		Reference			Manufacturer	Digikey		Package								
SORT	Item	Designator	Qty	Manufacturer	Part Number	Part Number	Part Description	Style	# of pins	Height	Length	Width	Area	Volume	Cost	
1	1	C1, C2, C3, C4, C5, C6, C7, C8, C12, C13, C14, C15, C16, C17, C18, C19	16	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	$2.29
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	$9.00
2	3	R1, R2, R3, R4, R5, R6, R17, R19, R20, R21, R24, R25, R26, R27	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	$9.58
2	4	R22	1	Panasonic	ERJ-6GEYJ115V	P1.1MACT-ND	Resistor, Thick Film 1.1M 5% 1/10W	0805	2	1.30mm	2.00mm	1.25mm	2.50mm^2	3.25mm^3	$0.08	$0.08
2	5	R15, R16	2	Panasonic	ERJ-6ENF1400V	P140CCT-ND	Resistor, Thick Film 140ohm 1% 1/10W	0805	2	1.30mm	2.00mm	1.25mm	2.50mm^2	3.25mm^3	$0.09	$0.18
2	6	R12	1	Panasonic	ERJ-6ENF60R4V	P60.4CCT-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	$0.09
2	7	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	$0.18
2	8	R7, R8, R9, R10	4	Panasonic	ERJ-6GEYJ361V	P360ACT-ND	Resistor, Precision Thick Film SMT 360 1% 0.1W	0805	2	0.60mm	2.00mm	1.25mm	2.50mm^2	1.50mm^3	$0.38	$1.51
2	9	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	$0.38
3	10	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	$0.00
4	11	J2	1			(MBARI Stock)	Connector, 2X3_6-PIN_0.100"_HEADER	prop	6				0.00mm^2	0.00mm^3		$0.00
4	12	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	$1.46
4	13	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	$1.76
4	14	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	$1.62
4	15	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	$0.57
4	16	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	$0.77
4	17	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	$0.74
5	18	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	$2.20
5	19	Y1	1	Fox Electronics	JITO-2-DC3AE-4.000	(Fox)	IC, Oscillator HCMOS 4.000MHz 100ppm 3.3V	MIN6	6	1.50mm	5.00mm	7.50mm	37.50mm^2	56.25mm^3	$11.60	$11.60
5	20	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	$3.84
5	21	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	$2.38
5	22	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	$2.40
5	23	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	$0.88
6	24	U2	1	Atmel	AT45DB011B-SC	AT45DB011B-SC-ND	IC, Flash Memory 1Mbit 2.7V	SOIC8W	8	2.03mm	8.38mm	5.38mm	45.08mm^2	91.52mm^3	$4.62	$4.62
6	25	U3	1	Maxim	MAX3320TCAP	(Maxim)	IC, RS-232 Transceiver with Power Reset	SSOP20	20	1.99mm	7.33mm	7.90mm	57.91mm^2	115.23mm^3	$2.55	$2.55
6	26	U9	1	Maxim	MAX3471CUA	(Maxim)	IC, RS-485 Transceiver	UMAX8	8	1.10mm	3.05mm	5.03mm	15.34mm^2	16.88mm^3	$2.61	$2.61
6	27	U11	1	Xilinx	XCR3064XL-6-VQ44C	XCR3064XL-6VQ44C-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	$7.50
6	28	U10	1	BURR-BROWN	OPT101P-J	OPT101P-J-ND	IC, PHOTODIODE WITH AMPLIFER 36V	J-LEAD 8	8	4.19mm	9.53mm	6.52mm	62.14mm^2	260.35mm^3	$5.51	$5.51
6	29	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	$7.27
6	30	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	$2.28
6	31	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	$1.73
									359 total	7.98mm max				**Total (*qty)**	$90.20	
										0.31" max						
Mating Connectors																
	32		3	Hirose	DF13-3S-1.25C	H2180-ND	Connector, TH 1.25mm 1x3pin - FEMALE		3						$0.34	$1.02
	33		1	Hirose	DF13-5S-1.25C	H2182-ND	Connector, TH 1.25mm 1x5pin - FEMALE		5						$0.35	$0.35
	34		1	Hirose	DF13-10S-1.25C	H2186-ND	Connector, TH 1.25mm 1x10pin - FEMALE		10						$0.41	$0.41
	35		24	Hirose	DF13-2630SCF	H9992-ND	Socket, Crimp Tin for DF13 series		1						$0.04	$0.85

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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		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%														

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