



# MC145143

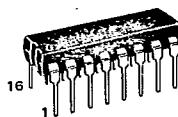
## PLL FREQUENCY SYNTHESIZER

The MC145143 is a phase locked loop building block variation of the MC145106/MC145112 family. The device contains the oscillator circuitry required to operate with fundamental mode crystals to 10.24 MHz. The oscillator circuitry is connected to the phase detector through a divide-by-16 and a 2<sup>9</sup>-1 divide-by-N counter. The reference oscillator can be divided in steps of 16 between 32 and 8176 before interfacing with the phase detector. The external input to the phase detector requires a V<sub>SS</sub> to V<sub>DD</sub> signal and forces the phase-detector output high if higher in frequency than the output of the divide-by-N counter. An out-of-lock signal is provided from the on-chip lock detector with a "O" level for an out-of-lock condition.

- Operation to 25 MHz
- 4.5 to 12 V Operation
- Programmable Reference Divisions from 32 to 8176 (16×2 to 16×511)
- Three-State Phase Detection
- On-Chip Lock Detection

## CMOS MSI

(LOW-POWER COMPLEMENTARY MOS)  
PLL  
FREQUENCY SYNTHESIZER

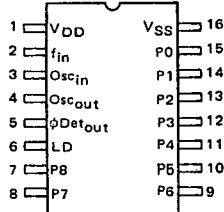


P SUFFIX  
PLASTIC PACKAGE  
CASE 648

PRODUCT CANCELLED

NOT RECOMMENDED FOR NEW DESIGNS  
PRODUCT BEING PHASED OUT

### PIN ASSIGNMENT



Closest equivalent is the MC145106

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields, however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V<sub>in</sub> and V<sub>out</sub> be constrained to the range V<sub>SS</sub> · (V<sub>in</sub> or V<sub>out</sub>) · V<sub>DD</sub>.