

BYD13D - BYD13M

CONTROLLED AVALANCHE RECTIFIER DIODES

PRV : 200 - 1000 Volts

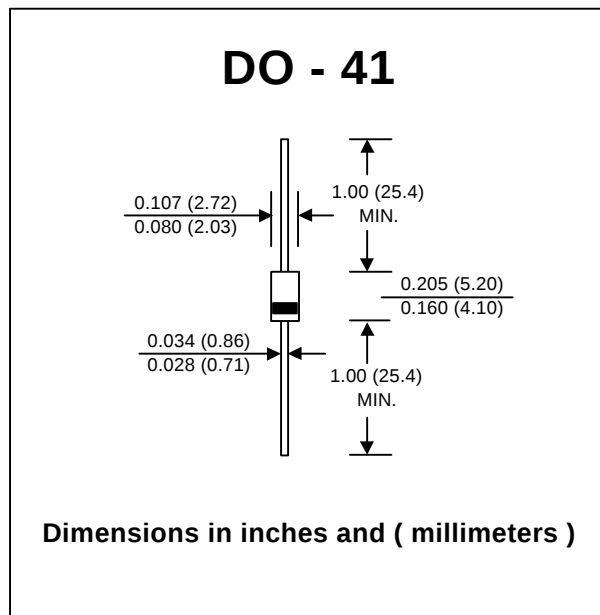
Io : 1.4 Amperes

FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * **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 13D	BYD 13G	BYD 13J	BYD 13K	BYD 13M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Minimum Reverse Avalanche Breakdown Voltage	$V_{(BR)R-min}$	225	450	650	900	1100	V
Maximum Reverse Avalanche Breakdown Voltage	$V_{(BR)R-max}$	1600	1600	1600	1600	1600	V
Maximum Average Forward Current $T_{ip} = 55^{\circ}C$	$I_{F(AV)}$	1.4					A
Maximum Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	20					A
Maximum Forward Voltage drop per Diode at $I_F = 1.0 A$	V_F	1.05					V
Maximum DC reverse Current $T_J = 25^{\circ}C$	I_R	1					μA
at rated DC Block Voltage $T_J = 165^{\circ}C$	$I_{R(H)}$	100					μA
Junction Temperature Range	T_J	175					$^{\circ}C$
Storage Temperature Range	T_{STG}	- 65 to + 175					$^{\circ}C$

RATING AND CHARACTERISTIC CURVES (BYD13D - BYD13M)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

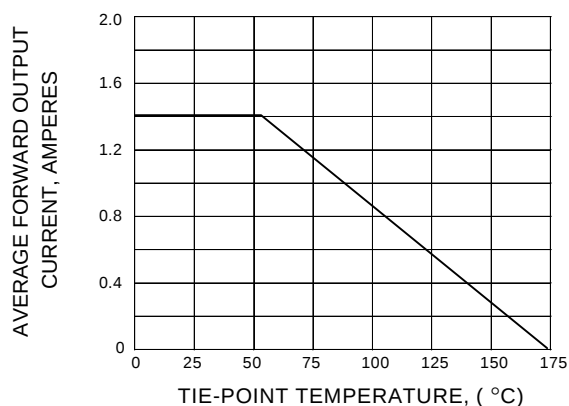


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

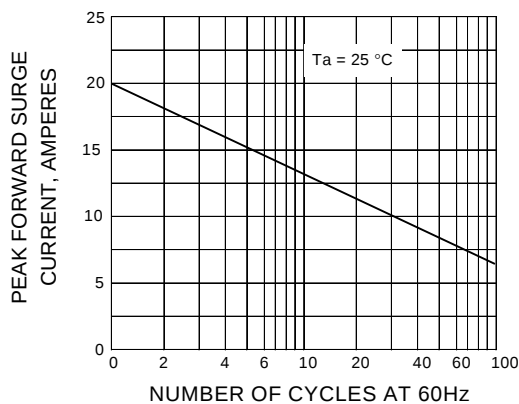


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

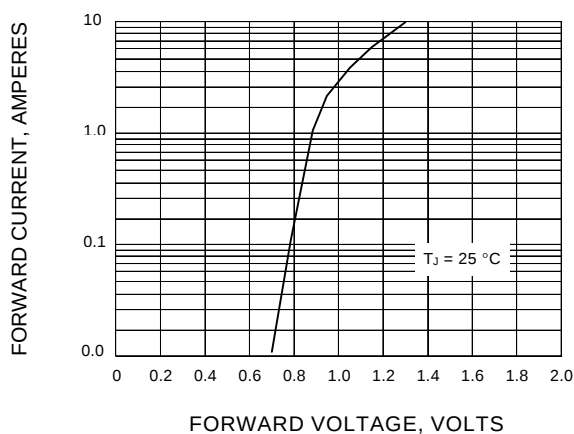


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

