

FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

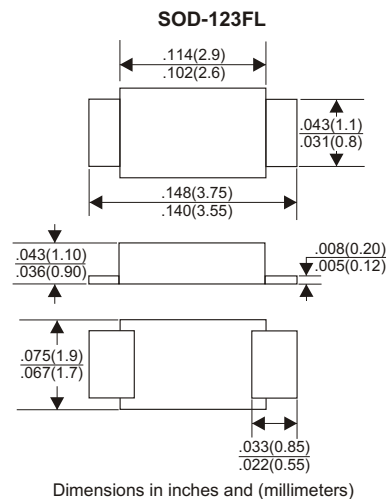
MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg 0.00048oz

VOLTAGE RANGE

5.0 to 440 Volts

200 Watts Peak Power



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATINGS | SYMBOL | VALUE | UNITS |
|--|-----------------------------------|-------------|-------|
| Peak Power Dissipation at T _A =25°C, T _P =1ms(NOTE 1) | P _{PK} | Minimum 200 | Watts |
| Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3) | I _{FSM} | 30 | Amps |
| Maximum Instantaneous Forward Voltage at 25.0A for Unidirectional only | V _F | 3.5 | Volts |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. Mounted on Copper Pad area of 5.0mm²(.013mm Thick) to each terminal.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

DEVICES FOR BIPOLAR APPLICATIONS

1. For Bidirectional use C or CA Suffix for types SMFJ5.0 thru SMFJ440.
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (SMF SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

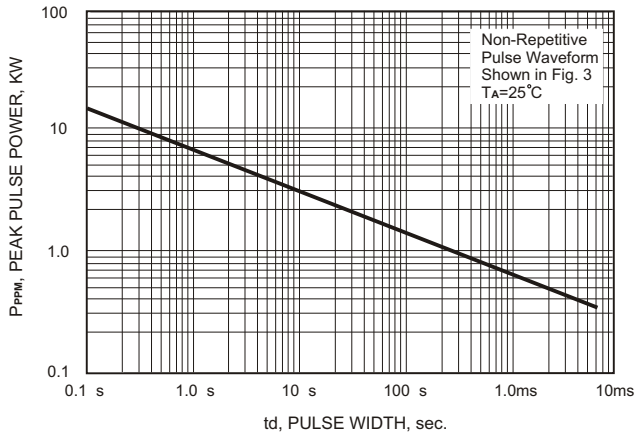


FIG.2-PULSE DERATING CURVE

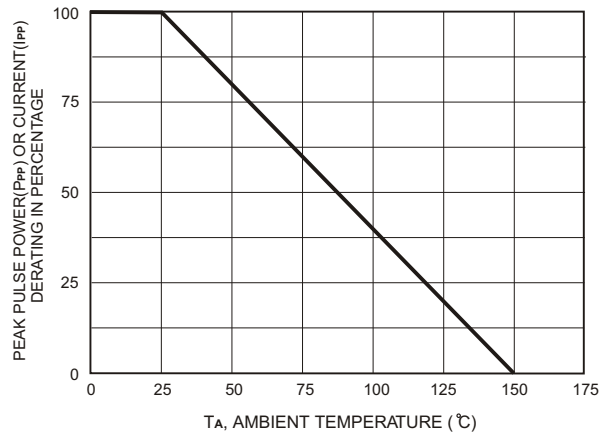


FIG.3-PULSE WAVE FORM

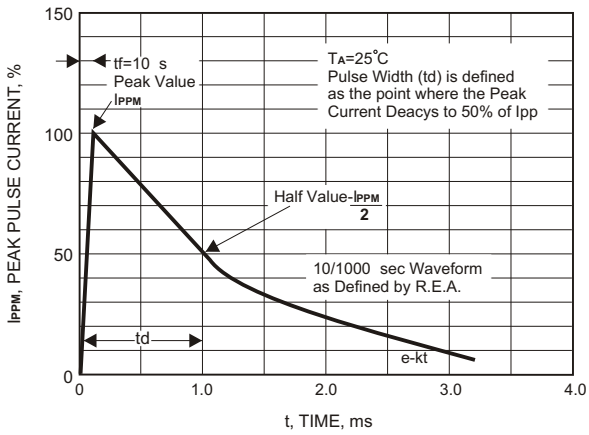
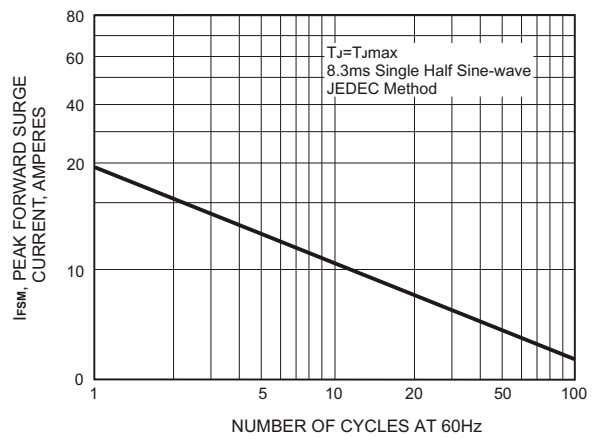


FIG.4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



200 Watt Surface Mount TVS

| PART NUMBER ADD C FOR BI- DIRECTIONAL | V_{RWM} | Breakdown Voltage | | Test Current | Reverse Leakage | Max. Clamp Voltage | Peak Pulse Current | Marking | |
|---|-----------|-------------------|------|--------------|-----------------|--------------------|--------------------|---------|---------|
| | | $V_{BR} @ I_T$ | | I_T | $I_R @ V_{RWM}$ | $V_C @ I_{PP}$ | I_{PP} | | |
| | | Min | Max | | | | | mA | μA |
| See Note 1 | V | V | V | mA | μA | V | A | Uni | Bi |
| SMF5.0(C)A | 5 | 6.4 | 7 | 10 | 400 | 9.2 | 21.7 | AE | CAE |
| SMF6.0(C)A | 6 | 6.67 | 7.37 | 10 | 400 | 10.3 | 19.4 | AG | CAG |
| SMF6.5(C)A | 6.5 | 7.22 | 7.98 | 10 | 250 | 11.2 | 17.9 | AK | CAK |
| SMF7.0(C)A | 7 | 7.78 | 8.6 | 10 | 100 | 12 | 16.7 | AM | CAM |
| SMF7.5(C)A | 7.5 | 8.33 | 9.21 | 1 | 50 | 12.9 | 15.5 | AP | CAP |
| SMF8.0(C)A | 8 | 8.89 | 9.83 | 1 | 25 | 13.6 | 14.7 | AR | CAR |
| SMF8.5(C)A | 8.5 | 9.44 | 10.4 | 1 | 10 | 14.4 | 13.9 | AT | CAT |
| SMF9.0(C)A | 9 | 10 | 11.1 | 1 | 5 | 15.4 | 13 | AV | CAV |
| SMF10(C)A | 10 | 11.1 | 12.3 | 1 | 2.5 | 17 | 11.8 | AX | CAX |
| SMF11(C)A | 11 | 12.2 | 13.5 | 1 | 2.5 | 18.2 | 11 | AZ | CAZ |
| SMF12(C)A | 12 | 13.3 | 14.7 | 1 | 2.5 | 19.9 | 10.1 | BE | CBE |
| SMF13(C)A | 13 | 14.4 | 15.9 | 1 | 1 | 21.5 | 9.3 | BG | CBG |
| SMF14(C)A | 14 | 15.6 | 17.2 | 1 | 1 | 23.2 | 8.6 | BK | CBK |
| SMF15(C)A | 15 | 16.7 | 18.5 | 1 | 1 | 24.4 | 8.2 | BM | CBM |
| SMF16(C)A | 16 | 17.8 | 19.7 | 1 | 1 | 26 | 7.7 | BP | CBP |
| SMF17(C)A | 17 | 18.9 | 20.9 | 1 | 1 | 27.6 | 7.2 | BR | CBR |
| SMF18(C)A | 18 | 20 | 22.1 | 1 | 1 | 29.2 | 6.8 | BT | CBT |
| SMF20(C)A | 20 | 22.2 | 24.5 | 1 | 1 | 32.4 | 6.2 | BV | CBV |
| SMF22(C)A | 22 | 24.4 | 26.9 | 1 | 1 | 35.5 | 5.6 | BX | CBX |
| SMF24(C)A | 24 | 26.7 | 29.5 | 1 | 1 | 38.9 | 5.1 | BZ | CBZ |
| SMF26(C)A | 26 | 28.9 | 31.9 | 1 | 1 | 42.1 | 4.8 | CE | CCE |
| SMF28(C)A | 28 | 31.1 | 34.4 | 1 | 1 | 45.4 | 4.4 | CG | CCG |
| SMF30(C)A | 30 | 33.3 | 36.8 | 1 | 1 | 48.4 | 4.1 | CK | CCK |
| SMF33(C)A | 33 | 36.7 | 40.6 | 1 | 1 | 53.3 | 3.8 | CM | CCM |
| SMF36(C)A | 36 | 40 | 44.2 | 1 | 1 | 58.1 | 3.4 | CP | CCP |
| SMF40(C)A | 40 | 44.4 | 49.1 | 1 | 1 | 64.5 | 3.1 | CR | CCR |
| SMF43(C)A | 43 | 47.8 | 52.8 | 1 | 1 | 69.4 | 2.9 | CT | CCT |
| SMF45(C)A | 45 | 50 | 55.3 | 1 | 1 | 72.7 | 2.8 | CV | CCV |
| SMF48(C)A | 48 | 53.3 | 58.9 | 1 | 1 | 77.4 | 2.6 | CX | CCX |
| SMF51(C)A | 51 | 56.7 | 62.7 | 1 | 1 | 82.4 | 2.4 | CZ | CCZ |
| SMF54(C)A | 54 | 60 | 66.3 | 1 | 1 | 87.1 | 2.3 | DE | CDE |
| SMF58(C)A | 58 | 64.4 | 71.2 | 1 | 1 | 93.6 | 2.1 | DG | CDG |
| SMF60(C)A | 60 | 66.7 | 73.7 | 1 | 1 | 96.8 | 1.8 | DK | CDK |
| SMF64(C)A | 64 | 71.1 | 78.6 | 1 | 1 | 103 | 1.7 | DM | CDM |
| SMF70(C)A | 70 | 77.8 | 86 | 1 | 1 | 113 | 1.5 | DP | CDP |
| SMF75(C)A | 75 | 83.3 | 92.1 | 1 | 1 | 121 | 1.4 | DR | CDR |
| SMF78(C)A | 78 | 86.7 | 95.8 | 1 | 1 | 126 | 1.4 | DT | CDT |
| SMF85(C)A | 85 | 94.4 | 104 | 1 | 1 | 137 | 1.3 | DV | CDV |
| SMF90(C)A | 90 | 100 | 111 | 1 | 1 | 146 | 1.2 | DX | CDX |
| SMF100(C)A | 100 | 111 | 123 | 1 | 1 | 162 | 1.1 | DZ | CDZ |
| SMF110(C)A | 110 | 122 | 135 | 1 | 1 | 177 | 1 | EE | CEE |
| SMF120(C)A | 120 | 133 | 147 | 1 | 1 | 193 | 0.9 | EG | CEG |
| SMF130(C)A | 130 | 144 | 159 | 1 | 1 | 209 | 0.8 | EK | CEK |
| SMF150(C)A | 150 | 167 | 185 | 1 | 1 | 243 | 0.7 | EM | CEM |
| SMF160(C)A | 160 | 178 | 197 | 1 | 1 | 259 | 0.7 | EP | CEP |
| SMF170(C)A | 170 | 189 | 209 | 1 | 1 | 275 | 0.6 | ER | CER |
| SMF180(C)A | 180 | 201 | 222 | 1 | 1 | 292 | 0.5 | ET | CET |
| SMF200(C)A | 200 | 224 | 247 | 1 | 1 | 324 | 0.5 | EX | CEX |
| SMF220(C)A | 220 | 246 | 272 | 1 | 1 | 356 | 0.5 | E22 | CE22 |
| SMF250(C)A | 250 | 279 | 309 | 1 | 1 | 405 | 0.5 | E25 | CE25 |
| SMF300(C)A | 300 | 335 | 371 | 1 | 1 | 486 | 0.45 | E30 | CE30 |
| SMF350(C)A | 350 | 391 | 432 | 1 | 1 | 567 | 0.4 | E35 | CE35 |
| SMF400(C)A | 400 | 447 | 494 | 1 | 1 | 648 | 0.35 | E40 | CE40 |
| SMF440(C)A | 440 | 492 | 543 | 1 | 1 | 713 | 0.3 | E44 | CE44 |

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