

200mA, 40V Schottky Barrier Diode

FEATURES

- Fast switching device
- Surface mount device type
- 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: SOD-523F
- Molding compound meets UL 94 V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 1.60 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	200	mA
V_{RRM}	40	V
V_F at $I_F=40mA$	1.0	V
$T_{J\ MAX}$	125	°C
Package	SOD-523F	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	BAS40M5	UNIT
Marking code on the device		40	
Power dissipation	P_D	200	mW
Repetitive peak reverse voltage	V_{RRM}	40	V
Non-repetitive peak reverse voltage	V_{RM}	40	V
Forward current	I_F	200	mA
Non-repetitive peak forward surge current @ $t=8.3ms$	I_{FSM}	0.5	A
Junction temperature range	T_J	-50 to +125	°C
Storage temperature range	T_{STG}	-50 to +125	°C

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 1\text{mA}, T_J = 25^\circ\text{C}$	V_F	-	0.38	V
	$I_F = 10\text{mA}, T_J = 25^\circ\text{C}$			0.50	
	$I_F = 40\text{mA}, T_J = 25^\circ\text{C}$			1.00	
Reverse voltage ⁽²⁾	$I_R = 10\mu\text{A}, T_J = 25^\circ\text{C}$	V_R	40	-	V
Reverse current ⁽²⁾	$V_R = 25\text{V}, T_J = 25^\circ\text{C}$	I_R	-	1	μA
Capacitance	$f = 1\text{MHz}, V_R = 0\text{V}$	C	-	5	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}$ $I_{RR} = 1\text{mA}, R_L = 100\Omega$	t_{rr}	-	5	ns

Notes:

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

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
BAS40M5 RSG	SOD-523F	8K / 7" Reel

CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

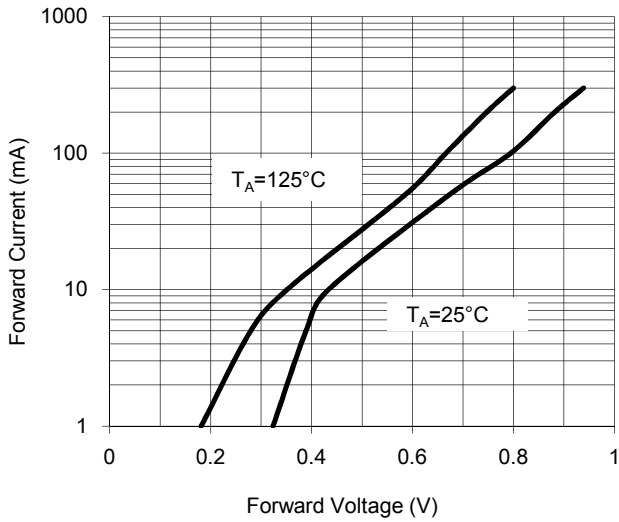


Fig.2 Typical Reverse Characteristics

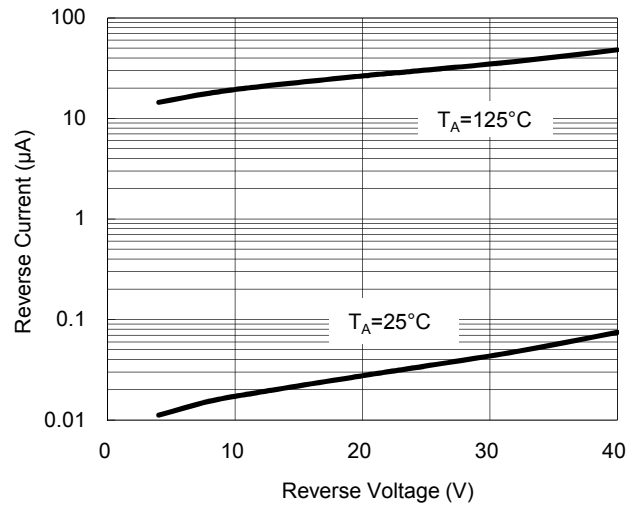


Fig.3 Typical Capacitance Characteristics

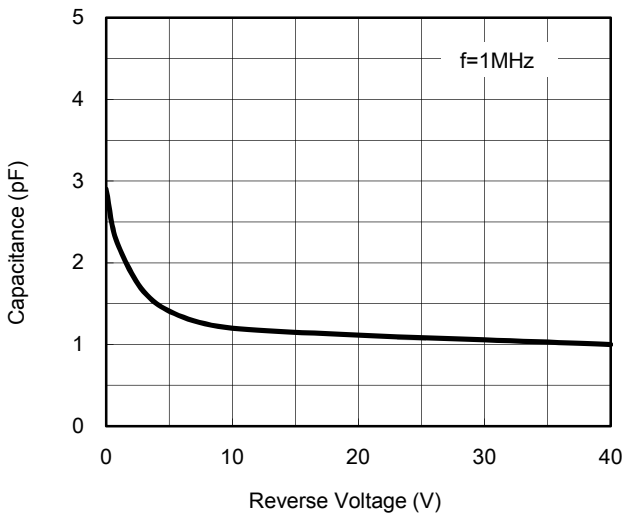
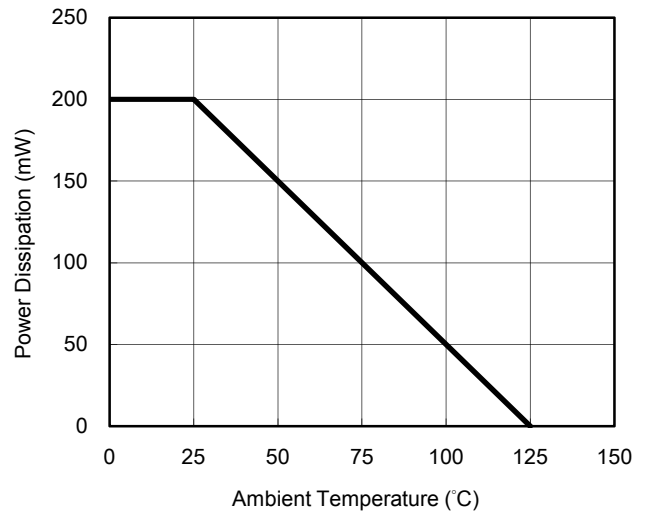
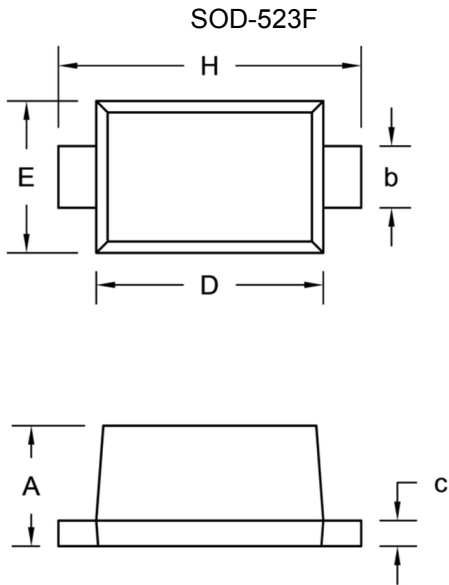


Fig.4 Power Derating Curve

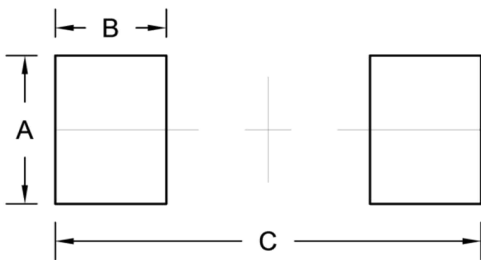


PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.50	0.77	0.020	0.030
b	0.25	0.40	0.010	0.016
c	0.07	0.20	0.003	0.008
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H	1.50	1.70	0.059	0.067

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	0.80	0.031
B	0.60	0.024
C	2.30	0.091

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