VISHAY MAS 威世马来
GENERAL SEMICONDUCTOR

CONTROLLED AVALANCHE RECTIFIER DIODES

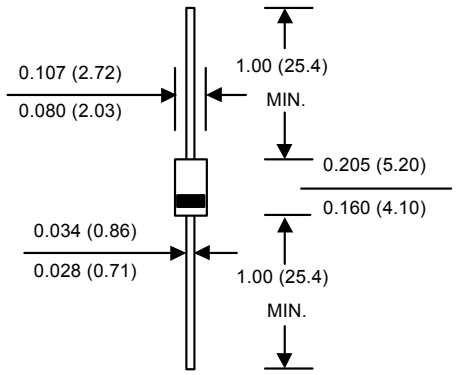
BYD13D - BYD13M

Vishaymas Semiconductors

FEATURES

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Pb / RoHS Free

DO - 41



Dimensions in inches and (millimeters)

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	$V_{(BR)R\text{-}min}$	225	450	650	900	1100	V
Maximum Reverse Avalanche Breakdown Voltage	$V_{(BR)R\text{-}max}$	1600	1600	1600	1600	1600	V
Maximum Average Forward Current T_{tp} = 55°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 at T_J = 25 °C	I_R	1					µA
rated DC Block Voltage T_J = 165 °C	$I_{R(H)}$	100					µA
Junction Temperature Range	T_J	175					°C
Storage Temperature Range	T_{STG}	- 65 to + 175					°C

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

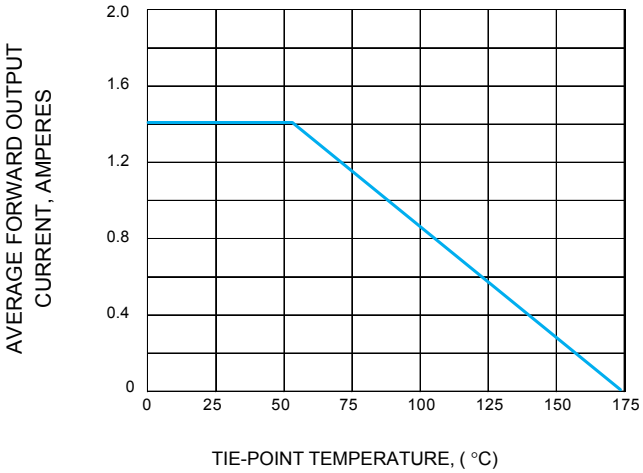


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

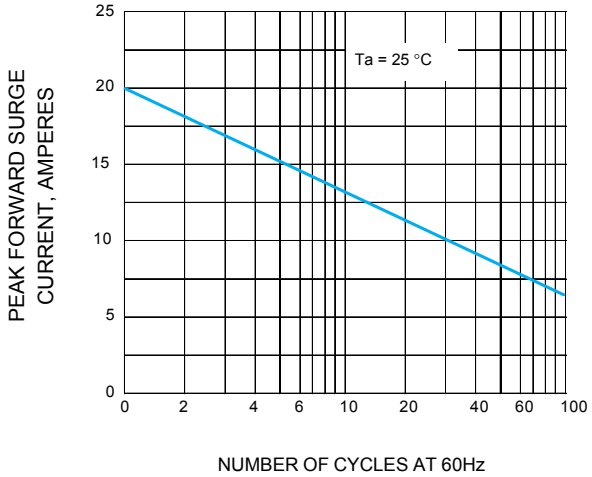


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

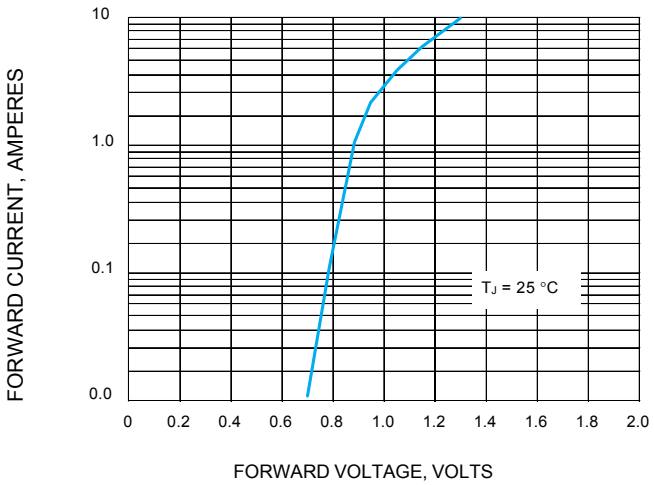


FIG.4 - TYPICAL REVERSE CHARACTERISTICS