

## **Maximum Ratings** (@T<sub>A</sub> = +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 <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T <sub>T</sub> = +120°C	lo				1.0				Α
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>				30				А

## **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal (Note 6)	$R_{\Theta JT}$	20	°C/W
Operating and Storage Temperature Range	$T_{J_i} T_{STG}$	-65 to +150	°C

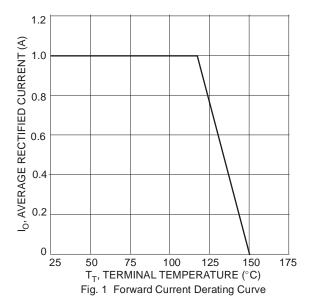
# Electrical Characteristics (@T<sub>A</sub> = +25°C unless otherwise specified.)

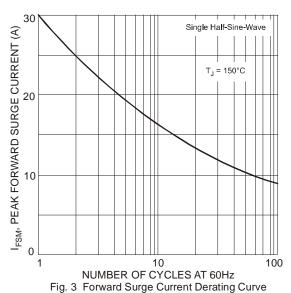
Characteristic		Symbol	RS1 A/AB	RS1 B/BB	RS1 D/DB	RS1 G/GB	RS1 J/JB	RS1 K/KB	RS1 M/MB	Unit
Minimum Reverse Breakdown Voltage (Note 5)	@ $I_R = 5\mu A$	$V_{(BR)R}$	50	100	200	400	600	800	1000	V
Maximum Forward Voltage Drop	$@I_F = 1.0A$	$V_{FM}$				1.3				V
Peak Reverse Current	@ T <sub>A</sub> = +25°C	1				5.0				uА
at Rated DC Blocking Voltage (Note 5)	@ $T_A = +125$ °C	IRM	200					μΑ		
Maximum Reverse Recovery Time (Note 7)		t <sub>RR</sub>		15	50		250	50	00	ns
Typical Total Capacitance (Note 8)		Ст		•	•	15	•	•		pF

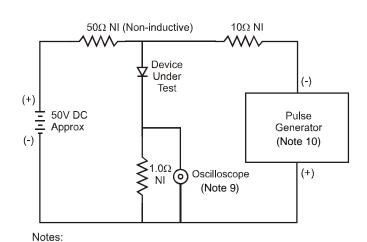
Notes:

- 5. Short duration pulse test used to minimize self-heating effect.
- 6. Valid provided that terminals are kept at ambient temperature. 7. Reverse recovery test conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ . See Figure 5. 8. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



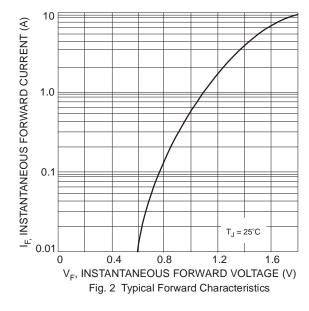


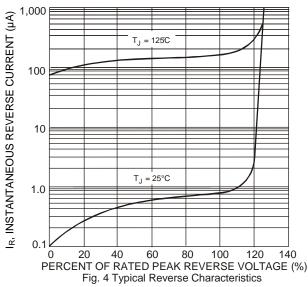


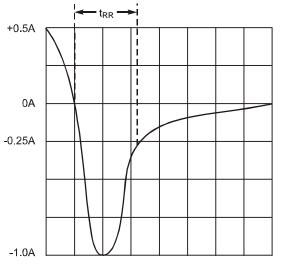


9. Rise Time = 7.0ns max. Input Impedance =  $1.0M\Omega$ , 22pF.

10. Rise Time = 10ns max. Input Impedance =  $50\Omega$ .







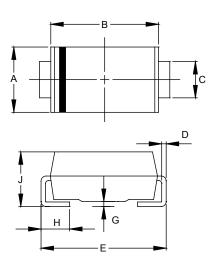
Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



# **Package Outline Dimensions**

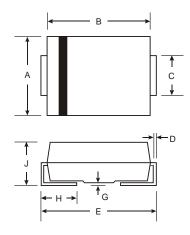
Please see http://www.diodes.com/package-outlines.html for the latest version.



## SMA

SMA				
Dim	Min	Max		
Α	2.29	2.92		
В	4.00	4.60		
С	1.27	1.63		
D	0.15	0.31		
Е	4.80	5.59		
G	0.05	0.20		
Н	0.76	1.52		
J	1.96	2.40		
All Dimensions in mm				

### **SMB**



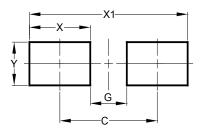
SMB					
Dim	Min	Max			
Α	3.30	3.94			
В	4.06	4.57			
C	1.96	2.21			
D	0.15	0.31			
E	5.00	5.59			
G	0.05	0.20			
Η	0.76	1.52			
7	2.00	2.50			
All Dimensions in mm					



# **Suggested Pad Layout**

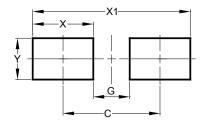
Please see http://www.diodes.com/package-outlines.html for the latest version.

## SMA



Dimensions	Value (in mm)
С	4.00
G	1.50
Х	2.50
X1	6.50
Y	1.70

## SMB



Dimensions	Value (in mm)
С	4.30
G	1.80
Х	2.50
X1	6.80
Y	2.30



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