

HIGH EFFICIENCY RECTIFIERS

**VOLTAGE RANGE: 100--- 1000 V
CURRENT: 1.1 - 2.0 A**

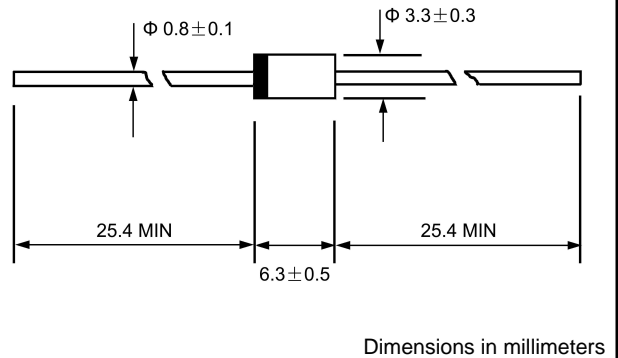
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ Easily cleaned with freon, alcohol, Isopropand and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC DO-15, molded plastic
- ◇ Terminals: Axial leads,solderable per MIL-STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting: 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%.

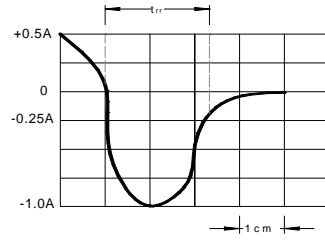
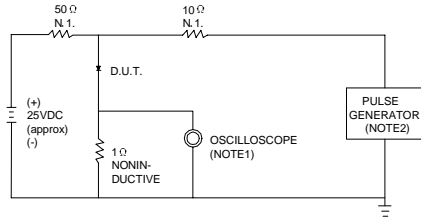
| | | RU3YX | RU3 | RU3A | RU3B | RU3C | UNITS |
|--|-----------------|------------------|-------|------|------|------|--------------|
| Maximum peak repetitive reverse voltage | V_{RRM} | 100 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 100 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$ | $I_{F(AV)}$ | 2.0 | 1.5 | | 1.1 | 1.5 | A |
| Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$ | I_{FSM} | 50.0 | 20.0 | | | | A |
| Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$ | V_F | 0.95 | 1.5 | | 2.5 | | V |
| Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$ | I_R | 10.0 | | | | | μA |
| | | 300.0 | 400.0 | | | | |
| Maximum reverse recovery time (Note1) | t_{rr} | 50 | 100 | | | | ns |
| Typical junction capacitance (Note2) | C_J | 50 | | 30 | | | pF |
| Typical thermal resistance (Note3) | $R_{\theta JL}$ | 12 | | | | | $^\circ C/W$ |
| Operating junction temperature range | T_J | - 55 ----- + 150 | | | | | $^\circ C$ |
| Storage temperature range | T_{STG} | - 55 ----- + 150 | | | | | $^\circ C$ |

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

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

3. Thermal resistance junction to ambient.

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1. RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ. 22pF.
2. RISE TIME = 10ns MAX.SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

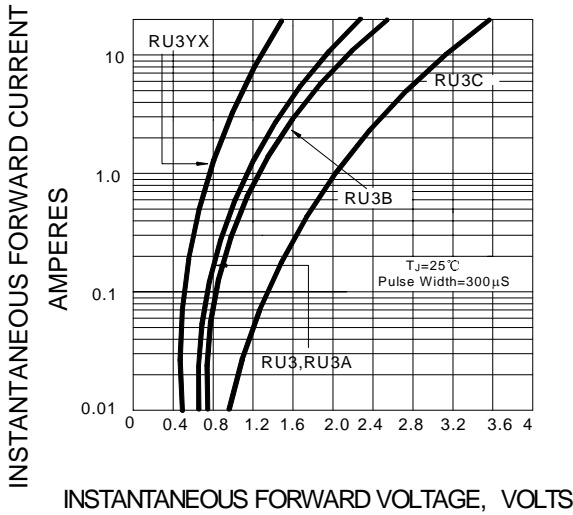


FIG.3 – FORWARD DERATING CURVE

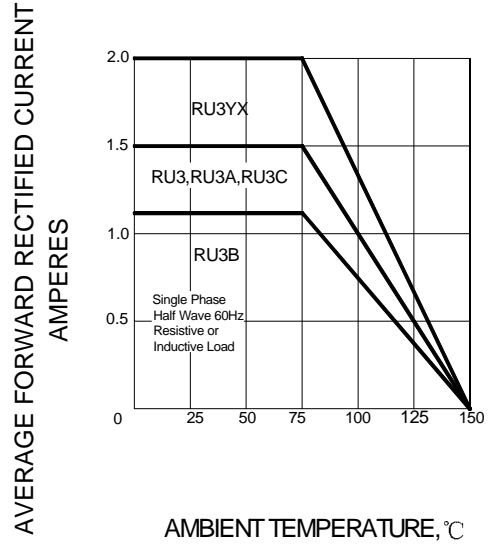


FIG.4 – PEAK FORWARD SURGE CURRENT

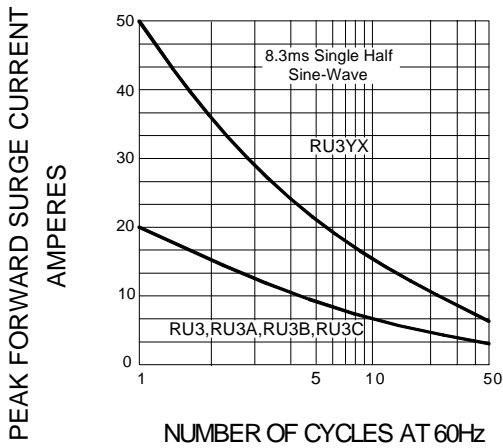


FIG.5 – TYPICAL JUNCTION CAPACITANCE

