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	: DO-201AD moulded plastic
Lead	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
Polarity	: Colour band denotes cathode end
High temperature soldering guaranteed	: 260°C/10 seconds/0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension
Weight	: 1.1g

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%.

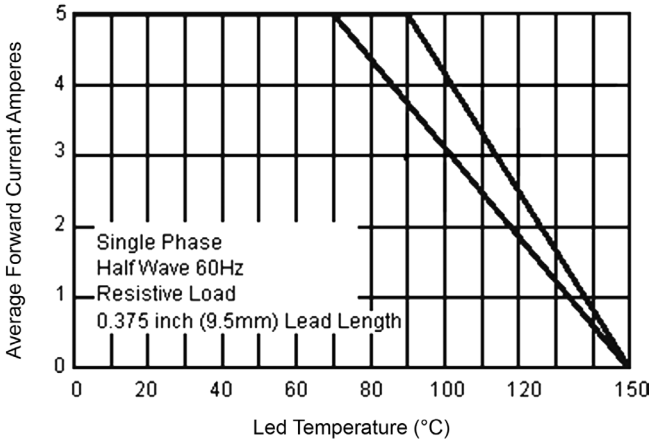
Parameters	Symbol	SR509	SR510	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	90	100	V
Maximum RMS Voltage	V_{RMS}	63	70	
Maximum DC Blocking Voltage	V_{DC}	90	100	
Maximum Average Forward Rectified Current	$I_{(AV)}$	5		A
Peak Forward Surge Current, 8.3ms Single Half A Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120		
Maximum Instantaneous Forward Voltage at 5A	V_F	0.85		V

Parameters	Symbol	SR509	SR510	Units
Maximum DC Reverse Current at T_A = 25°C at Rated DC Blocking Voltage at T_A = 125°C	I_R	0.1 5		µA µA
Typical Junction Capacitance (Note 2)	C_j	120		pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	10 2		°C/W
Operating Junction Temperature Range	T_J	-65 to +150		°C
Storage Temperature Range	T_{STG}			

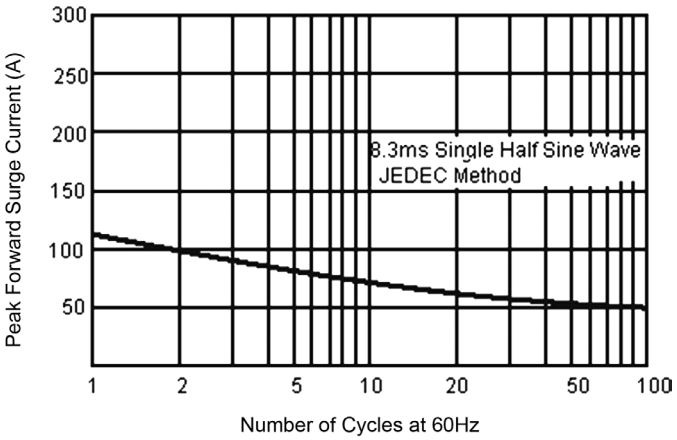
Notes:
1. Mount on Cu-Pad Size 5mm × 5mm on PCB
2. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

Ratings and Characteristic Curves

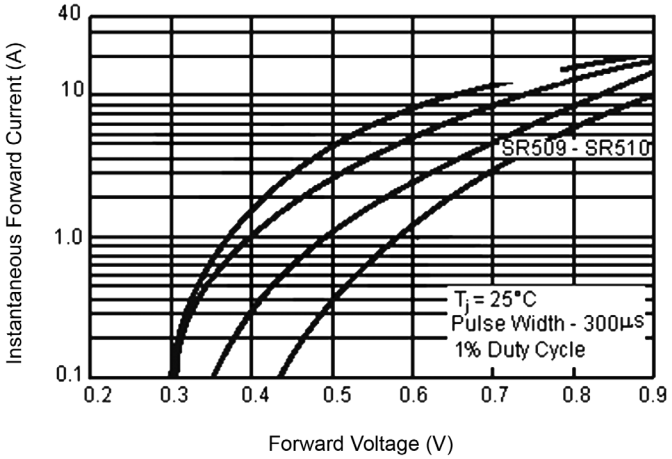
Maximum Forward Current Derating Curve



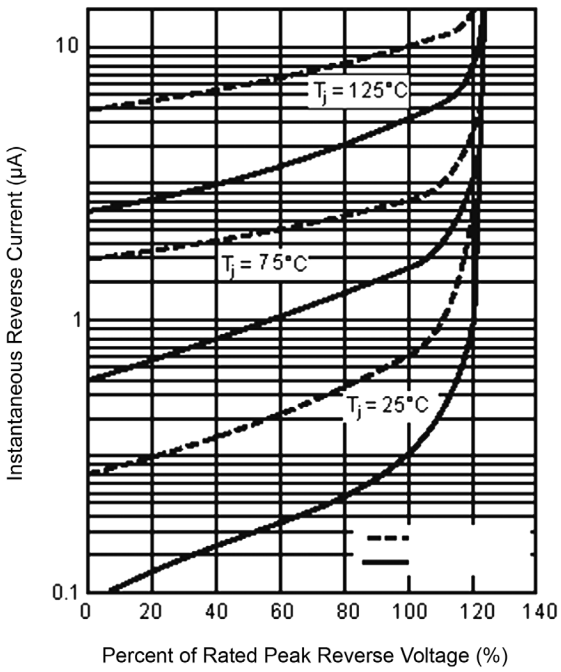
Maximum Non-Repetitive Forward Surge Current



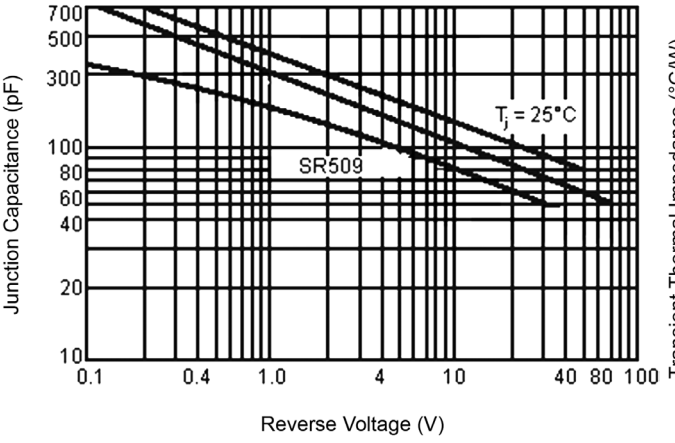
Typical Forward Characteristics



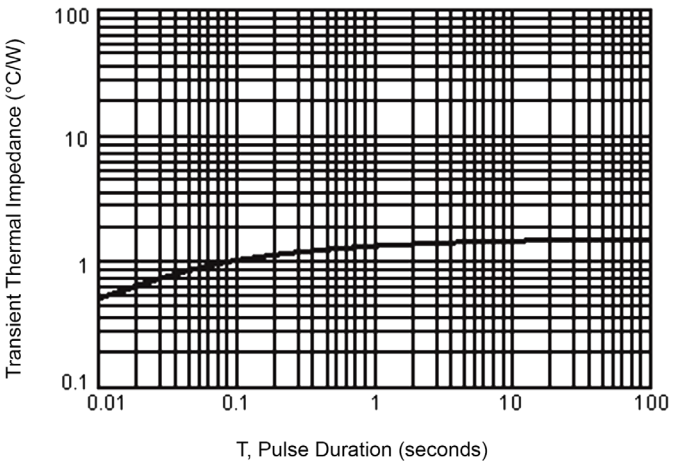
Typical Reverse Characteristics



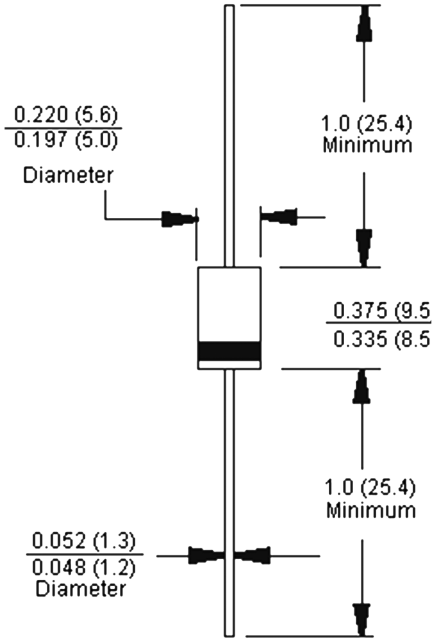
Typical Junction Capacitance



Typical Transient Thermal Characteristics



DO-201AD



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 5A, 90V	SR509
Diode, Schottky, 5A, 100V	SR510