

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	MURS140	MURS160	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	400	600	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage (Note 10)	V _R			
RMS Reverse Voltage	V _{R(RMS)}	283	424	V
Average Rectified Output Current @ T _T = +135°C	I _O	1.0		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	35		A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal (Note 6)	R _{θJT}	15	°C/W
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

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

Characteristic	Symbol	Value	Unit
Forward Voltage	V _{FM}	@ I _F = 1.0A, T _J = +25°C 1.25	V
		@ I _F = 1.0A, T _J = +150°C 1.05	
Peak Reverse Current at Rated DC Blocking Voltage (Note 10)	I _{RM}	@ T _A = +25°C 5.0	μA
		@ T _A = +150°C 150	
Reverse Recovery Time (Note 8)	t _{rr}	50	ns
Forward Recovery Time (Note 9)	t _{fr}	50	ns
Typical Total Capacitance (Note 7)	C _T	10	pF

- Notes:
- 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 4V DC.
 - Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
 - Measured with I_F = 1.0A, di/dt = 100A/μs, Duty Cycle ≤ 2.0%.
 - Short duration pulse test used to minimize self-heating effect.

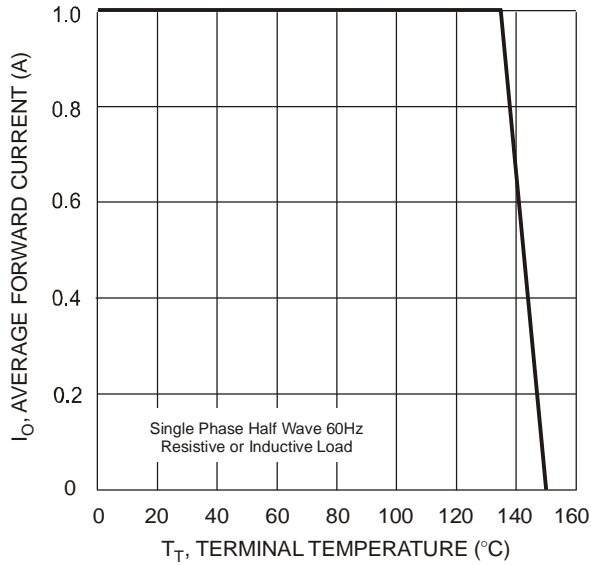


Fig. 1 Forward Current Derating Curve

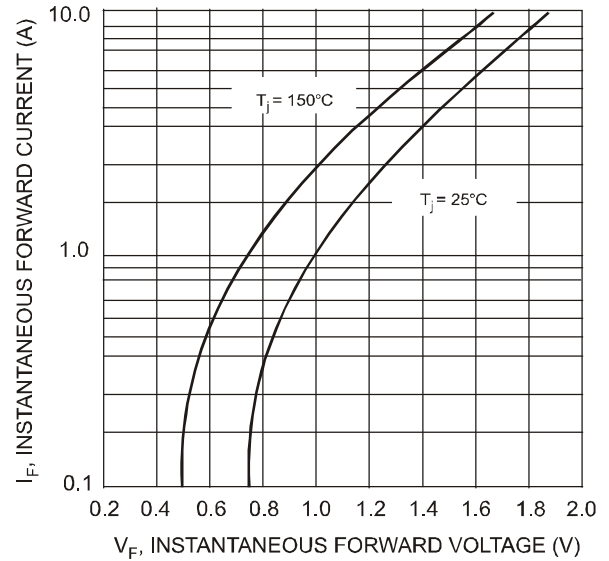


Fig. 2 Typical Forward Characteristics

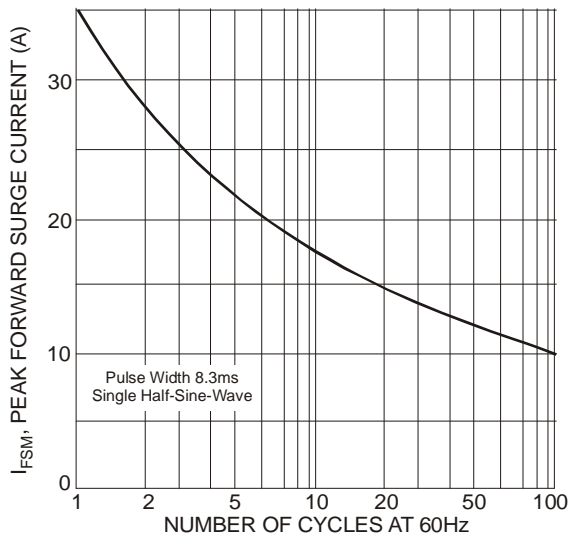


Fig. 3 Surge Current Derating Curve

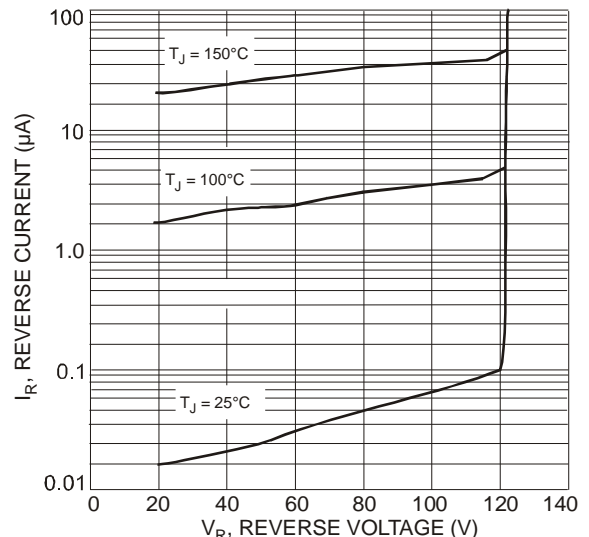
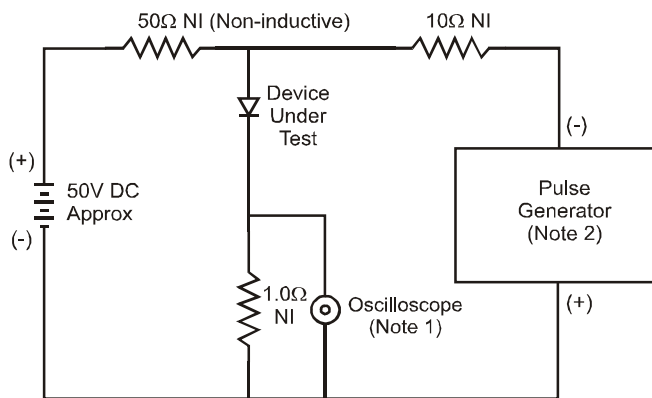


Fig. 4 Typical Reverse Characteristics



Notes:

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

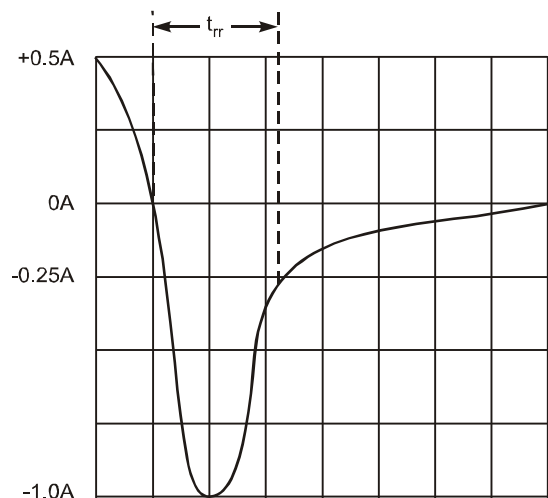
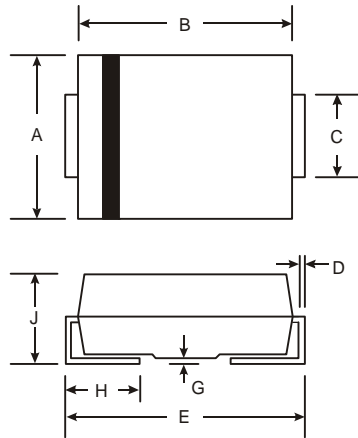


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

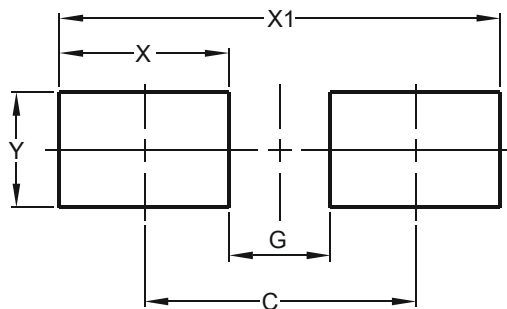
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

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



Dimensions	Value (in mm)
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

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