

1N4245GP, 1N4246GP, 1N4247GP, 1N4248GP, 1N4249GP

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RoHS

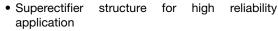
Glass Passivated Junction Plastic Rectifier

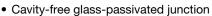


DO-204AL (DO-41)

PRIMARY CHARACTERISTICS					
I _{F(AV)}	1.0 A				
V _{RRM}	200 V, 400 V, 600 V, 800 V, 1000 V				
I _{FSM}	25 A				
I _R	1.0 μA				
V _F	1.2 V				
T _J max.	175 °C				
Package	DO-204AL (DO-41)				
Diode variations	Single die				

FEATURES





• Low forward voltage drop

· Low leakage current

High forward surge capability

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

 Material categorization: for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

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	1N4245GP	1N4246GP	1N4247GP	1N4248GP	1N4249GP	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	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 55 °C	I _{F(AV)}	1.0					Α
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	25				Α	
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at $T_A = 55$ °C	I _{R(AV)}	50				μΑ	
Operating junction temperature range	TJ	-65 to +160				°C	
Storage temperature range	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	1N4245GP	1N4246GP	1N4247GP	1N4248GP	1N4249GP	UNIT
Maximum instantaneous forward voltage	1.0 A		V _F ⁽¹⁾	V _F ⁽¹⁾ 1.2				V	
Maximum reverse current at rated DC		T _A = 25 °C		$T_A = 25 ^{\circ}\text{C}$ $I_B^{(1)}$ 1.0					
blocking voltage		T _A = 125 °C	IR (*)			25			μA
Typical junction capacitance	4.0 V, 1	MHz	CJ	8.0				pF	

Note

⁽¹⁾ JEDEC registered values

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER SYMBOL 1N4245GP 1N4246GP 1N4247GP 1N4248GP 1N4249GP U						UNIT	
Typical thormal registance	R _{0JA} (1)	55					°C/W
Typical thermal resistance	R ₀ JL (1)	25					C/VV

Note

⁽¹⁾ Thermal resistance from junction to ambient 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				
1N4247GP-E3/54	0.335	54	5500	13" diameter paper tape and reel				
1N4247GP-E3/73	0.335	73	3000	Ammo pack packaging				

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

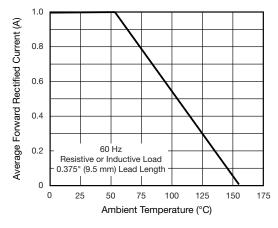


Fig. 1 - Forward Current Derating Curve

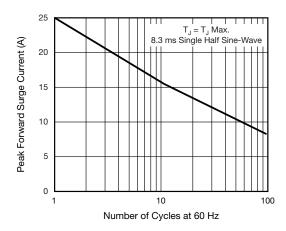


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

Note

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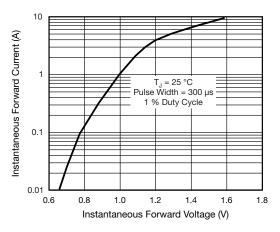


Fig. 3 - Typical Instantaneous Forward Characteristics

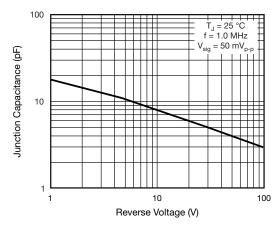


Fig. 5 - Typical Junction Capacitance

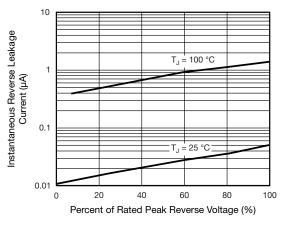


Fig. 4 - Typical Reverse Characteristics

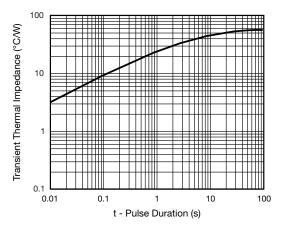
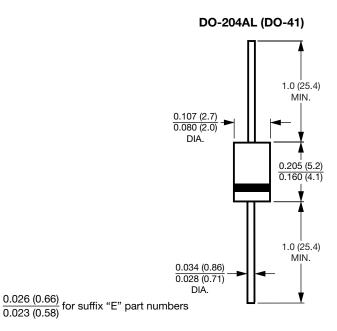


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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