

ON-BOARD BLUETOOTH ANTENNA Specification

1. Product description

- (1) Supplier Name: Shanghai Sunmi Technology Co.,Ltd.
- (2) Material Name: MAX Cash Drawer Bluetooth antenna

2. Electrical Specification :

2-1. Frequency Band:

Frequency Band	MHz
Bluetooth	2400-2500MHz

2-2. Impedance

50 ohm nominal

2-3. VSWR:

Frequency Band	2400	2450	2500		
2-3-1. Typical Value:	≤ 3	≤ 3	≤ 3		
2-3-2 Measuring Method	<ol style="list-style-type: none"> 1. A 50Ω coaxial cable is connected to the fpcb antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm. 				
2-3-3 Picture					

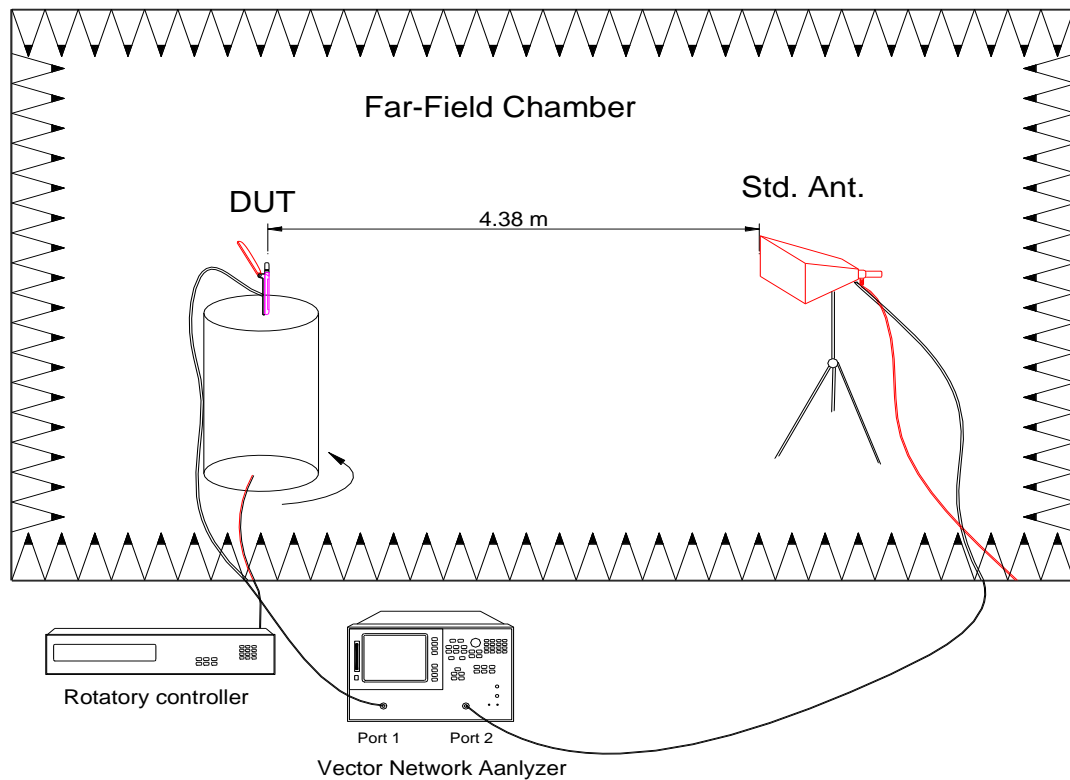
2-4. Gain and Efficiency

2-4.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig

2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

2-4.2 Chamber definition



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

2-4.3 Gain and Efficiency

Freq	Efficiency	Gain
2400	-2.2	2.9
2410	-2.1	3.1
2420	-2.2	3.0
2430	-2.8	2.2
2440	-2.8	2.1
2450	-2.4	2.5
2460	-2.8	2.1
2470	-3.1	1.8
2480	-3.0	1.8
2490	-2.8	1.8
2500	-2.7	2.0

2-4.4 Antenna 2D and 3D

2-4.5 Antenna OTA

3. Antenna Dimensions:(unit:mm)

