Type SM Series

Key Features

- Low Profile Design
- Available on Tape
- Very Wide Value Range
- Ideal for Power Circuitry
- Available in 2,3 or 5 Watts
- Flameproof Coating UL94V0

TE Connectivity (TE) 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 onnections. These features allow the SM Series to withstand the higher temperatures associated with reflow, vapour phase, or infrared (IR) manufacturing processes without degradation.

Characteristics - Electrical

	SM (Wire)	SM (Metal Film)
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 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 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:	500VDC	10,000 MΩ	10,000 MΩ
Load Life:	70°C 1.5 hrs on 0.5 hrs off for 1000 hrs	± 2%	± 1%
Humidity Load Life:	40°C ±2°C @ 90-95% RH 500 hrs 1.5 hrs on 0.5 hrs off	± 2%	± 1%
Voltage Withstand:	500VAC for 60 seconds	No Physical damage	
Solderability:	235°C ±5°C for 2 seconds	95% coverage	
Resistance to Soldering Heat:	270°C ±5°C for 10 ±1seconds	Resistance value change within ± 1%	

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

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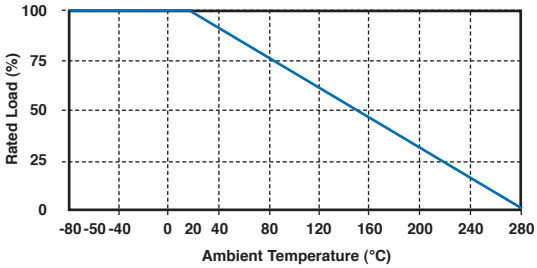
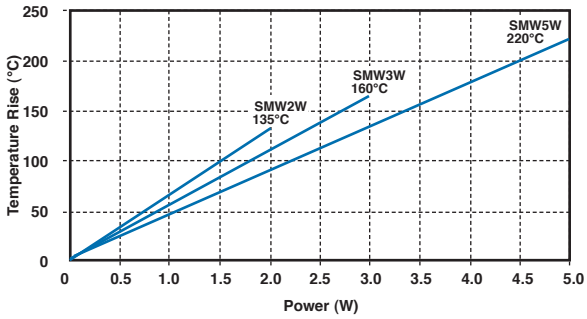
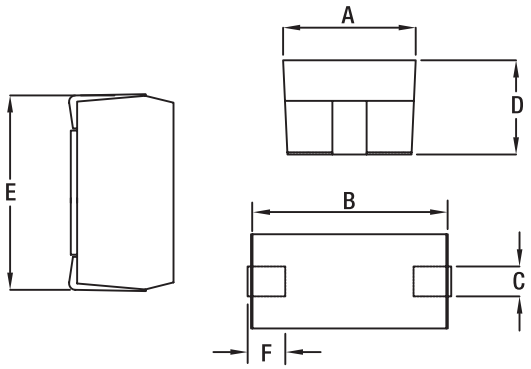
Power Derating



Maximum Allowable Body Temperature



Dimensions



	A ±0.3	B ±0.3	C ±0.3	D ±0.3	E max	F±0.3	Qty Per Reel
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

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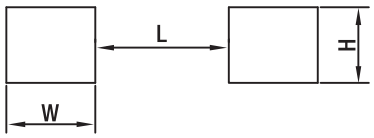
Recommended Pad Dimensions



	W Nom.	H Nom.	L Nom.
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	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