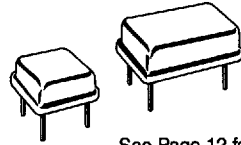


ECL OSCILLATORS in 10K LOGIC 10 MHz to 125 MHz

10 KH ,10E and ECLPS Lite LOGIC 10 MHz to 410 MHz



See Page 12 for
Package Outlines



The new M2900 models feature ultra-fast ECLPS Lite logic with complementary outputs of 350 ps rise and fall times

The MF ECL oscillators are available in four common configurations. Series M1400 and M1500, use 10 K logic, with and without complementary outputs are in frequencies from 10 MHz to 125 MHz. The Models M2600, *1700, M1800 and *1900 are in 10KH or 10E logic (above 210 MHz) .

Frequency tolerances have been extended to be choice of 200 ppm to 20 ppm include all effects of voltage, load and aging.

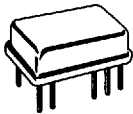
- New ECLPS Lite rise/fall times less than 350 ps
- DIL - full size or half size
- Single or dual complementary outputs
- H1900 and M1900 have Enable/Disable, reducing noise of unwanted frequency and allowing wired OR (to 210 MHz)
- Start up time less than 5 ms.
- Stability options from .02% (200 ppm) to .002% (20 ppm)
- Guaranteed start-up with ramping DC Supply
- Specified for extended temperature to 85°C, to allow for additional heat rise in confined space
- Terminating resistor may be internal - consult factory

	-5 Volt Power on Pin 14		+5 Volt Power on Pin 14 (PECL)				-5 Volt Power on Pin 7		Vdd on 14 and Vee on 7		Frequency Stability
	Single Output	Complementary Output	Single Output	Complementary Output	Enable/Disable Output	Single Output	Complementary Output	Single Output	Complementary Output		
10K Logic 10 MHz thru 125 MHz	M1400	M2400	M1500	M2500	—	—	—	—	—	±100 ppm	
	M1410	M2410	M1510	M2510	—	—	—	—	—	±200 ppm	
	M1436*	M2436*	M1536*	M2536*	—	—	—	—	—	±100 ppm	
	M1444	M2444	M1544	M2544	—	—	—	—	—	±25 ppm	
10KH Logic 10 MHz thru 210 MHz	M1445	M2445	M1545	M2545	—	—	—	—	—	±50 ppm	
	M1600	M2600	M1700, M1700	M2700, H2700	M1900, H1900	M1800, M2800	M1850**	M1810, M2810	±100 ppm		
M1610	M2610	M1710, H1710	M2710, H2710	M1910, H1910	M1810, M2810	±200 ppm					
M1636*	M2636*	M1736*, H1736*	M2736*, H2736*	M1936*, H1936*	M1836*, M2836*	±100 ppm					
M1644	M2644	M1744, H1744	M2744, H2744	M1944, H1944	M1844, M2844	±25 ppm					
10E Logic 210.1 to 410 MHz	M1645	M2645	M1745, H1745	M2745, H2745	M1945, H1945	M1845, M2845	±50 ppm				
	M1647	M2647	M1747, H1747	M2747, H2747	M1947, H1947	M1847, M2847	±10 ppm				
			M1748, H1748	M2748, H2748			±20 ppm				
				M2900, H2900			±100 ppm				
ECLPS Lite Logic 10 MHz thru 410 MHz				M2936*, H2936			±100 ppm				
				M2944, H2944			±200 ppm				
				M2945, H2945			±25 ppm				
				M2948, H2948			±50 ppm				

*Guaranteed Superior Symmetry 45/55

** For M1850 only, pin 1 only is connected to case. Pin 14 is Vdd and pin 7 is Vee

"M-1" Package



See Page 12 for
Package Outlines

GUARANTEED CRYSTAL CONTROLLED OSCILLATORS 20 to 220 MHz PROGRAMMABLE ECL

MF Crystal Controlled Programmable Oscillators are programmed by user-software to generate any frequency within its range with high accuracy. The frequency may be changed at any time during power-on, by loading new vectors and the transition is smooth with minimal overshoot.

USES

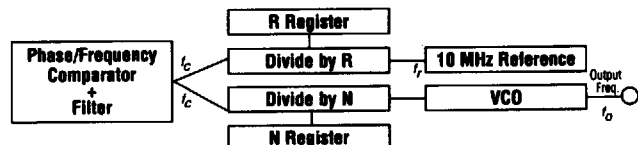
- To replace several oscillators when only one frequency is required at a time
- To reduce inventory requirements, since one device can be used for different boards requiring different frequencies
- To optimize the frequency for a system after it is assembled
- To lower the clock frequency under software control for use with ATE
- To obtain exact frequency locked to external standard

FEATURES

- Any frequency programmable from 20 MHz to 220 MHz within ±20 ppm (16 bits), often within 1 ppm
- New frequency output in less than 5 ms after data input
- Operating temperature to 85°C, to allow for additional heat rise in confined space
- Exceptionally low jitter

- 2 to 1 ratio of high frequency to low frequency
- Complementary ECL output available
- TTL/HCMOS programmable
- AC coupled external reference
- Max. programmable frequencies from 20 MHz to 220 MHz
- $Frequency = (Frequency\ Reference) * (N \div R)$
 $N = 16\ bits, R = 15\ bits$

CONTROLLING THE FREQUENCY



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