

FAST RECOVERY RECTIFIER

VOLTAGE RANGE: 400 --- 600 V

CURRENT: 1.0 A

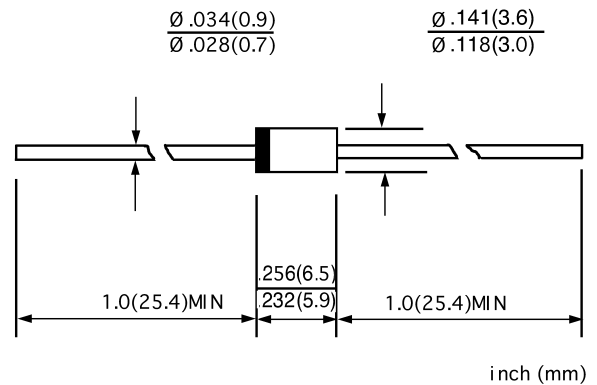
FEATURES

- ◇ 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-750,Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.14 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%.

		1S1834	1S1835	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	400	600	V
Maximum RMS voltage	V_{RMS}	280	420	V
Maximum DC blocking voltage	V_{DC}	400	600	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 @ $T_J=125^{\circ}C$	I_{FSM}	60.0		A
Maximum instantaneous forward voltage @ 1.5 A	V_F	1.2		V
Maximum reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=100^{\circ}C$	I_R	10.0 100.0		μA
Maximum reverse recovery time (Note1)	t_{rr}	350		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-----+150		$^{\circ}C$
Storage temperature range	T_{STG}	-55-----+150		$^{\circ}C$

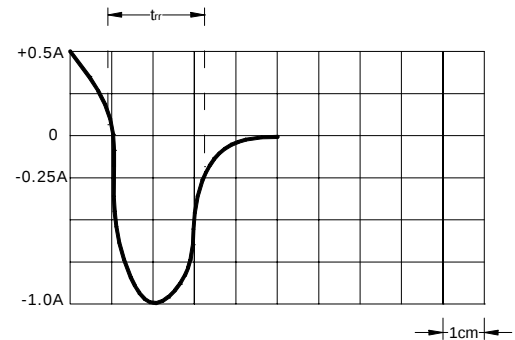
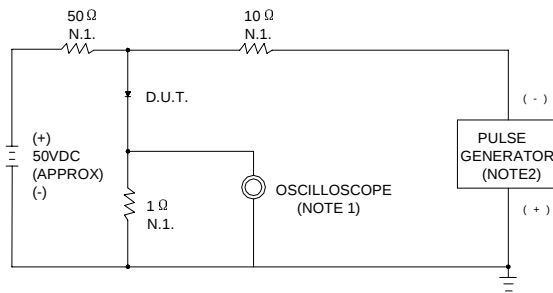
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $t_{rr}=0.25A$.

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

SET TIME BASE FOR 50/100 ns / cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

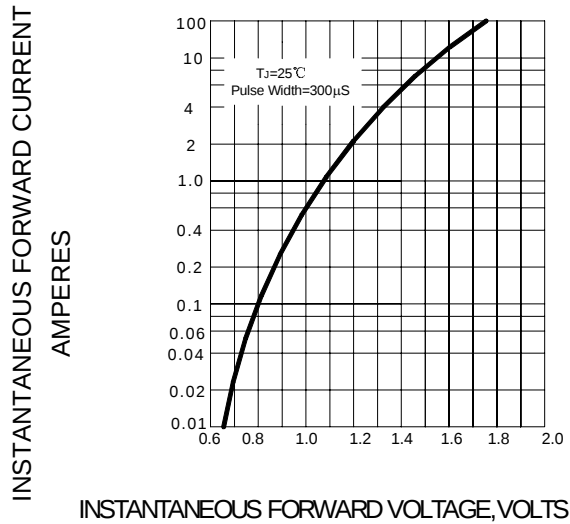


FIG.3 – FORWARD DERATING CURVE

AVERAGE FORWARD RECTIFIED CURRENT
AMPERES

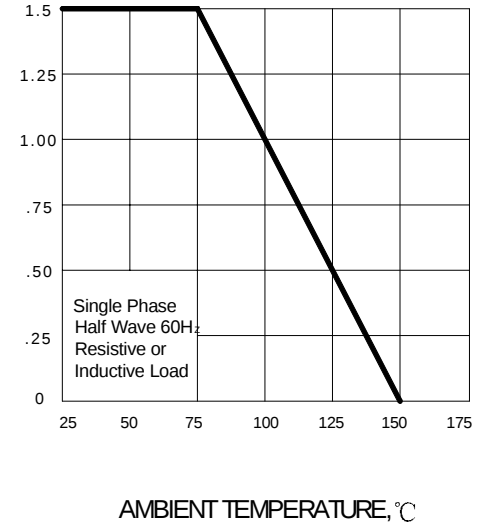


FIG.5 – PEAK FORWARD SURGE CURRENT

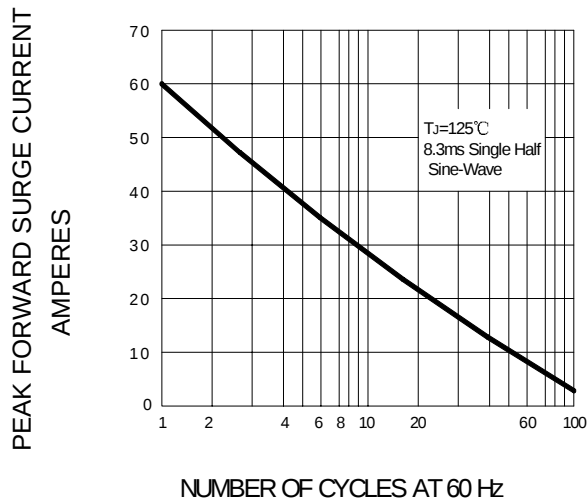


FIG.6 – TYPICAL JUNCTION CAPACITANCE

