

MODELS SMM0102 and SMM0204

Thin Film Chip Resistors

Cylindrical, Industrial, Precision



FEATURES

- Cylindrical, leadless body style (MELF)
- Automatic placement compatibility
- Reflow and wave solderable
- Thin film resistance element
- Solderable end cap construction
- Color band marking
- 8mm tape width reel or bulk packaging
- Maximum operating voltage is 100 V for SMM0102 and 200 V for SMM0204
- Power rating at + 70°C is 0.20 W for SMM0102 and 0.25 W for SMM0204

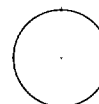
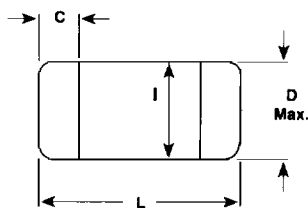
STANDARD ELECTRICAL SPECIFICATIONS

MODEL	TEMPERATURE COEFFICIENT	RESISTANCE RANGE (Ohms)	DECADE VALUES	TOLERANCE
SMM0102	± 50PPM/°C	10 - 1M	E24 - E96	± 1%
SMM0102	± 25PPM/°C	100 - 100k	E24 - E96	± 0.1%
SMM0204	± 15PPM/°C	43 - 221k 22 - 221k 10 - 221k	E24 - E192 E24 - E192 E24 - E192	± 0.1% ± 0.25% ± 0.5%
SMM0204	± 25PPM/°C	43 - 511k 22 - 511k 10 - 1M	E24 - E192 E24 - E192 E24 - E192	± 0.1% ± 0.25% ± 0.5%
SMM0204	± 50PPM/°C	10 - 1M 1 - 10M	E24 - E192 E24 - E96	± 0.5% ± 1%
SMM0204	± 100PPM/°C	.51 - 10M .22 - 10M	E24 E24	± 2% ± 5%
SMM0204 HF*	± 50PPM/°C	10 - 470	E96	± 1%

OMM0204 = Zero-ohm resistor. R_{max.}: 15mΩ. I_{max.}: 2A

* HF = High Frequency version.

DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]



MODEL	D (Max.)	I*	L	C (Max.)	C (Min.)
SMM0102	.043 [1.1]	.043 ± .002 [1.1 ± 0.05]	.087 - .004 [2.2 - 0.1]	.018 [0.45]	.014 [0.35]
SMM0204	.055 [1.4]	.055 - .006 [1.4 - 0.15]	.142 - .006 [3.6 - 0.15]	.033 [0.85]	.020 [0.5]

* Measured in the middle of the resistor.

MODELS SMM0102 and SMM0204

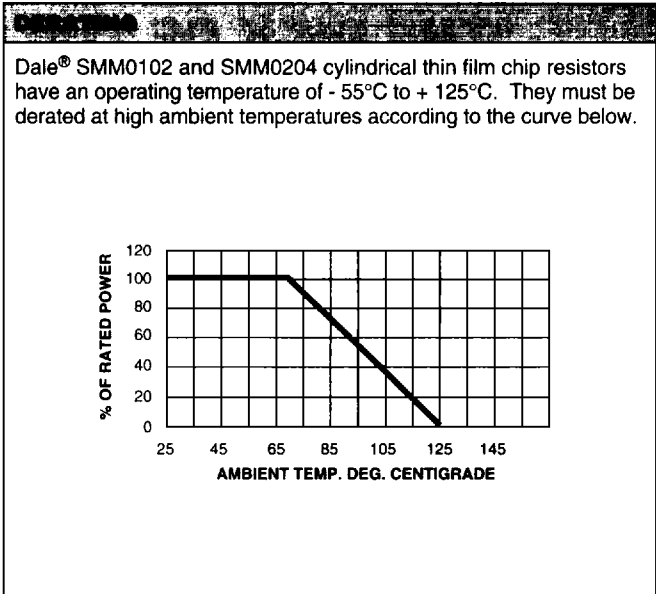
ENVIRONMENTAL PERFORMANCE	
TEST	MAX. ΔR (Typical Test Lots)
Thermal Shock	± 0.10% Max. + .05Ω
Short Time Overload	± 0.10% Max. + .05Ω
Resistance to Bonding Exposure	± 0.10% Max. + .05Ω
56 Day Damp Heat	± 0.50% Max. + .05Ω
Life 1,000 Hours @ + 70°C	± 0.25% Max. + .05Ω

PART MARKING

Depending on the tolerance, the marking consists of a four band (± 5% and ± 2%) or five band (± 1% and ± 0.1%) color code.

For SMM0204 only: The color of the resistor body identifies the TC:
 Bright green = ± 100PPM/°C and ± 50PPM/°C.
 Pink = ± 25PPM/°C.
 Violet = ± 15PPM/°C.

The HF type has a beige coating.
 Zero-ohm resistors are bright green with a black band.



HOW TO ORDER

SMM MODEL	0204 SIZE	± 25PPM/°C TEMPERATURE COEFFICIENT	332k VALUE	± 0.5% TOLERANCE	TAPE AND REEL PACKAGING
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Manufactured in Germany

TAPE AND REEL SPECIFICATIONS [Numbers in brackets indicate millimeters]

Tape Dimensions

MODEL	A	B	C
SMM0102	.047 ± .004 [1.2 ± 0.1]	.118 ± .004 [3.0 ± 0.1]	.057 ± .004 [1.45 ± 0.1]
SMM0204	.067 ± .004 [1.7 ± 0.1]	.157 ± .004 [4.0 ± 0.1]	.069 ± .004 [1.75 ± 0.1]

SMM0102 resistors are packed in quantities of 3,000 pieces and SMM0204 resistors are packed in quantities of 2,500 pieces in 180mm diameter reels. Larger reels of 10,000 pieces are available on request.

SMM0204 resistors are also available bulk packed in plastic boxes with styrofoam overpacking, in quantities of 1,000 or 5,000 pieces.

SMM0204 in TC's of ± 15PPM/°C or ± 25PPM/°C are also available in quantities of 1000 pieces on 180mm diameter reels.