

Schottky Barrier Rectifier



Features:

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data:

Case	: JEDEC DO-41 molded plastic
Polarity	: Colour band denotes cathode
Weight	: 0.012 ounces, 0.34 grams
Mounting Position	: Any
Reverse Voltage	: 40 to 60 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	SR140	SR160	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	40	60	V
Max. RMS Voltage	V_{RMS}	28	42	
Max. DC Blocking Voltage	V_{DC}	40	60	
Max. Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths @ $T_L = 100^\circ C$	$I_{(AV)}$	1.0		A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30		
Peak Forward Voltage at 1A DC	V_F	0.55	0.7	V
Max. DC Reverse Current at $T_J = 25^\circ C$ Rated DC Blocking Voltage at $T_J = 100^\circ C$	I_R	1 10		mA
Typical Junction Capacitance (Note 1)	C_J	110	80	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	15		$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150		$^\circ C$
Storage Temperature Range	T_{STG}			

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance junction to lead
3. The typical data above is for reference only

Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

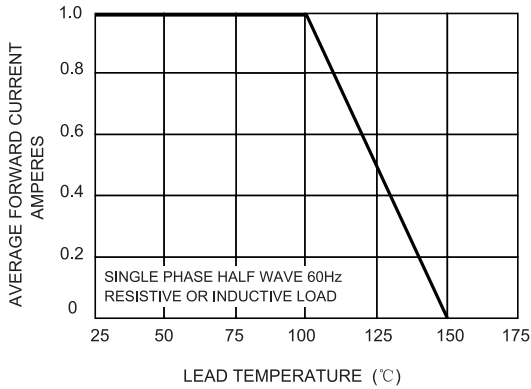


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

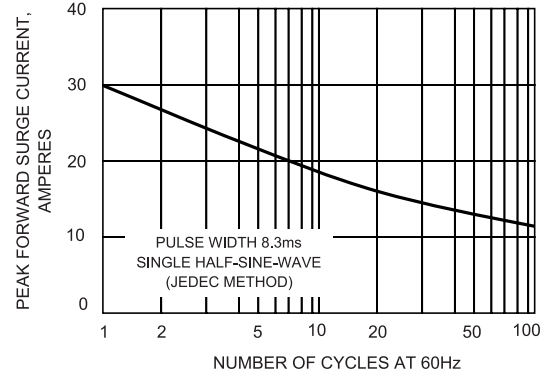


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

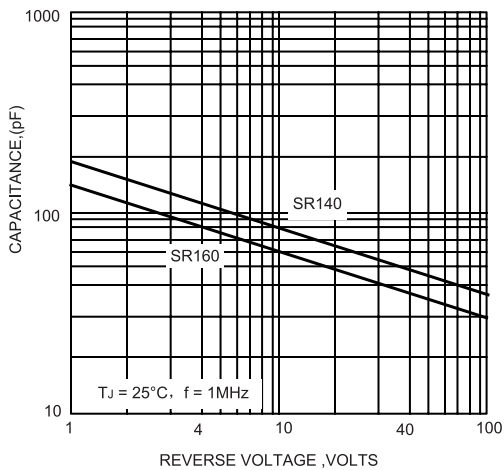


FIG.4-TYPICAL FORWARD CHARACTERISTICS

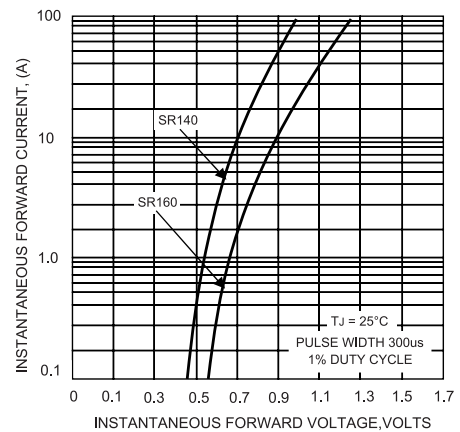
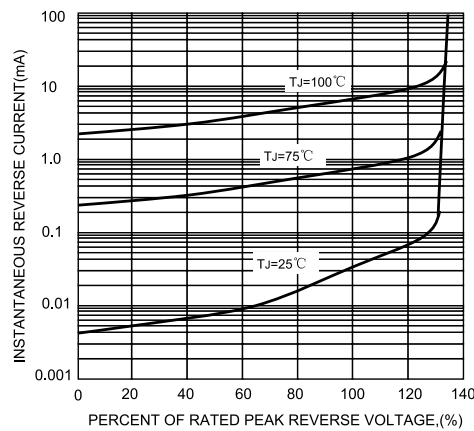


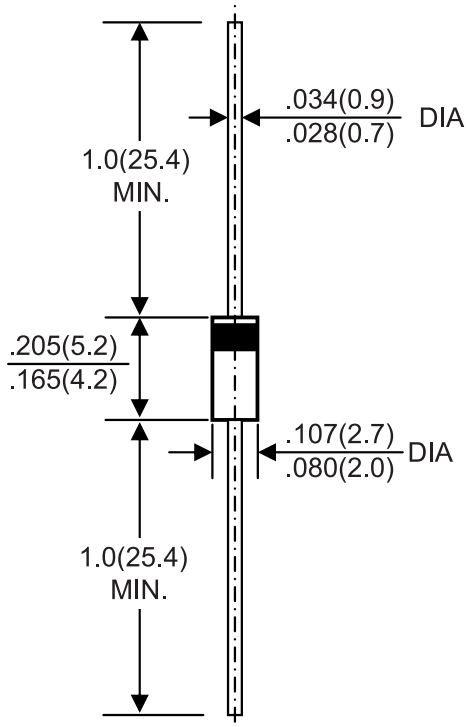
FIG.5-TYPICAL REVERSE



Schottky Barrier Rectifier



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Schottky Barrier Rectifier, 1A 40V, DO-41	SR140
Schottky Barrier Rectifier, 1A 60V, DO-41	SR160

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