

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 according to IEC 61249-2-21

APPLICATIONS

- Adapters
- For switching power supply
- 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: 1.60mg (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	
Configuration	Single die	



SOD-523F



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	SD103AXM5	UNIT
Marking code on the device		$\bar{S}4$	
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 = 0.3ms
2. Pulse test with PW = 30ms

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

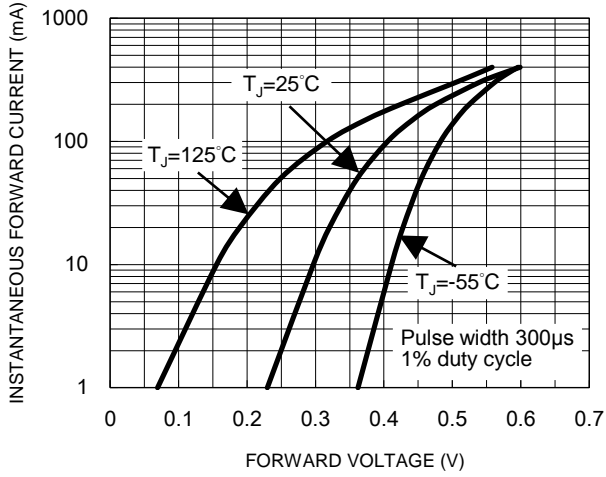


Fig.2 Typical Reverse Characteristics

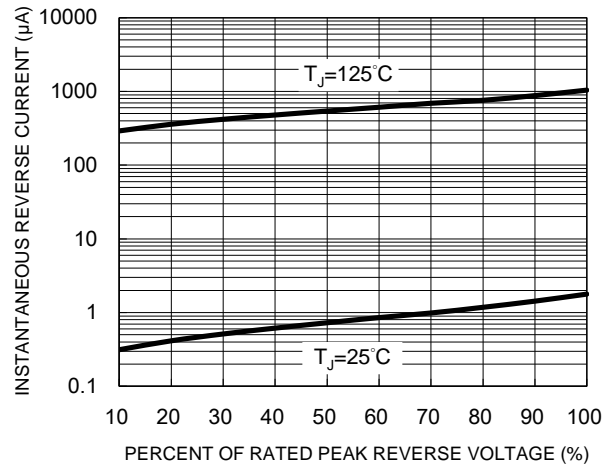


Fig.3 Typical Junction Capacitance

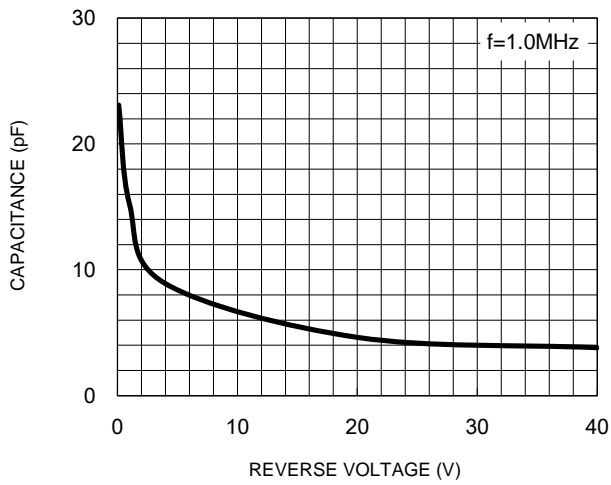
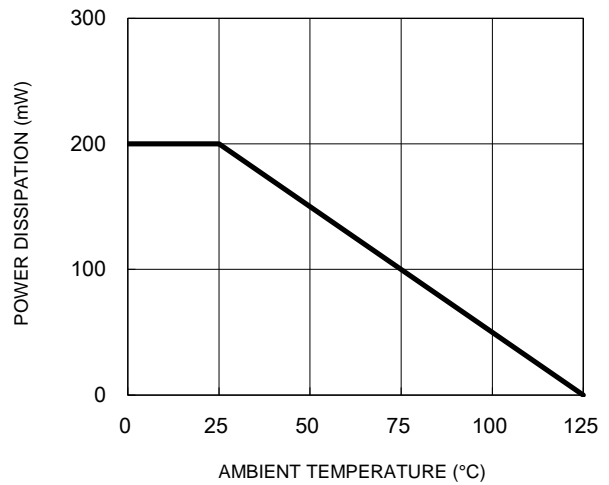
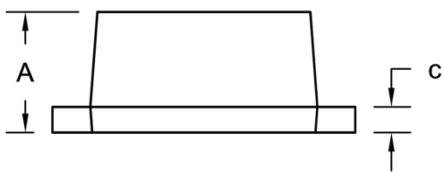
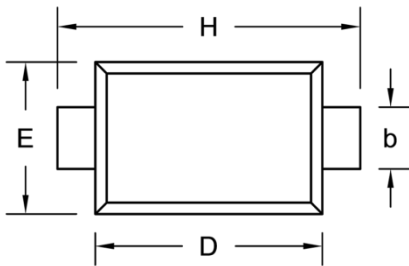


Fig.4 Power Derating Curve



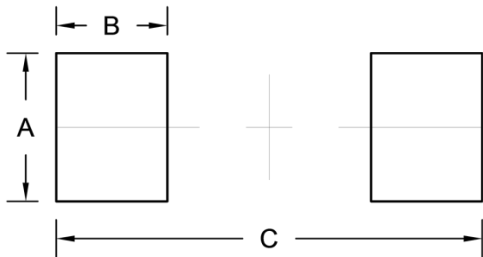
PACKAGE OUTLINE DIMENSION

SOD-523F



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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