



# 15SQ045 THRU 15SQ060

## Photovoltaic Solar Cell Protection Schottky Diode

Reverse Voltage 45-60 Volts  
Forward Current - 15.0 Amperes

### Features

- Low power loss, high efficiency
- High current capability, low  $V_F$
- High surge capacity

### Mechanical Data

- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

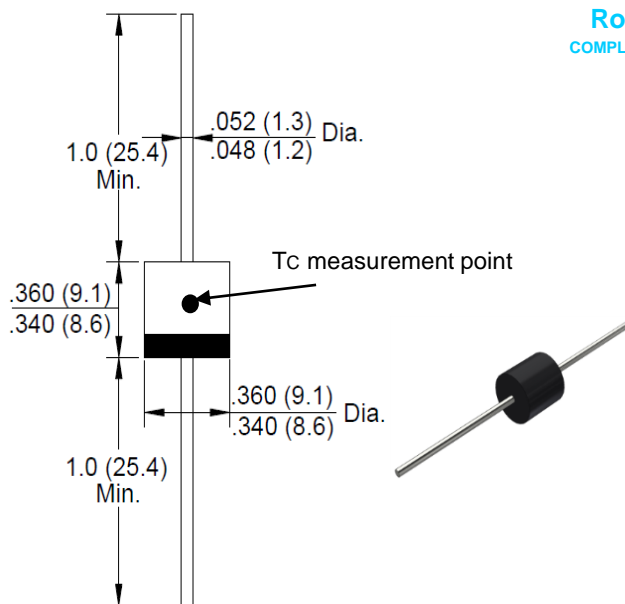
### Applications

- For use in solar cell junction box as a bypass diode

R- 6



RoHS  
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

## 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	15SQ045	15SQ060	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	45	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	31.5	42	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	45	60	V
Maximum Average Forward Rectified Current @T <sub>c</sub> =95 °C	I(AV)	15		A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	350		A
Peak Forward Voltage at 15A DC (Note1)	V <sub>F</sub>	0.7		V
Maximum DC Reverse Current @T <sub>J</sub> =25°C	I <sub>R</sub>	0.5		mA
at Rated DC Bolcking Voltage @T <sub>J</sub> =100°C		50		
Typical Junction Capacitance (Note2)	C <sub>J</sub>	450		pF
Typical Thermal Resistance Junction to Case	R <sub>θJC</sub>	3.5		°C/W
Junction Temperature Range	T <sub>J</sub>	-55 to+200		°C
Storage Temperature Range	T <sub>STG</sub>	-55 to+200		°C

Notes: 1. 300uS pulse width, 2% duty cycle.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3. The typical data above is for reference only .



Fig. 1 - Forward Current Derating Curve

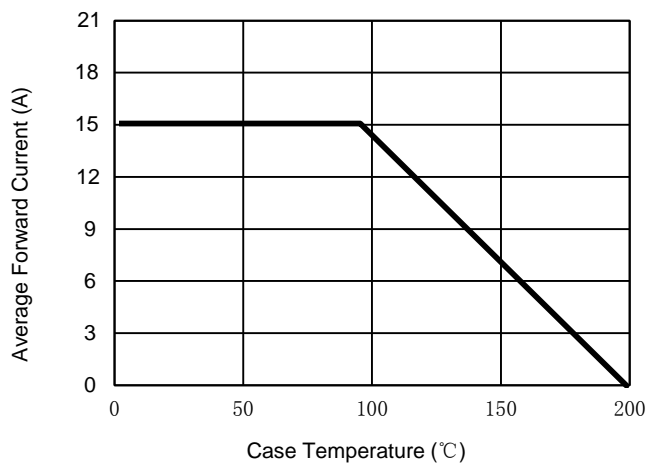


Fig. 2 - Maximum Non-Repetitive Surge Current

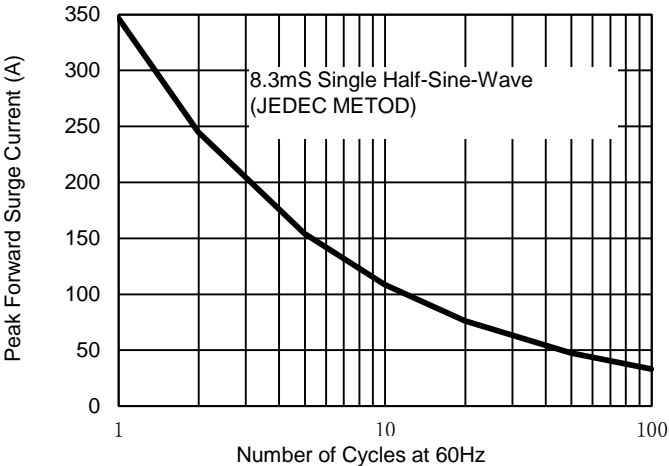


Fig. 3 - Typical Reverse Characteristics

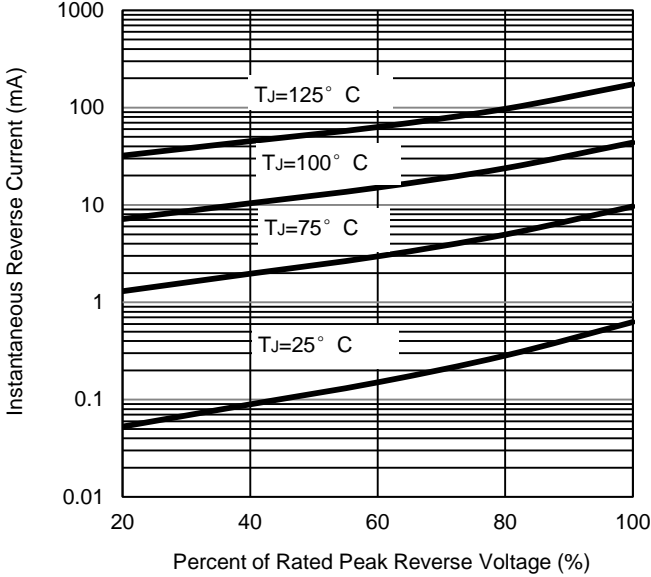


Fig. 4 - Typical Forward Characteristics

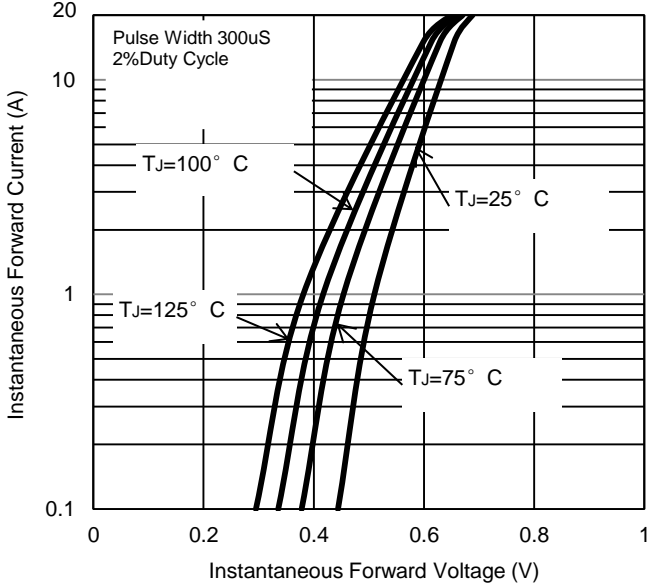
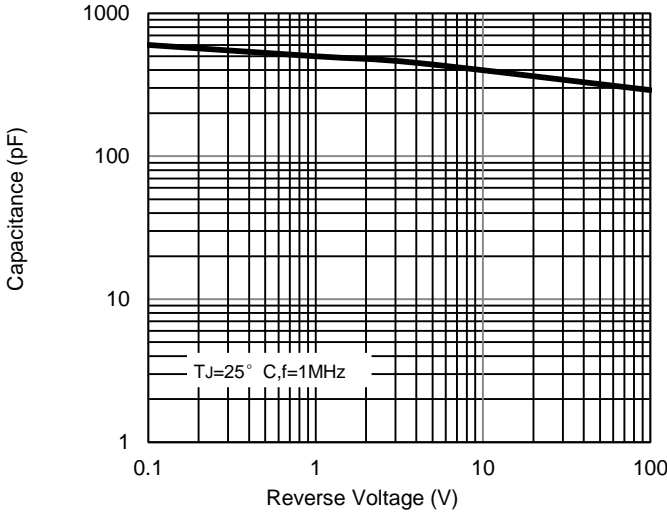


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.