

# RS1A THRU RS1M

## SURFACE MOUNT FAST RECOVERY RECTIFIERS

Reverse Voltage – 50 to 1000 V

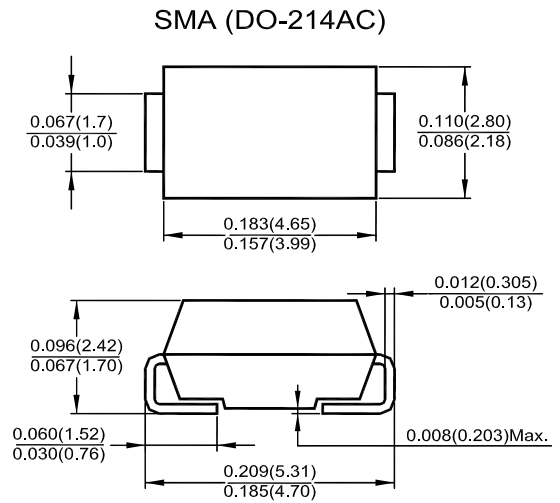
Forward Current – 1 A

### Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency

### Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic
- **Mounting position:** Any
- **Lead:** Lead formed for surface mount
- **Polarity:** Color band denotes cathode end



Dimensions in inches and (millimeters)

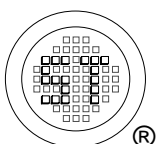
### Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Current at $T_a = 90^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	35							A
Maximum Forward Voltage at $I_F = 1\text{A}$	$V_F$	1.3							V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	$I_R$	5							$\mu\text{A}$
		50							
Maximum Reverse Recovery Time <sup>1)</sup>	$t_{rr}$	150			250		500		ns
Typical Junction Capacitance <sup>2)</sup>	$C_J$	50							pF
Operating and Storage Temperature Range	$T_J, T_S$	- 65 to + 150							$^\circ\text{C}$

<sup>1)</sup> Reverse recovery test conditions  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .

<sup>2)</sup> Measured at 1 MHz and applied reverse voltage of 4 V.



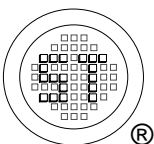
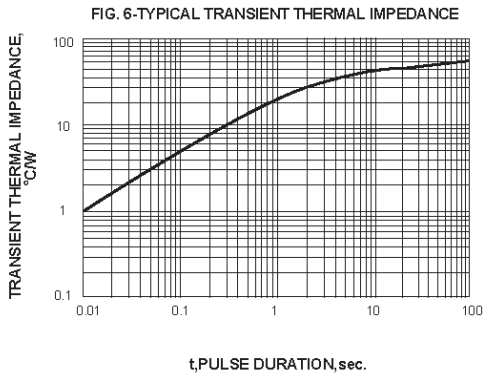
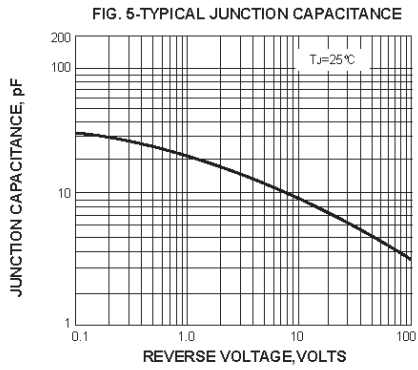
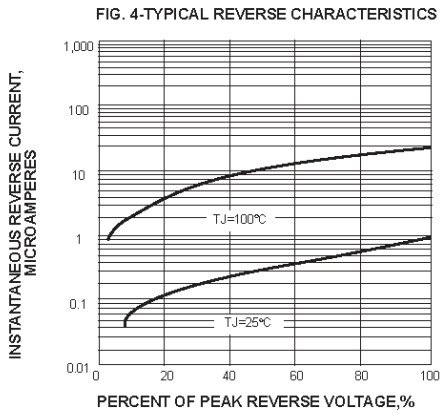
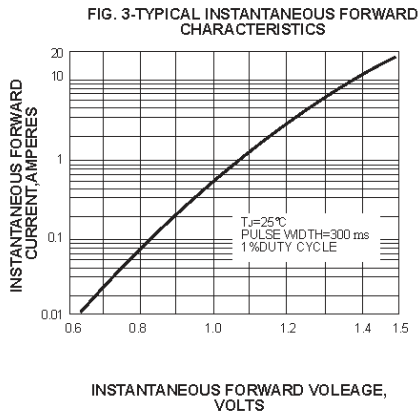
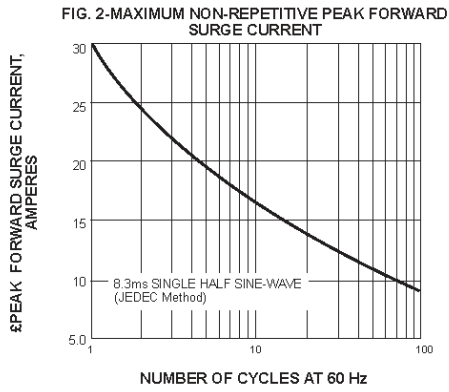
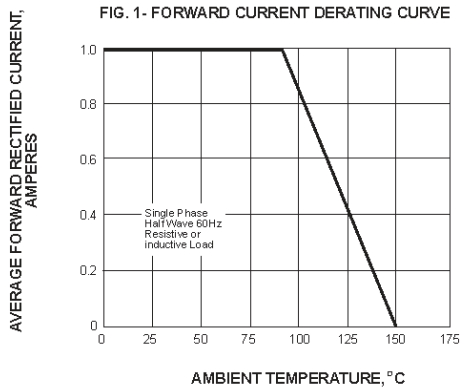
**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

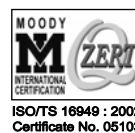


Dated : 11/04/2008

# RS1A THRU RS1M



**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002 Certificate No. 05103  
 ISO 14001:2004 Certificate No. 7116  
 ISO 9001:2000 Certificate No. 0506098

Dated : 11/04/2008