



RS2A/A - RS2M/A

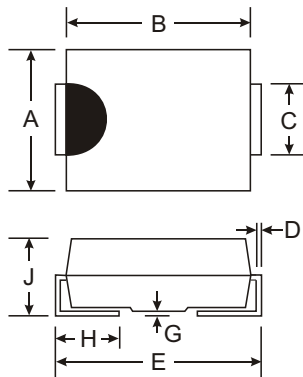
1.5A SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- Glass Passivated Die Construction
- Fast Recovery Time For High Efficiency
- Surge Overload Rating to 50A 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 (E3)
- Polarity: Cathode Band or Cathode Notch
- Marking Information: See Page 3
- Ordering Information: See Page 3
- SMA Weight: 0.065 grams (approximate)
- SMB Weight: 0.09 grams (approximate)



Dim	SMA		SMB	
	Min	Max	Min	Max
A	2.29	2.92	3.30	3.94
B	4.00	4.60	4.06	4.57
C	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
H	0.76	1.52	0.76	1.52
J	2.01	2.30	2.00	2.40
All Dimensions in mm				

AA, BA, DA, GA, JA, KA, MA Suffix Designates SMA Package
A, B, D, G, J, K 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	RS2 A/AA	RS2 B/BA	RS2 D/DA	RS2 G/GA	RS2 J/JA	RS2 K/KA	RS2 M/MA	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	I _O	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I _{FSM}	50							A
Forward Voltage @ I _F = 1.5A	V _{FM}	1.3							V
Peak Reverse Current @ T _A = 25 C at Rated DC Blocking Voltage (Note 5) @ T _A = 125 C	I _{RM}	5.0 200							A
Reverse Recovery Time (Note 3)	t _{rr}	150				250	500		ns
Typical Total Capacitance (Note 2)	C _T	30							pF
Typical Thermal Resistance, Junction to Terminal (Note 1)	R _{JT}	20							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150							C

- Notes:
- Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
 - Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 - Reverse recovery test conditions: I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
 - RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.
 - Short duration pulse test used to minimize self-heating effect.

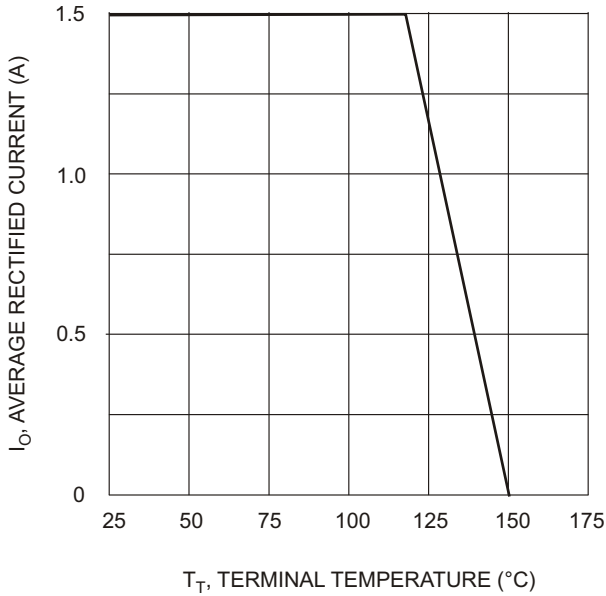


Fig. 1 Forward Current Derating Curve

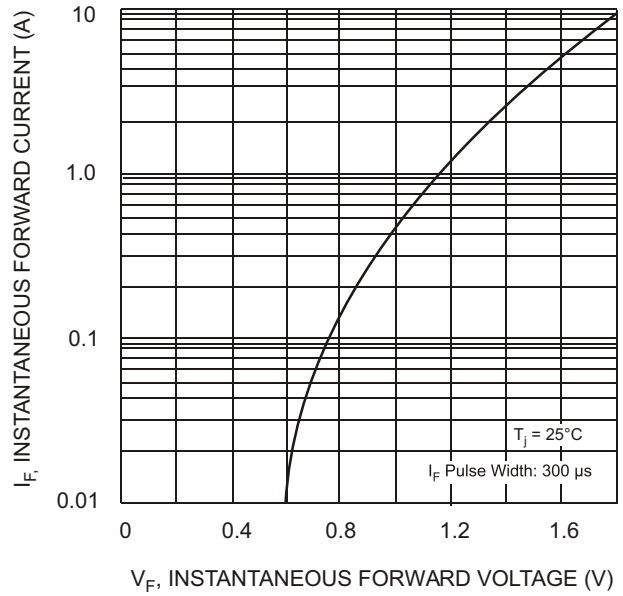


Fig. 2 Typical Forward Characteristics

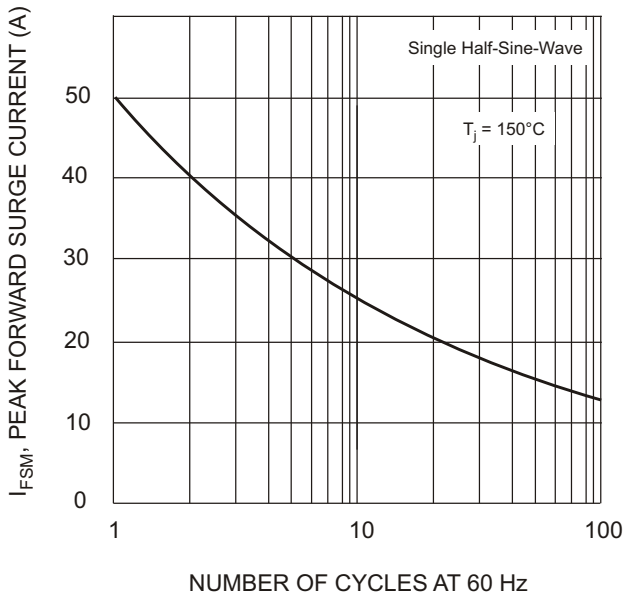


Fig. 3 Forward Surge Current Derating Curve

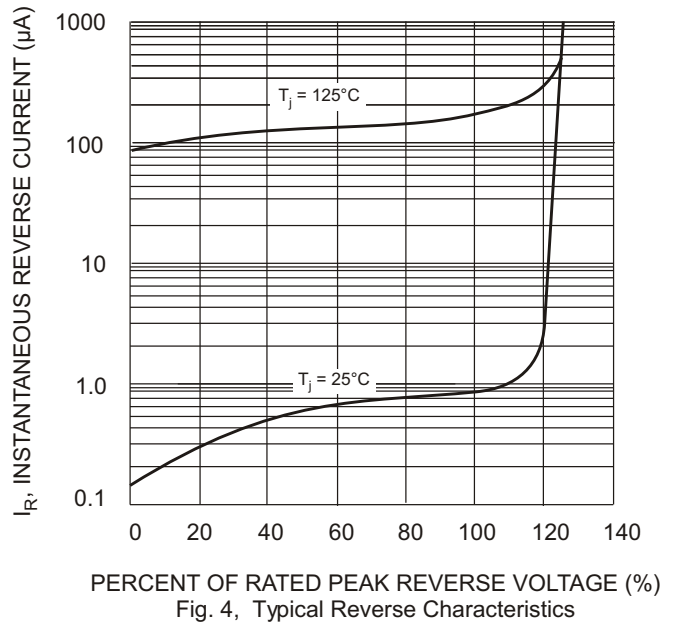
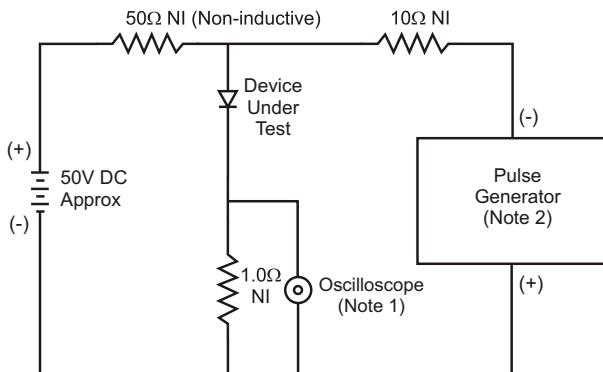
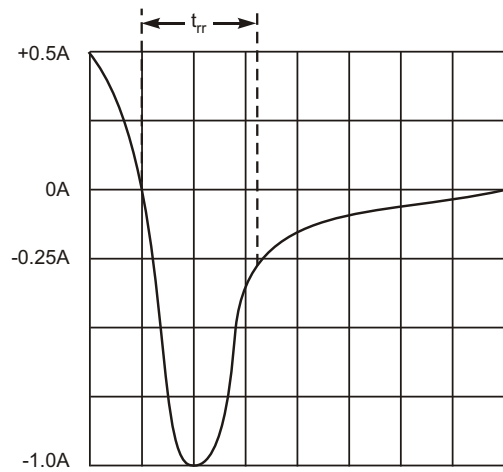


Fig. 4, Typical Reverse Characteristics



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50 Ω .



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

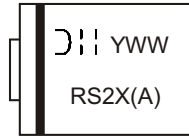
Ordering Information (Note 6)

Device*	Packaging	Shipping
RS2xA-13-F RS2x-13-F	SMA SMB	5000/Tape & Reel 5000/Tape & Reel

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

* x = Device type, e.g. RS2DA-13-F (SMA package); RS2J-13-F (SMB package).

Marking Information



RS2X = Product Type Marking Code, ex: RS2G (SMB package)
 RS2XA = Product Type Marking Code, ex: RS2GA (SMA package)
 J|| = 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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