

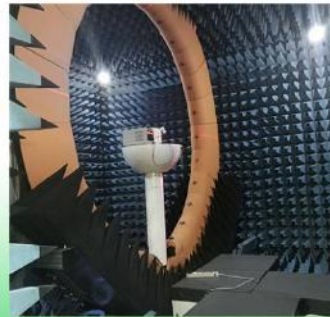
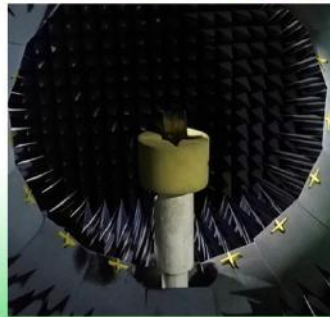
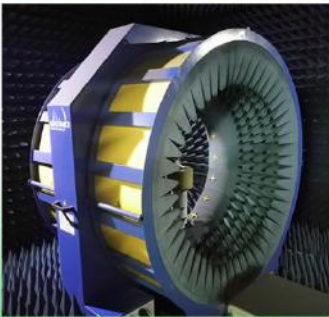
ANWEI commnuication Equipment Co.,Ltd

APPROVAL SHEET

Customer	Youmi	Specs	A15Ultra
Part Number	A15ULTRA-ANT0-AW A15ULTRA-ANT1-AW A15ULTRA-ANT2-AW A15ULTRA-ANT3-AW A15ULTRA-ANT4-AW A15ULTRA-ANT5-AW A15ULTRA-ANT6-AW A15ULTRA-ANT7-AW	Frequency Band	2G:GSM850/900/1800/1900/BCO/BC1 3G:WCDMA-B1/2/4/5/6/8/19 4G:LTE-B1/2/3/4/5/7/8/12/13/17/18/19/20/25/ 26/28A/28B/34/38/39/40/41/66/71 5G:N1/2/3/5/7/8/20/25/28/38/40/41/66/71/77 /78
Color	Black	Edition	REV:A0
Salesperson	Mr.Xie	Design	ZHONG ZHI HUI
Structure	QIN YUN LIN		
Date	2023/8/08		

ANT Manufacturers: ANWEI commnuication Equipment Co.,Ltd
 Address:2nd Floor, East Block, Building 5, Yifenghua Innovation Industrial Park, Huaning Road, Dalang Street, Longhua District, Shenzhen City, Guangdong Province

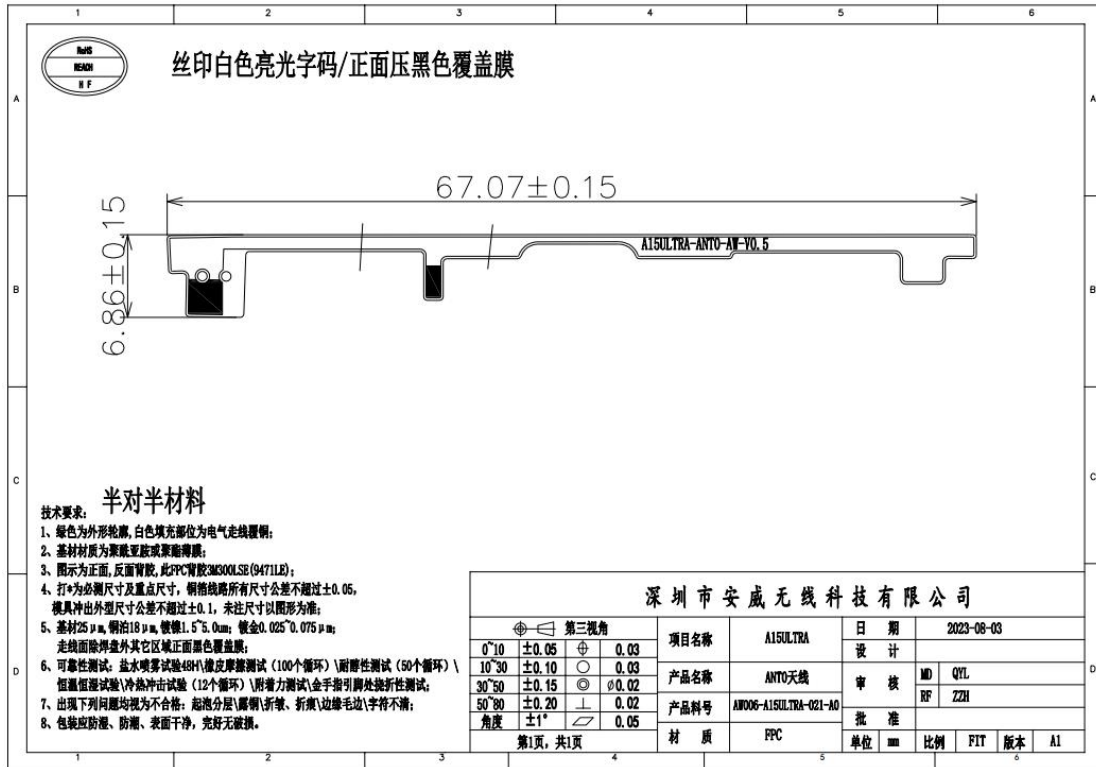
Project development environment



安威无线一直都是您值得信赖且优秀的合作伙伴，我们为您提供全方位一站式的产品以及技术服务！

“质量第一，服务至上”是安威一直以来的发展宗旨

(antenna 0)



(Working frequency band): 600MHZ~960MHZ

2G:GSM850/900/BCO

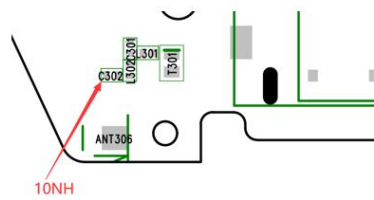
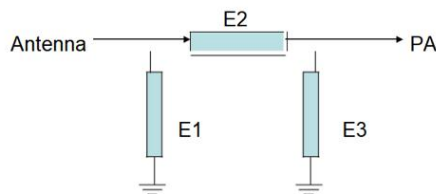
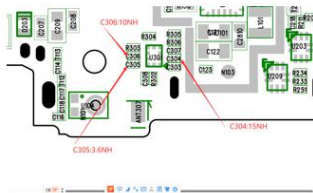
3G:WCDMA-B5/6/8/19

4G:LTE-B5/8/12/13/17/18/19/20/26/28A/28B/71

5G:N/5/8/20/28/71

(Matcheing network):

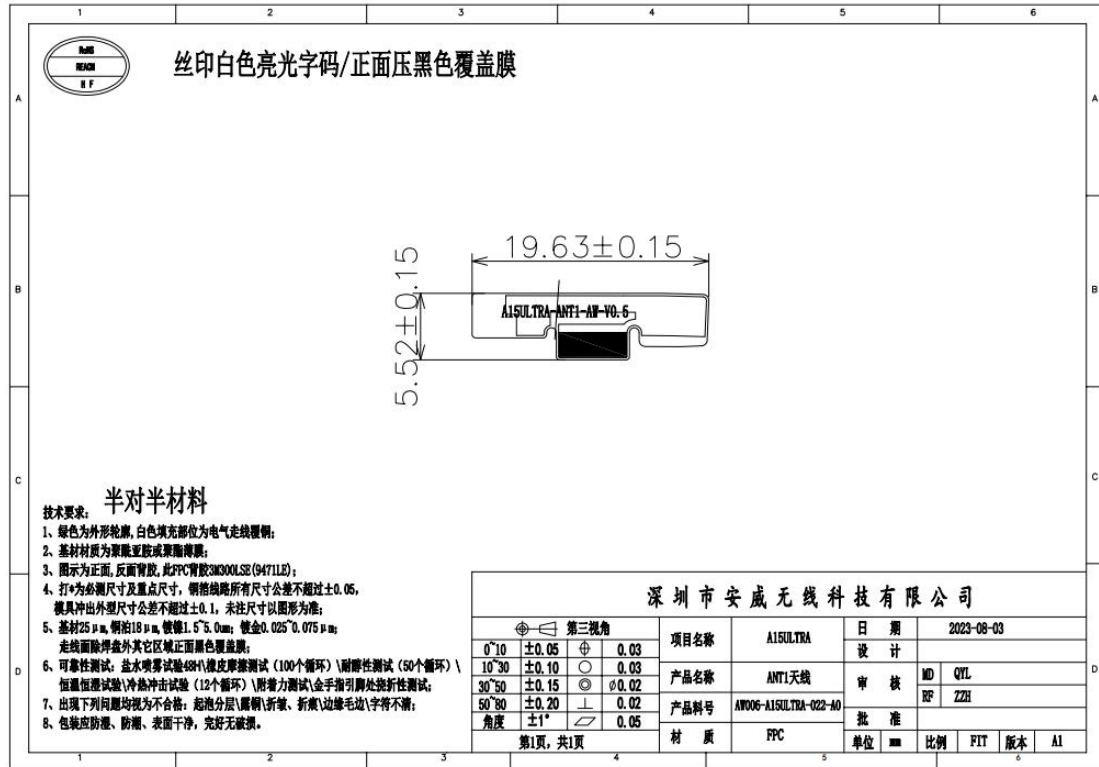
ANT0天线匹配电路



Element	Value
E1	10NH
E2	5.6PF
E3	N/A
E4	0Ω
E5	ESD

10NH
其它保持试产机不变

(antenna 1)



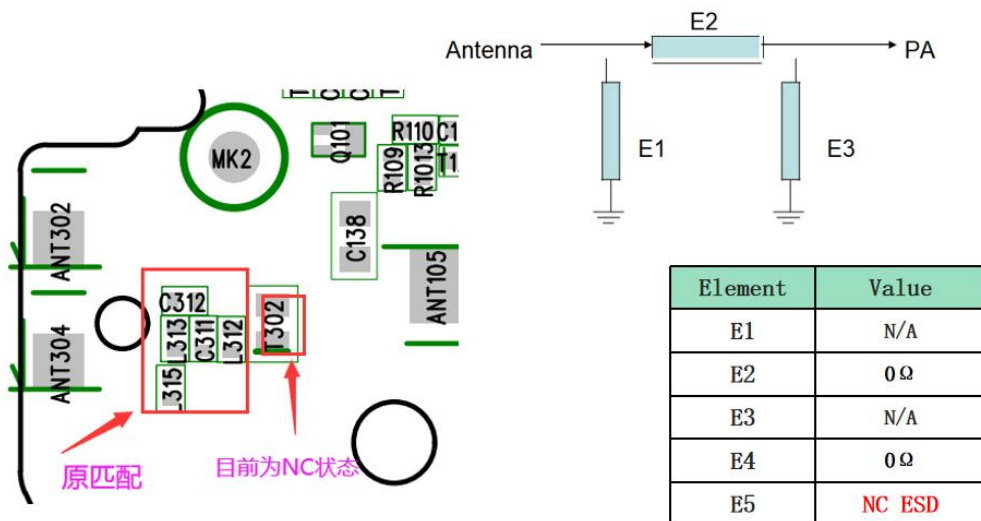
(Working frequency band):2300~2690MHZ

4G:LTE-B7/38/40/41

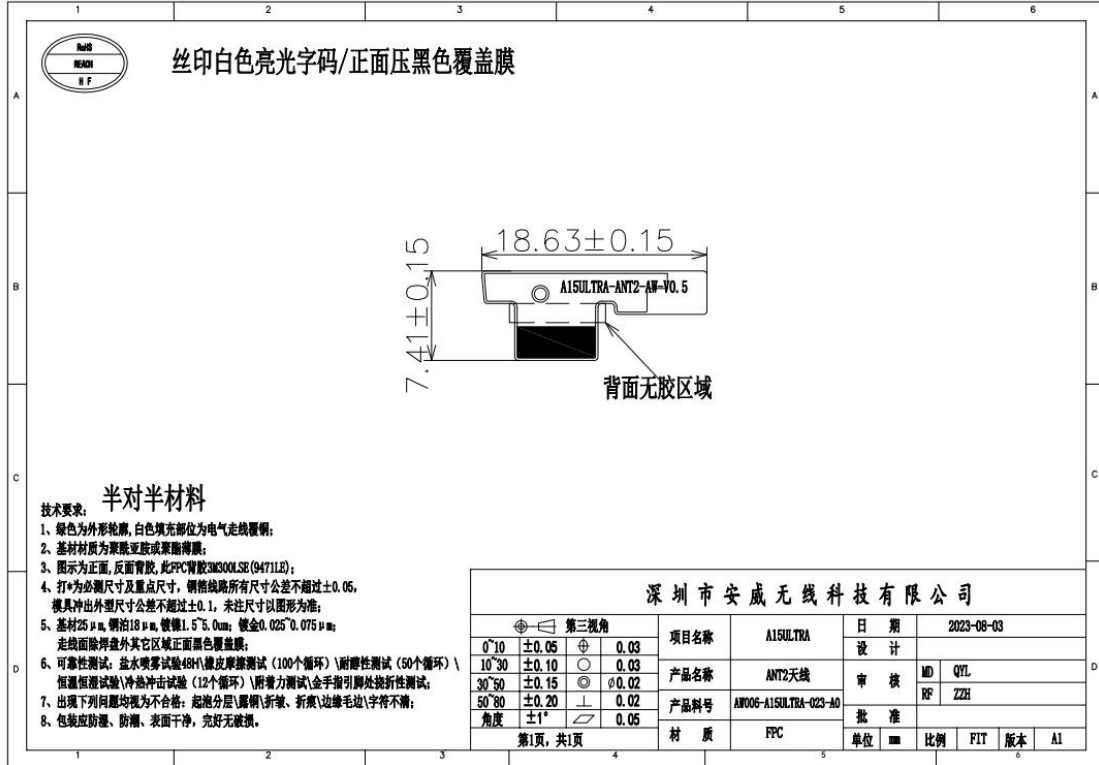
5G:N7/38/40/41

(Matcheing network):

ANT1天线匹配电路



(antenna 2)

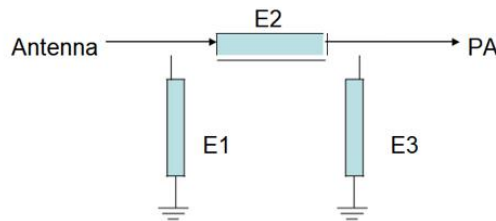
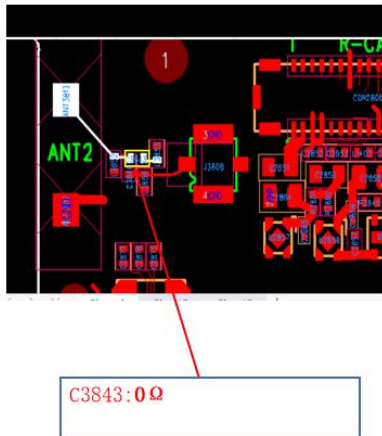


(Working frequency band):3300~4200MHZ

5G:N77/78

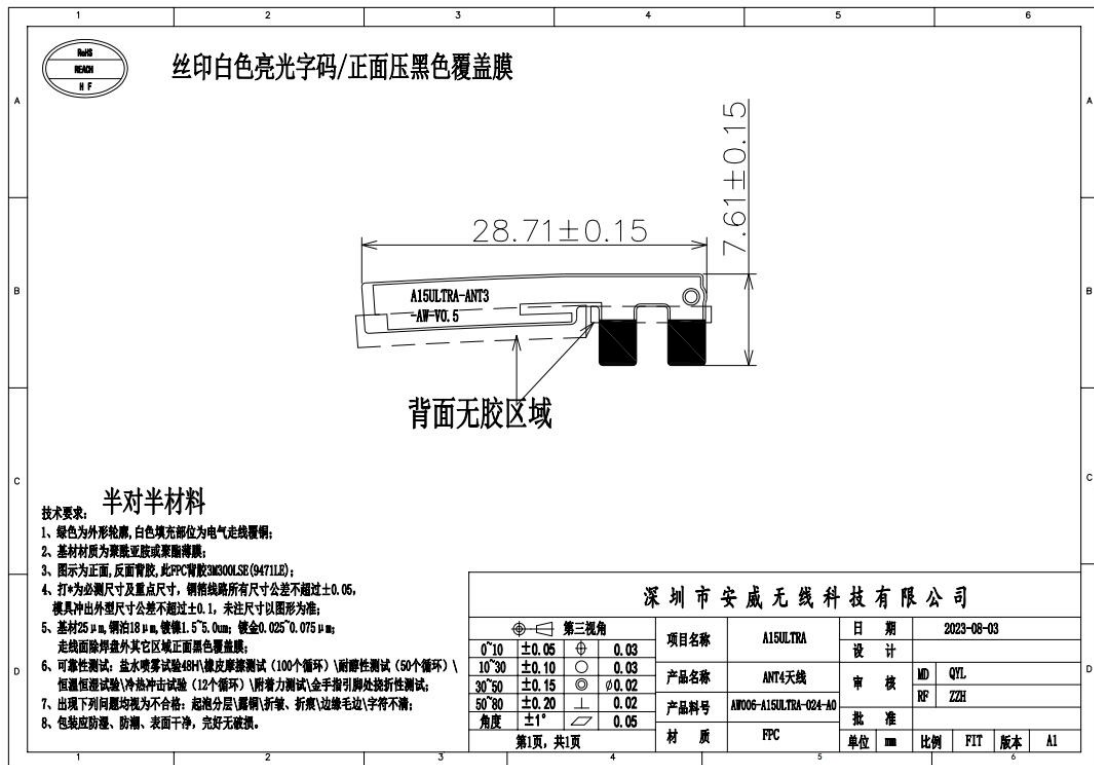
(Matcheing network):

ANT2天线匹配电路



Element	Value
E1	N/A
E2	0 Ω
E3	N/A

(antenna 3)



(Working frequency band):1710~2170MHZ

2G:GSM1800/1900/BC1

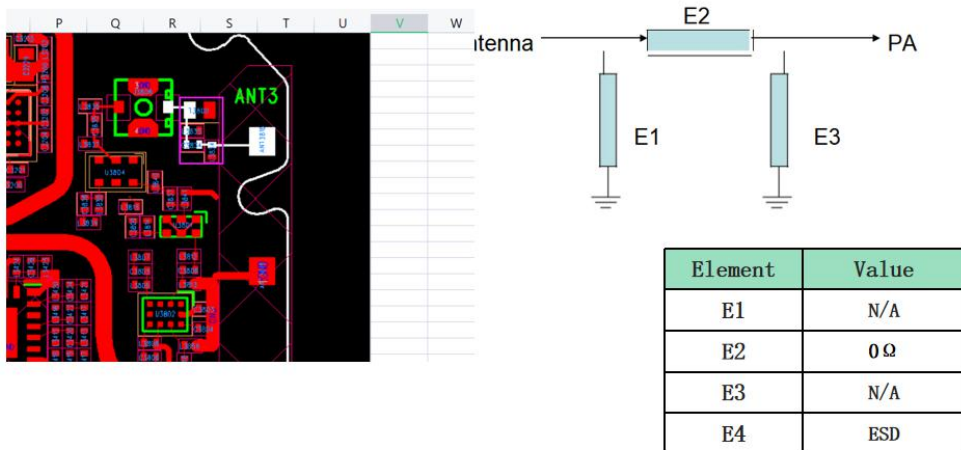
3G:WCDMA-B1/2/4

4G:LTE-B1/2/3/4/25/34/39/66

5G:N1/2/3/25/66

(Matcheing network):

ANT3天线匹配电路



(antenna 4)

丝印白色亮光字码/正面压黑色覆盖膜

半对半材料

技术要求:

- 1、绿色为外形轮廓,白色填充部位为电气走线覆铜;
- 2、基材材质为聚酰亚胺或聚酰亚胺膜;
- 3、图示为正面,反面背胶,此PPC背胶3M300LSE(9471LE);
- 4、打*为必须尺寸及重点尺寸,铜箔线路所有尺寸公差不得超过±0.05,模具冲出外形尺寸公差不得超过±0.1,未注尺寸以图形为准;
- 5、基材25μm,铜箔18μm,微蚀1.5~3.0um;镀金0.025~0.075μm;走线面除焊盘外其它区域正面黑色覆盖膜;
- 6、可靠性测试:盐水喷雾试验(96h)\橡皮摩擦测试(100个循环)\耐磨性测试(50个循环)\恒温恒湿试验\冷热冲击试验(12个循环)\附着力量测试\手指刮刷处弯曲折性测试;
- 7、出现下列问题均视为不合格:起泡分层\露铜\折痕、折痕\边缘毛边\字符不清;
- 8、包装应防震、防潮、表面干净,完好无破损。

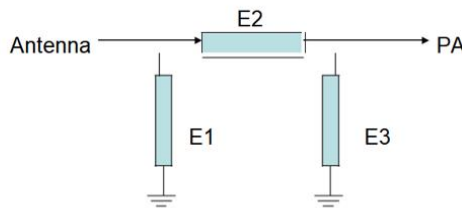
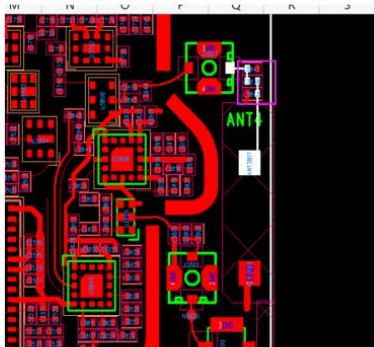
第三视角				深圳市安威无线科技有限公司						
0°/10	±0.05	⊕	0.03	项目名称	A15ULTRA		日期	2023-08-03		
10°/30	±0.10	⊙	0.03	产品名称	ANT4天线		设计			
30°/50	±0.15	⊗	0.02	产品料号	AW006-A15ULTRA-025-A0		审核	MD	QYL	
50°/80	±0.20	⊖	0.02	材质	PPC		批准	RF	ZZH	
角度	±1°	∇	0.05	单位	mm		比例	FIT	版本	A1
第1页,共1页										

(Working frequency band):3300~4200MHZ

(Matcheing network):

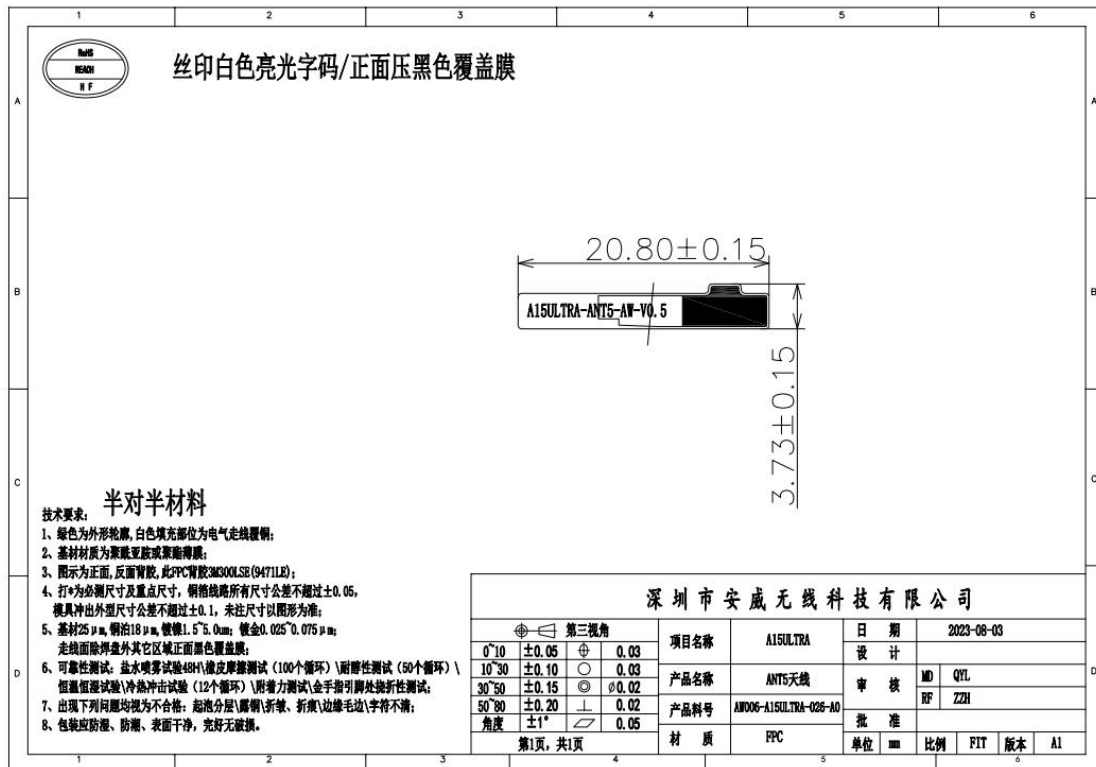
5G:N77/78(only for Receive)

ANT4天线匹配电路



Element	Value
E1	N/A
E2	0 Ω
E3	N/A

(antenna 5)

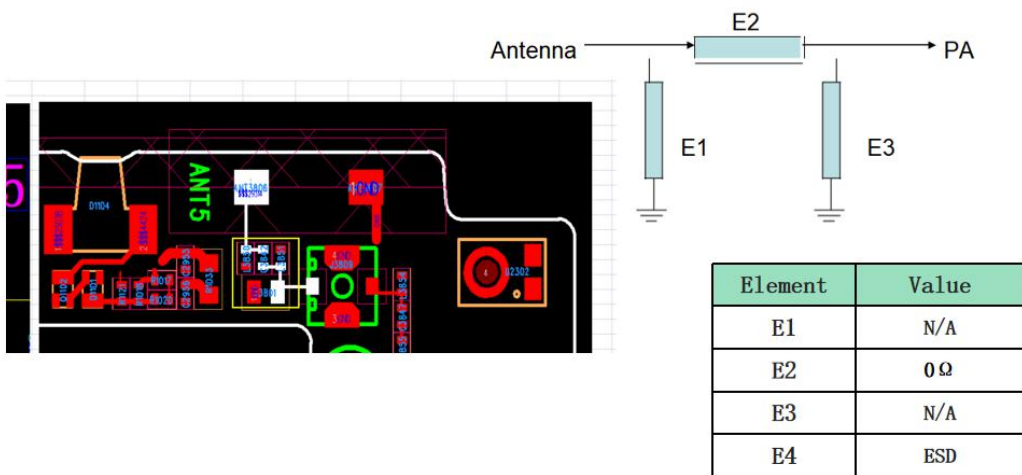


(Working frequency band):3300~4200MHZ

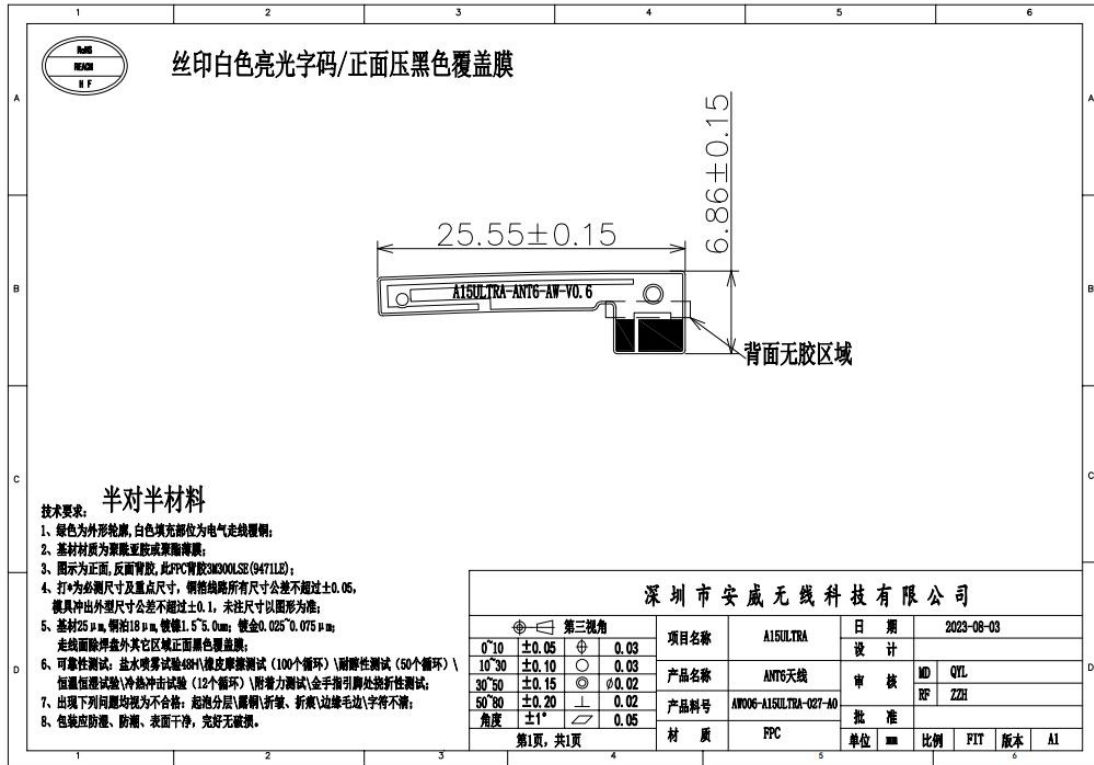
(Matcheing network):

5G:N77/78(only for Receive)

ANT5天线匹配电路



ANT6 (2.4G/5G WIFI/BT/WIFI 6E antenna)

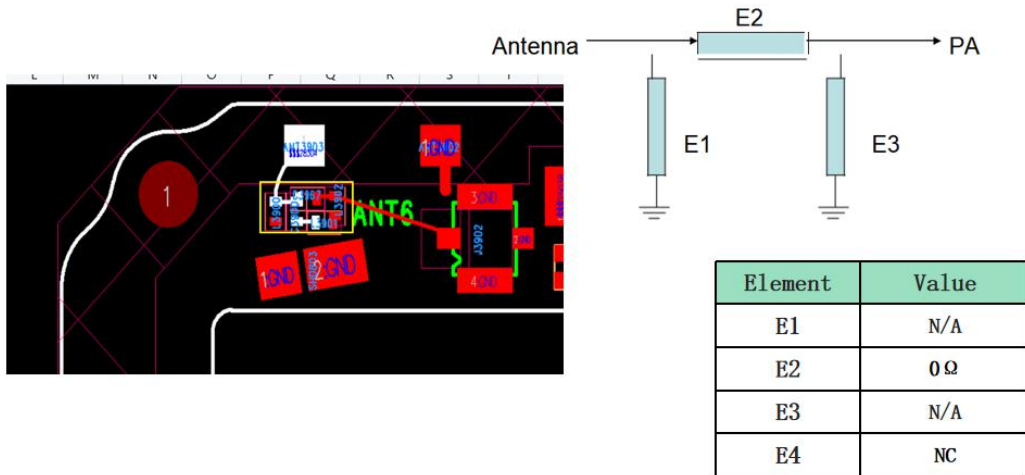


(Working frequency band of 5GWIFI antenna) : 2400~2500,5150MHZ~5850MHZ

(Working frequency band of 6E WIFI antenna) : 5925~7125MHZ

(Matching network)

ANT6天线匹配电路



ANT7 (2.4G/5G WIFI/WIFI 6E antenna)

丝印白色亮光字码/正面压黑色覆盖膜

技术要求: **半对半材料**

- 1、绿色为外形轮廓,白色填充部位为电气走线覆铜;
- 2、基材材质为聚酰亚胺或聚酰亚胺膜;
- 3、图示为正面,反面背胶,此FPC背胶3M300LSE(9471LE);
- 4、打*为必须尺寸及重点尺寸,铜箔线路所有尺寸公差不得超过±0.05,模具冲出外形尺寸公差不得超过±0.1,未注尺寸以图形为准;
- 5、基材25 μm,铜箔18 μm,微蚀1.5±0.0um; 镀金0.025±0.075 μm;走线面除焊盘外其它区域正面黑色覆盖膜;
- 6、可靠性测试: 盐水喷雾试验48H(橡皮摩擦测试(100个循环)\耐弯性测试(50个循环)\恒湿恒湿试验\冷热冲击试验(12个循环)\附着力量测试\金手指引脚处微折性测试;
- 7、出现下列问题均视为不合格: 起泡分层\露铜\折痕\边缘毛边\字符不清;
- 8、包装应防潮、防霉、表面干净,完好无破损。

第三视角				项目名称	A15ULTRA	日期	2023-08-03			
0°/10	±0.05	⊕	0.03	设计			MD	QYL		
10°/30	±0.10	⊙	0.03	产品名称	ANT7天线	审核	BF	ZZH		
30°/50	±0.15	⊙	0.02	产品料号	AW006-A15ULTRA-028-A0	批准				
50°/90	±0.20	⊕	0.02	材料	FPC	单位	mm	比例	FIT	版本
角度	±1°	∠	0.05						A1	

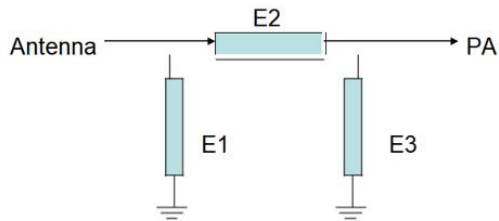
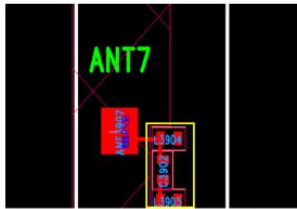
第1页,共1页

(Working frequency band of 5GWIFI antenna) : 2400~2500,5150MHZ~5850MHZ

(Working frequency band of 6E WIFI antenna) : 5925~7125MHZ

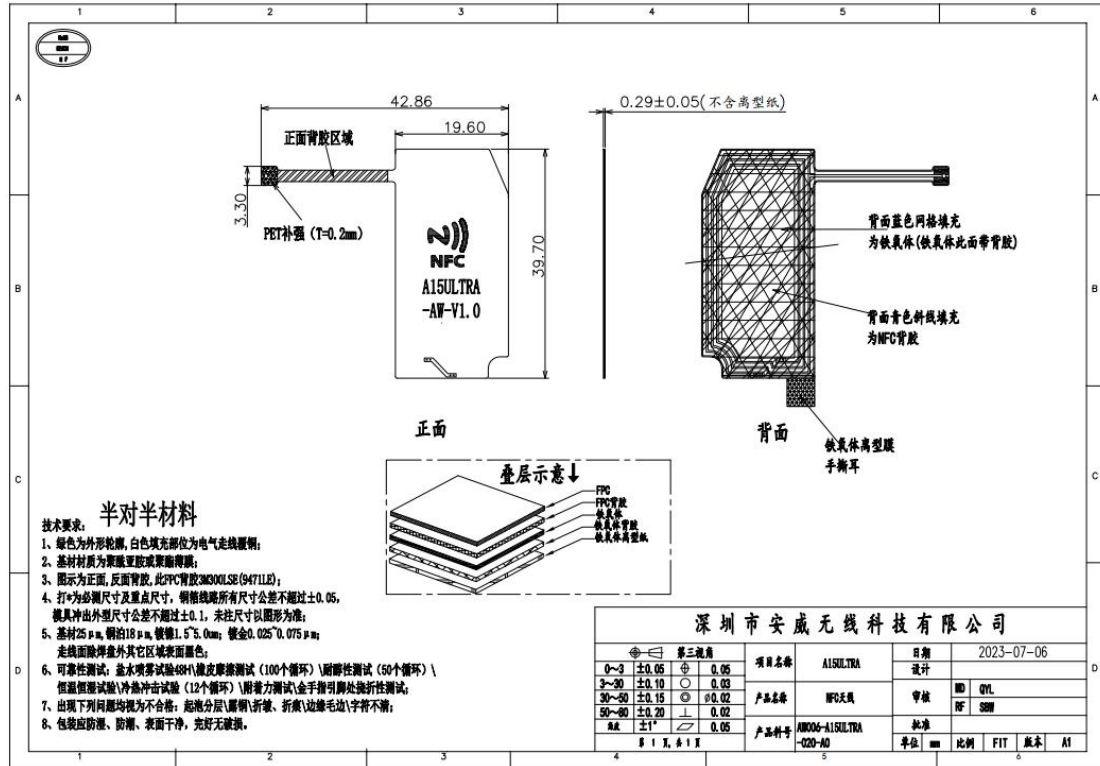
(Matcheign network)

ANT7天线匹配电路



Element	Value
E1	N/A
E2	0 Ω
E3	N/A

(NFC antenna)



ANWEI ANT TRP&TIS parameter Summary of A15Ultra

BAND	Channel	TRP (dBm)	TIS (dBm)
5G N1 (10M)	L	17.78	
	M	17.44	
	H	17.70	-91.37
5G N2 (10M)	L	17.02	
	M	17.20	
	H	17.14	-91.07
5G N3 (10M)	L	15.80	
	M	15.90	
	H	15.58	-89.73
5G N5 (10M)	L	14.06	
	M	14.34	
	H	14.78	-89.73
5G N7 (10M)	L	14.10	
	M	14.11	
	H	15.25	-86.01
5G N8 (10M)	L	14.11	
	M	15.20	
	H	15.29	-87.58
5G N20 (10M)	L	14.35	
	M	14.85	
	H	14.92	-89.06
5G N25 (10M)	L	17.07	
	M	17.31	
	H	17.62	-91.46
5G N28 (10M)	L	14.44	
	M	14.97	
	H	14.79	-87.59

5G N66 (10M)	L	17.36	
	M	16.00	
	H	17.15	-89.73
5G N38 (10M)	L	15.06	
	M	14.84	
	H	14.73	-90.96
5G N40 (10M)	L	14.06	
	M	14.00	
	H	13.86	-90.12
5G N71 (10M)	L	14.38	
	M	14.42	
	H	14.04	-88.03
5G N77 (100M)	L	16.15	
	M	17.67	
	H	16.21	-84.37
5G N78 (100M)	L	17.16	
	M	17.35	
	H	17.20	-83.89
5G N41 (100M)	L	16.57	
	M	17.42	
	H	15.77	-80.14
FDD B1	L	17.33	
	M	17.02	
	H	17.52	-93.20
FDD B2	L	17.07	
	M	17.28	
	H	17.57	-91.69
FDD B3	L	14.87	
	M	14.88	
	H	15.27	-89.41

FDD B4	L	15.67	
	M	15.70	
	H	15.68	-91.87
FDD B5	L	14.57	
	M	15.06	
	H	15.25	-90.06
FDD B7	L	14.55	
	M	14.50	
	H	15.06	-89.67
FDD B8	L	14.03	
	M	15.00	
	H	15.14	-88.08
FDD B12	L	14.35	
	M	14.77	
	H	14.72	-90.63
FDD B13	L		
	M	13.28	-88.65
	H		
FDD B17	L	15.42	
	M	15.56	
	H	15.14	-90.25
FDD B18	L	13.50	
	M	14.18	
	H	14.28	-91.02
FDD B19	L	14.00	
	M	14.42	
	H	14.41	-91.21

FDD B20	L	14.56	
	M	15.03	
	H	15.20	-89.25
FDD B25	L	17.28	
	M	17.50	
	H	17.65	-91.49
FDD B26	L	13.40	
	M	14.00	
	H	15.02	-89.40
FDD B28A	L	14.65	
	M	15.23	
	H	14.92	-88.18
FDD B28B	L	15.52	
	M	15.28	
	H	15.18	-88.39
FDD B66	L	15.22	
	M	14.64	
	H	14.93	-92.20
FDD B71	L	13.06	
	M	13.76	
	H	13.16	-90.67
TDD B34	L	17.41	
	M	17.53	
	H	17.74	-91.64
TDD B38	L	14.70	
	M	15.18	
	H	15.05	-87.14
TDD B39	L	17.13	
	M	17.03	
	H	17.09	-88.2

TDD B40	L	14.09	
	M	14.17	
	H	14.02	-87.46
TDD B41	L	17.16	
	M	15.79	
	H	17.19	-87.06
WCDMA-B1	L	17.54	
	M	17.45	
	H	17.54	-105.08
WCDMA-B2	L	17.05	
	M	17.45	
	H	17.64	-105.20
WCDMA-B4	L	17.18	
	M	17.08	
	H	17.46	-105.51
WCDMA-B5	L	14.64	
	M	14.72	
	H	14.89	-103.37
WCDMA-B6	L	14.53	
	M	14.55	
	H	14.63	-103.75
WCDMA-B8	L	14.42	
	M	15.08	
	H	15.20	-100.38
WCDMA-B19	L	14.52	
	M	14.51	
	H	14.60	-102.30
BCO	L	15.54	
	M	15.31	
	H	15.92	-100.32

BC1	L	15.96	
	M	16.22	
	H	16.88	-103.47

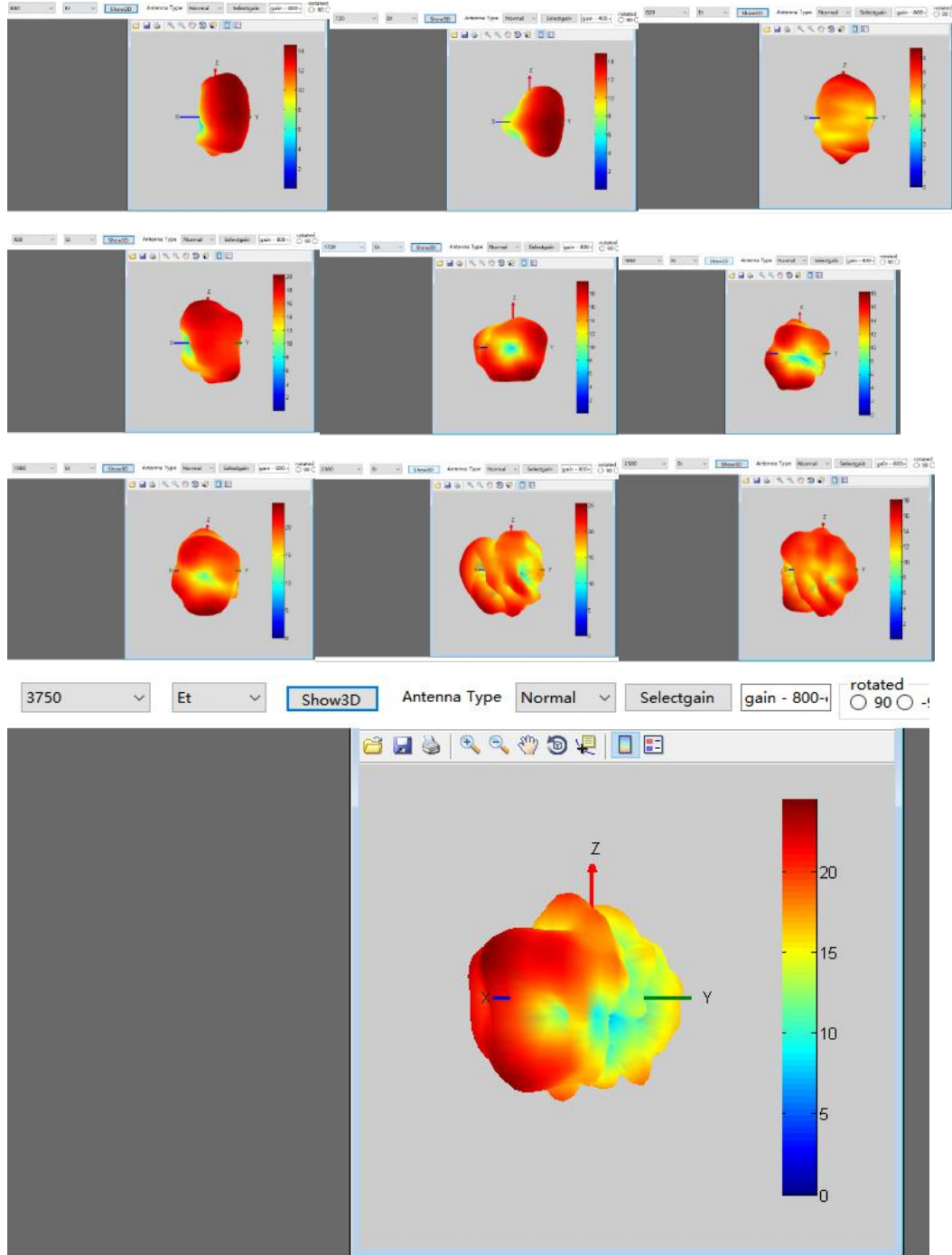
	Channel	TRP (dBm)	TIS (dBm)
GSM850	L	23.85	
	M	24.59	
	H	25.15	-101.87
GSM900	L	23.87	
	M	24.04	
	H	24.07	-97.89
DCS1800	L	22.36	
	M	22.09	
	H	22.43	-102.59
PCS1900	L	22.36	
	M	22.15	
	H	22.48	-103.01
2.4G WIFI B 模 11M	L	11.78	-82.20
	M	11.31	-82.71
	H	12.50	-81.38
5 G WIFI A 模 54M	L	9.10	-68.05
	M	9.66	-68.11
	H	10.53	-70.60

天线增益(Antenna gain)

Standard	Band	Frequency	Gain(dbi)
5G NR	N1	1980	0.28
5G NR	N2	1880	-1.14
5G NR	N3	1720	1.08
5G NR	N5	820	-4.65
5G NR	N7	2580	0.82
5G NR	N8	920	-2.07
5G NR	N20	820	-4.65
5G NR	N25	1880	-1.14
5G NR	N28	720	-6.53
5G NR	N66	1720	1.08
5G NR	N38	2580	0.82
5G NR	N40	2380	-0.59
5G NR	N71	660	-5.41
5G NR	N77	3750	2.07
5G NR	N78	3750	2.07
5G NR	N41	2580	0.82
TDD_LTE	TDD_B34	1980	0.28
TDD_LTE	TDD_B38	2580	0.82
TDD_LTE	TDD_B39	1880	-1.14
TDD_LTE	TDD_B40	2380	-0.59
TDD_LTE	TDD_B41	2580	0.82
FDD_LTE	FDD_B1	1980	0.28
FDD_LTE	FDD_B2	1880	-1.14
FDD_LTE	FDD_B3	1720	1.08
FDD_LTE	FDD_B4	1720	1.08
FDD_LTE	FDD_B5	820	-4.65
FDD_LTE	FDD_B7	2580	0.82
FDD_LTE	FDD_B8	920	-2.07
FDD_LTE	FDD_B12	720	-6.53
FDD_LTE	FDD_B13	780	-4.97
FDD_LTE	FDD_B17	720	-6.53

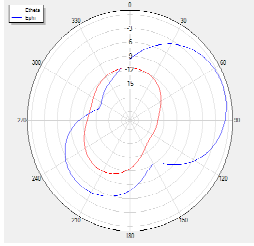
FDD_LTE	FDD_B18	820	-4.65
FDD_LTE	FDD_B19	820	-4.65
FDD_LTE	FDD_B20	820	-4.65
FDD_LTE	FDD_B25	1880	-1.14
FDD_LTE	FDD_B26	820	-4.65
FDD_LTE	FDD_B28	720	-6.53
FDD_LTE	FDD_B71	660	-5.41
WCDMA	WCDMA_B1	1980	0.28
WCDMA	WCDMA_B2	1880	-1.14
WCDMA	WCDMA_B4	1720	1.08
WCDMA	WCDMA_B5	820	-4.65
WCDMA	WCDMA_B6	820	-4.65
WCDMA	WCDMA_B8	920	-2.07
WCDMA	WCDMA_B19	820	-4.65
GSM	GSM850	820	-4.65
GSM	GSM900	920	-2.07
GSM	DCS1800	1720	1.08
GSM	PCS1900	1880	-1.14
BC0	850	820	-4.65
BC1	1900	1880	-1.14
2.4GWIFI		2450	0.81
5GWIFI		5800	-1.74
WIFI 6E		6500	1.50
BT		2450	0.81
NFC		13.56	1.5

antenna apple map

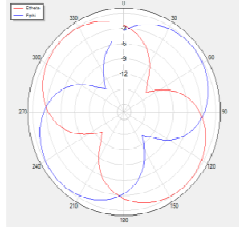


(antenna) PolarGraphs/EtotalGraphs

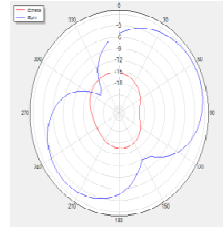
H Theta=90 freq=660MHz



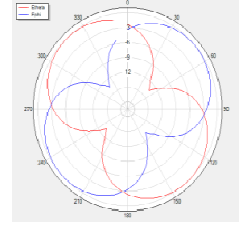
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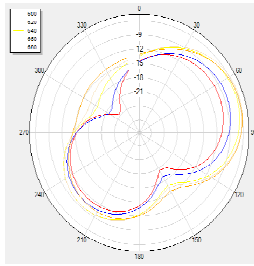
H Theta=90 freq=600MHz



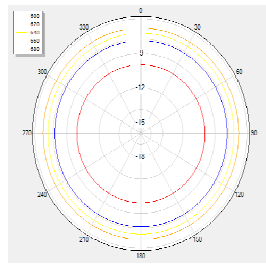
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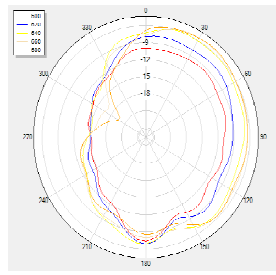
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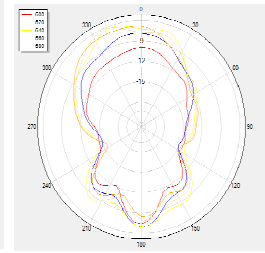
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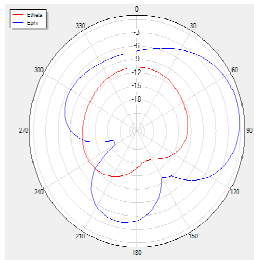
V Phi=90



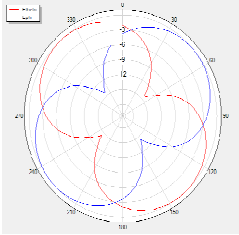
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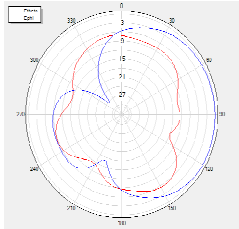
H Theta=90 freq=720MHz



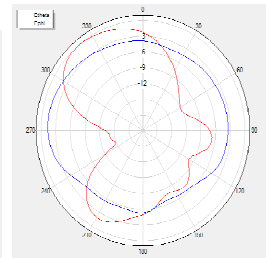
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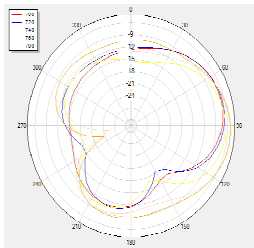
V Phi=90 freq=720MHz



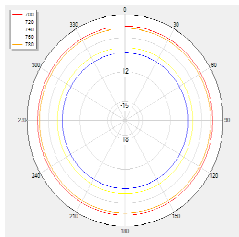
V Phi=0 freq=720MHz



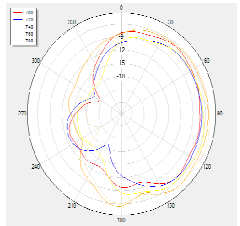
H Theta=90



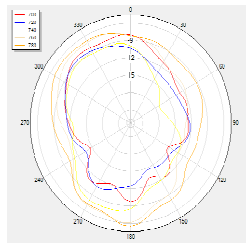
H Theta=0



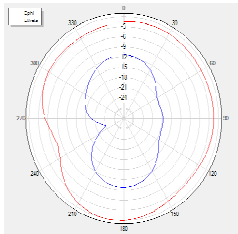
V Phi=90



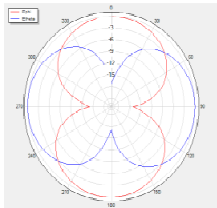
V Phi=0



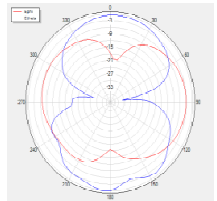
H Theta=90 freq=820MHz



H Theta=0 freq=820MHz



V Phi=90 freq=820MHz



V Phi=0 freq=820MHz

