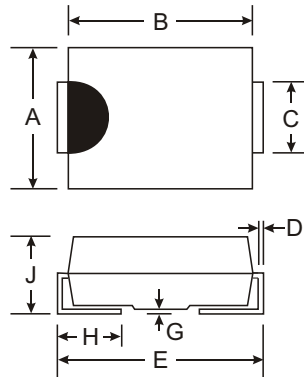


Features

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 Complaint (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				

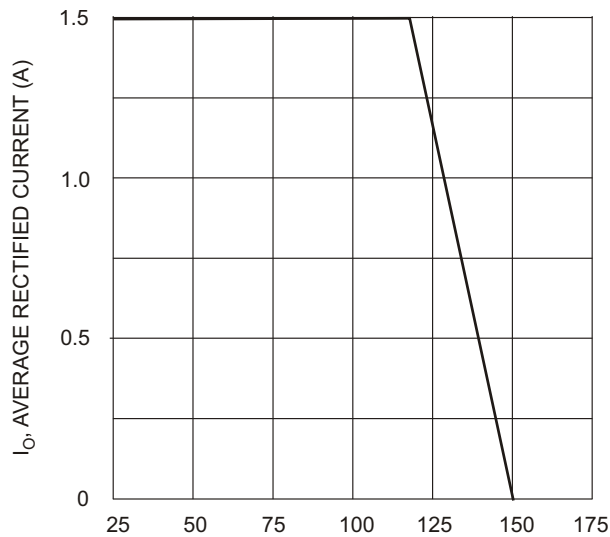
AA, BA, DA, GA, JA, KA, MA Suffix Designates SMA Package
 A, B, D, G, J, K Suffix Designates SMB Package

Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

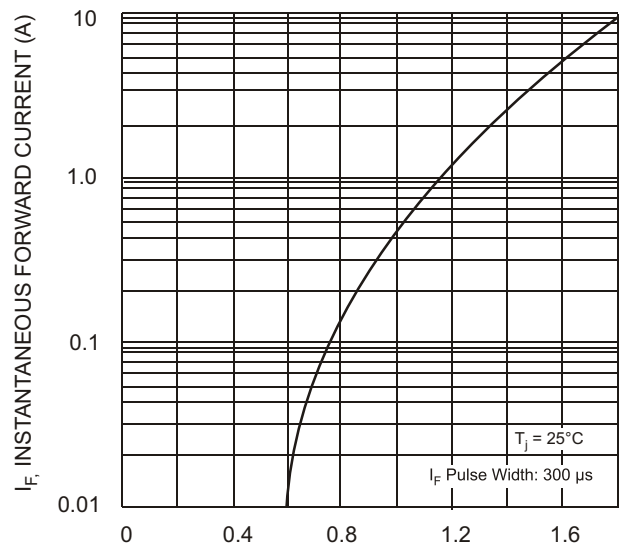
Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

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 @ $T_T = 120^\circ\text{C}$	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 @ $I_F = 1.5\text{A}$	V_{FM}	1.3							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage (Note 5) @ $T_A = 125^\circ\text{C}$	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							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							$^\circ\text{C}$

- Notes:
1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $t_{rr} = 0.25\text{A}$. 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.



T_T , TERMINAL TEMPERATURE ($^{\circ}$ C)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics

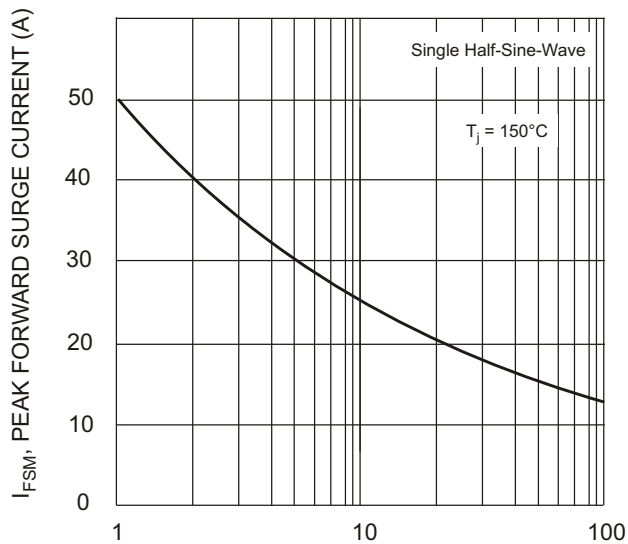


Fig. 3 Forward Surge Current Derating Curve

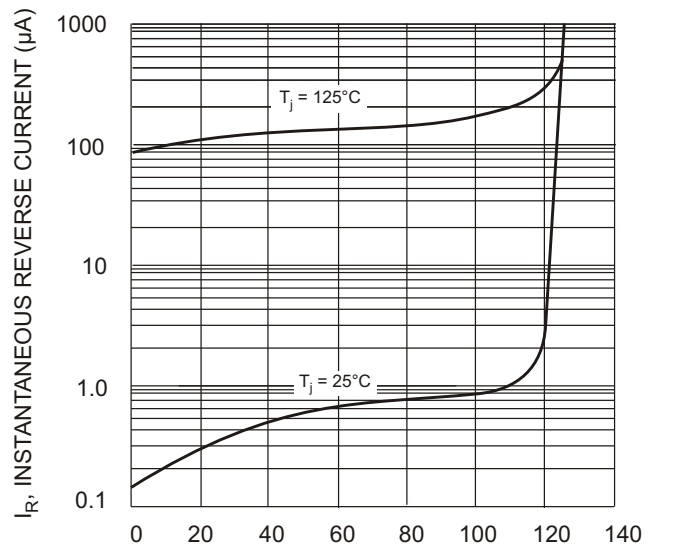
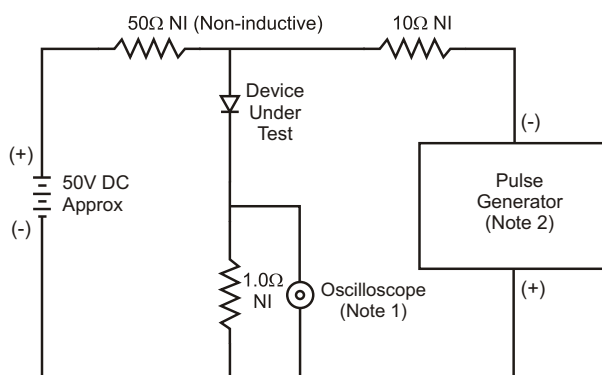


Fig. 4, Typical Reverse Characteristics



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

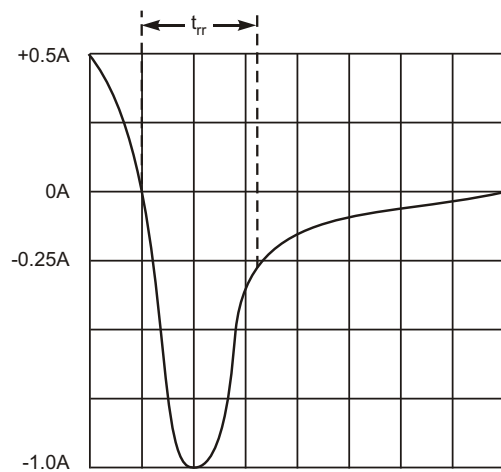


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

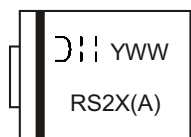
Ordering Information (Note 6)

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)
 D11 = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year ex: 6 for 2006
 WW = Week code 01 to 52

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.