

ULTRA FAST RECTIFIERS

VOLTAGE RANGE: 50 --- 600V

CURRENT: 8.0A

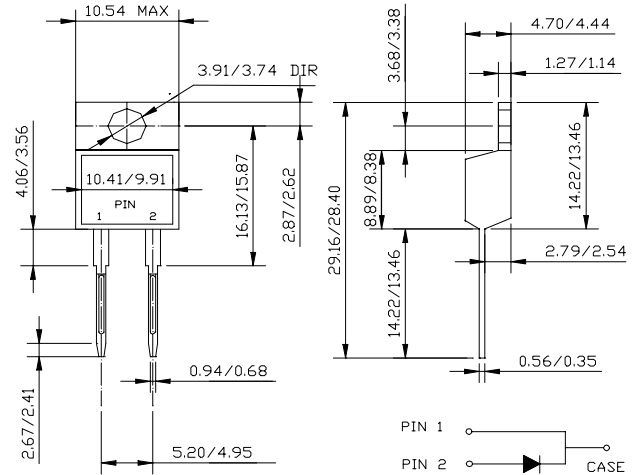
FEATURES

- Low cost
- Diffused junction
- Glass passivated junction
- Low forward voltage drop
- High current capability
- Easily cleaned with Alcohol, Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- Case: JEDEC TO-220AC
- Terminals: solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Weight: 0.064 ounces, 1.81 gram
- Mounting position: Any

TO - 220AC



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%.

| | | MUR 805 | MUR 810 | MUR 815 | MUR 820 | MUR 830 | MUR 840 | MUR 860 | UNITS |
|--|-----------------|-----------------|----------------|---------|---------|--------------|--------------|---------|---------|
| Device marking code | | U805 | U810 | U815 | U820 | U830 | U840 | U860 | |
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum average forward rectified current total device (rated V_R), $T_C=150$ | $I_{(AV)}$ | 8.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load | I_{FSM} | 100 | | | | | | | A |
| Maximum instantaneous forward voltage (Note1) @ $I_F=8.0A, T_C=25$ $I_F=8.0A, T_C=150$ | V_F | | 0.975 0.895 | | | 1.30 1.00 | 1.50 1.20 | | V |
| Maximum reverse current at rated DC blocking voltage @ $T_j=25$ $T_j=150$ | I_R | | 5.0 250 | | | 10 500 | | | μA |
| Maximum reverse recovery time (Note2) (Note3) | t_{rr} | | 25 35 | | | 50 60 | | | ns |
| Typical thermal resistance junction to case | $R_{\theta jC}$ | | 3.0 | | | 2.0 | | | /W |
| Operating junction temperature range | T_j | - 65 ---- + 175 | | | | | | | |
| Storage temperature range | T_{STG} | - 65 ---- + 175 | | | | | | | |

NOTE:1. Pulse test: pulse width=300 μs , duty cycle 2.0%

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

3. Measured with $I_F=1.0A, di/dt=50A/\mu s$.

FIG.1 –TYPICAL FORWARD CHARACTERISTIC

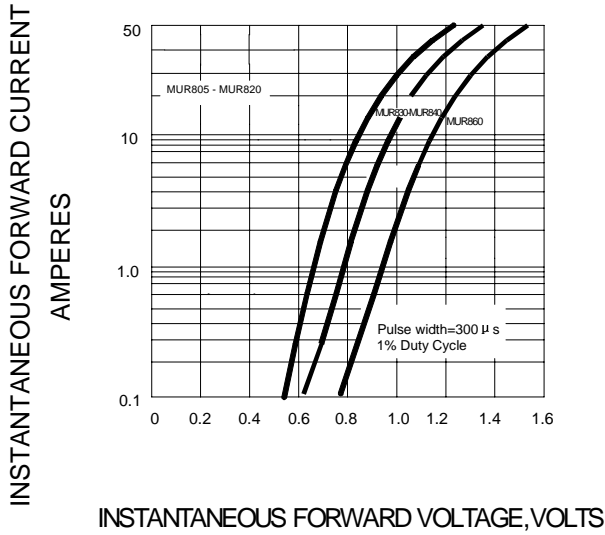


FIG.2 –TYPICAL REVERSE CHARACTERISTICS

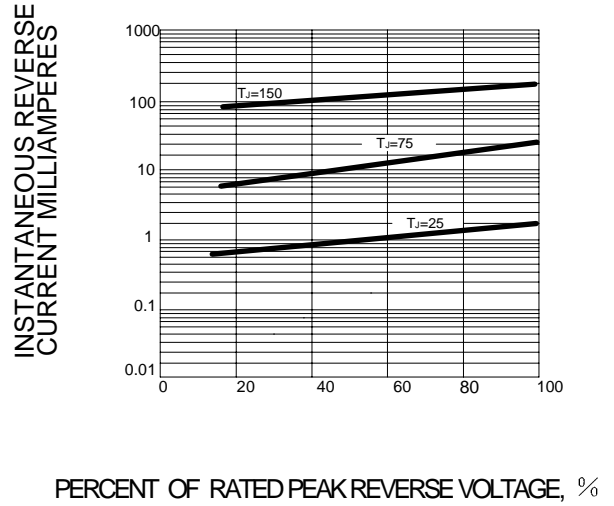


FIG.3 – PEAK FORWARD SURGE CURRENT

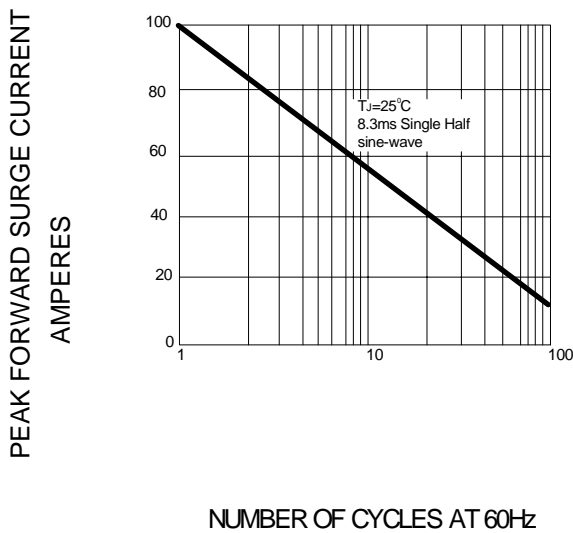


FIG.4 – FORWARD DERATING CURVE

