

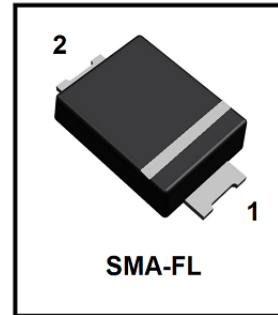
S-SZAF ***A Series

Zener voltage regulator diodes

1 Watt Steady State

Feature

- * 1 W SMA-FL
- * Zener voltage regulator diodes
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * We declare that the material of product compliance with RoHS requirements.
- * Guarding for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals
- * IEC61000-4-2 ESD Air Contact $\geq \pm 15KV$
- * MSL: 1
- * We declare that the material of product compliance with RoHS requirements and Halogen Free.
- * S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



Mechanical Data

Case: JEDEC SMA-FL molded plastic

Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026

Polarity: Color band denoted cathode except Bipolar

Mounting Position: Any

Weight : Approximated 0.0327 gram

1.Electrical Characteristic

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| RATING | SYMBOL | VALUE | UNITS |
|--------------------------------------------------------------|----------------|-------------|-------|
| Steady State Power Dissipation at $T_A = 50^\circ C$ (Note1) | $P_{M(AV)}$ | 1 | Watts |
| Z-current | I_Z | PV/VZ | mA |
| Operating and Storage Temperature Range | T_J, T_{STG} | -50 to +150 | °C |

NOTES:

1. 8.0mm² (.013mm thick) land areas

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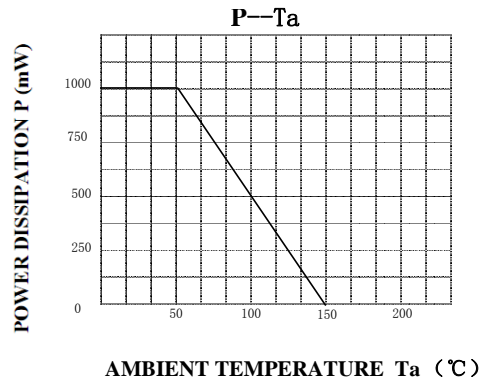
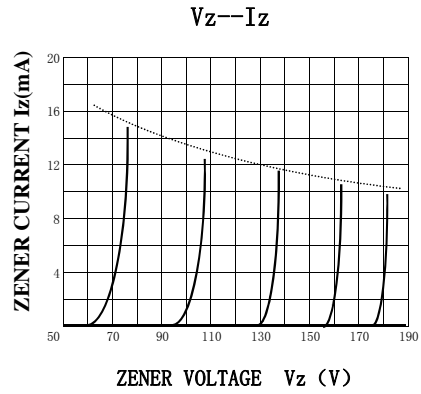
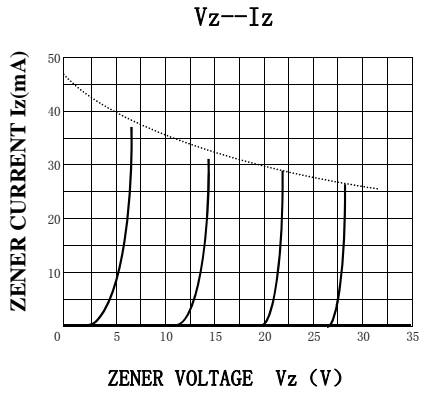
2.Product Characteristic

Vz tolerance : ±5%; Ta=25°C Vfmax =1.2V @ IF = 200mA P=1 W

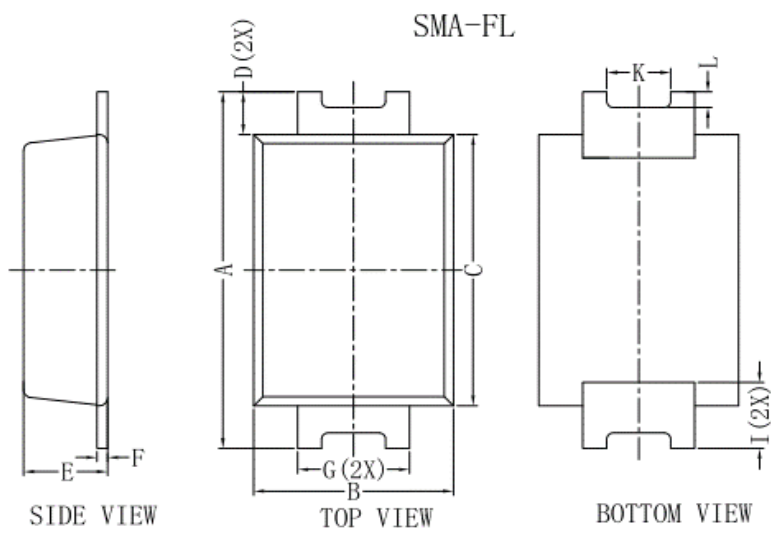
| Type | Device marking code | Zener | Current | A and B Sufflx only | | | Leakage Current | | Maximum Regulator Current2) |
|------------|---------------------|---------|---------|---------------------|-----------|-----------|-----------------|----------------|--------------------------------|
| | | Voltage | I zt | Z zt @ I zt | Z zk@ Izk | Z zk@ Izk | I _R | V _R | I _{ZM} @ Tamb =50 ° C |
| | | Vz@Lzt | | | | | | | |
| | | Volts | mA | Ohms | Ohms | m A | uA Max | Volts | mA |
| S-SZAF2.4A | Z2.4 | 2.4 | 102 | 30 | 1200 | 1 | 100 | 1.0 | 378 |
| S-SZAF2.5A | Z2.5 | 2.5 | 98 | 30 | 1250 | 1 | | 1.0 | 362 |
| S-SZAF2.7A | Z2.7 | 2.7 | 90 | 30 | 1300 | 1 | | 1.0 | 334 |
| S-SZAF2.8A | Z2.8 | 2.8 | 87 | 30 | 1400 | 1 | | 1.0 | 324 |
| S-SZAF3.0A | Z3.0 | 3.0 | 82 | 29 | 1600 | 1 | | 1.0 | 302 |
| S-SZAF3.3A | Z3.3 | 3.3 | 76 | 28 | 400 | 1 | | 1.0 | 276 |
| S-SZAF3.6A | Z3.6 | 3.6 | 69 | 24 | 400 | 1 | | 1.0 | 252 |
| S-SZAF3.9A | Z3.9 | 3.9 | 64 | 23 | 400 | 1 | | 1.0 | 238 |
| S-SZAF4.3A | Z4.3 | 4.3 | 58 | 22 | 400 | 1 | | 1.0 | 214 |
| S-SZAF4.7A | Z4.7 | 4.7 | 53 | 19 | 400 | 1 | | 1.0 | 194 |
| S-SZAF5.1A | Z5.1 | 5.1 | 49 | 7 | 550 | 1 | 1.0 | 178 | |
| S-SZAF5.6A | Z5.6 | 5.6 | 45 | 5 | 600 | | 2.0 | 164 | |
| S-SZAF6.2A | Z6.2 | 6.2 | 41 | 2 | 700 | | 3.0 | 146 | |
| S-SZAF6.8A | Z6.8 | 6.8 | 37 | 4 | 1300 | | 4 | 133 | |
| S-SZAF7.5A | Z7.5 | 7.5 | 34 | 4.5 | 1300 | 0.5 | 70 | 5 | 121 |
| S-SZAF8.2A | Z8.2 | 8.2 | 31 | 5.5 | 1300 | 0.5 | | 6 | 110 |
| S-SZAF9.1A | Z9.1 | 9.1 | 28 | 6 | 1300 | 0.5 | | 7 | 100 |
| S-SZAF10A | Z10 | 10 | 25 | 7 | 1300 | 0.25 | 2 | 7.6 | 91 |
| S-SZAF11A | Z11 | 11 | 23 | 8 | 1300 | | | 8.4 | 83 |
| S-SZAF12A | Z12 | 12 | 21 | 9 | 1300 | | | 9.1 | 76 |
| S-SZAF13A | Z13 | 13 | 19 | 10 | 1300 | | | 9.9 | 69 |
| S-SZAF15A | Z15 | 15 | 17 | 14 | 1300 | | | 11.4 | 61 |
| S-SZAF16A | Z16 | 16 | 15.5 | 16 | 1300 | | 12.2 | 57 | |
| S-SZAF18A | Z18 | 18 | 14 | 20 | 1300 | | 13.7 | 50 | |
| S-SZAF20A | Z20 | 20 | 12.5 | 22 | 1300 | | 15.2 | 45 | |
| S-SZAF22A | Z22 | 22 | 11.5 | 23 | 1300 | | 16.7 | 41 | |
| S-SZAF24A | Z24 | 24 | 10.5 | 25 | 1300 | | 18.2 | 38 | |
| S-SZAF27A | Z27 | 27 | 9.5 | 35 | 1300 | 20.6 | 34 | | |
| S-SZAF30A | Z30 | 30 | 8.5 | 40 | 1500 | 22.8 | 30 | | |
| S-SZAF33A | Z33 | 33 | 7.5 | 45 | 1500 | 25.1 | 27 | | |
| S-SZAF36A | Z36 | 36 | 7 | 50 | 1500 | 27.4 | 25 | | |
| S-SZAF39A | Z39 | 39 | 6.5 | 60 | 1500 | 29.7 | 23 | | |
| S-SZAF43A | Z43 | 43 | 6 | 70 | 2500 | 32.7 | 22 | | |
| S-SZAF47A | Z47 | 47 | 5.5 | 80 | 2500 | 35.8 | 19 | | |
| S-SZAF51A | Z51 | 51 | 5 | 95 | 2500 | 38.8 | 18 | | |
| S-SZAF56A | Z56 | 56 | 4.5 | 110 | 2500 | 42.6 | 16 | | |
| S-SZAF62A | Z62 | 62 | 4 | 125 | 2500 | 47.1 | 14 | | |
| S-SZAF68A | Z68 | 68 | 3.7 | 150 | 2500 | 51.7 | 13 | | |
| S-SZAF75A | Z75 | 75 | 3.3 | 175 | 2500 | 56 | 12 | | |
| S-SZAF82A | Z82 | 82 | 3 | 200 | 3000 | 62.2 | 11 | | |
| S-SZAF91A | Z91 | 91 | 2.8 | 250 | 3000 | 69.2 | 10 | | |
| S-SZAF100A | Z100 | 100 | 2.5 | 350 | 3000 | 76 | 9 | | |
| S-SZAF110A | Z110 | 110 | 2 | 550 | 5000 | 83 | 8 | | |
| S-SZAF120A | Z120 | 120 | 1.5 | 750 | 5500 | 90 | 7 | | |
| S-SZAF130A | Z130 | 130 | 1 | 900 | 6000 | 98 | 6 | | |
| S-SZAF150A | Z150 | 150 | 1 | 1200 | 6500 | 113 | 6 | | |
| S-SZAF160A | Z160 | 160 | 1 | 1350 | 7000 | 120 | 6 | | |
| S-SZAF180A | Z180 | 180 | 1 | 1650 | 8500 | 135 | 5 | | |
| S-SZAF200A | Z200 | 200 | 1 | 1950 | 10000 | 150 | 4 | | |
| S-SZAF220A | Z220 | 220 | 1 | 2300 | 12000 | 165 | 4 | | |

S-SZAF ***A Series

3.Characteristic Curves



4. OUTLINE AND DIMENSIONS



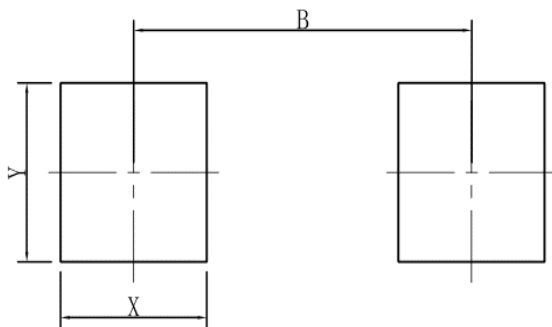
| SMA-FL | | | |
|--------|------|------|------|
| DIM | MIN | MAX | Typ. |
| A | 4.40 | 4.80 | 4.60 |
| B | 2.30 | 2.70 | 2.60 |
| C | 3.30 | 3.70 | 3.50 |
| D | - | - | 0.55 |
| E | 0.90 | 1.20 | 1.05 |
| F | 0.11 | 0.21 | 0.17 |
| G | 1.30 | 1.50 | 1.40 |
| I | - | - | 0.90 |
| K | - | - | 0.80 |
| L | - | - | 0.20 |

All Dimensions in mm

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2 \mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2 \mu m$

5. SOLDERING FOOTPRINT



| SMA-FL | |
|--------|------|
| DIM | (mm) |
| X | 1.60 |
| Y | 1.80 |
| B | 3.70 |

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