

***RoHS Compliant & Pb-Free Product***

FRACTIONAL-N RF SYNTHESIZER WITH  
MODULATOR AND DIGITAL IF FILTER  
Part of the POLARIS™ TOTAL RADIO™ Solution

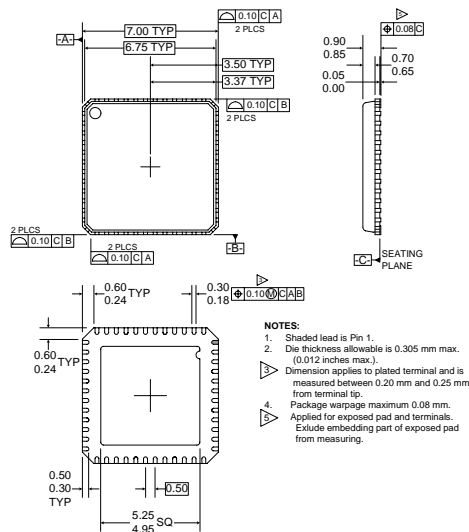
## Typical Applications

- GSM/DCS Handsets
- GSM/DCS/PCS Handsets
- Quad-Band GSM Handsets

- Multi-Band EDGE<sub>RX</sub> Handsets
- Multi-Band GPRS Handsets

## Product Description

The RF6001 is a combination synthesizer and signal processing IC, which along with the RF2722 Very-Low-IF Receive IC, constitutes RFMD's low-cost GSM transceiver solution. The high-performance fractional-N synthesizer offers numerous features including a fully digital GMSK modulator with provisions for an analog I/Q interface and extremely low current consumption. The signal processor section provides a digital receive filter path designed to complement the RF2722. The IF inputs are digitized, filtered and downconverted to baseband I and Q signals. The flexible baseband interface can be configured for either analog or digital operation. Chip functionality is controlled through a three-wire serial data interface (SDI) bus. The RF2722 is part of the POLARIS™ TOTAL RADIO™ solution.



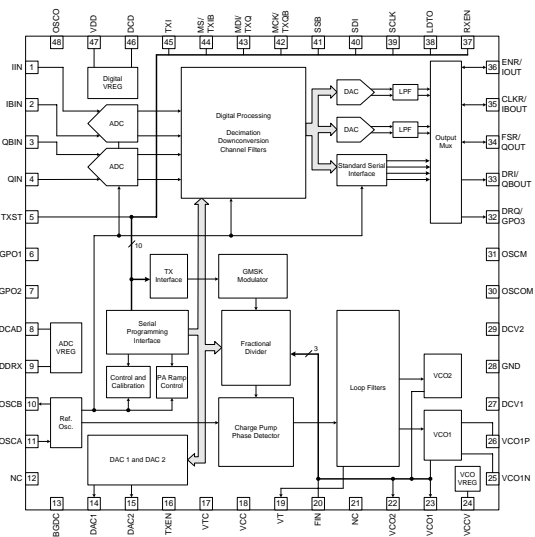
# Optimum Technology Matching® Applied

- |                                     |                                   |   |
|-------------------------------------|-----------------------------------|---|
| <input type="checkbox"/> Si BJT     | <input type="checkbox"/> GaAs HBT | <input type="checkbox"/> GaAs MESFET        |
| <input type="checkbox"/> Si Bi-CMOS | <input type="checkbox"/> SiGe HBT | <input checked="" type="checkbox"/> Si CMOS |
| <input type="checkbox"/> InGaP/HBT  | <input type="checkbox"/> GaN HEMT | <input type="checkbox"/> SiGe Bi-CMOS       |

Package Style: QFN, 48-Pin, 7x7

## Features

- Fractional-N Synthesizer with Digital GMSK Modulator
- Signal Processing Circuitry for use with RF2722 VLIF Receiver
- Versatile Baseband Interface
- Integrated RF Transmit VCO's



## Functional Block Diagram

## Ordering Information

RF6001

### Fractional-N RF Synthesizer with Modulator and Digital IF Filter

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**RF6001**

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