BAX12, BAX12A

CONTROLLED AVALANCHE DIODES

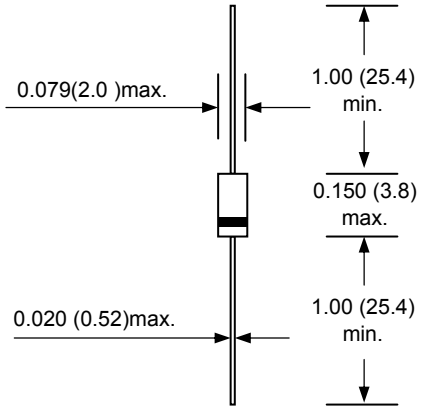
FEATURES :

* 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 : DO-35 Glass Case
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.13 gram (approximately)

DO - 35



Dimensions in inches and (millimeters)

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	t = 1 µs	I_{FSM}	55	A
Square wave: Tj = 25 °C prior to surge	t = 100 µs		15	
	t = 10 ms		9	
Total Power Dissipation , Ta = 25 °C		P_{tot}	450	mW
Repetitive Peak Reverse Current		I_{RRM}	600	mA
Junction Temperature		T_J	200	°C
Storage Temperature Range		T_S	-65 to + 200	°C

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

ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Parameter		Symbol	Test Condition	Min.	Max.	Unit
Reverse Avalanche	**BAX12**	$V_{(BR)R}$	I_R = 1mA	120	170	V
Breakdown Voltage	**BAX12A**		I_R = 0.1mA	120	170	V
Reverse Current		I_R	V_R = 90 V	-	100	nA
			V_R = 90 V, Tj = 150 °C	-	100	µA
Forward Voltage		V_F	I_F = 400 mA	-	1.25	V
Diode Capacitance		Cd	f = 1MHz ; V_R = 0	-	35	pF
Reverse Recovery Time		Trr	I_F = 30mA , I_R = 30mA R_L = 100 Ω 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.

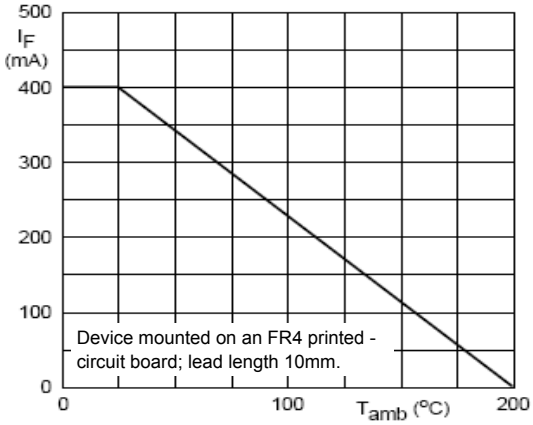


Fig.2 - Forward current as a function of forward voltage.

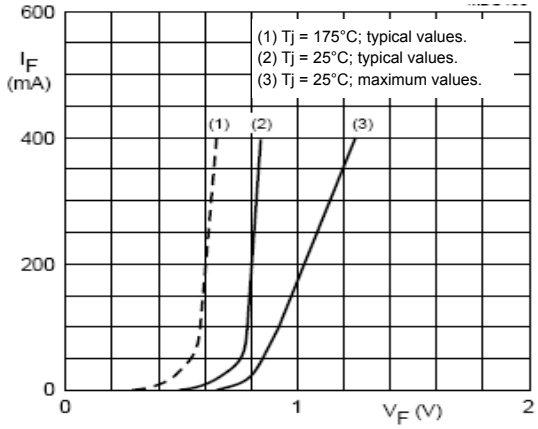


Fig.3 - Reverse current as a function of junction temperature.

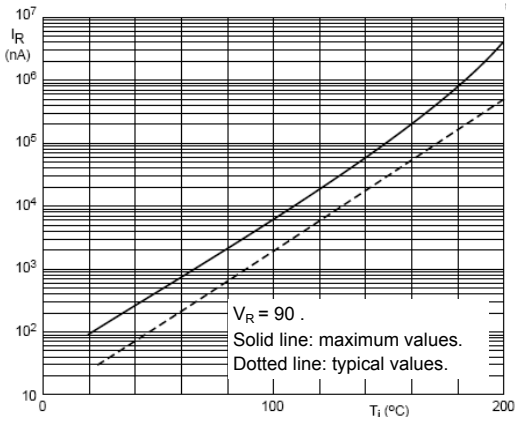


Fig.4 - Diode capacitance as a function of reverse voltage; typical values.

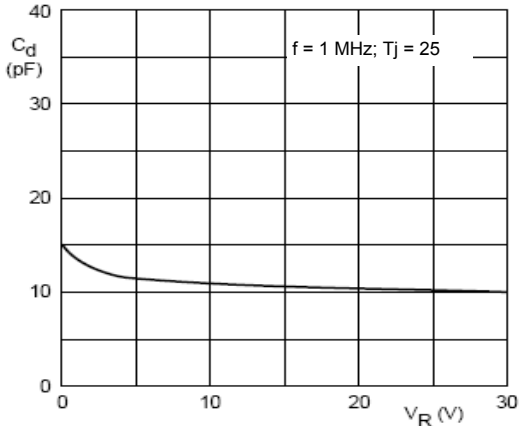


Fig.5 - Maximum permissible non-repetitive peak forward current as a function of pulse duration.