

MS46541TML 天线测试报告

MS46541TML Antenna Test Report

深圳市麒鑫通达科技有限公司

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2026-10-12

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2G: GSM2/3/5/8

3G: W1/2/4/5

4G: FDD-B1/2/3/4/7/28

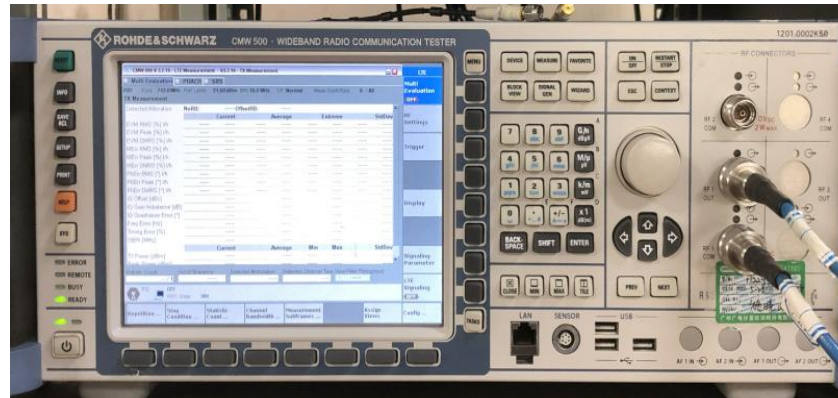
	Test Project	Equipment
1. S Parameter	1. Return Loss(RL) 2. VSWR	Network Analyzer: Agilent 5071B
2.Passive Test	1.Gain 2.Efficiency (%)	Network Analyzer: Agilent 5071B
3. RF Test (2/3/4/5G)	1. power 2. level 3.TRP/TIS	Comprehensive Test: SP9500/CMW500/8960 Test Environment: Anechoic Chamber



Agilent 5071B (S Parameter (RL/VSWR) Test Equipment



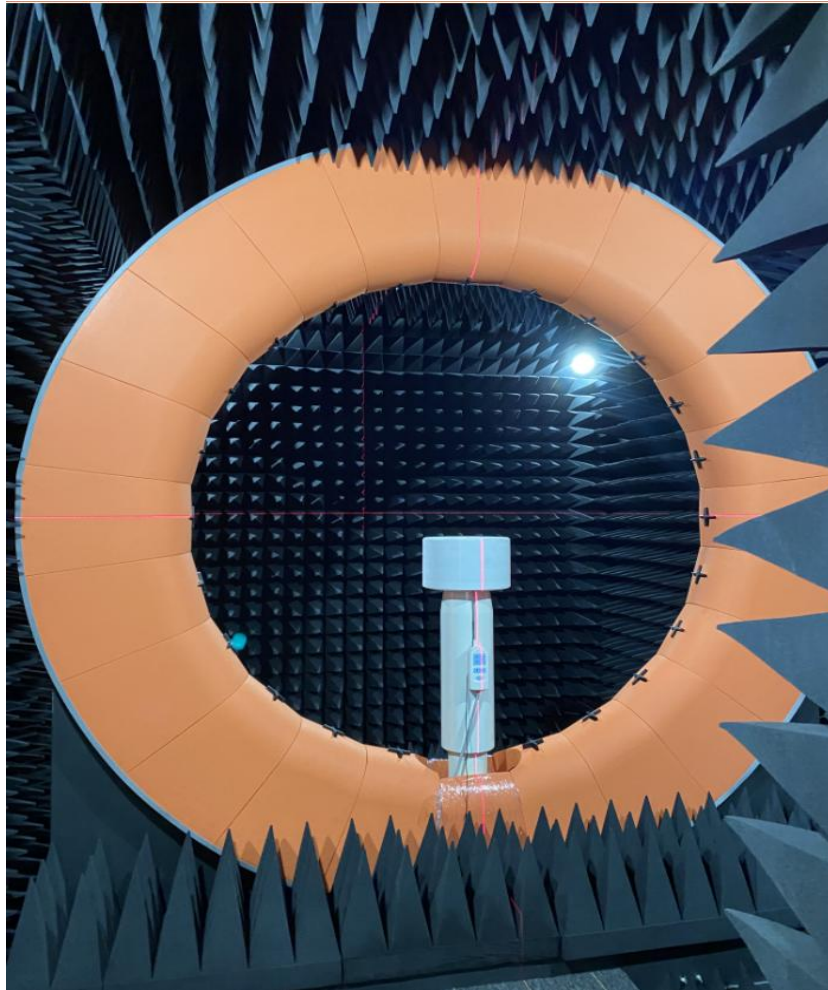
Agilent 8960 (2G/3G Test Equipment)



CMW 500 (2G/3G/4G Test Equipment)

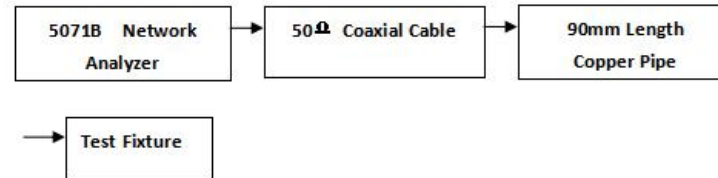


SP9500 (5G Test Equipment)

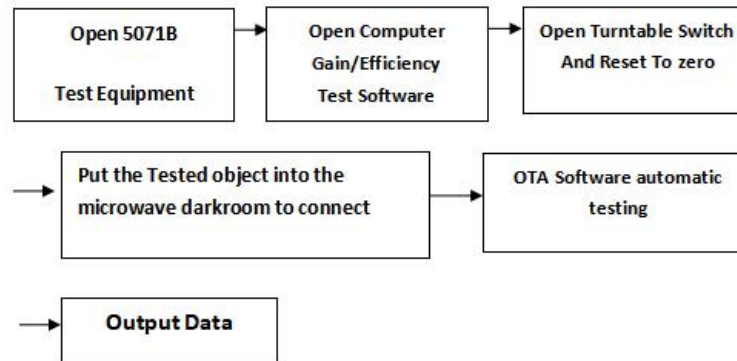


Microwave Anechoic Chamber

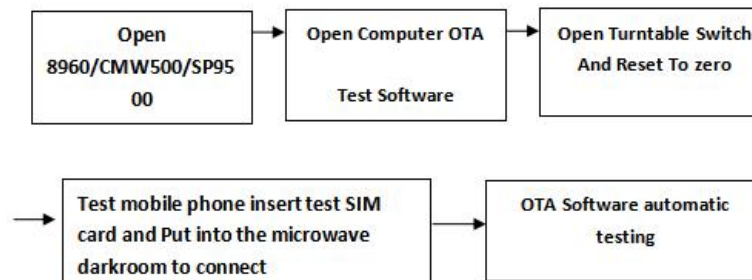
Passive VSWR/RL Test Steps:



Gain/Efficiency Test Steps:

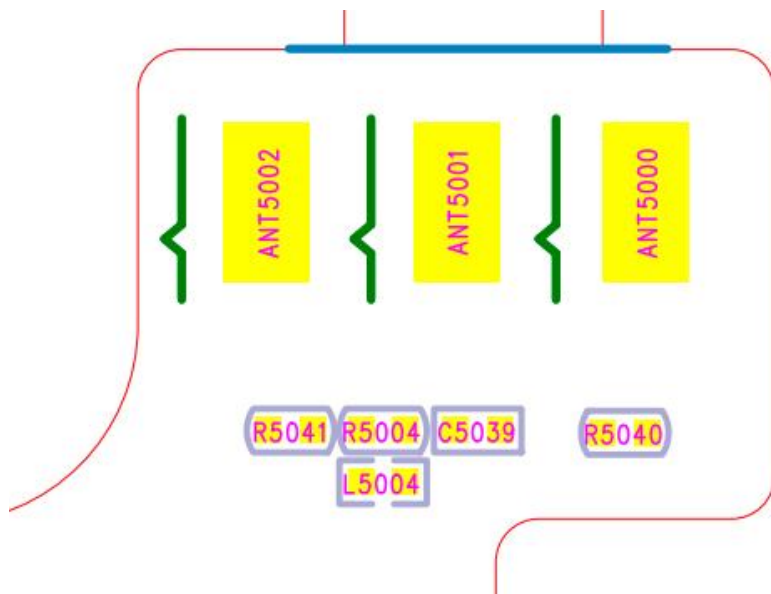


Active TRP/TIS Test Steps:



GPS/WIFI/BT天线主板匹配说明

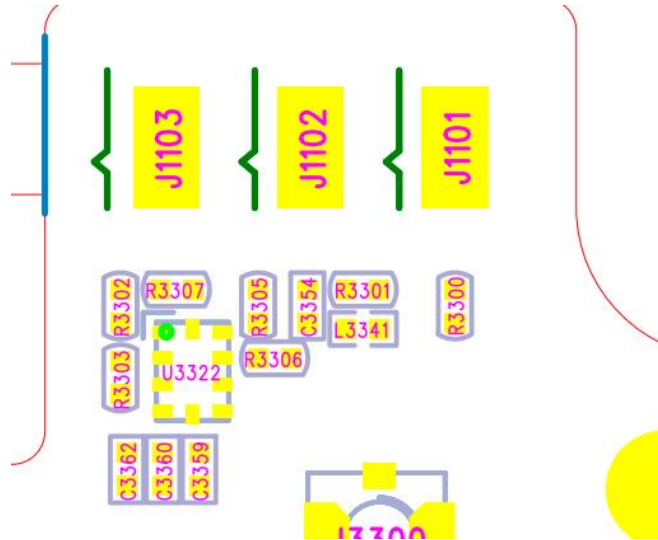
GPS/WIFI/BT Motherboard Circuit Matching Description)



主板位号 Mainboard Designator	匹配数值 Match values
R5040	0R
C5039	NC
R5004	0R
L5004	NC
R5041	0R

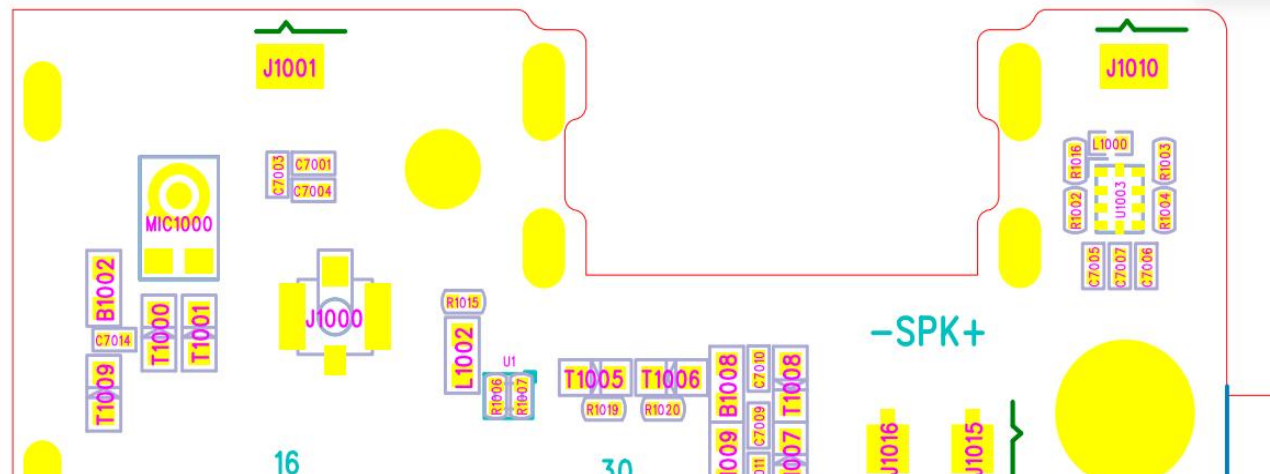
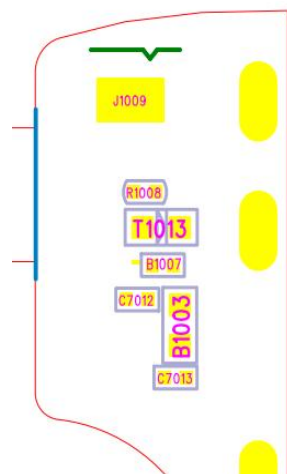
分集天线主板匹配说明

Diversity antenna Motherboard Circuit Matching Description



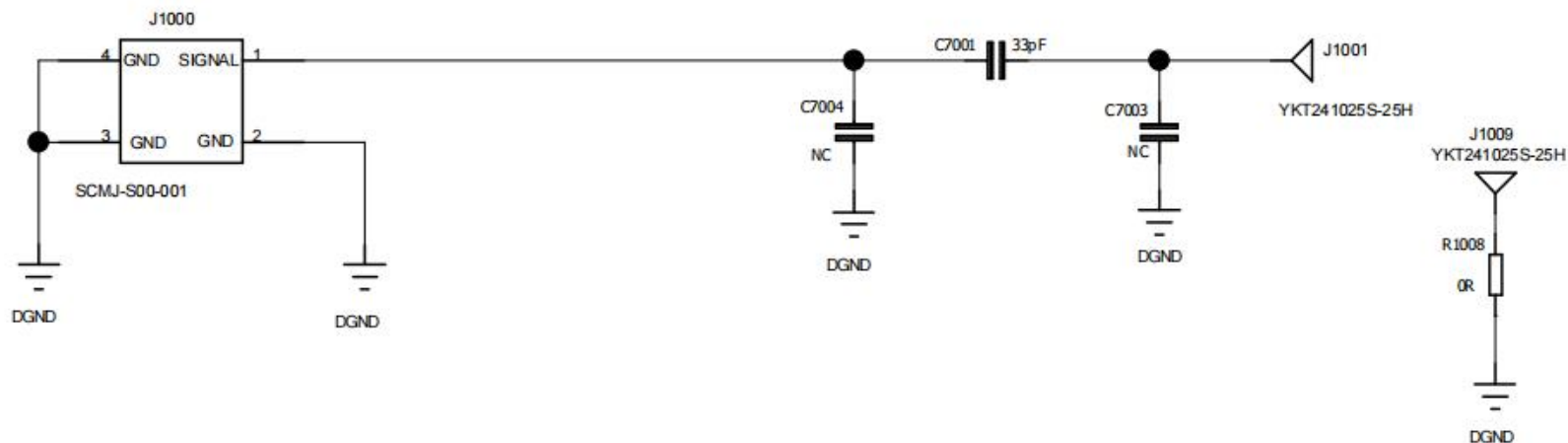
主板位号 Mainboard Designator	匹配数值 Match values
C3354	12NH
R3301	3.6PF
L3341	NC
R3300	0R
R3307	NC
R3302	0R
R3303	4.3NH
R3305	10NH
R3306	NC

主天线匹配说明 Main antenna Matching Description

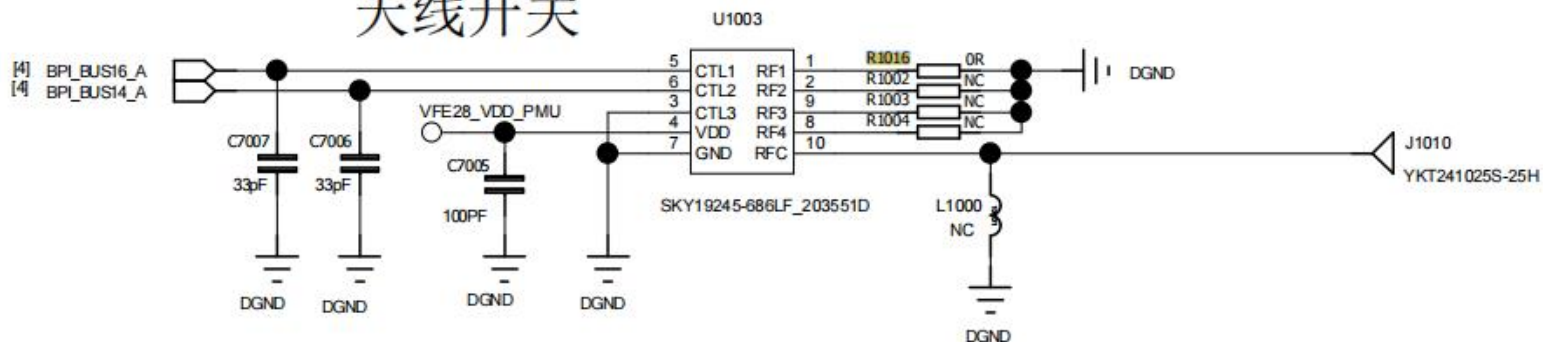


位号 Designator	匹配数值 Match values
R1008	0R
C7003	NC
C7001	0R
C7004	NC
L1000	NC
R1016	0R
R1002	5.1NH
R1003	5.6NH
R1004	12NH

主天线开关原理图 (Schematic Diagram of Main Antenna Switch)



天线开关





Main ANT		
Main ANT	RF1	TRX 2G:900/1800/1900 3G:W1/2/4 4G:B1/2/3/4
	RF2	TRX 2G:850 3G:W5
	RF3	DRX 4G:B7
	RF4	TRX 4G:B28

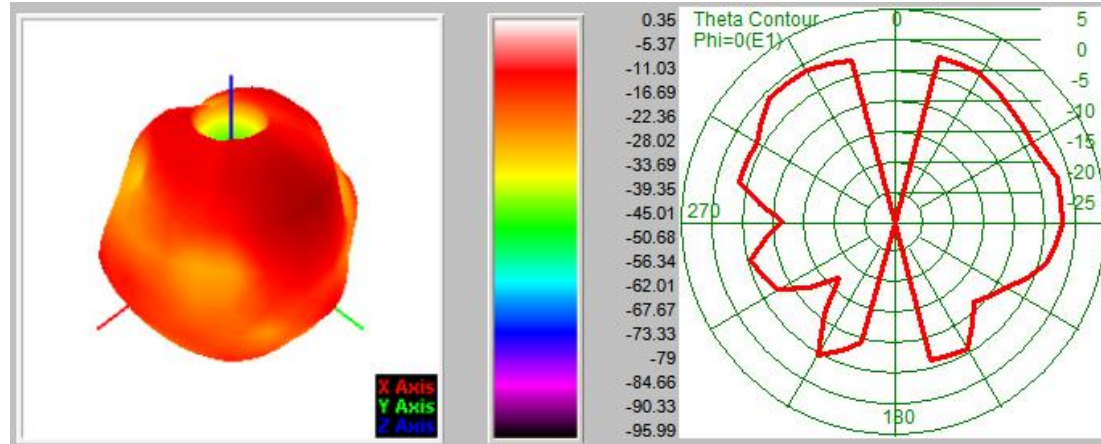
DIV ANT		
DIV ANT	RF1	DRX 2G:900/1800/1900 3G:W1/2/4 4G:B1/2/3/4 TRX 4G:B7
	RF2	DRX 2G:850 3G:W5
	RF3	DRX 4G:B28
	RF4	

天线增益 (Antenna Gain)

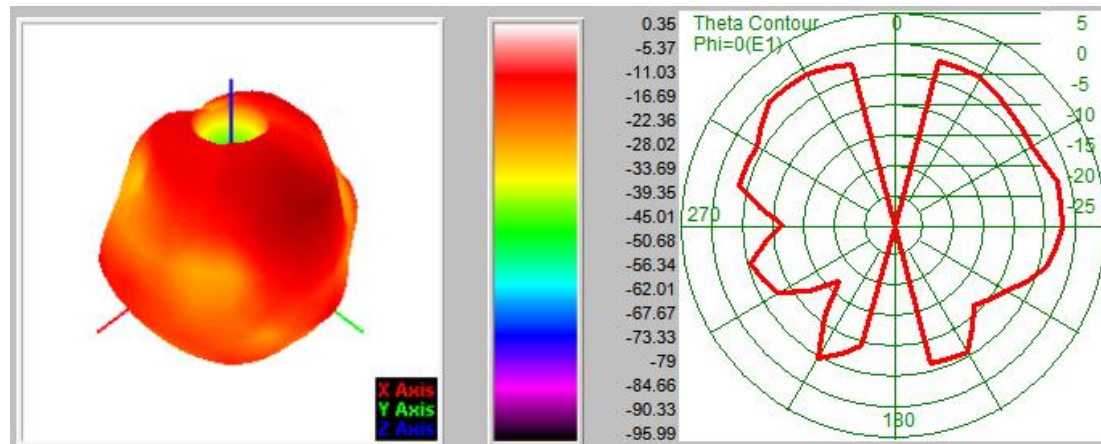
Band	Max Gain	Band	Max Gain
GSM850(824-894MHz)	-2.42	LTE-B66(1710-2200MHz)	×
GSM900(880-960MHz)	-2.18	LTE-B71(617-698MHz)	×
DCS1800(1710-1880MHz)	0.43	LTE-B34(2010-2025MHz)	×
PCS1900(1850-1990MHz)	0.65	LTE-B38(2570-2620MHz)	×
WCDMA1(1922-2168MHz)	0.71	LTE-B39(1880-1920MHz)	×
WCDMA2(826-892MHz)	0.65	LTE-B40(2300-2400MHz)	×
WCDMA4(882-958MHz)	0.43	LTE-B41(2496-2690MHz)	×
WCDMA5(826-892MHz)	-2.42	NR1(1920-2170MHz)	×
WCDMA6(832-882MHz)	×	NR2(1850-1990MHz)	×
WCDMA8(882-958MHz)	×	NR3(1710-1880MHz)	×
WCDMA19(832-888MHz)	×	NR5(824-894MHz)	×
LTE-B1(1920-2170MHz)	0.71	NR7(2500-2690MHz)	×
LTE-B2(1850-1990MHz)	0.65	NR8(880-960MHz)	×
LTE-B3(1710-1880MHz)	0.43	NR12(699-746MHz)	×
LTE-B4(1710-2155MHz)	0.43	NR20(791-862MHz)	×
LTE-B5(824-894MHz)	×	NR25(1850-1995MHz)	×
LTE-B7(2500-2690MHz)	0.68	NR28(703-803MHz)	×
LTE-B8(880-960MHz)	×	NR66(1710-2200MHz)	×
LTE-B12(699-746MHz)	×	NR71(617-698MHz)	×
LTE-B13(746-787MHz)	×	NR38(2570-2620MHz)	×
LTE-B17(704-746MHz)	×	NR39(1880-1920MHz)	×
LTE-B18(815-875MHz)	×	NR40(2300-2400MHz)	×
LTE-B19(830-890MHz)	×	NR41(2496-2690MHz)	×
LTE-B20(791-862MHz)	×	NR48(3550-3700MHz)	×
LTE-B25(1850-1995MHz)	×	NR77(3300-4200MHz)	×
LTE-B26(814-894MHz)	×	NR78(3300-3800MHz)	×
LTE-B28(706-803MHz)	-2.96		

L1/BT/WIFI2.4G/WIFI5.1-5.8G	
Band	Max Gain
Bluetooth(2402-2480)	0.35
WIFI-2.4G(2412-2484)	0.35
GPS-L1(1575.42)	0.62

2.4GWIFI

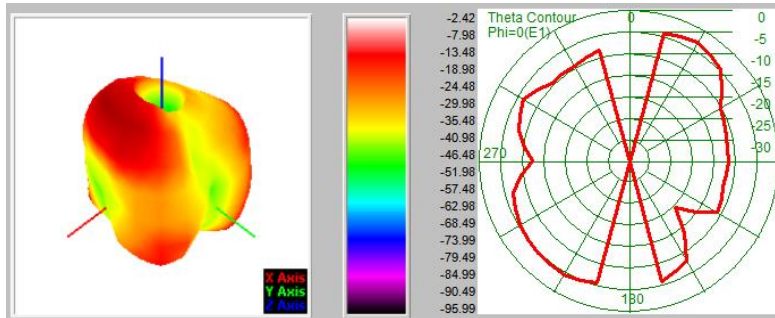


BT

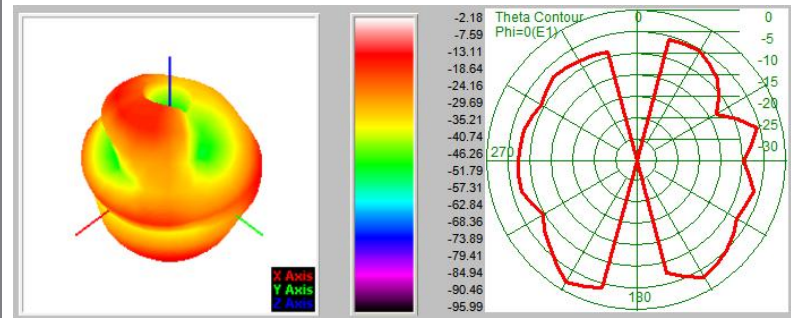


2D方向图与3D场强图 (2D radiation pattern and 3D field strength plot)

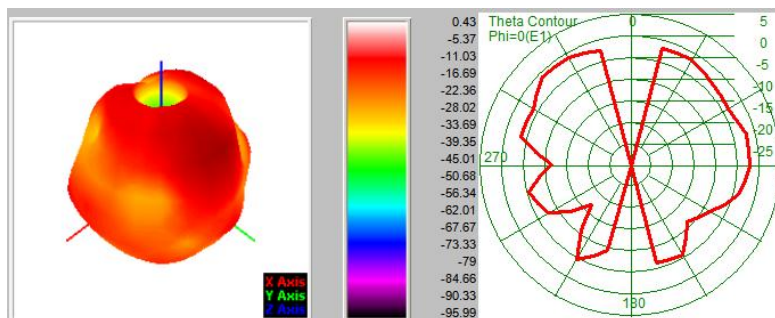
GSM850



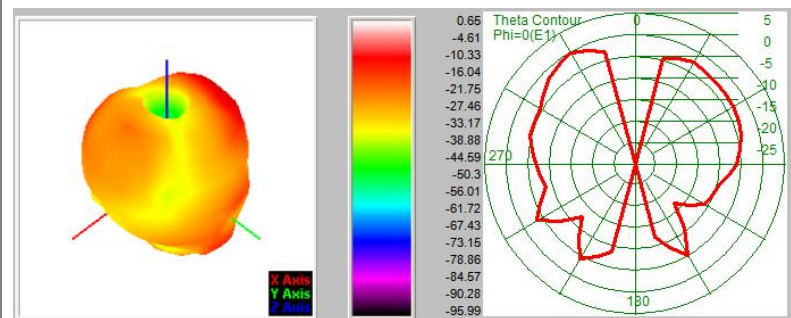
GSM900



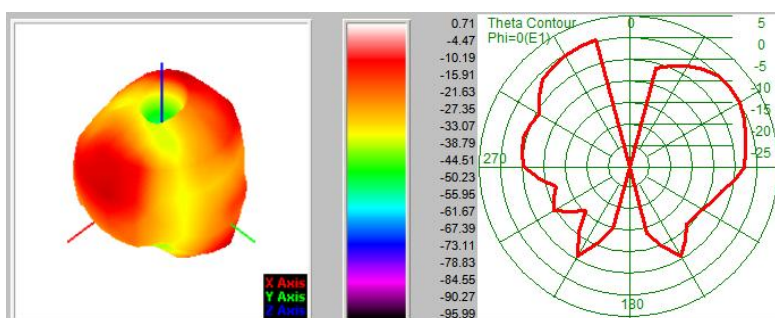
DCS1800



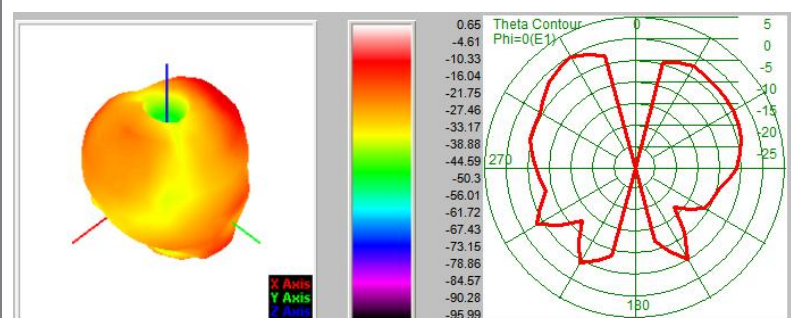
PCS1900



W1

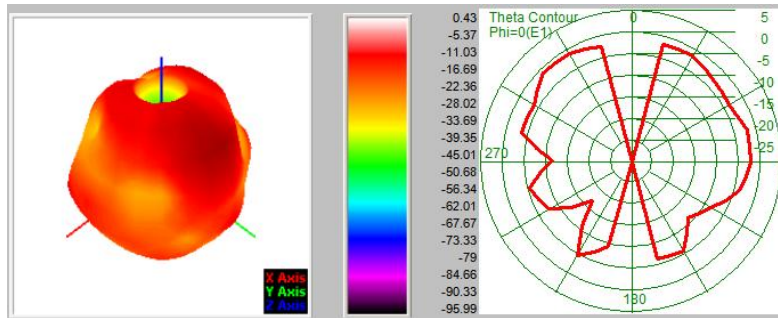


W2

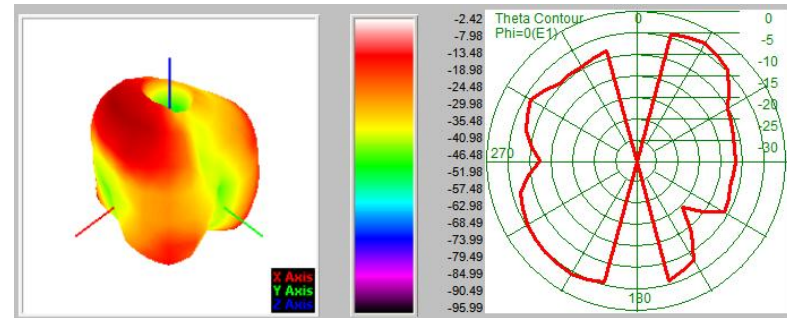


2D方向图与3D场强图 (2D radiation pattern and 3D field strength plot)

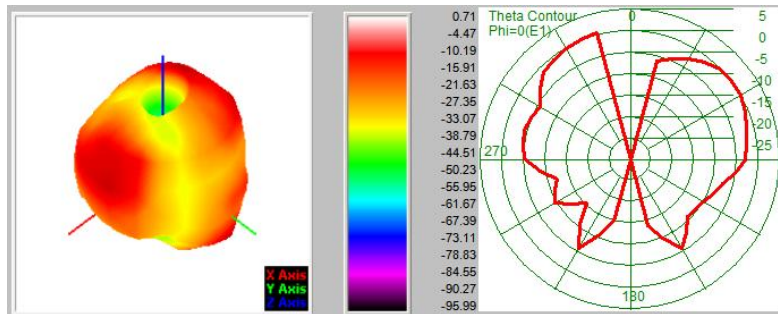
W4



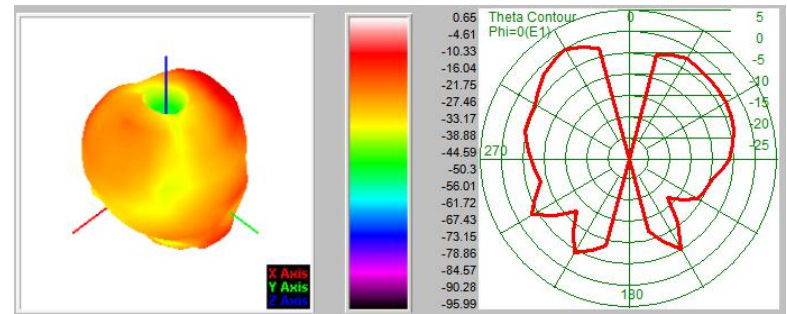
W5



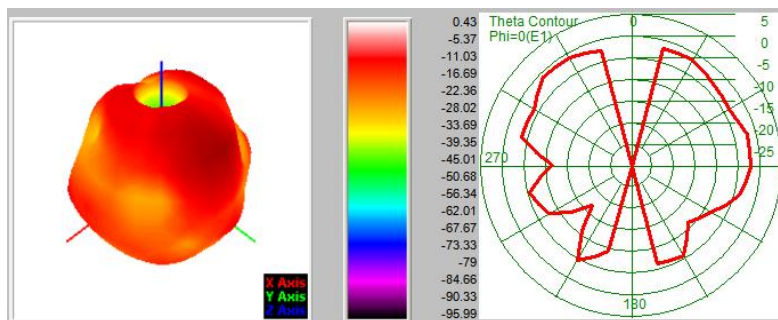
FDD-B1



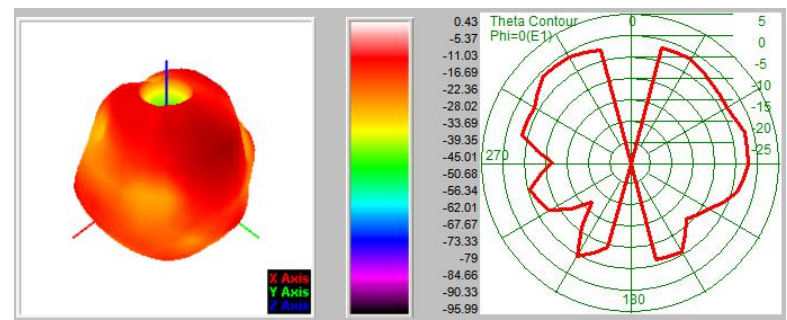
FDD-B2



FDD-B3

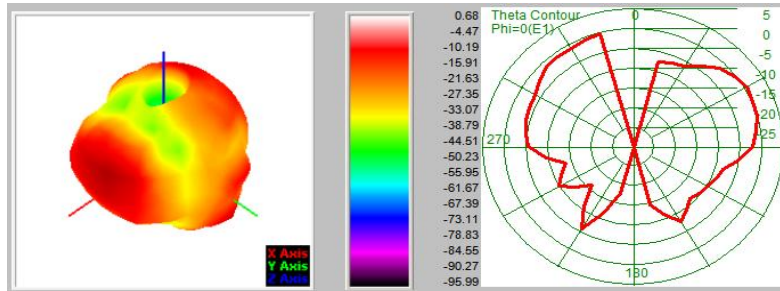


FDD-B4

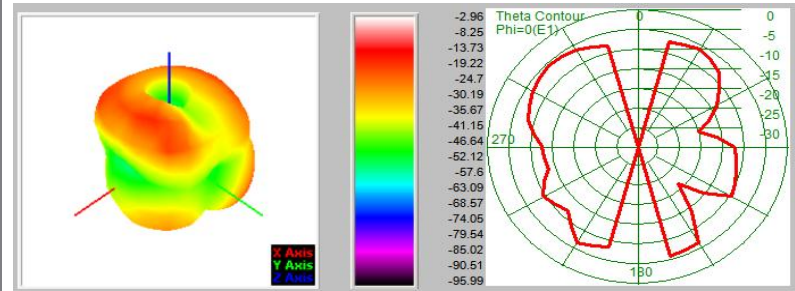


2D方向图与3D场强图 (2D radiation pattern and 3D field strength plot)

FDD-B7



FDD-B28



天线OTA测试数据 (Antenna OTA Test Data)

Band	Measurement	Total	Band	Measurement	Total	Band	Measurement	Total
GSM850	TRP	25.2	WCDMA_B5	TRP	17.2			
GSM850	TRP	25.2	WCDMA_B5	TRP	17.2			
GSM850	TRP	25.6	WCDMA_B5	TRP	17.1			
GSM850	TIS(RSSI)	-101.6	WCDMA_B5	TIS FAST	-103.1			
GSM900	TRP	25.5	FDD_B1(10MHz)	TRP	18.5			
GSM900	TRP	26.1	FDD_B1(10MHz)	TRP	18.6			
GSM900	TRP	26.2	FDD_B1(10MHz)	TRP	18.8			
GSM900	TIS(RSSI)	-101.8	FDD_B1(10MHz)	TIS FAST	-93.1			
DCS1800	TRP	24.0	FDD_B2(10MHz)	TRP	18.1			
DCS1800	TRP	25.1	FDD_B2(10MHz)	TRP	18.3			
DCS1800	TRP	25.5	FDD_B2(10MHz)	TRP	18.2			
DCS1800	TIS(RSSI)	-103.5	FDD_B2(10MHz)	TIS FAST	-93.3			
PCS1900	TRP	24.6	FDD_B3(10MHz)	TRP	17.8			
PCS1900	TRP	24.3	FDD_B3(10MHz)	TRP	18.5			
PCS1900	TRP	24.5	FDD_B3(10MHz)	TRP	18.9			
PCS1900	TIS(RSSI)	-103.6	FDD_B3(10MHz)	TIS FAST	-91.6			
WCDMA_B1	TRP	17.8	FDD_B4(10MHz)	TRP	17.2			
WCDMA_B1	TRP	17.8	FDD_B4(10MHz)	TRP	17.6			
WCDMA_B1	TRP	18.1	FDD_B4(10MHz)	TRP	18.1			
WCDMA_B1	TIS(RSSI)	-105.2	FDD_B4(10MHz)	TIS FAST	-93.4			
WCDMA_B2	TRP	18.2	FDD_B7(10MHz)	TRP	18.3			
WCDMA_B2	TRP	18.2	FDD_B7(10MHz)	TRP	18.2			
WCDMA_B2	TRP	18.1	FDD_B7(10MHz)	TRP	18.0			
WCDMA_B2	TIS(RSSI)	-105.8	FDD_B7(10MHz)	TIS FAST	-89.0			
WCDMA_B4	TRP	17.5	FDD_B28(10MHz)	TRP	16.6			
WCDMA_B4	TRP	18.1	FDD_B28(10MHz)	TRP	17.3			
WCDMA_B4	TRP	18.6	FDD_B28(10MHz)	TRP	18.3			
WCDMA_B4	TIS FAST	-104.7	FDD_B28(10MHz)	TIS FAST	-92.3			



型号 (Model)		备注 (Remark)	GPS测试 (GPS Test)		
测试项目 (Test Item)	GPS				
信道 (Channel)	1575.42MHz				
TRP(dBm)					
TIS(dBm)	-148.0				



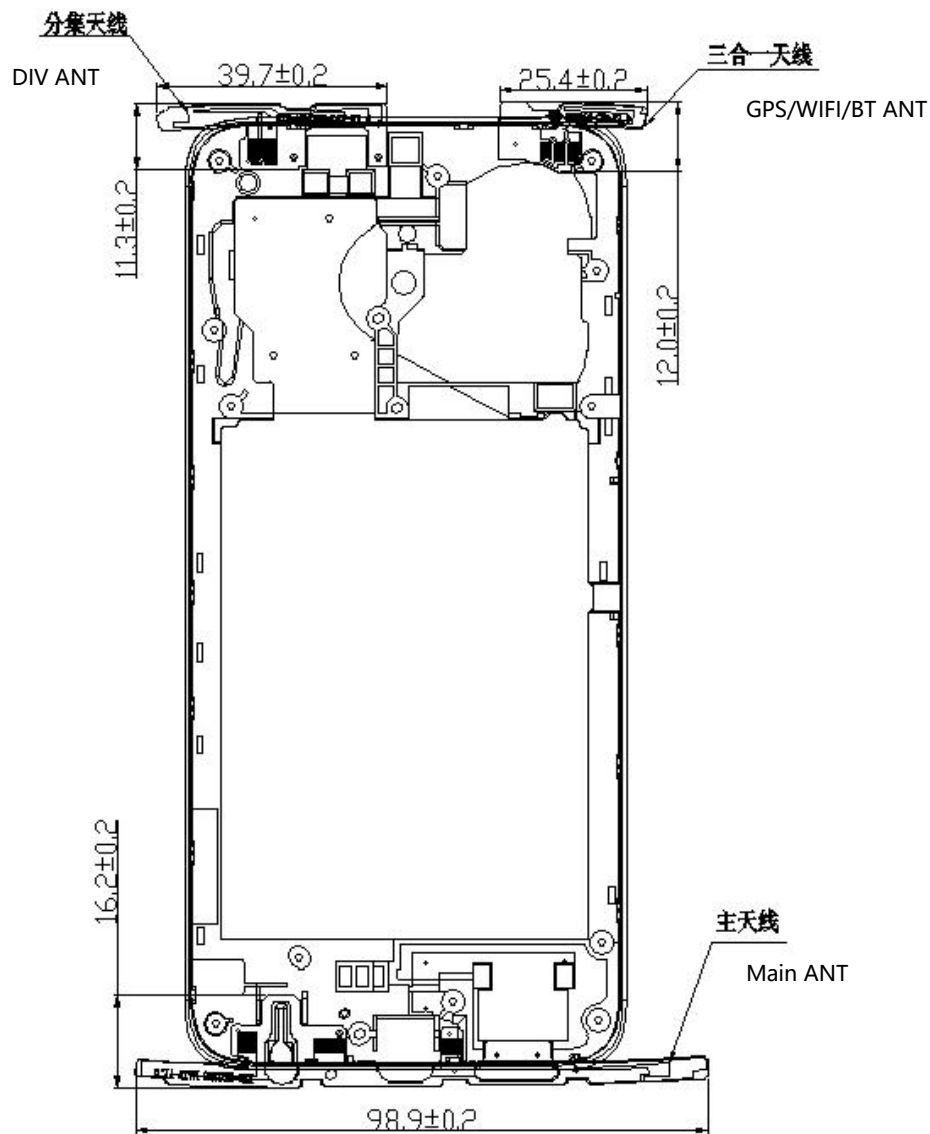
型号 (Test Item)		备注 (Remark)	WIFI测试 (WIFI Test)				
测试项目 (Test Item)		WIFI-B测量数值 (WIFI-B Measured Value)			WIFI-A测量数值 (WIFI-A Measured Value)		
信道 (Channel)		L	M	H	L	M	H
TRP(dBm)		11.2	11.5	11.3			
TIS(dBm)				-80.2			



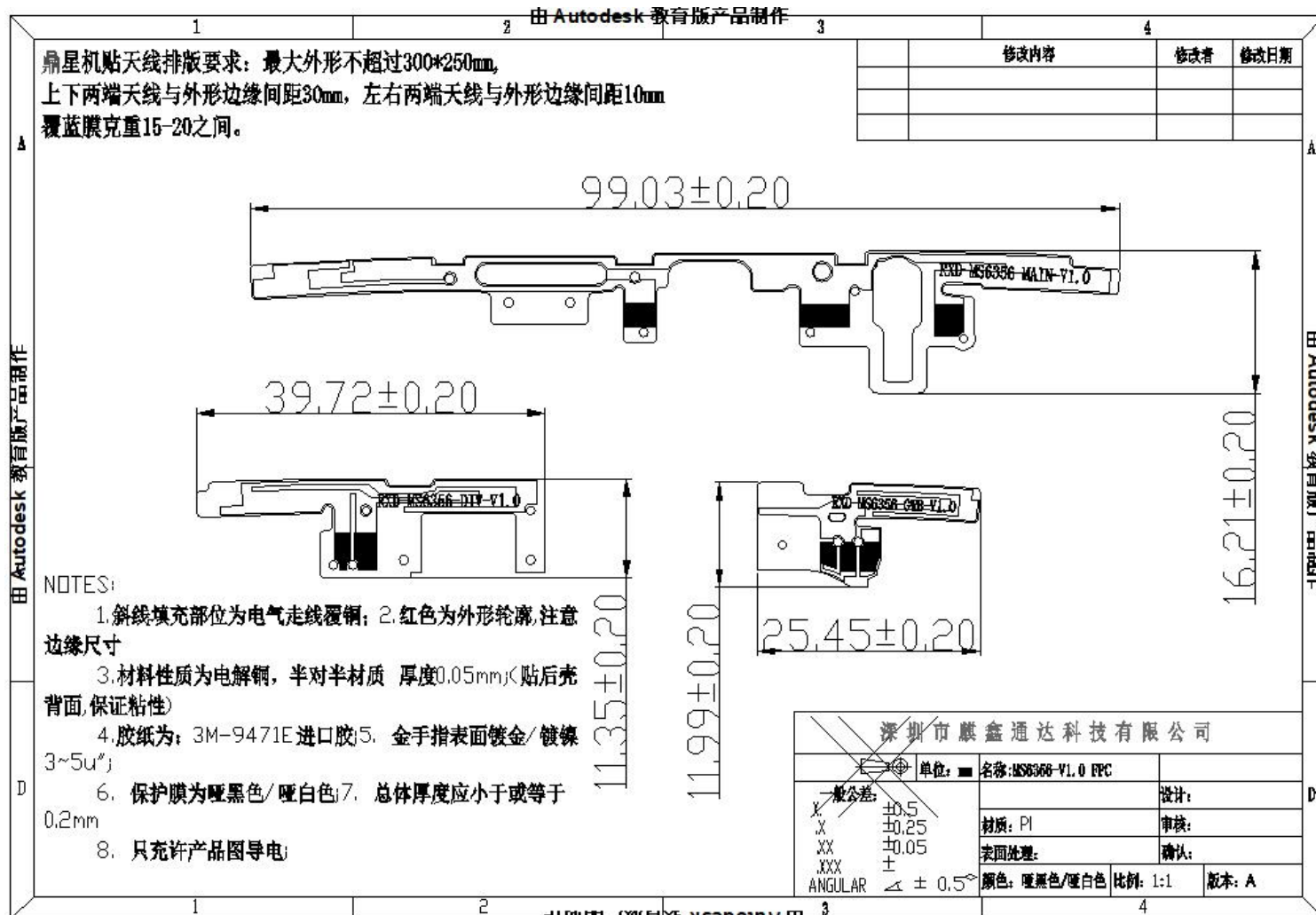
型号 (Test Item)		备注 (Remark)	BT测试 (BT Test)	
测试项目 (Test Item)		BLUETOOTH		
信 道 (Channel)		L	H	M
TRP(dBm)		4.2	4.3	4.1
TIS(dBm)				-85.3

MS46541TML	
Antenna type	Main ANT --PIFA DIV ANT --PIFA GPS/WIFI/BT --PIFA
Antenna materia	FPC

天线分布图 (Antenna Distribution Diagram)



天线线路设计图 (NFC Antenna Line Design Diagram)



**END
THANK YOU**