



PRELIMINARY

SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773

Designer's Data Sheet

FEATURES:

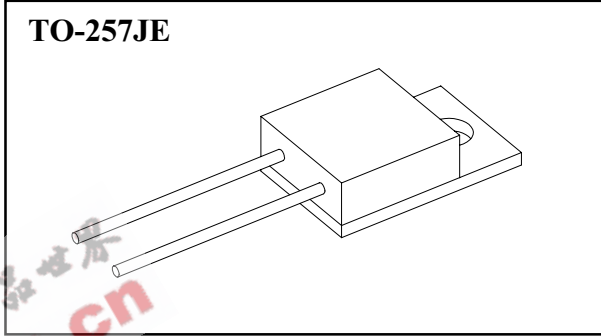
- 13.6 - 800 Volts Unidirectional in TO-257 Package
- Glass Passivated Junction, Epoxy Encapsulated Assembly
- Meets all Environmental Requirements of Mil-RPF-19500
- Custom Configuration Available
- Reverse Polarity Available (Add Suffix "R")
- 150°C Maximum Operating Temperature
- TX and TXV Level Screening Available

APPLICATIONS:

- Voltage Sensitive Components Protection
- Protection against Power Interruption
- Lightning Protection

**STA3KA13.6JE
 thru
 STA3KA800JE**

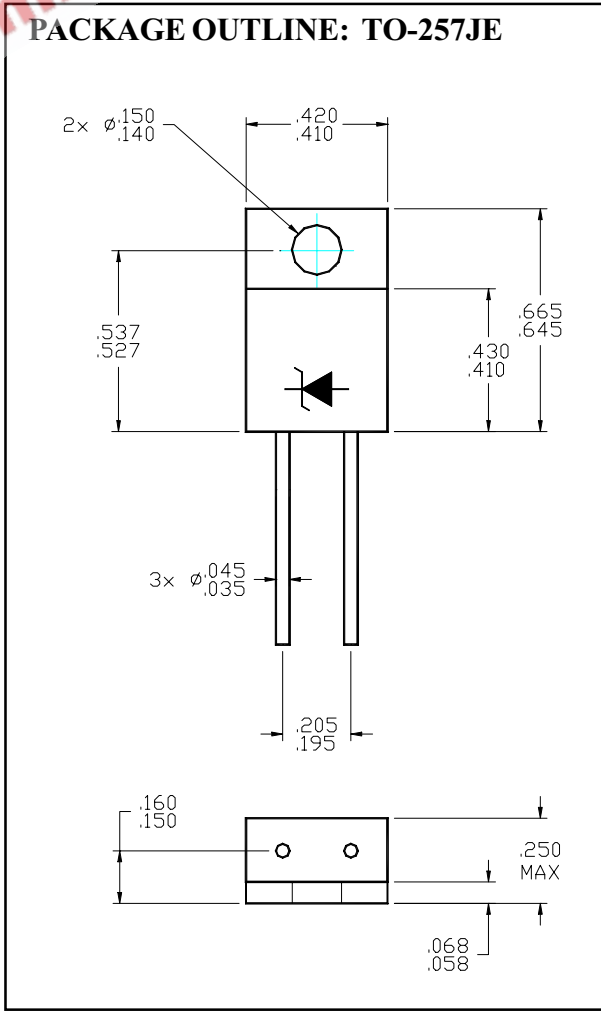
**3,000 WATTS
 PEAK PULSE POWER
 13.6 - 800 VOLTS
 UNIDIRECTIONAL
 TRANSIENT VOLTAGE
 SUPPRESSOR**



| Maximum Ratings | SYMBOL | VALUE | UNITS |
|--|-----------|-------------|-------|
| Stand off Voltage | V_{RWM} | 13.6-800 | Volts |
| Steady State Power Dissipation | P_D | 10 | W |
| Peak Pulse Power @ 1.0 msec | P_{PP} | 3,000 | W |
| Peak Surge Current (8.3 ms Pulse, Half Sine Wave) | I_{FSM} | 200 | A |
| Operating and Storage Temperature | Top, Tstg | -65 to +175 | °C |

Note:

SSDI's Transient Voltage Suppressors offer standard Breakdown Voltage Tolerances of $\pm 10\%$ (A) and $\pm 5\%$ (B). For other Voltages and Voltage Tolerances, contact SSDI's Marketing Department.



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TVS001B

STA3KA13.6JE thru STA3KA800JE

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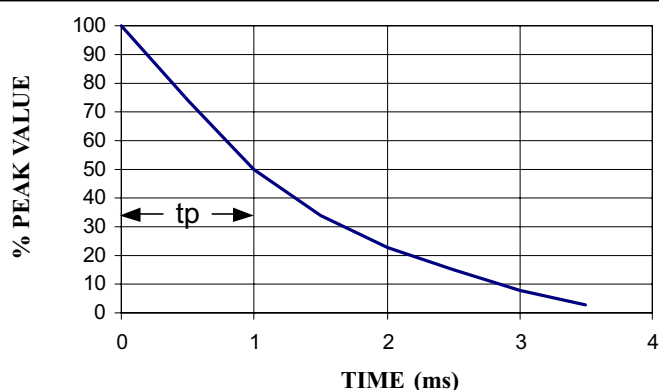


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Electrical Characteristics

| PART NUMBER | | BREAK DOWN (note 1) | | MAX REVERSE STAND OFF | | | PEAK PULSE CLAMPING | | MAXIMUM TEMPERATURE COEFFICIENT |
|--------------|--------------|---------------------|--------------|-----------------------|-----------------|-------------------------|---------------------------------------|--------------------------|---------------------------------|
| | | Nominal Voltage | Test Current | Voltage | | Reverse Leakage Current | @ Current $t_p = 1\text{ms}$ (note 2) | Voltage (max) | |
| | | V_{BR} | I_{BRT} | V_{RWM} | $I_R @ V_{RWM}$ | I_{PP} | V_C | $T_C @ 25^\circ\text{C}$ | |
| 10% | 5% | Volts | mA | 10% | 5% | μA | A | Volts | %/ $^\circ\text{C}$ |
| STA3KA13.6JE | STA3KB13.6JE | 13.6 | 10 | 11.00 | 10.60 | 1000 | 143 | 21.0 | 0.057 |
| STA3KA15JE | STA3KB15JE | 15 | 10 | 12.10 | 12.80 | 500 | 132 | 22.6 | 0.061 |
| STA3KA16.4JE | STA3KB16.4JE | 16.4 | 10 | 13.26 | 14.04 | 200 | 124 | 24.2 | 0.065 |
| STA3KA18.2JE | STA3KB18.2JE | 18.2 | 1.0 | 14.74 | 15.56 | 50 | 112 | 26.8 | 0.068 |
| STA3KA20JE | STA3KB20JE | 20 | 1.0 | 16.2 | 17.1 | 10 | 103 | 29.0 | 0.073 |
| STA3KA22JE | STA3KB22JE | 22 | 1.0 | 17.84 | 18.8 | 5.0 | 96.0 | 31.2 | 0.075 |
| STA3KA24JE | STA3KB24JE | 24 | 1.0 | 19.44 | 20.4 | 5.0 | 90.0 | 33.4 | 0.076 |
| STA3KA26JE | STA3KB26JE | 26 | 1.0 | 21.0 | 22.2 | 5.0 | 82.0 | 36.4 | 0.081 |
| STA3KA30JE | STA3KB30JE | 30 | 1.0 | 24.2 | 25.6 | 5.0 | 71.0 | 42.4 | 0.084 |
| STA3KA32JE | STA3KB32JE | 32 | 1.0 | 25.8 | 27.2 | 5.0 | 67.0 | 45.0 | 0.086 |
| STA3KA36JE | STA3KB36JE | 36 | 1.0 | 29.0 | 30.6 | 5.0 | 57.2 | 52.4 | 0.088 |
| STA3KA40JE | STA3KB40JE | 40 | 1.0 | 32.4 | 34.2 | 5.0 | 54.0 | 55.4 | 0.090 |
| STA3KA44JE | STA3KB44JE | 44 | 1.0 | 35.6 | 37.6 | 5.0 | 49.0 | 61.2 | 0.092 |
| STA3KA48JE | STA3KB48JE | 48 | 1.0 | 38.8 | 41.0 | 5.0 | 45.0 | 66.4 | 0.094 |
| STA3KA60JE | STA3KB60JE | 60 | 1.0 | 48.6 | 50.2 | 5.0 | 36.0 | 82.8 | 0.097 |
| STA3KA72JE | STA3KB72JE | 72 | 1.0 | 59.2 | 61.6 | 5.0 | 30.0 | 98.8 | 0.099 |
| STA3KA86JE | STA3KB86JE | 86 | 1.0 | 69.6 | 73.6 | 5.0 | 25.3 | 118.6 | 0.101 |
| STA3KA102JE | STA3KB102JE | 102 | 1.0 | 82.6 | 87.2 | 5.0 | 21.4 | 140.2 | 0.102 |
| STA3KA124JE | STA3KB124JE | 124 | 1.0 | 100.4 | 106.0 | 5.0 | 17.7 | 170.0 | 0.104 |
| STA3KA150JE | STA3KB150JE | 150 | 1.0 | 120.4 | 128.2 | 5.0 | 14.6 | 206.0 | 0.105 |
| STA3KA164JE | STA3KB164JE | 164 | 1.0 | 132.8 | 140.2 | 5.0 | 13.3 | 226 | 0.105 |
| STA3KA200JE | STA3KB200JE | 200 | 1.0 | 162 | 171 | 5.0 | 11.0 | 274 | 0.106 |
| STA3KA300JE | STA3KB300JE | 300 | 1.0 | 242 | 256 | 5.0 | 7.2 | 414 | 0.108 |
| STA3KA360JE | STA3KB360JE | 360 | 1.0 | 292 | 308 | 5.0 | 6.1 | 492 | 0.108 |
| STA3KA400JE | STA3KB400JE | 400 | 1.0 | 324 | 342 | 5.0 | 5.5 | 548 | 0.108 |
| STA3KA600JE | STA3KB600JE | 600 | 1.0 | 486 | 512 | 5.0 | 3.6 | 828 | 0.110 |
| STA3KA800JE | STA3KB800JE | 800 | 1.0 | 648 | 684 | 5.0 | 2.7 | 1096 | 0.110 |



Notes:

1. All voltages are measured with automated test set using 35 msec test time. Longer or shorter test times will have a corresponding effect on the measured value due to the heating effects.
2. Pulse width (t_p) is defined as the time from peak pulse current I_{PP} to the point where peak pulse current decayed to 50% of rated I_{PP} . (10 μsec x 100 μsec wave form as defined by R.E.A.)
3. All Ratings based on 25 $^\circ\text{C}$ Case temperature.