



Micro Commercial Components



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SA5.0(C)(A) THRU SA170(C)(A)

**500WATTS TRANSIENT
VOLTAGE SUPPRESSOR
5.0 TO 170 VOLTS**

Features

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- UL Recognized file # E331408
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Fast Response Time

MECHANICAL DATA

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Unidirectional-type number and cathode band
Bidirectional-type number only
- Weight: 0.4 grams

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- For capacitive load, derate current by 20%

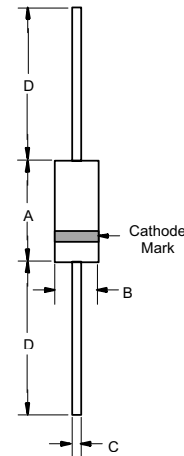
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---------------------------------------|--------------------|------|--|
| Peak Pulse Power Dissipation | P _{PPM} | 500W | T _A =25°C |
| Peak Forward Surge Current | I _{FSM} | 70A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V _F | 3.5V | I _{FM} =35A; T _J =25°C* |
| Steady State Power Dissipation | P _{M(AV)} | 3.0W | T _L =75°C |

*Pulse test: Pulse width 300 usec, Duty cycle 1%

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

DO-15



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.230 | 0.300 | 5.80 | 7.60 | |
| B | 0.104 | 0.140 | 2.60 | 3.60 | |
| C | 0.026 | 0.034 | 0.70 | 0.90 | |
| D | 1.000 | ----- | 25.40 | ----- | |

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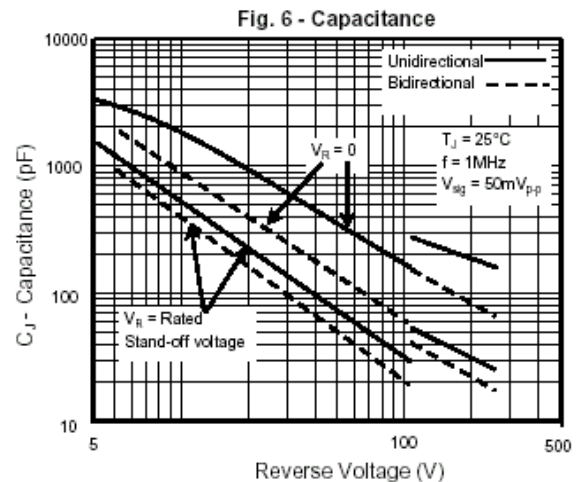
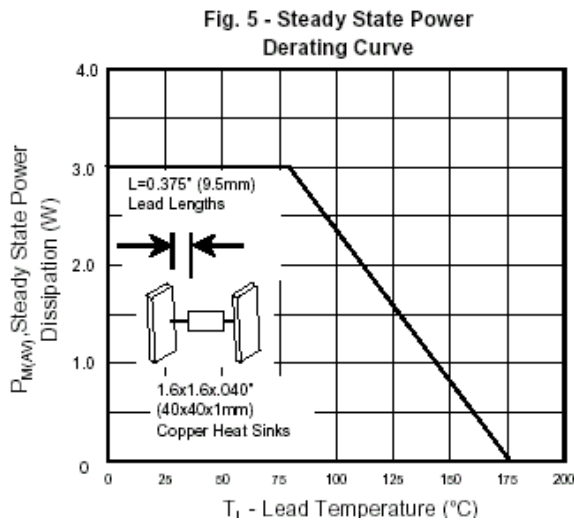
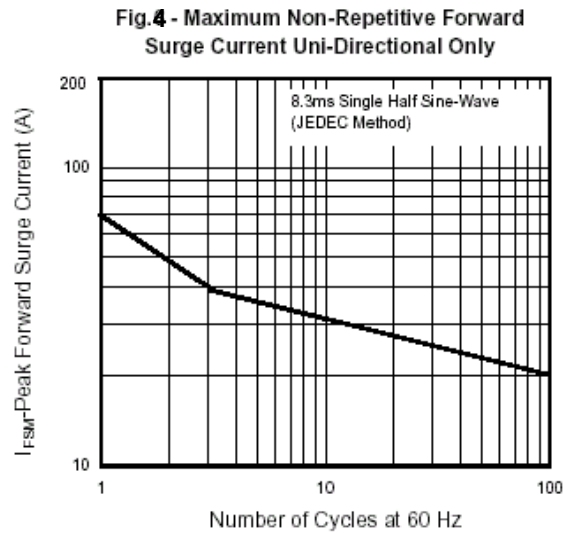
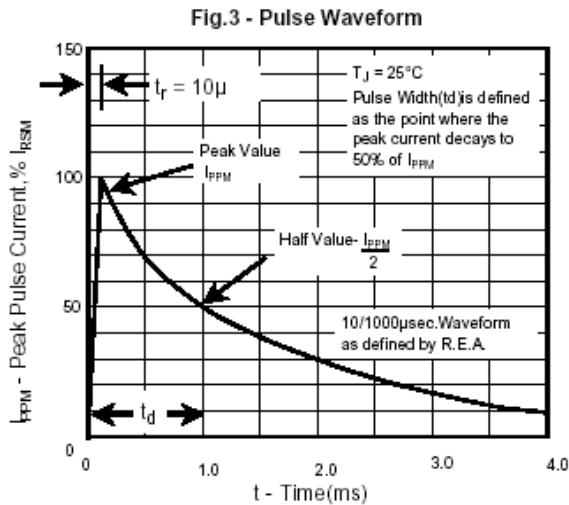
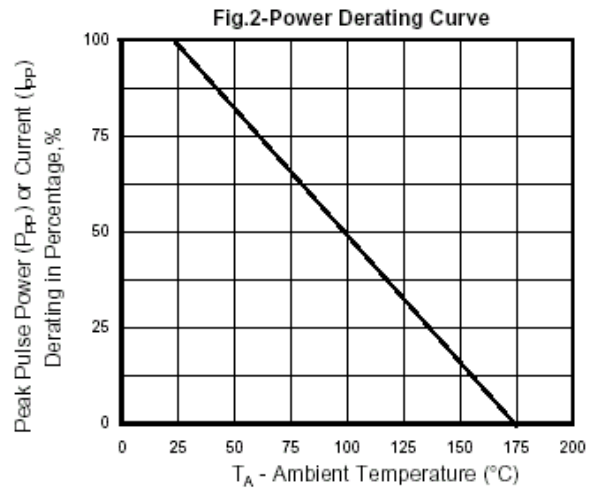
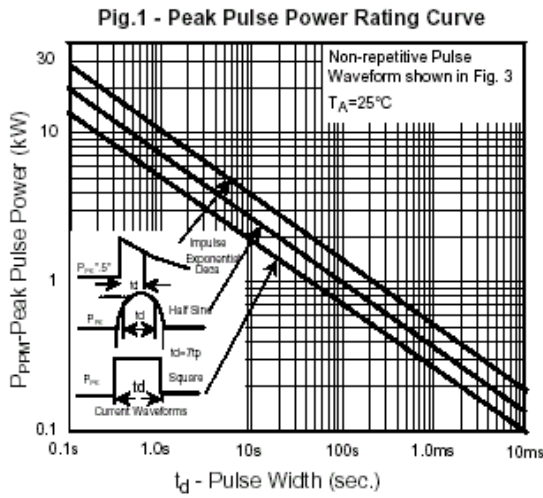
| MCC PART NUMBER | | REVERSE STAND-OFF VOLTAGE VRWM(V) | BREAKDOWN VOLTAGE VBR(V) MIN.@IT | BREAKDOWN VOLTAGE VBR(V) MAX.@IT | TEST CURRENT IT (mA) | MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V) | PEAK PULSE CURRENT Ipp (A) | REVERSE LEAKAGE @ VRWM IR(μ A) | Maxium Temperature Coefficient of V _(BR) (mV/°C) |
|-----------------|----------|-----------------------------------|----------------------------------|----------------------------------|----------------------|-------------------------------------|----------------------------|--------------------------------|---|
| UNI-Polar | BI-Polar | | | | | | | | |
| SA5.0A | SA5.0CA | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 55.4 | 600 | 5 |
| SA6.0A | SA6.0CA | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 49.5 | 600 | 5 |
| SA6.5A | SA6.5CA | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 45.5 | 400 | 5 |
| SA7.0A | SA7.0CA | 7.0 | 7.78 | 8.60 | 10 | 12 | 42.5 | 150 | 6 |
| SA7.5A | SA7.5CA | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 39.5 | 50 | 7 |
| SA8.0A | SA8.0CA | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 37.5 | 25 | 7 |
| SA8.5A | SA8.5CA | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 35.4 | 10 | 8 |
| SA9.0A | SA9.0CA | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 33.1 | 5 | 9 |
| SA10A | SA10CA | 10.0 | 11.10 | 12.30 | 1 | 17 | 30 | 1 | 10 |
| SA11A | SA11CA | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 28 | 1 | 11 |
| SA12A | SA12CA | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 25.6 | 1 | 12 |
| SA13A | SA13CA | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 23.7 | 1 | 13 |
| SA14A | SA14CA | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 22 | 1 | 14 |
| SA15A | SA15CA | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 20.9 | 1 | 16 |
| SA16A | SA16CA | 16.0 | 17.80 | 19.70 | 1 | 26 | 19.6 | 1 | 17 |
| SA17A | SA17CA | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 18.5 | 1 | 19 |
| SA18A | SA18CA | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 17.5 | 1 | 20 |
| SA20A | SA20CA | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 15.7 | 1 | 23 |
| SA22A | SA22CA | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 14.4 | 1 | 25 |
| SA24A | SA24CA | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 13.1 | 1 | 28 |
| SA26A | SA26CA | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 12.1 | 1 | 30 |
| SA28A | SA28CA | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 11.2 | 1 | 31 |
| SA30A | SA30CA | 30.0 | 33.30 | 36.80 | 1 | 48.4 | 10.5 | 1 | 36 |
| SA33A | SA33CA | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 9.6 | 1 | 39 |
| SA36A | SA36CA | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 8.8 | 1 | 41 |
| SA40A | SA40CA | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 7.9 | 1 | 46 |
| SA43A | SA43CA | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 7.3 | 1 | 50 |
| SA45A | SA45CA | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 7 | 1 | 52 |
| SA48A | SA48CA | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 6.6 | 1 | 56 |
| SA51A | SA51CA | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 6.2 | 1 | 61 |
| SA54A | SA54CA | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 5.9 | 1 | 65 |
| SA58A | SA58CA | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 5.4 | 1 | 70 |
| SA60A | SA60CA | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 5.3 | 1 | 71 |
| SA64A | SA64CA | 64.0 | 71.10 | 78.60 | 1 | 103 | 5 | 1 | 76 |
| SA70A | SA70CA | 70.0 | 77.80 | 86.00 | 1 | 113 | 4.5 | 1 | 85 |
| SA75A | SA75CA | 75.0 | 83.30 | 92.10 | 1 | 121 | 4.2 | 1 | 91 |
| SA78A | SA78CA | 78.0 | 86.70 | 95.80 | 1 | 126 | 4 | 1 | 95 |
| SA85A | SA85CA | 85.0 | 94.40 | 104.00 | 1 | 137 | 3.7 | 1 | 103 |
| SA90A | SA90CA | 90.0 | 100.00 | 111.00 | 1 | 146 | 3.5 | 1 | 110 |
| SA100A | SA100CA | 100.0 | 111.00 | 123.00 | 1 | 162 | 3.1 | 1 | 123 |
| SA110A | SA110CA | 110.0 | 122.00 | 135.00 | 1 | 177 | 2.9 | 1 | 133 |
| SA120A | SA120CA | 120.0 | 133.00 | 147.00 | 1 | 193 | 2.6 | 1 | 146 |
| SA130A | SA130CA | 130.0 | 144.00 | 159.00 | 1 | 209 | 2.4 | 1 | 158 |
| SA150A | SA150CA | 150.0 | 167.00 | 185.00 | 1 | 243 | 2.1 | 1 | 184 |
| SA160A | SA160CA | 160.0 | 178.00 | 197.00 | 1 | 259 | 2 | 1 | 196 |
| SA170A | SA170CA | 170.0 | 189.00 | 209.00 | 1 | 275 | 1.9 | 1 | 208 |

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

For parts without A , the VBR is +/-10%

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Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)





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Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 4Kpcs/Reel |
| Part Number-AP | Ammo Packing: 3Kpcs/Ammo Box |
| Part Number-BP | Bulk: 25Kpcs/Carton |

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