



REV	DESCRIPTION	DATE	APP
1	CURVE WAS 21	12/18/2018	DD
0	INITIAL RELEASE	11/19/2018	DD

REVISION HISTORY

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	DRAWN BY: DAN DANKERT	
P/N EPT221S103	SCALE: NONE	LAYER: 0 OF 2
	REV: 1	DATE: 11/19/2018

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RESISTANCE @ +25°C = 10,000 Ω NOMINAL  
 ACCURACY (0 TO +70°C) = ± 0.50°C  
 RESISTANCE/TEMPERATURE CURVE = "21A"  
 BETA "β" (0 TO +50°C) = 3,575°K NOMINAL  
 TEMPERATURE COEFFICIENT @ +25°C = -4.04%/°C NOMINAL  
 DISSIPATION CONSTANT = 1 mW/°C NOMINAL (AIR)  
 THERMAL TIME CONSTANT = 10 SECONDS NOMINAL (AIR)  
 MAXIMUM TEMPERATURE RATING = +135°C

MAXIMUM EXPOSURE TEMPERATURE FOR BEST LONG-TERM DRIFT = +120°C

ROHS COMPLIANT

# El Sensor Technologies

## Resistance Versus Temperature Table

P/N EPT221S103 Revision "1"

Resistance @ +25°C = 10,000 Ω

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C/R@+25°C)	Resistance (Ω Nominal)
-55	-67.0	60.856	608,564
-54	-65.2	57.024	570,238
-53	-63.4	53.456	534,560
-52	-61.6	50.133	501,332
-51	-59.8	47.037	470,372
-50	-58.0	44.151	441,511
-49	-56.2	41.459	414,594
-48	-54.4	38.948	389,481
-47	-52.6	36.604	366,039
-46	-50.8	34.415	344,148
-45	-49.0	32.370	323,697
-44	-47.2	30.458	304,583
-43	-45.4	28.671	286,710
-42	-43.6	26.999	269,992
-41	-41.8	25.435	254,347
-40	-40.0	23.970	239,700
-39	-38.2	22.597	225,974
-38	-36.4	21.312	213,120
-37	-34.6	20.108	201,076
-36	-32.8	18.979	189,787
-35	-31.0	17.920	179,200
-34	-29.2	16.926	169,255
-33	-27.4	15.992	159,922
-32	-25.6	15.116	151,160
-31	-23.8	14.293	142,932
-30	-22.0	13.520	135,200

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
-29	-20.2	12.793	127,925
-28	-18.4	12.109	121,086
-27	-16.6	11.465	114,652
-26	-14.8	10.860	108,598
-25	-13.0	10.290	102,900
-24	-11.2	9.7512	97,512
-23	-9.4	9.2439	92,439
-22	-7.6	8.7660	87,660
-21	-5.8	8.3156	83,156
-20	-4.0	7.8910	78,910
-19	-2.2	7.4906	74,906
-18	-0.4	7.1129	71,129
-17	1.4	6.7564	67,564
-16	3.2	6.4199	64,199
-15	5.0	6.1020	61,020
-14	6.8	5.8012	58,012
-13	8.6	5.5170	55,170
-12	10.4	5.2484	52,484
-11	12.2	4.9943	49,943
-10	14.0	4.7540	47,540
-9	15.8	4.5264	45,264
-8	17.6	4.3110	43,110
-7	19.4	4.1071	41,071
-6	21.2	3.9140	39,140
-5	23.0	3.7310	37,310
-4	24.8	3.5576	35,576
-3	26.6	3.3931	33,931
-2	28.4	3.2372	32,372
-1	30.2	3.0893	30,893
0	32.0	2.9490	29,490
1	33.8	2.8156	28,156
2	35.6	2.6890	26,890
3	37.4	2.5687	25,687
4	39.2	2.4545	24,545
5	41.0	2.3460	23,460
6	42.8	2.2430	22,430
7	44.6	2.1451	21,451
8	46.4	2.0519	20,519
9	48.2	1.9633	19,633
10	50.0	1.8790	18,790

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
11	51.8	1.7987	17,987
12	53.6	1.7222	17,222
13	55.4	1.6494	16,494
14	57.2	1.5801	15,801
15	59.0	1.5140	15,140
16	60.8	1.4510	14,510
17	62.6	1.3910	13,910
18	64.4	1.3337	13,337
19	66.2	1.2791	12,791
20	68.0	1.2270	12,270
21	69.8	1.1773	11,773
22	71.6	1.1298	11,298
23	73.4	1.0845	10,845
24	75.2	1.0413	10,413
25	77.0	1.0000	10,000
26	78.8	0.96060	9,606.0
27	80.6	0.92290	9,229.0
28	82.4	0.88690	8,869.0
29	84.2	0.85250	8,525.0
30	86.0	0.81960	8,196.0
31	87.8	0.78820	7,882.0
32	89.6	0.75810	7,581.0
33	91.4	0.72930	7,293.0
34	93.2	0.70180	7,018.0
35	95.0	0.67540	6,754.0
36	96.8	0.65020	6,502.0
37	98.6	0.62600	6,260.0
38	100.4	0.60280	6,028.0
39	102.2	0.58070	5,807.0
40	104.0	0.55940	5,594.0
41	105.8	0.53900	5,390.0
42	107.6	0.51950	5,195.0
43	109.4	0.50070	5,007.0
44	111.2	0.48270	4,827.0
45	113.0	0.46550	4,655.0
46	114.8	0.44900	4,490.0
47	116.6	0.43310	4,331.0
48	118.4	0.41790	4,179.0
49	120.2	0.40330	4,033.0
50	122.0	0.38930	3,893.0

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
51	123.8	0.37580	3,758.0
52	125.6	0.36290	3,629.0
53	127.4	0.35040	3,504.0
54	129.2	0.33850	3,385.0
55	131.0	0.32700	3,270.0
56	132.8	0.31600	3,160.0
57	134.6	0.30540	3,054.0
58	136.4	0.29520	2,952.0
59	138.2	0.28540	2,854.0
60	140.0	0.27600	2,760.0
61	141.8	0.26690	2,669.0
62	143.6	0.25820	2,582.0
63	145.4	0.24970	2,497.0
64	147.2	0.24160	2,416.0
65	149.0	0.23380	2,338.0
66	150.8	0.22630	2,263.0
67	152.6	0.21910	2,191.0
68	154.4	0.21210	2,121.0
69	156.2	0.20550	2,055.0
70	158.0	0.19900	1,990.0
71	159.8	0.19280	1,928.0
72	161.6	0.18680	1,868.0
73	163.4	0.18100	1,810.0
74	165.2	0.17540	1,754.0
75	167.0	0.17000	1,700.0
76	168.8	0.16480	1,648.0
77	170.6	0.15980	1,598.0
78	172.4	0.15490	1,549.0
79	174.2	0.15020	1,502.0
80	176.0	0.14570	1,457.0
81	177.8	0.14140	1,414.0
82	179.6	0.13720	1,372.0
83	181.4	0.13310	1,331.0
84	183.2	0.12920	1,292.0
85	185.0	0.12540	1,254.0
86	186.8	0.12180	1,218.0
87	188.6	0.11830	1,183.0
88	190.4	0.11490	1,149.0
89	192.2	0.11160	1,116.0
90	194.0	0.10840	1,084.0

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
91	195.8	0.10530	1,053.0
92	197.6	0.10230	1,023.0
93	199.4	0.09940	994.00
94	201.2	0.09660	966.00
95	203.0	0.09390	939.00
96	204.8	0.09130	913.00
97	206.6	0.08880	888.00
98	208.4	0.08630	863.00
99	210.2	0.08400	840.00
100	212.0	0.08170	817.00
101	213.8	0.07950	795.00
102	215.6	0.07730	773.00
103	217.4	0.07520	752.00
104	219.2	0.07320	732.00
105	221.0	0.07130	713.00
106	222.8	0.06940	694.00
107	224.6	0.06750	675.00
108	226.4	0.06580	658.00
109	228.2	0.06400	640.00
110	230.0	0.06240	624.00
111	231.8	0.06080	608.00
112	233.6	0.05920	592.00
113	235.4	0.05770	577.00
114	237.2	0.05620	562.00
115	239.0	0.05480	548.00
116	240.8	0.05340	534.00
117	242.6	0.05200	520.00
118	244.4	0.05070	507.00
119	246.2	0.04940	494.00
120	248.0	0.04820	482.00
121	249.8	0.04700	470.00
122	251.6	0.04590	459.00
123	253.4	0.04470	447.00
124	255.2	0.04360	436.00
125	257.0	0.04260	426.00
126	258.8	0.04150	415.00
127	260.6	0.04050	405.00
128	262.4	0.03960	396.00
129	264.2	0.03860	386.00
130	266.0	0.03770	377.00

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
131	267.8	0.03680	368.00
132	269.6	0.03590	359.00
133	271.4	0.03510	351.00
134	273.2	0.03430	343.00
135	275.0	0.03350	335.00