

Small Signal Zener Diodes



FEATURES

- Silicon planar low noise Zener diodes
- 350 mW high quality voltage regulator designed for low leakage, low current and low noise applications
- $\pm 5\%$ tolerance on V_Z
- High temperature soldering guaranteed: 260 °C/4 x 10 s at terminals
- AEC-Q101 qualified
- ESD capability according to AEC-Q101: Human body model > 8 kV Machine model > 800 V
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - 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.	2.4 to 6.2	V
Test current I_{ZT}	0.25	mA
V_Z specification	Pulse current	
Int. construction	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
MMBZ4617 to MMBZ4627	MMBZ4617-E3-08 to MMBZ4627-E3-08	3000 (8 mm tape on 7" reel)	15 000/box
	MMBZ4617-HE3-08 to MMBZ4627-HE3-08		
	MMBZ4617-E3-18 to MMBZ4627-E3-18	10 000 (8 mm tape on 13" reel)	10 000/box
	MMBZ4617-HE3-18 to MMBZ4627-HE3-18		

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 ($T_{amb} = 25\text{ °C}$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation	On FR - 5 board using recommended solder pad layout	P_{tot}	350	mW
Forward voltage, maximum	$I_F = 200\text{ mA}$	V_F	1.1	V
Forward voltage, typical	$I_F = 200\text{ mA}$	V_F	0.97	V
Thermal resistance junction to ambient air	On FR - 5 board using recommended solder pad layout	R_{thJA}	420	°C/W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 55 to + 150	°C
Operating temperature range		T_{op}	- 55 to + 150	°C

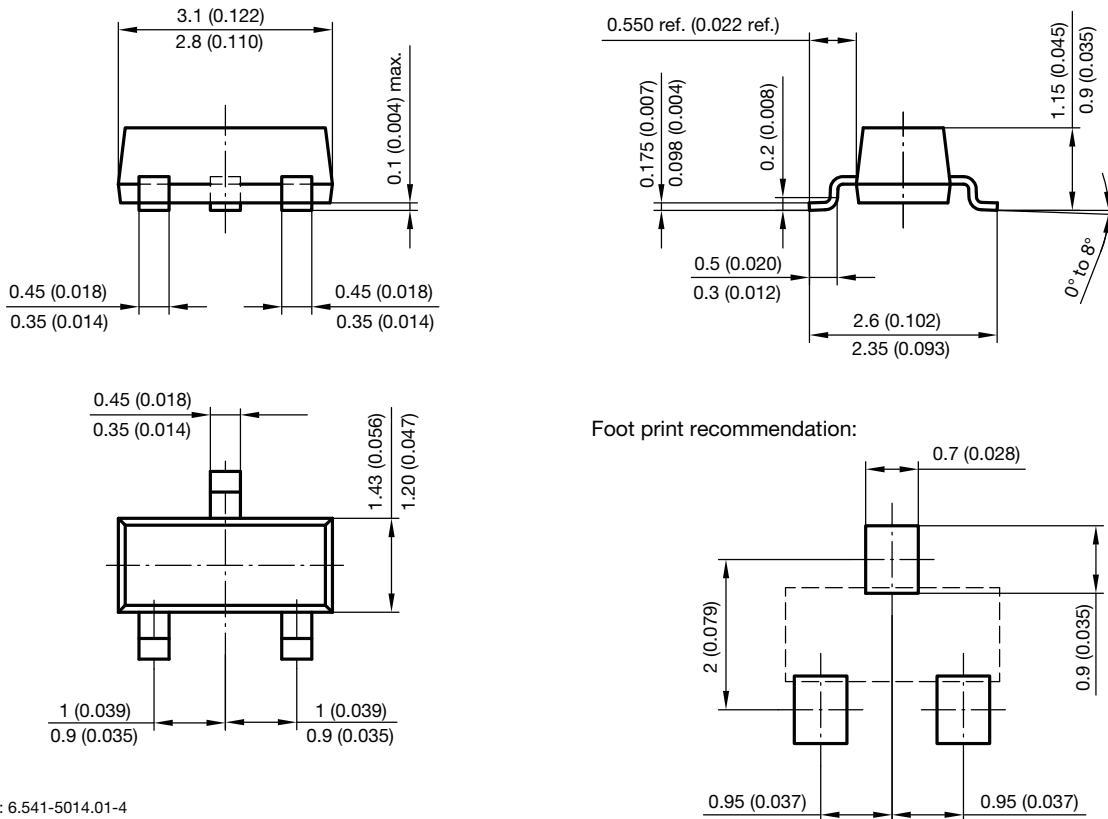


ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)										
PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE ⁽¹⁾			TEST CURRENT	REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE	ZENER CURRENT	NOISE DENSITY
		V_Z at I_{ZT1}			I_{ZT1}	I_R at V_R		Z_{ZT} at I_{ZT1}	I_{ZM}	N_D at I_{ZT1}
		V			mA	μA	V	Ω	mA	$\mu\text{V}/\sqrt{\text{Hz}}$
		MIN.	NOM.	MAX.		MAX.		MAX.	MAX.	MAX.
MMBZ4617	G17	2.280	2.4	2.520	0.25	2	1	1400	95	1
MMBZ4618	G18	2.565	2.7	2.835	0.25	1	1	1500	90	1
MMBZ4619	G19	2.850	3	3.150	0.25	0.8	1	1600	85	1
MMBZ4620	G20	3.135	3.3	3.465	0.25	7.5	1.5	1650	80	1
MMBZ4621	G21	3.420	3.6	3.780	0.25	7.5	2	1700	75	1
MMBZ4622	G22	3.705	3.9	4.095	0.25	5	2	1650	70	1
MMBZ4623	G23	4.085	4.3	4.515	0.25	4	2	1600	65	1
MMBZ4624	G24	4.465	4.7	4.935	0.25	10	3	1550	60	1
MMBZ4625	G25	4.845	5.1	5.355	0.25	10	3	1500	55	2
MMBZ4626	G26	5.320	5.6	5.880	0.25	10	4	1400	50	4
MMBZ4627	G27	5.890	6.2	6.510	0.25	10	5	1200	45	5

Note

⁽¹⁾ V_Z tested with 5 ms pulse

PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**



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