45SQ045

Photovoltaic Solar Cell Protection Schottky Diode

Reverse Voltage - 45 Volts
Forward Current - 45 Amperes

Features

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

Mechanical Data

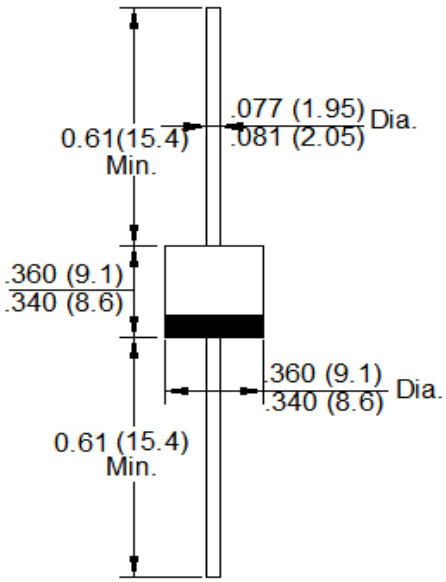
- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

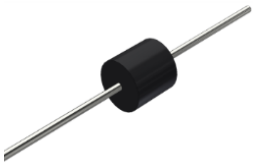
Applications

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

R-6(2.0)

RoHS COMPLIANT





Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	45SQ045	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current @ Tc=170 ℃	$I_{(AV)}$	45	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	600	A
Peak Forward Voltage at 45A DC (Note1)	V_F	0.58	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=25℃ Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=100℃	I_R	0.1 10	mA
Typical Junction Capacitance Junction to Case	$R_{\theta JC}$	1.5	℃/W
Junction Temperature Range	T_J	-55 to+200	℃
Storage Temperature Range	T_{STG}	-55 to+150	℃
ESD	ESD	⩾25	KV
VBR(IZ1=1mA)	VBR	50 to 60	V

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

2. The typical data above is for reference only.

Rating and Characteristic Curves
45SQ045

Fig. 1 - Forward Current Derating Curve

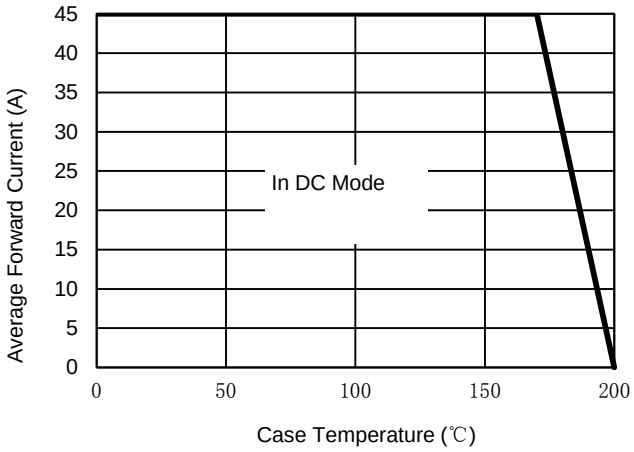


Fig. 2 - Maximum Non-Repetitive Surge Current

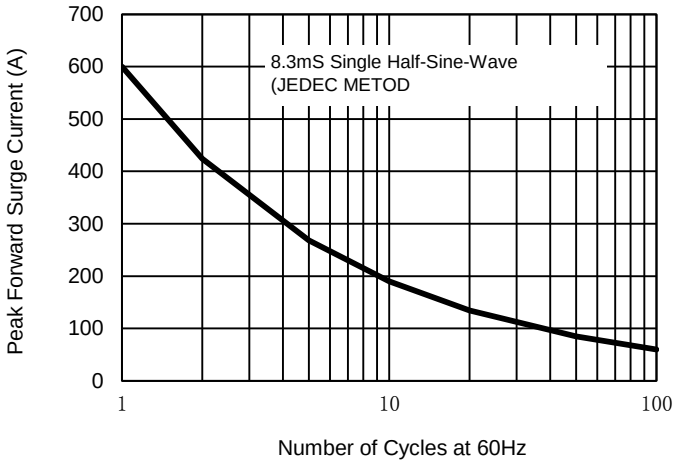


Fig. 3 - Typical Reverse Characteristics

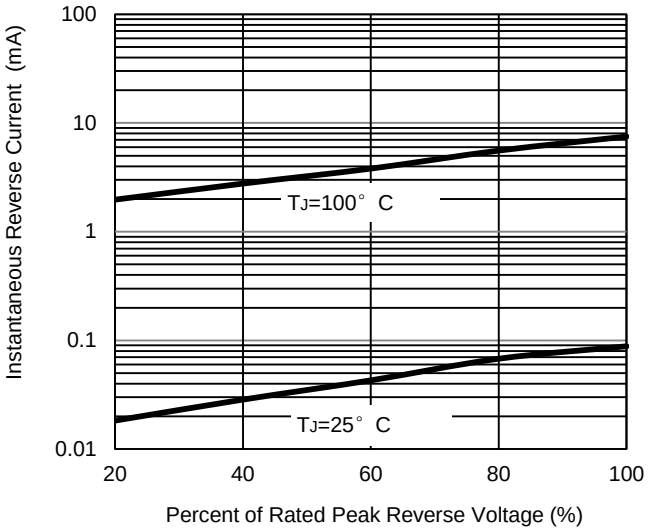
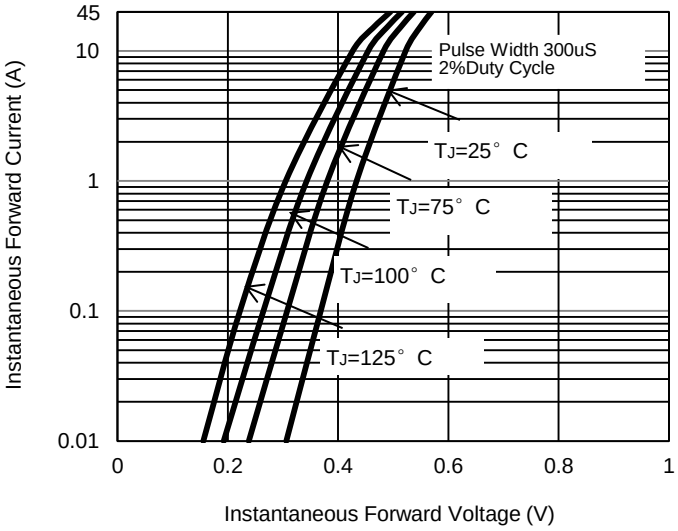


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.