

Transient Voltage Suppressors Lightning Surge Protection Type

STVS Series

MERITEK

FEATURE

- Operating Temperature: -55°C ~ +150°C
- Glass Passivated Junction
- Bi-Directional High Current Transient Suppressor
- Excellent Clamping Capability
- Low Slope Resistance
- UL Safety Approved: Certification No: E223045



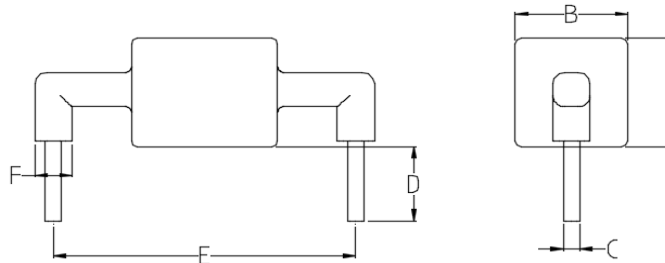
PART NUMBERING SYSTEM

STVS **KA** **058**
(1) (2) (3)



| No | Item | Code | Description | |
|-----|---------------------------------|------|---|--------------------------------------|
| (1) | Meritek Series | STVS | Transient Voltage Suppressor, Lightning Surge Protection Type | |
| (2) | Current Rating (I_{PP}) | KA | KA: 3KAmp | K1: 1KA, KB: 6KA, KC: 10KA, KD: 15KA |
| (3) | Reverse Stand-off Voltage (VDC) | 058 | 058: 58VDC | 076: 76VDC, 170:170VDC |

DIMENSIONS



| I_{PP} | 1KA | 3KA | 6KA | 10KA | 15KA |
|----------|---------------|---------------|---------------|---------------|---------------|
| Series | STVSK1 Series | STVSKA Series | STVSKB Series | STVSKC Series | STVSKD Series |
| A | 14.5 max | 14.5 max | 14.5 max | 16.0 max | 17.40 max |
| B | 12.7 max | 12.7 max | 12.7 max | 14.5 max | 15.90 max |
| C | 1.30 ± 0.10 | 1.30 ± 0.10 | 1.30 ± 0.10 | 1.30 ± 0.10 | 1.30 ± 0.10 |
| D | 7.00 ± 0.50 | 7.00 ± 0.50 | 7.00 ± 0.50 | 7.00 ± 0.50 | 7.00 ± 0.50 |
| E | 24.15 ± 0.7 | 24.15 ± 0.7 | 24.15 ± 0.7 | 24.15 ± 0.7 | 24.15 ± 0.7 |
| F | 4.0 max | 4.0 max | 4.0 max | 4.0 max | 4.0 max |

Unit: mm

Transient Voltage Suppressors
Lightning Surge Protection Type

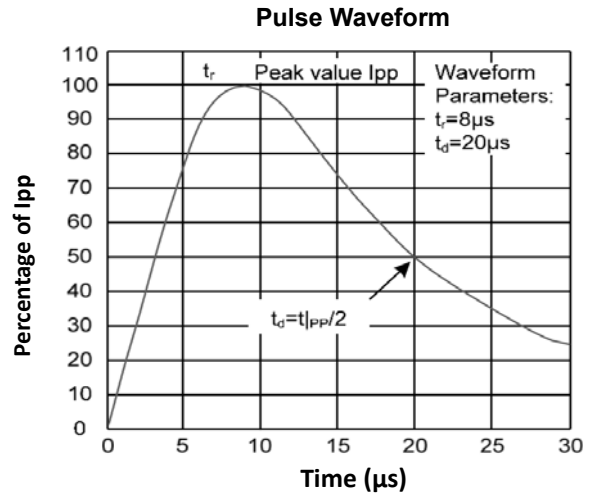
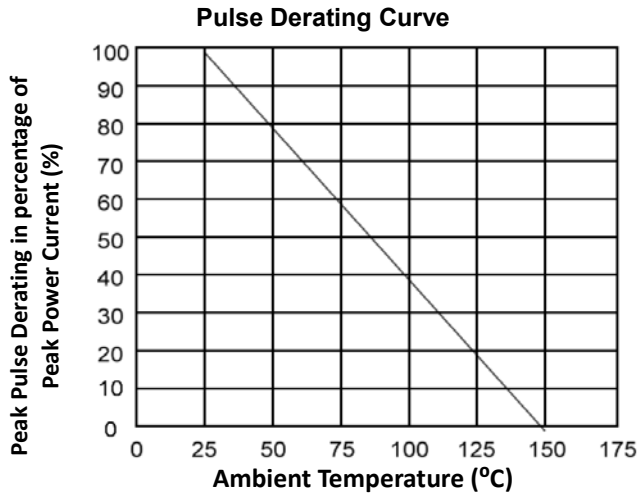
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ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

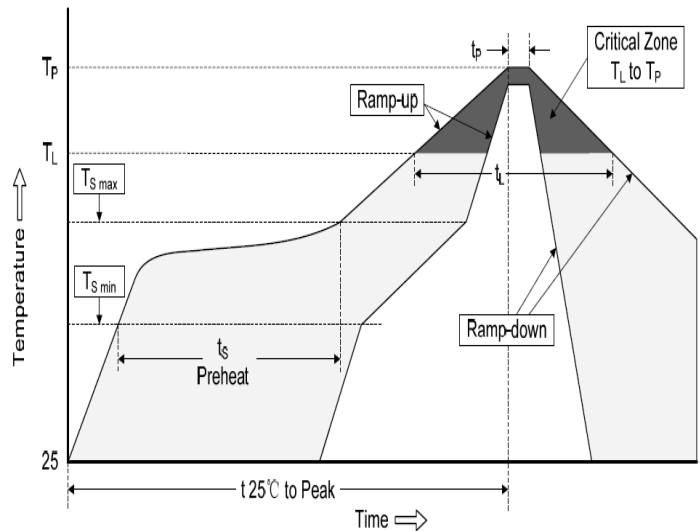
| STVS Series | Reverse Stand-off Voltage | | Min. Breakdown Voltage | Test Current | Rated Current 8/20µs | Max. Clamping Voltage | Max. Reverse Leakage Current |
|-------------|---------------------------|---------------------|--------------------------------------|---------------------|----------------------|--------------------------------------|---------------------------------------|
| | V _{AC} (V) | V _{DC} (V) | V _{BR} (V) @ I _T | I _T (mA) | I _{PP} (KA) | V _C (V) @ I _{PP} | I _R (µA) @ V _{DC} |
| STVSK1076 | 54 | 76 | 83 | 10 | 1 | 135 | 20 |
| STVSKA012 | 8.5 | 12.8 | 14 | 10 | 3 | 28 | 20 |
| STVSKA015 | 11 | 15 | 17 | 10 | 3 | 30 | 20 |
| STVSKA020 | 14 | 20 | 22 | 10 | 3 | 40 | 20 |
| STVSKA025 | 17 | 25 | 28 | 10 | 3 | 50 | 20 |
| STVSKA030 | 21 | 30 | 33 | 10 | 3 | 90 | 20 |
| STVSKA042 | 30 | 42 | 47 | 10 | 3 | 77 | 20 |
| STVSKA058 | 40 | 58 | 64 | 10 | 3 | 110 | 20 |
| STVSKA066 | 45 | 66 | 70 | 10 | 3 | 125 | 20 |
| STVSKA076 | 54 | 76 | 85 | 10 | 3 | 140 | 20 |
| STVSKA170 | 130 | 170 | 180 | 10 | 3 | 260 | 20 |
| STVSKA380 | 275 | 380 | 401 | 10 | 3 | 520 | 20 |
| STVSKA430 | 310 | 430 | 440 | 10 | 3 | 625 | 20 |
| STVSKB030 | 21 | 30 | 33 | 10 | 6 | 90 | 20 |
| STVSKB058 | 40 | 58 | 64 | 10 | 6 | 110 | 20 |
| STVSKB066 | 45 | 66 | 70 | 10 | 6 | 125 | 20 |
| STVSKB076 | 54 | 76 | 83 | 10 | 6 | 140 | 20 |
| STVSKB170 | 130 | 170 | 180 | 10 | 6 | 260 | 20 |
| STVSKB190 | 145 | 190 | 200 | 10 | 6 | 290 | 20 |
| STVSKB240 | 180 | 240 | 250 | 10 | 6 | 340 | 20 |
| STVSKB380 | 275 | 380 | 401 | 10 | 6 | 520 | 20 |
| STVSKB430 | 310 | 430 | 440 | 10 | 6 | 625 | 20 |
| STVSKC030 | 21 | 30 | 33 | 10 | 10 | 90 | 20 |
| STVSKC058 | 40 | 58 | 64 | 10 | 10 | 110 | 20 |
| STVSKC066 | 45 | 66 | 70 | 10 | 10 | 125 | 20 |
| STVSKC076 | 54 | 76 | 83 | 10 | 10 | 135 | 20 |
| STVSKC170 | 130 | 170 | 180 | 10 | 10 | 260 | 20 |
| STVSKC190 | 145 | 190 | 200 | 10 | 10 | 290 | 20 |
| STVSKC240 | 180 | 240 | 250 | 10 | 10 | 340 | 20 |
| STVSKC380 | 275 | 380 | 401 | 10 | 10 | 520 | 20 |
| STVSKC430 | 310 | 430 | 440 | 10 | 10 | 625 | 20 |
| STVSKD012 | 8.5 | 12.8 | 14 | 10 | 15 | 50 | 20 |
| STVSKD042 | 30 | 42 | 47 | 10 | 15 | 100 | 20 |
| STVSKD058 | 40 | 58 | 64 | 10 | 15 | 110 | 20 |
| STVSKD076 | 54 | 76 | 85 | 10 | 6 | 150 | 20 |

CHARACTERISTIC CURVES



RECOMMENDED SOLDERING PROFILES

| Reflow Condition | | |
|--|-------------------------------|-----------------|
| Pre Heat | Temp. Min $T_{s(min)}$ | 150°C |
| | Temp. Max $T_{s(max)}$ | 200°C |
| | Time (min. to max.) (t_s) | 60~180 seconds |
| Average ramp up rate (T_L) to peak | | 3°C/second Max. |
| $T_{s(max)}$ to T_L (Ramp-up rate) | | 3°C/second Max. |
| Reflow | Temp. (T_L) | 220°C Min. |
| | Time (min. to max.) (t_L) | 60~150 seconds |
| Peak Temperature (T_P) | | 255~260°C |
| Time within 5°C of actual peak Temperature (t_p) | | 10~30 seconds |
| Ramp-down Rate | | 5°C/second Max. |
| Time (25°C to Peak Temp.) | | 6 mins Max. |
| Do not exceed | | 280°C |



*Specifications subject to change without notice.