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|---|----------------|
|  | E480232 |
|---|----------------|

Features

- Economical Series and Quick Response
- Available in Both Unidirectional and Bidirectional Construction
- Excellent Clamping Capability
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Application

- This Series Has a Peak Pulse Power Rating of 1500 Watts for One Millisecond. It Can Protect Intergrated Circuit,Hybrids,CMOS,MOS, and Other Voltage Sensitive Components in a Board Range of Applications Such as Telecommunications,Power Supplies,Computer, Automotive,and Industrial Equipment.

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

| | | | |
|---|---|-------|----------------------|
| Peak Pulse Power Dissipation | P _{PP} | 1500W | T _A =25°C |
| Steady State Power Dissipatoin | P _D | 5.0 W | T _L =75°C |
| t _{clamping} (0 Volts to V _(BR) Min): | Unidirectional<1x10 ⁻¹² Seconds; | | |
| | Bidirectoinal<5x10 ⁻⁹ Seconds | | |

1.High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Device Marking:

Unidirectional - Type Number and Cathode Band
Bidirectional - Type Number Only

Pin Configuration



1500W TVS

6.8V to 550V

DO-201AE

| DIMENSIONS | | | | | |
|------------|--------|-------|-------|------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | ---- | 0.370 | ---- | 9.50 | |
| B | ---- | 0.209 | ---- | 5.30 | |
| C | 0.038 | 0.042 | 0.96 | 1.06 | |
| D | 1.000 | ---- | 25.40 | ---- | |

| MCC PART NUMBER | | REVERSE STAND-OFF VOLTAGE $V_{RWM}(V)$ | BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN.@ I_T | BREAKDOWN VOLTAGE $V_{BR}(V)$ MAX.@ I_T | TEST CURRENT I_T (mA) | MAXIMUM CLAMPING VOLTAGE @ I_{pp} $V_c(V)$ | PEAK PULSE CURRENT I_{pp} (A) | REVERSE LEAKAGE @ V_{RWM} $I_R(\mu A)$ |
|-----------------|------------|--|---|---|-------------------------|--|---------------------------------|--|
| UNI-POLAR | BI-POLAR | | | | | | | |
| 1.5KE6.8A | 1.5KE6.8CA | 5.80 | 6.45 | 7.14 | 10 | 10.5 | 144.8 | 1000 |
| 1.5KE7.5A | 1.5KE7.5CA | 6.40 | 7.13 | 7.88 | 10 | 11.3 | 134.5 | 500 |
| 1.5KE8.2A | 1.5KE8.2CA | 7.02 | 7.79 | 8.61 | 10 | 12.1 | 125.6 | 200 |
| 1.5KE9.1A | 1.5KE9.1CA | 7.78 | 8.65 | 9.50 | 1 | 13.4 | 113.4 | 50 |
| 1.5KE10A | 1.5KE10CA | 8.55 | 9.50 | 10.50 | 1 | 14.5 | 104.8 | 10 |
| 1.5KE11A | 1.5KE11CA | 9.40 | 10.50 | 11.60 | 1 | 15.6 | 97.4 | 5 |
| 1.5KE12A | 1.5KE12CA | 10.20 | 11.40 | 12.60 | 1 | 16.7 | 91.0 | 5 |
| 1.5KE13A | 1.5KE13CA | 11.10 | 12.40 | 13.70 | 1 | 18.2 | 83.5 | 5 |
| 1.5KE15A | 1.5KE15CA | 12.80 | 14.30 | 15.80 | 1 | 21.2 | 71.7 | 5 |
| 1.5KE16A | 1.5KE16CA | 13.60 | 15.20 | 16.80 | 1 | 22.5 | 67.6 | 5 |
| 1.5KE18A | 1.5KE18CA | 15.30 | 17.10 | 18.90 | 1 | 25.2 | 60.3 | 5 |
| 1.5KE20A | 1.5KE20CA | 17.10 | 19.00 | 21.00 | 1 | 27.7 | 54.9 | 5 |
| 1.5KE22A | 1.5KE22CA | 18.80 | 20.90 | 23.10 | 1 | 30.6 | 49.7 | 5 |
| 1.5KE24A | 1.5KE24CA | 20.50 | 22.80 | 25.20 | 1 | 33.2 | 45.8 | 5 |
| 1.5KE27A | 1.5KE27CA | 23.10 | 25.70 | 28.40 | 1 | 37.5 | 40.5 | 5 |
| 1.5KE30A | 1.5KE30CA | 25.60 | 28.50 | 31.50 | 1 | 41.4 | 36.7 | 5 |
| 1.5KE33A | 1.5KE33CA | 28.20 | 31.40 | 34.70 | 1 | 45.7 | 33.3 | 5 |
| 1.5KE36A | 1.5KE36CA | 30.80 | 34.20 | 37.80 | 1 | 49.9 | 30.5 | 5 |
| 1.5KE39A | 1.5KE39CA | 33.30 | 37.10 | 41.00 | 1 | 53.9 | 28.2 | 5 |
| 1.5KE43A | 1.5KE43CA | 36.80 | 40.90 | 45.20 | 1 | 59.3 | 25.6 | 5 |
| 1.5KE47A | 1.5KE47CA | 40.20 | 44.70 | 49.40 | 1 | 64.8 | 23.5 | 5 |
| 1.5KE51A | 1.5KE51CA | 43.60 | 48.50 | 53.60 | 1 | 70.1 | 21.7 | 5 |
| 1.5KE56A | 1.5KE56CA | 47.80 | 53.20 | 58.80 | 1 | 77.0 | 19.7 | 5 |
| 1.5KE62A | 1.5KE62CA | 53.00 | 58.90 | 65.10 | 1 | 85.0 | 17.9 | 5 |
| 1.5KE68A | 1.5KE68CA | 58.10 | 64.60 | 71.40 | 1 | 92.0 | 16.5 | 5 |
| 1.5KE75A | 1.5KE75CA | 64.10 | 71.30 | 78.80 | 1 | 103.0 | 14.8 | 5 |
| 1.5KE82A | 1.5KE82CA | 70.10 | 77.90 | 86.10 | 1 | 113.0 | 13.5 | 5 |
| 1.5KE91A | 1.5KE91CA | 77.80 | 86.50 | 95.50 | 1 | 125.0 | 12.2 | 5 |
| 1.5KE100A | 1.5KE100CA | 85.50 | 95.00 | 105.00 | 1 | 137.0 | 11.1 | 5 |
| 1.5KE110A | 1.5KE110CA | 94.00 | 105.00 | 116.00 | 1 | 152.0 | 10.0 | 5 |
| 1.5KE120A | 1.5KE120CA | 102.00 | 114.00 | 126.00 | 1 | 165.0 | 9.2 | 5 |
| 1.5KE130A | 1.5KE130CA | 111.00 | 124.00 | 137.00 | 1 | 179.0 | 8.5 | 5 |
| 1.5KE150A | 1.5KE150CA | 128.00 | 143.00 | 158.00 | 1 | 207.0 | 7.3 | 5 |
| 1.5KE160A | 1.5KE160CA | 136.00 | 152.00 | 168.00 | 1 | 219.0 | 6.9 | 5 |
| 1.5KE170A | 1.5KE170CA | 145.00 | 162.00 | 179.00 | 1 | 234.0 | 6.5 | 5 |
| 1.5KE180A | 1.5KE180CA | 154.00 | 171.00 | 189.00 | 1 | 246.0 | 6.2 | 5 |
| 1.5KE200A | 1.5KE200CA | 171.00 | 190.00 | 210.00 | 1 | 274.0 | 5.5 | 5 |
| 1.5KE220A | 1.5KE220CA | 185.00 | 209.00 | 231.00 | 1 | 328.0 | 4.6 | 5 |
| 1.5KE250A | 1.5KE250CA | 214.00 | 237.00 | 263.00 | 1 | 344.0 | 4.4 | 5 |
| 1.5KE300A | 1.5KE300CA | 256.00 | 285.00 | 315.00 | 1 | 414.0 | 3.7 | 5 |
| 1.5KE350A | 1.5KE350CA | 300.00 | 332.00 | 368.00 | 1 | 482.0 | 3.2 | 5 |
| 1.5KE400A | 1.5KE400CA | 342.00 | 380.00 | 420.00 | 1 | 548.0 | 2.8 | 5 |
| 1.5KE440A | 1.5KE440CA | 376.00 | 418.00 | 462.00 | 1 | 602.0 | 2.5 | 5 |
| 1.5KE480A | 1.5KE480CA | 408.00 | 456.00 | 504.00 | 1 | 658.0 | 2.3 | 5 |
| 1.5KE510A | 1.5KE510CA | 434.00 | 485.00 | 535.00 | 1 | 698.0 | 2.1 | 5 |
| 1.5KE530A | 1.5KE530CA | 450.00 | 503.50 | 556.50 | 1 | 725.0 | 2.1 | 5 |
| 1.5KE540A | 1.5KE540CA | 459.00 | 513.00 | 567.00 | 1 | 740.0 | 2.0 | 5 |
| 1.5KE550A | 1.5KE550CA | 467.00 | 522.50 | 577.50 | 1 | 760.0 | 2.0 | 5 |

Forward Voltage (VF)@100 amps peak,8.3 msec sine wave equal to 3.5 volts max. (unidirectional only).
 For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.
 For parts without A , the VBR is $\pm 10\%$
 For bi-directional part number use C or CA Suffix for types 1.5KE6.8 thru types 1.5KE550 (e.g. 1.5KE6.8C ,1.5KE550CA)

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve



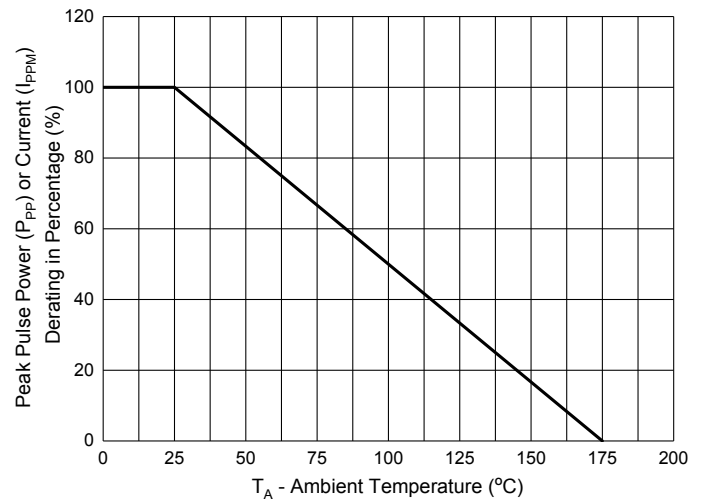
Fig. 2 - Typical Junction Capacitance



Fig. 3 - Pulse Waveform



Fig. 4 - Pulse Derating Curve



Ordering Information

| Device | Packing |
|------------------|--------------------------------|
| (Part Number)-TP | Tape&Reel: 1.2Kpcs/Reel |
| (Part Number)-AP | Ammo Packing: 1.2Kpcs/Ammo Box |
| (Part Number)-BP | Bulk: 12Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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