Hytera Communications Corporation Limited

Antenna Specifications

Antenna frequency band： 400~470MHZ

Antenna model： AN0435H19

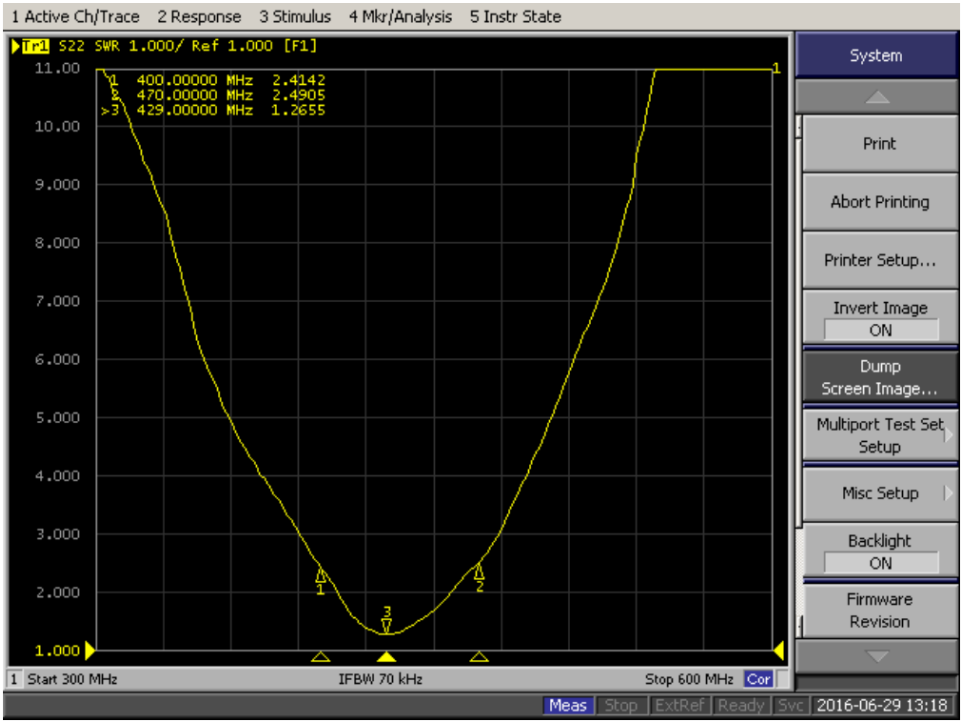
1.Product Specifications

Machine model	BP510
Antenna Name	AN0435H19
Main Electrical Specifications	
Frequency Rang （MHz）	400-470MHz
VSWR	≤ 3.5
Max Antenna Gain(dBi)	0.5
Impedance （Ω）	50Ω
Polarization	**Vertical Polarization**
Main Structure Specifications	
Length	94.6MM
Connector Type	R
Color	Black
Allowable power	10W
Operating temperature	-20~+85℃
Storage temperature	-40~+85℃

2. Antenna Appearance

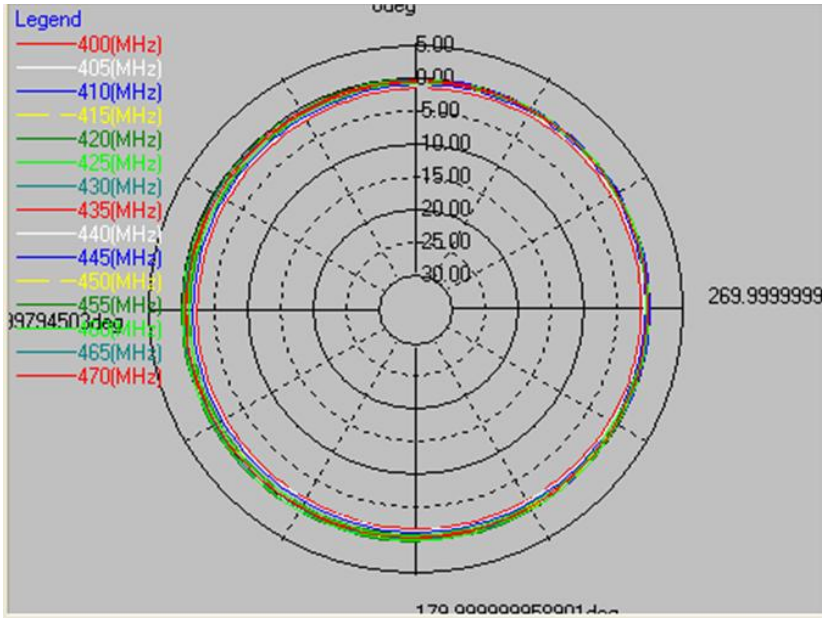
3. Standing wave diagram

AN0435H19:

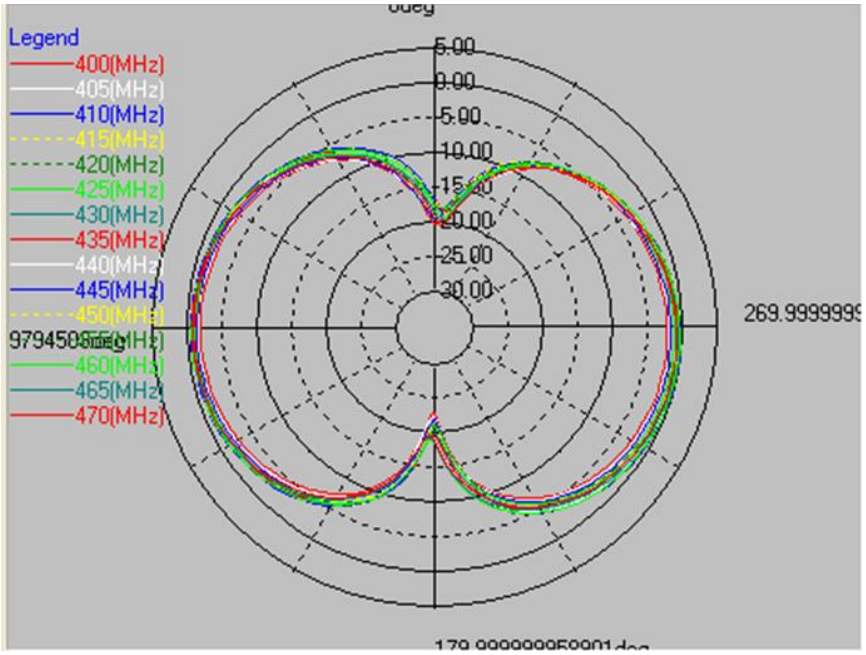


4. Antenna radiation pattern

Horizontal pattern：



Vertical pattern:



5. Mechanical properties

(1). Drop test:
Assemble the antenna on the designated prototype and let it fall naturally from a height of 1.5M to a 20CM thick iron plate. During the test, the drop sequence and direction are as shown in the figure below, with 5 sides and 2 bottom corners for 3 cycles and 21 times. After the experiment, the antenna usage requirements must be met. However, scars and whitening are allowed, and there is no obvious damage, coating peeling, pits and other phenomena.

(2). Low temperature drop test:
After the normal temperature drop is completed, store it at -40°C for 4 hours, and immediately start free falling after taking it out of the low temperature box. The drop method and height are the same as the normal temperature drop, the number of drops is 5 sides and 2 bottom corners, a total of 14 times in 2 cycles, and the judgment method is the same as the normal temperature drop.

(3). Antenna sleeve tensile test:
Fix the antenna head, fix the antenna rubber sleeve on the test end of the tension meter, and pull the antenna with a force of 10kgf for 1min. After the test, check the appearance, structure, and standing wave ratio of the antenna. The test results meet the requirements for use.

(4). Antenna sleeve tensile test:
Fix the antenna head, fix the antenna cap on the test end of the tension meter, and pull the antenna with a force of 7.5kgf for 1min. After the experiment, check that the appearance, structure and standing wave ratio of the antenna meet the requirements for use.

(5). Torque test:
Fix the antenna head, twist the antenna connector and the antenna plastic part with a force of 10kfg with a torque meter for 1min. After the experiment, check the appearance, structure and standing wave ratio of the antenna to meet the requirements of use.

(6). Wear resistance test of antenna head：

The antenna connector and the antenna base are screwed in and out 1000 times, the antenna connector is not seriously deformed, the antenna core is sag, etc., which does not affect the effect of the line call and meets the requirements of the antenna.
(7). Connection and cooperation experiment:
Connect the antenna to the host of the corresponding applicable model, and perform the connection and cooperation experiment between the antenna and

the host. Repeatedly rotate the antenna in and out of the antenna base 10 times to check whether the appearance, structure of the antenna and the antenna base are in good condition. After the test, it can meet the customer's use requirements.

6. Environmental performance

(1) Low temperature test:

After the sample is placed in the environment of -40℃ for 2H, take it out for confirmation. It is required that the appearance of the sample has no obvious change, and the electrical performance is not affected.

(2). High temperature test:
After the sample is placed in an environment of 80 °C for 4 hours, it is taken out for confirmation. It is required that the appearance of the sample has no obvious change, and the electrical performance is not affected.

(3). Thermal shock test:

The high temperature of 80℃ and the low temperature of -40℃ were placed for 2H in each case. After a total of 3 times, the sample was taken out for confirmation. It is required that the appearance of the sample has no obvious change. After 2H recovery, it is confirmed that the electrical performance has no effect.

(4). High temperature and high humidity experiment:
After being placed in an environment with a temperature of 60°C and a humidity of 95%RH for 12H, take it out to confirm that there is no obvious change in the appearance of the sample. After recovery for 12H, confirm the electrical properties and require that the electrical properties are not affected.

(5). Salt spray test:
After the handset antenna is actually equipped with the antenna base 200 times, the salt spray test of 48H (spray 24H/dry 24H) is carried out according to the salt spray test method. It is required that the appearance of the metal part of the sample is free of rust, oxidation and other corrosion phenomena to be judged as qualified.