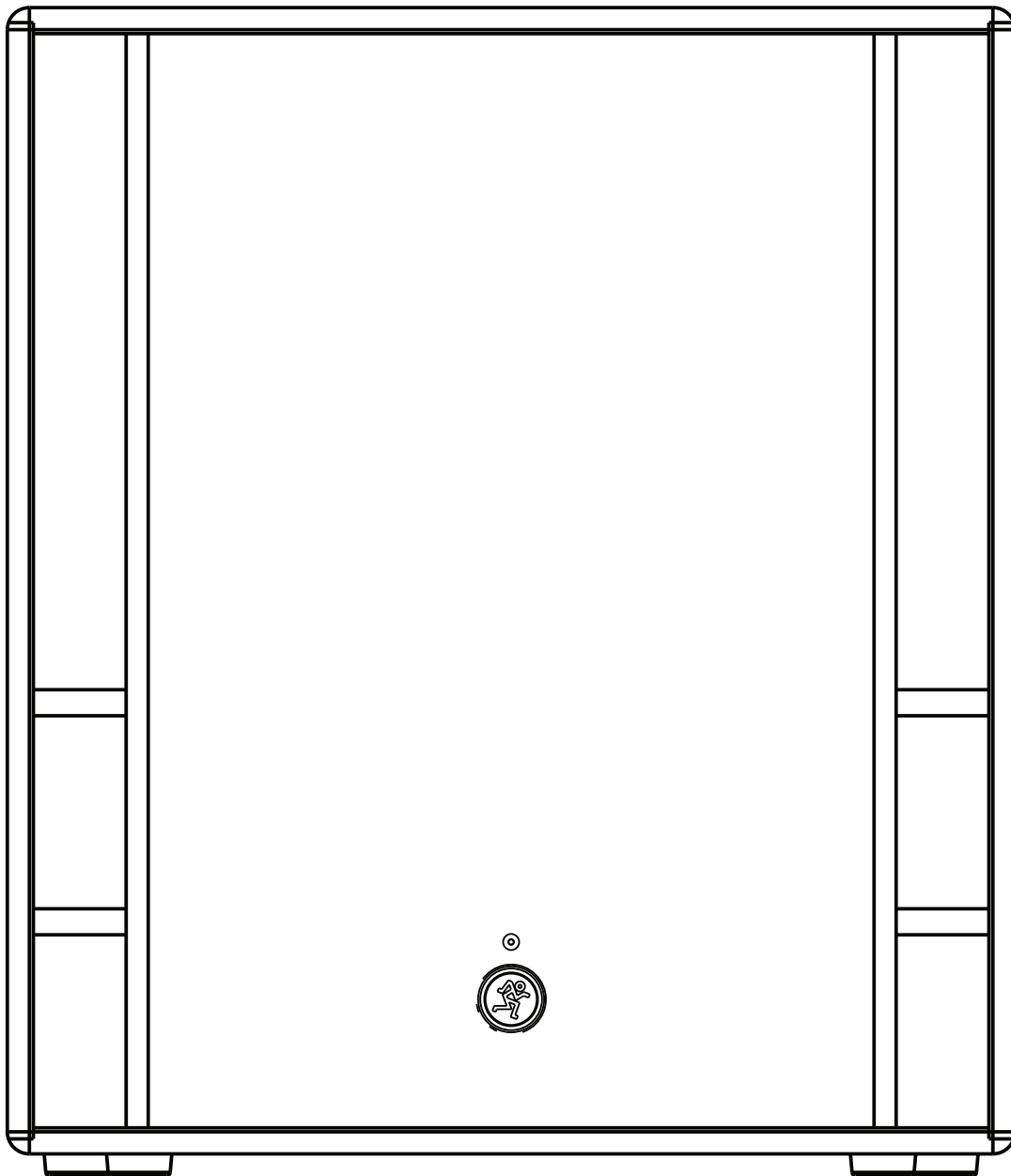


# MACKIE.

## Service Manual



# Thump 18S

Thump 18S\_SM.pdf

SKU No. 2042232-00 Rev.A 8/14

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	<b>CAUTION AVIS</b> RISK OF ELECTRIC SHOCK. DO NOT OPEN RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL</p> <p><i>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.</i></p> <p><i>AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE</i></p>		



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.*

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### 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.

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### ESD Warning:



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

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**Thump18S SUBWOOFER SPECIFICATIONS****Acoustic Performance**

Frequency Response	(-3 dB) 40 Hz – 120 Hz
Frequency Response	(-10 dB) 30 Hz – 132 Hz
Max peak SPL	130 dB
Crossover Point 1	40 Hz
Slope	2nd order HP, 6th order LP

**Transducer**

Woofers Diameter	18.0 in / 457 mm
Voice Coil Diameter	3.0 in / 76 mm
Cone Material	Paper
Magnet Material	Ferrite

**Power Amplifier**

Rated Power	600 watts rms / 1200 watts peak
Rated THD	< 1%
Cooling	Convection
Design	Class D

**Input / Output**

Input Type	Female XLR balanced
Input Impedance	20 k $\Omega$ balanced / 20 k $\Omega$ unbalanced
Full Range Outputs	Male XLR balanced
High Pass Outputs	Male XLR balanced

**Line Input Power**

US detachable line cord	100 – 120 VAC, 50 – 60 Hz, 150W
EU detachable line cord	220 – 240 VAC, 50 – 60 Hz, 150W
AC Connector	3-pin IEC 250 VAC, 10 A male
Power Supply Type	Switchmode
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 Front and rear power ON, Rear OL limiter

**Physical Properties**

Height	26.5 in / 672 mm
Width	22.6 in / 573 mm
Depth	22.8 in / 580 mm
Weight	82 lb / 37.2 kg



### **Options**

Thump18S Subwoofer Cover P/N 2036809-25  
SPM200 Loudspeaker Pole Mount P/N 2035170-01

### **Ordering Information**

Thump18S 1200W 18" Powered Subwoofer, US P/N 2042232-00  
Thump18S 1200W 18" Powered Subwoofer, EU P/N 2042232-01  
Thump18S 1200W 18" Powered Subwoofer, UK P/N 2042232-03  
Thump18S 1200W 18" Powered Subwoofer, AU P/N 2042232-04  
Thump18S 1200W 18" Powered Subwoofer, CN P/N 2042232-05  
Thump18S 1200W 18" Powered Subwoofer, BZ (120V) P/N 2042232-06  
Thump18S 1200W 18" Powered Subwoofer, BZ (230V) P/N 2042232-16



**!!!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:

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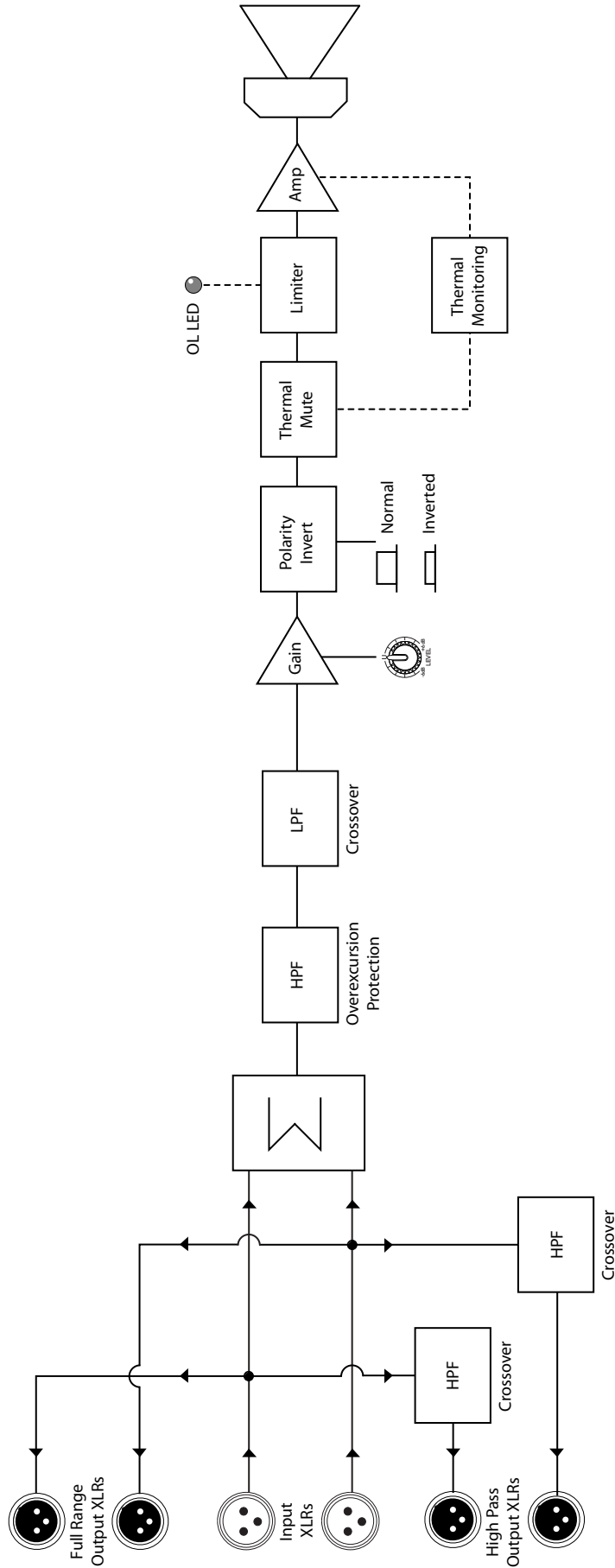
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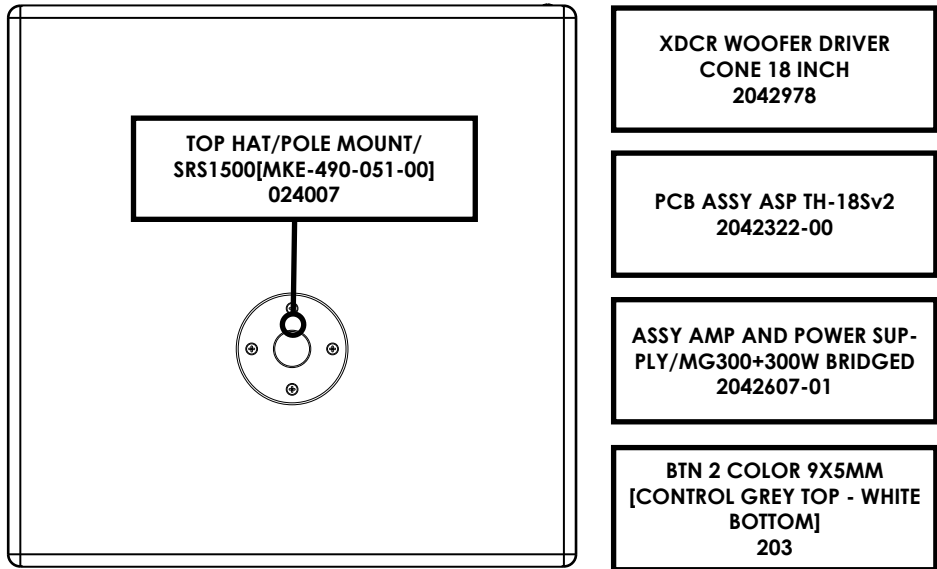
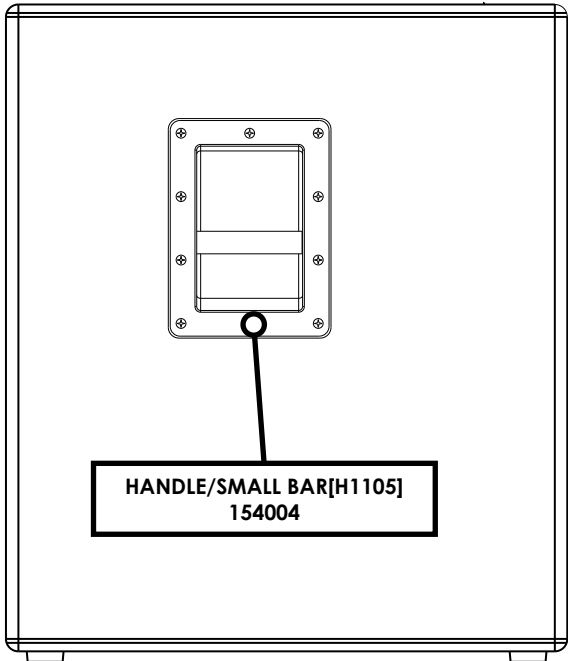
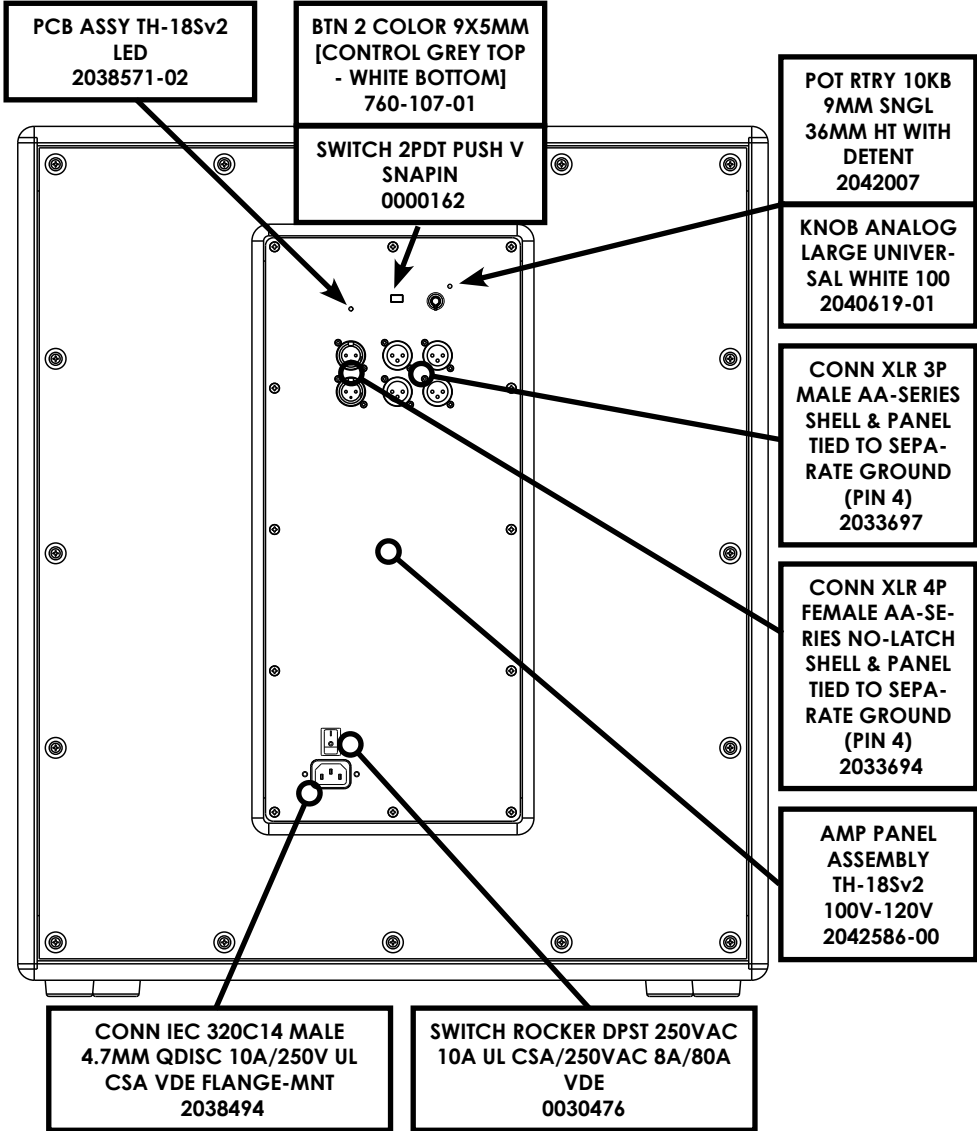
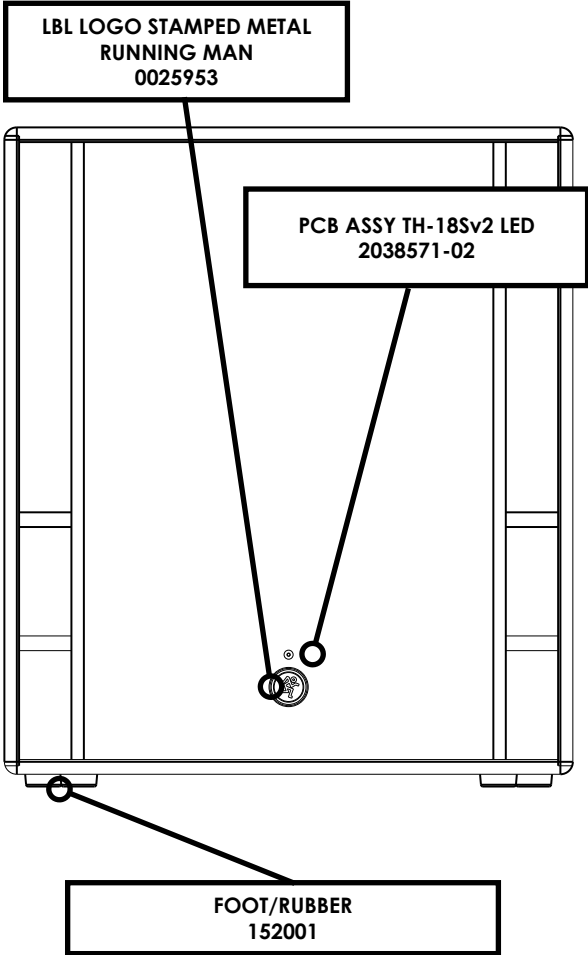
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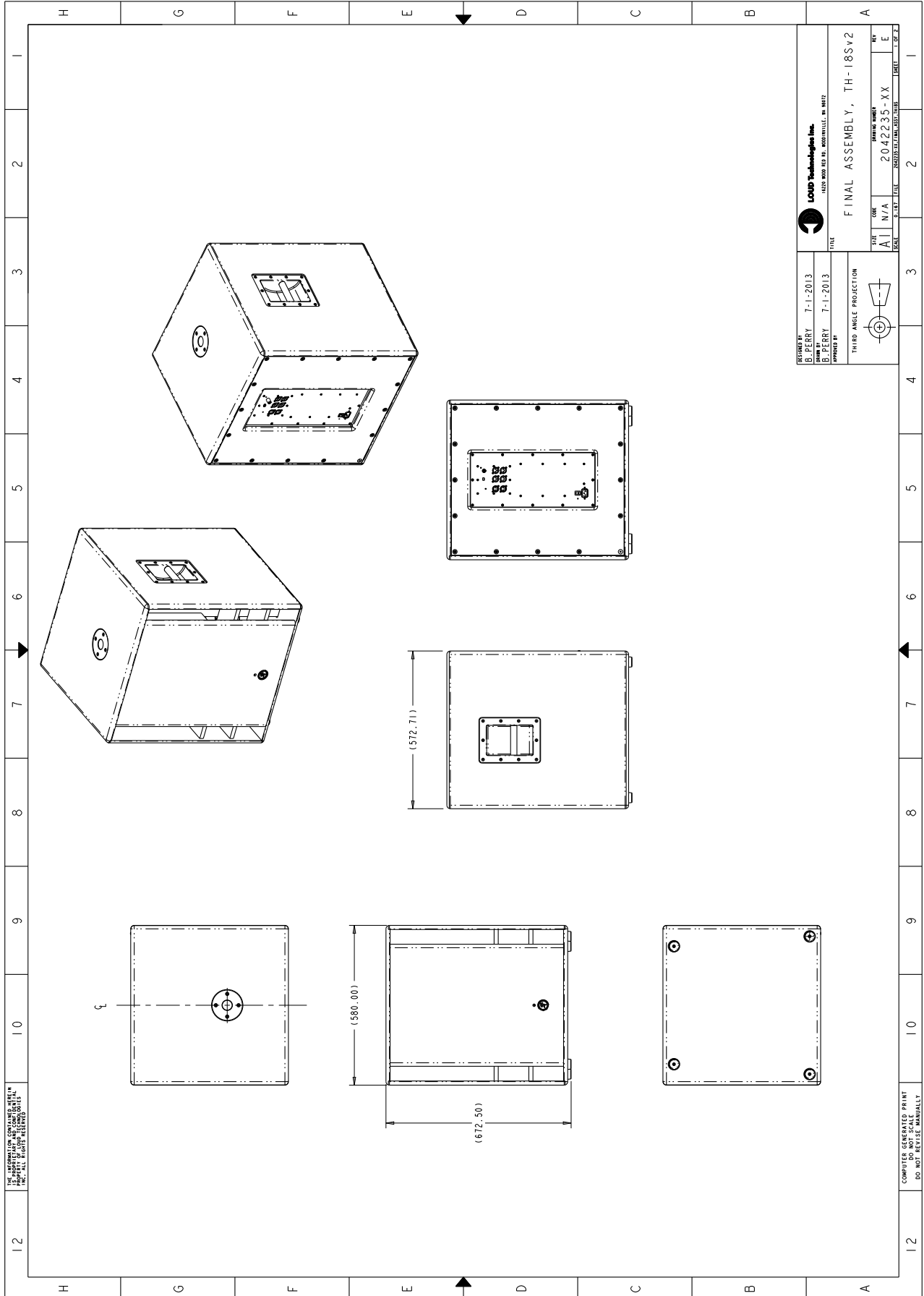
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COMPUTER GENERATED PRINT  
DO NOT SCALE  
DO NOT REVISE MANUALLY

DESIGNED BY <b>B. PERRY</b>	DATE <b>7-1-2013</b>	<p><b>LOUD Technologies Inc.</b> 11038 200th St. SE, Snohomish, WA 98297</p>	<p><b>FINAL ASSEMBLY, TH-18Sv2</b></p>
DRAWN BY <b>D. PERRY</b>	DATE <b>7-1-2013</b>		
APPROVED BY		TITLE	
THIRD ANGLE PROJECTION			
REV	DATE	BY	REASON
A	N/A		2042235-XX
E			
			1 OF 2



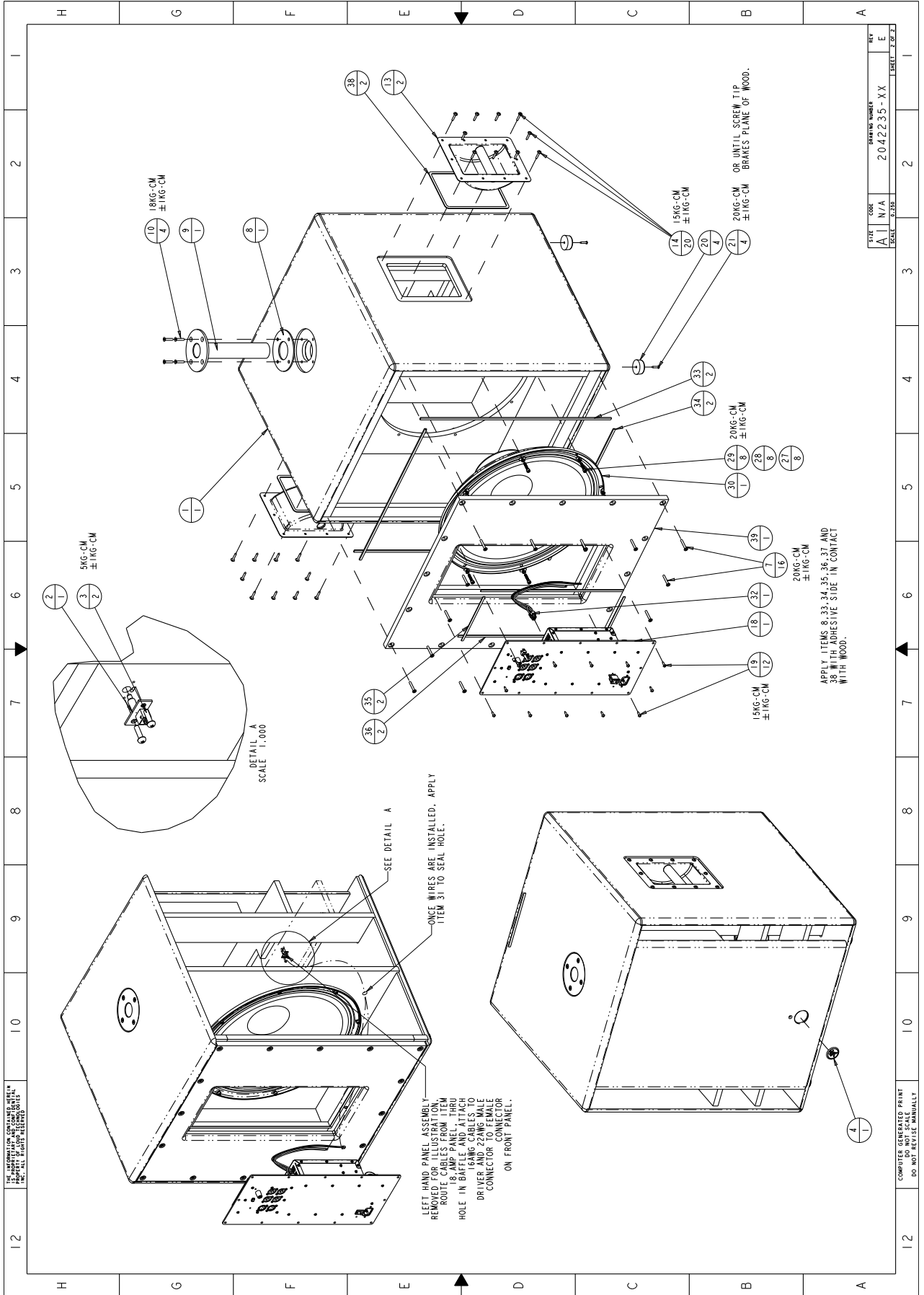
Item	Part Number
34	2043407-480
35	2043407-161
36	2043407-427
38	2043407-620

Item	Part Number
28	0010016
29	0010073
30	2042978
32	2042800
33	2043407-572

Item	Part Number
18	2042586-00
19	51992008
20	152001
21	2044050
27	2043787

Item	Part Number
8	51992018
9	024007
10	0010027
13	154004
14	0028081

Item	Part Number
1	2042585-00
2	2038571-02
3	0026670
4	0025953
7	51992018



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COMPUTER GENERATED PRINT  
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Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
	2042232-00	A01	Thump18S Powered Subwoofer 100-120V US		
1	2042232-00U	A00	Thump18S Powered Subwoofer 100-120V US UNADJUSTED		
1	2042245	A00	LBL PCK THUMP18S		
3	0032856	E00	LBL SERIAL NUMBER GENERIC 35mm X 9.5mm UL		
1	0033468	B00	LBL REVISION GENERIC 13mm X 9.5mm		
1	0033486	E00	LBL SPEC FINISHED GOOD BOX BARCODE 4x3in (102x76mm)		
1	2042235-00	E00	ASSY FINAL TH-18Sv2 SUB 100-120V		
1	2042585-00	A01	CAB PAINTED BLACK TH-18Sv2 SUB		CABINET PAINTED
1	2042584-00	C01	CAB UNPAINTED TH-18Sv2 SUB		
4	0031726-52	A00	RIVNUT M5 X 14 LG STL		
8	2044702	A00	T-NUT M5 x 8.0mm x 15mm DIA STL BLK		
1	2043767	A00	BACK PANEL PAINTED BLACK THUMP18S SUB		BACK PANEL ASSEMBLED FIT TO CAB
1	2043766	A00	BACK PANEL UNPAINTED THUMP18S SUB		
1	2038571-02	B01	PCB ASSY TH-18Sv2 LED		FRONT PANEL, LED PCBA
1	2038572-01	B00	PCB FAB NANO NEXT LED	PCB1	
1	2038953	A00	LED GREEN 525NM SUPERBRIGHT T-1	D1	
1	2043788	A00	SPCR PVC T1 LED .350 DIAM 4.5		For D1
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J1	
2	0026670	A00	SCR SELFTAP WOOD M3X12 PNH PHILLIP STL BLK ZN		2 SCREWS FOR PCBA, ITEM 10
1	0025953	B00	LBL LOGO STAMPED METAL RUNNING MAN		LOGO
16	51992018	A00	SCR SELFTAP PLASTIC DBL THD 4.8X35 PNH PHH STL BLK		BACK PANEL ASSEMBLY SECURE TO CABINET
1	030012	A	GASKET/TOP HAT[MCK]		TOP HAT GASKET
1	024007	C	TOP HAT/POLE MOUNT/ SRS1500[MKE-490-051-00]		TOP HAT
4	0010027	A	SCREW/M5X25 PH FHMS [DIN965 A]		TOP HAT TO CABINET- SCREWS
2	2043407-572	A00	TAPE EPDM FOAM 1.6MM THK X 6MM WIDE X 572MM LG CLOSED CELL SINGLE SIDED PSA BLK		FOAM TAPE FOR BACK PANEL-VERTI- CAL.
2	2043407-480	A00	TAPE EPDM FOAM 1.6MM THK X 6MM WIDE X 480MM LG CLOSED CELL SINGLE SIDED PSA BLK		FOAM TAPE FOR BACK PANEL-HORI- ZONTAL



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	2043407-620	A00	TAPE EPDM FOAM 1.6MM THK X 6MM WIDE X 620MM LG CLOSED CELL SINGLE SIDED PSA BLK		FOAM TAPE, HANDLE GASKET
2	154004	A	HANDLE/SMALL BAR[H1105]		HANDLE
20	0028081	A00	SCR SELFTAP WOOD M4X25 TRUSS HEAD PHILLIP STL BLK ZN		HANDLE SCREWS
1	2042978	A03	XDCR WOOFER DRIVER CONE 18 INCH		DRIVER, 18 INCH
8	2043787	A00	WSHR OBROUND M5 18MM X 8MM ZINC		DRIVER WASHER, MOUNTING
8	0010016	A00	WASHER/LOCK/M5/DIN127A/ZINC		DRIVER WASHER, LOCK, MOUNTING
8	0010073	A	SCR M5x25 SHCS BLK [DIN7984]		DRIVER, M5, SCREW, CAP, MOUNTING
1	2042586-00	D00	AMP PANEL ASSEMBLY TH-18Sv2 100V-120V		AMP PANEL ASSEMBLY
1	2042515-00	B02	REAR PANEL MAIN METAL THUMP18S 100V-120V		METAL PANEL
1	2038493	A00	ASSY CBL IEC INT W 50MM 16AWG GND WIRE		IEC WITH CABLES
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		
2	0000659	A01	NUT HEX KEP M3		SECURE IEC 2X
1	0010350	B00	NUT HEX M3.5x0.6MM STL CLR ZNC (DIN 934)		NUT GRND STUD
1	2043867	C00	ASSY CBL SWITCH POWER		CABLE ASSEMBLY
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		
1	0022473	A00	MAG FERRITE 22X14X8MM MN-ZN		
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		USED WITH ITEM 10
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		
1	2042607-01	B01	ASSY AMP AND POWER SUPPLY/ MG300+300W BRIDGED		AMP ASSEMBLY
1	2041940	A00	FORMING HEAT SINK/PCB SUPPORT		
1	2038306-01	B00	PCB ASSY POWER SUPPLY/AMP MG300+300W BRIDGED		
1	2038305-01	B00	PCB FAB POWER SUPPLY/AMP MG300+300W	PCB1	
2	0026138	A00	CAP 0.47UF 275V 10% X2 RADIAL	C1, C5	
3	0029768	A00	CAP 2200PF 20% 250VAC Y1 CER DISC	C2, C3, C8	
1	0026174	A00	CAP 1UF 275V 10% POLYP BOX X2 RADIAL	C4	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0026978	A01	CAP 1500UF 200V 20% 85C AL RADIAL	C6, C7	
2	2043780	A00	CAP 3300pF 20% 440VAC Y1 BOX	C9, C12	
1	0028747	A00	CAP 0.33UF 400V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C10	
53	0026125	A00	CAP 0.1UF 50V 5% X7R 0603	C11, C14, C19, C20, C21, C22, C31, C36, C41, C42, C44, C45, C46, C47, C50, C53, C55, C56, C58, C59, C61, C62, C68, C73, C77, C78, C88, C89, C92, C97, C101, C102, C103, C105, C106, C107, C127, C128, C130, C132, C133, C134, C135, C136, C137, C138, C141, C142, C146, C147, C153, C155, C156	
1	0026144	A00	CAP 1000PF 1000V 10% CER DISC	C13	
9	0027311	A00	CAP 1000PF 50V 5% NPO 0603	C15, C16, C48, C71, C116, C117, C131, C171, C172	
6	0026979	A00	CAP 680UF 100V 20% 105C AL LESR RADIAL	C17, C18, C23, C24, C25, C26	
4	2037007	A00	CAP CER 0.1UF 200V X7R 1206	C27, C63, C64, C119	
4	220-067-02	A11	CAP LYT 47UF 20% 25V 105C T/A	C28, C32, C95, C115	
4	0029761	A00	CAP 0.68UF 100V 20% X7R 1812	C29, C38, C121, C123	
1	0031389	A00	CAP LYT 100UF 20% 25V 105C RAD	C30	
4	0026214	A00	CAP 470PF 50V 2% NPO 0603	C33, C35, C111, C112	
3	0031390	A00	CAP LYT 10UF 20% 50V 105C RAD	C34, C66, C91	
3	0026175	A00	CAP 1UF 50V 10% X7R 1206	C37, C60, C80	
6	0008480	A	CAP CER 47P 200V 5% 1206 NPO	C39, C40, C94, C124, C125, C152	
8	0026146	A00	CAP 1000PF 100V 10% X7R 1206	C43, C72, C84, C86, C87, C99, C122, C129	
2	0026133	A00	CAP 0.22UF 50V 10% X7R 0805	C49, C51	
2	0026126	A00	CAP 0.1UF 630V 10% METALLIZED POLYESTER FILM RADIAL	C52, C139	
10	0032725	A00	CAP 10UF 25V 10% X7R 1206	C54, C57, C69, C70, C93, C96, C143, C144, C148, C149	
4	0030387	A00	CAP 220UF 25V 20% 105C AL LESR RADIAL (TAPING)	C65, C67, C81, C82	
2	0026137	A00	CAP 0.47UF 250V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C74, C118	
3	0026217	A00	CAP 470UF 25V 20% 105C AL LESR RADIAL	C75, C83, C110	
5	0020295	A00	CAP CER 4.7uF 25V X7R SMT1206	C76, C90, C140, C150, C151	
2	0026114	A00	CAP 0.1UF 100V 10% METALLIZED POLYESTER FILM RADIAL	C79, C120	
4	0021369	A01	CAP 47PF 50V 5% NPO 0603	C100, C104, C126, C145	
4	212-004-00	C11	CAP CER 220PF 5% 50V NPO SM	C108, C109, C113, C114	
4	0029767	A00	CAP COG/NPO 100pF 5% 200V 1206 SMT	C160, C161, C162, C163	
1	0026983	A00	DIODE BRIDGE KBJ1506 600V 15A KBJ	D1	
1	2042047	A00	DIODE ZENER 500MW SMT MMSZ5251B 22V	D2	
20	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D3, D15, D16, D24, D27, D31, D32, D33, D35, D40, D41, D42, D47, D52, D58, D59, D62, D67, D68, D70	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0031335	A00	DIODE ZENER 1N4742A 12V 5% DO-41	D4	
8	0032731	A00	DIODE SUPERFAST ES1D 200V 1A 15NS SMA/DO-214AC	D5, D7, D8, D25, D38, D43, D46, D50	
1	0026958	A00	DIODE SUPERFAST ER1J 600V 1A 35NS DO-214AA (SMA)	D6	
1	2036451	A00	DIODE SUPERFAST ES3D 3 AMP 200 VOLT SMC	D9	
4	0026984	A01	DIODE SUPERFAST 200V 10A 35NS TO220F	D10, D11, D12, D13	
1	0026961	A00	IC VREG AZ431BN-A 2.5-36V 0.1A SOT23-3	D14	
2	304-065-03	A01	LED GREEN SM 0805	D17, D28	
6	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D18, D29, D37, D45, D48, D49	
6	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D19, D20, D21, D22, D53, D54	
2	304-064-03	A01	LED RED SM 0805	D23, D26	
1	0026283	A00	DIODE GP GS1G 400V 1A SMA/DO-214AC	D30	
5	0004128	A00	DIODE 500MW SURFACE MOUNT ZENER MMSZ5232B 5.6V	D34, D39, D56, D60, D61	
2	300-012-03	A01	DIODE SW BAS21 SMT	D36, D44	
1	0026988	B00	FUSE SB 10A/250V 5X20MM UL CSA	F1	
2	400-060-00	A01	CONN FUSE CLIP PCMT 5MM DIA	FC1, FC2	
1	2033617-02	A00	CONN HDR 7A 2P 7.92MM 1ROW POLAR VRT	J1	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J2	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J7	
1	0013040-06	A00	CONN HDR 7A 6P 4.2MM 2ROW SHRD	J8	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J9, J10	
1	712-057-03	A01	LRG TEST POINT SMT	J100	
1	2033563	A03	IND COM 6MH 5A TOROID	L1	
1	0033419	A03	IND COM 16MH 10A TOROID	L2	
2	0026387	A00	MAG FERRITE BEAD 9.8X11.5X1.0MM D5A	L3, L4	
2	2040433	A00	IND SW 500KHz 25UH 10% 17A-DC EP20 500W RECON	L5, L7	
2	2033562	A01	IND COM 1MH 5A TOROID	L8, L12	
4	0027472	A00	IND 20UH 20% 2.5A 0.045 OHM RADIAL	L9, L10, L11, L14	
1	2038142	A00	XSTR NPN POWER KSD2012 TO-220F	Q1	
3	0026714	A00	XSTR GP MMBT4401 NPN 60V 0.6A SOT-23	Q2, Q7, Q10	
2	2039233	A00	XSTR FET N-CH FDP22N50N 500V 22A 0.22 OHM TO-220	Q3, Q4	
5	0026715	A00	XSTR GP MMBT4403 PNP 40V 0.6A SOT-23	Q5, Q6, Q8, Q9, Q22	
4	2034485	A01	XSTR FET N-CH IRFB5615PbF 150V 35A 0.032RDS TO-220	Q11, Q12, Q13, Q14	
1	0026692	A01	THYRISTOR MCR100-6 400V 0.8A TO-92	Q26	
1	121-132-00	A00	RES MO 300K OHM 5% 1W	R1	

Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2035397	A00	THERM NTC 100K 1% @ 25C TAB MOUNT L = 150MM	R2	
1	0026625	A00	RES MET-OX 1 5% 1W	R3	
1	0026654	A00	RES MET-OX 68K 5% 2W	R4	
6	0021368	A01	RES 10 5% 1/4W 1206	R5, R113, R118, R163, R168, R185	
7	146-457-00	A00	RES MF SM .25W 1% 51K1 OHM	R6, R90, R91, R95, R140, R141, R145	
28	0026424	A00	RES 10K 1% 1/10W 0603	R7, R8, R12, R15, R30, R48, R51, R80, R81, R82, R83, R84, R85, R104, R114, R119, R130, R131, R132, R133, R134, R135, R154, R164, R169, R193, R194, R195	
10	141-033-00	B01	RES MF SM .25W 5% 22 OHM	R10, R11, R13, R47, R50, R62, R198, R226, R227, R228	
4	0026447	A00	RES 1K00 1% 1/10W 0603	R14, R21, R22, R196	
6	0026516	A00	RES 4.7K 1% 1/10W 0603	R16, R32, R53, R55, R56, R188	
7	0026479	A00	RES 24.9K 1% 1/10W 0603	R17, R27, R86, R87, R136, R137, R187	
15	0026518	A00	RES 4.99K 1% 1/10W 0603	R18, R88, R89, R92, R105, R106, R107, R108, R138, R139, R142, R155, R156, R157, R158	
2	143-524-00	A1	RES TF 255K 1% 0.1W SMT	R19, R25	
7	0026417	A00	RES 100 1% 1/10W 0603	R20, R60, R65, R69, R75, R96, R146	
6	0026421	A00	RES 100K 1% 1/10W 0603	R26, R28, R34, R37, R42, R77	
3	0026491	A00	RES 3.3K 1% 1/4W 1206	R29, R44, R76	
2	0026484	A00	RES 27K 1% 1/10W 0603	R31, R68	
4	0026528	A00	RES 47K 1% 1/10W 0603	R45, R67, R184, R189	
8	0026464	A00	RES 20K 1% 1/10W 0603	R36, R182, R183, R190, R191, R223, R224, R225	
2	0026418	A00	RES 100 1% 1/4W 1206	R38, R39	
2	0026967	A00	RES MET-OX 68K 5% 1W	R40, R41	
2	0026490	A00	RES 3.3K 1% 1/10W 0603	R64, R178	
2	0026646	A00	RES MET-OX 5.1K 5% 2W	R43, R46	
1	0026543	A00	RES 6.49K 1% 1/10W 0603	R54	
1	0026432	A00	RES 12K 1% 1/10W 0603	R61	
2	0026508	A00	RES 390K 5% 1/10W 0603	R63, R66	
2	0026509	A00	RES 39K 1% 1/10W 0603	R70, R197	
4	0026955	A00	RES 470K 5% 1/4W 1206	R71, R72, R73, R74	
1	146-000-00	A00	RES MF SM .25W 1% 0 OHM 1206	R179	
2	130-090-00	A00	POT TRIM 1KOHM HORIZ	R93, R143	
2	0026521	A00	RES 470 1% 1/10W 0603	R94, R144	
4	146-273-00	A00	RES MF SM .25W 1% 681 OHM	R97, R100, R147, R150	
2	0027325	A00	RES 6.81K 1% 1/10W 0603	R98, R148	
6	146-081-00	A01	RES MF SM .25W 1% 6R81 OHM 1206	R101, R102, R120, R151, R152, R170	
2	146-443-00	A00	RES MF SM .25W 1% 36K5 OHM	R103, R153	
3	0026540	A00	RES 51K 1% 1/10W 0603	R9, R109, R159	
4	143-000-00	A01	RES TF 0.00 1% 0.1W SMT	R112, R117, R162, R167	
4	0009477	A00	RES SMT 10 OHM 5% 0.75W 2010	R121, R122, R171, R172	
3	0027306	A00	RES MET-OX 3K 5% 2W	R123, R173, R175	
2	0029102	A00	RES MET-OX 22 5% 2W	R124, R174	
2	0021336	A01	RES 100K 5% 1/4W 1206	R180, R199	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0025950	A00	XFMR SW 115/230V +/-54V 2A 200W	T1	
1	0025948	C00	XFMR DRIVER 15V 15V/15V 0.1A 3W	T2	
1	0025947	B01	XFMR CURRENT SENSE 10A 1:100	T3	
1	0030963	A01	XFMR SW 115/230V +/-15V 0.5A +5V 0.5A +15V 0.5A +15V 0.5A 25W	T4	
2	2042587	A00	THERM NTC 2.5 OHM 25% 9A 20MM UL, C-UL, TUV, CQC	TH1, TH2	
1	2038088	A00	IC PWM SG3525A VOLTAGE-MODE CONTROLLER SOIC-16DW	U1	
3	323-002-00	D00	IC LM339D QUAD COMP SM	U2, U8, U18	
2	0026389	A01	OPTO 1 CHANNEL 70V 200-400 4-DIP	U3, U9	
1	0026353	A00	IC TIMER NE556D SO14	U5	
1	0026980	A00	IC VREG ADJ 1.2-37V 1.5A ISOWATT220	U6	
1	2042436	A00	IC PWM CONTROLLER ICE3A1065ELJ CURRENT MODE DIP-8	U7	
5	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U10, U11, U13, U14, U17	
2	2040003	A00	IC DIGITAL PWM DRIVER IRS2092STRPbF	U12, U15	
1	329-014-00	A01	IC LM35DZ PREC TEMP SENSOR	U16	
1	0026388	A00	MOV 470VAC DISC 14MM	VR1	
3	0025312	A00	WIRE JUMPER 20AWG 60MM	J3, WL3, WL4	
6	0025400	A00	IND SW 1.5UH 1A R3X15	L13, L16, L17, L18, L19, L20	
1	0017668-13	J00	LBL IEC POWER RATING 100-120V~/ 220-240V~ 50-60Hz 150W	LBL1	
1	0016023	A00	LBL BLANK HI-TEMP WHT POLYIMIDE 1.00" X .250"		
1	0032856	E00	LBL SERIAL NUMBER GENERIC 35mm X 9.5mm UL	LBL2	
1	143-404-00	A1	RES TF 14.3K 1% 0.1W SMT	R23	
2	2043108	A00	MAG FERRITE BEAD 4X2X5.0MM A6 RH	L21, L22	
3	0026448	A00	RES 1K 1% 1/4W 1206	R35, R49, R52	
4	0027305	A00	RES 33.2K 1% 1/10W 0603	R57, R58, R59, R186	
2	0029095	A00	RES 3.32K 1% 1/10W 0603	R99, R149	
1	0026541	A00	RES 6.19K 1% 1/10W 0603	R192	
1	0027326	A00	RES 9.09K 1% 1/10W 0603	R240	
1	0026441	A00	RES 15K 1% 1/10W 0603	R33	
11	0024357	B00	SCR SEMS M3X8 PNH PHILLIP STL NICKEL		(10) FOR PCB MOUNT (1) WITH PCB MOUNT THRU SHIELD TAB
1	2041937	A00	COVER HEAT SINK SHIELD		
13	0020065-06	A01	SCREW M3 X 0.5 X 6MM PAN MCH SEMS-ETLW PH STL BLKZC		SHIELD SCREWS
2	2043405	B00	CLAMP TRANSISTOR LENGTH 29.2MM.		C-CLAMP TRANSISTOR, SECONDARY SIDE.
1	2044038	A00	CLAMP TRANSISTOR LENGTH 37MM EXTRUDED TAPPED M3		C-CLAMP TRANSISTOR, PRIMARY SIDE.





Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2043448	B00	CLAMP TRANSISTOR 66.2MM LENGTH		QUAD CLAMP
7	0026673	A00	SCR SEMS M3X12 PNH PHILLIP STL NICKEL		SCREW TO MOUNT BRACKETS, DIODES, INSULATION ETC.
1	0020269	A00	WASHER/FLAT M3		WASHER FOR PRIMARY BRIDGE RECTIFIER
1	2042690	B00	INSUL RECT BRIDGE PRIMARY TH-18Sv2		INSULATOR PRIMARY SIDE
4	0028527	B00	INSULATOR SILICON TRANSISTOR		INSULATOR-SECONDARY SIDE
2	2042594-05	C00	SHRINK TUBE D13X21MM		apply to item 25
2	0000659	A01	NUT HEX KEP M3		SECURE CABLE TO HEAT SINK AND PRIMARY DIODE
1	0032610	A00	TAPE THERMAL TRANSFER 0.5MM X 8MM X 18MM		THERMAL TAPE WRAP AROUND THERMAL SENSING IC
1	2042730	A01	COLLAR FOAM 9.5 X 6.0 RECT BUTTON		FOAM AROUND 9X6.5 BUTTON
16	2042613	A00	SCR MACH M3X8 PNH PHILLIP STL BLK NI		(8X) SCREWS, THRU PANEL TO HS. (8X) SCREWS TO MOUNT INPUT PCB
1	2042671	C00	SEAL GASKET SHIELD INPUT TH-18Sv2		GASKETS SANDWICHED BETWEEN INPUT BOARD AND SHIELD
1	2042673	C01	SHIELD INPUT BOARD TH-18Sv2		PLASTIC SHIELD AROUND INPUT BOARD
1	2042322-00	A04	PCB ASSY ASP TH-18Sv2		INPUT BOARD
1	2042321-00	A01	PCB FAB ASP TH-18Sv2	PCB1	
1	760-107-01	D00	BTN 2 COLOR 9X5MM [CONTROL GREY TOP - WHITE BOTTOM]	BTN1	
2	220-027-02	C00	CAP 10UF 20% 50V 85C AL RADIAL	C2, C4	
2	220-008-02	A1	CAP LYT 1UF 20% 50V RAD TR	C3, C6	
15	200-029-02	A01	CAP PLY/BX .22UF 5% 50V TR	C11, C12, C18, C22, C23, C24, C25, C26, C27, C28, C29, C83, C84, C85, C86	

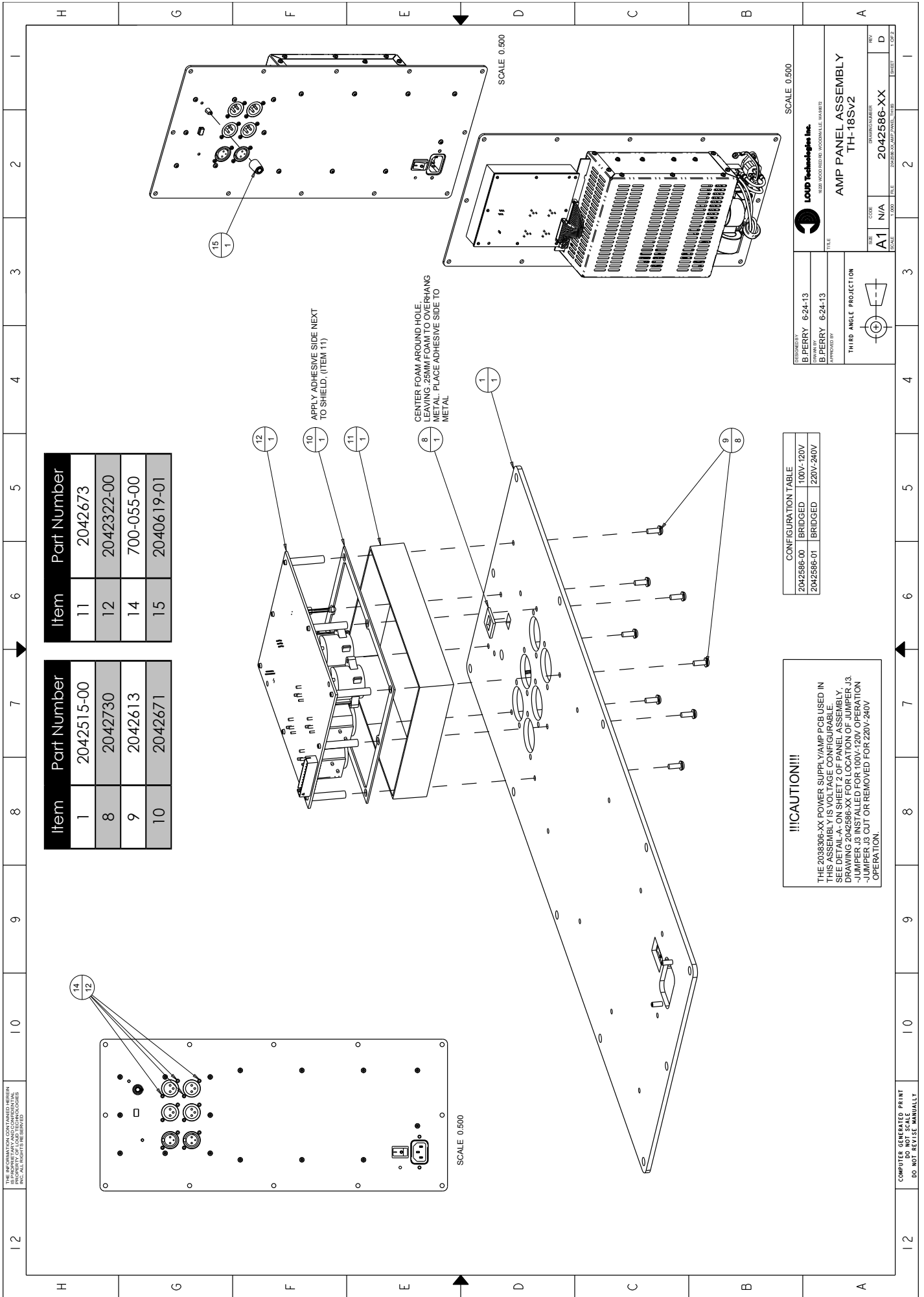


Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	200-022-02	A	PLY .47UF 5% 50V TR	C7, C8	
2	200-027-02	A11	CAP PLY .1UF 5% 100V TR	C13, C14	
2	0030383	A00	CAP 100UF 25V 20% 105C AL RADIAL (TAPING)	C30, C31	
28	212-025-00	D11	CAP CER .1UF 50V 10% X7R	C32, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C61, C64, C65, C69, C74, C80	
17	212-003-00	B11	CAP CER 100PF 5% 50V 0805 SMT	C1, C5, C33, C45, C60, C62, C63, C66, C67, C68, C70, C71, C75, C76, C77, C78, C79	
1	0026381	B00	LED RED 50MCD 620NM D3MM	D1	
1	0026378	B00	LED GREEN 50MCD 570NM D3MM	D2	
15	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D5, D6, D8, D9, D10, D11, D13, D17, D18, D19, D20, D21, D22, D23, D24	
1	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D12	
2	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D25, D26	
1	0007262	A00	PUSH BUTTON ADAPTER 39033 SRM 100	EXT1	
8	0008320-02	M00	STDF SWAGE M3 X 24MM 4.7 DIA	HDW1, HDW2, HDW3, HDW4, HDW5, HDW6, HDW7, HDW8	
2	2033694	A01	CONN XLR 4P FEMALE AA-SERIES NO-LATCH SHELL & PANEL TIED TO SEPARATE GROUND (PIN 4)	J1, J4	
4	2033697	A01	CONN XLR 3P MALE AA-SERIES SHELL & PANEL TIED TO SEPARATE GROUND (PIN 4)	J2, J3, J5, J6	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J8, J9	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J10	
3	311-001-00	B01	XSTR NPN IMBT4401 SMT	Q1, Q2, Q3	
1	2042007	A00	POT RTRY 10KB 9MM SNGL 36MM HT WITH DETENT	R1	
6	145-485-00	B	RES MF SM .1W 1% 100K OHM	R19, R23, R31, R35, R45, R53	
10	145-389-00	B	RES MF SM .1W 1% 10K0 OHM	R3, R13, R46, R52, R61, R82, R113, R116, R119, R122	
1	145-518-00	B01	RES MF SM .1W 1% 221K OHM	R6	
4	145-318-00	B	RES MF SM .1W 1% 2K00 OHM	R5, R7, R12, R18	
6	145-418-00	B	RES MF SM .1W 1% 20K0 OHM	R20, R30, R49, R66, R73, R81	
1	145-406-00	B	RES MF SM .1W 1% 15K0 OHM	R10	
2	140-118-00	A	RES TF SM .1W 5% 68K OHM	R11, R54	
1	145-310-00	B00	RES MF SM .125W 1% 1K65 OHM	R14	
1	145-383-00	B00	RES MF SM .1W 1% 8K66 OHM	R84	
1	145-439-00	B	RES MF SM .1W 1% 33K2 OHM	R16	
22	145-360-00	B01	RES MF SM .1W 1% 4K99 OHM	R17, R22, R38, R39, R41, R48, R65, R67, R87, R89, R90, R92, R102, R103, R109, R110, R114, R115, R120, R121, R126, R127	
1	145-339-00	B	RES MF SM 3K01 OHM 1% 0.1W 0805	R21	
2	140-135-00	A00	RES TF SM 330K 5% 0.1W 0805	R24, R58	
2	140-053-00	A00	RES TF SM .1W 5% 150 OHM	R55, R56	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	145-260-00	B	RES MF SM .1W 1% 499 OHM	R36, R37	
4	146-210-00	A01	RES MF SM .25W 1% 150 OHM 1206	R107, R108, R124, R125	
1	0000162	B00	SWITCH 2PDT PUSH V SNAPIN	SW1	
12	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U1, U2, U4, U5, U7, U8, U10, U11, U12, U14, U15, U16	
1	320-024-00	A01	IC TRANSCON AMP NJM13600M SM	U3	
1	311-002-00	A01	XSTR PNP MMST4403 SMT	Q4	
1	145-514-00	B	RES MF SM .1W 1% 200K OHM	R4	
1	145-422-00	B	RES MF SM .1W 1% 22K1 OHM	R34	
1	145-371-00	B	RES MF SM .1W 1% 6K49 OHM	R68	
8	145-427-00	B01	RES MF SM .1W 1% 24K9 OHM	R27, R28, R59, R74, R105, R112, R118, R129	
1	0023482	A00	RES MF SM 7.15K 1% 1/10W 0805	R83	
3	145-435-00	B	RES MF SM .1W 1% 30K1 OHM	R32, R51, R97	
5	145-306-00	B	RES MF SM .1W 1% 1K50 OHM	R88, R104, R111, R117, R128	
4	145-349-00	A00	RES MF SM .1W 1% 3K83 OHM	R106, R123, R130, R131	
2	706-095-00	A	SPCR PVC .905 T1 LED	SP1, SP2	
9	212-043-00	A11	CAP CER 680PF 5% 50V NPO SMT	C100, C101, C102, C103, C104, C105, C106, C107, C108	
1	145-000-00	B	RES TF SM .1W 0 OHM	R25	
1	145-397-00	B	RES MF SM .1W 1% 12K1 OHM	R72	
1	200-004-03	A00	CAP PLY .047UF 10% 100V TR NO HT RESTRICTION	C19	
1	660-005-00	A01	CBL 22GA JUMPER WIRE	JUMP1	
1	145-289-00	B	RES MF SM .1W 1% 1K00 OHM	R101	
1	145-331-00	B	RES MF SM .1W 1% 2K49 OHM	R40	
1	145-336-00	A00	RES MF SM .1W 1% 2K80 OHM	R50	
1	145-377-00	B	RES MF SM .1W 1% 7K50 OHM	R33	
1	145-401-00	A00	RES MF SM .1W 1% 13K3 OHM	R15	
12	700-055-00	A	SCR MCH 4-24X3/8 PHP BLK HILO		SCREWS TO XLR
1	2040619-01	D00	KNOB ANALOG LARGE UNIVERSAL WHITE 100		LARGE KNOB
1	0013712-010	A01	CBL ASSY 12 PIN 2.5MM TJC3 SINGLE ROW 10 CM LEN		12 PIN CABLE FROM INPUT BOARD TO AMP BOARD.
24	0005166	B00	CONN TERM TJC3 22-28AWG TR		
2	0005167-12	B00	CONN RECP 12P .098X1 TJC3		
1	0030476	A00	SWITCH ROCKER DPST 250VAC 10A UL CSA/250VAC 8A/80A VDE		
1	2044493-060	A00	CABLE 16AWG BLUE UL1015 QDISC (2X) TAB 4.5MMX.8MM 60MM LENGTH		
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		
1	2044494-060	A00	CABLE 16AWG BROWN UL1015 QDISC (2X) TAB 4.5MMX.8MM 60MM		
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		

Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		
12	51992008	A01	SCR SELFTAP PLASTIC DBL THD 4X20 PNH PHH STL BLK		AMP PANEL TO CABINET
4	152001	A	FOOT/RUBBER		FEET
4	2044050	A01	SCR SELFTAP WOOD M5X20 PNH PHILLIP STL BLK ZN		SCREWS FOR FEET
2	2043407-161	A00	TAPE EPDM FOAM 1.6MM THK X 6MM WIDE X 161MM LG CLOSED CELL SINGLE SIDED PSA BLK		FOAM TAPE, AMP PANEL TO BACK PANEL HORIZONTAL
2	2043407-427	A00	TAPE EPDM FOAM 1.6MM THK X 6MM WIDE X 427MM LG CLOSED CELL SINGLE SIDED PSA BLK		FOAM TAPE, AMP PANEL TO BACK PANEL VERTICAL
1	2042800	B00	ASSY CBL SPEAKER AND FRONT LED SUB		WIRE HARNESS, DRIVER, LED.
1	0013039-06	A00	CONN RECP 7A 6P 4.2MM 2ROW		
6	0013038	A00	CONN TERM FEM 7A 4.2MM 16-22 AWG TR		
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	2043393	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .250 X .032 16 AWG		FASTON CONNECTOR
1	2042290-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .205 X .032 16 AWG		FASTON CONNECTOR
2	0022257	A01	MAG FERRITE 9.5X17.5X28.5MM NI-ZN		
1	0027084	A00	MAG FERRITE 10X15X13 MN-ZN		
1	2042941	A00	FOAM TAPE - ADHESIVE BACKED - 30mm Wide x 400mm Len x 3.2mm Thick		WRAP AROUND FERRITES
1	2043565	B00	Quick Start Guide - Thump12_15_18S - INTERNATIONAL - PRINT		
1	2043606	C01	STICKER POP THUMP18S		
1	2042252	A01	ASSY PKG MATL Thump18S		
1	2042255	A01	BOX PRODUCT Thump18S		
4	2042260	A00	END CAP - Thump18S		
2	2042261	A00	CREASED CORRUGATED BOARD - Thump18S		
1	2042256-02	A00	BAG 2 MIL PE - GUSSETED - 720mm Wide x 500mm Deep x 1520mm Height		
2	0003203	B00	DESICCANT #4 UNIT TYVEK		
1	640-001-00	D	CORD PWR IEC US 10A 125V 2.0M		
2	2038731-03	A00	LBL BUMPER STICKER Mackie LRG		



Item	Part Number
11	2042673
12	2042322-00
14	700-055-00
15	2040619-01

Item	Part Number
1	2042515-00
8	2042730
9	2042613
10	2042671

CONFIGURATION TABLE

2042586-00	BRIDGED	100V-120V
2042586-01	BRIDGED	220V-240V

**!!CAUTION!!**

THE 2038306-XX POWER SUPPLY PCB USED IN THIS ASSEMBLY IS VOLTAGE CONFIGURABLE. SEE DETAIL-A ON SHEET 2 OF PANEL ASSEMBLY DRAWING 2042586-XX FOR LOCATION OF JUMPER J3. JUMPER J3 INSTALLED FOR 100V-120V OPERATION -JUMPER J3 CUT OR REMOVED FOR 220V-240V OPERATION.

DESIGNED BY  
B. PERRY 6-24-13

APPROVED BY  
B. PERRY 6-24-13

THIRD ANGLE PROJECTION

SCALE 0.500

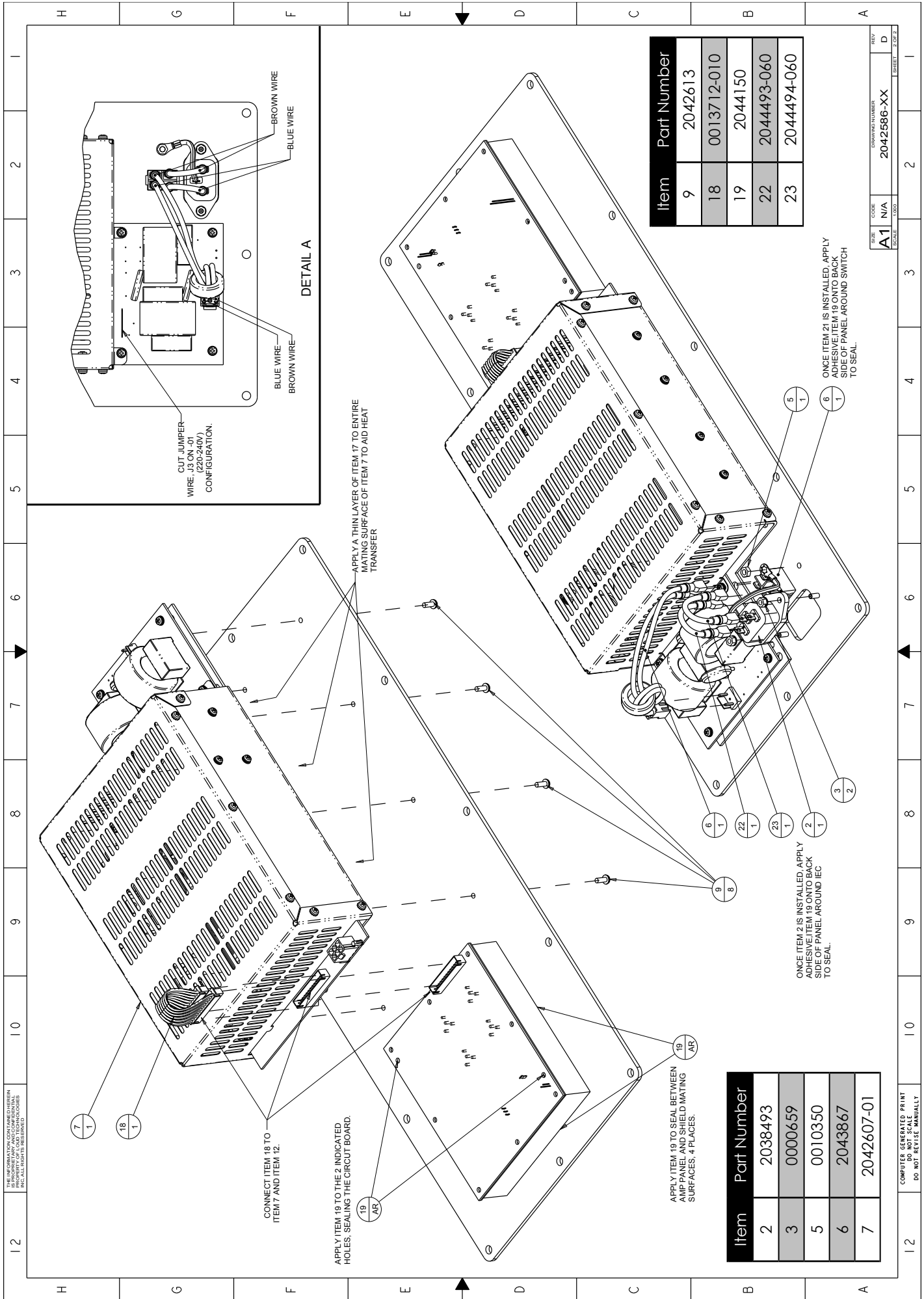
LOUP Technologies Inc.  
1525 WOODFIELD RD. WOODBRIDGE, VA 22192

AMP PANEL ASSEMBLY  
TH-18Sv2

REV	DESCRIPTION	DATE
A1	N/A	2042586-XX

FILE: 2042586-XX AMP PANEL\_TUBS.DWG SHEET 1 OF 2

COMPUTER GENERATED PRINT  
DO NOT REVISE MANUALLY



Item	Part Number
9	2042613
18	0013712-010
19	2044150
22	2044493-060
23	2044494-060

Item	Part Number
2	2038493
3	0000659
5	0010350
6	2043867
7	2042607-01

SIZE	CODE	REV
A1	N/A	D
SCALE	1:1	DRAWING NUMBER
		2042586-XX
		SHEET 2 OF 2

12 COMPUTER GENERATED PRINT  
DO NOT REVISE MANUALLY



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2042515-00	B02	REAR PANEL MAIN METAL THUMP18S 100V-120V		METAL PANEL
1	2038493	A00	ASSY CBL IEC INT W 50MM 16AWG GND WIRE		IEC WITH CABLES
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		
2	0000659	A01	NUT HEX KEP M3		SECURE IEC 2X
1	0010350	B00	NUT HEX M3.5x0.6MM STL CLR ZNC (DIN 934)		NUT GRND STUD
1	2043867	C00	ASSY CBL SWITCH POWER		CABLE ASSEMBLY
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		
1	0022473	A00	MAG FERRITE 22X14X8MM MN-ZN		
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		USED WITH ITEM 10
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		
1	2042607-01	B01	ASSY AMP AND POWER SUPPLY/ MG300+300W BRIDGED		AMP ASSEMBLY
1	2041940	A00	FORMING HEAT SINK/PCB SUPPORT		
1	2038306-01	B00	PCB ASSY POWER SUPPLY/AMP MG300+300W BRIDGED		
1	2038305-01	B00	PCB FAB POWER SUPPLY/AMP MG300+300W	PCB1	
2	0026138	A00	CAP 0.47UF 275V 10% X2 RADIAL	C1, C5	
3	0029768	A00	CAP 2200PF 20% 250VAC Y1 CER DISC	C2, C3, C8	
1	0026174	A00	CAP 1UF 275V 10% POLYP BOX X2 RADIAL	C4	
2	0026978	A01	CAP 1500UF 200V 20% 85C AL RADIAL	C6, C7	
2	2043780	A00	CAP 3300pF 20% 440VAC Y1 BOX	C9, C12	
1	0028747	A00	CAP 0.33UF 400V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C10	
53	0026125	A00	CAP 0.1UF 50V 5% X7R 0603	C11, C14, C19, C20, C21, C22, C31, C36, C41, C42, C44, C45, C46, C47, C50, C53, C55, C56, C58, C59, C61, C62, C68, C73, C77, C78, C88, C89, C92, C97, C101, C102, C103, C105, C106, C107, C127, C128, C130, C132, C133, C134, C135, C136, C137, C138, C141, C142, C146, C147, C153, C155, C156	
1	0026144	A00	CAP 1000PF 1000V 10% CER DISC	C13	
9	0027311	A00	CAP 1000PF 50V 5% NPO 0603	C15, C16, C48, C71, C116, C117, C131, C171, C172	
6	0026979	A00	CAP 680UF 100V 20% 105C AL LESR RADIAL	C17, C18, C23, C24, C25, C26	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
4	2037007	A00	CAP CER 0.1UF 200V X7R 1206	C27, C63, C64, C119	
4	220-067-02	A11	CAP LYT 47UF 20% 25V 105C T/A	C28, C32, C95, C115	
4	0029761	A00	CAP 0.68UF 100V 20% X7R 1812	C29, C38, C121, C123	
1	0031389	A00	CAP LYT 100UF 20% 25V 105C RAD	C30	
4	0026214	A00	CAP 470PF 50V 2% NPO 0603	C33, C35, C111, C112	
3	0031390	A00	CAP LYT 10UF 20% 50V 105C RAD	C34, C66, C91	
3	0026175	A00	CAP 1UF 50V 10% X7R 1206	C37, C60, C80	
6	0008480	A	CAP CER 47P 200V 5% 1206 NPO	C39, C40, C94, C124, C125, C152	
8	0026146	A00	CAP 1000PF 100V 10% X7R 1206	C43, C72, C84, C86, C87, C99, C122, C129	
2	0026133	A00	CAP 0.22UF 50V 10% X7R 0805	C49, C51	
2	0026126	A00	CAP 0.1UF 630V 10% METALLIZED POLYESTER FILM RADIAL	C52, C139	
10	0032725	A00	CAP 10UF 25V 10% X7R 1206	C54, C57, C69, C70, C93, C96, C143, C144, C148, C149	
4	0030387	A00	CAP 220UF 25V 20% 105C AL LESR RADIAL (TAPING)	C65, C67, C81, C82	
2	0026137	A00	CAP 0.47UF 250V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C74, C118	
3	0026217	A00	CAP 470UF 25V 20% 105C AL LESR RADIAL	C75, C83, C110	
5	0020295	A00	CAP CER 4.7uF 25V X7R SMT1206	C76, C90, C140, C150, C151	
2	0026114	A00	CAP 0.1UF 100V 10% METALLIZED POLYESTER FILM RADIAL	C79, C120	
4	0021369	A01	CAP 47PF 50V 5% NPO 0603	C100, C104, C126, C145	
4	212-004-00	C11	CAP CER 220PF 5% 50V NPO SM	C108, C109, C113, C114	
4	0029767	A00	CAP COG/NPO 100pF 5% 200V 1206 SMT	C160, C161, C162, C163	
1	0026983	A00	DIODE BRIDGE KBJ1506 600V 15A KBJ	D1	
1	2042047	A00	DIODE ZENER 500MW SMT MMSZ5251B 22V	D2	
20	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D3, D15, D16, D24, D27, D31, D32, D33, D35, D40, D41, D42, D47, D52, D58, D59, D62, D67, D68, D70	
1	0031335	A00	DIODE ZENER 1N4742A 12V 5% DO-41	D4	
8	0032731	A00	DIODE SUPERFAST ES1D 200V 1A 15NS SMA/DO-214AC	D5, D7, D8, D25, D38, D43, D46, D50	
1	0026958	A00	DIODE SUPERFAST ER1J 600V 1A 35NS DO-214AA (SMA)	D6	
1	2036451	A00	DIODE SUPERFAST ES3D 3 AMP 200 VOLT SMC	D9	
4	0026984	A01	DIODE SUPERFAST 200V 10A 35NS TO220F	D10, D11, D12, D13	
1	0026961	A00	IC VREG AZ431BN-A 2.5-36V 0.1A SOT23-3	D14	
2	304-065-03	A01	LED GREEN SM 0805	D17, D28	





Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
6	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D18, D29, D37, D45, D48, D49	
6	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D19, D20, D21, D22, D53, D54	
2	304-064-03	A01	LED RED SM 0805	D23, D26	
1	0026283	A00	DIODE GP GS1G 400V 1A SMA/DO- 214AC	D30	
5	0004128	A00	DIODE 500MW SURFACE MOUNT ZENER MMSZ5232B 5.6V	D34, D39, D56, D60, D61	
2	300-012-03	A01	DIODE SW BAS21 SMT	D36, D44	
1	0026988	B00	FUSE SB 10A/250V 5X20MM UL CSA	F1	
2	400-060-00	A01	CONN FUSE CLIP PCMT 5MM DIA	FC1, FC2	
1	2033617-02	A00	CONN HDR 7A 2P 7.92MM 1ROW POLAR VRT	J1	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J2	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J7	
1	0013040-06	A00	CONN HDR 7A 6P 4.2MM 2ROW SHRD	J8	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J9, J10	
1	712-057-03	A01	LRG TEST POINT SMT	J100	
1	2033563	A03	IND COM 6MH 5A TOROID	L1	
1	0033419	A03	IND COM 16MH 10A TOROID	L2	
2	0026387	A00	MAG FERRITE BEAD 9.8X11.5X1.0MM D5A	L3, L4	
2	2040433	A00	IND SW 500KHz 25UH 10% 17A-DC EP20 500W RECON	L5, L7	
2	2033562	A01	IND COM 1MH 5A TOROID	L8, L12	
4	0027472	A00	IND 20UH 20% 2.5A 0.045 OHM RADIAL	L9, L10, L11, L14	
1	2038142	A00	XSTR NPN POWER KSD2012 TO-220F	Q1	
3	0026714	A00	XSTR GP MMBT4401 NPN 60V 0.6A SOT-23	Q2, Q7, Q10	
2	2039233	A00	XSTR FET N-CH FDP22N50N 500V 22A 0.22 OHM TO-220	Q3, Q4	
5	0026715	A00	XSTR GP MMBT4403 PNP 40V 0.6A SOT-23	Q5, Q6, Q8, Q9, Q22	
4	2034485	A01	XSTR FET N-CH IRFB5615PbF 150V 35A 0.032RDS TO-220	Q11, Q12, Q13, Q14	
1	0026692	A01	THYRISTOR MCR100-6 400V 0.8A TO-92	Q26	
1	121-132-00	A00	RES MO 300K OHM 5% 1W	R1	
1	2035397	A00	THERM NTC 100K 1% @ 25C TAB MOUNT L = 150MM	R2	
1	0026625	A00	RES MET-OX 1 5% 1W	R3	
1	0026654	A00	RES MET-OX 68K 5% 2W	R4	
6	0021368	A01	RES 10 5% 1/4W 1206	R5, R113, R118, R163, R168, R185	
7	146-457-00	A00	RES MF SM .25W 1% 51K1 OHM	R6, R90, R91, R95, R140, R141, R145	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
28	0026424	A00	RES 10K 1% 1/10W 0603	R7, R8, R12, R15, R30, R48, R51, R80, R81, R82, R83, R84, R85, R104, R114, R119, R130, R131, R132, R133, R134, R135, R154, R164, R169, R193, R194, R195	
10	141-033-00	B01	RES MF SM .25W 5% 22 OHM	R10, R11, R13, R47, R50, R62, R198, R226, R227, R228	
4	0026447	A00	RES 1K00 1% 1/10W 0603	R14, R21, R22, R196	
6	0026516	A00	RES 4.7K 1% 1/10W 0603	R16, R32, R53, R55, R56, R188	
7	0026479	A00	RES 24.9K 1% 1/10W 0603	R17, R27, R86, R87, R136, R137, R187	
15	0026518	A00	RES 4.99K 1% 1/10W 0603	R18, R88, R89, R92, R105, R106, R107, R108, R138, R139, R142, R155, R156, R157, R158	
2	143-524-00	A1	RES TF 255K 1% 0.1W SMT	R19, R25	
7	0026417	A00	RES 100 1% 1/10W 0603	R20, R60, R65, R69, R75, R96, R146	
6	0026421	A00	RES 100K 1% 1/10W 0603	R26, R28, R34, R37, R42, R77	
3	0026491	A00	RES 3.3K 1% 1/4W 1206	R29, R44, R76	
2	0026484	A00	RES 27K 1% 1/10W 0603	R31, R68	
4	0026528	A00	RES 47K 1% 1/10W 0603	R45, R67, R184, R189	
8	0026464	A00	RES 20K 1% 1/10W 0603	R36, R182, R183, R190, R191, R223, R224, R225	
2	0026418	A00	RES 100 1% 1/4W 1206	R38, R39	
2	0026967	A00	RES MET-OX 68K 5% 1W	R40, R41	
2	0026490	A00	RES 3.3K 1% 1/10W 0603	R64, R178	
2	0026646	A00	RES MET-OX 5.1K 5% 2W	R43, R46	
1	0026543	A00	RES 6.49K 1% 1/10W 0603	R54	
1	0026432	A00	RES 12K 1% 1/10W 0603	R61	
2	0026508	A00	RES 390K 5% 1/10W 0603	R63, R66	
2	0026509	A00	RES 39K 1% 1/10W 0603	R70, R197	
4	0026955	A00	RES 470K 5% 1/4W 1206	R71, R72, R73, R74	
1	146-000-00	A00	RES MF SM .25W 1% 0 OHM 1206	R179	
2	130-090-00	A00	POT TRIM 1KOHM HORIZ	R93, R143	
2	0026521	A00	RES 470 1% 1/10W 0603	R94, R144	
4	146-273-00	A00	RES MF SM .25W 1% 681 OHM	R97, R100, R147, R150	
2	0027325	A00	RES 6.81K 1% 1/10W 0603	R98, R148	
6	146-081-00	A01	RES MF SM .25W 1% 6R81 OHM 1206	R101, R102, R120, R151, R152, R170	
2	146-443-00	A00	RES MF SM .25W 1% 36K5 OHM	R103, R153	
3	0026540	A00	RES 51K 1% 1/10W 0603	R9, R109, R159	
4	143-000-00	A01	RES TF 0.00 1% 0.1W SMT	R112, R117, R162, R167	
4	0009477	A00	RES SMT 10 OHM 5% 0.75W 2010	R121, R122, R171, R172	
3	0027306	A00	RES MET-OX 3K 5% 2W	R123, R173, R175	
2	0029102	A00	RES MET-OX 22 5% 2W	R124, R174	
2	0021336	A01	RES 100K 5% 1/4W 1206	R180, R199	
1	0025950	A00	XFMR SW 115/230V +/-54V 2A 200W	T1	
1	0025948	C00	XFMR DRIVER 15V 15V/15V 0.1A 3W	T2	
1	0025947	B01	XFMR CURRENT SENSE 10A 1:100	T3	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0030963	A01	XFMR SW 115/230V +/-15V 0.5A +5V 0.5A +15V 0.5A +15V 0.5A 25W	T4	
2	2042587	A00	THERM NTC 2.5 OHM 25% 9A 20MM UL, C-UL, TUV, CQC	TH1, TH2	
1	2038088	A00	IC PWM SG3525A VOLTAGE-MODE CONTROLLER SOIC-16DW	U1	
3	323-002-00	D00	IC LM339D QUAD COMP SM	U2, U8, U18	
2	0026389	A01	OPTO 1 CHANNEL 70V 200-400 4-DIP	U3, U9	
1	0026353	A00	IC TIMER NE555D SO14	U5	
1	0026980	A00	IC VREG ADJ 1.2-37V 1.5A ISOWATT220	U6	
1	2042436	A00	IC PWM CONTROLLER ICE3A1065ELJ CURRENT MODE DIP-8	U7	
5	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U10, U11, U13, U14, U17	
2	2040003	A00	IC DIGITAL PWM DRIVER IRS2092STRPbF	U12, U15	
1	329-014-00	A01	IC LM35DZ PREC TEMP SENSOR	U16	
1	0026388	A00	MOV 470VAC DISC 14MM	VR1	
3	0025312	A00	WIRE JUMPER 20AWG 60MM	J3, WL3, WL4	
6	0025400	A00	IND SW 1.5UH 1A R3X15	L13, L16, L17, L18, L19, L20	
1	0017668-13	J00	LBL IEC POWER RATING 100-120V~/220-240V~ 50-60Hz 150W	LBL1	
1	0016023	A00	LBL BLANK HI-TEMP WHT POLYIMIDE 1.00" X .250"		
1	0032856	E00	LBL SERIAL NUMBER GENERIC 35mm X 9.5mm UL	LBL2	
1	143-404-00	A1	RES TF 14.3K 1% 0.1W SMT	R23	
2	2043108	A00	MAG FERRITE BEAD 4X2X5.0MM A6 RH	L21, L22	
3	0026448	A00	RES 1K 1% 1/4W 1206	R35, R49, R52	
4	0027305	A00	RES 33.2K 1% 1/10W 0603	R57, R58, R59, R186	
2	0029095	A00	RES 3.32K 1% 1/10W 0603	R99, R149	
1	0026541	A00	RES 6.19K 1% 1/10W 0603	R192	
1	0027326	A00	RES 9.09K 1% 1/10W 0603	R240	
1	0026441	A00	RES 15K 1% 1/10W 0603	R33	
11	0024357	B00	SCR SEMS M3X8 PNH PHILLIP STL NICKEL		(10) FOR PCB MOUNT (1) WITH PCB MOUNT THRU SHIELD TAB
1	2041937	A00	COVER HEAT SINK SHIELD		
13	0020065-06	A01	SCREW M3 X 0.5 X 6MM PAN MCH SEMS-ETLW PH STL BLKZC		SHIELD SCREWS
2	2043405	B00	CLAMP TRANSISTOR LENGTH 29.2MM.		C-CLAMP TRANSISTOR, SECONDARY SIDE.
1	2044038	A00	CLAMP TRANSISTOR LENGTH 37MM EXTRUDED TAPPED M3		C-CLAMP TRANSISTOR, PRIMARY SIDE.
1	2043448	B00	CLAMP TRANSISTOR 66.2MM LENGTH		QUAD CLAMP



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
7	0026673	A00	SCR SEMS M3X12 PNH PHILLIP STL NICKEL		SCREW TO MOUNT BRACKETS, DIODES, INSULATION ETC.
1	0020269	A00	WASHER/FLAT M3		WASHER FOR PRIMARY BRIDGE RECTIFIER
1	2042690	B00	INSUL RECT BRIDGE PRIMARY TH-18Sv2		INSULATOR PRIMARY SIDE
4	0028527	B00	INSULATOR SILICON TRANSISTOR		INSULATOR-SECONDARY SIDE
2	2042594-05	C00	SHRINK TUBE D13X21MM		apply to item 25
	730-001-00	A01	THERMAL COMPOUND		
2	0000659	A01	NUT HEX KEP M3		SECURE CABLE TO HEAT SINK AND PRIMARY DIODE
1	0032610	A00	TAPE THERMAL TRANSFER 0.5MM X 8MM X 18MM		THERMAL TAPE WRAP AROUND THERMAL SENSING IC
1	2042730	A01	COLLAR FOAM 9.5 X 6.0 RECT BUTTON		FOAM AROUND 9X6.5 BUTTON
	LPT2042730	001	TOOL-DIE CUT COLLAR FOAM 9.5 X 6.0 BUTTON		
16	2042613	A00	SCR MACH M3X8 PNH PHILLIP STL BLK NI		(8X) SCREWS, THRU PANEL TO HS. (8X) SCREWS TO MOUNT INPUT PCB
1	2042671	C00	SEAL GASKET SHIELD INPUT TH-18Sv2		GASKETS SANDWICHED BETWEEN INPUT BOARD AND SHIELD
	LPT2042671	001	TOOL STAMP SEAL GASKET SHIELD INPUT BOARD		
1	2042673	C01	SHIELD INPUT BOARD TH-18Sv2		PLASTIC SHIELD AROUND INPUT BOARD
1	2042322-00	A04	PCB ASSY ASP TH-18Sv2		INPUT BOARD
1	2042321-00	A01	PCB FAB ASP TH-18Sv2	PCB1	
1	760-107-01	D00	BTN 2 COLOR 9X5MM [CONTROL GREY TOP - WHITE BOTTOM]	BTN1	
2	220-027-02	C00	CAP 10UF 20% 50V 85C AL RADIAL	C2, C4	
2	220-008-02	A1	CAP LYT 1UF 20% 50V RAD TR	C3, C6	



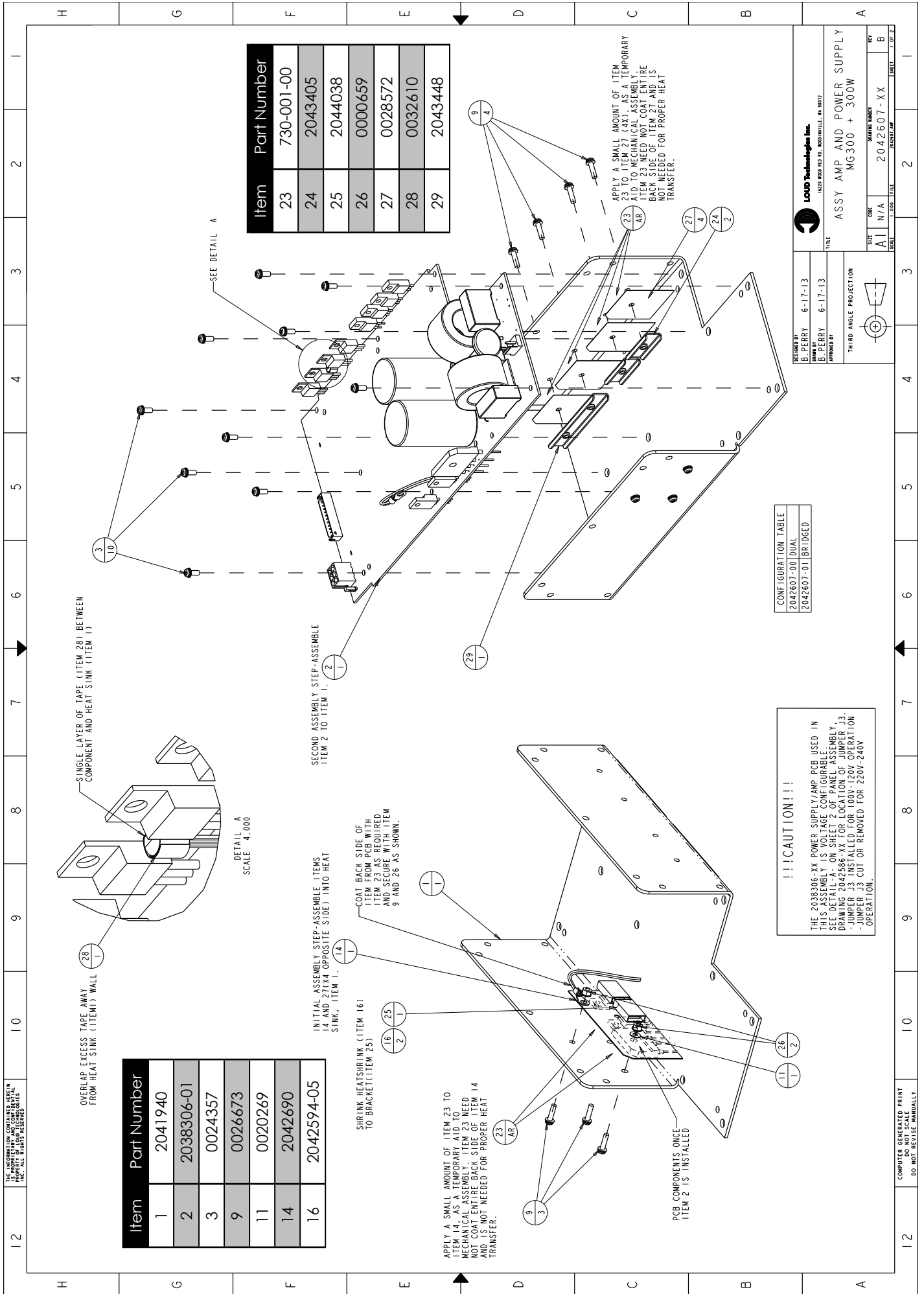
Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
15	200-029-02	A01	CAP PLY/BX .22UF 5% 50V TR	C11, C12, C18, C22, C23, C24, C25, C26, C27, C28, C29, C83, C84, C85, C86	
2	200-022-02	A	PLY .47UF 5% 50V TR	C7, C8	
2	200-027-02	A11	CAP PLY .1UF 5% 100V TR	C13, C14	
2	0030383	A00	CAP 100UF 25V 20% 105C AL RADIAL (TAPING)	C30, C31	
28	212-025-00	D11	CAP CER .1UF 50V 10% X7R	C32, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C61, C64, C65, C69, C74, C80	
17	212-003-00	B11	CAP CER 100PF 5% 50V 0805 SMT	C1, C5, C33, C45, C60, C62, C63, C66, C67, C68, C70, C71, C75, C76, C77, C78, C79	
1	0026381	B00	LED RED 50MCD 620NM D3MM	D1	
1	0026378	B00	LED GREEN 50MCD 570NM D3MM	D2	
15	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D5, D6, D8, D9, D10, D11, D13, D17, D18, D19, D20, D21, D22, D23, D24	
1	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D12	
2	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D25, D26	
1	0007262	A00	PUSH BUTTON ADAPTER 39033 SRM 100	EXT1	
8	0008320-02	M00	STDF SWAGE M3 X 24MM 4.7 DIA	HDW1, HDW2, HDW3, HDW4, HDW5, HDW6, HDW7, HDW8	
2	2033694	A01	CONN XLR 4P FEMALE AA-SERIES NO-LATCH SHELL & PANEL TIED TO SEPARATE GROUND (PIN 4)	J1, J4	
4	2033697	A01	CONN XLR 3P MALE AA-SERIES SHELL & PANEL TIED TO SEPARATE GROUND (PIN 4)	J2, J3, J5, J6	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J8, J9	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J10	
3	311-001-00	B01	XSTR NPN IMBT4401 SMT	Q1, Q2, Q3	
1	2042007	A00	POT RTRY 10KB 9MM SNGL 36MM HT WITH DETENT	R1	
6	145-485-00	B	RES MF SM .1W 1% 100K OHM	R19, R23, R31, R35, R45, R53	
10	145-389-00	B	RES MF SM .1W 1% 10K0 OHM	R3, R13, R46, R52, R61, R82, R113, R116, R119, R122	
1	145-518-00	B01	RES MF SM .1W 1% 221K OHM	R6	
4	145-318-00	B	RES MF SM .1W 1% 2K00 OHM	R5, R7, R12, R18	
6	145-418-00	B	RES MF SM .1W 1% 20K0 OHM	R20, R30, R49, R66, R73, R81	
1	145-406-00	B	RES MF SM .1W 1% 15K0 OHM	R10	
2	140-118-00	A	RES TF SM .1W 5% 68K OHM	R11, R54	
1	145-310-00	B00	RES MF SM .125W 1% 1K65 OHM	R14	
1	145-383-00	B00	RES MF SM .1W 1% 8K66 OHM	R84	
1	145-439-00	B	RES MF SM .1W 1% 33K2 OHM	R16	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
22	145-360-00	B01	RES MF SM .1W 1% 4K99 OHM	R17, R22, R38, R39, R41, R48, R65, R67, R87, R89, R90, R92, R102, R103, R109, R110, R114, R115, R120, R121, R126, R127	
1	145-339-00	B	RES MF SM 3K01 OHM 1% 0.1W 0805	R21	
2	140-135-00	A00	RES TF SM 330K 5% 0.1W 0805	R24, R58	
2	140-053-00	A00	RES TF SM .1W 5% 150 OHM	R55, R56	
2	145-260-00	B	RES MF SM .1W 1% 499 OHM	R36, R37	
4	146-210-00	A01	RES MF SM .25W 1% 150 OHM 1206	R107, R108, R124, R125	
1	0000162	B00	SWITCH 2PDT PUSH V SNAPIN	SW1	
12	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U1, U2, U4, U5, U7, U8, U10, U11, U12, U14, U15, U16	
1	320-024-00	A01	IC TRANSCON AMP NJM13600M SM	U3	
1	311-002-00	A01	XSTR PNP MMST4403 SMT	Q4	
1	145-514-00	B	RES MF SM .1W 1% 200K OHM	R4	
1	145-422-00	B	RES MF SM .1W 1% 22K1 OHM	R34	
1	145-371-00	B	RES MF SM .1W 1% 6K49 OHM	R68	
8	145-427-00	B01	RES MF SM .1W 1% 24K9 OHM	R27, R28, R59, R74, R105, R112, R118, R129	
1	0023482	A00	RES MF SM 7.15K 1% 1/10W 0805	R83	
3	145-435-00	B	RES MF SM .1W 1% 30K1 OHM	R32, R51, R97	
5	145-306-00	B	RES MF SM .1W 1% 1K50 OHM	R88, R104, R111, R117, R128	
4	145-349-00	A00	RES MF SM .1W 1% 3K83 OHM	R106, R123, R130, R131	
2	706-095-00	A	SPCR PVC .905 T1 LED	SP1, SP2	
9	212-043-00	A11	CAP CER 680PF 5% 50V NPO SMT	C100, C101, C102, C103, C104, C105, C106, C107, C108	
1	145-000-00	B	RES TF SM .1W 0 OHM	R25	
1	145-397-00	B	RES MF SM .1W 1% 12K1 OHM	R72	
1	200-004-03	A00	CAP PLY .047UF 10% 100V TR NO HT RESTRICTION	C19	
1	660-005-00	A01	CBL 22GA JUMPER WIRE	JUMP1	
1	145-289-00	B	RES MF SM .1W 1% 1K00 OHM	R101	
1	145-331-00	B	RES MF SM .1W 1% 2K49 OHM	R40	
1	145-336-00	A00	RES MF SM .1W 1% 2K80 OHM	R50	
1	145-377-00	B	RES MF SM .1W 1% 7K50 OHM	R33	
1	145-401-00	A00	RES MF SM .1W 1% 13K3 OHM	R15	
12	700-055-00	A	SCR MCH 4-24X3/8 PHP BLK HILO		SCREWS TO XLR
1	2040619-01	D00	KNOB ANALOG LARGE UNIVERSAL WHITE 100		LARGE KNOB
1	0013712-010	A01	CBL ASSY 12 PIN 2.5MM TJC3 SINGLE ROW 10 CM LEN		12 PIN CABLE FROM INPUT BOARD TO AMP BOARD.
24	0005166	B00	CONN TERM TJC3 22-28AWG TR		
2	0005167-12	B00	CONN RECP 12P .098X1 TJC3		
1	0030476	A00	SWITCH ROCKER DPST 250VAC 10A UL CSA/250VAC 8A/80A VDE		



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	2044493-060	A00	CABLE 16AWG BLUE UL1015 QDISC (2X) TAB 4.5MMX.8MM 60MM LENGTH		
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		
1	2044494-060	A00	CABLE 16AWG BROWN UL1015 QDISC (2X) TAB 4.5MMX.8MM 60MM		
2	2044120	A00	SLEEVE PVC QDISC .187 TERMINAL		
2	2042289-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .187 X .032 16 AWG		



SINGLE LAYER OF TAPE (ITEM 28) BETWEEN COMPONENT AND HEAT SINK (ITEM 1)

OVERLAP EXCESS TAPE AWAY FROM HEAT SINK (ITEM) WALL

Item	Part Number
1	2041940
2	2038306-01
3	0024357
9	0026673
11	0020269
14	2042690
16	2042594-05

DETAIL A  
SCALE 4:000

INITIAL ASSEMBLY STEP-ASSEMBLE ITEMS 14 AND 24 OPPOSITE SIDE INTO HEAT SINK, ITEM 1.

SECOND ASSEMBLY STEP-ASSEMBLE ITEM 2 TO ITEM 1.

SHRINK HEATSHRINK (ITEM 16) TO BRACKET (ITEM 25)

COAT BACK SIDE OF ITEM 23 AS REQUIRED AND SECURE WITH ITEM 9 AND 26 AS SHOWN.

APPLY A SMALL AMOUNT OF ITEM 23 TO ITEM 14, AS A TEMPORARY AID TO MECHANICAL ASSEMBLY. ITEM 23 NEED NOT COAT ENTIRE BACK SIDE OF ITEM 14 AND IS NOT NEEDED FOR PROPER HEAT TRANSFER.

PCB COMPONENTS ONCE ITEM 2 IS INSTALLED

APPLY A SMALL AMOUNT OF ITEM 23 TO ITEM 27 (4X) AS A TEMPORARY AID TO MECHANICAL ASSEMBLY. ITEM 23 NEED NOT COAT ENTIRE BACK SIDE OF ITEM 27 AND IS NOT NEEDED FOR PROPER HEAT TRANSFER.

Item	Part Number
23	730-001-00
24	2043405
25	2044038
26	0000659
27	0028572
28	0032610
29	2043448

**!!!CAUTION!!!**  
THE 2038306-XX POWER SUPPLY AMP PCB USED IN THIS ASSEMBLY IS A TEMPORARY CONFIGURATION. SEE DETAIL A - ON SHEET 2 OF PANEL ASSEMBLY DRAWING 2042586-XX FOR LOCATION OF JUMPER J3. - JUMPER J3 INSTALLED FOR 100V-120V OPERATION. - JUMPER J3 CUT OR REMOVED FOR 220V-240V OPERATION.

CONFIGURATION TABLE
2042607-00 DUAL
2042607-01 BRIDGED

**LOUIS Technology Inc.**  
1425 WOOD RD. WOODVILLE, MA 01872

DESIGNED BY: B. PERRY 6-17-13  
DRAWN BY: B. PERRY 6-17-13  
APPROVED BY: [Signature]

THIRD ANGLE PROJECTION

SCALE: 1:000 TITLE: 2042607-01

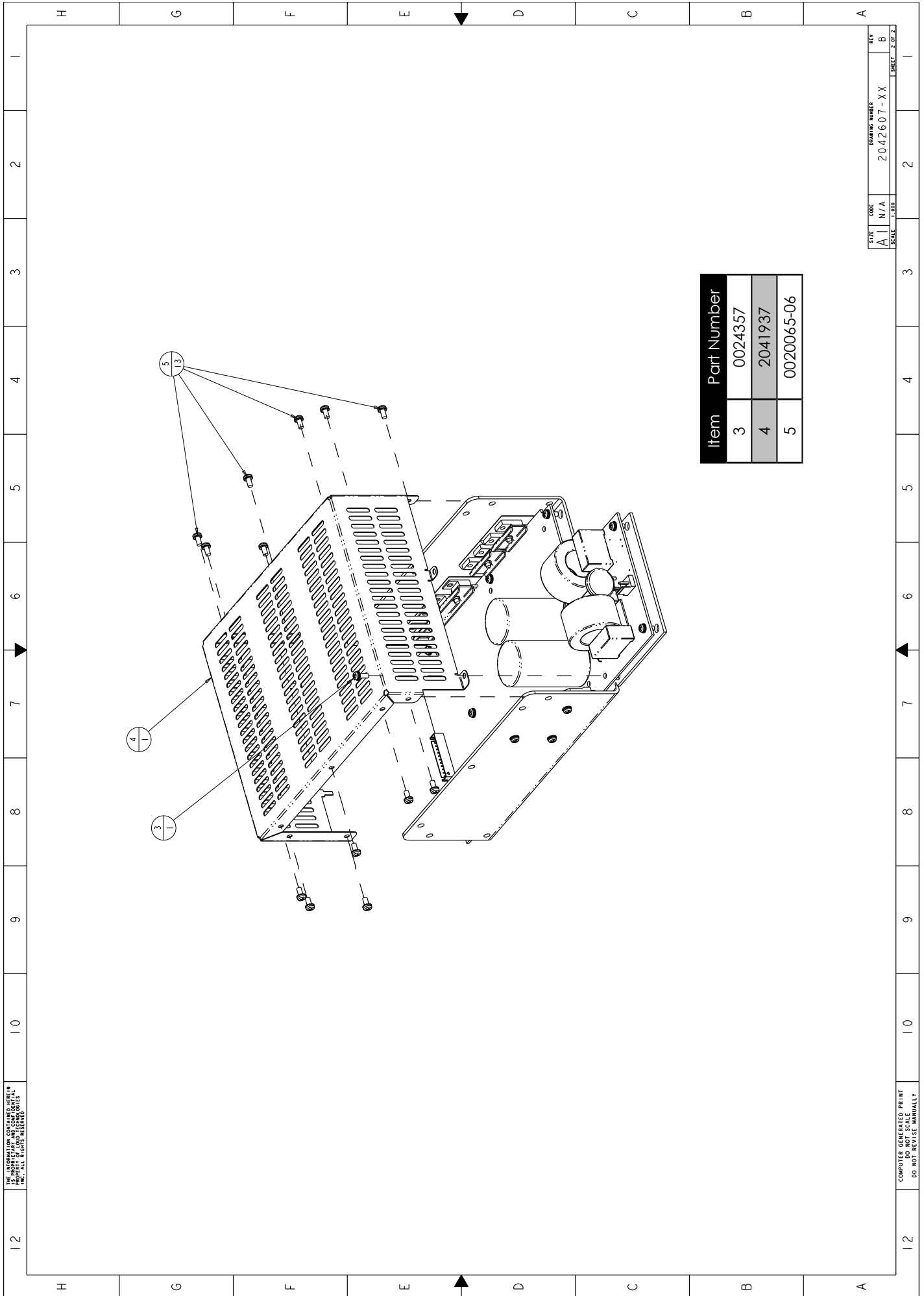
REV: A | N/A | 2042607-XX | B

ASSY AMP AND POWER SUPPLY  
MG300 + 300W

SHEET 2 OF 2

COMPUTER GENERATED PRINT  
DO NOT REVISE MANUALLY





Item	Part Number
3	0024357
4	2041937
5	0020065-06

SIZE	CODE	DRAWING NUMBER	REV
A	N/A	2042607-XX	B
SCALE	1:1000		SHEET 2 OF 2

12	10	9	8	7	6	5	4	3	2	1
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COMPUTER GENERATED PRINT  
DO NOT REVISE MANUALLY



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
	2042607-01	B01	ASSY AMP AND POWER SUPPLY/ MG300+300W BRIDGED		
1	2041940	A00	FORMING HEAT SINK/PCB SUPPORT		
1	2038306-01	B00	PCB ASSY POWER SUPPLY/AMP MG300+300W BRIDGED		
1	2038305-01	B00	PCB FAB POWER SUPPLY/AMP MG300+300W	PCB1	
2	0026138	A00	CAP 0.47UF 275V 10% X2 RADIAL	C1, C5	
3	0029768	A00	CAP 2200PF 20% 250VAC Y1 CER DISC	C2, C3, C8	
1	0026174	A00	CAP 1UF 275V 10% POLYP BOX X2 RADIAL	C4	
2	0026978	A01	CAP 1500UF 200V 20% 85C AL RADIAL	C6, C7	
2	2043780	A00	CAP 3300pF 20% 440VAC Y1 BOX	C9, C12	
1	0028747	A00	CAP 0.33UF 400V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C10	
53	0026125	A00	CAP 0.1UF 50V 5% X7R 0603	C11, C14, C19, C20, C21, C22, C31, C36, C41, C42, C44, C45, C46, C47, C50, C53, C55, C56, C58, C59, C61, C62, C68, C73, C77, C78, C88, C89, C92, C97, C101, C102, C103, C105, C106, C107, C127, C128, C130, C132, C133, C134, C135, C136, C137, C138, C141, C142, C146, C147, C153, C155, C156	
1	0026144	A00	CAP 1000PF 1000V 10% CER DISC	C13	
9	0027311	A00	CAP 1000PF 50V 5% NPO 0603	C15, C16, C48, C71, C116, C117, C131, C171, C172	
6	0026979	A00	CAP 680UF 100V 20% 105C AL LESR RADIAL	C17, C18, C23, C24, C25, C26	
4	2037007	A00	CAP CER 0.1UF 200V X7R 1206	C27, C63, C64, C119	
4	220-067-02	A11	CAP LYT 47UF 20% 25V 105C T/A	C28, C32, C95, C115	
4	0029761	A00	CAP 0.68UF 100V 20% X7R 1812	C29, C38, C121, C123	
1	0031389	A00	CAP LYT 100UF 20% 25V 105C RAD	C30	
4	0026214	A00	CAP 470PF 50V 2% NPO 0603	C33, C35, C111, C112	
3	0031390	A00	CAP LYT 10UF 20% 50V 105C RAD	C34, C66, C91	
3	0026175	A00	CAP 1UF 50V 10% X7R 1206	C37, C60, C80	
6	0008480	A	CAP CER 47P 200V 5% 1206 NPO	C39, C40, C94, C124, C125, C152	
8	0026146	A00	CAP 1000PF 100V 10% X7R 1206	C43, C72, C84, C86, C87, C99, C122, C129	
2	0026133	A00	CAP 0.22UF 50V 10% X7R 0805	C49, C51	
2	0026126	A00	CAP 0.1UF 630V 10% METALLIZED POLYESTER FILM RADIAL	C52, C139	
10	0032725	A00	CAP 10UF 25V 10% X7R 1206	C54, C57, C69, C70, C93, C96, C143, C144, C148, C149	
4	0030387	A00	CAP 220UF 25V 20% 105C AL LESR RADIAL (TAPING)	C65, C67, C81, C82	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0026137	A00	CAP 0.47UF 250V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C74, C118	
3	0026217	A00	CAP 470UF 25V 20% 105C AL LESR RADIAL	C75, C83, C110	
5	0020295	A00	CAP CER 4.7uF 25V X7R SMT1206	C76, C90, C140, C150, C151	
2	0026114	A00	CAP 0.1UF 100V 10% METALLIZED POLYESTER FILM RADIAL	C79, C120	
4	0021369	A01	CAP 47PF 50V 5% NPO 0603	C100, C104, C126, C145	
4	212-004-00	C11	CAP CER 220PF 5% 50V NPO SM	C108, C109, C113, C114	
4	0029767	A00	CAP COG/NPO 100pF 5% 200V 1206 SMT	C160, C161, C162, C163	
1	0026983	A00	DIODE BRIDGE KBJ1506 600V 15A KBJ	D1	
1	2042047	A00	DIODE ZENER 500MW SMT MMSZ5251B 22V	D2	
20	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D3, D15, D16, D24, D27, D31, D32, D33, D35, D40, D41, D42, D47, D52, D58, D59, D62, D67, D68, D70	
1	0031335	A00	DIODE ZENER 1N4742A 12V 5% DO-41	D4	
8	0032731	A00	DIODE SUPERFAST ES1D 200V 1A 15NS SMA/DO-214AC	D5, D7, D8, D25, D38, D43, D46, D50	
1	0026958	A00	DIODE SUPERFAST ER1J 600V 1A 35NS DO-214AA (SMA)	D6	
1	2036451	A00	DIODE SUPERFAST ES3D 3 AMP 200 VOLT SMC	D9	
4	0026984	A01	DIODE SUPERFAST 200V 10A 35NS TO220F	D10, D11, D12, D13	
1	0026961	A00	IC VREG AZ431BN-A 2.5-36V 0.1A SOT23-3	D14	
2	304-065-03	A01	LED GREEN SM 0805	D17, D28	
6	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D18, D29, D37, D45, D48, D49	
6	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D19, D20, D21, D22, D53, D54	
2	304-064-03	A01	LED RED SM 0805	D23, D26	
1	0026283	A00	DIODE GP GS1G 400V 1A SMA/DO-214AC	D30	
5	0004128	A00	DIODE 500MW SURFACE MOUNT ZENER MMSZ5232B 5.6V	D34, D39, D56, D60, D61	
2	300-012-03	A01	DIODE SW BAS21 SMT	D36, D44	
1	0026988	B00	FUSE SB 10A/250V 5X20MM UL CSA	F1	
2	400-060-00	A01	CONN FUSE CLIP PCMT 5MM DIA	FC1, FC2	
1	2033617-02	A00	CONN HDR 7A 2P 7.92MM 1ROW POLAR VRT	J1	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J2	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J7	
1	0013040-06	A00	CONN HDR 7A 6P 4.2MM 2ROW SHRD	J8	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J9, J10	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	712-057-03	A01	LRG TEST POINT SMT	J100	
1	2033563	A03	IND COM 6MH 5A TOROID	L1	
1	0033419	A03	IND COM 16MH 10A TOROID	L2	
2	0026387	A00	MAG FERRITE BEAD 9.8X11.5X1.0MM D5A	L3, L4	
2	2040433	A00	IND SW 500KHz 25UH 10% 17A-DC EP20 500W RECON	L5, L7	
2	2033562	A01	IND COM 1MH 5A TOROID	L8, L12	
4	0027472	A00	IND 20UH 20% 2.5A 0.045 OHM RADIAL	L9, L10, L11, L14	
1	2038142	A00	XSTR NPN POWER KSD2012 TO-220F	Q1	
3	0026714	A00	XSTR GP MMBT4401 NPN 60V 0.6A SOT-23	Q2, Q7, Q10	
2	2039233	A00	XSTR FET N-CH FDP22N50N 500V 22A 0.22 OHM TO-220	Q3, Q4	
5	0026715	A00	XSTR GP MMBT4403 PNP 40V 0.6A SOT-23	Q5, Q6, Q8, Q9, Q22	
4	2034485	A01	XSTR FET N-CH IRFB5615PbF 150V 35A 0.032RDS TO-220	Q11, Q12, Q13, Q14	
1	0026692	A01	THYRISTOR MCR100-6 400V 0.8A TO-92	Q26	
1	121-132-00	A00	RES MO 300K OHM 5% 1W	R1	
1	2035397	A00	THERM NTC 100K 1% @ 25C TAB MOUNT L = 150MM	R2	
1	0026625	A00	RES MET-OX 1 5% 1W	R3	
1	0026654	A00	RES MET-OX 68K 5% 2W	R4	
6	0021368	A01	RES 10 5% 1/4W 1206	R5, R113, R118, R163, R168, R185	
7	146-457-00	A00	RES MF SM .25W 1% 51K1 OHM	R6, R90, R91, R95, R140, R141, R145	
28	0026424	A00	RES 10K 1% 1/10W 0603	R7, R8, R12, R15, R30, R48, R51, R80, R81, R82, R83, R84, R85, R104, R114, R119, R130, R131, R132, R133, R134, R135, R154, R164, R169, R193, R194, R195	
10	141-033-00	B01	RES MF SM .25W 5% 22 OHM	R10, R11, R13, R47, R50, R62, R198, R226, R227, R228	
4	0026447	A00	RES 1K00 1% 1/10W 0603	R14, R21, R22, R196	
6	0026516	A00	RES 4.7K 1% 1/10W 0603	R16, R32, R53, R55, R56, R188	
7	0026479	A00	RES 24.9K 1% 1/10W 0603	R17, R27, R86, R87, R136, R137, R187	
15	0026518	A00	RES 4.99K 1% 1/10W 0603	R18, R88, R89, R92, R105, R106, R107, R108, R138, R139, R142, R155, R156, R157, R158	
2	143-524-00	A1	RES TF 255K 1% 0.1W SMT	R19, R25	
7	0026417	A00	RES 100 1% 1/10W 0603	R20, R60, R65, R69, R75, R96, R146	
6	0026421	A00	RES 100K 1% 1/10W 0603	R26, R28, R34, R37, R42, R77	
3	0026491	A00	RES 3.3K 1% 1/4W 1206	R29, R44, R76	
2	0026484	A00	RES 27K 1% 1/10W 0603	R31, R68	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
4	0026528	A00	RES 47K 1% 1/10W 0603	R45, R67, R184, R189	
8	0026464	A00	RES 20K 1% 1/10W 0603	R36, R182, R183, R190, R191, R223, R224, R225	
2	0026418	A00	RES 100 1% 1/4W 1206	R38, R39	
2	0026967	A00	RES MET-OX 68K 5% 1W	R40, R41	
2	0026490	A00	RES 3.3K 1% 1/10W 0603	R64, R178	
2	0026646	A00	RES MET-OX 5.1K 5% 2W	R43, R46	
1	0026543	A00	RES 6.49K 1% 1/10W 0603	R54	
1	0026432	A00	RES 12K 1% 1/10W 0603	R61	
2	0026508	A00	RES 390K 5% 1/10W 0603	R63, R66	
2	0026509	A00	RES 39K 1% 1/10W 0603	R70, R197	
4	0026955	A00	RES 470K 5% 1/4W 1206	R71, R72, R73, R74	
1	146-000-00	A00	RES MF SM .25W 1% 0 OHM 1206	R179	
2	130-090-00	A00	POT TRIM 1KOHM HORIZ	R93, R143	
2	0026521	A00	RES 470 1% 1/10W 0603	R94, R144	
4	146-273-00	A00	RES MF SM .25W 1% 681 OHM	R97, R100, R147, R150	
2	0027325	A00	RES 6.81K 1% 1/10W 0603	R98, R148	
6	146-081-00	A01	RES MF SM .25W 1% 6R81 OHM 1206	R101, R102, R120, R151, R152, R170	
2	146-443-00	A00	RES MF SM .25W 1% 36K5 OHM	R103, R153	
3	0026540	A00	RES 51K 1% 1/10W 0603	R9, R109, R159	
4	143-000-00	A01	RES TF 0.00 1% 0.1W SMT	R112, R117, R162, R167	
4	0009477	A00	RES SMT 10 OHM 5% 0.75W 2010	R121, R122, R171, R172	
3	0027306	A00	RES MET-OX 3K 5% 2W	R123, R173, R175	
2	0029102	A00	RES MET-OX 22 5% 2W	R124, R174	
2	0021336	A01	RES 100K 5% 1/4W 1206	R180, R199	
1	0025950	A00	XFMR SW 115/230V +/-54V 2A 200W	T1	
1	0025948	C00	XFMR DRIVER 15V 15V/15V 0.1A 3W	T2	
1	0025947	B01	XFMR CURRENT SENSE 10A 1:100	T3	
1	0030963	A01	XFMR SW 115/230V +/-15V 0.5A +5V 0.5A +15V 0.5A +15V 0.5A 25W	T4	
2	2042587	A00	THERM NTC 2.5 OHM 25% 9A 20MM UL, C-UL, TUV, CQC	TH1, TH2	
1	2038088	A00	IC PWM SG3525A VOLTAGE-MODE CONTROLLER SOIC-16DW	U1	
3	323-002-00	D00	IC LM339D QUAD COMP SM	U2, U8, U18	
2	0026389	A01	OPTO 1 CHANNEL 70V 200-400 4-DIP	U3, U9	
1	0026353	A00	IC TIMER NE556D SO14	U5	
1	0026980	A00	IC VREG ADJ 1.2-37V 1.5A ISOWATT220	U6	
1	2042436	A00	IC PWM CONTROLLER ICE3A1065ELJ CURRENT MODE DIP-8	U7	
5	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U10, U11, U13, U14, U17	
2	2040003	A00	IC DIGITAL PWM DRIVER IRS2092STRPbF	U12, U15	
1	329-014-00	A01	IC LM35DZ PREC TEMP SENSOR	U16	
1	0026388	A00	MOV 470VAC DISC 14MM	VR1	
3	0025312	A00	WIRE JUMPER 20AWG 60MM	J3, WL3, WL4	



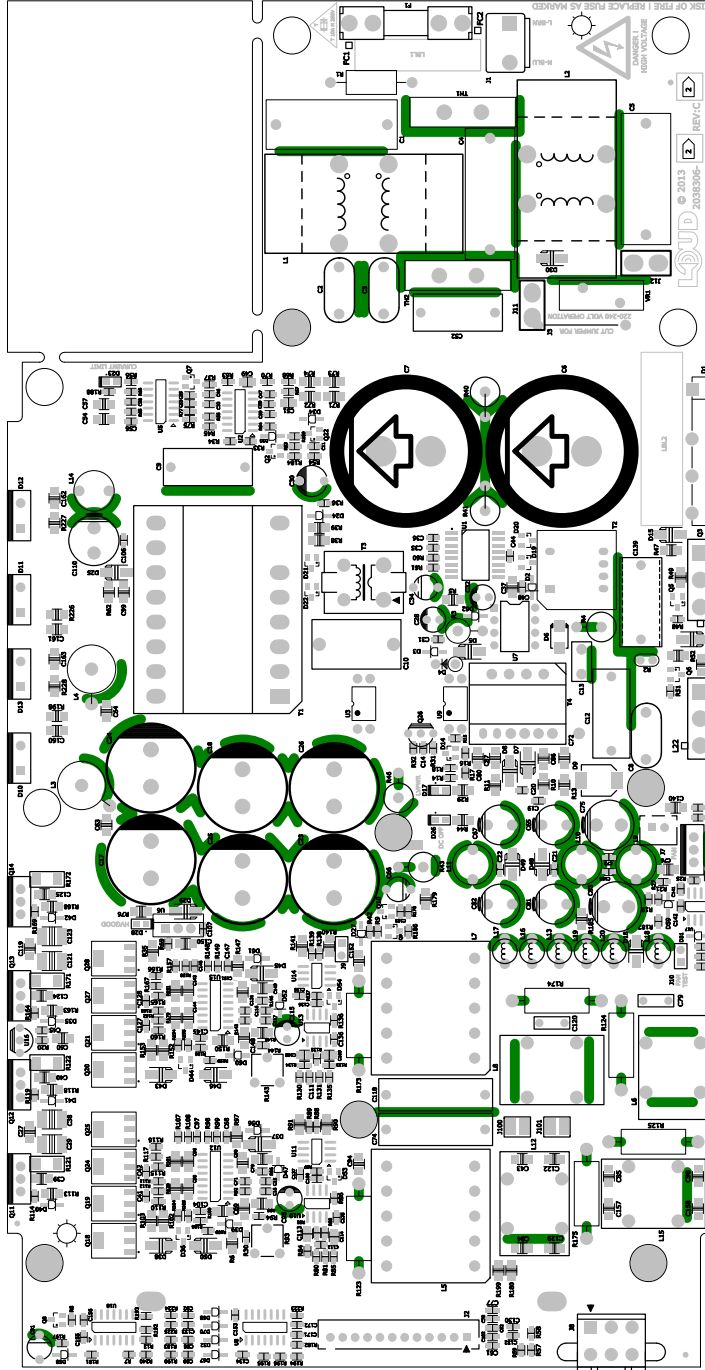
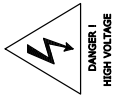
Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
6	0025400	A00	IND SW 1.5UH 1A R3X15	L13, L16, L17, L18, L19, L20	
1	0017668-13	J00	LBL IEC POWER RATING 100-120V~/ 220-240V~ 50-60Hz 150W	LBL1	
1	0016023	A00	LBL BLANK HI-TEMP WHT POLYIMIDE 1.00" X .250"		
1	0032856	E00	LBL SERIAL NUMBER GENERIC 35mm X 9.5mm UL	LBL2	
1	143-404-00	A1	RES TF 14.3K 1% 0.1W SMT	R23	
2	2043108	A00	MAG FERRITE BEAD 4X2X5.0MM A6 RH	L21, L22	
3	0026448	A00	RES 1K 1% 1/4W 1206	R35, R49, R52	
4	0027305	A00	RES 33.2K 1% 1/10W 0603	R57, R58, R59, R186	
2	0029095	A00	RES 3.32K 1% 1/10W 0603	R99, R149	
1	0026541	A00	RES 6.19K 1% 1/10W 0603	R192	
1	0027326	A00	RES 9.09K 1% 1/10W 0603	R240	
1	0026441	A00	RES 15K 1% 1/10W 0603	R33	
11	0024357	B00	SCR SEMS M3X8 PNH PHILLIP STL NICKEL		(10) FOR PCB MOUNT (1) WITH PCB MOUNT THRU SHIELD TAB
1	2041937	A00	COVER HEAT SINK SHIELD		
13	0020065-06	A01	SCREW M3 X 0.5 X 6MM PAN MCH SEMS-ETLW PH STL BLKZC		SHIELD SCREWS
2	2043405	B00	CLAMP TRANSISTOR LENGTH 29.2MM.		C-CLAMP TRANSISTOR, SECONDARY SIDE.
1	2044038	A00	CLAMP TRANSISTOR LENGTH 37MM EXTRUDED TAPPED M3		C-CLAMP TRANSISTOR, PRIMARY SIDE.
1	2043448	B00	CLAMP TRANSISTOR 66.2MM LENGTH		QUAD CLAMP
7	0026673	A00	SCR SEMS M3X12 PNH PHILLIP STL NICKEL		SCREW TO MOUNT BRACKETS, DIODES, INSULATION ETC.
1	0020269	A00	WASHER/FLAT M3		WASHER FOR PRIMARY BRIDGE RECTIFIER
1	2042690	B00	INSUL RECT BRIDGE PRIMARY TH- 18Sv2		INSULATOR PRIMARY SIDE
4	0028527	B00	INSULATOR SILICON TRANSISTOR		INSULATOR- SECONDARY SIDE
2	2042594-05	C00	SHRINK TUBE D13X21MM		apply to item 25
	730-001-00	A01	THERMAL COMPOUND		



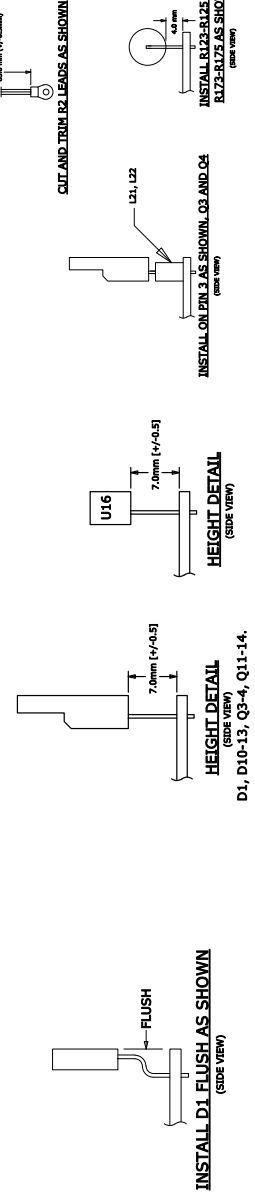
Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0000659	A01	NUT HEX KEP M3		SECURE CABLE TO HEAT SINK AND PRIMARY DIODE
1	0032610	A00	TAPE THERMAL TRANSFER 0.5MM X 8MM X 18MM		THERMAL TAPE WRAP AROUND THERMAL SENSING IC

8 7 6 5 4 3 2 1

HAZARDOUS HIGH VOLTAGE !  
USE CAUTION WHEN ASSEMBLY IS POWERED



TOP SIDE SHOWN



- APPLY RTV1 (SILICONE RTV) AS SHOWN. APPLY RTV2 (HT TEMP RTV) TO TH1 AND TH2 ONLY.
- VERSION & REVISION FOR PCA BUILD MUST BE MARKED WHERE SHOWN.
- TRIM LEADS ON BOTTOM SIDE TO NO LONGER THAN 2.4mm.

NOTES:

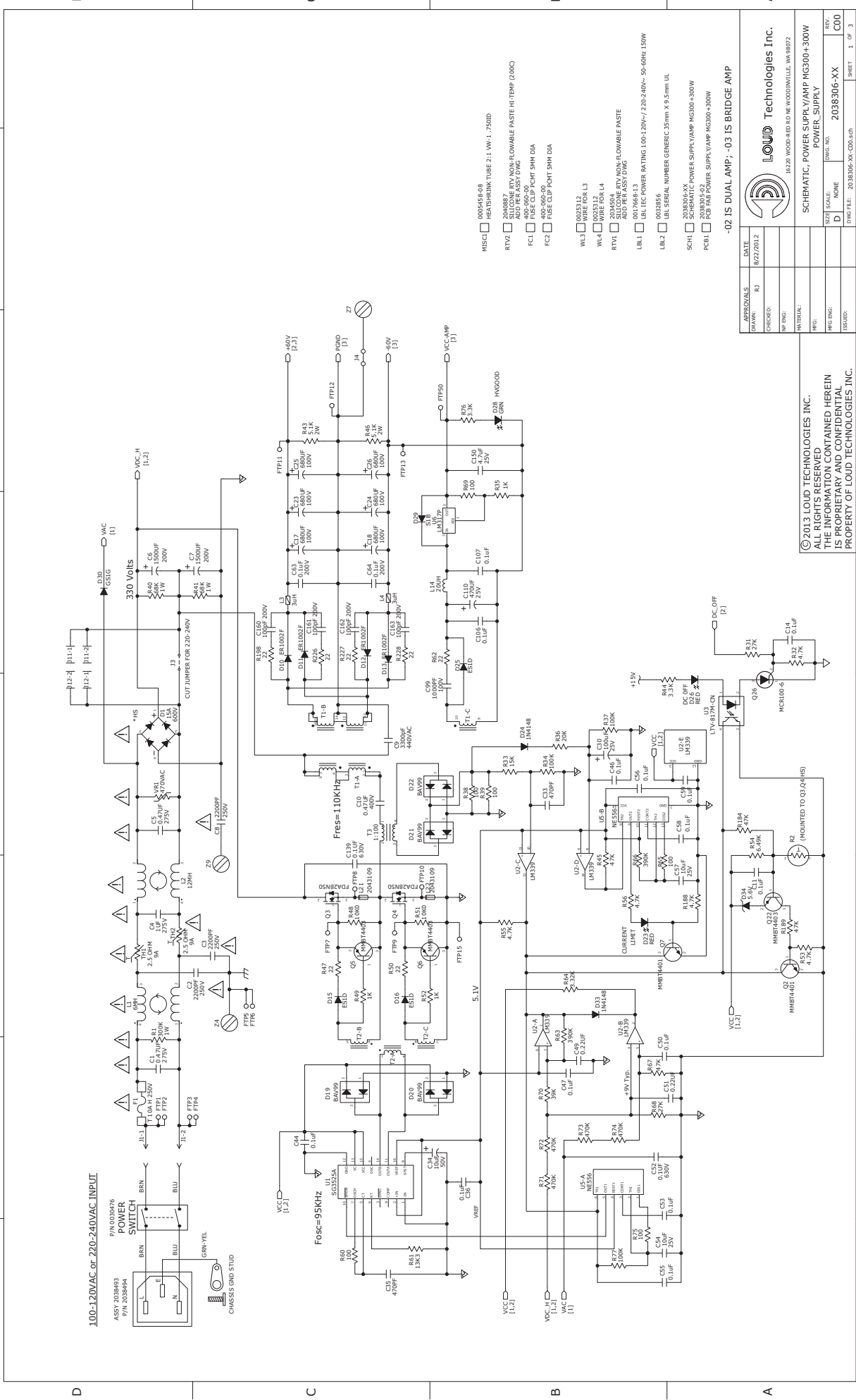
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DESIGNED BY: KR	9-13-2012	2038306-XX	C00
CHECKED BY: JX			
APPROVED BY: JX			
MANUFACTURING: JX			
INSPECTION: JX			
DATE: 9-13-2012			
PCB ASSY POWER SUPPLY/AMP MG300+300W			
LOAD TECHNOLOGIES INC. WOODBRIDGE, VA, USA			
DO NOT SCALE DRAWING			
SHEET 1 OF 1			



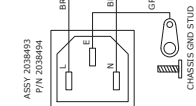
# 2038306-01 SCHEMATIC POWER SUPPLY/AMP POWER SUPPLY

## THUMP18S SERVICE MANUAL

1 2 3 4 5 6 7 8



100-120VAC or 220-240VAC INPUT  
P/N 0030476  
POWER SWITCH  
P/N 2038493  
P/N 2038494



- MISC1 000548-88 HEADSHANK TUBE 2.1 Wx 1.75OD
- RTV2 204887 RTV NON-FLOWABLE PASTE HI TEMP (100C) ADD PER ASSY DWG
- FCL1 400-960-00 FUSE 5MM DA
- FC2 400-960-00 FUSE CLIP POINT 5MM DA
- W13 002512 WIRE FOR L3
- W14 002512 WIRE FOR L4
- RTV1 002512 RTV NON-FLOWABLE PASTE ADD PER ASSY DWG
- LBL1 ULL LITE POWER RATING 100-120V~/230-240V~/50-60Hz 150W
- LBL2 ULL LITE POWER RATING 100-120V~/230-240V~/50-60Hz 150W
- SCH 2038306-XX SCHEMATIC POWER SUPPLY/AMP MGS300-300W
- PCB1 PCB FAB POWER SUPPLY/AMP MGS300-300W

APPROVALS	DATE
DRAWN: RJ	8/22/2012
CHECKED:	
APP ENGR:	
MATERIAL:	
WFO:	
WPG ENGR:	
ISSUED:	

2038306-01 SCHEMATIC POWER SUPPLY/AMP  
MGS300-300W  
PCB FAB POWER SUPPLY/AMP MGS300-300W

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LOUD Technologies Inc.  
15220 WOOD RIDGE RD WOODBRIDGE, VA 22072

SCHEMATIC POWER SUPPLY/AMP MGS300-300W  
POWER SUPPLY  
REV: 000  
DATE: 2038306-XX  
DRAWN: RJ  
ISSUED: 1 OF 3

APPROVALS: DATE: 8/22/2012  
DRAWN: RJ  
CHECKED: [ ]  
APP ENGR: [ ]  
MATERIAL: [ ]  
WFO: [ ]  
WPG ENGR: [ ]  
ISSUED: [ ]

2038306-01 SCHEMATIC POWER SUPPLY/AMP  
MGS300-300W  
PCB FAB POWER SUPPLY/AMP MGS300-300W

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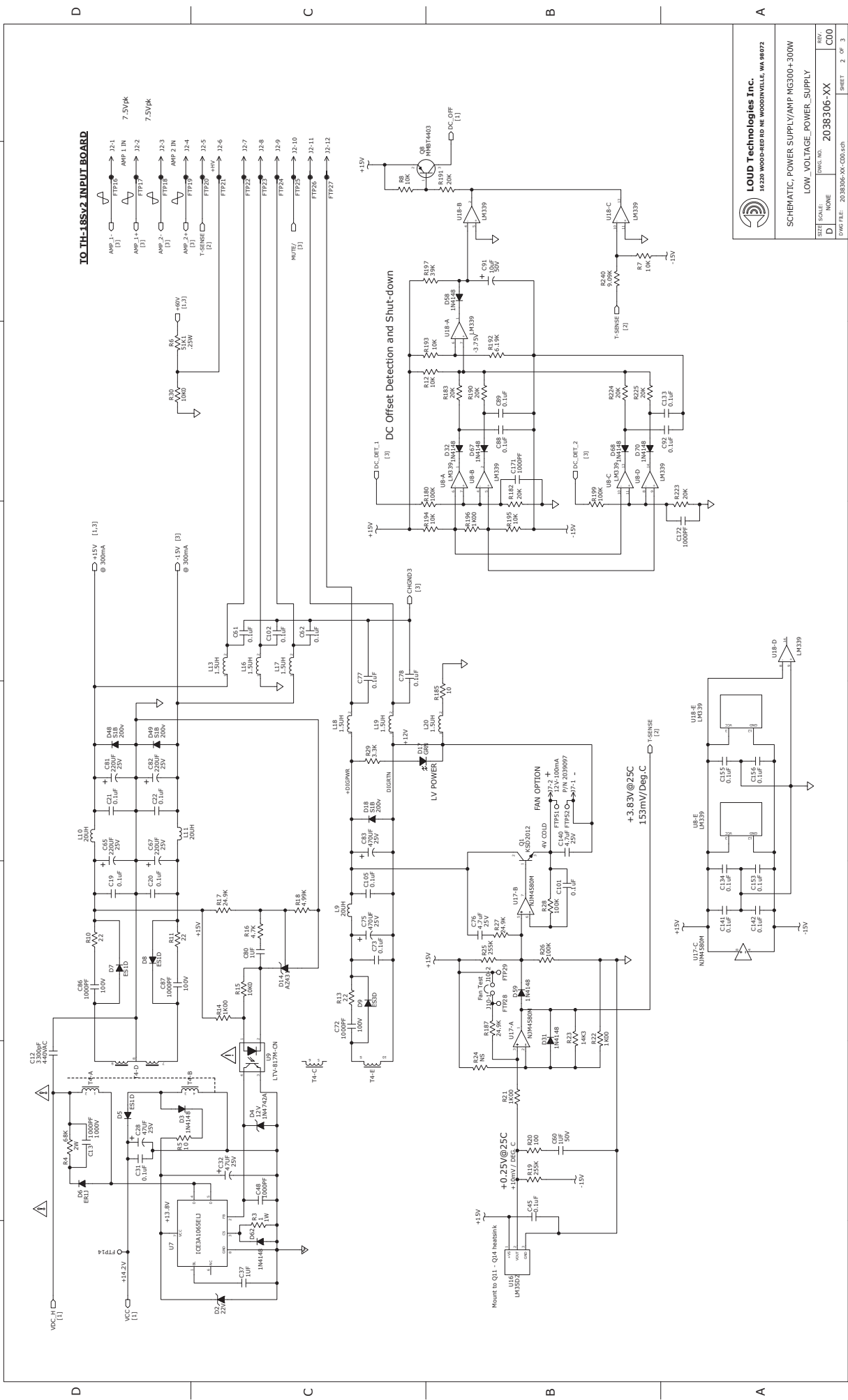
LOUD Technologies Inc.  
15220 WOOD RIDGE RD WOODBRIDGE, VA 22072

SCHEMATIC POWER SUPPLY/AMP MGS300-300W  
POWER SUPPLY  
REV: 000  
DATE: 2038306-XX  
DRAWN: RJ  
ISSUED: 1 OF 3

# 2038306-01 SCHEMATIC POWER SUPPLY/AMP LOW VOLTAGE POWER SUPPLY

## THUMP18S SERVICE MANUAL

1 2 3 4 5 6 7 8



TO TH-18S-V2 INPUT BOARD

DC Offset Detection and Shut-down

+3.83V@25C  
1533mV/Deg.C

**Loud Technologies Inc.**  
6120 Woodbridge Rd. Woodinville, WA 98072

REV: 001  
SCALE: 1:1  
DATE: 2038306-XX  
P/N: 2038306-XX-001.001

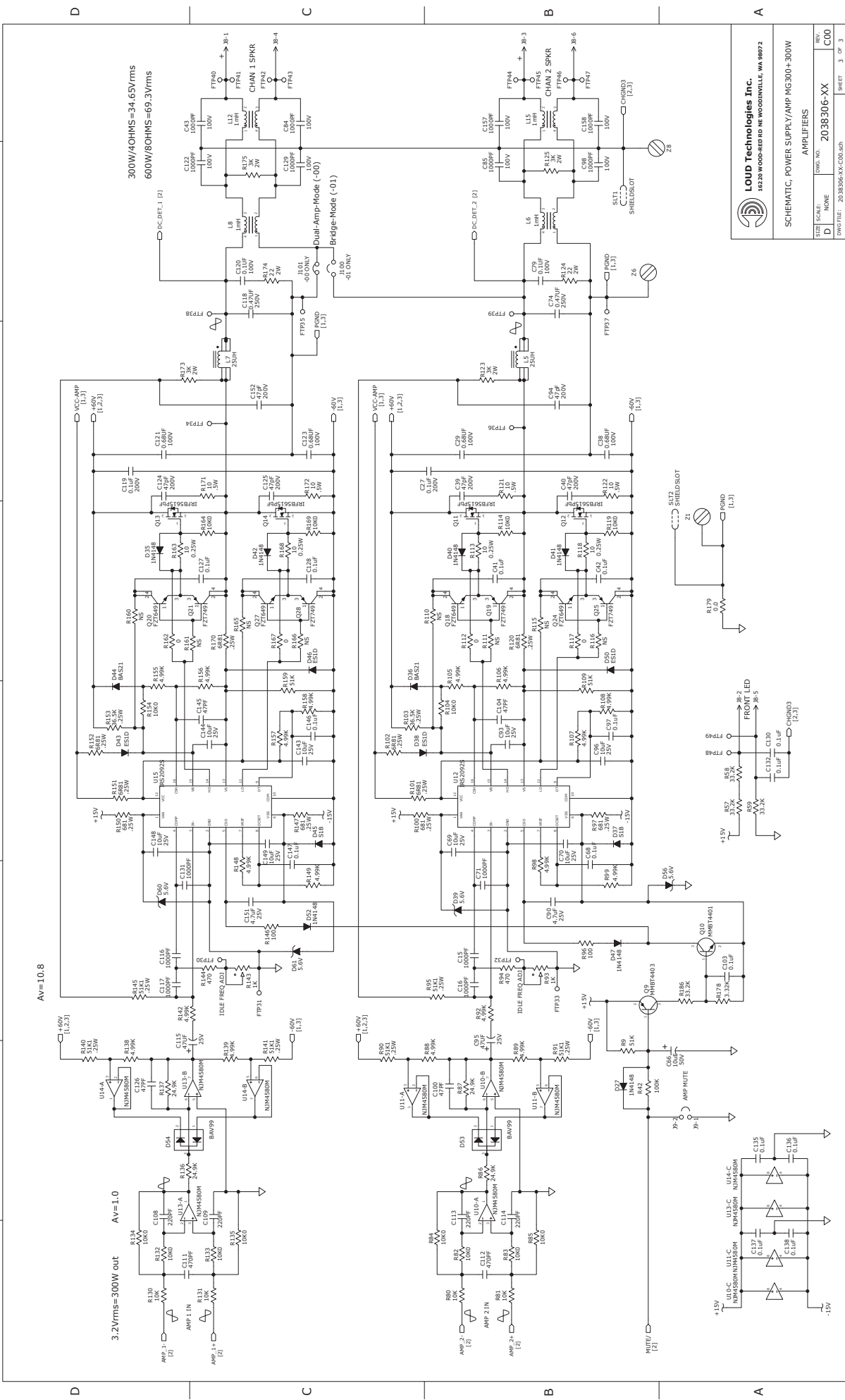
DESIGN NO: 2038306-XX  
PART NO: 2038306-XX  
SHEET: 2 OF 3

SCHEMATIC: POWER SUPPLY/AMP MG300+300W  
LOW\_VOLTAGE\_POWER\_SUPPLY

# 2038306-01 SCHEMATIC POWER SUPPLY/AMP AMPLIFIERS

## THUMP18S SERVICE MANUAL

1 2 3 4 5 6 7 8



**LOUD Technologies Inc.**  
 18220 WOOD-RED RD NE WOODINVILLE, WA 98072

SCHEMATIC: POWER SUPPLY/AMP MG300+300W AMPLIFIERS

SIZE	SCALE	DWG. NO.	REV.
D	NONE	2038306-XX	C00
DATE			
DWG. FILE		2038306-XX.C00.dwg	SHEET 3 OF 3



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
	2038306-01	B00	PCB ASSY POWER SUPPLY/AMP MG300+300W BRIDGED		
1	2038305-01	B00	PCB FAB POWER SUPPLY/AMP MG300+300W	PCB1	
2	0026138	A00	CAP 0.47UF 275V 10% X2 RADIAL	C1, C5	
3	0029768	A00	CAP 2200PF 20% 250VAC Y1 CER DISC	C2, C3, C8	
1	0026174	A00	CAP 1UF 275V 10% POLYP BOX X2 RADIAL	C4	
2	0026978	A01	CAP 1500UF 200V 20% 85C AL RADIAL	C6, C7	
2	2043780	A00	CAP 3300pF 20% 440VAC Y1 BOX	C9, C12	
1	0028747	A00	CAP 0.33UF 400V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C10	
53	0026125	A00	CAP 0.1UF 50V 5% X7R 0603	C11, C14, C19, C20, C21, C22, C31, C36, C41, C42, C44, C45, C46, C47, C50, C53, C55, C56, C58, C59, C61, C62, C68, C73, C77, C78, C88, C89, C92, C97, C101, C102, C103, C105, C106, C107, C127, C128, C130, C132, C133, C134, C135, C136, C137, C138, C141, C142, C146, C147, C153, C155, C156	
1	0026144	A00	CAP 1000PF 1000V 10% CER DISC	C13	
9	0027311	A00	CAP 1000PF 50V 5% NPO 0603	C15, C16, C48, C71, C116, C117, C131, C171, C172	
6	0026979	A00	CAP 680UF 100V 20% 105C AL LESR RADIAL	C17, C18, C23, C24, C25, C26	
4	2037007	A00	CAP CER 0.1UF 200V X7R 1206	C27, C63, C64, C119	
4	220-067-02	A11	CAP LYT 47UF 20% 25V 105C T/A	C28, C32, C95, C115	
4	0029761	A00	CAP 0.68UF 100V 20% X7R 1812	C29, C38, C121, C123	
1	0031389	A00	CAP LYT 100UF 20% 25V 105C RAD	C30	
4	0026214	A00	CAP 470PF 50V 2% NPO 0603	C33, C35, C111, C112	
3	0031390	A00	CAP LYT 10UF 20% 50V 105C RAD	C34, C66, C91	
3	0026175	A00	CAP 1UF 50V 10% X7R 1206	C37, C60, C80	
6	0008480	A	CAP CER 47P 200V 5% 1206 NPO	C39, C40, C94, C124, C125, C152	
8	0026146	A00	CAP 1000PF 100V 10% X7R 1206	C43, C72, C84, C86, C87, C99, C122, C129	
2	0026133	A00	CAP 0.22UF 50V 10% X7R 0805	C49, C51	
2	0026126	A00	CAP 0.1UF 630V 10% METALLIZED POLYESTER FILM RADIAL	C52, C139	
10	0032725	A00	CAP 10UF 25V 10% X7R 1206	C54, C57, C69, C70, C93, C96, C143, C144, C148, C149	
4	0030387	A00	CAP 220UF 25V 20% 105C AL LESR RADIAL (TAPING)	C65, C67, C81, C82	
2	0026137	A00	CAP 0.47UF 250V 10% METALLIZED POLYPROPYLENE FILM RADIAL	C74, C118	
3	0026217	A00	CAP 470UF 25V 20% 105C AL LESR RADIAL	C75, C83, C110	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
5	0020295	A00	CAP CER 4.7uF 25V X7R SMT1206	C76, C90, C140, C150, C151	
2	0026114	A00	CAP 0.1UF 100V 10% METALLIZED POLYESTER FILM RADIAL	C79, C120	
4	0021369	A01	CAP 47PF 50V 5% NPO 0603	C100, C104, C126, C145	
4	212-004-00	C11	CAP CER 220PF 5% 50V NPO SM	C108, C109, C113, C114	
4	0029767	A00	CAP COG/NPO 100pF 5% 200V 1206 SMT	C160, C161, C162, C163	
1	0026983	A00	DIODE BRIDGE KBJ1506 600V 15A KBJ	D1	
1	2042047	A00	DIODE ZENER 500MW SMT MMSZ5251B 22V	D2	
20	0004125	A01	DIODE SMT 1N4148W 75V FAST SWITCHING SOD123	D3, D15, D16, D24, D27, D31, D32, D33, D35, D40, D41, D42, D47, D52, D58, D59, D62, D67, D68, D70	
1	0031335	A00	DIODE ZENER 1N4742A 12V 5% DO-41	D4	
8	0032731	A00	DIODE SUPERFAST ES1D 200V 1A 15NS SMA/DO-214AC	D5, D7, D8, D25, D38, D43, D46, D50	
1	0026958	A00	DIODE SUPERFAST ER1J 600V 1A 35NS DO-214AA (SMA)	D6	
1	2036451	A00	DIODE SUPERFAST ES3D 3 AMP 200 VOLT SMC	D9	
4	0026984	A01	DIODE SUPERFAST 200V 10A 35NS TO220F	D10, D11, D12, D13	
1	0026961	A00	IC VREG AZ431BN-A 2.5-36V 0.1A SOT23-3	D14	
2	304-065-03	A01	LED GREEN SM 0805	D17, D28	
6	0004136	A00	DIODE RECTIFIER 1A GLASS PASSIVATED S1B	D18, D29, D37, D45, D48, D49	
6	0029101	A00	DIODE SUPERFAST DUAL BAV99 100V 0.15A SOT-23	D19, D20, D21, D22, D53, D54	
2	304-064-03	A01	LED RED SM 0805	D23, D26	
1	0026283	A00	DIODE GP GS1G 400V 1A SMA/DO-214AC	D30	
5	0004128	A00	DIODE 500MW SURFACE MOUNT ZENER MMSZ5232B 5.6V	D34, D39, D56, D60, D61	
2	300-012-03	A01	DIODE SW BAS21 SMT	D36, D44	
1	0026988	B00	FUSE SB 10A/250V 5X20MM UL CSA	F1	
2	400-060-00	A01	CONN FUSE CLIP PCMT 5MM DIA	FC1, FC2	
1	2033617-02	A00	CONN HDR 7A 2P 7.92MM 1ROW POLAR VRT	J1	
1	0005168-12	B00	CONN HDR 12P .098X1 SHRD TJC3	J2	
1	0005168-02	B00	CONN HDR 2P .098X1 SHRD TJC3	J7	
1	0013040-06	A00	CONN HDR 7A 6P 4.2MM 2ROW SHRD	J8	
2	400-171-00	A01	CONN HDR 2P .100X1 STR	J9, J10	
1	712-057-03	A01	LRG TEST POINT SMT	J100	
1	2033563	A03	IND COM 6MH 5A TOROID	L1	
1	0033419	A03	IND COM 16MH 10A TOROID	L2	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0026387	A00	MAG FERRITE BEAD 9.8X11.5X1.0MM D5A	L3, L4	
2	2040433	A00	IND SW 500KHz 25UH 10% 17A-DC EP20 500W RECON	L5, L7	
2	2033562	A01	IND COM 1MH 5A TOROID	L8, L12	
4	0027472	A00	IND 20UH 20% 2.5A 0.045 OHM RADIAL	L9, L10, L11, L14	
1	2038142	A00	XSTR NPN POWER KSD2012 TO-220F	Q1	
3	0026714	A00	XSTR GP MMBT4401 NPN 60V 0.6A SOT-23	Q2, Q7, Q10	
2	2039233	A00	XSTR FET N-CH FDP22N50N 500V 22A 0.22 OHM TO-220	Q3, Q4	
5	0026715	A00	XSTR GP MMBT4403 PNP 40V 0.6A SOT-23	Q5, Q6, Q8, Q9, Q22	
4	2034485	A01	XSTR FET N-CH IRFB5615PbF 150V 35A 0.032RDS TO-220	Q11, Q12, Q13, Q14	
1	0026692	A01	THYRISTOR MCR100-6 400V 0.8A TO-92	Q26	
1	121-132-00	A00	RES MO 300K OHM 5% 1W	R1	
1	2035397	A00	THERM NTC 100K 1% @ 25C TAB MOUNT L = 150MM	R2	
1	0026625	A00	RES MET-OX 1 5% 1W	R3	
1	0026654	A00	RES MET-OX 68K 5% 2W	R4	
6	0021368	A01	RES 10 5% 1/4W 1206	R5, R113, R118, R163, R168, R185	
7	146-457-00	A00	RES MF SM .25W 1% 51K1 OHM	R6, R90, R91, R95, R140, R141, R145	
28	0026424	A00	RES 10K 1% 1/10W 0603	R7, R8, R12, R15, R30, R48, R51, R80, R81, R82, R83, R84, R85, R104, R114, R119, R130, R131, R132, R133, R134, R135, R154, R164, R169, R193, R194, R195	
10	141-033-00	B01	RES MF SM .25W 5% 22 OHM	R10, R11, R13, R47, R50, R62, R198, R226, R227, R228	
4	0026447	A00	RES 1K00 1% 1/10W 0603	R14, R21, R22, R196	
6	0026516	A00	RES 4.7K 1% 1/10W 0603	R16, R32, R53, R55, R56, R188	
7	0026479	A00	RES 24.9K 1% 1/10W 0603	R17, R27, R86, R87, R136, R137, R187	
15	0026518	A00	RES 4.99K 1% 1/10W 0603	R18, R88, R89, R92, R105, R106, R107, R108, R138, R139, R142, R155, R156, R157, R158	
2	143-524-00	A1	RES TF 255K 1% 0.1W SMT	R19, R25	
7	0026417	A00	RES 100 1% 1/10W 0603	R20, R60, R65, R69, R75, R96, R146	
6	0026421	A00	RES 100K 1% 1/10W 0603	R26, R28, R34, R37, R42, R77	
3	0026491	A00	RES 3.3K 1% 1/4W 1206	R29, R44, R76	
2	0026484	A00	RES 27K 1% 1/10W 0603	R31, R68	
4	0026528	A00	RES 47K 1% 1/10W 0603	R45, R67, R184, R189	
8	0026464	A00	RES 20K 1% 1/10W 0603	R36, R182, R183, R190, R191, R223, R224, R225	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
2	0026418	A00	RES 100 1% 1/4W 1206	R38, R39	
2	0026967	A00	RES MET-OX 68K 5% 1W	R40, R41	
2	0026490	A00	RES 3.3K 1% 1/10W 0603	R64, R178	
2	0026646	A00	RES MET-OX 5.1K 5% 2W	R43, R46	
1	0026543	A00	RES 6.49K 1% 1/10W 0603	R54	
1	0026432	A00	RES 12K 1% 1/10W 0603	R61	
2	0026508	A00	RES 390K 5% 1/10W 0603	R63, R66	
2	0026509	A00	RES 39K 1% 1/10W 0603	R70, R197	
4	0026955	A00	RES 470K 5% 1/4W 1206	R71, R72, R73, R74	
1	146-000-00	A00	RES MF SM .25W 1% 0 OHM 1206	R179	
2	130-090-00	A00	POT TRIM 1KOHM HORIZ	R93, R143	
2	0026521	A00	RES 470 1% 1/10W 0603	R94, R144	
4	146-273-00	A00	RES MF SM .25W 1% 681 OHM	R97, R100, R147, R150	
2	0027325	A00	RES 6.81K 1% 1/10W 0603	R98, R148	
6	146-081-00	A01	RES MF SM .25W 1% 6R81 OHM 1206	R101, R102, R120, R151, R152, R170	
2	146-443-00	A00	RES MF SM .25W 1% 36K5 OHM	R103, R153	
3	0026540	A00	RES 51K 1% 1/10W 0603	R9, R109, R159	
4	143-000-00	A01	RES TF 0.00 1% 0.1W SMT	R112, R117, R162, R167	
4	0009477	A00	RES SMT 10 OHM 5% 0.75W 2010	R121, R122, R171, R172	
3	0027306	A00	RES MET-OX 3K 5% 2W	R123, R173, R175	
2	0029102	A00	RES MET-OX 22 5% 2W	R124, R174	
2	0021336	A01	RES 100K 5% 1/4W 1206	R180, R199	
1	0025950	A00	XFMR SW 115/230V +/-54V 2A 200W	T1	
1	0025948	C00	XFMR DRIVER 15V 15V/15V 0.1A 3W	T2	
1	0025947	B01	XFMR CURRENT SENSE 10A 1:100	T3	
1	0030963	A01	XFMR SW 115/230V +/-15V 0.5A +5V 0.5A +15V 0.5A +15V 0.5A 25W	T4	
2	2042587	A00	THERM NTC 2.5 OHM 25% 9A 20MM UL, C-UL, TUV, CQC	TH1, TH2	
1	2038088	A00	IC PWM SG3525A VOLTAGE-MODE CONTROLLER SOIC-16DW	U1	
3	323-002-00	D00	IC LM339D QUAD COMP SM	U2, U8, U18	
2	0026389	A01	OPTO 1 CHANNEL 70V 200-400 4-DIP	U3, U9	
1	0026353	A00	IC TIMER NE556D SO14	U5	
1	0026980	A00	IC VREG ADJ 1.2-37V 1.5A ISOWATT220	U6	
1	2042436	A00	IC PWM CONTROLLER ICE3A1065ELJ CURRENT MODE DIP-8	U7	
5	0006956	B00	IC OP AMP NJM4580 DUAL SO-8	U10, U11, U13, U14, U17	
2	2040003	A00	IC DIGITAL PWM DRIVER IRS2092STRPbF	U12, U15	
1	329-014-00	A01	IC LM35DZ PREC TEMP SENSOR	U16	
1	0026388	A00	MOV 470VAC DISC 14MM	VR1	
3	0025312	A00	WIRE JUMPER 20AWG 60MM	J3, WL3, WL4	
6	0025400	A00	IND SW 1.5UH 1A R3X15	L13, L16, L17, L18, L19, L20	
1	0017668-13	J00	LBL IEC POWER RATING 100-120V~/220-240V~ 50-60Hz 150W	LBL1	



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
1	0016023	A00	LBL BLANK HI-TEMP WHT POLYIMIDE 1.00" X .250"		
1	0032856	E00	LBL SERIAL NUMBER GENERIC 35mm X 9.5mm UL	LBL2	
1	143-404-00	A1	RES TF 14.3K 1% 0.1W SMT	R23	
2	2043108	A00	MAG FERRITE BEAD 4X2X5.0MM A6 RH	L21, L22	
3	0026448	A00	RES 1K 1% 1/4W 1206	R35, R49, R52	
4	0027305	A00	RES 33.2K 1% 1/10W 0603	R57, R58, R59, R186	
2	0029095	A00	RES 3.32K 1% 1/10W 0603	R99, R149	
1	0026541	A00	RES 6.19K 1% 1/10W 0603	R192	
1	0027326	A00	RES 9.09K 1% 1/10W 0603	R240	
1	0026441	A00	RES 15K 1% 1/10W 0603	R33	



**2042088-B00 ASSY CBL SPEAKER AND FRONT LED SUB**

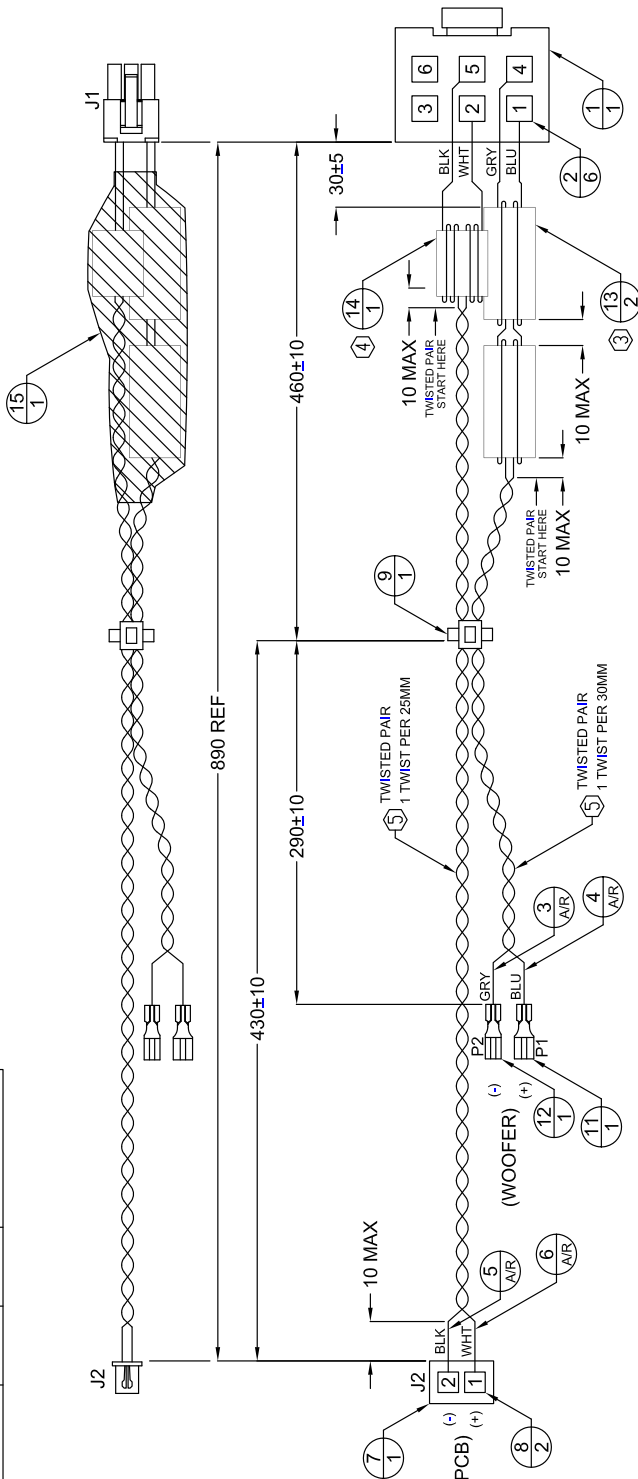
**THUMP 18S SERVICE MANUAL**

4 3 2 1

WIRE DIAGRAM		
FUNCTION	FROM	TO
N/C	J1-6	-
N/C	J1-3	-
LED PCB (-)	J1-5	J2-2
LED PCB (+)	J1-2	J2-1
WOOFER (-)	J1-4	P2
WOOFER (+)	J1-1	P1

ECO. No.	REV.	DESCRIPTION	REV. BY	APP. BY	DATE
ECON017156	A00	RELEASE TO PI.OT	F.F.	SEE ECO1	16-DEC-2013
ECON017619	B00	ADD ADHESIVE BACKED FOAM TAPE (ITEM 15) AND ADD NOTE 6	F.F.	SEE ECO1	12-MAY-2014

Item	Part Number
1	0013039-06
2	0013038
3	0013066-8
4	0013066-7
5	0015641-0
6	0015641-9
7	0005167-02
8	0005166
9	0013948
11	2043393
12	2042290-16
13	0022257
14	0027084
15	2042941



- ⑥ AFTER CABLE IS COMPLETELY ASSEMBLED WRAP FOAM TAPE (ITEM 15) AROUND THE 3 FERRITES AS SHOWN.
- ⑤ TWIST WIRES AS SHOWN. ALL DIMENSIONS APPLY AFTER WIRES ARE TWISTED.
- ④ LOOP WIRES 2 TIMES THRU FERRITE.
- ③ LOOP WIRES 1 TIME THRU FERRITE.
- 2. ALL MATERIAL USED TO CONSTRUCT THIS CABLE MUST BE COMPLIANT WITH EU DIRECTIVE 2002/95/EC (RoHS).
- 1. ALL DIMENSIONS ARE IN MILLIMETERS

NOTE:

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE METRIC TOLERANCES ARE: MILLIMETERS DECIMAL ANGULAR THIRD ANGLE PROJECTION		DESIGNED BY: F.FREDERICK DRAWN BY: F.FREDERICK APPROVED BY: (SEE ECO) DATE ORIGINATED: 12-DEC-2013 THE INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL PROPERTY OF LOUD TECHNOLOGIES INC. ALL RIGHTS RESERVED.	DO NOT SCALE DRAWING	SCALE 1:1	DRAWING NUMBER 2042800	SHEET 1 OF 1
TITLE ASSY CBL SPEAKER AND FRONT LED SUB		FILE 2042800_400.cwg		REV. B00		



Qty	Item Number	Rev	Item Description	Ref Des	BOM Notes
	2042800	B00	ASSY CBL SPEAKER AND FRONT LED SUB		
1	0013039-06	A00	CONN RECP 7A 6P 4.2MM 2ROW		
6	0013038	A00	CONN TERM FEM 7A 4.2MM 16-22 AWG TR		
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	2043393	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .250 X .032 16 AWG		FASTON CONNECTOR
1	2042290-16	A00	CONN TERM QDISC-F DUAL CRIMP UNINSULATED .205 X .032 16 AWG		FASTON CONNECTOR
2	0022257	A01	MAG FERRITE 9.5X17.5X28.5MM NI-ZN		
1	0027084	A00	MAG FERRITE 10X15X13 MN-ZN		
1	2042941	A00	FOAM TAPE - ADHESIVE BACKED - 30mm Wide x 400mm Len x 3.2mm Thick		WRAP AROUND FERRITES