

PLASTIC SILICON RECTIFIER

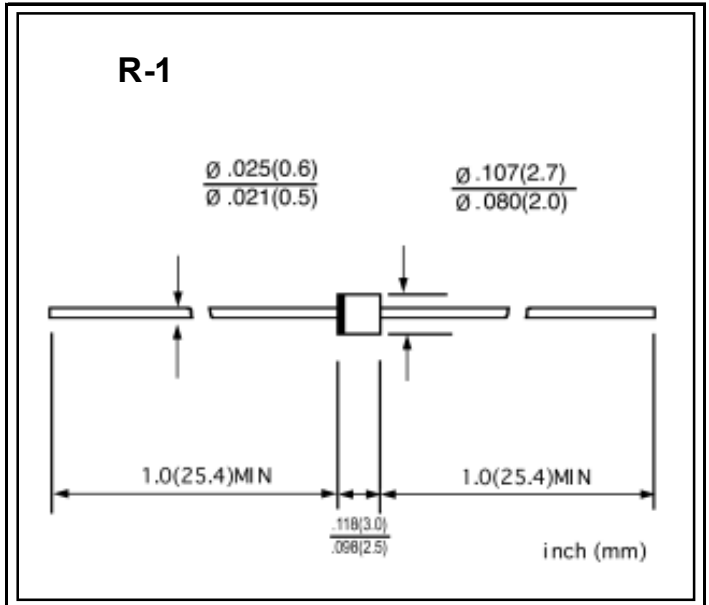
VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 1.0 A

FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ High current capability
- ◇ Easily cleaned with Freon, Alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC R-1, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.007 ounces, 0.20 grams
- ◇ Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

| | | 1A1 | 1A2 | 1A3 | 1A4 | 1A5 | 1A6 | 1A7 | UNITS |
|---|-------------|-----------------|-----|-----|-----|-----|-----|------|---------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_j=125^\circ\text{C}$ | I_{FSM} | 30.0 | | | | | | | A |
| Maximum instantaneous forward voltage @ 1.0 A | V_F | 1.0 | | | | | | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 5.0 50.0 | | | | | | | μA |
| Typical junction capacitance (Note1) | C_J | 15 | | | | | | | pF |
| Typical thermal resistance (Note2) | R_{JA} | 50 | | | | | | | °C |
| Operating junction temperature range | T_j | - 55 ---- + 150 | | | | | | | °C |
| Storage temperature range | T_{STG} | - 55 ---- + 150 | | | | | | | °C |

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

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FIG.1 – TYPICAL FORWARD CHARACTERISTIC

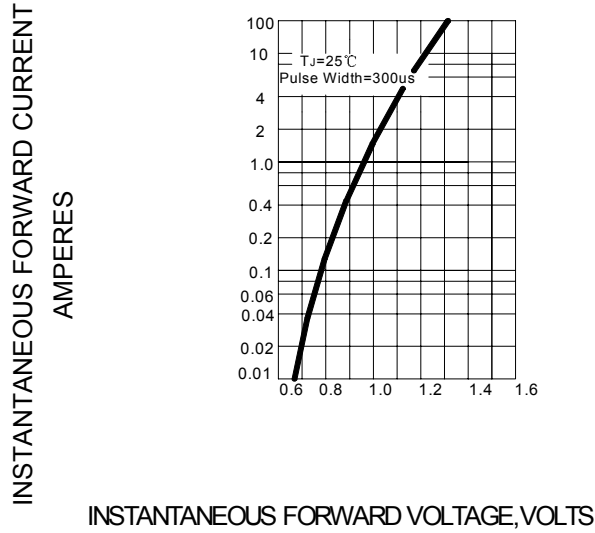


FIG.2 – TYPICAL JUNCTION CAPACITANCE

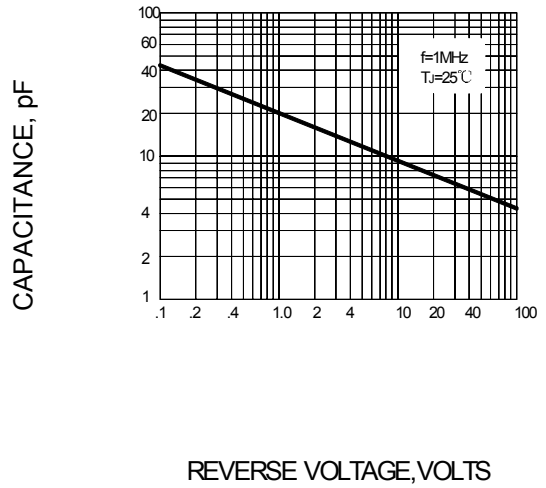


FIG.3 – PEAK FORWARD SURGE CURRENT

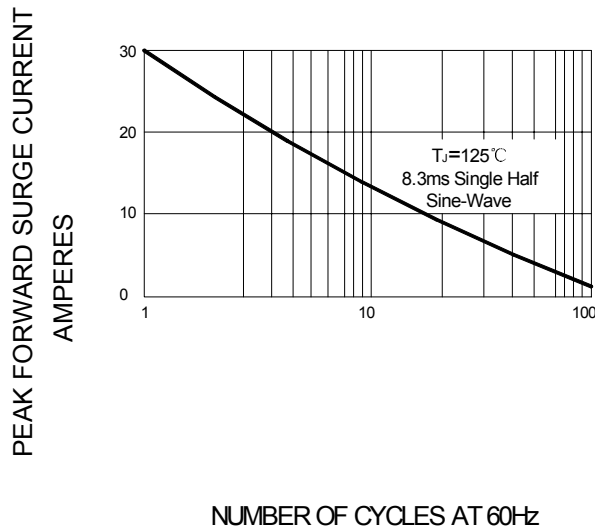


FIG.4 – FORWARD DERATING CURVE

