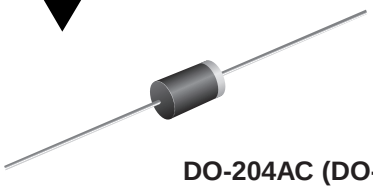
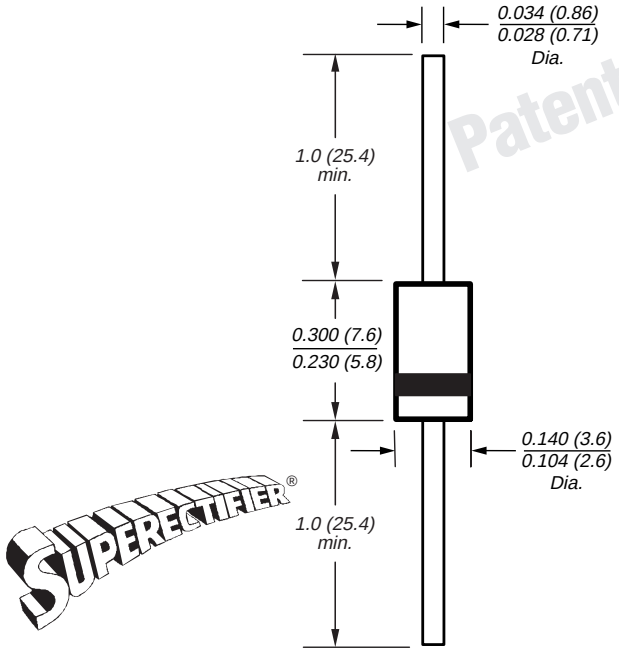
Vishay Semiconductors
formerly General Semiconductor



Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 50 to 1000V
Forward Current 1.5A

DO-204AC (DO-15)



Dimensions in inches and (millimeters)
*****Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306*

Patented*

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
- 1.5 Ampere operation at T_A=55°C with no thermal runaway
- Typical I_R less than 0.1µA
- High temperature soldering guaranteed: 350°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: 0.015 oz., 0.4 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	RGP 15A	RGP 15B	RGP 15D	RGP 15G	RGP 15J	RGP 15K	RGP 15M	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" (9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	1.5							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T_A=55°C	$I_{R(AV)}$	100							µA
Typical thermal resistance(1)	$R_{\Theta JA}$	45							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 1.5A	V_F	1.3			V
Maximum DC reverse current at rated DC blocking voltage T_A=25°C / T_A=150°C	I_R	5.0 / 200			µA
Maximum reverse recovery time I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	150	250	500	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	25			pF

Notes: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

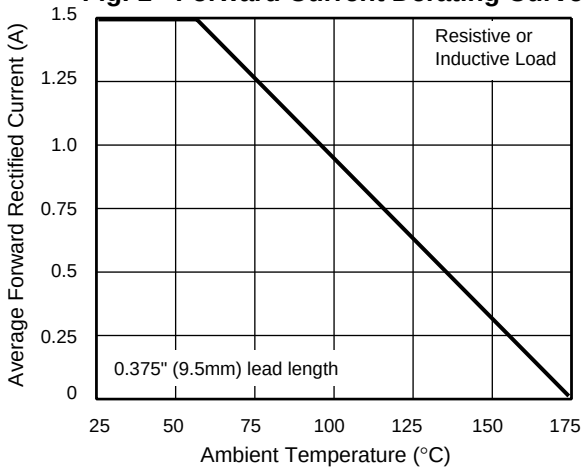


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

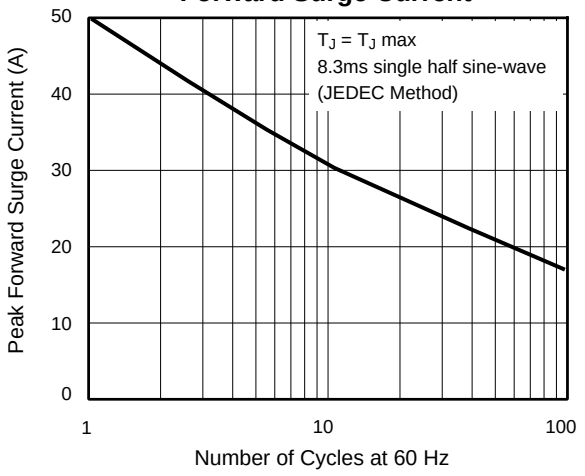


Fig. 3 - Typical Instantaneous Forward Characteristics

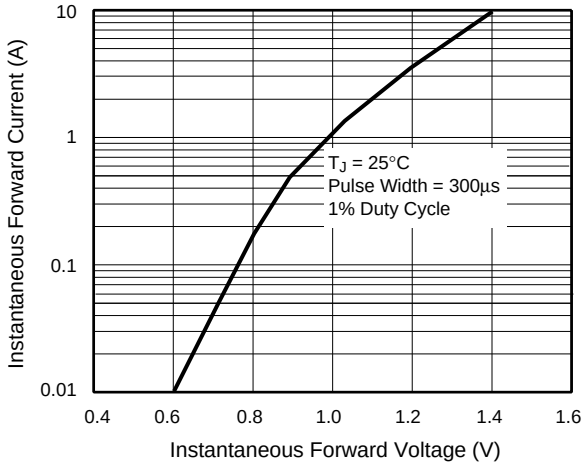


Fig. 4 - Typical Reverse Characteristics

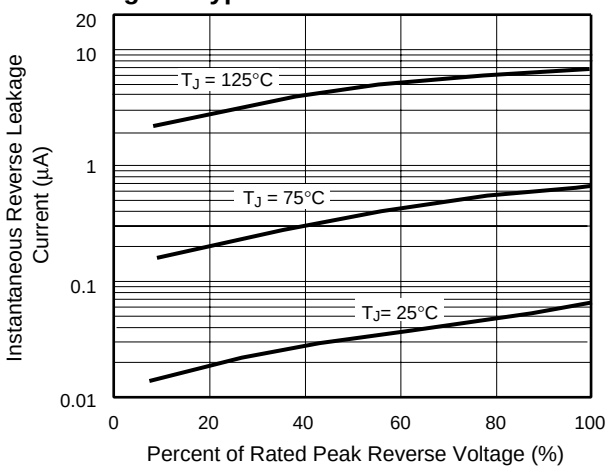


Fig. 5 - Typical Junction Capactitance

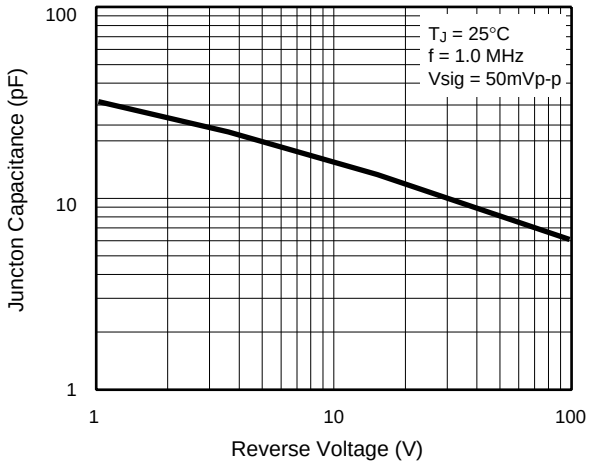


Fig. 6 - Typical Transient Thermal Impedance