

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)	715MHz (Choice TX high peak gain)
WNC	PIFA	81ELBF15.G36 (6036B0366201)	81ELBF15.G35 (6036B0366101)	81ELBF15.G37 (6036B0366301)	81ELBF15.G36 (6036B0366201)	-0.18 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	WNC
contact person	Annie Lo
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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 : 81ELBF15.G36	WNC	PIFA	-2.48
LTE Cat.M1	2	1850	1910				-1.4
LTE Cat.M1	3	1710	1785				-2.5
LTE Cat.M1	4	1710	1755				-2.5
GSM850 / LTE Cat.M1	5	824	849				-1.93
GSM900 / LTE Cat.M1	8	880	915				-2.64
LTE Cat.M1	12	699	716				-0.18
LTE Cat.M1	13	777	787				-1.38
LTE Cat.M1	14	788	798				-2.7
LTE Cat.M1	18	815	830				-3.11
LTE Cat.M1	19	830	845				-2.07
LTE Cat.M1	20	832	862				-1.93
GSM1900/ LTE Cat.M1	25	1850	1915				-1.4
LTE Cat.M1	26	814	849				-1.93
LTE Cat.M1	27	802	824				-3.6
LTE Cat.M1	28	703	748				-0.18
GSM1800 / LTE Cat.M1	66	1710	1780				-2.5
LTE Cat.M1	85	698	716				-0.18

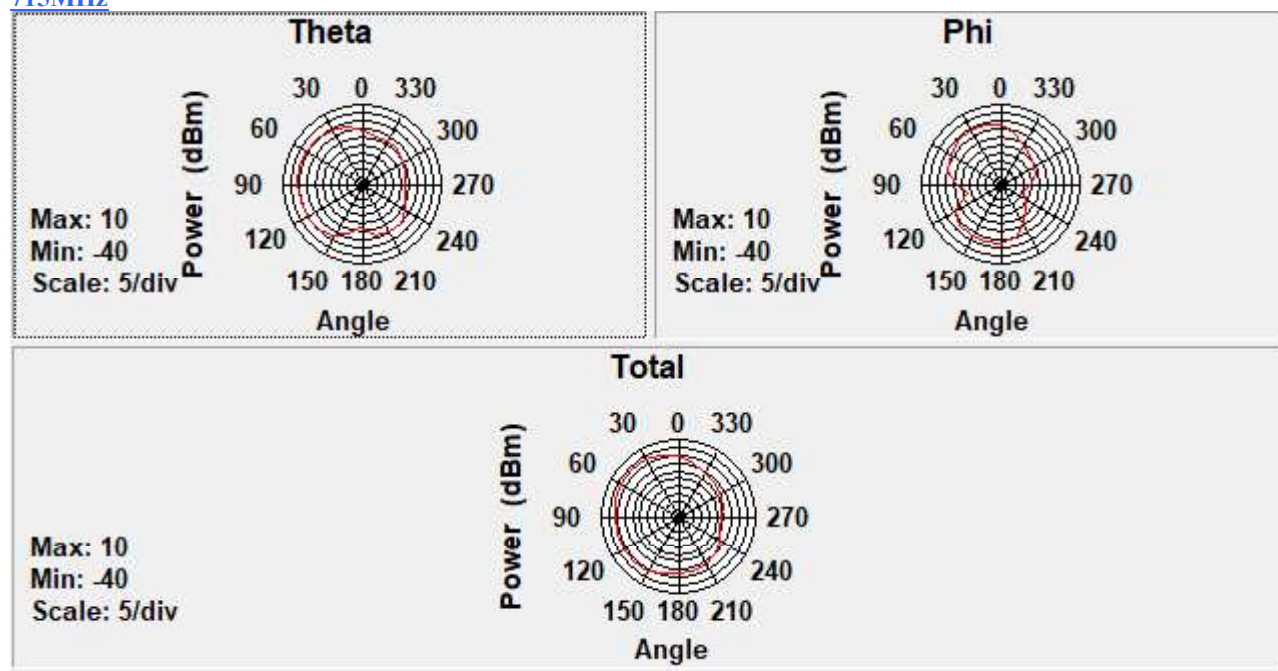
- Antenna Peak Gain required being test in system basis.

The listed frequency 2D radiation pattern is required

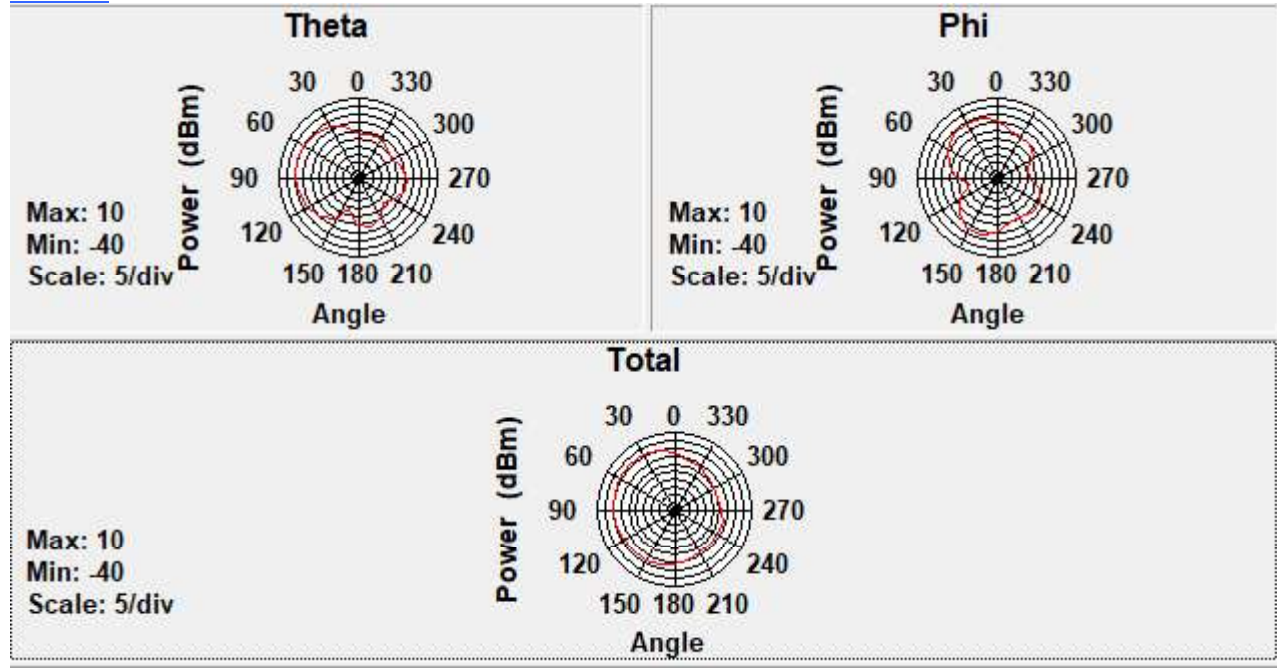
• Ant5:

Example:

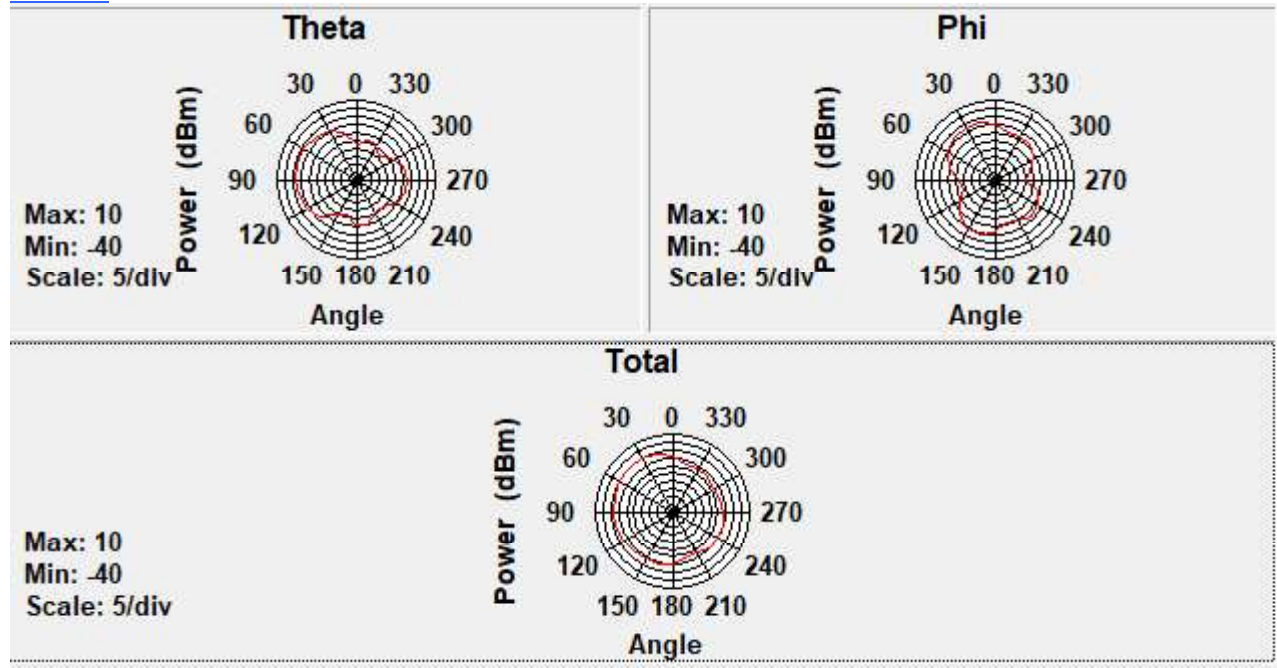
715MHz



Center Frequency	715MHz
Horizontal (dBi) peak	-0.18
Vertical (dBi) peak	-2.09

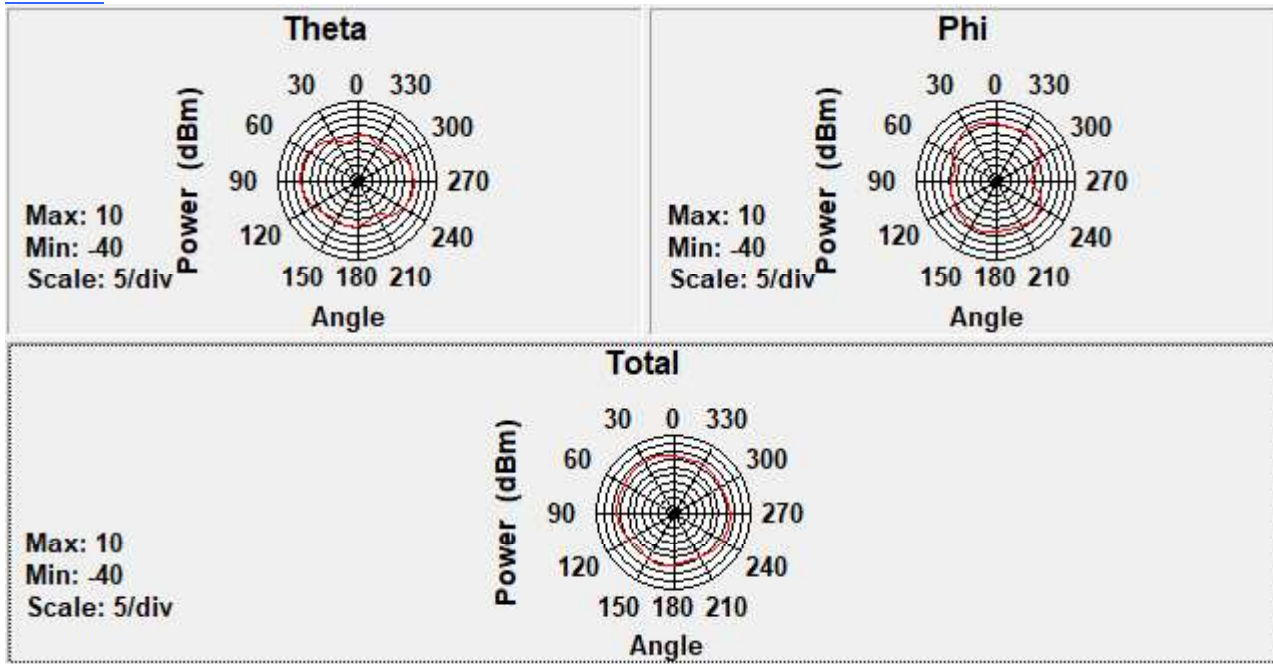
777MHz

Center Frequency	777MHz
Horizontal (dBi) peak	-1.38
Vertical (dBi) peak	-2.38

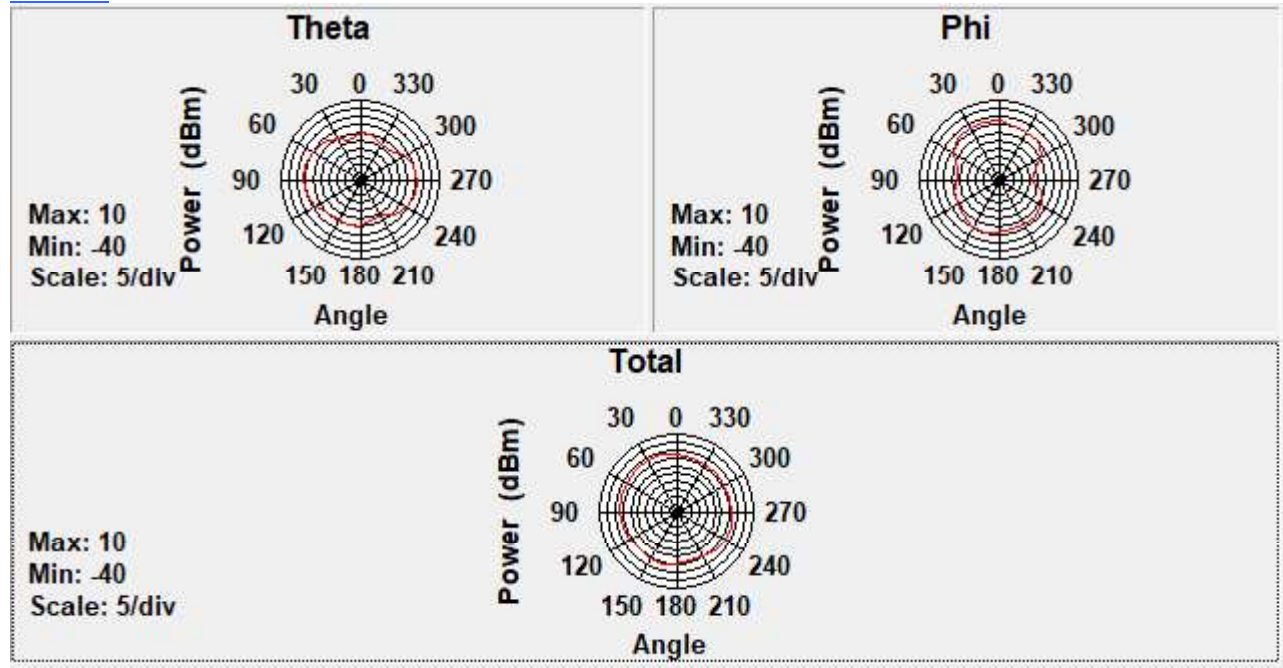
791MHz

Center Frequency	791MHz
Horizontal (dBi) peak	-2.7
Vertical (dBi) peak	-3.23

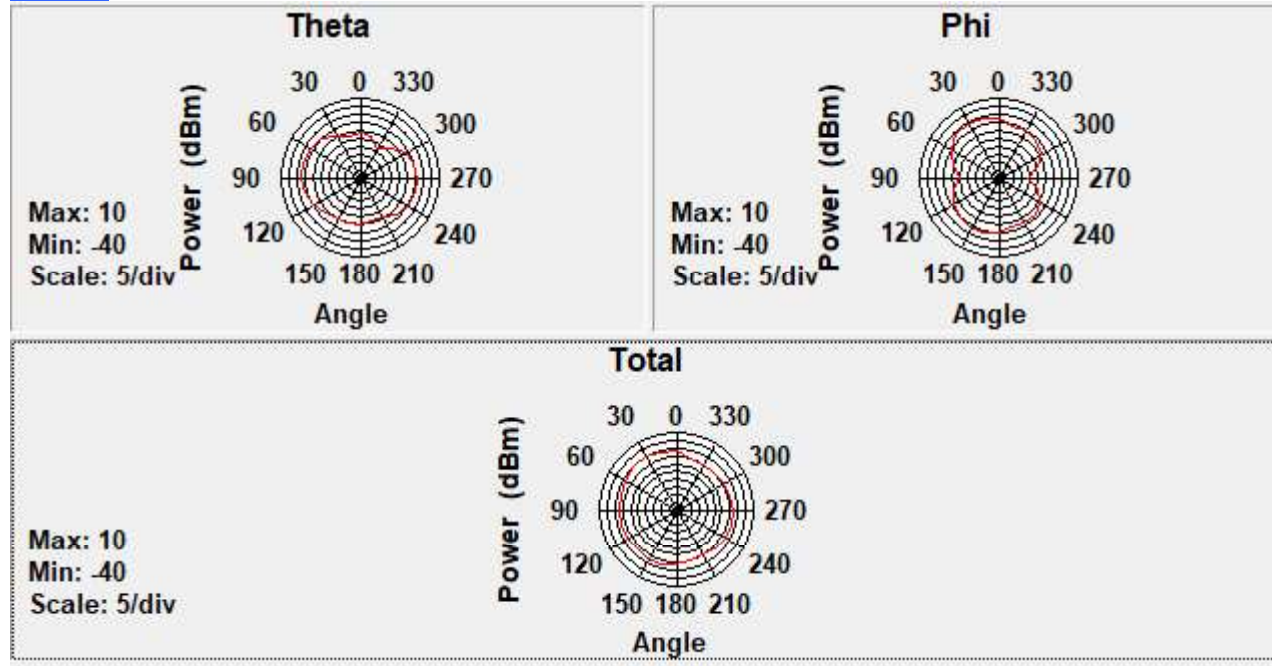
[824MHz](#)



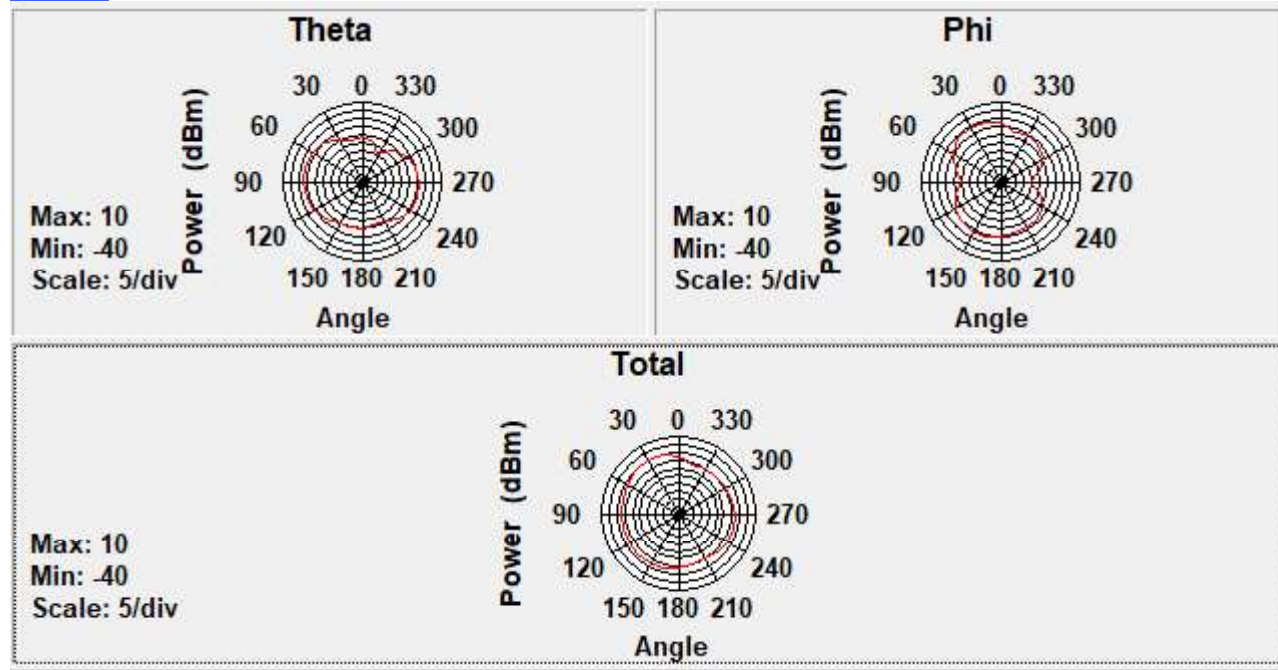
Center Frequency	824MHz
Horizontal (dBi) peak	-4.69
Vertical (dBi) peak	-3.6

830MHz

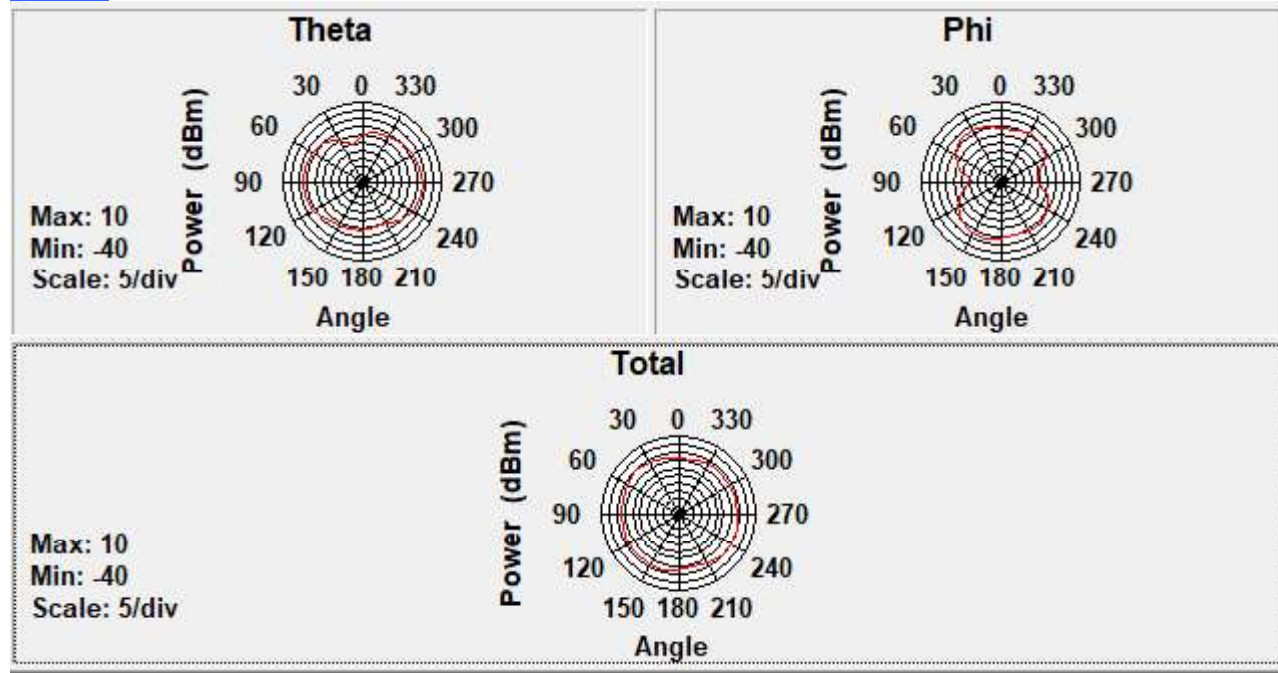
Center Frequency	830MHz
Horizontal (dBi) peak	-5
Vertical (dBi) peak	-3.11

845MHz

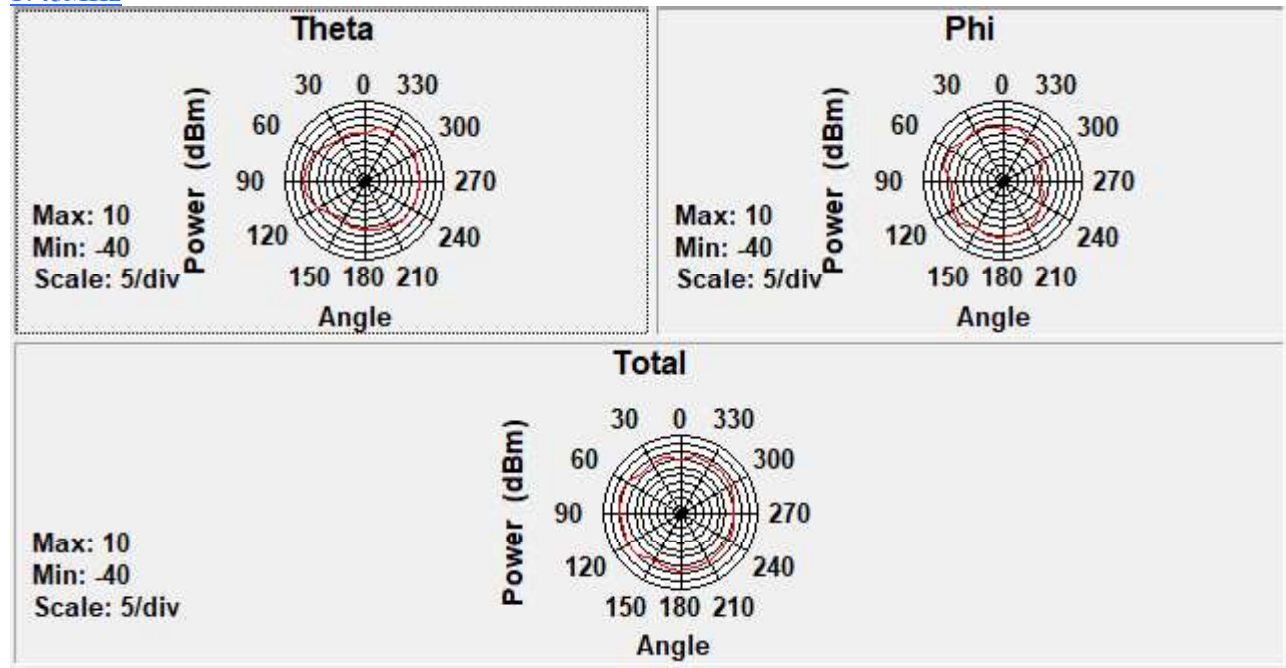
Center Frequency	845MHz
Horizontal (dBi) peak	-4.14
Vertical (dBi) peak	-2.07

[849MHz](#)

Center Frequency	849MHz
Horizontal (dBi) peak	-4.16
Vertical (dBi) peak	-1.93

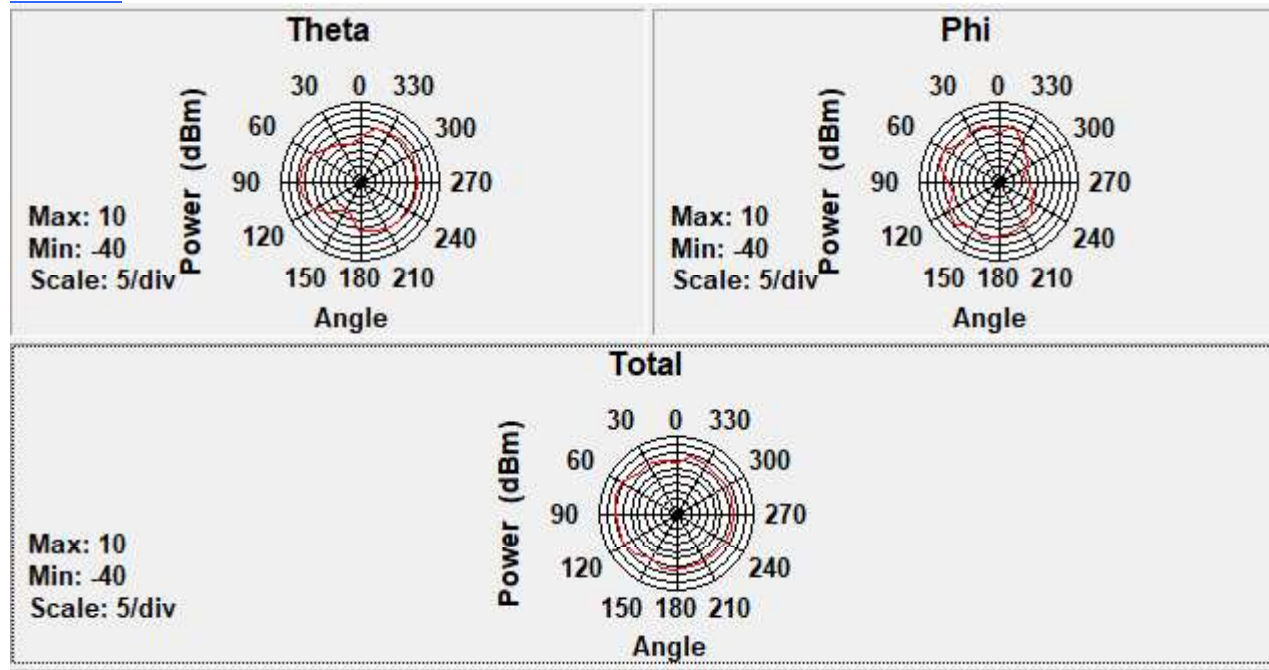
915MHz

Center Frequency	915MHz
Horizontal (dBi) peak	-2.64
Vertical (dBi) peak	-3.68

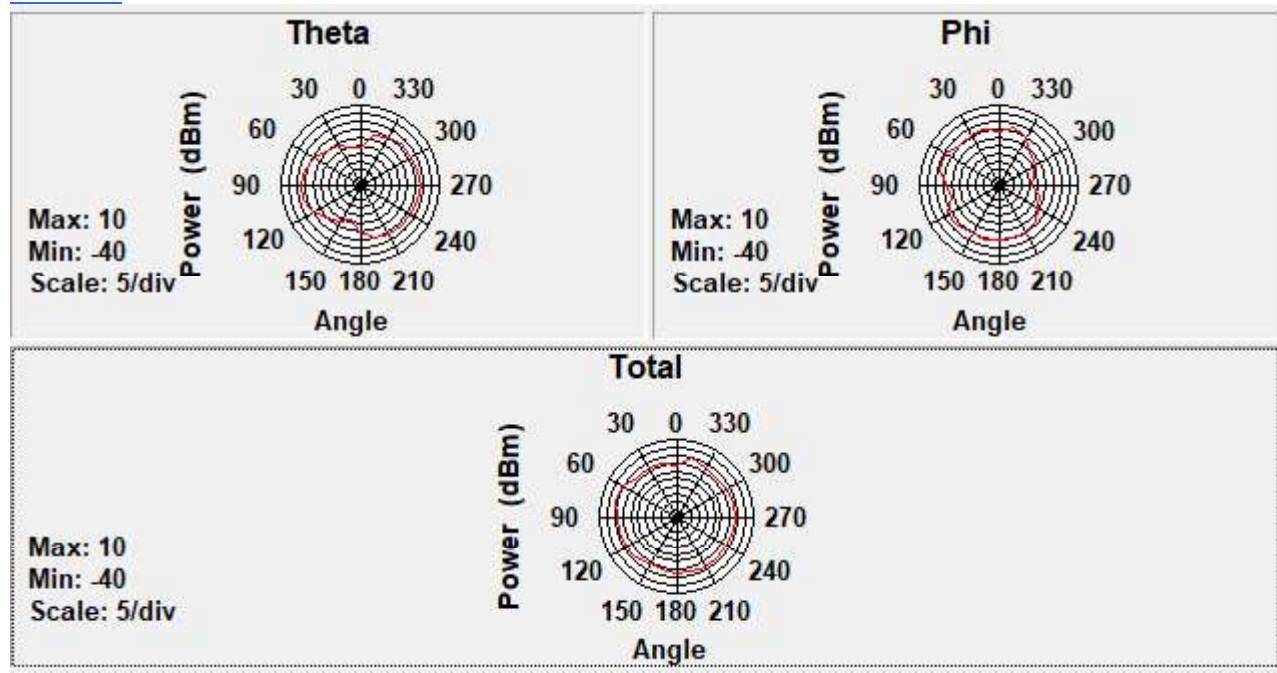
1745MHz

Center Frequency	1745MHz
Horizontal (dBi) peak	-2.81
Vertical (dBi) peak	-2.5

1850MHz



Center Frequency	1850MHz
Horizontal (dBi) peak	-3.02
Vertical (dBi) peak	-1.4

1980MHz

Center Frequency	1980MHz
Horizontal (dBi) peak	-2.92
Vertical (dBi) peak	-2.48