

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

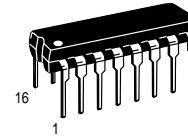
The MC145165 is a low-voltage dual phase-locked loop (PLL) frequency synthesizer especially designed for CT-1 cordless phone applications worldwide. This frequency synthesizer is also for any product with a frequency operation at 60 MHz or below.

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.

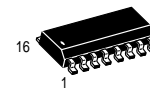
The device features fully programmable receive, transmit, reference, and auxiliary reference counters accessed through an MCU serial interface. This feature allows this device to operate in any CT-1 cordless phone application. The device consists of two independent phase detectors for transmit and receive 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 $\div 3/\div 4$
- 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

CLK	[	1	•	16	] LD
AD _{in}	[	2		15	] TxPD _{out}
D _{in}	[	3		14	] f _{in} -T
ENB	[	4		13	] TxPS/f _{Tx}
MCUCLK	[	5		12	] V _{DD}
V _{SS}	[	6		11	] RxPS/F _{Rx}
OSC _{in}	[	7		10	] RxPD _{out}
OSC _{out}	[	8		9	] f _{in} -R

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

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



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