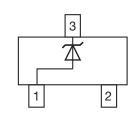


Vishay Semiconductors

Small Signal Zener Diodes





FEATURES

- Silicon planar Zener diodes
- Standard Zener voltage tolerance is ± 5 %.
- AEC-Q101 qualified available
- ESD capability according to AEC-Q101: Human body model > 8 kV Machine model > 800 V



AUTOMOTIVE GRADE

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

- RoHS COMPLIANT
- Base P/N-HE3 RoHS-compliant, AEC-Q101 qualified
- · Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

DESIGN SUPPORT TOOLS click logo to get started



PRIMARY CHARACTERISTICS				
PARAMETER	VALUE	UNIT		
V _Z range nom.	2.4 to 43	V		
Test current I _{ZT}	0.05	mA		
V _Z specification	Pulse current			
Circuit configuration	Single			

ORDERING INFORMATION					
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY		
MMBZ4681 to MMBZ4717	MMBZ4681-E3-08 to MMBZ4717-E3-08	3000 (8 mm tape on 7" reel)	15 000/box		
	MMBZ4681-HE3-08 to MMBZ4717-HE3-08	3000 (6 mm tape on 7 Teel)			
	MMBZ4681-E3-18 to MMBZ4717-E3-18	10 000 (8 mm tape on 13" reel)	10 000/box		
	MMBZ4681-HE3-18 to MMBZ4717-HE3-18	10 000 (o min tape on 13 reei)			

PACKAGE						
PACKAGE NAME WEIGHT MOLDING COMPOUND FLAMMABILITY RATING		MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS			
SOT-23	8.8 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	On FR - 5 board using recommended solder pad layout	P _{tot}	350	mW	
Zener current	See table "Electrical Characteristics"				
Thermal resistance junction to ambient air	On FR - 5 board using recommended solder pad layout	R _{thJA}	420	K/W	
Junction temperature, maximum		Tj	150	°C	
Storage temperature range		T _{stg}	-55 to +150	°C	
Operating temperature range		T _{op}	-55 to +150	°C	



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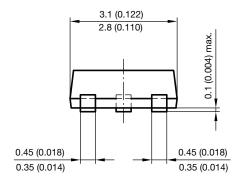
ELECTRICAL (TEST		OUDDESSE	VOLTAGE
PART NUMBER	MARKING	ZENER	ZENER VOLTAGE RANGE (1)			REVERSE CURRENT		CHANGE (2)
	MARKING CODE	V _Z at I _{ZT1}			I _{ZT1}	I _R a	nt V _R	∆ V _Z
	3322		V		mA	μΑ	V	V
		MIN.	nom.	max.		max.		MAX.
MMBZ4681	CF	2.28	2.4	2.52	0.05	2	1	0.8
MMBZ4682	CH	2.57	2.7	2.84	0.05	1	1	0.85
MMBZ4683	CJ	2.85	3	3.15	0.05	0.8	1	0.9
MMBZ4684	CK	3.14	3.3	3.47	0.05	7.5	1.5	0.95
MMBZ4685	CM	3.42	3.6	3.78	0.05	7.5	2	0.95
MMBZ4686	CN	3.71	3.9	4.1	0.05	5	2	0.97
MMBZ4687	CP	4.09	4.3	4.52	0.05	4	2	0.99
MMBZ4688	CT	4.47	4.7	4.94	0.05	10	3	0.99
MMBZ4689	CU	4.85	5.1	5.36	0.05	10	3	0.97
MMBZ4690	CV	5.32	5.6	5.88	0.05	10	4	0.96
MMBZ4691	CA	5.89	6.2	6.51	0.05	10	5	0.95
MMBZ4692	CX	6.46	6.8	7.14	0.05	10	5.1	0.9
MMBZ4693	CY	7.13	7.5	7.88	0.05	10	5.7	0.75
MMBZ4694	CZ	7.79	8.2	8.61	0.05	1	6.2	0.5
MMBZ4695	DC	8.27	8.7	9.14	0.05	1	6.6	0.1
MMBZ4696	DD	8.65	9.1	9.56	0.05	1	6.9	0.08
MMBZ4697	DE	9.5	10	10.5	0.05	1	7.6	0.1
MMBZ4698	DF	10.5	11	11.6	0.05	0.05	8.4	0.11
MMBZ4699	DH	11.4	12	12.6	0.05	0.05	9.1	0.12
MMBZ4700	DJ	12.4	13	13.7	0.05	0.05	9.8	0.13
MMBZ4701	DK	13.3	14	14.7	0.05	0.05	10.6	0.14
MMBZ4702	DM	14.3	15	15.8	0.05	0.05	11.4	0.15
MMBZ4703	DN	15.2	16	16.8	0.05	0.05	12.1	0.16
MMBZ4704	DP	16.2	17	17.9	0.05	0.05	12.9	0.17
MMBZ4705	DT	17.1	18	18.9	0.05	0.05	13.6	0.18
MMBZ4706	DU	18.1	19	20	0.05	0.05	14.4	0.19
MMBZ4707	DV	19	20	21	0.05	0.01	15.2	0.2
MMBZ4708	DA	20.9	22	23.1	0.05	0.01	16.7	0.22
MMBZ4709	DZ	22.8	24	25.2	0.05	0.01	18.2	0.24
MMBZ4710	DY	23.8	25	26.3	0.05	0.01	19	0.25
MMBZ4711	EA	25.7	27	28.4	0.05	0.01	20.4	0.27
MMBZ4712	EC	26.6	28	29.4	0.05	0.01	21.2	0.28
MMBZ4713	ED	28.5	30	31.5	0.05	0.01	22.8	0.3
MMBZ4714	EE	31.4	33	34.7	0.05	0.01	25	0.33
MMBZ4715	EF	34.2	36	3.7.8	0.05	0.01	27.3	0.36
MMBZ4716	EH	37.1	39	41	0.05	0.01	29.6	0.39
MMBZ4717	EJ	40.9	43	45.2	0.05	0.01	32.6	0.43

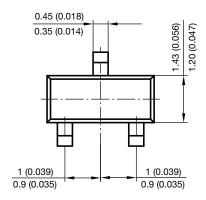
Notes

- Maximum $V_F = 0.9 \text{ V}$, at $I_F = 10 \text{ mA}$
- (1) Tested with pulse test current
- $^{(2)}$ Maximum voltage change (Vz). Voltage change is equal to the difference between Vz at 100 μA and Vz at 10 μA .

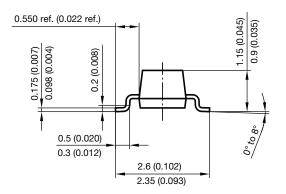
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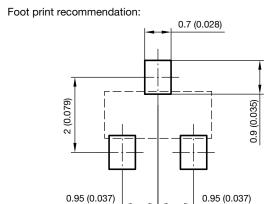
PACKAGE DIMENSIONS in millimeters (inches): SOT-23





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