



DATA SHEET

1E1 thru 1E5

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 50 to 600 Volts **CURRENT** 1.0 Ampere

R-1

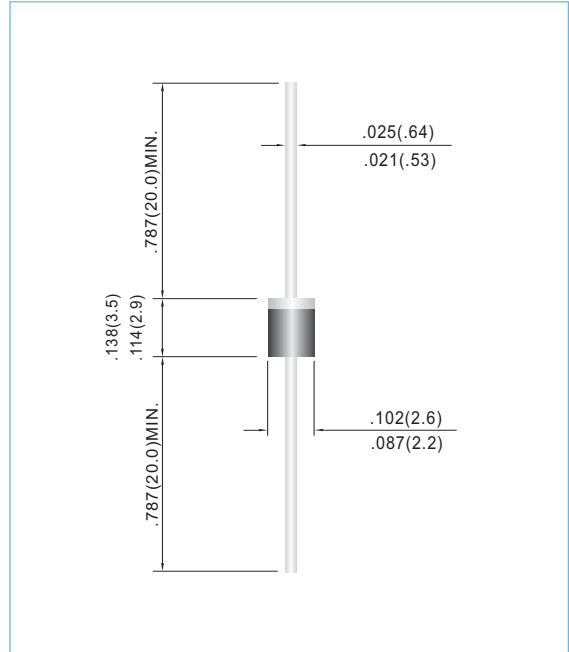
Unit: inch(mm)

FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Superfast recovery times-epitaxial construction.
- Low forward voltage, high current capability.
- Exceeds environmental standards of MIL-S-19500/228.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

MECHANICAL DATA

Case: Molded plastic, R-1.
Terminals: Axial leads, solderable to MIL-STD-202G, Method 208.
Polarity: Color Band denotes cathode end.
Mounting Position: Any
Weight: 0.0064 ounce, 0.181 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

| PARAMETER | SYMBOL | 1E1 | 1E2 | 1E2A | 1E3 | 1E3A | 1E4 | 1E5 | UNITS |
|---|-----------------------------------|-------------|-----|------|------------|------|-----|-----|--------|
| 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 Current .375"(9.5mm) lead length at TA=55°C | I _{AV} | 1.0 | | | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I _{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at 1.0A | V _F | 0.95 | | | 1.25 | | 1.7 | | V |
| Maximum DC Reverse Current TA=25°C at Rated DC Blocking Voltage TA=100°C | I _R | | | | 5.0 150 | | | | uA |
| Typical Junction capacitance (Note 2) | C _J | | | | 17 | | | | pF |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | | | | 35 | | | | ns |
| Typical Thermal Resistance | R _{θJA} | | | | 60 | | | | °C / W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -55 TO +150 | | | | | | | °C |

NOTES:

1. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{rr}=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC



RATING AND CHARACTERISTIC CURVES

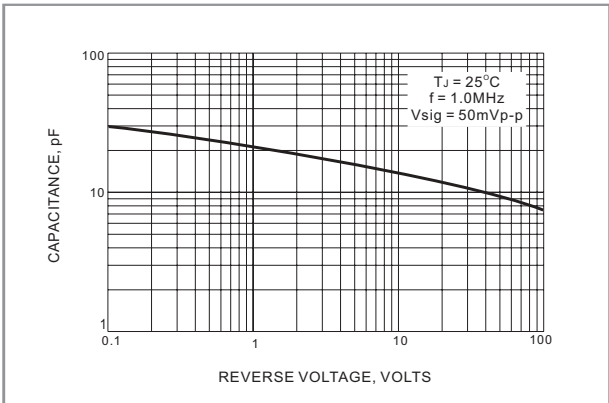


FIG.1 TYPICAL JUNCTION CAPACITANCE

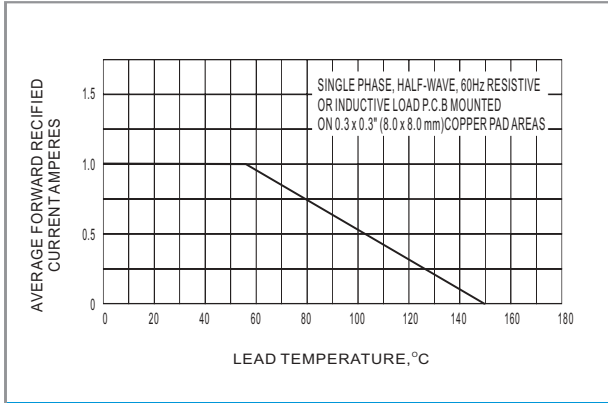


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

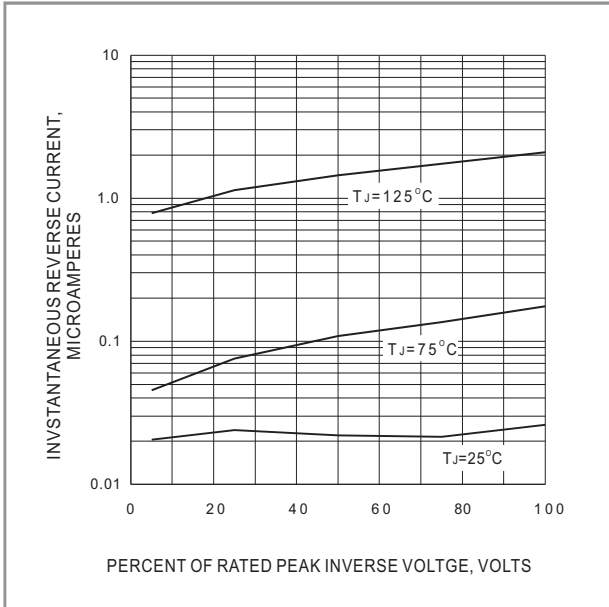


FIG.3 TYPICAL REVERSE CHARACTERISTICS

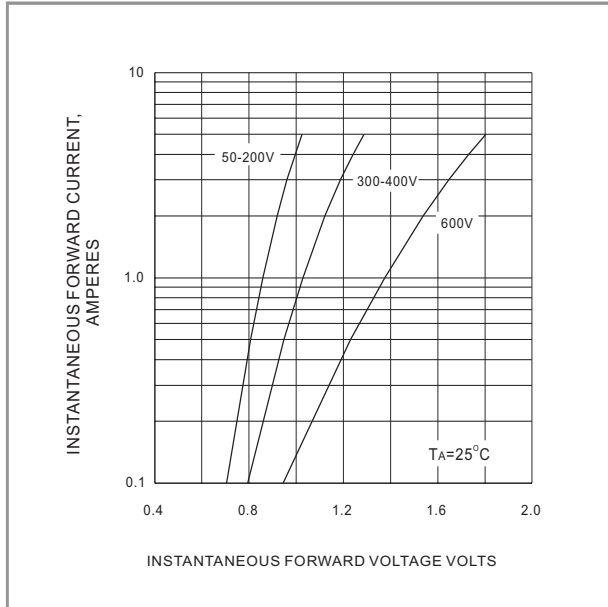


FIG.4 TYPICAL FORWARD CHARACTERISTICS

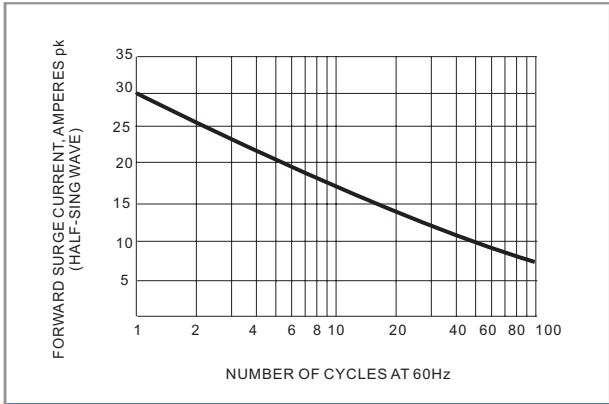


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT