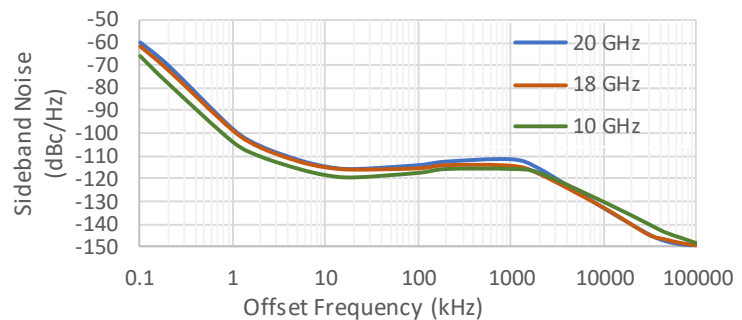


SC5511A

20 GHz Signal Source Core Module

The SC5511A is a compact, high performance VCO based synthesized signal source with frequency ranging from 100 MHz to 20 GHz. Despite its small modular form factor that fits into the palm of the hand, it packs the instrument grade performance of large box instruments. Boasting low phase noise of -137 dBc/Hz @ 10kHz offset from a 1 GHz carrier, tuning the entire band at 1 Hz resolution, and having amplitude step resolution of 0.01 dB over the range of < -25 dBm to +13 dBm sets the SC5511A apart from other small modular synthesizers. Furthermore, using a unique multiple phase-locked loop architecture the phase spurs are typically kept below -70 dBc across the tuning range, even at 1 Hz step resolution. Furthermore, using a high fundamental frequency VCO (20 GHz) and eliminating multipliers, sub-harmonics due to dividers are typically less than -70 dBc and far out spurious signals are also kept below -70 dBc.

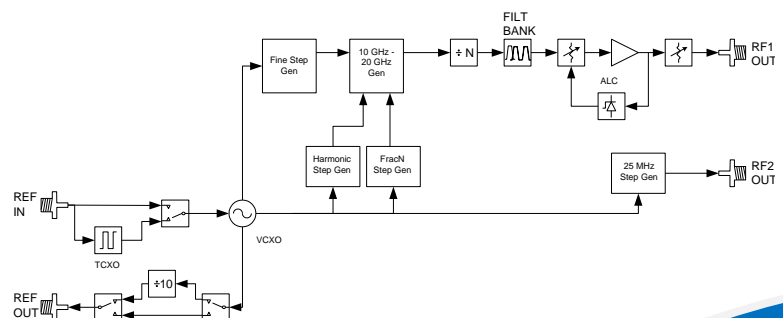


The SC5511A has an additional independent RF2 channel whose frequency range covers 100 MHz to 3 GHz with tuning resolution of 25 MHz. This makes the module ideal for both single-stage RF conversion systems, and dual-stage image suppression up/down converter systems. It makes a great general purpose laboratory signal source where demanding size, low phase noise, and signal purity are needed. It is also an ideal choice as an integrated clock source for fast DAC and ADC applications, especially those that require variable sampling rates.

Product Features

- Low residual phase noise typically -137 dBc/Hz at 10 kHz, 1 GHz
- 100 MHz to 20 GHz output range
- 1 Hz tuning resolution (exact frequency)
- < -25 dBm to +13 dBm leveled output
- Spurious signals < -70 dBc typical
- Dual independent channels

Simplified Functional Diagram



Applications

- RF instrumentation
- Wireless communications
- Signal intelligence

