

TDSEMIC

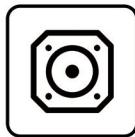
拓電半導體

自主封測 品質把控 售後保障

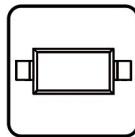
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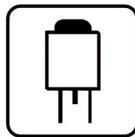
電源管理



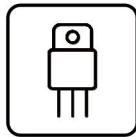
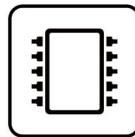
顯示驅動



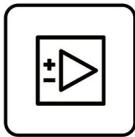
二三極管 LDO穩壓器



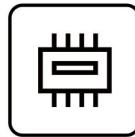
觸摸芯片



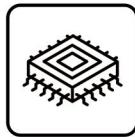
MOS管



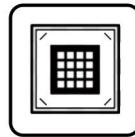
運算放大器



存儲芯片



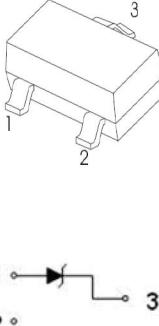
MCU



串口通信

BZX84C10

產品規格說明書

| ZENER DIODE | SOT-23 Plastic-Encapsulate Diodes | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------------|---------------------------|-------|------|--|-------|-----|---|---------------------------|-------|-----|----|---|-----------------|-----|---------------------------|----------------------|-------|-----|------------------|---------------------------|-----------|----------|------------------|
| <p><u>SOT-23</u></p>  <p>1 → 3 2</p> | <p>Features</p> <ul style="list-style-type: none">• Planar Die Construction• 300mW Power Dissipation• Zener Voltages from 2.4V - 43V• Ultra-Small Surface Mount Package Power Dissipation | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Maximum Ratings($T_a=25^\circ\text{C}$ unless otherwise specified)</p> <table border="1"><thead><tr><th>Characteristic</th><th>Symbol</th><th>Value</th><th>Unit</th></tr></thead><tbody><tr><td>Forward Voltage (Note 2) @ $I_F = 10\text{mA}$</td><td>V_F</td><td>0.9</td><td>V</td></tr><tr><td>Power Dissipation(Note 1)</td><td>P_d</td><td>300</td><td>mW</td></tr><tr><td>Thermal Resistance from Junction to Ambient</td><td>$R_{\theta JA}$</td><td>417</td><td>$^\circ\text{C}/\text{W}$</td></tr><tr><td>Junction Temperature</td><td>T_j</td><td>150</td><td>$^\circ\text{C}$</td></tr><tr><td>Storage Temperature Range</td><td>T_{stg}</td><td>-55~+150</td><td>$^\circ\text{C}$</td></tr></tbody></table> | | Characteristic | Symbol | Value | Unit | Forward Voltage (Note 2) @ $I_F = 10\text{mA}$ | V_F | 0.9 | V | Power Dissipation(Note 1) | P_d | 300 | mW | Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 417 | $^\circ\text{C}/\text{W}$ | Junction Temperature | T_j | 150 | $^\circ\text{C}$ | Storage Temperature Range | T_{stg} | -55~+150 | $^\circ\text{C}$ |
| Characteristic | Symbol | Value | Unit | | | | | | | | | | | | | | | | | | | | | | |
| Forward Voltage (Note 2) @ $I_F = 10\text{mA}$ | V_F | 0.9 | V | | | | | | | | | | | | | | | | | | | | | | |
| Power Dissipation(Note 1) | P_d | 300 | mW | | | | | | | | | | | | | | | | | | | | | | |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 417 | $^\circ\text{C}/\text{W}$ | | | | | | | | | | | | | | | | | | | | | | |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ | | | | | | | | | | | | | | | | | | | | | | |
| Storage Temperature Range | T_{stg} | -55~+150 | $^\circ\text{C}$ | | | | | | | | | | | | | | | | | | | | | | |

ELECTRICAL CHARACTERISTICS

 $T_a=25^\circ\text{C}$ unless otherwise specified

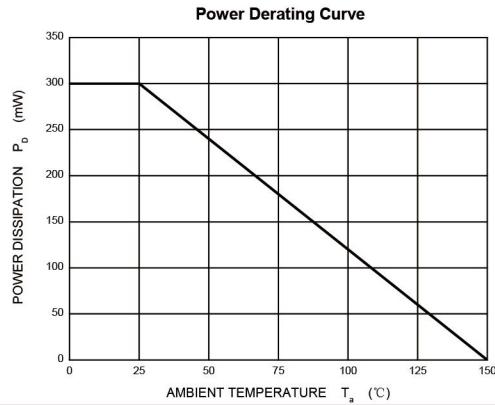
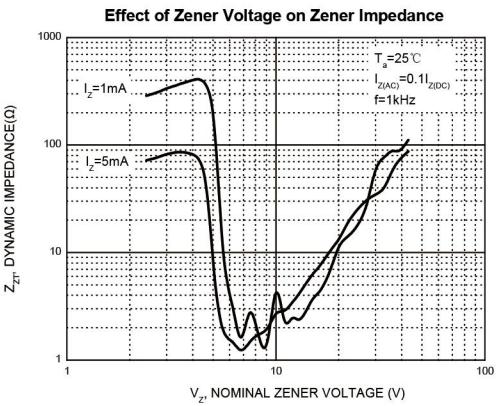
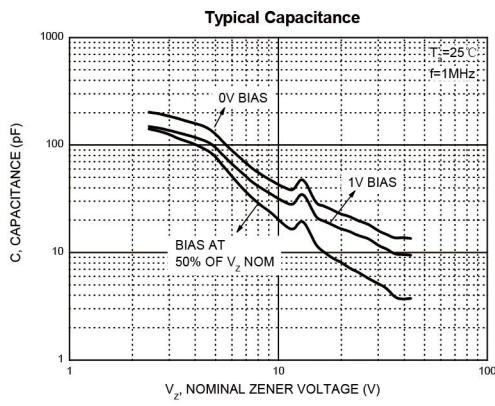
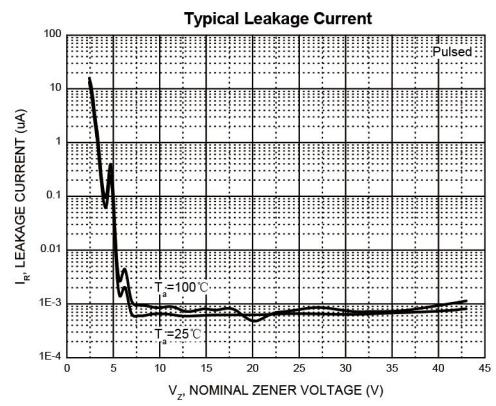
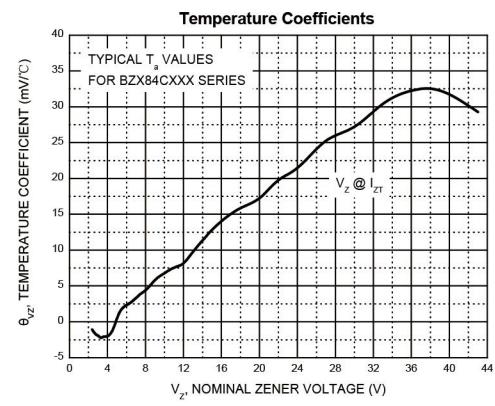
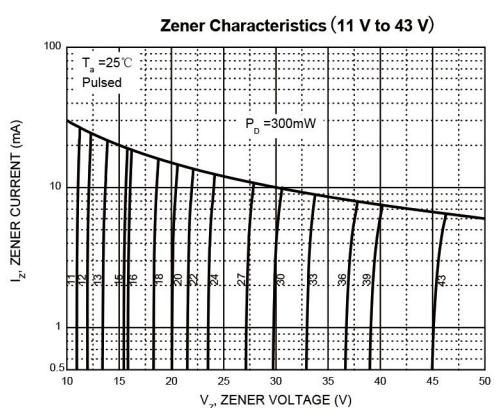
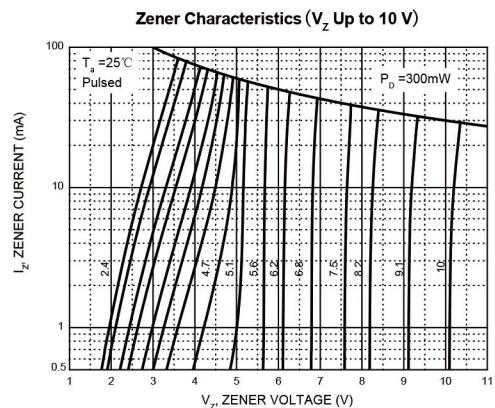
| Type Number | Code | Zener Voltage Range (Note 2) | | | | Maximum Zener Impedance (Note 3) | | | Maximum Reverse Current | | Temperature Coefficient of Zener voltage @ $I_{ZT}=5\text{mA}$ mV/ $^\circ\text{C}$ | |
|-------------|------|------------------------------|--------|--------|----------|----------------------------------|-----------------|-------------------|-------------------------|-------|---|------|
| | | $V_z@I_{ZT}$ | | | I_{ZT} | $Z_{zT}@I_{ZT}$ | $Z_{zK}@I_{zK}$ | I_{zK} | I_R | V_R | | |
| | | Nom(V) | Min(V) | Max(V) | (mA) | (Ω) | (mA) | (μA) | (V) | Min | Max | |
| BZX84C2V4 | Z11 | 2.4 | 2.20 | 2.60 | 5 | 100 | 600 | 1.0 | 50 | 1.0 | -3.5 | 0 |
| BZX84C2V7 | Z12 | 2.7 | 2.5 | 2.9 | 5 | 100 | 600 | 1.0 | 20 | 1.0 | -3.5 | 0 |
| BZX84C3V0 | Z13 | 3.0 | 2.8 | 3.2 | 5 | 95 | 600 | 1.0 | 10 | 1.0 | -3.5 | 0 |
| BZX84C3V3 | Z14 | 3.3 | 3.1 | 3.5 | 5 | 95 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 |
| BZX84C3V6 | Z15 | 3.6 | 3.4 | 3.8 | 5 | 90 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 |
| BZX84C3V9 | Z16 | 3.9 | 3.7 | 4.1 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 |
| BZX84C4V3 | Z17 | 4.3 | 4.0 | 4.6 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 |
| BZX84C4V7 | Z1 | 4.7 | 4.4 | 5.0 | 5 | 80 | 500 | 1.0 | 3 | 2.0 | -3.5 | 0.2 |
| BZX84C5V1 | Z2 | 5.1 | 4.8 | 5.4 | 5 | 60 | 480 | 1.0 | 2 | 2.0 | -2.7 | 1.2 |
| BZX84C5V6 | Z3 | 5.6 | 5.2 | 6.0 | 5 | 40 | 400 | 1.0 | 1 | 2.0 | -2.0 | 2.5 |
| BZX84C6V2 | Z4 | 6.2 | 5.8 | 6.6 | 5 | 10 | 150 | 1.0 | 3 | 4.0 | 0.4 | 3.7 |
| BZX84C6V8 | Z5 | 6.8 | 6.4 | 7.2 | 5 | 15 | 80 | 1.0 | 2 | 4.0 | 1.2 | 4.5 |
| BZX84C7V5 | Z6 | 7.5 | 7.0 | 7.9 | 5 | 15 | 80 | 1.0 | 1 | 5.0 | 2.5 | 5.3 |
| BZX84C8V2 | Z7 | 8.2 | 7.7 | 8.7 | 5 | 15 | 80 | 1.0 | 0.7 | 5.0 | 3.2 | 6.2 |
| BZX84C9V1 | Z8 | 9.1 | 8.5 | 9.6 | 5 | 15 | 100 | 1.0 | 0.5 | 6.0 | 3.8 | 7.0 |
| BZX84C10 | Z9 | 10 | 9.4 | 10.6 | 5 | 20 | 150 | 1.0 | 0.2 | 7.0 | 4.5 | 8.0 |
| BZX84C11 | Y1 | 11 | 10.4 | 11.6 | 5 | 20 | 150 | 1.0 | 0.1 | 8.0 | 5.4 | 9.0 |
| BZX84C12 | Y2 | 12 | 11.4 | 12.7 | 5 | 25 | 150 | 1.0 | 0.1 | 8.0 | 6.0 | 10.0 |
| BZX84C13 | Y3 | 13 | 12.4 | 14.1 | 5 | 30 | 170 | 1.0 | 0.1 | 8.0 | 7.0 | 11.0 |
| BZX84C15 | Y4 | 15 | 13.8 | 15.6 | 5 | 30 | 200 | 1.0 | 0.1 | 10.5 | 9.2 | 13.0 |
| BZX84C16 | Y5 | 16 | 15.3 | 17.1 | 5 | 40 | 200 | 1.0 | 0.1 | 11.2 | 10.4 | 14.0 |
| BZX84C18 | Y6 | 18 | 16.8 | 19.1 | 5 | 45 | 225 | 1.0 | 0.1 | 12.6 | 12.4 | 16.0 |
| BZX84C20 | Y7 | 20 | 18.8 | 21.2 | 5 | 55 | 225 | 1.0 | 0.1 | 14.0 | 14.4 | 18.0 |
| BZX84C22 | Y8 | 22 | 20.8 | 23.3 | 5 | 55 | 250 | 1.0 | 0.1 | 15.4 | 16.4 | 20.0 |
| BZX84C24 | Y9 | 24 | 22.8 | 25.6 | 5 | 70 | 250 | 1.0 | 0.1 | 16.8 | 18.4 | 22.0 |
| BZX84C27 | Y10 | 27 | 25.1 | 28.9 | 2 | 80 | 300 | 0.5 | 0.1 | 18.9 | 21.4 | 25.3 |
| BZX84C30 | Y11 | 30 | 28.0 | 32.0 | 2 | 80 | 300 | 0.5 | 0.1 | 21.0 | 24.4 | 29.4 |
| BZX84C33 | Y12 | 33 | 31.0 | 35.0 | 2 | 80 | 325 | 0.5 | 0.1 | 23.1 | 27.4 | 33.4 |
| BZX84C36 | Y13 | 36 | 34.0 | 38.0 | 2 | 90 | 350 | 0.5 | 0.1 | 25.2 | 30.4 | 37.4 |
| BZX84C39 | Y14 | 39 | 37.0 | 41.0 | 2 | 130 | 350 | 0.5 | 0.1 | 27.3 | 33.4 | 41.2 |
| BZX84C43 | Y15 | 43 | 40.0 | 46.0 | 2 | 100 | 700 | 1 | 0.1 | 32 | 10 | 12 |

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

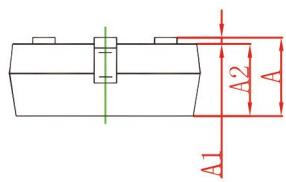
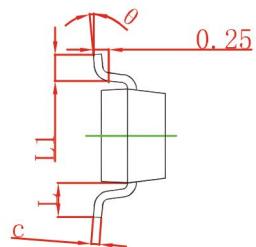
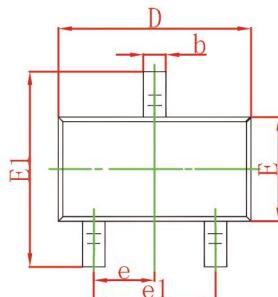
2. Tested with pulses, period=5ms, pulse width =300 μs .

3. f = 1kHz.

TYPICAL ELECTRICAL CHARACTERISTICS

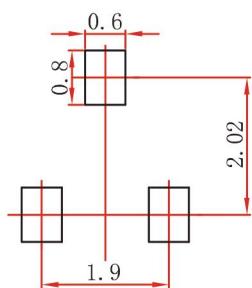


SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 6° |

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.