BA157G thru BA159G

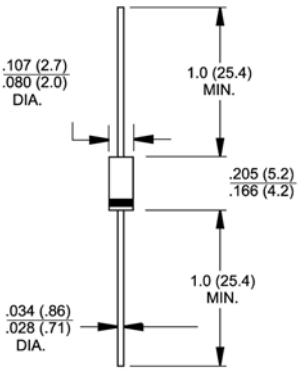
Glass Passivated Fast Recovery Rectifiers
Reverse Voltage 400 to 1000 Volts Forward Current 1.0 Ampere

Features

- Plastic package has Underwriters Laboratories 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°C with no thermal runaway
- Typical I_R less than 0.1uA
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



DO-204AL (DO-41)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC DO-204AL (DO-41), 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, 0.33 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	BA157G	BA158G	BA159DG	BA159G	Units
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	1.0				Amp
Peak forward surge current 10ms single half sine-wave superimposed on rated load at T_A=25°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°C	I_R	5.0				uA
Maximum reverse recovery time (Note 1)	t_{rr}	150	250	500		nS
Typical junction capacitance (Note 2)	C_J	15				pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	55.0				°C/W
Operating junction temperature range	T_J	-55 to +150				°C
Storage temperature range	T_{STG}	-55 to +150				°C

Notes: 1. Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
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

(T_A = 25°C unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

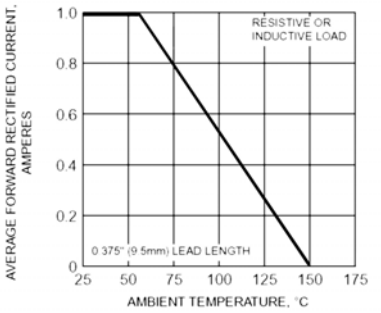


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

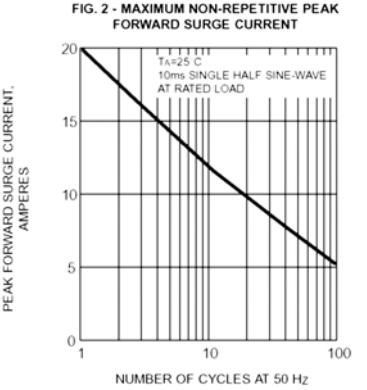


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

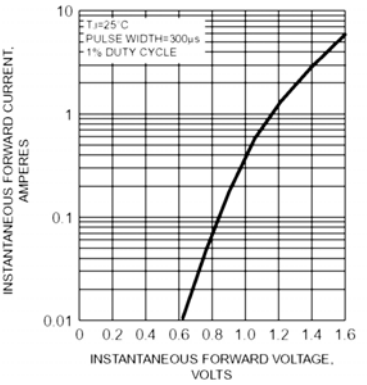


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

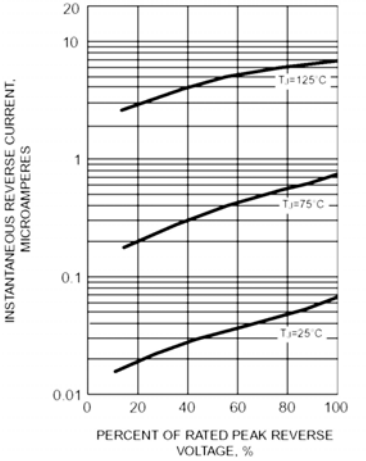


FIG. 5- TYPICAL JUNCTION CAPACITANCE

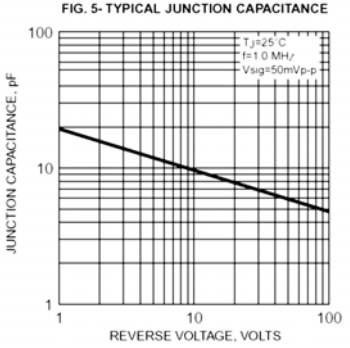


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

