

Features

2018

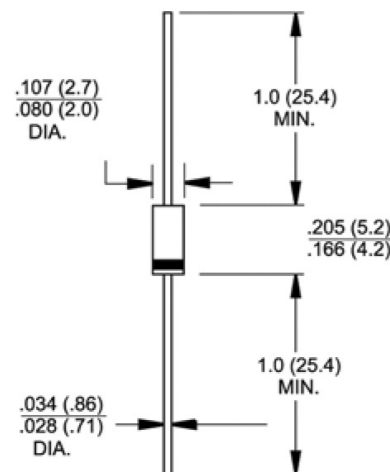
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ For use in high frequency rectifier circuits
- ◆ Fast switching for high efficiency
- ◆ Glass passivated cavity-free junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.0 Ampere operation at $T_A=55^{\circ}\text{C}$ with no thermal runaway
- ◆ Typical I_R less than 0.1 μA
- ◆ High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension



DO-204AL (DO-41)

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



Dimensions in inches and (millimeters)

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 $T_A=55^{\circ}\text{C}$	$I_{F(AV)}$	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		nS
Typical junction capacitance (Note 2)	C_J	15				pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	55.0				$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	-55 to +150				$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150				$^{\circ}\text{C}$

- 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

($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

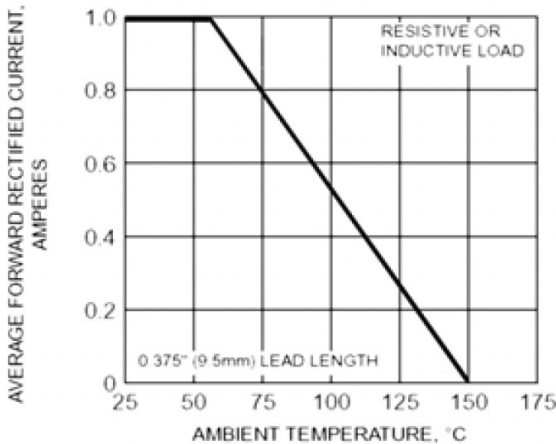


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

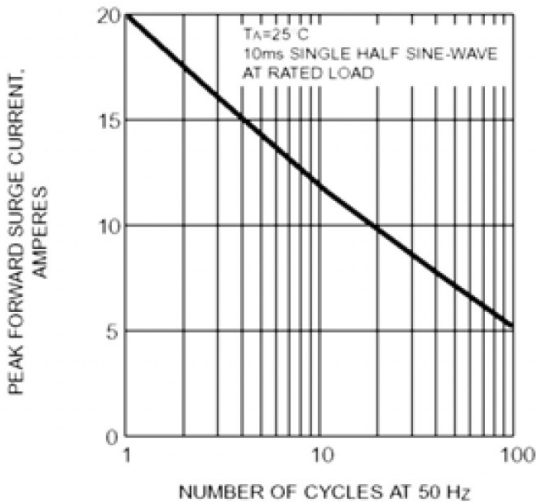


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

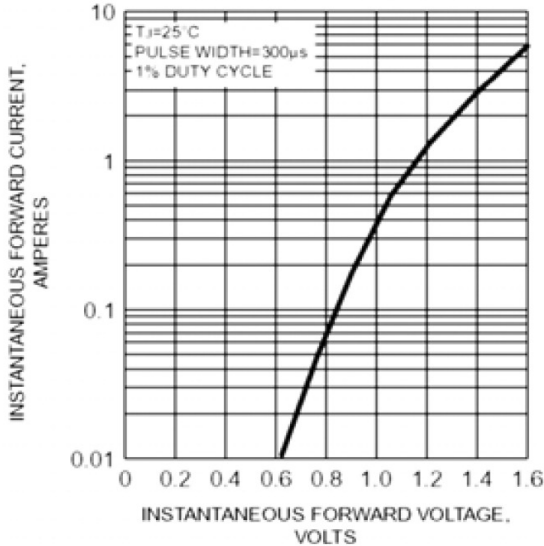


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

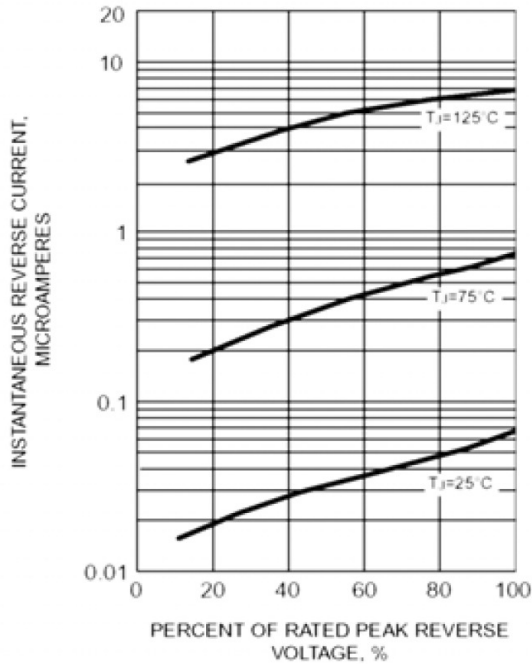


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

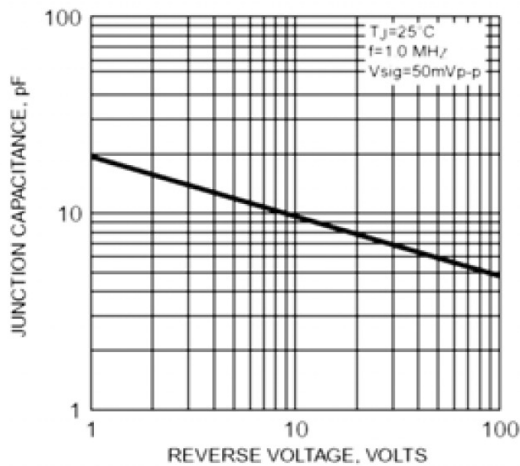


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

