

# Rectifiers, High Efficiency, **Glass Passivated, 2.0 A**

## EGP20A - EGP20K

### **Features**

- Glass-Passivated Cavity-Free Junction
- High Surge Current Capability
- Low Leakage Current
- Super-Fast Recovery Time for High Efficiency
- Low Forward Voltage, High Current Capability

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
I <sub>F(AV)</sub>	Average Rectified Current 0.375 inch lead length at TA = 55°C	2.0	Α
I <sub>FSM</sub>	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	75	A
T <sub>J</sub> , T <sub>STG</sub>	Junction and Storage Temperature Range	-65 to 150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

## **AXIAL LEAD DO 204** CASE 017AJ

## **MARKING DIAGRAM**



EGP20X = Specific Device Code X = A/B/C/D/F/G/J/K7 = Assembly Code

YWW = Date Code (Year & Week)

## **ORDERING INFORMATION**

See detailed ordering and shipping information on page 3 of this data sheet.

## THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
P <sub>D</sub>	Total Device Dissipation	3.13	W
	Derate above 25°C	25	mW°C
$R_{ heta JA}$	Thermal Resistance, Junction to Ambient	40	°C/W
$R_{ heta JL}$	Thermal Resistance, Junction to Lead	15	°C/W

## **ELECTRICAL CHARACTERISTICS** ( $T_A = 25$ °C unless otherwise noted)

		Device								
Parameter		20A	20B	20C	20D	20F	20G	20J	20K	Unit
Peak Repetitive Reverse Voltage		50	100	150	200	300	400	600	800	V
Maximum RMS Voltage		35	70	105	140	210	280	420	560	V
DC Reverse Voltage (Rated V <sub>R</sub> )		50	100	150	200	300	400	600	800	V
Maximum Reverse Current at Rated V <sub>R</sub>	T <sub>A</sub> = 25°C	5.0					μΑ			
	T <sub>A</sub> = 125°C	100						μΑ		
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$		50 75						nS		
Maximum Forward Voltage @ 2.0 A		0.95			1.25 1.7		.7	V		
Typical Junction Capacitance V <sub>R</sub> = 4.0 V, f = 1.0 MHz		70 45				pF				

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. \*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2%.

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## **TYPICAL PERFORMANCE CHARACTERISTICS**

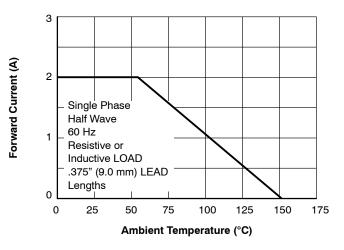


Figure 1. Forward Current Derating Curve

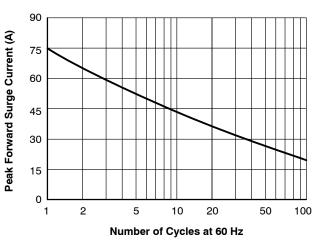


Figure 2. Non-Repetitive Surge Current

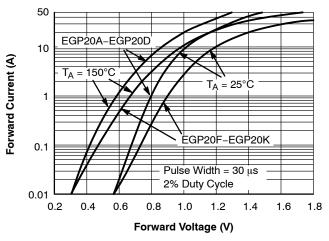


Figure 3. Forward Characteristics

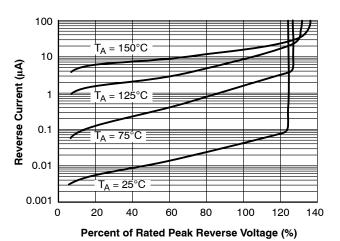


Figure 4. Reverse Characteristics

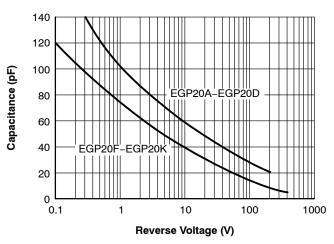
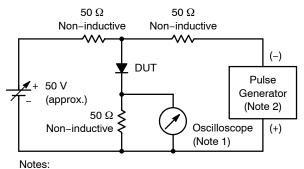


Figure 5. Junction Capacitance

## EGP20A - EGP20K

## **Reverse Recovery Time Characteristic and Test Circuit Diagram**



- 1. Rise time = 7.0 ns max; Input impedance = 1.0 M $\Omega$  22 pF.
- 2. Rise time = 10 ns max; Source impedance =  $50 \Omega$ .

Figure 6. Test Circuit Diagram

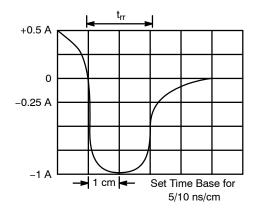


Figure 7. Reverse Recovery Time Characteristics

## **ORDERING INFORMATION**

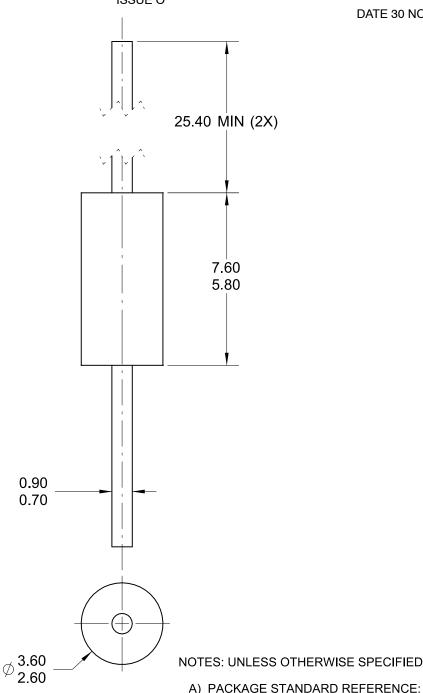
Device	Package	Shipping <sup>†</sup>
EGP20A	Axial Lead / DO-204 (Pb-Free)	4000 / Tape & Reel
EGP20B		
EGP20C		
EGP20D		
EGP20F		
EGP20G		
EGP20J		
EGP20K		

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.



CASE 017AJ ISSUE O

**DATE 30 NOV 2016** 



A) PACKAGE STANDARD REFERENCE:
JEDEC DO-204 VARIATION AC.
D) DI ACTIC DACICACE DODY

- B) PLASTIC PACKAGE BODY.D) ALL DIMENSIONS ARE IN MILLIMETERS.

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