

1N3611GP, 1N3612GP, 1N3613GP, 1N3614GP, 1N3957GP

www.vishay.com

Vishay General Semiconductor

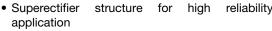
Glass Passivated Junction Plastic Rectifier

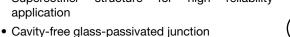


DO-204AL (DO-41)

PRIMARY CHARACTERISTICS						
I _{F(AV)}	1.0 A					
V_{RRM}	200 V, 400 V, 600 V, 800 V, 1000 V					
I _{FSM}	30 A					
I _R	1.0 µA					
V_{F}	1.0 V					
T _J max.	175 °C					
Package	DO-204AL (DO-41)					
Diode variation	Single die					

FEATURES





Low forward voltage drop

Low leakage current, I_R less than 0.1 μA

· 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 general purpose rectification of power supplies, inverters, converters, and freewheeling diodes application

MECHANICAL DATA

Case: 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) ⁽¹⁾							
PARAMETER	SYMBOL	1N3611GP	1N3612GP	1N3613GP	1N3614GP	1N3957GP	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	Α
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 75 °C	I _{F(AV)}	1.0					Α
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30				А	
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175				°C	

Note

(1) JEDEC® registered values



1N3611GP, 1N3612GP, 1N3613GP, 1N3614GP, 1N3957GP

www.vishay.com

Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)											
PARAMETER	TEST CONDITIONS		SYMBOL	1N3611GP	1N3612GP	1N3613GP	1N3614GP	1N3957GP	UNIT		
Maximum instantaneous forward voltage	1.0 A		V _F	1.0				V			
Maximum DC reverse		T _A = 25 °C	I _R ⁽¹⁾	1.0							
current at rated DC blocking voltage		T _A = 150 °C	IR (''			300			μΑ		
Typical reverse recovery time	$I_F = 0.5$ $I_{rr} = 0.2$	A, I _R = 1.0 A, 5 A	t _{rr}	2.0			μs				
Typical junction capacitance	4.0 V, 1	MHz	СЈ	8.0			pF				

Note

⁽¹⁾ JEDEC registered values

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL 1N3611GP 1N3612GP 1N3613GP 1N3614GP 1N3957GP UN					UNIT	
Typical thormal registance	R _{0JA} (1)	55					°C/W
Typical thermal resistance	R _{0JL} (1)	25					C/VV

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				
1N3612GP-E3/54	0.335	54	5500	13" diameter paper tape and reel				
1N3612GP-E3/73	0.335	73	3000	Ammo pack packaging				

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

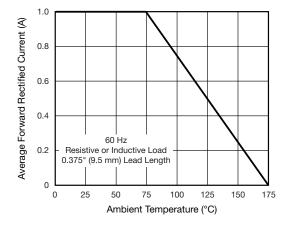


Fig. 1 - Max. Forward Current Derating

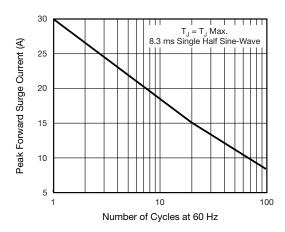


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

Note

· Lead diameter is

1N3611GP, 1N3612GP, 1N3613GP, 1N3614GP, 1N3957GP

www.vishay.com

Vishay General Semiconductor

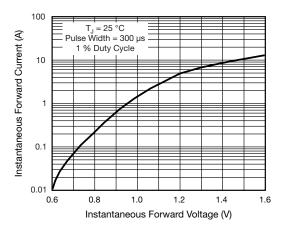


Fig. 3 - Typical Instantaneous Forward Characteristics

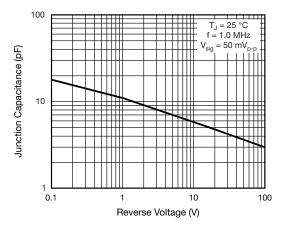


Fig. 5 - Typical Junction Capacitance

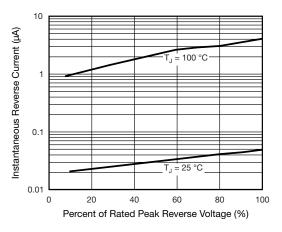


Fig. 4 - Typical Reverse Characteristics

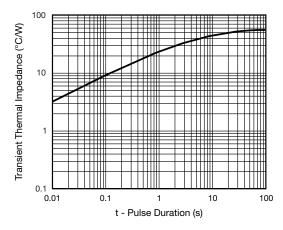


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

0.107 (2.7) 0.080 (2.0) DIA. 0.026 (0.66) 0.026 (0.68) 0.023 (0.58) for suffix "E" part numbers



Legal Disclaimer Notice

Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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