

S3101 Cable & Antenna Tester Datasheet



Saluki Technology Inc.

The datasheet applies to the cable and antenna analyzer of the following models:

- S3101A cable and antenna analyzer (1MHz - 4GHz).
- S3101B cable and antenna analyzer (1MHz - 8GHz).

Standard Accessories of S3101 Cable and antenna analyzer

Item	Name	Qty
1	Main Machine	1 Set
2	Power Cord	1 pcs
3	User Manual	1 pcs
4	PC software CD or U disk	1 pcs
5	USB cable	1 pcs
6	Battery	1 pcs
7	Vehicle charger	1 pcs

Options of the S3101 Cable and antenna analyzer

Option Number	Item	Function
S3101-01	USB power measurement software	\
S3101-04	USB Continuous Wave Power Sensor SAV87230	9kHz-6GHz
S3101-05	USB Continuous Wave Power Sensor SAV87231	10MHz-18GHz
S3101-06	USB Continuous Wave Power Sensor SAV87232	50MHz-26.5GHz
S3101-07	USB Continuous Wave Power Sensor SAV87233	50MHz-40GHz
S3101-08	Type N Male Calibration Kit SAV31101A	DC-18GHz
S3101-09	Type N Female Calibration Kit SAV31101B	DC-18GHz
S3101-10	Type N Male Calibration Kit SAV20201A	DC-9GHz
S3101-11	Type N Female Calibration Kit SAV20201B	DC-9GHz
S3101-12	N-DIN Adaptor	L29/N-KJ-T
S3101-13	N-DIN Adaptor	L29/N-JJ-T
S3101-03	GPS Cable	

Option Number	Item	Function
S3101-14	Test Port Extension Cable (Low loss)	N-JK (80cm)
S3101-15	Test Port Extension Cable (Low loss)	N-JJ (80cm)
S3101-16	Functional soft case	\
S3101-17	Electronic calibration kit (Embedded)	For S3101A only

Preface

Thanks for choosing Saluki Technology Inc products. Please read this quick starter manual carefully for your convenience.

Manual No.

S3101-02-01

Version

Rev01 2017.03 Saluki Technology

Manual Authorization

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Product Quality Assurance

The warranty period of the product is 18 months from the date of delivery.

Product Quality Certificate

The product meets the indicator requirements of the manual at the time of delivery. Calibration and measurement are completed by the measuring organization with qualifications specified by the state, and relevant data are provided for reference.

Quality/Environment Management

Research, development, manufacturing and testing of the product comply with the requirements of the quality and environmental management system.

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1 Overview

S3101 series cable and antenna analyzer is designed with latest technologies and can provide an accurate and fast measurement. Operator can measure VSWR, return loss, impedance, phase, DTF etc. with such a compact and low-weight box. S3101 equipped with long-term battery, touch screen, auto-adjust back light for easy site use.

S3101 is perfect for cable and antenna system site test of telecommunication base stations. Tetra, GSM, PCS/DCS, CDMA, GPRS, WCDMA, CDMA200, TD-SCDMA, LTE etc. S3101B reaches 8GHz and brings more abilities to do higher frequency measurements.

S3101 also provides smith chart, phase display and can be easily used as a single port VNA.

Key features

- 1MHz – 8GHz frequency range
- 7 display formats: Return Loss, VSWR, Cable loss, DTF return loss, DTF SWR, Smith chart, phase.
- 7" touch screen with auto backlight adjustment
- Dual-window display allows user to get a better observation.
- 8 hour long time battery life
- Wise measurement wizard
- Embedded E-cal kit
- Build-in GPS receiver
- SCPI supported
- Compact design, small size, low weight, sand proof.

2 Specifications

2.1 Frequency

	S3101A	S3101B
Frequency Range	1MHz - 4GHz	1MHz - 8GHz
Frequency Uncertainty	$\pm 2 \times 10^{-6}$ (23°C)	$\pm 2.5 \times 10^{-6}$ (23°C)
Frequency Temperature Stability	$\pm 1 \times 10^{-6}$ / 10°C	$\pm 1 \times 10^{-6}$ / 10°C
Frequency Resolution	1kHz	1kHz

2.2 Corrected Performance

	S3101A	S3101B
Directivity	≥ 42 dB (Mechanical Calibration) ≥ 35 dB (Embedded Electronic Calibration)	≥ 42 dB (1MHz - 6GHz) ≥ 36 dB (6GHz - 8GHz)
Source Match	≥ 31 dB (Mechanical Calibration)	≥ 31 dB
Reflection Track	± 0.08 dB (Mechanical Calibration)	± 0.08 dB

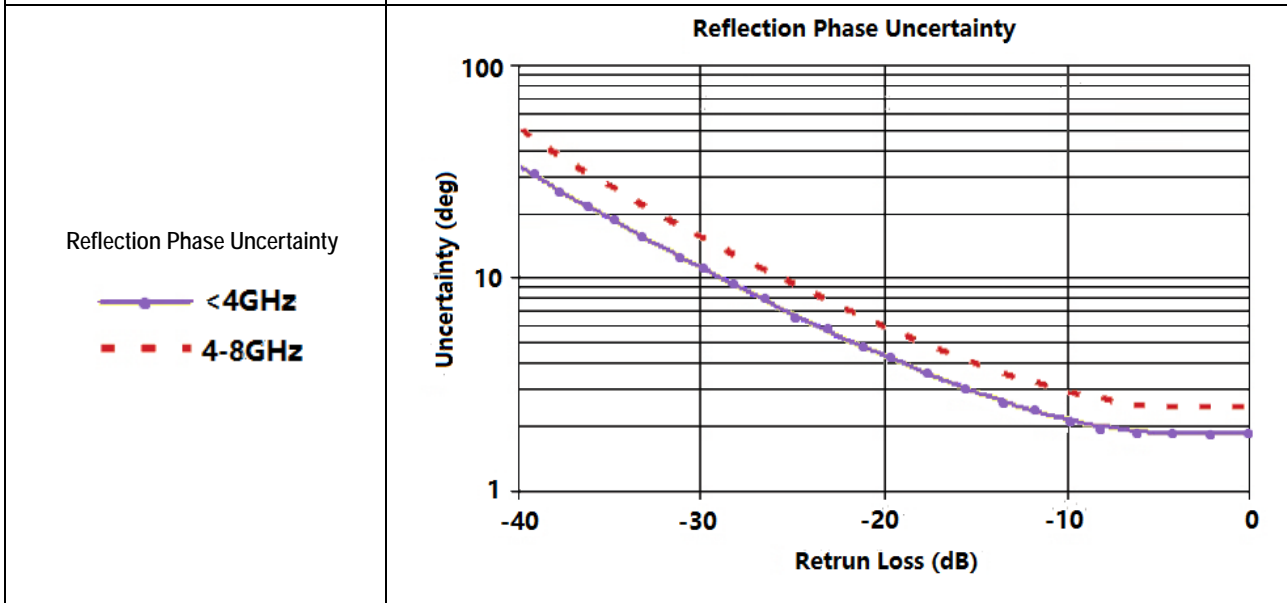
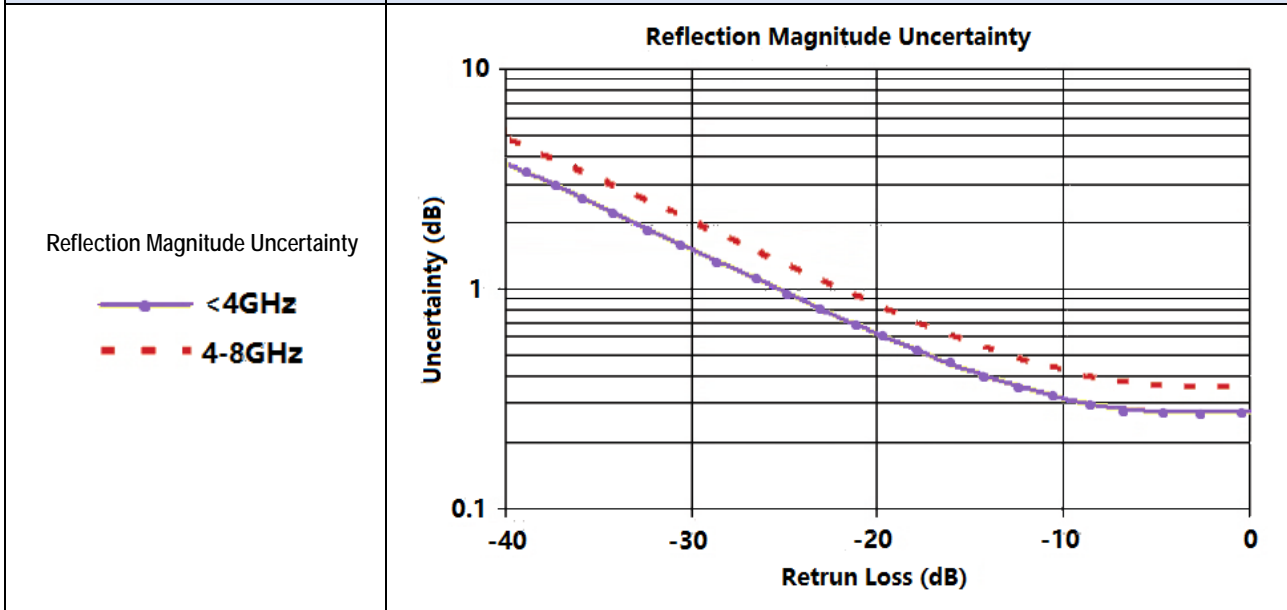
2.3 Interfaces

Test Port	N type (F)
10 Ref In/Ref Out	BNC
GPS Antenna Port	BNC
Data Storage	USB, Mini USB, Mini SD
Network Port	LAN RJ 45
Audio Out	Headphone port

2.4 Measurement Function Parameter

Output Power Range	0 to -30dBm
Return Loss Range	-100 dB TO 100 dB
Return Loss Resolution	0.01

VSWR Range	1-65
VSWR Resolution	0.01
Cable Loss Range	0 – 30dB
Cable Loss Resolution	0.01 dB
Sweep Points	2-1001
Sweep Time (10k IF bandwidth)	1ms/point



2.6 General

	S3101A	S3101B
Battery Life	8h (with embedded E-cal kit) 6h (without embedded E-cal kit)	4h
Consumption	≤15W ≤54W (with battery charging)	≤18W ≤54W (with battery charging)
Power Adaptor	110V/220V, 50Hz AC	
Dimension (W x H x D)	295mm x 205mm x 70mm	
Weight	Approx. 2.5kg (with battery)	
Operation Temp.	-10°C to +50°C	
Storage Temp.	-40°C to +70°C	

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