

Features

- Glass passivated chip
- 600 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case: DO214AC/(SMA) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbols | Value | Unit |
|--|----------------|----------------|------|
| Peak power dissipation with a 10/1000 us waveform ⁽¹⁾ | P_{PP} | 600 | W |
| Peak pulse current with a 10/1000 us waveform ⁽¹⁾ | I_{PP} | See Next Table | A |
| Power dissipation on infinite heatsink at $T_L = 75\text{ }^\circ\text{C}$ | P_D | 5.0 | W |
| Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾ | I_{FSM} | 60 | A |
| Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾ | V_F | 3.5/6.5 | V |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | °C |

Note:

- 1) Non-repetitive current pulse per Fig.5 and derated above $T_A = 25\text{ }^\circ\text{C}$ per Fig.1 ;
- 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 devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.



SMA6Jxx(C)A Series

| Part Number | | Device Marking Code | | Reverse Stand-off Voltage | Breakdown Voltage $V_{BR} @ I_T$ | | Test Current | Max. Clamping Voltage @ I_{PP} | Max. Peak Pulse Current | Max. Reverse Leakage @ V_{RWM} |
|-------------|------------|---------------------|----|---------------------------|----------------------------------|---------|--------------|----------------------------------|-------------------------|----------------------------------|
| UNI-POLAR | BI-POLAR | UNI | BI | $V_{RWM}(V)$ | Min.(V) | Max.(V) | $I_T(mA)$ | $V_{C MAX.}(V)$ | $I_{PP}(A)$ | $I_R(\mu A)$ |
| SMA6J5.0A | SMA6J5.0CA | KE | AE | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 65.3 | 800 |
| SMA6J6.0A | SMA6J6.0CA | KG | AG | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 58.3 | 800 |
| SMA6J6.5A | SMA6J6.5CA | KK | AK | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 53.6 | 500 |
| SMA6J7.0A | SMA6J7.0CA | KM | AM | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 50.0 | 200 |
| SMA6J7.5A | SMA6J7.5CA | KP | AP | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 46.6 | 100 |
| SMA6J8.0A | SMA6J8.0CA | KR | AR | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 44.2 | 50 |
| SMA6J8.5A | SMA6J8.5CA | KT | AT | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 41.7 | 20 |
| SMA6J9.0A | SMA6J9.0CA | KV | AV | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 39.0 | 10 |
| SMA6J10A | SMA6J10CA | KX | AX | 10.0 | 11.10 | 12.30 | 1 | 17.0 | 35.3 | 5 |
| SMA6J11A | SMA6J11CA | KZ | AZ | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 33.0 | 1 |
| SMA6J12A | SMA6J12CA | LE | BE | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 30.2 | 1 |
| SMA6J13A | SMA6J13CA | LG | BG | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 28.0 | 1 |
| SMA6J14A | SMA6J14CA | LK | BK | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 25.9 | 1 |
| SMA6J15A | SMA6J15CA | LM | BM | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 24.6 | 1 |
| SMA6J16A | SMA6J16CA | LP | BP | 16.0 | 17.80 | 19.70 | 1 | 26.0 | 23.1 | 1 |
| SMA6J17A | SMA6J17CA | LR | BR | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 21.8 | 1 |
| SMA6J18A | SMA6J18CA | LT | BT | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 20.6 | 1 |
| SMA6J20A | SMA6J20CA | LV | BV | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 18.6 | 1 |
| SMA6J22A | SMA6J22CA | LX | BX | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 16.9 | 1 |
| SMA6J24A | SMA6J24CA | LZ | BZ | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 15.5 | 1 |
| SMA6J26A | SMA6J26CA | ME | CE | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 14.3 | 1 |
| SMA6J28A | SMA6J28CA | MG | CG | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 13.3 | 1 |
| SMA6J30A | SMA6J30CA | MK | CK | 30.0 | 33.50 | 36.80 | 1 | 48.4 | 12.4 | 1 |
| SMA6J33A | SMA6J33CA | MM | CM | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 11.3 | 1 |
| SMA6J36A | SMA6J36CA | MP | CP | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 10.4 | 1 |
| SMA6J40A | SMA6J40CA | MR | CR | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 9.3 | 1 |
| SMA6J43A | SMA6J43CA | MT | CT | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 8.7 | 1 |
| SMA6J45A | SMA6J45CA | MV | CV | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 8.3 | 1 |
| SMA6J48A | SMA6J48CA | MX | CX | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 7.8 | 1 |
| SMA6J51A | SMA6J51CA | MZ | CZ | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 7.3 | 1 |
| SMA6J54A | SMA6J54CA | NE | DE | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 6.9 | 1 |
| SMA6J58A | SMA6J58CA | NG | DG | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 6.5 | 1 |
| SMA6J60A | SMA6J60CA | NK | DK | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 6.2 | 1 |
| SMA6J64A | SMA6J64CA | NM | DM | 64.0 | 71.10 | 78.60 | 1 | 103.0 | 5.9 | 1 |
| SMA6J70A | SMA6J70CA | NP | DP | 70.0 | 77.80 | 86.00 | 1 | 113.0 | 5.3 | 1 |
| SMA6J75A | SMA6J75CA | NR | DR | 75.0 | 83.30 | 92.10 | 1 | 121.0 | 5.0 | 1 |
| SMA6J78A | SMA6J78CA | NT | DT | 78.0 | 86.70 | 95.80 | 1 | 126.0 | 4.8 | 1 |
| SMA6J85A | SMA6J85CA | NV | DV | 85.0 | 94.4 | 104.0 | 1 | 137.0 | 4.4 | 1 |
| SMA6J90A | SMA6J90CA | NX | DX | 90.0 | 100.0 | 111.0 | 1 | 146.0 | 4.1 | 1 |
| SMA6J100A | SMA6J100CA | NZ | DZ | 100.0 | 111.0 | 123.0 | 1 | 162.0 | 3.7 | 1 |
| SMA6J110A | SMA6J110CA | PE | EE | 110.0 | 122.0 | 135.0 | 1 | 177.0 | 3.4 | 1 |
| SMA6J120A | SMA6J120CA | PG | EG | 120.0 | 133.0 | 147.0 | 1 | 193.0 | 3.1 | 1 |
| SMA6J130A | SMA6J130CA | PK | EK | 130.0 | 144.0 | 159.0 | 1 | 209.0 | 2.9 | 1 |
| SMA6J150A | SMA6J150CA | PM | EM | 150.0 | 167.0 | 185.0 | 1 | 243.0 | 2.5 | 1 |
| SMA6J160A | SMA6J160CA | PP | EP | 160.0 | 178.0 | 197.0 | 1 | 259.0 | 2.3 | 1 |
| SMA6J170A | SMA6J170CA | PR | ER | 170.0 | 189.0 | 209.0 | 1 | 275.0 | 2.2 | 1 |
| SMA6J180A | SMA6J180CA | PT | ET | 180.0 | 201.0 | 222.0 | 1 | 292.0 | 2.1 | 1 |
| SMA6J190A | SMA6J190CA | PA | EC | 190.0 | 209.0 | 243.0 | 1 | 308.0 | 2.0 | 1 |
| SMA6J200A | SMA6J200CA | PV | EV | 200.0 | 224.0 | 247.0 | 1 | 324.0 | 1.9 | 1 |
| SMA6J210A | SMA6J210CA | PB | ED | 210.0 | 231.0 | 268.0 | 1 | 340.0 | 1.8 | 1 |
| SMA6J220A | SMA6J220CA | PX | EX | 220.0 | 246.0 | 272.0 | 1 | 356.0 | 1.7 | 1 |
| SMA6J250A | | PZ | | 250.0 | 279.0 | 309.0 | 1 | 405.0 | 1.5 | 1 |
| SMA6J300A | | QE | | 300.0 | 335.0 | 371.0 | 1 | 486.0 | 1.3 | 1 |
| SMA6J350A | | QG | | 350.0 | 391.0 | 432.0 | 1 | 567.0 | 1.1 | 1 |
| SMA6J400A | | QK | | 400.0 | 447.0 | 494.0 | 1 | 648.0 | 0.9 | 1 |
| SMA6J440A | | QM | | 440.0 | 492.0 | 543.0 | 1 | 713.0 | 0.9 | 1 |

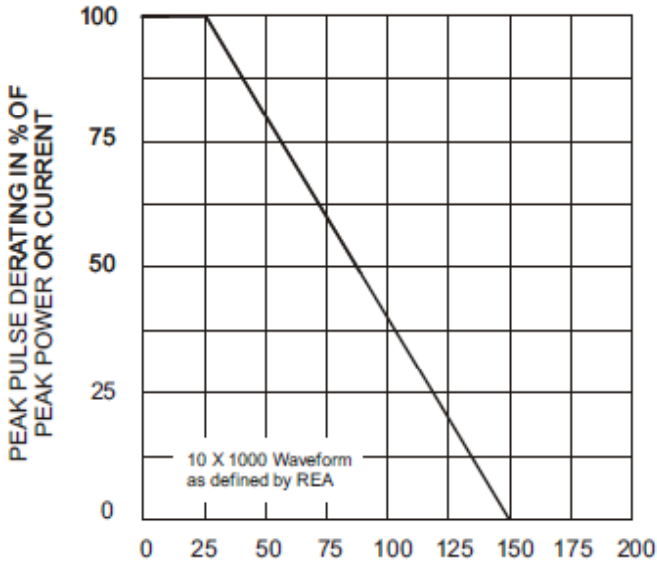


Fig. 1 - Pulse Derating Curve

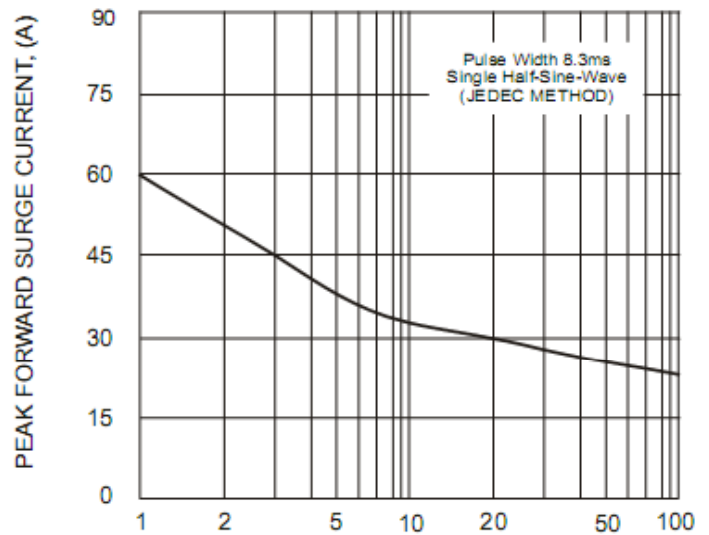


Fig. 2 - Maximum Non-Repetitive Surge Current

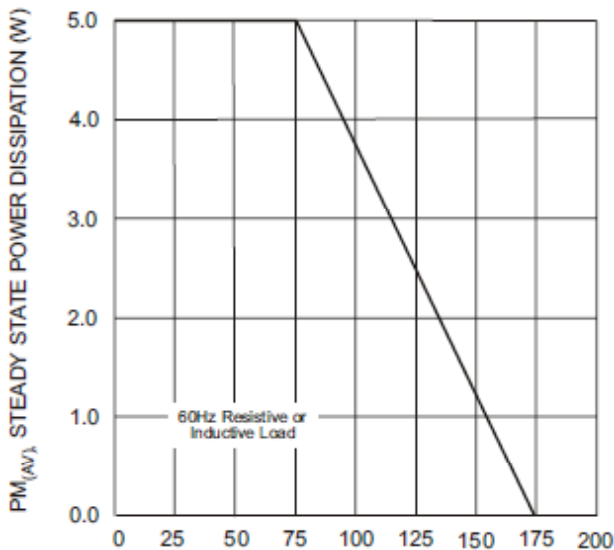


Fig. 3 - Steady State Power Derating Curve

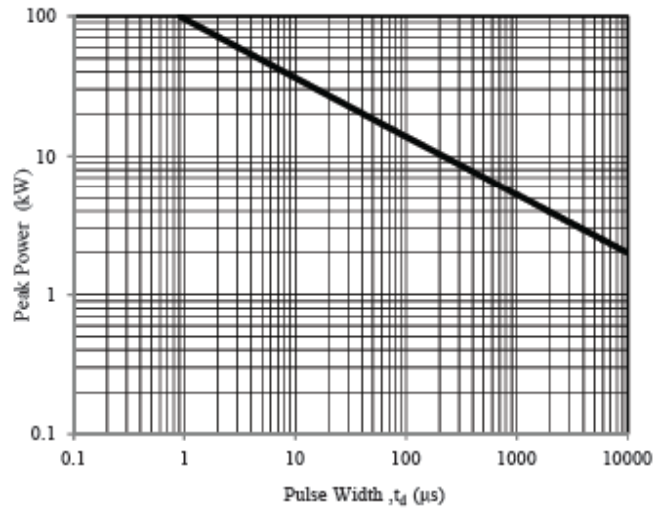


Fig. 4 - Peak Pulse Power Rating Curve

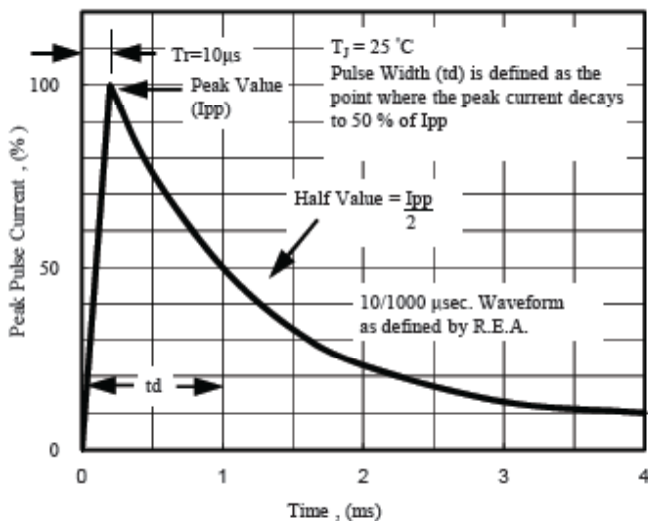


Fig. 5 - Pulse Waveform

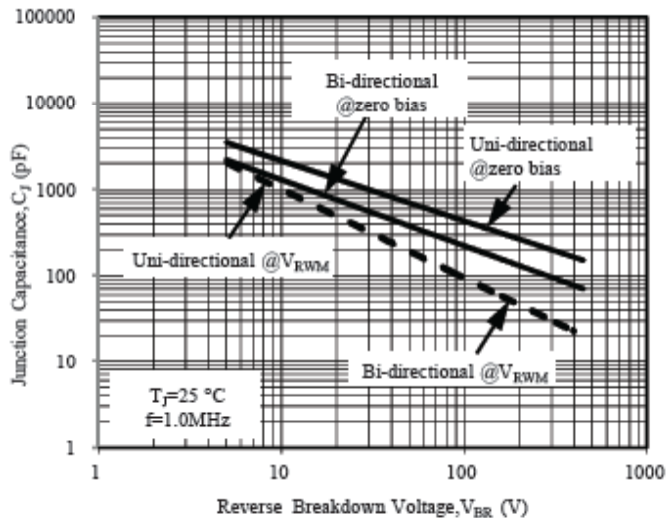


Fig. 6 - Typical Junction Capacitance

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [ZHIDE](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [CEN955 W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)