

- Archive of all programs
- Currently used Dispersion_Field_Points
- Currently used Dispersion_Field_Scan
- Currently used MI-4_v1
- Delay Time Calculator
- ZNB calibration
- Baidu Internet Disk
- GMI操作手册
- 超声换能器操作手册

New programs for the dispersion measurements

Run!

- DelayTimeCorrection
- Dispersion measurements
- DMM data
- DMM initialization
- FreqSegments
- Gain
- HMF data
- HMF initialization
- HMF OFF
- ZNB data loop
- ZNB data
- ZNB initialization

Dispersion_Field_Points: This program measures the dispersion of S-parameters and impedance in a wide frequency range for the specified bias field points. The field values are entered during the user dialog.

VNA's connection
ZNB20

HMF's connection
Generator

DMM's connection
DMM

VNA's port(s) used for measurements
S21

Number of frequency points
5000

Start frequency (Hz)
100000

Stop frequency (Hz)
1.5E+10

Max input voltage for the amplifier (0<V<7)
7

Voltage to field coefficient > 0 (Oe/V)
4.29

Number of field points
1

The procedure measures the frequency dispersions of S-parameters and Z for the specified magnetic fields.

VNA must be already calibrated before the measurements. The procedure will not change the calibration but you can modify IFBW and power.

The field values will be entered during the user dialog. All field values must be within the maximum (+/-) field range.

Please check the maximum input voltage allowed for your power amplifier. It may be less than 10 V!

The voltage to field coefficient (Oe/V) must be found from the coil calibration.

The delay time along the sample must be found separately.

The coil resistance and inductance must be larger than zero. Measure them by a digital multimeter (DMM).

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Coil resistance > 0 (Ohm)
8.38

Coil inductance > 0 (H)
0.32

-20 dB < Power < 20 dB (0 dB default)
0

1 Hz < IFBW < 1MHz (10 kHz default)
10000

Power amplifier LinMag gain (if 0, it will be calculated)
0

Amplifier LinMag gain
0

DMM reading
5.64925

Current field point
98

Choose the folder where the field dependencies of S-parameters and Z will be saved
C:\Users\Z\Ucomposite\Desktop\Tests

Dispersion_Field_Scan: This program measures the dispersion of S-parameters and impedance in a wide frequency range for the bias field points which are scanned between the maximum and minimum values specified by the user together with the number of field points. This program is more suitable for the stress impedance measurements where we will not have too much time to enter the field points manually.

VNA's connection
ZNB20

HMF's connection
Generator

DMM's connection
DMM

VNA's port(s) used for measurements
S21

Number of frequency points
5000

Start frequency (Hz)
100000

Stop frequency (Hz)
1.5E+10

Max input voltage for the amplifier (0<V<7)
7

Voltage to field coefficient > 0 (Oe/V)
4.29

Number of field points
2

Minimum field (Oe)
0

Maximum field (Oe)
1

The procedure measures the frequency dispersions of S-parameters and Z for the specified magnetic fields.

VNA must be already calibrated before the measurements. The procedure will not change the calibration but you can modify IFBW and power. The frequency measurement range must be within the calibration range.

The measured fields must be within the maximum (+/-) field range.

Please check the maximum input voltage allowed for your power amplifier. It may be less than 10 V!

The voltage to field coefficient (Oe/V) must be found from the coil calibration.

The delay time along the sample must be found separately.

The coil resistance and inductance must be larger than zero. Measure them by a digital multimeter (DMM).

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Coil inductance > 0 (H)
0.32

Coil resistance > 0 (Ohm)
8.38

Power amplifier LinMag gain (if 0, it will be calculated)
0

Delay time along the sample (ps)
0

Amplifier LinMag gain
0

-20 dB < Power < 20 dB (0 dB default)
0

DMM reading
5.64925

Current field point
98

1 Hz < IFBW < 1MHz (10 kHz default)
10000

Choose the folder where the field dependencies of S-parameters and Z will be saved

C:\Users\ZJUcomposite\Desktop\Tests