Small Signal Product

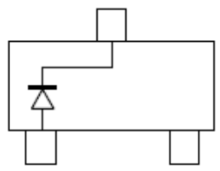
225mW SMD Switching Diode

FEATURES

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



SOT-23



MECHANICAL DATA

- Case: Bend lead SOT-23 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable
  per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s
- Weight: 8 ± 0.5 mg
- Marking Code: A6

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	225	mW
Repetitive peak reverse voltage	V_{RRM}	75	V
Mean forward current	I_O	150	mA
Non-repetitive peak forward surge current @ t = 0.001 s	I_{FSM}	2	A
Thermal resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	375	°C/W
Junction and storage temperature range	T_J , T_{STG}	-65 to +150	°C

PARAMETER		SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage	I_R = 100 μA	$V_{(BR)}$	75	-	V
Forward voltage	I_F = 1.0 mA	V_F	-	0.715	V
	I_F = 10 mA			0.855	
	I_F = 50 mA			1.000	
	I_F = 150 mA			1.250	
Reverse leakage current	V_R = 75 V	I_R	-	1	μA
Junction capacitance	V_R = 0 V , f = 1.0 MHz	C_J	-	2.0	pF
Reverse recovery time	(Note 2)	t_{rr}	-	3.0	ns

Note 1: Valid provided that electrodes are kept at ambient temperature

Note 2: Reverse recovery test conditions: I_F=10mA , I_R=10mA , R_L=100 Ω, I_{RR}= 1mA

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

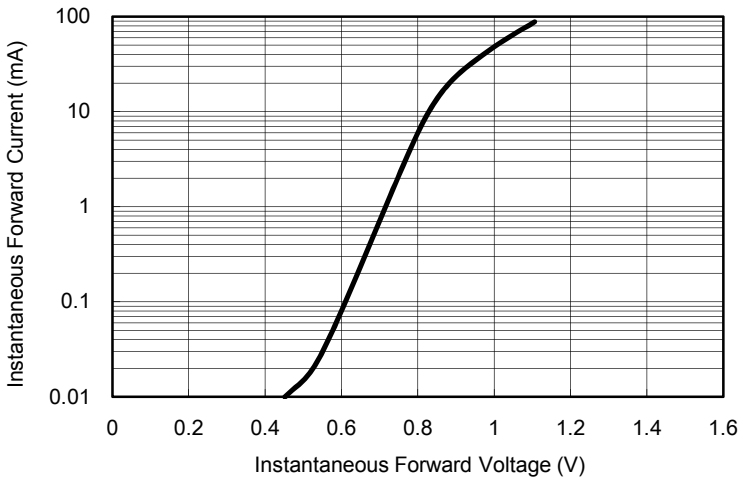


Fig. 2 Reverse Current VS. Reverse Voltage

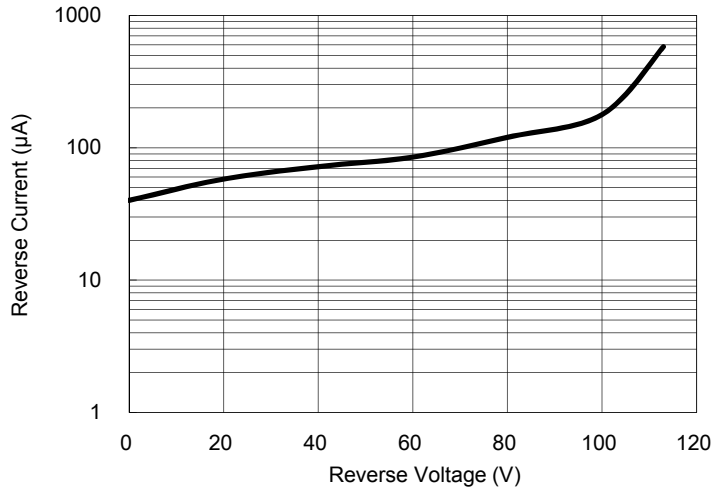


Fig. 3 Admissible Power Dissipation Curve

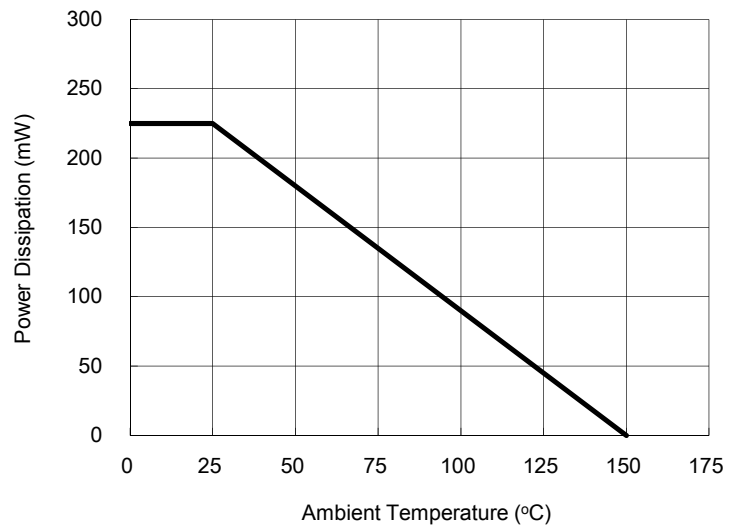
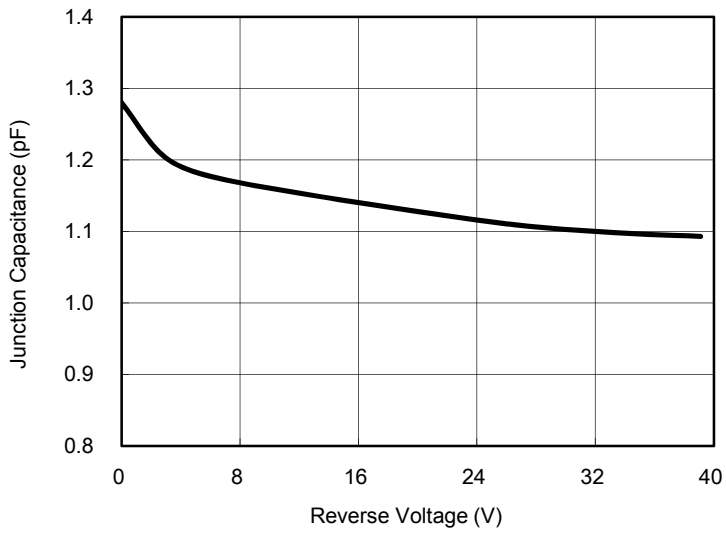


Fig. 4 Typical Junction Capacitance

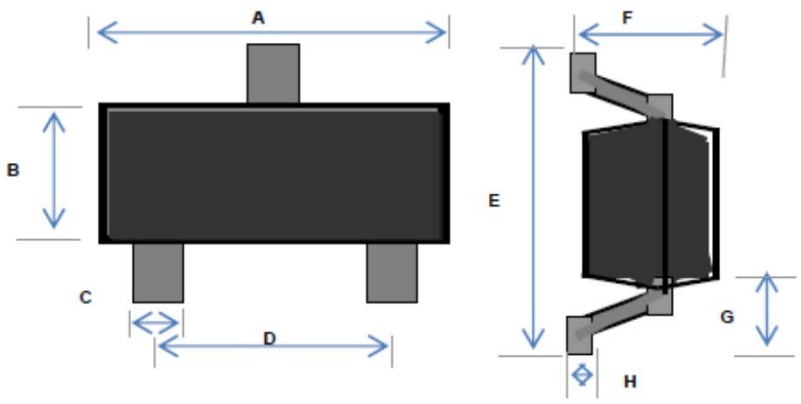


ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 1)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAS16	-xx	RF	G	SOT-23	3K / 7" Reel
		R5			10K / 13" Reel

Note 1: Part No. Suffix „-xx “ would be used for special requirement

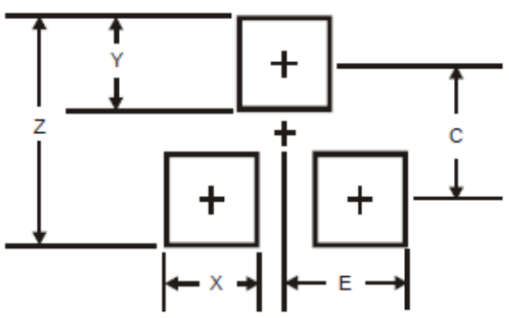
EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS16 RF	BAS16		RF		Multiple manufacture source
BAS16 RFG	BAS16		RF	G	Multiple manufacture source Green compound
BAS16-B0 RFG	BAS16	-B0	RF	G	Defined manufacture source Green compound

PACKAGE OUTLINE DIMENSIONS



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	

SUGGEST 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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