



# THE DATASHEET OF SMCJ180



# Transient Voltage Suppressors DO-214AB/SMC Package

SMCJ Series

MERITEK

## FEATURE

- Breakdown Voltage from 5.0 to 440V
- 1500W peak pulse power capability with a 10/1000 $\mu$ s waveform, repetitive rate (duty cycle): 0.01%
- Glass passivated chip
- Excellent clamping capability, fast response time.
- Low incremental surge resistance, Low profile package
- Terminal: Solderable per MIL-STD-750, Method 2026
- Epoxy: UL 94V-0 rate flame retardant
- UL/cUL safety approved: certification No: E223045



## ELECTRICAL CHARACTERISTICS



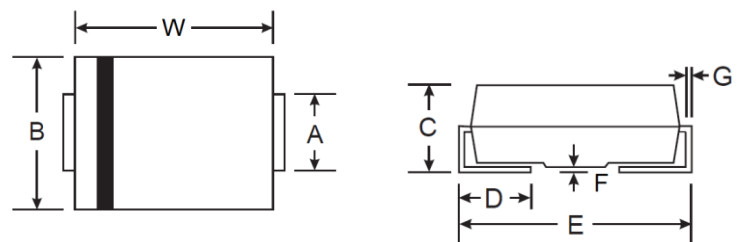
| Parameter   | Symbols        | Value          | Unit  |
|---|----------------|----------------|-------|
| Peak power dissipation with a 10/1000 $\mu$ s waveform(1)   | $P_{PP}$       | 1500           | Watts |
| Peak pulse current with a 10/1000 $\mu$ s waveform(1)   | $I_{PP}$       | See Next Table | Amps  |
| Power dissipation on infinite heatsink at TL = 75 °C  | $P_D$          | 6.5            | Watts |
| Peak forward surge current, 8.3 ms single half sine-wave unidirectional only. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum. | $I_{FSM}$      | 200            | Amps  |
| Maximum instantaneous forward voltage at 25 A for unidirectional only. $V_F < 3.5V$ for devices of $V_{BR} < 200V$ and $V_F < 5.0V$ for devices of $V_{BR} > 201V$                          | $V_F$          | 3.5/5.0        | Volts |
| Operating junction and storage temperature range  | $T_J, T_{STG}$ | -55 to +150    | °C    |

Rating at 25°C, ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

1.Non-repetitive current pulse per Fig.5 and derated above  $T_A=25^\circ C$  per Fig.1

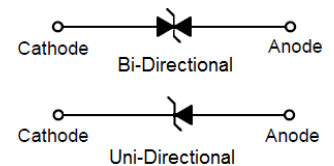
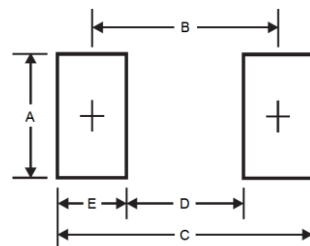
## DIMENSIONS

| Item | DO-214AB(SMC) |       |
|------|---------------|-------|
|      | Milimeters    |       |
|      | Min.          | Max.  |
| W    | 6.52          | 7.11  |
| A    | 2.75          | 3.25  |
| B    | 5.52          | 6.22  |
| C    | 2.00          | 2.62  |
| D    | 0.76          | 1.52  |
| E    | 7.64          | 8.13  |
| F    | -             | 0.203 |
| G    | 0.152         | 0.305 |



## SOLDERING PAD LAYOUT

| A   | B   | C   | D   | E   |
|-----|-----|-----|-----|-----|
| 3.3 | 6.9 | 9.3 | 4.4 | 2.5 |



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| Device Type (Uni) | Device Type (Bi) | Marking Code |     | Breakdown Voltage VBR@IT |        |        | Working Peak Reverse Voltage VRWM(V) | Maximum Reverse Leakage IR @ VRWM(V) | Maximum Reverse Surge Current Ipp(A) | Maximum Clamping Voltage VC@Ipp |
|-------------------|------------------|--------------|-----|--------------------------|--------|--------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
|                   |                  | Uni          | Bi  | Min(V)                   | Max(V) | IT(mA) |                                      |                                      |                                      |                                 |
| SMCJ5.0           | SMCJ5.0C         | GDD          | BDD | 6.40                     | 7.30   | 10     | 5.0                                  | 1000                                 | 156.25                               | 9.6                             |
| SMCJ5.0A          | SMCJ5.0CA        | GDE          | BDE | 6.40                     | 7.00   | 10     | 5.0                                  | 1000                                 | 163.04                               | 9.2                             |
| SMCJ6.0           | SMCJ6.0C         | GDF          | BDF | 6.67                     | 8.15   | 10     | 6.0                                  | 1000                                 | 131.58                               | 11.4                            |
| SMCJ6.0A          | SMCJ6.0CA        | GDG          | BDG | 6.67                     | 7.37   | 10     | 6.0                                  | 1000                                 | 145.63                               | 10.3                            |
| SMCJ6.5           | SMCJ6.5C         | GDH          | BDH | 7.22                     | 8.82   | 10     | 6.5                                  | 500                                  | 121.95                               | 12.3                            |
| SMCJ6.5A          | SMCJ6.5CA        | GDK          | BDK | 7.22                     | 7.98   | 10     | 6.5                                  | 500                                  | 133.93                               | 11.2                            |
| SMCJ7.0           | SMCJ7.0C         | GDL          | BDL | 7.78                     | 9.51   | 10     | 7.0                                  | 200                                  | 112.78                               | 13.3                            |
| SMCJ7.0A          | SMCJ7.0CA        | GDM          | BDM | 7.78                     | 8.60   | 10     | 7.0                                  | 200                                  | 125.00                               | 12.0                            |
| SMCJ7.5           | SMCJ7.5C         | GDN          | BDN | 8.33                     | 10.20  | 1      | 7.5                                  | 100                                  | 104.90                               | 14.3                            |
| SMCJ7.5A          | SMCJ7.5CA        | GDP          | BDP | 8.33                     | 9.21   | 1      | 7.5                                  | 100                                  | 116.28                               | 12.9                            |
| SMCJ8.0           | SMCJ8.0C         | GDQ          | BDQ | 8.89                     | 10.90  | 1      | 8.0                                  | 50                                   | 100.00                               | 15.0                            |
| SMCJ8.0A          | SMCJ8.0CA        | GDR          | BDR | 8.89                     | 9.83   | 1      | 8.0                                  | 50                                   | 110.29                               | 13.6                            |
| SMCJ8.5           | SMCJ8.5C         | GDS          | BDS | 9.44                     | 11.50  | 1      | 8.5                                  | 20                                   | 94.34                                | 15.9                            |
| SMCJ8.5A          | SMCJ8.5CA        | GDT          | BDT | 9.44                     | 10.40  | 1      | 8.5                                  | 20                                   | 104.17                               | 14.4                            |
| SMCJ9.0           | SMCJ9.0C         | GDU          | BDU | 10.00                    | 12.20  | 1      | 9.0                                  | 10                                   | 88.76                                | 16.9                            |
| SMCJ9.0A          | SMCJ9.0CA        | GDV          | BDV | 10.00                    | 11.10  | 1      | 9.0                                  | 10                                   | 97.40                                | 15.4                            |
| SMCJ10            | SMCJ10C          | GDW          | BDW | 11.10                    | 13.60  | 1      | 10.0                                 | 5                                    | 79.79                                | 18.8                            |
| SMCJ10A           | SMCJ10CA         | GDX          | BDX | 11.10                    | 12.30  | 1      | 10.0                                 | 5                                    | 88.24                                | 17.0                            |
| SMCJ11            | SMCJ11C          | GDY          | BDY | 12.20                    | 14.90  | 1      | 11.0                                 | 5                                    | 74.63                                | 20.1                            |
| SMCJ11A           | SMCJ11CA         | GDZ          | BDZ | 12.20                    | 13.50  | 1      | 11.0                                 | 5                                    | 82.42                                | 18.2                            |
| SMCJ12            | SMCJ12C          | GED          | BED | 13.30                    | 16.30  | 1      | 12.0                                 | 5                                    | 68.18                                | 22.0                            |
| SMCJ12A           | SMCJ12CA         | GEE          | BEE | 13.30                    | 14.70  | 1      | 12.0                                 | 5                                    | 75.38                                | 19.9                            |
| SMCJ13            | SMCJ13C          | GEF          | BEF | 14.40                    | 17.60  | 1      | 13.0                                 | 5                                    | 63.03                                | 23.8                            |
| SMCJ13A           | SMCJ13CA         | GEG          | BEG | 14.40                    | 15.90  | 1      | 13.0                                 | 5                                    | 69.77                                | 21.5                            |
| SMCJ14            | SMCJ14C          | GEH          | BEH | 15.60                    | 19.10  | 1      | 14.0                                 | 5                                    | 58.14                                | 25.8                            |
| SMCJ14A           | SMCJ14CA         | GEK          | BEK | 15.60                    | 17.20  | 1      | 14.0                                 | 5                                    | 64.66                                | 23.2                            |
| SMCJ15            | SMCJ15C          | GEL          | BEL | 16.70                    | 20.40  | 1      | 15.0                                 | 5                                    | 55.76                                | 26.9                            |
| SMCJ15A           | SMCJ15CA         | GEM          | BEM | 16.70                    | 18.50  | 1      | 15.0                                 | 5                                    | 61.48                                | 24.4                            |
| SMCJ16            | SMCJ16C          | GEN          | BEN | 17.80                    | 21.80  | 1      | 16.0                                 | 5                                    | 52.08                                | 28.8                            |
| SMCJ16A           | SMCJ16CA         | GEP          | BEP | 17.80                    | 19.70  | 1      | 16.0                                 | 5                                    | 57.69                                | 26.0                            |
| SMCJ17            | SMCJ17C          | GEQ          | BEQ | 18.90                    | 23.10  | 1      | 17.0                                 | 5                                    | 49.18                                | 30.5                            |
| SMCJ17A           | SMCJ17CA         | GER          | BER | 18.90                    | 20.90  | 1      | 17.0                                 | 5                                    | 54.35                                | 27.6                            |
| SMCJ18            | SMCJ18C          | GES          | BES | 20.00                    | 24.40  | 1      | 18.0                                 | 5                                    | 46.58                                | 32.2                            |
| SMCJ18A           | SMCJ18CA         | GET          | BET | 20.00                    | 22.10  | 1      | 18.0                                 | 5                                    | 51.37                                | 29.2                            |
| SMCJ19            | SMCJ19C          | GEA          | BEA | 21.13                    | 25.76  | 1      | 19.0                                 | 5                                    | 44.10                                | 34.0                            |
| SMCJ19A           | SMCJ19CA         | GEB          | BEB | 21.10                    | 23.30  | 1      | 19.0                                 | 5                                    | 48.73                                | 30.8                            |
| SMCJ20            | SMCJ20C          | GEU          | BEU | 22.20                    | 27.10  | 1      | 20.0                                 | 5                                    | 41.90                                | 35.8                            |
| SMCJ20A           | SMCJ20CA         | GEV          | BEV | 22.20                    | 24.50  | 1      | 20.0                                 | 5                                    | 46.30                                | 32.4                            |
| SMCJ22            | SMCJ22C          | GEW          | BEW | 24.40                    | 29.80  | 1      | 22.0                                 | 5                                    | 38.07                                | 39.4                            |
| SMCJ22A           | SMCJ22CA         | GEX          | BEX | 24.40                    | 26.90  | 1      | 22.0                                 | 5                                    | 42.25                                | 35.5                            |
| SMCJ24            | SMCJ24C          | GEY          | BEY | 26.70                    | 32.60  | 1      | 24.0                                 | 5                                    | 34.88                                | 43.0                            |
| SMCJ24A           | SMCJ24CA         | GEZ          | BEZ | 26.70                    | 29.50  | 1      | 24.0                                 | 5                                    | 38.56                                | 38.9                            |
| SMCJ26            | SMCJ26C          | GFD          | BFD | 28.90                    | 35.30  | 1      | 26.0                                 | 5                                    | 32.19                                | 46.6                            |
| SMCJ26A           | SMCJ26CA         | GFE          | BFE | 28.90                    | 31.90  | 1      | 26.0                                 | 5                                    | 35.63                                | 42.1                            |
| SMCJ28            | SMCJ28C          | GFF          | BFF | 31.10                    | 38.00  | 1      | 28.0                                 | 5                                    | 30.00                                | 50.0                            |
| SMCJ28A           | SMCJ28CA         | GFG          | BFG | 31.10                    | 34.40  | 1      | 28.0                                 | 5                                    | 33.04                                | 45.4                            |
| SMCJ30            | SMCJ30C          | GFH          | BFH | 33.30                    | 40.70  | 1      | 30.0                                 | 5                                    | 28.04                                | 53.5                            |
| SMCJ30A           | SMCJ30CA         | GFK          | BFK | 33.30                    | 36.80  | 1      | 30.0                                 | 5                                    | 30.99                                | 48.4                            |
| SMCJ33            | SMCJ33C          | GFL          | BFL | 36.70                    | 44.90  | 1      | 33.0                                 | 5                                    | 25.42                                | 59.0                            |

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|-------------------|------------------|--------------|-----|--------------------------|--------|--------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
|                   |                  | Uni          | Bi  | Min(V)                   | Max(V) | IT(mA) |                                      |                                      |                                      |                                 |
| SMCJ33A           | SMCJ33CA         | GFM          | BFM | 36.70                    | 40.60  | 1      | 33.0                                 | 5                                    | 28.14                                | 53.3                            |
| SMCJ36            | SMCJ36C          | GFN          | BFN | 40.00                    | 48.90  | 1      | 36.0                                 | 5                                    | 23.33                                | 64.3                            |
| SMCJ36A           | SMCJ36CA         | GFP          | BFP | 40.00                    | 44.20  | 1      | 36.0                                 | 5                                    | 25.82                                | 58.1                            |
| SMCJ40            | SMCJ40C          | GFQ          | BFQ | 44.40                    | 54.30  | 1      | 40.0                                 | 5                                    | 21.01                                | 71.4                            |
| SMCJ40A           | SMCJ40CA         | GFR          | BFR | 44.40                    | 49.10  | 1      | 40.0                                 | 5                                    | 23.26                                | 64.5                            |
| SMCJ43            | SMCJ43C          | GFS          | BFS | 47.80                    | 58.40  | 1      | 43.0                                 | 5                                    | 19.56                                | 76.7                            |
| SMCJ43A           | SMCJ43CA         | GFT          | BFT | 47.80                    | 52.80  | 1      | 43.0                                 | 5                                    | 21.61                                | 69.4                            |
| SMCJ45            | SMCJ45C          | GFU          | BFU | 50.00                    | 61.10  | 1      | 45.0                                 | 5                                    | 18.68                                | 80.3                            |
| SMCJ45A           | SMCJ45CA         | GFV          | BFV | 50.00                    | 55.30  | 1      | 45.0                                 | 5                                    | 20.63                                | 72.7                            |
| SMCJ48            | SMCJ48C          | GFW          | BFW | 53.30                    | 65.10  | 1      | 48.0                                 | 5                                    | 17.54                                | 85.5                            |
| SMCJ48A           | SMCJ48CA         | GFX          | BFX | 53.30                    | 58.90  | 1      | 48.0                                 | 5                                    | 19.38                                | 77.4                            |
| SMCJ51            | SMCJ51C          | GFY          | BFY | 56.70                    | 69.30  | 1      | 51.0                                 | 5                                    | 16.47                                | 91.1                            |
| SMCJ51A           | SMCJ51CA         | GFZ          | BFZ | 56.70                    | 62.70  | 1      | 51.0                                 | 5                                    | 18.20                                | 82.4                            |
| SMCJ54            | SMCJ54C          | GGD          | BGD | 60.00                    | 73.30  | 1      | 54.0                                 | 5                                    | 15.58                                | 96.3                            |
| SMCJ54A           | SMCJ54CA         | GGE          | BGE | 60.00                    | 66.30  | 1      | 54.0                                 | 5                                    | 17.22                                | 87.1                            |
| SMCJ58            | SMCJ58C          | GGF          | BGF | 64.40                    | 78.70  | 1      | 58.0                                 | 5                                    | 14.56                                | 103.0                           |
| SMCJ58A           | SMCJ58CA         | GGG          | BGG | 64.40                    | 71.20  | 1      | 58.0                                 | 5                                    | 16.03                                | 93.6                            |
| SMCJ60            | SMCJ60C          | GGH          | BGH | 66.70                    | 81.50  | 1      | 60.0                                 | 5                                    | 14.02                                | 107.0                           |
| SMCJ60A           | SMCJ60CA         | GGK          | BGK | 66.70                    | 73.70  | 1      | 60.0                                 | 5                                    | 15.50                                | 96.8                            |
| SMCJ64            | SMCJ64C          | GGL          | BGL | 71.10                    | 86.90  | 1      | 64.0                                 | 5                                    | 13.16                                | 114.0                           |
| SMCJ64A           | SMCJ64CA         | GGM          | BGM | 71.10                    | 78.60  | 1      | 64.0                                 | 5                                    | 14.56                                | 103.0                           |
| SMCJ70            | SMCJ70C          | GGN          | BGN | 77.80                    | 95.10  | 1      | 70.0                                 | 5                                    | 12.00                                | 125.0                           |
| SMCJ70A           | SMCJ70CA         | GGP          | BGP | 77.80                    | 86.00  | 1      | 70.0                                 | 5                                    | 13.27                                | 113.0                           |
| SMCJ75            | SMCJ75C          | GGQ          | BGQ | 83.30                    | 102.00 | 1      | 75.0                                 | 5                                    | 11.19                                | 134.0                           |
| SMCJ75A           | SMCJ75CA         | GGR          | BGR | 83.30                    | 92.10  | 1      | 75.0                                 | 5                                    | 12.40                                | 121.0                           |
| SMCJ78            | SMCJ78C          | GGS          | BGS | 86.70                    | 106.00 | 1      | 78.0                                 | 5                                    | 10.79                                | 139.0                           |
| SMCJ78A           | SMCJ78CA         | GGT          | BGT | 86.70                    | 95.80  | 1      | 78.0                                 | 5                                    | 11.90                                | 126.0                           |
| SMCJ80            | SMCJ80C          | GGA          | BGA | 88.96                    | 108.80 | 1      | 80.0                                 | 5                                    | 10.47                                | 143.2                           |
| SMCJ80A           | SMCJ80CA         | GGB          | BGB | 88.80                    | 97.60  | 1      | 80.0                                 | 5                                    | 11.57                                | 129.6                           |
| SMCJ85            | SMCJ85C          | GGU          | BGU | 94.40                    | 115.00 | 1      | 85.0                                 | 5                                    | 9.93                                 | 151.0                           |
| SMCJ85A           | SMCJ85CA         | GGV          | BGV | 94.40                    | 104.00 | 1      | 85.0                                 | 5                                    | 10.95                                | 137.0                           |
| SMCJ90            | SMCJ90C          | GGW          | BGW | 100.00                   | 122.00 | 1      | 90.0                                 | 5                                    | 9.38                                 | 160.0                           |
| SMCJ90A           | SMCJ90CA         | GGX          | BGX | 100.00                   | 111.00 | 1      | 90.0                                 | 5                                    | 10.27                                | 146.0                           |
| SMCJ100           | SMCJ100C         | GGY          | BGY | 111.00                   | 136.00 | 1      | 100.0                                | 5                                    | 8.38                                 | 179.0                           |
| SMCJ100A          | SMCJ100CA        | GGZ          | BGZ | 111.00                   | 123.00 | 1      | 100.0                                | 5                                    | 9.26                                 | 162.0                           |
| SMCJ110           | SMCJ110C         | GHD          | BHD | 122.00                   | 149.00 | 1      | 110.0                                | 5                                    | 7.65                                 | 196.0                           |
| SMCJ110A          | SMCJ110CA        | GHE          | BHE | 122.00                   | 135.00 | 1      | 110.0                                | 5                                    | 8.47                                 | 177.0                           |
| SMCJ120           | SMCJ120C         | GHF          | BHF | 133.00                   | 163.00 | 1      | 120.0                                | 5                                    | 7.01                                 | 214.0                           |
| SMCJ120A          | SMCJ120CA        | GHG          | BHG | 133.00                   | 147.00 | 1      | 120.0                                | 5                                    | 7.77                                 | 193.0                           |
| SMCJ130           | SMCJ130C         | GHH          | BHH | 144.00                   | 176.00 | 1      | 130.0                                | 5                                    | 6.49                                 | 231.0                           |
| SMCJ130A          | SMCJ130CA        | GHK          | BHK | 144.00                   | 159.00 | 1      | 130.0                                | 5                                    | 7.18                                 | 209.0                           |
| SMCJ140           | SMCJ140C         | GHA          | BHA | 155.68                   | 190.40 | 1      | 140.0                                | 5                                    | 5.99                                 | 250.6                           |
| SMCJ140A          | SMCJ140CA        | GHB          | BHB | 155.00                   | 171.00 | 1      | 140.0                                | 5                                    | 6.61                                 | 226.8                           |
| SMCJ150           | SMCJ150C         | GHL          | BHL | 167.00                   | 204.00 | 1      | 150.0                                | 5                                    | 5.60                                 | 268.0                           |
| SMCJ150A          | SMCJ150CA        | GHM          | BHM | 167.00                   | 185.00 | 1      | 150.0                                | 5                                    | 6.17                                 | 243.0                           |
| SMCJ160           | SMCJ160C         | GHN          | BHN | 178.00                   | 218.00 | 1      | 160.0                                | 5                                    | 5.23                                 | 287.0                           |
| SMCJ160A          | SMCJ160CA        | GHP          | BHP | 178.00                   | 197.00 | 1      | 160.0                                | 5                                    | 5.79                                 | 259.0                           |

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|-------------------|------------------|--------------|-----|--------------------------|--------|--------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
|                   |                  | Uni          | Bi  | Min(V)                   | Max(V) | IT(mA) |                                      |                                      |                                      |                                 |
| SMCJ170           | SMCJ170C         | GHQ          | BHQ | 189.00                   | 231.00 | 1      | 170.0                                | 5                                    | 4.93                                 | 304.0                           |
| SMCJ170A          | SMCJ170CA        | GHR          | BHR | 189.00                   | 209.00 | 1      | 170.0                                | 5                                    | 5.45                                 | 275.0                           |
| SMCJ180           | SMCJ180C         | GHS          | BHS | 200.16                   | 244.80 | 1      | 180.0                                | 5                                    | 4.66                                 | 322.2                           |
| SMCJ180A          | SMCJ180CA        | GHT          | BHT | 200.00                   | 220.00 | 1      | 180.0                                | 5                                    | 5.14                                 | 291.6                           |
| SMCJ190           | SMCJ190C         | GHU          | BHU | 211.28                   | 258.40 | 1      | 190.0                                | 5                                    | 4.41                                 | 340.1                           |
| SMCJ190A          | SMCJ190CA        | GHV          | BHV | 211.00                   | 232.00 | 1      | 190.0                                | 5                                    | 4.87                                 | 307.8                           |
| SMCJ200A          | SMCJ200CA        | GHW          | BHW | 224.00                   | 247.00 | 1      | 200.0                                | 5                                    | 4.60                                 | 324.0                           |
| SMCJ220A          | SMCJ220CA        | GHX          | BHX | 246.00                   | 272.00 | 1      | 220.0                                | 5                                    | 4.20                                 | 356.0                           |
| SMCJ250A          | SMCJ250CA        | GHZ          | BHZ | 279.00                   | 309.00 | 1      | 250.0                                | 5                                    | 3.70                                 | 405.0                           |
| SMCJ300A          | SMCJ300CA        | GJE          | BJE | 335.00                   | 371.00 | 1      | 300.0                                | 5                                    | 3.10                                 | 486.0                           |
| SMCJ350A          | SMCJ350CA        | GJG          | BJG | 391.00                   | 432.00 | 1      | 350.0                                | 5                                    | 2.60                                 | 567.0                           |
| SMCJ400A          | SMCJ400CA        | GJK          | BJK | 447.00                   | 494.00 | 1      | 400.0                                | 5                                    | 2.30                                 | 648.0                           |
| SMCJ440A          | SMCJ440CA        | GJM          | BJM | 492.00                   | 543.00 | 1      | 440.0                                | 5                                    | 2.10                                 | 713.0                           |

## CHARACTERISTICS CURVES

Fig.1 Pulse Derating Curve



Fig 2. Maximum Non-Repetitive Surge Current

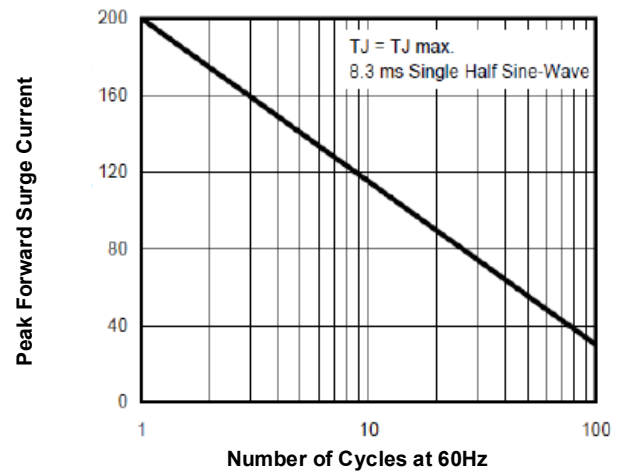


Fig 3. Steady State Power Derating Curve

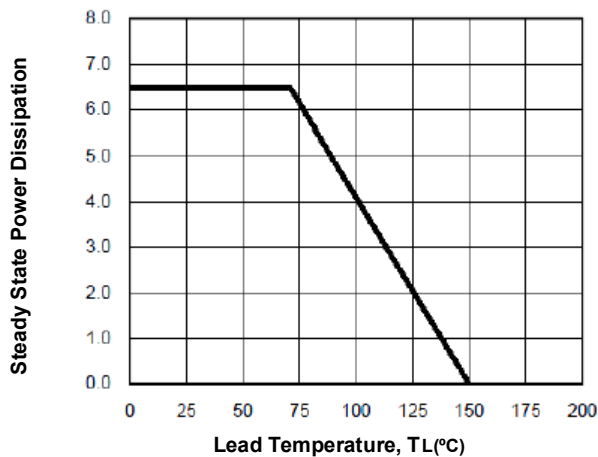


Fig 4. Peak Pulse Power Rating Curve



### CHARACTERISTICS CURVES(Continued)

Fig 5. Pulse Waveform

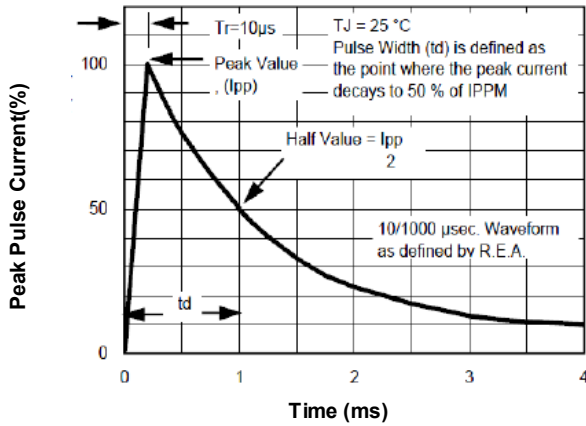
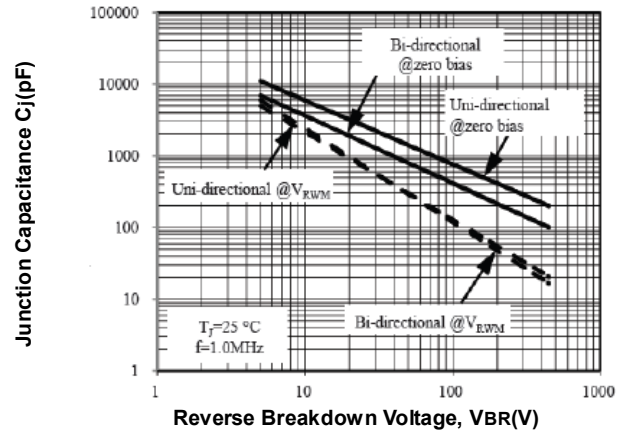
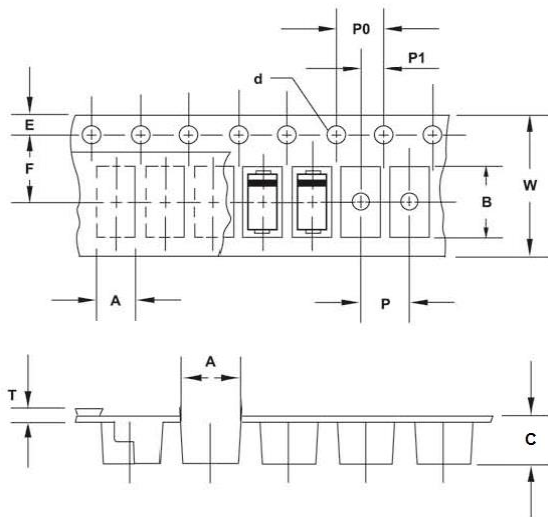


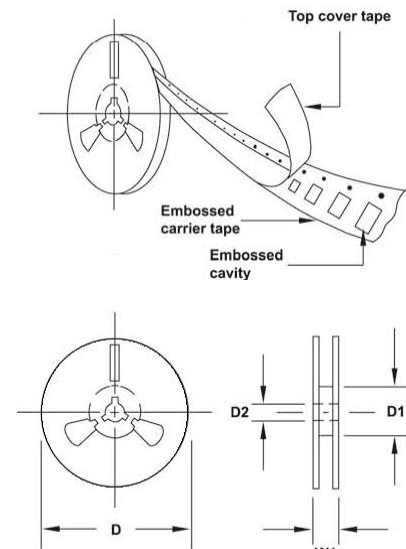
Fig 6. Typical Junction Capacitance



### PACKAGING SPECIFICATION- DO214AB (SMC) - Tape Carrier and Reel



DO-214AB(SMC) - Tape carrier



DO-214AB(SMC) - Reel

| Item                   | Symbol | DO-214AB (SMC) | Item                   | Symbol | DO-214AB (SMC) |
|------------------------|--------|----------------|------------------------|--------|----------------|
| Carrier width          | A      | 6.05 ± 0.10    | Punch hole position    | F      | 7.50 ± 0.10    |
| Carrier length         | B      | 8.31 ± 0.10    | Punch hole pitch       | P      | 8.00 ± 0.10    |
| Carrier depth          | C      | 2.54 ± 0.10    | Sprocket hole pitch    | P0     | 4.00 ± 0.10    |
| Sprocket hole          | d      | 1.55 ± 0.10    | Embossment center      | P1     | 2.00 ± 0.10    |
| Reel outside diameter  | D      | 330.0 ± 2.0    | Overall tape thickness | T      | Max 0.4        |
| Reel inner diameter    | D1     | Min 50         | Tape width             | W      | 16.00 ± 0.30   |
| Feed hole diameter     | D2     | 13.00 ± 0.50   | Reel width             | W1     | Max 22.40      |
| Sprocket hole position | E      | 1.75 ± 0.10    |                        |        |                |

Unit: mm

# Transient Voltage Suppressors DO-214AB/SMC Package

SMCJ Series

MERITEK



## RECOMMENDED SOLDERING PROFILES

| Reflow Condition                                     |                               |                         |
|--|-------------------------------|-------------------------|
| Average Ramp-up Rate $T_L$ to $T_P$                  |                               | 3°C/second max.         |
| Pre Heat   | Temp. Min $T_{s(min)}$        | 150°C                   |
|  | Tempe. Max $T_{s(max)}$       | 200°C                   |
|  | Time (min. to max.) ( $t_s$ ) | 60-120 seconds          |
| Ramp-up Rate $T_{s(max)}$ to $T_L$                   |                               | 3°C/second max.         |
| Reflow   | Temp. ( $T_L$ )               | 217°C                   |
|  | Time ( $t_L$ )                | 60-260 seconds          |
| Peak Temperature ( $T_P$ )                           |                               | 255 <sup>-0/+5</sup> °C |
| Time within 5°C of actual peak Temperature ( $t_p$ ) |                               | 10-30 seconds           |
| Ramp-down Rate                                       |                               | 6°C/second max.         |
| Time 25°C to peak Temp. ( $T_P$ )                    |                               | 6 minutes max.          |



## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View SMCJ180 on WIN SOURCE](#)
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