Rectifier, High Efficiency, Glass Passivated, 1.0 A

EGP10B - EGP10K



AXIAL LEAD / DO−41
CASE 017AH

Features

- Superfast Recovery Time for High Efficiency
- Low Forward Voltage, High Current Capability
- Low Leakage Current
- High Surge Current Capability

MARKING DIAGRAM



EGP10X = Specific Device Code
X = B/C/D/F/G/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_O	Average Rectified Current 0.375" lead length @ T_L = 75°C	1.0	A
$I_{f(surge)}$	Peak Forward Surge Current 8.3 ms single half−sine−wave Superimposed on rated load (JEDEC method)	30	A
P_D	Total Device Dissipation Derate above 25°C	2.5 17	W mW°C
I_C	Thermal Resistance, Junction to Ambient	50	°C/W
T_J, T_{STG}	Junction and Storage Temperature Range	−65~150	°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.
*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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

Parameter		Device						Unit
		10B	10C	10D	10F	10G	10K	
Peak Repetitive Reverse Voltage		100	150	200	300	400	800	V
Maximum RMS Voltage		70	105	140	210	280	560	V
DC Reverse Voltage (Rated V_R)		100	150	200	300	400	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		22			15			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

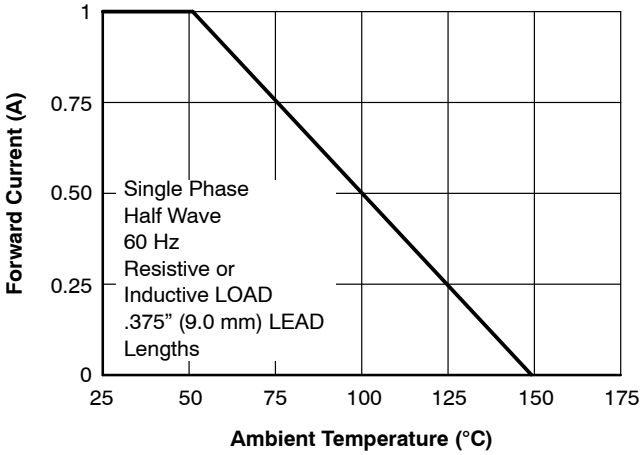


Figure 1. Forward Current Derating Curve

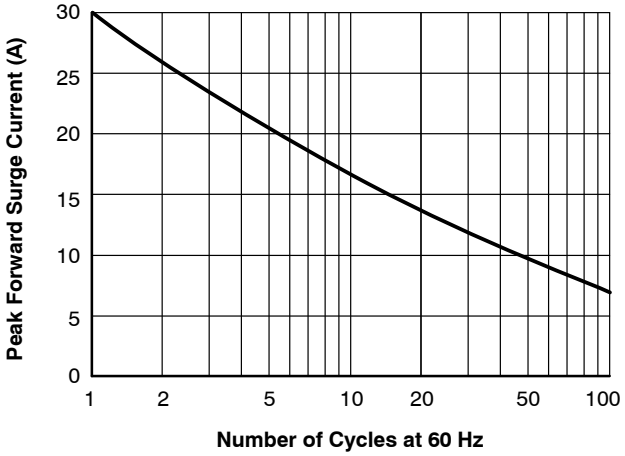


Figure 2. Non−Repetitive Surge Current

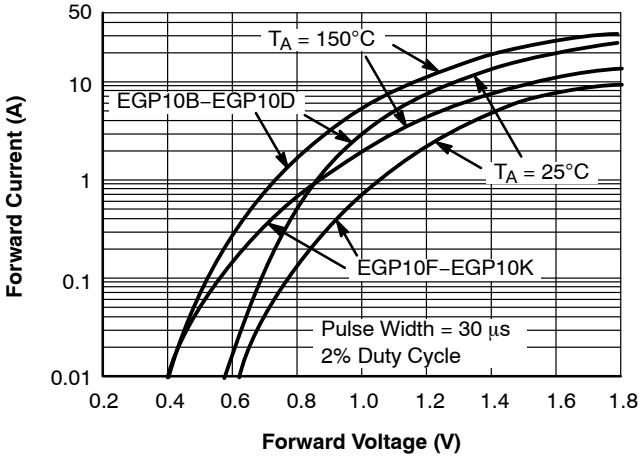


Figure 3. Forward Characteristics

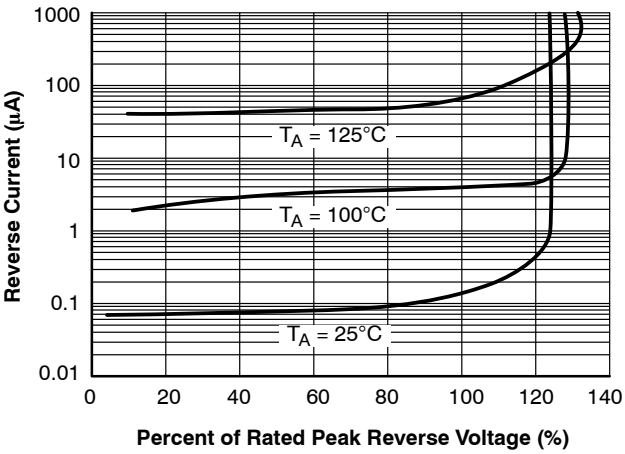


Figure 4. Reverse Characteristics

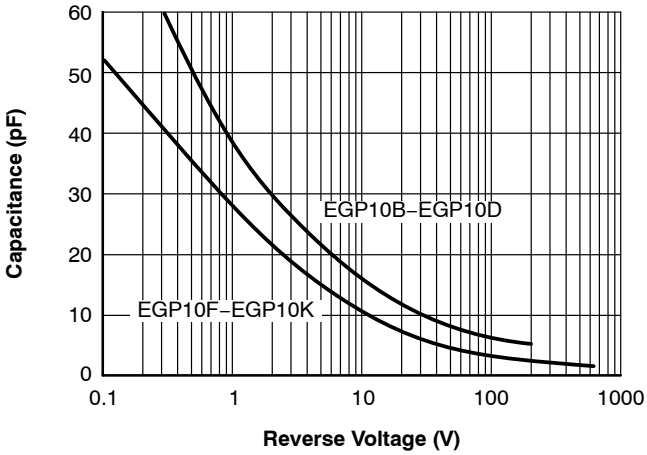
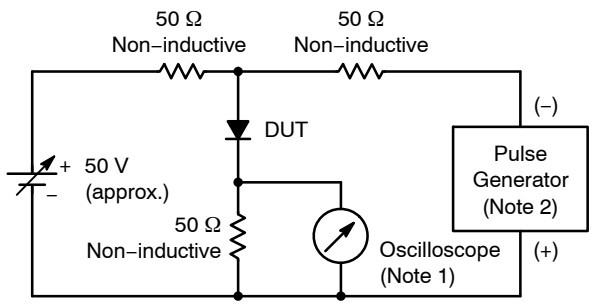


Figure 5. Junction Capacitance

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

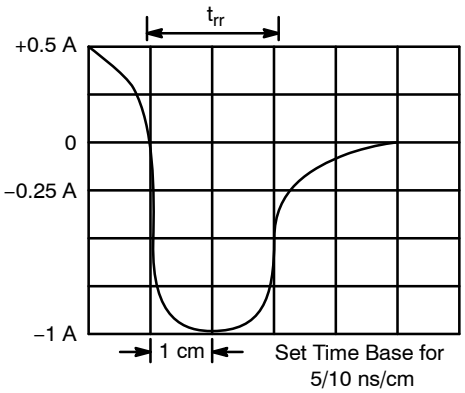


Figure 7. Reverse Recovery Time Characteristics

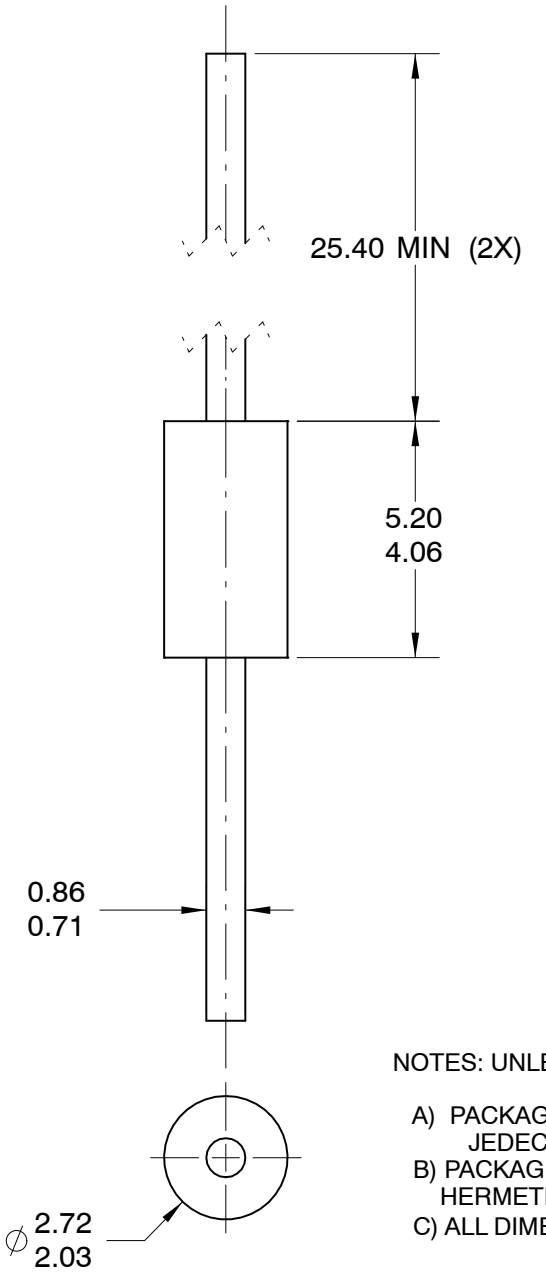
ORDERING INFORMATION

Device	Package	Shipping†
EGP10B	Axial Lead / DO−41 (Pb−Free)	5000 / Tape & Reel
EGP10C		
EGP10D		
EGP10F		
EGP10G		
EGP10K		

†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 31 AUG 2016



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO−204 VARIATION AL.
B) PACKAGE BODY CAN BE PLASTIC OR
HERMETICALLY SEALED GLASS.
C) ALL DIMENSIONS ARE IN MILLIMETERS.

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