FIXED SIP DELAY LINE
T_D/T_R = 5
(SERIES 1514)

FEATURES
- Fast rise time for high frequency applications
- Very narrow device (SIP package)
- Stackable for PC board economy
- Low profile
- Epoxy encapsulated
- Meets or exceeds MIL-D-23859C

PINOUT / PART NUMBERING

1514-xxz
xx = Delay (T_D)
z = Impedance Code

1 2 6 7
IN GND GND OUT

FUNCTIONAL DESCRIPTION

The 1514-series device is a fixed, single-input, single-output, passive delay line. The signal input (IN) is reproduced at the output (OUT), shifted by a time (T_D) given by the device dash number. The characteristic impedance of the line is given by the letter code that follows the dash number (See Table). The rise time (T_R) of the line is 20% of T_D, and the 3dB bandwidth is given by 1.75 / T_D.

SERIES SPECIFICATIONS

- Dielectric breakdown: 50 Vdc
- Distortion @ output: 10% max.
- Operating temperature: -55°C to +125°C
- Storage temperature: -55°C to +125°C
- Temperature coefficient: 100 PPM/°C

DASH NUMBER SPECIFICATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Delay (ns)</th>
<th>Rise Time (ns)</th>
<th>Impedance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1514-2.5A</td>
<td>2.5 ± 1.0</td>
<td>1.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-5A</td>
<td>5.0 ± 1.0</td>
<td>1.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-10A</td>
<td>10.0 ± 1.0</td>
<td>2.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-15A</td>
<td>15.0 ± 1.0</td>
<td>3.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-20A</td>
<td>20.0 ± 1.0</td>
<td>4.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-25A</td>
<td>25.0 ± 1.5</td>
<td>5.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-30A</td>
<td>30.0 ± 1.5</td>
<td>6.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-40A</td>
<td>40.0 ± 2.0</td>
<td>8.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-50A</td>
<td>50.0 ± 2.5</td>
<td>10.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-60A</td>
<td>60.0 ± 3.0</td>
<td>12.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-80A</td>
<td>80.0 ± 4.0</td>
<td>16.0</td>
<td>50</td>
</tr>
<tr>
<td>1514-100A</td>
<td>100 ± 5.0</td>
<td>20.0</td>
<td>50</td>
</tr>
</tbody>
</table>

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PASSIVE DELAY LINE TEST SPECIFICATIONS

TEST CONDITIONS

INPUT:
- Ambient Temperature: 25°C ± 3°C
- Input Pulse: High = 3.0V typical, Low = 0.0V typical
- Source Impedance: 50Ω Max.
- Rise/Fall Time: 3.0 ns Max. (measured at 10% and 90% levels)

OUTPUT:
- R_{\text{load}}: 10MΩ
- C_{\text{load}}: 10pf
- Threshold: 50% (Rising & Falling)

Pulse Width (TD <= 75ns): PW_{IN} = 100ns
Period (TD <= 75ns): PER_{IN} = 1000ns
Pulse Width (TD > 75ns): PW_{IN} = 2 x T_D
Period (TD > 75ns): PER_{IN} = 10 x T_D

NOTE: The above conditions are for test only and do not in any way restrict the operation of the device.