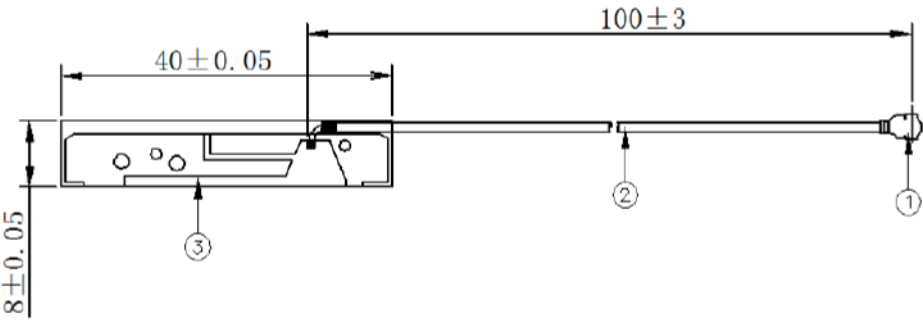


1. Antenna Description:

Antenna type	PCB Antenna
Model	WS4-A1RS
Frequency range	2400-2500MHz, 5180-5240MHz, 5745-5825MHz
Manufacturer	Ubibot Dalian Smart Limited
Address	3rd Floor, Block A, No. 23 Honggang Road, Ganjingzi District, Dalian, Liaoning Province, China
ANT Peak Gain	3.0 dBi for 2400-2500MHz 5.0 dBi for 5180-5240MHz 5.0 dBi for 5745-5825MHz

2. Antenna Photo:



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

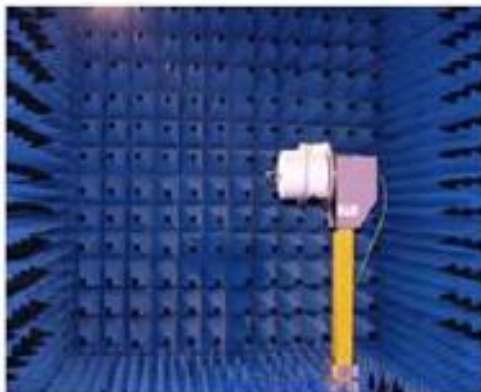
Dark room specifications: ETS-743

TD-SCDMA test equipment: StarPoint SP6010/Agilent 8960

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

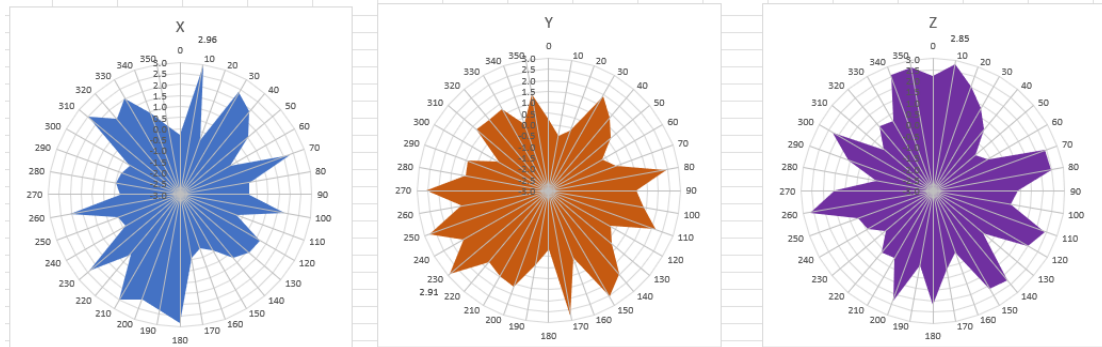
WCDMA/GSM/CDMA test equipment: Agilent 8960

Passive efficiency testing equipment: Agilent Technologies E5071B

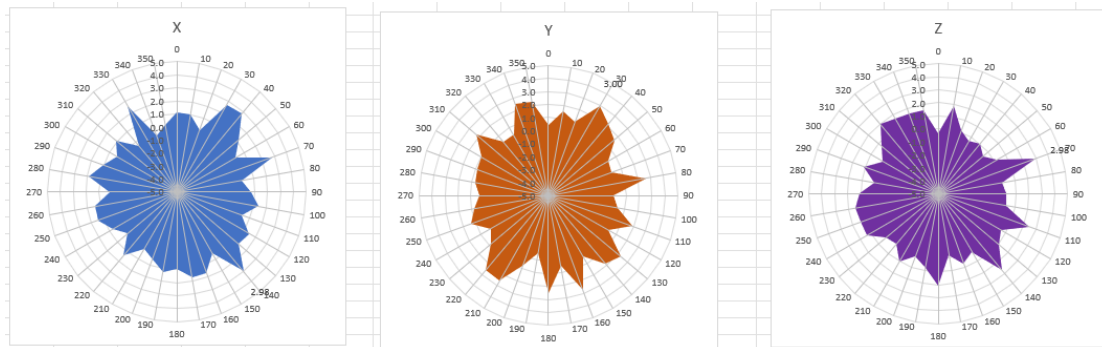


4 . Antenna Radiation Pattern

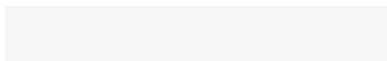
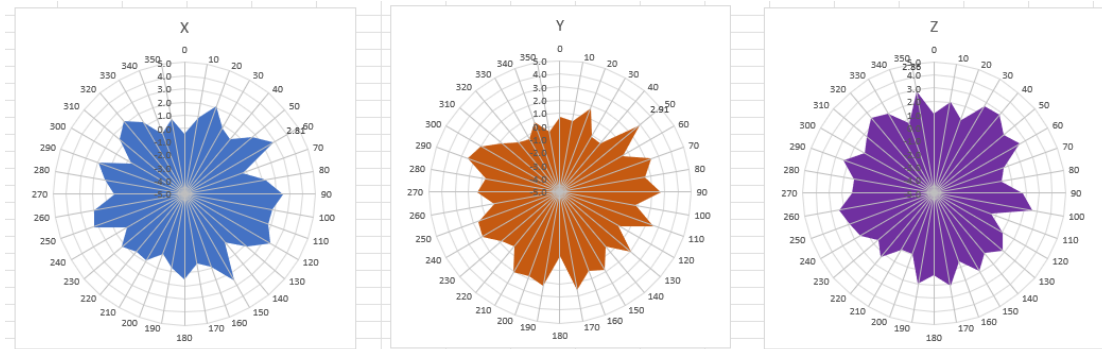
2400MHz



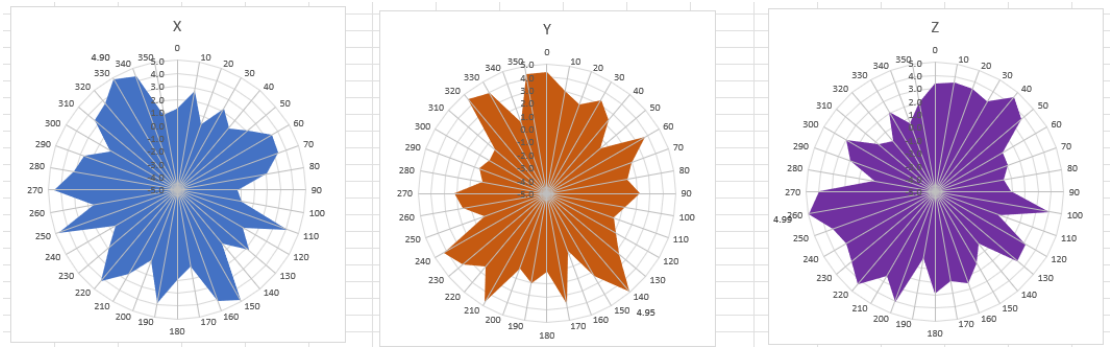
2450MHz



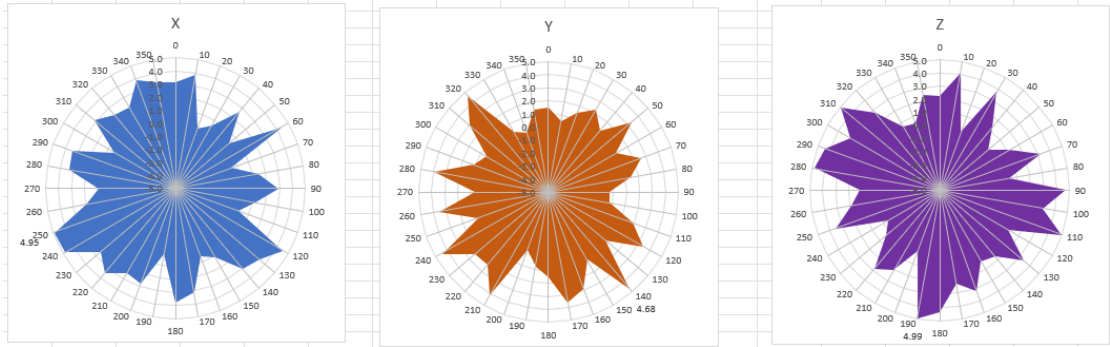
2500MHz



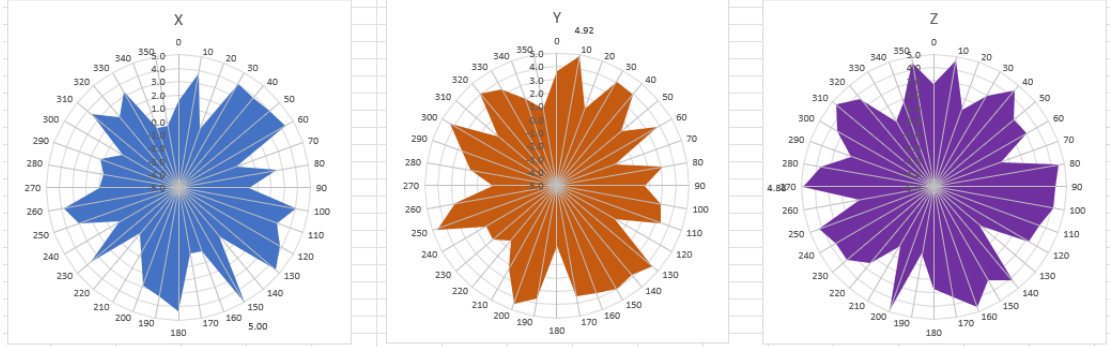
5180MHz



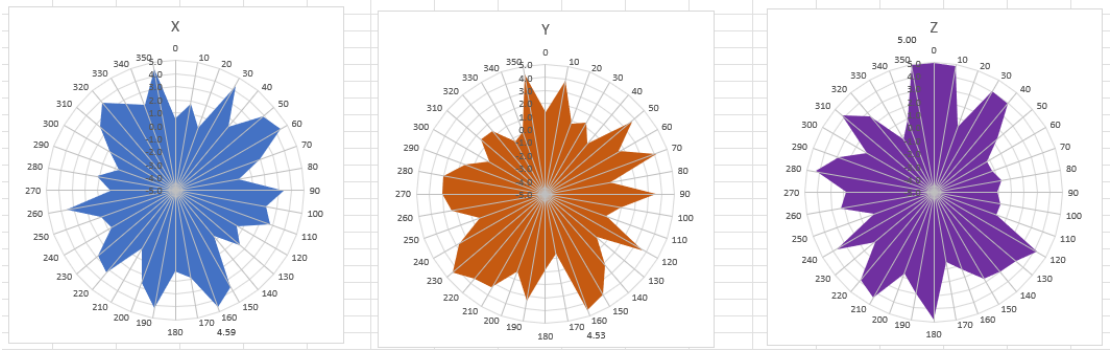
5220MHz



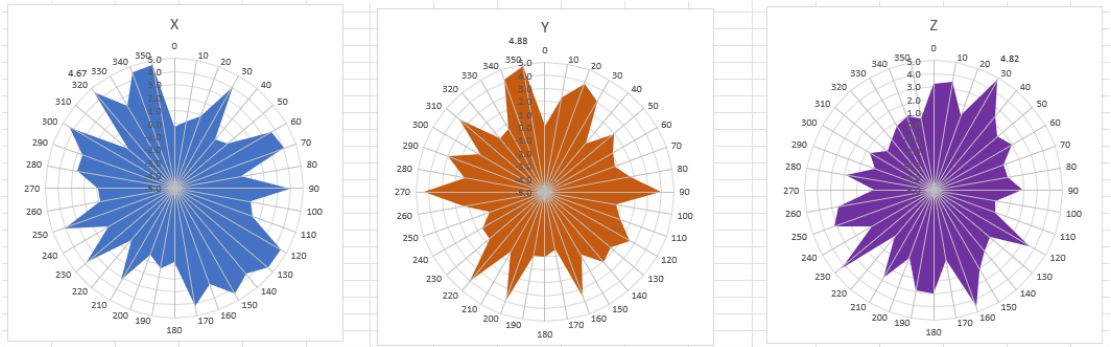
5240MHz



5745MHz



5785MHz



5825MHz

