

# EGP30A-EGP30K

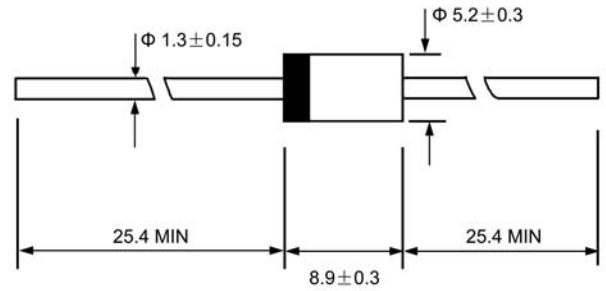
High Efficiency Rectifiers

**VOLTAGE RANGE: 50 --- 800 V**

**CURRENT: 3.0 A**



**DO - 27**



Dimensions in millimeters

## 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
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15grams
- ◇ 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, @ $T_A=75^\circ C$	$I_{F(AV)}$	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 @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=125^\circ C$	$I_R$	5.0 100.0								$\mu A$	
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								$^\circ C/W$	
Typical thermal resistance (Note4)	$R_{\theta JL}$	8.5								$^\circ C/W$	
Operating junction temperature range	$T_J$	- 55 ---- + 150								$^\circ C$	
Storage temperature range	$T_{STG}$	- 55 ---- + 150								$^\circ C$	

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

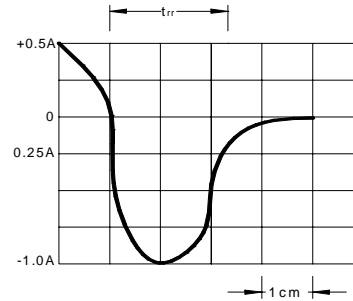
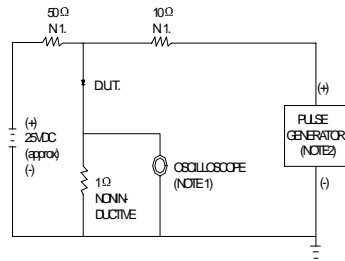
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

4. Thermal resistance junction to lead.

### Ratings AND Characteristic Curves

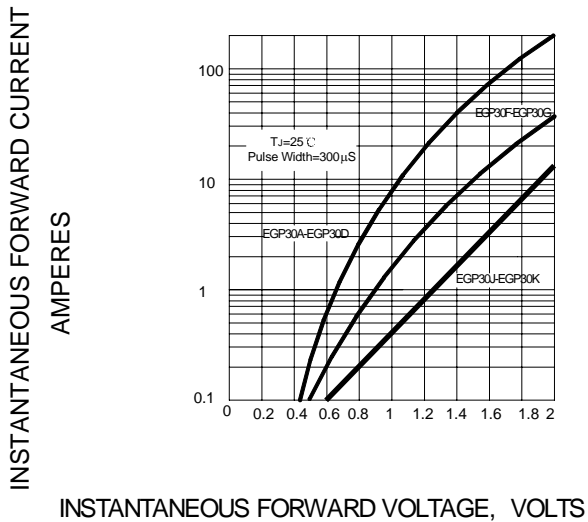
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



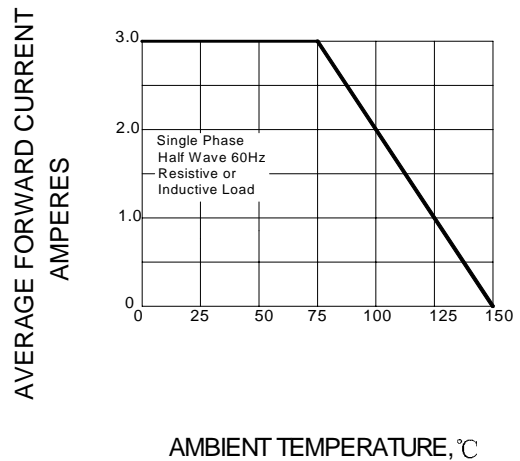
NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ. 22pF.  
 2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 20/30 ns/cm

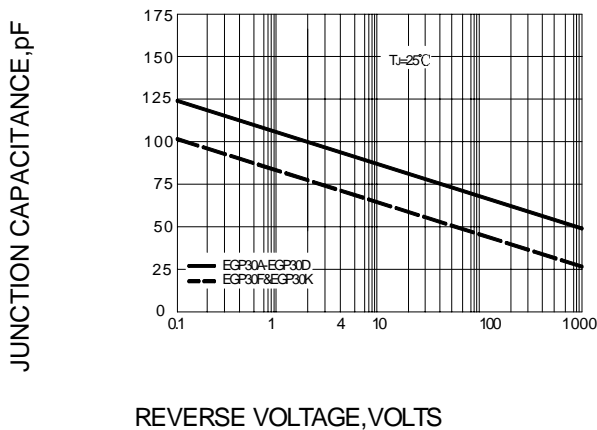
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



**FIG.5 – PEAK FORWARD SURGE CURRENT**

