

# LANSDALE

*Semiconductor, Inc.*

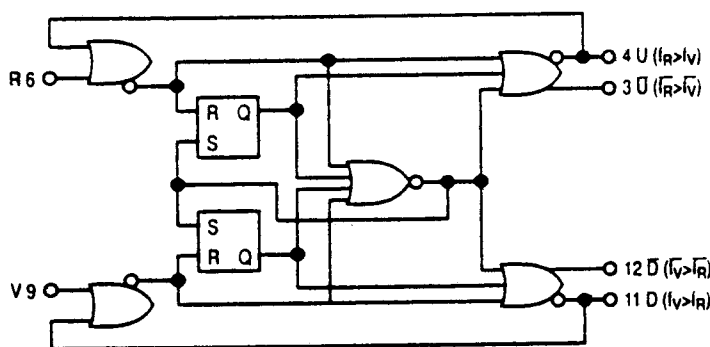
# ML12040 PHASE FREQUENCY DETECTOR

Pin Conversion Table

14 PIN DIP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
20 PIN PLCC	2	3	4	6	8	9	10	12	13	14	16	18	19	20

Inputs		Outputs			
R	V	U	D	$\bar{U}$	$\bar{D}$
0	0	X	X	X	X
0	1	X	X	X	X
1	1	X	X	X	X
0	1	X	X	X	X
1	1	1	0	0	1
0	1	1	0	0	1
1	1	1	0	0	1
1	0	1	0	0	1
1	1	0	0	1	1
1	0	0	0	1	1
1	1	0	1	1	0
1	0	0	1	1	0
1	1	0	1	1	0
0	1	0	1	1	0
1	1	0	0	1	1

LOGIC DIAGRAM



V<sub>CC1</sub> = Pin 1  
V<sub>CC2</sub> = Pin 14  
V<sub>EE</sub> = Pin 7

**TRUTH TABLE**

This is not strictly a functional truth table; i.e., it does not cover all possible modes of operation. However, it gives a sufficient number of tests to ensure that the device will function properly in all modes of operation.

The ML12040 is a phase-frequency detector intended for use in systems requiring zero phase and frequency difference at lock. In combination with a voltage controlled oscillator, it is useful in a broad range of phase-locked loop applications. Operation of this device is identical to that of Phase Detector #1 of the ML4044.

Operating Frequency = 80 MHz typical



CP suffix  
plastic dual inline



-4P  
PLCC package

**PIN CONNECTIONS**

