

1N5059 THRU 1N5062

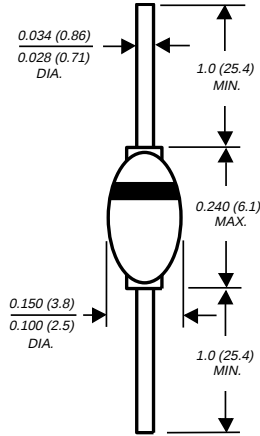
GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 200 to 800 Volts

Forward Current - 1.0 Ampere

PATENTED *

DO-204AP



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 $T_A=75^{\circ}\text{C}$ with no thermal runaway
- ♦ Typical I_R less than $0.1\mu\text{A}$
- ♦ Hermetically sealed package
- ♦ Glass passivated cavity-free junction
- ♦ Capable of meeting environmental standards of MIL-S-19500
- ♦ 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-204AP solid glass body

Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.02 ounce, 0.56 gram

MAXIMUM RATINGS AND ELECTRICAL 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	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	560	Volts
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.0				Amp
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0				Amps
* Maximum instantaneous forward voltage at 1.0A	V_F	1.2				Volts
* Maximum full Load reverse current, full cycle average 0.375" (9.5mm) $T_A=25^{\circ}\text{C}$ lead length at $T_A=75^{\circ}\text{C}$	$I_{R(AV)}$	5.0				μA
		150		100		
* Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=175^{\circ}\text{C}$	I_R	5.0				μA
		300		200		
Typical reverse recovery time (NOTE 1)	t_{rr}	1.5				μs
Typical junction capacitance (NOTE 2)	C_J	15.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	55.0				$^{\circ}\text{C}/\text{W}$
* Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175				$^{\circ}\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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

* JEDEC registered values

RATINGS AND CHARACTERISTIC CURVES 1N5059 THRU 1N5062

FIG. 1 - FORWARD CURRENT DERATING CURVE

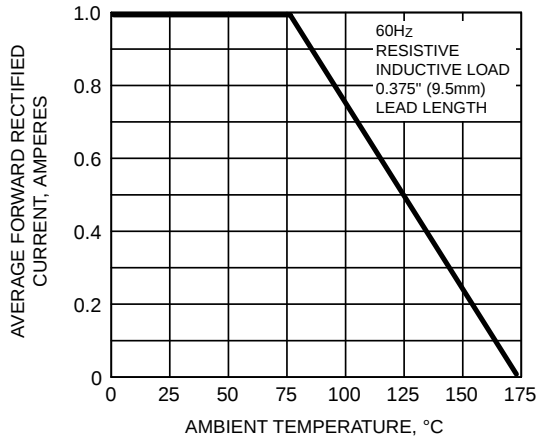


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

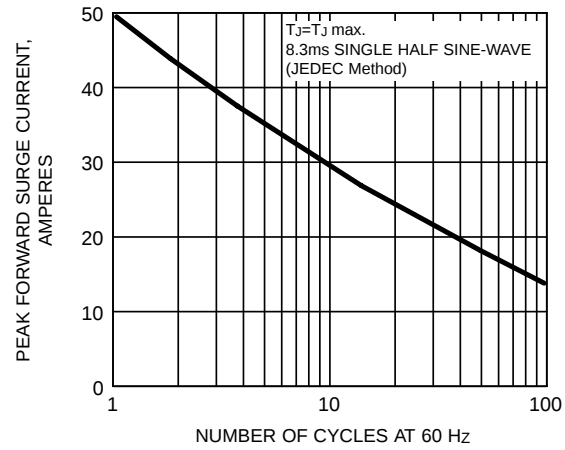


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

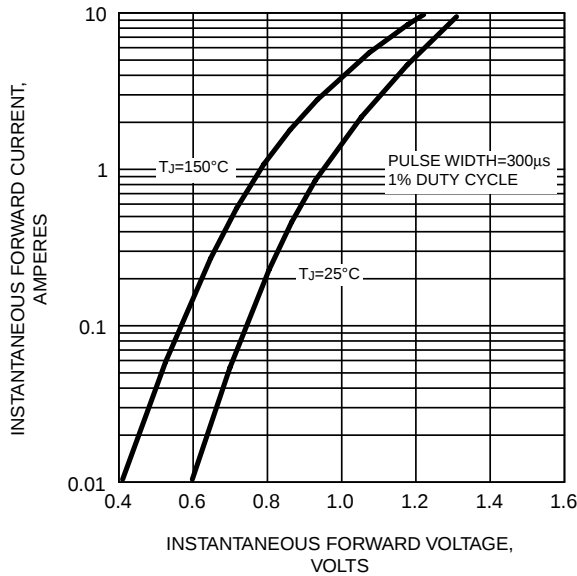


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

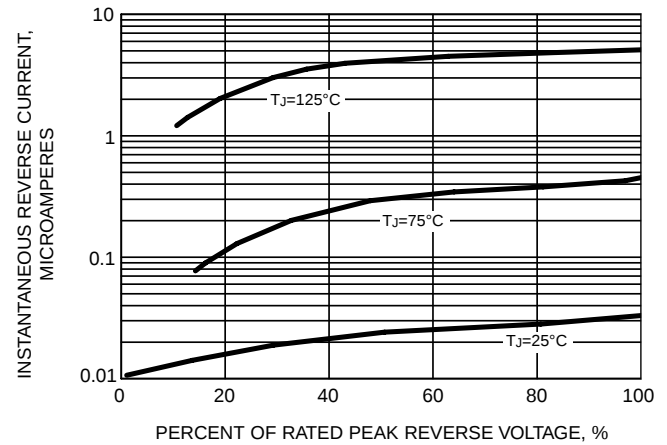


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

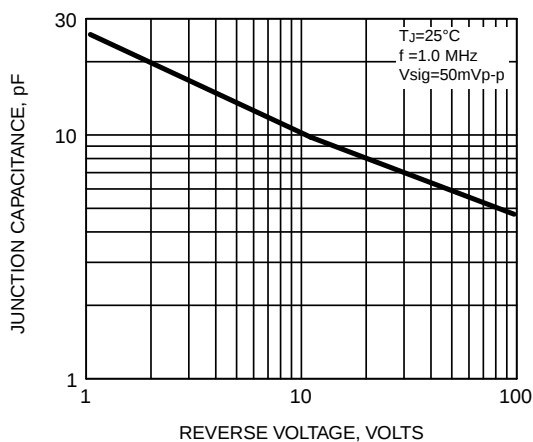


FIG. 6 - MAXIMUM NON-REPETITIVE PEAK PULSE REVERSE AVALANCHE POWER DISSIPATION

