

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

Characteristic	Symbol	SMAT70A	SMBT70A	Unit
Peak Pulse Power Dissipation (Non-repetitive current pulse derated above T _A = +25°C)	P _{PK}	400	600	W
Peak Forward Surge Current, 8.3ms Single Half-Sine Wave Superimposed on Rated Load (Note 5)	I _{FSM}	40	100	A
Instantaneous Forward Voltage @ I _{PP} = 35A (Note 5)	V _F	3.5		V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

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

Part Number	Reverse Standoff Voltage	Breakdown Voltage V _{BR} @ I _T (Note 6)		Test Current	Max. Reverse Leakage @ V _{RWM}	Max. Clamping Voltage @ I _{PP}	Max. Peak Pulse Current I _{PP}	Typical Total Capacitance (Note 6)	Typical Voltage Temp. Variation of V _{BR}	Marking Code
	V _{RWM} (V)	Min (V)	Max (V)	I _T (mA)	I _R (μA)	V _C (V)	(A)	(pF)	mV/°C	
SMAT70A	70	77.8	89.5	1.0	5.0	100	3.5	140	80	KEX
SMBT70A	70	77.8	89.5	1.0	5.0	100	5.3	290	80	NPX

Notes: 5. V_{BR} measured with I_T current pulse = 10 ~ 15 ms.
 6. f = 1MHz, V_R = 0VDC.

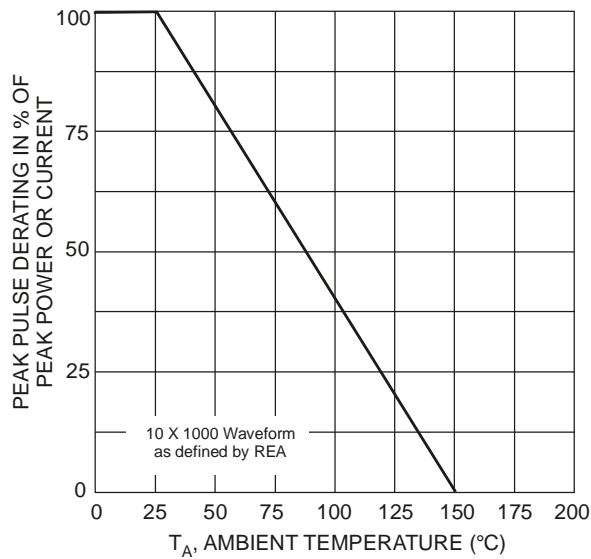


Fig. 1 Pulse Derating Curve

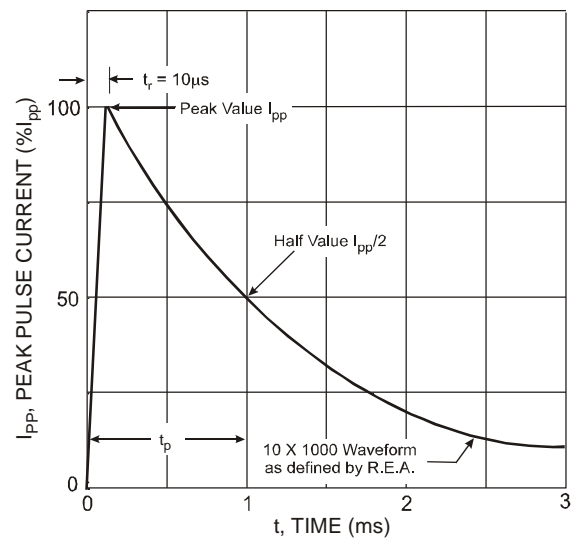


Fig. 2 Pulse Waveform

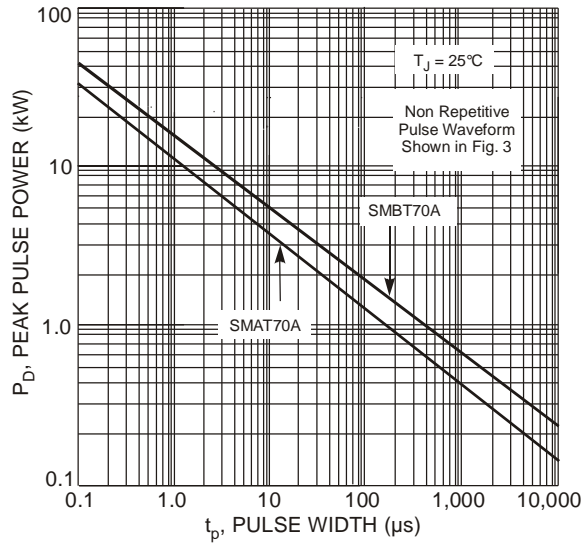


Fig. 3 Pulse Rating Curve

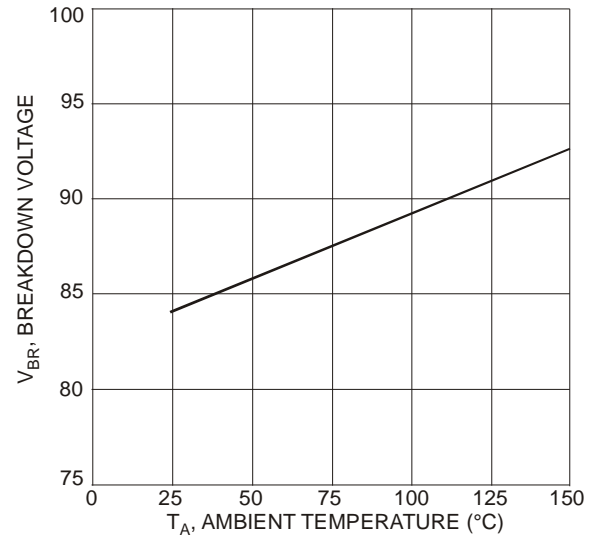
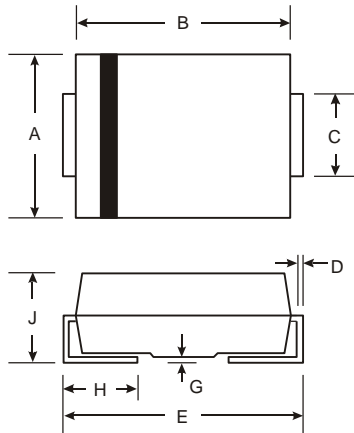


Fig. 4 Average Breakdown Voltage vs. Ambient Temperature

Package Outline Dimensions

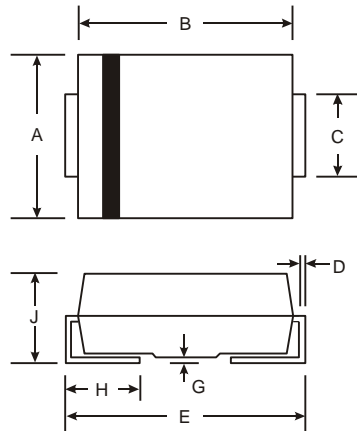
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.

(1) SMA



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	2.01	2.30
All Dimensions in mm		

(2) SMB

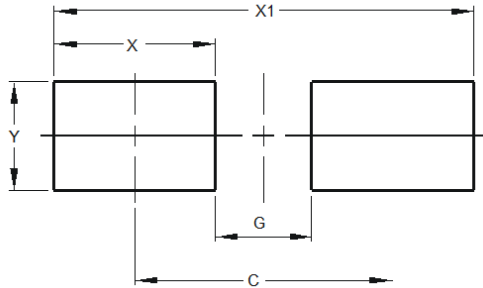


SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

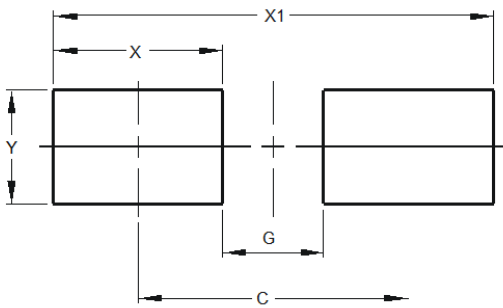
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.

(1) SMA



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

(2) SMB



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

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