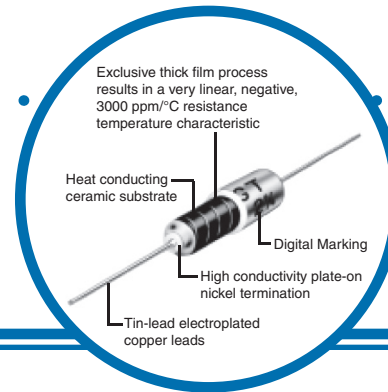


Thick Film Temperature Compensation Resistor



RGT Series

- Superior linearity
- Stable thick-film technology
- Negative temperature coefficient
- Effective compensation for positive TC devices, semiconductors, and copper



Specifications

Temperature Coefficient	Resistance Ratio	Linearity	Standard Resistance Values	Std. Resistance Tol. @ 25°C
-0.30%/°C (minus 3000 ppm/°C @ 25°C)	R25°C/R125°C = 1.37	<1.2% deviation per 100°C (typical over range from -55°C to 140°C)	740, 1K and 10K. Others available	±2%, ±5%, ±10%

Operating Temperature Range	High Temp Stability	Time Constraints	Dissipation Constants	Element
-55°C to + 175°C	2000 hours @ 175°C, <0.5%ΔR	7.4 sec for RGT-1, 2.9 sec. for RGT-2 (time to achieve 63.2% of an applied step-change in temperature in still air)	8.1mW/°C for RGT-1, 4.7mW/°C for RGT-2 (power required to raise sensor temperature 1°C in a still air ambient of 25°C)	fused thick-film composition

Substrate	Lead Pull	Resistance to Soldering Heat	Marking Resistance to Solvents	Lead Solderability
solid-core alumina ceramic	5 lbs for 5 sec.	MIL-STD-202E, Method 210A, cond. A, <0.5%ΔR	MIL-STD-202, Method 215	MIL-STD-202, Method 208

Applications

Compensates transistors, diodes, sensors, transducers, hall devices, microprocessors, and strain gauges. Proven in automotive under-hood use.

Curve Tolerances (±)

Temperature		G Tol.	J Tol.	K Tol.
-55°C	-67°F	7%	10%	15%
-15°C	+9°F	4.5%	7.5%	12.5%
0°C	+32°F	3.6%	6.6%	11.6%
25°C	77°F	±2%	±5%	±10%
50°C	122°F	2.5%	5.5%	10.5%
75°C	167°F	3.0%	6.0%	11.0%
100°C	212°F	3.5%	6.5%	11.5%
125°C	257°F	4.0%	7.0%	12.0%
150°C	302°F	4.5%	7.5%	12.5%
175°C	347°F	5.0%	8.0%	13.0%

General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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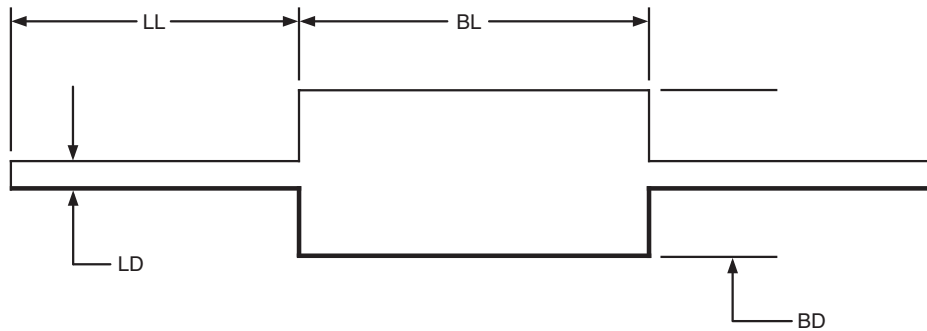
Thick Film Temperature Compensation Resistor

Resistance vs. Temperature

°C	°F	R in Ω s*	°C	°F	R in Ω s*	°C	°F	R in Ω s*
-60	-76	1285.2	+40	+104	956.7	+125	+257	734.0
-40	-40	1208.5	+50	+122	928.2	+130	+266	723.2
-30	-22	1173.4	+60	+140	900.2	+140	+284	703.7
-20	-4	1139.3	+70	+158	872.3	+150	+302	685.8
-10	+14	1106.3	+75	+167	858.7	+160	+320	669.3
0	+32	1074.6	+80	+176	845.2	+170	+338	653.8
+10	+50	1044.1	+90	+194	818.8	+180	+356	639.7
+20	+68	1014.6	+100	+212	793.2	+230	+446	582.9
+25	+77	1000.0	+110	+230	768.5			
+30	+86	985.5	+120	+248	745.1			

*Based on actual measurements of resistors that were 1000 ohms at 25°C.

Physical Data



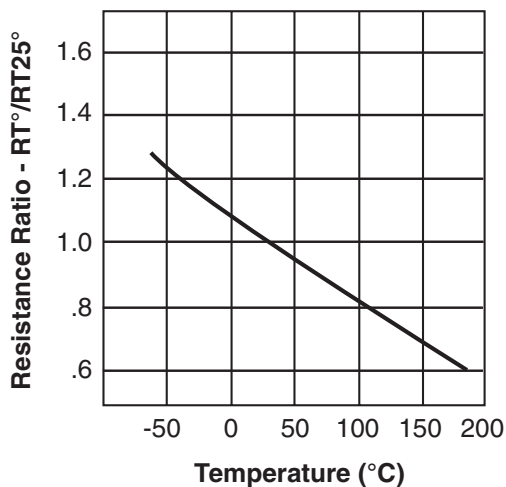
Dimensions (Inches and (mm))

IRC Type	BL (Body Length)	BD (Body Diameter)	LD (Lead Diameter)	LL (Lead Length)
RGT-2	0.150 (3.81)	0.066 (1.70)	0.016 (0.41)	1.0 (25.4)
RGT-1	0.250 (6.35)	0.090 (2.29)	0.025 (0.64)	1.5 (38.1)

Thick Film Temperature Compensation Resistor



Linearity



Ordering Data

Sample Part No.	RGT	2	-3000	1002	G
IRC Type					
Size					
2 sizes available					
TCR					
(-3000 ppm)					
Resistance Value					
Tolerance					
G = 2%, J = 5%, K = 10%					