SEMICONDUCTOR

DATA SHEET

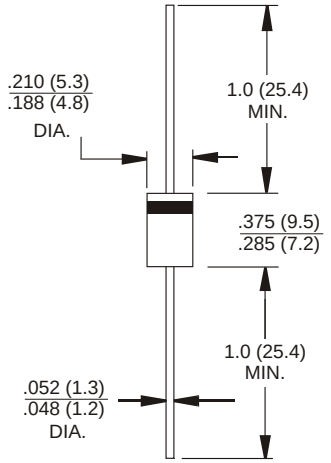
SF51G~SF58G

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

DO-201AD Unit:inch(mm)



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.

	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 halfsine-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

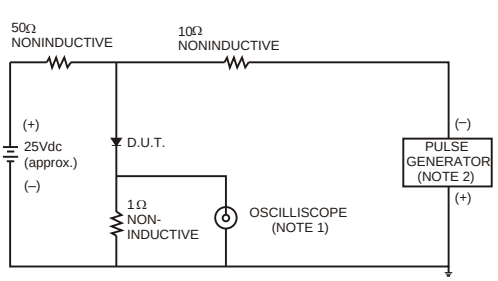
NOTES:

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

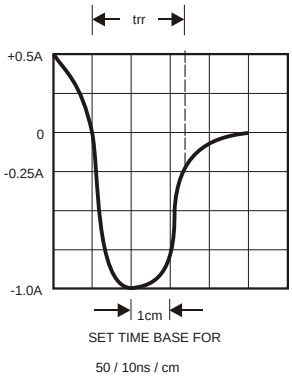
SF51G~SF58G

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.



SET TIME BASE FOR

50 / 10ns / cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

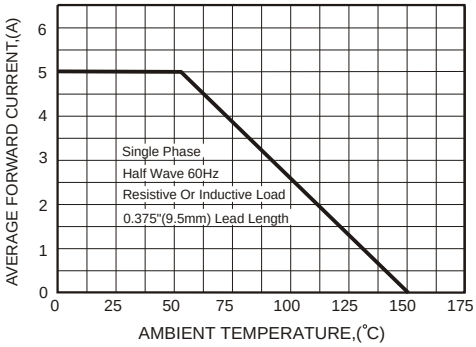


FIG.3-TYPICAL FORWARD CHARACTERISTICS

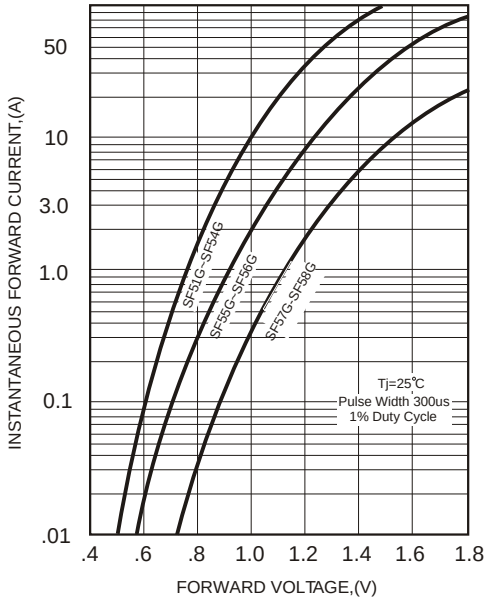


FIG.4-TYPICAL REVERSE CHARACTERISTICS

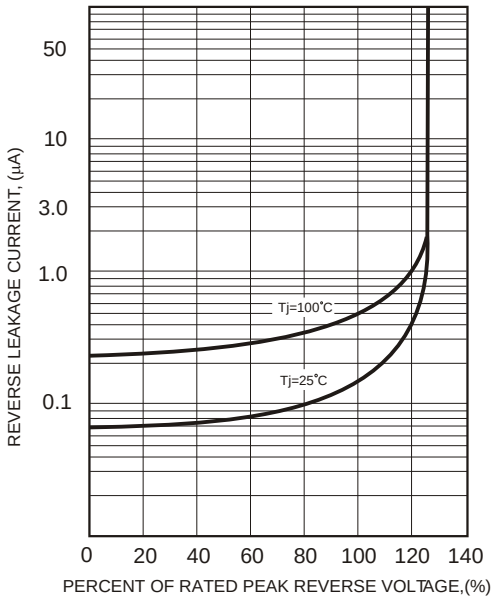


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

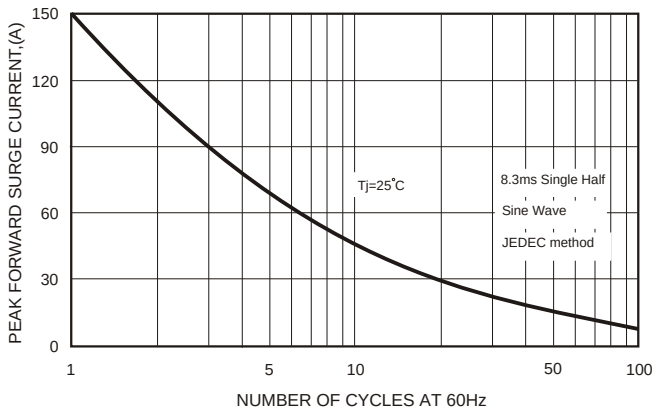


FIG.6-TYPICAL JUNCTION CAPACITANCE

