



HTB2SE Subwoofer

of
home theatre 3000 series



SERVICE MANUAL

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GENERAL SPECIFICATION

	Typical	LIMIT	UNIT
1) THD (@70Hz with 20KHz Filter)			
Output 100W	0.08	0.35	%
Output 28V, No load	0.8	1.0	%
2) Input sensitivity (@100Hz with 20KHz Filter)			
Output 100W	580	+/-10%	mVrms
Output 160W	1.8	+/-15%	Vrms
3) S/N (@70Hz Input, A-Weight)			
Output 40W	95	85	dB
Output 160W	100	95	dB
4) Filter (@70Hz 10mV Input, Output ref 0dB)			
High Pass Filter, -6dB Point	30	+/-10%	Hz
Low Pass Filter, -6dB Point	360	+/-10%	Hz
5) Filter Roll-off (Relative to -6dB Point)			
High Pass Filter Roll-off	-12	+/-2	dB
Low Pass Filter Roll-off	-28	+/-4	dB
6) Bass Boost (@40Hz 10mV Input, Bass Boost set to 0dB, Output ref 0dB)			
Bass Boost Switch set to +6dB	+6.5	+/-1	dB
Bass Boost Switch set to +12dB	+13.5	+/-1	dB
7) Phase Adjustable (@100Hz Output 10V ref 0 degree)			
Phase Switch set to 0 degree	0	0	degree
Phase Switch set to 180 degree	180	180	degree
8) Hum & Noise (Bass Boost Switch set to +12dB, Input with 1K ohm)			
Output with 20KHz Filter	<3	5	mVrms
9) Current Consumption < 10 second			
JAP 100V @Output 160W	3	3.5	A
@IDLE	0.15	0.20	A
US 115V @Output 160W	2.8	3.2	A
@IDLE	0.15	0.20	A
EU/UK 230V @Output 160W	1.5	1.8	A
@IDLE	0.10	0.15	A
AUST 240V @Output 160W	1.5	1.8	A
@IDLE	0.10	0.15	A

GENERAL SPECIFICATION

10) Input Impedance RCA	5K	+/-10%	Kohm
11) Auto Turn on Level @70Hz	2	+/-1	mVrms
12) Auto Turn Off Delay Time	17	+/-3	Min
13) Standby Current 230V	<0.02	<0.05	A
Standby Current 115V	<0.01	<0.03	A

SYSTEM SPECIFICATIONS

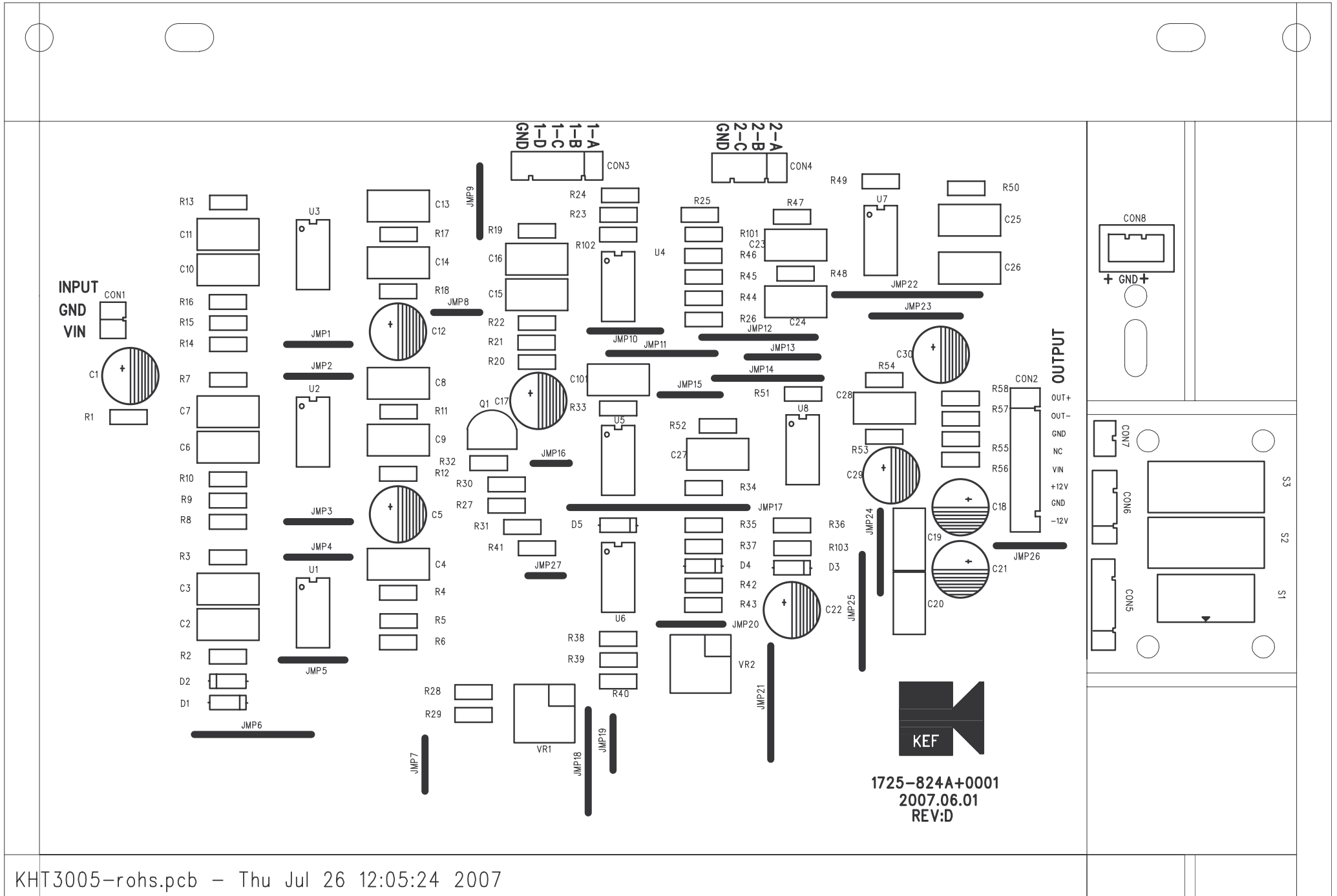
Frequency Response	30~250 Hz
Sensitivity	110dB+/-2dB @1W/m
Nominal Rating	250W
Dimension (W x D x H)	390x440x195mm(vertical) 227x440x385mm(horizontal)
Net Weight	11kg / pc

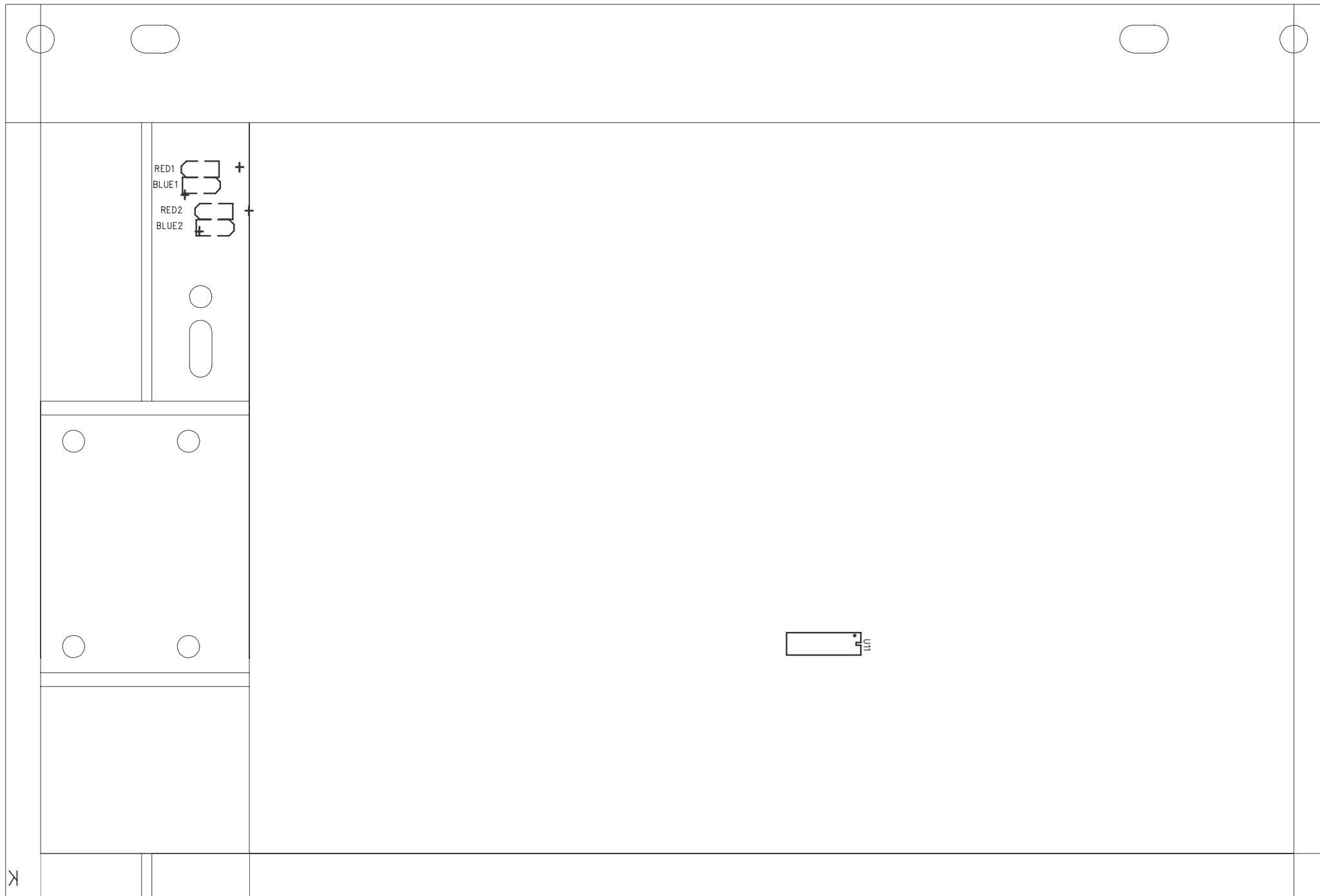
WOOFER SPECIFICATIONS

Rated Impedance	4+/-0.8 ohms at 1V 130 Hz
Sweep Test	Sine Wave 14V at 20-1.5K Hz
Resonant Frequency (Fo)	24 +/- 5Hz at 1V
Sensitivity	89+/-2 dB/W/m
Frequency Response Fo	- 0.7K Hz
Rated Power Input	200W
Power Test	200W RMS/Channel (The rated power is verified by performing power handling test by feeding rated output with IEC268-5 for 8 hours)
Heat Test	60 °C 24 hours
Humidity Test	40 °C 90~95% 24 hours
Main Magnet	Ø145 x Ø 75x17mm ferrite magnet Y30
Backing Magnet	Ø135x Ø56 x 14mm ferrite magnet Y25
Voice Coil Bobbin Material	Black Kapton
Cone Material	paper+5% FIBER
Surround Material	Rubber SBR 6010

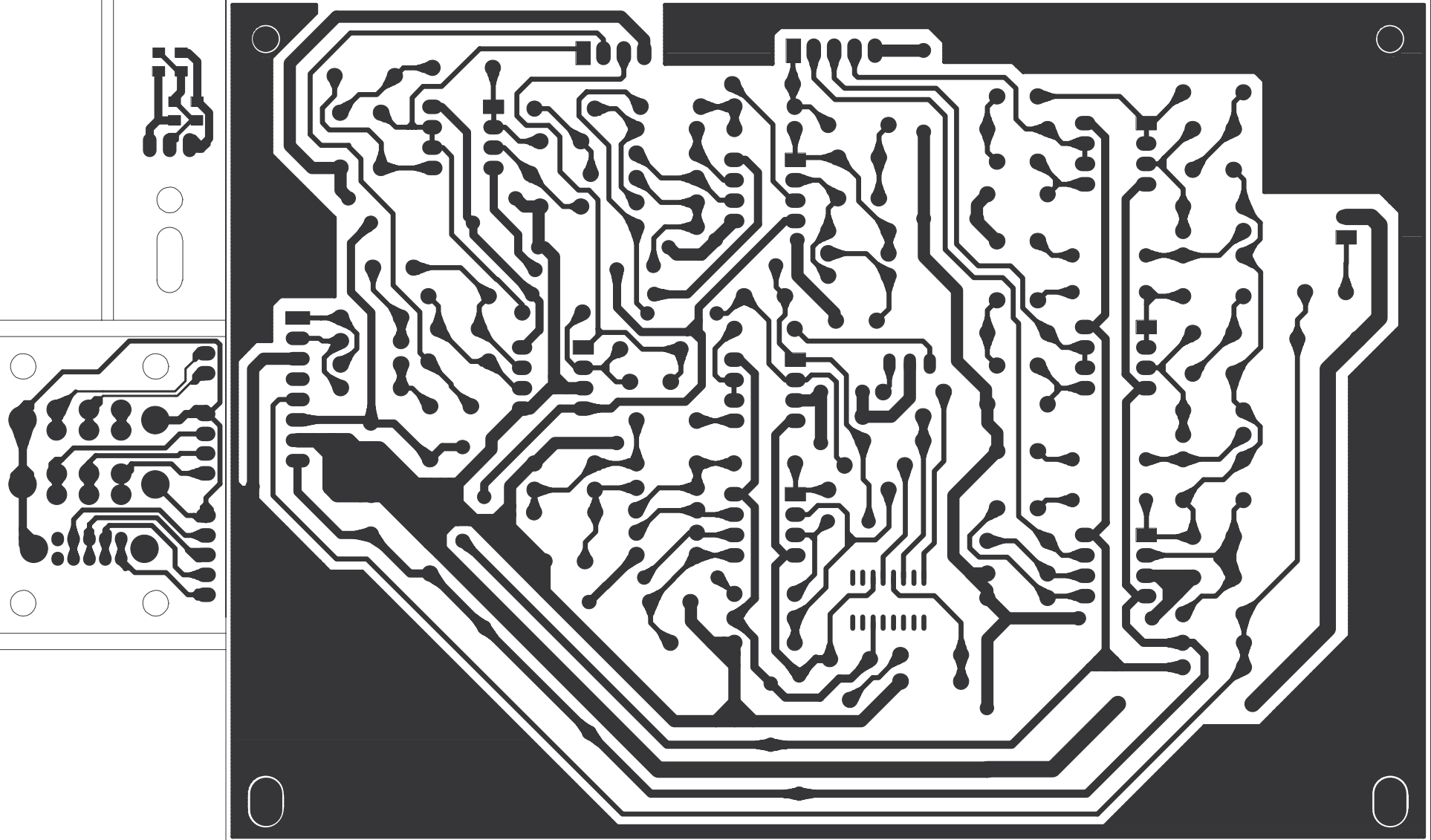
ABR SPECIFICATIONS

Surround Inner	Rubber SBR 6010
Surround Outer	Rubber SBR 6010
Disc	Aluminium Alloy

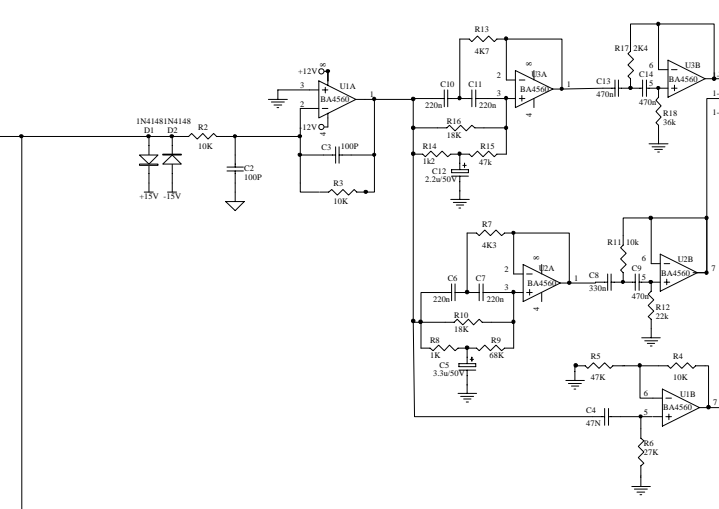
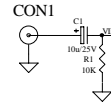




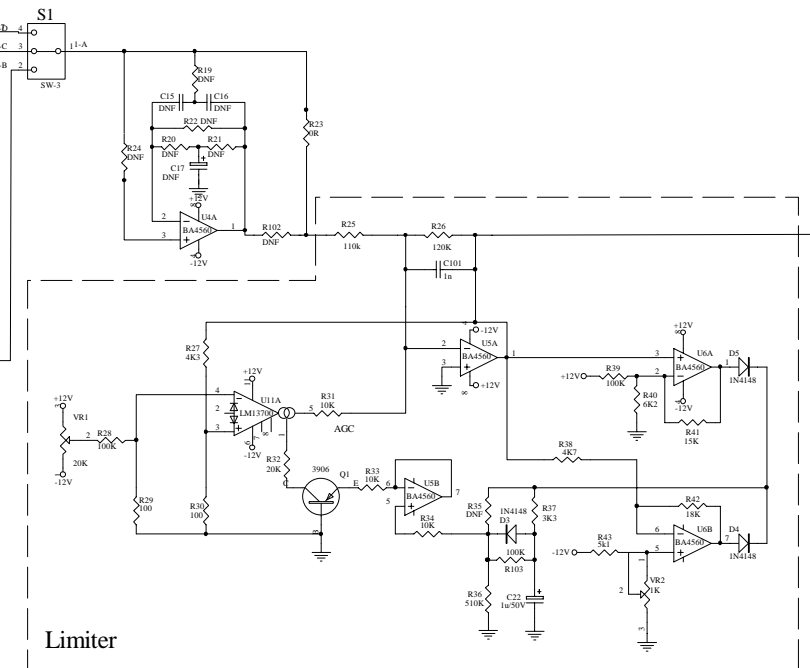
1725-824A+0001 Bottom Layer



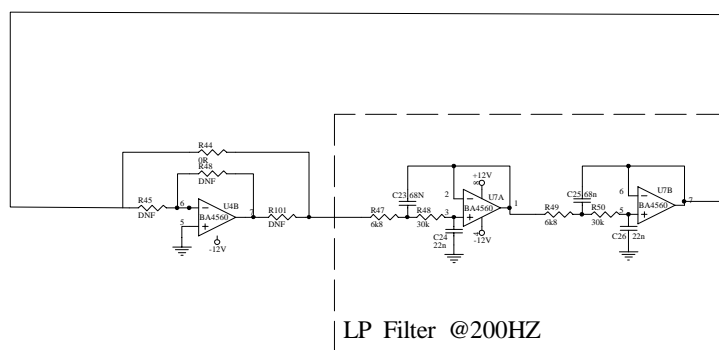
LINE INPUT



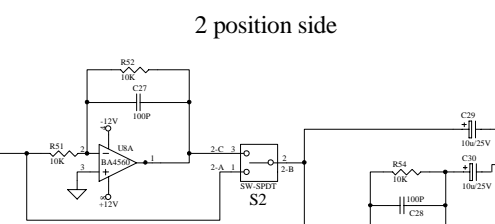
3 position side



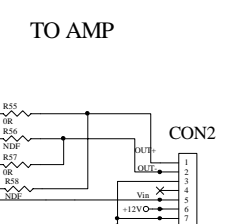
Limiter



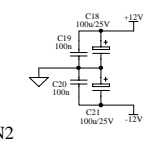
LP Filter @200HZ



2 position side



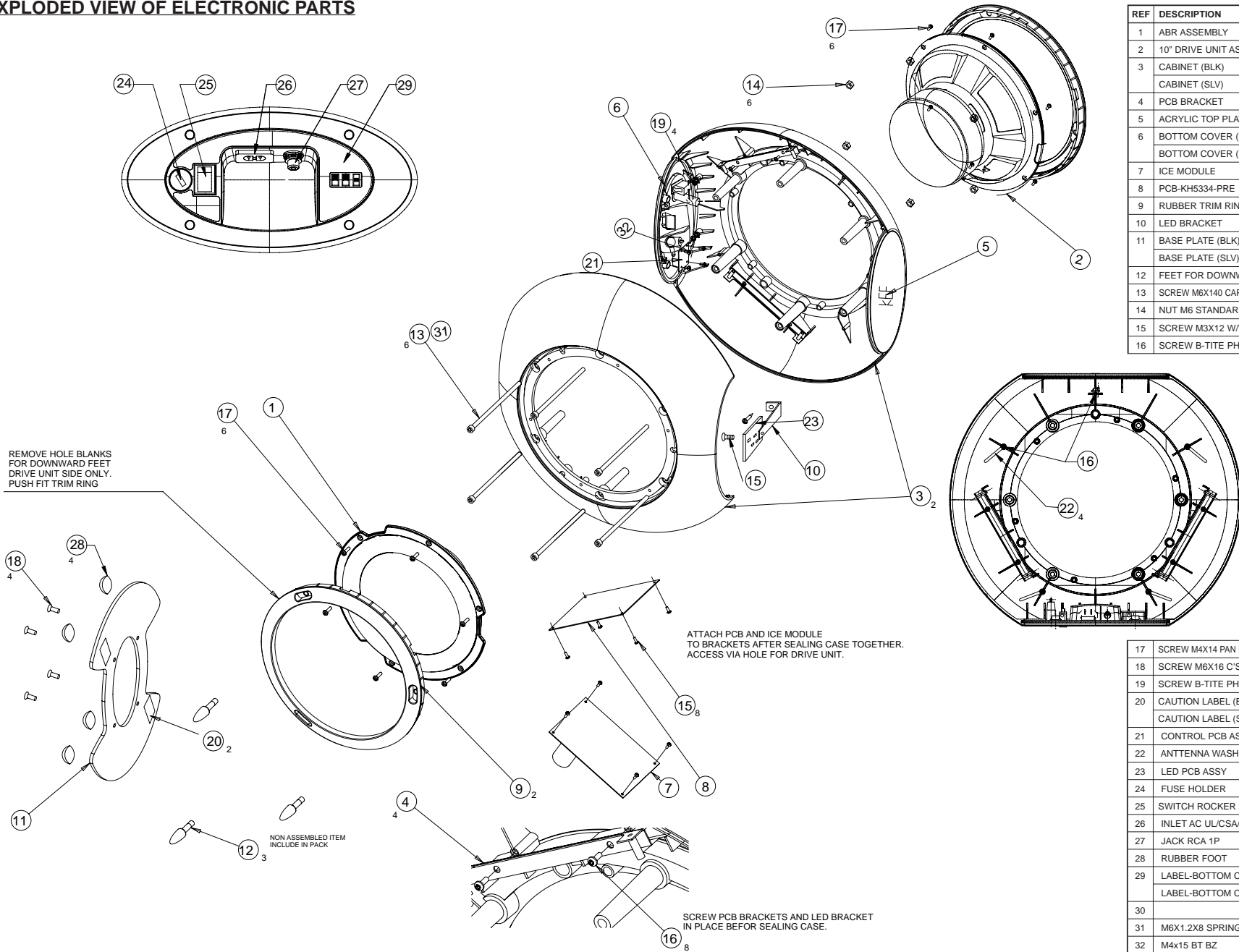
TO AMP



CON2

ISSUE	DESCRIPTION	DATE
1	PRE-AMP	2007.05.21
2	QF Huang	
3	DRAWN BY	
4	APPROVED BY	
GPE International Ltd.		
Title: Mc9005		
ORIGINAL	COPY	W:001: HTB:2SE
		PART No: 1725-824A-0001
		SCH FILE: PRE-SCH
		JOB FILE: 29033
GPE INTERNATIONAL LTD.		Sheet 1 of 1
		REV. ROHS

EXPLODED VIEW OF ELECTRONIC PARTS



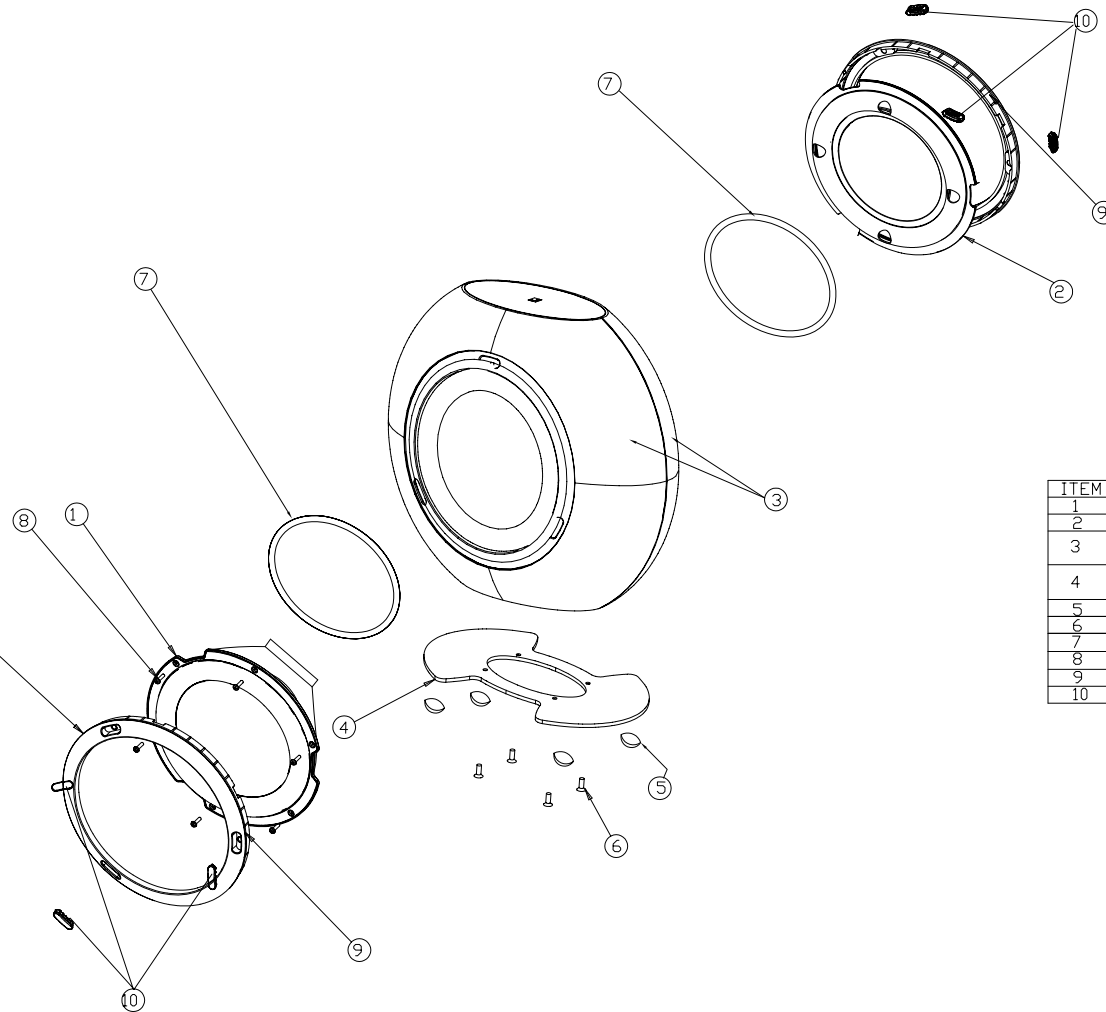
REF	DESCRIPTION	PART NO.	QTY
1	ABR ASSEMBLY	8900-6780-0	1
2	10" DRIVE UNIT ASSEMBLY	8900-6760-0	1
3	CABINET (BLK)	4158-0110+1	2
	CABINET (SLV)	4158-0111+1	2
4	PCB BRACKET	4135-6071+0	4
5	ACRYLIC TOP PLATE	1467-5401+1	1
6	BOTTOM COVER (BLK)	1467-5502+1	1
	BOTTOM COVER (SLV)	1467-5501+1	1
7	ICE MODULE	8902-0001-0	1
8	PCB-KH5334-PRE	1725-824A+0001	1
9	RUBBER TRIM RING	4149-9901-0	2
10	LED BRACKET	4135-6151+1	1
11	BASE PLATE (BLK)	1422-5252+1	1
	BASE PLATE (SLV)	1422-5253+1	1
12	FEET FOR DOWNWARD FIRE MODE	4160-0660+0	3
13	SCREW M6X140 CAP HD SOCK MACHINE	2A08-9000+K400	6
14	NUT M6 STANDARD	4159-0331-0	6
15	SCREW M3X12 W/WASHER BZ	2904-3012-3030	9
16	SCREW B-TITE PH M3X8 MM YZ C	2950-3012-U020	13

17	SCREW M4X14 PAN HD POZI MACHINE	2900-4015-3000	12
18	SCREW M6X16 C'SK SOCK MACHINE	2901-6016-4400	4
19	SCREW B-TITE PH M4X14 MM	2910-4015-3000	4
20	CAUTION LABEL (BLK)	3001-1329+0	2
	CAUTION LABEL (SLV)	3001-1330+0	2
21	CONTROL PCB ASSY	1725-824A+0001	1
22	ANTENNA WASHER	4131-7701-0	4
23	LED PCB ASSY	1725-824A+0001	1
24	FUSE HOLDER	4153-1100-0	1
25	SWITCH ROCKER 2 PIT	5200-4875-0	1
26	INLET AC UL/CSA/VDA	2113-3139+0	1
27	JACK RCA 1P	2113-3129-0	1
28	RUBBER FOOT	4154-2612-0	4
29	LABEL-BOTTOM COVER (BLK)	3001-1016+3	1
	LABEL-BOTTOM COVER (SLV)	3001-1017+3	1
30			
31	M6X1.2X8 SPRING WASHER	2607-6612-1200	6
32	M4x15 BT BZ	2950-4015-3000	4



WORK TO DIMENSIONS. REMOVE ALL BURRS. ALL CASTINGS AND MOULDING TO BE FREE FROM SINKS AND BLEMISHES.


GPE EN. NO.	REV	ZONE	DESCRIPTION	DATE
	1		DRAWING RELEASE	Jul/12/07



REMOVE HOLE BLANKS FOR DOWNWARD FEET DRIVE UNIT SIDE ONLY. PUSH FIT TRIM RING

ITEM	DESCRIPTION	PART No.	QTY
1	10" DRIVE UNIT ASSEMBLY	8900-6760+0	1
2	ABR ASSEMBLY	8900-6780+0	1
3	CABINET HTB2 GLOSSY BLACK	4158-0116+2	2
	CABINET HTB2 GLOSSY SILVER	4158-0113+2	2
4	GLOSSY BK METAL BASE	1422-5252+1	1
	GLOSSY SILVER METAL BASE	1422-5253+1	1
5	RUBBER FOOT HTB2	4154-2613+0	4
6	SCREW M6X16	2901-6016+4400	4
7	GRILLE GASKET FOR QBASS	4153-3431+0	4.5
8	SCREW M4X14 PAN HD PUZI MACHINE	2900-4015+3000	12
9	RUBBER TRIM HTB2	4149-9901+1	2
10	RUBBER BUNG	4160-0700+0	6

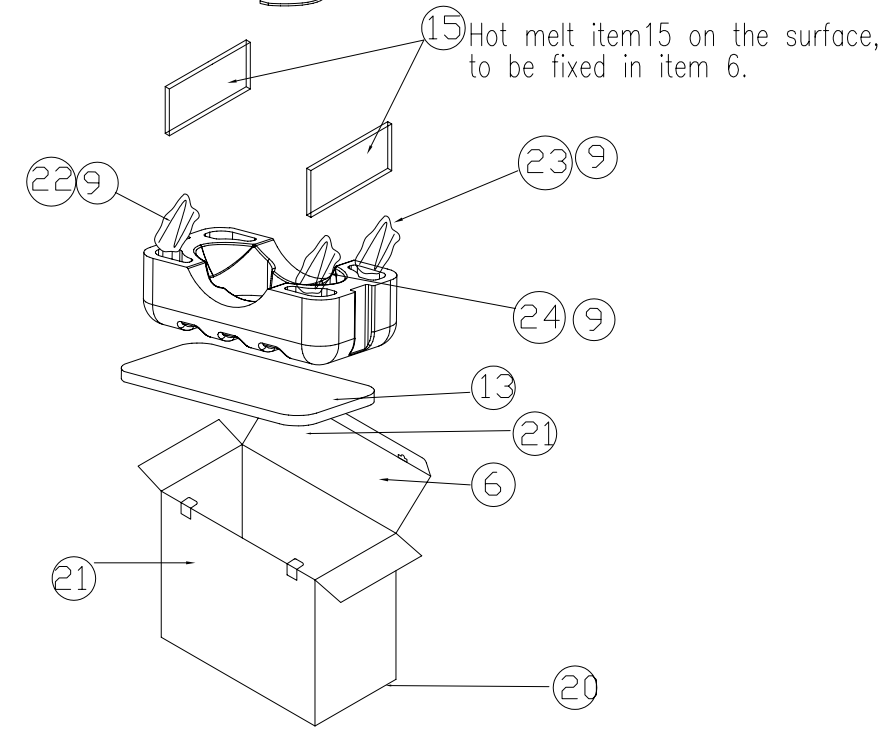
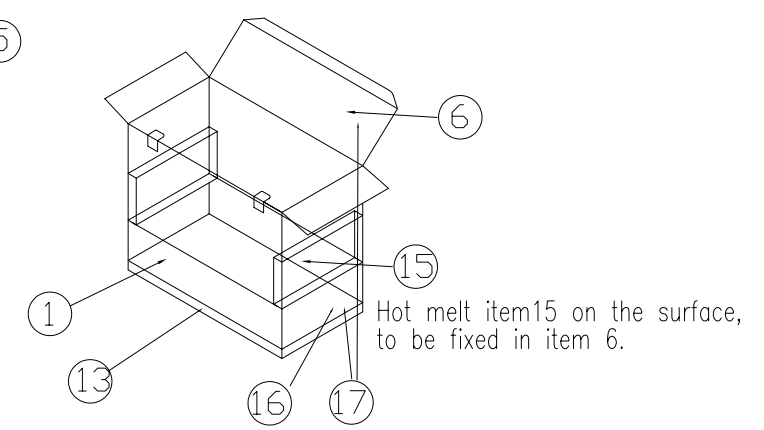
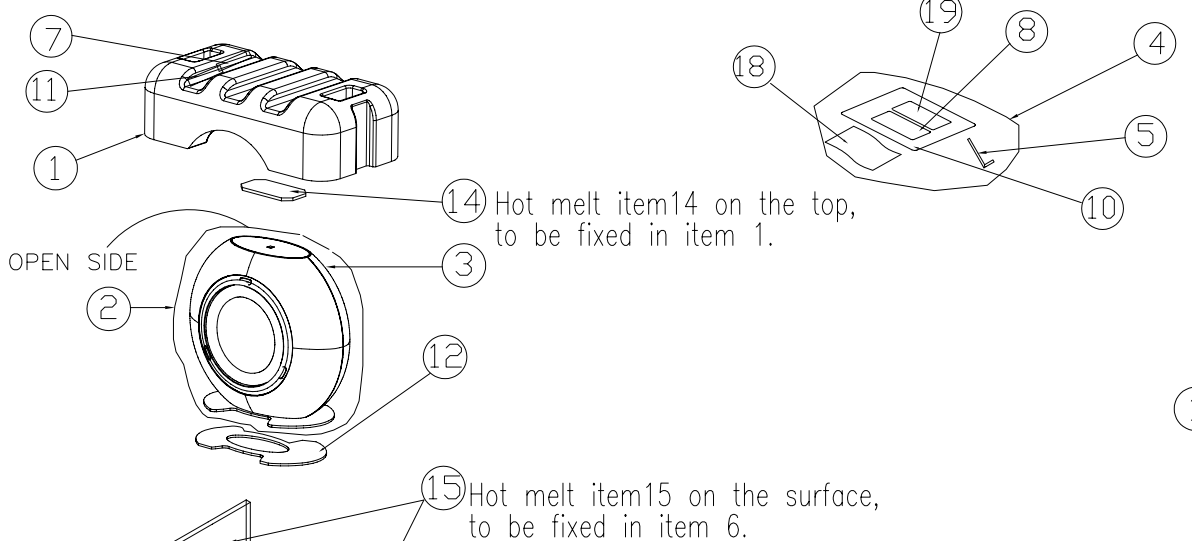
GEOMETRIC TOLERANCE & POSITIONAL TOLERANCE SHOULD BE IN ACCORDANCE WITH GB/T 1184-1996

 GP Electronics (Huizhou) Co. Ltd. No.9, Le Jin West Road, Zhong Kai Hi-Tech, Industrial Development Zone, Huizhou, Guangdong, China	UNLESS OTHERWISE SPECIFIED : TOLERANCES ARE		MODEL	USAGE	MATERIAL:	SIGNATURE	DATE	SIGNATURE	DATE	TITLE: ASSEMBLY DRAWING FOR KHT3005.3SE SUB				
	1 decimal place	±0.1mm	31 - 120mm	±0.3mm	KFSSKH53+16CP11/14	UNLESS SPECIFIED COMPLY WITH THE RoHS	DRAWN: WenBo Gao	Jul/12/07	CHECKED:		PART NO.			
	1 - 5mm	±0.1mm	121 - 315mm	±0.5mm		FINISH:	CHECKED:		CHECKED:		SCALE	SIZE	DRAWING NO.	REV 1
	6 - 30mm	±0.2mm	OVER 315mm	±0.8mm	ALL DIMENSIONS ARE IN MM	DO NOT SCALE DRAWING	APPROVED:				NTS	A4	KHT3005SE_SUB ASSEMBLY	PAGE 1 OF 1



WORK TO DIMENSIONS. REMOVE ALL BURRS. ALL CASTINGS AND MOULDING TO BE FREE FROM SINKS AND BLEMISHES.

GPE EN. NO.	REV	ZONE	DESCRIPTION	DATE
	1		DRAWING RELEASE	Jul/12/07
	2		Change item 9 to 22 Add items 23,24	Jul/30/07



ITEM	PART No.	DESCRIPTION	QTY
1	1491-7041+2	POLYFOAM HTB2	2.0EA
2	4200-0530+2	CLOTH BAG HTB2 600*550MM	1.0EA
3	KFSW3005B+06CS11/14	HTB2 GLOSSY BLACK/SILVER	1.0EA
4	1497-4782+0	ZIPBAG FOR GK-1114	1.0EA
5	2150-4031+0	ALLEN KEY 4MM AF NICKEL25*90	1.0EA
6	1483-2601+0	G.BOX HTB2	1.0EA
7	1497-2042+0	POLYBAG 04X5X6-FUSE	1.0EA
	5120-0078+0	FUSE T2.5A 250V 5X20MM	1.0EA
8	4301-6037+1	W.CARD FOR KEF(1 YEAR)	1.0EA
9	1497-2092+0	POLYBAG 04*10*10 W/LD	3.0EA
10	4301-5323+4	MANUAL HTB2SE	1.0EA
11	4160-0660+0	RUBBER FOOT HTB2	3.0EA
	1497-4122+0	P.BAG 10'X14' W/ES GREEN	1.0EA
12	1491-7121+0	PE FOAM PAD BASE	1.0EA
13	1491-7111+0	PE FOAM PAD BOTTOM	1.0EA
14	1491-7191+0	PE FOAM HTB2 62X138mm	1.0EA
15	1491-7201+0	POLY FOAM HTB2 300X35	2.0EA
16	3000-8614/8612+0	UPC LABE HTB2SE GLOSSY BK/SIL	2.0EA
17	3000-8238+0	LABEL FOR RoHS COMPLIANT	1.0EA
18	4200-0590+0	POLISHING BLACK CLOTH	1.0EA
19	4301-5242+1	NEW MANUAL OF CI SERIES	1.0EA
20	3000-8589+0	SE STICKER KHT3005SE D30	2.0EA
21	3000-8588+0	SE STICKER KHT3005SE D46	1.0EA
22	7012-7100+0	CORD-AC POWER UL/CSA 10A	1.0EA
23	7012-7110+0	CORD-AC POWER EU 250V	1.0EA
24	7012-7430+0	CORD-AC POWER UK 250V	1.0EA

GEOMETRIC TOLERANCE & POSITIONAL TOLERANCE SHOULD BE IN ACCORDANCE WITH GB/T 1184-1996

<p>GP Electronics (Huizhou) Co. Ltd. No.9, Le Jin West Road, Zhong Kai Hi-Tech, Industrial Development Zone, Huizhou, Guangdong, China</p>	UNLESS OTHERWISE SPECIFIED : TOLERANCES ARE		MODEL	USAGE	MATERIAL:	SIGNATURE	DATE	SIGNATURE	DATE	TITLE: HTB2SE BLACK/SILVER PACKING				
	1 decimal place	±0.1mm	31 - 120mm	±0.3mm	KFSW3005B+06CS11/14	UNLESS SPECIFIED COMPLY WITH THE [RoHS]	DRAWN: WenBo Gao	Jul/30/07	CHECKED:		PART NO.			
	1 - 5mm	±0.1mm	121 - 315mm	±0.5mm		FINISH:	CHECKED:		CHECKED:		SCALE	SIZE	DRAWING NO.	REV 2
	6 - 30mm	±0.2mm	OVER 315mm	±0.8mm	ALL DIMENSIONS ARE IN MM	DO NOT SCALE DRAWING	APPROVED:				NTS	A4	KHT3005.3SE SUB PACKING	PAGE 1 OF 1