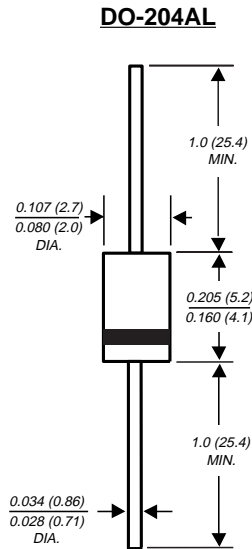


## FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Guardring for overvoltage protection
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) tension

## MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounces, 0.34 gram



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N5817	1N5818	1N5819	UNITS
* Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	Volts
* Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	Volts
* Maximum non-repetitive peak reverse voltage	V <sub>RSM</sub>	24	36	48	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>L</sub> =90°C	I <sub>(AV)</sub>	1.0			Amp
* Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T <sub>L</sub> =70°C	I <sub>FSM</sub>	25.0			Amps
* Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V <sub>F</sub>	0.450	0.550	0.600	Volts
* Maximum instantaneous forward voltage at 3.1A (NOTE 1)	V <sub>F</sub>	0.750	0.875	0.900	Volts
* Maximum instantaneous reverse current at rated DC reverse voltage T <sub>A</sub> =25°C (NOTE 1) T <sub>A</sub> =100°C	I <sub>R</sub>	1.0 10.0			mA
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub> R <sub>θJL</sub>	50.0 15.0			°C/W
Typical junction capacitance (NOTE 3)	C <sub>J</sub>	110.0			pF
* Storage and operating junction temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125			°C

\*JEDEC registered values

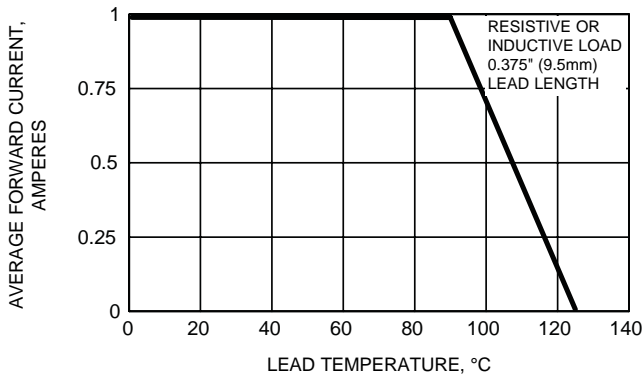
### NOTES:

(1) Pulse test: 300μs pulse width, 1% duty cycle

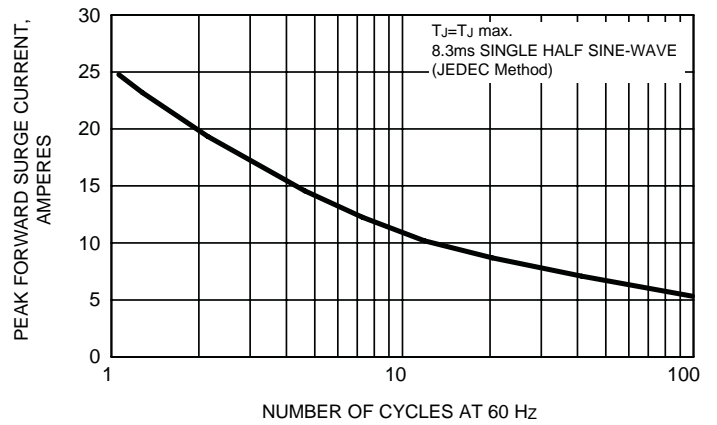
(2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

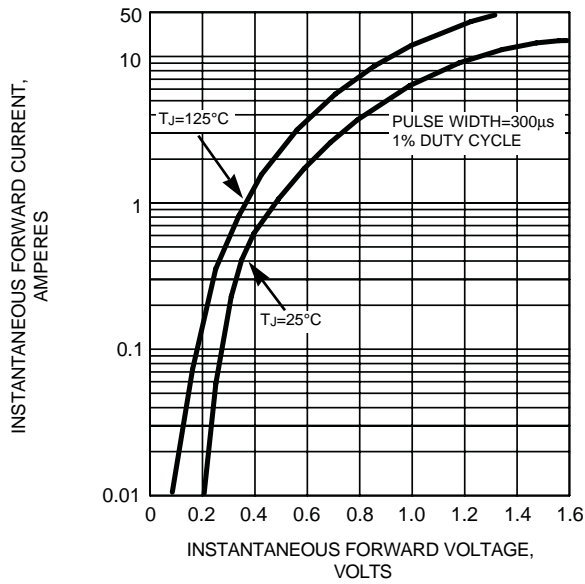
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



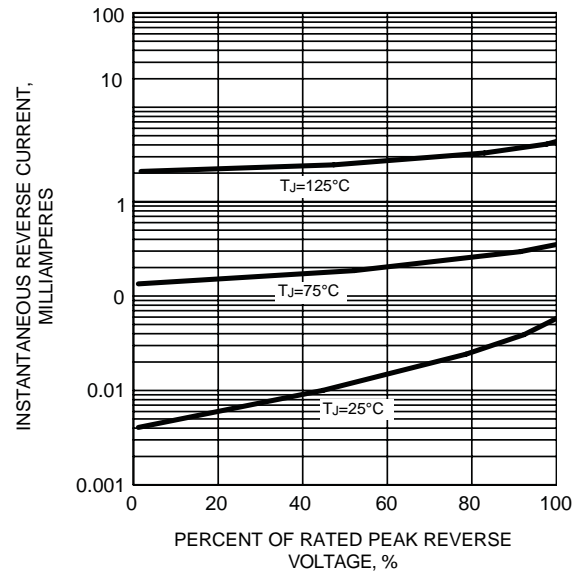
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



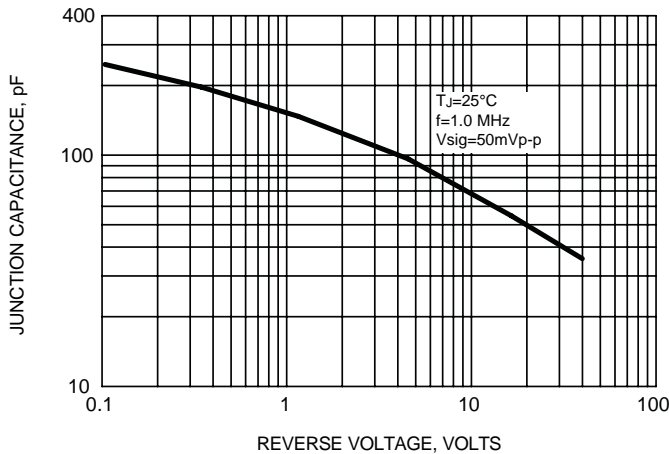
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

