

东莞市广正模具塑胶有限公司

承 认 书

(结构料 类)

SPECIFICATION FOR APPROVAL

物料描述

DESCRIBE: S6031-GSM天线

物料型号

PRODUCTS: S6031

物料编码

PART NO:

品牌(制造商)

BRAND:

适用机种

APPLICATION: S6031

日期

DATE: 2013-7-15

供应商

PROVIDER: 磊德科技有限公司

APPROVED BY VENDOR			
确认	校对	审核	批准
APPROVED BY JANUS			
确认	校对	审核	批准

文件编号: TN-WI-018

V1.0

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四、电特性

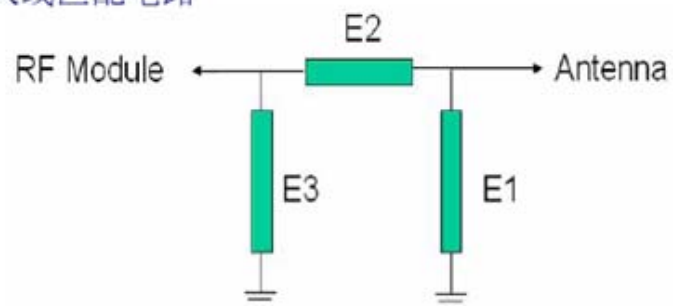
1. Antenna Structure



Figure1 antenna structure

2. Matching Network

主天线匹配电路



Element	Value
E1(0402)	5.6nH
E2(0402)	0Ω
E3(0402)	N/A

3. Passive Test

1. Return Loss

Test Equipment: HP8753E

Test Result:



Figure3.1 S11 curve

2. Vswr

Test Equipment: HP8753E

Test Result:

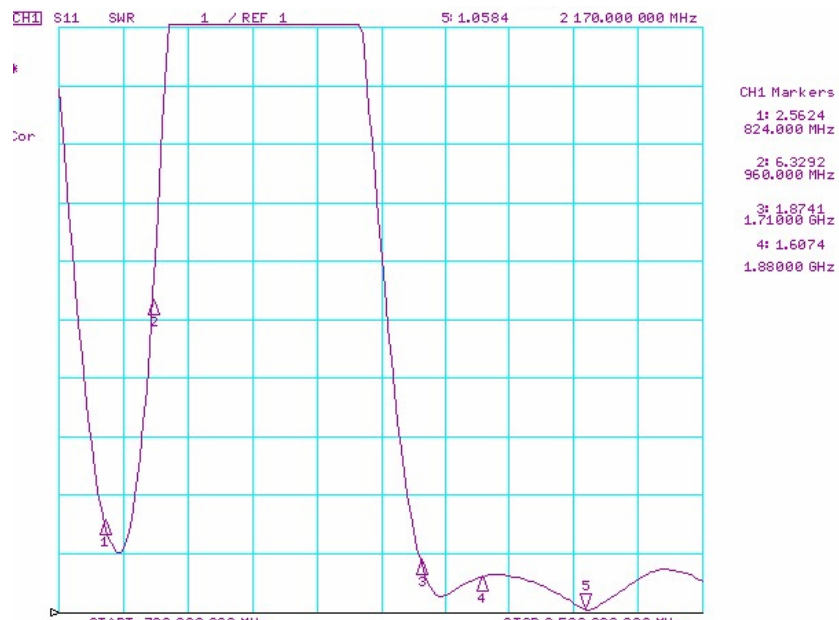


Figure3.2 vswr curve

3. Smith

Test Equipment: HP8753E

Test Result:

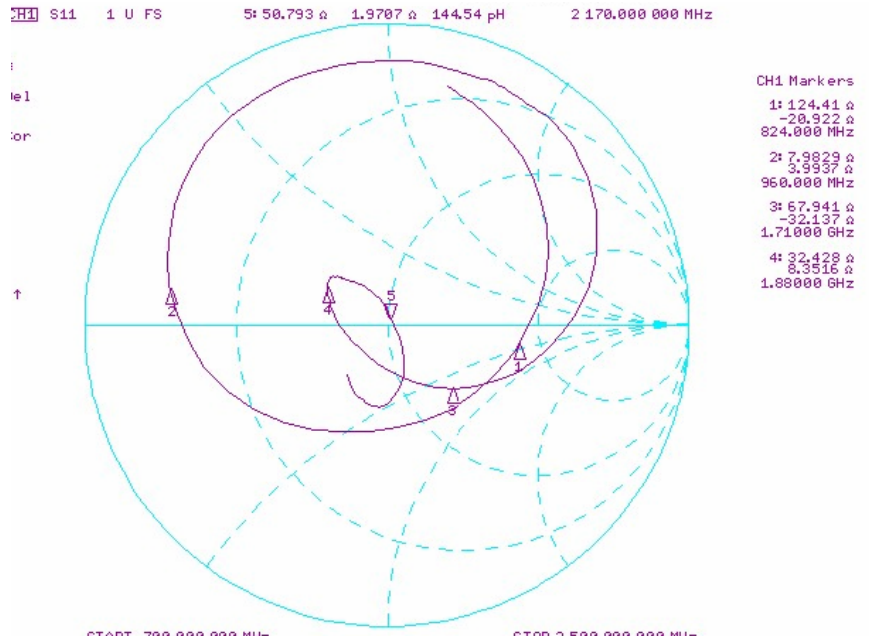


Figure3.3 smith curve

4. S21

Test Equipment: HP8753E

Test Result:

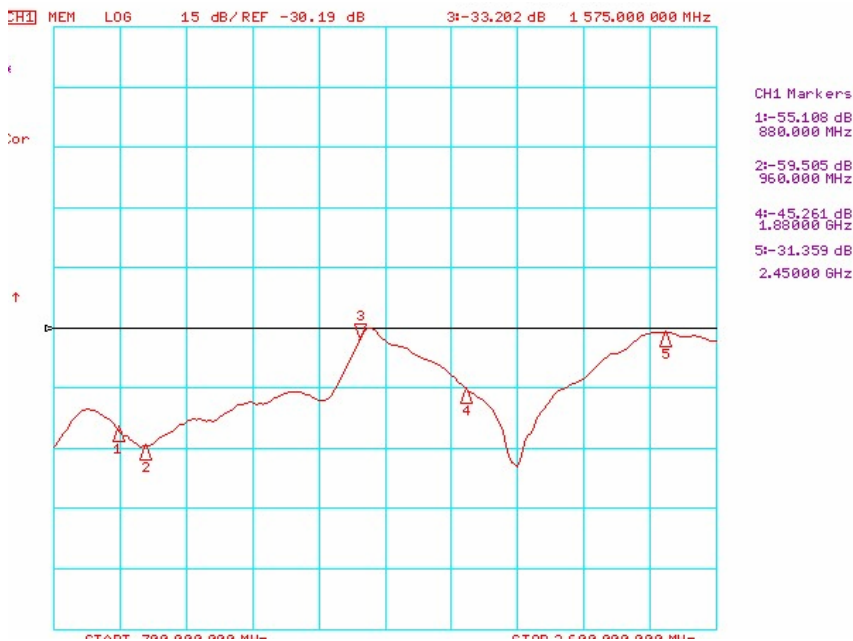


Figure3.4.1 S21 (GSM&GPS&WIFI&BT)

5. Radiation Pattern

Test Equipment: Satimo StarLab, HP8753E, Shielding Room
 Antenna Range Axis Definition

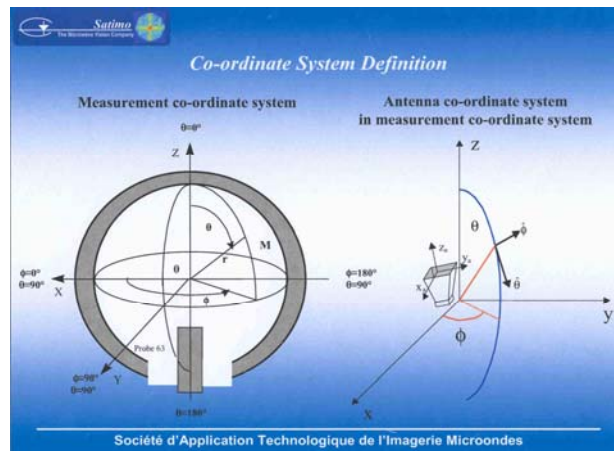


Figure 3.5.1 antenna test coordinate

Orientation of Antenna as Measured in the Antenna Range

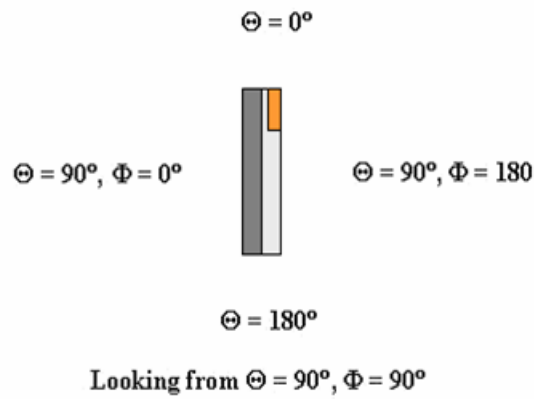


Figure 3.5.2 mobile handset place

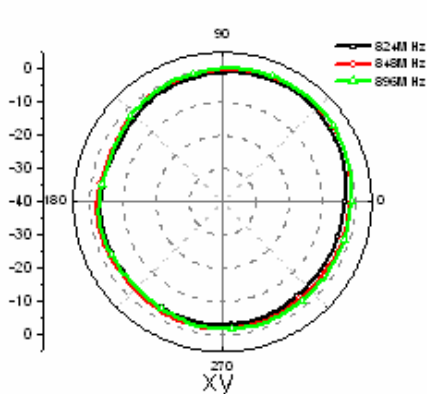


figure 3.5.3 GSM850 XY plane Antenna pattern

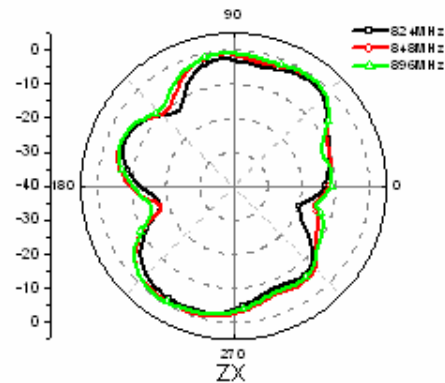


figure 3.5.4 GSM850 ZX plane Antenna pattern

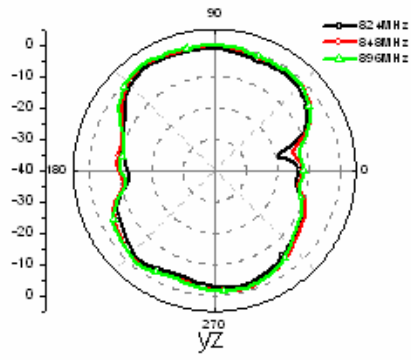


figure 3.5.5 GSM 850 YZ plane Antenna pattern

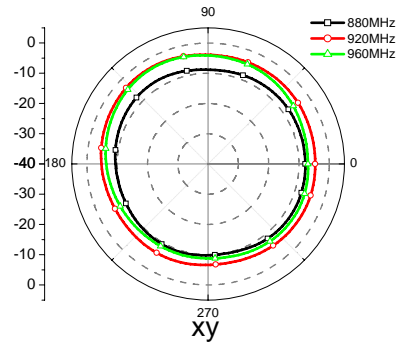


Figure3.5.6 EGSM900 XY plane Antenna pattern

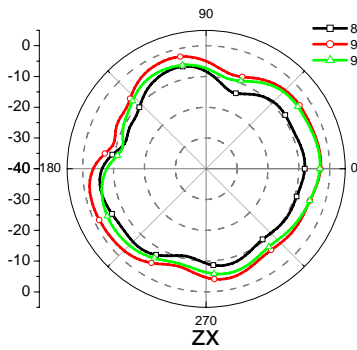


Figure 3.5.7 EGSM900 ZX plane Antenna pattern

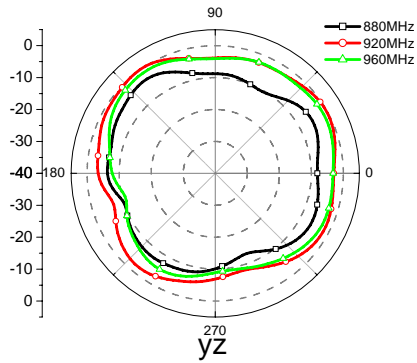


Figure 3.5.8 EGSM900 YZ plane Antenna pattern

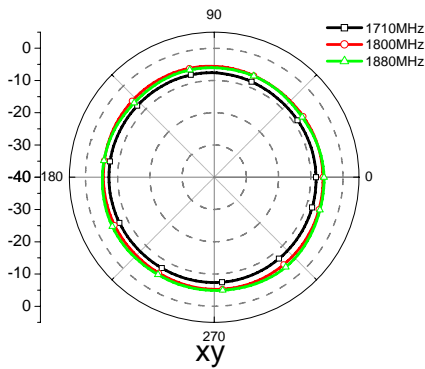


Figure 3.5.9 DCS XY plane Antenna pattern

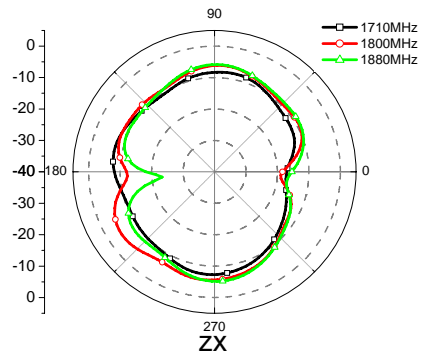


Figure 3.5.10 DCS ZX plane Antenna pattern

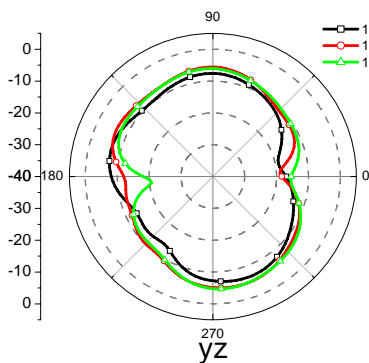


Figure 3.5.11 DCS YZ plane Antenna pattern

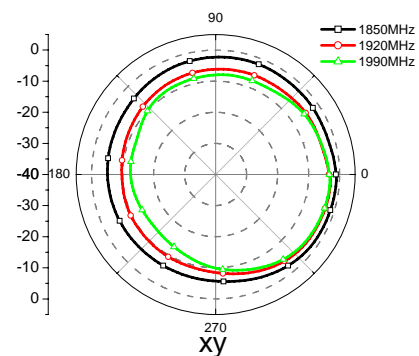


Figure 3.5.12 PCS XY plane Antenna pattern

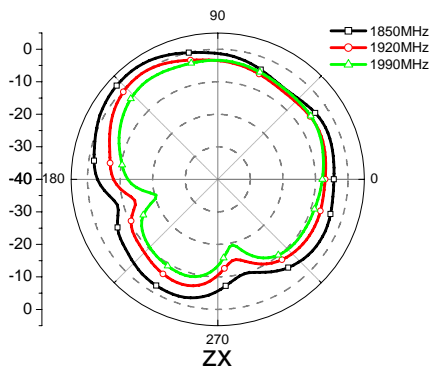


Figure 3.5.13 PCS ZX plane Antenna pattern

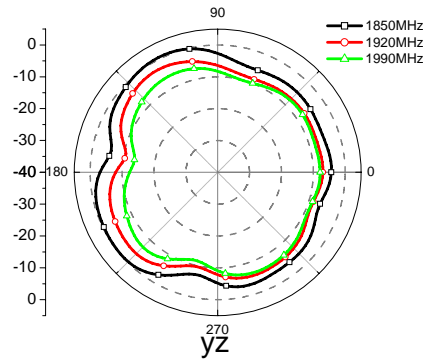


Figure 3.5.14 PCS YZ plane Antenna pattern

6. 3D radiation pattern

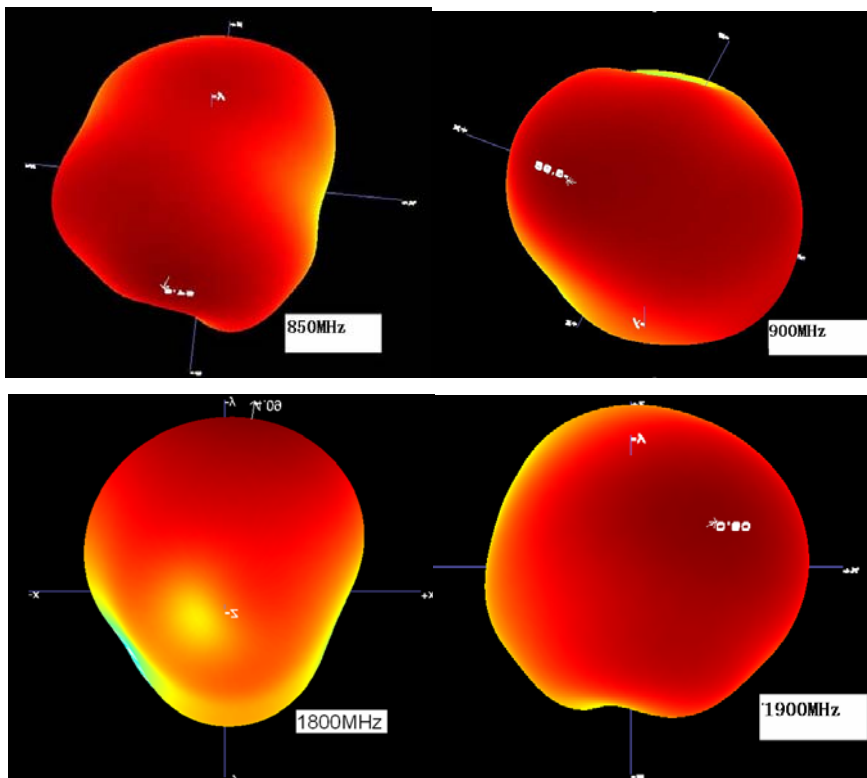


Figure 3.6 antenna 3D pattern

7. Peak gain

Test Equipment: Satimo StarLab, HP8753E, Shielding Room

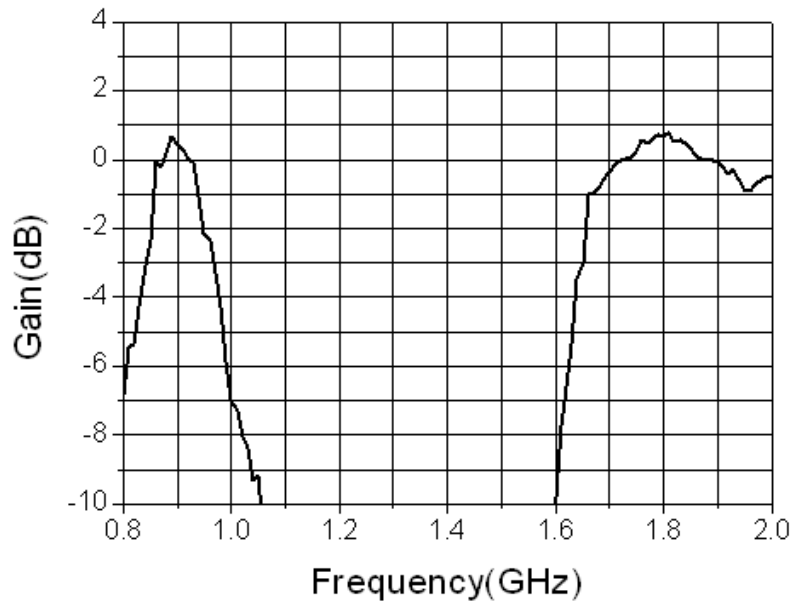


Figure 3.7 GSM850/ GSM900/DCS/PCS/WCDMA gain curve

8. Efficiency

Test Equipment: Satimo StarLab, HP8753E, Shielding Room

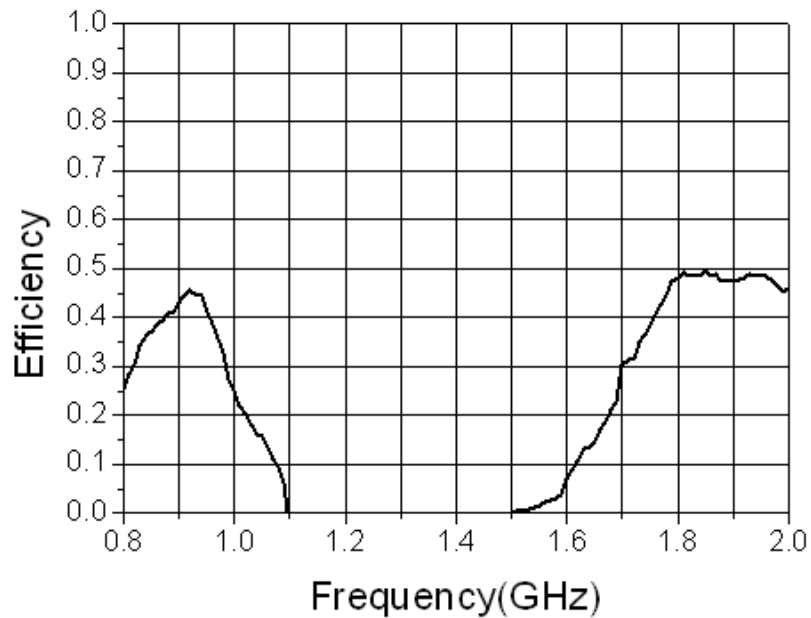


Figure3.8 GSM850/ GSM900/DCS/PCS/WCDMA efficiency curve

9. Main Antenna efficiency and gain table

Frequency (MHz)	840	920 (MAX)	950	1780	1850 (MAX)	1980
Efficiency (%)	36.5	45.7	41.4	44.6	49.5	46.4
Gain (dB)	-2.10	0.08	-1.99	0.64	0.33	-0.61

Table1 Main Antenna efficiency and gain

4. Active Test

Test Equipment: Agilent8960, Shielding Room, Satimo StarLab

Test result (dBm)	GSM850			EGSM900			DCS			PCS		
	128	189	251	975	37	124	512	698	885	512	661	810
TRP	28.3	28.2	28.1	28.0	28.2	28.2	26.9	27.8	27.8	28.7	28.6	28.3
TIS	-107.0	-106.5	-106.0	-107.1	-107.7	-107.3	-106.7	-107.3	-107.0	-107.6	-107.1	-107.1

Test result (dBm)	Band I			Band II			Band VIII		
	9612	9750	9888	9262	9400	9538	2712	2787	2863
TRP	20.5	20.2	19.8	21.4	21.2	21.2	19.0	19.4	18.9
TIS	10562	10700	10838	2937	3012	3088	2937	3012	3088
	-107.3	-107.7	-107.5	-107.4	-107.0	-106.6	-106.6	-107.3	-106.9

Table2 Antenna 3D test result

5. Materials

Antenna module	materials
materials	steel

Table3 Antenna material

6. Conclusion

Test results arrive at customer requirement. Recommend that customers to accept