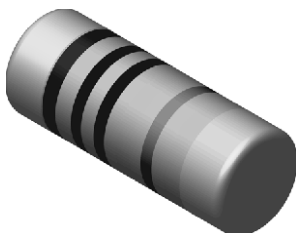


Metal Film, Cylindrical Resistors



FEATURES

- Metal film resistor with high power rating
- Stable metal film on high quality ceramic
- Good thermal distribution
- Pure tin termination on nickel barrier, plated on press fit steel caps
- Compatible with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2002/95/EC


RoHS
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING ⁽¹⁾ P_{70} W	LIMITING ELEMENT VOLTAGE ⁽²⁾ DC or AC _{RMS} V	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
SMM0207	1.0	350	± 50	± 0.5	1R0 to 2M21	24, 96
SMM0207	1.0	350	± 50	± 1	1R0 to 10M	24, 96
SMM0207	1.0	350	± 100	± 5	R16 to R91	24
Zero-Ohm-Resistor: OMM0207 $R_{max.} = 10 \text{ m}\Omega$ $I_{max.} = 5 \text{ A}$						

Notes

⁽¹⁾ Permissible dissipation depends on the maximum temperature at the solder point, the component placement density and the substrate material

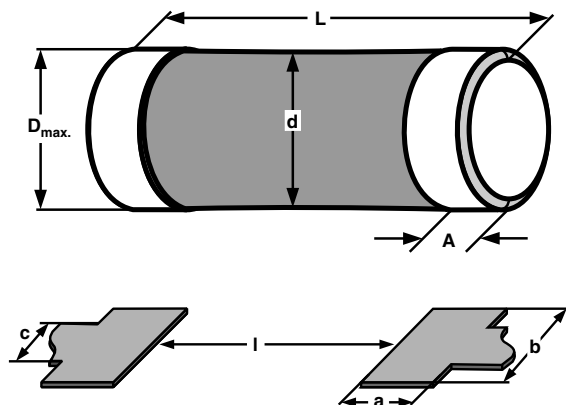
⁽²⁾ Rated voltage: $\sqrt{P \times R}$

- Further values and tolerances on request
- Marking: According to IEC 60062; see also document "Surface Mount Resistor Marking" (www.vishay.com/doc?20020)
- Zero ohm resistor has one black band only

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	SMM0207
Rated Dissipation at 70 °C	W	1
Limiting Element Voltage, DC or AC _{RMS}	V	350
Insulation Voltage (1 min), DC or AC _{PEAK}	V	500
Thermal Resistance	K/W	see table
Insulation Resistance	Ω	$\geq 10^{11}$
Temperature Range	°C	- 55 to + 155
Failure Rate	10 ⁻⁹ /h	< 5
Weight/1000 pieces	g	77

DIMENSIONS



MODEL	DIMENSIONS in millimeters			
	D _{max.}	d ⁽¹⁾	L	A
SMM0207	2.2	D - 0.2	5.8 - 0.3	1.25 ± 0.2

Note

⁽¹⁾ d measured in the middle of the resistor

SOLDER PAD DIMENSIONS in millimeters					
a x b (mm)	LINE-WIDTH c (mm)	P ₇₀ for 35 μ (W)	R _{th} for 35 μ (K/W)	P ₇₀ for 70 μ (W)	R _{th} for 70 μ (K/W)
6 x 6	6	0.82	103	0.99	86
3 x 3	3	0.70	121	0.82	104
2 x 3	2	0.62	137	0.71	120
3 x 3	2	0.65	131	0.75	114
1 x 3	1	0.51	166	0.58	147
3 x 3	1	0.57	148	0.63	134
2.4 x 2	0.5	0.46	184	0.50	171
2.4 x 2	0.5	0.48	177	0.52	163

Note

- Line length 30 mm min., l = 2.8 mm

PART NUMBER AND PRODUCT DESCRIPTION ⁽²⁾

PART NUMBER ⁽³⁾: SMM02070C5620FBS

PART NUMBER ⁽³⁾: OMM0207000000BS

S	M	M	0	2	0	7	0	C	5	6	2	0	F	B	S	0	0
O	M	M	0	2	0	7	0	0	0	0	0	0	0	B	S	0	0

MODEL/SIZE	SPECIAL CHARACTER	TCR	VALUE	TOLERANCE	PACKAGING ⁽⁴⁾	SPECIAL
SMM0207 OMM0207	0 = Neutral	C = ± 50 ppm/K B = ± 100 ppm/K 0 = Jumper	3 digit value 1 digit multiplier 0000 = Jumper MULTIPLIER 7 = *10 ⁻³ 2 = *10 ² 8 = *10 ⁻² 3 = *10 ³ 9 = *10 ⁻¹ 4 = *10 ⁴ 0 = *10 ⁰ 5 = *10 ⁵ 1 = *10 ¹ 6 = *10 ⁶	D = ± 0.5 % F = ± 1 % J = ± 5 % 0 = Jumper	BP BS	Up to 2 digits 00 = Standard

PRODUCT DESCRIPTION: SMM0207 50 562R 1 % BS

PRODUCT DESCRIPTION: OMM0207 0R0 BS

SMM0207	50	562R	1 %	BS
OMM0207	-	0R0	-	BS
MODEL	TCR	RESISTANCE VALUE	TOLERANCE	PACKAGING ⁽⁴⁾
SMM0207 OMM0207	± 50 ppm/K ± 100 ppm/K	100R = 100 Ω 2M21 = 2.21 MΩ 0R0 = Jumper	± 0.5 % ± 1 % ± 5 %	BP BS

Notes

⁽²⁾ Products can be ordered using either the PRODUCT DESCRIPTION or the PART NUMBER.

⁽³⁾ The PART NUMBER is shown to facilitate the introduction of a unified part numbering system. Currently, this PART NUMBER is applicable in the Americas only.

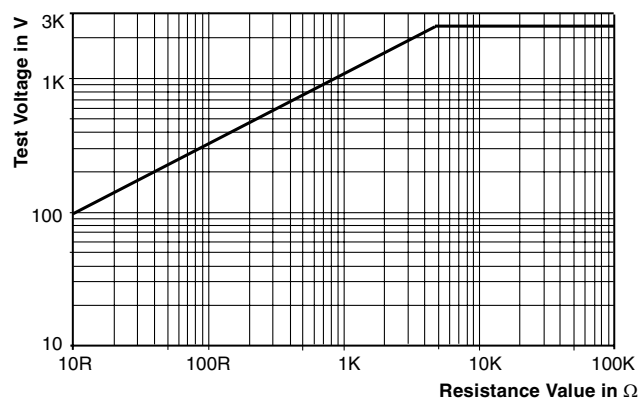
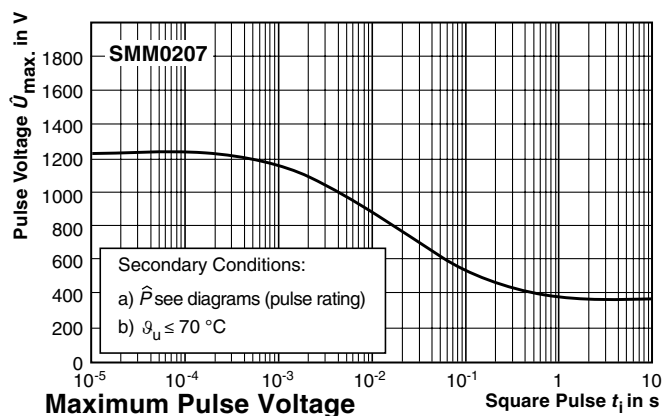
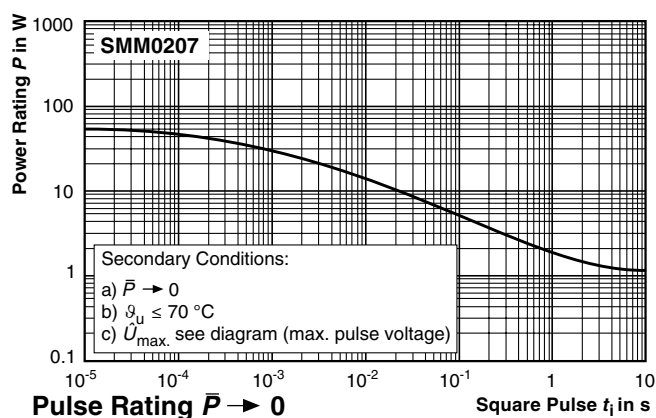
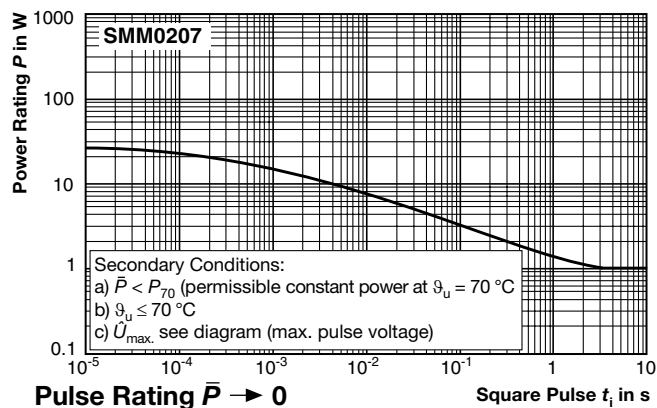
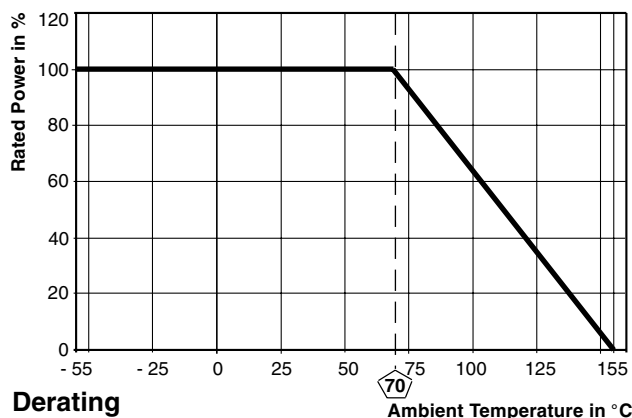
⁽⁴⁾ Please refer to table PACKAGING, see next page.

PACKAGING

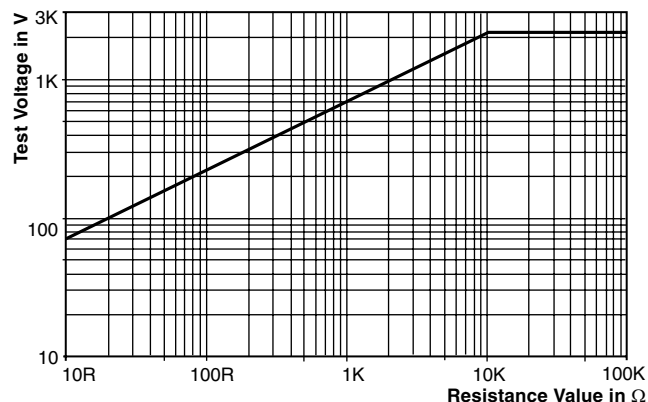
MODEL	BLISTER TAPE ON REEL ACC. IEC 60286-3		
	DIAMETER	PIECES/REEL	CODE
SMM0207	180 mm/7"	1500	BP
OMM0207	330 mm/13"	7500	BS

Note

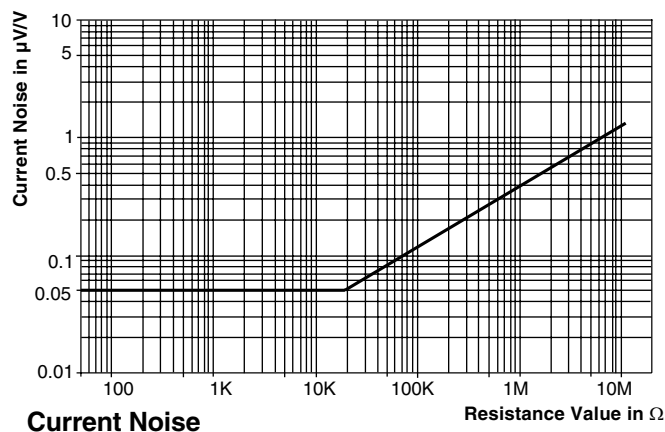
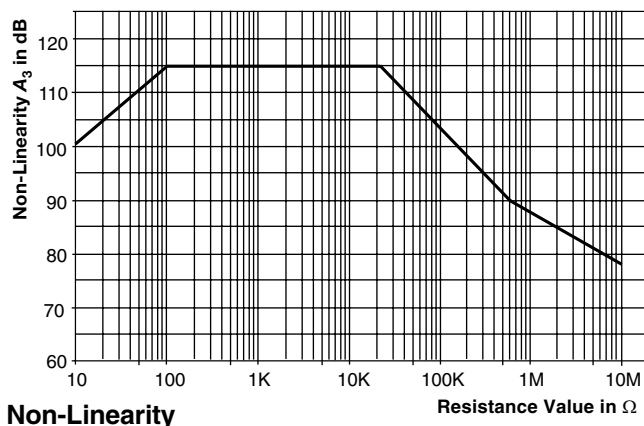
- Further information about packing see also document "Surface Mount Resistor Packaging" (www.vishay.com/doc?20014)



1.2/50 acc. EN 60115-1, 4.27



10/700 acc. EN 60115-1, 4.27



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST RESULTS ⁽¹⁾
Endurance Test at 70 °C IEC 60115-1, 4.25.1	1000 h at 70 °C 1.5 h "ON" 0.5 h "OFF"	≤ 0.5 %
Endurance at UCT IEC 60115-1, 4.25.3	1000 h at 125 °C without load	≤ 0.5 %
Overload Test IEC 60115-1, 4.13	Short time overload for 2 s 2.5 x rated voltage or ≤ 2 x limiting element voltage	≤ 0.5 %
Thermal Shock IEC 60115-1, 4.19 and IEC 60068-2-14	Rapid change between upper and lower category temperature, 5 cycles	≤ 0.1 %
Damp Heat Steady State IEC 60115-1, 4.24 and IEC 60068-2-78	56 days at 40 °C and 93 % relative humidity	≤ 0.5 %
Resistance to Soldering Heat IEC 60115-1, 4.18 and IEC 60068-2-58	10 s at 260 °C solder bath temperature	≤ 0.25 %

Note
⁽¹⁾ For a resistance range from 10 Ω to 1 MΩ

APPLICABLE SPECIFICATIONS
• EN 140401-803 • EN 140400 • EN 60115-1



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