



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C31 C32	2	CAP, CERAMIC, 330pF, 20V, X7R, 10%, 0402	330pF	10%	402	Panasonic	ECJ6B1E333K	Yes	Yes
C45 C46 C50 C51 C102	5	CAP, CERAMIC, 1000pF, 16V, X7R, 10%, 0402	1000pF	10%	402	Murata	GRM155R71E100MABD	Yes	Yes
C47 C49	2	CAP, CERAMIC, 150pF, 50V, 0805, 5% Multilayer-MSC-R002	150pF	5%	402	Panasonic	ECJ6B1E150K	Yes	Yes
C43 C55 C57 C59	14	CAP, TANTALUM CHIP, 50V, X5R, 10%, 10uF	10uF	10%	3216-18	AVX	TAVA105050R	Yes	Yes
C54 C56 C58 C60 C61 C57 C58 C59 C74 C77 C80 C81 C84 C85 C90 C93	17	CAP, CERAMIC, 100nF, 16V, X5R, 20%, 0201	100nF	20%	201	Panasonic	ECJ2E1A104M	Yes	Yes
C62	1	CAP, CERAMIC, 100nF, 16V, X5R, 10%, 0402	100nF	10%	402	Panasonic	ECJ6B1C104K	Yes	Yes
C64	1	CAP, CERAMIC, 1uF, 16V, X7R, 10%, 0603, Multilayer-MSC-R002	1uF	10%	603	TDK Corporation	CGA3E1X7R1C106K80AC	Yes	Yes
C65 C73 C78 C83 C87 C89	6	CAP, TANTALUM CHIP, LOW ESR, 10uF, 10V, 10%	10uF	10%	3216-18	AVX	TPSA105K010R000	Yes	Yes
C66	1	CAP, CERAMIC, 1uF, 25V, X7R, 10%, 0805	1uF	10%	805	Murata	GCM218R71E105K456L	Yes	Yes
C70 C71 C72 C75 C76 C79 C82 C86 C88 C91 C94 C95	12	CAP, CERAMIC, 10nF, 16V, X7R, 10%, 0201	10nF	10%	201	Murata	GRM03R71A100KA01D	Yes	Yes
D1	1	DIODE, LED, CHIP, GRN, CLEAR LENS, 3.0V, 20mA, SMD, 0603	GRN	-	603	Lite-On	LTST-C190K0K7	Yes	Yes
J1	1	CONN, JACK, PHONO (RCA), RIGHT ANGLE, YELLOW, 2 PIN, THROUGH	CONN1 JACK-YEL-RA-J	-	-	CL# Inc.	RCJ-044	Yes	Yes
J2	1	CONN, SOCKET, HIGH SPEED, 2x28, 52 SIG PIN, 0.635MM PITCH, ALIGNMT PINS, 1 GND BUS PIN, LIGHT GOLD PLTG, RETENTION SWG	CON52-2x26-J (QFS)	-	-	Samtec	QFS-026-04-25-L0-A-R11	Yes	Yes
L1 L3	2	IND, CHIP COIL, LASER CUT, 1.0uH, +/- 5%, 100V	1.0uH	-	1008	Panasonic	ELFJC1R05F	Yes	Yes
L2	1	IND, CHIP COIL, LASER CUT, 2.2uH, +/- 5%, 100V	2.2uH	-	1008	Panasonic	ELFJC2R22F	Yes	Yes
L8	1	IND, FERRITE CHIP, 100 OHM AT 100MHz, 0.1 OHM @ 1MHz	1.4A	-	603	Murata	BLM18PG2212N1D	Yes	Yes
P20 P21 P23 P29	4	CONN, HEADER, VERTICAL, 1x3, 3 PIN, 2MM PITCH, THRU-BORE	HDR3-1x3-P	-	-	3M	951103-8622-AR	Yes	Yes
P22 P30	2	CONN, HEADER, VERTICAL, 1x2, 2 PIN, 2MM PITCH, THRU-BORE	HDR2-1x2-P	-	-	3M	951102-8622-AR	Yes	Yes
P23 P28	2	CONN, HEADER, VERTICAL, 2x2, 4 PIN, 2MM PITCH, THRU-BORE	HDR4-2x2-P	-	-	3M	951104-8622-AR	Yes	Yes
P24 P27	2	CONN, HEADER, VERTICAL, 2x1, 8 PIN, .100 PITCH, 25 MIL SQ POSTS	HDR8-2x4-P	-	-	Typo Electronics	87227-4	Yes	Yes
P26	1	CONN, HEADER, VERTICAL, 1x4, 4 PIN, 2MM PITCH, THRU-BORE	HDR4-1x4-P	-	-	3M	951104-8622-AR	Yes	Yes
R91 R92	2	RESISTOR, CHIP ARRAY, ISOLATED, 4 RES, 8 TERMINALS, 22 OHM, 0.05W, 5%, 0402 ARRAY	22	5%	0402 X 4	Panasonic	E9828V2202X	Yes	Yes
R97 R98	2	RESISTOR, CHIP ARRAY, ISOLATED, 4 RES, 8 TERMINALS, 4.7K OHM, 0.05W, 5%, 0402 ARRAY	4.7K	5%	0402 X 4	Panasonic	E9828V4722X	Yes	Yes
R7 R20 R21 R25 R55 R72	6	RESISTOR, THICK FILM CHIP, SMD, 0 OHM, 0.05W, 0.05W, 5%, 0402	0	5%	402	Panasonic	ERJ2GE0R00X	Yes	Yes
R9	1	RESISTOR, PRECISION THICK FILM CHIP, SMD, 2.4K, 0.1W, 1%, 0402	2.4K	1%	402	Panasonic	ERJ2R47241X	Yes	Yes
R18	1	RESISTOR, PRECISION THICK FILM CHIP, SMD, 75 OHM, 0.1W, 1%, 0402	75	1%	402	Panasonic	ERJ2R47500X	Yes	Yes
R19	1	RESISTOR, PRECISION THICK FILM CHIP, SMD, 39 OHM, 0.1W, 1%, 0402	39	1%	402	Panasonic	ERJ2R473900X	Yes	Yes
R62 R63 R78	3	RESISTOR, THICK FILM CHIP, SMD, 33 OHM, 0.1W, 1%, 0402	33	5%	402	Panasonic	ERJ2GE1330X	Yes	Yes
R64 R69 R70 R75 R76	5	RESISTOR, THICK FILM CHIP, SMD, 10K, 0.05W, 5%, 0402	10K	5%	402	Panasonic	ERJ2GE100X	Yes	Yes
R73 R74 R106 R107 R108	5	RESISTOR, THICK FILM CHIP, SMD, 22 OHM, 0.1W, 5%, 0402	22	5%	402	Panasonic	ERJ2GE1220X	Yes	Yes
R77	1	RESISTOR, THICK FILM CHIP, SMD, 560 OHM, 0.05W, 5%, 0402	560	5%	402	Panasonic	ERJ2GE1561X	Yes	Yes
R79 R99 R101 R109 R109	5	RESISTOR, THICK FILM CHIP, SMD, 4.7K, 0.05W, 5%, 0402	4.7K	5%	402	Panasonic	ERJ2GE1472X	Yes	Yes
R80 R81 R82 R83 R84 R85 R86 R87 R88 R100 R102 R104	12	RESISTOR, THICK FILM CHIP, SMD, 100K, 0.05W, 5%, 0402	100K	5%	402	Panasonic	ERJ2GE104X	Yes	Yes
SW1	1	SWITCH, PUSH BUTTON, TACTILE, MOM, 2 PIN, SPST, NO, 0.05A @ 250VAC, SMD	P8-SPST	-	SMD	TE Connectivity	147873-2	Yes	Yes
SW2 SW3	2	SWITCH, DIP, SLIDE, SPST, 4 POS, HALF PITCH, SMD, 1.6mm	Slide-SPST	-	SMD	Copal Electronics	CHS-04TA	Yes	Yes
TP9 TP8	2	CONN, TERMINAL, TEST POINT, COMPACT, THICK SMT	TSP9T-5036	-	-	Keystone Electronics	5036	Yes	Yes
U1	1	IC, SENSOR, ACTIVE-PIXEL DIGITAL IMAGE, CMOS, 6228 DEMO HDSD, MT9V126, 864x488, 30 FPS	MT9V126_DEMO3_BGA6-3	-	BGA63	ON Semiconductor	MT9V126IA3XTCH_BGA63	No	Yes
UB UB9	2	IC, BUFFER, SINGLE SCHMITT-TRIGGER, 1.65V TO 5.5V, SOT23-5	SN74VLC1G17	-	SOT23-5	Texas Instruments	SN74VLC1G1708VR	Yes	Yes
U10	1	IC, AND-GATE, SINGLE, INPUT POSITIVE, 20mA, 1.65V TO 5.5V, SOT23-5	SN74AUP1G08	-	SCTO-5	Texas Instruments	SN74AUP1G08DCKR	Yes	Yes
U11	1	IC, SUPERVISOR, MICROPROCESSOR POWER SUPPLY, 2.93V, ACTIVE LOW RESET, SOT14-4	CAT811	-	SOT143-4	ON Semiconductor	CAT8115T81	No	Yes
U12	1	IC, SERIAL EEPROM, I2C, 96BIT, 2.5V, 1MHz, 40°C	24FC64-1/3N	-	S08	Microchip	24FC64-15N	Yes	Yes
U14	1	IC, FLASH MEMORY, 8MBIT, 70MHz, 2.7V TO 3.6V, S08	AT29D081A	-	S08	Atmel	AT29D081A-SSU	Yes	Yes
Y1	1	OSC, CRYSTAL CLOCK, SMD, CMOS, 2.25V TO 3.6V, 4MHz, 27.0000MHz, 2.5MM x 2.0MM	27MHz	-	-	Kyocera	KC3520B27.0000C2GE00	Yes	Yes
Y2	1	OSC, CRYSTAL, SMD, 20PF, 27MHz, STABILITY ± 100 ppm, 55°C - 125°C, 3.2 x 2.5 x 0.7 MM	27MHz	-	-	ECS Inc.	ICS-370-20-33-DU-TR	Yes	Yes