## SCHOTTKY BARRIER RECTIFIERS

**REVERSE VOLTAGE - 30 to 100Volts**
**FORWARD CURRENT - 12.0 Amperes**

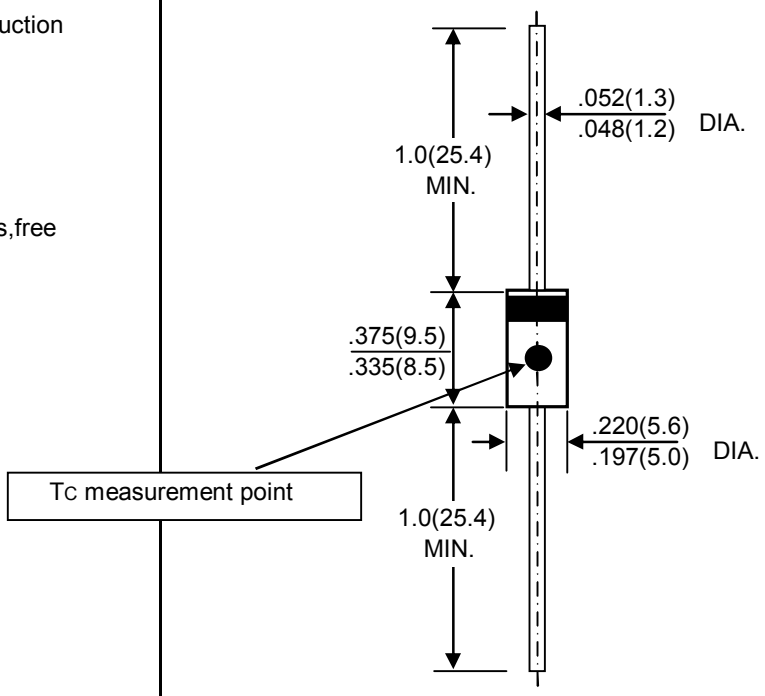
### FEATURES

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

### MECHANICAL DATA

- Case: JEDEC DO-27 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.04ounces , 1.1grams
- Mounting position: Any

**DO- 27**




Dimensions in inches and (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 | SQ1230 | SQ1235 | SQ1240 | SQ1245 | SQ1250 | SQ1260 | SQ1280 | SQ12100 | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 21 | 24.5 | 28 | 31.5 | 35 | 42 | 56 | 70 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum Average Forward Rectified Current @Tc=95 ℃ | $I_{(AV)}$ | 12 | | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method) | $I_{FSM}$ | 275 | | | | | | | | A |
| Peak Forward Voltage at 12A DC(Note1) | $V_F$ | 0.55 | | | | 0.7 | | 0.8 | | V |
| Maximum DC Reverse Current @Tj=25℃ | $I_R$ | 0.5 | | | | | | | | mA |
| at Rated DC Bolcking Voltage @Tj=100℃ | | 50 | | | | | | | | |
| Tyical Junction Capacitance (Note2) | $C_J$ | 450 | | | | | | | | pF |
| Tyical Thermal Resistance (Note3) | $R_{\theta JC}$ | 3.0 | | | | | | | | ℃/w |
| Operating 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 4.0VDC.

3.Thermal Resistance Junction to case.

FIG.1-FORWARD CURRENT DERATING CURVE

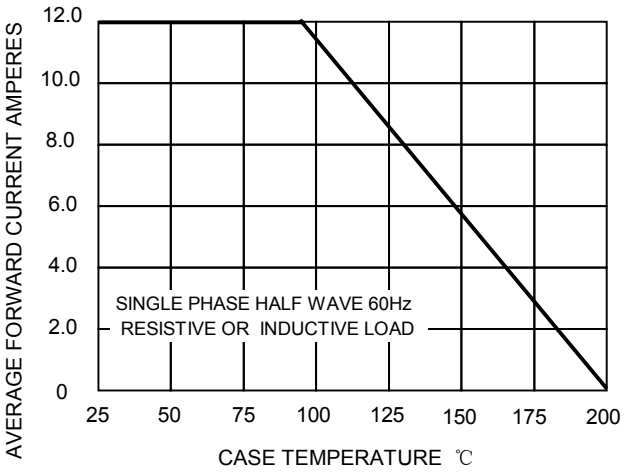



FIG.2-MAXIMUM NON-REPETITVE SURGE

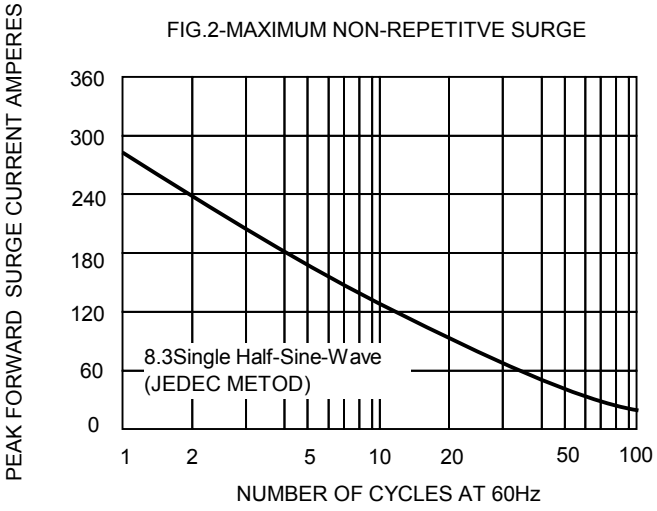



FIG.3-TYPICAL REVER CHARACTERISTICS

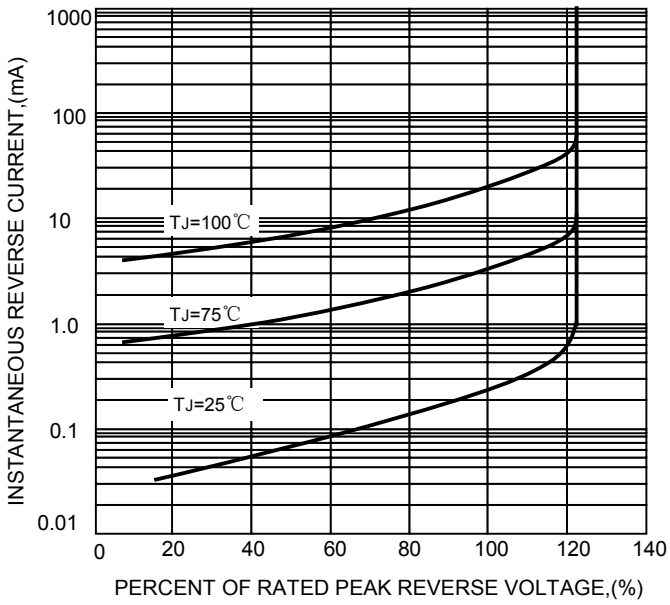



FIG.4-TYPICAL FORWARD CHARACTERISTICS

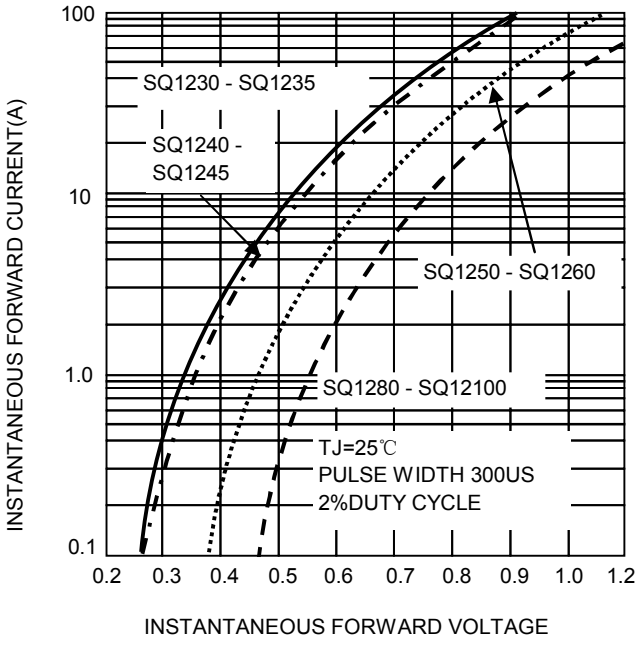



FIG.5-TYPICAL JUNCTION CAPACITANCE