THE DATASHEET OF

SML4731AHE3/61

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

Pb e3 RoHS COMPLIANT

MECHANICAL DATA

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

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

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	

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

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ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE	TEST CURRENT		REVERSE CURRENT		DYNAMIC RESISTANCE		SURGE CURRENT (1)
		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		µA	V	Ω		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

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

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BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

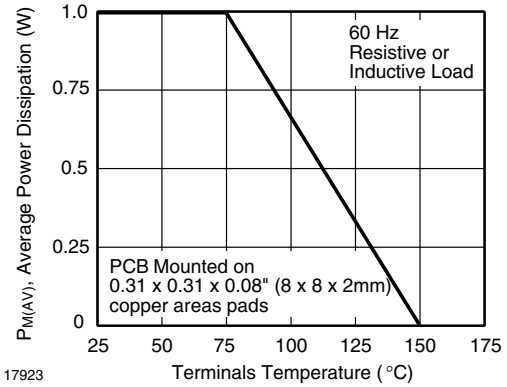

Fig. 1 - Maximum Continuous Power Dissipation

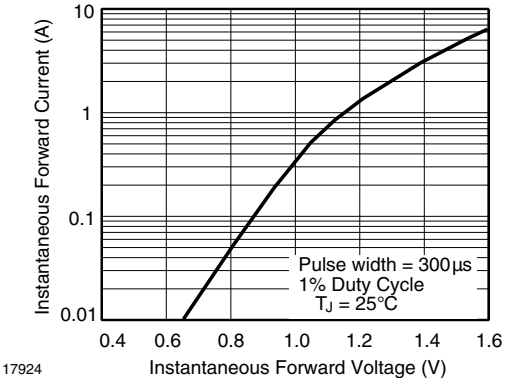

Fig. 4 - Typical Instantaneous Forward Characteristics for SML4763

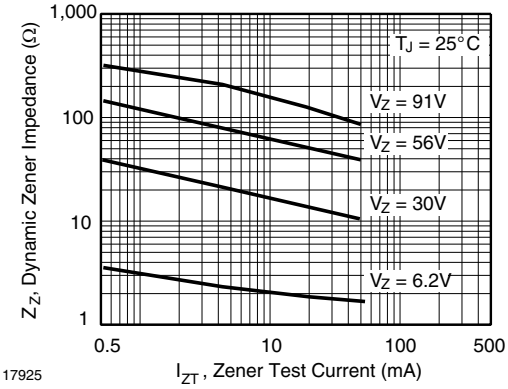

Fig. 2 - Typical Zener Impedance

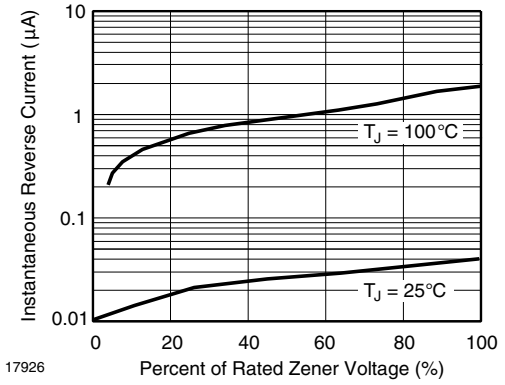

Fig. 5 - Typical Reverse Characteristics

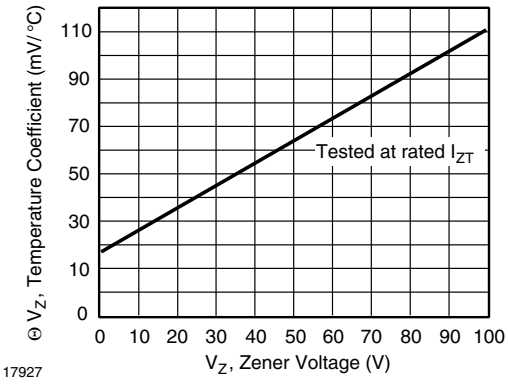

Fig. 3 - Typical Temperature Coefficients

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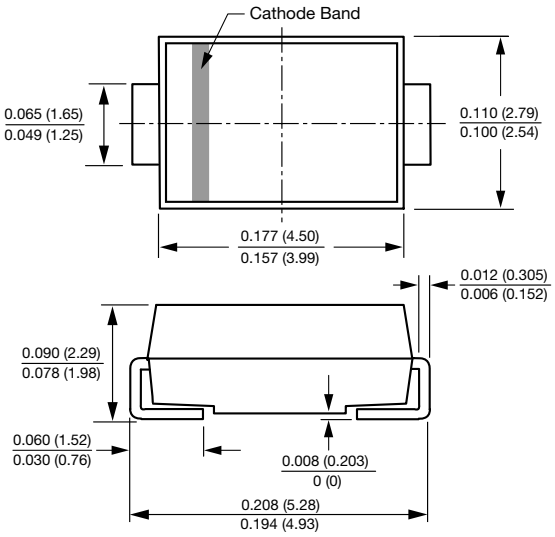
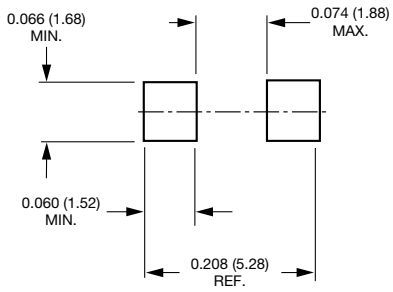
PACKAGE DIMENSIONS in inches (millimeters): **DO-214AC**

DO-214AC (SMA)



Mounting Pad Layout



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