

BZX784B5V1 thru BZX784B20

Surface Mount Zener Diodes

Vz Range: 5.1 to 20V Power Dissipation: 100mW

Features

- Planar die construction
- 100mW power dissipation



Schematic Diagram

Package: SOD-723

Absolute Maximum Ratings

(T_A=25°C unless otherwise noted)

| Characteristic | Symbol | Value | Unit |
|---|------------------|-------------|------|
| Forward Voltage @I _F =10mA | V _F | 0.9 | V |
| Power Dissipation | P _D | 100 | mW |
| Thermal Resistance from Junction to Ambient | R _{θJA} | 1250 | °C/W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature | T _{STG} | -55 to +150 | °C |

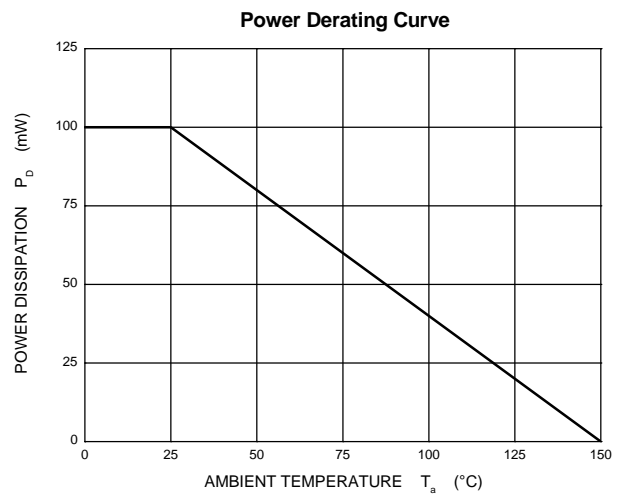
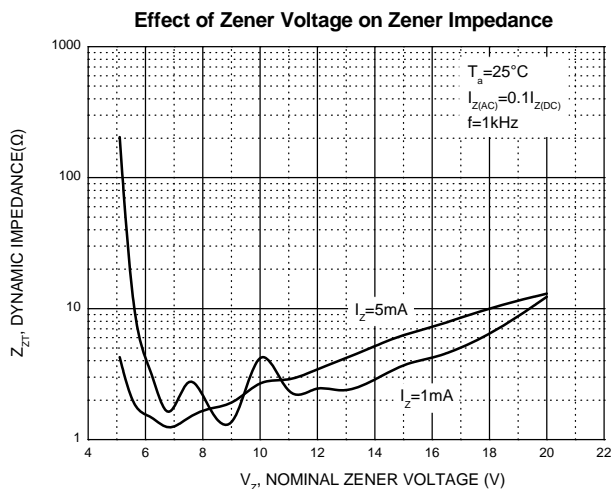
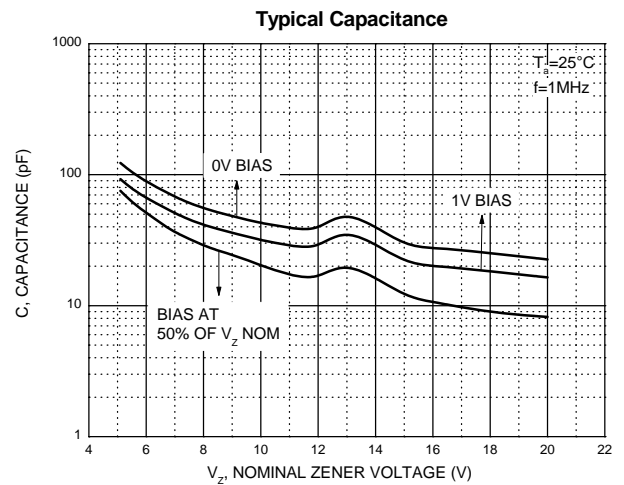
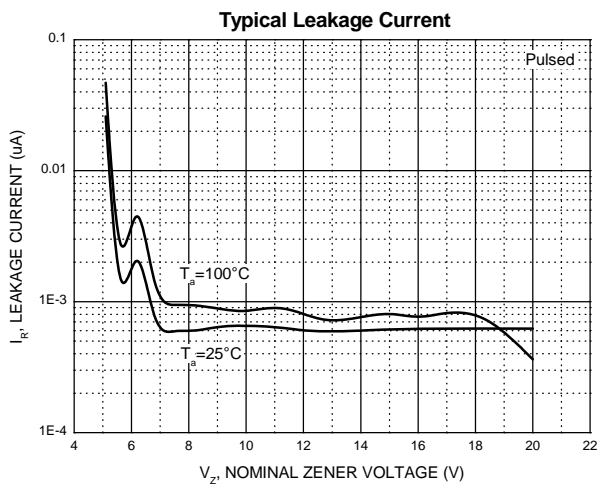
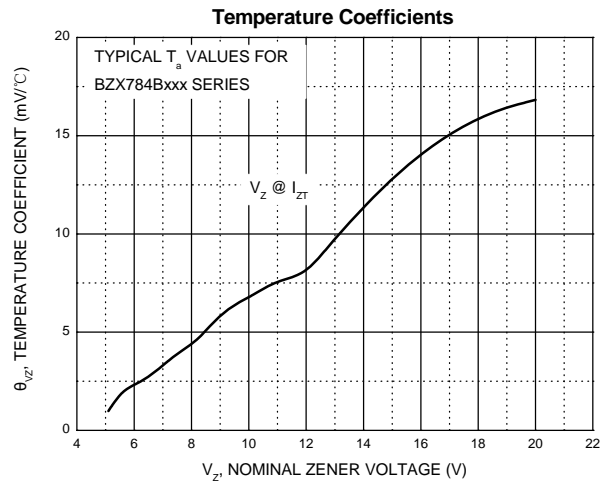
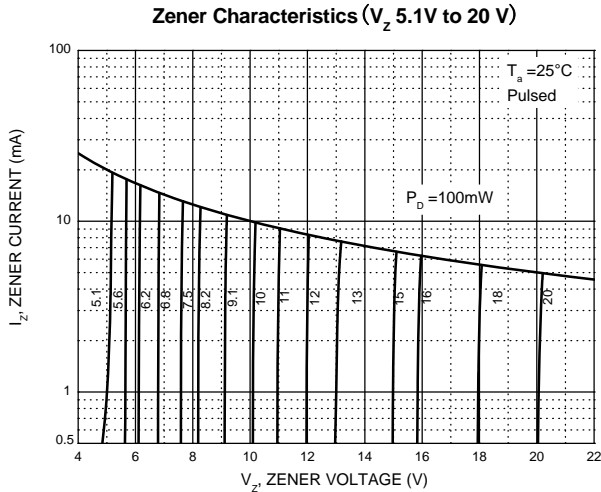
Electrical Characteristics (T_A=25°C unless otherwise noted)

| Type Number | Type Code | Zener Voltage Range (Note 1) | | | | Maximum Zener Impedance (Note 2) | | | Maximum Reverse Current | | Typical Temperature Coefficient @I _{ZT} =5 mA mV/°C | |
|-------------|-----------|---------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-----------------|-------------------------|----------------|--|------|
| | | V _Z @I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} | I _{ZK} | I _R | V _R | Min | Max |
| | | Nom(V) | Min(V) | Max(V) | mA | Ω | | mA | uA | V | | |
| BZX784B5V1 | X2 | 5.1 | 5.00 | 5.20 | 5 | 60 | 480 | 1.0 | 2 | 2.0 | -2.7 | 1.2 |
| BZX784B5V6 | X3 | 5.6 | 5.49 | 5.71 | 5 | 40 | 400 | 1.0 | 1 | 2.0 | -2.0 | 2.5 |
| BZX784B6V2 | X4 | 6.2 | 6.08 | 6.32 | 5 | 10 | 150 | 1.0 | 3 | 4.0 | 0.4 | 3.7 |
| BZX784B6V8 | X5 | 6.8 | 6.66 | 6.94 | 5 | 15 | 80 | 1.0 | 2 | 4.0 | 1.2 | 4.5 |
| BZX784B7V5 | X6 | 7.5 | 7.35 | 7.65 | 5 | 15 | 80 | 1.0 | 1 | 5.0 | 2.5 | 5.3 |
| BZX784B8V2 | X7 | 8.2 | 8.04 | 8.36 | 5 | 15 | 80 | 1.0 | 0.7 | 5.0 | 3.2 | 6.2 |
| BZX784B9V1 | X8 | 9.1 | 8.92 | 9.28 | 5 | 15 | 100 | 1.0 | 0.5 | 6.0 | 3.8 | 7.0 |
| BZX784B10 | X9 | 10 | 9.80 | 10.20 | 5 | 20 | 150 | 1.0 | 0.2 | 7.0 | 4.5 | 8.0 |
| BZX784B11 | W1 | 11 | 10.78 | 11.22 | 5 | 20 | 150 | 1.0 | 0.1 | 8.0 | 5.4 | 9.0 |
| BZX784B12 | W2 | 12 | 11.76 | 12.24 | 5 | 25 | 150 | 1.0 | 0.1 | 8.0 | 6.0 | 10.0 |
| BZX784B13 | W3 | 13 | 12.74 | 13.26 | 5 | 30 | 170 | 1.0 | 0.1 | 8.0 | 7.0 | 11.0 |
| BZX784B15 | W4 | 15 | 14.70 | 15.30 | 5 | 30 | 200 | 1.0 | 0.1 | 10.5 | 9.2 | 13.0 |
| BZX784B16 | W5 | 16 | 15.68 | 16.32 | 5 | 40 | 200 | 1.0 | 0.1 | 11.2 | 10.4 | 14.0 |
| BZX784B18 | W6 | 18 | 17.64 | 18.36 | 5 | 45 | 225 | 1.0 | 0.1 | 12.6 | 12.4 | 16.0 |
| BZX784B20 | W7 | 20 | 19.60 | 20.40 | 5 | 55 | 225 | 1.0 | 0.1 | 14.0 | 14.4 | 18.0 |

Notes:

- Tested with pulses, period=5ms,pulse width =300µs.
- f=1kHz.

Typical Electrical Characteristic Curves



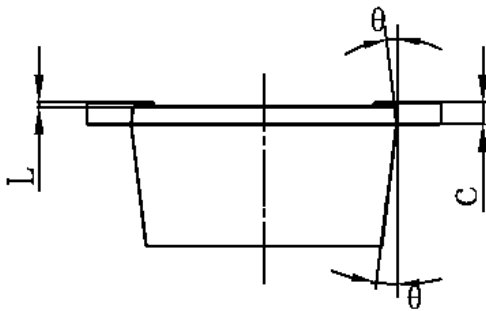
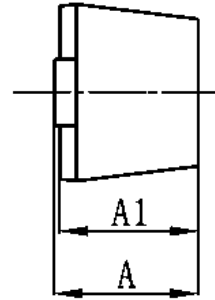
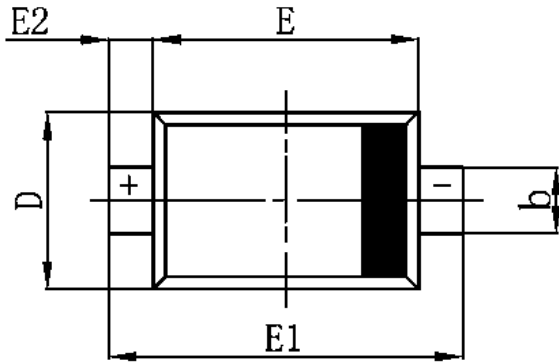
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Package Outline Dimensions

SOD-723



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.525 | 0.650 | 0.021 | 0.026 |
| A1 | 0.515 | 0.580 | 0.020 | 0.023 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 0.550 | 0.650 | 0.022 | 0.026 |
| E | 0.900 | 1.100 | 0.035 | 0.043 |
| E1 | 1.300 | 1.500 | 0.051 | 0.059 |
| E2 | 0.200 REF | | 0.008 REF | |
| L | 0.010 | 0.070 | 0.001 | 0.003 |
| θ | 7° REF | | 7° REF | |