

350mA, 20V – 40V Schottky Barrier Diode

FEATURES

- Low forward voltage
- 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-323F
- 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: 3.4 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	350	mA
V_{RRM}	20-40	V
V_F at $I_F=200mA$	0.6	V
$T_{J\ MAX}$	125	°C
Package	SOD-323F	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SD103AM3	SD103BM3	SD103CM3	UNIT
Marking code on the device		CA	CB	CC	
Repetitive peak reverse voltage	V_{RRM}	40	30	20	V
Power dissipation	P_D	200			mW
Forward current	I_F	350			mA
Non-repetitive peak forward surge current @ 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 +125			°C

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	-	-	0.37	V	
	$I_F=200\text{mA}, T_J=25^\circ\text{C}$				0.60		
Reverse voltage ⁽²⁾	SD103AM3	V_R	$I_R=100\mu\text{A}, T_J=25^\circ\text{C}$	-	-	V	
	SD103BM3						40
	SD103CM3						30
Reverse current ⁽²⁾	SD103AM3	I_R	-	-	5	μA	
	SD103BM3						$V_R=30\text{V}, T_J=25^\circ\text{C}$
	SD103CM3						$V_R=20\text{V}, T_J=25^\circ\text{C}$
Capacitance	$f=1\text{MHz}, V_R=0\text{V}$	C	-	50	-	pF	

Notes:

1. Pulse test with $PW=0.3\text{ ms}$
2. Pulse test with $PW=30\text{ ms}$

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
SD103AM3 RRG	SOD-323F	3K / 7" Reel
SD103BM3 RRG	SOD-323F	3K / 7" Reel
SD103CM3 RRG	SOD-323F	3K / 7" Reel

CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

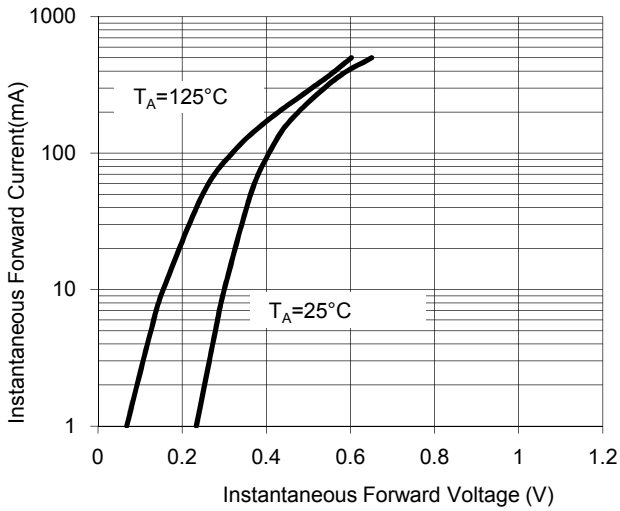


Fig.2 Typical Reverse Characteristics

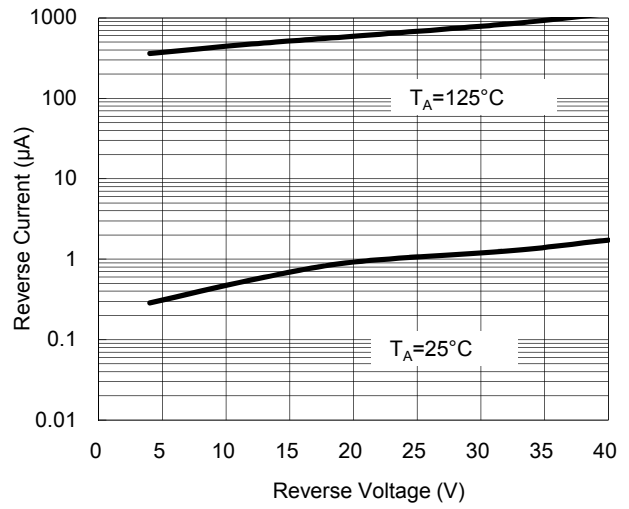


Fig.3 Typical Capacitance Characteristics

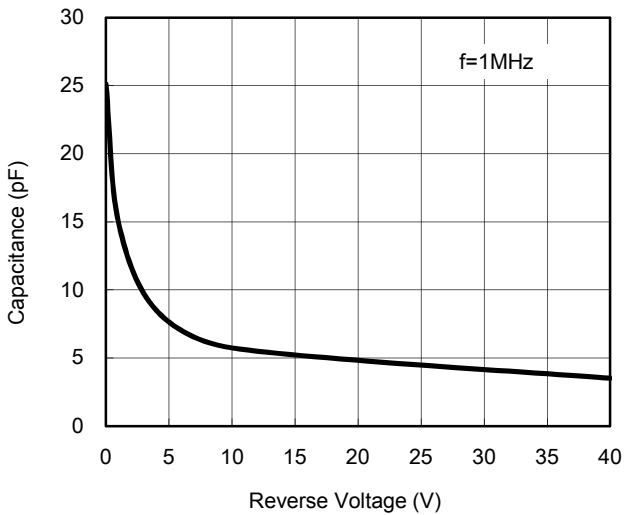
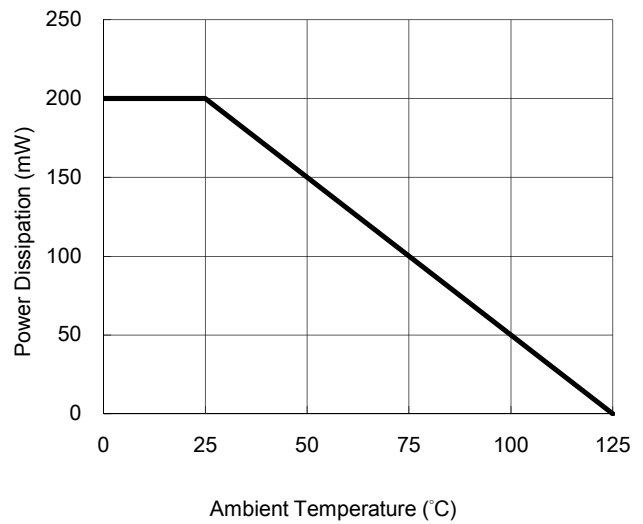
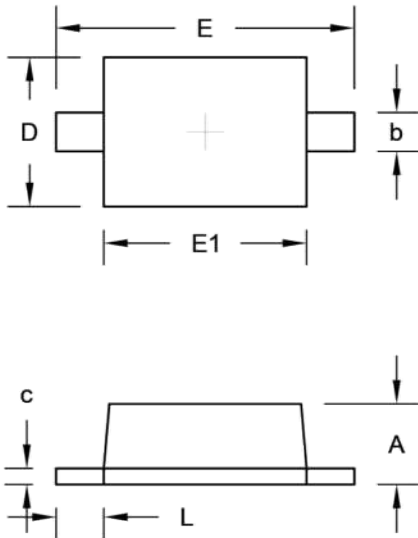


Fig.4 Power Derating Curve



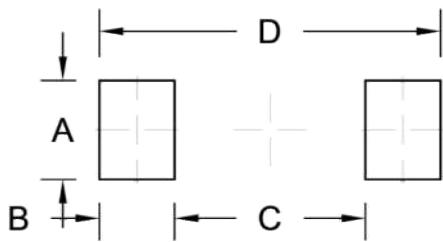
PACKAGE OUTLINE DIMENSION

SOD-323F



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.60	0.75	0.024	0.030
b	0.25	0.40	0.010	0.016
c	0.06	0.21	0.002	0.008
D	1.15	1.35	0.045	0.053
E	2.30	2.70	0.091	0.106
E1	1.60	1.80	0.063	0.071
L	0.30	0.50	0.012	0.020

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	0.83	0.033
B	0.63	0.025
C	1.60	0.063
D	2.86	0.113

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