

Metal Film, Cylindrical Resistors



FEATURES

- Stable metal film on high quality ceramic
- Low TC and tight tolerances
- Excellent stability
- Force fitted steel caps, tin plated on nickel barrier
- Reliable solderable terminations to facilitate surface mounting

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70^{\circ}\text{C}}^{1)}$ W	LIMITING ELEMENT VOLTAGE MAX ²⁾ $V \cong$	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
SMM0102	0.20	100	15	0.1	100R – 100K	24 – 96
SMM0102	0.20	100	25	0.1	100R – 100K	24 – 96
SMM0102	0.20	100	50	1.0	10R – 2M21	24 – 96
Zero-Ohm-Resistor : OMM0102 $R_{\text{max}} = 10\text{m}\Omega$ $I_{\text{max}} = 2\text{A}$						

¹⁾ Power rating 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
- Coating: green for TC = 50ppm/K
pink TC = 25ppm/K
violet TC = 15ppm/K
zero ohm resistor with a black band only
- Marking: see appropriate catalog or web page

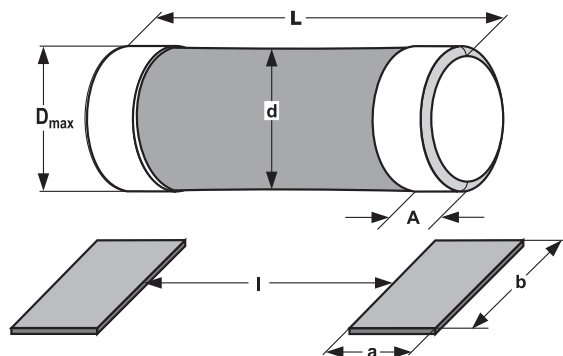
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	SMM0102
Rated Dissipation at 70°C	W	0.2
Limiting Element Voltage	$V \cong$	100
Insulation Voltage (1 min)	$V_{\text{dc/ac peak}}$	> 150
Thermal Resistance	K/W	≤ 250
Insulation Resistance	Ω	≥ 10 ¹⁰
Category Temperature Range	°C	- 55 / + 125
Failure Rate	10 ⁻⁹ /h	< 2
Weight / 1000pcs	g	7.8

ORDERING INFORMATION

SMM0102	25	562R	.1%	B3
MODEL	TC ppm / K	RESISTANCE VALUE Ω	TOLERANCE ± %	PACKAGING B3-Blistertape 3000 pcs

DIMENSIONS



MODEL	DIMENSIONS [in millimeters]				
	Dmax	d *	L	A max	A min
SMM0102	1.1	D -0.05	2.2 - 0.15	0.45	0.35

* d measured in the middle of the resistor

MODEL	SOLDER PAD DIMENSIONS [in millimeters]					
	REFLOW SOLDERING			WAVE SOLDERING		
	a	b	l	a	b	l
SMM0102	0.5	1.3	1.3	0.6	1.3	1.3

PERFORMANCE		
TEST	CONDITIONS OF TEST	REQUIREMENTS ¹⁾
Endurance Test at 70°C IEC 60115-1 4.25.1	1000 hours at 70°C, 1.5 hours "ON", 0.5 hours "OFF" 8000 hours at 70°C, 1.5 hours "ON", 0.5 hours "OFF"	$\leq \pm 0.25\%$ $\leq \pm 0.5\%$
Endurance at UCT IEC 60115-1 4.25.3	1000 hours at 125°C without load	$\leq \pm 0.5\%$
Overload Test IEC 60115-1 4.13	Short time overload for 2 seconds at 6.25 x rated power	$\leq \pm 0.1\%$
Thermal Shock IEC 60115-1 4.19 IEC 60068-2-14	Rapid change between upper and lower category temperature	$\leq \pm 0.1\%$
Damp Heat Steady State IEC 60115-1 4.24 IEC 60068-2-3	56 days at 40°C and 93% relative humidity	$\leq \pm 0.5\%$
Resistance to Soldering Heat IEC 60115-1 4.18 IEC 60068-2-20	10 seconds at 260°C solder bath temperature	$\leq \pm 0.1\%$

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

PACKAGING						
MODEL	REEL				BULK	
	TAPE WIDTH	DIAMETER	PIECES / REEL	CODE	BULK FEEDING MAGAZINE	
					PIECES / MAGAZINE	CODE
SMM0102	8mm	180mm	1000	B1*	8000	M8
OMM0102	Blister tape	180mm	3000	B3		
		330mm	10000	B0		

• For further information about packaging see appropriate catalog or web page

*For $\leq TC25$ and Tol. $\leq 0.5\%$ only