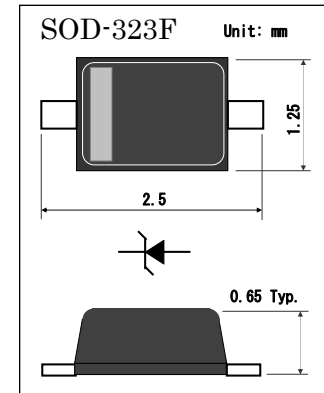


Zener Diodes / DATA SHEET

M3Z2V0C – M3Z75VC series

- ◇ Constant Voltage control
- ◇ Wide Voltage Range Selection 2.0V to 75V
- ◇ Vz tolerance selection of $\pm 5\%$ (C series)
- ◇ SOD323F Thin SMD package
- ◇ RoHS compliant / Green EMC
- ◇ Matte Tin (Sn) Lead finish
- ◇ Cathode Band / Device marking
Refer to table list



Maximum Ratings (Ta = 25 °C)

| Symbol | Parameter | Value | Units |
|-----------|---------------------------|-------------|-------|
| P_D | Power Dissipation | 200 | mW |
| T_J | Junction Temperature | 150 | °C |
| T_{STG} | Storage Temperature | -55 to +125 | °C |
| I_{ZM} | Maximum Regulator Current | P_D/V_Z | mA |

Electrical Characteristics (Ta = 25 °C)

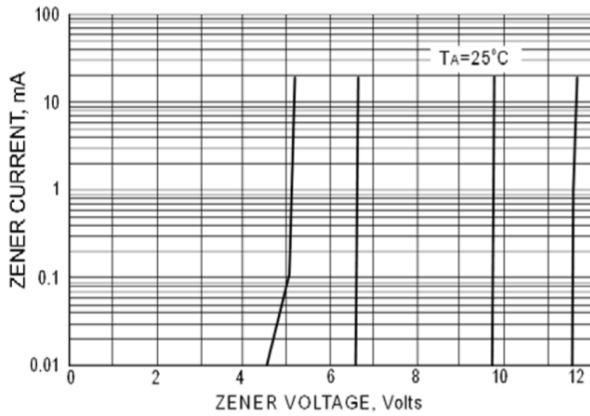
| Type Number | Device Marking | Vz (V) *1 | | | Zzt(Ω) max. | Iz (mA) | Zzk(Ω) max. | Izk (mA) | IR(μA) max. | VR (V) |
|-------------|----------------|-----------|------|-------|-------------|---------|-------------|----------|-------------|--------|
| | | min. | typ. | max. | | | | | | |
| M3Z2V0C | 2v0 | 1.90 | 2.0 | 2.10 | 100 | 5 | 600 | 1 | 120 | 1.0 |
| M3Z2V2C | 2v2 | 2.09 | 2.2 | 2.31 | 100 | 5 | 600 | 1 | 120 | 1.0 |
| M3Z2V4C | 2v4 | 2.20 | 2.4 | 2.60 | 90 | 5 | 600 | 1 | 120 | 1.0 |
| M3Z2V7C | 2v7 | 2.50 | 2.7 | 2..90 | 90 | 5 | 600 | 1 | 100 | 1.0 |
| M3Z3V0C | 3v0 | 2.80 | 3.0 | 3.20 | 85 | 5 | 600 | 1 | 50 | 1.0 |
| M3Z3V3C | 3v3 | 3.10 | 3.3 | 3.50 | 85 | 5 | 600 | 1 | 20 | 1.0 |
| M3Z3V6C | 3v6 | 3.40 | 3.6 | 3.80 | 85 | 5 | 600 | 1 | 10 | 1.0 |
| M3Z3V9C | 3v9 | 3.70 | 3.9 | 4.10 | 85 | 5 | 600 | 1 | 5 | 1.0 |
| M3Z4V3C | 4v3 | 4.00 | 4.3 | 4.60 | 80 | 5 | 600 | 1 | 5 | 1.0 |
| M3Z4V7C | 4v7 | 4.40 | 4.7 | 5.00 | 70 | 5 | 500 | 1 | 2 | 1.0 |
| M3Z5V1C | 5v1 | 4.80 | 5.1 | 5.40 | 50 | 5 | 480 | 1 | 2 | 1.5 |

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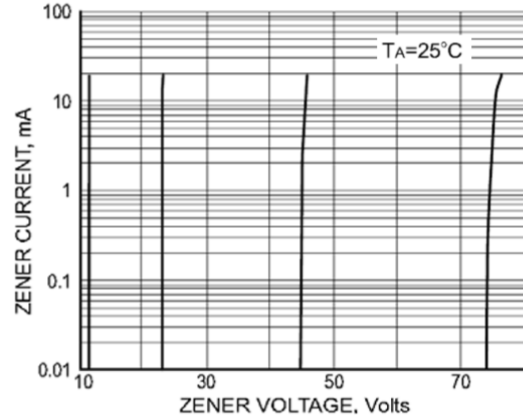
| Device No | Device Marking | Vz(V) *1 | | | Zzt(Ω) | Iz | Zzk(Ω) | Izk | I _R (μ A) | V _R |
|-----------|----------------|----------|------|-------|-----------------|------|-----------------|------|---------------------------|----------------|
| | | min. | typ. | max. | max. | (mA) | max. | (mA) | max. | (V) |
| M3Z5V6C | 5v6 | 5.32 | 5.6 | 5.88 | 30 | 5 | 400 | 1 | 1 | 2.0 |
| M3Z6V2C | 6v2 | 5.89 | 6.2 | 6.51 | 10 | 5 | 150 | 1 | 1 | 3.0 |
| M3Z6V8C | 6v8 | 6.46 | 6.8 | 7.14 | 10 | 5 | 80 | 1 | 0.5 | 4.0 |
| M3Z7V5C | 7v5 | 7.11 | 7.5 | 7.86 | 10 | 5 | 50 | 1 | 0.5 | 5.0 |
| M3Z8V2C | 8v2 | 7.79 | 8.2 | 8.61 | 10 | 5 | 50 | 1 | 0.5 | 6.0 |
| M3Z9V1C | 9v1 | 8.65 | 9.1 | 9.56 | 10 | 5 | 50 | 1 | 0.5 | 7.0 |
| M3Z10VC | 10 | 9.50 | 10.0 | 10.50 | 15 | 5 | 70 | 1 | 0.1 | 7.5 |
| M3Z11VC | 11 | 10.45 | 11.0 | 11.55 | 20 | 5 | 70 | 1 | 0.1 | 8.0 |
| M3Z12VC | 12 | 11.40 | 12.0 | 12.60 | 20 | 5 | 90 | 1 | 0.1 | 9.0 |
| M3Z13VC | 13 | 12.35 | 13.0 | 13.65 | 26 | 5 | 110 | 1 | 0.1 | 10 |
| M3Z15VC | 15 | 14.25 | 15.0 | 15.75 | 30 | 5 | 110 | 1 | 0.1 | 11 |
| M3Z16VC | 16 | 15.20 | 16.0 | 16.80 | 40 | 5 | 170 | 1 | 0.1 | 12 |
| M3Z18VC | 18 | 17.10 | 18.0 | 18.90 | 45 | 5 | 170 | 1 | 0.1 | 14 |
| M3Z20VC | 20 | 19.00 | 20.0 | 21.00 | 55 | 5 | 220 | 1 | 0.1 | 15 |
| M3Z22VC | 22 | 20.90 | 22.0 | 23.10 | 55 | 5 | 220 | 1 | 0.1 | 17 |
| M3Z24VC | 24 | 22.80 | 24.0 | 25.20 | 70 | 5 | 220 | 1 | 0.1 | 19 |
| M3Z27VC | 27 | 25.65 | 27.0 | 28.35 | 80 | 5 | 220 | 1 | 0.1 | 20 |
| M3Z30VC | 30 | 28.50 | 30.0 | 31.50 | 80 | 5 | 220 | 1 | 0.1 | 22 |
| M3Z33VC | 33 | 31.35 | 33.0 | 34.65 | 80 | 5 | 220 | 1 | 0.1 | 24 |
| M3Z36VC | 36 | 34.20 | 36.0 | 37.80 | 80 | 5 | 220 | 1 | 0.1 | 27 |
| M3Z39VC | 39 | 37.05 | 39.0 | 40.95 | 90 | 2.5 | 500 | 0.5 | 0.1 | 29 |
| M3Z43VC | 43 | 40.85 | 43.0 | 45.15 | 90 | 2.5 | 600 | 0.5 | 0.1 | 32 |
| M3Z47VC | 47 | 44.65 | 47.0 | 49.35 | 110 | 2.5 | 700 | 0.5 | 0.1 | 35 |
| M3Z51VC | 51 | 48.45 | 51.0 | 53.55 | 125 | 2.5 | 700 | 0.5 | 0.1 | 38 |
| M3Z56VC | 56 | 53.20 | 56.0 | 58.80 | 135 | 2.5 | 1000 | 0.5 | 0.1 | 42 |
| M3Z62VC | 62 | 58.90 | 62.0 | 65.10 | 150 | 2.5 | 1000 | 0.5 | 0.1 | 47 |
| M3Z68VC | 68 | 64.60 | 68.0 | 71.40 | 200 | 2.5 | 1000 | 0.5 | 0.1 | 51 |
| M3Z75VC | 75 | 71.25 | 75.0 | 78.75 | 250 | 2.5 | 1500 | 0.5 | 0.1 | 56 |

*1 Pulse width = 10 ms

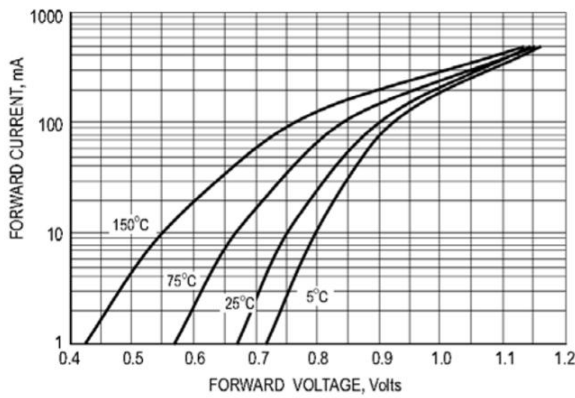
Typical Characteristics



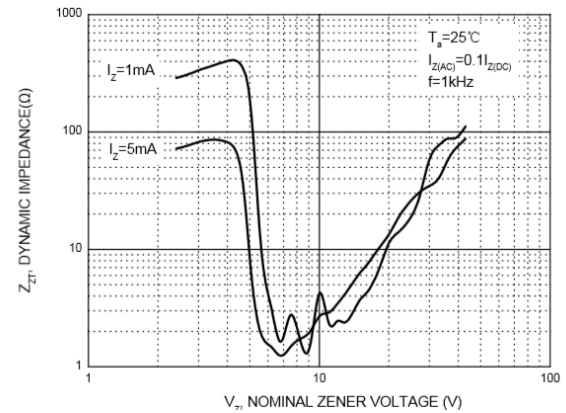
ZENER BREAKDOWN CHARACTERISTIC



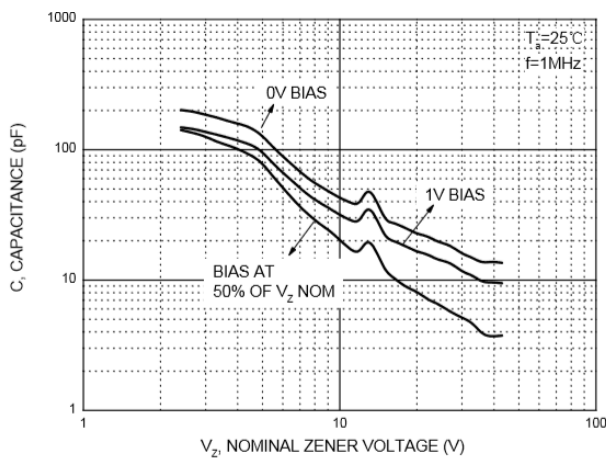
ZENER BREAKDOWN CHARACTERISTICS



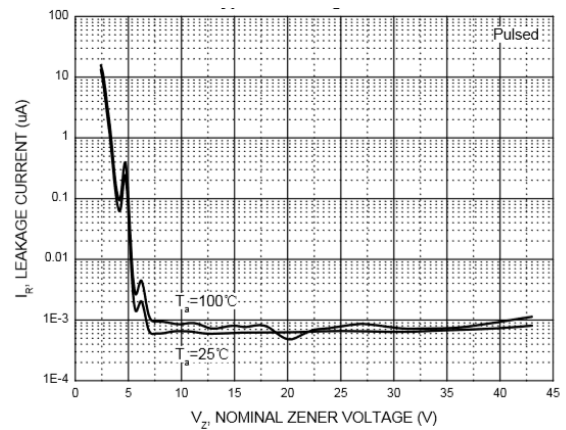
TYPICAL FORWARD VOLTAGE



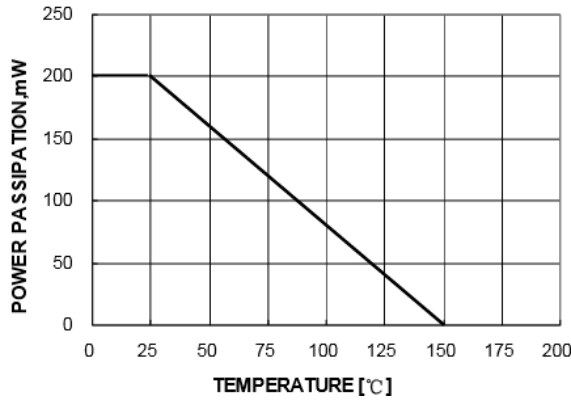
Effect of Zener Voltage on Zener Impedance



Typical Capacitance



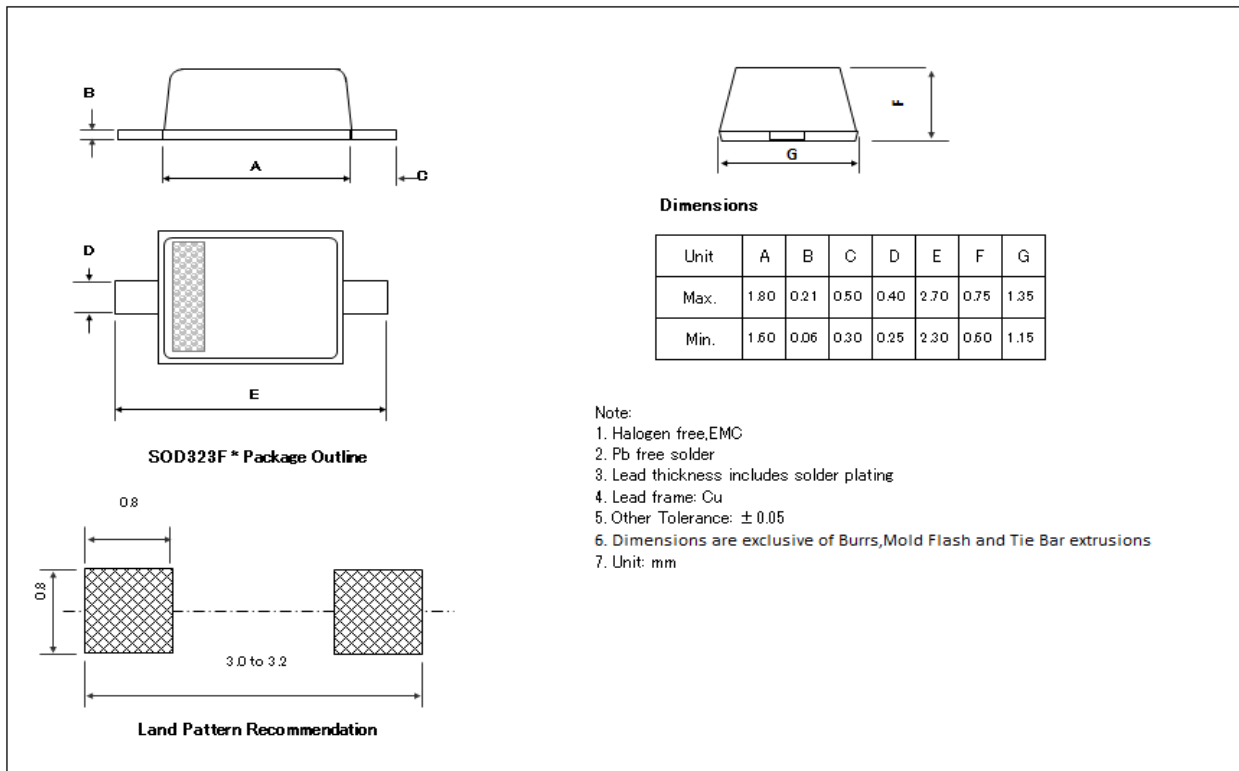
Typical Leakage Current



Ordering Information

| Device | Package | Shipping | Tape wide | Emboss pitch | Tape specification | Notes |
|-----------------------------|---------|------------------------------------|-----------|--------------|--------------------|-------|
| M3Z2V0C – M3Z75VC series | SOD323F | Tape & Reel 3000pcs /7” Reel | 8 mm | 4 mm | Conductive | |

Package Dimensions



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