

MMBZ4617 to MMBZ4627

Vishay Semiconductors

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
- 5 % Tolerance on V_Z
- High temperature soldering guaranteed: 250 °C/10 seconds at terminals.



Mechanical Data

Case: SOT-23 Plastic case

Weight: approx. 8.8 mg Terminals: Solderable per MIL-STD-750, method 2026 Packaging codes/options: GS18 / 10 k per 13 " reel (8 mm tape), 10 k/box GS08 / 3 k per 7 " reel (8 mm tape), 15 k/box

Absolute Maximum Ratings

 $T_{amb} = 25 \ ^{\circ}C$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Power dissipation		P _{tot}	350 ¹⁾	mW
Forward voltage, maximum	I _F = 200 mA	V _F	1.1	V
Forward voltage, typical	I _F = 200 mA	V _F	0.97	V

¹⁾ On FR - 5 board using recommended solder pad layout

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Maximum junction temperature		Тj	150	°C
Storage temperature range		Τ _S	- 55 to + 150	°C
Thermal resistance junction to ambient air		R _{thJA}	420 ¹⁾	°C/W

¹⁾ On FR - 5 board using recommended solder pad layout

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Electrical Characteristics

Partnumber	Marking Code	Zener ¹⁾ Voltage	Test Current	Maximum Zener Impedance	Maximum Reverse Leakage Current		Maximum Zener Current	Maximum Noise Density
		V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	I _R	V _R	I _{ZM}	N _D @ I _{ZT} = 250 μA
		V	μA	Ω	μA	V	mA	μV/√Hz
MMBZ4617	G17	2.4	250	1400	2.0	1.0	95	1.0
MMBZ4618	G18	2.7	250	1500	1.0	1.0	90	1.0
MMBZ4619	G19	3.0	250	1600	0.8	1.0	85	1.0
MMBZ4620	G20	3.3	250	1650	7.5	1.5	80	1.0
MMBZ4621	G21	3.6	250	1700	7.5	2.0	75	1.0
MMBZ4622	G22	3.9	250	1650	5.0	2.0	70	1.0
MMBZ4623	G23	4.3	250	1600	4.0	2.0	65	1.0
MMBZ4624	G24	4.7	250	1550	10	3.0	60	1.0
MMBZ4625	G25	5.1	250	1500	10	3.0	55	2.0
MMBZ4626	G26	5.6	250	1400	10	4.0	50	4.0
MMBZ4627	G27	6.2	250	1200	10	5.0	45	5.0

Note: $^{1)}\,V_Z$ tested with 5 ms pulse

Package Dimensions in mm (Inches)



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Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

- 1. Meet all present and future national and international statutory requirements.
- 2. Regularly and continuously improve the performance of our products, processes, distribution and operatingsystems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

- 1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
- 2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
- 3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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