

April 2008

BAX16

High Voltage General Purpose Diode



DO-35 Glass case

COLOR BAND DENOTES CATHODE

Absolute Maximum Ratings *Ta = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage	150	V
I _{F(AV)}	Average Rectified Forward Current	200	mA
i _f	Recurrent Peak Forward Current	600	mA
I _{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 s Pulse Width = 1.0 μs	1 4	A A
T _{STG}	Storage Temperature Range	-65 to 200	°C
T _J	Operating Junction Temperature	175	°C

^{*} These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics * Ta = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100μA	180		V
V_{F}	Forward Voltage	I _F = 1.0mA		0.65	V
V _{FP}	Forward Voltage Pulse Width = 300 µs	I _F = 100mA I _F = 200mA		1.3 1.5	
I _R	Reverse Leakage	$V_R = 50V$ $V_R = 50V, T_A = 150^{\circ}C$ $V_R = 150V$ $V_R = 150V, T_A = 150^{\circ}C$		25 25 100 100	nA μA nA μA
t _{rr}	Reverse Recovery Time	$I_F = 30\text{mA}, I_R = 30\text{mA},$ $I_{rr} = 1.0\text{mA}, R_L = 100\Omega$		120	ns

Notes:

1) These ratings are based on a maximum junction temperature of 200degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Typical Performance Characteristics

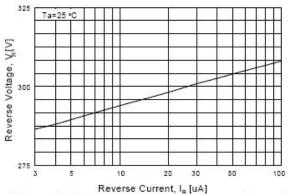
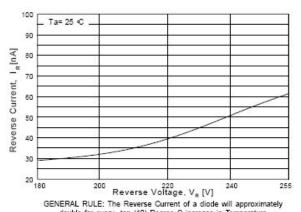


Figure 1. Reverse Voltage vs Reverse Current BV - 1.0 to 100uA



GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature Figure 3. Reverse Current vs Reverse Roltage IR - 180 to 225 V

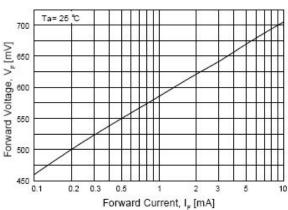


Figure 5. Forward Voltage vs Forward Current VF - 0.1 to 10mA

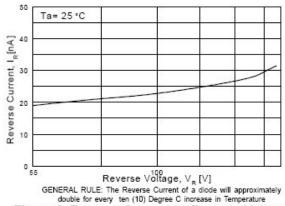


Figure 2. Reverse Current vs Reverse Voltage IR - 55 to 205 V

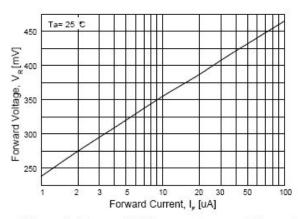


Figure 4. Forward Voltage vs Forward Current VF - 1.0 to 100uA

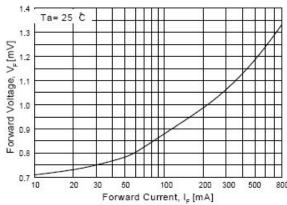


Figure 6. Forward Voltage vs Forward Current VF - 10 to 800mA

Typical Performance Characteristics

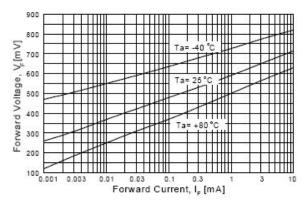


Figure 7. Forward Voltage vs Ambient Temperature VF - 1.0 uA - 10 mA (-40 to +80 Deg C)

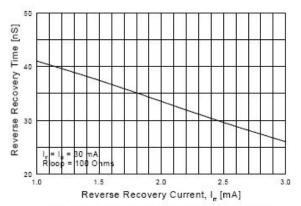


Figure 9. Reverse Recovery Time vs Reverse Recovery Current

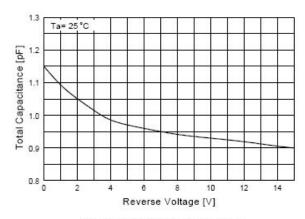


Figure 8. Total Capacitance

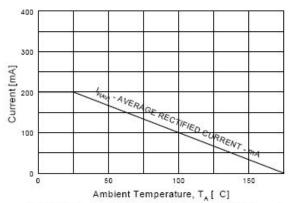


Figure 10. Average Rectified Current (I_{F(AV)}) versus Ambient Temperature (T_A)

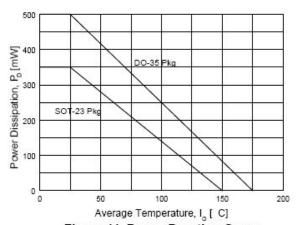


Figure 11. Power Derating Curve





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Rev. I31