
harman/kardon**Service Manual**

DVD 39/230**DVD 49/230****DVD players**

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Technical Specifications

Applicable Disc:	Disc formats: 5 inch (12 cm) or 3 inch (8 cm) DVD Video, DVD-Audio, SACD (DVD 49 only), Standard conforming DVD+RW, DVD+R, DVD-R, DVD-RW, DivX, VCD, CD, CD-R, MP3, WMA, JPEG or CD-RW discs, Region code: DVD Movie disc with Code 2 or 0 only. DVD-Layers: Single Side/Single Layer, Single Side/Dual Layer, Dual Side/Single Layer, Dual Side/Dual Layer Audio formats: DVD-Audio MLP lossless, Linear PCM, MPEG, Windows Media® 9, Dolby Digital or DTS Audio discs Still-image format: JPEG	
Memory cards (DVD 49 only):	Slot 1: Secure Digital (SD), Multimedia Card (MMC) and Memory Stick (compatible with Magic Gate) cards. Other card types may be used with a compatible adapter, but are not guaranteed to be recognized by the DVD 49 Slot 2: Compact Flash I (CF) cards, or cards using a Compact Flash 1-compatible adapter Card Capacity: Up to 1 GB	
USB Port (DVD 49 only):	Up to USB 2.0-compatible solid-state flash drives	
Video Signal System:	PAL/NTSC	
HDMI™ Output:	Video: 576p, 720p, 1080i, 1080p HDMI Version 1.2a-compliant HDCP Version 1.1-compliant	
Composite Video Output:	1 V _{p-p} /75 Ohms, sync negative polarity	
S Video Output:	Y/Luminance: 1 V _{p-p} /75 Ohms, sync negative polarity C/Chrominance: 0.286 V _{p-p}	
Component Video Output:	Y: 1 V _{p-p} /75 Ohms, sync negative polarity Cr: 0.7 V _{p-p} /75 Ohms Cb: 0.7 V _{p-p} /75 Ohms	
Analog Audio Output:	2 V _{rms} max	
Frequency Response:	DVD (Linear PCM):	2Hz - 22kHz (48kHz sampling) 2Hz - 44kHz (96kHz sampling)
	CD:	2Hz - 20kHz
Signal/Noise Ratio (SNR):	105 dB (A-weighted)	
Dynamic Range:	DVD: 100dB (18 Bit) / 105dB (20 Bit) CD/DVD: 96dB (16 Bit)	
THD/1kHz:	DVD/CD: 0.0025 %	
Wow & Flutter:	Below Measurable Limits	
AC Power:	100 - 240 V/50 ~ 60 Hz	
Power Consumption:	1 Watts (Standby)/25 Watts (Max)	
Dimensions (WxHxD):	440 x 50 x 385 mm	
Weight:	4.0 kg	

Depth measurement includes knobs and connectors.

Height measurement includes feet and chassis.

All specifications subject to change without notice.

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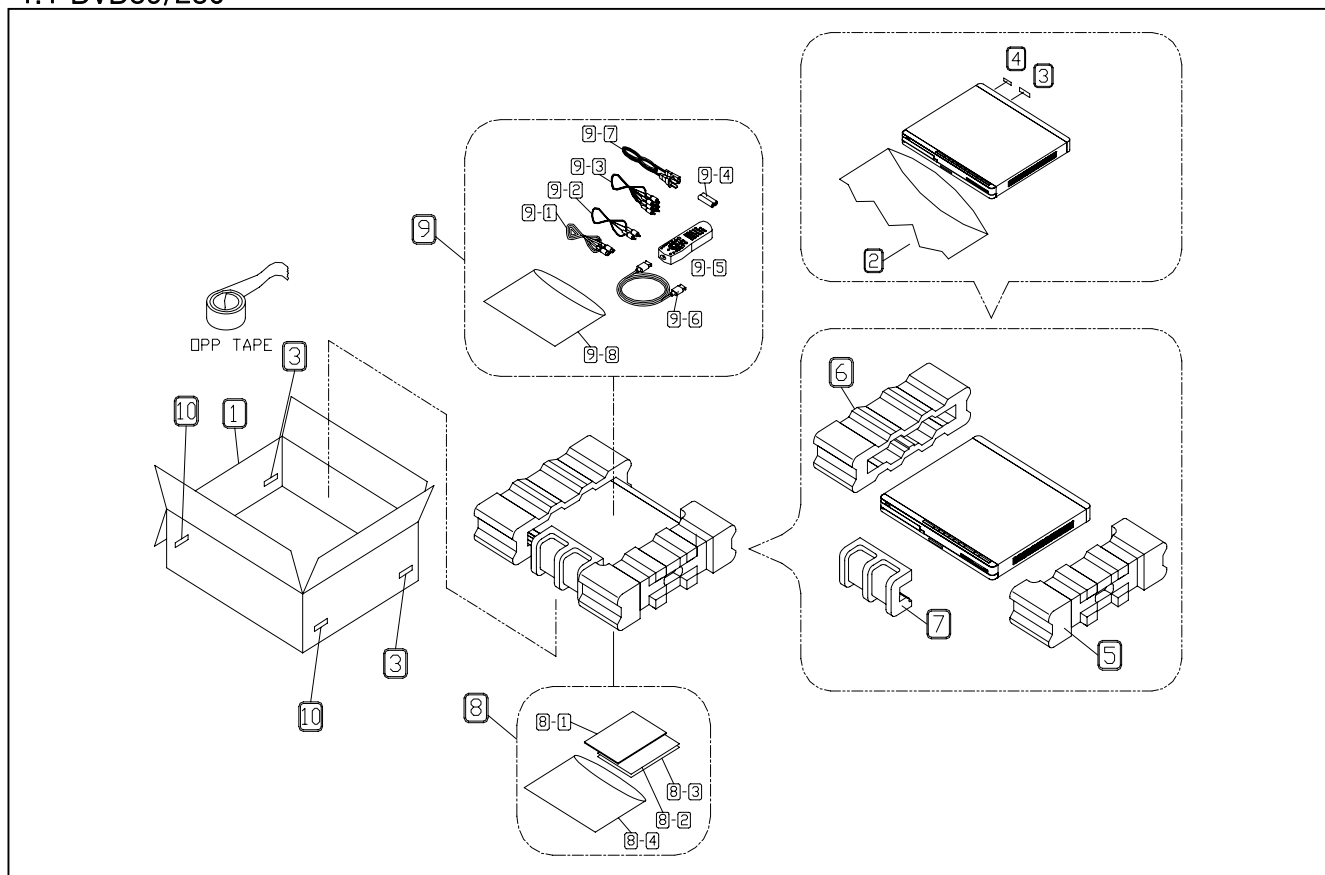
Troubleshooting Guide

Troubleshooting Guide

Symptom	Possible Cause	Solution
Unit does not turn on	No AC power	Check AC power plug and make certain any switched outlet is turned on.
Disc does not play	- Disc loaded improperly - Incorrect disc type - Invalid Region Code - Rating is above parental preset	- Load disc label-side up; align the disc with the guides and place it in its proper position. - Check to see that disc is CD, CD-R, CD-RW, DivX, VCD, MP3, WMA, JPEG, DVD-R, DVD-RW, DVD+R, DVD+RW (standard conforming), DVD-Audio, SACD or DVD-Video; other types will not play. - Use Region 2 or Open Region (0) disc only. - Enter password to override or change rating settings.
No picture	- Intermittent connections - Wrong input - Progressive Scan output selected - Video Off feature active HDMI Output 11 is connected to a video display that is not HDCP-compliant.	- Check all video connections. - Check input selection of TV or receiver. - Use Progressive Scan mode only with compatible TV. If needed, press the Progressive Scan/Interlaced Button 22 to toggle to the correct mode. - Press Video Off Button 27 to reactivate video circuitry (see page 26) - The HDMI Output 11 may not be used with video displays that are not HDCP-compliant. Unplug the cable and select another audio and video connection (see pages 13 through 14).
No sound	- Intermittent connections - Incorrect digital audio selection - DVD disc is in fast or slow mode - Surround receiver not compatible with 96kHz PCM audio - DVD Audio or SACD disc is loaded without using analog audio connection	- Check all audio connections. - Check digital audio settings. - There is no audio playback on DVD discs during fast or slow modes. - Use analog audio outputs. - Use 6-Channel Audio Outputs 7 or Analog Audio Outputs 10.
Picture is distorted or jumps during fast forward or reverse play	MPEG-2 decoding	It is a normal artifact of DVD playback for pictures to jump or show some distortion during rapid play.
Some remote buttons do not operate during DVD play; prohibited symbol  appears (see below)	Function not permitted at this time	With most discs, some functions are not permitted at certain times (e.g., Track Skip) or at all (e.g., direct audio track selection).
The OSD menu is in a foreign language	Incorrect OSD language	Change the display language selection.
The  symbol appears	Requested function not available at this time	Certain functions may be disabled by the DVD itself during passages of a disc.
Picture is displayed in the wrong aspect ratio	Incorrect match of aspect ratio settings to disc	Change aspect ratio settings.
Remote control inoperative	- Weak batteries - Sensor is blocked	- Change both batteries. - Clear path to sensor or use optional outboard remote sensor.
Disc will not copy to VCR	Copy protection	Many DVDs are encoded with copy protection to prevent copying to VCR.
Password not accepted.	Incorrect password being used or password has been forgotten.	Factory default password "1234" always remains active.
Cannot program playlist	- The player must be in Stop mode to program a playlist - Edit Mode is turned off	- Stop play of disc before programming a playlist. - Select the Edit Mode line in the Control Commands and press the OK Button to turn it on
Cannot navigate through hierarchy	Edit Mode is turned on, disabling navigation of folders	Select the Edit Mode line in the Control Commands and press the OK Button to turn it off
Unable to select desired media (DVD 49 only)	- No media is present - Wrong type of USB drive was inserted in USB Port - Media was not inserted correctly	- Insert the appropriate memory card into one of the card source slots, or a USB flash drive into the USB Port - Only USB flash drives that do not function as stand alone MP3 players are compatible - Remove media and carefully insert according to the instructions on page 7

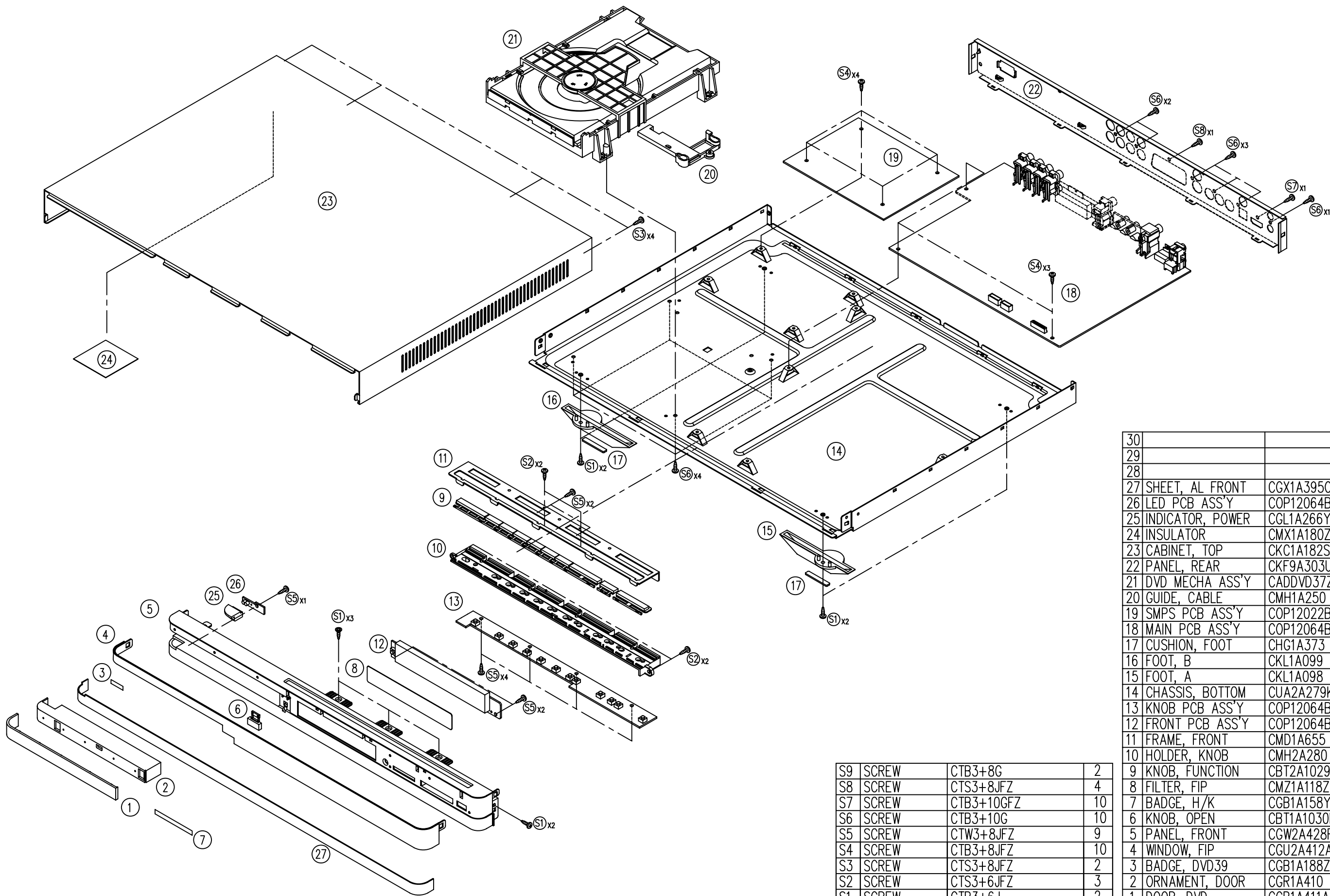
4. PACKING VIEW

4.1 DVD39/230



Ref. No.	Part No.	Part Name	Remarks	Q'ty	NEW
1	CPG1A843Y	BOX , OUT CARTON		1	
2	CPB1A180Z	BAG, POLY(SET)		1	
3	CQB1A551Z	LABEL, BAR CODE		3	
4	CQB1A622	LABEL, SERIAL NO.	MANUFAC.DATE	1	
5	CPS2A794	PAD, SNOW-R		1	
6	CPS2A793	PAD, SNOW-L		1	
7	CPS1A765	PAD, CENTER		1	
8	CQXDVD39/230	INSTRUCTION MANUAL ASS'Y		1	
8-1	CQX1A1305Z	MANUAL , INSTRUCTION		1	
8-2	HQE1A273Z	HARMAN IMAGE BROCHURES		1	
8-3	CQE1A172X	CARD, WARRANTY		1	
8-4	CPB1061W	BAG, POLY(MANUAL)		1	
9	CQXDVD29/230	INSTRUCTION MANUAL ASS'Y		1	
9-1	CJS0I006Z	CABLE, S-VHS(1.5M)		1	
9-2	CJS9D002Z	CORD , JACK(MONO) 1200MM		1	
9-3	CJS4S004Z	CORD , PIN(3P,W/R/Y)		1	
9-4	CABR6P	BATTERY (SIZE 'AA')		2	
9-5	CARTDVD39	REMOCON ASS'Y		1	
9-6	CJS8T001Z	CABLE, HDMI(2M)		1	
9-7	CJA2B020Z	CORD, POWER		1	
9-8	CPB1061W	BAG, POLY(MANUAL)		1	
10	CQB1A858Z	LABEL, COUNTRY		2	

EXPLODED VIEW(DVD39/230)

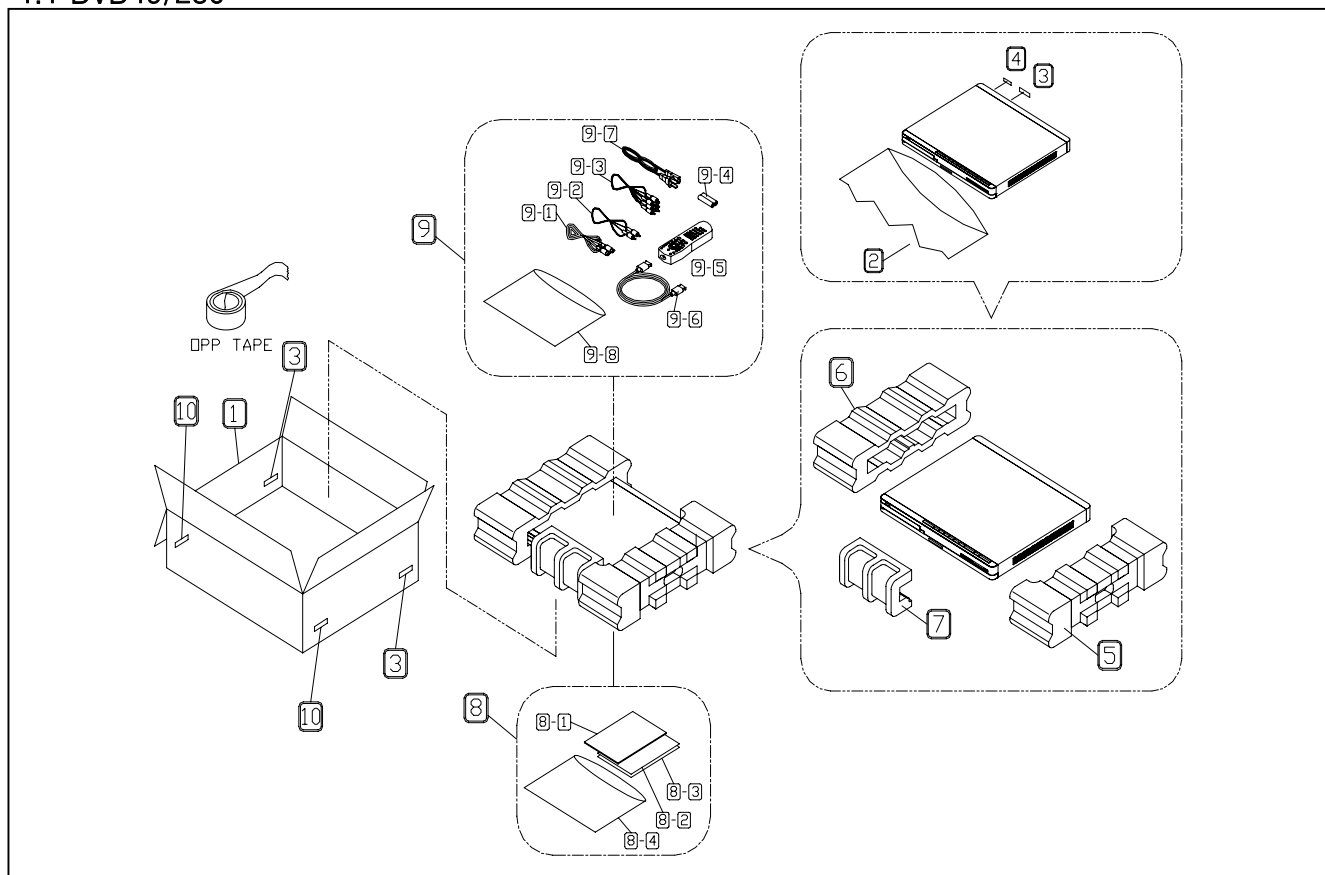


S9	SCREW	CTB3+8G	2
S8	SCREW	CTS3+8JFZ	4
S7	SCREW	CTB3+10GFZ	10
S6	SCREW	CTB3+10G	10
S5	SCREW	CTW3+8JFZ	9
S4	SCREW	CTB3+8JFZ	10
S3	SCREW	CTS3+8JFZ	2
S2	SCREW	CTS3+6JFZ	3
S1	SCREW	CTB3+6J	2
No.	DESCRIPTION	PARTS-No.	Q,ty

30			1
29			1
28			1
27	SHEET, AL FRONT	CGX1A395C66	1
26	LED PCB ASS'Y	COP12064B	1
25	INDICATOR, POWER	CGL1A266Y	1
24	INSULATOR	CMX1A180Z	1
23	CABINET, TOP	CKC1A182S60	1
22	PANEL, REAR	CKF9A303UK1	1
21	DVD MECHA ASS'Y	CADDVD37ZA	1
20	GUIDE, CABLE	CMH1A250	1
19	SMPS PCB ASS'Y	COP12022B	1
18	MAIN PCB ASS'Y	COP12064B	1
17	CUSHION, FOOT	CHG1A373	4
16	FOOT, B	CKL1A099	2
15	FOOT, A	CKL1A098	2
14	CHASSIS, BOTTOM	CUA2A279K1	1
13	KNOB PCB ASS'Y	COP12064B	1
12	FRONT PCB ASS'Y	COP12064B	1
11	FRAME, FRONT	CMD1A655	1
10	HOLDER, KNOB	CMH2A280	1
9	KNOB, FUNCTION	CBT2A1029MMXB24	1
8	FILTER, FIP	CMZ1A118Z	1
7	BADGE, H/K	CGB1A158Y	1
6	KNOB, OPEN	CBT1A1030MMZB17	1
5	PANEL, FRONT	CGW2A428R4WB24	1
4	WINDOW, FIP	CGU2A412A25Y	1
3	BADGE, DVD39	CGB1A188Z	1
2	ORNAMENT, DOOR	CGR1A410	1
1	DOOR, DVD	CGR1A411A25	1
No.	DESCRIPTION	PARTS-No.	Q,ty

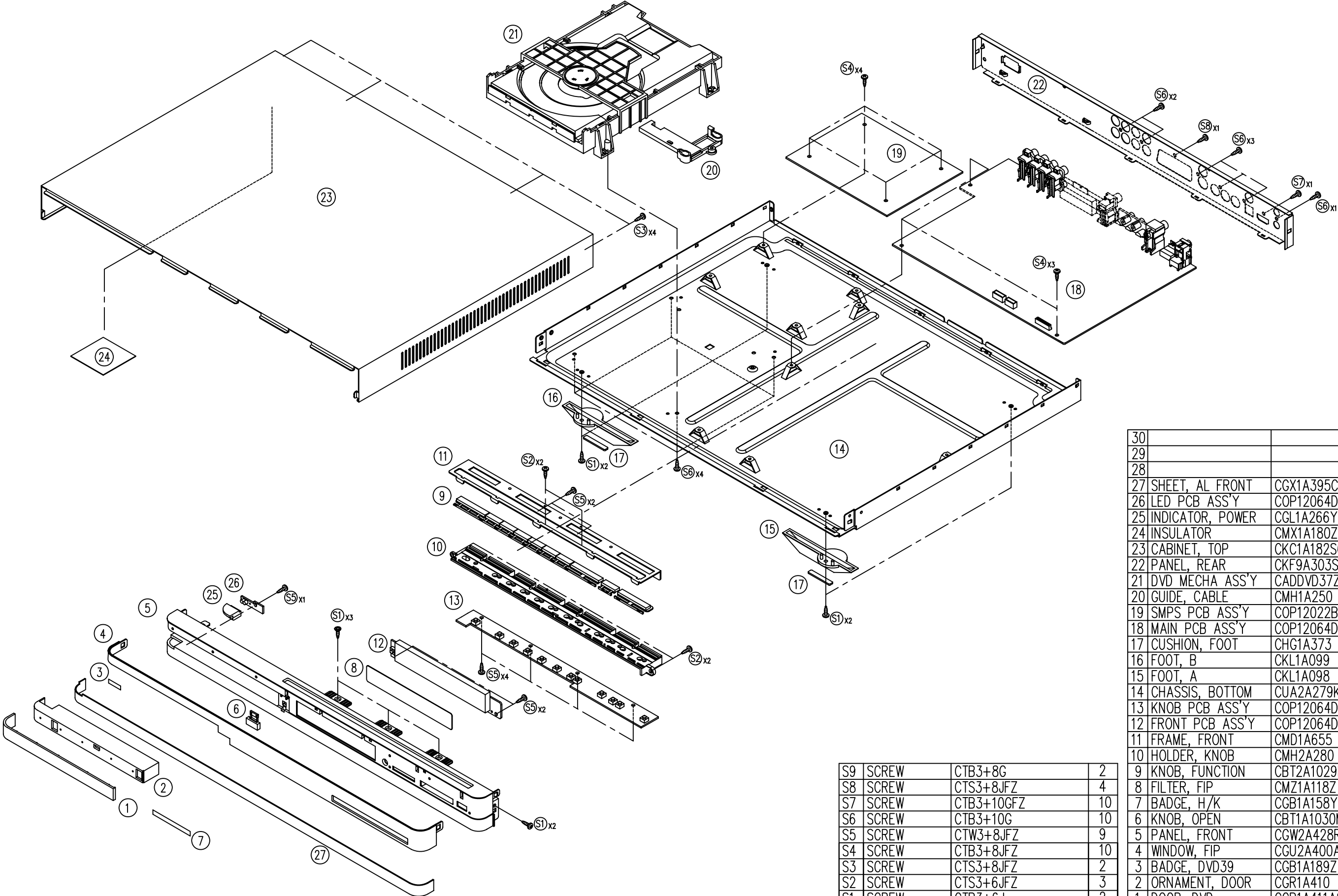
4. PACKING VIEW

4.1 DVD49/230



Ref. No.	Part No.	Part Name	Remarks	Q'ty	NEW
1	CPG1A843W	BOX , OUT CARTON		1	
2	CPB1A180Z	BAG, POLY(SET)		1	
3	CQB1A551Z	LABEL, BAR CODE		3	
4	CQB1A622	LABEL, SERIAL NO.	MANUFAC.DATE	1	
5	CPS2A794	PAD, SNOW-R		1	
6	CPS2A793	PAD, SNOW-L		1	
7	CPS1A765	PAD, CENTER		1	
8	CQXDVD49/230	INSTRUCTION MANUAL ASS'Y		1	
8-1	CQX1A1305Z	MANUAL , INSTRUCTION		1	
8-2	HQE1A273Z	HARMAN IMAGE BROCHURES		1	
8-3	CQE1A172X	CARD, WARRANTY		1	
8-4	CPB1061W	BAG, POLY(MANUAL)		1	
9	CQXDVD29/230	INSTRUCTION MANUAL ASS'Y		1	
9-1	CJS0I006Z	CABLE, S-VHS(1.5M)		1	
9-2	CJS9D002Z	CORD , JACK(MONO) 1200MM		1	
9-3	CJS4S004Z	CORD , PIN(3P,W/R/Y)		1	
9-4	CABR6P	BATTERY (SIZE 'AA')		2	
9-5	CARTDVD49	REMOCON ASS'Y		1	
9-6	CJS8T001Z	CABLE, HDMI(2M)		1	
9-7	CJA2B020Z	CORD, POWER		1	
9-8	CPB1061W	BAG, POLY(MANUAL)		1	
10	CQB1A858Z	LABEL, COUNTRY		2	

EXPLODED VIEW(DVD49/230)



30			1
29			1
28			1
27	SHEET, AL FRONT	CGX1A395C66	1
26	LED PCB ASS'Y	COP12064D	1
25	INDICATOR, POWER	CGL1A266Y	1
24	INSULATOR	CMX1A180Z	1
23	CABINET, TOP	CKC1A182S60	1
22	PANEL, REAR	CKF9A303SK1	1
21	DVD MECHA ASS'Y	CADDVD37ZA	1
20	GUIDE, CABLE	CMH1A250	1
19	SMPS PCB ASS'Y	COP12022B	1
18	MAIN PCB ASS'Y	COP12064D	1
17	CUSHION, FOOT	CHG1A373	4
16	FOOT, B	CKL1A099	2
15	FOOT, A	CKL1A098	2
14	CHASSIS, BOTTOM	CUA2A279K1	1
13	KNOB PCB ASS'Y	COP12064D	1
12	FRONT PCB ASS'Y	COP12064D	1
11	FRAME, FRONT	CMD1A655	1
10	HOLDER, KNOB	CMH2A280	1
9	KNOB, FUNCTION	CBT2A1029MMWB24	1
8	FILTER, FIP	CMZ1A118Z	1
7	BADGE, H/K	CGB1A158Y	1
6	KNOB, OPEN	CBT1A1030MMZB17	1
5	PANEL, FRONT	CGW2A428R4UB24	1
4	WINDOW, FIP	CGU2A400A25Y	1
3	BADGE, DVD39	CGB1A189Z	1
2	ORNAMENT, DOOR	CGR1A410	1
1	DOOR, DVD	CGR1A411A25	1
No.	DESCRIPTION	PARTS-No.	Q,ty

S9	SCREW	CTB3+8G	2
S8	SCREW	CTS3+8JFZ	4
S7	SCREW	CTB3+10GFZ	10
S6	SCREW	CTB3+10G	10
S5	SCREW	CTW3+8JFZ	9
S4	SCREW	CTB3+8JFZ	10
S3	SCREW	CTS3+8JFZ	2
S2	SCREW	CTS3+6JFZ	3
S1	SCREW	CTB3+6J	2
No.	DESCRIPTION	PARTS-No.	Q,ty

DVD 39

Harman Kardon DVD 39/230 parts list			
Ref#	Component	Description	Drawing No
	CHE154	CLAMPER , ARM	
	CPG1A843Y	BOX , OFFSET CARTON	
	CPS1A765	PAD , CENTER	DMC250
	CPS2A793	PAD , SNOW L	
	CPS2A794	PAD , SNOW R	
	CQB1A549Y	LABEL , ATTENTION DVD48	
	CQB1A551Z	LABEL , BAR CODE	
	CQB1A622	LABEL , SERIAL NO	
	CQB1A744Z	LABEL , DIVX	
	CQB1A876Z	LABEL , COUNTRY DVD29/230	
	CQXDVD39/230	INSTRUCTION MANUAL ASS'Y	
	CARTDVD39	REMOCON TRANSMITTER ASS'Y	
	CJA2B020Z	CORD , POWER	
	CJS0I006Z	CABLE, S-VHS(1.5M)	Y, C
	CJS4S004Z	CORD , PIN(3P,W/R/Y)	
	CJS8T001Z	CABLE, HDMI(2M)	CBADV-005-2
	CJS9D002Z	CORD , JACK(MONO) 1200MM	
	CQE1A172X	CARD , WARRANTY	USA VER
	CQX1A1305Z	MANUAL , INSTRUCTION DVD39/230	
	HQE1A273Z	HARMAN IMAGE BROCHURES	
	CGR1A411ZA	DVD DOOR ASS'Y(DMC250)	DMC250
	CGR1A410	ORNAMENT , DOOR	
	CGR1A411A25	DOOR , DVD	
	CGWDVD39/230	FRONT PANEL ASS'Y	
	CBT2A1029XA	DVD39/230 FUNCTION KNOB ASS'Y	
	CBT2A1029MMXB24	KNOB , FUNCTION DVD39	
	CGX1A383Z	SHEET , LED	
	CMH2A280	HOLDER , KNOB	
	CGB1A158Y	BADGE , FRONT HARMAN/KARDON	
	CGB1A188Z	BADGE , DVD39	
	CGL1A266Y	INDICATOR , POWER DVD29	
	CGW2A428WA	DVD39/230 FRONT PANEL ASS'Y	
	CBT1A1030MMZB17	KNOB , OPEN	
	CGU2A412A25Y	WINDOW , FIP DVD39/230	
	CGW2A428R4WB24	PANEL , FRONT DVD39/230	
	CGX1A395C66	SHEET , AL FRONT DMC250	
	CHG1A305	CUSHION , SUPPORT	
	CMC1A341	PLATE , EARTH DMC250	
	CMD1A655	FRAME , FRONT	
	CMD1A682	BRACKET , HOLDER	
	CMZ1A118Z	FILTER , FIP	
	CTB3+10JR	SCREW	
	CTB3+8JR	SCREW	
	CTS3+8JFZR	SCREW	
	CWC4F2A09A080B	CABLE , CARD (9P, 60mm, 1.0mm PITCH)	9P, 60MM, 1.0MM PITCH
	CWC4F2A17A180B	CABLE , CARD (17P, 180mm, 1.0mm PITCH)	17P, 180MM, 1.0MM PITCH
	CWE8102050RR	RING WIRE ASS'Y	
	C8AAK81	BOND , LOCK	
	CKC1A182S60	CABINET , TOP DVD29	
	CMX1A180Z	INSULATOR	
	CQB1A644Z	LABEL , ORIGIN	
	CTB3+8JFZR	SCREW	
	CTS3+8JFZR	SCREW	
	CUADV39/230	BOTTOM CHASSIS ASS'Y	
	CADDVD39ZA	DVD MECHANISM ASA ASS'Y	
	CADSDL003VA	DVD LOADER ASS'Y	
	CADSDL003Z	LOADER	
	CJDDM3481A	ASA TRAVERSE PICK UP ASS'Y	SF-HD850G

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	CMH1A250	GUIDE, CABLE	
	CWB1B905150EE	WIRE ASS'Y	
	CWB5A906150SE	WIRE ASS'Y	
	CWC4G2A24G300B	CABLE , CARD DVD(0.5mm PITCH, A-B)	DMC250
	CHG1A373	CUSHION , FOOT AVR350	
	CKF9A303UK1	PANEL , REAR DVD39/230	
	CKL1A098	FOOT , L	
	CKL1A099	FOOT , R	
	CUP12022Z	PCB , SMPS(163X247, FR-1)	163X247, FR-1
C902	CCEA1HH220TS	CAP , ELECT	50V/22UF/105°C
C903	CCEA1HH220TS	CAP , ELECT	50V/22UF/105°C
C904	CCEA1HH220TS	CAP , ELECT	50V/22UF/105°C
C905	CCEA1HHR47TS	CAP , ELECT	
C906	CCEA1HHR47TS	CAP , ELECT	
C907	HCQI2A472JZT	Capacitor, Mylar 100V 4700pF	
C908	HCQI2A472JZT	Capacitor, Mylar 100V 4700pF	
C931	CCEA1AH471TS	CAP , ELECT	10V/470UF/105°C
C932	CCEA1AH471TS	CAP , ELECT	10V/470UF/105°C
C933	CCEA1HH1R0TS	CAP , ELECT	50V/1.0UF/105°C
C934	CCKT3A102KBL	CAP , CERAMIC	EKR3A102K05FK5
C935	CCUMT1H104KB	CAP , MONO	50V 104 K
C936	CCEA1HH470TS	CAP , ELECT	50V/47UF/105°C
C937	CCEA1HH470TS	CAP , ELECT	50V/47UF/105°C
C938	CCUMT1H104KB	CAP , MONO	50V 104 K
C952	CCEA1AH471TS	CAP , ELECT	10V/470UF/105°C
C953	CCEA1HH1R0TS	CAP , ELECT	50V/1.0UF/105°C
C955	CCEA1AH471TS	CAP , ELECT	10V/470UF/105°C
C960	CCEA1EH331TS	CAP , ELECT	25V/330UF/105°C
C962	CCEA1EH101TS	CAP , ELECT	25V/100UF/105°C
C963	CCEA1EH331TS	CAP , ELECT	25V/330UF/105°C
C967	CCKT3A102KBL	CAP , CERAMIC	EKR3A102K05FK5
D906	CVDJ2J20BT	DIODE , ZENER	
D907	CVDJ2J20BT	DIODE , ZENER	
D908	CVDJ2J20BT	DIODE , ZENER	
D909	CVDJ2J16BT	DIODE , ZENER 16V	
D942	CVD1SS133MT	DIODE	1SS133
D945	CVDJ2J2.7BT	DIODE , ZENER	
FH91	KJCFC5S	HOLDER , FUSE	
FH92	KJCFC5S	HOLDER , FUSE	
IC95	HVIKIA431BAT	I.C , REGULATOR	KIA431B
IC96	HVIKIA431BAT	I.C , REGULATOR	KIA431B
L931	CLZ9Z074Z	COIL , CHOKE(20uH)	
L932	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L933	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L936	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L937	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
Q901	HVTKSA708YT	T.R	KSA708Y
Q931	HVTKRC102MT	T.R	KRC102M
Q933	HVTKSA708YT	T.R	KSA708Y
Q934	CVTKTN2222A	T.R , SWITCHING	KTN2222A
R901	KROS1TJ105V	RES , METAL FILM (1/2W , 1M OHM)	
R911	CRD25TJ100T	RES , CARBON	
R912	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J
R913	CRD20TJ204T	RES , CARBON	
R915	CRD20TJ101T	RES , CARBON	100 OHM 1/5W J
R921	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J
R922	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R923	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R924	CRD20TJ274T	RES , CARBON	
R931	CRD20TJ101T	RES , CARBON	100 OHM 1/5W J
R932	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J

DVD 39

R933	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R934	CRD20TF3481T	RES , CARBON	
R935	CRD20TF3001T	RES , CARBON	3K 1/5W F
R936	CRD20TF1003T	RES , CARBON	
R938	CRD20TF1003T	RES , CARBON	
R939	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R940	CRD20TJ153T	RES , CARBON	15K OHM 1/5W J
R941	CRD20TJ751T	RES , CARBON	750 OHM 1/5W J
R945	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R946	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R951	CRD20TJ181T	RES , CARBON	180 OHM 1/5W J
R953	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R954	CRD20TF3301T	RES , CARBON	3.3K /1/5W/F
R956	CRD20TF3001T	RES , CARBON	3K 1/5W F
R957	CRD20TF1003T	RES , CARBON	
CN91	CJP02KA060ZY	WAFER	
CN95	CJP13GA19ZY	WAFER, STRAIGHT, 13PIN	
CX91	HCQF2E104KZE	CAP , POLYPROPYLENE FILM	
CX92	HCQF2E104KZE	CAP , POLYPROPYLENE FILM	
CY91	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY92	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY93	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY94	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
C901	CCET400VK3J101NKZ	CAP , ELECT(100uF/400V,25X25,K3J)	100UF/400V,25X25,K3J
C909	CKT3A222KBL	CAP , CERAMIC	EKR3A222K05FK5
C910	CKT3A222KBL	CAP , CERAMIC	EKR3A222K05FK5
C951	CCEA1CH222ES	CAP , ELECT	
C954	CCEA1CH222ES	CAP , ELECT	
C961	CCEA1EH681ES	E.CAP 25V 680uF, 105°C	
D901	HVDRL207T	DIODE	RL207T
D902	HVDRL207T	DIODE	RL207T
D903	HVDRL207T	DIODE	RL207T
D904	HVDRL207T	DIODE	RL207T
D911	HVDFR107T	DIODE , F-R	
D912	HVDFR107T	DIODE , F-R	
D913	HVDFR107T	DIODE , F-R	
D914	HVDFR107T	DIODE , F-R	
D931	HVD11EQ06T	DIODE , SCHOTTKY (60V/1A)	11EQ06
D932	HVD11EQ06T	DIODE , SCHOTTKY (60V/1A)	11EQ06
D933	HVDUF4004T	DIODE , SCHOTTKY	UF4004
D935	HVD31DQ06H	DIODE	31DQ06-FC5
D936	HVD31DQ10FC5	DIODE , SCHOTTKY (100V/3A)	31DQ10
D939	HVDUF4007T	DIODE , SCHOTTKY	UF4007
D940	CVDUF5407H	DIODE , ULTRA FAST RECTIFIERS(800V, 3A)	
IC91	CVIICE3B0365J	IC, CoolSET ICE3B0365J	ICE3B0365J DIP-8P
IC92	CVIICE2B265	IC , COOLSET	
LF91	CLZ9Z087Z	FILTER , LINE(DMC250)	CVA30180J
LF92	CLZ9Z072Z	LINE FILTER (DVD-S1700)	
PC91	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
PC92	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
PC93	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
R910	CRG1ANJ154H	RES , METAL OXIDE FILM (150K J 1W 15mm M Type)	
R914	CRG1ANJ2R2B	RES , METAL OXIDE(2.2/1W)	
R925	CRW1PJ0R7V	RES , WIRE WOUND(1W/0.7ohm)	
R926	KRG2SANJ683H	RES , METAL OXIDE FILM	2W 68K OHM MINI
R937	CRG1ANJ220R	RES , METAL OXIDE FILM(1W, 20ohm V)	
R942	CRG1ANJ101R	RES , METAL OXIDE FILM (100 J 1W 5mm R Type)	
R943	CRG1ANJ220H	RES , METAL OXIDE FILM	22 OHM 1W J
R958	CRG1ANJ361R	RES , METAL OXIDE(360/1W)	
R961	CRG1ANJ101R	RES , METAL OXIDE FILM (100 J 1W 5mm R Type)	
R965	CRG1ANJ102R	RES , METAL OXIDE(1K/1W)	

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TF91	CLT9Z042ZE	TRANS , SWITCHING DVD49	
TF92	CLT9Z043ZE	TRANS , SWITCHING DVD49	
TH91	KRT10D9MSFT	THERMISTER	
VT91	CRVSVC471D14A	VARISTOR	SVC471D14A
	COP12064B	DVD39/230 FRONT/MAIN PCB ASS'Y	
C168	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C204	CCUS1H050CA	CAP , CHIP	5PF 50V C
C205	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C206	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C207	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C208	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C209	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C212	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C214	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C220	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C221	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C223	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C226	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C228	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C240	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C241	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C242	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C243	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C260	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C261	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C262	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C263	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C267	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C268	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C269	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C270	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C271	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C272	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C274	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C275	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C276	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C277	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C278	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C280	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C281	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C282	CCUS1H101JA	CAP , CHIP	100PF 50V J
C284	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C285	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C287	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C288	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C289	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C290	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C291	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C292	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C293	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C294	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C295	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C296	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C297	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C298	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C299	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C300	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C301	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C302	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C303	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C312	CCUS1H104KC	CAP , CHIP	0.1UF 50V K

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C351	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C352	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C353	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C354	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C357	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C359	CCUS1H220JA	CAP , CHIP	22PF 50V J
C361	CCUS1H220JA	CAP , CHIP	22PF 50V J
C363	CCUS1H220JA	CAP , CHIP	22PF 50V J
C505	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C515	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C525	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C535	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C545	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C555	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C565	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C575	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C623	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C624	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C635	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C636	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C650	CCUS1H560JA	CAP , CHIP	56PF 50V J
C701	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C702	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C703	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C704	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C707	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C708	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C709	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C710	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C711	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C712	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C713	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C714	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C715	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C716	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C718	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C719	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C720	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C721	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C724	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C725	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C732	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C733	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C734	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C735	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C736	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C737	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C738	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C739	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C740	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C757	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C759	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C764	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C765	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C787	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C788	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C801	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C802	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C803	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C805	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C806	CCUS1H102KC	CAP , CHIP	1000PF 50V K

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C807	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C808	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C809	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C810	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C812	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C814	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C815	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C817	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C818	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C820	CCUS1H102KC	CAP , CHIP	1000PF 50V K
FB23	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB30	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB32	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB33	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB34	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
R239	CRJ10DF2002T	RES , CHIP 1%	
R255	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R261	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R291	CRJ10DJ153T	RES , CHIP	
R292	CRJ10DJ153T	RES , CHIP	
R353	CRJ10DJ681T	RES , CHIP	1608 SIZE
R628	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R629	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R630	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R631	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R713	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R715	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R775	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R776	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R777	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R778	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
	CUP12064Z	PCB , FRONT/MAIN DVD39/230(278X247 , FR4/2)	
BD81	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD82	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD83	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD84	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
CN43	CJP24GA195ZM	SMT FFC/FPC WAFER(0.5MM PITCH)	52559-2472 (PB FREE)
C102	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C104	CCUS1H151JA	CAP , CHIP	150PF 50V J
C105	CCUS1H150JA	CAP , CHIP(15PF/50V)	15PF 50V J
C106	CCUS1H150JA	CAP , CHIP(15PF/50V)	15PF 50V J
C162	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C163	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C166	CCUS1H220JA	CAP , CHIP	22PF 50V J
C167	CCUS1H220JA	CAP , CHIP	22PF 50V J
C169	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C170	CCUS1H221JA	CAP , CHIP	220PF 50V J
C171	CCUS1H221JA	CAP , CHIP	220PF 50V J
C172	CCUS1H221JA	CAP , CHIP	220PF 50V J
C173	CCUS1H221JA	CAP , CHIP	220PF 50V J
C175	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C176	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C181	CCUS1H101JA	CAP , CHIP	100PF 50V J
C182	CCUS1H101JA	CAP , CHIP	100PF 50V J
C203	CCUS1H330JA	CAP , CHIP	33PF 50V J
C210	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C211	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C216	CCUS1H200JA	CAP , CHIP	
C217	CCUS1H200JA	CAP , CHIP	
C225	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C227	CCUS1H102KC	CAP , CHIP	1000PF 50V K

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C229	CCUS1H330JA	CAP , CHIP	33PF 50V J
C230	CCUS1H330JA	CAP , CHIP	33PF 50V J
C231	CCUS1H330JA	CAP , CHIP	33PF 50V J
C232	CCUS1H330JA	CAP , CHIP	33PF 50V J
C233	CCUS1H330JA	CAP , CHIP	33PF 50V J
C234	CCUS1H330JA	CAP , CHIP	33PF 50V J
C235	CCUS1H330JA	CAP , CHIP	33PF 50V J
C236	CCUS1H330JA	CAP , CHIP	33PF 50V J
C237	CCUS1H330JA	CAP , CHIP	33PF 50V J
C238	CCUS1H330JA	CAP , CHIP	33PF 50V J
C239	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C244	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C245	CCUS1H330JA	CAP , CHIP	33PF 50V J
C246	CCUS1H330JA	CAP , CHIP	33PF 50V J
C247	CCUS1H330JA	CAP , CHIP	33PF 50V J
C248	CCUS1H330JA	CAP , CHIP	33PF 50V J
C265	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C279	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C304	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C305	CCUS1H101JA	CAP , CHIP	100PF 50V J
C306	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C308	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C310	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C314	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C358	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C360	CCUS1H220JA	CAP , CHIP	22PF 50V J
C362	CCUS1H220JA	CAP , CHIP	22PF 50V J
C364	CCUS1H221JA	CAP , CHIP	220PF 50V J
C365	CCUS1H221JA	CAP , CHIP	220PF 50V J
C401	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C403	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C406	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C408	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C412	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C415	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C424	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C425	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C426	CCUS1H101JA	CAP , CHIP	100PF 50V J
C427	CCUS1H101JA	CAP , CHIP	100PF 50V J
C430	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C432	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C433	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C434	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C435	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C440	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C441	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C442	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C443	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C445	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C446	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C503	CCUS1H391JA	CAP , CHIP	390PF 50V J
C506	CCUS1H391JA	CAP , CHIP	390PF 50V J
C508	CCUS1H101JA	CAP , CHIP	100PF 50V J
C513	CCUS1H391JA	CAP , CHIP	390PF 50V J
C516	CCUS1H391JA	CAP , CHIP	390PF 50V J
C518	CCUS1H101JA	CAP , CHIP	100PF 50V J
C523	CCUS1H391JA	CAP , CHIP	390PF 50V J
C526	CCUS1H391JA	CAP , CHIP	390PF 50V J
C528	CCUS1H101JA	CAP , CHIP	100PF 50V J
C533	CCUS1H391JA	CAP , CHIP	390PF 50V J
C536	CCUS1H391JA	CAP , CHIP	390PF 50V J

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C538	CCUS1H101JA	CAP , CHIP	100PF 50V J
C543	CCUS1H391JA	CAP , CHIP	390PF 50V J
C546	CCUS1H391JA	CAP , CHIP	390PF 50V J
C548	CCUS1H101JA	CAP , CHIP	100PF 50V J
C553	CCUS1H391JA	CAP , CHIP	390PF 50V J
C556	CCUS1H391JA	CAP , CHIP	390PF 50V J
C558	CCUS1H101JA	CAP , CHIP	100PF 50V J
C563	CCUS1H391JA	CAP , CHIP	390PF 50V J
C566	CCUS1H391JA	CAP , CHIP	390PF 50V J
C568	CCUS1H101JA	CAP , CHIP	100PF 50V J
C573	CCUS1H391JA	CAP , CHIP	390PF 50V J
C576	CCUS1H391JA	CAP , CHIP	390PF 50V J
C578	CCUS1H101JA	CAP , CHIP	100PF 50V J
C637	CCUS1H560JA	CAP , CHIP	56PF 50V J
C638	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C641	CCUS1H220JA	CAP , CHIP	22PF 50V J
C653	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C654	CCUS1H470JA	CAP , CHIP	47PF 50V J
C655	CCUS1H470JA	CAP , CHIP	47PF 50V J
C656	CCUS1H470JA	CAP , CHIP	47PF 50V J
C657	CCUS1H470JA	CAP , CHIP	47PF 50V J
C658	CCUS1H470JA	CAP , CHIP	47PF 50V J
C659	CCUS1H470JA	CAP , CHIP	47PF 50V J
C705	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C722	CCUS1H180JA	CAP , CHIP(18PF/50V)	18PF 50V J
C723	CCUS1H180JA	CAP , CHIP(18PF/50V)	18PF 50V J
C728	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C729	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C741	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C742	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C743	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C746	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C747	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C750	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C751	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C755	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C761	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C762	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C773	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C774	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C777	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C778	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C780	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C782	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C784	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C785	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C791	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C793	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C794	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C796	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C797	CCUS1H221JA	CAP , CHIP	220PF 50V J
C798	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C804	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C811	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C813	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C816	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C819	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C821	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C822	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C823	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C824	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	

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C825	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C827	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C840	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C841	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C843	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C844	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C845	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C846	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C847	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C848	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C849	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C852	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C882	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
D103	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D104	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D105	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D106	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D107	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D108	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D109	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D110	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D111	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D112	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D115	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D116	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D117	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D411	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D412	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D751	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D752	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D753	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
FB11	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB17	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB25	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB26	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB27	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB28	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB29	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB31	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB35	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB36	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB37	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB38	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB39	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB40	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB41	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB42	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB43	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB44	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB45	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB46	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB51	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB52	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB53	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB54	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB55	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB56	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB57	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB58	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB59	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB66	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40

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FB70	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB71	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB72	CLZ9R005Z	FERRITE , CHIP BEAD(60ohm, 1608)	HCB1608KF-600T30
FB73	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB75	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB76	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB77	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB78	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB79	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB80	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB81	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB82	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB83	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB84	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB85	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB86	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB87	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB88	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB89	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB90	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB91	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB92	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB93	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
IC11	HVIST72F324K2	IC,FLASH (ST)	
IC12	HVITC74HCT7007F	I.C	TC74HC7007AFEL
IC13	CVIT5CB5PQ	I.C , MCU (FLASH 61440 bytes PQFP64)	
IC14	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC21	CVIZR36886HLCG	I.C , MPEG(ZORAN)	
IC22	CVIES29LV320ET70TG	I.C , FLASH ROM 32Mbit IC (TOP BOOST)	ES29LV320ET70TG
IC23	HVIM12L64164A7T	IC, 64M SDRAM (4X16)	
IC24	HVIAT24C08N10SC	I.C	AT24C08N10SC2.7
IC25	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC26	CVIKIA1117S18	I.C , REGULATOR(SOT-223)	KIA1117S/F18, SOT-223
IC27	HVTHN1K05FU	MOS FET	HN1K05FU
IC41	HVIAM5888SLF	I. C , Motor Driver(AMtek,Pb free)	AM5888S L/F
IC42	HVITL3472IDR	IC,OP AMP 8-SOIC (TI)	
IC53	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC54	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC55	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC56	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC57	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC58	HVIKIC7S66FU	i.c , SWITCH(USV PACKAGE)	KIC7S66FU-RTK/3
IC62	BVIBH7862FS	IC , 6CH VIDEO DRIVER	ROHM (BH7862FS)
IC65	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC66	HVIBU2098F	IC , I2C BUS	ROHM
IC71	CVIFLI2310LFCF	I/P CONVERTER, FLI2310-LF-CF	FLI2310-LF-CF
IC72	CVIW9864G2GH6	SDRAM , 64M(512K x 4Banks x 32bit) 6nS	
IC73	BVIBA33BC0FP	I,C , REGULATOR(3.3V SMD Type)	ROHM 3.3V SMD
IC74	BVIBA18BC0FP	I.C , REGULATOR CHIP (1.8V)	BA18BC0FP-E2
IC75	HVICS4382-KQ	I.C , DAC	CS4382-KQ
IC76	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC79	CVIKIA1117S50	I.C , REGULATOR(SOT-223)	KIA1117S50-RTK/P
IC80	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC81	CVISII9030CTU7	I.C , HDMI TX	
IC82	HVTHN1K02FUTE85	TR , MOS FET (S-MOS)	HN1K02FU-TE85L
IC83	HVIKIC7SZ08FU	I.C ,INPUT AND GATE (USV PACKAGE)	KIC7SZ08FU-RTK
IC85	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC86	CVIKIA1117S18	I.C , REGULATOR(SOT-223)	KIA1117S/F18, SOT-223
IC87	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC90	HVISN74AHC541PW	OCTAL BUFFERS IC(TSSOP-20 PKG)	SN74AHC541PWR
JK81	HJJ9H003Z	JACK , HDMI(JALCO)	YKF45-7009

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L401	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L402	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L403	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L602	CLQ08ER68KRZ	COIL , CHIP(0.68uH, 2012)	FCI2012F-R68K
L603	CLQ08ER39KRZ	COIL , CHIP(0.39uH, 2012)	FCI2012F-R39K
L604	CLQ08ER68KRZ	COIL , CHIP(0.68uH, 2012)	FCI2012F-R68K
Q103	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q104	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q105	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q107	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q111	HVTKTA1504SYRTK	T.R , CHIP	KTA1504S Y RTK
Q112	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q115	HVTKRC107S	T.R , CHIP	
Q351	HVTKRA107ST	T.R , CHIP	KRA107S
Q352	HVTKRA107ST	T.R , CHIP	KRA107S
Q401	HVTKRA107ST	T.R , CHIP	KRA107S
Q410	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q411	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q412	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q413	HVTKTA1664YP	T.R	
Q414	HVTKTA1664YP	T.R	
Q581	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q582	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q583	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q584	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q585	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q586	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q587	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q588	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q591	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q592	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q593	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q594	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q595	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q596	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q597	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q598	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q606	HVTKRA107ST	T.R , CHIP	KRA107S
Q607	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q751	HVTKRC107S	T.R , CHIP	
Q752	HVTKRA107ST	T.R , CHIP	KRA107S
Q753	HVTKRA107ST	T.R , CHIP	KRA107S
Q754	HVTKRA107ST	T.R , CHIP	KRA107S
Q755	HVTKRC107S	T.R , CHIP	
Q756	HVTKRA107ST	T.R , CHIP	KRA107S
Q781	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q801	CVTKRC103S	T.R , CHIP	
RN21	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN22	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN23	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN24	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN71	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN72	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN73	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN74	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN75	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN76	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN77	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN78	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN79	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN80	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4

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RN81	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN82	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN83	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN84	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN85	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN86	CRJ104DJ0R0T	RES, ARRAY, 1608*4	
RN88	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN89	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
R101	CRJ10DJ100T	RES , CHIP	1608 SIZE
R102	CRJ10DJ103T	RES , CHIP	1608 SIZE
R103	CRJ10DJ473T	RES , CHIP	1608 SIZE
R104	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R105	CRJ10DJ103T	RES , CHIP	1608 SIZE
R106	CRJ10DJ103T	RES , CHIP	1608 SIZE
R107	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R109	CRJ10DJ103T	RES , CHIP	1608 SIZE
R110	CRJ10DJ103T	RES , CHIP	1608 SIZE
R115	CRJ10DJ222T	RES , CHIP	1608 SIZE
R116	CRJ10DJ102T	RES , CHIP	1608 SIZE
R117	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R118	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R119	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R120	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R121	CRJ10DJ105T	RES , CHIP	1608 SIZE
R122	CRJ10DJ472T	RES , CHIP	1608 SIZE
R123	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R124	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R125	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R126	CRJ10DJ472T	RES , CHIP	1608 SIZE
R127	CRJ10DJ472T	RES , CHIP	1608 SIZE
R128	CRJ10DJ472T	RES , CHIP	1608 SIZE
R129	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R130	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R131	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R132	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R140	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R141	CRJ10DJ103T	RES , CHIP	1608 SIZE
R142	CRJ10DJ103T	RES , CHIP	1608 SIZE
R149	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R150	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R151	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R152	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R153	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R154	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R156	CRJ14CJ101T	RES , CHIP 1/4W	3216 SIZE
R157	CRJ10DJ101T	RES , CHIP	1608 SIZE
R158	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R159	CRJ14CJ101T	RES , CHIP 1/4W	3216 SIZE
R160	CRJ10DJ101T	RES , CHIP	1608 SIZE
R162	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R163	CRJ10DJ103T	RES , CHIP	1608 SIZE
R164	CRJ10DJ103T	RES , CHIP	1608 SIZE
R165	CRJ10DJ103T	RES , CHIP	1608 SIZE
R166	CRJ10DJ103T	RES , CHIP	1608 SIZE
R167	CRJ10DJ103T	RES , CHIP	1608 SIZE
R168	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R169	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R170	CRJ10DJ102T	RES , CHIP	1608 SIZE
R171	CRJ10DJ472T	RES , CHIP	1608 SIZE
R172	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R174	CRJ10DJ0R0T	RES , CHIP	1608 SIZE

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R175	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R176	CRJ10DJ472T	RES , CHIP	1608 SIZE
R177	CRJ10DJ472T	RES , CHIP	1608 SIZE
R178	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R179	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R182	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R183	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R184	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R185	CRJ10DJ472T	RES , CHIP	1608 SIZE
R187	CRJ10DJ472T	RES , CHIP	1608 SIZE
R188	CRJ10DJ472T	RES , CHIP	1608 SIZE
R190	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R191	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R192	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R193	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R194	CRJ10DJ472T	RES , CHIP	1608 SIZE
R195	CRJ10DJ472T	RES , CHIP	1608 SIZE
R196	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R197	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R198	CRJ10DJ473T	RES , CHIP	1608 SIZE
R199	CRJ10DJ473T	RES , CHIP	1608 SIZE
R201	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R202	CRJ10DJ472T	RES , CHIP	1608 SIZE
R203	CRJ10DJ330T	RES , CHIP	1608 SIZE
R204	CRJ10DJ102T	RES , CHIP	1608 SIZE
R205	CRJ10DJ101T	RES , CHIP	1608 SIZE
R206	CRJ10DJ121T	RES , CHIP	1608 SIZE
R207	CRJ10DJ121T	RES , CHIP	1608 SIZE
R208	CRJ10DJ121T	RES , CHIP	1608 SIZE
R209	CRJ10DJ472T	RES , CHIP	1608 SIZE
R210	CRJ10DJ202T	RES , CHIP	
R211	CRJ10DJ202T	RES , CHIP	
R212	CRJ10DJ221T	RES , CHIP	1608 SIZE
R213	CRJ10DJ182T	RES , CHIP	
R214	CRJ10DJ680T	RES , CHIP	
R215	CRJ10DJ330T	RES , CHIP	1608 SIZE
R216	CRJ10DJ330T	RES , CHIP	1608 SIZE
R217	CRJ10DJ330T	RES , CHIP	1608 SIZE
R218	CRJ10DJ330T	RES , CHIP	1608 SIZE
R219	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R220	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R221	CRJ10DJ472T	RES , CHIP	1608 SIZE
R222	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R223	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R224	CRJ10DJ104T	RES , CHIP	1608 SIZE
R225	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R226	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R227	CRJ10DF4300T	RES	
R231	CRJ10DF3920T	RES. CHIP (392R 1%)	1608 SIZE
R232	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R233	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R234	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R235	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R236	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R237	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R238	CRJ10DJ104T	RES , CHIP	1608 SIZE
R240	CRJ10DJ121T	RES , CHIP	1608 SIZE
R241	CRJ10DJ330T	RES , CHIP	1608 SIZE
R244	CRJ10DJ330T	RES , CHIP	1608 SIZE
R245	CRJ10DJ330T	RES , CHIP	1608 SIZE
R246	CRJ10DJ330T	RES , CHIP	1608 SIZE

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R247	CRJ10DJ330T	RES , CHIP	1608 SIZE
R248	CRJ10DJ330T	RES , CHIP	1608 SIZE
R249	CRJ10DJ330T	RES , CHIP	1608 SIZE
R250	CRJ10DJ330T	RES , CHIP	1608 SIZE
R251	CRJ10DJ433T	RES , CHIP	
R252	CRJ10DJ153T	RES , CHIP	
R253	CRJ10DJ303T	RES , CHIP	
R254	CRJ10DJ513T	RES , CHIP	51K
R259	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R260	CRJ10DJ472T	RES , CHIP	1608 SIZE
R262	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R263	CRJ10DJ472T	RES , CHIP	1608 SIZE
R264	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R265	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R266	CRJ10DJ472T	RES , CHIP	1608 SIZE
R267	CRJ10DJ472T	RES , CHIP	1608 SIZE
R268	CRJ10DJ472T	RES , CHIP	1608 SIZE
R269	CRJ10DJ102T	RES , CHIP	1608 SIZE
R270	CRJ10DJ102T	RES , CHIP	1608 SIZE
R271	CRJ10DJ103T	RES , CHIP	1608 SIZE
R272	CRJ10DJ102T	RES , CHIP	1608 SIZE
R273	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R274	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R275	CRJ10DJ103T	RES , CHIP	1608 SIZE
R280	CRJ10DJ330T	RES , CHIP	1608 SIZE
R281	CRJ10DJ330T	RES , CHIP	1608 SIZE
R282	CRJ10DJ330T	RES , CHIP	1608 SIZE
R283	CRJ10DJ330T	RES , CHIP	1608 SIZE
R286	CRJ10DJ330T	RES , CHIP	1608 SIZE
R287	CRJ10DJ182T	RES , CHIP	
R288	CRJ10DJ182T	RES , CHIP	
R289	CRJ10DJ330T	RES , CHIP	1608 SIZE
R290	CRJ10DJ330T	RES , CHIP	1608 SIZE
R351	CRJ10DJ333T	RES , CHIP	1608 SIZE
R356	CRJ10DJ100T	RES , CHIP	1608 SIZE
R357	CRJ10DJ472T	RES , CHIP	1608 SIZE
R358	CRJ10DJ472T	RES , CHIP	1608 SIZE
R359	CRJ10DJ331T	RES , CHIP	
R360	CRJ10DJ331T	RES , CHIP	
R361	CRJ10DJ821T	RES , CHIP	1608 SIZE
R362	CRJ10DJ122T	RES , CHIP	1608 SIZE
R363	CRJ10DJ152T	RES , CHIP	1608 SIZE
R364	CRJ10DJ222T	RES , CHIP	1608 SIZE
R365	CRJ10DJ681T	RES , CHIP	1608 SIZE
R366	CRJ10DJ821T	RES , CHIP	1608 SIZE
R367	CRJ10DJ122T	RES , CHIP	1608 SIZE
R368	CRJ10DJ152T	RES , CHIP	1608 SIZE
R369	CRJ10DJ222T	RES , CHIP	1608 SIZE
R370	CRJ10DJ332T	RES , CHIP	1608 SIZE
R371	CRJ10DJ331T	RES , CHIP	
R372	CRJ10DJ331T	RES , CHIP	
R373	CRJ10DJ331T	RES , CHIP	
R374	CRJ10DJ331T	RES , CHIP	
R375	CRJ10DJ331T	RES , CHIP	
R376	CRJ10DJ331T	RES , CHIP	
R377	CRJ10DJ331T	RES , CHIP	
R378	CRJ10DJ331T	RES , CHIP	
R379	CRJ10DJ331T	RES , CHIP	
R380	CRJ10DJ331T	RES , CHIP	
R381	CRJ10DJ331T	RES , CHIP	
R382	CRJ10DJ331T	RES , CHIP	

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R384	CRJ10DJ222T	RES , CHIP	1608 SIZE
R385	CRJ10DJ680T	RES , CHIP	
R401	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R402	CRJ10DJ472T	RES , CHIP	1608 SIZE
R404	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R409	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R410	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R413	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R414	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R418	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R421	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R422	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R423	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R425	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R426	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R428	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R429	CRJ10DJ102T	RES , CHIP	1608 SIZE
R430	CRJ10DF1000T	RES , CHIP 1%	
R431	CRJ10DF1000T	RES , CHIP 1%	
R438	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R439	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R441	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R443	CRJ10DJ102T	RES , CHIP	1608 SIZE
R444	CRJ10DJ682T	RES , CHIP	1608 SIZE
R457	CRJ10DJ470T	RES , CHIP	1608 SIZE
R458	CRJ10DJ473T	RES , CHIP	1608 SIZE
R459	CRJ10DJ103T	RES , CHIP	1608 SIZE
R461	CRJ10DJ271T	RES , CHIP	1608 SIZE
R462	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R471	CRJ10DJ472T	RES , CHIP	1608 SIZE
R472	CRJ10DJ472T	RES , CHIP	1608 SIZE
R473	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R474	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R475	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R476	CRJ10DJ330T	RES , CHIP	1608 SIZE
R477	CRJ10DJ332T	RES , CHIP	1608 SIZE
R478	CRJ10DJ332T	RES , CHIP	1608 SIZE
R479	CRJ10DJ471T	RES , CHIP	1608 SIZE
R480	CRJ10DJ472T	RES , CHIP	1608 SIZE
R481	CRJ10DJ332T	RES , CHIP	1608 SIZE
R482	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R483	CRJ10DJ221T	RES , CHIP	1608 SIZE
R484	CRJ10DJ221T	RES , CHIP	1608 SIZE
R485	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R501	CRJ10DJ132T	RES , CHIP	1608 SIZE
R502	CRJ10DJ132T	RES , CHIP	1608 SIZE
R503	CRJ10DJ132T	RES , CHIP	1608 SIZE
R504	CRJ10DJ132T	RES , CHIP	1608 SIZE
R505	CRJ10DJ332T	RES , CHIP	1608 SIZE
R506	CRJ10DJ102T	RES , CHIP	1608 SIZE
R507	CRJ10DJ102T	RES , CHIP	1608 SIZE
R508	CRJ10DJ332T	RES , CHIP	1608 SIZE
R509	CRJ10DJ104T	RES , CHIP	1608 SIZE
R510	CRJ10DJ221T	RES , CHIP	1608 SIZE
R511	CRJ10DJ132T	RES , CHIP	1608 SIZE
R512	CRJ10DJ132T	RES , CHIP	1608 SIZE
R513	CRJ10DJ132T	RES , CHIP	1608 SIZE
R514	CRJ10DJ132T	RES , CHIP	1608 SIZE
R515	CRJ10DJ332T	RES , CHIP	1608 SIZE
R516	CRJ10DJ102T	RES , CHIP	1608 SIZE
R517	CRJ10DJ102T	RES , CHIP	1608 SIZE

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R518	CRJ10DJ332T	RES , CHIP	1608 SIZE
R519	CRJ10DJ104T	RES , CHIP	1608 SIZE
R520	CRJ10DJ221T	RES , CHIP	1608 SIZE
R521	CRJ10DJ132T	RES , CHIP	1608 SIZE
R522	CRJ10DJ132T	RES , CHIP	1608 SIZE
R523	CRJ10DJ132T	RES , CHIP	1608 SIZE
R524	CRJ10DJ132T	RES , CHIP	1608 SIZE
R525	CRJ10DJ332T	RES , CHIP	1608 SIZE
R526	CRJ10DJ102T	RES , CHIP	1608 SIZE
R527	CRJ10DJ102T	RES , CHIP	1608 SIZE
R528	CRJ10DJ332T	RES , CHIP	1608 SIZE
R529	CRJ10DJ104T	RES , CHIP	1608 SIZE
R530	CRJ10DJ221T	RES , CHIP	1608 SIZE
R531	CRJ10DJ132T	RES , CHIP	1608 SIZE
R532	CRJ10DJ132T	RES , CHIP	1608 SIZE
R533	CRJ10DJ132T	RES , CHIP	1608 SIZE
R534	CRJ10DJ132T	RES , CHIP	1608 SIZE
R535	CRJ10DJ332T	RES , CHIP	1608 SIZE
R536	CRJ10DJ102T	RES , CHIP	1608 SIZE
R537	CRJ10DJ102T	RES , CHIP	1608 SIZE
R538	CRJ10DJ332T	RES , CHIP	1608 SIZE
R539	CRJ10DJ104T	RES , CHIP	1608 SIZE
R540	CRJ10DJ221T	RES , CHIP	1608 SIZE
R541	CRJ10DJ132T	RES , CHIP	1608 SIZE
R542	CRJ10DJ132T	RES , CHIP	1608 SIZE
R543	CRJ10DJ132T	RES , CHIP	1608 SIZE
R544	CRJ10DJ132T	RES , CHIP	1608 SIZE
R545	CRJ10DJ332T	RES , CHIP	1608 SIZE
R546	CRJ10DJ102T	RES , CHIP	1608 SIZE
R547	CRJ10DJ102T	RES , CHIP	1608 SIZE
R548	CRJ10DJ332T	RES , CHIP	1608 SIZE
R549	CRJ10DJ104T	RES , CHIP	1608 SIZE
R550	CRJ10DJ221T	RES , CHIP	1608 SIZE
R551	CRJ10DJ132T	RES , CHIP	1608 SIZE
R552	CRJ10DJ132T	RES , CHIP	1608 SIZE
R553	CRJ10DJ132T	RES , CHIP	1608 SIZE
R554	CRJ10DJ132T	RES , CHIP	1608 SIZE
R555	CRJ10DJ332T	RES , CHIP	1608 SIZE
R556	CRJ10DJ102T	RES , CHIP	1608 SIZE
R557	CRJ10DJ102T	RES , CHIP	1608 SIZE
R558	CRJ10DJ332T	RES , CHIP	1608 SIZE
R559	CRJ10DJ104T	RES , CHIP	1608 SIZE
R560	CRJ10DJ221T	RES , CHIP	1608 SIZE
R561	CRJ10DJ132T	RES , CHIP	1608 SIZE
R562	CRJ10DJ132T	RES , CHIP	1608 SIZE
R563	CRJ10DJ132T	RES , CHIP	1608 SIZE
R564	CRJ10DJ132T	RES , CHIP	1608 SIZE
R565	CRJ10DJ332T	RES , CHIP	1608 SIZE
R566	CRJ10DJ102T	RES , CHIP	1608 SIZE
R567	CRJ10DJ102T	RES , CHIP	1608 SIZE
R568	CRJ10DJ332T	RES , CHIP	1608 SIZE
R569	CRJ10DJ104T	RES , CHIP	1608 SIZE
R570	CRJ10DJ221T	RES , CHIP	1608 SIZE
R571	CRJ10DJ132T	RES , CHIP	1608 SIZE
R572	CRJ10DJ132T	RES , CHIP	1608 SIZE
R573	CRJ10DJ132T	RES , CHIP	1608 SIZE
R574	CRJ10DJ132T	RES , CHIP	1608 SIZE
R575	CRJ10DJ332T	RES , CHIP	1608 SIZE
R576	CRJ10DJ102T	RES , CHIP	1608 SIZE
R577	CRJ10DJ102T	RES , CHIP	1608 SIZE
R578	CRJ10DJ332T	RES , CHIP	1608 SIZE

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R579	CRJ10DJ104T	RES , CHIP	1608 SIZE
R580	CRJ10DJ221T	RES , CHIP	1608 SIZE
R581	CRJ10DJ222T	RES , CHIP	1608 SIZE
R582	CRJ10DJ222T	RES , CHIP	1608 SIZE
R583	CRJ10DJ222T	RES , CHIP	1608 SIZE
R584	CRJ10DJ222T	RES , CHIP	1608 SIZE
R585	CRJ10DJ222T	RES , CHIP	1608 SIZE
R586	CRJ10DJ222T	RES , CHIP	1608 SIZE
R587	CRJ10DJ222T	RES , CHIP	1608 SIZE
R588	CRJ10DJ222T	RES , CHIP	1608 SIZE
R589	CRJ10DJ221T	RES , CHIP	1608 SIZE
R590	CRJ10DJ221T	RES , CHIP	1608 SIZE
R591	CRJ10DJ222T	RES , CHIP	1608 SIZE
R592	CRJ10DJ222T	RES , CHIP	1608 SIZE
R593	CRJ10DJ222T	RES , CHIP	1608 SIZE
R594	CRJ10DJ222T	RES , CHIP	1608 SIZE
R595	CRJ10DJ222T	RES , CHIP	1608 SIZE
R596	CRJ10DJ222T	RES , CHIP	1608 SIZE
R597	CRJ10DJ222T	RES , CHIP	1608 SIZE
R598	CRJ10DJ222T	RES , CHIP	1608 SIZE
R653	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R654	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R655	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R656	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R657	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R660	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R661	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R662	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R669	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R670	CRJ10DF82R0T	RES, CHIP 82OHM 1%	
R671	CRJ10DF82R0T	RES, CHIP 82OHM 1%	
R672	CRJ10DF82R0T	RES, CHIP 82OHM 1%	
R673	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R674	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R675	CRJ10DF82R0T	RES, CHIP 82OHM 1%	
R676	CRJ10DJ472T	RES , CHIP	1608 SIZE
R677	CRJ10DJ102T	RES , CHIP	1608 SIZE
R678	CRJ10DJ222T	RES , CHIP	1608 SIZE
R701	CRJ10DJ103T	RES , CHIP	1608 SIZE
R702	CRJ10DJ103T	RES , CHIP	1608 SIZE
R703	CRJ10DJ103T	RES , CHIP	1608 SIZE
R704	CRJ10DJ103T	RES , CHIP	1608 SIZE
R705	CRJ10DJ103T	RES , CHIP	1608 SIZE
R706	CRJ10DJ103T	RES , CHIP	1608 SIZE
R707	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R708	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R709	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R710	CRJ10DJ330T	RES , CHIP	1608 SIZE
R711	CRJ10DJ330T	RES , CHIP	1608 SIZE
R712	CRJ10DJ102T	RES , CHIP	1608 SIZE
R714	CRJ10DJ330T	RES , CHIP	1608 SIZE
R717	CRJ10DJ330T	RES , CHIP	1608 SIZE
R722	CRJ10DJ472T	RES , CHIP	1608 SIZE
R723	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R724	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R725	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R726	CRJ10DJ330T	RES , CHIP	1608 SIZE
R727	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R729	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R730	CRJ10DJ105T	RES , CHIP	1608 SIZE
R731	CRJ10DJ330T	RES , CHIP	1608 SIZE

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R732	CRJ10DJ330T	RES , CHIP	1608 SIZE
R734	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R735	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R737	CRJ10DJ471T	RES , CHIP	1608 SIZE
R752	CRJ10DJ330T	RES , CHIP	1608 SIZE
R757	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R758	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R759	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R760	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R761	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R762	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R763	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R764	CRJ10DJ472T	RES , CHIP	1608 SIZE
R765	CRJ10DJ224T	RES , CHIP	
R766	CRJ10DJ472T	RES , CHIP	1608 SIZE
R767	CRJ10DJ224T	RES , CHIP	
R768	CRJ10DJ472T	RES , CHIP	1608 SIZE
R769	CRJ10DJ224T	RES , CHIP	
R770	CRJ10DJ101T	RES , CHIP	1608 SIZE
R771	CRJ10DJ221T	RES , CHIP	1608 SIZE
R772	CRJ10DJ474T	RES , CHIP	1608 SIZE
R773	CRJ10DJ223T	RES , CHIP	1608 SIZE
R781	CRJ10DJ330T	RES , CHIP	1608 SIZE
R782	CRJ10DJ330T	RES , CHIP	1608 SIZE
R783	CRJ10DJ330T	RES , CHIP	1608 SIZE
R784	CRJ10DJ223T	RES , CHIP	1608 SIZE
R785	CRJ10DJ750T	RES , CHIP	1608 SIZE
R786	CRJ10DJ680T	RES , CHIP	
R787	CRJ10DJ121T	RES , CHIP	1608 SIZE
R788	CRJ10DJ101T	RES , CHIP	1608 SIZE
R789	CRJ10DJ3R3T	RES , CHIP	
R796	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R797	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R798	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R799	CRJ10DJ330T	RES , CHIP	1608 SIZE
R802	CRJ10DJ103T	RES , CHIP	1608 SIZE
R805	CRJ10DJ330T	RES , CHIP	1608 SIZE
R806	CRJ10DJ330T	RES , CHIP	1608 SIZE
R807	CRJ10DJ330T	RES , CHIP	1608 SIZE
R808	CRJ10DJ330T	RES , CHIP	1608 SIZE
R809	CRJ10DJ330T	RES , CHIP	1608 SIZE
R810	CRJ10DJ330T	RES , CHIP	1608 SIZE
R811	CRJ10DJ330T	RES , CHIP	1608 SIZE
R812	CRJ10DJ330T	RES , CHIP	1608 SIZE
R817	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R818	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R819	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R820	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R821	CRJ10DJ330T	RES , CHIP	1608 SIZE
R822	CRJ10DJ330T	RES , CHIP	1608 SIZE
R823	CRJ10DJ330T	RES , CHIP	1608 SIZE
R824	CRJ10DJ330T	RES , CHIP	1608 SIZE
R825	CRJ10DJ330T	RES , CHIP	1608 SIZE
R826	CRJ10DJ330T	RES , CHIP	1608 SIZE
R827	CRJ10DJ330T	RES , CHIP	1608 SIZE
R828	CRJ10DJ101T	RES , CHIP	1608 SIZE
R829	CRJ10DJ472T	RES , CHIP	1608 SIZE
R830	CRJ10DF4700T	RES, CHIP 470 OHM/1608/1%	
R831	CRJ10DJ103T	RES , CHIP	1608 SIZE
R832	CRJ10DJ103T	RES , CHIP	1608 SIZE
R833	CRJ10DJ182T	RES , CHIP	

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R834	CRJ10DJ182T	RES , CHIP	
R835	CRJ10DJ103T	RES , CHIP	1608 SIZE
R836	CRJ10DJ473T	RES , CHIP	1608 SIZE
R837	CRJ10DJ101T	RES , CHIP	1608 SIZE
R838	CRJ10DJ330T	RES , CHIP	1608 SIZE
R839	CRJ10DJ101T	RES , CHIP	1608 SIZE
R842	CRJ10DJ103T	RES , CHIP	1608 SIZE
R843	CRJ10DJ330T	RES , CHIP	1608 SIZE
R861	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R862	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R863	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R864	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R881	CRJ10DJ472T	RES , CHIP	1608 SIZE
R882	CRJ10DJ472T	RES , CHIP	1608 SIZE
R883	CRJ10DJ472T	RES , CHIP	1608 SIZE
R884	CRJ10DJ472T	RES , CHIP	1608 SIZE
R886	CRJ10DJ472T	RES , CHIP	1608 SIZE
R887	CRJ10DJ472T	RES , CHIP	1608 SIZE
R888	CRJ10DJ472T	RES , CHIP	1608 SIZE
R889	CRJ10DJ220T	RES , CHIP	1608 SIZE
R890	CRJ10DJ220T	RES , CHIP	1608 SIZE
X201	HOX27000E180S	CRYSTAL , CHIP(27MHZ,SMD)	HC-49/US
X701	COX13500E160S	X'TAL (13.5MHz) 16p	
C101	CCEA1EH470T	CAP , ELECT	47UF 25V
C103	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V
C107	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C108	CCEA1HH100T	CAP , ELECT	10UF 50V
C161	CCEA1CH221T	CAP , ELECT	220UF 16V
C164	CCEA1CH221T	CAP , ELECT	220UF 16V
C165	CCEA1HH100T	CAP , ELECT	10UF 50V
C174	CCEA1HH100T	CAP , ELECT	10UF 50V
C177	CCEA1EH470T	CAP , ELECT	47UF 25V
C201	CCEA1HH220T	CAP , ELECT	22UF 50V
C202	CCEA1HH220T	CAP , ELECT	22UF 50V
C213	CKKT1H104KB	CAP , CERAMIC	0.1UF 50V KB
C215	CCEA1CH101T	CAP , ELECT	100UF 16V
C219	CCEA1CH101T	CAP , ELECT	100UF 16V
C222	CCEA1CH101T	CAP , ELECT	100UF 16V
C224	CCEA1CH221T	CAP , ELECT	220UF 16V
C264	CCEA1EH470T	CAP , ELECT	47UF 25V
C266	CCEA1EH470T	CAP , ELECT	47UF 25V
C273	CCEA1EH470T	CAP , ELECT	47UF 25V
C283	CCEA1EH470T	CAP , ELECT	47UF 25V
C286	CCEA1EH470T	CAP , ELECT	47UF 25V
C307	CCEA1EH470T	CAP , ELECT	47UF 25V
C309	CCEA1CH101T	CAP , ELECT	100UF 16V
C311	CCEA1CH101T	CAP , ELECT	100UF 16V
C313	CCEA1CH101T	CAP , ELECT	100UF 16V
C315	CCEA1CH101T	CAP , ELECT	100UF 16V
C405	CCEA1CH471T	CAP , ELECT	470UF 16V
C410	CCEA1CH221T	CAP , ELECT	220UF 16V
C411	CCEA1CH221T	CAP , ELECT	220UF 16V
C416	CCEA1CH471T	CAP , ELECT	470UF 16V
C431	CCEA1CH101T	CAP , ELECT	100UF 16V
C436	CCEA1EH470T	CAP , ELECT	47UF 25V
C444	CCEA1HH101T	CAP , ELECT	100UF 50V
C447	CCEA1HH101T	CAP , ELECT	100UF 50V
C501	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C502	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C504	CCEA1CH101T	CAP , ELECT	100UF 16V
C507	CCEA1HH220T	CAP , ELECT	22UF 50V

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C511	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C512	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C514	CCEA1CH101T	CAP , ELECT	100UF 16V
C517	CCEA1HH220T	CAP , ELECT	22UF 50V
C521	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C522	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C524	CCEA1CH101T	CAP , ELECT	100UF 16V
C527	CCEA1HH220T	CAP , ELECT	22UF 50V
C531	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C532	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C534	CCEA1CH101T	CAP , ELECT	100UF 16V
C537	CCEA1HH220T	CAP , ELECT	22UF 50V
C541	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C542	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C544	CCEA1CH101T	CAP , ELECT	100UF 16V
C547	CCEA1HH220T	CAP , ELECT	22UF 50V
C551	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C552	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C554	CCEA1CH101T	CAP , ELECT	100UF 16V
C557	CCEA1HH220T	CAP , ELECT	22UF 50V
C561	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C562	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C564	CCEA1CH101T	CAP , ELECT	100UF 16V
C567	CCEA1HH220T	CAP , ELECT	22UF 50V
C571	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C572	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C574	CCEA1CH101T	CAP , ELECT	100UF 16V
C577	CCEA1HH220T	CAP , ELECT	22UF 50V
C634	CCEA1CH221T	CAP , ELECT	220UF 16V
C639	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C640	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C642	CCEA1EH470T	CAP , ELECT	47UF 25V
C643	CCEA1EH470T	CAP , ELECT	47UF 25V
C644	CCEA1AH331T	CAP , ELECT	330UF 10V
C645	CCEA1AH331T	CAP , ELECT	330UF 10V
C646	CCEA1HH220T	CAP , ELECT	22UF 50V
C647	CCEA1CH101T	CAP , ELECT	100UF 16V
C648	CCEA1HH220T	CAP , ELECT	22UF 50V
C649	CCEA1CH101T	CAP , ELECT	100UF 16V
C651	CCEA1CH101T	CAP , ELECT	100UF 16V
C652	CCEA1AH331T	CAP , ELECT	330UF 10V
C706	CCEA1CH101T	CAP , ELECT	100UF 16V
C717	CCEA1CH101T	CAP , ELECT	100UF 16V
C726	CCEA1CH101T	CAP , ELECT	100UF 16V
C727	CCEA1HH220T	CAP , ELECT	22UF 50V
C730	CCEA1CH101T	CAP , ELECT	100UF 16V
C731	CCEA1HH220T	CAP , ELECT	22UF 50V
C744	CCEA1CH101T	CAP , ELECT	100UF 16V
C745	CCEA1CH221T	CAP , ELECT	220UF 16V
C748	CCEA1CH221T	CAP , ELECT	220UF 16V
C749	CCEA1CH221T	CAP , ELECT	220UF 16V
C752	CCEA1CH221T	CAP , ELECT	220UF 16V
C756	CCEA1CH101T	CAP , ELECT	100UF 16V
C758	CCEA1CH101T	CAP , ELECT	100UF 16V
C760	CCEA1EH470T	CAP , ELECT	47UF 25V
C763	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C766	CCEA1HH100T	CAP , ELECT	10UF 50V
C767	CCEA1CH221T	CAP , ELECT	220UF 16V
C768	CCEA1HH3R3T	CAP , ELECT	3.3UF 50V
C771	CCEA1EH221T	CAP , ELECT	220UF 25V
C772	CCEA1EH221T	CAP , ELECT	220UF 25V

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C775	CCEA1CH221T	CAP , ELECT	220UF 16V
C776	CCEA1CH221T	CAP , ELECT	220UF 16V
C779	CCEA1CH221T	CAP , ELECT	220UF 16V
C781	CCEA1CH221T	CAP , ELECT	220UF 16V
C783	CCEA1CH221T	CAP , ELECT	220UF 16V
C786	CCEA1CH221T	CAP , ELECT	220UF 16V
C792	CCEA1CH101T	CAP , ELECT	100UF 16V
C795	CCEA1CH101T	CAP , ELECT	100UF 16V
C826	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C842	CCEA1HH220T	CAP , ELECT	22UF 50V
C881	CCEA1CH101T	CAP , ELECT	100UF 16V
D202	CVD1N4003SRT	DIODE , RECT	1N4003
D203	CVD1N4003SRT	DIODE , RECT	1N4003
D204	CVD1N4003SRT	DIODE , RECT	1N4003
D205	CVD1N4003SRT	DIODE , RECT	1N4003
D401	CVD1N4003SRT	DIODE , RECT	1N4003
D402	CVD1N4003SRT	DIODE , RECT	1N4003
D754	CVD1N4003SRT	DIODE , RECT	1N4003
Q106	HVTKTA1271YT	T.R	KTA1271Y
Q757	HVTKSA916YT	T.R	
Q784	HVTKTA1271YT	T.R	KTA1271Y
SW30	CST1A012ZT	SW , TACT	SKHV10910G
SW31	CST1A012ZT	SW , TACT	SKHV10910G
SW32	CST1A012ZT	SW , TACT	SKHV10910G
SW33	CST1A012ZT	SW , TACT	SKHV10910G
SW34	CST1A012ZT	SW , TACT	SKHV10910G
SW35	CST1A012ZT	SW , TACT	SKHV10910G
SW36	CST1A012ZT	SW , TACT	SKHV10910G
SW37	CST1A012ZT	SW , TACT	SKHV10910G
SW38	CST1A012ZT	SW , TACT	SKHV10910G
SW39	CST1A012ZT	SW , TACT	SKHV10910G
SW40	CST1A012ZT	SW , TACT	SKHV10910G
SW41	CST1A012ZT	SW , TACT	SKHV10910G
SW42	CST1A012ZT	SW , TACT	SKHV10910G
	CMD2A602	BRACKET , FL	
	CMY2A280	HEAT SINK	
	K8AYG6260	COMPOUND , SILICONE	
BN38	CWB1C903180EN	WIRE ASS'Y (3P, 180mm)	
BN51	CWB1C913120EN	WIRE ASS'Y(13P, 120mm)	
CN11	CJP07GA01ZY	WAFER , STRAIGHT(7PIN)	
CN16	CJP07GA01ZY	WAFER , STRAIGHT(7PIN)	
CN17	CJP17GA117ZY	WAFER	
CN18	CJP07HA37ZM	WAFER	
CN22	CJP04GA01ZY	WAFER , STRAIGHT(4PIN)	
CN35	CJP09GB113ZY	WAFER , 9PIN ANGLE CARD CABLE 1MM	
CN36	CJP09GB113ZY	WAFER , 9PIN ANGLE CARD CABLE 1MM	
CN37	CJP17GB113ZY	WAFER	
CN38	CJP03GB46ZY	WAFER , ANGLE(3PIN)	
CN41	CJP06GA19ZY	WAFER , STRAIGHT(DVD LOADER)	
CN42	CJP05GA19ZY	WAFER , STRAIGHT	
D352	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D353	CVD1L034FA22M0MA	L.E.D , AMBER DIFFUSED	1L034FA22M0MA001
D371	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D372	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D373	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D374	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D375	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D376	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D377	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D378	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D379	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201

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D380	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D381	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D382	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D384	CVD1L034FA22M0MA	L.E.D , AMBER DIFFUSED	1L034FA22M0MA001
D385	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
FIP3	CFL13BT231GINK	F.I.P , FUTABA	
IC36	CRVKSM603TH2E	SENSOR , REMOCON	KSM603TH2E
IC44	HVIKIA7808API	I.C , REGULATOR +8V	KIA7808 (KEC)
IC45	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
IC77	HVIKIA7809API	I.C , REGULATOR +9V	KIA7809 (KEC)
IC78	HVIKIA7909PI	I.C , REGULATOR (-9V)	
JK41	HJJ1D002Z	JACK , STEREO(2P 3.5PIE)	SR7400
JK51	CJJ4N067Z	JACK , 2P	RCA-201DAG-01
JK52	CJJ4R041Z	6P JACK, BOARD	RCA-601DAG-11
JK53	CJS9U011Z	JACK, OPTICAL+COXIAL(GOLD PLATE)	
JK61	CJJ9N006Z	JACK , S-VIDEO+CVBS(GOLD, 2P)	
JK62	CJJ4S036Z	JACK , BOARD	3P,G/B/R,GOLD
JW31	CWE7202100AR	WIRE ASS'Y	
X101	HOX08000E160C	CRYSTAL 8MHz	
X102	HOX08000E160C	CRYSTAL 8MHz	
	CTB3+10JFZR	SCREW	
	CTB3+6FFZR	SCREW	
	CTS3+8JFZR	SCREW	
	CTW3+8JR	SCREW	
	CUA2A279K1	CHASSIS , BOTTOM DVD39	
	CWZDVD39EUBN91A	EUR INLET WIRE ASS'Y	
	CWZDVD39BN91	WIRE ASS'Y(2P, 50MM)	
	HJJ8A003Z	RECEPTACLE,(2.5A 250V AC)	RF-180-BB
	KMC1A264	CUSHION , SHIELD	
F901	KBA2C2000TLEY	FUSE	EUR (2A/250V)
	KPL6500	STAPLE	

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Harman Kardon DVD 49/230 parts list			
Ref#	Component	Description	Drawing No
	CHE154	CLAMPER , ARM	
	CPG1A843W	BOX , OFFSET CARTON	
	CPS1A765	PAD , CENTER	DMC250
	CPS2A793	PAD , SNOW L	
	CPS2A794	PAD, SNOW R	
	CQB1A549Y	LABEL , ATTENTION DVD48	
	CQB1A551Z	LABEL , BAR CODE	
	CQB1A622	LABEL , SERIAL NO	
	CQB1A744Z	LABEL, DIVX	
	CQB1A876Z	LABEL , COUNTRY DVD29/230	
	CQXDVD49/230	INSTRUCTION MANUAL ASS'Y	
	CARTDVD49	REMOCON TRANSMITTER ASS'Y	
	CJA2B020Z	CORD , POWER	
	CJS0I006Z	CABLE, S-VHS(1.5M)	Y, C
	CJS4S004Z	CORD , PIN(3P,W/R/Y)	
	CJS8T001Z	CABLE, HDMI(2M)	CBADV-005-2
	CJS9D002Z	CORD , JACK(MONO) 1200MM	
	CQE1A172X	CARD , WARRANTY	USA VER
	CQX1A1305Z	MANUAL , INSTRUCTION DVD39/230	
	HQE1A273Z	HARMAN IMAGE BROCHURES	
	CGR1A411ZA	DVD DOOR ASS'Y(DMC250)	DMC250
	CGR1A410	ORNAMENT , DOOR	
	CGR1A411A25	DOOR , DVD	
	CGWDVD49/230	FRONT PANEL ASS'Y	
	CBT2A1029WA	DVD49 FUNCTION KNOB ASS'Y	
	CBT2A1029MMWB24	KNOB , FUNCTION DVD49	
	CGX1A383Z	SHEET , LED	
	CMH2A280	HOLDER , KNOB	
	CGB1A158Y	BADGE , FRONT HARMAN/KARDON	
	CGB1A189Z	BADGE , DVD49	
	CGL1A266Y	INDICATOR , POWER DVD29	
	CGW2A428UA	DVD49/230 FRONT PANEL ASS'Y	
	CBT1A1030MMZB17	KNOB , OPEN	
	CGU2A400A25Y	WIDNOW , FIP DVD49/230	
	CGW2A428R4UB24	PANEL , FRONT DVD49/230	
	CGX1A395C66	SHEET , AL FRONT DMC250	
	CHG1A305	CUSHION , SUPPORT	
	CMC1A341	PLATE , EARTH DMC250	
	CMD1A604	BRACKET , USB	
	CMD1A655	FRAME , FRONT	
	CMD1A682	BRACKET , HOLDER	
	CMZ1A118Z	FILTER , FIP	
	COP12023B	DVD49 USB PCB ASS'Y	
	CIP12023B	DVD49 USB PCB AUTO ASS'Y	
	CIP12023BSMD	DVD49 USB PCB SMD ASS'Y	
	CIP12023BBSMD	DVD49 USB PCB BOTTOM SMD ASS'Y	
C158	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C170	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
RN15	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN16	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN17	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN18	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN19	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN20	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN21	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN22	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN23	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
R151	CRJ10DJ103T	RES , CHIP	1608 SIZE
R152	CRJ10DJ103T	RES , CHIP	1608 SIZE
R173	CRJ10DJ301T	RES , CHIP	1608
R174	CRJ10DJ301T	RES , CHIP	1608
R175	CRJ10DJ301T	RES , CHIP	1608
R176	CRJ10DJ301T	RES , CHIP	1608

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	CIP12023BTSMD	DVD49 USB PCB SMD ASS'Y	
	CUP12023Z	PCB , USB(253X194, FR-4)	253X194, FR-4
CN15	CJP50GA205ZM	WAFER , MOLEX 51374 50PIN, 0.5mm STRAIGHT	MOLEX 51374 50PIN, 0.5MM
C151	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C152	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C153	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C155	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C156	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C161	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C162	CCUS1H680JA	CAP , CHIP	68PF 50V J
C163	CCUS1H680JA	CAP , CHIP	68PF 50V J
C164	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C165	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C171	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C173	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
FB16	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB17	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
IC15	HVITC4053BF	IC , 2CH. MULTI/DEMULTIPLXER	TC4053BF (TAPE)
IC16	HVITC4053BF	IC , 2CH. MULTI/DEMULTIPLXER	TC4053BF (TAPE)
IC17	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC18	CVIRT9702APB	IC , CURRENT LIMITER	
JK15	CJJ9Y002Z	JACK , CARD SOCKET(4 IN 1)	
JK16	CJJ9Y001Z	JACK , CF CARD SOCKET	RJ-006TC
RN11	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN12	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN13	CRJ104DJ301T	RES , ARRAY 300R (1608*4)	
RN14	CRJ104DJ750T	RES , ARRAY 75R (1608*4)	
RN24	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN25	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN26	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN27	CRJ104DJ750T	RES , ARRAY 75R (1608*4)	
RN28	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
R153	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R154	CRJ10DJ103T	RES , CHIP	1608 SIZE
R157	CRJ10DJ103T	RES , CHIP	1608 SIZE
R158	CRJ10DJ103T	RES , CHIP	1608 SIZE
R159	CRJ10DJ104T	RES , CHIP	1608 SIZE
R160	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R161	CRJ10DJ750T	RES , CHIP	1608 SIZE
R162	CRJ10DJ103T	RES , CHIP	1608 SIZE
R163	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R164	CRJ10DJ103T	RES , CHIP	1608 SIZE
R165	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R166	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R167	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R168	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R169	CRJ10DJ202T	RES , CHIP	
R170	CRJ10DJ202T	RES , CHIP	
R171	CRJ10DJ202T	RES , CHIP	
R172	CRJ10DJ202T	RES , CHIP	
R177	CRJ10DJ750T	RES , CHIP	1608 SIZE
R178	CRJ10DJ103T	RES , CHIP	1608 SIZE
R179	CRJ10DJ270T	RES , CHIP	
R180	CRJ10DJ270T	RES , CHIP	
R181	CRJ10DJ273T	RES , CHIP	
R182	CRJ10DJ273T	RES , CHIP	
R183	CRJ10DJ104T	RES , CHIP	1608 SIZE
C154	CCEA1EH470T	CAP , ELECT	47UF 25V
C157	CCEA1EH470T	CAP , ELECT	47UF 25V
C159	CCEA1EH470T	CAP , ELECT	47UF 25V
C160	CCEA1EH470T	CAP , ELECT	47UF 25V
C167	CCEA1HKS100T	CAP , ELECT	10UF 50V SMALL SIZE
C168	CCEA1HKS100T	CAP , ELECT	10UF 50V SMALL SIZE
C169	CCEA1CH221T	CAP , ELECT	220UF 16V
C172	CCEA1CH101T	CAP , ELECT	100UF 16V
C174	CCEA1CH101T	CAP , ELECT	100UF 16V

DVD 49

D151	CVD1N4003SRT	DIODE , RECT	1N4003
	CMX1A227	SHEET , CARD DMC250	
	KMC1A267	TAPE , EMI GASKET	
BN16	CWZDVD49BN16	WIRE ASS'Y	
JK17	HJJ9X001Z	JACK, USB	
JW11	CWE8202080RV	WIRE ASS'Y(1P)	
JW12	CWE8202080RV	WIRE ASS'Y(1P)	
	CTB3+10JR	SCREW	
	CTB3+6JR	SCREW	
	CTB3+8JR	SCREW	
	CTS3+8JFZR	SCREW	
	CWC4F2A09A080B	CABLE , CARD (9P, 60mm, 1.0mm PITCH)	9P, 60MM, 1.0MM PITCH
	CWC4F2A17A180B	CABLE , CARD (17P, 180mm, 1.0mm PITCH)	17P, 180MM, 1.0MM PITCH
	CWE8102050RR	RING WIRE ASS'Y	
	C8AAK81	BOND , LOCK	
	KMC1A267	TAPE , EMI GASKET	
	CKC1A182S60	CABINET , TOP DVD29	
	CMX1A180Z	INSULATOR	
	CQB1A644Z	LABEL , ORIGIN	
	CTB3+8JFZR	SCREW	
	CTS3+8JFZR	SCREW	
	CUADVD49/230	BOTTOM CHASSIS ASS'Y	
	CADDVD39ZA	DVD MECHANISM ASA ASS'Y	
	CADSDL003VA	DVD LOADER ASS'Y	
	CADSDL003Z	LOADER	
	CJDDM3481A	ASA TRAVERSE PICK UP ASS'Y	SF-HD850G
	CMH1A250	GUIDE, CABLE	
	CWB1B905150EE	WIRE ASS'Y	
	CWB5A906150SE	WIRE ASS'Y	
	CWC4G2A24G300B	CABLE , CARD DVD(0.5mm PITCH, A-B)	DMC250
	CHG1A373	CUSHION , FOOT AVR350	
	CKF9A303SK1	PANEL , REAR DVD49/230	
	CKL1A098	FOOT , L	
	CKL1A099	FOOT , R	
	CUP12022Z	PCB , SMPS(163X247, FR-1)	163X247, FR-1
C902	CCEA1HH220TS	CAP , ELECT	50V/22UF/105'C
C903	CCEA1HH220TS	CAP , ELECT	50V/22UF/105'C
C904	CCEA1HH220TS	CAP , ELECT	50V/22UF/105'C
C905	CCEA1HHR47TS	CAP , ELECT	
C906	CCEA1HHR47TS	CAP , ELECT	
C907	HCQI2A472JZT	Capacitor, Mylar 100V 4700pF	
C908	HCQI2A472JZT	Capacitor, Mylar 100V 4700pF	
C931	CCEA1AH471TS	CAP , ELECT	10V/470UF/105'C
C932	CCEA1AH471TS	CAP , ELECT	10V/470UF/105'C
C933	CCEA1HH1R0TS	CAP , ELECT	50V/1.0UF/105'C
C934	CCKT3A102KBL	CAP , CERAMIC	EKR3A102K05FK5
C935	CCUMT1H104KB	CAP , MONO	50V 104 K
C936	CCEA1HH470TS	CAP , ELECT	50V/47UF/105'C
C937	CCEA1HH470TS	CAP , ELECT	50V/47UF/105'C
C938	CCUMT1H104KB	CAP , MONO	50V 104 K
C952	CCEA1AH471TS	CAP , ELECT	10V/470UF/105'C
C953	CCEA1HH1R0TS	CAP , ELECT	50V/1.0UF/105'C
C955	CCEA1AH471TS	CAP , ELECT	10V/470UF/105'C
C960	CCEA1EH331TS	CAP , ELECT	25V/330UF/105'C
C962	CCEA1EH101TS	CAP , ELECT	25V/100UF/105'C
C963	CCEA1EH331TS	CAP , ELECT	25V/330UF/105'C
C967	CCKT3A102KBL	CAP , CERAMIC	EKR3A102K05FK5
D906	CVDZJ20BT	DIODE , ZENER	
D907	CVDZJ20BT	DIODE , ZENER	
D908	CVDZJ20BT	DIODE , ZENER	
D909	CVDZJ16BT	DIODE , ZENER 16V	
D942	CVD1SS133MT	DIODE	1SS133
D945	CVDZJ2.7BT	DIODE , ZENER	
FH91	KJCFC5S	HOLDER , FUSE	
FH92	KJCFC5S	HOLDER , FUSE	
IC95	HVIKIA431BAT	I.C , REGULATOR	KIA431B

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IC96	HVIKIA431BAT	I.C , REGULATOR	KIA431B
J901	C3A206	WIRE , COPPER	SN95/PB5 , 0.6
J921	C3A206	WIRE , COPPER	SN95/PB5 , 0.6
J924	C3A206	WIRE , COPPER	SN95/PB5 , 0.6
L931	CLZ9Z074Z	COIL , CHOKE(20uH)	
L932	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L933	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L936	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
L937	CLZ9Z040Y	COIL , CHOCK(6.8uH)	6700F-6R8M
Q901	HVTKSA708YT	T.R	KSA708Y
Q931	HVTKRC102MT	T.R	KRC102M
Q933	HVTKSA708YT	T.R	KSA708Y
Q934	CVTKTN2222A	T.R , SWITCHING	KTN2222A
R901	KROS1TJ105V	RES , METAL FILM (1/2W , 1M OHM)	
R911	CRD25TJ100T	RES , CARBON	
R912	CRD20TJ470T	RES , CARBON	47 OHM 1/5W J
R913	CRD20TJ204T	RES , CARBON	
R915	CRD20TJ101T	RES , CARBON	100 OHM 1/5W J
R921	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J
R922	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R923	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R924	CRD20TJ274T	RES , CARBON	
R931	CRD20TJ101T	RES , CARBON	100 OHM 1/5W J
R932	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R933	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R934	CRD20TF3481T	RES , CARBON	
R935	CRD20TF3001T	RES , CARBON	3K 1/5W F
R936	CRD20TF1003T	RES , CARBON	
R938	CRD20TF1003T	RES , CARBON	
R939	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R940	CRD20TJ153T	RES , CARBON	15K OHM 1/5W J
R941	CRD20TJ751T	RES , CARBON	750 OHM 1/5W J
R945	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R946	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R951	CRD20TJ181T	RES , CARBON	180 OHM 1/5W J
R953	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R954	CRD20TF3301T	RES , CARBON	3.3K /1/5W/F
R956	CRD20TF3001T	RES , CARBON	3K 1/5W F
R957	CRD20TF1003T	RES , CARBON	
CN91	CJP02KA060ZY	WAFER	
CN95	CJP13GA19ZY	WAFER, STRAIGHT, 13PIN	
CX91	HCQF2E104KZE	CAP , POLYPROPYLENE FILM	
CX92	HCQF2E104KZE	CAP , POLYPROPYLENE FILM	
CY91	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY92	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY93	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
CY94	CCKDHS102ME	CAP , CERAMIC (400V Y-CAP)	SDE2G102M10FF7
C901	CCET400VK3J101NKZ	CAP , ELECT(100uF/400V,25X25,K3J)	100UF/400V,25X25,K3J
C909	CCKT3A222KBL	CAP , CERAMIC	EKR3A222K05FK5
C910	CCKT3A222KBL	CAP , CERAMIC	EKR3A222K05FK5
C951	CCEA1CH222ES	CAP , ELECT	
C954	CCEA1CH222ES	CAP , ELECT	
C961	CCEA1EH681ES	E.CAP 25V 680uF, 105'C	
D901	HVDRL207T	DIODE	RL207T
D902	HVDRL207T	DIODE	RL207T
D903	HVDRL207T	DIODE	RL207T
D904	HVDRL207T	DIODE	RL207T
D911	HVDFR107T	DIODE , F-R	
D912	HVDFR107T	DIODE , F-R	
D913	HVDFR107T	DIODE , F-R	
D914	HVDFR107T	DIODE , F-R	
D931	HVD11EQ06T	DIODE , SCHOTTKY (60V/1A)	11EQ06
D932	HVD11EQ06T	DIODE , SCHOTTKY (60V/1A)	11EQ06
D933	HVDUF4004T	DIODE , SCHOTTKY	UF4004
D935	HVD31DQ06H	DIODE	31DQ06-FC5
D936	HVD31DQ10FC5	DIODE , SCHOTTKY (100V/3A)	31DQ10

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D939	HVDUF4007T	DIODE , SCHOTTKY	UF4007
D940	CVDUF5407H	DIODE , ULTRA FAST RECTIFIERS(800V, 3A)	
IC91	CVIICE3B0365J	IC, CoolSET ICE3B0365J	ICE3B0365J DIP-8P
IC92	CVIICE2B265	IC , COOLSET	
LF91	CLZ9Z087Z	FILTER , LINE(DMC250)	CVA30180J
LF92	CLZ9Z072Z	LINE FILTER (DVD-S1700)	
PC91	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
PC92	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
PC93	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
R910	CRG1ANJ154H	RES , METAL OXIDE FILM (150K J 1W 15mm M Type)	
R914	CRG1ANJ2R2B	RES , METAL OXIDE(2.2/1W)	
R925	CRW1PJ0R7V	RES , WIRE WOUND(1W/0.7ohm)	
R926	KRG2SANJ683H	RES , METAL OXIDE FILM	2W 68K OHM MINI
R937	CRG1ANJ220R	RES , METAL OXIDE FILM(1W, 20ohm V)	
R942	CRG1ANJ101R	RES , METAL OXIDE FILM (100 J 1W 5mm R Type)	
R943	CRG1ANJ220H	RES , METAL OXIDE FILM	22 OHM 1W J
R958	CRG1ANJ361R	RES , METAL OXIDE(360/1W)	
R961	CRG1ANJ101R	RES , METAL OXIDE FILM (100 J 1W 5mm R Type)	
R965	CRG1ANJ102R	RES , METAL OXIDE(1K/1W)	
TF91	CLT9Z042ZE	TRANS , SWITCHING DVD49	
TF92	CLT9Z043ZE	TRANS , SWITCHING DVD49	
TH91	KRT10D9MSFT	THERMISTER	
VT91	CRVSVC471D14A	VARISTOR	SVC471D14A
	COP12064D	DVD49/230 FRONT/MAIN PCB ASS'Y	
C168	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C204	CCUS1H050CA	CAP , CHIP	5PF 50V C
C205	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C206	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C207	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C208	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C209	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C212	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C214	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C220	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C221	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C223	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C226	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C228	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C240	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C241	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C242	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C243	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C260	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C261	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C262	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C263	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C267	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C268	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C269	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C270	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C271	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C272	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C274	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C275	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C276	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C277	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C278	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C280	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C281	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C282	CCUS1H101JA	CAP , CHIP	100PF 50V J
C284	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C285	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C287	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C288	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C289	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C290	CCUS1H103KC	CAP , CHIP	0.01UF 50V K

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C291	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C292	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C293	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C294	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C295	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C296	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C297	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C298	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C299	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C300	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C301	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C302	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C303	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C312	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C351	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C352	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C353	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C354	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C357	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C359	CCUS1H220JA	CAP , CHIP	22PF 50V J
C361	CCUS1H220JA	CAP , CHIP	22PF 50V J
C363	CCUS1H220JA	CAP , CHIP	22PF 50V J
C505	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C515	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C525	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C535	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C545	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C555	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C565	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C575	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C601	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C602	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C603	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C604	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C609	CCUS1H222KC	CAP , CHIP	2200PF 50V K
C610	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C611	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C617	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C618	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C619	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C623	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C624	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C635	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C636	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C650	CCUS1H560JA	CAP , CHIP	56PF 50V J
C701	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C702	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C703	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C704	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C707	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C708	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C709	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C710	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C711	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C712	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C713	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C714	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C715	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C716	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C718	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C719	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C720	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C721	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C724	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C725	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C732	CCUS1H104KC	CAP , CHIP	0.1UF 50V K

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C733	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C734	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C735	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C736	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C737	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C738	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C739	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C740	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C757	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C759	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C764	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C765	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C787	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C788	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C801	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C802	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C803	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C805	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C806	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C807	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C808	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C809	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C810	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C812	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C814	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C815	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C817	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C818	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C820	CCUS1H102KC	CAP , CHIP	1000PF 50V K
FB23	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB30	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB32	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB33	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB34	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
R239	CRJ10DF2002T	RES , CHIP 1%	
R255	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R261	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R353	CRJ10DJ681T	RES , CHIP	1608 SIZE
R607	CRJ10DJ472T	RES , CHIP	1608 SIZE
R628	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R629	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R630	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R631	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R713	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R715	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R775	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R776	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R777	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R778	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R974	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R975	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R976	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R977	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
	CUP12064Z	PCB , FRONT/MAIN DVD39/230(278X247 , FR4/2)	
BD81	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD82	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD83	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
BD84	CLZ9R009Z	CHOKE COIL, CHIP (FOR HDMI)	
CN26	CJP50GA205ZM	WAFER , MOLEX 51374 50PIN, 0.5mm STRAIGHT	MOLEX 51374 50PIN, 0.5MM
CN43	CJP24GA195ZM	SMT FFC/FPC WAFER(0.5MM PITCH)	52559-2472 (PB FREE)
C102	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C104	CCUS1H151JA	CAP , CHIP	150PF 50V J
C105	CCUS1H150JA	CAP , CHIP(15PF/50V)	15PF 50V J
C106	CCUS1H150JA	CAP , CHIP(15PF/50V)	15PF 50V J
C162	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C163	CCUS1H104KC	CAP , CHIP	0.1UF 50V K

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C166	CCUS1H220JA	CAP , CHIP	22PF 50V J
C167	CCUS1H220JA	CAP , CHIP	22PF 50V J
C169	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C170	CCUS1H221JA	CAP , CHIP	220PF 50V J
C171	CCUS1H221JA	CAP , CHIP	220PF 50V J
C172	CCUS1H221JA	CAP , CHIP	220PF 50V J
C173	CCUS1H221JA	CAP , CHIP	220PF 50V J
C175	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C176	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C181	CCUS1H101JA	CAP , CHIP	100PF 50V J
C182	CCUS1H101JA	CAP , CHIP	100PF 50V J
C203	CCUS1H330JA	CAP , CHIP	33PF 50V J
C210	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C211	CCUS1H030CA	CAP , CHIP(50V/3PF)	
C216	CCUS1H200JA	CAP , CHIP	
C217	CCUS1H200JA	CAP , CHIP	
C225	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C227	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C229	CCUS1H330JA	CAP , CHIP	33PF 50V J
C230	CCUS1H330JA	CAP , CHIP	33PF 50V J
C231	CCUS1H330JA	CAP , CHIP	33PF 50V J
C232	CCUS1H330JA	CAP , CHIP	33PF 50V J
C233	CCUS1H330JA	CAP , CHIP	33PF 50V J
C234	CCUS1H330JA	CAP , CHIP	33PF 50V J
C235	CCUS1H330JA	CAP , CHIP	33PF 50V J
C236	CCUS1H330JA	CAP , CHIP	33PF 50V J
C237	CCUS1H330JA	CAP , CHIP	33PF 50V J
C238	CCUS1H330JA	CAP , CHIP	33PF 50V J
C239	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C244	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C245	CCUS1H330JA	CAP , CHIP	33PF 50V J
C246	CCUS1H330JA	CAP , CHIP	33PF 50V J
C247	CCUS1H330JA	CAP , CHIP	33PF 50V J
C248	CCUS1H330JA	CAP , CHIP	33PF 50V J
C265	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C279	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C304	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C305	CCUS1H101JA	CAP , CHIP	100PF 50V J
C306	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C308	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C310	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C314	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C358	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C360	CCUS1H220JA	CAP , CHIP	22PF 50V J
C362	CCUS1H220JA	CAP , CHIP	22PF 50V J
C364	CCUS1H221JA	CAP , CHIP	220PF 50V J
C365	CCUS1H221JA	CAP , CHIP	220PF 50V J
C401	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C403	CCUS1H273KC	CAP , CHIP	0.027UF 50V K
C406	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C408	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C412	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C415	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C424	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C425	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C426	CCUS1H101JA	CAP , CHIP	100PF 50V J
C427	CCUS1H101JA	CAP , CHIP	100PF 50V J
C430	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C432	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C433	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C434	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C435	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C440	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C441	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C442	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C443	CCUS1H104KC	CAP , CHIP	0.1UF 50V K

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C445	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C446	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C503	CCUS1H391JA	CAP , CHIP	390PF 50V J
C506	CCUS1H391JA	CAP , CHIP	390PF 50V J
C508	CCUS1H101JA	CAP , CHIP	100PF 50V J
C513	CCUS1H391JA	CAP , CHIP	390PF 50V J
C516	CCUS1H391JA	CAP , CHIP	390PF 50V J
C518	CCUS1H101JA	CAP , CHIP	100PF 50V J
C523	CCUS1H391JA	CAP , CHIP	390PF 50V J
C526	CCUS1H391JA	CAP , CHIP	390PF 50V J
C528	CCUS1H101JA	CAP , CHIP	100PF 50V J
C533	CCUS1H391JA	CAP , CHIP	390PF 50V J
C536	CCUS1H391JA	CAP , CHIP	390PF 50V J
C538	CCUS1H101JA	CAP , CHIP	100PF 50V J
C543	CCUS1H391JA	CAP , CHIP	390PF 50V J
C546	CCUS1H391JA	CAP , CHIP	390PF 50V J
C548	CCUS1H101JA	CAP , CHIP	100PF 50V J
C553	CCUS1H391JA	CAP , CHIP	390PF 50V J
C556	CCUS1H391JA	CAP , CHIP	390PF 50V J
C558	CCUS1H101JA	CAP , CHIP	100PF 50V J
C563	CCUS1H391JA	CAP , CHIP	390PF 50V J
C566	CCUS1H391JA	CAP , CHIP	390PF 50V J
C568	CCUS1H101JA	CAP , CHIP	100PF 50V J
C573	CCUS1H391JA	CAP , CHIP	390PF 50V J
C576	CCUS1H391JA	CAP , CHIP	390PF 50V J
C578	CCUS1H101JA	CAP , CHIP	100PF 50V J
C607	CCUS1C154KC	CAP , CHIP	0.15UF 16V K
C608	CCUS1H123KC	CAP , CHIP(1608, 50V/12NF)	1608, 50V/12NF
C612	CCUS1H222KC	CAP , CHIP	2200PF 50V K
C614	CCUS1A105KC	CAP , CHIP	1UF 10V K
C615	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C620	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C626	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C627	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C628	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C629	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C630	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C632	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C633	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C637	CCUS1H560JA	CAP , CHIP	56PF 50V J
C638	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C641	CCUS1H220JA	CAP , CHIP	22PF 50V J
C653	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C654	CCUS1H470JA	CAP , CHIP	47PF 50V J
C655	CCUS1H470JA	CAP , CHIP	47PF 50V J
C656	CCUS1H470JA	CAP , CHIP	47PF 50V J
C657	CCUS1H470JA	CAP , CHIP	47PF 50V J
C658	CCUS1H470JA	CAP , CHIP	47PF 50V J
C659	CCUS1H470JA	CAP , CHIP	47PF 50V J
C682	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C683	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C686	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C687	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C690	CCUS1H123KC	CAP , CHIP(1608, 50V/12NF)	1608, 50V/12NF
C691	CCUS1C154KC	CAP , CHIP	0.15UF 16V K
C693	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C705	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C722	CCUS1H180JA	CAP , CHIP(18PF/50V)	18PF 50V J
C723	CCUS1H180JA	CAP , CHIP(18PF/50V)	18PF 50V J
C728	CCUS1H103KC	CAP , CHIP	0.01UF 50V K
C729	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C741	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C742	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C743	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C746	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C747	CCUS1H104KC	CAP , CHIP	0.1UF 50V K

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C750	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C751	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C755	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C761	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C762	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C773	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C774	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C777	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C778	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C780	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C782	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C784	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C785	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C789	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C791	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C793	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C794	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C796	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C797	CCUS1H221JA	CAP , CHIP	220PF 50V J
C798	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C804	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C811	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C813	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C816	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C819	CCUS1H102KC	CAP , CHIP	1000PF 50V K
C821	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C822	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C823	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C824	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C825	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C827	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C840	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C841	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C843	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C844	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C845	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C846	CCSJA0J220B	CAP , CHIP TANTAL(A TYPE, 22uF/6.3V, ELNA)	
C847	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C848	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C849	CCSJA1C100B	CAP , CHIP TANTAL(A TYPE, 10uF/16V, ELNA)	
C852	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C882	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C918	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
C919	CCUS1H104KC	CAP , CHIP	0.1UF 50V K
D103	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D104	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D105	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D106	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D107	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D108	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D109	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D110	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D111	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D112	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D115	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D116	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D117	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D411	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D412	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D751	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D752	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
D753	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	RLS4148 TE-11
FB11	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB17	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB21	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB22	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40

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FB25	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB26	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB27	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB28	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB29	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB31	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB35	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB36	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB37	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB38	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB39	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB40	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB41	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB42	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB43	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB44	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB45	CLZ9R006Z	FERRITE , CHIP BEAD(220ohm, 2012)	HCB2012KF-221T25
FB46	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB49	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB50	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB51	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB52	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB53	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB54	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB55	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB56	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB57	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB58	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB59	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB60	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB61	CLZ9R005Z	FERRITE , CHIP BEAD(60ohm, 1608)	HCB1608KF-600T30
FB62	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB63	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB64	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB65	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB66	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB69	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB70	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB71	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB72	CLZ9R005Z	FERRITE , CHIP BEAD(60ohm, 1608)	HCB1608KF-600T30
FB73	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB75	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB76	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB77	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB78	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB79	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB80	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB81	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB82	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB83	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB84	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB85	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB86	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB87	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB88	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB89	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB90	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB91	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB92	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
FB93	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	HCB2012KF-600T40
IC11	HVIST72F324K2	IC,FLASH (ST)	
IC12	HVITC74HCT7007F	I.C	TC74HC7007AFEL
IC13	CVIT5CB5PQ	I.C , MCU (FLASH 61440 bytes PQFP64)	
IC14	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC21	CVIZR36888HLCGS	I.C , MPEG	256PIN, VADDIS 888-HLCG
IC22	CVIES29LV320ET70TG	I.C , FLASH ROM 32Mbit IC (TOP BOOST)	ES29LV320ET70TG

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IC23	HVIM12L64164A7T	IC, 64M SDRAM (4X16)	
IC24	HVIAT24C08N10SC	I.C	AT24C08N10SC2.7
IC25	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC26	CVIKIA1117S18	I.C , REGULATOR(SOT-223)	KIA1117S/F18, SOT-223
IC27	HVTHN1K05FU	MOS FET	HN1K05FU
IC41	HVIAM5888SLF	I. C , Motor Driver(AMtek,Pb free)	AM5888S L/F
IC42	HVITL3472IDR	IC,OP AMP 8-SOIC (TI)	
IC52	HVI74LVC157ADBR	I.C , MULTIPLEXER	SN74LVC157A
IC53	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC54	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC55	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC56	HVINJM2068MDTE1	I.C , OP AMP	NJM2068MD-TE1
IC57	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC58	HVIKIC7S66FU	i.c , SWITCH(USV PACKAGE)	KIC7S66FU-RTK/3
IC60	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC61	CVIADV7342BSTZ	I.C , VIDEO ENCODER	ADV7342BSTZ
IC62	BVIBH7862FS	IC , 6CH VIDEO DRIVER	ROHM (BH7862FS)
IC64	CVIKIA1117S18	I.C , REGULATOR(SOT-223)	KIA1117S/F18, SOT-223
IC65	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC66	HVIBU2098F	IC , I2C BUS	ROHM
IC71	CVIFLI2310LFCF	I/P CONVERTER, FLI2310-LF-CF	FLI2310-LF-CF
IC72	CVIW9864G2GH6	SDRAM , 64M(512K x 4Banks x 32bit) 6nS	
IC73	BVIBA33BC0FP	I,C , REGULATOR(3.3V SMD Type)	ROHM 3.3V SMD
IC74	BVIBA18BC0FP	I.C , REGULATOR CHIP (1.8V)	BA18BC0FP-E2
IC75	HVICS4382-KQ	I.C , DAC	CS4382-KQ
IC76	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC79	CVIKIA1117S50	I.C , REGULATOR(SOT-223)	KIA1117S50-RTK/P
IC80	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC81	CVISII9030CTU7	I.C , HDMI TX	
IC82	HVTHN1K02FUTE85	TR , MOS FET (S-MOS)	HN1K02FU-TE85L
IC83	HVIKIC7SZ08FU	I.C ,INPUT AND GATE (USV PACKAGE)	KIC7SZ08FU-RTK
IC85	HVIKIC7SH08FU	HIGH SPEED 2 INPUT AND GATE (USV PACKAGE)	KIC7SH08FU-RTK
IC86	CVIKIA1117S18	I.C , REGULATOR(SOT-223)	KIA1117S/F18, SOT-223
IC87	CVIKIA1117S33	I.C , REGULATOR(SOT-223)	KIA1117S/F33, SOT-223
IC90	HVISN74AHC541PW	OCTAL BUFFERS IC(TSSOP-20 PKG)	SN74AHC541PWR
IC95	HVISN74AHC541PW	OCTAL BUFFERS IC(TSSOP-20 PKG)	SN74AHC541PWR
IC96	HVISN74AHC541PW	OCTAL BUFFERS IC(TSSOP-20 PKG)	SN74AHC541PWR
JK81	HJJ9H003Z	JACK , HDMI(JALCO)	YKF45-7009
L401	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L402	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L403	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L601	HLQ06E100KRZ	INDUCTOR , CHIP	3225 SIZE
L602	CLQ08ER68KRZ	COIL , CHIP(0.68uH, 2012)	FCI2012F-R68K
L603	CLQ08ER39KRZ	COIL , CHIP(0.39uH, 2012)	FCI2012F-R39K
L604	CLQ08ER68KRZ	COIL , CHIP(0.68uH, 2012)	FCI2012F-R68K
Q103	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q104	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q105	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q107	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q111	HVTKTA1504SYRTK	T.R , CHIP	KTA1504S Y RTK
Q112	HVTKTC3875SYRTK	T.R , CHIP	KTC3875S Y RTK
Q115	HVTKRC107S	T.R , CHIP	
Q351	HVTKRA107ST	T.R , CHIP	KRA107S
Q352	HVTKRA107ST	T.R , CHIP	KRA107S
Q401	HVTKRA107ST	T.R , CHIP	KRA107S
Q410	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q411	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q412	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q413	HVTKTA1664YP	T.R	
Q414	HVTKTA1664YP	T.R	
Q581	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q582	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q583	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q584	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q585	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q586	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304

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Q587	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q588	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q591	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q592	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q593	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q594	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q595	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q596	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q597	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q598	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q601	HVTKTA2014GR	T.R , CHIP	TRPNPB-R2
Q602	HVTKTA2014GR	T.R , CHIP	TRPNPB-R2
Q603	HVTKTA2014GR	T.R , CHIP	TRPNPB-R2
Q604	HVTKTA2014GR	T.R , CHIP	TRPNPB-R2
Q605	HVTKTA2014GR	T.R , CHIP	TRPNPB-R2
Q606	HVTKRA107ST	T.R , CHIP	KRA107S
Q607	HVTKTD1304T	T.R , CHIP (MUTE)	KTD1304
Q751	HVTKRC107S	T.R , CHIP	
Q752	HVTKRA107ST	T.R , CHIP	KRA107S
Q753	HVTKRA107ST	T.R , CHIP	KRA107S
Q754	HVTKRA107ST	T.R , CHIP	KRA107S
Q755	HVTKRC107S	T.R , CHIP	
Q756	HVTKRA107ST	T.R , CHIP	KRA107S
Q781	HVT2N3904SP	TR, CHIP (KEC)	2N3904S-RTK/PS
Q801	CVTKRC103S	T.R , CHIP	
Q901	CVTKRC103S	T.R , CHIP	
RN21	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN22	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN23	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN24	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN61	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN62	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN63	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN64	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN65	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN66	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN67	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN71	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN72	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN73	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN74	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN75	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN76	CRJ104DJ103T	RES, ARRAY, 10K (1608)	10K(1608)
RN77	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN78	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN79	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN80	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN81	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN82	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN83	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN84	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN85	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN86	CRJ104DJ0R0T	RES, ARRAY, 1608*4	
RN88	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN89	CRJ104DJ330T	RES , 4ARRAY (1608*4)	33 OHM/1608*4
RN91	CRJ104DJ220T	RES,4ARRAY	22X4/2012
RN92	CRJ104DJ220T	RES,4ARRAY	22X4/2012
R101	CRJ10DJ100T	RES , CHIP	1608 SIZE
R102	CRJ10DJ103T	RES , CHIP	1608 SIZE
R103	CRJ10DJ473T	RES , CHIP	1608 SIZE
R104	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R105	CRJ10DJ103T	RES , CHIP	1608 SIZE
R106	CRJ10DJ103T	RES , CHIP	1608 SIZE
R107	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R109	CRJ10DJ103T	RES , CHIP	1608 SIZE
R110	CRJ10DJ103T	RES , CHIP	1608 SIZE

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R115	CRJ10DJ222T	RES , CHIP	1608 SIZE
R116	CRJ10DJ102T	RES , CHIP	1608 SIZE
R117	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R118	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R119	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R120	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R121	CRJ10DJ105T	RES , CHIP	1608 SIZE
R122	CRJ10DJ472T	RES , CHIP	1608 SIZE
R123	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R124	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R125	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R126	CRJ10DJ472T	RES , CHIP	1608 SIZE
R127	CRJ10DJ472T	RES , CHIP	1608 SIZE
R128	CRJ10DJ472T	RES , CHIP	1608 SIZE
R129	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R130	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R131	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R132	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R140	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R141	CRJ10DJ103T	RES , CHIP	1608 SIZE
R142	CRJ10DJ103T	RES , CHIP	1608 SIZE
R149	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R150	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R151	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R152	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R153	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R154	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R156	CRJ14CJ101T	RES , CHIP 1/4W	3216 SIZE
R157	CRJ10DJ101T	RES , CHIP	1608 SIZE
R158	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R159	CRJ14CJ101T	RES , CHIP 1/4W	3216 SIZE
R160	CRJ10DJ101T	RES , CHIP	1608 SIZE
R162	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R163	CRJ10DJ103T	RES , CHIP	1608 SIZE
R164	CRJ10DJ103T	RES , CHIP	1608 SIZE
R165	CRJ10DJ103T	RES , CHIP	1608 SIZE
R166	CRJ10DJ103T	RES , CHIP	1608 SIZE
R167	CRJ10DJ103T	RES , CHIP	1608 SIZE
R168	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R169	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R170	CRJ10DJ102T	RES , CHIP	1608 SIZE
R171	CRJ10DJ472T	RES , CHIP	1608 SIZE
R172	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R174	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R175	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R176	CRJ10DJ472T	RES , CHIP	1608 SIZE
R177	CRJ10DJ472T	RES , CHIP	1608 SIZE
R178	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R179	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R182	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R183	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R184	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R185	CRJ10DJ472T	RES , CHIP	1608 SIZE
R187	CRJ10DJ472T	RES , CHIP	1608 SIZE
R188	CRJ10DJ472T	RES , CHIP	1608 SIZE
R190	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R191	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R192	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R193	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R194	CRJ10DJ472T	RES , CHIP	1608 SIZE
R195	CRJ10DJ472T	RES , CHIP	1608 SIZE
R196	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R197	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R198	CRJ10DJ473T	RES , CHIP	1608 SIZE
R199	CRJ10DJ473T	RES , CHIP	1608 SIZE
R201	CRJ10DJ0R0T	RES , CHIP	1608 SIZE

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R202	CRJ10DJ472T	RES , CHIP	1608 SIZE
R203	CRJ10DJ330T	RES , CHIP	1608 SIZE
R204	CRJ10DJ102T	RES , CHIP	1608 SIZE
R205	CRJ10DJ101T	RES , CHIP	1608 SIZE
R206	CRJ10DJ121T	RES , CHIP	1608 SIZE
R207	CRJ10DJ121T	RES , CHIP	1608 SIZE
R208	CRJ10DJ121T	RES , CHIP	1608 SIZE
R209	CRJ10DJ472T	RES , CHIP	1608 SIZE
R210	CRJ10DJ202T	RES , CHIP	
R211	CRJ10DJ202T	RES , CHIP	
R212	CRJ10DJ221T	RES , CHIP	1608 SIZE
R213	CRJ10DJ182T	RES , CHIP	
R214	CRJ10DJ680T	RES , CHIP	
R215	CRJ10DJ330T	RES , CHIP	1608 SIZE
R216	CRJ10DJ330T	RES , CHIP	1608 SIZE
R217	CRJ10DJ330T	RES , CHIP	1608 SIZE
R218	CRJ10DJ330T	RES , CHIP	1608 SIZE
R219	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R220	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R221	CRJ10DJ472T	RES , CHIP	1608 SIZE
R222	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R223	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R224	CRJ10DJ104T	RES , CHIP	1608 SIZE
R225	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R226	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R227	CRJ10DF4300T	RES	
R231	CRJ10DF3920T	RES. CHIP (392R 1%)	1608 SIZE
R232	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R233	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R234	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R235	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R236	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R237	CRJ10DF39R0T	CHIP RES, 1% 39 Ohm	
R238	CRJ10DJ104T	RES , CHIP	1608 SIZE
R240	CRJ10DJ121T	RES , CHIP	1608 SIZE
R241	CRJ10DJ330T	RES , CHIP	1608 SIZE
R244	CRJ10DJ330T	RES , CHIP	1608 SIZE
R245	CRJ10DJ330T	RES , CHIP	1608 SIZE
R246	CRJ10DJ330T	RES , CHIP	1608 SIZE
R247	CRJ10DJ330T	RES , CHIP	1608 SIZE
R248	CRJ10DJ330T	RES , CHIP	1608 SIZE
R249	CRJ10DJ330T	RES , CHIP	1608 SIZE
R250	CRJ10DJ330T	RES , CHIP	1608 SIZE
R251	CRJ10DJ433T	RES , CHIP	
R252	CRJ10DJ153T	RES , CHIP	
R253	CRJ10DJ303T	RES , CHIP	
R254	CRJ10DJ513T	RES , CHIP	51K
R259	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R260	CRJ10DJ472T	RES , CHIP	1608 SIZE
R262	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R263	CRJ10DJ472T	RES , CHIP	1608 SIZE
R264	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R265	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R266	CRJ10DJ472T	RES , CHIP	1608 SIZE
R267	CRJ10DJ472T	RES , CHIP	1608 SIZE
R268	CRJ10DJ472T	RES , CHIP	1608 SIZE
R269	CRJ10DJ102T	RES , CHIP	1608 SIZE
R270	CRJ10DJ102T	RES , CHIP	1608 SIZE
R271	CRJ10DJ103T	RES , CHIP	1608 SIZE
R272	CRJ10DJ102T	RES , CHIP	1608 SIZE
R273	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R274	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R275	CRJ10DJ103T	RES , CHIP	1608 SIZE
R280	CRJ10DJ330T	RES , CHIP	1608 SIZE
R281	CRJ10DJ330T	RES , CHIP	1608 SIZE
R282	CRJ10DJ330T	RES , CHIP	1608 SIZE

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R283	CRJ10DJ330T	RES , CHIP	1608 SIZE
R286	CRJ10DJ330T	RES , CHIP	1608 SIZE
R287	CRJ10DJ182T	RES , CHIP	
R288	CRJ10DJ182T	RES , CHIP	
R289	CRJ10DJ330T	RES , CHIP	1608 SIZE
R290	CRJ10DJ330T	RES , CHIP	1608 SIZE
R351	CRJ10DJ333T	RES , CHIP	1608 SIZE
R356	CRJ10DJ100T	RES , CHIP	1608 SIZE
R357	CRJ10DJ472T	RES , CHIP	1608 SIZE
R358	CRJ10DJ472T	RES , CHIP	1608 SIZE
R359	CRJ10DJ331T	RES , CHIP	
R360	CRJ10DJ331T	RES , CHIP	
R361	CRJ10DJ821T	RES , CHIP	1608 SIZE
R362	CRJ10DJ122T	RES , CHIP	1608 SIZE
R363	CRJ10DJ152T	RES , CHIP	1608 SIZE
R364	CRJ10DJ222T	RES , CHIP	1608 SIZE
R365	CRJ10DJ681T	RES , CHIP	1608 SIZE
R366	CRJ10DJ821T	RES , CHIP	1608 SIZE
R367	CRJ10DJ122T	RES , CHIP	1608 SIZE
R368	CRJ10DJ152T	RES , CHIP	1608 SIZE
R369	CRJ10DJ222T	RES , CHIP	1608 SIZE
R370	CRJ10DJ332T	RES , CHIP	1608 SIZE
R371	CRJ10DJ331T	RES , CHIP	
R372	CRJ10DJ331T	RES , CHIP	
R373	CRJ10DJ331T	RES , CHIP	
R374	CRJ10DJ331T	RES , CHIP	
R375	CRJ10DJ331T	RES , CHIP	
R376	CRJ10DJ331T	RES , CHIP	
R377	CRJ10DJ331T	RES , CHIP	
R378	CRJ10DJ331T	RES , CHIP	
R379	CRJ10DJ331T	RES , CHIP	
R380	CRJ10DJ331T	RES , CHIP	
R381	CRJ10DJ331T	RES , CHIP	
R382	CRJ10DJ331T	RES , CHIP	
R384	CRJ10DJ222T	RES , CHIP	1608 SIZE
R385	CRJ10DJ680T	RES , CHIP	
R401	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R402	CRJ10DJ472T	RES , CHIP	1608 SIZE
R404	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R409	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R410	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R413	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R414	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R418	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R421	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R422	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R423	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R425	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R426	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R428	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R429	CRJ10DJ102T	RES , CHIP	1608 SIZE
R430	CRJ10DF1000T	RES , CHIP 1%	
R431	CRJ10DF1000T	RES , CHIP 1%	
R438	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R439	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R441	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R443	CRJ10DJ102T	RES , CHIP	1608 SIZE
R444	CRJ10DJ682T	RES , CHIP	1608 SIZE
R457	CRJ10DJ470T	RES , CHIP	1608 SIZE
R458	CRJ10DJ473T	RES , CHIP	1608 SIZE
R459	CRJ10DJ103T	RES , CHIP	1608 SIZE
R461	CRJ10DJ271T	RES , CHIP	1608 SIZE
R462	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R471	CRJ10DJ472T	RES , CHIP	1608 SIZE
R472	CRJ10DJ472T	RES , CHIP	1608 SIZE
R473	CRJ10DJ0R0T	RES , CHIP	1608 SIZE

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R474	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R475	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R476	CRJ10DJ330T	RES , CHIP	1608 SIZE
R477	CRJ10DJ332T	RES , CHIP	1608 SIZE
R478	CRJ10DJ332T	RES , CHIP	1608 SIZE
R479	CRJ10DJ471T	RES , CHIP	1608 SIZE
R480	CRJ10DJ472T	RES , CHIP	1608 SIZE
R481	CRJ10DJ332T	RES , CHIP	1608 SIZE
R482	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R483	CRJ10DJ221T	RES , CHIP	1608 SIZE
R484	CRJ10DJ221T	RES , CHIP	1608 SIZE
R485	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R501	CRJ10DJ132T	RES , CHIP	1608 SIZE
R502	CRJ10DJ132T	RES , CHIP	1608 SIZE
R503	CRJ10DJ132T	RES , CHIP	1608 SIZE
R504	CRJ10DJ132T	RES , CHIP	1608 SIZE
R505	CRJ10DJ332T	RES , CHIP	1608 SIZE
R506	CRJ10DJ102T	RES , CHIP	1608 SIZE
R507	CRJ10DJ102T	RES , CHIP	1608 SIZE
R508	CRJ10DJ332T	RES , CHIP	1608 SIZE
R509	CRJ10DJ104T	RES , CHIP	1608 SIZE
R510	CRJ10DJ221T	RES , CHIP	1608 SIZE
R511	CRJ10DJ132T	RES , CHIP	1608 SIZE
R512	CRJ10DJ132T	RES , CHIP	1608 SIZE
R513	CRJ10DJ132T	RES , CHIP	1608 SIZE
R514	CRJ10DJ132T	RES , CHIP	1608 SIZE
R515	CRJ10DJ332T	RES , CHIP	1608 SIZE
R516	CRJ10DJ102T	RES , CHIP	1608 SIZE
R517	CRJ10DJ102T	RES , CHIP	1608 SIZE
R518	CRJ10DJ332T	RES , CHIP	1608 SIZE
R519	CRJ10DJ104T	RES , CHIP	1608 SIZE
R520	CRJ10DJ221T	RES , CHIP	1608 SIZE
R521	CRJ10DJ132T	RES , CHIP	1608 SIZE
R522	CRJ10DJ132T	RES , CHIP	1608 SIZE
R523	CRJ10DJ132T	RES , CHIP	1608 SIZE
R524	CRJ10DJ132T	RES , CHIP	1608 SIZE
R525	CRJ10DJ332T	RES , CHIP	1608 SIZE
R526	CRJ10DJ102T	RES , CHIP	1608 SIZE
R527	CRJ10DJ102T	RES , CHIP	1608 SIZE
R528	CRJ10DJ332T	RES , CHIP	1608 SIZE
R529	CRJ10DJ104T	RES , CHIP	1608 SIZE
R530	CRJ10DJ221T	RES , CHIP	1608 SIZE
R531	CRJ10DJ132T	RES , CHIP	1608 SIZE
R532	CRJ10DJ132T	RES , CHIP	1608 SIZE
R533	CRJ10DJ132T	RES , CHIP	1608 SIZE
R534	CRJ10DJ132T	RES , CHIP	1608 SIZE
R535	CRJ10DJ332T	RES , CHIP	1608 SIZE
R536	CRJ10DJ102T	RES , CHIP	1608 SIZE
R537	CRJ10DJ102T	RES , CHIP	1608 SIZE
R538	CRJ10DJ332T	RES , CHIP	1608 SIZE
R539	CRJ10DJ104T	RES , CHIP	1608 SIZE
R540	CRJ10DJ221T	RES , CHIP	1608 SIZE
R541	CRJ10DJ132T	RES , CHIP	1608 SIZE
R542	CRJ10DJ132T	RES , CHIP	1608 SIZE
R543	CRJ10DJ132T	RES , CHIP	1608 SIZE
R544	CRJ10DJ132T	RES , CHIP	1608 SIZE
R545	CRJ10DJ332T	RES , CHIP	1608 SIZE
R546	CRJ10DJ102T	RES , CHIP	1608 SIZE
R547	CRJ10DJ102T	RES , CHIP	1608 SIZE
R548	CRJ10DJ332T	RES , CHIP	1608 SIZE
R549	CRJ10DJ104T	RES , CHIP	1608 SIZE
R550	CRJ10DJ221T	RES , CHIP	1608 SIZE
R551	CRJ10DJ132T	RES , CHIP	1608 SIZE
R552	CRJ10DJ132T	RES , CHIP	1608 SIZE
R553	CRJ10DJ132T	RES , CHIP	1608 SIZE
R554	CRJ10DJ132T	RES , CHIP	1608 SIZE

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R555	CRJ10DJ332T	RES , CHIP	1608 SIZE
R556	CRJ10DJ102T	RES , CHIP	1608 SIZE
R557	CRJ10DJ102T	RES , CHIP	1608 SIZE
R558	CRJ10DJ332T	RES , CHIP	1608 SIZE
R559	CRJ10DJ104T	RES , CHIP	1608 SIZE
R560	CRJ10DJ221T	RES , CHIP	1608 SIZE
R561	CRJ10DJ132T	RES , CHIP	1608 SIZE
R562	CRJ10DJ132T	RES , CHIP	1608 SIZE
R563	CRJ10DJ132T	RES , CHIP	1608 SIZE
R564	CRJ10DJ132T	RES , CHIP	1608 SIZE
R565	CRJ10DJ332T	RES , CHIP	1608 SIZE
R566	CRJ10DJ102T	RES , CHIP	1608 SIZE
R567	CRJ10DJ102T	RES , CHIP	1608 SIZE
R568	CRJ10DJ332T	RES , CHIP	1608 SIZE
R569	CRJ10DJ104T	RES , CHIP	1608 SIZE
R570	CRJ10DJ221T	RES , CHIP	1608 SIZE
R571	CRJ10DJ132T	RES , CHIP	1608 SIZE
R572	CRJ10DJ132T	RES , CHIP	1608 SIZE
R573	CRJ10DJ132T	RES , CHIP	1608 SIZE
R574	CRJ10DJ132T	RES , CHIP	1608 SIZE
R575	CRJ10DJ332T	RES , CHIP	1608 SIZE
R576	CRJ10DJ102T	RES , CHIP	1608 SIZE
R577	CRJ10DJ102T	RES , CHIP	1608 SIZE
R578	CRJ10DJ332T	RES , CHIP	1608 SIZE
R579	CRJ10DJ104T	RES , CHIP	1608 SIZE
R580	CRJ10DJ221T	RES , CHIP	1608 SIZE
R581	CRJ10DJ222T	RES , CHIP	1608 SIZE
R582	CRJ10DJ222T	RES , CHIP	1608 SIZE
R583	CRJ10DJ222T	RES , CHIP	1608 SIZE
R584	CRJ10DJ222T	RES , CHIP	1608 SIZE
R585	CRJ10DJ222T	RES , CHIP	1608 SIZE
R586	CRJ10DJ222T	RES , CHIP	1608 SIZE
R587	CRJ10DJ222T	RES , CHIP	1608 SIZE
R588	CRJ10DJ222T	RES , CHIP	1608 SIZE
R589	CRJ10DJ221T	RES , CHIP	1608 SIZE
R590	CRJ10DJ221T	RES , CHIP	1608 SIZE
R591	CRJ10DJ222T	RES , CHIP	1608 SIZE
R592	CRJ10DJ222T	RES , CHIP	1608 SIZE
R593	CRJ10DJ222T	RES , CHIP	1608 SIZE
R594	CRJ10DJ222T	RES , CHIP	1608 SIZE
R595	CRJ10DJ222T	RES , CHIP	1608 SIZE
R596	CRJ10DJ222T	RES , CHIP	1608 SIZE
R597	CRJ10DJ222T	RES , CHIP	1608 SIZE
R598	CRJ10DJ222T	RES , CHIP	1608 SIZE
R603	CRJ10DJ330T	RES , CHIP	1608 SIZE
R604	CRJ10DJ330T	RES , CHIP	1608 SIZE
R605	CRJ10DJ330T	RES , CHIP	1608 SIZE
R606	CRJ10DJ330T	RES , CHIP	1608 SIZE
R609	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R610	CRJ10DJ332T	RES , CHIP	1608 SIZE
R611	CRJ10DJ821T	RES , CHIP	1608 SIZE
R614	CRJ10DF1690T	RES , CHIP(1/10W, 169OHM, 1%)	
R615	CRJ10DJ821T	RES , CHIP	1608 SIZE
R616	CRJ10DJ332T	RES , CHIP	1608 SIZE
R618	CRJ10DF6801T	RES, CHIP 6.8KOHM/1608/1%	
R619	CRJ10DF3901T	RES, CHIP 3.9KOHM/1608/1%	
R622	CRJ10DJ472T	RES , CHIP	1608 SIZE
R623	CRJ10DJ330T	RES , CHIP	1608 SIZE
R624	CRJ10DJ330T	RES , CHIP	1608 SIZE
R625	CRJ10DJ330T	RES , CHIP	1608 SIZE
R626	CRJ10DJ330T	RES , CHIP	1608 SIZE
R627	CRJ10DJ330T	RES , CHIP	1608 SIZE
R632	CRJ10DJ182T	RES , CHIP	
R633	CRJ10DJ101T	RES , CHIP	1608 SIZE
R634	CRJ10DJ561T	RES , CHIP	
R635	CRJ10DJ681T	RES , CHIP	1608 SIZE

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R636	CRJ10DJ182T	RES , CHIP	
R637	CRJ10DJ101T	RES , CHIP	1608 SIZE
R638	CRJ10DJ561T	RES , CHIP	
R639	CRJ10DJ681T	RES , CHIP	1608 SIZE
R640	CRJ10DJ182T	RES , CHIP	
R641	CRJ10DJ101T	RES , CHIP	1608 SIZE
R642	CRJ10DJ561T	RES , CHIP	
R643	CRJ10DJ681T	RES , CHIP	1608 SIZE
R644	CRJ10DJ182T	RES , CHIP	
R645	CRJ10DJ101T	RES , CHIP	1608 SIZE
R646	CRJ10DJ561T	RES , CHIP	
R647	CRJ10DJ681T	RES , CHIP	1608 SIZE
R648	CRJ10DJ182T	RES , CHIP	
R649	CRJ10DJ101T	RES , CHIP	1608 SIZE
R650	CRJ10DJ561T	RES , CHIP	
R651	CRJ10DJ681T	RES , CHIP	1608 SIZE
R653	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R654	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R655	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R656	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R657	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R663	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R664	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R665	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R669	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R670	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R671	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R672	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R673	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R674	CRJ10DF75R0T	RES, CHIP 1% 75 OHM	75 OHM, 1%
R675	CRJ10DF82R0T	RES, CHIP 82OHM 1%	
R676	CRJ10DJ472T	RES , CHIP	1608 SIZE
R677	CRJ10DJ102T	RES , CHIP	1608 SIZE
R678	CRJ10DJ222T	RES , CHIP	1608 SIZE
R695	CRJ10DF1690T	RES , CHIP(1/10W, 169OHM, 1%)	
R701	CRJ10DJ103T	RES , CHIP	1608 SIZE
R702	CRJ10DJ103T	RES , CHIP	1608 SIZE
R703	CRJ10DJ103T	RES , CHIP	1608 SIZE
R704	CRJ10DJ103T	RES , CHIP	1608 SIZE
R705	CRJ10DJ103T	RES , CHIP	1608 SIZE
R706	CRJ10DJ103T	RES , CHIP	1608 SIZE
R707	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R708	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R709	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R710	CRJ10DJ330T	RES , CHIP	1608 SIZE
R711	CRJ10DJ330T	RES , CHIP	1608 SIZE
R712	CRJ10DJ102T	RES , CHIP	1608 SIZE
R714	CRJ10DJ330T	RES , CHIP	1608 SIZE
R717	CRJ10DJ330T	RES , CHIP	1608 SIZE
R722	CRJ10DJ472T	RES , CHIP	1608 SIZE
R723	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R724	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R725	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R726	CRJ10DJ330T	RES , CHIP	1608 SIZE
R727	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R729	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R730	CRJ10DJ105T	RES , CHIP	1608 SIZE
R731	CRJ10DJ330T	RES , CHIP	1608 SIZE
R732	CRJ10DJ330T	RES , CHIP	1608 SIZE
R734	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R735	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R737	CRJ10DJ471T	RES , CHIP	1608 SIZE
R741	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R742	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R743	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R744	CRJ10DJ0R0T	RES , CHIP	1608 SIZE

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R752	CRJ10DJ330T	RES , CHIP	1608 SIZE
R753	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R754	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R755	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R756	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R761	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R762	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R763	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R764	CRJ10DJ472T	RES , CHIP	1608 SIZE
R765	CRJ10DJ224T	RES , CHIP	
R766	CRJ10DJ472T	RES , CHIP	1608 SIZE
R767	CRJ10DJ224T	RES , CHIP	
R768	CRJ10DJ472T	RES , CHIP	1608 SIZE
R769	CRJ10DJ224T	RES , CHIP	
R770	CRJ10DJ101T	RES , CHIP	1608 SIZE
R771	CRJ10DJ221T	RES , CHIP	1608 SIZE
R772	CRJ10DJ474T	RES , CHIP	1608 SIZE
R773	CRJ10DJ223T	RES , CHIP	1608 SIZE
R774	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R779	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R780	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R781	CRJ10DJ330T	RES , CHIP	1608 SIZE
R782	CRJ10DJ330T	RES , CHIP	1608 SIZE
R783	CRJ10DJ330T	RES , CHIP	1608 SIZE
R784	CRJ10DJ223T	RES , CHIP	1608 SIZE
R785	CRJ10DJ750T	RES , CHIP	1608 SIZE
R786	CRJ10DJ680T	RES , CHIP	
R787	CRJ10DJ121T	RES , CHIP	1608 SIZE
R788	CRJ10DJ101T	RES , CHIP	1608 SIZE
R789	CRJ10DJ3R3T	RES , CHIP	
R790	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R791	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R792	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R793	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R794	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R795	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R802	CRJ10DJ103T	RES , CHIP	1608 SIZE
R805	CRJ10DJ330T	RES , CHIP	1608 SIZE
R806	CRJ10DJ330T	RES , CHIP	1608 SIZE
R807	CRJ10DJ330T	RES , CHIP	1608 SIZE
R808	CRJ10DJ330T	RES , CHIP	1608 SIZE
R809	CRJ10DJ330T	RES , CHIP	1608 SIZE
R810	CRJ10DJ330T	RES , CHIP	1608 SIZE
R811	CRJ10DJ330T	RES , CHIP	1608 SIZE
R812	CRJ10DJ330T	RES , CHIP	1608 SIZE
R817	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R818	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R819	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R820	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R821	CRJ10DJ330T	RES , CHIP	1608 SIZE
R822	CRJ10DJ330T	RES , CHIP	1608 SIZE
R823	CRJ10DJ330T	RES , CHIP	1608 SIZE
R824	CRJ10DJ330T	RES , CHIP	1608 SIZE
R825	CRJ10DJ330T	RES , CHIP	1608 SIZE
R826	CRJ10DJ330T	RES , CHIP	1608 SIZE
R827	CRJ10DJ330T	RES , CHIP	1608 SIZE
R828	CRJ10DJ101T	RES , CHIP	1608 SIZE
R829	CRJ10DJ472T	RES , CHIP	1608 SIZE
R830	CRJ10DF4700T	RES, CHIP 470 OHM/1608/1%	
R831	CRJ10DJ103T	RES , CHIP	1608 SIZE
R832	CRJ10DJ103T	RES , CHIP	1608 SIZE
R833	CRJ10DJ182T	RES , CHIP	
R834	CRJ10DJ182T	RES , CHIP	
R835	CRJ10DJ103T	RES , CHIP	1608 SIZE
R836	CRJ10DJ473T	RES , CHIP	1608 SIZE
R837	CRJ10DJ101T	RES , CHIP	1608 SIZE

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R838	CRJ10DJ330T	RES , CHIP	1608 SIZE
R839	CRJ10DJ101T	RES , CHIP	1608 SIZE
R842	CRJ10DJ103T	RES , CHIP	1608 SIZE
R843	CRJ10DJ330T	RES , CHIP	1608 SIZE
R861	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R862	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R863	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R864	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R881	CRJ10DJ472T	RES , CHIP	1608 SIZE
R882	CRJ10DJ472T	RES , CHIP	1608 SIZE
R883	CRJ10DJ472T	RES , CHIP	1608 SIZE
R884	CRJ10DJ472T	RES , CHIP	1608 SIZE
R886	CRJ10DJ472T	RES , CHIP	1608 SIZE
R887	CRJ10DJ472T	RES , CHIP	1608 SIZE
R888	CRJ10DJ472T	RES , CHIP	1608 SIZE
R889	CRJ10DJ220T	RES , CHIP	1608 SIZE
R890	CRJ10DJ220T	RES , CHIP	1608 SIZE
R891	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R892	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R945	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R946	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R948	CRJ10DJ220T	RES , CHIP	1608 SIZE
R949	CRJ10DJ220T	RES , CHIP	1608 SIZE
R950	CRJ10DJ220T	RES , CHIP	1608 SIZE
R951	CRJ10DJ220T	RES , CHIP	1608 SIZE
R952	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R953	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R959	CRJ10DJ220T	RES , CHIP	1608 SIZE
R960	CRJ10DJ220T	RES , CHIP	1608 SIZE
R961	CRJ10DJ220T	RES , CHIP	1608 SIZE
R965	CRJ10DJ103T	RES , CHIP	1608 SIZE
R972	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R973	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
X201	HOX27000E180S	CRYSTAL , CHIP(27MHZ,SMD)	HC-49/US
X701	COX13500E160S	X'TAL (13.5MHz) 16p	
C101	CCEA1EH470T	CAP , ELECT	47UF 25V
C103	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V
C107	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C108	CCEA1HH100T	CAP , ELECT	10UF 50V
C161	CCEA1CH221T	CAP , ELECT	220UF 16V
C164	CCEA1CH221T	CAP , ELECT	220UF 16V
C165	CCEA1HH100T	CAP , ELECT	10UF 50V
C174	CCEA1HH100T	CAP , ELECT	10UF 50V
C177	CCEA1EH470T	CAP , ELECT	47UF 25V
C201	CCEA1HH220T	CAP , ELECT	22UF 50V
C202	CCEA1HH220T	CAP , ELECT	22UF 50V
C213	CCKT1H104KB	CAP , CERAMIC	0.1UF 50V KB
C215	CCEA1CH101T	CAP , ELECT	100UF 16V
C219	CCEA1CH101T	CAP , ELECT	100UF 16V
C222	CCEA1CH101T	CAP , ELECT	100UF 16V
C224	CCEA1CH221T	CAP , ELECT	220UF 16V
C264	CCEA1EH470T	CAP , ELECT	47UF 25V
C266	CCEA1EH470T	CAP , ELECT	47UF 25V
C273	CCEA1EH470T	CAP , ELECT	47UF 25V
C283	CCEA1EH470T	CAP , ELECT	47UF 25V
C286	CCEA1EH470T	CAP , ELECT	47UF 25V
C307	CCEA1EH470T	CAP , ELECT	47UF 25V
C309	CCEA1CH101T	CAP , ELECT	100UF 16V
C311	CCEA1CH101T	CAP , ELECT	100UF 16V
C313	CCEA1CH101T	CAP , ELECT	100UF 16V
C315	CCEA1CH101T	CAP , ELECT	100UF 16V
C405	CCEA1CH471T	CAP , ELECT	470UF 16V
C410	CCEA1CH221T	CAP , ELECT	220UF 16V
C411	CCEA1CH221T	CAP , ELECT	220UF 16V
C416	CCEA1CH471T	CAP , ELECT	470UF 16V
C431	CCEA1CH101T	CAP , ELECT	100UF 16V

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C436	CCEA1EH470T	CAP , ELECT	47UF 25V
C444	CCEA1HH101T	CAP , ELECT	100UF 50V
C447	CCEA1HH101T	CAP , ELECT	100UF 50V
C501	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C502	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C504	CCEA1CH101T	CAP , ELECT	100UF 16V
C507	CCEA1HH220T	CAP , ELECT	22UF 50V
C511	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C512	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C514	CCEA1CH101T	CAP , ELECT	100UF 16V
C517	CCEA1HH220T	CAP , ELECT	22UF 50V
C521	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C522	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C524	CCEA1CH101T	CAP , ELECT	100UF 16V
C527	CCEA1HH220T	CAP , ELECT	22UF 50V
C531	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C532	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C534	CCEA1CH101T	CAP , ELECT	100UF 16V
C537	CCEA1HH220T	CAP , ELECT	22UF 50V
C541	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C542	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C544	CCEA1CH101T	CAP , ELECT	100UF 16V
C547	CCEA1HH220T	CAP , ELECT	22UF 50V
C551	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C552	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C554	CCEA1CH101T	CAP , ELECT	100UF 16V
C557	CCEA1HH220T	CAP , ELECT	22UF 50V
C561	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C562	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C564	CCEA1CH101T	CAP , ELECT	100UF 16V
C567	CCEA1HH220T	CAP , ELECT	22UF 50V
C571	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C572	HCQI1H332JZT	CAP , MYLAR	3300PF 50V J
C574	CCEA1CH101T	CAP , ELECT	100UF 16V
C577	CCEA1HH220T	CAP , ELECT	22UF 50V
C616	CCEA1CH101T	CAP , ELECT	100UF 16V
C621	CCEA1CH101T	CAP , ELECT	100UF 16V
C622	CCEA1CH101T	CAP , ELECT	100UF 16V
C625	CCEA1CH101T	CAP , ELECT	100UF 16V
C631	CCEA1CH101T	CAP , ELECT	100UF 16V
C634	CCEA1CH221T	CAP , ELECT	220UF 16V
C639	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C640	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C642	CCEA1EH470T	CAP , ELECT	47UF 25V
C643	CCEA1EH470T	CAP , ELECT	47UF 25V
C644	CCEA1AH331T	CAP , ELECT	330UF 10V
C645	CCEA1AH331T	CAP , ELECT	330UF 10V
C646	CCEA1HH220T	CAP , ELECT	22UF 50V
C647	CCEA1CH101T	CAP , ELECT	100UF 16V
C648	CCEA1HH220T	CAP , ELECT	22UF 50V
C649	CCEA1CH101T	CAP , ELECT	100UF 16V
C651	CCEA1CH101T	CAP , ELECT	100UF 16V
C652	CCEA1AH331T	CAP , ELECT	330UF 10V
C681	CCEA1CH221T	CAP , ELECT	220UF 16V
C684	CCEA1CH221T	CAP , ELECT	220UF 16V
C685	CCEA1CH221T	CAP , ELECT	220UF 16V
C688	CCEA1CH221T	CAP , ELECT	220UF 16V
C692	CCEA1CH101T	CAP , ELECT	100UF 16V
C706	CCEA1CH101T	CAP , ELECT	100UF 16V
C717	CCEA1CH101T	CAP , ELECT	100UF 16V
C726	CCEA1CH101T	CAP , ELECT	100UF 16V
C727	CCEA1HH220T	CAP , ELECT	22UF 50V
C730	CCEA1CH101T	CAP , ELECT	100UF 16V
C731	CCEA1HH220T	CAP , ELECT	22UF 50V
C744	CCEA1CH101T	CAP , ELECT	100UF 16V
C745	CCEA1CH221T	CAP , ELECT	220UF 16V

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C748	CCEA1CH221T	CAP , ELECT	220UF 16V
C749	CCEA1CH221T	CAP , ELECT	220UF 16V
C752	CCEA1CH221T	CAP , ELECT	220UF 16V
C756	CCEA1CH101T	CAP , ELECT	100UF 16V
C758	CCEA1CH101T	CAP , ELECT	100UF 16V
C760	CCEA1EH470T	CAP , ELECT	47UF 25V
C763	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C766	CCEA1HH100T	CAP , ELECT	10UF 50V
C767	CCEA1CH221T	CAP , ELECT	220UF 16V
C768	CCEA1HH3R3T	CAP , ELECT	3.3UF 50V
C771	CCEA1EH221T	CAP , ELECT	220UF 25V
C772	CCEA1EH221T	CAP , ELECT	220UF 25V
C775	CCEA1CH221T	CAP , ELECT	220UF 16V
C776	CCEA1CH221T	CAP , ELECT	220UF 16V
C779	CCEA1CH221T	CAP , ELECT	220UF 16V
C781	CCEA1CH221T	CAP , ELECT	220UF 16V
C783	CCEA1CH221T	CAP , ELECT	220UF 16V
C786	CCEA1CH221T	CAP , ELECT	220UF 16V
C790	CCEA1HH100T	CAP , ELECT	10UF 50V
C792	CCEA1CH101T	CAP , ELECT	100UF 16V
C795	CCEA1CH101T	CAP , ELECT	100UF 16V
C826	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C842	CCEA1HH220T	CAP , ELECT	22UF 50V
C881	CCEA1CH101T	CAP , ELECT	100UF 16V
D202	CVD1N4003SRT	DIODE , RECT	1N4003
D203	CVD1N4003SRT	DIODE , RECT	1N4003
D204	CVD1N4003SRT	DIODE , RECT	1N4003
D205	CVD1N4003SRT	DIODE , RECT	1N4003
D401	CVD1N4003SRT	DIODE , RECT	1N4003
D402	CVD1N4003SRT	DIODE , RECT	1N4003
D754	CVD1N4003SRT	DIODE , RECT	1N4003
Q106	HVTKTA1271YT	T.R	KTA1271Y
Q757	HVTKSA916YT	T.R	
Q784	HVTKTA1271YT	T.R	KTA1271Y
SW30	CST1A012ZT	SW , TACT	SKHV10910G
SW31	CST1A012ZT	SW , TACT	SKHV10910G
SW32	CST1A012ZT	SW , TACT	SKHV10910G
SW33	CST1A012ZT	SW , TACT	SKHV10910G
SW34	CST1A012ZT	SW , TACT	SKHV10910G
SW35	CST1A012ZT	SW , TACT	SKHV10910G
SW36	CST1A012ZT	SW , TACT	SKHV10910G
SW37	CST1A012ZT	SW , TACT	SKHV10910G
SW38	CST1A012ZT	SW , TACT	SKHV10910G
SW39	CST1A012ZT	SW , TACT	SKHV10910G
SW40	CST1A012ZT	SW , TACT	SKHV10910G
SW41	CST1A012ZT	SW , TACT	SKHV10910G
SW42	CST1A012ZT	SW , TACT	SKHV10910G
	CMD2A602	BRACKET , FL	
	CMY2A280	HEAT SINK	
	K8AYG6260	COMPOUND , SILICONE	
BN38	CWB1C903180EN	WIRE ASS'Y (3P, 180mm)	
BN51	CWB1C913120EN	WIRE ASS'Y(13P, 120mm)	
CN11	CJP07GA01ZY	WAFER , STRAIGHT(7PIN)	
CN16	CJP07GA01ZY	WAFER , STRAIGHT(7PIN)	
CN17	CJP17GA117ZY	WAFER	
CN18	CJP07HA37ZM	WAFER	
CN21	CJP05GA19ZY	WAFER , STRAIGHT	
CN22	CJP04GA01ZY	WAFER , STRAIGHT(4PIN)	
CN35	CJP09GB113ZY	WAFER , 9PIN ANGLE CARD CABLE 1MM	
CN36	CJP09GB113ZY	WAFER , 9PIN ANGLE CARD CABLE 1MM	
CN37	CJP17GB113ZY	WAFER	
CN38	CJP03GB46ZY	WAFER , ANGLE(3PIN)	
CN41	CJP06GA19ZY	WAFER , STRAIGHT(DVD LOADER)	
CN42	CJP05GA19ZY	WAFER , STRAIGHT	
D352	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D353	CVD1L034FA22M0MA	L.E.D , AMBER DIFFUSED	1L034FA22M0MA001

DVD 49

D371	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D372	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D373	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D374	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D375	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D376	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D377	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D378	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D379	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D380	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D381	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D382	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
D384	CVD1L034FA22M0MA	L.E.D , AMBER DIFFUSED	1L034FA22M0MA001
D385	CVD1L0345W31BOCT20	L.E.D , WHITE	CVD1L0345W31BOCT201
FIP3	CFL13BT231GINK	F.I.P , FUTABA	
IC36	CRVKSM603TH2E	SENSOR , REMOCON	KSM603TH2E
IC44	HVIKIA7808API	I.C , REGULATOR +8V	KIA7808 (KEC)
IC45	CVIEL817B	I.C , PHOTO COUPLER	EL817-B
IC77	HVIKIA7809API	I.C , REGULATOR +9V	KIA7809 (KEC)
IC78	HVIKIA7909PI	I.C , REGULATOR (-9V)	
JK41	HJJ1D002Z	JACK , STEREO(2P 3.5PIE)	SR7400
JK51	CJJ4N067Z	JACK , 2P	RCA-201DAG-01
JK52	CJJ4R041Z	6P JACK, BOARD	RCA-601DAG-11
JK53	CJS9U011Z	JACK, OPTICAL+COXIAL(GOLD PLATE)	
JK61	CJJ9N006Z	JACK , S-VIDEO+CVBS(GOLD, 2P)	
JK62	CJJ4S036Z	JACK , BOARD	3P,G/B/R,GOLD
JW31	CWE7202100AR	WIRE ASS'Y	
X101	HOX08000E160C	CRYSTAL 8MHz	
X102	HOX08000E160C	CRYSTAL 8MHz	
	CTB3+10JFZR	SCREW	
	CTB3+6FFZR	SCREW	
	CTS3+8JFZR	SCREW	
	CTW3+8JR	SCREW	
	CUA2A279K1	CHASSIS , BOTTOM DVD39	
	CWC4G2A50G120B	CABLE , CARD(50P, 120MM)	
	CWZDVD39EUBN91A	EUR INLET WIRE ASS'Y	
	CWZDVD39BN91	WIRE ASS'Y(2P, 50MM)	
	HJJ8A003Z	RECEPTACLE,(2.5A 250V AC)	RF-180-BB
	KMC1A264	CUSHION , SHIELD	
F901	KBA2C2000TLEY	FUSE	EUR (2A/250V)

KEC

SEMICONDUCTOR

TECHNICAL DATA

KIA1117S/F00~

KIA1117S/F50

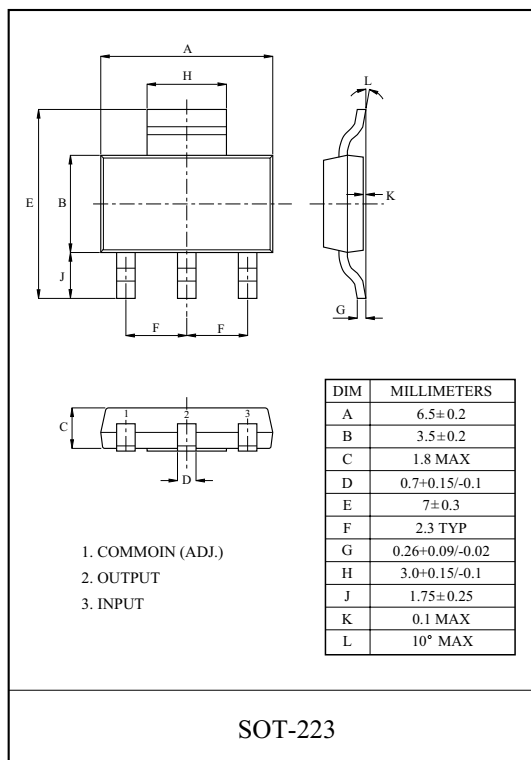
BIPOLAR LINEAR INTEGRATED CIRCUIT

LOW DROP FIXED AND ADJUSTABLE POSITIVE VOLTAGE REGULATOR

The KIA1117S/F $\times \times$ is a Low Drop Voltage Regulator able to provide up to 1A of output current, available even in adjustable version ($V_{ref}=1.25V$)

FEATURES

- Low Dropout Voltage : 1.1V/Typ. ($I_{out}=1.0A$)
- Very Low Quiescent Current : 4.2mA/Typ.
- Output Current up to 1A
- Fixed Output Voltage of 1.5V, 1.8V, 2.5V, 2.85V, 3.3V, 5.0V
- Adjustable Version Availability : $V_{ref}=1.25V$
- Internal Current and Thermal Limit
- Only 10 μF for stability
- Available in $\pm 2\%$ (at 25 $^{\circ}C$) and 4% in full Temperature range
- High Ripple Rejection : 80dB/Typ
- Temperature Range : 0 $^{\circ}C \sim 125^{\circ}C$



LINE UP

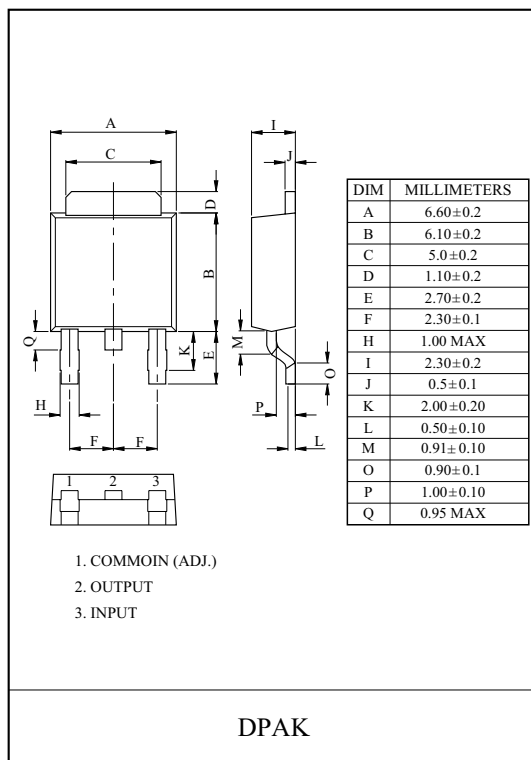
ITEM	OUTPUT VOLTAGE (V)	PACKAGE
KIA1117S/F00	Adjustable (1.25~10V)	S : SOT-223 F : DPAK
KIA1117S/F15	1.5	
KIA1117S/F18	1.8	
KIA1117S/F25	2.5	
KIA1117S/F28	2.85	
KIA1117S/F33	3.3	
KIA1117S/F50	5.0	

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage		V_{IN}	10	V
Output Current	S/F	I_{OUT}	1.0	A
Power Dissipation 1 (No heatsink)	S (Note)	P_{D1}	1.0	W
	F		1.3	
Power Dissipation 2 (Without heatsink)	S	P_{D2}	8.3	W
	F		13	
Operating Temperature		T_{opr}	0 ~ 125	$^{\circ}C$
Storage Temperature		T_{stg}	-55 ~ 150	$^{\circ}C$

Note) Package Mounted on FR-4 PCB 36 $\times$ 18 $\times$ 1.5 mm.

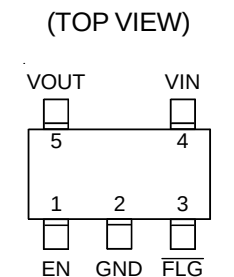
: mounting pad for the GND Lead min. 6cm²



RT9702/A

RICHTEK

Pin Configurations

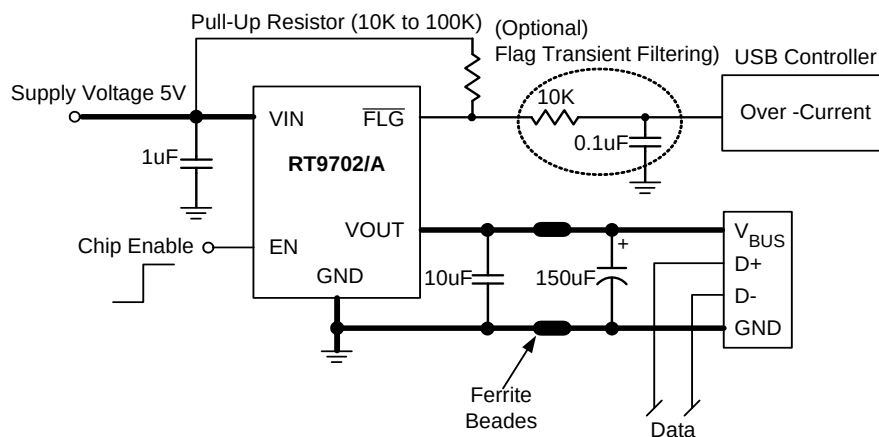


SOT-23-5/TSOT-23-5

Functional Pin Description

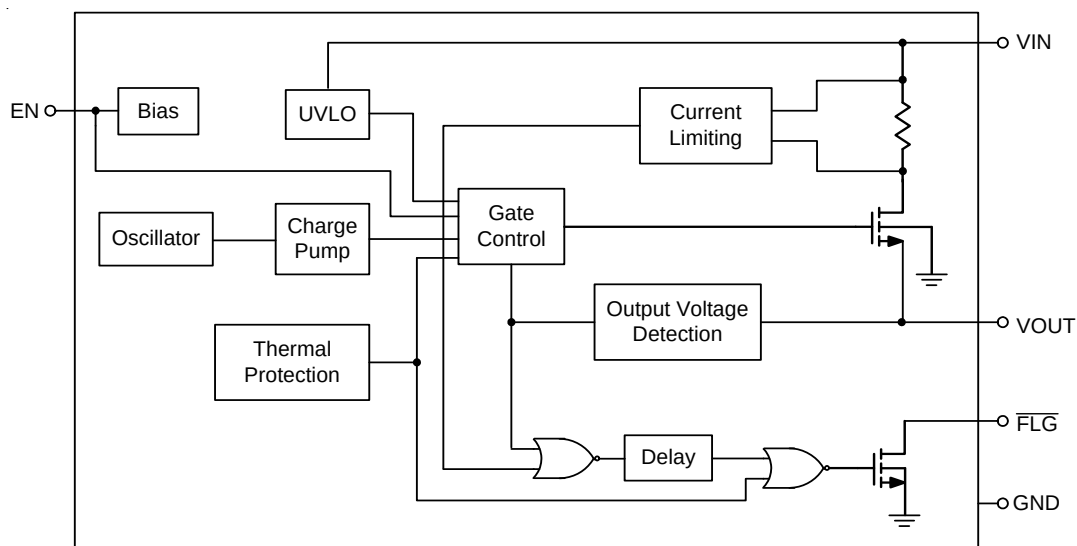
Pin Name	Pin Function
VIN	Power-Input Voltage
VOUT	Output Voltage
GND	Ground
EN	Chip Enable (Active High)
FLG	Open-Drain Fault Flag Output

Typical Application Circuit



Note: A low-ESR 150μF aluminum electrolytic or tantalum between V_{OUT} and GND is strongly recommended to meet the 330mV maximum droop requirement in the hub V_{BUS}. (see Application Information Section for further details)

Function Block Diagram



TOSHIBA

TC4051BP/BF/BFN/BFT, TC4052BP/BF/BFN/BFT, TC4053BP/BF/BFN/BFT

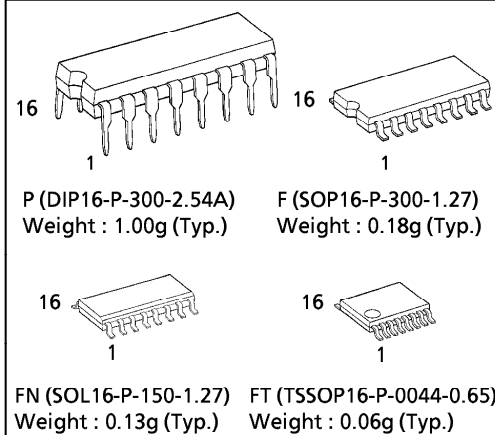
TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC4051BP, TC4051BF, TC4051BFN, TC4051BFT
 TC4052BP, TC4052BF, TC4052BFN, TC4052BFT
 TC4053BP, TC4053BF, TC4053BFN, TC4053BFT

TC4051B SINGLE 8-CHANNEL MULTIPLEXER / DEMULTIPLEXER
 TC4052B DIFFERENTIAL 4-CHANNEL MULTIPLEXER / DEMULTIPLEXER
 TC4053B TRIPLE 2-CHANNEL MULTIPLEXER / DEMULTIPLEXER

(Note) The JEDEC SOP (FN) is not available in Japan.

TC4051B, TC4052B and TC4053B are multiplexers with capabilities of selection and mixture of analog signal and digital signal. TC4051B has 8 channels configuration. TC4052B has 4 channel×2 configuration and TC4053B has 2 channel×3 configuration. The digital signal to the control terminal turns "ON" the corresponding switch of each channel, with large amplitude ($V_{DD}-V_{EE}$) can be switched by the control signal with small logical amplitude ($V_{DD}-V_{SS}$). For example, in the case of $V_{DD}=5V$ $V_{SS}=0V$ and $V_{EE}=-5V$, signals between $-5V$ and $+5V$ can be switched from the logical circuit with single power supply of 5 volts. As the ON-resistance of each switch is low, these can be connected to the circuits with low input impedance.

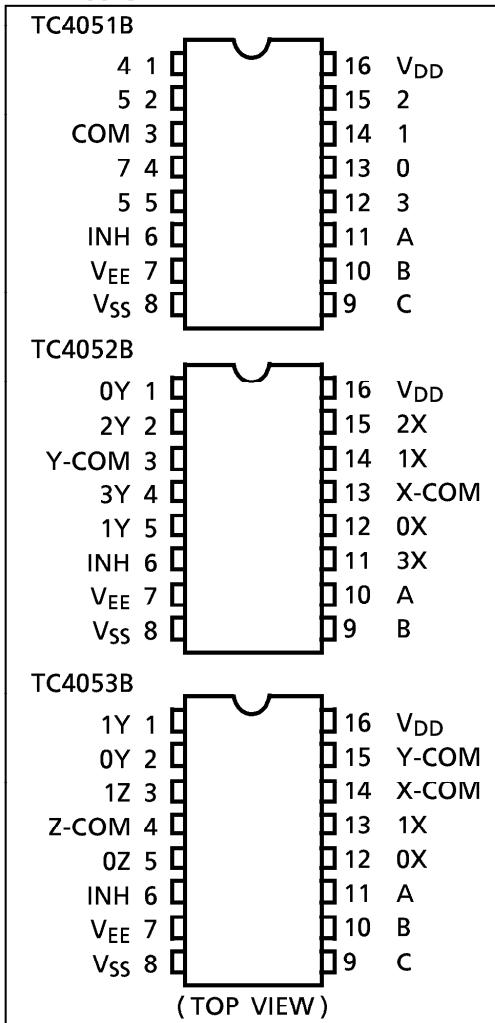
**MAXIMUM RATINGS**

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	$V_{DD}-V_{SS}$	$-0.5\sim 20$	V
DC Supply Voltage	$V_{DD}-V_{EE}$	$-0.5\sim 20$	V
Control Input Voltage	V_{CIN}	$V_{SS}-0.5\sim V_{DD}+0.5$	V
Switch I/O Voltage	V_I/V_O	$V_{EE}-0.5\sim V_{DD}+0.5$	V
Control Input Current	I_{CIN}	± 10	mA
Potential difference across I/O during ON	V_I-V_O	$-0.5\sim 0.5$	V
Power Dissipation	P_D	300 (DIP) / 180 (SOIC)	mW
Operating Temperature Range	T_{opr}	$-40\sim 85$	°C
Storage Temperature Range	T_{stg}	$-65\sim 150$	°C

TRUTH TABLE

CONTROL INPUTS				"ON" CHANNEL		
INHIBIT	$C\triangle$	B	A	TC4051B	TC4052B	TC4053B
L	L	L	L	0	0X, 0Y	0X, 0Y, 0Z
L	L	L	H	1	1X, 1Y	1X, 0Y, 0Z
L	L	H	L	2	2X, 2Y	0X, 1Y, 0Z
L	L	H	H	3	3X, 3Y	1X, 1Y, 0Z
L	H	L	L	4	—	0X, 0Y, 1Z
L	H	L	H	5	—	1X, 0Y, 1Z
L	H	H	L	6	—	0X, 1Y, 1Z
L	H	H	H	7	—	1X, 1Y, 1Z
H	*	*	*	NONE	NONE	NONE

* : Don't Care $\triangle$ Except TC4052B

PIN ASSIGNMENT

961001EBA2

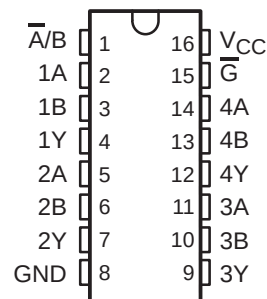
● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

SN74LVC157A

QUADRUPLE 2-LINE TO 1-LINE DATA SELECTOR/MULTIPLEXER

SCAS292G – JANUARY 1993 – REVISED OCTOBER 1998

- **EPIC™** (Enhanced-Performance Implanted CMOS) Submicron Process
- Typical V_{OLP} (Output Ground Bounce) < 0.8 V at $V_{CC} = 3.3$ V, $T_A = 25^\circ\text{C}$
- Typical V_{OHV} (Output V_{OH} Undershoot) > 2 V at $V_{CC} = 3.3$ V, $T_A = 25^\circ\text{C}$
- Inputs Accept Voltages to 5.5 V
- ESD Protection Exceeds 2000 V Per MIL-STD-883, Method 3015; Exceeds 200 V Using Machine Model ($C = 200$ pF, $R = 0$)
- Latch-Up Performance Exceeds 250 mA Per JESD 17
- Package Options Include Plastic Small-Outline (D), Shrink Small-Outline (DB), and Thin Shrink Small-Outline (PW) Packages

D, DB, OR PW PACKAGE
(TOP VIEW)

description

This quadruple 2-line to 1-line data selector/multiplexer is designed for 1.65-V to 3.6-V V_{CC} operation.

The SN74LVC157A features a common strobe ($\overline{G}$) input. When the strobe is high, all outputs are low. When the strobe is low, a 4-bit word is selected from one of two sources and is routed to the four outputs. The device provides true data.

Inputs can be driven from either 3.3-V or 5-V devices. This feature allows the use of these devices as translators in a mixed 3.3-V/5-V system environment.

The SN74LVC157A is characterized for operation from -40°C to 85°C .

FUNCTION TABLE

INPUTS				OUTPUT Y
$\overline{G}$	$\overline{A/B}$	A	B	
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H



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ADV7342/ADV7343

PIN CONFIGURATION AND FUNCTION DESCRIPTIONS

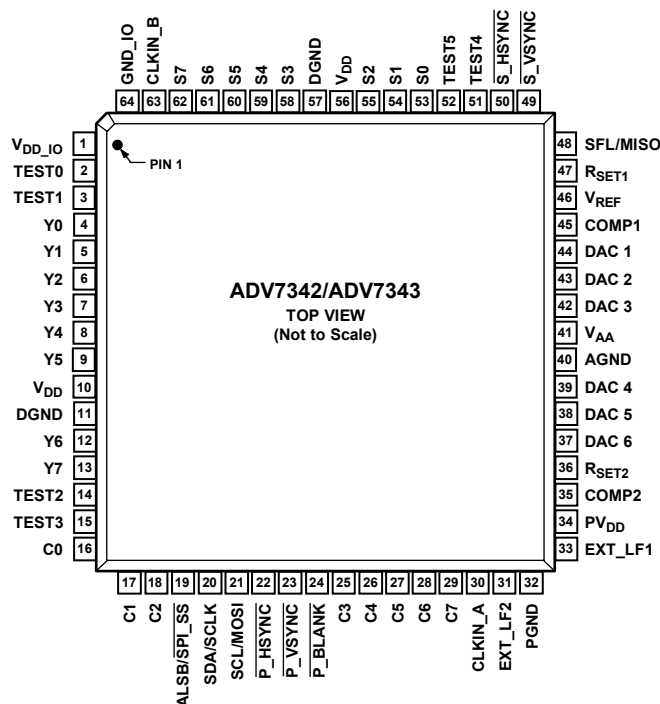


Figure 21. Pin Configuration

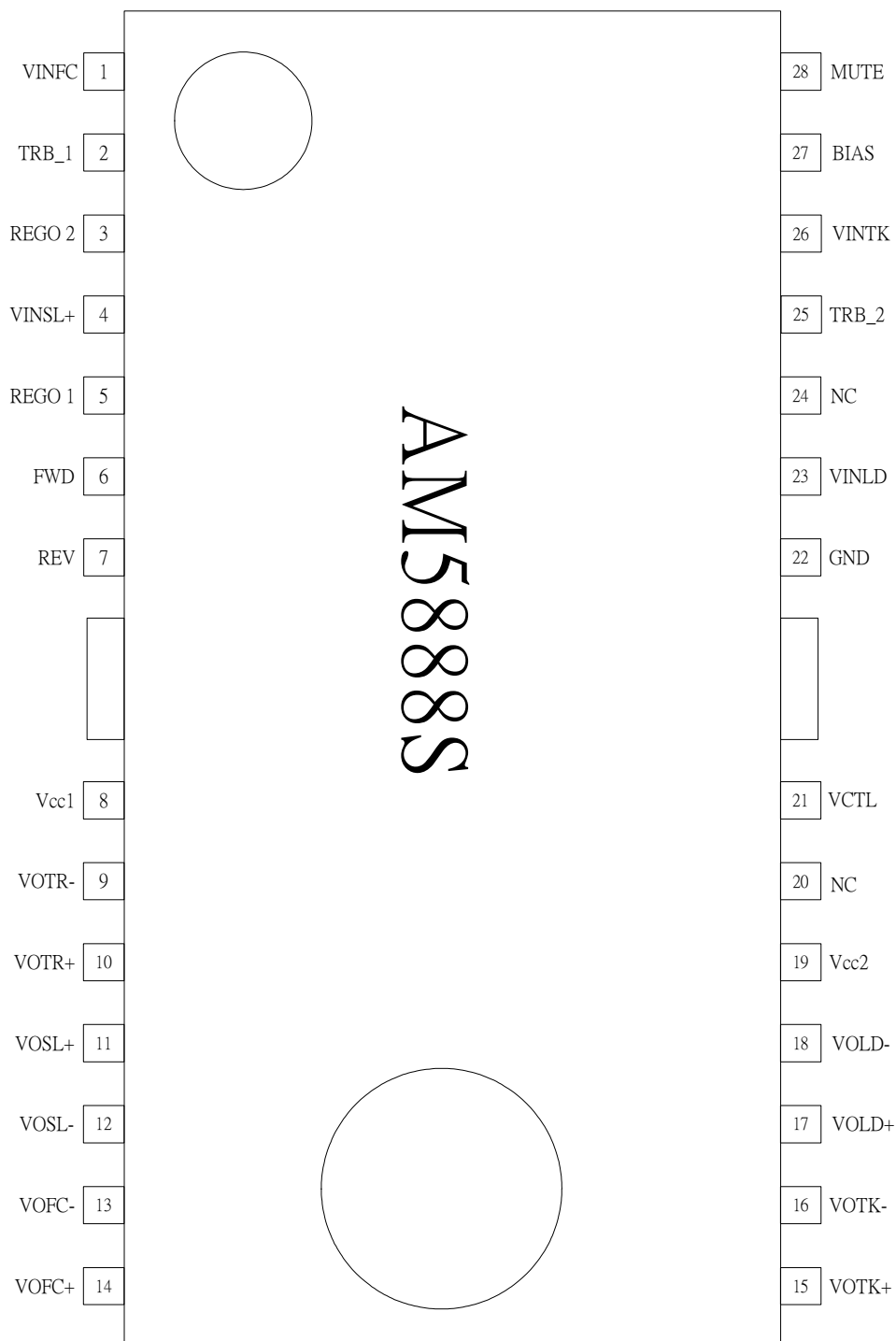
Table 13. Pin Function Descriptions

Pin No.	Mnemonic	Input/ Output	Description
13, 12, 9 to 4	Y7 to Y0	I	8-Bit Pixel Port. Y0 is the LSB. Refer to Table 31 for input modes.
29 to 25, 18 to 16	C7 to C0	I	8-Bit Pixel Port. C0 is the LSB. Refer to Table 31 for input modes.
62 to 58, 55 to 53	S7 to S0	I	8-Bit Pixel Port. S0 is the LSB. Refer to Table 31 for input modes.
52, 51, 15, 14, 3, 2	TEST5 to TEST0	I	Unused. These pins should be connected to DGND.
30	CLKIN_A	I	Pixel Clock Input for HD Only (74.25 MHz), ED ¹ Only (27 MHz or 54 MHz) or SD Only (27 MHz).
63	CLKIN_B	I	Pixel Clock Input for Dual Modes Only. Requires a 27 MHz reference clock for ED operation or a 74.25 MHz reference clock for HD operation.
50	$\overline{S_HSYNC}$	I/O	SD Horizontal Synchronization Signal. This pin can also be configured to output an SD, ED, or HD horizontal synchronization signal. See the External Horizontal and Vertical Synchronization Control section.
49	$\overline{S_VSYNC}$	I/O	SD Vertical Synchronization Signal. This pin can also be configured to output an SD, ED, or HD vertical synchronization signal. See the External Horizontal and Vertical Synchronization Control section.
22	$\overline{P_HSYNC}$	I	ED/HD Horizontal Synchronization Signal. See the External Horizontal and Vertical Synchronization Control section.
23	$\overline{P_VSYNC}$	I	ED/HD Vertical Synchronization Signal. See the External Horizontal and Vertical Synchronization Control section.
24	$\overline{P_BLANK}$	I	ED/HD Blanking Signal. See the External Horizontal and Vertical Synchronization Control section.
48	SFL/MISO	I/O	Multifunctional Pin: Subcarrier Frequency Lock (SFL) Input/SPI Data Output. The SFL input is used to drive the color subcarrier DDS system, timing reset, or subcarrier reset.
47	RSET1	I	This pin is used to control the amplitudes of the DAC 1, DAC 2, and DAC 3 outputs. For full-drive operation (for example, into a 37.5 Ω load), a 510 Ω resistor must be connected from RSET1 to AGND. For low drive operation (for example, into a 300 Ω load), a 4.12 k Ω resistor must be connected from RSET1 to AGND.



AM5888S Motor Driver ICs

● Pin configuration





AM5888S Motor Driver ICs

● Pin description

PIN No	Pin Name	Function
1	VINFC	Input for focus driver
2	TRB_1	Connect to external transistor base
3	REGO2	Regulator voltage output, connect to external transistor collector
4	VINSL+	Input for the sled driver
5	REGO1	Regulator voltage output, connect to external transistor collector
6	FWD	Tray driver forward input
7	REV	Tray driver reverse input
8	Vcc1	Vcc for pre-drive block and power block of sled and tray
9	VOTR-	Tray driver output (-)
10	VOTR+	Tray driver output (+)
11	VOSL+	Sled driver output (+)
12	VOSL-	Sled driver output (-)
13	VOFC-	Focus driver output (-)
14	VOFC+	Focus driver output (+)
15	VOTK+	Tracking driver output (+)
16	VOTK-	Tracking driver output (-)
17	VOLD+	Spindle driver output (+)
18	VOLD-	Spindle driver output (-)
19	Vcc2	Vcc for power block of spindle, tracking and focus
20	NC	No Connection
21	VCTL	Speed control input of tray driver
22	GND	Ground
23	VINLD	Input for spindle driver
24	NC	No Connection
25	TRB_2	Connect to external transistor base
26	VINTK	Input for tracking driver
27	BIAS	Input for reference voltage
28	MUTE	Input for mute control

Notes) Symbol of + and – (output of drivers) means polarity to input pin.
(For example, if voltage of pin1 is high, pin14 is high.)

Features

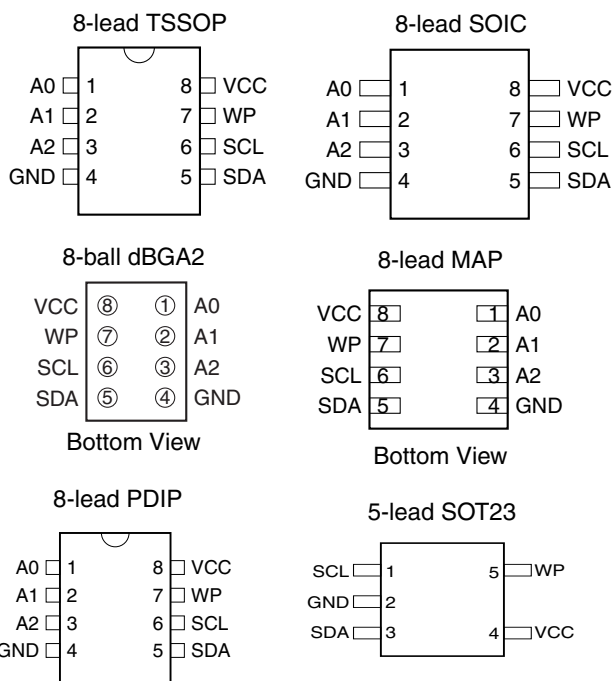
- **Low-voltage and Standard-voltage Operation**
 - 2.7 ($V_{CC} = 2.7V$ to 5.5V)
 - 1.8 ($V_{CC} = 1.8V$ to 5.5V)
- **Internally Organized 128 x 8 (1K), 256 x 8 (2K), 512 x 8 (4K), 1024 x 8 (8K) or 2048 x 8 (16K)**
- **Two-wire Serial Interface**
- **Schmitt Trigger, Filtered Inputs for Noise Suppression**
- **Bidirectional Data Transfer Protocol**
- **100 kHz (1.8V) and 400 kHz (2.7V, 5V) Compatibility**
- **Write Protect Pin for Hardware Data Protection**
- **8-byte Page (1K, 2K), 16-byte Page (4K, 8K, 16K) Write Modes**
- **Partial Page Writes Allowed**
- **Self-timed Write Cycle (5 ms max)**
- **High-reliability**
 - Endurance: 1 Million Write Cycles
 - Data Retention: 100 Years
- **Automotive Grade and Lead-free/Halogen-free Devices Available**
- **8-lead PDIP, 8-lead JEDEC SOIC, 8-lead MAP, 5-lead SOT23, 8-lead TSSOP and 8-ball dBG2 Packages**
- **Die Sales: Wafer Form, Waffle Pack and Bumped Wafers**

Description

The AT24C01A/02/04/08A/16A provides 1024/2048/4096/8192/16384 bits of serial electrically erasable and programmable read-only memory (EEPROM) organized as 128/256/512/1024/2048 words of 8 bits each. The device is optimized for use in many industrial and commercial applications where low-power and low-voltage operation are essential. The AT24C01A/02/04/08A/16A is available in space-saving 8-lead PDIP, 8-lead JEDEC SOIC, 8-lead MAP, 5-lead SOT23 (AT24C01A/AT24C02/AT24C04), 8-lead TSSOP, and 8-ball dBG2 packages and is accessed via a Two-wire serial interface. In addition, the entire family is available in 2.7V (2.7V to 5.5V) and 1.8V (1.8V to 5.5V) versions.

Table 1. Pin Configuration

Pin Name	Function
A0 - A2	Address Inputs
SDA	Serial Data
SCL	Serial Clock Input
WP	Write Protect
NC	No Connect
GND	Ground
VCC	Power Supply



Two-wire Serial EEPROM

1K (128 x 8)

2K (256 x 8)

4K (512 x 8)

8K (1024 x 8)

16K (2048 x 8)

AT24C01A

AT24C02

AT24C04

AT24C08A

AT24C16A

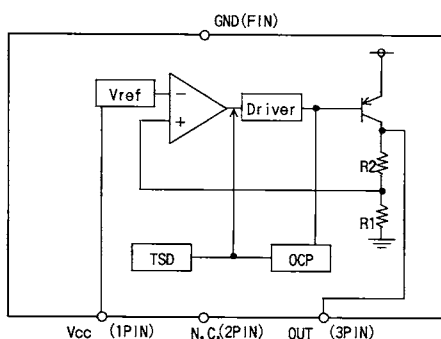
0180V-SEEPR-8/05



ROHM

3/4

○BLOCK DIAGRAM



※ Please refer to technical note concerning application circuit, and etc.

○PIN NO. , PIN NAME

Pin No.	Pin Name
1	Vcc
2	N.C.
3	OUT
FIN	GND

○NOTES FOR USE

1. Absolute maximum range

Absolute Maximum Ratings are those values beyond which the life of a device may be destroyed we cannot be defined the failure mode, such as short mode or open mode.

Therefore physical security countermeasure, like fuse, is to be given when a specific mode to be beyond absolute maximum ratings is considered.

2. GND pin voltage

GND terminal should be connected the lowest voltage, under all conditions. And all terminals except GND should be under GND terminal voltage under all conditions including transient situations.

3. Power dissipation

If IC is used on condition that the power loss is over the power dissipation, the reliability will become worse by heat up, such as reduced output current capability.

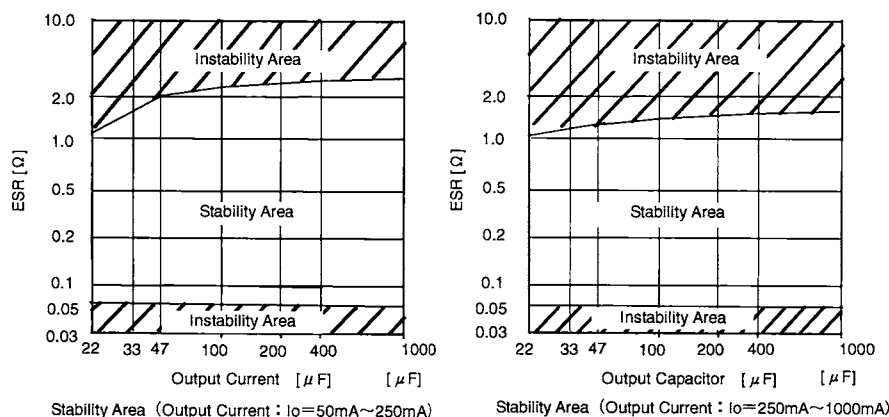
Also, be sure to use this IC within a power dissipation range allowing enough of margin.

4. Electrical characteristics described in these specifications may vary, depending on temperature, supply voltage, external circuits and other conditions. Therefore, be sure to check all relevant factors, including transient characteristics.

5. Be sure to connect a capacitor with capacitance of at least 22 μ F, including temperature characteristics and variation, to prevent oscillation between the Vo and GND. Note that if the capacity of the capacitor changes due to factors such as changes in temperature or ESR, oscillation may occur, and the original characteristics of the IC may not be realized. For example, when a ceramic capacitor is employed, oscillation will be generated because the series resistance is too small. Please take countermeasures to prevent this, such as adding a series resistor. Standard electrolytic capacitors are subject to extremely large capacitance and ESR fluctuations due to temperature conditions. Particularly at low temperature, capacity is decreased, while ESR grows larger, conditions which increase the vulnerability to oscillation. Therefore, be certain to check for the presence of oscillation.

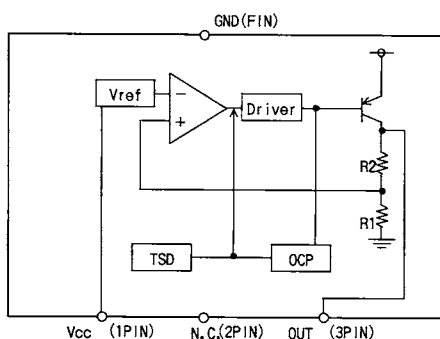
In respect to the proper ESR range, select a capacitor that meets the conditions in the figure below for stable operation range. Note, however, that the stable range suggested in the figure depends on the IC and the resistance load involved, and can vary with the board's wiring impedance, input impedance, and/or load impedance. Therefore, be certain to ascertain the final status of these items for actual use.

Keep capacitor capacitance within a range of 22 μ F~1000 μ F. It is also recommended that a 0.33 μ F bypass capacitor be connected as close to the input pin-GND as location possible. However, in situations such as rapid fluctuation of the input voltage or the load, please check the operation in real application to determine proper capacitance.



Rev. D

○BLOCK DIAGRAM



※ Please refer to technical note concerning application circuit, and etc.

○PIN NO. , PIN NAME

Pin No.	Pin Name
1	Vcc
2	N.C.
3	OUT
FIN	GND

ONOTES FOR USE

1. Absolute maximum range

Absolute Maximum Ratings are those values beyond which the life of a device may be destroyed we cannot be defined the failure mode, such as short mode or open mode.

Therefore physical security countermeasure, like fuse, is to be given when a specific mode to be beyond absolute maximum ratings is considered.

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GND terminal should be connected the lowest voltage, under all conditions. And all terminals except GND should be under GND terminal voltage under all conditions including transient situations.

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If IC is used on condition that the power loss is over the power dissipation, the reliability will become worse by heat up, such as reduced output current capability.

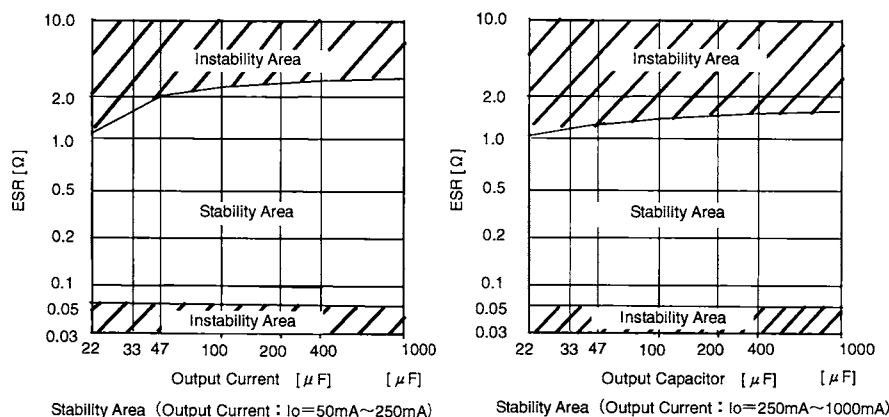
Also, be sure to use this IC within a power dissipation range allowing enough of margin.

4. Electrical characteristics described in these specifications may vary, depending on temperature, supply voltage, external circuits and other conditions. Therefore, be sure to check all relevant factors, including transient characteristics.

5. Be sure to connect a capacitor with capacitance of at least 22 μ F, including temperature characteristics and variation, to prevent oscillation between the Vo and GND. Note that if the capacity of the capacitor changes due to factors such as changes in temperature or ESR, oscillation may occur, and the original characteristics of the IC may not be realized. For example, when a ceramic capacitor is employed, oscillation will be generated because the series resistance is too small. Please take countermeasures to prevent this, such as adding a series resistor. Standard electrolytic capacitors are subject to extremely large capacitance and ESR fluctuations due to temperature conditions. Particularly at low temperature, capacity is decreased, while ESR grows larger, conditions which increase the vulnerability to oscillation. Therefore, be certain to check for the presence of oscillation.

In respect to the proper ESR range, select a capacitor that meets the conditions in the figure below for stable operation range. Note, however, that the stable range suggested in the figure depends on the IC and the resistance load involved, and can vary with the board's wiring impedance, input impedance, and/or load impedance. Therefore, be certain to ascertain the final status of these items for actual use.

Keep capacitor capacitance within a range of 22 μ F~1000 μ F. It is also recommended that a 0.33 μ F bypass capacitor be connected as close to the input pin-GND as location possible. However, in situations such as rapid fluctuation of the input voltage or the load, please check the operation in real application to determine proper capacitance.

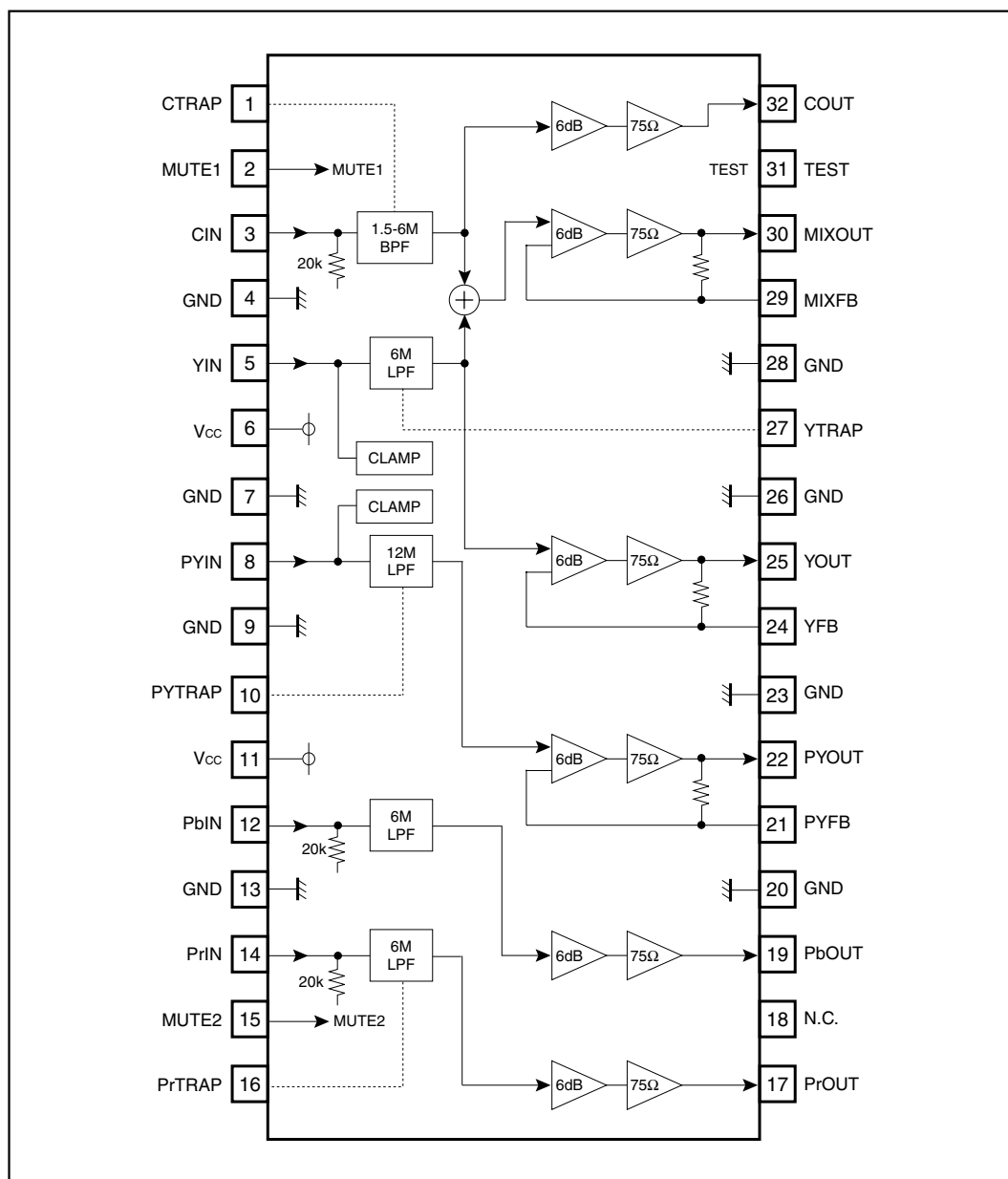


Rev. D

BH7862FS

Multimedia ICs

●Block diagram

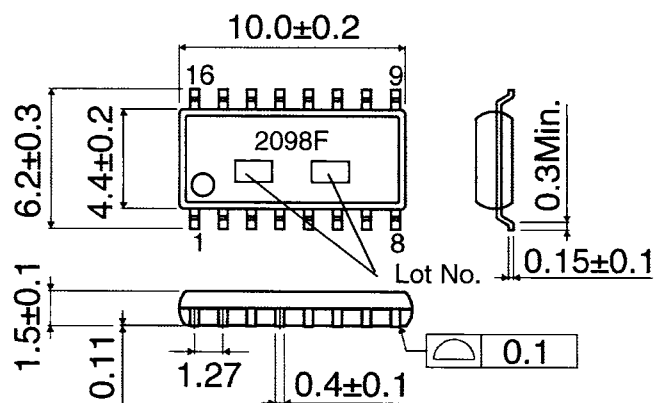


● ELECTRICAL CHARACTERISTICS (unless otherwise noted, $T_a=25^{\circ}\text{C}$, $V_{DD}=5.0\text{V}$)

Parameter	Symbol	Standard Value			Unit	Condition
		MIN	TYP	MAX		
Power Supply Voltage range	V_{DD}	2.7	-	5.5	V	V_{DD} pin
Output Voltage range	V_o	0	-	15.0	V	
Supply current	I_{cc1}	-	-	2.0	μA	Static supply current
Input "H" voltage	V_{IH}	0.7	-	-	V/V	Ratio against V_{DD}
Input "L" voltage	V_{IL}	-	-	0.3	V/V	Ratio against V_{DD}
Output "L" voltage	V_{OL}	-	-	0.4	V	
Input "L" current	I_{IL}	-	-	2.0	μA	$V_{in}=0$
Input "L" current	I_{IH}	-	-	-2.0	μA	$V_{in}=V_{DD}$
Output Leakage current	I_L	-	-	± 5.0	μA	Output=OPEN, $V_{out}=V_{DD}$
Data Minimum set up time	t_1	100	-	-	nS	High speed mode
Data hold time	t_2	-	-	900	nS	High speed mode
Minimum shift pulse width (High speed mode)	t_{31}	0	-	400	KHz	
Minimum shift pulse width (normal mode)	t_{32}	0	-	100	KHz	

This product is not assessed whether to be strategic materials in foreign exchange and trade law or not, so please confirm at trading. This product is not deigned against radioactive ray.

● PHYSICAL DIMENSIONS



SOP16 (UNIT : mm)


EVERLIGHT ELECTRONICS CO., LTD

Technical Data Sheet

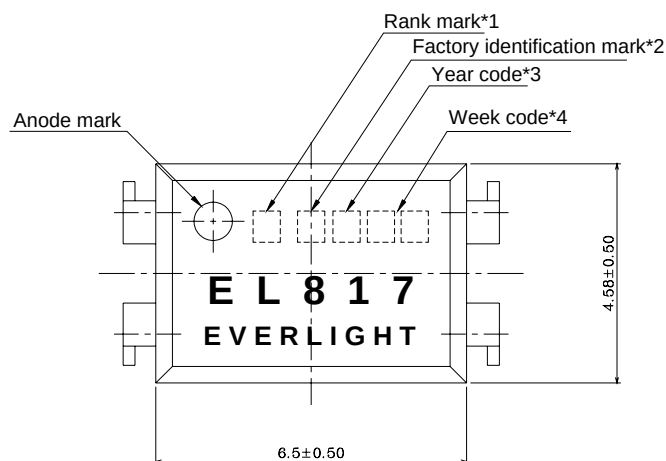
Photocoupler-RoHS Compliant

Device Selection Guide

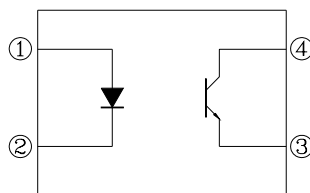
Part. No.	Chip Material	
	IR	PT
EL817*	GaAs	Silicon

EL817 Series

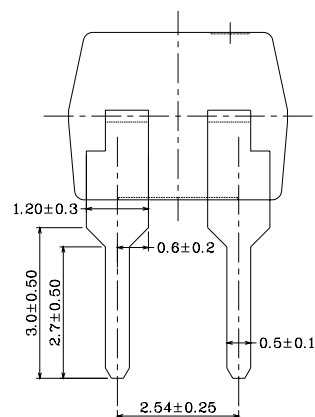
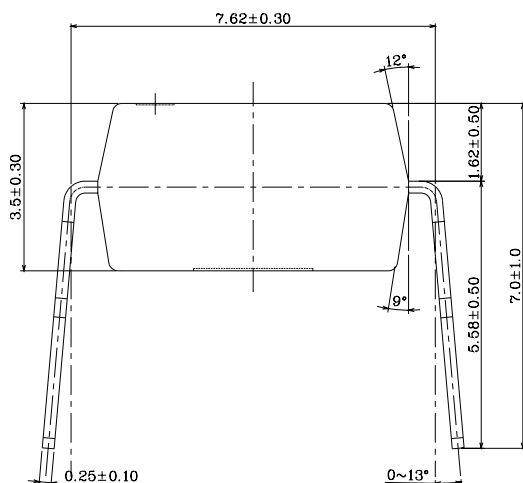
Package Dimensions



PIN NO. AND INTERNAL CONNECTION DIAGRAM



1. Anode 3. Emitter
2. Cathode 4. Collector




EVERLIGHT ELECTRONICS CO., LTD

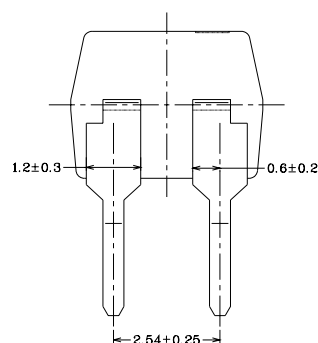
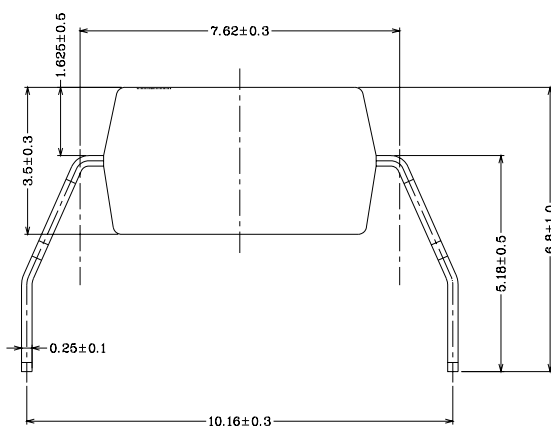
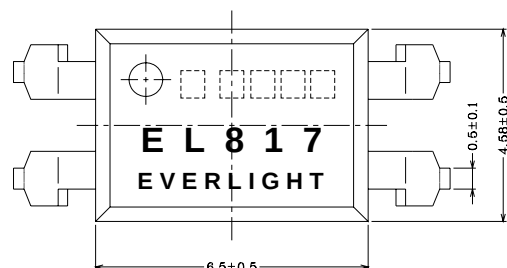
Technical Data Sheet

Photocoupler-RoHS Compliant

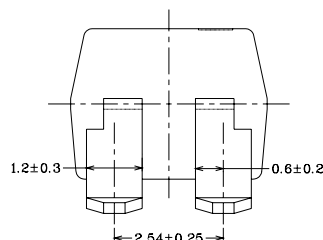
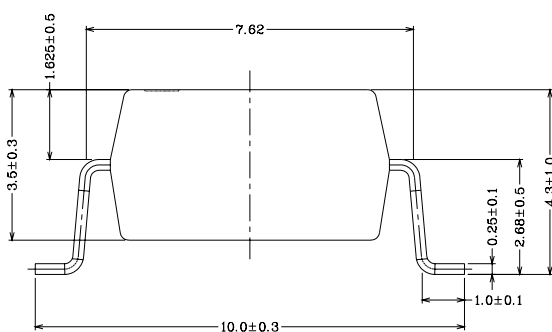
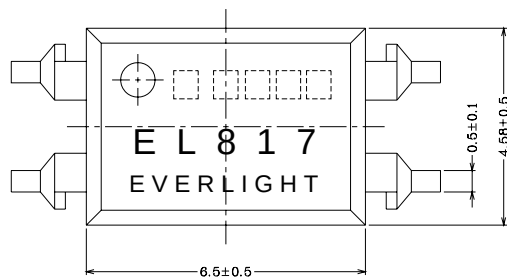
Package Dimensions

EL817 Series

M Type



S Type



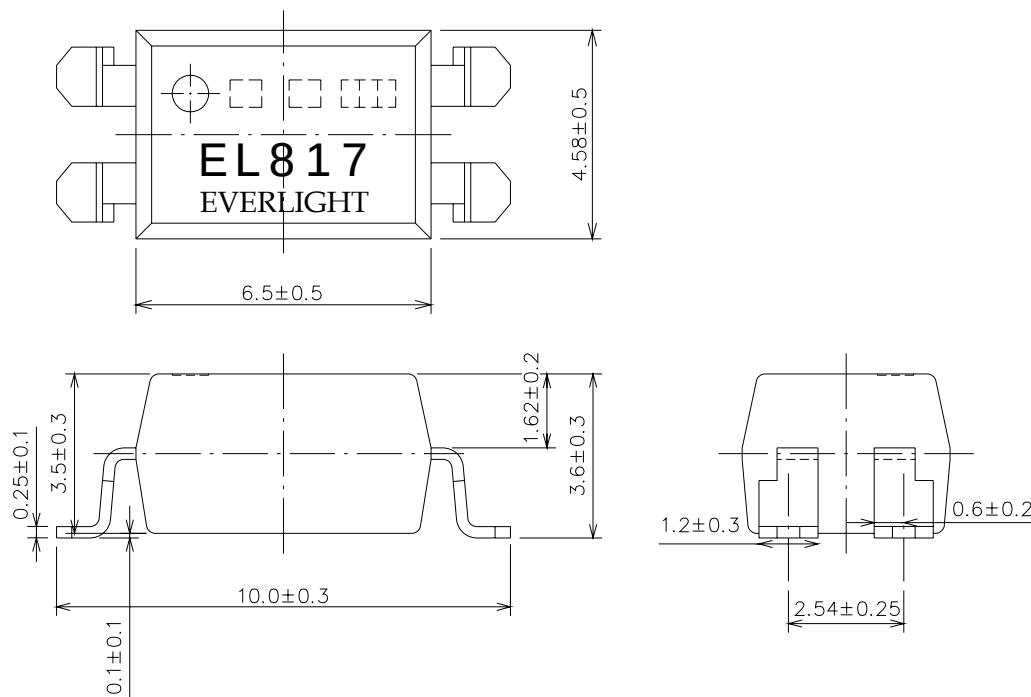

EVERLIGHT ELECTRONICS CO., LTD

Technical Data Sheet

Photocoupler-RoHS Compliant

EL817 Series

S1 Type



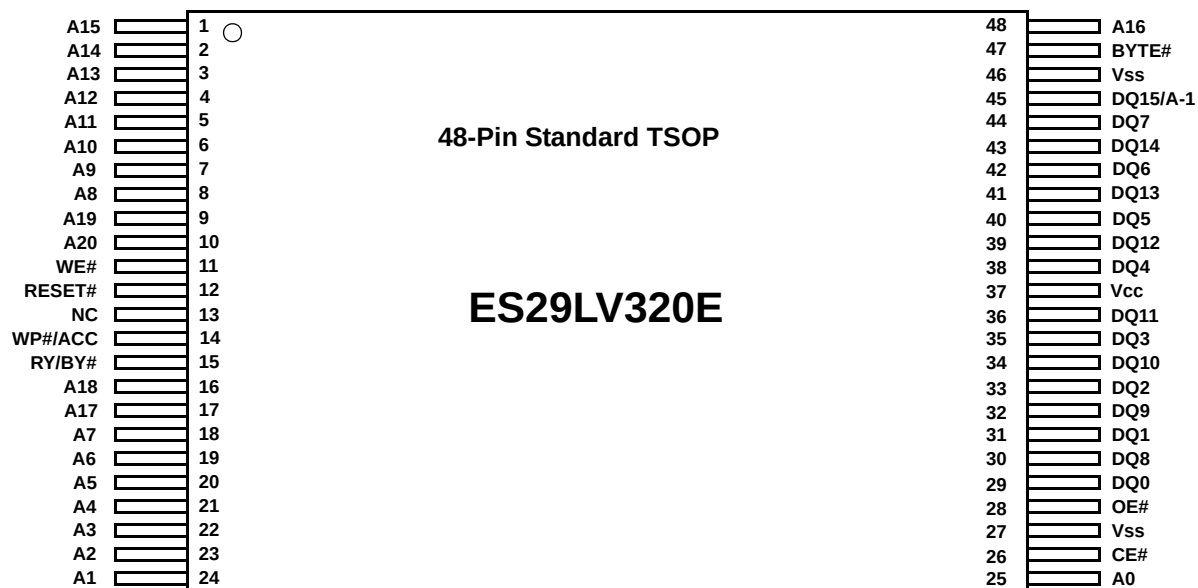
Notes:

1. Rank shall be or shall not be marked
2. Factory code shall be marked (T: Taiwan / C: China)
3. Year date code
4. 2-digit work week
5. All dimensions are in millimeters
6. Specifications are subject to change without notice



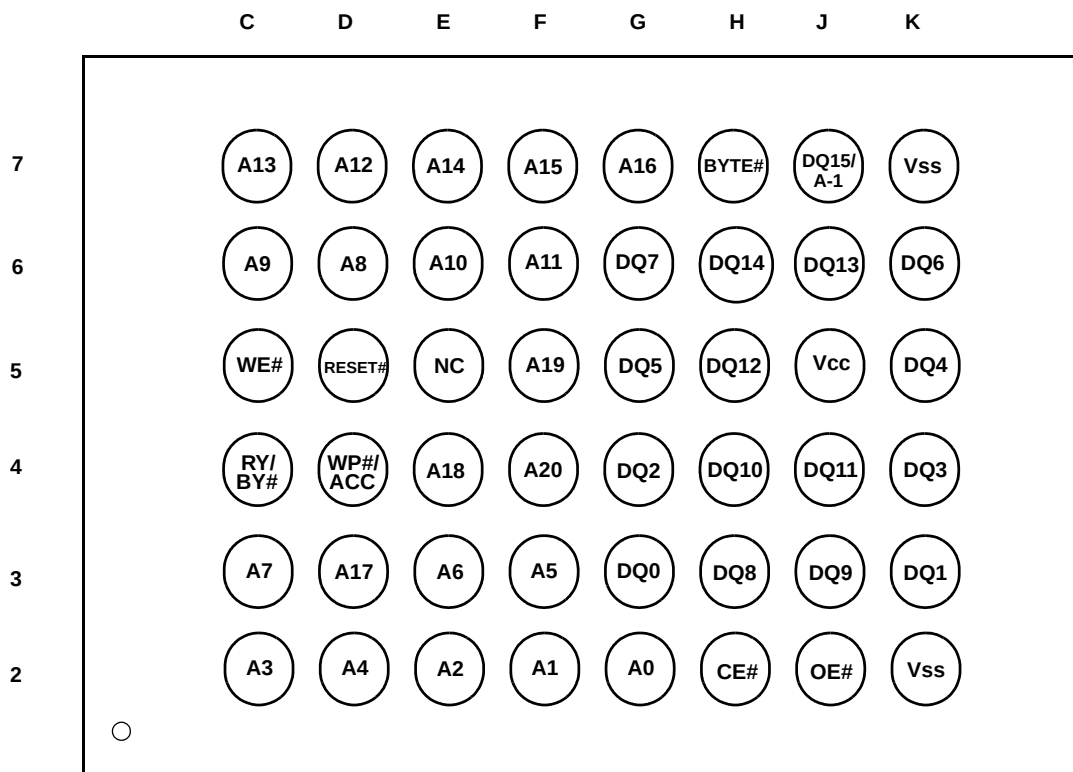
Excel Semiconductor inc.

CONNECTION DIAGRAM



48-Ball FBGA 6 x 8 mm)

(Top View, Balls Facing Down)



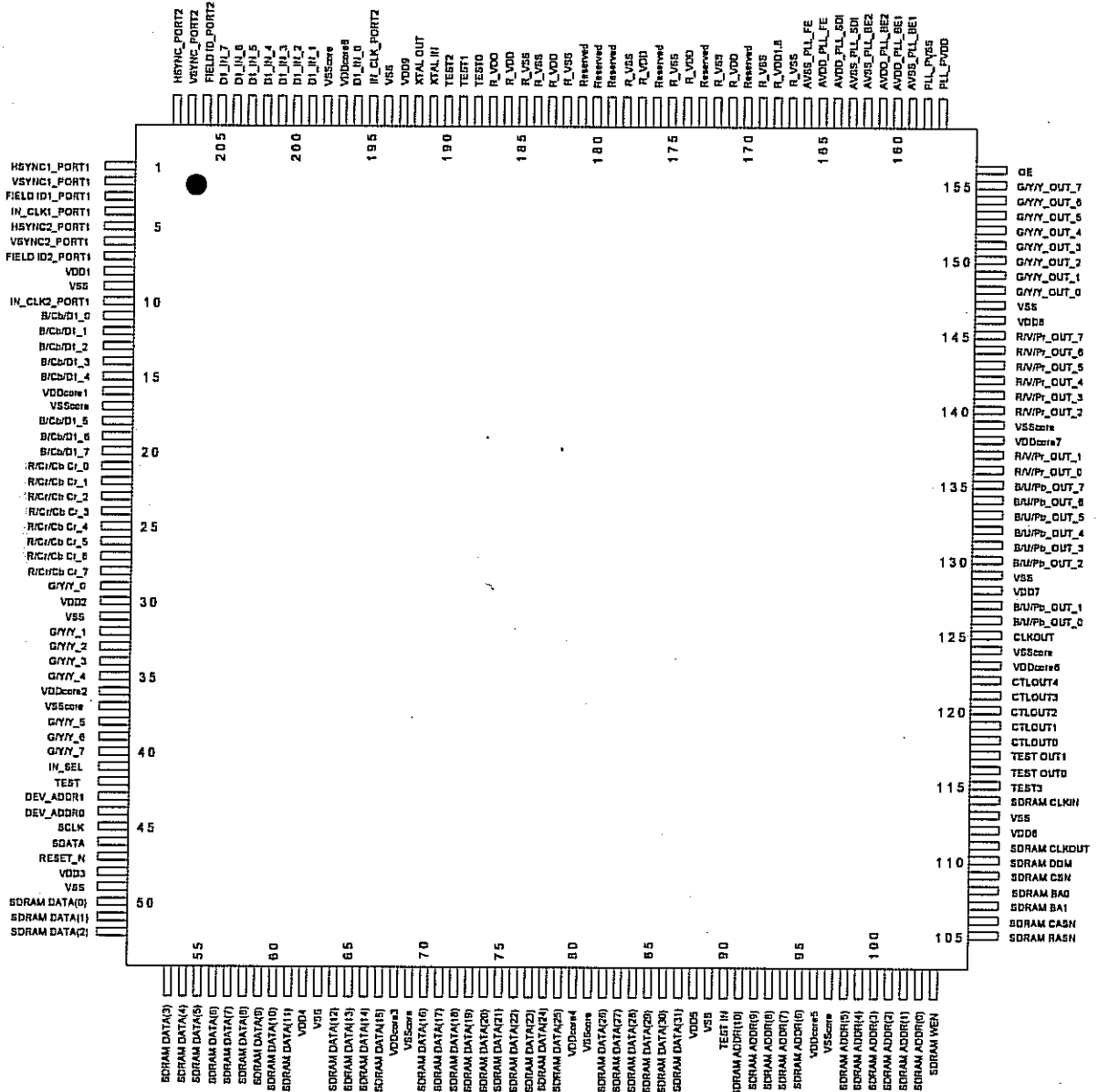


FLI2310 LF Digital Video Converter Data Sheet

3 PIN INFORMATION

3.1 Pin Diagram

Figure 3.1: Pinout Information



Package: 208-pin PQFP

TOSHIBA**HN1K02FU**

TOSHIBA Field Effect Transistor Silicon N Channel MOS Type

HN1K02FU

High Speed Switching Applications

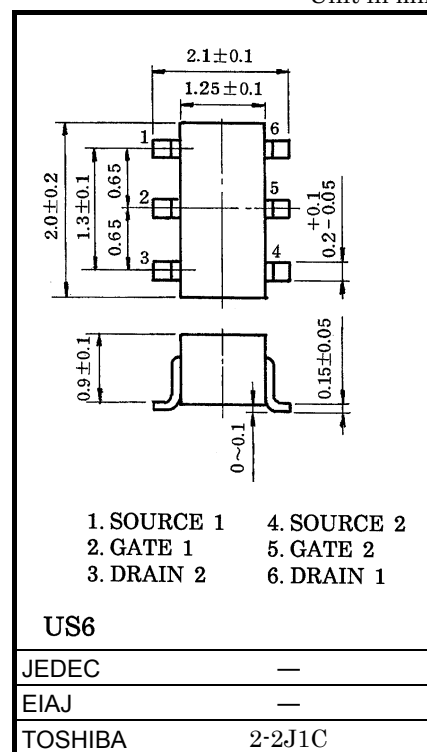
Analog Switch Applications

Unit in mm

- 2.5 V gate drive.
- Low threshold voltage: $V_{th} = 0.5V \sim 1.5V$
- High speed
- Enhancement-mode
- Small package

**Absolute Maximum Ratings ($T_a = 25^\circ C$)
(Q1, Q2 Common)**

Characteristic	Symbol	Rating	Unit
Drain-Source voltage	V_{DS}	20	V
Gate-Source voltage	V_{GSS}	10	V
DC Drain current	I_D	50	mA
Drain power dissipation	P_D^*	200	mW
Channel temperature	T_{ch}	150	$^\circ C$
Storage temperature range	T_{stg}	-55~150	$^\circ C$



Weight: 6.8mg

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

* Total rating

TOSHIBA**HN1K05FU**

TOSHIBA Field Effect Transistor Silicon N Channel MOS Type

HN1K05FU

For Portable Devices

High Speed Switching Applications

Interface Applications

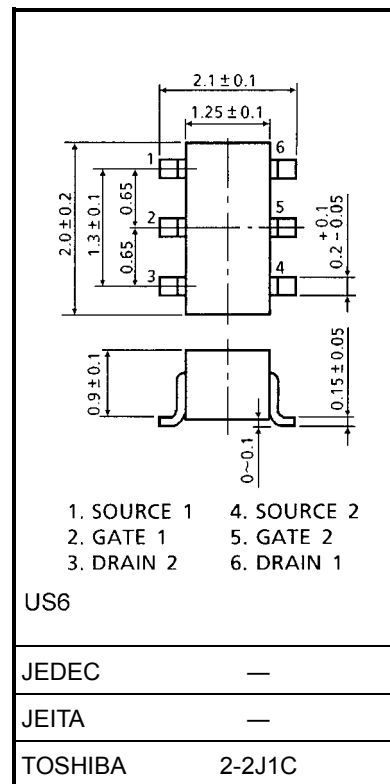
Unit: mm

- High input impedance and extremely low drive current.
- V_{th} is low and it is possible to drive directly at low-voltage CMOS.
: $V_{th} = 0.5$ to 1.0 V
- Suitable for high-density mounting because of a compact package.

Maximum Ratings ($T_a = 25^\circ\text{C}$) (Q1, Q2 common)

Characteristics	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	20	V
Gate-source voltage	V_{GSS}	10	V
DC drain current	I_D	100	mA
Drain power dissipation	P_D (Note)	200	mW
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

Note: TOTAL rating



Weight: 6.8 mg

Electrical Characteristics ($T_a = 25^\circ\text{C}$) (Q1, Q2 common)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current	I_{GSS}	$V_{GS} = 10$ V, $V_{DS} = 0$ V	—	—	1	μA
Drain-source breakdown voltage	$V_{(BR)DSS}$	$I_D = 100$ μA , $V_{GS} = 0$ V	20	—	—	V
Drain cut-off current	I_{DSS}	$V_{DS} = 20$ V, $V_{GS} = 0$ V	—	—	1	μA
Gate threshold voltage	V_{th}	$V_{DS} = 1.5$ V, $I_D = 0.1$ mA	0.5	—	1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 1.5$ V, $I_D = 10$ mA	35	70	—	mS
Drain-Source ON resistance 1	$R_{DS(ON)1}$	$I_D = 1$ mA, $V_{GS} = 1.2$ V	—	15	50	Ω
Drain-Source ON resistance 2	$R_{DS(ON)2}$	$I_D = 10$ mA, $V_{GS} = 1.5$ V	—	10	40	Ω
Drain-Source ON resistance 3	$R_{DS(ON)3}$	$I_D = 10$ mA, $V_{GS} = 2.5$ V	—	7	28	Ω
Input capacitance	C_{iss}	$V_{DS} = 1.5$ V, $V_{GS} = 0$ V, $f = 1$ MHz	—	12	—	pF
Reverse transfer capacitance	C_{rss}	$V_{DS} = 1.5$ V, $V_{GS} = 0$ V, $f = 1$ MHz	—	3.4	—	pF
Output capacitance	C_{oss}	$V_{DS} = 1.5$ V, $V_{GS} = 0$ V, $f = 1$ MHz	—	12	—	pF
Switching time	t_{on}	$V_{DD} = 1.5$ V, $I_D = 10$ mA, $V_{GS} = 0$ to 1.5 V	—	0.35	—	μs
	t_{off}	$V_{DD} = 1.5$ V, $I_D = 10$ mA, $V_{GS} = 0$ to 1.5 V	—	0.2	—	

KEC

SEMICONDUCTOR

TECHNICAL DATA

KIA1117S/F00~

KIA1117S/F50

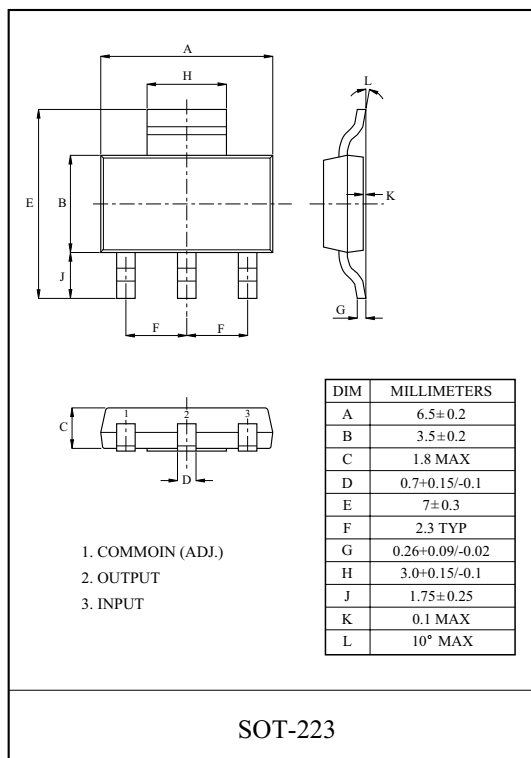
BIPOLAR LINEAR INTEGRATED CIRCUIT

LOW DROP FIXED AND ADJUSTABLE POSITIVE VOLTAGE REGULATOR

The KIA1117S/F $\times \times$ is a Low Drop Voltage Regulator able to provide up to 1A of output current, available even in adjustable version ($V_{ref}=1.25V$)

FEATURES

- Low Dropout Voltage : 1.1V/Typ. ($I_{out}=1.0A$)
- Very Low Quiescent Current : 4.2mA/Typ.
- Output Current up to 1A
- Fixed Output Voltage of 1.5V, 1.8V, 2.5V, 2.85V, 3.3V, 5.0V
- Adjustable Version Availability : $V_{ref}=1.25V$
- Internal Current and Thermal Limit
- Only 10 μF for stability
- Available in $\pm 2\%$ (at 25 $^{\circ}C$) and 4% in full Temperature range
- High Ripple Rejection : 80dB/Typ
- Temperature Range : 0 $^{\circ}C \sim 125^{\circ}C$



LINE UP

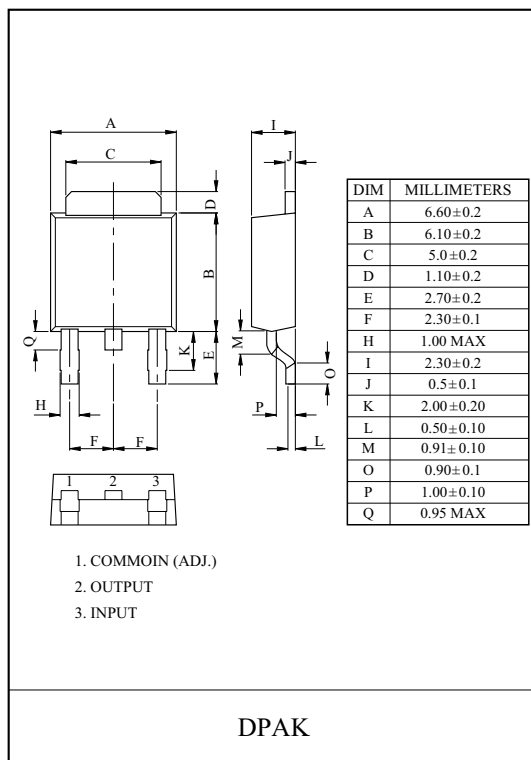
ITEM	OUTPUT VOLTAGE (V)	PACKAGE
KIA1117S/F00	Adjustable (1.25~10V)	S : SOT-223 F : DPAK
KIA1117S/F15	1.5	
KIA1117S/F18	1.8	
KIA1117S/F25	2.5	
KIA1117S/F28	2.85	
KIA1117S/F33	3.3	
KIA1117S/F50	5.0	

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage		V_{IN}	10	V
Output Current	S/F	I_{OUT}	1.0	A
Power Dissipation 1 (No heatsink)	S (Note)	P_{D1}	1.0	W
	F		1.3	
Power Dissipation 2 (Without heatsink)	S	P_{D2}	8.3	W
	F		13	
Operating Temperature		T_{opr}	0 ~ 125	$^{\circ}C$
Storage Temperature		T_{stg}	-55 ~ 150	$^{\circ}C$

Note) Package Mounted on FR-4 PCB 36 $\times$ 18 $\times$ 1.5 mm.

: mounting pad for the GND Lead min. 6cm²



KEC**SEMICONDUCTOR
TECHNICAL DATA****KIA7805API~
KIA7824API
BIPOLAR LINEAR INTEGRATED CIRCUIT**

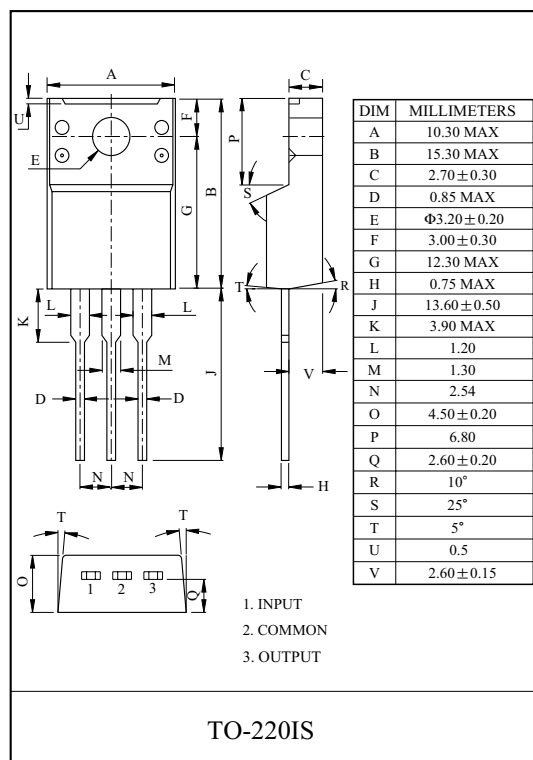
THREE TERMINAL POSITIVE VOLTAGE REGULATORS
5V, 6V, 8V, 9V, 10V, 12V, 15V, 18V, 20V, 24V.

FEATURES

- Suitable for C-MOS, TTL, the Other Digital IC's Power Supply.
- Internal Thermal Overload Protection.
- Internal Short Circuit Current Limiting.
- Output Current in Excess of 1A.
- Satisfies IEC-65 Specification. (International Electronical Commission)

MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage	KIA7805API ~ KIA7815API	V_{IN}	35	V
	KIA7818API ~ KIA7824API		40	
Power Dissipation (Tc=25 °C)		P_D	20.8	W
Power Dissipation (Without Heatsink)	KIA7805API ~ KIA7824API	P_D	2.0	W
Operating Junction Temperature		T_J	-30 ~ 150	°C
Storage Temperature		T_{stg}	-55 ~ 150	°C



KEC

KOREA ELECTRONICS CO.,LTD.

SEMICONDUCTOR
TECHNICAL DATA**KIA7805AP/API~**
KIA7824AP/API

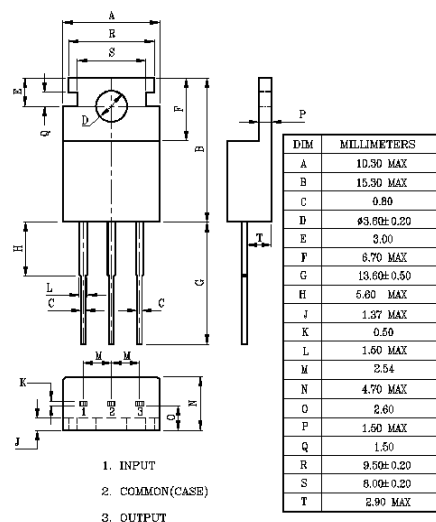
BIPOLAR LINEAR INTEGRATED CIRCUIT

THREE TERMINAL POSITIVE VOLTAGE REGULATORS
5V, 6V, 8V, 9V, 10V, 12V, 15V, 18V, 20V, 24V.**FEATURES**

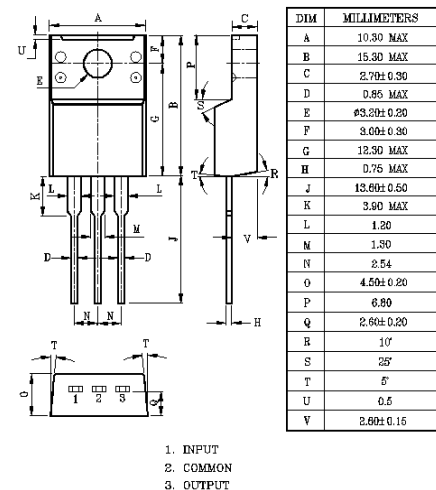
- Suitable for C-MOS, TTL, the Other Digital IC's Power Supply.
- Internal Thermal Overload Protection.
- Internal Short Circuit Current Limiting.
- Output Current in Excess of 1A.
- Satisfies IEC-65 Specification. (International Electronical Commission).

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage	KIA7805AP/API~	V_{IN}	35	V
	KIA7815AP/API			
	KIA7818AP/API~		40	
	KIA7824AP/API			
Power Dissipation (Tc=25°C)		P_D	20.8	W
Power Dissipation (Without Heatsink)	KIA7805API~ KIA7824API	P_D	2.0	W
Operating Junction Temperature		T_j	-30~150	°C
Storage Temperature		T_{stg}	-55~150	°C



TO-220AB



TO-220IS

KEC

KOREA ELECTRONICS CO.,LTD.

SEMICONDUCTOR
TECHNICAL DATA**KIA7905P/PI~**
KIA7924P/PI

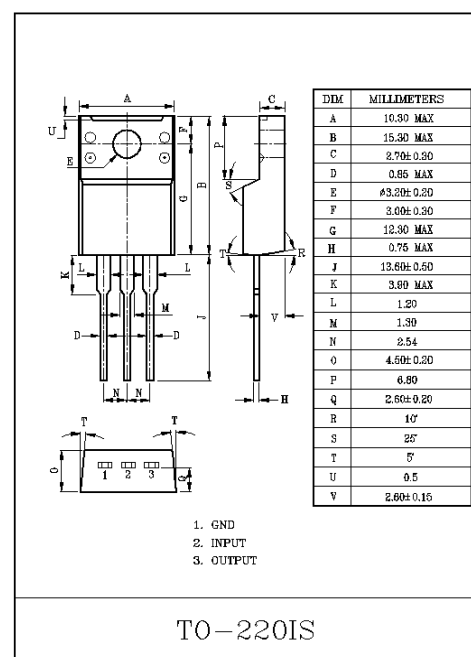
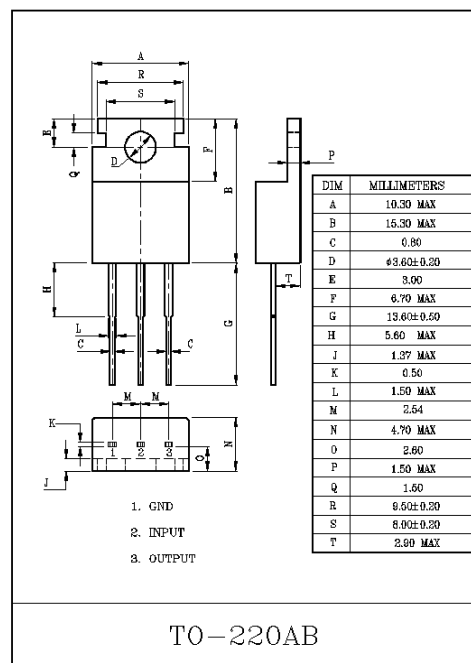
BIPOLAR LINEAR INTEGRATED CIRCUIT

1A THREE TERMINAL NEGATIVE VOLTAGE REGULATORS
-5V, -6V, -8V, -9V, -10V, -12V, -15V, -18V, -20V, -24V**FEATURES:**

- Suitable for C-MOS, TTL, and the other digital IC power supply.
- Internal thermal overload protecting.
- Internal short circuit current limiting.
- Output current in excess of 1.0A.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Input Voltage	KIA7905P/PI~ KIA7915P/PI	V_{IN}	-35	V
	KIA7918P/PI~ KIA7924P/PI		-40	
Power Dissipation (Tc=25°C)		P_D	20.8	W
Operating Junction Temperature		T_j	-30~150	°C
Operating Temperature		T_{opr}	-30~75	°C
Storage Temperature		T_{stg}	-55~150	°C



BILATERAL SWITCH

The KIC7S66FU is a high speed C²MOS BILATERAL SWITCH fabricated with silicon gate C²MOS technology. It consists of a high speed switch capable of controlling either digital or analog signals while maintaining the C²MOS low power dissipation.

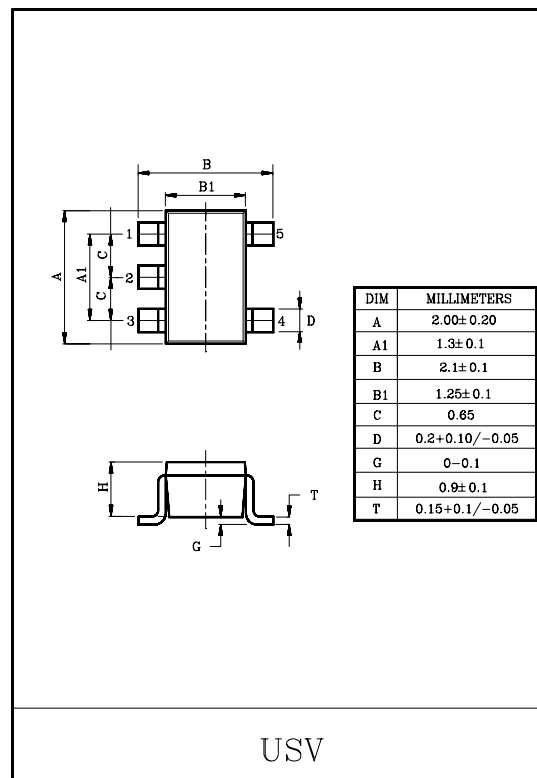
Control input (C) is provided to control the switch.

The switch turns ON while the C input is high, and the switch turns OFF while low.

Input is equipped with protection circuits against static discharge or transient excess voltage.

FEATURES

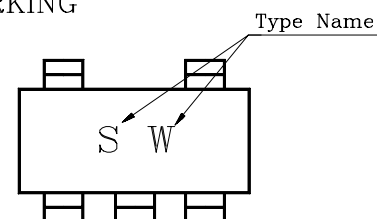
- High Speed : $t_{pd}=7\text{ns}(\text{Typ.})$ at $V_{CC}=5\text{V}$.
- Low Power Dissipation : $I_{CC}=1\mu\text{A}(\text{Max.})$ at $T_a=25^\circ\text{C}$.
- High Noise Immunity : $V_{NIH}=V_{NIL}=28\% V_{CC}(\text{Min.})$.
- Low ON Resistance : $R_{ON}=100\Omega(\text{Typ.})$ at $V_{CC}=9\text{V}$.
- Low T.H.D : $\text{THD}=0.05\%(\text{Typ.})$ at $V_{CC}=5\text{V}$.



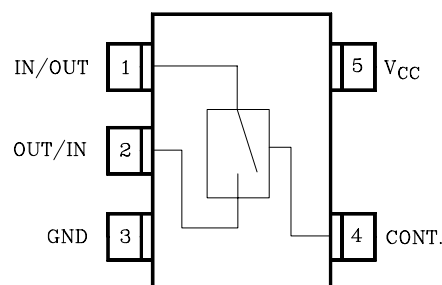
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	-0.5~10	V
Control Input Voltage	V_{IN}	-0.5~ $V_{CC}+0.5$	V
Switch I/O Voltage	$V_{I/O}$	-0.5~ $V_{CC}+0.5$	V
Control Diode Current	I_{CK}	±20	mA
Output Diode Current	I_{OK}	±20	mA
Through I/O Current	I_T	±12.5	mA
DC V_{CC} /Ground Current	I_{CC}	±25	mA
Power Dissipation	P_D	200	mW
Storage Temperature	T_{stg}	-65~150	°C
Lead Temperature (10s)	T_L	260	°C

MARKING



PIN CONNECTION(TOP VIEW)



2-INPUT AND GATE

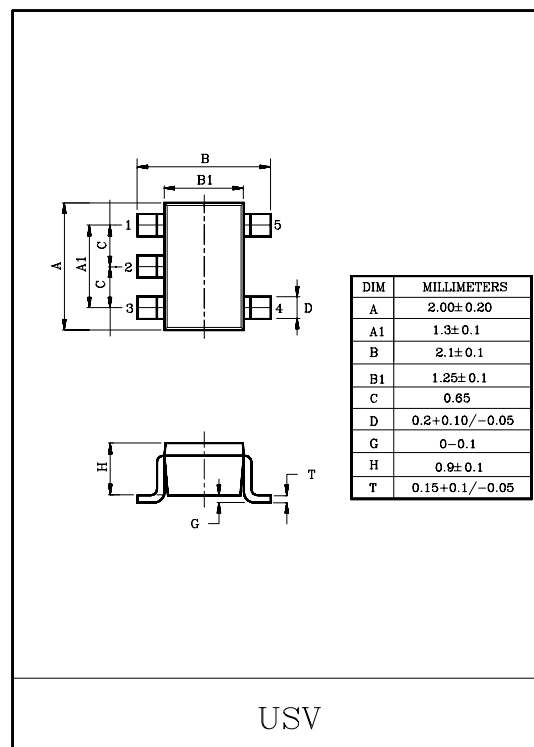
The KIC7SH08FU is a advanced high speed CMOS-2 INPUT AND GATE fabricated with silicon gate C²MOS technology. It achieves the high speed operation similar to equivalent Bipolar Schottky TTL while maintaining the CMOS low power dissipation. The internal circuit is composed of 4 stage including buffer output, which provide high noise immunity and stable output. An input protection circuit ensures that 0 to 7V can be applied to the input pins without regard to the supply voltage. This device can be used to interfase 5V to 3V systems and two supply systems such as battery back up. This circuit prevents device destruction due to mismatched supply and input voltages.

FEATURES

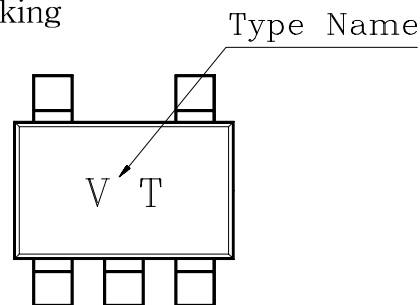
- High Speed : $t_{pd}=4.3ns(Typ.)$ at $V_{CC}=5V$.
- Low Power Dissipation : $I_{CC}=2\mu A(Max.)$ at $T_a=25^{\circ}C$.
- High Noise Immunity : $V_{NIH}=V_{NIL}=28\% V_{CC}(Min.)$.
- Power Down Protection is Provided on all inputs.
- Balanced Propagation Delays : $t_{PLH} \approx t_{PHL}$
- Wide Operating Voltage Range : $V_{CC(opr)}=2\sim 5.5V$.

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

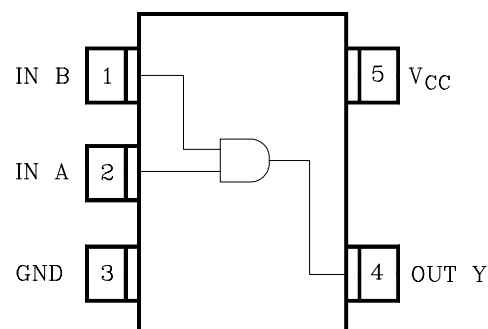
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage Range	V_{CC}	$-0.5\sim 7.0$	V
DC Input Voltage	V_{IN}	$-0.5\sim 7.0$	V
DC Output Voltage	V_{OUT}	$-0.5\sim V_{CC}+0.5$	V
Input Diode Current	I_{IK}	-20	mA
Output Diode Current	I_{OK}	± 20	mA
DC Output Current	I_{OUT}	± 25	mA
DC V_{CC} /Ground Current	I_{CC}	± 50	mA
Power Dissipation	P_D	200	mW
Storage Temperature	T_{stg}	$-65\sim 150$	$^{\circ}C$
Lead Temperature (10s)	T_L	260	$^{\circ}C$



Marking



PIN CONNECTION(TOP VIEW)





SEMICONDUCTOR TECHNICAL DATA

KIC7SZ08FU SILICON MONOLITHIC CMOS DIGITAL INTEGRATED CIRCUIT

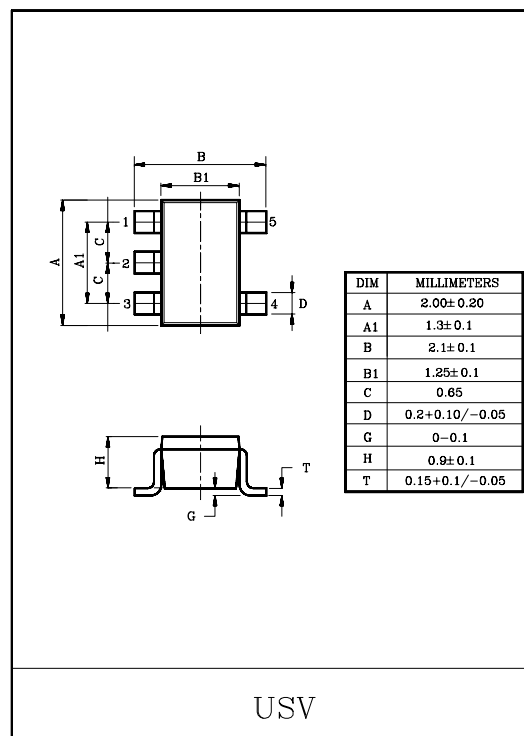
2 INPUT AND GATE

FEATURES

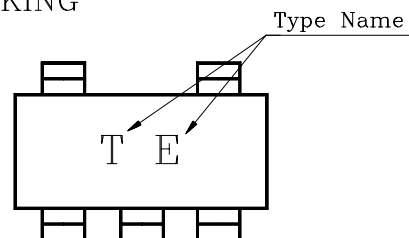
- High Output Drive : $\pm 24\text{mA}$ (Typ.)
@ $V_{CC}=3\text{V}$
- Super High Speed Operation : $t_{PD}=2.7\text{ns}$ (Typ.)
@ $V_{CC}=5\text{V}$, 50pF
- Operation Voltage Range : $V_{CC(\text{opr})}=1.8\sim 5.5\text{V}$.
- Supply Voltage Data Retention : $V_{CC}=1.5\sim 5.5\text{V}$.
- 5V Tolerant Function

MAXIMUM RATINGS

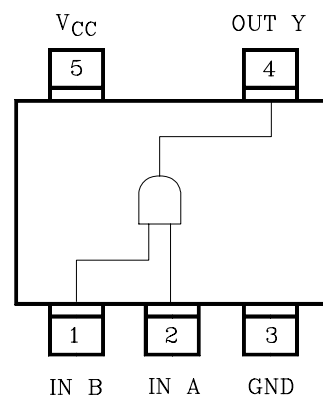
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage Range	V_{CC}	$-0.5\sim 6$	V
DC Input Voltage	V_{IN}	$-0.5\sim 6$	V
DC Output Voltage	V_{OUT}	$-0.5\sim 6$	V
Input Diode Current	I_{IK}	± 20	mA
Output Diode Current	I_{OK}	± 20	mA
DC Output Current	I_{OUT}	± 50	mA
DC V_{CC} /Ground Current	I_{CC}	± 50	mA
Power Dissipation	P_D	200	mW
Storage Temperature	T_{stg}	$-65\sim 150$	$^{\circ}\text{C}$
Lead Temperature (10s)	T_L	260	$^{\circ}\text{C}$



MARKING

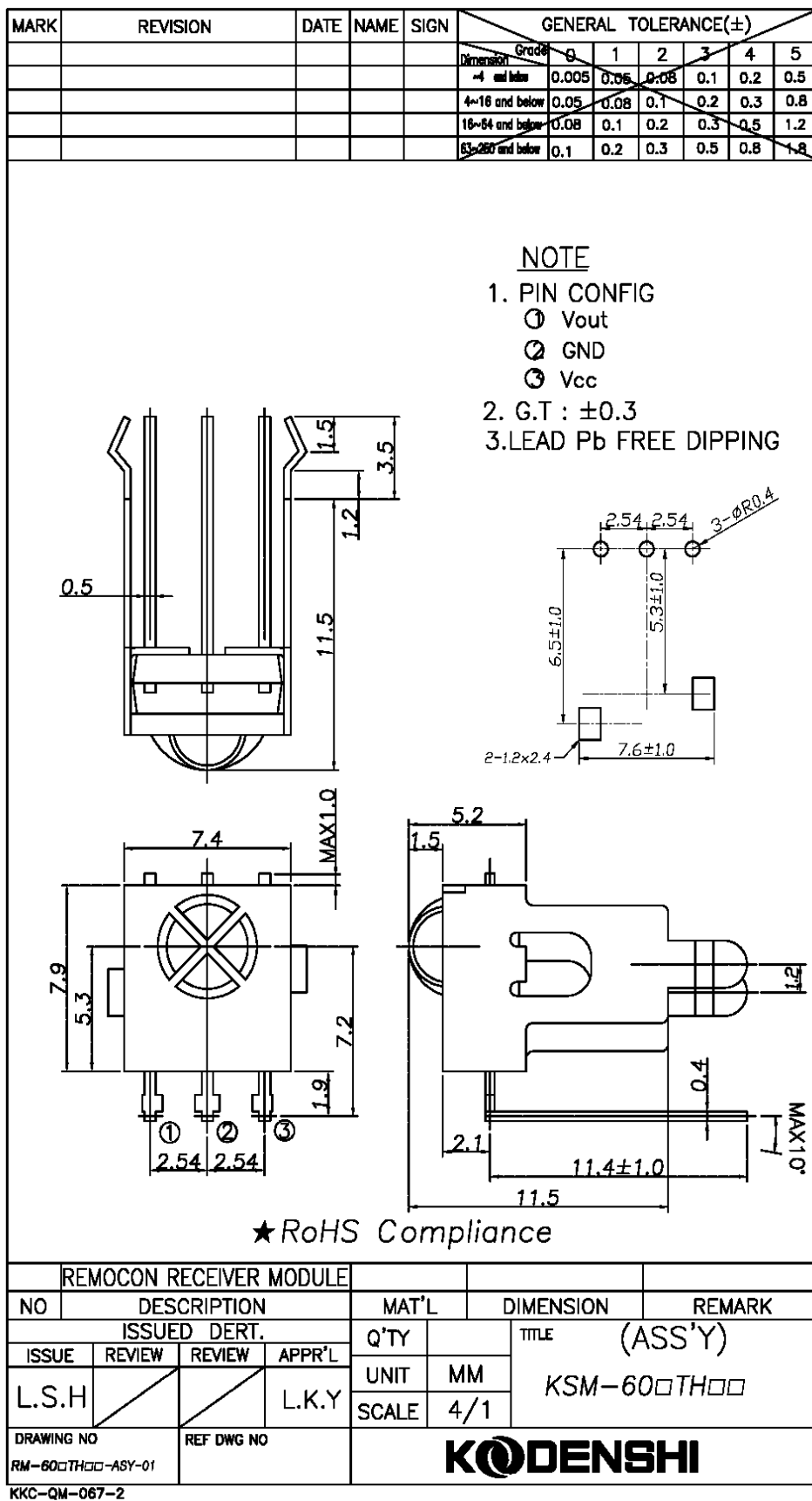


PIN CONNECTION(TOP VIEW)



KSM-60 □TH2E

KODENSHI KOREA CORP



ESMT**M12L64164A****SDRAM****1M x 16 Bit x 4 Banks
Synchronous DRAM****FEATURES**

- JEDEC standard 3.3V power supply
- LVTTTL compatible with multiplexed address
- Four banks operation
- MRS cycle with address key programs
 - CAS Latency (2 & 3)
 - Burst Length (1, 2, 4, 8 & full page)
 - Burst Type (Sequential & Interleave)
- All inputs are sampled at the positive going edge of the system clock
- DQM for masking
- Auto & self refresh
- 64ms refresh period (4K cycle)

ORDERING INFORMATION

54 Pin TSOP (Type II)
(400mil x 875mil)

PRODUCT NO.	MAX FREQ.	PACKAGE
M12L64164A-6T	166MHz	TSOP II
M12L64164A-7T	143MHz	

GENERAL DESCRIPTION

The M12L64164A is 67,108,864 bits synchronous high data rate Dynamic RAM organized as 4 x 1,048,576 words by 16 bits. Synchronous design allows precise cycle controls with the use of system clock I/O transactions are possible on every clock cycle. Range of operating frequencies, programmable burst length and programmable latencies allow the same device to be useful for a variety of high bandwidth, high performance memory system applications.

PIN ASSIGNMENT

Top View

V _{DD}	1	54	V _{SS}
DQ0	2	53	DQ15
V _{DDQ}	3	52	V _{SSQ}
DQ1	4	51	DQ14
DQ2	5	50	DQ13
V _{SSQ}	6	49	V _{DDQ}
DQ3	7	48	DQ12
DQ4	8	47	DQ11
V _{DDQ}	9	46	V _{SSQ}
DQ5	10	45	DQ10
DQ6	11	44	DQ9
V _{SSQ}	12	43	V _{DDQ}
DQ7	13	42	DQ8
V _{DD}	14	41	V _{SS}
LDQM	15	40	NC
$\overline{\text{WE}}$	16	39	UDQM
$\overline{\text{CAS}}$	17	38	CLK
$\overline{\text{RAS}}$	18	37	CKE
$\overline{\text{CS}}$	19	36	NC
A ₁₃	20	35	A ₁₁
A ₁₂	21	34	A ₉
A _{10/AP}	22	33	A ₈
A ₀	23	32	A ₇
A ₁	24	31	A ₆
A ₂	25	30	A ₅
A ₃	26	29	A ₄
V _{DD}	27	28	V _{SS}



9030 HDMI Panellink Transmitter Data Sheet

SiI 9030 Pin Diagram

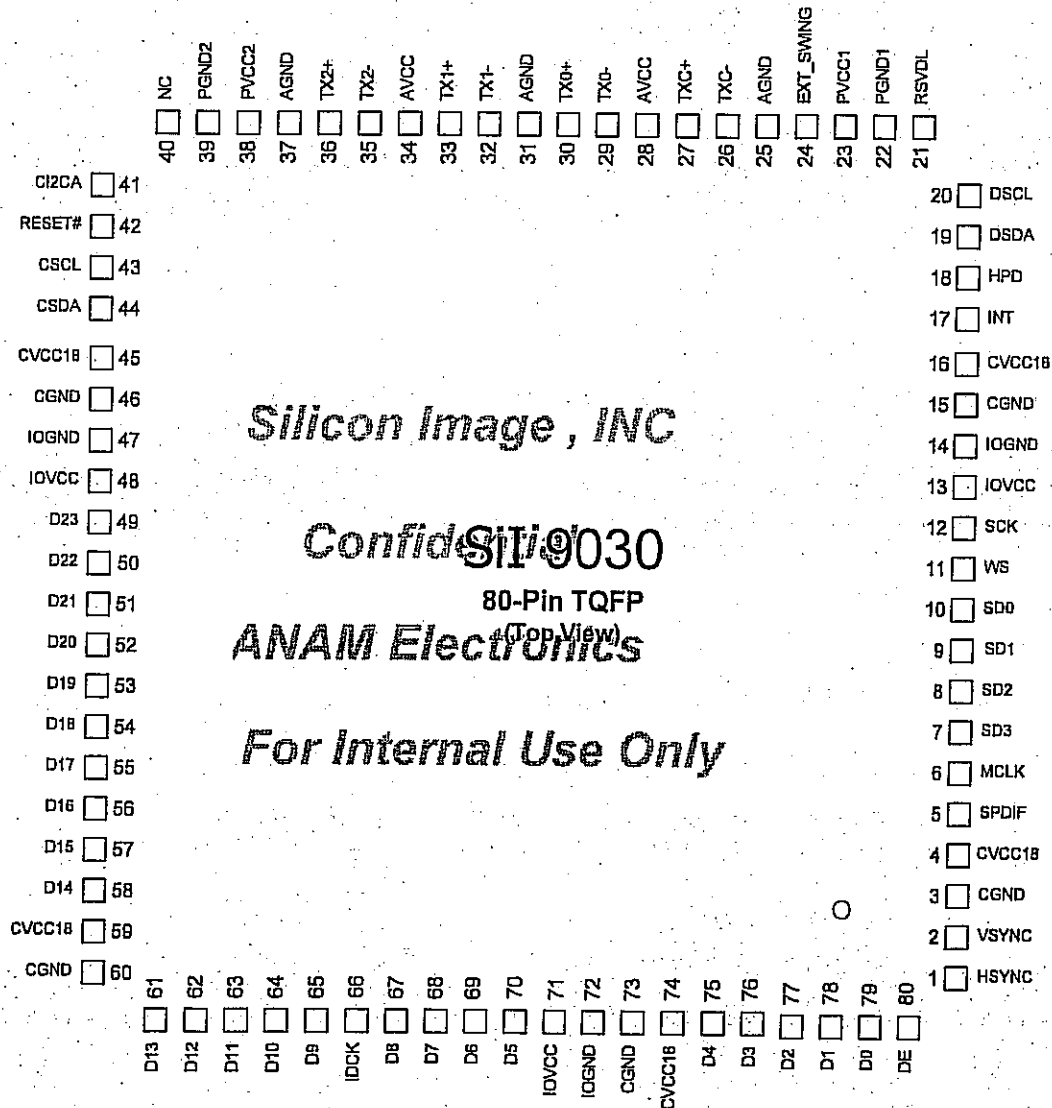


Figure 1. Pin Diagram

SN54AHC541, SN74AHC541 OCTAL BUFFERS/DRIVERS WITH 3-STATE OUTPUTS

SCLS261M – DECEMBER 1995 – REVISED JULY 2003

- Operating Range 2-V to 5.5-V V_{CC}
- Latch-Up Performance Exceeds 250 mA Per JESD 17

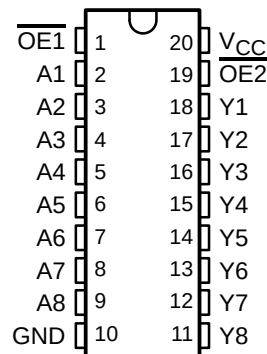
description/ordering information

The 'AHC541 octal buffers/drivers are ideal for driving bus lines or buffer memory address registers. These devices feature inputs and outputs on opposite sides of the package to facilitate printed circuit board layout.

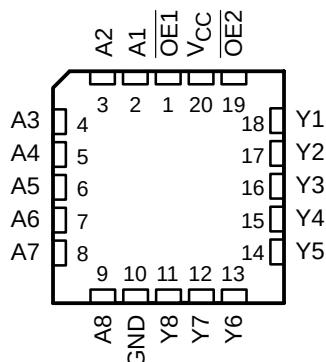
The 3-state control gate is a two-input AND gate with active-low inputs so that if either output-enable ($\overline{OE1}$ or $\overline{OE2}$) input is high, all corresponding outputs are in the high-impedance state. The outputs provide noninverted data when they are not in the high-impedance state.

To ensure the high-impedance state during power up or power down, $\overline{OE}$ should be tied to V_{CC} through a pullup resistor; the minimum value of the resistor is determined by the current-sinking capability of the driver.

SN54AHC541 . . . J OR W PACKAGE
SN74AHC541 . . . DB, DGV, DW, N, NS, OR PW PACKAGE
(TOP VIEW)



SN54AHC541 . . . FK PACKAGE
(TOP VIEW)



ORDERING INFORMATION

T_A	PACKAGE [†]		ORDERABLE PART NUMBER	TOP-SIDE MARKING
-40°C to 85°C	PDIP – N	Tube	SN74AHC541N	SN74AHC541N
	SOIC – DW	Tube	SN74AHC541DW	AHC541
		Tape and reel	SN74AHC541DWR	
	SOP – NS	Tape and reel	SN74AHC541NSR	AHC541
	SSOP – DB	Tape and reel	SN74AHC541DBR	HA541
	TSSOP – PW	Tube	SN74AHC541PW	HA541
		Tape and reel	SN74AHC541PWR	
-55°C to 125°C	TVSOP – DGV	Tape and reel	SN74AHC541DGVR	HA541
	CDIP – J	Tube	SNJ54AHC541J	SNJ54AHC541J
	CFP – W	Tube	SNJ54AHC541W	SNJ54AHC541W
	LCCC – FK	Tube	SNJ54AHC541FK	SNJ54AHC541FK

[†] Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



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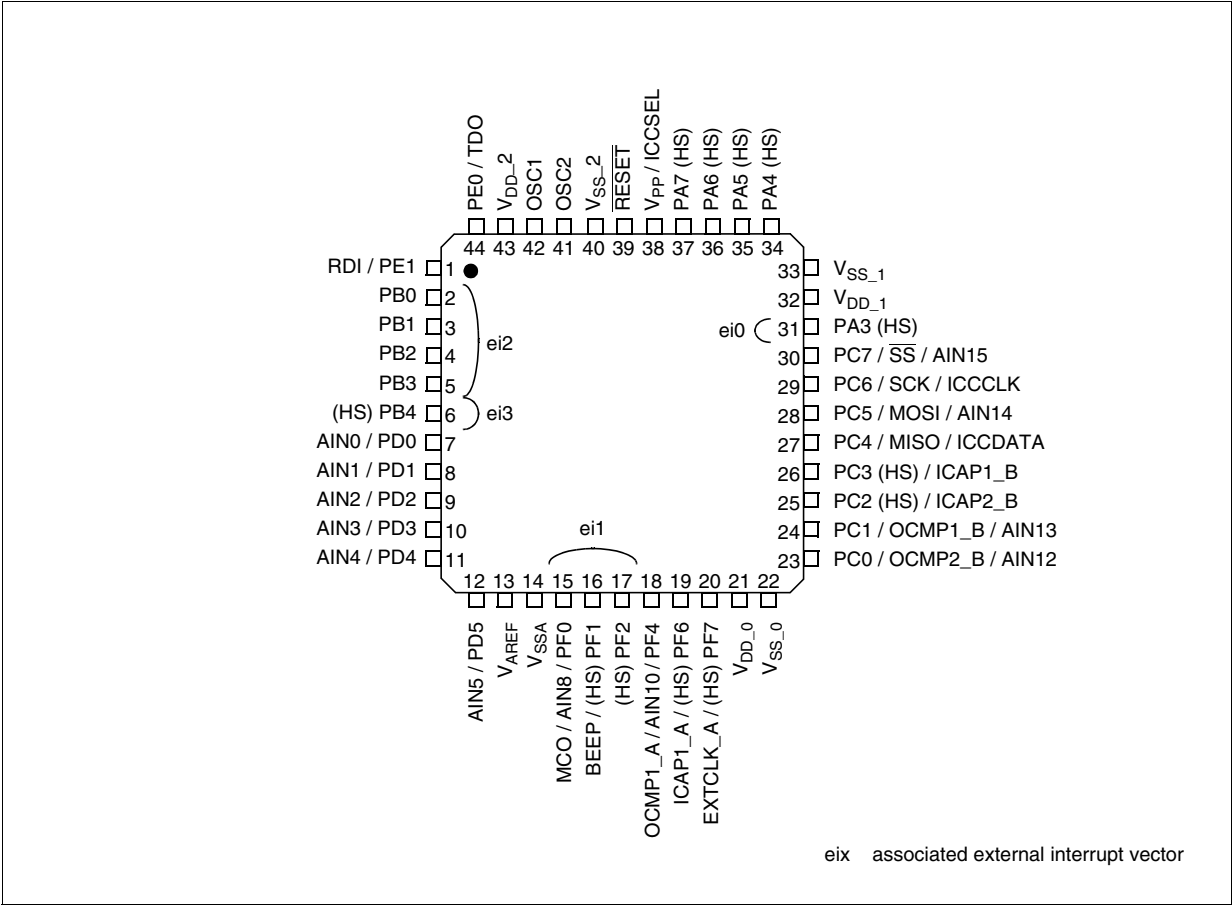
**TEXAS
INSTRUMENTS**

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On products compliant to MIL-PRF-38535, all parameters are tested unless otherwise noted. On all other products, production processing does not necessarily include testing of all parameters.

2 PIN DESCRIPTION

Figure 2. 44-Pin TQFP Package Pinouts



PIN DESCRIPTION (Cont'd)

Figure 3. 32-Pin SDIP Package Pinout

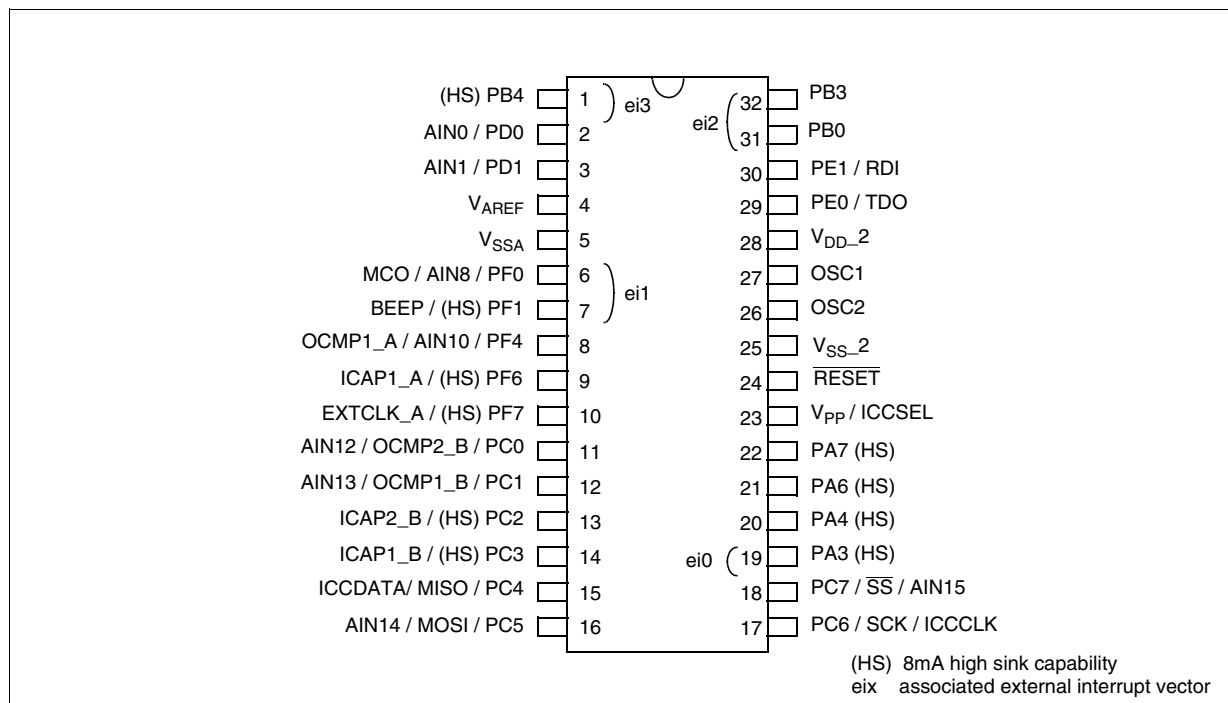
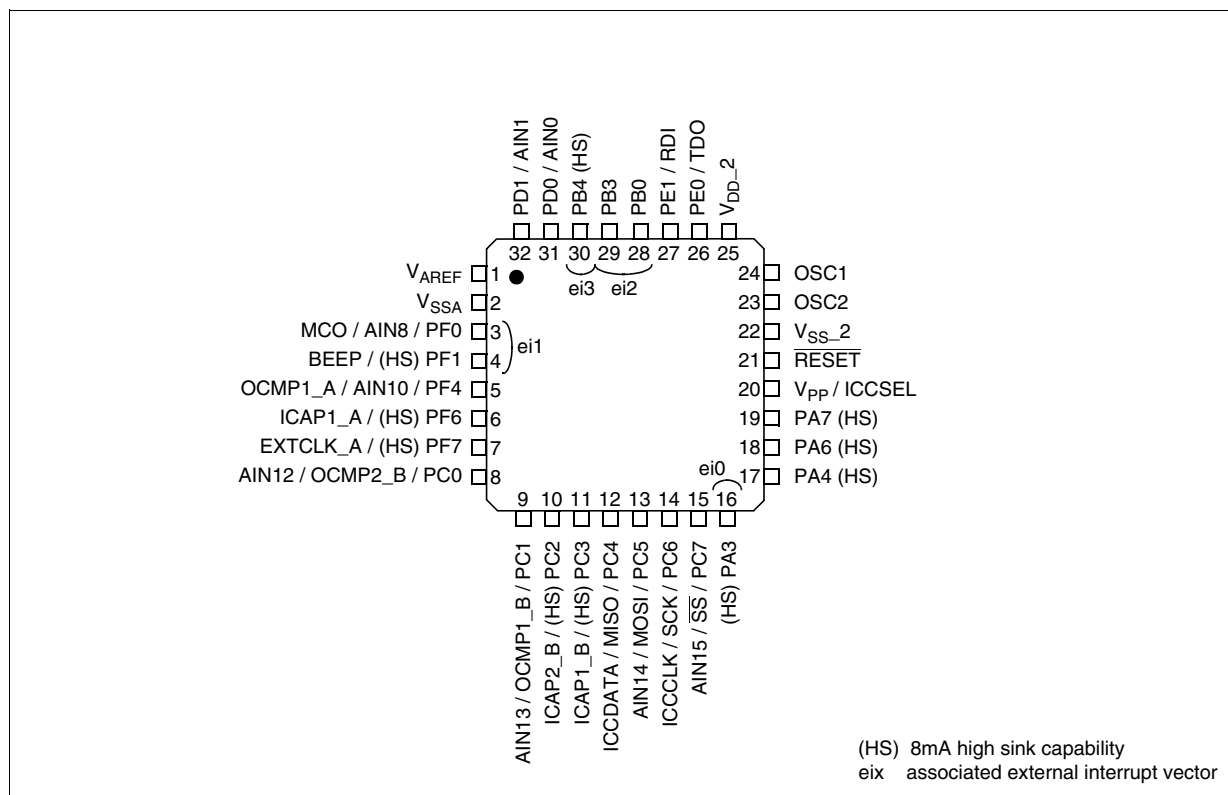


Figure 4. 32-Pin TQFP 7x7 Package Pinout



1.2 Pin Assignment

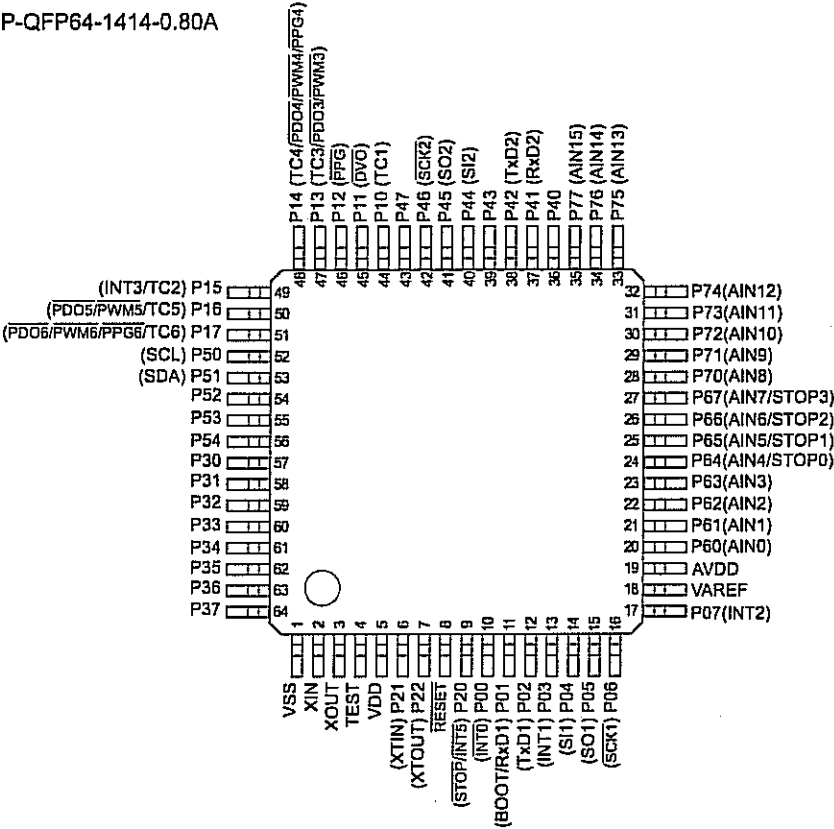


Figure 1-1 Pin Assignment

TOSHIBA**TC74HCT7007AP/AF**

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC74HCT7007AP, TC74HCT7007AF

HEX BUFFER

The TC74HCT7007A is a high speed CMOS BUFFER fabricated with silicon gate C²MOS technology.

It achieves the high speed operation similar to equivalent LSTTL while maintaining the CMOS low power dissipation.

This device may be used as a level converter for interfacing TTL or NMOS to High Speed CMOS. The inputs are compatible with TTL, NMOS and CMOS output voltage levels.

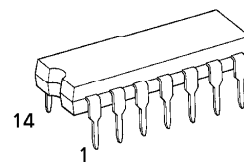
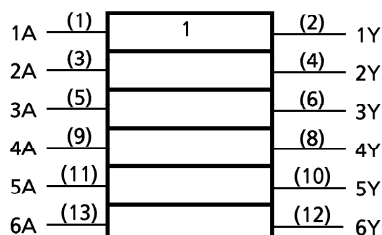
The internal circuit is composed of 4 stages including a buffer output, which provides high noise immunity and stable output.

All inputs are equipped with protection circuits against static discharge or transient excess voltage.

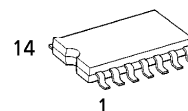
FEATURES:

- High Speed..... $t_{pd} = 11\text{ns}(\text{typ.})$ at $V_{CC} = 5\text{V}$
- Low Power Dissipation..... $I_{CC} = 1\mu\text{A}(\text{Max.})$ at $T_a = 25^\circ\text{C}$
- Compatible with TTL outputs..... $V_{IH} = 2\text{V}(\text{Min.})$
 $V_{IL} = 0.8\text{V}(\text{Max.})$
- Wide Interfacing ability.....LSTTL, NMOS, CMOS
- Output Drive Capability.....10 LSTTL Loads
- Symmetrical Output Impedance..... $|I_{OH}| = I_{OL} = 4\text{mA}(\text{Min.})$
- Balanced Propagation Delays..... $t_{pLH} \approx t_{pHL}$
- Pin and Function Compatible with 74LS07

IEC LOGIC SYMBOL

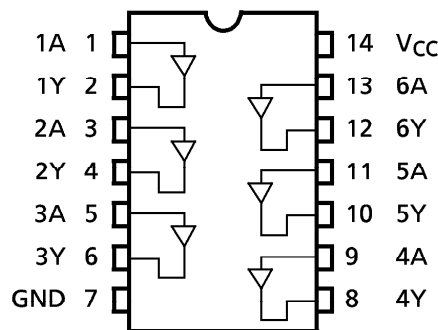


P (DIP14-P-300-2.54)
Weight : 0.96g (Typ.)



F (SOP14-P-300-1.27)
Weight : 0.18g (Typ.)

PIN ASSIGNMENT



(TOP VIEW)

PIN ASSIGNMENT

A	Y
L	L
H	H

961001EBA2

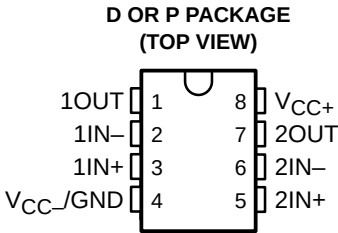
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TL3472

HIGH-SLEW-RATE, SINGLE-SUPPLY OPERATIONAL AMPLIFIER

SLOS200G – OCTOBER 1997 – REVISED JULY 2003

- Wide Gain-Bandwidth Product . . . 4 MHz
- High Slew Rate . . . 13 V/ μ s
- Fast Settling Time . . . 1.1 μ s to 0.1%
- Wide-Range Single-Supply Operation . . . 4 V to 36 V
- Wide Input Common-Mode Range Includes Ground (V_{CC-})
- Low Total Harmonic Distortion . . . 0.02%
- Large-Capacitance Drive Capability . . . 10,000 pF
- Output Short-Circuit Protection



description/ordering information

Quality, low-cost, bipolar fabrication with innovative design concepts is employed for the TL3472 operational amplifier. This device offers 4 MHz of gain-bandwidth product, 13-V/ μ s slew rate, and fast settling time, without the use of JFET device technology. Although the TL3472 can be operated from split supplies, it is particularly suited for single-supply operation because the common-mode input voltage range includes ground potential (V_{CC-}). With a Darlington transistor input stage, this device exhibits high input resistance, low input offset voltage, and high gain. The all-npn output stage, characterized by no dead-band crossover distortion and large output voltage swing, provides high-capacitance drive capability, excellent phase and gain margins, low open-loop high-frequency output impedance, and symmetrical source/sink ac frequency response. This low-cost amplifier is an alternative to the MC33072 and the MC34072 operational amplifiers.

ORDERING INFORMATION

T_A	PACKAGE [†]		ORDERABLE PART NUMBER	TOP-SIDE MARKING
0°C to 70°C	PDIP (P)	Tube of 25	TL3472CP	TL3472CP
	SOIC (D)	Tube of 50	TL3472CD	3472C
		Reel of 2500	TL3472CDR	
–40°C to 105°C	PDIP (P)	Tube of 25	TL3472IP	TL3472IP
	SOIC (D)	Tube of 50	TL3472ID	Z3472
		Reel of 2500	TL3472IDR	

[†] Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



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W9864G2GH



4. PIN CONFIGURATION

VCC	1	86	Vss
DQ0	2	85	DQ15
VccQ	3	84	VssQ
DQ1	4	83	DQ14
DQ2	5	82	DQ13
VssQ	6	81	VccQ
DQ3	7	80	DQ12
DQ4	8	79	DQ11
VccQ	9	78	VssQ
DQ5	10	77	DQ10
DQ6	11	76	DQ9
VSSQ	12	75	VccQ
DQ7	13	74	DQ8
NC	14	73	NC
VCC	15	72	Vss
DQM0	16	71	DQM1
WE	17	70	NC
CAS	18	69	NC
RAS	19	68	CLK
CS	20	67	CKE
NC	21	66	A9
BS0	22	65	A8
BS1	23	64	A7
A10/AP	24	63	A6
A0	25	62	A5
A1	26	61	A4
A2	27	60	A3
DQM2	28	59	DQM3
Vcc	29	58	Vss
NC	30	57	NC
DQ16	31	56	DQ31
VssQ	32	55	VccQ
DQ17	33	54	DQ30
DQ18	34	53	DQ29
VccQ	35	52	VssQ
DQ19	36	51	DQ28
DQ20	37	50	DQ27
VssQ	38	49	VccQ
DQ21	39	48	DQ26
DQ22	40	47	DQ25
VccQ	41	46	VssQ
DQ23	42	45	DQ24
Vcc	43	44	Vss

W9864G2GH



5. PIN DESCRIPTION

PIN NUMBER	PIN NAME	FUNCTION	DESCRIPTION
24, 25, 26, 27, 60, 61, 62, 63, 64, 65, 66	A0-A10	Address	Multiplexed pins for row and column address. Row address: A0-A10. Column address: A0-A7. A10 is sampled during a precharge command to determine if all banks are to be precharged or bank selected by BS0, BS1.
22, 23	BS0, BS1	Bank Select	Select bank to activate during row address latch time, or bank to read/write during address latch time.
2, 4, 5, 7, 8, 10, 11, 13, 31, 33, 34, 36, 37, 39, 40, 42, 45, 47, 48, 50, 51, 53, 54, 56, 74, 76, 77, 79, 80, 82, 83, 85	DQ0-DQ31	Data Input/ Output	Multiplexed pins for data output and input.
20	$\overline{\text{CS}}$	Chip Select	Disable or enable the command decoder. When command decoder is disabled, new command is ignored and previous operation continues.
19	$\overline{\text{RAS}}$	Row Address Strobe	Command input. When sampled at the rising edge of the clock $\overline{\text{RAS}}$, $\overline{\text{CAS}}$ and $\overline{\text{WE}}$ define the operation to be executed.
18	$\overline{\text{CAS}}$	Column Address Strobe	Referred to $\overline{\text{RAS}}$
17	$\overline{\text{WE}}$	Write Enable	Referred to $\overline{\text{RAS}}$
16, 28, 59, 71	DQM0-DQM3	Input/Output Mask	The output buffer is placed at Hi-Z (with latency of 2) when DQM is sampled high in read cycle. In write cycle, sampling DQM high will block the write operation with zero latency.
68	CLK	Clock Inputs	System clock used to sample inputs on the rising edge of clock.
67	CKE	Clock Enable	CKE controls the clock activation and deactivation. When CKE is low, Power Down mode, Suspend mode, or Self Refresh mode is entered.
1, 15, 29, 43	Vcc	Power	Power for input buffers and logic circuit inside DRAM.
44, 58, 72, 86	Vss	Ground	Ground for input buffers and logic circuit inside DRAM.
3, 9, 35, 41, 49, 55, 75, 81	Vcca	Power for I/O Buffer	Separated power from VCC, to improve DQ noise immunity.
6, 12, 32, 38, 46, 52, 78, 84	Vssa	Ground for I/O Buffer	Separated ground from VSS, to improve DQ noise immunity.
14, 21, 30, 57, 69, 70, 73	NC	No Connection	No connection. (The NC pin must connect to ground or floating.)

Publication Release Date: Aug. 13, 2007
Revision A09

Pin Configuration and Functionality**1 Pin Configuration and Functionality****1.1 Pin Configuration with P-DIP-8-6**

Pin	Symbol	Function
1	SoftS	Soft-Start
2	FB	Feedback
3	Isense	Controller Current Sense Input, CoolMOS™ Source Output
4	Drain	650V ¹⁾ /800V ²⁾ CoolMOS™ Drain
5	Drain	650V ¹⁾ /800V ²⁾ CoolMOS™ Drain
6	N.C	Not connected
7	VCC	Controller Supply Voltage
8	GND	Controller Ground

¹⁾ at $T_j = 110^\circ\text{C}$

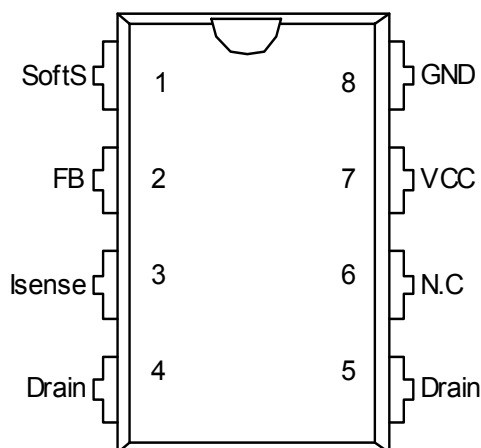
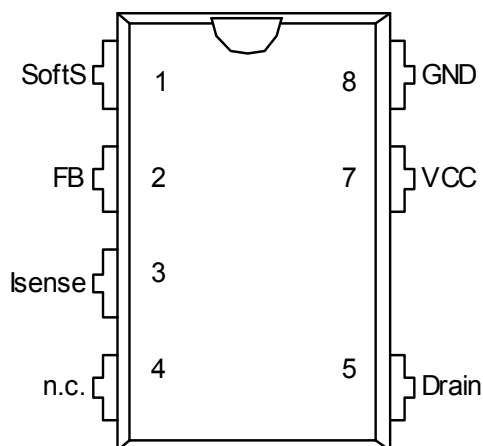
²⁾ at $T_j = 25^\circ\text{C}$

1.2 Pin Configuration with P-DIP-7-1

Pin	Symbol	Function
1	SoftS	Soft-Start
2	FB	Feedback
3	Isense	Controller Current Sense Input, CoolMOS™ Source Output
4	N.C.	Not connected
5	Drain	650V ¹⁾ /800V ²⁾ CoolMOS™ Drain
7	VCC	Controller Supply Voltage
8	GND	Controller Ground

¹⁾ at $T_j = 110^\circ\text{C}$

²⁾ at $T_j = 25^\circ\text{C}$

Package P-DIP-8-6*Figure 1 Pin Configuration P-DIP-8-6 (top view)***Package P-DIP-7-1***Figure 2 Pin Configuration P-DIP-7-1 (top view)*

Pin Configuration and Functionality

1.3 Pin Configuration with P-TO220-6-46/47

Pin	Symbol	Function
1	Drain	650V ¹⁾ CoolMOS™ Drain
3	Isense	Controller Current Sense Input, CoolMOS™ Source Output
4	GND	Controller Ground
5	VCC	Controller Supply Voltage
6	SoftS	Soft-Start
7	FB	Feedback

¹⁾ at $T_j = 110^\circ\text{C}$

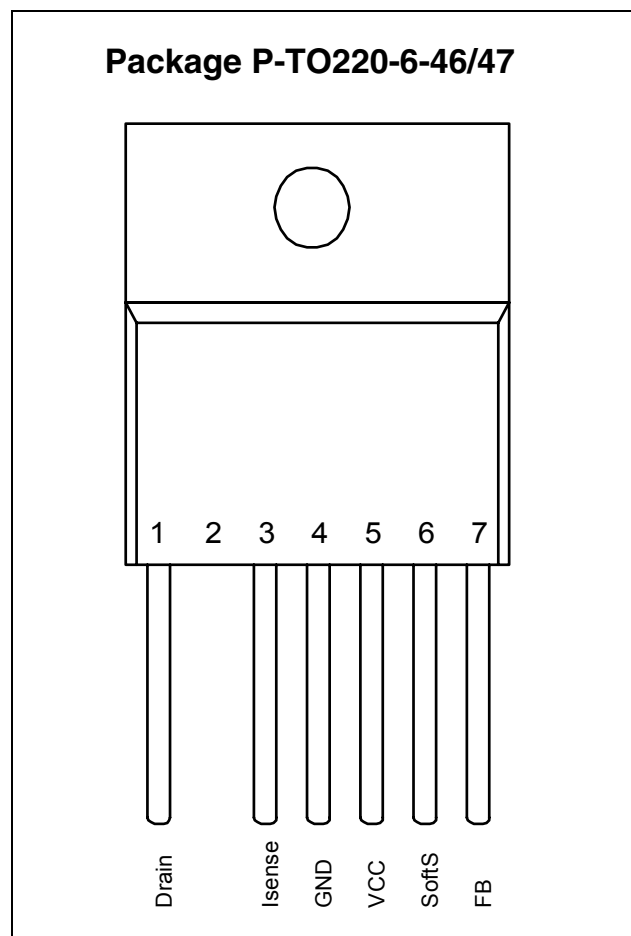


Figure 3 Pin Configuration P-TO220-6-46/47 (top view)

1.4 Pin Configuration with P-DSO-16/12

Pin	Symbol	Function
1	N.C.	Not Connected
2	SoftS	Soft-Start
3	FB	Feedback
4	Isense	Controller Current Sense Input, CoolMOS™ Source Output
5	Drain	650V ¹⁾ CoolMOS™ Drain
6	Drain	650V ¹⁾ CoolMOS™ Drain
7	Drain	650V ¹⁾ CoolMOS™ Drain
8	Drain	650V ¹⁾ CoolMOS™ Drain
9	N.C.	Not Connected
10	N.C.	Not Connected
11	VCC	Controller Supply Voltage
12	GND	Controller Ground

¹⁾ at $T_j = 110^\circ\text{C}$

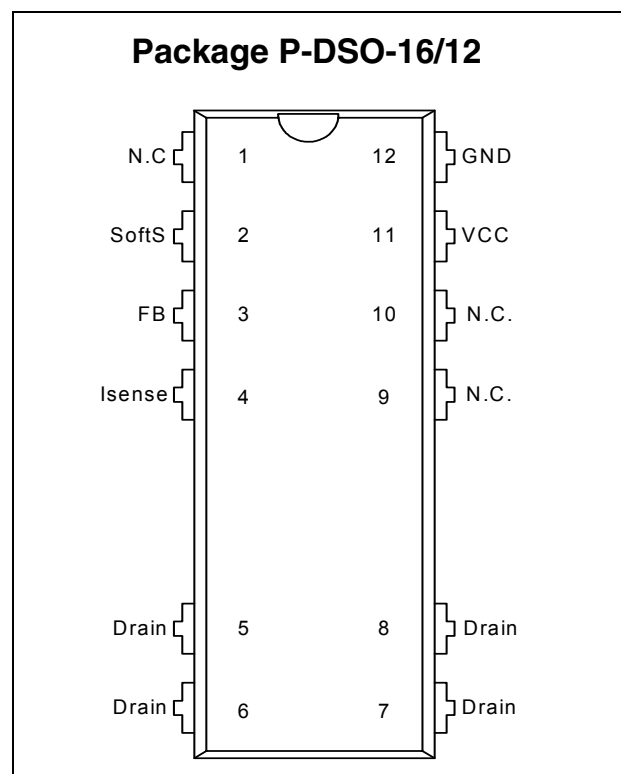


Figure 4 Pin Configuration P-DSO-16/12 (top view)



Pin Configuration and Functionality

1 Pin Configuration and Functionality

1.1 Pin Configuration with PG-DIP-8-6

Pin	Symbol	Function
1	SoftS	Soft-Start
2	FB	Feedback
3	CS	Current Sense/ 650V ¹⁾ Depl-CoolMOS™ Source
4	Drain	650V ¹⁾ Depl-CoolMOS™ Drain
5	Drain	650V ¹⁾ Depl-CoolMOS™ Drain
6	n.c.	Not Connected
7	VCC	Controller Supply Voltage
8	GND	Controller Ground

¹⁾ at T_j = 110°C

1.2 Pin Configuration with PG-DIP-7-1

Pin	Symbol	Function
1	SoftS	Soft-Start
2	FB	Feedback
3	CS	Current Sense/ 650V ¹⁾ Depl-CoolMOS™ Source
4	n.c.	Not connected
5	Drain	650V ¹⁾ Depl-CoolMOS™ Drain
-	-	-
7	VCC	Controller Supply Voltage
8	GND	Controller Ground

¹⁾ at T_j = 110°C

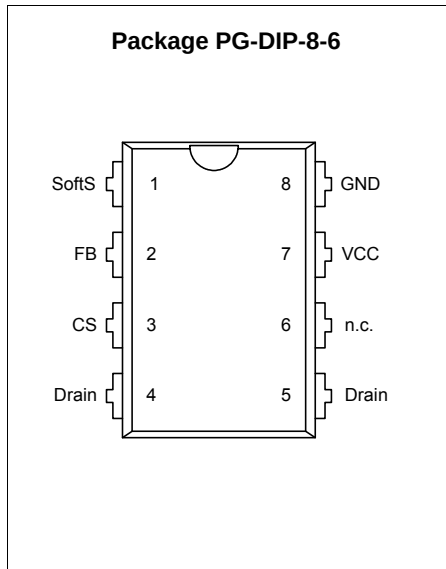


Figure 1 Pin Configuration PG-DIP-8-6(top view)

Note: Pin 4 and 5 are shorted within the DIP 8 package.

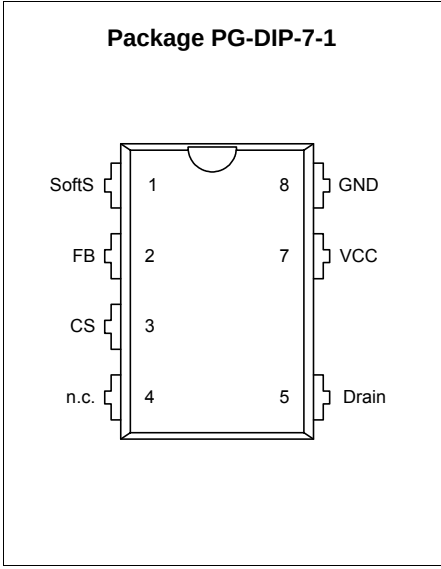


Figure 2 Pin Configuration PG-DIP-7-1(top view)

Pin Configuration and Functionality**1.3 Pin Configuration with P-TO220-6-46**

Pin	Symbol	Function
1	Drain	650V ¹⁾ Depl-CoolMOS™ Drain
3	CS	Current Sense/ 650V ¹⁾ Depl-CoolMOS™ Source
4	GND	Controller Ground
5	VCC	Controller Supply Voltage
6	SoftS	Soft-Start
7	FB	Feedback

¹⁾ at $T_j = 110^{\circ}\text{C}$

1.4 Pin Configuration with P-TO220-6-47

Pin	Symbol	Function
1	Drain	650V ¹⁾ Depl-CoolMOS™ Drain
3	CS	Current Sense/ 650V ¹⁾ Depl-CoolMOS™ Source
4	GND	Controller Ground
5	VCC	Controller Supply Voltage
6	SoftS	Soft-Start
7	FB	Feedback

¹⁾ at $T_j = 110^{\circ}\text{C}$

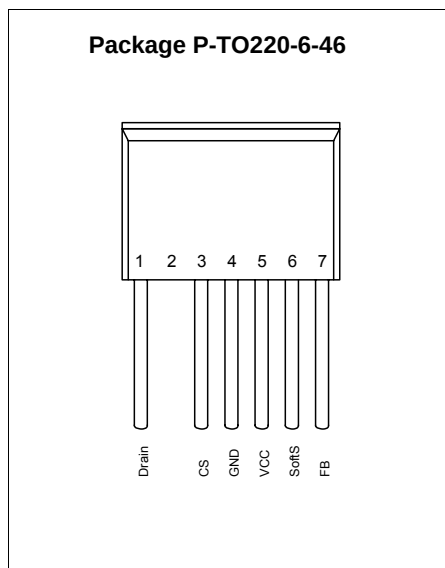


Figure 3 Pin Configuration P-TO220-6-46(top view)

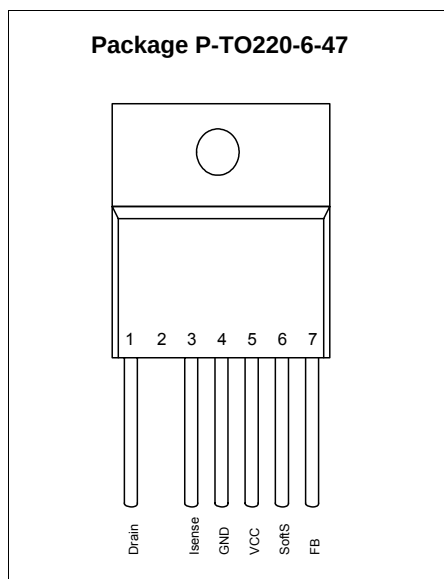


Figure 4 Pin Configuration P-TO220-6-47(top view)

KEC

KOREA ELECTRONICS CO.,LTD.

**SEMICONDUCTOR
TECHNICAL DATA****KIA431/F/A/AF**
BIPOLAR LINEAR INTEGRATED CIRCUIT**PROGRAMMABLE PRECISION REFERENCES**

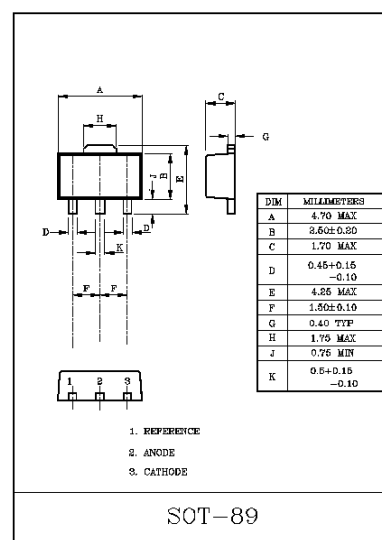
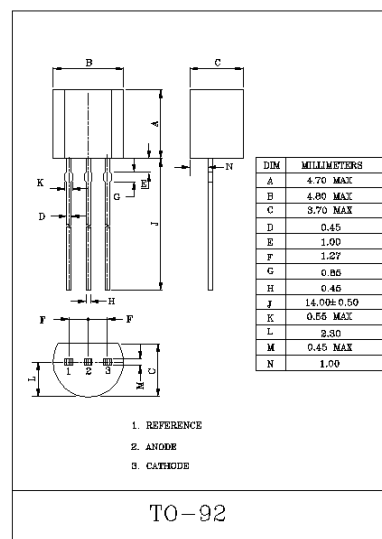
The KIA431/F/A/AF integrated circuits are three-terminal programmable shunt regulator diodes. These monolithic IC voltage reference operate as a low temperature coefficient zener which is programmable from V_{ref} to 36 volts with two external resistors. These devices exhibit a wide operating current range of 1.0 to 100mA with a typical dynamic impedance of 0.22Ω . The characteristics of these references make them excellent replacements for zener diodes in many applications such as digital voltmeters, power supplies, and op amp circuitry. The 2.5 volt reference makes it convenient to obtain a stable reference from 5.0 volt logic supplies, and since the KIA431/F/A/AF operates as a shunt regulator, it can be used as either a positive or negative voltage reference.

FEATURES

- Programmable Output Voltage to 36 Volts.
- Voltage Reference Tolerance : $\pm 1.0\%$ (KIA431A/AF)
- Low Dynamic Output Impedance : 0.22Ω (Typ.).
- Sink Current Capability of 1.0 to 100mA.
- Equivalent Full-Range Temperature Coefficient of 50ppm/ $^{\circ}\text{C}$ (Typ.).
- Temperature Compensated for Operation Over Full Rated Operating Temperature Range.
- Low Output Noise Voltage.

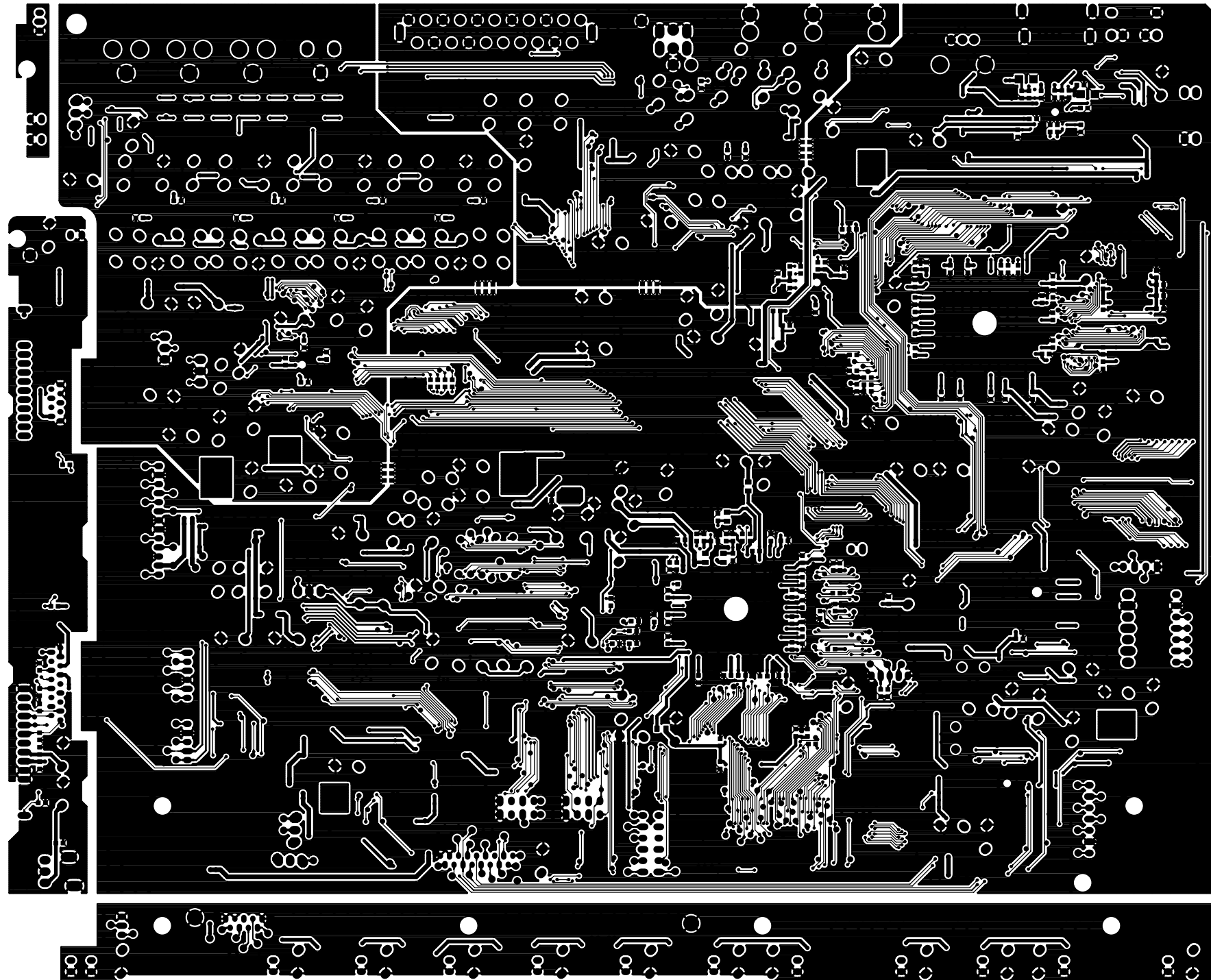
MARKING

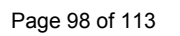
Type No.	Marking
KIA431F	3A
KIA431AF	3B

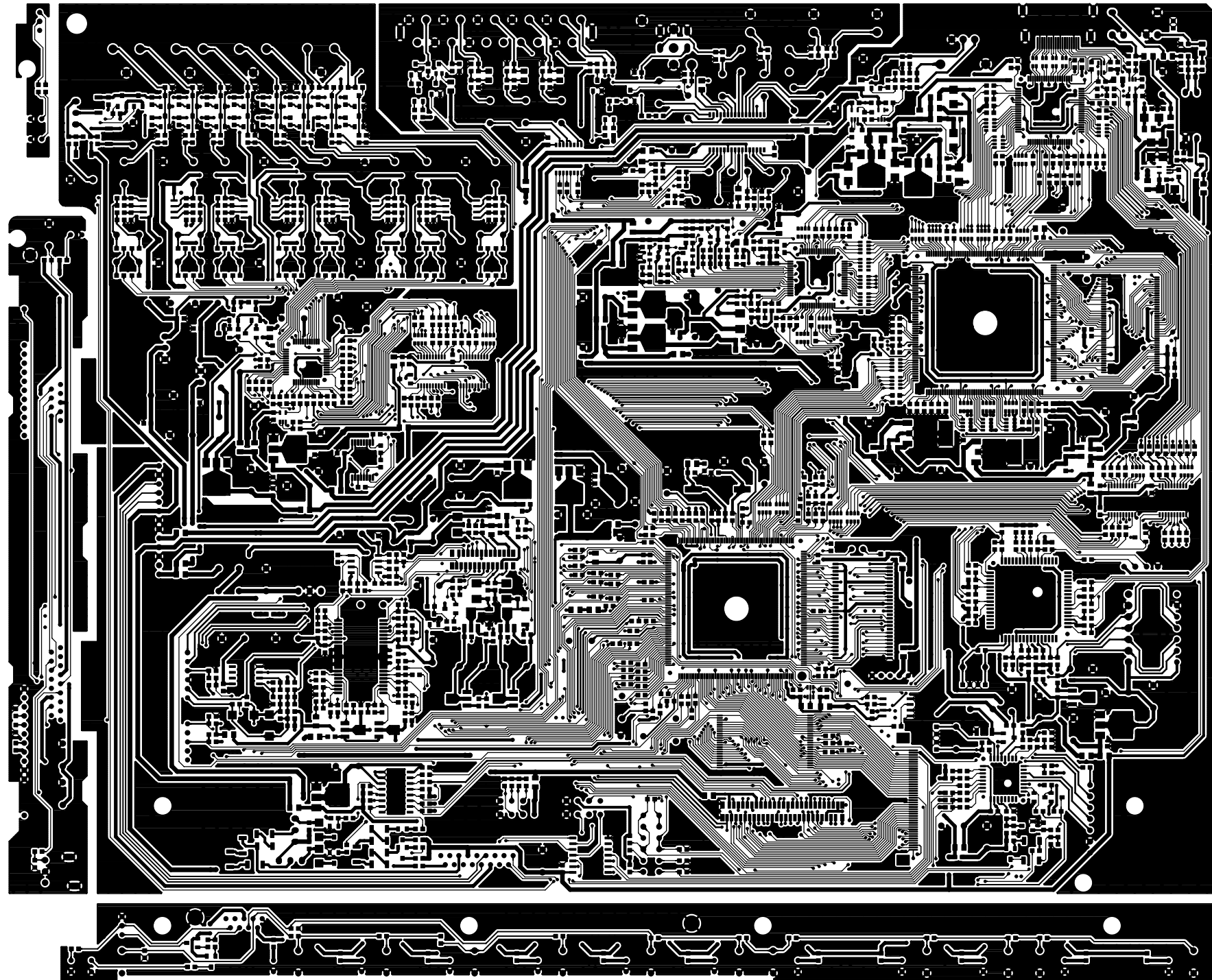
**MAXIMUM RATINGS**

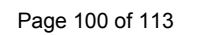
(Full operating ambient temperature range applies unless otherwise noted.)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Cathode To Anode Voltage		V_{KA}	37	V
Cathode Current Range, Continuous		I_K	-100~150	mA
Reference Input Current Range, Continuous		I_{ref}	-0.05~10	mA
Operating Junction Temperature		T_j	150	$^{\circ}\text{C}$
Operating Temperature		T_{opr}	-40~85	$^{\circ}\text{C}$
Storage Temperature		T_{stg}	-65~150	$^{\circ}\text{C}$
Total Power Dissipation	KIA431/A	P_D	700	mW
	KIA431F/AF		800	

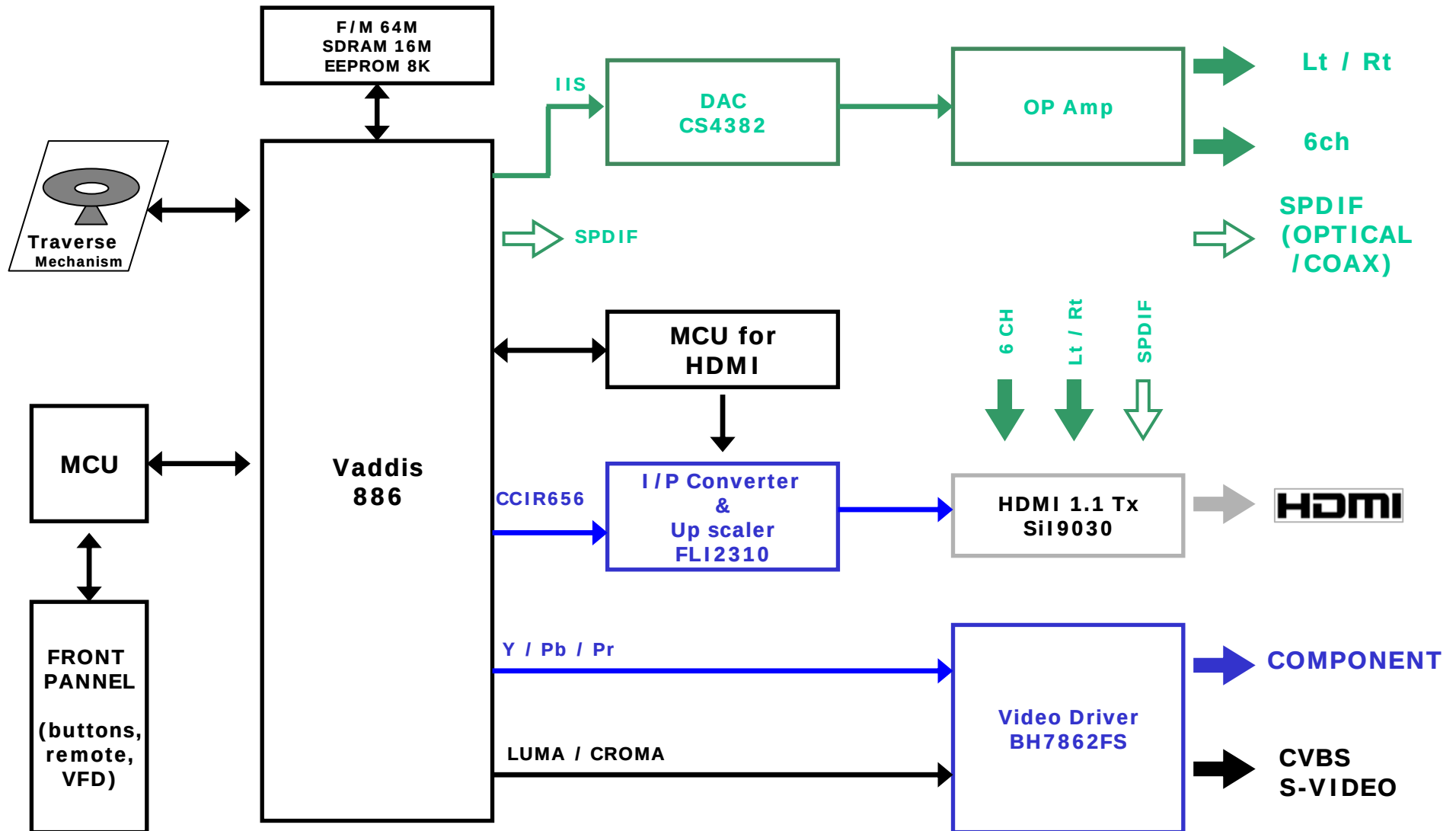




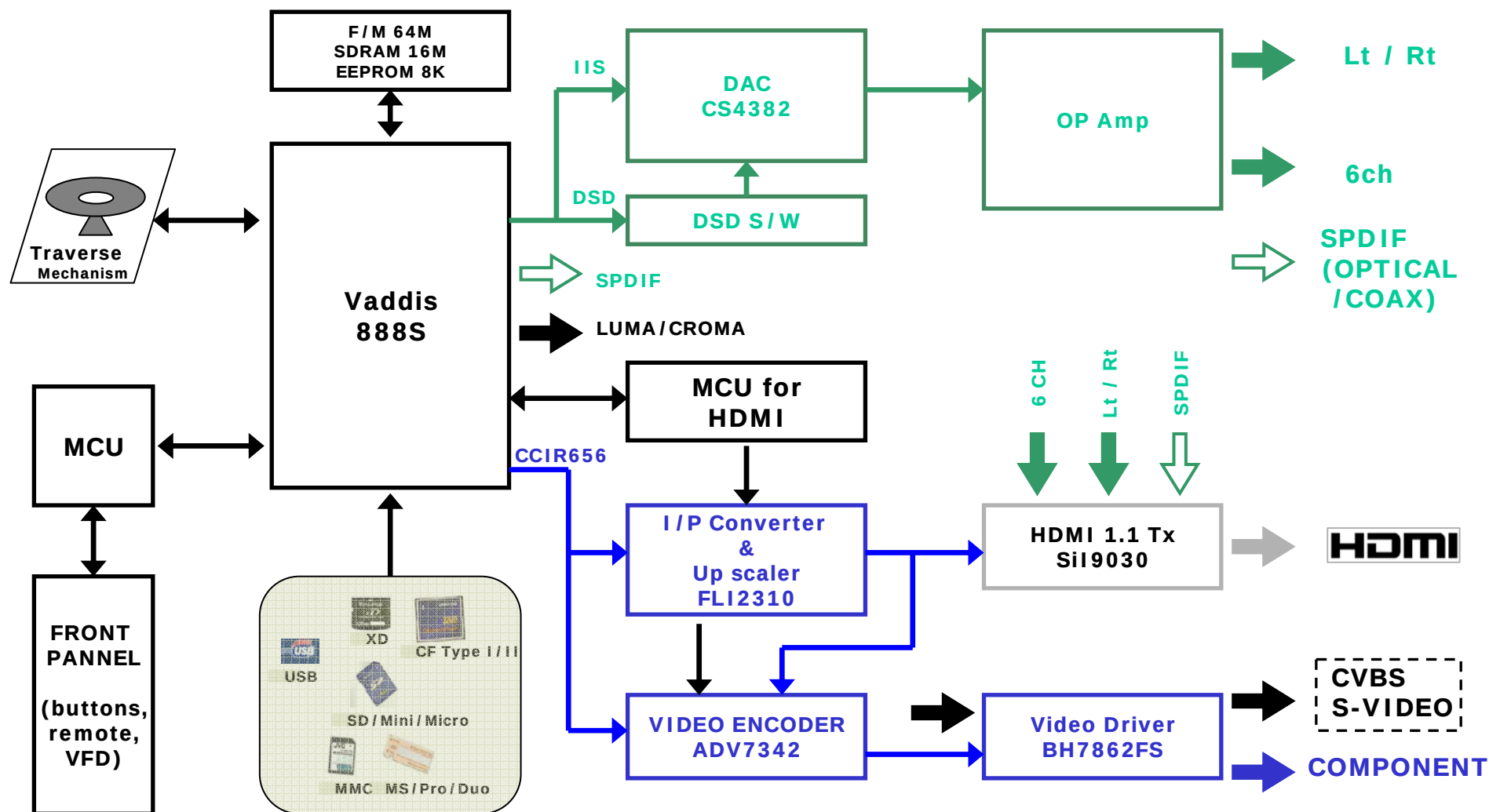




DVD39 / 230 BLOCK DIAGRAM

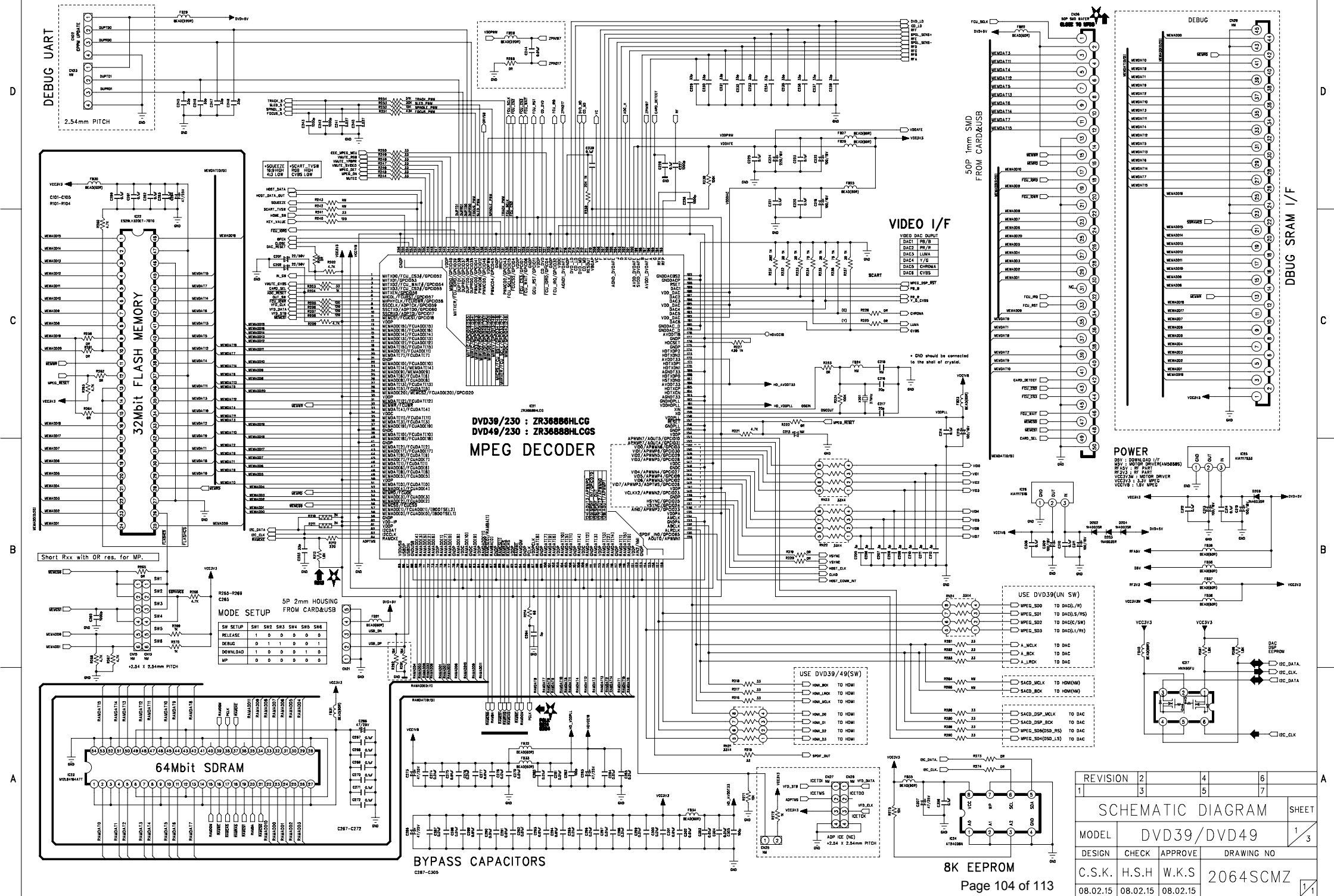


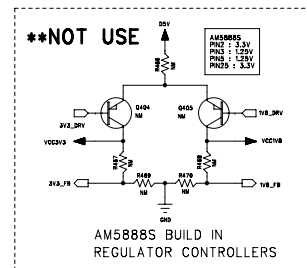
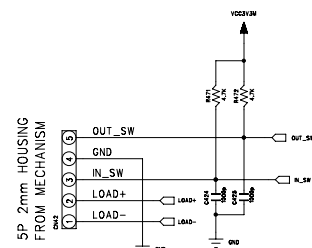
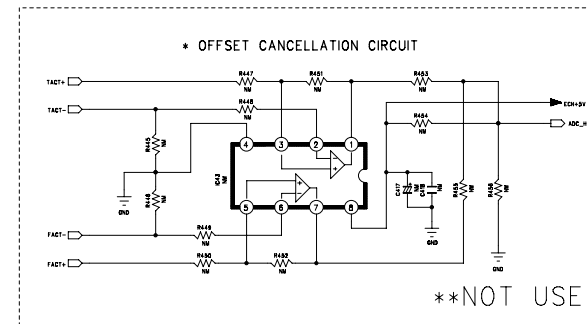
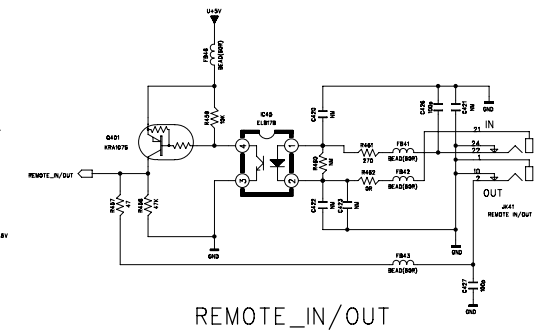
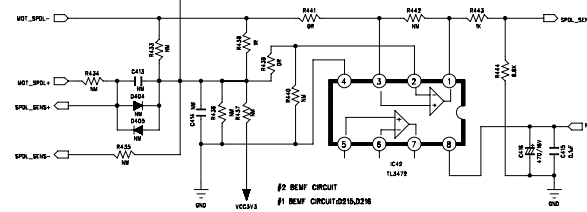
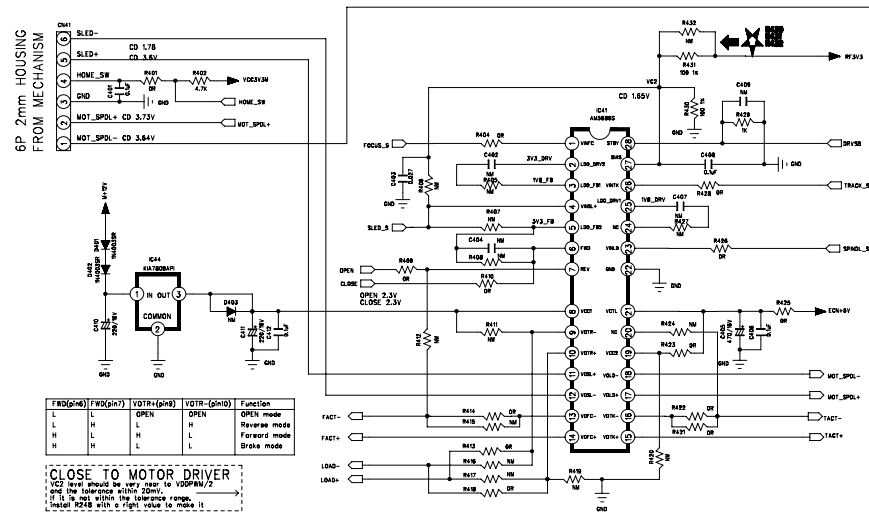
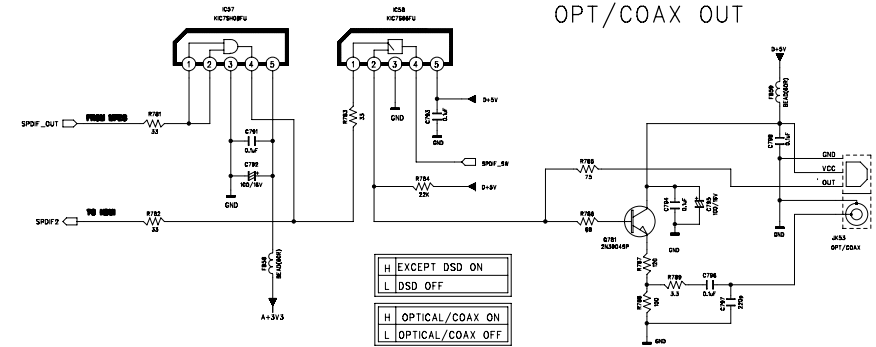
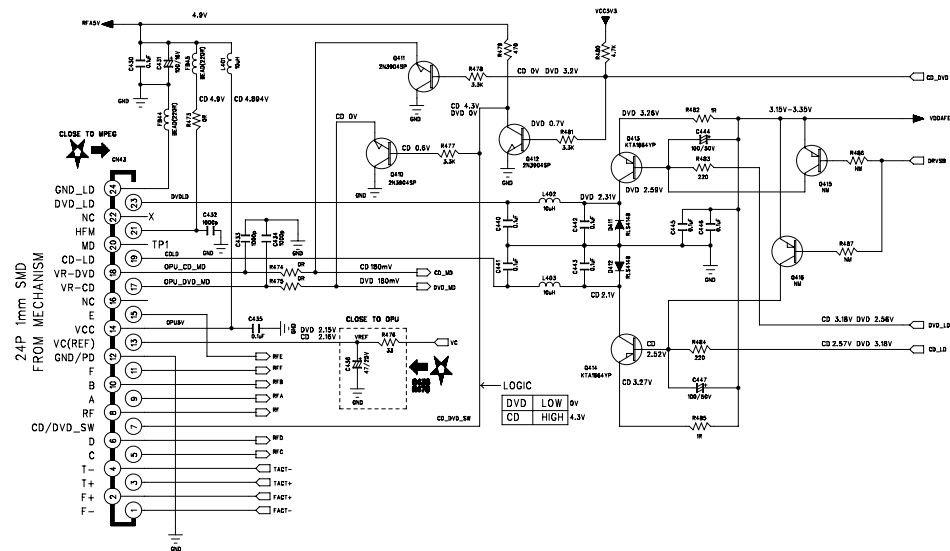
DVD49 / 230 BLOCK DIAGRAM



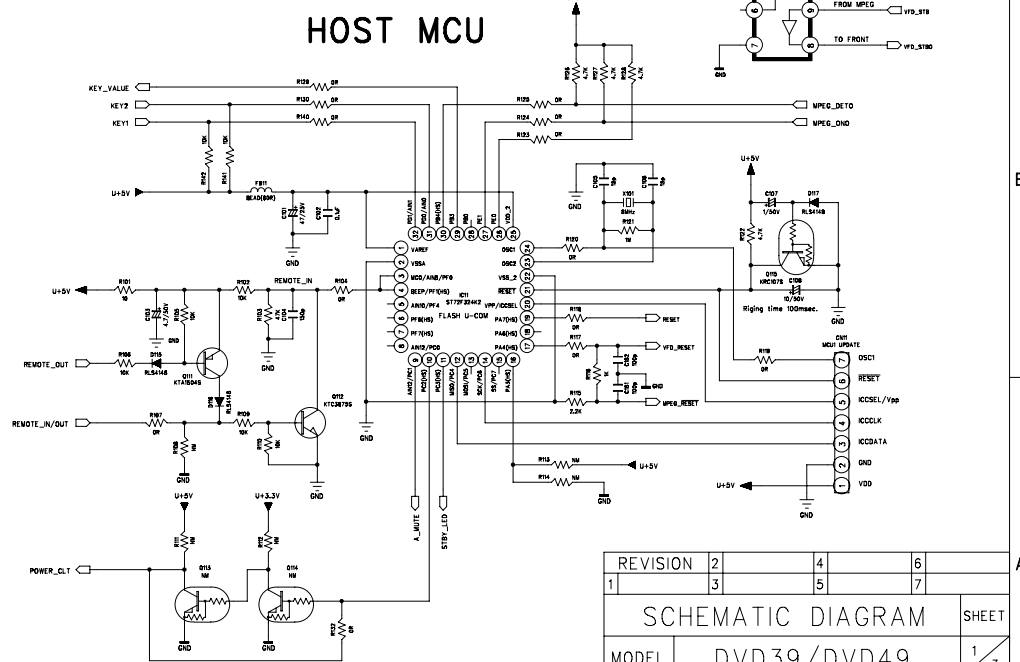
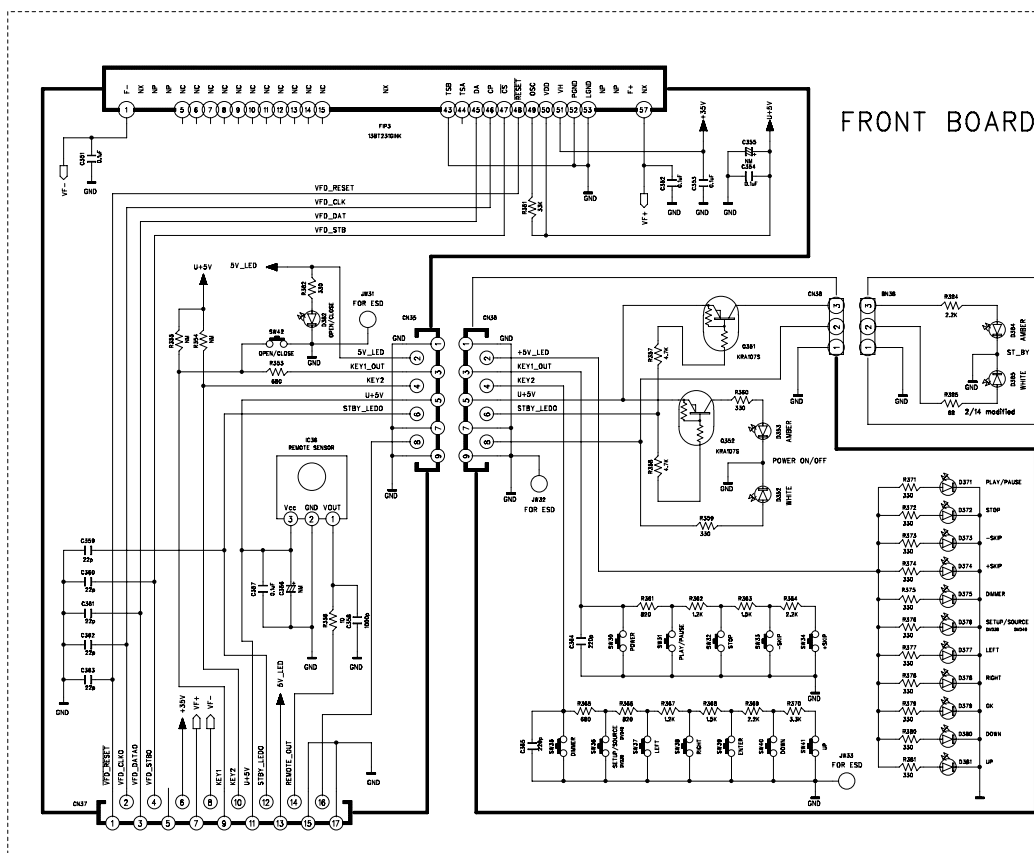
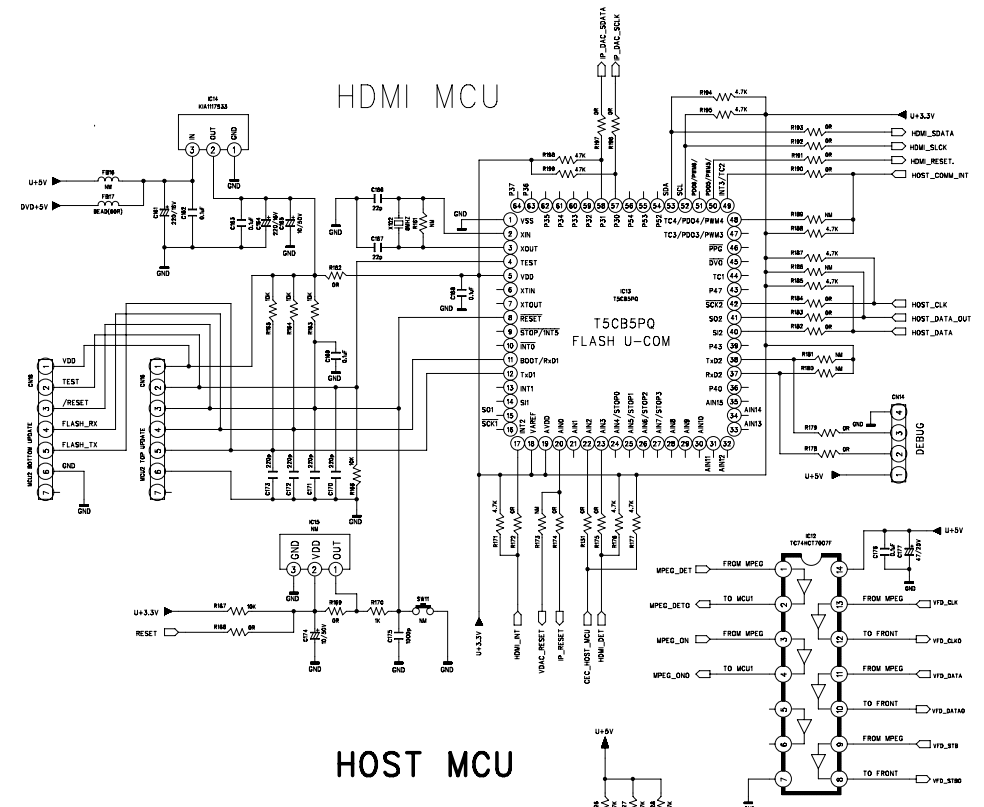
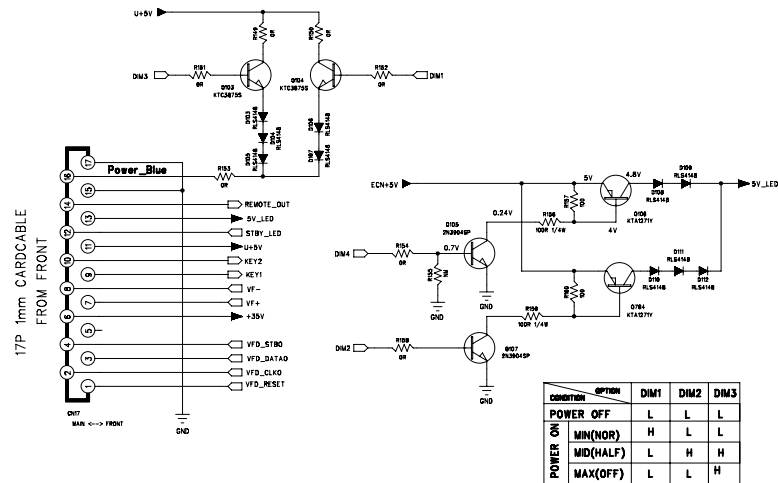


CN21 ~ BN16	
1	GND
2	USB_DP
3	USB_DN
4	DVD+5V
5	GND

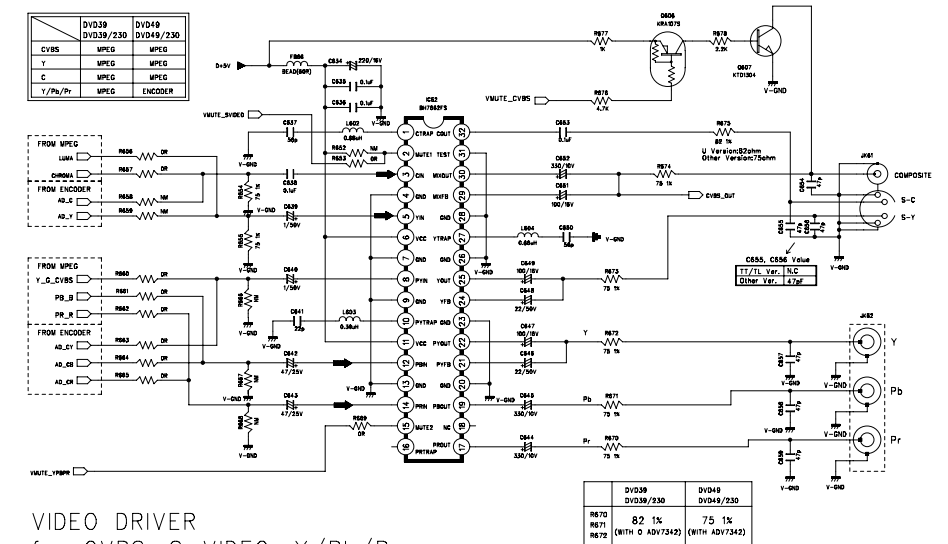
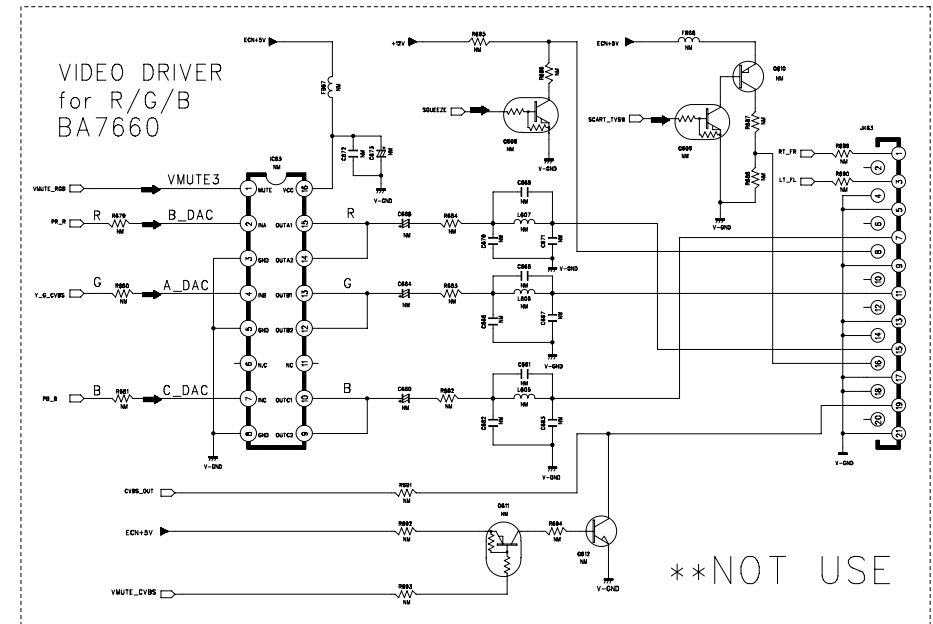
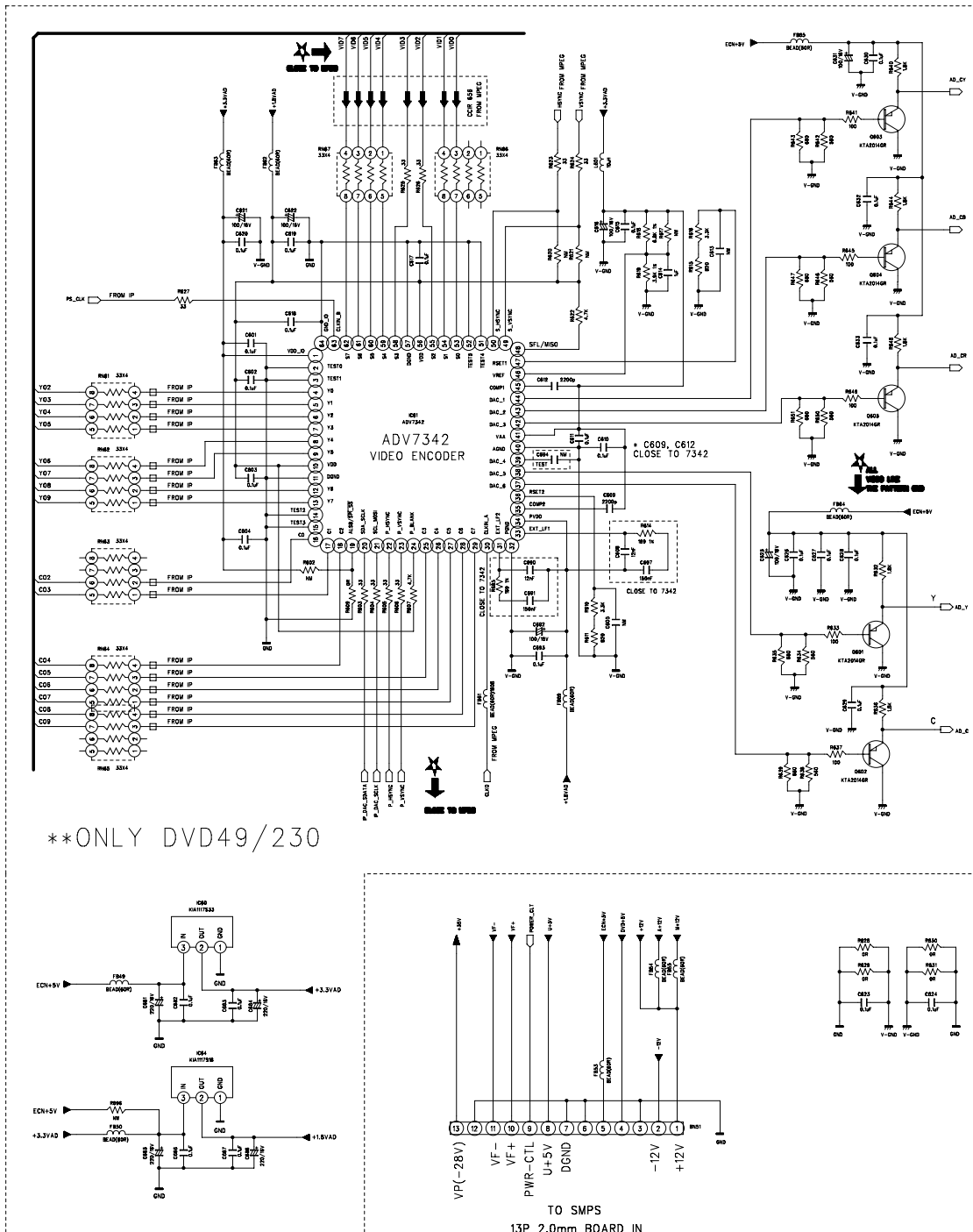




REVISION		2	4	6	
1		3	5	7	
SCHEMATIC DIAGRAM					SHEET
MODEL	DVD39/DVD49			1 3	
DESIGN	CHECK	APPROVE	DRAWING NO		
C.S.K	H.S.H	W.K.S	2064SCMZ		
08.02.15	08.02.15	08.02.15	1 1		

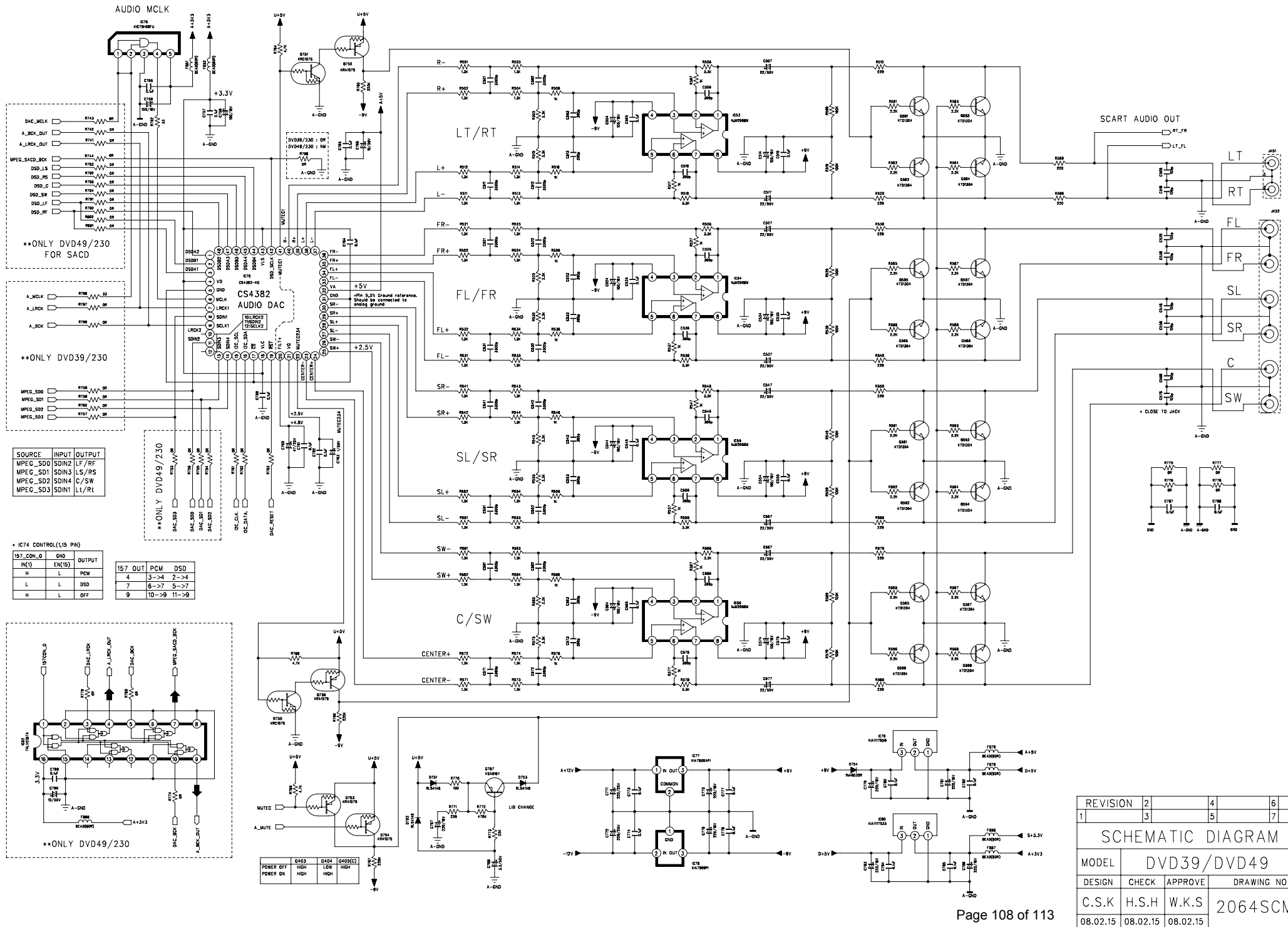


REVISION		2	4	6	
1		3	5	7	
SCHEMATIC DIAGRAM					SHEET
MODEL	DVD39/DVD49			1 3	
DESIGN	CHECK	APPROVE	DRAWING NO		
C.S.K	H.S.H	W.K.S	2064SCMZ		
08.02.15	08.02.15	08.02.15	1 1		



VIDEO DRIVER
for CVBS, S-VIDEO, Y/Pb/Pr
BH7862

REVISION		2	4	6	
1		3	5	7	
SCHEMATIC DIAGRAM					SHEET
MODEL	DVD39/DVD49			1 3	
DESIGN	CHECK	APPROVE	DRAWING NO		
C.S.K	H.S.H	W.K.S	2064SCMZ		
08.02.15	08.02.15	08.02.15	1 1		



D

C

B

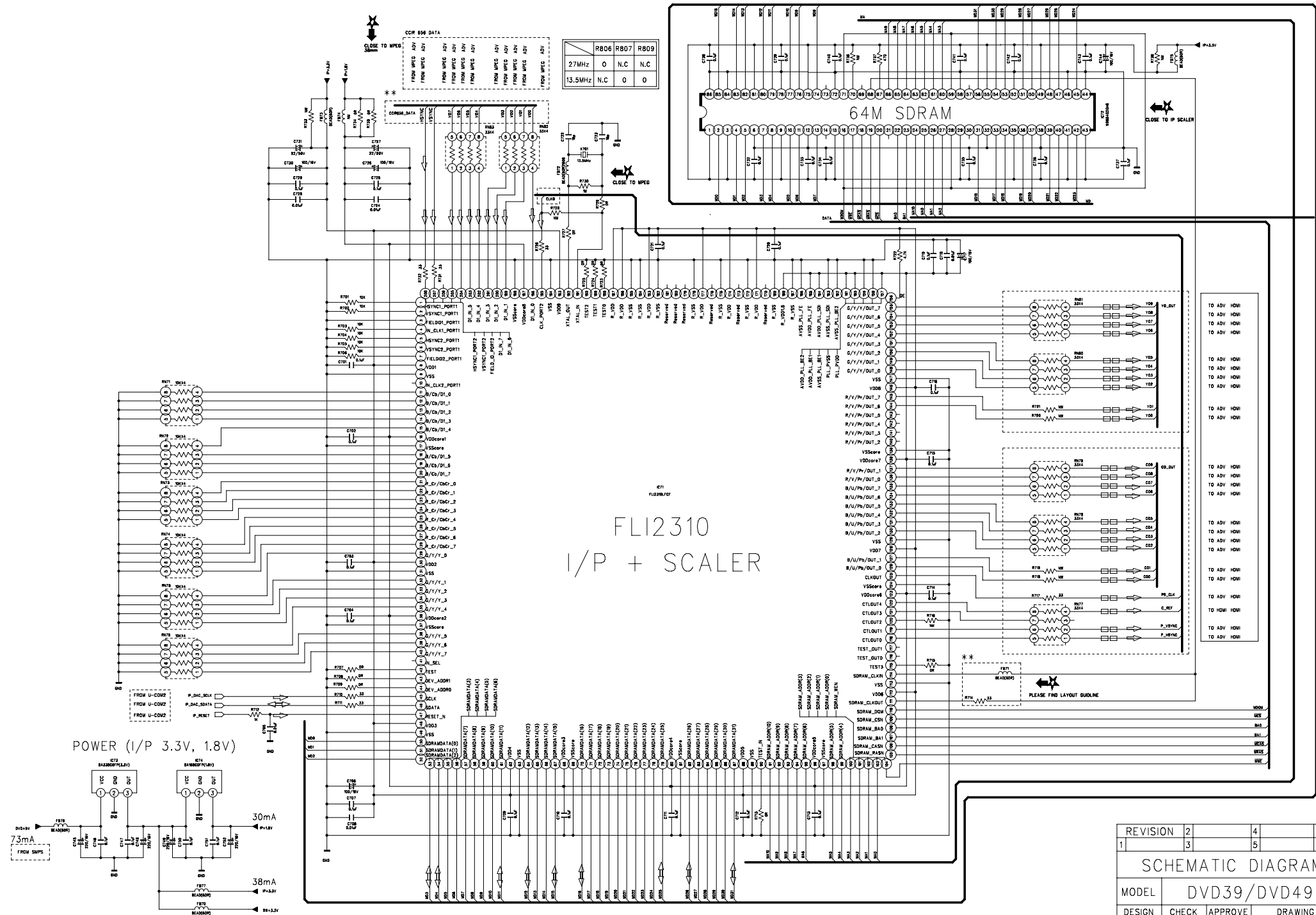
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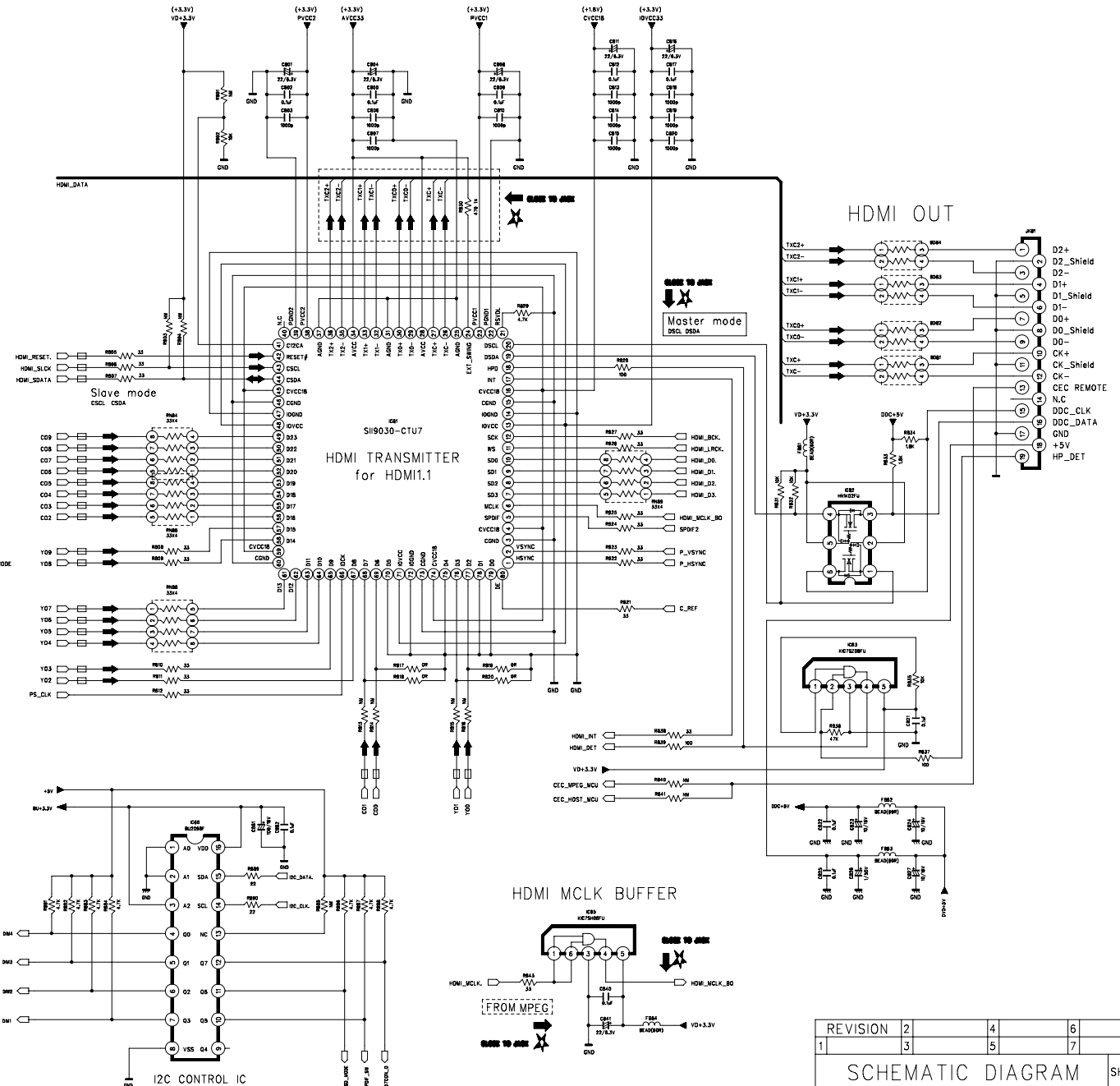
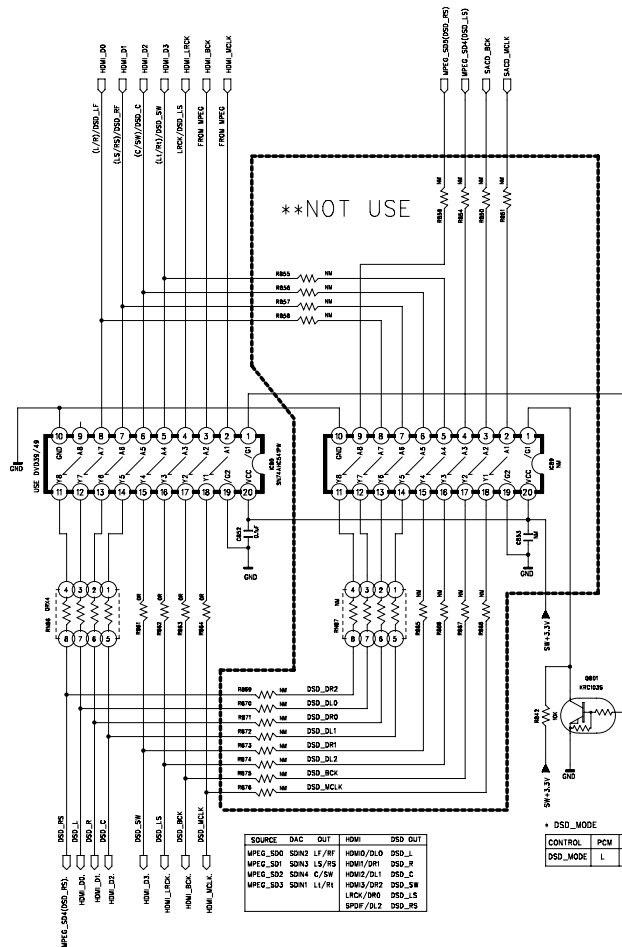
D

C

B

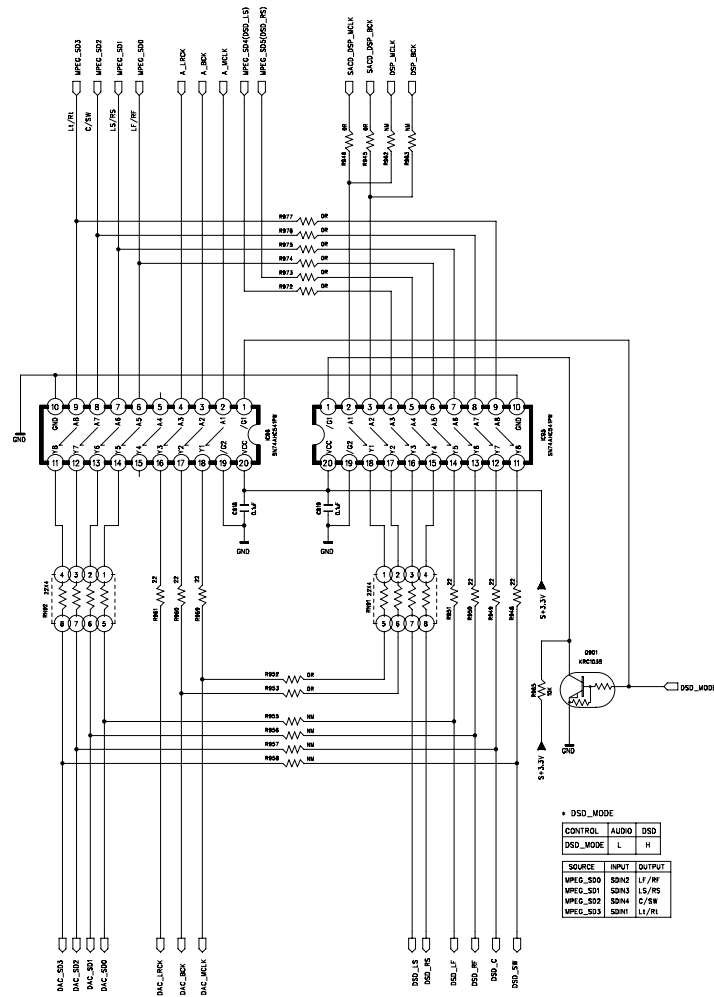
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REVISION		2	4	6	
1		3	5	7	
SCHEMATIC DIAGRAM					SHEET
MODEL	DVD39/DVD49			1 / 3	
DESIGN	CHECK	APPROVE	DRAWING NO		
C.S.K	H.S.H	W.K.S	2064SCMZ		
08.02.15	08.02.15	08.02.15	1 / 1		

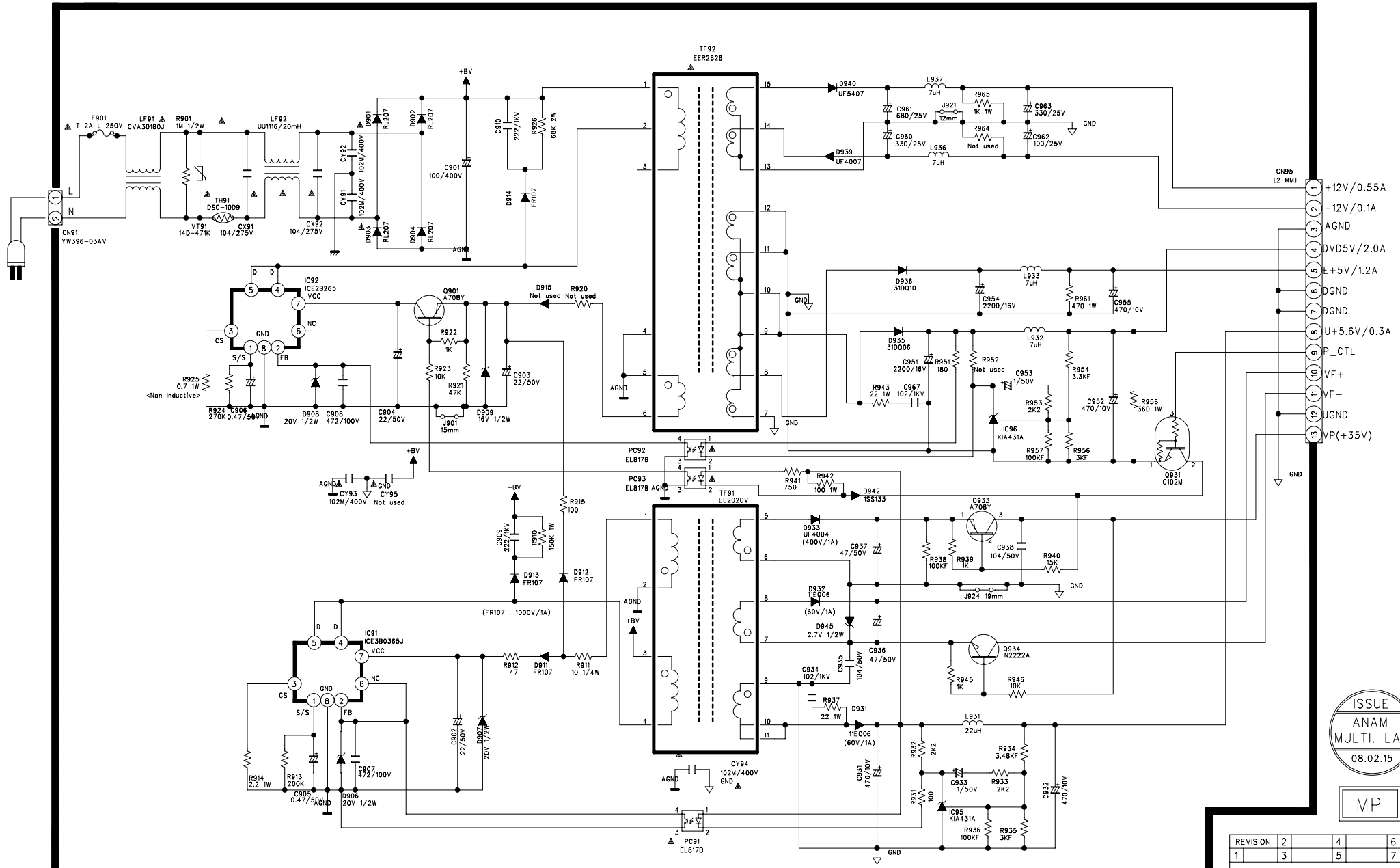
**ONLY DVD49/230



CONTROL	AUDIO	DSD
DSD_MODE	L	H

SOURCE	INPUT	OUTPUT
VPEG_S00	SDIN2	LT/RT
VPEG_S01	SDIN3	LS/RS
VPEG_S02	SDIN4	C/SW
VPEG_S03	SDIN1	LT/RT

REVISION		2	4	6	
1		3	5	7	
SCHEMATIC DIAGRAM					SHEET
MODEL	DVD49				1 3
DESIGN	CHECK	APPROVE	DRAWING NO		
C.S.K	H.S.H	W.K.S	2064SCMZ		
08.02.15	08.02.15	08.02.15	1 1		

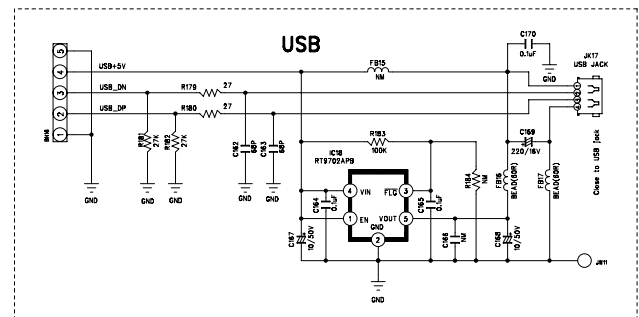
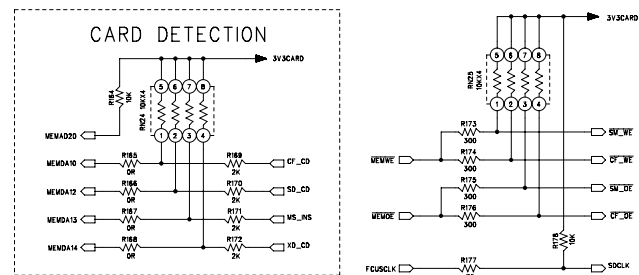
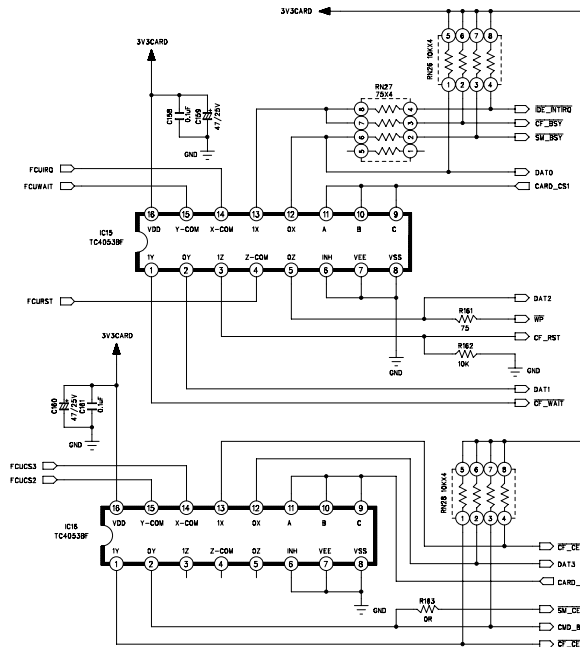


ISSUE
ANAM
MULTI. LAB
08.02.15

MP

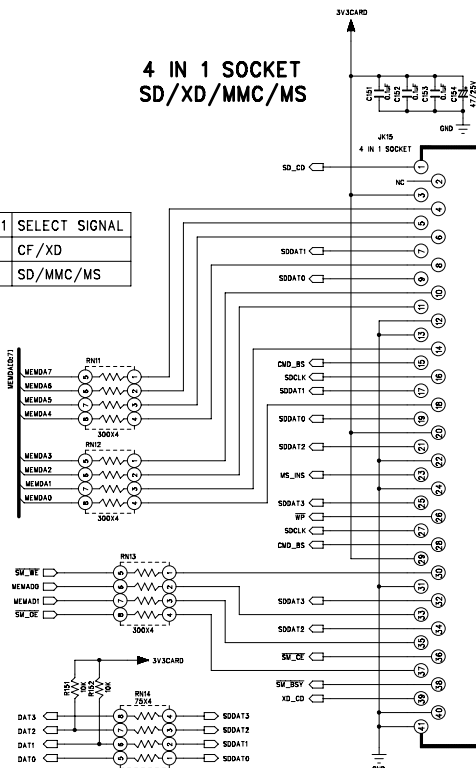
IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY A MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY: WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
•THE UNIT OF RESISTANCE IS OHM.
k=1000 OHM, M=1000 K OHM
•THE UNIT OF CAPACITANCE IS MICROFARAD (UF)
PF=10⁻⁶ UF
•THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE

REVISION	2	4	6
1	3	5	7
SCHEMATIC DIAGRAM			
MODEL	DVD39/DVD49	1/1	
DESIGN	CHECK	APPROVE	DRAWING NO
C.S.K	H.S.H	W.K.S	2022SCMZ
08.02.15	08.02.15	08.02.15	(SMP5)

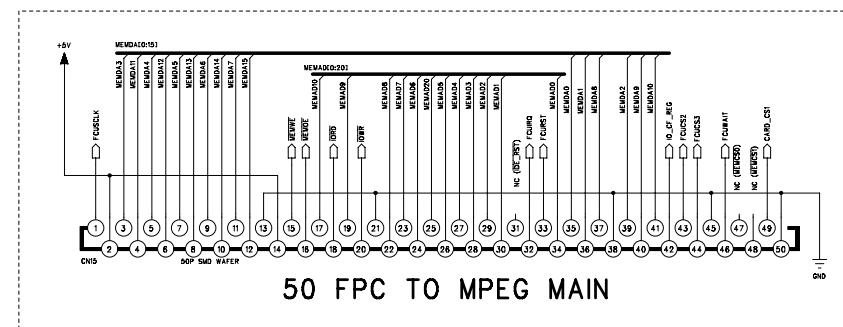


4 IN 1 SOCKET
SD/XD/MMC/MS

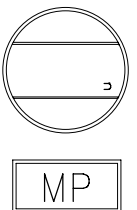
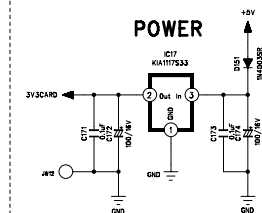
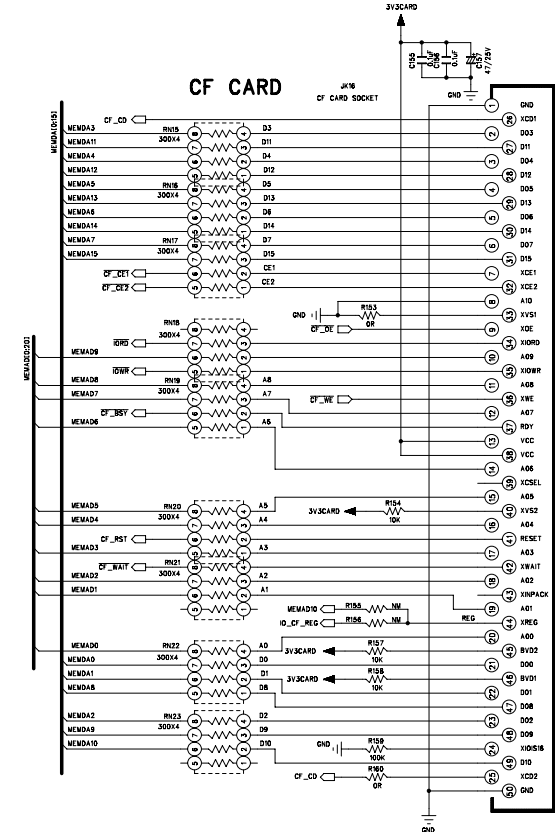
CARD_CS1	SELECT SIGNAL
H	CF/XD
L	SD/MMC/MS



PIN DESCRIPTION			
0	MS	SD	XD
1		CD1	
2		WP1	
3			VCC
4			D7
5			D6
6			D5
7		DAT1	
8			D4
9		DAT0	
10			D3
11			D2
12		VSS 2	
13	VSS		
14			D1
15	BS		
16		CLK	
17	VCC1		
18			D0
19	SDIO		
20		VDD	
21	RESERVE01		
22			GND
23	INS		
24		VSS 1	
25	RESERVE02		
26			WP
27	SCLK		
28		CMD	
29	VCC2		
30			WE
31	VSS		
32		DAT3	
33			ALE
34		DAT2	
35			CLE
36			CE
37			RD-/BS
38			
39			
40			GND



CF CARD



REVISION		2	4	6
1	3	5	7	
SCHEMATIC DIAGRAM				SHEET
MODEL	DVD49			1 1
DESIGN	CHECK	APPROVE	DRAWING NO	
C.S.K	H.S.H	W.K.S	2023SCMZ	
08.02.15	08.02.15	08.02.15	6 6	