

Silicon Avalanche Diodes

500 Watt Axial Leaded Transient Voltage Suppressors

RoHS SA Series



ELECTRICAL SPECIFICATION @ Tamb 25°C

| Part Numbers | | Reverse Stand off Voltage VR (Volts) | Breakdown Voltage VBR (Volts) @ IT | | Test Current IT (mA) | Maximum Clamping Voltage Vc @ IPP (Volts) | Maximum Peak Pulse Current IPP (A) | Maximum Reverse Leakage IR @ VR (µA) |
|--------------|----------|--------------------------------------|------------------------------------|--------|----------------------|---|------------------------------------|--------------------------------------|
| Uni-Polar | Bi-Polar | | MIN | MAX | | | | |
| SA5.0A | SA5.0CA | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 55.4 | 600 |
| SA6.0A | SA6.0CA | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 49.5 | 600 |
| SA6.5A | SA6.5CA | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 45.5 | 400 |
| SA7.0A | SA7.0CA | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 42.5 | 150 |
| SA7.5A | SA7.5CA | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 39.5 | 50 |
| SA8.0A | SA8.0CA | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 37.5 | 25 |
| SA8.5A | SA8.5CA | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 35.4 | 10 |
| SA9.0A | SA9.0CA | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 33.1 | 5 |
| SA10A | SA10CA | 10.0 | 11.10 | 12.30 | 1 | 17.0 | 30.0 | 3 |
| SA11A | SA11CA | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 28.0 | 3 |
| SA12A | SA12CA | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 25.6 | 3 |
| SA13A | SA13CA | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 23.7 | 3 |
| SA14A | SA14CA | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 22.0 | 3 |
| SA15A | SA15CA | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 20.9 | 3 |
| SA16A | SA16CA | 16.0 | 17.80 | 19.70 | 1 | 26.0 | 19.6 | 3 |
| SA17A | SA17CA | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 18.5 | 3 |
| SA18A | SA18CA | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 17.5 | 3 |
| SA20A | SA20CA | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 15.7 | 3 |
| SA22A | SA22CA | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 14.4 | 3 |
| SA24A | SA24CA | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 13.1 | 3 |
| SA26A | SA26CA | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 12.1 | 3 |
| SA28A | SA28CA | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 11.2 | 3 |
| SA30A | SA30CA | 30.0 | 33.30 | 36.80 | 1 | 48.4 | 10.5 | 3 |
| SA33A | SA33CA | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 9.6 | 3 |
| SA36A | SA36CA | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 8.8 | 3 |
| SA40A | SA40CA | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 7.9 | 3 |
| SA43A | SA43CA | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 7.3 | 3 |
| SA45A | SA45CA | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 7.0 | 3 |
| SA48A | SA48CA | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 6.6 | 3 |
| SA51A | SA51CA | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 6.2 | 3 |
| SA54A | SA54CA | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 5.9 | 3 |
| SA58A | SA58CA | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 5.4 | 3 |
| SA60A | SA60CA | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 5.3 | 3 |
| SA64A | SA64CA | 64.0 | 71.10 | 78.60 | 1 | 103.0 | 5.0 | 3 |
| SA70A | SA70CA | 70.0 | 77.80 | 86.00 | 1 | 113.0 | 4.5 | 3 |
| SA75A | SA75CA | 75.0 | 83.30 | 92.10 | 1 | 121.0 | 4.2 | 3 |
| SA78A | SA78CA | 78.0 | 86.70 | 95.80 | 1 | 126.0 | 4.0 | 3 |
| SA85A | SA85CA | 85.0 | 94.40 | 104.00 | 1 | 137.0 | 3.7 | 3 |
| SA90A | SA90CA | 90.0 | 100.00 | 111.00 | 1 | 146.0 | 3.5 | 3 |
| SA100A | SA100CA | 100.0 | 111.00 | 123.00 | 1 | 162.0 | 3.1 | 3 |
| SA110A | SA110CA | 110.0 | 122.00 | 135.00 | 1 | 177.0 | 2.9 | 3 |
| SA120A | SA120CA | 120.0 | 133.00 | 147.00 | 1 | 193.0 | 2.6 | 3 |
| SA130A | SA130CA | 130.0 | 144.00 | 159.00 | 1 | 209.0 | 2.4 | 3 |
| SA150A | SA150CA | 150.0 | 167.00 | 185.00 | 1 | 243.0 | 2.1 | 3 |
| SA160A | SA160CA | 160.0 | 178.00 | 197.00 | 1 | 259.0 | 2.0 | 3 |
| SA170A | SA170CA | 170.0 | 189.00 | 209.00 | 1 | 275.0 | 1.9 | 3 |
| SA180A | SA180CA | 180.0 | 200.00 | 233.00 | 1 | 289.0 | 1.7 | 3 |

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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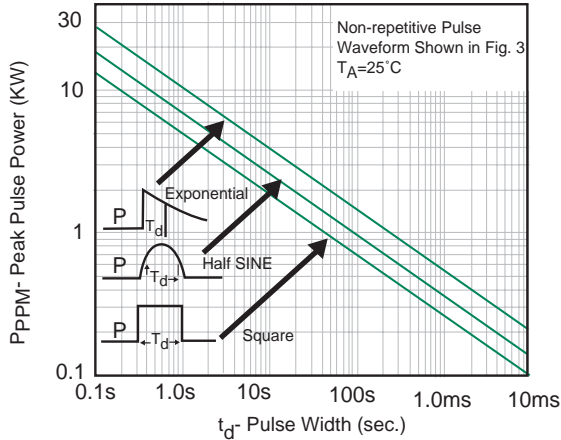


Fig. 1 Peak Pulse Power Rating Curve

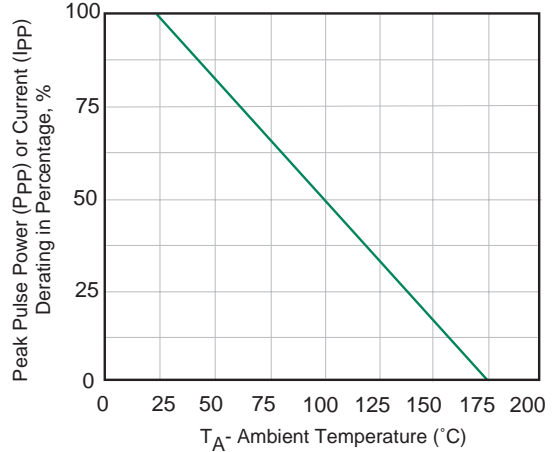


Fig. 2 Pulse Derating Curve

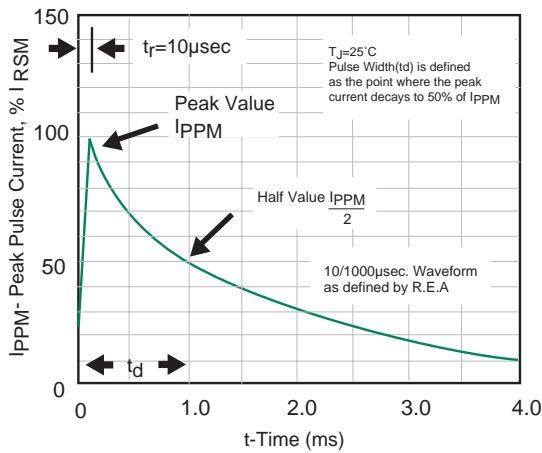


Fig. 3 Pulse Waveform

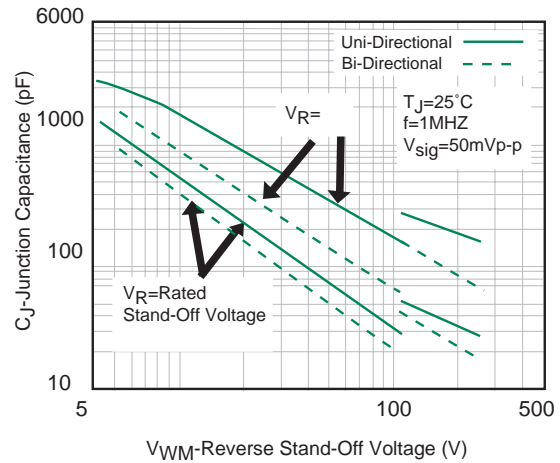


Fig. 4- Typical Junction Capacitance

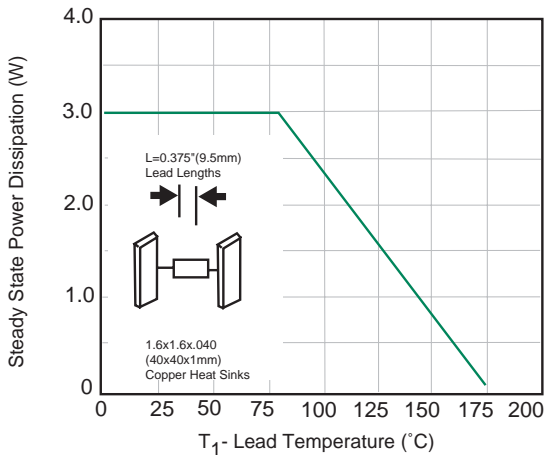


Fig. 5 Steady State Power Derating Curve

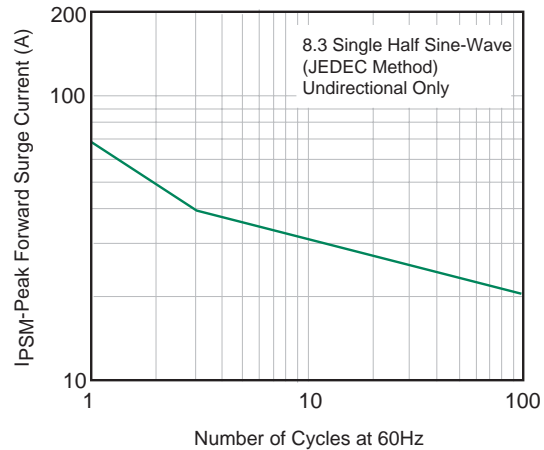


Fig. 6- Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

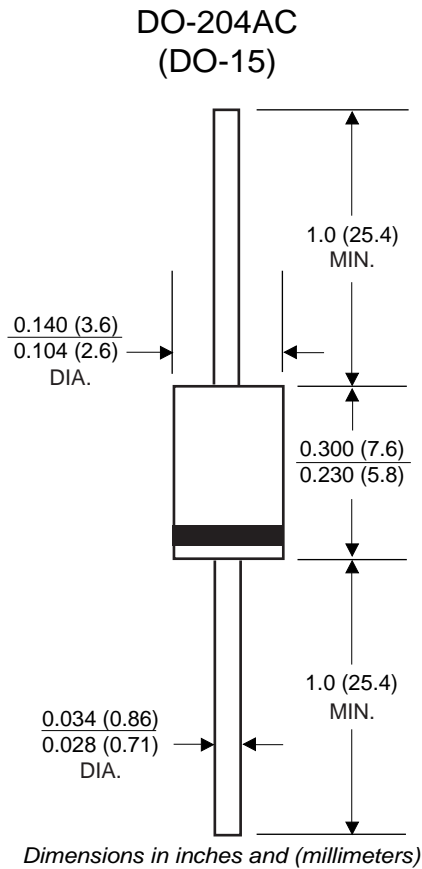
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Outline Dimensions



6
SILICON DIODE
ARRAYS