

## SMD Moulded Power Resistor

### Type SM Series

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Tyco Electronics CGS introduces a surface mount power resistor suited to meet today's circuit design needs. Each size offers low profile case design with flexible tinned copper terminations for reliable solder joints. All styles utilize a fully welded construction technique, unlike other designs that rely solely on tinned termination connections. These features allow the SM Series to withstand the higher temperatures associated with reflow, vapour phase, or infrared (IR) manufacturing processes without degradation.

#### Key Features

- Low Profile Design
- Available on Tape
- Very Wide Value Range
- Ideal for Power Circuitry
- Available in 1, 2, 3 or 5 Watts

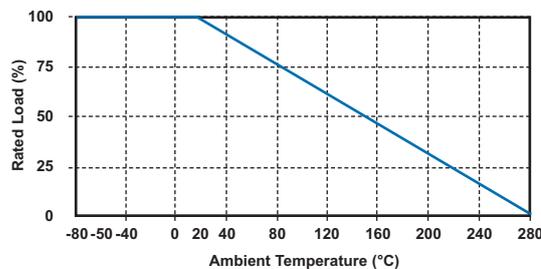
#### Characteristics - Electrical

	SM (Wire)	SM (Metal Film)
Values SMF1:	----	10R – 2M
Values SM_2:	R10 – 200R	201R – 2M
Values SM_3:	R10 – 300R	301R – 2M
Values SM_5:	R10 - 500R	501R - 2M
Value Grid:	E24	
Resistance Tolerance:	1% or 5%	
Power Rating @ 25°C SMF1:	----	1.0 Watt
Power Rating @ 25°C SM_2:	2.0 Watts	
Power Rating @ 25°C SM_3:	3.0 Watts	
Power Rating @ 25°C SM_5:	5.0 Watts	
Derating:	See Curve Below	
Max Operating Voltage SMF1:	----	300 Volts
Max Operating Voltage SM_2:	300 Volts	
Max Operating Voltage SM_3:	500 Volts	
Max Operating Voltage SM_5:	500 Volts	

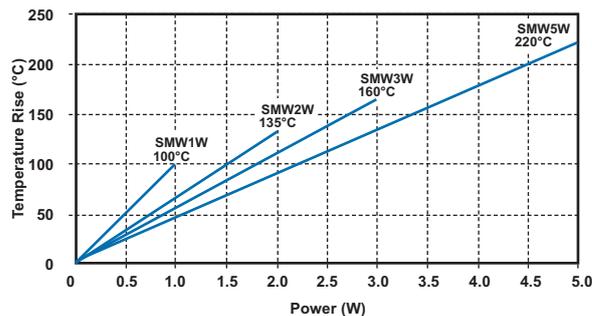
#### Characteristics - Environmental

Test	Condition	SM (Wire)	SM (Metal Film)
Temperature Coefficient of Resistance:	-55°C ~ +200°C	± 200ppm /°C	± 100ppm /°C
Short Time Overload:	5 times of rated wattage for 5 sec.	± 1%	± 0.5%
Rated Load:	Rated voltage for 30 minutes	± 1%	± 0.5%
Insulation Resistance:	500V megger.	10,000 MΩ	10,000 MΩ
Load Life:	70°C on-off cycle 1,000hrs.	± 2%	± 1%
Humidity Load Life:	40°C - 95% RH on-off cycle 500hrs.	± 2%	± 1%

#### Power Derating



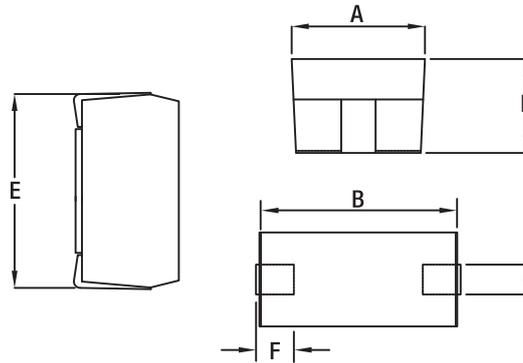
#### Maximum Allowable Body Temperature



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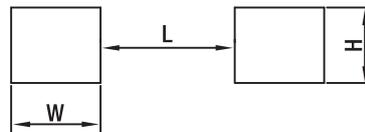
## Type SM Series

### Dimensions



	A ±0.3	B ±0.3	C ±0.3	D ±0.3	E max	F±0.3	Qty Per Reel
SMF1	3.3	4.5	1.2	2.7	6.0	1.1	2500
SM_2	4.0	6.7	1.4	3.55	7.9	1.5	2000
SM_3	5.5	10.5	1.7	5.0	12.0	2.3	1000
SM_5	7.3	13.5	1.7	6.8	17.0	2.5	1000

### Recommended Pad Dimensions



	W Nom.	H Nom.	L Nom.
SMF1	2.2	2.2	1.8
SM_2	2.6	2.9	2.8
SM_3	4.0	3.4	6.0
SM_5	4.5	3.4	11.0

### How to Order

SMW	2	1R0	F	T
Common Part	Case Size	Resistance Value	Tolerance	Pack Style
SMW – Wirewound SMF – Metal Film	1 – 1 Watt 2 – 2 Watts 3 – 3 Watts 5 – 5 Watts	0.1 ohm (100 milli ohms) R10 1 ohm (1000 milli ohms) 1R0 100 ohm (100 ohms) 100R 1K ohm (1000 ohms) 1K0 100K ohm (100,000 ohms) 100K	J – ±5% F – ±1%	T – Taped