

# SP241 Series 24-Pin Single Output Passive Delay Modules

- Fast Rise Time, Low DCR
- High Bandwidth  $\approx 0.35 / t_r$
- Low Distortion LC Network
- 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

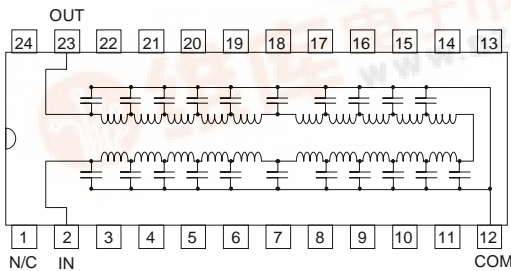
Pulse Overshoot (Pos) .....	5% to 10%, typical
Pulse Distortion (S) .....	3% typical
Working Voltage .....	25 VDC maximum
Dielectric Strength .....	100VDC minimum
Insulation Resistance .....	1,000 M $\Omega$ min. @ 100VDC
Temperature Coefficient .....	70 ppm/ $^{\circ}\text{C}$ , typical
Bandwidth (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

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

Total (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)	200 Ohm Part Number	Rise Time max. (ns)	DCR max. (Ohms)
10 $\pm$ 0.50	SP2410105	2.5	1.0	SP2410107	2.5	1.0	SP2410101	2.8	1.3	SP2410102	3.5	2.5
20 $\pm$ 1.00	SP2410205	3.7	1.7	SP2410207	3.7	1.7	SP2410201	3.7	1.8	SP2410202	4.0	3.9
25 $\pm$ 1.25	SP2410255	4.0	1.8	SP2410257	4.0	1.8	SP2410251	4.0	2.1	SP2410252	4.5	4.4
30 $\pm$ 1.50	SP2410305	4.8	1.9	SP2410307	4.8	1.9	SP2410301	4.8	2.3	SP2410302	5.0	4.8
40 $\pm$ 2.00	SP2410405	5.5	2.1	SP2410407	5.5	2.1	SP2410401	5.5	2.4	SP2410402	7.5	5.0
50 $\pm$ 2.50	SP2410505	6.0	2.2	SP2410507	6.0	2.2	SP2410501	6.2	2.6	SP2410502	9.0	5.2
60 $\pm$ 3.00	SP2410605	7.0	2.4	SP2410607	7.0	2.4	SP2410601	7.1	2.7	SP2410602	10.0	5.3
70 $\pm$ 3.50	SP2410705	7.9	2.6	SP2410707	7.9	2.6	SP2410701	8.1	2.8	SP2410702	11.0	5.4
75 $\pm$ 3.75	SP2410755	8.7	2.6	SP2410757	8.8	2.6	SP2410751	8.8	2.9	SP2410752	11.5	5.5
80 $\pm$ 4.00	SP2410805	9.4	2.8	SP2410807	9.4	2.8	SP2410801	9.5	3.0	SP2410802	12.0	5.7
100 $\pm$ 5.00	SP24101005	11.8	3.0	SP2411007	12.2	3.2	SP2411001	12.8	3.3	SP2411002	15.0	6.0
150 $\pm$ 7.50	SP24101505	15.5	3.4	SP24111507	15.8	3.4	SP24111501	16.0	3.7	SP24111502	23.0	7.0
200 $\pm$ 10.0	SP24102005	20.0	3.6	SP24112007	20.6	3.6	SP24112001	21.0	4.1	SP24112002	31.0	8.1
250 $\pm$ 12.5	SP24102505	26.0	3.8	SP24112507	26.9	3.8	SP24112501	28.0	4.4	SP24112502	38.0	9.2
300 $\pm$ 15.0	SP24103005	32.0	4.4	SP24113007	32.4	4.4	SP24113001	32.5	5.2	SP24113002	46.0	9.9

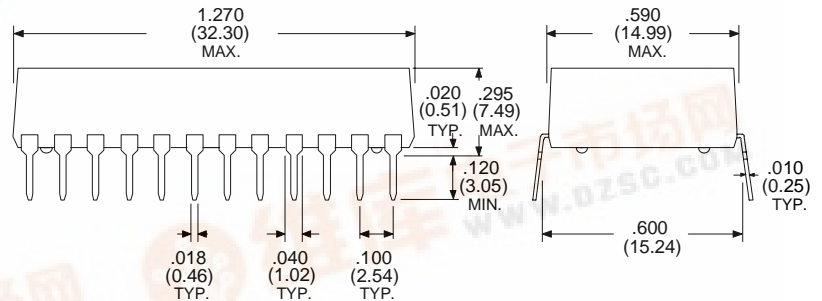
1. Rise Times are measured from 10% to 90% points.
2. Delay Times measured at 50% points of leading edge.
3. Output (100% Tap) terminated to ground through  $R_L = Z_0$

SP241 Style Single Output Schematic

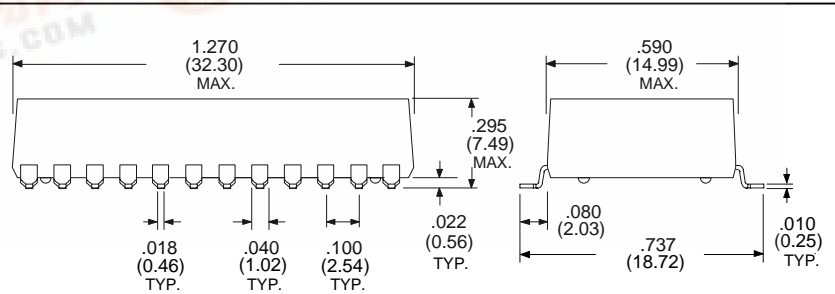


Dimensions in Inches (mm)

Default Thru-hole 24-Pin Package. Example: SP2410105



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



Gull wing SMD Package Add suffix "G" to P/N. Example: SP2410105G