

LM565 Series—Phase Locked Loops

REFERENCE TABLE

Code	Stock No.
LM565H	31051R
LM565CH	29642X
LM565CN	29643H

GENERAL DESCRIPTION

The LM565 and LM565C are general purpose phase locked loops containing a stable, highly linear voltage controlled oscillator for low distortion FM demodulation, and a double balanced phase detector with good carrier suppression. The VCO frequency is set with an external resistor and capacitor, and a tuning range of 10:1 can be obtained with the same capacitor. The characteristics of the closed loop system—bandwidth, response speed, capture and pull-in range—may be adjusted over a wide range with an external resistor and capacitor. The loop may be broken between the VCO and the phase detector for insertion of a digital frequency divider to obtain frequency multiplication.

FEATURES

200 ppm/°C frequency stability of the VCO.

Power supply range of ± 5 to ± 12 volts with 100 ppm/% typical.

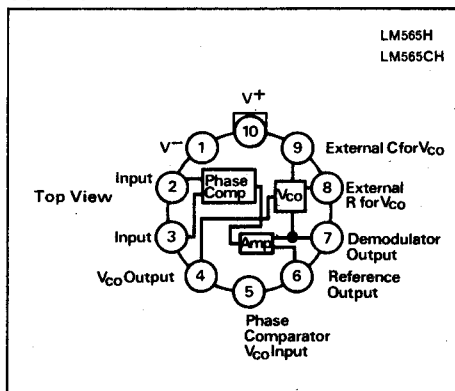
0.2% linearity of demodulated output.

Linear triangle wave with in phase zero crossings available.

TTL and DTL compatible phase detector input and square wave output.

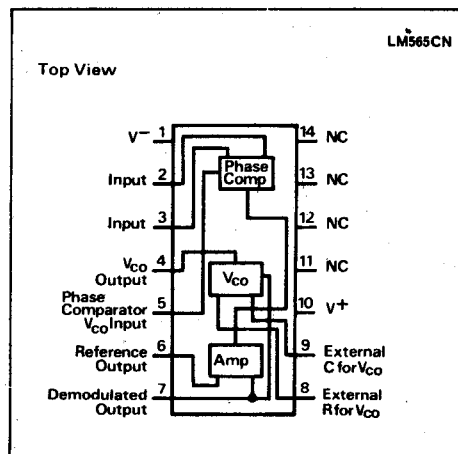
Adjustable hold in range from $\pm 1\%$ to $> \pm 60\%$.

CONNECTION DIAGRAM



See outline drawing No. 98 for dimensions.

CONNECTION DIAGRAM



See outline drawing No. 109 for dimensions.

ABSOLUTE MAXIMUM RATINGS

Supply Voltage $\pm 12V$

Power Dissipation (Note 1) 300mW

Differential Input Voltage $\pm 1V$

Operating Temperature Range

LM565H $-55^{\circ}C$ to $+125^{\circ}C$
LM565CH, LM565CN $0^{\circ}C$ to $70^{\circ}C$

Storage Temperature Range $-65^{\circ}C$ to $+150^{\circ}C$

Lead Temperature (Soldering, 10 sec) $300^{\circ}C$

PLEASE QUOTE STOCK NO. AND MANUFACTURER'S CODE WHEN ORDERING