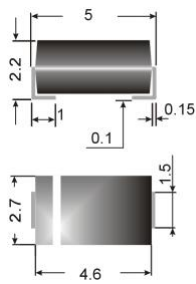


Z2 SMA 1 ... Z2 SMA 200 (2W)



Surface mount diode

Zener silicon diodes

Z2 SMA 1 ... Z2 SMA 200

Maximum Power Dissipation: 2 W

Nominal Z-voltage: 1 to 200 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- Standard Zener voltage tolerance is graded to the international E 24 (5%) standard. Other voltage tolerances and higher Zener voltages on request.

Mechanical Data

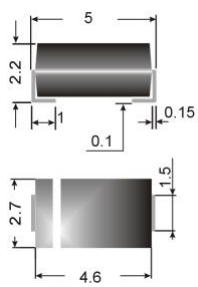
- Plastic case: SMA / DO-214AC
- Weight approx.: 0,07 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 7500 pieces per reel

¹⁾ Mounted on P.C. board with 50 mm² copper pads at each terminal
 Tested with pulses
 The Z2SMA 1 is a diode operated in forward. Hence, the index of all parameters should be "F" instead of "Z".
 The cathode, indicated by a white ring is to be connected to the negative pole.

| Absolute Maximum Ratings | | T _s = 25 °C, unless otherwise specified | |
|--------------------------|---|--|-------|
| Symbol | Conditions | Values | Units |
| P _{tot} | Power dissipation, T _A = 50 °C ¹⁾ | 2 | W |
| P _{ZSM} | Non repetitive peak power dissipation, t < 10 ms | 40 | V |
| R _{thA} | Max. thermal resistance junction to ambient ¹⁾ | 70 | K/W |
| R _{thT} | Max. thermal resistance junction to case | 30 | K/W |
| T _j | Operating junction temperature | - 50 ... + 150 | °C |
| T _s | Storage temperature | - 50 ... + 150 | °C |

| Type | Zener Voltage V _Z @I _{ZT} | | Test curr. I _{ZT} mA | Dyn. Resistance Z _{ZT} @ I _{ZT} | Temp. Coeffiz. of V _Z 10 ⁻⁴ °C | Reverse curr. | | Z curr. T _A = 50 °C i _{Zmax} mA |
|----------------------|---|---------------------|-------------------------------|---|--|-------------------|------------------|---|
| | V _{Zmin} V | V _{Zmax} V | | | | I _R µA | V _R V | |
| Z2SMA1 ³⁾ | 0,71 | 0,82 | 100 | 0,5 (<1) | - 26 ... - 16 | | - | 1200 |
| Z2SMA6,2 | 5,8 | 6,6 | 100 | 1 (<2) | - 1 ... + 6 | 1 | >1,5 | 303 |
| Z2SMA6,8 | 6,4 | 7,2 | 100 | 1 (<2) | 0 ... + 7 | 1 | > 2 | 278 |
| Z2SMA7,5 | 7 | 7,9 | 100 | 1 (<2) | 0 ... + 7 | 1 | > 2 | 253 |
| Z2SMA8,2 | 7,7 | 8,7 | 100 | 1 (<2) | + 3 ... + 8 | 1 | > 3,5 | 230 |
| Z2SMA9,1 | 8,5 | 9,6 | 50 | 2 (<4) | + 3 ... + 8 | 1 | > 3,5 | 208 |
| Z2SMA10 | 9,4 | 10,6 | 50 | 2 (<4) | + 5 ... + 9 | 1 | > 5 | 189 |
| Z2SMA11 | 10,4 | 11,6 | 50 | 4 (<7) | + 5 ... + 10 | 1 | > 5 | 172 |
| Z2SMA12 | 11,4 | 12,7 | 50 | 4 (<7) | + 5 ... + 10 | 1 | > 7 | 157 |
| Z2SMA13 | 12,4 | 14,1 | 50 | 5 (<10) | + 5 ... + 10 | 1 | > 7 | 142 |
| Z2SMA15 | 13,8 | 15,6 | 50 | 5 (<10) | + 5 ... + 10 | 1 | > 10 | 128 |
| Z2SMA16 | 15,3 | 17,1 | 25 | 6 (<15) | + 6 ... + 11 | 1 | > 10 | 117 |
| Z2SMA18 | 16,8 | 19,1 | 25 | 6 (<15) | + 6 ... + 11 | 1 | > 10 | 105 |
| Z2SMA20 | 18,8 | 21,2 | 25 | 6 (<15) | + 6 ... + 11 | 1 | > 10 | 94 |
| Z2SMA22 | 20,8 | 23,3 | 25 | 6 (<15) | + 6 ... + 11 | 1 | > 12 | 86 |
| Z2SMA24 | 22,8 | 25,6 | 25 | 7 (<15) | +6 ... + 11 | 1 | > 12 | 78 |
| Z2SMA27 | 25,1 | 28,9 | 25 | 7 (<15) | + 6 ... + 11 | 1 | > 14 | 69 |
| Z2SMA30 | 28 | 32 | 25 | 8 (<15) | + 6 ... + 11 | 1 | > 14 | 63 |
| Z2SMA33 | 31 | 35 | 25 | 8 (<15) | + 6 ... + 11 | 1 | > 17 | 57 |
| Z2SMA36 | 34 | 38 | 10 | 16 (<40) | + 6 ... + 11 | 1 | > 17 | 53 |
| Z2SMA39 | 37 | 41 | 10 | 20 (<40) | + 6 ... + 11 | 1 | > 20 | 49 |
| Z2SMA43 | 40 | 46 | 10 | 24 (<45) | + 7 ... + 12 | 1 | > 20 | 43 |
| Z2SMA47 | 44 | 50 | 10 | 24 (<45) | + 7 ... + 12 | 1 | > 24 | 40 |
| Z2SMA51 | 48 | 54 | 10 | 25 (<60) | + 7 ... + 12 | 1 | > 24 | 37 |
| Z2SMA56 | 52 | 60 | 10 | 25 (<60) | + 7 ... + 12 | 1 | > 28 | 33 |
| Z2SMA62 | 58 | 66 | 10 | 25 (<80) | + 8 ... + 13 | 1 | > 28 | 30 |
| Z2SMA68 | 64 | 72 | 10 | 25 (<80) | + 8 ... + 13 | 1 | > 34 | 28 |
| Z2SMA75 | 70 | 79 | 10 | 30 (<100) | + 8 ... + 13 | 1 | > 34 | 25 |
| Z2SMA82 | 77 | 88 | 10 | 30 (<100) | + 8 ... + 13 | 1 | > 41 | 23 |
| Z2SMA91 | 85 | 96 | 5 | 40 (<200) | + 9 ... + 13 | 1 | > 41 | 21 |
| Z2SMA100 | 94 | 106 | 5 | 60 (<200) | + 9 ... + 13 | 1 | > 50 | 19 |
| Z2SMA110 | 104 | 116 | 5 | 80 (<250) | + 9 ... + 13 | 1 | > 50 | 17 |
| Z2SMA120 | 114 | 127 | 5 | 80 (<250) | + 9 ... + 13 | 1 | > 60 | 16 |
| Z2SMA130 | 124 | 141 | 5 | 90 (<300) | + 9 ... + 13 | 1 | > 60 | 14 |
| Z2SMA150 | 138 | 156 | 5 | 100(<300) | + 9 ... + 13 | 1 | > 75 | 13 |
| Z2SMA160 | 153 | 171 | 5 | 110(<350) | + 9 ... + 13 | 1 | > 75 | 12 |
| Z2SMA180 | 168 | 191 | 5 | 120(<350) | + 9 ... + 13 | 1 | > 90 | 10 |
| Z2SMA200 | 188 | 212 | 5 | 150(<350) | + 9 ... + 13 | 1 | > 90 | 9 |

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Surface mount diode

| Type | Zener Voltage $V_Z@I_{ZT}$ | | Test curr. I_{ZT} mA | Dyn. Resistance $Z_{ZT}@I_{ZT}$ | Temp. Coeffiz. of V_Z 10^{-4} $^{\circ}\text{C}$ | Reverse curr. | | Z curr. $T_A = 50$ $^{\circ}\text{C}$ i_{Zmax} mA |
|------|-------------------------------|-----------------|---------------------------------|------------------------------------|---|------------------------|------------|---|
| | V_{Zmin} V | V_{Zmax} V | | | | I_R μA | V_R V | |

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**Maximum Power
Dissipation: 2 W**

Nominal Z-voltage: 1 to 200 V

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 - Mounting position: any
 - Standard packaging: 7500 pieces per reel
- 1) Mounted on P.C. board with 50 mm² copper pads at each terminal
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