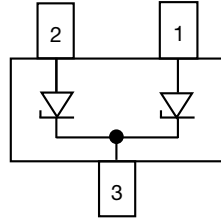
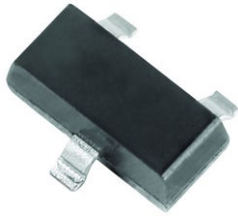




**THE DATASHEET OF
DZ23C5V1-E3-18**



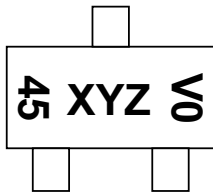
Small Signal Zener Diodes



LINKS TO ADDITIONAL RESOURCES



MARKING (example only)



XYZ = type code
 45 = working week
 0 = year
 V = Vishay

FEATURES

- Silicon planar Zener diodes
- The Zener voltages are graded according to the international E24 standard. Standard Zener voltage tolerance is $\pm 5\%$
- AEC-Q101 qualified available
- ESD capability acc. to AEC-Q101:
 human body model: $> 8\text{ kV}$,
 machine model: $> 800\text{ V}$
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3_A - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V_Z range nom.	2.2 to 75	V
Test current I_{ZT}	2; 5	mA
V_Z specification	Pulse current	
Circuit configuration	Common cathode	

ORDERING INFORMATION					
DEVICE NAME	ORDERING CODE	ZENER VOLTAGE TOLERANCE	AEC-Q101 QUALIFIED	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
DZ23 series	DZ23C2V4-E3-08 to DZ23C75-E3-08	5 %	no	3000 (8 mm tape on 7" reel)	15 000
	DZ23C2V4-HE3_A-08 to DZ23C75-HE3_A-08	5 %	yes		
	DZ23C2V4-E3-18 to DZ23C75-E3-18	5 %	no	10 000 (8 mm tape on 13" reel)	10 000
	DZ23C2V4-HE3_A-18 to DZ23C75-HE3_A-18	5 %	yes		

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOT-23	9.2 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

ABSOLUTE MAXIMUM RATINGS					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Power dissipation	$R_{thJL} = 250\text{ K/W}$	P_{tot}	500	mW	
	On FR-4 board with recommended soldering footprint	P_{tot}	300	mW	
Thermal resistance junction to lead		R_{thJL}	250	K/W	
Thermal resistance junction to ambient	According to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	R_{thJA}	420	K/W	
Junction temperature		T_j	150	°C	
Storage temperature range		T_{stg}	-65 to +150	°C	
Operating temperature range		T_{op}	-55 to +150	°C	



ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)												
PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE f = 1 kHz		TEMPERATURE COEFFICIENT	
		V _Z at I _{ZT1}			I _{ZT1}	I _{ZT2}	I _R at V _R		Z _Z at I _{ZT1}	Z _{ZK} at I _{ZT2}	α _{VZ} at I _{ZT1}	
		V			mA		μA	V	Ω		10 ⁻⁴ /°C	
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
DZ23C2V2	V77	2.09	2.2	2.31	5	1	100	1	120	600	-9	-4
DZ23C2V4	V78	2.28	2.4	2.52	5	1	50	1	100	600	-9	-4
DZ23C2V7	V41	2.57	2.7	2.84	5	1	20	1	83	500	-9	-4
DZ23C3V0	V42	2.85	3.0	3.15	5	1	10	1	95	500	-9	-3
DZ23C3V3	V43	3.14	3.3	3.47	5	1	5	1	95	500	-8	-3
DZ23C3V6	V44	3.42	3.6	3.78	5	1	5	1	90	500	-8	-3
DZ23C3V9	V45	3.71	3.9	4.10	5	1	3	1	90	500	-7	-3
DZ23C4V3	V46	4.09	4.3	4.52	5	1	3	1	90	500	-6	-1
DZ23C4V7	V47	4.47	4.7	4.94	5	1	3	2	78	500	-5	2
DZ23C5V1	V48	4.85	5.1	5.36	5	1	2	2	60	480	-3	4
							0.1	0.8				
DZ23C5V6	V49	5.32	5.6	5.88	5	1	1	2	40	400	-2	6
							0.1	1				
DZ23C6V2	V50	5.89	6.2	6.51	5	1	3	4	10	150	-1	7
							0.1	2				
DZ23C6V8	V51	6.46	6.8	7.14	5	1	2	4	8	80	2	7
							0.1	3				
DZ23C7V5	V52	7.13	7.5	7.88	5	1	0.1	5	7	50	3	7
DZ23C8V2	V53	7.79	8.2	8.61	5	1	0.1	6	7	50	4	7
DZ23C9V1	V54	8.65	9.1	9.56	5	1	0.1	7	10	50	5	8
DZ23C10	V55	9.50	10	10.50	5	1	0.1	7.5	15	70	5	8
DZ23C11	V56	10.45	11	11.55	5	1	0.1	8.5	20	70	5	9
DZ23C12	V57	11.40	12	12.60	5	1	0.1	9	20	90	6	9
DZ23C13	V58	12.40	13	13.65	5	1	0.1	10	25	110	7	9
DZ23C15	V59	14.25	15	15.60	5	1	0.05	11	30	110	7	9
DZ23C16	V60	15.30	16	16.80	5	1	0.05	12	40	170	8	9.5
DZ23C18	V61	17.10	18	18.90	5	1	0.05	14	45	170	8	9.5
DZ23C20	V62	19.00	20	21.00	5	1	0.05	15	50	220	8	10
DZ23C22	V63	20.90	22	23.10	5	1	0.05	17	55	220	8	10
DZ23C24	V64	22.80	24	25.20	5	1	0.05	18	70	220	8	10
DZ23C27	V65	25.65	27	28.35	2	0.5	0.05	20	80	250	8	10
DZ23C30	V66	28.50	30	31.50	2	0.5	0.05	22.5	80	250	8	10
DZ23C33	V67	31.35	33	34.65	2	0.5	0.05	25	80	250	8	10
DZ23C36	V68	34.20	36	37.80	2	0.5	0.05	27	87	250	8	10
DZ23C39	V69	37.05	39	40.95	2	0.5	0.05	29	87	300	10	12
DZ23C43	V70	40.85	43	45.15	2	0.5	0.05	32	97	375	10	12
DZ23C47	V71	44.65	47	49.35	2	0.5	0.05	35	97	375	10	12
DZ23C51	V72	48.45	51	53.55	2	0.5	0.05	38	100	400	10	12
DZ23C56	V73	53.20	56	58.80	2	0.5	0.05	42	135	425	9	11
DZ23C62	V74	58.90	62	65.10	2	0.5	0.05	46.5	150	450	9	12
DZ23C68	V75	64.60	68	71.40	2	0.5	0.05	51	200	475	10	12
DZ23C75	V76	71.25	75	78.75	2	0.5	0.05	56	250	500	10	12

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

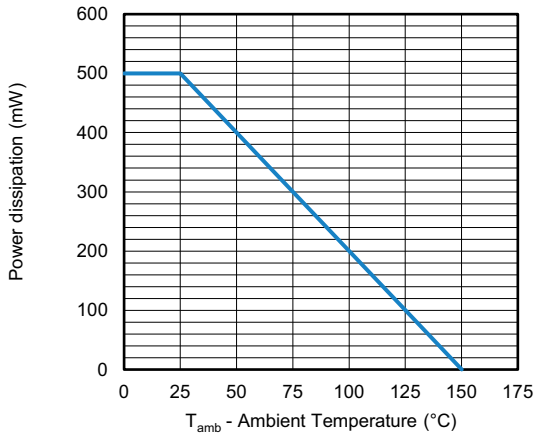


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

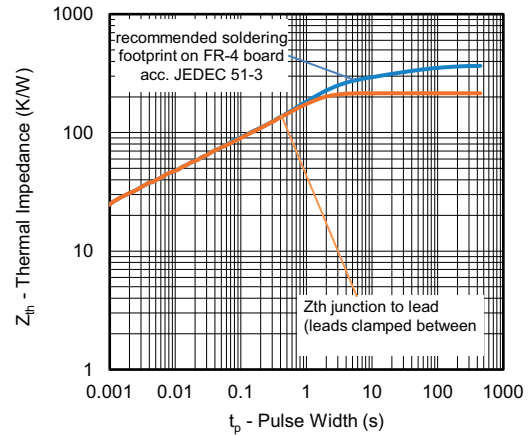
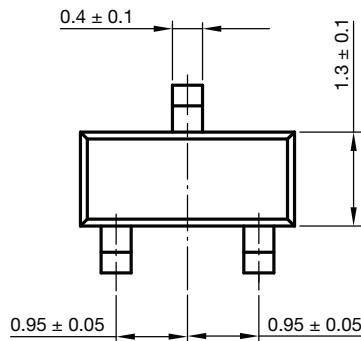
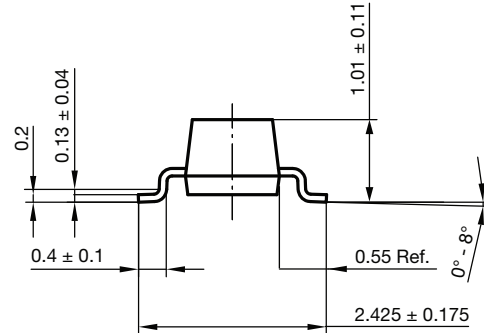
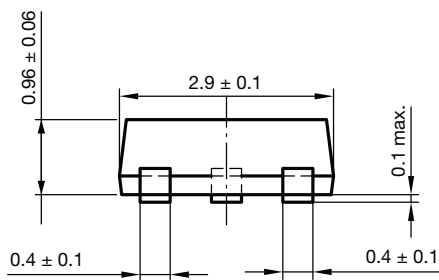
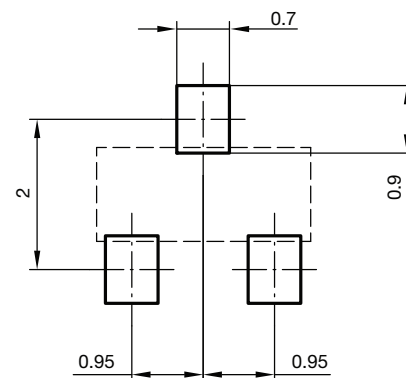


Fig. 2 - Thermal Impedance vs. Time

PACKAGE DIMENSIONS in millimeters (inches): SOT-23



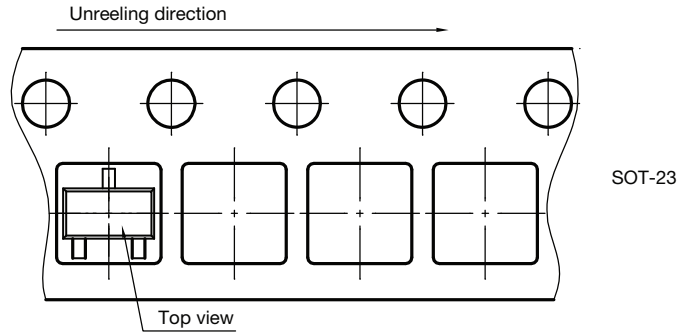
Foot print recommendation:



Document no.: S8-V-3929.01-009 (4)
 Created - Date: 18. Oct. 2021
 Rev. 01 - Date: 18. Jan. 2022

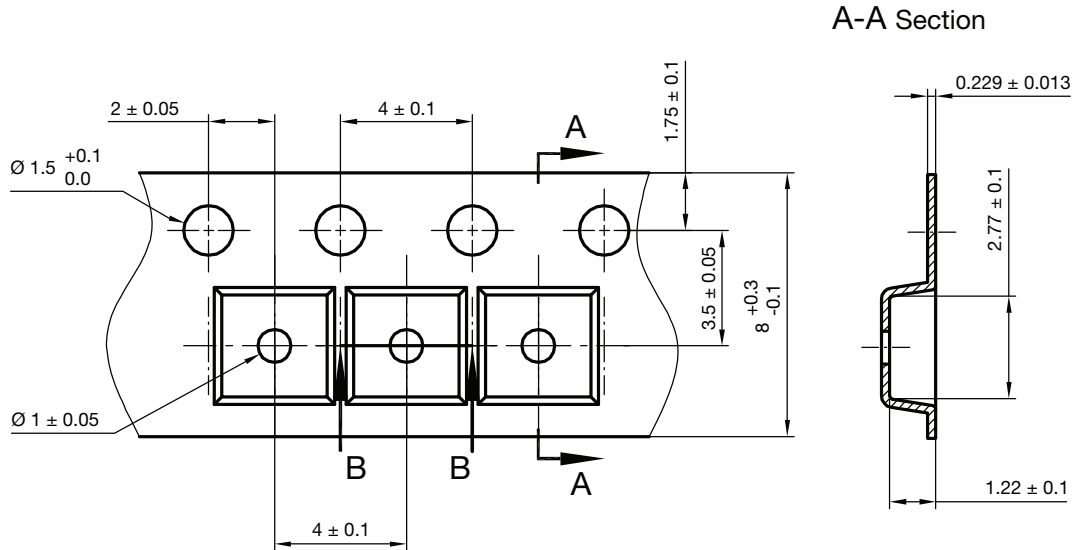


ORIENTATION IN CARRIER TAPE



S8-V-3929.01-006 (4)
Created Date: 04.02.2010
Rev. 02 Date: 07.11.2022

CARRIER TAPE



B-B Section

Document no.: S8-V-3929.01-005 (4)
Created - Date: 04. Feb. 2010



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.


Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View DZ23C5V1-E3-18 on WIN SOURCE](#)

 [Vishay Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management