

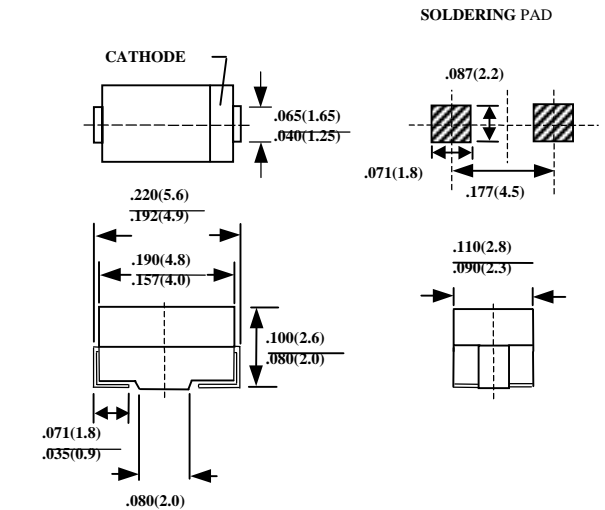
400W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

FEATURES

- OPTIMIZED FOR LAN PROTECTION APPLICATION
- IDEAL FOR ESD PROTECTION OF DATA LINES IN ACCORDANCE WITH IEC 1000-4-2(IEC801-2)
- IDEAL FOR EFT PROTECTION OF DATA LINE IN ACCORDANCE WITH IEC 1000-4-4(IEC801-4)
- EXCELLENT CLAMPING CAPABILITY
- LOW INCREMENTAL SURGE RESISTANCE
- FAST RESPONSE TIME:TYPICALLY LESS THAN 1.0 ps FROM 0 VOLTS TO V(BR) MIN
- 400 W PEAK PULSE POWER CAPABILITY WITH A 10/1000 μ S WAVEFORM , REPETITION RATE (DUTY CYCLE) : 0.01%
- TYPICAL I_D LESS THAN 1 μ A ABOVE 10V
- HIGH TEMPERATURE SOLDERING GUARANTEED:250°C/10 SECONDS AT TERMINAL

MECHANICAL DATA

- CASE : MOLDED PLASTIC
- TERMINALS : SOLDER PLATED
- POLARITY : INDICATED BY CATHODE BAND
- WEIGHT : 0.064 GRAMS



CASE : SMA (DO-214AC)

DIMENSIONS IN INCHES AND (MILLIMETERS)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED

| RATINGS | SYMBOL | VALUE | UNITS |
|---|----------------|---------------|------------------|
| PEAK PULSE POWER DISSIPATION ON 10/1000 μ S WAVEFORM (NOTE 1, FIG. 1) | P_{PPM} | MINIMUM 400 | WATTS |
| PEAK PULSE CURRENT OF 0N 10/1000 μ S WAVEFORM (NOTE 1,FIG. 3) | I_{PPM} | SEE TABLE 1 | A |
| STEADY STATE POWER DISSIPATION AT $T_L=75^\circ\text{C}$ (NOTE 2) | $P_{M(AV)}$ | 1.0 | WATTS |
| PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD, UNIDIRECTIONAL ONLY(NOTE 3) | I_{FSM} | 40 | A |
| MAXIMUM INSTANTANEOUS FORWARD VOLTAGE AT 25.0A FOR UNIDIRECTIONAL ONLY (NOTE 3 & 4) | VF | 3.5 | V |
| OPERATING JUNCTION AND STORAGE TEMPERATURE RANGE | T_J, T_{STG} | - 55 TO + 150 | $^\circ\text{C}$ |

NOTE :

1. NON-REPETITIVE CURRENT PULSE, PER FIG.3 AND DERATED ABOVE $T_A=25^\circ\text{C}$ PER FIG 2.
2. MOUNTED ON 5.0mm² COPPER PADS TO EACH TERMINAL
3. LEAD TEMPERATURE AT 75 $^\circ\text{C}$ = T_L PER FIG. 5
4. MEASURED ON 8.3ms SINGLE HALF SINE-WAVE. FOR UNI-DIRECTINAL DEVICES ONLY
5. PEAK PULSE POWER WAVEFORM IS 10/1000 μ S

| DEVICE | DEVICE MARKING CODE | | WORKING PEAK REVERSE VOLTAGE V_{WM} (VOLTS) | BREAKDOWN VOLTAGE $V_{(BR)}$ (VOLTS) at I_T | | TEST CURRENT I_T (mA) | MAXIMUM Clamping VOLTAGE AT I_{PPM} VC(Volts) (Note 5) | MAX PEAK PULSE SURGE CURRENT I_{PPM} (NOTE 5) (Amps) | MAXIMUM REVERSE LEAKAGE AT V_{WM} I_D (μ A) |
|------------|---------------------|----|---|---|------|-------------------------|--|--|--|
| | UNI | BI | | MIN | MAX | | | | |
| | | | | | | | | | |
| P4SMAJ5.0 | AD | WD | 5.0 | 6.40 | 7.81 | 10 | 9.6 | 31.3 | 800 |
| P4SMAJ5.0A | AE | WE | 5.0 | 6.40 | 7.08 | 10 | 9.2 | 32.6 | 800 |
| P4SMAJ6.0 | AF | WF | 6.0 | 6.67 | 8.15 | 10 | 11.4 | 26.3 | 800 |
| P4SMAJ6.0A | AG | WG | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 29.1 | 800 |
| P4SMAJ6.5 | AH | WH | 6.5 | 7.22 | 8.82 | 10 | 12.3 | 24.4 | 500 |
| P4SMAJ6.5A | AK | WK | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 26.8 | 500 |
| P4SMAJ7.0 | AL | WL | 7.0 | 7.78 | 9.51 | 10 | 13.3 | 22.6 | 200 |
| P4SMAJ7.0A | AM | WM | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 25.0 | 200 |
| P4SMAJ7.5 | AN | WN | 7.5 | 8.33 | 10.3 | 1.0 | 14.3 | 21.0 | 100 |
| P4SMAJ7.5A | AP | WP | 7.5 | 8.33 | 9.21 | 1.0 | 12.9 | 23.3 | 100 |
| P4SMAJ8.0 | AQ | WQ | 8.0 | 8.89 | 10.9 | 1.0 | 15.0 | 20.0 | 50.0 |
| P4SMAJ8.0A | AR | WR | 8.0 | 8.89 | 9.83 | 1.0 | 13.6 | 22.1 | 50.0 |
| P4SMAJ8.5 | AS | WS | 8.5 | 9.44 | 11.5 | 1.0 | 15.9 | 18.9 | 10.0 |
| P4SMAJ8.5A | AT | WT | 8.5 | 9.44 | 10.4 | 1.0 | 14.4 | 20.8 | 10.0 |
| P4SMAJ9.0 | AU | WU | 9.0 | 10.0 | 12.2 | 1.0 | 16.9 | 17.8 | 5.0 |
| P4SMAJ9.0A | AV | WV | 9.0 | 10.0 | 11.1 | 1.0 | 15.4 | 19.5 | 5.0 |
| P4SMAJ10 | AW | WW | 10.0 | 11.1 | 13.6 | 1.0 | 18.8 | 16.0 | 5.0 |
| P4SMAJ10A | AX | WX | 10.0 | 11.1 | 12.3 | 1.0 | 17.0 | 17.6 | 5.0 |
| P4SMAJ11 | AY | WY | 11.0 | 12.2 | 14.9 | 1.0 | 20.1 | 14.9 | 5.0 |
| P4SMAJ11A | AZ | WZ | 11.0 | 12.2 | 13.5 | 1.0 | 18.2 | 16.5 | 5.0 |
| P4SMAJ12 | BD | XD | 12.0 | 13.3 | 16.3 | 1.0 | 22.0 | 13.6 | 5.0 |
| P4SMAJ12A | BE | XE | 12.0 | 13.3 | 14.7 | 1.0 | 19.9 | 15.1 | 5.0 |
| P4SMAJ13 | BF | XF | 13.0 | 14.4 | 17.6 | 1.0 | 23.8 | 12.6 | 5.0 |
| P4SMAJ13A | BG | XG | 13.0 | 14.4 | 15.9 | 1.0 | 21.5 | 14.0 | 5.0 |
| P4SMAJ14 | BH | XH | 14.0 | 15.6 | 19.1 | 1.0 | 25.8 | 11.6 | 5.0 |
| P4SMAJ14A | BK | XK | 14.0 | 15.6 | 17.2 | 1.0 | 23.2 | 12.9 | 5.0 |
| P4SMAJ15 | BL | XL | 15.0 | 16.7 | 20.4 | 1.0 | 26.9 | 11.2 | 5.0 |
| P4SMAJ15A | BM | XM | 15.0 | 16.7 | 18.5 | 1.0 | 24.4 | 12.3 | 5.0 |
| P4SMAJ16 | BN | XN | 16.0 | 17.8 | 21.8 | 1.0 | 28.8 | 10.4 | 5.0 |
| P4SMAJ16A | BP | XP | 16.0 | 17.8 | 19.7 | 1.0 | 26.0 | 11.5 | 5.0 |
| P4SMAJ17 | BQ | XQ | 17.0 | 18.9 | 23.1 | 1.0 | 30.5 | 9.8 | 5.0 |
| P4SMAJ17A | BR | XR | 17.0 | 18.9 | 20.9 | 1.0 | 27.6 | 10.9 | 5.0 |
| P4SMAJ18 | BS | XS | 18.0 | 20.0 | 24.4 | 1.0 | 32.2 | 9.3 | 5.0 |
| P4SMAJ18A | BT | XT | 18.0 | 20.0 | 22.1 | 1.0 | 29.2 | 10.3 | 5.0 |
| P4SMAJ20 | BU | XU | 20.0 | 22.2 | 27.1 | 1.0 | 35.8 | 8.4 | 5.0 |
| P4SMAJ20A | BV | XV | 20.0 | 22.2 | 24.5 | 1.0 | 32.4 | 9.3 | 5.0 |
| P4SMAJ22 | BW | XW | 22.0 | 24.4 | 29.8 | 1.0 | 39.4 | 7.6 | 5.0 |
| P4SMAJ22A | BX | XX | 22.0 | 24.4 | 26.9 | 1.0 | 35.5 | 8.5 | 5.0 |
| P4SMAJ24 | BY | XY | 24.0 | 26.7 | 32.6 | 1.0 | 43.0 | 7.0 | 5.0 |
| P4SMAJ24A | BZ | XZ | 24.0 | 26.7 | 29.5 | 1.0 | 38.9 | 7.7 | 5.0 |
| P4SMAJ26 | CD | YD | 26.0 | 28.9 | 35.3 | 1.0 | 46.6 | 6.4 | 5.0 |
| P4SMAJ26A | CE | YE | 26.0 | 28.9 | 31.9 | 1.0 | 42.1 | 7.1 | 5.0 |
| P4SMAJ28 | CF | YF | 28.0 | 31.1 | 38.0 | 1.0 | 50.1 | 6.0 | 5.0 |
| P4SMAJ28A | CG | YG | 28.0 | 31.1 | 34.4 | 1.0 | 45.4 | 6.6 | 5.0 |
| P4SMAJ30 | CH | YH | 30.0 | 33.3 | 40.7 | 1.0 | 53.5 | 5.6 | 5.0 |
| P4SMAJ30A | CK | YK | 30.0 | 33.3 | 36.8 | 1.0 | 48.4 | 6.2 | 5.0 |
| P4SMAJ33 | CL | YL | 33.0 | 36.7 | 44.9 | 1.0 | 59.0 | 5.1 | 5.0 |
| P4SMAJ33A | CM | YM | 33.0 | 36.7 | 40.6 | 1.0 | 53.3 | 5.6 | 5.0 |
| P4SMAJ36 | CN | YN | 36.0 | 40.0 | 48.9 | 1.0 | 64.3 | 4.7 | 5.0 |
| P4SMAJ36A | CP | YP | 36.0 | 40.0 | 44.2 | 1.0 | 58.1 | 5.2 | 5.0 |
| P4SMAJ40 | CQ | YQ | 40.0 | 44.4 | 54.3 | 1.0 | 71.4 | 4.2 | 5.0 |
| P4SMAJ40A | CR | YR | 40.0 | 44.4 | 49.1 | 1.0 | 64.5 | 4.7 | 5.0 |
| P4SMAJ43 | CS | YS | 43.0 | 47.8 | 58.4 | 1.0 | 76.7 | 3.9 | 5.0 |
| P4SMAJ43A | CT | YT | 43.0 | 47.8 | 52.8 | 1.0 | 69.4 | 4.3 | 5.0 |
| P4SMAJ45 | CU | YU | 45.0 | 50.0 | 61.1 | 1.0 | 80.3 | 3.7 | 5.0 |
| P4SMAJ45A | CV | YV | 45 | 50.0 | 55.3 | 1.0 | 72.7 | 4.1 | 5.0 |
| P4SMAJ48 | CW | YW | 48 | 53.3 | 65.1 | 1.0 | 85.5 | 3.5 | 5.0 |
| P4SMAJ48A | CX | YX | 48 | 53.3 | 58.9 | 1.0 | 77.4 | 3.9 | 5.0 |

| DEVICE | DEVICE MARKING CODE | | WORKING PEAK REVERSE VOLTAGE V_{WM} (VOLTS) | BREAKDOWN VOLTAGE $V_{(BR)}$ (VOLTS) at I_T | | TEST CURRENT I_T (mA) | MAXIMUM Clamping VOLTAGE AT I_{PPM} VC(Volts) (Note 5) | MAX PEAK PULSE SURGE CURRENT I_{PPM} (NOTE 5) (Amps) | MAXIMUM REVERSE LEAKAGE AT V_{WM} I_D (μ A) |
|------------|---------------------|----|---|---|-------|-------------------------|--|--|--|
| | UNI | BI | | MIN | MAX | | | | |
| | | | | | | | | | |
| P4SMAJ51 | CY | YY | 51 | 56.7 | 69.3 | 1.0 | 91.1 | 3.3 | 5.0 |
| P4SMAJ51A | CZ | YZ | 51 | 56.7 | 62.7 | 1.0 | 82.4 | 3.6 | 5.0 |
| P4SMAJ54 | RD | ZD | 54 | 60.0 | 73.3 | 1.0 | 96.3 | 3.1 | 5.0 |
| P4SMAJ54A | RE | ZE | 54 | 60.0 | 66.3 | 1.0 | 87.1 | 3.4 | 5.0 |
| P4SMAJ58 | RF | ZF | 58 | 64.4 | 78.7 | 1.0 | 103.0 | 2.9 | 5.0 |
| P4SMAJ58A | RG | ZG | 58 | 64.4 | 71.2 | 1.0 | 93.6 | 3.2 | 5.0 |
| P4SMAJ60 | RH | ZH | 60 | 66.7 | 81.5 | 1.0 | 107.0 | 2.8 | 5.0 |
| P4SMAJ60A | RK | ZK | 60 | 66.7 | 73.7 | 1.0 | 96.8 | 3.1 | 5.0 |
| P4SMAJ64 | RL | ZL | 64 | 71.1 | 86.4 | 1.0 | 114.0 | 2.6 | 5.0 |
| P4SMAJ64A | RM | ZM | 64 | 71.1 | 78.6 | 1.0 | 103.0 | 2.9 | 5.0 |
| P4SMAJ70 | RN | ZN | 70 | 77.8 | 95.1 | 1.0 | 125.0 | 2.4 | 5.0 |
| P4SMAJ70A | RP | ZP | 70 | 77.8 | 86.0 | 1.0 | 113.0 | 2.7 | 5.0 |
| P4SMAJ75 | RQ | ZQ | 75 | 83.3 | 102.0 | 1.0 | 134.0 | 2.2 | 5.0 |
| P4SMAJ75A | RR | ZR | 75 | 83.3 | 92.1 | 1.0 | 121.0 | 2.5 | 5.0 |
| P4SMAJ78 | RS | ZS | 78 | 86.7 | 106.0 | 1.0 | 139.0 | 2.2 | 5.0 |
| P4SMAJ78A | RT | ZT | 78 | 86.7 | 95.8 | 1.0 | 126.0 | 2.4 | 5.0 |
| P4SMAJ85 | RU | ZU | 85 | 94.4 | 115.0 | 1.0 | 151.0 | 2.0 | 5.0 |
| P4SMAJ85A | RV | ZV | 85 | 94.4 | 104.0 | 1.0 | 137.0 | 2.2 | 5.0 |
| P4SMAJ90 | RW | ZW | 90 | 100 | 122.0 | 1.0 | 160.0 | 1.9 | 5.0 |
| P4SMAJ90A | RX | ZX | 90 | 100 | 111.0 | 1.0 | 146.0 | 2.1 | 5.0 |
| P4SMAJ100 | RY | ZY | 100 | 111 | 136.0 | 1.0 | 179.0 | 1.7 | 5.0 |
| P4SMAJ100A | RZ | ZZ | 100 | 111 | 123.0 | 1.0 | 162.0 | 1.9 | 5.0 |
| P4SMAJ110 | SD | VD | 110 | 122 | 149.0 | 1.0 | 196.0 | 1.5 | 5.0 |
| P4SMAJ110A | SE | VE | 110 | 122 | 135.0 | 1.0 | 177.0 | 1.7 | 5.0 |
| P4SMAJ120 | SF | VF | 120 | 133 | 163.0 | 1.0 | 214.0 | 1.4 | 5.0 |
| P4SMAJ120A | SG | VG | 120 | 133 | 147.0 | 1.0 | 193.0 | 1.6 | 5.0 |
| P4SMAJ130 | SH | VH | 130 | 144 | 176.0 | 1.0 | 231.0 | 1.3 | 5.0 |
| P4SMAJ130A | SK | VK | 130 | 144 | 159.0 | 1.0 | 209.0 | 1.4 | 5.0 |
| P4SMAJ150 | SL | VL | 150 | 167 | 204.0 | 1.0 | 268.0 | 1.1 | 5.0 |
| P4SMAJ150A | SM | VM | 150 | 167 | 185.0 | 1.0 | 243.0 | 1.2 | 5.0 |
| P4SMAJ160 | SN | VN | 160 | 178 | 218.0 | 1.0 | 287.0 | 1.0 | 5.0 |
| P4SMAJ160A | SP | VP | 160 | 178 | 197.0 | 1.0 | 259.0 | 1.2 | 5.0 |
| P4SMAJ170 | SQ | VQ | 170 | 189 | 231.0 | 1.0 | 304.0 | 0.99 | 5.0 |
| P4SMAJ170A | SR | VR | 170 | 189 | 209.0 | 1.0 | 275.0 | 1.09 | 5.0 |