SMAT70A/SMBT70A

400W, 600W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

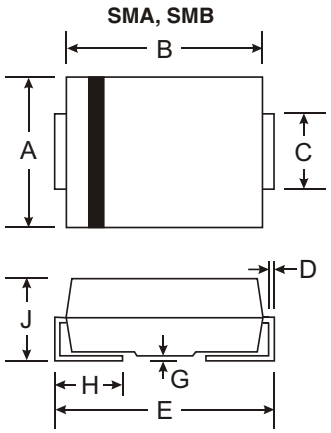
NEW PRODUCT

Features

- 400, 600W Peak Pulse Power Dissipation
- 70V Standoff Voltage
- 100V Maximum Clamping Voltage - A requirement of many -48V Backplane Telecom Applications
- Glass Passivated Die Construction
- Fast Response Time: Typically less than 1 ps
- Plastic Material - UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: SMA, SMB Transfer Molded Epoxy
- Case Material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
- Marking: Date Code (See Page 3) and Marking Code (See Page 1)
- Weight: SMA 0.064 grams
  SMB 0.093 grams
- Ordering Information: See Page 3



	SMAT70A		SMBT70A	
Package	SMA		SMB	
Dim	Min	Max	Min	Max
A	2.29	2.92	3.30	3.94
B	4.00	4.60	4.06	4.57
C	1.27	1.63	1.96	2.21
D	0.15	0.31	0.15	0.31
E	4.80	5.59	5.00	5.59
G	0.10	0.20	0.10	0.20
H	0.76	1.52	0.76	1.52
J	2.01	2.62	2.00	2.62

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 (JEDEC Method) (Note 2)	I_{FSM}	40	100	A
Instantaneous Forward Voltage @ I_{PP} = 35A (Note 2)	V_F	3.5		V
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 3)		Test Current	Max. Reverse Leakage @ V_{RWM}	Max. Clamping Voltage @ I_{pp}	Max. Peak Pulse Current I_{pp}	Typical Junction Capacitance (Note 3)	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	55	80	KEX
SMBT70A	70	77.8	89.5	1.0	5.0	100	5.3	80	80	NPX

Notes: 1. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
2. V_{BR} measured with I_T current pulse = 300μs.
3. f = 1MHz, V_R = 0VDC.

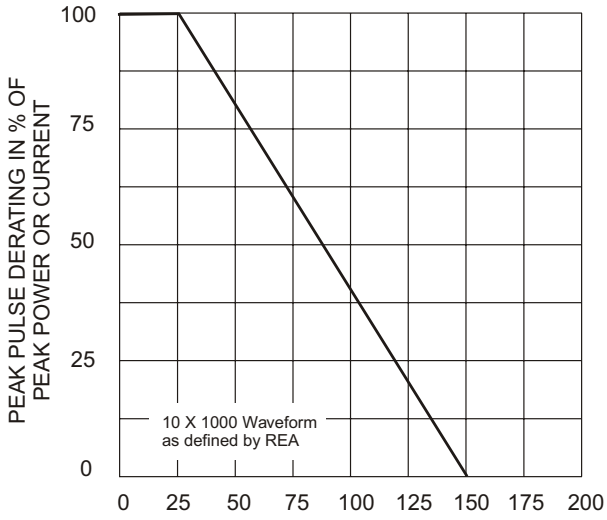


Fig. 1 Pulse Derating Curve

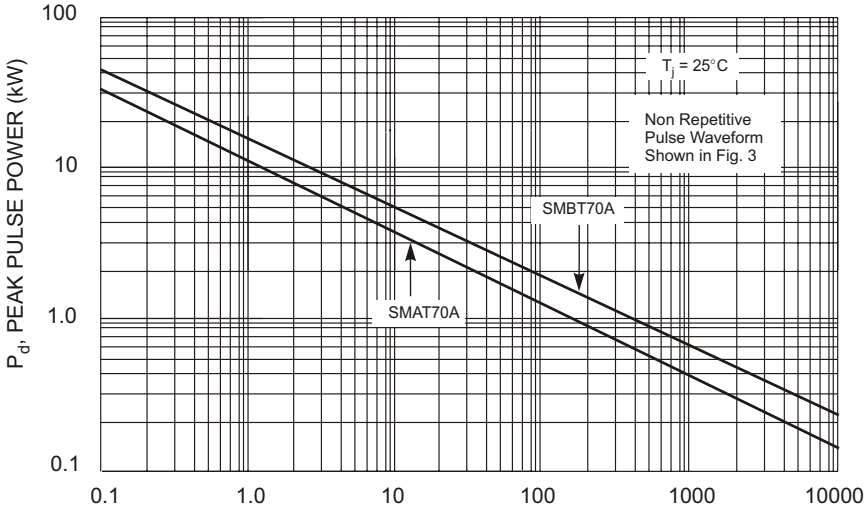


Fig. 2 Pulse Rating Curve

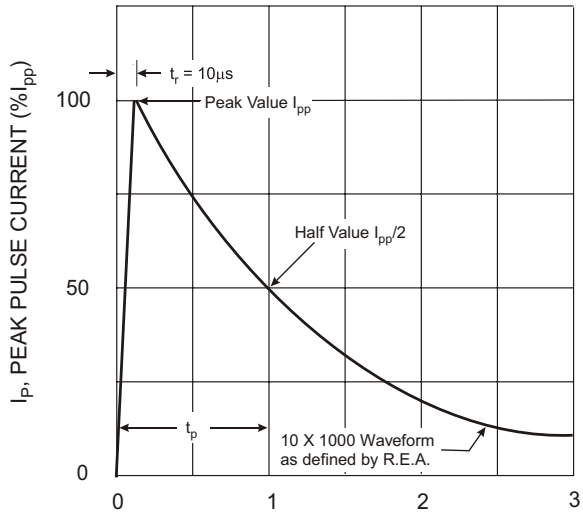


Fig. 3 Pulse Waveform

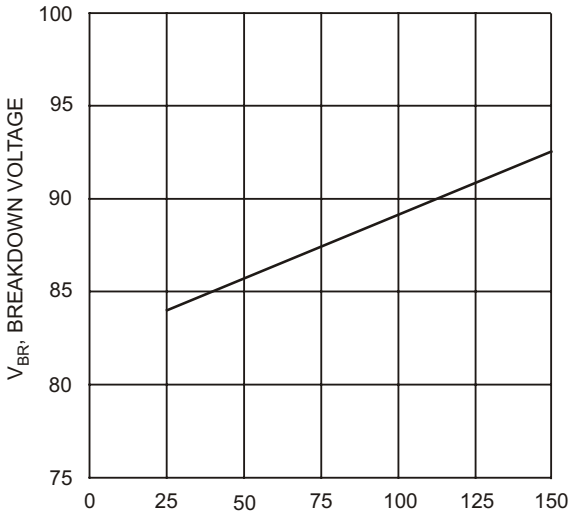


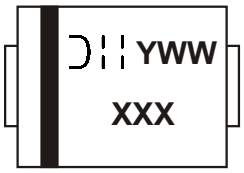
Fig. 4 Average Breakdown Voltage vs. Ambient Temperature

Ordering Information (Note 4)

Device	Packaging	Shipping
SMAT70A-13 SMBT70A-13	SMA SMB	5000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



XXX = Product type marking code (See Sheet 1)
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52