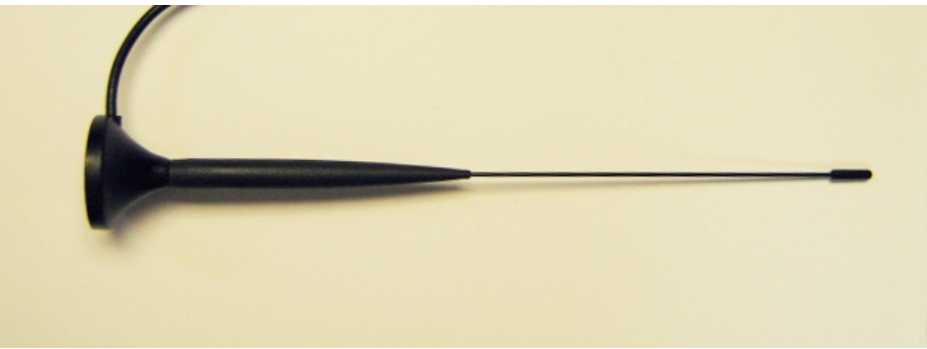
APPROVAL SHEET

PRODUCT NAME	CUSTOMER NAME OR MODEL
AM103-4	
CABLE LENGTH	**CUSTOMER APPROVED BY**
CONNECTOR TYPE	**APPROVED DATE**

SPECIFICATION

Product Name: AM103-4

Description: Multi-Band Mini Whip Magnetic Antenna



VERSION INFORMATION

VERSION	DATE	REVISION DESCRIPTION	PREPARED	CHECKED	APPROVED
1.0	5/11/15	New Issued	JMT	JF	

PRODUCT NAME	Prepared Date	Page
AM103-4	5/11/15	1/12

1. Electrical Characteristics

1	Antenna model	AM103-4
2	Frequency range	GSM850 / GSM900 / GSM1800 / GSM1900 / UMTS 2.1GHz (3G)
3	Gain	3dBi
4	Polarisation	Linear
5	Impedance	50Ω
6	VSWR	Less than 3:1

2. Material

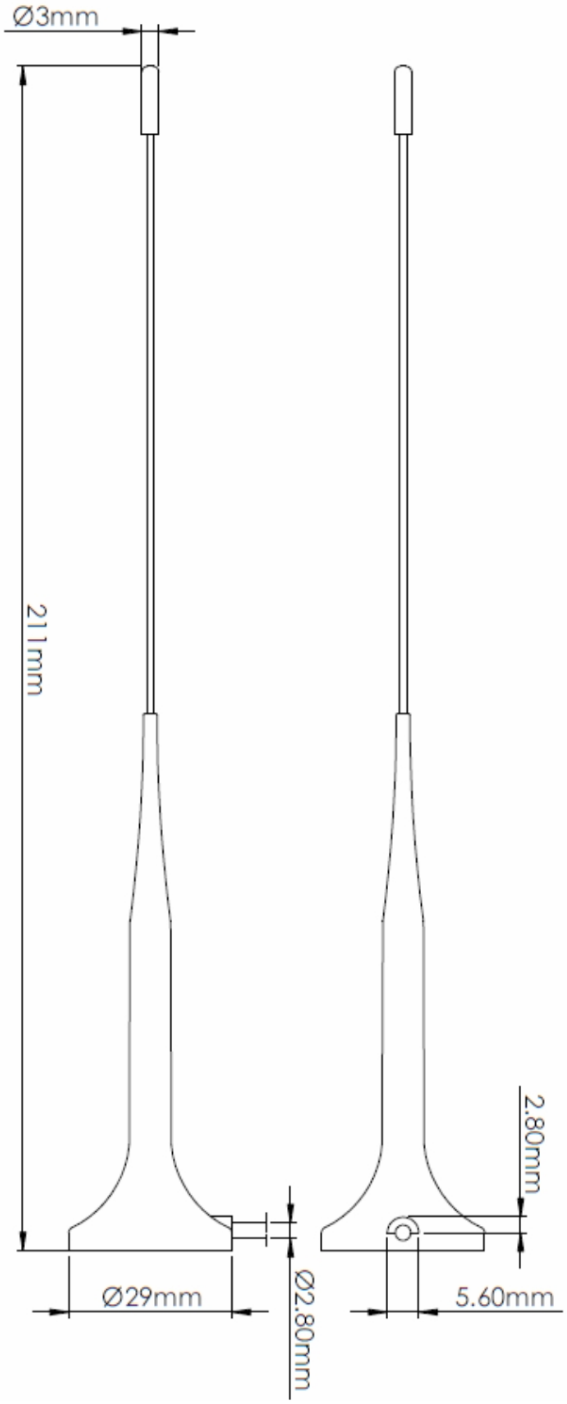
1	Antenna substrate	
2	Electrode	
3	Mounting	Magnetic base
4	RoHS compliant?	Yes

3. Cable

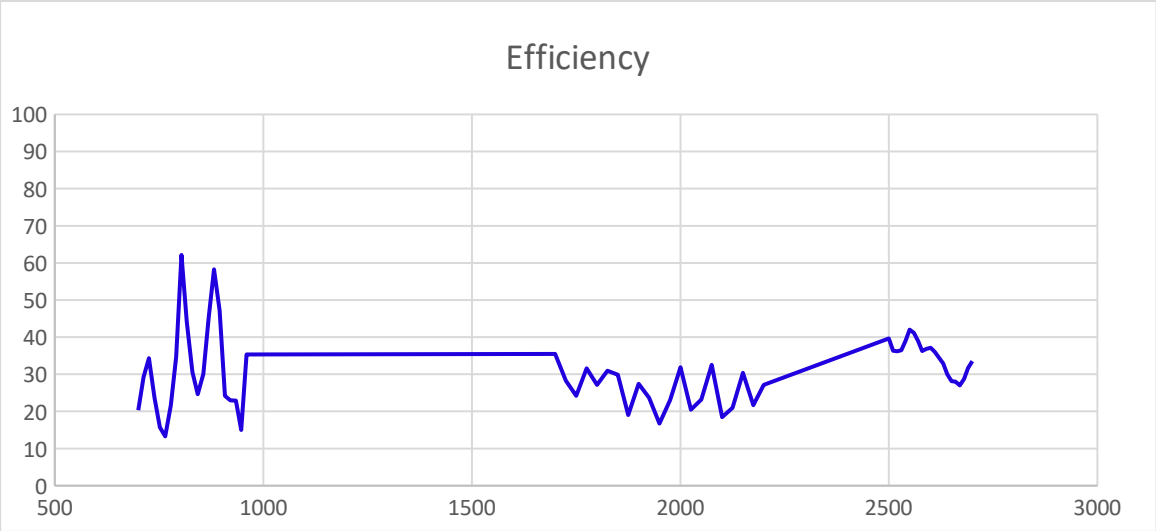
1	Cable Type	RG174
2	Velocity factor	66%
3	Nominal Diameter	2.8mm
4	RoHS compliant?	Yes

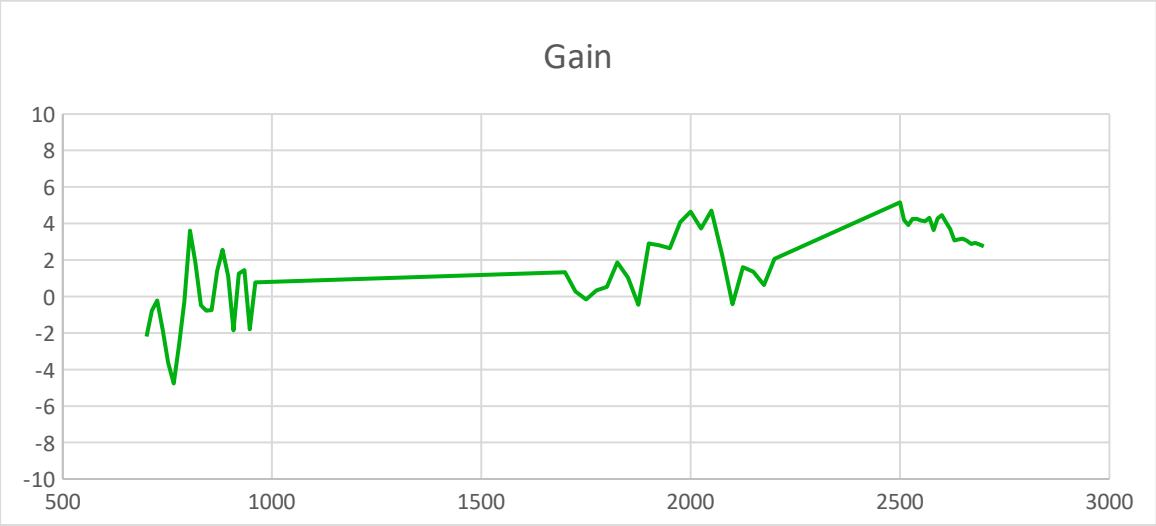
PRODUCT NAME	Prepared Date	Page
AM103-4	5/11/15	2/12

4. Dimensions (±0.5mm)



5. Efficiency and gain plots

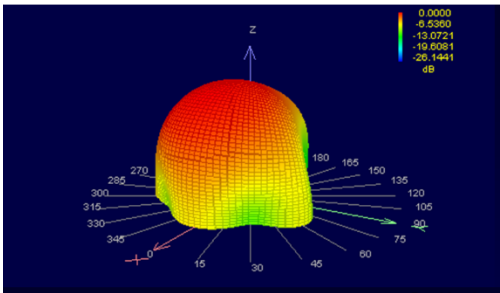




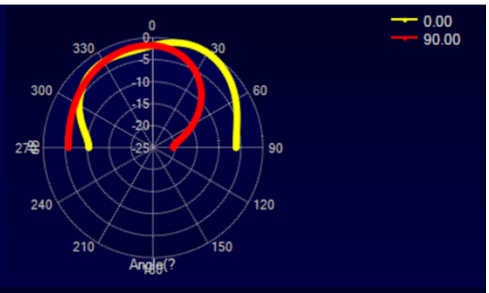
6. Typical radiation patterns

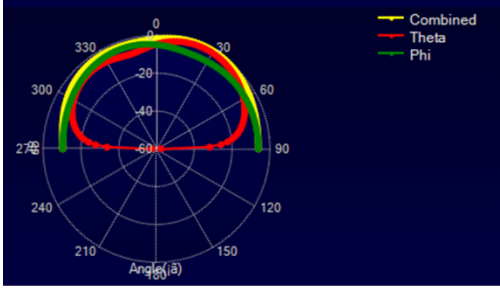
830MHZ

Far-Field Linear Polarisation

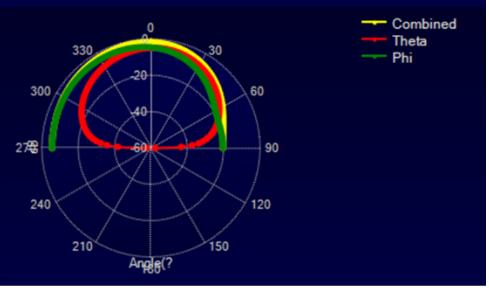


Bi-section Combined Chart





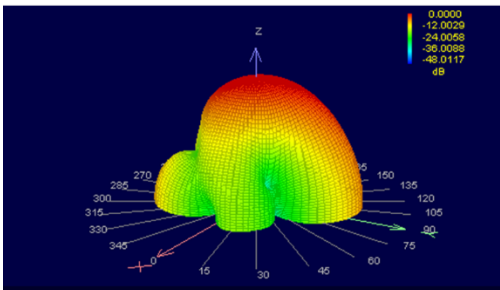
Bi-section 0.00˚ Amplitude Cut



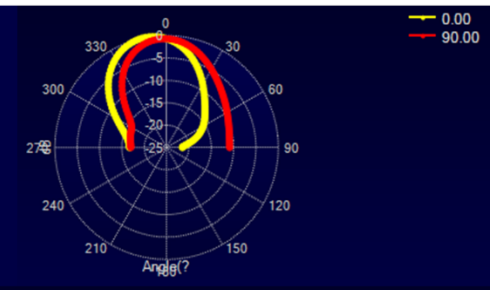
Bi-section 90.00˚ Amplitude Cut

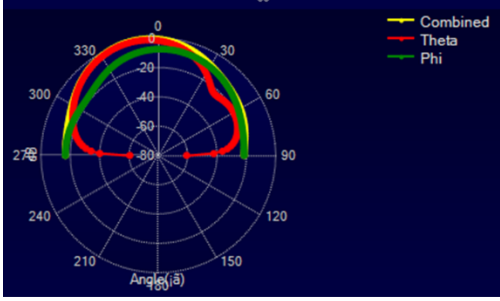
921MHz

Far-Field Linear Polarisation

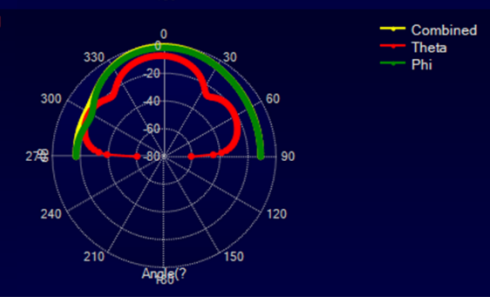


Bi-section Combined Chart





Bi-section 0.00˚ Amplitude Cut

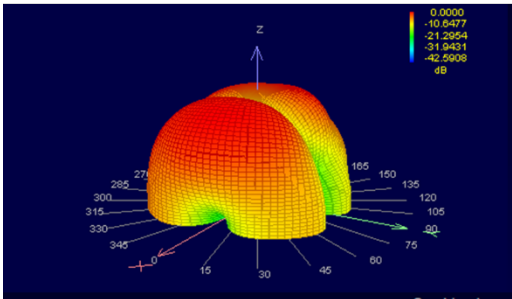


Bi-section 90.00˚ Amplitude Cut

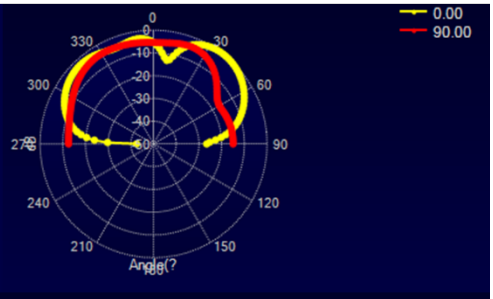
Typical radiation patterns (continued)

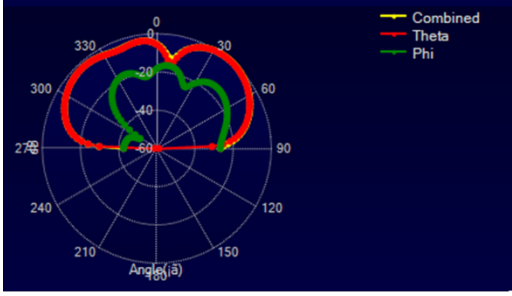
1700MHz

Far-Field Linear Polarisation

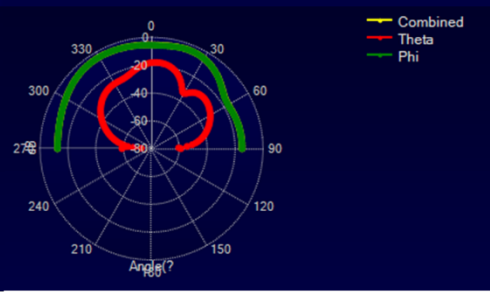


Bi-section Combined Chart





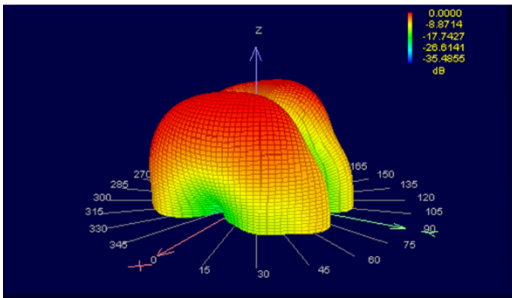
Bi-section 0.00˚ Amplitude Cut



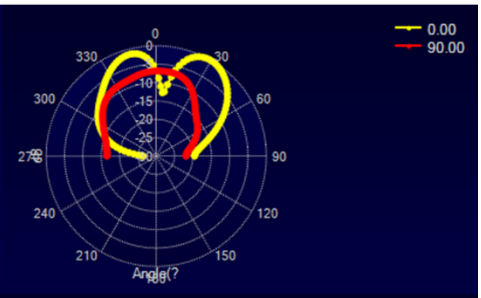
Bi-section 90.00˚ Amplitude Cut

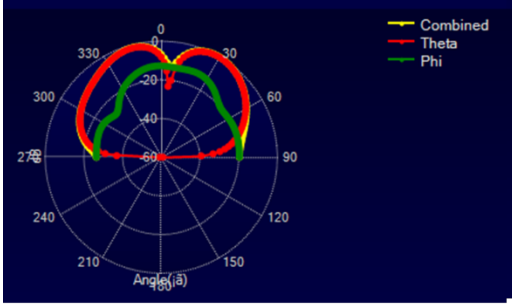
1800MHz

Far-Field Linear Polarisation

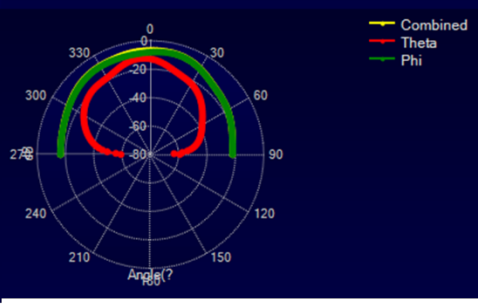


Bi-section Combined Chart





Bi-section 0.00˚ Amplitude Cut

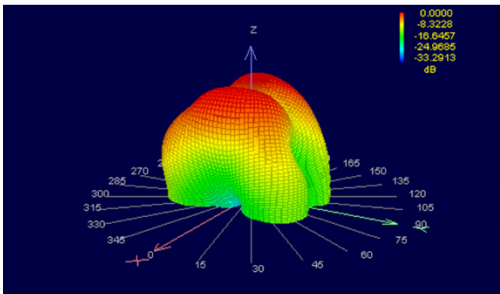


Bi-section 90.00˚ Amplitude Cut

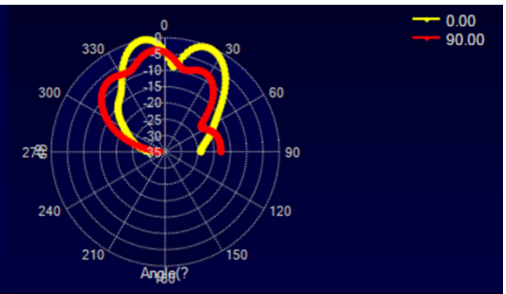
Typical radiation patterns (continued)

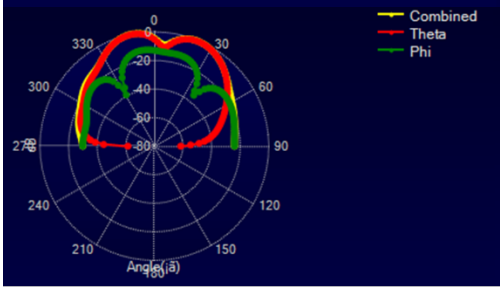
1900MHz

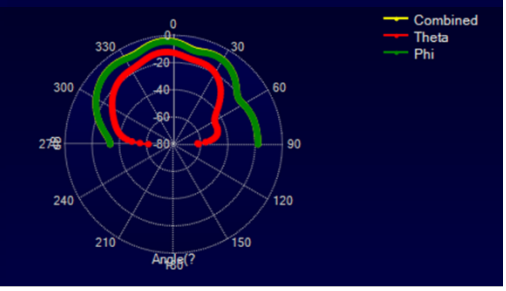
Far-Field Linear Polarisation



Bi-section Combined Chart





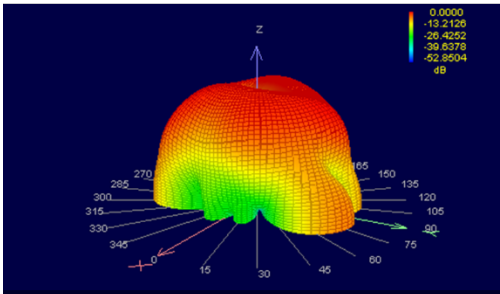


Bi-section 0.00˚ Amplitude Cut

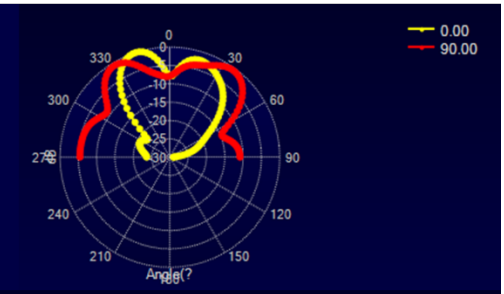
Bi-section 90.00˚ Amplitude Cut

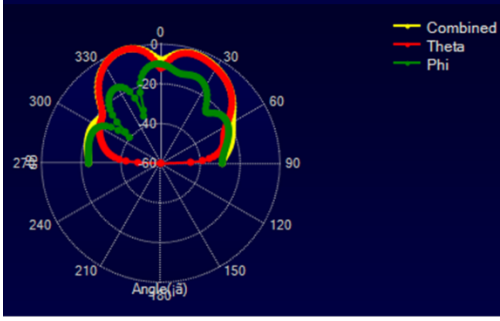
2100MHz

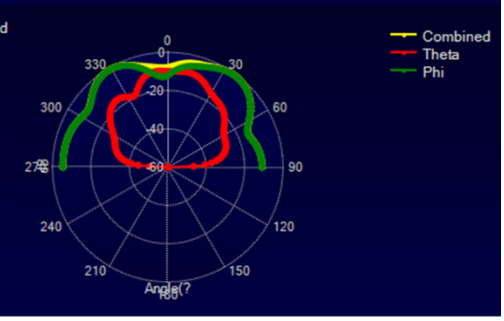
Far-Field Linear Polarisation



Bi-section Combined Chart



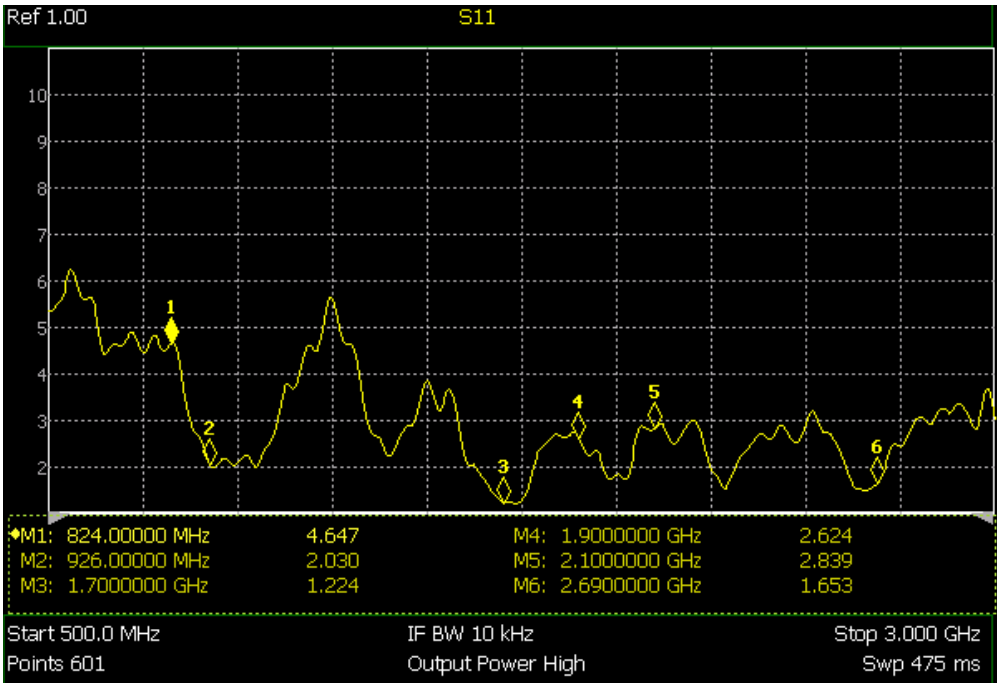




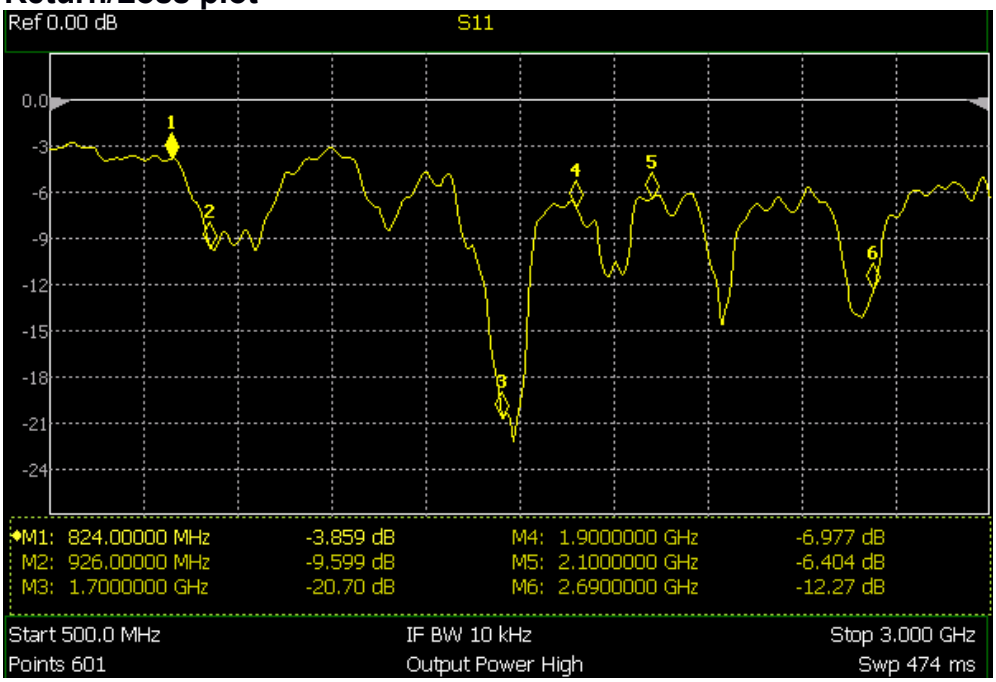
Bi-section 0.00˚ Amplitude Cut

Bi-section 90.00˚ Amplitude Cut

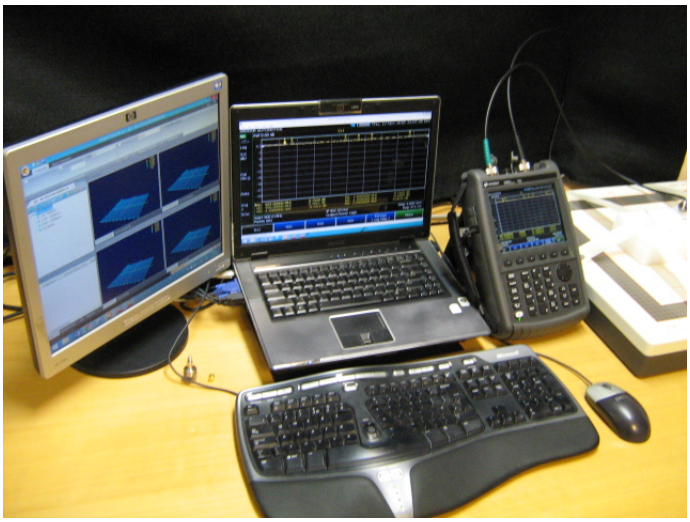
7. VSWR plot



8. Return/Loss plot



9. Test environment



Testing hardware:

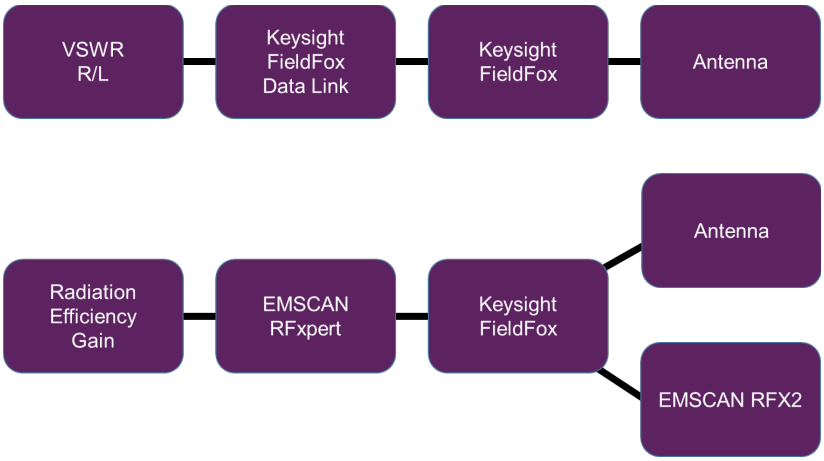
Keysight FieldFox Microwave Analyser N9915A

EMSCAN RFX2

Testing software:

EMSCAN RFxpert v4.1

Keysight FieldFox Data Link v5.06



10. Mounting method

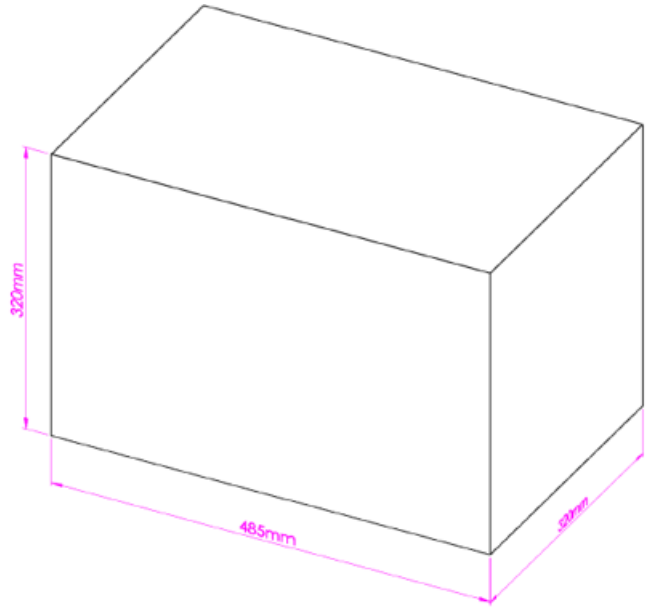
1. Choose a flat mounting place on the car roof.
2. Clean the roof mounting area.
3. Take care that the antenna's magnetic face is free from metal parts. Do not take off the protective film.
4. The antenna needs to be mounted in a way where a minimum cable length of 10cm between the antenna and the door seal is tight.
5. Ensure that the cable is not twisted, bent or pulled across any sharp edges.
6. The reception signal must not be restricted by anything placed near or onto the antenna (e.g. roof rack).

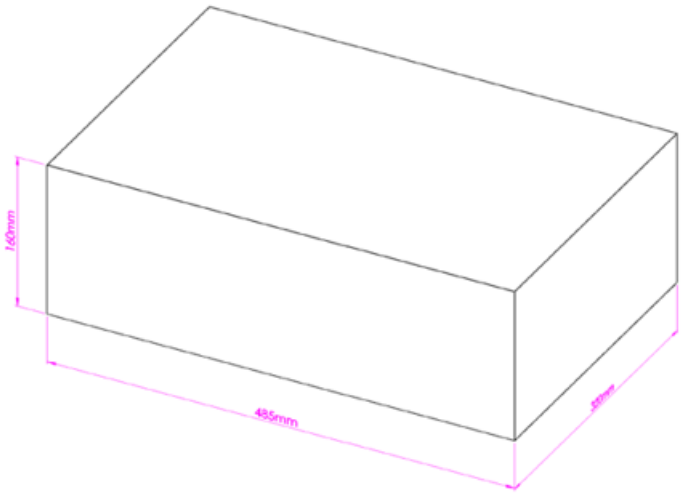
NOTE: Adhesion up to 180 km/h can only be guaranteed if the mounting instructions are strictly observed.

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

11. Packaging

Package	Qty
Poly Bag	1
Medium Box	100
Large Box	200





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.

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.