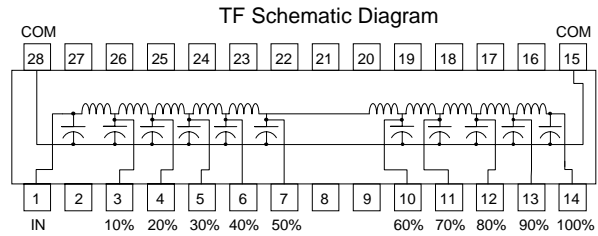


# TF Series High Performance 20 Section 10-Tap Delay Lines

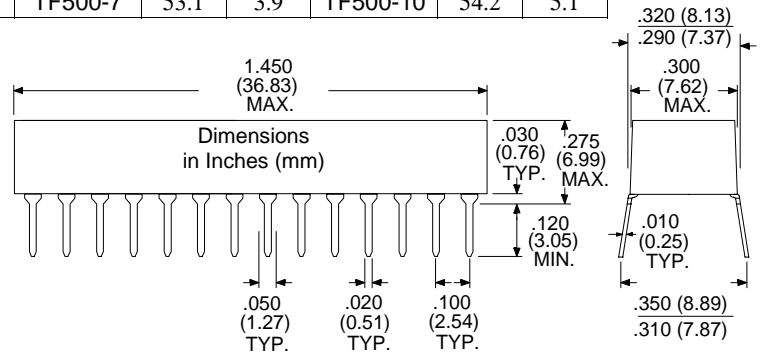
- Fast Rise Time ( $t_d/t_r \approx 10$ )
- High Bandwidth  $\approx 0.35/t_r$
- Low Distortion LC Network
- 10 Equal Delay Taps
- Standard Impedances: 50 - 75 - 100  $\Omega$
- Stable Delay vs. Temperature: 100 ppm/ $^{\circ}C$
- Operating Temperature Range -55 $^{\circ}C$  to +125 $^{\circ}C$



Electrical Specifications at 25 $^{\circ}C$  1, 2, 3

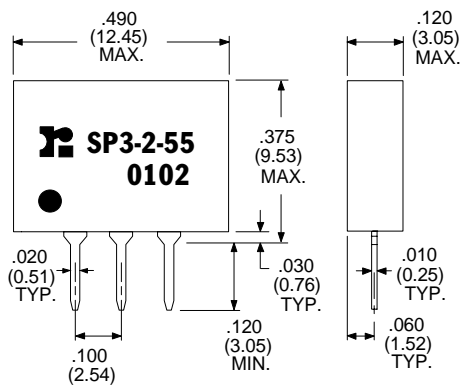
Delay Tolerances		50 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)	75 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)	100 Ohm Part Number	Rise Time (ns)	DCR max. (Ohms)
Total (ns)	Tap-to-Tap (ns)									
50 $\pm$ 2.5	5.0 $\pm$ 1.0	TF50-5	6.2	1.9	TF50-7	6.2	2.0	TF50-10	6.4	2.2
75 $\pm$ 3.7	7.5 $\pm$ 2.0	TF75-5	9.2	2.1	TF75-7	9.2	2.2	TF75-10	9.4	2.3
80 $\pm$ 4.0	8.0 $\pm$ 2.0	TF80-5	9.5	2.2	TF80-7	9.6	2.3	TF80-10	9.9	2.4
100 $\pm$ 5.0	10.0 $\pm$ 2.0	TF100-5	11.2	2.3	TF100-7	11.7	2.5	TF100-10	12.5	2.7
120 $\pm$ 6.0	12.0 $\pm$ 2.0	TF120-5	13.4	2.3	TF120-7	13.7	2.7	TF120-10	13.8	3.1
150 $\pm$ 15.0	15.0 $\pm$ 2.5	TF150-5	15.7	2.4	TF150-7	16.1	3.1	TF150-10	16.4	3.5
200 $\pm$ 10.0	20.0 $\pm$ 3.0	TF200-5	21.3	2.5	TF200-7	21.5	3.3	TF200-10	21.6	3.8
250 $\pm$ 12.5	25.0 $\pm$ 3.0	TF250-5	27.2	2.6	TF250-7	27.3	3.5	TF250-10	27.5	4.3
300 $\pm$ 15.0	30.0 $\pm$ 3.5	TF300-5	31.1	2.7	TF300-7	31.4	3.6	TF300-10	32.3	4.6
400 $\pm$ 20.0	40.0 $\pm$ 4.0	TF400-5	41.0	2.8	TF400-7	41.3	3.7	TF400-10	41.7	4.8
500 $\pm$ 25.0	50.0 $\pm$ 5.0	TF500-5	50.8	2.9	TF500-7	53.1	3.9	TF500-10	54.2	5.1

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 through  $Z_o$  to ground.

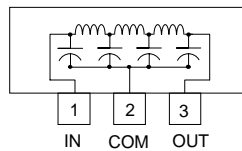


## SP3 Series 3-Pin Mini-SIP Passive Delays

Refer to SIL2 Series



SP3 Style Schematic



Part Number Examples:  
 SP3-2-50 = 2 ns 50  $\Omega$   
 SP3-2.5-93 = 2.5 ns 93  $\Omega$   
 SP3-5-10 = 5 ns 100  $\Omega$   
 SP3-10-20 = 10 ns 200  $\Omega$

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

Delay (ns)	Rise Time 20% - 80% max. (ns)	DCR max. (Ohms)	Part Number Zo: XX= 50, 55, 75, 93, 10 or 20
1.0 $\pm$ .20	1.6	.20	SP3-1 - XX
1.5 $\pm$ .20	1.6	.30	SP3-1.5 - XX
2.0 $\pm$ .20	1.6	.40	SP3-2 - XX
2.5 $\pm$ .20	1.6	.50	SP3-2.5 - XX
3.0 $\pm$ .20	1.7	.60	SP3-3 - XX
3.5 $\pm$ .20	1.7	.60	SP3-3.5 - XX
4.0 $\pm$ .20	1.7	.70	SP3-4 - XX
4.5 $\pm$ .20	1.7	.70	SP3-4.5 - XX
5.0 $\pm$ .25	1.8	.80	SP3-5 - XX
6.0 $\pm$ .30	2.0	.85	SP3-6 - XX
7.0 $\pm$ .30	2.2	.90	SP3-7 - XX
7.5 $\pm$ .30	2.4	.95	SP3-7.5 - XX
8.0 $\pm$ .30	2.4	.95	SP3-8 - XX
10 $\pm$ .30	2.8	1.20	SP3-10 - XX

1. Rise Times are measured from 20% to 80% points.
2. Delay Times measured at 50% points of leading edge.
3. Output (100% Tap) terminated through  $Z_o$  to ground.

Specifications subject to change without notice.

For other values & Custom Designs, contact factory.

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