

# MSKSEMI 美森科

SEMICONDUCTOR



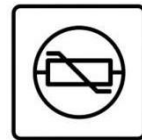
ESD



TVS



TSS



MOV



GDT



PLED

**1SMAF4728A-MS - 1SMAF4777A-MS**

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**Product specification**

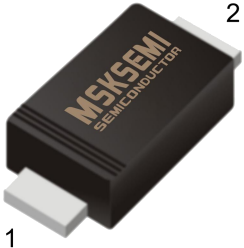
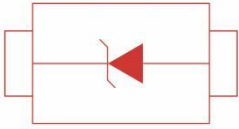
## FEATURES

- Total power dissipation: Max. 1 W.
- Wide zener reverse voltage range 3.3V to 330V.
- Small plastic package suitable for surface mounted design.

## Mechanical Data

- Case: SMAF
- Terminals: Solderable per MIL- STD- 750, M ethod 2026
- Approx . Weight: 27mg 0 .00095oz

## Reference News

| PACKAGE OUTLINE   | PIN CONFIGURATION   |
|---|---|
|  |  |
| implied outline SMAF and symbol   |   |

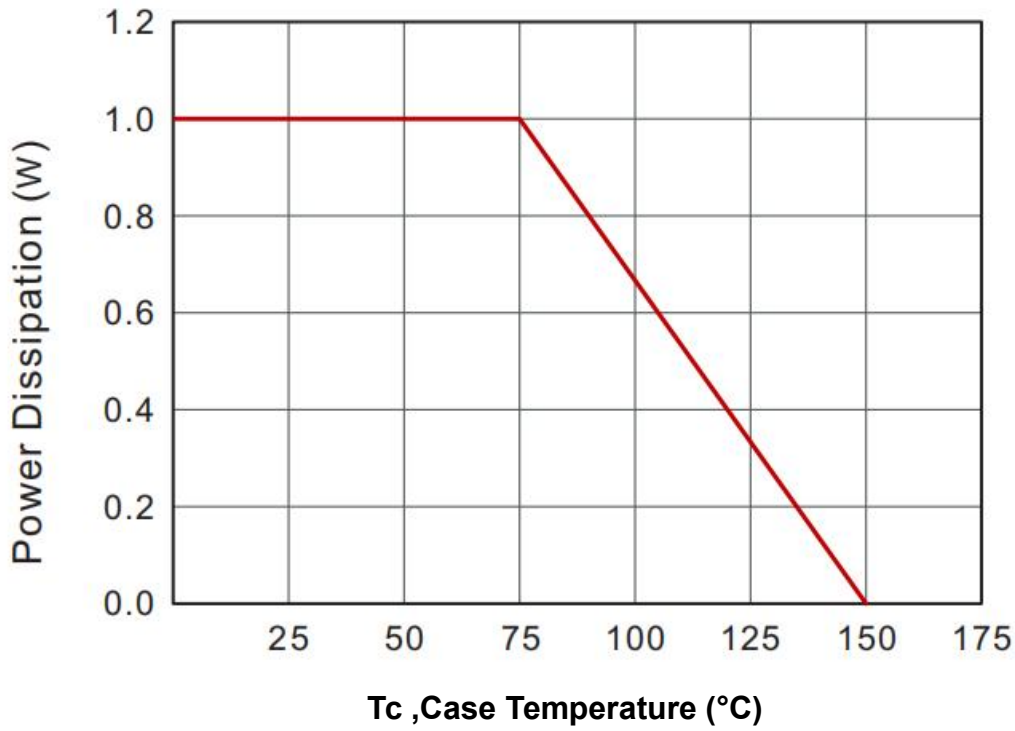
## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | A node      |

**Absolute Maximum Ratings And Characteristics (Ta = 25 °C)**

| Parameter                      | Symbol | Value         | Unit |
|--------------------------------|--------|---------------|------|
| Power Dissipation at Tc =75°C  | D      | 1             | W    |
| Forward Voltage at If = 200 mA | F      | 1.2           | V    |
| Junction Temperature Range     | TJ     | - 55 to + 150 | °C   |
| Storage Temperature Range      | Ts     | - 55 to + 150 | °C   |

**Fig.1 Maximum Continuous Power Derating**

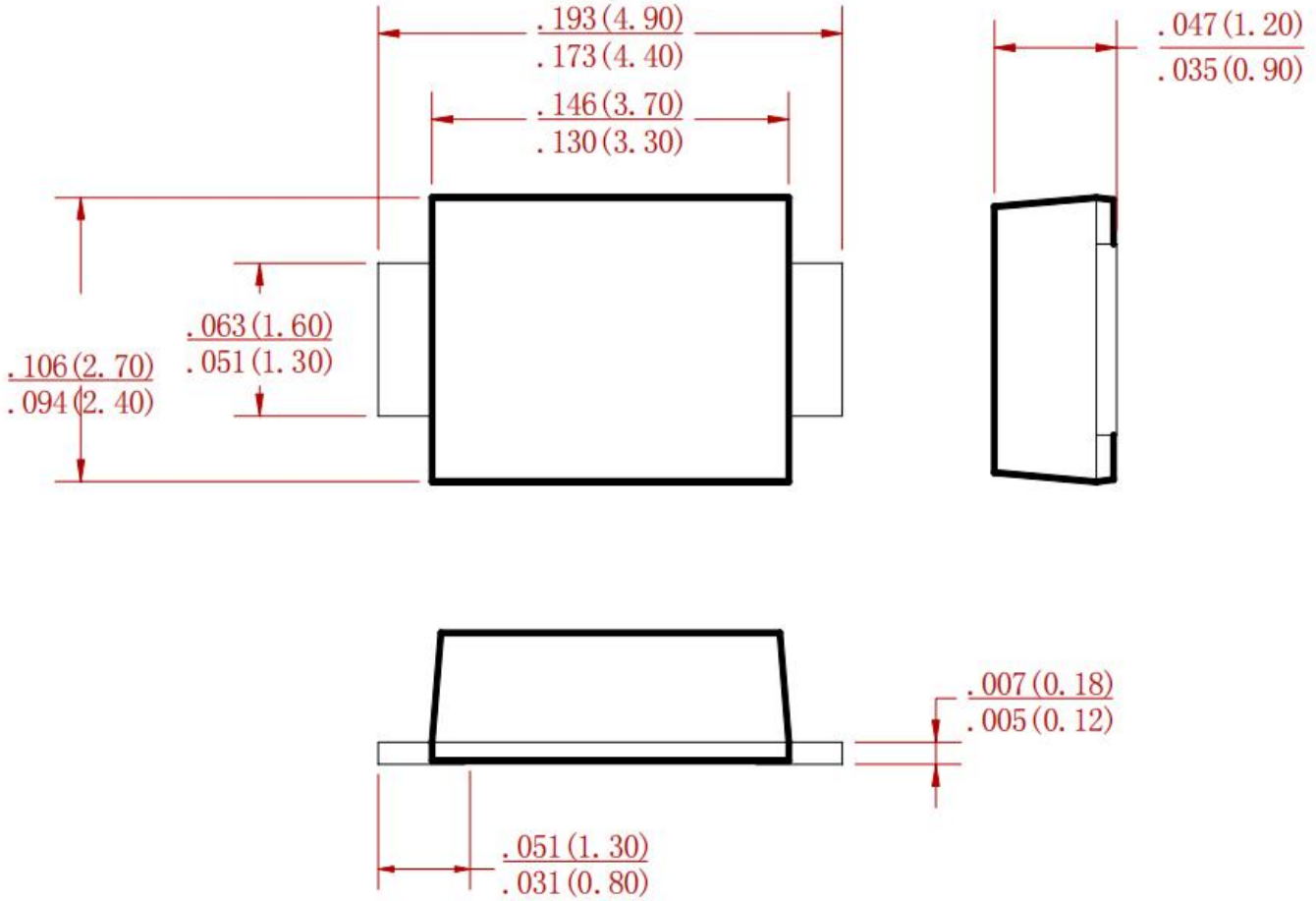


**C haracteristics at Ta = 25°C**

| Type       | Marking | Zener Voltage Range (1)                |           |           | I <sub>ZT</sub><br>(mA) | Dynamic<br>Impedance<br>Z <sub>ZT</sub> (at I <sub>ZT</sub> )<br>Max (Ω) | Reverse Current             |                            | Admissible<br>Zener Current<br>I <sub>ZM</sub> (mA) |
|------------|---------|--|-----------|-----------|-------------------------|--|-----------------------------|----------------------------|---|
|            |         | V <sub>ZT</sub> ( at I <sub>ZT</sub> ) |           |           |                         |  | I <sub>r</sub><br>Max ( μA) | at V <sub>r</sub><br>( V ) |   |
|            |         | Min (V)                                | Nom ( V ) | Max ( V ) |                         |  |                             |                            |   |
| 1SMAF4728A | 728A    | 3.10                                   | 3.3       | 3.50      | 75                      | 10   | 100                         | 1                          | 285   |
| 1SMAF4729A | 729A    | 3.40                                   | 3.6       | 3.80      | 69                      | 10   | 100                         | 1                          | 263   |
| 1SMAF4730A | 730A    | 3.70                                   | 3.9       | 4.10      | 64                      | 9.0  | 50                          | 1                          | 243   |
| 1SMAF4731A | 731A    | 4.06                                   | 4.3       | 4.56      | 58                      | 9.0  | 25                          | 1                          | 219   |
| 1SMAF4732A | 732A    | 4.50                                   | 4.7       | 4.93      | 53                      | 8.0  | 10                          | 1                          | 203   |
| 1SMAF4733A | 733A    | 4.84                                   | 5.1       | 5.36      | 49                      | 7.0  | 10                          | 1                          | 186   |
| 1SMAF4734A | 734A    | 5.32                                   | 5.6       | 5.92      | 45                      | 5.0  | 10                          | 2                          | 170   |
| 1SMAF4735A | 735A    | 5.86                                   | 6.2       | 6.51      | 41                      | 2.0  | 10                          | 3                          | 154   |
| 1SMAF4736A | 736A    | 6.46                                   | 6.8       | 7.18      | 37                      | 3.5  | 10                          | 4                          | 140   |
| 1SMAF4737A | 737A    | 7.12                                   | 7.5       | 7.88      | 34                      | 4.0  | 10                          | 5                          | 127   |
| 1SMAF4738A | 738A    | 7.79                                   | 8.2       | 8.67      | 31                      | 4.5  | 10                          | 6                          | 116   |
| 1SMAF4739A | 739A    | 8.60                                   | 9.1       | 9.59      | 28                      | 5.0  | 10                          | 7                          | 104   |
| 1SMAF4740A | 740A    | 9.50                                   | 10        | 10.5      | 25                      | 7.0  | 10                          | 7                          | 95  |
| 1SMAF4741A | 741A    | 10.4                                   | 11        | 11.6      | 23                      | 8.0  | 5                           | 8                          | 86  |
| 1SMAF4742A | 742A    | 11.4                                   | 12        | 12.6      | 21                      | 9.0  | 5                           | 9                          | 79  |
| 1SMAF4743A | 743A    | 12.4                                   | 13        | 14.1      | 19                      | 10   | 5                           | 10                         | 71  |
| 1SMAF4744A | 744A    | 13.8                                   | 15        | 15.8      | 17                      | 14   | 5                           | 11                         | 63  |
| 1SMAF4745A | 745A    | 15.2                                   | 16        | 17.1      | 16                      | 16   | 5                           | 12                         | 58  |
| 1SMAF4746A | 746A    | 16.8                                   | 18        | 19.2      | 14                      | 20   | 5                           | 13                         | 52  |
| 1SMAF4747A | 747A    | 19.0                                   | 20        | 21.2      | 13                      | 22   | 5                           | 15                         | 47  |
| 1SMAF4748A | 748A    | 20.8                                   | 22        | 23.3      | 12                      | 23   | 5                           | 17                         | 43  |
| 1SMAF4749A | 749A    | 22.8                                   | 24        | 26.0      | 11                      | 25   | 5                           | 18                         | 38  |
| 1SMAF4750A | 750A    | 25.3                                   | 27        | 28.9      | 9.5                     | 35   | 5                           | 21                         | 35  |
| 1SMAF4751A | 751A    | 28.2                                   | 30        | 32.0      | 8.5                     | 40   | 5                           | 23                         | 31  |
| 1SMAF4752A | 752A    | 31.3                                   | 33        | 34.9      | 7.5                     | 45   | 5                           | 25                         | 28  |
| 1SMAF4753A | 753A    | 34.2                                   | 36        | 37.9      | 7.0                     | 50   | 5                           | 27                         | 26  |
| 1SMAF4754A | 754A    | 37.2                                   | 39        | 41.5      | 6.5                     | 60   | 5                           | 30                         | 24  |
| 1SMAF4755A | 755A    | 40.9                                   | 43        | 45.6      | 6.0                     | 70   | 1                           | 32                         | 22  |
| 1SMAF4756A | 756A    | 44.9                                   | 47        | 49.8      | 5.5                     | 80   | 1                           | 35                         | 20  |
| 1SMAF4757A | 757A    | 48.6                                   | 51        | 54.0      | 5.0                     | 95   | 1                           | 38                         | 18  |
| 1SMAF4758A | 758A    | 53.6                                   | 56        | 58.8      | 4.5                     | 110  | 1                           | 42                         | 17  |
| 1SMAF4759A | 759A    | 58.9                                   | 62        | 65.6      | 4.0                     | 125  | 1                           | 47                         | 15  |
| 1SMAF4760A | 760A    | 64.6                                   | 68        | 71.7      | 3.7                     | 150  | 1                           | 52                         | 14  |
| 1SMAF4761A | 761A    | 71.2                                   | 75        | 78.8      | 3.3                     | 175  | 1                           | 56                         | 12  |
| 1SMAF4762A | 762A    | 77.9                                   | 82        | 87.0      | 3.0                     | 200  | 1                           | 62                         | 11  |
| 1SMAF4763A | 763A    | 86.0                                   | 91        | 96.0      | 2.8                     | 250  | 1                           | 69                         | 10  |
| 1SMAF4764A | 764A    | 95.0                                   | 100       | 105       | 2.5                     | 350  | 1                           | 76                         | 9.5   |
| 1SMAF4765A | 765A    | 104                                    | 110       | 116       | 2.3                     | 450  | 1                           | 84                         | 8.6   |
| 1SMAF4766A | 766A    | 114                                    | 120       | 127       | 2.0                     | 550  | 1                           | 91                         | 7.8   |
| 1SMAF4767A | 767A    | 125                                    | 135       | 142       | 1.9                     | 700  | 1                           | 100                        | 7.0   |
| 1SMAF4768A | 768A    | 140                                    | 150       | 157       | 1.7                     | 900  | 1                           | 110                        | 6.3   |
| 1SMAF4769A | 769A    | 155                                    | 165       | 172       | 1.6                     | 1100   | 1                           | 120                        | 5.8   |
| 1SMAF4770A | 770A    | 170                                    | 180       | 191       | 1.4                     | 1200   | 1                           | 135                        | 5.2   |
| 1SMAF4771A | 771A    | 189                                    | 200       | 211       | 1.2                     | 1400   | 1                           | 150                        | 4.7   |
| 1SMAF4772A | 772A    | 209                                    | 220       | 231       | 1.0                     | 1600   | 1                           | 165                        | 4.3   |
| 1SMAF4773A | 773A    | 229                                    | 240       | 251       | 1.0                     | 1800   | 1                           | 180                        | 3.9   |
| 1SMAF4774A | 774A    | 249                                    | 260       | 271       | 1.0                     | 2000   | 1                           | 190                        | 3.7   |
| 1SMAF4775A | 775A    | 269                                    | 280       | 291       | 1.0                     | 2100   | 1                           | 205                        | 3.4   |
| 1SMAF4776A | 776A    | 289                                    | 300       | 315       | 1.0                     | 2300   | 1                           | 230                        | 3.1   |
| 1SMAF4777A | 777A    | 313                                    | 330       | 346       | 1.0                     | 2500   | 1                           | 250                        | 2.8   |

(1) V<sub>ZT</sub> is tested with pulses (20 ms)

**PACKAGE MECHANICAL DATA**



**Dimensions in inches and (millimeters)**

**REEL SPECIFICATION**

| P/N           | PKG  | QTY  |
|---------------|------|------|
| 1SMAF47XXA-MS | SMAF | 3000 |

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