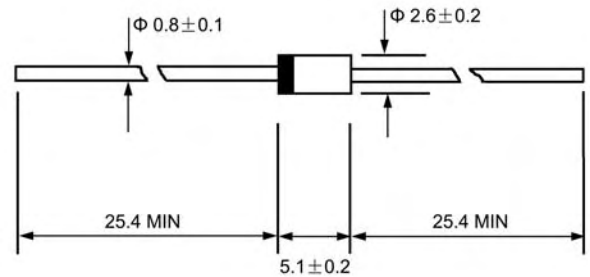




DO - 41



Dimensions in millimeters

Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with freon, alcohol, Isopropanol and similar solvents

Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting: Any

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%.

		EG1Y	EG1Z	EG1	EG1A	UNITS
Maximum peak repetitive reverse voltage	V_{RRM}	70	200	400	600	V
Maximum RMS voltage	V_{RMS}	49	140	280	420	V
Maximum DC blocking voltage	V_{DC}	70	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.1	0.8		0.6	A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	30.0	15.0		10.0	A
Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$	V_F	1.2	1.7	1.8	2.0	V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	100.0 500.0	50.0 300.0		100.0 500.0	μA
Maximum reverse recovery time (Note1)	t_{rr}	50				ns
Typical junction capacitance (Note2)	C_J	20			15	pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	60				$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ----- + 150				$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ----- + 150				$^\circ\text{C}$

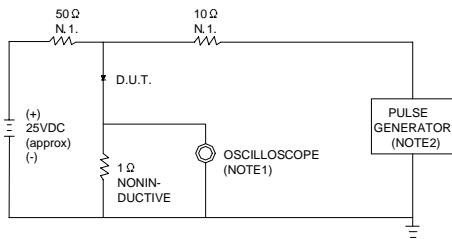
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

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

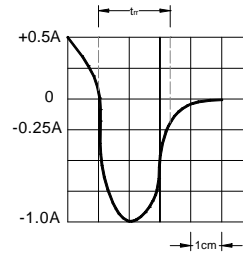
3. Thermal resistance junction to ambient.

Ratings AND Characteristic Curves

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=50 Ω.



SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

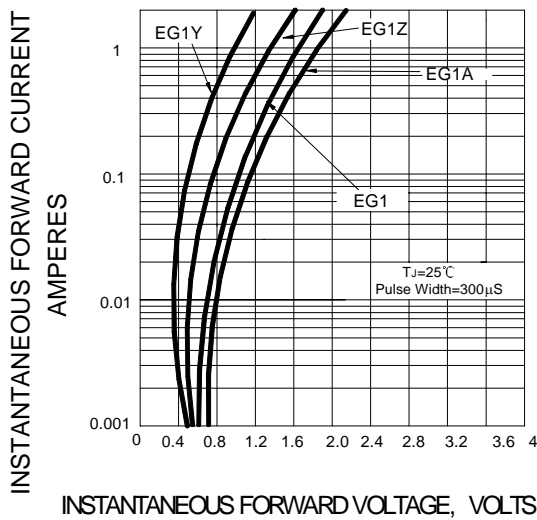


FIG.3 – FORWARD DERATING CURVE

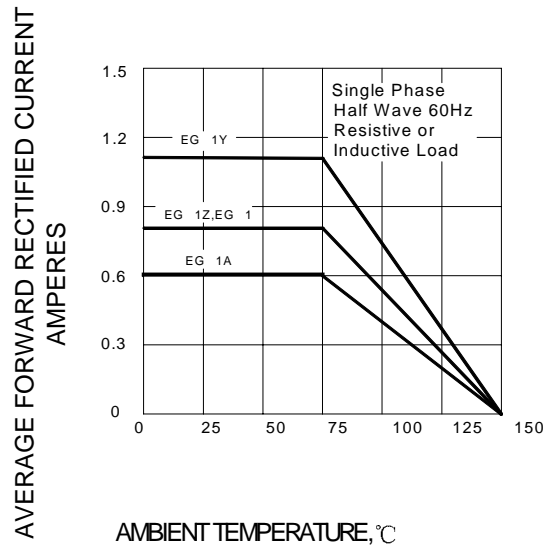


FIG.4 – PEAK FORWARD SURGE CURRENT

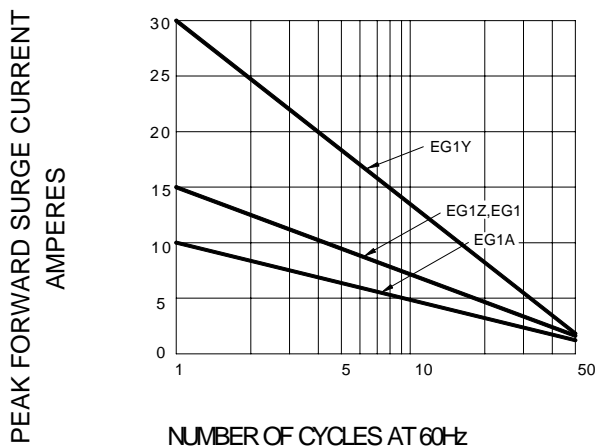


FIG.5-TYPICAL JUNCTION CAPACITANCE

