

# EGP20A-EGP20K

High Efficiency Rectifiers

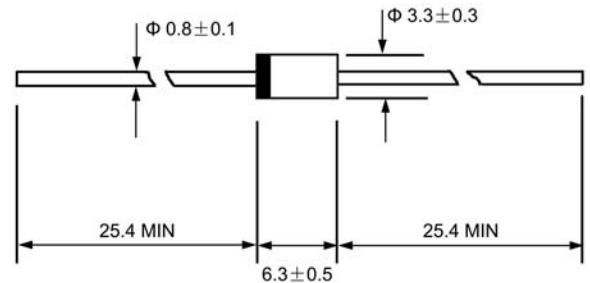
**VOLTAGE RANGE: 50 --- 800 V**

**CURRENT: 2.0 A**

**DO - 15**

## Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0



Dimensions in millimeters

## Mechanical Data

- ◇ Case: JEDEC DO--15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 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 20A	EGP 20B	EGP 20C	EGP 20D	EGP 20F	EGP 20G	EGP 20J	EGP 20K	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, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0								A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	75								A	
Maximum instantaneous forward voltage @ 2.0 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								$\mu A$	
Maximum reverse recovery (Note1)	$t_{rr}$	50						75		ns	
Typical junction capacitance (Note2)	$C_J$	70					45				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	40								$^\circ C/W$	
Typical thermal resistance (Note4)	$R_{\theta JL}$	15									
Operating junction temperature range	$T_J$	- 55 ---- + 150								$^\circ C$	
Storage temperature range	$T_{STG}$	- 55 ---- + 150								$^\circ C$	

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

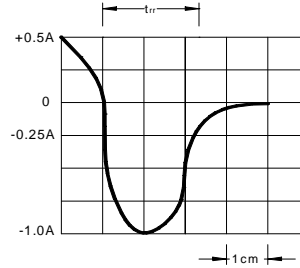
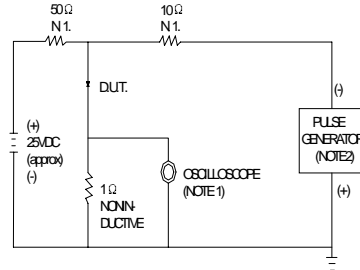
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

4. Thermal resistance from junction to lead.

## Ratings AND Characteristic Curves

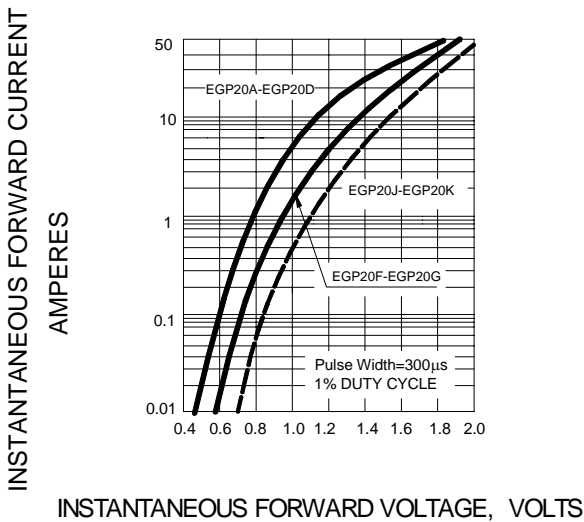
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



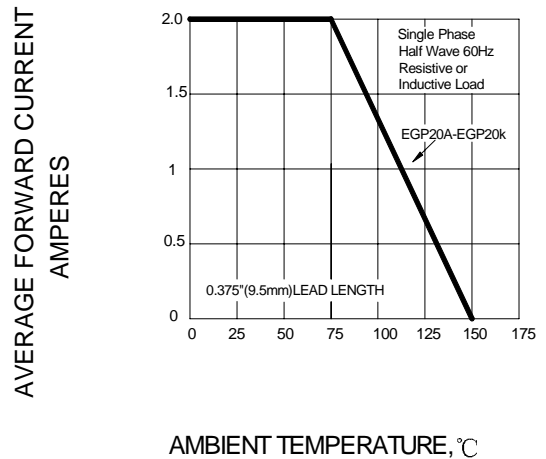
NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ, 22pF.  
 2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 20/30 ns/cm

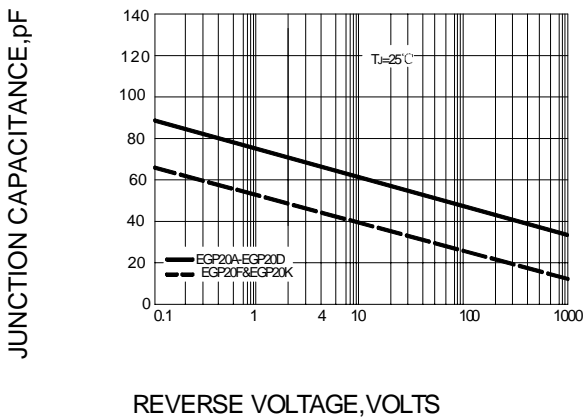
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



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

