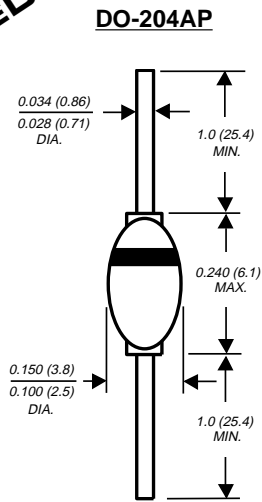


# 1N5059 THRU 1N5062

## GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 200 to 800 Volts      Forward Current - 1.0 Ampere

**PATENTED \***



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

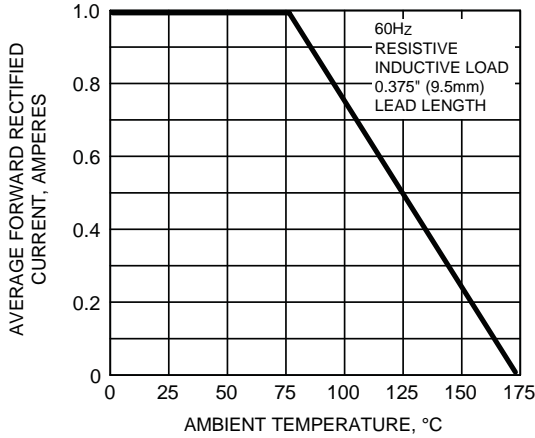
	SYMBOLS	1N5059	1N5060	1N5061	1N5062	UNITS
* Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	800	Volts
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	Volts
* Maximum DC blocking voltage	$V_{DC}$	200	400	600	800	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	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) lead length at $T_A=25^\circ\text{C}$ $T_A=75^\circ\text{C}$	$I_{R(AV)}$	5.0				$\mu\text{A}$
		150	100			
* Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=175^\circ\text{C}$	$I_R$	5.0				$\mu\text{A}$
		300	200			
Typical reverse recovery time (NOTE 1)	$t_{rr}$	1.5				$\mu\text{s}$
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:

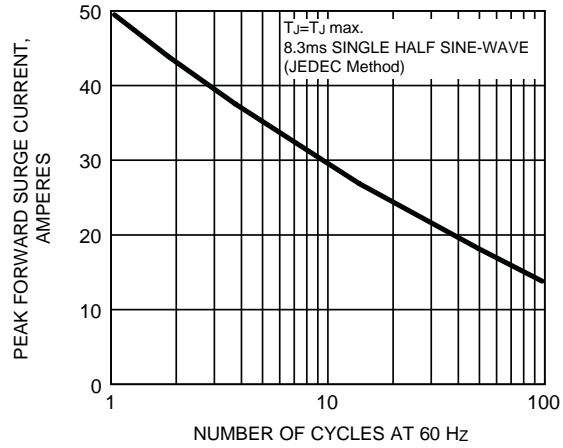
- (1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length P.C.B. mounted  
\*JEDEC registered values

# RATINGS AND CHARACTERISTIC CURVES 1N5059 THRU 1N5062

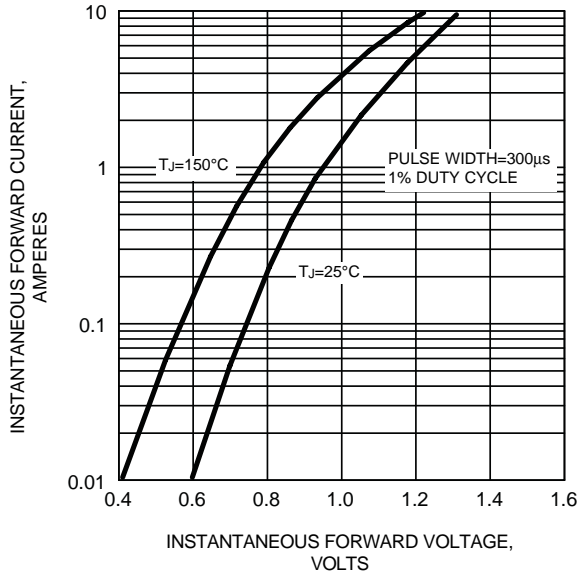
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



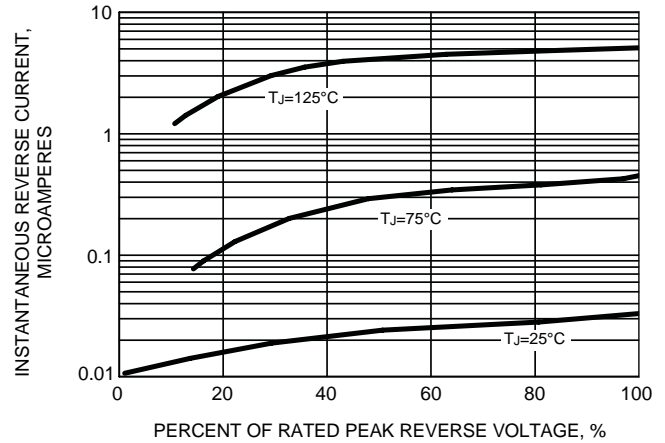
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



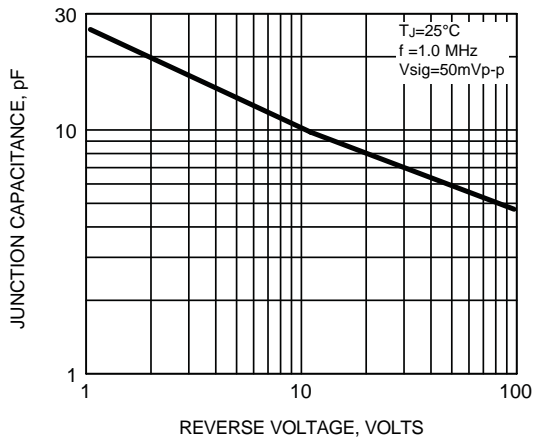
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



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

