

## Applications

- Precision Time Bases
- PLLs
- Microwave References
- VCOs

## Overview

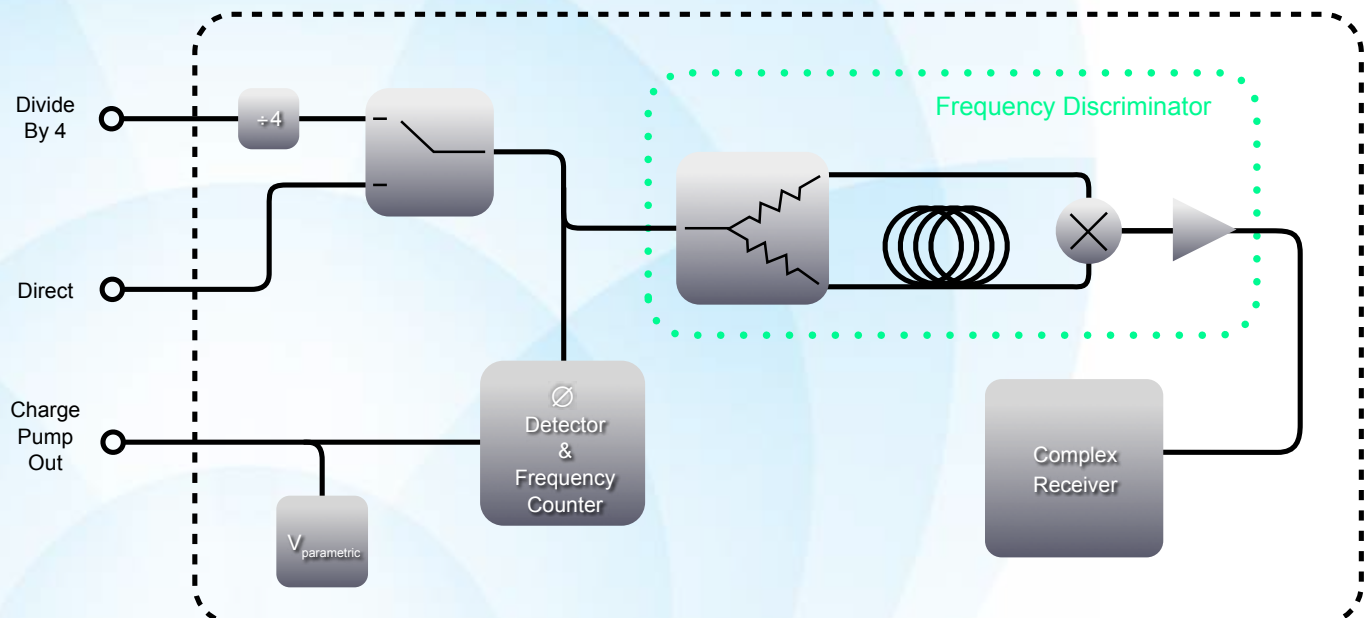
The RI8575 Phase Noise Measure instrument provides the industry's first, direct phase noise measurement capability to test microwave VCOs and oscillators at production speed. It provides two RF measurement ports, and a multi-purpose I/O port for biasing and phase locking a device, evaluating  $K_v$ , 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 &  $K_v$  Measure with 16-bit Frequency Counter*

## Block Diagram



## Performance

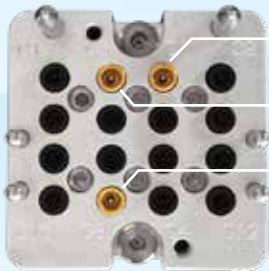
### Phase Noise

Frequency Range	1 GHz to 16 GHz
Offset	50 kHz to 2 MHz
Noise Floor	
Direct	-129 dBc/Hz @ 50 kHz   -161 dBc/Hz @ 2 MHz
Divide-By-4	-117 dBc/Hz @ 50 kHz   -146 dBc/Hz @ 2 MHz

### Parametric Measure

Current Range	±2mA; ±2µA (leakage mode)
Voltage Range	-3V to +25V

## 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 Instruments

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