

GP15A, GP15B, GP15D, GP15G, GP15J, GP15K, GP15M

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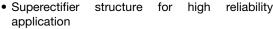
Vishay General Semiconductor

Glass Passivated Junction Plastic Rectifier



PRIMARY CHARACTERISTICS								
I _{F(AV)}	1.5 A							
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V							
I _{FSM}	50 A							
I _R	5.0 μA							
V _F	1.1 V							
T _J max.	175 °C							
Package	DO-204AC (DO-15)							
Diode variations	Single die							

FEATURES





· Cavity-free glass-passivated junction

RoHS

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 for consumer applications.

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

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	GP15A	GP15B	GP15D	GP15G	GP15J	GP15K	GP15M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	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)}	1.5					Α		
Peak forward surge current 8.3 ms single half-sine wave superimposed on rated load	I _{FSM}	50					Α		
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at T _A = 55 °C	I _{R(AV)}	100					μΑ		
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175					°C		

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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)											
PARAMETER	TEST CONDITIONS		SYMBOL	GP15A	GP15B	GP15D	GP15G	GP15J	GP15K	GP15M	UNIT
Maximum instantaneous forward voltage	1.5 A		V _F	1.1						V	
Maximum reverse current at rated DC		T _A = 25 °C	1_	5.0							
blocking voltage		T _A = 150 °C	I _R	200							μA
Typical reverse recovery time	I _F = 0.5 I _{rr} = 0.2	A, I _R = 1.0 V, 25 A	t _{rr}	3.5						μs	
Typical junction capacitance	4.0 V, 1	MHz	СЈ	15							pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER SYMBOL GP15A GP15B GP15D GP15G GP15J GP15K GP15M					GP15M	UNIT		
Typical thermal resistance	R _{0JA} (1)	45						°C/W
Typical thermal resistance	R _{0JL} (1)	20						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	DELIVERY MODE								
GP15J-E3/54	0.425	54	4000	13" diameter paper tape and reel					
GP15J-E3/73	0.425	73	2000	Ammo pack packaging					

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

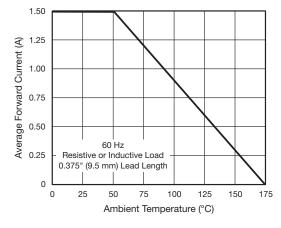


Fig. 1 - Forward Current Derating Curve

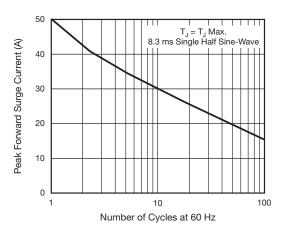


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

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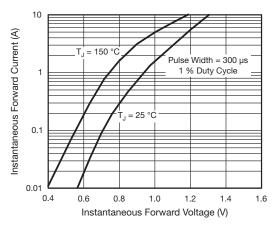


Fig. 3 - Typical Instantaneous Forward Characteristics

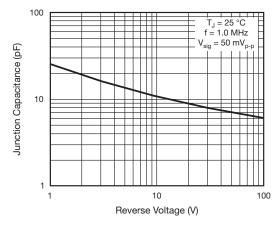


Fig. 5 - Typical Junction Capacitance

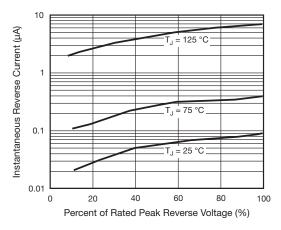


Fig. 4 - Typical Reverse Characteristics

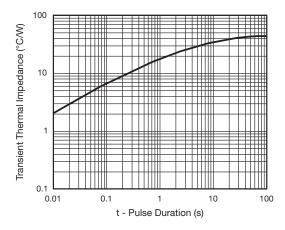
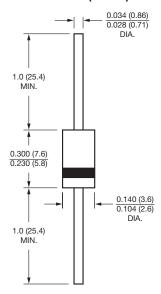


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-204AC (DO-15)





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