

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

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

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Note 5)	P _{PK}	3000	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (Notes 6 & 7)	I _{FSM}	300	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175	°C

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

Part Number	Reverse Standoff Voltage	Breakdown Voltage V _{BR} @ I _T (Note 8)		Test Current	Max. Reverse Leakage @ V _{RWM}	Max Clamping Voltage @ I _{PP}	Max Peak Pulse Current I _{PP}	Typical Total Capacitance (Note 10)	Marking Code
		Min (V)	Max (V)						
See Notes 1 & 9	V _{RWM} (V)			I _T (mA)	I _R (μA)	V _C (V)	(A)	C _T (pF)	
3.0SMCJ5.0A	5.0	6.40	7.07	10	1000	9.2	326.1	8,000	HDE
3.0SMCJ14A	14.0	15.60	17.2	1.0	5.0	23.2	129.3	3,500	HEK
3.0SMCJ20A	20.0	22.20	24.5	1.0	5.0	32.4	92.6	3,300	HEV
3.0SMCJ22A	22.0	24.40	27.0	1.0	5.0	35.5	84.5	3,000	HEX
3.0SMCJ24A	24.0	26.70	29.5	1.0	5.0	38.9	77.1	3,000	HEZ
3.0SMCJ28A	28.0	31.10	34.4	1.0	5.0	45.4	66.1	1,800	HFG
3.0SMCJ30A	30.0	33.30	36.8	1.0	5.0	48.4	62.0	1,700	HFK
3.0SMCJ58A	58.0	64.40	71.2	1.0	5.0	93.6	32.1	1,500	HGG

- Notes:
- Non-repetitive current pulse, per Figure 4 and derated above T_A = +25°C per Figure 1.
 - Mounted on 8.00mm² (0.013mm thick) land areas.
 - Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
 - V_{BR} measured with I_T current pulse = 10 ~ 15 ms.
 - Additional voltages may be available upon request. Please contact the Diodes Incorporated sales department for assistance.
 - V_R = 0V, f = 1MHz

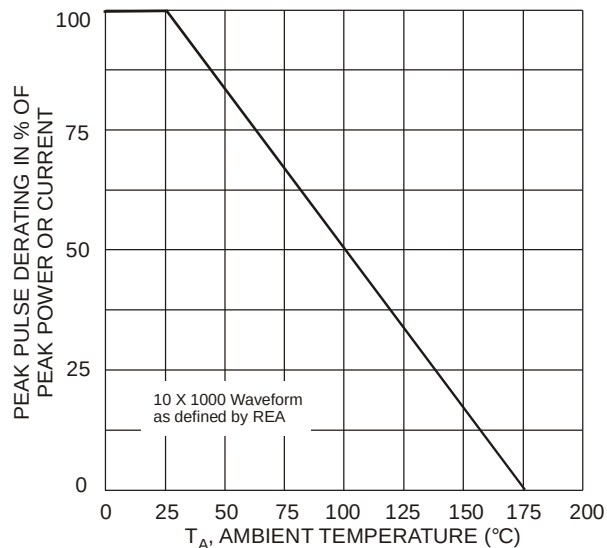


Fig. 1 Pulse Derating Curve

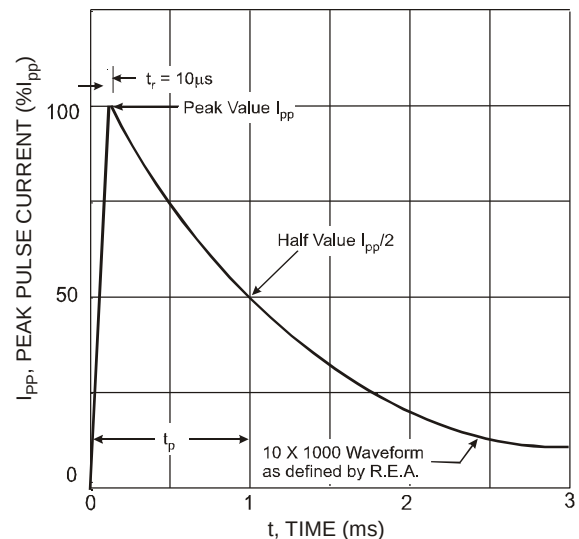
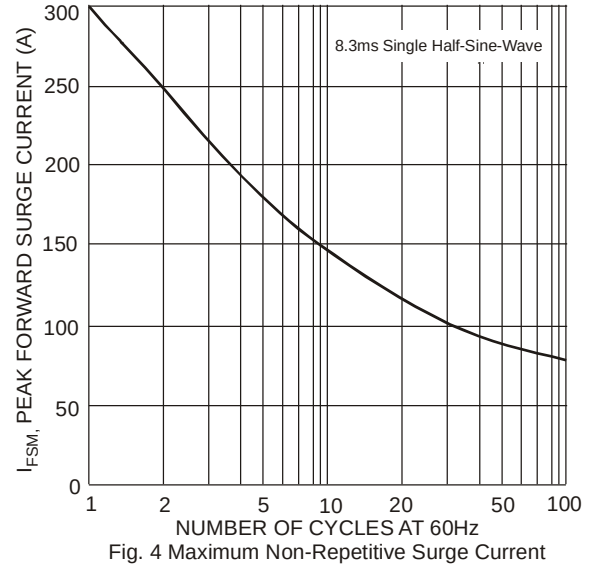
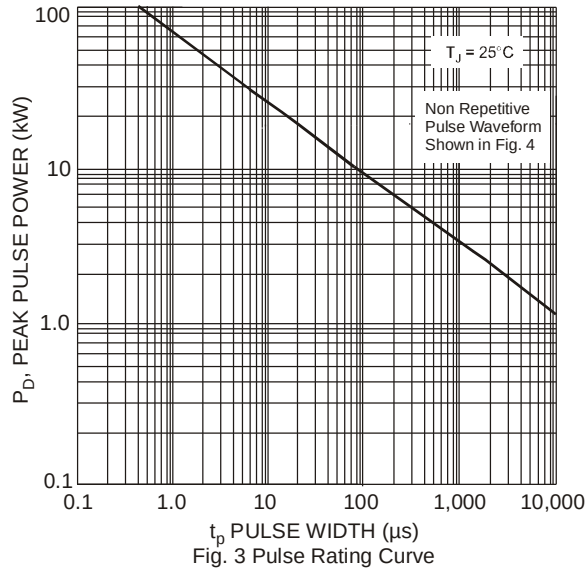
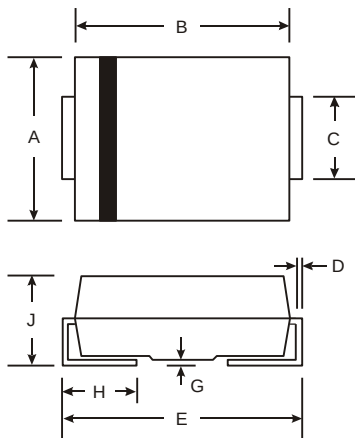


Fig. 2 Pulse Waveform



Package Outline Dimensions

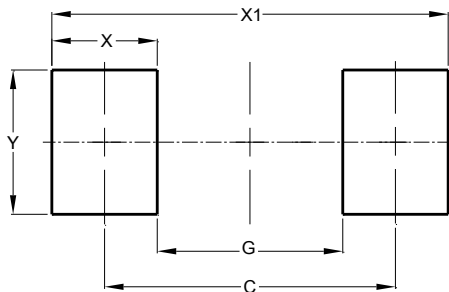
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SMC		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	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	6.90
G	4.40
X	2.50
X1	9.40
Y	3.30

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