



Antenna Version/Model: lora glue stick  
antenna Model of the DUT: MS24SF1  
PCB number and version: MS24SF1\_V1.0  
Hardware Engineer: 李金倍  
Test Data: 2023/11/7

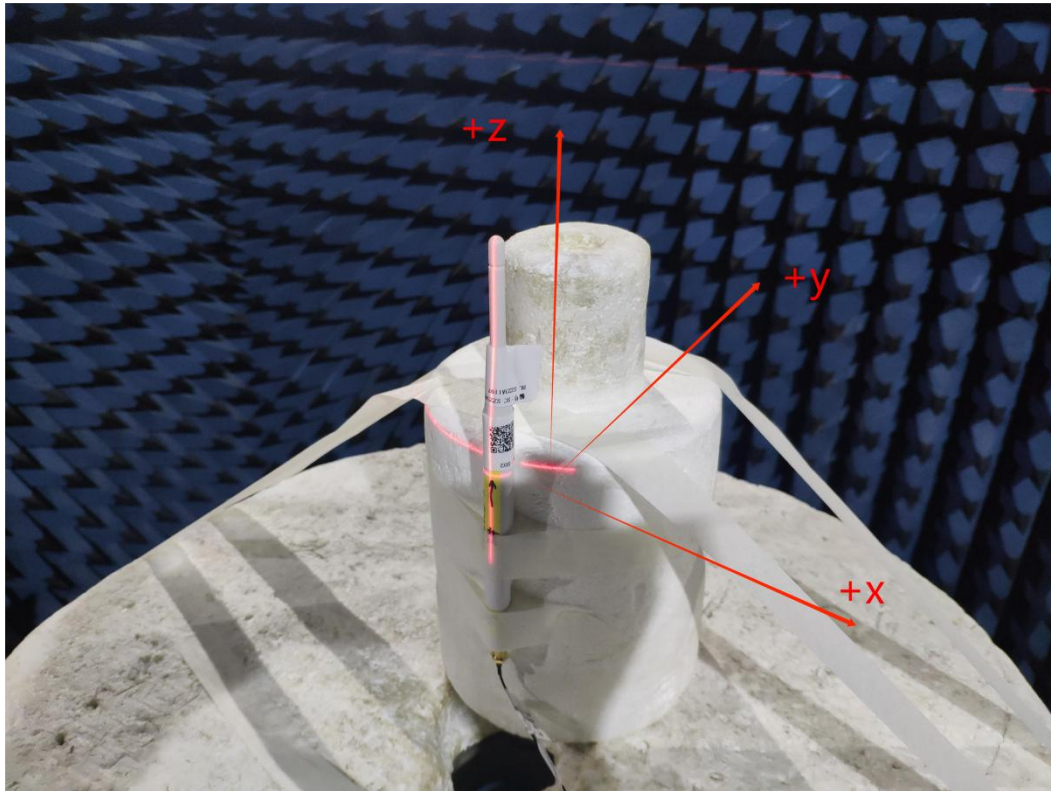
### 1、Technical Specification

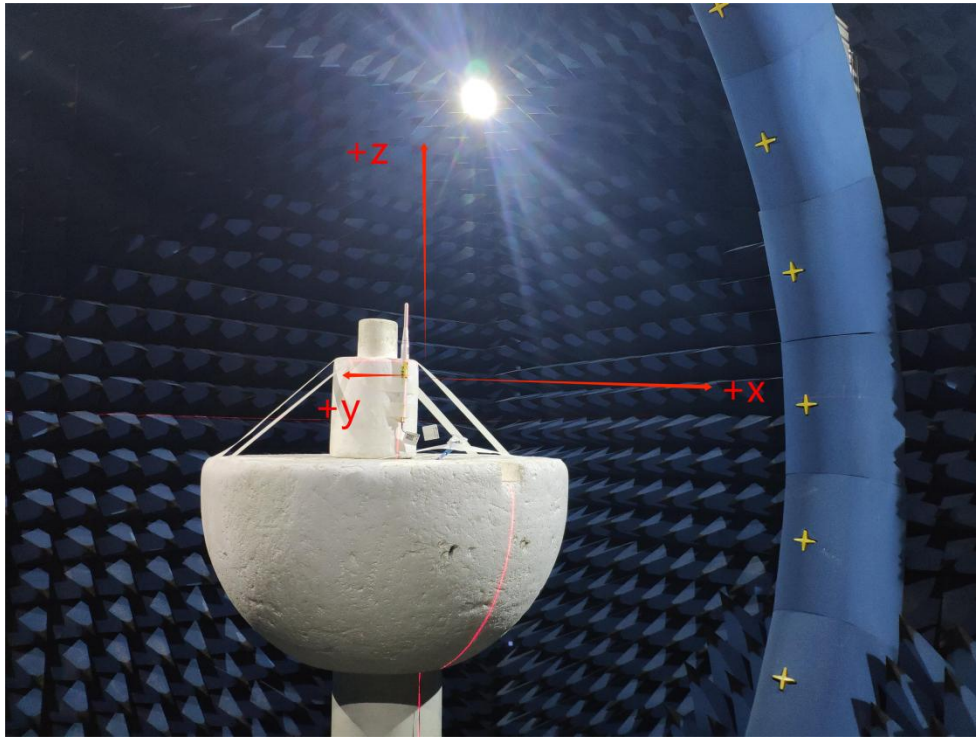
Electrical Specifications	
Frequency Range (MHz)	902-928
Bandwidth (-10dB) (MHz)	7.57
Input Impedance ( $\Omega$ )	50
Return Loss (dB)	<-9.0
VSWR	<1.89
Gain (@915MHz) (dBi)	0.69
Peak Gain (dBi)	0.98
Polarization Type	linear polarization
Lightning Protection	DC grounding
Power Capacity (mW)	1000
Mechanical Specifications	
Antenna Size (mm)	196*13mm
Radiator	Cuprum
Connect Type	无
Working Temperature ( $^{\circ}\text{C}$ )	/
Storage Temperature ( $^{\circ}\text{C}$ )	/

2、the shape and size of the antenna

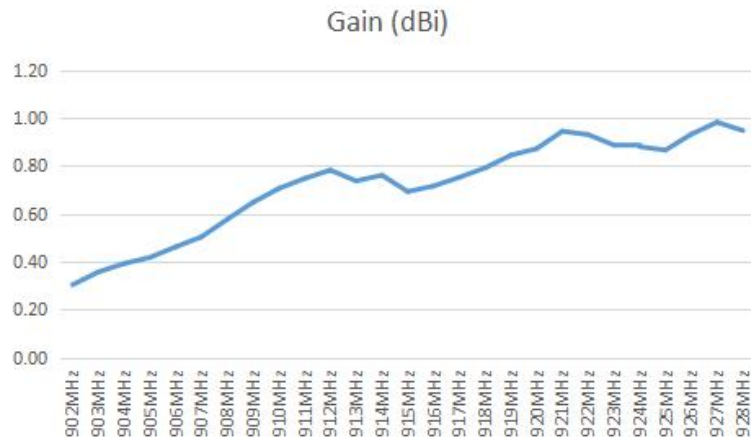


3、The result of the test

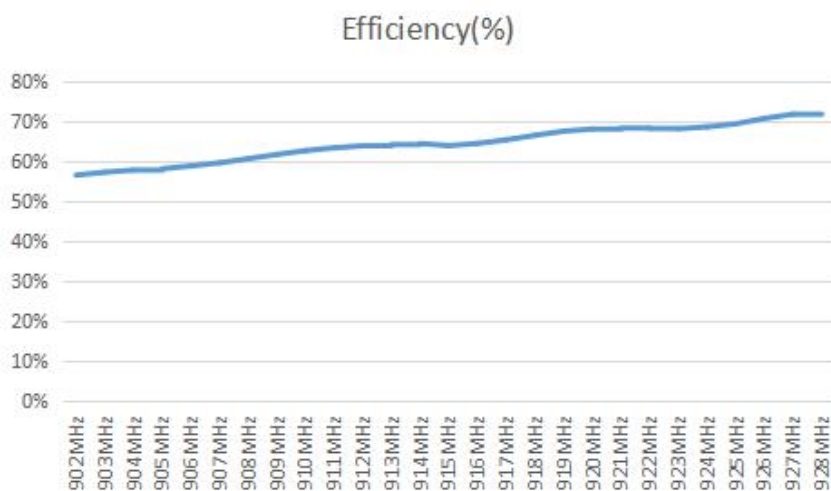




### 3.1 Gain



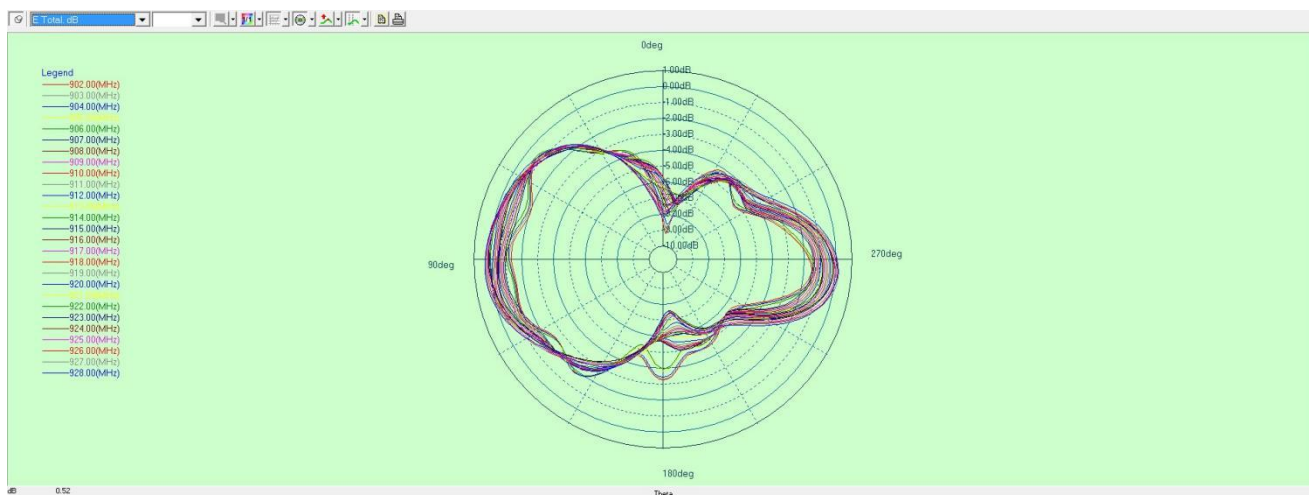
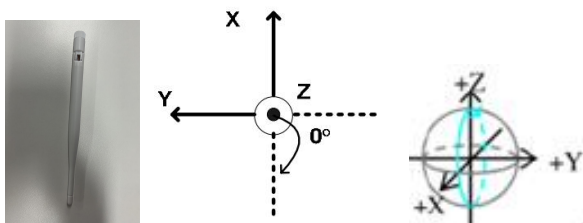
### 3.2 Efficiency



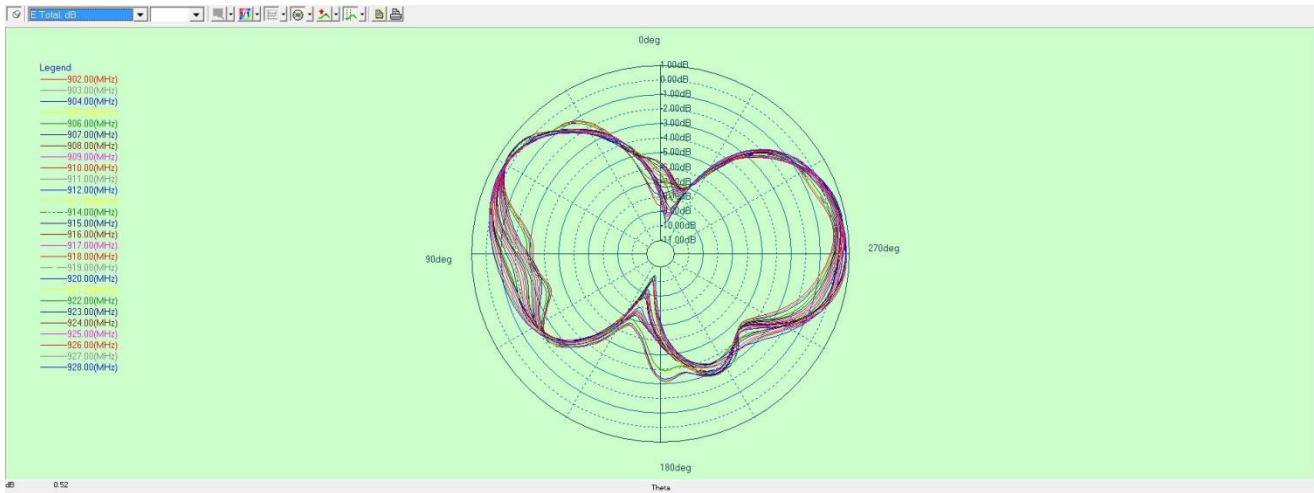
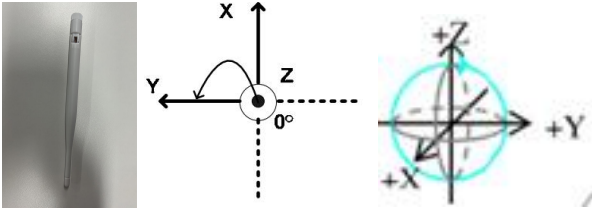
Note: the relationship between the two expressions of efficiency:  $\text{efficiency (DB)} = 10\lg(\text{percentage of efficiency})$

### 4、Radiation Pattern

(1) E1, XZ plane,  $\phi=0^\circ$



(2) E2, YZ 面,  $\phi=90^\circ$



(3) H, XY plane, theta=90°

