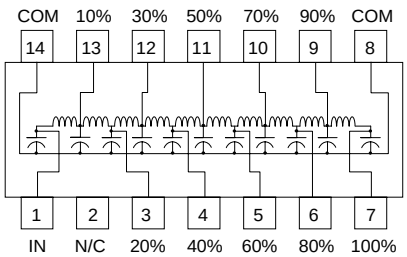
# *TZB-TYB-TUB Series* 10-Tap High Performance Passive Delays

- *Fast Rise Time, Low DCR*
- *High Bandwidth $\approx$ 0.35 / $t_r$*
- *Low Distortion LC Network*
- *10 Equal Delay Taps*
- *Standard Impedances: 50 - 75 - 100 - 200 Ω*
- *Stable Delay vs. Temperature: 100 ppm/°C*
- *Operating Temperature Range -55°C to +125°C*

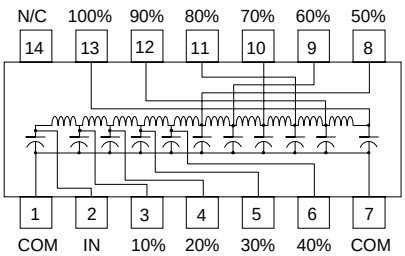
## Operating Specifications - *Passive Delay Lines*

| | |
|---|---|
| Pulse Overshoot (Pos) | 5% to 10%, typical |
| Pulse Distortion (S) | 3% typical |
| Working Voltage | 25 VDC maximum |
| Dielectric Strength | 100VDC minimum |
| Insulation Resistance | 1,000 MΩ min. @ 100VDC |
| Temperature Coefficient | 100 ppm/°C, typical |
| Bandwidth ($f_c$) | 0.35/$t_r$ approx. |
| Operating Temperature Range | -55° to +125°C |
| Storage Temperature Range | -65° to +150°C |

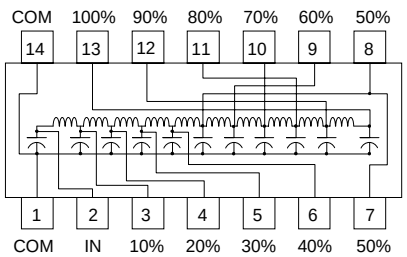
**TZB Style Schematic**
*Most Popular Footprint*




**TYB Style Schematic**
*Substitute TYB for TZB in P/N*




**TUB Style Schematic**
*Substitute TUB for TZB in P/N*



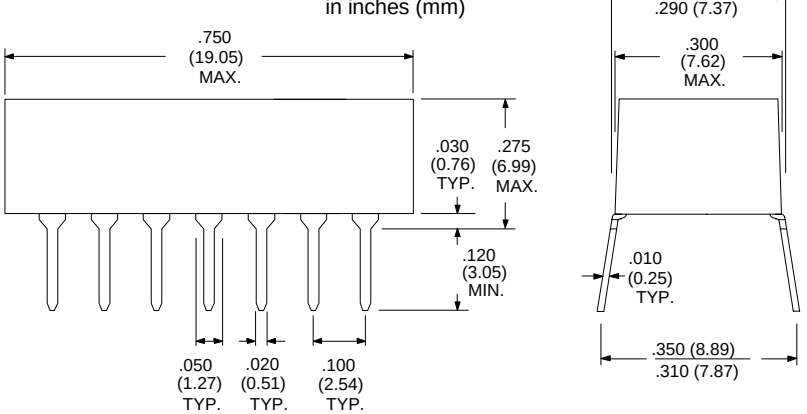

Electrical Specifications at 25°C

| Delay Tolerances Total (ns) | Delay Tolerances Tap-to-Tap (ns) | 50 Ohm Part Number | Rise Time (ns) | DCR max. (Ohms) | 75 Ohm Part Number | Rise Time (ns) | DCR max. (Ohms) | 100 Ohm Part Number | Rise Time (ns) | DCR max. (Ohms) | 200 Ohm Part Number | Rise Time (ns) | DCR max. (Ohms) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 ± 0.5 | 0.5 ± 0.2 | TZB1-5 | 2.0 | 0.7 | TZB1-7 | 2.1 | 0.8 | TZB1-10 | 2.2 | 0.8 | TZB1-20 | 2.4 | 0.9 |
| 10 ± 0.7 | 1.0 ± 0.4 | TZB6-5 | 3.2 | 0.7 | TZB6-7 | 3.6 | 0.8 | TZB6-10 | 3.8 | 0.8 | TZB6-20 | 5.5 | 1.0 |
| 20 ± 1.0 | 2.0 ± 0.5 | TZB12-5 | 4.0 | 0.7 | TZB12-7 | 4.4 | 1.3 | TZB12-10 | 4.6 | 1.5 | TZB12-20 | 8.5 | 1.5 |
| 25 ± 1.25 | 2.5 ± 0.5 | TZB18-5 | 4.5 | 0.9 | TZB18-7 | 5.3 | 1.5 | TZB18-10 | 5.5 | 1.7 | TZB18-20 | 9.0 | 1.8 |
| 30 ± 1.5 | 3.0 ± 0.5 | TZB24-5 | 5.5 | 1.0 | TZB24-7 | 5.8 | 1.7 | TZB24-10 | 5.8 | 2.0 | TZB24-20 | 10.0 | 2.0 |
| 40 ± 2.0 | 4.0 ± 1.0 | TZB30-5 | 7.0 | 1.2 | TZB30-7 | 7.5 | 2.0 | TZB30-10 | 7.5 | 2.2 | TZB30-20 | 13.0 | 2.2 |
| 50 ± 2.5 | 5.0 ± 1.0 | TZB36-5 | 8.5 | 1.3 | TZB36-7 | 8.5 | 2.1 | TZB36-10 | 8.5 | 2.3 | TZB36-20 | 15.5 | 2.4 |
| 60 ± 3.0 | 6.0 ± 1.5 | TZB42-5 | 10.5 | 1.6 | TZB42-7 | 11.4 | 2.3 | TZB42-10 | 11.5 | 2.5 | TZB42-20 | 16.0 | 2.5 |
| 70 ± 3.5 | 7.0 ± 1.5 | TZB48-5 | 11.0 | 1.7 | TZB48-7 | 13.0 | 2.5 | TZB48-10 | 13.0 | 2.8 | TZB48-20 | 17.0 | 2.5 |
| 80 ± 4.0 | 8.0 ± 1.8 | TZB54-5 | 12.0 | 1.9 | TZB54-7 | 15.3 | 3.8 | TZB54-10 | 15.5 | 3.0 | TZB54-20 | 19.0 | 2.5 |
| 90 ± 4.5 | 9.0 ± 2.0 | TZB60-5 | 14.0 | 2.0 | TZB60-7 | 17.3 | 3.0 | TZB60-10 | 17.5 | 3.1 | TZB60-20 | 20.0 | 2.5 |
| 100 ± 5.0 | 10.0 ± 2.0 | TZB66-5 | 18.0 | 2.1 | TZB66-7 | 19.5 | 3.1 | TZB66-10 | 20.0 | 3.2 | TZB66-20 | 24.0 | 2.5 |
| 150 ± 7.50 | 15.0 ± 3.0 | TZB72-5 | 24.0 | 2.2 | TZB72-7 | 26.0 | 3.3 | TZB72-10 | 26.0 | 3.5 | TZB72-20 | 35.0 | 3.6 |
| 200 ± 10.0 | 20.0 ± 3.0 | TZB78-5 | 34.0 | 2.4 | TZB78-7 | 38.0 | 3.4 | TZB78-10 | 39.0 | 3.5 | TZB78-20 | 44.0 | 4.8 |
| 250 ± 12.5 | 25.0 ± 3.0 | TZB84-5 | 41.0 | 2.4 | TZB84-7 | 45.0 | 3.5 | TZB84-10 | 46.0 | 4.0 | TZB84-20 | 56.0 | 5.2 |
| 300 ± 15.0 | 30.0 ± 3.0 | TZB90-5 | 48.0 | 2.5 | TZB90-7 | 53.0 | 3.5 | TZB90-10 | 54.0 | 4.2 | TZB90-20 | 68.0 | 5.8 |
| 400 ± 20.0 | 40.0 ± 5.0 | TZB94-5 | 65.0 | 2.8 | TZB94-7 | 66.0 | 3.6 | TZB94-10 | 67.0 | 4.5 | ——— | ——— | ——— |
| 500 ± 25.0 | 50.0 ± 5.0 | TZB98-5 | 75.0 | 3.3 | TZB98-7 | 84.0 | 3.7 | TZB98-10 | 86.0 | 5.0 | ——— | ——— | ——— |

1. Rise Times are measured from 10% to 90% points.
2. Delay Times measured at 50% points of leading edge.
3. Output (100% Tap) terminated to ground through $R_L=Z_O$

*Low-profile*
*DIP/SMD versions*
*refer to **AIZ** Series !!!*

Dimensions
in inches (mm)




Specifications subject to change without notice.

*For other values & Custom Designs, contact factory.*

TZB 9901


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