

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 50 --- 400 V
CURRENT: 1.0 A

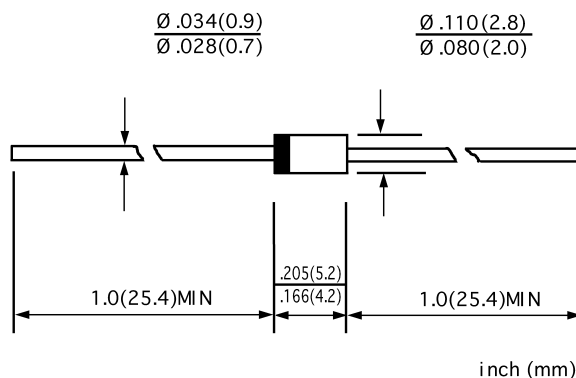
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage
- ◇ 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-41, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

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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%.

		EGP 10A	EGP 10B	EGP 10C	EGP 10D	EGP 10F	EGP 10G	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	V
Maximum average forward rectified current 9.5mm lead length @T _A =75°C	I _{F(AV)}	1.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	30.0						A
Maximum instantaneous forward voltage @ 1.0 A	V _F	0.95				1.25		V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	5.0 100.0						μ A
Maximum reverse recovery time (Note1)	t _{rr}	50						ns
Typical junction capacitance (Note2)	C _J	22				15		pF
Typical thermal resistance (Note3)	R _{θJA}	50						°C /W
Operating junction temperature range	T _J	- 55 ---- + 150						°C
Storage temperature range	T _{STG}	- 55 ---- + 150						°C

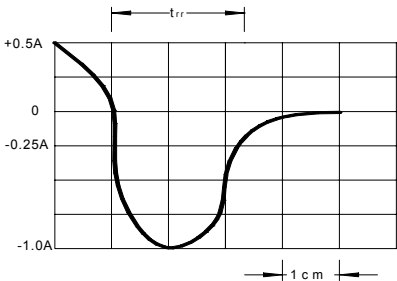
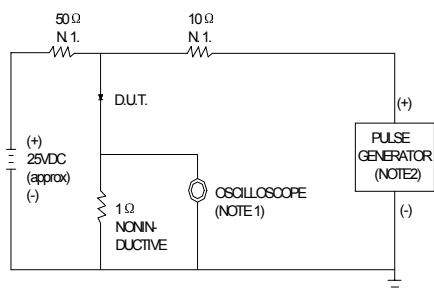
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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.3 –TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT
AMPERES

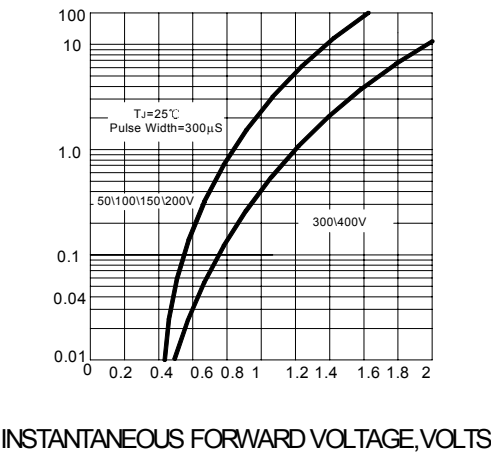
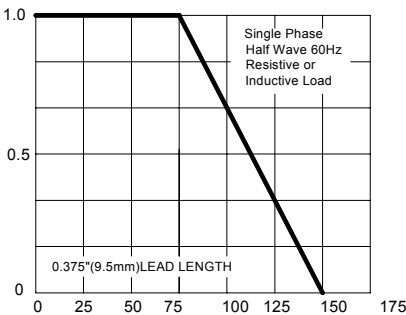


FIG.4-TYPICAL REVERSE CHARACTERISTICS

PEAK FORWARD SURGE CURRENT
AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.5-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,pF

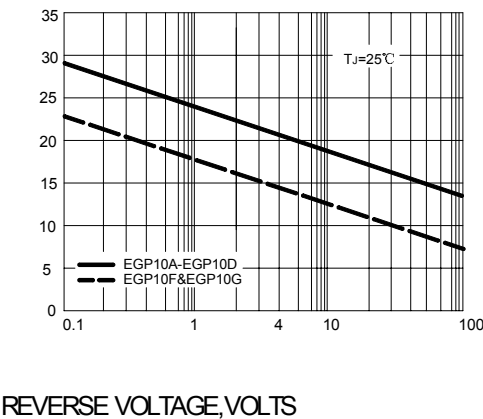


FIG.6-FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT
AMPERES

