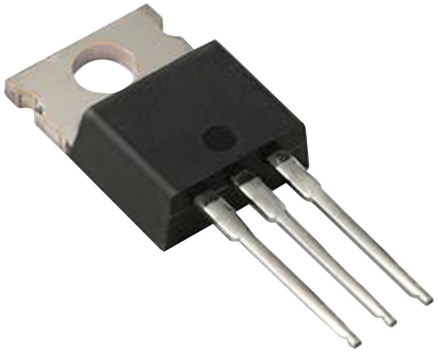
Schottky Diode

RoHS Compliant



Features:

- Low power loss, high efficiency
- High current capability, Low V_F
- High reliability
- High surge current capability
- Epitaxial construction
- Guard-ring for transient protection
- For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

Specifications:

Mechanical Data:

Cases	: TO-220AB moulded plastic
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
Polarity	: As marked
High temperature soldering guaranteed	: 260°C/10 seconds/0.25", (6.35mm) from case
Weight	: 2.24g

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%.

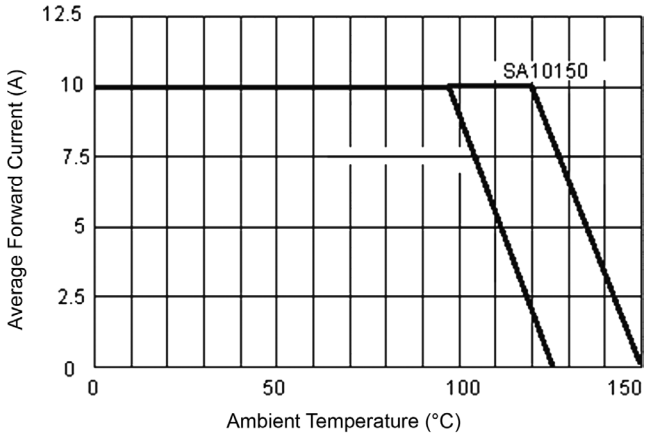
Parameters	Symbol	SR10100	SR10150	SR1060	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	150	60	V
Maximum RMS Voltage	V_{RMS}	70	105	42	
Maximum DC Blocking Voltage	V_{DC}	100	150	60	
Maximum Average Forward Rectified Current	$I_{(AV)}$	10			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120			

Parameters	Symbol	SR10100	SR10150	SR1060	Units
Maximum Instantaneous Forward Voltage at 5A	V_F	0.85	0.95	0.7	V
Maximum DC Reverse Current at T_A = 25°C	I_R	0.1	0.5		µA
at Rated DC Blocking Voltage at T_A = 100°C		5	10		µA
Typical Junction Capacitance (Note 2)	C_j	310			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	3			°C/W
Operating Junction Temperature Range	T_J	-65 to +125	-65 to +150		°C
Storage Temperature Range	T_{STG}	-65 to +150			

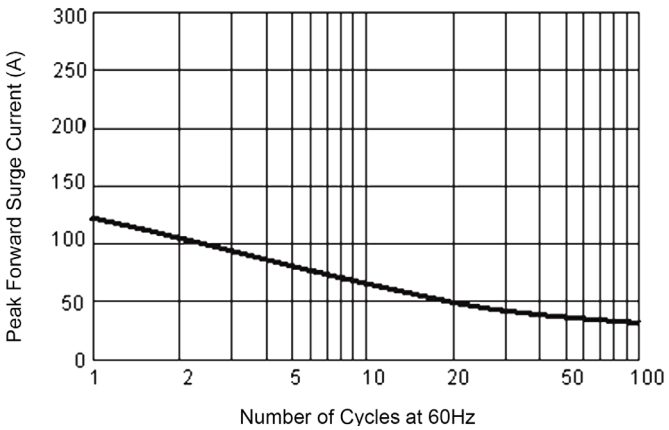
Notes:
1. Thermal Resistance from Junction to Case Per Leg, Mounted on Heatsink size of 2" × 3" × 0.25" Al-Plate.
2. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

Ratings and Characteristic Curves

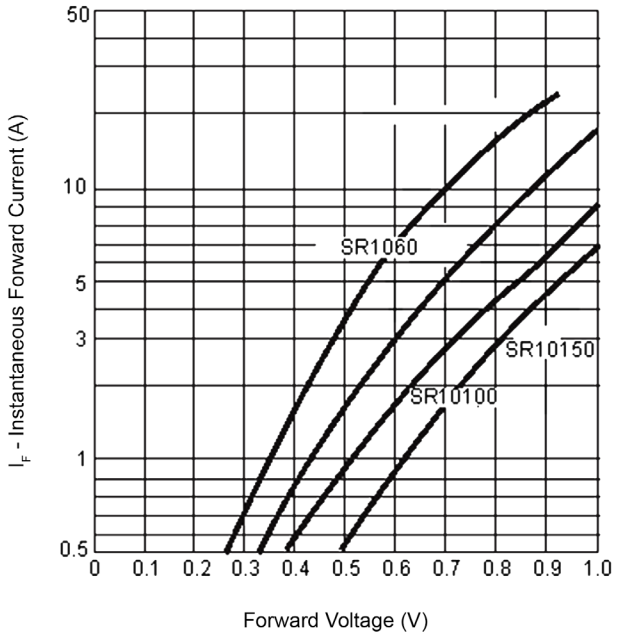
Forward Current Derating Curve



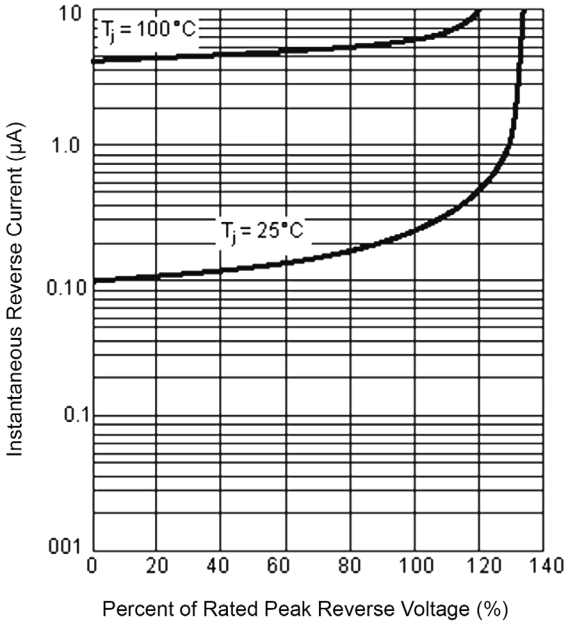
Maximum Non-Repetitive Forward Surge Current Per Leg



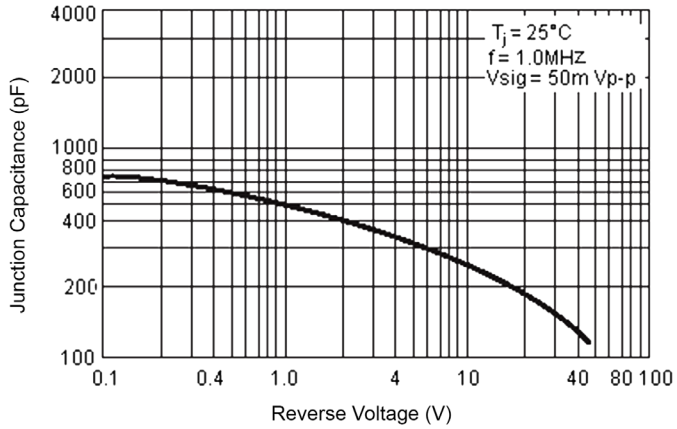
Typical Forward Characteristics Per Leg



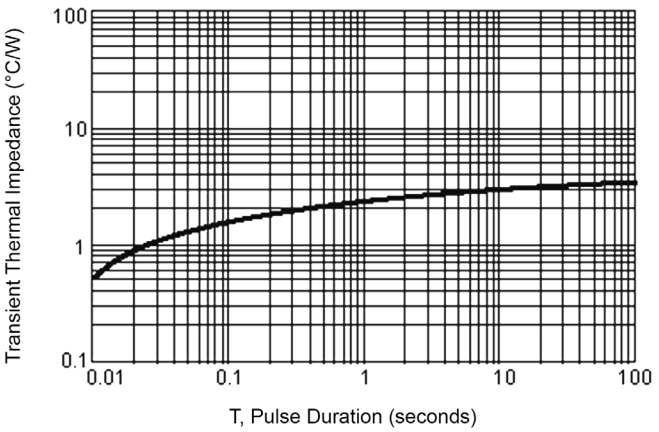
Typical Reverse Characteristics Per Leg



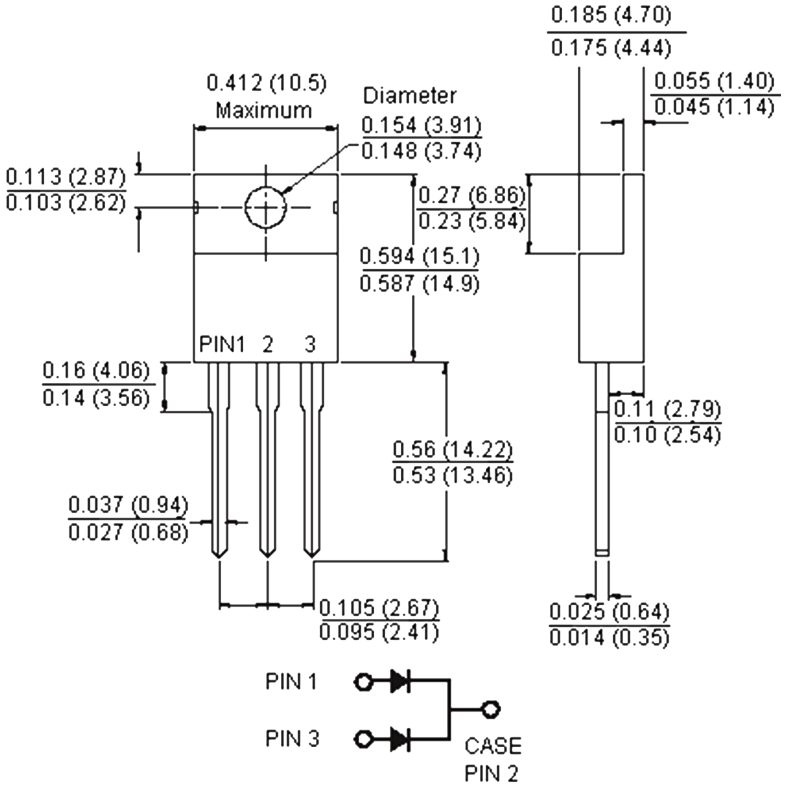
Typical Junction Capacitance Per Leg



Typical Transient Thermal Impedance Per Leg



TO-220AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 10A, 100V	SR10100
Diode, Schottky, 10A, 150V	SR10150
Diode, Schottky, 10A, 60V	SR1060

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