



### 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 ± 10 %, suffix A ± 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 <sub>Z</sub> range nom.	3.3 to 100	V
Test current I <sub>ZT</sub>	2.5 to 76	mA
V <sub>Z</sub> 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 SML4728HE3/5A	7500 (12 mm tape on 13" plastic reel)	
SML4728 to SML4764A	SML4728-E3/61 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 (according J-STD-020)	260 °C/10 s at terminals

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation	T <sub>L</sub> = 75 °C	P <sub>tot</sub>	1000	mW
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature range		T <sub>stg</sub>	- 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)



Fig. 1 - Maximum Continuous Power Dissipation



Fig. 4 - Typical Instantaneous Forward Characteristics for SML4763



Fig. 2 - Typical Zener Impedance



Fig. 5 - Typical Reverse Characteristics



Fig. 3 - Typical Temperature Coefficients



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





## **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 and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. 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.**



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.