

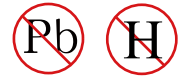


# DATA SHEET

SEMICONDUCTOR

P4SMAJ -A Series

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

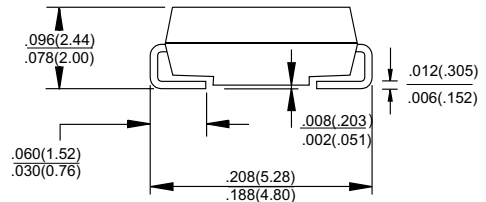
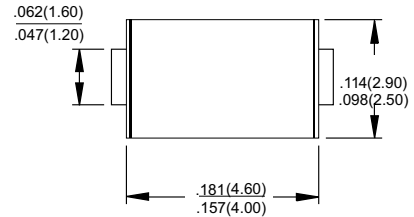


### VOLTAGE 5.0 to 440 Volts 400 Watt Peak Power Pulse

SMA/DO-214AC Unit:inch(mm)

#### FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Excellent clamping capability
- Low inductance
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical IR less than 1µA above 10V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request
- AEC-Q101 qualified



#### MECHANICAL DATA

- Case: JEDEC DO-214AC low profile molded plastic
- Base P/N - RoHS compliant, commercial grade
- Base P/N-A - RoHS compliant, AEC-Q101 qualified
- Terminals: Solder leads, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band except Bi-directional types.
- Standard Packaging: 12mm tape per(EIA-481)
- Quantify Per Reel : 1800 pcs

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
For Capacitive load derate current by 20%.

| RATING  | SYMBOL                            | VALUE       | UNITS |
|---|-----------------------------------|-------------|-------|
| Peak Power Dissipation on 10/1000us waveform (Note 1.2 , Fig.1)   | P <sub>pp</sub>                   | 400         | Watts |
| Peak Forward Surge Current, 8.3ms single half sine - wave uni-directional only (JEDEC method) (Notes 2,3) | I <sub>FSM</sub>                  | 40          | Amps  |
| Peak Pulse Current on 10/1000s waveform (Note 1 , Fig.3)  | I <sub>PP</sub>                   | See Table 1 | Amps  |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 ~ +150  | °C    |

#### NOTES:

- Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig.2.
- Mounted on 5.0 mm<sup>2</sup>(0.13mm thick) land areas.
- Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

# P4SMAJ -A Series

| Part Number                              |             | Reverse Stand-off Voltage | Breakdown Voltage |       | Test Current | Reverse Leakage |           | Max. Clamp Voltage | Peak Pulse Current | Package |      |              |    |                     |
|--|-------------|---------------------------|-------------------|-------|--------------|-----------------|-----------|--------------------|--------------------|---------|------|--------------|----|---------------------|
|  |             |                           | VBR@ I T          |       |              | I T             | I R@ VRWM |                    |                    | Vc@Ipp  | Ipp  | SMA/DO-214AC |    |                     |
|  |             |                           | VRWM              | Min.  |              |                 | Max.      |                    |                    |         |      | UNI          | BI | Device Marking Code |
| UNI                                      | BI          | V                         | V                 | V     | m A          | μA              | μA        | V                  | A                  | UNI     | BI   |              |    |                     |
| <b>400W Transient Voltage Suppressor</b> |             |                           |                   |       |              |                 |           |                    |                    |         |      |              |    |                     |
| P4SMAJ5.0                                | P4SMAJ5.0C  | 5.0                       | 6.40              | 7.82  | 10           | 800.0           | 1600.0    | 9.6                | 41.7               | 5.0V    | 5.0C |              |    |                     |
| P4SMAJ5.0A                               | P4SMAJ5.0CA | 5.0                       | 6.40              | 7.07  | 10           | 800.0           | 1600.0    | 9.2                | 43.85              | 5.0A    | 5.0D |              |    |                     |
| P4SMAJ6.0                                | P4SMAJ6.0C  | 6.0                       | 6.67              | 8.15  | 10           | 800.0           | 1600.0    | 11.4               | 35.1               | 6.0V    | 6.0C |              |    |                     |
| P4SMAJ6.0A                               | P4SMAJ6.0CA | 6.0                       | 6.67              | 7.37  | 10           | 800.0           | 1600.0    | 10.3               | 38.8               | 6.0A    | 6.0D |              |    |                     |
| P4SMAJ6.5                                | P4SMAJ6.5C  | 6.5                       | 7.22              | 8.82  | 10           | 500.0           | 1000.0    | 12.3               | 32.5               | 6.5V    | 6.5C |              |    |                     |
| P4SMAJ6.5A                               | P4SMAJ6.5CA | 6.5                       | 7.22              | 7.98  | 10           | 500.0           | 1000.0    | 11.2               | 35.7               | 6.5A    | 6.5D |              |    |                     |
| P4SMAJ7.0                                | P4SMAJ7.0C  | 7.0                       | 7.78              | 9.51  | 10           | 200.0           | 400.0     | 13.3               | 30.1               | 7.0V    | 7.0C |              |    |                     |
| P4SMAJ7.0A                               | P4SMAJ7.0CA | 7.0                       | 7.78              | 8.60  | 10           | 200.0           | 400.0     | 12.0               | 33.3               | 7.0A    | 7.0D |              |    |                     |
| P4SMAJ7.5                                | P4SMAJ7.5C  | 7.5                       | 8.33              | 10.20 | 1            | 100.0           | 200.0     | 14.3               | 28.0               | 7.5V    | 7.5C |              |    |                     |
| P4SMAJ7.5A                               | P4SMAJ7.5CA | 7.5                       | 8.33              | 9.21  | 1            | 100.0           | 200.0     | 12.9               | 31.0               | 7.5A    | 7.5D |              |    |                     |
| P4SMAJ8.0                                | P4SMAJ8.0C  | 8.0                       | 8.89              | 10.90 | 1            | 50.0            | 100.0     | 15.0               | 26.7               | 8.0V    | 8.0C |              |    |                     |
| P4SMAJ8.0A                               | P4SMAJ8.0CA | 8.0                       | 8.89              | 9.83  | 1            | 50.0            | 100.0     | 13.6               | 29.4               | 8.0A    | 8.0D |              |    |                     |
| P4SMAJ8.5                                | P4SMAJ8.5C  | 8.5                       | 9.44              | 11.50 | 1            | 10.0            | 20.0      | 15.9               | 25.2               | 8.5V    | 8.5C |              |    |                     |
| P4SMAJ8.5A                               | P4SMAJ8.5CA | 8.5                       | 9.44              | 10.40 | 1            | 10.0            | 20.0      | 14.4               | 27.8               | 8.5A    | 8.5D |              |    |                     |
| P4SMAJ9.0                                | P4SMAJ9.0C  | 9.0                       | 10.00             | 12.20 | 1            | 5.0             | 10.0      | 16.9               | 23.7               | 9.0V    | 9.0C |              |    |                     |
| P4SMAJ9.0A                               | P4SMAJ9.0CA | 9.0                       | 10.00             | 11.10 | 1            | 5.0             | 10.0      | 15.4               | 26.0               | 9.0A    | 9.0D |              |    |                     |
| P4SMAJ10                                 | P4SMAJ10C   | 10.0                      | 11.10             | 13.60 | 1            | 5.0             | 10.0      | 18.8               | 21.3               | 10V     | 10C  |              |    |                     |
| P4SMAJ10A                                | P4SMAJ10CA  | 10.0                      | 11.10             | 12.30 | 1            | 5.0             | 10.0      | 17.0               | 23.5               | 10A     | 10D  |              |    |                     |
| P4SMAJ11                                 | P4SMAJ11C   | 11.0                      | 12.20             | 14.90 | 1            | 5.0             | 5.0       | 20.1               | 19.9               | 11V     | 11C  |              |    |                     |
| P4SMAJ11A                                | P4SMAJ11CA  | 11.0                      | 12.20             | 13.50 | 1            | 5.0             | 5.0       | 18.2               | 22.0               | 11A     | 11D  |              |    |                     |
| P4SMAJ12                                 | P4SMAJ12C   | 12.0                      | 13.30             | 16.30 | 1            | 5.0             | 5.0       | 22.0               | 18.2               | 12V     | 12C  |              |    |                     |
| P4SMAJ12A                                | P4SMAJ12CA  | 12.0                      | 13.30             | 14.70 | 1            | 5.0             | 5.0       | 19.9               | 20.1               | 12A     | 12D  |              |    |                     |
| P4SMAJ13                                 | P4SMAJ13C   | 13.0                      | 14.40             | 17.60 | 1            | 5.0             | 5.0       | 23.8               | 16.8               | 13V     | 13C  |              |    |                     |
| P4SMAJ13A                                | P4SMAJ13CA  | 13.0                      | 14.40             | 15.90 | 1            | 5.0             | 5.0       | 21.5               | 18.6               | 13A     | 13D  |              |    |                     |
| P4SMAJ14                                 | P4SMAJ14C   | 14.0                      | 15.60             | 19.10 | 1            | 5.0             | 5.0       | 25.8               | 15.5               | 14V     | 14C  |              |    |                     |
| P4SMAJ14A                                | P4SMAJ14CA  | 14.0                      | 15.60             | 17.20 | 1            | 5.0             | 5.0       | 23.2               | 17.2               | 14A     | 14D  |              |    |                     |
| P4SMAJ15                                 | P4SMAJ15C   | 15.0                      | 16.70             | 20.40 | 1            | 5.0             | 5.0       | 26.9               | 14.9               | 15V     | 15C  |              |    |                     |
| P4SMAJ15A                                | P4SMAJ15CA  | 15.0                      | 16.70             | 18.50 | 1            | 5.0             | 5.0       | 24.4               | 16.4               | 15A     | 15D  |              |    |                     |
| P4SMAJ16                                 | P4SMAJ16C   | 16.0                      | 17.80             | 21.80 | 1            | 5.0             | 5.0       | 28.8               | 13.9               | 16V     | 16C  |              |    |                     |
| P4SMAJ16A                                | P4SMAJ16CA  | 16.0                      | 17.80             | 19.70 | 1            | 5.0             | 5.0       | 26.0               | 15.4               | 16A     | 16D  |              |    |                     |
| P4SMAJ17                                 | P4SMAJ17C   | 17.0                      | 18.90             | 23.10 | 1            | 5.0             | 5.0       | 30.5               | 13.1               | 17V     | 17C  |              |    |                     |
| P4SMAJ17A                                | P4SMAJ17CA  | 17.0                      | 18.90             | 20.90 | 1            | 5.0             | 5.0       | 27.6               | 14.5               | 17A     | 17D  |              |    |                     |
| P4SMAJ18                                 | P4SMAJ18C   | 18.0                      | 20.00             | 24.40 | 1            | 5.0             | 5.0       | 32.2               | 12.4               | 18V     | 18C  |              |    |                     |
| P4SMAJ18A                                | P4SMAJ18CA  | 18.0                      | 20.00             | 22.10 | 1            | 5.0             | 5.0       | 29.2               | 13.7               | 18A     | 18D  |              |    |                     |
| P4SMAJ20                                 | P4SMAJ20C   | 20.0                      | 22.20             | 27.10 | 1            | 5.0             | 5.0       | 35.8               | 11.2               | 20V     | 20C  |              |    |                     |
| P4SMAJ20A                                | P4SMAJ20CA  | 20.0                      | 22.20             | 24.50 | 1            | 5.0             | 5.0       | 32.4               | 12.3               | 20A     | 20D  |              |    |                     |
| P4SMAJ22                                 | P4SMAJ22C   | 22.0                      | 24.40             | 29.80 | 1            | 5.0             | 5.0       | 39.4               | 10.2               | 22V     | 22C  |              |    |                     |
| P4SMAJ22A                                | P4SMAJ22CA  | 22.0                      | 24.40             | 26.90 | 1            | 5.0             | 5.0       | 35.5               | 11.3               | 22A     | 22D  |              |    |                     |
| P4SMAJ24                                 | P4SMAJ24C   | 24.0                      | 26.70             | 32.60 | 1            | 5.0             | 5.0       | 43.0               | 9.3                | 24V     | 24C  |              |    |                     |
| P4SMAJ24A                                | P4SMAJ24CA  | 24.0                      | 26.70             | 29.50 | 1            | 5.0             | 5.0       | 38.9               | 10.3               | 24A     | 24D  |              |    |                     |
| P4SMAJ26                                 | P4SMAJ26C   | 26.0                      | 28.90             | 35.30 | 1            | 5.0             | 5.0       | 46.6               | 8.6                | 26V     | 26C  |              |    |                     |
| P4SMAJ26A                                | P4SMAJ26CA  | 26.0                      | 28.90             | 31.90 | 1            | 5.0             | 5.0       | 42.1               | 9.5                | 26A     | 26D  |              |    |                     |
| P4SMAJ28                                 | P4SMAJ28C   | 28.0                      | 31.10             | 38.00 | 1            | 5.0             | 5.0       | 50.0               | 8.0                | 28V     | 28C  |              |    |                     |
| P4SMAJ28A                                | P4SMAJ28CA  | 28.0                      | 31.10             | 34.40 | 1            | 5.0             | 5.0       | 45.4               | 8.8                | 28A     | 28D  |              |    |                     |
| P4SMAJ30                                 | P4SMAJ30C   | 30.0                      | 33.30             | 40.70 | 1            | 5.0             | 5.0       | 53.5               | 7.5                | 30V     | 30C  |              |    |                     |
| P4SMAJ30A                                | P4SMAJ30CA  | 30.0                      | 33.30             | 36.80 | 1            | 5.0             | 5.0       | 48.4               | 8.3                | 30A     | 30D  |              |    |                     |
| P4SMAJ33                                 | P4SMAJ33C   | 33.0                      | 36.70             | 44.90 | 1            | 5.0             | 5.0       | 59.0               | 6.8                | 33V     | 33C  |              |    |                     |

# P4SMAJ -A Series

| Part Number                              |             | Reverse Stand-off Voltage | Breakdown Voltage |        | Test Current | Reverse Leakage |            | Max. Clamp Voltage | Peak Pulse Current | Package |      |
|--|-------------|---------------------------|-------------------|--------|--------------|-----------------|------------|--------------------|--------------------|---------|------|
|  |             |                           | VBR@ I T          |        |              | I R@ VRWM       |            |                    |                    | Vc@Ipp  | Ipp  |
| UNI                                      | BI          | V                         | Min. V            | Max. V | m A          | UNI $\mu$ A     | BI $\mu$ A | V                  | A                  | UNI     | BI   |
| <b>400W Transient Voltage Suppressor</b> |             |                           |                   |        |              |                 |            |                    |                    |         |      |
| P4SMAJ33A                                | P4SMAJ33CA  | 33.0                      | 36.70             | 40.60  | 1            | 5.0             | 5.0        | 53.3               | 7.5                | 33A     | 33D  |
| P4SMAJ36                                 | P4SMAJ36C   | 36.0                      | 40.00             | 48.90  | 1            | 5.0             | 5.0        | 64.3               | 6.2                | 36V     | 36C  |
| P4SMAJ36A                                | P4SMAJ36CA  | 36.0                      | 40.00             | 44.20  | 1            | 5.0             | 5.0        | 58.1               | 6.9                | 36A     | 36D  |
| P4SMAJ40                                 | P4SMAJ40C   | 40.0                      | 44.40             | 54.30  | 1            | 5.0             | 5.0        | 71.4               | 5.6                | 40V     | 40C  |
| P4SMAJ40A                                | P4SMAJ40CA  | 40.0                      | 44.40             | 49.10  | 1            | 5.0             | 5.0        | 64.5               | 6.2                | 40A     | 40D  |
| P4SMAJ43                                 | P4SMAJ43C   | 43.0                      | 47.80             | 58.40  | 1            | 5.0             | 5.0        | 76.7               | 5.2                | 43V     | 43C  |
| P4SMAJ43A                                | P4SMAJ43CA  | 43.0                      | 47.80             | 52.80  | 1            | 5.0             | 5.0        | 69.4               | 5.8                | 43A     | 43D  |
| P4SMAJ45                                 | P4SMAJ45C   | 45.0                      | 50.00             | 61.10  | 1            | 5.0             | 5.0        | 80.3               | 5.0                | 45V     | 45C  |
| P4SMAJ45A                                | P4SMAJ45CA  | 45.0                      | 50.00             | 55.30  | 1            | 5.0             | 5.0        | 72.7               | 5.5                | 45A     | 45D  |
| P4SMAJ48                                 | P4SMAJ48C   | 48.0                      | 53.30             | 65.10  | 1            | 5.0             | 5.0        | 85.5               | 4.7                | 48V     | 48C  |
| P4SMAJ48A                                | P4SMAJ48CA  | 48.0                      | 53.30             | 58.90  | 1            | 5.0             | 5.0        | 77.4               | 5.2                | 48A     | 48D  |
| P4SMAJ51                                 | P4SMAJ51C   | 51.0                      | 56.70             | 69.30  | 1            | 5.0             | 5.0        | 91.1               | 4.4                | 51V     | 51C  |
| P4SMAJ51A                                | P4SMAJ51CA  | 51.0                      | 56.70             | 62.70  | 1            | 5.0             | 5.0        | 82.4               | 4.9                | 51A     | 51D  |
| P4SMAJ54                                 | P4SMAJ54C   | 54.0                      | 60.00             | 73.30  | 1            | 5.0             | 5.0        | 96.3               | 4.2                | 54V     | 54C  |
| P4SMAJ54A                                | P4SMAJ54CA  | 54.0                      | 60.00             | 66.30  | 1            | 5.0             | 5.0        | 87.1               | 4.6                | 54A     | 54D  |
| P4SMAJ58                                 | P4SMAJ58C   | 58.0                      | 64.40             | 78.70  | 1            | 5.0             | 5.0        | 103.0              | 3.9                | 58V     | 58C  |
| P4SMAJ58A                                | P4SMAJ58CA  | 58.0                      | 64.40             | 71.20  | 1            | 5.0             | 5.0        | 93.6               | 4.3                | 58A     | 58D  |
| P4SMAJ60                                 | P4SMAJ60C   | 60.0                      | 66.70             | 81.50  | 1            | 5.0             | 5.0        | 107.0              | 3.7                | 60V     | 60C  |
| P4SMAJ60A                                | P4SMAJ60CA  | 60.0                      | 66.70             | 73.70  | 1            | 5.0             | 5.0        | 96.8               | 4.1                | 60A     | 60D  |
| P4SMAJ64                                 | P4SMAJ64C   | 64.0                      | 71.10             | 86.90  | 1            | 5.0             | 5.0        | 114.0              | 3.5                | 64V     | 64C  |
| P4SMAJ64A                                | P4SMAJ64CA  | 64.0                      | 71.10             | 78.60  | 1            | 5.0             | 5.0        | 103.0              | 3.9                | 64A     | 64D  |
| P4SMAJ70                                 | P4SMAJ70C   | 70.0                      | 77.80             | 95.10  | 1            | 5.0             | 5.0        | 125.0              | 3.2                | 70V     | 70C  |
| P4SMAJ70A                                | P4SMAJ70CA  | 70.0                      | 77.80             | 86.00  | 1            | 5.0             | 5.0        | 113.0              | 3.5                | 70A     | 70D  |
| P4SMAJ75                                 | P4SMAJ75C   | 75.0                      | 83.30             | 102.00 | 1            | 5.0             | 5.0        | 134.0              | 3.0                | 75V     | 75C  |
| P4SMAJ75A                                | P4SMAJ75CA  | 75.0                      | 83.30             | 92.10  | 1            | 5.0             | 5.0        | 121.0              | 3.0                | 75A     | 75D  |
| P4SMAJ78                                 | P4SMAJ78C   | 78.0                      | 86.70             | 106.00 | 1            | 5.0             | 5.0        | 139.0              | 2.9                | 78V     | 78C  |
| P4SMAJ78A                                | P4SMAJ78CA  | 78.0                      | 86.70             | 95.80  | 1            | 5.0             | 5.0        | 126.0              | 3.2                | 78A     | 78D  |
| P4SMAJ85                                 | P4SMAJ85C   | 85.0                      | 94.40             | 115.00 | 1            | 5.0             | 5.0        | 151.0              | 2.0                | 85V     | 85C  |
| P4SMAJ85A                                | P4SMAJ85CA  | 85.0                      | 94.40             | 104.00 | 1            | 5.0             | 5.0        | 137.0              | 2.2                | 85A     | 85D  |
| P4SMAJ90                                 | P4SMAJ90C   | 90.0                      | 100.00            | 122.00 | 1            | 5.0             | 5.0        | 160.0              | 1.9                | 90V     | 90C  |
| P4SMAJ90A                                | P4SMAJ90CA  | 90.0                      | 100.00            | 111.00 | 1            | 5.0             | 5.0        | 146.0              | 2.1                | 90A     | 90D  |
| P4SMAJ100                                | P4SMAJ100C  | 100.0                     | 111.00            | 136.00 | 1            | 5.0             | 5.0        | 179.0              | 1.7                | 100V    | 100C |
| P4SMAJ100A                               | P4SMAJ100CA | 100.0                     | 111.00            | 123.00 | 1            | 5.0             | 5.0        | 162.0              | 1.9                | 100A    | 100D |
| P4SMAJ110                                | P4SMAJ110C  | 110.0                     | 122.00            | 149.00 | 1            | 5.0             | 5.0        | 196.0              | 1.5                | 110V    | 110C |
| P4SMAJ110A                               | P4SMAJ110CA | 110.0                     | 122.00            | 135.00 | 1            | 5.0             | 5.0        | 177.0              | 1.7                | 110A    | 110D |
| P4SMAJ120                                | P4SMAJ120C  | 120.0                     | 133.00            | 163.00 | 1            | 5.0             | 5.0        | 214.0              | 1.4                | 120V    | 120C |
| P4SMAJ120A                               | P4SMAJ120CA | 120.0                     | 133.00            | 147.00 | 1            | 5.0             | 5.0        | 193.0              | 1.6                | 120A    | 120D |
| P4SMAJ130                                | P4SMAJ130C  | 130.0                     | 144.00            | 176.00 | 1            | 5.0             | 5.0        | 231.0              | 1.3                | 130V    | 130C |
| P4SMAJ130A                               | P4SMAJ130CA | 130.0                     | 144.00            | 159.00 | 1            | 5.0             | 5.0        | 209.0              | 1.4                | 130A    | 130D |
| P4SMAJ150                                | P4SMAJ150C  | 150.0                     | 167.00            | 204.00 | 1            | 5.0             | 5.0        | 268.0              | 1.1                | 150V    | 150C |
| P4SMAJ150A                               | P4SMAJ150CA | 150.0                     | 167.00            | 185.00 | 1            | 5.0             | 5.0        | 243.0              | 1.2                | 150A    | 150D |
| P4SMAJ160                                | P4SMAJ160C  | 160.0                     | 178.00            | 218.00 | 1            | 5.0             | 5.0        | 287.0              | 1.1                | 160V    | 160C |
| P4SMAJ160A                               | P4SMAJ160CA | 160.0                     | 178.00            | 197.00 | 1            | 5.0             | 5.0        | 259.0              | 1.2                | 160A    | 160D |
| P4SMAJ170                                | P4SMAJ170C  | 170.0                     | 189.00            | 231.00 | 1            | 5.0             | 5.0        | 304.0              | 1.1                | 170V    | 170C |
| P4SMAJ170A                               | P4SMAJ170CA | 170.0                     | 189.00            | 209.00 | 1            | 5.0             | 5.0        | 275.0              | 1.1                | 170A    | 170D |
| P4SMAJ188                                | P4SMAJ188C  | 188.0                     | 209.00            | 255.00 | 1            | 5.0             | 5.0        | 344.0              | 0.9                | 188V    | 188C |
| P4SMAJ188A                               | P4SMAJ188CA | 188.0                     | 209.00            | 231.00 | 1            | 5.0             | 5.0        | 328.0              | 0.9                | 188A    | 188D |

# P4SMAJ -A Series

| Part Number                              |             | Reverse Stand-off Voltage | Breakdown Voltage |        |      | Test Current | Reverse Leakage |           | Max. Clamp Voltage | Peak Pulse Current | Package |     |              |                     |  |
|--|-------------|---------------------------|-------------------|--------|------|--------------|-----------------|-----------|--------------------|--------------------|---------|-----|--------------|---------------------|--|
|  |             |                           | VBR@ I T          |        |      |              | I T             | I R@ VRWM |                    |                    | Vc@Ipp  | Ipp | SMA/DO-214AC |                     |  |
|  |             |                           | VRWM              | Min.   | Max. |              |                 | UNI       |                    |                    |         |     | BI           | Device Marking Code |  |
| UNI                                      | BI          | V                         | V                 | V      | m A  | μA           | μA              | V         | A                  | UNI                | BI      |     |              |                     |  |
| <b>400W Transient Voltage Suppressor</b> |             |                           |                   |        |      |              |                 |           |                    |                    |         |     |              |                     |  |
| P4SMAJ200A                               | P4SMAJ200CA | 200.0                     | 224.00            | 247.00 | 1    | 5.0          | 5.0             | 324.0     | 1.2                | 200A               | 200D    |     |              |                     |  |
| P4SMAJ220A                               | P4SMAJ220CA | 220.0                     | 246.00            | 272.00 | 1    | 5.0          | 5.0             | 356.0     | 1.1                | 220A               | 220D    |     |              |                     |  |
| P4SMAJ250A                               | P4SMAJ250CA | 250.0                     | 279.00            | 309.00 | 1    | 5.0          | 5.0             | 405.0     | 1.0                | 250A               | 250D    |     |              |                     |  |
| P4SMAJ300A                               | P4SMAJ300CA | 300.0                     | 335.00            | 371.00 | 1    | 5.0          | 5.0             | 486.0     | 0.8                | 300A               | 300D    |     |              |                     |  |
| P4SMAJ350A                               | P4SMAJ350CA | 350.0                     | 391.00            | 432.00 | 1    | 5.0          | 5.0             | 567.0     | 0.7                | 350A               | 350D    |     |              |                     |  |
| P4SMAJ400A                               | P4SMAJ400CA | 400.0                     | 447.00            | 494.00 | 1    | 5.0          | 5.0             | 648.0     | 0.6                | 400A               | 400D    |     |              |                     |  |
| P4SMAJ440A                               | P4SMAJ440CA | 440.0                     | 492.00            | 543.00 | 1    | 5.0          | 5.0             | 713.0     | 0.6                | 440A               | 440D    |     |              |                     |  |

# DEVICE CHARACTERISTICS

## P4SMAJ -A Series

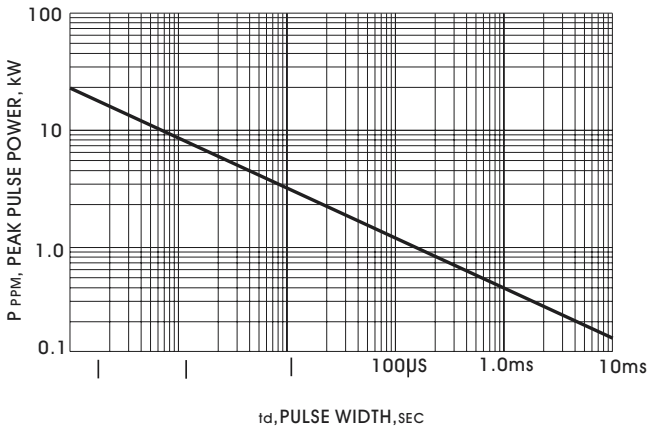


Fig.1 PEAK PULSE POWER RATING CURVE

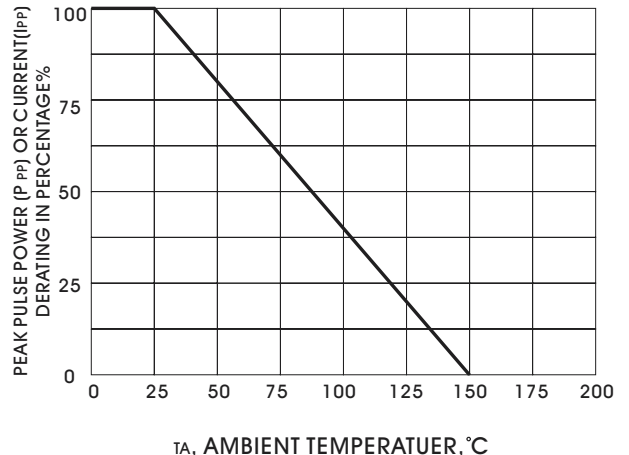


Fig.2 DERATING CURVE

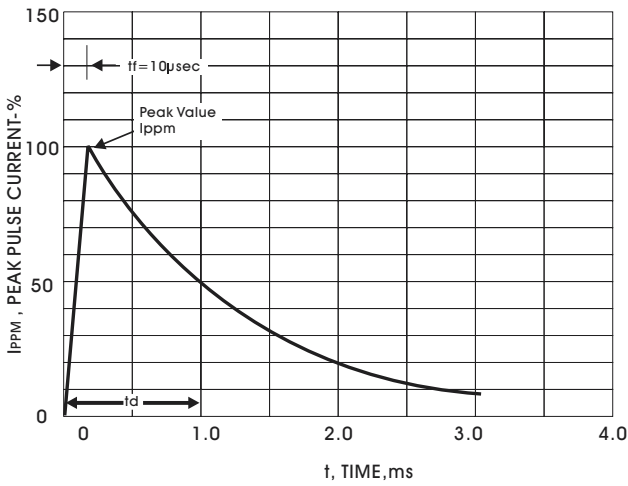


Fig.3 PULSE WAVE FORM

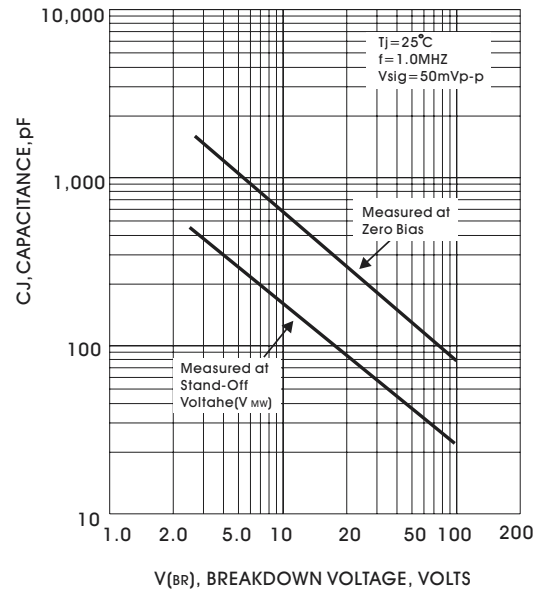


Fig.4 TYPICAL CAPACITANCE

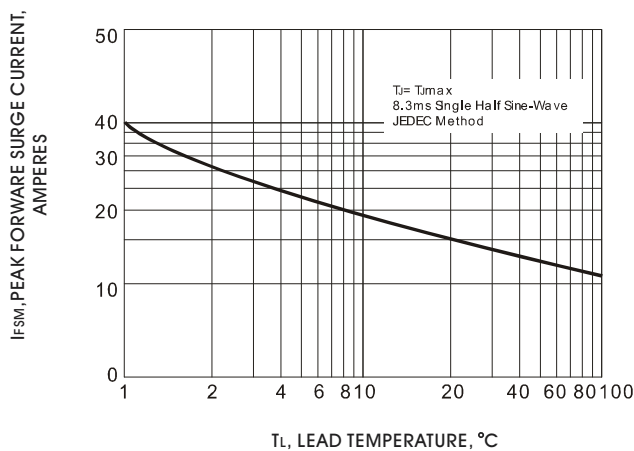


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT