

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 800 --- 1000 V
CURRENT: 2.0 A

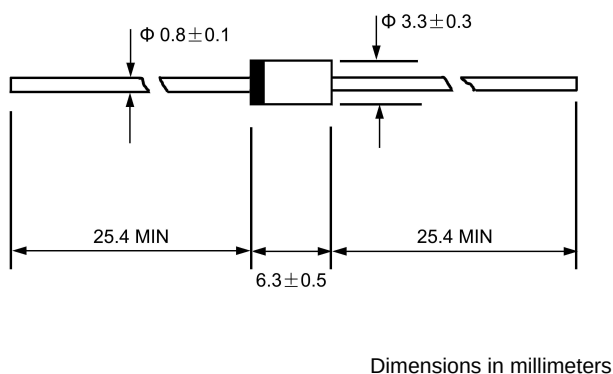
FEATURES

- ◇ 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



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%.

		BYV 37	BYV 38	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	800	1000	V
Maximum RMS voltage	V_{RMS}	560	700	V
Maximum DC blocking voltage	V_{DC}	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J = 125^\circ\text{C}$	I_{FSM}	50.0		A
Maximum instantaneous forward voltage @ 1.0 A	V_F	1.1		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		μA
Maximum reverse recovery time (Note1)	t_{rr}	300		ns
Typical junction capacitance (Note2)	C_J	15		pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	45		K/W
Operating junction temperature range	T_J	- 55 --- +150		$^\circ\text{C}$
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.

3. Thermal resistance from junction to ambient, $l = 10\text{mm}$, $T_L = \text{constant}$.

www.galaxycn.com

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

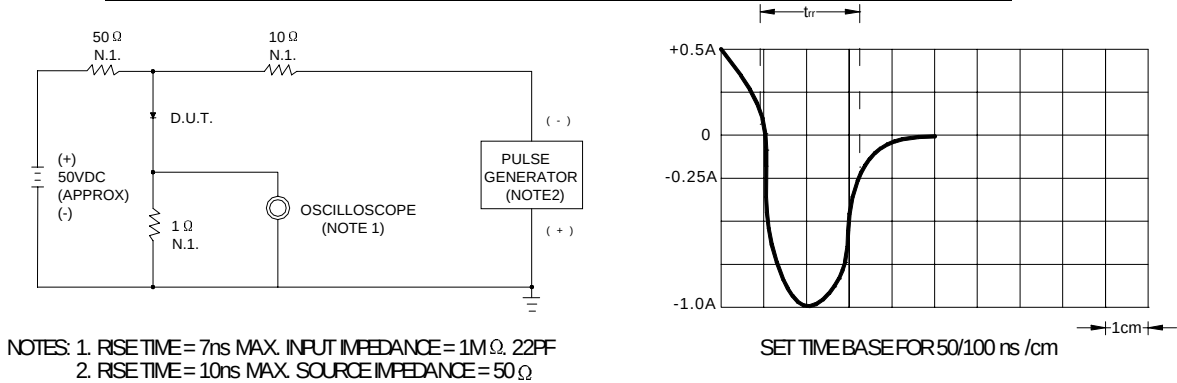


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

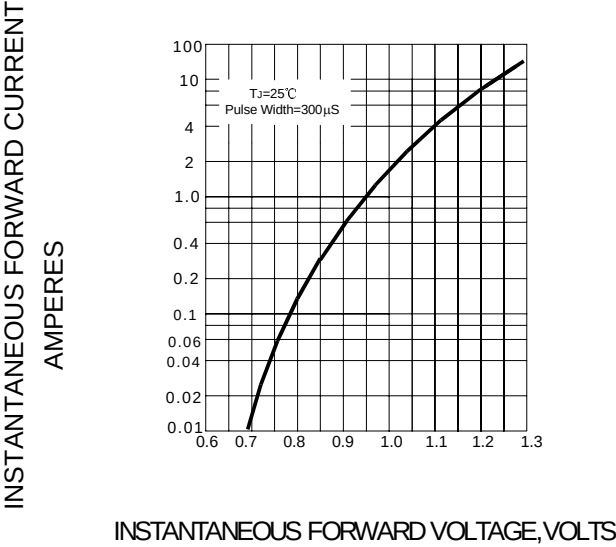


FIG.3– FORWARD DERATING CURRENT

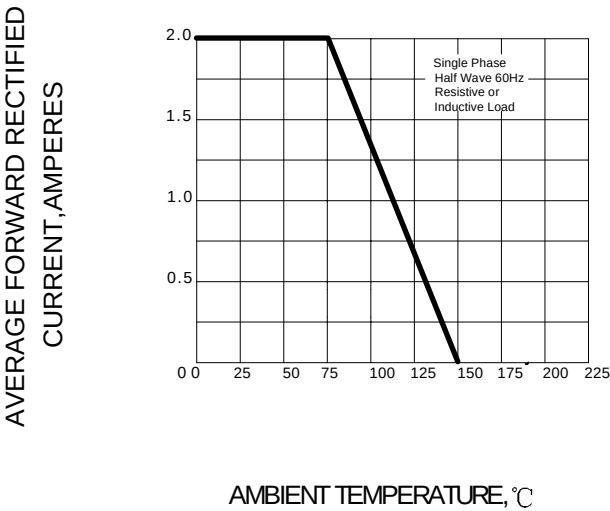


FIG.4– PEAK FORWARD SURGE CURRENT

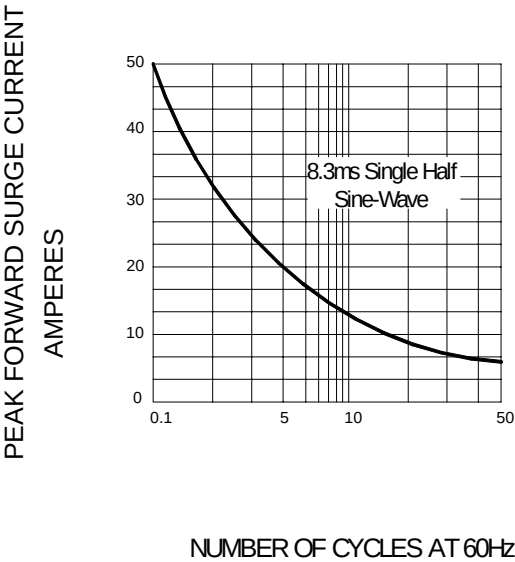


FIG.7 – TYPICAL JUNCTION CAPACITANCE

