

1.0A FAST RECOVERY RECTIFIER

BA157G THRU BA159G Vishaymas General Semiconductor

FEATURES

- The plastic package carries Underwriters
- Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead
length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-15 molded plastic body

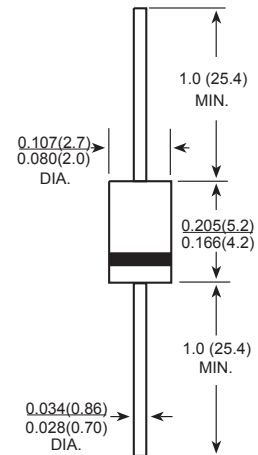
Terminals: Plated axial leads, solderable per
MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.33 grams

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave
60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	BA157G	BA158G	BA159G	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	1000	VOLTS
Maximum RMS voltage	V_{RMS}	280	420	700	VOLTS
Maximum DC blocking voltage	V_{DC}	400	600	1000	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}	30.0			Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.3			Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 50.0			μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150	250	500	ns
Typical junction capacitance (NOTE 2)	C_J	15.0			pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150			$^\circ\text{C}$

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

FIG. 1- FORWARD CURRENT DERATING CURVE

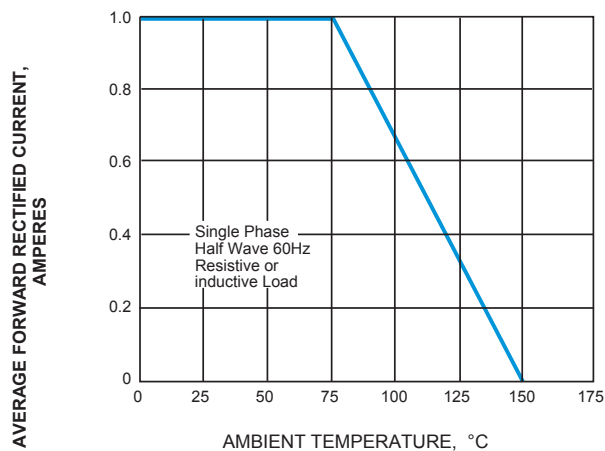


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

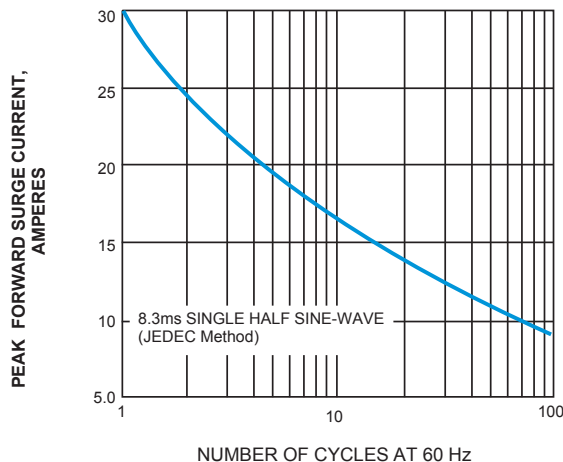


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

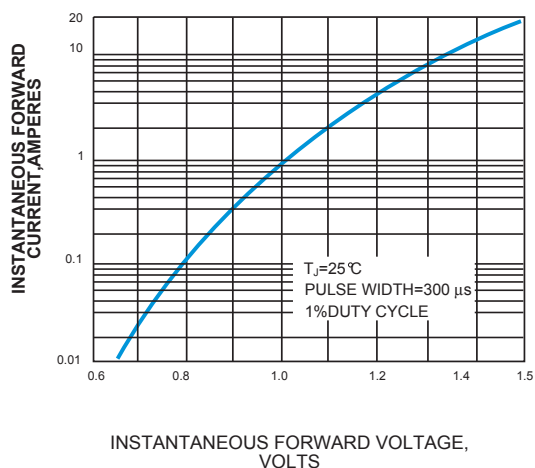


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

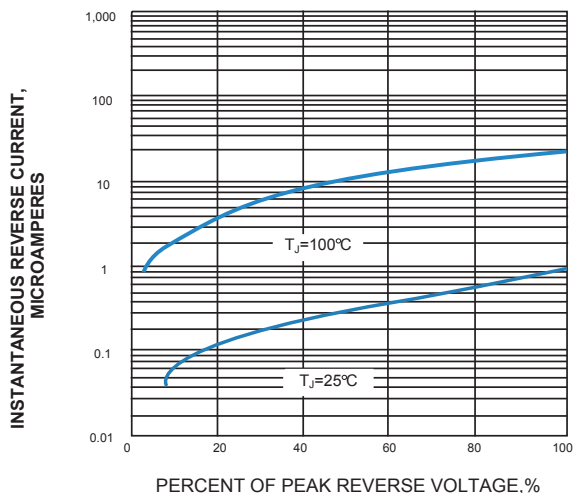


FIG. 5-TYPICAL JUNCTION CAPACITANCE

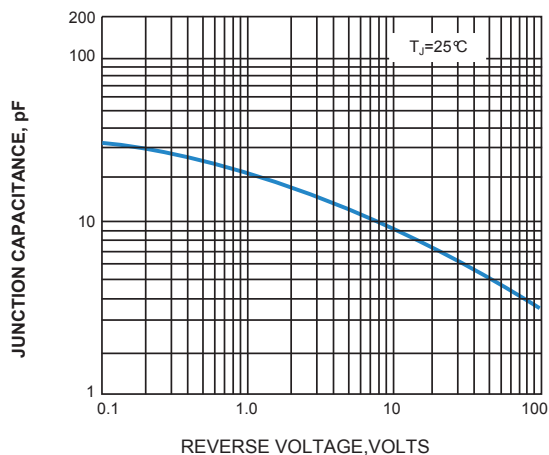


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

