

SPECIFICATION FOR APPROVAL

CUSTOMER/PROJECT: _____

CUSTOMER P.N: _____

PRODUCT NAME: 868/915/923/- antenna

MODEL NO: 25I011A-11

ANTENNA TYPE: Spring antenna

SUPPLIER AUTHORIZED SIGNATURE		
PREPARED	CHECKED	APPROVED

CUSTOMER AUTHORIZED SIGNATURE			
PM		QE	

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with your approved signature.

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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

network analyzer
Agilent8960
SATIMO64 chamber

3 Working frequency band

The yellow Identification is the using band

band	uplink	downlink
GSM800	824MHz~896MHz	824MHz~896MHz
GSM900	890MHz~915MHz	935MHz~960MHz
DCS1800	1710MHz~1785MHz	1805MHz~1880MHz
PCS1900	1850MHz~1910MHz	1930MHz~1990MHz
CDMA800	825MHz~835MHz	870MHz~880 MHz
WCDMA900	880MHz~915MHz	925MHz~960MHz
WCDMA2100	1920MHz~1980MHz	2110MHz~2170MHz
NB-B5	824MHz~896MHz	824MHz~896MHz
NB-B8	890MHz~915MHz	935MHz~960MHz
LTE	700MHz~2700MHz	

4 Test project

4.1 VSWR plot

4.2 Simth plot

4.3 Radiation pattern

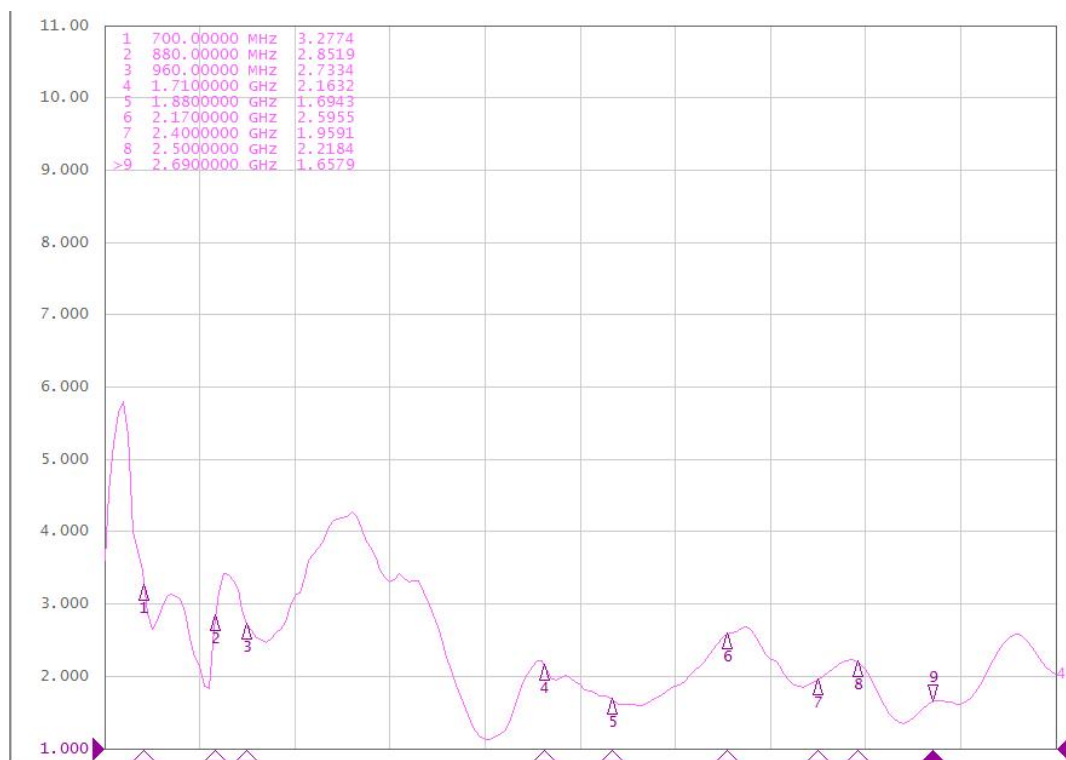
4.4 Gain & Efficiency

4.5 TRP&TIS

5 Antenna parameter

5.1 VSWR

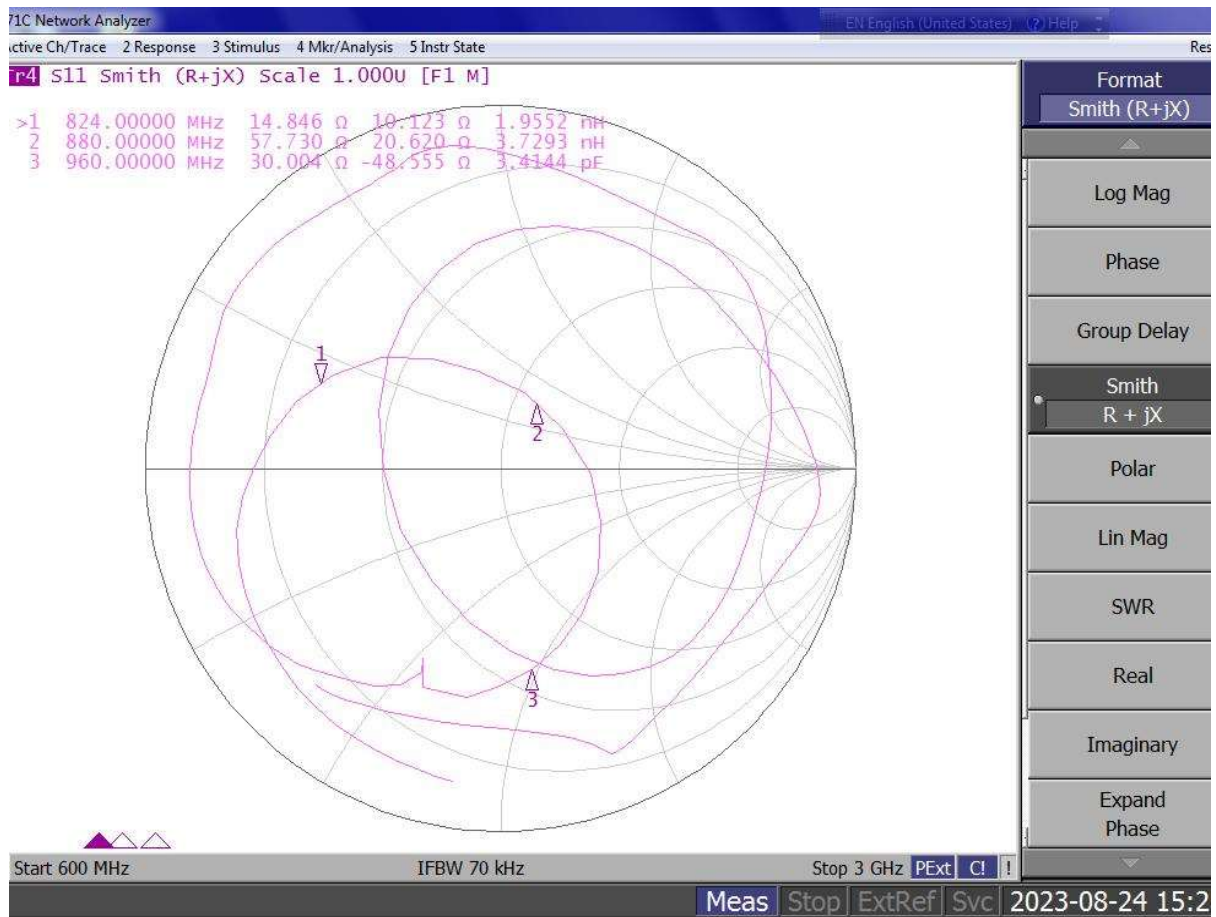
5.1.1 VSWR plot



5.1.2 VSWR data

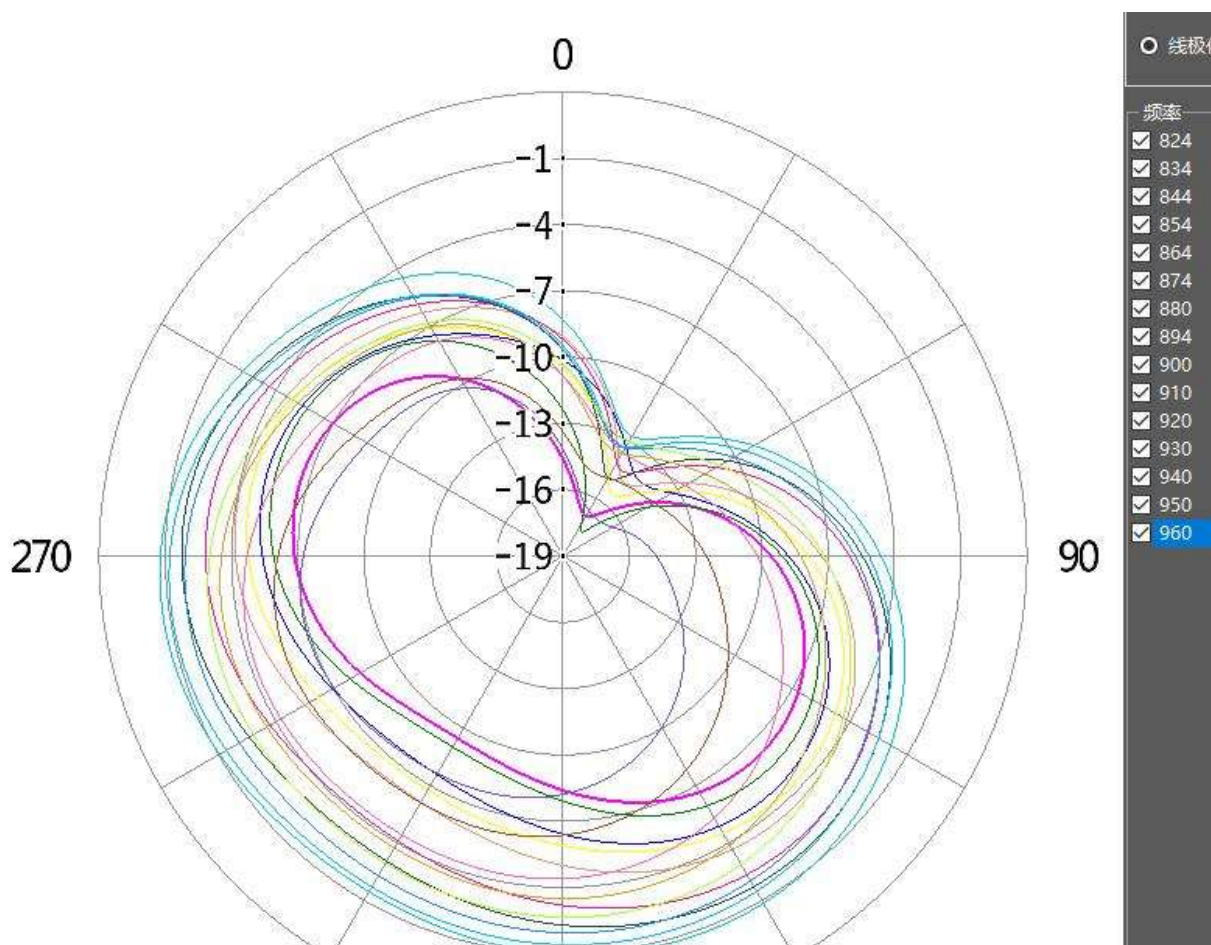
Freq/MHz	824	880	960
VSWR	3.56	1.55	3.55

5.2 Smith plot



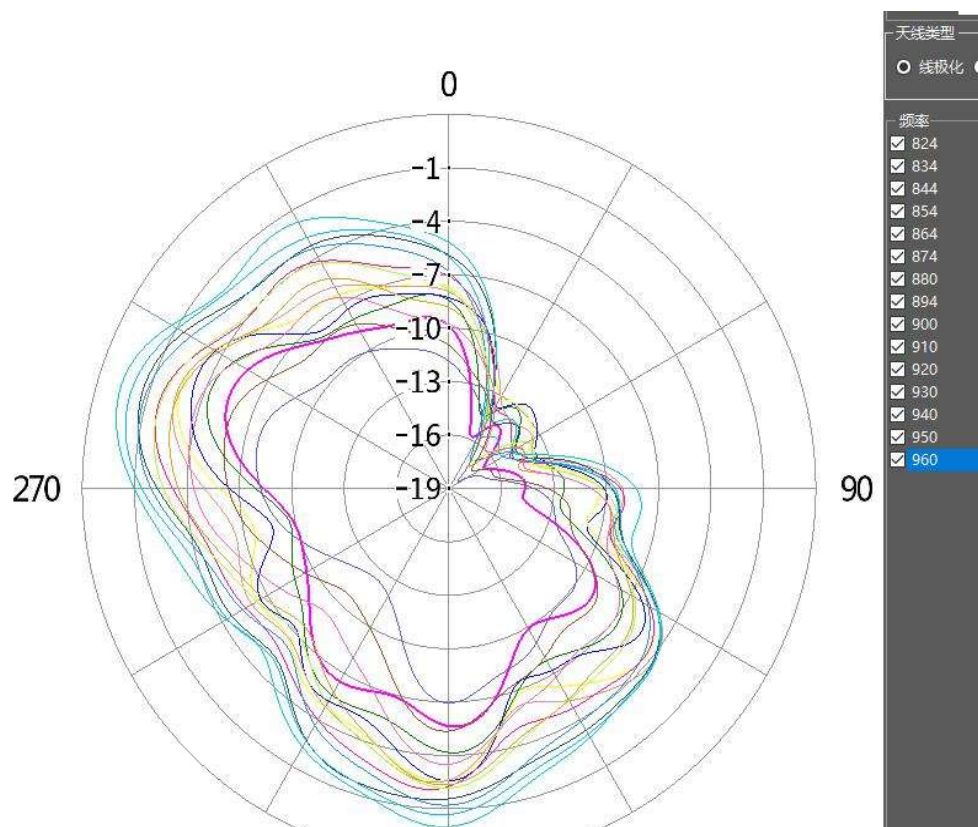
5.3 Radiation pattern

5.3.1 H-plane

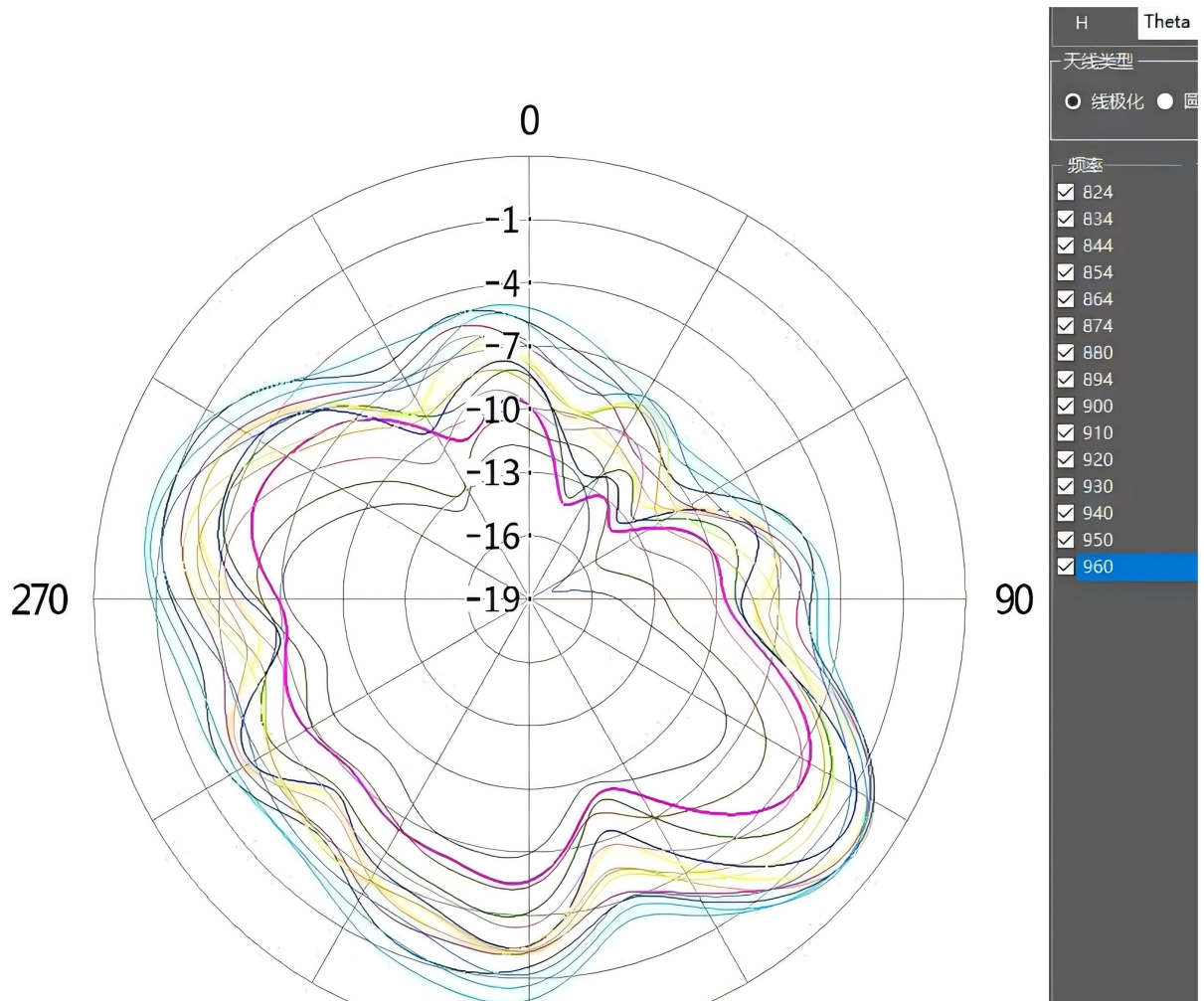


5.3.2 E-plane

E1



E2



5.4 UGain & Efficiency

Frequency(MHz)	Peak Gain(dBi)	Efficiency(%)
824	-3.24	25.84
834	-2.01	27.44
844	-0.22	28.63
854	0.32	29.25
864	0.81	30.53
874	0.47	34.08
880	0.74	42.28
894	1.18	49.40
900	0.76	45.04
910	0.07	39.97
920	0.03	38.86
930	-1.77	34.09
940	-1.88	28.88
950	-1.95	27.99
960	-2.03	27.48

<u>NB-IOT</u>	<u>TRP(dBm)</u>		<u>TIS(dBm)</u>	
	UL_Channel		DL_Channel	
<u>BAND5</u>	20407	19.62	2407	
	20525	19.99	2525	
	20643	19.59	2643	-112.61
<u>BAND8</u>	21457	20.02	3457	
	21625	19.75	3625	
	21793	19.03	3793	-113.68

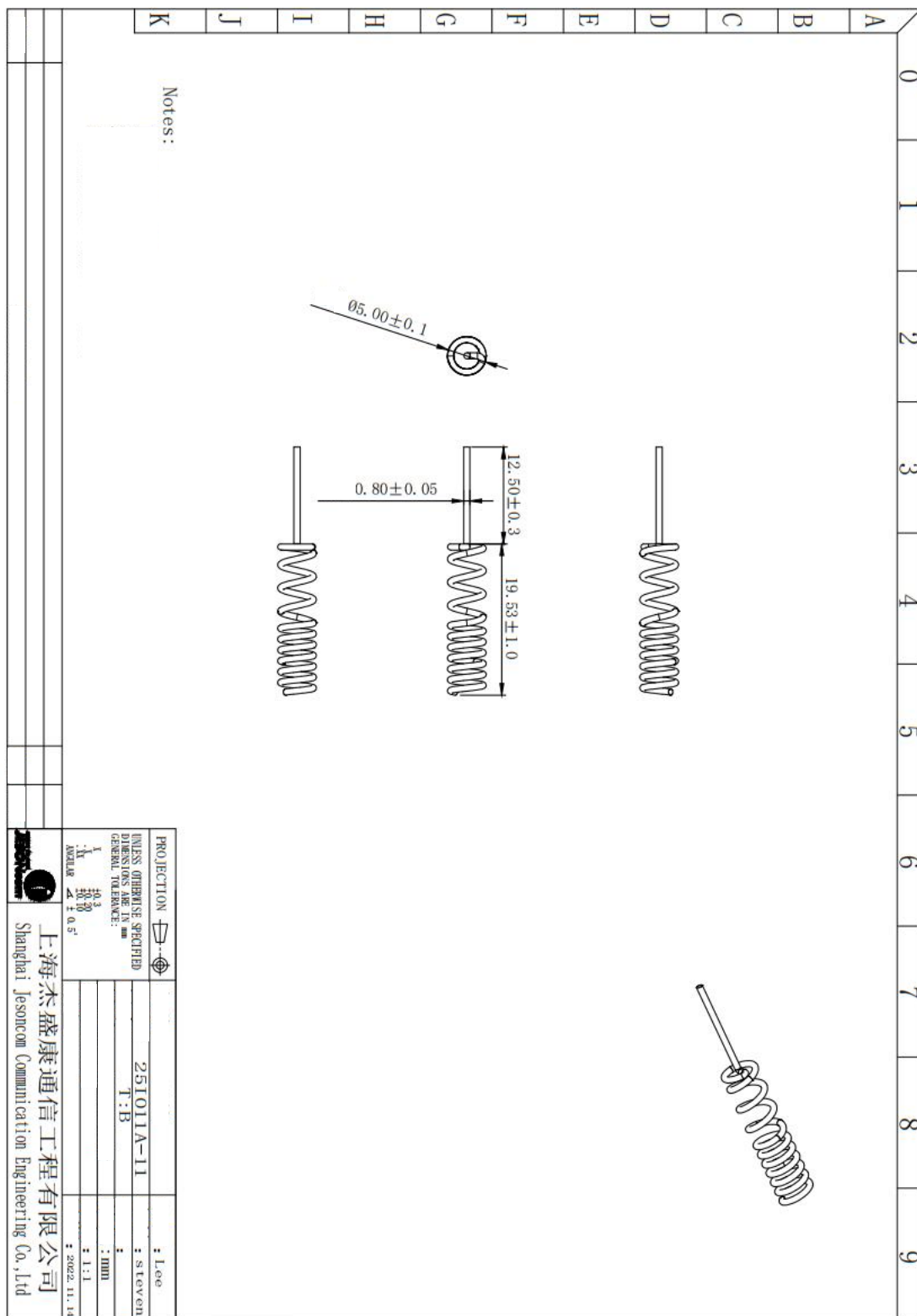
6 Environmental treatment suggestions

Environment does not need treatment

7 Impedance matching

Impedance does not need treatment

8 Antenna plan



9 Antenna installation guide

9.1 Antenna installation instructions

10 Other