

HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 3.0 A

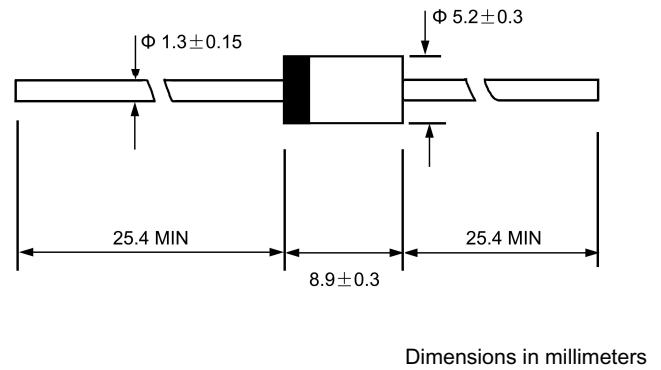
FEATURES

- ◇ Fast recovery times
- ◇ UI 90V0 flame retardant epoxy molding compound
- ◇ Diffused junction
- ◇ Low cost
- ◇ High surge current capability
- ◇ Bevel round chip, avalanche operation

MECHANICAL DATA

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any

DO - 27



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%.

		BYT 56A	BYT 56B	BYT 56D	BYT 56G	BYT 56J	BYT 56K	BYT 56M	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 forward rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	150.0							A
Maximum instantaneous forward voltage @ 3.0A	V _F	1.4							V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	10.0 150.0							μ A
Maximum reverse recovery time (Note1)	t _{rr}	100							ns
Typical junction capacitance (Note2)	C _J	75				50			pF
Typical thermal resistance (Note3)	R _{θJA}	30							°C /W
Operating junction temperature range	T _J	- 55 ---- + 150							°C
Storage temperature range	T _{STG}	- 55 ---- + 150							°C

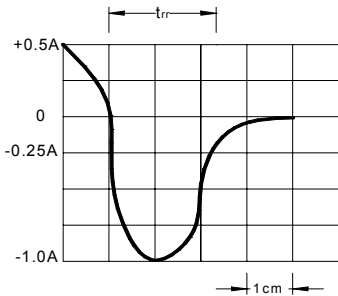
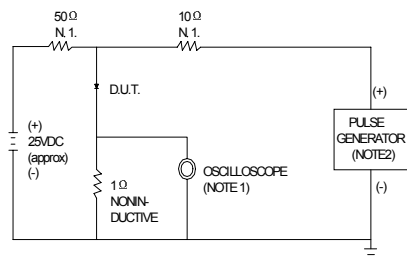
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

3. Thermal resistance from junction to ambient.

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FIG.1 –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=50Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 -- TYPICAL JUNCTION CAPTANCE

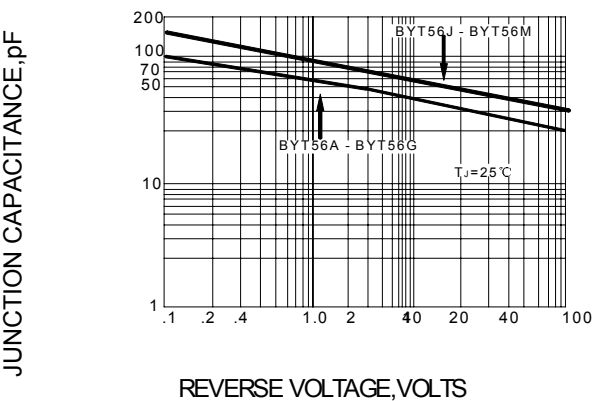


FIG.3 –PEAK FORWARD SURGE CURRENT

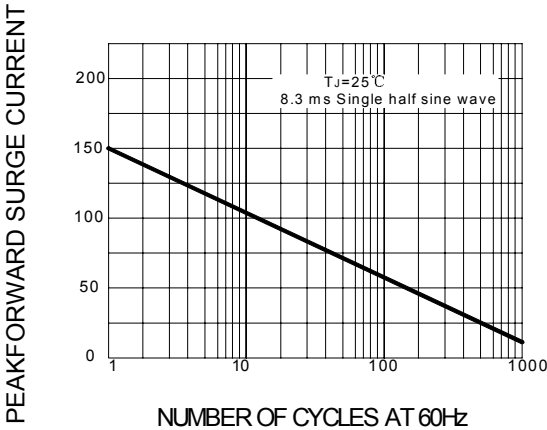


FIG.4 -- TYPICAL FORWARD CURRENT DERATING CURVE

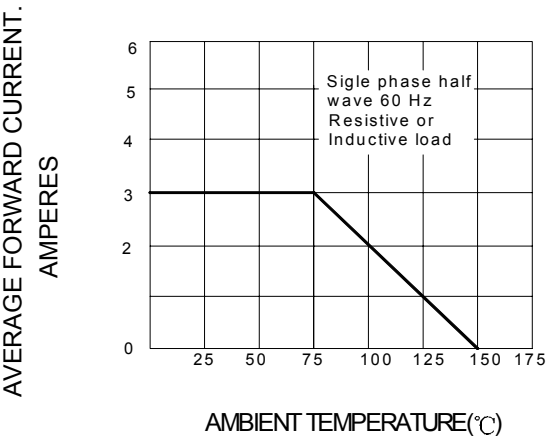


FIG.5-TYPICAL FORWARD CHARACTERISTIC

