

Product Datasheet - Technical Specifications



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A noise source is a device that generates a random continuous spectrum signal. A well-operated noise source should have a stable output noise power and a homogeneous power spectral density within a specified frequency band. China Electronics Technology Instruments Co., Ltd (CETI as follows) provides a variety of solid-state coaxial noise sources in the frequency range of 10MHz to 40GHz, namely, smart and standard series, which have the advantages of wide frequency coverage, small output voltage standing wave ratio (VSWR), and excellent flatness of output excess noise ratio, etc.

The smart noise source adopts the I2C bus-technology to realize the automatic download

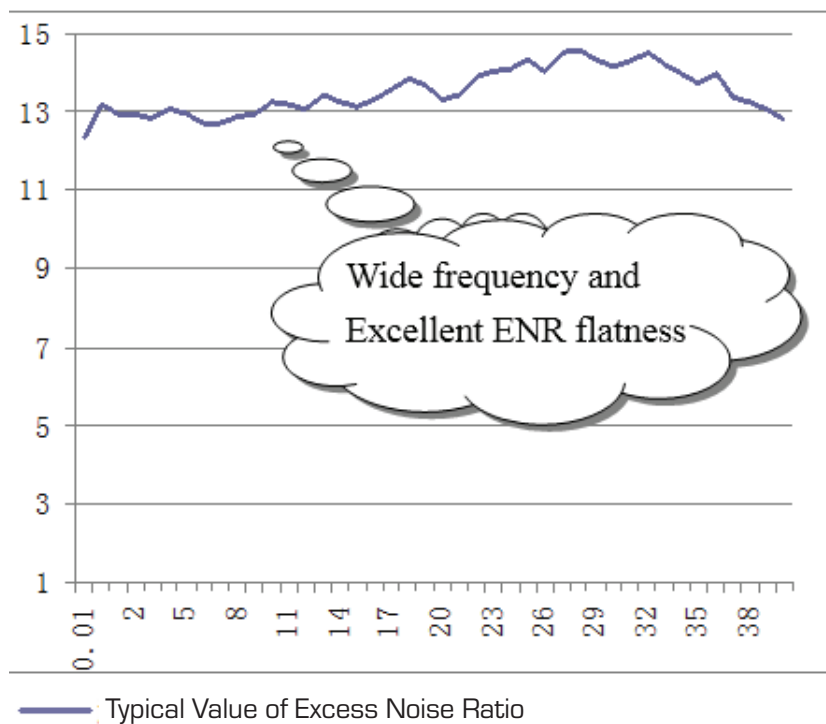
and improve the measurement speed. Equipped with digital temperature sensor, it is convenient for the host to automatically monitor the change of ambient temperature and can be used to correct the temperature of the noise figure measurement and improve the measurement precision. Standard noise source requires +28V pulse voltage drive.

The solid-state noise source and noise figure analyzer are used together to provide a complete solution for the measurement of the noise figure of microwave millimeter wave frequencies. CETI has established a corresponding frequency band noise source calibration system to calibrate the excess noise ratio of noise source regularly.

- Wide frequency coverage and excellent flatness of output excess noise ratio
Touch screen operation
- The value of excess noise ratio can be automatically loaded after the smart noise source connecting with noise figure analyzer
List sweep
- Real-time temperature detection
Data save/recall
- Perfect calibration system for accurate calibration and periodic verification of noise source
excess noise ratio
Power measurement

Wide frequency coverage and excellent flatness of output excess noise ratio

The upper frequency limit of the series coaxial noise source can reach 40GHz. The frequency coverage is wide and the flatness of excess noise ratio is good.



The value of excess noise ratio can be automatically loaded after the smart noise source connecting with noise figure analyzer

Smart noise source adopts I2C bus-technology with built-in electronic memory to store the data of frequency-dependent excess noise ratio.

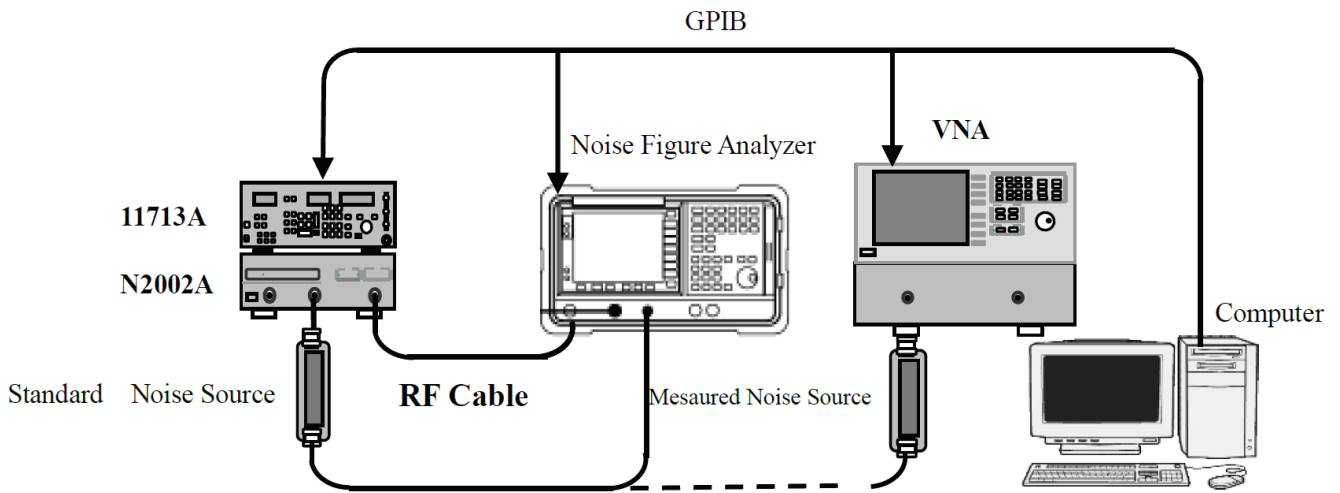
Real-time temperature detection

The smart noise source has a built-in digital temperature sensor, which can monitor the real-time change of the ambient temperature, and can be used to correct the temperature of the noise figure measurement and improve the measurement precision.

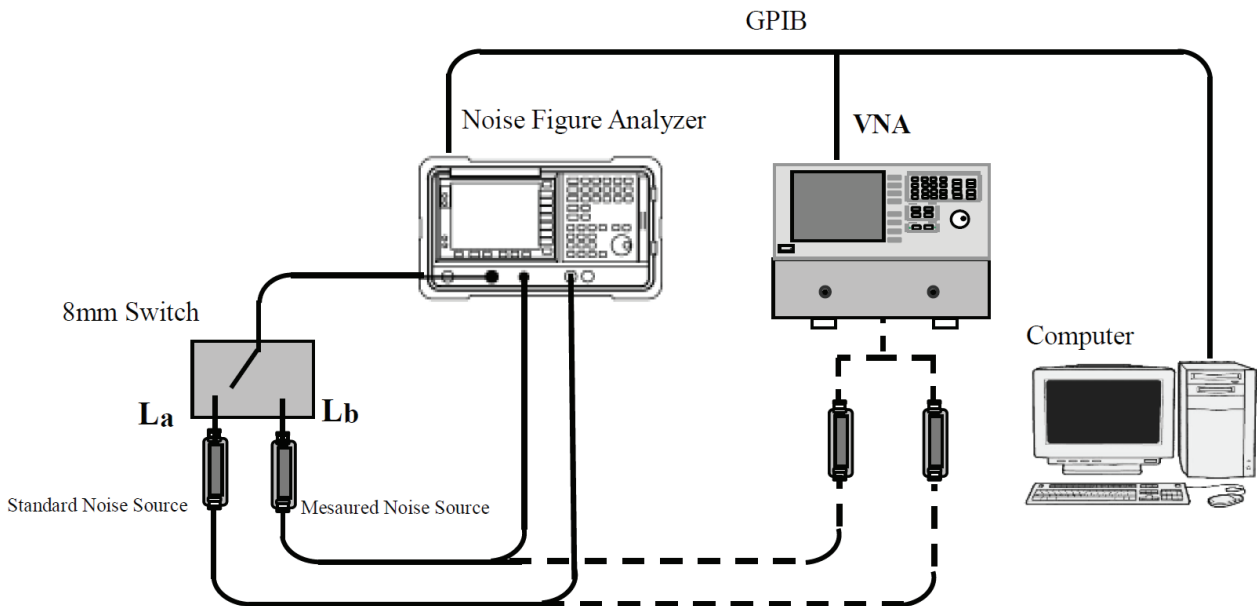
Main Characteristics

Perfect calibration system for accurate calibration and periodic verification of noise source excess noise ratio

The microwave and millimeter wave noise source calibration system is established and the automatic test software is developed to realize the automatic calibration of excess noise ratio of the noise source and to facilitate the periodical verification of the noise source.



A calibration system for the excess noise ratio of microwave wave noise source



A calibration system for the excess noise ratio of millimeter wave noise source

Technical Specifications

| Types | Frequency Range | Excess Noise Ratio Range | Output VSWR | Output Interface Types | Driver Interface |
|--|-----------------------------|--------------------------|----------------|------------------------|---------------------------|
| 16603 Series Noise Source | | | | | |
| 16603DA | 10MHz...18GHz | 5dB...8dB | <1.30:1 | 3.5 mm (male) | Standard Driver Interface |
| 16603DB | 10MHz...18GHz | 14dB...17dB | <1.30:1 | | |
| 16603EB | 10MHz...26.5GHz | 12dB...17dB | <1.35:1 | | |
| 16603FB | 10MHz...40GHz | 12dB...19dB | 10MHz...18GHz | 2.4 mm (mal) | |
| | | | 18GHz...40GHz | | |
| 16603HB | 10MHz...50GHz | 10dB...19dB | <10MHz...18GHz | | |
| | | | 18GHz...50GHz | | 1.35:1 1.50:1 |
| Max. Size | W×H×D=30mm×21.5mm×137mm | | | | |
| Max. Weight | 0.17kg | | | | |
| 16604 Series Smart Noise Source | | | | | |
| 16604DA | 10MHz...18GHz | 5dB...8dB | <1.30:1 | 3.5 mm (male) | Smart Driver Interface |
| 16604DB | 10MHz...18GHz | 14dB...17dB | <1.30:1 | | |
| 16604EB | 10MHz... 26.5GHz | 12dB...17dB | <1.35:1 | | |
| 16604FB | 10MHz...40GHz | 12dB...19dB | 10MHz...18GHz | 2.4 mm (male) | |
| | | | 18GHz...40GHz | | |
| 16604HB | 10MHz...50GHz | 10dB...19dB | 10MHz...18GHz | | |
| | | | 18GHz...50GHz | | <1.35:1 <1.50:1 |
| Max. Size | W×H×D=52.5mm×33.5mm×125.5mm | | | | |
| Max. Weight | 0.25kg | | | | |