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REVISIONS				
REV	DESCRIPTION	EFF. DATE	CHK	APPROVED/DATE
A	PROD RLSE W/O CHG. ECO 10474	1-7-11		DD

D

D

C

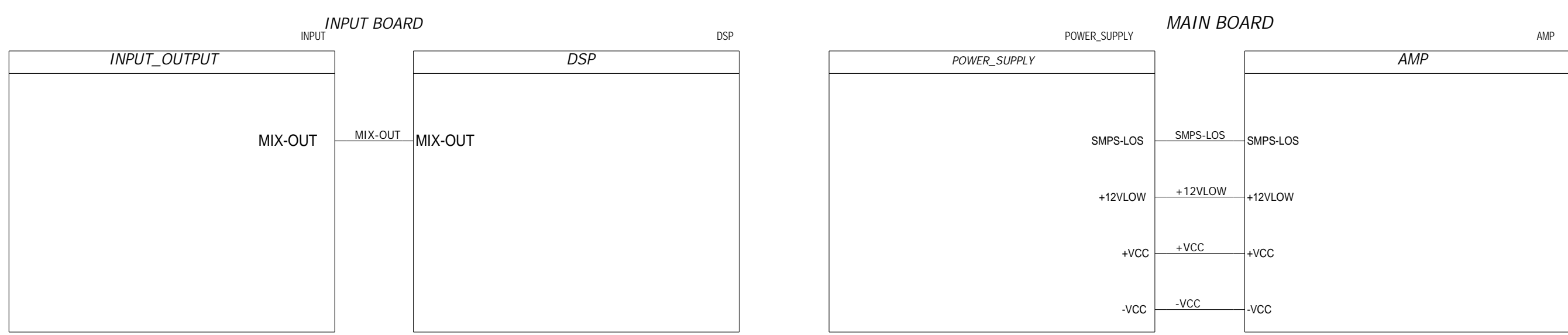
C

B

B

A

A



PLUMBING SCHEDULE
 +/-15V: MAIN BOARD RAW
 +/-15V_A: AMP CH 1 AUDIO
 +/-15V_B: AMP CH 2 AUDIO
 +/-15V_C: INPUT BOARD RAW
 +/-15V_D: INPUT BOARD AUDIO
 VDD1: MAIN BOARD +7V
 VDD2: INPUT BOARD +7V
 +/-VCC: AMPLIFIER RAILS

GROUND SCHEDULE
 C1: INPUT PCB CHASSIS
 P1: MAIN PCB POWER
 A1: MAIN PCB AUDIO
 C2: XCAP CHASSIS

SCHEMATIC ASSOCIATION
 PC-212206-00 FOR ALL MODELS
 WP-212202-00 KW122
 WP-215302-00 KW152
 WP-215302-00 KW153
 WP-218102-00 KW181

COMPONENT NOTES
 '2-WAY' MEANS ONLY FOR KW122/152/153
 'SUB' MEANS ONLY FOR KW181
 USE VALUE AS SHOWN AFTER NOTE
 DNI MEANS 'DO NOT INSERT'



1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLIES WP-212202-00.
 WP-215202-00
 WP-215302-00
 WP-218102-00

NOTES: UNLESS OTHERWISE SPECIFIED

CONTRACT NO.		QSC AUDIO PRODUCTS, LLC. COSTA MESA, CALIFORNIA			
APPROVALS	DATE	SCHEMATIC DIAGRAM KW SERIES			
DRAWN EVAN SHULTZ	1-4-11				
CHECKED DAVID G	1-4-11				
ISSUED DENISE D	1-4-11				
SEED FILE NO. SUBVERSION	PLOT DATE:	SIZE C	CAGE CODE OOPW4	DWG NO. SH-212206-00	REV A
		SCALE NONE	CAD FILE NO. AR-212206-00.ZIP	SHEET 1 OF 5	

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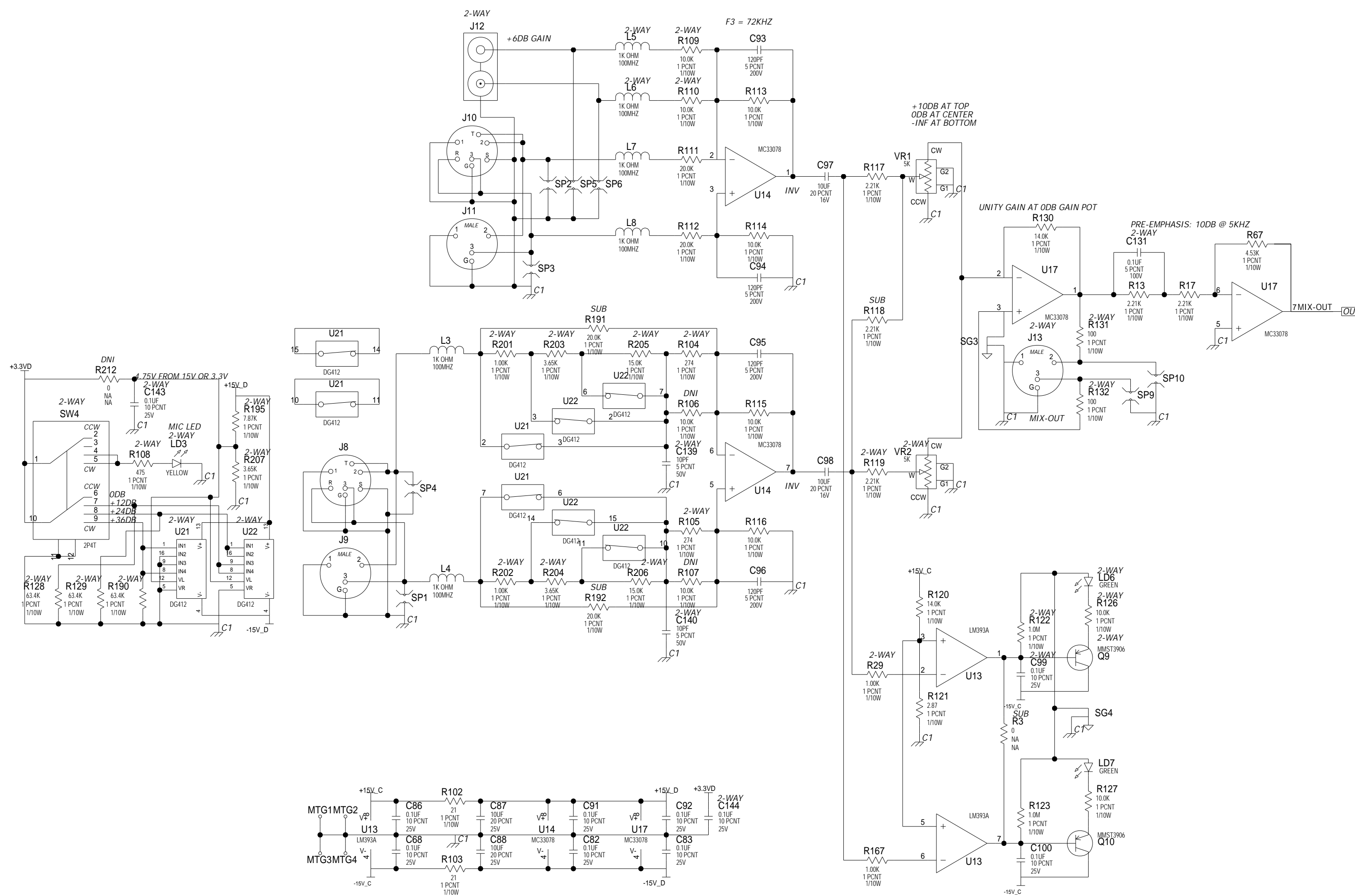
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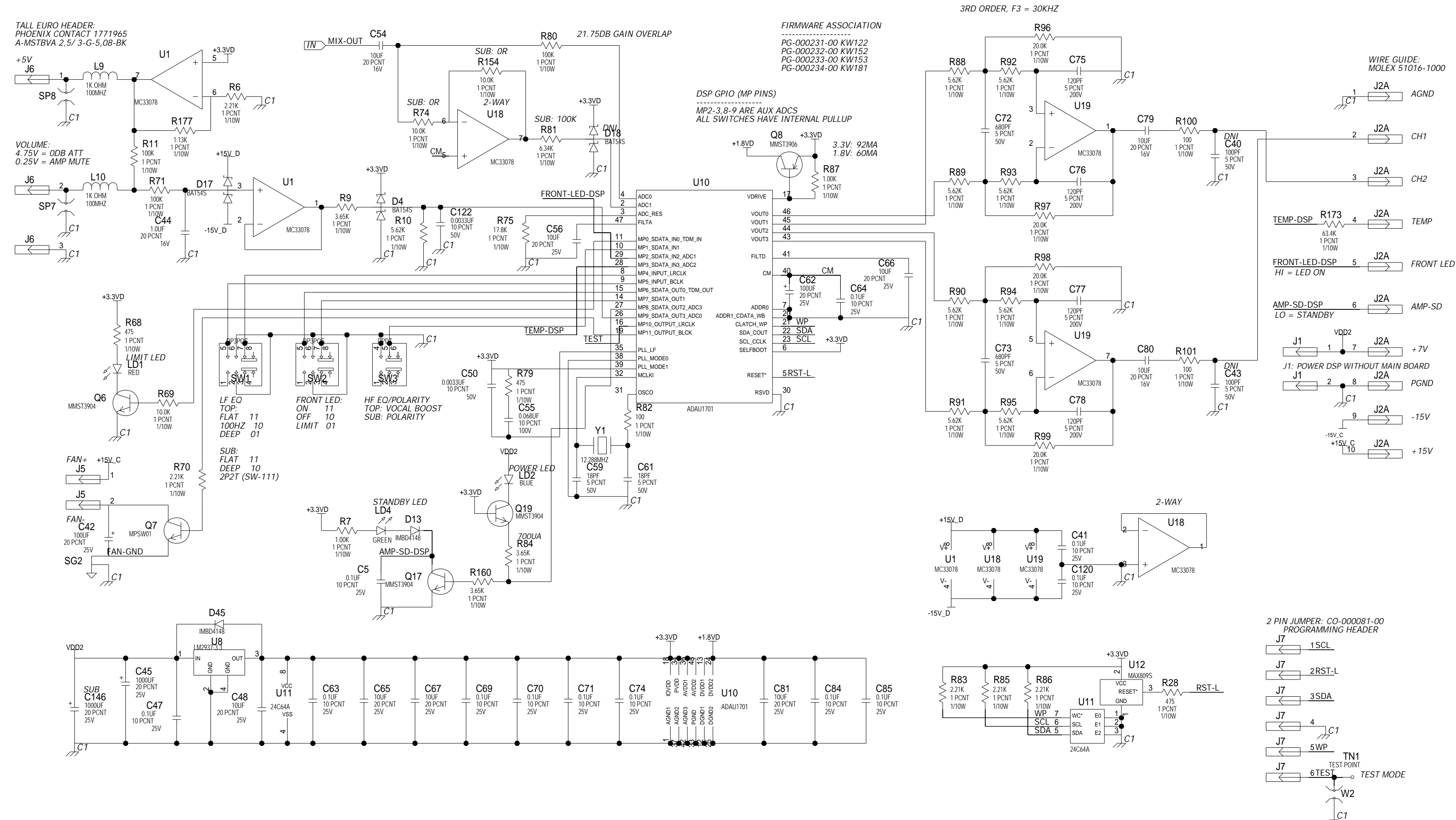
INPUT STAGE, SIGNAL PRESENCE, GAIN, INPUT SUMMING



SIZE C	CAGE CODE 00PW4	DWG NO. SH-212206-00	REV A
SCALE NONE	CAD FILE NO. AR-212206-00.ZIP	SHEET 2 OF 5	

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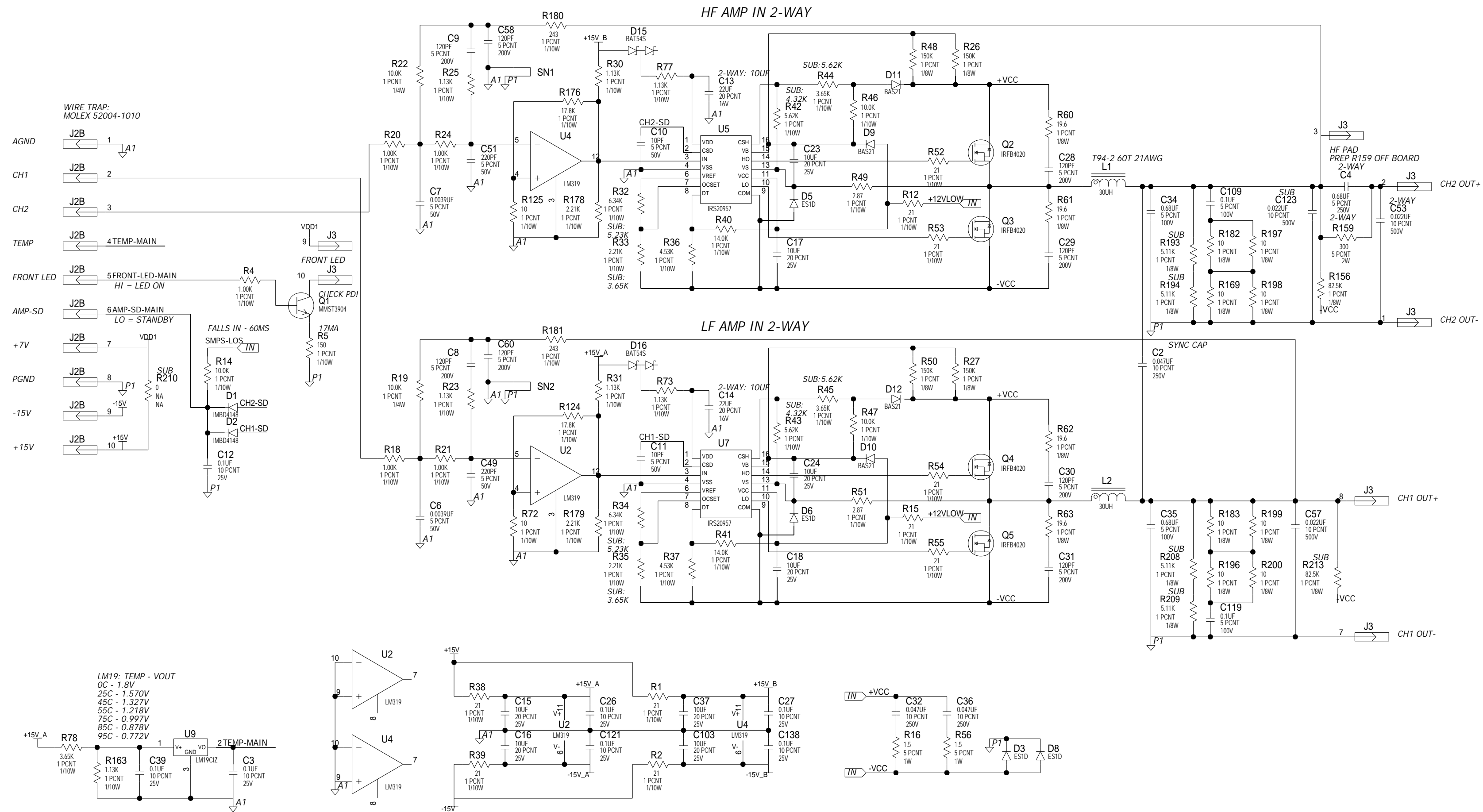
DSP, EEPROM, 3.3V REGULATOR



SIZE C	CAGE CODE 00PW4	DWG NO. SH-212206-00	REV A
SCALE NONE	CAD FILE NO. AR-212206-00.ZIP	SHEET 3 OF 5	

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2-CHANNEL CLASS D AMPLIFIER AND PROTECTION



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D

C

C

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SIZE C	CAGE CODE 00PW4	DWG NO. SH-212206-00	REV A
SCALE NONE	CAD FILE NO. AR-212206-00.ZIP	SHEET 4 OF 5	

Assy Desc:PCB ASSY,,KW122,,UNIV SPLY,FULL RNG,12" 2-WAY

Assy Number:WP-212202-00

Assy Rev:B

Part Number	Description	Item No.	Qty	Ref Des
CA-010002-30	10PF, 5 PCNT, 50V, CERAMIC NPO, 0805,	85	4	C10, C11, C139, C140
CA-018002-30	18PF, 5 PCNT, 50V, CERAMIC NPO, SMT,	90	2	C59, C61
CA-110001-10	100PF, 5 PCNT, 500V, MICA, DIPPED,	95	2	C126, C127
CA-112001-30	120PF, 5 PCNT, 200V, CERAMIC NPO, 0805,	105	20	C19, C20, C22, C28, C29, C30, C31, C58, C60, C8, C9, C1, C75, C76, C77, C78, C93, C94, C95, C96
CA-122002-30	220PF, 5 PCNT, 50V, CERAMIC NPO, 0805,	110	3	C117, C49, C51
CA-122011-00	220PF, 10 PCNT, 250VAC, CERAMIC CLASS Y1, DISC, YCAP	115	1	C52
CA-168003-30	680PF, 5 PCNT, 50V, CERAMIC NPO, 0805,	145	2	C72, C73
CA-222001-00	0.0022UF, 20 PCNT, 125VAC, CERAMIC Y5U, DISC, YCAP	150	3	C104, C105, C124
CA-233003-30	0.0033UF, 10 PCNT, 50V, CERAMIC X7R, 0805,	155	2	C122, C50
CA-239002-30	0.0039UF, 5 PCNT, 50V, CERAMIC COG/NPO, 0805,	160	2	C6, C7
CA-322013-30	0.022UF, 10 PCNT, 500V, CERAMIC X7R, 1206,	165	6	C53, C57, C111, C114, C130, C132
CA-347008-10	0.047UF, 10 PCNT, 250V, FILM, BOX,	170	5	C2, C32, C36, C46, C89
CA-368007-30	0.068UF, 10 PCNT, 100V, CERAMIC X7R, 0805,	175	1	C55
CA-410001-00	0.1UF, 20 PCNT, 250VAC, FILM, BOX STYLE, XCAP	180	1	C108
CA-410012-30	0.1UF, 10 PCNT, 25V, CERAMIC X7R, 0805,	185	34	C3, C5, C12, C21, C26, C27, C39, C41, C47, C63, C64, C68, C69, C70, C71, C74, C82, C83, C84, C85, C86, C90, C91, C92, C99, C100, C106, C107, C118, C120, C121, C138, C143, C144
CA-410027-10	0.1UF, 5 PCNT, 100V, FILM, BOX STYLE,	190	3	C109, C119, C131
CA-468005-10	0.68UF, 5 PCNT, 100V, FILM, DIPPED/BOX,	195	2	C34, C35
CA-468006-00	0.68UF, 5 PCNT, 250V, POLYPROPYLENE, BOX,	200	3	C4, C116, C149
CA-468007-00	0.68UF, 20 PCNT, 250VAC, FILM, BOX STYLE, X2 CAP	205	2	C101, C102
CA-468008-10	0.68UF, 5 PCNT, 100V, FILM, DIPPED/BOX, DO NOT USE W/HI RIPPLE CURRENT	196	1	C125
CA-510007-30	1.0UF, 20 PCNT, 16V, CERAMIC Y5V, 0805,	210	6	C38, C44, C115, C128, C137, C148
CA-610011-30	10UF, 20 PCNT, 16V, ELECTROLYTIC, SMT, NON-POLAR	215	5	C54, C79, C80, C97, C98
CA-610021-30	10UF, 20 PCNT, 25V, CERAMIC CAP, 1206,	220	20	C13, C14, C15, C16, C17, C18, C23, C24, C33, C37, C48, C56, C65, C66, C67, C81, C87, C88, C103, C110
CA-710004-10	100UF, 20 PCNT, 25V, ELECTROLYTIC, , LOW ESR	10	5	C133, C134, C42, C62, C129
CA-747011-00	470UF, 20 PCNT, 400V, ELECTROLYTIC, SNAP IN,	15	2	C112, C113
CA-810010-10	1000UF, 20 PCNT, 25V, ELECTROLYTIC, ,	20	2	C25, C45
CA-810010-10	1000UF, 20 PCNT, 25V, ELECTROLYTIC, ,	21	1	C145
CA-818001-00	1800UF, 20 PCNT, 100V, ELECTROLYTIC, 22MM X 40MM SNAP IN,	25	2	C135, C136
CO-000009-ZT	ZTAB, 0.25" TAB, 1 POS, MALE, AUTO INSERTABLE	30	2	J14, J15
CO-000155-00	HEADER, 0.1" CENTERS, 2 POS (1X2), MALE, RAMP LOCK	35	1	J1
CO-000185-30	TEST POINT, SMT, 1 POS, , 1206	655	1	TN1
CO-000329-00	WIRE HOLDER, RIBBON CABLE, 10 POS, FEMALE,	630	1	
CO-000371-00	JACK, PHONO, 2 POS, FEMALE, VERTICAL	40	1	J12
CO-000413-00	HEADER, 4.2MM CENTERS, 10 POS (2X5), MALE,	45	1	J3
CO-000414-00	XLR, COMBO, 3 POS, FEMALE, VERTICAL WITHOUT TAB	50	2	J8, J10
CO-000421-00	XLR, , 3 POS, MALE, VERTICAL PLASTIC SHELL	55	3	J9, J11, J13
CO-000422-00	JACK, EURO, 3 POS, MALE, VERTICAL BLACK TALL	60	1	J6
CO-000426-00	WIRE TRAP, RIBBON CABLE, 10 POS, FEMALE, RELEASABLE	65	1	J2B
CO-000458-00	TERMINAL STRIP, 2X3, 6 POS, MALE,	70	1	J7
CO-000483-00	CONNECTOR, STRAIGHT WAFER, 2 PIN, ,	36	1	J5
CY-000009-30	12.288MHZ, , SMT	75	1	Y1
HW-000007-HW	FUSE CLIP, PC MOUNT, , , TIN PLATED BRASS, 5MM	635	2	
IC-000048-30	OPAMP, DUAL, MC33078, ,	80	5	U1, U14, U17, U18, U19
IC-000157-30	REGULATOR, SHUNT, ZR431, ,	120	1	U6
IC-000188-30	VOLTAGE REGULATOR, +3.3V, LM2937-3.3, ,	125	1	U8
IC-000200-30	RESET, MICROPROCESSOR, MAX8095, ,	130	1	U12
IC-000279-30	COMPARATOR, DUAL, LM319, SMT,	135	2	U2, U4
IC-000315-00	SENSOR, TEMPERATURE, LM19C1Z, ,	140	1	U9
IC-000382-30	DSP 28/56 BIT, , ADAU1701, ,	225	1	U10
IC-000407-30	EEPROM, 8KX8, 24C64A, SMT, I2C	230	1	U11
IC-000412-30	CONTROLLER, ACTIVE CLAMP PWM, UCC2893, SMT,	235	1	U15
IC-000413-30	DRIVER, MOSFET HALF BRIDGE, IRS20957, SMT,	240	2	U5, U7
IC-000425-30	OPTO COUPLER, TRANSISTOR OUTPUT, MOC205R2V-M, SMT, VDE APPROVAL	245	1	U3

Part Number	Description	Item No.	Qty	Ref Des
IC-000431-30	VOLTAGE REGULATOR, +12V, LM78L12A, SO-8,	250	1	U16
IC-000505-30	COMPARATOR, DUAL, LM393A, SO-8, VIO = 2MV MAX	255	1	U13
IC-000558-30	ANALOG SWITCH, QUAD, DG412, ,	665	2	U21, U22
MS-000115-30	FUSE, 1.0A, 24V, 1206, SLO	260	3	F2, F3, F4
MS-10.250-FU	FUSE, 10A, 250V, 5MM X 20MM, FAST	265	1	F1
PC-212202-00	SOB-DO NOT ORDER-PCB, KW SERIES, , ,	605	1	
PG-000231-00	FIRMWARE, , KW122, ,	640	0	
PL-000628-00	SPACER, T-1 LED, 0.85", PLASTIC, BLACK,	620	6	
PL-000643-00	SPACER, LED/TO-92, .115" (3MM), PVC, BLACK,	625	1	
PL-000686-00	SPACER, ROUND, 0.063"ID X 0.156"OD X 0.510"L, NYLON, ,	615	1	
PL-000710-00	BOAT, NTC SUPPORT, , , ,	616	1	
PT-250006-00	GAIN, 5K, 20 PCNT, , 21 DETENT, GX SERIES	270	2	VR1, VR2
QD-000052-00	LED, , , GREEN, , DIFFUSED	275	3	LD4, LD6, LD7
QD-000053-00	LED, , , YELLOW, , NA	280	1	LD3
QD-000054-00	LED, , , RED, , NA	285	1	LD1
QD-000066-10	TRANSISTOR NPN, 30V, 1A, 1W, MPSW01, TO-92,	290	2	Q7, Q16
QD-000102-30	DIODE, 75V, 0.075A, , IMBD4148, SOT-23, 4NS	295	8	D1, D2, D7, D13, D22, D25, D35, D45
QD-000103-30	TRANSISTOR NPN, 40V, 0.2A, 0.2W, MMST3904, SOT-23,	300	5	Q1, Q6, Q11, Q12, Q17
QD-000104-30	TRANSISTOR PNP, 40V, 0.2A, 0.2W, MMST3906, SOT-23,	305	3	Q10, Q8, Q9
QD-000105-30	TRANSISTOR NPN, 300V, 0.2A, 0.2W, MMBTA42, SOT-23,	310	1	Q15
QD-000108-30	DIODE, 200V, 0.2A, , BAS21, SOT-23, 50NS	315	8	D9, D10, D11, D12, D14, D27, D29, D40
QD-000187-00	LED, , , BLUE, , NA	320	1	LD2
QD-000189-30	DIODE SCHOTTKY, 30V, 0.2A, , BAT54S, SOT-23,	325	5	D4, D15, D16, D17, D37
QD-000282-30	DIODE RECTIFIER ULTRAFast, 200V, 1A, , ES1D, SMA,	330	9	D3, D31, D32, D36, D43, D5, D6, D8, D28
QD-000284-00	MOSFET N-CHANNEL, 600V, 26A, 313W, STW26NM60, TO-247,	335	1	Q14
QD-000363-30	DIODE, SCHOTTKY, 30V, 2.0A, , MBR230, SOD-123,	345	4	D23, D24, D38, D39
QD-000372-00	BRIDGE RECTIFIER, , , KBU1005, IN-LINE, 600V 10A	350	1	BR1
QD-000373-00	MOSFET N-CHANNEL, 200V, 18A, 100W, IRFB4020, TO-220AB,	355	4	Q2, Q3, Q4, Q5
QD-000376-00	MOSFET N-CHANNEL, 600V, 11A, 160W, STP11NM60FD, TO-220,	360	1	Q13
QD-000391-00	DIODE RECTIFIER, 600V, 8A, , FFP08S60S, TO-220, 15NS STEALTH II	365	2	D33, D34
QD-000416-30	LED, BLUE, , , , SMT,	650	1	
RE-.15002-30	1.5, 5 PCNT, 1W, THICK FILM, 2512, 200V	370	4	R16, R56, R174, R184
RE-.28701-30	2.87, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	375	4	R49, R51, R121, R155
RE-000300-NR	NTC, 2.5 OHMS, 8 AMPS, , INRUSH LIMIT 90J	380	1	R140
RE-001003-30	10, 1 PCNT, 1/8W, THICK FILM, 1206, 200V	385	10	R157, R168, R169, R182, R183, R196, R197, R198, R199, R200
RE-001006-30	10, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	390	3	R72, R125, R165
RE-001960-30	19.6, 1 PCNT, 1/8W, THICK FILM, 1206, 200V	395	4	R60, R61, R62, R63
RE-002100-30	21, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	400	13	R1, R2, R12, R15, R38, R39, R52, R53, R54, R55, R57, R102, R103
RE-010002-30	100, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	405	11	R100, R101, R131, R132, R139, R175, R187, R59, R64, R82, R58
RE-010018-10	100, 5 PCNT, 2W, METAL OXIDE FP, MINI,	410	3	R161, R162, R166
RE-024301-30	243, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	415	4	R180, R181, R185, R186
RE-027401-30	274, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	675	2	R104, R105
RE-030002-10	300, 5 PCNT, 2W, METAL OXIDE FP, MINI,	420	1	R159
RE-047502-30	475, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	425	6	R108, R211, R28, R5, R68, R79
RE-076801-30	768, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	430	1	R153
RE-110002-30	1.00K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	435	11	R158, R167, R18, R20, R21, R24, R29, R7, R87, R201, R202
RE-111301-30	1.13K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	440	10	R163, R164, R171, R177, R23, R25, R30, R31, R73, R77
RE-122103-30	2.21K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	445	14	R117, R119, R13, R151, R17, R178, R179, R33, R35, R6, R70, R83, R85, R86
RE-136502-30	3.65K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	450	11	R160, R203, R204, R207, R44, R45, R66, R76, R78, R9, R84
RE-145302-30	4.53K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	455	3	R36, R37, R67
RE-156200-30	5.62K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	465	11	R10, R42, R43, R88, R89, R90, R91, R92, R93, R94, R95
RE-163402-30	6.34K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	470	6	R148, R32, R34, R8, R81, R4
RE-178701-30	7.87K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	475	2	R141, R195
RE-210001-BM	10.0K, 1 PCNT, 1/4W, METAL FILM, ,	480	2	R19, R22
RE-210003-30	10.0K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	485	14	R109, R110, R113, R114, R115, R116, R126, R127, R14, R154, R46, R47, R69, R74
RE-211005-00	11K, 5 PCNT, 1W, METAL OXIDE FP, ,	670	5	R65, R144, R145, R146, R147
RE-214001-30	14.0K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	490	4	R120, R130, R40, R41
RE-215002-30	15.0K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	680	2	R205, R206

Part Number	Description	Item No.	Qty	Ref Des
RE-217803-30	17.8K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	495	4	R75, R124, R137, R176
RE-220002-30	20.0K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	500	6	R111, R112, R96, R97, R98, R99
RE-229402-30	29.4K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	505	1	R150
RE-256001-00	SOB-56K, 5 PCNT, 1W, METAL OXIDE, FP,	510	1	R170
RE-263401-30	63.4K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	515	6	R143, R149, R173, R128, R129, R190
RE-282501-30	82.5K, 1 PCNT, 1/8W, THICK FILM, 1206, 200V	520	5	R152, R156, R172, R188, R189
RE-310002-30	100K, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	525	5	R11, R138, R142, R71, R80
RE-315002-30	150K, 1 PCNT, 1/8W, THICK FILM, 1206, 200V	530	6	R26, R27, R48, R50, R135, R136
RE-324302-30	243K, 1 PCNT, 1/8W, THICK FILM, 1206, 200V	535	2	R133, R134
RE-410005-30	1.0M, 1 PCNT, 1/10W, THICK FILM, 0805, 100V	540	2	R122, R123
SW-000111-00	SWITCH, DPDT, SLIDE, PCB MOUNT 0.805" TERMINALS	545	1	SW3
SW-000112-00	SWITCH, DP3T, SLIDE, PCB MOUNT 0.805" TERMINALS	550	2	SW1, SW2
SW-000182-00	SWITCH, 2P4T, ROTARY, 4 POS VERTICAL	555	1	SW4
WC-000523-00	RIBBON CABLE, , 26 AWG, 10 COND, KW SERIES, 9.0 IN INSULATION,	560	1	J2A
WC-1.1022-JW	WIRE, JUMPER, 22 GA, , BOP, 1.1, WHT	565	1	W1
XF-000100-30	BEAD, 100MHZ, 1K OHM, SMT	570	8	L3, L4, L5, L6, L7, L8, L9, L10
XF-000360-30	TRANSFORMER, CURRENT SENSE, , , , , 100:1 BOP-2CH	575	1	T1
XF-000361-30	TRANSFORMER, GATE DRIVE, , , , BOP-2CH, ,	580	1	T3
XF-000362-00	TRANSFORMER, SWITCHING, 200KHZ, E42-21-20, 1000W, BOP-2CH, ,	585	1	T2
XF-000364-00	INDUCTOR, , TOROID T94-2, 30UH, BOP-2CH, ,	590	2	L1, L2
XF-000376-00	INDUCTOR, COMMON MODE, TOROID, 4MH, BOP, , 50/60HZ 6.3A	595	2	L11, L12
XF-000391-00	INDUCTOR, 60HZ PFC, TOROID, 774UH, KW SERIES, , 4 TO 6 PIN BASE	600	1	L13