# SPECIFICATION SHEET

## TRANSIENT VOLTAGE SUPPRESSORS DIODES TP6SMB SERIES

| | | |
|---|---|---|
| SPECIFICATION SHEET NO. | S0909- TP6SMB8V2AL000 | |
| ORIGINAL MFG/PART NO. | LGE Diodes/TP6SMB8.2A-L | |
| NEXTGEN PART CODE | TP6SMB8V2AL000 | Indicate This Code For RFQ /Order |
| DATE | Sept. 9, 2025 | |
| REVISION | A1 | Updated With Most Recent Data |
| DESCRIPTION AND MAIN PARAMETRICS | SMD Transient Voltage Suppressor (TVs) Diodes, Automotive Grade, TP6SMB Series<br>Case SMB/DO-214AA, 2 Pads, Unidirectional Type, Breakdown Voltage 8.2V,<br>Peak Pulse Power: 600 Watts, Reverse Surge Current: 49.59A Max.<br>Operating Junction Temp. Range -55°C ~+150°C<br>Package in Tape/Reel, 3000pcs/Reel<br>RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF) | |
| CUSTOMER | | |
| CUSTOMER PART NUMBER | | |
| CROSS REF. PART NUMBER | | |
| MEMO | | |

| VENDOR APPROVE |
|---|
| Issued/Checked/Approved<br>Mandy Xu<br>Ruby Zhang<br>Jack Zhang |
| Effective Date: Sept. 9, 2025 |

| CUSTOMER APPROVE |
|---|
| |
| Date: |

## MAIN FEATURE

*Image shown is a representation only.*

*Exact specifications should be obtained from the product dimension.*

- Glass Passivated Chip
- 600W Peak Pulse Power Capability With a 10/1000 μs Waveform, Repetitive Rate (Duty Cycle):0.01 %
- Uni-Directional and Bi-directional Polarity Option
- Low Leakage
- Excellent Clamping Capability
- Very Fast Response Time
- Short Lead Time
- Cross Competitors Parts and More.
- Automotive Grade
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)

## APPLICATION

- I/O Interface
- AC/DC Power Supply
- Low Frequency Signal Transmission Line (RS232, RS485, etc.)

## ELECTRICAL CHARACTERISTICS

- See Page 5 ~Page 11 For Different Part Code
- All Parameters are Subject To NextGen Components' Final Confirmation

## HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code TP6SMB8V2AL000 For RFQ and Order.

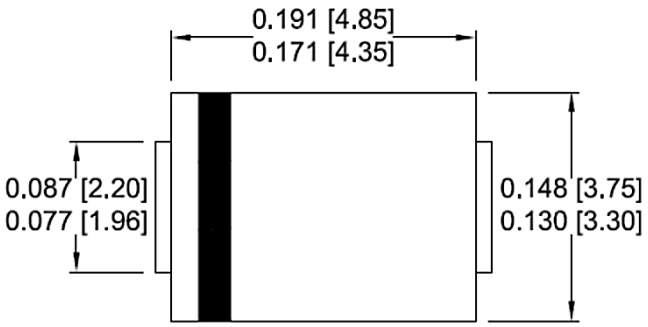
## PART CODE GUIDE

**RFQ**
Request For Quotation

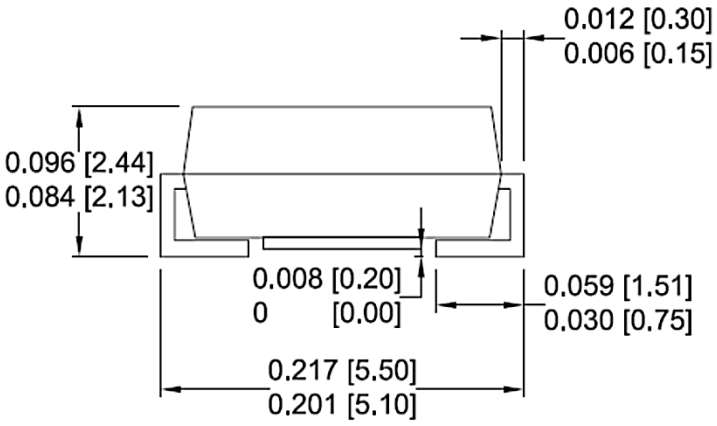
| CODE | NAME | KEY SPECIFICATION OPTION |
|---|---|---|
| TP6SMB | Product Series Code | SMD Transient Voltage Suppressors (TVs) Diodes,<br>Case SMB/DO-214AA, 2 Pads, Automotive Grade |
| 8V2A | Mode code | 8V2A: Breakdown Voltage 8.2V, Uni-directional Polarity Type,<br>Reverse Surge Current: 49.59A Max. |
| L000 | Internal Control Code | Letter or Digits (A~Z, a~z or 0~9) |
| XX | Special/Custom<br>Parameters Code | Letter or Digits (A~Z, a~z or 0~9) for Special Parametric;<br>Blank: N/A |

DIMENSION- Unit: Inch [mm], Case SMB/DO-214AA Outline

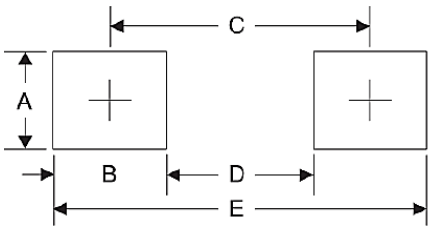
Top View




Side View




Recommend Pad Layout




| SYMBOL | A | B | C | D | E |
|---|---|---|---|---|---|
| Unit (Inch) | 0.11 | 0.094 | 0.181 | 0.086 | 0.276 |
| Unit (mm) | 2.80 | 2.40 | 4.60 | 2.20 | 7.00 |

## MECHANICAL DATA

| CASE | EXPOXY | LEAD | POLARITY | MOUNTING POSITION | MARKING |
|---|---|---|---|---|---|
| JEDEC SMB/DO-214AA Molded Plastic Body | UL 94V-0 Rate Flame Retardant | Solderable per MIL-STD 750, Method 2026 | Color Band Denotes Cathode End Except Bipolar | Any | See Marking Code List |

## MAX. RATING & CHARACTERISTICS - Ratings at 25℃ ambient temperature unless otherwise specified.

| PARAMETER | SYMBOLS | VALUE | UNITS |
|---|---|---|---|
| Peak Power Dissipation with 10/1000μs Waveform See Note 1 | $P_{pp}$ | 600 | W |
| Peak Pulse Current with a 10/1000μs waveform See Note 1 | $I_{pp}$ | See Page 6~ Page 11 | A |
| Power Dissipation On Infinite Heatsink at $T_L$ = 75 °C | $P_D$ | 5.0 | W |
| Peak Forward Surge Current 8.3ms Single Half Sine- Wave Unidirectional Type Only See Note 2 | $I_{FSM}$ | 100 | A |
| Maximum instantaneous forward voltage at 25A for Unidirectional Type Only See Note 3 | $V_F$ | 3.5/5.0 | V |
| Operating Junction And Storage Temperature Range | $T_J$, $T_{STG}$ | -55 ~ +150 | °C |

Note

1. Non-repetitive Current Pulse Per Fig.5 And Derated Above $T_A$= 25 °C Per Fig.1
2. Measured On 8.3 ms Single Half Sine-wave Or Equivalent Square Wave, Duty Cycle = 4 Pulses Per Minute Max.
3. $V_F$<3.5V for devices of $V_{BR}$<200V and $V_F$<5.0V for devices of $V_{BR}$>201V

## UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | VBR @ IT | | | | | | |
| | VRWM | Min. | Max. | IT | IR @ VRWM | IPP | VC @ IPP | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB6V8AL000 | 5.8 | 6.46 | 7.14 | 10 | 1000 | 57.14 | 10.5 | 6V8A |
| TP6SMB7V5AL000 | 6.4 | 7.13 | 7.88 | 10 | 500 | 53.1 | 11.3 | 7V5A |
| TP6SMB8V2AL000 | 7.0 | 7.79 | 8.61 | 10 | 200 | 49.59 | 12.1 | 8V2A |
| TP6SMB9V1AL000 | 7.8 | 8.65 | 9.56 | 1 | 50 | 44.78 | 13.4 | 9V1A |
| TP6SMB10AL0000 | 8.6 | 9.5 | 10.5 | 1 | 10 | 41.38 | 14.5 | 10A |
| TP6SMB11AL0000 | 9.4 | 10.45 | 11.55 | 1 | 5 | 38.46 | 15.6 | 11A |
| TP6SMB12AL0000 | 10.2 | 11.4 | 12.6 | 1 | 5 | 35.93 | 16.7 | 12A |
| TP6SMB13AL0000 | 11.1 | 12.35 | 13.65 | 1 | 1 | 32.97 | 18.2 | 13A |
| TP6SMB15AL0000 | 12.8 | 14.25 | 15.75 | 1 | 1 | 28.3 | 21.2 | 15A |
| TP6SMB16AL0000 | 13.6 | 15.2 | 16.8 | 1 | 1 | 26.67 | 22.5 | 16A |
| TP6SMB18AL0000 | 15.3 | 17.1 | 18.9 | 1 | 1 | 23.81 | 25.2 | 18A |
| TP6SMB20AL0000 | 17.1 | 19 | 21 | 1 | 1 | 21.66 | 27.7 | 20A |
| TP6SMB22AL0000 | 18.8 | 20.9 | 23.1 | 1 | 1 | 19.61 | 30.6 | 22A |
| TP6SMB24AL0000 | 20.5 | 22.8 | 25.2 | 1 | 1 | 18.07 | 33.2 | 24A |
| TP6SMB27AL0000 | 23.1 | 25.65 | 28.35 | 1 | 1 | 16.0 | 37.5 | 27A |
| TP6SMB30AL0000 | 25.6 | 28.5 | 31.5 | 1 | 1 | 14.49 | 41.4 | 30A |
| TP6SMB33AL0000 | 28.2 | 31.35 | 34.65 | 1 | 1 | 13.13 | 45.7 | 33A |
| TP6SMB36AL0000 | 30.8 | 34.2 | 37.8 | 1 | 1 | 12.02 | 49.9 | 36A |
| TP6SMB39AL0000 | 33.3 | 37.05 | 40.95 | 1 | 1 | 11.13 | 53.9 | 39A |
| TP6SMB43AL0000 | 36.8 | 40.85 | 45.15 | 1 | 1 | 10.12 | 59.3 | 43A |

## UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | $V_{BR}$ @ $I_T$ | | | | | | |
| | $V_{RWM}$ | Min. | Max. | $I_T$ | $I_R$ @ $V_{RWM}$ | $I_{PP}$ | $V_C$ @ $I_{PP}$ | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB47AL0000 | 40.2 | 44.65 | 49.35 | 1 | 1 | 9.26 | 64.8 | 47A |
| TP6SMB51AL0000 | 43.6 | 48.45 | 53.55 | 1 | 1 | 8.56 | 70.1 | 51A |
| TP6SMB56AL0000 | 47.8 | 53.2 | 58.8 | 1 | 1 | 7.79 | 77 | 56A |
| TP6SMB62AL0000 | 53 | 58.9 | 65.1 | 1 | 1 | 7.06 | 85 | 62A |
| TP6SMB68AL0000 | 58.1 | 64.6 | 71.4 | 1 | 1 | 6.52 | 92 | 68A |
| TP6SMB75AL0000 | 64.1 | 71.25 | 78.75 | 1 | 1 | 5.83 | 103 | 75A |
| TP6SMB82AL0000 | 70.1 | 77.9 | 86.1 | 1 | 1 | 5.31 | 113 | 82A |
| TP6SMB91AL0000 | 77.8 | 86.45 | 95.55 | 1 | 1 | 4.8 | 125 | 91A |
| TP6SMB100AL000 | 85.5 | 95 | 105 | 1 | 1 | 4.38 | 137 | 100A |
| TP6SMB110AL000 | 94 | 104.5 | 115.5 | 1 | 1 | 3.95 | 152 | 110A |
| TP6SMB120AL000 | 102 | 114 | 126 | 1 | 1 | 3.64 | 165 | 120A |
| TP6SMB130AL000 | 111 | 123.5 | 136.5 | 1 | 1 | 3.35 | 179 | 130A |
| TP6SMB150AL000 | 128 | 142.5 | 157.5 | 1 | 1 | 2.9 | 207 | 150A |
| TP6SMB160AL000 | 136 | 152 | 168 | 1 | 1 | 2.74 | 219 | 160A |
| TP6SMB170AL000 | 145 | 161.5 | 178.5 | 1 | 1 | 2.56 | 234 | 170A |
| TP6SMB180AL000 | 154 | 171 | 189 | 1 | 1 | 2.44 | 246 | 180A |
| TP6SMB200AL200A | 171 | 190 | 210 | 1 | 1 | 2.19 | 274 | 200A |
| TP6SMB220AL000 | 185 | 209 | 231 | 1 | 1 | 1.83 | 328 | 220A |
| TP6SMB250AL000 | 214 | 237.5 | 262.5 | 1 | 1 | 1.74 | 344 | 250A |
| TP6SMB300AL000 | 256 | 285 | 315 | 1 | 1 | 1.45 | 414 | 300A |

## UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | $V_{BR}$ @ $I_T$ | | | | | | |
| | $V_{RWM}$ | Min. | Max. | $I_T$ | $I_R$ @ $V_{RWM}$ | $I_{PP}$ | $V_C$ @ $I_{PP}$ | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB350AL000 | 299.3 | 332.5 | 367.5 | 1 | 1 | 1.24 | 482 | 350A |
| TP6SMB380AL000 | 324.9 | 361 | 399 | 1 | 1 | 1.14 | 524.4 | 380A |
| TP6SMB400AL000 | 342 | 380 | 420 | 1 | 1 | 1.09 | 548 | 400A |
| TP6SMB440AL000 | 376.2 | 418 | 462 | 1 | 1 | 0.99 | 607.2 | 440A |
| TP6SMB500AL000 | 427.5 | 475 | 525 | 1 | 1 | 0.87 | 690 | 500A |
| TP6SMB510AL000 | 434.5 | 485 | 535 | 1 | 1 | 0.86 | 698 | 510A |
| TP6SMB520AL000 | 444.6 | 494 | 546 | 1 | 1 | 0.84 | 717.6 | 520A |
| TP6SMB550AL000 | 470.3 | 522.5 | 577.5 | 1 | 1 | 0.79 | 759 | 550A |
| TP6SMB600AL000 | 513 | 570 | 630 | 1 | 1 | 0.72 | 828 | 600A |

## BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | $V_{BR}$ @ $I_T$ | | | | | | |
| | $V_{RWM}$ | Min. | Max. | $I_T$ | $I_R$ @ $V_{RWM}$ | $I_{PP}$ | $V_C$ @ $I_{PP}$ | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB6V8CL000 | 5.8 | 6.46 | 7.14 | 10 | 1000 | 57.14 | 10.5 | 6V8C |
| TP6SMB7V5CL000 | 6.4 | 7.13 | 7.88 | 10 | 500 | 53.1 | 11.3 | 7V5C |
| TP6SMB8V2CL000 | 7.0 | 7.79 | 8.61 | 10 | 200 | 49.59 | 12.1 | 8V2C |
| TP6SMB9V1CL000 | 7.8 | 8.65 | 9.56 | 1 | 50 | 44.78 | 13.4 | 9V1C |
| TP6SMB10CAL000 | 8.6 | 9.5 | 10.5 | 1 | 10 | 41.38 | 14.5 | 10C |
| TP6SMB11CAL000 | 9.4 | 10.45 | 11.55 | 1 | 5 | 38.46 | 15.6 | 11C |
| TP6SMB12CAL000 | 10.2 | 11.4 | 12.6 | 1 | 5 | 35.93 | 16.7 | 12C |
| TP6SMB13CAL000 | 11.1 | 12.35 | 13.65 | 1 | 1 | 32.97 | 18.2 | 13C |
| TP6SMB15CAL000 | 12.8 | 14.25 | 15.75 | 1 | 1 | 28.3 | 21.2 | 15C |
| TP6SMB16CAL000 | 13.6 | 15.2 | 16.8 | 1 | 1 | 26.67 | 22.5 | 16C |
| TP6SMB18CAL000 | 15.3 | 17.1 | 18.9 | 1 | 1 | 23.81 | 25.2 | 18C |
| TP6SMB20CAL000 | 17.1 | 19 | 21 | 1 | 1 | 21.66 | 27.7 | 20C |
| TP6SMB22CAL000 | 18.8 | 20.9 | 23.1 | 1 | 1 | 19.61 | 30.6 | 22C |
| TP6SMB24CAL000 | 20.5 | 22.8 | 25.2 | 1 | 1 | 18.07 | 33.2 | 24C |
| TP6SMB27CAL000 | 23.1 | 25.65 | 28.35 | 1 | 1 | 16.0 | 37.5 | 27C |
| TP6SMB30CAL000 | 25.6 | 28.5 | 31.5 | 1 | 1 | 14.49 | 41.4 | 30C |
| TP6SMB33CAL000 | 28.2 | 31.35 | 34.65 | 1 | 1 | 13.13 | 45.7 | 33C |
| TP6SMB36CAL000 | 30.8 | 34.2 | 37.8 | 1 | 1 | 12.02 | 49.9 | 36C |
| TP6SMB39CAL000 | 33.3 | 37.05 | 40.95 | 1 | 1 | 11.13 | 53.9 | 39C |
| TP6SMB43CAL000 | 36.8 | 40.85 | 45.15 | 1 | 1 | 10.12 | 59.3 | 43C |

## BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | $V_{BR}$ @ $I_T$ | | | | | | |
| | $V_{RWM}$ | Min. | Max. | $I_T$ | $I_R$ @ $V_{RWM}$ | $I_{PP}$ | $V_C$ @ $I_{PP}$ | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB47CAL000 | 40.2 | 44.65 | 49.35 | 1 | 1 | 9.26 | 64.8 | 47C |
| TP6SMB51CAL000 | 43.6 | 48.45 | 53.55 | 1 | 1 | 8.56 | 70.1 | 51C |
| TP6SMB56CAL000 | 47.8 | 53.2 | 58.8 | 1 | 1 | 7.79 | 77 | 56C |
| TP6SMB62CAL000 | 53 | 58.9 | 65.1 | 1 | 1 | 7.06 | 85 | 62C |
| TP6SMB68CAL000 | 58.1 | 64.6 | 71.4 | 1 | 1 | 6.52 | 92 | 68C |
| TP6SMB75CAL000 | 64.1 | 71.25 | 78.75 | 1 | 1 | 5.83 | 103 | 75C |
| TP6SMB82CAL000 | 70.1 | 77.9 | 86.1 | 1 | 1 | 5.31 | 113 | 82C |
| TP6SMB91CAL000 | 77.8 | 86.45 | 95.55 | 1 | 1 | 4.8 | 125 | 91C |
| TP6SMB100CL000 | 85.5 | 95 | 105 | 1 | 1 | 4.38 | 137 | 100C |
| TP6SMB110CL000 | 94 | 104.5 | 115.5 | 1 | 1 | 3.95 | 152 | 110C |
| TP6SMB120CL000 | 102 | 114 | 126 | 1 | 1 | 3.64 | 165 | 120C |
| TP6SMB130CL000 | 111 | 123.5 | 136.5 | 1 | 1 | 3.35 | 179 | 130C |
| TP6SMB150CL000 | 128 | 142.5 | 157.5 | 1 | 1 | 2.9 | 207 | 150C |
| TP6SMB160CL000 | 136 | 152 | 168 | 1 | 1 | 2.74 | 219 | 160C |
| TP6SMB170CL000 | 145 | 161.5 | 178.5 | 1 | 1 | 2.56 | 234 | 170C |
| TP6SMB180CL000 | 154 | 171 | 189 | 1 | 1 | 2.44 | 246 | 180C |
| TP6SMB200CL000 | 171 | 190 | 210 | 1 | 1 | 2.19 | 274 | 200C |
| TP6SMB220CL000 | 185 | 209 | 231 | 1 | 1 | 1.83 | 328 | 220C |
| TP6SMB250CL000 | 214 | 237.5 | 262.5 | 1 | 1 | 1.74 | 344 | 250C |
| TP6SMB300CL000 | 256 | 285 | 315 | 1 | 1 | 1.45 | 414 | 300C |

## BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

| Part Code | Working Peak Reverse Voltage | Breakdown Voltage | | Test Current | Max. Reverse Leakage | Max. Reverse Surge Current | Max. Clamping Voltage | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | $V_{BR}$ @ $I_T$ | | | | | | |
| | $V_{RWM}$ | Min. | Max. | $I_T$ | $I_R$ @ $V_{RWM}$ | $I_{PP}$ | $V_C$ @ $I_{PP}$ | |
| | V | V | V | mA | µA | A | V | |
| TP6SMB350CL000 | 299.3 | 332.5 | 367.5 | 1 | 1 | 1.24 | 482 | 350C |
| TP6SMB380CL000 | 324.9 | 361 | 399 | 1 | 1 | 1.14 | 524.4 | 380C |
| TP6SMB400CL000 | 342 | 380 | 420 | 1 | 1 | 1.09 | 548 | 400C |
| TP6SMB440CL000 | 376.2 | 418 | 462 | 1 | 1 | 0.99 | 607.2 | 440C |
| TP6SMB500CL000 | 427.5 | 475 | 525 | 1 | 1 | 0.87 | 690 | 500C |
| TP6SMB510CL000 | 434.5 | 485 | 535 | 1 | 1 | 0.86 | 698 | 510C |
| TP6SMB520CL000 | 444.6 | 494 | 546 | 1 | 1 | 0.84 | 717.6 | 520C |
| TP6SMB550CL000 | 470.3 | 522.5 | 577.5 | 1 | 1 | 0.79 | 759 | 550C |
| TP6SMB600CL000 | 513 | 570 | 630 | 1 | 1 | 0.72 | 828 | 600C |

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

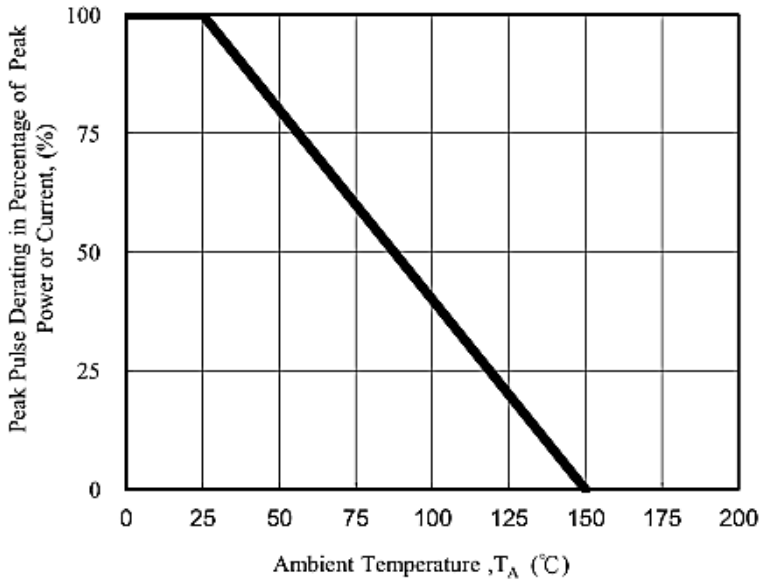



Fig. 1 - Pulse Derating Curve

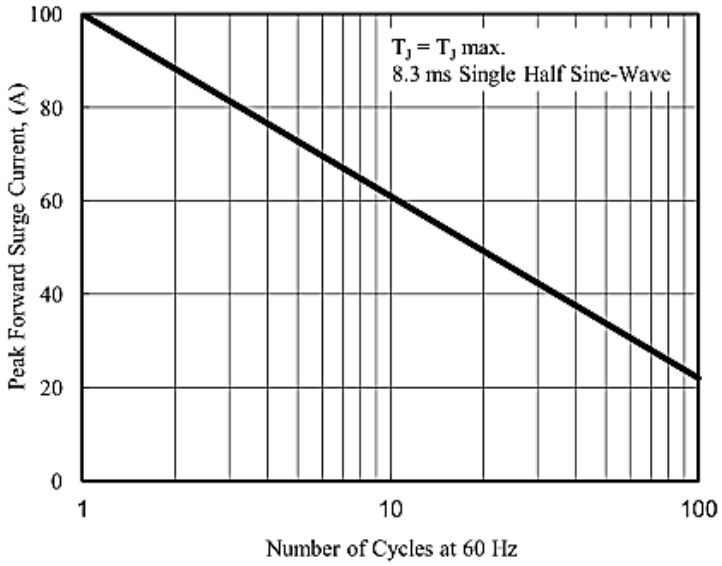



Fig. 2 - Maximum Non-Repetitive Surge Current

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

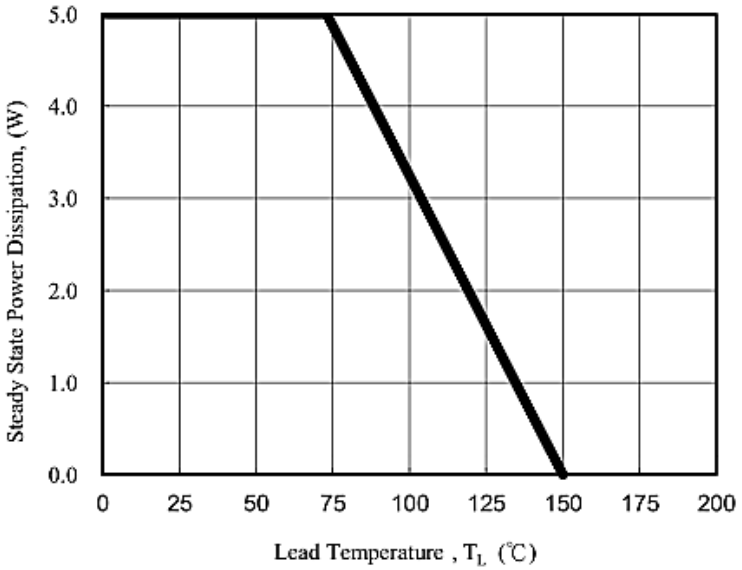



Fig. 3 - Steady State Power Derating Curve

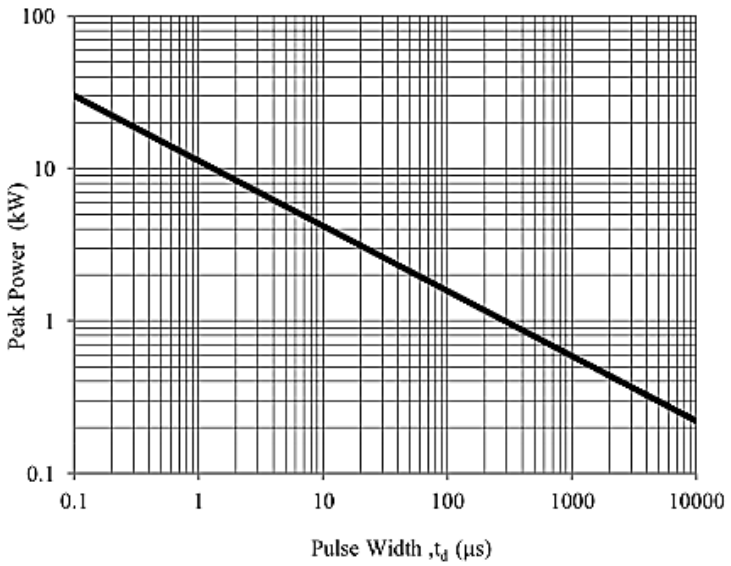



Fig. 4 - Peak Pulse Power Rating Curve

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

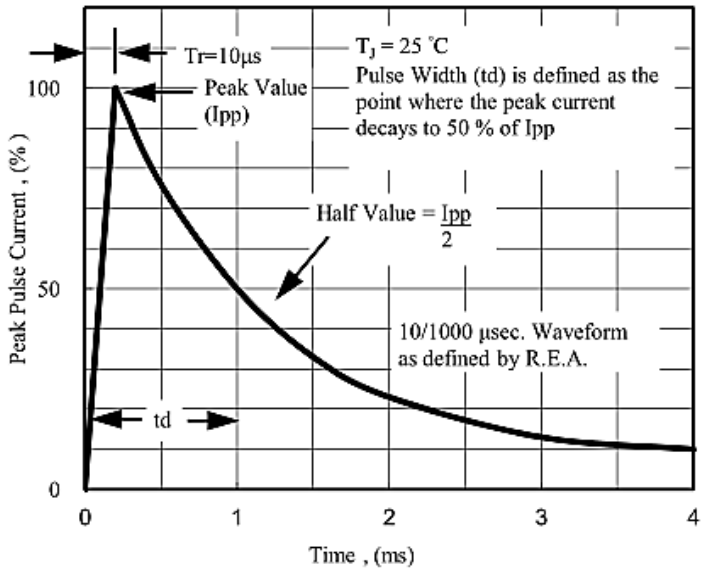



Fig. 5 - Pulse Waveform

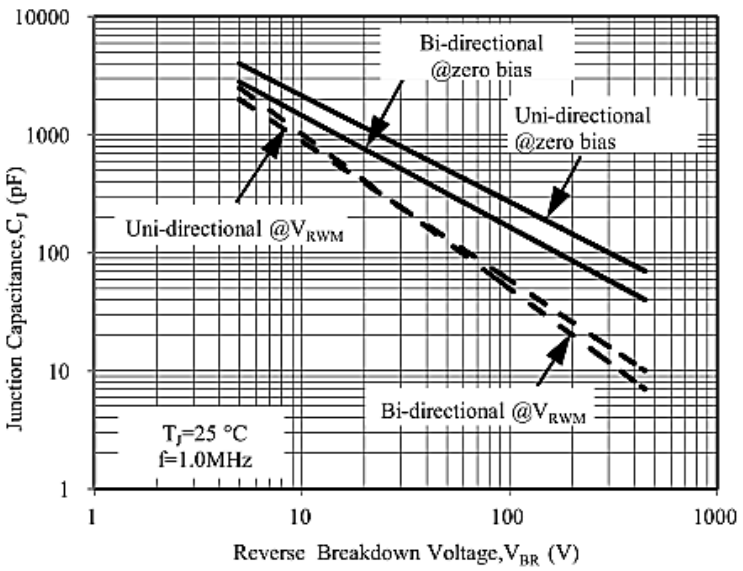
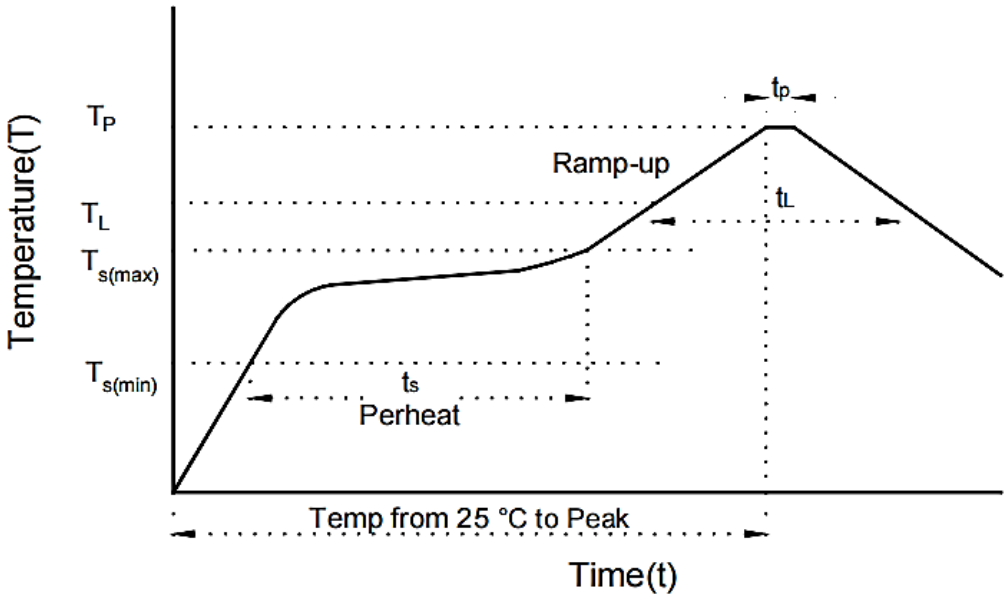



Fig. 6 - Typical Junction Capacitance

AECQ101 TEST TABLE- For Reference Only, Ta=25℃ Unless Otherwise Specified.

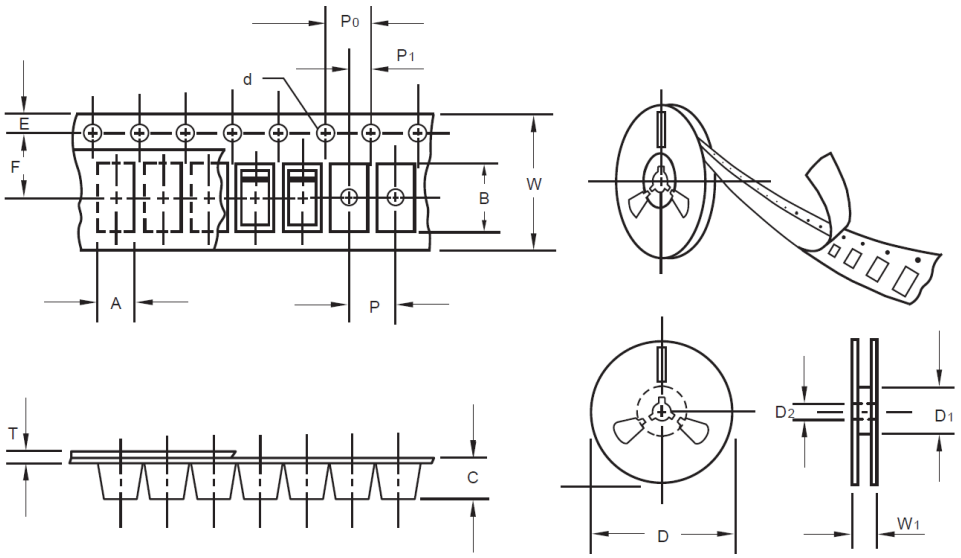
| NO. | TEST ITEM | TEST CONDITIONS | TEST STANDARD | SAMPLE SIZE | ACC/REJ |
|---|---|---|---|---|---|
| 1 | Pre- and Post-Stress Electrical Test | Electrical characterization @25℃ | AEC-Q101-C | All | 0/1 |
| 2 | External Visual | Body, Terminals Check | AEC-Q101-C | All | 0/1 |
| 3 | Parametric Verification | Individual AEC user specfication | AEC-Q101-C | All | 0/1 |
| 4 | H.T.R.B. | 80% Rated VR (T=150℃) /168hrs | AEC-Q101-C, JESD22- A108 | 22 | 0/1 |
| 5 | Temp. Cycling | -55°C/15Min, 150°C/15Min / 100 cycles | AEC-Q101-C, JESD22-A104 | 22 | 0/1 |
| 6 | Autoclave (A.C) | Ta=121±2℃ 15Psig (1.057kgf/cm²) | MIL-STD-750, Method 102 | 22 | 0/1 |
| 7 | ESD | HBM: 8KV (C=100pf R=1500Ω)/10 Times | AEC-Q101-C | 10 | 0/1 |
| 8 | D.P.A | Random sample of devices have successfully completed TC test. | AEC-Q101-C | 1 | 0/1 |
| 9 | Physical Dimension | For user request | JESD22-B100 | 10 | 0/1 |
| 10 | Solder Heat | 260±5℃ /10 sec. | AEC-Q101-C JESD22- B106 | 22 | 0/1 |
| 11 | Thermal shock | 0℃/5MIN , 100℃ / 5MIN, 100cycles | AEC-Q101-C JESD22- B106 | 22 | 0/1 |
| 12 | Solderability test | 245±5℃ / 5 sec | JESD22-B102, AEC-Q101 | 10 | 0/1 |

## RECOMMENDED SOLDERING PARAMETERS – FOR REFERENCE ONLY




| PROFILE FEATURE | | PB-FREE ASSEMBLY |
|---|---|---|
| Average Ramp-up Rate ($T_L$ Max to $T_p$) | | 3°C/second Max |
| Preheat | Temperature Min ($T_s$ Min.) | 150°C |
| | Temperature Max ($T_s$ Max.) | 200°C |
| | Time ($t_s$ Min. to $t_s$ Max.) | 60 ~ 180 seconds |
| Time maintained above | Temperature ($T_L$) | 217°C |
| | Time ($t_L$) | 60 ~ 150 seconds |
| Peak/Classification Temperature ($T_p$) | | 260 °C |
| Time within 5°C of actual Peak Temperature ($t_p$) | | 20 ~ 40 seconds |
| Ramp-down Rate | | 6 °C /Second Max. |
| Time 25 °C to Peak Temperature | | 8 Minutes Max. |
| Suggest reflow times | | 3 Times Max. |

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications




| ITEM | SYMBOL | TOLERANCE | SMB/DO-214AA |
|---|---|---|---|
| Carrier width | A | 0.1 | 3.81 |
| Carrier Length | B | 0.1 | 5.41 |
| Carrier Depth | C | 0.1 | 2.42 |
| Sprocket hole | d | 0.05 | 1.50 |
| 13”Reel outside diameter | D | 2.0 | 330.00 |
| 13”Reel inner diameter | D1 | Min. | 50.00 |
| Feed hole diameter | D2 | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 5.55 |
| Punch hole pitch | P | 0.1 | 8.00 |
| Sprocket hole pitch | P0 | 0.1 | 4.00 |
| Embossment center | P1 | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.30 |
| Tape width | W | 0.3 | 12.00 |
| Reel width | W1 | 1.0 | 12.30 |
| Qty./Reel (pcs) | 3000 | | |

## IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained can be obtained at Download Center.
2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained can be obtained at Download Center.
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