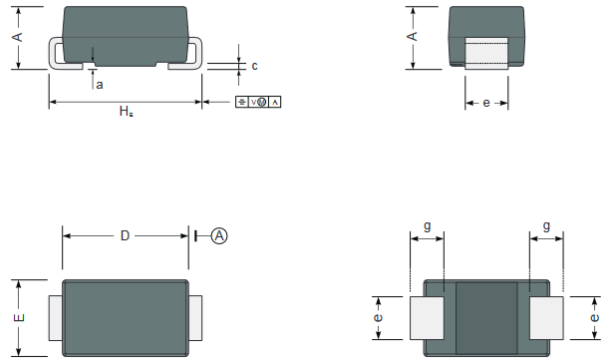


SMD Transient Voltage Suppressor Diodes

| Primary characteristics | | |
|-------------------------|----------|------|
| Parameter | Value | Unit |
| V_R range nom. | 5 to 440 | V |
| Power rating | 600 | W |

Features

- **SMA (DO-214AC)** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability
- Terminals: Solderable per MIL-STD-750, Method 2026

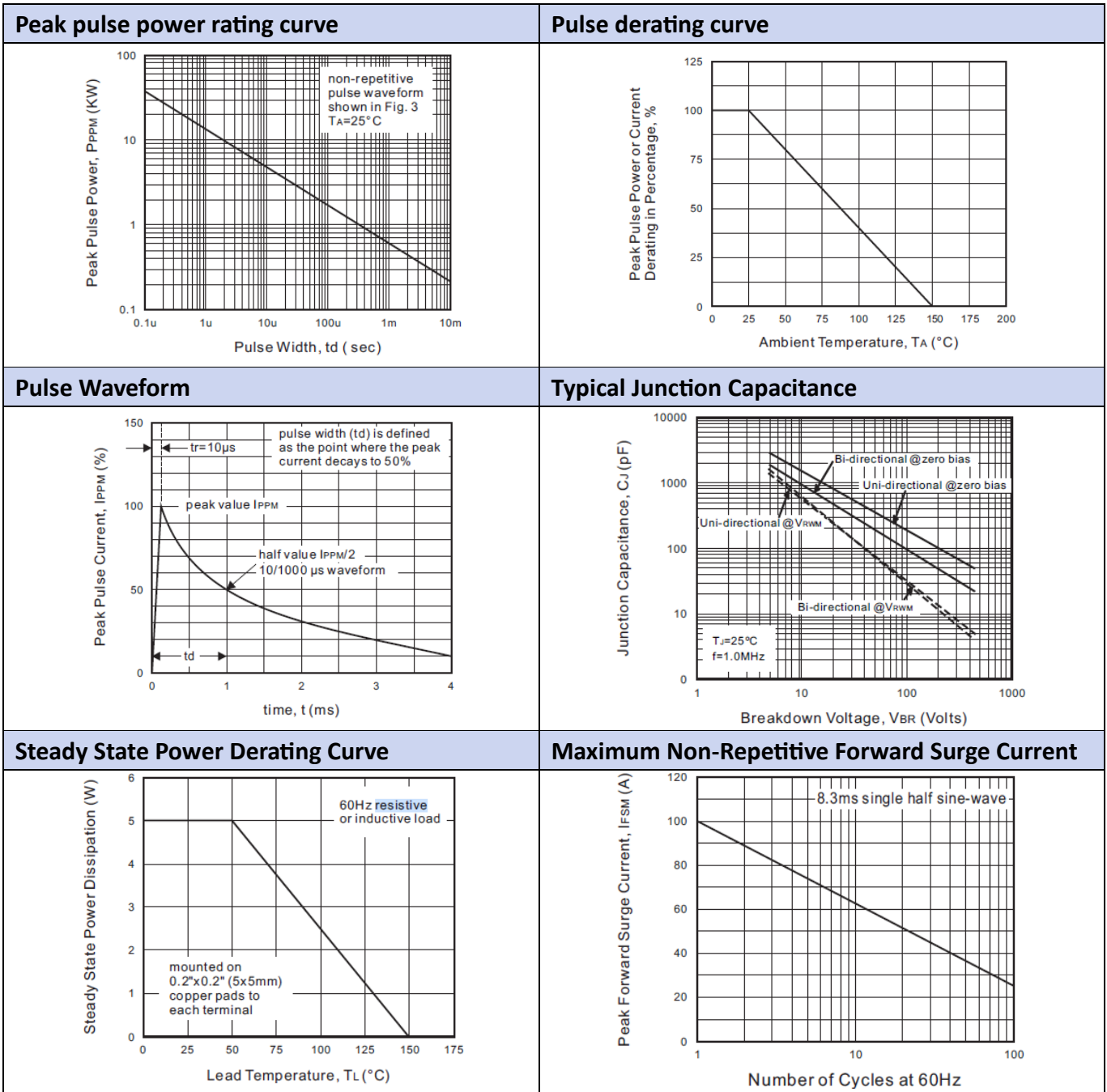
| Case dimensions | | | | | | | | |
|--|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|------------------|-----|
|  | | | | | | | | |
| SMA (DO-214AC) | | | | | | | | |
| Unit | A | D | E | H_E | c | e | g | a |
| mm | 2.05 ± 0.15 | 4.25 ± 0.25 | 2.5 ± 0.2 | 4.95 ± 0.25 | 0.23 ± 0.08 | 1.45 ± 0.15 | 1.2 ± 0.3 | 0.3 |

| Part numbering system | | |
|-----------------------|---|--|
| SMA6J | 24 | A |
| ↓ | ↓ | ↓ |
| Series code | Reverse standoff voltage marking (see: Characteristics table) | Unidirectional: A Bidirectional: CA |

| Absolute maximum ratings and general electrical characteristics ($T_a = 25^\circ\text{C}$) | | | |
|---|-------------|---------------------------------------|------------------|
| Parameter | Symbol | Value | Unit |
| Peak power dissipation with a 10/1000 μs waveform, Note 1 & Fig. 1 | P_{PPM} | 600 | W |
| Peak forward surge current 8.3ms single half sine-wave, Note 2 | I_{FSM} | 60 | A |
| Peak pulse current with a 10/1000 μs waveform | I_{PPM} | Characteristics table | A |
| Instantaneous forward voltage at 50A for Unidirectional only, Note 3 | V_F | 3.5/5.0 | V |
| Steady state power dissipation at $T_L=75^\circ\text{C}$ | $P_{M(AV)}$ | 5.0 | W |
| Operating junction temperature and storage temperature range | T_j, T_s | -55 ~ 150 | $^\circ\text{C}$ |
| Notes: | | | |
| 1) Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2 | | | |
| 2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum | | | |
| 3) $V_F < 3.5\text{V}$ for $V_{BR} \leq 200\text{V}$ and $V_F < 6.5\text{V}$ for $V_{BR} \geq 201\text{V}$ | | | |

| Characteristics table (T _a = 25°C) | | | | | | | | |
|---|------------------|---------------------------|-----------------------------------|------|----------------|---|----------------------------|---|
| Part number (UNI) | Part number (BI) | Reverse stand off voltage | Breakdown voltage @I _T | | Test current | Maximum clamping voltage @I _{PP} | Maximum peak pulse current | Maximum reverse leakage @V _R |
| | | | V _{BR} | | | | | |
| | | V _R | MIN | MAX | I _T | V _C | I _{PP} | I _R |
| | | V | V | V | mA | V | A | μA |
| SMA6J5.0A | SMA6J5.0CA | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 65.3 | 800 |
| SMA6J6.0A | SMA6J6.0CA | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 58.3 | 800 |
| SMA6J6.5A | SMA6J6.5CA | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 53.6 | 500 |
| SMA6J7.0A | SMA6J7.0CA | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 50.0 | 200 |
| SMA6J7.5A | SMA6J7.5CA | 7.5 | 8.33 | 9.21 | 1.0 | 12.9 | 46.6 | 100 |
| SMA6J8.0A | SMA6J8.0CA | 8.0 | 8.89 | 9.83 | 1.0 | 13.6 | 44.2 | 50 |
| SMA6J8.5A | SMA6J8.5CA | 8.5 | 9.44 | 10.4 | 1.0 | 14.4 | 41.7 | 20 |
| SMA6J9.0A | SMA6J9.0CA | 9.0 | 10.0 | 11.1 | 1.0 | 15.4 | 39.0 | 10 |
| SMA6J10A | SMA6J10CA | 10 | 11.1 | 12.3 | 1.0 | 17.0 | 35.3 | 5 |
| SMA6J11A | SMA6J11CA | 11 | 12.2 | 13.5 | 1.0 | 18.2 | 33.0 | 1 |
| SMA6J12A | SMA6J12CA | 12 | 13.3 | 14.7 | 1.0 | 19.9 | 30.2 | 1 |
| SMA6J13A | SMA6J13CA | 13 | 14.4 | 15.9 | 1.0 | 21.5 | 28.0 | 1 |
| SMA6J14A | SMA6J14CA | 14 | 15.6 | 17.2 | 1.0 | 23.2 | 25.9 | 1 |
| SMA6J15A | SMA6J15CA | 15 | 16.7 | 18.5 | 1.0 | 24.4 | 24.6 | 1 |
| SMA6J16A | SMA6J16CA | 16 | 17.8 | 19.7 | 1.0 | 26.0 | 23.1 | 1 |
| SMA6J17A | SMA6J17CA | 17 | 18.9 | 20.9 | 1.0 | 27.6 | 21.8 | 1 |
| SMA6J18A | SMA6J18CA | 18 | 20.0 | 22.1 | 1.0 | 29.2 | 20.6 | 1 |
| SMA6J20A | SMA6J20CA | 20 | 22.2 | 24.5 | 1.0 | 32.4 | 18.6 | 1 |
| SMA6J22A | SMA6J22CA | 22 | 24.4 | 26.9 | 1.0 | 35.5 | 16.9 | 1 |
| SMA6J24A | SMA6J24CA | 24 | 26.7 | 29.5 | 1.0 | 38.9 | 15.5 | 1 |
| SMA6J26A | SMA6J26CA | 26 | 28.9 | 31.9 | 1.0 | 42.1 | 14.3 | 1 |
| SMA6J28A | SMA6J28CA | 28 | 31.1 | 34.4 | 1.0 | 45.4 | 13.3 | 1 |
| SMA6J30A | SMA6J30CA | 30 | 33.3 | 36.8 | 1.0 | 48.4 | 12.4 | 1 |
| SMA6J33A | SMA6J33CA | 33 | 36.7 | 40.6 | 1.0 | 53.3 | 11.3 | 1 |
| SMA6J36A | SMA6J36CA | 36 | 40.0 | 44.2 | 1.0 | 58.1 | 10.4 | 1 |
| SMA6J40A | SMA6J40CA | 40 | 44.4 | 49.1 | 1.0 | 64.5 | 9.3 | 1 |
| SMA6J43A | SMA6J43CA | 43 | 47.8 | 52.8 | 1.0 | 69.4 | 8.7 | 1 |
| SMA6J45A | SMA6J45CA | 45 | 50.0 | 55.3 | 1.0 | 72.7 | 8.3 | 1 |
| SMA6J48A | SMA6J48CA | 48 | 53.3 | 58.9 | 1.0 | 77.4 | 7.8 | 1 |
| SMA6J51A | SMA6J51CA | 51 | 56.7 | 62.7 | 1.0 | 82.4 | 7.3 | 1 |
| SMA6J54A | SMA6J54CA | 54 | 60.0 | 66.3 | 1.0 | 87.1 | 6.9 | 1 |
| SMA6J58A | SMA6J58CA | 58 | 64.4 | 71.2 | 1.0 | 93.6 | 6.5 | 1 |
| SMA6J60A | SMA6J60CA | 60 | 66.7 | 73.7 | 1.0 | 96.8 | 6.2 | 1 |
| SMA6J64A | SMA6J64CA | 64 | 71.1 | 78.6 | 1.0 | 103.0 | 5.9 | 1 |

| Characteristics table (T _a = 25°C) | | | | | | | | |
|---|------------------|---------------------------|-----------------------------------|------|----------------|---|----------------------------|---|
| Part number (UNI) | Part number (BI) | Reverse stand off voltage | Breakdown voltage @I _T | | Test current | Maximum clamping voltage @I _{PP} | Maximum peak pulse current | Maximum reverse leakage @V _R |
| | | | V _{BR} | | | | | |
| | | V _R | MIN | MAX | I _T | V _C | I _{PP} | I _R |
| | | V | V | V | mA | V | A | μA |
| SMA6J70A | SMA6J70CA | 70 | 77.8 | 86.0 | 1.0 | 113.0 | 5.3 | 1 |
| SMA6J75A | SMA6J75CA | 75 | 83.3 | 92.1 | 1.0 | 121.0 | 5.0 | 1 |
| SMA6J78A | SMA6J78CA | 78 | 86.7 | 95.8 | 1.0 | 126.0 | 4.8 | 1 |
| SMA6J85A | SMA6J85CA | 85 | 94.4 | 104 | 1.0 | 137.0 | 4.4 | 1 |
| SMA6J90A | SMA6J90CA | 90 | 100 | 111 | 1.0 | 146.0 | 4.1 | 1 |
| SMA6J100A | SMA6J100CA | 100 | 111 | 123 | 1.0 | 162.0 | 3.7 | 1 |
| SMA6J110A | SMA6J110CA | 110 | 122 | 135 | 1.0 | 177.0 | 3.4 | 1 |
| SMA6J120A | SMA6J120CA | 120 | 133 | 147 | 1.0 | 193.0 | 3.1 | 1 |
| SMA6J130A | SMA6J130CA | 130 | 144 | 159 | 1.0 | 209.0 | 2.9 | 1 |
| SMA6J150A | SMA6J150CA | 150 | 167 | 185 | 1.0 | 243.0 | 2.5 | 1 |
| SMA6J160A | SMA6J160CA | 160 | 178 | 197 | 1.0 | 259.0 | 2.3 | 1 |
| SMA6J170A | SMA6J170CA | 170 | 189 | 209 | 1.0 | 275.0 | 2.2 | 1 |
| SMA6J180A | SMA6J180CA | 180 | 201 | 222 | 1.0 | 292.0 | 2.0 | 1 |
| SMA6J200A | SMA6J200CA | 200 | 224 | 247 | 1.0 | 324.0 | 1.9 | 1 |
| SMA6J220A | SMA6J220CA | 220 | 246 | 272 | 1.0 | 356.0 | 1.7 | 1 |
| SMA6J250A | SMA6J250CA | 250 | 279 | 309 | 1.0 | 405.0 | 1.5 | 1 |
| SMA6J300A | SMA6J300CA | 300 | 335 | 371 | 1.0 | 486.0 | 1.3 | 1 |
| SMA6J350A | SMA6J350CA | 350 | 391 | 432 | 1.0 | 567.0 | 1.1 | 1 |
| SMA6J400A | SMA6J400CA | 400 | 447 | 494 | 1.0 | 678.0 | 0.9 | 1 |
| SMA6J440A | SMA6J440CA | 440 | 492 | 543 | 1.0 | 713.0 | 0.9 | 1 |



| Ordering information | | | |
|-------------------------------|----------------|-------------------|------------|
| Part Number | Package | Shipping Quantity | Dimensions |
| SMA6J5.0A(CA) ~ SMA6J440A(CA) | SMA (DO-214AC) | 5000pcs / reel | |

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