

200mA, 30V Schottky Barrier Diode

FEATURES

- Designed for mounting on small surface
- Low capacitance
- Low forward voltage drop
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

APPLICATIONS

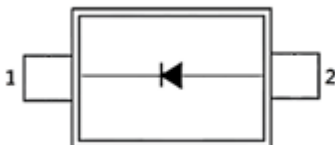
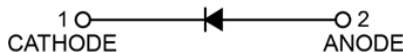
- Adapters
- For switching power supply
- Inverter

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	200	mA
V_{RRM}	30	V
I_{FSM}	4	A
V_F at $I_F = 200\text{mA}$	1	V
$T_J \text{ MAX}$	125	°C



PACKAGE: SOD-323F	PIN CONFIGURATION	CIRCUIT DIAGRAM
		

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

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage	V_{RRM}	30	V
Maximum dc blocking voltage	V_R	30	V
Forward current	I_F	200	mA
Non-repetitive peak forward current	I_{FSM}	2	A
	$t = 10\text{mS}$		
Junction temperature range	T_J	-65 to +125	°C
Storage temperature range	T_{STG}	-65 to +125	°C

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

PARAMETER		CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	BAT42WS	I _F = 10mA, T _J = 25°C	V _F	-	-	0.40	V
		I _F = 50mA, T _J = 25°C		-	-	0.65	V
		I _F = 200mA, T _J = 25°C		-	-	1.00	V
	BAT43WS	I _F = 2mA, T _J = 25°C		-	-	0.33	V
		I _F = 15mA, T _J = 25°C		-	-	0.45	V
		I _F = 200mA, T _J = 25°C		-	-	1.00	V
Reverse voltage		I _R = 100µA, T _J = 25°C	V _R	30	-	-	V
Reverse current @ rated V _R ⁽²⁾		V _R = 25V T _J = 25°C	I _R	-	-	500	nA
Junction capacitance		1MHz, V _R = 1V	C _J	-	7	-	pF
Reverse recovery time		I _F = I _R = 10mA, R _L = 100Ω I _{rr} = 1mA	t _{rr}	-	5	-	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	DEVICE MARKING
BAT42WS RRG	SOD-323F	3,000 / 7" Tape & Reel	B1
BAT42WS R9G	SOD-323F	10,000 / 13" Tape & Reel	B1
BAT43WS RRG	SOD-323F	3,000 / 7" Tape & Reel	B2
BAT43WS R9G	SOD-323F	10,000 / 13" Tape & Reel	B2

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

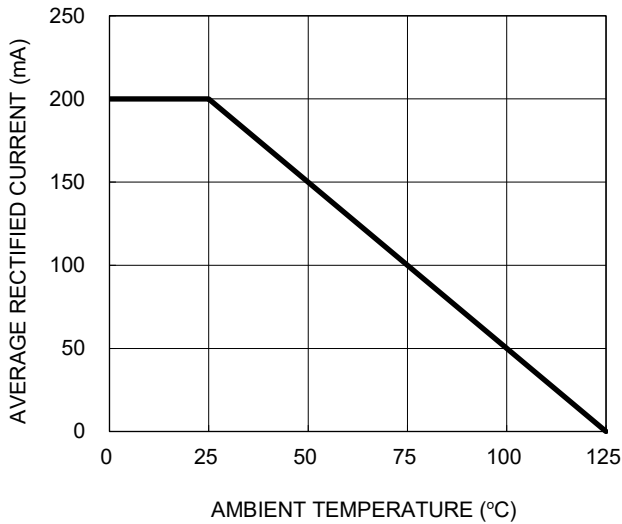


Fig.2 Typical Forward Characteristics

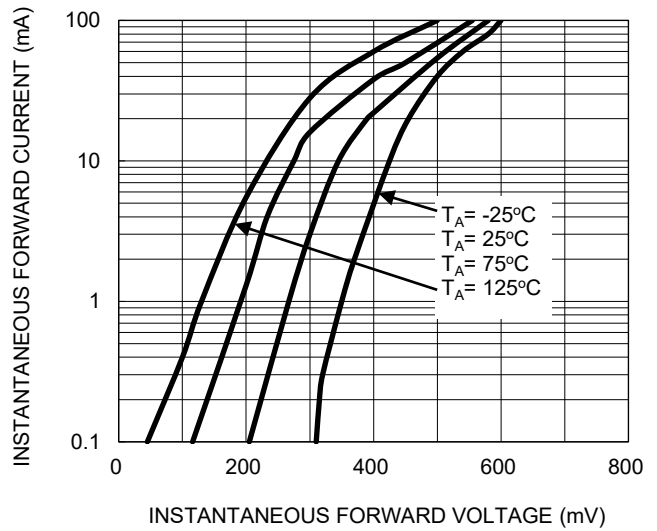


Fig.3 Typical Reverse Characteristics

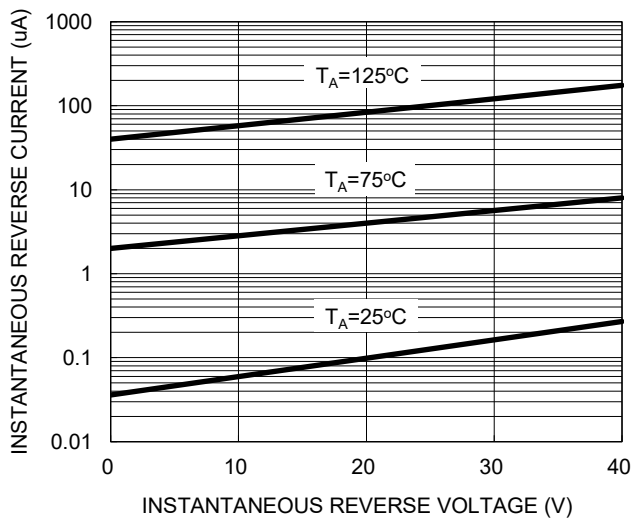
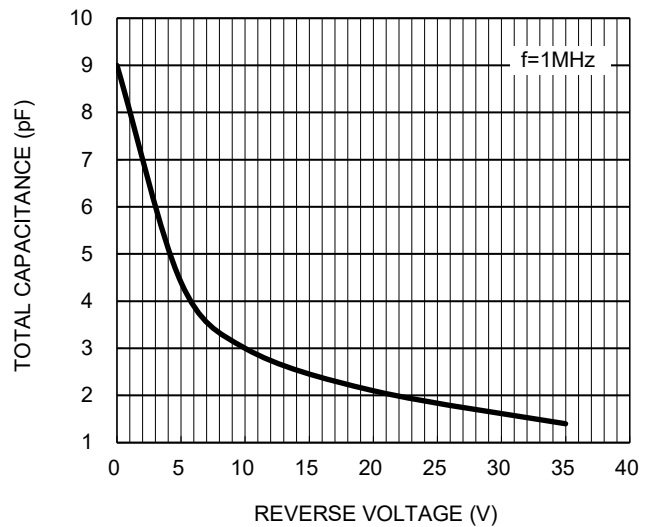
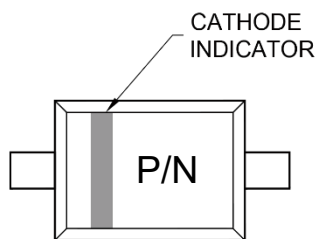
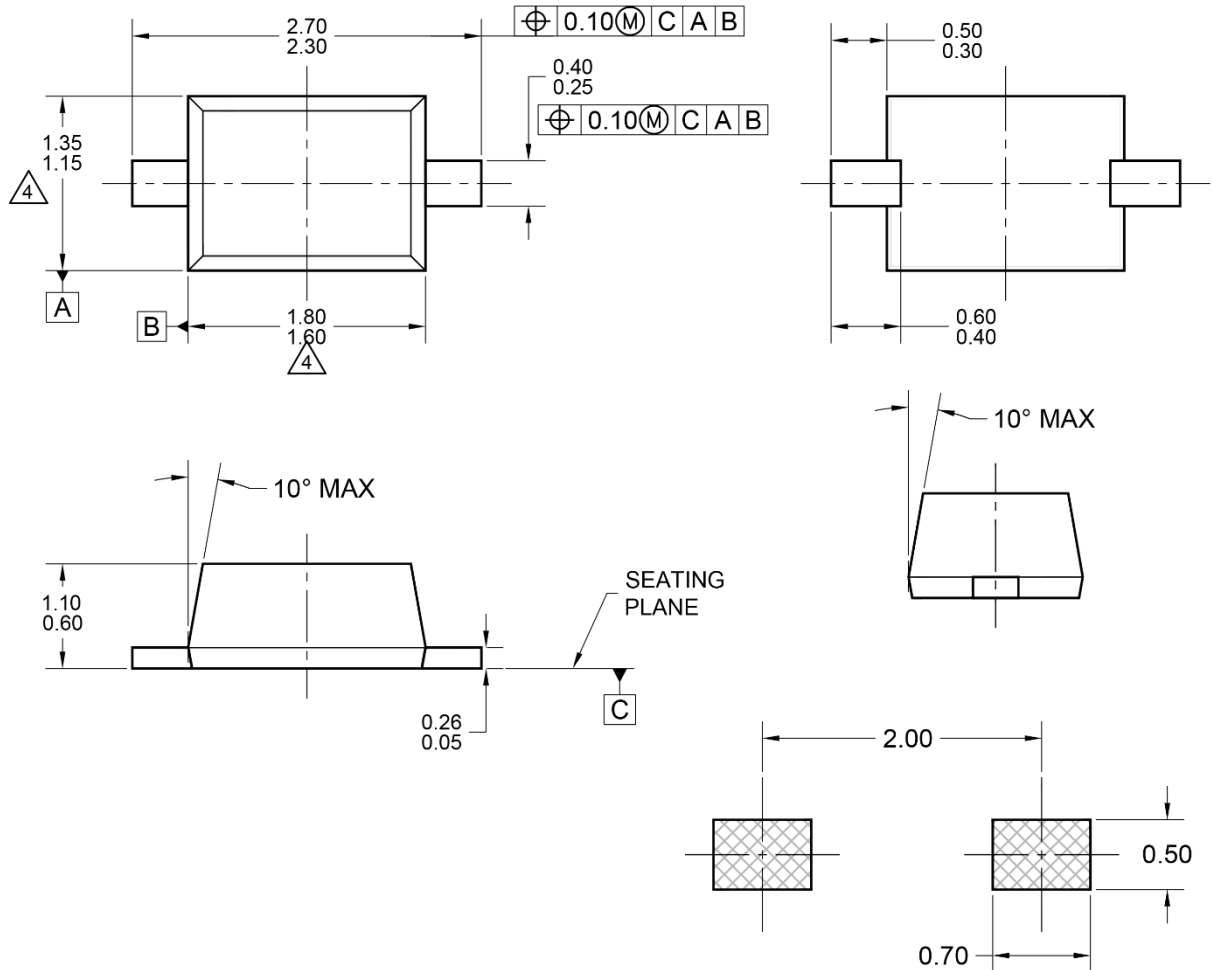


Fig.4 Total Capacitance VS. Reverse Voltage



PACKAGE OUTLINE DIMENSION

SOD-323F



MARKING DIAGRAM

P/N = Device marking

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.

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

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

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