

TA Temperature Controller Bill of Materials

Label	Manufacturer	Part Number	Description	Vendor	Vendor P/N	Unit Price	Quantity
R2-18, R20, R22-23, R25-26, R28	Xicon	271-xxx	1/4 W, 1% metal-film resistor, various sizes	Mouser	271-xxx	\$0.13	23
R19	Bourns	3296W-1-201LF	25 turn cermet trim pot, 200 Ω	Digi-Key	3296W-1-201LF-ND	\$2.31	1
R21	Bourns	3296W-1-102LF	25 turn cermet trim pot, 1 k Ω	Digi-Key	3296W-1-102LF-ND	\$2.31	1
R27	Bourns	3296W-1-503LF	25 turn cermet trim pot, 50 k Ω	Digi-Key	3296W-1-503LF-ND	\$2.31	1
R24	Caddock	SR20-0.010-1%	0.01 Ω , 1% 4-point sense resistor	Mouser	684-SR20-0.01	\$7.01	1
R1	Bourns	3590S-2-502L	5 k Ω 10-turn, precision pot, solder lugs, 3/8" panel hole, 1/4" shaft	Mouser	652-3590S-2-502L	\$8.51	1
C1, C3	Vishay/Sprague	199D106X9025C1V1E3	10 μ F Tantalum capacitor, 25 V	Mouser	74-199D25V10-E	\$1.18	2
C2, C4, C11-15	Vishay/Sprague	1C10Z5U104M050B	0.1 μ F 50V monolithic ceramic radial capacitor, 20% tolerance	Mouser	75-1C10Z5U104M05 0B	\$0.10	7
C6-8, C16-17	Vishay/Sprague	199D106X9016C1V1E3	10 μ F Tantalum capacitor, 16 V	Mouser	74-199D16V10-E	\$0.95	5
C5, C10	Vishay/Sprague	515D477M025CD6AE3	470 μ F Electrolytic capacitor, 25V	Mouser	75-515D477M025CD 6AE3	\$0.50	2
D1	Fairchild	P6KE68A	6.8V, 600W transient voltage suppressor	Mouser	512-P6KE68A	\$0.26	1
D2-3	Fairchild	P6KE30A	30V, 600W transient voltage suppressor	Mouser	512-P6KE30A	\$0.28	2
IC1-3	Texas Instruments	INA128PA	low power instrumentation amplifier, dip-8	Newark	04M4540	\$6.00	3
WTC3243	Wavelength	WTC3243	ultrastable temperature controller	Wavelength	WTC3243	\$87.00	1
No Label	Wavelength	WHS302	heatsink for temp controller	Wavelength	WHS302	\$12.00	1
No Label	Wavelength	WXC304	+12V fan for temp controller	Wavelength	WXC304	\$29.00	1
SW1	NKK Switches	M2022S2A2G40	DPDT switch, rt. angle, vertical PCB mount	Digi-Key	360-1837-ND	\$6.88	1
F1-3	Littelfuse	0473.500MRT1L	0.5 A slo-blo fuse	Mouser	576-0473.500MRT1L	\$1.26	3
No Label	Bussmann	BK/PCS	PCB fuse socket	Mouser	504-PCS	\$0.89	3
REG1	ON Semicond.	MC7815ACTG	+15 V regulator, T0-220 pkg	Mouser	863-MC7815ACTG	\$0.47	1
REG2	ON Semicond.	MC7915ACTG	-15 V regulator, T0-220 pkg	Mouser	863-MC7915ACTG	\$0.47	1
LM399	Linear Tech.	LM399H	temperature stabilized, precision voltage reference (6.95V)	Digi-Key	LM399HLT-ND	\$7.94	1
LED1	Everlight	MV5454A	green diffused 5mm LED	Mouser	638-MV5454A	\$0.22	1
DB9	Multicomp	SPC15383	d sub 9 female, 90 degree PCB mount	Newark	79K4966	\$3.87	1
J2-4	Amphenol RF	31-5538-10RFX	rt. angle PCB BNC connector	Mouser	523-31-5538-10-RFX	\$2.38	3

Label	Manufacturer	Part Number	Description	Vendor	Vendor P/N	Unit Price	Quantity
No Label	Molex	39520-0004	4-pin eurostyle connection block, 5mm, cable mount	Mouser	538-39520-0004	\$1.97	1
J5	Phoenix	1881558	2-pin male header, 2.5mm pitch	Digi-Key	277-1452-ND	\$0.78	1
J1	Molex	39521-1004	4-pin eurostyle connection block, 5mm, PCB mount	Mouser	538-39521-1004	\$0.97	1
No Label	Phoenix	1881325	2-pin female plug, 2.5mm pitch	Digi-Key	277-1430-ND	\$2.49	1
No Label	Lascar	SP-400	green LED backlit LCD panel meter	Lascar	SP-400	\$31.20	1
No Label	3M	1M-1010-016-3365-012 .0-00-AB-00-0	16 connector, ribbon cable assembly, 12 in.	Mouser	517-1M-1010-016-12	\$8.16	1
No Label	VCC	CLB300CTP	clear fresnel lens for 5mm LED	Newark	57P6494	\$0.23	1
No Label	Vishay Spectrol	018-1-11	15-turn dial scale knob for 1/4" shaft	Digi-Key	P018-1-11-ND	\$11.56	1
No Label	3M	929647-09-36-ND	single row header pin, 0.1" pitch, 36 position	Digi-Key	929647-09-36-1	\$3.82	1
No Label	Advanced Cirucits	N/A	2-layer custom PCB	33 each	N/A	\$33.00	1
No Label	Analog Devices	AD590JH	AD590 temperature transducer	Digi-Key	AD590JH-ND	\$9.54	1
					Total Cost:	\$318.23	
					Prices in USD, current as of 02/2013		