5-TAP DIP/SMD DELAY LINE
T_D/T_R = 3
(SERIES 1516)

FEATURES
- 5 taps of equal delay increment
- Delays to 200ns
- Low profile
- Epoxy encapsulated
- Meets or exceeds MIL-D-23859C

PACKAGES
- IN Signal Input
- T1-T5 Tap Outputs
- GND Ground

PART NUMBER CONSTRUCTION
1516(S)m - xxx - zzz p

MOUNTING HEIGHT CODE
- See Table

DELAY TIME
Expressed in nanoseconds (ns)
- First two digits are significant figures
- Last digit specifies # of zeros to follow

IMPEDANCE
Expressed in nanoseconds (ns)
- First two digits are significant figures
- Last digit specifies # of zeros to follow

PINOUT CODE
Omit for STD pinout

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

PINOUT CODES

MOUNTING HEIGHT CODES

FUNCTIONAL DESCRIPTION
The 1516-series device is a fixed, single-input, five-output, passive delay line. The signal input (IN) is reproduced at the outputs (T1-T5) in equal increments. The delay from IN to T5 (T_D) and the characteristic impedance of the line (Z) are determined by the dash number. The rise time (T_R) of the line is 30% of T_D, and the 3dB bandwidth is given by 1.05 / T_D. The device is available in a 8-pin DIP (1516) or a 8-pin SMD (1516S), and a wide range of pinouts may be specified.

Part numbers are constructed according to the scheme shown at right. For example, 1516C-101-500B is a 290 mil DIP, 100ns, 50Ω delay line with pinout code B. Similarly, 1516SB-151-501 is a 240 mil SMD, 150ns, 500Ω delay line with standard pinout.

Notes:
- Codes A and B are not available for all values of T_D
- Contact technical staff for details

DELAY SPECIFICATIONS

Notes:
- T_1 represents nominal tap-to-tap delay increment
- Tolerance on T_D ±5% or ±2ns, whichever is greater
- Tolerance on T_R ±5% or ±1ns, whichever is greater
- "N/A" indicates that delay is not available at this Z
FUNCTIONAL DIAGRAM

T1 T2 T3 T4
IN
GND

T5
GND

PACKAGE DIMENSIONS

Lead Material:
Nickel-Iron alloy 42
TIN PLATE

1516-xx (DIP)

1516S-xx (Gull-Wing)
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-load: 10MΩ
C-load: 10pf
Threshold: 50% (Rising & Falling)

Pulse Width (T_D <= 75ns): PW_IN = 100ns
Period (T_D <= 75ns): PER_IN = 1000ns
Pulse Width (T_D > 75ns): PW_IN = 2 x T_D
Period (T_D > 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.