

RS1A/B - RS1M/B

1.0A SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- Glass Passivated Die Construction
- Fast Recovery Time For High Efficiency
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automated Assembly
- Lead Free Finish/RoHS Compliant (Note 4)

Mechanical Data

Case: SMA/SMB

Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Moisture Sensitivity: Level 1 per J-STD-020C

Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 (3)

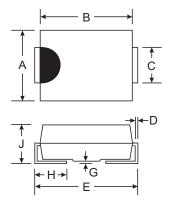
Polarity: Cathode Band or Cathode Notch

Marking Information: See Page 3

Ordering Information: See Page 3

SMA Weight: 0.064 grams (approximate)

SMB Weight: 0.093 grams (approximate)



Dim	SI	/IΑ	SMB			
	Min	Max	Min	Max		
Α	2.29	2.92	3.30	3.94		
В	4.00	4.60	4.06	4.57		
С	1.27	1.63	1.96	2.21		
D	0.15	0.31	0.15	0.31		
E	4.80	5.59	5.00	5.59		
G	0.10	0.20	0.10	0.20		
Н	0.76	1.52	0.76	1.52		
J	2.01	2.30	2.00	2.40		

A, B, D, G, J, K, M Suffix Designates SMA Package AB, BB, DB, GB, JB, KB, MB Suffix Designates SMB Package

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	RS1 A/AB	RS1 B/BB	RS1 D/DB	RS1 G/GB	RS1 J/JB	RS1 K/KB	RS1 M/MB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 5)	V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T _T = 120	C Io		•	•	1.0		•	•	Α
Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave Superimposed on Rated Load		30					Α		
Forward Voltage Drop @ I _F = 1.	A V _{FM}				1.3				V
Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage (Note 5) @ T _A = 125°C		5.0 200						μА	
Reverse Recovery Time (Note 3)		150 250 500			00	ns			
Typical Total Capacitance (Note 2)		15					pF		
Typical Thermal Resistance, Junction to Terminal (Note 1)		20						°C/W	
Operating and Storage Temperature Range		-65 to +150						°C	

- 1. Valid provided that terminals are kept at ambient temperature.
- 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 3. Reverse recovery test conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$. See figure 5.
- 4. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.
- 5. Short duration pulse test used to minimize self-heating effect.

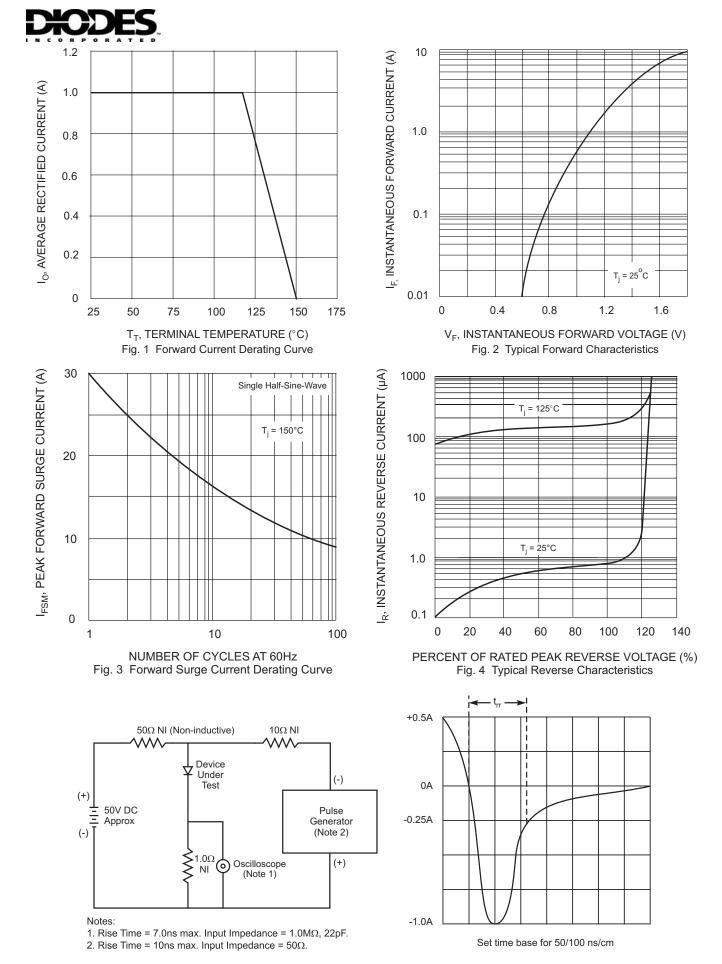


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



Ordering Information (Note 6)

Device*	Packaging	Shipping		
RS1x-13-F	SMA	5000/Tape & Reel		
RS1xB-13-F	SMB	3000/Tape & Reel		

^{*} x = Device type, e.g. RS1D-13-F (SMA package); RS1JB-13-F (SMB package).

Notes: 6. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



RS1X = Product Type Marking Code, ex: RS1G (SMA package)
RS1XB = Product Type Marking Code, ex: RS1GB (SMB package)
1; = Manufacturer's Code Marking
YWW = Date Code Marking
Y = Last Digit of Year ex: 6 for 2006
WW = Week code 01 to 52

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