

GALTRONICS

WHEN CONNECTIONS COUNT



Askey Charter Adant Star Robin MDU Antenna Performance Report

Galtronics Project: 7795

Antenna Locations



Z-direction

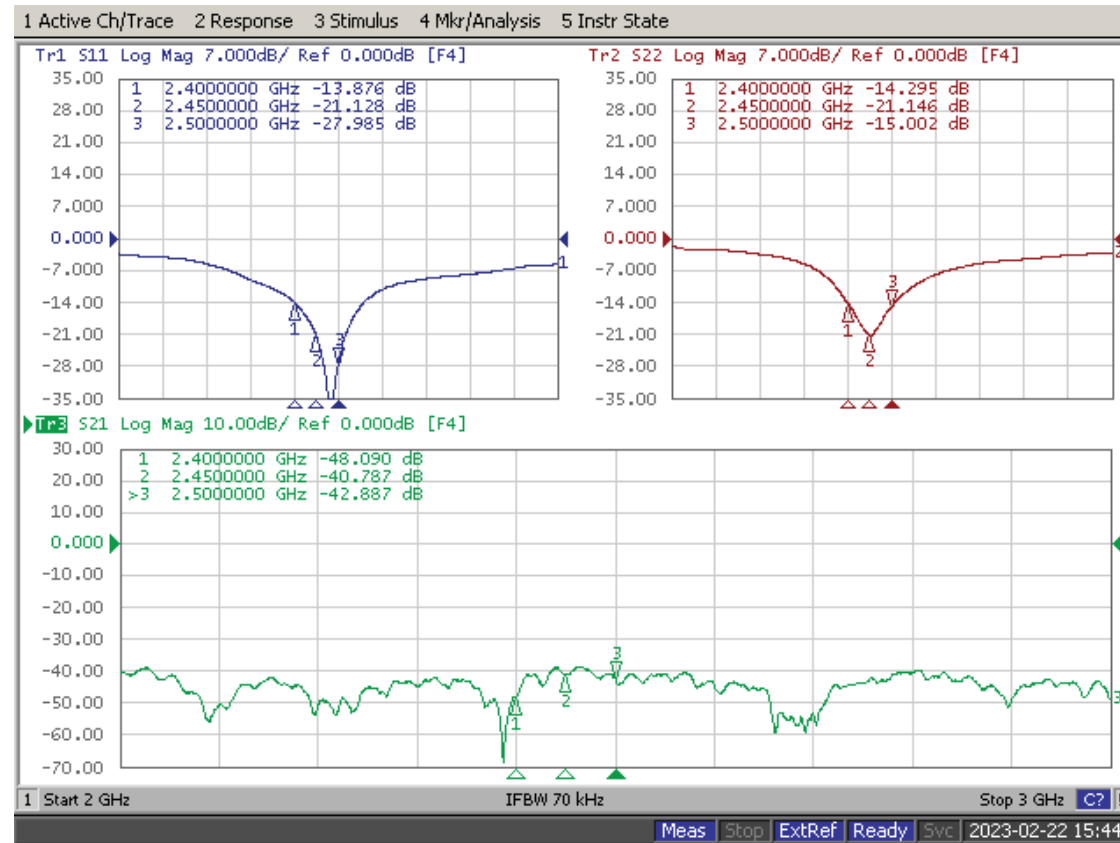
Cable length and orientation

Antenna	Part Number	Cable Length	Orientation	Cable Color
IoT1	02102073-07795-1(GALTRONICS)	235mm	V	Blue
IoT2	02102073-07795-2(GALTRONICS)	60mm	V	Black
6G1	02102475-07795-1(GALTRONICS)	175mm	H	Yellow
6G2	02102475-07795-2(GALTRONICS)	165mm	V	Orange
6G3	02102475-07795-3(GALTRONICS)	110mm	V	Red
6G4	02102475-07795-4(GALTRONICS)	165mm	H pol Omni	Green

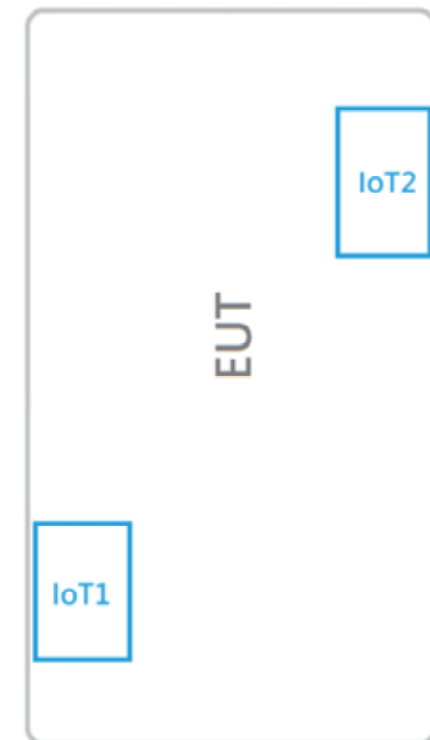
V = vertical

H = horizontal

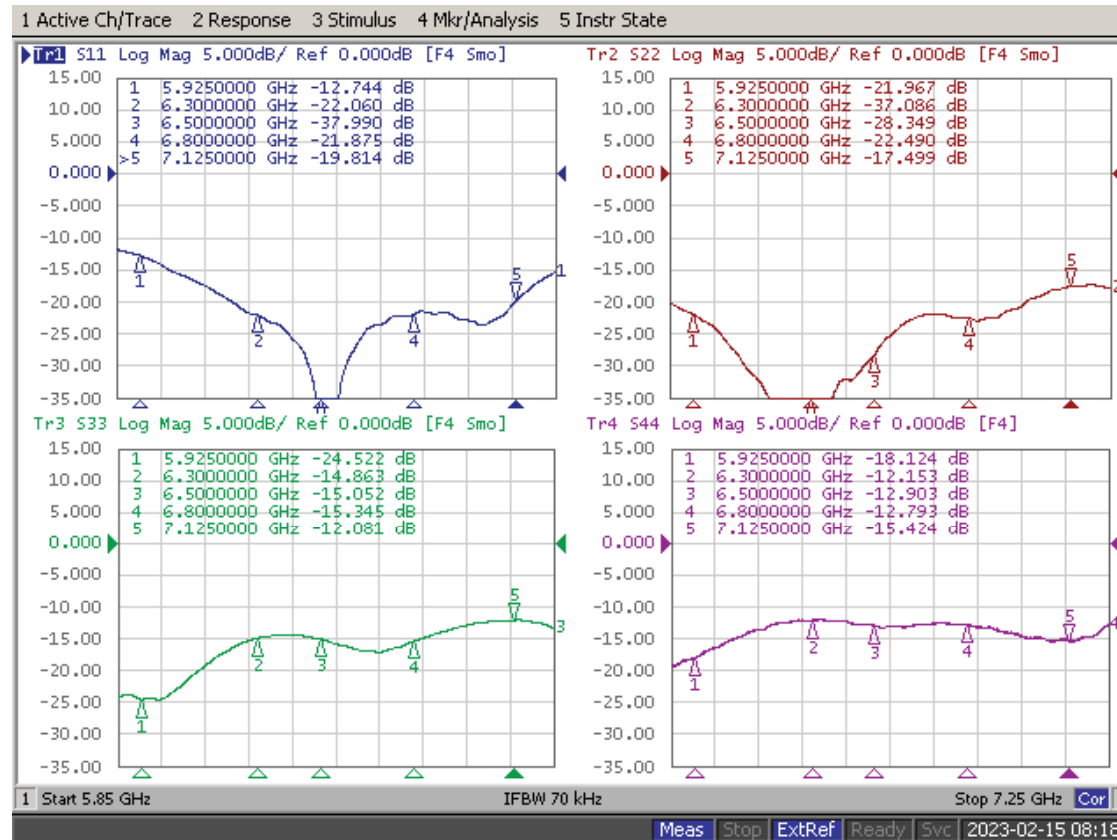
Return Loss and Isolation of IoT antennas



Port 1= IoT1 Port 2= IoT2



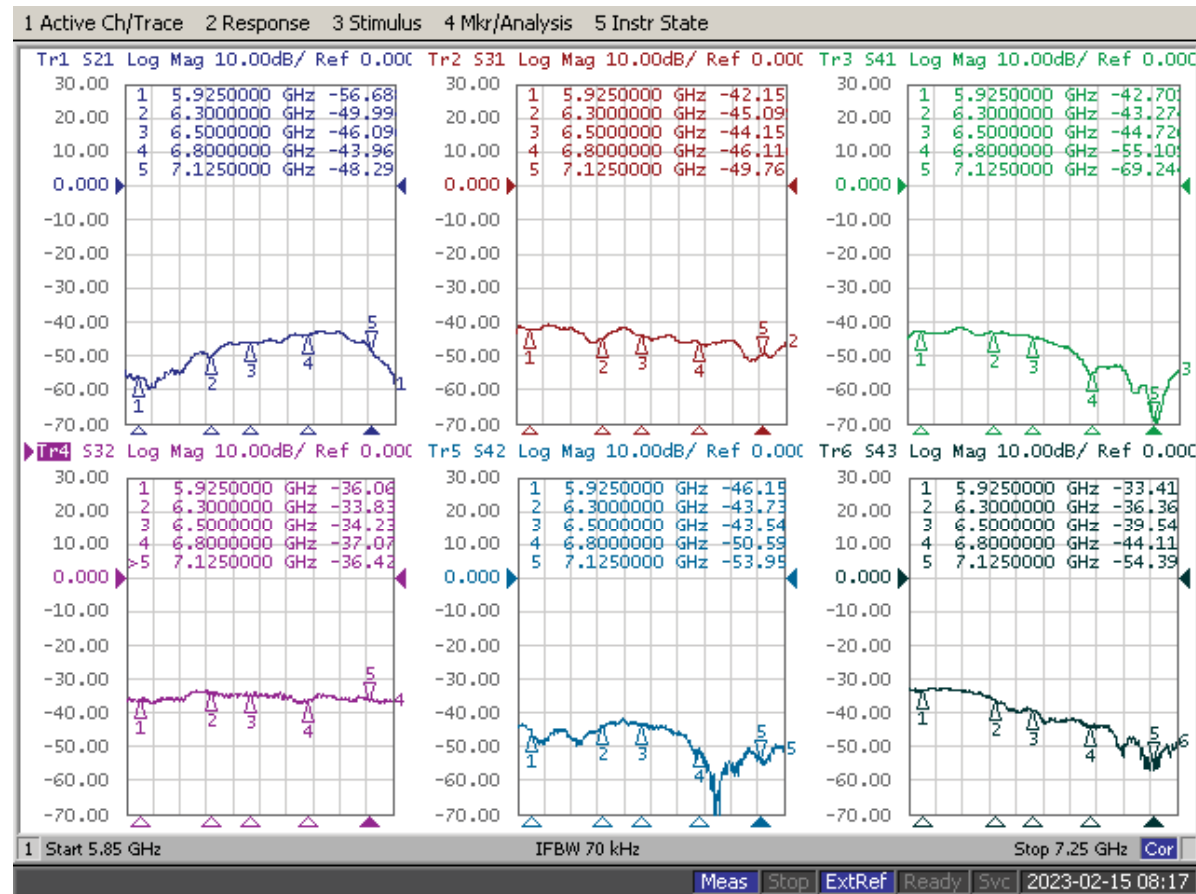
Return Loss of the 6GHz Antennas



Port 1= 6G1	Port 2= 6G2
Port 3= 6G3	Port 4= 6G4



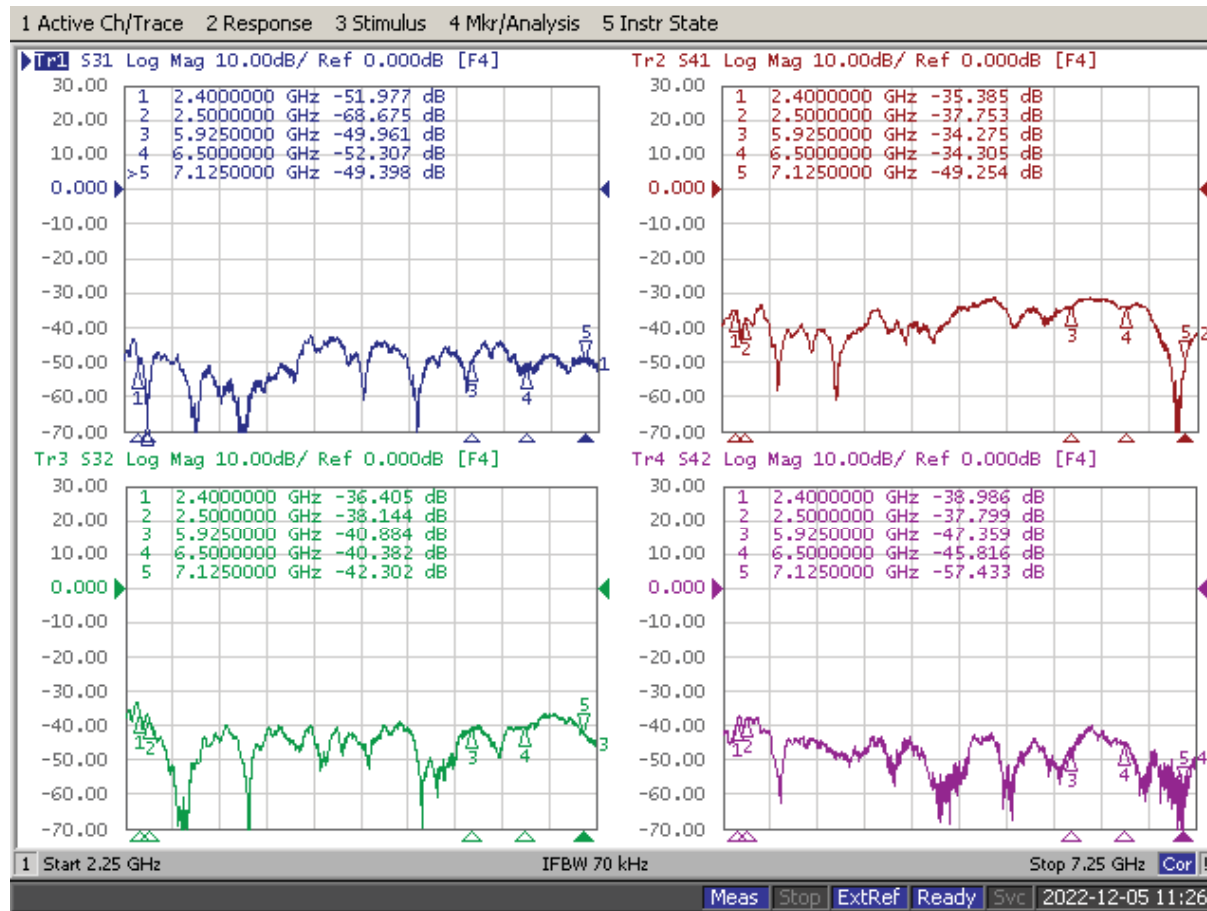
Isolation of the 6GHz Antennas



Port 1= 6G1	Port 2= 6G2
Port 3= 6G3	Port 4= 6G4



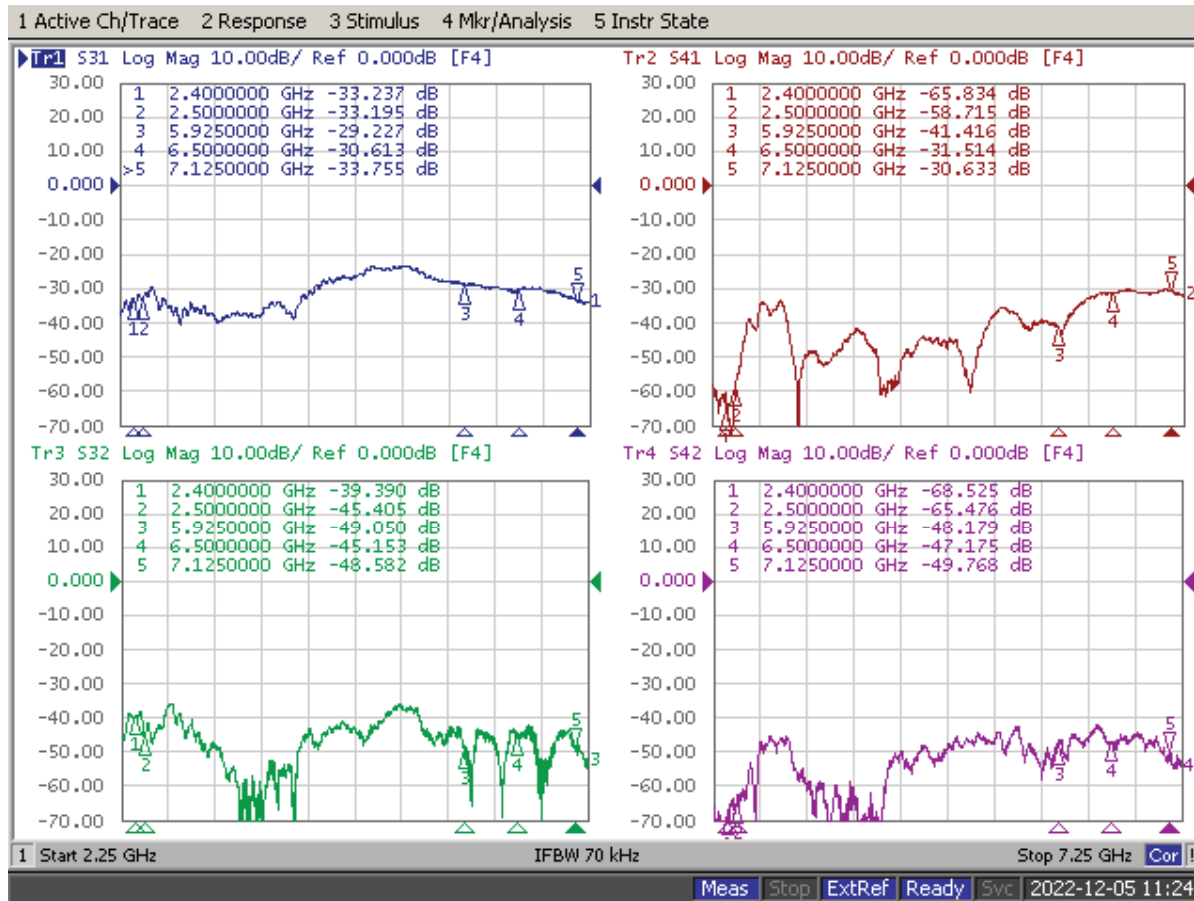
Isolation between IoTs and 6GHz Antennas



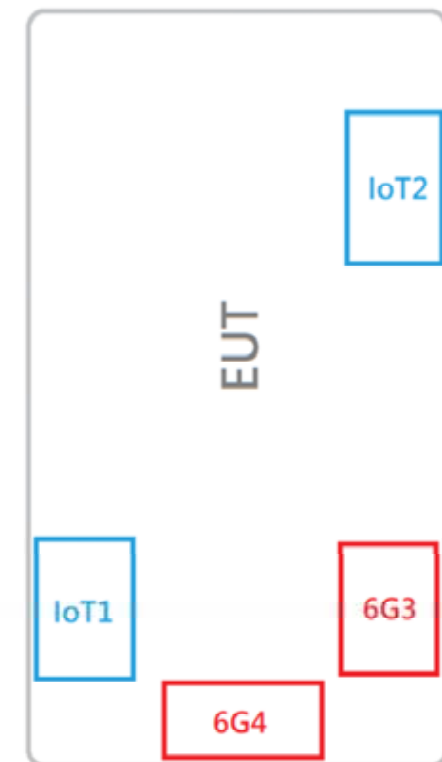
Port 1= IoT1	Port 2= IoT2
Port 3= 6G1	Port 4= 6G2



Isolation between IoTs and 6GHz Isolation



Port 1= IoT1	Port 2= IoT2
Port 3= 6G3	Port 4= 6G4



Antenna Peak Gain and Efficiency

IoT1	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	2.983	5.171	60.43 %
	2450	3.355	5.295	63.97 %
	2500	3.273	5.402	61.25 %
	Average			61.88 %
IoT2	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	4.420	5.941	70.45 %
	2450	4.950	6.188	75.20 %
	2500	4.545	5.901	73.18 %
	Average			72.94 %

6G1	Freq (MHz)	Peak Gain (dBi)	Directivity (dB)	Efficiency
	5925	4.365	6.238	64.97 %
	6300	5.555	7.293	67.03 %
	6500	5.539	7.323	66.31 %
	6800	5.259	7.199	63.97 %
	7125	4.785	6.730	63.90 %
	Average			65.24 %

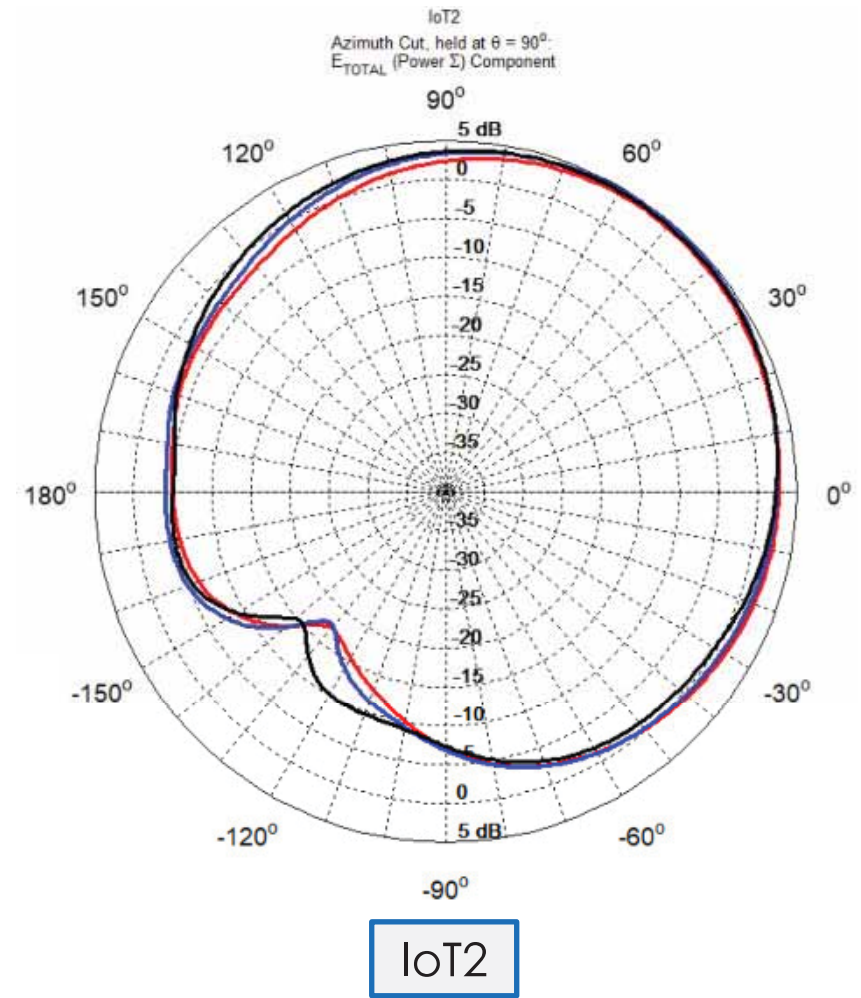
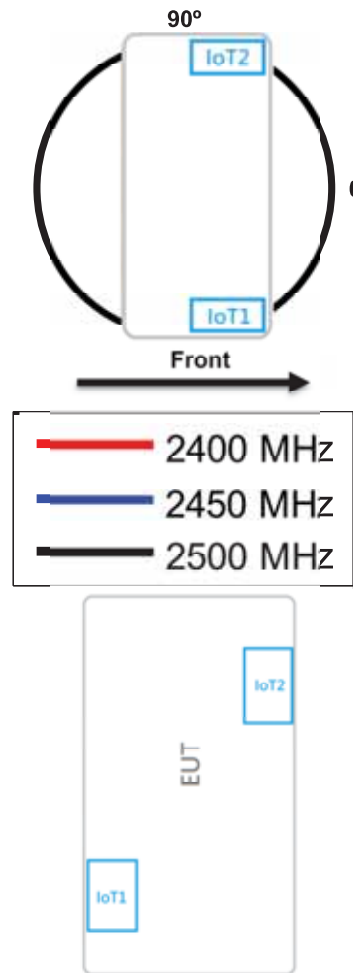
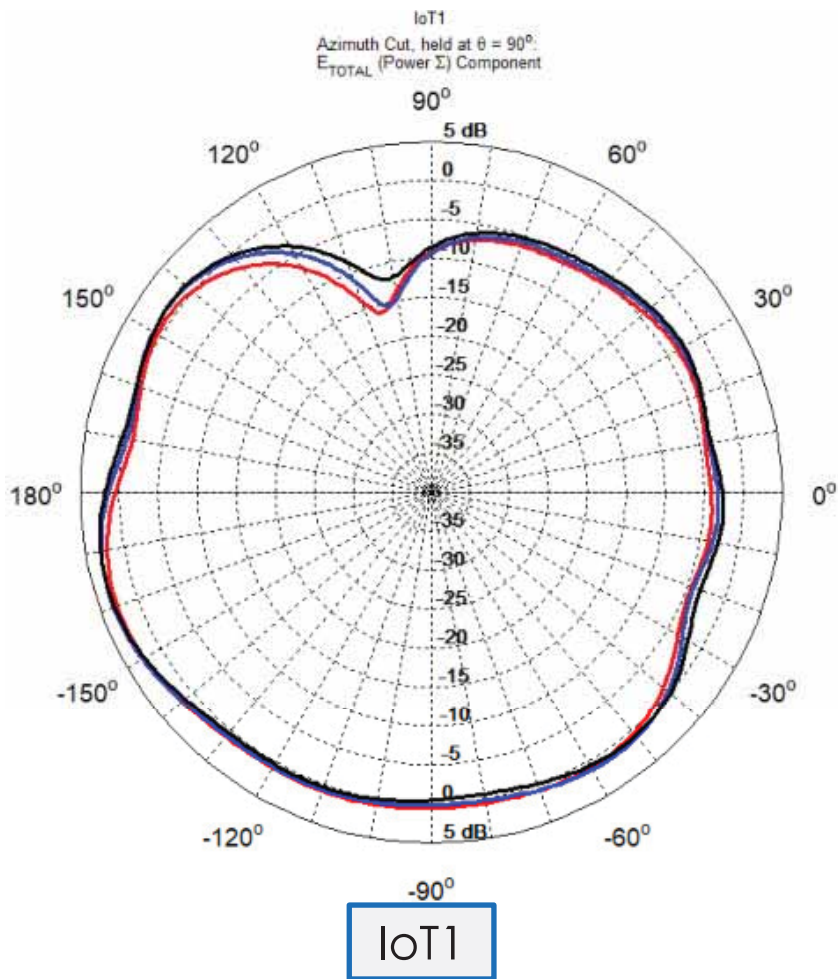
6G2	Freq (MHz)	Peak Gain (dBi)	Directivity (dB)	Efficiency
	5925	3.933	5.245	73.94 %
	6300	4.931	6.392	71.44 %
	6500	4.494	6.027	70.25 %
	6800	3.604	5.367	66.63 %
	7125	4.123	5.932	65.94 %
	Average			69.64 %

6G3	Freq (MHz)	Peak Gain (dBi)	Directivity (dB)	Efficiency
	5925	5.166	6.309	76.85 %
	6300	5.382	6.616	75.26 %
	6500	5.247	6.696	71.62 %
	6800	4.903	6.663	66.68 %
	7125	4.711	6.289	69.54 %
	Average			71.99 %

6G4	Freq (MHz)	Peak Gain (dBi)	Directivity (dB)	Efficiency
	5925	2.728	4.495	66.57 %
	6300	3.534	5.470	64.03 %
	6500	3.451	5.277	65.68 %
	6800	4.063	5.933	65.01 %
	7125	4.325	6.187	65.13 %
	Average			65.28 %

Azimuth Cut - Power Sum

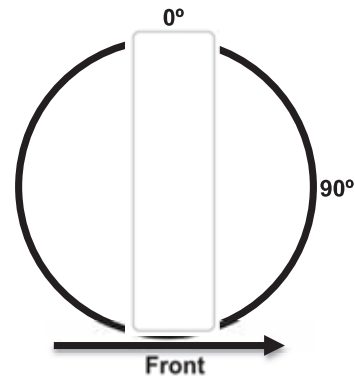
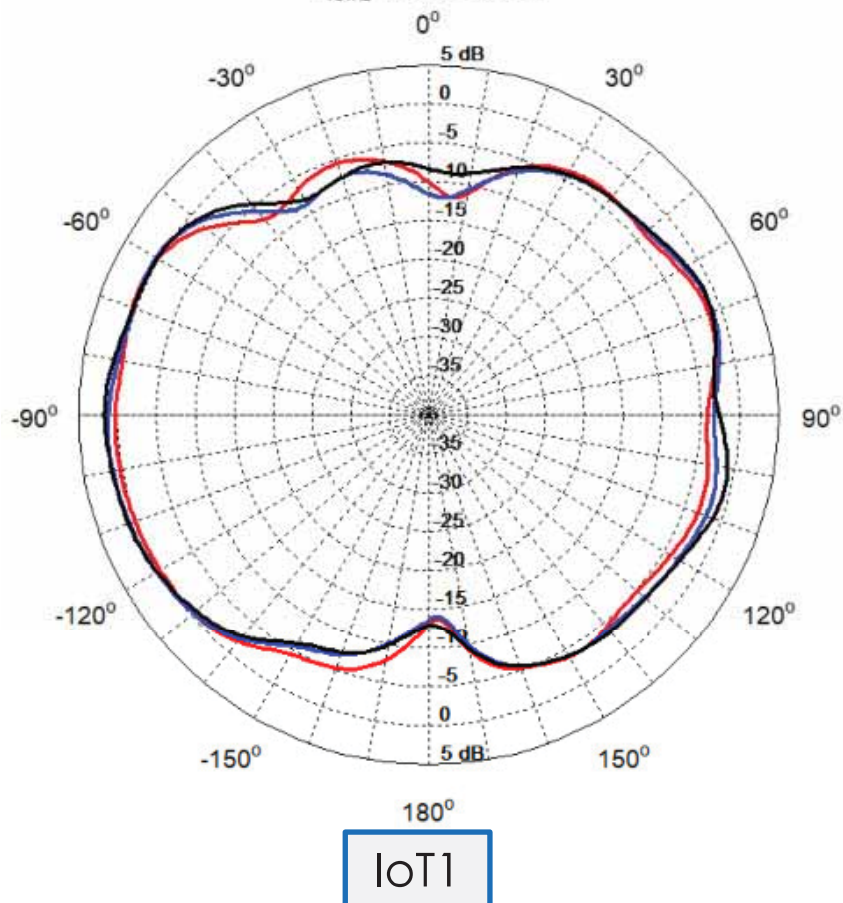
IoT Antennas



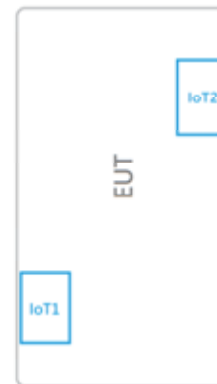
Elevation (Front to Back) Cut - Power Sum

IoT Antennas

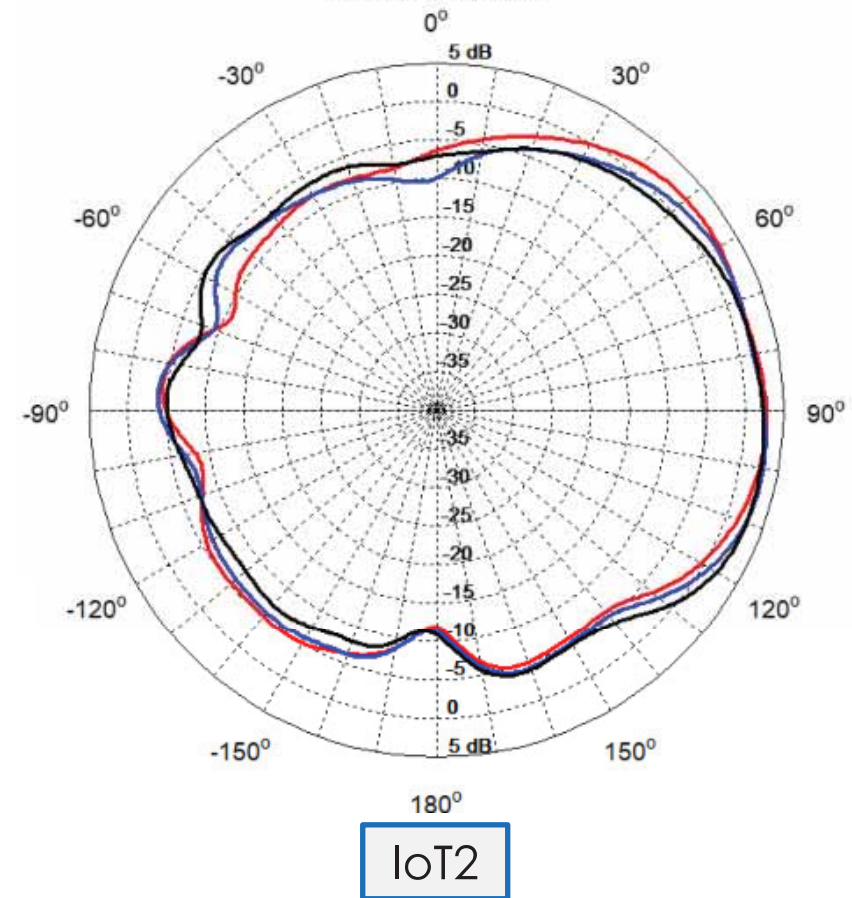
IoT1
Elevation Cut, held at $\phi = 0^\circ$
 E_{TOTAL} (Power Σ) Component



— 2400 MHz
— 2450 MHz
— 2500 MHz

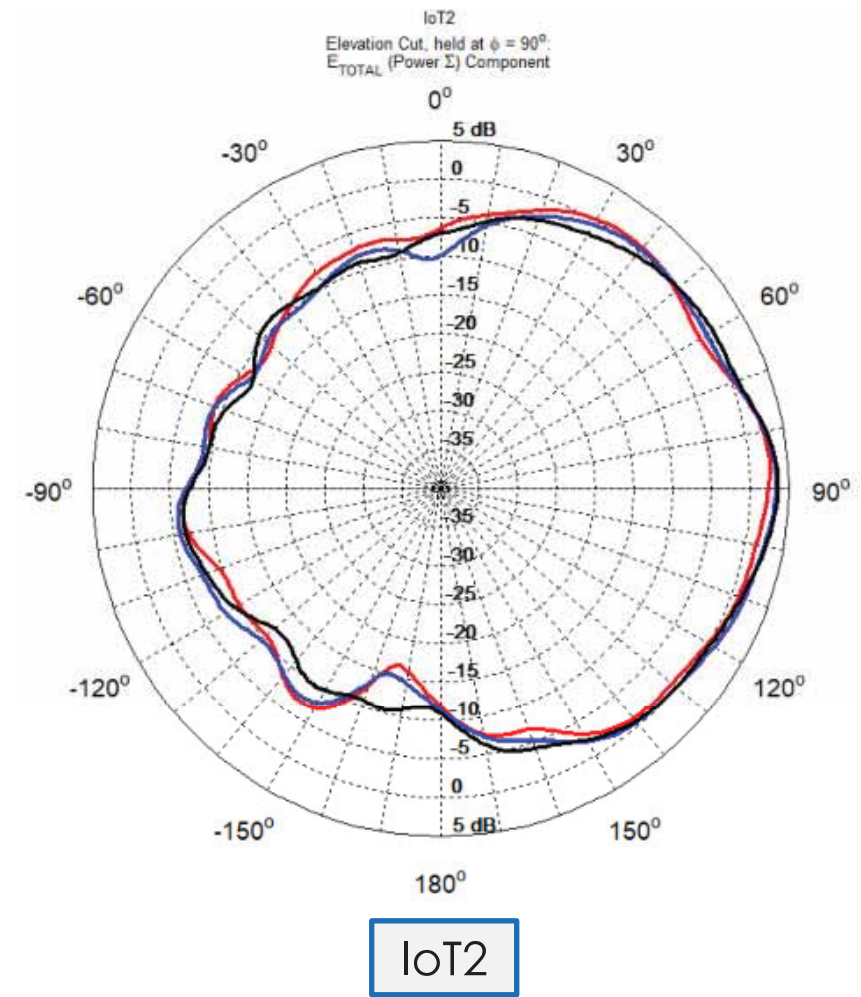
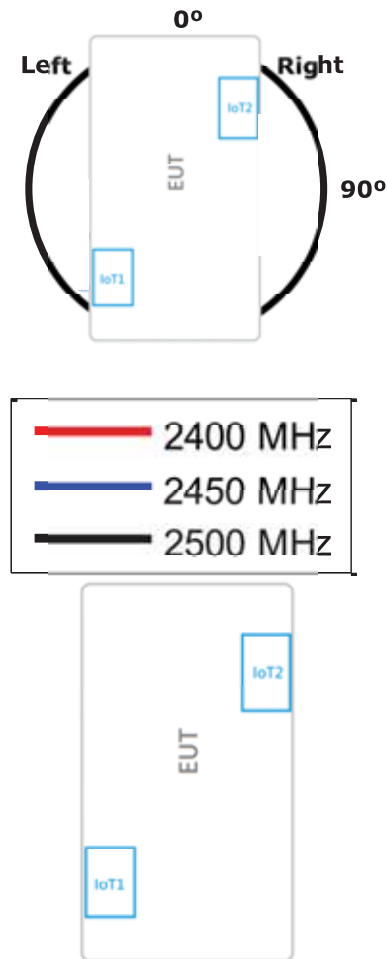
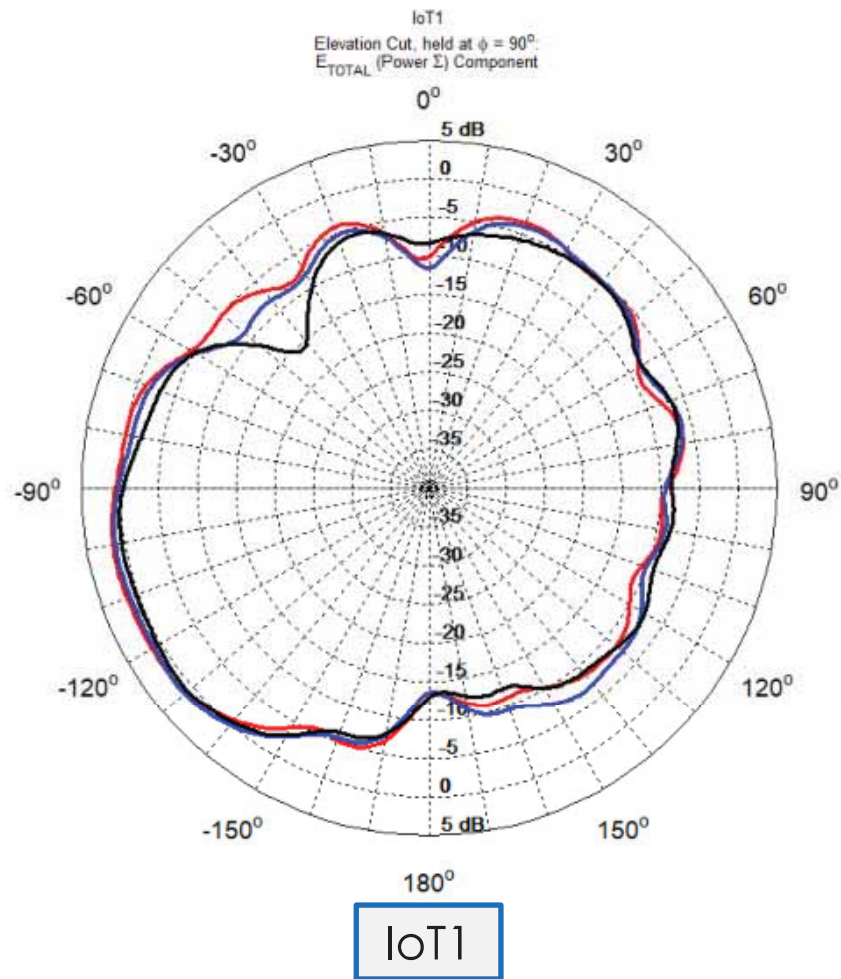


IoT2
Elevation Cut, held at $\phi = 0^\circ$
 E_{TOTAL} (Power Σ) Component



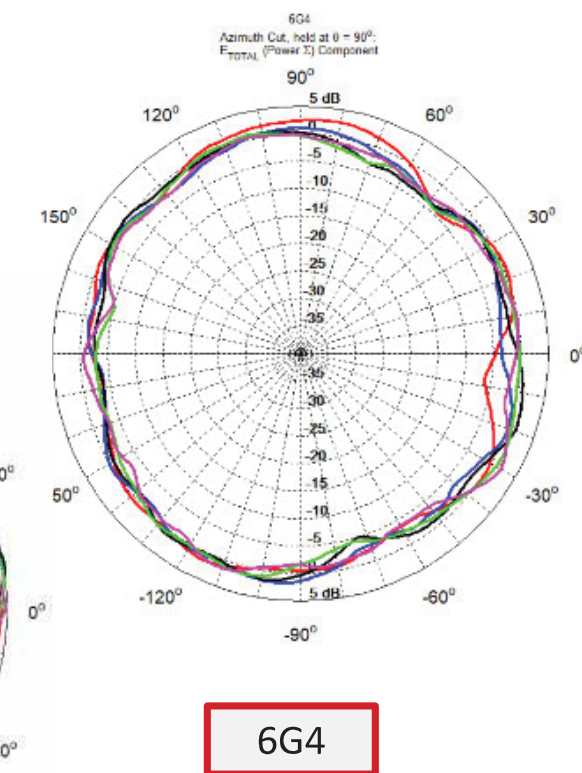
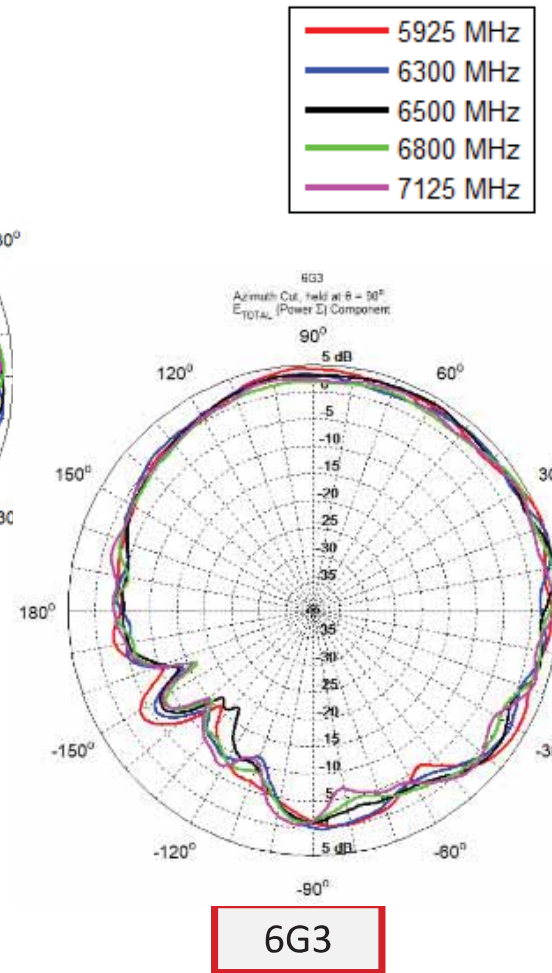
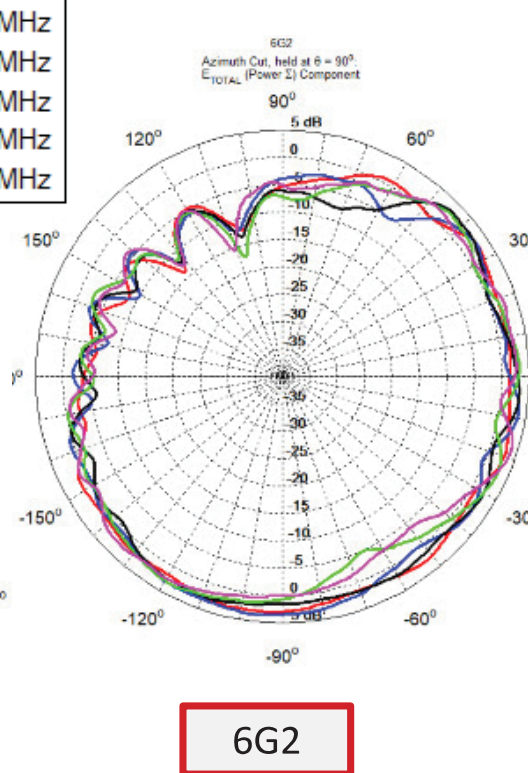
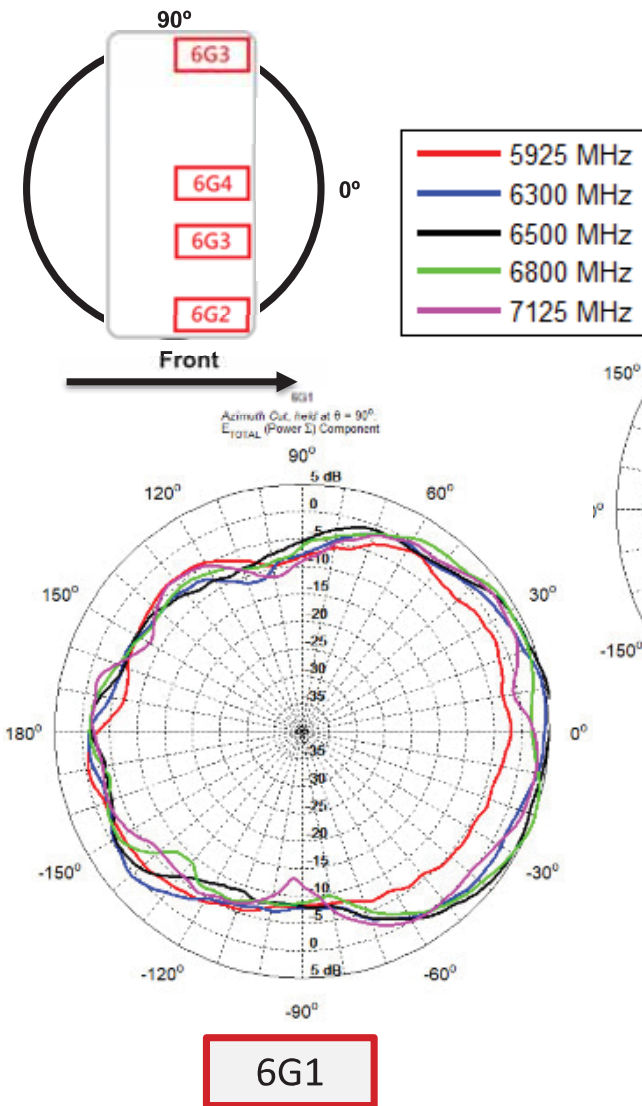
Elevation (Side to Side) Cut - Power Sum

IoT Antennas



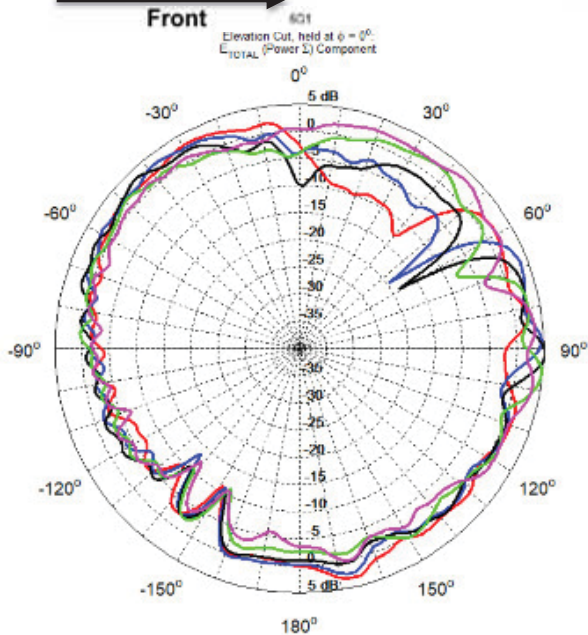
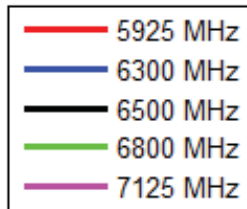
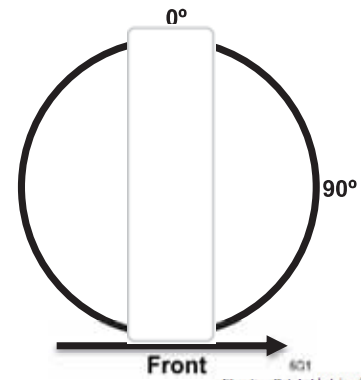
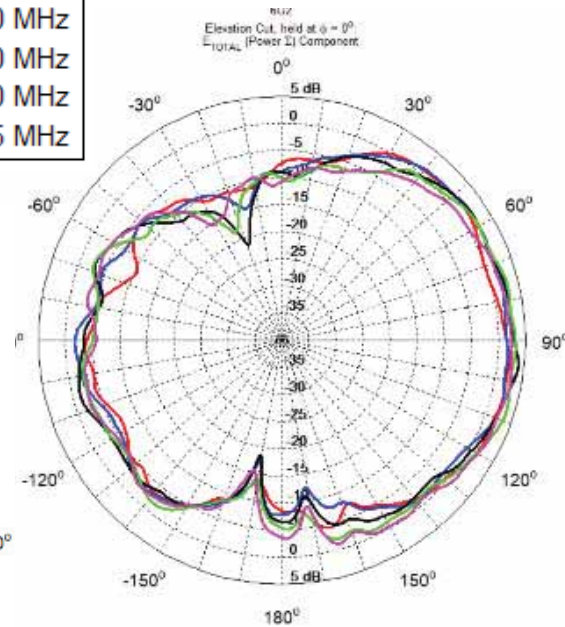
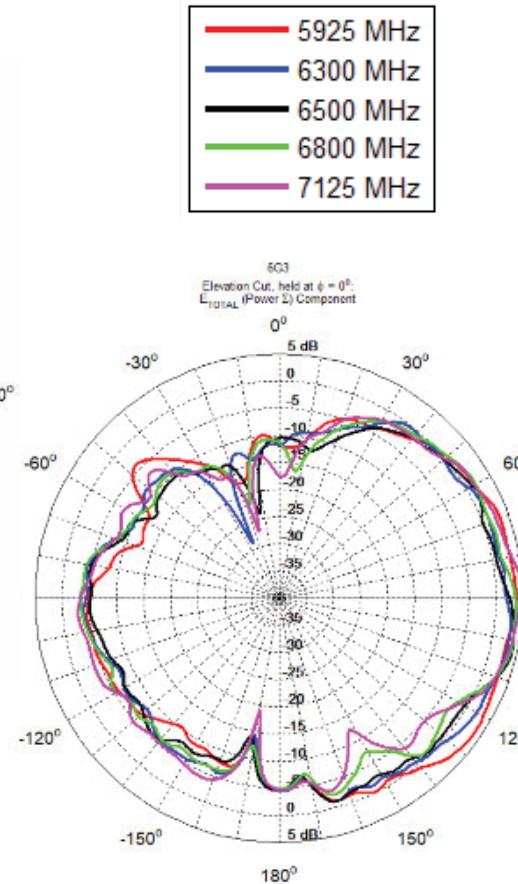
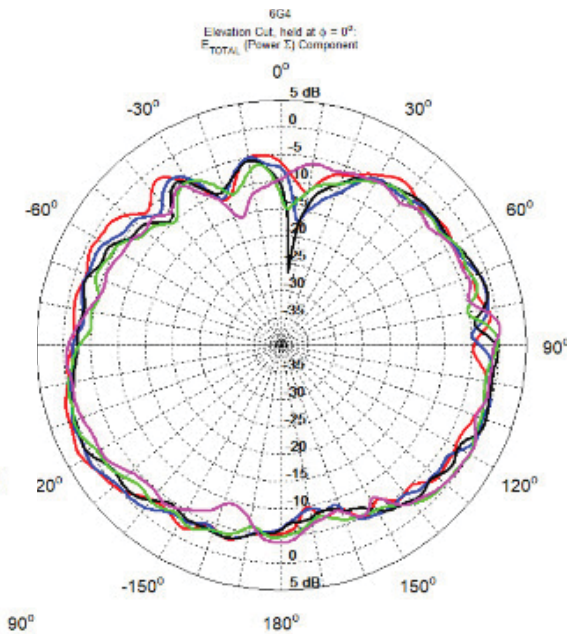
Azimuth Cut - Power Sum

6 GHz Antennas



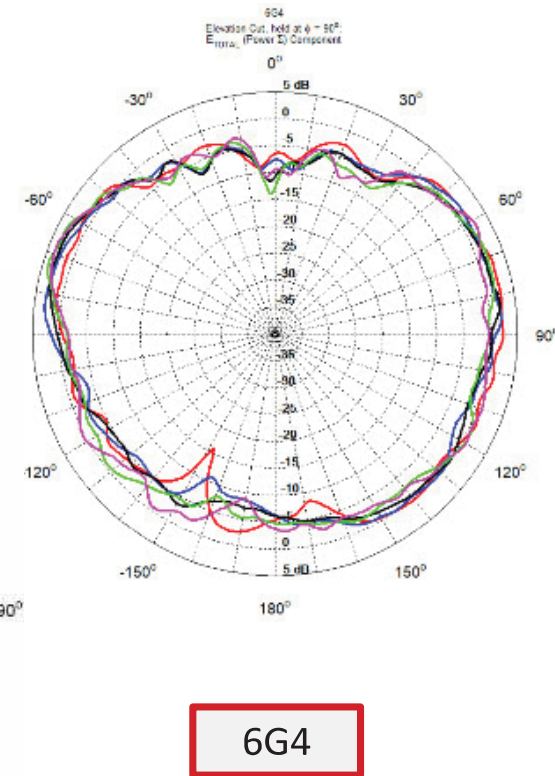
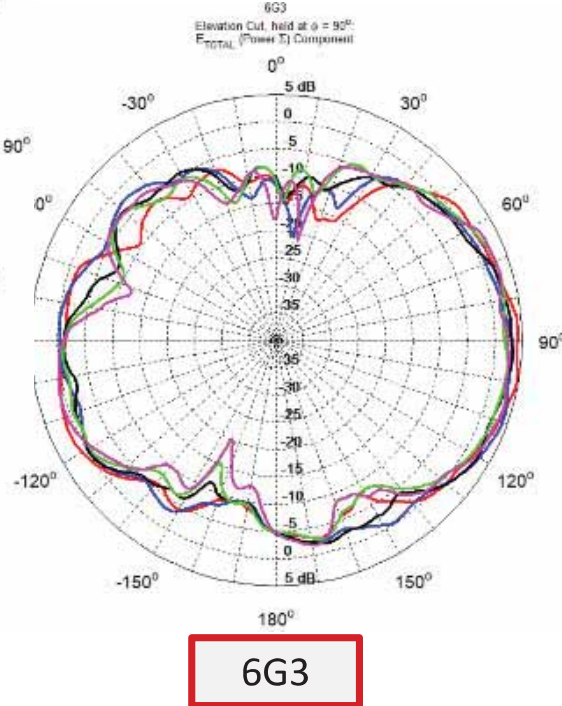
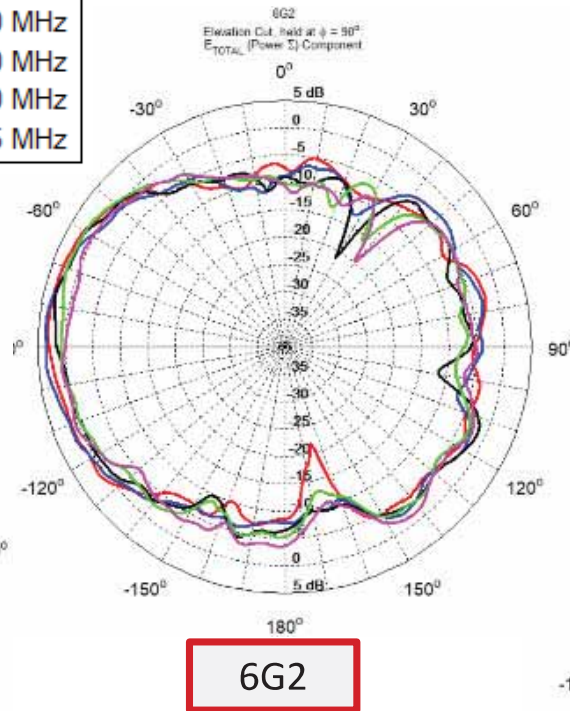
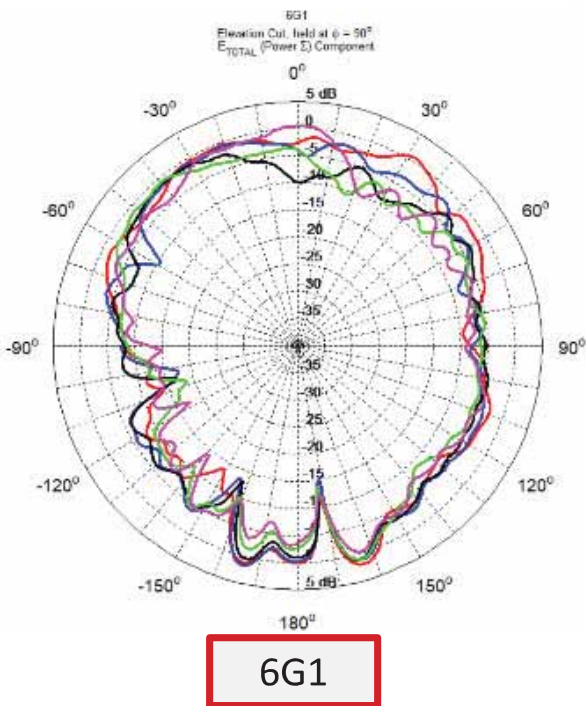
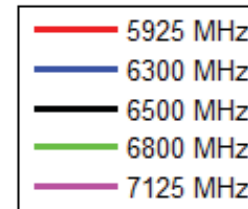
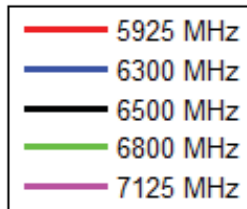
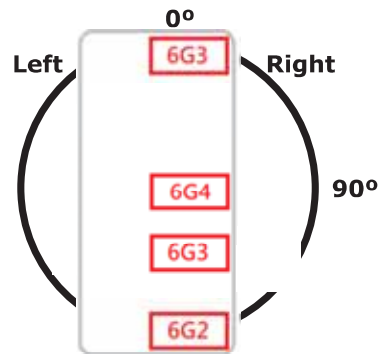
Elevation (Front to Back) Cut - Power Sum

6 GHz Antennas

**6G1****6G2****6G3****6G4**

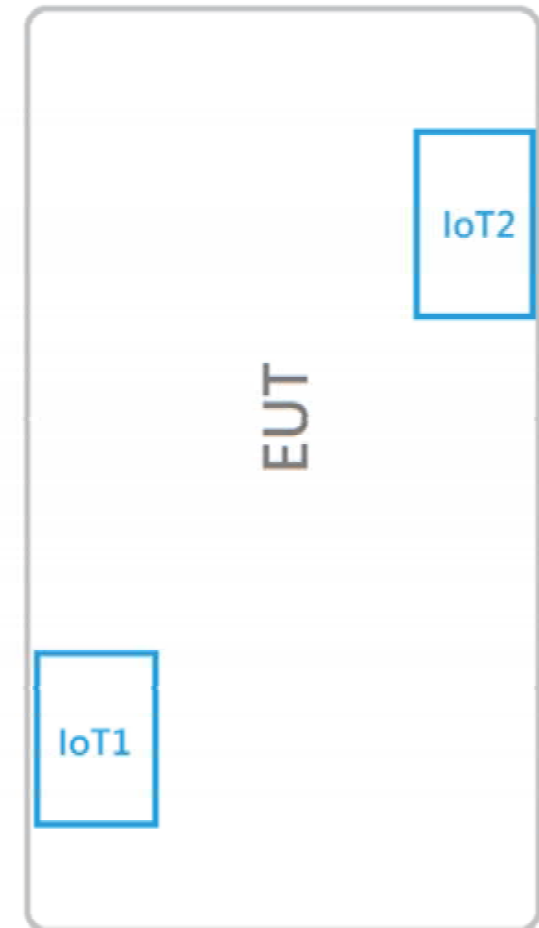
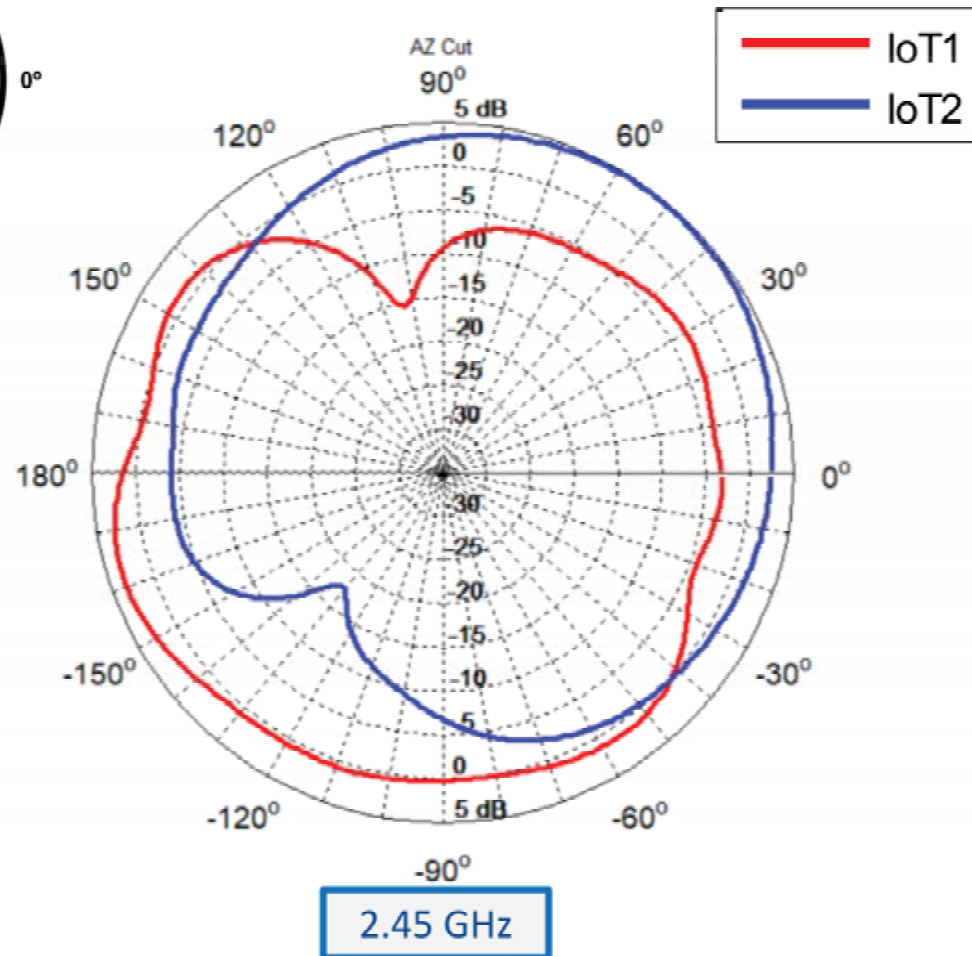
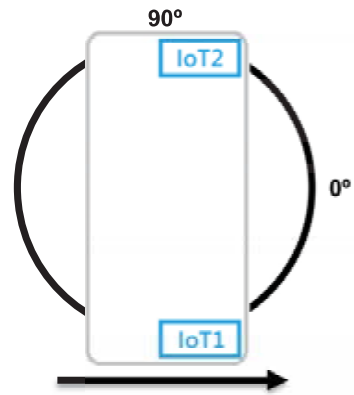
Elevation (Side to Side) Cut - Power Sum

6 GHz Antennas

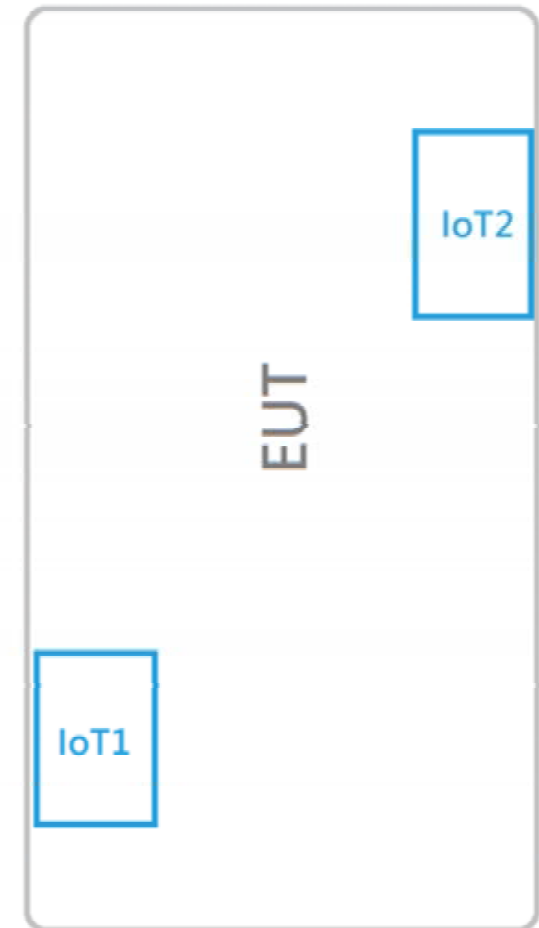
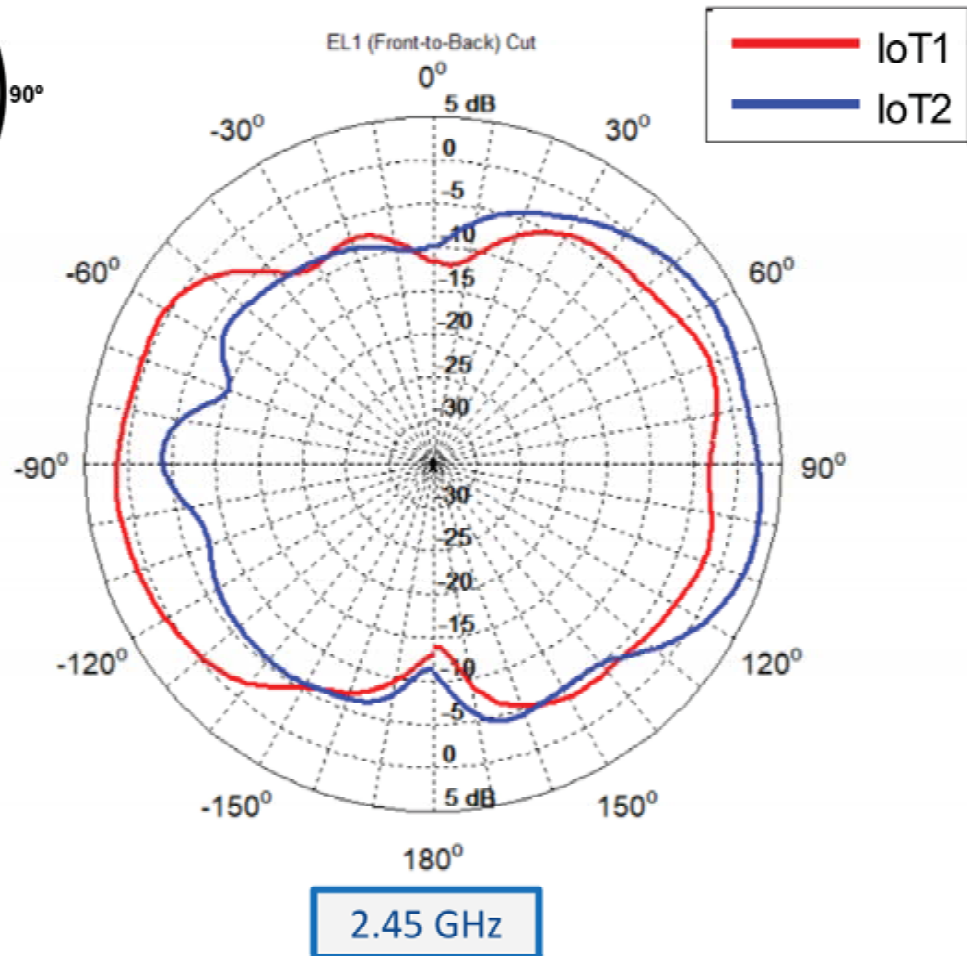
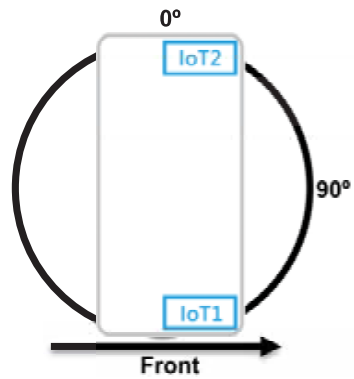


Azimuth Cut - Power Sum

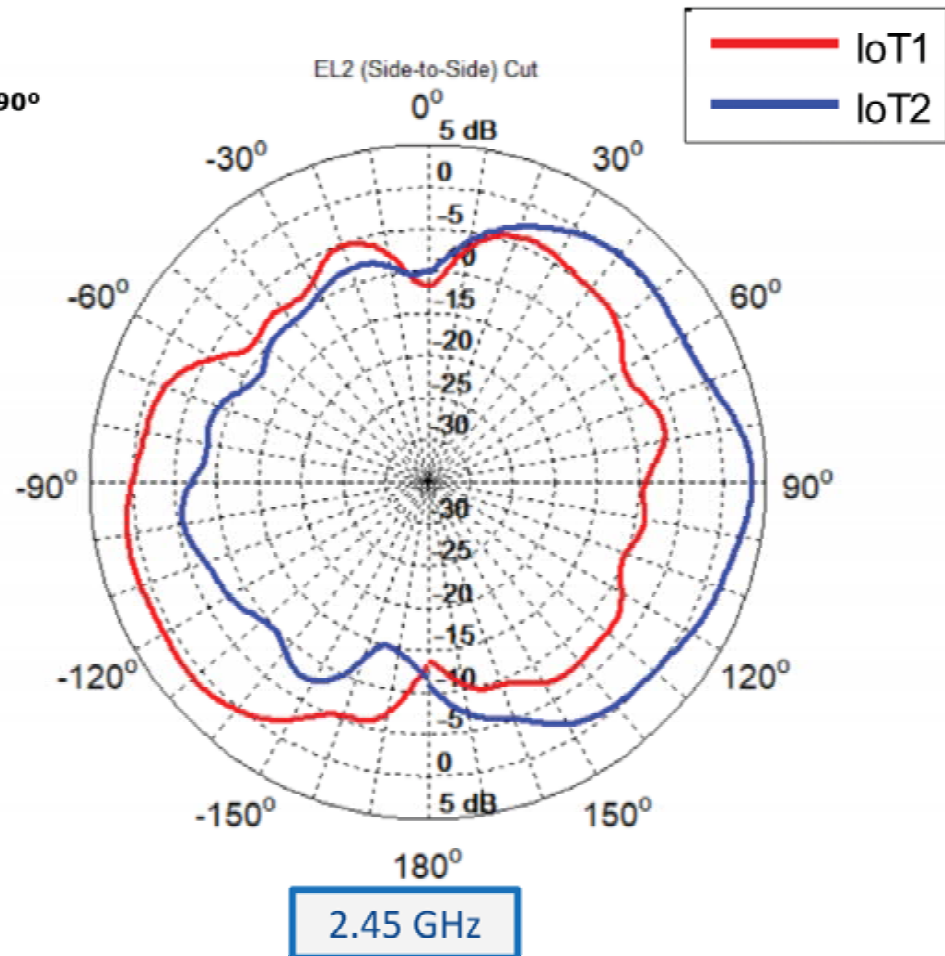
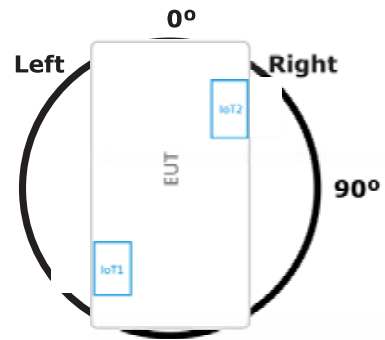
System Coverage – IoT Antennas



Elevation (Front to Back) Cut - Power Sum System Coverage – **IoT** Antennas

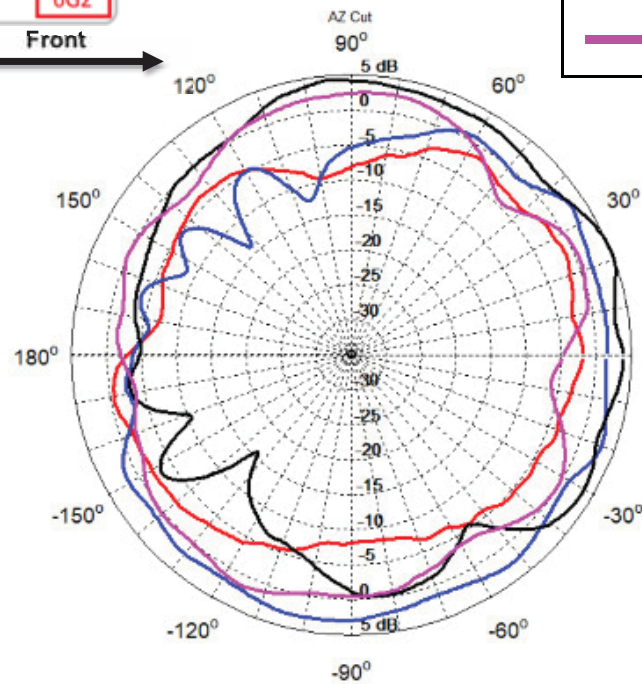
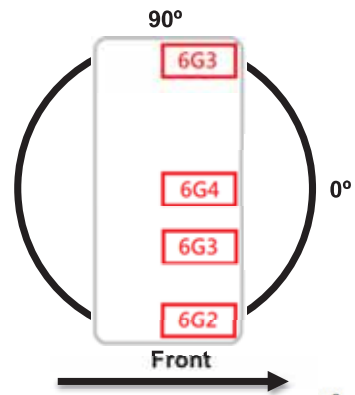


Elevation (Side to Side) Cut - Power Sum System Coverage – IoT Antennas

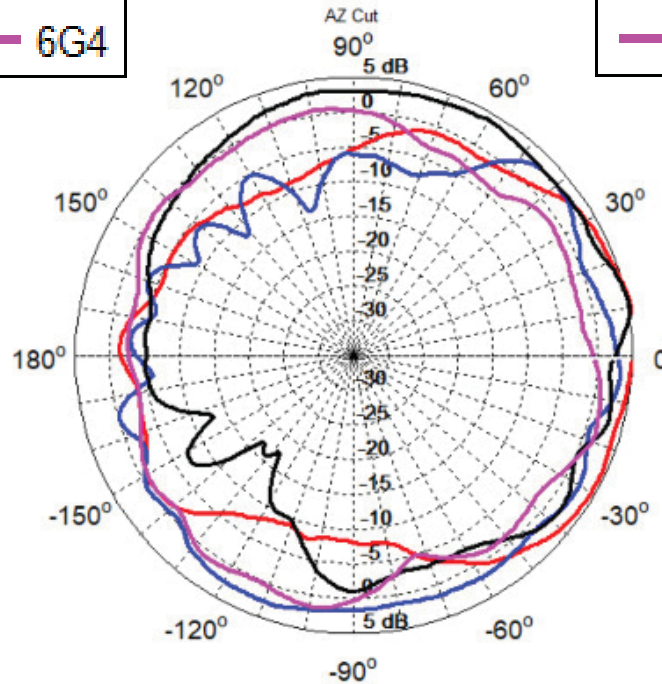


Azimuth Cut - Power Sum

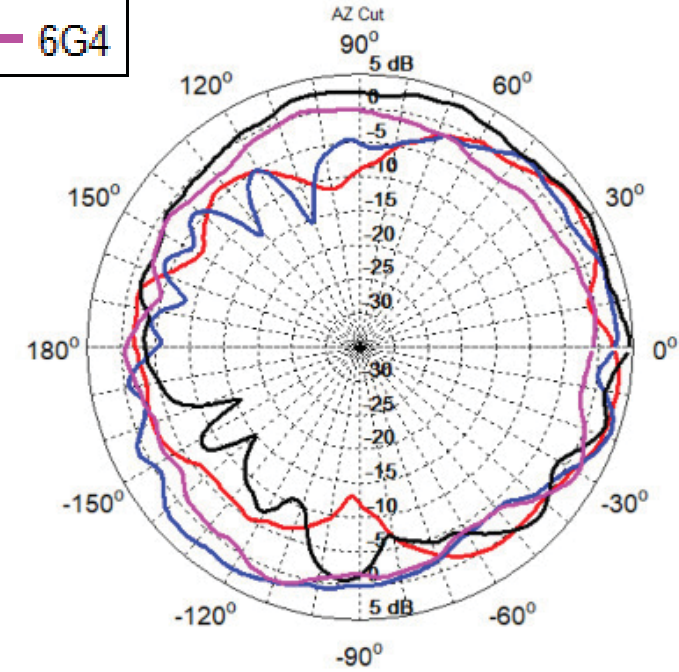
System Coverage – 6GHz Antennas



5925 MHz

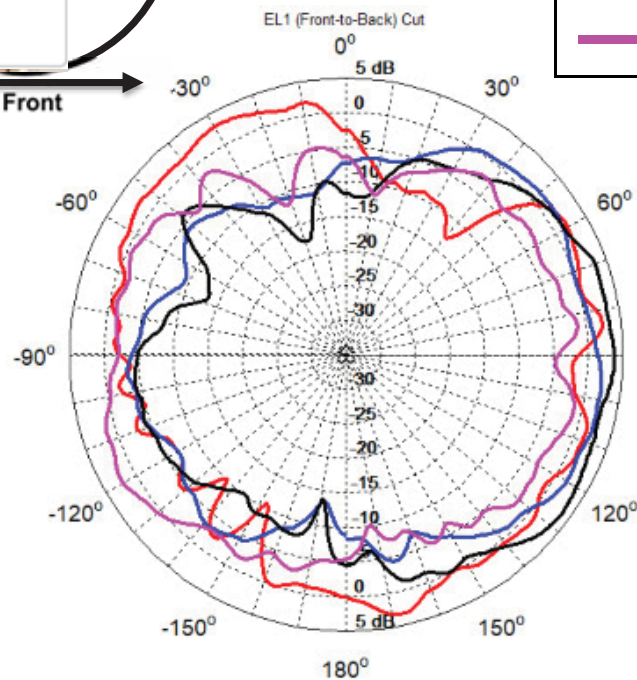
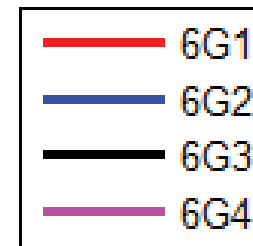
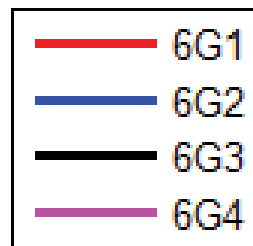
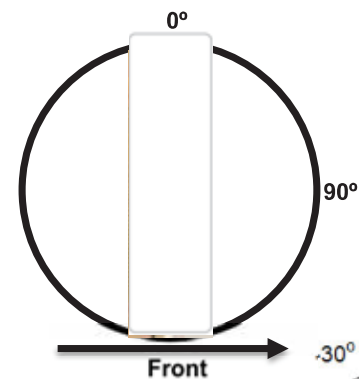


6500 MHz

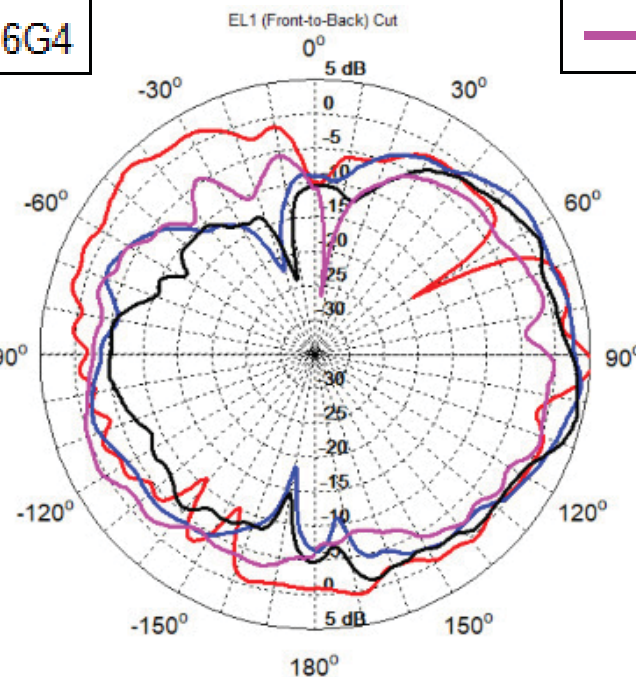


7125 MHz

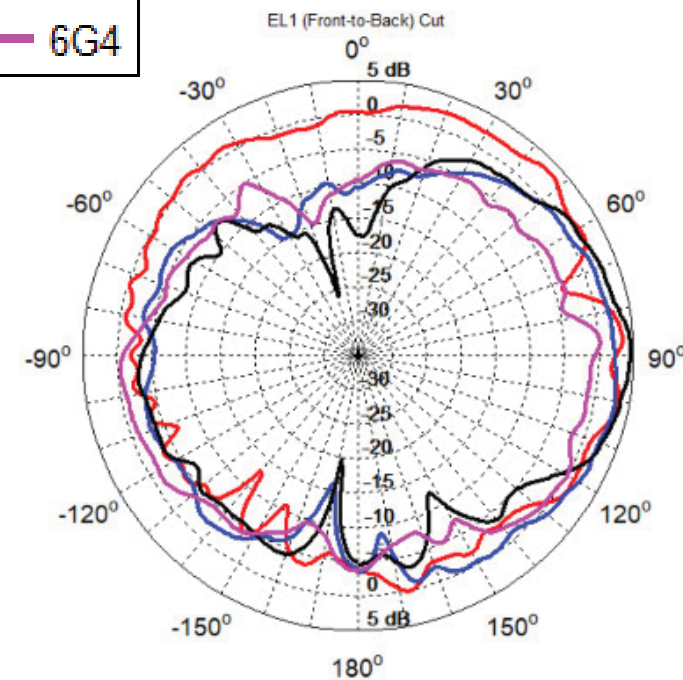
Elevation (Front to Back) Cut - Power Sum System Coverage – 6GHz Antennas



5925 MHz

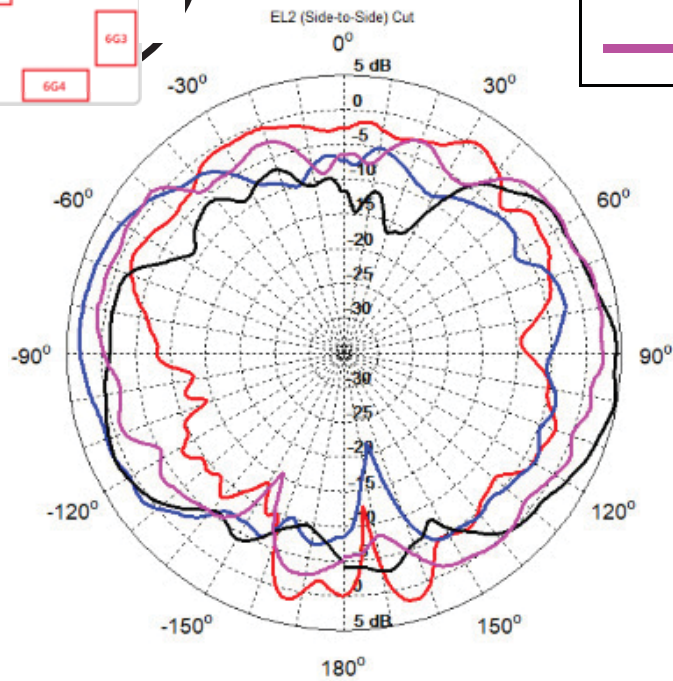
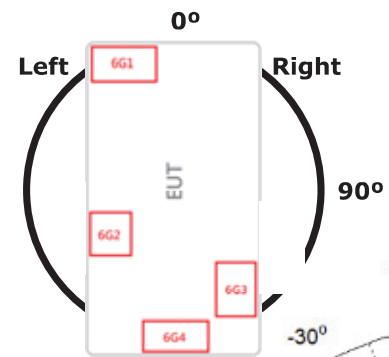


6500 MHz

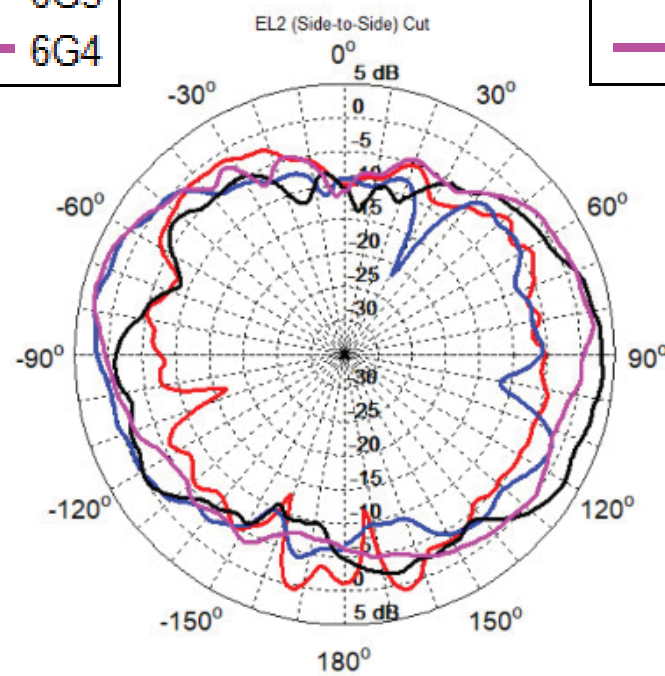
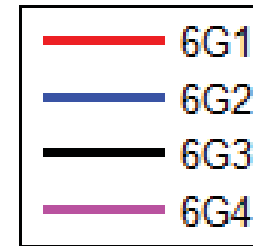


7125 MHz

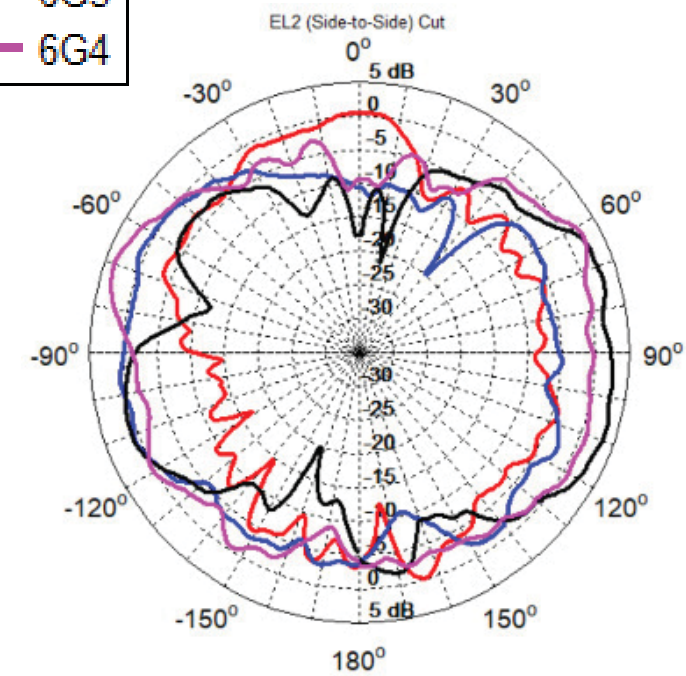
Elevation (Side to Side) Cut - Power Sum System Coverage – 6GHz Antennas



5925 MHz



6500 MHz



7125 MHz

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