

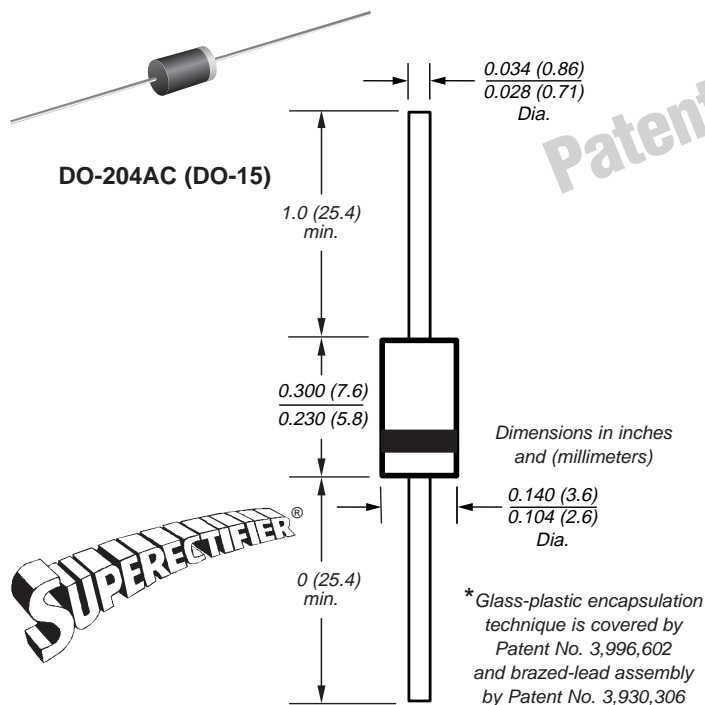


# 1N4383GP thru 1N4385GP, 1N4585GP and 1N4586GP

Vishay Semiconductors  
formerly General Semiconductor

## Glass Passivated Junction Rectifiers

Reverse Voltage  
200 to 1000V  
Forward Current 1.0A



### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at  $T_A = 100^\circ\text{C}$  with no thermal runaway
- High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** JEDEC DO-204AC, molded plastic over glass body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.015oz., 0.4g

### Maximum Ratings & Thermal Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symbol	1N 4383GP	1N 4384GP	1N 4385GP	1N 4585GP	1N 4586GP	Unit
* Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	400	600	800	1000	V
* Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	560	700	V
* Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	800	1000	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 100^\circ\text{C}$	I <sub>F(AV)</sub>	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A = 100^\circ\text{C}$	I <sub>FSM</sub>	50					A
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A = 100^\circ\text{C}$	I <sub>R(AV)</sub>	275	250	225	200	200	$\mu\text{A}$
Typical thermal resistance <sup>(1)</sup>	R <sub><math>\theta</math>JA</sub>	45					$^\circ\text{C}/\text{W}$
* Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175					$^\circ\text{C}$

### Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.0	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 150^\circ\text{C}$	I <sub>R</sub>	5.0 250	$\mu\text{A}$
* Typical reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	t <sub>rr</sub>	2.0	$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	15	pF

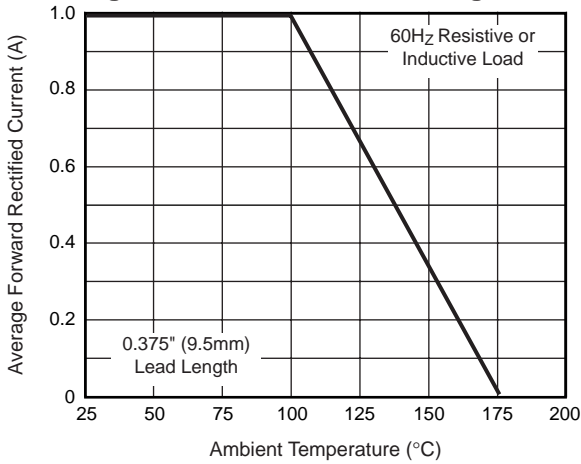
**Note:** (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted \*JEDEC registered values



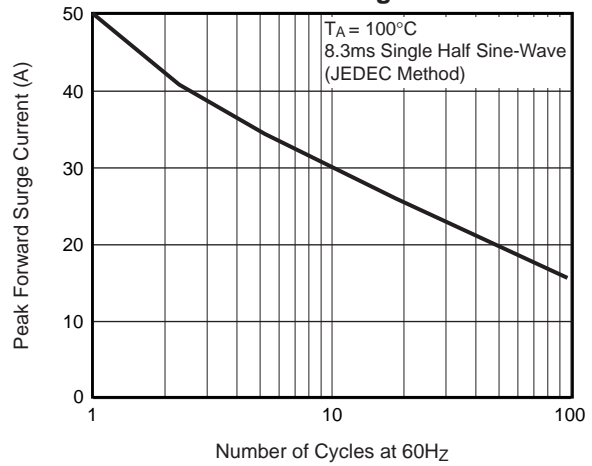
Vishay Semiconductors  
formerly General Semiconductor

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

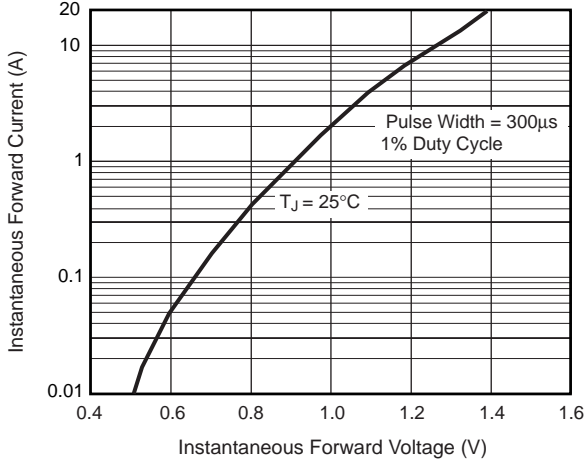
**Fig. 1 – Forward Current Derating Curve**



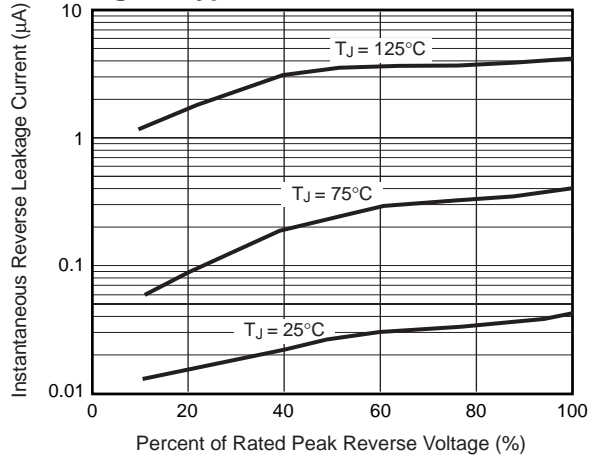
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



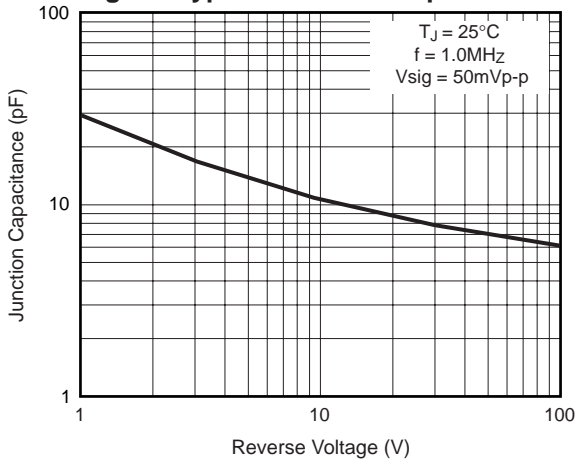
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Transient Thermal Impedance**

