

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 100 --- 1000 V
CURRENT: 1.0 A

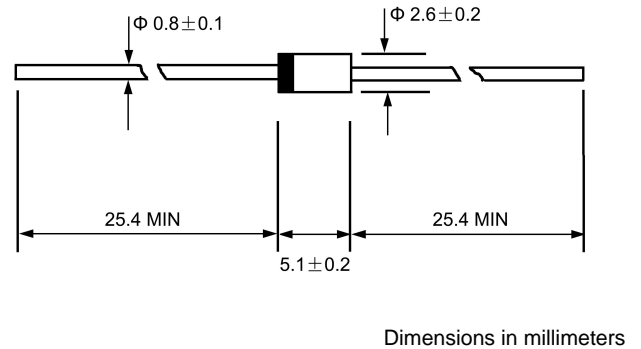
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ 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-41, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

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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%.

		PG 101	PG 102	PG 103	PG 104	PG 105	PG 106	PG 107	PG 108	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	V_{DC}	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	30.0								A
Maximum instantaneous forward voltage @ 1.0 A	V_F	1.3								V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=125^\circ C$	I_R	5.0 100.0								μA
Maximum reverse recovery time (Note1)	t_{rr}	150					250	500		ns
Typical junction capacitance (Note2)	C_J	12								pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	55								$^\circ C/W$
Operating junction temperature range	T_J	- 55----- +125								$^\circ C$
Storage temperature range	T_{STG}	- 55----- + 150								$^\circ C$

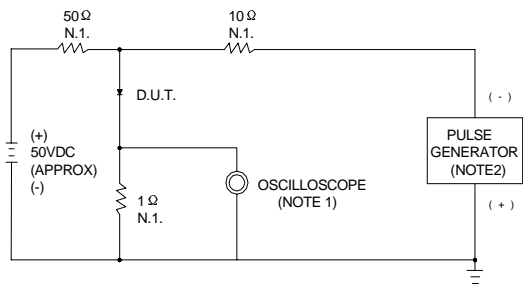
NOTE:1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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 = 75ns MAX. INPUT IMPEDANCE = 1MΩ, 22pF
 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50Ω

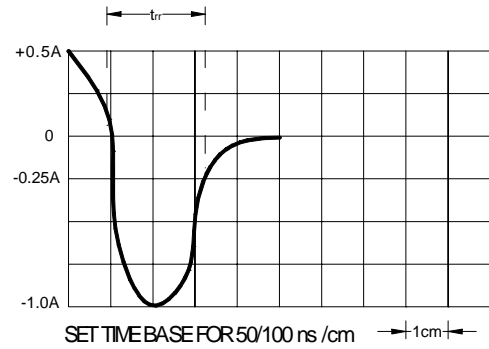


FIG.2 – FORWARD CURRENT DERATING CURVE

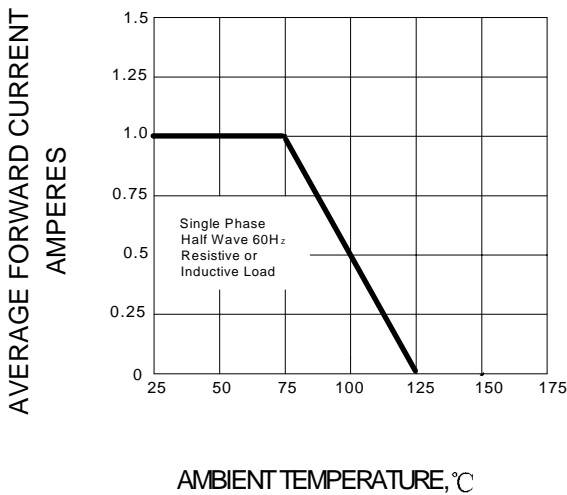


FIG.3 – PEAK FORWARD SURGE CURRENT

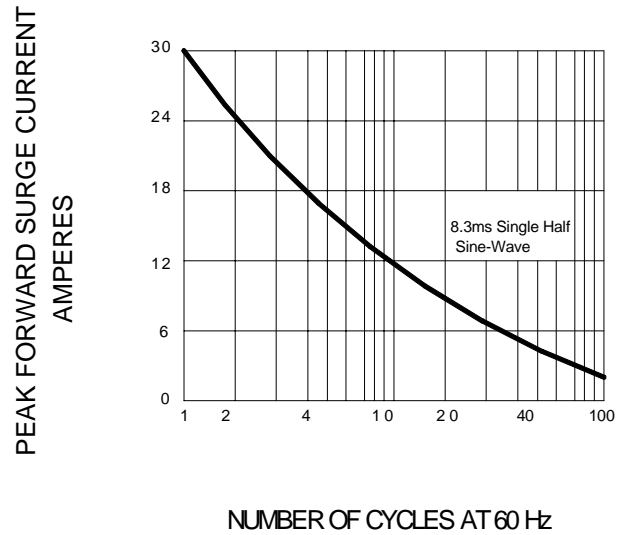


FIG.4 – TYPICAL FORWARD CHARACTERISTICS

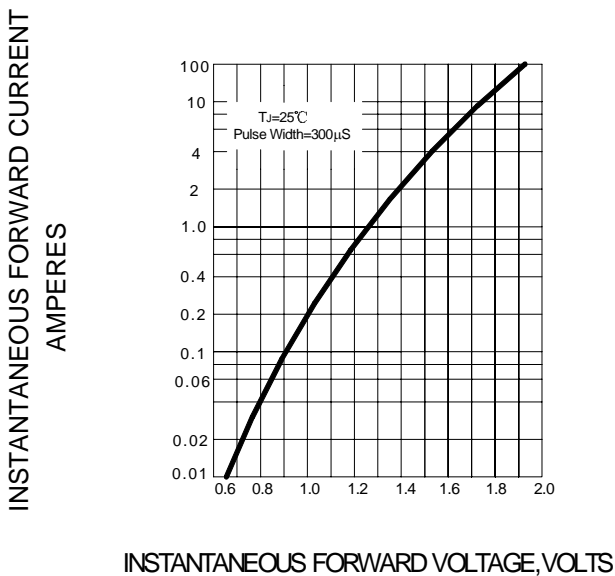


FIG.5 – TYPICAL JUNCTION CAPACITANCE

