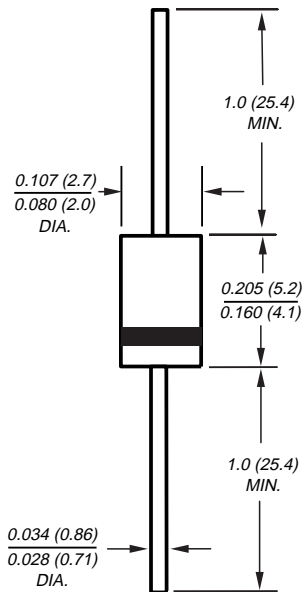
**Fast Switching Plastic Rectifier****Reverse Voltage** 400 to 1000V  
**Forward Current** 1.0A**DO-204AL (DO-41)**

Dimensions in inches and (millimeters)

**Features**

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Void-free plastic package
- 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-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 oz., 0.3 g**Packaging codes/options:**

1/5K per bulk box

23/3K per Ammo mag. (52mm tape),

4/5.5K per 13" reel (52mm tape),

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

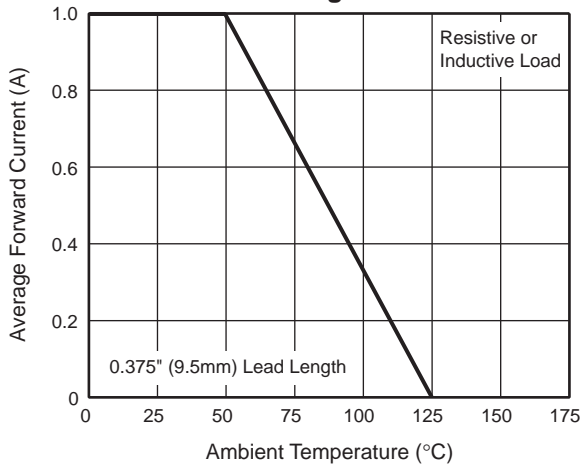
Parameter	Symbol	BA157	BA158	BA159D	BA159	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>F(AV)</sub>	1.0				A
Peak forward surge current 10ms single half sine-wave superimposed on rated load at T <sub>A</sub> =25°C	I <sub>FSM</sub>	20				A
Maximum operation junction temperature	T <sub>J</sub>	-65 to +125				°C
Maximum storage temperature	T <sub>STG</sub>	-65 to +150				°C

**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

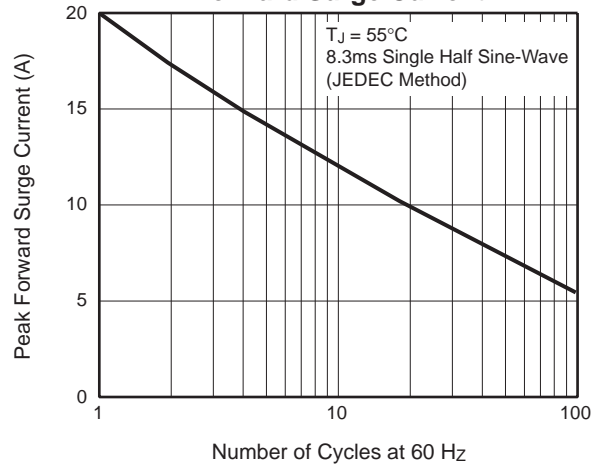
Parameter	Symbol	BA157	BA158	BA159D	BA159	Unit
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.3				V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25°C	I <sub>R</sub>	5.0				μA
Maximum reverse recovery time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	150	250	500		ns
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	12				pF

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

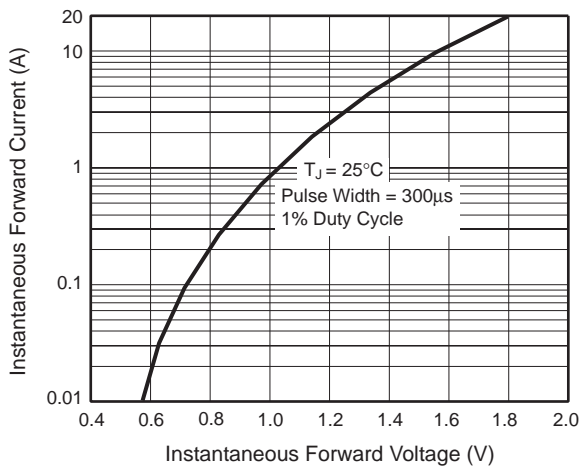
**Fig. 1 – Forward Current Derating Curve**



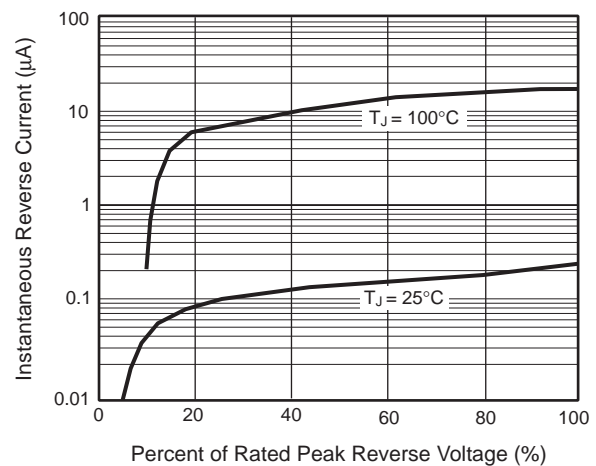
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



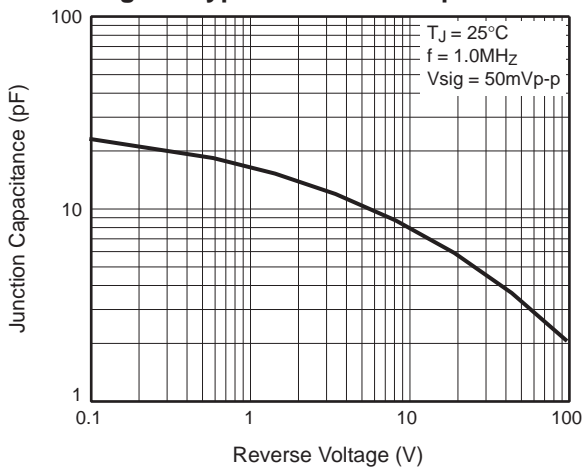
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Transient Thermal Impedance**

