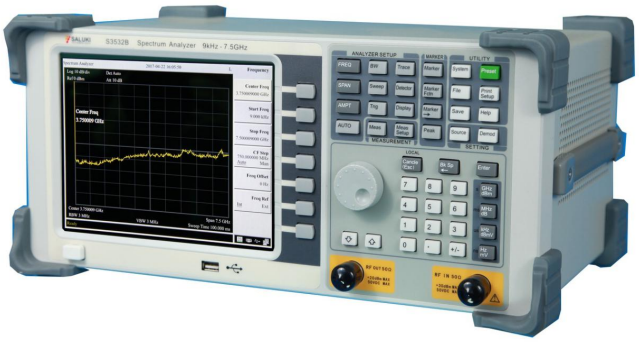
S3532 Series Spectrum Analyzer

Datasheet



Saluki Technology Inc.

The document applies to the instruments of the following models:

- S3532A spectrum analyzer (9kHz-3.6GHz).
- S3532B spectrum analyzer (9kHz-7.5GHz).

Standard Accessories of S3532 spectrum analyzer

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

Options of the S3532 spectrum analyzer:

Option No.	Item	Description
S3532-01	Field Strength Measurement	/
S3532-02	Near Field Probe Kit	/
S3532-03	Frequency Identity Module	/
S3532-04	Directional Antenna	Frequency range: 600MHz - 8GHz
S3532-05	Omnidirectional Antenna	Frequency range: 300MHz - 7.5GHz
S3532-06	SWR Bridge	Frequency range: 10MHz - 3.6GHz
S3532-07	USB Power Sensor	Frequency range: 10MHz - 6GHz
S3532-08	RF Demonstration Kit	/

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.

Document No.

S3532-02-01

Version

Rev02 2019.05

Saluki Technology

Authorization

The information contained in this datasheet is subject to change without notice. The power to interpret the contents of and terms used in this Document rests with Saluki.

Product Quality Assurance

The warranty period of the product is 36 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.

Contacts

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Content

1. Overview

S3532 series spectrum analyzer covers a frequency range up to 7.5GHz. It provides a good performance with a low cost. S3532 is a good choice for RF product manufacturing and maintenance. S3532 has rich measurement functions, including spectrum analysis, network measurement, field strength measurement, channel scanning, analog demodulation, and template alarm settings. Standard tracking source is provided for test need stimulus signal. It also provides telecommunication ports such as USB and LAN for remote data collection and remote control. Using the standard SCPI command set, user can quickly set up and upgrade an integrated test system for measurement.

S3532 series handheld spectrum analyzer has compact structure and a good performance. S3532 can be used in aerospace, microwave communication, satellite navigation, radar monitoring, electronic detection and countermeasures, precision guidance and other fields.

Key Features

- Frequency range: 9kHz - 3.6GHz / 7.5GHz
- Resolution bandwidth: 1Hz -3MHz
- Sensitive, standard pre-amplifier, best DANL < -160dBm
- Multi-window, multi-trace, clear display
- Dual signal source (tracking source and normal source)
- Standard LAN and USB interface, support SCPI
- Standard AM,FM demodulation functions
- Standard FFT 1Hz resolution bandwidth function
- Standard 3.2GHz / 3.6GHz tracking source function
- Support field strength measurement, frequency discrimination test, Pass-fail, S11 and S21, channel measurement, etc. Functions

2. Specification Details

2. 1. Frequency

	S3532A	S3532B
Frequency range	9kHz - 3.6GHz	9kHz - 7.5GHz
Resolution	1Hz	1Hz
Frequency readout accuracy	± (frequency indication × frequency reference+1% × span+10% × RBW+0.5 × [span/(number of sweep points-1)]+1Hz)	
Aging Rate	±1ppm/year	

Temperature stability	±0.5ppm (15℃ ~ 35℃)

2. 2. Amplitude

	S3532A	S3532B
Amplitude		
Measurement Range (fc≥10MHz)	DANL to +27dBm	DANL to +20dBm
Maximum Safe Input Level	+37dBm	+23dBm
Maximum DC Voltage	50Vdc	50Vdc
Input Attenuator Range	0 - 39dB, Steps of 3 dB	0 - 30dB, Steps of 1 dB
Test Port VSWR	< 2.0:1	9kHz – 3.4GHz: < 2.0:1 3.4GHz – 7.5GHz: < 2.5:1
Reference Level Range	-80dBm to +30dBm, step in 1dB	-80dBm to +30dBm, step in 1dB
1dB compression	+7dBm	+10dBm
Amplitude Accuracy（20℃ - 30℃）		
Comprehensive amplitude accuracy（90%）	Input range: 0dBm to -50dBm, ±1.5dB	

2. 3. Input /Output

		S3532A	S3532B
RF Input/Output		Type -N female (50Ω)	
USB		USB 1.1 B, USB 2.0 A	
LAN		10/100 Base-T, RJ-45 Connectivity	
AF Output		3.5mm mini jack for headphones	
Reference input/output		10MHz: Input level 0dBm to +10dBm	
		BNC female: Output level 0dBm±2dB	
Trig input	**BNC female**	5V TTL（±10V,100mA maximum）	
VGA		800*600, 60Hz 15 D-SUB pin (f)	
RS232		9 D-SUB pin (M)	

2. 4. RBW

	S3331A	S3331B

Range	1Hz - 500kHz (in 1 to 10 step), 1MHz, 3MHz
Resolution filter shape factor(60dB/3dB)	<5:1 (Typ.)
Accuracy	<5% (Typ.)
Video bandwidth (VBW)	10Hz - 3MHz

2. 5. DANL（0dB attenuation, RBW=1Hz）

S3532A			**S3532B**		
Frequency	**Preamp off**	**Preamp on**	**Frequency**	**Preamp off**	**Preamp on**
100kHz - 1MHz	<-100dBm-3×(f/100kHz)dB	<-120dBm-3×(f/100kHz)dB	100kHz - 1MHz	<-95dBm-3×(f/100kHz)dB	<-110dBm-3×(f/100kHz)dB
1MHz - 10MHz	<-130dBm	<-150dBm	1MHz - 10MHz	<-125dBm	<-140dBm
10MHz - 1GHz	<-135dBm	<-155dBm	10MHz - 2GHz	<-133dBm	<-148dBm
1GHz - 3.6GHz	<-130dBm	<-148dBm	2GHz - 3.4GHz	<-130dBm	<-143dBm
			3.4GHz - 5GHz	<-133dBm	<-145dBm
			5GHz - 7.5GHz	<-127dBm	<-138dBm

2. 6. Phase Noise

	S3532A		**S3532B**	
SSB phase noise (RBW=1kHz, Sample detector, Trace average ≥10)				
CF=500MHz	Carrier offset 30kHz	-90dBc/Hz	Carrier offset 30kHz	-80dBc/Hz
	Carrier offset 100kHz	-100dBc/Hz	Carrier offset 100kHz	-90dBc/Hz
	Carrier offset 1MHz	-110dBc/Hz	Carrier offset 1MHz	-110dBc/Hz

2. 7. Sweep Time

	S3532A	**S3532B**
Sweep time		
Full Span	3ms - 3000s	
Zero Span	1ms - 3000s	
Sweep Mode	Continuous, single	
Best Sweep Time (Full Span)	<50ms	<100ms

2. 8. Spurious Response

	S3532A	S3532B
TOI (>30MHz)	+10dBm	+13dBm
SHI (>10MHz)	+30dBm	+40dBm
Input related spurious (>10MHz)	<-60dBc	
Inherent residual response (>10MHz)	<-85dBm	

2. 9. Tracking Generator

	S3532A	S3532B
Frequency range	100kHz - 3.6GHz	100kHz - 3.2GHz
Output level	-30dBm To 0dBm Stepped by 1 dB	
Output flatness	±3dB	

2. 10. General

		S3532A	S3532B
Display		8.4 inch TFT LCD	8.4 inch TFT LCD
Detector		Sample, Peak, Negative peak, Normal	
Marker Counter Resolution		1Hz, 10Hz, 100Hz, 1kHz	
Limit Line		Available	
Dimensions		390(H)×182(W)×230(D)mm	390(H)×182(W)×230(D)mm
Weight		6.5Kg	6.5Kg
Operating Temperature range		0℃ to 40℃	0℃ to 40℃
Storage Temperature range		-20℃ to +70℃	-20℃ to +70℃
Power	**Input Voltage**	100V-240V AC	100V-240V AC
	Input Frequency	40Hz - 60Hz	40Hz - 60Hz
	Consumption	Max.30W	Max.30W

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