

To-Style Power-Film Resistors

TO-Style Power-Film Resistors - RMG30 Series Take on Transistor Outlines

► Preview

A wide range of TO-style power film resistors that are designed for use in power electronic circuits such as snubbers, current limiting, loads, current sensing and other power resistor applications, is available from Token Components.

Their compact heatsink-mountable construction ensures that they are ideal for high-power-density applications, and the noninductive form allows these TO-style resistors to operate at up to 30 Watt at 25°C case temperature.

RMG30 Series values as low as 0.05Ω make them particularly suited for current sensing applications with Pb-free Terminations Meet RoHS Requirements.

The resistance range of these resistors is from 0.05Ω to $10K\Omega$ and tolerances are standard at 1% for most resistance values, although 5% tolerances are available.

Many standard values are available from Token. Contact us with your specific needs.



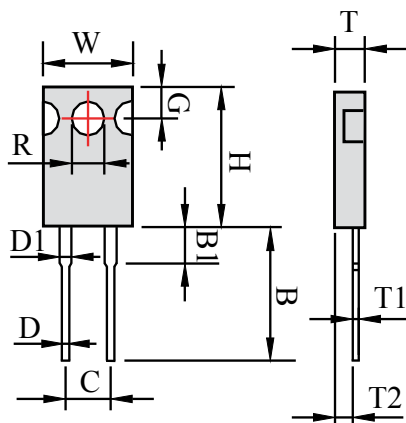
► Features

- 30 Watt at 25°C Case Temperature Heat Sink Mounted.
- Isolated Case, Non Inductive, TO-220 Style Power Package.
- Single Screw Mounting to Heat Sink, Molded Case for Protection and Easy to Mount.

► Applications

- Gate Resistors in Power Supplies, Terminal Resistance in RF Power Amplifiers.
- UPS, Snubbers, Voltage Regulation, Low Energy Pulse Loading, Load and Dumping Resistors in CRT Monitors.

► Dimensions (Unit: mm)



Type	W	H	T	T1	T2	B	B1	C	D	D1	G	R
RMG30	10.15	16.00	2.92	0.40	1.52	11.43	2.54	4.82	0.66	1.14	2.92	3.08
	~ 10.67	~ 16.52	~ 3.44	~ 0.60	~ 2.04	~ 13.97	~ 4.06	~ 5.34	~ 0.86	~ 1.40	~ 3.44	~ 3.28

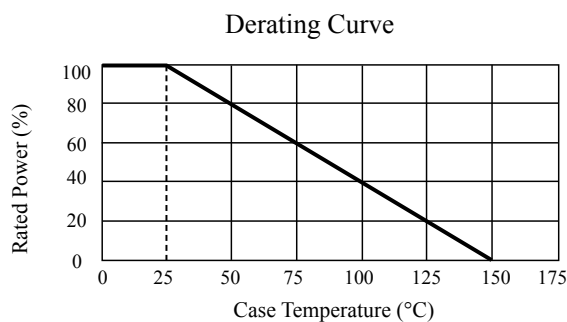
► Electrical Characteristics Specifications

Resistance Range	Resistance Tolerance	TCR(PPM/°C)
0.05Ω~1Ω	±5.00% ±10.0%	-
2Ω~5Ω	±1.00% ±5.00% ±10.0%	±200
5Ω~10Ω	±1.00% ±5.00% ±10.0%	±100 ±200
11Ω~10KΩ	±0.50% ±1.00% ±5.00% ±10.0%	±50 ±100 ±200

Note: Operating Voltage:350V Max. Dielectric Strength: 1800VAC Insulation Resistance: 10GΩmin.

Working Temperature Range:-65°C to +150°C. Resistance Value < 1Ω is Available

► Power Derating Curve



Environmental Characteristics

Test Item	Specification	Test Method
Temperature Coefficient of Resistance	10Ω and above, $\pm 50\text{ppm}/^{\circ}\text{C}$ 1Ω and 10Ω, $(\pm 100\text{ppm})/^{\circ}\text{C}$	Referenced to 25°C, ΔR taken at +105°C
Short Time Overload	$\Delta R \pm 0.3\%$	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds.
Load Life	$\Delta R \pm 1.0\%$	MIL-R-39009, 2,000 hours at rated power.
Humidity (Steady State)	$\Delta R \pm 0.5\%$	MIL-STD-202F, Method 103B 40°C, 90~95%RH, RCWV 1.5hours ON, 0.5hours OFF. total 1000~1048 hours.
Thermal Shock	$\Delta R \pm 0.3\%$	MIL-STD-202, Method 107G. -65°C~150°C, 100 cycle
Terminal Strength	$\Delta R \pm 0.2\%$	MIL-STD-202, Method 211, Cond.A(Pull Test) 2.4N.
Vibration, High Frequency	$\Delta R \pm 0.2\%$	MIL-STD-202, Method 204, Cond.D.

Note: 1. Lead Material: Tinned Copper. Maximum Torque: 0.9 Nm.

2. Without Heat Sink, When in Free Air at 25°C, the RMG30 is Rated for 2.25W.

3. The Case Temperature is to be used for the Definition of the Applied Power Limit.

4. The Case Temperature Measurement Must be Made with a Thermocouple Contacting the Center of the Component Mounted on the Designed Heat Sink.

5. Thermal Grease Should be Applied Properly.

How to Order

RMG	30	J	P	D	10R
①	②	③	④	⑤	⑥

① Part Number

② Power Rating

③ Resistance Tolerance (%)

Code	Resistance Tolerance
D	$\pm 0.5\%$
F	$\pm 1\%$
G	$\pm 2\%$
J	$\pm 5\%$
K	$\pm 10\%$

④ Packaging

Code	Packaging
T	Tube
P	Bulk

⑤ TCR

Code	TCR
D	$\pm 50\text{PPM}/^{\circ}\text{C}$
E	$\pm 100\text{PPM}/^{\circ}\text{C}$
F	$\pm 200\text{PPM}/^{\circ}\text{C}$
-	No specified

⑥ Resistance

Code	Resistance
0R1	0.1Ω
10R	10Ω
1K	1KΩ
10K	10KΩ

[Back to 1st Page - TO-220 Power Resistors \(RMG30\)](#)