

HIGH EFFICIENCY RECTIFIER

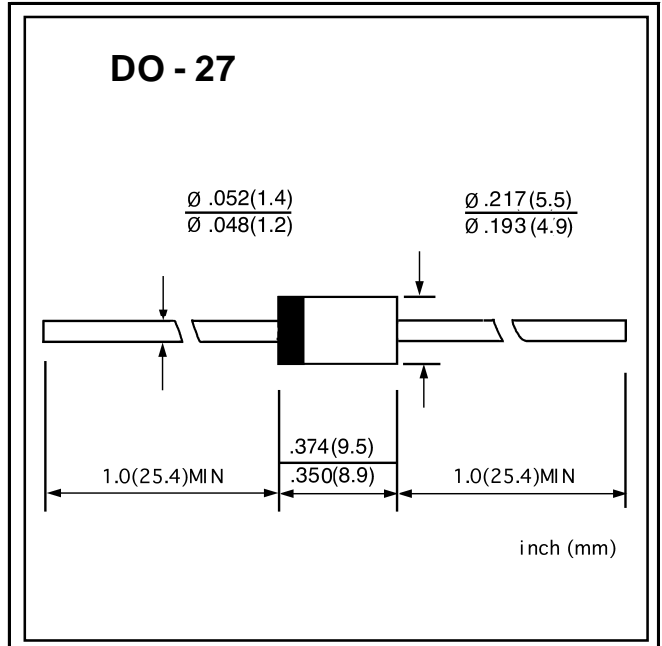
VOLTAGE RANGE: 50 --- 800 V
CURRENT: 3.0 A

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



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, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	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 at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	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)	$R_{\theta JA}$	20								$^\circ\text{C/W}$	
Typical thermal resistance (Note4)	$R_{\theta JL}$	8.5								$^\circ\text{C/W}$	
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 $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

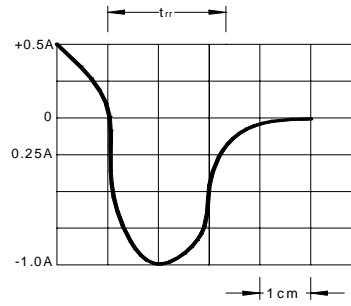
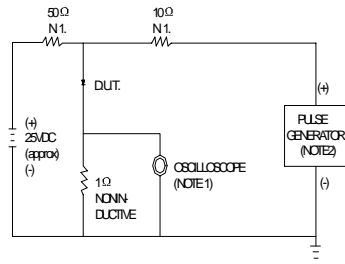
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

4. Thermal resistance junction to lead.

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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 = 50 Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

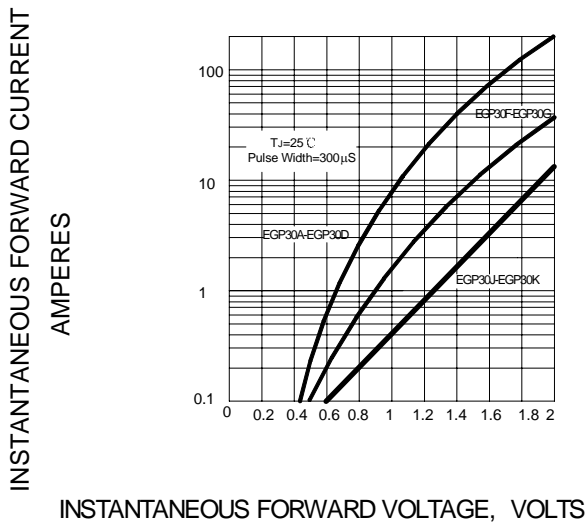


FIG.3 – FORWARD DERATING CURVE

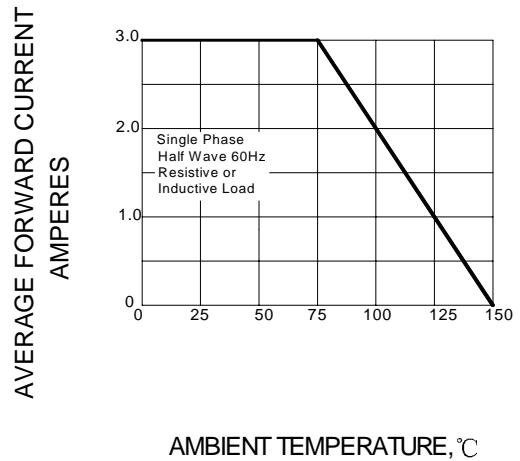


FIG.4 – TYPICAL JUNCTION CAPACITANCE

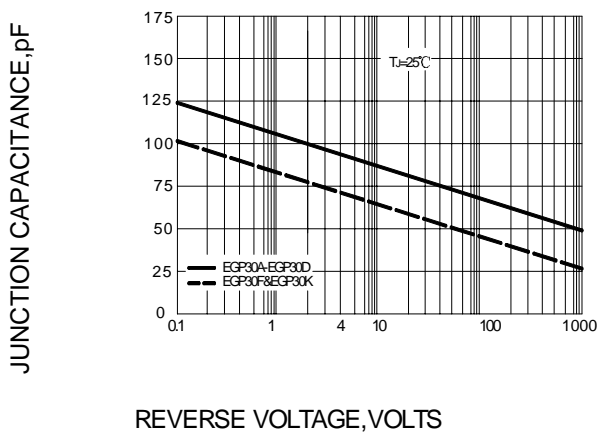


FIG.5 – PEAK FORWARD SURGE CURRENT

