

APPROVAL SHEET

PCB ANTENNA

3800~7200MHz Working Frequency

Halogens Free Product

P/N: RFPCA202210IMMB301

Customer : _____
Customer 's Part No. : _____
Approval No. : _____
Issue Date : _____

*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2019 Mar.	New Release	HWCHAN

ELECTRICAL CHARACTERISTICS

Item	Specification
Frequency Range	3800 ~7200 MHz (note-1)
Return Loss	-10.0 dB(Max)
VSWR	2.0 (Max)
Radiation	Omni-directional
Gain(peak)	5.54 dBi
Impedance	50 Ohm Nominal
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	-20°C ~ +65°C

*note-1: Electrical characteristics will depend on customer's final application.

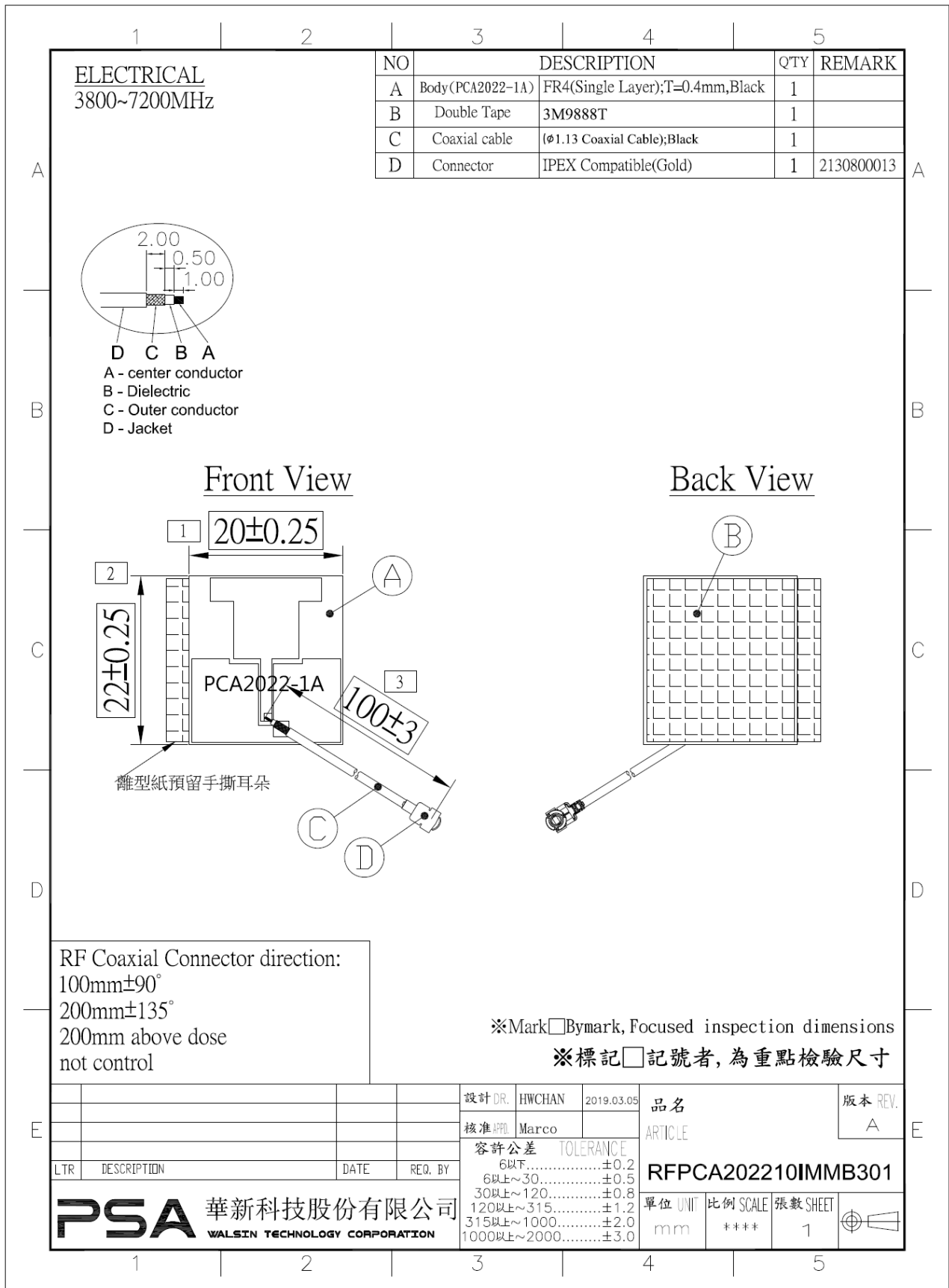
MATERIAL TABLE

Items	Description
PCB	FR4(Single Layer);T=0.4mm;黑漆
Double Tape	3M9888T
Cable	φ 1.13 Coaxial Cable(Black)
Connector	IPEX Compatible(Gold)

ORDERING RULE

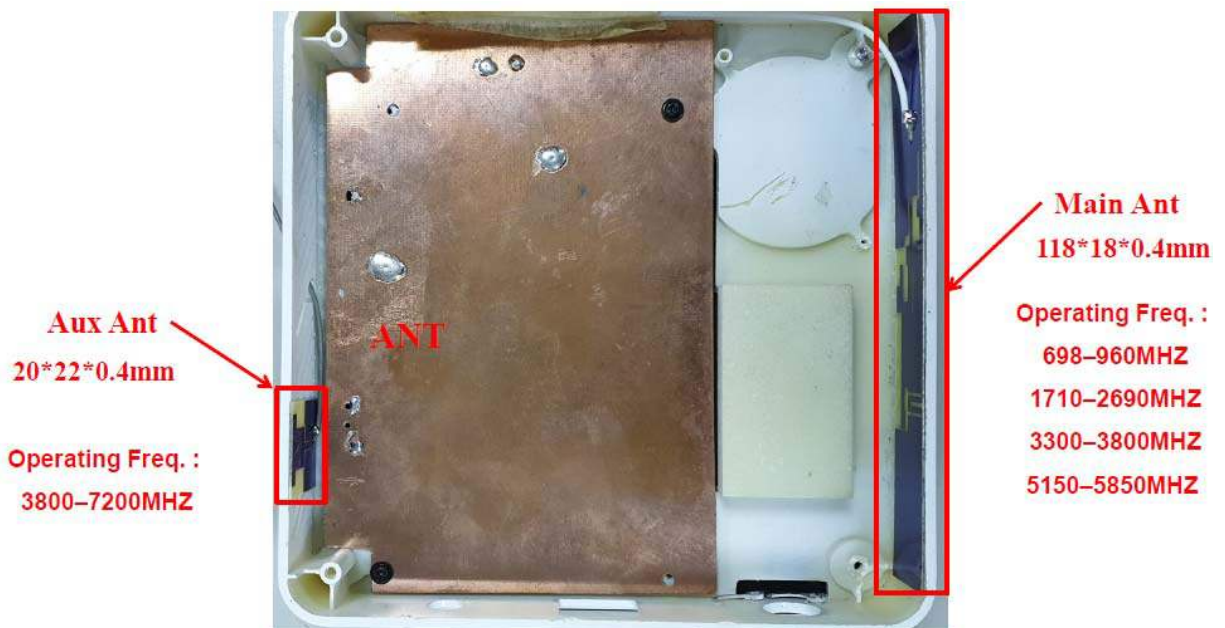
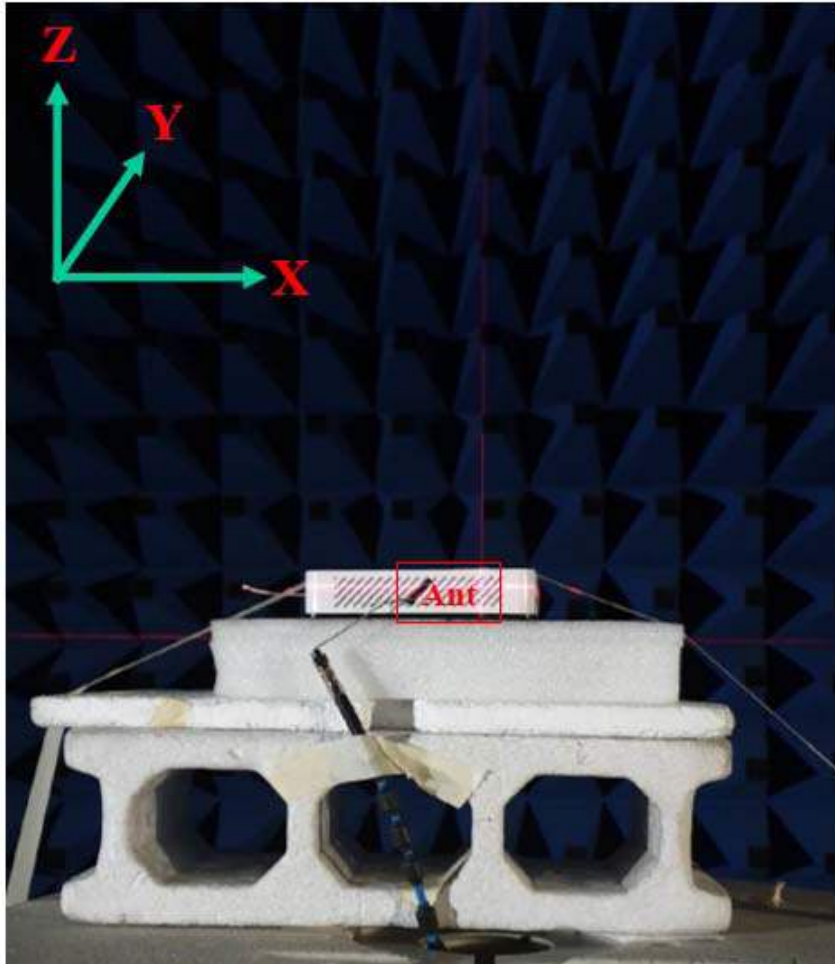
RF	PCA	2022	10	I	M	M	B	3	01
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	PCA: PCB Antenna	Per 2 digits of length, width e.g.: 2022 Length 20.0mm, Width 22.0mm	2 digits for cable length e.g.: Cable length:10.0 cm	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band M:LTE+Sub 6G +5G N: NFC T: LTE band W: WCDMA band	B: MP T:Dur ing Test X: Pile Run	0:None 1:∅ 0.81 3:∅ 1.13 6:RG316 7:∅ 1.37 8:RG178 9:∅ 1.37 Low Loss	01~99 series number

DIMENSIONS



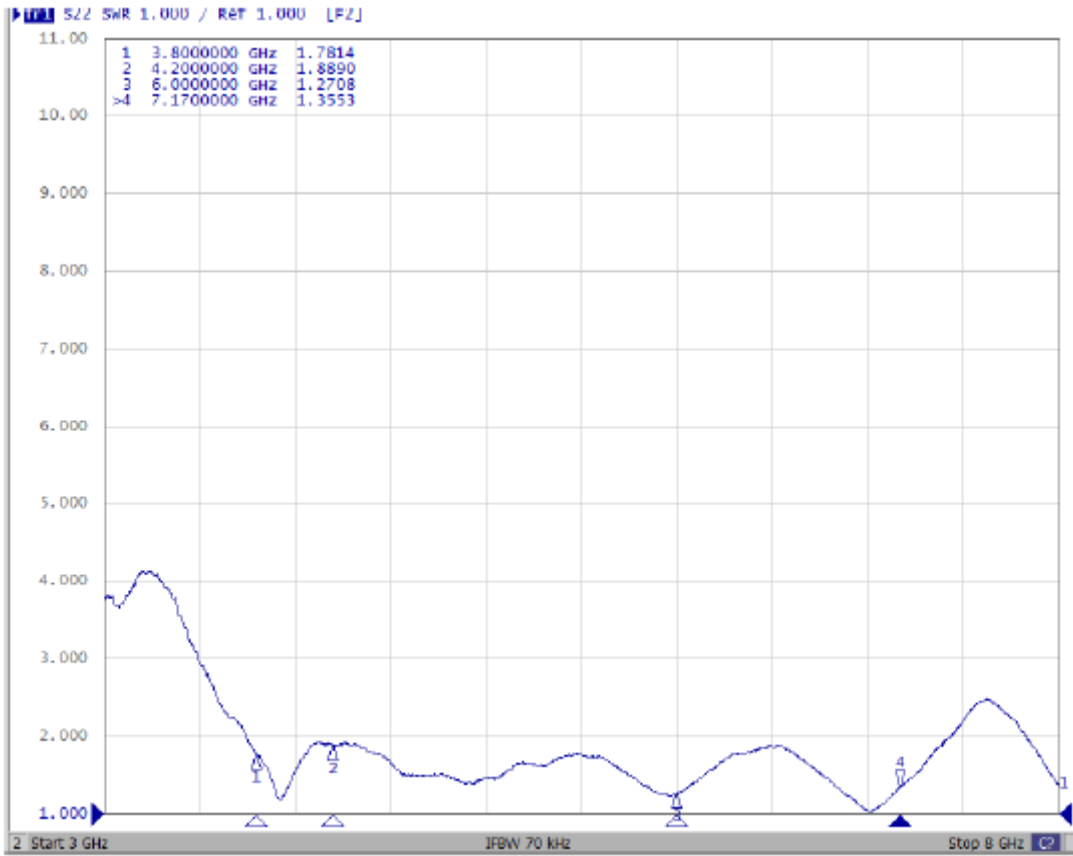
Test Report

EXPERIMENTAL SETUP



ELECTRICAL CHARACTERISTICS

VSWR

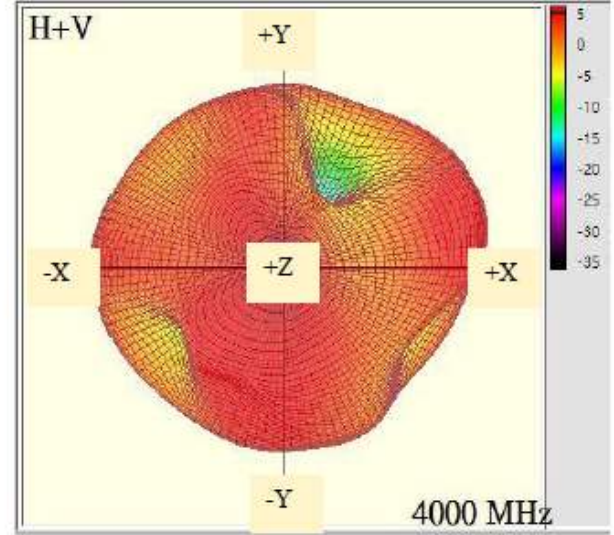
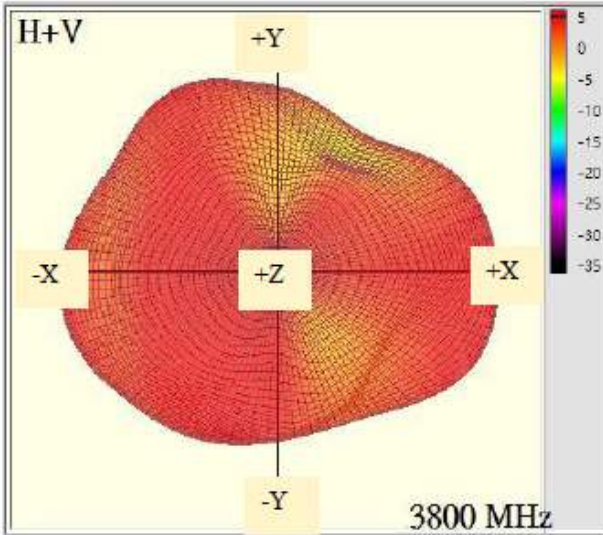


■ Antenna Efficiency and Peak Gain

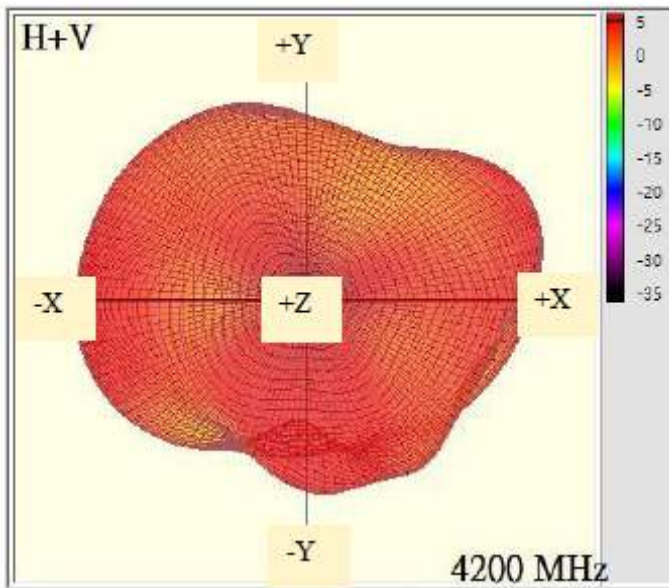
3800~4200MHz

3800MHz

4000MHz

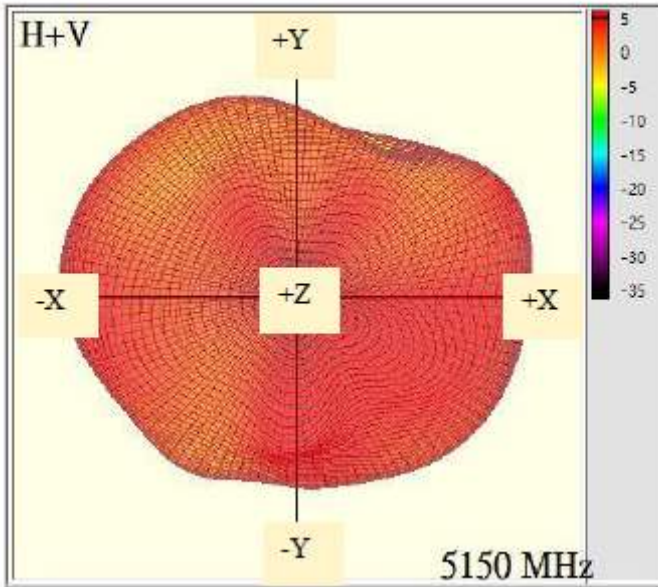


4200MHz

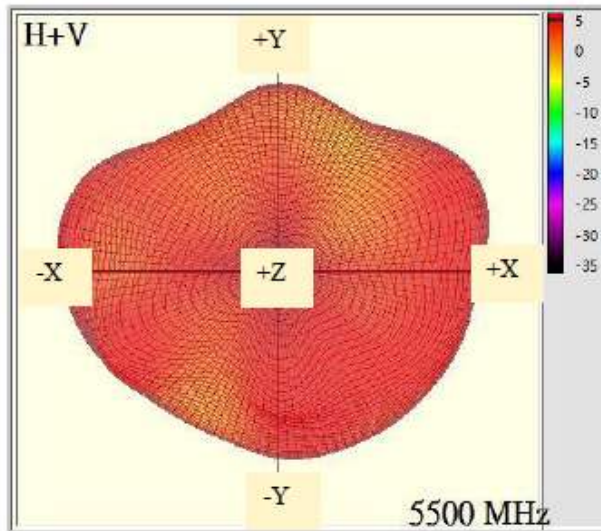


5150~5850MHz

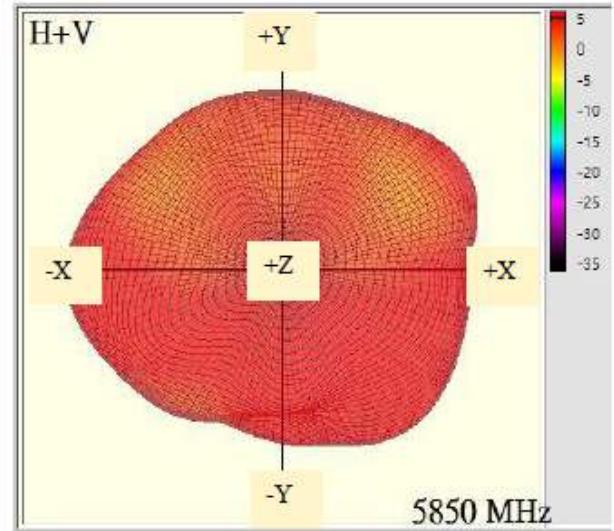
5150MHz



5500MHz

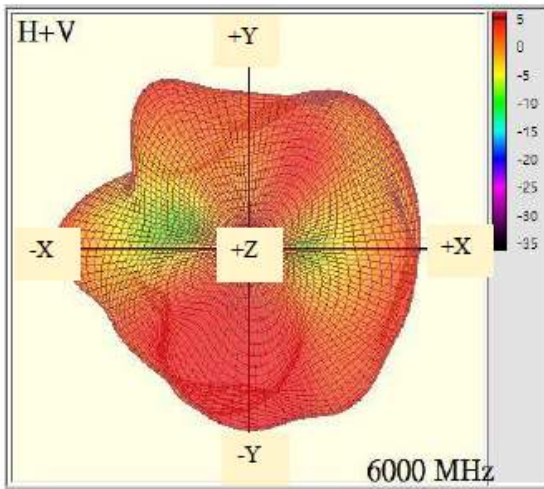


5850MHz

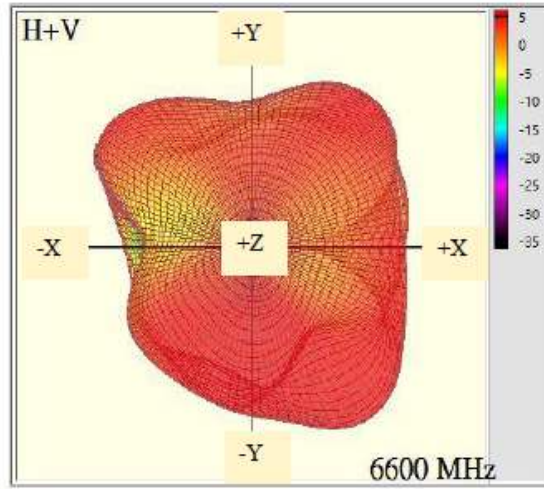


6000~7200MHz

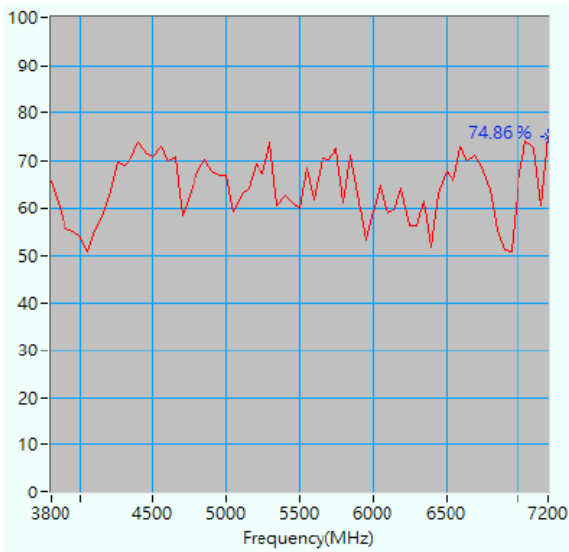
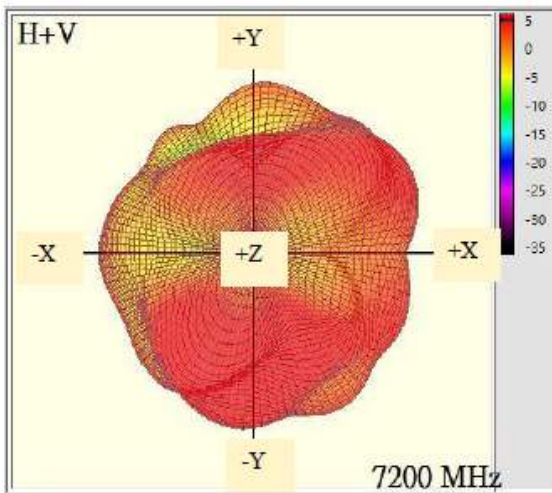
6000MHz



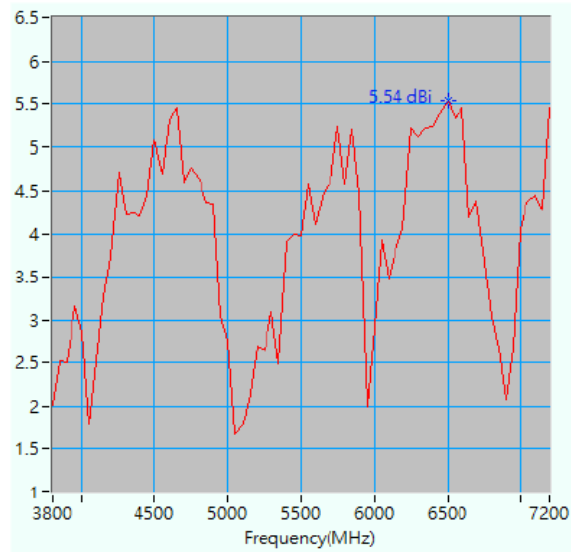
6600MHz



7200MHz



Maximum Efficiency at 7200 MHz : 74.86 %



Maximum Peak Gain at 6500 MHz : 5.54dBi

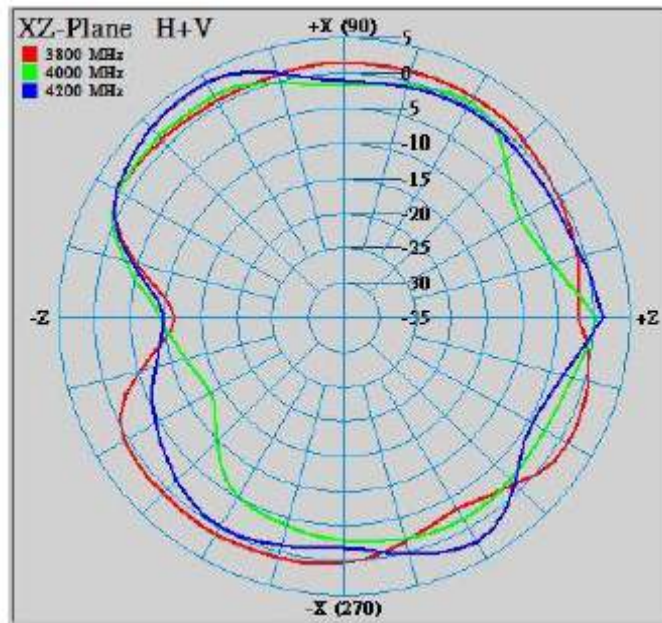
RADIATION PATTERN

3800~4200MHz

X-Z Plane

Phi=0.00deg

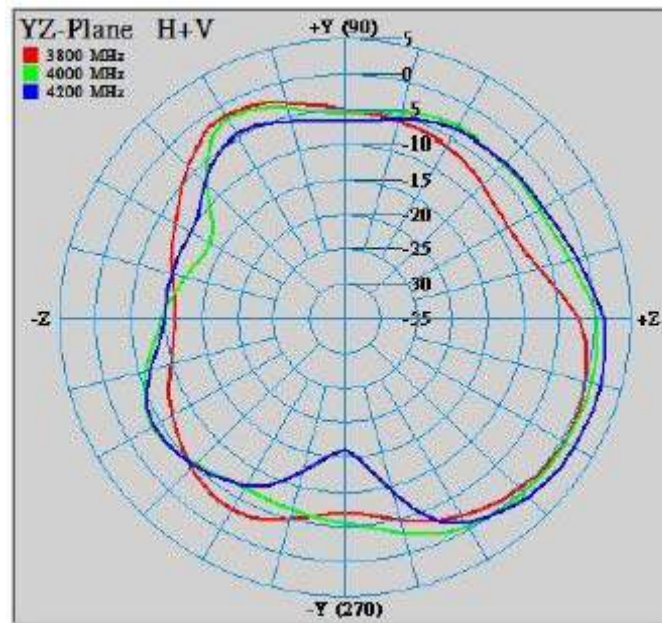
Gain . dB



Y-Z Plane

Phi=90.00deg

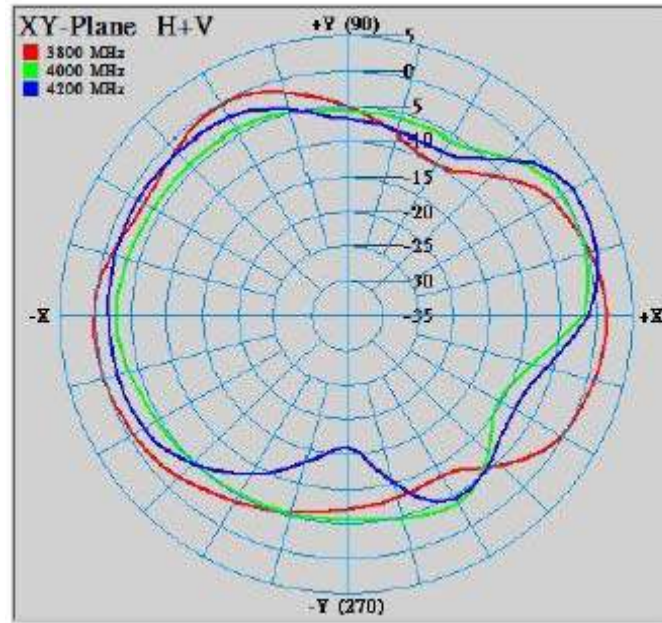
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



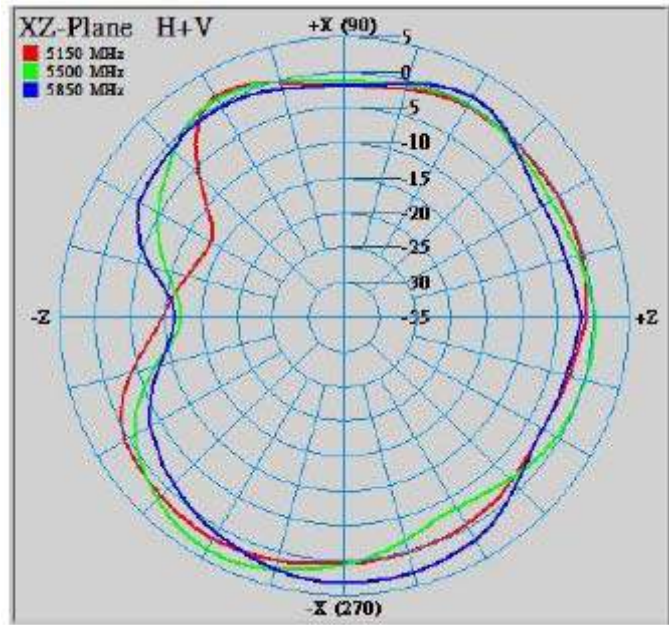
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
3800	1.63	0.096	0.524	-3.936	1.406	-2.006
4000	1.602	-1.645	0.707	-2.999	-0.111	-3.953
4200	3.732	-0.112	2.113	-2.963	1.511	-3.218

5150~5850MHz

X-Z Plane

Phi=0.00deg

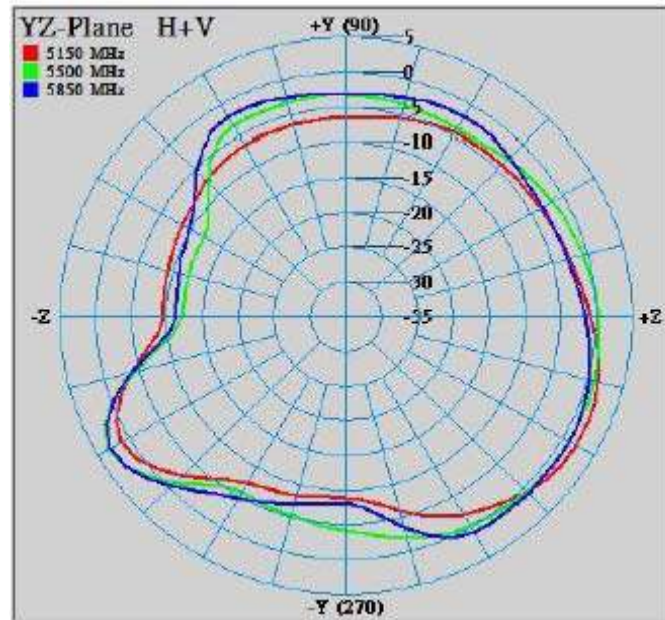
Gain . dB



Y-Z Plane

Phi=90.00deg

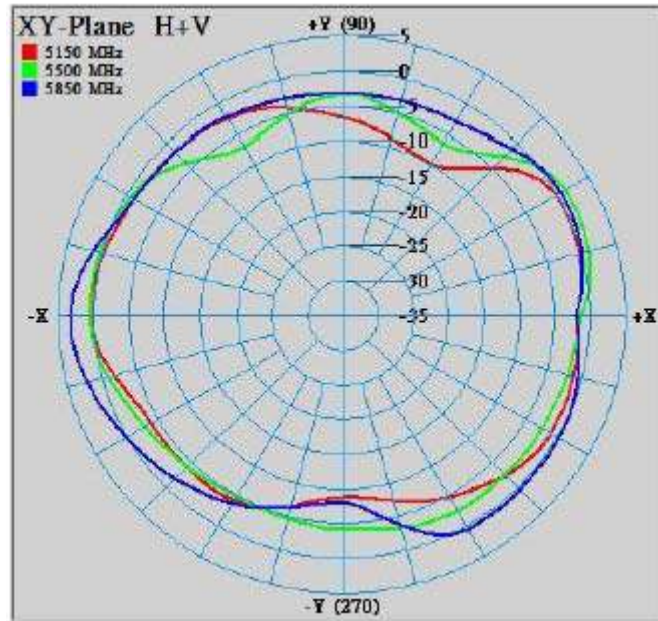
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



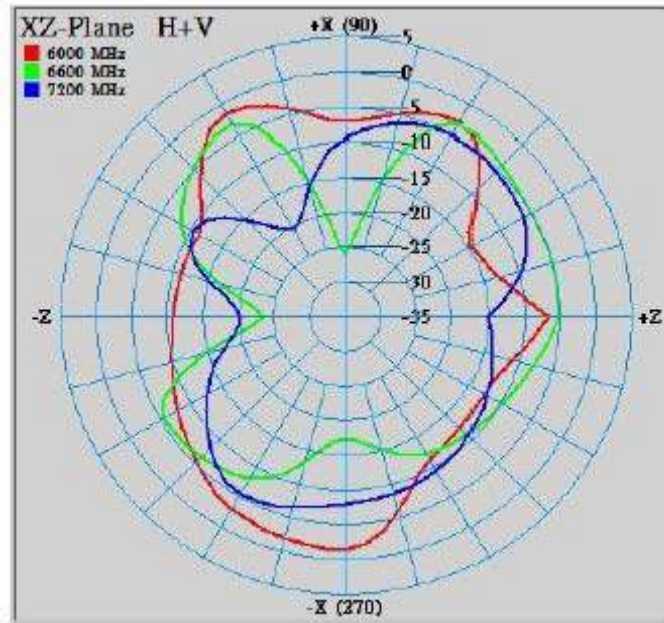
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5150	1.801	-0.82	2.15	-2.884	0.387	-2.773
5500	3.684	-0.48	3.295	-1.657	1.312	-2.152
5850	3.321	-0.512	2.965	-1.755	3.321	-0.804

6000~7200MHz

X-Z Plane

Phi=0.00deg

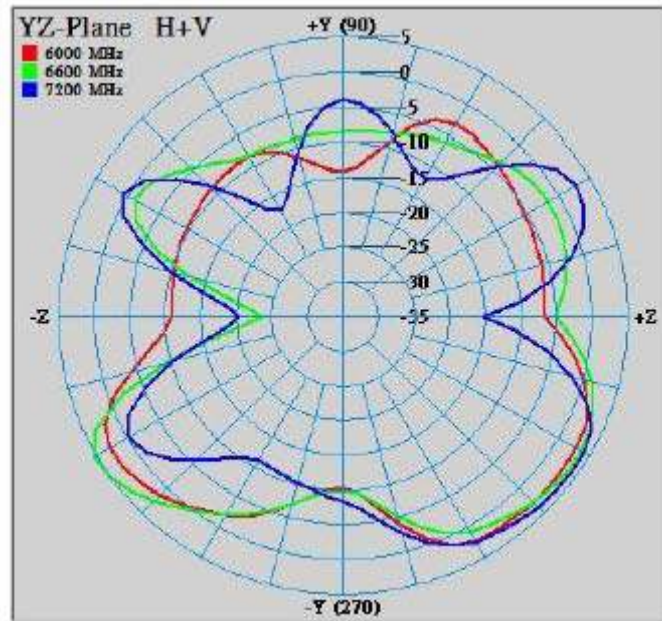
Gain . dB



Y-Z Plane

Phi=90.00deg

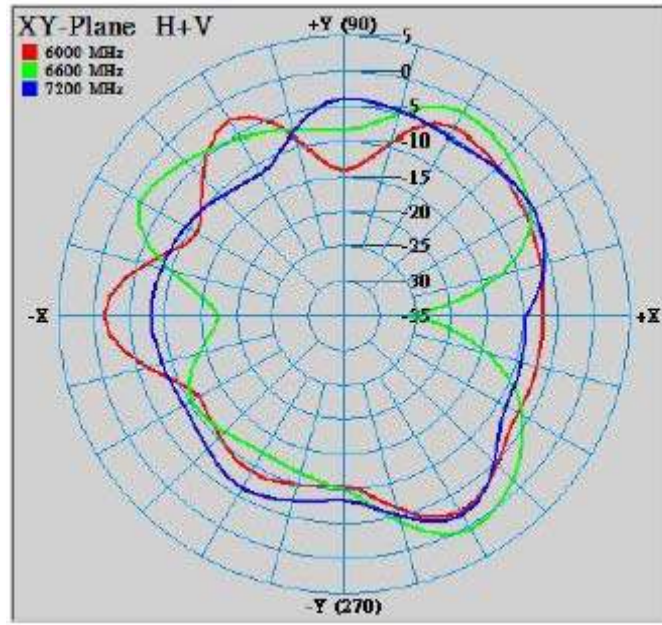
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
6000	-1.477	-5.59	2.922	-1.908	-1.477	-5.611
6600	-3.133	-7.081	5.453	-0.808	0.565	-5.103
7200	-4.948	-9.12	4.204	-1.185	-1.868	-6.355