

30mA, 40V Low V_F SMD Schottky Barrier Diode

FEATURES

- Low power loss, high current capability, low V_F
- Surface mount device type
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: SOD-323F
- 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: 4.60mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	30	mA
V_{RRM}	40	V
V_F at $I_F = 1\text{mA}$	0.37	V
$T_{J\text{MAX}}$	125	°C
Package	SOD-323F	
Configuration	Single die	



SOD-323F



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	RB751V-40WS	UNIT
Marking code on the device		S8	
Power Dissipation	P_D	200	mW
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Reverse Voltage	V_R	30	V
Forward current	I_F	30	mA
Non-repetitive peak forward surge current	60Hz for 1 Cyc. I_{FSM}	0.2	A
Junction temperature range	T_J	-40 to +125	°C
Storage temperature range	T_{STG}	-40 to +125	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	500	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward Voltage ⁽¹⁾	$I_F = 1\text{mA}$	V_F	-	0.37	V
Reverse current @ rated V_R ⁽²⁾	$V_R = 30\text{V}$	I_R	-	0.50	μA
Junction capacitance	1MHz, $V_R = 1\text{V}$	C_J	2	-	pF

Notes:

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

ORDERING INFORMATION		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
RB751V-40WS RR	SOD-323F	3K / 7" Reel
RB751V-40WS RRG	SOD-323F	3K / 7" Reel
RB751V-40WS R9	SOD-323F	10K / 13" Reel
RB751V-40WS R9G	SOD-323F	10K / 13" Reel

Notes:

1. "G" means green compound (halogen-free according to IEC 61249-2-21)

CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

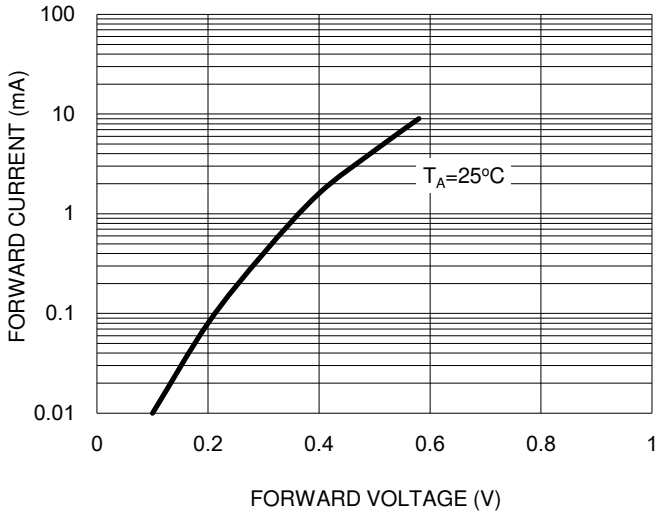


Fig.2 Typical Reverse Characteristics

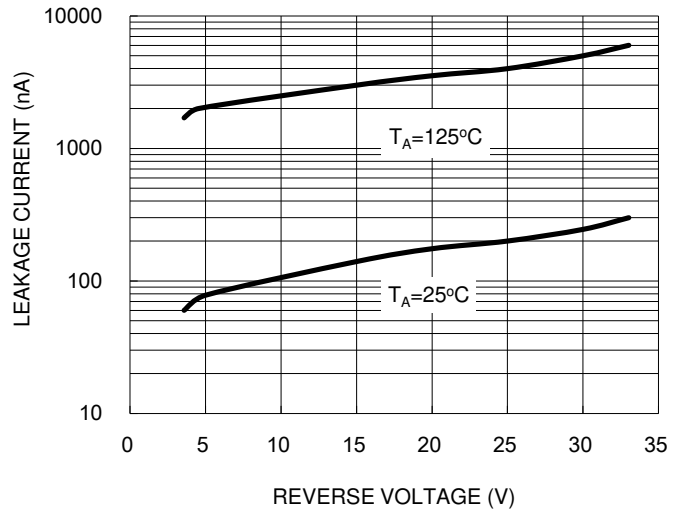


Fig.3 Typical Junction Capacitance

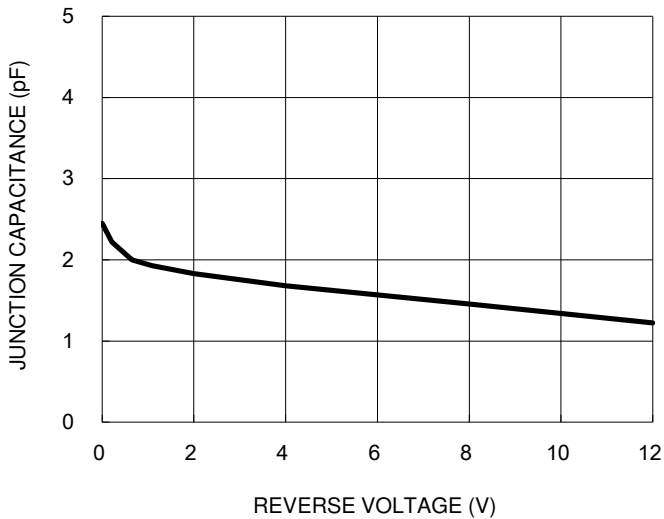
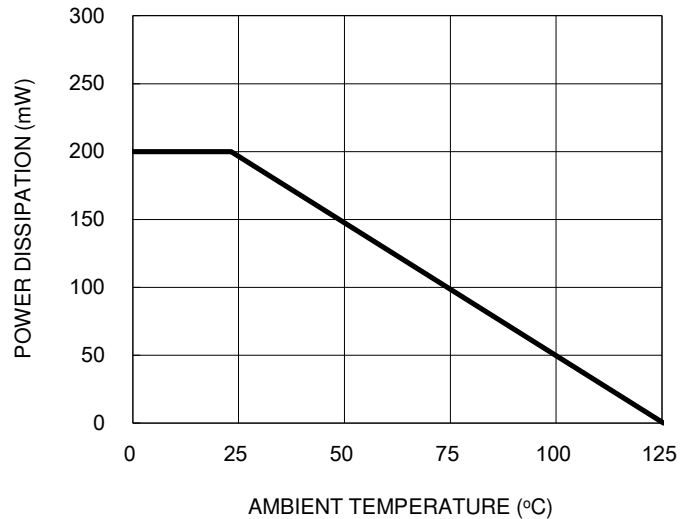
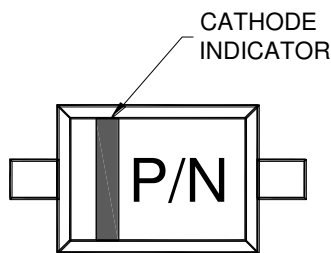
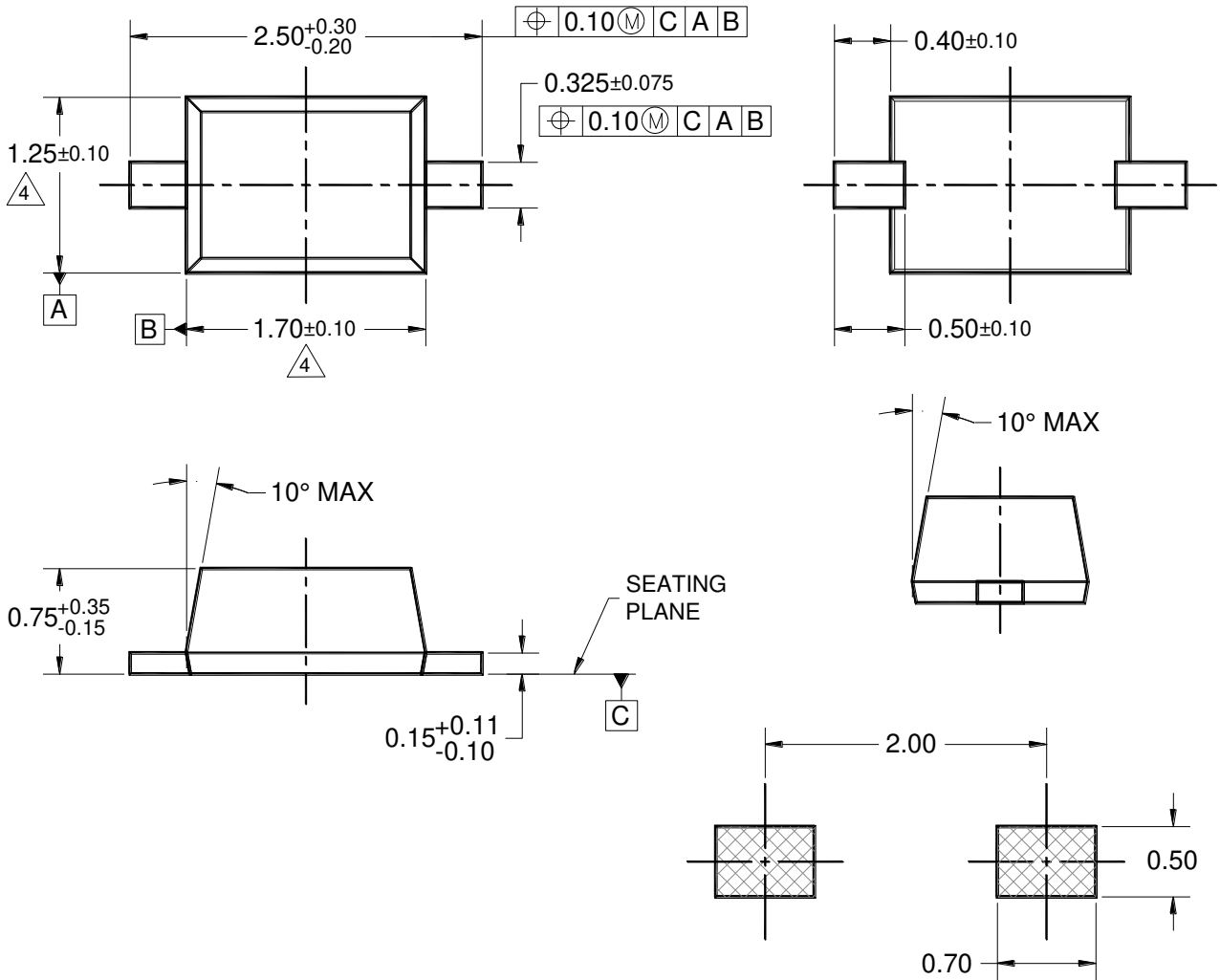


Fig.4 Power Dissipation Curve



PACKAGE OUTLINE DIMENSIONS

SOD-323F



MARKING DIAGRAM

P/N = MARKING CODE

SUGGESTED PAD LAYOUT

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-1, SC-90.

$\triangle 4$ MOLDED PLASTIC BODY LATERAL DIMENSIONS DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

5. DWG NO. REF: HQ2SD07-SOD323F-018 REV A.

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