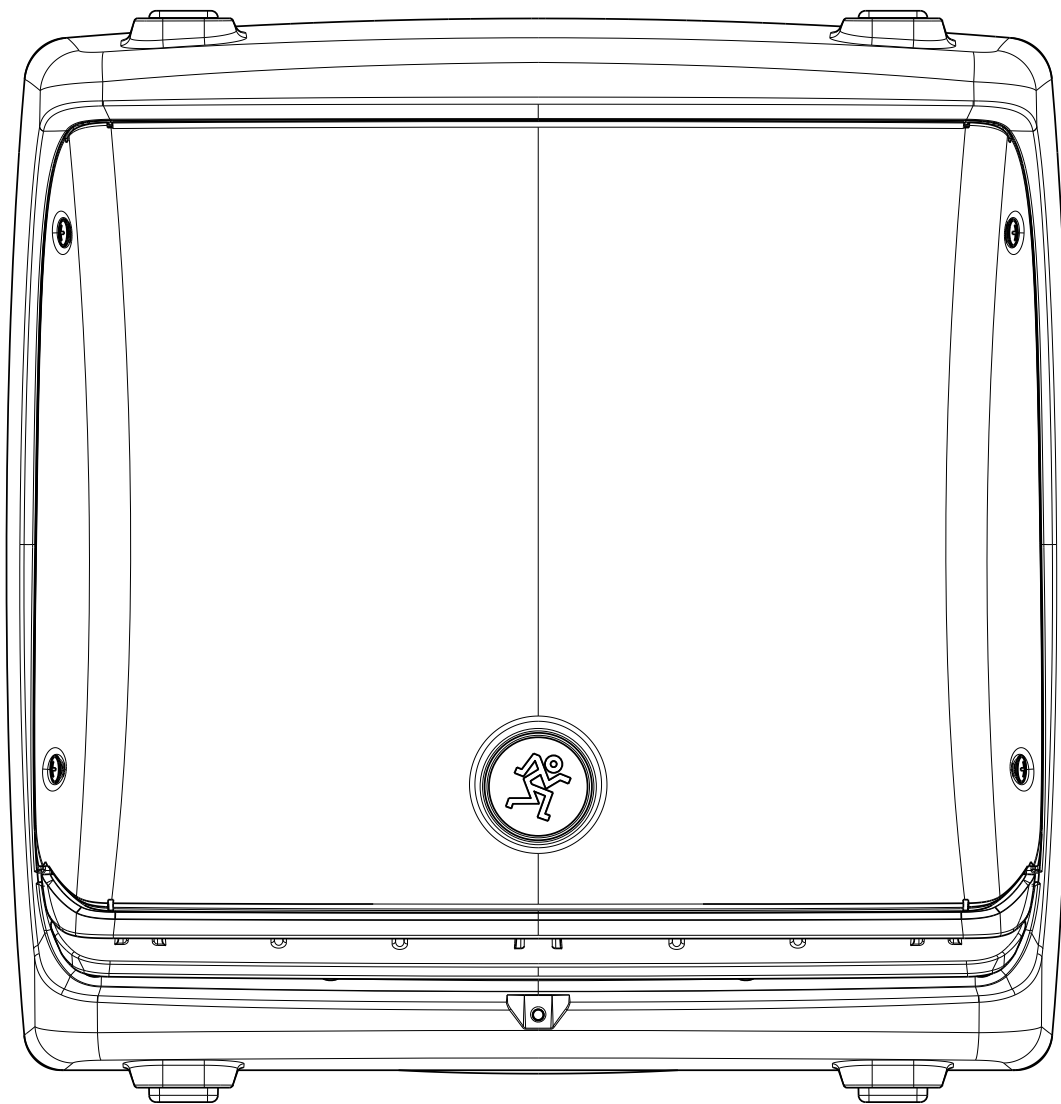


MACKIE.

Service Manual



DLM12

Codename: Nano12



	CAUTION AVIS RISK OF ELECTRIC SHOCK. DO NOT OPEN RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE. AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE		



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

Safety Warning:



Caution! These instructions are for use by qualified personnel only!

To avoid electric shock, do not perform any servicing unless you are qualified to do so.

Refer all service to qualified personnel.

ESD Warning:



To avoid damage by electrostatic discharge all standard ESD precautions must be taken.

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SPECIFICATIONS

Frequency Response

(-10 dB)	38 Hz – 20 kHz
Max peak SPL	(@ 1m calculated) 128 dB
Calculated from driver sensitivity and amplifier power.	
Crossover Point	1.6 kHz
Dispersion	90° conical

Equalization

Low Shelving	±15 dB @ 80 Hz
Mid-Peaking	±15 dB @ 2.5 kHz
High Shelving	±15 dB @ 12 kHz
Increments	±3 dB

High-Frequency Section

Voice Coil Diameter	1.75 in / 44 mm
Horn Entry Diameter	1.0 in / 25 mm
Diaphragm Material	Polyimide Film
Magnet Material	Ferrite

Low-Frequency Section

Woofer Diameter	12.0 in / 305 mm
Voice Coil Diameter	2.5 in / 64 mm
Diaphragm Material	Paper
Magnet Material	Ferrite

Power Amplifiers

Rated Power	1000 watts rms
	2000 watts peak

Low Frequency Power Amplifier

Rated Power	500 watts rms
	1000 watts peak
Rated THD	< 1%
Cooling	Multi-speed fan
Design	Class D

High Frequency Power Amplifier

Rated Power	500 watts rms
	1000 watts peak
Rated THD	< 1%
Cooling	Multi-speed fan
Design	Class

DL2 Digital Mixer System Processing

EQ	Six speaker modes
Alignment Delay	0-300 ms
FX	16 presets
Multi-band feedback destroyer	On / Off / Clear / Hold
Memory	Three locations for instant venue setting, recall and factory reset

Input / Output

Channel	
Mic	3.3 k Ω balanced
Line	20 k Ω balanced 10 k Ω unbalanced
1/4" TRS	16 k Ω balanced 8 k Ω unbalanced

Channel 2

XLR Line	20 k Ω balanced 10 k Ω unbalanced
1/4" TRS [Hi-Z instrument]	1 M Ω unbalanced
RCA	25 k Ω unbalanced
Thru	Male XLR balanced

Power

US detachable line cord	100 – 120 VAC, 50 – 60 Hz, 250W
EU detachable line cord	220 – 240 VAC, 50 – 60 Hz, 250W
AC Connector	3-pin IEC 250 VAC
Operating Temperature	0 - 40 °C
[extended ambient temperature]	32 - 104 °F

Safety Features

Input Protection	Peak and RMS limiting, power supply and amplifier thermal protection
Display	LEDs Defeatable front power ON, Front load power limiter
Status Info	Power supply voltage, Core temperature

Physical Properties

Height	15.9 in / 403 mm
Depth	14.3 in / 363 mm
Width	15.3 in / 389 mm
Weight	31 lb / 14.1 kg



!!!Service Bulletins / Kits and Modifications (Please Review Before Servicing)!!!

Service Bulletins

- None as of this document revision.

Service Kits

- None as of this document revision.

Modifications

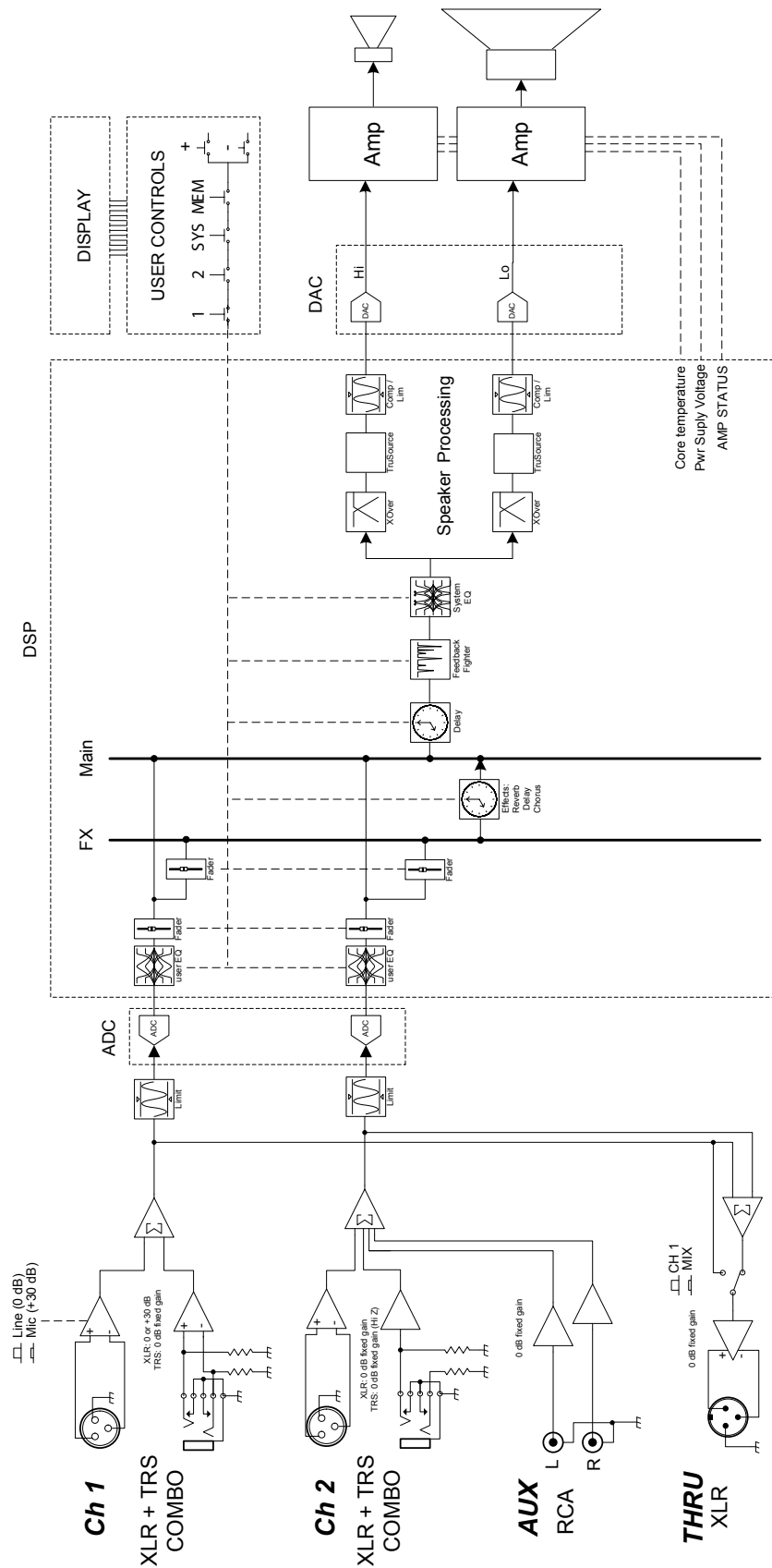
- None as of this document revision.

NOTES:

[illegible]

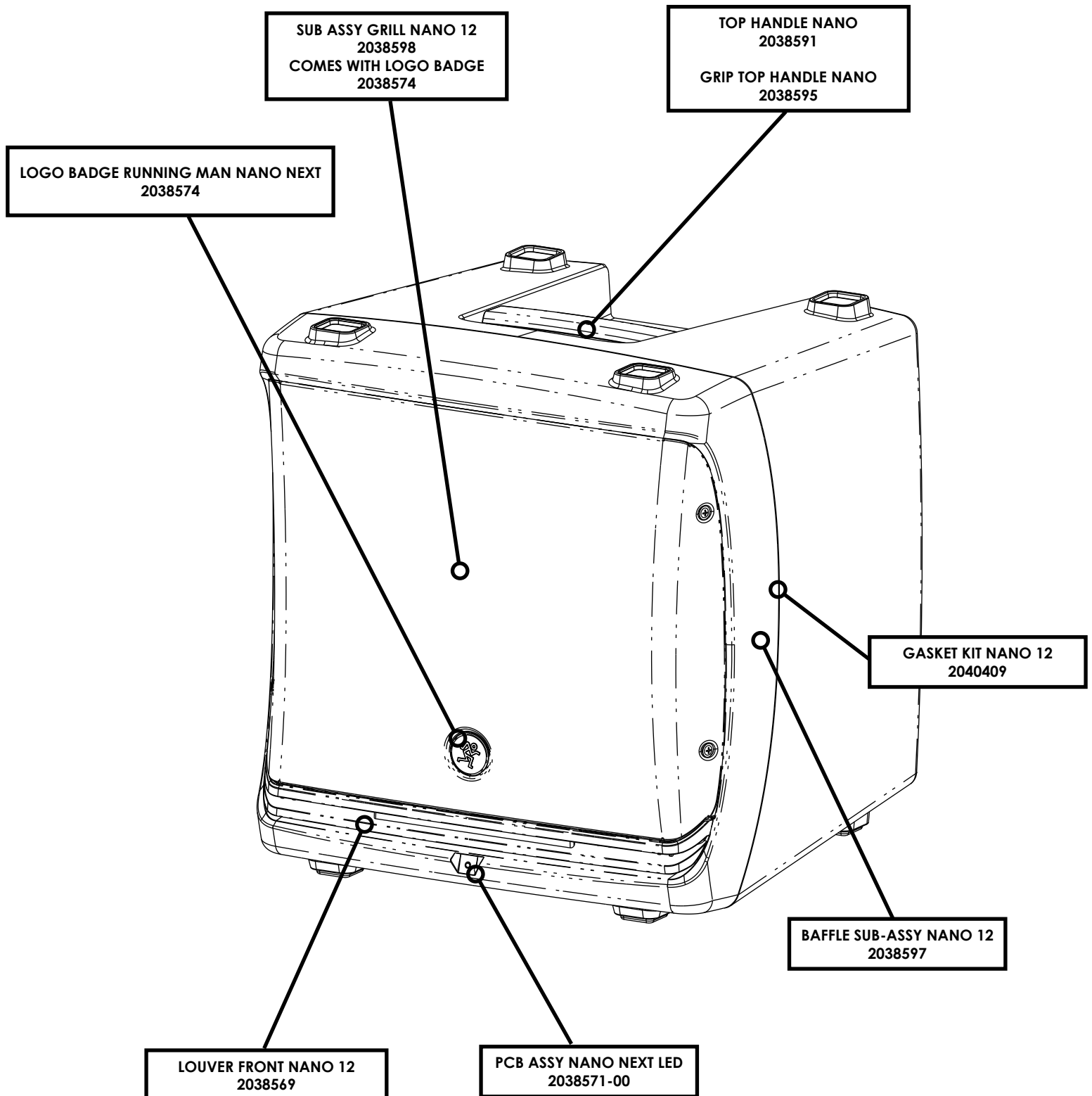


BLOCK DIAGRAM





QUICK PARTS (FRONT)





QUICK PARTS (BACK)

BUTTON MAIN - "1" NANO
2038470-01

BUTTON MAIN - "2" NANO
2038470-02

BUTTON MAIN - "SYS" NANO
2038470-03

BUTTON MAIN - "MEM" NANO
2038470-04

BUTTON VOLUME - "UP" NANO
2038471-01

BUTTON VOLUME - "DOWN" NANO
2038471-02

KICKSTAND MOUNT LEFT
2039711-01

RND BUTTON CAP
0012143-07

BTN ADAPTER
0016339-00

CONN XLR 3P MALE
AA-SERIES SHELL &
PANEL TIED TO SEPERATE
GROUND (PIN 4)
2033697

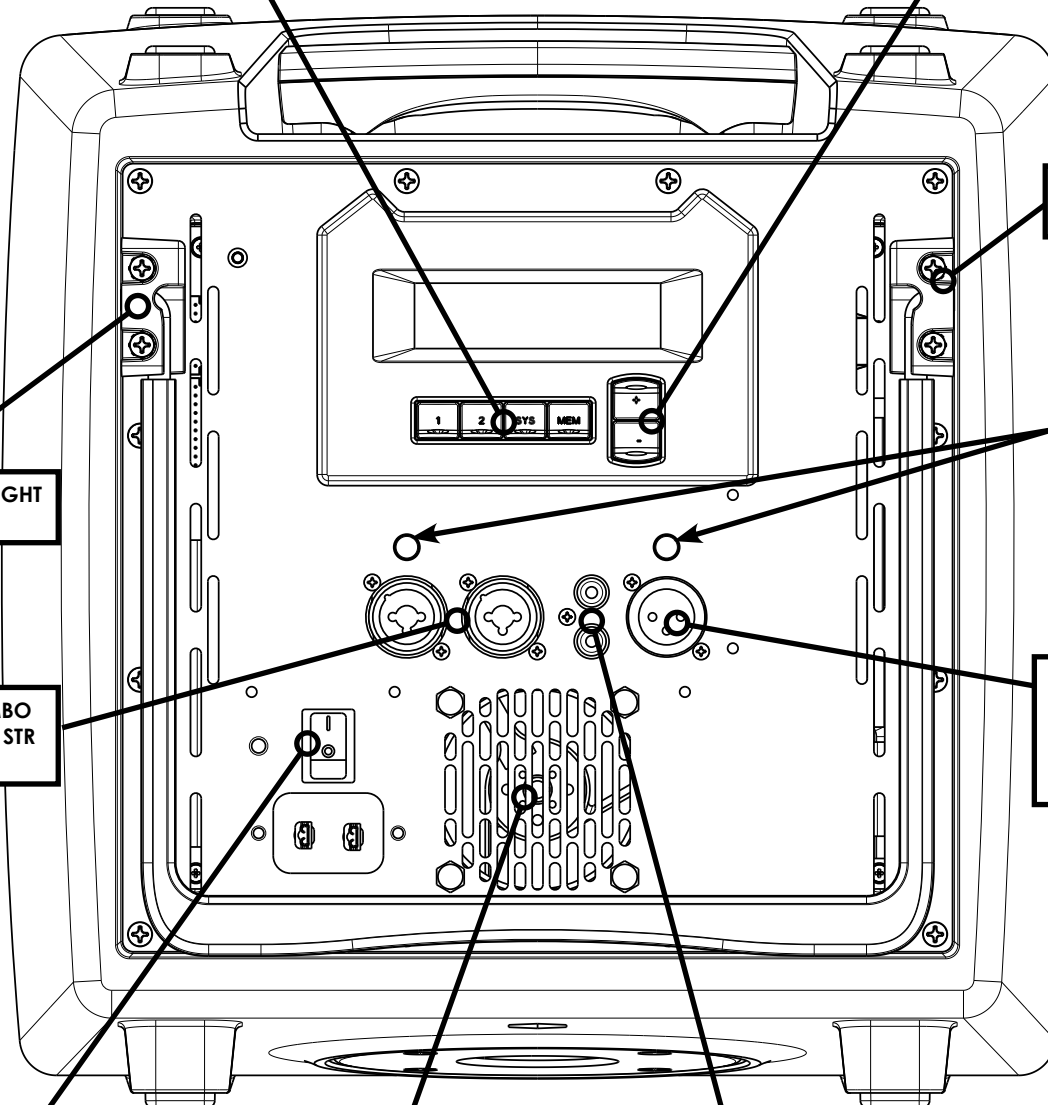
CONN RCA VERT 2P 24.3MM HIGH
0004901

SUB ASSY FAN 12VDC 60X60X15MM 15CFM
2039097-01

SUB ASSY SWITCH ROCKER DPST 250VAC
10A UL CSA/250VAC 8A/80A VDE
2039282

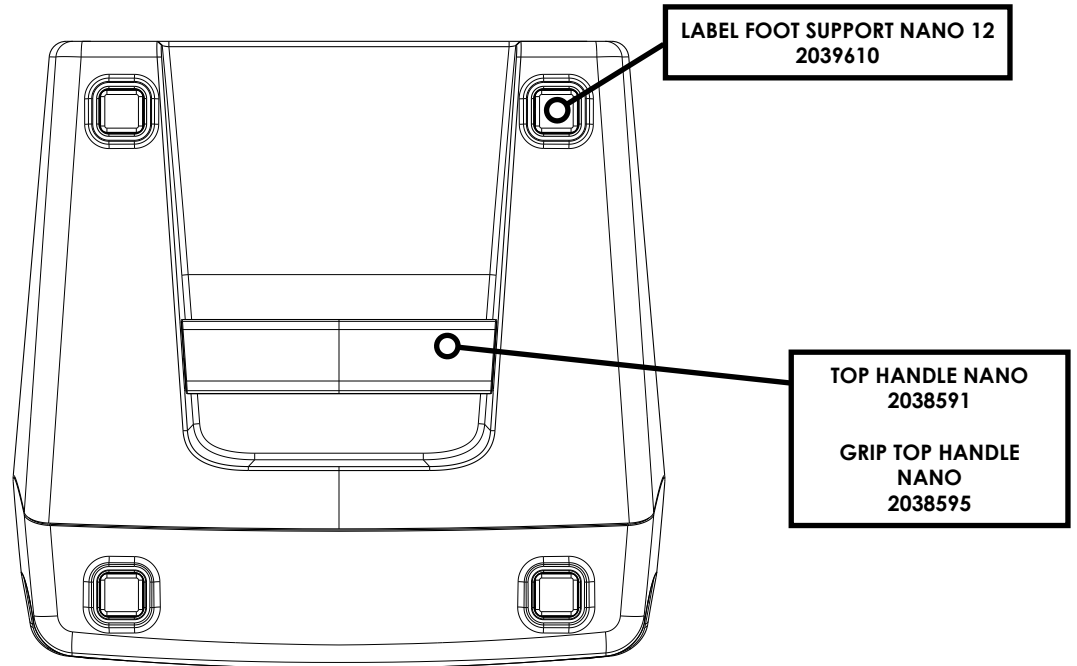
CONN XLR COMBO
A SERIES 6P VERT STR
2034400

KICKSTAND MOUNT RIGHT
2039711-00

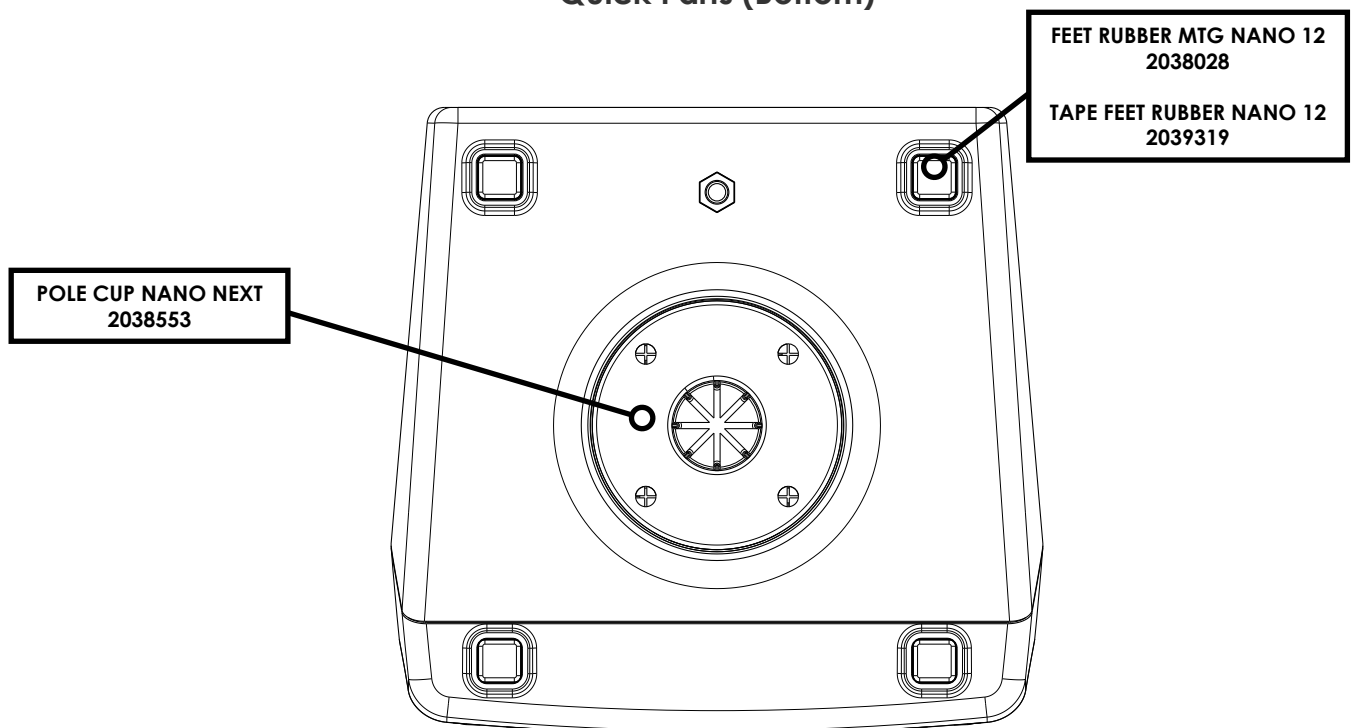




QUICK PARTS (TOP)



Quick Parts (Bottom)



**FINAL ASSEMBLY BOM**

Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
	2037875-00	A00	DLM12 120V US		
1	2037875-00U	A00	NANO12 120V US UNADJUSTED		
1	2037876-00	F00	ASSY FINAL NANO12 100-120 VAC		
1	2039678-02	C00	ASSY AMPLIFIER NANO12 100-120V		Installs in Back Cabinet
1	2038350	E00	ENCLOSURE AMPLIFIER NANO		
1	2038355	A00	INSULATOR AMPLIFIER NANO BASE		
1	750-001-00	A	BUMPON ROUND BLK .63X.31		
1	2039680-00	A00	SUBASSY NANO AMP+PS 2CHANNEL		
1	2039275-00	D01	PCB ASSY NANO SHADOW 2 CHANNEL		
1	2039274-03	D00	PCB FAB NANO SHADOW	PCB1	
8	0020294	A00	CAP CER .047uF 200V X7R SMT 1206	C1,C2,C3,C5,C6,C7,C205,C206	
8	0008480	A	CAP CER 47P 200V 5% 1206 NPO	C4,C8,C10,C11,C189,C190,C198,C200	
3	0032725	A00	CAP 10UF 25V 10% X7R 1206	C9,C69,C72	
60	212-025-00	D11	CAP CER .1UF 50V 10% X7R	C12,C13,C14,C15,C38,C39,C42,C43,C80,C105,C116,C117,C124,C125,C126,C128,C129,C134,C135,C143,C144,C146,C147,C148,C149,C151,C152,C153,C155,C156,C157,C158,C159,C161,C164,C165,C170,C172,C174,C181,C191,C192,C195,C210,C211,C212,C213,C216,C217,C220,C221,C222,C223,C224,C225,C227,C228,C231,C232,C238	
2	2039232	A00	CAP 47uF 20% 35V 105C AL RADIAL	C16,C17	
3	0031389	A00	CAP LYT 100UF 20% 25V 105C RAD	C19,C24,C86	
2	0015142	A00	CAP 0.33UF 5% 250V 3.5A @ 100KHz PPM RADIAL	C20,C30	
7	220-070-00	A1	CAP LYT 470U 20% 25V 105C BUK	C21,C31,C33,C36,C40,C46,C63	
2	2037911	A00	CAP 0.82UF 5% 250V 4.2A @ 100KHz PPM RADIAL	C22,C23	
2	0008518	A00	CAP LYTIC 47UF 20% 100V 105C T/A	C25,C26	
2	210-027-00	A11	CAP 470PF 20% 250VAC Y2/X1 CER RADIAL	C32,C35	
1	200-050-00	A01	CAP PLYBOX .47UF 20% 275V X2	C71	
10	2037758	A00	CAP 390UF 20% 100V 1.6A 105C AL RADIAL 18X25	C49,C50,C51,C52,C55,C56,C59,C60,C61,C62	
1	0031388	A00	CAP CER 0.01UF 1KV 10% DISC	C58	
1	0026121	A00	CAP 0.1UF 400V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C64	
3	220-070-02	A11	CAP LYT 470U 20% 25V 105C T/A	C27,C37,C65	
1	0017302	A00	CAP 0.1uF 400V POLYE FILM	C66	
1	0028474	A00	CAP 2.2UF 25V 20% Y5V 1206	C68	
1	0026957	A00	CAP 2200PF 100V 10% X7R 1206	C70	
2	0021297	A00	CAP Lytic 2200uF 200V 30mm dia	C73,C77	
1	0031234	A00	CAP 0.47UF 400V 5% METALLIZED POLYPROPYLENE FILM RADIAL	C74	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
3	0026146	A00	CAP 1000PF 100V 10% X7R 1206	C76,C78,C79	
4	212-037-00	A11	CAP CER 1000PF 2% 50V NPO SMT	C82,C83,C121,C122	
1	0029768	A00	CAP 2200PF 20% 250VAC Y1 CER DISC	C84	
1	0026974	A00	CAP 22UF 50V 20% 105C AL RADIAL 2X5DX5MM (TAPING)	C85	
2	2039267	A00	CAP 0.022uF 10% 500V X7R 1206	C100,C101	
2	0018984	A00	CAP CER X7R 1UF 16V 10% 0805	C104,C131	
4	0029767	A00	CAP COG/NPO 100pF 5% 200V 1206 SMT	C106,C107,C109,C110	
2	212-046-00	A11	CAP 510PF 5% 50V NPO 0805	C108,C130	
18	0020295	A00	CAP CER 4.7uF 25V X7R SMT1206	C120,C127,C154,C160,C162,C163, C171,C173,C183,C184,C186,C187, C188,C196,C199,C201,C204,C207	
4	2037909	A00	CAP 6800pF 10% 100V X7R CER 0805	C166,C168,C180,C193	
4	2034271	A00	CAP 680PF 100V 5% COG 0805	C167,C169,C185,C194	
2	224-046-00	A11	CAP .01UF 5% 50V FM 1206	C175,C214	
2	212-004-00	C11	CAP CER 220PF 5% 50V NPO SM	C176,C202	
2	212-039-00	A11	CAP CER .33UF 16V 10% X7R SM	C178,C179	
4	2036451	A00	DIODE SUPERFAST ES3D 3 AMP 200 VOLT SMC	D1,D3,D9,D12	
2	0026291	A00	DIODE SUPERFAST ER1D 200V 1A 35NS SMB/DO-214AA	D13,D134	
4	0026295	A00	DIODE ULTRAFAST MUR1520 200V 15A 35NS TO-220AC	D15,D19,D20,D21	
9	0026287	A00	DIODE SCHOTTKY SS0540 40V 0.5A SOD-123	D18,D102,D103,D122,D123,D124, D125,D142,D168	
2	0028386	A00	DIODE SUPERFAST ER306 600V 3A 35NS DO-201AD	D22,D23	
1	0026272	A00	DIODE BRIDGE 600V 25A KBJ	D25	
6	0004137	A00	DIODE 1.0A SMT PASSIVATED RECTIFIER S1G	D111,D126,D129,D132,D164,D165	
26	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D112,D113,D114,D115,D116,D135, D137,D138,D140,D141,D143,D144, D145,D146,D147,D148,D149,D150, D151,D152,D159,D162,D169,D170, D171,D172	
3	0004128	A00	DIODE 500MW SURFACE MOUNT ZE- NER MMSZ5232B 5.6V	D130,D131,D153	
6	0016970	A00	DIODE RECT ES1G 1A FAST GLASS SMT	D155,D157,D158,D160,D166,D167	
1	0026958	A00	DIODE SUPERFAST ER1J 600V 1A 35NS DO-214AA (SMA)	D136	
3	0004131	A00	DIODE 500MW SURFACE MOUNT ZE- NER MMSZ5250B 20V	D139,D161,D163	
2	0000021	A00	DIODE SCHOTKY BAT54S	D154,D156	
2	400-060-00	A01	CONN FUSE CLIP PCMT 5MM DIA	FC1,FC2	
1	0005168-08	B00	CONN HDR 8P .098X1 SHRD TJC3	J1	
1	0005168-10	B00	CONN HDR 10P .098X1 SHRD TJC3	J2	
6	400-171-00	A01	CONN HDR 2P .100X1 STR	J3,J4,J8,J9,J10,J11	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J5	
2	400-143-00	A01	CONN HDR 3P .100X1 STR	J6,J7	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2033617-02	A00	CONN HDR 7A 2P 7.92MM 1ROW POLAR VRT	J12	
2	0026686	A00	TERM 14X8X0.8MM BRS	J13,J14	
1	712-057-03	A	LRG TEST POINT SMT	J101	
1	0013040-06	A00	CONN HDR 7A 6P 4.2MM 2ROW SHRD	J102	
1	0022696	A02	RELAY DPDT 10A/250VAC 12VDC	K1	
1	0027292	A00	IND SW COMMON MODE 70uH 25% 3.5A (X6) PCB	L1	
2	2040433	A00	IND SW 500KHz 25UH 10% 17A-DC EP20 500W RECON	L2,L3	
4	2038111	A00	IND COM 340uH +/-25% 8A RADIAL	L4,L5,L6,L7	
5	0027472	A00	IND 20UH 20% 2.5A 0.045 OHM RADIAL	L8,L9,L10,L11,L17	
2	0026387	A00	MAG FERRITE BEAD 9.8X11.5X1.0MM D5A	L14,L16	
4	0033266	A01	XSTR FET N-CH IRFB4227PBF 200V 65A 0.0197RDS TO-220AB	Q1,Q2,Q3,Q4	
1	310-020-00	B11	XSTR PWR PNP TIP32A 60V 3A TO220	Q5	
3	311-001-00	B01	XSTR NPN IMBT4401 SMT	Q6,Q104,Q107	
1	2034044	A01	XSTR FET N-CH FQPF7N65C 650V 7A 1.4 OHM TO220F	Q7	
2	2039233	A00	XSTR FET N-CH FDP22N50N 500V 22A 0.22 OHM TO-220	Q8,Q9	
4	311-002-00	A01	XSTR PNP MMST4403 SMT	Q100,Q101,Q102,Q106	
4	0000086	A00	XSTR FZT651TA NPN 3A 60V SOT-223	Q108,Q110,Q112,Q114	
4	0000085	A00	XSTR FZT751TA PNP 3A 60V SOT-223	Q109,Q111,Q113,Q115	
4	145-000-00	B	RES TF SM .1W 0 OHM	R1,R2,R280,R302	
8	0007784	A00	RES SMT 5% 2K0 OHM 2010	R3,R4,R5,R6,R13,R14,R17,R18	
4	0008487	B01	RES TF SM 1W 5% 22 OHM 2512	R7,R8,R9,R10	
8	123-063-00	B	RES MET-OX 39 OHM 5% 3W	R11,R16,R20,R22,R25,R26,R27,R28	
8	146-418-00	A00	RES MF SM .25W 1% 20K0 OHM	R12,R15,R21,R24,R250,R251,R271, R273	
2	130-090-00	A00	POT TRIM 1KOHM HORIZ	R19,R23	
1	121-132-00	A00	RES MO 300K OHM 5% 1W	R29	
2	2039234	A00	THERM NTC INRUSH CURRENT LIMITER 2 OHM 25% 18A RADIAL	R30,R31	
2	0026418	A00	RES 100 1% 1/4W 1206	R32,R36	
4	140-129-00	A01	RES TF SM .1W 5% 180K OHM	R34,R134,R140,R148	
30	140-097-00	A	RES TF SM .1W 5% 10K OHM	R35,R54,R61,R116,R117,R164,R165, R202,R204,R213,R214,R216,R222, R223,R224,R230,R241,R243,R252, R253,R256,R321,R322,R323,R324, R326,R328,R330,R332,R334	
1	0021342	A01	RES MET-OX 47K 5% 2W	R37	
2	0026967	A00	RES MET-OX 68K 5% 1W	R38,R41	
3	0026440	A00	RES 150K 5% 1/4W 1206	R39,R40,R42	
1	0026388	A00	MOV 470VAC DISC 14MM	R43	
4	0026965	A00	RES MET 10 5% 1/2W	R45,R46,R47,R48	
1	145-205-00	A00	RES MF SM .1W 1% 133 OHM	R49	
1	145-298-00	B	RES MF SM .1W 1% 1K24 OHM	R50	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2035397	A00	THERM NTC 100K 1% @ 25C TAB MOUNT	R51	
2	140-080-00	A	RES TF SM .1W 5% 2K0 OHM	R52,R53	
1	145-441-00	B	RES MF SM .1W 1% 34K8 OHM	R55	
1	0026966	A00	RES MET-OX 0.47 5% 1W	R57	
2	140-065-00	A	RES TF SM .1W 5% 470 OHM	R58,R59	
2	145-406-00	B	RES MF SM .1W 1% 15K0 OHM	R60,R206	
3	0021368	A01	RES 10 5% 1/4W 1206	R62,R106,R109	
5	0026470	A00	RES 22 5% 1/4W 1206	R63,R107,R108,R110,R111	
6	145-289-00	B	RES MF SM .1W 1% 1K00 OHM	R64,R219,R248,R249,R293,R303	
9	140-130-00	A	RES TF SM .1W 5% 200K OHM	R118,R198,R203,R211,R212,R239, R240,R304,R305	
6	145-193-00	B	RES MF SM .1W 1% 100 OHM	R125,R170,R255,R258,R282,R292	
2	0026450	A00	RES 1K 5% 1/4W 1206	R126,R129	
1	145-485-00	B	RES MF SM .1W 1% 100K OHM	R131	
5	145-181-00	D01	RES MF SM 75 OHM 1% 0.1 W 0805	R132,R180,R226,R285,R286	
1	145-473-00	B	RES MF SM .1W 1% 75K0 OHM	R133	
5	140-135-00	A00	RES TF SM 330K 5% 0.1W 0805	R135,R137,R141,R149,R244	
1	140-110-00	A	RES TF SM .1W 5% 33K OHM	R136	
1	140-089-00	A	RES TF SM .1W 5% 4K7 OHM	R138	
3	140-104-00	A01	RES TF SM .1W 5% 20K OHM	R215,R242,R314	
6	140-017-00	A	RES TF SM .1W 5% 4.7 OHM	R154,R157,R262,R263,R268,R278	
3	145-454-00	B	RES MF SM .1W 1% 47K5 OHM	R171,R172,R173	
2	140-086-00	A	RES TF SM .1W 5% 3K6 OHM	R174,R175	
1	145-398-00	B01	RES MF SM 12K4 OHM 1% 0.1W 0805	R179	
1	145-210-00	B01	RES MF SM 150 OHM 1% 0.1W 0805	R228	
2	2037837	A00	RES SMT 300 OHM 5% 0.75W 2010	R196,R197	
1	145-373-00	B	RES MF SM 6K81 OHM 1% 0.1W 0805	R199	
1	145-268-00	B	RES MF SM 604 OHM 1% 0.1W 0805	R200	
1	145-526-00	B	RES MF SM 267K OHM 1% .125W 0805	R205	
11	145-339-00	B	RES MF SM 3K01 OHM 1% 0.1W 0805	R56,R208,R247,R254,R257,R269, R270,R283,R284,R295,R299	
1	140-124-00	A01	RES TF SM 120K OHM 5% 0.1W 0805	R209	
1	140-134-00	A00	RES 300K 5% 1/8W 0805	R210	
1	145-325-00	B	RES MF SM 2K15 OHM 1% 0.1W 0805	R217	
1	145-283-00	A00	RES 866 1% 1/10W 0805	R221	
18	145-222-00	A00	RES MF SM 200 OHM 1% 0.1W 0805	R201,R227,R231,R232,R233,R234, R235,R236,R237,R238,R264,R265, R266,R267,R274,R275,R276,R277	
1	145-313-00	A00	RES 1K78 1% 1/10W 0805	R245	
4	145-260-00	B	RES MF SM .1W 1% 499 OHM	R246,R259,R272,R279	
4	145-374-00	A00	RES MF SM .1W 1% 6K98 OHM	R260,R261,R288,R290	
4	146-457-00	A00	RES MF SM .25W 1% 51K1 OHM	R281,R287,R289,R291	
8	140-025-00	A	RES TF SM .1W 5% 10 OHM	R294,R298,R308,R311,R315,R316, R318,R319	
6	146-081-00	A00	RES MF SM .25W 1% 6R81 OHM 1206	R297,R301,R307,R310,R312,R313	
4	0009477	A00	RES SMT 10 OHM 5% 0.75W 2010	R325,R327,R329,R331	
1	145-383-00	B00	RES MF SM .1W 1% 8K66 OHM	R333	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0025946	A00	XFMR SW 115/230V +/-15V 1A +5V 0.8A +12V 0.85A +48V 0.08A 50W	T1	
1	0025948	B00	XFMR DRIVER 15V 15V/15V 0.1A 3W	T2	
1	0025947	B01	XFMR CURRENT SENSE 10A 1:100	T4	
2	2039268	A00	IC SINGLE SCHMITT BUFFER SN74LVC1G17 SOT23-5	U1,U107	
2	0026389	A01	OPTO 1 CHANNEL 70V 200-400 4-DIP	U3,U7	
1	329-014-00	A01	IC LM35DZ PREC TEMP SENSOR	U4	
1	321-008-00	C01	IC REG LM317T ADJ	U6	
1	0026962	A00	IC PWM OB2269CCP ON-BRIGHT SOIC-8	U8	
1	0026961	A00	IC VREG AZ431BN-A 2.5-36V 0.1A SOT23-3	U9	
1	0026352	A00	IC TIMER NE555D SO8	U100	
4	323-002-00	D00	IC LM339D QUAD COMP SM	U101,U104,U105,U106	
1	2038088	A00	IC PWM SG3525A VOLTAGE-MODE CONTROLLER SOIC-16DW	U102	
2	0024048	A02	IC OP AMP TLC081CDR SINGLE SO8	U108,U111	
2	2033565	A00	IC DIGITAL PWM DRIVER IRS20957STRPbF	U109,U110	
1	0014367	A00	CONN RING LUG #8 (4MM) 16-22 AWG		
1	400-172-00	B00	CONN TERM SOLDER-IN 18-14 AWG		
2	2036980-057	A00	HEATSHRINK TUBE 2:1 VW-1 (35.0mm ID x 57mm Length)	Z10	
3	0029761	A00	CAP 0.68UF 100V 20% X7R 1812	C18,C28,C29	
2	0026174	A00	CAP 1UF 275V 10% POLYP BOX X2 RADIAL	C34,C57	
2	0029982	A00	CAP 4700PF 20% 250VAC Y2/X1 CER RADIAL	C48,C53	
4	2037007	A00	CAP CER 0.1UF 200V X7R 1206	C138,C142,C229,C230	
2	0006335	A00	CAP 470PF 2% 50V NPO 0603	C182,C209	
1	0026988	B00	FUSE SB 10A/250V 5X20MM UL CSA	F1	
1	0000623-06	B00	SCR M3 X 6MM PAN MCH PH STL BLK ZINC	HDW3	
1	0000659	A01	NUT HEX KEP M3	HDW4	
1	2039040	A01	TAPE THERMAL TRANSFER 0.5MM X 7MM X 7MM	HDW5	
1	2033563	A03	IND COM 6MH 5A TOROID	L12	
1	0033419	A03	IND COM 16MH 10A TOROID	L15	
1	140-103-00	A	RES TF SM .1W 5% 18K OHM	R147	
1	140-108-00	A	RES TF SM .1W 5% 27K OHM	R150	
1	0025949	A00	XFMR SW 115/230V +/-75V 2A 300W	T3	
2	2036450	A00	CAP 4700PF NPO/C0G 5% 25V 0805	C197,C208	
2	2039831	A00	CAP 22pF 5% 200V COG CER 1206	C203,C219	
4	145-402-00	B01	RES MF SM .1W 1% 13K7 OHM	R207,R218,R220,R229	
1	145-270-00	A00	RES MF SM 634 OHM 1% .125W 0805	R225	
2	0026646	A00	RES MET-OX 5.1K 5% 2W	R65,R66	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0029172	A00	CAP 1000UF 25V 20% 105C AL LESR RADIAL	C41,C44	
2	212-038-00	A11	CAP CER .01UF 50V 2% NPO 1210	C75,C87	
1	2038359	A00	SILPAD NANO A		
1	2038348	B00	HEATSINK NANO A		
1	2038354	A00	INSULATOR AMPLIFIER NANO DEVICES		
1	0030535	A02	FILM VALOX FR-1 .017"		
1	2038340	A00	BRACKET HEATSINK NANO A		
1	2038358	A00	SILPAD NANO B		
1	2038347	A00	HEATSINK NANO B		
1	2038339	A00	BRACKET HEATSINK NANO B		
1	2038357	B00	SILPAD NANO C		
1	2038346	A00	HEATSINK NANO C		
1	2038338	C00	BRACKET HEATSINK NANO C		
10	2038361	A00	SCR MACH M3X12 FHH PHH STL ZN		
10	0000659	A01	NUT HEX KEP M3		
1	2038349	A00	GASKET OUTPUT NANO		
1	2039045-10	A00	TAPE KAPTON 6.35mm GOLD 10 CM		
1	2039769	C00	SHIELD NANO AMP RECON FILTER EMC NOTCHED		TWIST (3) TABS ON BOTTOM TO RETAIN
13	2038361	A00	SCR MACH M3X12 FHH PHH STL ZN		(10) @ HEAT-SINKS; (3) @ SHIELD
1	2038351-03	F01	PANEL AMPLIFIER NANO 100-120V		
1	2038351	F01	PANEL AMPLIFIER NANO		
1	2038353	D00	LENS OLED DISPLAY 256x64		
1	2038341-02	E02	NANO BEZEL 12		
6	105053	A00	WASHER/FLAT M3 OVERSIZED O.D./ZINC		@ BEZEL
6	0000330-06	B00	SCR M3 X 6MM TF PLASTIC PAN PH CLRZC STEEL		@ BEZEL
1	2038192	A00	SUBASSY USER INTERFACE OLED NANO		
1	2037916-00	A00	PCB ASSY NANO USER INTERFACE		
1	212-027-00	A11	CAP CER .1UF 16V 10% X7R 0603	C1	
2	212-030-00	A11	CAP CER 1UF 16V 10% X7R 1206	C2,C4	
5	212-025-00	D11	CAP CER .1UF 50V 10% X7R	C3,C7,C8,C10,C12	
4	222-005-00	A11	CAP TANT 10UF 20% 16V SM	C5,C6,C9,C11	
1	300-011-03	A01	DIODE SIGNAL DUAL BAV99	D1	
1	2037944-30	A00	CONN HDR SKT FPC 0.5MM 30P BOT-TOM CONTACTS SMT	J1	
1	0005169-12	B00	CONN HDR 12P .098X1 SHRD RTA TJC3	J4	
1	0013322	A00	XSTR FET FDC658P P-CH	Q1	
1	0004147	A00	XSTR FET 2N7002 N-CH TRANSISTOR SOT-23	Q3	
2	143-165-00	A01	RES TF 51.1 1% 0.1W SMT	R1,R14	
11	143-389-00	A1	RES TF 10.0K 1% 0.1W SMT	R2,R3,R4,R5,R6,R7,R8,R9,R10,R11, R157	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	145-565-00	B	RES MF SM .1W 1% 681K OHM	R12	
6	0019926	A00	SW TACT vert sqr shaft 6mmW x 7.3mmH 2.55N	S1,S2,S3,S4,S5,S6	
1	0030177	A00	IC 74HC597 SHIFT REG TSSOP	U1	
1	0005169-04	B00	CONN HDR 4P .098X1 SHRD RTA TJC3	J3	
1	2038193	A02	SUBASSY OLED W/ BRACKETS NANO		
1	2037598	A00	OLED DISPLAY 256x64 WHITE ON BLACK 2.8IN		
2	2038191	A00	BRACKET OLED DISPLAY 256x64		
2	2040975	B00	TAPE DOUBLE SIDED 6MM X 20MM		
4	0024357	A00	SCR SEMS M3X8 PNH PHILLIP STL NICKEL		
4	0025352	A00	NUT HEX M3X5.5X2.5MM STL CLR ZN		
6	2038943	B00	BUTTON ADAPTER - NANO		
1	2040592	125	PROG PCBA DLM12 DSP		
1	2037303-00	B05	PCB ASSY NANO DSP		
5	0032725	A00	CAP 10UF 25V 10% X7R 1206	C1,C8,C15,C17,C20	
3	220-011-02	A11	CAP LYT 100UF 20% 25V RAD	C5,C22,C25	
10	0000013	A00	CAP 100PF NPO 2% 50V 0603	C7,C71,C72,C165,C190,C207,C208,C215,C216,C217	
2	0009185	A00	CAP 10PF NPO 5% 50V 0603	C9,C24	
1	0000003	B00	CAP 4700PF NPO 2% 25V 0805	C11	
2	212-034-00	A11	CAP CER .022UF 10% 100V X7R	C14,C18	
2	0007877	A00	CAP LYT 47UF 63V 20% 8x11.5MM LOWLEAKAGE RAD	C116,C129	
1	0021459	A01	CAP 0.015UF 50V 20% X7R 0603	C21	
8	223-004-00	B11	CAP LYT 10UF 20% 16V SM	C38,C39,C57,C58,C67,C68,C89,C90	
11	0000014	A00	CAP X7R 1000PF 10% 50V 0603	C40,C85,C86,C87,C91,C92,C196,C198,C200,C201,C235	
1	0026217	A00	CAP 470UF 25V 20% 105C AL LESR RADIAL	C70	
4	220-003-02	B	CAP LYT 47UF 20% 50V RAD TR	C100,C101,C133,C134	
10	220-002-02	A1	CAP LYT 47UF 20% 25V RAD TR	C102,C103,C131,C132,C137,C138,C141,C195,C230,C238	
6	212-009-00	A01	CAP CER 47PF 5% 50V NPO 0805 SM	C110,C127,C222,C223,C228,C229	
9	0006335	A00	CAP 470PF 2% 50V NPO 0603	C136,C184,C186,C188,C191,C224,C225,C226,C227	
2	0009294	A00	CAP .22UF 10% 25V X7R 0805	C143,C144	
4	0017943	A00	CAP NPO 18PF 50V 5% 0603	C74,C79,C156,C157	
2	212-026-00	A00	CAP 15PF 5% 50V NPO 0805	C214,C219	
2	0013123	A00	CAP 3300PF 5% 50V NPO 0805	C197,C199	
2	0026224	A00	CAP 560PF 50V 2% NPO 0603	C211,C212	
1	0006864	A00	DIODE SCHOTTKY 0.5A 30V	D1	
2	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D2,D7	
2	0019180	A00	DIODE SCHOTTKY 45V 1.5A SMA	D3,D4	
3	304-065-03	A	LED GREEN SM 0805	D5,D6,D26	
1	304-064-03	A	LED RED SM 0805	D29	
3	300-011-03	A01	DIODE SIGNAL DUAL BAV99	D11,D27,D28	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
12	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D13,D14,D15,D16,D17,D18,D19,D20,D21,D22,D23,D24	
1	2039514	A00	CONN USB MICRO AB RECEPTACLE SMT	J1	
1	0005169-12	B00	CONN HDR 12P .098X1 SHRD RTA TJC3	J2	
1	0005169-04	B00	CONN HDR 4P .098X1 SHRD RTA TJC3	J3	
1	0005168-04	B00	CONN HDR 4P .098X1 SHRD TJC3	J4	
2	2033580-06	A00	CONN HDR 6P 0.1" DUAL STR 10U" GOLD GENERIC	J5,J6	
1	0005169-08	B00	CONN HDR 8P .098X1 SHRD RTA TJC3	J7	
1	0005169-10	B00	CONN HDR 10P .098X1 SHRD RTA TJC3	J8	
1	0004901	A01	CONN RCA VERT 2P 24.3MM HIGH	J9	
2	2034400	A00	CONN XLR COMBO A SERIES 6P VERT STR	J10,J11	
1	0018995	A00	IND CHOKE 150UH 20% 0.7A 0.32DCR 9.5DIA 8.9H	L1	
1	0008403	A00	IND SW 0.56UH 20% 6A SMT	L2	
2	0024590	A00	IND SHIELDED 22UH 20% 2.2A SMD	L3,L7	
4	0000922	A00	IND CHOKE 10UH 10% 1812 SMT	L5,L6,L8,L13	
4	0000094	A00	IND FERRITE 120OHM 200MA 0.15DCR 0805 SMT	L14,L18,L22,L23	
1	0017955	A00	IND FERRITE 600 OHM 200MA 0.5DCR 0603 SMT	L9	
8	0028137	A00	IND FERRITE BEAD 1100 OHMS HF SMT	L15,L16,L20,L21,L25,L26,L27,L28	
2	0028138	A00	IND FERRITE BEAD 3000 OHMS LF SMT	L17,L19	
1	0013321	A00	XSTR FET FDC653N N-CH	Q1	
1	0004147	A00	XSTR FET 2N7002 N-CH TRANSISTOR SOT-23	Q2	
17	143-000-00	A01	RES TF 0.00 1% 0.1W SMT	R1,R4,R5,R6,R7,R8,R31,R34,R43,R48,R50,R68,R84,R130,R190,R195,R261	
1	143-437-00	A1	RES TF 31.6K 1% 0.1W SMT	R2	
4	143-289-00	A1	RES TF 1.00K 1% 0.1W SMT	R9,R116,R119,R225	
1	145-039-00	A00	RES MF SM .1W 1% 2R49 OHM	R11	
7	143-149-00	A01	RES TF 34.8 1% 0.1W SMT	R3,R12,R13,R33,R35,R41,R44	
1	143-424-00	A1	RES TF 23.2K 1% 0.1W SMT	R14	
1	143-404-00	A1	RES TF 14.3K 1% 0.1W SMT	R15	
41	143-389-00	A1	RES TF 10.0K 1% 0.1W SMT	R16,R21,R77,R86,R111,R112,R113,R114,R115,R122,R123,R124,R128,R152,R167,R171,R212,R213,R214,R215,R217,R218,R230,R237,R238,R254,R256,R258,R264,R266,R269,R270,R271,R272,R273,R276,R278,R281,R294,R295,R297	
3	143-339-00	A1	RES TF 3.01K 1% 0.1W SMT	R18,R19,R228	
1	143-261-00	A1	RES TF 511 1% 0.1W SMT	R22	
12	143-318-00	A1	RES TF 2.00K 1% 0.1W SMT	R23,R42,R126,R127,R232,R234,R248,R251,R263,R265,R275,R277	
2	143-358-00	A1	RES TF 4.75K 1% 0.1W SMT	R37,R89	



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37	143-165-00	A01	RES TF 51.1 1% 0.1W SMT	R24,R25,R26,R27,R28,R29,R30, R32,R36,R39,R40,R49, R101,R192, R196,R231,R241,R242,R243,R244, R245,R246,R247,R257,R300,R301, R302,R303,R304,R305,R306,R307, R308,R309,R310,R311,R312	
4	143-581-00	A1	RES 1M00 1% 1/10W 0603	R52,R226,R274,R299	
2	143-387-00	A1	RES TF 9.53K 1% 0.1W SMT	R76,R78	
2	143-256-00	A1	RES TF 453 1% 0.1W SMT	R267,R268	
2	143-406-00	A1	RES TF 15.0K 1% 0.1W SMT	R95,R125	
1	143-306-00	A1	RES 1K50 1% 1/10W 0603	R96	
2	143-349-00	A1	RES TF 3.83K 1% 0.1W SMT	R117,R120	
1	143-383-00	A1	RES TF 8.66K 1% 0.1W SMT	R118	
1	143-418-00	A1	RES TF 20.0K 1% 0.1W SMT	R129	
3	145-000-00	B	RES TF SM .1W 0 OHM	R175,R287,R288	
2	146-165-00	A01	RES MF SM .25W 1% 51.1 OHM 1206	R143,R161	
12	143-457-00	A1	RES TF 51.1K 1% 0.1W SMT	R81,R82,R166,R170,R176,R179,R180, R181,R182,R185,R186,R188	
1	143-277-00	A1	RES TF 750 1% 0.1W SMT	R284	
1	145-260-00	B	RES MF SM .1W 1% 499 OHM	R193	
1	145-261-00	B01	RES MF SM .1W 1% 511 OHM	R194	
1	143-337-00	A1	RES 2K87 1% 1/10W 0603	R216	
4	143-193-00	A01	RES TF 100 1% 0.1W SMT	R221,R222,R223,R224	
1	143-204-00	A01	RES TF 130 1% 0.1W SMT	R240	
2	143-287-00	A1	RES TF 953 1% 0.1W SMT	R249,R252	
2	143-416-00	A1	RES TF 19.1K 1% 0.1W SMT	R250,R253	
14	143-331-00	A1	RES TF 2.49K 1% 0.1W SMT	R45,R46,R47,R66,R69,R70,R72,R169, R197,R200,R233,R235,R259,R260	
4	0008320-11	L00	STDF SWAGE M3 X 5.7MM 4.7 DIA	SO4,SO5,SO6,SO7	
2	0000162	B00	SWITCH 2PDT PUSH V SNAPIN	SW3,SW4	
1	2037865	A00	IC DC-DC CONVERTER SWITCHING BOOST SEPIC 60V LM5022 MSOP-10	U1	
1	0022666	A00	IC DUAL OPAMP RAIL-TO-RAIL NJU#7032M DMP8	U2	
1	2037867	A00	IC DC-DC CONVERTER SWITCHING DUAL BUCK 20V 2A SC2440 TSSOP-16	U3	
1	0019049	A00	IC MPU SUPERVISORY 2.93V SOT23	U4	
1	2037298	A00	IC CPU FREESCALE MCF51JM128VLH 50MHZ LQFP-64	U5	
6	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U11,U13,U14,U19,U21,U27	
1	320-006-00	B00	IC OP AMP NJM2068 DUAL SO-8	U22	
1	0009079	A00	IC OPAMP DUAL TL072	U20	
1	2037480	A00	OSC CRYSTAL 12MHZ 18PF 50PPM SMT	X1	
3	0026171	A00	CAP 1UF 16V +80-20% Y5V 0603	C2,C6,C167	
24	0009130	A00	CAP .01UF X7R 10% 50V 0603 SMT	C3,C32,C33,C77,C78,C81,C82,C83, C84,C88,C93,C95,C96,C98,C99, C114,C121,C164,C174,C187,C204, C206,C213,C218	



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28	0009289	A00	CAP 0.1UF X7R 10% 25V 0603	C10,C12,C13,C19,C23,C75,C76, C80,C142,C162,C166,C168,C169, C170,C172,C173,C175,C192,C193, C194,C202,C203,C209,C210,C231, C232,C234,C237	
4	212-041-00	A11	CAP CER 75PF 50V 5% NPO 0805	C26,C27,C30,C31	
4	0002088	A00	CAP 2200PF 5% 50V NPO 0805	C28,C29,C59,C60	
2	212-016-00	A11	CAP CER 1000PF 5% 50V NPO SM	C107,C108	
2	0017670	A00	CAP CER 1UF 10V 10% X7R 0603	C233,C236	
1	2033697	A00	CONN XLR 3P MALE AA-SERIES SHELL & PANEL TIED TO SEPARATE GROUND (PIN 4)	J12	
1	400-032-00	G01	CONN HDR 14P .100X2 STR	J13	
4	143-373-00	A1	RES TF 6.81K 1% 0.1W SMT	R67,R191,R198,R202	
4	143-402-00	A1	RES 13K7 1% 1/10W 0603	R71,R189,R199,R201	
8	143-360-00	A1	RES TF 4.99K 1% 0.1W SMT	R85,R88,R140,R141,R142,R150,R15 1,R229	
5	142-089-00	A1	RES TF 4.7K 5% 0.1W SMT	R51,R53,R219,R220,R227	
1	142-042-00	A1	RES TF 51 5% 0.1W SMT	R296	
2	0026338	A00	IC LDO 1117 ADJ 800mA SOT-223	U10,U18	
1	0022758	A00	IC DIGITAL, DSP, SHARC, ADSP- 21261SKBCZ150, 150MHZ, CSPBGA136	U15	
1	0021301	A00	IC CODEC CS4272	U30	
1	0023342	A00	OSC XTAL 12.288MHZ 30PPM TOL HC49SM	Y1	
1	2040469	A01	SPI FLASH memory Preprogrammed DLM8/12 (topbox) DSP Firmware	U9	
1	2040460	A00	IC MEM FLASH SPI 4MBIT ATMEL AT25DF041A		
1	SW0940-00	114	DLM 8/12 (topbox) DSP FIRMWARE		
1	0026953	A00	RES 10K 5% 1/4W 1206	C171	
2	146-373-00	A01	RES MF SM .25W 1% 6K81 OHM 1206	R79,R80	
1	SW0949	125	FIRMWARE COLD FIRE DLM12		
1	2040597	125	LABEL PROG PCBA DLM12 DSP		
1	0016023	A00	LBL BLANK HI-TEMP WHT POLYIMIDE 1.00" X .250"		
1	2038360	A00	SHIELD DSP NANO		
1	2038493	A00	ASSY CBL IEC INT W 50MM 16AWG GND WIRE		
1	2038494	A00	CONN IEC 320C14 MALE 4.7MM QDISC 10A/250V UL CSA VDE FLANGE- MNT		
1	0014367	A00	CONN RING LUG #8 (4MM) 16-22 AWG		
1	0014654	B00	NUT/HEX/M4 ZNC[DIN934]		AT GND STUD
1	2039282	B01	ASSY CBL SWITCH POWER NANO		
1	0030476	A00	SWITCH ROCKER DPST 250VAC 10A UL CSA/250VAC 8A/80A VDE		
1	0018860-03	A00	CONN RECP 7A 3P 3.96MM 1ROW		
2	0018859-01	A00	CONN TERM FEM 10A 3.96MM 16-18 AWG TR		



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	2034798	A00	CONN TERM 90 DEG CLIP FULLY INSUL 16-14 AWG .187 X .020		
4	0027357	A00	SHRINK TUBE D5X20MM BLK		AT ALL WIRE CONNECTIONS
1	2039097-01	A00	SUBASSY FAN 12VDC 60X60X15MM 15CFM 150MM CBL		
1	2039097	B00	FAN 12VDC 60X60X15MM 15CFM		
1	0005167-02	B00	CONN RECP 2P .098X1 TJC3		
2	0005166	B00	CONN TERM TJC3 22-28AWG TR		
1	2038438	A00	GASKET FAN NANO		
2	0016339-00	B00	BTN ADAPTER - ONYX 1200F		
2	0012143-07	D00	RND BUTTON CAP (7MM) CONTROL GRAY TOP WHITE BOTTOM		
1	2038470-01	G01	BUTTON MAIN - "1" NANO		
1	2038470	G00	BUTTON MAIN NANO		
1	2038470-02	G01	BUTTON MAIN - "2" NANO		
1	2038470	G00	BUTTON MAIN NANO		
1	2038470-03	G01	BUTTON MAIN - "SYS" NANO		
1	2038470	G00	BUTTON MAIN NANO		
1	2038470-04	G01	BUTTON MAIN - "MEM" NANO		
1	2038470	G00	BUTTON MAIN NANO		
1	2038471-01	F00	BUTTON VOLUME NANO UP		
1	2038471	F00	BUTTON VOLUME NANO		
1	2038471-02	F00	BUTTON VOLUME NANO DOWN		
1	2038471	F00	BUTTON VOLUME NANO		
4	0028320	A00	SCR SEMS M3X6 PNH PHILLIP STL NICKEL		@ DSP SHIELD
18	0024357	A00	SCR SEMS M3X8 PNH PHILLIP STL NICKEL		(11) @ PS PCBA; (4) @ OLED SASSY ; (3) @ DSP
4	2039107	A00	SCR SEMS M4X22 PNH PHILLIP STL BLK ZN		@ FAN;
7	700-055-00	A	SCR MCH 4-24X3/8 PHP BLK HILO		DSP I/O CONNS TO PANEL
21	0000659	A01	NUT HEX KEP M3		(6) @ SHIELD; (2) @ IEC; (10) @ HEATSINKS; (3) @ SHIELD
1	0013710-008	A00	ASSY CBL 10 PIN 2.5MM TJC3 SINGLE ROW 8 CM LEN		PS TO DSP
20	0005166	B00	CONN TERM TJC3 22-28AWG TR		
2	0005167-10	B00	CONN RECP 10P .098X1 TJC3		
1	0013708-008	A	ASSY CBL 8 PIN 2.5MM TJC3 SINGLE ROW 8 CM		PS TO DSP
1	0010338	A00	ASSY CBL 12 PIN 2.5MM TJC3 SINGLE ROW 1.00 INCHES		DSP TO UI
24	0005166	B00	CONN TERM TJC3 22-28AWG TR		
2	0005167-12	B00	CONN RECP 12P .098X1 TJC3		
12	0010054	A00	WIRE RIBBON 26AWG UL2468		



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0013704-003	A00	ASSY CBL 4 PIN 2.5MM TJC3 SINGLE ROW 3 CM LEN		DSP TO UI
8	0005166	B00	CONN TERM TJC3 22-28AWG TR		
2	0005167-04	B00	CONN RECP 4P .098X1 TJC3		
2	2038437	A00	GASKET AMP REAR NANO SIDES		
2	2038600	A00	GASKET AMP REAR NANO TOP/BOT-TOM		
1	2039711-00	C00	MOUNT KICKSTAND RH NANO		
1	2039711-01	C00	MOUNT KICKSTAND LH NANO		
4	2039118	A00	LOCK WASHER - EXTERNAL TOOTH M3.5 BLK		@ KICKSTAND MOUNTS
4	0007821-20	A01	SCR M3.5 X 0.6 X 20MM PAN MCH PH STL BLKZC		@ KICKSTAND MOUNTS
4	0010350	B00	NUT HEX M3.5x0.6MM STL CLR ZNC (DIN 934)		@ KICKSTAND MOUNTS
1	2039499	A00	PLUG HOLE LIQUID TIGHT 12.7MM HEYCO		
1	2039681	A00	ASSY CBL YEL 16AWG UL1015 QDISC .25 TO .25 8 CM LEN		JUMPER - J13 TO J14
2	400-145-00	A02	CONN TERM QDISC .250 F 16/14GA		
1	2039773	C00	SHIELD NANO AMP EMI		
1	2040979-01	A00	TAPE EPDM FOAM 3MM THK X 20MM WIDE X 100MM LG CLOSED CELL SINGLE SIDED PSA BLK		Installs to EMI Shield
2	2040979-00	A00	TAPE EPDM FOAM 3MM THK X 20MM WIDE X 12MM LG CLOSED CELL SINGLE SIDED PSA BLK		Installs to EMI Shield
2	2040096-70	A00	GSKT TAPE WITH ADHESIVE 1MM X 3MM X 70MM		Installs to long edges of OLED Lens
2	2041193	A00	COLLAR FOAM M7 X 12MM OD X 1.6MM THK		Installs on back of panel at item 22 locations.
1	2038342	A00	ASSY CBL SPEAKER AND FRONT LED NANO8 & 12		Installs to Amp & Driver
1	0013039-06	A00	CONN RECP 7A 6P 4.2MM 2ROW		
6	0013038	A00	CONN TERM FEM 7A 4.2MM 16-22 AWG TR		
2	17-250-03	A00	.250" 16/14GA FASTON FULLY INS. FEMALE		@ 16 AWG BLK & RED
2	17-205-02	A00	CONN .205 X.020 TIN FASTON FEM		@ 16 AWG GRY & BLU
1	0005167-02	B00	CONN RECP 2P .098X1 TJC3		
2	0005166	B00	CONN TERM TJC3 22-28AWG TR		
1	0013948	A01	LOCKING CABLE TIE TYRAP		
1	2038549	C00	SUB ASSY BACK CABINET NANO 12		Installs to Front Baffle
1	2038037	E00	BACK CABINET NANO12		
4	0011132	A01	INSERT CASE M5 SRM350		INSTALLS IN BTM FOR POLE CUP
1	33921480	C	INSERT M10.2XM14 BRS BLK		INSTALL INTO BACK CABINET



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	52100133	A	WSHR FLT M14 28OD 2.3THK STL BLK		INSTALL INTO BACK CABINET
1	33920510	B	NUT INSERT M14 5THK STL BLK		INSTALL INTO BACK CABINET
8	2038026	B00	BRKT SIDE MTG CABINET NANO NEXT		INSTALL INTO BACK CABINET
2	2038552	C00	BRKT BTM MTG CABINET NANO NEXT		INSTALL INTO BACK CABINET
1	2038591	F00	TOP HANDLE NANO		INSTALL INTO BACK CABINET
2	2039130	A00	INSERT 9.5 X 11.13 X M6 PRESS-FIT THD FLNGHD		Refer to drawing for install details
1	2038595	D01	GRIP TOP HANDLE NANO		INSTALL INTO BACK CABINET
2	0014713-12	A00	SCR M3X12MM PLASTITE 45 PAN HD PHIL STEEL BLK ZINC		ASSEMBLES TOP HANDLE TO GRIP
2	2039148-45	A00	SCR M6 X 1 X 45MM PAN MCH PH STL BLK		INSTALLS TOP HANDLE TO BACK CABINET
2	0022094	A00	WASHER/SPLIT-LOCK/HIGH COLLAR M6 BLK		INSTALLS TO M6 SCREW
1	2038597	E00	BAFFLE SUB-ASSY NANO 12		Installs to Back Cabinet
1	2038036	B00	BAFFLE FRONT NANO12		
4	0017716	A00	INSERT WOOFER SRM450		INSTALLS INTO BACK OF BAFFLE FOR MTG DRIVER
4	33921580	A	SPCR 6.5ID 9OD 6.3THK STL ZN		INSTALLS INTO FRONT OF BAFFLE FOR MTG DRIVER
2	2038599	B01	LOUVER SEAL NANO12		Installs into back opening of louver feature
2	2039304	A02	TOP PORT EXT NANO12		Installs into back port features of Baffle
2	33921480	C	INSERT M10.2XM14 BRS BLK		Installs into top of Baffle
2	52100133	A	WSHR FLT M14 28OD 2.3THK STL BLK		Installs into top of Baffle
2	33920510	B	NUT INSERT M14 5THK STL BLK		Installs into top of Baffle
2	2040095-465	B00	GSKT CABINET CORD 2.0mm SQ X 465MM EVA FOAM		Installs into groove for Grille
1	2040096-190	B00	GSKT TAPE WITH ADHESIVE 1MM X 3MM X 190MM		Installs below top groove for Grille
1	2038569	B00	LOUVER FRONT NANO12		Installs to Front Baffle
1	2038574	B00	LOGO BADGE RUNNING MAN NANO NEXT		Installs to Grille

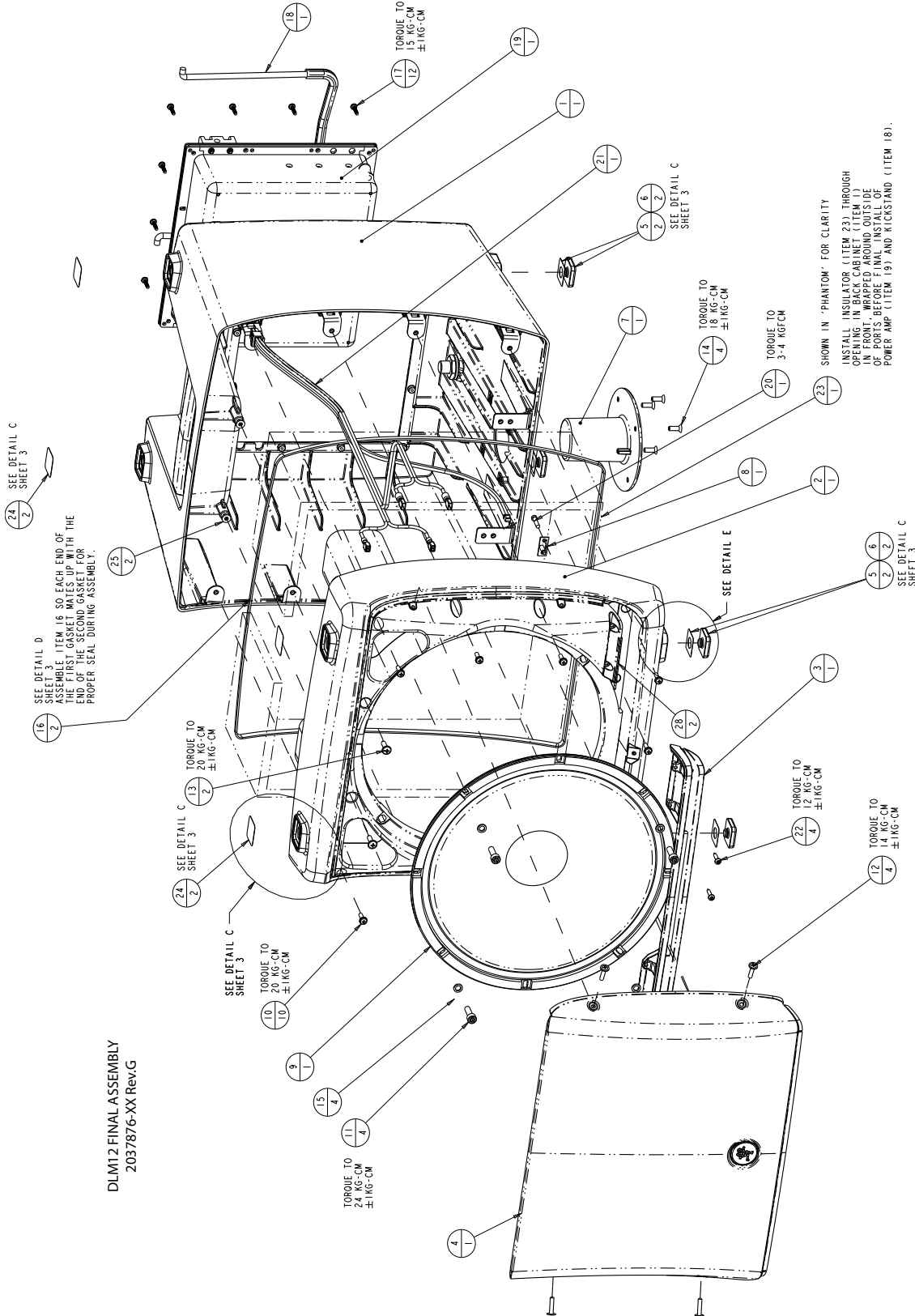


Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2040825-02	A00	TAPE EPDM FOAM 1.6MM THK X 10MM WIDE X 310MM LG CLOSED CELL SINGLE SIDED PSA BLK		Installs to bottom flange of grille
1	51240211	A	SCR SELFTAP 2.9X9.5 FILH PHH STL BLK		Installs LED PCBA to Baffle
4	2038028	A01	FEET RUBBER MTG NANO12 & NEXT		Installs to Cabi- net
4	2039319	B01	TAPE FEET RUBBER MTG NANO12 & NEXT		Adheres to foot
1	2038553	F00	POLE CUP NANO NEXT		Installs to Cabi- net
1	2038571-00	B00	PCB ASSY NANO NEXT LED		Installs to Front Baffle
1	2038572-01	B00	PCB FAB NANO NEXT LED	PCB1	
1	2038953	100	LED GREEN 525NM SUPERBRIGHT T-1	D1	
1	0027080	A00	PILLAR D3X10.8MM PLASTIC	SPC1	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J1	
1	2038373	D00	XDCR DRIVER CONE CX12/2502-4		Installs to Front Baffle
10	0013719-14	E00	SCR M4 X 14 PPH SEMS ITLW STL BLK ZNC		Installs Front Baffle to Back Cabinet Brack- ets
4	51190336	A	SCR MACH M6X35 SKT HEX STL BLK		Mounting screws for woofer
4	51992003	A	SCR SELFTAP PLASTIC DBL THD 4.2X20 PNH PHH STL BLK		Installs Grille to Front Cabinet
2	0019650	A00	SCREW/M4.8 X 1.59 x 20MM PH RWASHER/DUAL THREAD/TFS/BLK		Installs top mtg Front Baffle to Back Cabinet
4	0007247	A01	SCR MACH M5X14 FLH PHH STL BLK		Installs Pole Mount
4	0022094	A00	WASHER/SPLIT-LOCK/HIGH COLLAR M6 BLK		Lockwashers for Woofer
2	2040891-01	A00	ADHESIVE TAPE BLACK 6MM WIDE X 755MM LONG		Installs around rim of Front Baffle
12	2038576-16	A00	SCR M3.5 X 16MM PLASTITE PAN HD PHIL STEEL BLK ZC		Installs Amp to Back Cabinet
1	2038594	C00	KICKSTAND DLM (NANO)		Installs to Amp Assembly
1	2038593	D02	ROD KICKSTAND NANO		Rod will be add- ed to LPT2038594 for overmolded
4	0010481	A00	SCREW/M3.5 X 19 PH PHSMS BLK[DIN7981C]		Installs Front Louver to Front Baffle
1	2039496	A01	SOUND ABSORBER INTERNAL- NANO12		Installs inside Cabinet
2	2040337	B00	WASHER FIBER M4 X 8MM OD X 2.0MM THK		Install between cab and baffle top mtg bosses



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0021637-02	A01	TAPE FOAM GRL R-421-N 6mm x 3mm x 45mm		Installs on left & right lower rim above louver mtg slots
2	2037439-040	A00	TAPE EPDM FOAM 1/16" THK X 1/4" WIDE X 40MM LG CLOSED CELL SINGLE SIDED PSA BLK		Adhere to Kick- stand mounting slots
1	640-001-00	D	CORD PWR IEC US 10A 125V 2.0M		

2037876-XX G00 ASSEMBLY AND QUICK PARTS



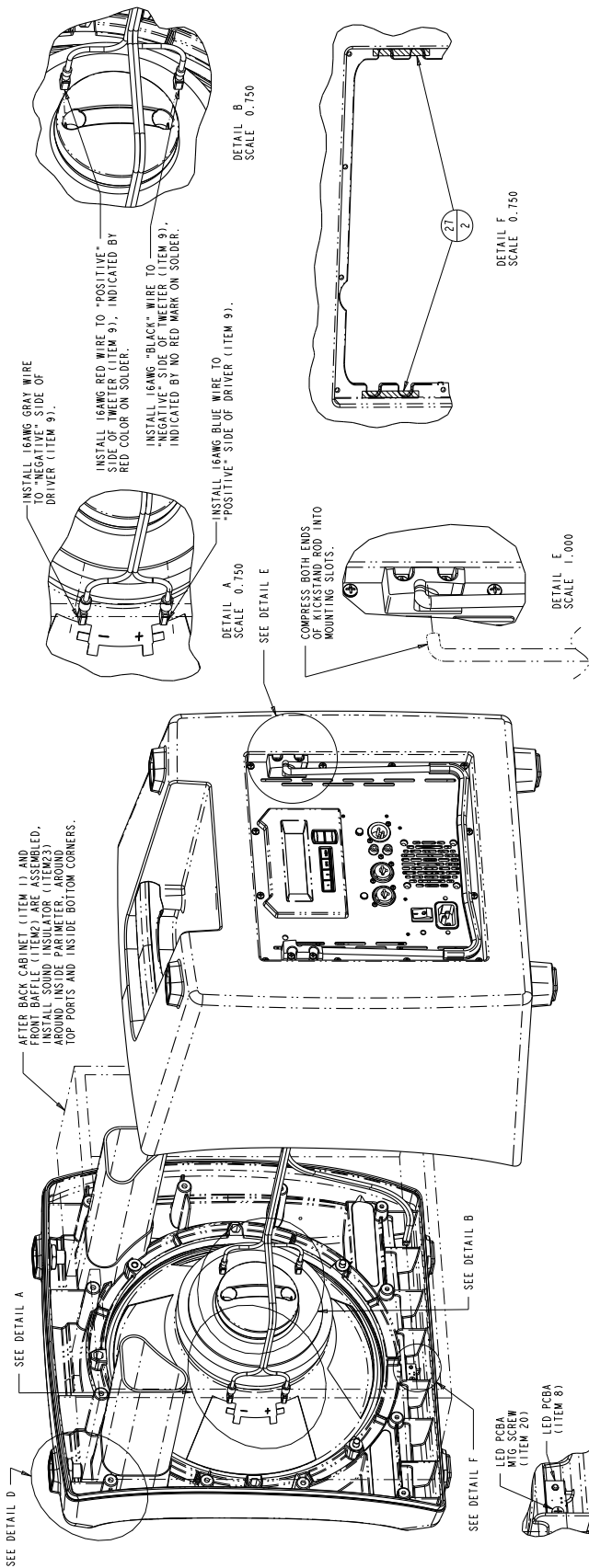
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23	2039496
24	2039610
25	2040337
27	2037439-040
28	0021637-02

Item	Part Number
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16	2040891-01
17	2038576-16
18	2038594
19	2039678-02
20	51240211
21	2038342

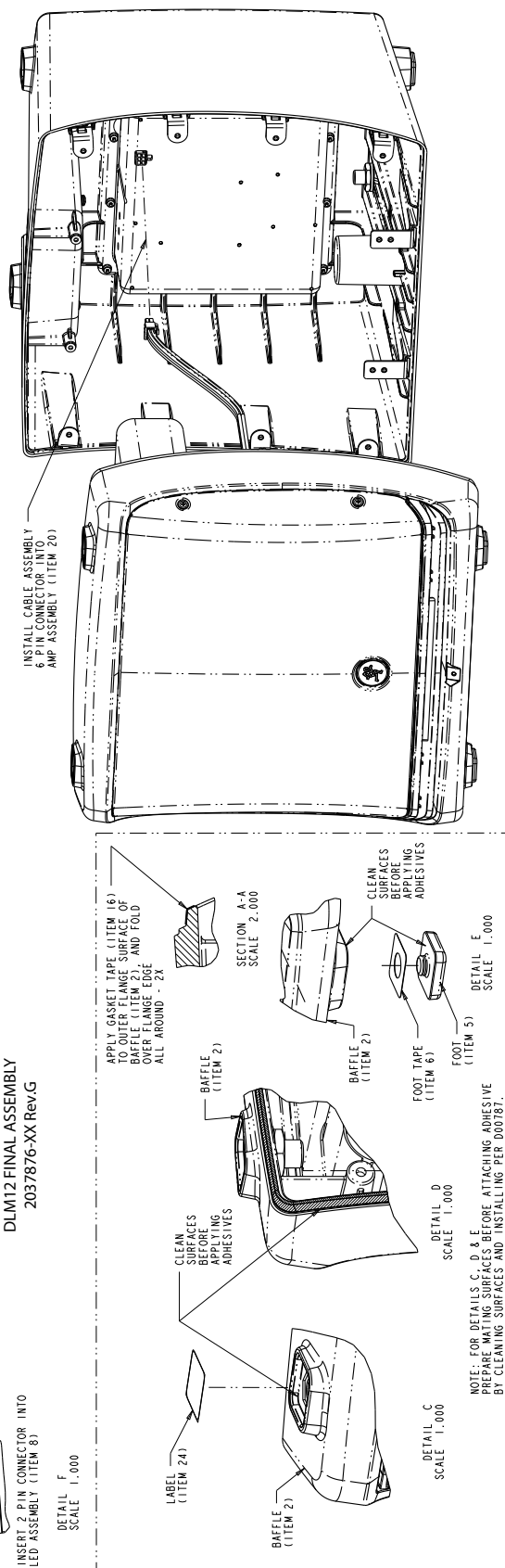
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9	2038373
10	0013719-14
11	51190336
12	51992003
13	0019650
14	0007247

Item	Part Number
1	2038549
2	2038597
3	2038569
4	2038598
5	2038028
6	2039319
7	2038553

2037876-XX G00 ASSEMBLY AND QUICK PARTS

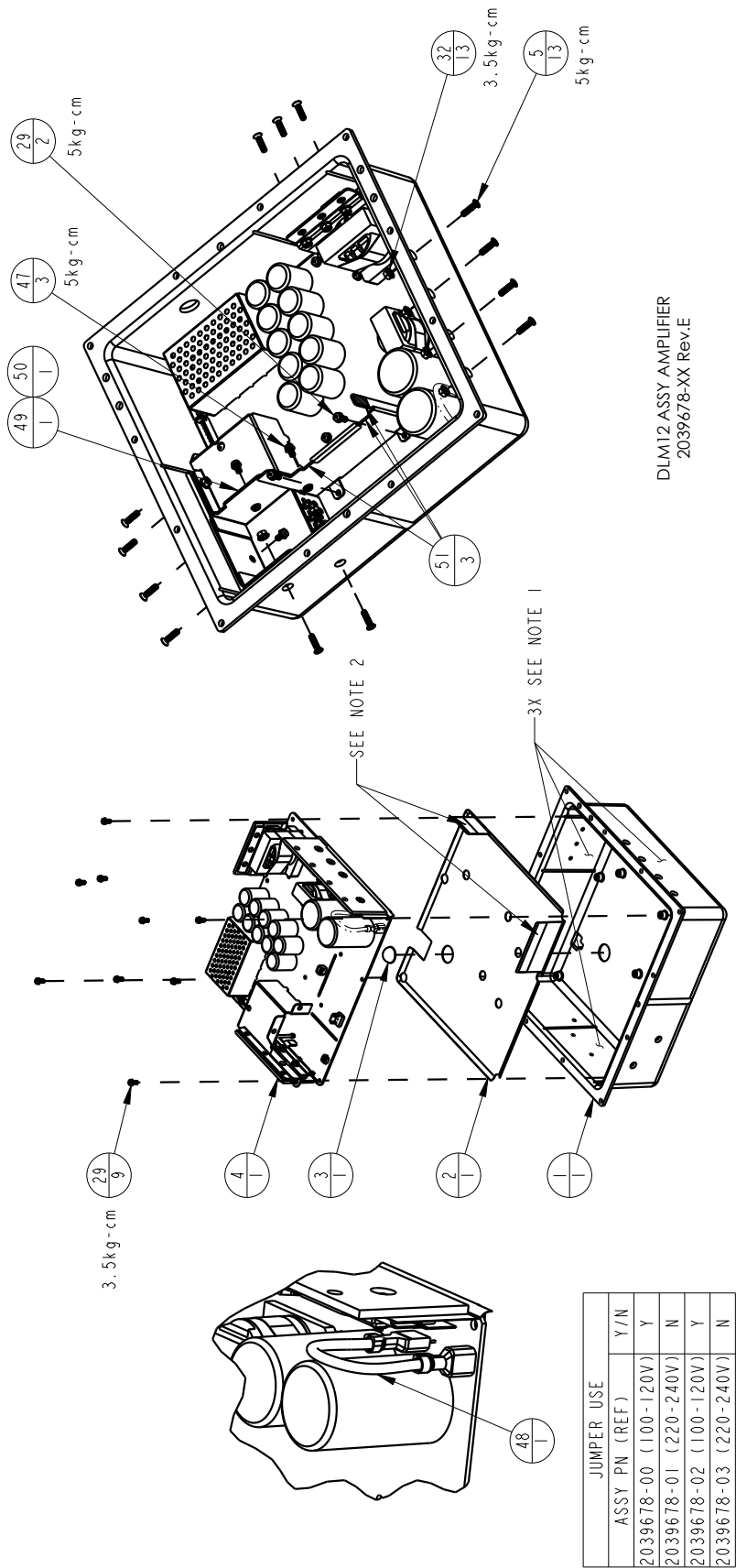


DLM12 FINAL ASSEMBLY
2037876-XX Rev.G



Item	Part Number
27	2037439-040

2039678-XX E00 ASSEMBLY AND QUICK PARTS

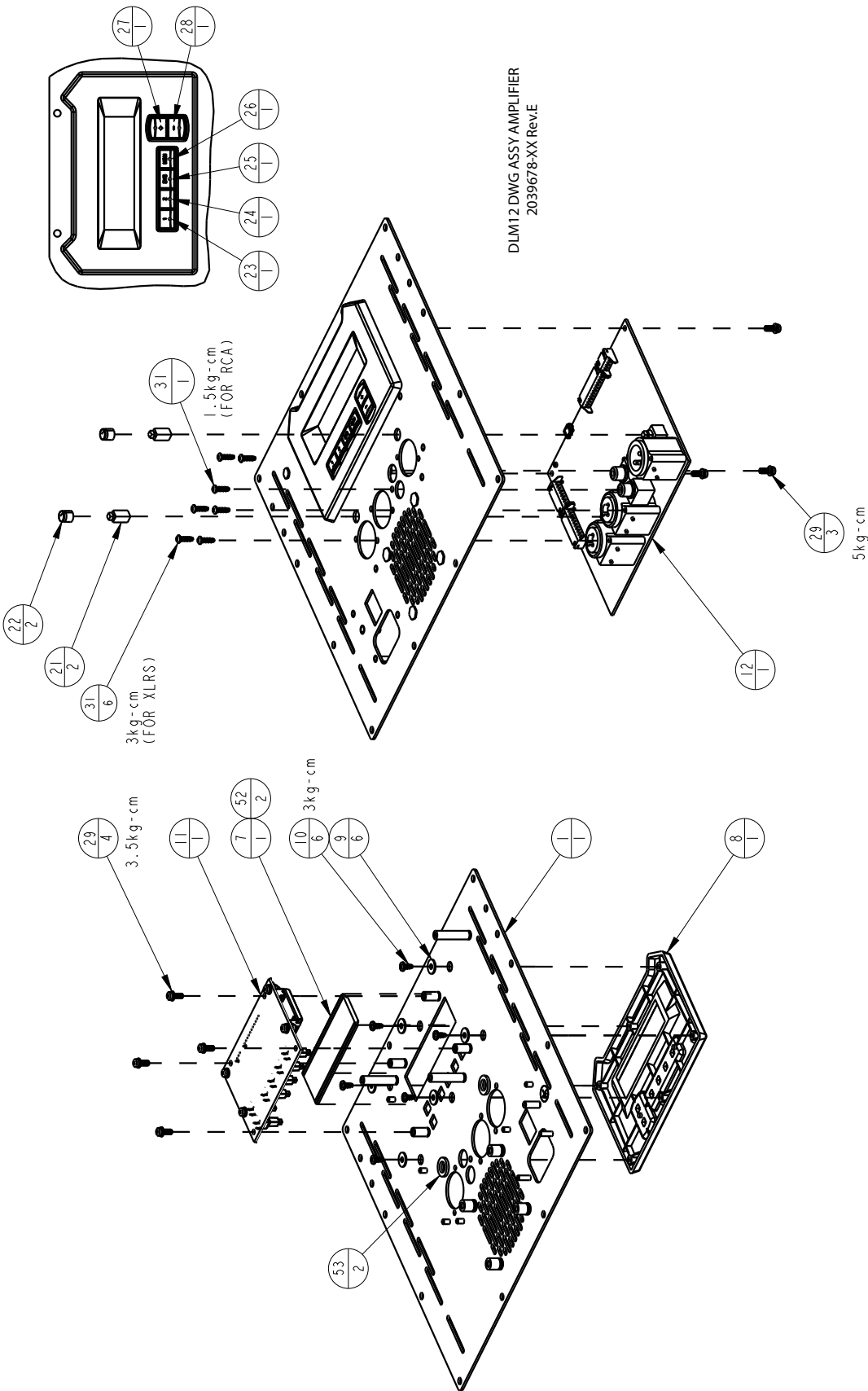


Item	Part Number
47	0028320
48	2039681
49	2039773
50	2040979-01
51	2040979-00

Item	Part Number
1	2038350
2	2038355
3	750-001-00
4	2039680-00
5	2038361
29	0024357
32	0000659

JUMPER USE	
ASSY PN (REF)	Y/N
2039678-00 (100-120V)	Y
2039678-01 (220-240V)	N
2039678-02 (100-120V)	Y
2039678-03 (220-240V)	N

2039678-XX E00 ASSEMBLY AND QUICK PARTS



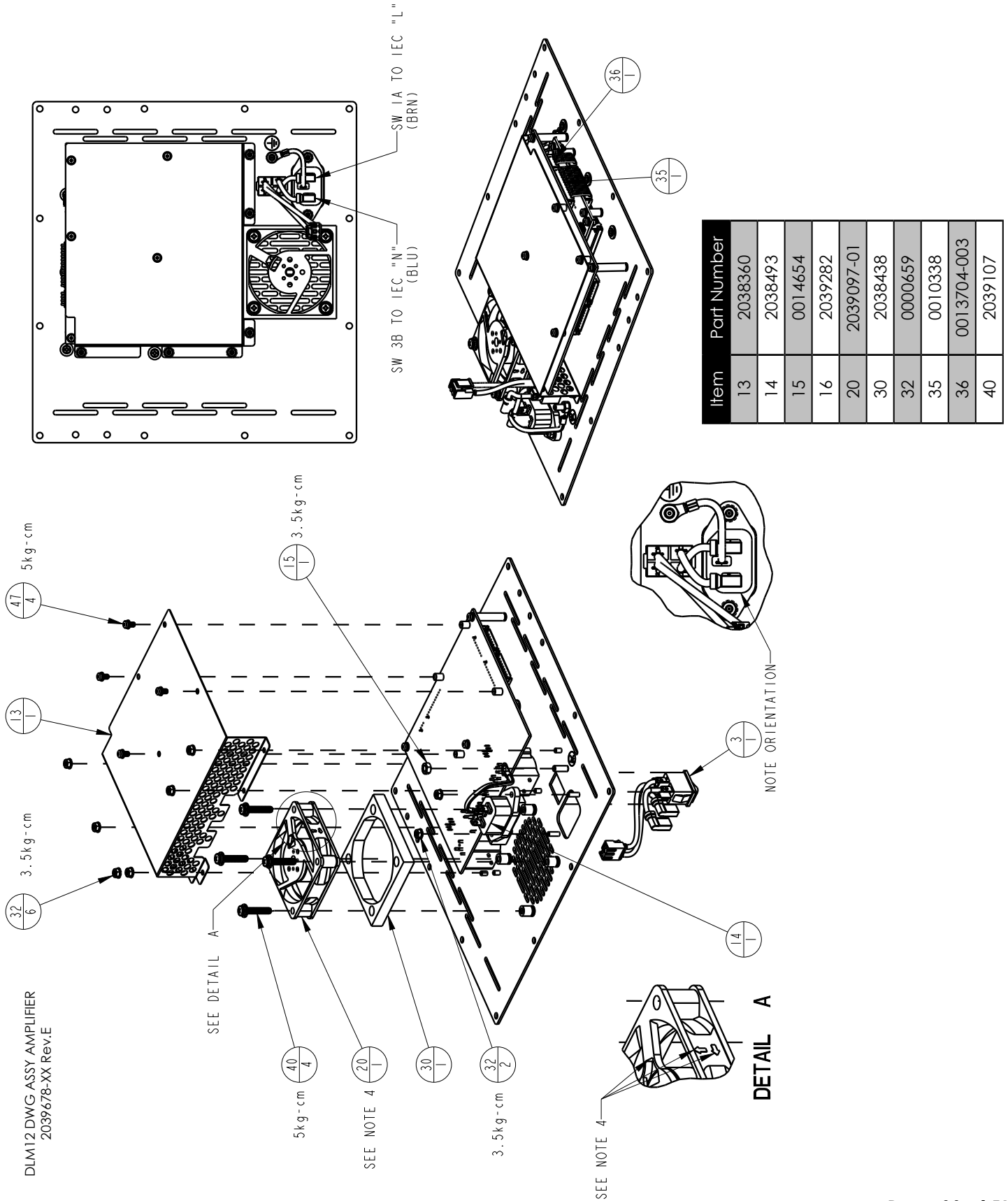
Item	Part Number
28	2038471-02
29	0024357
31	700-055-00
53	2041193

Item	Part Number
21	0016339-00
22	0012143-07
23	2038470-01
24	2038470-02
25	2038470-03
26	2038470-04
27	2038471-01

Item	Part Number
6	2038351-03
7	2038353
8	2038341-01
9	105053
10	0000330-06
11	2038192
12	2040591

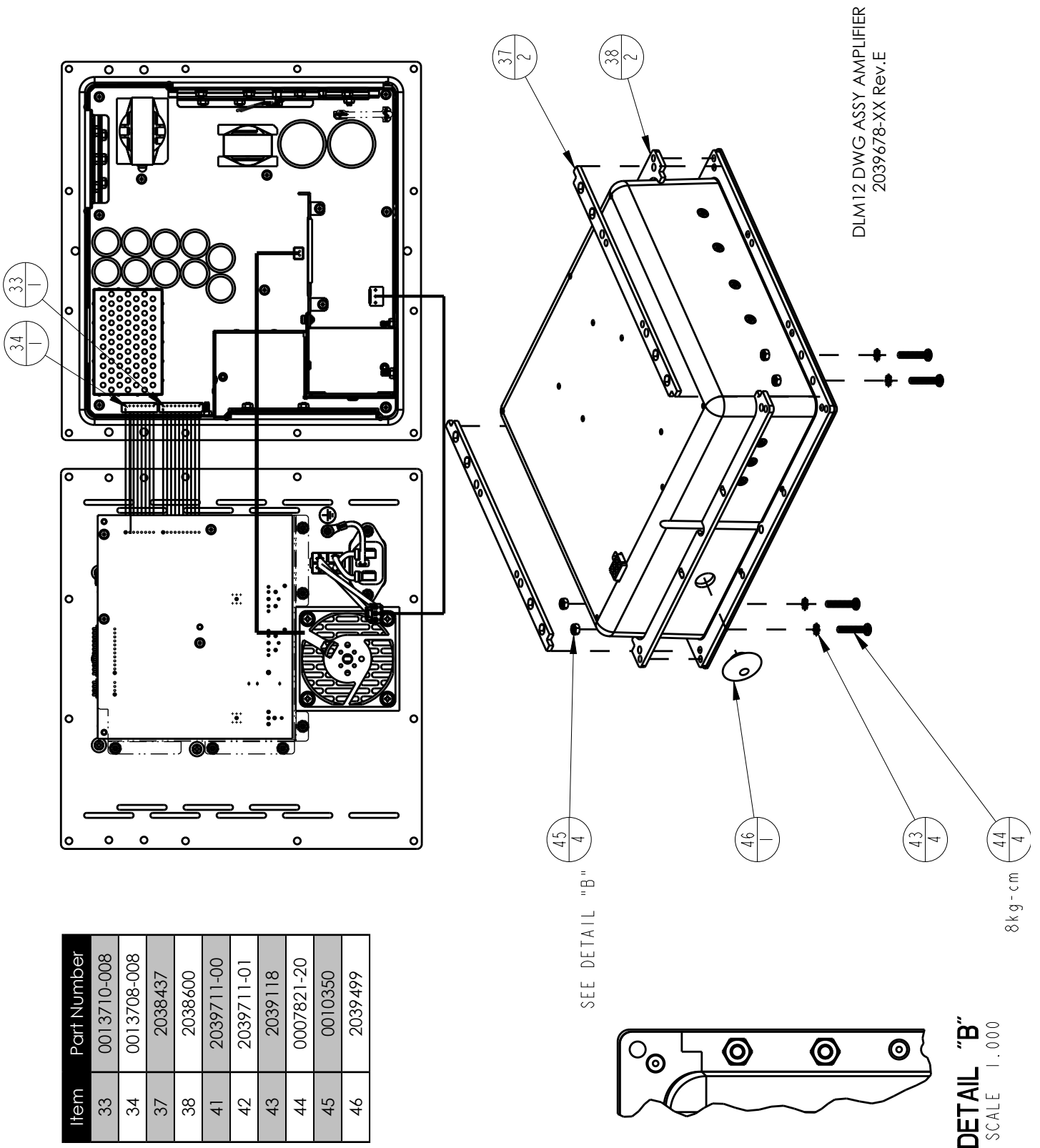


2039678-XX E00 ASSEMBLY AND QUICK PARTS

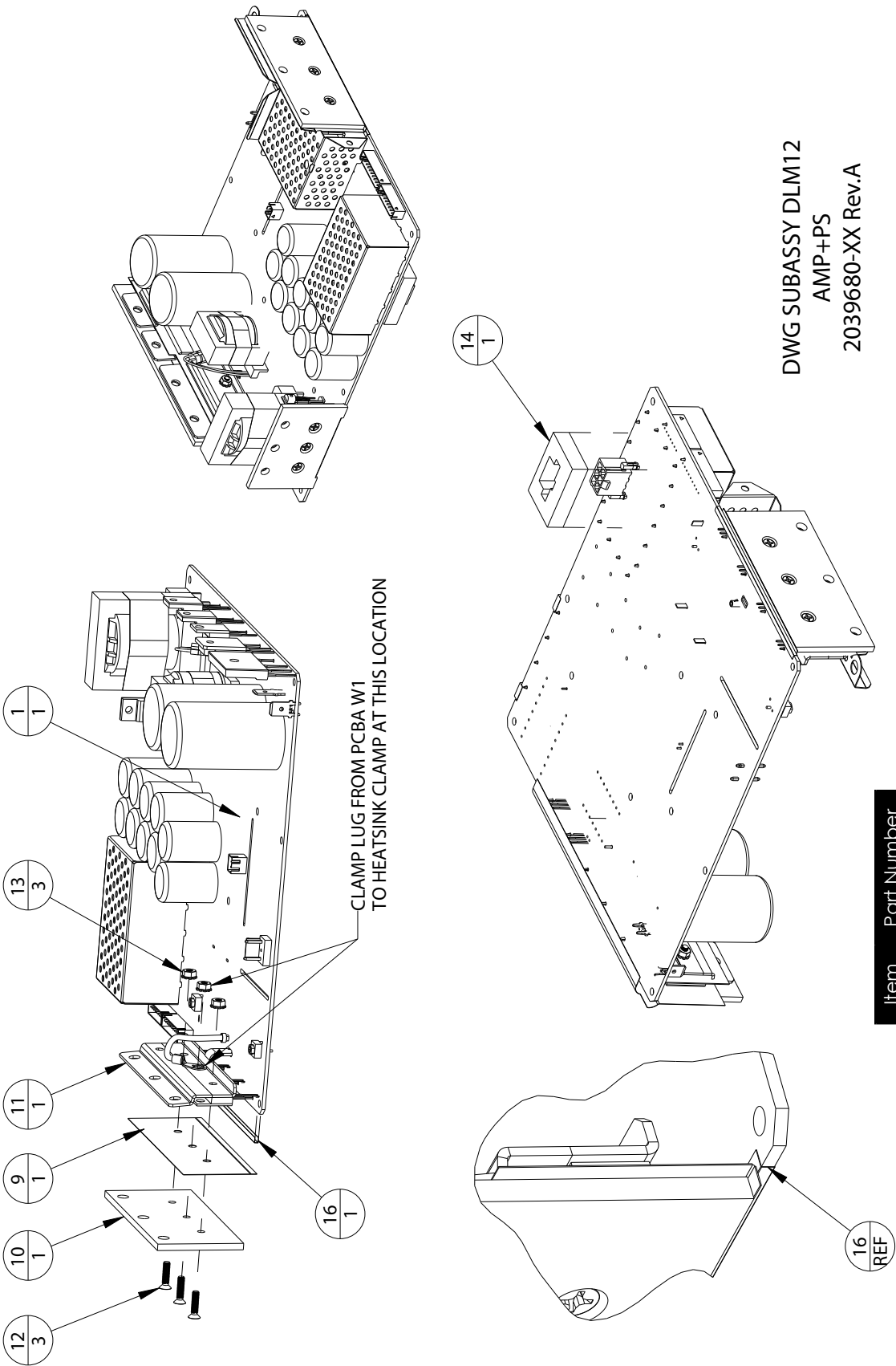




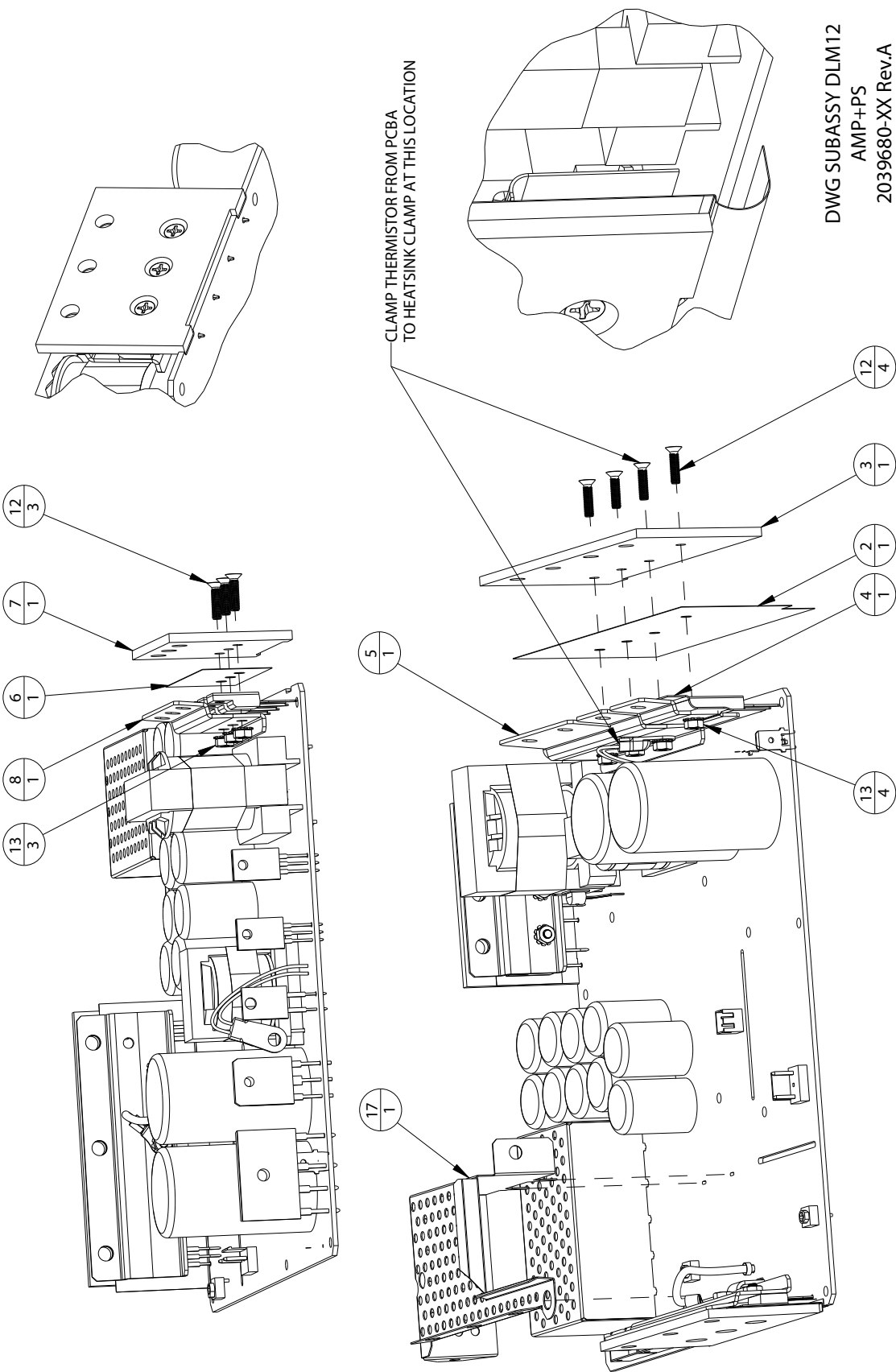
2039678-XX E00 ASSEMBLY AND QUICK PARTS



2039680-XX A00 ASSEMBLY AND QUICK PARTS



2039680-XX A00 ASSEMBLY AND QUICK PARTS

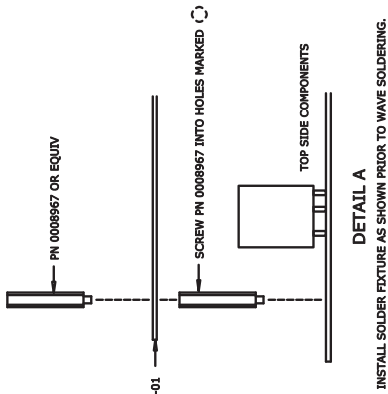


Item	Part Number
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13	0000659
17	2039769

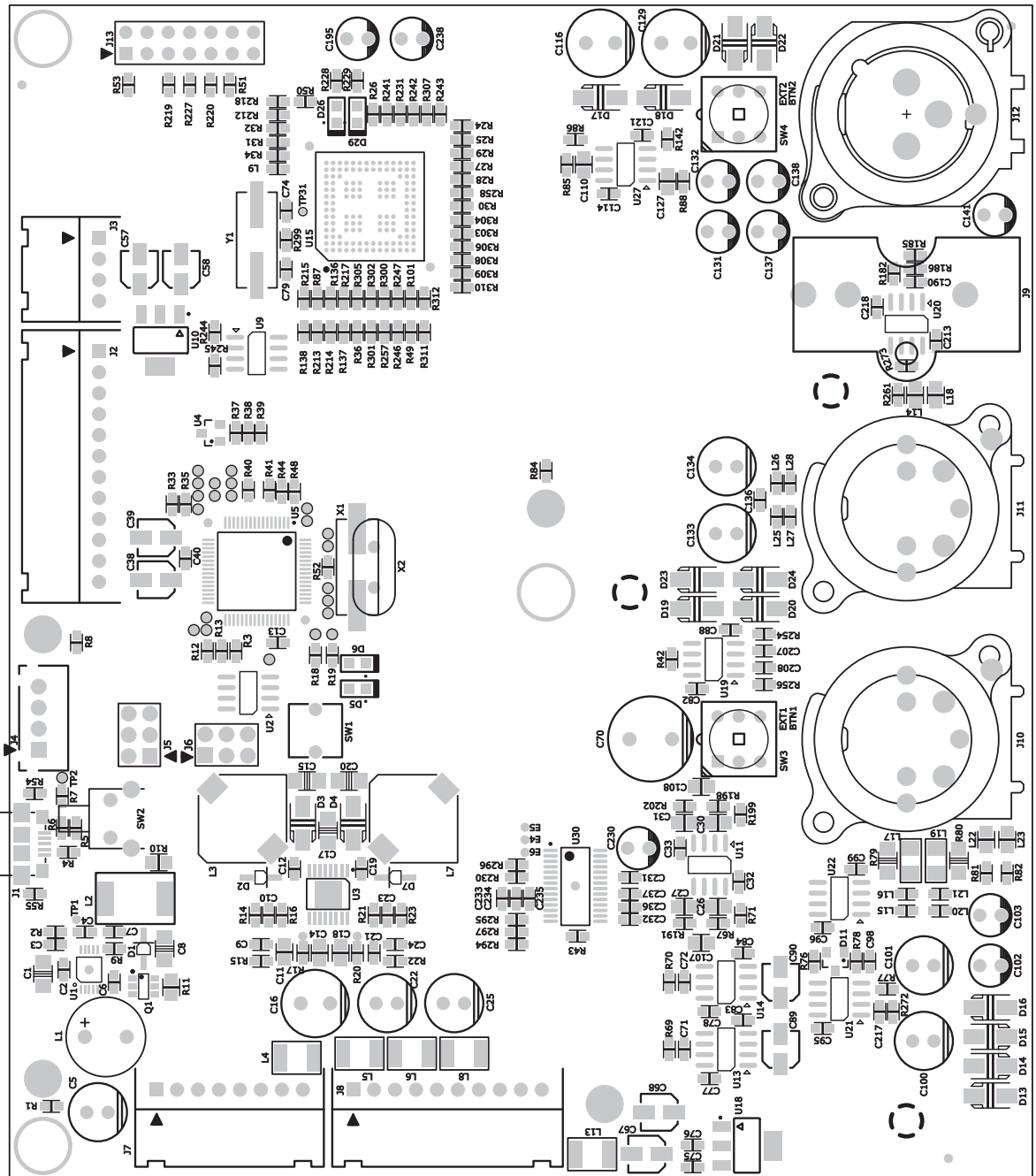
Item	Part Number
2	2038359
3	2038348
4	2038354
5	2038340
6	2038358
7	2038347
8	2038339



2037303-XX B00 PCB ASSEMBLY DSP (TOP)



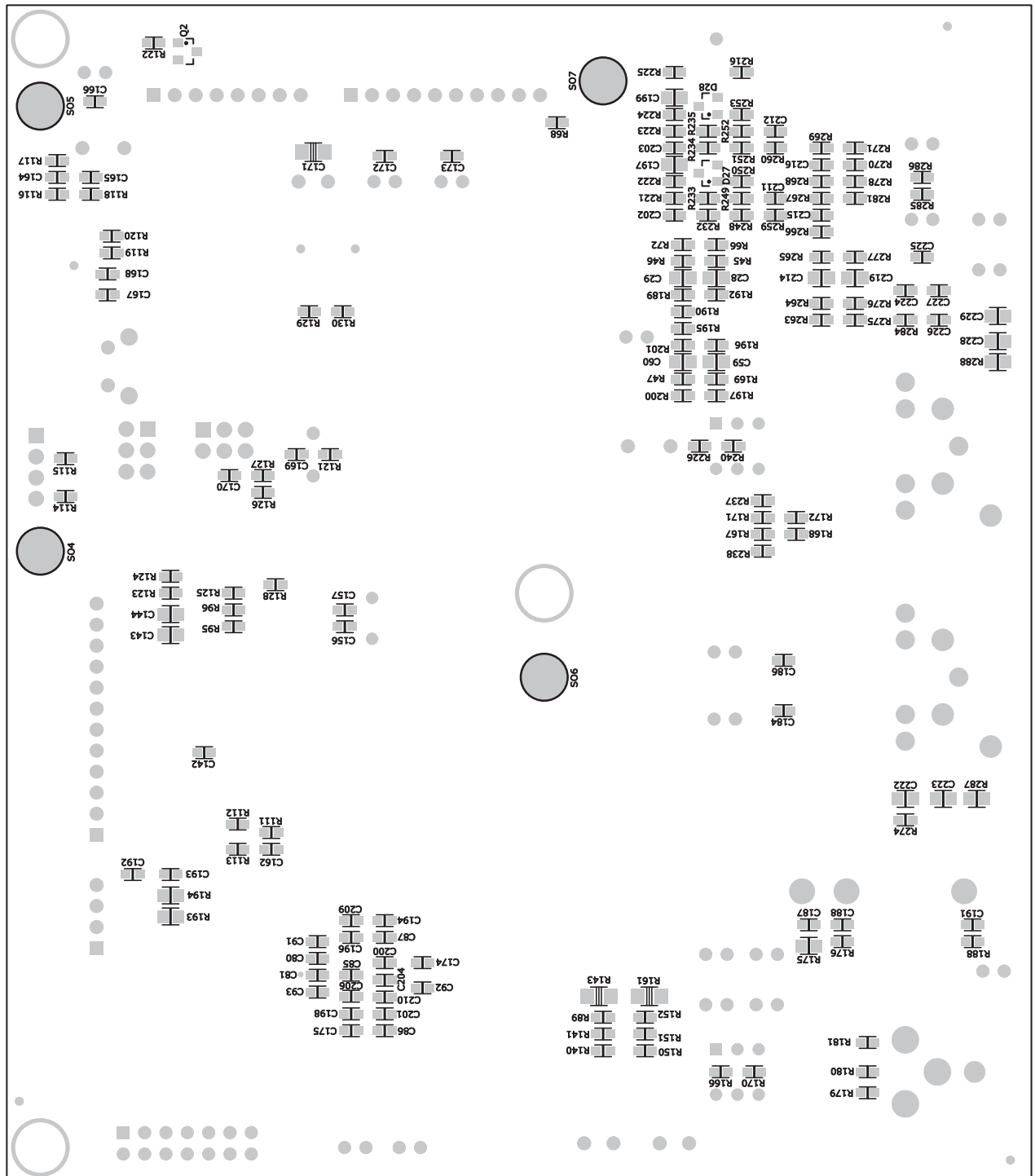
PCB ASSY DLM DSP
2037303-XX
TOP SIDE SHOWN

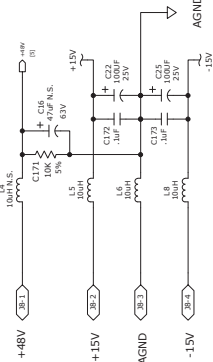




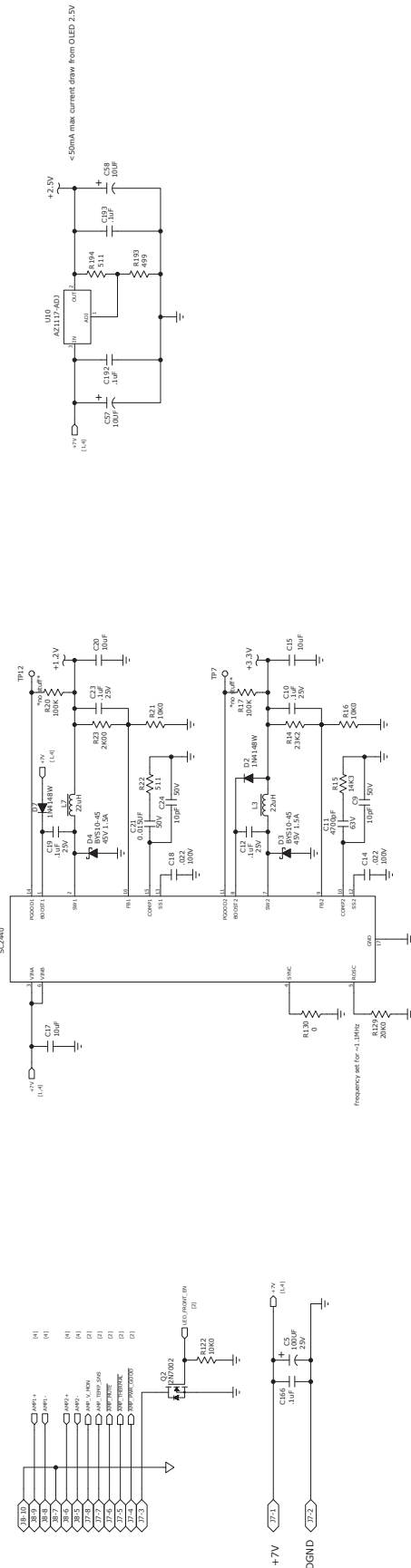
2037303-XX B00 PCB ASSEMBLY DSP (BOTTOM)

PCB ASSY DLM DSP
2037303-XX
BOTTOM SIDE SHOWN



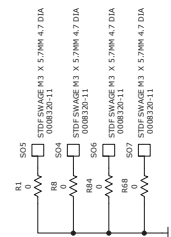


AGND and DGND connected with copper part on ground layer



DLM DSP
2037303-XX Rev.B06

SCH1 ☐ 2037303-XX

PCB1 ☐ 2037304-01 PCB FAB NANO DSP



2037303-XX B06 SCHEMATICS (DSP MICROCONTROLLER)





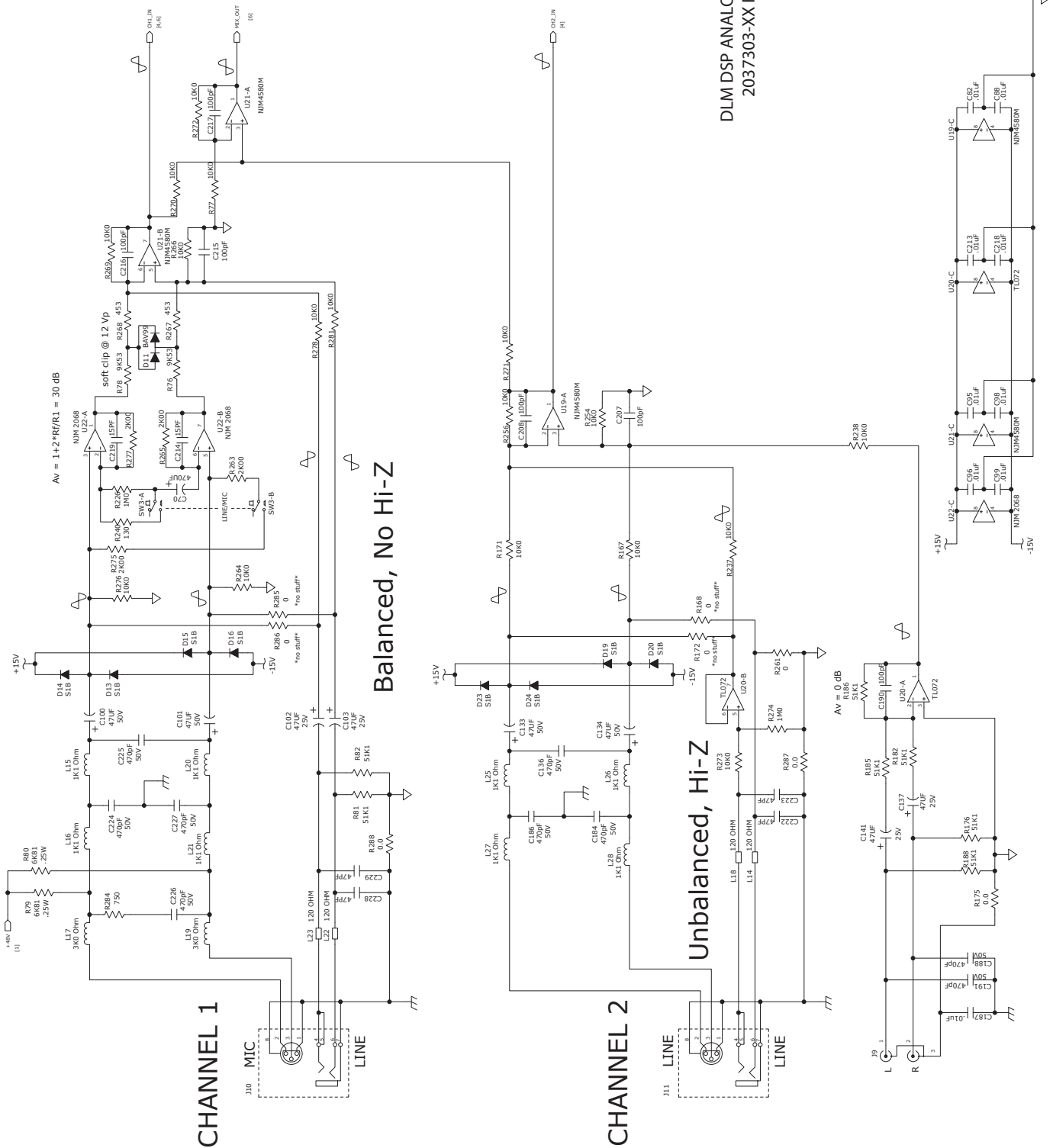
2037303-XX B06 SCHEMATICS (DLM DSP)







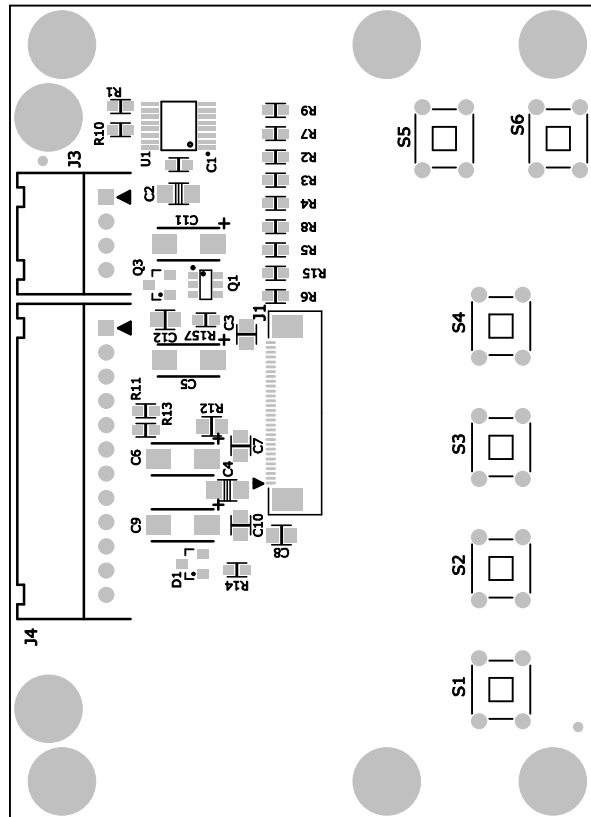
2037303-XX B06 SCHEMATICS (DSP ANALOG INPUTS)

DLM DSP ANALOG_INPUTS
2037303-XX Rev.B06



2037916-XX A00 PCB ASSEMBLY USER INTERFACE (TOP)

DLM PCB ASSY
USER INTERFACE
2037916-XX Rev.A00



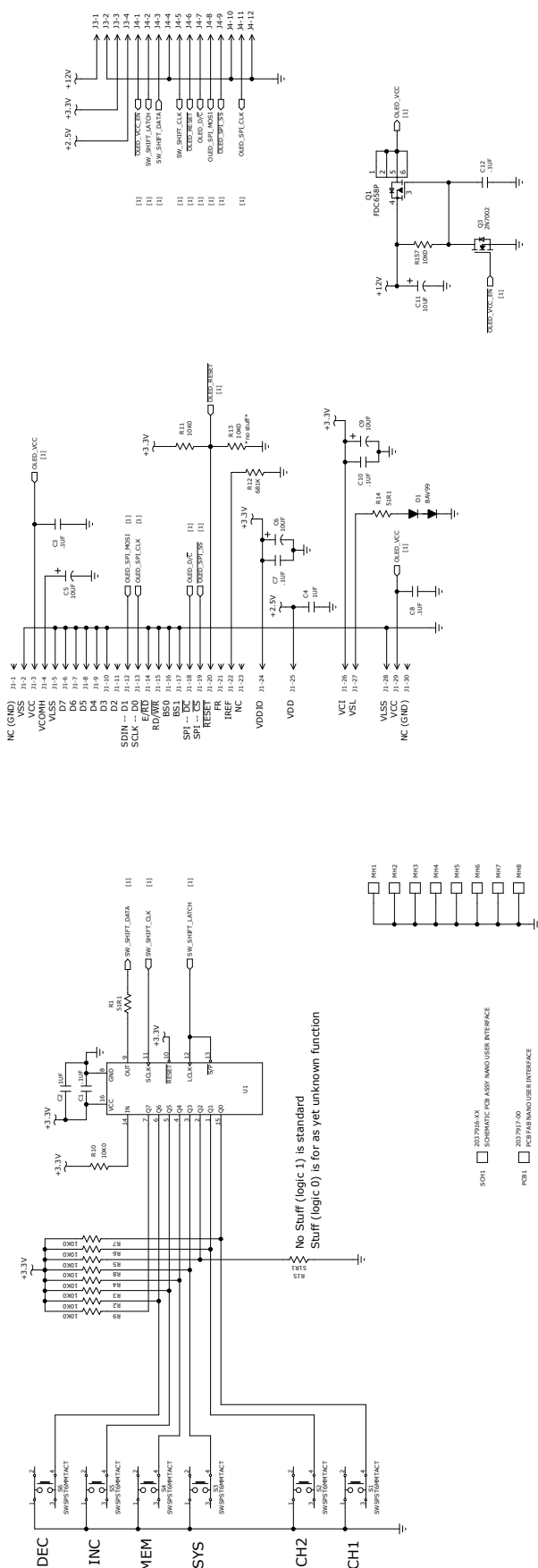
TOP SIDE SHOWN

TO OLED DISPLAY

When powering up, +3.3V must be stable before enabling OLED VCC

When powering down, OLED VCC must fully discharge before +3.3V begins discharging

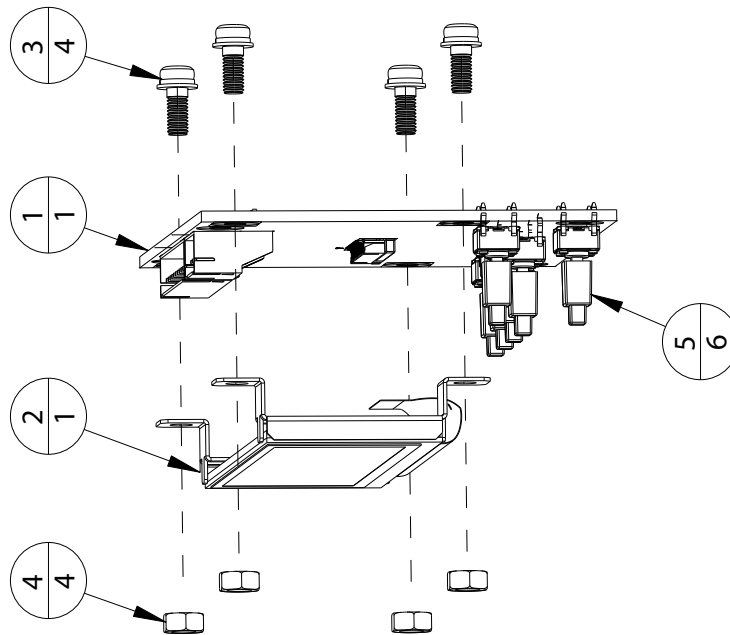
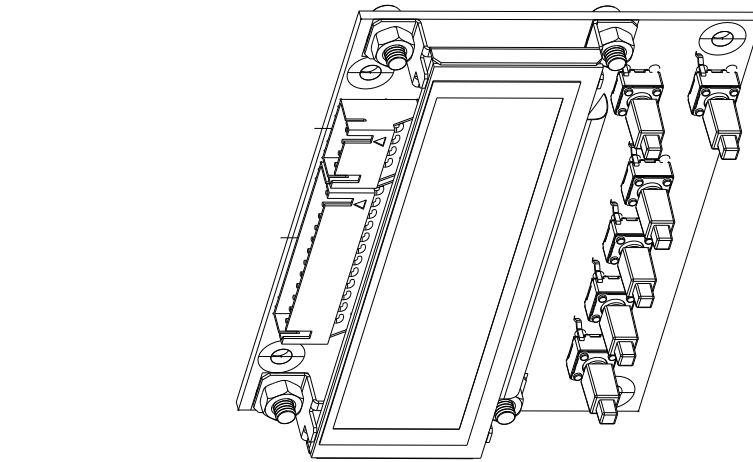
Use power good signal from amp to trigger disabling of OLED VCC before +3.3V begins to decay



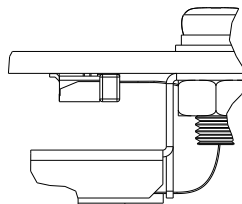


2038192-XX A00 ASSEMBLY AND QUICK PARTS

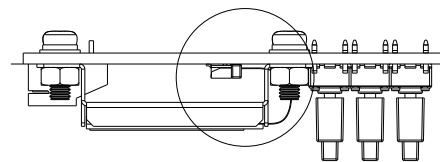
DWG SUBASSY
USER INTERFACE OLED
2038192-XX Rev.A



Item	Part Number
1	2037916-00
2	2038193
3	0024357
4	0025352
5	2041582

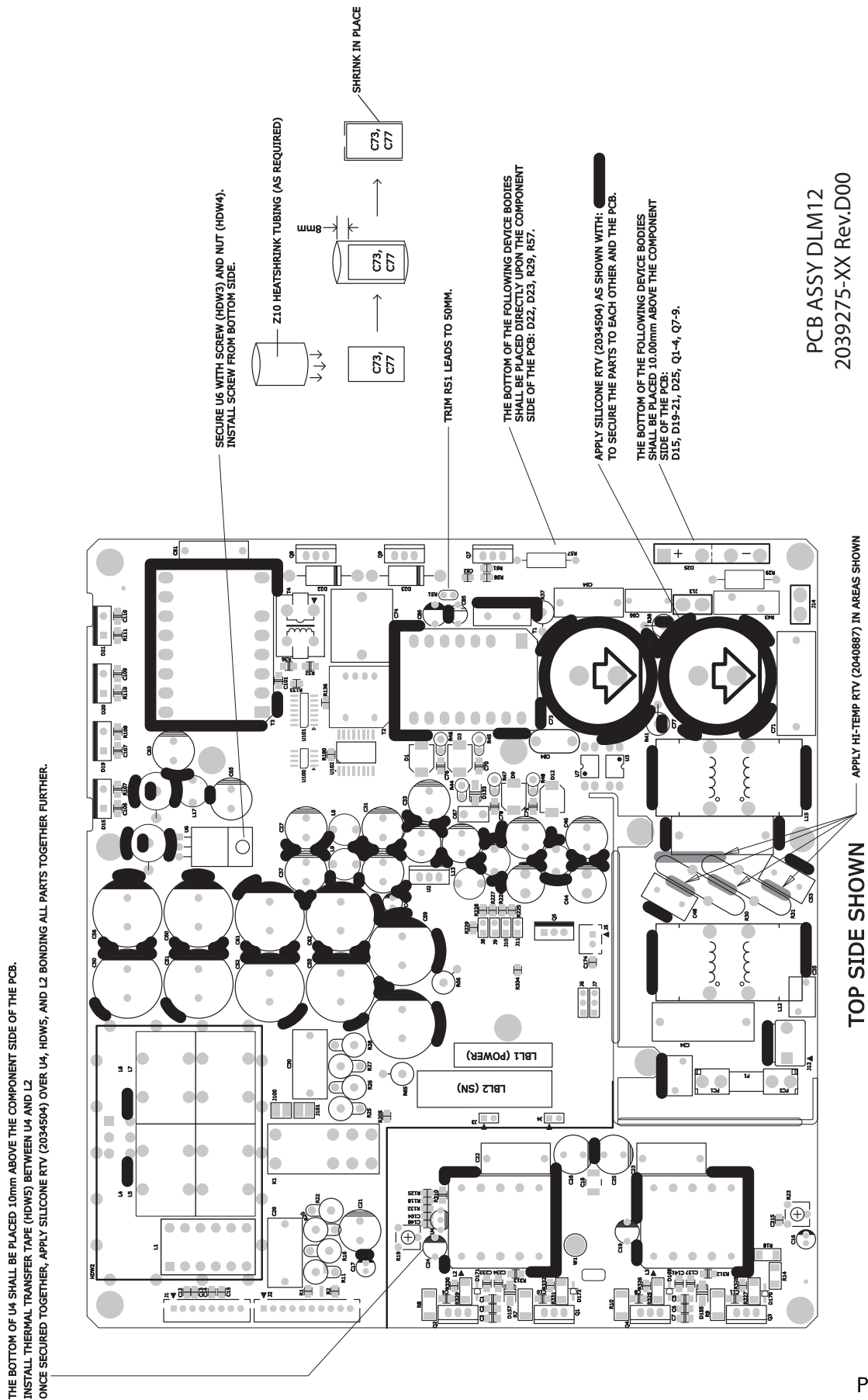


DETAIL A
SCALE 2.000





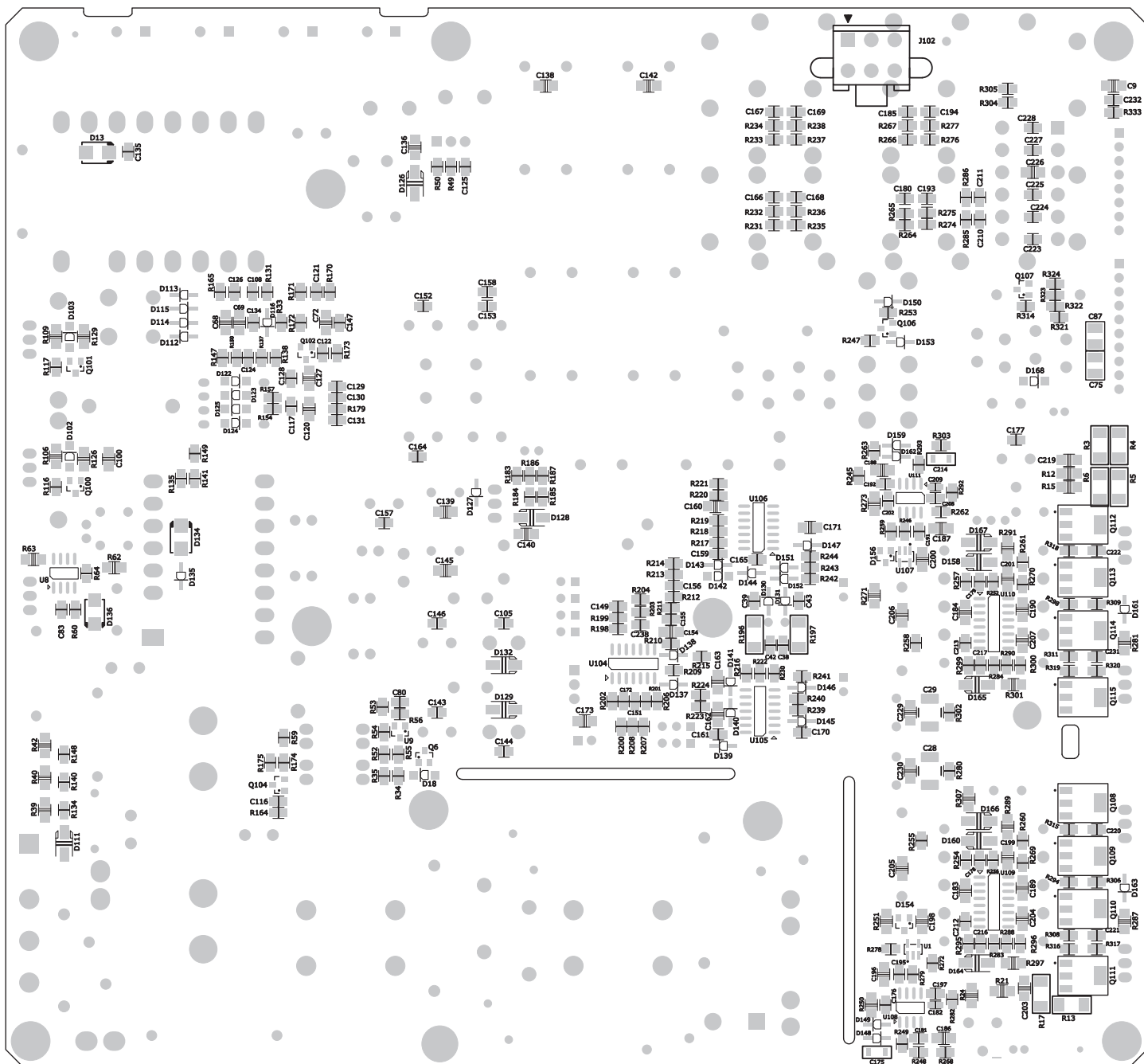
2039275-XX D00 PCB ASSEMBLY (TOP)





2039275-XX D00 PCB ASSEMBLY (BOTTOM)

PCB ASSY DLM12
2039275-XX Rev.D00

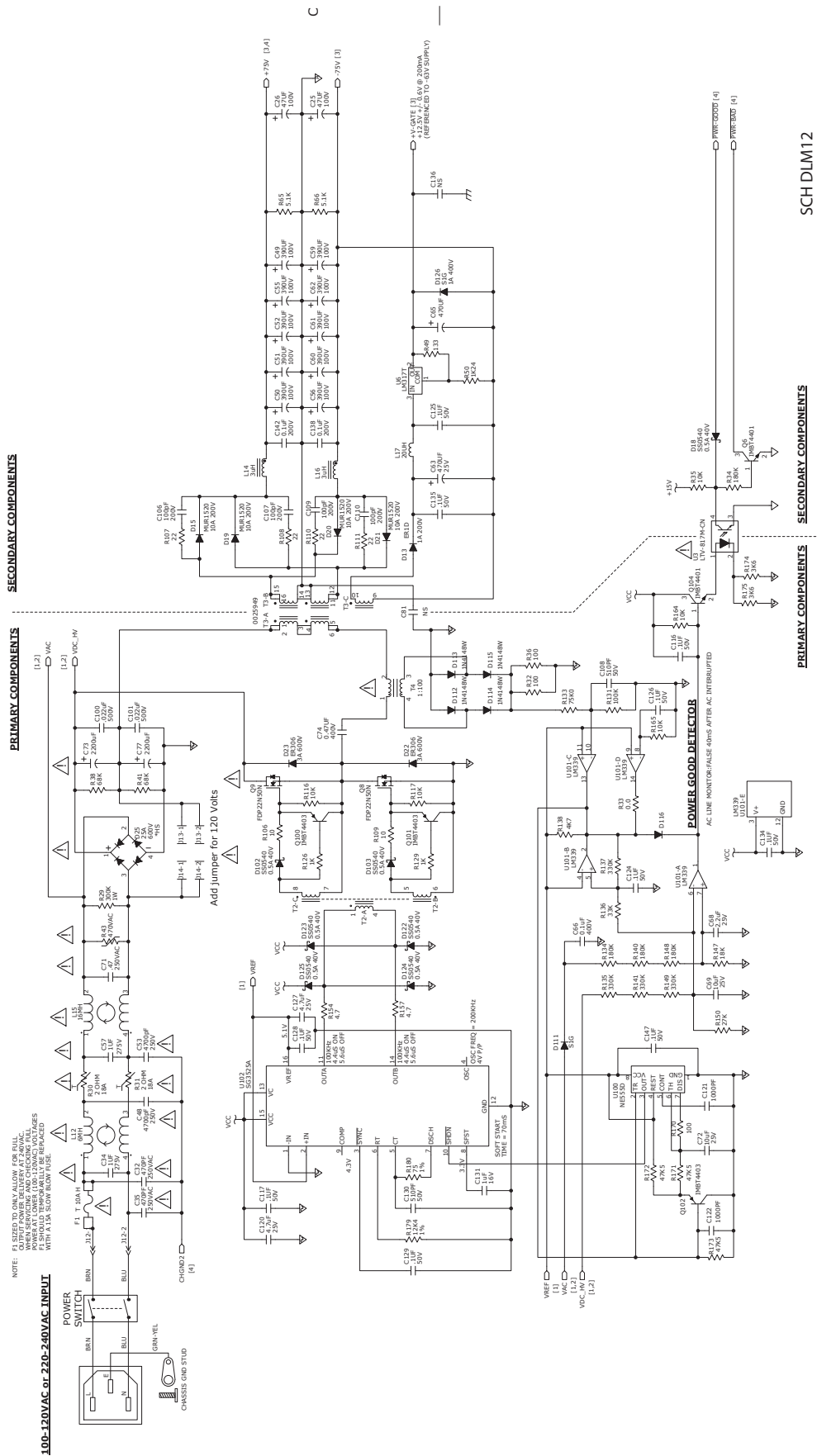


BOTTOM SIDE SHOWN

TRIM ALL COMPONENT LEADS TO 2.5mm MAX.



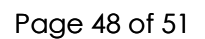
2039275-XX D01 SCHEMATICS (INPUT Q-RES SUPPLY)



SCH DLM12
INPUT Q-RES_SUPPLY
2039275-XX Rev.D01



SCH DLM12
AUX_SUPPLY
2039275-XX Rev.D01





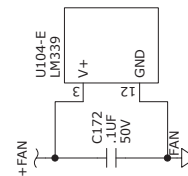
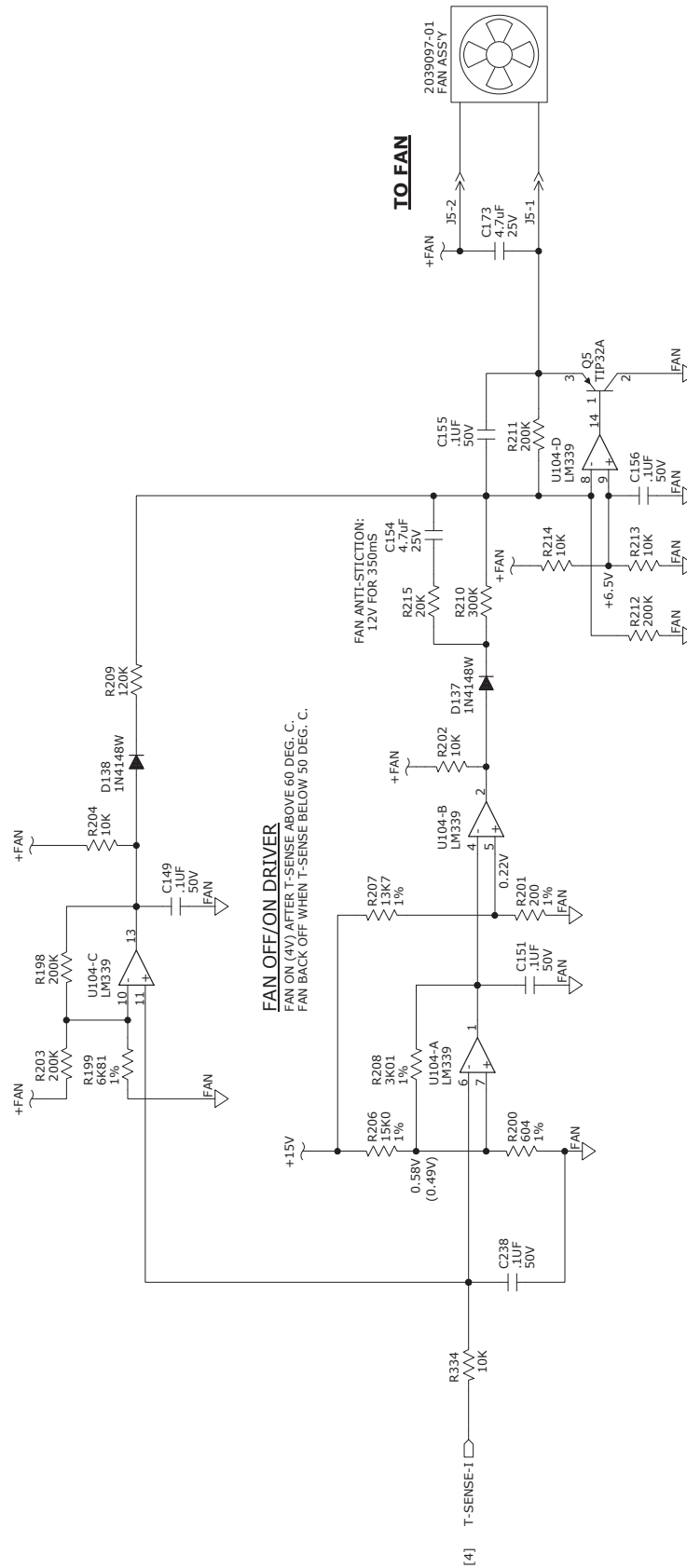




2039275-XX D01 SCHEMATICS (FAN DRIVER)

VARIABLE SPEED FAN DRIVER

FAN @ 4V WHEN T-SENSE 63 DEG. C. OR BELOW.
FAN VOLTAGE RAMPES FROM 4V TO 12V FROM 63 DEG. C. TO 79 DEG. C.



SCH DLM12
FAN_DRIVER
2039275-XX Rev.D01