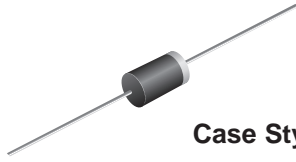
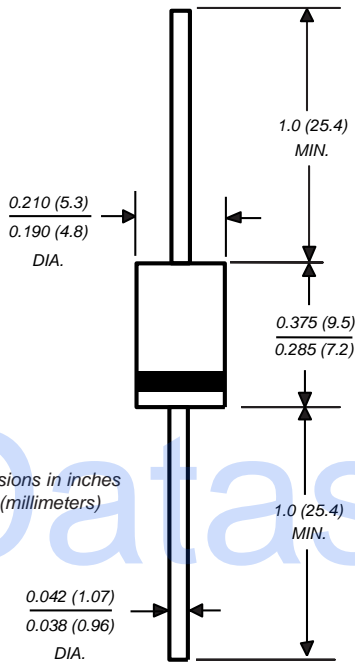


## TRANSZORB® Transient Voltage Suppressors



Case Style 1.5KE



Extended Voltage Range

**V<sub>(BR)</sub> Unidirectional** 6.8 to 540V  
**V<sub>(BR)</sub> Bidirectional** 6.8 to 440V  
**Peak Pulse Power** 1500W

### Features

- Underwriters Laboratory Recognition under UL standard for safety 497B: Isolated Loop Circuit Protection
- Glass passivated junction
- 1500W peak pulse power capability on 10/1000µs waveform, repetition rate (duty cycle): 0.05%
- Excellent clamping capability
- Low incremental surge resistance
- Very fast response time
- Includes 1N6267 thru 1N6303A

### Mechanical Data

**Case:** Molded plastic body over passivated junction

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 265°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension

**Polarity:** For unidirectional types the color band denotes the cathode, which is positive with respect to the anode under normal TVS operation

**Mounting Position:** Any **Weight:** 0.045 oz., 1.2 g

**Flammability:** Epoxy is rated UL 94V-0

#### Packaging Codes – Options (Antistatic):

- 51 – 1K per Bulk box, 10K/carton
- 54 – 1.4K per 13" paper Reel (52mm horiz. tape), 4.2K/carton
- 73 – 1K per horiz. tape & Ammo box, 10K/carton

### Devices for Bidirectional Applications

For bi-directional, use C or CA suffix for types 1.5KE6.8 thru types 1.5KE440 (e.g. 1.5KE6.8C, 1.5KE440CA). Electrical characteristics apply in both directions.

### Maximum Ratings and Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

| Parameter                                                                                           | Symbol                            | Limit          | Unit |
|-----------------------------------------------------------------------------------------------------|-----------------------------------|----------------|------|
| Peak power dissipation with a 10/1000µs waveform <sup>(1)</sup> (Fig. 1)                            | PPPM                              | 1500           | W    |
| Peak pulse current with a 10/1000µs waveform <sup>(1)</sup>                                         | IPPM                              | See Next Table | A    |
| Steady state power dissipation at T <sub>L</sub> = 75°C, lead lengths 0.375" (9.5mm) <sup>(2)</sup> | P <sub>M(AV)</sub>                | 6.5            | W    |
| Peak forward surge current, 8.3ms single half sine-wave unidirectional only <sup>(3)</sup>          | I <sub>FSM</sub>                  | 200            | A    |
| Maximum instantaneous forward voltage at 100A for unidirectional only <sup>(4)</sup>                | V <sub>F</sub>                    | 3.5/5.0        | V    |
| Typical thermal resistance junction-to-lead                                                         | R <sub>θJL</sub>                  | 20             | °C/W |
| Typical thermal resistance junction-to-ambient                                                      | R <sub>θJA</sub>                  | 75             | °C/W |
| Operating junction and storage temperature range                                                    | T <sub>J</sub> , T <sub>STG</sub> | -55 to +175    | °C   |

**Notes:** (1) Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub> = 25°C per Fig. 2  
(2) Mounted on copper pad area of 1.6 x 1.6" (40 x 40mm) per Fig. 5  
(3) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum  
(4) V<sub>F</sub> = 3.5V for 1.5KE220(A) & below; V<sub>F</sub> = 5.0V for 1.5KE250(A) & above

# 1.5KE Series and 1N6267 thru 1N6303A



Vishay Semiconductors  
formerly General Semiconductor

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

| JEDEC Type Number | General Semiconductor Part Number | Breakdown Voltage V <sub>(BR)</sub> at I <sub>T</sub> <sup>(1)</sup> (V) |      | Test Current I <sub>T</sub> (mA) | Stand-off Voltage V <sub>WM</sub> (V) | Maximum Reverse Leakage at V <sub>WM</sub> I <sub>D</sub> <sup>(4)</sup> (μA) | Maximum Peak Pulse Current I <sub>PPM</sub> <sup>(2)</sup> (A) | Maximum Clamping Voltage at I <sub>PPM</sub> V <sub>C</sub> (V) | Maximum Temp. Coefficient of V <sub>(BR)</sub> (% / °C) |
|-------------------|-----------------------------------|--------------------------------------------------------------------------|------|----------------------------------|---------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|
|                   |                                   | Min                                                                      | Max  |                                  |                                       |                                                                               |                                                                |                                                                 |                                                         |
| 1N6267            | +1.5KE6.8                         | 6.12                                                                     | 7.48 | 10                               | 5.50                                  | 1000                                                                          | 139                                                            | 10.8                                                            | 0.057                                                   |
| 1N6267A           | +1.5KE6.8A                        | 6.45                                                                     | 7.14 | 10                               | 5.80                                  | 1000                                                                          | 143                                                            | 10.5                                                            | 0.057                                                   |
| 1N6268            | +1.5KE7.5                         | 6.75                                                                     | 8.25 | 10                               | 6.05                                  | 500                                                                           | 128                                                            | 11.7                                                            | 0.061                                                   |
| 1N6268A           | +1.5KE7.5A                        | 7.13                                                                     | 7.88 | 10                               | 6.40                                  | 500                                                                           | 133                                                            | 11.3                                                            | 0.061                                                   |
| 1N6269            | +1.5KE8.2                         | 7.38                                                                     | 9.02 | 10                               | 6.63                                  | 200                                                                           | 120                                                            | 12.5                                                            | 0.065                                                   |
| 1N6269A           | +1.5KE8.2A                        | 7.79                                                                     | 8.61 | 10                               | 7.02                                  | 200                                                                           | 124                                                            | 12.1                                                            | 0.065                                                   |
| 1N6270            | +1.5KE9.1                         | 8.19                                                                     | 10.0 | 1.0                              | 7.37                                  | 50                                                                            | 109                                                            | 13.8                                                            | 0.068                                                   |
| 1N6270A           | +1.5KE9.1A                        | 8.65                                                                     | 9.55 | 1.0                              | 7.78                                  | 50                                                                            | 112                                                            | 13.4                                                            | 0.068                                                   |
| 1N6271            | +1.5KE10                          | 9.00                                                                     | 11.0 | 1.0                              | 8.10                                  | 10                                                                            | 100                                                            | 15.0                                                            | 0.073                                                   |
| 1N6271A           | +1.5KE10A                         | 9.50                                                                     | 10.5 | 1.0                              | 8.55                                  | 10                                                                            | 103                                                            | 14.5                                                            | 0.073                                                   |
| 1N6272            | +1.5KE11                          | 9.90                                                                     | 12.1 | 1.0                              | 8.92                                  | 5.0                                                                           | 92.6                                                           | 16.2                                                            | 0.075                                                   |
| 1N6272A           | +1.5KE11A                         | 10.5                                                                     | 11.6 | 1.0                              | 9.40                                  | 5.0                                                                           | 96.2                                                           | 15.6                                                            | 0.075                                                   |
| 1N6273            | +1.5KE12                          | 10.8                                                                     | 13.2 | 1.0                              | 9.72                                  | 5.0                                                                           | 86.7                                                           | 17.3                                                            | 0.076                                                   |
| 1N6273A           | +1.5KE12A                         | 11.4                                                                     | 12.6 | 1.0                              | 10.2                                  | 5.0                                                                           | 89.8                                                           | 16.7                                                            | 0.078                                                   |
| 1N6274            | +1.5KE13                          | 11.7                                                                     | 14.3 | 1.0                              | 10.5                                  | 5.0                                                                           | 78.9                                                           | 19.0                                                            | 0.081                                                   |
| 1N6274A           | +1.5KE13A                         | 12.4                                                                     | 13.7 | 1.0                              | 11.1                                  | 5.0                                                                           | 82.4                                                           | 18.2                                                            | 0.081                                                   |
| 1N6275            | +1.5KE15                          | 13.5                                                                     | 16.5 | 1.0                              | 12.1                                  | 1.0                                                                           | 68.2                                                           | 22.0                                                            | 0.084                                                   |
| 1N6275A           | +1.5KE15A                         | 14.3                                                                     | 15.8 | 1.0                              | 12.8                                  | 1.0                                                                           | 70.8                                                           | 21.2                                                            | 0.084                                                   |
| 1N6276            | +1.5KE16                          | 14.4                                                                     | 17.6 | 1.0                              | 12.9                                  | 1.0                                                                           | 63.8                                                           | 23.5                                                            | 0.086                                                   |
| 1N6276A           | +1.5KE16A                         | 15.2                                                                     | 16.8 | 1.0                              | 13.6                                  | 1.0                                                                           | 66.7                                                           | 22.5                                                            | 0.086                                                   |
| 1N6277            | +1.5KE18                          | 16.2                                                                     | 19.8 | 1.0                              | 14.5                                  | 1.0                                                                           | 56.6                                                           | 26.5                                                            | 0.088                                                   |
| 1N6277A           | +1.5KE18A                         | 17.1                                                                     | 18.9 | 1.0                              | 15.3                                  | 1.0                                                                           | 59.5                                                           | 25.2                                                            | 0.089                                                   |
| 1N6278            | +1.5KE20                          | 18.0                                                                     | 22.0 | 1.0                              | 16.2                                  | 1.0                                                                           | 51.5                                                           | 29.1                                                            | 0.090                                                   |
| 1N6278A           | +1.5KE20A                         | 19.0                                                                     | 21.0 | 1.0                              | 17.1                                  | 1.0                                                                           | 54.2                                                           | 27.7                                                            | 0.090                                                   |
| 1N6279            | +1.5KE22                          | 19.8                                                                     | 24.2 | 1.0                              | 17.8                                  | 1.0                                                                           | 47.0                                                           | 31.9                                                            | 0.092                                                   |
| 1N6279A           | +1.5KE22A                         | 20.9                                                                     | 23.1 | 1.0                              | 18.8                                  | 1.0                                                                           | 49.0                                                           | 30.6                                                            | 0.092                                                   |
| 1N6280            | +1.5KE24                          | 21.6                                                                     | 26.4 | 1.0                              | 19.4                                  | 1.0                                                                           | 43.2                                                           | 34.7                                                            | 0.094                                                   |
| 1N6280A           | +1.5KE24A                         | 22.8                                                                     | 25.2 | 1.0                              | 20.5                                  | 1.0                                                                           | 45.2                                                           | 33.2                                                            | 0.094                                                   |
| 1N6281            | +1.5KE27                          | 24.3                                                                     | 29.7 | 1.0                              | 21.8                                  | 1.0                                                                           | 38.4                                                           | 39.1                                                            | 0.096                                                   |
| 1N6281A           | +1.5KE27A                         | 25.7                                                                     | 28.4 | 1.0                              | 23.1                                  | 1.0                                                                           | 40.0                                                           | 37.5                                                            | 0.096                                                   |
| 1N6282            | +1.5KE30                          | 27.0                                                                     | 33.0 | 1.0                              | 24.3                                  | 1.0                                                                           | 34.5                                                           | 43.5                                                            | 0.097                                                   |
| 1N6282A           | +1.5KE30A                         | 28.5                                                                     | 31.5 | 1.0                              | 25.6                                  | 1.0                                                                           | 36.2                                                           | 41.4                                                            | 0.097                                                   |
| 1N6283            | +1.5KE33                          | 29.7                                                                     | 36.3 | 1.0                              | 26.8                                  | 1.0                                                                           | 31.4                                                           | 47.7                                                            | 0.098                                                   |
| 1N6283A           | +1.5KE33A                         | 31.4                                                                     | 34.7 | 1.0                              | 28.2                                  | 1.0                                                                           | 32.8                                                           | 45.7                                                            | 0.098                                                   |
| 1N6284            | +1.5KE36                          | 32.4                                                                     | 39.6 | 1.0                              | 29.1                                  | 1.0                                                                           | 28.8                                                           | 52.0                                                            | 0.099                                                   |
| 1N6284A           | +1.5KE36A                         | 34.2                                                                     | 37.8 | 1.0                              | 30.8                                  | 1.0                                                                           | 30.1                                                           | 49.9                                                            | 0.099                                                   |
| 1N6285            | +1.5KE39                          | 35.1                                                                     | 42.9 | 1.0                              | 31.6                                  | 1.0                                                                           | 26.6                                                           | 56.4                                                            | 0.100                                                   |
| 1N6285A           | +1.5KE39A                         | 37.1                                                                     | 41.0 | 1.0                              | 33.3                                  | 1.0                                                                           | 27.8                                                           | 53.9                                                            | 0.100                                                   |
| 1N6286            | +1.5KE43                          | 38.7                                                                     | 47.3 | 1.0                              | 34.8                                  | 1.0                                                                           | 24.2                                                           | 61.9                                                            | 0.101                                                   |
| 1N6286A           | +1.5KE43A                         | 40.9                                                                     | 45.2 | 1.0                              | 36.8                                  | 1.0                                                                           | 25.3                                                           | 59.3                                                            | 0.101                                                   |
| 1N6287            | +1.5KE47                          | 42.3                                                                     | 51.7 | 1.0                              | 38.1                                  | 1.0                                                                           | 22.1                                                           | 67.8                                                            | 0.101                                                   |
| 1N6287A           | +1.5KE47A                         | 44.7                                                                     | 49.4 | 1.0                              | 40.2                                  | 1.0                                                                           | 23.1                                                           | 64.8                                                            | 0.101                                                   |
| 1N6288            | +1.5KE51                          | 45.9                                                                     | 56.1 | 1.0                              | 41.3                                  | 1.0                                                                           | 20.4                                                           | 73.5                                                            | 0.102                                                   |
| 1N6288A           | +1.5KE51A                         | 48.5                                                                     | 53.6 | 1.0                              | 43.6                                  | 1.0                                                                           | 21.4                                                           | 70.1                                                            | 0.102                                                   |
| 1N6289            | +1.5KE56                          | 50.4                                                                     | 61.8 | 1.0                              | 45.4                                  | 1.0                                                                           | 18.6                                                           | 80.5                                                            | 0.103                                                   |
| 1N6289A           | +1.5KE56A                         | 53.2                                                                     | 58.8 | 1.0                              | 47.8                                  | 1.0                                                                           | 19.5                                                           | 77.0                                                            | 0.103                                                   |
| 1N6290            | +1.5KE62                          | 55.8                                                                     | 68.2 | 1.0                              | 50.2                                  | 1.0                                                                           | 16.9                                                           | 89.0                                                            | 0.104                                                   |
| 1N6290A           | +1.5KE62A                         | 58.9                                                                     | 65.1 | 1.0                              | 53.0                                  | 1.0                                                                           | 17.6                                                           | 85.0                                                            | 0.104                                                   |
| 1N6291            | +1.5KE68                          | 61.2                                                                     | 74.8 | 1.0                              | 55.1                                  | 1.0                                                                           | 15.3                                                           | 98.0                                                            | 0.104                                                   |
| 1N6291A           | +1.5KE68A                         | 64.6                                                                     | 71.4 | 1.0                              | 58.1                                  | 1.0                                                                           | 16.3                                                           | 92.0                                                            | 0.104                                                   |
| 1N6292            | +1.5KE75                          | 67.5                                                                     | 82.5 | 1.0                              | 60.7                                  | 1.0                                                                           | 13.9                                                           | 109                                                             | 0.105                                                   |



## Electrical Characteristics (Cont'd) (T<sub>A</sub> = 25°C unless otherwise noted)

| JEDEC Type Number | General Semiconductor Part Number | Breakdown Voltage V <sub>(BR)</sub> at I <sub>T</sub> <sup>(1)</sup> (V) |       | Test Current I <sub>T</sub> (mA) | Stand-off Voltage V <sub>WM</sub> (V) | Maximum Reverse Leakage at V <sub>WM</sub> I <sub>D</sub> <sup>(4)</sup> (μA) | Maximum Peak Pulse Current I <sub>PPM</sub> <sup>(2)</sup> (A) | Maximum Clamping Voltage at I <sub>PPM</sub> V <sub>C</sub> (V) | Maximum Temp. Coefficient of V <sub>(BR)</sub> (% / °C) |
|-------------------|-----------------------------------|--------------------------------------------------------------------------|-------|----------------------------------|---------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|
|                   |                                   | Min                                                                      | Max   |                                  |                                       |                                                                               |                                                                |                                                                 |                                                         |
| 1N6292A           | +1.5KE75A                         | 71.3                                                                     | 78.8  | 1.0                              | 64.1                                  | 1.0                                                                           | 14.6                                                           | 104                                                             | 0.105                                                   |
| 1N6293            | +1.5KE82                          | 73.8                                                                     | 90.2  | 1.0                              | 66.4                                  | 1.0                                                                           | 12.7                                                           | 118                                                             | 0.105                                                   |
| 1N6293A           | +1.5KE82A                         | 77.9                                                                     | 86.1  | 1.0                              | 70.1                                  | 1.0                                                                           | 13.3                                                           | 113                                                             | 0.105                                                   |
| 1N6294            | +1.5KE91                          | 81.9                                                                     | 100.0 | 1.0                              | 73.7                                  | 1.0                                                                           | 11.5                                                           | 131                                                             | 0.106                                                   |
| 1N6294A           | +1.5KE91A                         | 86.5                                                                     | 95.5  | 1.0                              | 77.8                                  | 1.0                                                                           | 12.0                                                           | 125                                                             | 0.106                                                   |
| 1N6295            | +1.5KE100                         | 90.0                                                                     | 110   | 1.0                              | 81.0                                  | 1.0                                                                           | 10.4                                                           | 144                                                             | 0.106                                                   |
| 1N6295A           | +1.5KE100A                        | 95.0                                                                     | 105   | 1.0                              | 85.5                                  | 1.0                                                                           | 10.9                                                           | 137                                                             | 0.106                                                   |
| 1N6296            | +1.5KE110                         | 99.0                                                                     | 121   | 1.0                              | 89.2                                  | 1.0                                                                           | 9.5                                                            | 158                                                             | 0.107                                                   |
| 1N6296A           | +1.5KE 110A                       | 105                                                                      | 116   | 1.0                              | 94.0                                  | 1.0                                                                           | 9.9                                                            | 152                                                             | 0.107                                                   |
| 1N6297            | +1.5KE120                         | 108                                                                      | 132   | 1.0                              | 97.2                                  | 1.0                                                                           | 8.7                                                            | 173                                                             | 0.107                                                   |
| 1N6297A           | +1.5KE120A                        | 114                                                                      | 126   | 1.0                              | 102                                   | 1.0                                                                           | 9.1                                                            | 165                                                             | 0.107                                                   |
| 1N6298            | +1.5KE130                         | 117                                                                      | 143   | 1.0                              | 105                                   | 1.0                                                                           | 8.0                                                            | 187                                                             | 0.107                                                   |
| 1N6298A           | +1.5KE130A                        | 124                                                                      | 137   | 1.0                              | 111                                   | 1.0                                                                           | 8.4                                                            | 179                                                             | 0.107                                                   |
| 1N6299            | +1.5KE150                         | 136                                                                      | 165   | 1.0                              | 121                                   | 1.0                                                                           | 7.0                                                            | 215                                                             | 0.108                                                   |
| 1N6299A           | +1.5KE150A                        | 143                                                                      | 158   | 1.0                              | 128                                   | 1.0                                                                           | 7.2                                                            | 207                                                             | 0.106                                                   |
| 1N6300            | +1.5KE160                         | 144                                                                      | 176   | 1.0                              | 130                                   | 1.0                                                                           | 6.5                                                            | 230                                                             | 0.106                                                   |
| 1N6300A           | +1.5KE160A                        | 152                                                                      | 168   | 1.0                              | 136                                   | 1.0                                                                           | 6.8                                                            | 219                                                             | 0.108                                                   |
| 1N6301            | +1.5KE170                         | 153                                                                      | 187   | 1.0                              | 138                                   | 1.0                                                                           | 6.1                                                            | 244                                                             | 0.108                                                   |
| 1N6301A           | +1.5KE170A                        | 162                                                                      | 179   | 1.0                              | 145                                   | 1.0                                                                           | 6.4                                                            | 234                                                             | 0.108                                                   |
| 1N6302            | 1.5KE180                          | 162                                                                      | 198   | 1.0                              | 146                                   | 1.0                                                                           | 5.8                                                            | 258                                                             | 0.108                                                   |
| 1N6302A           | 1.5KE180A                         | 171                                                                      | 189   | 1.0                              | 154                                   | 1.0                                                                           | 6.1                                                            | 246                                                             | 0.108                                                   |
| 1N6303            | 1.5KE200                          | 180                                                                      | 220   | 1.0                              | 162                                   | 1.0                                                                           | 5.2                                                            | 287                                                             | 0.108                                                   |
| 1N6303A           | 1.5KE200A*                        | 190                                                                      | 210   | 1.0                              | 171                                   | 1.0                                                                           | 5.5                                                            | 274                                                             | 0.108                                                   |
|                   | 1.5KE220                          | 198                                                                      | 242   | 1.0                              | 175                                   | 1.0                                                                           | 4.4                                                            | 344                                                             | 0.108                                                   |
|                   | 1.5KE220A*                        | 209                                                                      | 231   | 1.0                              | 185                                   | 1.0                                                                           | 4.6                                                            | 328                                                             | 0.108                                                   |
|                   | 1.5KE250                          | 225                                                                      | 275   | 1.0                              | 202                                   | 1.0                                                                           | 4.2                                                            | 360                                                             | 0.110                                                   |
|                   | 1.5KE250A                         | 237                                                                      | 263   | 1.0                              | 214                                   | 1.0                                                                           | 4.4                                                            | 344                                                             | 0.110                                                   |
|                   | 1.5KE300                          | 270                                                                      | 330   | 1.0                              | 243                                   | 1.0                                                                           | 3.5                                                            | 430                                                             | 0.110                                                   |
|                   | 1.5KE300A                         | 285                                                                      | 315   | 1.0                              | 256                                   | 1.0                                                                           | 3.6                                                            | 414                                                             | 0.110                                                   |
|                   | 1.5KE350                          | 315                                                                      | 385   | 1.0                              | 284                                   | 1.0                                                                           | 3.0                                                            | 504                                                             | 0.110                                                   |
|                   | 1.5KE350A                         | 333                                                                      | 368   | 1.0                              | 300                                   | 1.0                                                                           | 3.1                                                            | 482                                                             | 0.110                                                   |
|                   | 1.5KE400                          | 360                                                                      | 440   | 1.0                              | 324                                   | 1.0                                                                           | 2.6                                                            | 574                                                             | 0.110                                                   |
|                   | 1.5KE400A                         | 380                                                                      | 420   | 1.0                              | 342                                   | 1.0                                                                           | 2.7                                                            | 548                                                             | 0.110                                                   |
|                   | 1.5KE440                          | 396                                                                      | 484   | 1.0                              | 356                                   | 1.0                                                                           | 2.4                                                            | 631                                                             | 0.110                                                   |
|                   | 1.5KE440A                         | 418                                                                      | 462   | 1.0                              | 376                                   | 1.0                                                                           | 2.5                                                            | 602                                                             | 0.110                                                   |
|                   | 1.5KE480                          | 432                                                                      | 528   | 1.0                              | 389                                   | 1.0                                                                           | 2.19                                                           | 686                                                             | 0.110                                                   |
|                   | 1.5KE480A                         | 456                                                                      | 504   | 1.0                              | 408                                   | 1.0                                                                           | 2.28                                                           | 658                                                             | 0.110                                                   |
|                   | 1.5KE510                          | 459                                                                      | 561   | 1.0                              | 413                                   | 1.0                                                                           | 2.06                                                           | 729                                                             | 0.110                                                   |
|                   | 1.5KE510A                         | 485                                                                      | 535   | 1.0                              | 434                                   | 1.0                                                                           | 2.15                                                           | 698                                                             | 0.110                                                   |
|                   | 1.5KE540                          | 486                                                                      | 594   | 1.0                              | 437                                   | 1.0                                                                           | 1.94                                                           | 772                                                             | 0.110                                                   |
|                   | 1.5KE540A                         | 513                                                                      | 567   | 1.0                              | 459                                   | 1.0                                                                           | 2.03                                                           | 740                                                             | 0.110                                                   |

Notes: (1) Pulse test: t<sub>p</sub> ≤ 50ms

(2) Surge current waveform per Fig. 3 and derate per Fig. 2

(3) All terms and symbols are consistent with ANSI/IEEE CA62.35

(4) For bidirectional types with V<sub>R</sub> 10 volts and less the I<sub>D</sub> limit is doubled

\* Bidirectional versions are UL approved under component across the line protection, ULV1414 file number E108274 (1.5KE200CA, 1.5KE220CA)

+ Underwriters Laboratory Recognition for the classification of protectors (QVQG2) under the UL standard for safety 497B and file number E136766 for both uni-directional and bi-directional devices

### Application

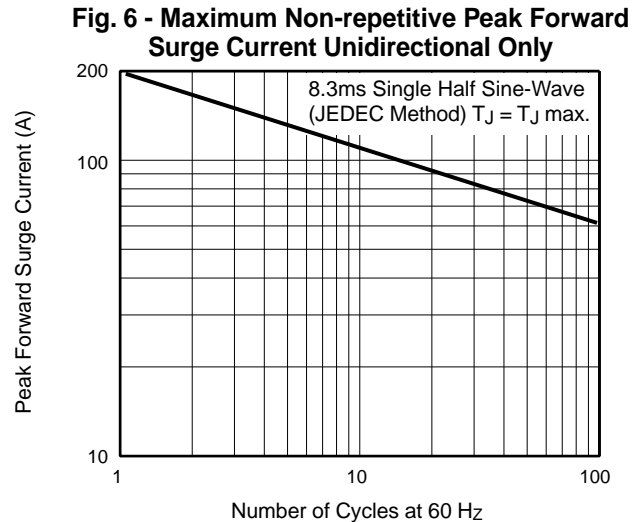
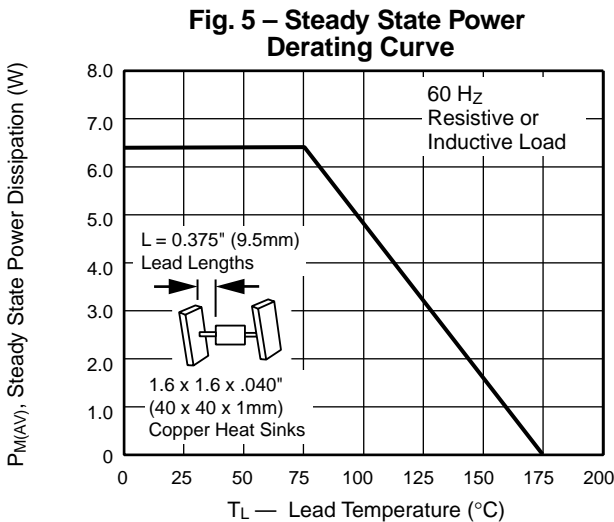
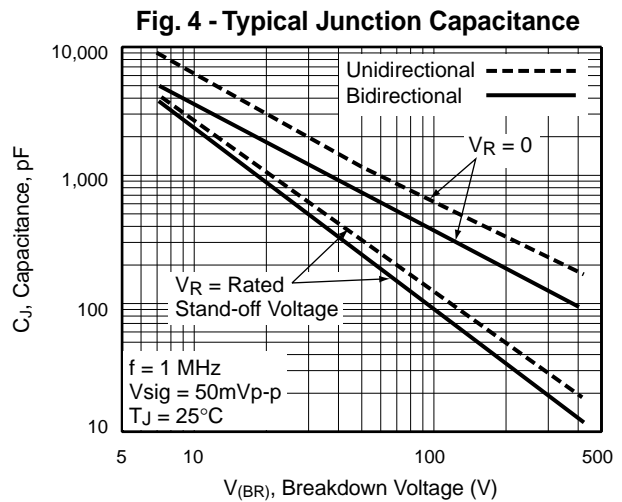
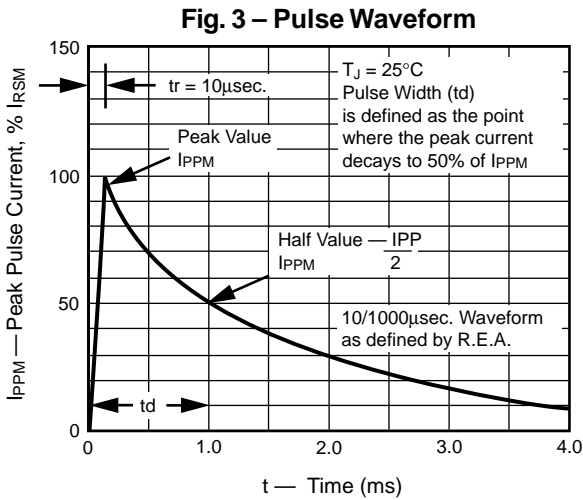
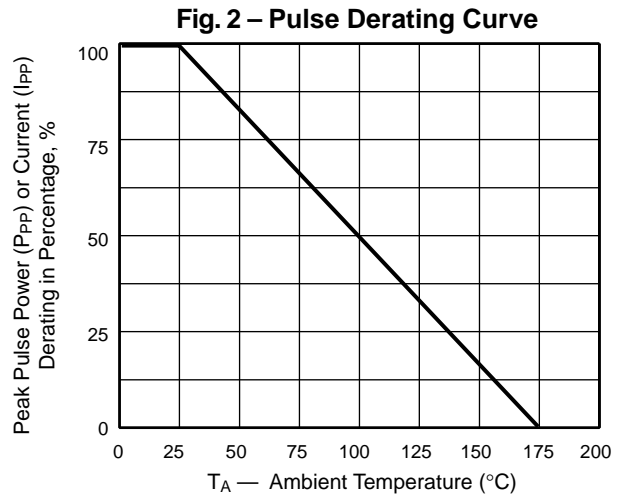
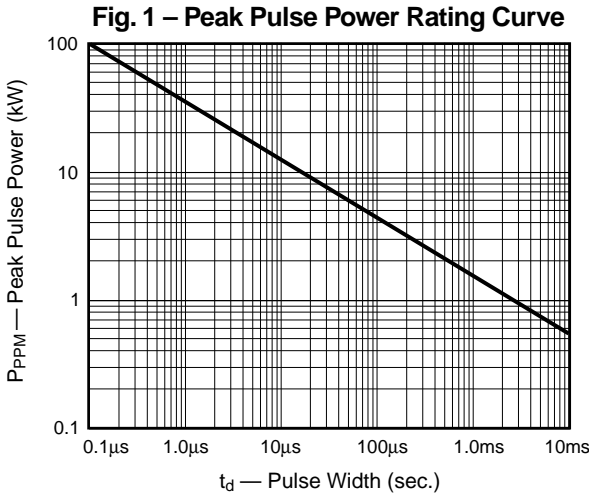
- This series of Silicon Transient Suppressors is used in applications where large voltage transients can permanently damage voltage-sensitive components.
- The TVS diode can be used in applications where induced lightning on rural or remote transmission lines presents a hazard to electronic circuitry (ref: R.E.A. specification P.E. 60).
- This Transient Voltage Suppressor diode has a pulse power rating of 1500 watts for one millisecond. The response time of TVS diode clamping action is effectively instantaneous (1 x 10<sup>-9</sup> seconds bidirectional); therefore, they can protect integrated circuits, MOS devices, hybrids, and other voltage sensitive semi-conductors and components. TVS diodes can also be used in series or parallel to increase the peak power ratings.

# 1.5KE Series and 1N6267 thru 1N6303A



Vishay Semiconductors  
formerly General Semiconductor

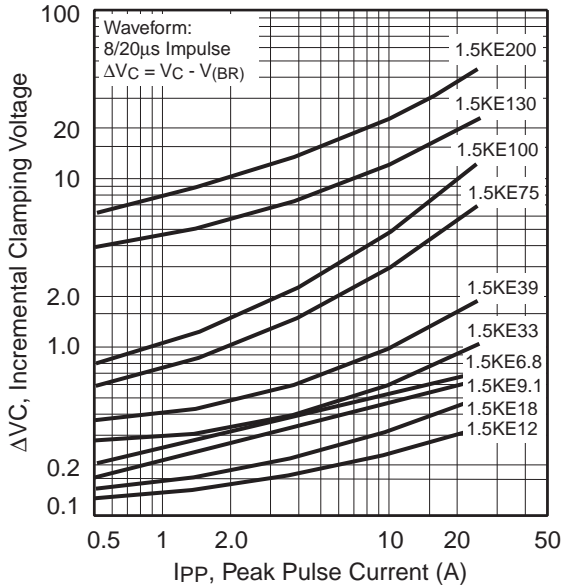
## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



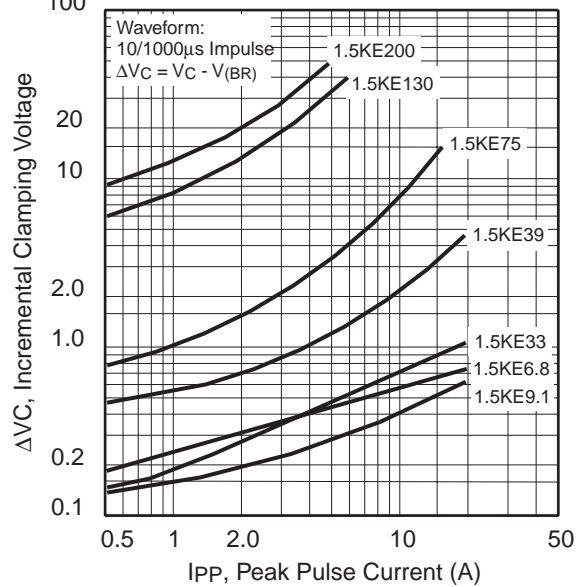


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

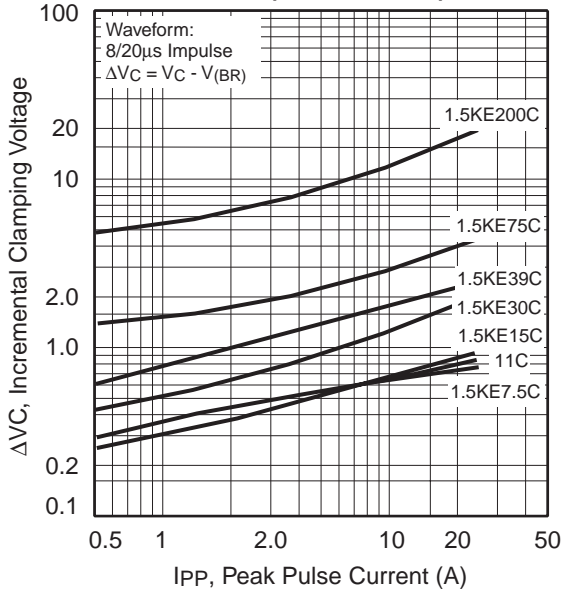
### Fig. 7 – Incremental Clamping Voltage Curve (Unidirectional)



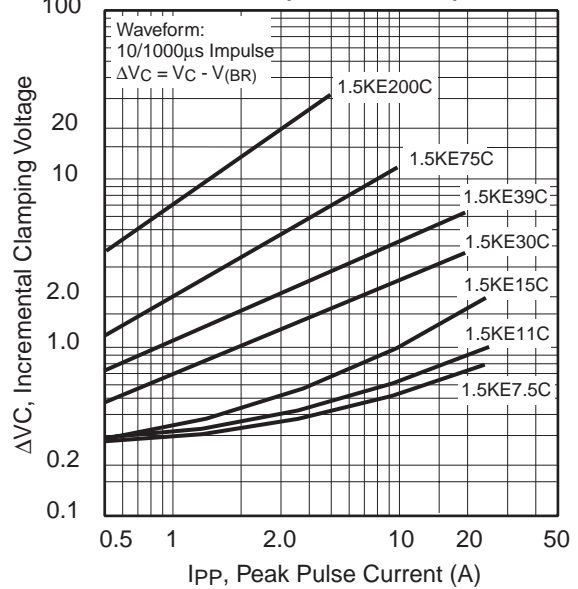
### Fig. 8 – Incremental Clamping Voltage Curve (Unidirectional)



### Fig. 7 – Incremental Clamping Voltage Curve (Bidirectional)



### Fig. 10 – Incremental Clamping Voltage Curve (Bidirectional)



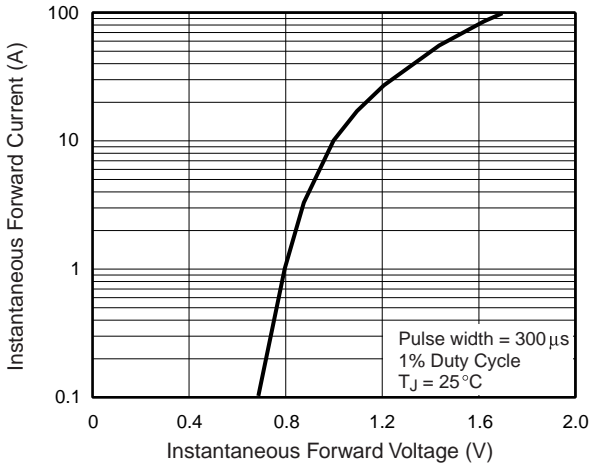
# 1.5KE Series and 1N6267 thru 1N6303A



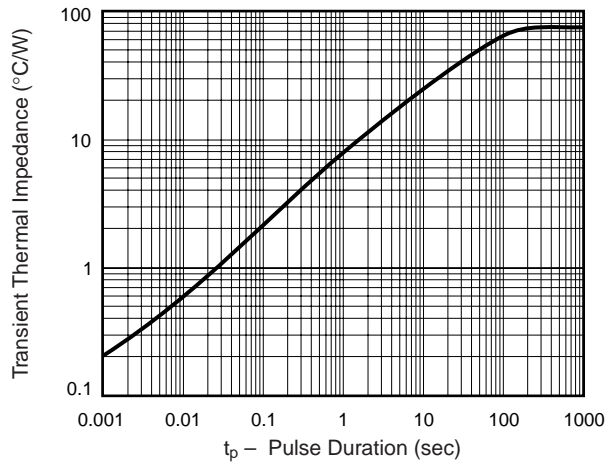
Vishay Semiconductors  
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## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Fig. 11 – Instantaneous Forward Voltage Characteristics Curve**



**Fig. 12 – Typical Transient Thermal Impedance**



**Fig. 13 – Typical Reverse Leakage Characteristics**

