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 = 200mA	0.6	V
$T_{J\ MAX}$	125	°C
Package	SOD-523F	
Configuration	Single die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

SOD-523F

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**SD103AXM5**	**UNIT**
Marking code on the device		S4	
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 = 8.3ms 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°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Forward voltage[1]	I_F = 20mA, T_J = 25°C	V_F	-	0.32	0.37	V
	I_F = 200mA, T_J = 25°C		-	0.48	0.60	V
Reverse voltage[2]	I_R = 100μA, T_J = 25°C	V_R	40	-	-	V
Reverse current[2]	V_R = 30V, T_J = 25°C	I_R	-	-	5	μA
Junction capacitance	f = 1MHz, V_R = 0V	C_J	-	23	50	pF
Reverse recovery time	I_F = I_R = 50mA, R_L = 100Ω	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°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

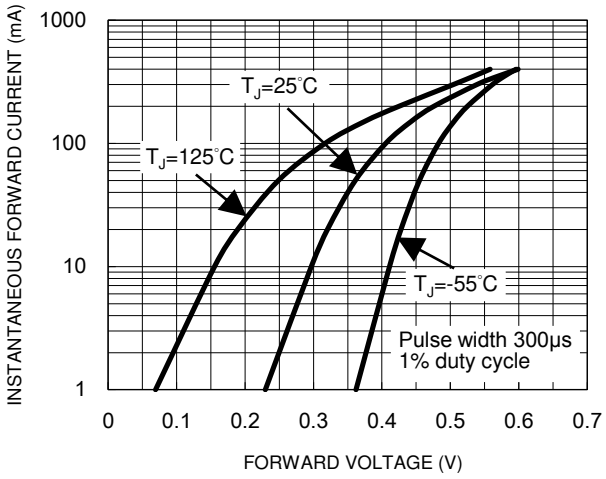


Fig.2 Typical Reverse Characteristics

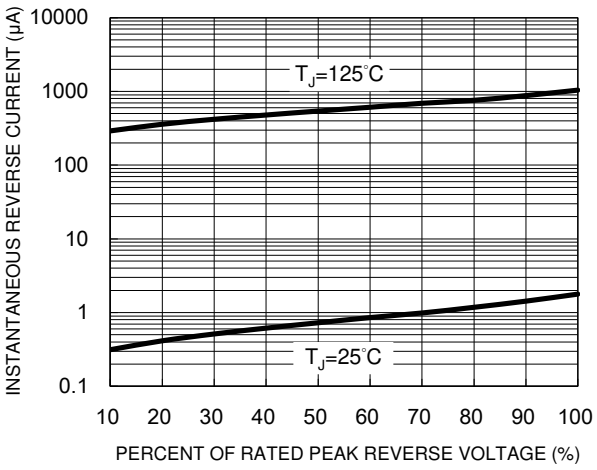


Fig.3 Typical Junction Capacitance

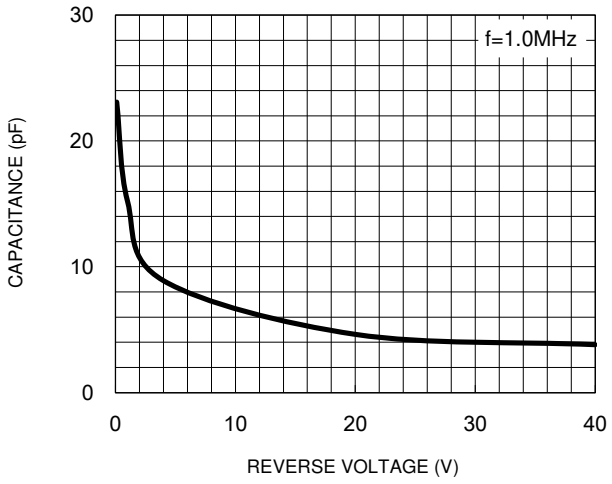
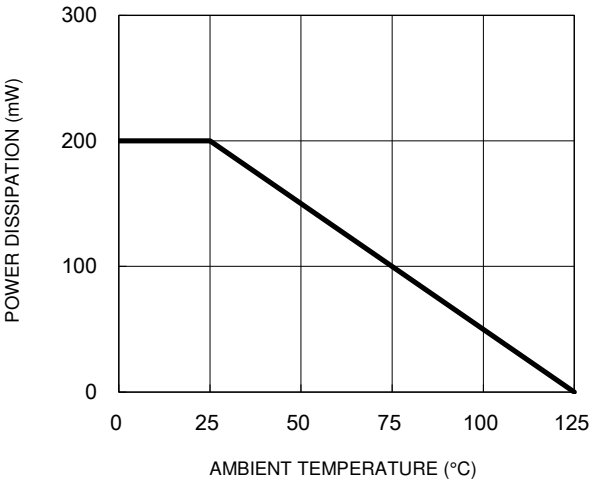
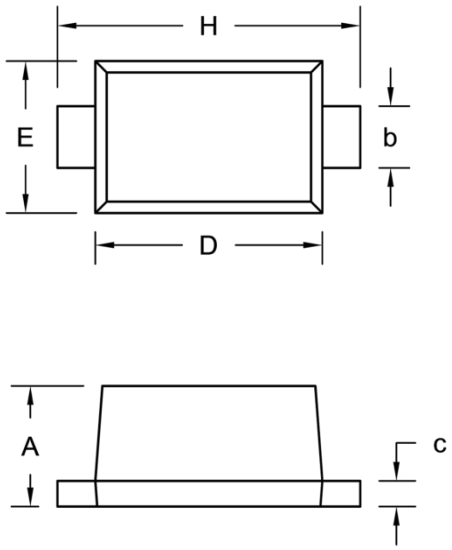


Fig.4 Power Derating Curve



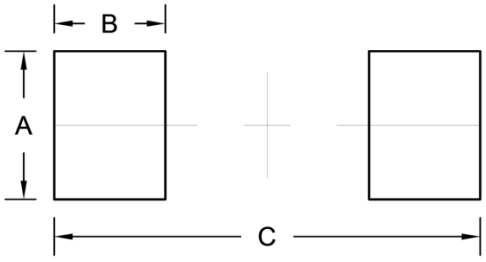
PACKAGE OUTLINE DIMENSION

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.