

# BYD13D - BYD13M

# CONTROLLED AVALANCHE RECTIFIER DIODES

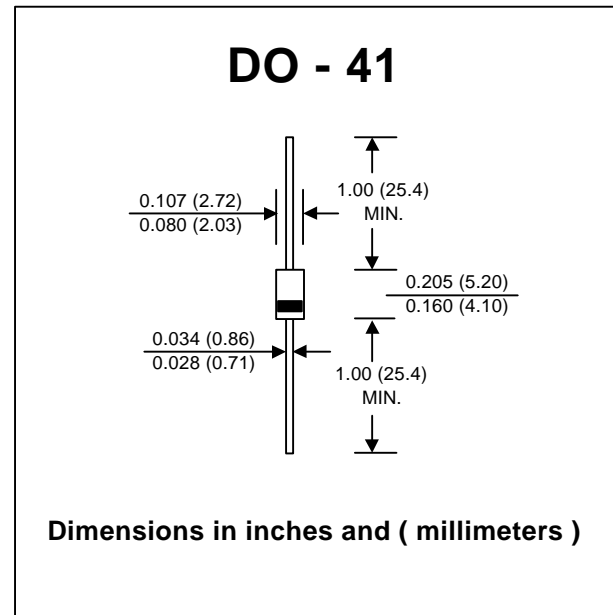
**PRV : 200 - 1000 Volts**  
**Io : 1.4 Amperes**

## 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.

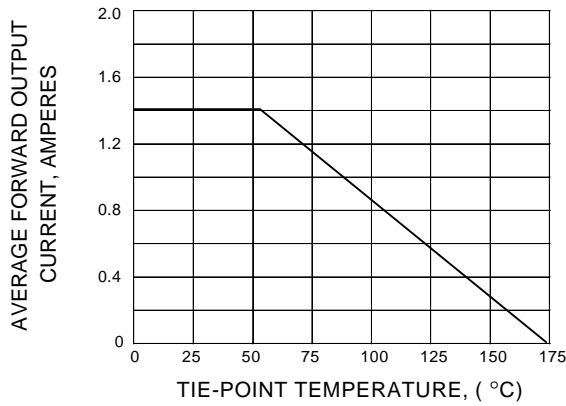
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

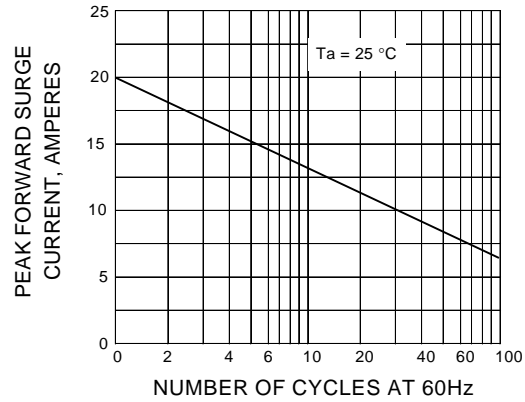
RATING	SYMBOL	BYD 13D	BYD 13G	BYD 13J	BYD 13K	BYD 13M	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1000	V
Minimum Reverse Avalanche Breakdown Voltage	$V_{(BR)R-min}$	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 $T_J = 25^{\circ}C$ at rated DC Block Voltage $T_J = 165^{\circ}C$	$I_R$	1					$\mu A$
	$I_{R(H)}$	100					$\mu A$
Junction Temperature Range	$T_J$	175					$^{\circ}C$
Storage Temperature Range	$T_{STG}$	- 65 to + 175					$^{\circ}C$

## RATING AND CHARACTERISTIC CURVES ( BYD13D - BYD13M )

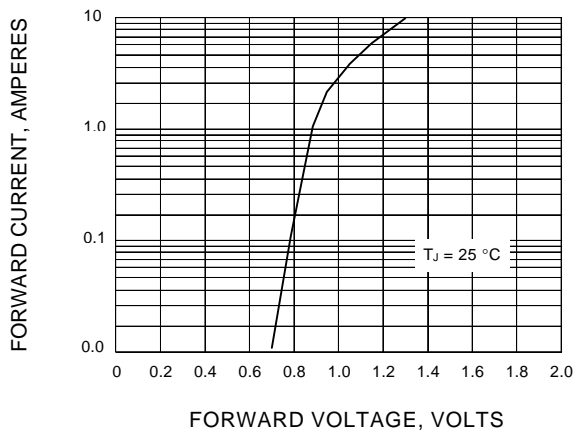
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

