

Low-Voltage 60 MHz Universal Programmable Dual PLL Frequency Synthesizer CMOS

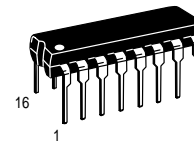
The MC145165 is a low-voltage dual phase-locked loop (PLL) frequency synthesizer especially designed for CT-1 cordless phone applications worldwide. This frequency synthesizer is also for any product with a frequency operation at 60 MHz or below.

This chip is suitable for any portable RF products which use two 1.2 V chargeable Ni-Cd batteries. The feature of low operating voltage can reduce the current consumption and the cost of the portable RF products by reducing the number of batteries used.

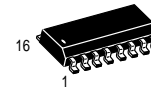
The device features fully programmable receive, transmit, reference, and auxiliary reference counters accessed through an MCU serial interface. This feature allows this device to operate in any CT-1 cordless phone application. The device consists of two independent phase detectors for transmit and receive loops. A common reference oscillator, driving two independent reference frequency counters, provides independent reference frequencies for transmit and receive loops. The auxiliary reference counter allows the user to select an additional reference frequency for receive and transmit loops if required. All of the functions and features of the MC145165 are fully compatible with the MC145162.

- Operating Voltage Range: 1.8 to 3.6 V
- Operating Temperature Range: - 40 to + 75°C
- Operating Power Consumption: 1.5 mA @ 1.8 V
- Maximum Operating Frequency: 60 MHz
- Minimum Input Sensitivity: 60 MHz @ 200 mV p-p, V_{DD} = 1.8 V
- Three or Four Pins Used for Serial MCU Interface
- Built-In MCU Clock Output with Frequency of Reference Oscillator ÷ 3/÷ 4
- Power Saving Mode Controlled by MCU
- Lock Detect Signal
- On-Chip Reference Oscillator Supports External Crystals to 16.0 MHz
- Reference Frequency Counter Division Range: 16 to 4095
- Auxiliary Reference Frequency Counter Division Range: 16 to 16,383
- Transmit Counter Division Range: 16 to 65,535
- Receive Counter Division Range: 16 to 65,535

MC145165



P SUFFIX
PLASTIC DIP
CASE 648

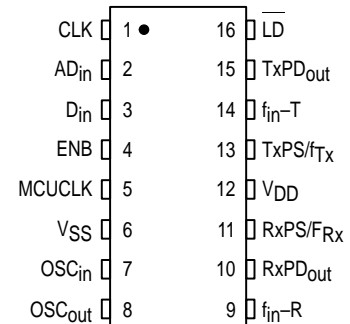


D SUFFIX
SOG PACKAGE
CASE 751B

ORDERING INFORMATION


MC145165P Plastic DIP
MC145165D SOG Package

PIN ASSIGNMENT



**NOT RECOMMENDED FOR NEW DESIGNS;
PRODUCT TO BE PHASED OUT.**

The MC145162 is a drop-in replacement for supply voltages ≥ 2.5 V.

Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Motorola data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part. Motorola and  are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

Mfax is a trademark of Motorola, Inc.

How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 5405, Denver, Colorado, 80217. 1-303-675-2140 or 1-800-441-2447

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 1-602-244-6609
Motorola Fax Back System – US & Canada ONLY 1-800-774-1848
– http://sps.motorola.com/mfax/

HOME PAGE: <http://motorola.com/sps/>

JAPAN: Nippon Motorola Ltd.; SPD, Strategic Planning Office; 4-32-1,
Nishi-Gotanda; Shinagawa-ku, Tokyo 141, Japan. 81-3-5487-8488

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

CUSTOMER FOCUS CENTER: 1-800-521-6274



MOTOROLA



MC145165/D