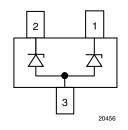


Small Signal Zener Diodes



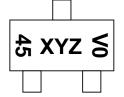


LINKS TO ADDITIONAL RESOURCES





MARKING (example only)

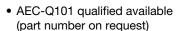


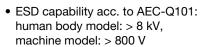
XYZ = type code 45 = working week 0 = year V = Vishay

PRIMARY CHARACTERISTICS PARAMETER VALUE UNIT V_Z range nom. 2.2 to 75 ٧ Test current I_{ZT} 2; 5 mΑ V_Z specification Pulse current Circuit configuration Common anode

FEATURES

- Silicon planar Zener diodes
- The Zener voltages are graded according to the international E24 standard. Standard Zener voltage tolerance is ± 5 %, indicated by the "C" in the ordering code. Replace "C" with "B" for ± 2 % tolerance.





- Base P/N-G3 green, commercial grade
- · Material categorization: for definitions of compliance please see www.vishav.com/doc?99912





RoHS HALOGEN FREE

GREEN (5-2008)

ORDERING INFORMATION											
DEVICE NAME	ORDERING CODE	ZENER VOLTAGE TOLERANCE	AEC-Q101 QUALIFIED	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY						
	AZ23C2V4-G3-08 to AZ23C75-G3-08	5 %	no	3000	15 000						
AZ23-G series	AZ23B2V4-G3-08 to AZ23B75-G3-08	2 %	no	(8 mm tape on 7" reel)	13 000						
AZZ3-G Series	AZ23C2V4-G3-18 to AZ23C75-G3-18	5 %	no	10 000	10 000						
	AZ23B2V4-G3-18 to AZ23B75-G3-18	2 %	no	(8 mm tape on 13" reel)	10 000						

PACKAGE											
PACKAGE NAME	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 K/W	P _{tot}	500	mW						
Fower dissipation	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		Tj	150	°C						
Storage temperature range		T _{stg}	-65 to +150	°C						
Operating temperature range		T _{op}	-55 to +150	°C						



PART M NUMBER	MARKING	ZENER VOLTAGE RANGE ⁽¹⁾			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE f = 1 kHz		TEMPERATURE COEFFICIENT	
	CODE	V _Z at I _{ZT1}			I _{ZT1} I _{ZT2}		I _R at V _R μΑ V		Z _Z at I _{ZT1}	Z _{ZK} at I _{ZT2}	α _{VZ} at I _{ZT1} 10 ⁻⁴ /°C	
		V							Ω			
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
AZ23C2V2-G	D77	2.09	2.2	2.31	5	1	100	1	120	600	-9	-4
AZ23C2V4-G	D78	2.28	2.4	2.52	5	1	50	1	100	600	-9	-4
AZ23C2V7-G	D41	2.57	2.7	2.84	5	1	20	1	83	500	-9	-4
AZ23C3V0-G	D42	2.85	3.0	3.15	5	1	10	1	95	500	-9	-3
AZ23C3V3-G	D43	3.14	3.3	3.47	5	1	5	1	95	500	-8	-3
AZ23C3V6-G	D44	3.42	3.6	3.78	5	1	5	1	90	500	-8	-3
AZ23C3V9-G	D45	3.71	3.9	4.10	5	1	3	1	90	500	-7	-3
AZ23C4V3-G	D46	4.09	4.3	4.52	5	1	3	1	90	500	-6	-1
AZ23C4V7-G	D47	4.47	4.7	4.94	5	1	3	2	78	500	-5	2
AZ23C5V1-G	D48	4.85	5.1	5.36	5	1	2	2	60	480	-3	4
							0.1	0.8				
AZ23C5V6-G	D49	5.32	5.6	5.88	5	1	1	2	40	400	-2	6
							0.1	1				
AZ23C6V2-G	D50	5.89	6.2	6.51	5	1	3	4	10	150	-1	7
,. <u></u>		0.00	0.2	0.0			0.1	2	1		·	
AZ23C6V8-G	D51	6.46	6.8	7.14	5	1	2	4	8	80	2	7
712200010 0	501	0.40	0.0	7.14			0.1	3	1	00	_	,
AZ23C7V5-G	D52	7.13	7.5	7.88	5	1	0.1	5	7	50	3	7
AZ23C8V2-G	D53	7.79	8.2	8.61	5	1	0.1	6	7	50	4	7
AZ23C9V1-G	D54	8.65	9.1	9.56	5	1	0.1	7	10	50	5	8
AZ23C10-G	D55	9.50	10	10.50	5	1	0.1	7.5	15	70	5	8
AZ23C11-G	D56	10.45	11	11.55	5	1	0.1	8.5	20	70	5	9
AZ23C11-G	D57	11.40	12	12.60	5	1	0.1	9	20	90	6	9
AZ23C12-G	D57	12.40	13	13.65	5	1	0.1	10	25	110	7	9
AZ23C15-G	D59	14.25	15	15.60	5	1	0.05	11	30	110	7	9
AZ23C15-G	D60	15.30	16	16.80	5	1	0.05	12	40	170	8	9.5
AZ23C18-G	D61	17.10	18	18.90	5	1	0.05	14	45	170	8	9.5
AZ23C10-G AZ23C20-G	D61	19.00	20	21.00	5	1	0.05	15	50	220	8	10
AZ23C20-G AZ23C22-G	D62		22	23.10	5	1		17	55	220	8	10
AZ23C22-G AZ23C24-G	D63	20.90	24	25.10	5	1	0.05	18	70	220	8	10
				28.35								
AZ23C27-G	D65	25.65	27		2	0.5	0.05	20	80	250	8	10
AZ23C30-G	D66	28.50	30	31.50	2	0.5	0.05	22.5	80	250	8	10
AZ23C33-G	D67	31.35	33	34.65	2	0.5	0.05	25	80	250	8	10
AZ23C36-G	D68	34.20	36	37.80	2	0.5	0.05	27	87	250	8	10
AZ23C39-G	D69	37.05	39	40.95	2	0.5	0.05	29	87	300	10	12
AZ23C43-G	D70	40.85	43	45.15	2	0.5	0.05	32	97	375	10	12
AZ23C47-G	D71	44.65	47	49.35	2	0.5	0.05	35	97	375	10	12
AZ23C51-G	D72	48.45	51	53.55	2	0.5	0.05	38	100	400	10	12
AZ23C56-G	D73	53.20	56	58.80	2	0.5	0.05	42	135	425	9	11
AZ23C62-G	D74	58.90	62	65.10	2	0.5	0.05	46.5	150	450	9	12
AZ23C68-G	D75	64.60	68	71.40	2	0.5	0.05	51	200	475	10	12
AZ23C75-G	D76	71.25	75	78.75	2	0.5	0.05	56	250	500	10	12



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PART	MARKING CODE	ZENER VOLTAGE RANGE ⁽¹⁾ V _Z at I _{ZT1}			TEST CURRENT I _{ZT1} I _{ZT2} mA		REVERSE LEAKAGE CURRENT I _R at V _R		DYNAMIC RESISTANCE f = 1 kHz		TEMPERATURE COEFFICIENT	
NUMBER									Z _Z at I _{ZT1}	Z _{ZK} at I _{ZT2}	α _{VZ} at I _{ZT1}	
		V							Ω	10 ⁻⁴ /°C		
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
AZ23B2V2-G	DG8	2.16	2.2	2.24	5	1	100	1	120	600	-9	-4
AZ23B2V4-G	DG9	2.35	2.4	2.45	5	1	50	1	100	600	-9	-4
AZ23B2V7-G	DD1	2.65	2.7	2.75	5	1	20	1	83	500	-9	-4
AZ23B3V0-G	DD2	2.94	3.0	3.06	5	1	10	1	95	500	-9	-3
AZ23B3V3-G	DD3	3.23	3.3	3.37	5	1	5	1	95	500	-8	-3
AZ23B3V6-G	DD4	3.53	3.6	3.67	5	1	5	1	90	500	-8	-3
AZ23B3V9-G	DD5	3.82	3.9	3.98	5	1	3	1	90	500	-7	-3
AZ23B4V3-G	DD6	4.21	4.3	4.39	5	1	3	1	90	500	-6	-1
AZ23B4V7-G	DD7	4.61	4.7	4.79	5	1	3	2	78	500	-5	2
AZ23B5V1-G	DD8	5.00	5.1	5.20	5	1	2	2	60	480	-3	4
							0.1	0.8	1			
AZ23B5V6-G	DD9	5.49	5.6	5.71	5	1	1	2	40	400	-2	6
							0.1	1				
AZ23B6V2-G	DE0	6.08	6.2	6.32	5	1	3	4	10	150	-1	7
							0.1	2				
AZ23B6V8-G	DE1	6.66	6.8	6.94	5	1	2	4	8	80	2	7
							0.1	3	1			
AZ23B7V5-G	DE2	7.35	7.5	7.65	5	1	0.1	5	7	50	3	7
AZ23B8V2-G	DE3	8.04	8.2	8.36	5	1	0.1	6	7	50	4	7
AZ23B9V1-G	DE4	8.92	9.1	9.28	5	1	0.1	7	10	50	5	8
AZ23B10-G	DE5	9.80	10	10.20	5	1	0.1	7.5	15	70	5	8
AZ23B11-G	DE6	10.78	11	11.22	5	1	0.1	8.5	20	70	5	9
AZ23B12-G	DE7	11.76	12	12.24	5	1	0.1	9	20	90	6	9
AZ23B13-G	DE8	12.74	13	13.26	5	1	0.1	10	25	110	7	9
AZ23B15-G	DE9	14.70	15	15.30	5	1	0.05	11	30	110	7	9
AZ23B16-G	DF0	15.68	16	16.32	5	1	0.05	12	40	170	8	9.5
AZ23B18-G	DF1	17.64	18	18.36	5	1	0.05	14	45	170	8	9.5
AZ23B20-G	DF2	19.60	20	20.40	5	1	0.05	15	50	220	8	10
AZ23B22-G	DF3	21.56	22	22.44	5	1	0.05	17	55	220	8	10
AZ23B24-G	DF4	23.52	24	24.48	5	1	0.05	18	70	220	8	10
AZ23B27-G	DF5	26.46	27	27.54	2	0.5	0.05	20	80	250	8	10
AZ23B30-G	DF6	29.40	30	30.60	2	0.5	0.05	22.5	80	250	8	10
AZ23B33-G	DF7	32.34	33	33.66	2	0.5	0.05	25	80	250	8	10
AZ23B36-G	DF8	35.28	36	36.72	2	0.5	0.05	27	87	250	8	10
AZ23B30-G	DF9	38.22	39	39.78	2	0.5	0.05	29	87	300	10	12
AZ23B39-G AZ23B43-G	DG0	42.14	43	43.86	2	0.5	0.05	32	97	375	10	12
AZ23B43-G AZ23B47-G	DG0 DG1	46.06	43	47.94	2	0.5	0.05	35	97	375	10	12
AZ23B47-G AZ23B51-G	DG1 DG2	49.98	51	52.02	2	0.5	0.05	38	100	400	10	12
AZ23B56-G	DG3	54.88	56	57.12	2	0.5	0.05	42	135	425	9	11
AZ23B62-G	DG5	60.76	62	63.24	2	0.5	0.05	46.5	150	450	9	12
AZ23B68-G	DG6	66.64	68	69.36	2	0.5	0.05	51	200	475	10	12

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

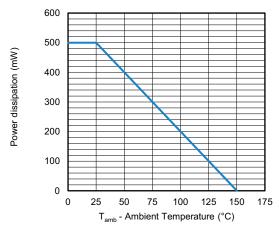


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

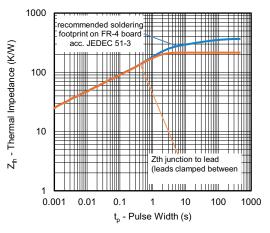
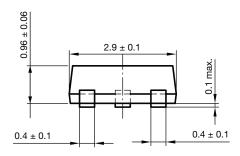
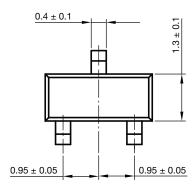


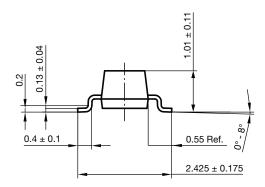
Fig. 2 - Thermal Impedance vs. Time

PACKAGE DIMENSIONS in millimeters (inches): SOT-23

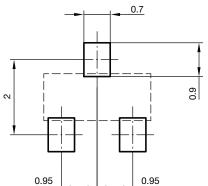




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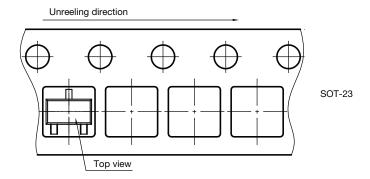


Foot print recommendation:





ORIENTATION IN CARRIER TAPE



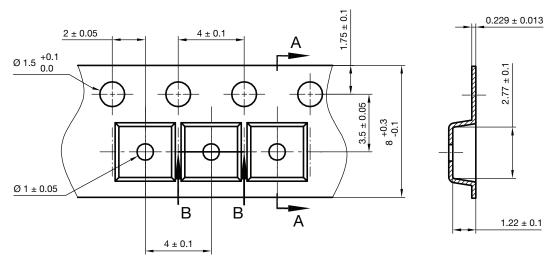
S8-V-3929.01-006 (4) Created Date: 04.02.2010 Rev. 02 Date: 07.11.2022

CARRIER TAPE

A-A Section

 2.77 ± 0.1

 1.22 ± 0.1



B-B Section



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



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