

EGP10A, EGP10B, EGP10C, EGP10D, EGP10F, EGP10G

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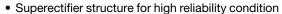
Vishay General Semiconductor

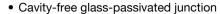
Glass Passivated Ultrafast Plastic Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	1.0 A					
V_{RRM}	50 V, 100 V, 150 V, 200 V, 300 V, 400 V					
I _{FSM}	30 A					
t _{rr}	50 ns					
V_{F}	0.95 V, 1.25 V					
T _J max.	150 °C					
Package	DO-41 (DO-204AL)					
Circuit configuration	Single					

FEATURES





RoHS COMPLIANT

- · Ultrafast reverse recovery time
- · Low forward voltage drop
- Low leakage current
- · Low switching losses, high efficiency
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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: DO-41 (DO-204AL), molded epoxy over glass body Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	EGP10A	EGP10B	EGP10C	EGP10D	EGP10F	EGP10G	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	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55$ °C	I _{F(AV)}	(AV) 1.0						Α
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	FSM 30						Α
Operating junction and storage temperature range	T _J , T _{STG}	T _J , T _{STG} -65 to +150						°C



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS		SYMBOL	EGP10A	EGP10B	EGP10C	EGP10D	EGP10F	EGP10G	UNIT
Maximum instantaneous forward voltage	1.0 A		V _F	0.95 1.25				25	V	
		T _A = 25 °C		5.0						
current at rated DC blocking voltage		T _A = 125 °C	I _R	100					μA	
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	22 15				5	pF	

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER SYMBOL EGP10A EGP10B EGP10C EGP10D EGP10F EGP10G UN							UNIT
Typical thermal resistance	R _{0JA} (1)	(1) 50					°C/W

Note

⁽¹⁾ Thermal resistance from junction to ambient, and from junction to lead at 0.375" (9.5 mm) lead length, PCB mounted

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
EGP10D-E3/54	0.337	54	5500	13" diameter paper tape and reel				
EGP10D-E3/73	0.337	73	3000	Ammo pack packaging				

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

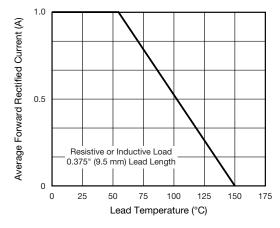


Fig. 1 - Maximum Forward Current Derating Curve

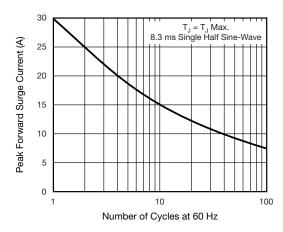


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current



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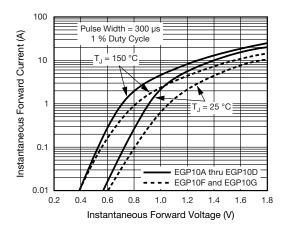


Fig. 3 - Typical Instantaneous Forward Characteristics

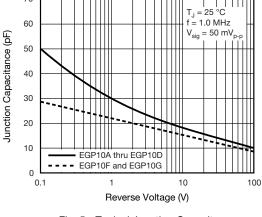


Fig. 5 - Typical Junction Capacitance

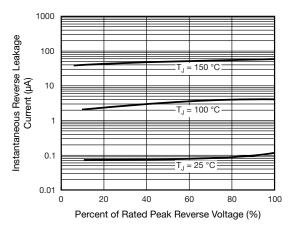


Fig. 4 - Typical Reverse Leakage Characteristics

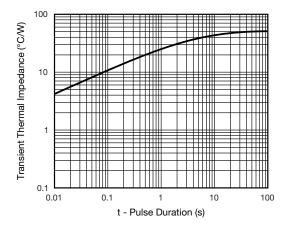


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

0.107 (2.7) 0.080 (2.0) DIA. 0.205 (5.2) 0.1060 (4.1) 1.0 (25.4) MIN. 0.205 (5.2) 0.160 (4.1) 1.0 (25.4) MIN.



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