## Photovoltaic Solar Cell Protection Schottky Diode

## Reverse Voltage - 45Volts
## Forward Current - 20 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

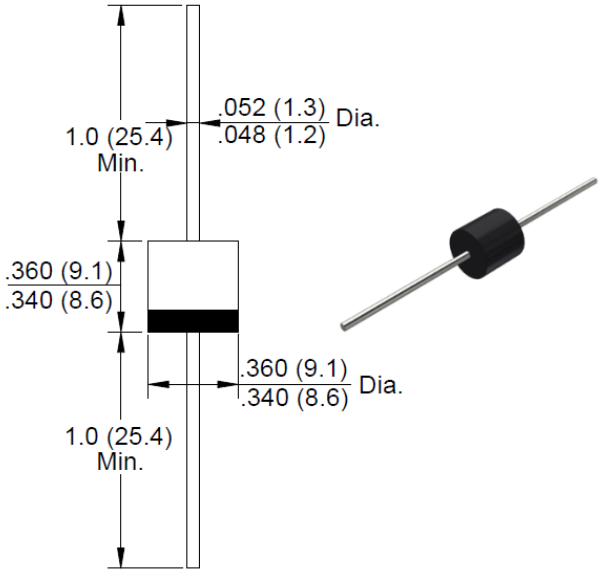
Note: Products with logo HY or hy are made by HY Electronic (Cayman) Limited.

### Applications

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

**R-6**

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 | 20TLV045 | 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 ℃ | | $I_{(AV)}$ | 20 | A |
| Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load ( JEDEC Method ) | | $I_{FSM}$ | 275 | A |
| Peak Forward Voltage at 20A DC ( Note1 ) | | $V_F$ | 0.55 | V |
| Maximun DC Reverse Current at Rated DC Blocking Voltage | @$T_J$=25℃ | $I_R$ | 0.5 | mA |
| | @$T_J$=75℃ | | 4.0 | |
| | @$T_J$=100℃ | | 50.0 | |
| | @$T_J$=125℃ | | 70 | |
| Typical Thermal Resistance Junction to Case | | $R_{\theta JC}$ | 2.5 | ℃/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. The typical data above is for reference only.



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Fig. 1 - Forward Current Derating Curve

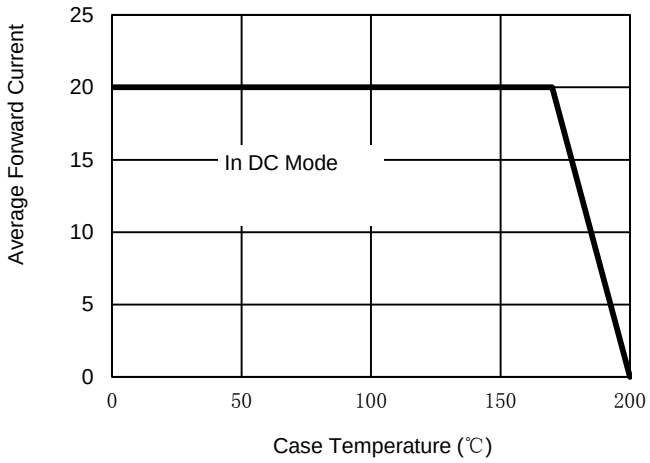



Fig. 2 - Maximum Non-Repetitive Surge Current

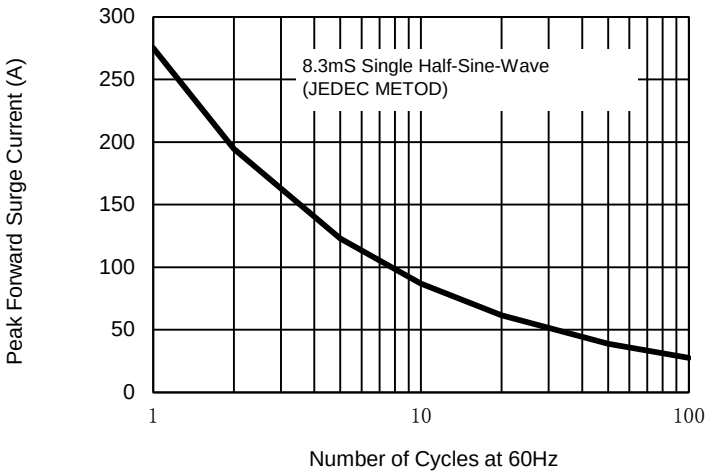



Fig. 3 - Typical Reverse Characteristics

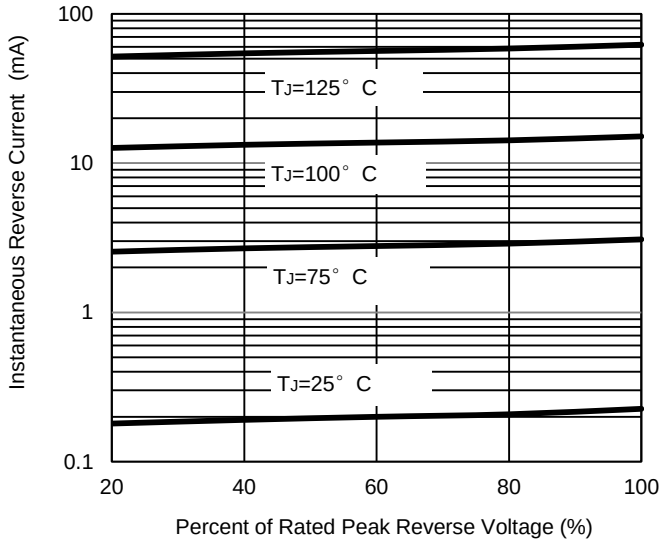
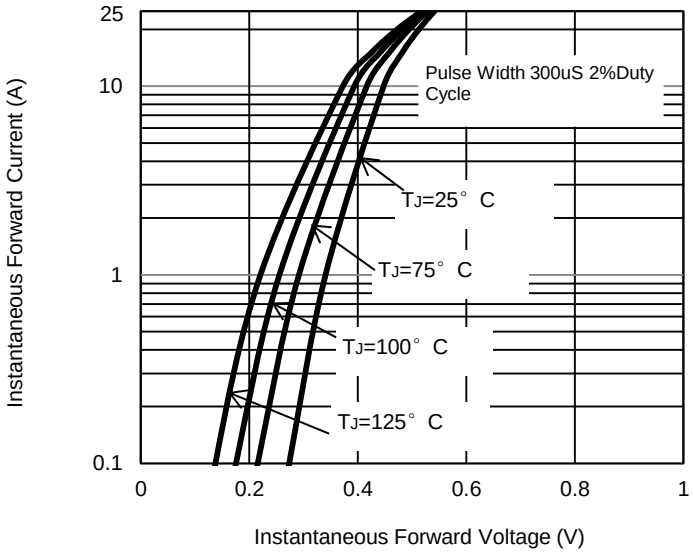



Fig. 4 - Typical Forward Characteristics




The curve above is for reference only.



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