

16603/16604 Series Noise Source (10MHz~18GHz/26.5GHz/40GHz/50GHz)

Product Description



The noise source is a device that can generate 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. We, China Electronics Technology Instruments Co., Ltd (CETI as follows) provide a variety of solid-state coaxial noise sources in the frequency range of 10MHz to 50GHz, 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.

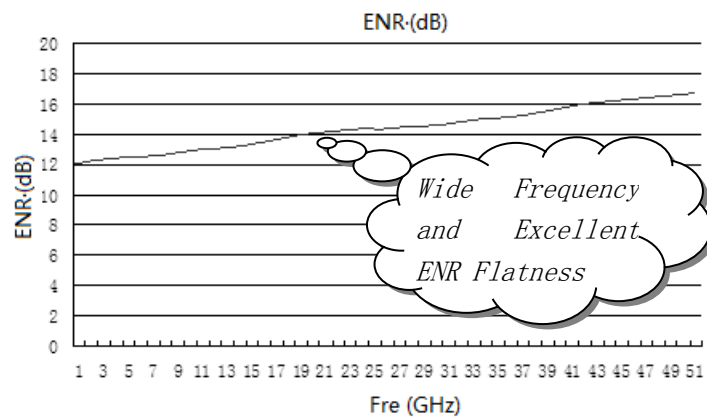
The solid-state noise source and noise figure analyzer are used together to provide a complete solution for the measurement of the noise figure of microwave millimeter wave frequencies. CETI has established a corresponding frequency band noise source calibration system to calibrate the excess noise ratio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

Main Character

- Wide frequency coverage and excellent flatness of output excess noise ratio
- The value of excess noise ratio can be automatically loaded after the smart noise source connecting with noise figure analyzer
- Real-time temperature detection
- Perfect calibration system for accurate calibration and periodic verification of noise source excess noise ratio

Wide frequency coverage and excellent flatness of output excess noise ratio

The upper frequency limit of the series coaxial noise source can reach 50GHz. 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.

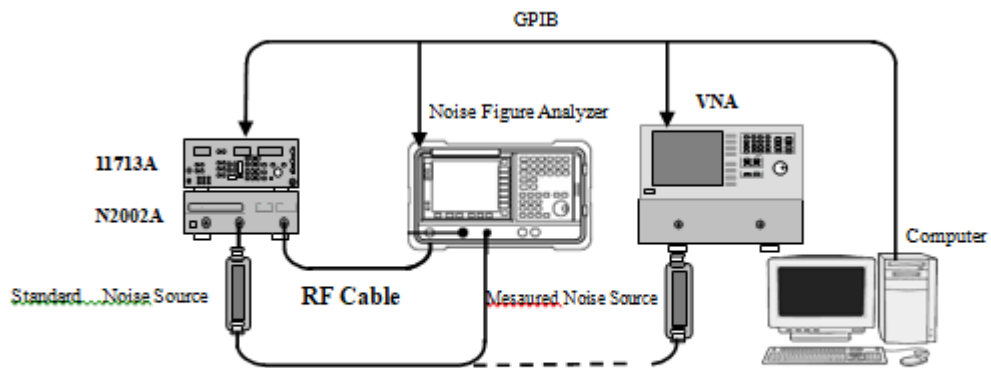
Real-time temperature detection

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.

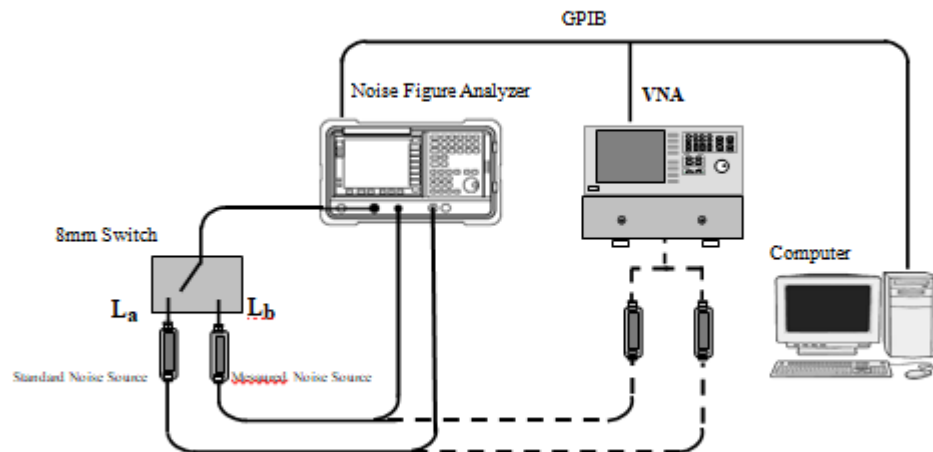
Perfect calibration system for accurate calibration and periodic verification of noise source excess noise ratio

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

16603 Series Noise Source					
Model	Frequency Range	Excess Noise Ratio Range	Output VSWR	Output Interface Types	Driver Interface
16603DA	10MHz~18GHz	5dB~8dB	<1.30: 1	3.5mm (m)	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 <1.35: 1	2.4mm (m)	
			18GHz~40GHz <1.45: 1		
16603HB	10MHz~50GHz	10dB~19dB	10MHz~18GHz <1.35:1		
			18GHz~50GHz <1.50:1		
Dimension	W×H×D=30mm×21.5mm×137mm				
Weight	0.17kg				
16604 Series Noise Source					
Model	Frequency Range	Excess Noise Ratio Range	Output VSWR	Output Interface Types	Driver Interface
16604DA	10MHz~18GHz	5dB~8dB	<1.30: 1	3.5mm (m)	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 <1.35: 1	2.4mm (m)	
			18GHz~40GHz <1.45: 1		
16604HB	10MHz~50GHz	10dB~19dB	10MHz~18GHz <1.35:1		
			18GHz~50GHz <1.50:1		
Dimension	W×H×D =52.5mm×33.5mm×125.5mm				
Weight	0.25kg				

Ordering Information

- Main Unit: 16603/16604 Series Noise Source
- Standard Configuration:

No.	Types	Explanation
1	Noise Source Drive Cable	Multi-core Cable: used for the connection of smart noise source and noise coefficient analyzer; BNC (Male)-BNC (Male) Cable: used for the connection of standard noise source and noise coefficient analyzer.
2	Excess Noise Ratio Calibration Data	
3	Manufacturer's Certificate	

- Options:

No.	Types	Functions
16603/4-H01	711XX Series Coaxial Adapters	Used for the adaptable connection between noise sources and noise figure analyzers