

Small Signal Product

**225mW, SMD Switching Diode**

FEATURES

- Low power loss, high current capability, low VF
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) under plate
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)

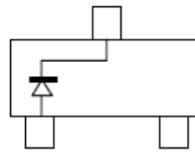


SOT-23



MECHANICAL DATA

- Case: SOT- 23, molded plastic
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight: 8 mg (approximately)
- Marking Code: JV



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	225	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	75	V
Mean Forward Current	I <sub>O</sub>	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s	I <sub>FSM</sub>	500	mA
Thermal Resistance (Junction to Ambient) (Note 1)	R <sub>θJA</sub>	330	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage I <sub>R</sub> = 100 μA	V <sub>BR</sub>	75	-	V
Forward Voltage I <sub>F</sub> = 1 mA I <sub>F</sub> = 10 mA I <sub>F</sub> = 50 mA I <sub>F</sub> = 150 mA	V <sub>F</sub>	-	0.9	V
		-	1.0	
		-	1.1	
		-	1.25	
Reverse Leakage Current V <sub>R</sub> = 75 V	I <sub>R</sub>	-	5	nA
		-	80	
Junction Capacitance V <sub>R</sub> = 0 V , f = 1.0 MHz	C <sub>J</sub>	-	2.0	pF
Reverse Recovery Time (Note 2)	t <sub>rr</sub>	-	3.0	ns

Notes : 1. Valid provided that electrodes are kept at ambient temperature  
 2. Reverse recovery test conditions : I<sub>F</sub>=10mA , I<sub>R</sub>=10mA , R<sub>L</sub>=100 Ω, I<sub>RR</sub>= 1mA

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Typical Forward Characteristics

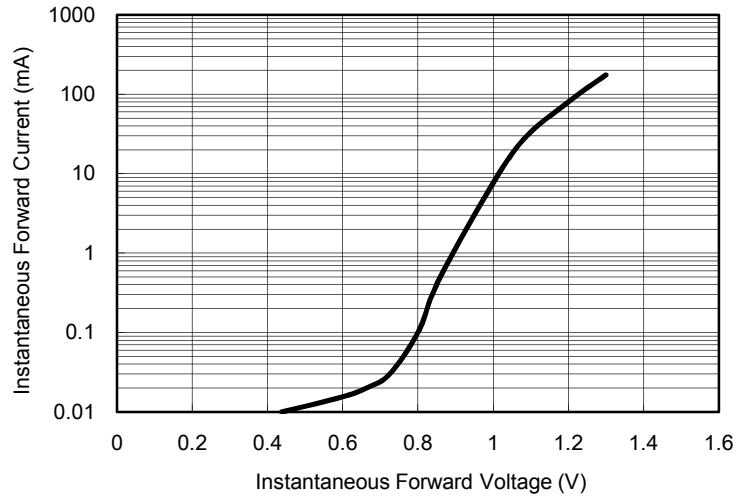


Fig. 2 Reverse Current vs. Reverse Voltage

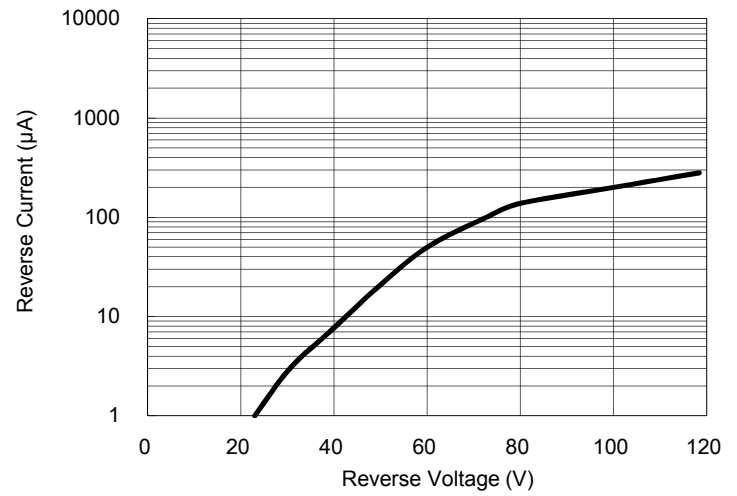


Fig. 3 Admissible Power Dissipation Curve

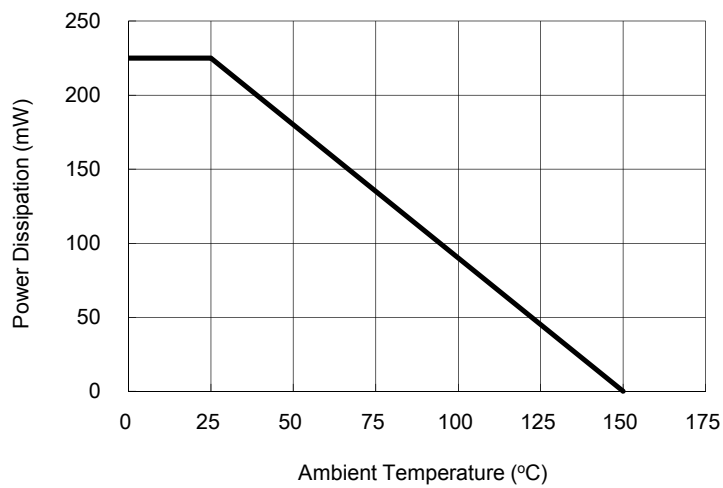
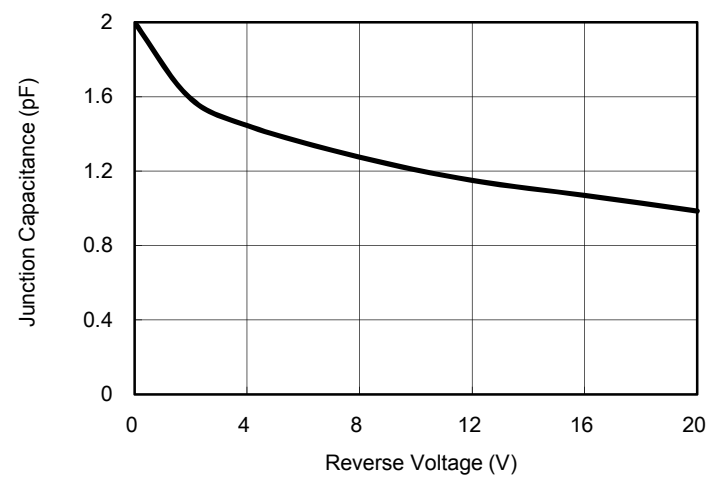


Fig. 4 Typical Junction Capacitance



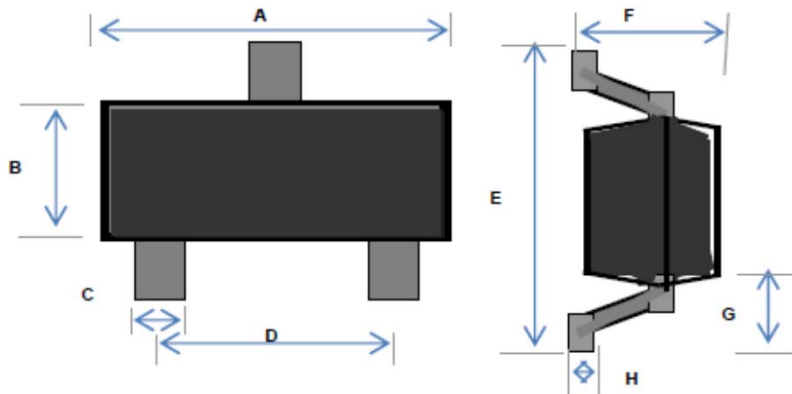
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ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAS116	RF	G	SOT-23	3K / 7" Reel

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS116 RFG	BAS116	RF	G	Green compound

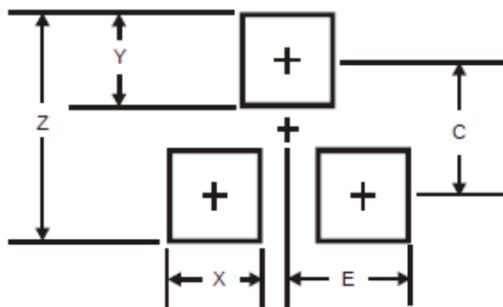
PACKAGE OUTLINE DIMENSIONS

**SOT-23**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.10 REF		0.004 REF	

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)		Unit (inch)	
	Typ.		Typ.	
Z	2.8		0.110	
X	0.7		0.028	
Y	0.9		0.035	
C	1.9		0.075	
E	1.0		0.039	

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