

MMXZ5243B-TP Datasheet

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| | |
|------------------------------|---|
| DiGi Electronics Part Number | MMXZ5243B-TP-DG |
| Manufacturer | Micro Commercial Co |
| Manufacturer Product Number | MMXZ5243B-TP |
| Description | DIODE ZENER 13V 200MW SOD323 |
| Detailed Description | Zener Diode 13 V 200 mW ±5% Surface Mount SOD-323 |

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Purchase and inquiry

Manufacturer Product Number:

MMXZ5243B-TP

Series:

-

Voltage - Zener (Nom) (Vz):

13 V

Power - Max:

200 mW

Current - Reverse Leakage @ Vr:

500 nA @ 9.9 V

Operating Temperature:

-55°C ~ 150°C

Package / Case:

SC-76, SOD-323

Base Product Number:

MMXZ5243

Manufacturer:

Micro Commercial Co

Product Status:

Active

Tolerance:

±5%

Impedance (Max) (Zzt):

13 Ohms

Voltage - Forward (Vf) (Max) @ If:

1.2 V @ 100 mA

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-323

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0050

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Features

- Zener Voltages from 2.7V-39V
- Planar Die Construction
- Ideally Suited for Automated Assembly Processes
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 625°C/W Junction to Ambient

| Parameter | Symbol | Rating | Conditions |
|-------------------------|--------|--------|----------------------|
| Power Dissipation | P_D | 200mW | Note 2 |
| Maximum Forward Voltage | V_F | 0.9V | $I_F=10mA$ Note 3 |

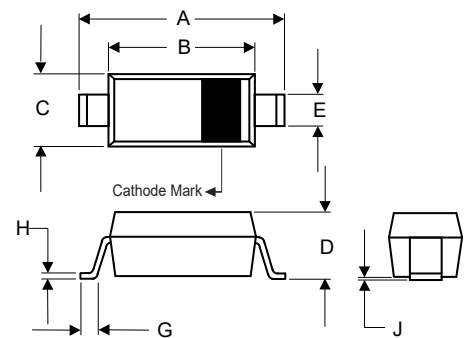
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. Device Mounted on Ceramic PCB: 7.6mm x 9.4mm x 0.87mm With Pad Areas 25 mm²

Note:3. Tested With Pulses, $T_p < 1.0ms$

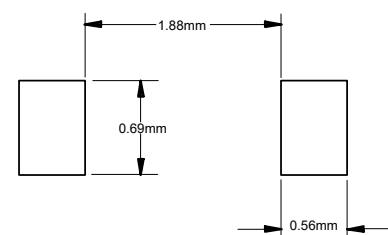
200 mW Zener Diodes 2.7 to 39 Volts

SOD-323



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.090 | 0.107 | 2.30 | 2.70 | |
| B | 0.063 | 0.071 | 1.60 | 1.80 | |
| C | 0.045 | 0.053 | 1.15 | 1.35 | |
| D | 0.031 | 0.045 | 0.80 | 1.15 | |
| E | 0.010 | 0.016 | 0.25 | 0.40 | |
| G | 0.004 | 0.018 | 0.10 | 0.45 | |
| H | 0.004 | 0.010 | 0.10 | 0.25 | |
| J | ----- | 0.006 | ----- | 0.15 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | Nominal Zener Voltage ^(4,5) | | Maximum Zener Impedance ⁽⁶⁾ | | | Leakage Current | | Maximum Zener Voltage Temp Coefficient 'B' Suffix Only | Marking Code |
|--------------------|--|----------|--|-------------------|----------|----------------------|-------|---|--------------|
| | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{Zk} @ I_{Zk}$ | I_{Zk} | I_R | V_R | | |
| | V | mA | Ω | Ω | mA | $\mu A(\text{Max.})$ | V | %/°C | |
| MMXZ5223B | 2.7 | 20 | 30 | 1300 | 0.25 | 75 | 1.0 | -0.080 | C3 |
| MMXZ5225B | 3.0 | 20 | 29 | 1600 | 0.25 | 50 | 1.0 | -0.075 | C5 |
| MMXZ5226B | 3.3 | 20 | 28 | 1600 | 0.25 | 25 | 1.0 | -0.070 | G1 |
| MMXZ5227B | 3.6 | 20 | 24 | 1700 | 0.25 | 15 | 1.0 | -0.065 | G2 |
| MMXZ5228B | 3.9 | 20 | 23 | 1900 | 0.25 | 10 | 1.0 | -0.060 | G3 |
| MMXZ5229B | 4.3 | 20 | 22 | 2000 | 0.25 | 5.0 | 1.0 | ± 0.055 | G4 |
| MMXZ5230B | 4.7 | 20 | 19 | 1900 | 0.25 | 5.0 | 2.0 | ± 0.030 | G5 |
| MMXZ5231B | 5.1 | 20 | 17 | 1600 | 0.25 | 5.0 | 2.0 | ± 0.030 | E1 |
| MMXZ5232B | 5.6 | 20 | 11 | 1600 | 0.25 | 5.0 | 3.0 | +0.038 | E2 |
| MMXZ5234B | 6.2 | 20 | 7.0 | 1000 | 0.25 | 5.0 | 4.0 | +0.045 | E4 |
| MMXZ5235B | 6.8 | 20 | 5.0 | 750 | 0.25 | 3.0 | 5.0 | +0.050 | E5 |
| MMXZ5236B | 7.5 | 20 | 6.0 | 500 | 0.25 | 3.0 | 6.0 | +0.058 | F1 |
| MMXZ5237B | 8.2 | 20 | 8.0 | 500 | 0.25 | 3.0 | 6.5 | +0.062 | F2 |
| MMXZ5239B | 9.1 | 20 | 10 | 600 | 0.25 | 3.0 | 7.0 | +0.068 | F4 |
| MMXZ5240B | 10 | 20 | 17 | 600 | 0.25 | 3.0 | 8.0 | +0.075 | F5 |
| MMXZ5241B | 11 | 20 | 22 | 600 | 0.25 | 2.0 | 8.4 | +0.076 | H1 |
| MMXZ5242B | 12 | 20 | 30 | 600 | 0.25 | 1.0 | 9.1 | +0.077 | H2 |
| MMXZ5243B | 13 | 9.5 | 13 | 600 | 0.25 | 0.5 | 9.9 | +0.079 | H3 |
| MMXZ5245B | 15 | 8.5 | 16 | 600 | 0.25 | 0.1 | 11 | +0.082 | H5 |
| MMXZ5246B | 16 | 7.8 | 17 | 600 | 0.25 | 0.1 | 12 | +0.083 | J1 |
| MMXZ5248B | 18 | 7.0 | 21 | 600 | 0.25 | 0.1 | 14 | +0.085 | J3 |
| MMXZ5250B | 20 | 6.2 | 25 | 600 | 0.25 | 0.1 | 15 | +0.086 | J5 |
| MMXZ5251B | 22 | 5.6 | 29 | 600 | 0.25 | 0.1 | 17 | +0.087 | K1 |
| MMXZ5252B | 24 | 5.2 | 33 | 600 | 0.25 | 0.1 | 18 | +0.088 | K2 |
| MMXZ5254B | 27 | 4.6 | 41 | 600 | 0.25 | 0.1 | 21 | +0.090 | K4 |
| MMXZ5255B | 28 | 4.5 | 44 | 600 | 0.25 | 0.1 | 21 | +0.091 | K5 |
| MMXZ5256B | 30 | 4.2 | 49 | 600 | 0.25 | 0.1 | 23 | +0.091 | M1 |
| MMXZ5257B | 33 | 3.8 | 58 | 700 | 0.25 | 0.1 | 25 | +0.092 | M2 |
| MMXZ5258B | 36 | 3.4 | 70 | 700 | 0.25 | 0.1 | 27 | +0.093 | M3 |
| MMXZ5259B | 39 | 3.2 | 80 | 800 | 0.25 | 0.1 | 30 | +0.094 | M4 |

NOTE:

4. Tolerance and Type Number Designation. The Type Numbers Listed Have a Standard Tolerance on The Nominal Zener Voltage of $\pm 5\%$.

5. Zener Voltage (V_Z) Measurement. Guarantees The Zener Voltage When Measured at 90 Seconds While Maintaining The Lead Temperature (T_L) at 25°C, from The Diode Body.

6. Zener Impedance (Z_Z) Derivation. The zener Impedance is Derived from The 60 Cycle AC Voltage, Which Results When an AC Current Having an rms Value Equal to 10% of the DC Zener Current (I_{ZT} or I_{Zk}) is Superimposed on I_{ZT} or I_{Zk} .

Curve Characteristics

Fig. 1 - Power Derating Curve

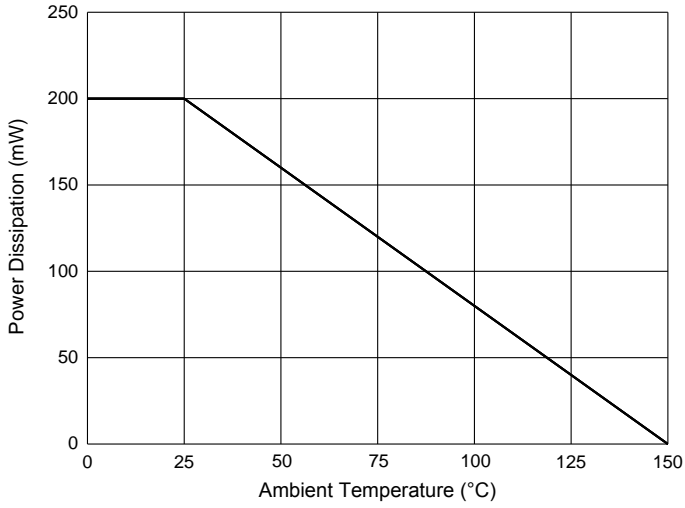


Fig. 2 - Typical Zener Breakdown Characteristics

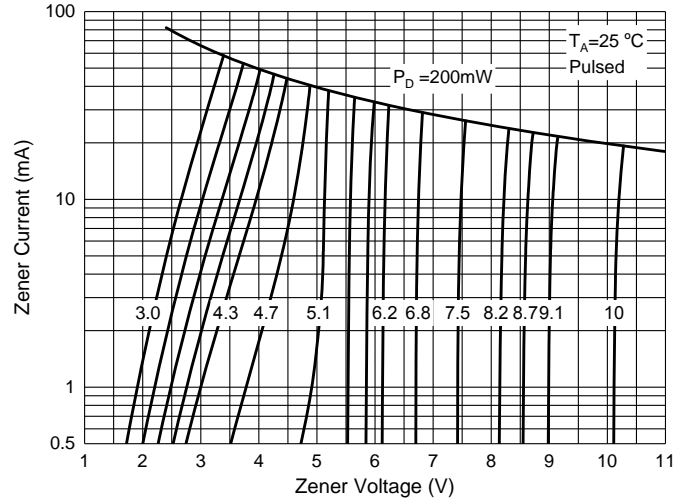
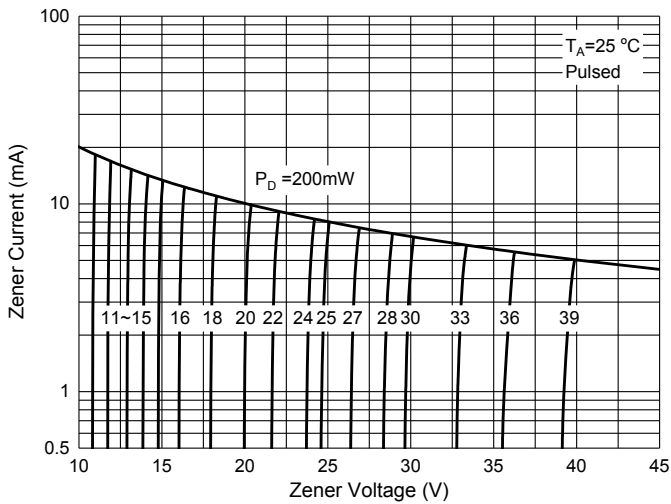


Fig. 3 - Typical Zener Breakdown Characteristics





Ordering Information

| Device | Packing |
|----------------|----------------------|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |

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