APPROVAL SHEET

PRODUCT NAME	CUSTOMER NAME OR MODEL
AO100	
CABLE LENGTH	**CUSTOMER APPROVED BY**
CONNECTOR TYPE	**APPROVED DATE**

SPECIFICATION

Product Name: AO100

Description: Outdoor Co-Linear Antenna

VERSION INFORMATION

VERSION	DATE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
1.0	9/11/15	New Issued	JMT	JF	

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1. Electrical Characteristics

1	Antenna model	AO100
2	Frequency range	GSM850 / GSM900 / GSM1800 / GSM1900 / UMTS 2.1GHz (3G)
3	Gain	2dBi
4	Polarisation	Linear
5	Impedance	50Ω
6	VSWR	Less than 3.6:1

2. Material

1	Antenna substrate	
2	Electrode	
3	Mounting	Wall
4	RoHS compliant?	Yes

3. Cable

1	Cable Type	RG58
2	Velocity factor	66%
3	Nominal Diameter	4.8mmm
4	RoHS compliant?	Yes

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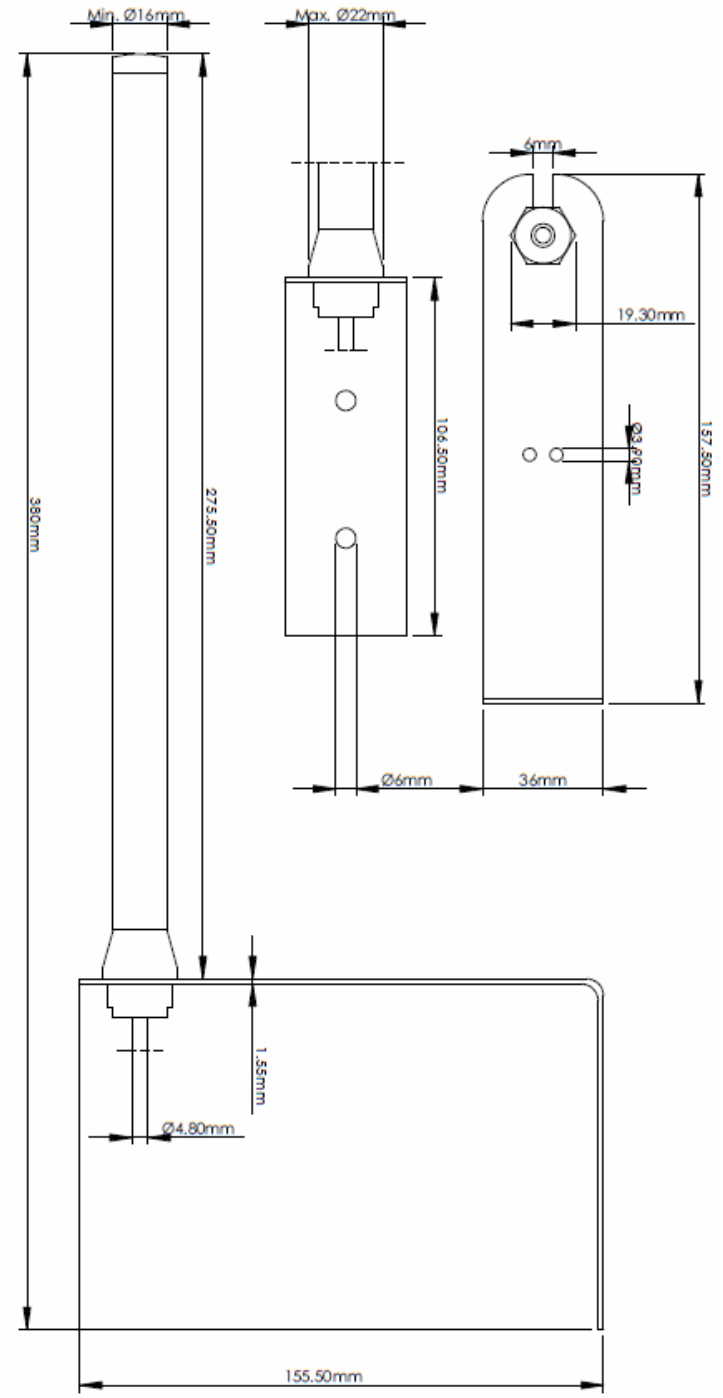
4. Dimensions (±0.5mm)



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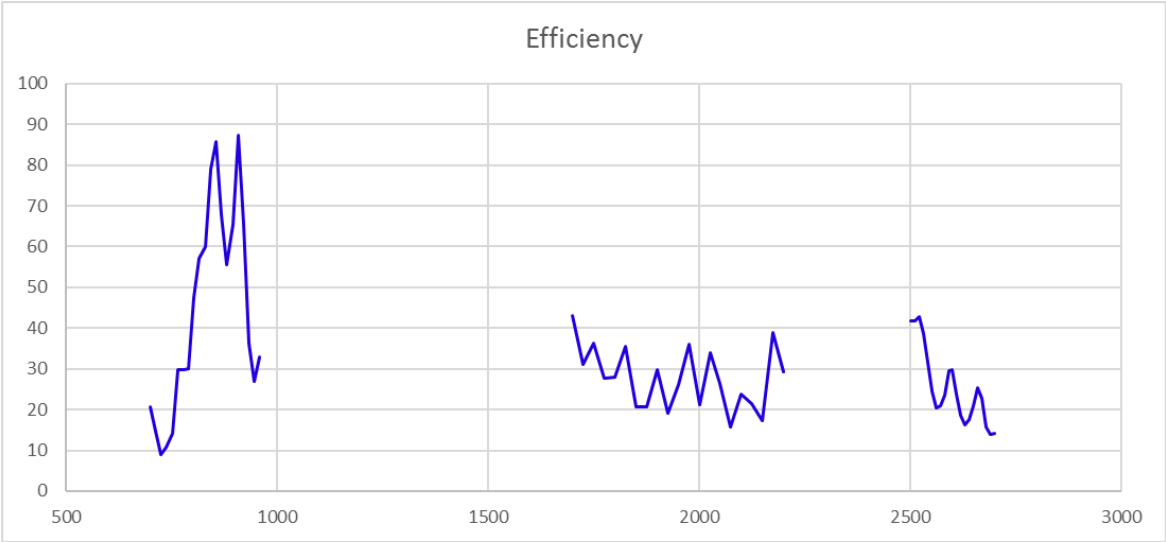
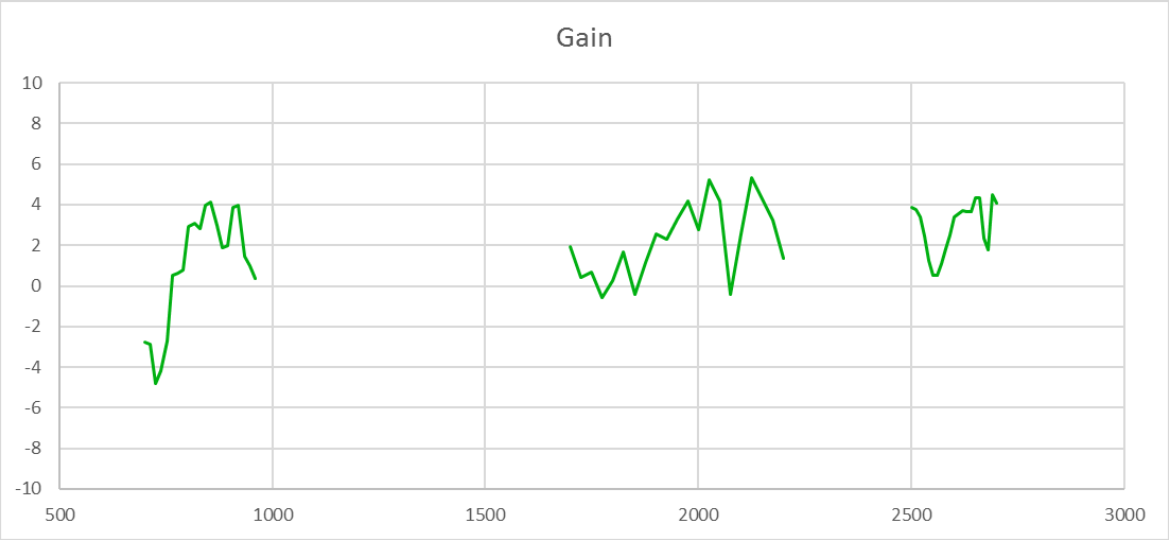
5. Efficiency and gain plots





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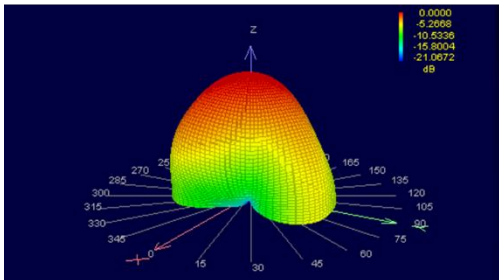
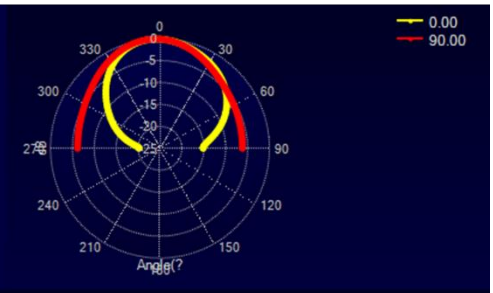
6. Typical radiation patterns

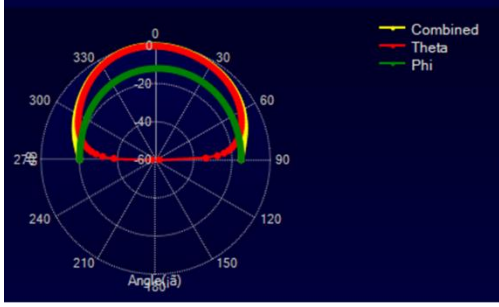
830MHZ

Far-Field Linear Polarisation

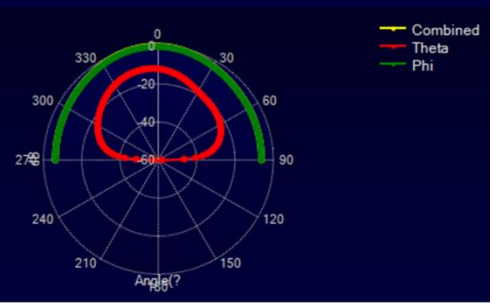


Bi-section Combined Chart





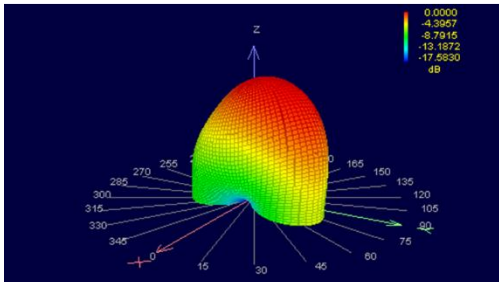
Bi-section 0.00˚ Amplitude Cut



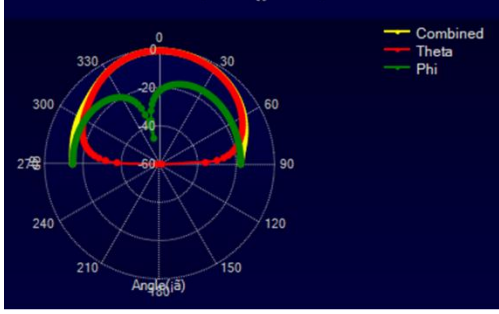
Bi-section 90.00˚ Amplitude Cut

921MHz

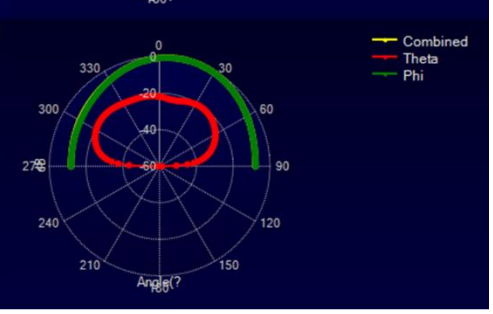
Far-Field Linear Polarisation



Bi-section Combined Chart



Bi-section 0.00˚ Amplitude Cut



Bi-section 90.00˚ Amplitude Cut

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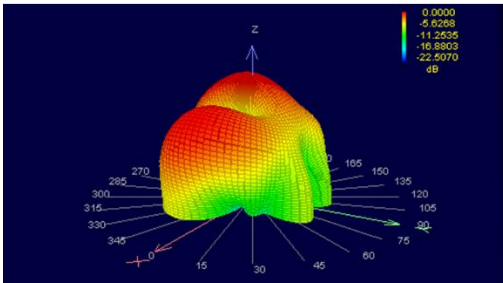
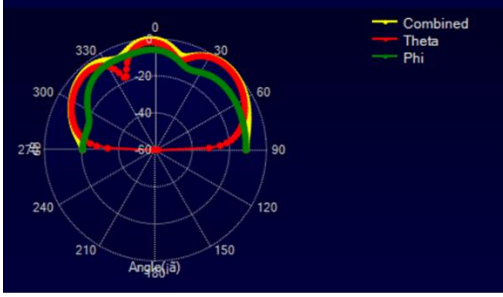
Typical radiation patterns (continued)

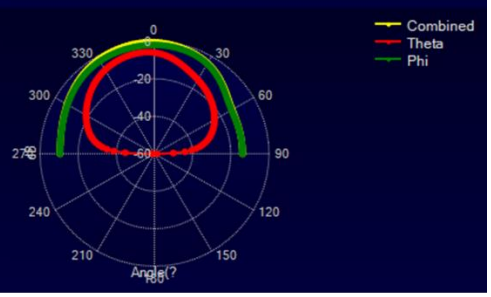
1700MHz

Far-Field Linear Polarisation



Bi-section Combined Chart



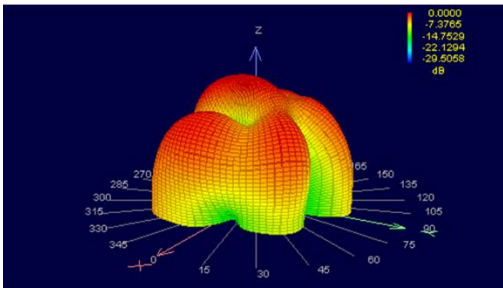


Bi-section 0.00˚ Amplitude Cut

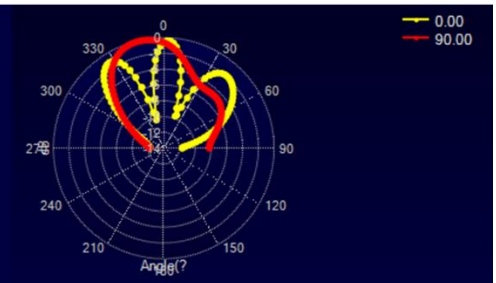
Bi-section 90.00˚ Amplitude Cut

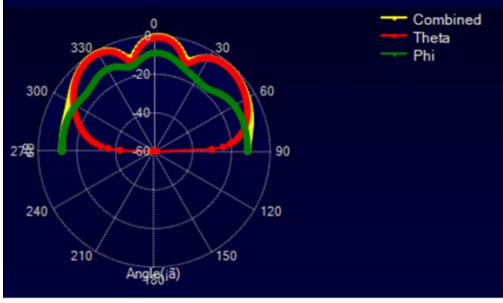
1800MHz

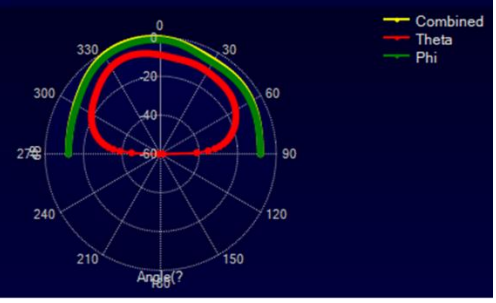
Far-Field Linear Polarisation



Bi-section Combined Chart







Bi-section 0.00˚ Amplitude Cut

Bi-section 90.00˚ Amplitude Cut

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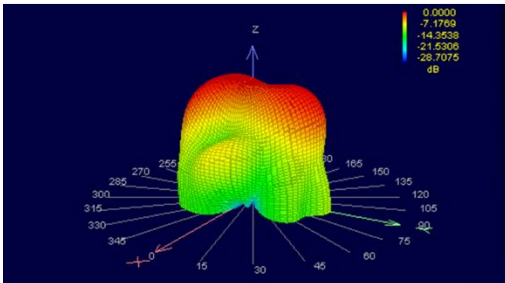
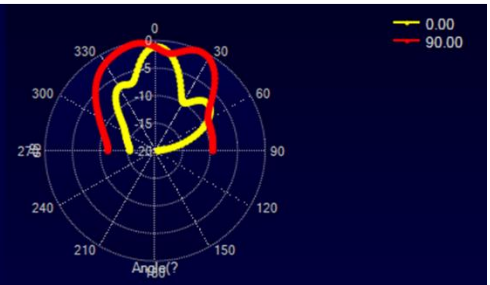
Typical radiation patterns (continued)

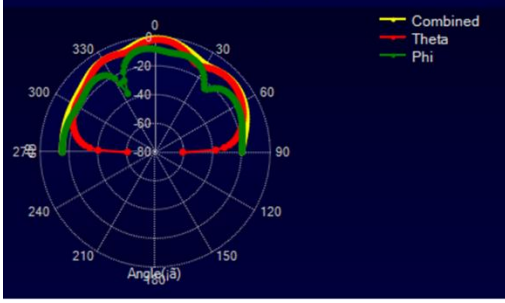
1900MHz

Far-Field Linear Polarisation

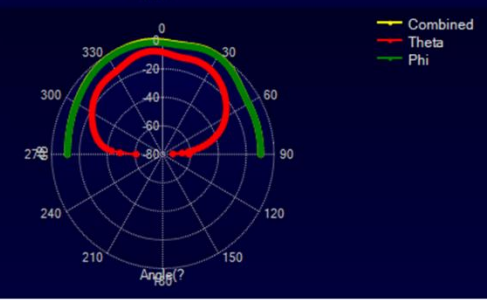


Bi-section Combined Chart





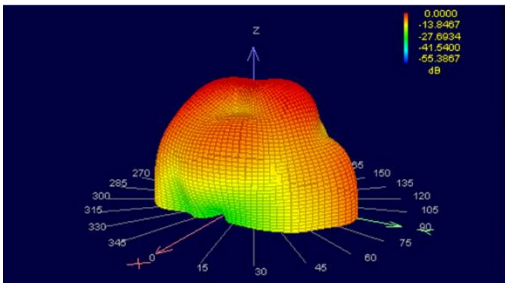
Bi-section 0.00˚ Amplitude Cut



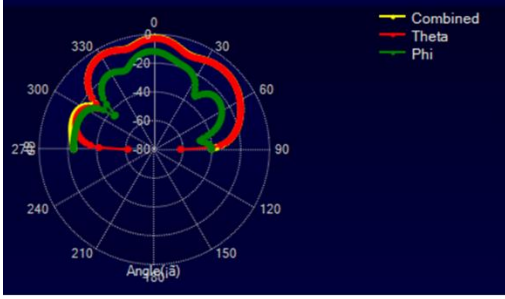
Bi-section 90.00˚ Amplitude Cut

2100MHz

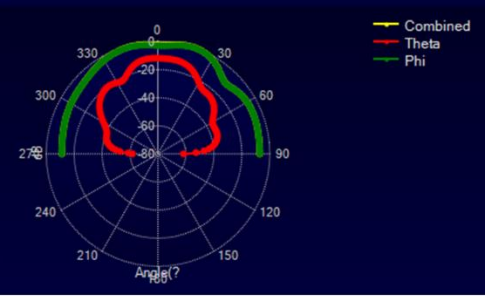
Far-Field Linear Polarisation



Bi-section Combined Chart



Bi-section 0.00˚ Amplitude Cut



Bi-section 90.00˚ Amplitude Cut

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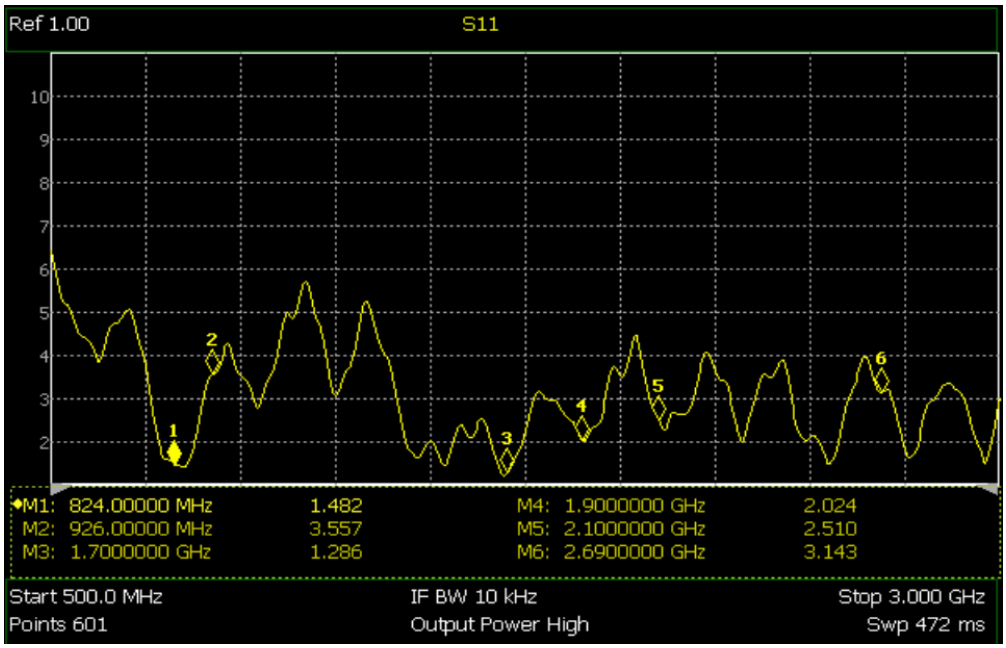
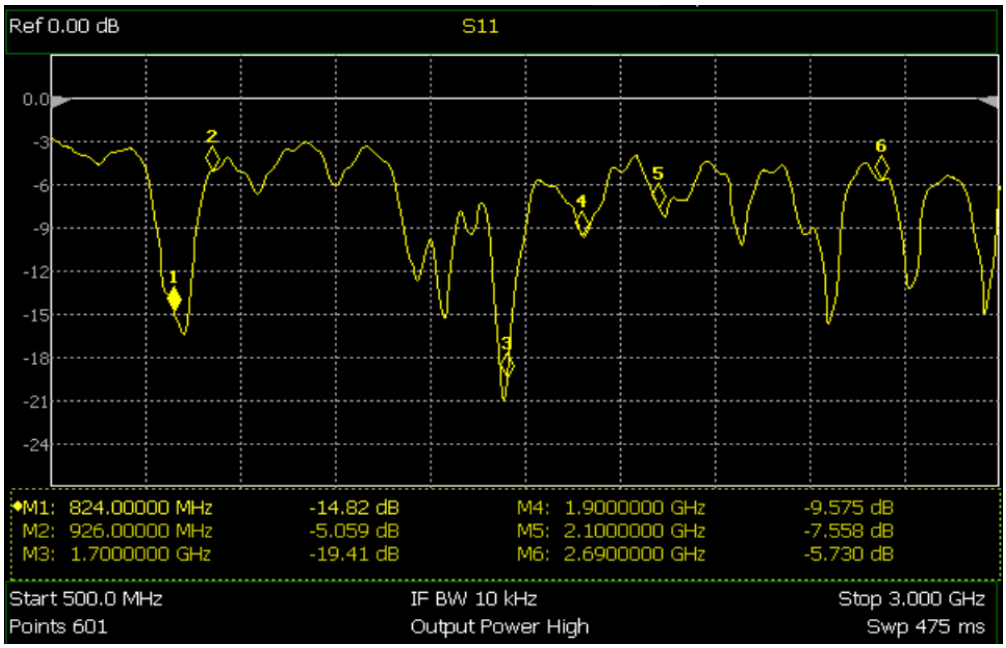
7. VSWR plot



8. Return/Loss plot



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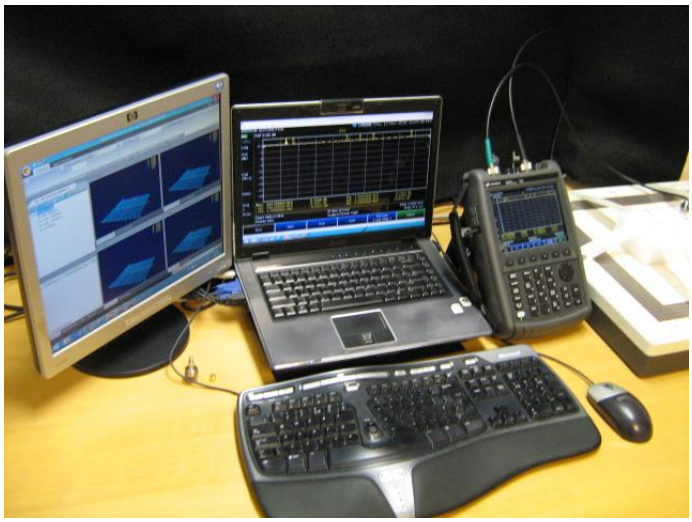
9. Test environment



Testing hardware:

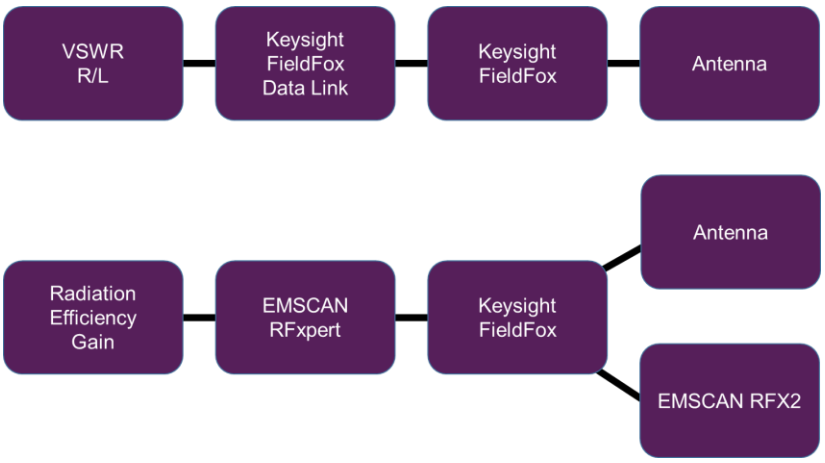
Keysight FieldFox Microwave Analyser N9915A

EMSCAN RFX2

Testing software:

EMSCAN RFxpert v4.1

Keysight FieldFox Data Link v5.06



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10. Mounting method

The receiver should be totally powered down (switch off mains and disconnect battery) before antenna installation.

1. Feed the cable on the extension antenna through the bracket slot and secure the antenna with the washer and nut. Secure the cable to the bracket using a cable tie – leaving a drip loop (~50mm radius).
2. Feed the extension antenna cable and connector through a suitable hole in the box housing of the receiver. Attach the adapter cable and connect to the receiver.
3. Check signal strength and secure the antenna bracket upright to the wall using suitable screws and plugs.

After it's use, this product must be processed as electronic scrap for proper disposal according to the prevailing waste disposal regulations of your community/district/state.

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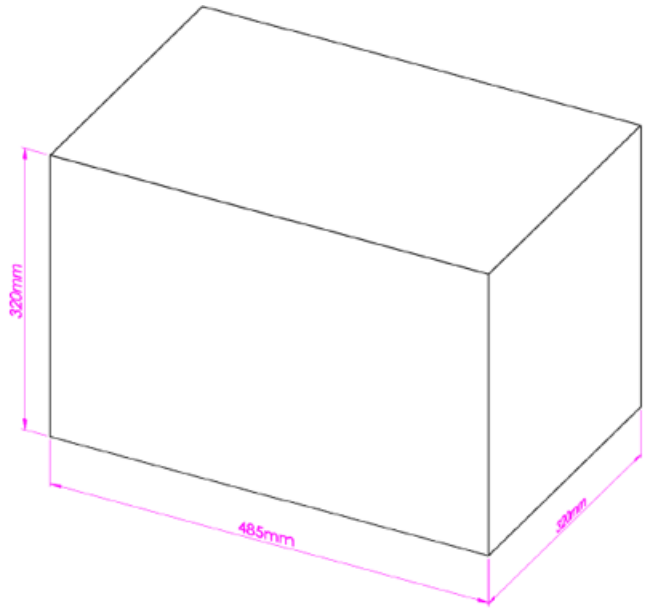
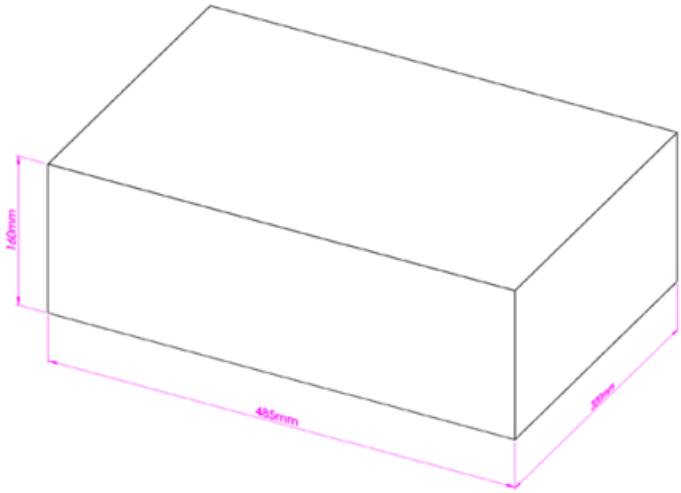
11. Packaging

Package	Qty
Poly Bag	1
Medium Box	10
Large Box	25





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12. Environmental specifications

Temperature range: 25±3℃
Relative Humidity range: 55~75%RH
Operating Temperature range: -40℃~+85℃
Storage Temperature range: -40℃~+110℃

Moisture Proof
The device should satisfy the electrical characteristics after exposed to the temperature 40±2℃ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

Vibration Resist
The device should satisfy the electrical characteristics after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

Drop Shock
The device should satisfy the electrical characteristics after dropping onto the hard wooden board from the height of 30cm for 3 times each facet of the 3 dimensions of the device.

High Temperature Endurance
The device should satisfy the electrical characteristics after exposed to temperature 80±5℃for 24±2 hours and 1~2 hours recovery time under normal temperature.

Low Temperature Endurance
The device should also satisfy the electrical characteristics after exposed to the temperature -40℃±5℃ for 24±2 hours and to 2 hours recovery time under normal temperature.

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13. Notes

i. This product specification guarantees the quality of our product as a single unit. Please make sure that your product is evaluated and confirmed against your specifications when our product is mounted to your product.

ii. We cannot warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.