

SP24L Series 24-Pin Single Output Passive Delay Modules

Optimized for Fastest Rise times and Lowest DCR in single configuration

- Fast Rise Time, Low DCR
- Better than 10/1 Td/tr typical
- High Bandwidth $\approx 0.35 / t_r$
- Low Distortion LC Network
- Standard Impedances: 50 - 75 - 100 Ω
- 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

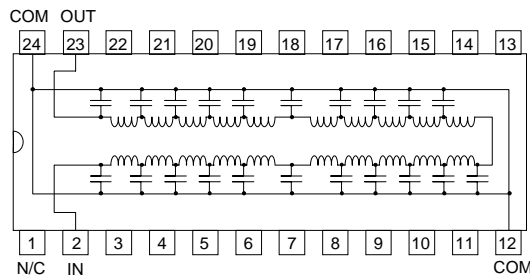
Pulse Overshoot (Pos)	5% to 10%, typical
Pulse Distortion (S)	3% typical
Working Voltage	25 VDC maximum
Dielectric Strength	100VDC minimum
Insulation Resistance	1,000 M Ω min. @ 100VDC
Temperature Coefficient	70 ppm/ $^{\circ}\text{C}$, typical
Bandwidth (f_c)	0.35/ t_r approx.
Operating Temperature Range	-55 $^{\circ}$ to +125 $^{\circ}\text{C}$
Storage Temperature Range	-65 $^{\circ}$ to +150 $^{\circ}\text{C}$

Electrical Specifications ^{1,2,3} at 25 $^{\circ}\text{C}$ Note: For SMD Package Add "G" to end of P/N in Table Below

Delay (ns)	50 Ohm Part Number	Rise Time max. (ns)	DCR max. (Ohms)	75 Ohm Part Number	Rise Time max. (ns)	DCR max. (Ohms)	100 Ohm Part Number	Rise Time max. (ns)	DCR max. (Ohms)
50 \pm 2.50	SP24L-505	5.2	1.5	SP24L-507	5.2	1.8	SP24L-501	5.2	2.0
75 \pm 3.75	SP24L-755	7.1	1.9	SP24L-757	7.1	2.2	SP24L-751	7.3	2.3
100 \pm 5.00	SP24L1005	9.2	2.4	SP24L1007	9.3	2.6	SP24L1001	9.4	2.6
150 \pm 7.50	SP24L1505	13.8	2.5	SP24L1507	14.0	2.7	SP24L1501	14.0	2.7
200 \pm 10.0	SP24L2005	16.5	2.6	SP24L2007	16.5	2.9	SP24L2001	16.5	2.9
250 \pm 12.5	SP24L2505	22.0	2.9	SP24L2507	22.0	3.4	SP24L2501	22.0	3.5
300 \pm 15.0	SP24L3005	22.4	3.1	SP24L3007	22.6	3.7	SP24L3001	22.8	3.9
400 \pm 20.0	SP24L4005	34.0	3.8	SP24L4007	35.0	4.8	SP24L4001	36.0	4.9
500 \pm 25.0	SP24L5005	42.0	4.8	SP24L5007	42.0	5.8	SP24L5001	42.0	6.2
750 \pm 37.5	SP24L7505	69.0	6.4	SP24L7507	69.0	7.1	SP24L7501	69.0	7.2
1000 \pm 50.0	SP24L10005	94.0	7.2	SP24L10007	94.0	8.8	SP24L10001	94.0	9.6
1200 \pm 60.0	SP24L12005	110.0	8.3	SP24L12007	111.0	9.8	SP24L12001	112.0	10.4

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 $R_L = Z_0$

SP24L Style Single Output Schematic

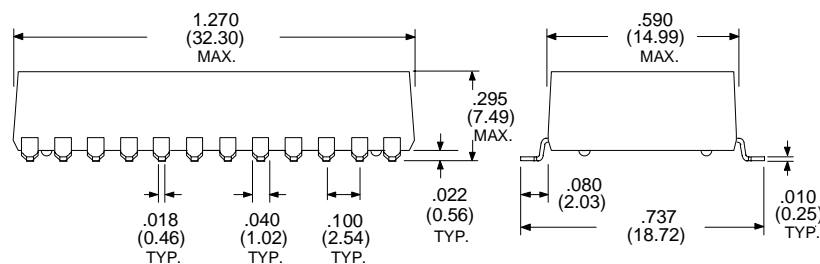
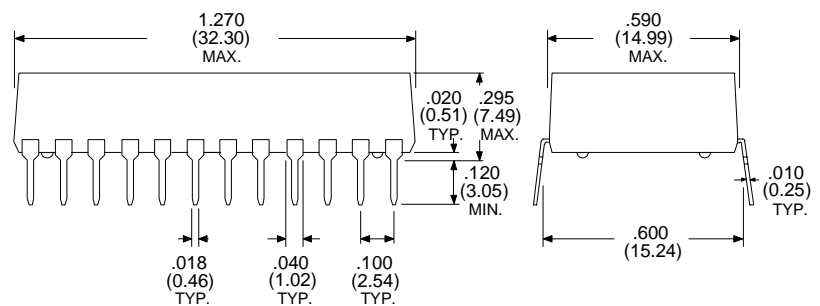


For similar package, alternate schematic style with only one common connection (pin 24 = N/C) at pin 12, refer to Series **SP241**

For 20 Tap versions in the same 24-Pin package, refer to Series **SP24A & SP24A**

Dimensions in Inches (mm)

Default Thru-hole 24-Pin Package Example: SP24L1001



Gull wing SMD Package Add suffix "G" to P/N. Example: SP24L1001G