

1N4383GP thru 1N4385GP, 1N4585GP, 1N4586GP

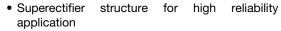
Vishay General Semiconductor

Glass Passivated Junction Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	1.0 A					
V _{RRM}	200 V to 1000 V					
I _{FSM}	50 A					
I _R	5.0 μΑ					
V _F	1.0 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) ⁽¹⁾							
PARAMETER	SYMBOL	1N4383GP	1N4384GP	1N4385GP	1N4585GP	1N4586GP	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 $T_A = 100 ^{\circ}\text{C}$	I _{F(AV)}	1.0					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 = 100 °C	I _{R(AV)}	275	250	225	200	200	μΑ
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	1N4383GP	1N4384GP	1N4385GP	1N4585GP	1N4586GP	UNIT
Maximum instantaneous forward voltage	1.0 A		V _F	1.0					٧
Maximum DC reverse current at rated DC		T _A = 25 °C	5.0				μA		
blocking voltage		T _A = 150 °C	I _R 250					μA	
Typical reverse recovery time	$I_F = 0.5$ $I_{rr} = 0.2$	A, I _R = 1.0 A, 5 A	t _{rr} ⁽¹⁾	2.0				μs	
Typical junction capacitance	4.0 V, 1	MHz	CJ	15				pF	

Note

⁽¹⁾ JEDEC registered values

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER		1N4383GP	1N4384GP	1N4385GP	1N4585GP	1N4586GP	UNIT
Typical thermal resistance	R _{θJA} ⁽¹⁾	45				°C/W	

⁽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				
1N4385GP-E3/54	0.425	54	4000	13" diameter paper tape and reel				
1N4385GP-E3/73	0.425	73	2000	Ammo pack packaging				
1N4385GPHE3/54 ⁽¹⁾	0.425	54	4000	13" diameter paper tape and reel				
1N4385GPHE3/73 ⁽¹⁾	0.425	73	2000	Ammo pack packaging				

Note

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

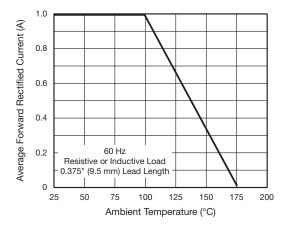


Fig. 1 - Forward Current Derating Curve

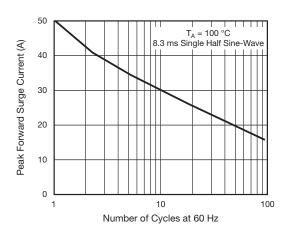


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

⁽¹⁾ AEC-Q101 qualified



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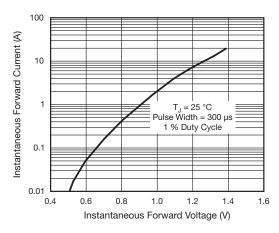


Fig. 3 - Typical Instantaneous Forward Characteristics

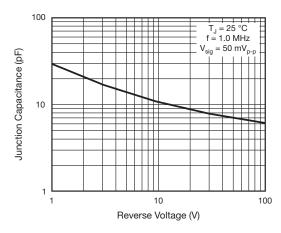


Fig. 5 - Typical Junction Capacitance

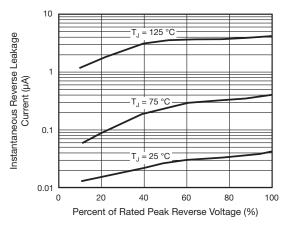


Fig. 4 - Typical Reverse Characteristics

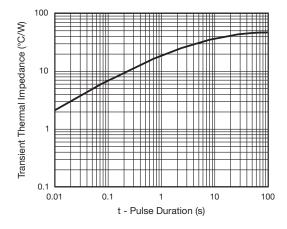
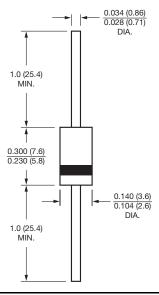


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-204AC (DO-15)





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Офис по работе с юридическими лицами:

105318, г. Москва, ул. Щербаковская д. 3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru moschip.ru_6 moschip.ru 4 moschip.ru 9