

BK7238 Antenna Test Report

Customer	芯中芯
Project	BK7238
Antenna Revision	A1
Product Description	板载
Product No	V1.0
DATE	2023. 10. 21

Product Overview & Dimension

Front

Purpose

This report is to measure the performance of BT antenna for **BK7238**. The antenna operating frequency at **2.4~2.5GHz**, All test data are showed as below.

Content

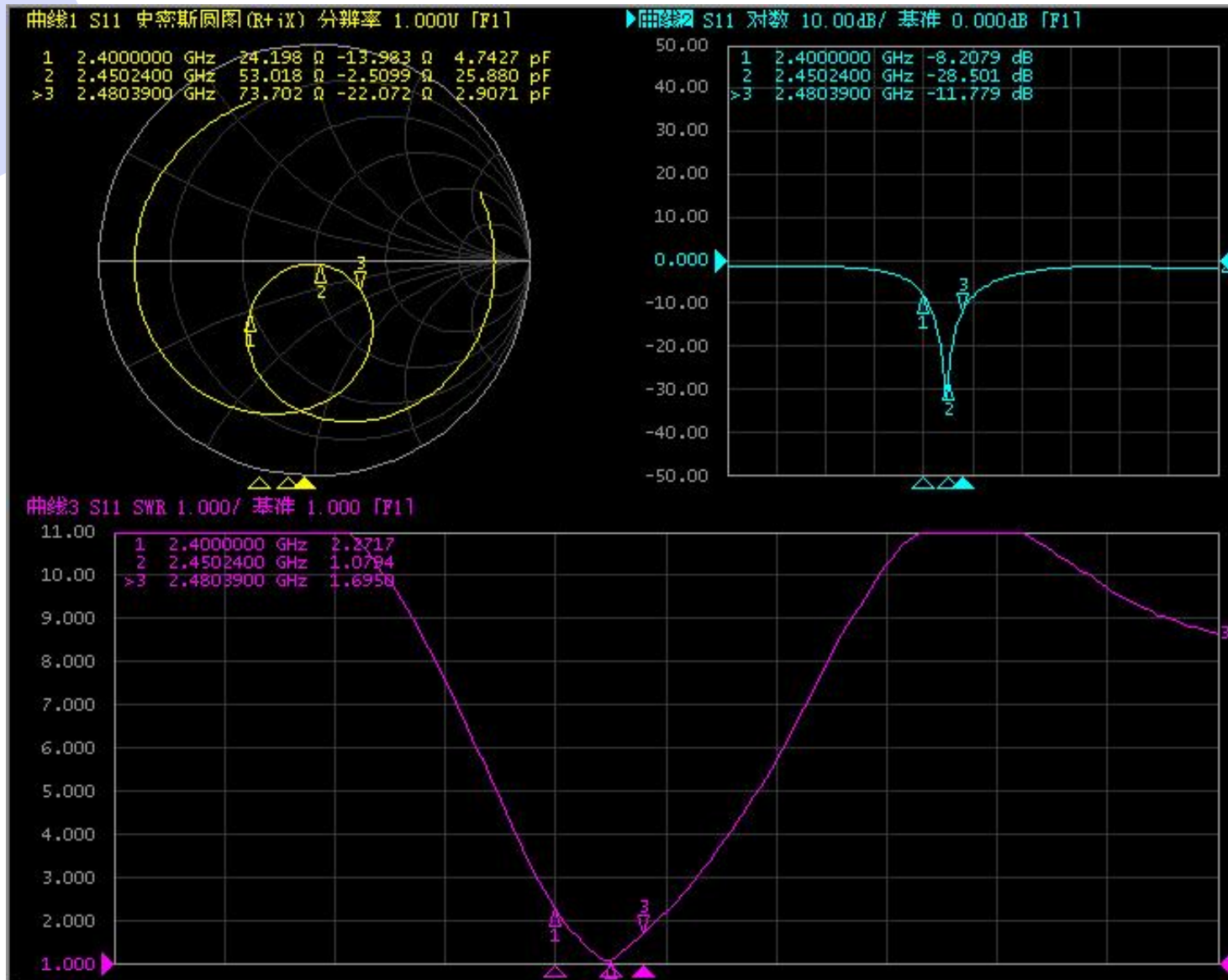
1. Product Overview & Dimension
2. Test system
3. Antenna Matching Network
4. Test Result
 - 4.1 S11 Parameter
 - 4.2 Test coordinate
 - 4.3 2D Pattern
 - 4.4 OTA Data
 - 4.5 BT Boot measured
5. Antenna Assembly & environmental processing

2. Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	CMW500 & CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C



S11—(BT ANT)



Test Result

Gain & Efficiency——**BT- ANT**

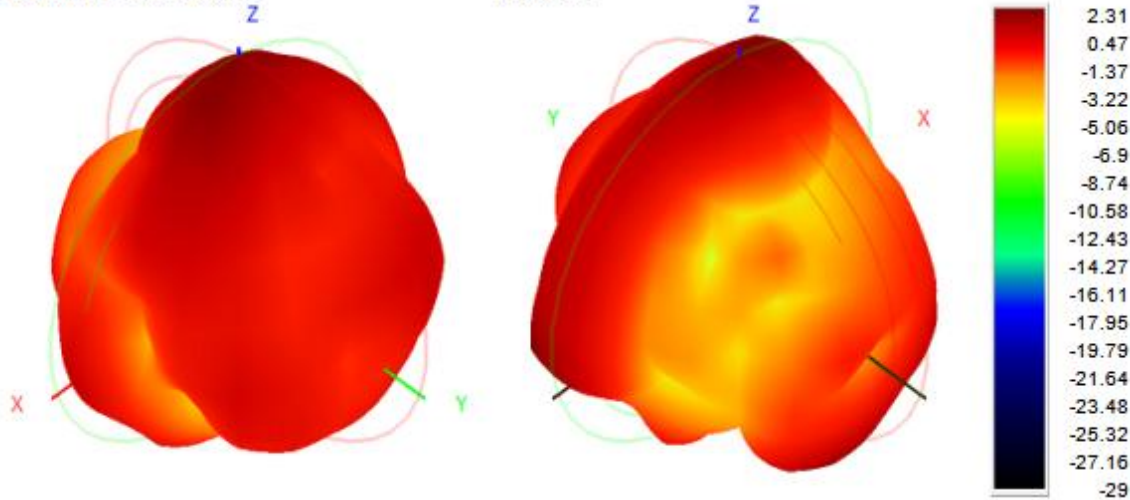
Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	57.77	1.31
2410	58.21	1.37
2420	58.52	1.38
2430	63.42	1.90
2440	62.88	1.96
2450	60.55	2.10
2460	58.00	2.31
2470	57.44	2.51
2480	56.99	2.42
2490	55.85	2.77
2500	55.51	2.46

Test Result

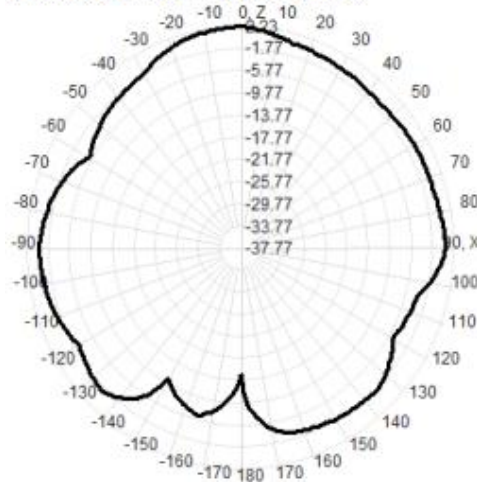
2D&3D — BT- ANT

2400.0MHz H+V, Eff: 52.8%

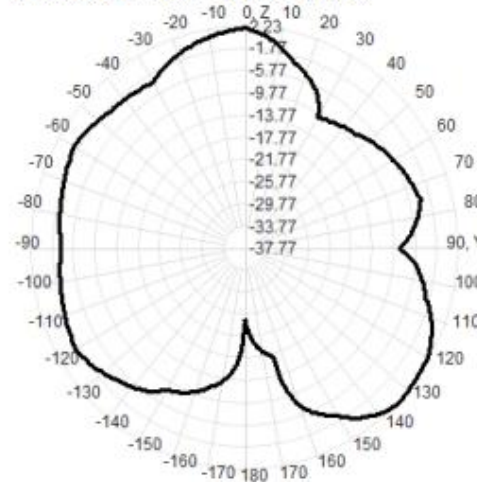
Back View



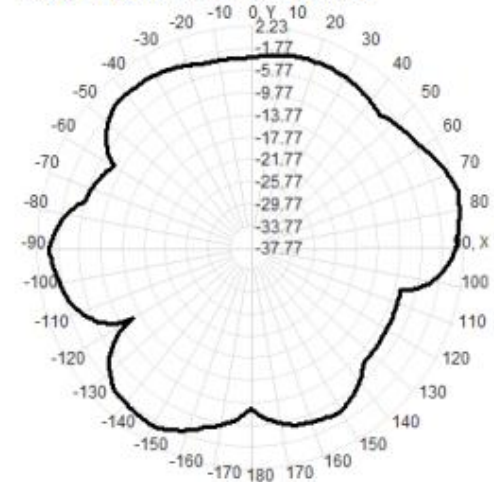
2400.0MHz Total(E1-XZ), Max= 2.16dBi



2400.0MHz Total(E2-YZ), Max= 2.23dBi



Total(H-XY), Max= 2.16dBi, CirD=14.74

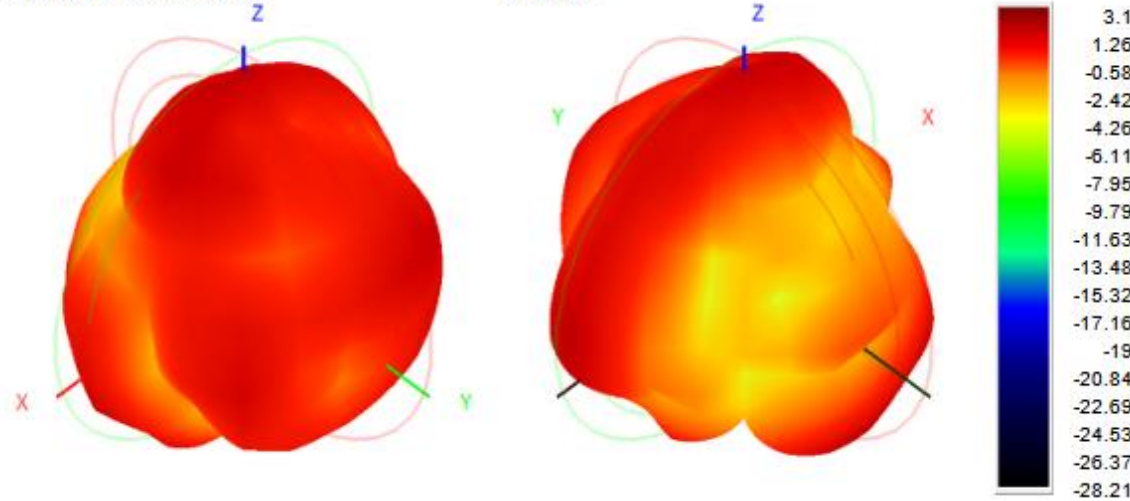


Test Result

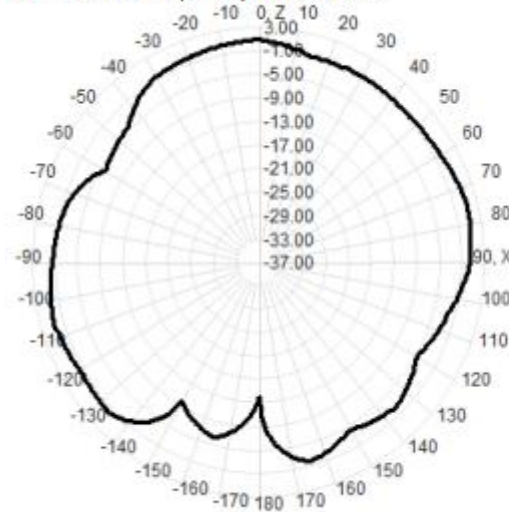
2D&3D — **BT- ANT**

2450.0MHz H+V, Eff: 52.6%

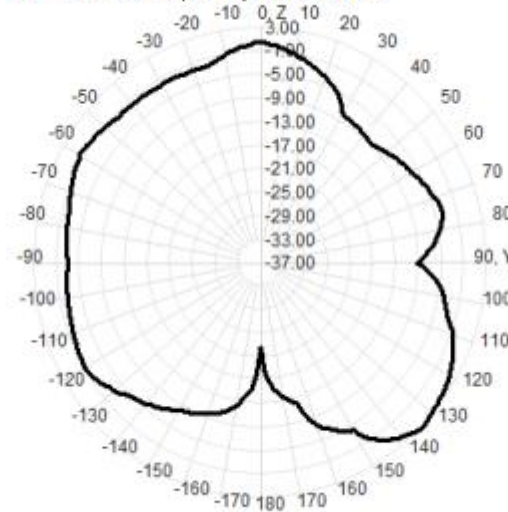
Back View



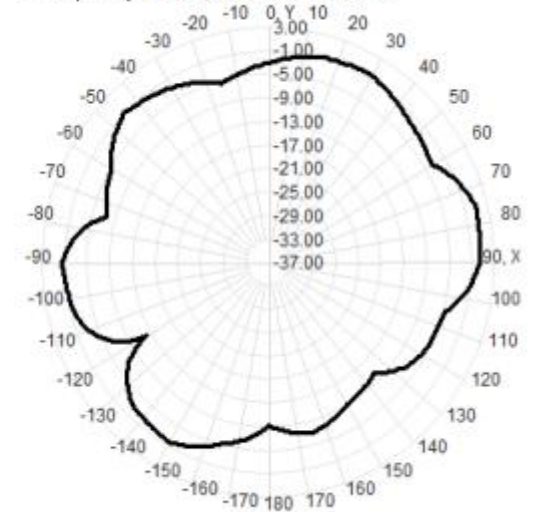
2450.0MHz Total(E1-XZ), Max= 0.93dBi



2450.0MHz Total(E2-YZ), Max= 3.00dBi



Total(H-XY), Max= 0.67dBi, CirD=12.95

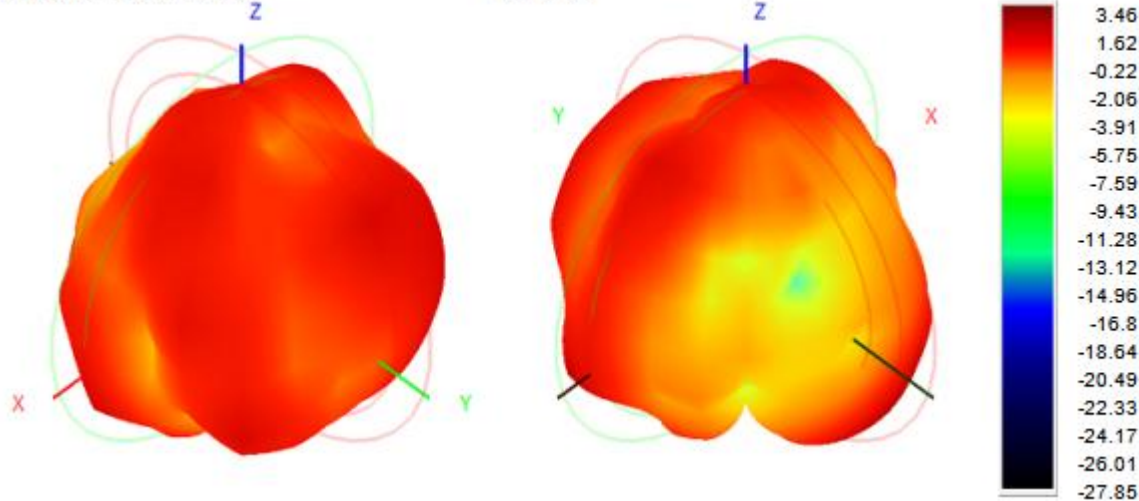


Test Result

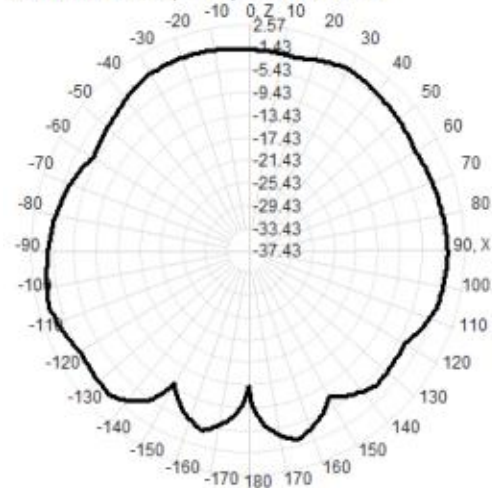
2D&3D — BT-ANT

2500.0MHz H+V, Eff: 50.5%

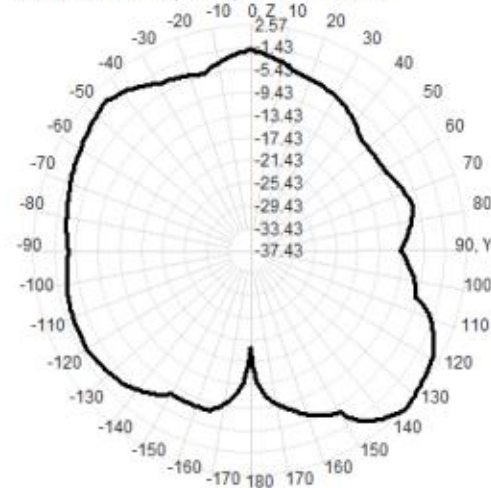
Back View



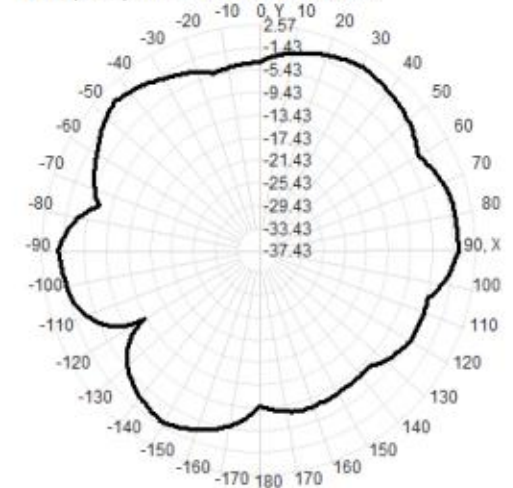
2500.0MHz Total(E1-XZ), Max= 0.45dBi



2500.0MHz Total(E2-YZ), Max= 2.57dBi



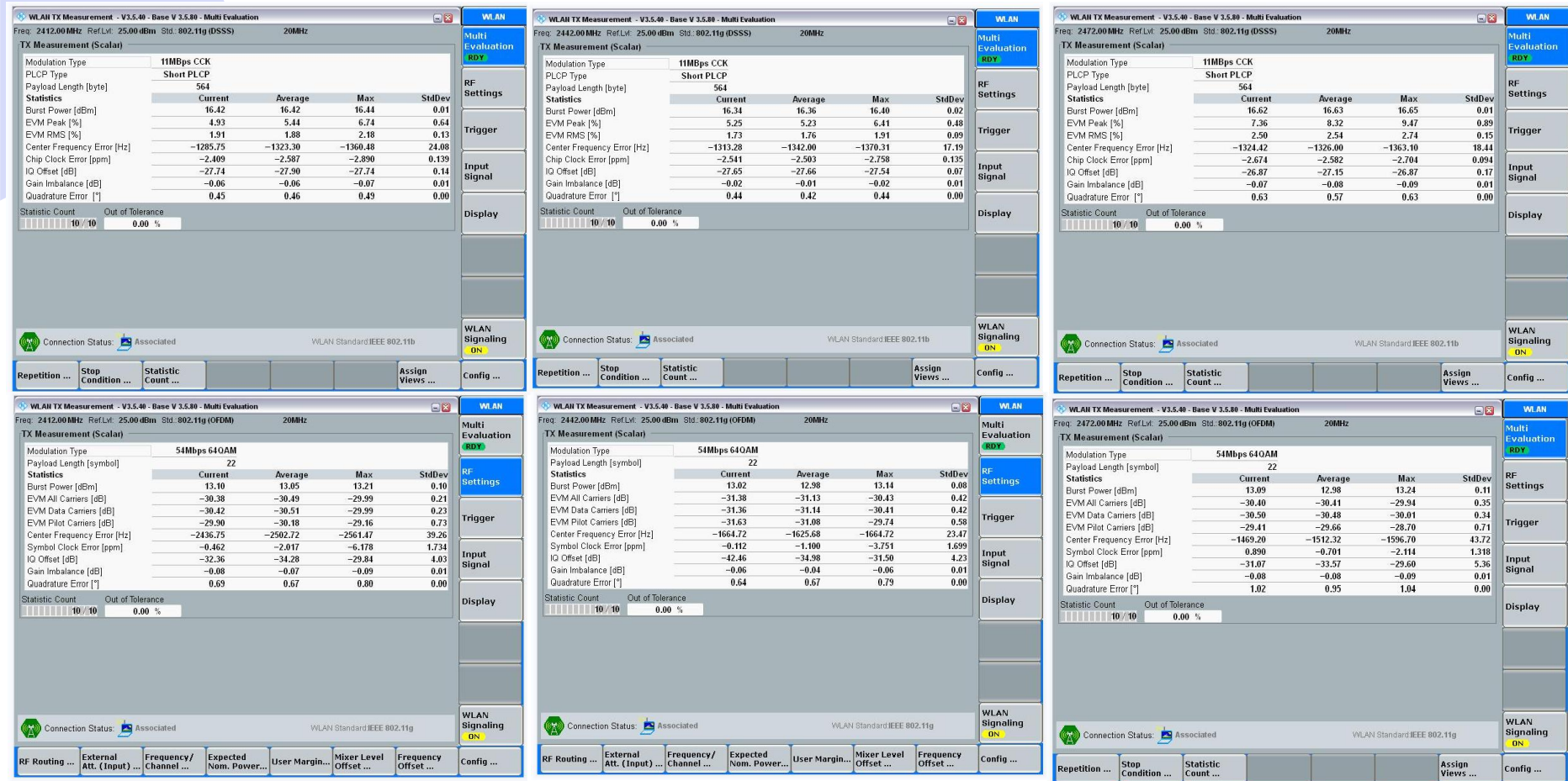
Total(H-XY), Max= 0.30dBi, CirD=13.52



WiFi--1号机

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
WIFI	802.11b (11M)	1	15.57	-89.56
		7	16.06	-90.87
		13	16.17	-89.94
WIFI	802.11g (54M)	1	12.59	-75.56
		7	12.99	-75.76
		13	12.57	-75.35
WIFI	802.11n (CS7)	1	12.13	-71.78
		7	12.62	-70.61
		13	12.06	-70.01

WiFi--1号机



WiFi--1号机



WiFi--1号机

Test Equipment:	R&S CMW500			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	Power(dBm)	PER(dBm)
WIFI	802.11b (11M)	1	16.42	-89
		7	16.34	-89
		13	16.62	-89
WIFI	802.11g (54M)	1	13.05	-75
		7	12.98	-75
		13	12.98	-75
WIFI	802.11n (CS7)	1	11.96	-71
		7	11.95	-71
		13	11.84	-70

Thanks for your comment!

✧ 深圳市合拓科技有限公司

✧ 深圳：深圳市宝安区西乡恒丰工业城C 6 栋1202B

✧ RF： 胡雪文