

BYD33D - BYD33M

AVALANCHE FAST SOFT-RECOVERY RECTIFIER DIODES

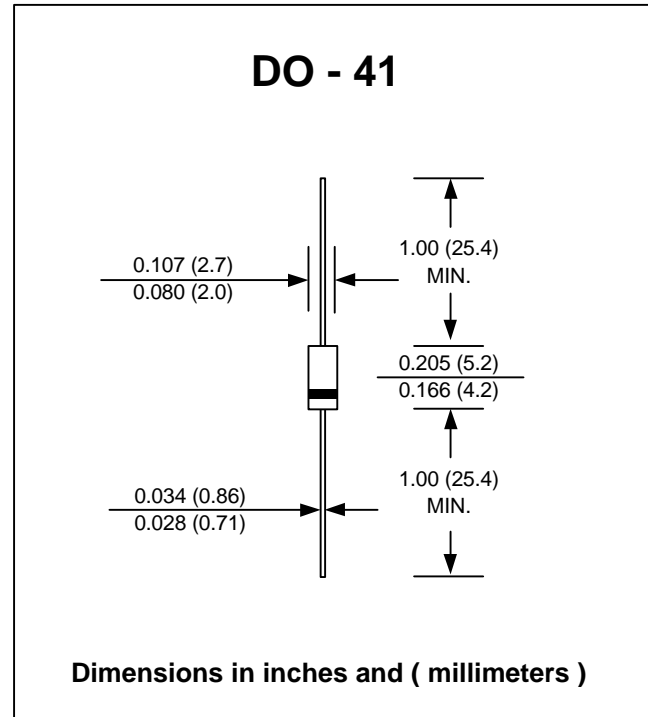
PRV : 200 - 1000 Volts
Io : 1.3 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : DO-41 Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.339 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	BYD 33D	BYD 33G	BYD 33J	BYD 33K	BYD 33M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum Continuous Reverse Voltage	V_R	200	400	600	800	1000	V
Min. Reverse Avalanche Breakdown Voltage @ $I_R = 0.1$ mA	$V_{(BR)R-min}$	300	500	700	900	1100	V
Maximum Average Forward Current $T_{tp} = 55$ °C (Note 1)	$I_{F(AV)}$	1.3					A
Maximum Non-Repetitive Peak Forward Surge Current	I_{FSM}	20					A
Maximum Repetitive Peak Forward Current	I_{FRM}	12					A
Maximum Forward Voltage at 1.0 Amp.	V_F	1.3					V
Maximum Reverse Current at Reverse Voltage	I_R	1.0					μ A
Maximum Reverse Current at Reverse Voltage $T_J = 165$ °C	$I_{R(H)}$	100					μ A
Maximum Reverse Recovery Time (Note 2)	T_{rr}	250			300		ns
Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	120					K / W
Junction Temperature Range	T_J	- 65 to + 175					°C
Storage Temperature Range	T_{STG}	- 65 to + 175					°C

Notes :

- (1) Lead Length 10 mm.
- (2) Measured with $I_F = 1$ Amp to $V_R \geq 30$ V

RATING AND CHARACTERISTIC CURVES (BYD33D - BYD33M)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC

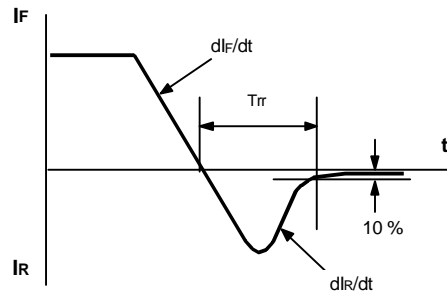


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

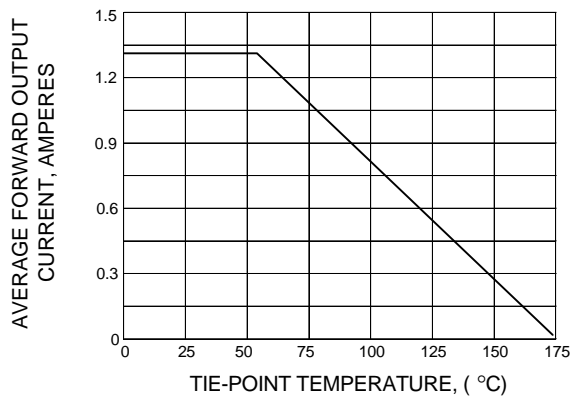


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

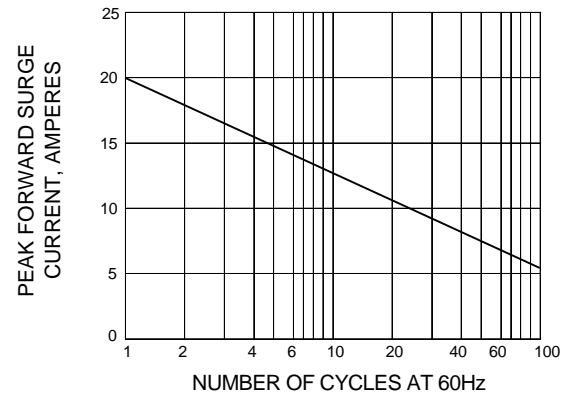


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

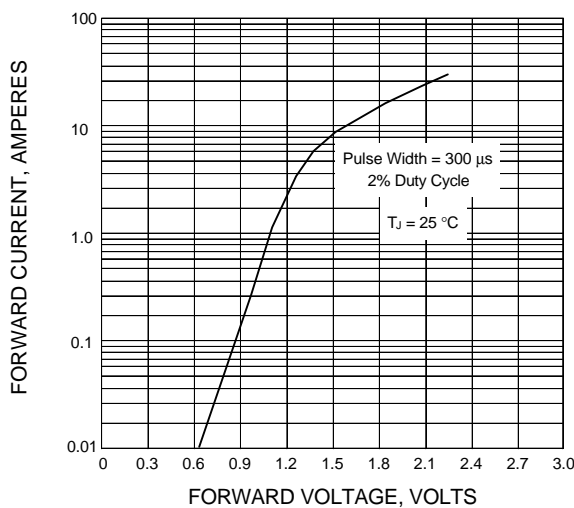


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

