

## 250mA, 90V High Speed SMD Switching Diode

### FEATURES

- Fast switching device ( $t_{rr} < 4.0ns$ )
- Surface Mount Device Type
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- 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
$I_F$	250	mA
$V_{RRM}$	90	V
$I_{FSM}$	500	mA
$V_F$ at $I_F = 100mA$	1.2	V
$T_{JMAX.}$	150	°C
Package	SOD-323F	
Configuration	Single die	


**SOD-323F**


ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ C$ unless otherwise noted)			
PARAMETER	SYMBOL	1SS355	UNIT
Marking code on the device		S4	
Power dissipation	$P_D$	200	mW
Repetitive peak reverse voltage	$V_{RRM}$	90	V
Forward current	$I_F$	250	mA
Continue forward current	$I_O$	150	mA
Non-repetitive peak forward current	$I_{FSM}$	500	mA
	$t = 1s$		
Junction temperature range	$T_J$	-65 to +150	°C
Storage temperature range	$T_{STG}$	-65 to +150	°C

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>MIN</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage <sup>(1)</sup>	$I_F = 100\text{mA}$ , $T_J = 25^\circ\text{C}$	$V_F$	-	1.2	V
Reverse voltage	$I_R = 100\mu\text{A}$ , $T_J = 25^\circ\text{C}$	$V_R$	80	-	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$V_R = 80\text{V}$ , $T_J = 25^\circ\text{C}$	$I_R$	-	100	nA
Junction capacitance	1MHz, $V_R = 0.5\text{V}$	$C_J$	-	4	pF
Reverse recovery time	$I_F = 10\text{mA}$ , $R_L = 100\Omega$ , $V_R = 6\text{V}$	$t_{rr}$	-	4	ns

**Notes:**

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

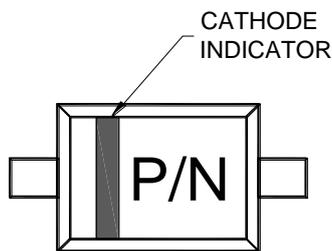
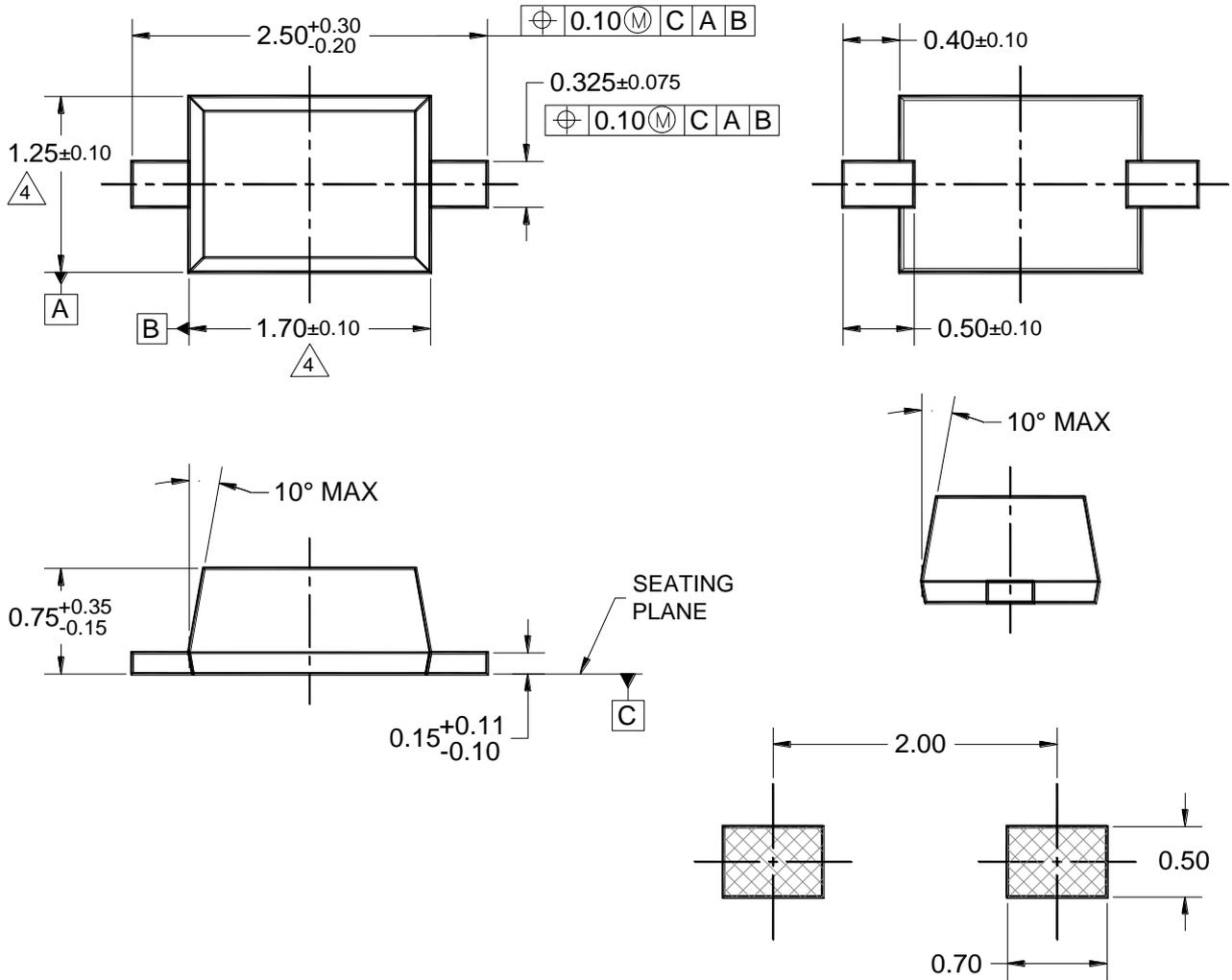
<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b> <sup>(1)</sup>	<b>PACKAGE</b>	<b>PACKING</b>
1SS355 RRG	SOD-323F	3,000 / 7" Tape & Reel
1SS355 RR	SOD-323F	3,000 / 7" Tape & Reel
1SS355 R9G	SOD-323F	10,000 / 13" Tape & Reel
1SS355 R9	SOD-323F	10,000 / 13" Tape & Reel

**Notes:**

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

**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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