

SORT	Item	Reference Designator	Manufacturer		Manufacturer Part Number	Digikey Part Number	Part Description	Package							Cost
			Qty	Manufacturer				Style	# of pins	Height	Length	Width	Area	Volume	
1	1	C1, C2, C3, C4, C5, C6, C7, C8, C12, C13, C14, C15, C16, C17, C18	15	Kemet	C0805C104M5RACTU	399-1169-1-ND	Capacitor, Ceramic 0.1UF 20% 50V	0805	2	1.30mm	2.00mm	1.25mm	2.50mm^2	3.25mm^3	\$0.14
1	2	C9, C10, C11	3	AVX	TPSE226M035R0300	(AVNET)	Capacitor, Low ESR Tantalum SMT 22uF 10% 35V 300mOhm	7343	2	4.30mm	7.30mm	2.40mm	17.52mm^2	75.34mm^3	\$3.00
2	3	R1, R2, R3, R4, R5, R6, R17, R18, R19, R20, R21, R22, R23, R24	14	Panasonic	ERA-6YEB103V	P10KZCT-ND	Resistor, METAL FILM SMT 10kOhm, 0.1%, 0.1W	0805	2	1.30mm	2.00mm	1.25mm	2.50mm^2	3.25mm^3	\$0.68
2	4	R12, R15, R16	3	Panasonic	ERJ-6ENF6040V	P604CCT-ND	Resistor, Precision Thick Film 60.4 1% 1/10W	0805	2	0.60mm	2.00mm	1.25mm	2.50mm^2	1.50mm^3	\$0.09
2	5	R13, R14	2	Panasonic	ERJ-6ENF1470V	P147CCT-ND	Resistor, Precision Thick Film 147 1% 1/10W	0805	2	0.60mm	2.00mm	1.25mm	2.50mm^2	1.50mm^3	\$0.09
2	6	R7, R8, R9, R10	4	Panasonic	ERJ-14NF3600U	P360AACT-ND	Resistor, Precision Thick Film SMT 360 1% 0.25W	0805	2	0.60mm	2.00mm	1.25mm	2.50mm^2	1.50mm^3	\$0.38
2	7	R11	1	Panasonic	ERJ-14NF7500U	P750AACT-ND	Resistor, Precision Thick Film 750 1% 1/4W	1210	2	0.60mm	3.20mm	2.50mm	8.00mm^2	4.80mm^3	\$0.38
3	8	L1	1	Coilcraft	D01608-223	(Coilcraft)	Inductor, 22uH, 20% 0.7A	prop	2	2.82mm	6.60mm	4.45mm	29.37mm^2	82.82mm^3	\$0.00
4	9	J2	1				Connector, 2X3 6-PIN 0.100" HEADER	prop	6				0.00mm^2	0.00mm^3	
4	10	J7	1	Molex	87331-1420	WM18063-ND	Connector, 2mm Header Shrouded Vertical Keyed	prop	14	6.40mm	16.65mm	6.30mm	104.90mm^2	671.33mm^3	\$1.46
4	11	S1	1	BCC	CAS-120TB	CAS120GCT-ND	Switch, SPDT SMT	prop	3	2.50mm	5.40mm	4.20mm	22.68mm^2	56.70mm^3	\$1.76
4	12	J3, J5, J6	3	Hirose	DF13-3P-1.25SDA	H2192-ND	Connector, TH 1.25mm 1x3pin - MALE	prop	3	4.30mm	5.40mm	3.40mm	18.36mm^2	78.95mm^3	\$0.54
4	13	J1	1	Hirose	DF13-5P-1.25DSA	H2194-ND	Connector, TH 1.25mm 1x5pin - MALE	prop	5	4.30mm	7.90mm	3.40mm	26.86mm^2	115.50mm^3	\$0.57
4	14	J4	1	Hirose	DF13-10P-1.25DSA	H2198-ND	Connector, TH 1.25mm 1x10pin - MALE	prop	10	4.30mm	14.15mm	3.40mm	48.11mm^2	206.87mm^3	\$0.77
4	15	F1	1	Bourns	MF-SM100-02	MF-SM100CT-ND	Fuse, Resetable 1.10A (hold) 2.20A (trip)	prop	2	7.98mm	6.73mm	5.44mm	36.61mm^2	292.16mm^3	\$0.74
5	16	D1, D2, D11, D12, D13	5	Diodes, Inc.	1N4148W-7	1N4148WCT-ND	Diode, SMT GENERAL PURPOSE FAST SWITCHING DIODE	SOD-123	2	1.70mm	3.85mm	1.70mm	6.55mm^2	11.13mm^3	\$0.44
5	17	Y1	1	Fox Electronics	JITO-2-DC3AE-4.000		IC, Oscillator HCMOS 4.000MHz 100ppm 3.3V	MIN6	6	1.50mm	5.00mm	7.50mm	37.50mm^2	56.25mm^3	\$11.60
5	18	D5, D6, D7, D8, D9, D10	6	Lumex	SSL-LX15GC-RP-TR	67-1379-1-ND	LED, Green	SOT-23	3	1.15mm	3.00mm	3.00mm	9.00mm^2	10.35mm^3	\$0.64
5	19	Q1, Q2, Q3, Q4	4	International Rectifier	IRFR120NTRL	IRFR120NTRL-ND	Transistor, N-MOSFET 100V 9.4A	TO-252	4	2.38mm	10.42mm	6.73mm	70.13mm^2	166.90mm^3	\$0.59
5	20	Q5, Q6, Q7, Q8	4	International Rectifier	IRLML2803TR	IRLML2803CT-ND	Transistor, N-MOSFET ENHANCEMENT MODE	SOT-23	3	1.11mm	3.05mm	2.50mm	7.63mm^2	8.46mm^3	\$0.60
5	21	D3, D4	2	On Semiconductor	MMBZ5232B-7	MMBZ5232BDICT-ND	Diode, 5.6V Zener ESD Protection	SOT-23	3	1.11mm	3.04mm	2.64mm	8.03mm^2	8.91mm^3	\$0.44
6	22	U2	1	Atmel	AT45DB011B-SC	AT45DB011B-SC-ND	IC, Flash Memory 1Mbit 2.7V	SOIC8	8	2.03mm	8.38mm	5.38mm	45.08mm^2	91.52mm^3	\$4.62
6	23	U3	1	Maxim	MAX3320TCAP		IC, RS-232 Transceiver with Power Reset	SSOP20	20	1.99mm	7.33mm	7.90mm	57.91mm^2	115.23mm^3	\$2.55
6	24	U9	1	Maxim	MAX3471CUA		IC, RS-485 Transceiver	UMAX8	8	1.10mm	3.05mm	5.03mm	15.34mm^2	16.88mm^3	\$2.61
6	25	U11	1	Xilinx	XCR3064XL-6-VQ44C	XCR3064XL-6CS48C-ND	IC, CPLD 3.3V (MBARI #101358)	TQFP_10X10-44	44	1.20mm	12.00mm	12.00mm	144.00mm^2	172.80mm^3	\$7.50
6	26	U10	1	BURR-BROWN	OPT101P-J	OPT101P-J-ND	IC, PHOTODIODE WITH AMPLIFIER 36V	SOIC8	8	4.19mm	9.53mm	6.52mm	62.14mm^2	260.35mm^3	\$5.51
6	27	U1	1	Microchip	PIC16LF877-04/PT	PIC16LF877-04/PT-ND	IC, 8-bit Microcontroller	TQFP_10X10-44	44	1.20mm	12.00mm	12.00mm	144.00mm^2	172.80mm^3	\$7.27
6	28	U4, U5, U6, U7	4	NEC	PS2701-1	PS2701-1-ND	IC, Optocoupler High Speed 40V 3750Vrms	PSOP4	4	2.30mm	7.00mm	4.50mm	31.50mm^2	72.45mm^3	\$0.57
6	29	U8	1	Texas Instruments	REG1117-3.3	REG1117-3.3-ND	IC, Voltage Regulator 3.3V 800mA	SOT223-4	4	1.70mm	6.70mm	7.30mm	48.91mm^2	83.15mm^3	\$1.73
									355 total	7.98mm max					
										0.31" max					

Temperature Range	Max. Vibration	Max. Shock	Max. ESD	Maximum Power Disip.	Maximum Theta JC	Maximum Theta JA	Library			Typical Current Consumption								Maximum Current Consumption								
							Symbol	Footprint	Package	+2.5V	+3.3V	+5.0V	+9.0V	+12.0V	+14.0V	-14.0V	Power	+2.5V	+3.3V	+5.0V	+9.0V	+12.0V	+14.0V	-14.0V	Power	
-55c..+125c	n/a	n/a			n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+125c	n/a	n/a			n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+125c	n/a	n/a		100mW	n/a	n/a	done	done	done		0.33mA						1.09mW		0.40mA					1.32mW		
-55c..+125c	n/a	n/a		100mW	n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+125c	n/a	n/a		100mW	n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+125c	n/a	n/a		250mW	n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+125c	n/a	n/a		250mW	n/a	n/a	done	done	done								0.00mW							0.00mW		
-40c..+85c	n/a	n/a		800mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
n/a	n/a	n/a			n/a	n/a	done	done	done								0.00mW							0.00mW		
-55c..+105c	n/a	n/a		2000mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-40c..+85c	n/a	n/a		1000mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-35c..+85c	n/a	n/a		1000mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-35c..+85c	n/a	n/a		1000mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-35c..+85c	n/a	n/a		1000mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-40c..+85c	n/a	n/a		2200mA	n/a	n/a	done	done	done								0.00mW							0.00mW		
-65c..+150c	n/a	n/a		350mW	?	84 C/W	done	done	done								0.00mW							0.00mW		
-10c..+70c	n/a	n/a		?	?	180 C/W	done	done	done		8.00mA						26.40mW		8.00mA					26.40mW		
-30c..+85c	n/a	n/a		100mW	?	?	done	done	done		17.00mA						56.10mW		25.00mA					82.50mW		
-55c..+175c	n/a	n/a		48000mW	3 C/W	50 C/W	done	done	done					225.00mA			2700.00mW					250.00mA		3000.00mW		
-55c..+150c	n/a	n/a		540mW	?	230 C/W	done	done	done								0.00mW							0.00mW		
-55c..+150c	n/a	n/a		225mW	?	556 C/W	done	done	done								0.00mW							0.00mW		
0c..+70c	n/a	n/a		?	?	?	done	done	done		10.00mA						33.00mW		25.00mA					82.50mW		
0c..+70c	n/a	n/a	+/-2.0kV	640mW	?	?	done	done	done		0.45mA						1.49mW		1.00mA					3.30mW		
0c..+70c	n/a	n/a	+/-2.0kV	362mW	?	?	done	done	done		0.05mA						0.17mW		0.06mA					0.20mW		
0c..+70c	n/a	n/a		?	?	?	done	done	done		1.00mA						3.30mW		1.00mA					3.30mW		
0c..+70c	n/a	n/a		?	?	100 C/W	done	done	done		0.25mA						0.83mW		0.25mA					0.83mW		
0c..+70c	n/a	n/a		?	?	?	done	done	done		0.60mA						1.98mW		2.00mA					6.60mW		
-55c..+100c	n/a	n/a		300mW	?	?	done	done	done		5.00mA						16.50mW		8.00mA					26.40mW		
0c..+125c	n/a	n/a		int. limited	15 C/W	65 C/W	done	done	done					54.52mA			654.25mW					81.31mA		975.75mW		
								Total (*qty)			0.00mA	146.97mA	0.00mA	0.00mA	954.52mA	0.00mA	0.00mA	3495.10mW	0.00mA	224.91mA	0.00mA	0.00mA	1081.31mA	0.00mA	0.00mA	4209.10mW
											Regulator Efficiency:		80%													