

350mW Surface Mount Zener Diode

MMBZ5221B-5259B

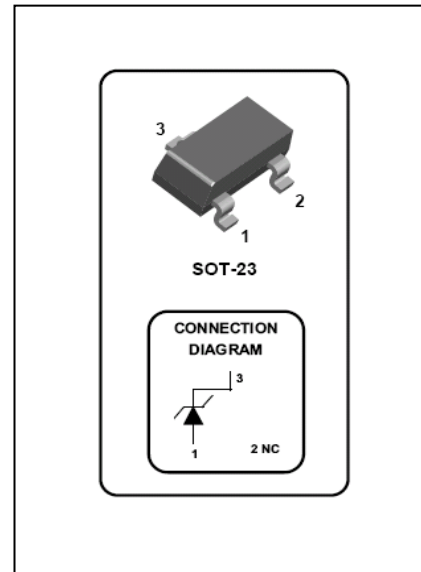
FEATURES

- Planar Die Construction.
- 350mw Power Dissipation.
- General purpose, medium current.
- Ideally Suited For Automated Assembly Processes.



APPLICATIONS

- 350Mw Surface mount zener diode



ORDERING INFORMATION

| Type No. | Marking | Package Code |
|---------------------|--------------------|--------------|
| MMBZ5221B-MMBZ5259B | See Table on page2 | SOT-23 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|---------------------------------------------|-----------------------------------|------------|------|
| Forward Voltage@I _F =10mA | V _F | 0.9 | V |
| Power Dissipation | P _d | 350 | mW |
| Thermal Resistance, Junction to Ambient Air | R _{θJA} | 357 | °C/W |
| Operating and Storage Temperature Range | T _j , T _{stg} | -65 to+150 | °C |

Notes: 1. Valid provided that device terminals are kept at ambient temperature.

2. Tested with pulses, T_P ≤ 1.0ms.

Diode Semiconductor Korea

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Type Number | Marking Code | Zener Voltage Range | | | | Maximum Zener Impedance | | Maximum Reverse Leakage Current | |
|-------------|--------------|---------------------------------|--------|--------|-----------------|----------------------------------|------------------------------------------|---------------------------------|----------------|
| | | V _Z @I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} =0.25mA | I _R | V _R |
| | | Nom(V) | Min(V) | Max(V) | (mA) | (Ω) | | (μA) | (V) |
| MMBZ5221B | KC1 | 2.4 | 2.28 | 2.52 | 20 | 30 | 1200 | 100 | 1.0 |
| MMBZ5222B | KC2 | 2.5 | 2.38 | 2.63 | 20 | 30 | 1250 | 100 | 1.0 |
| MMBZ5223B | KC3 | 2.7 | 2.57 | 2.84 | 20 | 30 | 1300 | 75 | 1.0 |
| MMBZ5225B | KC5 | 3.0 | 2.85 | 3.15 | 20 | 30 | 1600 | 50 | 1.0 |
| MMBZ5226B | KG1 | 3.3 | 3.14 | 3.47 | 20 | 28 | 1600 | 25 | 1.0 |
| MMBZ5227B | KG2 | 3.6 | 3.42 | 3.78 | 20 | 24 | 1700 | 15 | 1.0 |
| MMBZ5228B | KG3 | 3.9 | 3.71 | 4.10 | 20 | 23 | 1900 | 10 | 1.0 |
| MMBZ5229B | KG4 | 4.3 | 4.09 | 4.52 | 20 | 22 | 2000 | 5.0 | 1.0 |
| MMBZ5230B | KG5 | 4.7 | 4.47 | 4.94 | 20 | 19 | 1900 | 5.0 | 2.0 |
| MMBZ5231B | KE1 | 5.1 | 4.85 | 5.36 | 20 | 17 | 1600 | 5.0 | 2.0 |
| MMBZ5232B | KE2 | 5.6 | 5.32 | 5.88 | 20 | 11 | 1600 | 5.0 | 3.0 |
| MMBZ5233B | KE3 | 6.0 | 5.7 | 6.30 | 20 | 7 | 1600 | 5.0 | 3.5 |
| MMBZ5234B | KE4 | 6.2 | 5.89 | 6.51 | 20 | 7 | 1000 | 5.0 | 4.0 |
| MMBZ5235B | KE5 | 6.8 | 6.46 | 7.14 | 20 | 5 | 750 | 3.0 | 5.0 |
| MMBZ5236B | KF1 | 7.5 | 7.13 | 7.88 | 20 | 6 | 500 | 3.0 | 6.0 |
| MMBZ5237B | KF2 | 8.2 | 7.79 | 8.61 | 20 | 8 | 500 | 3.0 | 6.5 |
| MMBZ5238B | KF3 | 8.7 | 8.27 | 9.14 | 20 | 8 | 600 | 3.0 | 6.5 |
| MMBZ5239B | KF4 | 9.1 | 8.65 | 9.56 | 20 | 10 | 600 | 3.0 | 7.0 |

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| Type Number | Marking Code | Zener Voltage Range | | | | Maximum Zener Impedance | | Maximum Reverse Leakage Current | |
|-------------|--------------|---------------------------------|--------|--------|-----------------|----------------------------------|------------------------------------------|---------------------------------|----------------|
| | | V _Z @I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} =0.25mA | I _R | V _R |
| | | Nom(V) | Min(V) | Max(V) | (mA) | (Ω) | | (μA) | (V) |
| MMBZ5240B | KF5 | 10 | 9.5 | 10.50 | 20 | 17 | 600 | 3.0 | 8.0 |
| MMBZ5241B | KH1 | 11 | 10.45 | 11.55 | 20 | 22 | 600 | 2.0 | 8.4 |
| MMBZ5242B | KH2 | 12 | 11.40 | 12.60 | 20 | 30 | 600 | 1.0 | 9.1 |
| MMBZ5243B | KH3 | 13 | 12.35 | 13.65 | 9.5 | 13 | 600 | 0.5 | 9.9 |
| MMBZ5245B | KH5 | 15 | 14.25 | 15.75 | 8.5 | 16 | 600 | 0.1 | 11 |
| MMBZ5246B | KJ1 | 16 | 15.20 | 16.80 | 7.8 | 17 | 600 | 0.1 | 12 |
| MMBZ5248B | KJ3 | 18 | 17.1 | 18.90 | 7.0 | 21 | 600 | 0.1 | 14 |
| MMBZ5250B | KJ5 | 20 | 19.00 | 21.00 | 6.2 | 25 | 600 | 0.1 | 15 |
| MMBZ5251B | KK1 | 22 | 20.90 | 23.10 | 5.6 | 29 | 600 | 0.1 | 17 |
| MMBZ5252B | KK2 | 24 | 22.80 | 25.20 | 5.2 | 33 | 600 | 0.1 | 18 |
| MMBZ5254B | KK4 | 27 | 25.65 | 28.35 | 5.0 | 41 | 600 | 0.1 | 21 |
| MMBZ5255B | KK5 | 28 | 26.60 | 29.40 | 4.5 | 44 | 600 | 0.1 | 21 |
| MMBZ5256B | KM1 | 30 | 28.50 | 31.50 | 4.2 | 49 | 600 | 0.1 | 23 |
| MMBZ5257B | KM2 | 33 | 31.35 | 34.65 | 3.8 | 58 | 700 | 0.1 | 25 |
| MMBZ5258B | KM3 | 36 | 34.20 | 37.80 | 3.4 | 70 | 700 | 0.1 | 27 |
| MMBZ5259B | KM4 | 39 | 37.05 | 40.95 | 3.2 | 80 | 800 | 0.1 | 30 |

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

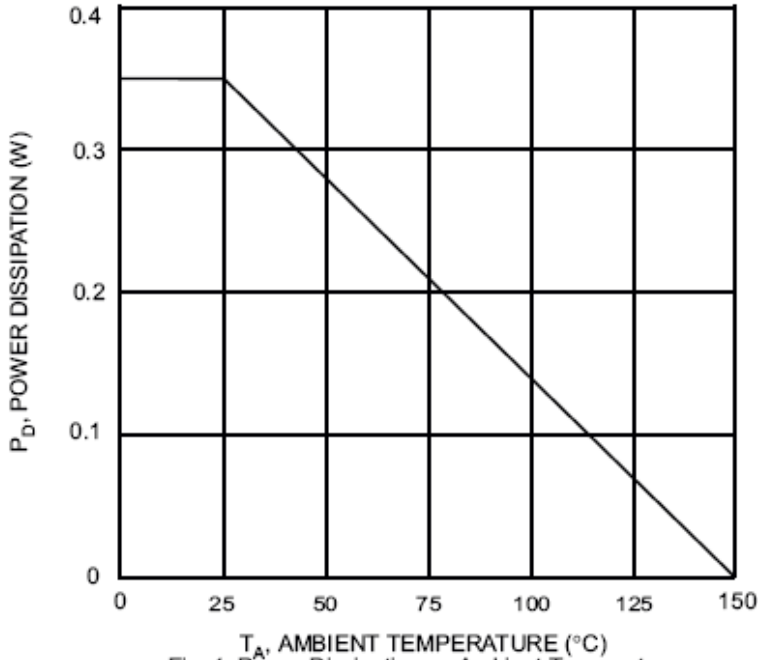


Fig. 1 Power Dissipation vs Ambient Temperature

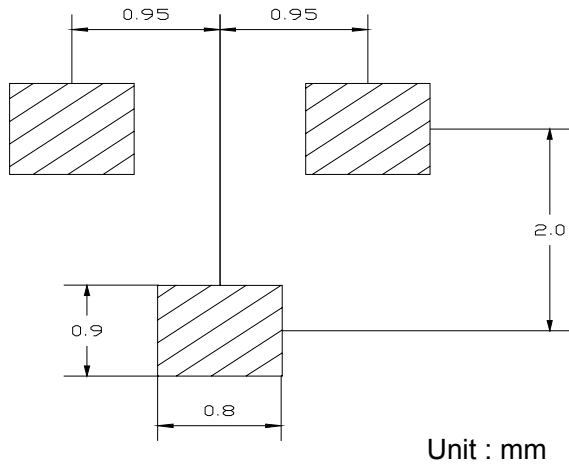
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23

| SOT-23 | | |
|----------------------|------------|------|
| Dim | Min | Max |
| A | 2.85 | 2.95 |
| B | 1.25 | 1.35 |
| C | 1.0Typical | |
| D | 0.37 | 0.43 |
| E | 0.35 | 0.48 |
| G | 1.85 | 1.95 |
| H | 0.02 | 0.1 |
| J | 0.1Typical | |
| K | 2.35 | 2.45 |
| All Dimensions in mm | | |

SOLDERING FOOTPRINT



PACKAGE INFORMATION

| Device | Package | Shipping |
|-----------------|---------|----------------|
| MMBZ5221B-5259B | SOT-23 | 3000/Tape&Reel |