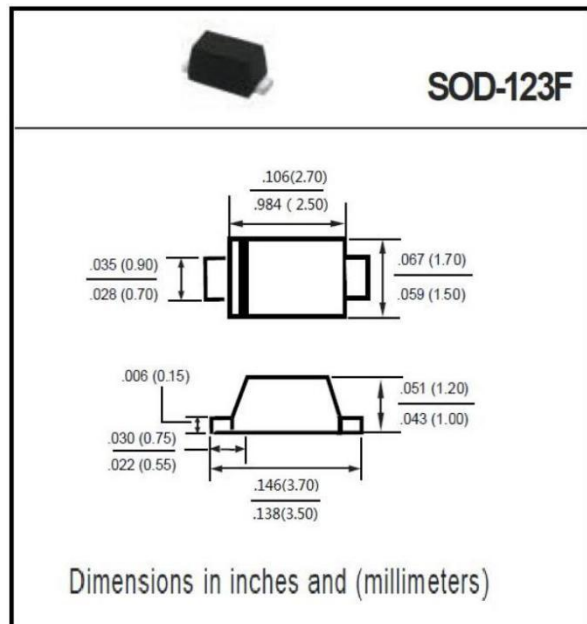




SMFJ3.0(C)A thru SMFJ170J(C)A

表面贴装瞬间抑制二极管
 隔离电压 3.0 --- 170 V
 峰值功率 300W

Surface Mount Transient Voltage Suppressors
 Stand-off Voltage 3.0 to 170V
 Peak Pulse Power 300W



特征 Features

- 表面安装应用 For surface mount applications
- 玻璃钝化芯片 Glass passivated junction
- 快速响应时间 Very fast response time
- 优良钳位能力 Excellent clamping capability
- 最高焊接温度 260°C/10 秒
- High temperature soldering guaranteed:
 260°C/10 seconds at terminals
- 200W 峰值脉冲保护能力(≥60V 为 175W)
 200W peak pulse power capability (175W above 60V) • 10/1000µs 波形, 重复率:0.01%
 a 10/1000µs waveform, repetition rate (duty cycle): 0.01%

机械数据 Mechanical Data

- 封装: 塑料封装 Case: Molded plastic body
- 端子: 焊料被镀 Terminals: Solder plated
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 安装位置: 任意 Mounting Position: Any
- 重量: 0.016 克 Weight: 0.016 gram

极限值和温度特性 TA = 25°C 除非另有规定。

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|--|-------------------|----------------|------|
| 最大峰值脉冲功率 Peak pulse power dissipation with a 10/1000µs waveform (1, 2) (see fig. 1) | P_{PPM} | 300 | W |
| 最大峰值脉冲电流 Peak pulse current with a 10/1000µs waveform(1) | I_{PPM} | See Next Table | A |
| 正向峰值浪涌电流 8.3ms 单一正弦半波 Peak forward surge current 8.3ms single half sine-wave uni-directional only(2) | I_{FSM} | 20 | A |
| 典型热阻 Typical thermal resistance (3) | R^{θ}_{JA} | 180 | °C/W |
| 工作结温和存储温度 Operating junction and storage temperature range | T_J, T_{STG} | -55---150 | °C |

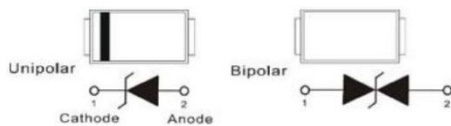
Notes: (1) Non-repetitive current pulse, per Fig. 3 and derated above TA = 25°C per Fig. 2. Rating is 175W above 60V
 (2) Mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pads to each terminal
 (3) Mounted on minimum recommended pad layout



SMFJ3.0(C)A thru SMFJ170(C)A

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified

| Part Number | | V _{RWM} | V _{BR@I_T} | | | I _{R@V_{RWM}} | V _{C@I_{PP}} | | Marking Code | |
|-------------|-----------|------------------|-------------------------------|------|----------------|--------------------------------|-------------------------------|------|--------------|----|
| | | | Min. | Max. | I _T | | V | A | Uni | Bi |
| | | V | V | V | mA | μA | V | A | | |
| SMFJ3.0A | SMFJ3.0CA | 3.0 | 4.1 | 4.5 | 10 | 400 | 8 | 25 | HD | TD |
| SMFJ5.0A | SMFJ5.0CA | 5 | 6.4 | 7 | 10 | 400 | 9.2 | 21.7 | HE | TE |
| SMFJ6.0A | SMFJ6.0CA | 6 | 6.7 | 7.4 | 10 | 400 | 10.3 | 19.4 | HG | TG |
| SMFJ6.5A | SMFJ6.5CA | 6.5 | 7.2 | 8 | 10 | 250 | 11.2 | 17.9 | HK | TK |
| SMFJ7.0A | SMFJ7.0CA | 7 | 7.8 | 8.6 | 10 | 100 | 12 | 16.7 | HM | TM |
| SMFJ7.5A | SMFJ7.5CA | 7.5 | 8.3 | 9.2 | 1 | 50 | 12.9 | 15.5 | HP | TP |
| SMFJ8.0A | SMFJ8.0CA | 8 | 8.9 | 9.8 | 1 | 25 | 13.6 | 14.7 | HR | TR |
| SMFJ8.5A | SMFJ8.5CA | 8.5 | 9.4 | 10.4 | 1 | 10 | 14.4 | 13.9 | HT | TT |
| SMFJ9.0A | SMFJ9.0CA | 9 | 10 | 11.1 | 1 | 5 | 15.4 | 13 | HV | TV |
| SMFJ10A | SMFJ10CA | 10 | 11.1 | 12.3 | 1 | 2.5 | 17 | 11.8 | HX | TX |
| SMFJ11A | SMFJ11CA | 11 | 12.2 | 13.5 | 1 | 2.5 | 18.2 | 11 | HZ | TZ |
| SMFJ12A | SMFJ12CA | 12 | 13.3 | 14.7 | 1 | 2.5 | 19.9 | 10.1 | IE | UE |
| SMFJ13A | SMFJ13CA | 13 | 14.4 | 15.9 | 1 | 1 | 21.5 | 9.3 | IG | UG |
| SMFJ14A | SMFJ14CA | 14 | 15.6 | 17.2 | 1 | 1 | 23.2 | 8.6 | IK | UK |
| SMFJ15A | SMFJ15CA | 15 | 16.7 | 18.5 | 1 | 1 | 24.4 | 8.2 | IM | UM |
| SMFJ16A | SMFJ16CA | 16 | 17.8 | 19.7 | 1 | 1 | 26 | 7.7 | IP | UP |
| SMFJ17A | SMFJ17CA | 17 | 18.9 | 20.9 | 1 | 1 | 27.6 | 7.2 | IR | UR |
| SMFJ18A | SMFJ18CA | 18 | 20 | 22.1 | 1 | 1 | 29.2 | 6.8 | IT | UT |
| SMFJ20A | SMFJ20CA | 20 | 22.2 | 24.5 | 1 | 1 | 32.4 | 6.2 | IV | UV |
| SMFJ22A | SMFJ22CA | 22 | 24.4 | 26.9 | 1 | 1 | 35.5 | 5.6 | IX | UX |
| SMFJ24A | SMFJ24CA | 24 | 26.7 | 29.5 | 1 | 1 | 38.9 | 5.1 | IZ | UZ |
| SMFJ26A | SMFJ26CA | 26 | 28.9 | 31.9 | 1 | 1 | 42.1 | 4.8 | JE | VE |
| SMFJ28A | SMFJ28CA | 28 | 31.1 | 34.4 | 1 | 1 | 45.4 | 4.4 | JG | VG |
| SMFJ30A | SMFJ30CA | 30 | 33.3 | 36.8 | 1 | 1 | 48.4 | 4.1 | JK | VK |
| SMFJ33A | SMFJ33CA | 33 | 36.7 | 40.6 | 1 | 1 | 53.3 | 3.8 | JM | VM |
| SMFJ36A | SMFJ36CA | 36 | 40 | 44.2 | 1 | 1 | 58.1 | 3.4 | JP | VP |
| SMFJ40A | SMFJ40CA | 40 | 44.4 | 49.1 | 1 | 1 | 64.5 | 3.1 | JR | VR |
| SMFJ43A | SMFJ43CA | 43 | 47.8 | 52.8 | 1 | 1 | 69.4 | 2.9 | JT | VT |
| SMFJ45A | SMFJ45CA | 45 | 50 | 55.3 | 1 | 1 | 72.7 | 2.8 | JV | VV |
| SMFJ48A | SMFJ48CA | 48 | 53.3 | 58.9 | 1 | 1 | 77.4 | 2.6 | JX | VX |
| SMFJ51A | SMFJ51CA | 51 | 56.7 | 62.7 | 1 | 1 | 82.4 | 2.4 | JZ | VZ |
| SMFJ54A | SMFJ54CA | 54 | 60 | 66.3 | 1 | 1 | 87.1 | 2.3 | RE | WE |
| SMFJ58A | SMFJ58CA | 58 | 64.4 | 71.2 | 1 | 1 | 93.6 | 2.1 | RG | WG |
| SMFJ60A | SMFJ60CA | 60 | 66.7 | 73.7 | 1 | 1 | 96.8 | 1.8 | RK | WK |
| SMFJ64A | SMFJ64CA | 64 | 71.1 | 78.6 | 1 | 1 | 103 | 1.7 | RM | WM |
| SMFJ70A | SMFJ70CA | 70 | 77.8 | 86 | 1 | 1 | 113 | 1.5 | RP | WP |
| SMFJ75A | SMFJ75CA | 75 | 83.3 | 92.1 | 1 | 1 | 121 | 1.4 | RR | WR |
| SMFJ78A | SMFJ78CA | 78 | 86.7 | 95.8 | 1 | 1 | 126 | 1.4 | RT | WT |
| SMFJ85A | SMFJ85CA | 85 | 94.4 | 104 | 1 | 1 | 137 | 1.3 | RV | WV |
| SMFJ90A | SMFJ90CA | 90 | 100 | 111 | 1 | 1 | 146 | 1.2 | RX | WX |
| SMFJ100A | SMFJ100CA | 100 | 111 | 123 | 1 | 1 | 162 | 1.1 | RZ | WZ |
| SMFJ110A | SMFJ110CA | 110 | 122 | 135 | 1 | 1 | 177 | 1 | SE | XE |
| SMFJ120A | SMFJ120CA | 120 | 133 | 147 | 1 | 1 | 193 | 0.9 | SG | XG |
| SMFJ130A | SMFJ130CA | 130 | 144 | 159 | 1 | 1 | 209 | 0.8 | SK | XK |
| SMFJ140A | SMFJ140CA | 150 | 167 | 185 | 1 | 1 | 243 | 0.7 | SM | XM |
| SMFJ160A | SMFJ160CA | 160 | 178 | 197 | 1 | 1 | 259 | 0.7 | SP | XP |
| SMFJ170A | SMFJ170CA | 170 | 189 | 209 | 1 | 1 | 275 | 0.6 | SR | XR |





SMFJ3.0(C)A thru SMFJ170(C)A

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified)

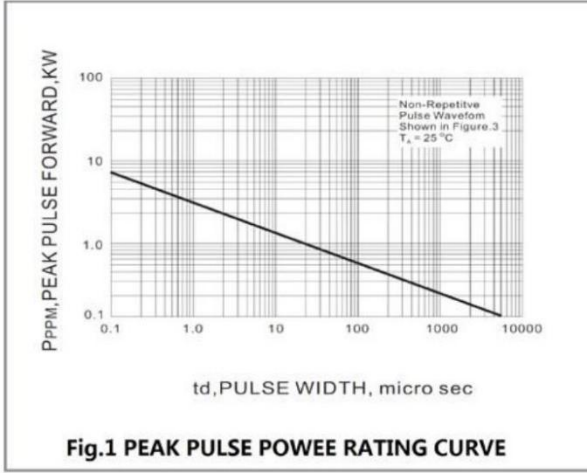


Fig.1 PEAK PULSE POWER RATING CURVE

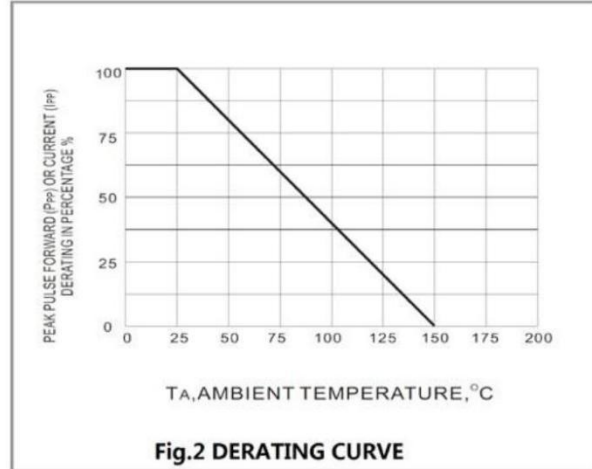


Fig.2 DERATING CURVE

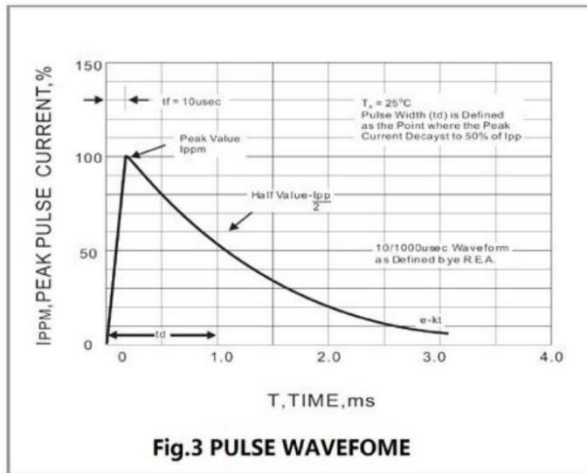


Fig.3 PULSE WAVEFORM

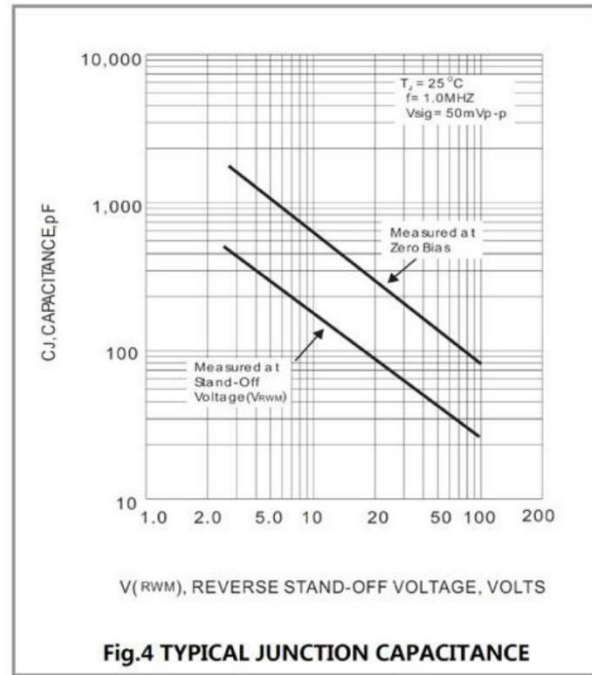


Fig.4 TYPICAL JUNCTION CAPACITANCE

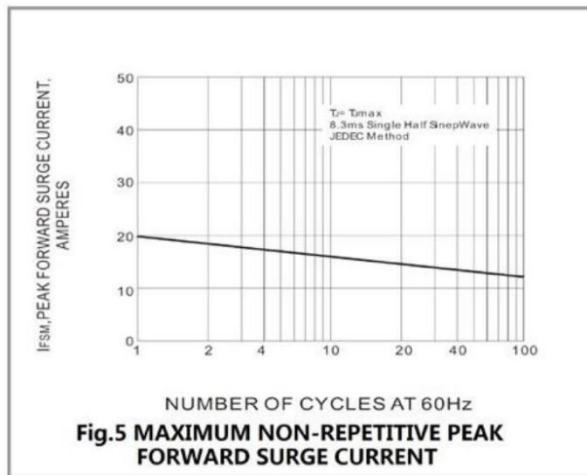
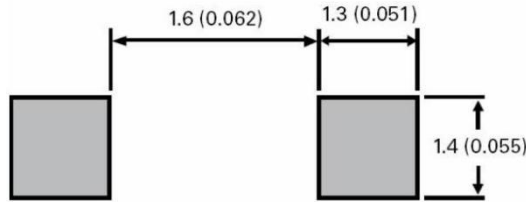


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



SMFJ3.0(C)A thru SMFJ170(C)A

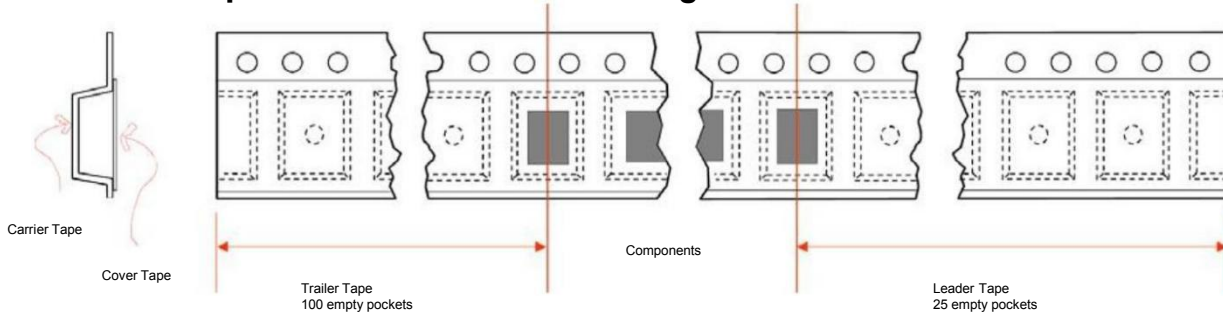
Mounting Pad Layout



Packing

| Part number | Component Package | Quantity | Packaging Option |
|---------------------|-------------------|----------|----------------------------|
| SMFJ3.0(C)A-170(C)A | SOD-123F | 3000 | Tape & Reel – 8mm/7" tape |
| | | 10000 | Tape & Reel – 8mm/13" tape |

SOD-123F Tape Leader and Trailer Configuration



Tape and Reel Specification

