

## RGS Series Datasheet

Metal Glaze Film Resistors | Axial |

Hi-temp. solder contacts | Bakelite Moulded

### ORDERING CODE-Example

New SAP Part Nr.:

RGS	-50	G	T	-	52-	10R	AA
Serie	Power rating -50 = 0,5W -70 = 0,7W	Tol. D = ±0,5% F = ±1% G = ±2%	Pack-Code T = Tape (ammo pack) or R = Reel	TCR - Base on spec.	Forming type 52- Inner Taping dimension	R Value	Special AA = Standard

Historical VTM Part Nr.:

RG515 - 0	2	T	10R
Type	Tol.	Pack-Code	R Value

RG520 - 0	2	T	10R
Type	Tol.	Pack-Code	R Value

### APPLICATIONS

- Automotive
- Charger
- Alternative Energy
- Power Supply
- Home Appliances
- Industrial

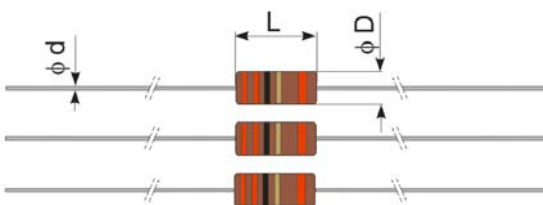
### FEATURES

- Other preforming available
- Uninflammable acc. to IEC 60695-2-2
- High insulation voltage
- RoHs & REACH Compliant

### ELECTRICAL SPECIFICATIONS

Type	RG5-50	RG5-70
Historical Part Number	RG515-0	RG520-0
Nominal Power Rating $P_{70}$	[W] 0,5 ( $P_{max.} = 0,7$ )	0,7 ( $P_{max.} = 0,9$ )
Resistance Range	[Ω] Min. Max.	R3
		3M32
E-Series (preferred)	E24 (1% ; 2%) ; E96 (0,5% ; 1%)	
Tolerances	±[%] D = 0,5% ; F = 1% ; G = 2%	
Temperature Coefficient	±[10 <sup>-6</sup> K <sup>-1</sup> ] Depends on the value, please check the table below	
Working Temperature Range	[°C] -65 ... +175	
Thermal Resistance	[KW <sup>-1</sup> ] 125	100
Insulation Resistance IEC60115-1 clause 4.6	[MΩ] > 10 <sup>4</sup>	
Max. Working Voltage	[V] <sub>RMS</sub> 350	
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	[V] <sub>RMS</sub> 1000	

### DIMENSIONS [mm]



Type	Historical P/N:	L ±0,2	Ø D ±0,2	Ø d ±0,02
RG5-50	RG515 - 0	6,4	2,3	0,65
RG5-70	RG520 - 0	8,0	3,2	0,65

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### PERFORMANCE DATE

Type		RGS-50	RGS-70
Historical Part Number		RG515-0	RG520-0
Derating Linear	[°C]	70...175 (0W)	
Climatic Category		55/155/56	
Voltage Coefficient <i>IEC60115-1 clause 4.11</i>	[10 <sup>-6</sup> V <sup>-1</sup> ]	< 30	
Failure Rate <i>(Total, 90, max, 60[%] cont. lev.)</i>	[10 <sup>-9</sup> h <sup>-1</sup> ]	1	
Endurance <i>IEC60115-1 clause 4.25 (P<sub>70</sub> @ 70[°C], 1000[h])</i>	±[%]	0,5	
Damp Heat, Steady State <i>IEC60115-1 clause 4.24 (40[°C], 93[% r.h.], 56[d])</i>	±[%]	1,0	
Climatic Sequence <i>IEC60115-1 clause 4.23</i>	±[%]	1,0	
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18 (260<sup>±5</sup>[°C], 3,5<sup>±1</sup>[s])</i>	±[%]	0,1	
Terminal Strength	±[%]	0,2	
Terminal Tensile Strength	[N]	40	
Solderability <i>IEC60068-2-20 (245<sup>±5</sup>[°C] 3<sup>±0,5</sup>[s])</i>		Solder bath method (> 95% coverage)	
Current Noise <i>IEC60195</i>	[dB]	R <1K: -20 ; R > 1K ± 20/decade	
Nonlinearity <i>IEC60440</i>	[dB]	110 -20 /decade	
Marking <i>IEC60062</i>		Color code (6 th band for TC ; < 1R 4 bands )	

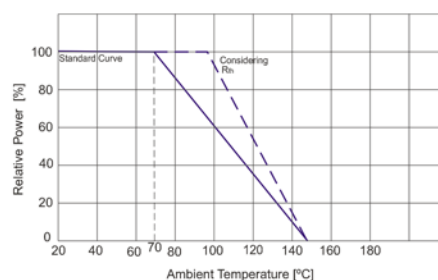
### TEMPERATURE COEFFICIENT

Resistance range	Tolerance	TCR	E-Series
R3 ... 3M3	± 2%	± 100 ppm/K *	E24
R3... 9R1	± 1%		
10R... 3M32	± 1%	± 50 ppm/K	E24 / E96
10R... 1M	± 0,5%		E96

\* R <1R TC200

### DERATING CURVE & TEMPERATURE RISE

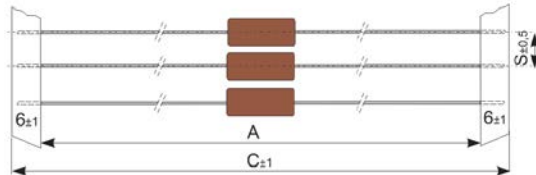
Derating Curve



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### PACKAGING

The standard packaging for RGS in axial type is taped, dimensions below.



Type	Historical P/N:	Pack Code	Pieces	Forming Type (Inner Taping dim.)	A	C	S
RGS-50	RG515 - 0	T = Taped Ammo pack	1000	52-	52	65	5
		R = Reel	5000				
RGS-70	RG520 - 0	T = Taped Ammo pack	1000				
		R = Reel	5000				

### ALTERNATIVE LEAD CONFIGURATIONS

This type RGS is also available in a different pre-forming, as shown below, other's upon request.

#### THOUGH HOLE VERSION

Axial Goal Post (AG-)	Axial Goal Post Kink (AK-)	Radial (RD-)	Radial 2 Kink (RK-)