



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Surface Mount Zener Diodes


**DO-214AC (SMA)**
**FEATURES**

- Plastic package has underwriters laboratory flammability classification 94 V-0
- For surface mounted applications
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 260 °C/10 s at terminals
- Standard voltage tolerance is  $\pm 10\%$ , suffix A  $\pm 5\%$
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

| PRIMARY CHARACTERISTICS |               |      |
|-------------------------|---------------|------|
| PARAMETER               | VALUE         | UNIT |
| $V_Z$ range nom.        | 3.3 to 100    | V    |
| Test current $I_{ZT}$   | 2.5 to 76     | mA   |
| $V_Z$ specification     | Pulse current |      |
| Int. construction       | Single        |      |

**MECHANICAL DATA**

Base P/N-E3 - RoHS-compliant, commercial grade

Base P/NHE3 - RoHS-compliant, AEC-Q101 qualified

| ORDERING INFORMATION |                                |                                       |                        |
|----------------------|--------------------------------|---------------------------------------|------------------------|
| DEVICE NAME          | ORDERING CODE                  | TAPED UNITS PER REEL                  | MINIMUM ORDER QUANTITY |
| SML4728 to SML4764A  | SML4728-E3/5A<br>SML4728HE3/5A | 7500 (12 mm tape on 13" plastic reel) |                        |
| SML4728 to SML4764A  | SML4728-E3/61<br>SML4728HE3/61 | 1800 (12 mm tape on 7" plastic reel)  |                        |

| PACKAGE      |        |                                      |                                      |                          |
|--------------|--------|--------------------------------------|--------------------------------------|--------------------------|
| PACKAGE NAME | WEIGHT | MOLDING COMPOUND FLAMMABILITY RATING | MOISTURE SENSITIVITY LEVEL           | SOLDERING CONDITIONS     |
| DO-214AC     | 64 mg  | UL 94 V-0                            | MSL level 1<br>(according J-STD-020) | 260 °C/10 s at terminals |

| ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified) |                      |           |             |      |
|---|----------------------|-----------|-------------|------|
| PARAMETER   | TEST CONDITION       | SYMBOL    | VALUE       | UNIT |
| Power dissipation   | $T_L = 75\text{ °C}$ | $P_{tot}$ | 1000        | mW   |
| Junction temperature  |                      | $T_j$     | 150         | °C   |
| Storage temperature range   |                      | $T_{stg}$ | -65 to +150 | °C   |



| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |              |                     |              |           |                 |      |                    |                       |                              |
|--|--------------|---------------------|--------------|-----------|-----------------|------|--------------------|-----------------------|------------------------------|
| PART NUMBER  | MARKING CODE | ZENER VOLTAGE RANGE | TEST CURRENT |           | REVERSE CURRENT |      | DYNAMIC RESISTANCE |                       | SURGE CURRENT <sup>(1)</sup> |
|  |              | $V_Z$ at $I_{ZT1}$  | $I_{ZT1}$    | $I_{ZT2}$ | $I_R$ at $V_R$  |      | $Z_Z$ at $I_{ZT1}$ | $Z_{ZK}$ at $I_{ZT2}$ | $I_{RM}$                     |
|  |              | V                   | mA           |           | $\mu\text{A}$   | V    | $\Omega$           |                       | $\text{mA}_{pk}$             |
|  |              | NOM.                |              |           | MAX.            |      | MAX.               | MAX.                  | MAX.                         |
| SML4728  | 3P3          | 3.3                 | 76           | 1         | 100             | 1    | 10                 | 400                   | 1380                         |
| SML4729  | 3P6          | 3.6                 | 69           | 1         | 100             | 1    | 10                 | 400                   | 1260                         |
| SML4730  | 3P9          | 3.9                 | 64           | 1         | 50              | 1    | 9                  | 400                   | 1190                         |
| SML4731  | 4P3          | 4.3                 | 58           | 1         | 10              | 1    | 9                  | 400                   | 1070                         |
| SML4732  | 4P7          | 4.7                 | 53           | 1         | 10              | 1    | 8                  | 500                   | 970                          |
| SML4733  | 5P1          | 5.1                 | 49           | 1         | 10              | 1    | 7                  | 550                   | 890                          |
| SML4734  | 5P6          | 5.6                 | 45           | 1         | 10              | 2    | 5                  | 600                   | 810                          |
| SML4735  | 6P2          | 6.2                 | 41           | 1         | 10              | 3    | 2                  | 700                   | 730                          |
| SML4736  | 6P8          | 6.8                 | 37           | 1         | 10              | 4    | 3.5                | 700                   | 660                          |
| SML4737  | 7P5          | 7.5                 | 34           | 0.5       | 10              | 5    | 4                  | 700                   | 605                          |
| SML4738  | 8P2          | 8.2                 | 31           | 0.5       | 10              | 6    | 4.5                | 700                   | 550                          |
| SML4739  | 9P1          | 9.1                 | 28           | 0.5       | 10              | 7    | 5                  | 700                   | 500                          |
| SML4740  | 10           | 10                  | 25           | 0.25      | 10              | 7.6  | 7                  | 700                   | 454                          |
| SML4741  | 11           | 11                  | 23           | 0.25      | 5               | 8.4  | 8                  | 700                   | 414                          |
| SML4742  | 12           | 12                  | 21           | 0.25      | 5               | 9.1  | 9                  | 700                   | 380                          |
| SML4743  | 13           | 13                  | 19           | 0.25      | 5               | 9.9  | 10                 | 700                   | 344                          |
| SML4744  | 15           | 15                  | 17           | 0.25      | 5               | 11.4 | 14                 | 700                   | 305                          |
| SML4745  | 16           | 16                  | 15.5         | 0.25      | 5               | 12.2 | 16                 | 700                   | 285                          |
| SML4746  | 18           | 18                  | 14           | 0.25      | 5               | 13.7 | 20                 | 750                   | 250                          |
| SML4747  | 20           | 20                  | 12.5         | 0.25      | 5               | 15.2 | 22                 | 750                   | 225                          |
| SML4748  | 22           | 22                  | 11.5         | 0.25      | 5               | 16.7 | 23                 | 750                   | 205                          |
| SML4749  | 24           | 24                  | 10.5         | 0.25      | 5               | 18.2 | 25                 | 750                   | 190                          |
| SML4750  | 27           | 27                  | 9.5          | 0.25      | 5               | 20.6 | 35                 | 750                   | 170                          |
| SML4751  | 30           | 30                  | 8.5          | 0.25      | 5               | 22.8 | 40                 | 1000                  | 150                          |
| SML4752  | 33           | 33                  | 7.5          | 0.25      | 5               | 25.1 | 45                 | 1000                  | 135                          |
| SML4753  | 36           | 36                  | 7            | 0.25      | 5               | 27.4 | 50                 | 1000                  | 125                          |
| SML4754  | 39           | 39                  | 6.5          | 0.25      | 5               | 29.7 | 60                 | 1000                  | 115                          |
| SML4755  | 43           | 43                  | 6            | 0.25      | 5               | 32.7 | 70                 | 1500                  | 110                          |
| SML4756  | 47           | 47                  | 5.5          | 0.25      | 5               | 35.8 | 80                 | 1500                  | 95                           |
| SML4757  | 51           | 51                  | 5            | 0.25      | 5               | 38.8 | 95                 | 1500                  | 90                           |
| SML4758  | 56           | 56                  | 4.5          | 0.25      | 5               | 42.6 | 110                | 2000                  | 80                           |
| SML4759  | 62           | 62                  | 4            | 0.25      | 5               | 47.1 | 125                | 2000                  | 70                           |
| SML4760  | 68           | 68                  | 3.7          | 0.25      | 5               | 51.7 | 150                | 2000                  | 65                           |
| SML4761  | 75           | 75                  | 3.3          | 0.25      | 5               | 56   | 175                | 2000                  | 60                           |
| SML4762  | 82           | 82                  | 3            | 0.25      | 5               | 62.2 | 200                | 3000                  | 55                           |
| SML4763  | 91           | 91                  | 2.8          | 0.25      | 5               | 69.2 | 250                | 3000                  | 50                           |
| SML4764  | 100          | 100                 | 2.5          | 0.25      | 5               | 76   | 350                | 3000                  | 45                           |

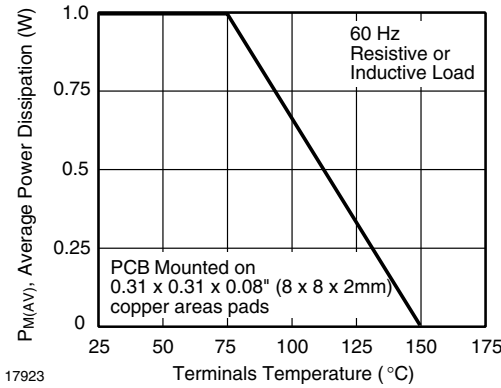
**Note**

<sup>(1)</sup> Surge current is a non-repetitive, 8.3 ms pulse width square wave or equivalent sine-wave superimposed on  $I_{ZT}$  per JEDEC® method



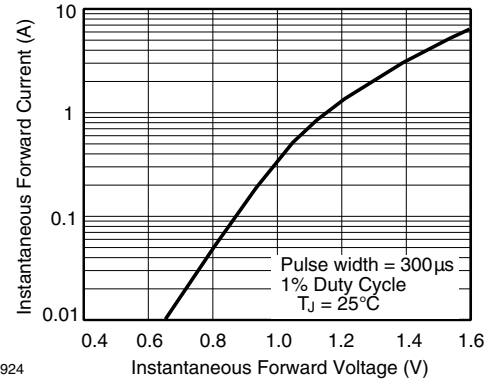


BASIC CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)



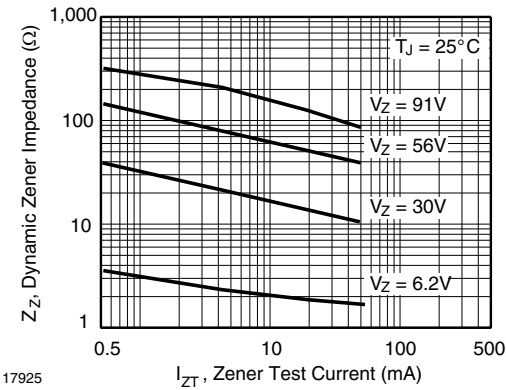
17923

Fig. 1 - Maximum Continuous Power Dissipation



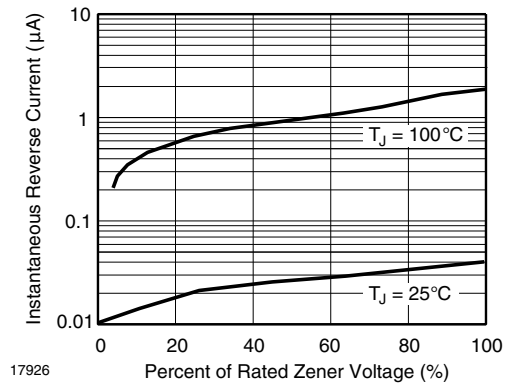
17924

Fig. 4 - Typical Instantaneous Forward Characteristics for SML4763



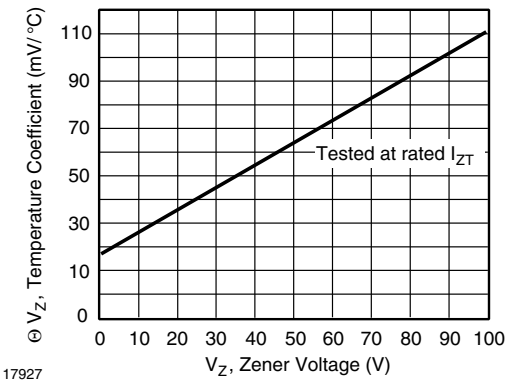
17925

Fig. 2 - Typical Zener Impedance



17926

Fig. 5 - Typical Reverse Characteristics



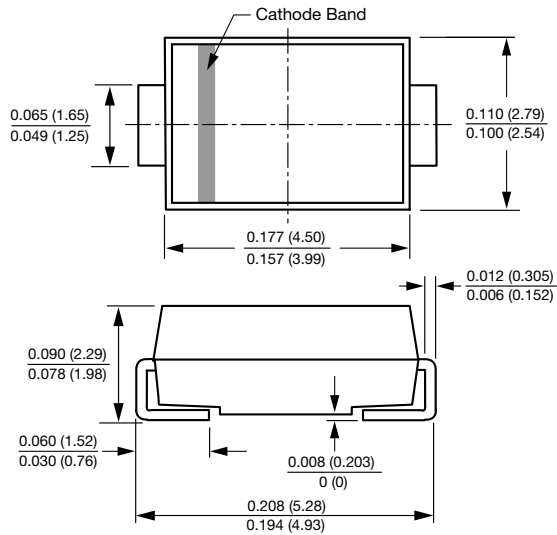
17927

Fig. 3 - Typical Temperature Coefficients

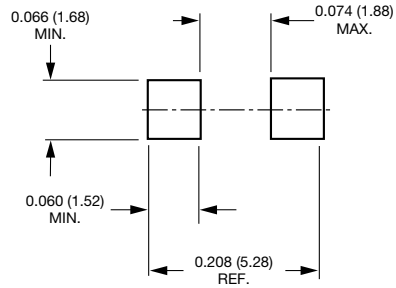


## PACKAGE DIMENSIONS in inches (millimeters): DO-214AC

### DO-214AC (SMA)



### Mounting Pad Layout





## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

## Material Category Policy

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**