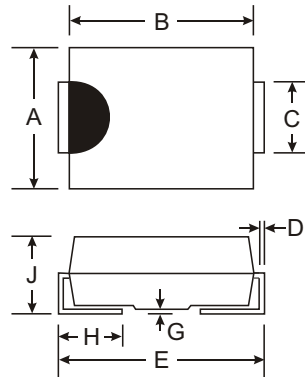


Features

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				

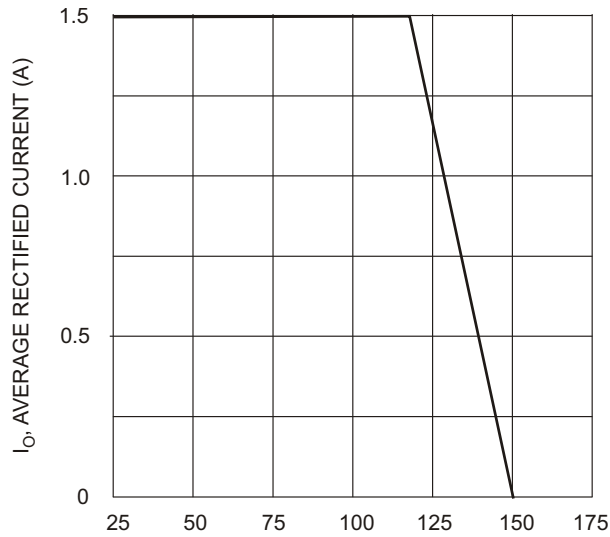
AA, BA, DA, GA, JA, KA, MA Suffix Designates SMA Package
 A, B, D, G, J, K Suffix Designates SMB Package

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

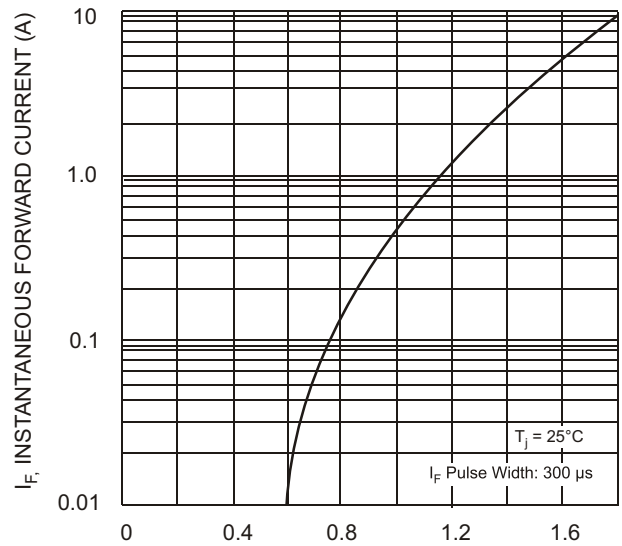
Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

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 @ $T_J = 120^\circ\text{C}$	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

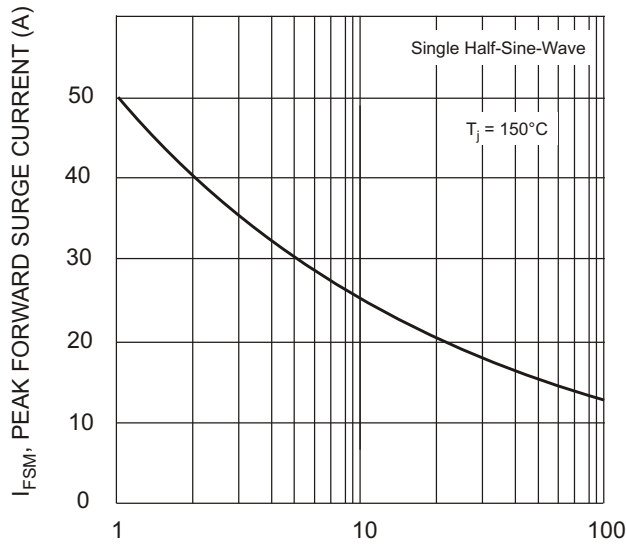


Fig. 3 Forward Surge Current Derating Curve

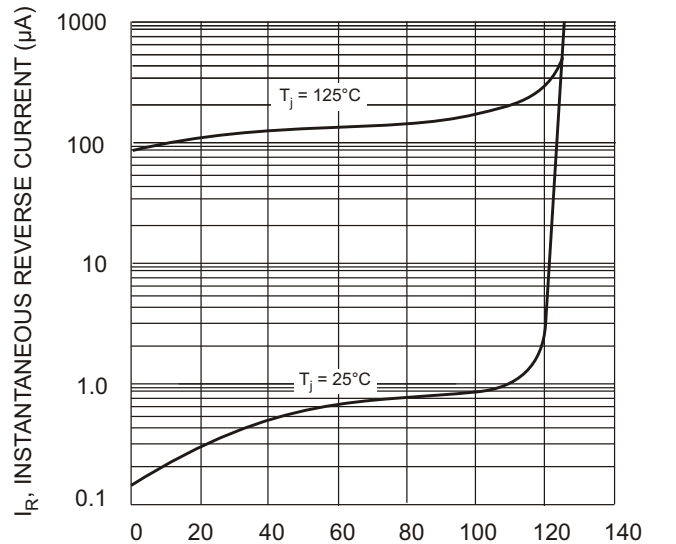
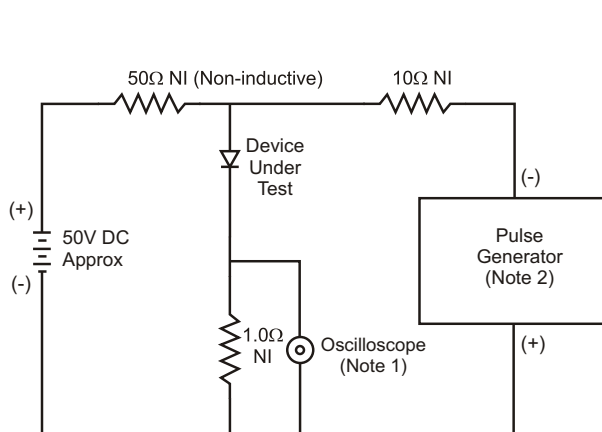


Fig. 4, Typical Reverse Characteristics



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

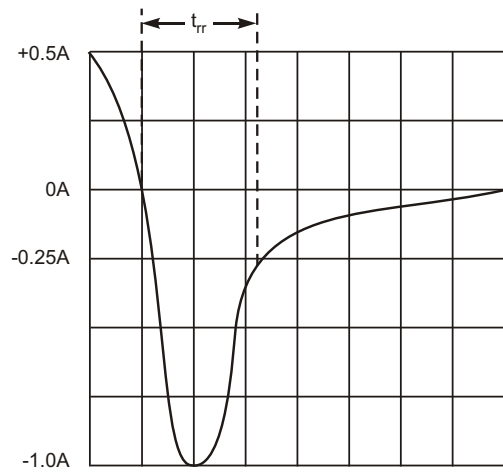


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

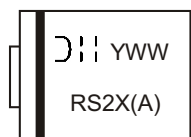
Ordering Information (Note 6)

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)
 DII = 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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