



SAV102 NB-IoT Modular Signal Generator

Datasheet



Saluki Technology Inc.

The document applies to following models:

- SAV102 NB-IoT Modular Signal Generator

Standard Accessories

- Main Machine
- Power adapter
- USB Cable

Options

SAV102-001	GSM License
SAV102-002	WCDMA License
SAV102-003	TDD-LTE License
SAV102-004	FDD-LTE License
SAV102-005	NB-IoT License
SAV102-006	LoRa License

Preface

Thank you for choosing SAV102 NB-IoT Modular Signal Generator produced by Saluki Technology Inc.

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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Saluki Technology

Document 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.

Product Quality Certificate

The product meets the indicator requirements of the document 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/Settings 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

SAV102 NB-IoT Modular Signal Generator is designed to meet the rapid growth of wireless telecommunication and IoT test requirement. SAV102 is capable to generate arbitrary wave signal, CW signal, vector signal and digital modulation. It also supports standard WIFI signal and telecommunication standard signal. It is a perfect source for education, wireless monitoring, mobile communication and defense.

Key features

- Frequency range: 10MHz~6GHz (up to 9GHz supported in the near future)
- Power coverage: -110~+10dBm
- Full range of common digital modulation: BPSK, QPSK, OQPSK, 8PSK, 16QAM, 32QAM, 64QAM, MSK, FSK, output linearity, log scan and multiple modulation mode
- Variety of common signal generating including GSM/ EDGE/ CDMA/ TD-SCDMA/ WCDMA/ CDMA2000/ TD-LTE/ FDD-LTE/ NB-IoT/ LoRa. Users can modify channels under different configuration
- Pulse modulation function
- Fixable integration interface, customized data can be input into module to generate customized signal
- Simple control via USB port. Provide API for second-time development

1.1. Definitions

Specification (Spec.)

Specifications describe the performance of parameters within the warranty of the instrument. Product specifications apply under the following conditions:

- 1) Two hours storage at ambient temperature (0-40°C) followed by 30 minutes warm-up operation
- 2) Specified environmental conditions met
- 3) Instrument is within its calibration cycle.
- 4) The specification listed in the datasheet includes measurement uncertainties.

Data in this document are Spec. unless otherwise noted.

Typical (typ.)

Typical data is not guaranteed by instrument warranty. It describes additional product performance information that 80 percent of the units exhibit. Typical data only valid at 25°C. Typical performance does not include measurement uncertainty.

Nominal(nom.)

Nominal values indicate expected performance, or describe product performance that is useful in the application of the product, but are not covered by the product warranty.

2. Specifications

2.1. Frequency

- Frequency Range

Model	Frequency Range
SAV102	10MHz - 6GHz

- Frequency Reference

Frequency Resolution	0.1Hz
Frequency-Temperature Stability	± 1 ppm
Initial Frequency Accuracy	± 0.5 ppm

2.2. Amplitude

- Amplitude Range

Measurement Range	-110dBm ~ +10dBm, f < 3.5GHz
Amplitude Resolution	0.1dB

- Absolute Amplitude Accuracy

All Frequency	± 1.5 dB
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2.3. Harmonic, Spurious, Phase Noise

- Harmonic

Harmonic	≤ -30 dBc
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- Spurious

Spurious	≤ -55 dBc
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- Phase Noise

Settings: CF=1GHz, 10kHz offset

Phase Noise	≤ -105 dBc
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2. 4. Modulation

Modulation Bandwidth	20MHz
Modulation Type	Analog, Vector, Pulse
Pulse Modulation	Pulse Width: 100ns - 1s Repetition Rate: 1Hz – 5MHz
Universal Digital Modulation Type	BPSK、QPSK、OQPSK、8PSK、MSK、FSK、16QAM、32QAM、64QAM
Mobile Communication Standard	GSM/EDGE/CDMA/TD-SCDMA/WCDMA/CDMA2000k/TD-LTE/FDD-LTE/NB-IoT/ LoRa
Supported Channel (LTE)	PSS、SSS、CSRS、PBCH、PCFICH、PHICH、PDCCH、PDSCH、PUSCH、PUCCH、PRACH and SRS
EVM	≤2%rms
Frequency Error	Better than ±10Hz
Phase Error	Better than ±3°
Waveform Quality ρ	>0.9999

2. 5. General

Power Supply	12V DC
Power Supply Current	2A Max
Communication Interface	USB Type C
Provided API	Windows API
Dimension	190 x93 x 32 mm

2. 6. Compliant

2. 6. 1. CE



- EMC

Complies with the requirements of the EC EMC directive 2014/30/EU with amendments.

Test Standards:

EN 61326-1:2013

EN 61000-3-2:2014

EN 61000-3-3:2013

- Safety

Complies with EC LVD Directive 2014/35/EU with amendment.

Test Standard

EN61010-1:2010

2. 6. 2. ISO



- Manufacturing

This instrument is manufactured in an ISO-9001 registered facility

- End of Document -