

PHOTOVOLTAIC SOLAR CELL PROTECTION SCHOTTKY RECTIFIER

REVERSE VOLTAGE - 45Volts
FORWARD CURRENT - 15.0 Amperes

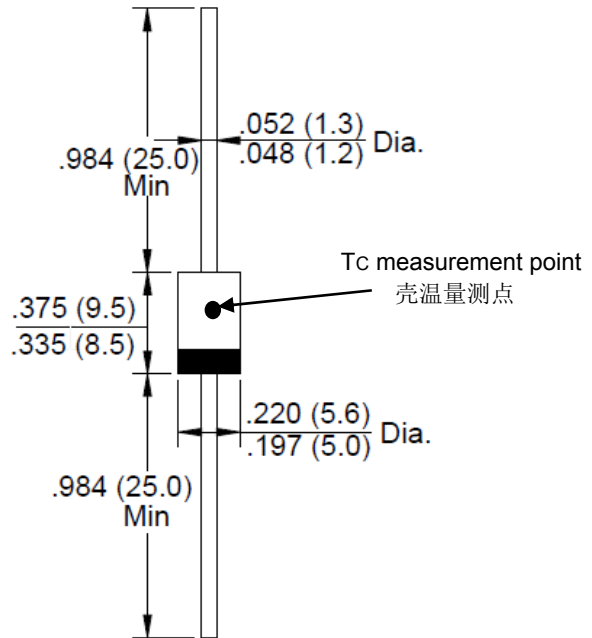
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low IR
- High surge capacity
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Polarity: Color band denotes cathode
- Weight: 0.04ounces , 1.1 grams
- Mounting position: Any

DO- 27



Dimensions in inches and (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 | THY1545 | UNIT |
|--|------------------------|------------|------|
| Maximum Recurrent 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 @T _C =175 °C | I _(AV) | 15 | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method) | I _{FSM} | 250 | A |
| Peak Forward Voltage at 15A DC(Note1) | V _F | 0.56 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @T _j =25°C | 0.1 | mA |
| | @T _j =75°C | 1.5 | |
| | @T _j =100°C | 30 | |
| | @T _j =125°C | 100 | |
| Typical Thermal Resistance (Note2) | R _{θJC} | 3.5 | °C/W |
| Operating Temperature Range(IN DC Forward Mode-Forward Operations,without reverse bias, t≤1h) | T _J | -55 to+200 | °C |
| Storage Temperature Range | T _{STG} | -55 to+200 | °C |

NOTES:1.300us Pulse Width, 2%Duty Cycle.

2.Thermal Resistance Junction to case.

3.The typical data above is for reference only(典型值仅供参考).

FIG.1-FORWARD CURRENT DERATING CURVE

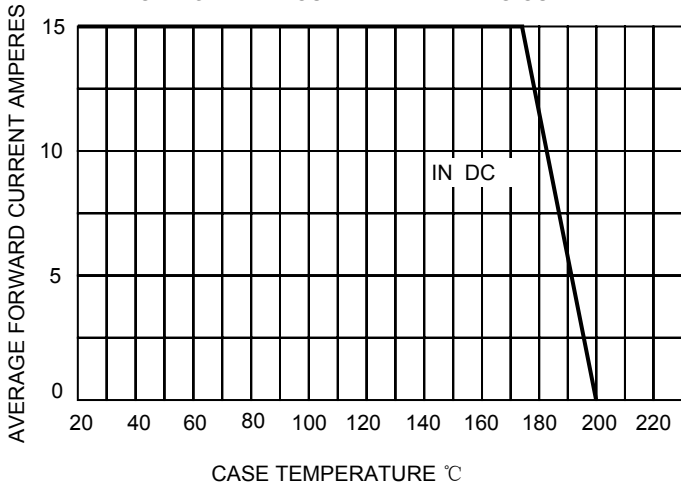


FIG.2-MAXIMUM NON-REPETITIVE SURGE

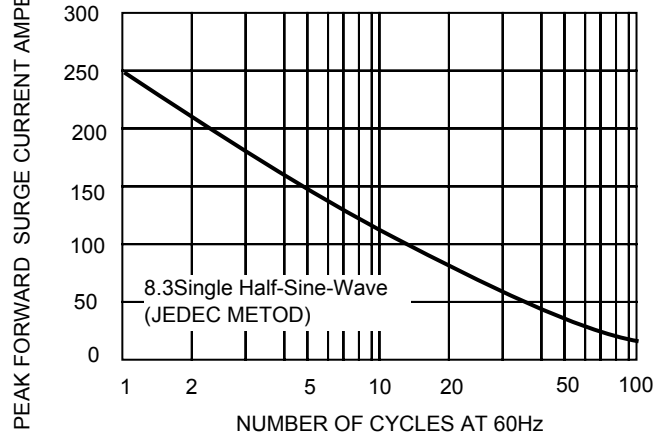


FIG.3-TYPICAL REVERSE CHARACTERISTICS

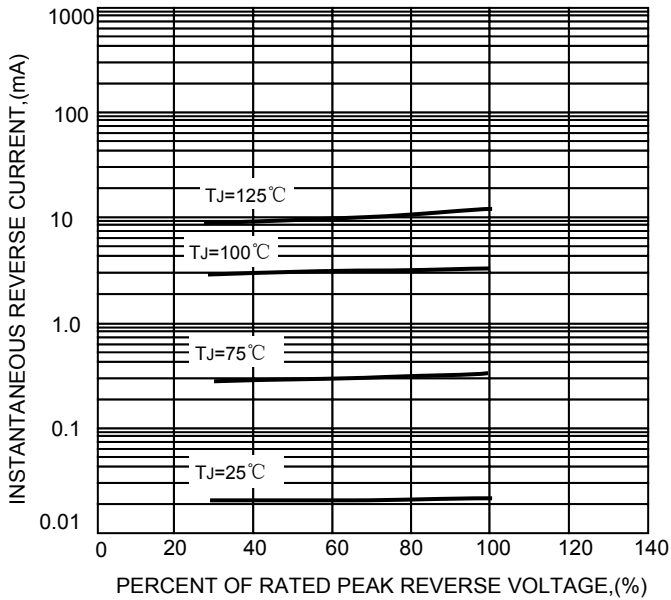
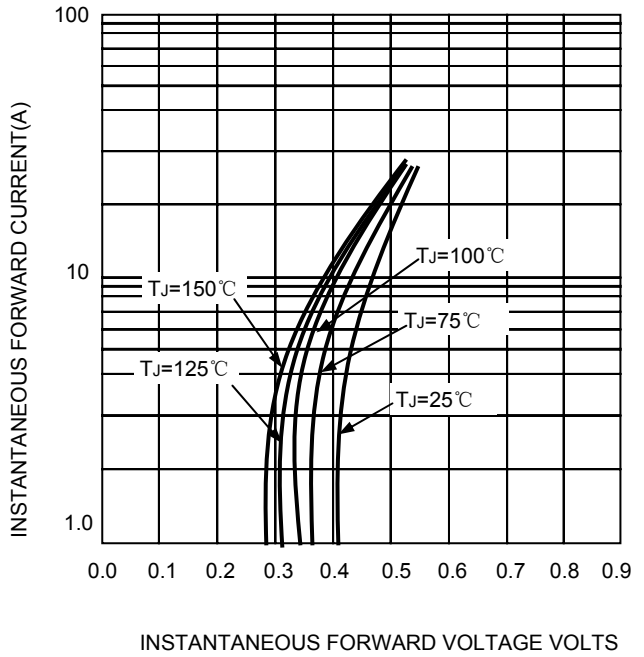


FIG.4-TYPICAL FORWARD CHARACTERISTICS





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