NextGen Components,Inc.

# PART CODE: SMDJ48CA00SDFX

## SPECIFICATION SHEET

| | | |
|---|---|---|
| **SPECIFICATION SHEET NO.** | Q1022-SMDJ48CA00SDFX | |
| **DATE** | Oct. 22, 2023 | |
| **REVISION** | A0 | Updated With Most Recent Data - Official First Release |
| **DESCRIPTION AND MAIN PARAMETRICS** | SMD Transient Voltage Suppressor (TVs) Diodes, SMDJ series,<br>SMDJ48CA Type, 2 Pads, Bidirectional ,<br>Reverse Stand-off Voltage ($V_R$) 48V Peak Pulse Power: 3000 Watts.<br>Operating Temp. Range -65°C ~+150°C<br>Package in Tape/Reel, 3000pcs/Reel<br>RoHS/RoHS III and REACH Compliant | |
| **CUSTOMER** | | |
| **CUSTOMER PART NO.** | | |
| **CROSS REF. PART NO.** | | |
| **ORIGINAL MFG/PART NO.** | MDD/SMDJ48CA | |
| **PART CODE** | SMDJ48CA00SDFX | |

| **VENDOR APPROVE** |
|---|
| Issued/Checked/Approved<br>NextGen Components, Inc. Jack Zhang<br>NextGen Components, Inc. Mandy Xu<br>NextGen Components, Inc. Ruby Zhang |
| DATE: Oct. 22, 2023 |

| **CUSTOMER APPROVE** |
|---|
| |
| DATE: |



NextGen Components, Inc. sales@NextGenComponent.com www.NextGenComponent.com

NextGen Components,Inc.

PART CODE: **SMDJ48CA00SDFX**

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

## MAIN FEATURE

- Space Low Profile Package
- Built-in Strain Relief
- Glass Passivated Junction
- Low Inductance
- Excellent Clamping Capability
- 3000W Peak Pulse Power Capability At 10/1000μs Waveform,
- Repetition Rate (Duty Cycle): 0.01%
- Fast Response Time
- Typical Ir Less Than 1μa Above 10v
- High Temperature Soldering: 260℃/10 Seconds At Terminals
- Plastic Package Has Underwriters Laboratory Flammability 94V-0
- RoHS III Complaint
- Cross Main Competitor Parts in Market

## APPLICATION

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

**RFQ**
Request For Quotation

## PART CODE GUIDE

| SMDJ | 48CA00 | S | DFX |
|---|---|---|---|
| 1 | 2 | 3 | 4 |

1. SMDJ: SMD Transient Voltage Suppressor (TVs) Diodes, SMDJ series
2. 48CA00: Specification code for Bidirectional, Reverse Stand-off Voltage ($V_R$) 48V
3. S: Package code, Tape/Reel
4. DFX: Marking code for “DFX” on the case surface, Different Marking for different specification

## ELECTRICAL CHARACTERISTICS

See Page 5 ~ Page 10 For Different Part Code

## HOW TO ORDER

Please indicate pat code and send us your RFQ by E-mail, sales@nextgencomponent.com

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**DIMENSION -** Unit: Inch/mm

**Image for reference**

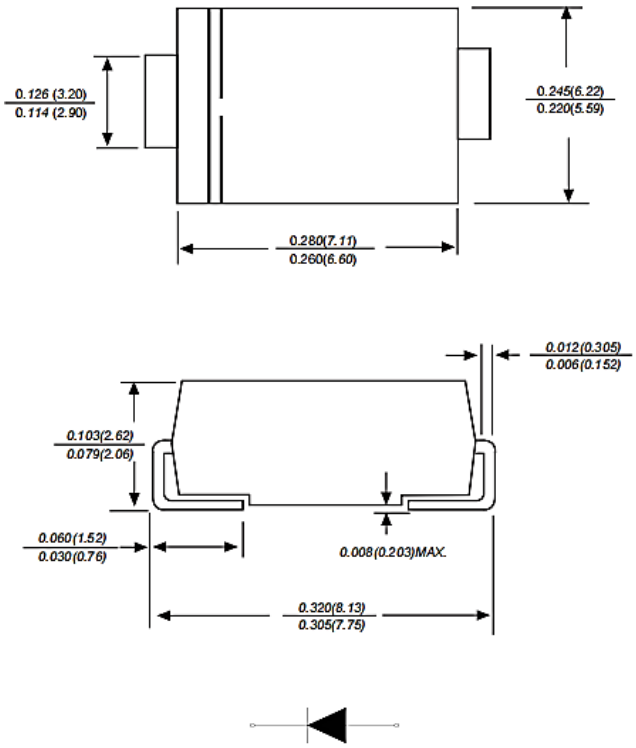


**Marking:** standard

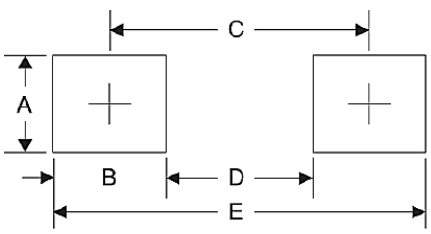
* See Marking Code List page 5~10

**Case Dimension:**

SMC/DO-214AB




**Recommend Pad Layout**




| Symbol | Unit (Inch) | Unit (mm) |
|---|---|---|
| A | 0.170 | 4.3 |
| B | 0.160 | 4.1 |
| C | 0.311 | 7.9 |
| D | 0.150 | 3.8 |
| E | 0.472 | 12 |

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

## MECHANICAL DATA

| Case | Terminals | Polarity | Mounting Position | Marking | Weight per piece |
|---|---|---|---|---|---|
| JEDEC SMC/DO-214AB molded plastic body | Solderable per MIL-STD-750, Method 2026 | Polarity symbol marking on body | ANY | See Marking Code List | 0.003 ounce, 0.095grams |

## MAX. RATING & CHARACTERISTICS - Ratings at 25℃ Ambient Temperature Unless Otherwise Specified.

| Parameter | SYMBOLS | VALUE | UNITS |
|---|---|---|---|
| Peak pulse power dissipation at 10/1000μs waveform (Note 1, Note 2) | $P_{ppm}$ | 3000 | W |
| Maximum Instantaneous Forward Voltage at 100A for Unidirectional only | $V_F$ | 3.5 | V |
| Steady state power dissipation at TA=50℃ | $P_{M(AV)}$ | 6.5 | W |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) | $I_{FSM}$ | 300 | A |
| Typical thermal resistance junction to lead | $R_{\theta JL}$ | 15 | °C/W |
| Typical thermal resistance junction to ambient | $R_{\theta JL}$ | 75 | °C/W |
| Operating junction temperature range | $T_J$ | -65 ~ +150 | °C |
| Storage temperature range | $T_{stg}$ | -65 ~ +150 | °C |

Notes

1. Non-repetitive current pulse, per Fig 3 and derated above TA=25 °C per Fig 2
2. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum.

NextGen Components,Inc.

PART CODE: **SMDJ48CA00SDFX**

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

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

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (µA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ050A00SRDE | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 326.1 | 800 | RDE |
| SMDJ060A00SRDG | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 291.3 | 800 | RDG |
| SMDJ065A00SRDK | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 267.9 | 500 | RDK |
| SMDJ070A00SPDM | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 250.0 | 200 | PDM |
| SMDJ075A00SPDP | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 232.6 | 100 | PDP |
| SMDJ080A00SPDR | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 220.6 | 50 | PDR |
| SMDJ085A00SPDT | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 208.3 | 20 | PDT |
| SMDJ090A00SPDV | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 194.8 | 10 | PDV |
| SMDJ10A000SPDX | 10.0 | 11.10 | 12.30 | 1 | 17.0 | 176.5 | 5 | PDX |
| SMDJ11A000SPDZ | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 164.8 | 2 | PDZ |
| SMDJ12A000SPEE | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 150.8 | 2 | PEE |
| SMDJ13A000SPEG | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 139.5 | 2 | PEG |
| SMDJ14A000SPEK | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 129.3 | 2 | PEK |
| SMDJ15A000SPEM | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 123.0 | 2 | PEM |
| SMDJ16A000SPEP | 16.0 | 17.80 | 19.70 | 1 | 26.0 | 115.4 | 2 | PEP |
| SMDJ17A000SPER | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 108.7 | 2 | PER |
| SMDJ18A000SPET | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 102.7 | 2 | PET |
| SMDJ20A000SPEV | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 92.6 | 2 | PEV |
| SMDJ22A000SPEX | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 84.5 | 2 | PEX |
| SMDJ24A000SPEZ | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 77.1 | 2 | PEZ |

NextGen Components,Inc.

PART CODE: **SMDJ48CA00SDFX**

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

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

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (µA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ26A000SPFE | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 71.3 | 2 | PFE |
| SMDJ28A000SPFG | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 66.1 | 2 | PFG |
| SMDJ30A000SPFK | 30.0 | 33.30 | 36.80 | 1 | 48.4 | 62.0 | 2 | PFK |
| SMDJ33A000SPFM | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 56.3 | 2 | PFM |
| SMDJ36A000SPFP | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 51.6 | 2 | PFP |
| SMDJ40A000SPFR | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 46.5 | 2 | PFR |
| SMDJ43A000SPFT | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 43.2 | 2 | PFT |
| SMDJ45A000SPFV | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 41.3 | 2 | PFV |
| SMDJ48A000SPFX | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 38.8 | 2 | PFX |
| SMDJ51A000SPFZ | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 36.4 | 2 | PFZ |
| SMDJ54A000SRGE | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 34.4 | 2 | RGE |
| SMDJ58A000SPGG | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 32.1 | 2 | PGG |
| SMDJ60A000SPGK | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 31.0 | 2 | PGK |
| SMDJ64A000SPGM | 64.0 | 71.10 | 78.60 | 1 | 103.0 | 29.1 | 2 | PGM |
| SMDJ70A000SPGP | 70.0 | 77.80 | 86.00 | 1 | 113.0 | 26.5 | 2 | PGP |
| SMDJ75A000SPGR | 75.0 | 83.30 | 92.10 | 1 | 121.0 | 24.8 | 2 | PGR |
| SMDJ78A000SPGT | 78.0 | 86.70 | 95.80 | 1 | 126.0 | 23.8 | 2 | PGT |
| SMDJ85A000SPGV | 85.0 | 94.40 | 104.00 | 1 | 137.0 | 21.9 | 2 | PGV |
| SMDJ90A000SPGX | 90.0 | 100.00 | 111.00 | 1 | 146.0 | 20.5 | 2 | PGX |
| SMDJ100A00SPGZ | 100.0 | 111.00 | 123.00 | 1 | 162.0 | 18.5 | 2 | PGZ |

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**ELECTRICAL CHARACTERISTICS UNIDIRECTIONAL TYPE** - Ta = 25℃

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (μA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ110A00SPHE | 110.0 | 122.00 | 135.00 | 1 | 177.0 | 16.9 | 2 | PHE |
| SMDJ120A00SPHG | 120.0 | 133.00 | 147.00 | 1 | 193.0 | 15.5 | 2 | PHG |
| SMDJ130A00SPHK | 130.0 | 144.00 | 159.00 | 1 | 209.0 | 14.4 | 2 | PHK |
| SMDJ150A00SPHM | 150.0 | 167.00 | 185.00 | 1 | 243.0 | 12.3 | 2 | PHM |
| SMDJ160A00SPHP | 160.0 | 178.00 | 197.00 | 1 | 259.0 | 11.6 | 2 | PHP |
| SMDJ170A00SPHR | 170.0 | 189.00 | 209.00 | 1 | 275.0 | 10.9 | 2 | PHR |

**Note:**

1. For parts without A , the VBR is ± 10%, and VC is 5% higher than A parts.
2. For bidirectional type having VR of 10 volts and less, the IR limit is double.

NextGen Components,Inc.

PART CODE: **SMDJ48CA00SDFX**

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

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

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (µA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ050CA0SDDE | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 326.1 | 800 | DDE |
| SMDJ060CA0SDDG | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 291.3 | 800 | DDG |
| SMDJ065CA0SDDK | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 267.9 | 500 | DDK |
| SMDJ070CA0SDDM | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 250.0 | 200 | DDM |
| SMDJ075CA0SDDP | 7.5 | 8.33 | 9.21 | 1 | 12.9 | 232.6 | 100 | DDP |
| SMDJ080CA0SDDR | 8.0 | 8.89 | 9.83 | 1 | 13.6 | 220.6 | 50 | DDR |
| SMDJ085CA0SDDT | 8.5 | 9.44 | 10.40 | 1 | 14.4 | 208.3 | 20 | DDT |
| SMDJ090CA0SDDV | 9.0 | 10.00 | 11.10 | 1 | 15.4 | 194.8 | 10 | DDV |
| SMDJ10CA00SDDX | 10.0 | 11.10 | 12.30 | 1 | 17.0 | 176.5 | 5 | DDX |
| SMDJ11CA00SDDZ | 11.0 | 12.20 | 13.50 | 1 | 18.2 | 164.8 | 2 | DDZ |
| SMDJ12CA00SDEE | 12.0 | 13.30 | 14.70 | 1 | 19.9 | 150.8 | 2 | DEE |
| SMDJ13CA00SDEG | 13.0 | 14.40 | 15.90 | 1 | 21.5 | 139.5 | 2 | DEG |
| SMDJ14CA00SDEK | 14.0 | 15.60 | 17.20 | 1 | 23.2 | 129.3 | 2 | DEK |
| SMDJ15CA00SDEM | 15.0 | 16.70 | 18.50 | 1 | 24.4 | 123.0 | 2 | DEM |
| SMDJ16CA00SDEP | 16.0 | 17.80 | 19.70 | 1 | 26.0 | 115.4 | 2 | DEP |
| SMDJ17CA00SDER | 17.0 | 18.90 | 20.90 | 1 | 27.6 | 108.7 | 2 | DER |
| SMDJ18CA00SDET | 18.0 | 20.00 | 22.10 | 1 | 29.2 | 102.7 | 2 | DET |
| SMDJ20CA00SDEV | 20.0 | 22.20 | 24.50 | 1 | 32.4 | 92.6 | 2 | DEV |
| SMDJ22CA00SDEX | 22.0 | 24.40 | 26.90 | 1 | 35.5 | 84.5 | 2 | DEX |
| SMDJ24CA00SDEZ | 24.0 | 26.70 | 29.50 | 1 | 38.9 | 77.1 | 2 | DEZ |

NextGen Components,Inc.

PART CODE: **SMDJ48CA00SDFX**

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

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

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (µA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ26CA00SDFE | 26.0 | 28.90 | 31.90 | 1 | 42.1 | 71.3 | 2 | DFE |
| SMDJ28CA00SDFG | 28.0 | 31.10 | 34.40 | 1 | 45.4 | 66.1 | 2 | DFG |
| SMDJ30CA00SDFK | 30.0 | 33.30 | 36.80 | 1 | 48.4 | 62.0 | 2 | DFK |
| SMDJ33CA00SDFM | 33.0 | 36.70 | 40.60 | 1 | 53.3 | 56.3 | 2 | DFM |
| SMDJ36CA00SDFP | 36.0 | 40.00 | 44.20 | 1 | 58.1 | 51.6 | 2 | DFP |
| SMDJ40CA00SDFR | 40.0 | 44.40 | 49.10 | 1 | 64.5 | 46.5 | 2 | DFR |
| SMDJ43CA00SDFT | 43.0 | 47.80 | 52.80 | 1 | 69.4 | 43.2 | 2 | DFT |
| SMDJ45CA00SDFV | 45.0 | 50.00 | 55.30 | 1 | 72.7 | 41.3 | 2 | DFV |
| SMDJ48CA00SDFX | 48.0 | 53.30 | 58.90 | 1 | 77.4 | 38.8 | 2 | DFX |
| SMDJ51CA00SDFZ | 51.0 | 56.70 | 62.70 | 1 | 82.4 | 36.4 | 2 | DFZ |
| SMDJ54CA00SDGE | 54.0 | 60.00 | 66.30 | 1 | 87.1 | 34.4 | 2 | DGE |
| SMDJ58CA00SDGG | 58.0 | 64.40 | 71.20 | 1 | 93.6 | 32.1 | 2 | DGG |
| SMDJ60CA00SDGK | 60.0 | 66.70 | 73.70 | 1 | 96.8 | 31.0 | 2 | DGK |
| SMDJ64CA00SDGM | 64.0 | 71.10 | 78.60 | 1 | 103.0 | 29.1 | 2 | DGM |
| SMDJ70CA00SDGP | 70.0 | 77.80 | 86.00 | 1 | 113.0 | 26.5 | 2 | DGP |
| SMDJ75CA00SDGR | 75.0 | 83.30 | 92.10 | 1 | 121.0 | 24.8 | 2 | DGR |
| SMDJ78CA00SDGT | 78.0 | 86.70 | 95.80 | 1 | 126.0 | 23.8 | 2 | DGT |
| SMDJ85CA00SDGV | 85.0 | 94.40 | 104.00 | 1 | 137.0 | 21.9 | 2 | DGV |
| SMDJ90CA00SDGX | 90.0 | 100.00 | 111.00 | 1 | 146.0 | 20.5 | 2 | DGX |
| SMDJ100CA0SDGZ | 100.0 | 111.00 | 123.00 | 1 | 162.0 | 18.5 | 2 | DGZ |

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**ELECTRICAL CHARACTERISTICS BIDIRECTIONAL TYPE** - Ta = 25℃

| Part Code | Reverse Stand-off Voltage V R (V) | Breakdown Voltage V BR @ I T (V) | | Test Current I T (mA) | Max. Clamp Voltage V C @ I PP (V) | Peak Pulse Current I PP (A) | Reverse Leakage I R @ V R (μA ) | Marking Code |
|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | | | | | |
| SMDJ110CA0SDHE | 110.0 | 122.00 | 135.00 | 1 | 177.0 | 16.9 | 2 | DHE |
| SMDJ120CA0SDHG | 120.0 | 133.00 | 147.00 | 1 | 193.0 | 15.5 | 2 | DHG |
| SMDJ130CA0SDHK | 130.0 | 144.00 | 159.00 | 1 | 209.0 | 14.4 | 2 | DHK |
| SMDJ150CA0SDHM | 150.0 | 167.00 | 185.00 | 1 | 243.0 | 12.3 | 2 | DHM |
| SMDJ160CA0SDHP | 160.0 | 178.00 | 197.00 | 1 | 259.0 | 11.6 | 2 | DHP |
| SMDJ170CA0SDHR | 170.0 | 189.00 | 209.00 | 1 | 275.0 | 10.9 | 2 | DHR |

**Note:**

1. For parts without A , the VBR is ± 10%, and VC is 5% higher than A parts.
2. For bidirectional type having VR of 10 volts and less, the IR limit is double.

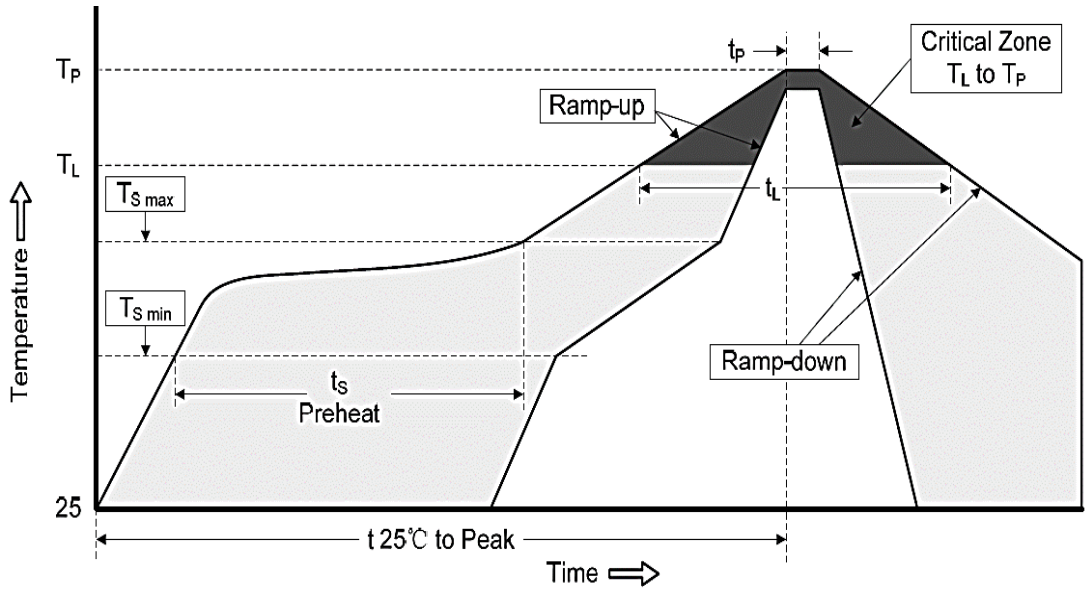
# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

## RELIABILITY

| Number | Experiment Items | Experiment Method And Conditions | Reference Documents |
|---|---|---|---|
| 1 | Solder Resistance Test | Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32" | MIL-STD-750D METHOD-2031.2 |
| 2 | Solderability Test | 230°C ±5°C for 5 sec. | MIL-STD-750D METHOD-2026.1 0 |
| 3 | Pull Test | 1 kg in axial lead direction for 10 sec. | MIL-STD-750D METHOD-2036.4 |
| 4 | Bend Test | 0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times | MIL-STD-750D METHOD-2036.4 |
| 5 | High Temperature Reverse Bias Test | $T_A$=100°C for 1000 Hours at $V_R$=80% Rated $V_R$ | MIL-STD-750D METHOD-1038.4 |
| 6 | Forward Operation Life Test | TA=25°C Rated Average Rectified Current | MIL-STD-750D METHOD-1027.3 |
| 7 | Intermittent Operation Life Test | On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles. | MIL-STD-750D METHOD-1036.3 |
| 8 | Pressure Cooker Test | 15 PSIG, $T_A$=121°C, 4 hours | MIL-S-19500 APPENOIXC |
| 9 | Temperature Cycling Test | -55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles. | MIL-STD-750D METHOD-1051.7 |
| 10 | Thermal Shock Test | 0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles | MIL-STD-750D METHOD-1056.7 |
| 11 | Forward Surge Test | 8.3ms Single Sale Sine-wave One Surge. | MIL-STD-750D METHOD-4066.4 |
| 12 | Humidity Test | $T_A$=65°C, RH=98% for 1000 hours. | MIL-STD-750D METHOD-1021.3 |
| 13 | High Temperature Storage life Test | 150°C for 1000 Hours | MIL-STD-750D METHOD-1031.5 |

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**SUGGESTED REFLOW PROFILE -** For Reference Only




| | | |
|---|---|---|
| **Profile Feature** | | Pb-Free Assembly |
| **Average Ramp-up Rate (Ts Max to Tp)** | | 3℃/second Max |
| **Preheat** | **Temperature Min (Ts Min.)** | 150℃ |
| | **Temperature Max (Ts Max.)** | 200℃ |
| | **Time (ts Min. to ts Max.)** | 60 ~ 180 seconds |
| **Time maintained above** | **Temperature (TL)** | 217℃ |
| | **Time (tL)** | 60 ~ 150 seconds |
| **Peak/Classification Temperature (Tp)** | | 260 ℃ |
| **Time within 5℃ of actual Peak Temperature (tp)** | | 20 ~ 40 seconds |
| **Ramp-down rate** | | 6 ℃ /Second Max. |
| **Time 25 ℃ to Peak Temperature** | | 8 minutes Max. |
| **Suggest reflow times** | | 3 Times Max. |

# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**RATINGS AND CHARACTERISTIC CURVES** (For Reference Only) - Ta= 25°C Unless Otherwise Specified

Figure 1. Peak Pulse Power Rating Curve

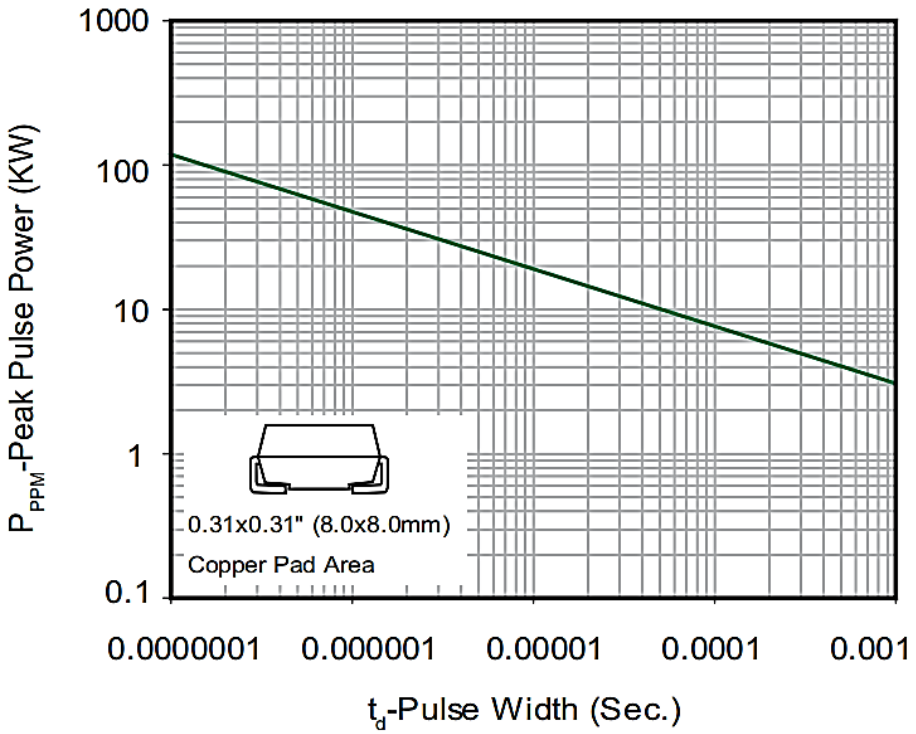
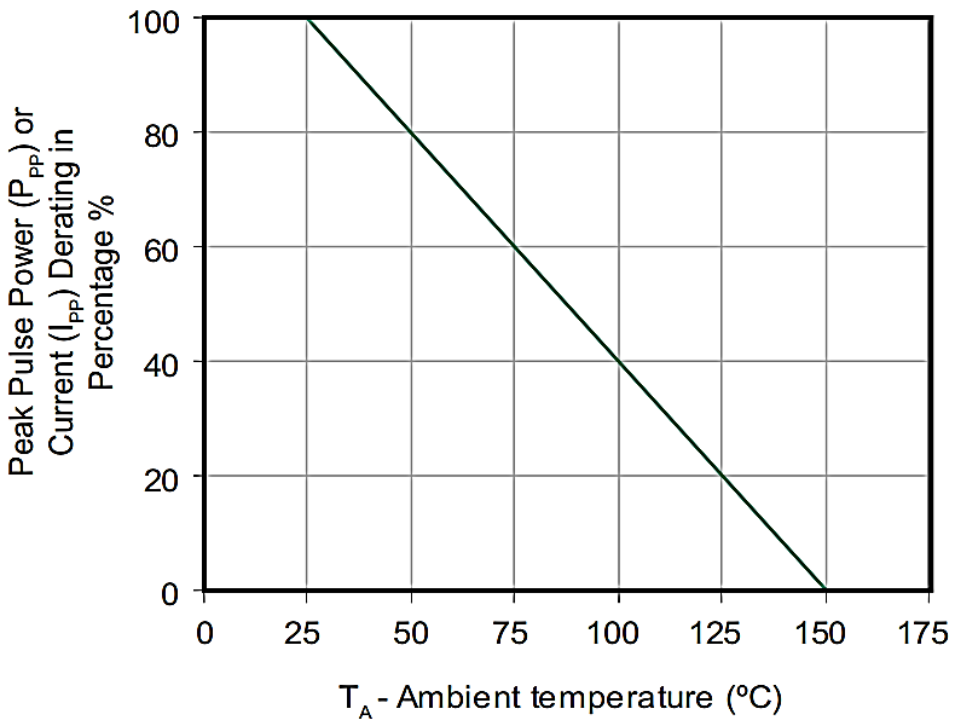



Figure 2. Pulse Derating Curve



**RATINGS AND CHARACTERISTIC CURVES** (For Reference Only) - Ta= 25°C Unless Otherwise Specified

Figure 3. Pulse Waveform

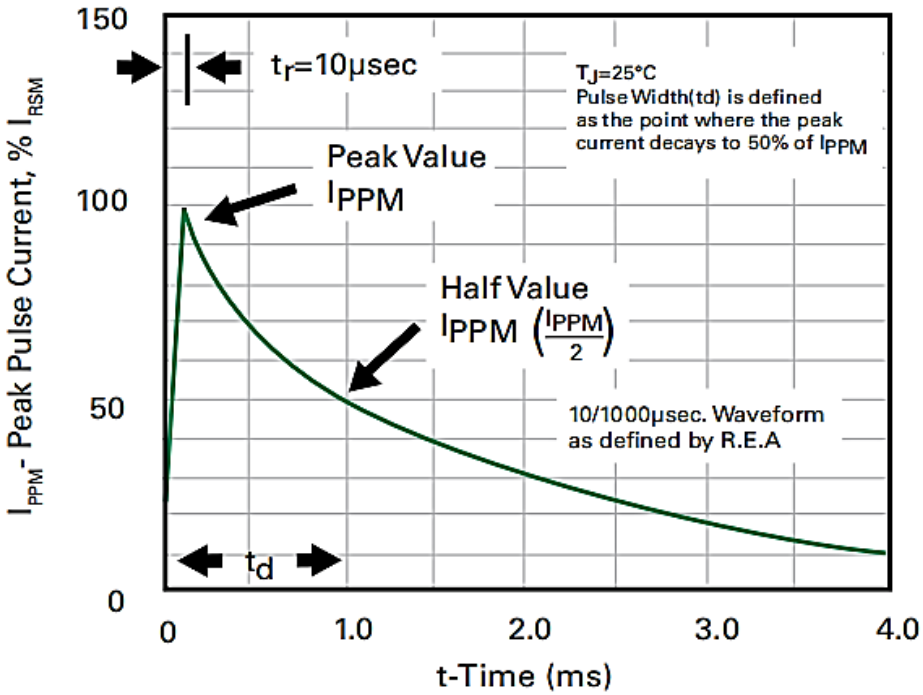
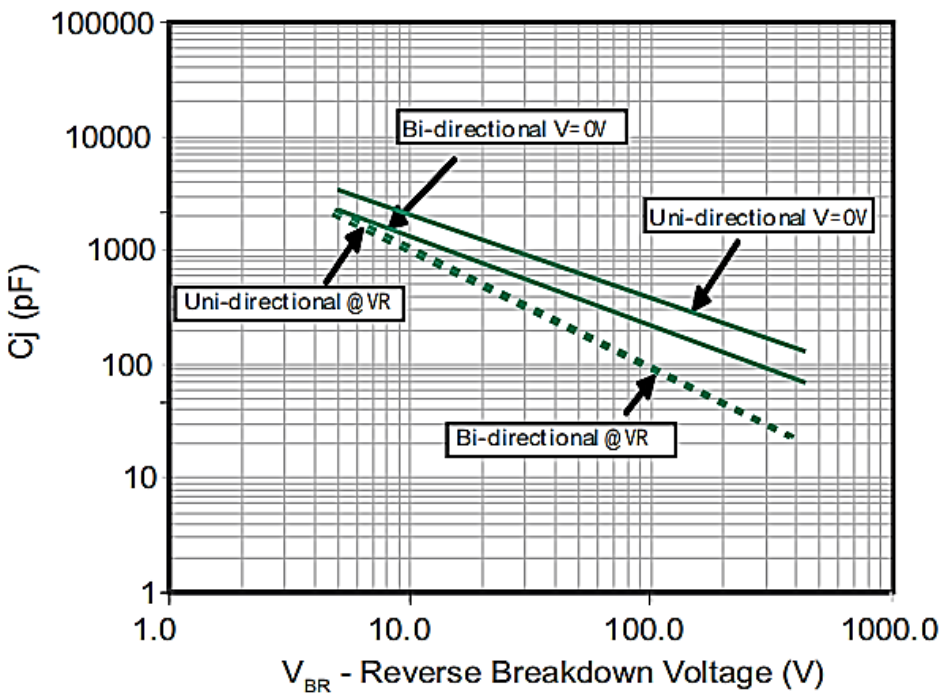



Figure 4 - Typical Junction Capacitance



**RATINGS AND CHARACTERISTIC CURVES** (For Reference Only) - Ta= 25°C Unless Otherwise Specified

Figure 5 - Steady State Power Derating Curve

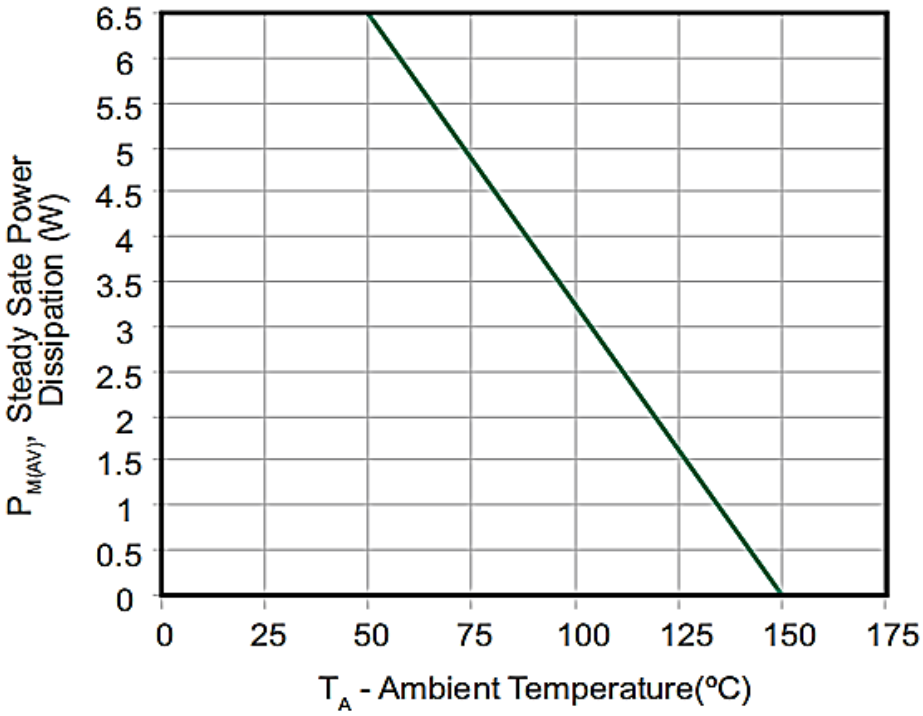
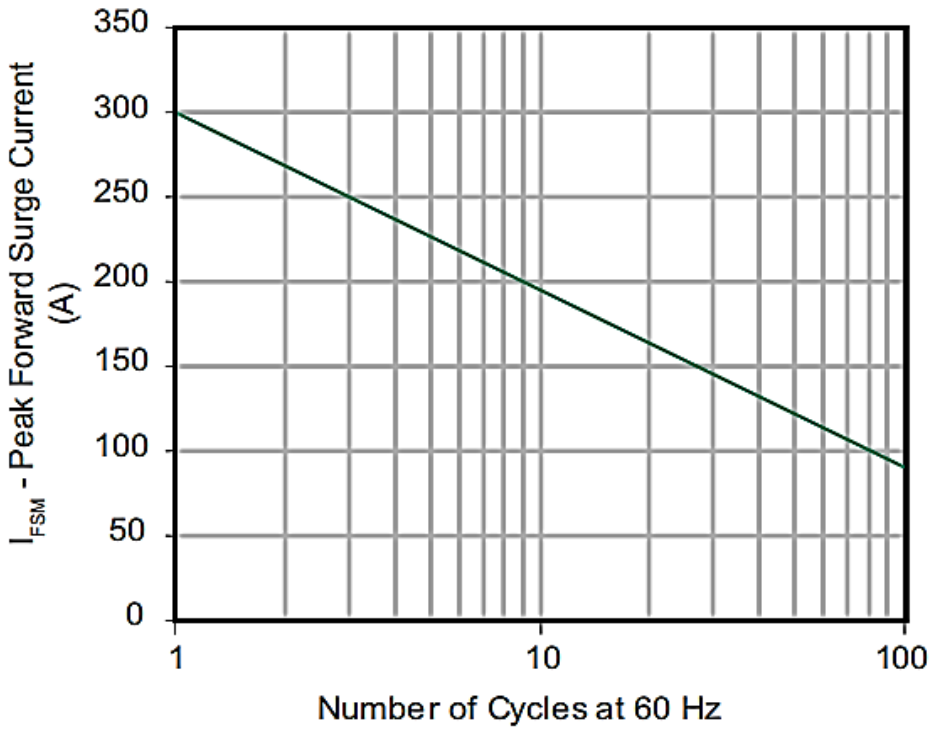



Figure 6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional only



# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**RATINGS AND CHARACTERISTIC CURVES** (For Reference Only) - Ta= 25°C Unless Otherwise Specified

Figure 7 - Steady State Power Derating
Dissipation Derating Curve

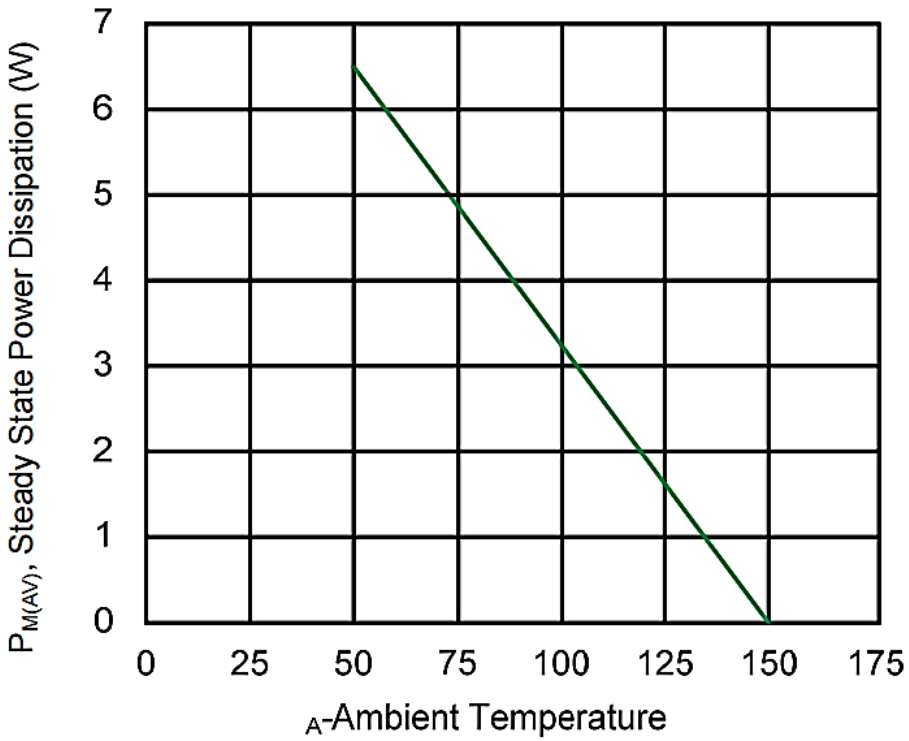
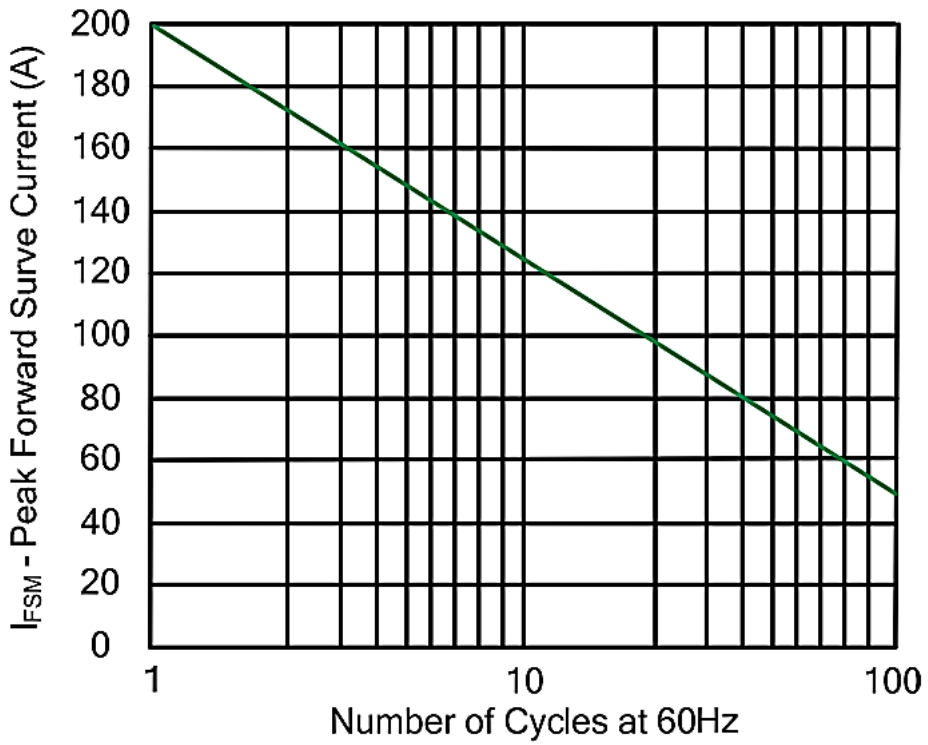


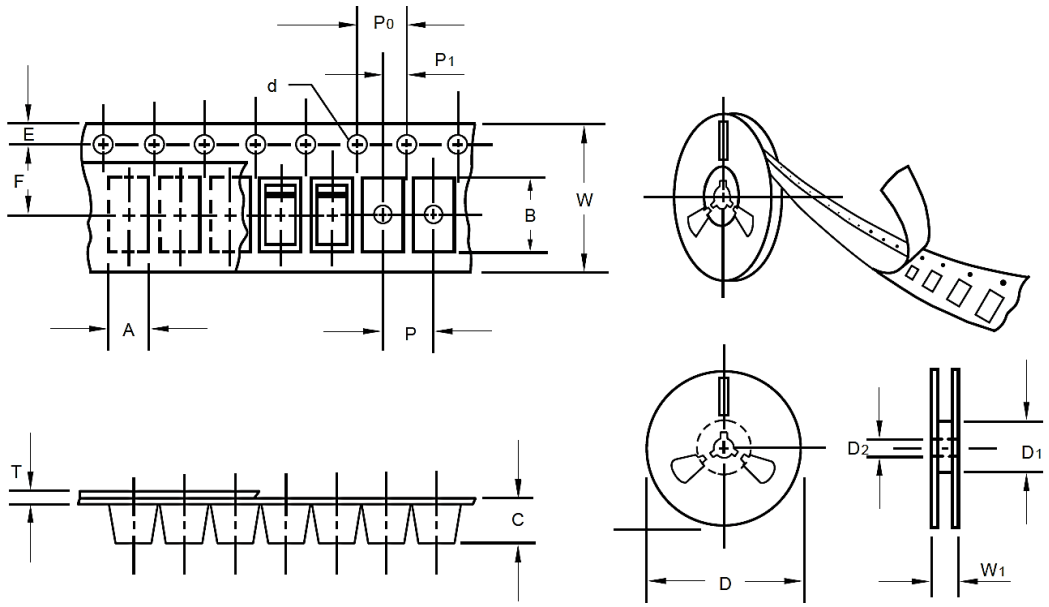

Figure 8 - Maximum Non-Repetitive Forward
Surge Current Uni-Directional only



# SMD TRANSIENT VOLTAGE SUPPRESSORS DIODES SMDJ SERIES

**TAPE/REEL** (Unit: mm)

All Devices are packed in accordance with EIA standard RS-481-A and specifications.




| Item | Symbol | Tolerance | SMC/DO-214AB |
|---|---|---|---|
| Carrier width | A | 0.1 | 6.15 |
| Carrier Length | B | 0.1 | 8.41 |
| Carrier Depth | C | 0.1 | 2.42 |
| Sprocket hole | d | 0.05 | 1.50 |
| 13”Reel outside diameter | D | 2.0 | 330.0 |
| 13”Reel inner diameter | D1 | - | 50.0Min. |
| 7”Reel outside diameter | D | - | - |
| 7”Reel inner diameter | D1 | - | - |
| Feed hole diameter | D2 | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 7.50 |
| 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 | 0.25 |
| Tape width | W | 0.3 | 16.00 |
| Reel width | W1 | 1.0 | 16.50 |
| Package | 3000pcs/Reel, 2 Reels/ Box | | |

## 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 after clicked.

## 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 after clicked.

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P4SMA30A P4SMA68CA P6SMB200A P6SMB27A SDR319M508S012 SIR315M000S042 BZT52B7V5 P6SMB150CA 1SMA4751A BZT52B13 SMDJ6.5A BZT52B20 BZT52C8V2S P4SMA39CA SAR303M825S032 1SMA4745A FK10M70000S0AJ P4SMA15CA P6SMB150A SMDJ30CA SMDJ43CA YP32K76800S103 BZT52C24 MM1W16 P4SMA12A SDR315M000S011 BZT52B47 MMSZ5252B P6SMB24CA YP32K76800S601