

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 2.0 A

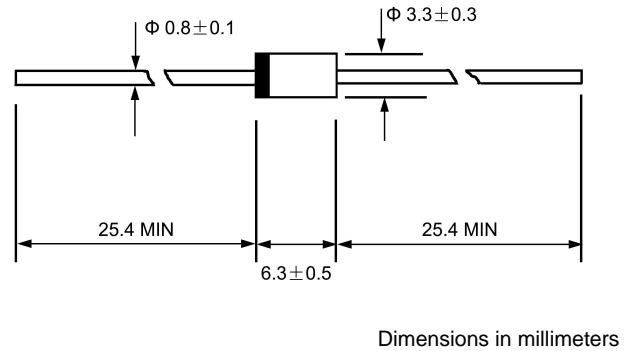
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ 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 DO-15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

DO - 15



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

| | | SFR 201 | SFR 202 | SFR 203 | SFR 204 | SFR 205 | SFR 206 | SFR 207 | 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, @ $T_A=55^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$ | I_{FSM} | 60 | | | | | | | A |
| Maximum instantaneous forward voltage @ 2.0 A | V_F | 1.2 | | | | | | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 5.0 100.0 | | | | | | | μA |
| Maximum reverse recovery time (Note1) | t_{rr} | 120 | | | 200 | | 350 | | ns |
| Typical junction capacitance (Note2) | C_J | 40 | | | | | | | pF |
| Typical thermal resistance (Note3) | $R_{\theta JA}$ | 45 | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | - 55 --- +150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 --- + 150 | | | | | | | $^\circ\text{C}$ |

NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

FIG.1 – FORWARD DERATING CURVE

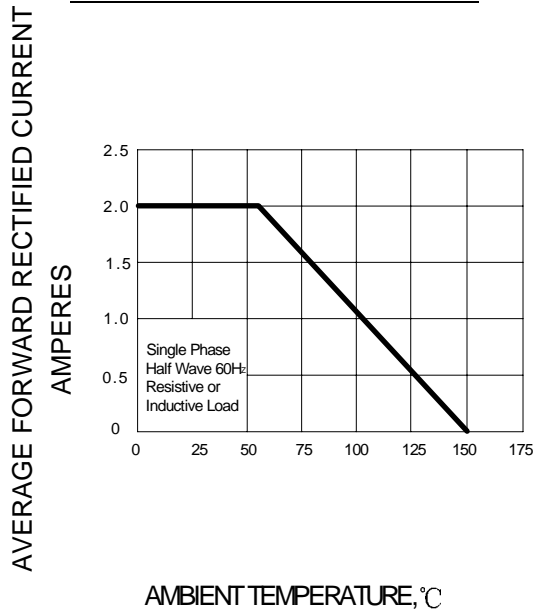


FIG.2-PEAK FORWARD SURGE CURRENT

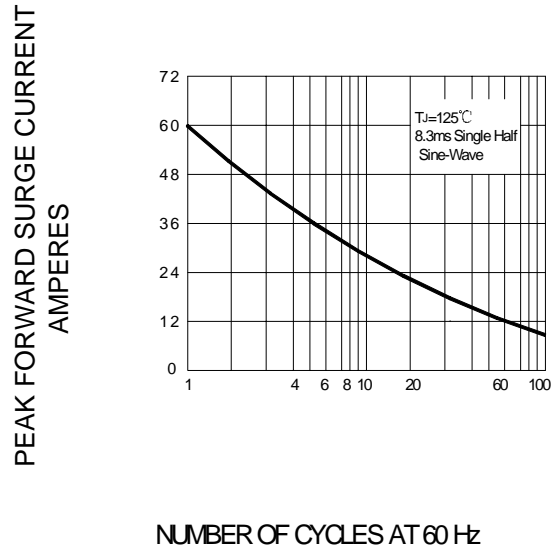


FIG.3-TYPICAL JUNCTION CAPACITANCE

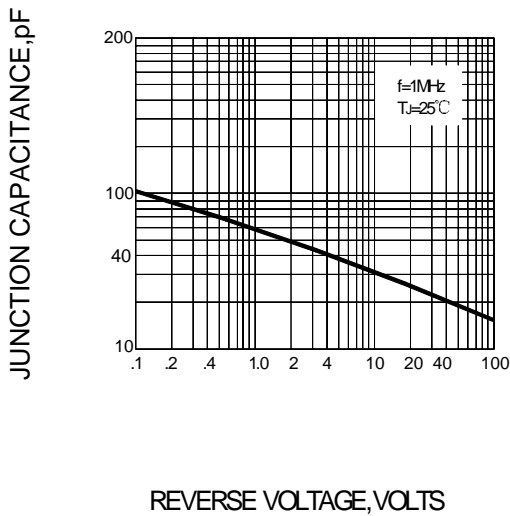


FIG.4 –TYPICAL FORWARD CHARACTERISTIC

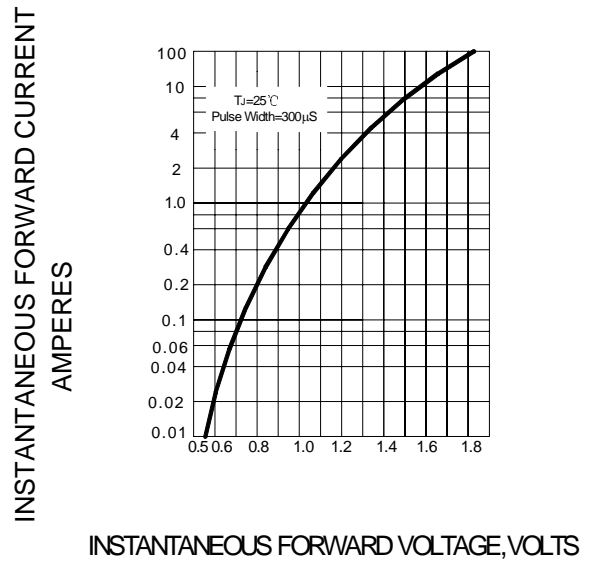


FIG.5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

