



BA157 THRU BA159

FAST SWITCHING PLASITC RECTIFIER

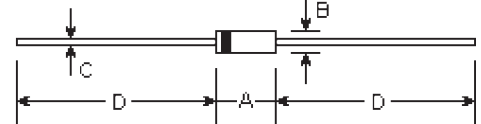
Reverse Voltage - 400 to 1000 Volts

Forward Current - 1.0 Ampere

Features

- Plastic package has Underwriters Laboratory 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

DO-41



Mechanical Data

- **Case:** DO-41 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 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	φ
C	0.028	0.034	0.71	0.86	φ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	BA157	BA158	BA159	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 $T_A=50^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load at $T_A=25^\circ\text{C}$	I_{FSM}	35.0			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	nS
Typical junction capacitance (Note 2)	C_j	15.0			ρF
Typical thermal resistance (Note 3)	$R_{\theta(JL)}$	25			$^\circ\text{C/W}$
Maximum operating junction temperature	T_J	-65 to +125			$^\circ\text{C}$
Maximum storage temperature	T_{STG}	-65 to +125			$^\circ\text{C}$

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 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

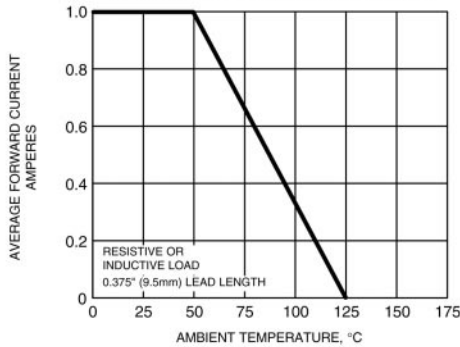


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

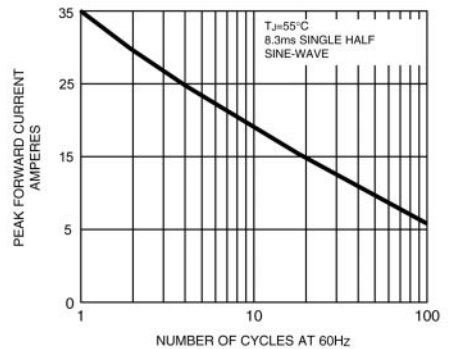


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

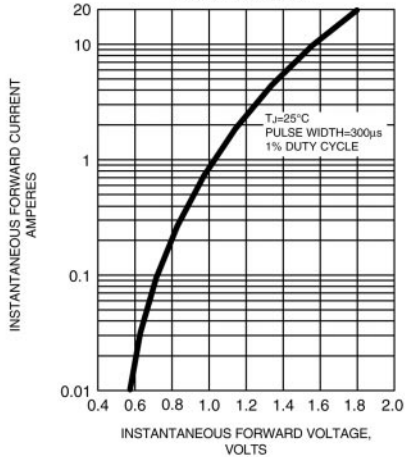


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

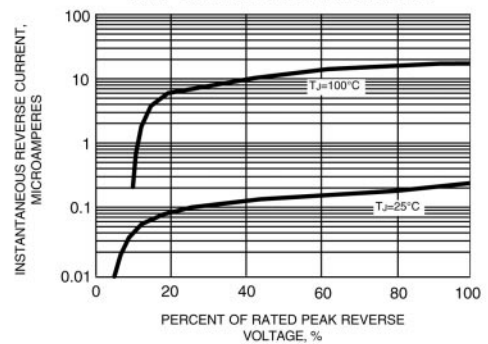


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

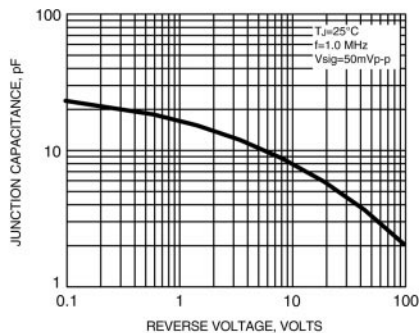


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

