

BAX16

High Voltage General Purpose Diode



DO-35 Glass case
COLOR BAND DENOTES CATHODE

Absolute Maximum Ratings

* $T_a = 25^\circ\text{C}$ 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	A
		4	A
T_{STG}	Storage Temperature Range	-65 to 200	$^\circ\text{C}$
T_J	Operating Junction Temperature	175	$^\circ\text{C}$

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

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.

Electrical Characteristics

* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	$I_R = 100\mu\text{A}$	180		V
V_F	Forward Voltage	$I_F = 1.0\text{mA}$		0.65	V
V_{FP}	Forward Voltage Pulse Width = 300 μs	$I_F = 100\text{mA}$		1.3	
		$I_F = 200\text{mA}$		1.5	
I_R	Reverse Leakage	$V_R = 50\text{V}$		25	nA
		$V_R = 50\text{V}, T_A = 150^\circ\text{C}$		25	μA
		$V_R = 150\text{V}$		100	nA
		$V_R = 150\text{V}, T_A = 150^\circ\text{C}$		100	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

Typical Performance Characteristics

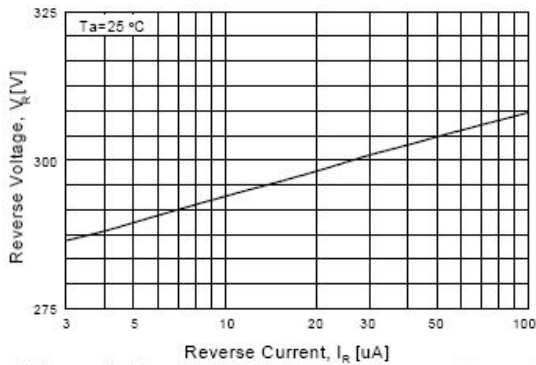


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100uA

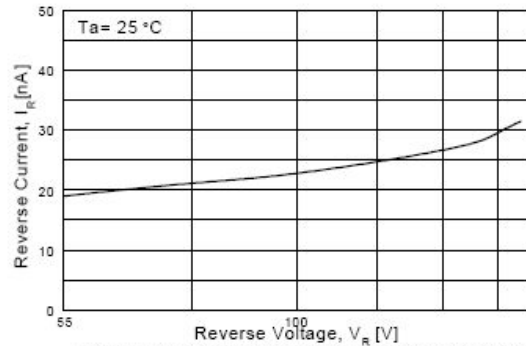


Figure 2. Reverse Current vs Reverse Voltage
IR - 55 to 205 V
GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

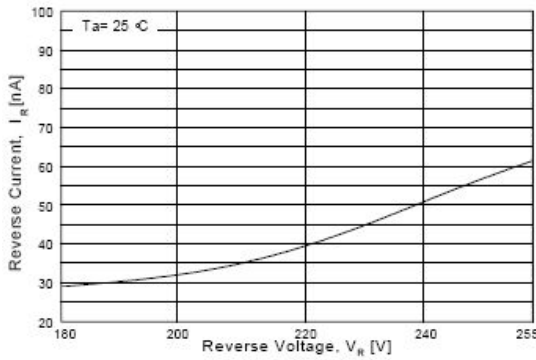


Figure 3. Reverse Current vs Reverse Voltage
IR - 180 to 225 V
GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

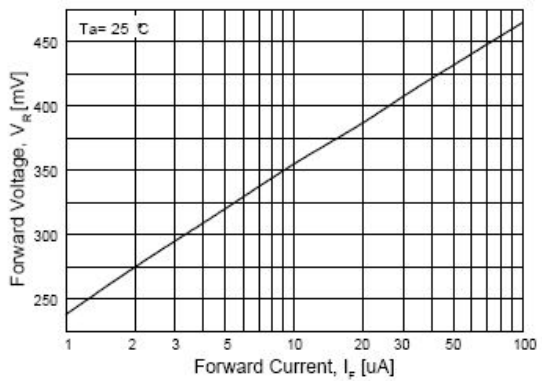


Figure 4. Forward Voltage vs Forward Current
VF - 1.0 to 100uA

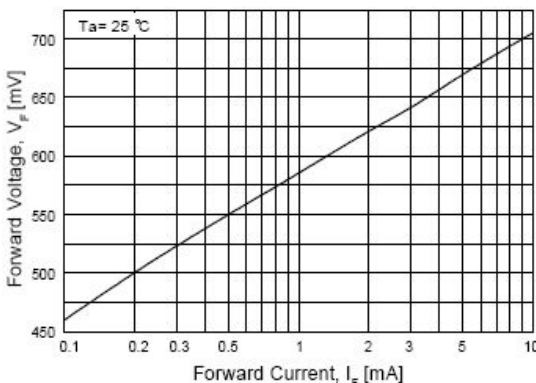


Figure 5. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

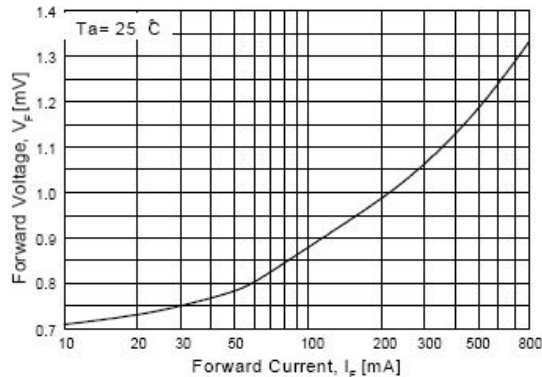


Figure 6. Forward Voltage vs Forward Current
VF - 10 to 800mA

Typical Performance Characteristics

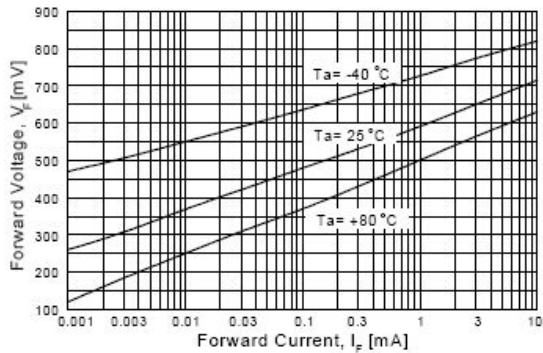


Figure 7. Forward Voltage vs Ambient Temperature
VF - 1.0 uA - 10 mA (-40 to +80 Deg C)

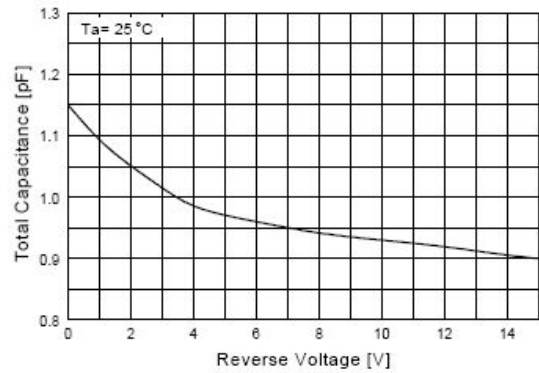


Figure 8. Total Capacitance

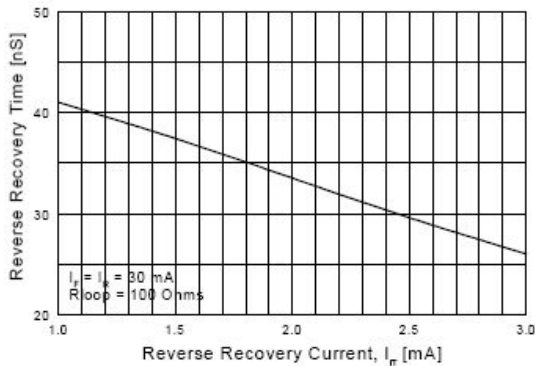


Figure 9. Reverse Recovery Time vs Reverse Recovery Current

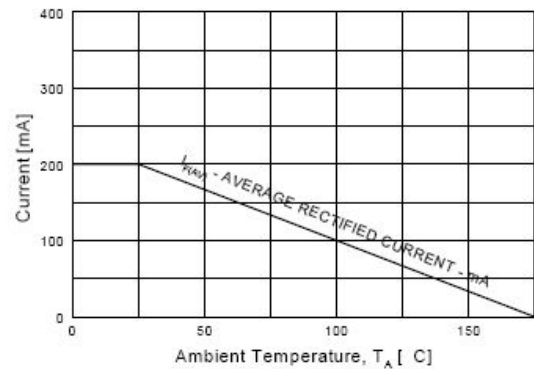


Figure 10. Average Rectified Current ($I_{F(AV)}$) versus Ambient Temperature (T_A)

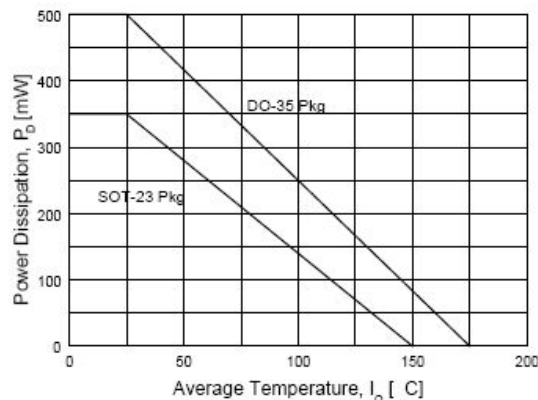


Figure 11. Power Derating Curve



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