

HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 50 --- 800 V
CURRENT: 3.0 A

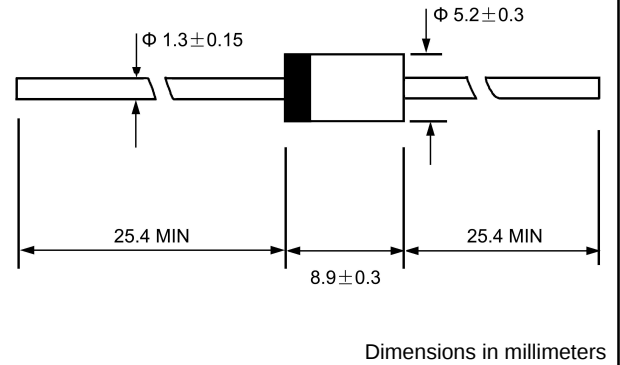
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High surge 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-750, Method 2026
- ◇ 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%.

		EGP 30A	EGP 30B	EGP 30C	EGP 30D	EGP 30F	EGP 30G	EGP 30J	EGP 30K	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	560	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	800	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	I _{FSM}	125.0								A
Maximum instantaneous forward voltage @ 3.0 A	V _F	0.95				1.25		1.7		V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I _R	5.0 100.0								μA
Maximum reverse recovery time (Note1)	t _{rr}	50				75				ns
Typical junction capacitance (Note2)	C _J	95				75				pF
Typical thermal resistance (Note3)	R _{θJA}	20								°C/W
Typical thermal resistance (Note4)	R _{θJL}	8.5								°C/W
Operating junction temperature range	T _J	- 55 ---- + 150								°C
Storage temperature range	T _{STG}	- 55 ---- + 150								°C

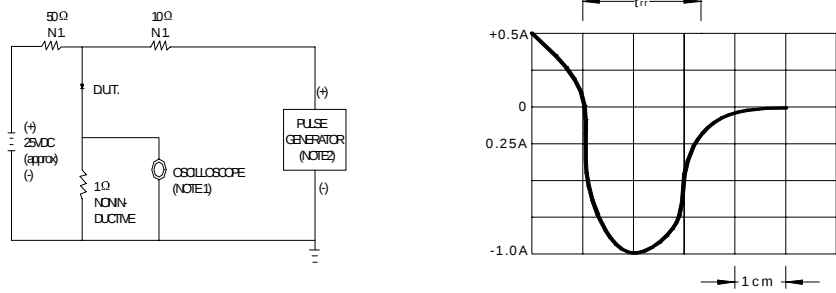
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

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

3. Thermal resistance junction to ambient.

4. Thermal resistance junction to lead.

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 20/30 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

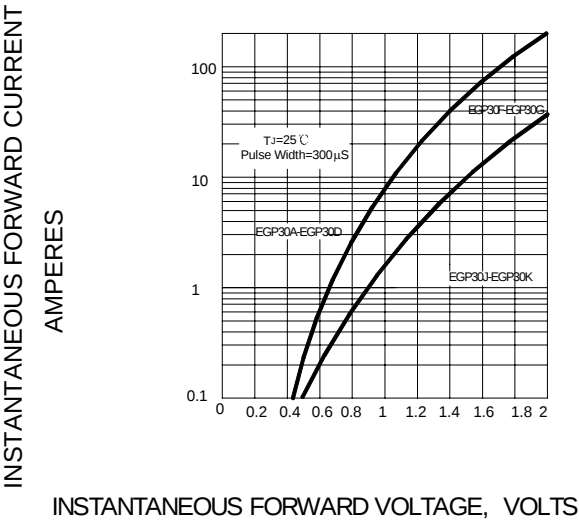


FIG.3 -- FORWARD DERATING CURVE

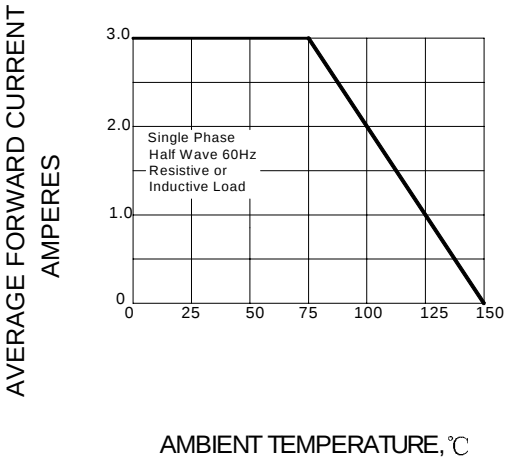


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

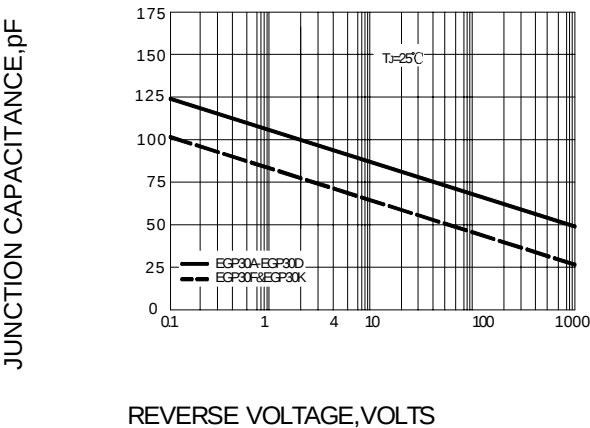


FIG.5 -- PEAK FORWARD SURGE CURRENT

