70mA, 70V SMD Schottky Barrier Diode

FEATURES

- Low turn-on voltage
- Fast switching
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Adapters
- For switching power supply
- Low stored charge
- Inverter

MECHANICAL DATA

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Weight: 8 mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	70	mA
V_{RRM}	70	V
I_{FSM}	0.1	A
V_F at I_F=15mA	1	V
T_J Max.	125	°C
Package	SOT-23	

Pb-Free

RoHS COMPLIANT

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER		**SYMBOL**	**VALUE**	**UNIT**
Marking code on the device	BAS70		73	
	BAS70-04		74	
	BAS70-05		75	
	BAS70-06		76	
Repetitive peak reverse voltage		V_{RRM}	70	V
Working peak reverse voltage		V_{RWM}	70	V
DC blocking voltage		V_R	70	V
RMS reverse voltage		$V_{R(RMS)}$	49	V
Forward current		I_F	70	mA
Non-repetitive peak forward surge current @ t = 1s		I_{FSM}	100	mA
Power dissipation		P_D	200	mW
Junction temperature range		T_J	-55 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

THERMAL PERFORMANCE			
PARAMETER	**SYMBOL**	**TYP**	**UNIT**
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	625	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**MIN**	**MAX**	**UNIT**
Forward voltage per diode (1)	I_F = 1mA, T_J = 25°C	V_F	-	0.41	V
	I_F = 15mA, T_J = 25°C			1.00	
Reverse current per diode (2)	V_R = 50V T_J = 25°C	I_R	-	100	nA
Reverse Breakdown Voltage	I_R=10μA	$V_{(BR)}$	70	-	V
Junction capacitance	f = 1 MHz, V_R=0V	C_J	-	2	pF
Reverse Recovery Time	I_F=I_R=10mA, R_L=100Ω, I_{RR}=1mA	t_{rr}	-	5	ns

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE (Note 1)	**PACKAGE**	**PACKING**
BAS7xxxx RF	SOT-23	3K / 7" Reel
BAS7xxxx RFG	SOT-23	3K / 7" Reel
BAS7xxxx-B0 RF	SOT-23	3K / 7" Reel
BAS7xxxx-B0 RFG	SOT-23	3K / 7" Reel
BAS7xxxx-D0 RF	SOT-23	3K / 7" Reel
BAS7xxxx-D0 RFG	SOT-23	3K / 7" Reel

Note:

1. "xxxx" defines part no. from "0" to "0-06"

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig. 1 Power Derating Curve

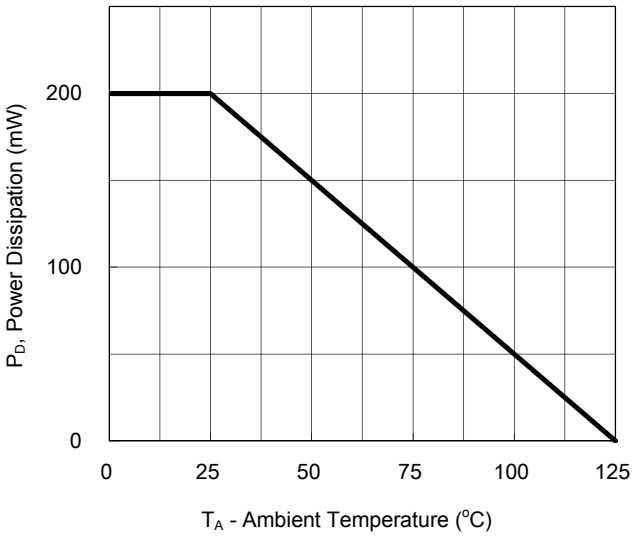


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

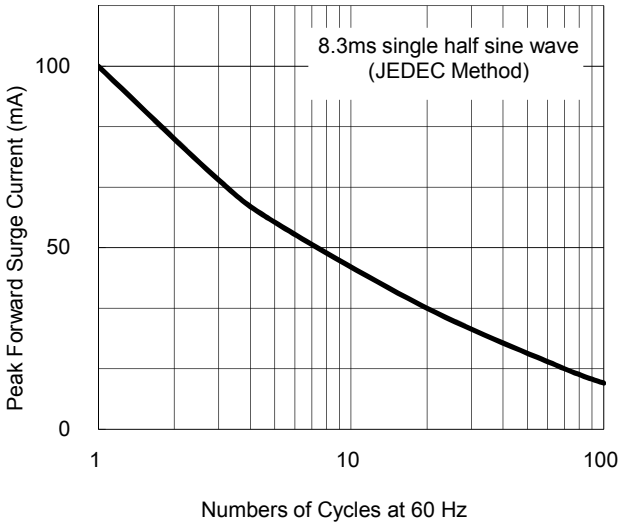


Fig.3 Typical Forward Characteristics

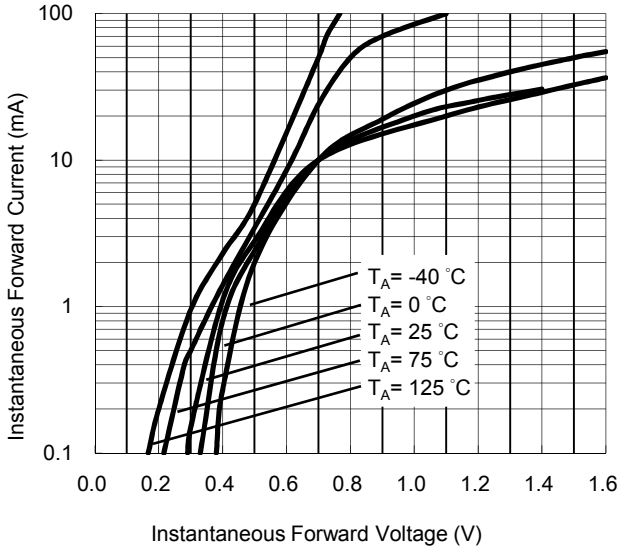
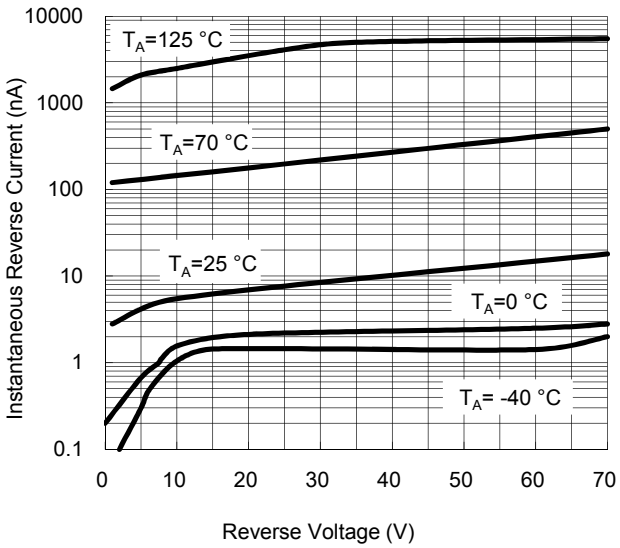


Fig.4 Typical Reverse Characteristics



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig. 5 Typical Total Capacitance VS. Reverse Voltage

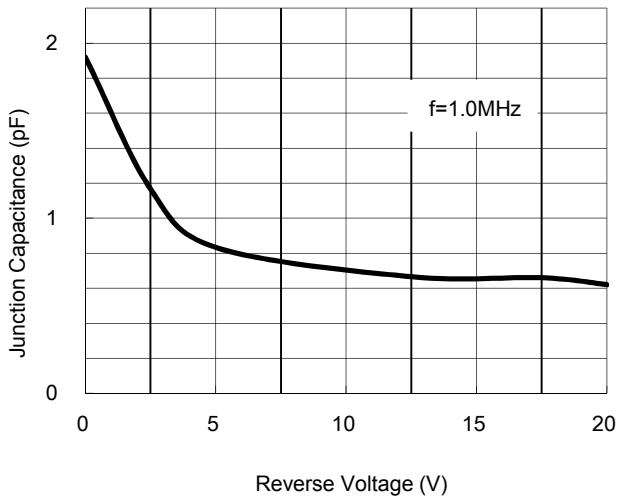
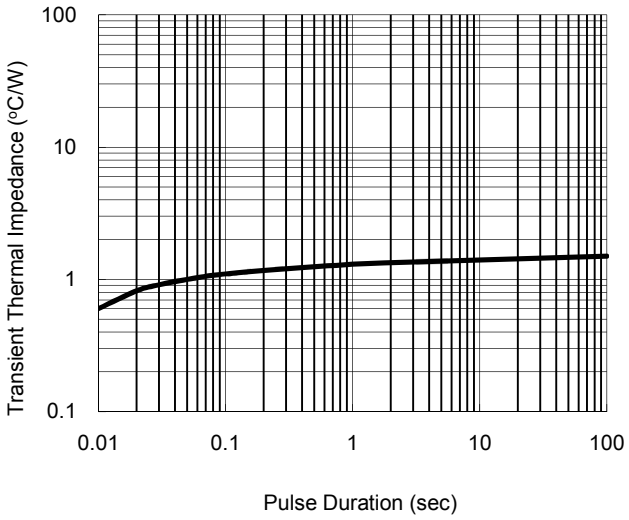
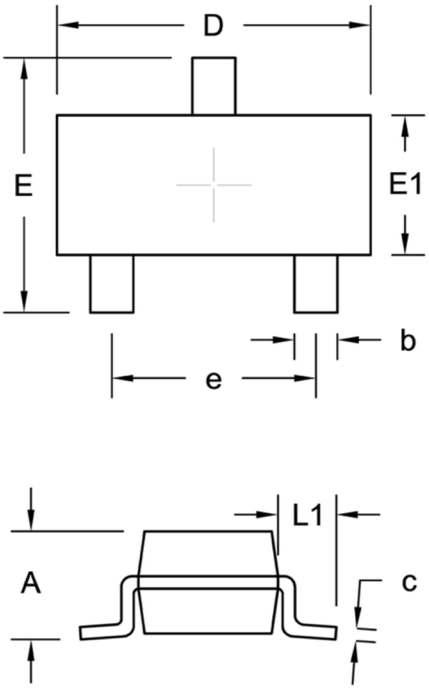


Fig.6 Typical Transient Thermal Characteristics



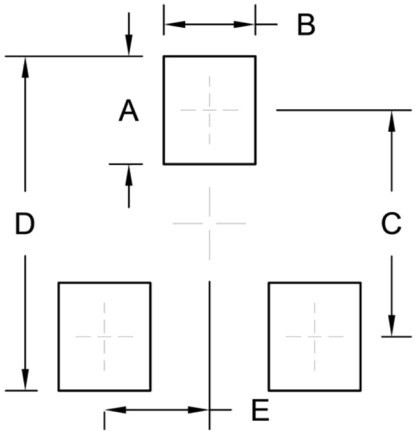
PACKAGE OUTLINE DIMENSION

SOT-23



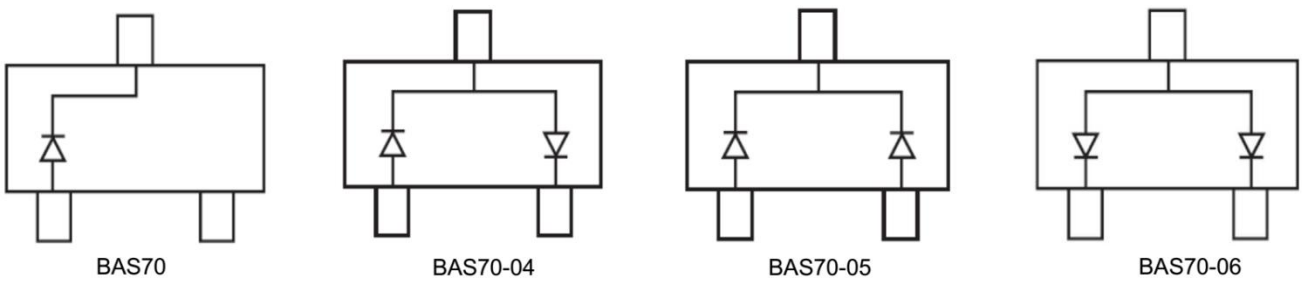
DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.89	1.12	0.035	0.044
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.80	3.04	0.110	0.120
E	2.10	2.64	0.083	0.104
E1	1.20	1.40	0.047	0.055
e	1.90 BSC		0.075 BSC	
L1	0.54 REF.		0.021 REF.	

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.00	0.039
B	0.85	0.033
C	2.10	0.083
D	3.10	0.122
E	0.98	0.039

PIN CONFIGURATION



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