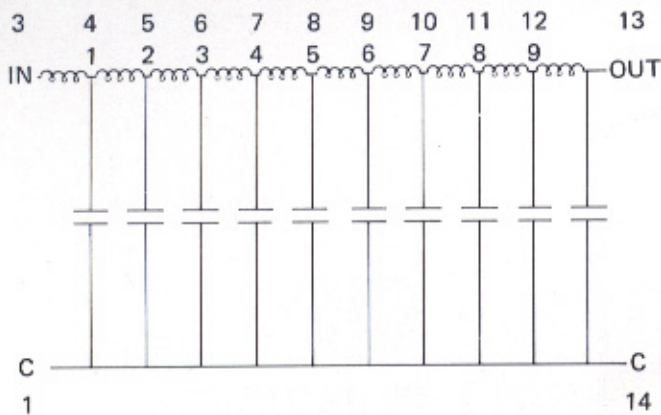
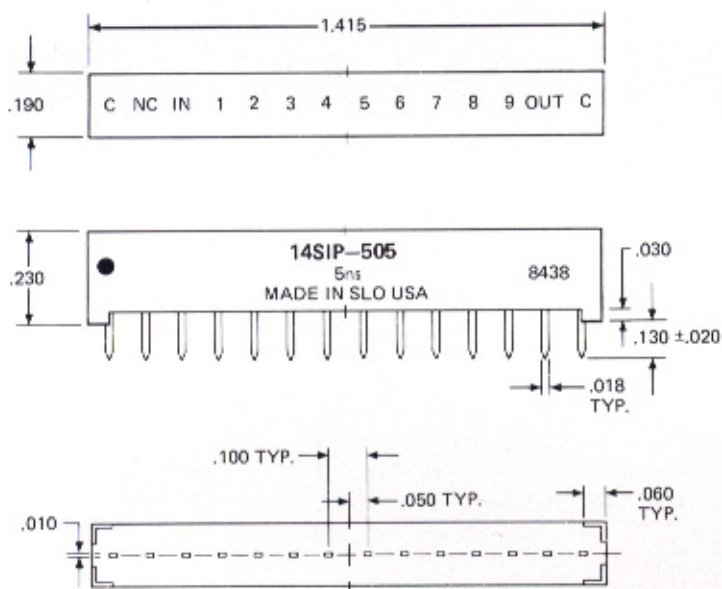


**BLOCK DIAGRAM IS SHOWN BELOW**



**MECHANICAL DETAIL IS SHOWN BELOW**



**TEST CONDITIONS**

1. All measurements are made at 25°C.
2. Test procedures in accordance with MIL-D-23859.

**OPERATING CHARACTERISTICS**

- Total delay tolerance: . . . . . See tabulations
- Tap delay tolerance: . . . . . See tabulations  $\phi$
- Rise time, maximum: . . . . . See tabulations
- Impedance: . . . . . 50, 100 or 200 ohms
- Impedance tolerance: . . . . .  $\pm 10\%$
- DC resistance, maximum: . . . . . See tabulations
- Attenuation, maximum: . . . . . .5 db
- Distortion, maximum: . . . . .  $\pm 5\%$
- Overshoot, maximum: . . . . . 10%
- Working voltage, maximum: . . . . . 25V DC
- Dielectric strength . . . . . 100V DC @ 50ua
- Insulation resistance, minimum: . . . . . 10,000 megohms @ 100V DC

$\phi$ Referenced from input of delay line.

**PART NUMBER TABLE**

| Part Number | Delay Time (ns) | Rise Time (ns) | $\phi$ Tap Delay (ns) | Impedance (ohms) | DCR (ohms) |     |
|-------------|-----------------|----------------|-----------------------|------------------|------------|-----|
| 14SIP-505   | 5 $\pm$ 0.5     | 2.0            | 0.5 $\pm$ 0.2         | 50               | 1.5        |     |
| 14SIP-510   | 10 $\pm$ 0.7    | 3.5            | 1.0 $\pm$ 0.5         |                  | 1.5        |     |
| 14SIP-515   | 15 $\pm$ 1.0    | 4.5            | 1.5 $\pm$ 0.5         |                  | 1.5        |     |
| 14SIP-520   | 20 $\pm$ 1.2    | 5.5            | 2.0 $\pm$ 0.5         |                  | 1.5        |     |
| 14SIP-525   | 25 $\pm$ 1.5    | 6.5            | 2.5 $\pm$ 0.6         |                  | 1.5        |     |
| 14SIP-530   | 30 $\pm$ 1.5    | 8.0            | 3.0 $\pm$ 0.6         |                  | 1.5        |     |
| 14SIP-535   | 35 $\pm$ 2.0    | 9.0            | 3.5 $\pm$ 0.8         |                  | 2.0        |     |
| 14SIP-540   | 40 $\pm$ 2.0    | 11.0           | 4.0 $\pm$ 0.8         |                  | 2.0        |     |
| 14SIP-545   | 45 $\pm$ 2.5    | 12.0           | 4.5 $\pm$ 1.0         |                  | 2.0        |     |
| 14SIP-550   | 50 $\pm$ 2.5    | 13.0           | 5.0 $\pm$ 1.0         |                  | 2.5        |     |
| 14SIP-560   | 60 $\pm$ 3.0    | 15.0           | 6.0 $\pm$ 1.2         |                  | 2.5        |     |
| 14SIP-570   | 70 $\pm$ 3.5    | 18.5           | 7.0 $\pm$ 1.4         |                  | 2.5        |     |
| 14SIP-580   | 80 $\pm$ 4.0    | 21.0           | 8.0 $\pm$ 1.6         |                  | 3.0        |     |
| 14SIP-590   | 90 $\pm$ 4.5    | 22.0           | 9.0 $\pm$ 1.8         | 3.0              |            |     |
| 14SIP-5100  | 100 $\pm$ 5.0   | 22.0           | 10.0 $\pm$ 2.0        | 3.0              |            |     |
| 14SIP-5150  | 150 $\pm$ 6.5   | 32.0           | 15.0 $\pm$ 2.5        | 3.0              |            |     |
| 14SIP-5200  | 200 $\pm$ 10    | 40.0           | 20.0 $\pm$ 3.0        | 50               | 3.0        |     |
| 14SIP-1005  | 5 $\pm$ 0.5     | 2.0            | 0.5 $\pm$ 0.2         | 100              | 1.5        |     |
| 14SIP-1010  | 10 $\pm$ 0.7    | 3.5            | 1.0 $\pm$ 0.5         |                  | 1.5        |     |
| 14SIP-1015  | 15 $\pm$ 1.0    | 5.0            | 1.5 $\pm$ 0.5         |                  | 1.5        |     |
| 14SIP-1020  | 20 $\pm$ 1.2    | 5.0            | 2.0 $\pm$ 0.5         |                  | 2.0        |     |
| 14SIP-1025  | 25 $\pm$ 1.5    | 7.0            | 2.5 $\pm$ 0.6         |                  | 2.0        |     |
| 14SIP-1030  | 30 $\pm$ 1.5    | 8.0            | 3.0 $\pm$ 0.6         |                  | 2.0        |     |
| 14SIP-1040  | 40 $\pm$ 2.0    | 11.0           | 4.0 $\pm$ 0.8         |                  | 2.5        |     |
| 14SIP-1050  | 50 $\pm$ 2.5    | 12.5           | 5.0 $\pm$ 1.0         |                  | 2.5        |     |
| 14SIP-1060  | 60 $\pm$ 3.0    | 12.5           | 6.0 $\pm$ 1.2         |                  | 2.5        |     |
| 14SIP-1070  | 70 $\pm$ 3.5    | 18.5           | 7.0 $\pm$ 1.4         |                  | 2.5        |     |
| 14SIP-1080  | 80 $\pm$ 4.0    | 20.0           | 8.0 $\pm$ 1.6         |                  | 2.5        |     |
| 14SIP-1090  | 90 $\pm$ 4.5    | 22.0           | 9.0 $\pm$ 1.8         |                  | 2.5        |     |
| 14SIP-10100 | 100 $\pm$ 5.0   | 24.0           | 10.0 $\pm$ 2.0        |                  | 2.5        |     |
| 14SIP-10150 | 150 $\pm$ 6.5   | 32.0           | 15.0 $\pm$ 2.5        | 100              | 2.5        |     |
| 14SIP-2010  | 10 $\pm$ 0.7    | 3.5            | 1 $\pm$ 0.5           | 200              | 2.0        |     |
| 14SIP-2020  | 20 $\pm$ 1.2    | 6.0            | 2 $\pm$ 0.6           |                  | 2.0        |     |
| 14SIP-2025  | 25 $\pm$ 1.5    | 7.0            | 2.5 $\pm$ 0.6         |                  | 2.0        |     |
| 14SIP-2030  | 30 $\pm$ 1.5    | 8.0            | 3 $\pm$ 0.6           |                  | 2.0        |     |
| 14SIP-2040  | 40 $\pm$ 2.0    | 10.0           | 4 $\pm$ 0.8           |                  | 2.5        |     |
| 14SIP-2050  | 50 $\pm$ 2.5    | 12.0           | 5 $\pm$ 1.0           |                  | 2.5        |     |
| 14SIP-2060  | 60 $\pm$ 3.0    | 14.0           | 6 $\pm$ 1.2           |                  | 2.5        |     |
| 14SIP-2080  | 80 $\pm$ 4.0    | 19.0           | 8 $\pm$ 1.6           |                  | 3.0        |     |
| 14SIP-20100 | 100 $\pm$ 5.0   | 24.0           | 10 $\pm$ 2.0          |                  | 200        | 3.0 |

Special delay lines can be readily manufactured with longer or specific delays, impedances, rise times and package configurations for specific applications.