Rectifiers, High Efficiency, Glass Passivated, 2.0 A

EGP20A - EGP20K



AXIAL LEAD DO 204
CASE 017AJ

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

MARKING DIAGRAM



EGP20X = Specific Device Code
X = A/B/C/D/F/G/J/K
Z = Assembly Code
YWW = Date Code (Year & Week)

ORDERING INFORMATION

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

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
$I_{F(AV)}$	Average Rectified Current 0.375 inch lead length at TA = 55°C	2.0	A
I_{FSM}	Peak Forward Surge Current 8.3 ms single half−sine−wave Superimposed on rated load (JEDEC method)	75	A
T_J, T_{STG}	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.

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
P_D	Total Device Dissipation	3.13	W
	Derate above 25°C	25	mW°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	40	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	15	°C/W

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

Parameter		Device								Unit
		20A	20B	20C	20D	20F	20G	20J	20K	
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_R)		50	100	150	200	300	400	600	800	V
Maximum Reverse Current at Rated V_R	T_A = 25°C	5.0								μA
	T_A = 125°C	100								μA
Maximum Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A		50						75		nS
Maximum Forward Voltage @ 2.0 A		0.95				1.25		1.7		V
Typical Junction Capacitance V_R = 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

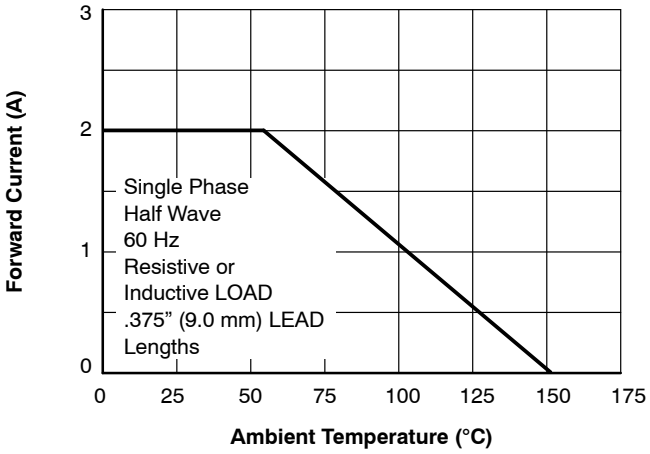


Figure 1. Forward Current Derating Curve

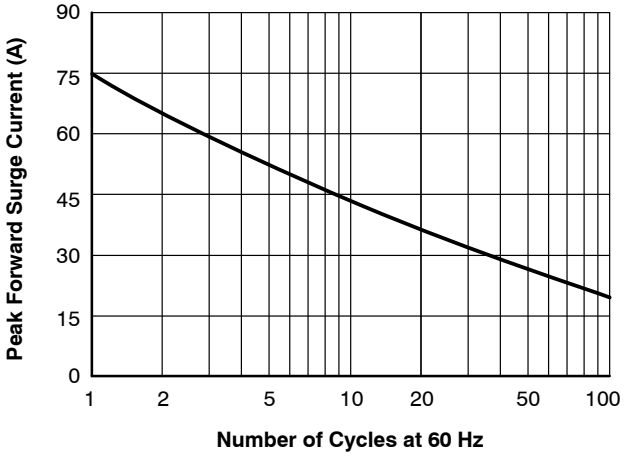


Figure 2. Non−Repetitive Surge Current

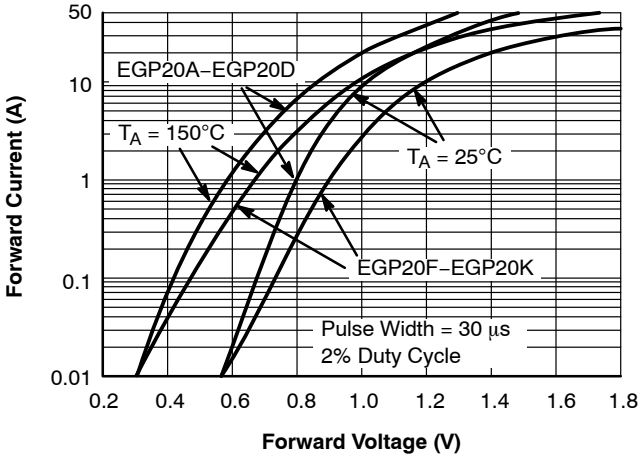


Figure 3. Forward Characteristics

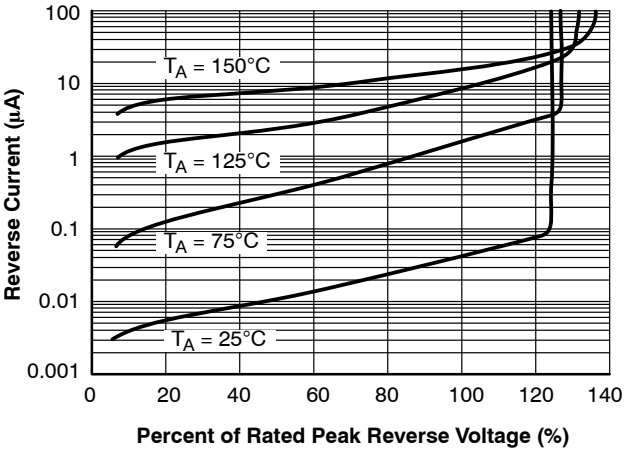


Figure 4. Reverse Characteristics

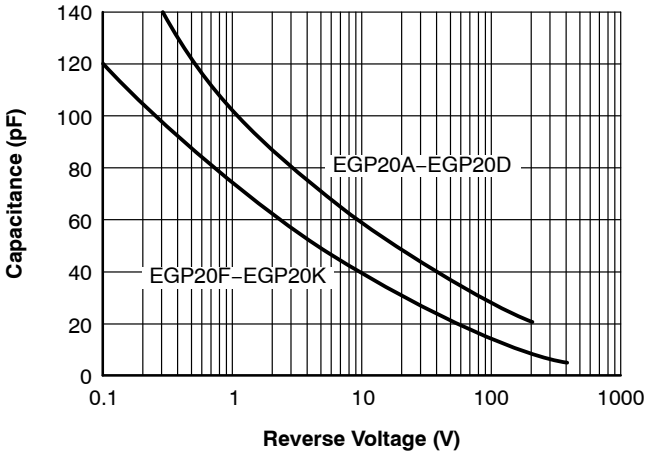
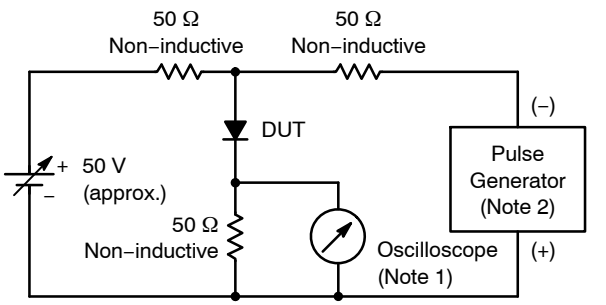


Figure 5. Junction Capacitance

Reverse Recovery Time Characteristic and Test Circuit Diagram



Notes:
1. Rise time = 7.0 ns max; Input impedance = 1.0 MΩ 22 pF.
2. Rise time = 10 ns max; Source impedance = 50 Ω.

Figure 6. Test Circuit Diagram

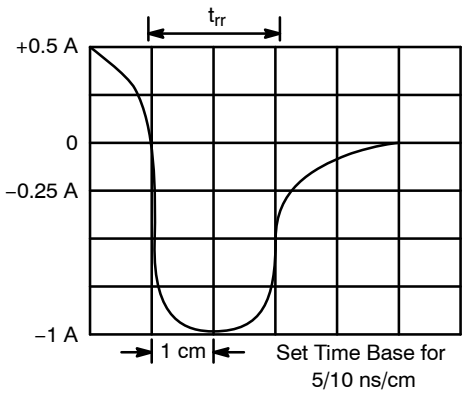


Figure 7. Reverse Recovery Time Characteristics

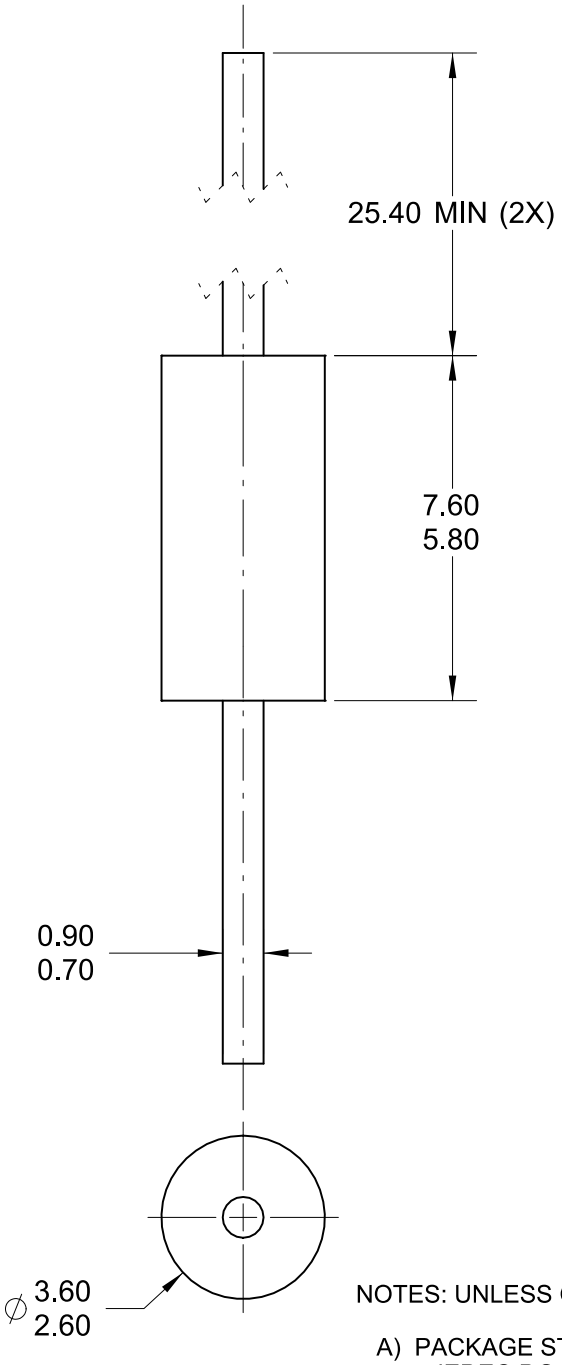
ORDERING INFORMATION

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

†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.

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ISSUE O

DATE 30 NOV 2016



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO-204 VARIATION AC.
B) PLASTIC PACKAGE BODY.
D) ALL DIMENSIONS ARE IN MILLIMETERS.

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