

TDVCO015 & TDVCO027

One Page - Preliminary Specification

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13.32 GHz – 15.20 & 23.32 – 27.34 GHz MMIC VCOs



Typical Applications

Low noise MMIC VCO for:

- Point to Point/Multipoint Radio
- Test Equipment & Industrial Controls
- SATCOM
- Military End-Use

Features

- Frequency Range:
TDVCO015: 13.32 - 15.20 GHz
TDVCO027: 23.32 – 27.34 GHz
- Typical Pout: +10 dBm
- Typical Phase Noise @ 100 kHz Offset:
TDVCO015: -115 dBc/Hz
TDVCO027: -98 dBc/Hz
- No External Resonator Needed
- Hermetic Ceramic 5 x 5 mm SMT Package: 25 mm²

General Description

The TDVCO015 & TDVCO027 are GaAs InGaP Heterojunction Bipolar Transistor (HBT) MMIC VCOs. The TDVCO015 & TDVCO027 integrate resonators, negative resistance devices, and varactor diodes. The phase noise performance is excellent over temperature, shock, and process due to the oscillator's monolithic structure. Power output is +10 dBm typical from a +5V supply voltage. These VCOs are packaged in a hermetic ceramic QFN 5 x 5 mm surface mount package, requiring no external matching components.

Table 1. Pin Descriptions

| Pin Number | Function | Description |
|------------------------|----------|---|
| 1-18, 20, 22-28, 30-32 | N/C | No Connection / No Bond Wire. May be connected to ground in end application. |
| 19 | RFOUT | VCO RF Output |
| 21 | Vcc | Supply Voltage |
| 29 | Vtune | Oscillator Frequency Tuning Voltage |
| Paddle | Ground | RF & dc Ground. Must be connected to ground on end application PCB. |

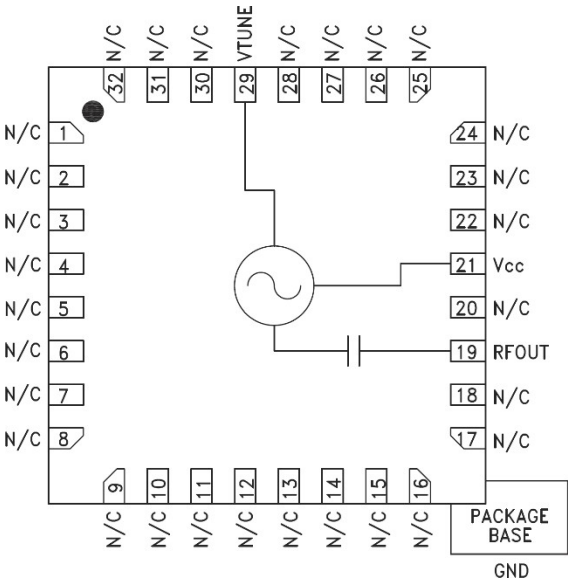


Figure 1: Package Pinout

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