

TempAlert Node Board
840-0096-01
Revision: 3.4

Item	Qty	Reference	Part	PCB Footprint	Manufacturer	Part Number	DK P/N	Notes
1	1	ANT1	SMA	CONN_SMA_V	Taylor Tech Unit Ltd	ESA0803 1114A		
2	DNP	BT2,BT1 (include 1 separately)	2AA	BAT-BH2AA	MPD	BH2AAPC	BH2AA-PC-ND	Battery Pack
3	DNP	BT3	2462K-ND	BAT2462	Keystone	2462	2462-ND	Battery Pack
10	4	C4,C9,C10,C14	CAPACITOR, 10NF, +/-10%, 25V, CERAMIC, X7R,	SMC_0402	Murata	GRM155R71E103KA01D	490-1312-1-ND	
11	2	C5,C6	CAPACITOR, 22PF, +/-5%, 50V, CERAMIC, C0G	SMC_0402	Murata	GRM1555C1H220JA01D	490-5888-1-ND	
12	3	C7,C12,C30	CAPACITOR, 8.0PF, +/-0.5PF, 50V, CERAMIC, C0G, NPO	SMC_0402	Murata	GRM1555C1HR00A01D	490-5887-1-ND	
13	1	C8	CAPACITOR, 0.47UF, +/-10%, 10V, CERAMIC, X5R, 0402	SMC_0402	Murata	GRM155R61A474KE15D	490-3284-1-ND	
14	5	C11,C13,C15,C19,C26	CAPACITOR, 100NF, +/-10%, 16V, CERAMIC, X7R	SMC_0402	Murata	GRM155R71C104KA88D	490-3281-1-ND	
15	DNP	C16	DNI	SMI_C_0402				
16	1	C18	CAPACITOR, 2.2UF, +/-10%, 16V, CERAMIC, X5R	SMC_0603	Murata	GRM188R61C225KE15D	490-3296-1-ND	
17	DNP	C28,C25	DNI	SMI_C_0402				
18	2	C27,C28	CAPACITOR, CERAMIC, 10PF, 50V, +/-5%, NPO, 0402	SMC_0402	AVX	04025A100JAT2A	478-1070-1-ND	
19	6	C31,C32,C34,C36,C37,C38	0.1uF	SMC_0402	TDK	C1005X7R1H104K050BB	445-5932-1-ND	
20	2	C35,C33	CAPACITOR, 15PF, +/-5%, 50V, CERAMIC, C0G	SMC_0402	Murata	GJM1555C1H150JB01D	490-3117-1-ND	
21	1	C17	CAPACITOR, 1.0UF, +/-10%, 25V, CERAMIC, X5R	SMC_0603	Murata	C1603X5R1E105K080AC	445-5146-1-ND	
22	2	C40,C41	10uF	SMC_0805	Murata	GRM21BR61A106KE19L	490-1709-1-ND	
23	DNP	C39	DNI	SMC_0603				Solar Charger Circuit
30	1	D1	LED Red	SM_D_0603	Lite-On	LTST-C190KRKT	160-1436-1-ND	
31	1	D2	LED Yellow	SM_D_0603	Lite-On	LTST-C190YSKT	160-1437-1-ND	
32	1	D3	LED Green	SM_D_0603	Lite-On	LTST-C190GKKT	160-1435-1-ND	
33	DNP	D4	DIODE	SC_79_21	Fairchild	RB520S30	RB520S30CT-ND	Solar Charger Circuit
40	DNP	J3	CON10	FTSH-105-01-F-DV-K	Samtec	FTSH-105-01-F-DV-K		
41	DNP	J5,J8	640456-4 - 4 Pos 0.1" Conn w/Locking Ramp	POLOCON.100V/HTM1SQS/W.300/4	TE Connectivity	640456-4	A1922-ND	
42	DNP	J6	CON8	FCI-6PIN-SMD	FCI	91596-106LF	609-2726-ND	
43	DNP	J7	CON10A	BLKCON.100V/HTM20GEAN.200/10	FCI	68001-238HLF	609-2223-ND	Break off 10 pos of 38
44	2	J9,J11	R4-HZ	TELESM.310FACE6X6_SM	Molex	441440005	WM5567CT-ND	Use Singatron IP67 waterproof connector
45	DNP	J10	CON3	BLKCON.100V/HTM1SQS/W.100/3				
46	1	J12	JUMPER1	SOLDER_JUMPER	FCI	68001-238HLF	609-2223-ND	Use 0 ohm resistor
47	DNP	J13	SOIC4R	BLKCON.100V/HTM1SQS/W.100/2				Solar Charger Circuit
50	1	L1	INDUCTOR, 3.3NH, +/-0.3NH, 500MA, MULTILAYER FILM	SM_R_0402	Murata	LOG15HS3N3S02D	490-2616-1-ND	
51	1	L2	0 ohm resistor	SMR_0402	Panasonic	ERJ-2GEJ1R0X	P1.0JCT-ND	
52	1	L3	INDUCTOR, 3.0NH, 190MA, +/-0.1NH, FILM, 0402	SMR_0402	Murata	LQP15MN3N0B02D		
53	DNP	L4	DNI	SMR_0402				
54	1	L5	4.7uH	IND-E12	Bourns	SDR0302-4R7ML	SDR0302-4R7MLCT-ND	
60	4	Q1,Q2,Q3,Q4	IRLML6401TRPBF	SMSOT23_321	International Rectifier	IRLML6401TRPBF	IRLML6401PBFCT-ND	
61	DNP	Q5	MM5T2222A	SMSOT23_123	Diodes Inc.	MM5T2222A-F	MM5T2222A-F0JCT-ND	Solar Charger Circuit
62	1	Q6	BSS123	SMSOT23_123	Fairchild	FDV301N	FDV301NCT-ND	
70	1	R7	10	SM_R_0402	Yageo	RC0402JR-0710RL	311-10JRCT-ND	
71	DNP	R9	DNP	SM_R_0402				
72	8	R10,R12,R46,R54,R58,R65,	2.2K	SM_R_0402	Yageo	RC0402JR-072K2L	311-2.2KJRCT-ND	
73	1	R87,R71	1	SM_R_0402	Panasonic	ERJ-2GEJ1R0X	P1.0JCT-ND	
74	2	R43,R44	1.2K	SM_R_0402	Yageo	RC0402JR-071K2L	311-1.2KJRCT-ND	
75	1	R45	10K	SM_R_0402	Yageo	RC0402JR-0710KL	311-10.0KJRCT-ND	
76	2	R47,R53	60K	SMR_0402	Panasonic	ERJ-2RKF602X	P68.0KJCT-ND	
77	3	R48,R50,R51	330	SMR_0402	Panasonic	ERJ-2RKF330X	P330KJCT-ND	
78	2	R49,R52	1K	SMR_0402	Yageo	RC0402FR-071KL	311-1.00KJRCT-ND	
79	1	R55	0 Ohm	SMR_0603	Panasonic	ERJ-3EKF1000V	P0.0JCT-ND	
80	1	R56	100K	SMR_0603	Panasonic	ERJ-3EKF1003V	P100KHCT-ND	
81	DNP	R57	DNP	SMR_0603				
82	8	R59,R60,R61,R62,R63,R64,	118K	SMR_0603	Panasonic	ERJ-3EKF1183V	P118KHCT-ND	
83	2	R72,R66	22	SMR_0402	Panasonic	ERJ-2RKF22R0X	P22.0JCT-ND	
84	1	R68	68K (64.9K)	SMR_0402	Panasonic	ERJ-2RKF682X	P64.9KJCT-ND	
85	DNP	R74	33K	SMR_0603	Panasonic	ERJ-3EKF3302V	P33.0KHCT-ND	
86	1	R75	536K	SMR_0402	Panasonic	ERJ-2RKF5363X	P536KJCT-ND	
87	DNP	R77,R78,R79	DNP	SMR_0603	Panasonic	ERJ-3EKF1001V	P1.00KHCT-ND	
88	DNP	R73	1K	SMR_0402	Yageo	RC0402FR-071KL	311-1.00KJRCT-ND	Solar Charger Circuit
89	1	R76	309K	SMR_0402	Panasonic	ERJ-2RKF3093X	P309KJCT-ND	
90	1	SW1	SW PUSHBUTTON	EVQ-PLMA15	Panasonic	EVQ-PLMA15	P8047SCT-ND	
91	DNP	SW2	SWITCH	BLKCON.100V/HTM1SQS/W.100/2				
100	1	U2	IC, EM357, ZIGBEE/802.15.4 RF SOLUTION	QFN48	Ember	EM357-RTR	636-1011-1-ND	
101	1	U5	IC, 2.4 GHZ SMART ENERGY/ZIGBEE FRONT END MODULE		Skyworks	SE2432L	863-1348-1-ND	
102	DNP	U8	SERIAL FLASH	SOIC8_R23W_R23L_R050PTCH				
103	1	U9	IC FLASH SER AMB 50MHZ SPI	SOIC8_R23W_R23L_R050PTCH	Microchip	SST25VF040B-50-4I-SAE	SST25VF040B-50-4I-SAE-ND	
104	1	U10	ATMEGA1284P-AU	TOP44_R5WXR5L_R0315PTCH	Atmel	ATMEGA1284P-AU	ATMEGA1284P-AURCT-ND	
105	1	U11	DS18B20	TO26_2MLINE_R05_123	Maxim	DS18B20-1&R	DS18B20-1&RCT-ND	Temp Sensor
106	DNP	U12	HH-5031		Honeywell	HH-5031	495-3294-1-ND	Humidity Sensor
107	DNP	U13	MCP9700	SMSOT23_123	Microchip	MCP9700T-E/TT	MCP9700T-E/TTCT-ND	Solar Charger Circuit
108	1	U14	MCP1640	SMSOT23-6	Microchip	MCP1640DT-VCHY	MCP1640DT-VCHYCT-ND	Solar Charger Circuit
109	DNP	U15	SC431SOT23	SMSOT23_123				
120	1	Y1	CRYSTAL, 24.000MHZ, +/-10PPM TOL, +/-25PPM STA, 18PF	ABM3	ABRACON	ABM38-24.000MHZ-R60-D1W-T	535-9700-1-ND	
121	1	Y2	3.6864Mhz	HC49US	Abracon	ABL52-3.6864MHZ-D4V-T	535-8656-1-ND	
122	1	Y3	CRYSTAL - 32 KHz	XTAL_CFS-206A-PAD	Citizen	CFS206 32.768KHZ25-UB	300-8301-ND	
1219/12	1	U2	Change					
1219/12	1.1	Scott Keller	First release					
1219/12	1.1	Scott Keller	Added battery pack info (Item 3)					
1227/12	1.2	Josh Schadel	Changed C39 to DNP					
			Changed to include battery pack BT1					
			Changed L4 to DNP					
01/16/13	1.3	Josh Schadel	Changed L2 to 0 ohm resistor					
			Changed R73 to DNP					
			Changed R78 to DNP					
			Changed R75 to 536K					
			Changed R76 to 309K					
01/17/13	1.4	Josh Schadel	Changed U9 to 4MBit part					
11/26/14	3	Josh Schadel	PCB updated to Rev 3.0					
11/15/15	3.2	Josh Schadel	PCB Updated to Rev 3.1					
			Changed Y2 to low profile part					
1/22/15	3.3	Josh Schadel	Changed PN of U9					
			Changed Item 2 to DNP					
			Corrected PN for items 11,12,19,21					
			Changed items 40-43 to DNP					
			Added note to item 44					
			Changed J12 to 0 ohm resistor					
			Changed SW1 to panasonic part EVQ-PLMA15					
			Changed U10 to ATMEGA1284P-AU					
2/2/15	3.4	Harry Schechter	Updated quantity typo on item 76					

MODEL/HVIN: TM-ZP200-SWC
FCC ID: SZ9ZPOINT
IC: 10940A-ZPOINT