

HIGH VOLTAGE RECTIFIERS

VOLTAGE RANGE: 2500 --- 5000 V
CURRENT: 0.2 A

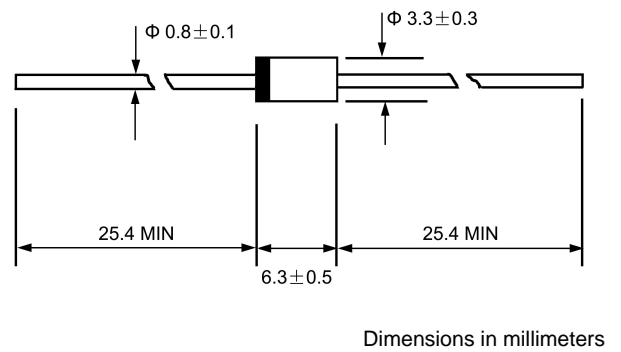
FEATURES

- ◇ Low cost
- ◇ Low leakage
- ◇ 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 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



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%.

		R2500F	R3000F	R4000F	R5000F	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	2500	3000	4000	5000	V
Maximum RMS voltage	V_{RMS}	1750	2100	2800	3500	V
Maximum DC blocking voltage	V_{DC}	2500	3000	4000	5000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	0.2				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	30.0				A
Maximum instantaneous forward voltage @ 0.2A	V_F	4.0	5.0	6.5		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 100.0				μA
Maximum reverse recovery time (Note1)	t_{rr}	500				ns
Typical junction capacitance (Note2)	C_J	15				pF
Operating junction temperature range	T_J	- 55 ---- + 125				$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150				$^\circ\text{C}$

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

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

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FIG.1 – FORWARD DERATING CURVE

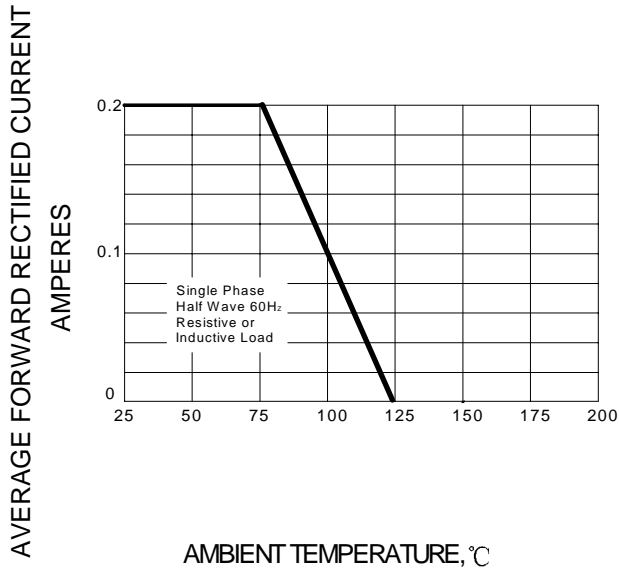


FIG.2 – PEAK FORWARD SURGE CURRENT

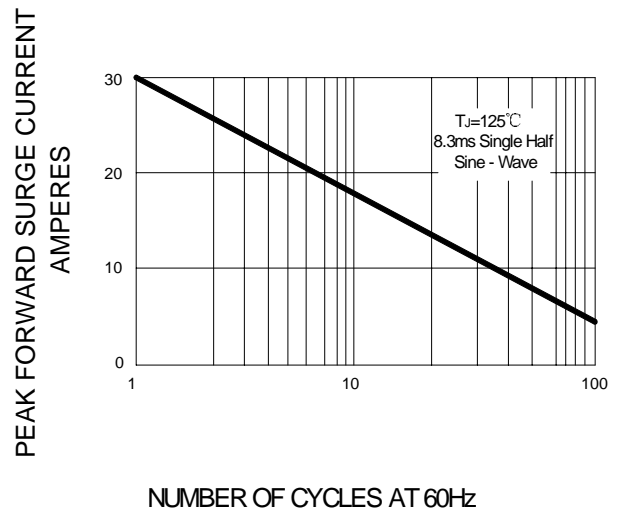
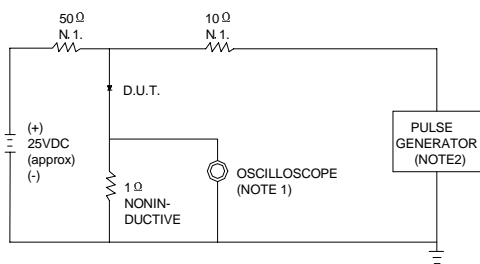
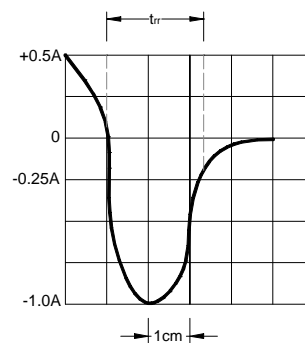


FIG.3 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



SET TIME BASE FOR 50/100 ns/cm