

BAX12, BAX12A

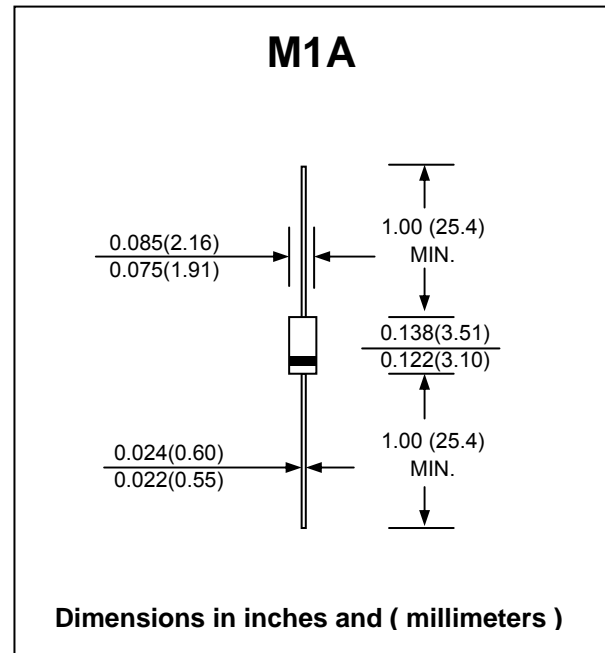
CONTROLLED AVALANCHE DIODES

FEATURES :

- * Switching speed: max. 50 ns
- * Continuous reverse voltage: max. 90V
- * Repetitive peak reverse voltage: max. 90V
- * Repetitive peak forward current: max.800 mA
- * Repetitive peak reverse current: max.600mA
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : M1A 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 : 0.20 gram (approximately)



Maximum Ratings

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	90	V
Continuous Reverse Voltage	V_R	90	V
Continuous Forward Current	I_F	400	mA
Repetitive Peak Forward Current	I_{FRM}	800	A
Non-repetitive Peak Forward Current	I_{FSM}	$t = 1 \mu s$	55
Square wave: $T_j = 25^\circ C$ prior to surge		$t = 100 \mu s$	15
		$t = 10 ms$	9
Total Power Dissipation , $T_a = 25^\circ C$	P_{tot}	450	mW
Repetitive Peak Reverse Current	I_{RRM}	600	mA
Junction Temperature	T_J	200	$^\circ C$
Storage Temperature Range	T_S	-65 to + 200	$^\circ C$

Note : (1) Device mounted on an FR4 printed circuit-board; lead length 10 mm.

Electrical Characteristics ($T_J = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Reverse Avalanche Breakdown Voltage	$V_{(BR)R}$	$I_R = 1mA$	120	170	V
		$I_R = 0.1mA$	120	170	V
Reverse Current	I_R	$V_R = 90 V$	-	100	nA
		$V_R = 90 V, T_J = 150^\circ C$	-	100	μA
Forward Voltage	V_F	$I_F = 400 mA$	-	1.25	V
Diode Capacitance	C_d	$f = 1MHz ; V_R = 0$	-	35	pF
Reverse Recovery Time	T_{rr}	$I_F = 30mA, I_R = 30mA$ $R_L = 100 \Omega$ measured at $I_R = 3 mA$	-	50	ns

RATING AND CHARACTERISTIC CURVES (BAX12, BAX12A)

Fig.1 - Maximum permissible continuous forward current as a function of ambient temperature.

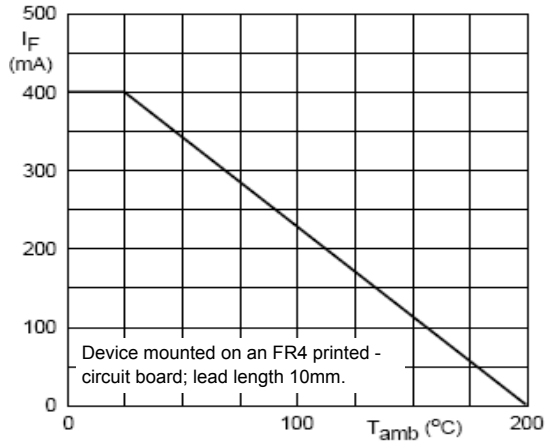


Fig.2 - Forward current as a function of forward voltage.

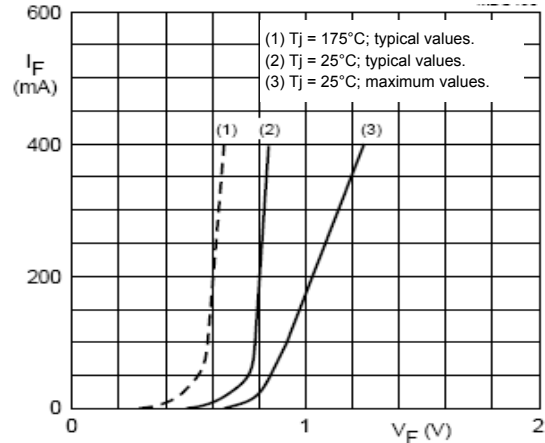


Fig.3 - Reverse current as a function of junction temperature.

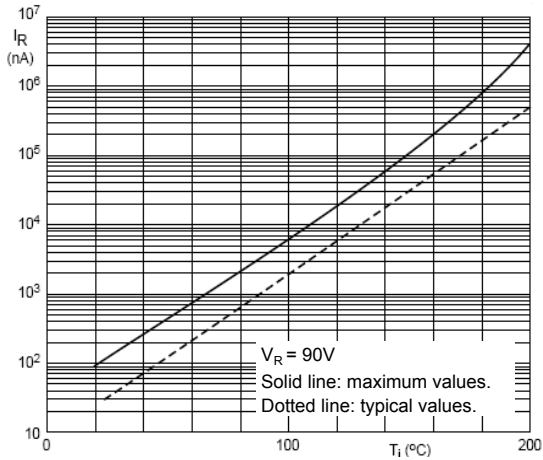


Fig.4 - Diode capacitance as a function of reverse voltage; typical values.

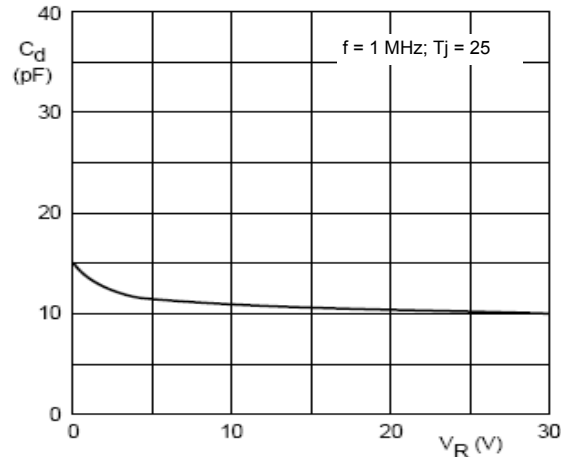


Fig.5 - Maximum permissible non-repetitive peak forward current as a function of pulse duration.

