

Item	Reference Designator	Description	MFG	MFG P/N
1	C1 C12 C25 C33	CAP 220uF ±20% 35V AL-ELEC CASE CL	NICHICON	UCV1V221MCL1GS
2	C3 C13 C21 C30 C43 C52 C59 C81	CAP 68uF ±20% 25V AI ELEC NPb RAD	WURTH ELEKTRONIK	865080443009
3	C4 C19 C22 C38 C39 C56 C60 C92 C193 C197 C206 C208 C241	CAP 10uF ±20% 35V X5R NPb 0603	MURATA	GRM188R6YA106MA73J
4	C5 C18 C23 C37 C40 C55 C61 C91 C93 C175 C181	CAP 0.1uF ±5% 25V X7R NPb 0603	KEMET	C0603C104J3RAC
5	C6 C17 C24 C35 C41 C54 C62 C87 C194 C195 C201 C202	CAP 680pF ±1% 50V C0G NPb 0603	KEMET	C0603C681F5GAC
6	C10 C28 C47 C73	CAP 0.015uF ±5% 50V C0G NPb 0805	MURATA	GRM2195C1H153JA01D
7	C57	CAP 470uF ±20% 10V AL-ELEC CASE F	PANASONIC	EEE-FK1A471V
8	C77 C233 C236 C248	CAP 4.7uF ±10% 16V X7R NPb 0603	MURATA	GRM188Z71C475KE21D
9	C78	CAP 0.47uF ±10% 25V X7R NPb 0603	SAMSUNG	CL10B474KA8NFNC
10	C88	CAP 2.2uF ±10% 10V X7R NPb 0603	MURATA	GRM188R71A225KE15D
11	C89	CAP 0.22uF ±10% 25V X7R NPb 0603	TDK	C1608X7R1E224K080AC
12	C90 C94 C182 C191 C243	CAP 1uF ±10% 16V X7R NPb 0603	KEMET	C0603C105K4RAC
13	C221 C222 C232 C234 C239 C247 C254	CAP 12pF ±5% 50V C0G NPb 0603	MURATA	QH-GRM1885C1H120JA01D
14	C240 C244	CAP 0.01uF ±10% 16V X7R NPb 0603	MURATA	GRM188R71C103KA01D
15	C293 C294 C295 C296	CAP 100uF ±20% 35V AI ELEC NPb RAD	WURTH ELEKTRONIK	865080545012
16	CLK_GEN_SRC MCLK_SRC	HDR 3x2 ML V 0.1"CTR .093BD Au HT NPb TH	AMP	67997-206HLF
17	DCJ1 DCJ2 DCJ3 DCJ4	HDR30X2 HI-SPD ML 0.8mm POLY-PAD NPb SM	SAMTEC	ERM8-030-05.0-S-DV-K-TR
18	GND40 GND41 GND42 GND43	CON TEST PT .1"CTR TIN PLATE NPb BLK	KEYSTONE	5001
19	J1 J2 J3 J4 J83 J84 J85 J86 J87 J88 J89 J90 J91 J92 J93 J94 J95 J96 J97 J98 J99 J100 J101 J102 J103 J104 J105 J106 J107 J108 J109 J110 J111 J112 J113 J114 J115 J116 J117 J118 J119 J120 J121 J122	HDR 1X1 ML 0.093 BRD 0.1"TAIL GLD NPb TH	AMP	NS-77311-801-01LF
20	L1 L2 L3	FE BEAD 1.7A 330OHM .08DCR NPb 0603	MURATA	QH-BLM18KG331SN1
21	LNK-CLK_GEN_SR LNK-MCLK_SRC	CON SHUNT 2P 0.1"CTR YELLOW NPb	SAMTEC	SNT-100-YW-G
22	MH3 MH4	SPACER M2.5X10mm INSET F/F THR STEEL NPb	WURTH ELEKTRONIK	9774100151R
23	R1 R2 R6 R7 R9 R10 R14 R16 R18 R21 R23 R28 R31 R32 R33 R34 R35 R38 R39 R41 R44 R45 R46 R51 R52 R58 R61 R64 R66 R68 R69 R70 R71 R75 R77 R80 R83 R85 R89 R92 R97 R98 R99 R100 R101 R111 R113 R114 R119 R122 R123 R126 R129 R136 R138 R139 R140 R193 R215 R224 R257 R280 R298 R302 R321 R322 R334 R343 R344 R348 R351 R390 R399	RES 0 OHM 1/10W NPb 0603 FILM	DALE	CRCW06030000Z0EA
24	R3 R26 R36 R60 R73 R95 R102 R131	RES 10 OHM 1/16W ±0.1% NPb 0603	BOURNS	QH-CRT0603-BY-10R0ELF
25	R4 R25 R94 R96 R118 R132 R174 R176	RES 1.2K OHM 1/5W ±0.1% NPb 0603	PANASONIC	ERJ-PB3B1201V
26	R8 R17 R40 R56 R76 R84 R112 R127	RES 47k OHM 1/10W ±5% NPb 0603 FILM	DALE	CRCW060347K0JNEA

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27	R12 R19 R47 R48 R78 R87 R116 R124	RES 1.2K OHM 1/10W ±0.1% NPb 0603 THIN FILM	PANASONIC	ERA-3AEB122V
28	R13 R20 R49 R50 R79 R88 R117 R125	RES 300 OHM 1/10W ±0.1% NPb 0603	PANASONIC	ERA-3AEB301V
29	R135 R338 R339 R340 R341 R345	RES 100 OHM 1/4W ±5% NPb 0603	DALE	CRCW0603100RJNEAHP
30	R144 R149 R150 R164 R165 R170 R347	RES 33 OHM 1/10W ±5% NPb 0603 FILM	DALE	CRCW060333R0JNEA
31	R185 R260 R268 R294	RES 10k OHM 1/10W ±1% NPb 0603 FILM	DALE	CRCW060310K0FKEA
32	R299	RES 4.7k OHM 1/10W ±5% NPb 0603 FLM	DALE	CRCW06034K70JNEA
33	R325 R330 R331 R332	RES 33 OHM 1/10W ±1% NPb 0603 FLM	DALE	CRCW060333R0FKEA
34	R326	RES 4.70K OHM 1/10W ±1% NPb 0603	PANASONIC	ERJ3EKF4701V
35	R327 R328 R329 R333	RES 0 OHM 1/4W NPb 0603	DALE	CRCW06030000Z0EAHP
36	R352	RES 1 OHM 1/3W ±1% NPb 0603	KOA	SG73P1JTTD1R00F
37	U1 U2 U3 U4 U12 U13 U16	IC OPAMP AUD 2 CRCT RR SOIC8	TEXAS INSTRUMENTS	OPA1656ID
38	U5	IC CRS 32bit HI PER P 4CH ADC B0 QFN48	CIRRUS LOGIC	CS5304P-CNR/B0 or CS5304S-CNR/B0
39	U9	IC SWITCH ANALOG 4PDT NPb HXQFN16	NXP	NX3DV2567HR,115
40	U11	IC EEPROM 512Kb SER 1MHz NPb UDFN8	ATMEL	AT24C512C-MAHM-E
41	U17	IC UNI-DIR VLVL XLTR 4CH XCVR NPb WQFN16	TEXAS INSTRUMENTS	CAXC4T774QBQBRQ1
42	U25	IC INVTR 1CH SCHMITT TRIGGER NPb SOT23-5	TEXAS INSTRUMENTS	SN74AUC1G14DBVR
43	Y3	OSC XO 11.2896MHz 20ppm 1.71-3.63V SMD4	KYOCERA	KC3225Z11.2896C1KX00
44	Y4	OSC XO 12.288MHz 20ppm 1.71-3.63V SMD4	KYOCERA	KC3225Z12.2880C1KX00
DO NOT POPULATE				
45	C2 C7 C8 C9 C14 C15 C16 C20 C26 C27 C31 C32 C34 C36 C42 C44 C45 C46 C48 C51 C53 C58 C63 C64 C65 C66 C67 C68 C69 C70 C71 C72 C75 C76 C79 C80 C82 C83 C85 C86 C96 C98 C99 C100 C101 C102 C103 C104 C105 C106 C107 C108 C109 C112 C114 C115 C116 C117 C118 C119 C120 C121 C122 C123 C124 C126 C127 C128 C129 C130 C131 C132 C134 C135 C136 C138 C140 C142 C144 C145 C146 C147 C150 C151 C152 C153 C154 C158 C159 C161 C162 C163 C164 C168 C169 C170 C171 C173 C174 C177 C179 C183 C185 C186 C187 C188 C198 C199 C200 C203 C204 C211 C212 C213 C214 C215 C216 C217 C218 C219 C224 C225 C226 C227 C228 C229 C230 C231 C251	NO POP CAP NPb 0603	NO POP	NP-CAP-0603
46	C11 C29 C49 C74 C110 C111 C139 C141 C155	NO POP CAP NPb 0805	NO POP	NP-CAP-0805
47	C50 C125 C137	CAP 470uF ±20% 10V AL-ELEC CASE F	PANASONIC	NP-EEE-FK1A471V
48	C84 C166	CAP 1uF ±10% 16V X7R NPb 0603	KEMET	NP-C0603C105K4RAC
49	C95	CAP 4.7uF ±10% 16V X7R NPb 0603	MURATA	NP-GRM188Z71C475KE21D

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DO NOT POPULATE				
50	C97 C113 C133 C143 C149 C157 C172 C184	CAP 68uF ±20% 25V AI ELEC NPb RAD	WURTH ELEKTRONIK	NP-865080443009
51	C148 C160	CAP 100pF ±1% 50V C0G NPb 0603	KEMET	NP-CBR06C101F5GAC
52	C165	CAP 0.1uF ±5% 25V X7R NPb 0603	KEMET	NP-C0603C104J3RAC
53	C167 C176	CAP 39pF ±5% 50V C0G NPb 0603	KEMET	NP-C0603C390J5GAC
54	C220	CAP 47uF ±20% 10V X5R MLCC NPb 0805	MURATA	NP-GRM21BR61A476ME15L
55	C235 C237 C245 C246	CAP 12pF ±5% 50V C0G NPb 0603	MURATA	NP-QH-GRM1885C1H120JA01D
56	C250 C252	CAP 680pF ±1% 50V C0G NPb 0603	KEMET	NP-C0603C681F5GAC
57	C297 C298 C299 C300	CAP 100uF ±20% 35V AI ELEC NPb RAD	WURTH ELEKTRONIK	NP-865080545012
58	J5 J6 J7 J8 J9 J10 J11 J12 J13 J14 J15 J16 J17 J18 J19 J20 J21 J22 J23 J24 J25 J26 J27 J28 J29 J32 J33 J36 J37 J38 J39 J40 J41 J43 J44 J45 J46 J47 J48 J49 J50 J51 J52 J53 J54 J55 J56 J57 J58 J59 J60 J61 J62 J63 J65 J66 J67 J68 J69 J70 J71 J74 J75 J78 J79 J80 J81 J82 J123 J124 J125 J126 J127 J128 J129 J130 J131 J132 J133 J134 J135 J136 J137 J138 J139 J140 J141 J142 J143	HDR 1X1 ML 0.093 BRD 0.1"TAIL GLD NPb TH	AMP	NP-77311-801-01LF
59	MH1 MH2 MH5 MH6	SPACER M2.5X10mm INSET F/F THR STEEL NPb	WURTH ELEKTRONIK	NP- 9774100151R
60	R5 R11 R22 R24 R29 R37 R42 R54 R55 R57 R59 R62 R72 R82 R86 R91 R93 R115 R128 R130 R219 R220 R221 R222 R223 R227 R228 R229 R230 R231 R295 R301 R304 R310 R313 R323 R324 R335 R336 R337 R342 R353 R354 R368 R383	RES 0 OHM 1/10W NPb 0603 FILM	DALE	NP-CRCW06030000Z0EA
61	R15 R27 R30 R43 R53 R63 R65 R67 R74 R81 R90	NO POP RES NPb 0603	NO POP	NP-RES-0603
62	R137 R258 R259 R263	RES 10k OHM 1/10W ±1% NPb 0603 FILM	DALE	NP-CRCW060310K0FKEA
63	R147 R305 R306 R312	RES 0 OHM 1/4W NPb 0603	DALE	NP-CRCW06030000Z0EAHP
64	R300	RES 4.7k OHM 1/10W ±5% NPb 0603 FLM	DALE	NP-CRCW06034K70JNEA
65	U6 U7 U8 U10 U14 U15	IC OPAMP AUD 2 CRCT RR SOIC8	TEXAS INSTRUMENTS	NP-OPA1656ID
66	U21	IC CRS NOLAN TSMC 55LP TSSOP10	CIRRUS LOGIC	NP-CS2500-CZ/A0
67	Y2	XTL 12.000MHz 20pF 10ppm SMD4	ABRACON	NP-ABM8-12.000MHZ-20-B1U-T
68	Y2	XTL 12.000MHz 20pF 10ppm SMD4	ABRACON	NP-ABM8-12.000MHZ-20-B1U-T