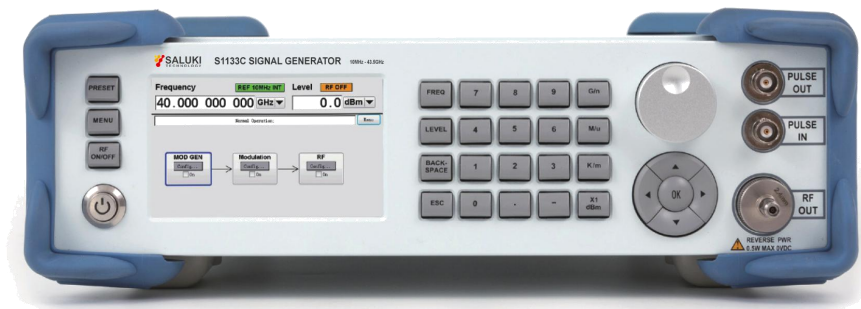


S1133 Series Microwave Analog Signal Generator

(Frequency Range: 10MHz - 12GHz / 24GHz / 43.5GHz / 67GHz)



Key Features

- Frequency range: 10MHz to 12GHz/24GHz/43.5GHz/67GHz
- Maximum output power: $\geq +20\text{dBm}$
- Phase noise: $< -116\text{dBc/Hz}$ (10GHz, 10kHz offset)
- Fast frequency switching time $< 10\mu\text{s}$
- Narrow pulse modulation, minimum pulse width 50ns
- Rise/fall time 10ns
- Compact, light weight
- Balance budget & performance to applications

Overview

Saluki S1133 series microwave analog signal generator is an ultra-low phase noise, high power output signal generator covering a continuous frequency range from 10MHz to 12GHz, 24GHz, 43.5GHz and 67GHz, with frequency resolution as low as 0.01 Hz. The S1133 series signal generator supports narrow pulse modulation. It is a cost-effective product that focuses on the application where excellent spectral purity, wide output power range and portability are necessary.

Applications: Local Oscillator Replacement / Component Test / Receiver Sensitivity Test / R&D low noise microwave generator

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Technical Specifications

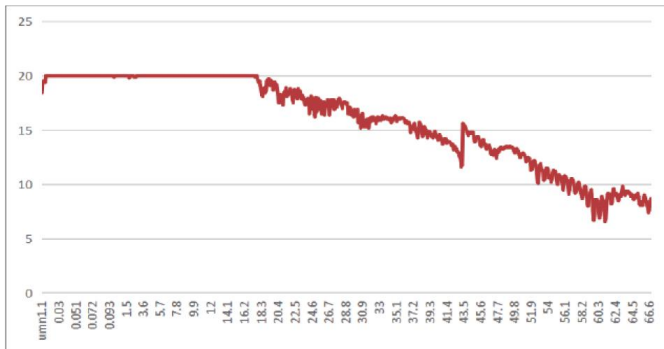
1. Frequency

Model	S1133A/B/C/D
Range	
Frequency Range	S1133A: 10MHz to 12GHz, S1133B: 10MHz to 24GHz, S1133C: 10MHz to 43.5GHz, S1133D: 10MHz to 67GHz
CW Switching Speed	≤ 20ms
Resolution	0.01Hz
Temperature Stability	<±0.5ppm, -20 to +70°C (typ.)
Internal Reference Output	
Frequency	10MHz
Power	+10±1dBm, 50ohm load
External Reference Input	
Input Frequency	10MHz
Locking Range	±1ppm
Power	+5±3dBm
Impedance	50ohm
Wave	Sine or square
Sweep Mode	
Working Mode	Step sweep
Sweep Range	Within instrument frequency range
Dwell Time	20ms to 10s
Resolution	100us

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2. Power

Model	S1133A/B/C/D		
Output			
Maximum Output Power	10MHz to 20GHz: $\geq +15\text{dBm}$ 20GHz to 40GHz: $\geq +13\text{dBm}$ 40GHz to 50GHz: $\geq +10\text{dBm}$ 50GHz to 67GHz: $\geq +7\text{dBm}$		
	 Output power		
Minimum Output Power	-110dBm/-90dBm (S1133D)		
Resolution	0.1dB		
Switching Speed	$\leq 20\text{ms}$		
Absolute Level Accuracy			
Frequency	$\geq -20\text{dBm}$	< -20 to -75dBm	$< -75\text{dBm}$
10MHz to 40GHz	$\pm 1.3\text{dB}$	$\pm 1.5\text{dB}$	$\pm 3.0\text{dB}$
40GHz to 67GHz	$\pm 1.3\text{dB}$	$\pm 1.5\text{dB}$	$\pm 3.5\text{dB}$
SWR			
(Step attenuator set to 10dB)	$\leq 2\text{GHz}$: $< 1.40:1$ 2GHz to 24GHz : $< 1.50:1$ 24GHz to 40GHz : $< 1.60:1$ 40GHz to 67GHz : $< 1.80:1$		

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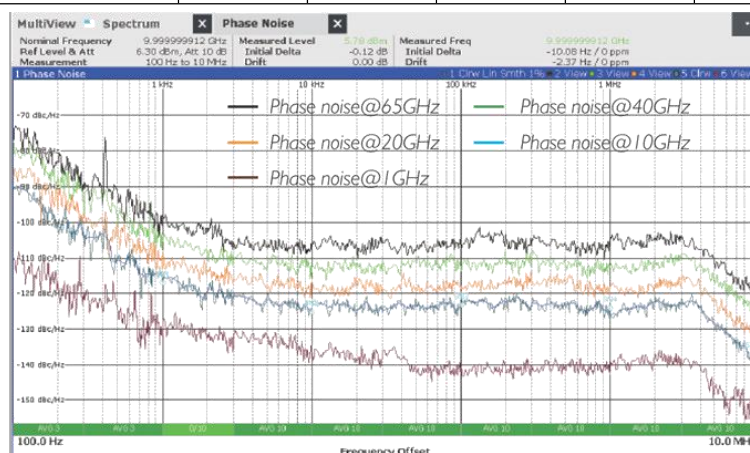


S1133 Series Microwave Analog Signal Generator

(Frequency Range: 10MHz - 12GHz / 24GHz / 43.5GHz / 67GHz)

3. Spectral Purity

Model	S1133A/B/C/D					
Harmonics						
(Output power:10dBm)	10MHz – 200MHz: <-40dBc, 200MHz – 20GHz: <-50dBc 20GHz – 40GHz: <-55dBc					
Non-harmonics						
(Output power:0dBm)	10MHz – 2GHz: <-75dBc 2GHz – 12GHz: <-70dBc 12GHz – 24GHz: <-65dBc 24GHz – 67GHz: <-60dBc					
SSB Phase Noise (0dBm Output Power, dBc/Hz)						
Frequency	Offset					
	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
5GHz	-105	-125	-130	-135	-135	-145
10GHz	-86	-108	-116	-116	-120	-140
20GHz	-80	-102	-110	-110	-114	-134
40GHz	-74	-96	-104	-104	-108	-128
67GHz	-70	-92	-90	-90	-94	-124



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4. Pulse Modulation

Model	S1133A/B/C/D
General Characteristics	
On/Off Ratio	> 70dB
Minimum Pulse Width	50ns
Minimum Period	100ns
External Pulse Input	
Input Resistance	DC coupling, high impedance
Level Logic	3.3V-CMOS
Internal Pulse Generator	
Square Wave Rate	0.1Hz to 10MHz
Pulse Period	100ns to 10s
Pulse Width	50ns to 10s
Resolution	5ns
Delay	5ns to 10s
Level Logic	3.3V-CMOS

5. Interface and structure

Model	S1133A/B/C/D
RF Output	3.5mm/2.92mm/1.85mm (50Ω)
Internal Pulse Output	BNC
External Pulse Input	BNC
External Reference Input	BNC
Internal Reference Output	BNC
External Trigger Input	BNC

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Internal Trigger Output	BNC
Control Interface	RJ-45 (TCP/IP over Ethernet)/RS422

6. General Information

Model	S1133A/B/C/D
Power Requirement	85-264VAC, 50Hz-60Hz, 110W
Temperature range	0°C to +50°C
Dimension	320 (W) × 88 (H) × 400 (D) mm (without protection cushion)
Weight	≤10kg

Ordering Information

Module No.	Item
S1133A	Microwave Analog Signal Generator, 10MHz to 12GHz
S1133B	Microwave Analog Signal Generator, 10MHz to 24GHz
S1133C	Microwave Analog Signal Generator, 10MHz to 43.5GHz
S1133D	Microwave Analog Signal Generator, 10MHz to 67GHz

Options

Option No.	Item
S1133-CL	1.6GHz Clock Input & Output
S1133-LF	100kHz to 10MHz LF Output

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