

Regulatory WWAN Antenna Information

Platform information						
Brand	ODM	Platform model name	Platform type (ex: regular NB, convertible PC, AIO...etc)			*SAR minimum separation (mm)
HP Inc.	Inventec	HSN-I62C	Convertible PC			217.17
Antenna information						Maximum Peak gain
Vendor	Type	Antenna Part number (Ant5 TX/RX)	Antenna Part number (Ant6 RX)	Antenna Part number (Ant7 RX)	Antenna Part number (Ant8 RX)	894 MHz (Choice TX high peak gain)
HONG-BO	PIFA	6036B0370401 (00-330270505L)	6036B0370501 (00-330270515L)	6036B0370301 (00-3302705250)	6036B0370401 (00-330270505L)	1.34 dBi
Module information						
Model	Form factor and suffixes (NGW/ HMW AND AN/ NB/ BN....)					
PhantasmR	Qualcomm 9205 Phantasm M.2 (CAT-M1)					

Antenna vendor connect person	
Antenna Vendor	HONGBO Wireless Communication Technology Co., LTD
contact person	Mirabelle Chou
E-mail	mirabellechou@hong-bo.com.tw
Tel/Mobile	02-2792-6009 EXT: 683
Web address	https://www.hong-lin.com.cn/index.php

Antenna Sample / Antenna Data

Requirements for worldwide regulatory approval

Section	Description of Required OEM / ODM Antenna Information	US / IC	EU	Japan	Taiwan	S.Korea
1A	Part Number for Antenna Assembly	Required	Required	Required	Required	Required
1B	Antenna Manufacturer Name	Required	Required	Required	Required	Required
1C	Description of Antenna Type	Required	N/A	N/A	N/A	N/A
1D	Tx antenna Gain(Peak Gain W/ cable loss) *	Required	Required	Required	Required	Required
2	Dimensioned Photographs and Drawings of Tx and Rx antennas	Required	Required	Required	Required	Required
3	Radiation patterns of antennas loaded in the host platform.	N/A	Required	Required	Required	N/A
4	Platform model name / number - correlated to antenna manufacturer and antenna part number	Required	Required	Desired	Required	Desired
5	Photograph(s) or Drawings showing location of antennas in platform. (S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.	Required	Required	Desired	<u>Required (Photos)</u>	<u>Required (Photos)</u>
6	Mech. drawings / photos with dimensions of antenna locations and distance from end-user (For evaluation of SAR testing requirement).	Required	N/A	N/A	N/A	N/A
7	Photograph(s) or Drawings showing the location of all antennas (WLAN, other) and distance between those transmitting antennas. Information will be used to evaluate whether co-location testing is required.	Required	N/A	N/A	N/A	N/A
8	Local representative contact information for LMA/ PARS process.	Required	N/A	N/A	N/A	N/A

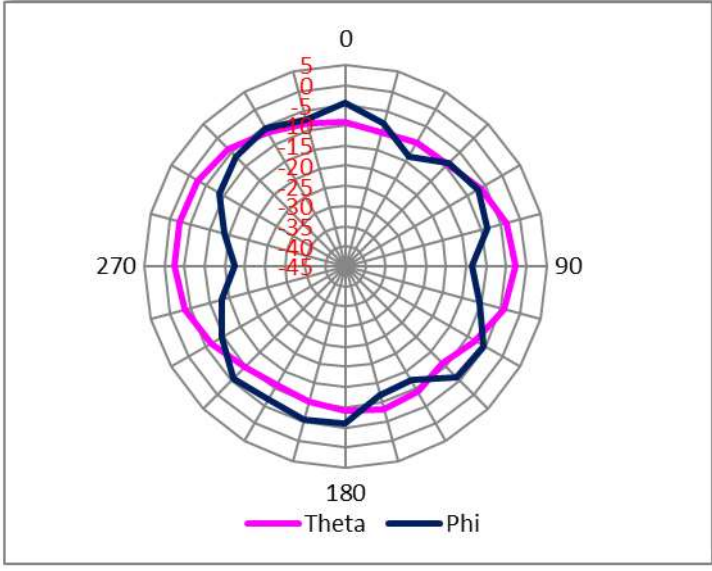
Antenna Information

Section 1. Antenna Assembly Specifications

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain(dBi) Ant5
LTE Cat.M1	1	1920	1980	Main : 6036B0370401 (00-330270505L)	HONG-BO	PIFA	0.7
LTE Cat.M1	2	1850	1910				-0.61
LTE Cat.M1	3	1710	1785				-0.11
LTE Cat.M1	4	1710	1755				-1.21
GSM850 / LTE Cat.M1	5	824	849				0.74
GSM900 / LTE Cat.M1	8	880	915				1.34
LTE Cat.M1	12	699	716				0.58
LTE Cat.M1	13	777	787				0.91
LTE Cat.M1	14	788	798				0.54
LTE Cat.M1	18	815	830				0.74
LTE Cat.M1	19	830	845				0.71
LTE Cat.M1	20	832	862				0.71
GSM1900/ LTE Cat.M1	25	1850	1915				-0.61
LTE Cat.M1	26	814	849				0.74
LTE Cat.M1	27	802	824				0.74
LTE Cat.M1	28	703	748				0.9
GSM1800 / LTE Cat.M1	66	1710	1780				-0.23
LTE Cat.M1	85	698	716				0.58

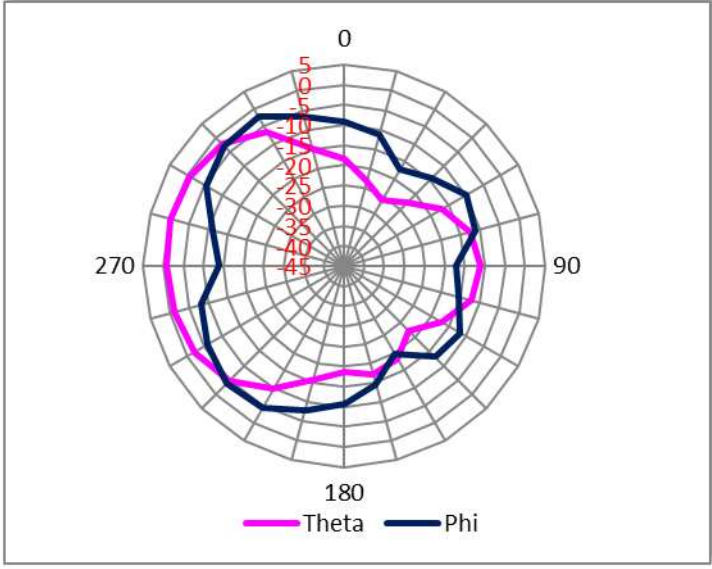
- Antenna Peak Gain required being test in system basis.

● [1920MHz](#)



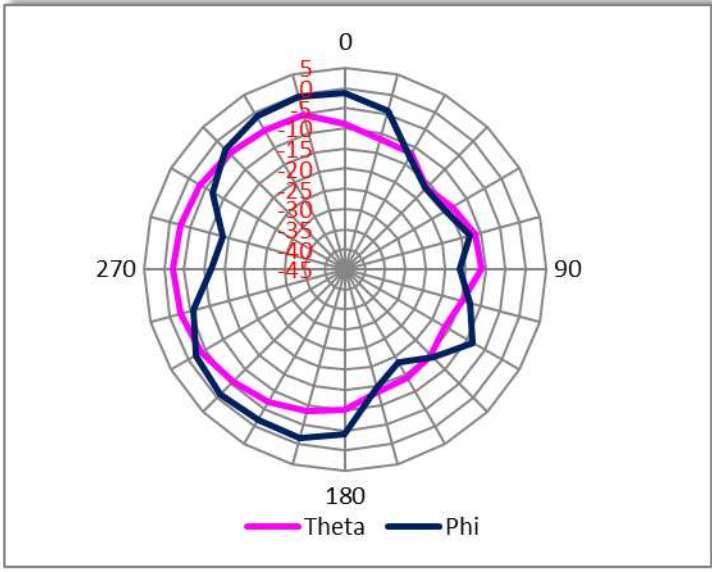
Center Frequency	1920MHz
Horizontal (dBi) peak	-2.32
Vertical (dBi) peak	-4.37

● [1980MHz](#)



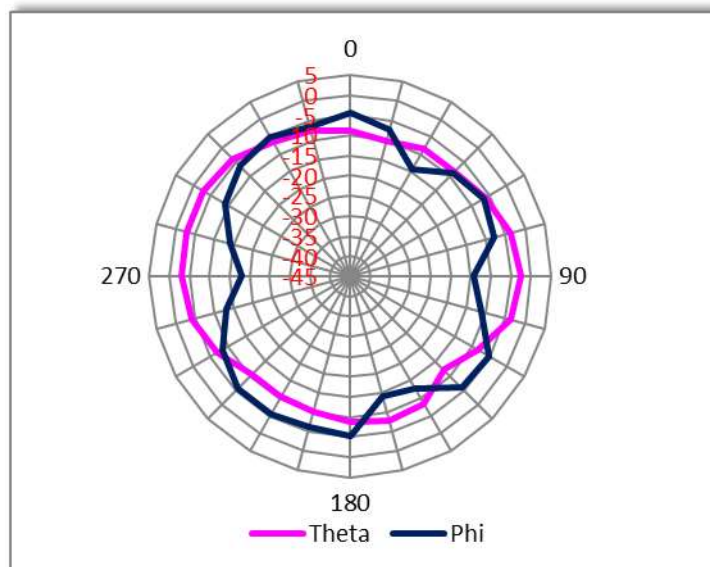
Center Frequency	1980MHz
Horizontal (dBi) peak	-0.43
Vertical (dBi) peak	-2.31

● [1850MHz](#)



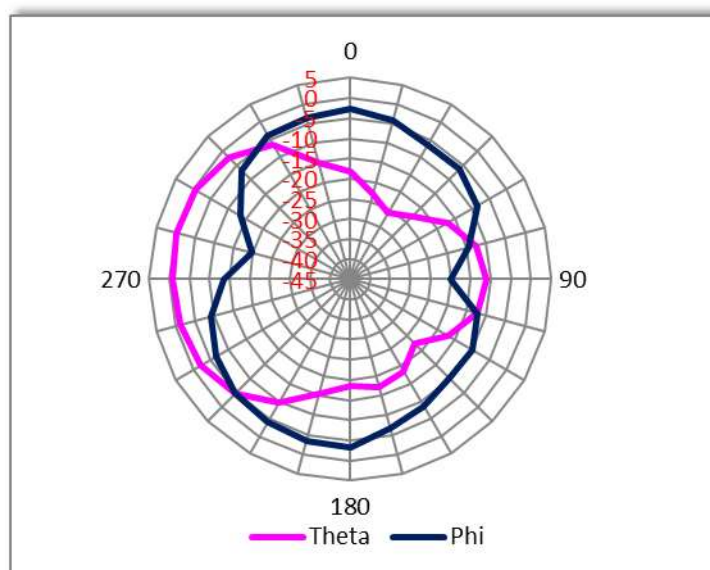
Center Frequency	1850MHz
Horizontal (dBi) peak	-2.29
Vertical (dBi) peak	-0.70

● [1910MHz](#)



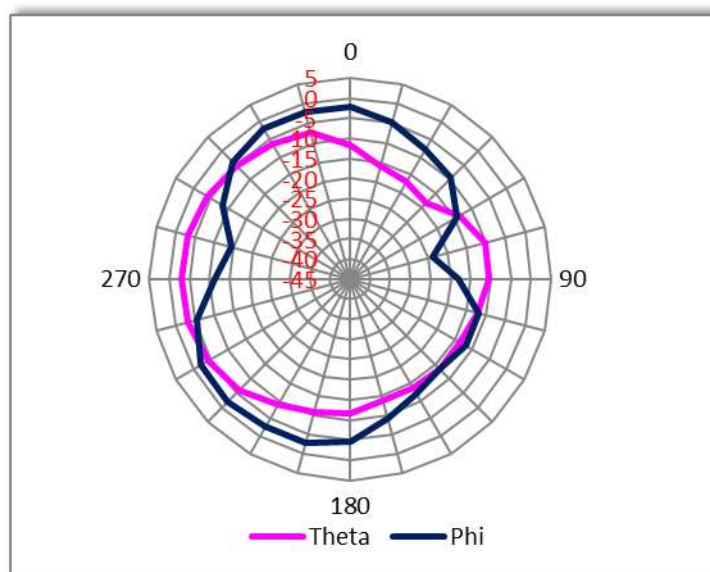
Center Frequency	1910MHz
Horizontal (dBi) peak	-2.57
Vertical (dBi) peak	-4.46

● 1710MHz



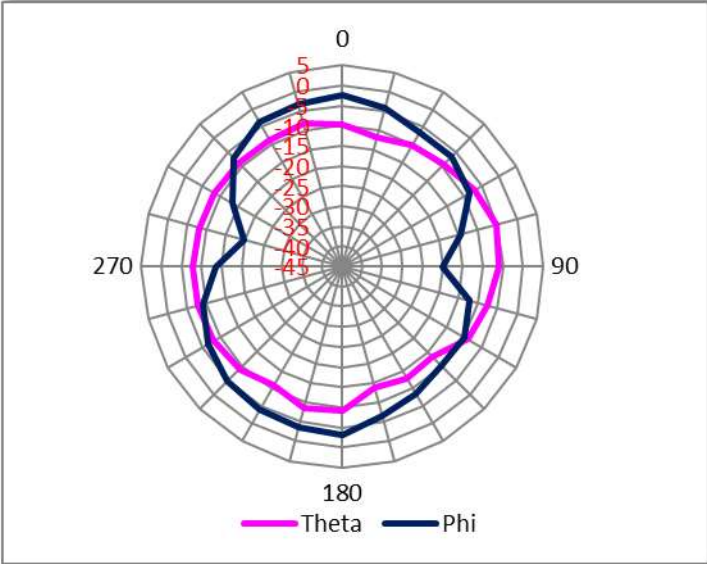
Center Frequency	1710MHz
Horizontal (dBi) peak	-5.28
Vertical (dBi) peak	-2.53

● 1785MHz



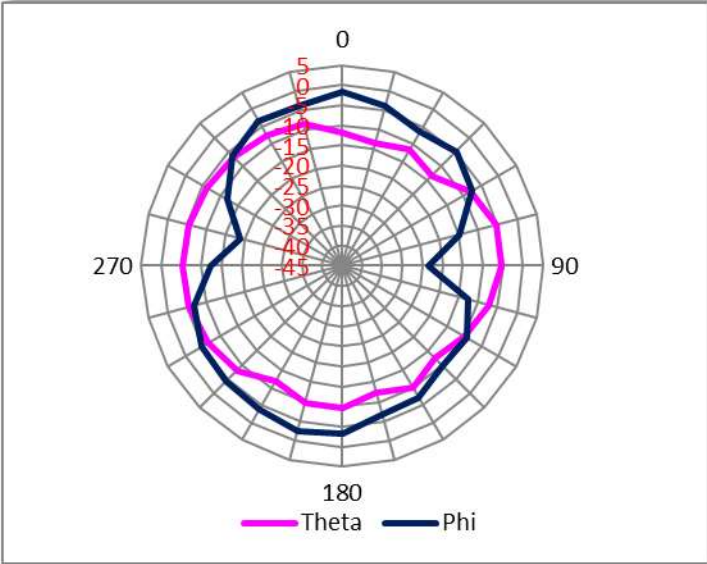
Center Frequency	1785MHz
Horizontal (dBi) peak	-3.19
Vertical (dBi) peak	-1.82

● [1710MHz](#)



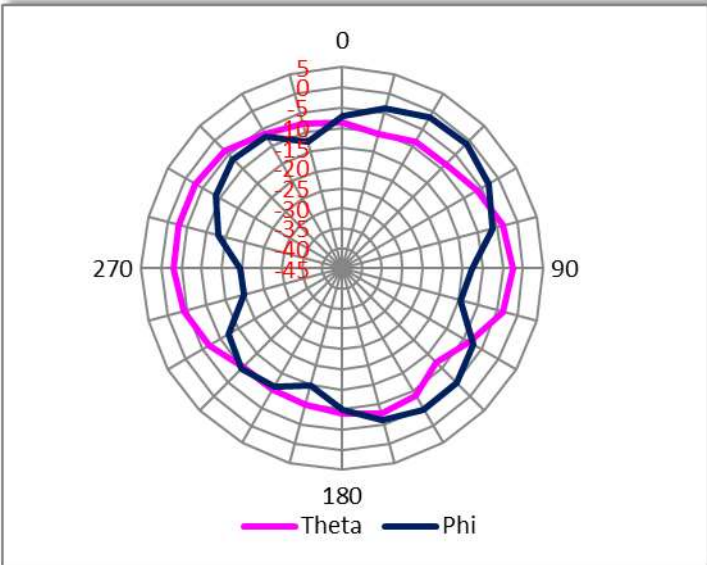
Center Frequency	1710MHz
Horizontal (dBi) peak	-5.28
Vertical (dBi) peak	-2.53

● [1755MHz](#)



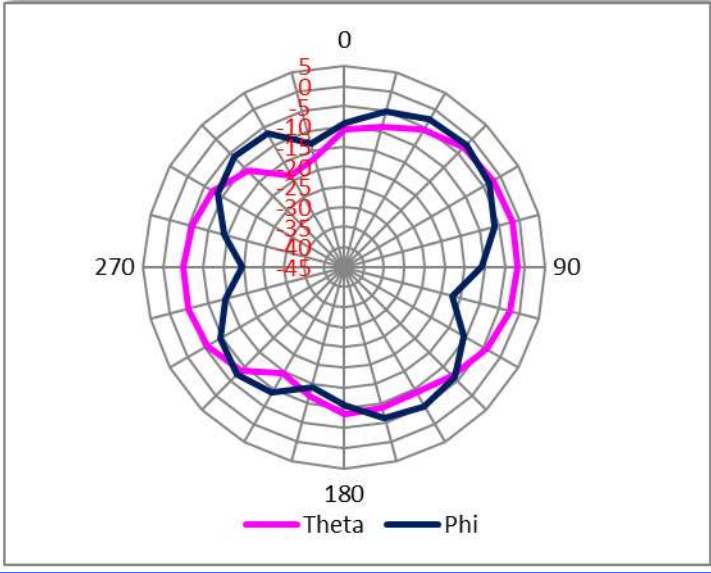
Center Frequency	1755MHz
Horizontal (dBi) peak	-5.15
Vertical (dBi) peak	-1.59

● [824MHz](#)



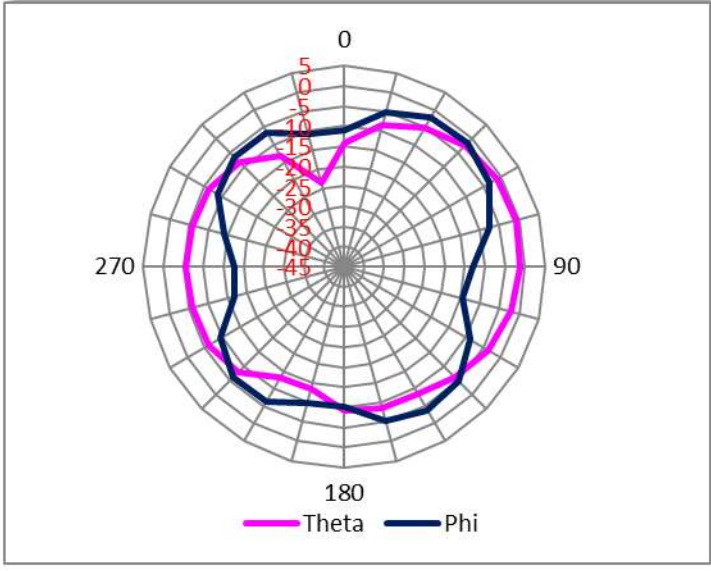
Center Frequency	824MHz
Horizontal (dBi) peak	-2.30
Vertical (dBi) peak	-1.28

● [849MHz](#)



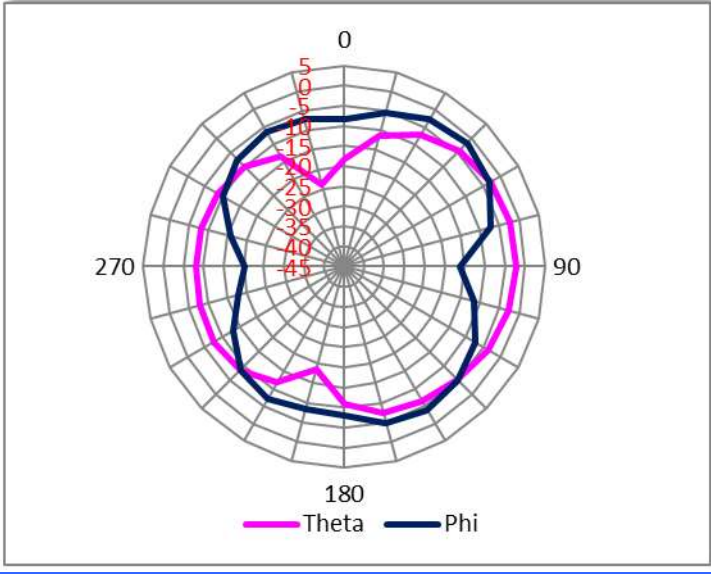
Center Frequency	849MHz
Horizontal (dBi) peak	-1.73
Vertical (dBi) peak	-2.08

● [880MHz](#)



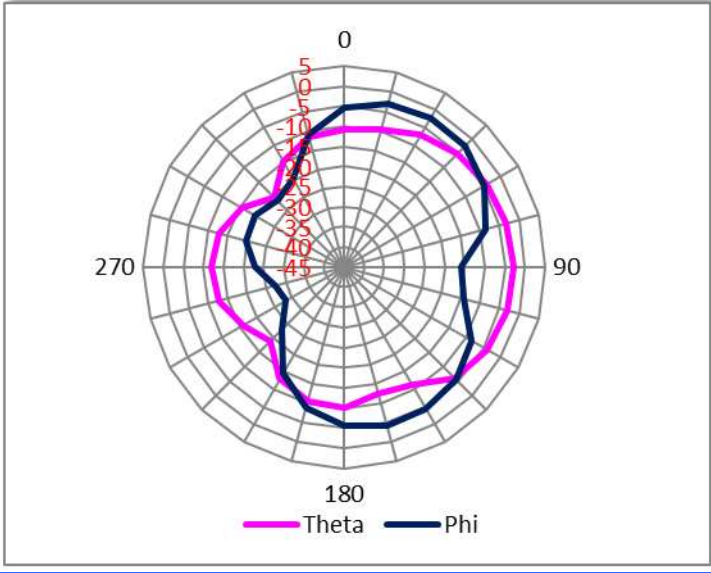
Center Frequency	880MHz
Horizontal (dBi) peak	-0.78
Vertical (dBi) peak	-1.53

● [915MHz](#)



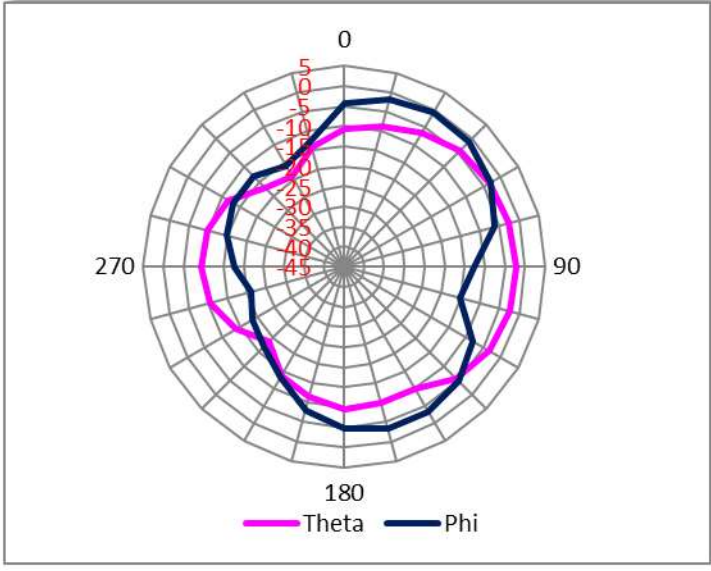
Center Frequency	915MHz
Horizontal (dBi) peak	-2.17
Vertical (dBi) peak	-1.78

● [699MHz](#)



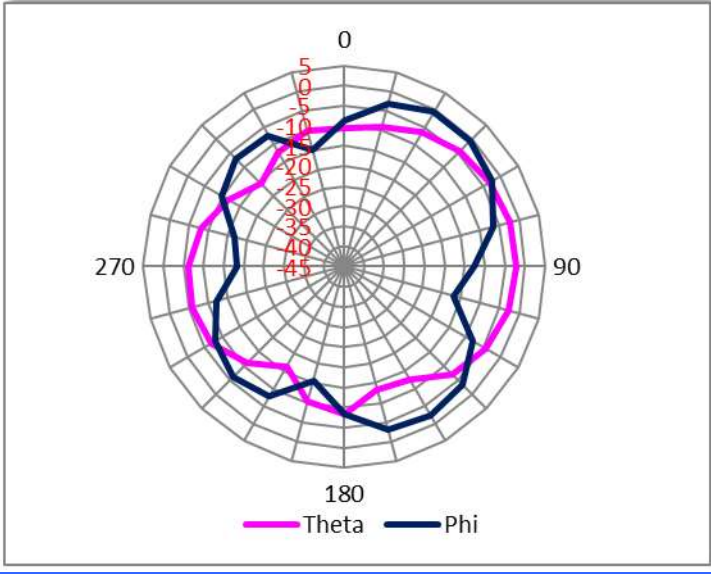
Center Frequency	699MHz
Horizontal (dBi) peak	-2.91
Vertical (dBi) peak	-2.04

● [716MHz](#)



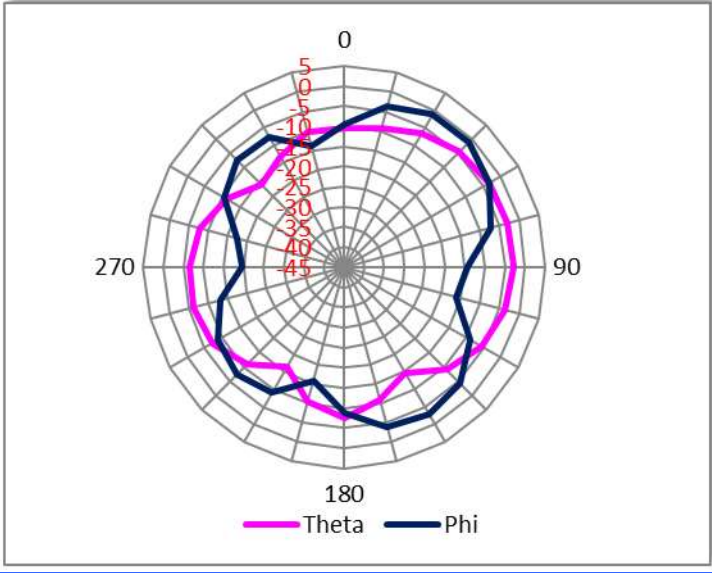
Center Frequency	716MHz
Horizontal (dBi) peak	-2.27
Vertical (dBi) peak	-0.69

● [777MHz](#)



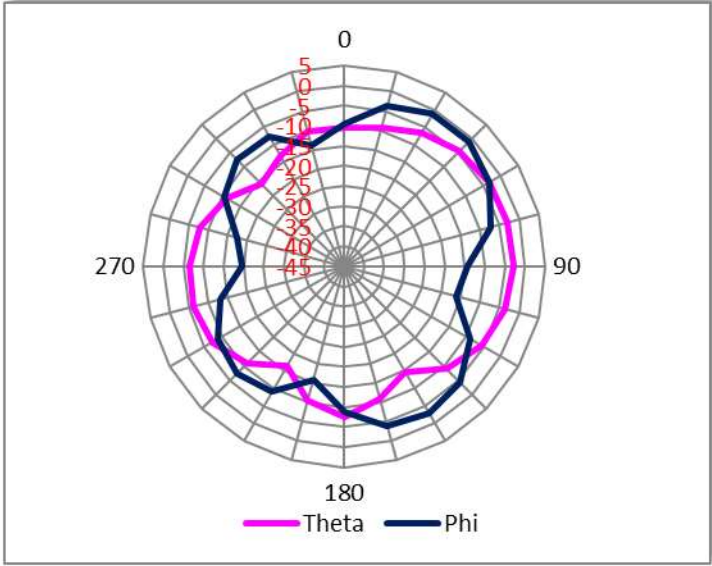
Center Frequency	777MHz
Horizontal (dBi) peak	-2.17
Vertical (dBi) peak	-0.62

● [787MHz](#)



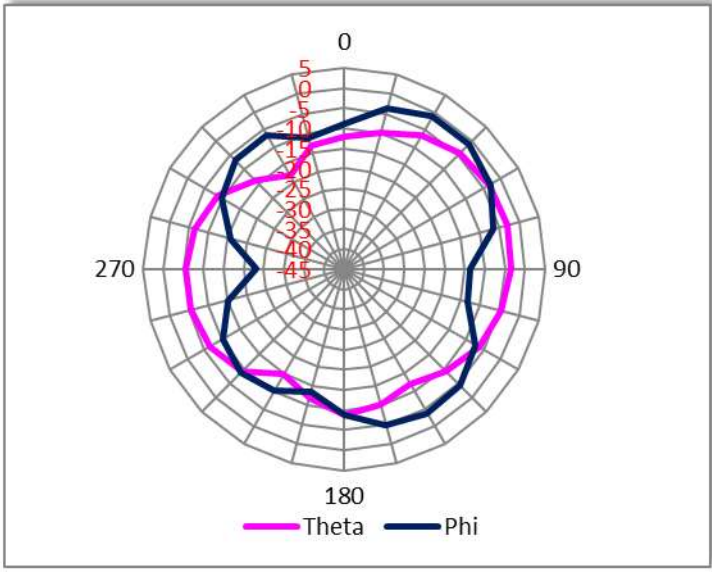
Center Frequency	787MHz
Horizontal (dBi) peak	-2.84
Vertical (dBi) peak	-1.16

● [788MHz](#)



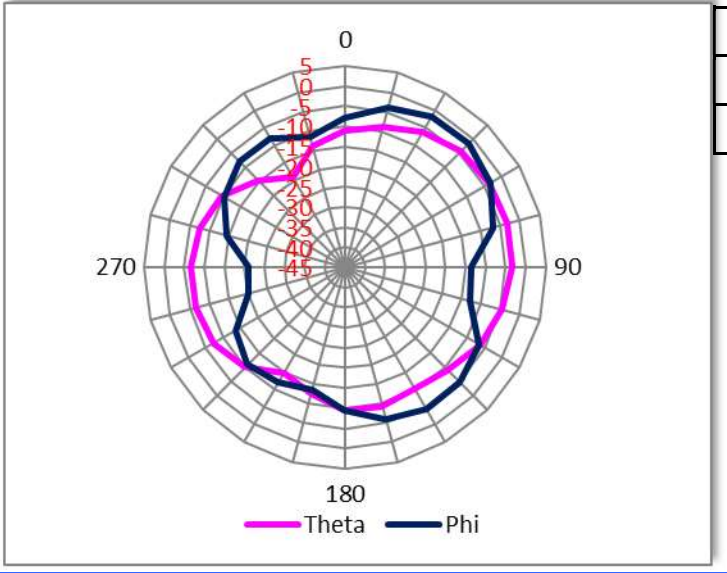
Center Frequency	788MHz
Horizontal (dBi) peak	-2.84
Vertical (dBi) peak	-1.16

● [798MHz](#)



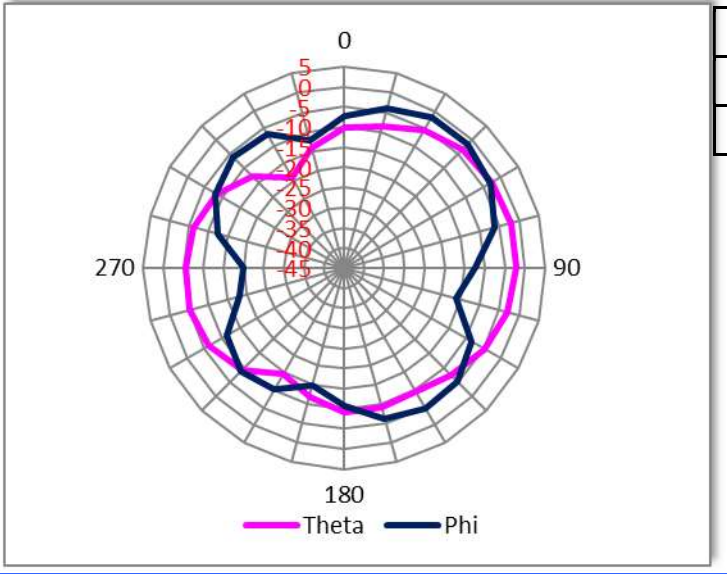
Center Frequency	798MHz
Horizontal (dBi) peak	-2.97
Vertical (dBi) peak	-1.27

● [815MHz](#)



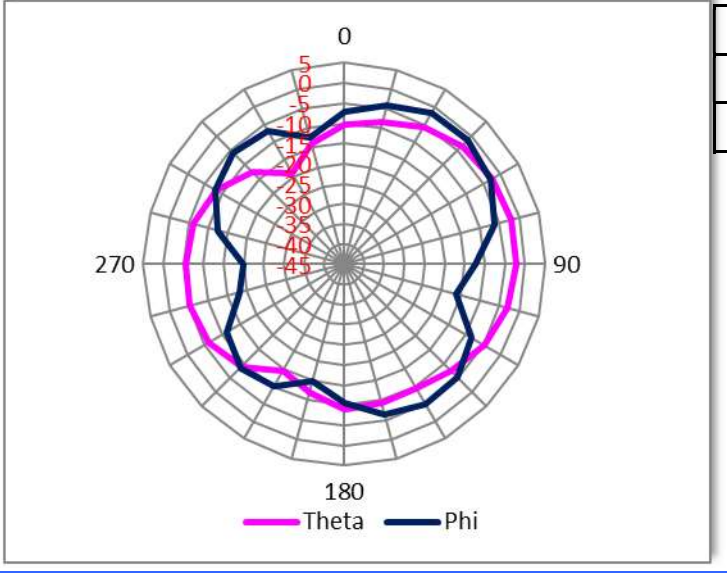
Center Frequency	815MHz
Horizontal (dBi) peak	-3.12
Vertical (dBi) peak	-1.53

● [830MHz](#)



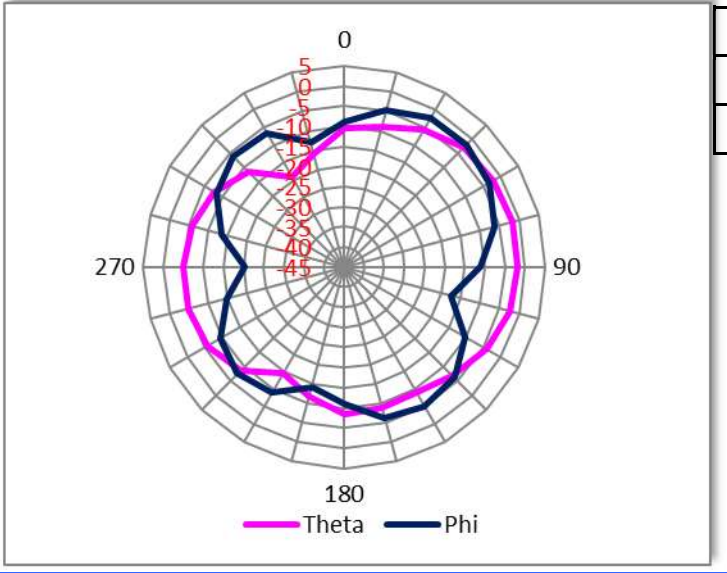
Center Frequency	830MHz
Horizontal (dBi) peak	-2.07
Vertical (dBi) peak	-1.44

● [830MHz](#)



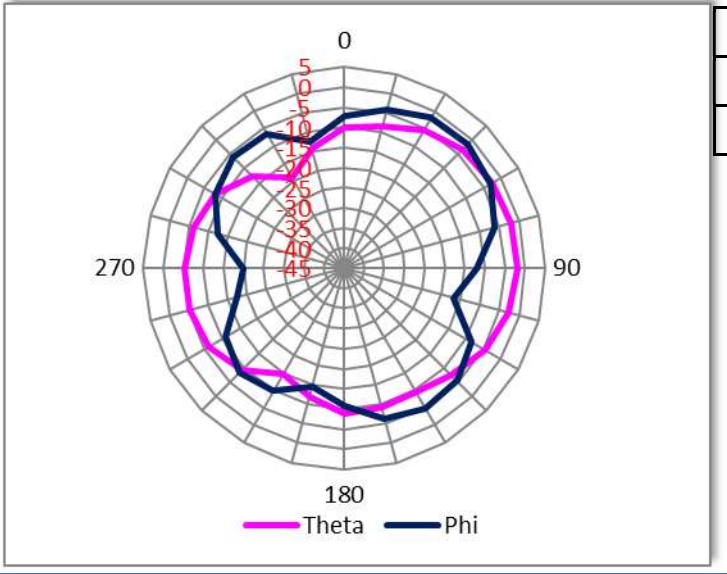
Center Frequency	830MHz
Horizontal (dBi) peak	-2.07
Vertical (dBi) peak	-1.44

● [845MHz](#)



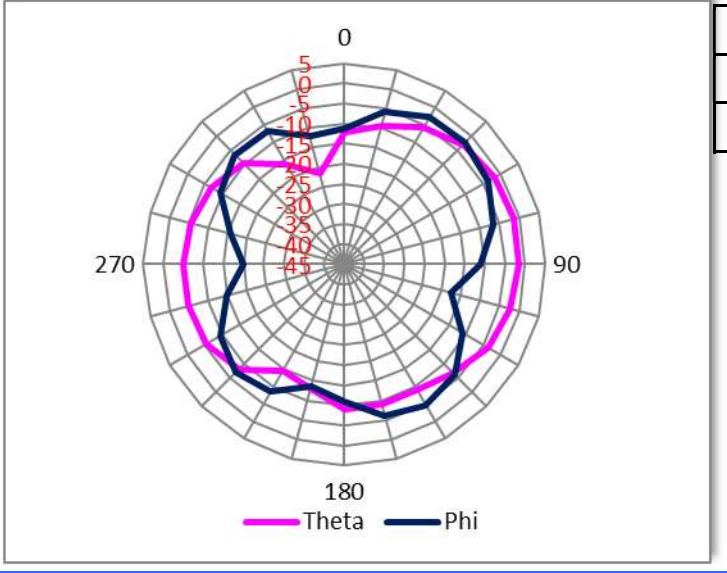
Center Frequency	845MHz
Horizontal (dBi) peak	-1.73
Vertical (dBi) peak	-1.99

● [832MHz](#)



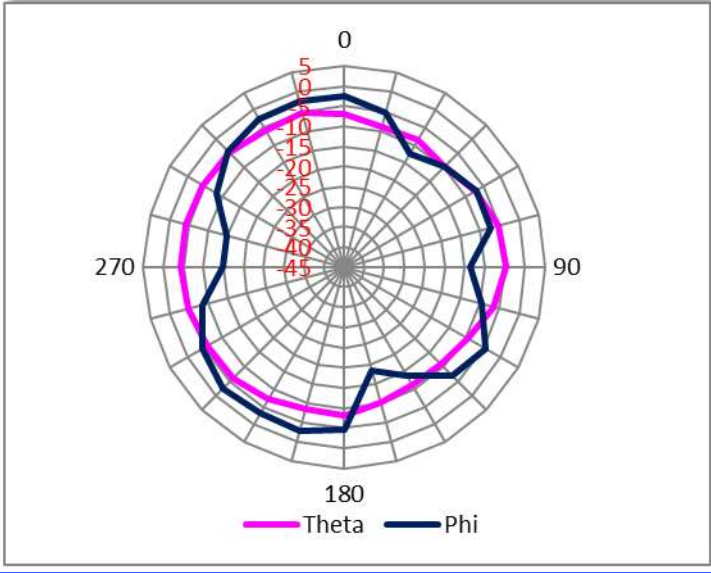
Center Frequency	832MHz
Horizontal (dBi) peak	-1.98
Vertical (dBi) peak	-1.50

● [862MHz](#)



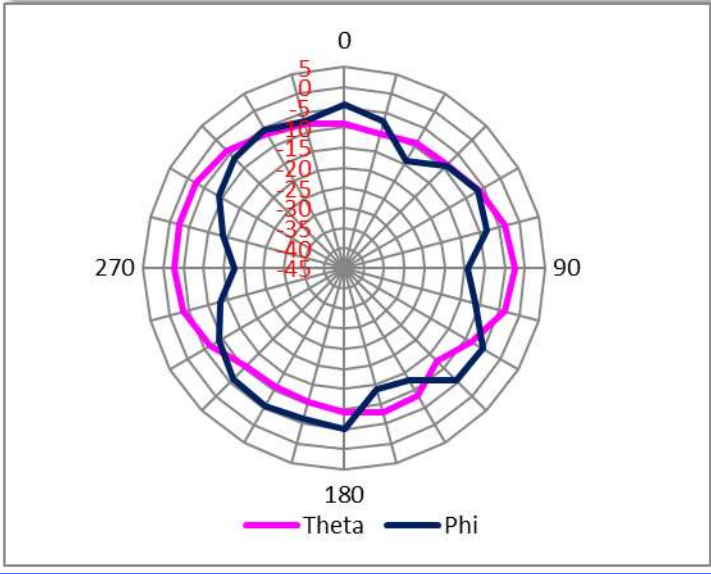
Center Frequency	862MHz
Horizontal (dBi) peak	-1.33
Vertical (dBi) peak	-2.25

● [1850MHz](#)



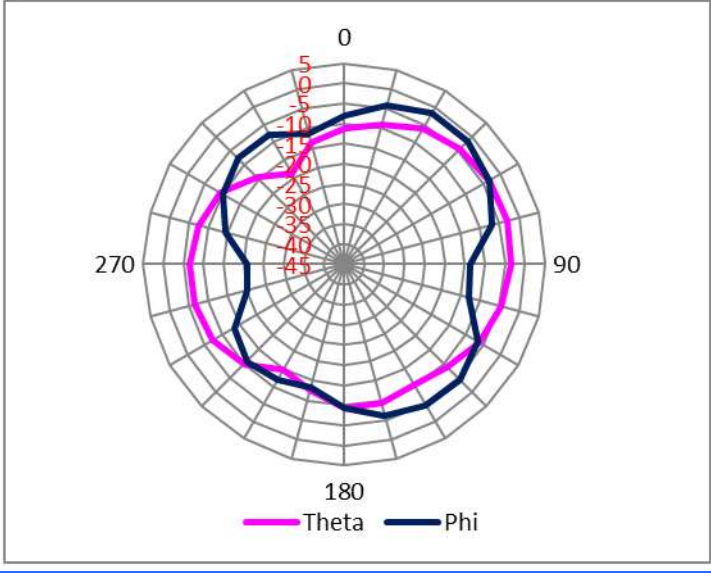
Center Frequency	1850MHz
Horizontal (dBi) peak	-4.37
Vertical (dBi) peak	-2.35

● [1915MHz](#)



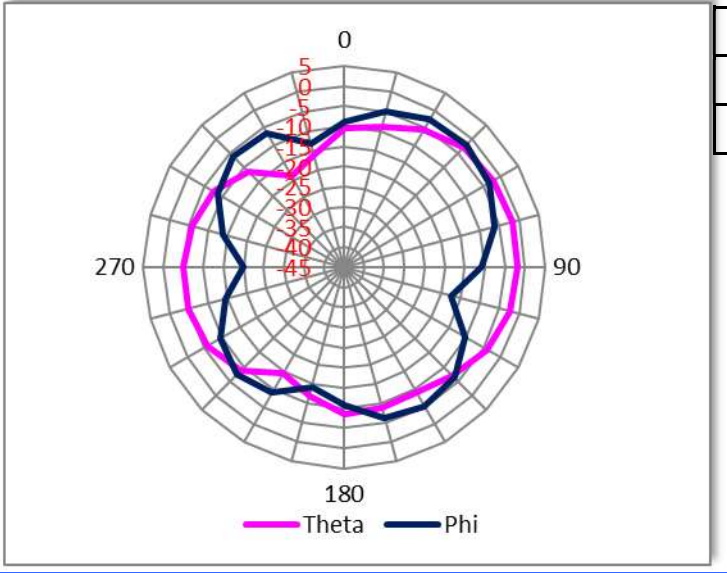
Center Frequency	1915MHz
Horizontal (dBi) peak	-2.46
Vertical (dBi) peak	-4.42

● [814MHz](#)



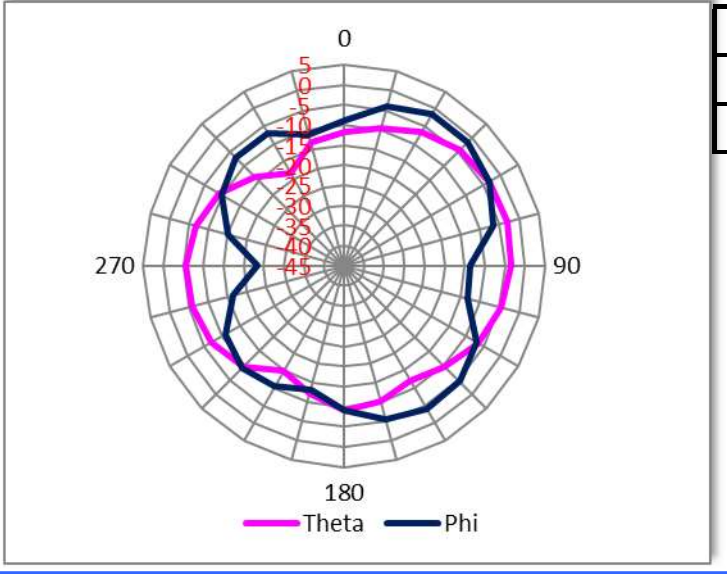
Center Frequency	814MHz
Horizontal (dBi) peak	-3.12
Vertical (dBi) peak	-1.53

● [849MHz](#)



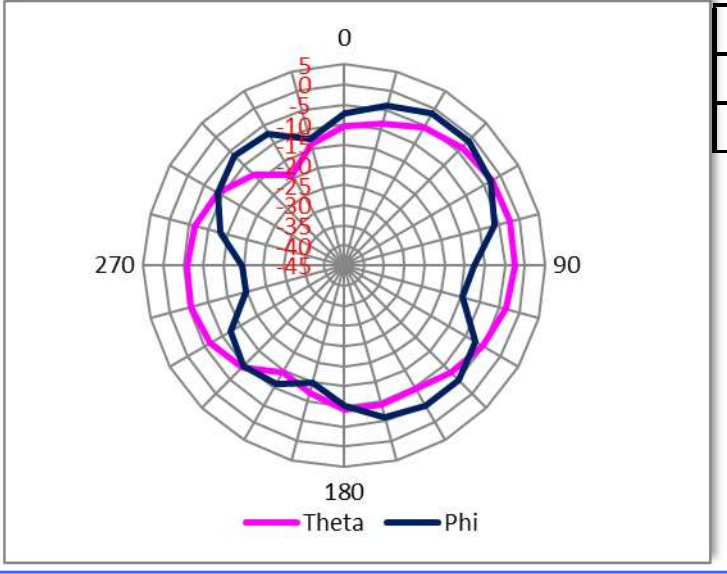
Center Frequency	849MHz
Horizontal (dBi) peak	-1.72
Vertical (dBi) peak	-2.03

● [802MHz](#)



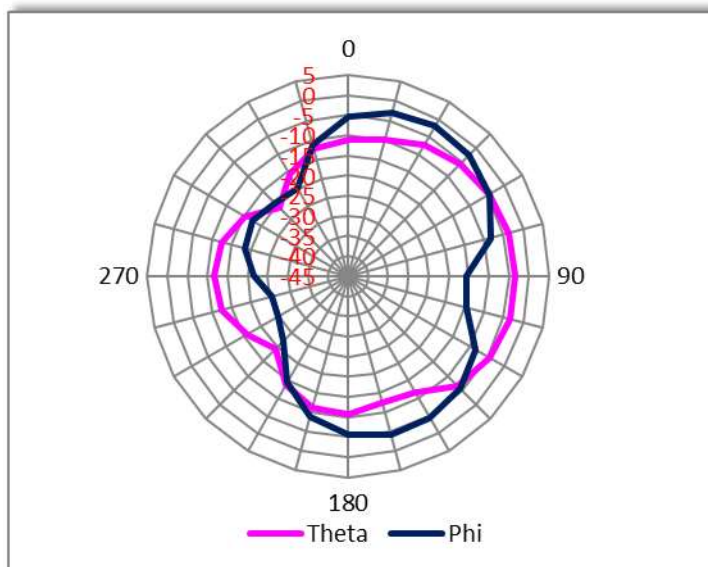
Center Frequency	802MHz
Horizontal (dBi) peak	-3.02
Vertical (dBi) peak	-1.41

● [824MHz](#)



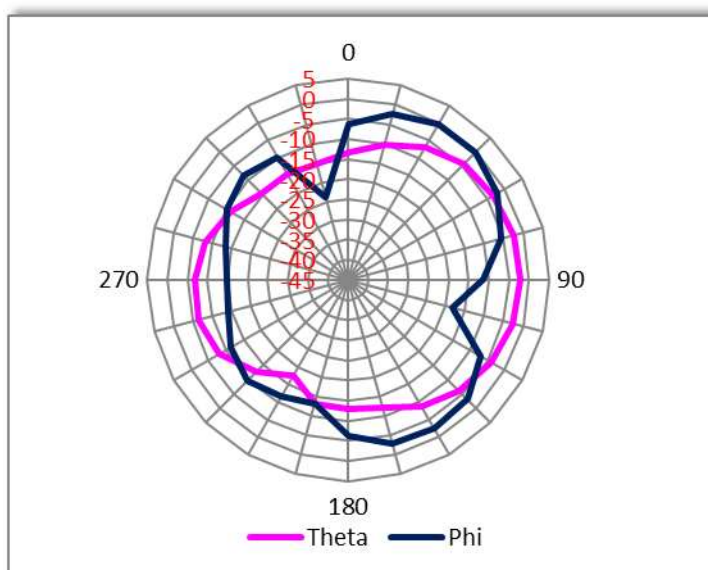
Center Frequency	824MHz
Horizontal (dBi) peak	-2.30
Vertical (dBi) peak	-1.28

● [703MHz](#)



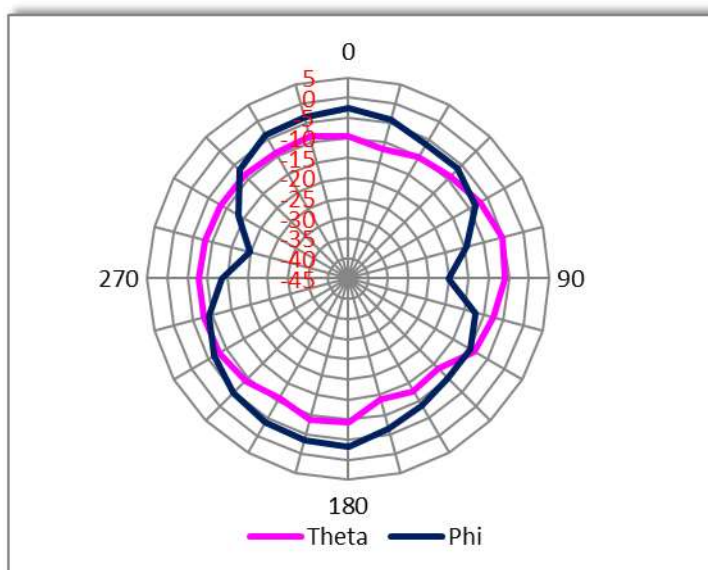
Center Frequency	703MHz
Horizontal (dBi) peak	-3.31
Vertical (dBi) peak	-1.93

● 748MHz



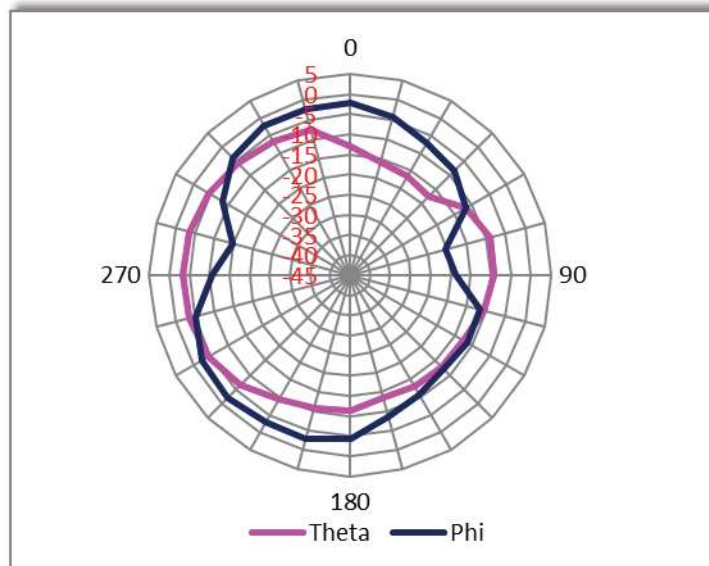
Center Frequency	748MHz
Horizontal (dBi) peak	-2.09
Vertical (dBi) peak	-0.30

● 1710MHz



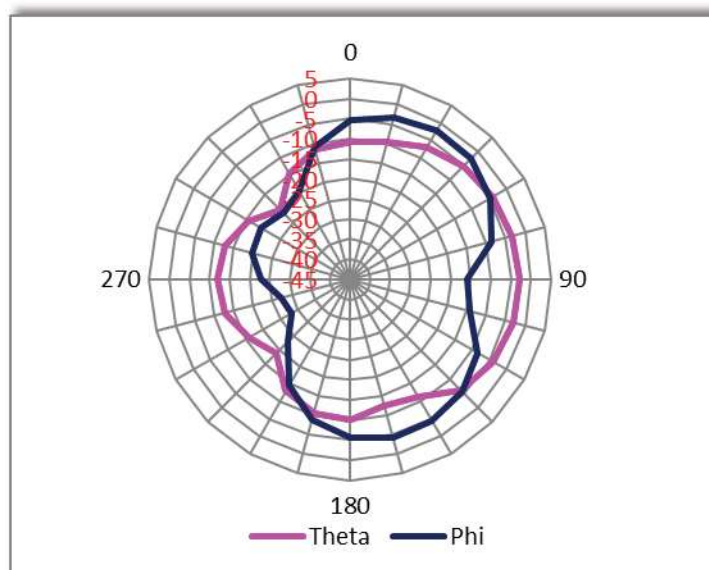
Center Frequency	1710MHz
Horizontal (dBi) peak	-5.28
Vertical (dBi) peak	-2.53

- [1780MHz](#)



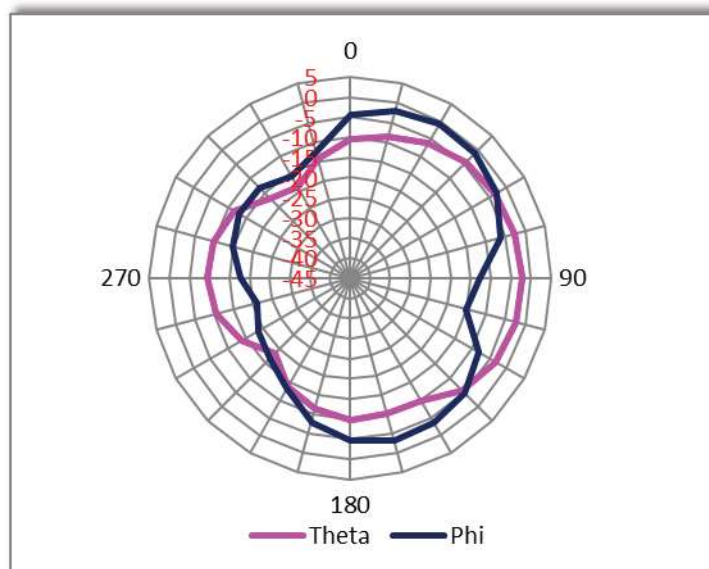
Center Frequency	1780MHz
Horizontal (dBi) peak	-3.40
Vertical (dBi) peak	-2.01

- [698MHz](#)



Center Frequency	698MHz
Horizontal (dBi) peak	-2.91
Vertical (dBi) peak	-2.04

- [716MHz](#)



Center Frequency	716MHz
Horizontal (dBi) peak	-2.27
Vertical (dBi) peak	-0.69