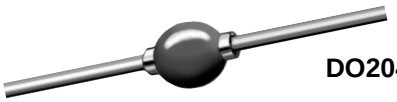
GENERAL SEMICONDUCTOR®

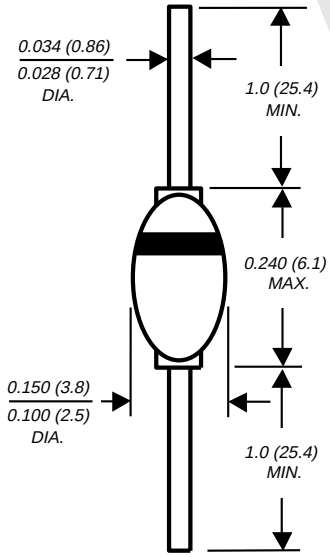
1N5059 THRU 1N5062

Glass Passivated Junction Rectifier

Reverse Voltage 200 to 800 V
Forward Current 1.0 A



DO204AP



Dimensions in inches and (millimeters)

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

Features

- High temperature metallurgically bonded construction
- 1.0 ampere operation at T_A=75°C with no thermal runaway
- Typical I_R less than 0.1µA
- Hermetically sealed package
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 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	1N5059	1N5060	1N5061	1N5062	UNITS
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	V
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=75°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}	50				A
* Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T_A=25°C	$I_{R(AV)}$	5.0				µA
T_A=75°C		150		100		
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$	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	1N5059	1N5060	1N5061	1N5062	UNITS
* Maximum instantaneous forward voltage at 1.0A	V_F	1.2				V
* Maximum DC reverse current at rated DC blocking voltage T_A=25°C	I_R	5.0				µA
T_A=175°C		300		200		
Typical reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	1.5				µs
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
*JEDEC registered values

1/17/00

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

FIG. 1 - FORWARD CURRENT DERATING CURVE

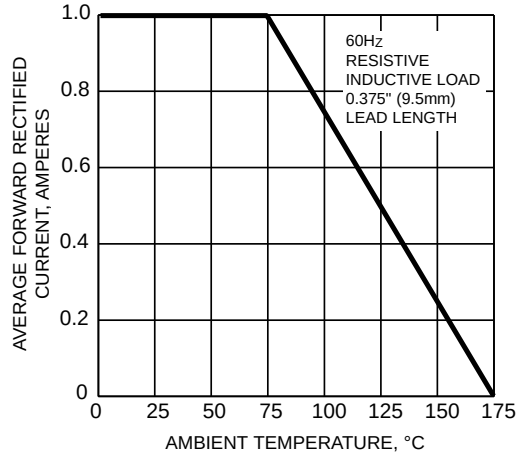


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

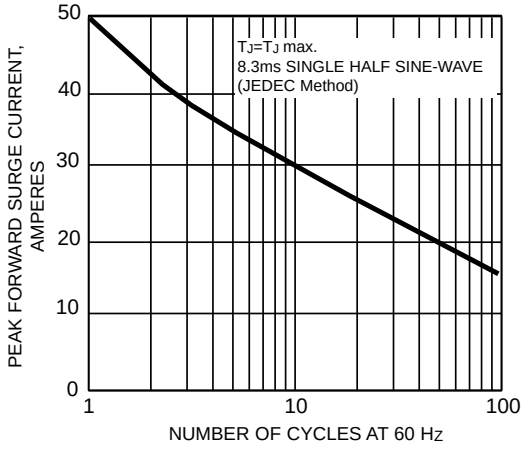


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

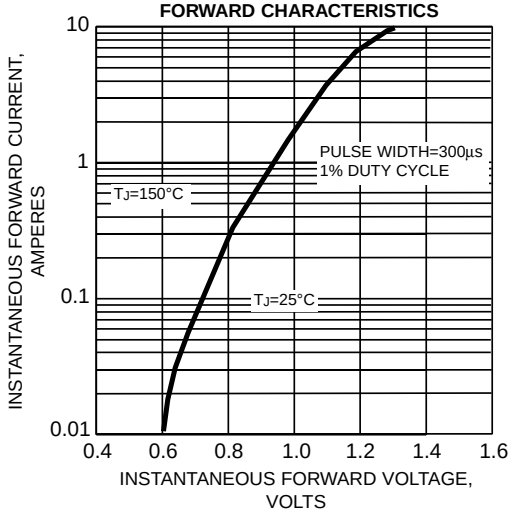


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

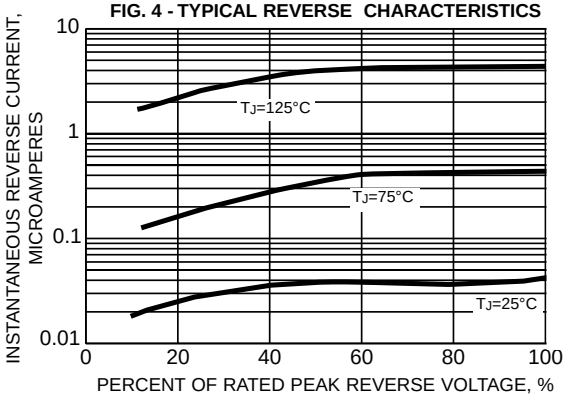


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

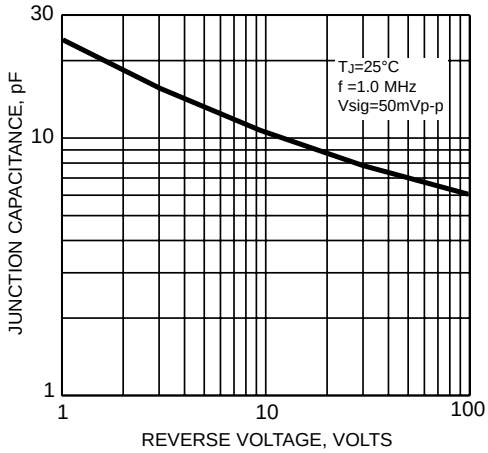


FIG. 6 - MAXIMUM NON-REPETITIVE PEAK PULSE REVERSE AVALANCHE POWER DISSIPATION