



#### FEATURES:

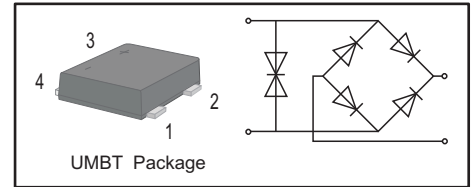
- Lower clamping voltage
- Green Molding Compound  
(No Halogen and Antimony)
- Glass Passivated Chip Junction
- High Surge Current Capability
- Designed for Surface Mount Application

#### MECHANICAL DATA

- Case: UMBT
- Terminals: Solderable per  
MIL-STD-750, Method 2026
- Approx. Weight: 60mg/0.0021oz

#### PINNING

| PIN | DESCRIPTION        |
|-----|--------------------|
| 1   | Input Pin (~)      |
| 2   | Input Pin (~)      |
| 3   | Output Anode (+)   |
| 4   | Output Cathode (-) |



#### Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                                      | Symbols                                               | BP30CUM10B-10  | Units |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------|-------|
| Average Rectified Output Current                                                                                               | $I_O$                                                 | 1.0            | A     |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                                             | $I_{FSM}$                                             | 30             | A     |
| Maximum Forward Voltage at 1.0 A                                                                                               | $V_F$                                                 | 1.1            | V     |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>(@VR=1000V)<br>@T <sub>A</sub> =25 °C<br>@T <sub>A</sub> =125 °C | $I_R$                                                 | 5<br>40        | μA    |
| Typical Junction Capacitance (Note1)                                                                                           | $C_j$                                                 | 7              | pF    |
| Typical Thermal Resistance (Note2)                                                                                             | $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | 45<br>15<br>25 | °C/W  |
| Operating and Storage Temperature Range                                                                                        | $T_j, T_{stg}$                                        | -55 ~ +150     | °C    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

#### Maximum Ratings and sssssssThermal Characteristics(TA = 25°C unless otherwise specified)

| Parameter of TVS                                   | Symbol         | BP30CUM10B-10 | Unit |
|----------------------------------------------------|----------------|---------------|------|
| Maximum allowable continuous AC voltage at 50-60Hz | $V_{RMS}$      | 18            | V    |
| Breakdown voltage                                  | $V_{BR}$       | 28.5~31.5     | V    |
| Maximum allowable continuous DC voltage            | $V_{DC}$       | 25.6          | V    |
| Maximum allowable clamping voltage                 | $V_C$          | 41.4          | V    |
| Maximum peak pulse current                         | $I_{pp}$       | 15.95         | A    |
| Operating and Storage Temperature Range            | $T_j, T_{stg}$ | -55 ~ +150    | °C   |

#### NOTES:

- 1.The breakdown voltage was measured at 1mA
2. The clamping voltage was measured at 10/1000μs standard current
3. The peak pulse current was tested at 10/1000μs waveform



Fig.1 Average Rectified Output Current Derating Curve

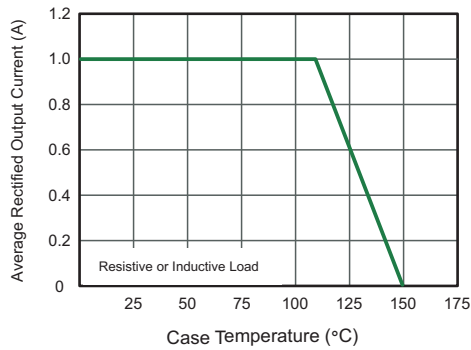


Fig.2 Typical Reverse Characteristics

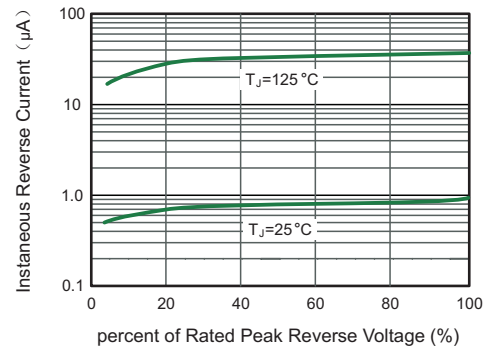


Fig.3 Typical Forward Characteristic

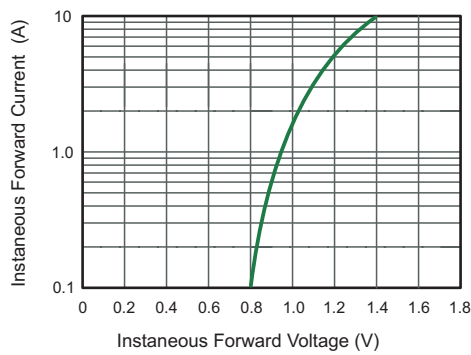


Fig.4 Typical Junction Capacitance

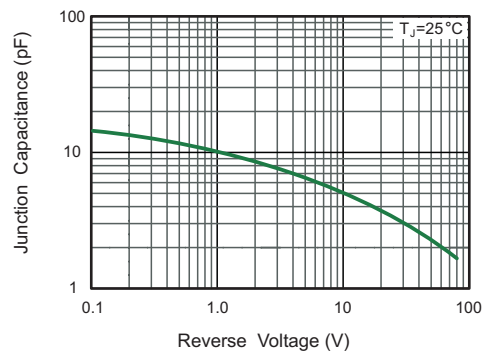


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

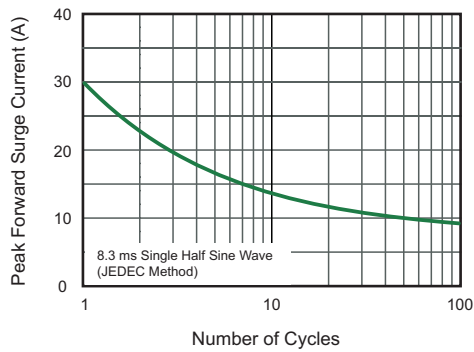


Fig.6 Peak Pulse Power Rating Curve

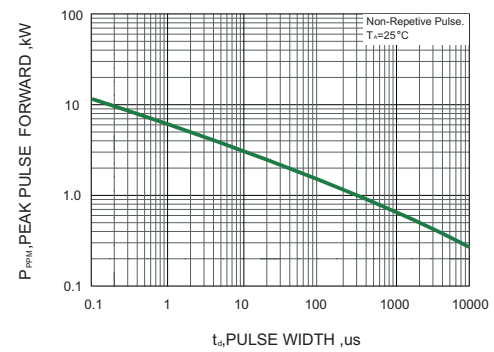


Fig.7 Forward Current Derating Curve

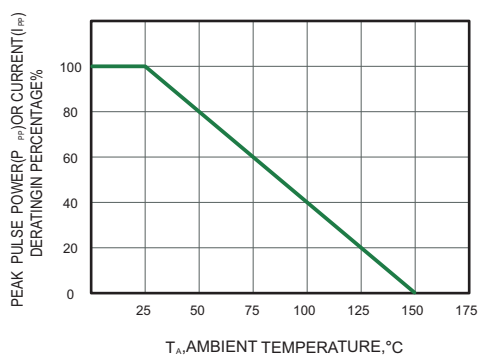
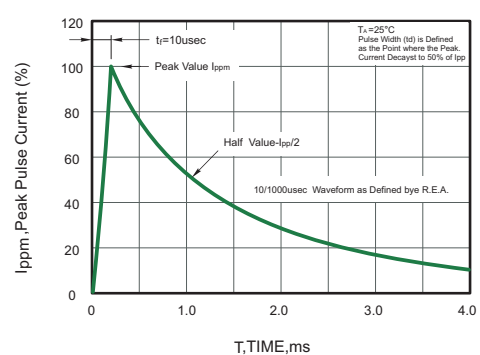


Fig.8 Pulse Waveform

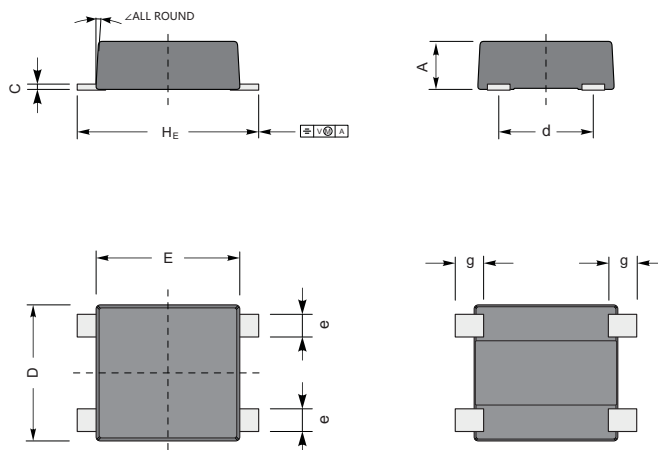




## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

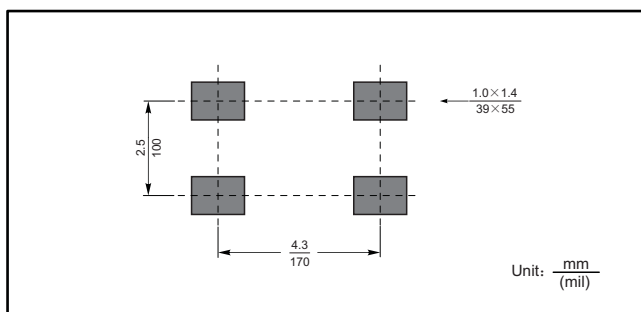
UMBT



UMBT mechanical data

| UNIT |     | A   | C    | D   | E   | H <sub>E</sub> | g    | d   | e    | ∠  |
|------|-----|-----|------|-----|-----|----------------|------|-----|------|----|
| mm   | max | 1.8 | 0.20 | 3.8 | 4.0 | 5.1            | 0.82 | 2.7 | 0.70 | 7° |
|      | min | 1.6 | 0.12 | 3.4 | 3.6 | 4.6            | 0.51 | 2.3 | 0.51 |    |
| mil  | max | 71  | 7.9  | 150 | 157 | 201            | 32   | 106 | 28   |    |
|      | min | 63  | 4.7  | 134 | 142 | 181            | 20   | 91  | 20   |    |

## The recommended mounting pad size



## Marking

| Type number   | Marking code |
|---------------|--------------|
| BP30CUM10B-10 | BP30C10      |



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