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# PASSIVE DELAY LINES, SIP PACKAGE

## SERIES SP05 - 7 PIN, 5-TAP

## SERIES SP10 - 14 PIN, 10-TAP



- Low cost, prompt delivery!
- Wide variety of values, 5nS to 250nS
- Precision-grade internal inductor elements ensure excellent stability
- Fast rise times
- Operating temperature: 0°C to 70°C

### OPTIONS

- Custom circuits available
- Non-standard delay or impedance values
- Tighter tolerance or temp. coefficient
- Internal resistor termination
- Faster rise times

### TYPE SP05 7-PIN 5 TAPS

Total Delay (nSec)	Rise Time Max. <sup>†</sup> (nSec)	Delay per Tap (nSec)	Attenuation Max. (%)	Available Impedance Values ( $\pm 10\%$ )*
5	2.0	1.0±5	2.0	50Ω, 100Ω
10	3.3	2.0±5	2.0	50Ω, 100Ω
20	6.0	4.0±1	2.0	50Ω, 100Ω
25	7.8	5.0±2	2.0	50Ω, 100Ω
30	9.0	6.0±2	2.0	50Ω, 100Ω
40	12	8.0±2	2.0	50Ω, 100Ω, 200Ω
50	15	10±2	2.0	100Ω
60	18	12±3	2.5	100Ω
70	22	14±3	3.0	100Ω
75	22	15±3	3.5	100Ω
80	25	16±3	4.0	100Ω
90	28	18±3	4.0	100Ω
100	28	20±3	4.0	100Ω

### TYPE SP10 14-PIN 10 TAPS

Total Delay (nSec)	Rise Time Max. <sup>†</sup> (nSec)	Delay per Tap (nSec)	Attenuation Max. (%)	Available Impedance Values ( $\pm 10\%$ )*
10	2.0	1.0±5	2.5	50Ω, 100Ω, 200Ω
20	3.5	2.0±5	2.5	50Ω, 100Ω, 200Ω
25	4.0	2.5±1	2.5	50Ω, 100Ω, 200Ω
30	5.0	3.0±1	2.5	50Ω, 100Ω, 200Ω
40	7.0	4.0±2	2.5	50Ω, 100Ω, 200Ω
50	9.0	5.0±2	3.0	50Ω, 100Ω, 200Ω
60	11	6.0±3	3.5	50Ω, 100Ω, 200Ω
70	12	7.0±3	3.5	50Ω, 100Ω
75	13	7.5±3	4.0	50Ω, 100Ω
80	14	8.0±3	4.5	100Ω, 200Ω
90	16	9.0±3	4.5	100Ω, 200Ω
100	18	10±3	4.5	50Ω, 100Ω
150	25	15±3	8.0	50Ω, 100Ω
200	35	20±3	10	50Ω, 100Ω
250	42	25±3	12	50Ω, 100Ω

\* 100Ω is the most common impedance value.

<sup>†</sup> Faster rise times available!

### HOW TO ORDER

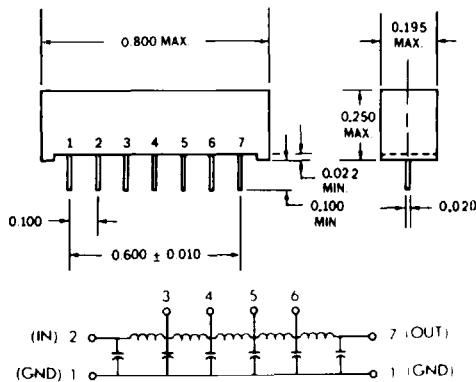
SP10	10nS	100Ω
RCD Type (SP05, SP10)		
Total Delay		
Impedance (50Ω, 100Ω, 200Ω)		

RCD Series SP05 and SP10 passive (analog) delay lines are a lumped constant design per applicable portions of MIL-D-23859. The series incorporates high performance inductors and multi layer capacitors in a molded SIP case ensuring stable transmission, low temperature coefficient, and excellent environmental performance.

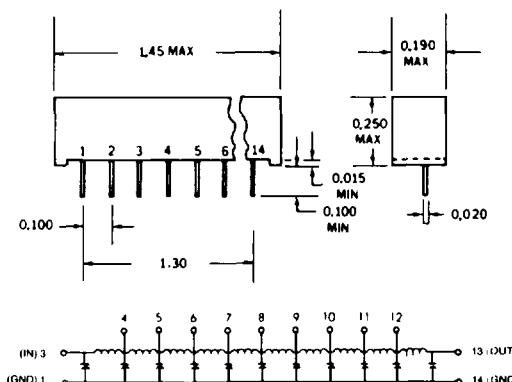
### ELECTRICAL CHARACTERISTICS

Total Delay Tol.:  $\pm 5\%$  or  $\pm 0.5\text{nS}$  whichever is greater  
 Temperature Coefficient: 100ppm/ $^{\circ}\text{C}$  Max.  
 Dielectric Strength: 100VDC  
 Insulation Resistance: 1000MΩ Min.  
 Distortion:  $\pm 10\%$  Max.

### TYPE SP05



### TYPE SP10



### TEST CONDITIONS @25°C

- 1) Input test pulse shall have an pulse amplitude of 3.2 volts, rise time of 2nS, and pulse width of 3× total delay
- 2) Delay line to be terminated to within 1% of its characteristic impedance
- 3) Delay time measured from 50% of input pulse to 50% of output pulse
- 4) Rise time measured from 10% to 90% of output pulse