

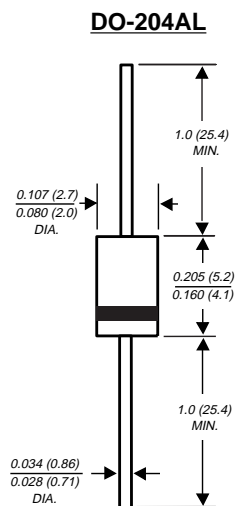
BA157GP THRU BA159GP

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

Reverse Voltage - 400 to 1000 Volts

Forward Current - 1.0 Ampere

PATENTED*



NOTE: Lead diameter is $\frac{0.026 (0.66)}{0.023 (0.58)}$ for suffix "E" part numbers

Dimensions in inches and (millimeters)

* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

SUPERRECTIFIER®

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ For use in high frequency rectifier circuits
- ◆ Fast switching for high efficiency
- ◆ Glass passivated cavity-free junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ 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-204AL molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BA157GP	BA158GP	BA159DGP	BA159GP	UNITS
Maximum repetitive peak reverse voltage	VRRM	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0				Amp
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=25^\circ\text{C}$	I_{FSM}	20.0				Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.3				Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$	I_R	5.0				μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150	250	500	500	ns
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

RATINGS AND CHARACTERISTIC CURVES BA157GP THRU BA159GP

FIG. 1 - FORWARD CURRENT DERATING CURVE

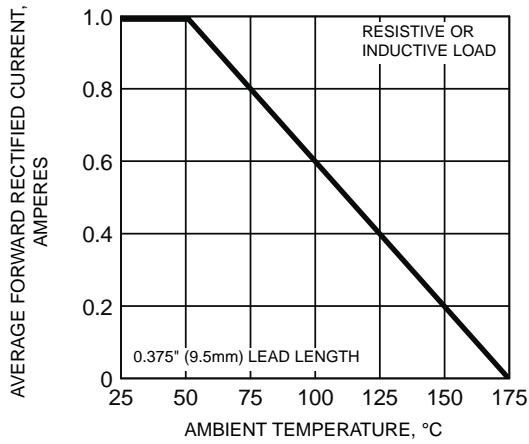


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

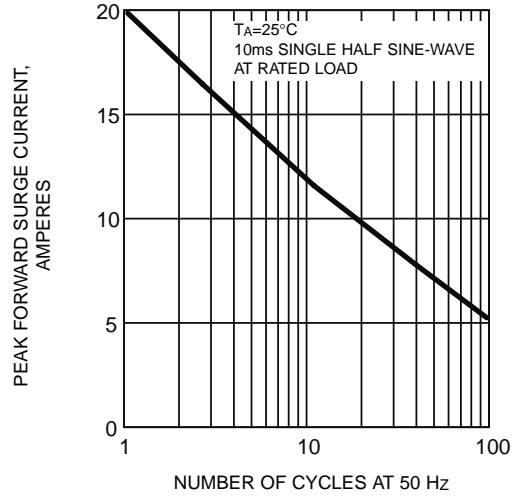


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

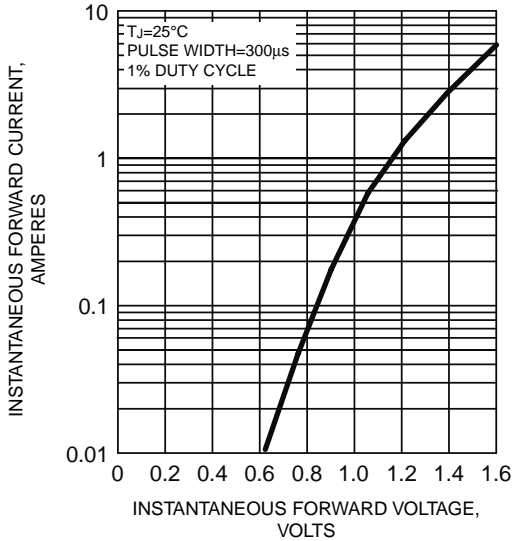


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

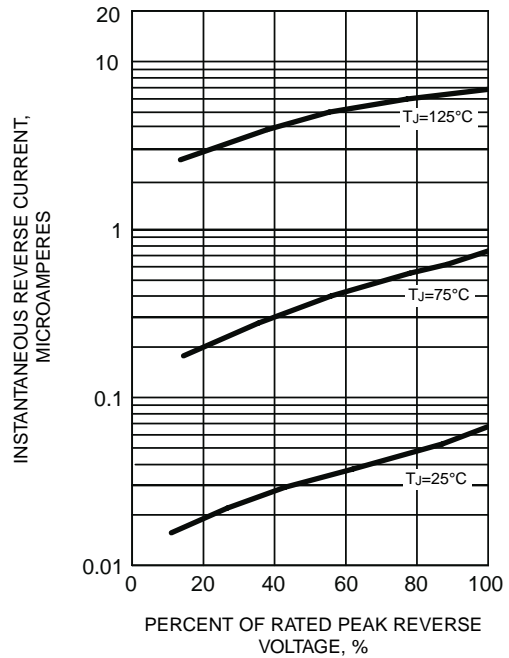


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

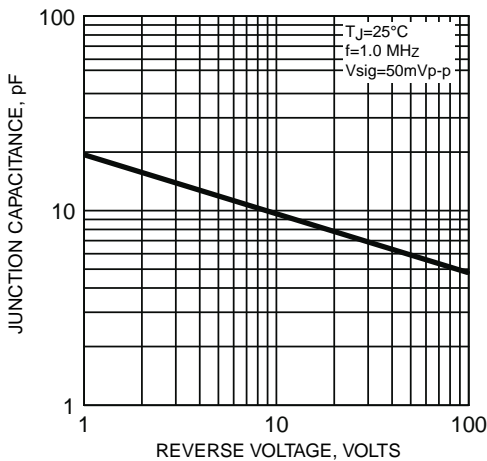


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

