Photovoltaic Solar Cell Protection Schottky Diode

Reverse Voltage - 45 Volts

Forward Current - 15.0 Amperes

Features

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

Mechanical Data

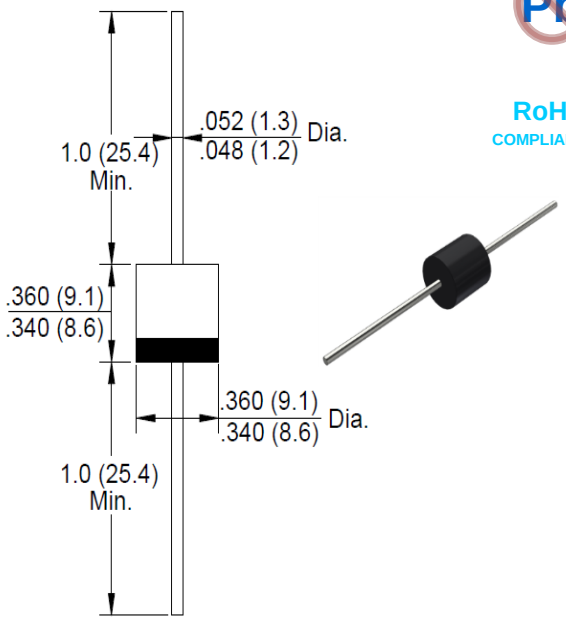
- Case: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

Applications

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

R-6



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	15SQ045	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 ℃	$I_{(AV)}$	15	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 15A DC (Note1)	V_F	0.55	V
Maximum DC Reverse Current at Rated DC Bolcking Voltage @T_J=25℃ Maximum DC Reverse Current at Rated DC Bolcking Voltage @T_J=125℃	I_R	0.5 50	mA
Typical Thermal Resistance (Note2)	C_J	450	pF
Typical Junction Capacitance Junction to Case	$R_{\theta JC}$	3.5	℃/W
Junction Temperature Range	T_J	-55 to+200	℃
Storage Temperature Range	T_{STG}	-55 to+200	℃

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.

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Fig. 1 - Forward Current Derating Curve

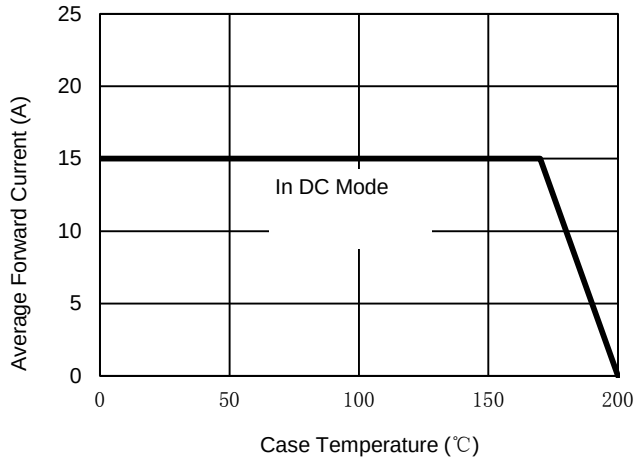


Fig. 2 - Maximum Non-Repetitive Surge Current

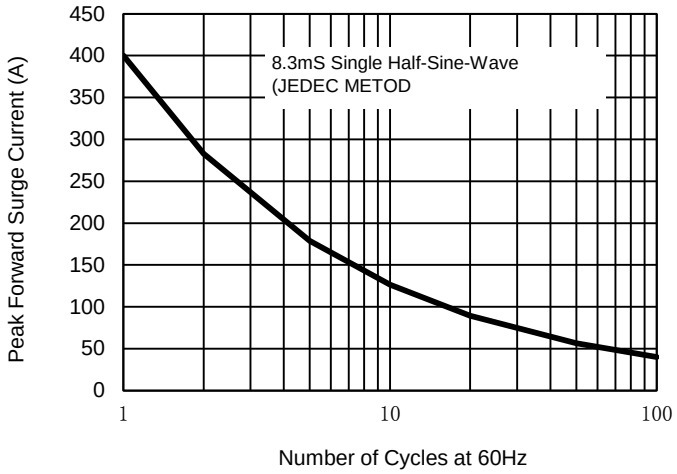


Fig. 3 - Typical Reverse Characteristics

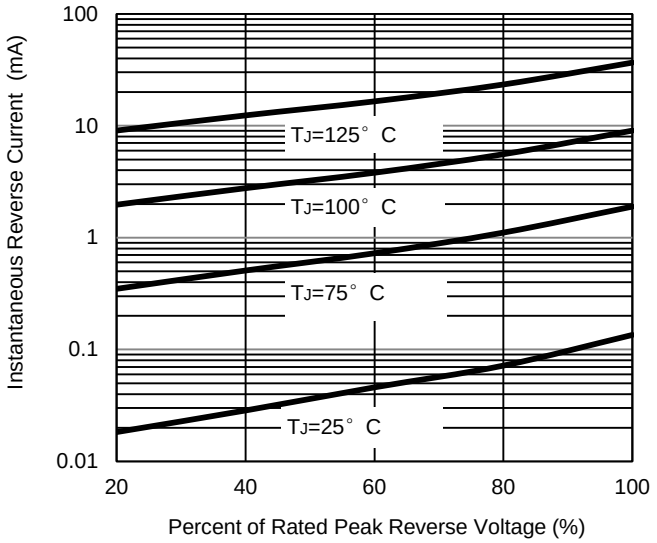


Fig. 4 - Typical Forward Characteristics

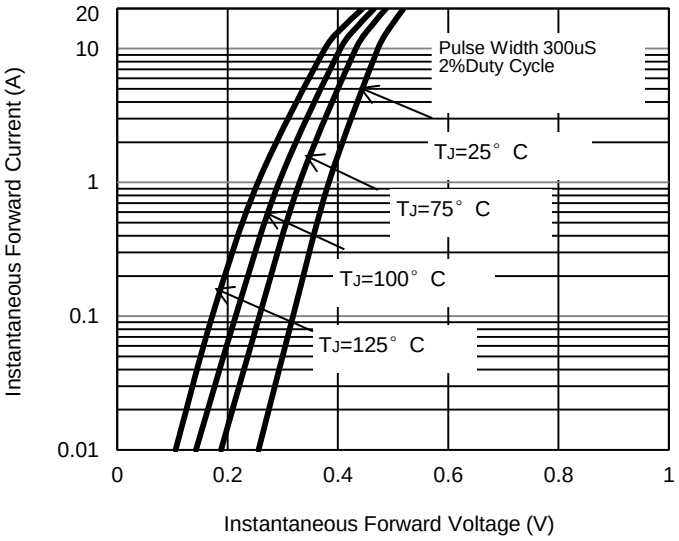
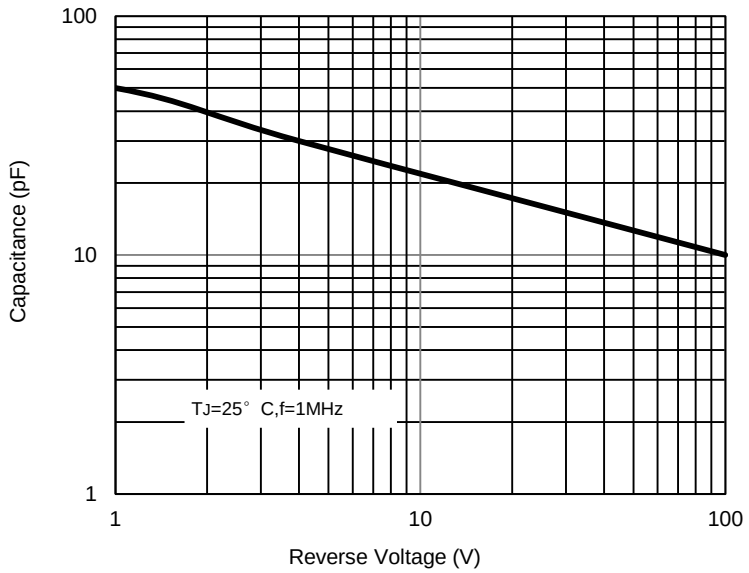


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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