# RI8575 - Phase Noise Measure

Cassini Instrument Profile

## **Applications**

- Precision Timebases
- Microwave References

• PLLs

VCOs

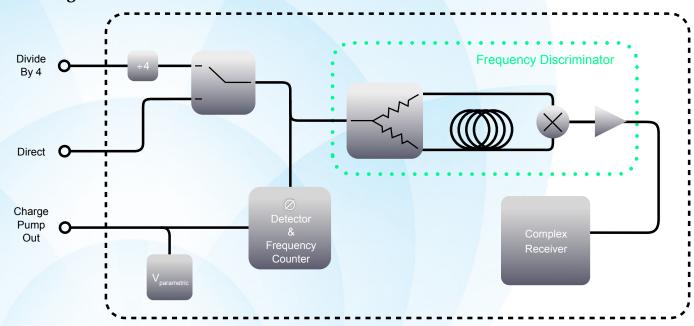
#### **Overview**

The RI8575 Phase Noise Measure instrument provides the industry's first, direct phase noise measurement capability to test microwave VCOs and oscillators at production speed. It provides two RF measurement ports, and a multi-purpose I/O port for biasing and phase locking a device, evaluating Kv, linearity, FM sideband performance, and phase noise for devices operating in the 100kHz to 12GHz frequency range.

#### **Key Features**

- Phase Detector with Built-in Reference Oscillator
- 1 to 16 GHz Application Range
- Phase Noise Offsets from 50 kHz to 2 MHz
- FM Sideband Measure
- Parametric Supply/Measure for Tune Voltage & Current
- Linearity & Kv Measure with 16-bit Frequency Counter

## **Block Diagram**





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#### **Performance**

#### Phase Noise

Frequency Range 1 GHz to 16 GHz
Offset 50 kHz to 2 MHz

Noise Floor

Direct -129 dBc/Hz @ 50 kHz | -161 dBc/Hz @ 2MHz Divide-By-4 -117 dBc/Hz @ 50 kHz | -146 dBc/Hz @ 2MHz

Parametric Measure

Current Range ±2mA; ±2µA (leakage mode)

Voltage Range -3 V to +25 V

#### Inputs/Outputs



Direct Input: 1-4 GHz Input

Divide-By-4: 4 - 16 GHz Input

Charge Pump Out: Phase Detector Output, Voltage/Current Parametric Output, or DC Parametric Measure Input

# **Cassini Test Systems**

A versatile, high-speed, automated test solution for analog, mixed-signal, RF, and millimeter-wave devices.

Cassini provides a modular base architecture that is fully configurable via Test Instrument Modules (TIMs) to meet the needs of any IC, wafer, or module test requirement.

Each TIM contains internally-cooled, RF-shielded measurement instrumentation, signal distribution, and blind mate interfacing to provide targeted test resources and integrate to build up a complete production test platform.

Combined with Roos Instruments' integrated test software, Cassini can be configured to any application for maximum performance, true low cost of test, and the industry's fastest test times.

Roos Insturments 2285 Martin Ave. Santa Clara, CA 95050 TEL +1 - 408 - 748 - 8589

sales@roos.com www.roos.com



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