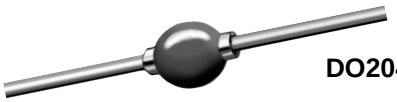
GENERAL SEMICONDUCTOR®

RG1A thru RG1M

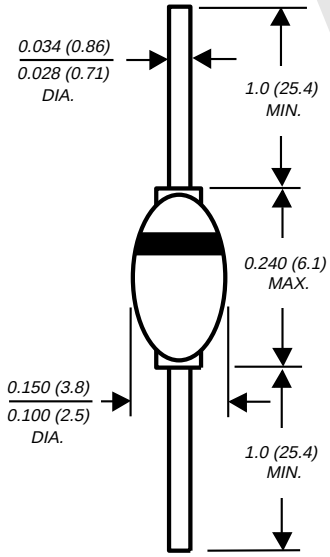
Glass Passivated Fast Switching Rectifier



DO204AP

Reverse Voltage 50 to 1000V
Forward Current 1.0A

Patented*



Dimensions in inches and (millimeters)

*****Brazed-lead assembly is covered by Patent No. 3,930,306*

Features

- High temperature metallurgically bonded construction
- Hermetically sealed package
- Cavity-free glass passivated junction
- 1.0 ampere operation at T_A = 55°C with no thermal runaway
- Typical I_R less than 0.1µA
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AP Solid glass body
Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.02 ounce, 0.56 gram

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	RG1A	RG1B	RG1D	RG1G	RG1J	RG1K	RG1M	UNITS
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	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum full load reverse current, full cycle average 0.375” (9.5mm) lead length at T_A=25°C T_A=100°C	$I_{R(AV)}$	1.0 100							µA
Typical thermal resistance (NOTE 1)	$R_{\Theta JA}$	55							°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.

	SYMBOLS	RG1A	RG1B	RG1D	RG1G	RG1J	RG1K	RG1M	UNITS
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current at rated DC blocking voltage	I_R	2.0							µA
Maximum reverse recovery time at at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	150				200	250	500	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	15							pF

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

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

FIG. 1 - FORWARD CURRENT DERATING CURVE

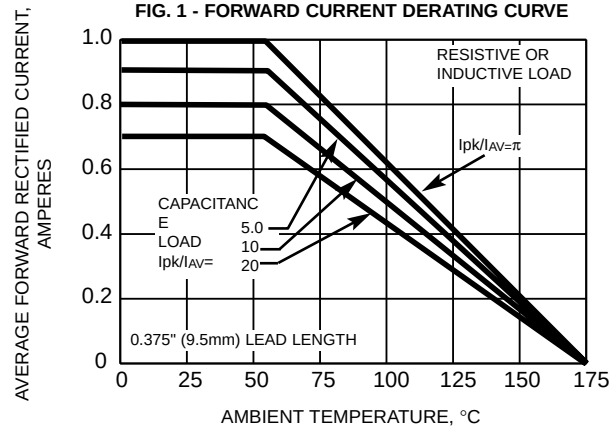

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

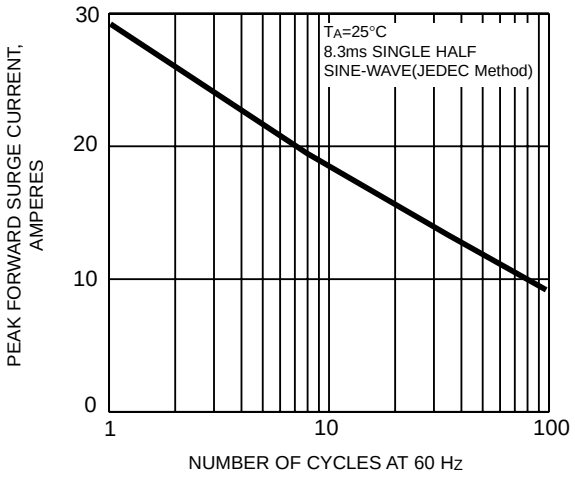

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

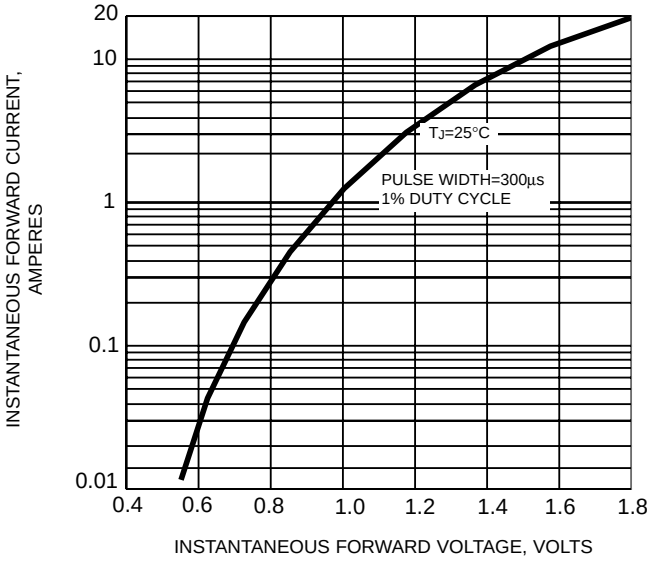

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

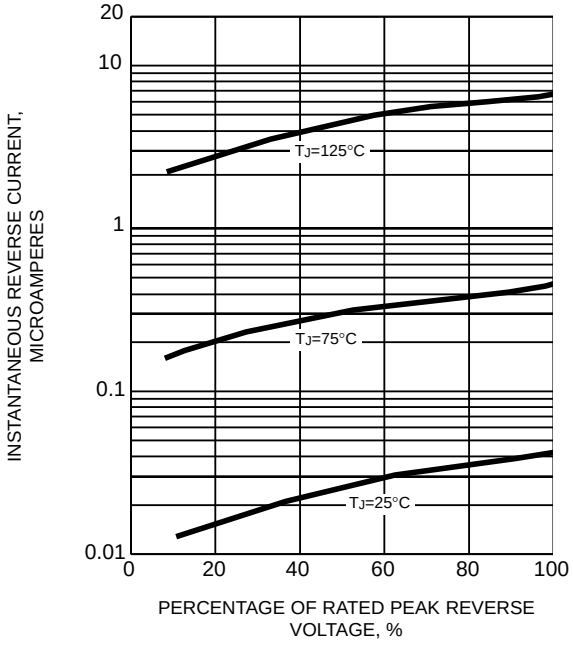

FIG. 5 - TYPICAL JUNCTION CAPACITANCE