

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE- 50 to 800 Volts CURRENT - 5.0 Amperes



FEATURES

- 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.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- High temperature soldering : 260°C/10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANICAL DATA

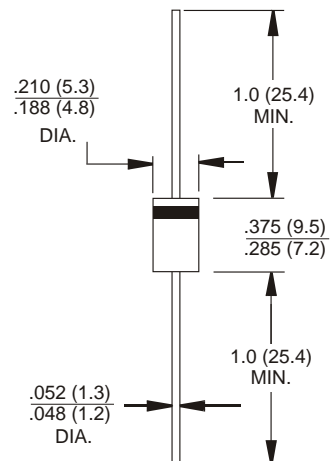
- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable to MIL-STD-202,Method 208
- Polarity: Color Band denotes cathode end
- Mounting Position: Any
- Weight: 0.04 ounce, 1.12 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

DO-201AD Unit:inch(mm)



| | SF51G | SF52G | SF53G | SF54G | SF55G | SF56G | SF57G | SF58G | UNITS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | V |
| Maximum RMS Voltage | 35 | 70 | 105 | 140 | 210 | 320 | 420 | 640 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | V |
| Maximum Average Forward Current .375"(9.5mm) lead length at TA=55°C J | 5.0 | | | | | | | | A |
| Peak Forward Surge Current, IFM (surge):8.3ms single half-sine-wave superimposed on rated load(JEDEC method) | 150.0 | | | | | | | | A |
| Maximum Forward Voltage at 5.0A DC | 0.95 | | 1.25 | | | 1.70 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | 5.0 | | | | | | | | µA |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA=125°C | 300 | | | | | | | | µA |
| Maximum Reverse Recovery Time(Note 1) | 35.0 | | | | | | | | nS |
| Typical Junction capacitance (Note 2) | 45 | | | | | | | | pF |
| Typical Junction Resistance(Note 3) RθJA | 25 | | | | | | | | °C/W |
| Operating and Storage Temperature Range TJ | -55 to +150 | | | | | | | | °C |

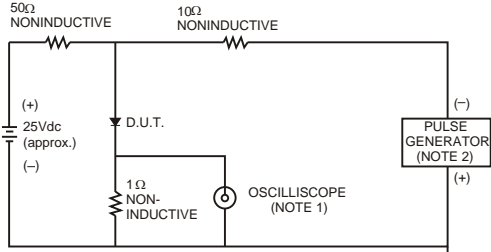
NOTES:

1. Reverse Recovery Test Conditions: IF=.5A, IR=1A, Irr=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

SF51G~SF58G

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



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

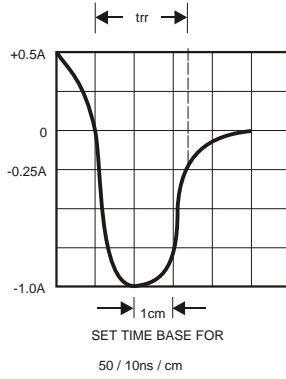


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

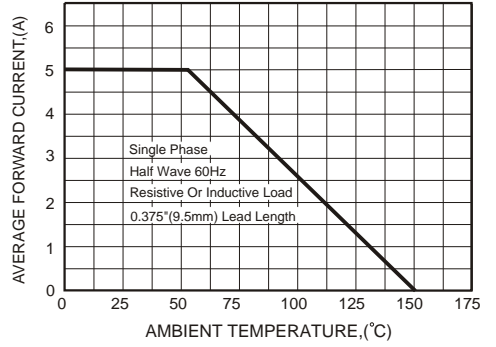


FIG.3-TYPICAL FORWARD CHARACTERISTICS

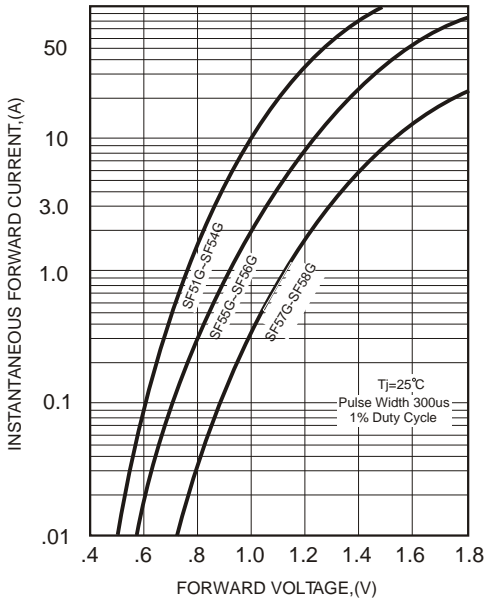


FIG.4-TYPICAL REVERSE CHARACTERISTICS

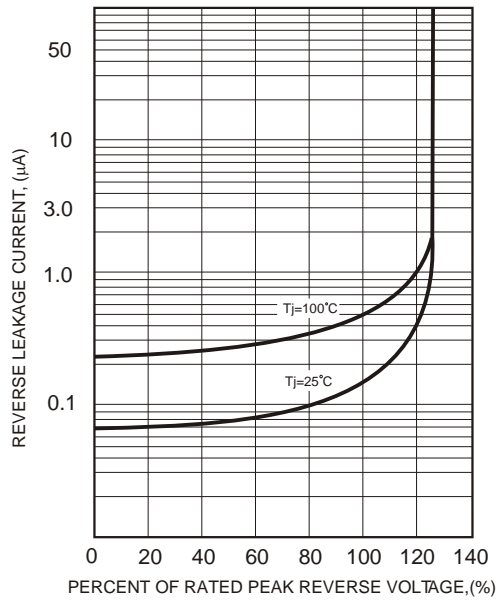


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

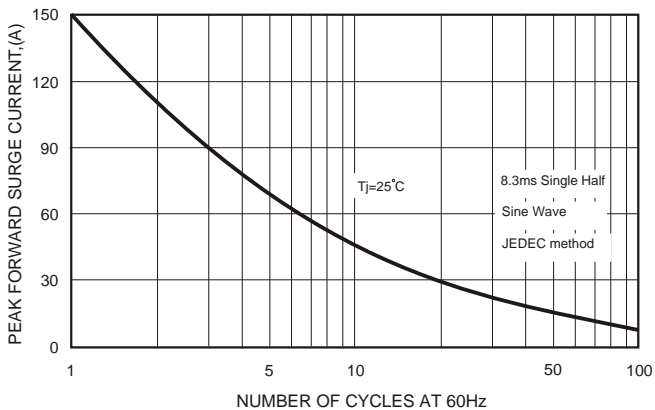


FIG.6-TYPICAL JUNCTION CAPACITANCE

