Philips Components-Signetics

Document No.	
ECN No.	
Date of Issue	September 20, 1990
Status	Preliminary Specification
RF Communications	

UMA1014T

Frequency synthesizer for cellular radio communication

DESCRIPTION

The UMA1014T is a low power universal synthesizer for radio communication. The IC is manufactured in Bipolar technology and is designed to achieve 5 to 100kHz channel spacing at 400 to 1100MHz. The channel is selected via the standard I^2C bus. A low power sensitive RF divider is integrated as well as a dead zone eliminated tri-state phase comparator. The low noise charge pump delivers 1mA output current for fast switching. A power down circuitry enables the synthesizer to be idled.

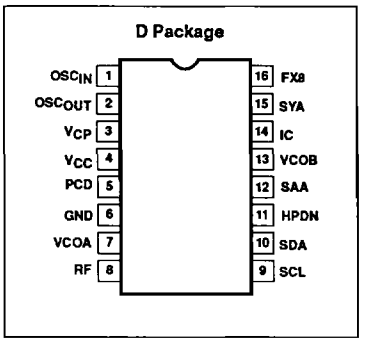
APPLICATIONS

- Cellular mobile radio (NMT, AMPS, TACS, PMR)
- Base station

FEATURES

- Fully programmable RF divider
- I^2C interface for two-line serial bus
- On-chip crystal oscillator from 3 to 16MHz; possibility to use a TCXO
- 16 reference division ratios allowing 5 to 100kHz channel spacing
- 1/8 crystal frequency output
- On-chip out-of-lock indication
- Two extra VCO control outputs
- Latched synthesizer alarm output
- Status register including out-of-lock indication and power failure
- Power down mode

PIN CONFIGURATION



ORDERING INFORMATION

DESCRIPTION	TEMPERATURE RANGE	ORDER CODE
16-Pin Plastic SO	0 to +70°C	UMA1014TD

BLOCK DIAGRAM