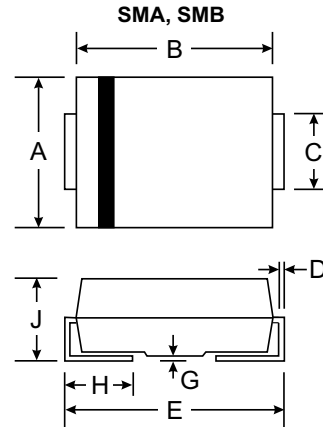


Features

- 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
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
- Marking: Date Code and Marking Code
- Weight: SMA 0.064 grams
SMB 0.093 grams



| Package | SMAT70A | | SMBT70A | |
|------------|---------|------|---------|------|
| | Min | Max | Min | Max |
| Dim | | | | |
| 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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | SMAT70A | SMBT70A | Unit |
|--|----------------|-------------|---------|------------------|
| Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$) (Note 1) | P_{PK} | 400 | 600 | W |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2) | I_{FSM} | 40 | 100 | A |
| Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 1, 2) | V_F | 3.5 | | V |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | $^\circ\text{C}$ |

- Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.

| 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 4) | Marking Code |
|-------------|--------------------------|---|---------|--------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|--------------|
| | V_{RWM} (V) | Min (V) | Max (V) | I_T (mA) | I_R (μA) | V_C (V) | (A) | (pF) | |
| SMAT70A | 70 | 77.8 | 89.5 | 1.0 | 5.0 | 100 | 3.5 | 55 | KEX |
| SMBT70A | 70 | 77.8 | 89.5 | 1.0 | 5.0 | 100 | 5.3 | 80 | NPX |

- Notes: 3. V_{BR} measured with I_T current pulse = 300 μs .
4. $f = 1\text{MHz}$, $V_R = 0\text{VDC}$.

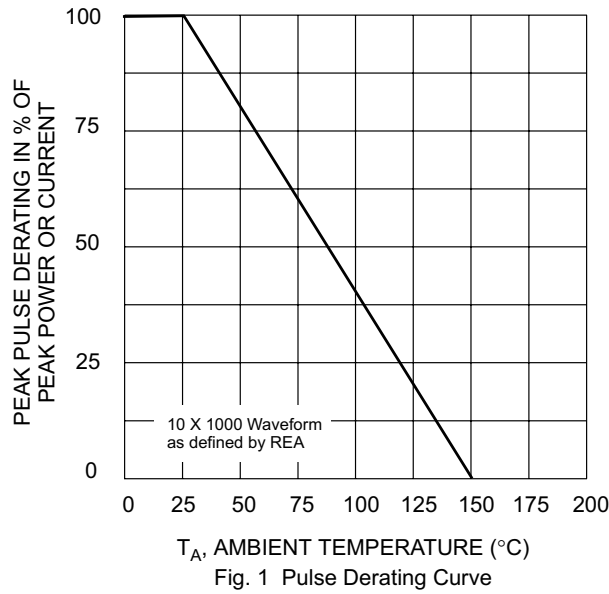


Fig. 1 Pulse Derating Curve

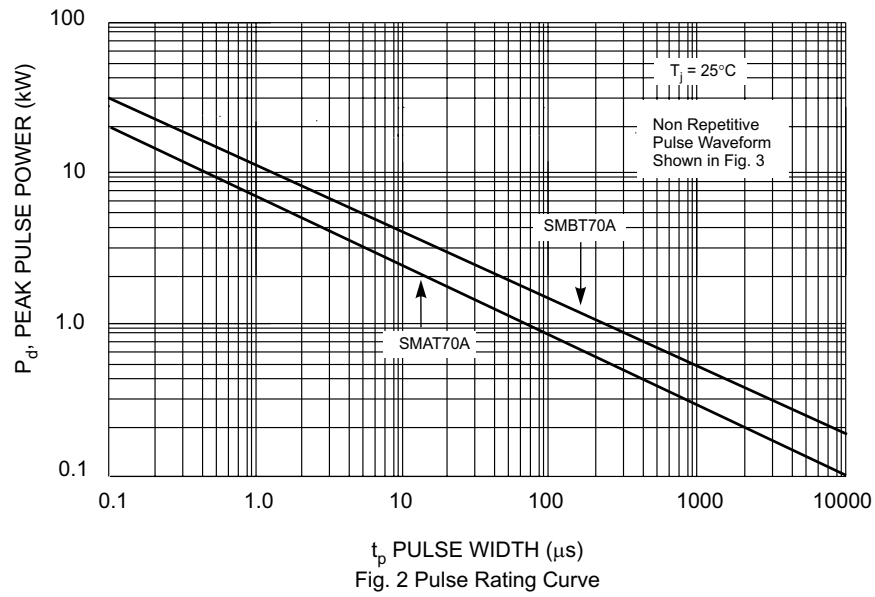


Fig. 2 Pulse Rating Curve

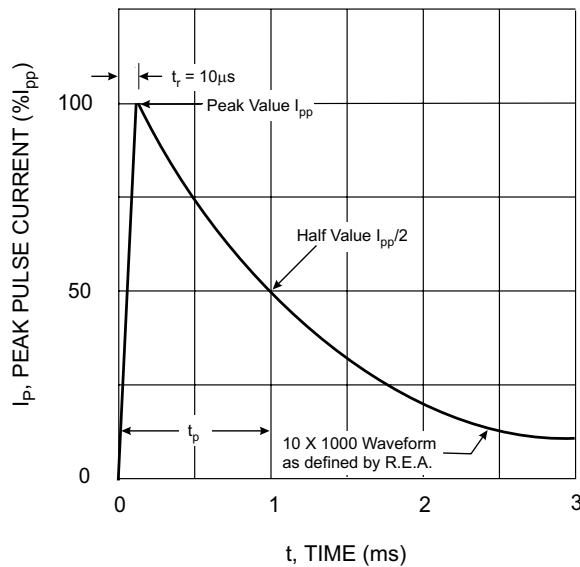


Fig. 3 Pulse Waveform