

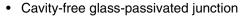
Vishay General Semiconductor

Glass Passivated Ultrafast Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	5.0 A					
V _{RRM}	50 V to 400 V					
I _{FSM}	150 A					
t _{rr}	50 ns					
V _F	0.95 V, 1.25 V					
T _J max.	150 °C					

FEATURES





· Ultrafast reverse recovery time

Low forward voltage drop

(e3)

· Low leakage current

COMPLIANT

· Low switching losses, high efficiency

High forward surge capability

• Solder dip 260 °C, 40 s

 Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

MECHANICAL DATA

Case: GP20, molded epoxy over glass body Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	EGP50A	EGP50B	EGP50C	EGP50D	EGP50F	EGP50G	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	٧
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_L = 55$ °C								Α
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	л 150						А
Operating and storage temperature range	T _J , T _{STG}	_J , T _{STG} - 65 to + 150						°C

Vishay General Semiconductor



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST (CONDITIONS	SYMBOL	EGP50A	EGP50B	EGP50C	EGP50D	EGP50F	EGP50G	UNIT
Maximum instantaneous forward voltage	5.0 A		V _F	0.95				1.25		٧
Maximum DC reverse current at rated DC blocking voltage		T _A = 25 °C T _A = 125 °C	I _R	5.0 50					μΑ	
Maximum reverse recovery time	I _F = 0.5 I _{rr} = 0.2	A, I _R = 1.0 A, 5 A	t _{rr}	50					ns	
Typical junction capacitance	4.0 V, 1	MHz	CJ	95 75				'5	pF	

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL EGP50A EGP50B EGP50C EGP50D EGP50F EGP50G UN						UNIT
Typical thermal resistance ⁽¹⁾	$R_{ hetaJA} \ R_{ hetaJL}$	20 5.0					°C/W

Note:

(1) Thermal resistance from junction to ambient, and from junction to lead at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
EGP50G-E3/54	1.01	54	1400	13" diameter paper tape and reel				
EGP50G-E3/73	1.01	73	1000	Ammo pack packaging				
EGP50GHE3/54 (1)	1.01	54	1400	13" diameter paper tape and reel				
EGP50GHE3/73 (1)	1.01	73	1000	Ammo pack packaging				

Note:

(1) Automotive grade AEC Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

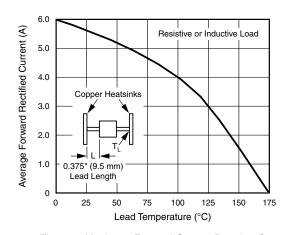


Figure 1. Maximum Forward Current Derating Curve

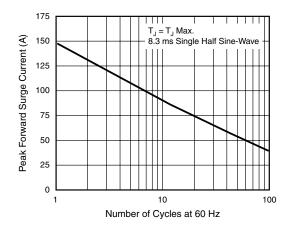


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



Vishay General Semiconductor

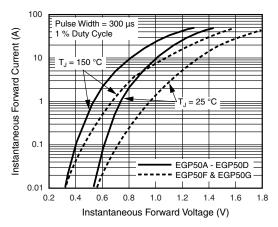


Figure 3. Typical Instantaneous Forward Characteristics

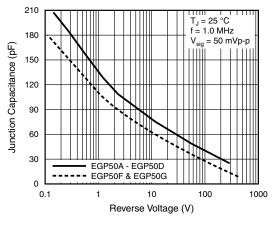


Figure 5. Typical Junction Capacitance

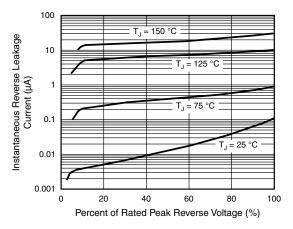


Figure 4. Typical Reverse Leakage Characteristics

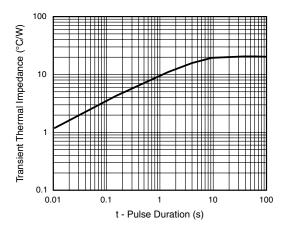
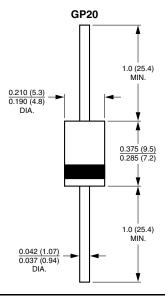


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





Vishay

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Revision: 18-Jul-08

Document Number: 91000 www.vishay.com