

SPECIFICATION FOR APPROVAL

CUSTOMER/PROJECT : _____

CUSTOMER P.N./ : _____

PRODUCT NAME./ : External Antenna

MODEL NO./ : 5Q004U

SPECIFICATION/ : _____

VERSION	DATE	REVISION DESCRIPTION

SUPPLIER AUTHORIZED SIGNATURE		
PREPARED	CHECKED	APPROVED
鄭湘傑		

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1 Definition of Terms

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 Testing Equipment

Can be adjusted as needed based on actual requirements:

Vector Network Analyzer
Comprehensive Tester
SATIMO 64-Chamber Anechoic Chamber

3 Applicable Frequency Band

Highlight the applicable frequency bands in a different color.

Standard	Uplink	Downlink
NB-B20	790MHz ~ 820MHz	830MHz ~ 860MHz
824-960M	824MHz ~ 960MHz	824MHz ~ 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
NB-20	832MHz-862MHz	791MHz-821MHz
LORA-868	865MHz -868MHz	865MHz -868MHz

4 Basic Test Items

4.1 VSWR Chart

4.2 Smith Impedance Chart

4.3 Radiation Pattern

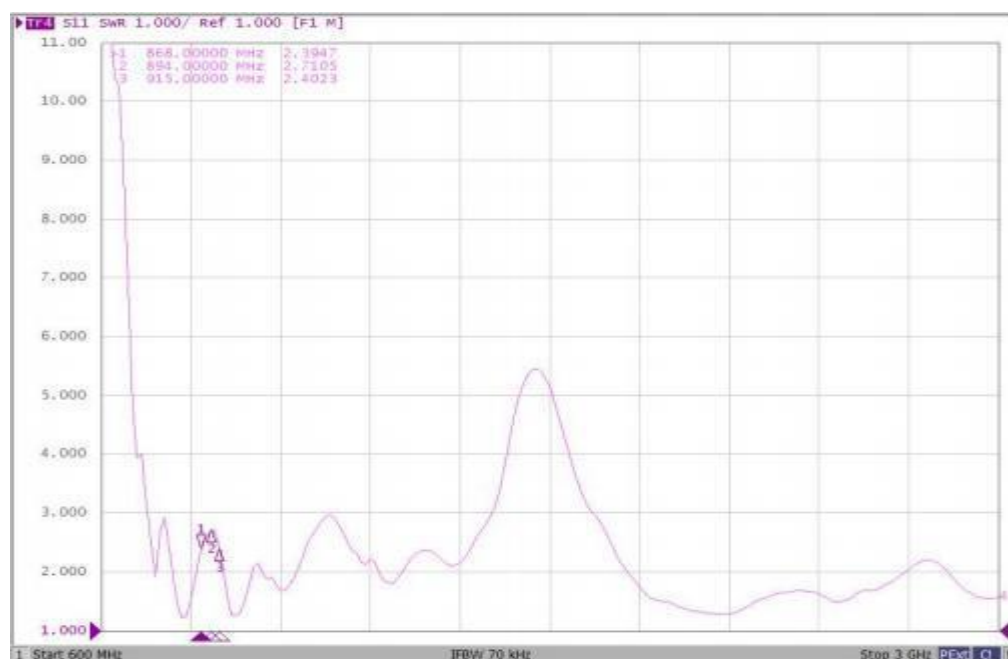
4.4 Gain and Efficiency

4.5 TRP & TIS Testing

5 Test Metrics and Data Charts

5.1 VSWR

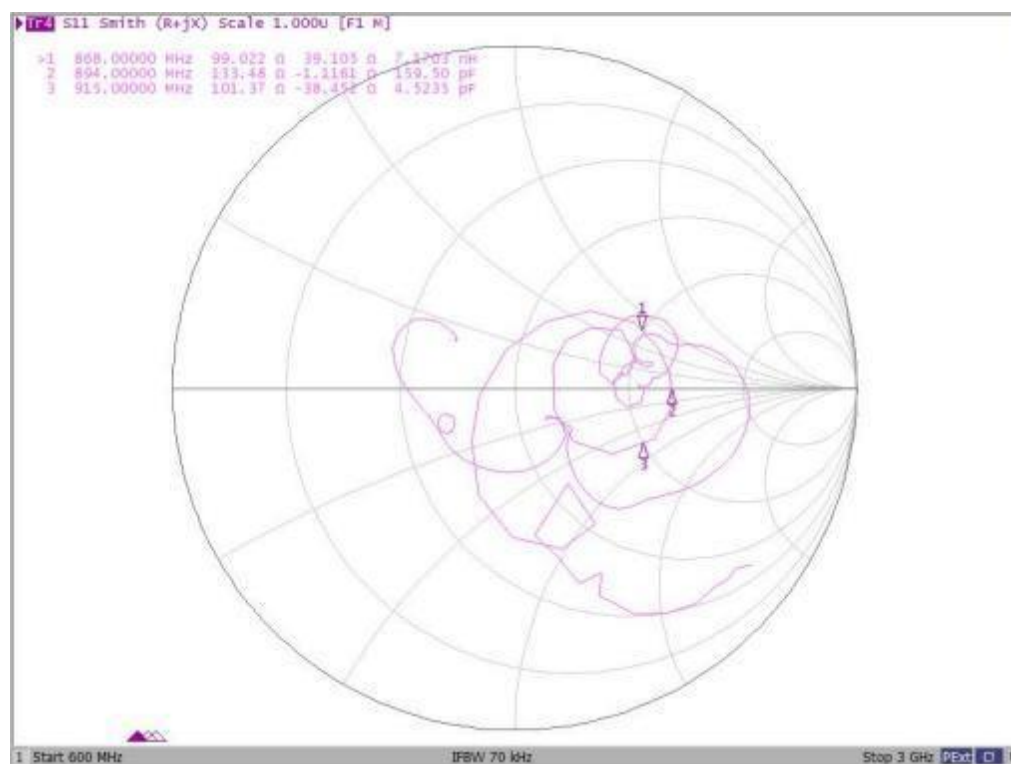
5.1.1 VSWR Chart



5.1.2 VSWR Data

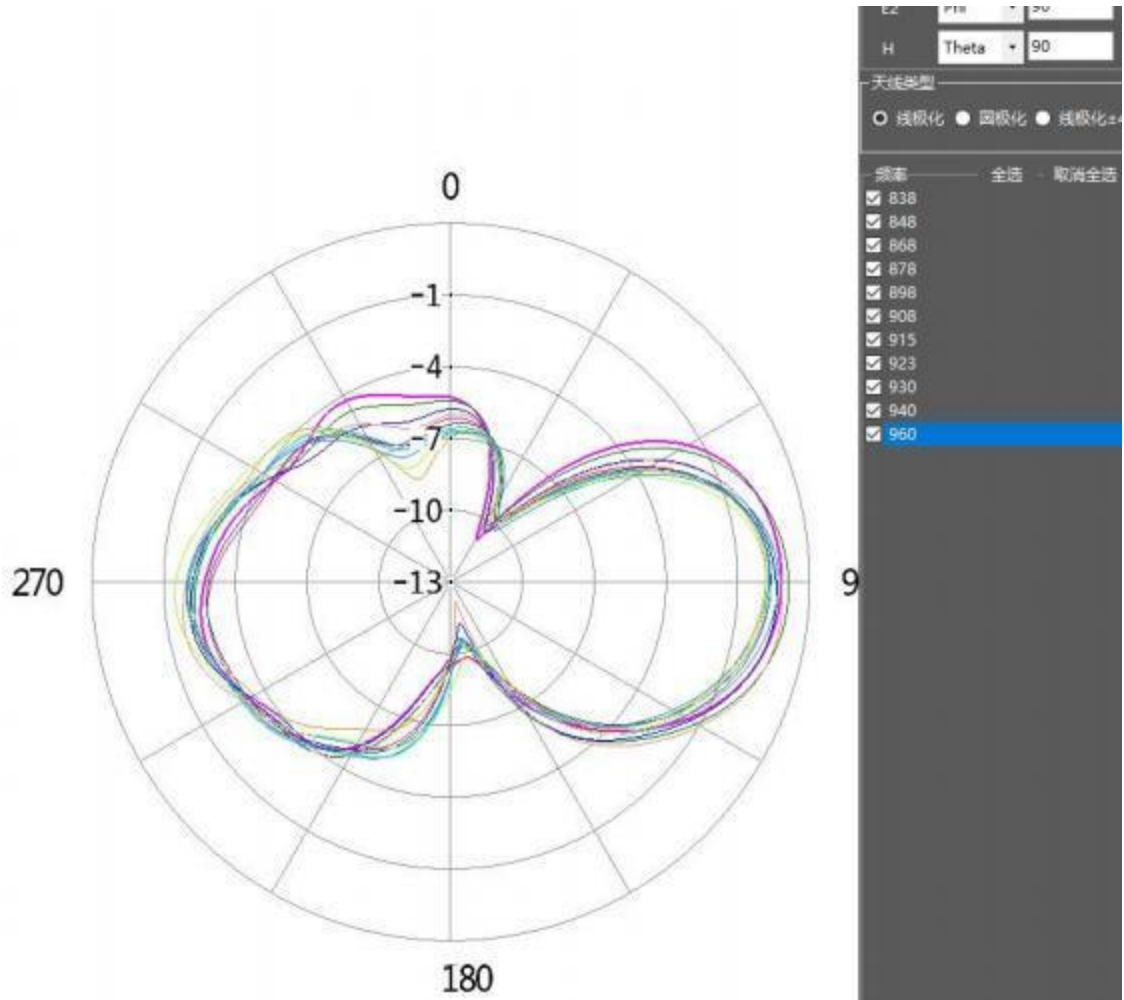
Freq/MHz	868	915
VSWR	2.3	2.4

5.2 Smith Impedance Chart



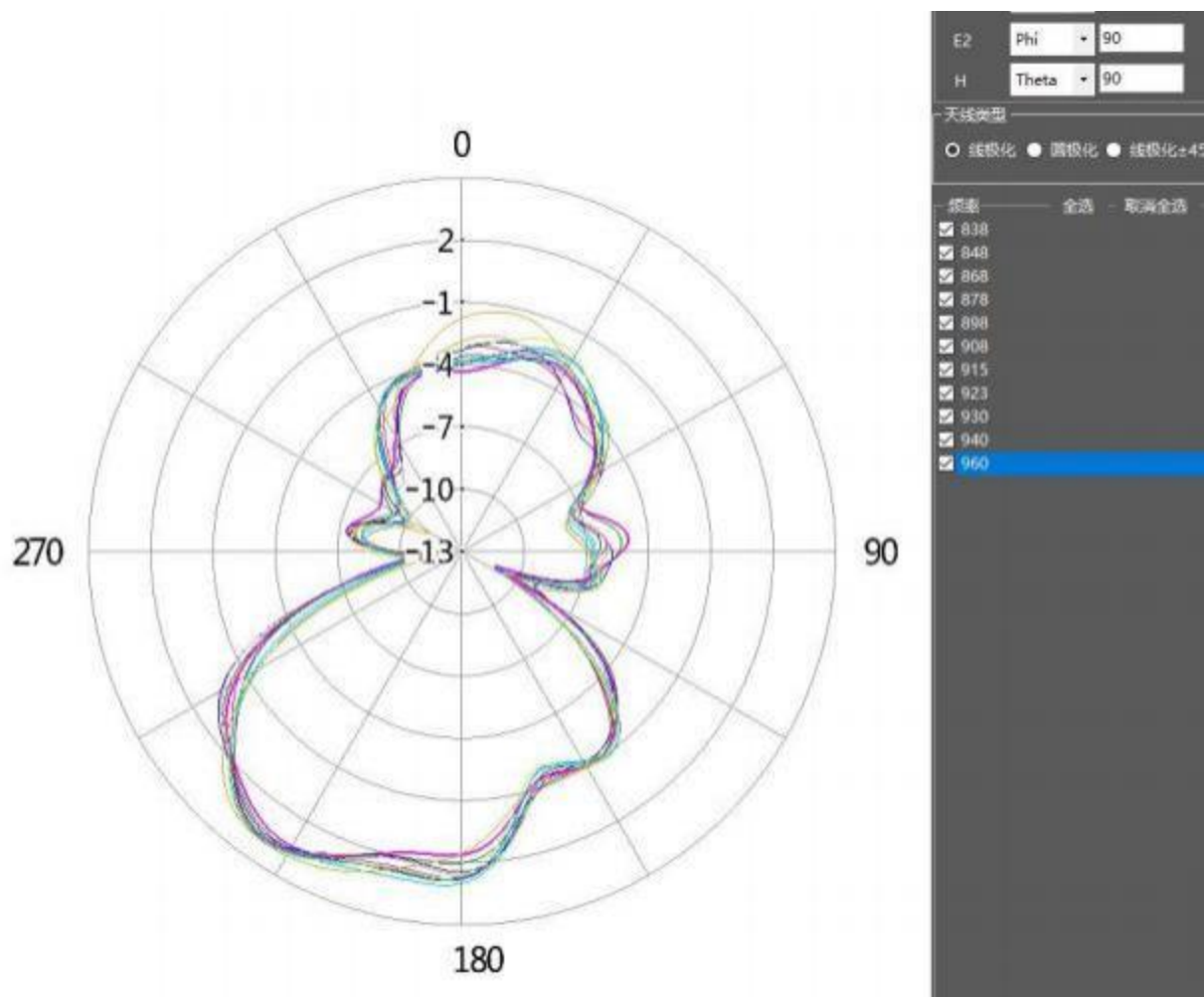
5.3 Radiation Pattern

5.3.1 H-plane

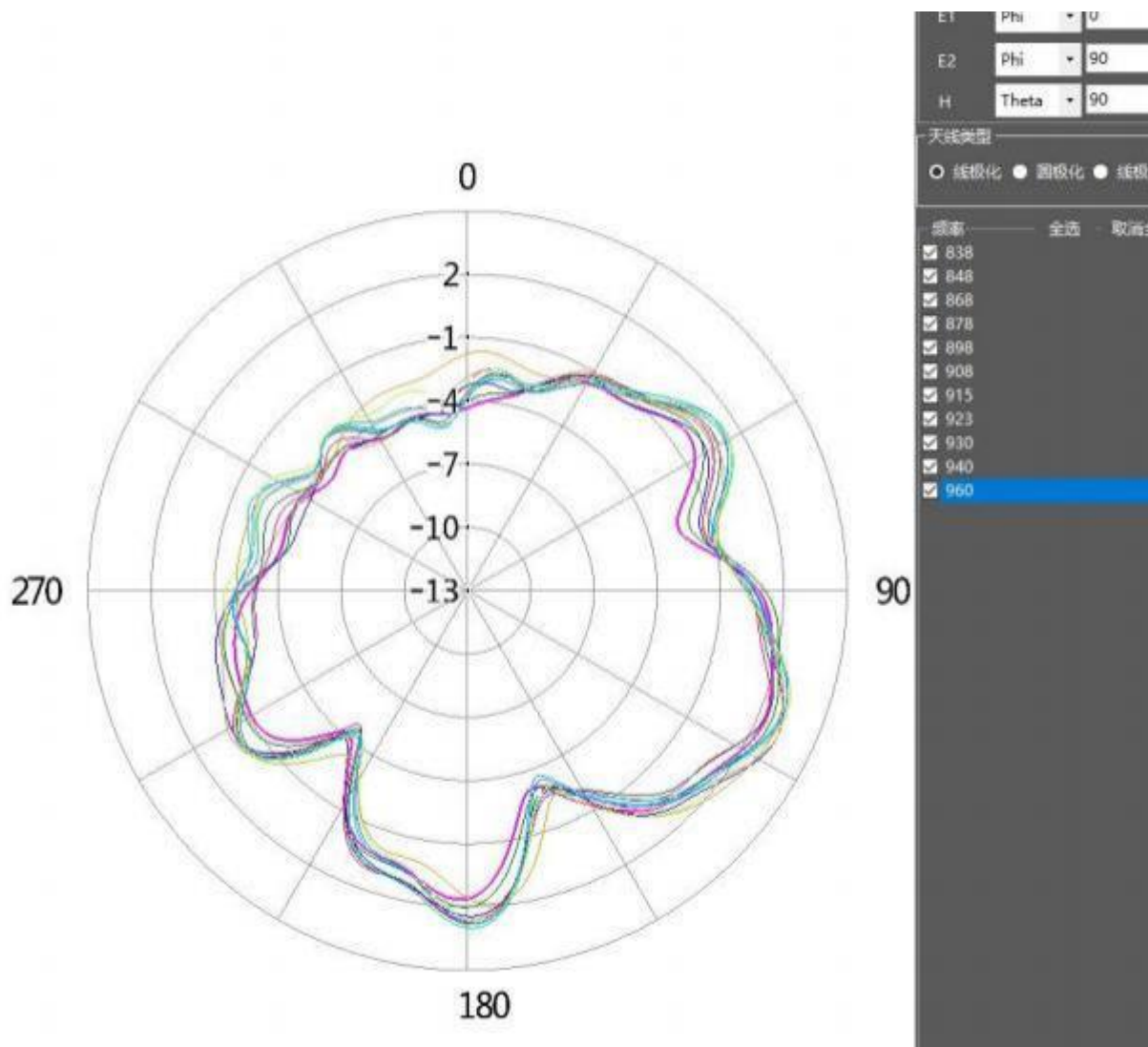


5.3.2 E-plane

E1



E2



5.4 Gain and Efficiency

Frequency(MHz)	Gain(dBi)	Efficiency(%)
838	1.46	67.17
848	1.62	67.77
868	1.63	66.23
878	1.05	53.75
898	1.49	56.31
908	1.94	65.23
915	2.48	73.29
923	2.39	70.51
930	2.21	69.58
940	2.17	68.56
960	2.01	68.02

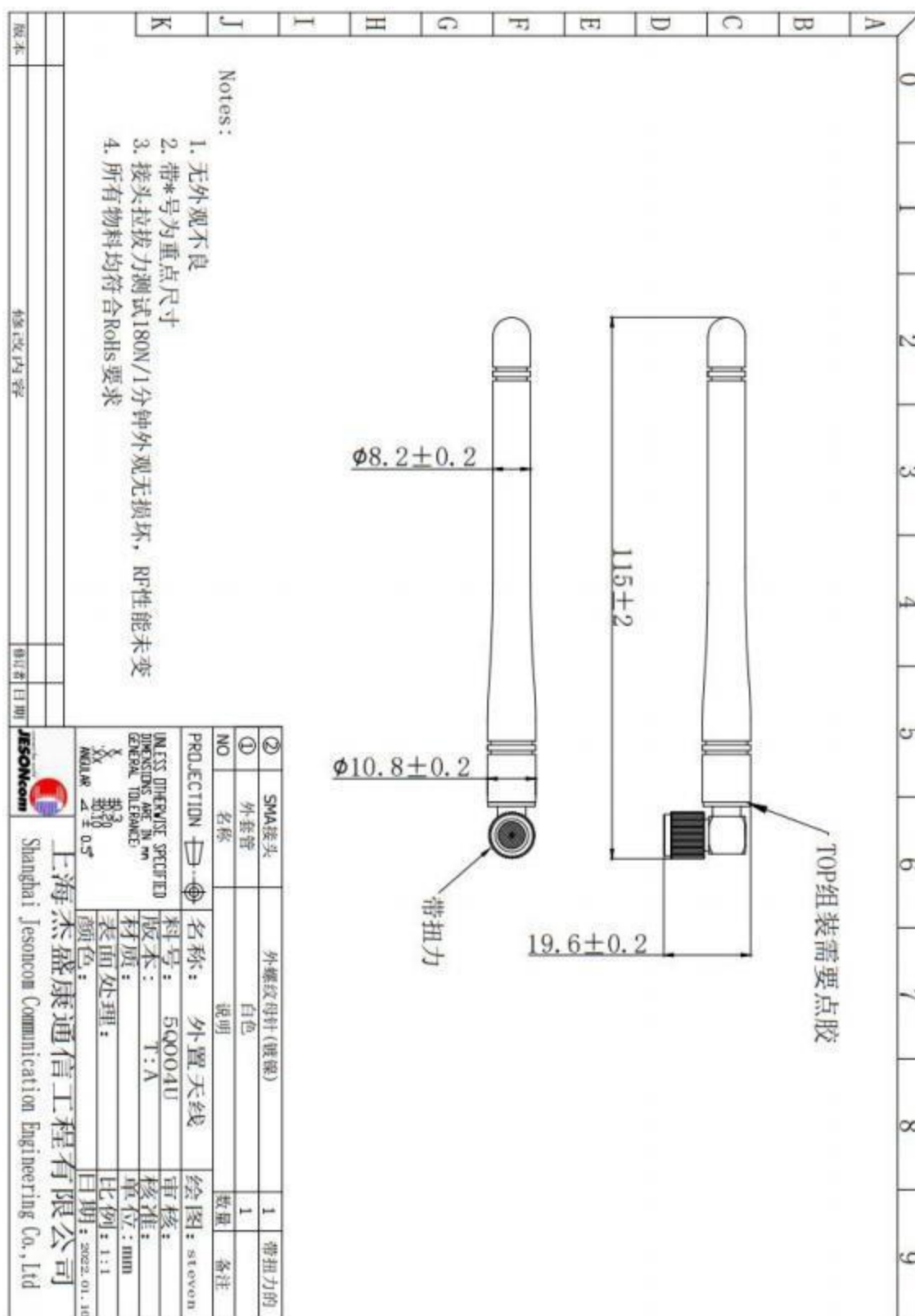
6 Environmental Handling Recommendations

No environmental treatment is required.

7 Impedance Matching Requirements

No impedance matching is required

8 Antenna Outline Diagram



9 Antenna Installation Guide

9.1 Antenna Installation and Feeder Cable Routing Instructions

10 Others