



SPECIFICATION FOR APPROVAL

CUSTOMER/PROJECT : LANDI IL001

CUSTOMER P.N./ : _____

PRODUCT NAME./ : DIV and GPS Antenna

MODEL NO./ : 5U081A

SPECIFICATION/ : _____

VERSION	DATE	REVISION DESCRIPTION
T:A	2024-12-05	newly added
T:B	2025-01-14	Update drawings
T:C	2025-04-15	Update drawings
T:D	2025-05-22	Update drawings

SUPPLIER AUTHORIZED SIGNATURE		
PREPARED	CHECKED	APPROVED
XUHAIJUN		

CUSTOMER AUTHORIZED SIGNATURE			
Project		Quality	

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1 Noun explanation

dBi	Decibel relative isotropic antenna
Tx	Transmit frequency
Rx	Receive frequency
TRP	Total Radiated Power
TIS	Total Isotropic Sensitivity
VSWR	Voltage Standing Wave Ratio
GSM	Global Service for Mobile communication
DCS	Digital Communication System
CDMA	Code Division Multiple Access
WCDMA	Wideband Code Division Multiple Access

2 Test equipment

Can be increased or decreased according to actual situation

vector network analyzer

Comprehensive test instrument

GTS darkroom

3 Working frequency band

The yellow Identification is the using band

System	up	down
GSM850	824MHz~849MHz	869MHz~894MHz
GSM900	890MHz~915MHz	935MHz~960MHz
DCS1800	1710MHz~1785MHz	1805MHz~1880MHz
PCS1900	1850MHz~1910MHz	1930MHz~1990MHz
CDMA800	825MHz~835MHz	870MHz~880 MHz
CDMA2000	824MHz ~849MHz	869MHz ~894MHz
WCDMA2100	1920MHz~1980MHz	2110MHz~2170MHz
GPS	1560MHz~1602MHz	1560MHz~1602MHz
LTE	700MHz ~2690MHz	700MHz ~2690MHz

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4 Test project

4.1 VSWR plot

4.2 Simth plot

4.3 Radiation pattern

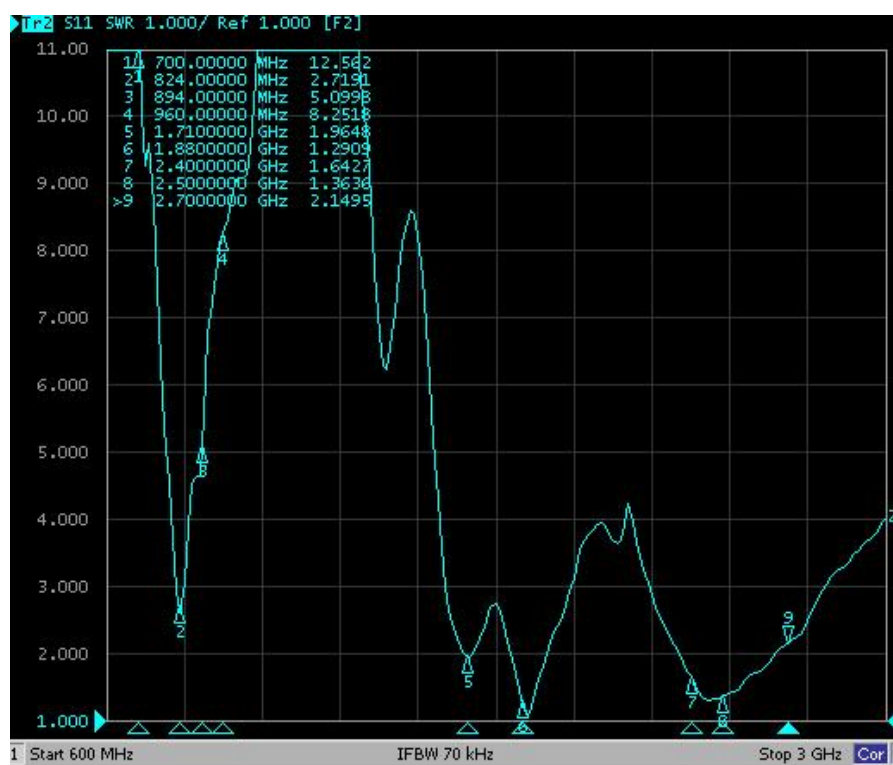
4.4 Gain & Efficiency

4.5 TRP&TIS

5 Antenna parameter

5.1 VSWR(DIV Antenna)

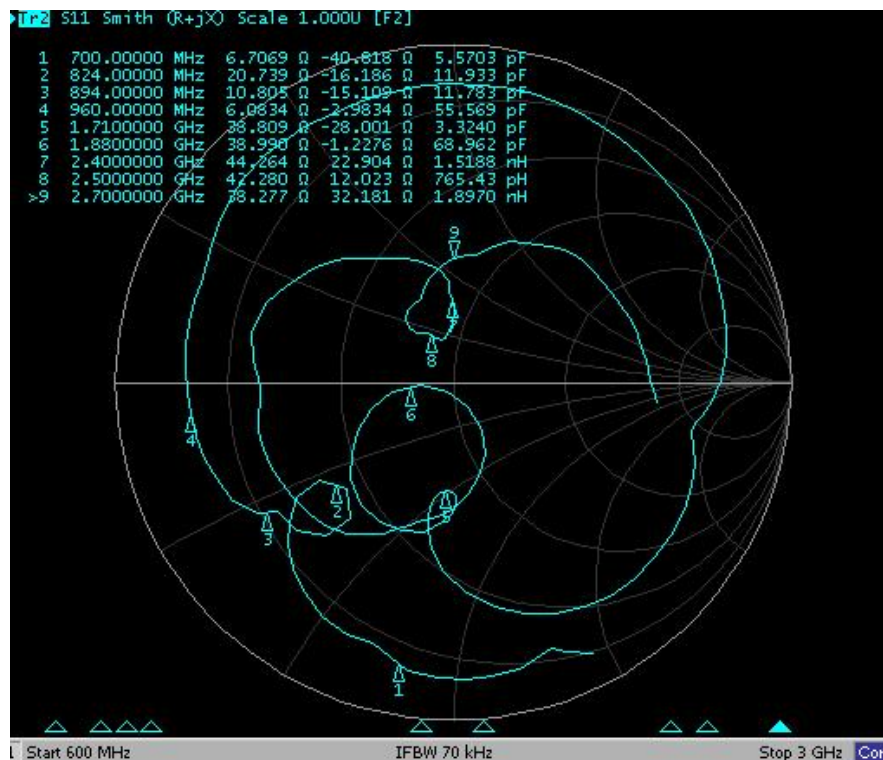
5.1.1 VSWR plot



5.1.2 VSWR data

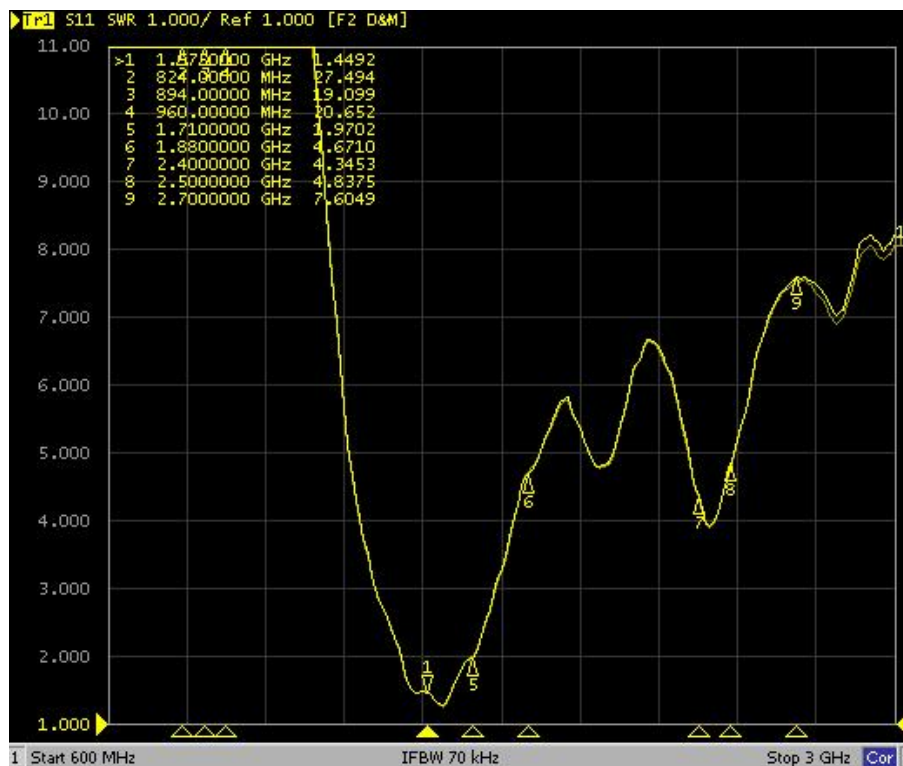
Freq/MHz	700	820	960	1710	1880	2400	2690
VSWR	12.5	2.7	8.2	1.9	1.2	1.6	2.1

Smith impedance circle diagram



5.2 VSWR(GPS Antenna)

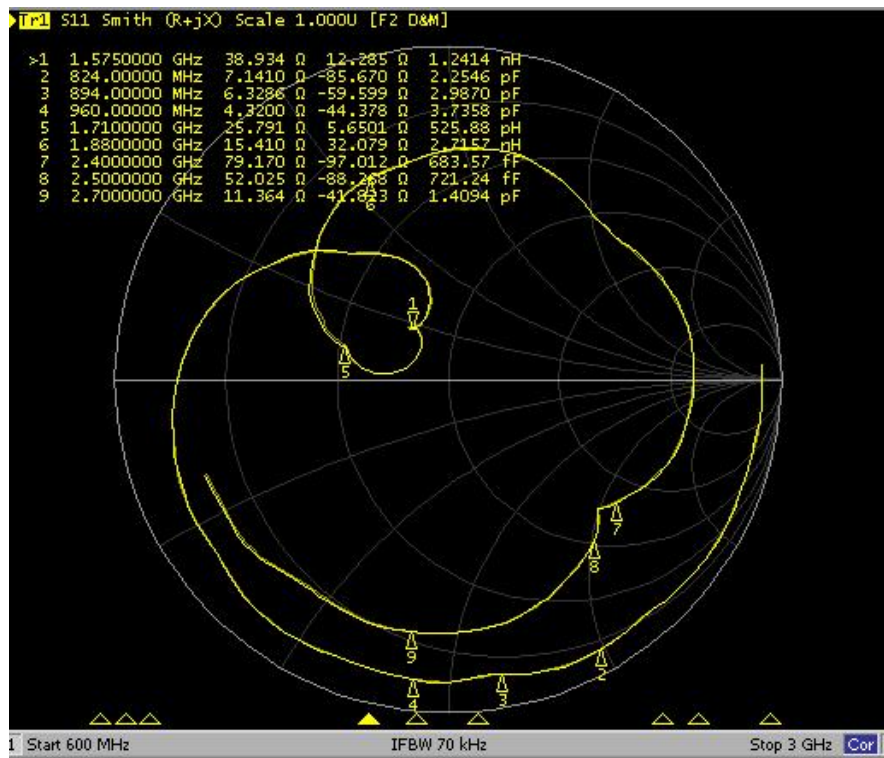
5.2.1 VSWR plot



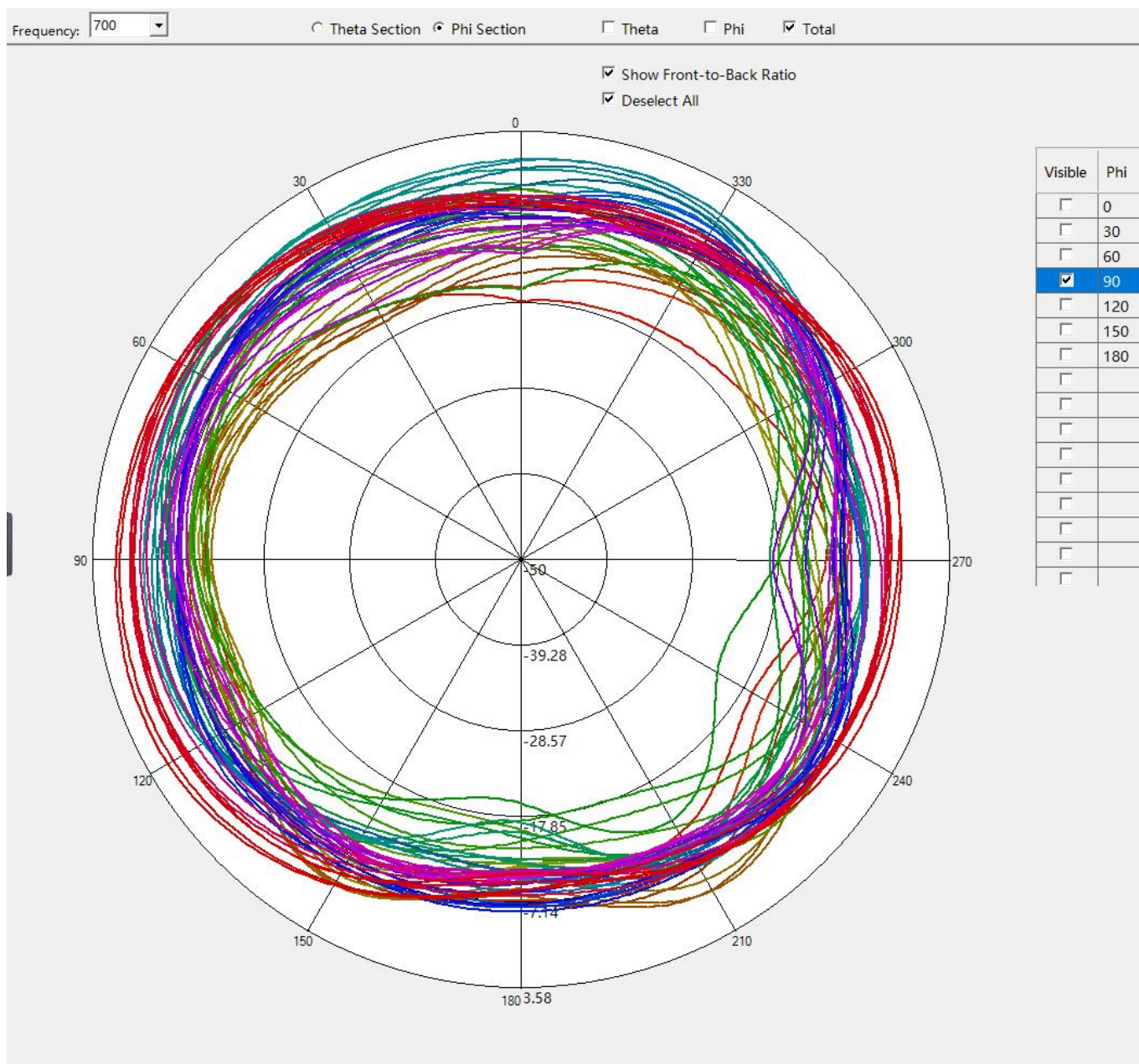
5.2.2 VSWR data

Freq/MHz	1575
VSWR	1.4

Smith impedance circle diagram

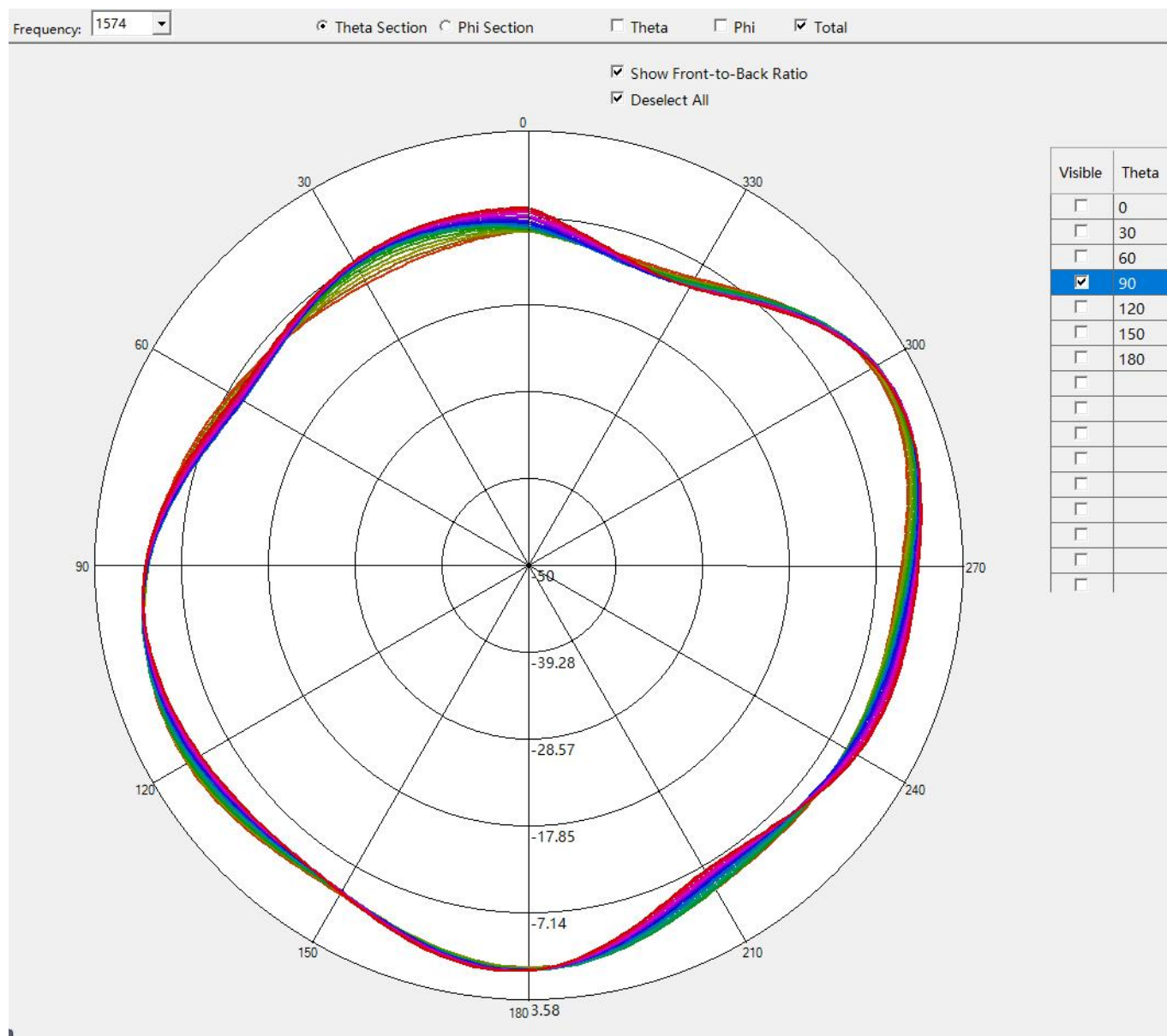


E2

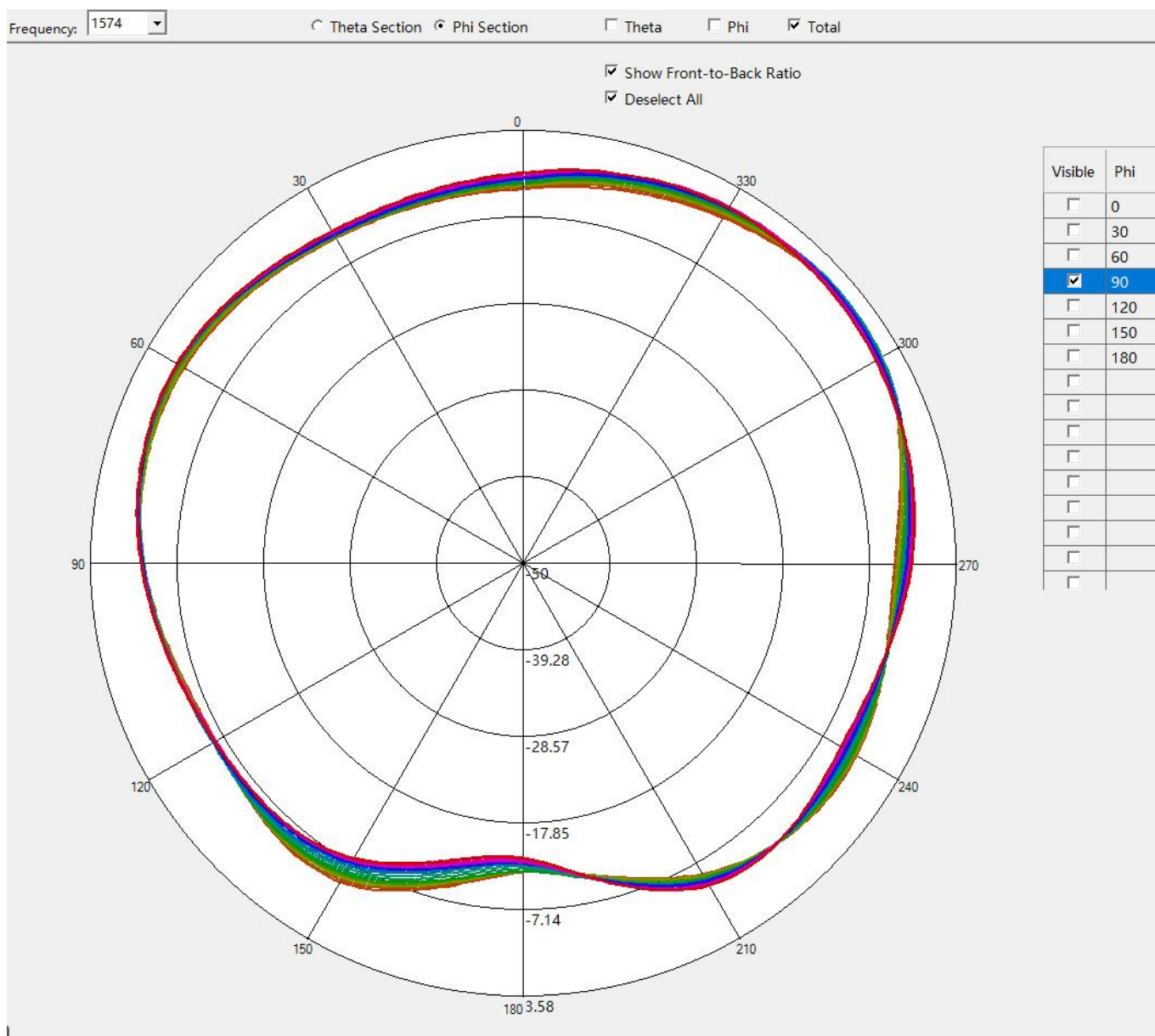


5.4 Radiation pattern(GPS Antenna)

5.4.1 H-plane



E2



5.5 Gain & Efficiency

DIV Antenna

Freq (MHZ)	Eff (%)	GAIN		Freq (MHZ)	Eff (%)	GAIN		Freq (MHZ)	Eff (%)	GAIN
700	10.34	-5.56		1710	47.34	1.56		2300	29.83	1.58
720	10.41	-5.13		1750	47.56	1.68		2330	29.79	1.59
740	9.18	-5.39		1790	42.87	1.33		2370	31.71	1.75
760	7.70	-4.56		1830	41.56	1.49		2400	31.11	1.77
780	9.44	-4.10		1870	37.83	1.50		2450	33.92	2.32
800	13.37	-3.16		1900	31.92	1.38		2480	33.03	2.17
820	17.92	-2.15		1930	28.75	1.18		2510	34.14	2.36
840	21.47	-1.57		1960	27.09	1.53		2540	36.01	2.67
860	20.20	-1.69		1990	23.68	1.24		2570	33.45	2.43
880	18.99	-2.70		2100	22.04	-1.74		2600	37.25	3.15
900	14.57	-3.39		2130	23.18	-1.12		2630	33.73	2.49
920	11.70	-4.01		2160	24.66	-0.45		2660	30.38	2.04
940	9.49	-5.31						2690	28.61	1.73
960	8.07	-6.14								

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GPS Antenna

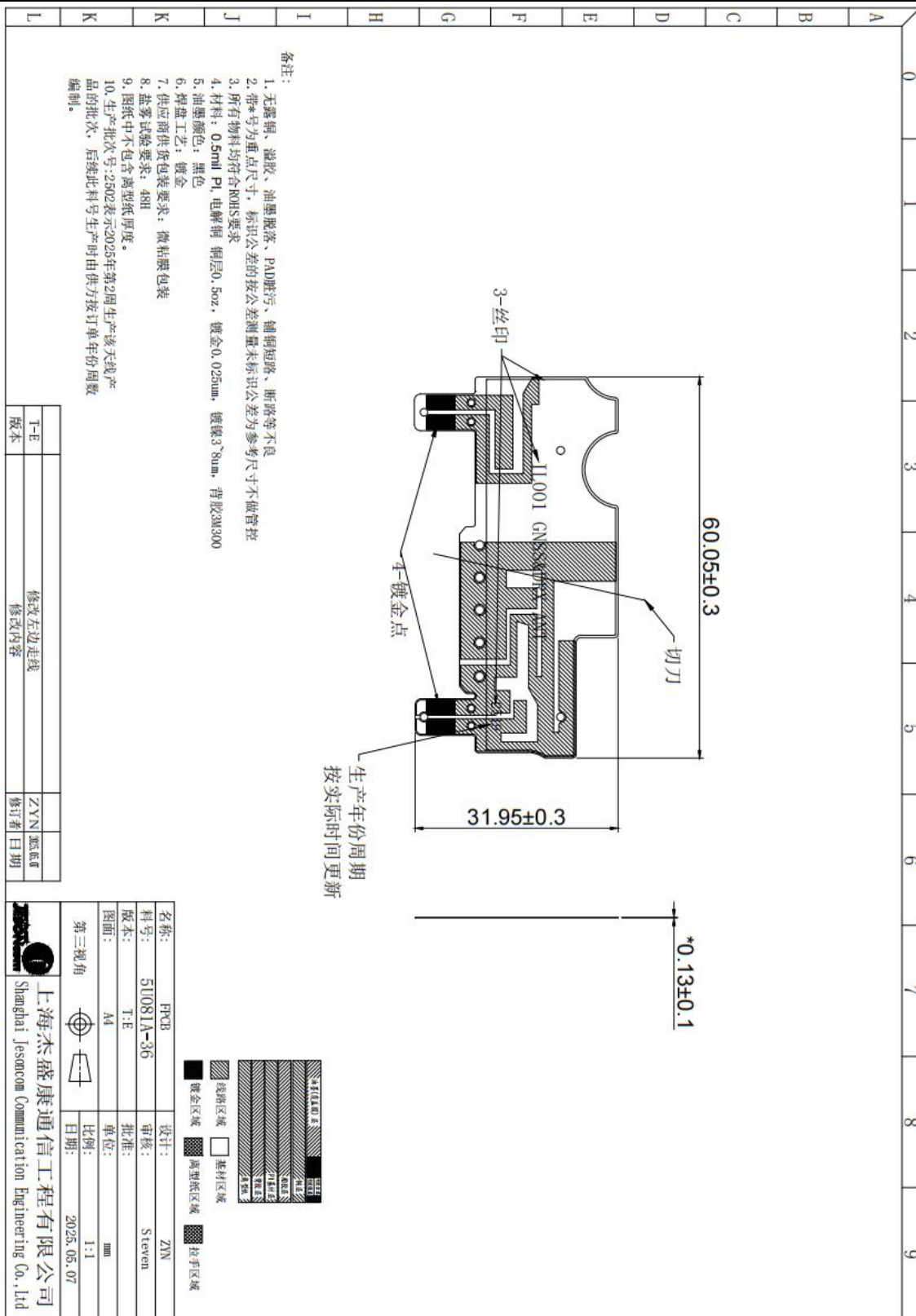
Freq (MHZ)	Eff (%)	Gain(Dbi)
1559	55.37	1.77
1562	55.33	1.72
1565	55.63	1.71
1568	56.11	1.75
1571	56.89	1.84
1574	57.43	1.92
1577	57.55	1.96
1580	57.30	1.97
1583	57.00	2.01
1586	56.74	2.05
1589	56.75	2.10
1592	56.52	2.12
1595	56.42	2.15
1598	56.25	2.19
1601	56.13	2.28
1604	56.45	2.43

6 Environmental treatment suggestions



7 Impedance matching

8 Antenna plan



9 Antenna installation guide

9.1 Antenna installation instructions

10 Other