

3D7225 replaces obsolete Maxim DS1000 series Silicon Delay Line

Description:

The 3D7225 5-Tap Delay Line product family consists of fixed-delay CMOS integrated circuits. Each package contains a single delay line, tapped and buffered at 5 points spaced uniformly in time. Tap-to-tap (incremental) delay values can range from 0.75ns through 700ns. The input is reproduced at the outputs without inversion, shifted in time as per the user-specified dash number. The 3D7225 is TTL- and CMOS-compatible, capable of driving ten 74LS-type loads, and features both rising- and falling-edge accuracy.

The all-CMOS 3D7225 integrated circuit has been designed as a reliable, economic alternative to hybrid TTL fixed delay lines. It is available in bare die and wafer format for maximum integration and size reduction in today's complex hybrid circuit and Multi-Chip-Module applications.

Features:

- All-silicon, low-power CMOS technology
- TTL/CMOS compatible inputs and outputs
- Low ground bounce noise
- Leading- and trailing-edge accuracy
- **Delay range:** 0.75ns through 3500ns
- **Delay tolerance:** 2% or 0.5ns
- **Temperature stability:** ±2% typical
- **V_{DD} stability:** ±1% typical (4.75V-5.25V)
- **Minimum input pulse width:** 30% of total delay

Maxim Part #	Data Delay Part #	TOLERANCES		INPUT RESTRICTIONS				Cross Reference Type
		TOTAL DELAY(ns)	TAP-TAP DELAY(ns)	Rec'd. Max Frequency	Abs. Max Frequency	Rec'd. Min Pulse Width	Abs. Max Pulse Width	
N/A	3D7225-.75*	3.0 ± 0.5*	0.75 ± 0.4	41.7 MHz	166.7 Mhz	12.0 ns	3.00 ns	N/A
N/A	3D7225-1*	4.0 ± 0.5*	1.0 ± 0.5	37.0 Mhz	166.7 Mhz	13.5 ns	3.00 ns	N/A
N/A	3D7225-1.5*	6.0 ± 0.5*	1.5 ± 0.7	31.2 Mhz	166.7 Mhz	16.0 ns	3.00 ns	N/A
N/A	3D7225-2*	8.0 ± 0.5*	2.0 ± 0.8	25.0 Mhz	166.7 Mhz	20.0 ns	3.00 ns	N/A
N/A	3D7225-2.5*	10.0 ± 0.5*	2.5 ± 1.0	22.2 Mhz	125.0 Mhz	22.5 ns	4.00 ns	N/A
DS1000-20	3D7225-4*	16.0 ± 0.7*	4.0 ± 1.3	8.33 Mhz	133.3 Mhz	30.0 ns	6.00 ns	EXACT
DS1000-25	3D7225-5	25.0 ± 1.0	5.0 ± 1.5	13.3 Mhz	66.7 Mhz	37.5 ns	7.50 ns	EXACT
DS1000-50	3D7225-10	50.0 ± 1.0	10.0 ± 2.0	6.67 Mhz	33.3 Mhz	75.0 ns	15.0 ns	EXACT
DS1000-100	3D7225-20	100.0 ± 2.0	20.0 ± 4.0	3.33 Mhz	16.7 Mhz	150 ns	30.0 ns	EXACT
DS1000-250	3D7225-50	250.0 ± 5.0	50.0 ± 10	1.33 Mhz	6.67 Mhz	375 ns	75.0 ns	EXACT
DS1000-500	3D7225-100	500.0 ± 10	100 ± 20	0.67 Mhz	3.33 Mhz	750 ns	150 ns	EXACT
N/A	3D7225-200	1000 ± 20	200 ± 40	0.33 Mhz	1.67 Mhz	1500 ns	300 ns	N/A
N/A	3D7225-700	3500 ± 70	700 ± 140	0.10 Mhz	0.48 Mhz	5250 ns	1050 ns	N/A

* Total delay is referenced to Tap1. Input to Tap1 delay is nominally 5ns.

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTES
DC Supply Voltage	V _{DD}	-0.3	7.0	V	
Input Pin Voltage	V _{IN}	-0.3	V _{DD} +0.3	V	
Input Pin Current	I _{IN}	-1.0	1.0	mA	25C
Storage Temperature	T _{STRG}	-55	150	C	

For complete electrical datasheet please see below:

www.datadelay.com/datasheets/3d7225.pdf

For further die details please contact your stocking distributor
Microcross Components at www.microcross.com/distribution.aspx

