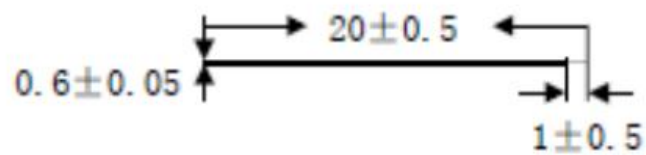


1. Antenna Description:

Antenna type	Wire antenna
Model	3516
Frequency range	2400-2500MHz
Manufacturer	Dongguan Chengyang Electronic Products Co., Ltd
ANT Peak Gain	1.63 dBi

2. Antenna Photo:



unit : mm

3. Test Equipment & Conditions

3.1 Test instrument

VSWR is tested using Agilent E5071B connected to a hand mechanism, and the status is free space.

3.2 Test environment and methods

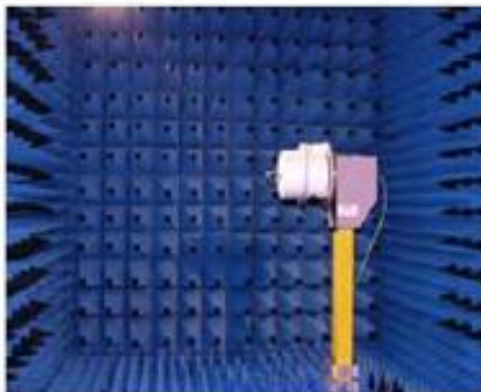
Dark room specifications: ETS-743

TD-SCDMA test equipment: StarPoint SP6010/Agilent 8960

LTE-TDD/FDD-SCDMA test equipment: StarPoint SP8011/CMW500

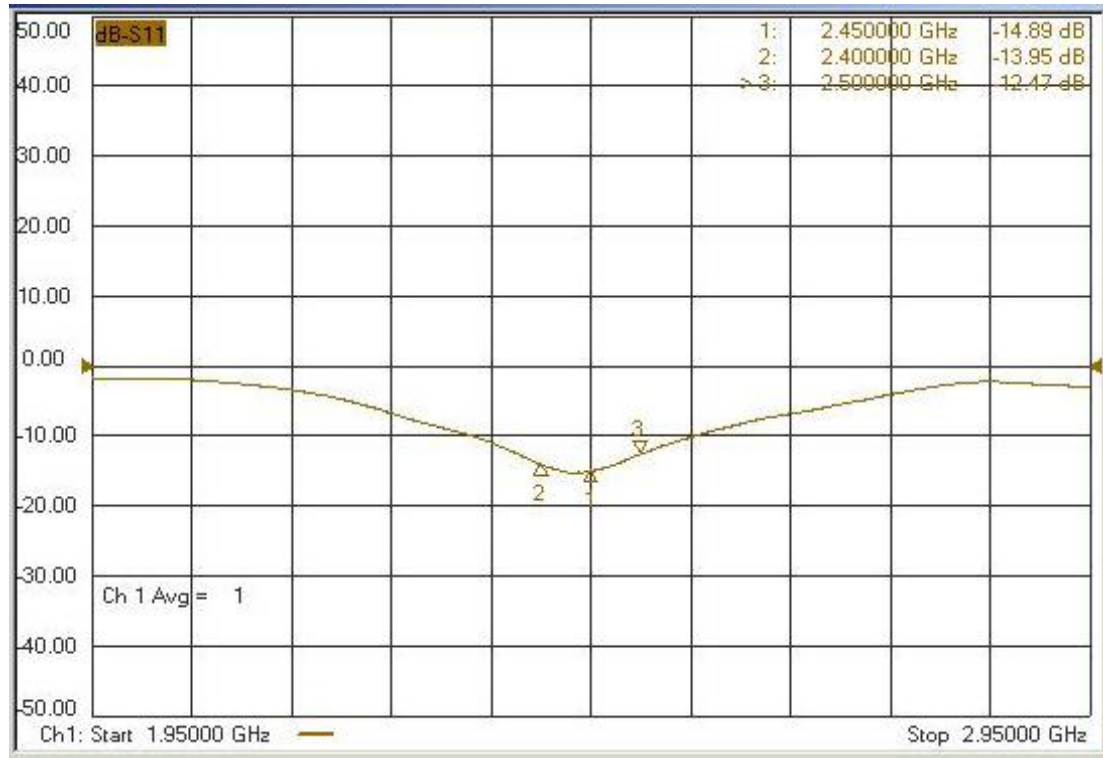
WCDMA/GSM/CDMA test equipment: Agilent 8960

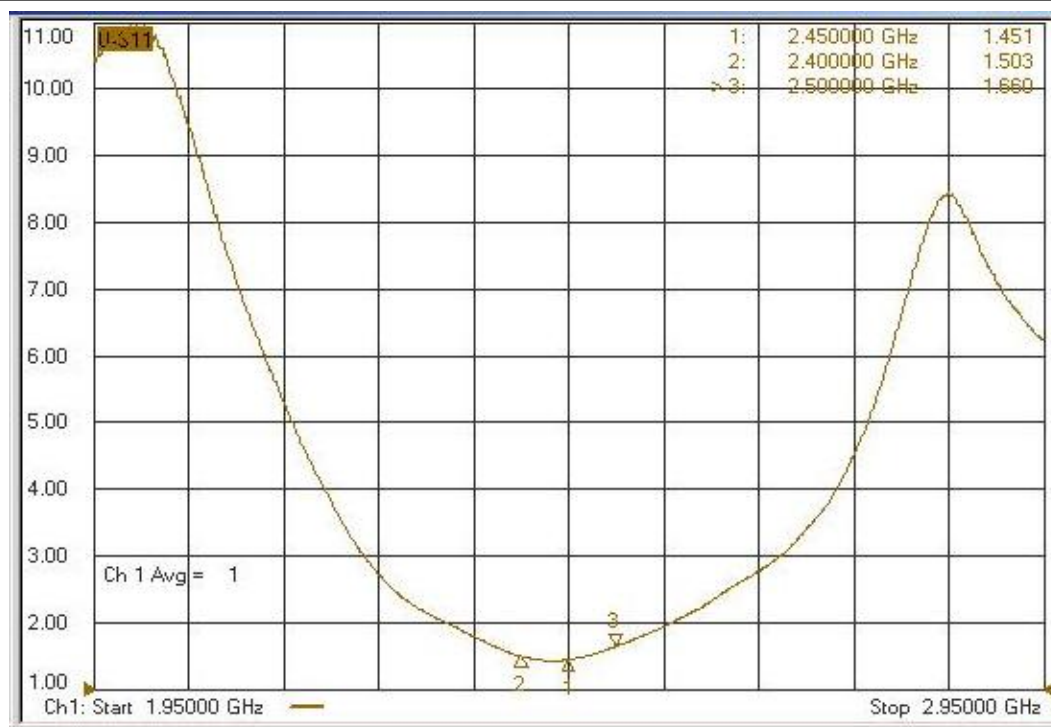
Passive efficiency testing equipment: Agilent Technologies E5071B



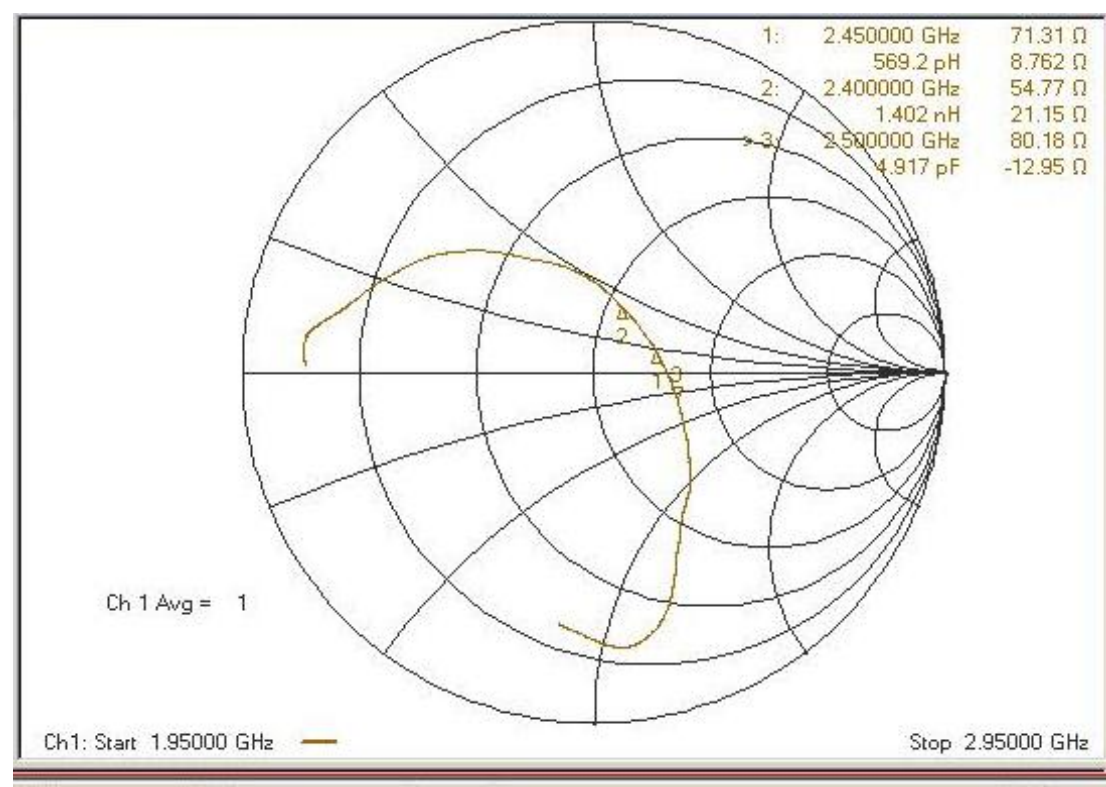
4 . Test Data for Electrical Performance

Marker	2400MHz	2450MHz	2500MHz
Returnloss	-13.9	-14.9	-12.5
VSWR	1.5	1.45	1.7



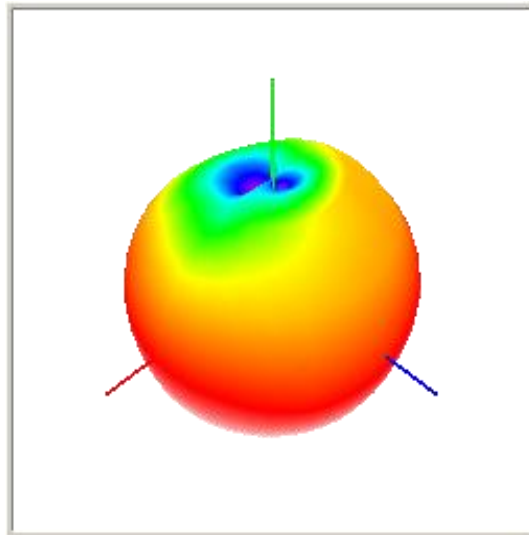


Smith picture :

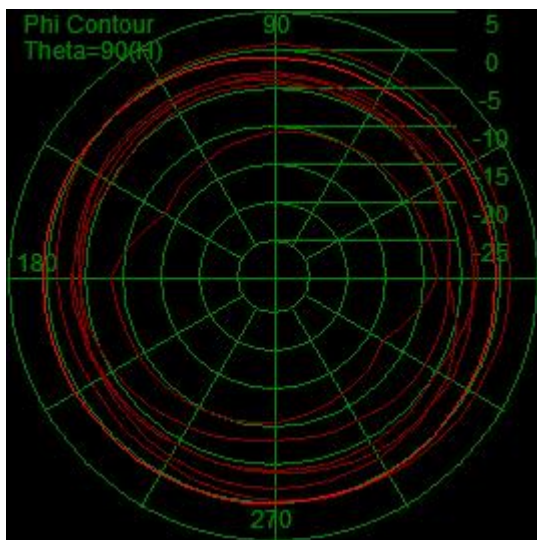


5 . Antenna Radiation Pattern

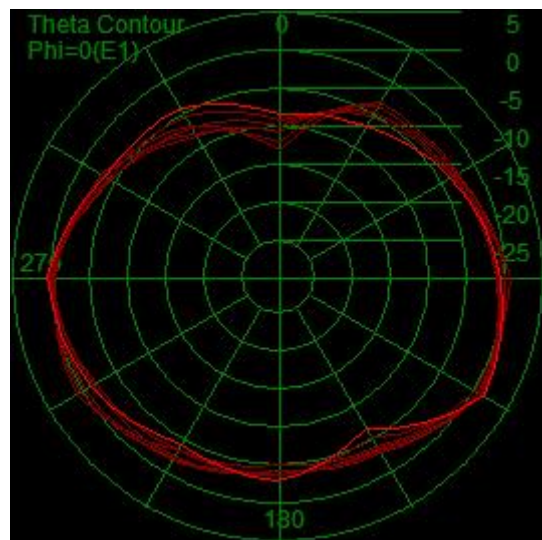
Marker	2400MHz	2450MHz	2500MHz
PeakGain (dBi)	0. 59	1. 12	1. 63
Efficiency (%)	54. 7	63. 2	73. 4



3D



H-plane



E-plane