

2-Line TVS Array

(Pb) Lead(Pb)-Free * Halogen-Free

Features:

- * Transient protection for data lines to IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
IEC 61000-4-4 (EFT) 40A ($t_p = 5/50\text{ns}$)
Cable Discharge Event (CDE)
- * Protects two data lines
- * Low clamping voltage
- * Working voltage: 5V
- * Low leakage current
- * Solid-state silicon-avalanche technology

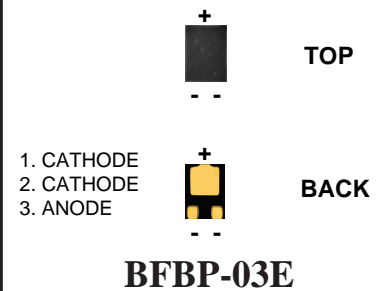
Main Applications:

- * Cellular Handsets & Accessories
- * Personal Digital Assistants (PDAs)
- * Notebooks & Handhelds
- * Portable Instrumentation
- * Digital Cameras
- * Peripherals
- * MP3 Players

Mechanical Characteristics:

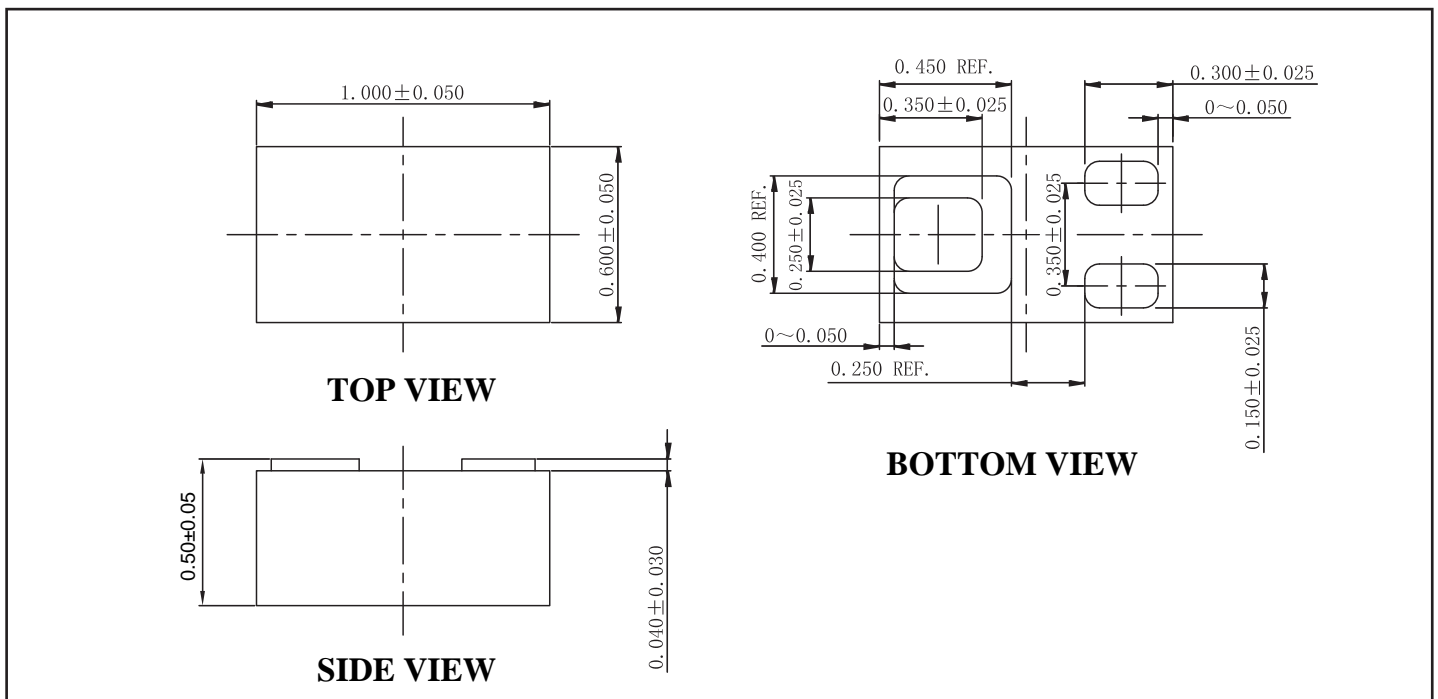
- * Lead Finish: NiPdAu
- * Molding compound flammability rating: UL 94V-0
- * Marking : 05

Peak Pulse Power
25 Watts
Reverse Working Voltage
5.0 VOLTS



BFBP Outline Dimensions

Unit:mm



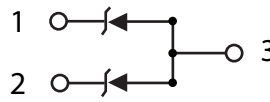
Maximum Ratings (T_A=25°C unless otherwise noted)

| Parameter | Symbol | Value | Units |
|--|------------------|-------------|-------|
| Peak Pulse Power (t _p =8/20μs) | P _{PP} | 25 | W |
| Maximum Peak Pulse Current (t _p = 8/20μs) | I _{PP} | 2 | A |
| IEC61000-4-2 Air(ESD) IEC61000-4-2 Contact(ESD) | ESD | 20 15 | kV |
| Operating Temperature | T _J | -55 to +125 | °C |
| Storage Temperature | T _{STG} | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS

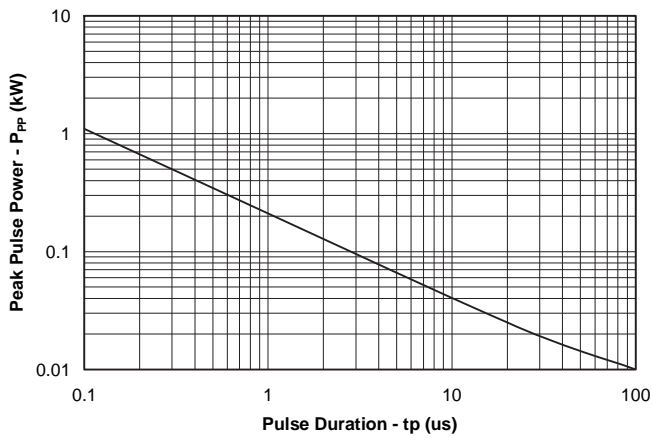
| Parameter | Symbol | Minimum | Typical | Maximum | Units |
|---|------------------|---------|---------|---------|-------|
| Reverse Stand-Off Voltage | V _{RWM} | - | - | 5 | V |
| Reverse Breakdown Voltage I _t = 1mA | V _{BR} | 6 | - | - | V |
| Reverse Leakage Current V _{RWM} = 5V, T=25°C | I _R | - | - | 0.25 | μA |
| Forward Voltage I _F = 10mA | V _F | - | 1 | 1.2 | V |
| Clamping Voltage I _{PP} = 2A, t _p = 8/20μs | V _C | - | - | 12.5 | V |
| Junction Capacitance V _R = 0V, f = 1MHz | C _J | - | - | 10 | pF |
| Junction Capacitance V _R = 3.3V, f = 1MHz | C _J | - | 4.5 | - | pF |

Device Marking

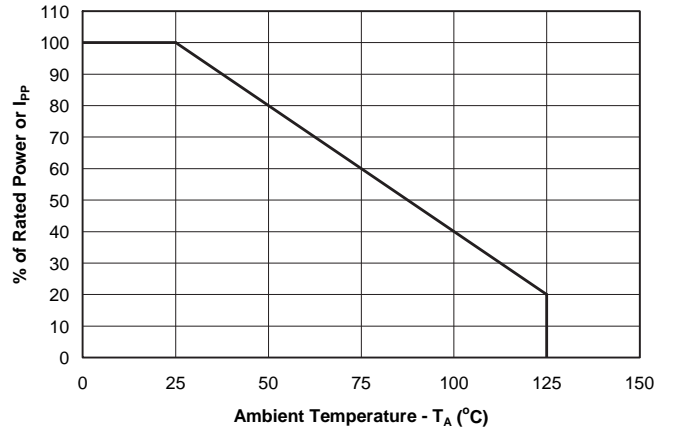
| Item | Marking | Equivalent Circuit diagram |
|------------|---------|---|
| ESD0502B3E | 05 |  |

Order Information

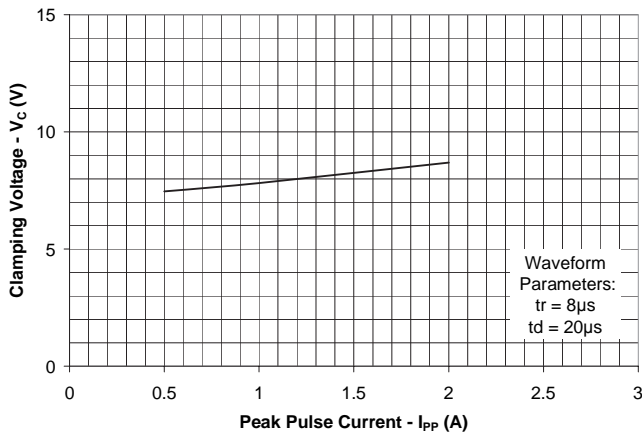
| Item | Package | Shipping |
|------------|---------|--------------------|
| ESD0502B3E | BFBP | 5000 / Tape & Reel |



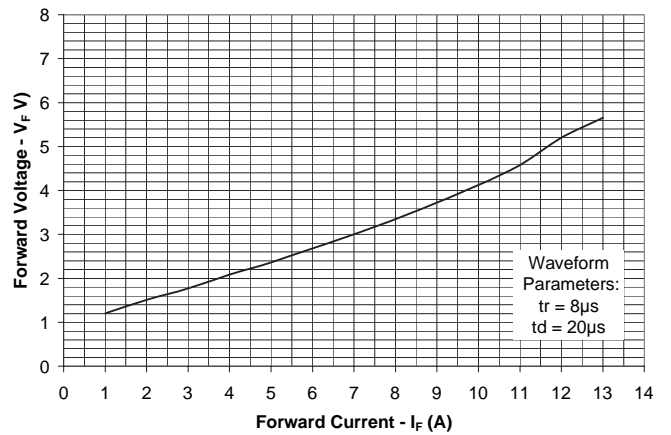
Non-Repetitive Peak Pulse Power vs. Pulse Time



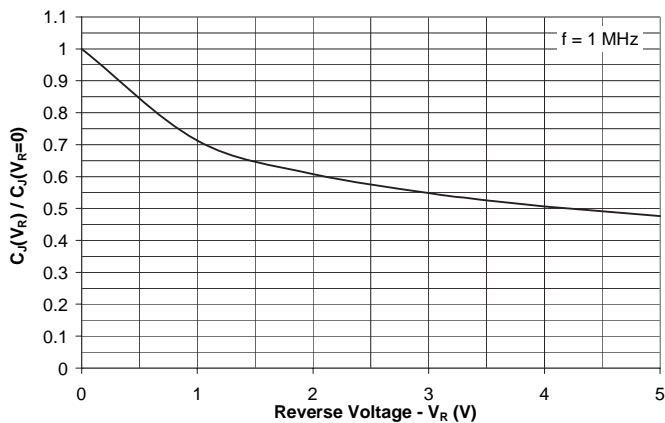
Power Derating Curve



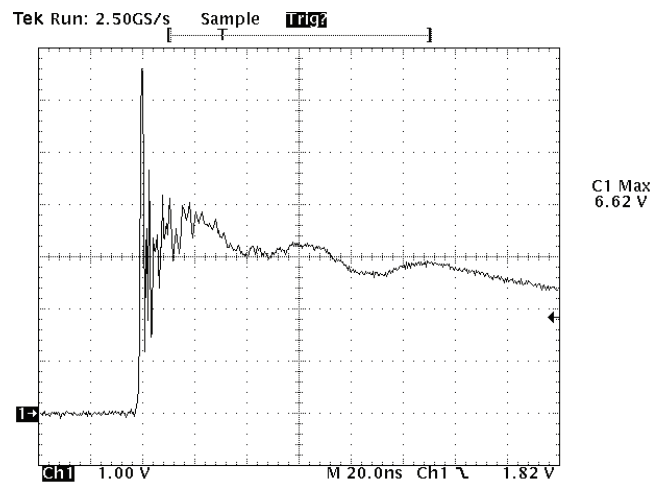
Clamping Voltage vs. Peak Pulse Current



Forward Voltage vs. Forward Current



Junction Capacitance vs. Reverse Voltage



**ESD Clamping
(8kV Contact per IEC 61000-4-2)**