

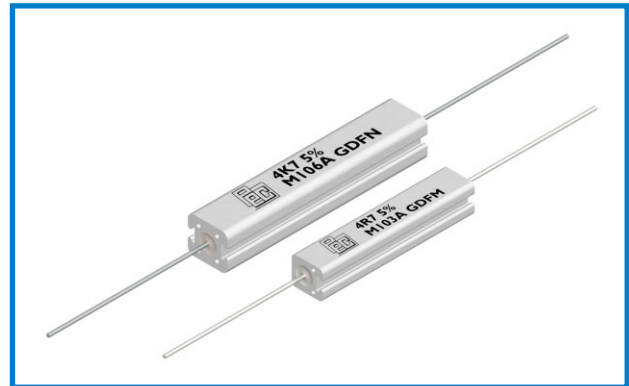


### Slotted Ceramic Cased, Axial

### Series PGMA

#### Key Features

- 4W to 17W Power Rating.
- Ceramic Encased, Axial Led.
- High Insulation Resistance.
- High Surge Versions.
- Low Surface Temperature.
- Slotted Ceramic Housing.
- Reference Standards.
  - IEC 115-1



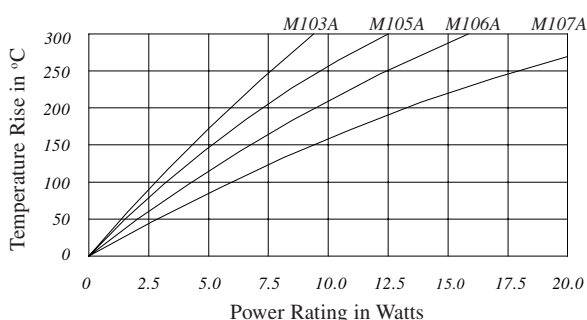
#### Electrical Specifications and Environmental Characteristics

Type	Power @70°C Watts	Ohmic Range Ohms		Additional Specifications	
		Min	Max	Tolerance	Standard $\leq 10\Omega \pm 10\%$ , $>10\Omega \pm 5\%$ , On Request $\pm 2\%$
M101A	4	0R1	6K8	Applicable E-Series	E24(5%), E12(10%); Other Values on Request
M102A	5	0R33	10K	Derating	From 70°C to 350°C
M103A	7	0R47	22K	TCR -Low Values, IEC 115-1, Cl 4.8.4.2, 2.2.20.2	450ppm/°C (Max)
M104A	7	0R33	10K	TCR -Mid Values & High Values	Std.: <150ppm/°C; On Request: 50, 20ppm/°C
M105A	9	0R47	22K	Temperature Range	-55°C to 350°C
M106A	11	0R82	22K	Climatic Category	55 / 200 / 56
M107A	17	1R5	27K	Solvent Resistance	As per IEC 115-1, Clause 4.30 (Test XA of IEC 68-2-45)

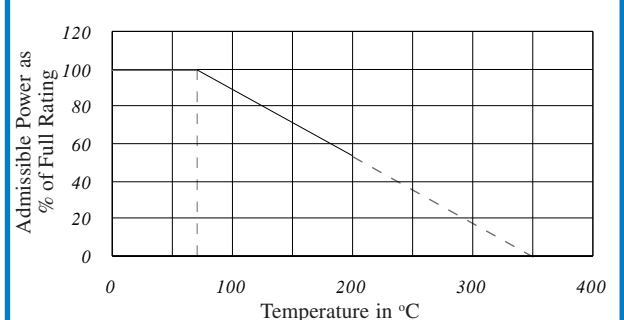
#### Performance Characteristics

Test Methods	Test Conditions	Test Limits
Insulation Resistance	Applying 500V DC, IEC 115-1, Clauses-4.6, 2.2.19	10000 M $\Omega$
Dielectric Strength	2000V <sub>peak</sub> for 1 min, IEC 115-1, Clause 2.2.17	No Breakdown
Terminal Strength	Tensile Test, IEC 115-1, Clause 4.16, Test Ua <sub>1</sub> , IEC 68-2-21	>50N
Solderability	As per MIL-STD 202F, Test 208; IEC 115-1, Clause 4.17.3	95% Coverage
Endurance at Rated Temperature	Rated Power @70°C(1.5hrs ON, 0.5hrs OFF), IEC 115-1, Clause 4.25	$\Delta R < 5\% + 0R05$
Long Term Damp Heat	90-95% RH@40°C Ambient Tempr. for 56days, IEC 115-1, Clause 4.24	$\Delta R < 5\% + 0R05$
Resistance to Soldering Heat	10 Seconds Dip in Solder Bath at 260°C, IEC 115-1, Clause 4.18	$\Delta R < 1\% + 0R05$
Climatic Sequence	As per IEC 115-1, Clause 4.23	$\Delta R < 5\% + 0R05$

#### Temperature Rise Graphs



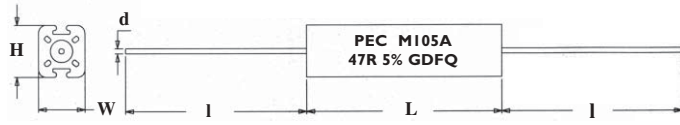
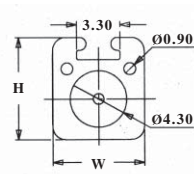
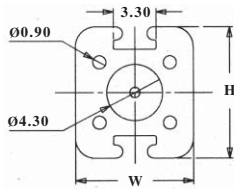
#### Derating Curve<sup>2</sup>



## Dimensions

For M104A, M105A,  
M106A, M107A

For M101A,  
M102A, M103A



Do not Scale Drawings. All dimensional tolerances in mm.

## Dimensions (mm)

Type	L	W	H	I	d
		± 0.5	± 0.5	± 3.0	± 0.05
M101A	20.0 ± 1.0	7.0	8.0	36.0	0.80
M102A	25.0 ± 1.0	7.0	8.0	36.0	0.80
M103A	38.0 ± 1.0	7.0	8.0	36.0	0.80
M104A	25.0 ± 1.0	9.0	10.0	36.0	0.80
M105A	38.0 ± 1.0	9.0	10.0	36.0	0.80
M106A	50.0 ± 1.5	9.0	10.0	36.0	0.80
M107A	75.0 ± 2.0	9.0	10.0	36.0	0.80

## Dimensions (Inches)

Type	L	W	H	I	d
		± 0.02	± 0.02	± 0.118	± 0.002
M101A	0.787 ± 0.039	0.276	0.315	1.417	0.0314
M102A	0.984 ± 0.039	0.276	0.315	1.417	0.0314
M103A	1.496 ± 0.039	0.276	0.315	1.417	0.0314
M104A	0.984 ± 0.039	0.354	0.394	1.417	0.0314
M105A	1.496 ± 0.039	0.354	0.394	1.417	0.0314
M106A	1.968 ± 0.059	0.354	0.394	1.417	0.0314
M107A	2.953 ± 0.079	0.354	0.394	1.417	0.0314

## To Order - Please Specify

PEC Type.	Ohmic Value	Tolerance	Packing Style	Release Condition	Standard / Non-Std. Leads	TCR
M105A	0.1 Ohm » 0R1 / R10 1 Ohm » 1R0 1 KOhm » 1K0 10.7 KOhm » 10K7	2% » G 5% » J 10% » K	Bulk » B	Commercial » X	Standard » S 38mm / 1.5" » L Others » M	Standard » S Others » M Please Specify

A Sample Part No.: **M105A 47R JBXSS**

## Notes

- On request we undertake tests for Batch Acceptance to a specified Reference Standard.
- The Derating Curve specifies the maximum allowable Power at a particular ambient temperature while ensuring that the maximum surface temperature remains within the designed limit.
- When the Resistor is subjected to a Pulse Load, please ensure that the *average* Power dissipated remains below the rated Power specified.
- Resistor performance with Pulse Loads will have to be application tested. Please utilise our Pulse Application Questionnaire for selecting a suitable type or for requesting any design-in assistance from us.

### International

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☎ ++44 (0)1457 852120 ✉ RonStewart@peccomponents.com

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### Mumbai, Pune, Western India

S.B. Dhurandar, Vikas R. Kothare, Electronica Sales  
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### Kolkata, Eastern India

M.W. Haque, Indian Electronics  
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### Hyderabad, Southern India

R. Ramaswamy, Electronic Agencies  
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### Factory Coordination

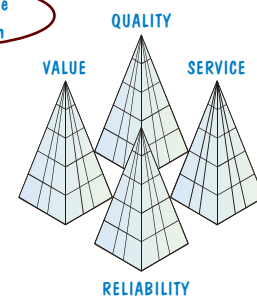
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S.P. Bhandarkar, Bangalore  
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to Work with



Thoughtful engineering and production by a well trained work-force, backed by strong design and development skills, enable us to maintain a level of manufacture and service recognised internationally.  
**At PEC we offer well-tuned customised support.**