Delay Lines

Active Delay Lines
Lead

ADL Series

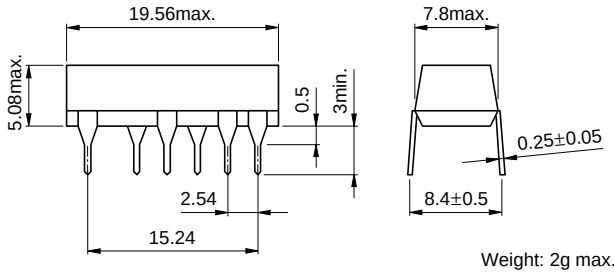
FEATURES

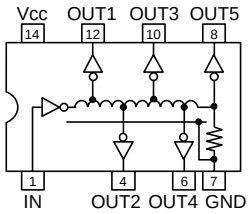
- Waveform shaping circuits are not required for the built-in TTL IC.
- Integration into a dual-inline package achieves a compact size only 5.08mm in height.
- These delay lines are transfer molded using high-performance resins.
- They can be used with automated inserters.

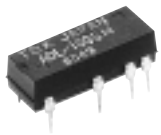
MAXIMUM RATINGS

Power supply voltage	Vcc	7V
Input voltage	Vin	–0.5 to +5.5V
Temperature range	Operating	0 to +70°C
	Storage	–55 to +125°C

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM







Weight: 2g max.

Dimensions in mm
Tolerance: ±0.25

ELECTRICAL CHARACTERISTICS

Part No.	Total delay time Td(ns)	Delay time between each tap td(ns)	Rise time (ns)max.	Minimum input pulse width* (ns)min.
ADL-020SH	20±2	4±2	4	8
ADL-025SH	25±3	5±2	4	10
ADL-050SH	50±3	10±2	4	20
ADL-060SH	60±3	12±3	4	24
ADL-075SH	75±5%	15±3	4	30
ADL-100SH	100±5%	20±3	4	40
ADL-125SH	125±5%	25±3	4	50
ADL-150SH	150±5%	30±3	4	60
ADL-200SH	200±5%	40±3	4	80
ADL-250SH	250±5%	50±3	4	100

* Repeat cycle T=Td×30

- Measuring conditions
  Power supply voltage Vcc: 5±0.1V/Ambient temperature: 25±1°C/No load between each tap

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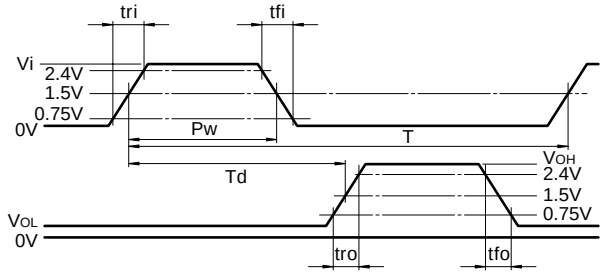
MEASURING CONDITIONS

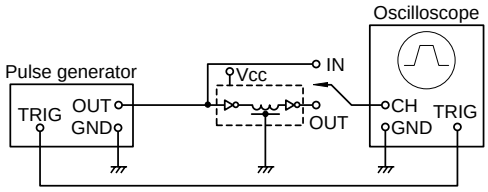
Input voltage Vi	3.2V
Pulse width conversion Pw	Td(Total delay time)×3
Repeat cycle T	Pw×10 [Duty: 10%]
Input rise time Tri	5ns max.
Power supply voltage V_{CC}	5±0.1V
Ambient temperature Ta	25±1°C

WAVEFORMS



Vi : Input voltage
Td : Total delay time
Pw: Pulse width conversion
tri : Input rise time
tfi : Input fall time
tro : Output rise time
tfo : Output fall time
V_{OL} : Output voltage(L level)
V_{OH} : Output voltage(H level)

MEASURING CIRCUITS



INPUT/OUTPUT CHARACTERISTICS

Item	Measuring conditions	Standard value		
		Minimum	Nominal	Maximum
Power supply voltage V_{CC}		4.75V	5V	5.25V
Input voltage (H level) V_{IH}		2V	—	—
Input voltage (L level) V_{IL}		—	—	0.8V
Output voltage (H level) V_{OH}	V_{CC}=4.75V V_{IH}=2V I_{OH}=–1mA	2.7V	3.4V	—
Output voltage (L level) V_{OL}	V_{CC}=4.75V V_{IL}=0.8V I_{OL}=20mA	—	—	0.5V
Input current (H level) I_{IH}	V_{CC}=5.25V V_I=2.7V	—	—	50µA
Input current (L level) I_{IL}	V_{CC}=5.25V V_I=0.5V	—	—	–2mA
Power supply current I_{CCL}	V_{CC}=5.25V V_{IL}=0V	—	47mA	65mA

OUTPUT LOAD CONDITIONS

Logic 1 output	20TTL load/tap [I_{OH}/I_{IH}=1mA/50µA=20]
Logic 0 output	10TTL load/tap [I_{OH}/I_{IL}=20mA/2mA=10]