

Service Manual

Created: 21 April 2015



STUDIO 50USB

High-Resolution, 150-Watt Bi-Amped Reference Studio Monitors with USB Input

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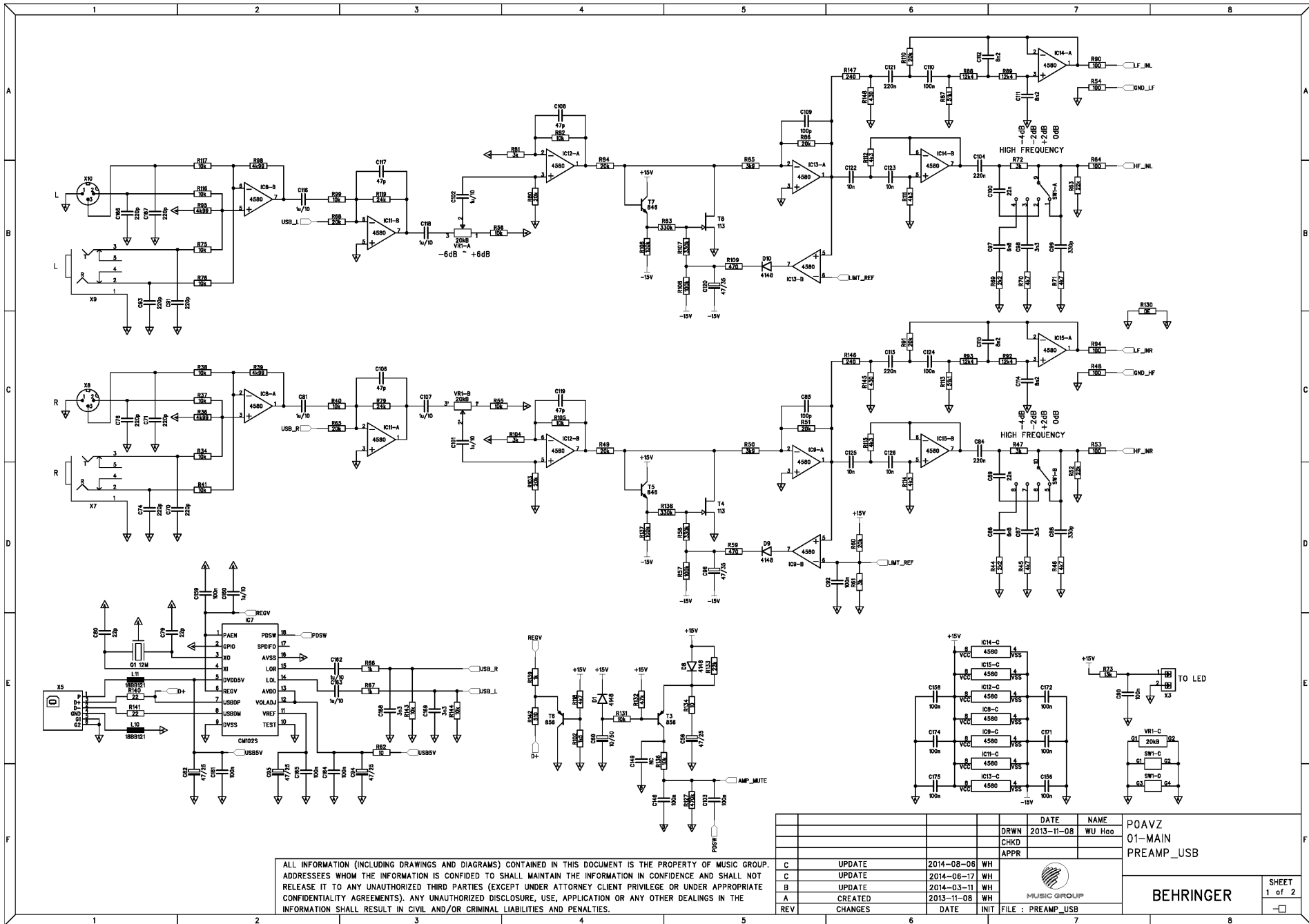
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STUDIO 50USB

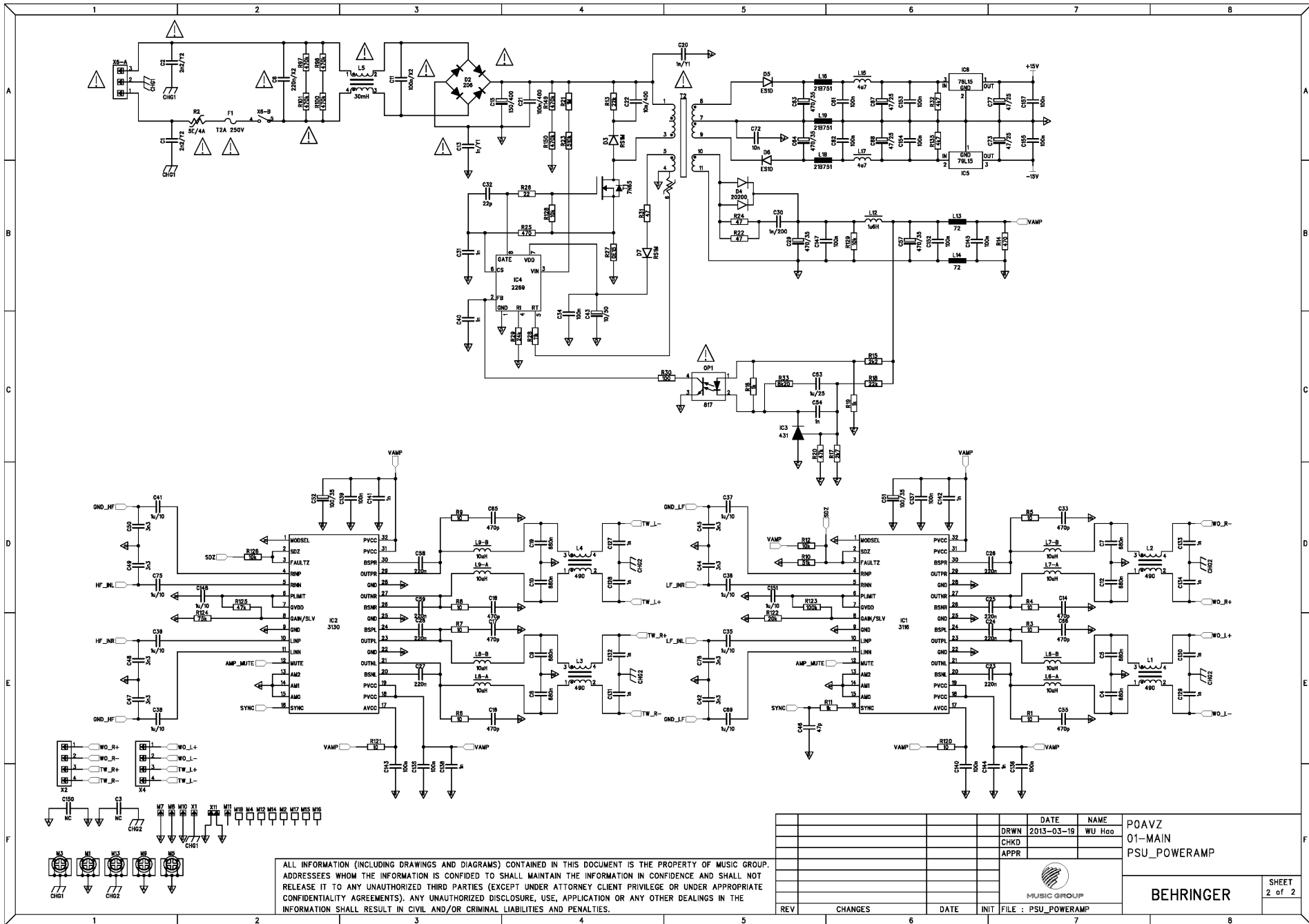
Specifications

- Ultra-linear 2-way digital monitor speakers ideally suited for computer studios, audio and multimedia workstations
- True bi-amping mode with 4 amplifiers for ultimate high-resolution sound
- 150 Watts of digital power amplification
- Ultra-high resolution 1" silk dome tweeter for superior audio reproduction
- Long-throw 5" woofers with deformation-resistant cone for ultimate bass response
- Advanced waveguide technology provides ultimate sound dispersion and extremely large "sweet spot"
- Adjustable volume control and tweeter sensitivity to adapt to a wide range of acoustic conditions
- USB input for direct connection of digital stereo audio sources
- Two analog inputs featuring XLR and TRS connectors can be used simultaneously with a digital stereo source
- 3-Year Warranty Program*
- Conceived and designed by BEHRINGER Germany



REV	CHANGES	DATE	INIT	FILE : PREAMP_USB
C	UPDATE	2014-08-08	WH	
C	UPDATE	2014-06-17	WH	
B	UPDATE	2014-03-11	WH	
A	CREATED	2013-11-08	WH	

DATE	2013-11-08	NAME	WU Hao
DRWN	2013-11-08		
CHKD			
APPR			
P0AVZ 01-MAIN PREAMP_USB			
BEHRINGER			SHEET 1 of 2



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DATE		NAME		
2013-03-19		WU Hao		
DRWN	P0AVZ			
CHKD	01-MAIN			
APPR	PSU_POWERAMP			
		BEHRINGER		
				SHEET 2 of 2
REV	CHANGES	DATE	INIT	FILE : PSU_POWERAMP



Hi Pcb Assemblies

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC	Q05-AVZ01-00103	A05-AVZ01-00103	PCB ASSEMBLY;POAVZ;PCB:1;REV:C;HI;MAIN		
2	1.0000	PC	Q05-AVZ02-00101	A05-AVZ02-00101	PCB ASSEMBLY;POAVZ;PCB:2;REV:A;HI;FRONT		

Cable

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		A70-00000-72182	CABLE;LENGTH:1950 MM;AWG:22;UL2468;POLES:4;BLACK		
2	1.0000	PC		A81-00001-01214	WIRE HARNESS;LENGTH:300 MM;AWG:26;UL2468;PITCH:2 MM;POLES:2;P1018-2P;A2006H-2P;ADD SHRINKAGE TUBE	[POAVZ:2: {1.0}(X1)]	
3	1.0000	PC		A88-00000-93174	CABLE;SPEAKER;LENGTH:300 MM;AWG:22;UL1007;PITCH:2.54 MM;POLES:4;RED;S/T:7MM;5.2MM&2.8MM AMP ISO		
4	1.0000	PC		A88-00000-93177	CABLE;SPEAKER;LENGTH:300 MM;AWG:22;UL1007;WHITE AND BLACK;BOTH S/T:5MM;S/T:7MM		
5	1.0000	PC		A88-00000-93179	CABLE;SPEAKER;LENGTH:240 MM;AWG:22;UL1007;RED;5.2MM&2.8MM AMP ISO;S/T:5MM		
6	1.0000	PC	Q76-15222-06417	A76-15222-06417	CABLE;AC-CORD;W/POLYBAG;LENGTH:152cm;AWG:18;VERSION;UL;SPEC.NO:06417		(UL)
7	1.0000	PC	Q76-15212-03119	A76-15212-03119	CABLE;AC-CORD;W/POLYBAG;LENGTH:152cm;H05VV-F 3G 0.75MM2;VERSION;EU;SPEC.NO:03119		(EU)
8	1.0000	PC	Q76-18050-47490	A76-18050-47490	CABLE;AC-CORD;LENGTH:180cm;VERSION;SAA;PLUG;HE105 ISOLATED;SAA H05VV-F 3x0.75mm2;CONN.HP-3;SPEC.NO:47490		(SAA)
9	1.0000	PC	Q76-15042-05624	A76-15042-05624	CABLE;AC-CORD;W/POLYBAG;LENGTH:150cm;H05VV-F3G0.75MM2;VERSION;UK;SPEC.NO:05624		(UK)
10	1.0000	PC	Q76-00000-13573	A76-00000-13573	CABLE;AC-CORD;3;AR;1500 MM;Plug + Connector:321+730;H05VV-F 3G0.75		(AR)
11	1.0000	PC	Q76-15032-55649	A76-15032-55649	CABLE;AC-CORD;CLASS II;W/POLYBAG;JAPAN;LENGTH:150cm;POLES:3;APPROVAL:PSE;JS15S 3 + VCTF 3x0.75mm2 + V1528		(JP, HM, SH)
12	1.0000	PC	Q76-00000-05305	A76-00000-05305	CABLE;AC-CORD;3;BR;1500 MM;Plug + Connector:375+730;H05VV-F 3G0.75		(BR)

Capacitor

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	8.0000	PC			CAP E;47uF;25V;PITCH:2mm5;5mm x 11mm;VERTICAL 12.7-15-9mm	[P0AVZ:1: {8.0}{C56,C67-C68,C73,C77,C82,C94-C95}]	*NOT available in DP
2	2.0000	PC			CAP E;47uF;35V;PITCH:2mm5;6mm x 11mm;VERTICAL 12.7-15-9mm	[P0AVZ:1: {2.0}{C96,C120}]	*NOT available in DP
3	4.0000	PC			CAP E;470uF;35V;PITCH:5mm;8mm x 16mm;VERTICAL 12.7-15-9mm	[P0AVZ:1: {4.0}{C29,C57,C63-C64}]	*NOT available in DP
4	2.0000	PC			CAP E;10uF;50V;PITCH:2mm5;5mm x 11mm;VERTICAL 12.7-15-9mm	[P0AVZ:1: {2.0}{C43,C60}]	*NOT available in DP
5	12.0000	PC			CAP CER;220 nF;25 V;X7R;10 %;SMD603	[P0AVZ:1: {12.0}{C23-C28,C58-C59,C84,C104,C113,C121}]	*NOT available in DP
6	8.0000	PC			CAP CER;0.68 uF;50 V;X7R;10%;SMD1206	[P0AVZ:1: {8.0}{C4-C5,C7-C10,C12,C19}]	*NOT available in DP
7	19.0000	PC			CAP CER;1uF;10V;+80% /-20%;SMT603	[P0AVZ:1: {5.0}{C148,C151,C160,C162-C163}]	*NOT available in DP
8	2.0000	PC			CAP CER;100nF;16V;X7R;SMT603	[P0AVZ:1: {2.0}{C110,C124}]	*NOT available in DP
9	1.0000	PC			CAP CER;1 uF;25 V;X5R;10 %;SMD603	[P0AVZ:1: {1.0}{C53}]	*NOT available in DP
10	3.0000	PC			CAP CER;22pF;50V;10%;SMT603	[P0AVZ:1: {3.0}{C32,C79-C80}]	*NOT available in DP
11	5.0000	PC			CAP CER;47pF;50V;5%;COG(NPO);SMT603	[P0AVZ:1: {5.0}{C46,C106,C108,C117,C119}]	*NOT available in DP
12	2.0000	PC			CAP CER;100pF;50V;20%;SMT603	[P0AVZ:1: {2.0}{C85,C109}]	*NOT available in DP
13	8.0000	PC			CAP CER;220pF;50V;10%;SMT603	[P0AVZ:1: {2.0}{C166-C167}]	*NOT available in DP
14	8.0000	PC			CAP CER;470pF;50V;10%;SMT603	[P0AVZ:1: {8.0}{C14,C16-C18,C33,C55,C65-C66}]	*NOT available in DP
15	15.0000	PC			CAP CER;1nF;50V;10%;SMT603	[P0AVZ:1: {12.0}{C127-C134,C138,C141-C142,C144}]	*NOT available in DP
16	2.0000	PC			CAP CER;2nF2;50V;10%;SMT603	[P0AVZ:1: {2.0}{C88,C99}]	*NOT available in DP
17	10.0000	PC			CAP CER;3nF3;50V;10%;SMT603	[P0AVZ:1: {2.0}{C168-C169}]	*NOT available in DP
18	4.0000	PC			CAP CER;8nF2;50V;10%;SMT603	[P0AVZ:1: {4.0}{C111-C112,C114-C115}]	*NOT available in DP
19	5.0000	PC			CAP CER;10nF;50V;10%;SMT603	[P0AVZ:1: {5.0}{C72,C122-C123,C125-C126}]	*NOT available in DP
20	2.0000	PC			CAP CER;22nF;50V;10%;SMT603	[P0AVZ:1: {2.0}{C87,C98}]	*NOT available in DP
21	2.0000	PC			CAP CER;47nF;50V;10%;SMD603	[P0AVZ:1: {2.0}{C86,C97}]	*NOT available in DP
22	2.0000	PC			CAP CER;68nF;50V;5%;SMT603;X7R	[P0AVZ:1: {2.0}{C89,C100}]	*NOT available in DP
23	30.0000	PC			CAP CER;100nF;50V;10%;SMT603	[P0AVZ:1: {24.0}{C135-C137,C139-C140,C143,C145-C147,C152-C159,C161,C164-C165,C171-C172,C174-C175}]	*NOT available in DP
24	2.0000	PC			CAP Y1;1nF;250V;20%;Y5U;PITCH:10mm;PRECUT:3.3	[P0AVZ:1: {2.0}{C13,C20}]	*NOT available in DP
25	2.0000	PC			CAP Y2;2nF2;275V;PITCH:7mm5;DISC;CASE:4 x 10mm	[P0AVZ:1: {2.0}{C1-C2}]	*NOT available in DP
26	1.0000	PC			CAP E;150uF;400V;PITCH:10mm;25mmx30mm;SNAP-IN;PRECUT:3mm2 -0/+0mm2	[P0AVZ:1: {1.0}{C15}]	*NOT available in DP
27	1.0000	PC	R12-32100-04351	B12-32100-04351	CAP X2;100nF;275V;PITCH:15mm;CASE:8mm5 x 18mm;CASE:8mm5 x 18mm;PRECUT:3.1mm+/-0mm5	[P0AVZ:1: {1.0}{C11}]	
28	1.0000	PC		B12-32220-41107	CAP X2;220nF;275V;PITCH:15mm;PRE-CUT:3.2+/-0.5mm	[P0AVZ:1: {1.0}{C6}]	
29	1.0000	PC			CAP CER;1nF;200V;X7R;10%;SMT805	[P0AVZ:1: {1.0}{C30}]	*NOT available in DP
30	1.0000	PC			CAP FILM;10nF;400V;MPF;10%;PITCH:5mm;BOX;VERTICAL 12.7-15-9mm	[P0AVZ:1: {1.0}{C22}]	*NOT available in DP
31	1.0000	PC			CAP FILM;100nF;400V;MPF;10%;PITCH:5mm;BOX	[P0AVZ:1: {1.0}{C21}]	*NOT available in DP
32	2.0000	PC			CAP E;100uF;35V;PITCH:2mm5;6mm3 x 11mm;105C;VERTICAL 12.7-15-9mm	[P0AVZ:1: {2.0}{C51-C52}]	*NOT available in DP

Circuit Protector

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		B22-00000-79847	FUSE;2 A;250V;RADIAL;PITCH:5MM08;TIME LAG;BEL	[P0AVZ:1: {1.0}{F1}]	

Coil

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	2.0000	PC		B32-00000-79848	COIL;SMD;4uH7;5%;180mA;SIZE:2520	[P0AVZ:1: {2.0}(L15,L17)]	
2	1.0000	PC		B37-00000-60672	COIL;CHOKE;30 mH;0.55 OHMS;30mH	[P0AVZ:1: {1.0}(L5)]	
3	1.0000	PC	R37-01603-04435	B37-01603-04435	COIL;CHOKE;1uH6;JUL TUBE;5 x 16m;WIRE DIA:2UEW0mm6;9.5TURNS	[P0AVZ:1: {1.0}(L12)]	
4	3.0000	PC	R39-00000-03394	B39-00000-03394	COIL;SMD;BEAD;SMD0805;(BLM21BD751SN1D)	[P0AVZ:1: {3.0}(L16,L18-L19)]	
5	4.0000	PC		B39-00000-79871	COIL;SMD;10 uH;DUAL;20%	[P0AVZ:1: {4.0}(L6-L9)]	
6	4.0000	PC		B39-00000-93103	COIL;SMD;SIZE:4X5;300 OHM MIN AT 100MHz;COMMON MODE	[P0AVZ:1: {4.0}(L1-L4)]	
7	2.0000	PC	R39-21202-00018	B39-21202-00018	COIL;SMD BEAD;SMD1608;(MURATA BLM18BB121)	[P0AVZ:1: {2.0}(L10-L11)]	
8	2.0000	PC		B44-00000-56486	COIL;BEAD;72 OHM AT 100MHz;SMD;1806;4.5x1.6	[P0AVZ:1: {2.0}(L13-L14)]	

Connector

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC	R83-00000-85584	B83-00000-85584	USB;B-TYPE;180 DEGREE;26MM HEIGHT	[P0AVZ:1: {1.0}(X5)]	
2	2.0000	PC	R84-25016-06014	B84-25016-06014	CRIMP TERMINAL;PITCH:2mm0;AWG24-30;A2008TOP-2		
3	1.0000	PC		B84-42050-00155	CRIMP CONNECTOR;LUG;INNER DIA:4mm3;AWG 14-18;WIRE MOUNT;STRAIGHT		
4	2.0000	PC		B95-14380-00168	CONNECTOR;XLR;SOCKET;FEMALE;STRAIGHT;POLES:3;NO:4;(CHUNS HENG CT3-04HF)	[P0AVZ:1: {2.0}(X8,X10)]	

Diode

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	4.0000	PC			DIODE;LL4148;LL34;TEMIC OR FC	[P0AVZ:1: {4.0}(D1,D8-D10)]	*NOT available in DP
2	2.0000	PC			DIODE;RECTIFIER;1000 V;SMD;DO-214AC;RS1M	[P0AVZ:1: {2.0}(D3,D7)]	*NOT available in DP
3	1.0000	PC			DUAL RECTIFIER;TO220;MBR20200FCT	[P0AVZ:1: {1.0}(D4)]	*NOT available in DP
4	2.0000	PC			DIODE;SUPERFAST;ES1D;200V;1A;15NS;DO-214AC;SMD	[P0AVZ:1: {2.0}(D5-D6)]	*NOT available in DP
5	1.0000	PC		H80-00001-17810	RECTIFIER, BRIDGE;800 V;KBP;KBP308;FORWARD CURRENT:3A	[P0AVZ:1: {1.0}(D2)]	

Hardware

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	40.0000	PC			NAIL;CROWN:2mm2;WIDTH:1mm27;THICKNESS:1mm0;LENGTH:15mm;18-GAUGE (0.49*0.40) FINISH;GALVANIZED		*NOT available in DP
2	0.3900	G			THERM-GREASE;COLOR:WHT;SPEC.NO:09286		*NOT available in DP
3	1.0000	G			SCREWLOCK;SPEC.NO:01090		*NOT available in DP
4	2.0000	PC			HEX. NUT;FOR JACK;M3/8in;HEXWRENCH:1.1mm;THICKNESS:2mm;SURFACE:NICKEL/SLV		*NOT available in DP
5	18.0000	PC			SCREW;A;4 MM;13 MM;PAN;ZINC;BLACK;2.84 MM;SC;A4*13mm		*NOT available in DP
6	6.0000	PC			SCREW;BT3mm*8mm;HEAD:PAN;INSERT:PHILLIPS REC.;SURFACE:BLACK/ZINC		*NOT available in DP
7	8.0000	PC			SCREW;M03mm*08mm;HEAD:PAN SPRING WASHER;INSERT:PHILLIPS REC.;SURFACE:SILVER/ZINC		*NOT available in DP
8	6.0000	PC			SCREW;A3mm*10mm;HEAD:PAN;INSERT:PHILLIPS REC.;SURFACE:BLACK/ZINC		*NOT available in DP
9	1.0000	PC			SCREW;M4mm*8mm;HEAD:BINDING;INSERT:PHILLIPS REC.;SURFACE:SILVER/ZINC		*NOT available in DP
10	9.0000	PC			SCREW;BT4mm*13mm;HEAD:PAN;INSERT:PHILLIPS REC.;SURFACE:BLACK/ZINC		*NOT available in DP
11	2.0000	PC			SILICA GEL;MASS;10g;SPEC.NO:10QB-BB2001-4		*NOT available in DP
12	0.0120	M			SHRINKING TUBE;INNER DIA:9mm0		*NOT available in DP
13	0.0300	M			SHRINKING TUBE;INNER DIA;1mm;SPEC.NO:43217		*NOT available in DP
14	0.2030	M			SHRINKING TUBE;INNER DIA;4mm;SPEC.NO:01098		*NOT available in DP
15	2.0000	PC			WASHER;PLAIN;INNER DIA:9mm4;OUTER DIA:13mm;THICKNESS;0mm5;PLATING:NICKEL		*NOT available in DP
16	1.0000	PC			WASHER;INTERNAL TEETH;INNER DIA:4mm;OUTER DIA:8mm;THICKNESS;0mm8		*NOT available in DP
17	1.0000	PC		F97-00001-26426	FELT;BLACK;EVA SHEET;AC SOCKET;POAUV;REVB		
18	1.0000	PC		F97-00001-26427	FELT;BLACK;EVA SHEET;SPEAKER CONNECTOR;POAUV;REVB		
19	1.0000	PC		F97-00001-27564	FOAM SHEET;BLACK;FOAM PAD;POAVZ;PCBA COVER;B001		
20	1.0000	PC		F97-00001-27565	PLASTIC;PC_SHEET;BLACK;POAVZ-PC_GUARD;REVB		
21	1.0000	PC		F97-32000-26356	SHEET 2;SLIDE-SWITCH;PVC;BLACK;DWG.NO:26356;(PVC SHEET2-REVA.DWG)		
22	0.0300	M			SHRINKING TUBE;INNER DIA;1mm;SPEC.NO:43217		*NOT available in DP

Ic

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		C61-00000-79849	IC;POWER AMP;HTSSOP;32;SMD;TPA3130D2DAPR	[P0AVZ:1: {1.0}(IC2)]	
2	1.0000	PC		C61-00000-84633	IC;POWER AMP;SMD;HTSSOP;32;TPA3116D2DADR	[P0AVZ:1: {1.0}(IC1)]	
3	7.0000	PC		C73-00000-29050	IC;OPAMP;SMD;SOP;8;BA4580RF	[P0AVZ:1: {7.0}(IC8-IC9,IC11-IC15)]	
4	1.0000	PC	S75-00226-90508	C75-00226-90508	IC;PWM;OB2269C;SOP8	[P0AVZ:1: {1.0}(IC4)]	
5	1.0000	PC	S77-00128-03000	C77-00128-03000	IC;VOLT.REGULATOR;ZENERSHUNT.REGULATOR;SOT23;LM431ACM3/N1	[P0AVZ:1: {1.0}(IC3)]	
6	1.0000	PC	S77-15108-03005	C77-15108-03005	IC;VOLT.REGULATOR;78L15;TO92;PITCH:2.54MM	[P0AVZ:1: {1.0}(IC6)]	
7	1.0000	PC	S77-15208-03005	C77-15208-03005	IC;VOLT.REGULATOR;79L15;TO92;PITCH:2.54MM	[P0AVZ:1: {1.0}(IC5)]	
8	1.0000	PC		D28-00000-79852	IC;USB AUDIO CONTROLLER;SMD;SOP;18;CM1025+	[P0AVZ:1: {1.0}(IC7)]	

Led

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC	U10-09590-02370	E10-09590-02370	LED;SMD;WAVELENGTH:465nm;COLOR:YELLOW;REFLECTOR:WATER CLEAR;(LIGITEK LG-192VY-CT)	[P0AVZ.2: {1.0}{LD1}]	

Metal Part

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		A63-00001-00015	METAL;HEATSINK;POAUV;MATERIAL:ALU 3.5mm;BLANKING + PUNCHING;AMP HEATSINK1;REVA		
2	1.0000	PC		A63-00001-00016	METAL;HEATSINK;POAUV;MATERIAL:ALUMINIUM 6061;EXTRUSION;AMP HEATSINK2;REVA		
3	2.0000	PC		A65-00001-00040	METAL;LOGO;POAUV;MATERIAL:STAINLESS STEEL;HIGH GLOSS;CUTTING;ELECTROPHORESIS;SILVER METALLIC;BEHRINGER LOGO;REVA		
4	1.0000	PC		A65-00001-02446	METAL;SHIELD;POAVZ;MATERIAL:TIN PLATE T=0.5mm;BLANKING + BENDING;MET;PCBA SHIELDING;REVA		
5	1.0000	PC		J00-00001-17721	METAL;PANEL;POAVZ;MATERIAL:SECC 1.5mm;BLANKING + PUNCHING;SPRAYING;BLACK;BACKPANEL;A001		

Plastic Part

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		G52-00000-68408	PLASTIC;POAVX;ABS PA757;KNOB;INJECTION MOULDING;YS1281A;PANTONE COOL GRAY 6;PANTONE Black;POAVX-KNOB_ROTARY		
2	0.0800	M	W53-31500-15647	G53-31500-15647	STRIP;SEALANT;B300;KD 5315;4mm* 50mm*11m;SPEC.NO:15647		
3	1.0000	PC		G58-00000-79436	PLASTIC;PANEL;POAVZ;ABS+PMMA;YS1283A HIGH-GLOSS;BLACK;FRONT PANEL;LEFT;ABS;REVA		
4	2.0000	PC		G58-00000-79439	PLASTIC;PIPE;POAVZ;ABS;INJECTION;HIGH GLOSSI;BLACK;AIR PIPE;REVA		
5	2.0000	PC		G58-00000-79440	PLASTIC;BRACKET;POAUV;ABS;INJECTION;BLACK;TWEETER BRACKET;REVA		
6	1.0000	PC		G58-00001-02349	PLASTIC;PANEL;POAVZ;ABS+PMMA;INJECTION;YS1283A HIGH-GLOSS;BLACK;FRONT PANEL;RIGHT		
7	1800.0000	MM	W58-00100-03986	G58-00100-03986	GASKET;SPEAKER;RGA10EVA1_5A;10in;MATERIAL:EVA;BLACK;WIDT H:10mm;HEIGHT:1mm5;DST.NO:001;DPT.NO:03986;(LS-RGA10EVA1_5A-REVA.DWG)		
8	200.0000	MM		G58-00100-07481	GASKET;SPEAKER;LS-RGASEVA1_5;5INCH;DST.NO:001;DPT.NO:07481;(LS-RGA5EVA1_5-REVA.DWG)		
9	1.0000	PC		I68-00000-80874	PLASTIC;PANEL;POAUV;ABS UL94 HB;INJECTION;;BLACK;CONNECTOR;A001		

Plug Socket

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	2.0000	PC	W64-01211-03174	G64-01211-03174	PLUG;JACK STEREO 6mm3;STRAIGHT SOLDER;W/O MET.RNG.;MET.BUSH.;NO NUT/WASHER;(JY-6351G-02-250)	[P0AVZ:1: {2.0}(X7,X9)]	
2	1.0000	PC		G67-00000-72273	AC SOCKET;WITH SW; 30MM HIGH;SIZE:41X30	[P0AVZ:1: {1.0}(X6)]	
3	2.0000	PC		G71-00000-72256	SOCKET;SPEAKER;4 PINS;HEIGHT: 24		
4	1.0000	PC		G71-23102-04756	WAFER;POLES:2;STRAIGHT;PITCH:2 mm;1 ROW;TYPE:A2006WV-2P	[P0AVZ:1: {1.0}(X3)]	
5	1.0000	PC		G71-24104-03839	WAFER;POLES:4;STRAIGHT;PITCH:2.5 mm;1 ROW;JS1001-04	[P0AVZ:1: {1.0}(X2)]	
6	1.0000	PC		G71-43102-05994	PLUG;HOUSING;POLES:2;ROWS:1;STRAIGHT;PITCH:2mm;TYP:A2008		
7	2.0000	PC	W71-80000-05663	G71-80000-05663	BD.-IN-CONN;TERMINAL;SAN-002T-0.8A		
8	1.0000	PC	W71-83102-05642	G71-83102-05642	BOARD-IN-CONNECTOR;POLES:2;ROWS:1;STRAIGHT;PITCH:2 mm		

Power Supply

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		J69-00000-79841	TRAFO;SWITCH MODE;P0AUV;UNIVERSAL 100 TO 240;L:300uH@1KHz 1V	[P0AVZ:1: {1.0}(T2)]	

Quarz

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC	X65-40471-20000	H65-40471-20000	QUARZ;RESONATOR;12MHz;HC49/4H FUNDAMENTAL	[P0AVZ:1: {1.0}(Q1)]	

Resistor

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC			RESISTOR;CARBON;13Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R73)]	*NOT available in DP
2	1.0000	PC			RESISTOR;CARBON;0ohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R130)]	*NOT available in DP
3	12.0000	PC			RESISTOR;CARBON;10ohm;5%;0W063;SMD603	[P0AVZ:1: {3.0}(R120-R121,R134)]	*NOT available in DP
4	3.0000	PC			RESISTOR;CARBON;22ohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R140-R141)]	*NOT available in DP
5	7.0000	PC			RESISTOR;CARBON;100ohm;5%;0W063;SMD603	[P0AVZ:1: {7.0}(R30,R48,R53-R54,R64,R90,R94)]	*NOT available in DP
6	2.0000	PC			RESISTOR;CARBON;240ohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R146-R147)]	*NOT available in DP
7	2.0000	PC			RESISTOR;CARBON;430ohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R145,R148)]	*NOT available in DP
8	3.0000	PC			RESISTOR;CARBON;470ohm;5%;0W063;SMD603	[P0AVZ:1: {3.0}(R25,R59,R109)]	*NOT available in DP
9	1.0000	PC			RESISTOR;CARBON;510ohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R142)]	*NOT available in DP
10	2.0000	PC			RESISTOR;CARBON;620ohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R44,R69)]	*NOT available in DP
11	6.0000	PC			RESISTOR;CARBON;1Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R139)]	*NOT available in DP
12	1.0000	PC			RESISTOR;CARBON;1Kohm5;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R102)]	*NOT available in DP
13	3.0000	PC			RESISTOR;CARBON;3Kohm;5%;0W063;SMD603	[P0AVZ:1: {3.0}(R61,R81,R104)]	*NOT available in DP
14	2.0000	PC			RESISTOR;CARBON;3Kohm9;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R50,R85)]	*NOT available in DP
15	1.0000	PC			RESISTOR;CARBON;4Kohm7;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R118)]	*NOT available in DP
16	13.0000	PC			RESISTOR;CARBON;10Kohm;5%;0W063;SMD603	[P0AVZ:1: {6.0}(R126,R128,R131,R136,R143-R144)]	*NOT available in DP
17	1.0000	PC			RESISTOR;CARBON;11Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R28)]	*NOT available in DP
18	10.0000	PC			RESISTOR;CARBON;20Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R122)]	*NOT available in DP
19	1.0000	PC			RESISTOR;CARBON;22Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R133)]	*NOT available in DP
20	3.0000	PC			RESISTOR;CARBON;24Kohm;5%;0W063;SMD603	[P0AVZ:1: {3.0}(R29,R79,R119)]	*NOT available in DP
21	2.0000	PC			RESISTOR;CARBON;47Kohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R125,R132)]	*NOT available in DP
22	1.0000	PC			RESISTOR;CARBON;51Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R10)]	*NOT available in DP
23	1.0000	PC			RESISTOR;CARBON;75Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R124)]	*NOT available in DP
24	5.0000	PC			RESISTOR;CARBON;100Kohm;5%;0W063;SMD603	[P0AVZ:1: {2.0}(R123,R137)]	*NOT available in DP
25	4.0000	PC			RESISTOR;CARBON;330Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R138)]	*NOT available in DP
26	1.0000	PC			RESISTOR;CARBON;470Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R127)]	*NOT available in DP
27	1.0000	PC			RESISTOR;CARBON;510Kohm;5%;0W063;SMD603	[P0AVZ:1: {1.0}(R23)]	*NOT available in DP
28	2.0000	PC			RESISTOR;METAL;560ohm;1%;0W063;SMD603	[P0AVZ:1: {2.0}(R47,R72)]	*NOT available in DP
29	2.0000	PC			RESISTOR;METAL;750ohm;1%;0W063;SMD603	[P0AVZ:1: {2.0}(R46,R71)]	*NOT available in DP
30	4.0000	PC			RESISTOR;METAL;1Kohm3;1%;0W063;SMD603	[P0AVZ:1: {4.0}(R45,R52,R63,R70)]	*NOT available in DP
31	1.0000	PC			RESISTOR;SMT;2Kohm7;1%;METAL;0W063;SMD603	[P0AVZ:1: {1.0}(R17)]	*NOT available in DP
32	4.0000	PC			RESISTOR;METAL;4Kohm7;1%;0W063;SMD603	[P0AVZ:1: {4.0}(R111-R112,R114-R115)]	*NOT available in DP
33	4.0000	PC			RESISTOR;METAL;4Kohm99;1%;0W063;SMD603	[P0AVZ:1: {4.0}(R36,R39,R95,R98)]	*NOT available in DP
34	8.0000	PC			RESISTOR;METAL;10Kohm;1%;0W063;SMD603	[P0AVZ:1: {4.0}(R75-R76,R116-R117)]	*NOT available in DP
35	4.0000	PC			RESISTOR;METAL;12Kohm4;1%;0W063;SMD603	[P0AVZ:1: {4.0}(R88-R89,R92-R93)]	*NOT available in DP
36	2.0000	PC			RESISTOR;METAL;20Kohm;1%;0W063;SMD603	[P0AVZ:1: {2.0}(R91,R110)]	*NOT available in DP
37	1.0000	PC			RESISTOR;METAL;22Kohm;1%;0W063;SMD603	[P0AVZ:1: {1.0}(R18)]	*NOT available in DP
38	1.0000	PC			RESISTOR;METAL;47Kohm;1%;0W063;SMD603	[P0AVZ:1: {1.0}(R20)]	*NOT available in DP
39	2.0000	PC			RESISTOR;METAL;51Kohm1;1%;0W063;SMD603	[P0AVZ:1: {2.0}(R87,R113)]	*NOT available in DP
40	1.0000	PC			RESISTOR;CARBON;47ohm;5%;0W1;SMD805	[P0AVZ:1: {1.0}(R31)]	*NOT available in DP
41	2.0000	PC			RESISTOR;CARBON;4Kohm7;5%;0W1;SMD805	[P0AVZ:1: {1.0}(R135)]	*NOT available in DP
42	1.0000	PC			RESISTOR;CARBON;10Kohm;5%;0W1;SMD805	[P0AVZ:1: {1.0}(R129)]	*NOT available in DP
43	1.0000	PC			RESISTOR;CARBON;1Mohm;5%;0W1;SMD805	[P0AVZ:1: {1.0}(R21)]	*NOT available in DP
44	1.0000	PC			RESISTOR;METAL;8Kohm20;1%;0W1;SMD603	[P0AVZ:1: {1.0}(R33)]	*NOT available in DP
45	6.0000	PC			RESISTOR;CARBON;470Kohm;5%;0W25;SMD1206	[P0AVZ:1: {6.0}(R96-R97,R100-R101,R149-R150)]	*NOT available in DP

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
46	2.0000	PC			RESISTOR;METAL;47ohm;1%;0W25;SMD1206	[P0AVZ:1: {2.0}(R22,R24)]	*NOT available in DP
47	1.0000	PC			RESISTOR;SMT;2Kohm2;1%;METAL;0W25;SMD1206	[P0AVZ:1: {1.0}(R15)]	*NOT available in DP
48	1.0000	PC	Y04-00100-23978	I04-00100-23978	THERMISTOR;NTC;10ohm;3A	[P0AVZ:1: {1.0}(R2)]	
49	1.0000	PC			RESISTOR;0.15 ohm;1W;5 %;METAL OXIDE FILM;F-TYPE	[P0AVZ:1: {1.0}(R27)]	*NOT available in DP
50	1.0000	PC			RESISTOR;METAL;22 kohm;1W;5 %;METAL OXIDE FILM;F-TYPE	[P0AVZ:1: {1.0}(R13)]	*NOT available in DP
51	1.0000	PC			RESISTOR;CARBON;470 ohm;2W;5 %;F-TYPE	[P0AVZ:1: {1.0}(R14)]	*NOT available in DP

Potentiometer

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		I03-00001-03401	POTENTIOMETER;20 kohm;3B;STEREO;METAL SHAFT;20MM;VERTICAL;NO NUT AND WASHER;1CC;30gf~70gf;SOUNDWELL	[P0AVZ:1: {1.0}(VR1)]	

Speaker Part

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	2.0000	PC	X76-00001-04829	H76-00001-04829	TWEETER;8 OHM;BLACK;LS-31-1B		
2	2.0000	PC	X77-00001-04840	H77-00001-04840	WOOFER;4 OHM;BLACK;LS-YS120-20131206-1 103-30A		

Switch

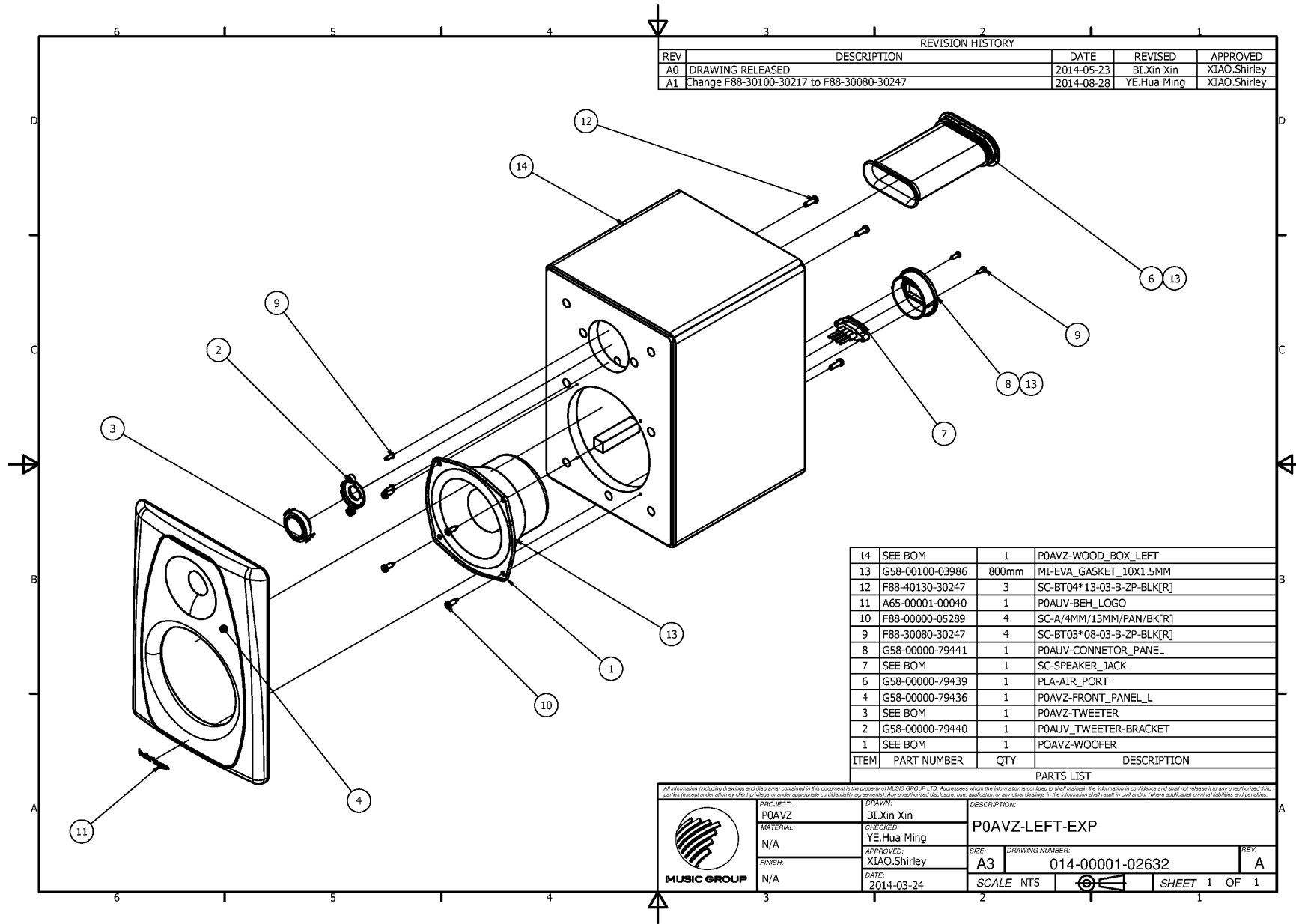
	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC		I86-00000-84921	SWITCH;SLIDE;2;4;LOCKING;NONSHORT;10;21mm HEIGHT;7mm SHAFT	[P0AVZ:1: {1.0}(SW1)]	

Transistor

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	1.0000	PC			TRANSISTOR;TO220F;3;MOSFET;SVF7N65AF;VDSS:650V;I:7A;25C	[P0AVZ:1: {1.0}(T1)]	*NOT available in DP
2	2.0000	PC			TRANSISTOR;BC846B;SOT;SMD	[P0AVZ:1: {2.0}(T5,T7)]	*NOT available in DP
3	2.0000	PC			TRANSISTOR;BC856B;SOT;SMD	[P0AVZ:1: {2.0}(T3,T6)]	*NOT available in DP
4	2.0000	PC			TRANSISTOR;SST113;SOT	[P0AVZ:1: {2.0}(T4,T8)]	*NOT available in DP

Cover

	Quantity	Unit	S.Sku	M.Sku	Description	Reference Designators	Notes
1	0.2600	M		J11-20049-44660	PVC COVERING;HARDNESS:22PHR;THICKNESS:0mm18;WIDTH:49in;COLOR:BLACK;(ZHPPEARL F2905-911)		

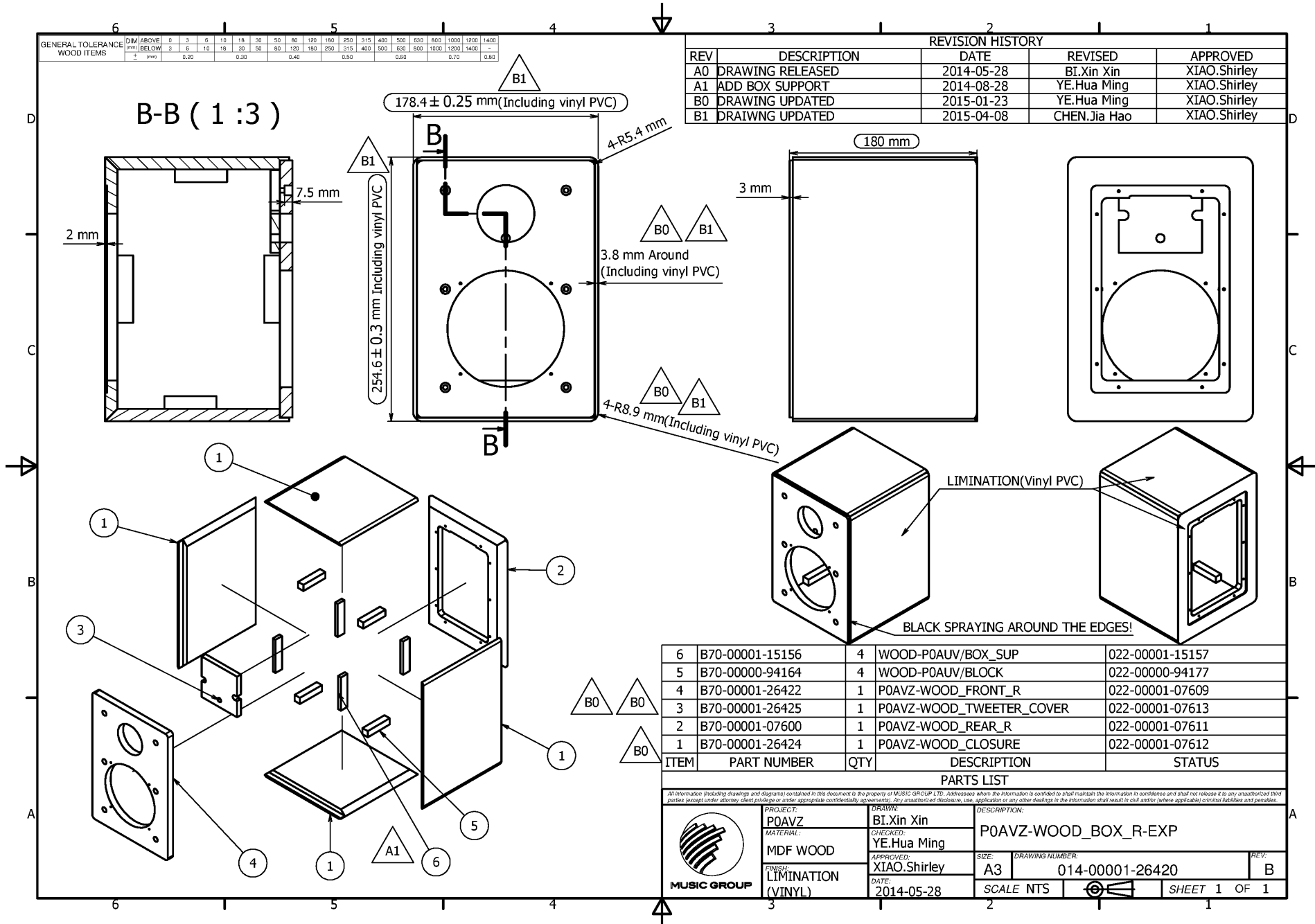


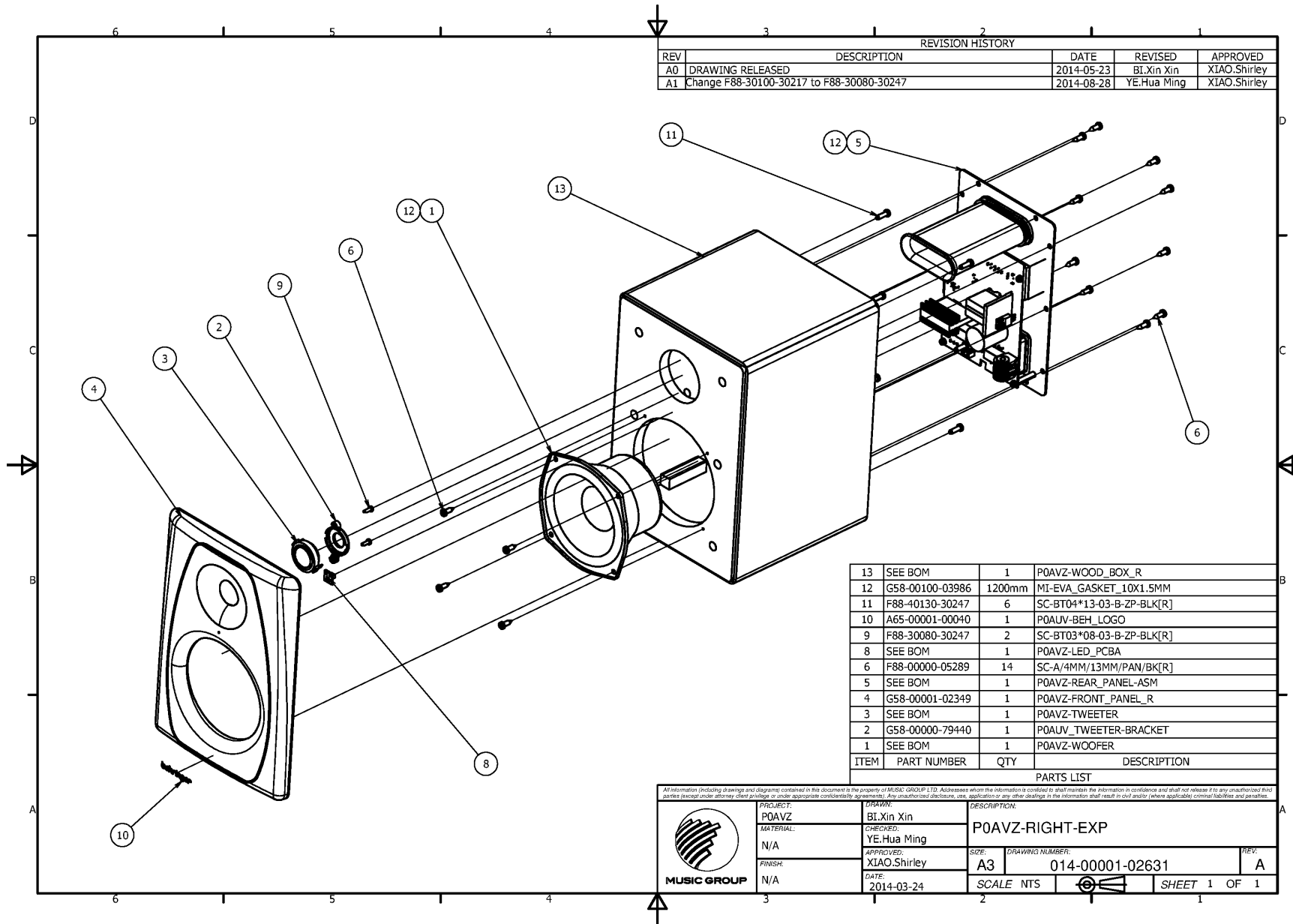
REVISION HISTORY				
REV	DESCRIPTION	DATE	REVISED	APPROVED
A0	DRAWING RELEASED	2014-05-23	BL.Xin Xin	XIAO,Shirley
A1	Change F88-30100-30217 to F88-30080-30247	2014-08-28	YE.Hua Ming	XIAO,Shirley

ITEM	PART NUMBER	QTY	DESCRIPTION
14	SEE BOM	1	P0AVZ-WOOD_BOX_LEFT
13	G58-00100-03986	800mm	MI-EVA_GASKET_10X1.5MM
12	F88-40130-30247	3	SC-BT04*13-03-B-ZP-BLK[R]
11	A65-00001-00040	1	P0AUV-BEH_LOGO
10	F88-00000-05289	4	SC-A/4MM/13MM/PAN/BK[R]
9	F88-30080-30247	4	SC-BT03*08-03-B-ZP-BLK[R]
8	G58-00000-79441	1	P0AUV-CONNECTOR_PANEL
7	SEE BOM	1	SC-SPEAKER_JACK
6	G58-00000-79439	1	PLA-AIR_PORT
4	G58-00000-79436	1	P0AVZ-FRONT_PANEL_L
3	SEE BOM	1	P0AVZ-TWEETER
2	G58-00000-79440	1	P0AUV_TWEETER-BRACKET
1	SEE BOM	1	P0AVZ-WOOFER

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	PROJECT:	POAVZ	DRAWN:	BL.Xin Xin	DESCRIPTION:	P0AVZ-LEFT-EXP		
	MATERIAL:	N/A	CHECKED:	YE.Hua Ming	SIZE:	A3	DRAWING NUMBER:	014-00001-02632
	FINISH:	N/A	APPROVED:	XIAO,Shirley	DATE:	2014-03-24	SCALE	NTS
							SHEET	1 OF 1



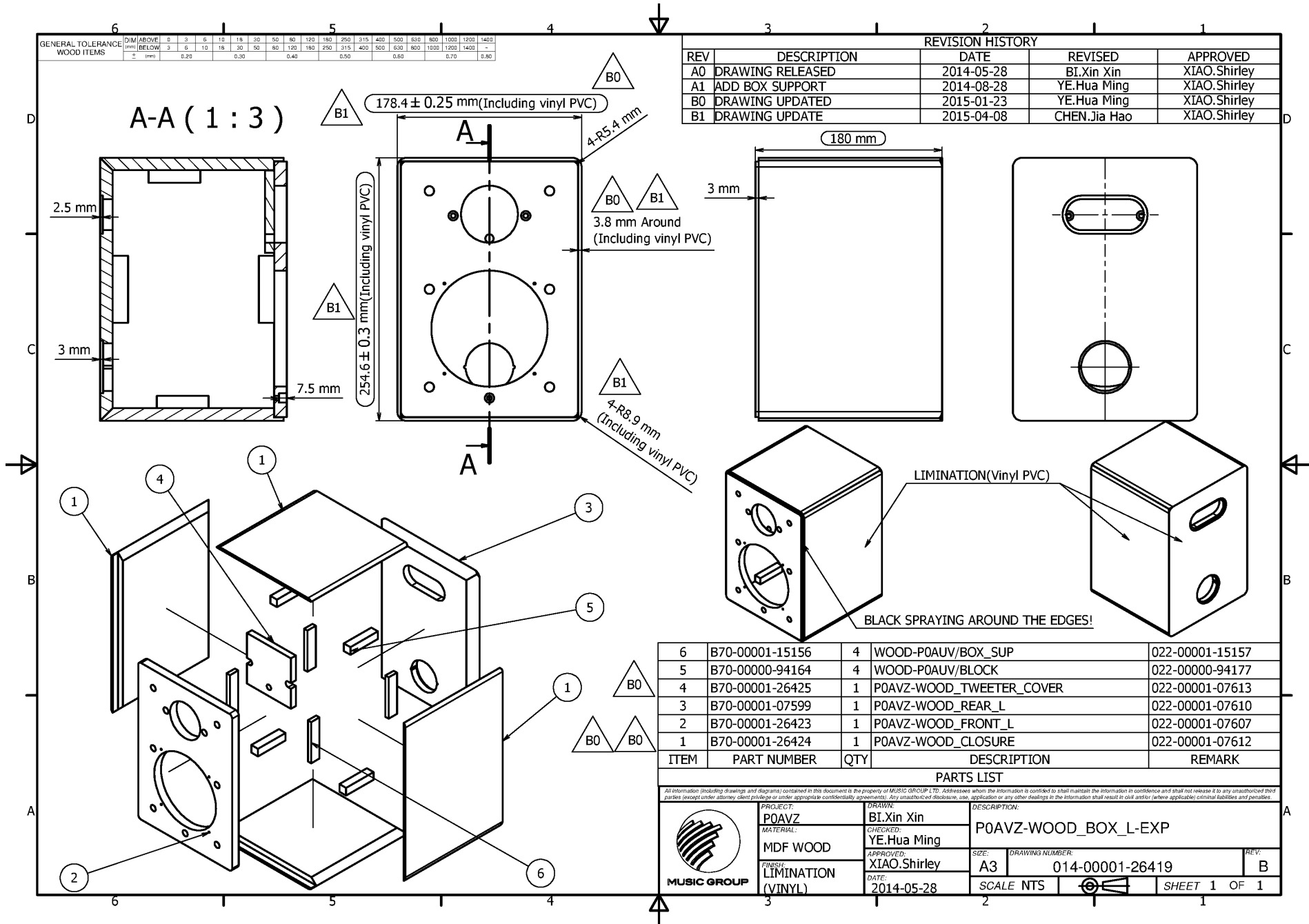


REVISION HISTORY				
REV	DESCRIPTION	DATE	REVISED	APPROVED
A0	DRAWING RELEASED	2014-05-23	BL.Xin Xin	XIAO.Shirley
A1	Change F88-30100-30217 to F88-30080-30247	2014-08-28	YE.Hua Ming	XIAO.Shirley

ITEM	PART NUMBER	QTY	DESCRIPTION
13	SEE BOM	1	POAVZ-WOOD_BOX_R
12	G58-00100-03986	1200mm	MI-EVA_GASKET_10X1.5MM
11	F88-40130-30247	6	SC-BT04*13-03-B-ZP-BLK[R]
10	A65-00001-00040	1	POAUV-BEH_LOGO
9	F88-30080-30247	2	SC-BT03*08-03-B-ZP-BLK[R]
8	SEE BOM	1	POAVZ-LED_PCBA
6	F88-00000-05289	14	SC-A/4MM/13MM/PAN/BK[R]
5	SEE BOM	1	POAVZ-REAR_PANEL-ASM
4	G58-00001-02349	1	POAVZ-FRONT_PANEL_R
3	SEE BOM	1	POAVZ-TWEETER
2	G58-00000-79440	1	POAUV_TWEETER-BRACKET
1	SEE BOM	1	POAVZ-WOOFER

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	PROJECT:	POAVZ	DRAWN:	BL.Xin Xin	DESCRIPTION:	POAVZ-RIGHT-EXP		
	MATERIAL:	N/A	CHECKED:	YE.Hua Ming	SIZE:	A3	DRAWING NUMBER:	014-00001-02631
	FINISH:	N/A	APPROVED:	XIAO.Shirley	DATE:	2014-03-24	SCALE	NTS
							SHEET	1 OF 1

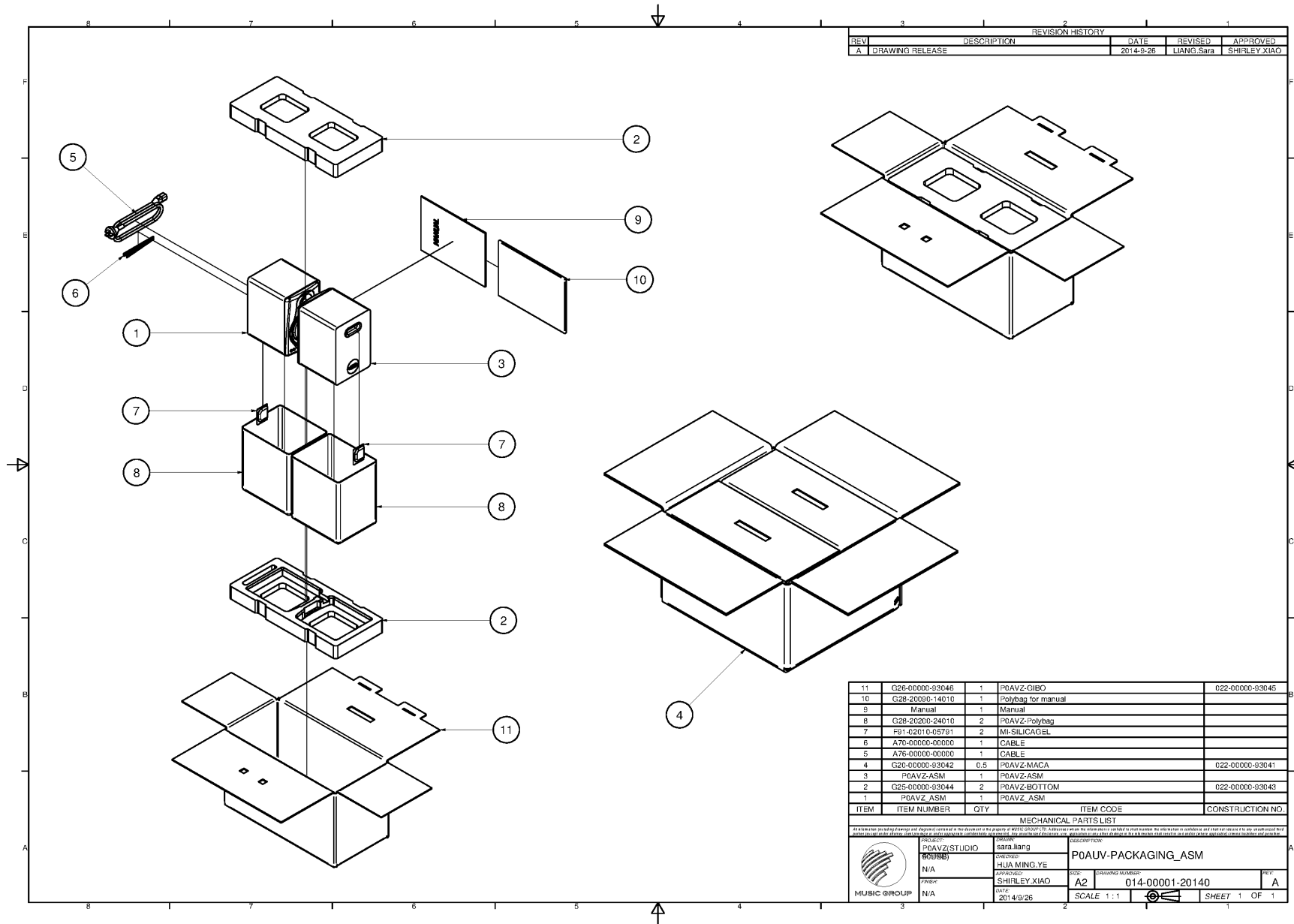


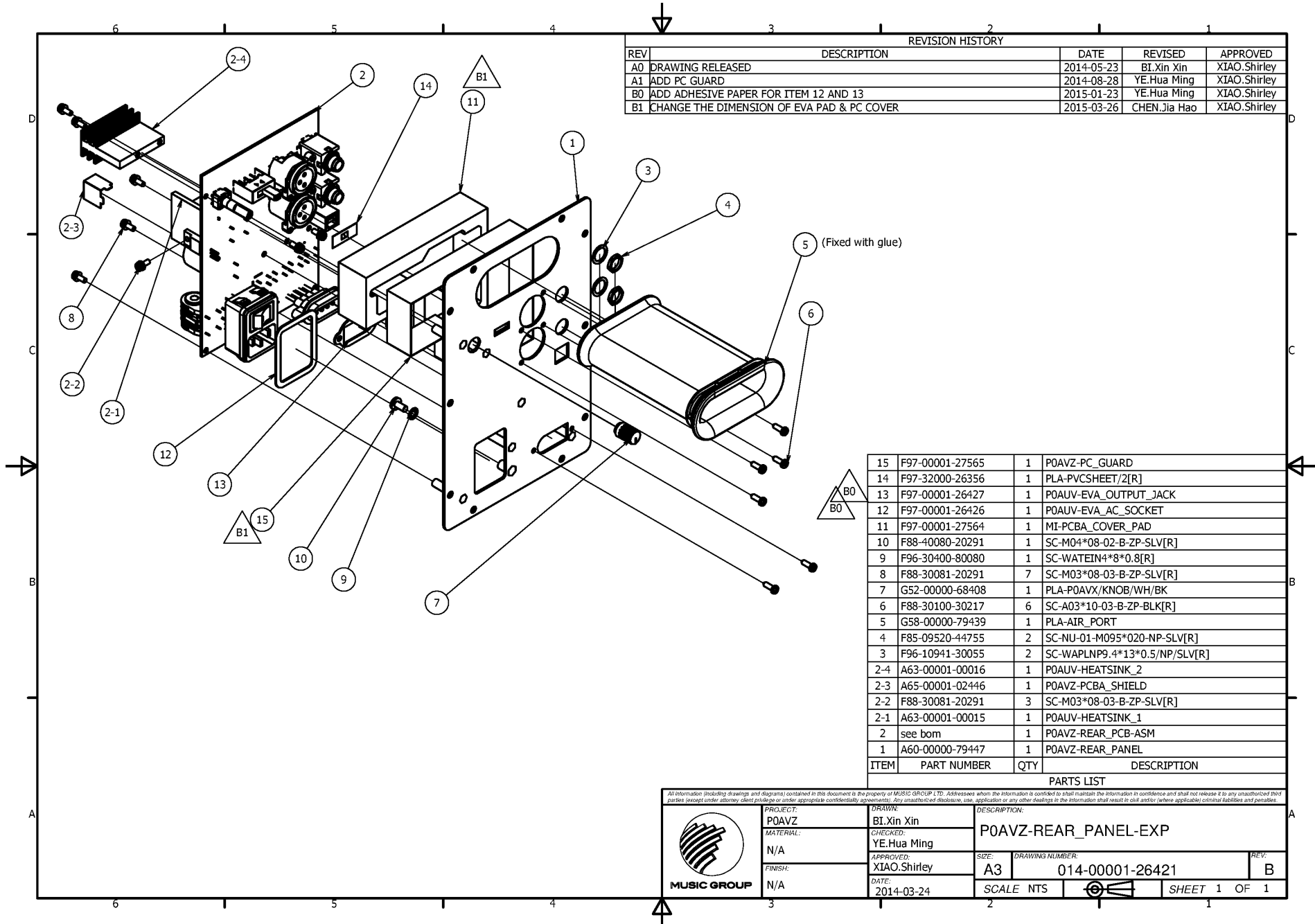
GENERAL TOLERANCE		WOOD ITEMS																			
DIM	ABOVE	0	3	6	10	18	30	50	80	120	180	250	315	400	500	630	800	1000	1200	1400	
(mm)	BELOW	3	6	10	18	30	50	80	120	180	250	315	400	500	630	800	1000	1200	1400	-	
±	(mm)	0.20	0.30	0.40	0.50	0.60	0.70	0.80													

REVISION HISTORY		REVISED	APPROVED
A0	DRAWING RELEASED	2014-05-28	BI.Xin Xin
A1	ADD BOX SUPPORT	2014-08-28	YE.Hua Ming
B0	DRAWING UPDATED	2015-01-23	YE.Hua Ming
B1	DRAWING UPDATE	2015-04-08	CHEN.Jia Hao

ITEM	PART NUMBER	QTY	DESCRIPTION	REMARK
6	B70-00001-15156	4	WOOD-P0AUV/BOX_SUP	022-00001-15157
5	B70-00000-94164	4	WOOD-P0AUV/BLOCK	022-00000-94177
4	B70-00001-26425	1	P0AVZ-WOOD_TWEETER_COVER	022-00001-07613
3	B70-00001-07599	1	P0AVZ-WOOD_REAR_L	022-00001-07610
2	B70-00001-26423	1	P0AVZ-WOOD_FRONT_L	022-00001-07607
1	B70-00001-26424	1	P0AVZ-WOOD_CLOSURE	022-00001-07612

PARTS LIST			
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	PROJECT:	BI.Xin Xin	DESCRIPTION:
	MATERIAL:	YE.Hua Ming	P0AVZ-WOOD_BOX_L-EXP
	APPROVED:	XIAO.Shirley	SIZE: A3
	DATE:	2014-05-28	DRAWING NUMBER: 014-00001-26419
FINISH: LIMINATION (VINYL)		SCALE NTS	SHEET 1 OF 1



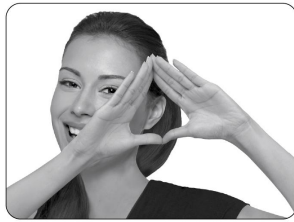


REV	DESCRIPTION	DATE	REVISED	APPROVED
A0	DRAWING RELEASED	2014-05-23	BI.Xin Xin	XIAO.Shirley
A1	ADD PC GUARD	2014-08-28	YE.Hua Ming	XIAO.Shirley
B0	ADD ADHESIVE PAPER FOR ITEM 12 AND 13	2015-01-23	YE.Hua Ming	XIAO.Shirley
B1	CHANGE THE DIMENSION OF EVA PAD & PC COVER	2015-03-26	CHEN.Jia Hao	XIAO.Shirley

ITEM	PART NUMBER	QTY	DESCRIPTION
15	F97-00001-27565	1	POAVZ-PC_GUARD
14	F97-32000-26356	1	PLA-PVCSHEET/2[R]
13	F97-00001-26427	1	POAUV-EVA_OUTPUT_JACK
12	F97-00001-26426	1	POAUV-EVA_AC_SOCKET
11	F97-00001-27564	1	MI-PCBA_COVER_PAD
10	F88-40080-20291	1	SC-M04*08-02-B-ZP-SLV[R]
9	F96-30400-80080	1	SC-WATEIN4*8*0.8[R]
8	F88-30081-20291	7	SC-M03*08-03-B-ZP-SLV[R]
7	G52-00000-68408	1	PLA-POAVX/KNOB/WH/BK
6	F88-30100-30217	6	SC-A03*10-03-B-ZP-BLK[R]
5	G58-00000-79439	1	PLA-AIR_PORT
4	F85-09520-44755	2	SC-NU-01-M095*020-NP-SLV[R]
3	F96-10941-30055	2	SC-WAPLNP9.4*13*0.5/NP/SLV[R]
2-4	A63-00001-00016	1	POAUV-HEATSINK_2
2-3	A65-00001-02446	1	POAVZ-PCBA_SHIELD
2-2	F88-30081-20291	3	SC-M03*08-03-B-ZP-SLV[R]
2-1	A63-00001-00015	1	POAUV-HEATSINK_1
2	see bom	1	POAVZ-REAR_PCB-ASM
1	A60-00000-79447	1	POAVZ-REAR_PANEL

PARTS LIST			
PROJECT:	POAVZ	DRIVER:	BI.Xin Xin
MATERIAL:	N/A	CHECKED:	YE.Hua Ming
FINISH:	N/A	APPROVED:	XIAO.Shirley
DATE:	2014-03-24	DESCRIPTION:	POAVZ-REAR_PANEL-EXP
SIZE:	A3	DRAWING NUMBER:	014-00001-26421
SCALE	NTS	REV:	B
SHEET 1 OF 1			





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