

## 6: Antenna specification;

6-2: Description of Available antennas for FCC

No	Antennas			Cables			
	Model name	Antenna type	Antenna gain[dBi]	Combination (refer to cable list)	Total loss[dB]	Total gain[dBi]	e.i.r.p. [dBm e.i.r.p.]
A	DA-2450-03RP-SMA-04	dipole antenna	4.3	1+2	1.01	3.29	12.04
B	EXT-ANT2	Patch antenna	1.95	1+2	1.01	0.94	9.69

\* Change the emission power of radio module to 8.53dBm.

Brand name	HWaYaoTek
Model name	DA-2450-03RP-SMA-04
Manufacturer information	<p>Hwa Yao Technologies Co., Ltd.</p> <p>No.1, Ln. 32, Zhengnan8th St., Yongkang Dist., Tainan City 710, Taiwan (R.O.C.)</p>
Antenna gain result (table)	Please see the slide 12(for FCC) and 13(for NCC).
gain pattern plots	Please see the slide 15 and the spec. sheet.

SPECIFICATIONS:

Electrical Specifications

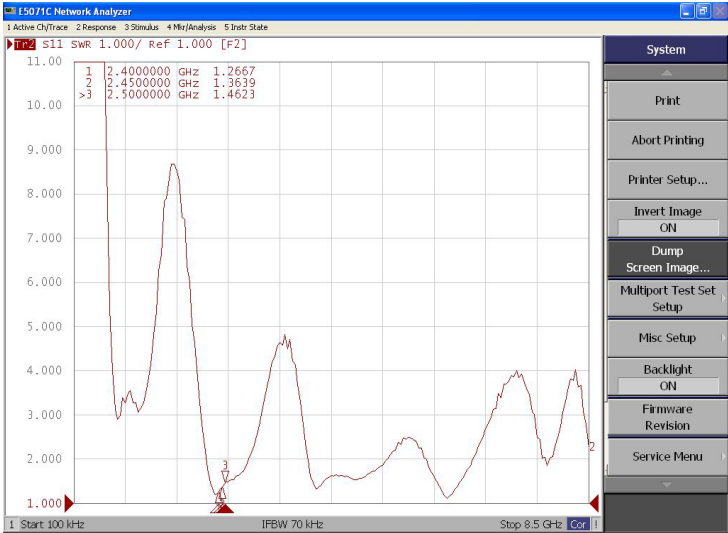
Frequency Range	2400~2500MHz
V.S.W.R	≤2.5:1
Antenna Type	Dipole Sleeve
Gain	≥3.0 +0.5dBi
Polarization	Linear
Horizontal Beam-with	360°
Impedance	50Ω
Connector	RP SMA MALE

Mechanical Specifications

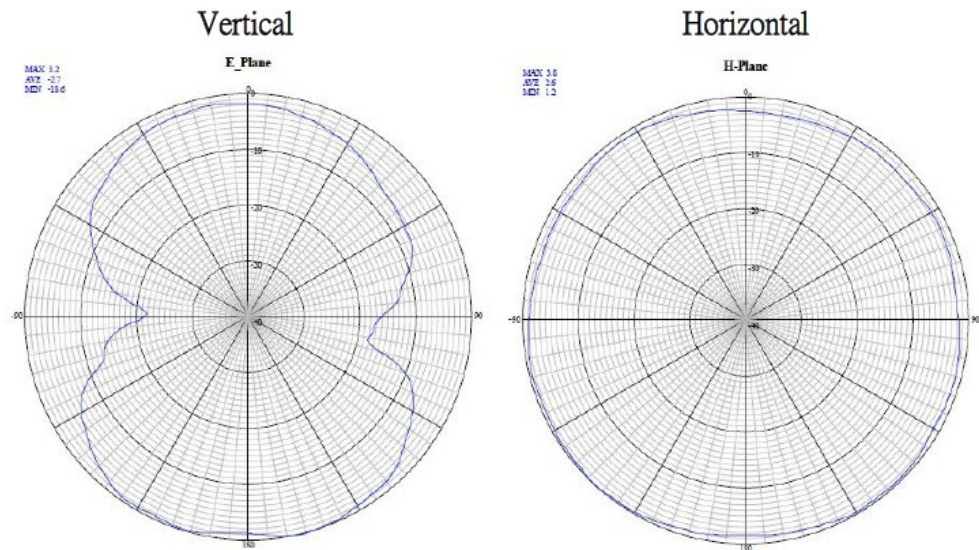
Dimension	136mm
Weight	11.5g
Housing	TPEE
Hinge	ABS
Color	Black
Operating Temperature	-20℃ to +70℃
Storage Temperature	-20℃ to +70℃

Frequency	Gain H-Plane	Gain E-Plane
2.4 GHz	4.1 dBi	3.8 dBi
2.45 GHz	3.4 dBi	4.0 dBi
2.5 GHz	3.3 dBi	4.3 dBi

VSWR



Antenna Vertical & Horizontal Pattern



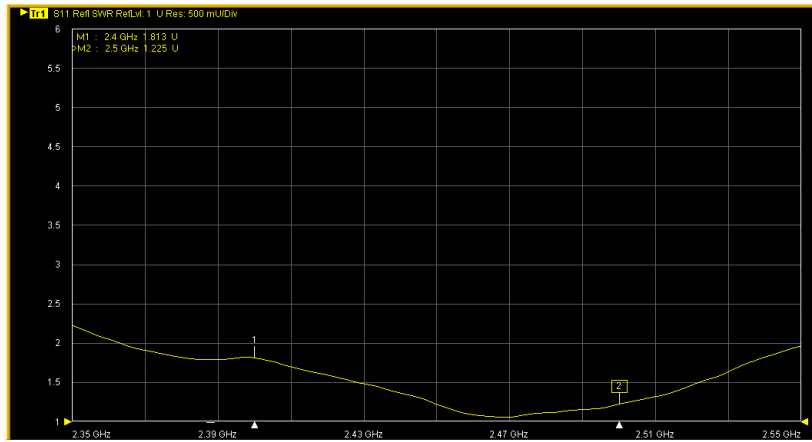
## B: Antenna specification: EXT-ANT2

Brand name	FUTABA
Model name	EXT-ANT2
Manufacturer information	FUTABA CORPORATION 629, Oshiba, Mobara, Chiba Prefecture 297-8588, Japan
Frequency range	2.4GHz~2.5GHz (VSWR<2.0)
Antenna type	Patch antenna
Connector type	SMA-P (Reversed type*)
Antenna gain	1.95dBi

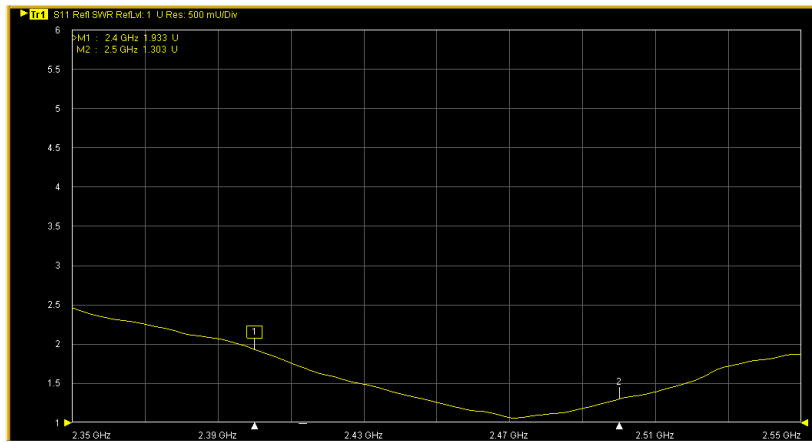
\* D-C16-086-A-G is connected to SMA-P and molded by heat shrinkable tube for converting to SMA-RP.

## ● VSWR

### ー V偏波アンテナ

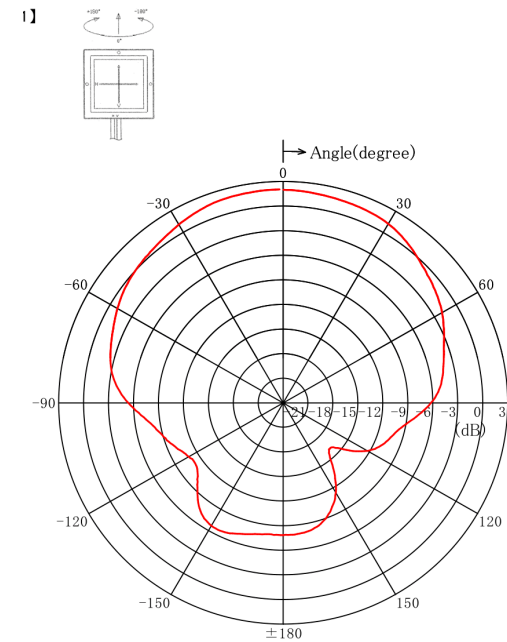


### ー H偏波アンテナ

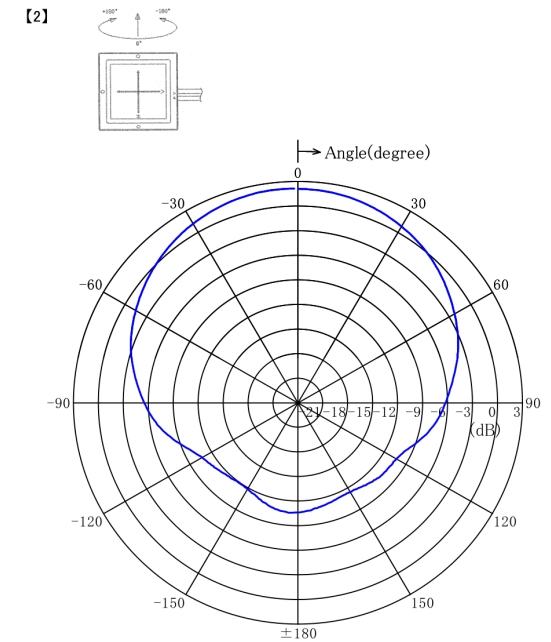


## ● Radiation patterns(Free space)

### ー 2400MHz

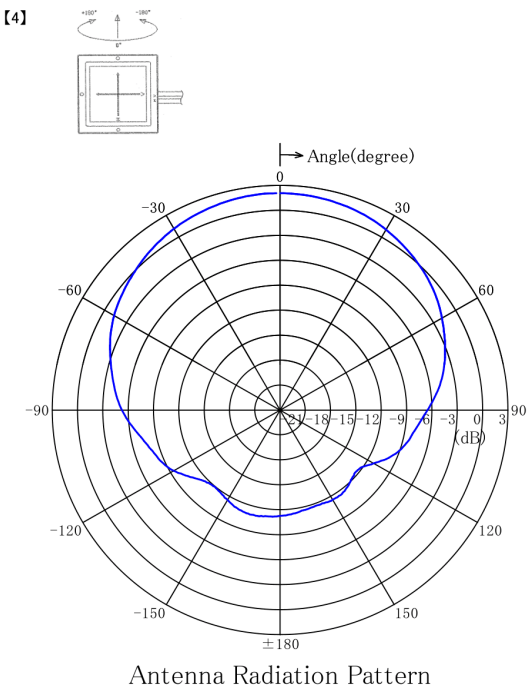
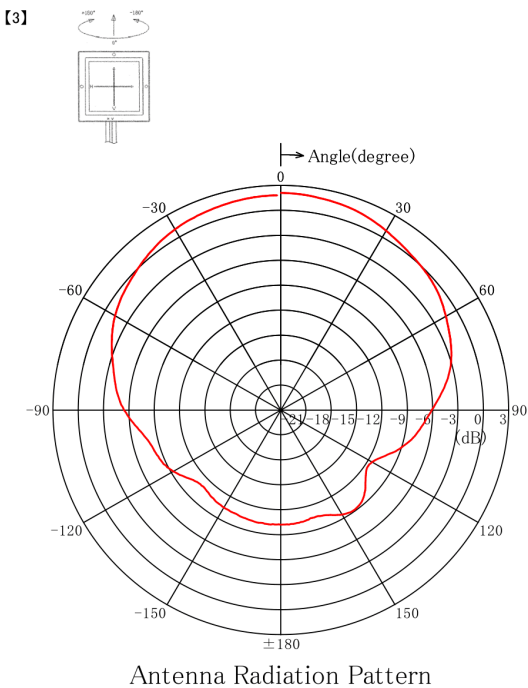


Antenna Radiation Pattern

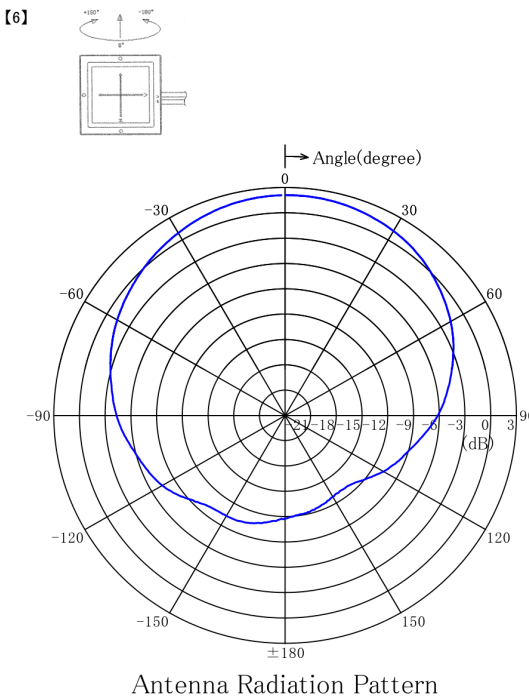
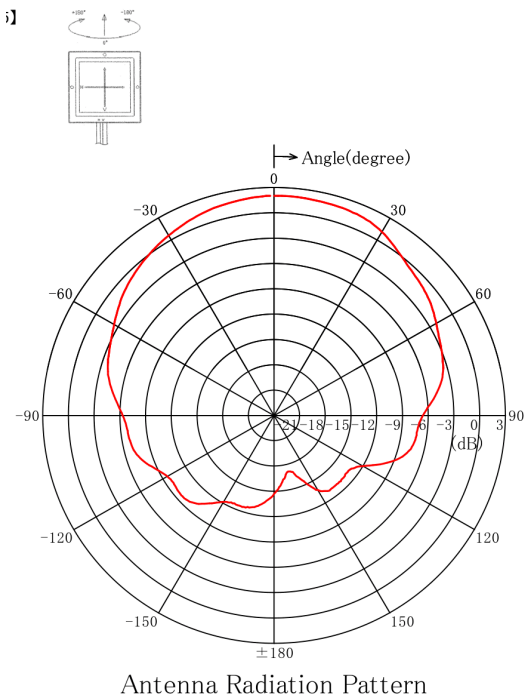


Antenna Radiation Pattern

- Radiation patterns(Free space)
  - 2450MHz



- Radiation patterns(Free space)
  - 2500MHz



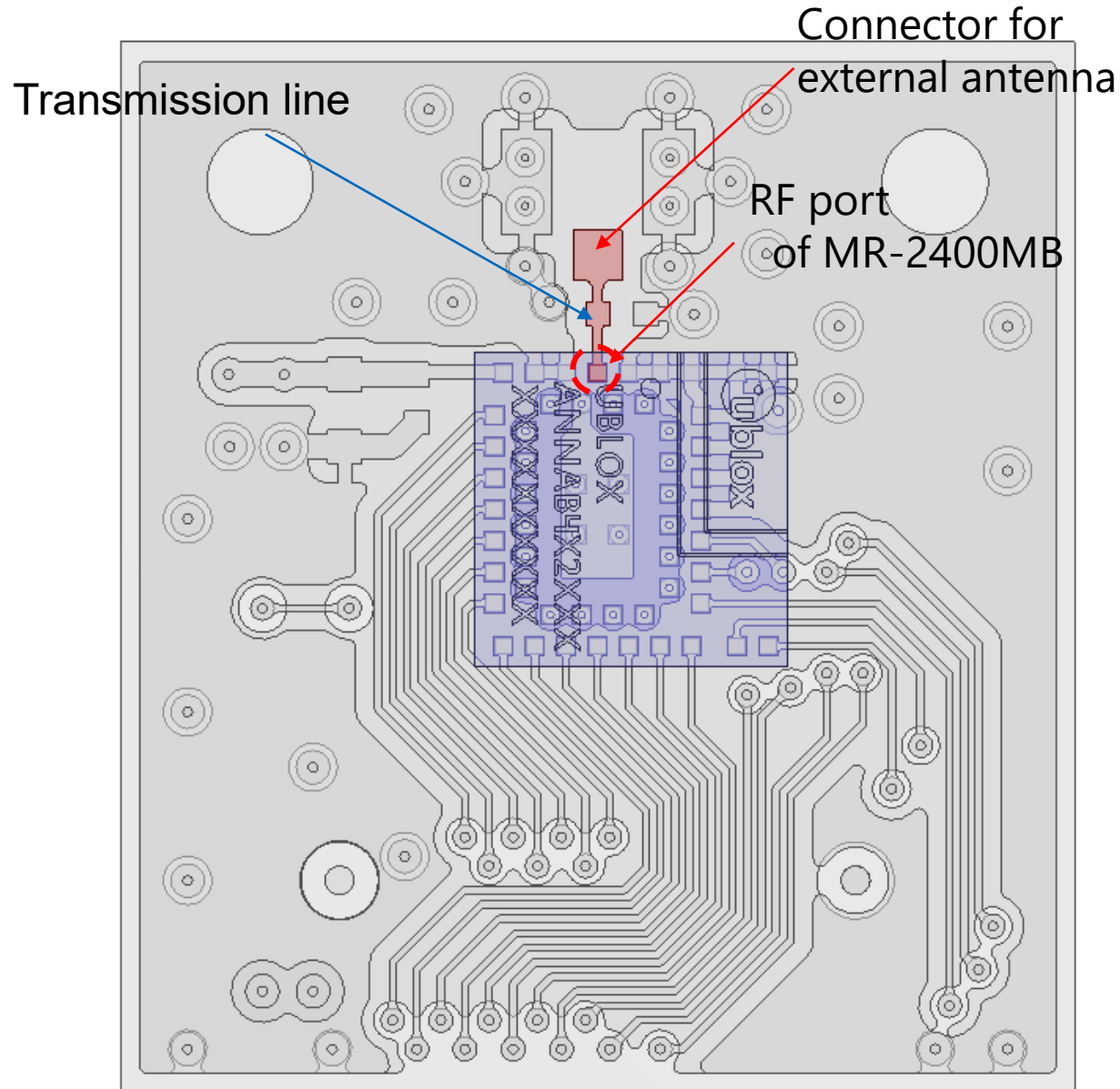
Frequency[MHz]	2400	2450	2500
Antenna gain[dBi]	1.95	1.91	1.91

## 7: Cable information

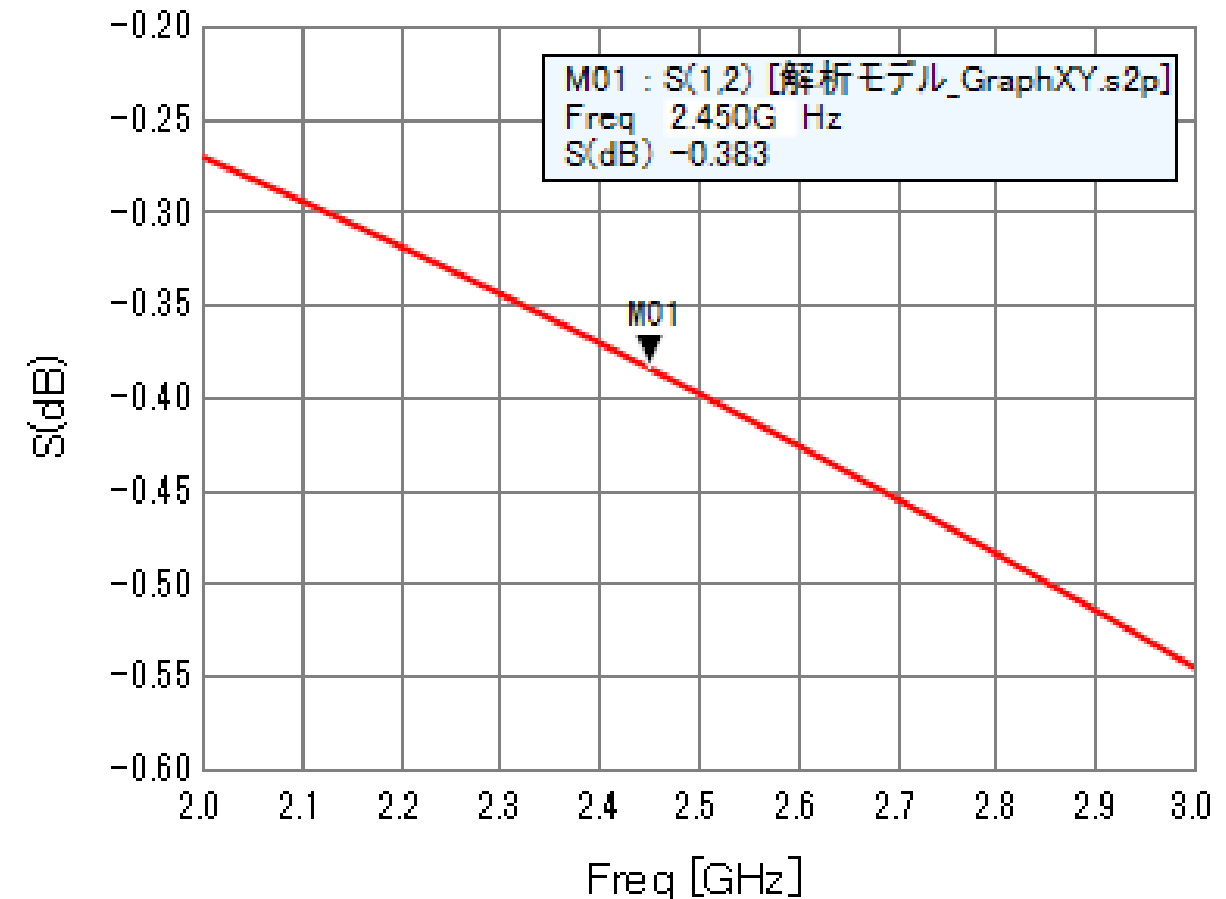
# Description of Available Cables



	Product number	Length	Insertion loss
1	WL-456-5000	Refer to attached slide	0.38dB
2	AA-562-2020(SMA-MHF_harness(150mm))	150mm	0.63dB



- Insertion loss of the Strip line: 0.38dB (@2.45GHz)



- Insertion loss: 0.63dB

- Drawing

