



# 25SQ045 THRU 25SQ060

## Photovoltaic Solar Cell Protection Schottky Diode

Reverse Voltage - 45 to 60 Volts  
Forward Current - 25.0 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

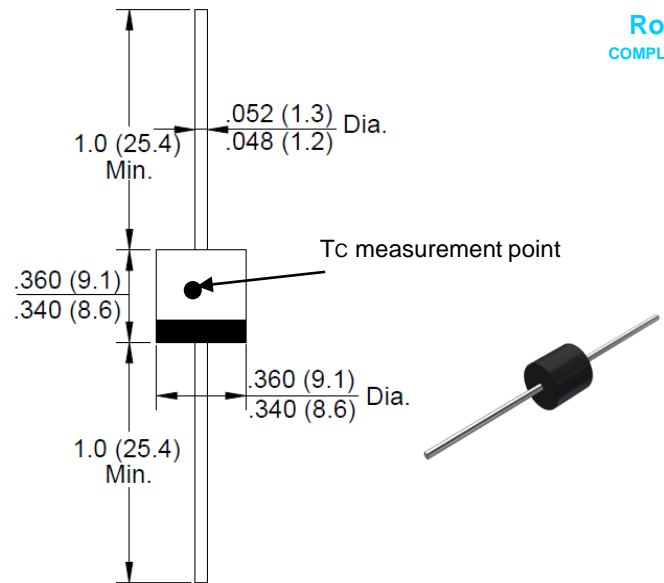
### Applications

- 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	25SQ045	25SQ060	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	45	60	V
Maximum RMS Voltage	$V_{RMS}$	31.5	42	V
Maximum DC Blocking Voltage	$V_{DC}$	45	60	V
Maximum Average Forward Rectified Current @ $T_L=95^\circ\text{C}$	$I_{(AV)}$	25		A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	400		A
Peak Forward Voltage at 25A DC (Note1)	$V_F$	0.55		V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$	$I_R$	0.5		mA
at Rated DC Blocking Voltage @ $T_J=100^\circ\text{C}$		50		
Typical Thermal Resistance Junction to Lead (Note 2)	$R_{\theta JL}$	1.8		$^\circ\text{C}/\text{W}$
Junction Temperature Range	$T_J$	-55 to +200		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +200		$^\circ\text{C}$

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

2. Thermal Resistance Junction to lead / terminal at a distance 1mm from case.

3. The typical data above is for reference only .

Fig. 1 - Forward Current Derating Curve

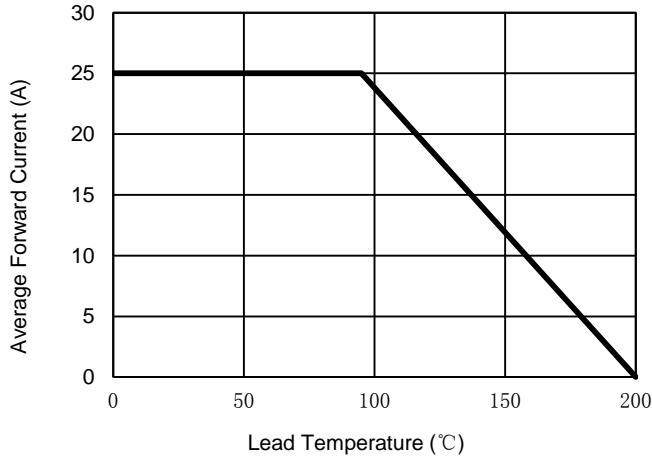


Fig. 2 - Maximum Non-Repetitive Surge Current

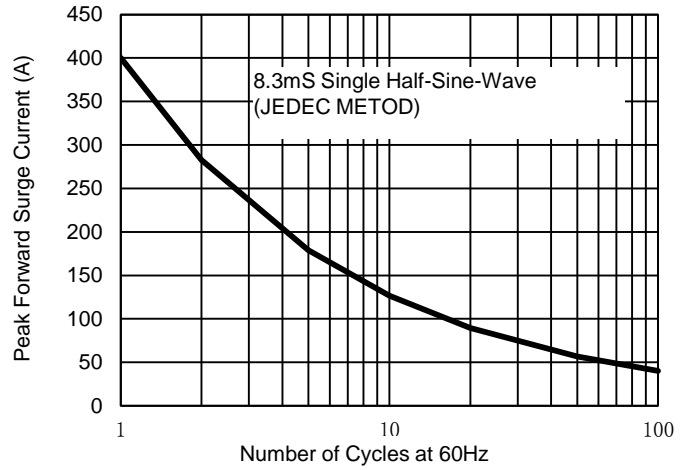


Fig. 3 - Typical Reverse Characteristics

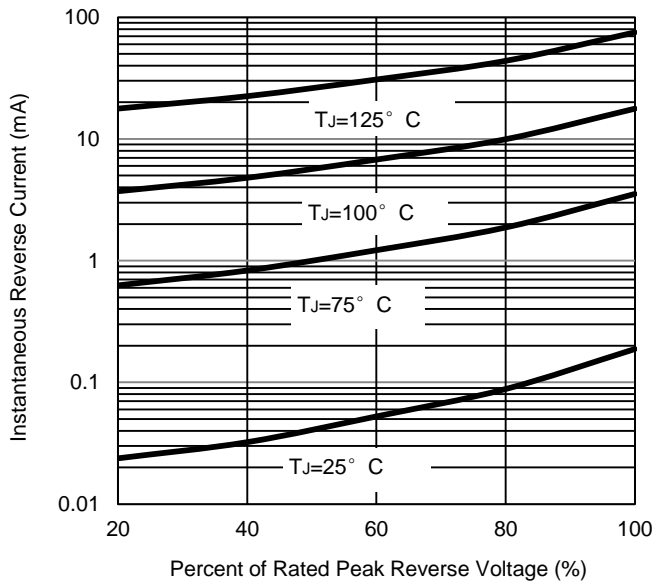


Fig. 4 - Typical Forward Characteristics

