Fast Rectifiers

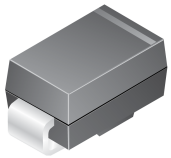
RS1A - RS1M

Features

- Glass−Passivated Junction
- For Surface Mounted Applications
- Built−in Strain Relief, Ideal for Automated Placement
- UL Certified: Certificate # E326243
- These Devices are Pb−Free and are RoHS Compliant

ON Semiconductor®

www.onsemi.com



SMA
CASE 403AE

MARKING DIAGRAM

&Y	= ON Semiconductor Logo
&Z	= Assembly Plant Code
&3	= Date Code (Year & Week)
RS1x	= Specific Device Code
x	= A/B/D/G/J/K/M

ORDERING INFORMATION

Part Number	Marking	Package	Shipping†
RS1A	RS1A	SMA (Pb−Free)	7500 / Tape & Reel
RS1B	RS1B		
RS1D	RS1D		
RS1G	RS1G		
RS1J	RS1J		
RS1K	RS1K		
RS1M	RS1M		

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value							Units
		RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current at T_A = 100°C	1.0							A
I_{FSM}	Non−Repetitive Peak Forward Surge Current: 8.3 ms Single Half−Sine Wave	30							A
T_J	Operating Junction Temperature	−55 to +150							°C
T_{STG}	Storage Temperature Range	−55 to +150							°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	1.19	W
$R_{\theta JA}$	Junction−to−Ambient Thermal Resistance (Note 1)	105	°C/W
$R_{\theta JL}$	Junction−to−Lead Thermal Resistance (Note 1)	32	°C/W

1. Device mounted on FR−4 PCB 0.013 mm.

ELECTRICAL CHARACTERISTICS (Values are at T_A = 25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Value							Unit
			RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	
V_F	Forward Voltage	I_F = 1.0 A	1.3							V
t_{rr}	Reverse Recovery Time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	150				250	500		ns
I_R	Reverse Current at Rated V_R	T_A = 25°C	5.0							μA
		T_A = 125°C	50							
C_T	Total Capacitance	V_R = 4.0 V, f = 1.0 MHz	10							pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL PERFORMANCE CHARACTERISTICS

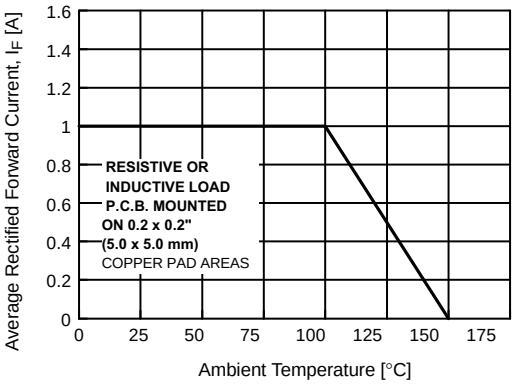


Figure 1. Forward Current Derating Curve

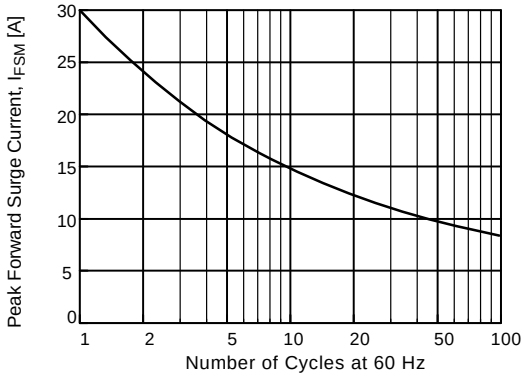


Figure 2. Non−Repetitive Surge Current

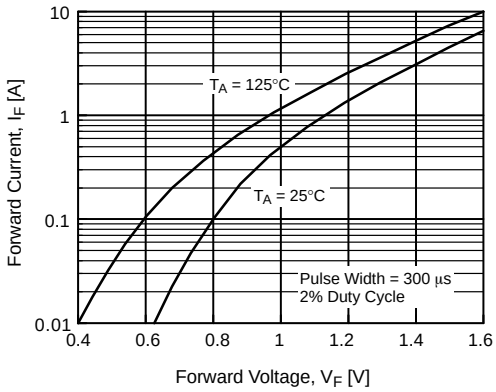


Figure 3. Forward Voltage Characteristics

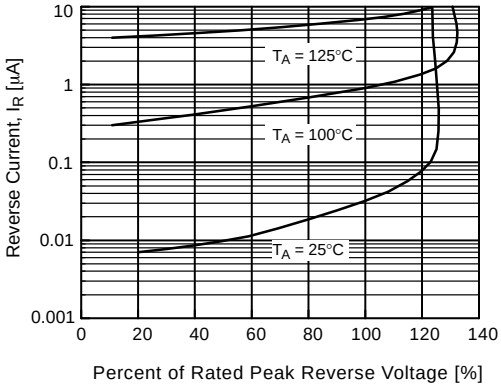


Figure 4. Reverse Current vs. Reverse Voltage

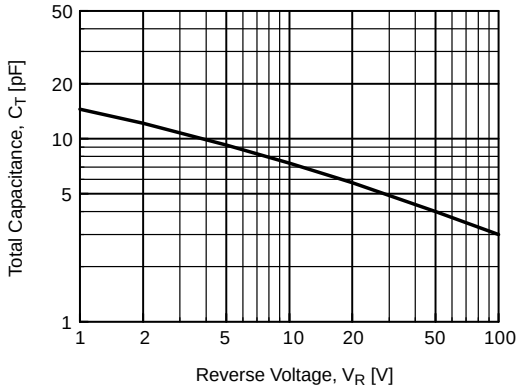


Figure 5. Total Capacitance

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

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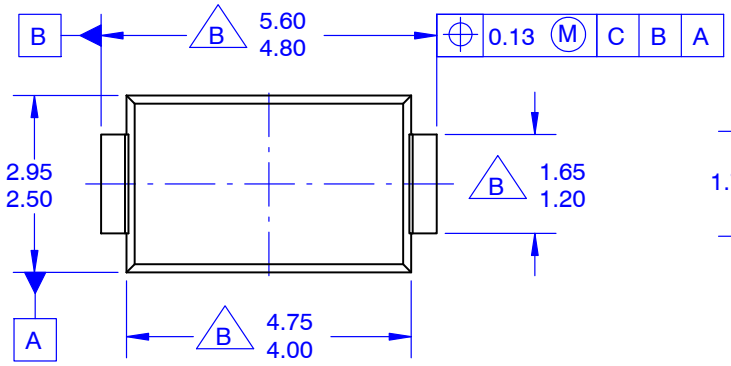
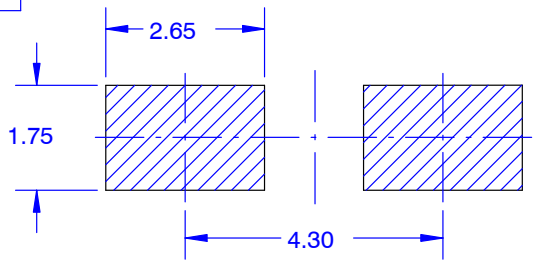
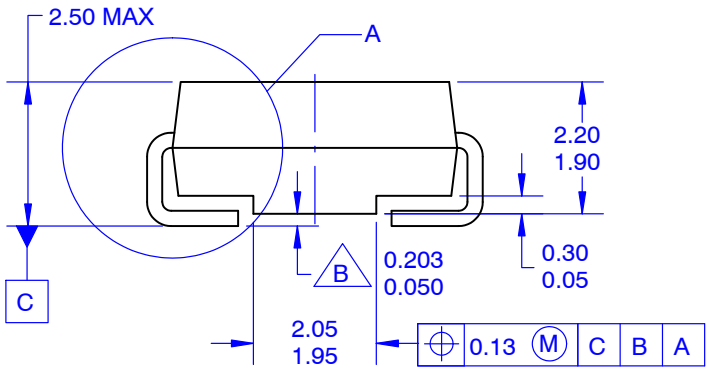


TOP VIEW



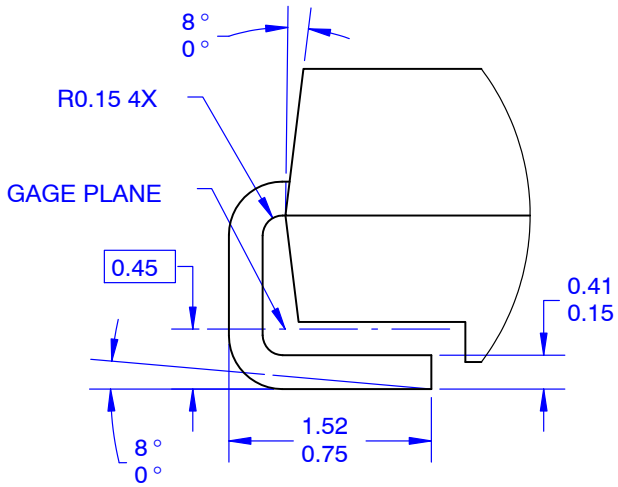
LAND PATTERN RECOMMENDATION



SIDE VIEW

NOTES:

A. EXCEPT WHERE NOTED, CONFORMS TO JEDEC DO214 VARIATION AC.
B DOES NOT COMPLY JEDEC STANDARD VALUE.
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
E. DIMENSIONS AND TOLERANCE AS PER ASME Y14.5–2009.
E. LAND PATTERN STD. DIOM5025X231M



DETAIL A
SCALE 20 : 1

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