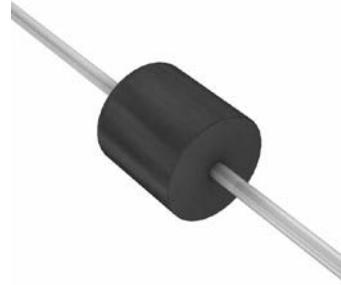


## Power TVS in DO-15

### Features

- 600Watts peak pulse power (10/1000 $\mu$ s)
- Class passivated junction
- High accuracy, 5% tolerance
- Uni and Bidirectional unit
- Low clamping voltage
- Low Leakage current
- Very fast response time



### Mechanical Data

- **Case:** DO-15 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Computers
- Telecom systems
- Industrial equipments
- Consumer electronic applications
- Other VCC bus and I/O interfaces

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter                                                                                             | Symbols                           | Value          | Unit |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|----------------|------|
| Peak power dissipation with a 10/1000us waveform <sup>(1)</sup><br>(Fig. 1)                           | P <sub>PPM</sub>                  | 600            | W    |
| Peak pulse current with a 10/1000us waveform <sup>(1)</sup>                                           | I <sub>PPM</sub>                  | See Next Table | A    |
| Steady state power dissipation<br>at T <sub>L</sub> =75°C, lead lengths 0.375" (9.5mm) <sup>(2)</sup> | P <sub>M(AV)</sub>                | 5.0            | W    |
| Peak forward surge current 8.3ms single half sine-wave <sup>(3)</sup>                                 | I <sub>FSM</sub>                  | 100            | A    |
| Maximum instantaneous forward voltage @ 50A for<br>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 +150    | °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. Meas ed on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

4.  $V_F=3.5$  V for devices of  $V_{(BR)} < 220V$ , and  $V_F=5.0$  Volt max. for devices of  $V_{(BR)} > 220V$

### Electrical Characteristics

(T<sub>A</sub>=25°C, Unless otherwise specified.)

| Part Number | Direction | Breakdown voltage<br>V <sub>(BR)</sub> (Volts) <sup>(1)</sup> |      | Test current at<br>I <sub>T</sub> (mA) | Stand-off voltage<br>V <sub>WM</sub> (Volts) | Maximum reverse leakage at V <sub>WM</sub><br>I <sub>D</sub> <sup>(3)</sup> (uA) | Maximum peak pulse current<br>I <sub>PPM</sub> <sup>(2)</sup> (A) | Maximum clamping voltage at I <sub>PPM</sub><br>V <sub>C</sub> (Volts) | Maximum temperature coefficient of V <sub>BR</sub><br>(% /°C) |
|-------------|-----------|---------------------------------------------------------------|------|----------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------|
|             |           | Min.                                                          | Max. |                                        |                                              |                                                                                  |                                                                   |                                                                        |                                                               |
| P6KE6.8A    | Uni-Dir   | 6.45                                                          | 7.14 | 10                                     | 5.80                                         | 1000                                                                             | 57.1                                                              | 10.5                                                                   | 0.057                                                         |
| P6KE6.8CA   | Bi-Dir    | 6.45                                                          | 7.14 | 10                                     | 5.80                                         | 1000                                                                             | 57.1                                                              | 10.5                                                                   | 0.057                                                         |
| P6KE7.5A    | Uni-Dir   | 7.13                                                          | 7.88 | 10                                     | 6.40                                         | 500                                                                              | 53.1                                                              | 11.3                                                                   | 0.061                                                         |
| P6KE7.5CA   | Bi-Dir    | 7.13                                                          | 7.88 | 10                                     | 6.40                                         | 500                                                                              | 53.1                                                              | 11.3                                                                   | 0.061                                                         |
| P6KE8.2A    | Uni-Dir   | 7.79                                                          | 8.61 | 10                                     | 7.02                                         | 200                                                                              | 49.6                                                              | 12.1                                                                   | 0.065                                                         |
| P6KE8.2CA   | Bi-Dir    | 7.79                                                          | 8.61 | 10                                     | 7.02                                         | 200                                                                              | 49.6                                                              | 12.1                                                                   | 0.065                                                         |
| P6KE9.1A    | Uni-Dir   | 8.65                                                          | 9.55 | 1.0                                    | 7.78                                         | 50                                                                               | 44.8                                                              | 13.4                                                                   | 0.068                                                         |
| P6KE9.1CA   | Bi-Dir    | 8.65                                                          | 9.55 | 1.0                                    | 7.78                                         | 50                                                                               | 44.8                                                              | 13.4                                                                   | 0.068                                                         |
| P6KE10A     | Uni-Dir   | 9.50                                                          | 10.5 | 1.0                                    | 8.55                                         | 10                                                                               | 41.4                                                              | 14.5                                                                   | 0.073                                                         |
| P6KE10CA    | Bi-Dir    | 9.50                                                          | 10.5 | 1.0                                    | 8.55                                         | 10                                                                               | 41.4                                                              | 14.5                                                                   | 0.073                                                         |
| P6KE11A     | Uni-Dir   | 10.5                                                          | 11.6 | 1.0                                    | 9.40                                         | 5.0                                                                              | 38.5                                                              | 15.6                                                                   | 0.075                                                         |
| P6KE11CA    | Bi-Dir    | 10.5                                                          | 11.6 | 1.0                                    | 9.40                                         | 5.0                                                                              | 38.5                                                              | 15.6                                                                   | 0.075                                                         |
| P6KE12A     | Uni-Dir   | 11.4                                                          | 12.6 | 1.0                                    | 10.2                                         | 5.0                                                                              | 35.9                                                              | 16.7                                                                   | 0.078                                                         |
| P6KE12CA    | Bi-Dir    | 11.4                                                          | 12.6 | 1.0                                    | 10.2                                         | 5.0                                                                              | 35.9                                                              | 16.7                                                                   | 0.078                                                         |
| P6KE13A     | Uni-Dir   | 12.4                                                          | 13.7 | 1.0                                    | 11.1                                         | 5.0                                                                              | 33.0                                                              | 18.2                                                                   | 0.081                                                         |
| P6KE13CA    | Bi-Dir    | 12.4                                                          | 13.7 | 1.0                                    | 11.1                                         | 5.0                                                                              | 33.0                                                              | 18.2                                                                   | 0.081                                                         |
| P6KE15A     | Uni-Dir   | 14.3                                                          | 15.8 | 1.0                                    | 12.8                                         | 1.0                                                                              | 28.3                                                              | 21.2                                                                   | 0.084                                                         |
| P6KE15CA    | Bi-Dir    | 14.3                                                          | 15.8 | 1.0                                    | 12.8                                         | 1.0                                                                              | 28.3                                                              | 21.2                                                                   | 0.084                                                         |
| P6KE16A     | Uni-Dir   | 15.2                                                          | 16.8 | 1.0                                    | 13.6                                         | 1.0                                                                              | 26.7                                                              | 22.5                                                                   | 0.086                                                         |
| P6KE16CA    | Bi-Dir    | 15.2                                                          | 16.8 | 1.0                                    | 13.6                                         | 1.0                                                                              | 26.7                                                              | 22.5                                                                   | 0.086                                                         |
| P6KE18A     | Uni-Dir   | 17.1                                                          | 18.9 | 1.0                                    | 15.3                                         | 1.0                                                                              | 23.8                                                              | 25.2                                                                   | 0.088                                                         |
| P6KE18CA    | Bi-Dir    | 17.1                                                          | 18.9 | 1.0                                    | 15.3                                         | 1.0                                                                              | 23.8                                                              | 25.2                                                                   | 0.088                                                         |
| P6KE20A     | Uni-Dir   | 19.0                                                          | 21.0 | 1.0                                    | 17.1                                         | 1.0                                                                              | 21.7                                                              | 27.7                                                                   | 0.090                                                         |
| P6KE20CA    | Bi-Dir    | 19.0                                                          | 21.0 | 1.0                                    | 17.1                                         | 1.0                                                                              | 21.7                                                              | 27.7                                                                   | 0.090                                                         |
| P6KE22A     | Uni-Dir   | 20.9                                                          | 23.1 | 1.0                                    | 18.8                                         | 1.0                                                                              | 19.6                                                              | 30.6                                                                   | 0.092                                                         |
| P6KE22CA    | Bi-Dir    | 20.9                                                          | 23.1 | 1.0                                    | 18.8                                         | 1.0                                                                              | 19.6                                                              | 30.6                                                                   | 0.092                                                         |
| P6KE24A     | Uni-Dir   | 22.8                                                          | 25.2 | 1.0                                    | 20.5                                         | 1.0                                                                              | 18.1                                                              | 33.2                                                                   | 0.094                                                         |
| P6KE24CA    | Bi-Dir    | 22.8                                                          | 25.2 | 1.0                                    | 20.5                                         | 1.0                                                                              | 18.1                                                              | 33.2                                                                   | 0.094                                                         |
| P6KE27A     | Uni-Dir   | 25.7                                                          | 28.4 | 1.0                                    | 23.1                                         | 1.0                                                                              | 16.0                                                              | 37.5                                                                   | 0.096                                                         |
| P6KE27CA    | Bi-Dir    | 25.7                                                          | 28.4 | 1.0                                    | 23.1                                         | 1.0                                                                              | 16.0                                                              | 37.5                                                                   | 0.096                                                         |
| P6KE30A     | Uni-Dir   | 28.5                                                          | 31.5 | 1.0                                    | 25.6                                         | 1.0                                                                              | 14.5                                                              | 41.4                                                                   | 0.097                                                         |
| P6KE30CA    | Bi-Dir    | 28.5                                                          | 31.5 | 1.0                                    | 25.6                                         | 1.0                                                                              | 14.5                                                              | 41.4                                                                   | 0.097                                                         |
| P6KE33A     | Uni-Dir   | 31.4                                                          | 34.7 | 1.0                                    | 28.2                                         | 1.0                                                                              | 13.1                                                              | 45.7                                                                   | 0.098                                                         |
| P6KE33CA    | Bi-Dir    | 31.4                                                          | 34.7 | 1.0                                    | 28.2                                         | 1.0                                                                              | 13.1                                                              | 45.7                                                                   | 0.098                                                         |
| P6KE36A     | Uni-Dir   | 34.2                                                          | 37.8 | 1.0                                    | 30.8                                         | 1.0                                                                              | 12.0                                                              | 49.9                                                                   | 0.099                                                         |
| P6KE36CA    | Bi-Dir    | 34.2                                                          | 37.8 | 1.0                                    | 30.8                                         | 1.0                                                                              | 12.0                                                              | 49.9                                                                   | 0.099                                                         |
| P6KE39A     | Uni-Dir   | 37.1                                                          | 41.0 | 1.0                                    | 33.3                                         | 1.0                                                                              | 11.1                                                              | 53.9                                                                   | 0.100                                                         |
| P6KE39CA    | Bi-Dir    | 37.1                                                          | 41.0 | 1.0                                    | 33.3                                         | 1.0                                                                              | 11.1                                                              | 53.9                                                                   | 0.100                                                         |
| P6KE43A     | Uni-Dir   | 40.9                                                          | 45.2 | 1.0                                    | 36.8                                         | 1.0                                                                              | 10.1                                                              | 59.3                                                                   | 0.101                                                         |
| P6KE43CA    | Bi-Dir    | 40.9                                                          | 45.2 | 1.0                                    | 36.8                                         | 1.0                                                                              | 10.1                                                              | 59.3                                                                   | 0.101                                                         |
| P6KE47A     | Uni-Dir   | 44.7                                                          | 49.4 | 1.0                                    | 40.2                                         | 1.0                                                                              | 9.3                                                               | 64.8                                                                   | 0.101                                                         |

| Part Number | Direction | Breakdown voltage<br>$V_{BR}$ (Volts) <sup>(1)</sup> |      | Test current at<br>$I_T$ (mA) | Stand-off voltage<br>$V_{WM}$ (Volts) | Maximum reverse leakage at $V_{WM}$<br>$I_D^{(3)}$ (uA) | Maximum peak pulse current at $I_{PPM}^{(2)}$ (A) | Maximum clamping voltage at $I_{PPM}$<br>$V_C$ (Volts) | Maximum temperature coefficient of $V_{BR}$<br>(% /°C) |
|-------------|-----------|------------------------------------------------------|------|-------------------------------|---------------------------------------|---------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
|             |           | Min.                                                 | Max. |                               |                                       |                                                         |                                                   |                                                        |                                                        |
| P6KE47CA    | Bi-Dir    | 44.7                                                 | 49.4 | 1.0                           | 40.2                                  | 1.0                                                     | 9.3                                               | 64.8                                                   | 0.101                                                  |
| P6KE51A     | Uni-Dir   | 48.5                                                 | 53.6 | 1.0                           | 43.6                                  | 1.0                                                     | 8.6                                               | 70.1                                                   | 0.102                                                  |
| P6KE51CA    | Bi-Dir    | 48.5                                                 | 53.6 | 1.0                           | 43.6                                  | 1.0                                                     | 8.6                                               | 70.1                                                   | 0.102                                                  |
| P6KE56A     | Uni-Dir   | 53.2                                                 | 58.8 | 1.0                           | 47.8                                  | 1.0                                                     | 7.8                                               | 77.0                                                   | 0.103                                                  |
| P6KE56CA    | Bi-Dir    | 53.2                                                 | 58.8 | 1.0                           | 47.8                                  | 1.0                                                     | 7.8                                               | 77.0                                                   | 0.103                                                  |
| P6KE62A     | Uni-Dir   | 58.9                                                 | 65.1 | 1.0                           | 53.0                                  | 1.0                                                     | 7.1                                               | 85.0                                                   | 0.104                                                  |
| P6KE62CA    | Bi-Dir    | 58.9                                                 | 65.1 | 1.0                           | 53.0                                  | 1.0                                                     | 7.1                                               | 85.0                                                   | 0.104                                                  |
| P6KE68A     | Uni-Dir   | 64.6                                                 | 71.4 | 1.0                           | 58.1                                  | 1.0                                                     | 6.5                                               | 92.0                                                   | 0.104                                                  |
| P6KE68CA    | Bi-Dir    | 64.6                                                 | 71.4 | 1.0                           | 58.1                                  | 1.0                                                     | 6.5                                               | 92.0                                                   | 0.104                                                  |
| P6KE75A     | Uni-Dir   | 71.3                                                 | 78.8 | 1.0                           | 64.1                                  | 1.0                                                     | 5.8                                               | 103                                                    | 0.105                                                  |
| P6KE75CA    | Bi-Dir    | 71.3                                                 | 78.8 | 1.0                           | 64.1                                  | 1.0                                                     | 5.8                                               | 103                                                    | 0.105                                                  |
| P6KE82A     | Uni-Dir   | 77.9                                                 | 86.1 | 1.0                           | 70.1                                  | 1.0                                                     | 5.3                                               | 113                                                    | 0.105                                                  |
| P6KE82CA    | Bi-Dir    | 77.9                                                 | 86.1 | 1.0                           | 70.1                                  | 1.0                                                     | 5.3                                               | 113                                                    | 0.105                                                  |
| P6KE91A     | Uni-Dir   | 86.5                                                 | 95.5 | 1.0                           | 77.8                                  | 1.0                                                     | 4.8                                               | 125                                                    | 0.106                                                  |
| P6KE91CA    | Bi-Dir    | 86.5                                                 | 95.5 | 1.0                           | 77.8                                  | 1.0                                                     | 4.8                                               | 125                                                    | 0.106                                                  |
| P6KE100A    | Uni-Dir   | 95.0                                                 | 105  | 1.0                           | 85.5                                  | 1.0                                                     | 4.4                                               | 137                                                    | 0.106                                                  |
| P6KE100CA   | Bi-Dir    | 95.0                                                 | 105  | 1.0                           | 85.5                                  | 1.0                                                     | 4.4                                               | 137                                                    | 0.106                                                  |
| P6KE110A    | Uni-Dir   | 105                                                  | 116  | 1.0                           | 94.0                                  | 1.0                                                     | 3.9                                               | 152                                                    | 0.107                                                  |
| P6KE110CA   | Bi-Dir    | 105                                                  | 116  | 1.0                           | 94.0                                  | 1.0                                                     | 3.9                                               | 152                                                    | 0.107                                                  |
| P6KE120A    | Uni-Dir   | 114                                                  | 126  | 1.0                           | 102                                   | 1.0                                                     | 3.6                                               | 165                                                    | 0.107                                                  |
| P6KE120CA   | Bi-Dir    | 114                                                  | 126  | 1.0                           | 102                                   | 1.0                                                     | 3.6                                               | 165                                                    | 0.107                                                  |
| P6KE130A    | Uni-Dir   | 124                                                  | 137  | 1.0                           | 111                                   | 1.0                                                     | 3.4                                               | 179                                                    | 0.107                                                  |
| P6KE130CA   | Bi-Dir    | 124                                                  | 137  | 1.0                           | 111                                   | 1.0                                                     | 3.4                                               | 179                                                    | 0.107                                                  |
| P6KE150A    | Uni-Dir   | 143                                                  | 158  | 1.0                           | 128                                   | 1.0                                                     | 2.9                                               | 207                                                    | 0.108                                                  |
| P6KE150CA   | Bi-Dir    | 143                                                  | 158  | 1.0                           | 128                                   | 1.0                                                     | 2.9                                               | 207                                                    | 0.108                                                  |
| P6KE160A    | Uni-Dir   | 152                                                  | 168  | 1.0                           | 136                                   | 1.0                                                     | 2.7                                               | 219                                                    | 0.108                                                  |
| P6KE160CA   | Bi-Dir    | 152                                                  | 168  | 1.0                           | 136                                   | 1.0                                                     | 2.7                                               | 219                                                    | 0.108                                                  |
| P6KE170A    | Uni-Dir   | 162                                                  | 179  | 1.0                           | 145                                   | 1.0                                                     | 2.6                                               | 234                                                    | 0.108                                                  |
| P6KE170CA   | Bi-Dir    | 162                                                  | 179  | 1.0                           | 145                                   | 1.0                                                     | 2.6                                               | 234                                                    | 0.108                                                  |
| P6KE180A    | Uni-Dir   | 171                                                  | 189  | 1.0                           | 154                                   | 1.0                                                     | 2.4                                               | 246                                                    | 0.108                                                  |
| P6KE180CA   | Bi-Dir    | 171                                                  | 189  | 1.0                           | 154                                   | 1.0                                                     | 2.4                                               | 246                                                    | 0.108                                                  |
| P6KE200A    | Uni-Dir   | 190                                                  | 210  | 1.0                           | 171                                   | 1.0                                                     | 2.2                                               | 274                                                    | 0.108                                                  |
| P6KE200CA   | Bi-Dir    | 190                                                  | 210  | 1.0                           | 171                                   | 1.0                                                     | 2.2                                               | 274                                                    | 0.108                                                  |
| P6KE220A    | Uni-Dir   | 209                                                  | 231  | 1.0                           | 185                                   | 1.0                                                     | 1.8                                               | 328                                                    | 0.108                                                  |
| P6KE220CA   | Bi-Dir    | 209                                                  | 231  | 1.0                           | 185                                   | 1.0                                                     | 1.8                                               | 328                                                    | 0.108                                                  |
| P6KE250A    | Uni-Dir   | 237                                                  | 263  | 1.0                           | 214                                   | 1.0                                                     | 1.7                                               | 344                                                    | 0.110                                                  |
| P6KE250CA   | Bi-Dir    | 237                                                  | 263  | 1.0                           | 214                                   | 1.0                                                     | 1.7                                               | 344                                                    | 0.110                                                  |
| P6KE300A    | Uni-Dir   | 285                                                  | 315  | 1.0                           | 256                                   | 1.0                                                     | 1.4                                               | 414                                                    | 0.110                                                  |
| P6KE300CA   | Bi-Dir    | 285                                                  | 315  | 1.0                           | 256                                   | 1.0                                                     | 1.4                                               | 414                                                    | 0.110                                                  |
| P6KE350A    | Uni-Dir   | 333                                                  | 368  | 1.0                           | 300                                   | 1.0                                                     | 1.2                                               | 482                                                    | 0.110                                                  |
| P6KE350CA   | Bi-Dir    | 333                                                  | 368  | 1.0                           | 300                                   | 1.0                                                     | 1.2                                               | 482                                                    | 0.110                                                  |
| P6KE400A    | Uni-Dir   | 380                                                  | 420  | 1.0                           | 342                                   | 1.0                                                     | 1.1                                               | 548                                                    | 0.110                                                  |
| P6KE400CA   | Bi-Dir    | 380                                                  | 420  | 1.0                           | 342                                   | 1.0                                                     | 1.1                                               | 548                                                    | 0.110                                                  |
| P6KE440A    | Uni-Dir   | 418                                                  | 462  | 1.0                           | 376                                   | 1.0                                                     | 1.0                                               | 602                                                    | 0.110                                                  |
| P6KE440CA   | Bi-Dir    | 418                                                  | 462  | 1.0                           | 376                                   | 1.0                                                     | 1.0                                               | 602                                                    | 0.110                                                  |

| Part Number | Direction | Breakdown voltage<br>$V_{(BR)}$ (Volts) <sup>(1)</sup> |       | Test current at<br>$I_T$ (mA) | Stand-off voltage<br>$V_{WM}$ (Volts) | Maximum reverse leakage at $V_{WM}$<br>$I_D^{(3)}$ (uA) | Maximum peak pulse current<br>$I_{PPM}^{(2)}$ (A) | Maximum clamping voltage at $I_{PPM}$<br>$V_C$ (Volts) | Maximum temperature coefficient of $V_{BR}$<br>(% / °C) |
|-------------|-----------|--------------------------------------------------------|-------|-------------------------------|---------------------------------------|---------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|
|             |           | Min.                                                   | Max.  |                               |                                       |                                                         |                                                   |                                                        |                                                         |
| P6KE480A    | Uni-Dir   | 456                                                    | 504   | 1.0                           | 408                                   | 1.0                                                     | 0.9                                               | 658                                                    | 0.110                                                   |
| P6KE480CA   | Bi-Dir    | 456                                                    | 504   | 1.0                           | 408                                   | 1.0                                                     | 0.9                                               | 658                                                    | 0.110                                                   |
| P6KE510A    | Uni-Dir   | 485                                                    | 535   | 1.0                           | 434                                   | 1.0                                                     | 0.9                                               | 698                                                    | 0.110                                                   |
| P6KE510CA   | Bi-Dir    | 485                                                    | 535   | 1.0                           | 434                                   | 1.0                                                     | 0.9                                               | 698                                                    | 0.110                                                   |
| P6KE530A    | Uni-Dir   | 503.5                                                  | 556.5 | 1.0                           | 450                                   | 1.0                                                     | 0.8                                               | 725                                                    | 0.110                                                   |
| P6KE530CA   | Bi-Dir    | 503.5                                                  | 556.5 | 1.0                           | 450                                   | 1.0                                                     | 0.8                                               | 725                                                    | 0.110                                                   |
| P6KE540A    | Uni-Dir   | 513                                                    | 567   | 1.0                           | 459                                   | 1.0                                                     | 0.8                                               | 740                                                    | 0.110                                                   |
| P6KE540CA   | Bi-Dir    | 513                                                    | 567   | 1.0                           | 459                                   | 1.0                                                     | 0.8                                               | 740                                                    | 0.110                                                   |
| P6KE550A    | Uni-Dir   | 522.5                                                  | 577.5 | 1.0                           | 467                                   | 1.0                                                     | 0.8                                               | 760                                                    | 0.110                                                   |
| P6KE550CA   | Bi-Dir    | 522.5                                                  | 577.5 | 1.0                           | 467                                   | 1.0                                                     | 0.8                                               | 760                                                    | 0.110                                                   |

Notes: 1.  $V_{(BR)}$  measured after  $I_T$  applied for 300us,  $I_T$ =square wave pulse or equivalent

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

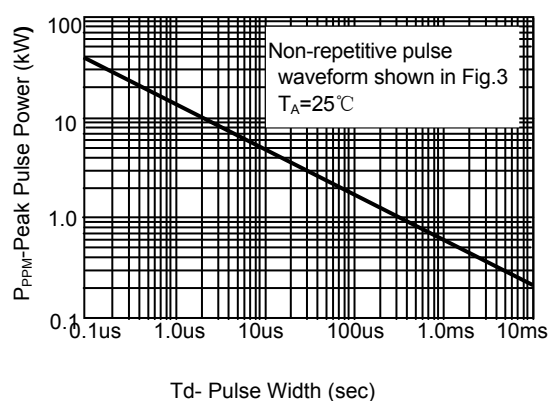
3. For bidirectional types with  $V_{WM}$  of 10 volts and less, the  $I_D$  limit is doubled

4. All terms and symbols are consistent with ANSI/IEEE C62.35

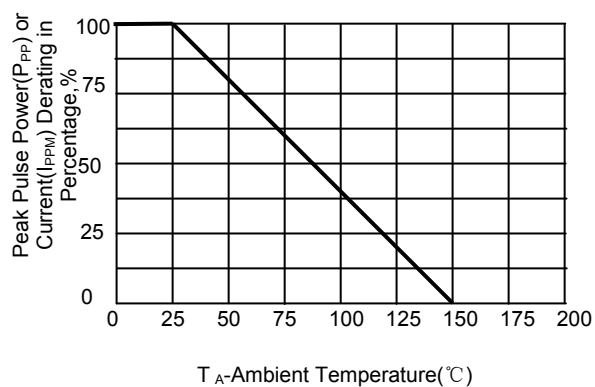
5. For parts without A, the  $V_{BR}$  is  $\pm 10\%$

### Typical Characteristics ( $T_{amb} = 25^\circ\text{C}$ unless otherwise specified)

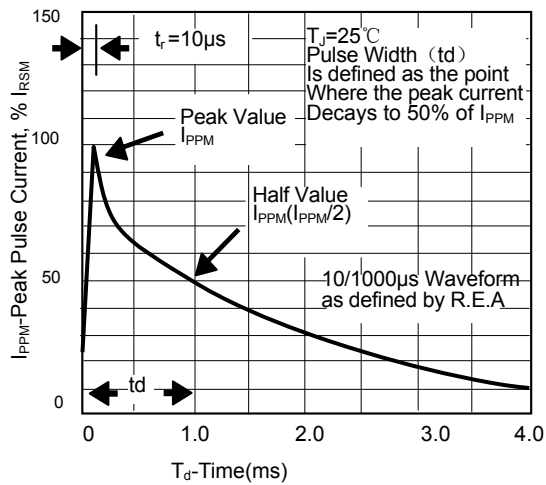
**Fig.1 Peak Pulse Power Rating Curve**



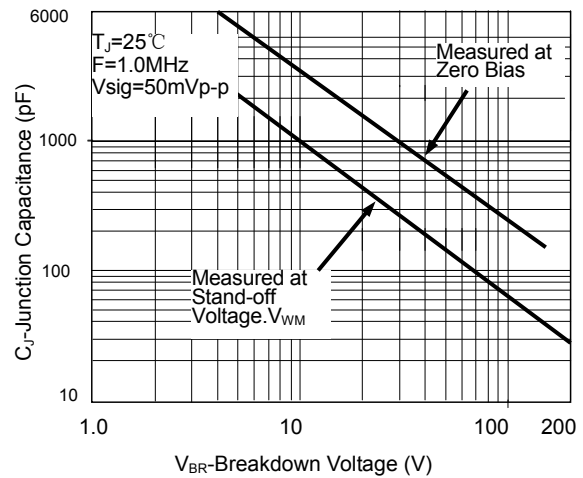
**Fig.2 Maximum Non-Repetitive Surge Current**



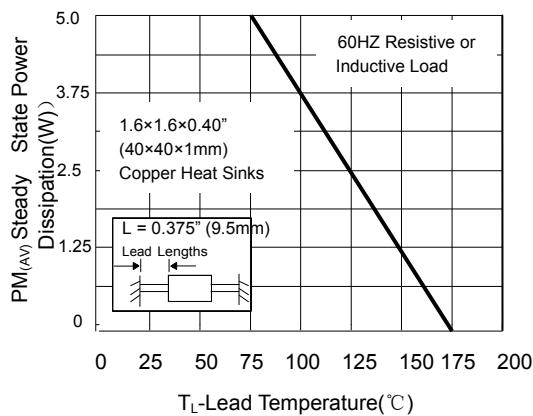
**Fig.3 Typical Forward Characteristics**



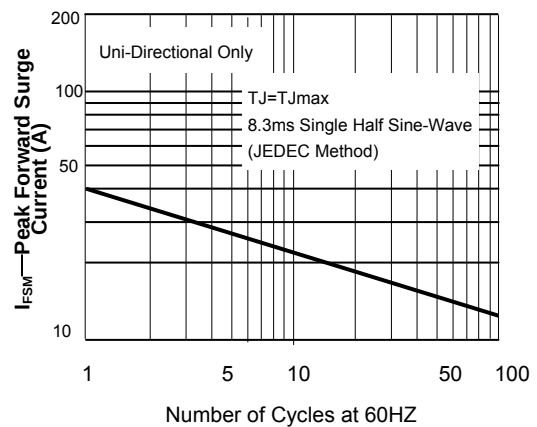
**Fig.4 Typ. Junction Capacitance Uni-Directional**



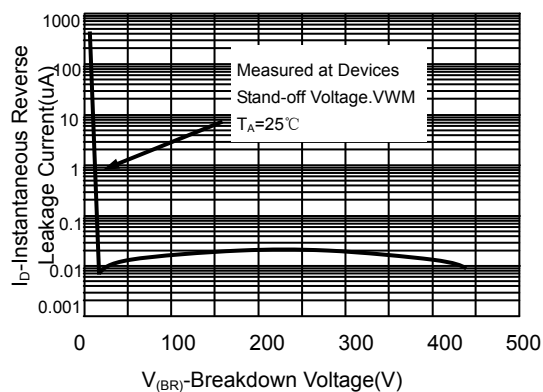
**Fig.5 Steady State Power Derating Curve**



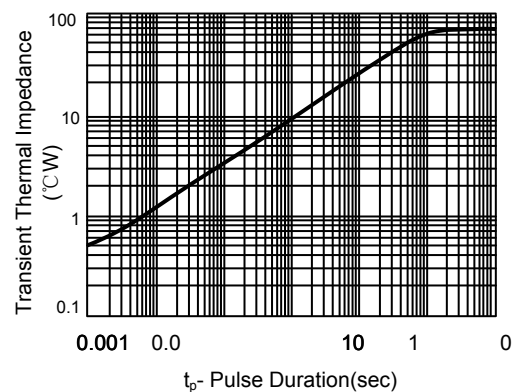
**Fig.6 Max. Non-Repetitive Forward Surge Currer Uni-Directional Only**



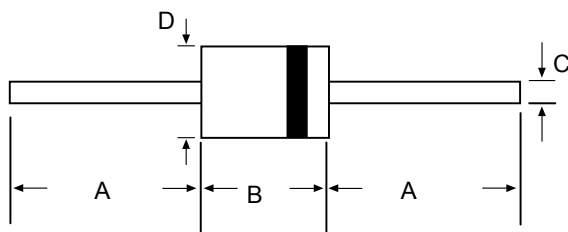
**Fig.7 Typical Reverse Leakage Characteristics**



**Fig.8 Typ. Transient Thermal Impedance**

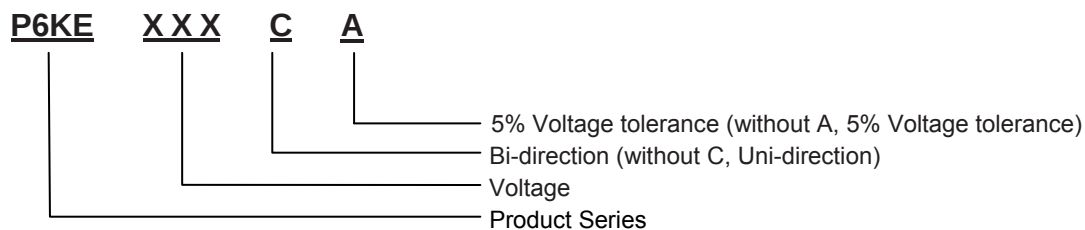


## Package Dimensions



| Dimensions | Milimeters |     |
|------------|------------|-----|
|            | Min        | Max |
| A          | 25.4       | -   |
| B          | 5.8        | 7.6 |
| C          | 0.7        | 0.9 |
| D          | 2.6        | 3.1 |

## Part number system



## Ordering information

| Order code  | Package | Packaging option | Base quantity | Packaging specification |
|-------------|---------|------------------|---------------|-------------------------|
| P6KExxA(CA) | DO-15   | Tape and BOX     | 3000pcs       | EIA STD RS-481          |

## Revision history

| Date        | Revision | Changes         |
|-------------|----------|-----------------|
| 23-May-2012 | 1.0      | Initial release |

## CAUTION / WARNING

Information in this document is believed to be accurate and reliable. However, CREATEK does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Users should independently evaluate the suitability of and test each product selected for their own applications, and CREATEK assumes no liability whatsoever relating to the choice, selection or use of the CREATEK products and services described herein.

CREATEK reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product.

Information in this document supersedes and replaces all information previously supplied.

Products are not designed, authorized or warranted to be suitable for use in medical, military, aircraft, space or life support equipment, nor in applications where failure or malfunction of an CREATEK product can reasonably be expected to result in personal injury, death or severe property or environmental damage. CREATEK accepts no liability for inclusion and/or use of CREATEK products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from national authorities.

Resale of CREATEK products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by CREATEK for the CREATEK product or service described herein and shall not create or extend in any manner whatsoever, any liability of CREATEK.

CREATEK expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. CREATEK only obligations are those in the CREATEK Standard Terms and Conditions of Sale and in no case will CREATEK be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

---

Specifications are subject to change without notice

© Copyright 2009, CREATEK Microelectronics

 CREATEK® is a registered trademark of CREATEK Microelectronics

All rights reserved