

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                                   | Symbol         | Value | Unit |
|--------------------------------------------------|----------------|-------|------|
| Forward Voltage (Note 6) @ I <sub>F</sub> = 10mA | V <sub>F</sub> | 0.9   | V    |

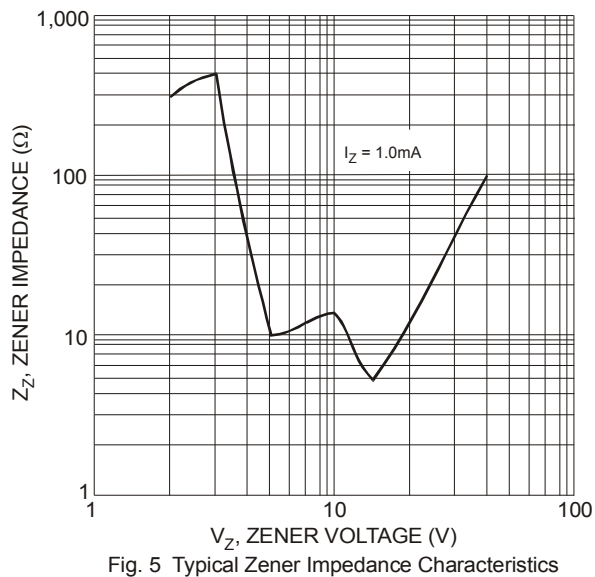
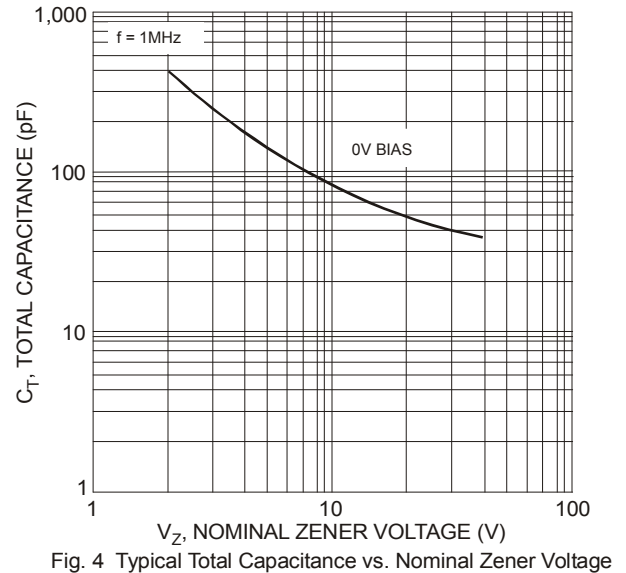
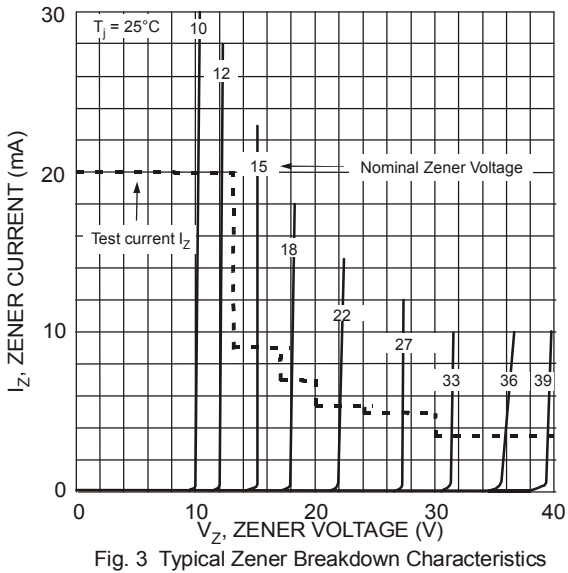
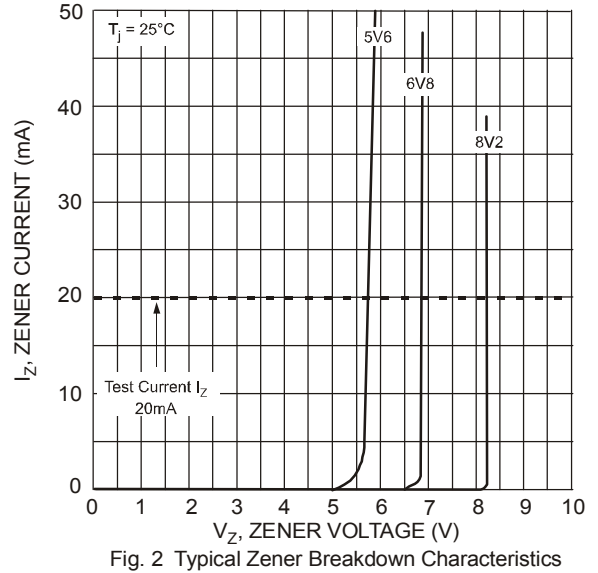
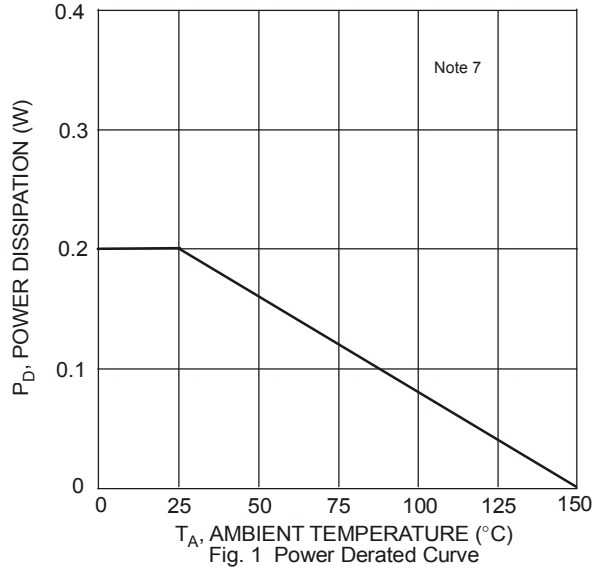
**Thermal Characteristics**

| Characteristic                                       | Symbol                            | Value       | Unit |
|------------------------------------------------------|-----------------------------------|-------------|------|
| Power Dissipation (Note 7)                           | P <sub>D</sub>                    | 200         | mW   |
| Thermal Resistance, Junction to Ambient Air (Note 7) | R <sub>θJA</sub>                  | 625         | °C/W |
| Operating and Storage Temperature Range              | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 | °C   |

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

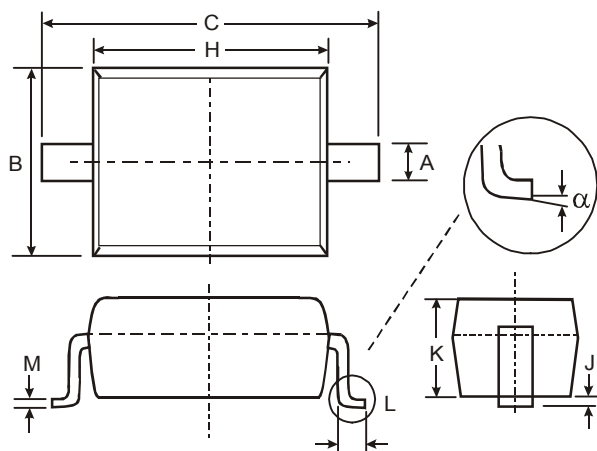
| Type Number | Marking Code | Zener Voltage Range (Note 8)     |         |         | Test Current | Maximum Zener Impedance (Note 9) |                                   | Maximum Reverse Leakage Current (Note 8)   |                |
|-------------|--------------|----------------------------------|---------|---------|--------------|----------------------------------|-----------------------------------|--------------------------------------------|----------------|
|             |              | V <sub>Z</sub> @ I <sub>ZT</sub> |         |         |              | I <sub>ZT</sub>                  | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> = 0.25mA | I <sub>R</sub> |
|             |              | Nom (V)                          | Min (V) | Max (V) | mA           | Ω                                |                                   | μA                                         | V              |
| MMSZ5221BS  | C1           | 2.4                              | 2.28    | 2.52    | 20           | 30                               | 1200                              | 100                                        | 1.0            |
| MMSZ5223BS  | C3           | 2.7                              | 2.57    | 2.84    | 20           | 30                               | 1300                              | 75                                         | 1.0            |
| MMSZ5225BS  | C5           | 3.0                              | 2.85    | 3.15    | 20           | 30                               | 1600                              | 50                                         | 1.0            |
| MMSZ5226BS  | G1           | 3.3                              | 3.14    | 3.47    | 20           | 28                               | 1600                              | 25                                         | 1.0            |
| MMSZ5227BS  | G2           | 3.6                              | 3.42    | 3.78    | 20           | 24                               | 1700                              | 15                                         | 1.0            |
| MMSZ5228BS  | G3           | 3.9                              | 3.71    | 4.10    | 20           | 23                               | 1900                              | 10                                         | 1.0            |
| MMSZ5229BS  | G4           | 4.3                              | 4.09    | 4.52    | 20           | 22                               | 2000                              | 5.0                                        | 1.0            |
| MMSZ5230BS  | G5           | 4.7                              | 4.4 7   | 4.94    | 20           | 19                               | 1900                              | 5.0                                        | 2.0            |
| MMSZ5231BS  | E1           | 5.1                              | 4.85    | 5.36    | 20           | 17                               | 1600                              | 5.0                                        | 2.0            |
| MMSZ5232BS  | E2           | 5.6                              | 5.32    | 5.88    | 20           | 11                               | 1600                              | 5.0                                        | 3.0            |
| MMSZ5233BS  | E3           | 6.0                              | 5.70    | 6.30    | 20           | 7                                | 1600                              | 5.0                                        | 3.5            |
| MMSZ5234BS  | E4           | 6.2                              | 5.89    | 6.51    | 20           | 7                                | 1000                              | 5.0                                        | 4.0            |
| MMSZ5235BS  | E5           | 6.8                              | 6.46    | 7.14    | 20           | 5                                | 750                               | 3.0                                        | 5.0            |
| MMSZ5236BS  | F1           | 7.5                              | 7.13    | 7.88    | 20           | 6                                | 500                               | 3.0                                        | 6.0            |
| MMSZ5237BS  | F2           | 8.2                              | 7.79    | 8.61    | 20           | 8                                | 500                               | 3.0                                        | 6.5            |
| MMSZ5238BS  | F3           | 8.7                              | 8.27    | 9.14    | 20           | 8                                | 600                               | 3.0                                        | 6.5            |
| MMSZ5239BS  | F4           | 9.1                              | 8.65    | 9.56    | 20           | 10                               | 600                               | 3.0                                        | 7.0            |
| MMSZ5240BS  | F5           | 10                               | 9.50    | 10.50   | 20           | 17                               | 600                               | 3.0                                        | 8.0            |
| MMSZ5241BS  | H1           | 11                               | 10.45   | 11.55   | 20           | 22                               | 600                               | 2.0                                        | 8.4            |
| MMSZ5242BS  | H2           | 12                               | 11.40   | 12.60   | 20           | 30                               | 600                               | 1.0                                        | 9.1            |
| MMSZ5243BS  | H3           | 13                               | 12.35   | 13.65   | 9.5          | 13                               | 600                               | 0.5                                        | 9.9            |
| MMSZ5245BS  | H5           | 15                               | 14.25   | 15.75   | 8.5          | 16                               | 600                               | 0.1                                        | 11             |
| MMSZ5246BS  | J1           | 16                               | 15.20   | 16.80   | 7.8          | 17                               | 600                               | 0.1                                        | 12             |
| MMSZ5248BS  | J3           | 18                               | 17.10   | 18.90   | 7.0          | 21                               | 600                               | 0.1                                        | 14             |
| MMSZ5250BS  | J5           | 20                               | 19.00   | 21.00   | 6.2          | 25                               | 600                               | 0.1                                        | 15             |
| MMSZ5251BS  | K1           | 22                               | 20.90   | 23.10   | 5.6          | 29                               | 600                               | 0.1                                        | 17             |
| MMSZ5252BS  | K2           | 24                               | 22.80   | 25.20   | 5.2          | 33                               | 600                               | 0.1                                        | 18             |
| MMSZ5254BS  | K4           | 27                               | 25.65   | 28.35   | 5.0          | 41                               | 600                               | 0.1                                        | 21             |
| MMSZ5255BS  | K5           | 28                               | 26.60   | 29.40   | 4.5          | 44                               | 600                               | 0.1                                        | 21             |
| MMSZ5256BS  | M1           | 30                               | 28.50   | 31.50   | 4.2          | 49                               | 600                               | 0.1                                        | 23             |
| MMSZ5257BS  | M2           | 33                               | 31.35   | 34.65   | 3.8          | 58                               | 700                               | 0.1                                        | 25             |
| MMSZ5258BS  | M3           | 36                               | 34.20   | 37.80   | 3.4          | 70                               | 700                               | 0.1                                        | 27             |
| MMSZ5259BS  | M4           | 39                               | 37.05   | 40.95   | 3.2          | 80                               | 800                               | 0.1                                        | 30             |

Notes: 6. Short duration pulse test used to minimize self-heating effect.  
7. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>  
8. Short duration pulse test used to minimize self-heating effect.  
9. f = 1KHz.



## Package Outline Dimensions

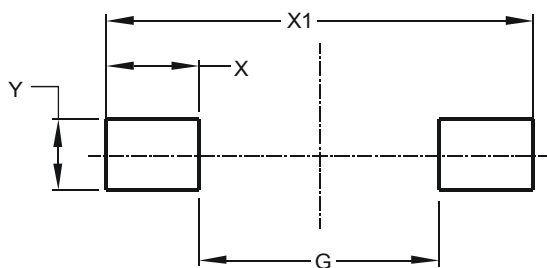
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



| SOD323               |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 0.25 | 0.35 |
| B                    | 1.20 | 1.40 |
| C                    | 2.30 | 2.70 |
| H                    | 1.60 | 1.80 |
| J                    | 0.00 | 0.10 |
| K                    | 1.0  | 1.1  |
| L                    | 0.20 | 0.40 |
| M                    | 0.10 | 0.15 |
| $\alpha$             | 0°   | 8°   |
| All Dimensions in mm |      |      |

## Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for latest version.



| Dimensions | Value (in mm) |
|------------|---------------|
| G          | 1.520         |
| X          | 0.590         |
| X1         | 2.700         |
| Y          | 0.450         |

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