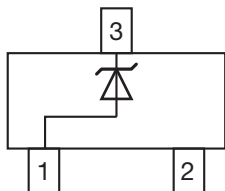


## Small Signal Zener Diodes



### 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-G3 - green, commercial grade
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
**GREEN**  
(5-2008)

### 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-G to MMBZ4627-G | MMBZ4617-G3-08 to MMBZ4627-G3-08 | 3000 (8 mm tape on 7" reel)    | 15 000                 |
|                          | MMBZ4617-G3-18 to MMBZ4627-G3-18 | 10 000 (8 mm tape on 13" reel) | 10 000                 |

### PACKAGE

| PACKAGE NAME | WEIGHT | MOLDING COMPOUND<br>FLAMMABILITY RATING | MOISTURE SENSITIVITY<br>LEVEL        | SOLDERING CONDITIONS     |
|--------------|--------|-----------------------------------------|--------------------------------------|--------------------------|
| SOT-23       | 8.8 mg | UL 94 V-0                               | MSL level 1<br>(according J-STD-020) | 260 °C/10 s at terminals |

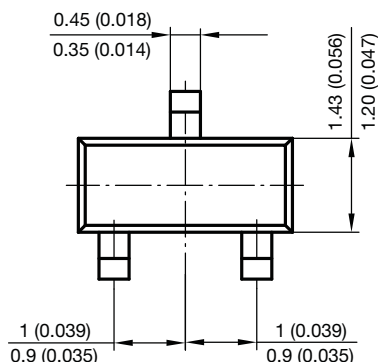
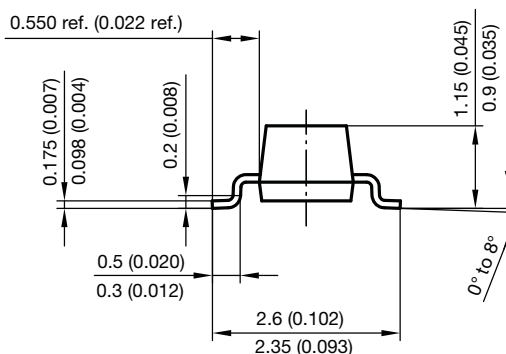
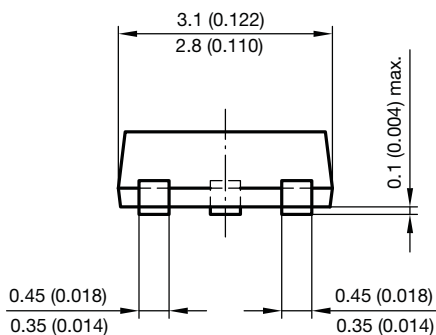
### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

| 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   |

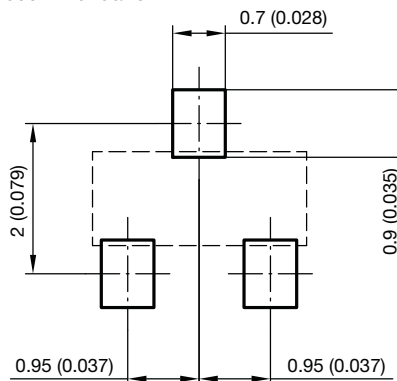
**ELECTRICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

| PART NUMBER | MARKING CODE | ZENER VOLTAGE RANGE <sup>(1)</sup> |      |       | TEST CURRENT     | REVERSE LEAKAGE CURRENT          |     | DYNAMIC RESISTANCE                  | ZENER CURRENT   | NOISE DENSITY                      |
|-------------|--------------|------------------------------------|------|-------|------------------|----------------------------------|-----|-------------------------------------|-----------------|------------------------------------|
|             |              | V <sub>Z</sub> at I <sub>ZT1</sub> |      |       | I <sub>ZT1</sub> | I <sub>R</sub> at V <sub>R</sub> |     | Z <sub>ZT</sub> at I <sub>ZT1</sub> | I <sub>ZM</sub> | N <sub>D</sub> at I <sub>ZT1</sub> |
|             |              | V                                  |      |       | mA               | μA                               | V   | Ω                                   | mA              | μV/√Hz                             |
|             |              | MIN.                               | NOM. | MAX.  |                  | MAX.                             |     | MAX.                                | MAX.            | MAX.                               |
| MMBZ4617-G  | GA7          | 2.280                              | 2.4  | 2.520 | 0.25             | 2                                | 1   | 1400                                | 95              | 1                                  |
| MMBZ4618-G  | GA8          | 2.565                              | 2.7  | 2.835 | 0.25             | 1                                | 1   | 1500                                | 90              | 1                                  |
| MMBZ4619-G  | GA9          | 2.850                              | 3    | 3.150 | 0.25             | 0.8                              | 1   | 1600                                | 85              | 1                                  |
| MMBZ4620-G  | GB0          | 3.135                              | 3.3  | 3.465 | 0.25             | 7.5                              | 1.5 | 1650                                | 80              | 1                                  |
| MMBZ4621-G  | GB1          | 3.420                              | 3.6  | 3.780 | 0.25             | 7.5                              | 2   | 1700                                | 75              | 1                                  |
| MMBZ4622-G  | GB2          | 3.705                              | 3.9  | 4.095 | 0.25             | 5                                | 2   | 1650                                | 70              | 1                                  |
| MMBZ4623-G  | GB3          | 4.085                              | 4.3  | 4.515 | 0.25             | 4                                | 2   | 1600                                | 65              | 1                                  |
| MMBZ4624-G  | GB4          | 4.465                              | 4.7  | 4.935 | 0.25             | 10                               | 3   | 1550                                | 60              | 1                                  |
| MMBZ4625-G  | GB5          | 4.845                              | 5.1  | 5.355 | 0.25             | 10                               | 3   | 1500                                | 55              | 2                                  |
| MMBZ4626-G  | GB6          | 5.320                              | 5.6  | 5.880 | 0.25             | 10                               | 4   | 1400                                | 50              | 4                                  |
| MMBZ4627-G  | GB7          | 5.890                              | 6.2  | 6.510 | 0.25             | 10                               | 5   | 1200                                | 45              | 5                                  |

**Note**
<sup>(1)</sup>  $V_Z$  tested with 5 ms pulse

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


Foot print recommendation:





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