

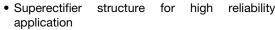
Vishay General Semiconductor

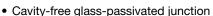
Glass Passivated Junction Rectifier



PRIMARY CHARACTERISTICS					
I _{F(AV)}	1.0 A				
V _{RRM}	200 V to 800 V				
I _{FSM}	50 A				
I _R	5.0 μΑ				
V _F	1.2 V				
T _J max.	175 °C				

FEATURES





· Low forward voltage drop

Low leakage current

• High forward surge capability

Meets environmental standard MIL-S-19500

• Solder dip 275 °C max. 10 s, per JESD 22-B106

AEC-Q101 qualified

 Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

MECHANICAL DATA

Case: DO-204AC, molded epoxy over glass body Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS compliant, commercial grade Base P/NHE3 - RoHS compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)							
PARAMETER		SYMBOL	1N5059GP	1N5060GP	1N5061GP	1N5062GP	UNIT
Maximum repetitive peak reverse voltage		V _{RRM} ⁽¹⁾	200	400	600	800	V
Maximum RMS voltage		V _{RMS}	140	280	420	560	V
Maximum DC blocking voltage		V _{DC} (1)	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 75 °C		I _{F(AV)} (1)	1.0			Α	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load			50				Α
Maximum full load reverse current, full cycle	T _A = 25 °C	. (1)	5.0				
average 0.375" (9.5 mm) lead length at	T _A = 75 °C	I _{R(AV)} ⁽¹⁾	150				μA
Operating junction and storage temperature range		T _J , T _{STG}	- 65 to + 175			°C	

Note

(1) JEDEC registered values

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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	TEST CONDITIONS		SYMBOL	1N5059GP	1N5060GP	1N5061GP	1N5062GP	UNIT
Max. instantaneous forward voltage	1.0 A	T _A = 75 °C	V _F ⁽¹⁾	1.2				V
Maximum DC reverse current at rated DC blocking voltage		T _A = 25 °C	I _R ⁽¹⁾	5.0			μΑ	
		T _A = 175 °C	'R''	300				
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	15			pF	

Note

⁽¹⁾ JEDEC registered values

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	L 1N5059GP 1N5060GP 1N5061GP 1N5062GF				UNIT	
Typical thermal resistance	R ₀ JA (1)		°C/W				
Typical thermal resistance			C/VV				

Note

⁽¹⁾ Thermal resistance from junction to ambient 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			
1N5061GP-E3/54	0.425	54	4000	13" diameter paper tape and reel			
1N5061GP-E3/73	0.425	73	2000	Ammo pack packaging			
1N5061GPHE3/54 (1)	0.425	54	4000	13" diameter paper tape and reel			
1N5061GPHE3/73 (1)	0.425	73	2000	Ammo pack packaging			

Note

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

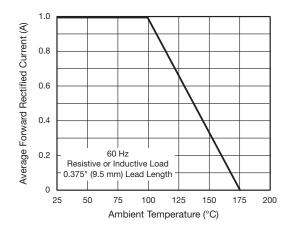


Fig. 1 - Forward Current Derating Curve

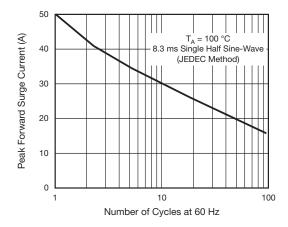


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

⁽¹⁾ AEC-Q101 qualified

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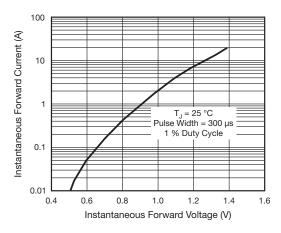


Fig. 3 - Typical Instantaneous Forward Characteristics

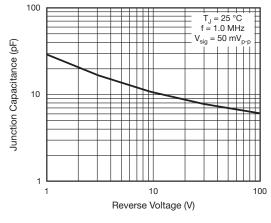


Fig. 5 - Typical Junction Capacitance

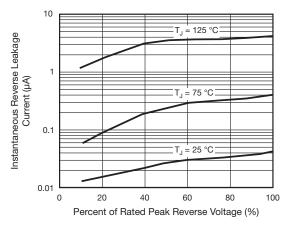


Fig. 4 - Typical Reverse Characteristics

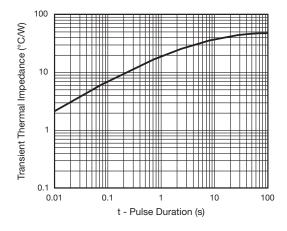
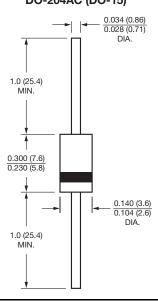


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters) DO-204AC (DO-15)



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For technical questions within your region, please contact one of the following: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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