



SUPPLY VOLTAGE	GND PINS	SUPPLY PINS
+5.0 Vdc	7, 8	1, 14
-5.2 Vdc	1, 14	7, 8

Input Capacitance = 6 pF typ

Maximum Series Resistance

for L (External Inductance) =  $50\Omega$  typ

Power Dissipation = 150 mW typ/pkg

(+5.0 Vdc Supply)

Maximum Output Frequency = 225 MHz typ

### Voltage-Controlled Oscillator

The MC1648 is an emitter-coupled oscillator, constructed on a single monolithic silicon chip. Output levels are compatible with MECL III logic levels. The oscillator requires an external parallel tank circuit consisting of the inductor (L) and capacitor (C).

A varactor diode may be incorporated into the tank circuit to provide a voltage variable input for the oscillator (VCO). The MC1648 was designed for use in the Motorola Phase-Locked Loop.

This device may also be used in many other applications requiring a fixed or variable frequency clock source of high spectral purity.

The MC1648 may be operated from a +5.0 Vdc supply or a -5.2 Vdc supply, depending upon system requirements.