

GALTRONICS

WHEN CONNECTIONS COUNT



Adtran Gemtek SKU #2 Pre Production Antenna Performance

Galtronics Project:
7756

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Introduction

- » Galtronics tuned the antenna solution for Adtran Gemtek SKU #2
- » There are 8 antennas such as four Dual Band antennas (DB1,DB2,DB3, and DB4) , for 5 GHz antennas (5G1,5G2,5G3, and 5G4), and one DFS antenna
- » All antennas are DC-grounded antennas
- » The operating frequency of the Dual band Antennas is 2.4 GHz-2.5 GHz and 5.47 GHz-5.85 GHz. The operating frequency of 5 GHz antenna is 5.15 GHz- 5.35 GHz.
- » The operating frequency of DFS antenna is 5.15 GHz- 5.825 GHz.
- » Measured return loss, isolation, peak gain, efficiency, composite gain and gain pattern of the antennas

DB Antenna Peak Gain and Efficiency

DB1 LB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	3.588	5.075	71.00 %
	2450	3.618	5.332	67.39 %
	2500	4.356	6.480	61.32 %
Average				66.57 %

DB1 HB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5500	4.287	5.493	75.76 %
	5725	4.341	5.376	78.80 %
	5825	3.988	5.058	78.17 %
Average				77.58 %

DB2 LB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	1.745	3.976	59.83 %
	2450	3.414	5.538	61.32 %
	2500	3.624	6.212	55.11 %
Average				58.75 %

DB2 HB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5500	4.289	5.211	80.86 %
	5725	4.174	5.296	77.24 %
	5825	3.970	5.511	70.12 %
Average				76.07 %

DB3 LB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	2.890	4.801	64.40 %
	2450	3.099	4.586	71.02 %
	2500	3.309	4.929	68.87 %
Average				68.10 %

DB3 HB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5500	4.302	5.610	74.00 %
	5725	4.634	5.626	79.58 %
	5825	4.483	5.615	77.05 %
Average				76.88 %

DB4 LB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	4.196	6.141	63.90 %
	2450	4.574	6.073	70.80 %
	2500	4.732	6.542	65.91 %
Average				66.87 %

DB4 HB	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5500	4.188	5.318	77.08 %
	5725	3.938	5.040	77.59 %
	5825	4.223	5.377	76.67 %
Average				77.11 %

5GHz and DFS Antenna Peak Gain and Efficiency

	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
DFS	5150	5.014	7.143	61.24 %
	5250	5.444	7.514	62.08 %
	5350	5.756	7.981	59.91 %
	5500	5.013	7.454	57.00 %
	5725	4.517	6.852	58.42 %
	5825	5.026	7.440	57.36 %
	Average			59.34 %

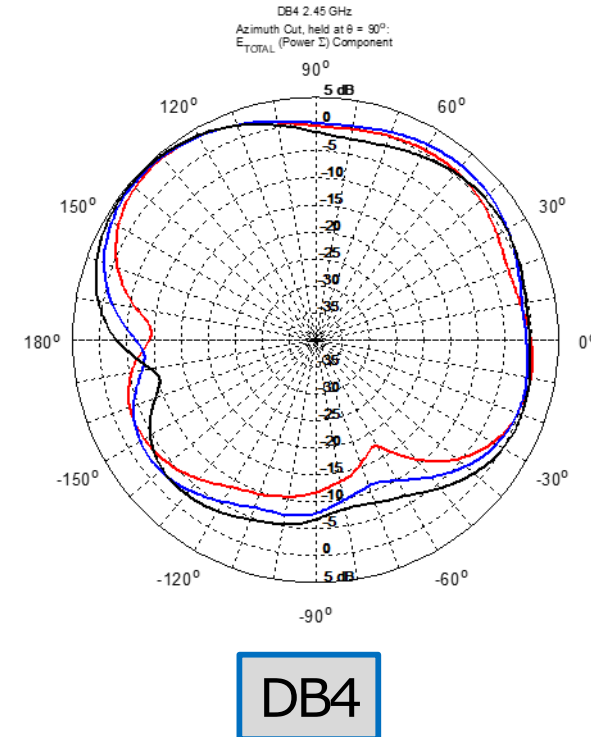
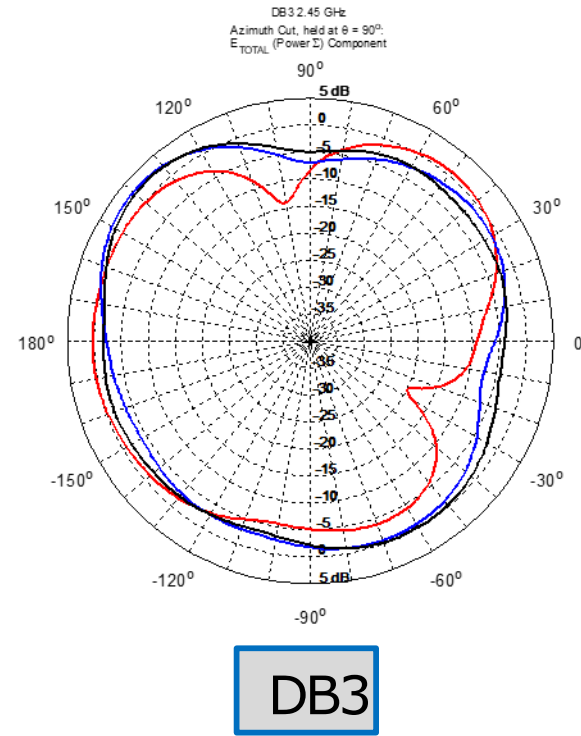
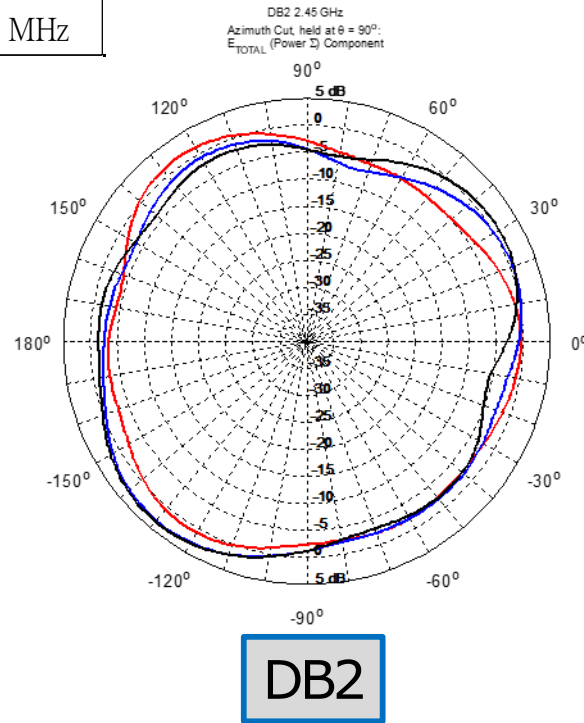
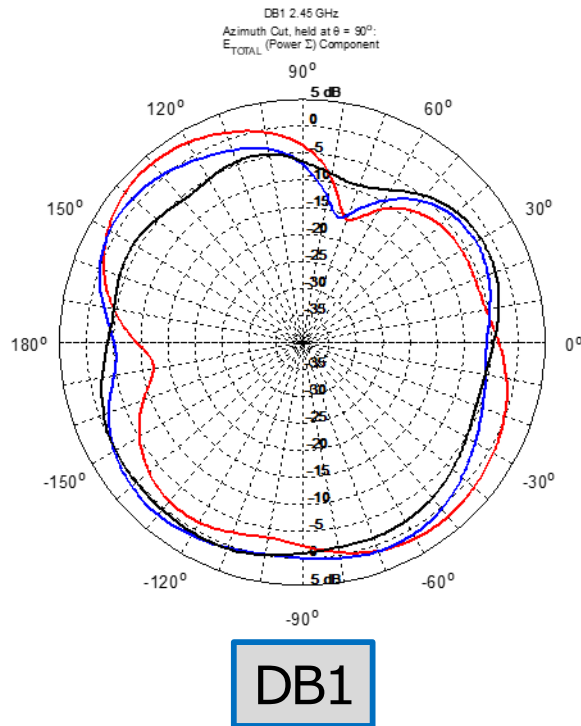
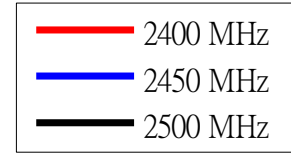
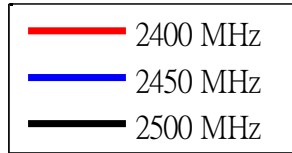
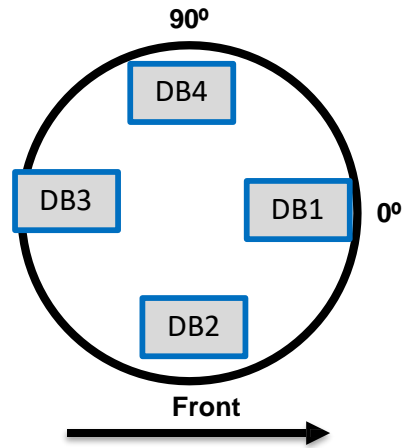
	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
5G1	5150	3.983	5.404	72.09 %
	5250	3.544	5.018	71.21 %
	5350	3.254	4.447	75.99 %
	Average			73.10 %

	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
5G2	5150	3.679	5.498	65.78 %
	5250	3.713	5.316	69.14 %
	5350	4.354	5.664	73.96 %
	Average			69.63 %

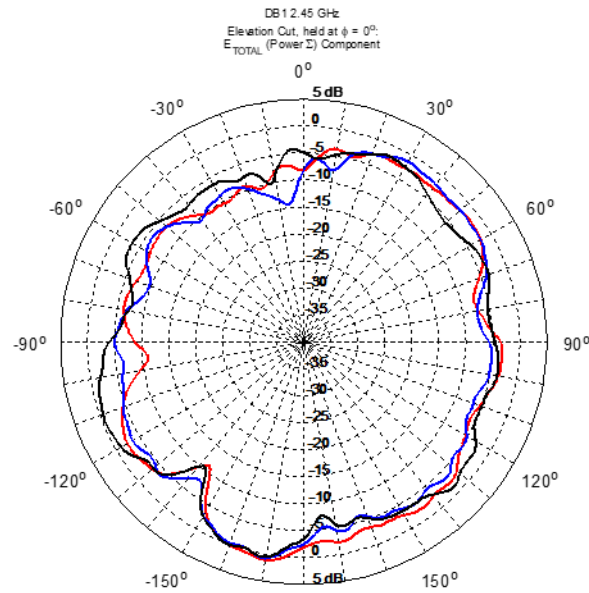
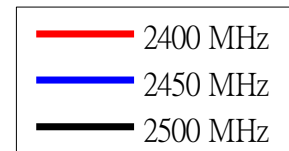
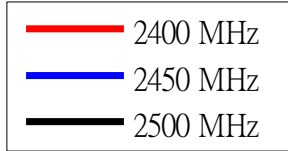
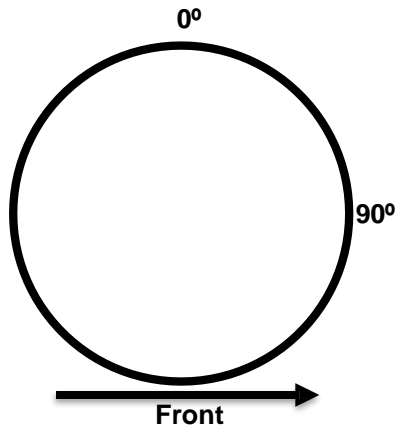
	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
5G3	5150	3.151	5.068	64.31 %
	5250	3.385	4.997	69.01 %
	5350	4.633	5.786	76.68 %
	Average			70.00 %

	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
5G4	5150	4.194	5.663	71.30 %
	5250	4.338	5.902	69.76 %
	5350	4.690	6.035	73.37 %
	Average			71.48 %

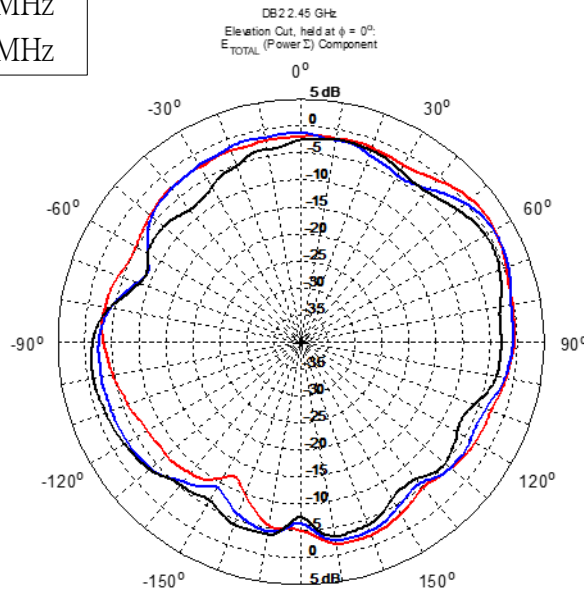
Azimuth Cut - Power Sum 2.45 GHz Band Antennas



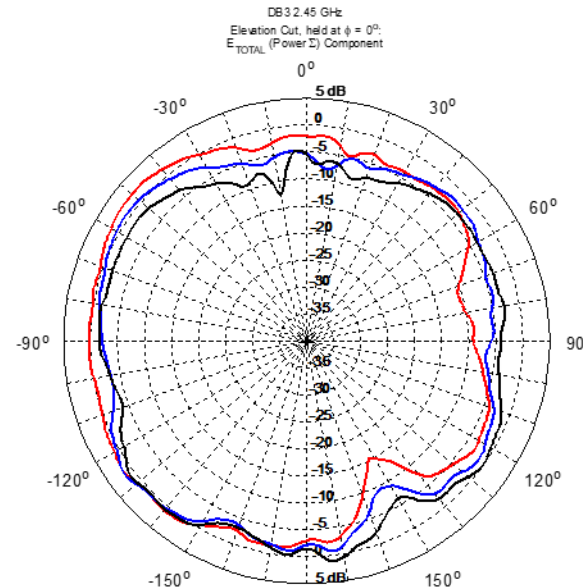
Elevation (Front to Back) Cut - Power Sum 2.45 GHz Band Antennas



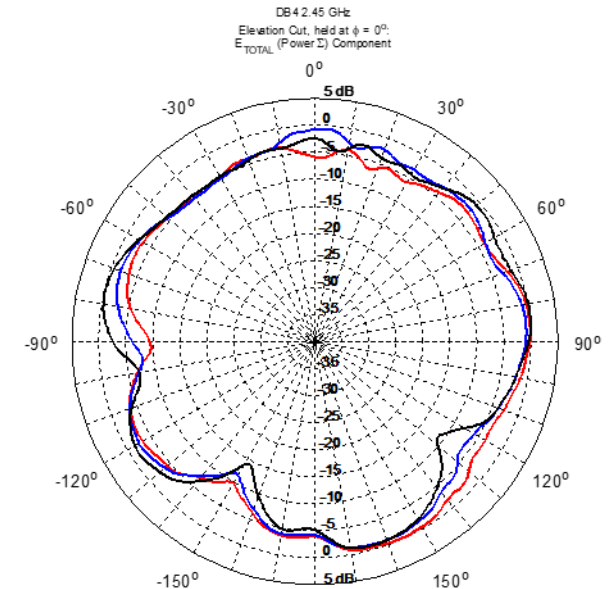
DB1



DB2

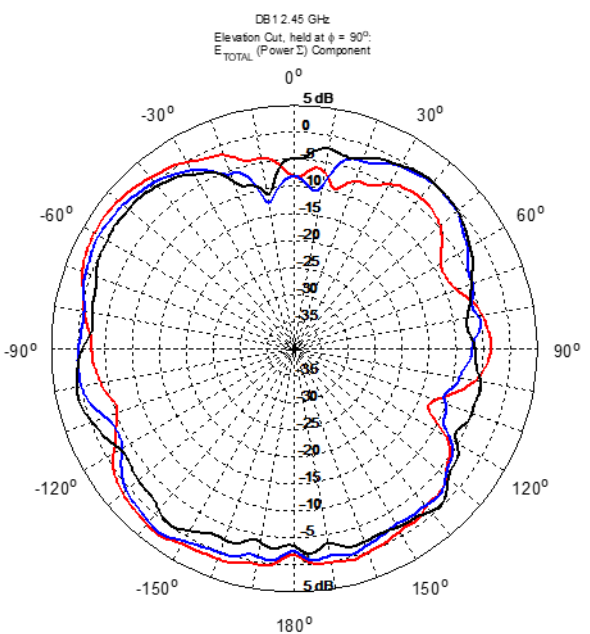
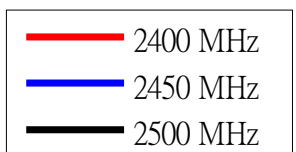
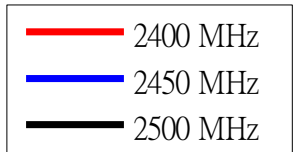
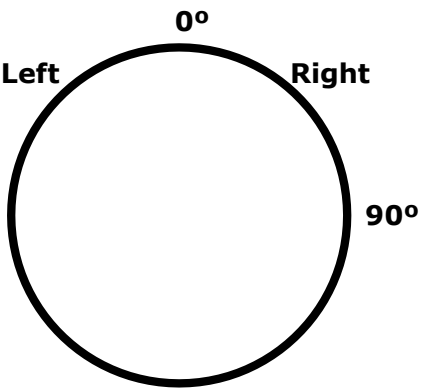


DB3

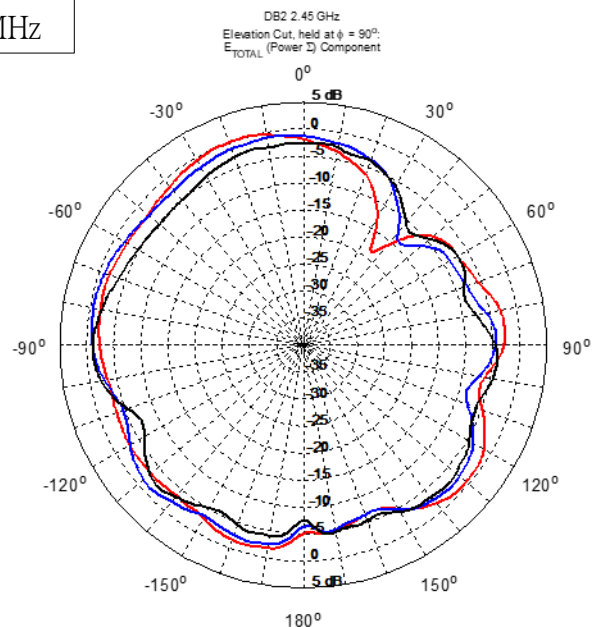


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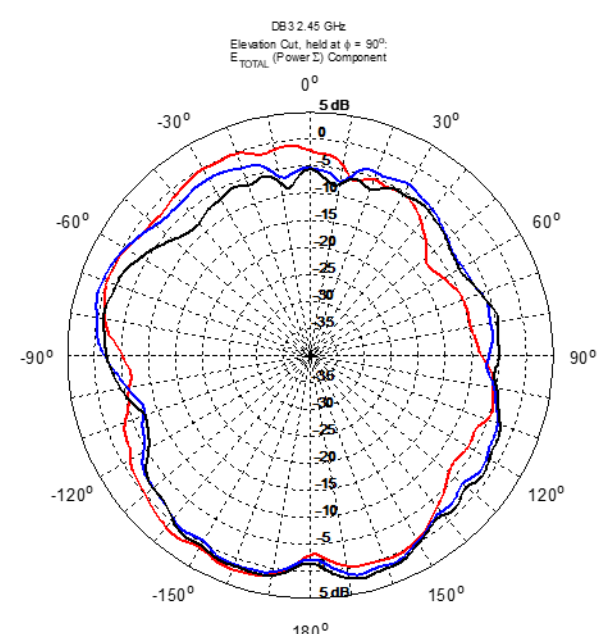
Elevation (Side to Side) Cut - Power Sum 2.45 GHz Band Antennas



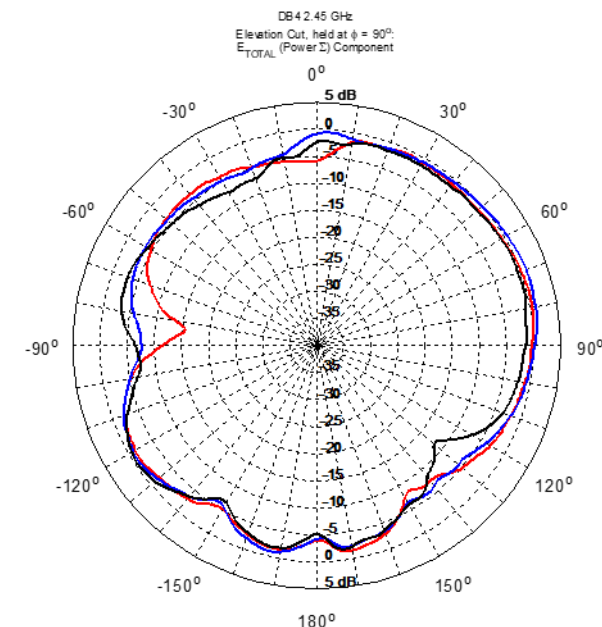
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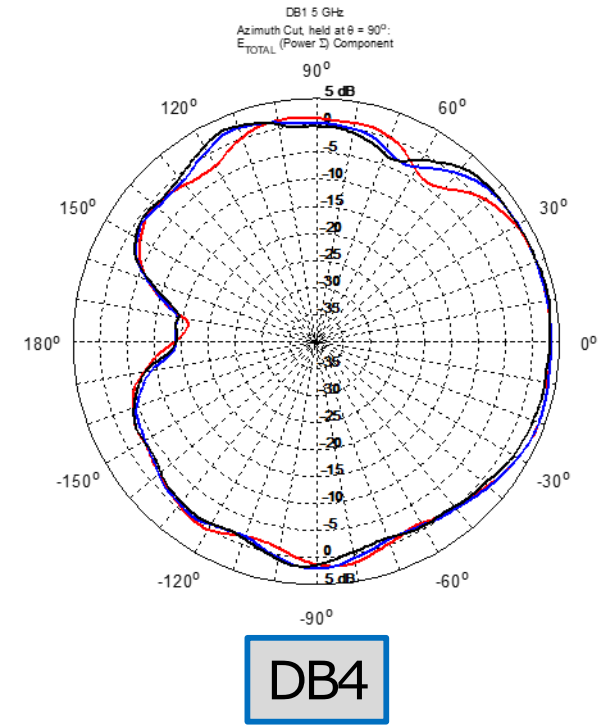
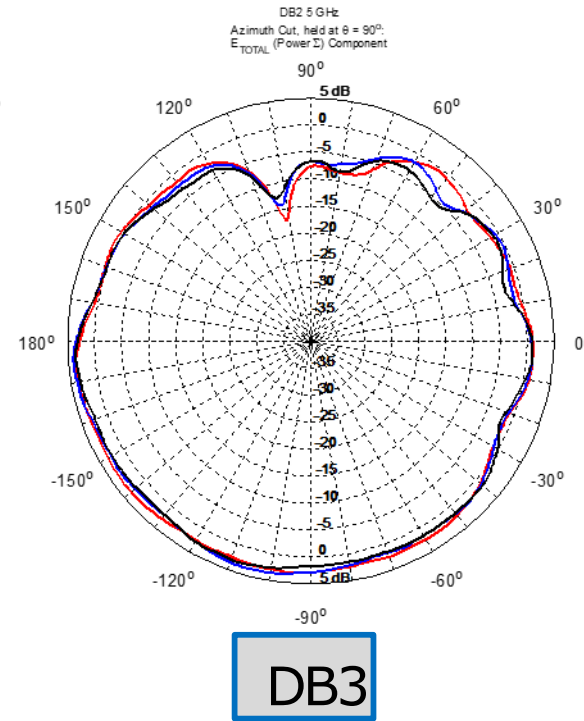
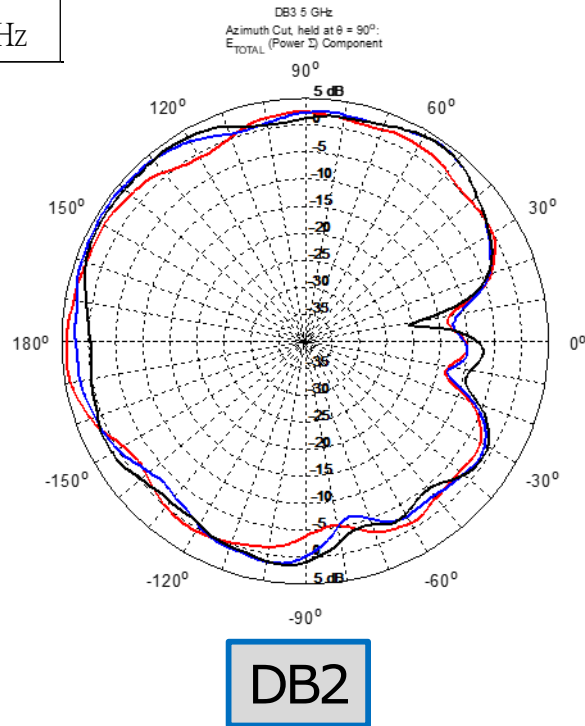
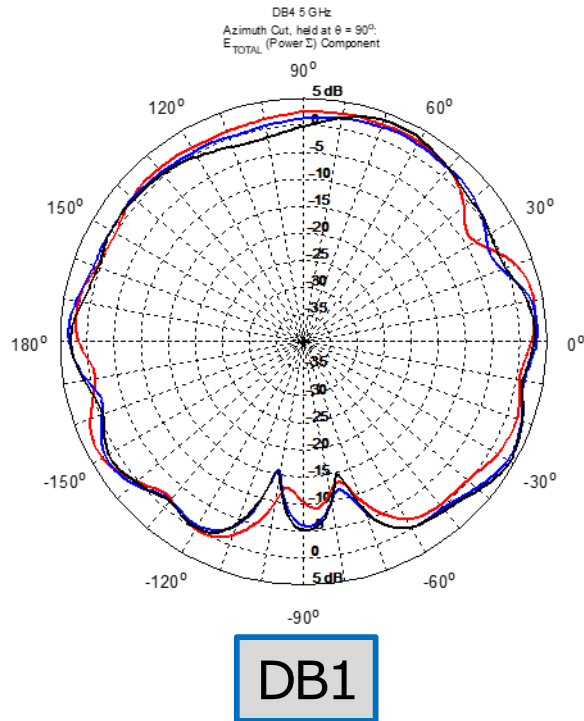
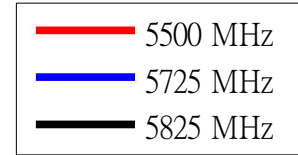
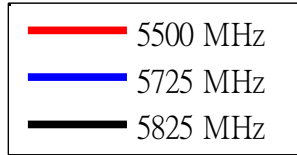
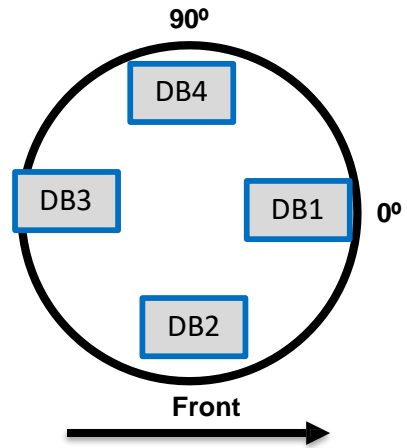


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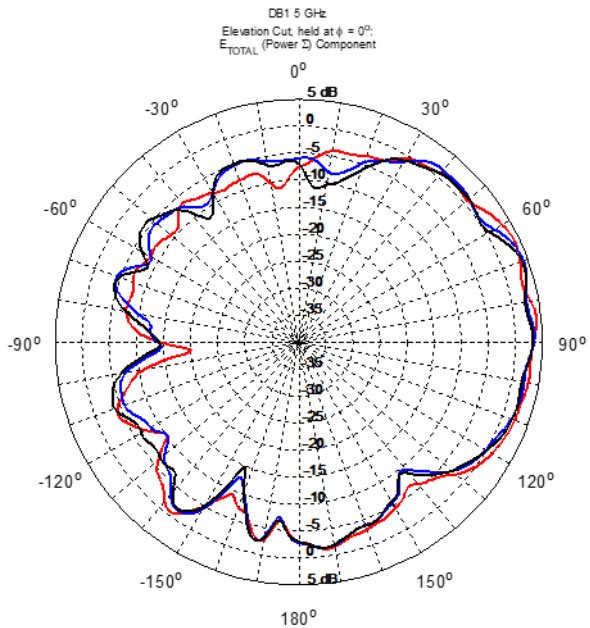
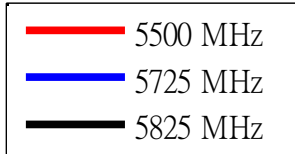
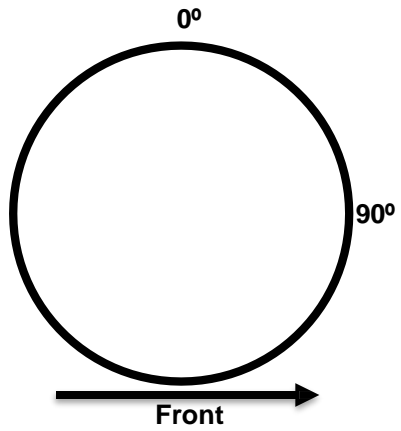


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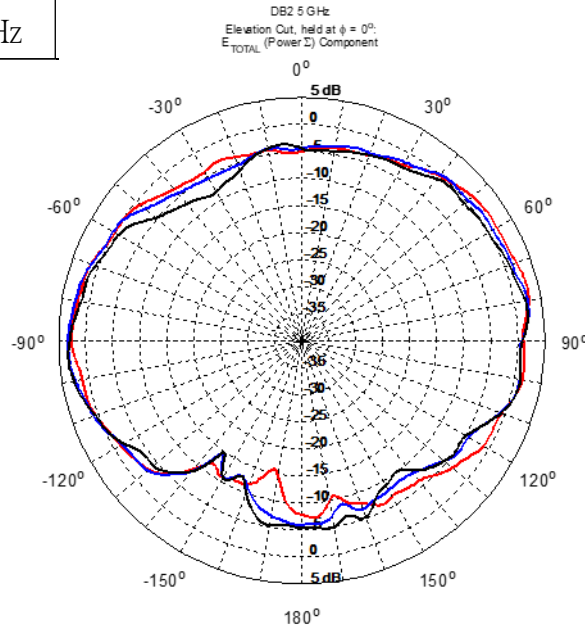
Azimuth Cut - Power Sum 5 GHz High Band Antennas



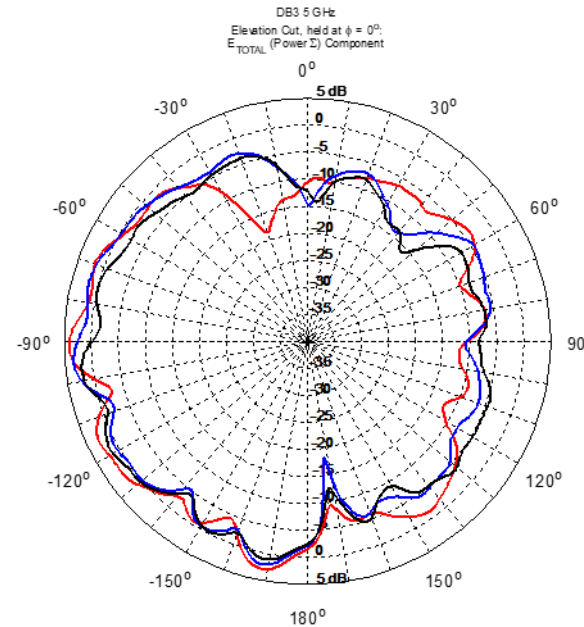
Elevation (Front to Back) Cut - Power Sum 5 GHz High Band Antennas



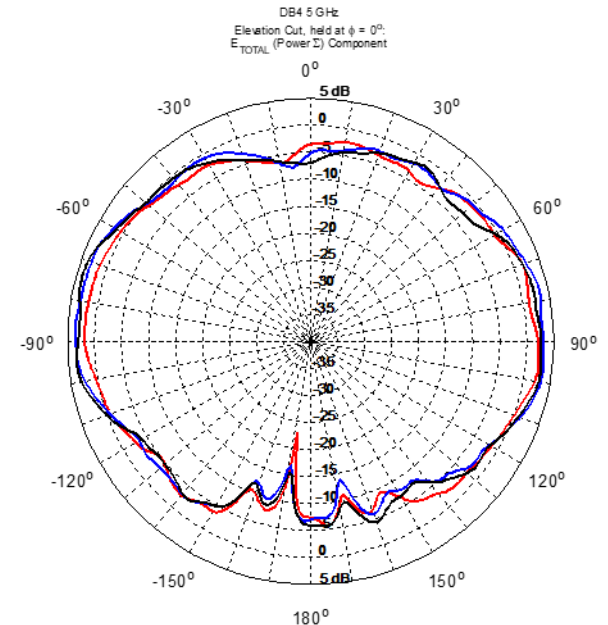
DB1



DB2

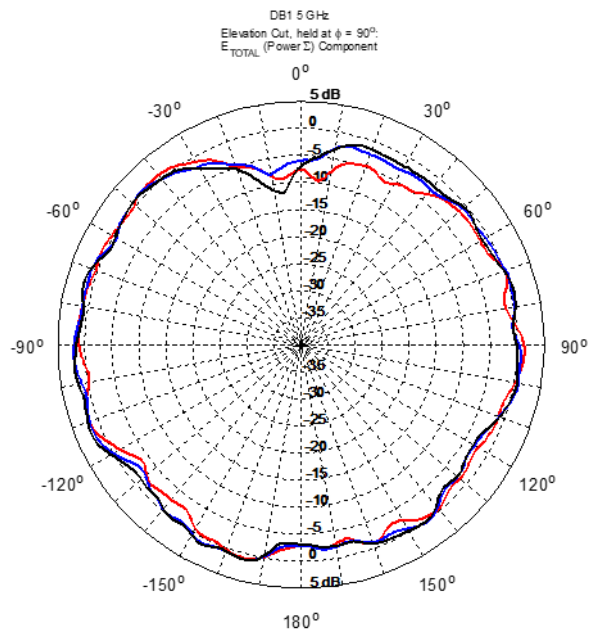
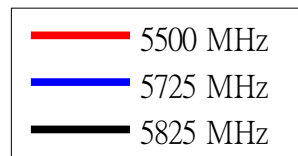
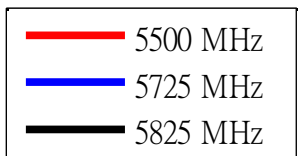
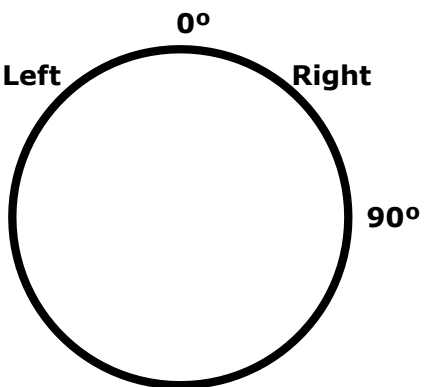


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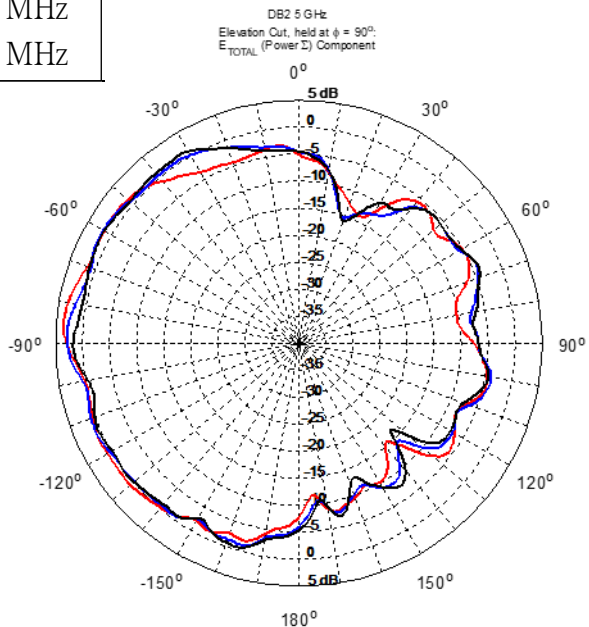


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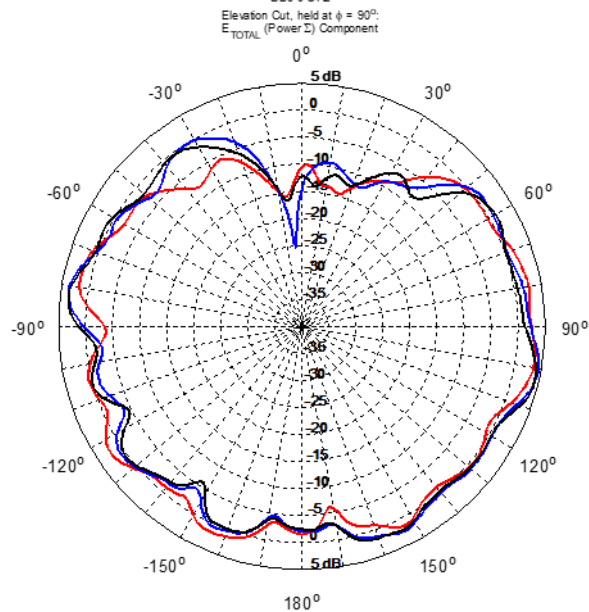
Elevation (Side to Side) Cut - Power Sum 5 GHz High Band Antennas



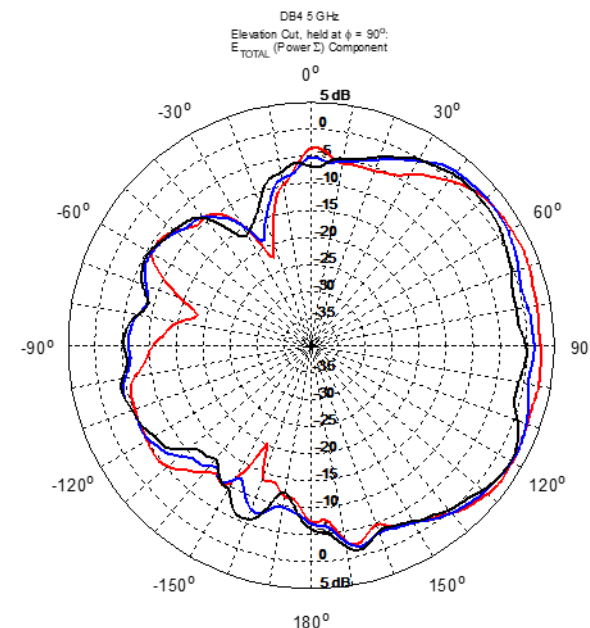
DB1



DB2

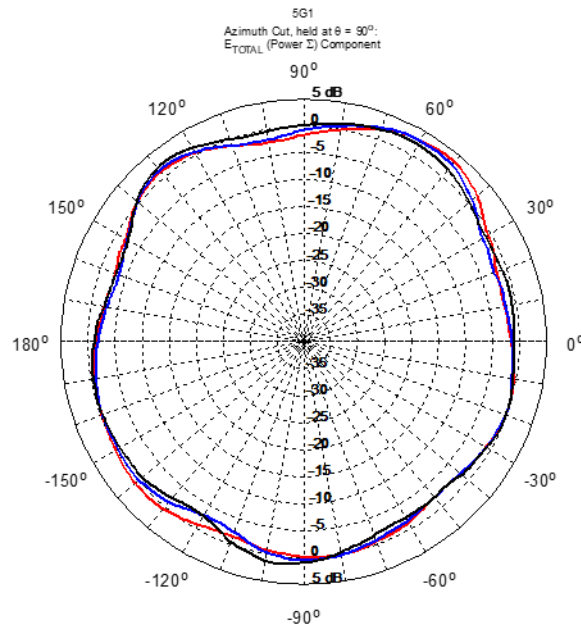
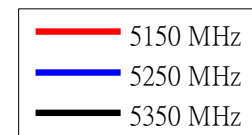
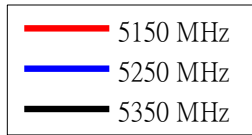
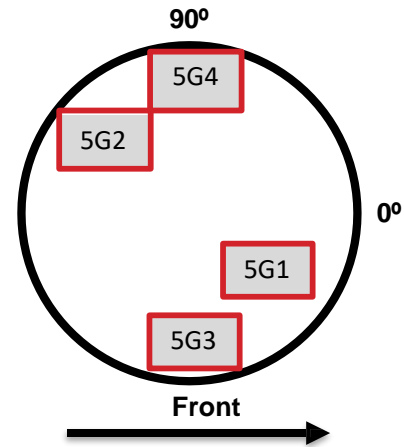


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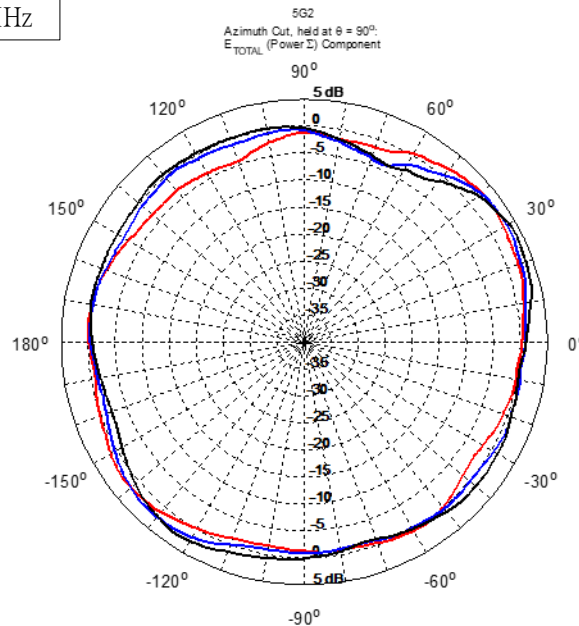


DB4

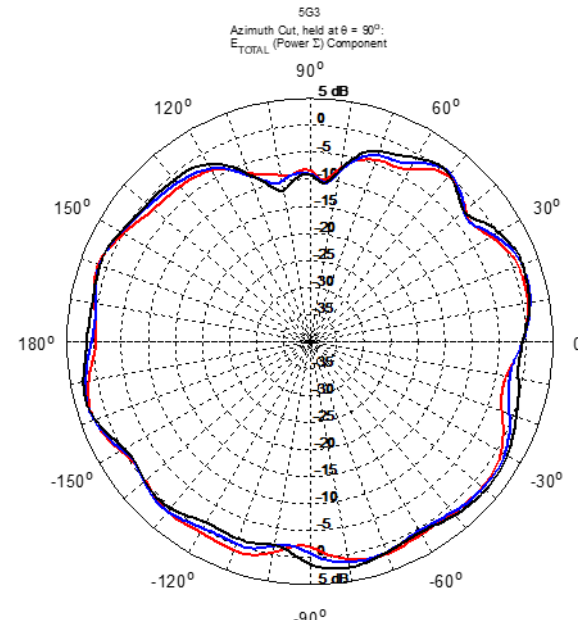
Azimuth Cut - Power Sum 5GHz Low Band Antennas



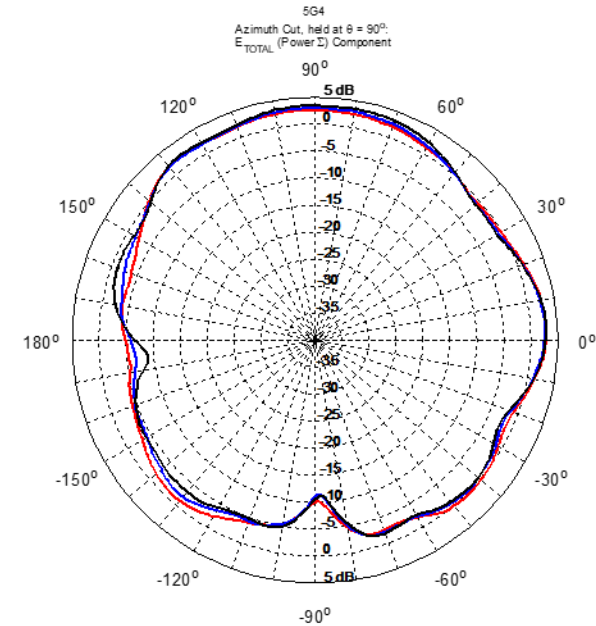
5G1



5G2

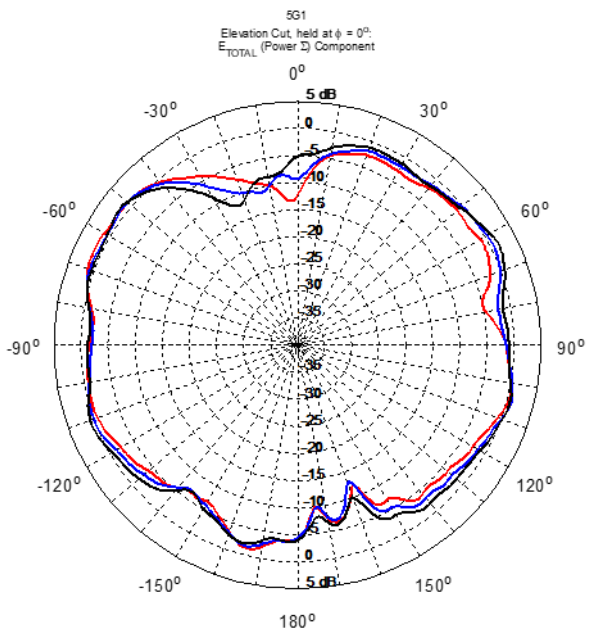
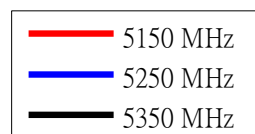
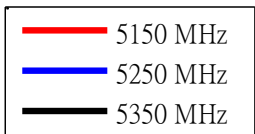
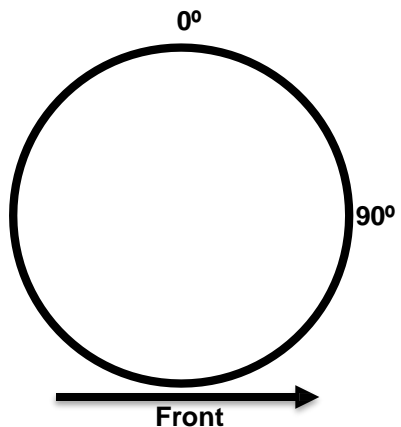


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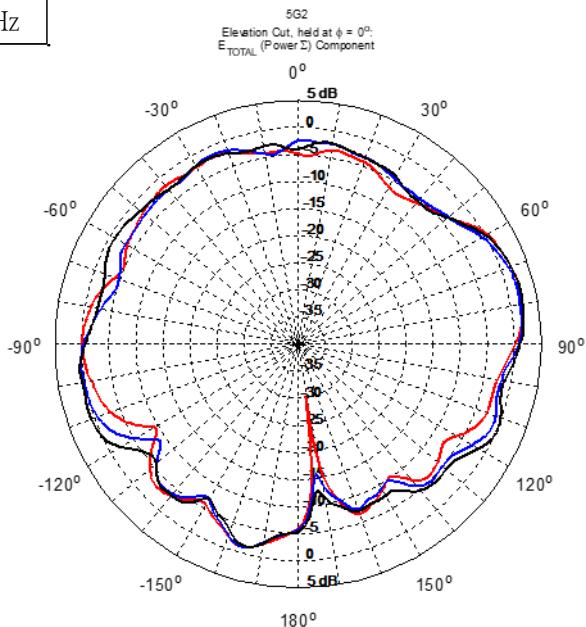


5G4

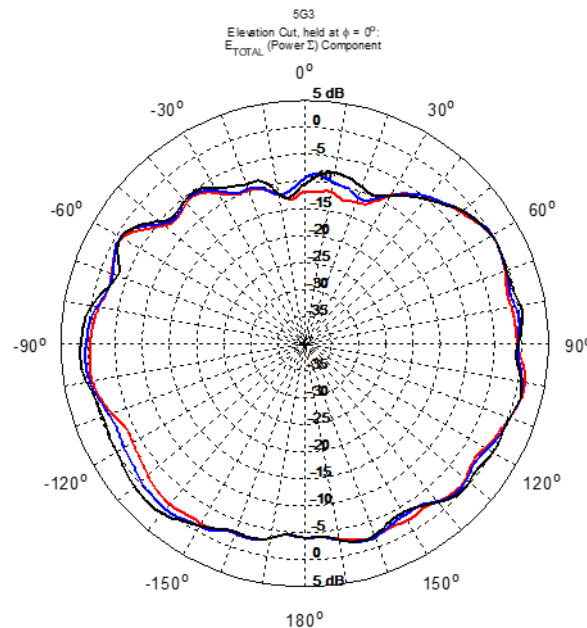
Elevation (Front to Back) Cut - Power Sum 5GHz Low Band Antennas



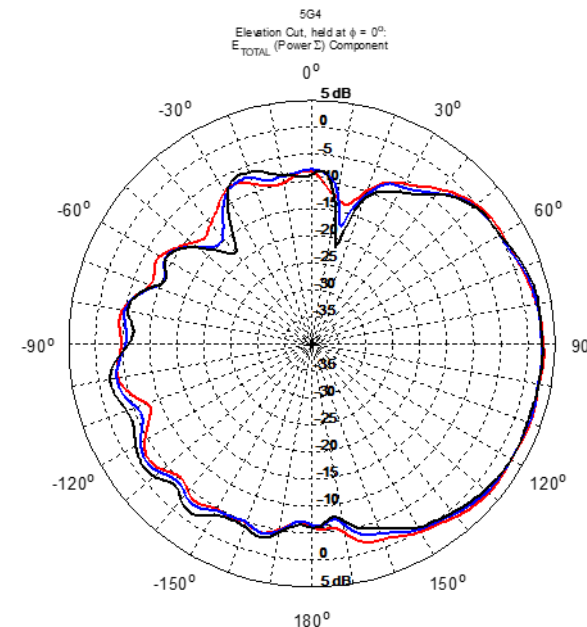
5G1



5G2

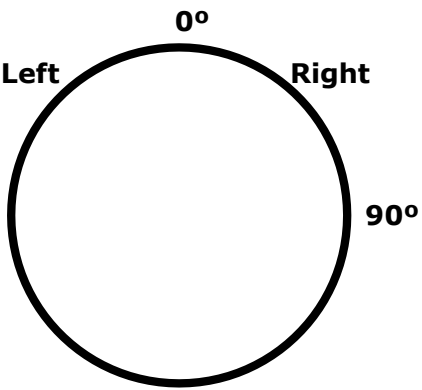


5G3



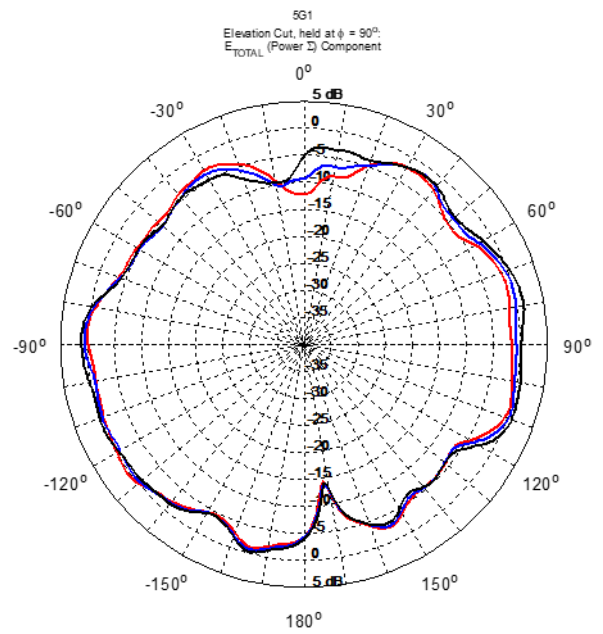
5G4

Elevation (Side to Side) Cut - Power Sum 5GHz Low Band Antennas

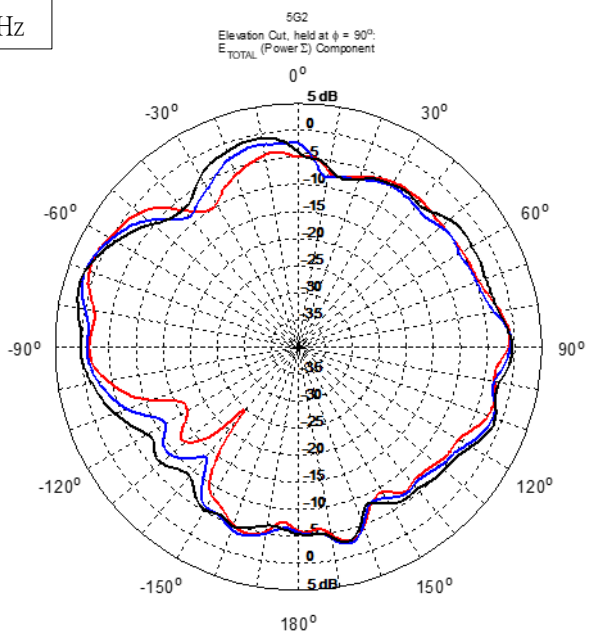


- 5150 MHz
- 5250 MHz
- 5350 MHz

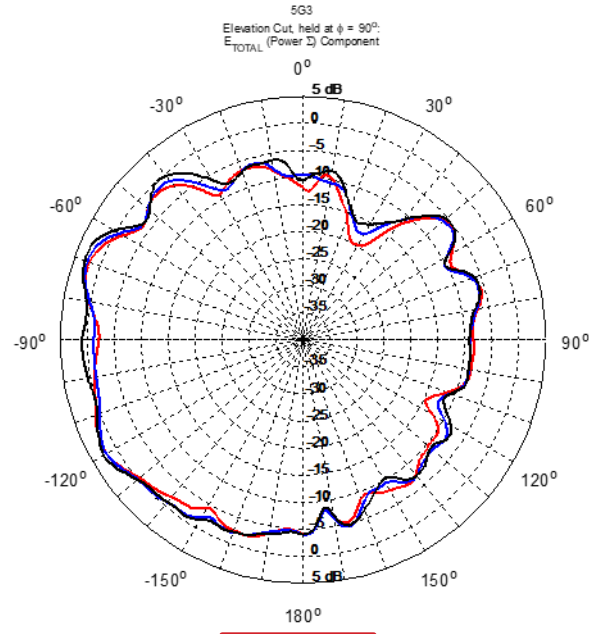
- 5150 MHz
- 5250 MHz
- 5350 MHz



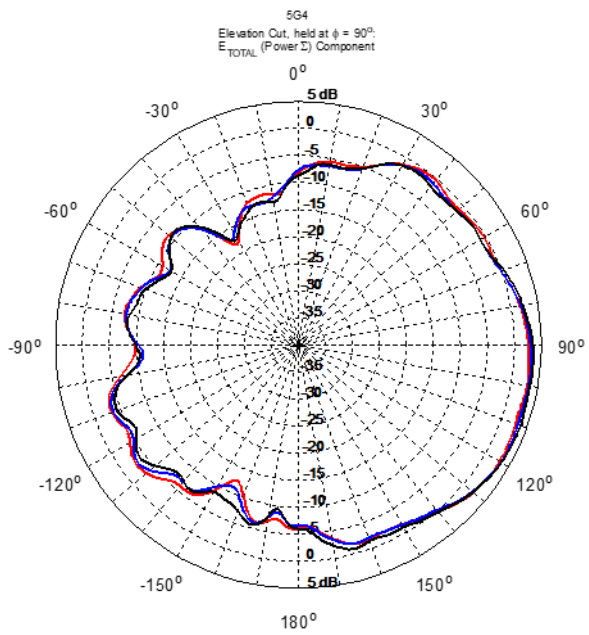
5G1



5G2



5G3



5G4

Thank You!

We Look Forward To Working Together

