
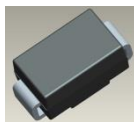


Features

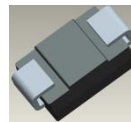
- 400, 600W Peak Pulse Power Dissipation
- 70V Standoff Voltage
- 100V Maximum Clamping Voltage
- Suitable for 48V Backplane Telecom Applications
- Glass Passivated Die Construction
- Fast Response Time: Typically Less than 1ps
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: SMA / SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Lead-Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 
- Polarity Indicator: Cathode Band
- Weight: SMA 0.064 grams (Approximate)
SMB 0.093 grams (Approximate)



Top View



Bottom View

Ordering Information (Note 4)

Part Number	Case	Packaging
SMAT70A-13-F	SMA	5,000/Tape & Reel
SMBT70A-13-F	SMB	3,000/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



xxx = Product Type Marking Code
See Electrical Characteristics Table
DII = Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year ex: 4 for 2014
WW = Week Code 01 to 53

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.

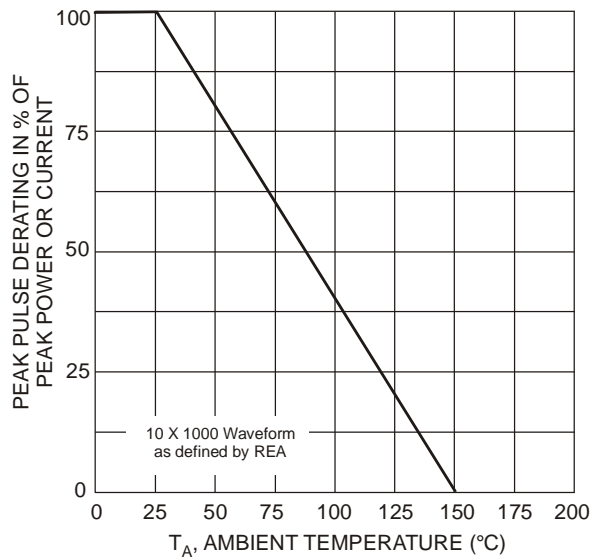


Fig. 1 Pulse Derating Curve

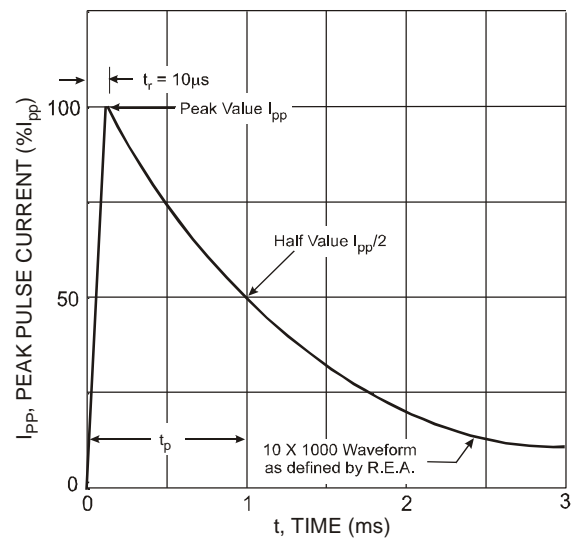


Fig. 2 Pulse Waveform

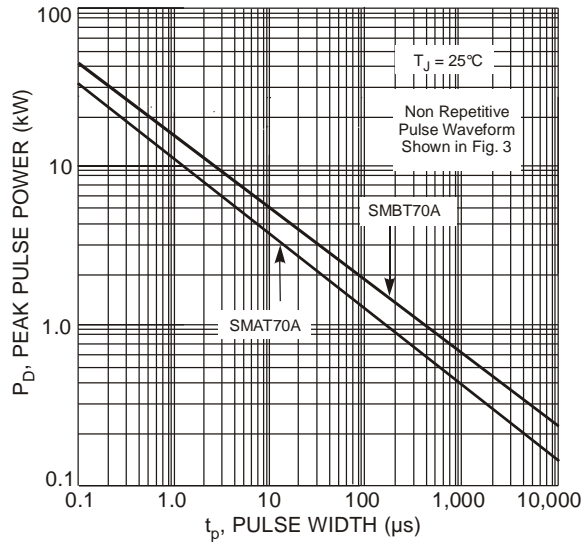


Fig. 3 Pulse Rating Curve

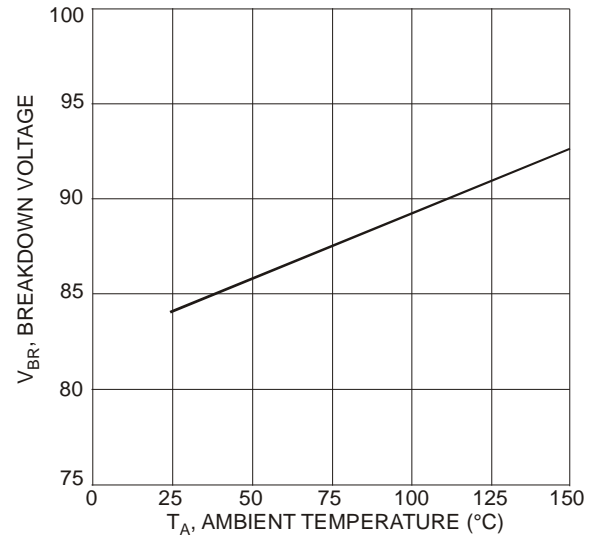
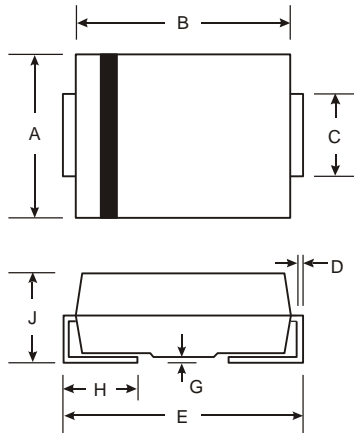


Fig. 4 Average Breakdown Voltage vs. Ambient Temperature

Package Outline Dimensions

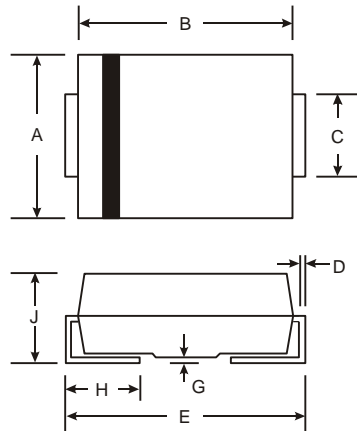
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.

(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

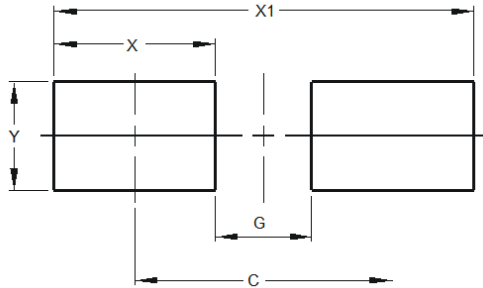


SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

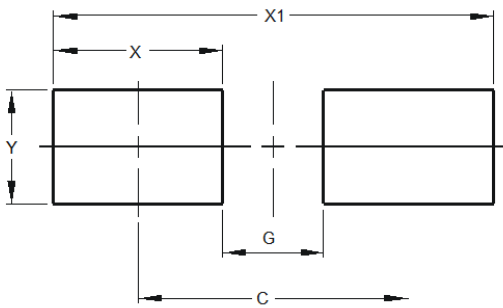
Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.

(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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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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