

GALTRONICS

WHEN CONNECTIONS COUNT



Adtran Bonaza Peak SKU #1 Antenna Performance

Galtronics Project:
7756

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Introduction

- » Galtronics developed an antenna solution for Adtran Bonanza Peak SKU #1
- » Galtronics received the production unit from the customer
- » There are 8 antennas
 - Four Low Band antennas (LB1, LB2, LB3, and LB4)
 - Four 5 GHz antennas (5G1, 5G2, 5G3, and 5G4)
- » All antennas are DC-grounded antennas
- » The operating frequency of the Low band Antennas is 2.4 GHz-2.5 GHz. The
- » operating frequency of 5 GHz antenna is 5.15 GHz- 5.825 GHz.
- » Measured return loss, isolation, peak gain, efficiency, composite gain and gain pattern of the antennas

Low Band Antenna Peak Gain and Efficiency

LB1	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	3.795	5.539	66.93 %
	2450	3.698	5.426	67.17 %
	2500	2.960	5.029	62.10 %
Average				65.40 %

LB2	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	2.801	5.069	59.31 %
	2450	4.220	6.083	65.13 %
	2500	4.863	6.988	61.30 %
Average				61.91 %

LB3	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	2.462	4.585	61.32 %
	2450	3.516	5.236	67.30 %
	2500	3.882	5.600	67.33 %
Average				65.32 %

LB4	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	2400	2.994	5.278	59.11 %
	2450	4.661	6.431	66.52 %
	2500	4.052	6.147	61.73 %
Average				62.45 %

5 GHz Band Antenna Peak Gain and Efficiency

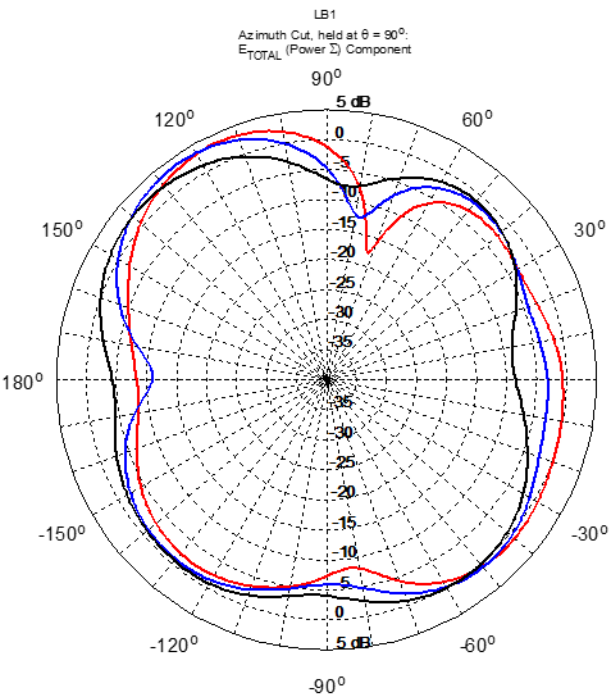
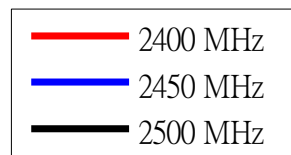
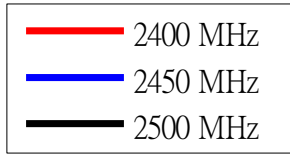
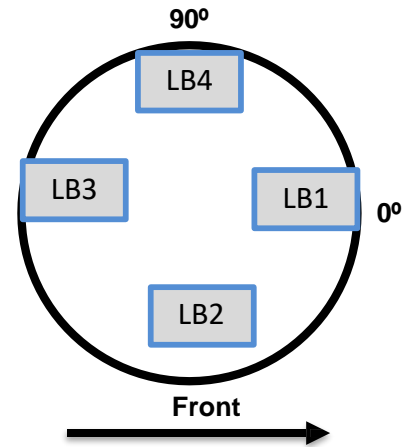
5G1	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5150	3.135	5.104	63.55 %
	5250	3.664	5.338	68.00 %
	5350	3.749	5.169	72.12 %
	5500	2.763	4.324	69.81 %
	5725	2.572	4.056	71.05 %
	5825	2.649	4.290	68.54 %
	Average			68.85 %

5G2	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5150	2.633	4.460	65.67 %
	5250	2.810	4.472	68.21 %
	5350	3.951	5.298	73.34 %
	5500	3.350	4.885	70.22 %
	5725	3.553	4.999	71.69 %
	5825	3.759	5.320	69.81 %
	Average			69.82 %

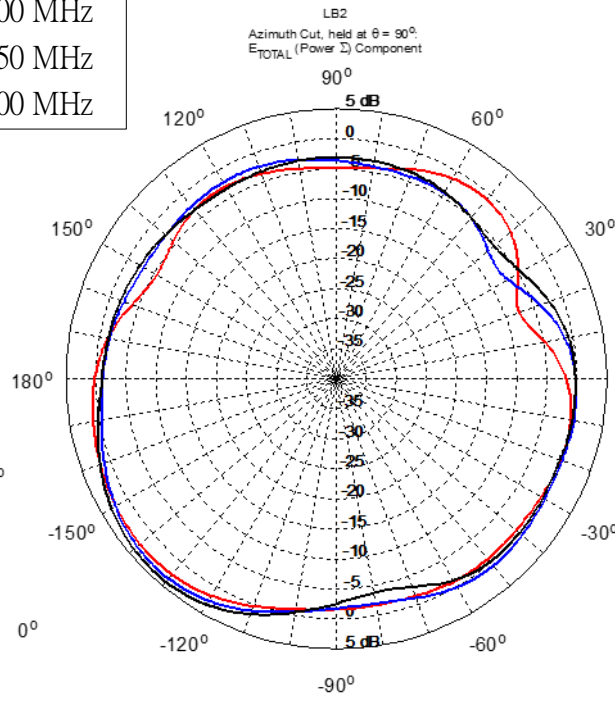
5G3	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5150	3.382	5.266	64.81 %
	5250	3.587	5.344	66.72 %
	5350	3.956	5.287	73.60 %
	5500	4.111	5.587	71.19 %
	5725	3.574	4.877	74.08 %
	5825	3.986	5.339	73.23 %
	Average			70.61 %

5G4	Freq (MHz)	Peak Gain (dBi)	Directivity (dBi)	Efficiency
	5150	3.378	5.256	64.89 %
	5250	4.053	5.870	65.82 %
	5350	4.006	5.461	71.53 %
	5500	4.120	5.706	69.42 %
	5725	4.088	5.586	70.83 %
	5825	4.789	6.297	70.66 %
	Average			68.86 %

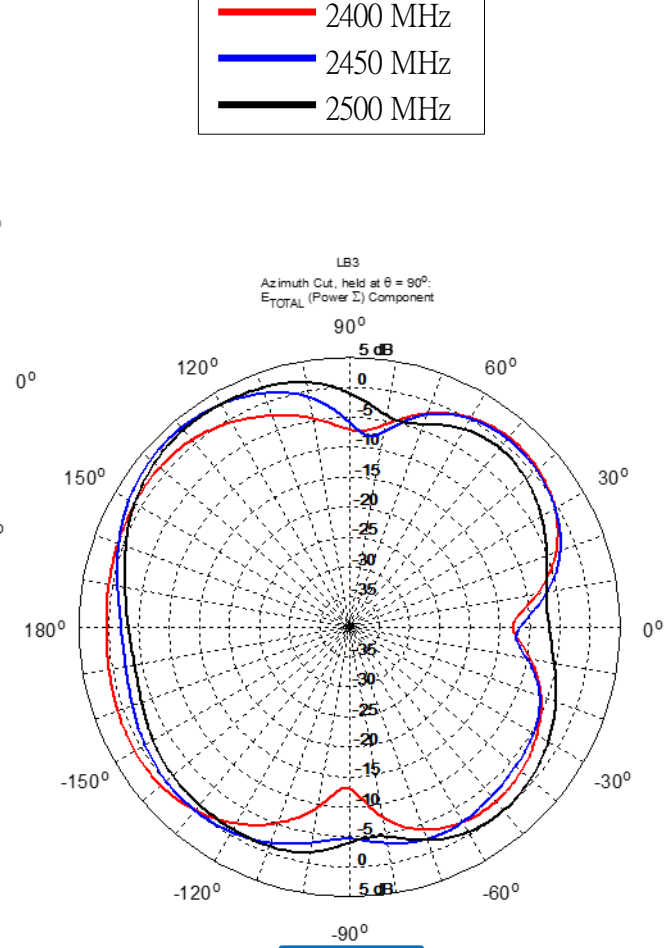
Azimuth Cut - Power Sum 2.45 GHz Band Antennas



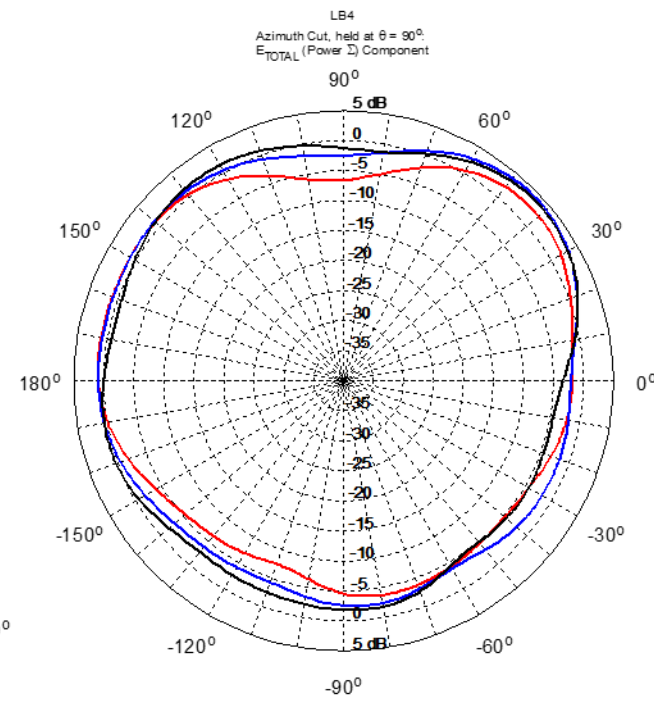
LB1



LB2

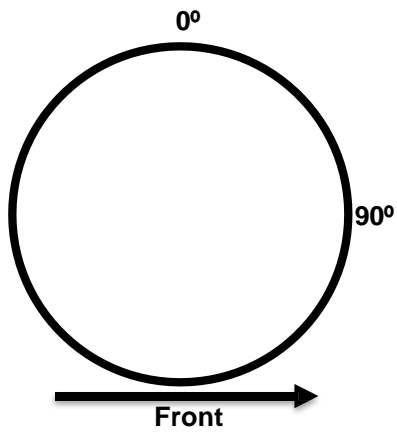


LB3



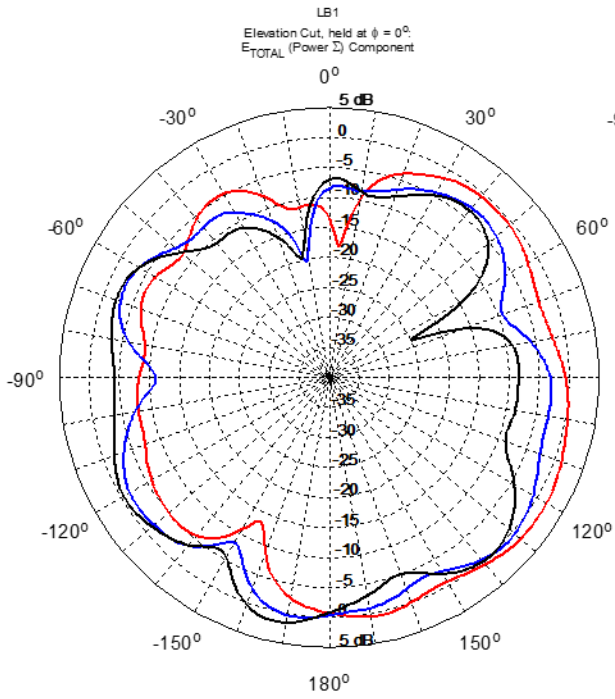
LB4

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

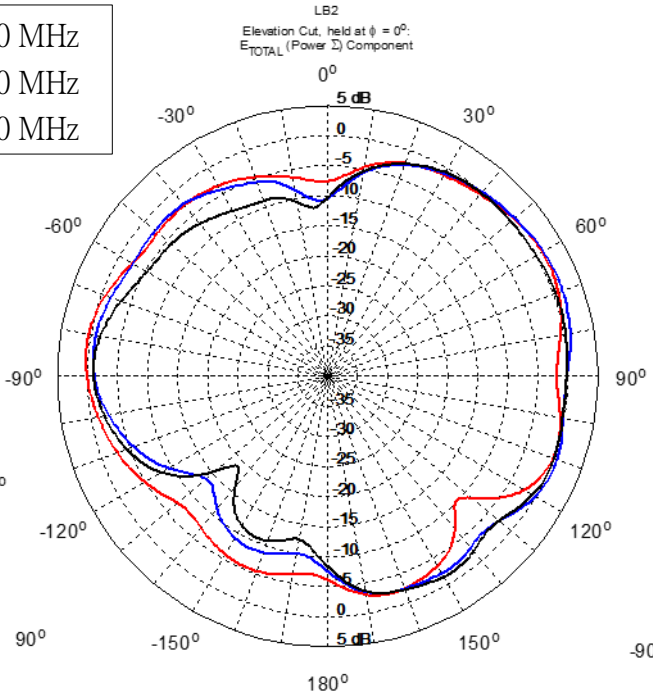


- 2400 MHz
- 2450 MHz
- 2500 MHz

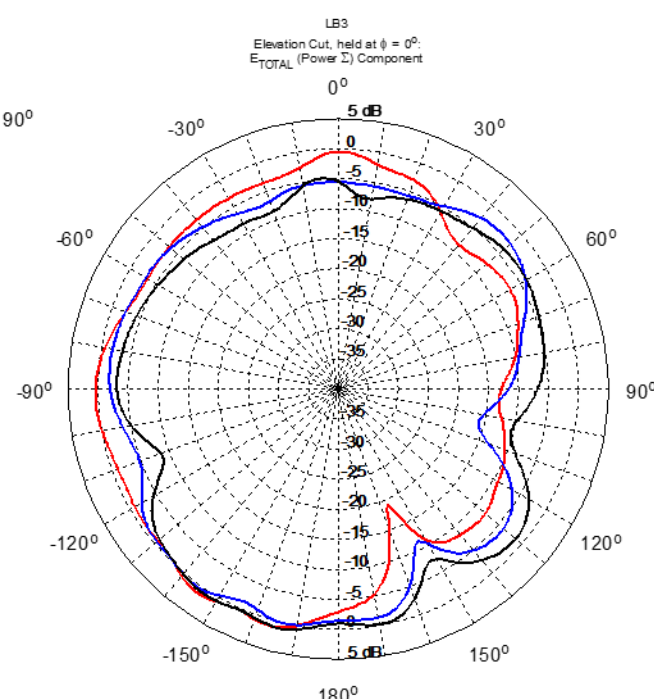
- 2400 MHz
- 2450 MHz
- 2500 MHz



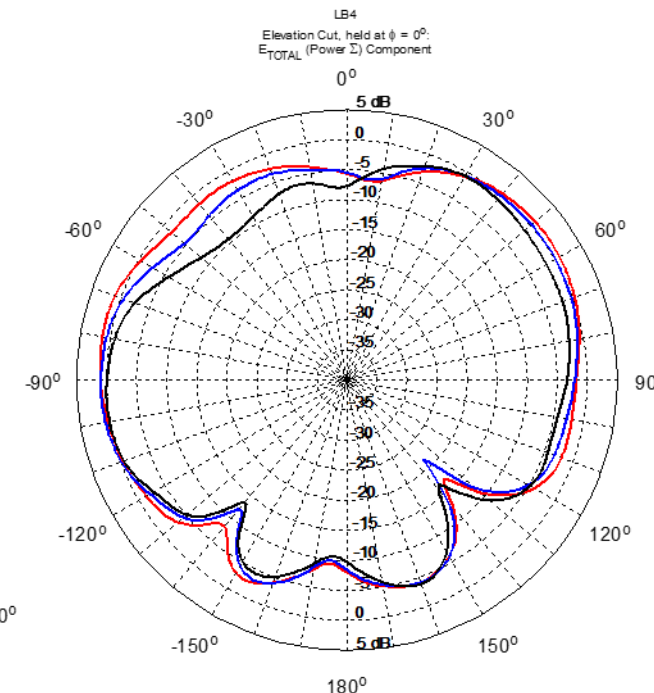
LB1



LB2

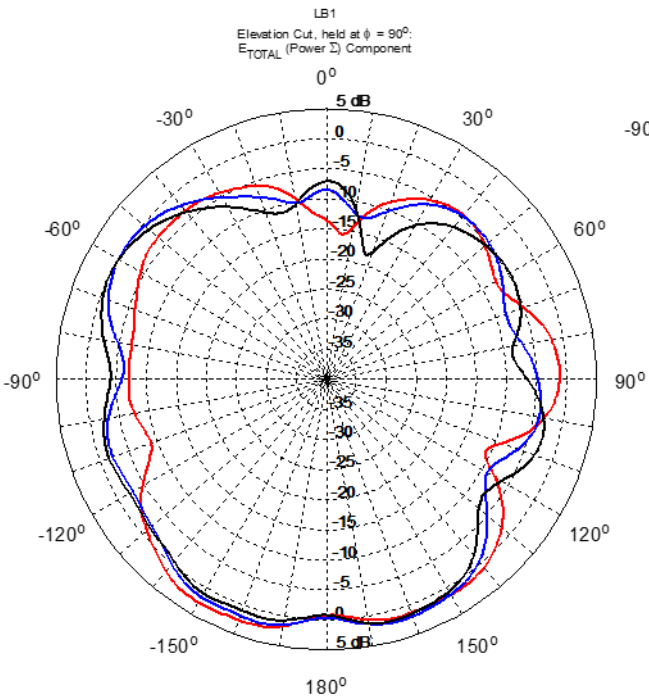
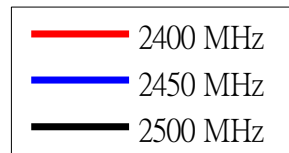
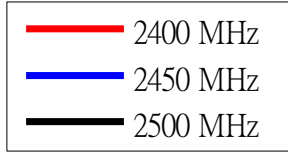
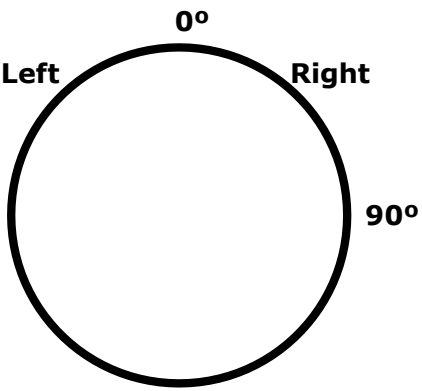


LB3

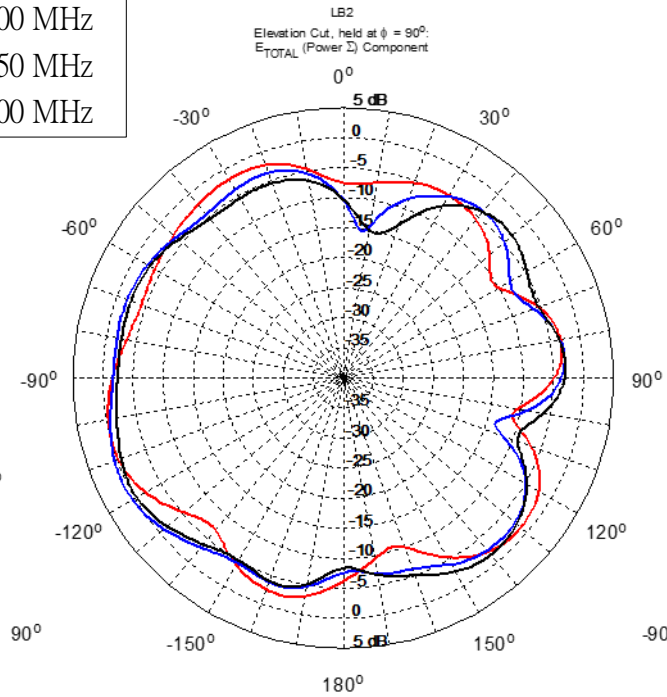


LB4

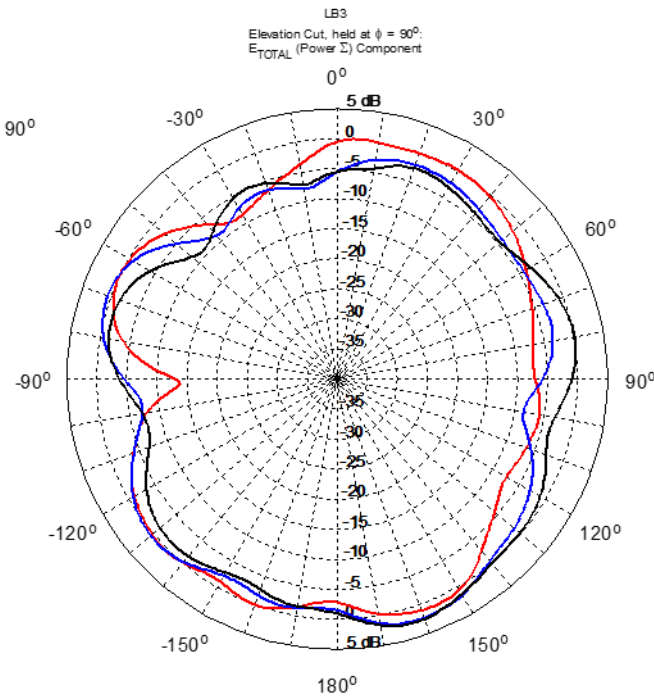
Elevation (Side to Side) Cut - Power Sum 2.45 GHz Band Antennas



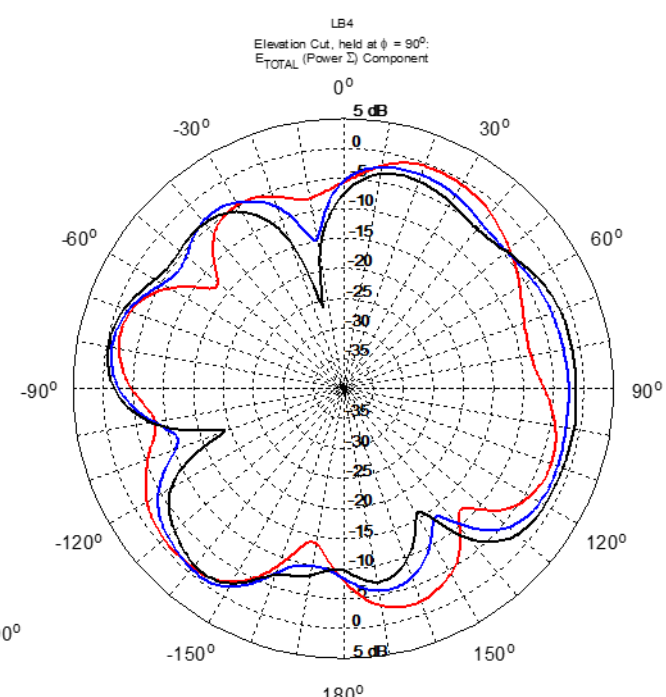
LB1



LB2

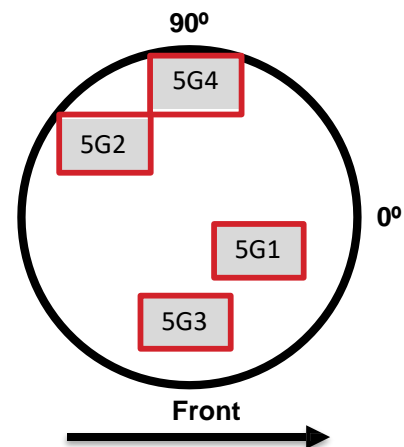


LB3



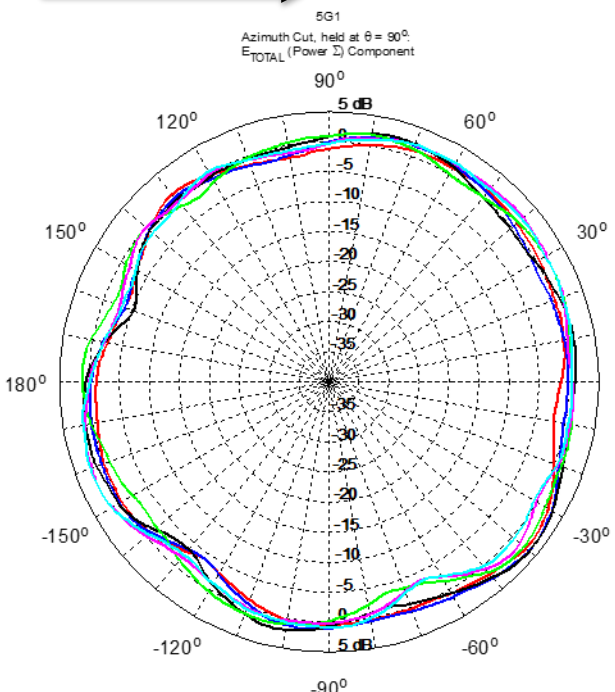
LB4

Azimuth Cut - Power Sum 5 GHz Band Antennas

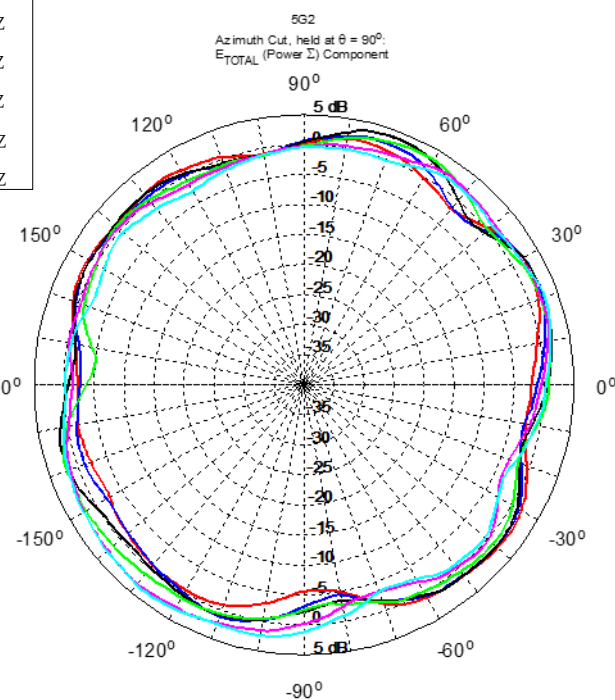


- 5150 MHz
- 5250 MHz
- 5350 MHz
- 5500 MHz
- 5725 MHz
- 5825 MHz

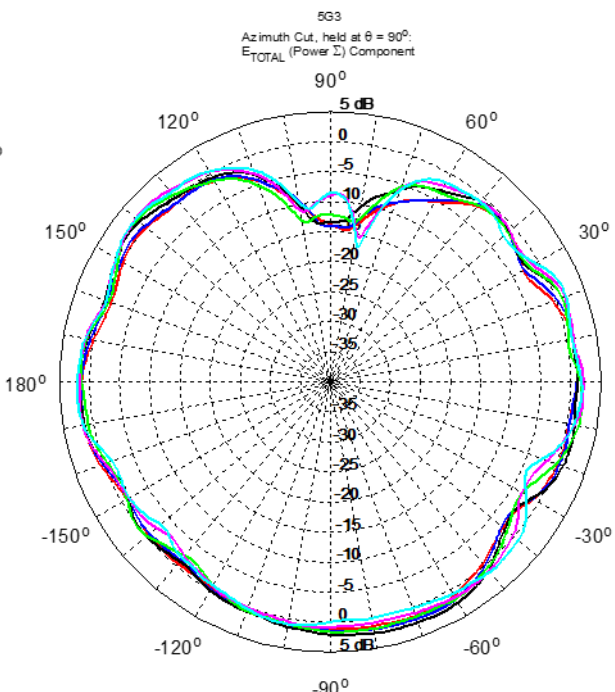
- 5150 MHz
- 5250 MHz
- 535
- 5
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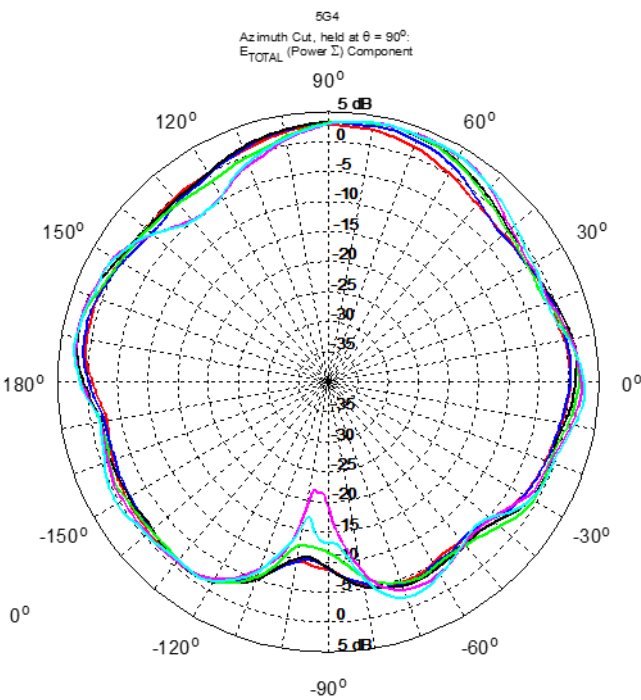
5G1



5G2

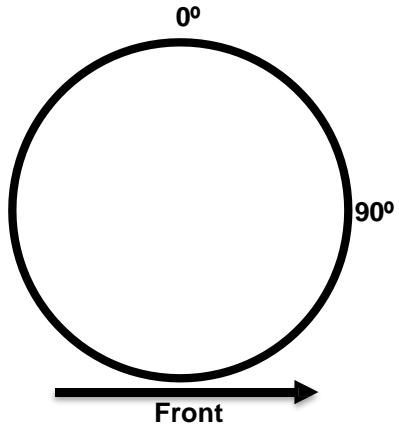


5G3



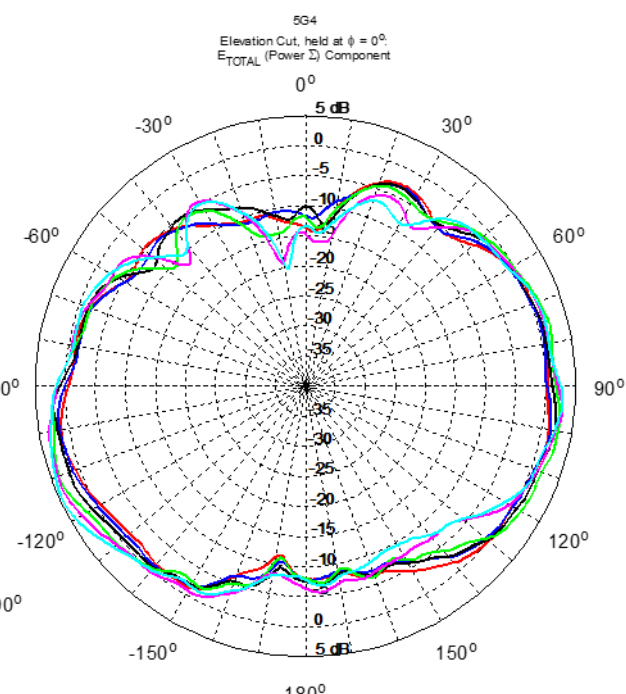
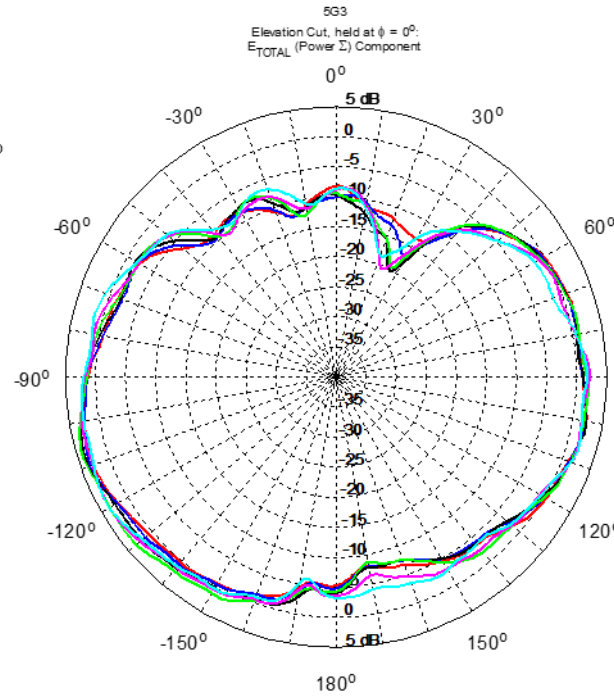
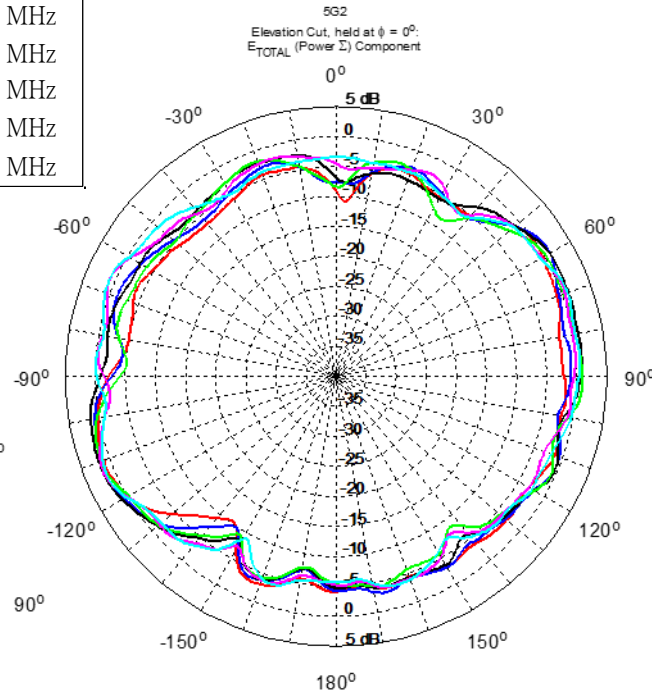
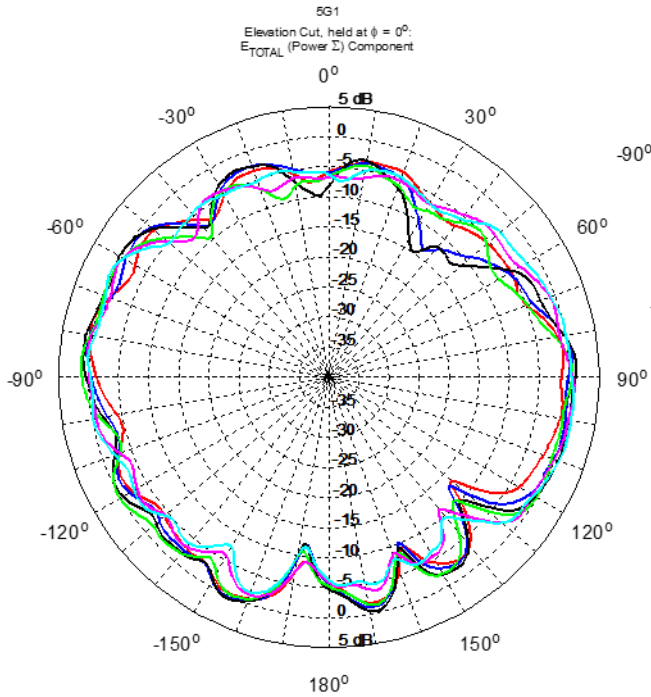
5G4

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



- 5150 MHz
- 5250 MHz
- 5350 MHz
- 5500 MHz
- 5725 MHz
- 5825 MHz

- 5150 MHz
- 5250 M
- 535
- 5
-
-



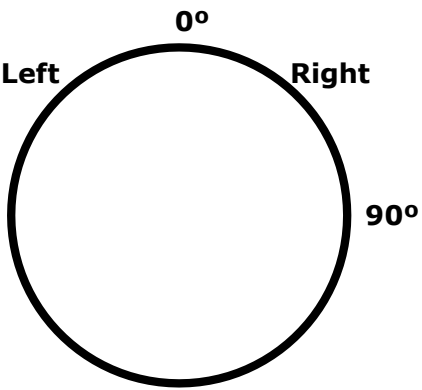
5G1

5G2

5G3

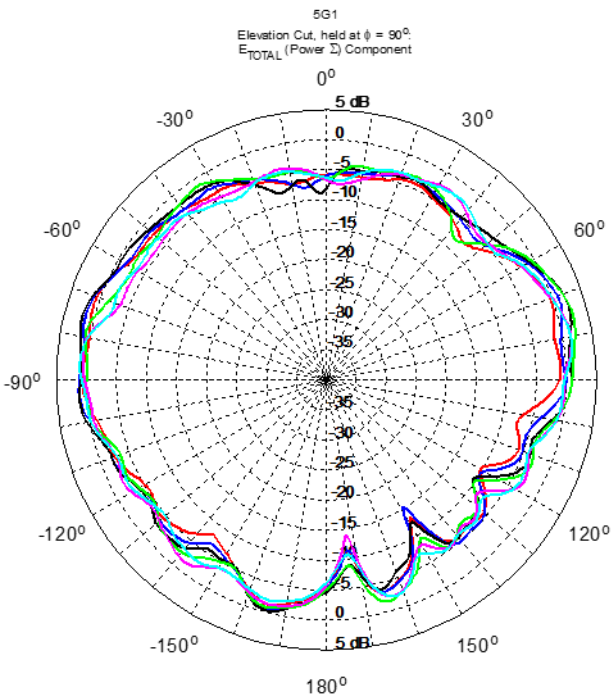
5G4

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

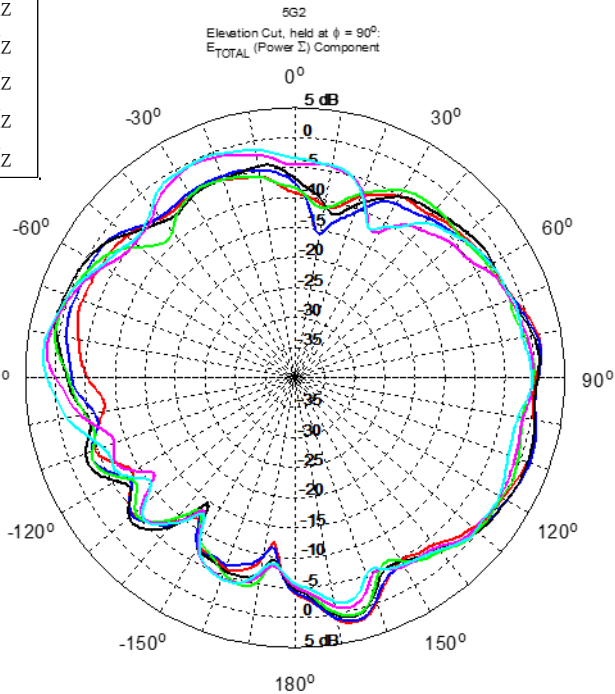


- 5150 MHz
- 5250 MHz
- 5350 MHz
- 5500 MHz
- 5725 MHz
- 5825 MHz

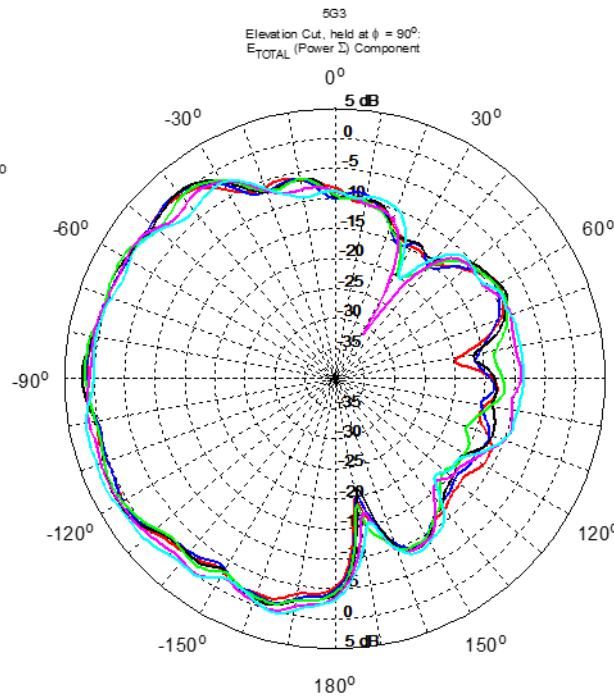
- 5150 MHz
- 5250 M
- 535
- 5
-
-



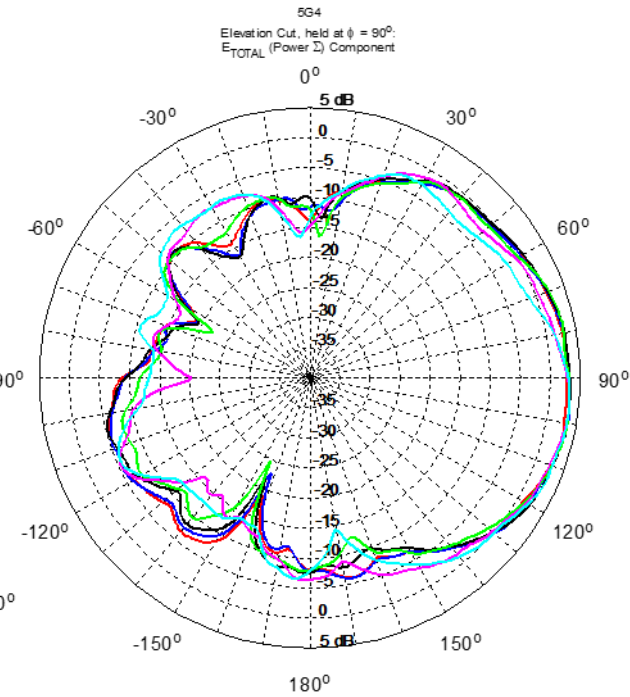
5G1



5G2



5G3



5G4

Thank You!

We Look Forward To Working Together

