

# TZA / TYA Series 5-Tap High Performance Passive Delay Modules

- Fast Rise Time, Low DCR
- High Bandwidth  $\approx 0.35 / t_r$
- Low Distortion LC Network
- 5 Equal Delay Taps
- Standard Impedances: 50 - 75 - 100 - 200  $\Omega$
- Stable Delay vs. Temperature: 100 ppm/ $^{\circ}\text{C}$
- Operating Temperature Range -55 $^{\circ}\text{C}$  to +125 $^{\circ}\text{C}$

## 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 M $\Omega$ min. @ 100VDC
Temperature Coefficient .....	100 ppm/ $^{\circ}\text{C}$ , typical
Bandwidth ( $f_c$ ) .....	0.35/ $t_r$ approx.
Operating Temperature Range .....	-55 $^{\circ}$ to +125 $^{\circ}\text{C}$
Storage Temperature Range .....	-65 $^{\circ}$ to +150 $^{\circ}\text{C}$

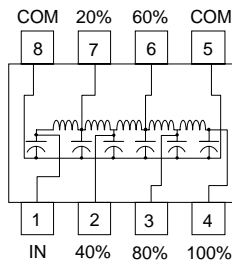
**Low-profile DIP/SMD versions refer to AMZ Series !!!**

### Electrical Specifications at 25 $^{\circ}\text{C}$

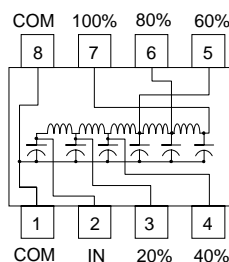
Delay Tolerances		50 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)	75 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)	100 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)	200 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)
Total (ns)	Tap-to-Tap (ns)												
5 $\pm$ 0.5	1.0 $\pm$ 0.4	TZA1-5	2.0	0.7	TZA1-7	2.7	0.8	TZA1-10	3.0	0.8	TZA1-20	3.0	0.9
10 $\pm$ 1.0	2.0 $\pm$ 0.5	TZA2-5	4.0	0.7	TZA2-7	4.4	1.3	TZA2-10	4.6	1.3	TZA2-20	6.3	1.5
15 $\pm$ 1.0	3.0 $\pm$ 0.6	TZA3-5	5.5	1.0	TZA3-7	5.8	1.6	TZA3-10	5.8	1.6	TZA3-20	7.7	2.0
20 $\pm$ 1.0	4.0 $\pm$ 0.8	TZA4-5	6.4	1.2	TZA4-7	7.3	1.7	TZA4-10	7.5	1.7	TZA4-20	9.8	2.2
25 $\pm$ 1.25	5.0 $\pm$ 1.0	TZA5-5	8.0	1.3	TZA5-7	8.0	1.9	TZA5-10	8.0	1.9	TZA5-20	15.5	2.4
30 $\pm$ 1.5	6.0 $\pm$ 1.2	TZA6-5	9.0	1.6	TZA6-7	8.5	2.2	TZA6-10	8.5	2.2	TZA6-20	16.0	2.8
35 $\pm$ 1.75	7.0 $\pm$ 1.5	TZA7-5	10.0	1.7	TZA7-7	12.3	2.5	TZA7-10	12.7	2.5	TZA7-20	17.0	3.1
40 $\pm$ 2.0	8.0 $\pm$ 2.0	TZA8-5	11.0	1.9	TZA8-7	15.5	2.8	TZA8-10	15.5	2.8	TZA8-20	17.0	3.4
45 $\pm$ 2.25	9.0 $\pm$ 2.0	TZA9-5	12.0	2.0	TZA9-7	16.2	3.0	TZA9-10	16.5	3.0	TZA9-20	18.0	3.7
50 $\pm$ 2.5	10.0 $\pm$ 2.0	TZA10-5	14.0	2.1	TZA10-7	17.8	3.1	TZA10-10	18.0	3.1	TZA10-20	19.0	4.0
75 $\pm$ 3.75	15.0 $\pm$ 3.5	TZA11-5	23.0	2.2	TZA11-7	25.7	3.4	TZA11-10	26.0	3.4	-	-	-
100 $\pm$ 5.0	20.0 $\pm$ 4.0	TZA12-5	33.0	2.4	TZA12-7	34.0	3.7	TZA12-10	34.0	3.7	-	-	-
125 $\pm$ 6.25	25.0 $\pm$ 5.0	TZA13-5	35.0	2.6	TZA13-7	41.5	4.0	TZA13-10	42.0	4.0	-	-	-

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  $R_L = Z_0$

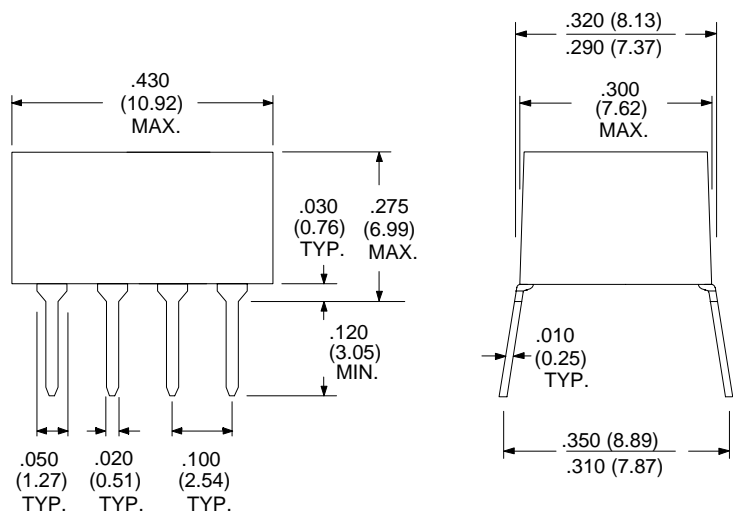
**TZA Style Schematic**  
Most Popular Footprint



**TYA Style Schematic**  
Substitute TYA for TZA in P/N



Dimensions  
in inches (mm)



Specifications subject to change without notice.

For other values & Custom Designs, contact factory.

TZA 9901



15801 Chemical Lane, Huntington Beach, CA 92649-1595  
Phone: (714) 898-0960 • FAX: (714) 896-0971  
www.rhombus-ind.com • email: sales@rhombus-ind.com