

# SMF5.0(C)A~SMF440(C)A

Rev.B May.-2024

## / Descriptions

200W  $V_{RMW}$ :5.0V~440V SOD-123FL  
200W Surface Mount Transient Voltage Suppressor Stand-Off Voltage 5.0V~440V SOD-123FL thin package.

## / Features

<7Y03

For surface mounted applications in order to optimize board space Glass passivated junction Low inductance Plastic package has Underwriters Laboratory Flammability Classifications 94V-0,HF Product.

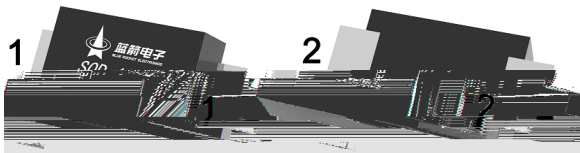
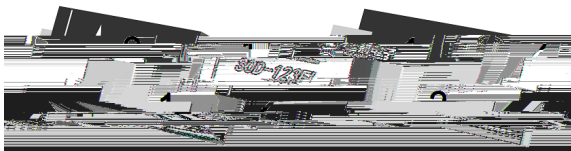
## / Applications

General purpose.

## / Equivalent Circuit



## / Pinning



## / Marking

See Marking Instructions.

# SMF5.0(C)A~SMF440(C)A

Rev.B May.-2024



蓝箭电子  
BLUE ROCKET ELECTRONICS

DATA SHEET

| Parameter                                                  | Symbol                                                | Rating               | Unit |
|------------------------------------------------------------|-------------------------------------------------------|----------------------|------|
| Peak Pulse Power Dissipation on $T_a=25$ (Note1,2,5, Fig1) | $P_{PPM}$                                             | 200                  | W    |
| Peak Forward Surge Current(Note3)                          | $I_{FSM(UNI)}$                                        | 20                   | A    |
| Peak Pulse Current on 10/1000us waveform (Note1) Fig2      | $I_{PPM}$                                             | See Table 1          | A    |
| Steady State Power Dissipation (Note4)                     | $P_{M(AV)}$                                           | 1                    | W    |
| Operating Junction and Storage Range                       | $T_j, T_{stg}$                                        | -55~150              |      |
| ESD Voltage per IEC61000-4-2 Contact Air                   | $V_{ESD1}$<br>$V_{ESD2}$                              | $\pm 30$<br>$\pm 30$ | kV   |
| ESD Voltage (HBM)                                          | $V_{ESD}$                                             | 16                   | kV   |
| Typical Thermal Resistance                                 | $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | 105<br>25<br>32      | /W   |

## NOTES

1. Non-repetitive current pulse per Fig 3 and derated above  $T_A=25$  per Fig 2
2. Mounted on 5mm<sup>2</sup> copper pads to each terminal
3. 8.3ms single half sinewave, or equivalent square wave duty cycle=4 pulses per minutes maximum

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## DATA SHEET

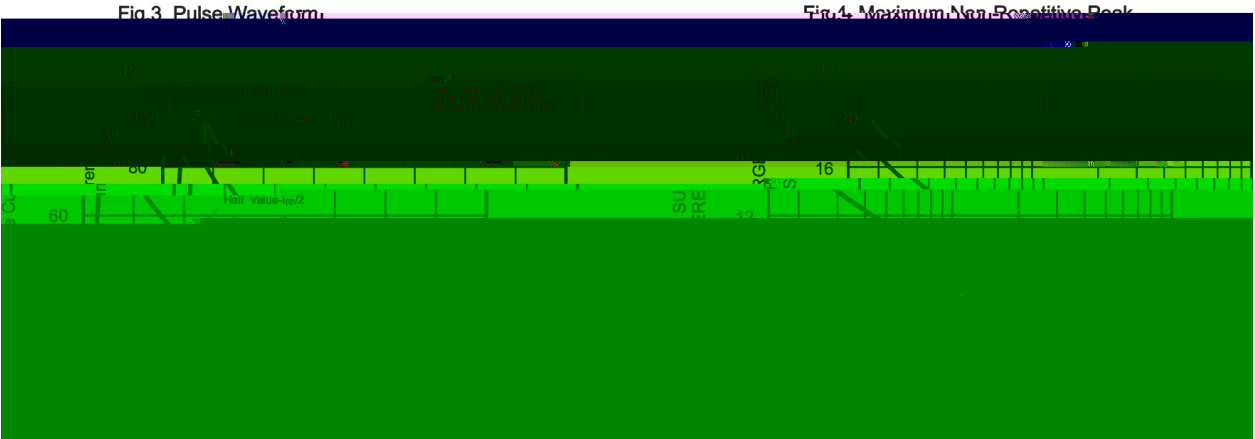
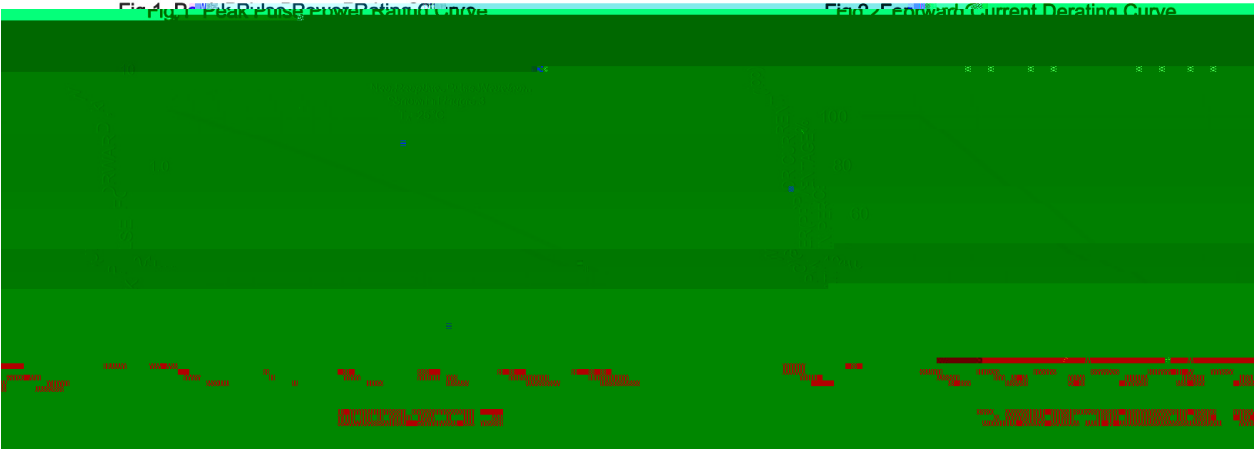
| Type | Marking | Stand-off Voltage | Breakdown Voltage | Test Current | Reverse Leakage | Max. Clamp Voltage | Peak Pulse Current |
|------|---------|-------------------|-------------------|--------------|-----------------|--------------------|--------------------|
|      |         | $V_{RMW}$         | $V_{BR@I_T}$      | $I_T$        | $I_R@V_{RWM}$   | $V_C@I_{PP}$       | $I_{PP}$           |



**/ Electrical Characteristics(Ta=25 )**

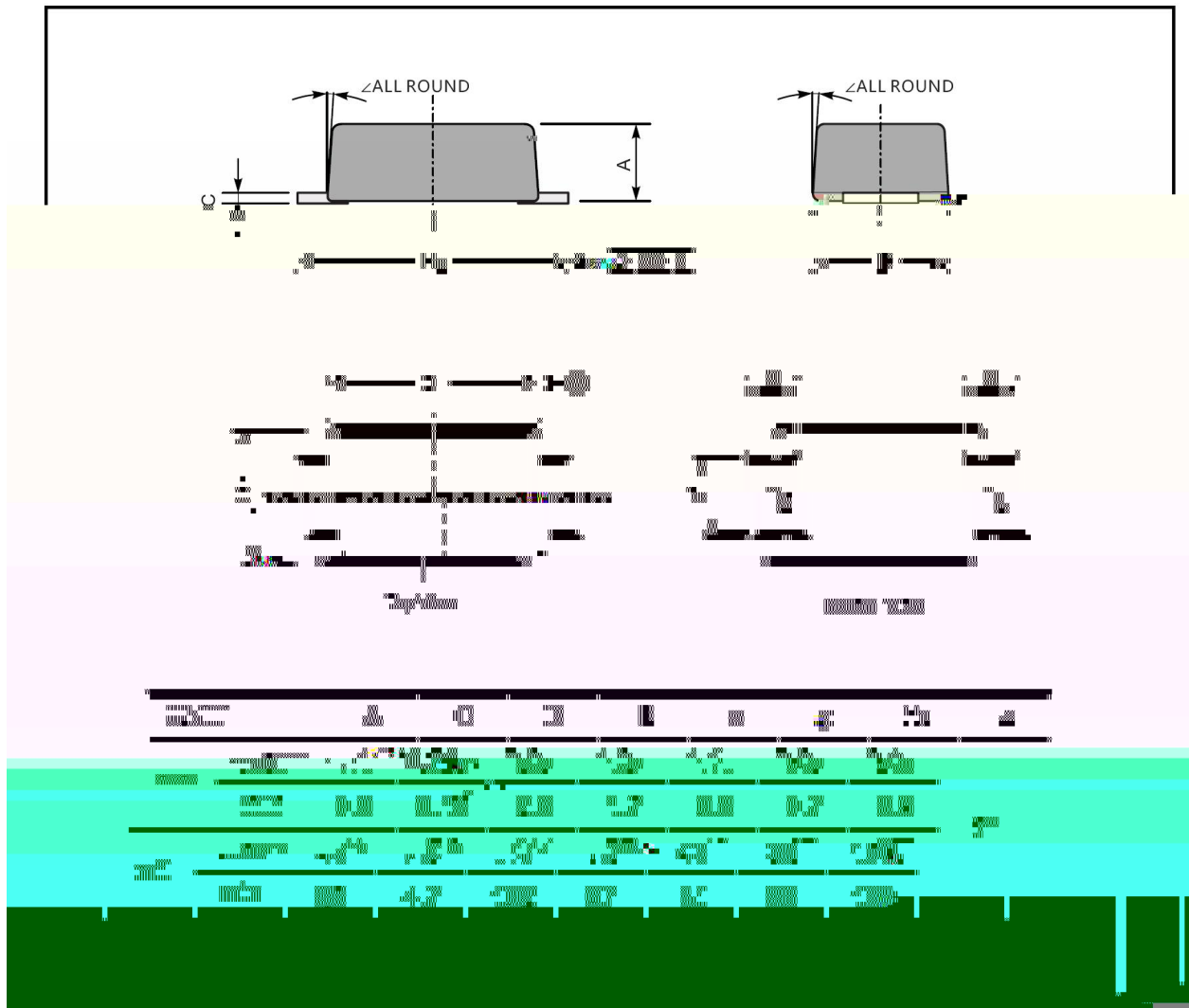
| Type    |          | Marking |      | Stand-off Voltage | Breakdown Voltage             |     | Test Current   | Reverse Leakage                | Max. Clamp Voltage            | Peak Pulse Current |
|---------|----------|---------|------|-------------------|-------------------------------|-----|----------------|--------------------------------|-------------------------------|--------------------|
|         |          |         |      | V <sub>RMW</sub>  | V <sub>BR@I<sub>T</sub></sub> |     | I <sub>T</sub> | I <sub>R@V<sub>RMW</sub></sub> | V <sub>C@I<sub>PP</sub></sub> | I <sub>PP</sub>    |
|         |          |         |      |                   | Min                           | Max |                |                                |                               |                    |
| Uni     | Bi       | Uni     | Bi   | V                 | V                             | V   | mA             | μA                             | V                             | A                  |
| SMF250A | SMF250CA | E25     | CE25 | 250               | 279                           | 309 | 1.0            | 1.0                            | 405                           | 0.5                |
| SMF300A | SMF300CA | E30     | CE30 | 300               | 335                           | 371 | 1.0            | 1.0                            | 486                           | 0.45               |
| SMF350A | SMF350CA | E35     | CE35 | 350               | 391                           | 432 | 1.0            | 1.0                            | 567                           | 0.4                |
| SMF400A | SMF400CA | E40     | CE40 | 400               | 447                           | 494 | 1.0            | 1.0                            | 648                           | 0.35               |
| SMF440A | SMF440CA | E44     | CE44 | 440               | 492                           | 543 | 1.0            | 1.0                            | 713                           | 0.3                |

/ Electrical Characteristic Curve

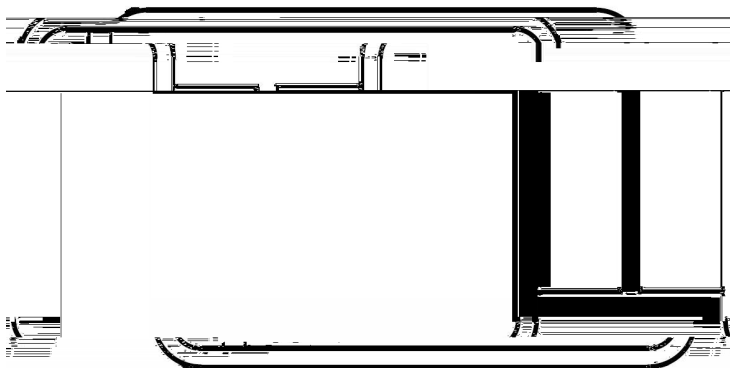


/ Package Dimensions

SOD-123FL



/ Marking Instructions



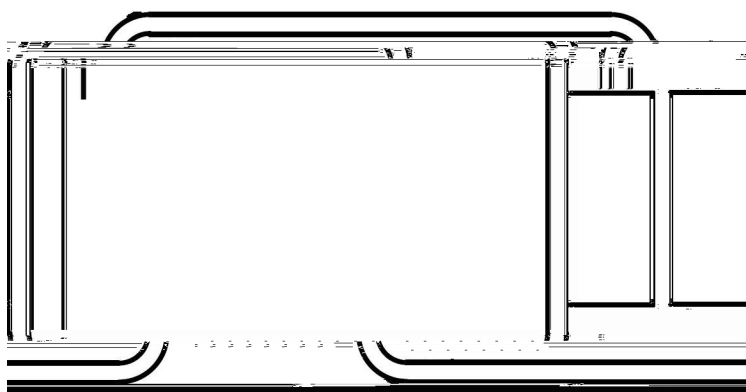
DH

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Note:

DH          Product Type Code

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FDH

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(     ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

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|  |
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|  |
|  |
|  |

- 1

150 180%

60 90sec;
- 2

245 ± 5%

5 ± 0.5sec;
- 3

2 10%/sec.
- Note:

1.Preheating:150~180%, Time:60~90sec.
- 2.Peak Temp.:245 ± 5%, Duration:5 ± 0.5sec.
3. Cooling Speed: 2~10%/sec.

/ Resistance to Soldering Heat Test Conditions

260 ± 5%                      10 ± 1 sec.                      Temp.:260±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL