

MDE Semiconductor, Inc.

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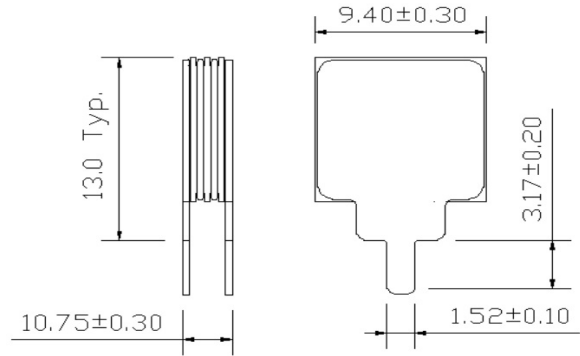
MAX 40 TAB-LEAD CELL Series

HIGH CURRENT TRANSIENT VOLTAGE SUPPRESSOR (TVS) DIODE STAND-OFF VOLTAGE 12 to 40 Volts

40000 Watt Peak Pulse Power

FEATURES

- Glass passivated junction with UV coated
- Bidirectional
- 40000W Peak Pulse Power capability on 10x1000 μ s waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Sharp breakdown voltage
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical IR less than 20 μ A above 10V
- Operation Temperature: -55°C to +150°C



Dimensions in millimeters

MECHANICAL DATA

Terminals: Ag Plated Axial leads, solderable per MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 1.490 \pm 0.149g (0.053 \pm 0.005 ounces)

DEVICES FOR BIPOLAR APPLICATIONS

Bidirectional use CA Suffix. Electrical characteristics apply in both directions.

Unidirectional A Suffix available as a special order

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNITS |
|--|--------|---------------|-------|
| Peak Pulse Power Dissipation on 10/1000 μ s waveform | Pppm | Minimum 20000 | Watts |
| Peak Pulse Current of on 10-1000 μ s waveform | Ippm | SEE CURVE | Amps |

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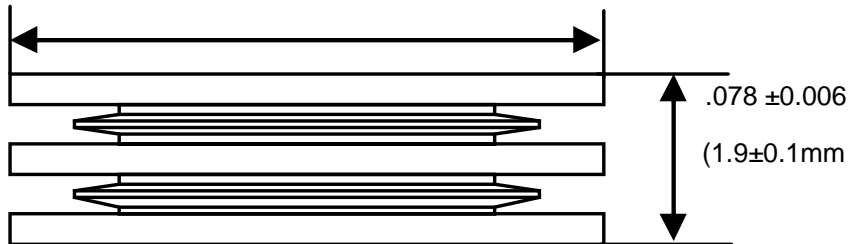
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| PART NUMBER | Numbers of Cell | REVERSE STAND-OFF VOLTAGE $V_{RWM}(V)$ | BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN. @ I_T | TEST CURRENT I_T (mA) | PEAK PULSE CURRENT I_{pp} (A) | REVERSE LEAKAGE @ V_{RWM} $I_R(\mu A)$ | MAXIMUM CLAMPING VOLTAGE @ $I_{PP} V_C$ (V) |
|--------------------------|-----------------|--|--|-------------------------|---------------------------------|--|---|
| MAX40-12CA TAB-LEAD CELL | 2 | 12 | 14.0 | 50 | 2010.1 | 2000 | 19.9 |
| MAX40-13CA TAB-LEAD CELL | 2 | 13 | 15.2 | 50 | 1860.5 | 2000 | 21.5 |
| MAX40-14CA TAB-LEAD CELL | 2 | 14 | 16.4 | 50 | 1724.1 | 2000 | 23.2 |
| MAX40-15CA TAB-LEAD CELL | 2 | 15 | 17.6 | 5 | 1639.3 | 500 | 24.4 |
| MAX40-16CA TAB-LEAD CELL | 2 | 16 | 18.8 | 5 | 1538.5 | 200 | 26.0 |
| MAX40-17CA TAB-LEAD CELL | 2 | 17 | 19.9 | 5 | 1449.3 | 50 | 27.6 |
| MAX40-18CA TAB-LEAD CELL | 2 | 18 | 21.1 | 5 | 1369.6 | 20 | 29.2 |
| MAX40-20CA TAB-LEAD CELL | 2 | 20 | 23.4 | 5 | 1234.6 | 20 | 32.4 |
| MAX40-22CA TAB-LEAD CELL | 2 | 22 | 25.7 | 5 | 1126.8 | 20 | 35.5 |
| MAX40-24CA TAB-LEAD CELL | 2 | 24 | 28.1 | 5 | 1028.3 | 20 | 38.9 |
| MAX40-26CA TAB-LEAD CELL | 2 | 26 | 30.4 | 5 | 950.1 | 20 | 42.1 |
| MAX40-28CA TAB-LEAD CELL | 2 | 28 | 32.8 | 5 | 881.1 | 20 | 45.4 |
| MAX40-30CA TAB-LEAD CELL | 2 | 30 | 35.1 | 5 | 826.4 | 20 | 48.4 |
| MAX40-33CA TAB-LEAD CELL | 2 | 33 | 38.7 | 5 | 750.5 | 20 | 53.3 |
| MAX40-36CA TAB-LEAD CELL | 2 | 36 | 42.1 | 5 | 688.5 | 20 | 58.1 |
| MAX40-40CA TAB-LEAD CELL | 2 | 40 | 46.8 | 5 | 620.2 | 20 | 64.5 |

Stack 2 chip

$.373 \pm 0.006$

(9.4±0.1mm)



MAX 40 TAB-LEAD CELL

Series Rating Characteristic Curves

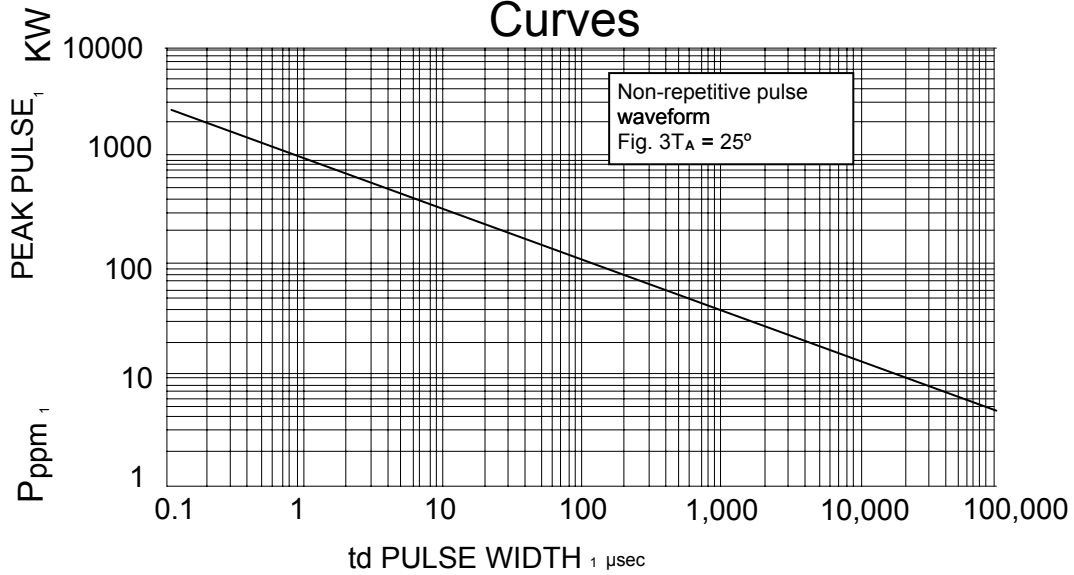


FIG. 1 PEAK PULSE POWER RATING

Fig.2 - Pulse Derating Curve

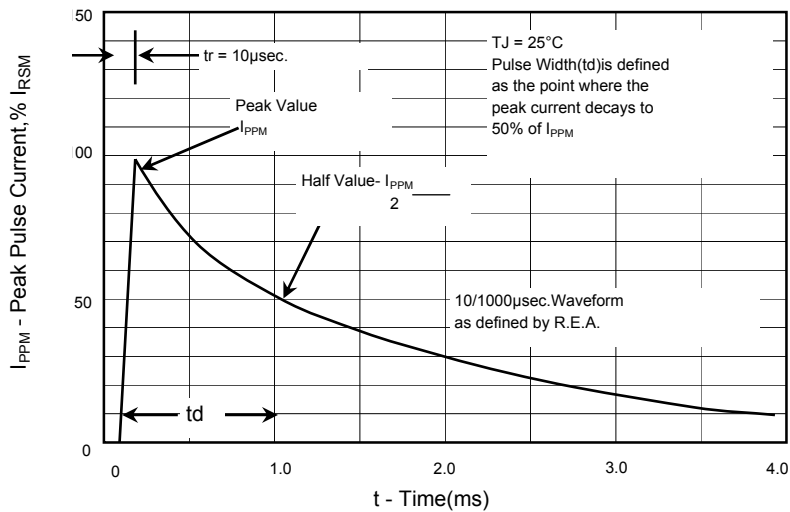
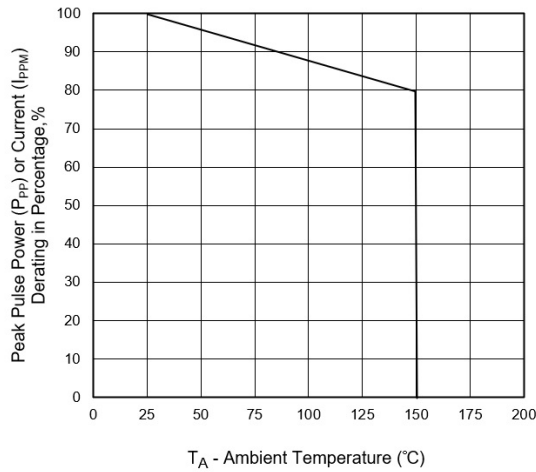


Fig.3 - Pulse Waveform