

BYD33D THRU BYD33M

SINTERED GLASS JUNCTION

FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE 200 TO 1000V

CURRENT: 1.0A



FEATURE

High temperature metallurgic ally bonded construction
Sintered glass cavity free junction
Capability of meeting environmental standard of MIL-S-19500

High temperature soldering guaranteed
350°C /10sec/0.375"lead length at 5 lbs tension
Operate at $T_a = 55^\circ\text{C}$ with no thermal run away
Typical $I_r < 0.1\mu\text{A}$

MECHANICAL DATA

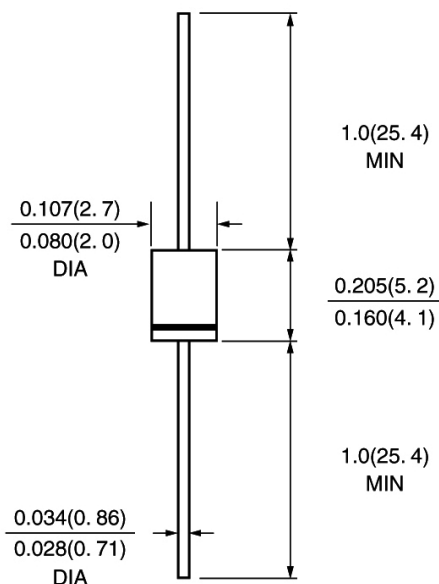
Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C

Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy

Polarity: color band denotes cathode

Mounting position: any

DO-41\DO-204AL



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C , unless otherwise stated)

	SYMBOL	BYD 33D	BYD 33G	BYD 33J	BYD 33K	BYD 33M	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	140	280	420	560	700	V
Maximum DC blocking Voltage	Vdc	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at Ta =55°C	If(av)	1.0					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	20.0					A
Maximum Forward Voltage at rated Forward Current and 25°C	Vf	1.3					V
Maximum full load reverse current full cycle average at 55°C Ambient	Ir(av)	100.0					μA
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =150°C	Ir	5.0 200.0					μA μA
Maximum Reverse Recovery Time (Note 1)	Trr	250			300		nS
Typical Junction Capacitance (Note 2)	Cj	15.0					pF
Typical Thermal Resistance (Note 3)	R(ja)	55.0					°C /W
Storage and Operating Junction Temperature	Tstg, Tj	-65 to +175					°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 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 3/8"lead length, P.C. Board Mounted

RATINGS AND CHARACTERISTIC CURVES BYD33D THRU BYD33M

FIG. 1 - FORWARD CURRENT DERATING CURVE

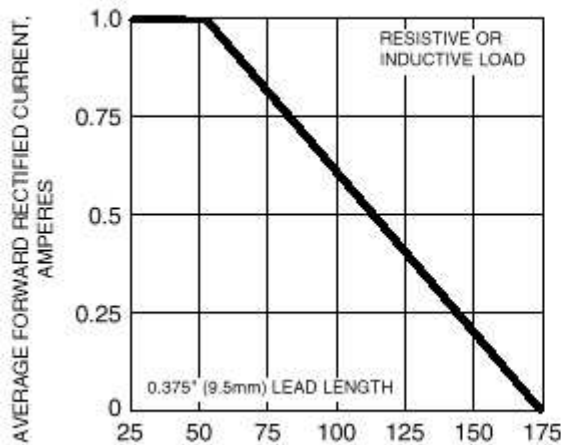


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

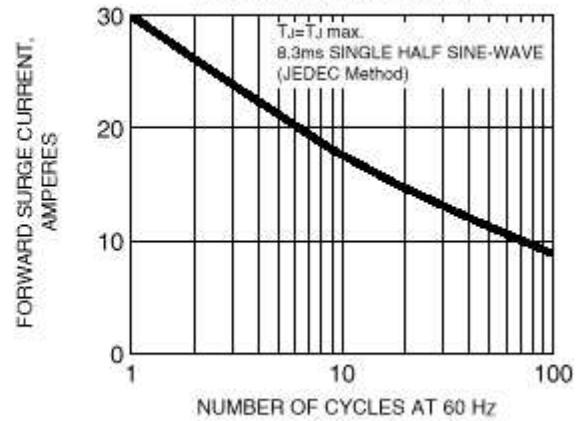


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

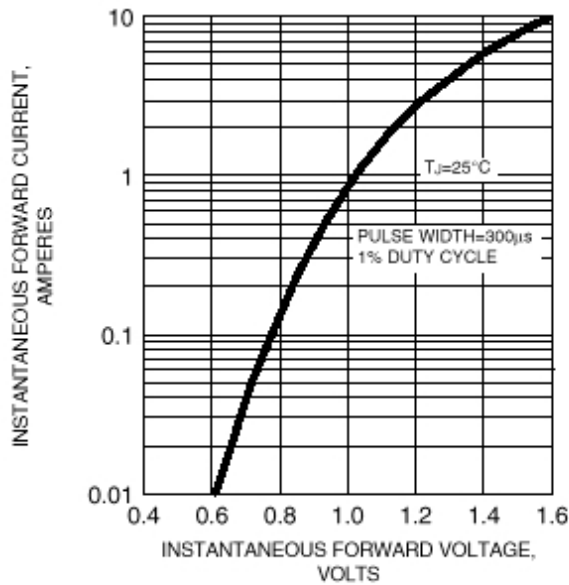


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

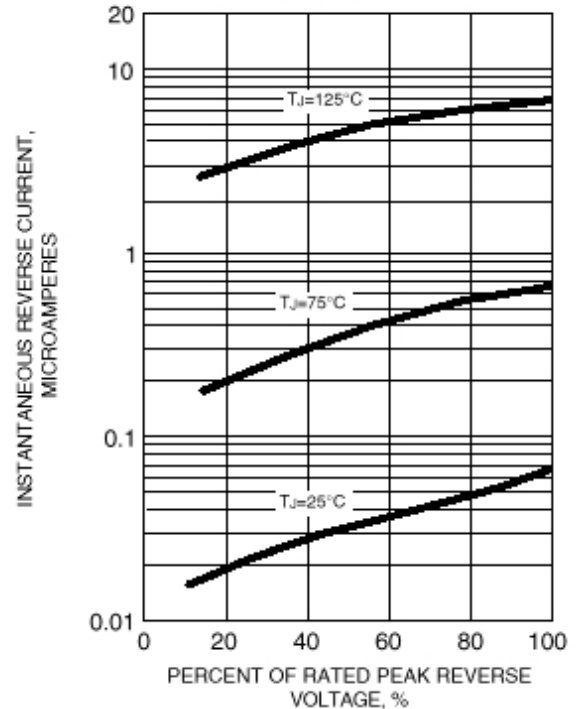


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

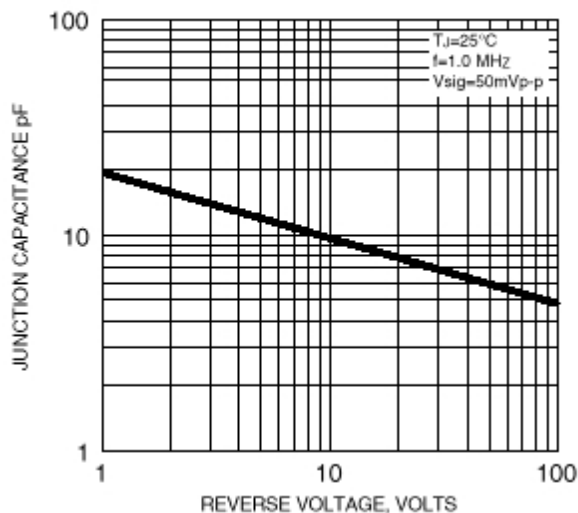


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

