

350mA, 40V Schottky Barrier Diode

FEATURES

- Low forward voltage drop
- Surface mount device type
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

APPLICATIONS

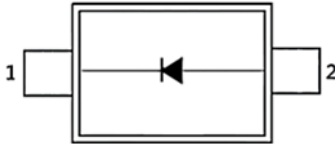
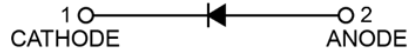
- Adapters
- For switching power supply
- Inverter

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: 1.60mg (approximately)



KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	350	mA
V_{RRM}	40	V
V_F at $I_F = 200\text{mA}$	0.6	V
$T_{J\text{ MAX}}$	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
DC blocking reverse voltage	V_R	40	V
Forward current	I_F	350	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$ single half sine wave	I_{FSM}	2	A
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	$R_{\theta JA}$	158	°C/W

Note: Units mounted on PCB (10mm x 5mm Cu pad test board)

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

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 20\text{mA}$, $T_J = 25^\circ\text{C}$	V_F	-	0.32	0.37	V
	$I_F = 200\text{mA}$, $T_J = 25^\circ\text{C}$		-	0.48	0.60	V
Reverse voltage ⁽²⁾	$I_R = 100\mu\text{A}$, $T_J = 25^\circ\text{C}$	V_R	40	-	-	V
Reverse current ⁽²⁾	$V_R = 30\text{V}$, $T_J = 25^\circ\text{C}$	I_R	-	-	5	μA
Junction capacitance	$f = 1\text{MHz}$, $V_R = 0\text{V}$	C_J	-	23	50	pF
Reverse recovery time	$I_F = I_R = 50\text{mA}$, $R_L = 100\Omega$	t_{rr}	-	-	4	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
SD103AXM5 RSG	SOD-523F	8K / 7" Reel

CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

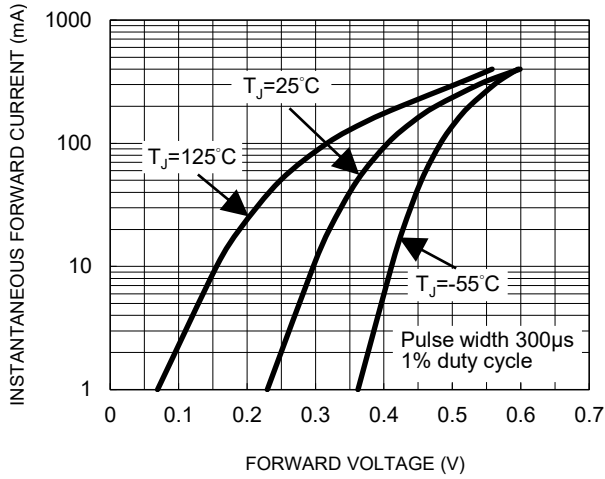


Fig.2 Typical Reverse Characteristics

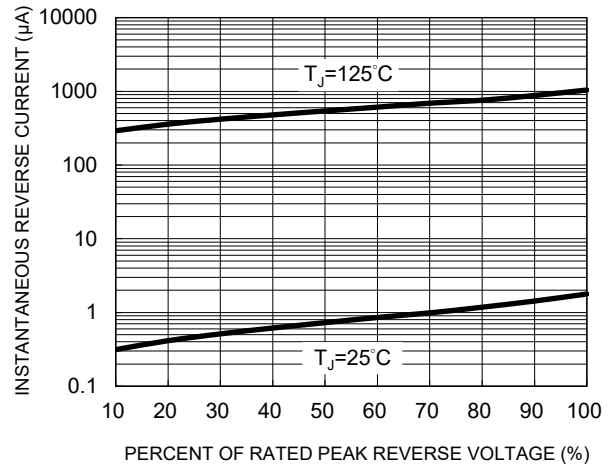


Fig.3 Typical Junction Capacitance

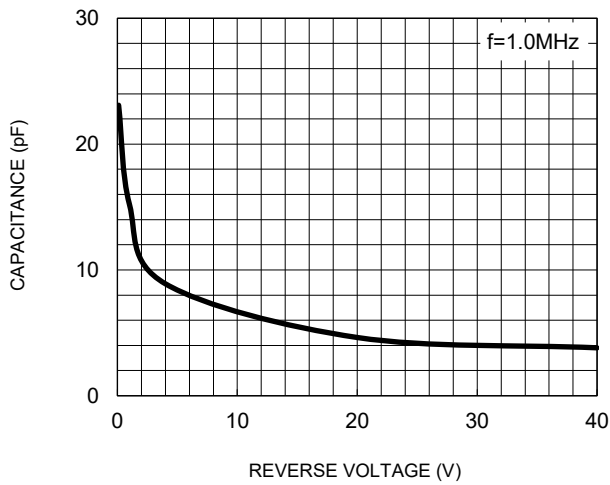
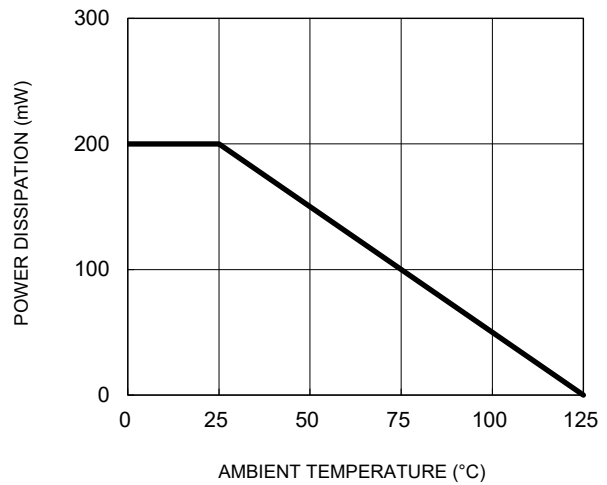
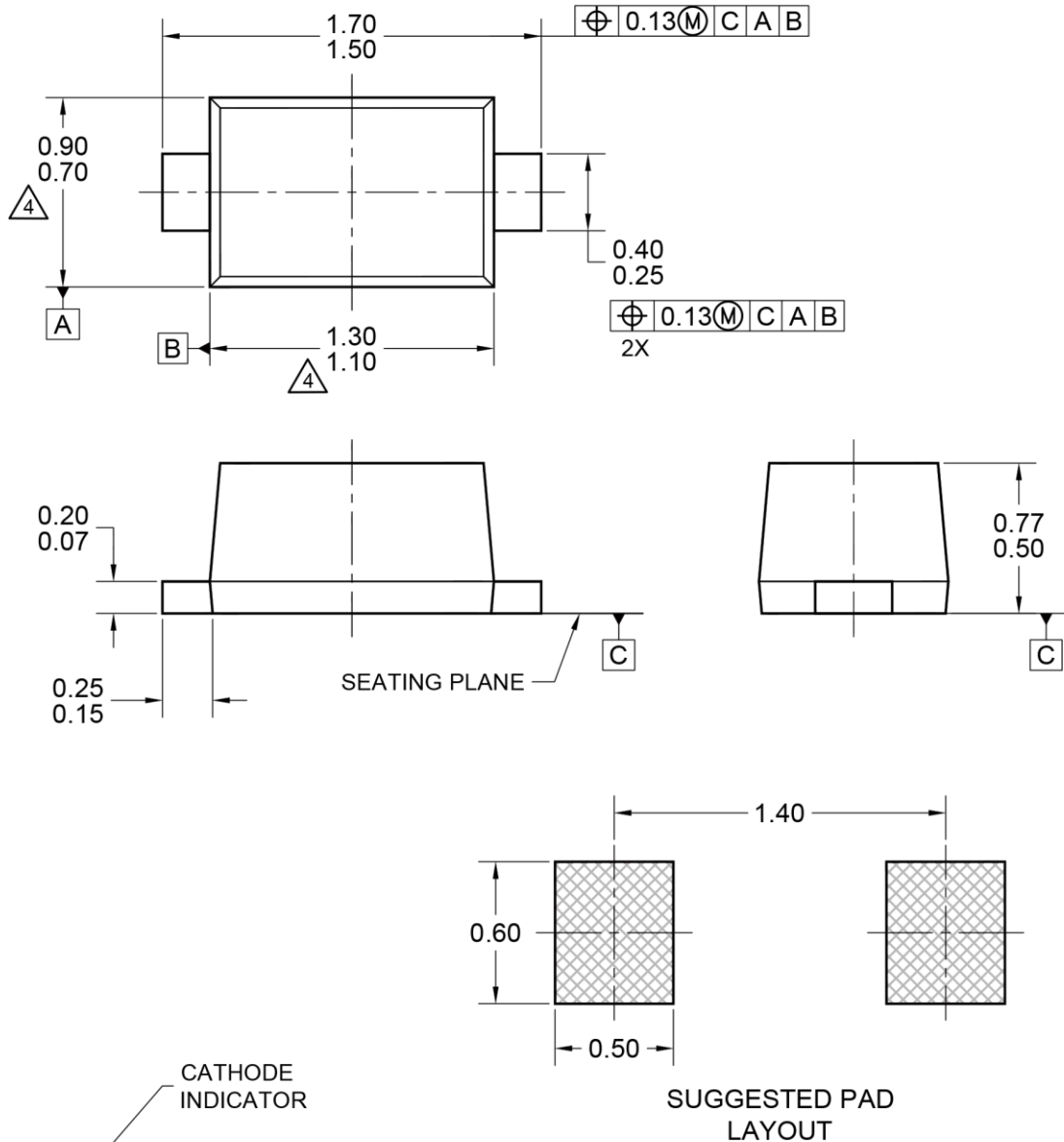


Fig.4 Power Derating Curve



PACKAGE OUTLINE DIMENSION

SOD-523F



MARKING DIAGRAM

$\bar{S}4$ = 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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