

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 200 V
CURRENT: 2.5 A

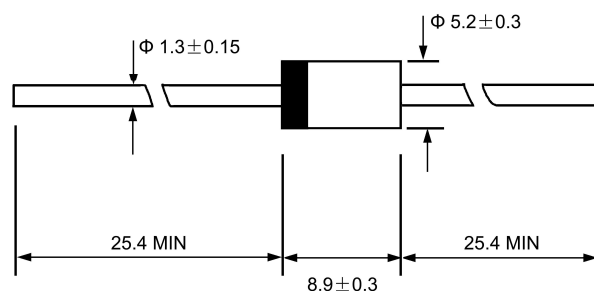
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ 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-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



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%.

		ERC35 - 02	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	2.5	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 @ 2.5A	V_F	1.2	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}	100	ns
Typical junction capacitance (Note2)	C_J	70	pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	30	$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 150	$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150	$^\circ\text{C}$

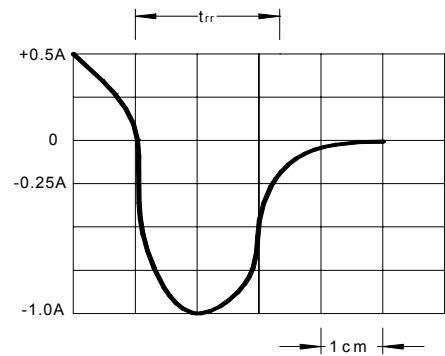
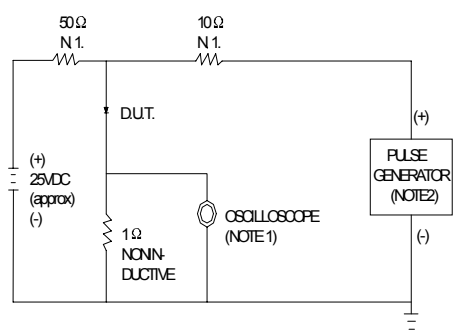
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

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

3. Thermal resistance from junction to ambient.

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

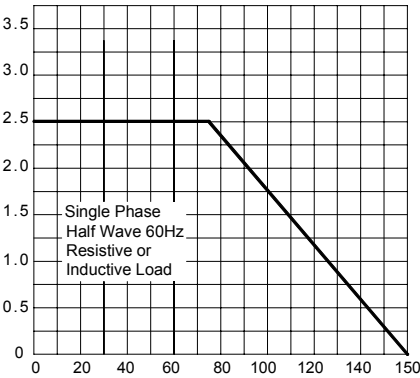


NOTES: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1MΩ. 22pF
2. RISE TIME=10ns MAX. SOURCE IMPEDANCE=50Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.3 –FORWARD DERATING CURVE

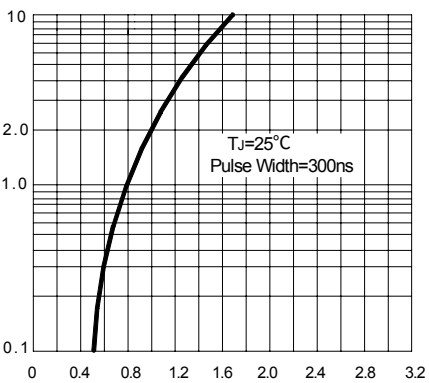
AVERAGE FORWARD RECTIFIED CURRENT.
AMPERES



AMBIENT TEMPERATURE. °C

FIG.4–TYPICAL FORWARD CHARACTERISTIC

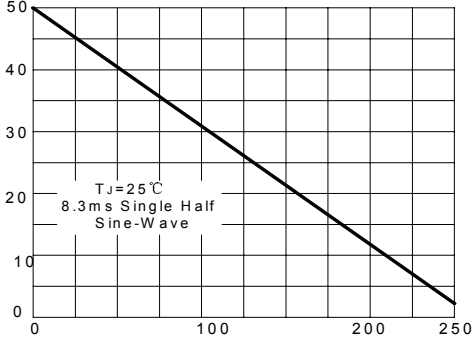
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS,

FIG.5–PEAK FORWARD SURGE CURRENT

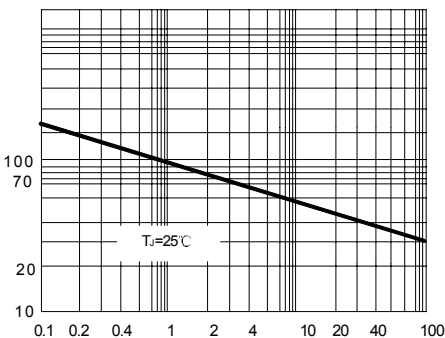
PEAK FORWARD SURGE CURRENT.
AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.6–TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE, pF



REVESE VOLTAGE, VOLTS