

Surface Mount Schottky Barrier Rectifier



Features:

- For surface mounted applications
- Metal-Semiconductor junction with guarding
- Epitaxial construction
- Very 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	: Molded Plastic
Polarity	: Colour band denotes cathode
Weight	: 0.002 ounces, 0.053 grams
Reverse Voltage	: 20 to 150 Volts
Forward Current	: 1 Ampere

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%.

Characteristics	Symbol	SS12+	SS14+	SS16+	SS110+	SS115+	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	100	150	V
Max. RMS Voltage	V_{RMS}	14	28	42	70	105	
Max. DC Blocking Voltage	V_{DC}	20	40	60	100	150	
Max. Average Forward Rectified Current $T_L = 100^\circ\text{C}$	$I_{(AV)}$	1					A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30					
Max. Instantaneous Forward Voltage (Note 1) $F = 1\text{A at } 25^\circ\text{C}$ at 100°C	V_F	0.5 0.4	0.75 0.65	0.8 0.7	0.95 0.85	V	
Max. DC Reverse Current at $T_J = 25^\circ\text{C}$ Rated DC Blocking Voltage at $T_J = 125^\circ\text{C}$	I_R	0.2 -		0.1 2		μA	
Typical Junction Capacitance (Note 2)	C_J	110					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	28					$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +150					$^\circ\text{C}$
Storage Temperature Range	T_{STG}						

Notes:

1. Pulse test with $PW=300\mu\text{s}$, 1% duty cycle
2. Measured at 1MHz and applied reverse voltage of 4V DC.
3. Thermal resistance junction to lead.

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Ratings and Characteristic Curves

FIG.1 FORWARD CURRENT DERATING CUURVE

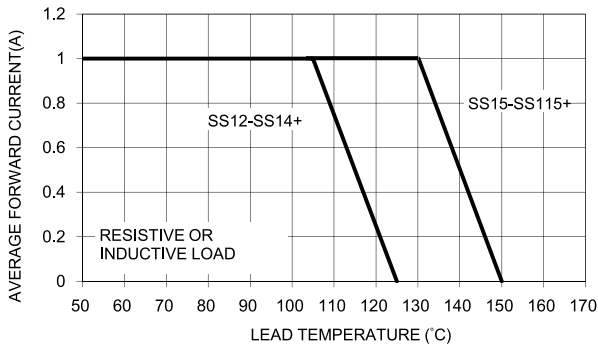


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

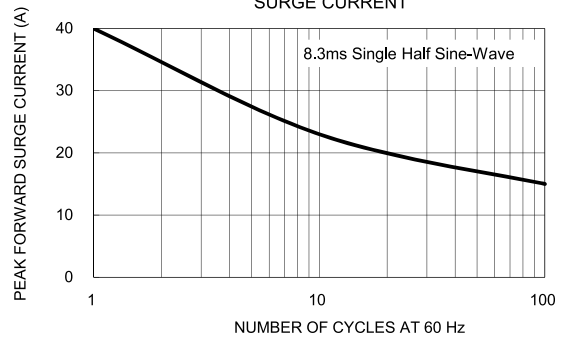


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

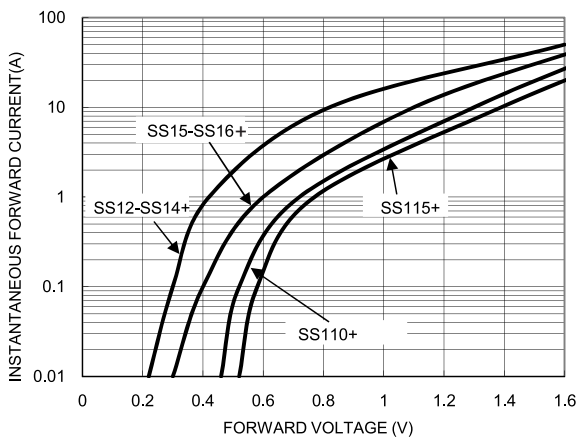


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

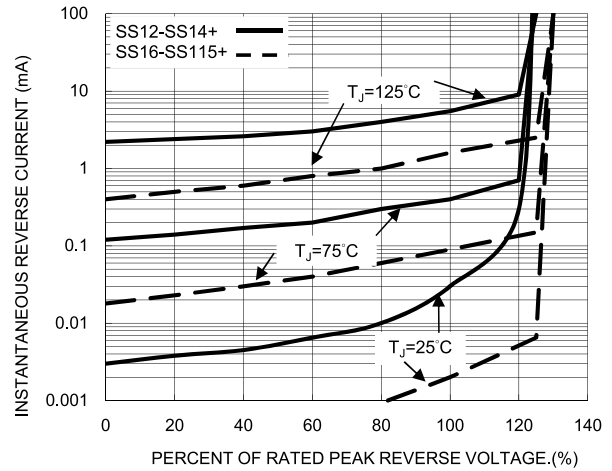


FIG. 5 TYPICAL JUNCTION CAPACITANCE

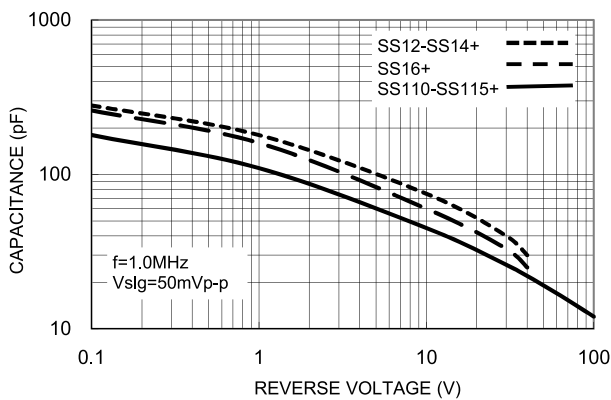
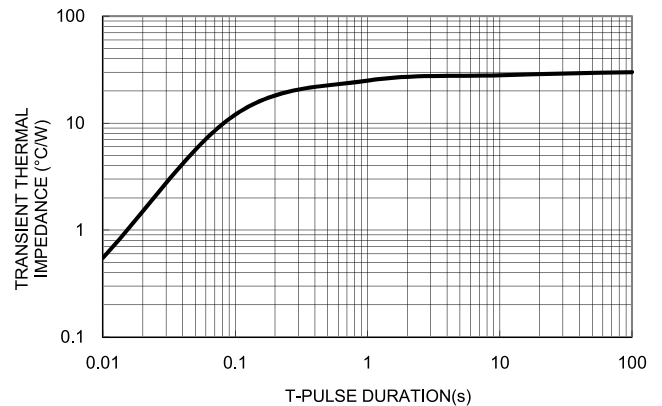


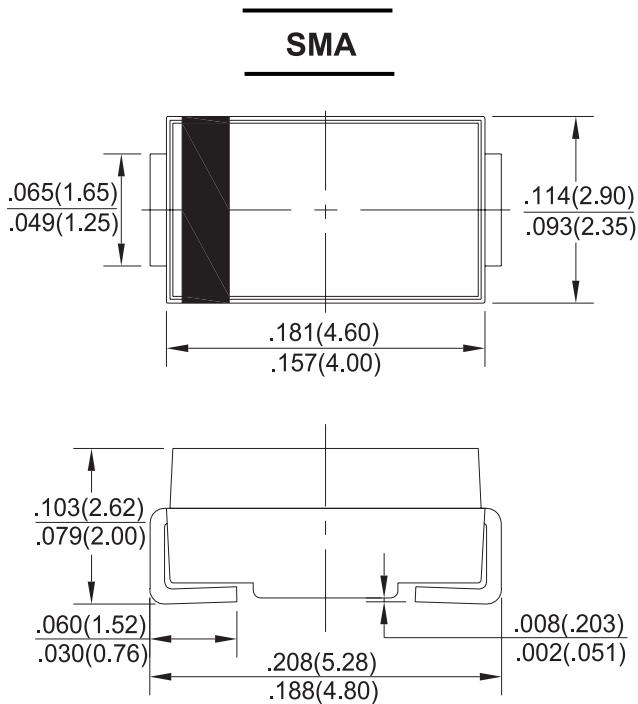
FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



Surface Mount Schottky Barrier Rectifier



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Surface Mount Schottky Barrier Rectifiers	SS12+
	SS14+
	SS16+
	SS110+
	SS115+

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