

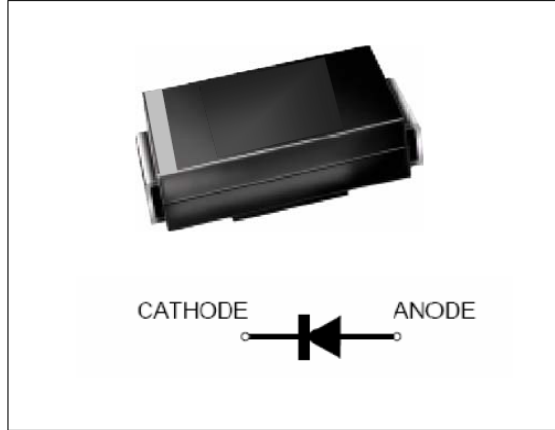
# S-SZA\*\*\*A Series

## GLASS PASSIVATED JUNCTION Zener voltage regulator diodes

### 1.0 Watt Steady State

#### Feature

- \* 1W SMA
- \* 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
- \* S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



We declare that the material of product compliance with ROHS requirements

#### Mechanical Data

**Case:** JEDEC DO-214AC molded plastic

**Terminals:** Axial leads, solderable per MIL-STD-202, Method 208

**Polarity:** Color band denoted cathode except Bipolar

**Mounting Position:** Any

**Weight:** 0.0023 ounce, 0.065 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 $T_L=75^\circ\text{C}$ (Note1) | $P_{M(AV)}$     | 1.0         | Watts |
| Z-current                                                        | $I_Z$           | $P_V/V_Z$   | mA    |
| Operating and Storage Temperature Range                          | $T_J, T_{STG}$  | -50 to +150 | °C    |
| Typical thermal resistance (Note 2)                              | $R_{\theta JA}$ | 150         | °C/W  |
|                                                                  | $R_{\theta JC}$ | 50          |       |

#### NOTES:

1. Mounted on Copper Leaf area of  $1.57\text{in}^2(40\text{mm}^2)$
2. Device mounted on an FR4 PCB, Single-sided copper(  $50\mu\text{m}$  thick), mounting pad for cathode  $1.77\text{mm}\times 1.65\text{mm}$ , mounting pad for Anode  $1.77\text{mm}\times 1.65\text{mm}$ .

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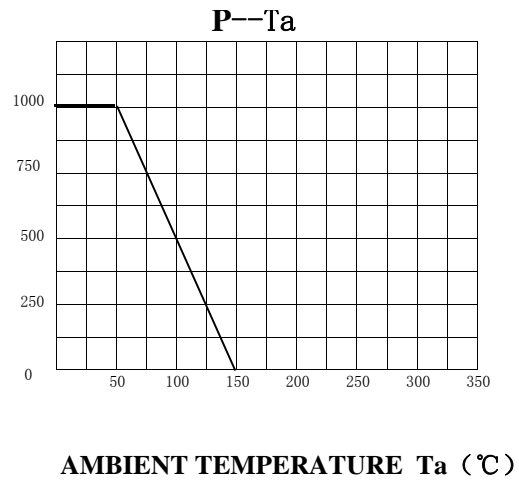
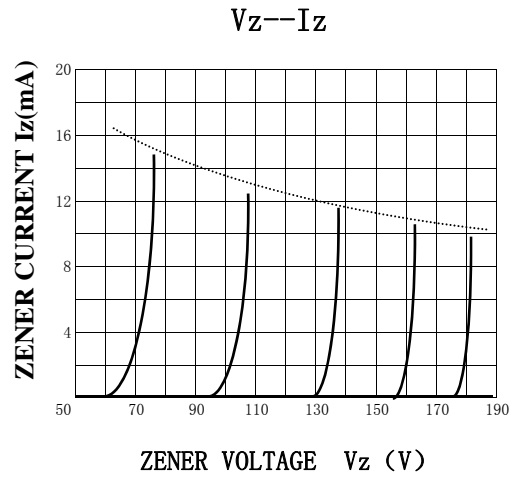
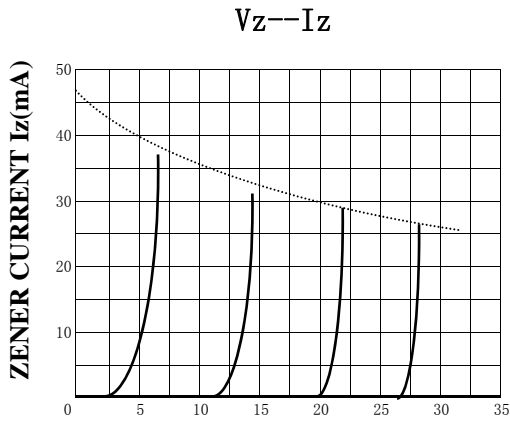
### 2.Product Characteristic

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

| Type      | Device marking code | Zener   | Current | A and B Suffix only |           |      | Leakage Current |                | Maximum Regulator Current2)   |
|-----------|---------------------|---------|---------|---------------------|-----------|------|-----------------|----------------|-------------------------------|
|           |                     | Voltage | I zt    | Z zt @ I zt         | Z zk@ Izk | Izk  | I <sub>R</sub>  | V <sub>R</sub> | I <sub>ZM</sub> @ Tamb =50 °C |
|           |                     | Vz@Lzt  |         |                     |           |      |                 |                |                               |
|           |                     | Volts   | mA      | Ohms                | Ohms      | m A  | uA Max          | Volts          | mA                            |
| S-SZA2.4A | Z2.4                | 2.4     | 102     | 30                  | 1200      | 1    | 100             | 1.0            | 378                           |
| S-SZA2.5A | Z2.5                | 2.5     | 98      | 30                  | 1250      |      |                 | 1.0            | 362                           |
| S-SZA2.7A | Z2.7                | 2.7     | 90      | 30                  | 1300      |      |                 | 1.0            | 334                           |
| S-SZA2.8A | Z2.8                | 2.8     | 87      | 30                  | 1400      |      |                 | 1.0            | 324                           |
| S-SZA3.0A | Z3.0                | 3.0     | 82      | 29                  | 1600      |      |                 | 1.0            | 302                           |
| S-SZA3.3A | Z3.3                | 3.3     | 76      | 28                  | 400       |      |                 | 1.0            | 276                           |
| S-SZA3.6A | Z3.6                | 3.6     | 69      | 24                  | 400       |      |                 | 1.0            | 252                           |
| S-SZA3.9A | Z3.9                | 3.9     | 64      | 23                  | 400       |      |                 | 1.0            | 238                           |
| S-SZA4.3A | Z4.3                | 4.3     | 58      | 22                  | 400       |      |                 | 1.0            | 214                           |
| S-SZA4.7A | Z4.7                | 4.7     | 53      | 19                  | 400       |      |                 | 1.0            | 194                           |
| S-SZA5.1A | Z5.1A               | 5.1     | 49      | 7                   | 550       |      |                 | 1.0            | 178                           |
| S-SZA5.6A | Z5.6A               | 5.6     | 45      | 5                   | 600       |      |                 | 2.0            | 164                           |
| S-SZA6.2A | Z6.2A               | 6.2     | 41      | 2                   | 700       |      |                 | 3.0            | 146                           |
| S-SZA6.8A | Z6.8A               | 6.8     | 37      | 4                   | 1300      |      |                 | 4              | 133                           |
| S-SZA7.5A | Z7.5A               | 7.5     | 34      | 4.5                 | 1300      | 0.5  | 70              | 5              | 121                           |
| S-SZA8.2A | Z8.2A               | 8.2     | 31      | 5.5                 | 1300      | 0.5  |                 | 6              | 110                           |
| S-SZA9.1A | Z9.1A               | 9.1     | 28      | 6                   | 1300      | 0.5  |                 | 7              | 100                           |
| S-SZA10A  | Z10A                | 10      | 25      | 7                   | 1300      | 0.25 | 2               | 7.6            | 91                            |
| S-SZA11A  | Z11A                | 11      | 23      | 8                   | 1300      |      |                 | 8.4            | 83                            |
| S-SZA12A  | Z12A                | 12      | 21      | 9                   | 1300      |      |                 | 9.1            | 76                            |
| S-SZA13A  | Z13A                | 13      | 19      | 10                  | 1300      |      |                 | 9.9            | 69                            |
| S-SZA15A  | Z15A                | 15      | 17      | 14                  | 1300      |      |                 | 11.4           | 61                            |
| S-SZA16A  | Z16A                | 16      | 15.5    | 16                  | 1300      |      |                 | 12.2           | 57                            |
| S-SZA18A  | Z18A                | 18      | 14      | 20                  | 1300      |      |                 | 13.7           | 50                            |
| S-SZA20A  | Z20A                | 20      | 12.5    | 22                  | 1300      |      |                 | 15.2           | 45                            |
| S-SZA22A  | Z22A                | 22      | 11.5    | 23                  | 1300      |      |                 | 16.7           | 41                            |
| S-SZA24A  | Z24A                | 24      | 10.5    | 25                  | 1300      |      |                 | 18.2           | 38                            |
| S-SZA27A  | Z27A                | 27      | 9.5     | 35                  | 1300      |      |                 | 20.6           | 34                            |
| S-SZA30A  | Z30A                | 30      | 8.5     | 40                  | 1500      |      |                 | 22.8           | 30                            |
| S-SZA33A  | Z33A                | 33      | 7.5     | 45                  | 1500      |      |                 | 25.1           | 27                            |
| S-SZA36A  | Z36A                | 36      | 7       | 50                  | 1500      |      |                 | 27.4           | 25                            |
| S-SZA39A  | Z39A                | 39      | 6.5     | 60                  | 1500      | 29.7 | 23              |                |                               |
| S-SZA43A  | Z43A                | 43      | 6       | 70                  | 2500      | 32.7 | 22              |                |                               |
| S-SZA47A  | Z47A                | 47      | 5.5     | 80                  | 2500      | 35.8 | 19              |                |                               |
| S-SZA51A  | Z51A                | 51      | 5       | 95                  | 2500      | 38.8 | 18              |                |                               |
| S-SZA56A  | Z56A                | 56      | 4.5     | 110                 | 2500      | 42.6 | 16              |                |                               |
| S-SZA62A  | Z62A                | 62      | 4       | 125                 | 2500      | 47.1 | 14              |                |                               |
| S-SZA68A  | Z68A                | 68      | 3.7     | 150                 | 2500      | 51.7 | 13              |                |                               |
| S-SZA75A  | Z75A                | 75      | 3.3     | 175                 | 2500      | 56   | 12              |                |                               |
| S-SZA82A  | Z82A                | 82      | 3       | 200                 | 3000      | 62.2 | 11              |                |                               |
| S-SZA91A  | Z91A                | 91      | 2.8     | 250                 | 3000      | 69.2 | 10              |                |                               |
| S-SZA100A | Z100A               | 100     | 2.5     | 350                 | 3000      | 76   | 9               |                |                               |
| S-SZA110A | Z110A               | 110     | 2       | 550                 | 5000      | 83   | 8               |                |                               |
| S-SZA120A | Z120A               | 120     | 1.5     | 750                 | 5500      | 90   | 7               |                |                               |
| S-SZA130A | Z130A               | 130     | 1       | 900                 | 6000      | 98   | 6               |                |                               |
| S-SZA150A | Z150A               | 150     | 1       | 1200                | 6500      | 113  | 6               |                |                               |
| S-SZA160A | Z160A               | 160     | 1       | 1350                | 7000      | 120  | 6               |                |                               |
| S-SZA180A | Z180A               | 180     | 1       | 1650                | 8500      | 135  | 5               |                |                               |
| S-SZA200A | Z200A               | 200     | 1       | 1950                | 10000     | 150  | 4               |                |                               |

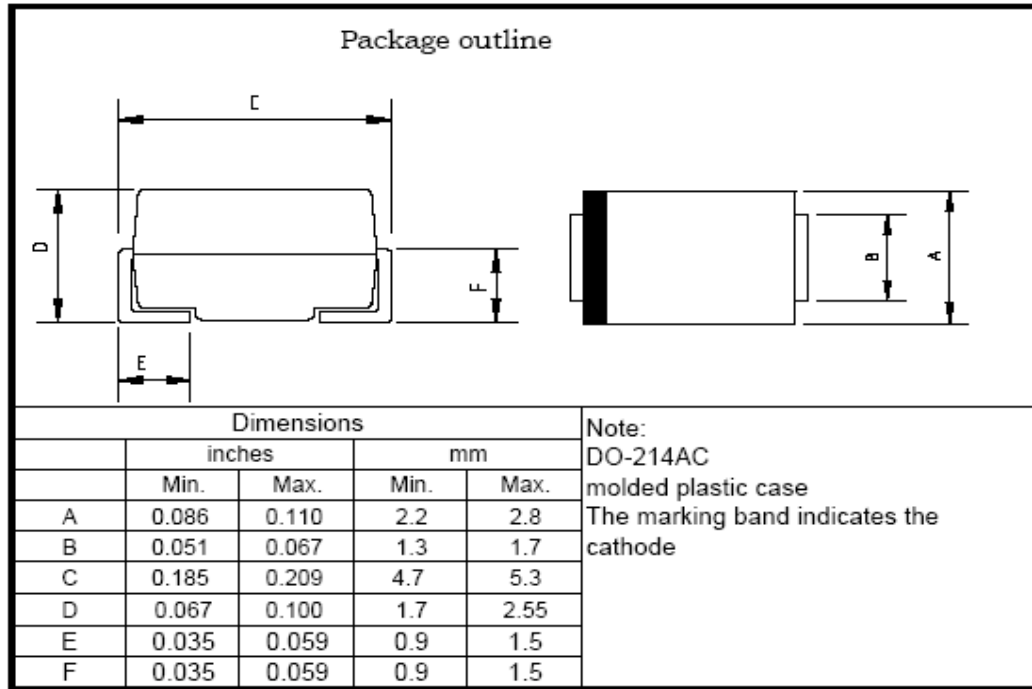
## S-SZA\*\*\*A Series

### 3.Characteristic Curves



## S-SZA\*\*\*A Series

### 4.Package Dimensions in inches and (millimeters)



### Mounting Pad Layout

---SMA

