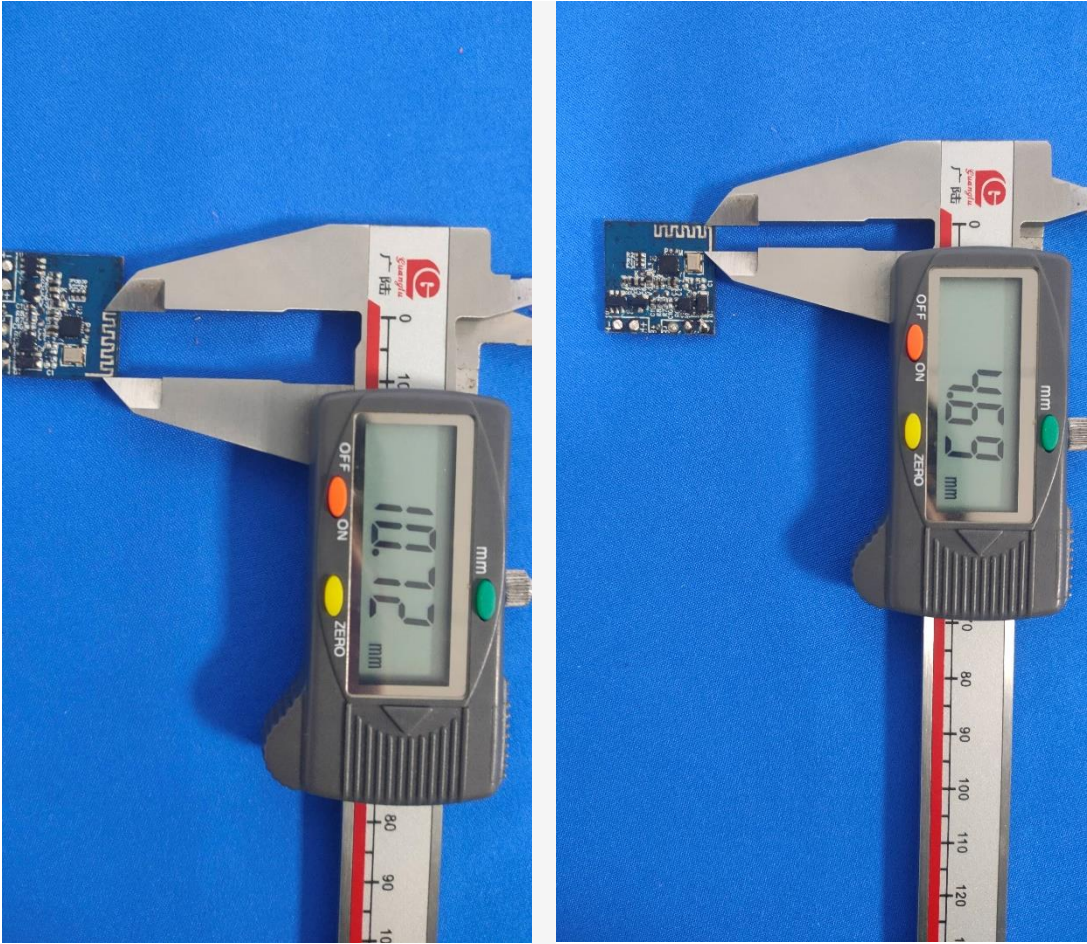


1. Antenna Description:

Antenna type	PCB antenna
Model	HVM-A
Frequency range	2400-2500MHz
Manufacturer	Dongguan Pinguan Sports Technology Co.,Ltd.
Address	No.1 Xingxin Street, Eshan, Liaobu Town, DongguanCity, Guangdong Province, China
ANT Peak Gain	0.77 dBi

2. Antenna Photo:

Length:10.72mm
Width:4.69mm



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

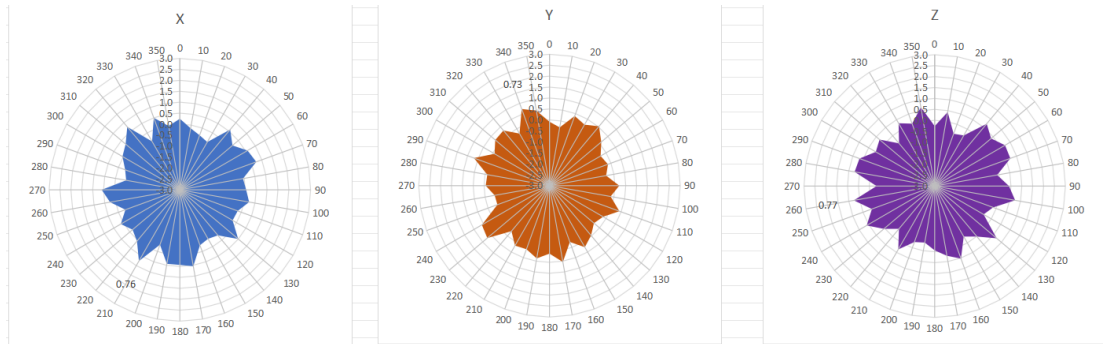
WCDMA/GSM/CDMA test equipment: Agilent 8960

Passive efficiency testing equipment: Agilent Technologies E5071B

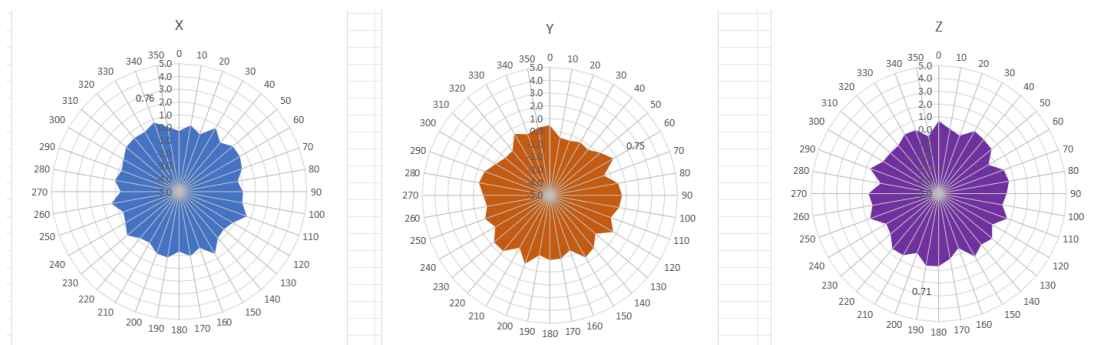


4 . Antenna Radiation Pattern

2400MHz



2450MHz



2500MHz

