HNFP serial Near Field Probe
User manual

Ver 1.0



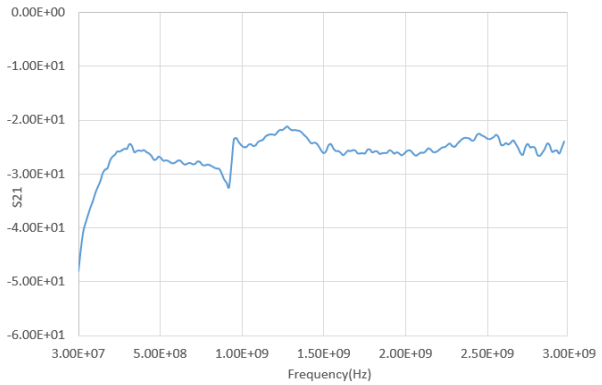
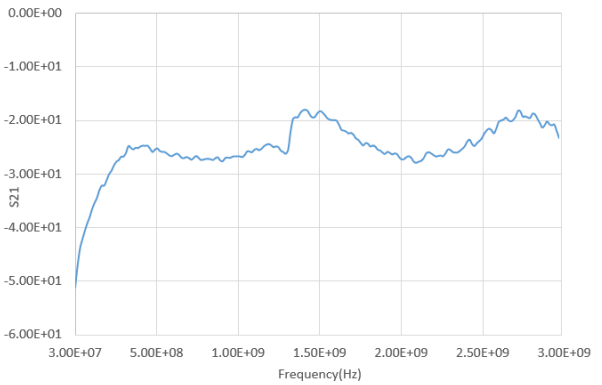
1. Summary

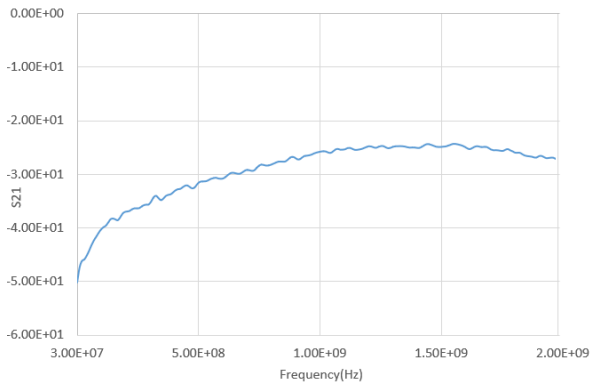
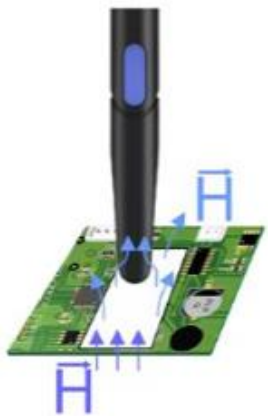
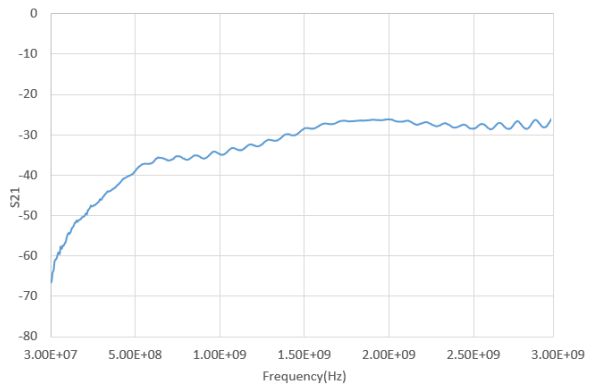
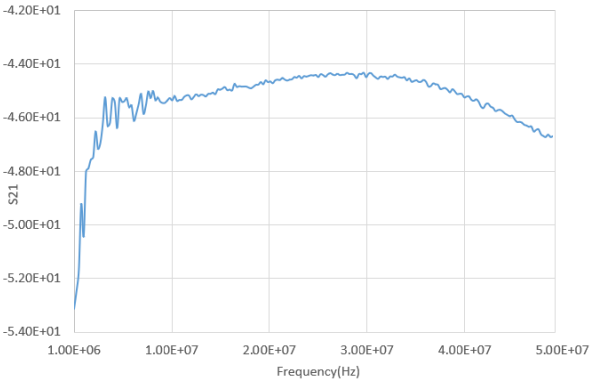
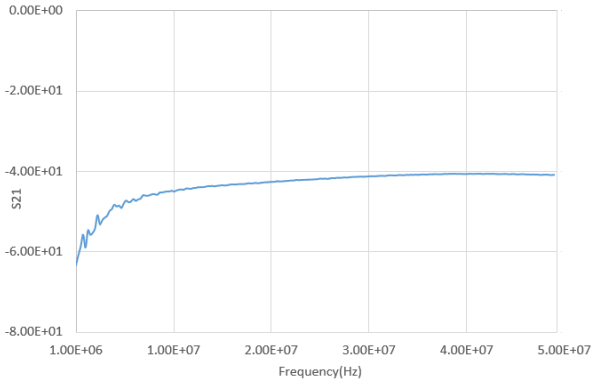
HNFP series probe set contains 7 probes specially designed for testing magnetic field. These probes are used to locating the interference source in EMI pre-compliance debugging and can effectively shield the interference from electric field. The frequency range is between 30MHz~3GHz, and it has 3 types of probe head shapes.The frequency range is 9kHz~50MHz, with 3 types of probe head shapes.

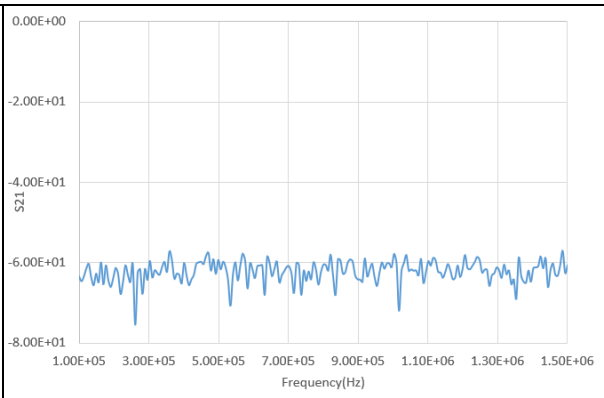
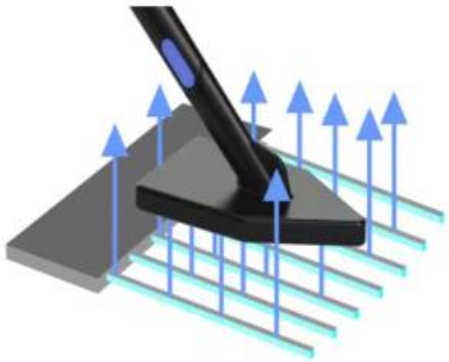
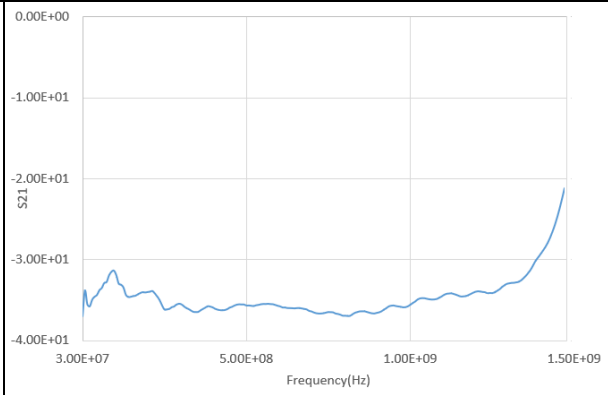
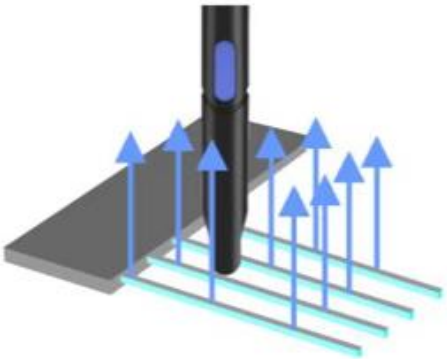
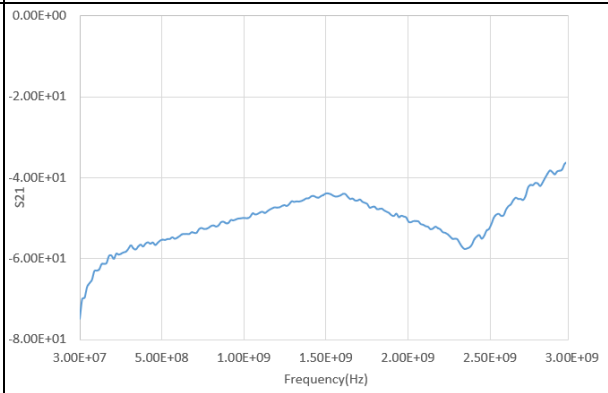
HNFP series probe set contains two probes specially designed for testing electric field, with frequency range from 30MHz to 3GHz. They are mainly used for locating the electric field interference source, and the rest of the probe body is shielding design.

The probe is directly connected to the spectrum analyzer or oscilloscope with 50Ω BNC cable. When the radiation or the conduction disturbance of the product surpass the standard, users can use the near field probe to search for the certain component or circuit generating the interference of certain frequency by measuring the coupling channel between the module and the signal shifting speed, RF voltage of the evaluating system. When the interference signal is relatively weak, users can improve the system sensitivity with the HNFPA(30dB attenuation) pre-amplifier.

2. Specification

Model	Description	parameter
 **HNFP-1**	H probe for detecting H field 10cm around Frequency range:30MHz-3GHz Resolution :25mm	
 **HNFP-2**	H probe for detecting H field 3cm around Frequency range:30MHz-3GHz Resolution :10mm	

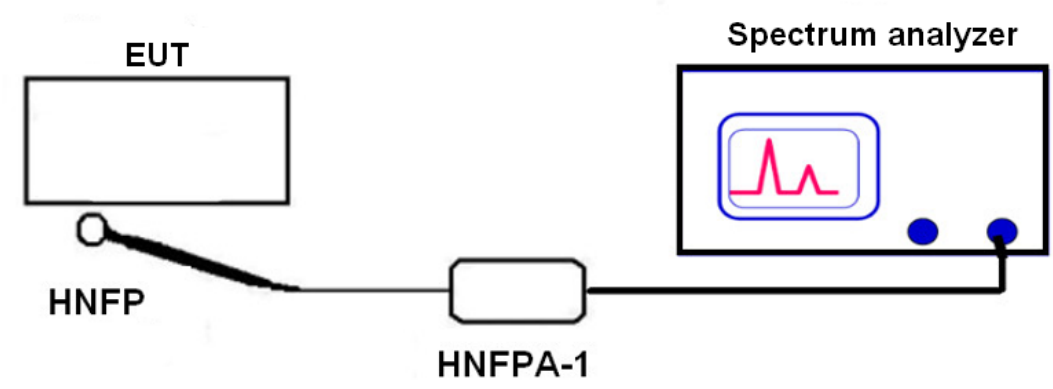
 **HNFP-3**	H probe mainly used to detectthe emission leakage of a wire. Frequency range:30MHz-2GHz Resolution : 5mm	
 **HNFP-4**	H probe can be used to detect thevertical H field. Frequency range:30MHz-3GHz Resolution : 2mm	
 **HNFP-5**	H probe can be used to check the H field within 10cm range Mainly used for LW conduct debug testing Frequency Range 1MHz-50MHz . Resolution rate: around 25mm	
 **HNFP-6**	H probe can be used to check the H field within 3cm range Mainly used for low frequency debug testing Frequency Range: 1MHz-50MHz Resolution rate: around 10mm	

 **HNFP-7**	H probe can be used to check the H field within 10cm range Mainly used for LW conduct debug testing Frequency Range: 9kHz-1MHz Resolution rate: around 25mm	
 **HNFP-8**	E probe used to test thesurface electric field. Covering zone 2*5cm. Used for bus structure or large component zone Frequency Range: 30MHz-1.5GHz	
 **HNFP-9**	E probe used for the testing ofelectric field generated on the surface single cable surface. Frequency range: 30MHz-3GHz	

3. Application

- Tracking the EMI radio interference sources
- Tracking the EMI conduct interference sources
- H field detection

Application Diagram:



4.Attachment Description

Standard Output Cable: 1m
Standard Adapter: SMA female to N male





HNFPA-1 serial Pre-amplifier

User manual

30dB,9kHz-3GHz



1. Summary

HNFPA-1 pre-amplifier can be used with HNFPA near field probe to amplify the small signal from probe. The frequency range is 9kHz - 3GHz with a fixed gain of 30dB.It can greatly improve the sensitivity of system testing. It can help the engineer to debug the electromagnetic disturbance source quickly and accurately and improve the work efficiency of engineers.

2.Specification

Model	HNFPA-1
Frequency range	9kHz-3GHz
Gain(typically)	30dB
Flatness	±1.5 dB
Gain	(Figure1)
Max linear output power	10dBm
Noise figure@2GHz	4dB
Max input power	15dBm
Supply voltage	12Vdc
Input/output interface	SMA female
Size	66mm*48mm*16mm

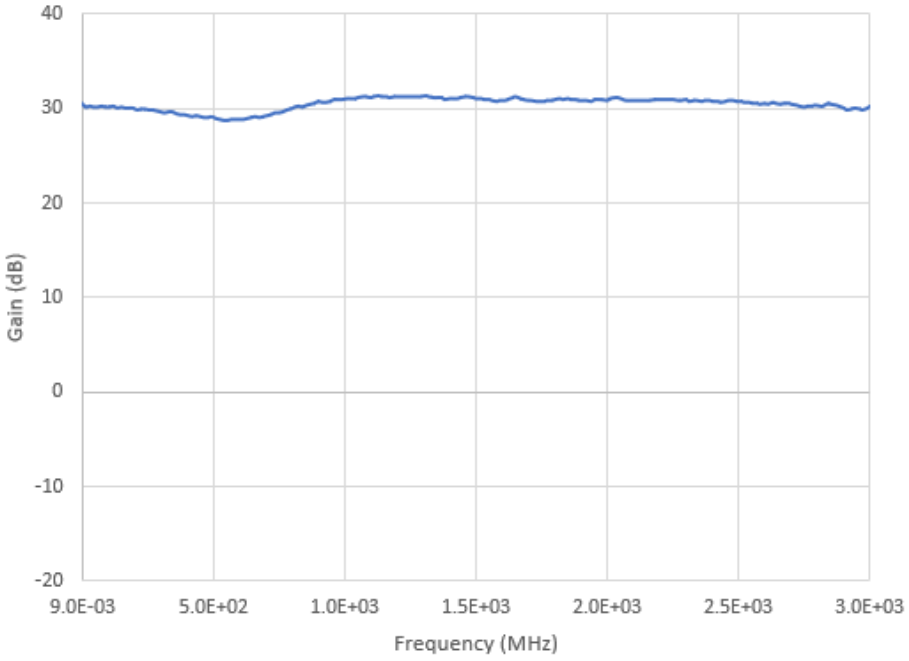
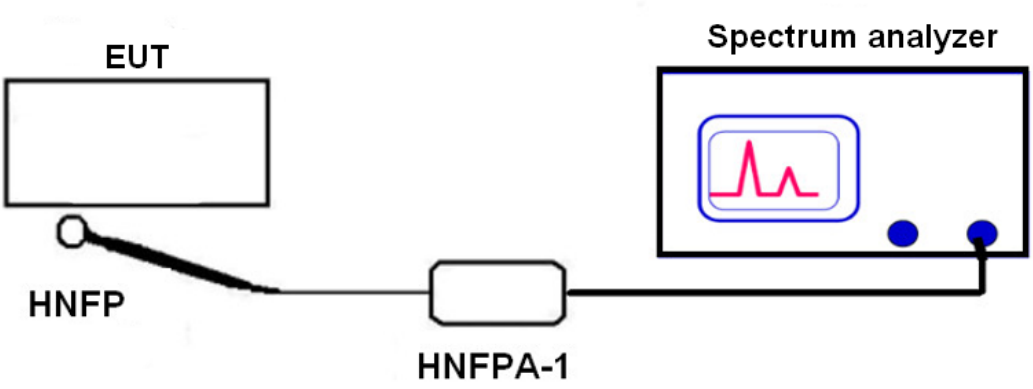


Figure1: Gain VS Frequency

3.Application

- EMI disturbance source debug
- Amplify the small signal

Application Diagram:



4.Using Steps

1) Connect the output interface of the pre-amplifier to receiver or spectrum analyzer.
2) Connect pre-amplifier power supply
3) Connect input signal (Please be sure that the input signal power doesn't exceed the max input power of the amplifier)

Especially remind

Connect the pre-amplifier before plug power cable in.Do not connect the pre-amplifier if you do not know the max level of the signal. Max Input power of the HNFPA is 15dBm. It may be damaged if the input level exceed the Max Input power.

Before connecting the device to HNFPA, please make sure there is no strong electromagnetic field around.

5.Attachment description





6. About Us

If you have any questions in the process of using Qingdao Hantai Electronics Co., LTD. 's products, you can get support through the following ways:

Email：Support@hantek.com
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Tel：400-036-7077 , (0086)532-55678770 & 55678772 & 55678773