Type SMM

Square Ceramic Surface Mount Medium Blow Fuse

3812 Size

RoHS6 Compliant

SMMD Sept.,2010

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% *In* (Volt) max.	Melting I²t @10*In* (A²Sec) min.	Maximum Power Dissipation (W)
SMM 20	20A	0.0025	0.09	270	1.8
SMM 25	25A	0.0019	0.08	420	2.0
SMM 30	30A	0.0013	0.07	1000	2.1

Consult manufacturer for other ratings

Electrical Characteristics

Testing Current	Blow Time	
	Minimum	Maximum
100%	4 hrs	N/A
200%	N/A	60 sec

Approvals

Safety Agency Approvals	Amp range / I.R. ability @ Volt
Recognized File No. E20624	20A - 30A / 100A@ 250V AC resistive 150A@125V AC resistive 300A@ 65V DC resistive

Soldering Guidelines

Reflow Conditions Recommended: 240℃, 30 sec. max.

Pb-Free Process Compatibility:

When soldered to test boards using IR reflow in accordance with JEDEC J-STD-020 (260℃, 40 sec. max.), SMM samples exhibited DCR change of +10% to -20% from initial values.

Subsequent tests showed all samples complied with the stated electrical characteristics on this data sheet.

NOT Recommended for Wave solder / Direct immersion / Hand Solder

Environmental Specification

Shock Resistance

MIL-STD-202G, Method 213B, Test Condition I (100 G's peak for 6 milliseconds).

Vibration Resistance

MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).

Salt Spray Resistance

MIL-STD-202G, Method 101E, Test condition B (48 hrs).

Thermal Shock Resistance

MIL-STD-202G, Method 107G, Test Condition B (-65℃ to +125℃)

Insulation Resistance:

MIL-STD-202G, Method 302, Test Condition A

(After Opening) 10,000 ohms minimum

Solderability:

MIL-STD-202G, Method 208H

Soldering Heat Resistance:

MIL-STD-202G, Method 210F

Operating Temperature

-55℃ to +85℃ Max.

Physical Specification

Materials

Ceramic Body / Matte Tin Plated Brass Caps

Marking

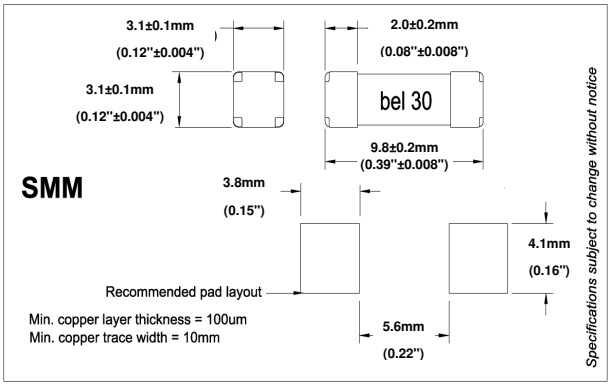
On fuse:
"bel", "Current Rating" in black

'On label:
"bel", **"SMM"**, **Current Rating**, **Voltage Rating**, **Interrupting Rating**, **Safety Logo** and " "," "(China RoHS compliant)

Packaging

2,000 fuses in 13 inches dia. reel, 16mm wide tape, 8mm pitch, per EIA Standard 481

Mechanical Dimensions



NOTES:

– TEST CONDITIONS

For all SMM data, as well as UL Component investigation, all tests were conducted with fuse samples soldered on a PCB (1.6mm thick) test board with copper traces measuring 0.1 mm nominal thickness (3 oz.clad), 10mm wide and 100 mm overall length.

– UL Condition of Acceptability

- the following information is contained in the UL Component Recognition for SMM Fuse Series:
The maximum temperature recorded in open air was 100 °C in a 21 °C ambient (79 °C rise). Consideration should be given to checking operating temperatures in end-use application with regard to thermal index of surrounding materials and components.
(Maximum temperature recorded at 80% of rating (24A) for the SMM30 rating was 69 C (48 C rise).

CAUTION:

– MINIMUM FUSING POINT :

The SMM Series fuses are NOT intended to be operated at currents between 100% and 200% of ampere rating. Prolonged operation at currents in this range may result in overheating of the fuse and/or desoldering of the fuse caps from the PCB pad.

SMM - TIME CURRENT CHARACTERISTIC CURVE