

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

APPLICATIONS

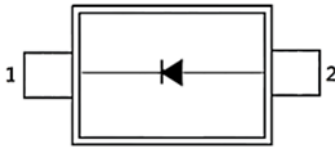
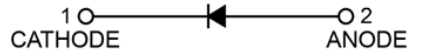
- Adapters
- For switching power supply
- Low stored charge
- Inverter

MECHANICAL DATA

- Case: SOD-523F
- Molding compound meets UL 94V-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	PIN CONFIGURATION	CIRCUIT DIAGRAM
		

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
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 $PW=0.3\text{ ms}$
2. Pulse test with $PW=30\text{ ms}$

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

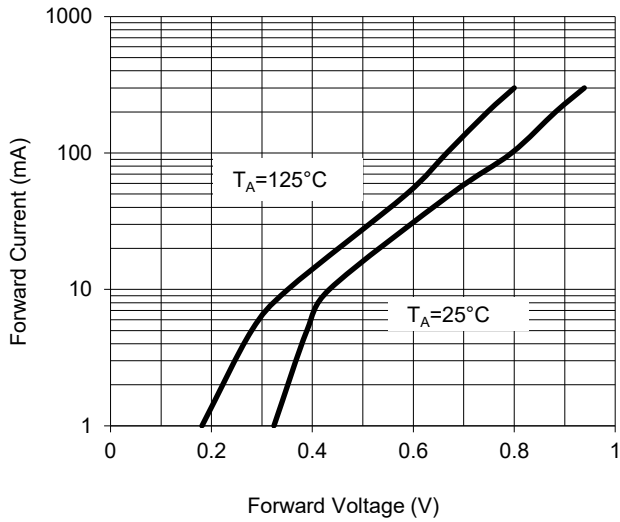


Fig.2 Typical Reverse Characteristics

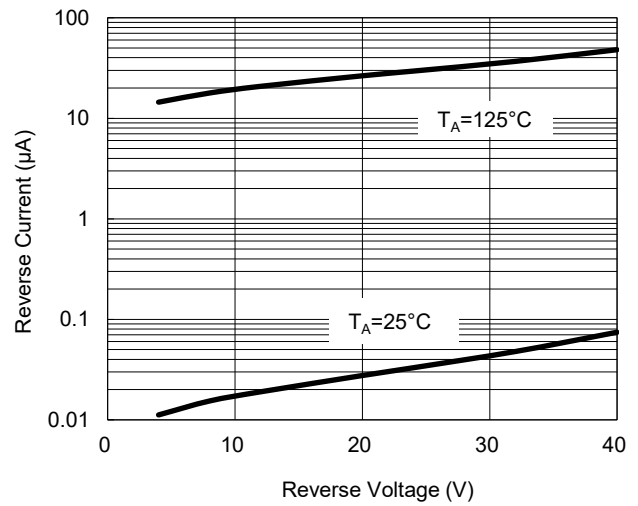


Fig.3 Typical Capacitance Characteristics

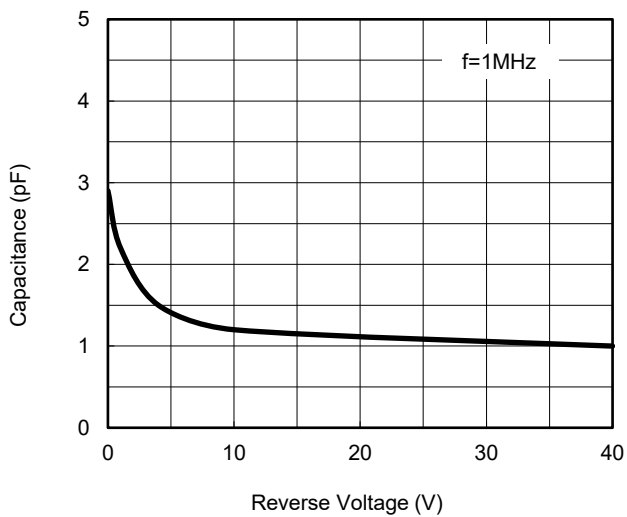
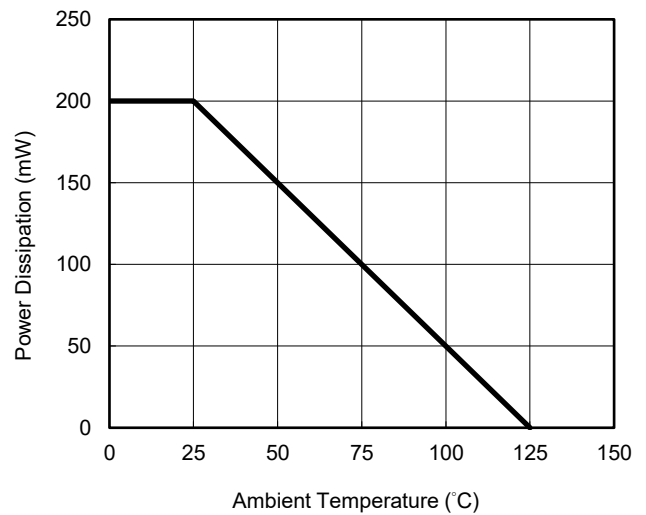
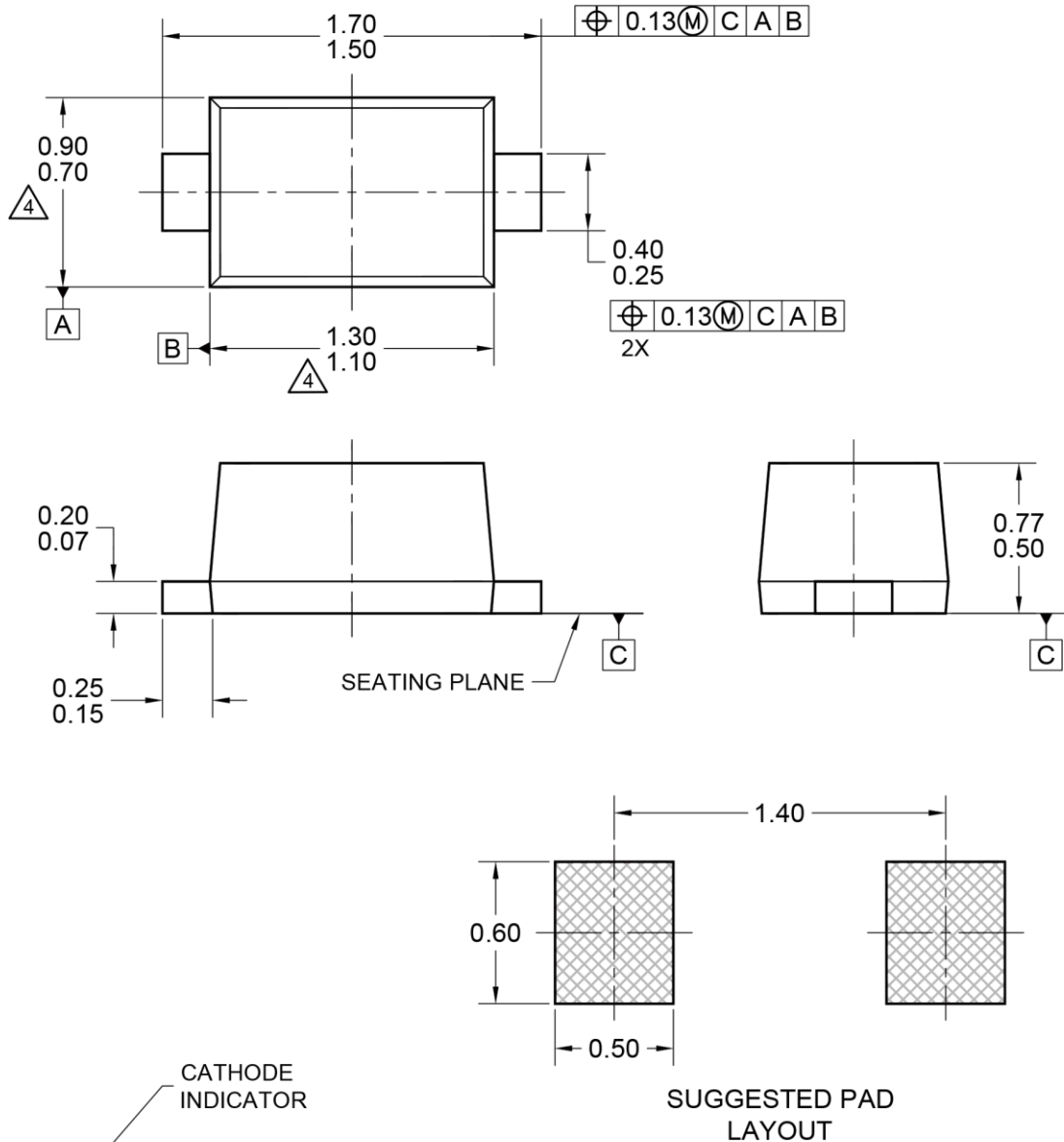


Fig.4 Power Derating Curve



PACKAGE OUTLINE DIMENSION

SOD-523F



MARKING DIAGRAM

40 = Device marking

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: EIAJ ED-7500A, SC-79.
4. MOLDED PLASTIC BODY LATERAL DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. DWG NO. REF: HQ2SD07-SOD523F-047 REV A.

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