

Features

- Fast Switching Speed
- Moisture Sensitivity Level 1
- AEC-Q101 Qualified
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

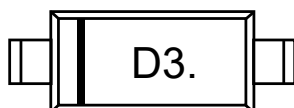
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note 2) : 500°C/W Junction to Ambient

MCC Part Number	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage V_R
BAS416HE3	100V	71V	100V

Parameter	Symbol	Value
DC Reverse Voltage	V_R	100V
Working Peak Reverse Voltage	V_{RWM}	100V
Average Forward Current	$I_{F(AV)}$	200mA
Peak Forward Surge Current	I_{FSM}	4A
Power Dissipation	P_D	250mW

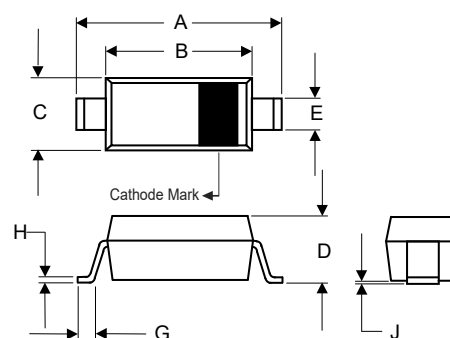
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Part mounted on FR-4 board with recommended pad layout.

Internal Structure and Marking Code



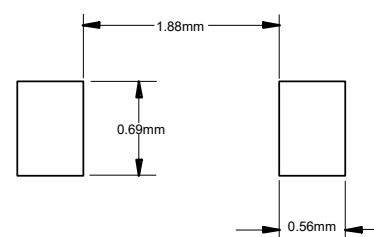
250mW High Speed Switching Diode

SOD-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.090	0.113	2.30	2.88	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.049	0.80	1.24	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	----	0.006	----	0.15	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu A$	100			V
Forward Voltage	V_F	$I_F=1mA$			0.9	V
		$I_F=10mA$			1	V
		$I_F=50mA$			1.1	V
		$I_F=150mA$			1.25	V
Reverse Current	I_R	$V_R=75V$			5	nA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$			4	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA,$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$			3	μs

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

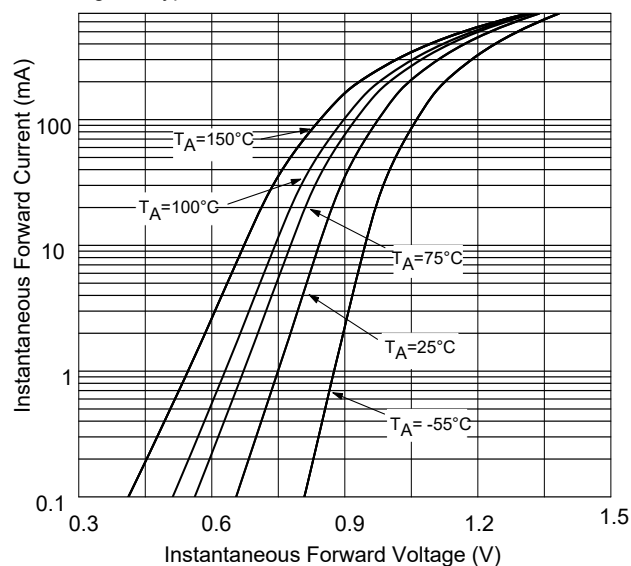


Fig. 2 - Typical Reverse Leakage Characteristics

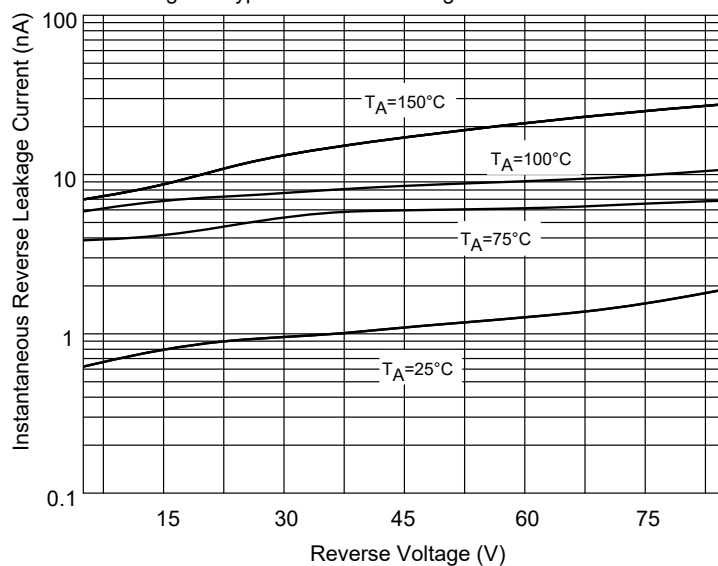


Fig. 3 - Capacitance Characteristics

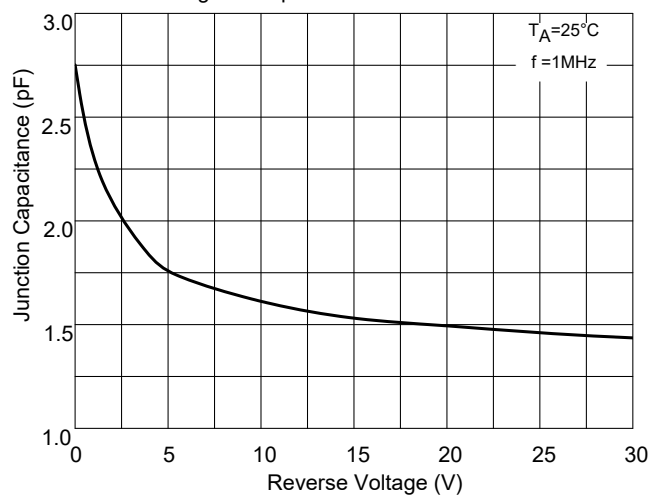
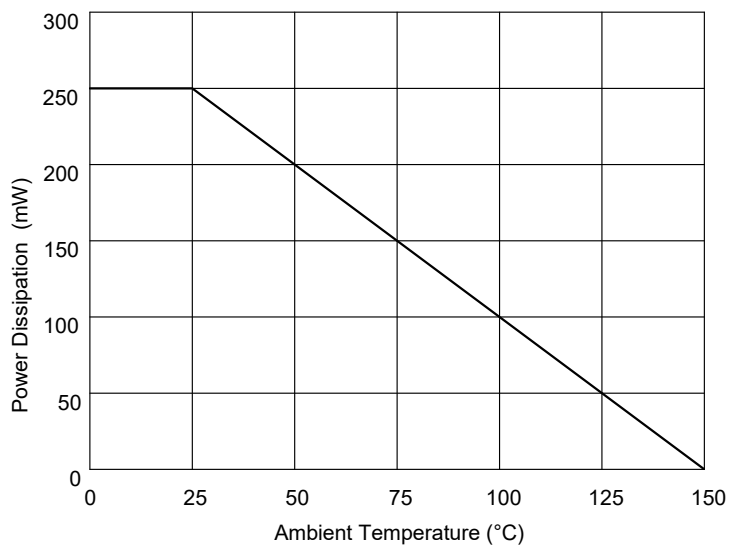


Fig. 4 - Power Derating Curve



Ordering Information

Device	Packing
BAS416HE3-TP	Tape&Reel: 3Kpcs/Reel

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