



## S1131 Signal Generator Datasheet



Saluki Technology Inc.

The document applies to the instruments of the following models:

- S1131 signal generator (100kHz-3GHz).

### Standard Accessories of S1131 Signal Generator

Item	Name	Qty
1	Main Machine	1 Set
2	Power Cord	1 pcs
3	CD	1 pcs

## Preface

Thanks for choosing Saluki Technology Inc instrument. We devote ourselves to meeting your demands, providing you high-quality measuring instrument and the best after-sales service. We persist with "superior quality and considerate service", and are committed to offering satisfactory products and service for our clients.

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## Authorization

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## Product Quality Assurance

The warranty period of the product is 18 months from the date of delivery. The instrument manufacturer will repair or replace damaged parts according to the actual situation within the warranty period. The user should return the product to the manufacturer and prepay mailing costs. The manufacturer will return the product and such costs to the user after maintenance.

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## 1. Overview

S1131 is a high-performance RF signal generator. It provides multiple functions such as CW signal generate, analog modulation, digital modulation, pulse modulation, frequency/amplitude sweep, step/list sweep etc. S1131 also provides flexible interfaces and support SCPI for easy remote control. S1131 is perfect suitable for education, RF component manufacture and maintenance.

### Key Features

- Frequency range
  - S1131: 100kHz - 3.0GHz
- Multi sweep mode, Step sweep, list sweep, frequency sweep and power sweep
- Standard low frequency output function, sine, square, triangle and saw tooth wave forms are supported
- Standard analog modulation functions, AM, FM, PM and Pulse modulation.
- Standard digital modulation functions, 2ASK, 2,4,8FSK, 2,4,8PSK supported.
- Standard IF input port
- SCPI supported.

## 2. Specification Details

### 2. 1. Frequency

Frequency	
Frequency Range	100kHz - 3GHz
Frequency Resolution	1Hz
Reference Frequency	10MHz
Aging Rate (Typ.)	1ppm/year
Temperature Stability (Typ.)	1ppm/year
Sweep Modes	Step Sweep / List Sweep
Sweep Type	Sweep / Amplitude / Sweep+Amplitude
Sweep Point	Step Sweep: 2 - 65535 List Sweep: 2 - 16383
Trigger Mode	Free, External
Dwell Time	20ms – 50s

## 2. 2. Amplitude

Amplitude	
Output Power Range	-120dBm to +10dBm
Output Power Resolution	0.01dB
Power Accuracy	<±1dB
VSWR	<1.8
ALC Settings	
ALC Dynamic Range	50Db (Typ.)
Dwell time (ALC ON)	≤5ms
Max. Reverse Power	1W

## 2. 3. Signal Purity

Spectral Purity Specifications			
SSB Phase Noise (dBc/Hz)	Carrier Frequency Offset	10kHz	100kHz
	f = 300MHz	-100dBc/Hz	-115dBc/Hz
	f = 1GHz	-90dBc/Hz	-105dBc/Hz
Harmonic	<-30dBc (typ.)		
Non-Harmonic	<-50dBc (typ.)		

## 2. 4. Analogue Modulation Specifications

Modulation Specification				
Internal Modulation Signal Generator (LF)	Waveform	Sine, square, triangle, sawtooth		
	Frequency Range	Sine wave:	0.1Hz - 1MHz	
		Square	0.1Hz - 20kHz	
		triangle, sawtooth	0.1Hz - 100kHz	
	Frequency Resolution		0.01Hz	
	Output level Range		200mVp-p to 20Vp-p	
	Output level Resolution		1mV	
Pulse Modulation	Pulse modulation rise/fall time		100ns(Tpy.)	
	Pulse Cycle Range		200ns - 160s	
	Resolution		100ns	
	Min.pulse width		100ns	
Amplitude Modulation	Modulation Depth		0 - 100%	
	Modulation Rate		20Hz - 1MHz	
Phase Modulation	Modulation Phase		0 - 360	
	Modulation Rate		20Hz - 1MHz	
Frequency Modulation	Frequency Offset		2MHz	
	Modulation rate		20Hz - 1MHz	

## 2. 5. IF Frequency Upper Conversion Settings

Frequency Upper Conversion	
Input IF frequency range	20MHz – 300MHz
Input IF power range	-50dBm - 0dBm
Output frequency range	301MHz – 1.5GHz
Output power range	-120dBm - +10dBm

## 2. 6. Digital Modulation

Digital Modulation	
Modulation Source	Internal Only
Internal Baseband	ASK/2FSK/4FSK/8FSK/2PSK/4PSK/8PSK

## 2. 7. Interfaces

Interface	
RF Output Interface	N type 50ohm (Front Panel)
LF Output	BNC 50ohm (Front Panel)
IF Input	BNC 50ohm (Front Panel)
USB	USB B 2.0 B type (Front Panel)
External Ref In/Out	BNC 50ohm (Rear Panel)
External Pulse Input	BNC 50ohm (Rear Panel)
External Trigger Input	BNC 50ohm (Rear Panel)
LAN	10/100 Base T (Rear Panel)
USB	USB A type (Rear Panel)
RS232	9-PIN D-SUB Male (Rear Panel)



## 2. 8. General

General	
Dimension (W x D x H)	340mm× 230mm×110mm
Weight	Approx. 5Kg
Operating Temp.	0°C - +45°C
Storage Temp.	-20°C - +70°C
Power Supply	110 - 240V 50/60Hz

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