



# 15SQ045

## SCHOTTKY BARRIER RECTIFIER

Voltage Range  
45 Volts  
Current  
15.0 Amperes

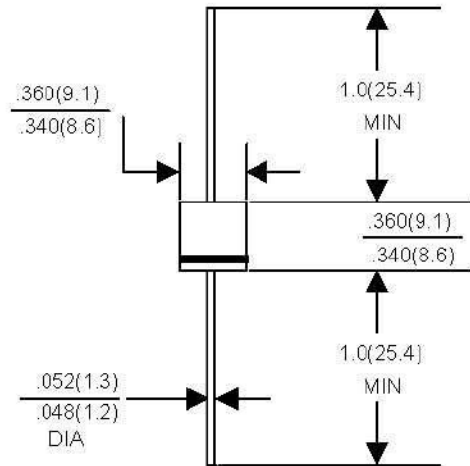
### Features

- Metal silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability low VF
- High surge capacity
- Plastic package has UL flammability classification 94 V-0

### Mechanical Data

- Cases: JEDEC R-6 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.07 ounces 2.1 grams
- Mounting position: Any

### R-6



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%

| Type Number                                                                                      |        | 15SQ045                     | UNITS |
|--------------------------------------------------------------------------------------------------|--------|-----------------------------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                          | VRRM   | 45                          | V     |
| Maximum RMS Voltage                                                                              | VRMS   | 31.5                        | V     |
| Maximum DC blocking Voltage                                                                      | VDC    | 45                          | V     |
| Maximum Average Forward Rectified Current                                                        | IF(AV) | 15                          | A     |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM   | 300                         | A     |
| Peak Forward Voltage @15.0A DC(Note 1)                                                           | VF     | 0.5                         | V     |
| Maximum DC Reverse Current @ TA=25°C at rated DC Blocking voltage @ TA=100°C                     | IR     | 0.5<br>50.0                 | mA    |
| Typical Thermal Resistance (Note 2)                                                              | RθJC   | 2.2                         | °C/W  |
| Junction temperature Range at reduced reverse voltage VR≤80% VRRM VR≤50% VRRM in DC forward mode | TJ     | -50 to +150<br>≤175<br>≤200 | °C    |
| Storage Temperature Range                                                                        | TSTG   | -50 to +150                 | °C    |

**NOTES:** 1.300us Pulse Width. 2% Duty Cycle.  
2.Thermal Resistance Junction to Case.

# RATING AND CHARACTERISTIC CURVES

## 15SQ045



FIG. 1-FORWARD CURRENT DERATING CURVE

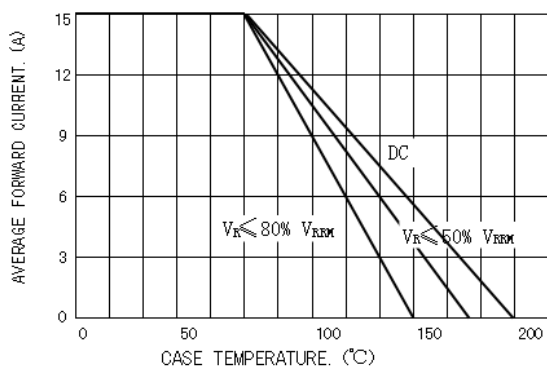


FIG. 2-MAXIMUM NON-REPETITIVE

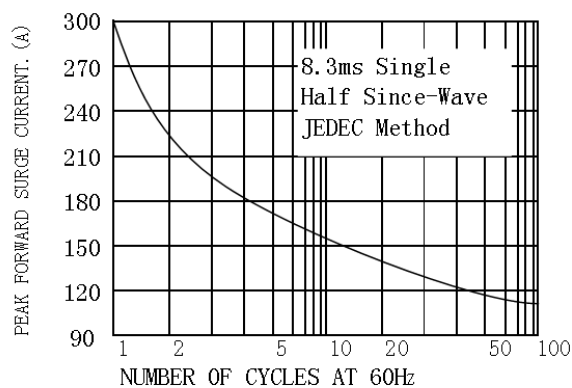


FIG. 3-TYPICAL REVERSE CHARACTERISTIC

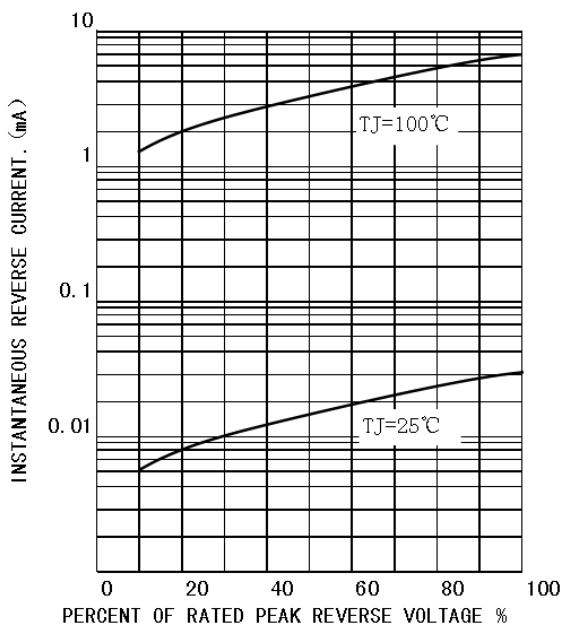


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

