

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 1.5 A

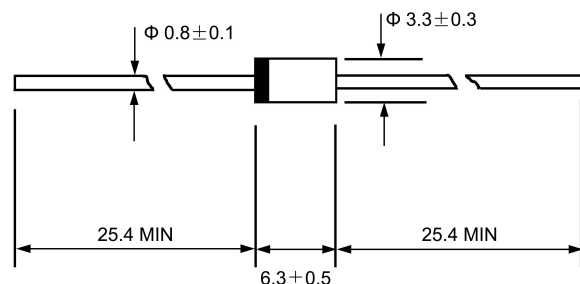
FEATURES

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

MECHANICAL DATA

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

DO - 15



Dimensions in millimeters

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%.

		SFR 151	SFR 152	SFR 153	SFR 154	SFR 155	SFR 156	SFR 157	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forw ard rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	1.5							A
Peak forw ard surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	50							A
Maximum instantaneous forw ard voltage @ 1.5 A	V _F	1.2							V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	5.0 100.0							μ A
Maximum reverse recovery time (Note1)	t _{rr}	120				200	350		ns
Typical junction capacitance (Note2)	C _J	18							pF
Typical thermal resistance (Note3)	R _{θJA}	45							°C/W
Operating junction temperature range	T _J	- 55---- +150							°C
Storage temperature range	T _{STG}	- 55---- + 150							°C

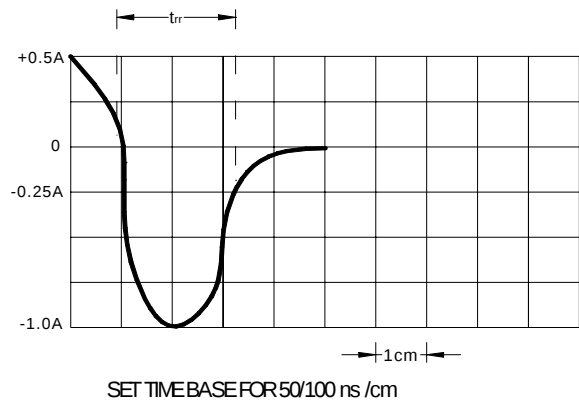
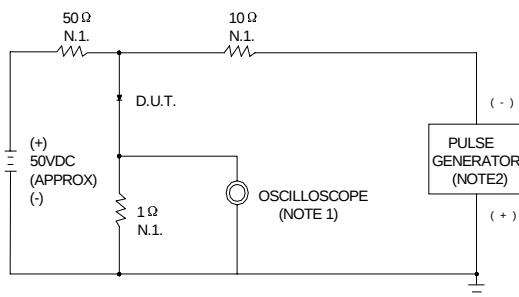
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_r=0.25\text{A}$.

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

3. Thermal resistance from junction to ambient.

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



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

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

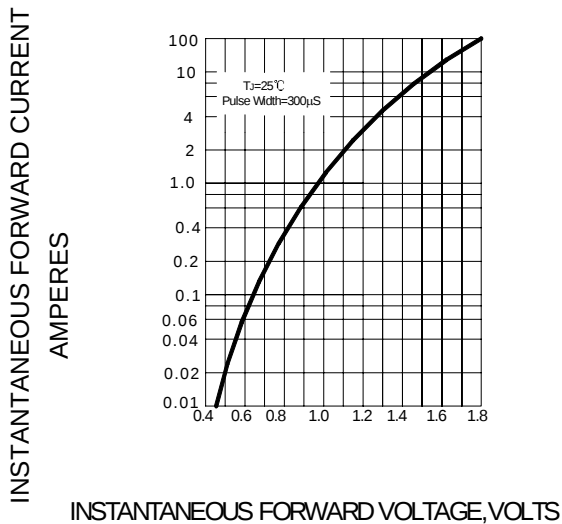


FIG.3 – FORWARD DERATING CURVE

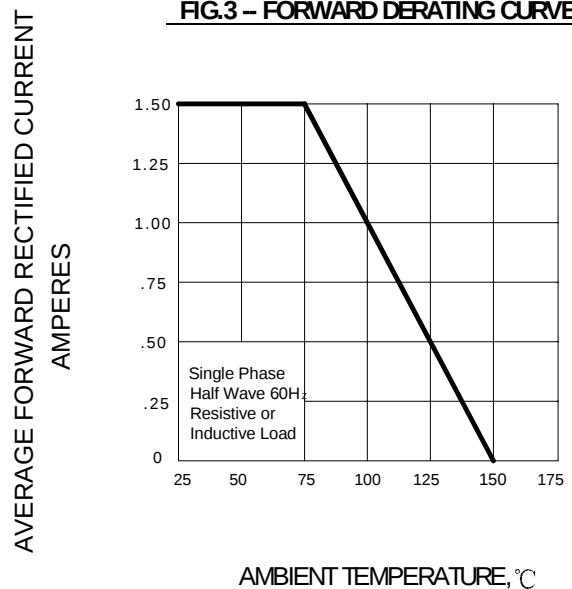


FIG.4 – TYPICAL JUNCTION CAPACITANCE

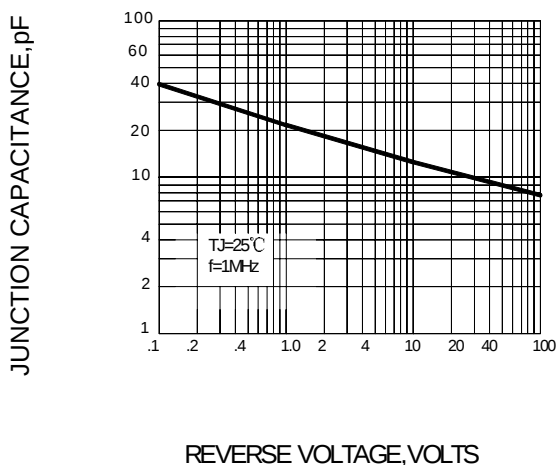


FIG.5 – PEAK FORWARD SURGE CURRENT

