BYD17D - BYD17M

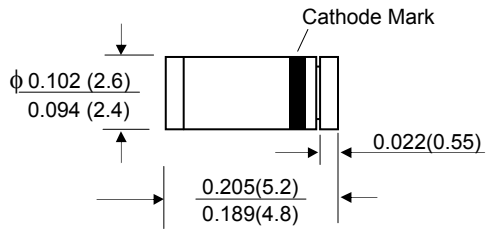
GENERAL PURPOSE CONTROLLED AVALANCHE RECTIFIERS

PRV : 200 - 1000 Volts
Io : 1.5 Amperes

FEATURES :
* Glass passivated
* High maximum operating temperature
* Low leakage current
* Excellent stability
* Guaranteed avalanche energy absorption capability
* Smallest surface mount rectifier outline
* Pb / RoHS Free

MECHANICAL DATA :
* Case : Molded plastic
* Terminals : Plated Terminals, solderable per MIL-STD-750 Method 2026
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.116 gram

MELF (Plastic)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Tj = 25 °C unless otherwise specified.)

RATING	SYMBOL	BYD 17D	BYD 17G	BYD 17J	BYD 17K	BYD 17M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum Crest Working Reverse Voltage	V_{RWM}	200	400	600	800	1000	V
Maximum Continuous Reverse Voltage	V_R	200	400	600	800	1000	V
Min. Reverse Avalanche Breakdown Voltage at I_R = 0.1 mA	$V_{(BR)R-min}$	225	450	650	900	1100	V
Maximum Average Forward Current Ttp = 105 °C	$I_{F(AV)}$	1.5					A
(Note 1) Ta = 65 °C; PCB mounting		0.6					
Maximum Non-Repetitive Peak Forward Surge Current (Note 2)	I_{FSM}	20					A
Maximum Forward Voltage at I_F = 1 A , Tj = 25 °C	V_F	1.05					V
at I_F = 1 A , Tj = Tjmax		0.93					
Maximum Reverse Current at $V_R = V_{RRMmax}$, Tj = 25 °C	I_R	1.0					µA
at $V_R = V_{RRMmax}$, Tj = 165 °C	$I_{R(H)}$	100					µA
Typical Reverse Recovery Time (Note 3)	Trr	3					µs
Thermal Resistance from Junction to Tie-Point	$R_{th\ j-tp}$	30					K / W
Thermal Resistance from Junction to Ambient (Note 4)	$R_{th\ j-a}$	150					K / W
Operating Junction Temperature Range	T_J	- 65 to + 175					°C
Storage Temperature Range	T_{STG}	- 65 to + 175					°C

Notes :
(1) Averaged over any 20 ms period.
(2) t = 10ms half sine wave; Tj = Tjmax prior to surge; $V_R = V_{RRMmax}$
(3) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, Irr = 0.25 A.
(4) Device mounted on an epoxy-glass printed-circuit board, 1.5 mm thick; thickness of copper ≥ 40 µm

RATING AND CHARACTERISTIC CURVES (BYD17D - BYD17M)

FIG.1 - MAXIMUM PERMISSIBLE AVERAGE FORWARD CURRENT AS A FUNCTION OF TIE-POINT TEMPERATURE

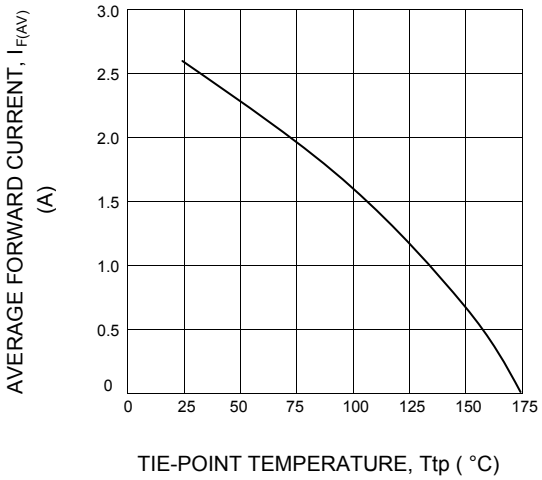


FIG.2 - MAXIMUM PERMISSIBLE AVERAGE FORWARD CURRENT AS A FUNCTION OF AMBIENT TEMPERATURE

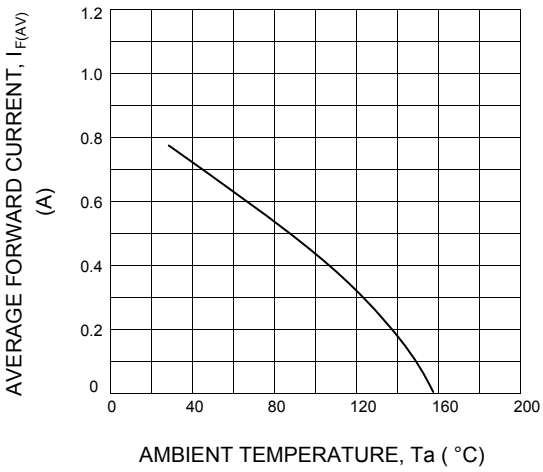


FIG.3 - FORWARD CURRENT AS FUNCTION OF FORWARD VOLTAGE; MAXIMUM VALUES

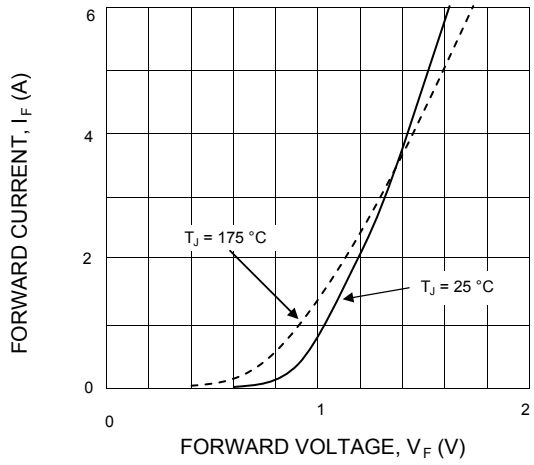


FIG.4 - REVERSE CURRENT AS FUNCTION OF JUNCTION TEMPERATURE; MAXIMUM VALUES