

Surface Mount

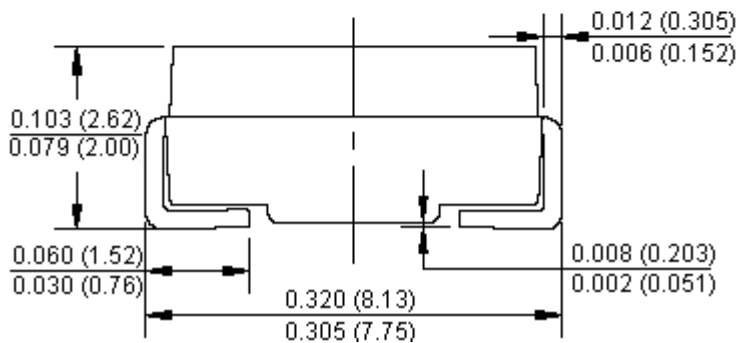
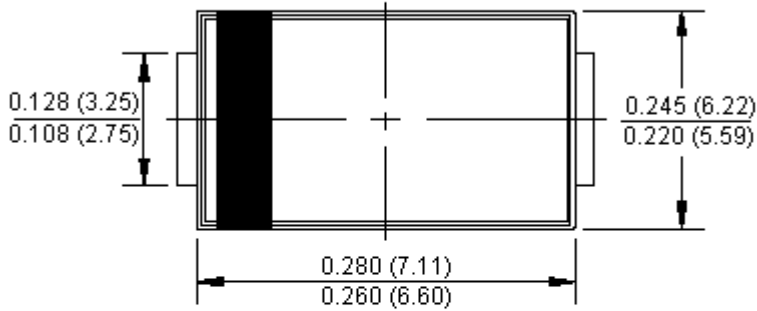


Schottky Barrier Rectifiers

Reverse Voltage - 20 to 100 Volts

Forward Current - 5.0 Amperes

SMC



Dimensions : Inches (Millimetres)

Features:

- Metal-semiconductor junction with guarding
- Epitaxial construction
- Low forward voltage drop
- High current capability
- Plastic material has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical Data:

Case : Moulded plastic
Polarity : Colour band denotes cathode
Weight : 0.007 ounces, 0.021 grams

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified
Single phase, half wave, 60Hz, resistive or inductive load
For capacitive load, derate current by 20%



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Characteristics	Symbol	SS54	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current @ $T_L=100^\circ\text{C}$	$I_{(AV)}$	5.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method)	I_{FSM}	150	A
Peak Forward Voltage at 1.0A DC	V_F	0.55	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$	I_R	1.0 50	mA
Typical Junction Capacitance (Note1)	C_J	500	pF
Typical Thermal Resistance (Note2)	$R_{\theta JL}$	15	$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance junction to ambient.

Rating and Characteristic Curves

Figure 1 - Forward Current Derating Curve

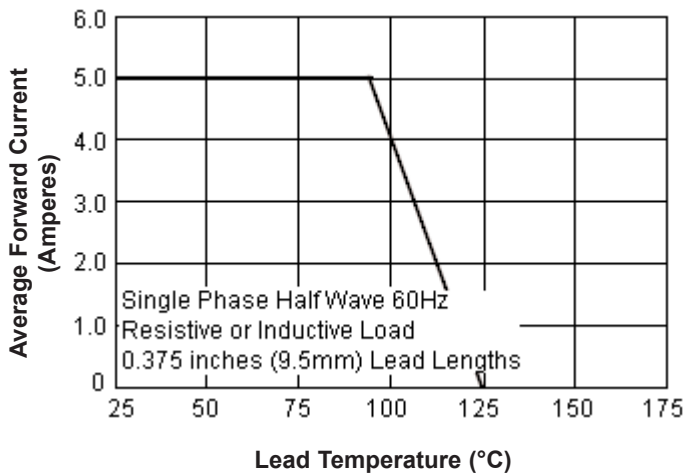
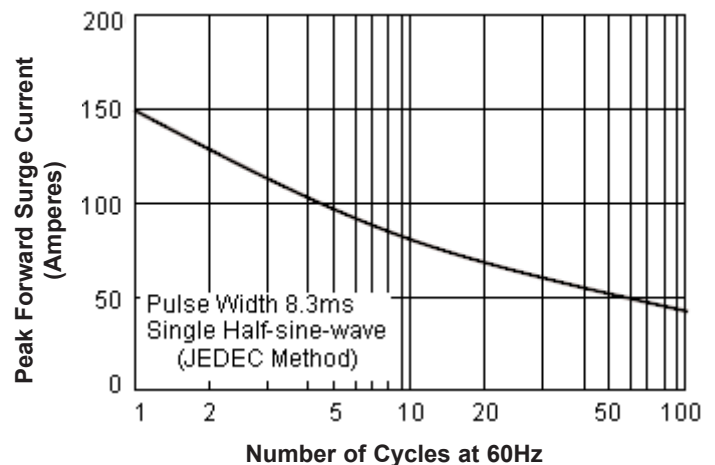


Figure 2 - Maximum Non-repetitive Surge Current



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Figure 3 - Typical Junction Capacitance

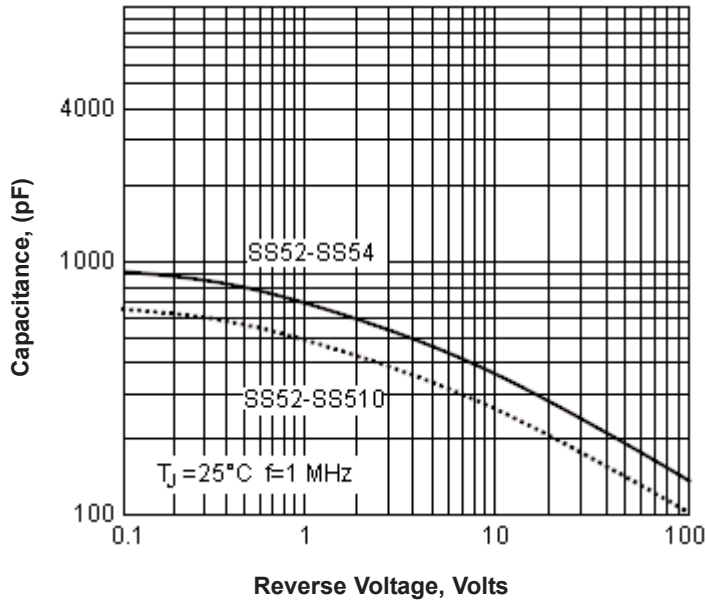


Figure 4 - Typical Forward Characteristics

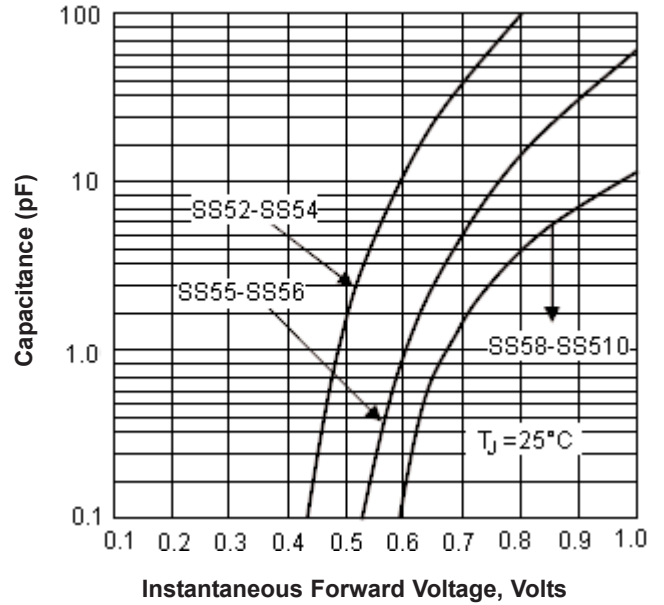
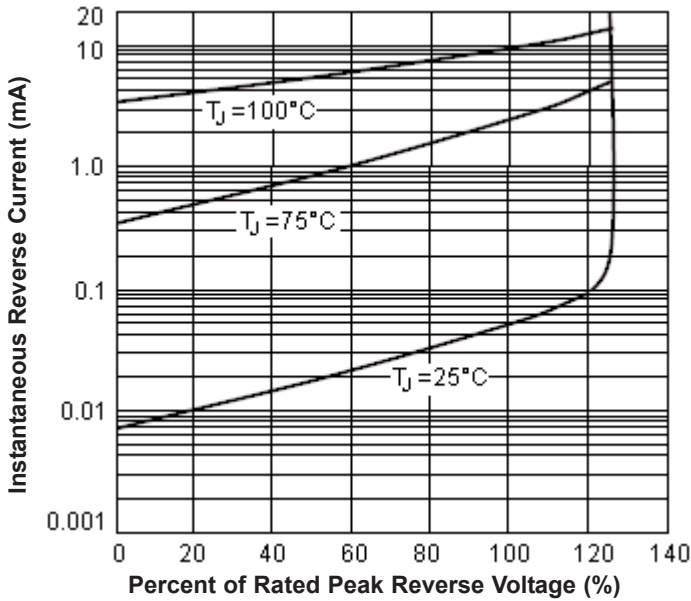


Figure 5 - Typical Reverse Characteristics



Part Number Table

Description	Part Number
Surface Mount Schottky Barrier Rectifiers	SS54

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