

S1134F-0218 Multi-channel Signal Generator

(2GHz - 18GHz, 5-channel output, especially for **QUANTUM COMPUTING**)



Key Features

- Frequency range: 2GHz to 18GHz
- 5 RF output channels which can operate individually
- Output power range: -20dBm to +22dBm
- Phase noise: <-113dBc/Hz (10GHz, 10kHz offset)
- Phase coherent among every channel
- Channel to channel relative phase drift (10GHz, 24h) $\leq \pm 1^\circ$
- High-speed frequency switching <10us
- Narrow pulse modulation, minimum pulse width 50ns

Overview

Saluki S1134F-0218 series signal generator is a phase-coherent and low phase noise signal generator with 5-channel output. The frequency range of 3 channels is 2GHz to 11.95GHz, the frequency range of 2 channels is 2GHz to 18GHz. Each channel can be independently fully adjusted.

The S1134F-0218 multi-channel phase-coherent signal generator has excellent performance in the field of quantum computing which requires high signal quality and stable coherence of each channel.

The high stability OCXO reference provides excellent frequency accuracy and frequency stability. In addition, the S1134F-0218 has high-frequency reference input and output ports, which can ensure that the phases of multiple output channels and

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multiple instruments are strictly coherent and stable for a long time.

The instrument comes in a standard 3U rack-mount form and offers LAN control interface, which allows easy and fast communication. Remote control of the instrument can be quickly attained from any host system. Application programming interface (API) or programming examples make the control implementation very easy.

Applications: Quantum Computing / Local Oscillator Replacement / Component Test / Receiver Sensitivity Test / R&D Low Noise Microwave Generator

Technical Specifications

Model	S1134F-0218
Output	
Frequency Range	3 channels: 2GHz-11.95GHz, 2 channels: 2GHz-18GHz
Output Channel	5-channel <i>*For more output channels, contact us for customization*</i>
Frequency Resolution	0.01Hz
Maximum Output Power	+22dBm @ <8GHz +20dBm @ 8-12GHz +18dBm @ >12GHz
Minimum Output Power	-20dBm
Power Resolution	0.01dB
Power Level Uncertainty	$\leq \pm 1.3\text{dB}$ @ $> -20\text{dBm}$ $\leq \pm 1.5\text{dB}$ @ $\leq -20\text{dBm}$
Harmonic Spurious	$\leq -50\text{dBc}$ @ 10dBm output
Non-harmonic Spurious	$\leq -70\text{dBc}$ @ $\leq 12\text{GHz}$ $\leq -65\text{dBc}$ @ $> 12\text{GHz}$
Channel to Channel Isolation	$\geq 80\text{dB}$

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Phase Stability	$\leq \pm 1^\circ$ (10GHz, 24h)
SSB Phase Noise (@10GHz)	$\leq -75\text{dBc/Hz}@100\text{Hz}$ $\leq -108\text{dBc/Hz}@1\text{KHz}$ $\leq -113\text{dBc/Hz}@10\text{KHz}$ $\leq -113\text{dBc/Hz}@100\text{KHz}$ $\leq -120\text{dBc/Hz}@1\text{MHz}$ $\leq -138\text{dBc/Hz}@10\text{MHz}$  Phase Noise @10GHz
Frequency Reference	
Both external and internal reference supported	
Internal Reference Frequency Temperature Stability	$\pm 5\text{e-}8$, 0°C to $+50^\circ\text{C}$
Internal Reference Frequency	10MHz
Internal Reference Output Power	$\geq 5\text{dBm}$
External Reference Input Level Range	5dBm - 10dBm

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SSB of Internal Reference	$\leq -125\text{dBc/Hz@10Hz}$ $\leq -140\text{dBc/Hz@100Hz}$ $\leq -150\text{dBc/Hz@1KHz}$ $\leq -155\text{dBc/Hz@10KHz}$ $\leq -155\text{dBc/Hz@100KHz}$
Output Sync Point Frequency	
Output Frequency	1.6GHz
Input Frequency	1.6GHz
General Information	
LAN Control	RJ-45 (TCP/IP over Ethernet)
Operation Temperature	0°C to +50°C
Operation Humidity	20%-80% (+30°C)
Power Supply	85-264VAC, 50Hz-60Hz, 270W
Dimension	483 (W) × 134 (H) × 559 (D) mm (3U)
Weight	$\leq 20\text{kg}$

Ordering Information

Module No.	Item
S1134F-0218	5-channel output, frequency range: 2GHz-11.95GHz & 2GHz-18GHz

***Note:** Information will conduct the necessary updates, the contents of this document are subject to change without notice*