



SEMICONDUCTOR

SMAJ5.0(C)A-V THRU SMAJ440(C)A-V

AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER-400 Watts

FEATURES

- 400 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU
- **AEC-Q101 qualified and PPAP capable**



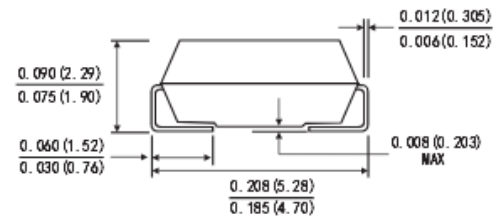
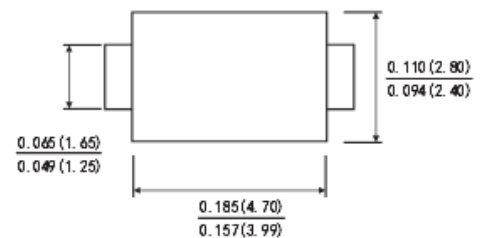
AEC-Q101 Qualified



MECHANICAL DATA

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder Plated
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device.

SMA(DO-214AC)



Dimensions in inches and (millimeters)

DEVICES FOR BIDIRECTIONAL APPLICATIONS

1. For bi-directional use C suffix for Types .
2. Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified)

| | Symbols | Value | Units |
|---|----------|------------|-------|
| Peak Pulse Power Dissipation at on 10/1000µs Waveform (Note 1, 2) | PPK | 400 | Watts |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 2, 3) | IFSM | 100 | Amps |
| Operating junction and storage temperature range | TJ, Tstg | -55 to 150 | °C |

- Note:**
1. Non repetitive current pulse and derated above TA=25°C
 2. Mounted on copper pads area of 0.2X0.2" (5X5mm)
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

RATINGS AND CHARACTERISTIC CURVES (SMAJ-V SERIES)

| Part number | | Reverse Standoff Voltage VRWM (Volts) | Breakdown Voltage VBR (Volts) | | Test Current (mA) | Maximum Clamping Voltage VC@Ipp (Volts) | Maximum Peak Pulse Current Ipp(A) | Maximum Reverse Leakage IR@VRWM (μA) |
|-------------|-------------|---------------------------------------|-------------------------------|-------|-------------------|---|-----------------------------------|--------------------------------------|
| UNI | BI | | MIN | MAX | | | | |
| SMAJ5.0A-V | SMAJ5.0CA-V | 5.00 | 6.40 | 7.00 | 10 | 9.2 | 43.5 | 3σ值 |
| SMAJ6.0A-V | SMAJ6.0CA-V | 6.00 | 6.67 | 7.37 | 10 | 10.3 | 38.8 | 3σ值 |
| SMAJ6.5A-V | SMAJ6.5CA-V | 6.50 | 7.22 | 7.98 | 10 | 11.2 | 35.7 | 3σ值 |
| SMAJ7.0A-V | SMAJ7.0CA-V | 7.00 | 7.78 | 8.60 | 10 | 12.0 | 33.3 | 3σ值 |
| SMAJ7.5A-V | SMAJ7.5CA-V | 7.50 | 8.33 | 9.21 | 1 | 12.9 | 31.0 | 3σ值 |
| SMAJ8.0A-V | SMAJ8.0CA-V | 8.00 | 8.89 | 9.83 | 1 | 13.6 | 29.4 | 3σ值 |
| SMAJ8.5A-V | SMAJ8.5CA-V | 8.50 | 9.44 | 10.40 | 1 | 14.4 | 27.8 | 3σ值 |
| SMAJ9.0A-V | SMAJ9.0CA-V | 9.00 | 10.00 | 11.10 | 1 | 15.4 | 26.0 | 3σ值 |
| SMAJ10A-V | SMAJ10CA-V | 10.50 | 11.10 | 12.30 | 1 | 17.0 | 23.5 | 1 |
| SMAJ11A-V | SMAJ11CA-V | 11.55 | 12.20 | 13.50 | 1 | 18.2 | 22.0 | 1 |
| SMAJ12A-V | SMAJ12CA-V | 12.60 | 13.30 | 14.70 | 1 | 19.9 | 20.1 | 1 |
| SMAJ13A-V | SMAJ13CA-V | 13.65 | 14.40 | 15.90 | 1 | 21.5 | 18.6 | 1 |
| SMAJ14A-V | SMAJ14CA-V | 14.70 | 15.60 | 17.20 | 1 | 23.2 | 17.2 | 1 |
| SMAJ15A-V | SMAJ15CA-V | 15.75 | 16.70 | 18.50 | 1 | 24.4 | 16.4 | 1 |
| SMAJ16A-V | SMAJ16CA-V | 16.80 | 17.80 | 19.70 | 1 | 26.0 | 15.4 | 1 |
| SMAJ17A-V | SMAJ17CA-V | 17.85 | 18.90 | 20.90 | 1 | 27.6 | 14.5 | 1 |
| SMAJ18A-V | SMAJ18CA-V | 18.90 | 20.00 | 22.10 | 1 | 29.2 | 13.7 | 1 |
| SMAJ20A-V | SMAJ20CA-V | 21.00 | 22.20 | 24.50 | 1 | 32.4 | 12.3 | 1 |
| SMAJ22A-V | SMAJ22CA-V | 23.10 | 24.40 | 26.90 | 1 | 35.5 | 11.3 | 1 |
| SMAJ24A-V | SMAJ24CA-V | 25.20 | 26.70 | 29.50 | 1 | 38.9 | 10.3 | 1 |
| SMAJ26A-V | SMAJ26CA-V | 27.30 | 28.90 | 31.90 | 1 | 42.1 | 9.5 | 1 |
| SMAJ28A-V | SMAJ28CA-V | 29.40 | 31.10 | 34.40 | 1 | 45.4 | 8.8 | 1 |
| SMAJ30A-V | SMAJ30CA-V | 31.50 | 33.30 | 36.80 | 1 | 48.4 | 8.3 | 1 |
| SMAJ33A-V | SMAJ33CA-V | 34.65 | 36.70 | 40.60 | 1 | 53.3 | 7.5 | 1 |
| SMAJ36A-V | SMAJ36CA-V | 37.80 | 40.00 | 44.20 | 1 | 58.1 | 6.9 | 1 |
| SMAJ40A-V | SMAJ40CA-V | 42.00 | 44.40 | 49.10 | 1 | 64.5 | 6.2 | 1 |
| SMAJ43A-V | SMAJ43CA-V | 45.15 | 47.80 | 52.80 | 1 | 69.4 | 5.8 | 1 |
| SMAJ45A-V | SMAJ45CA-V | 47.25 | 50.00 | 55.30 | 1 | 72.7 | 5.5 | 1 |
| SMAJ48A-V | SMAJ48CA-V | 50.40 | 53.30 | 58.90 | 1 | 77.4 | 5.2 | 1 |
| SMAJ51A-V | SMAJ51CA-V | 53.55 | 56.70 | 62.70 | 1 | 82.4 | 4.9 | 1 |
| SMAJ54A-V | SMAJ54CA-V | 56.70 | 60.00 | 66.30 | 1 | 87.1 | 4.6 | 1 |

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