



REV	DESCRIPTION	DATE	APP
1	CURVE WAS 30	12/18/2018	DD
0	INITIAL RELEASE	11/19/2018	DD

REVISION HISTORY

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	DRAWN BY: DAN DANKERT	
P/N EPT130R502	SCALE: NONE	LAYER: 0 OF 2
	REV: 1	DATE: 11/19/2018

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RESISTANCE @ +25°C = 5,000 Ω NOMINAL  
 ACCURACY (0 TO +70°C) = ± 0.20°C  
 RESISTANCE/TEMPERATURE CURVE = "30A"  
 BETA "β" (0 TO +50°C) = 3,892°K NOMINAL  
 TEMPERATURE COEFFICIENT @ +25°C = -4.39%/°C NOMINAL  
 DISSIPATION CONSTANT = 1 mW/°C NOMINAL (AIR)  
 THERMAL TIME CONSTANT = 10 SECONDS NOMINAL (AIR)  
 MAXIMUM TEMPERATURE RATING = +150°C

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

ROHS COMPLIANT

# El Sensor Technologies

## Resistance Versus Temperature Table

P/N EPT130R502 Revision "1"

Resistance @ +25°C = 5,000 Ω

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C/R@+25°C)	Resistance (Ω Nominal)
-55	-67.0	107.4707	537,354
-54	-65.2	98.9142	494,571
-53	-63.4	91.1154	455,577
-52	-61.6	84.0010	420,005
-51	-59.8	77.5055	387,528
-50	-58.0	71.5700	357,850
-49	-56.2	66.1416	330,708
-48	-54.4	61.1730	305,865
-47	-52.6	56.6214	283,107
-46	-50.8	52.4486	262,243
-45	-49.0	48.6200	243,100
-44	-47.2	45.1038	225,519
-43	-45.4	41.8726	209,363
-42	-43.6	38.9012	194,506
-41	-41.8	36.1665	180,833
-40	-40.0	33.6479	168,239
-39	-38.2	31.4902	157,451
-38	-36.4	29.4849	147,425
-37	-34.6	27.6194	138,097
-36	-32.8	25.8837	129,418
-35	-31.0	24.2682	121,341
-34	-29.2	22.7633	113,817
-33	-27.4	21.3610	106,805
-32	-25.6	20.0537	100,269
-31	-23.8	18.8348	94,174
-30	-22.0	17.6976	88,488

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
-29	-20.2	16.6354	83,177
-28	-18.4	15.6443	78,222
-27	-16.6	14.7176	73,588
-26	-14.8	13.8517	69,258
-25	-13.0	13.0422	65,211
-24	-11.2	12.2846	61,423
-23	-9.4	11.5759	57,880
-22	-7.6	10.9121	54,560
-21	-5.8	10.2904	51,452
-20	-4.0	9.7083	48,541
-19	-2.2	9.1621	45,810
-18	-0.4	8.6501	43,250
-17	1.4	8.1696	40,848
-16	3.2	7.7189	38,595
-15	5.0	7.2957	36,479
-14	6.8	6.8983	34,492
-13	8.6	6.5244	32,622
-12	10.4	6.1736	30,868
-11	12.2	5.8433	29,216
-10	14.0	5.5329	27,664
-9	15.8	5.2407	26,203
-8	17.6	4.9658	24,829
-7	19.4	4.7065	23,532
-6	21.2	4.4627	22,313
-5	23.0	4.2327	21,163
-4	24.8	4.0160	20,080
-3	26.6	3.8113	19,056
-2	28.4	3.6186	18,093
-1	30.2	3.4369	17,185
0	32.0	3.2650	16,325
1	33.8	3.1030	15,515
2	35.6	2.9498	14,749
3	37.4	2.8051	14,025
4	39.2	2.6683	13,341
5	41.0	2.5391	12,695
6	42.8	2.4170	12,085
7	44.6	2.3015	11,508
8	46.4	2.1918	10,959
9	48.2	2.0884	10,442
10	50.0	1.9902	9,951.2

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
11	51.8	1.8970	9,484.9
12	53.6	1.8091	9,045.3
13	55.4	1.7256	8,627.9
14	57.2	1.6461	8,230.5
15	59.0	1.5710	7,855.2
16	60.8	1.5000	7,500.0
17	62.6	1.4325	7,162.5
18	64.4	1.3681	6,840.6
19	66.2	1.3073	6,536.4
20	68.0	1.2491	6,245.6
21	69.8	1.1940	5,970.2
22	71.6	1.1421	5,710.5
23	73.4	1.0924	5,461.8
24	75.2	1.0448	5,224.2
25	77.0	1.0000	5,000.0
26	78.8	0.95737	4,786.9
27	80.6	0.91652	4,582.6
28	82.4	0.87789	4,389.4
29	84.2	0.84059	4,202.9
30	86.0	0.80551	4,027.5
31	87.8	0.77220	3,861.0
32	89.6	0.74023	3,701.2
33	91.4	0.70959	3,548.0
34	93.2	0.68073	3,403.6
35	95.0	0.65320	3,266.0
36	96.8	0.62655	3,132.8
37	98.6	0.60169	3,008.4
38	100.4	0.57771	2,888.5
39	102.2	0.55462	2,773.1
40	104.0	0.53242	2,662.1
41	105.8	0.51155	2,557.7
42	107.6	0.49156	2,457.8
43	109.4	0.47247	2,362.3
44	111.2	0.45426	2,271.3
45	113.0	0.43681	2,184.1
46	114.8	0.42012	2,100.6
47	116.6	0.40409	2,020.4
48	118.4	0.38881	1,944.0
49	120.2	0.37420	1,871.0
50	122.0	0.36021	1,801.1

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
51	123.8	0.34680	1,734.0
52	125.6	0.33401	1,670.1
53	127.4	0.32171	1,608.6
54	129.2	0.30990	1,549.5
55	131.0	0.29858	1,492.9
56	132.8	0.28779	1,438.9
57	134.6	0.27740	1,387.0
58	136.4	0.26750	1,337.5
59	138.2	0.25790	1,289.5
60	140.0	0.24880	1,244.0
61	141.8	0.24001	1,200.0
62	143.6	0.23162	1,158.1
63	145.4	0.22349	1,117.5
64	147.2	0.21572	1,078.6
65	149.0	0.20830	1,041.5
66	150.8	0.20111	1,005.6
67	152.6	0.19418	970.91
68	154.4	0.18761	938.06
69	156.2	0.18131	906.53
70	158.0	0.17520	875.99
71	159.8	0.16932	846.58
72	161.6	0.16372	818.61
73	163.4	0.15821	791.07
74	165.2	0.15302	765.10
75	167.0	0.14800	740.01
76	168.8	0.14321	716.03
77	170.6	0.13850	692.50
78	172.4	0.13401	670.07
79	174.2	0.12971	648.53
80	176.0	0.12549	627.44
81	177.8	0.12149	607.46
82	179.6	0.11772	588.59
83	181.4	0.11399	569.94
84	183.2	0.11039	551.95
85	185.0	0.10702	535.08
86	186.8	0.10369	518.43
87	188.6	0.10049	502.44
88	190.4	0.097380	486.90
89	192.2	0.094405	472.02
90	194.0	0.091563	457.82

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
91	195.8	0.088766	443.83
92	197.6	0.086101	430.51
93	199.4	0.083526	417.63
94	201.2	0.081039	405.20
95	203.0	0.078641	393.21
96	204.8	0.076332	381.66
97	206.6	0.074112	370.56
98	208.4	0.071980	359.90
99	210.2	0.069849	349.25
100	212.0	0.067851	339.25
101	213.8	0.065897	329.48
102	215.6	0.064032	320.16
103	217.4	0.062211	311.06
104	219.2	0.060480	302.40
105	221.0	0.058748	293.74
106	222.8	0.057105	285.52
107	224.6	0.055551	277.75
108	226.4	0.053996	269.98
109	228.2	0.052487	262.43
110	230.0	0.051066	255.33
111	231.8	0.049689	248.45
112	233.6	0.048313	241.56
113	235.4	0.047025	235.12
114	237.2	0.045737	228.69
115	239.0	0.044538	222.69
116	240.8	0.043339	216.70
117	242.6	0.042189	210.95
118	244.4	0.041079	205.40
119	246.2	0.040000	200.00
120	248.0	0.038961	194.80
121	249.8	0.037940	189.70
122	251.6	0.036958	184.79
123	253.4	0.036008	180.04
124	255.2	0.035089	175.44
125	257.0	0.034192	170.96
126	258.8	0.033321	166.61
127	260.6	0.032478	162.39
128	262.4	0.031661	158.30
129	264.2	0.030870	154.35
130	266.0	0.030102	150.51

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
131	267.8	0.029352	146.76
132	269.6	0.028628	143.14
133	271.4	0.027922	139.61
134	273.2	0.027238	136.19
135	275.0	0.026581	132.90
136	276.8	0.025928	129.64
137	278.6	0.025311	126.55
138	280.4	0.024698	123.49
139	282.2	0.024112	120.56
140	284.0	0.023530	117.65
141	285.8	0.022971	114.85
142	287.6	0.022429	112.14
143	289.4	0.021901	109.50
144	291.2	0.021390	106.95
145	293.0	0.020888	104.44
146	294.8	0.020409	102.04
147	296.6	0.019938	99.689
148	298.4	0.019480	97.402
149	300.2	0.019032	95.160
150	302.0	0.018610	93.051