

Maximum Ratings (@T_A = +25°C unless otherwise specified.)

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

Characteristic	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V _{RWM}								
DC Blocking Voltage (Note 4)	V _R								
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T _T = +75°C	I _O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms	I _{FSM}	30							A
Single Half Sine-Wave Superimposed on Rated Load									

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance, Junction to Terminal	R _{θJT}	30	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C unless otherwise specified.)

Characteristic	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Forward Voltage Drop @ I _F = 1.0A	V _{FM}	1.0			1.3	1.7			V
Peak Reverse Current @ T _A = +25°C	I _{RM}				5.0				μA
at Rated DC Blocking Voltage (Note 4) @ T _A = +100°C					100				
Reverse Recovery Time (Note 5)	t _{rr}	50				75			ns
Typical Total Capacitance (Note 6)	C _T	20				10			pF

- Notes:
- Short duration pulse test used to minimize self-heating effect.
 - Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
 - Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

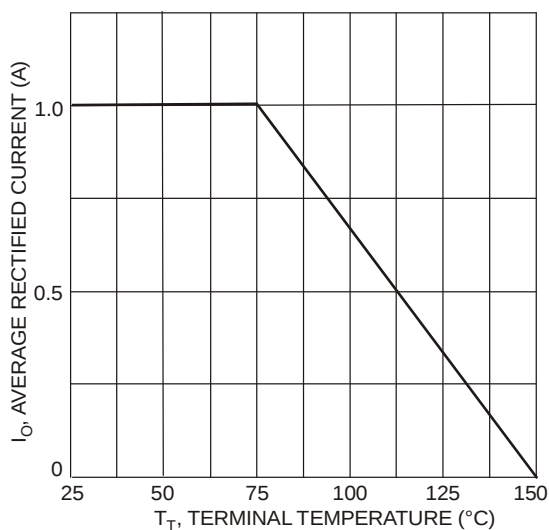


Fig. 1 Forward Current Derating Curve

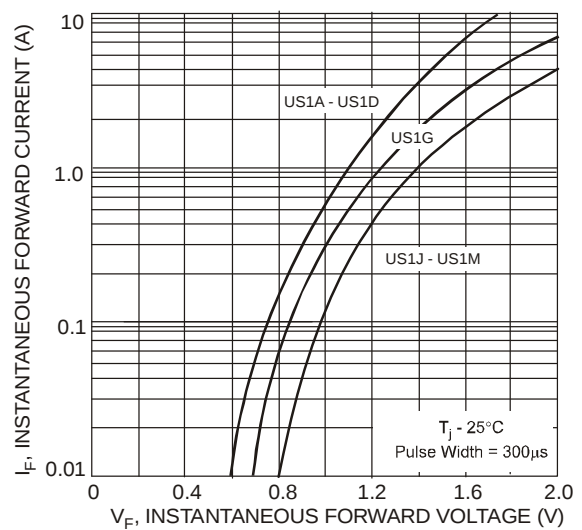


Fig. 2 Typical Forward Characteristics

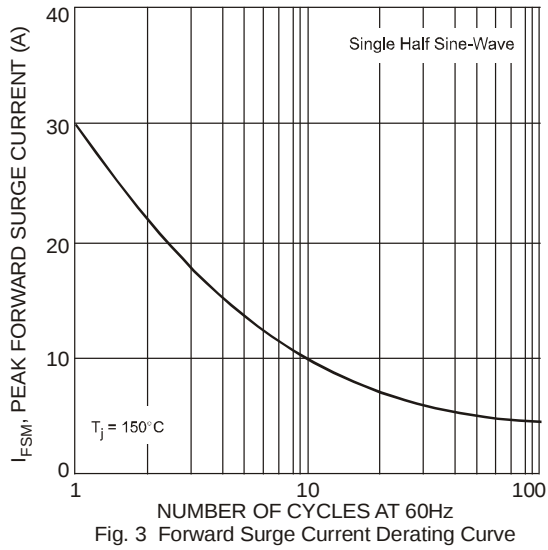


Fig. 3 Forward Surge Current Derating Curve

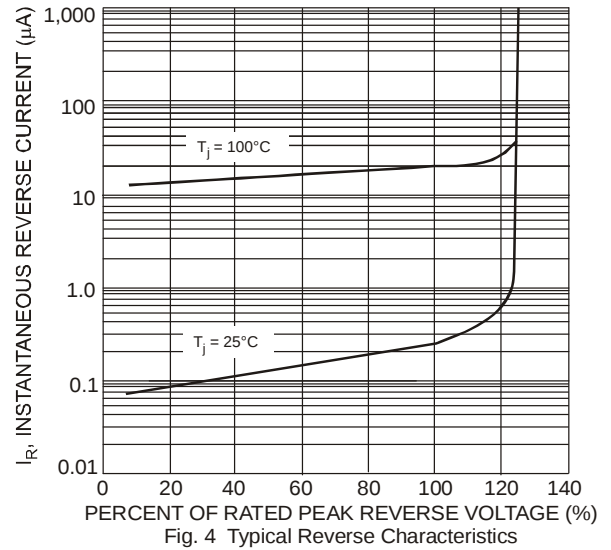
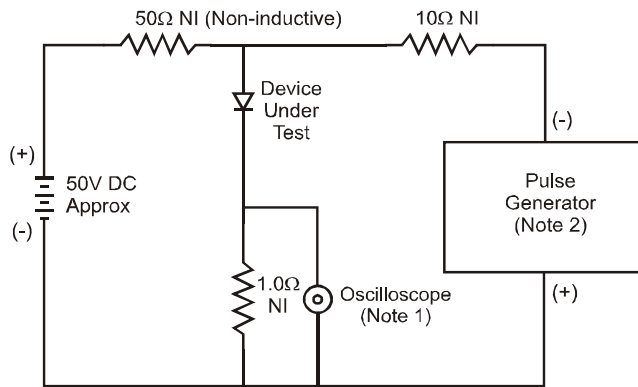
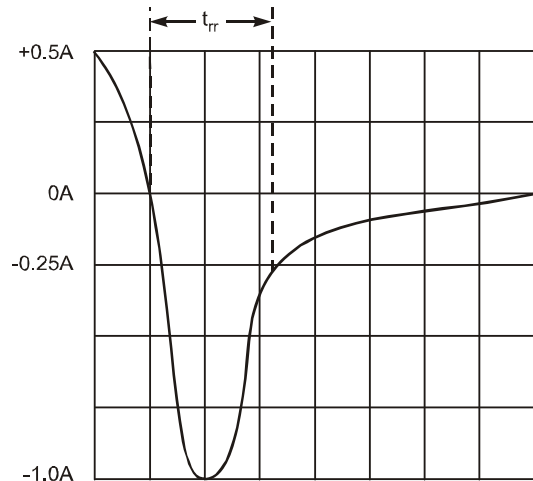


Fig. 4 Typical Reverse Characteristics



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

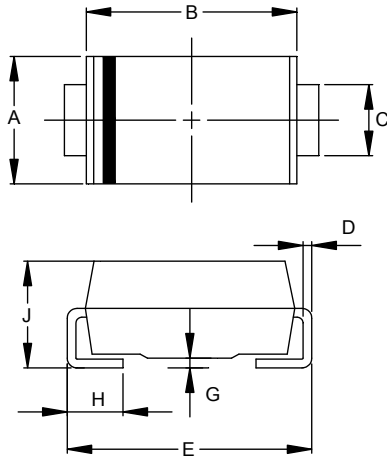
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



Set time base for 50/100 ns/cm

Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.

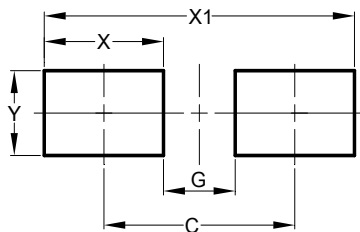


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for latest version.

SMA



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

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