

Power Density Simulation Report

FCC ID: A3LSMX818U

Power Density Simulation Report

Revision A

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SAMSUNG ELECTRONICS

1. Simulation methodology for Power Density (PD)

1.1 Simulation tool

1.1.1 Tool description

For the simulation approach to calculating power density (PD) evaluation for mobile phone with mmWave antenna modules, ANSYS Electromagnetics suite version 2022.R1 (HFSS) is used. ANSYS HFSS is one of several commercial tools for 3D full-wave electromagnetic simulation used for antenna and RF structure design of high frequency component. ANSYS Electromagnetics suite version 2022.R1 (HFSS) is implemented based on Finite Element Method (FEM), which operates in the frequency domain.

1.1.2 Mesh and Convergence criteria

To solve the PD analysis using FEM, volume area containing simulated objects should be subdivided into electrically small parts that are called finite elements as the unknown functions. To subdivide system, the adaptive mesh technique in ANSYS Electromagnetics suite version 2022.R1 (HFSS) is used. ANSYS Electromagnetics suite version 2022.R1 (HFSS) starts to refine the initial mesh based on wavelength and calculate the error to iterative process for adaptive mesh refinement. The determination parameter of the number of iteration in ANSYS Electromagnetics suite version 2022.R1 (HFSS) is defined as convergence criteria, delta S, and the iterative adaptive mesh process repeats until the delta S is met. In ANSYS Electromagnetics suite version 2022.R1 (HFSS), the accuracy of converged results depends on the delta S. Figure 1 is an example of adaptive mesh of the device (cross-section of top view).

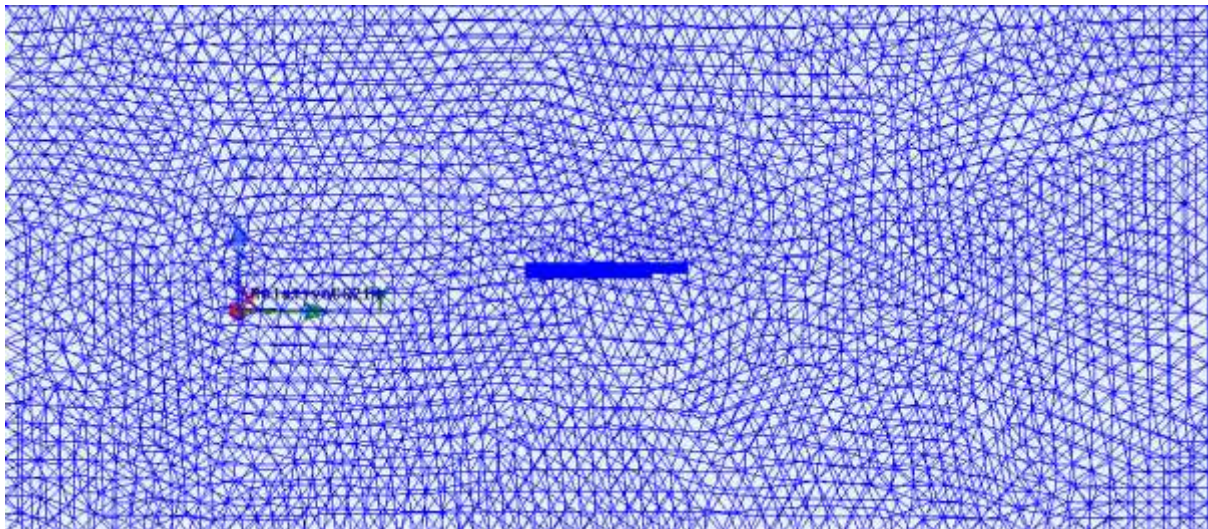


Figure 1.1 Front module Example of the adaptive mesh technique (right view)

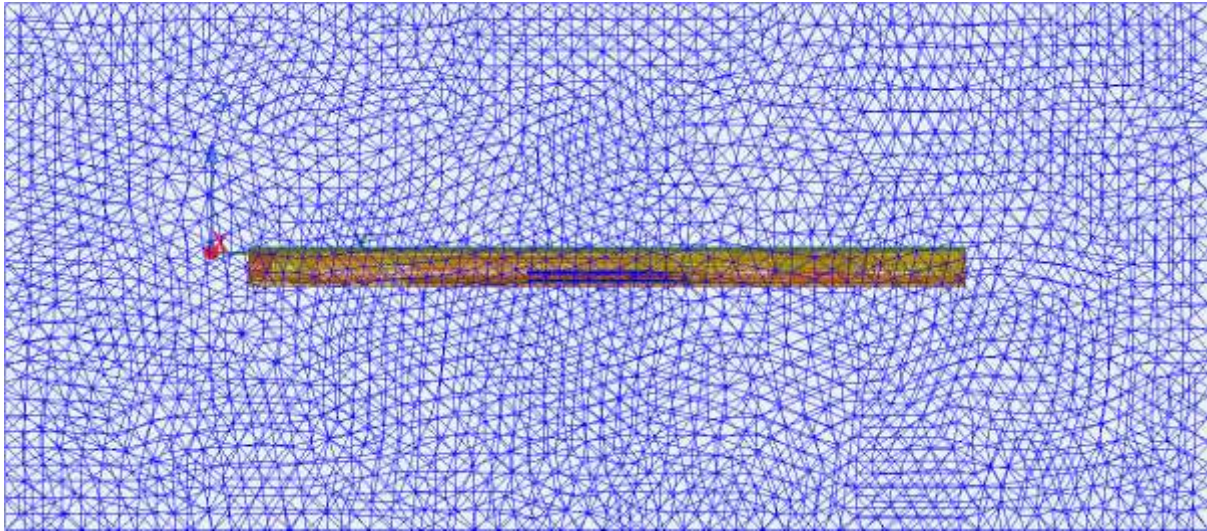


Figure 1.2 Rear module Example of the adaptive mesh technique (right view)

1.1.3 Power density calculation

After solving 3D full-wave electromagnetic simulation, various kinds of physical quantities can be obtained. To calculate PD evaluation, two physical quantities, an electric field (\vec{E}) and a magnetic field (\vec{H}) are needed. The actual consumption power can be expressed as the real term of the Poynting vector (\vec{S}) from the cross product of \vec{E} and complex conjugation of \vec{H} as shown below:

$$\langle \vec{S} \rangle = \text{Re} \left(\frac{1}{2} \vec{E} \times \vec{H}^* \right)$$

$\langle \vec{S} \rangle$ can be expressed as point power density based on a peak value of each spatial point on mesh grids, and obtained directly from ANSYS Electromagnetics suite version 2022.R1 (HFSS).

From the point power density $\langle \vec{S} \rangle$, the spatial-averaged power density (PD_{av}) on an evaluated area (A) can be derived as shown below:

$$PD_{av} = \frac{1}{A} \int_A \langle \vec{S} \rangle \cdot ds = \frac{1}{2A_{av}} \iint_{A_{av}} \| \text{Re}\{E \times H^*\} \| dA$$

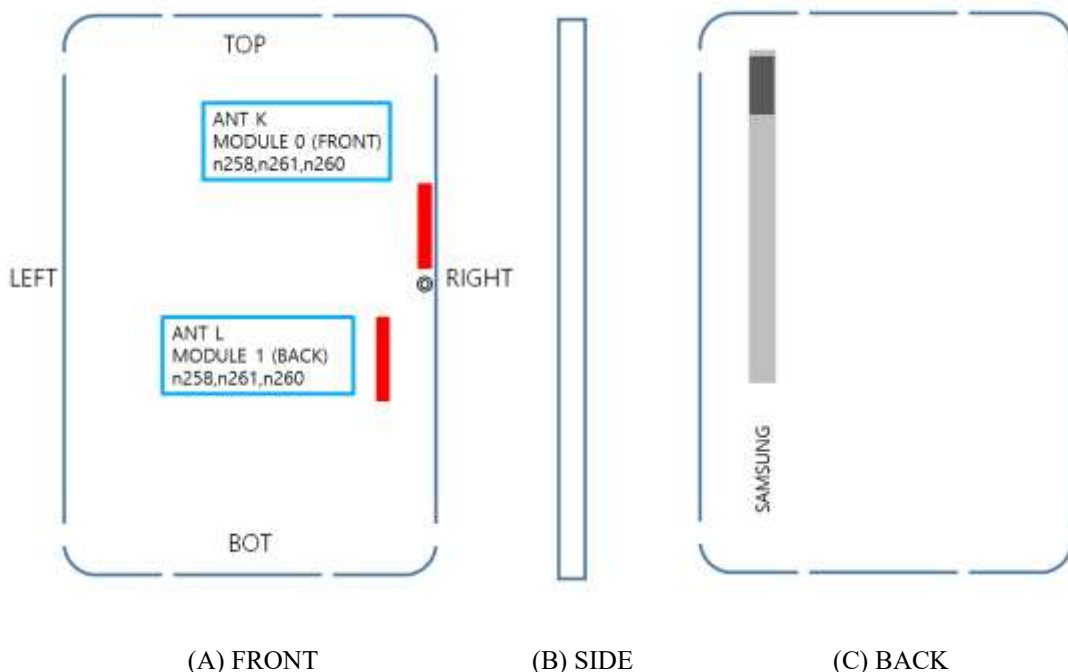
, where the spatial-averaged power density (PD_{av}) is total power density value considering on x, y and z components of point power density $\langle \vec{S} \rangle$ and the evaluated area (A) is 4cm^2 .

1.2 Simulation setup

1.2.1 3D modeling

Figure 2 shows the simulation model which is mounted two mmWave antenna modules. The simulation modeling includes most of the entire structure of device itself such as PCB, metal frame,

battery, cables, and legacy antennas as well as mmWave antenna modules called as Ant M and Ant N. The modeling contains the entire EUT to enable a Smart transmit GEN2, as well. Ant M is placed on the left side and antennas are facing the back side, and Ant N is placed on the right side and antennas are facing the right side of the device.



Location of mmWave Modules

Figure 2 Simulation model which is mounted two mmWave antenna modules

1.2.2 PD evaluation planes

Table 1 shows the PD evaluation planes for each mmWave antenna module and Figure 3 shows the PD evaluation planes and truncation area of the simulation model to find worst case of beamforming cases.

Please note that the “right” and “left” edge of mentioned in this report are defined from the perspective of looking at the device from the front side.

Table 1. PD evaluation planes

Module	Front	Back	Left From Front View	Right From Front View	Top	Bottom
	S1	S2	S3	S4	S5	S6
Ant L	O	O	X	O	X	X
Ant K	O	O	X	O	X	X

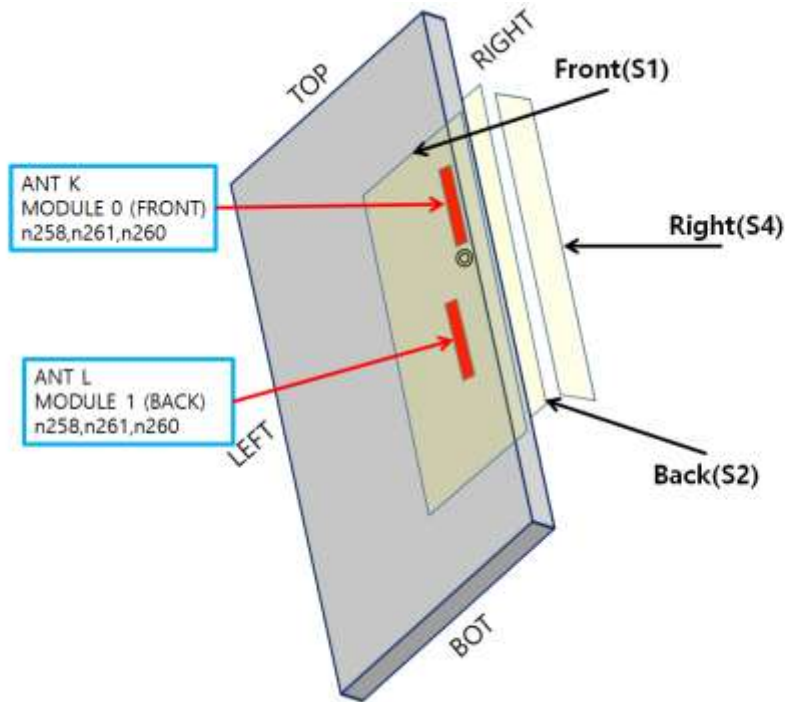


Figure 3. PD evaluation planes

1.2.3 Boundary condition

To simulate electromagnetic tool based on FEM, the boundary condition allows electromagnetic waves to be electrically open at the boundary and radiated far away without reflection. ANSYS Electromagnetics suite version 21.2 (HFSS) can support the absorbing boundary condition (ABC) for radiation boundary and make normally a quarter wave length from the radiating structure. In this report, to cover all beamforming cases of mmWave antenna modules, the three wavelength spacing from the device is used.

1.2.4 Source excitation condition

The number of antenna ports of ANT K, and ANT L for source excitation consists of 24, 16, and 16, respectively. The dipole array antennas consist of 4 antenna elements and each element uses two ports as a source excitation. All antenna ports of ANT K and ANT L are for patch array antennas.

After finishing 3D full wave electromagnetic simulation of modeling structure, the magnitude and phase information can be loaded for each port by using “Edit Sources” function in ANSYS Electromagnetics suite (HFSS). Since ANSYS Electromagnetics suite (HFSS) uses FEM solver based

on frequency domain analysis method, the input source for the port excitation applies sinusoidal waveform for each frequency.

1.2.5 Condition of simulation completion

The simulation completion condition of ANSYS Electromagnetics suite (HFSS) is defined as delta S. The ANSYS Electromagnetics suite (HFSS) calculates the S-parameter for the mesh conditions of each step and determines whether to proceed with the operation of the next step by comparing the difference between the S-parameters in the previous step. A difference between the previous step and the current step of S-parameter is expressed as delta S, and the delta S generally sets 0.02. The simulation result of this report is the result of setting delta S to 0.02.

2. Simulation verification

2.1 Spatial-averaged power density and $\text{sim.power}_{\text{limit}}$

As mentioned in the previous chapter, the Poynting vector (\vec{S}) can be obtained through cross product of an electric field (\vec{E}) and complex conjugate of a magnetic field (\vec{H}). The real term of the Poynting vector can be described as the point power density or peak power density. Using the point power density, the spatial-averaged power density can be obtained by the integral of 4 cm^2 at 2.5 mm intervals of the point power density result. Figure 6 shows examples of the distribution plot of point power density and the averaged power density.

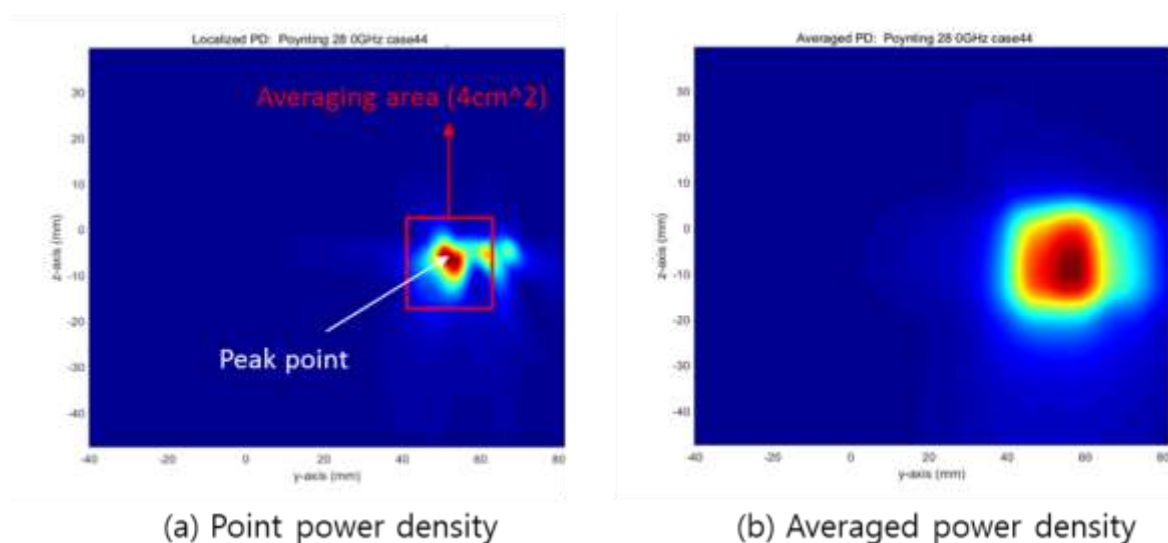


Figure 4. Power density distribution (Example)

2.2 Comparison between simulation, measurement

In this section, the simulated-power density distributions and measured-power density distributions are compared to each mmWave antenna. Furthermore, to verify the Smart transmit GEN2, the PD distributions printing out from the “Qualcomm MG script” are added.

Based on comparison of power density distributions, the power densities of simulated, measured and the “Qualcomm MG Script” have a good correlation. The discrepancy in amplitude between the “Qualcomm MG Script” 4 cm^2 averaged power density and measured 4 cm^2 averaged power density is considered as housing influence and used in determining input power limit for each beam for RF exposure compliance.

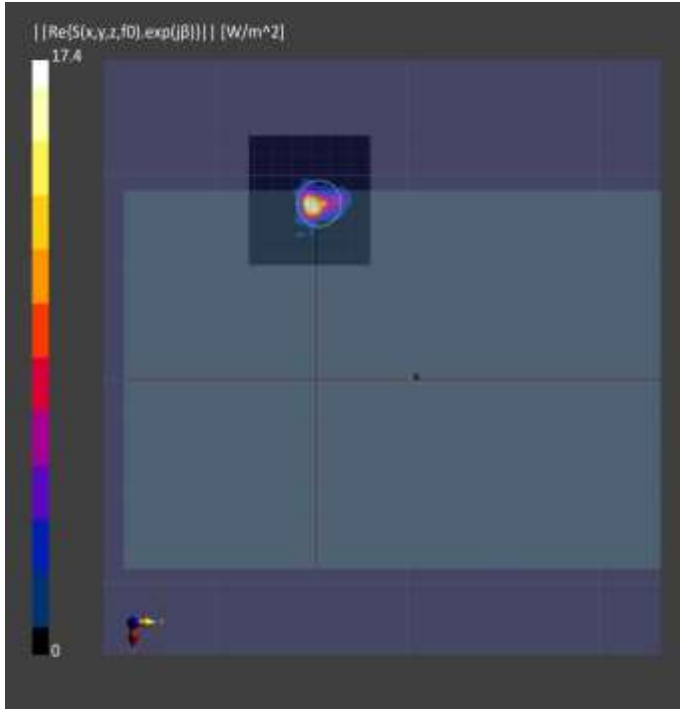
The input powers per each active port are listed below for both Simulation and Measurement validation and power density characterization. For Simulation, these values were entered directly into HFSS model. For measurement, FTM S/W was used to input these values for each active port also.

Mode/Band	Antenna	Input Power (dBm)	
		SISO	MIMO
5G NR n261	L Patch	6.0	6.0
	K Patch	6.0	6.0
5G NR n260	L Patch	6.0	6.0
	K Patch	6.0	6.0
5G NR n258	L Patch	6.0	6.0
	K Patch	6.0	6.0

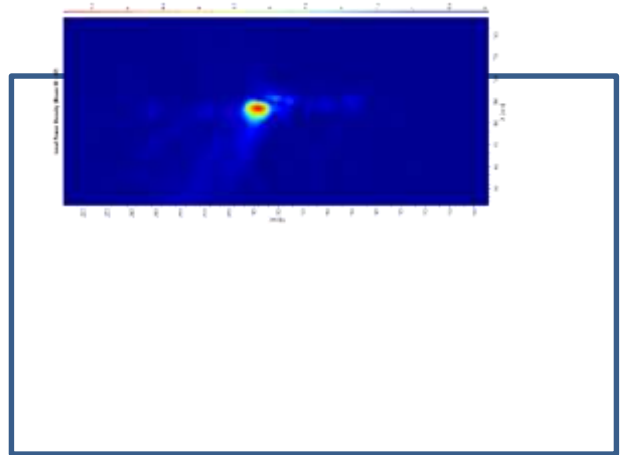
* The below simulation and measurement result were performed at 2mm evaluation distance and 28GHz / 38.5GHz / 24.8 GHz. The *input.power.limit* was determined based on below results in RF Exposure Part 0 Report.

Band	Channel	Module	Type(P or D)	Side	Beam ID	PLS (10 dBm)	Sim. PD (mW/cm ²)	Meas. PD (mW/cm ²) * Circle Avg
n258	Mid Ch. 2025833 (24800.0 MHz)	front 0	Patch	Front	37	60	1.397	0.631
				Right	25		1.368	0.285
				Front	156		2.952	1.66
				Right	155		2.429	0.414
		back 1	Patch	Rear	33		3.632	0.654
				Rear	161		2.70	1.04
n261	Mid Ch. 2077891 (27923.5 MHz)	front 0	Patch	Front	34	60	1.834	0.886
				Right	25		0.809	0.489
				Front	152		3.700	1.87
				Right	165		1.257	0.599
		back 1	Patch	Rear	41		3.050	0.585
				Rear	157		2.610	0.918
n260	Mid Ch. 2253331 (38449.9 MHz)	front 0	Patch	Front	24	60	2.325	0.952
				Right	36		1.396	0.493
				Front	154		2.021	0.838
				Right	153		0.986	0.293
		back 1	Patch	Rear	32		2.617	1.26
				Rear	159		2.542	0.979

- n258 ANT K-Patch Mid channel, Beam ID 37, Front

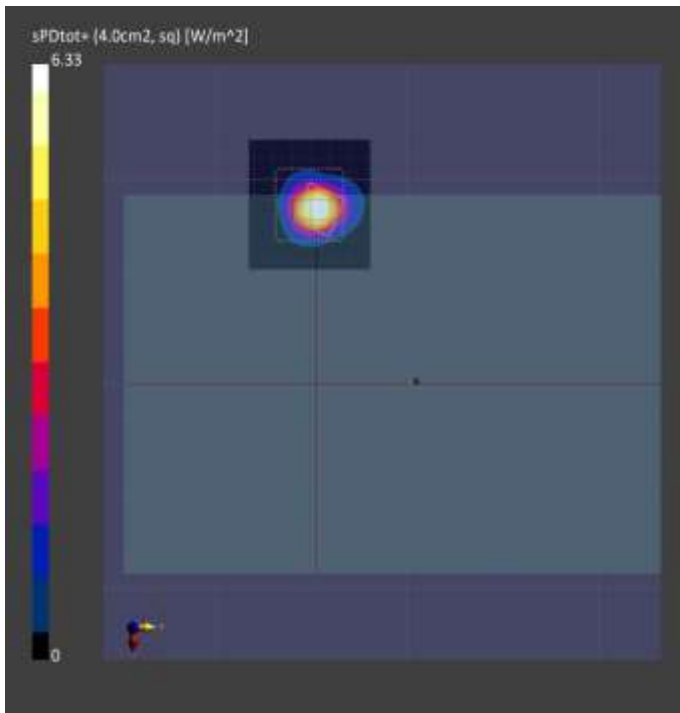


(a) measurement

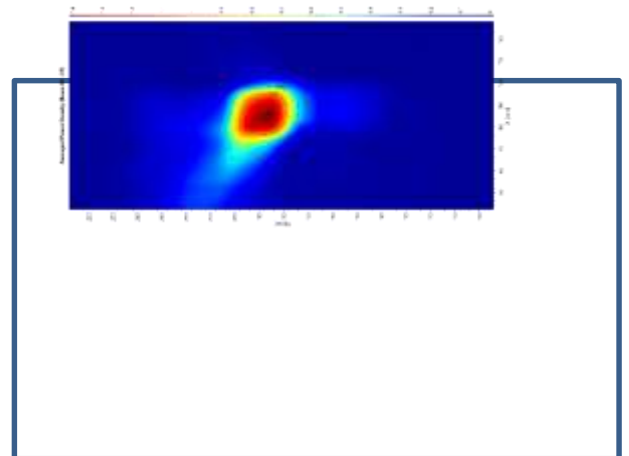


(b) simulation

ANT K-Patch Mid channel, Point power density



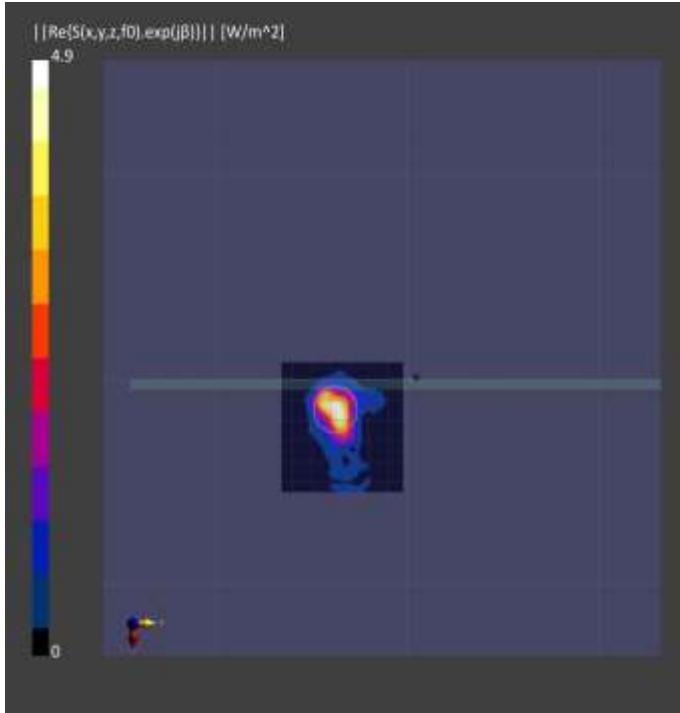
(a) measurement



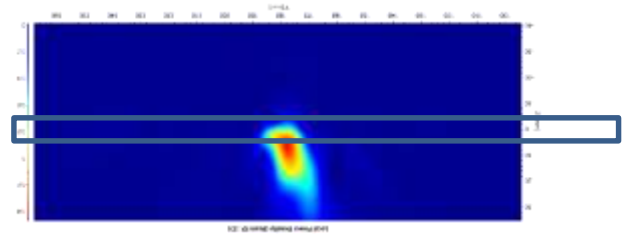
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n258 ANT K-Patch Mid channel, Beam ID 25, Right

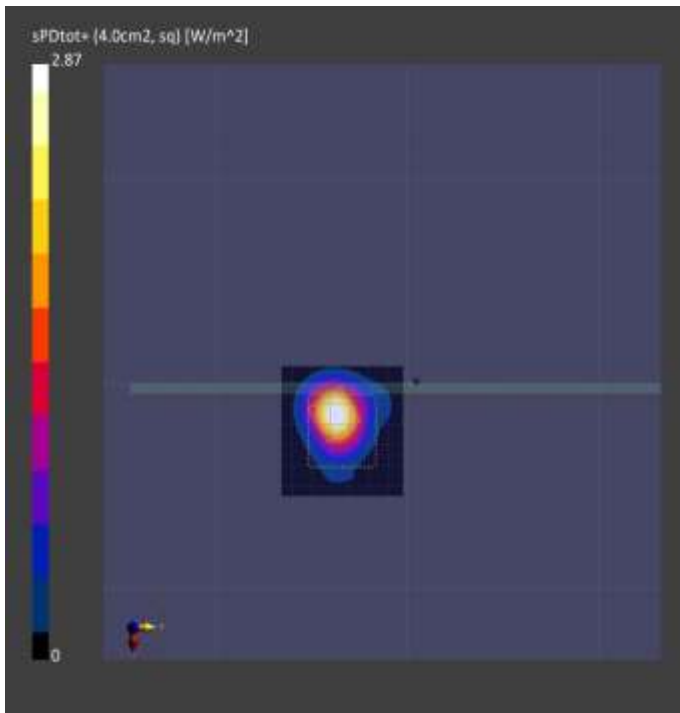


(a) measurement

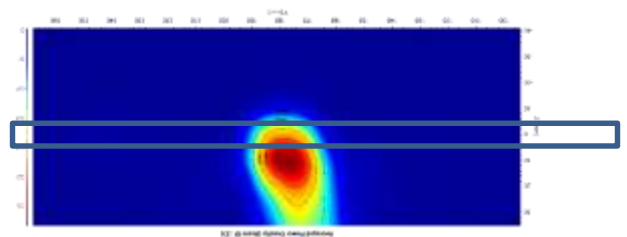


(b) simulation

ANT K-Patch Mid channel, Point power density



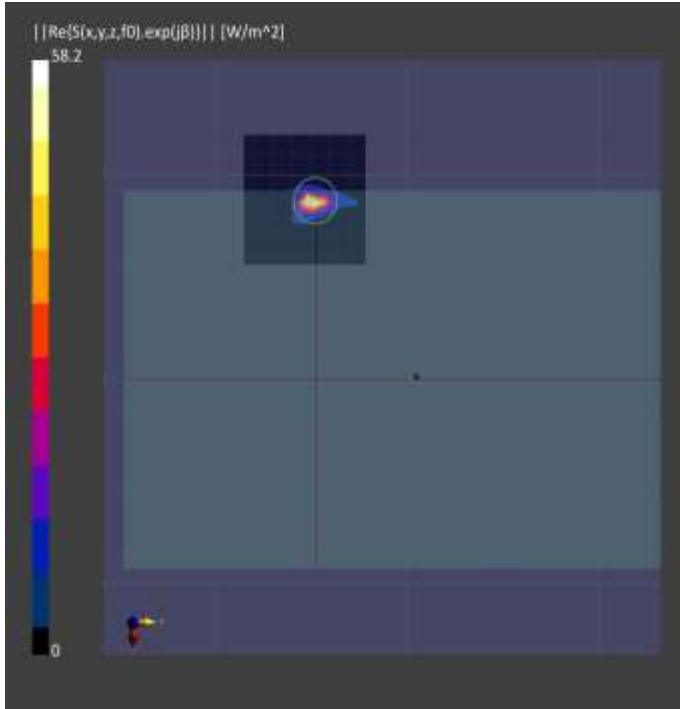
(a) measurement



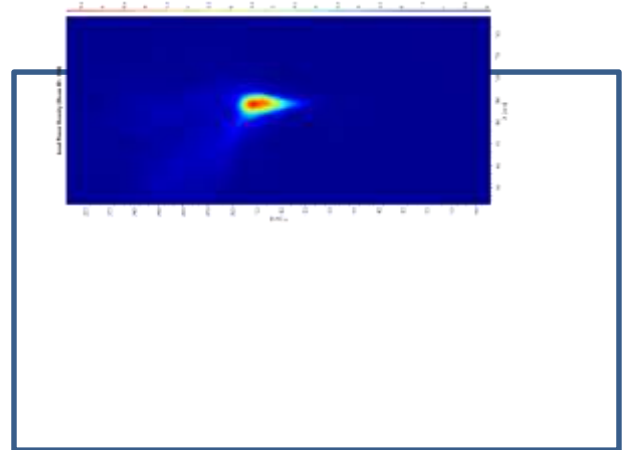
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n258 ANT K-Patch Mid channel, Beam ID 156, Front

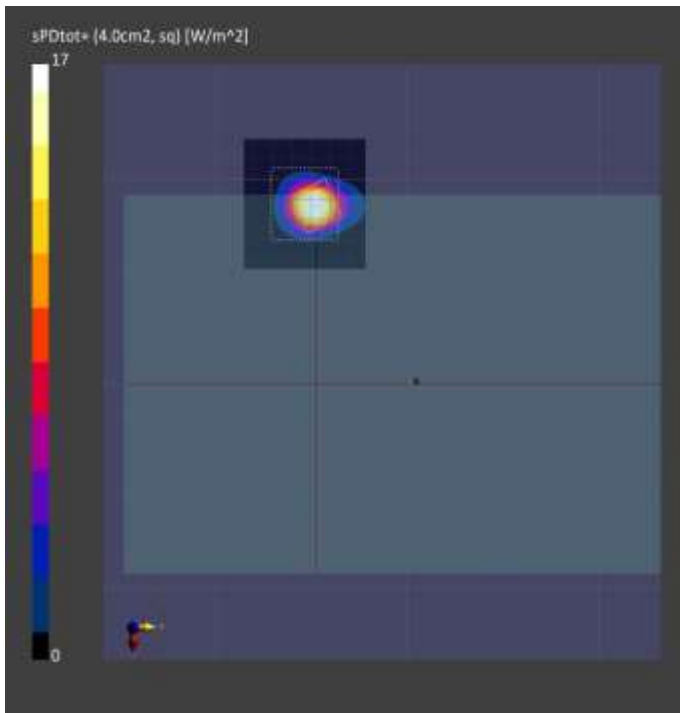


(a) measurement

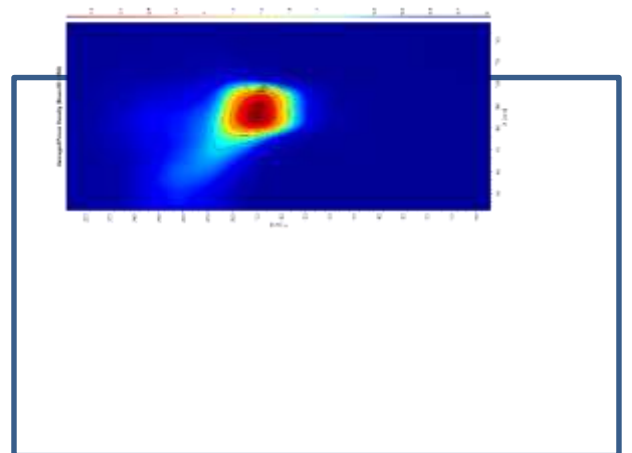


(b) simulation

ANT K-Patch Mid channel, Point power density



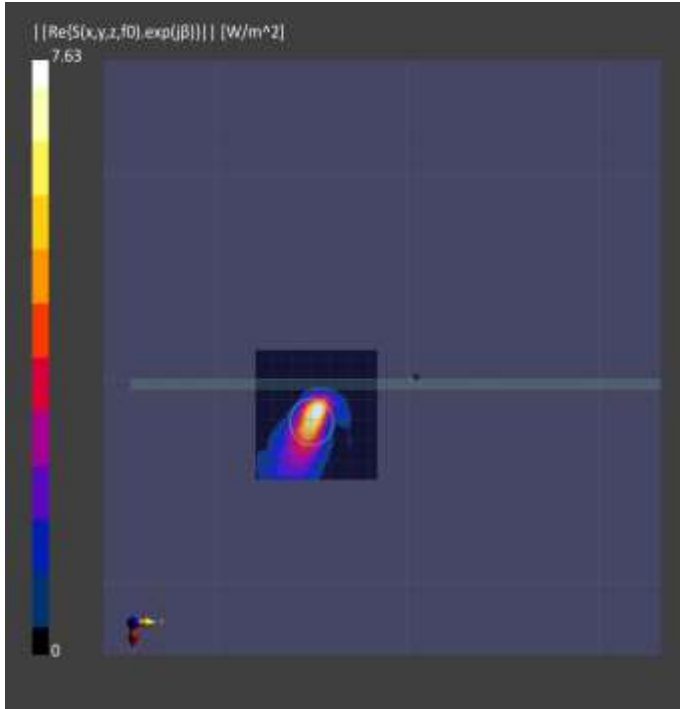
(a) measurement



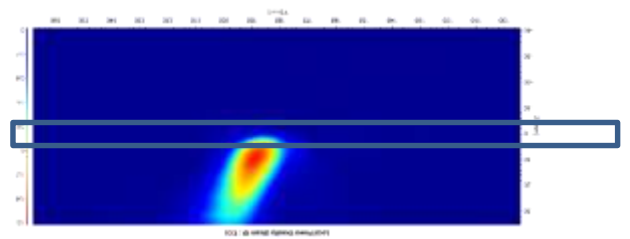
(b) simulation

ANT K-Patch Mid channel, 4cm2 averaged power density

- n258 ANT K-Patch Mid channel, Beam ID 155, Right

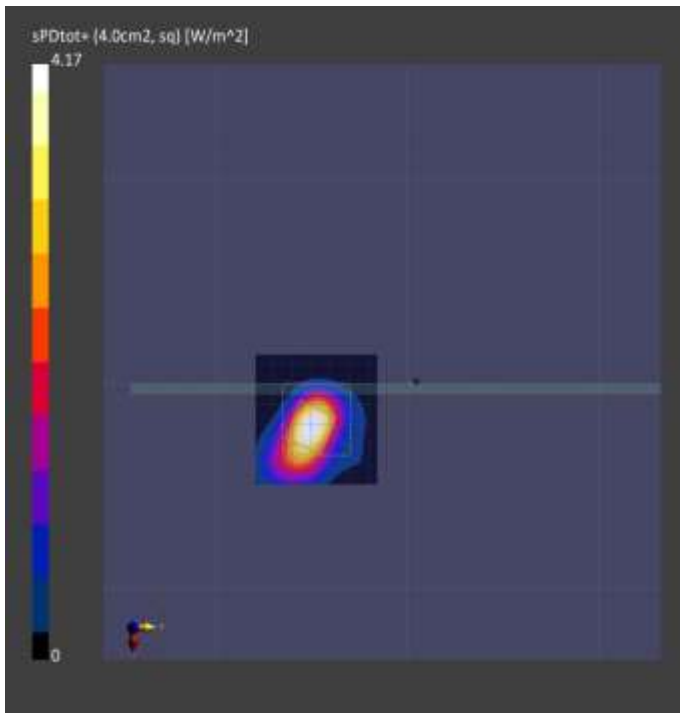


(a) measurement

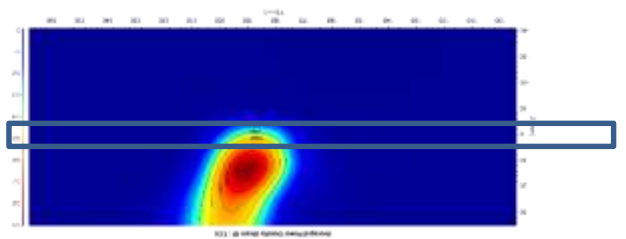


(b) simulation

ANT K-Patch Mid channel, Point power density



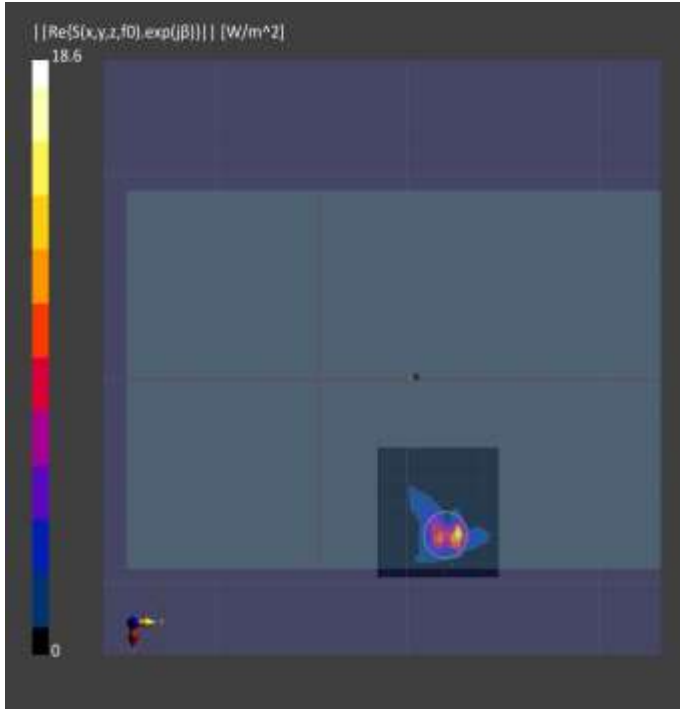
(a) measurement



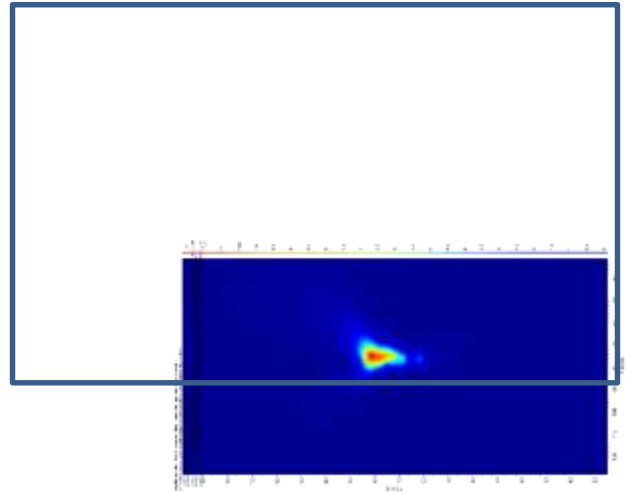
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n258 ANT L-Patch Mid channel, Beam ID 33, Rear

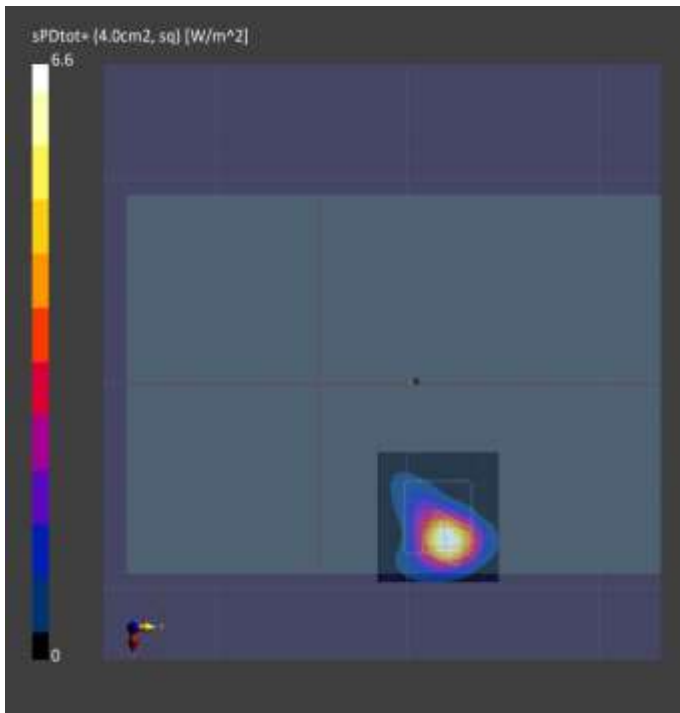


(a) measurement

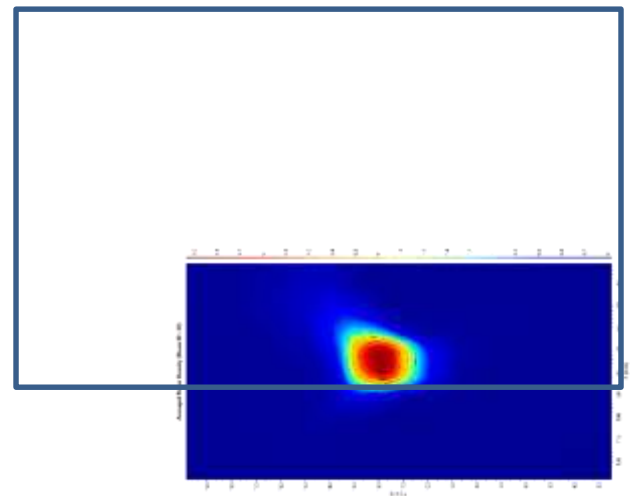


(b) simulation

ANT L-Patch Mid channel, Point power density



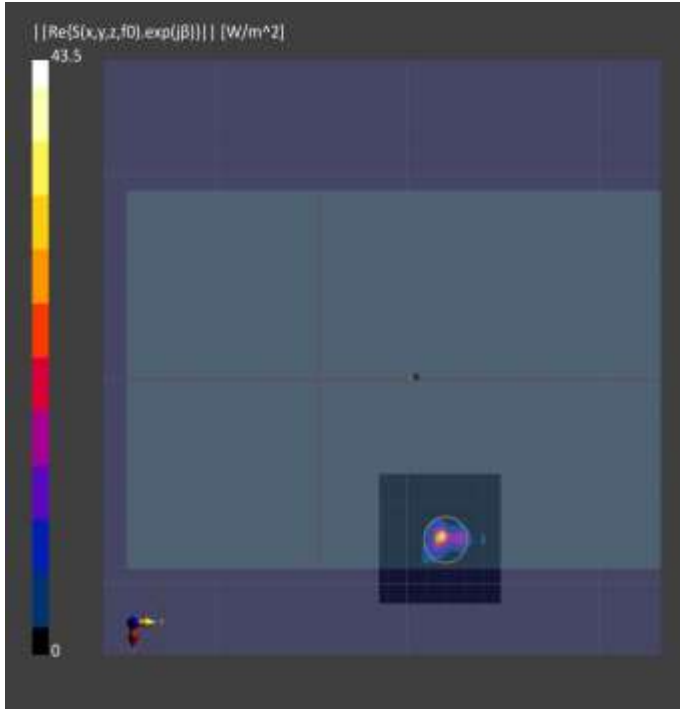
(a) measurement



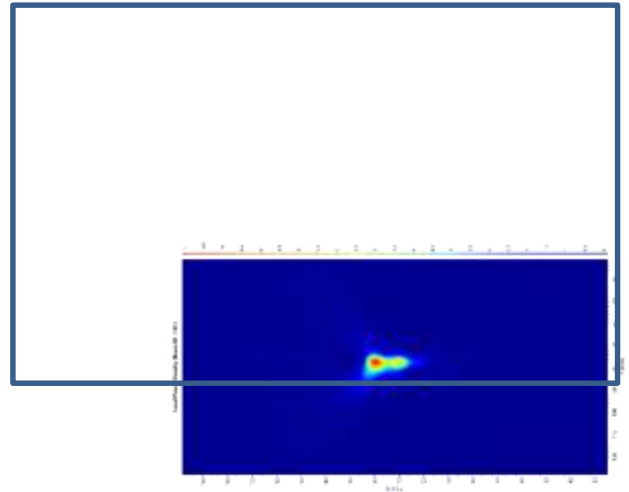
(b) simulation

ANT L-Patch Mid channel, 4cm² averaged power density

- n258 ANT L-Patch Mid channel, Beam ID 161, Rear

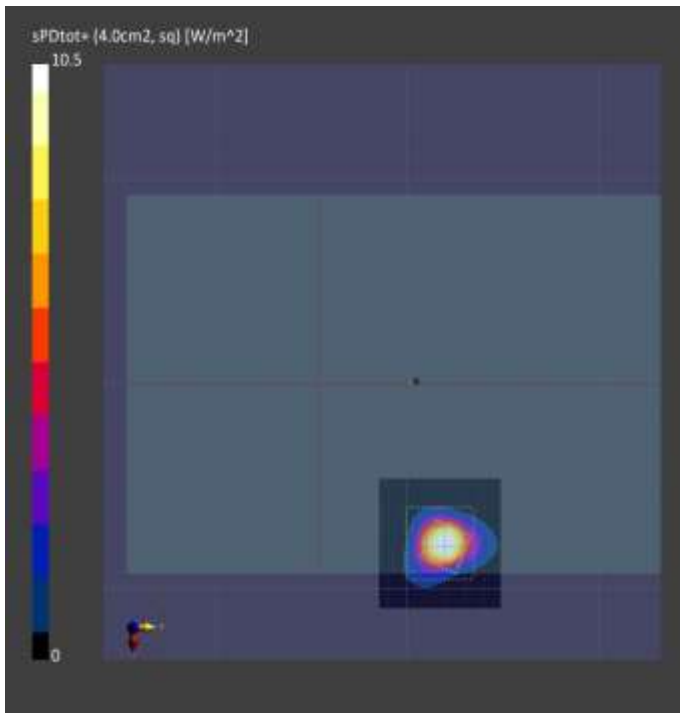


(a) measurement

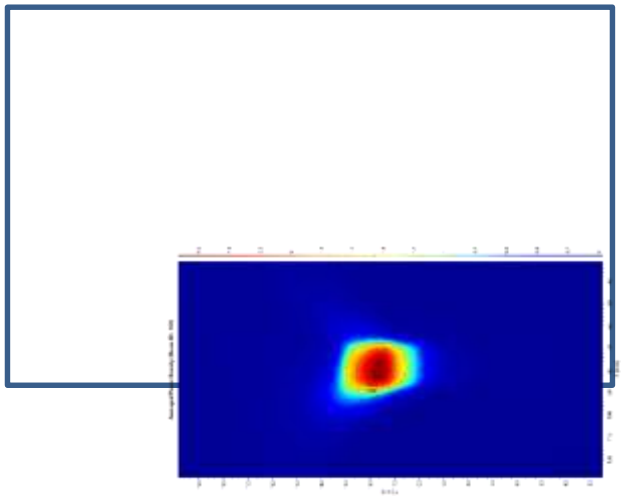


(b) simulation

ANT L-Patch Mid channel, Point power density



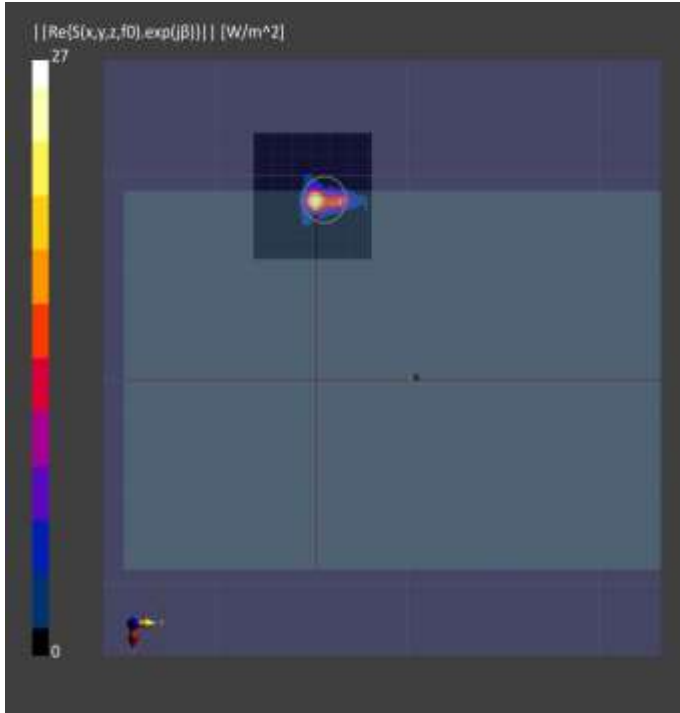
(a) measurement



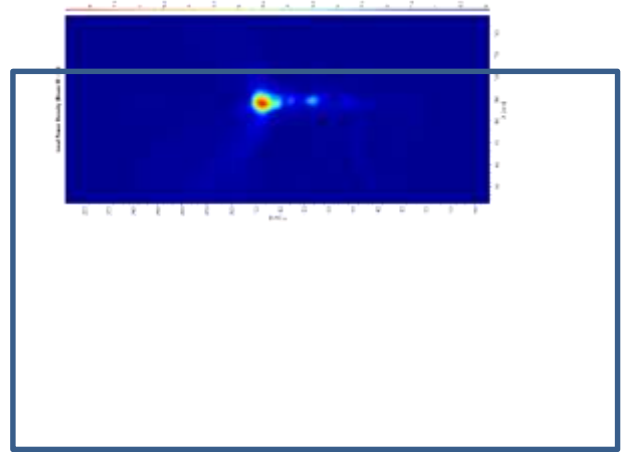
(b) simulation

ANT L-Patch Mid channel, 4cm2 averaged power density

- n261 ANT K-Patch Mid channel, Beam ID 34, Front

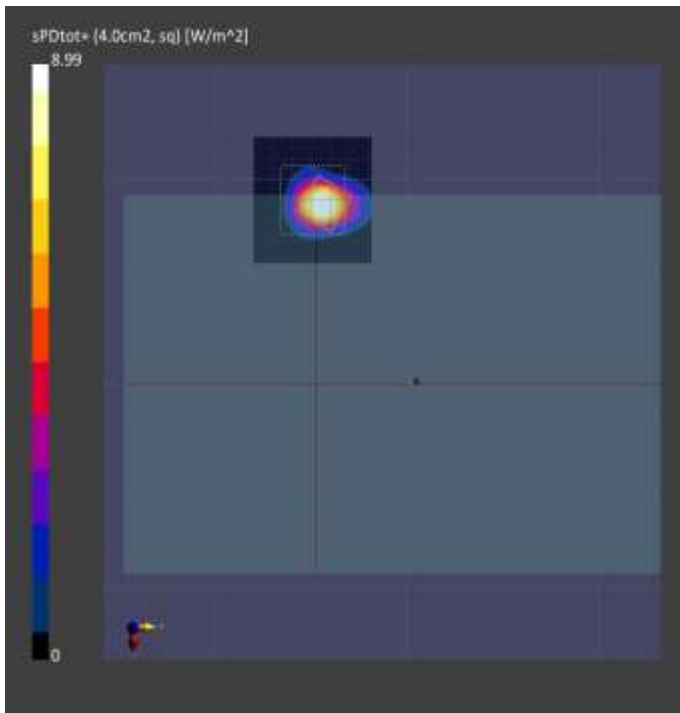


(a) measurement

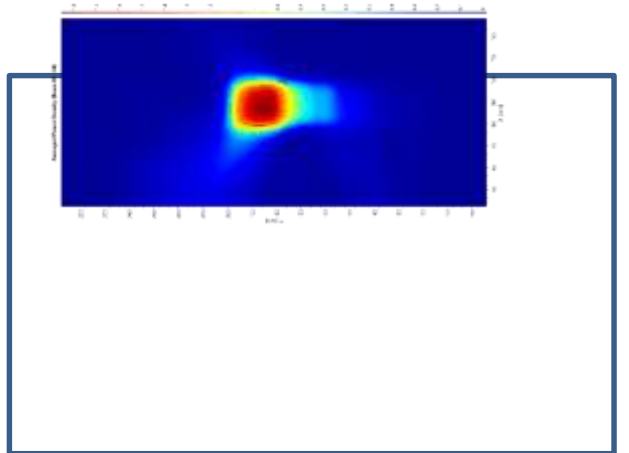


(b) simulation

ANT K-Patch Mid channel, Point power density



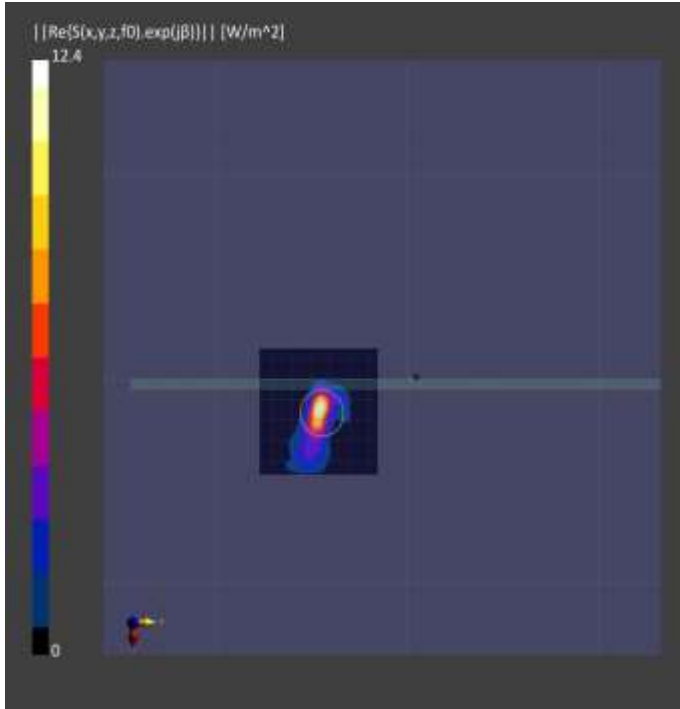
(a) measurement



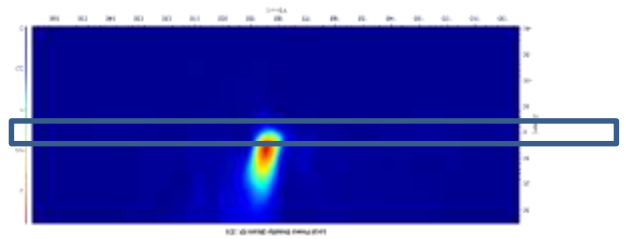
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n261 ANT K-Patch Mid channel, Beam ID 25, Right

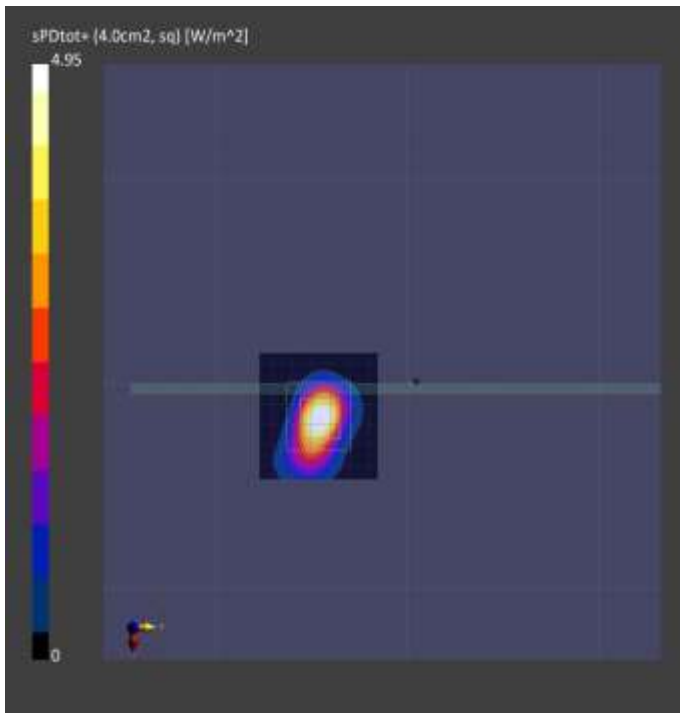


(a) measurement

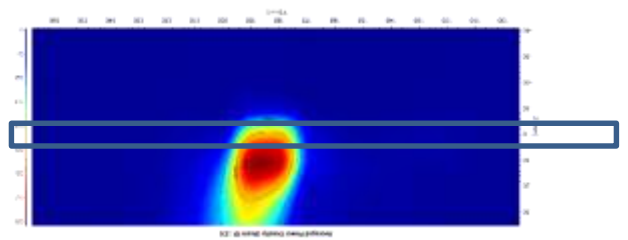


(b) simulation

ANT K-Patch Mid channel, Point power density



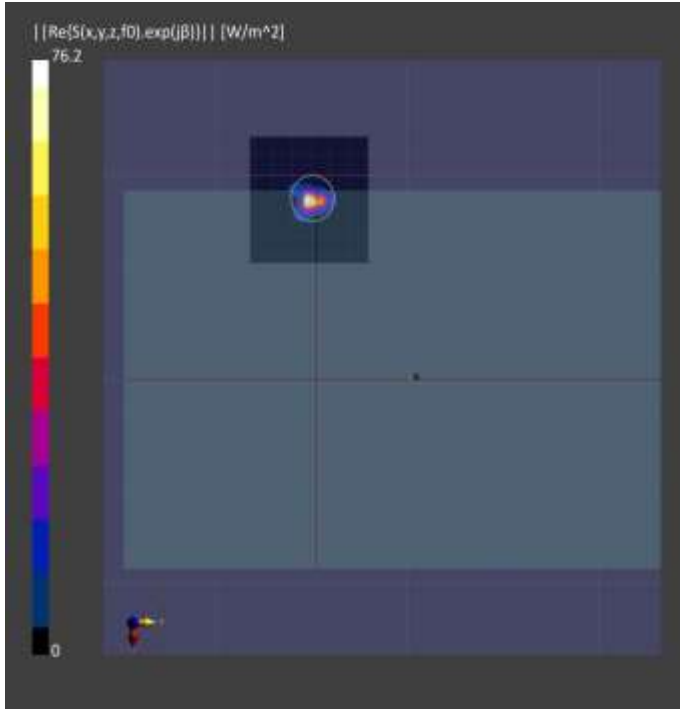
(a) measurement



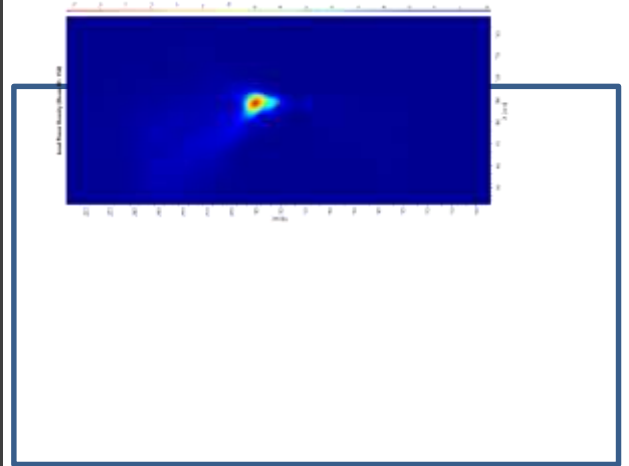
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n261 ANT K-Patch Mid channel, Beam ID 152, Front

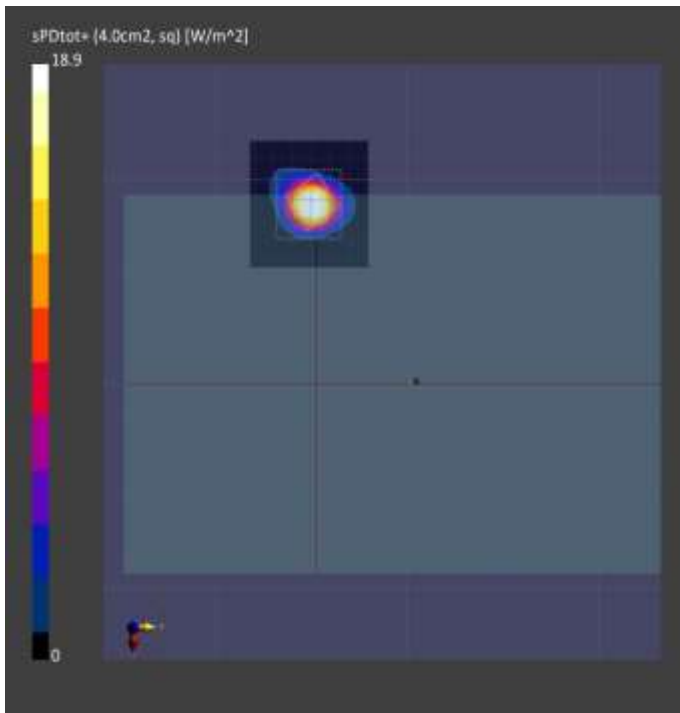


(a) measurement

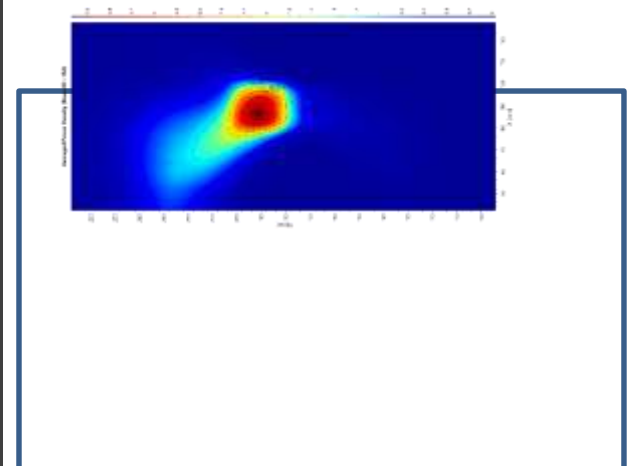


(b) simulation

ANT K-Patch Mid channel, Point power density



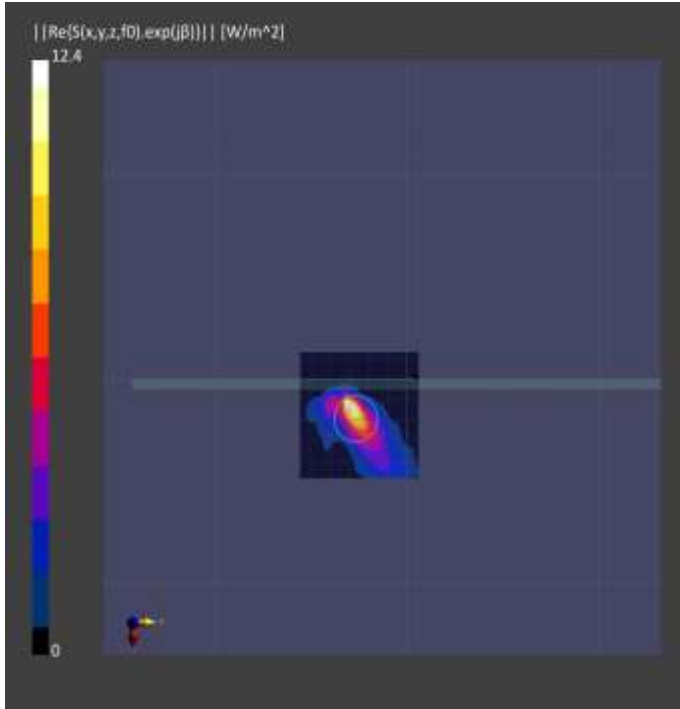
(a) measurement



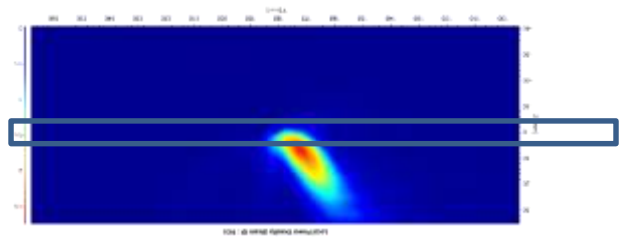
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n261 ANT K-Patch Mid channel, Beam ID 165, Right

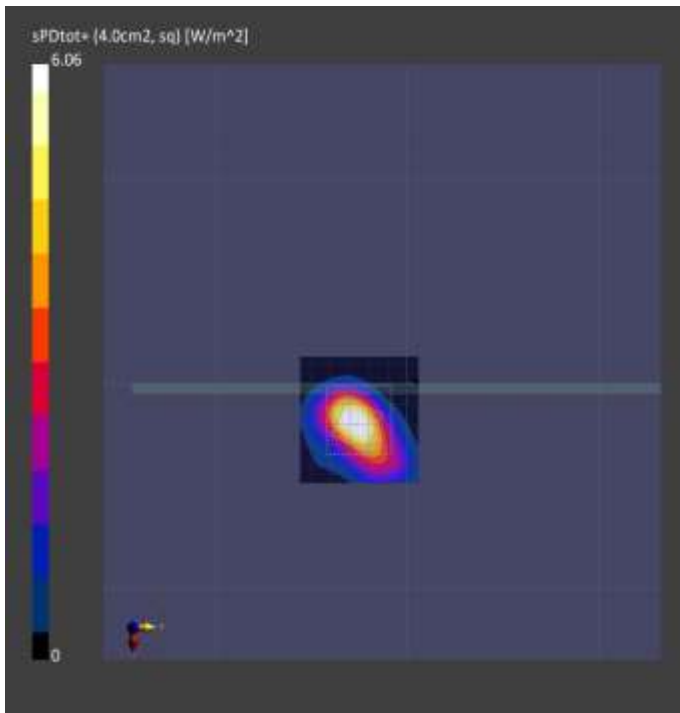


(a) measurement

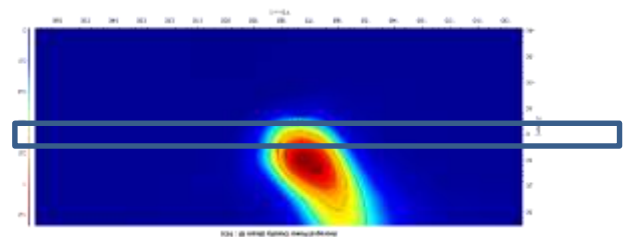


(b) simulation

ANT K-Patch Mid channel, Point power density



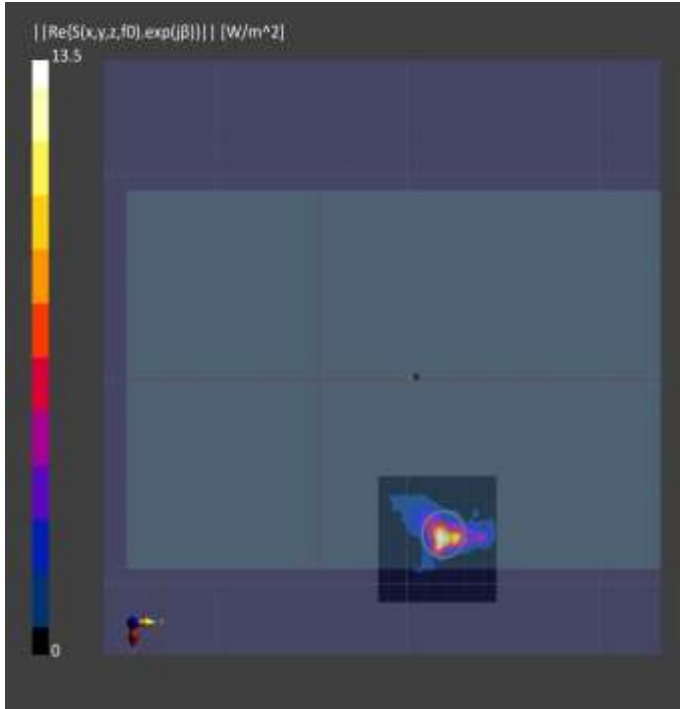
(a) measurement



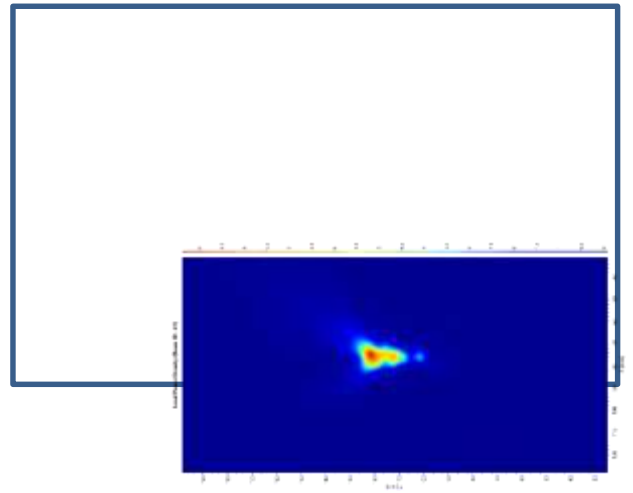
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n261 ANT L-Patch Mid channel, Beam ID 41, Rear

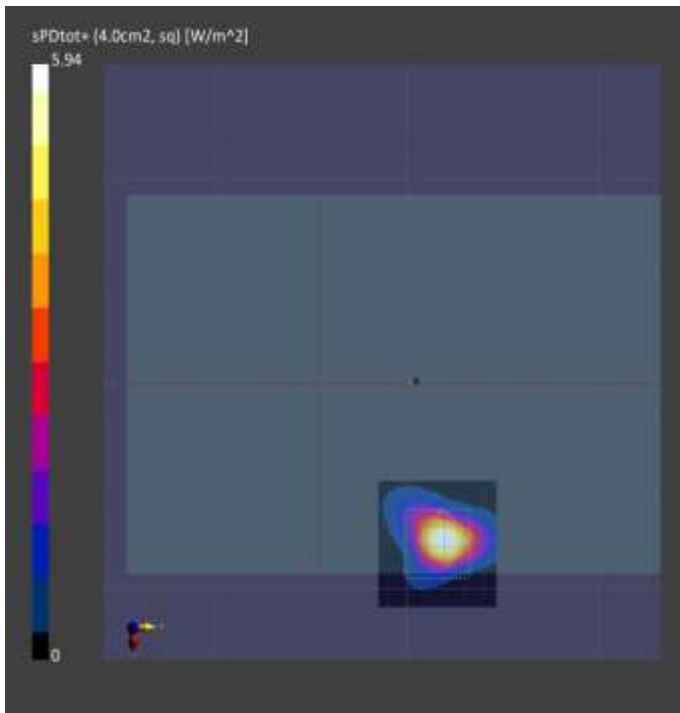


(a) measurement

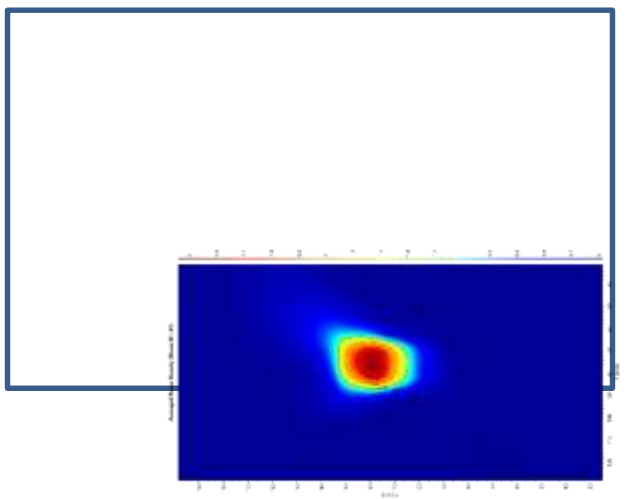


(b) simulation

ANT L-Patch Mid channel, Point power density



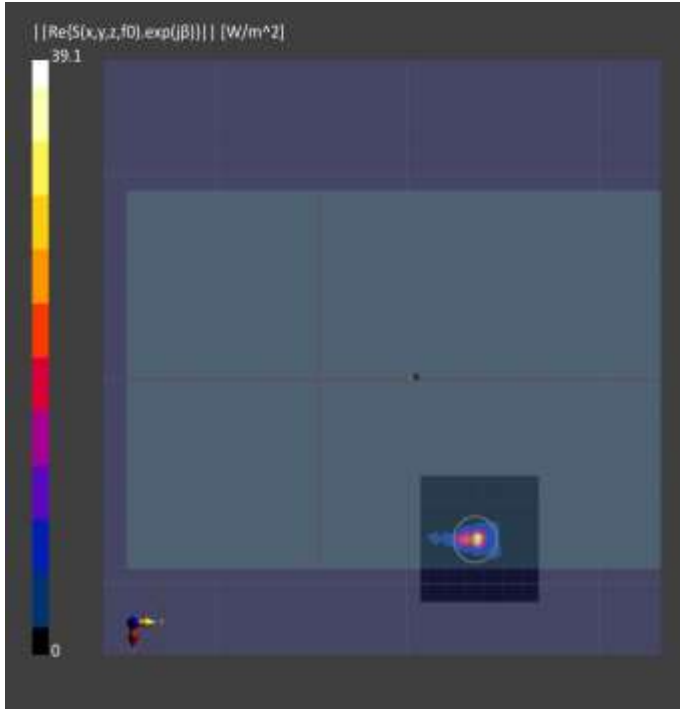
(a) measurement



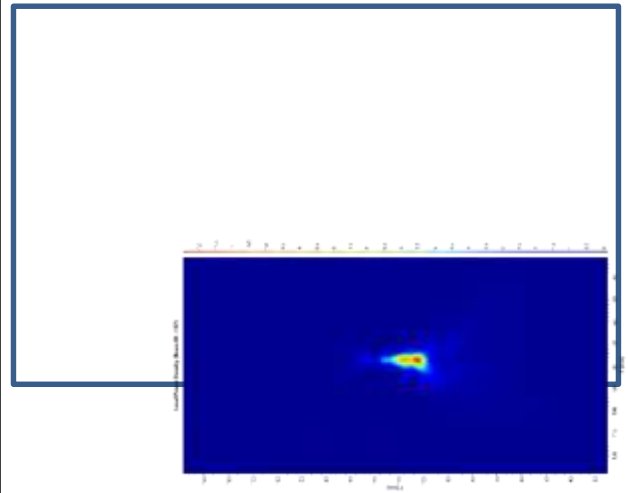
(b) simulation

ANT L-Patch Mid channel, 4cm2 averaged power density

- n261 ANT L-Patch Mid channel, Beam ID 157, Rear

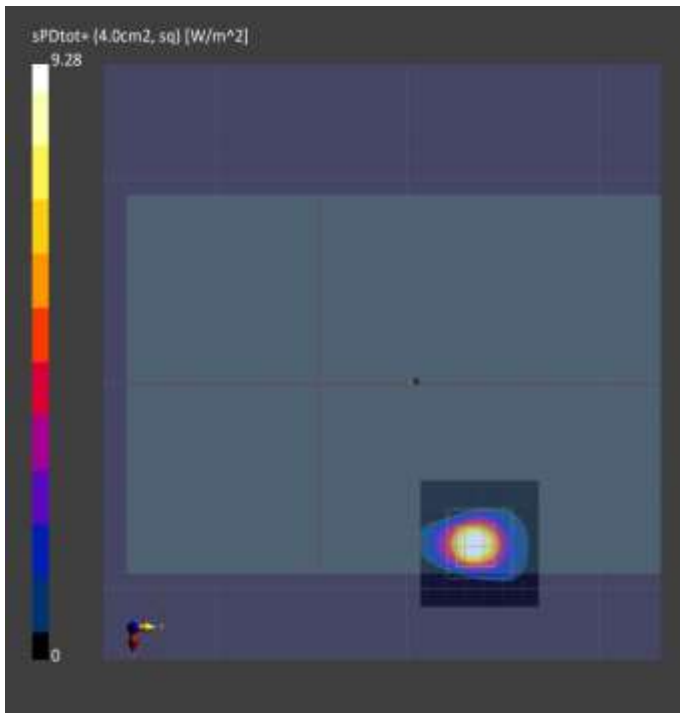


(a) measurement

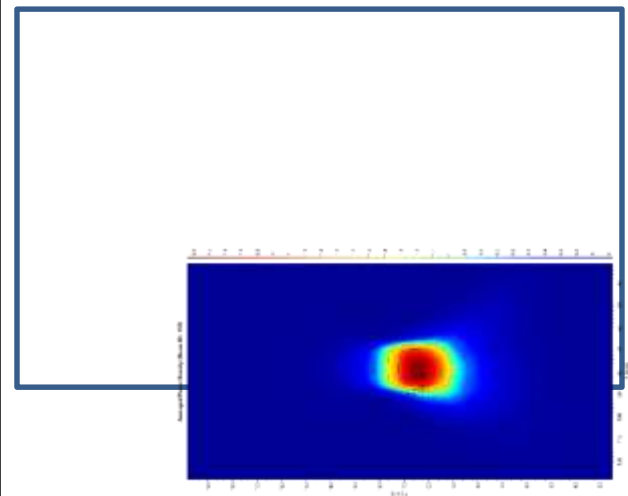


(b) simulation

ANT L-Patch Mid channel, Point power density



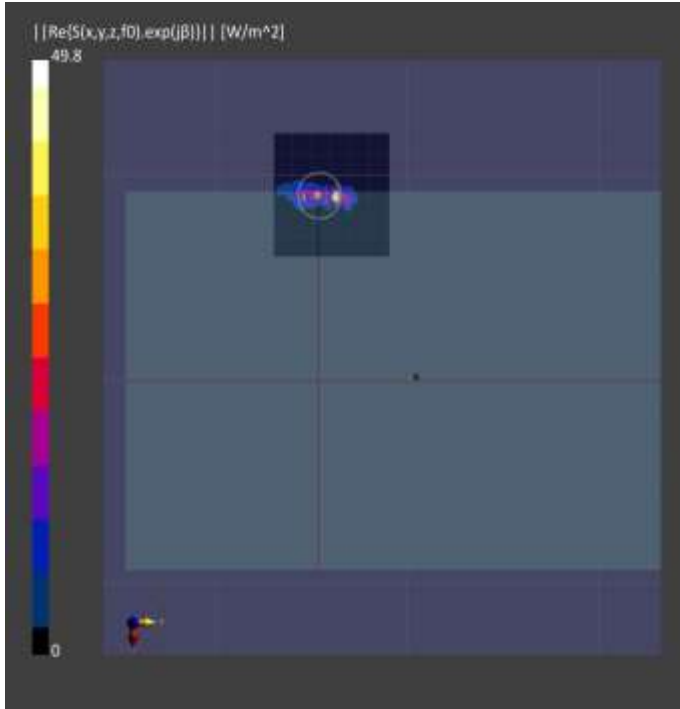
(a) measurement



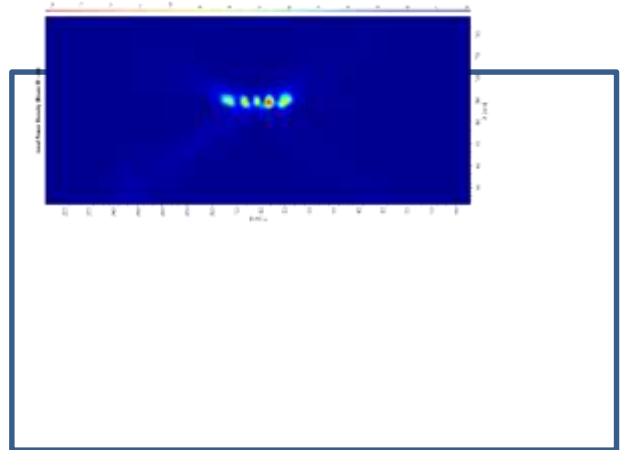
(b) simulation

ANT L-Patch Mid channel, 4cm2 averaged power density

- n260 ANT K-Patch Mid channel, Beam ID 24, Front

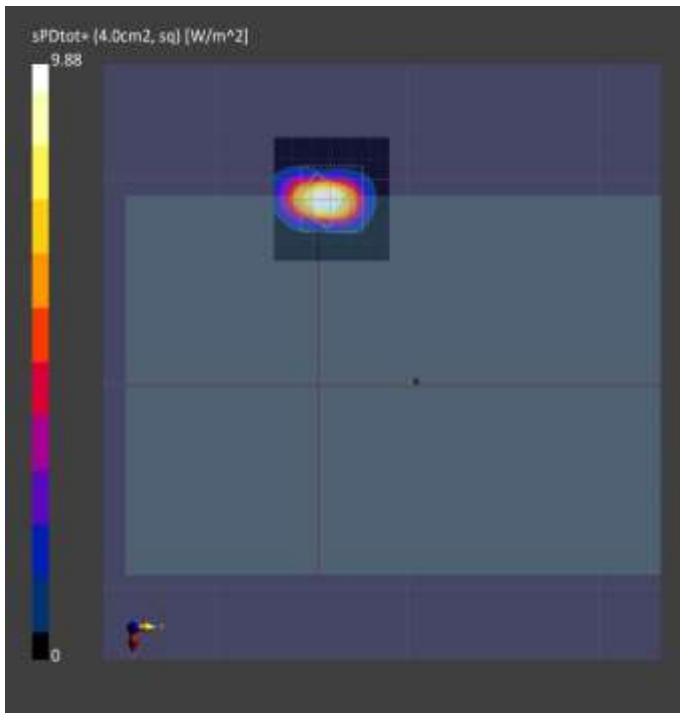


(a) measurement

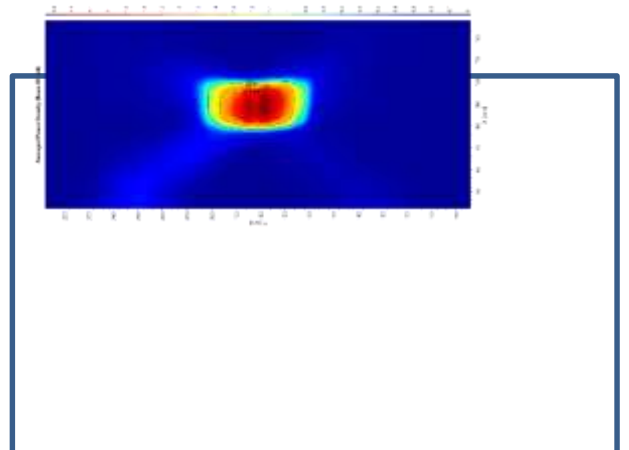


(b) simulation

ANT K-Patch Mid channel, Point power density



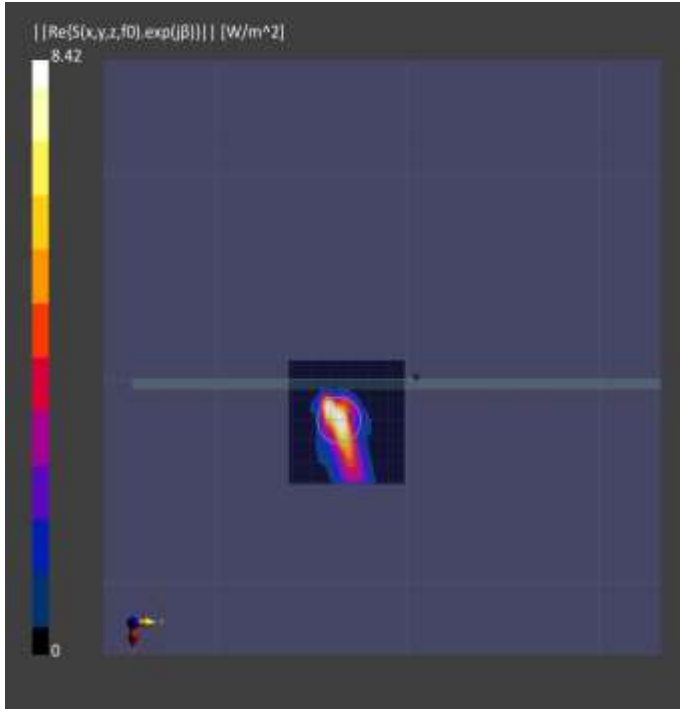
(a) measurement



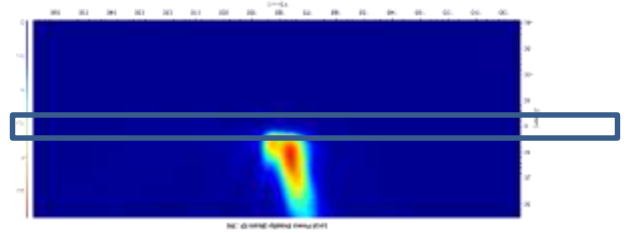
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n260 ANT K-Patch Mid channel, Beam ID 36, Right

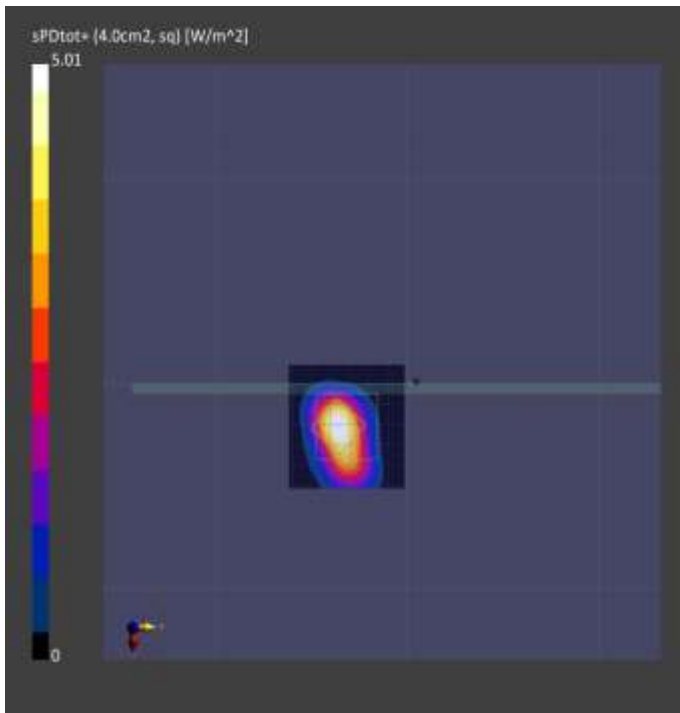


(a) measurement

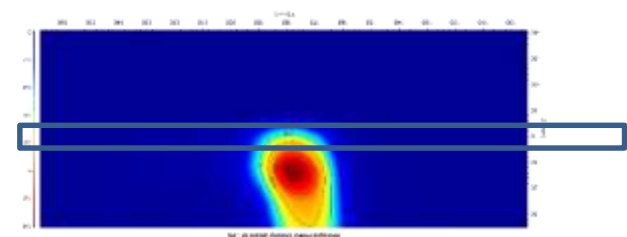


(b) simulation

ANT K-Patch Mid channel, Point power density



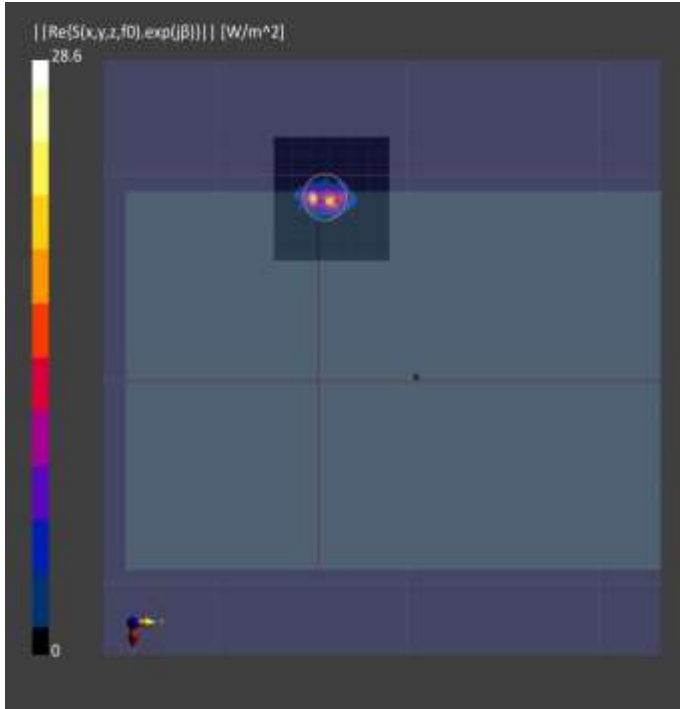
(a) measurement



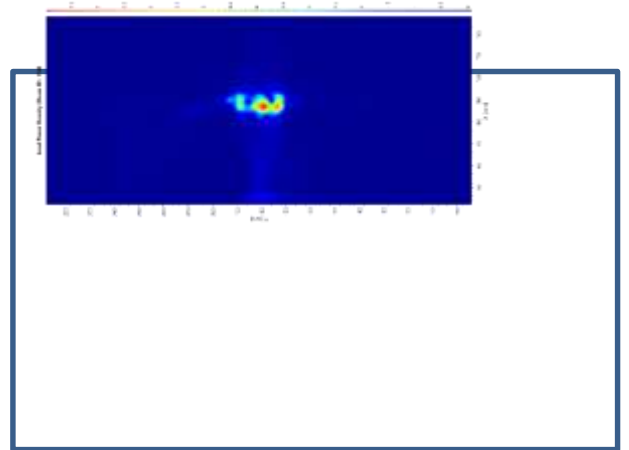
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n260 ANT K-Patch Mid channel, Beam ID 154, Front

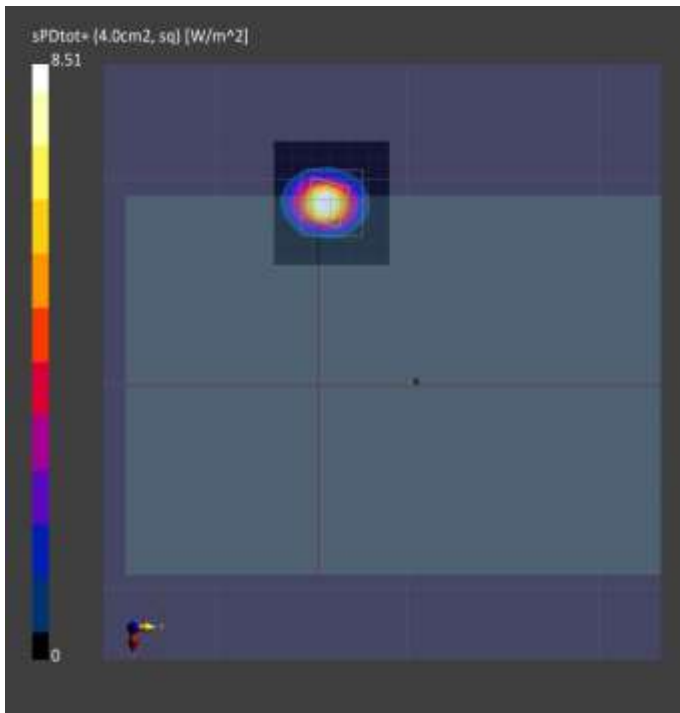


(a) measurement

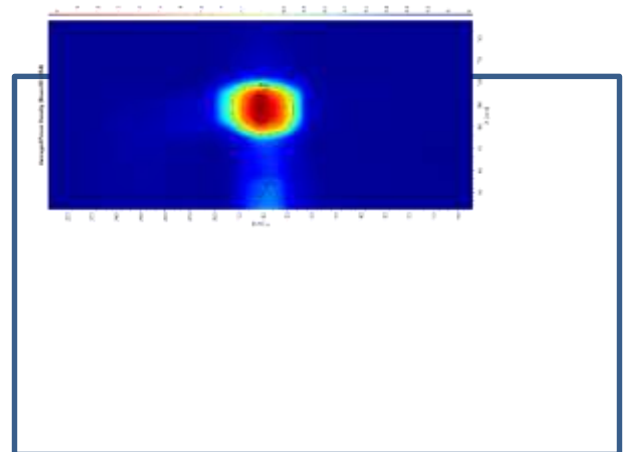


(b) simulation

ANT K-Patch Mid channel, Point power density



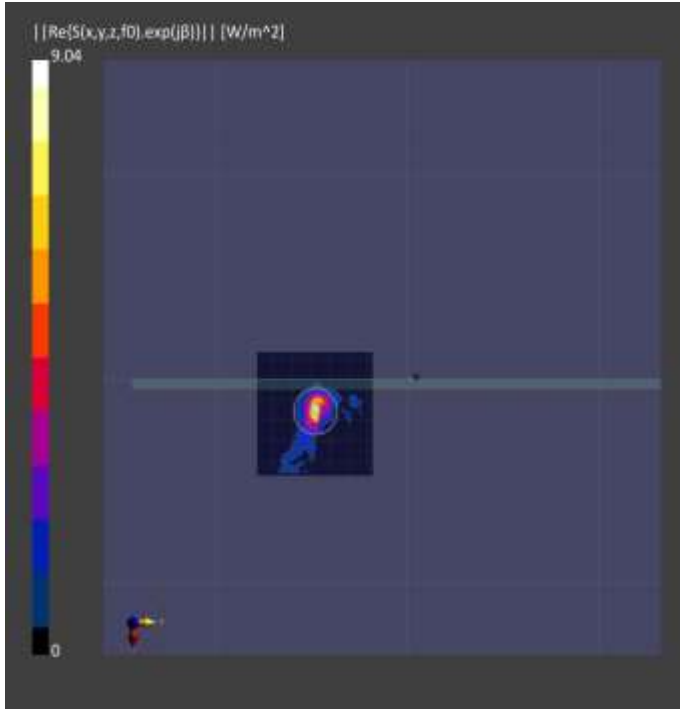
(a) measurement



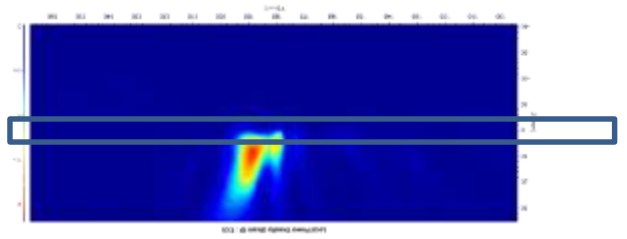
(b) simulation

ANT K-Patch Mid channel, 4cm² averaged power density

- n260 ANT K-Patch Mid channel, Beam ID 153, Right

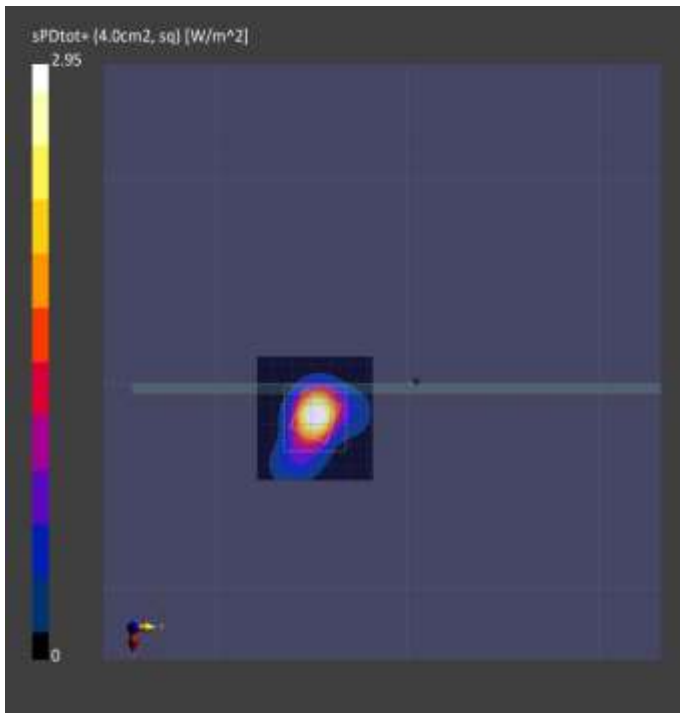


(a) measurement

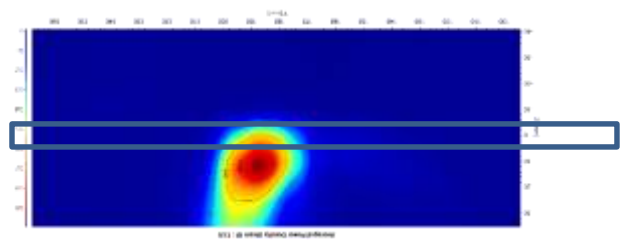


(b) simulation

ANT K-Patch Mid channel, Point power density



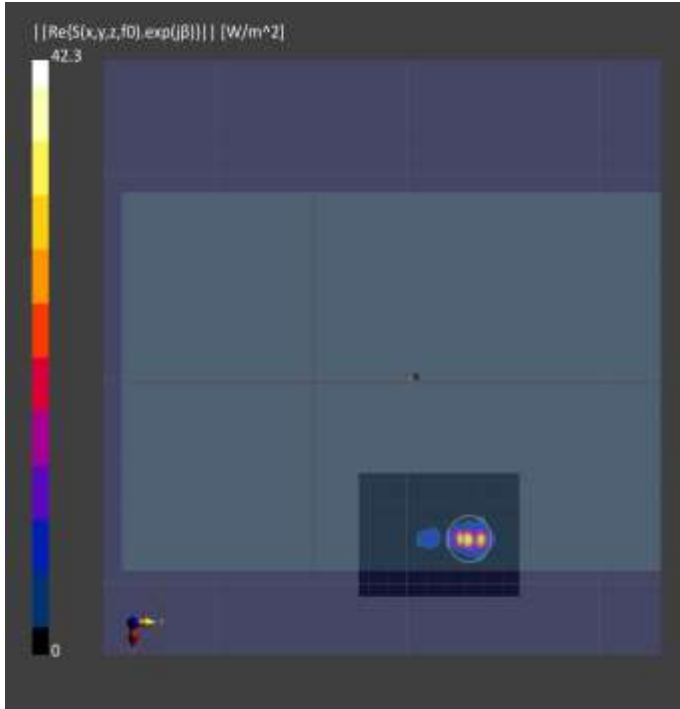
(a) measurement



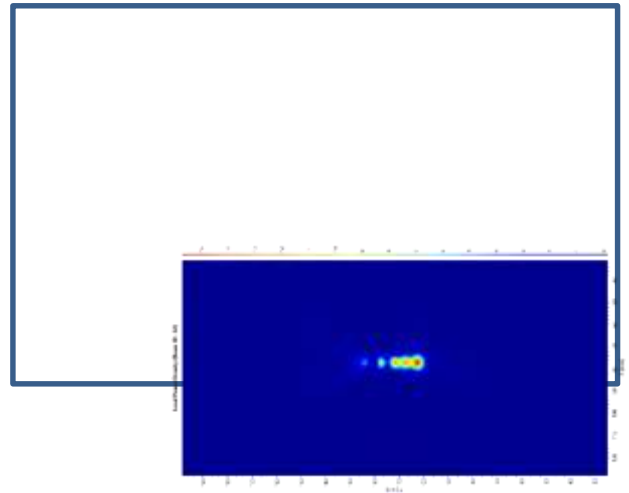
(b) simulation

ANT K-Patch Mid channel, 4cm2 averaged power density

- n260 ANT L-Patch Mid channel, Beam ID 32, Rear

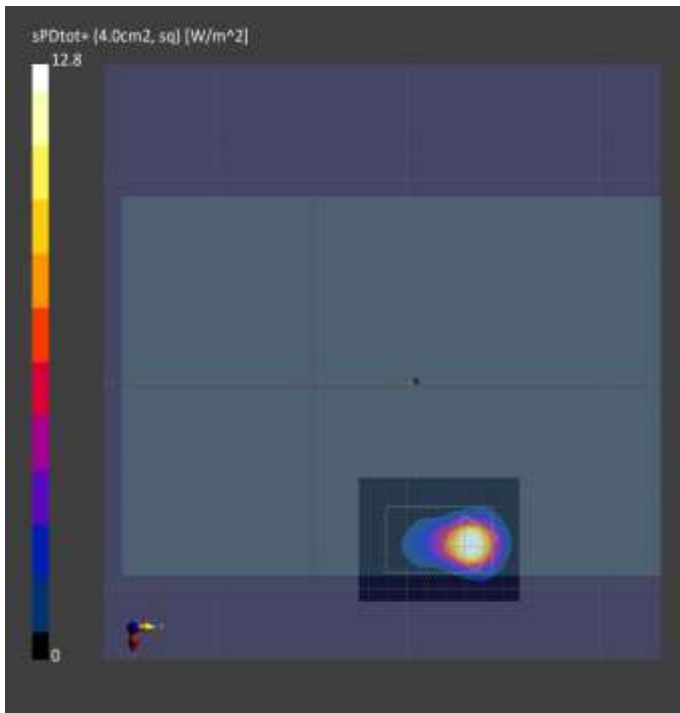


(a) measurement

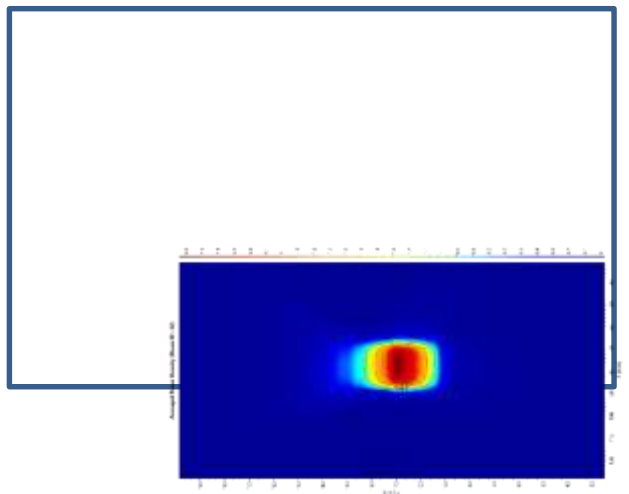


(b) simulation

ANT L-Patch Mid channel, Point power density



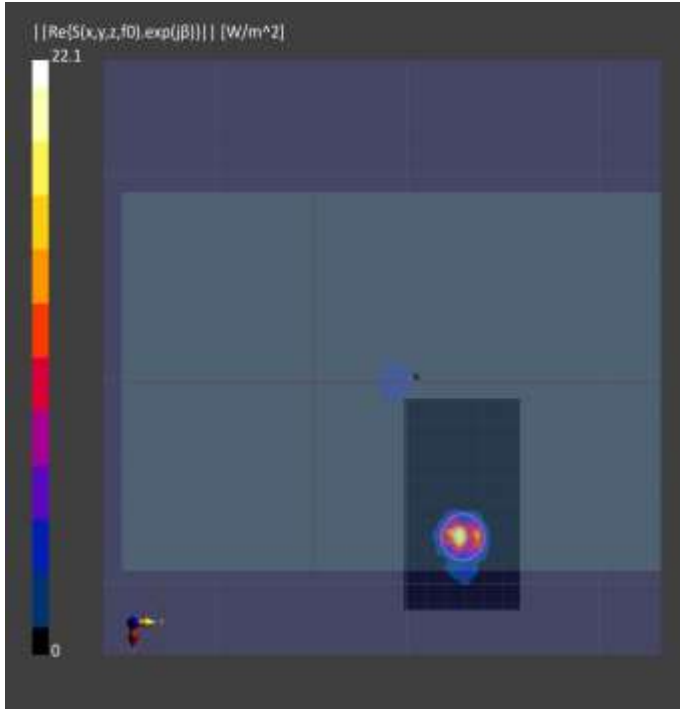
(a) measurement



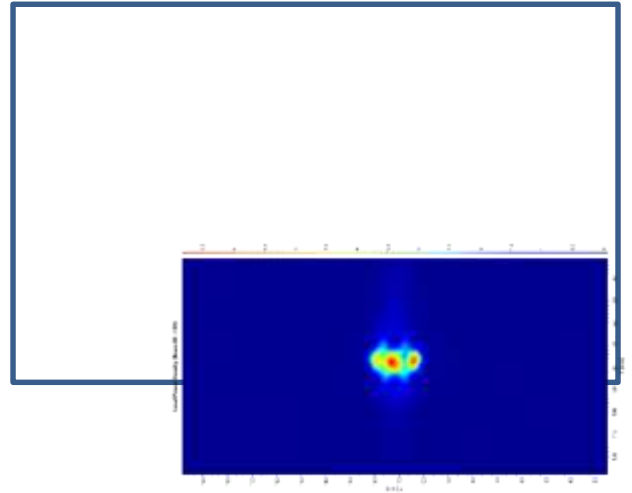
(b) simulation

ANT L-Patch Mid channel, 4cm2 averaged power density

- n260 ANT L-Patch Mid channel, Beam ID 159, Rear

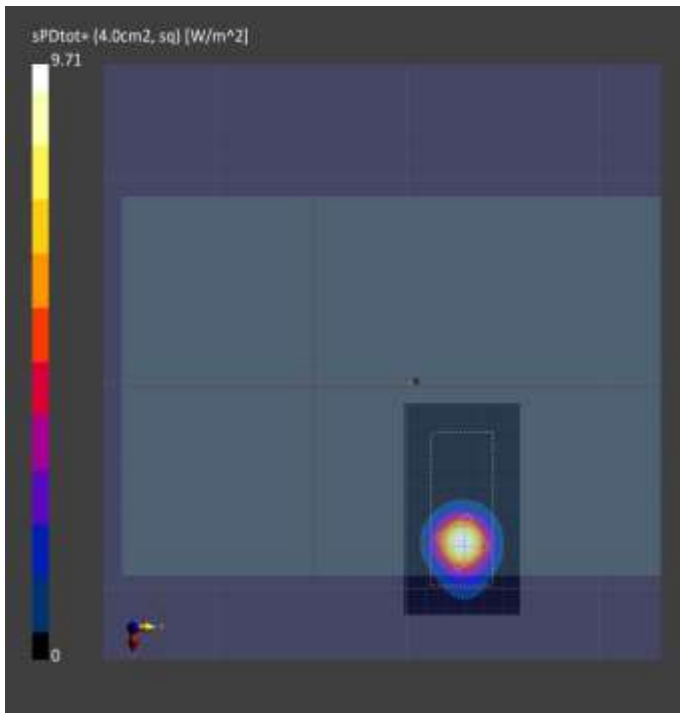


(a) measurement

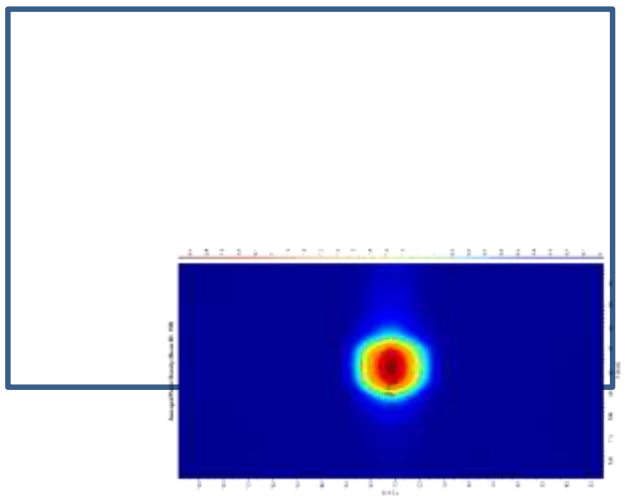


(b) simulation

ANT L-Patch Mid channel, Point power density



(a) measurement



(b) simulation

ANT L-Patch Mid channel, 4cm² averaged power density

3 Simulation results

This section shows the PD simulation results of Ant K and Ant L at 28GHz, 39GHz and 24GHz for each evaluation plane specified in Table 1 at two separation distances of 2mm and 10mm. The ratio of PD exposure from front surface to the worst surface at 2mm, and the ratio of PD exposure from 2mm to 10mm evaluation distance for each beam are also reported in this section to support RF exposure analysis for simultaneous transmission scenarios performed in the Part 1 Near Field PD report.

The relative phase between beam pairs is not controlled in the chipset design. Therefore, the relative phase between each beam pair was considered mathematically to identify the worst case conditions. The below MIMO results represent the highest reported MIMO simulation results after sweeping across the relative phase between beams a 5° step interval from 0° to 360°,

The worst-case simulated PD determined from the tables in this section were used for conservativeness in *input.power.limit* determination in RF Exposure Part 0 Report.

3.1 PD for Low/Mid/High Channel at 28GHz / 39GHz / 24GHz

3.1.1 Ant K– Patch Antenna

Table 3 to 5 show the PD simulation evaluation of Ant K patch antenna at 28GHz / 39GHz / 24GHz for the all surfaces.



Table 3. PD of Ant K – patch antenna (28GHz – n261)

- K-Patch Low CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	45.5%	100.0%	9.0%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm)	ratio (Right 10mm)	ratio (Front 10mm)	ratio (Rear 10mm)
												ratio (Right 2mm)/worst	ratio (Front 2mm)/worst	ratio (Rear 2mm)/worst										
1			0		1	0.08	0.02	0.03	0.02	0.25	0.02	32.0%	100.0%	8.0%	0.03	0.00	0.02	0.01	0.10	0.01	39.0%	11.2%	39.0%	2.7%
2			2		1	0.09	0.03	0.04	0.01	0.25	0.02	36.0%	100.0%	8.0%	0.03	0.00	0.01	0.01	0.11	0.01	42.8%	13.2%	42.8%	3.1%
3			4		1	0.11	0.02	0.01	0.01	0.37	0.01	29.7%	100.0%	2.7%	0.04	0.00	0.00	0.01	0.14	0.00	37.9%	10.5%	37.9%	0.9%
4			6		1	0.13	0.02	0.02	0.02	0.30	0.01	43.3%	100.0%	3.3%	0.05	0.00	0.01	0.01	0.15	0.01	50.9%	16.3%	50.9%	1.7%
5			8		1	0.12	0.02	0.01	0.04	0.36	0.02	33.3%	100.0%	3.6%	0.04	0.00	0.00	0.02	0.12	0.01	32.7%	11.2%	32.7%	1.7%
6			10		2	0.17	0.05	0.02	0.10	0.46	0.04	37.0%	100.0%	8.7%	0.07	0.00	0.01	0.03	0.18	0.02	39.4%	15.9%	39.4%	3.5%
7			11		2	0.30	0.05	0.02	0.02	0.67	0.03	44.8%	100.0%	4.5%	0.11	0.00	0.01	0.01	0.35	0.01	52.5%	16.5%	52.5%	1.6%
8			12		2	0.28	0.07	0.04	0.03	0.68	0.03	41.2%	100.0%	4.4%	0.11	0.00	0.02	0.01	0.33	0.01	48.4%	16.3%	48.4%	1.7%
9			13		2	0.17	0.04	0.05	0.04	0.45	0.03	37.8%	100.0%	6.7%	0.07	0.00	0.02	0.02	0.18	0.01	40.1%	16.6%	40.1%	2.1%
10			18		2	0.18	0.05	0.07	0.02	0.58	0.04	31.0%	100.0%	6.9%	0.07	0.00	0.04	0.01	0.25	0.01	42.3%	11.2%	42.3%	2.3%
11			19		2	0.21	0.06	0.03	0.03	0.64	0.02	32.8%	100.0%	3.1%	0.08	0.00	0.01	0.02	0.28	0.01	44.5%	12.4%	44.5%	1.3%
12			20		2	0.14	0.05	0.05	0.04	0.47	0.02	29.8%	100.0%	4.3%	0.05	0.00	0.02	0.02	0.19	0.01	39.4%	10.6%	39.4%	1.8%
13			24		5	0.39	0.08	0.09	0.15	1.10	0.05	35.5%	100.0%	4.5%	0.17	0.00	0.05	0.06	0.43	0.02	38.7%	15.4%	38.7%	2.0%
14			25		5	0.80	0.14	0.07	0.11	1.76	0.08	45.5%	100.0%	4.5%	0.39	0.00	0.03	0.05	0.96	0.04	54.3%	22.4%	54.3%	2.3%
15			26		5	0.65	0.20	0.06	0.07	1.75	0.06	37.1%	100.0%	3.4%	0.33	0.00	0.03	0.03	0.83	0.04	47.4%	18.6%	47.4%	2.3%
16			27		5	0.90	0.15	0.03	0.15	2.01	0.09	44.8%	100.0%	4.5%	0.45	0.00	0.02	0.09	0.96	0.04	47.8%	22.3%	47.8%	2.0%
17			28		5	0.39	0.13	0.22	0.11	1.11	0.10	35.1%	100.0%	9.0%	0.18	0.00	0.11	0.07	0.48	0.03	42.9%	16.0%	42.9%	2.7%
18			34		5	0.67	0.11	0.09	0.09	1.61	0.08	41.6%	100.0%	5.0%	0.31	0.00	0.06	0.03	0.76	0.03	47.0%	19.4%	47.0%	2.0%
19			35		5	0.67	0.22	0.05	0.06	1.77	0.06	37.9%	100.0%	3.4%	0.32	0.00	0.02	0.03	0.87	0.04	49.2%	18.0%	49.2%	2.1%
20			36		5	0.69	0.15	0.06	0.15	1.56	0.07	44.2%	100.0%	4.5%	0.35	0.00	0.04	0.07	0.74	0.04	47.6%	22.4%	47.6%	2.4%
21			37		5	0.63	0.09	0.11	0.09	1.48	0.07	42.6%	100.0%	4.7%	0.29	0.00	0.04	0.04	0.68	0.03	46.2%	19.7%	46.2%	2.2%
22			128		1	0.07	0.03	0.04	0.02	0.36	0.02	19.4%	100.0%	5.6%	0.02	0.00	0.02	0.01	0.12	0.01	33.7%	6.2%	33.7%	2.2%
23			130		1	0.16	0.01	0.02	0.02	0.69	0.01	23.2%	100.0%	1.4%	0.05	0.00	0.02	0.01	0.29	0.00	41.6%	6.7%	41.6%	0.6%
24			132		1	0.16	0.01	0.03	0.01	0.66	0.01	24.2%	100.0%	1.5%	0.05	0.00	0.02	0.01	0.27	0.01	41.5%	6.9%	41.5%	0.8%
25			134		1	0.16	0.01	0.03	0.01	0.63	0.01	25.4%	100.0%	1.6%	0.04	0.00	0.02	0.01	0.28	0.01	43.8%	7.0%	43.8%	0.8%
26			136		1	0.13	0.01	0.01	0.02	0.48	0.01	26.5%	100.0%	2.0%	0.04	0.00	0.01	0.01	0.23	0.00	47.1%	8.5%	47.1%	0.8%
27			138		2	0.24	0.03	0.08	0.05	0.93	0.03	25.8%	100.0%	3.2%	0.07	0.00	0.05	0.03	0.35	0.02	37.9%	7.9%	37.9%	1.8%
28			139		2	0.45	0.03	0.03	0.01	1.43	0.01	31.5%	100.0%	0.7%	0.15	0.00	0.02	0.00	0.81	0.00	56.3%	10.5%	56.3%	0.3%
29			140		2	0.41	0.02	0.03	0.03	1.27	0.01	32.3%	100.0%	0.8%	0.14	0.00	0.02	0.01	0.72	0.01	57.1%	10.8%	57.1%	0.4%
30			141		2	0.35	0.04	0.03	0.04	1.12	0.02	31.3%	100.0%	1.8%	0.12	0.00	0.02	0.03	0.58	0.01	52.0%	10.9%	52.0%	0.7%
31			146		2	0.32	0.06	0.07	0.01	1.28	0.03	25.0%	100.0%	2.3%	0.10	0.00	0.05	0.01	0.58	0.01	45.3%	8.0%	45.3%	1.1%
32			147		2	0.36	0.03	0.02	0.02	1.31	0.01	27.5%	100.0%	0.8%	0.11	0.00	0.01	0.02	0.65	0.01	49.9%	8.2%	49.9%	0.5%
33			148		2	0.32	0.02	0.02	0.04	1.23	0.02	26.0%	100.0%	1.6%	0.10	0.00	0.01	0.03	0.53	0.01	42.9%	7.9%	42.9%	0.6%
34			152		5	0.87	0.23	0.28	0.09	3.45	0.10	25.2%	100.0%	2.9%	0.28	0.00	0.20	0.05	1.21	0.04	35.1%	8.1%	35.1%	1.2%
35			153		5	1.09	0.15	0.06	0.02	3.22	0.05	33.9%	100.0%	1.6%	0.44	0.00	0.03	0.01	1.74	0.02	54.0%	13.7%	54.0%	0.6%
36			154		5	1.13	0.13	0.03	0.02	2.75	0.02	41.1%	100.0%	0.7%	0.52	0.00	0.02	0.01	1.88	0.01	68.3%	18.9%	68.3%	0.3%
37			155		5	1.16	0.12	0.02	0.03	3.11	0.03	37.3%	100.0%	1.0%	0.50	0.00	0.01	0.02	2.00	0.01	64.3%	16.0%	64.3%	0.5%
38			156		5	1.16	0.13	0.02	0.20	3.54	0.09	32.8%	100.0%	2.5%	0.41	0.00	0.01	0.13	1.64	0.03	46.4%	11.5%	46.4%	1.0%
39			162		5	0.97	0.23	0.17	0.07	3.19	0.07	30.4%	100.0%	2.2%	0.37	0.00	0.08	0.04	1.48	0.03	46.5%	11.5%	46.5%	0.9%
40			163		5	1.13	0.11	0.06	0.04	2.90	0.03	39.0%	100.0%	1.0%	0.50	0.00	0.04	0.02	1.88	0.01	65.0%	17.4%	65.0%	0.5%
41			164		5	1.18	0.13	0.02	0.02	2.92	0.02	40.4%	100.0%	0.7%	0.54	0.00	0.01	0.01	1.99	0.01	68.3%	18.4%	68.3%	0.3%
42			165		5	1.22	0.10	0.01	0.10	3.56	0.07	34.3%	100.0%	2.0%	0.49	0.00	0.01	0.07	1.92	0.02	53.9%	13.8%	53.9%	0.7%
43			0	128	2	0.17	0.03	0.04	0.05	0.68	0.02	25.0%	100.0%	2.9%	0.05	0.00	0.02	0.03	0.26	0.01	37.8%	7.8%	37.8%	1.3%
44			2	130	2	0.24	0.03	0.07	0.02	1.07	0.04	22.4%	100.0%	3.7%	0.08	0.00	0.04	0.01	0.40	0.01	37.7%	7.3%	37.7%	1.0%
45			4	132	2	0.31	0.03	0.04	0.02	1.12	0.01	27.7%	100.0%	0.9%	0.09	0.00	0.03	0.01	0.47	0.01	41.6%	8.1%	41.6%	0.7%
46			6	134	2	0.32	0.03	0.04	0.04	1.02	0.02	31.4%	100.0%	2.0%	0.11	0.00	0.03	0.02	0.48	0.01	46.6%	10.7%	46.6%	0.8%
47			8	136	2	0.26	0.03	0.02	0.06	0.90	0.03	28.9%	100.0%	3.3%	0.09	0.00	0.01	0.03	0.33	0.01	36.5%	9.7%	36.5%	1.4%
48			10	138	4	0.51	0.10	0.09	0.14	1.41	0.05	36.2%	100.0%	3.5%	0.19	0.00	0.05	0.05	0.51	0.03	36.0%	13.4%	36.0%	2.1%
49			11	139	4	0.73	0.06	0.05	0.03	2.13	0.02	34.3%	100.0%	0.9%	0.27	0.00	0.03	0.01	1.20	0.01	56.3%	12.4%	56.3%	0.5%
50			12	140	4	0.67	0.08	0.07	0.05	2.06	0.04	32.5%	100.0%	1.9%	0.24	0.00	0.05	0.02	1.07	0.02	51.8%	11.6%	51.8%	0.9%
51			13	141	4	0.40	0.06	0.10	0.09	1.57	0.05	25.5%	100.0%	3.2%	0.16	0.00	0.05	0.06	0.71	0.02	45.5%	9.9%	45.5%	1.3%
52			18	146	4	0.40	0.11	0.07	0.04	1.71	0.03	23.4%	100.0%	1.8%	0.13	0.00	0.05	0.03	0.69	0.01	40.1%	7.5%	40.1%	0.7%
53			19	147	4	0.54	0.11	0.08	0.05	2.00	0.04	27.0%	100.0%	2.0%	0.18	0.00	0.03	0.03	0.95	0.01	47.7%	9.1%	47.7%	0.7%
54			20	148	4	0.61	0.07	0.09	0.08	1.78	0.05	34.3%	100.0%	2.8%	0.21	0.00	0.04	0.05	0.81	0.02	45.5%	11.8%	45.5%	1.0%
55			24	152	10	1.47	0.37	0.27	0.27	3.97	0.14	37.0%	100.0%	3.5%	0.53	0.00	0.18	0.11	1.39	0.07	34.9%	13.4%	34.9%	1.8%
56			25	153	10	2.14	0.35	0.11	0.15	4.74	0.17	45.1%	100.0%	3.6%	0.89	0.00	0.06	0.08	2.46	0.07	51.8%	18.8%	51.8%	1.



ELECTRONICS

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- K-Patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)											max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance				max ratio out of all beams				
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm/2mm)	ratio (Right 10mm)/(worst-surface 2mm)	ratio (Front 10mm)/(worst-surface 2mm)	ratio (Rear 10mm)/(worst-surface 2mm)	67.9%	23.8%	67.9%	3.2%
1			0		1	0.07	0.02	0.01	0.02	0.21	0.01	33.3%	100.0%	4.8%	0.03	0.00	0.00	0.01	0.09	0.00	42.0%	12.5%	42.0%	1.1%				
2			1		1	0.10	0.03	0.02	0.01	0.30	0.01	33.3%	100.0%	3.3%	0.04	0.00	0.01	0.01	0.14	0.01	45.3%	13.6%	45.3%	2.1%				
3			4		1	0.11	0.03	0.02	0.02	0.37	0.01	29.7%	100.0%	2.7%	0.04	0.00	0.01	0.01	0.14	0.00	37.2%	10.1%	37.2%	1.3%				
4			6		1	0.09	0.02	0.02	0.03	0.25	0.01	36.0%	100.0%	4.0%	0.04	0.00	0.01	0.01	0.10	0.01	41.2%	14.3%	41.2%	2.1%				
5			8		1	0.11	0.02	0.01	0.03	0.35	0.01	31.4%	100.0%	2.9%	0.04	0.00	0.01	0.02	0.11	0.01	31.2%	10.9%	31.2%	1.8%				
6			10		2	0.17	0.03	0.03	0.08	0.47	0.03	36.2%	100.0%	6.4%	0.06	0.00	0.02	0.03	0.18	0.01	37.7%	13.8%	37.7%	3.1%				
7			11		2	0.26	0.06	0.03	0.04	0.65	0.02	40.0%	100.0%	3.1%	0.10	0.00	0.01	0.01	0.31	0.01	47.3%	15.2%	47.3%	1.4%				
8			12		2	0.28	0.07	0.02	0.03	0.71	0.02	39.4%	100.0%	2.8%	0.11	0.00	0.01	0.02	0.32	0.01	45.7%	15.4%	45.7%	1.3%				
9			13		2	0.13	0.03	0.07	0.05	0.51	0.03	25.5%	100.0%	5.9%	0.05	0.00	0.04	0.02	0.17	0.02	33.6%	9.8%	33.6%	3.2%				
10			18		2	0.22	0.04	0.03	0.02	0.54	0.02	40.7%	100.0%	3.7%	0.08	0.00	0.01	0.01	0.27	0.01	50.4%	15.7%	50.4%	1.5%				
11			19		2	0.28	0.04	0.02	0.02	0.71	0.02	39.4%	100.0%	2.8%	0.11	0.00	0.01	0.02	0.35	0.01	49.3%	15.8%	49.3%	1.2%				
12			20		2	0.17	0.05	0.03	0.04	0.54	0.02	31.5%	100.0%	3.7%	0.07	0.00	0.01	0.02	0.22	0.01	41.6%	13.7%	41.6%	1.3%				
13			24		5	0.52	0.07	0.09	0.21	1.46	0.07	35.6%	100.0%	4.8%	0.24	0.00	0.05	0.09	0.63	0.03	43.1%	16.2%	43.1%	1.8%				
14			25		5	0.81	0.10	0.05	0.07	1.72	0.08	47.1%	100.0%	4.7%	0.39	0.00	0.02	0.04	0.92	0.04	53.3%	22.6%	53.3%	2.3%				
15			26		5	0.73	0.20	0.03	0.04	1.78	0.05	41.0%	100.0%	2.8%	0.34	0.00	0.02	0.02	0.87	0.03	49.1%	19.4%	49.1%	1.9%				
16			27		5	0.74	0.12	0.04	0.11	1.82	0.08	40.7%	100.0%	4.4%	0.34	0.00	0.02	0.06	0.83	0.03	45.4%	18.6%	45.4%	1.9%				
17			28		5	0.38	0.12	0.14	0.11	1.33	0.07	28.6%	100.0%	5.3%	0.14	0.00	0.08	0.08	0.45	0.03	34.2%	10.4%	34.2%	2.0%				
18			34		5	0.78	0.09	0.06	0.09	1.83	0.08	42.6%	100.0%	4.4%	0.36	0.00	0.03	0.04	0.94	0.04	51.4%	19.6%	51.4%	1.9%				
19			35		5	0.80	0.15	0.04	0.04	1.70	0.07	47.1%	100.0%	4.1%	0.41	0.00	0.02	0.02	0.89	0.04	52.3%	23.8%	52.3%	2.3%				
20			36		5	0.52	0.23	0.04	0.09	1.53	0.05	34.0%	100.0%	3.3%	0.24	0.00	0.01	0.04	0.65	0.03	42.3%	16.0%	42.3%	1.8%				
21			37		5	0.65	0.07	0.11	0.13	1.75	0.06	37.1%	100.0%	3.4%	0.26	0.00	0.05	0.06	0.71	0.03	40.9%	15.0%	40.9%	1.5%				
22			128		1	0.10	0.01	0.02	0.03	0.47	0.01	21.3%	100.0%	2.1%	0.03	0.00	0.01	0.02	0.16	0.01	34.3%	5.8%	34.3%	1.8%				
23			130		1	0.15	0.02	0.02	0.01	0.68	0.01	22.1%	100.0%	1.5%	0.04	0.00	0.02	0.01	0.29	0.00	42.0%	6.5%	42.0%	0.6%				
24			132		1	0.16	0.01	0.03	0.01	0.64	0.01	25.0%	100.0%	1.6%	0.05	0.00	0.02	0.01	0.28	0.01	43.8%	7.2%	43.8%	0.9%				
25			134		1	0.16	0.01	0.03	0.01	0.59	0.01	27.1%	100.0%	1.7%	0.05	0.00	0.02	0.01	0.28	0.01	47.8%	8.2%	47.8%	1.1%				
26			136		1	0.11	0.01	0.02	0.01	0.46	0.01	23.9%	100.0%	2.2%	0.04	0.00	0.01	0.01	0.20	0.01	43.0%	7.8%	43.0%	1.2%				
27			138		2	0.26	0.03	0.09	0.04	0.93	0.04	28.0%	100.0%	4.3%	0.07	0.00	0.06	0.03	0.33	0.02	35.7%	7.6%	35.7%	2.3%				
28			139		2	0.46	0.03	0.03	0.00	1.42	0.01	32.4%	100.0%	0.7%	0.15	0.00	0.02	0.00	0.81	0.00	57.1%	10.8%	57.1%	0.3%				
29			140		2	0.41	0.02	0.03	0.03	1.27	0.01	32.3%	100.0%	0.8%	0.14	0.00	0.02	0.02	0.72	0.00	56.8%	10.7%	56.8%	0.4%				
30			141		2	0.33	0.03	0.04	0.04	0.99	0.02	33.3%	100.0%	2.0%	0.11	0.00	0.03	0.02	0.53	0.01	53.3%	11.5%	53.3%	1.2%				
31			146		2	0.36	0.05	0.06	0.01	1.34	0.02	26.9%	100.0%	1.5%	0.11	0.00	0.04	0.01	0.65	0.01	48.9%	8.5%	48.9%	0.6%				
32			147		2	0.39	0.02	0.01	0.02	1.35	0.01	28.9%	100.0%	0.7%	0.12	0.00	0.01	0.01	0.70	0.01	51.9%	8.9%	51.9%	0.5%				
33			148		2	0.36	0.02	0.01	0.04	1.32	0.02	27.3%	100.0%	1.5%	0.11	0.00	0.01	0.03	0.59	0.01	44.9%	8.1%	44.9%	1.0%				
34			152		5	1.01	0.23	0.31	0.04	3.70	0.10	27.3%	100.0%	2.7%	0.31	0.00	0.22	0.03	1.28	0.05	34.5%	8.4%	34.5%	1.2%				
35			153		5	1.16	0.12	0.05	0.02	3.24	0.05	35.8%	100.0%	1.5%	0.48	0.00	0.04	0.01	1.82	0.02	56.1%	14.8%	56.1%	0.7%				
36			154		5	1.14	0.11	0.03	0.02	2.81	0.02	40.6%	100.0%	0.7%	0.52	0.00	0.01	0.01	1.88	0.01	66.9%	18.4%	66.9%	0.2%				
37			155		5	1.18	0.12	0.02	0.04	3.13	0.03	37.7%	100.0%	1.0%	0.52	0.00	0.01	0.02	2.00	0.02	64.0%	16.6%	64.0%	0.5%				
38			156		5	1.21	0.13	0.01	0.17	3.50	0.09	34.6%	100.0%	2.6%	0.45	0.00	0.00	0.11	1.69	0.03	48.3%	12.9%	48.3%	0.9%				
39			162		5	1.10	0.21	0.20	0.06	3.43	0.07	32.1%	100.0%	2.0%	0.40	0.00	0.09	0.04	1.59	0.03	46.3%	11.6%	46.3%	0.8%				
40			163		5	1.17	0.12	0.04	0.04	2.99	0.03	39.1%	100.0%	1.0%	0.53	0.00	0.02	0.02	1.95	0.01	65.3%	17.6%	65.3%	0.4%				
41			164		5	1.18	0.13	0.02	0.02	2.93	0.02	40.3%	100.0%	0.7%	0.54	0.00	0.01	0.01	1.99	0.01	67.9%	18.6%	67.9%	0.2%				
42			165		5	1.26	0.10	0.01	0.09	3.49	0.07	36.1%	100.0%	2.0%	0.52	0.00	0.01	0.07	1.92	0.03	54.9%	14.8%	54.9%	0.8%				
43			9	128	2	0.18	0.03	0.03	0.05	0.68	0.02	26.5%	100.0%	2.9%	0.06	0.00	0.02	0.03	0.27	0.01	39.2%	8.3%	39.2%	0.8%				
44			2	130	2	0.24	0.03	0.07	0.02	1.15	0.03	20.9%	100.0%	2.6%	0.07	0.00	0.05	0.01	0.44	0.01	38.0%	6.5%	38.0%	1.0%				
45			4	132	2	0.29	0.03	0.07	0.02	1.04	0.03	27.9%	100.0%	2.9%	0.09	0.00	0.05	0.01	0.44	0.02	42.0%	6.5%	42.0%	1.5%				
46			6	134	2	0.28	0.03	0.05	0.04	0.88	0.02	31.8%	100.0%	2.3%	0.10	0.00	0.03	0.02	0.44	0.01	49.9%	11.0%	49.9%	1.3%				
47			8	136	2	0.24	0.02	0.02	0.04	0.84	0.02	28.6%	100.0%	2.4%	0.07	0.00	0.01	0.02	0.29	0.01	34.2%	8.3%	34.2%	1.1%				
48			10	138	4	0.63	0.06	0.11	0.09	1.44	0.06	43.8%	100.0%	4.2%	0.20	0.00	0.08	0.03	0.56	0.02	39.1%	14.2%	39.1%	1.6%				
49			11	139	4	0.67	0.08	0.06	0.04	2.00	0.02	33.5%	100.0%	1.0%	0.24	0.00	0.04	0.01	1.09	0.01	54.6%	11.8%	54.6%	0.5%				
50			12	140	4	0.71	0.07	0.04	0.05	2.20	0.04	32.3%	100.0%	1.8%	0.25	0.00	0.02	0.03	1.09	0.02	49.6%	11.3%	49.6%	0.7%				
51			13	141	4	0.39	0.05	0.17	0.10	1.49	0.08	26.2%	100.0%	5.4%	0.14	0.00	0.11	0.06	0.68	0.04	45.6%	9.3%	45.6%	3.0%				
52			18	146	4	0.49	0.09	0.09	0.03	1.77	0.03	27.7%	100.0%	1.7%	0.17	0.00	0.06	0.02	0.77	0.01	43.3%	9.8%	43.3%	0.6%				
53			19	147	4	0.67	0.08	0.04	0.05	2.19	0.03	30.6%	100.0%	1.4%	0.24	0.00	0.02	0.02	1.08	0.01	49.2%	10.8%	49.2%	0.6%				
54			20	148	4	0.67	0.09	0.06	0.08	1.88	0.04	35.6%	100.0%	2.1%	0.23	0.00	0.03	0.04	0.92	0.01	49.1%	12.0%	49.1%	0.7%				
55			24	152	10	1.94	0.30	0.31	0.28	4.93	0.18	39.4%	100.0%	3.7%	0.68	0.00	0.23	0.10	1.84	0.06	37.4%	13.8%	37.4%	1.2%				
56			25	153	10	2.38	0.23	0.08	0.07	4.77	0.19	49.9%	100.0%	4.0%	0.98	0.00	0.06	0.03										



ELECTRONICS

Samsung Confidential

- K-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)												max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance				max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm/2mm)	ratio (Right 10mm)/(worst-surface 2mm)	ratio (Front 10mm)/(worst-surface 2mm)	ratio (Rear 10mm)/(worst-surface 2mm)	67.9%	25.1%	67.9%	4.8%
1	K	Patch	0		1	0.08	0.02	0.02	0.02	0.31	0.01	25.8%	100.0%	3.2%	0.03	0.00	0.01	0.01	0.10	0.00	30.8%	10.7%	30.8%	1.6%				
2				1	0.11	0.02	0.02	0.02	0.23	0.01	47.8%	100.0%	4.3%	0.04	0.00	0.01	0.01	0.12	0.01	54.3%	18.9%	54.3%	2.2%					
3				1	0.11	0.03	0.02	0.02	0.35	0.02	31.4%	100.0%	5.7%	0.04	0.00	0.01	0.01	0.14	0.01	39.2%	11.9%	39.2%	2.0%					
4				1	0.06	0.03	0.03	0.02	0.25	0.02	24.0%	100.0%	8.0%	0.02	0.00	0.02	0.01	0.08	0.01	31.0%	9.2%	31.0%	3.9%					
4				1	0.09	0.02	0.01	0.03	0.29	0.01	31.0%	100.0%	3.4%	0.03	0.00	0.01	0.01	0.10	0.00	33.7%	10.4%	33.7%	1.4%					
6				2	0.14	0.02	0.04	0.04	0.43	0.03	32.6%	100.0%	7.0%	0.06	0.00	0.02	0.02	0.15	0.01	34.3%	13.9%	34.3%	2.7%					
7				2	0.24	0.05	0.04	0.03	0.65	0.03	36.9%	100.0%	4.6%	0.09	0.00	0.02	0.01	0.27	0.01	41.3%	14.2%	41.3%	1.9%					
8				2	0.29	0.06	0.03	0.03	0.61	0.02	47.5%	100.0%	3.3%	0.11	0.00	0.02	0.01	0.34	0.01	54.9%	18.3%	54.9%	1.7%					
9				2	0.11	0.03	0.07	0.05	0.58	0.05	19.0%	100.0%	8.6%	0.04	0.00	0.04	0.02	0.14	0.02	24.1%	7.3%	24.1%	3.5%					
10				2	0.25	0.03	0.04	0.02	0.59	0.02	42.4%	100.0%	3.4%	0.10	0.00	0.02	0.01	0.28	0.01	46.9%	17.5%	46.9%	1.4%					
11				2	0.30	0.03	0.03	0.03	0.68	0.03	44.1%	100.0%	4.4%	0.12	0.00	0.01	0.02	0.35	0.01	51.7%	18.2%	51.7%	1.3%					
12				2	0.18	0.05	0.04	0.04	0.52	0.04	34.6%	100.0%	7.7%	0.08	0.00	0.02	0.02	0.22	0.01	42.7%	15.1%	42.7%	2.5%					
13				5	0.52	0.07	0.12	0.11	1.06	0.06	48.1%	100.0%	2.6%	0.23	0.00	0.08	0.06	0.59	0.03	54.4%	20.9%	54.4%	2.5%					
14				5	0.76	0.09	0.09	0.09	1.54	0.07	49.4%	100.0%	4.5%	0.36	0.00	0.04	0.05	0.84	0.03	64.2%	23.5%	64.2%	2.2%					
15				5	0.70	0.16	0.04	0.05	1.47	0.08	47.6%	100.0%	5.4%	0.33	0.00	0.02	0.02	0.81	0.04	54.9%	22.5%	54.9%	2.6%					
16				5	0.65	0.20	0.05	0.08	1.45	0.06	44.8%	100.0%	4.1%	0.28	0.00	0.02	0.05	0.80	0.04	55.3%	19.5%	55.3%	2.5%					
17				5	0.42	0.08	0.21	0.13	1.43	0.11	29.4%	100.0%	7.7%	0.13	0.00	0.11	0.08	0.49	0.05	34.4%	9.1%	34.4%	3.6%					
18				5	0.71	0.07	0.06	0.08	1.35	0.08	52.6%	100.0%	5.9%	0.33	0.00	0.03	0.04	0.80	0.04	59.2%	24.7%	59.2%	2.7%					
19				5	0.79	0.14	0.06	0.06	1.58	0.12	50.0%	100.0%	7.6%	0.40	0.00	0.03	0.03	0.85	0.05	54.1%	25.1%	54.1%	2.9%					
20				5	0.47	0.24	0.05	0.13	1.23	0.06	38.2%	100.0%	4.9%	0.22	0.00	0.02	0.06	0.64	0.03	52.2%	17.5%	52.2%	2.3%					
21				5	0.61	0.09	0.15	0.14	1.07	0.19	37.0%	100.0%	2.7%	0.23	0.00	0.07	0.09	0.69	0.05	64.5%	23.5%	64.5%	4.8%					
22				1	0.11	0.02	0.02	0.02	0.52	0.01	21.2%	100.0%	1.9%	0.03	0.00	0.01	0.01	0.19	0.01	36.8%	5.9%	36.8%	1.4%					
23				1	0.16	0.02	0.02	0.01	0.67	0.01	23.9%	100.0%	1.5%	0.05	0.00	0.01	0.01	0.29	0.00	42.9%	6.9%	42.9%	0.6%					
24				1	0.15	0.01	0.03	0.01	0.64	0.01	23.4%	100.0%	1.6%	0.05	0.00	0.02	0.01	0.28	0.01	43.6%	7.1%	43.6%	1.0%					
25				1	0.16	0.01	0.03	0.01	0.60	0.01	26.7%	100.0%	1.7%	0.05	0.00	0.02	0.01	0.28	0.01	46.0%	8.1%	46.0%	1.3%					
26				1	0.11	0.01	0.03	0.01	0.47	0.01	23.4%	100.0%	2.1%	0.03	0.00	0.02	0.01	0.19	0.01	39.8%	6.6%	39.8%	1.3%					
27				2	0.30	0.03	0.11	0.03	1.08	0.04	27.8%	100.0%	3.7%	0.08	0.00	0.07	0.02	0.37	0.03	34.6%	7.8%	34.6%	2.4%					
28				2	0.46	0.03	0.03	0.00	1.40	0.01	32.9%	100.0%	0.7%	0.15	0.00	0.01	0.00	0.82	0.01	58.2%	11.0%	58.2%	0.4%					
29				2	0.41	0.02	0.02	0.02	1.26	0.01	32.5%	100.0%	0.8%	0.13	0.00	0.01	0.01	0.71	0.01	56.6%	10.6%	56.6%	0.4%					
30				2	0.31	0.03	0.06	0.03	0.92	0.02	33.7%	100.0%	2.2%	0.11	0.00	0.04	0.02	0.51	0.01	55.5%	12.4%	55.5%	1.4%					
31				2	0.38	0.05	0.06	0.01	1.35	0.02	28.1%	100.0%	1.5%	0.12	0.00	0.03	0.01	0.70	0.01	51.9%	9.2%	51.9%	0.5%					
32				2	0.40	0.02	0.02	0.02	1.34	0.01	29.9%	100.0%	0.7%	0.13	0.00	0.01	0.01	0.73	0.01	54.8%	9.4%	54.8%	0.4%					
33				2	0.37	0.02	0.01	0.04	1.32	0.02	28.0%	100.0%	1.5%	0.11	0.00	0.00	0.02	0.63	0.01	46.3%	8.4%	46.3%	0.9%					
34				5	1.09	0.25	0.33	0.04	3.80	0.11	28.7%	100.0%	2.9%	0.35	0.00	0.19	0.03	1.38	0.05	36.3%	9.1%	36.3%	1.4%					
35				5	1.20	0.14	0.05	0.02	3.34	0.05	35.9%	100.0%	1.5%	0.52	0.00	0.03	0.01	1.97	0.02	59.0%	15.5%	59.0%	0.6%					
36				5	1.15	0.12	0.02	0.02	2.86	0.02	40.2%	100.0%	0.7%	0.53	0.00	0.01	0.01	1.92	0.01	67.2%	18.4%	67.2%	0.2%					
37				5	1.18	0.11	0.03	0.03	3.09	0.03	38.2%	100.0%	1.0%	0.53	0.00	0.01	0.01	2.01	0.01	65.0%	17.1%	65.0%	0.5%					
38				5	1.20	0.10	0.03	0.14	3.32	0.09	36.1%	100.0%	2.7%	0.47	0.00	0.01	0.09	1.69	0.03	50.8%	14.2%	50.8%	1.0%					
39				5	1.15	0.23	0.21	0.04	3.61	0.07	31.9%	100.0%	1.9%	0.43	0.00	0.09	0.02	1.72	0.03	47.7%	12.0%	47.7%	0.8%					
40				5	1.18	0.12	0.04	0.04	3.00	0.03	39.3%	100.0%	1.0%	0.52	0.00	0.03	0.02	1.96	0.01	65.3%	17.5%	65.3%	0.3%					
41				5	1.17	0.12	0.01	0.01	2.93	0.02	39.9%	100.0%	0.7%	0.54	0.00	0.01	0.01	1.99	0.01	67.9%	18.4%	67.9%	0.2%					
42				5	1.22	0.10	0.01	0.06	3.35	0.07	36.4%	100.0%	2.1%	0.53	0.00	0.00	0.06	1.91	0.03	56.9%	15.7%	56.9%	0.8%					
43			128	2	0.19	0.03	0.03	0.05	0.69	0.02	26.1%	100.0%	2.9%	0.06	0.00	0.02	0.04	0.27	0.01	38.7%	8.6%	38.7%	1.0%					
44			130	2	0.25	0.03	0.07	0.02	1.12	0.03	22.3%	100.0%	2.7%	0.08	0.00	0.05	0.01	0.43	0.02	38.5%	7.2%	38.5%	1.5%					
45			132	2	0.25	0.03	0.07	0.03	0.95	0.03	26.3%	100.0%	4.2%	0.09	0.00	0.04	0.01	0.40	0.02	42.5%	9.1%	42.5%	1.9%					
46			134	2	0.23	0.04	0.09	0.02	0.86	0.04	26.7%	100.0%	4.7%	0.08	0.00	0.05	0.01	0.37	0.02	42.9%	9.6%	42.9%	1.9%					
47			136	2	0.22	0.02	0.03	0.03	0.78	0.02	28.2%	100.0%	2.6%	0.07	0.00	0.02	0.02	0.28	0.01	36.1%	8.7%	36.1%	1.4%					
48			138	4	0.62	0.04	0.12	0.06	1.40	0.06	44.3%	100.0%	4.3%	0.21	0.00	0.07	0.04	0.52	0.03	37.5%	14.7%	37.5%	2.5%					
49			139	4	0.62	0.08	0.06	0.04	1.97	0.03	31.5%	100.0%	1.5%	0.21	0.00	0.03	0.02	1.04	0.01	52.7%	10.6%	52.7%	0.6%					
50			140	4	0.77	0.06	0.04	0.06	2.30	0.04	33.5%	100.0%	1.7%	0.26	0.00	0.02	0.04	1.13	0.02	49.2%	11.2%	49.2%	0.7%					
51			141	4	0.40	0.06	0.20	0.09	1.39	0.09	28.8%	100.0%	6.5%	0.15	0.00	0.12	0.05	0.68	0.05	48.7%	10.6%	48.7%	3.8%					
52			146	4	0.59	0.10	0.09	0.04	1.83	0.03	32.2%	100.0%	1.6%	0.22	0.00	0.06	0.03	0.90	0.02	49.3%	11.9%	49.3%	0.9%					
53			147	4	0.72	0.05	0.05	0.05	2.22	0.03	32.4%	100.0%	1.4%	0.25	0.00	0.02	0.03	1.10	0.01	49.6%	11.4%	49.6%	0.7%					
54			148	4	0.67	0.09	0.07	0.07	1.85	0.05	36.2%	100.0%	2.7%	0.23	0.00	0.04	0.04	0.91	0.02	49.1%	12.3%	49.1%	0.9%					
55			152	10	2.03	0.28	0.30	0.12	4.90	0.19	41.4%	100.0%	3.9%	0.72	0.00	0.21	0.08	1.97	0.07	40.2%	14.6%	40.2%	1.4%					
56			153	10	2.31	0.22	0.09	0.11	4.74	0.18	48.7%	100.0%	3.8%	0.98	0.00	0.05	0.06	2.72	0.07	57.5%	20.7%	57.5%	1.5%					
57			154	10	1.88	0.20	0.07	0.05	4.57	0.13	41.1%	100.0%	2.8%	0.86	0.00	0.03	0.02	2.75	0.06	60.3%	18.8%	60.3%	1.3%					
58			155	10	1.90	0.16	0.07	0.10	5.21	0.10	36.5%	100.0%	1.9%	0.79	0.00	0.04	0.05	3.15	0.06	60.5%	15.2%	60.5%	1.1%					
59			156	10	1.59	0.13	0.18	0.35	6.16	0.15	25.8%	100.0%	2.4%	0.55	0.00	0.11	0.20	2.54	0.06	41.3%	9.0%	41.3%	0.9%					
60			162	10	2.25	0.27	0.16	0.11	4.73	0.19	47.6%	100.0%	4.0%	0.90	0.00	0.10	0.05	2.39	0.08	50.5%	19.1%							

Table 4. PD of Ant K – patch antenna (24GHz – n258)

- K-Patch Low CH

No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams						max ratio out of all beams					
						S4(Right)	S3(Left)	S5(Top)	S6 (Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	4cm2 PD(mW/cm2) at 10mm evaluation distance						24.9%	70.3%	4.8%
															S4(Right)	S3(Left)	S5(Top)	S6 (Bottom)	S1(Front)	S2(Rear)			
1	K	Patch	0	1	0.05	0.01	0.03	0.01	0.16	0.02	31.3%	100.0%	12.5%	0.02	0.00	0.02	0.00	0.07	0.01	10.3%	42.5%	4.7%	
2			2	1	0.06	0.01	0.03	0.02	0.19	0.01	31.6%	100.0%	5.3%	0.02	0.00	0.01	0.01	0.06	0.01	11.3%	31.7%	2.9%	
3			4	1	0.07	0.01	0.02	0.02	0.19	0.01	36.8%	100.0%	5.3%	0.02	0.00	0.01	0.01	0.08	0.00	12.8%	40.9%	2.0%	
4			6	1	0.06	0.01	0.03	0.02	0.18	0.01	33.3%	100.0%	5.6%	0.02	0.00	0.02	0.01	0.07	0.00	11.3%	37.7%	2.1%	
5			8	1	0.06	0.02	0.03	0.04	0.17	0.01	35.3%	100.0%	5.9%	0.02	0.00	0.01	0.02	0.05	0.01	13.2%	29.9%	3.3%	
6			10	2	0.11	0.02	0.07	0.04	0.33	0.03	33.3%	100.0%	9.1%	0.05	0.00	0.02	0.02	0.10	0.01	14.0%	30.9%	3.8%	
7			11	2	0.16	0.01	0.02	0.03	0.36	0.02	44.4%	100.0%	5.6%	0.06	0.00	0.01	0.01	0.15	0.01	15.7%	41.2%	1.9%	
8			12	2	0.14	0.02	0.06	0.04	0.45	0.03	31.1%	100.0%	6.7%	0.05	0.00	0.02	0.02	0.19	0.01	11.7%	41.3%	2.4%	
9			13	2	0.11	0.02	0.09	0.04	0.41	0.04	26.8%	100.0%	9.8%	0.04	0.00	0.04	0.02	0.17	0.02	9.6%	40.7%	4.1%	
10			18	2	0.16	0.03	0.04	0.04	0.38	0.02	42.1%	100.0%	5.3%	0.07	0.00	0.02	0.02	0.17	0.01	17.7%	44.2%	2.0%	
11			19	2	0.18	0.03	0.01	0.05	0.47	0.02	38.3%	100.0%	4.3%	0.08	0.00	0.01	0.02	0.21	0.01	16.1%	43.9%	1.9%	
12			20	2	0.11	0.02	0.09	0.04	0.41	0.04	26.8%	100.0%	9.8%	0.04	0.00	0.04	0.02	0.17	0.02	9.6%	40.7%	4.1%	
13			24	5	0.37	0.06	0.10	0.08	0.77	0.06	48.1%	100.0%	7.8%	0.18	0.00	0.05	0.03	0.35	0.03	23.9%	46.0%	3.8%	
14			25	5	0.48	0.08	0.05	0.10	1.05	0.06	45.7%	100.0%	5.7%	0.24	0.00	0.02	0.04	0.52	0.03	22.8%	49.0%	3.2%	
15			26	5	0.44	0.08	0.06	0.10	0.94	0.06	46.8%	100.0%	6.4%	0.23	0.00	0.02	0.05	0.49	0.03	24.9%	51.7%	3.3%	
16			27	5	0.32	0.10	0.12	0.11	0.93	0.07	34.4%	100.0%	7.5%	0.16	0.00	0.06	0.05	0.41	0.02	16.8%	43.7%	2.4%	
17			28	5	0.30	0.12	0.09	0.11	1.15	0.04	26.1%	100.0%	3.5%	0.14	0.00	0.05	0.04	0.48	0.02	12.0%	41.9%	1.7%	
18			34	5	0.50	0.07	0.08	0.10	1.04	0.07	48.1%	100.0%	6.7%	0.24	0.00	0.03	0.03	0.53	0.03	23.4%	50.7%	2.7%	
19			35	5	0.45	0.08	0.06	0.10	0.98	0.06	45.9%	100.0%	6.1%	0.23	0.00	0.02	0.05	0.47	0.03	23.8%	48.2%	3.3%	
20			36	5	0.43	0.10	0.05	0.12	0.95	0.05	45.3%	100.0%	5.3%	0.22	0.00	0.02	0.05	0.49	0.03	23.4%	51.4%	2.8%	
21			37	5	0.33	0.11	0.10	0.13	1.29	0.05	25.6%	100.0%	3.9%	0.15	0.00	0.05	0.05	0.51	0.02	12.0%	39.8%	1.7%	
22			128	1	0.08	0.02	0.07	0.01	0.44	0.03	18.2%	100.0%	6.8%	0.02	0.00	0.04	0.01	0.16	0.01	5.2%	35.2%	2.1%	
23			130	1	0.10	0.01	0.01	0.02	0.43	0.01	23.3%	100.0%	2.3%	0.03	0.00	0.01	0.02	0.19	0.00	7.7%	43.2%	0.6%	
24			132	1	0.08	0.01	0.01	0.02	0.39	0.01	20.5%	100.0%	2.6%	0.02	0.00	0.01	0.02	0.15	0.00	6.1%	37.9%	0.9%	
25			134	1	0.08	0.01	0.02	0.02	0.42	0.01	19.0%	100.0%	2.4%	0.03	0.00	0.01	0.01	0.16	0.00	6.4%	37.9%	0.7%	
26			136	1	0.09	0.01	0.01	0.01	0.39	0.00	23.1%	100.0%	0.0%	0.02	0.00	0.01	0.01	0.16	0.00	6.4%	40.7%	0.4%	
27			138	2	0.21	0.02	0.03	0.08	0.84	0.02	25.0%	100.0%	2.4%	0.06	0.00	0.01	0.06	0.35	0.01	7.3%	42.1%	1.2%	
28			139	2	0.26	0.02	0.01	0.03	0.97	0.01	26.8%	100.0%	1.0%	0.09	0.00	0.01	0.02	0.48	0.00	9.2%	49.4%	0.4%	
29			140	2	0.27	0.03	0.04	0.01	0.98	0.02	27.6%	100.0%	2.0%	0.09	0.00	0.03	0.00	0.50	0.01	9.7%	50.6%	0.8%	
30			141	2	0.26	0.04	0.03	0.04	0.86	0.02	30.2%	100.0%	2.3%	0.10	0.00	0.02	0.03	0.43	0.01	11.3%	50.4%	1.0%	
31			146	2	0.23	0.02	0.04	0.03	0.84	0.01	27.4%	100.0%	1.2%	0.08	0.00	0.02	0.02	0.42	0.00	9.7%	49.8%	0.5%	
32			147	2	0.26	0.02	0.01	0.01	0.95	0.00	27.4%	100.0%	0.0%	0.09	0.00	0.01	0.01	0.50	0.00	9.2%	52.3%	0.2%	
33			148	2	0.23	0.05	0.08	0.02	0.96	0.03	24.0%	100.0%	3.1%	0.08	0.00	0.05	0.01	0.44	0.01	8.5%	45.9%	1.3%	
34			152	5	0.64	0.14	0.04	0.12	2.51	0.04	25.5%	100.0%	1.6%	0.25	0.00	0.02	0.07	1.15	0.02	10.1%	46.0%	0.6%	
35			153	5	0.69	0.07	0.03	0.02	2.02	0.02	34.2%	100.0%	1.0%	0.30	0.00	0.02	0.01	1.23	0.01	14.9%	60.9%	0.4%	
36			154	5	0.72	0.07	0.05	0.01	1.72	0.02	41.9%	100.0%	1.2%	0.33	0.00	0.04	0.00	1.21	0.01	19.0%	70.3%	0.4%	
37			155	5	0.80	0.09	0.03	0.01	2.14	0.03	37.4%	100.0%	1.4%	0.35	0.00	0.02	0.01	1.37	0.01	16.4%	64.2%	0.6%	
38	156	5	0.75	0.14	0.17	0.02	2.70	0.06	27.8%	100.0%	2.2%	0.28	0.00	0.15	0.01	1.12	0.03	10.4%	41.5%	1.1%			
39	162	5	0.68	0.09	0.04	0.06	2.27	0.02	30.0%	100.0%	0.9%	0.28	0.00	0.02	0.03	1.22	0.01	12.1%	53.6%	0.4%			
40	163	5	0.71	0.08	0.04	0.01	1.78	0.01	39.9%	100.0%	0.6%	0.33	0.00	0.02	0.01	1.23	0.01	18.4%	69.0%	0.3%			
41	164	5	0.77	0.09	0.04	0.01	1.87	0.02	41.2%	100.0%	1.1%	0.34	0.00	0.03	0.00	1.30	0.01	18.4%	69.6%	0.4%			
42	165	5	0.82	0.11	0.09	0.01	2.59	0.05	31.7%	100.0%	1.9%	0.34	0.00	0.08	0.01	1.34	0.02	13.0%	51.8%	0.8%			
43	0	128	2	0.08	0.03	0.13	0.02	0.50	0.06	16.0%	100.0%	12.0%	0.03	0.00	0.07	0.01	0.13	0.02	5.1%	26.1%	4.8%		
44	2	130	2	0.15	0.02	0.06	0.06	0.53	0.03	28.3%	100.0%	5.7%	0.05	0.00	0.02	0.04	0.23	0.01	9.8%	43.4%	2.0%		
45	4	132	2	0.15	0.02	0.03	0.05	0.62	0.01	24.2%	100.0%	1.6%	0.05	0.00	0.01	0.03	0.24	0.01	8.3%	38.3%	1.3%		
46	6	134	2	0.13	0.02	0.03	0.04	0.47	0.02	27.7%	100.0%	4.3%	0.05	0.00	0.01	0.02	0.20	0.01	9.9%	42.6%	1.2%		
47	8	136	2	0.13	0.03	0.05	0.04	0.57	0.02	22.8%	100.0%	3.5%	0.04	0.00	0.03	0.02	0.18	0.01	6.9%	32.0%	1.3%		
48	10	138	4	0.35	0.04	0.07	0.09	1.35	0.04	25.9%	100.0%	3.0%	0.13	0.00	0.03	0.05	0.56	0.02	9.4%	41.7%	1.2%		
49	11	139	4	0.51	0.03	0.03	0.03	1.44	0.04	35.4%	100.0%	2.8%	0.19	0.00	0.02	0.02	0.75	0.01	13.3%	52.4%	1.0%		
50	12	140	4	0.33	0.03	0.11	0.05	1.36	0.05	24.3%	100.0%	3.7%	0.12	0.00	0.05	0.03	0.58	0.02	8.8%	42.6%	1.4%		
51	13	141	4	0.45	0.04	0.19	0.10	1.57	0.09	28.7%	100.0%	5.7%	0.18	0.00	0.07	0.06	0.85	0.03	11.4%	53.9%	2.1%		
52	18	146	4	0.38	0.03	0.09	0.08	1.18	0.03	32.2%	100.0%	2.5%	0.14	0.00	0.05	0.05	0.56	0.01	12.0%	47.6%	0.8%		
53	19	147	4	0.39	0.05	0.03	0.05	1.41	0.02	27.7%	100.0%	1.4%	0.14	0.00	0.02	0.02	0.69	0.01	10.2%	48.8%	0.6%		
54	20	148	4	0.35	0.03	0.17	0.04	1.53	0.08	22.9%	100.0%	5.2%	0.13	0.00	0.08	0.02	0.68	0.03	8.2%	44.3%	2.0%		
55	24	152	10	0.53	0.23	0.11	0.23	2.80	0.08	18.9%	100.0%	2.9%	0.21	0.00	0.08	0.14	1.04	0.04	7.5%	37.0%	1.5%		
56	25	153	10	0.68	0.19	0.13	0.14	2.45	0.06	27.8%	100.0%	2.4%	0.31	0.00	0.09	0.06	1.13	0.03	12.8%	46.3%	1.2%		
57	26	154	10	0.84	0.16	0.14	0.13	2.06	0.08	40.8%	100.0%	3.9%	0.41	0.00	0.07	0.07	1.14	0.04	20.1%	55.5%	1.9%		
58	27	155	10	1.04	0.25	0.17	0.16	2.74	0.08	38.0%	100.0%	2.9%	0.45	0.00	0.10	0.06	1.42	0.03	16.6%	51.8%	1.0%		
59	28	156	10	1.31	0.41	0.32	0.12	4.85	0.09	27.0%	100.0%	1.9%	0.45	0.00	0.20	0.03	1.89	0.04	9.3%	39.0%	0.9%		
60	34	162	10	0.64	0.23	0.13	0.20	2.76	0.08	23.2%	100.0%	2.9%	0.26	0.00	0.07	0.10	1.22	0.03	9.5%	44.3%	1.1%		
61	35	163	10	0.76	0.16	0.08	0.14	2.14	0.06	35.5%	100.0%	2.8%	0.36	0.00	0.05	0.06	1.13	0.03	16.7%	52.8%	1.5%		
62	36	164	10	1.04	0.21	0.13	0.14	2.48	0.08	41.9%	100.0%	3.2%	0.50	0.00	0.08	0.05	1.40	0.04	2				



ELECTRONICS

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- K-Patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	48.2%	100.0%	11.8%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	70.3%	24.3%	70.3%	4.8%
												ratio (Right 2mm)/(worst)	ratio (Front 2mm)/(worst)	ratio (Rear 2mm)/(worst)							ratio worst-surface (10mm)	ratio (Right 10mm)/(worst)	ratio (Front 10mm)/(worst)	ratio (Rear 10mm)/(worst)
1			0		1	0.05	0.01	0.04	0.01	0.19	0.01	26.3%	100.0%	5.3%	0.02	0.00	0.02	0.00	0.07	0.01	39.2%	9.9%	39.2%	3.5%
2			2		1	0.08	0.01	0.02	0.01	0.27	0.01	29.6%	100.0%	3.7%	0.03	0.00	0.01	0.01	0.09	0.00	34.1%	9.5%	34.1%	1.6%
3			4		1	0.08	0.01	0.03	0.01	0.17	0.01	47.1%	100.0%	5.9%	0.03	0.00	0.01	0.00	0.07	0.01	42.8%	16.2%	42.8%	4.2%
4			6		1	0.08	0.01	0.03	0.01	0.25	0.01	32.0%	100.0%	4.0%	0.03	0.00	0.01	0.01	0.09	0.01	35.1%	10.0%	35.1%	2.2%
5			8		1	0.07	0.02	0.03	0.02	0.20	0.02	35.0%	100.0%	10.0%	0.03	0.00	0.01	0.01	0.06	0.01	29.9%	12.5%	29.9%	4.7%
6			10		2	0.13	0.02	0.07	0.02	0.34	0.04	38.2%	100.0%	11.8%	0.06	0.00	0.02	0.01	0.12	0.02	34.0%	16.2%	34.0%	4.8%
7			11		2	0.19	0.02	0.04	0.01	0.44	0.02	43.2%	100.0%	4.5%	0.07	0.00	0.02	0.01	0.20	0.01	45.8%	15.5%	45.8%	1.7%
8			12		2	0.15	0.04	0.03	0.01	0.54	0.01	27.8%	100.0%	1.9%	0.05	0.00	0.02	0.01	0.20	0.01	36.9%	9.3%	36.9%	1.2%
9			13		2	0.12	0.04	0.06	0.02	0.54	0.02	22.2%	100.0%	3.7%	0.04	0.00	0.02	0.01	0.19	0.01	35.5%	7.9%	35.5%	1.6%
10			18		2	0.21	0.04	0.04	0.02	0.50	0.02	42.0%	100.0%	4.0%	0.08	0.00	0.01	0.01	0.20	0.01	40.7%	16.1%	40.7%	2.1%
11			19		2	0.23	0.03	0.02	0.02	0.57	0.02	40.4%	100.0%	3.5%	0.09	0.00	0.01	0.01	0.24	0.01	41.7%	16.1%	41.7%	1.9%
12			20		2	0.12	0.04	0.06	0.02	0.54	0.02	22.2%	100.0%	3.7%	0.04	0.00	0.02	0.01	0.19	0.01	35.5%	7.9%	35.5%	1.6%
13			24		5	0.43	0.06	0.18	0.06	1.02	0.10	42.2%	100.0%	9.8%	0.20	0.00	0.06	0.03	0.41	0.04	40.7%	20.0%	40.7%	4.2%
14			25		5	0.66	0.07	0.03	0.02	1.37	0.08	48.2%	100.0%	5.8%	0.33	0.00	0.02	0.01	0.68	0.05	49.7%	24.3%	49.7%	3.3%
15			26		5	0.53	0.13	0.05	0.03	1.23	0.06	43.1%	100.0%	4.9%	0.26	0.00	0.02	0.01	0.58	0.04	47.1%	21.1%	47.1%	3.0%
16			27		5	0.39	0.10	0.08	0.05	1.28	0.04	30.5%	100.0%	3.1%	0.19	0.00	0.03	0.02	0.53	0.02	41.1%	14.7%	41.1%	1.9%
17			28		5	0.27	0.11	0.13	0.06	1.19	0.06	22.7%	100.0%	0.9%	0.13	0.00	0.06	0.02	0.45	0.04	38.0%	10.5%	38.0%	3.0%
18			34		5	0.62	0.06	0.11	0.05	1.39	0.08	44.6%	100.0%	5.8%	0.29	0.00	0.05	0.02	0.66	0.03	47.4%	20.9%	47.4%	2.2%
19			35		5	0.58	0.11	0.05	0.02	1.27	0.07	45.7%	100.0%	5.5%	0.28	0.00	0.02	0.01	0.60	0.04	47.2%	22.4%	47.2%	3.4%
20			36		5	0.51	0.12	0.04	0.04	1.29	0.06	39.5%	100.0%	4.7%	0.25	0.00	0.02	0.02	0.59	0.03	45.9%	18.0%	45.9%	2.5%
21			37		5	0.32	0.12	0.16	0.06	1.40	0.08	23.6%	100.0%	5.7%	0.15	0.00	0.07	0.02	0.51	0.05	36.8%	10.8%	36.8%	3.2%
22			128		1	0.09	0.02	0.05	0.01	0.43	0.02	20.9%	100.0%	4.7%	0.03	0.00	0.03	0.01	0.17	0.01	39.8%	7.7%	39.8%	1.8%
23			130		1	0.11	0.01	0.01	0.02	0.47	0.01	23.4%	100.0%	2.1%	0.04	0.00	0.01	0.01	0.20	0.00	42.4%	7.7%	42.4%	0.8%
24			132		1	0.10	0.01	0.02	0.02	0.49	0.01	20.4%	100.0%	2.0%	0.03	0.00	0.01	0.01	0.19	0.01	38.5%	6.4%	38.5%	1.2%
25			134		1	0.10	0.01	0.02	0.02	0.49	0.01	20.4%	100.0%	2.0%	0.03	0.00	0.02	0.01	0.19	0.00	38.1%	6.2%	38.1%	0.9%
26			136		1	0.10	0.01	0.01	0.02	0.41	0.01	24.4%	100.0%	2.4%	0.03	0.00	0.01	0.01	0.18	0.00	43.7%	7.3%	43.7%	0.7%
27			138		2	0.22	0.02	0.03	0.08	0.87	0.03	38.7%	100.0%	3.4%	0.07	0.00	0.01	0.05	0.29	0.02	44.4%	18.3%	44.4%	1.8%
28			139		2	0.31	0.02	0.01	0.02	1.05	0.01	29.5%	100.0%	1.0%	0.11	0.00	0.00	0.02	0.58	0.00	55.0%	10.4%	55.0%	0.4%
29			140		2	0.30	0.02	0.04	0.01	1.09	0.01	27.5%	100.0%	0.9%	0.10	0.00	0.03	0.01	0.55	0.01	50.0%	9.6%	50.0%	0.6%
30			141		2	0.29	0.02	0.05	0.04	1.01	0.02	28.7%	100.0%	2.0%	0.10	0.00	0.03	0.02	0.49	0.01	48.1%	10.3%	48.1%	1.3%
31			146		2	0.25	0.02	0.04	0.03	0.90	0.02	27.8%	100.0%	2.2%	0.09	0.00	0.02	0.02	0.45	0.01	50.5%	9.9%	50.5%	0.6%
32			147		2	0.32	0.02	0.01	0.01	1.05	0.01	30.5%	100.0%	1.0%	0.11	0.00	0.01	0.01	0.59	0.00	56.1%	10.3%	56.1%	0.2%
33			148		2	0.25	0.04	0.06	0.02	1.02	0.02	24.5%	100.0%	2.0%	0.09	0.00	0.04	0.01	0.46	0.01	45.3%	8.5%	45.3%	0.9%
34			152		5	0.67	0.15	0.06	0.10	2.51	0.03	38.7%	100.0%	1.2%	0.26	0.00	0.02	0.07	1.19	0.02	47.3%	10.2%	47.3%	0.7%
35			153		5	0.79	0.08	0.03	0.02	2.28	0.02	34.6%	100.0%	0.9%	0.34	0.00	0.02	0.01	1.40	0.01	61.6%	14.9%	61.6%	0.4%
36			154		5	0.84	0.09	0.05	0.01	1.98	0.02	42.4%	100.0%	1.0%	0.38	0.00	0.03	0.00	1.39	0.01	70.3%	19.3%	70.3%	0.4%
37			155		5	0.89	0.11	0.02	0.02	2.43	0.02	36.6%	100.0%	0.8%	0.40	0.00	0.01	0.01	1.56	0.01	64.0%	16.3%	64.0%	0.5%
38			156		5	0.78	0.16	0.20	0.01	2.95	0.06	26.4%	100.0%	2.0%	0.28	0.00	0.17	0.01	1.19	0.03	40.3%	9.5%	40.3%	0.9%
39			162		5	0.75	0.09	0.05	0.04	2.41	0.02	31.1%	100.0%	0.8%	0.31	0.00	0.03	0.03	1.36	0.01	56.4%	13.0%	56.4%	0.4%
40			163		5	0.82	0.09	0.03	0.01	2.04	0.01	40.2%	100.0%	0.5%	0.37	0.00	0.01	0.01	1.40	0.01	68.8%	18.2%	68.8%	0.3%
41			164		5	0.87	0.10	0.05	0.01	2.11	0.02	41.2%	100.0%	0.9%	0.39	0.00	0.04	0.01	1.48	0.01	70.0%	18.4%	70.0%	0.3%
42			165		5	0.86	0.16	0.12	0.02	2.87	0.05	30.0%	100.0%	1.7%	0.35	0.00	0.07	0.01	1.45	0.02	50.4%	12.1%	50.4%	0.7%
43			0	128	2	0.12	0.03	0.13	0.01	0.59	0.06	20.3%	100.0%	10.2%	0.04	0.00	0.06	0.01	0.18	0.02	30.6%	7.0%	30.6%	4.2%
44			2	130	2	0.19	0.02	0.04	0.04	0.75	0.01	25.3%	100.0%	1.3%	0.06	0.00	0.02	0.03	0.32	0.01	42.1%	8.3%	42.1%	1.0%
45			4	132	2	0.17	0.02	0.05	0.03	0.70	0.02	24.3%	100.0%	2.9%	0.06	0.00	0.02	0.02	0.26	0.01	37.1%	8.1%	37.1%	1.9%
46			6	134	2	0.17	0.02	0.04	0.03	0.60	0.01	28.3%	100.0%	1.7%	0.05	0.00	0.02	0.02	0.25	0.01	41.5%	9.0%	41.5%	1.0%
47			8	136	2	0.16	0.04	0.05	0.04	0.65	0.02	24.6%	100.0%	3.1%	0.05	0.00	0.03	0.02	0.22	0.01	33.6%	8.3%	33.6%	1.7%
48			10	138	4	0.40	0.03	0.10	0.08	1.33	0.06	30.1%	100.0%	4.5%	0.16	0.00	0.04	0.03	0.62	0.03	47.0%	12.0%	47.0%	1.9%
49			11	139	4	0.65	0.03	0.05	0.03	1.77	0.04	36.7%	100.0%	2.3%	0.23	0.00	0.02	0.02	1.00	0.01	56.5%	13.1%	56.5%	0.8%
50			12	140	4	0.45	0.04	0.10	0.04	1.89	0.03	23.8%	100.0%	1.6%	0.16	0.00	0.07	0.02	0.84	0.01	44.3%	8.6%	44.3%	0.8%
51			13	141	4	0.52	0.06	0.11	0.07	2.11	0.04	24.6%	100.0%	1.9%	0.20	0.00	0.05	0.04	1.02	0.02	48.4%	9.6%	48.4%	1.1%
52			18	146	4	0.44	0.05	0.06	0.05	1.39	0.03	31.7%	100.0%	2.2%	0.15	0.00	0.03	0.03	0.65	0.02	46.6%	10.6%	46.6%	1.1%
53			19	147	4	0.46	0.05	0.04	0.04	1.56	0.02	29.5%	100.0%	1.3%	0.18	0.00	0.03	0.03	0.78	0.01	50.3%	11.5%	50.3%	0.6%
54			20	148	4	0.47	0.05	0.14	0.04	2.04	0.05	23.0%	100.0%	2.5%	0.17	0.00	0.08	0.02	0.92	0.02	45.0%	8.2%	45.0%	1.2%
55			24	152	10	0.57	0.22	0.21	0.19	2.74	0.10	20.8%	100.0%	3.6%	0.22	0.00	0.09	0.12	1.05	0.05	38.2%	8.2%	38.2%	1.7%
56			25	153	10	0.87	0.20	0.11	0.06	3.09	0.07	28.2%	100.0%	2.3%	0.39	0.00	0.06	0.03	1.38	0.04	44.8%	12.8%	44.8%	1.3%
57			26	154	10	1.09	0.24	0.12</																



ELECTRONICS

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- K-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst)	ratio (Front 2mm)/(worst)	ratio (Rear 2mm)/(worst)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm)	ratio (Right 10mm)	ratio (Front 10mm)	ratio (Rear 10mm)
1			0		1	0.06	0.02	0.04	0.01	0.17	0.02	35.3%	100.0%	11.8%	0.02	0.00	0.02	0.01	0.08	0.01	44.7%	11.7%	44.7%	4.1%
2			2		1	0.11	0.01	0.02	0.01	0.34	0.01	32.4%	100.0%	2.9%	0.04	0.00	0.01	0.01	0.13	0.01	38.2%	11.5%	38.2%	2.1%
3			4		1	0.09	0.01	0.02	0.01	0.23	0.01	39.1%	100.0%	4.3%	0.03	0.00	0.01	0.01	0.09	0.01	38.1%	12.7%	38.1%	3.2%
4			6		1	0.11	0.02	0.03	0.03	0.30	0.02	36.7%	100.0%	6.7%	0.03	0.00	0.01	0.01	0.11	0.01	36.0%	11.5%	36.0%	2.3%
5			8		1	0.09	0.01	0.03	0.03	0.24	0.01	37.5%	100.0%	4.2%	0.03	0.00	0.01	0.01	0.08	0.01	31.6%	13.0%	31.6%	2.5%
6			10		2	0.16	0.02	0.07	0.02	0.43	0.04	37.2%	100.0%	9.3%	0.07	0.00	0.03	0.01	0.16	0.02	38.1%	16.7%	38.1%	5.5%
7			11		2	0.24	0.01	0.03	0.01	0.49	0.03	49.0%	100.0%	6.1%	0.09	0.00	0.01	0.01	0.24	0.01	49.0%	18.1%	49.0%	2.1%
8			12		2	0.19	0.04	0.05	0.03	0.61	0.02	31.1%	100.0%	3.3%	0.07	0.00	0.02	0.02	0.24	0.01	39.5%	11.2%	39.5%	1.5%
9			13		2	0.15	0.05	0.08	0.04	0.62	0.03	24.2%	100.0%	4.8%	0.05	0.00	0.03	0.02	0.24	0.02	38.4%	8.8%	38.4%	2.6%
10			18		2	0.26	0.03	0.04	0.02	0.59	0.03	44.1%	100.0%	5.1%	0.11	0.00	0.01	0.01	0.26	0.01	43.7%	18.5%	43.7%	2.3%
11			19		2	0.29	0.03	0.01	0.02	0.72	0.03	40.3%	100.0%	4.2%	0.11	0.00	0.00	0.01	0.30	0.01	41.8%	15.5%	41.8%	1.6%
12			20		2	0.15	0.05	0.08	0.04	0.62	0.03	24.2%	100.0%	4.8%	0.05	0.00	0.03	0.02	0.24	0.02	38.4%	8.8%	38.4%	2.6%
13			24		5	0.50	0.06	0.09	0.05	1.12	0.07	44.6%	100.0%	6.3%	0.23	0.00	0.05	0.02	0.52	0.03	46.3%	20.7%	46.3%	2.7%
14			25		5	0.79	0.07	0.06	0.03	1.52	0.10	52.0%	100.0%	6.6%	0.39	0.00	0.02	0.01	0.78	0.05	51.2%	25.8%	51.2%	3.3%
15			26		5	0.70	0.10	0.07	0.04	1.42	0.08	49.3%	100.0%	5.6%	0.34	0.00	0.03	0.02	0.70	0.05	49.4%	23.9%	49.4%	3.4%
16			27		5	0.47	0.12	0.08	0.07	1.57	0.06	29.9%	100.0%	3.8%	0.22	0.00	0.04	0.03	0.65	0.03	41.2%	14.2%	41.2%	2.1%
17			28		5	0.38	0.18	0.13	0.06	1.64	0.04	23.2%	100.0%	2.4%	0.19	0.00	0.05	0.04	0.65	0.02	39.8%	11.6%	39.8%	1.4%
18			34		5	0.75	0.05	0.07	0.05	1.48	0.09	50.7%	100.0%	6.1%	0.37	0.00	0.03	0.02	0.78	0.05	52.9%	24.8%	52.9%	3.1%
19			35		5	0.74	0.09	0.03	0.03	1.48	0.09	50.7%	100.0%	6.1%	0.36	0.00	0.01	0.01	0.73	0.05	49.5%	24.2%	49.5%	3.2%
20			36		5	0.65	0.10	0.09	0.04	1.47	0.08	44.2%	100.0%	5.4%	0.21	0.00	0.03	0.02	0.69	0.05	46.6%	21.3%	46.6%	3.1%
21			37		5	0.42	0.18	0.11	0.06	1.82	0.05	23.6%	100.0%	2.7%	0.21	0.00	0.05	0.04	0.72	0.03	39.8%	11.4%	39.8%	1.6%
22			128		1	0.06	0.03	0.07	0.01	0.41	0.02	14.6%	100.0%	4.9%	0.02	0.00	0.03	0.01	0.14	0.01	33.9%	5.1%	33.9%	1.8%
23			130		1	0.12	0.01	0.01	0.01	0.50	0.01	24.0%	100.0%	2.0%	0.04	0.00	0.01	0.01	0.22	0.00	44.2%	8.3%	44.2%	0.7%
24			132		1	0.12	0.01	0.02	0.02	0.54	0.00	22.2%	100.0%	0.0%	0.04	0.00	0.01	0.01	0.21	0.00	39.7%	7.0%	39.7%	0.6%
25			134		1	0.11	0.02	0.03	0.02	0.53	0.01	20.8%	100.0%	1.9%	0.03	0.00	0.02	0.01	0.20	0.00	38.2%	6.4%	38.2%	0.5%
26			136		1	0.11	0.01	0.02	0.01	0.45	0.01	24.4%	100.0%	2.2%	0.03	0.00	0.01	0.01	0.20	0.00	43.8%	7.6%	43.8%	0.5%
27			138		2	0.23	0.03	0.03	0.05	0.90	0.02	44.2%	100.0%	2.4%	0.07	0.00	0.02	0.04	0.39	0.01	43.8%	9.7%	43.8%	0.8%
28			139		2	0.34	0.02	0.01	0.02	1.14	0.01	29.8%	100.0%	0.9%	0.12	0.00	0.00	0.02	0.63	0.00	55.1%	10.6%	55.1%	0.4%
29			140		2	0.29	0.04	0.05	0.02	1.14	0.01	25.4%	100.0%	0.9%	0.10	0.00	0.03	0.01	0.55	0.01	48.2%	9.0%	48.2%	0.6%
30			141		2	0.32	0.04	0.05	0.02	1.13	0.02	28.3%	100.0%	1.8%	0.11	0.00	0.04	0.01	0.53	0.01	47.0%	9.9%	47.0%	1.0%
31			146		2	0.24	0.03	0.05	0.03	0.95	0.02	25.3%	100.0%	2.1%	0.09	0.00	0.02	0.03	0.46	0.01	48.6%	9.2%	48.6%	0.6%
32			147		2	0.36	0.02	0.01	0.01	1.16	0.01	31.0%	100.0%	0.9%	0.12	0.00	0.01	0.01	0.65	0.00	56.4%	10.6%	56.4%	0.2%
33			148		2	0.24	0.06	0.07	0.01	1.05	0.02	22.9%	100.0%	1.9%	0.08	0.00	0.04	0.00	0.45	0.01	43.3%	7.9%	43.3%	0.9%
34			152		5	0.74	0.16	0.06	0.10	2.79	0.04	26.5%	100.0%	1.4%	0.27	0.00	0.02	0.08	1.31	0.02	46.8%	9.7%	46.8%	0.8%
35			153		5	0.90	0.09	0.05	0.02	2.54	0.02	35.4%	100.0%	0.8%	0.39	0.00	0.03	0.01	1.58	0.01	62.4%	15.3%	62.4%	0.3%
36			154		5	0.94	0.10	0.07	0.01	2.24	0.03	42.0%	100.0%	1.3%	0.42	0.00	0.03	0.01	1.57	0.01	70.0%	19.0%	70.0%	0.5%
37			155		5	0.93	0.13	0.03	0.02	2.57	0.02	36.2%	100.0%	0.8%	0.41	0.00	0.01	0.01	1.61	0.01	62.8%	15.8%	62.8%	0.4%
38			156		5	0.77	0.20	0.23	0.01	3.05	0.07	25.2%	100.0%	2.3%	0.27	0.00	0.16	0.01	1.18	0.03	38.7%	8.9%	38.7%	1.1%
39			162		5	0.83	0.10	0.06	0.05	2.68	0.03	31.0%	100.0%	1.1%	0.34	0.00	0.03	0.04	1.49	0.01	55.6%	12.5%	55.6%	0.4%
40			163		5	0.93	0.10	0.04	0.03	2.30	0.02	40.4%	100.0%	0.9%	0.42	0.00	0.02	0.02	1.60	0.01	69.4%	18.3%	69.4%	0.3%
41			164		5	0.97	0.11	0.06	0.02	2.36	0.02	41.1%	100.0%	0.8%	0.43	0.00	0.04	0.01	1.63	0.01	69.1%	18.2%	69.1%	0.4%
42			165		5	0.84	0.18	0.13	0.01	2.90	0.05	29.0%	100.0%	1.7%	0.33	0.00	0.08	0.00	1.44	0.02	49.6%	11.4%	49.6%	0.7%
43			0	128	2	0.10	0.03	0.12	0.03	0.62	0.05	16.1%	100.0%	8.1%	0.03	0.00	0.06	0.02	0.17	0.02	27.8%	5.3%	27.8%	3.2%
44			2	130	2	0.24	0.02	0.05	0.02	0.95	0.02	25.3%	100.0%	2.1%	0.09	0.00	0.02	0.01	0.41	0.01	43.4%	9.2%	43.4%	0.9%
45			4	132	2	0.19	0.02	0.04	0.02	0.76	0.02	25.0%	100.0%	2.6%	0.06	0.00	0.02	0.02	0.30	0.01	39.4%	8.5%	39.4%	1.2%
46			6	134	2	0.20	0.03	0.04	0.03	0.72	0.02	27.8%	100.0%	2.8%	0.06	0.00	0.02	0.02	0.30	0.01	41.0%	8.9%	41.0%	1.0%
47			8	136	2	0.18	0.03	0.06	0.04	0.66	0.02	27.3%	100.0%	3.0%	0.06	0.00	0.03	0.02	0.24	0.01	36.4%	9.0%	36.4%	1.4%
48			10	138	4	0.48	0.06	0.09	0.06	1.64	0.06	29.3%	100.0%	3.7%	0.18	0.00	0.04	0.04	0.75	0.03	45.6%	11.3%	45.6%	1.9%
49			11	139	4	0.73	0.03	0.03	0.02	1.95	0.04	37.4%	100.0%	2.1%	0.27	0.00	0.01	0.02	1.12	0.02	57.6%	13.6%	57.6%	0.8%
50			12	140	4	0.54	0.07	0.10	0.04	2.19	0.04	24.7%	100.0%	1.8%	0.19	0.00	0.06	0.03	0.98	0.01	44.7%	8.7%	44.7%	0.6%
51			13	141	4	0.60	0.10	0.16	0.03	2.48	0.05	24.2%	100.0%	2.0%	0.24	0.00	0.08	0.02	1.18	0.03	47.4%	9.7%	47.4%	1.1%
52			18	146	4	0.51	0.05	0.05	0.04	1.52	0.03	33.6%	100.0%	2.0%	0.17	0.00	0.02	0.02	0.69	0.01	45.1%	11.4%	45.1%	0.9%
53			19	147	4	0.57	0.05	0.02	0.04	1.85	0.02	30.8%	100.0%	1.1%	0.22	0.00	0.02	0.03	0.96	0.01	51.6%	11.7%	51.6%	0.6%
54			20	148	4	0.53	0.09	0.14	0.04	2.31	0.05	22.9%	100.0%	2.2%	0.20	0.00	0.07	0.02	1.05	0.02	45.5%	8.5%	45.5%	0.9%
55			24	152	10	0.72	0.25	0.09	0.15	3.04	0.06	23.7%	100.0%	2.0%	0.28	0.00	0.05	0.09	1.22	0.03	40.3%	9.2%	40.3%	1.0%
56			25	153	10	1.16	0.17	0.18	0.07	3.56	0.09	32.6%	100.0%	2.5%	0.52	0.00	0.09	0.04	1.66	0.05	46.7%	14.5%	46.7%	1.3%
57			26	154	10	1																		

Table 5. PD of Ant K – patch antenna (39GHz – n260)

- K-Patch Low CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	72.4%	100.0%	13.4%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	75.4%	35.8%	75.4%	6.7%
1			0		1	0.16	0.01	0.02	0.02	0.38	0.01	42.1%	100.0%	2.6%	0.06	0.00	0.01	0.01	0.19	0.00	49.5%	14.7%	49.5%	0.8%
2			2		1	0.15	0.01	0.03	0.02	0.38	0.01	39.5%	100.0%	2.6%	0.05	0.00	0.02	0.01	0.17	0.01	43.8%	13.1%	43.8%	1.7%
3			4		1	0.16	0.02	0.04	0.04	0.48	0.02	33.3%	100.0%	4.2%	0.05	0.00	0.03	0.02	0.20	0.01	41.1%	10.2%	41.1%	1.7%
4			6		1	0.15	0.01	0.03	0.02	0.39	0.01	38.5%	100.0%	2.6%	0.05	0.00	0.02	0.01	0.16	0.01	41.4%	12.4%	41.4%	2.0%
5			8		1	0.17	0.01	0.02	0.02	0.42	0.01	40.5%	100.0%	2.4%	0.06	0.00	0.01	0.02	0.18	0.01	43.0%	14.0%	43.0%	1.3%
6			10		2	0.27	0.04	0.07	0.05	0.90	0.03	30.0%	100.0%	3.3%	0.10	0.00	0.04	0.03	0.28	0.02	31.5%	10.7%	31.5%	2.0%
7			11		2	0.42	0.02	0.05	0.07	0.83	0.02	50.6%	100.0%	2.4%	0.17	0.00	0.02	0.05	0.44	0.01	52.7%	20.1%	52.7%	1.4%
8			12		2	0.41	0.02	0.13	0.03	0.80	0.05	51.3%	100.0%	6.3%	0.16	0.00	0.08	0.01	0.45	0.03	56.0%	19.5%	56.0%	3.4%
9			13		2	0.25	0.06	0.09	0.09	0.94	0.03	26.6%	100.0%	3.2%	0.09	0.00	0.05	0.04	0.27	0.01	28.9%	9.4%	28.9%	1.5%
10			18		2	0.28	0.06	0.06	0.08	0.95	0.03	29.5%	100.0%	3.2%	0.12	0.00	0.03	0.05	0.30	0.01	31.7%	12.2%	31.7%	1.4%
11			19		2	0.43	0.01	0.08	0.02	0.73	0.03	58.9%	100.0%	4.1%	0.18	0.00	0.05	0.01	0.50	0.02	68.4%	24.0%	68.4%	2.5%
12			20		2	0.37	0.04	0.13	0.06	0.92	0.05	40.2%	100.0%	5.4%	0.14	0.00	0.08	0.03	0.36	0.03	38.8%	15.3%	38.8%	3.1%
13			24		5	0.72	0.19	0.26	0.22	2.05	0.07	35.1%	100.0%	3.4%	0.27	0.00	0.12	0.08	0.71	0.03	34.6%	13.3%	34.6%	1.7%
14			25		5	0.94	0.04	0.05	0.20	1.50	0.06	62.7%	100.0%	4.0%	0.47	0.00	0.02	0.13	0.94	0.03	62.6%	31.2%	62.6%	1.7%
15			26		5	1.09	0.02	0.04	0.04	1.73	0.02	63.0%	100.0%	1.2%	0.53	0.00	0.02	0.02	1.28	0.01	74.2%	30.7%	74.2%	0.5%
16			27		5	0.93	0.05	0.53	0.05	1.49	0.20	62.4%	100.0%	13.4%	0.45	0.00	0.32	0.02	0.95	0.10	63.9%	29.9%	63.9%	6.7%
17			28		5	0.65	0.26	0.14	0.36	2.10	0.10	31.0%	100.0%	4.8%	0.25	0.00	0.06	0.12	0.73	0.03	34.7%	11.7%	34.7%	1.3%
18			34		5	0.77	0.19	0.06	0.30	1.82	0.08	42.3%	100.0%	4.4%	0.33	0.00	0.03	0.18	0.85	0.02	46.6%	18.0%	46.6%	1.7%
19			35		5	1.09	0.04	0.06	0.12	1.63	0.05	66.9%	100.0%	3.1%	0.53	0.00	0.02	0.07	1.15	0.02	70.7%	32.3%	70.7%	1.1%
20			36		5	1.00	0.04	0.17	0.07	1.46	0.04	68.5%	100.0%	2.7%	0.49	0.00	0.12	0.04	1.10	0.02	75.4%	33.4%	75.4%	1.6%
21			37		5	0.78	0.15	0.32	0.15	2.01	0.11	38.8%	100.0%	5.5%	0.32	0.00	0.16	0.06	0.79	0.05	39.2%	15.8%	39.2%	2.7%
22			128		1	0.11	0.02	0.01	0.01	0.31	0.01	35.5%	100.0%	3.2%	0.04	0.00	0.01	0.01	0.11	0.00	35.6%	11.9%	35.6%	0.8%
23			130		1	0.15	0.02	0.03	0.02	0.36	0.01	41.7%	100.0%	2.8%	0.05	0.00	0.01	0.01	0.15	0.00	40.6%	14.8%	40.6%	1.1%
24			132		1	0.16	0.02	0.02	0.02	0.44	0.01	36.4%	100.0%	2.3%	0.06	0.00	0.01	0.01	0.14	0.01	32.8%	13.1%	32.8%	1.2%
25			134		1	0.15	0.02	0.02	0.01	0.36	0.01	43.3%	100.0%	2.8%	0.06	0.00	0.01	0.01	0.13	0.00	44.9%	15.7%	44.9%	1.3%
26			136		1	0.16	0.02	0.02	0.02	0.40	0.01	40.0%	100.0%	2.5%	0.05	0.00	0.01	0.01	0.16	0.00	39.7%	13.5%	39.7%	1.0%
27			138		2	0.25	0.04	0.05	0.03	0.83	0.02	30.1%	100.0%	2.4%	0.10	0.00	0.03	0.01	0.26	0.01	31.5%	11.6%	31.5%	1.2%
28			139		2	0.36	0.06	0.02	0.04	0.69	0.02	52.2%	100.0%	2.9%	0.14	0.00	0.01	0.03	0.34	0.01	49.4%	20.4%	49.4%	1.5%
29			140		2	0.37	0.04	0.05	0.02	0.77	0.03	48.1%	100.0%	3.9%	0.16	0.00	0.03	0.01	0.35	0.01	45.1%	20.6%	45.1%	1.5%
30			141		2	0.21	0.05	0.06	0.04	0.86	0.02	24.4%	100.0%	2.3%	0.08	0.00	0.03	0.02	0.25	0.01	28.9%	9.0%	28.9%	1.1%
31			146		2	0.27	0.07	0.05	0.03	0.84	0.02	32.1%	100.0%	2.4%	0.11	0.00	0.02	0.02	0.30	0.01	36.3%	13.2%	36.3%	1.2%
32			147		2	0.41	0.04	0.04	0.02	0.68	0.03	60.3%	100.0%	4.4%	0.18	0.00	0.02	0.02	0.35	0.02	51.6%	26.6%	51.6%	2.2%
33			148		2	0.24	0.04	0.06	0.02	0.69	0.01	34.8%	100.0%	1.4%	0.09	0.00	0.02	0.01	0.23	0.01	33.8%	13.6%	33.8%	0.8%
34			152		5	0.57	0.20	0.30	0.08	1.61	0.05	35.4%	100.0%	3.1%	0.25	0.00	0.09	0.06	0.73	0.02	45.4%	15.5%	45.4%	1.5%
35			153		5	0.76	0.17	0.04	0.18	1.47	0.05	51.7%	100.0%	3.4%	0.37	0.00	0.02	0.10	0.89	0.03	60.4%	25.0%	60.4%	1.7%
36			154		5	0.96	0.21	0.04	0.02	1.54	0.11	62.3%	100.0%	7.1%	0.49	0.00	0.02	0.01	0.72	0.05	46.7%	32.0%	46.7%	3.3%
37			155		5	0.80	0.13	0.18	0.04	1.49	0.06	53.7%	100.0%	4.0%	0.37	0.00	0.09	0.02	0.89	0.04	59.9%	24.7%	59.9%	2.5%
38			156		5	0.50	0.18	0.17	0.12	1.59	0.05	31.4%	100.0%	3.1%	0.20	0.00	0.05	0.06	0.59	0.02	37.1%	12.6%	37.1%	1.3%
39			162		5	0.68	0.17	0.07	0.11	1.73	0.05	39.3%	100.0%	2.9%	0.30	0.00	0.03	0.06	0.87	0.01	50.7%	17.4%	50.7%	0.8%
40			163		5	0.79	0.19	0.05	0.13	1.25	0.06	63.2%	100.0%	4.8%	0.40	0.00	0.03	0.08	0.65	0.03	52.1%	31.8%	52.1%	2.6%
41			164		5	1.06	0.14	0.17	0.03	1.52	0.06	69.7%	100.0%	3.9%	0.52	0.00	0.11	0.02	0.89	0.04	58.8%	34.2%	58.8%	2.5%
42			165		5	0.54	0.17	0.28	0.08	1.59	0.04	34.0%	100.0%	2.5%	0.22	0.00	0.08	0.06	0.70	0.03	44.0%	14.1%	44.0%	1.6%
43			0	128	2	0.29	0.03	0.04	0.02	0.79	0.01	36.7%	100.0%	1.3%	0.09	0.00	0.02	0.01	0.33	0.01	41.5%	12.0%	41.5%	0.8%
44			2	130	2	0.38	0.02	0.04	0.02	0.85	0.01	44.7%	100.0%	1.2%	0.13	0.00	0.02	0.01	0.37	0.01	43.4%	15.8%	43.4%	0.8%
45			4	132	2	0.43	0.03	0.07	0.03	1.05	0.03	41.0%	100.0%	2.9%	0.15	0.00	0.04	0.02	0.42	0.02	40.1%	14.2%	40.1%	1.7%
46			6	134	2	0.39	0.03	0.05	0.03	0.83	0.03	47.0%	100.0%	3.6%	0.13	0.00	0.03	0.02	0.36	0.01	43.5%	16.0%	43.5%	1.5%
47			8	136	2	0.30	0.03	0.03	0.05	0.69	0.02	43.5%	100.0%	2.9%	0.10	0.00	0.02	0.03	0.26	0.01	37.7%	14.3%	37.7%	1.0%
48			10	138	4	0.47	0.12	0.04	0.13	1.57	0.04	29.9%	100.0%	2.5%	0.17	0.00	0.03	0.05	0.46	0.01	29.4%	10.8%	29.4%	0.9%
49			11	139	4	0.81	0.08	0.07	0.13	1.53	0.03	52.9%	100.0%	2.0%	0.31	0.00	0.03	0.07	0.72	0.02	47.3%	20.1%	47.3%	1.1%
50			12	140	4	0.75	0.08	0.10	0.04	1.48	0.04	50.7%	100.0%	2.7%	0.30	0.00	0.05	0.02	0.81	0.03	55.0%	19.9%	55.0%	1.7%
51			13	141	4	0.59	0.09	0.10	0.10	1.86	0.04	31.7%	100.0%	2.2%	0.21	0.00	0.05	0.04	0.55	0.02	29.3%	11.2%	29.3%	1.3%
52			18	146	4	0.38	0.15	0.07	0.14	1.57	0.04	24.2%	100.0%	2.5%	0.16	0.00	0.03	0.09	0.42	0.02	26.5%	10.3%	26.5%	1.3%
53			19	147	4	0.80	0.04	0.07	0.06	1.35	0.04	59.3%	100.0%	3.0%	0.38	0.00	0.04	0.03	0.78	0.02	58.1%	28.0%	58.1%	1.5%
54			20	148	4	0.64	0.12	0.23	0.07	1.40	0.05	45.7%	100.0%	3.6%	0.27	0.00	0.05	0.04	0.65	0.03	46.2%	19.4%	46.2%	2.0%
55			24	152	10	1.00	0.57	0.22	0.51	3.80	0.17	26.3%	100.0%	4.5%	0.34	0.00	0.19	0.15	1.38	0.05	36.3%	9.0%	36.3%	1.3%
56			25	153	10	1.99	0.28	0.11	0.56	3.40	0.16	58.5%	100.0%	4.7%	0.97	0.00	0.06	0.33	2.13					



ELECTRONICS

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- K-patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	74.1%	100.0%	7.8%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	74.1%	37.1%	74.1%	2.6%
												ratio (Right 2mm)/ (worst-surface 2mm)	ratio (Front 2mm)/ (worst-surface 2mm)	ratio (Rear 2mm)/ (worst-surface 2mm)							ratio (Right 10mm) / (worst-surface 2mm)	ratio (Front 10mm) / (worst-surface 2mm)	ratio (Rear 10mm) / (worst-surface 2mm)	
1			0		1	0.18	0.01	0.02	0.01	0.41	0.01	43.9%	100.0%	2.4%	0.06	0.00	0.01	0.01	0.21	0.00	51.4%	13.9%	51.4%	0.6%
2			2		1	0.17	0.01	0.04	0.02	0.45	0.01	37.8%	100.0%	2.2%	0.06	0.00	0.02	0.01	0.18	0.01	40.8%	12.5%	40.8%	1.7%
3			4		1	0.24	0.01	0.03	0.02	0.55	0.01	43.6%	100.0%	1.8%	0.08	0.00	0.02	0.01	0.26	0.00	46.8%	13.8%	46.8%	0.8%
4			6		1	0.22	0.02	0.02	0.02	0.53	0.01	41.5%	100.0%	1.9%	0.07	0.00	0.01	0.01	0.24	0.01	44.4%	13.4%	44.4%	1.0%
5			8		1	0.21	0.02	0.03	0.02	0.51	0.01	41.2%	100.0%	2.0%	0.07	0.00	0.02	0.01	0.23	0.00	45.1%	14.7%	45.1%	0.8%
6			10		2	0.38	0.05	0.07	0.04	1.19	0.02	31.9%	100.0%	1.7%	0.14	0.00	0.03	0.02	0.41	0.01	34.3%	11.4%	34.3%	0.9%
7			11		2	0.50	0.02	0.02	0.07	1.03	0.03	48.5%	100.0%	2.9%	0.20	0.00	0.01	0.04	0.55	0.01	53.6%	19.2%	53.6%	1.3%
8			12		2	0.57	0.03	0.06	0.02	1.05	0.02	54.3%	100.0%	1.9%	0.22	0.00	0.04	0.01	0.65	0.01	61.4%	21.0%	61.4%	0.9%
9			13		2	0.38	0.04	0.06	0.06	1.15	0.03	33.0%	100.0%	2.6%	0.13	0.00	0.03	0.03	0.37	0.01	32.3%	11.3%	32.3%	1.1%
10			18		2	0.44	0.04	0.04	0.06	1.17	0.02	37.6%	100.0%	1.7%	0.17	0.00	0.02	0.04	0.46	0.01	39.3%	14.3%	39.3%	1.0%
11			19		2	0.49	0.02	0.10	0.02	0.80	0.03	61.3%	100.0%	3.8%	0.20	0.00	0.05	0.01	0.53	0.01	65.8%	24.8%	65.8%	1.6%
12			20		2	0.48	0.04	0.05	0.03	1.21	0.02	39.7%	100.0%	1.7%	0.17	0.00	0.03	0.02	0.57	0.01	47.3%	13.9%	47.3%	0.8%
13			24		5	1.02	0.21	0.29	0.12	2.33	0.08	43.8%	100.0%	3.4%	0.42	0.00	0.11	0.09	1.09	0.03	46.7%	17.9%	46.7%	1.4%
14			25		5	1.31	0.04	0.05	0.22	2.06	0.07	63.6%	100.0%	3.4%	0.62	0.00	0.02	0.12	1.39	0.03	67.2%	30.1%	67.2%	1.6%
15			26		5	1.17	0.04	0.10	0.08	1.58	0.03	74.1%	100.0%	1.9%	0.59	0.00	0.04	0.03	1.17	0.01	74.1%	37.1%	74.1%	0.9%
16			27		5	1.19	0.09	0.32	0.04	2.17	0.12	54.8%	100.0%	5.5%	0.56	0.00	0.18	0.02	1.42	0.05	65.4%	26.0%	65.4%	2.5%
17			28		5	0.99	0.16	0.14	0.17	2.32	0.09	42.7%	100.0%	3.9%	0.41	0.00	0.10	0.09	1.03	0.04	44.5%	17.5%	44.5%	1.5%
18			34		5	1.11	0.17	0.09	0.23	2.25	0.09	49.3%	100.0%	4.0%	0.49	0.00	0.07	0.14	1.26	0.03	55.9%	21.9%	55.9%	1.5%
19			35		5	1.10	0.05	0.05	0.17	1.61	0.06	68.3%	100.0%	3.7%	0.53	0.00	0.03	0.09	1.06	0.03	65.8%	32.7%	65.8%	1.9%
20			36		5	1.40	0.05	0.23	0.02	2.00	0.07	70.0%	100.0%	3.5%	0.67	0.00	0.14	0.01	1.47	0.03	73.3%	33.3%	73.3%	1.5%
21			37		5	1.06	0.22	0.33	0.11	2.31	0.09	45.9%	100.0%	3.9%	0.46	0.00	0.15	0.07	1.22	0.03	52.8%	19.8%	52.8%	1.3%
22			128		1	0.14	0.02	0.01	0.01	0.38	0.00	36.8%	100.0%	0.0%	0.05	0.00	0.01	0.00	0.16	0.00	41.9%	13.0%	41.9%	0.6%
23			130		1	0.16	0.02	0.03	0.02	0.40	0.02	40.0%	100.0%	5.0%	0.05	0.00	0.01	0.01	0.16	0.01	39.3%	13.7%	39.3%	2.5%
24			132		1	0.19	0.03	0.02	0.02	0.51	0.01	37.3%	100.0%	2.0%	0.06	0.00	0.02	0.01	0.21	0.00	41.6%	12.6%	41.6%	0.7%
25			134		1	0.14	0.03	0.02	0.03	0.45	0.01	42.3%	100.0%	2.2%	0.05	0.00	0.01	0.01	0.17	0.01	38.2%	10.4%	38.2%	1.2%
26			136		1	0.18	0.03	0.02	0.04	0.47	0.01	38.3%	100.0%	2.1%	0.07	0.00	0.01	0.02	0.15	0.00	31.0%	12.9%	31.0%	0.9%
27			138		2	0.33	0.05	0.05	0.07	0.97	0.02	34.0%	100.0%	2.1%	0.12	0.00	0.03	0.03	0.29	0.01	30.1%	12.7%	30.1%	1.1%
28			139		2	0.32	0.08	0.02	0.11	0.81	0.03	39.5%	100.0%	3.7%	0.14	0.00	0.01	0.05	0.33	0.02	40.6%	17.4%	40.6%	2.0%
29			140		2	0.39	0.07	0.05	0.02	0.98	0.02	39.8%	100.0%	2.0%	0.17	0.00	0.03	0.01	0.38	0.01	38.8%	17.1%	38.8%	0.9%
30			141		2	0.31	0.06	0.05	0.05	0.93	0.04	33.3%	100.0%	4.3%	0.11	0.00	0.02	0.02	0.29	0.02	31.1%	11.9%	31.1%	1.7%
31			146		2	0.27	0.07	0.06	0.06	0.97	0.02	27.8%	100.0%	2.1%	0.10	0.00	0.03	0.03	0.32	0.01	33.4%	10.4%	33.4%	1.1%
32			147		2	0.38	0.09	0.04	0.02	0.90	0.02	42.3%	100.0%	2.2%	0.17	0.00	0.02	0.01	0.41	0.01	45.2%	19.3%	45.2%	1.2%
33			148		2	0.25	0.04	0.07	0.02	0.77	0.04	32.5%	100.0%	5.2%	0.10	0.00	0.03	0.01	0.24	0.02	31.0%	12.9%	31.0%	2.0%
34			152		5	0.82	0.23	0.23	0.09	1.78	0.07	46.1%	100.0%	3.9%	0.36	0.00	0.08	0.06	0.90	0.03	50.6%	20.3%	50.6%	1.7%
35			153		5	0.99	0.16	0.04	0.22	1.74	0.07	56.9%	100.0%	4.0%	0.49	0.00	0.03	0.11	0.93	0.03	53.2%	28.1%	53.2%	1.5%
36			154		5	0.93	0.27	0.07	0.02	2.02	0.06	46.0%	100.0%	3.0%	0.48	0.00	0.03	0.01	1.01	0.04	49.9%	24.0%	49.9%	1.7%
37			155		5	0.95	0.15	0.28	0.05	1.65	0.09	57.6%	100.0%	5.5%	0.46	0.00	0.16	0.02	0.94	0.03	57.0%	27.9%	57.0%	1.9%
38			156		5	0.66	0.23	0.11	0.13	1.72	0.07	38.4%	100.0%	4.1%	0.25	0.00	0.08	0.10	0.65	0.03	37.8%	14.3%	37.8%	1.7%
39			162		5	0.66	0.16	0.07	0.23	1.64	0.10	40.2%	100.0%	6.1%	0.31	0.00	0.04	0.12	0.78	0.04	47.6%	18.6%	47.6%	2.2%
40			163		5	0.82	0.26	0.03	0.17	1.86	0.05	44.1%	100.0%	2.7%	0.42	0.00	0.01	0.10	0.97	0.03	52.3%	22.6%	52.3%	1.5%
41			164		5	0.93	0.22	0.18	0.04	1.97	0.05	47.2%	100.0%	2.5%	0.51	0.00	0.10	0.02	0.93	0.03	47.1%	25.7%	47.1%	1.4%
42			165		5	0.81	0.22	0.23	0.09	1.75	0.08	46.3%	100.0%	4.6%	0.33	0.00	0.09	0.06	0.88	0.03	50.0%	19.1%	50.0%	1.6%
43			0	128	2	0.36	0.03	0.04	0.01	0.91	0.01	39.6%	100.0%	1.1%	0.12	0.00	0.02	0.01	0.43	0.01	46.9%	13.5%	46.9%	0.7%
44			2	130	2	0.34	0.03	0.06	0.03	0.92	0.04	37.0%	100.0%	4.3%	0.12	0.00	0.03	0.01	0.36	0.01	39.6%	12.6%	39.6%	1.3%
45			4	132	2	0.49	0.04	0.04	0.02	1.19	0.02	41.2%	100.0%	1.7%	0.16	0.00	0.02	0.02	0.53	0.01	44.7%	13.4%	44.7%	0.5%
46			6	134	2	0.48	0.04	0.05	0.05	1.13	0.02	42.5%	100.0%	1.8%	0.16	0.00	0.02	0.03	0.46	0.01	40.5%	14.4%	40.5%	0.6%
47			8	136	2	0.33	0.05	0.03	0.08	0.90	0.02	36.7%	100.0%	2.2%	0.11	0.00	0.02	0.04	0.31	0.01	34.3%	12.6%	34.3%	1.3%
48			10	138	4	0.70	0.11	0.05	0.13	2.08	0.06	33.7%	100.0%	2.9%	0.24	0.00	0.04	0.06	0.63	0.03	30.1%	11.6%	30.1%	1.7%
49			11	139	4	0.78	0.13	0.05	0.23	1.78	0.08	43.8%	100.0%	4.5%	0.30	0.00	0.03	0.12	0.77	0.04	43.1%	16.9%	43.1%	2.3%
50			12	140	4	0.97	0.13	0.05	0.03	1.92	0.03	50.5%	100.0%	1.6%	0.42	0.00	0.03	0.02	1.01	0.01	52.8%	21.9%	52.8%	0.6%
51			13	141	4	0.94	0.10	0.11	0.12	2.32	0.05	40.5%	100.0%	2.2%	0.32	0.00	0.04	0.05	0.82	0.02	35.3%	13.9%	35.3%	0.8%
52			18	146	4	0.63	0.11	0.04	0.20	2.14	0.07	29.4%	100.0%	3.3%	0.21	0.00	0.02	0.12	0.65	0.03	30.2%	9.8%	30.2%	1.4%
53			19	147	4	0.75	0.12	0.09	0.05	1.61	0.03	46.6%	100.0%	1.9%	0.31	0.00	0.05	0.03	0.95	0.01	59.1%	19.5%	59.1%	0.9%
54			20	148	4	0.90	0.12	0.17	0.06	1.82	0.04	49.5%	100.0%	2.2%	0.41	0.00	0.04	0.04	0.92	0.02	50.6%	22.7%	50.6%	1.1%
55			24	152	10	1.61	0.34	0.30	0.18	4.00	0.21	40.3%	100.0%	5.3%	0.63	0.00	0.22	0.11	2.07	0.08	51.7%	15.7%	51.7%	2.0%
56			25	153	10	2.65	0.19	0.12	0.77	3.96	0.20	66.9%	100.0%	5.1%	1.33	0.00	0.06	0.38	2.51	0.10	63.3%	33.6%	63.3%	2.5%
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- K-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)											max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						4cm2 PD(mW/cm2)						67.2%	100.0%	5.6%	4cm2 PD(mW/cm2) at 10mm evaluation distance						71.6%	33.8%	71.6%	2.2%					
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/ (worst-surface 2mm)	ratio (Front 2mm)/ (worst-surface 2mm)	ratio (Rear 2mm)/ (worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm /2mm)	ratio (Right 10mm) / (worst-surface 2mm)	ratio (Front 10mm) / (worst-surface 2mm)	ratio (Rear 10mm) / (worst-surface 2mm)					
1			0		1	0.16	0.01	0.01	0.01	0.41	0.01	39.0%	100.0%	2.4%	0.05	0.00	0.01	0.00	0.21	0.00	51.0%	12.9%	51.0%	0.7%					
2			2		1	0.19	0.01	0.02	0.02	0.51	0.01	37.3%	100.0%	2.0%	0.06	0.00	0.01	0.01	0.24	0.00	48.0%	12.1%	48.0%	0.5%					
3			4		1	0.24	0.02	0.02	0.02	0.60	0.01	40.0%	100.0%	1.7%	0.08	0.00	0.01	0.01	0.29	0.00	48.5%	14.1%	48.5%	0.6%					
4			6		1	0.21	0.01	0.02	0.01	0.50	0.01	42.0%	100.0%	2.0%	0.07	0.00	0.01	0.01	0.26	0.00	52.1%	14.9%	52.1%	0.6%					
5			8		1	0.17	0.02	0.03	0.02	0.47	0.01	36.2%	100.0%	2.1%	0.06	0.00	0.01	0.01	0.23	0.00	48.0%	12.8%	48.0%	0.5%					
6			10		2	0.32	0.04	0.05	0.03	1.03	0.02	31.1%	100.0%	1.9%	0.13	0.00	0.02	0.02	0.39	0.01	37.5%	12.9%	37.5%	0.7%					
7			11		2	0.46	0.02	0.01	0.05	0.95	0.01	48.4%	100.0%	1.1%	0.18	0.00	0.01	0.03	0.55	0.01	57.8%	19.4%	57.8%	0.7%					
8			12		2	0.57	0.04	0.04	0.04	1.19	0.01	47.9%	100.0%	0.8%	0.23	0.00	0.02	0.01	0.69	0.01	57.7%	19.2%	57.7%	0.5%					
9			13		2	0.32	0.06	0.06	0.04	1.16	0.02	27.6%	100.0%	1.7%	0.12	0.00	0.03	0.02	0.39	0.01	33.9%	10.5%	33.9%	0.7%					
10			18		2	0.39	0.04	0.04	0.03	1.06	0.01	36.8%	100.0%	0.9%	0.15	0.00	0.02	0.02	0.45	0.01	42.6%	14.3%	42.6%	1.0%					
11			19		2	0.58	0.02	0.04	0.02	1.00	0.01	58.0%	100.0%	1.0%	0.24	0.00	0.02	0.01	0.66	0.00	66.1%	23.9%	66.1%	0.4%					
12			20		2	0.42	0.05	0.06	0.02	1.20	0.02	35.0%	100.0%	1.7%	0.16	0.00	0.03	0.02	0.53	0.01	44.4%	13.1%	44.4%	0.6%					
13			24		5	0.70	0.25	0.22	0.10	2.16	0.07	32.4%	100.0%	3.2%	0.30	0.00	0.10	0.07	0.89	0.03	41.2%	14.1%	41.2%	1.4%					
14			25		5	1.17	0.05	0.03	0.20	2.05	0.07	57.1%	100.0%	3.4%	0.57	0.00	0.01	0.10	1.37	0.03	66.9%	27.9%	66.9%	1.6%					
15			26		5	1.31	0.05	0.05	0.06	1.95	0.02	67.2%	100.0%	1.0%	0.66	0.00	0.03	0.04	1.33	0.01	68.3%	33.8%	68.3%	0.5%					
16			27		5	1.15	0.10	0.18	0.04	2.33	0.05	49.4%	100.0%	2.1%	0.54	0.00	0.09	0.02	1.57	0.02	67.2%	23.2%	67.2%	0.8%					
17			28		5	0.81	0.20	0.13	0.12	2.18	0.06	37.2%	100.0%	2.8%	0.32	0.00	0.09	0.09	1.07	0.03	49.1%	14.9%	49.1%	1.1%					
18			34		5	1.01	0.07	0.06	0.09	2.21	0.06	45.7%	100.0%	2.7%	0.45	0.00	0.04	0.07	1.29	0.02	58.3%	20.4%	58.3%	0.9%					
19			35		5	1.05	0.08	0.04	0.21	1.77	0.06	52.3%	100.0%	2.4%	0.54	0.00	0.02	0.10	1.12	0.03	63.2%	30.5%	63.2%	1.7%					
20			36		5	1.43	0.07	0.16	0.02	2.35	0.04	60.9%	100.0%	1.7%	0.69	0.00	0.08	0.01	1.68	0.02	71.6%	29.3%	71.6%	0.9%					
21			37		5	0.76	0.24	0.25	0.10	2.11	0.06	36.0%	100.0%	2.8%	0.33	0.00	0.11	0.06	1.06	0.03	50.5%	15.7%	50.5%	1.3%					
22			128		1	0.17	0.01	0.02	0.01	0.39	0.00	43.6%	100.0%	0.0%	0.06	0.00	0.01	0.00	0.19	0.00	47.9%	14.8%	47.9%	0.5%					
23			130		1	0.16	0.02	0.04	0.02	0.40	0.01	40.0%	100.0%	2.5%	0.06	0.00	0.02	0.01	0.17	0.00	41.6%	14.0%	41.6%	0.5%					
24			132		1	0.20	0.02	0.01	0.01	0.53	0.01	37.7%	100.0%	1.9%	0.06	0.00	0.01	0.01	0.23	0.00	43.9%	11.5%	43.9%	0.8%					
25			134		1	0.17	0.02	0.02	0.03	0.46	0.01	45.2%	100.0%	1.2%	0.17	0.00	0.02	0.01	0.20	0.00	42.9%	11.3%	42.9%	0.9%					
26			136		1	0.19	0.02	0.02	0.01	0.47	0.01	40.4%	100.0%	2.4%	0.06	0.00	0.01	0.01	0.18	0.00	39.2%	13.7%	39.2%	0.6%					
27			138		2	0.42	0.04	0.04	0.05	1.00	0.02	42.0%	100.0%	2.0%	0.15	0.00	0.02	0.03	0.37	0.01	37.1%	15.5%	37.1%	0.7%					
28			139		2	0.34	0.05	0.02	0.09	0.85	0.04	40.0%	100.0%	4.7%	0.15	0.00	0.01	0.05	0.38	0.01	44.9%	17.2%	44.9%	1.3%					
29			140		2	0.44	0.05	0.04	0.02	0.94	0.02	46.8%	100.0%	2.1%	0.18	0.00	0.02	0.01	0.46	0.01	49.1%	18.9%	49.1%	0.7%					
30			141		2	0.33	0.05	0.05	0.05	0.97	0.02	34.0%	100.0%	2.1%	0.13	0.00	0.03	0.02	0.28	0.01	29.3%	13.5%	29.3%	0.7%					
31			146		2	0.36	0.04	0.05	0.06	1.06	0.03	34.0%	100.0%	2.8%	0.13	0.00	0.01	0.03	0.38	0.01	35.8%	12.7%	35.8%	0.9%					
32			147		2	0.38	0.06	0.04	0.02	0.84	0.01	45.2%	100.0%	1.2%	0.17	0.00	0.02	0.01	0.46	0.01	55.2%	20.5%	55.2%	0.9%					
33			148		2	0.27	0.04	0.07	0.02	0.79	0.02	34.2%	100.0%	2.5%	0.11	0.00	0.03	0.01	0.28	0.00	35.1%	13.7%	35.1%	0.6%					
34			152		5	1.15	0.14	0.17	0.10	2.08	0.05	55.3%	100.0%	2.4%	0.50	0.00	0.09	0.07	0.98	0.02	47.3%	23.8%	47.3%	1.0%					
35			153		5	1.00	0.10	0.02	0.19	1.79	0.07	55.9%	100.0%	3.9%	0.49	0.00	0.01	0.09	1.01	0.02	56.3%	27.6%	56.3%	1.2%					
36			154		5	0.77	0.15	0.11	0.03	1.60	0.03	48.1%	100.0%	1.9%	0.39	0.00	0.05	0.02	0.96	0.01	60.3%	24.5%	60.3%	0.9%					
37			155		5	1.02	0.17	0.27	0.05	1.78	0.08	57.3%	100.0%	4.5%	0.48	0.00	0.12	0.02	0.94	0.02	52.7%	26.8%	52.7%	1.3%					
38			156		5	0.95	0.14	0.10	0.16	2.05	0.07	46.3%	100.0%	3.4%	0.36	0.00	0.07	0.12	0.72	0.03	35.0%	17.6%	35.0%	1.3%					
39			162		5	0.96	0.23	0.05	0.28	1.81	0.10	53.0%	100.0%	5.5%	0.47	0.00	0.03	0.13	0.88	0.02	48.5%	25.7%	48.5%	1.3%					
40			163		5	0.87	0.19	0.03	0.06	1.90	0.03	45.8%	100.0%	1.6%	0.47	0.00	0.01	0.02	1.18	0.01	61.9%	24.7%	61.9%	0.8%					
41			164		5	0.93	0.16	0.11	0.02	1.85	0.04	50.3%	100.0%	2.2%	0.48	0.00	0.05	0.01	1.18	0.01	63.7%	25.9%	63.7%	0.8%					
42			165		5	1.12	0.15	0.20	0.11	2.04	0.05	54.9%	100.0%	2.5%	0.46	0.00	0.08	0.07	0.94	0.02	46.2%	22.7%	46.2%	1.1%					
43			0	128	2	0.38	0.03	0.03	0.01	0.92	0.01	41.3%	100.0%	1.1%	0.12	0.00	0.01	0.01	0.46	0.00	49.7%	13.5%	49.7%	0.4%					
44			2	130	2	0.42	0.03	0.04	0.02	1.03	0.01	40.8%	100.0%	1.0%	0.13	0.00	0.02	0.01	0.48	0.00	46.3%	13.0%	46.3%	0.4%					
45			4	132	2	0.55	0.04	0.04	0.03	1.24	0.02	44.4%	100.0%	1.6%	0.19	0.00	0.02	0.02	0.57	0.01	45.7%	15.3%	45.7%	0.7%					
46			6	134	2	0.48	0.03	0.04	0.03	1.10	0.02	43.6%	100.0%	1.8%	0.14	0.00	0.01	0.02	0.50	0.01	45.4%	13.0%	45.4%	0.6%					
47			8	136	2	0.32	0.03	0.04	0.05	0.83	0.02	34.4%	100.0%	2.2%	0.11	0.00	0.02	0.02	0.38	0.01	41.1%	11.8%	41.1%	0.6%					
48			10	138	4	0.62	0.08	0.07	0.12	1.90	0.04	32.6%	100.0%	2.1%	0.21	0.00	0.05	0.06	0.63	0.02	33.3%	11.0%	33.3%	0.9%					
49			11	139	4	0.82	0.07	0.04	0.18	1.79	0.05	45.8%	100.0%	2.8%	0.31	0.00	0.02	0.07	0.90	0.02	50.3%	17.5%	50.3%	1.2%					
50			12	140	4	0.82	0.11	0.06	0.05	2.09	0.03	39.2%	100.0%	1.4%	0.37	0.00	0.04	0.02	1.04	0.01	49.9%	17.6%	49.9%	0.6%					
51			13	141	4	0.98	0.09	0.10	0.09	2.47	0.05	39.7%	100.0%	2.0%	0.33	0.00	0.04	0.07	0.79	0.02	31.9%	13.4%	31.9%	0.8%					
52			18	146	4	0.76	0.05	0.05	0.12	2.20	0.05	34.5%	100.0%	2.3%	0.25	0.00	0.02	0.08	0.70	0.02	31.9%	11.4%	31.9%	0.9%					
53			19	147	4	0.92	0.06	0.08	0.04	1.72	0.03	53.5%	100.0%	1.7%	0.40	0.00	0.04	0.02	1.07	0.01	62.0%	23.1%	62.0%	0.7%					
54			20	148	4	0.73	0.13	0.17	0.06	1.81	0.03	40.3%	100.0%	1.7%	0.33	0.00	0.05	0.02	0.84	0.01	46.4%	18.4%	46.4%	0.7%					
55			24	152	10	1.74	0.13	0.33	0.12	3.77	0.19	46.2%	100.0%	5.0%	0.64	0.00	0.25	0.08	1.60	0.08	42.4%	17.0%	42.4%	2.1%					
56			25	153	10	2.34	0.26	0.08	0.64	3.82	0.19	61.3%	100.0%	5.0%	1.17	0.00	0.03	0.30	2.29	0.08	59.9%	30.6%	59.9%	2.2%					
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3.1.2 Ant L– Patch Antenna

Table 6 to 8 show the PD simulation evaluation of Ant L patch antenna at 28GHz / 39GHz / 24GHz for the all surfaces.

Table 6. PD of Ant L – patch antenna (28GHz – n261)

- L-Patch Low CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-)	ratio (Front 2mm)/(worst-)	ratio (Rear 2mm)/(worst-)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm)/(worst-)	ratio (Right 10mm)	ratio (Front 10mm)	ratio (Rear 10mm)
64			1	1	0.04	0.01	0.01	0.01	0.04	0.52	7.7%	7.7%	100.0%	0.02	0.00	0.01	0.01	0.01	0.21	39.5%	4.5%	2.1%	39.5%	
65			3	1	0.02	0.02	0.02	0.01	0.05	0.35	5.7%	14.3%	100.0%	0.01	0.00	0.01	0.01	0.01	0.11	30.3%	2.7%	4.6%	30.3%	
66			5	1	0.02	0.01	0.01	0.02	0.01	0.43	4.7%	2.3%	100.0%	0.01	0.00	0.01	0.01	0.00	0.11	25.0%	2.7%	0.9%	25.0%	
67			7	1	0.03	0.01	0.01	0.01	0.00	0.51	5.9%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.12	22.8%	2.9%	0.2%	22.8%	
68			9	1	0.02	0.03	0.01	0.01	0.00	0.59	3.4%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.18	31.1%	1.6%	0.2%	31.1%	
69			14	2	0.06	0.03	0.03	0.04	0.00	1.08	5.6%	0.0%	100.0%	0.03	0.00	0.02	0.03	0.00	0.36	33.3%	2.8%	0.2%	33.3%	
70			15	2	0.06	0.05	0.00	0.02	0.01	0.97	6.2%	1.0%	100.0%	0.03	0.00	0.00	0.01	0.00	0.37	37.9%	3.4%	0.3%	37.9%	
71			16	2	0.07	0.02	0.06	0.02	0.14	0.71	9.9%	19.7%	100.0%	0.04	0.00	0.03	0.01	0.04	0.34	48.5%	6.1%	5.9%	48.5%	
72			17	2	0.05	0.02	0.04	0.02	0.11	0.81	6.2%	13.6%	100.0%	0.03	0.00	0.02	0.02	0.03	0.31	38.2%	4.2%	4.0%	38.2%	
73			21	2	0.05	0.04	0.01	0.05	0.01	1.07	4.7%	0.9%	100.0%	0.03	0.00	0.01	0.04	0.00	0.38	35.7%	2.9%	0.3%	35.7%	
74			22	2	0.09	0.03	0.04	0.02	0.07	0.75	12.0%	9.3%	100.0%	0.05	0.00	0.02	0.01	0.02	0.33	43.6%	7.2%	3.2%	43.6%	
75			23	2	0.05	0.03	0.04	0.02	0.01	1.00	5.0%	1.0%	100.0%	0.03	0.00	0.03	0.02	0.01	0.32	32.4%	3.0%	0.6%	32.4%	
76			29	5	0.22	0.11	0.03	0.22	0.03	3.07	7.2%	1.0%	100.0%	0.13	0.00	0.02	0.19	0.01	1.11	36.3%	4.3%	0.3%	36.3%	
77			30	5	0.16	0.19	0.01	0.02	0.02	2.06	7.8%	1.0%	100.0%	0.11	0.00	0.01	0.01	0.01	0.97	47.1%	5.5%	0.4%	47.1%	
78			31	5	0.21	0.07	0.05	0.03	0.11	1.59	13.2%	6.9%	100.0%	0.15	0.00	0.02	0.02	0.03	0.66	41.8%	9.5%	2.2%	41.8%	
79			32	5	0.18	0.18	0.14	0.04	0.20	2.71	6.6%	7.4%	100.0%	0.11	0.00	0.10	0.02	0.06	1.25	46.1%	4.2%	2.4%	46.1%	
80			33	5	0.25	0.09	0.18	0.03	0.14	2.67	9.4%	5.2%	100.0%	0.15	0.00	0.15	0.02	0.04	0.97	36.2%	5.4%	1.5%	36.2%	
81			38	5	0.12	0.22	0.03	0.12	0.03	2.83	4.2%	1.1%	100.0%	0.07	0.00	0.02	0.10	0.01	1.27	44.8%	2.4%	0.4%	44.8%	
82			39	5	0.24	0.08	0.02	0.01	0.02	1.57	15.3%	1.3%	100.0%	0.17	0.00	0.01	0.01	0.01	0.69	43.6%	11.1%	0.7%	43.6%	
83			40	5	0.13	0.13	0.11	0.04	0.20	1.89	6.9%	10.6%	100.0%	0.09	0.00	0.06	0.03	0.06	0.91	48.2%	4.7%	3.4%	48.2%	
84			41	5	0.28	0.12	0.19	0.03	0.17	3.12	9.0%	5.4%	100.0%	0.17	0.00	0.16	0.02	0.05	1.20	38.4%	5.5%	1.6%	38.4%	
85			129	1	0.03	0.00	0.01	0.01	0.02	0.42	7.1%	4.8%	100.0%	0.01	0.00	0.01	0.00	0.01	0.20	47.0%	3.4%	2.1%	47.0%	
86			131	1	0.05	0.01	0.01	0.01	0.02	0.48	10.4%	4.2%	100.0%	0.03	0.00	0.01	0.01	0.01	0.19	39.4%	6.1%	1.7%	39.4%	
87			133	1	0.03	0.00	0.01	0.01	0.00	0.47	6.4%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.20	41.6%	3.7%	0.4%	41.6%	
88			135	1	0.04	0.00	0.01	0.01	0.00	0.45	8.9%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.19	41.5%	5.4%	0.3%	41.5%	
89			137	1	0.03	0.00	0.00	0.01	0.00	0.40	7.5%	0.0%	100.0%	0.01	0.00	0.00	0.01	0.00	0.18	45.8%	3.7%	0.2%	45.8%	
90			142	2	0.07	0.01	0.01	0.05	0.01	0.87	8.0%	1.1%	100.0%	0.04	0.00	0.01	0.04	0.00	0.36	41.9%	4.0%	0.3%	41.9%	
91			143	2	0.10	0.02	0.00	0.01	0.00	0.97	10.3%	0.0%	100.0%	0.06	0.00	0.00	0.01	0.00	0.56	58.0%	5.7%	1.1%	58.0%	
92			144	2	0.10	0.01	0.02	0.01	0.03	1.00	10.0%	3.0%	100.0%	0.06	0.00	0.02	0.00	0.01	0.59	58.6%	5.6%	1.3%	58.6%	
93			145	2	0.08	0.01	0.04	0.01	0.07	0.84	9.5%	8.3%	100.0%	0.05	0.00	0.03	0.01	0.03	0.37	44.3%	5.5%	3.1%	44.3%	
94			149	2	0.13	0.02	0.02	0.02	0.05	0.93	14.0%	5.4%	100.0%	0.08	0.00	0.01	0.02	0.02	0.36	38.5%	8.7%	2.2%	38.5%	
95			150	2	0.09	0.02	0.01	0.01	0.01	0.97	9.3%	1.0%	100.0%	0.05	0.00	0.00	0.01	0.01	0.55	56.6%	5.1%	0.6%	56.6%	
96			151	2	0.10	0.01	0.03	0.01	0.03	0.90	11.1%	3.3%	100.0%	0.05	0.00	0.02	0.01	0.02	0.36	40.3%	6.1%	1.8%	40.3%	
97			157	5	0.34	0.05	0.03	0.18	0.07	2.63	12.9%	2.7%	100.0%	0.18	0.00	0.01	0.14	0.03	0.99	37.7%	6.7%	1.0%	37.7%	
98			158	5	0.39	0.07	0.01	0.02	0.02	2.43	16.0%	0.8%	100.0%	0.24	0.00	0.01	0.01	0.01	1.52	62.4%	9.9%	0.4%	62.4%	
99			159	5	0.35	0.07	0.01	0.01	0.01	1.90	18.4%	0.5%	100.0%	0.23	0.00	0.01	0.01	0.01	1.27	66.6%	11.9%	0.3%	66.6%	
100			160	5	0.45	0.07	0.08	0.03	0.06	2.32	19.4%	2.6%	100.0%	0.28	0.00	0.06	0.02	0.02	1.22	52.6%	12.0%	1.0%	52.6%	
101			161	5	0.20	0.03	0.16	0.05	0.07	1.87	10.7%	3.7%	100.0%	0.10	0.00	0.12	0.04	0.03	0.66	35.2%	5.6%	1.7%	35.2%	
102			166	5	0.43	0.05	0.03	0.09	0.05	2.84	15.1%	1.8%	100.0%	0.26	0.00	0.02	0.07	0.02	1.42	49.9%	9.1%	0.6%	49.9%	
103			167	5	0.38	0.08	0.01	0.01	0.01	2.07	18.4%	0.5%	100.0%	0.24	0.00	0.01	0.01	0.00	1.43	60.9%	11.5%	0.2%	60.9%	
104			168	5	0.40	0.07	0.03	0.01	0.03	2.09	19.1%	1.4%	100.0%	0.26	0.00	0.02	0.01	0.01	1.28	61.1%	12.6%	0.5%	61.1%	
105			169	5	0.38	0.05	0.12	0.03	0.07	2.34	16.2%	3.0%	100.0%	0.21	0.00	0.10	0.02	0.03	0.98	42.0%	9.1%	1.3%	42.0%	
106			1	129	2	0.06	0.02	0.03	0.01	0.03	1.11	5.4%	2.7%	100.0%	0.03	0.00	0.02	0.01	0.01	0.45	40.9%	2.9%	1.1%	40.9%
107			3	131	2	0.04	0.01	0.04	0.01	0.08	0.69	5.8%	11.6%	100.0%	0.03	0.00	0.02	0.01	0.03	0.26	38.2%	3.7%	4.2%	38.2%
108			5	133	2	0.04	0.01	0.02	0.02	0.02	0.87	4.6%	2.3%	100.0%	0.03	0.00	0.01	0.02	0.01	0.31	35.4%	2.9%	0.8%	35.4%
109			7	135	2	0.05	0.01	0.02	0.02	0.00	0.92	5.4%	0.0%	100.0%	0.03	0.00	0.02	0.02	0.00	0.30	32.3%	2.9%	0.2%	32.3%
110			9	137	2	0.03	0.05	0.02	0.02	0.00	1.05	2.9%	0.0%	100.0%	0.02	0.00	0.02	0.01	0.00	0.32	30.3%	1.8%	0.2%	30.3%
111			14	142	4	0.11	0.05	0.04	0.08	0.01	2.16	5.1%	0.5%	100.0%	0.06	0.00	0.03	0.06	0.00	0.68	31.6%	2.7%	0.2%	31.6%
112			15	143	4	0.12	0.03	0.01	0.03	0.01	1.62	7.4%	0.6%	100.0%	0.07	0.00	0.01	0.02	0.00	0.90	55.4%	4.0%	0.2%	55.4%
113			16	144	4	0.13	0.05	0.10	0.02	0.20	1.76	7.4%	11.4%	100.0%	0.07	0.00	0.05	0.01	0.07	0.96	54.6%	3.9%	4.0%	54.6%
114			17	145	4	0.23	0.03	0.07	0.04	0.06	1.74	13.2%	3.4%	100.0%	0.14	0.00	0.05	0.03	0.02	0.76	43.3%	7.9%	1.2%	43.3%
115			21	149	4	0.27	0.03	0.03	0.09	0.03	1.96	13.8%	1.5%	100.0%	0.14	0.00	0.03	0.07	0.01	0.68	34.5%	7.2%	0.7%	34.5%
116			22	150	4	0.13	0.04	0.07	0.03	0.09	1.58	8.2%	5.7%	100.0%	0.07	0.00	0.04	0.02	0.03	0.85	54.0%	4.6%	1.9%	54.0%
117			23	151	4	0.15	0.03	0.06	0.04	0.02	1.70	8.8%	1.2%	100.0%	0.08	0.00	0.05	0.03	0.01	0.69	40.7%	5.0%	0.5%	40.7%
118			29	157	10	0.79	0.17	0.08	0.41	0.14	6.84	11.5%	2.0%	100.0%	0.41	0.00	0.04	0.32	0.05	2.29	33.5%	6.0%	0.7%	33.5%
119			30	158	10	0.47	0.31	0.03	0.04	0.06	4.78	9.8%	1.3%	100.0%	0.28	0.00	0.03	0.03	0.03	2.23	46.7%	5.8%	0.5%	46.7%
120			31	159	10	0.59	0.18	0.05	0.05	0.13														

- L-Patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)															max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance				max ratio out of all beams														
						4cm2 PD(mW/cm2)															18.4%	9.5%	100.0%	4cm2 PD(mW/cm2) at 10mm evaluation distance															70.3%	12.3%	3.3%	70.3%
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm/2mm)	ratio (Right 10mm)/(worst-surface 2mm)	ratio (Front 10mm)/(worst-surface 2mm)	ratio (Rear 10mm)/(worst-surface 2mm)																		
64			1		1	0.04	0.01	0.02	0.01	0.02	0.48	8.3%	4.2%	100.0%	0.02	0.00	0.01	0.01	0.01	0.19	39.9%	4.6%	1.4%	39.9%																		
65			3		1	0.01	0.01	0.01	0.01	0.02	0.25	4.0%	8.0%	100.0%	0.01	0.00	0.01	0.01	0.01	0.08	31.1%	3.4%	2.5%	31.1%																		
66			5		1	0.02	0.01	0.01	0.02	0.00	0.40	5.0%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.10	26.1%	2.8%	0.4%	26.1%																		
67			7		1	0.02	0.01	0.01	0.01	0.00	0.41	4.9%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.10	24.5%	3.3%	0.5%	24.5%																		
68			9		1	0.02	0.03	0.01	0.01	0.00	0.55	3.6%	0.0%	100.0%	0.01	0.00	0.01	0.00	0.00	0.18	32.0%	1.9%	0.3%	32.0%																		
69			14		2	0.05	0.02	0.03	0.03	0.00	0.97	5.2%	0.0%	100.0%	0.03	0.00	0.03	0.02	0.00	0.34	34.8%	2.9%	0.2%	34.8%																		
70			15		2	0.05	0.04	0.01	0.01	0.01	0.75	6.7%	1.3%	100.0%	0.03	0.00	0.00	0.01	0.00	0.28	37.4%	8.8%	0.3%	37.4%																		
71			16		2	0.06	0.03	0.04	0.03	0.06	0.63	9.5%	9.5%	100.0%	0.04	0.00	0.02	0.01	0.02	0.30	40.7%	6.7%	3.3%	47.4%																		
72			17		2	0.05	0.02	0.03	0.02	0.05	0.71	7.0%	7.0%	100.0%	0.03	0.00	0.02	0.02	0.02	0.29	40.7%	4.2%	2.5%	40.7%																		
73			21		2	0.05	0.04	0.02	0.05	0.01	0.97	5.2%	1.0%	100.0%	0.03	0.00	0.02	0.04	0.00	0.35	36.4%	2.7%	0.3%	36.4%																		
74			22		2	0.07	0.03	0.03	0.02	0.04	0.60	11.7%	6.7%	100.0%	0.05	0.00	0.01	0.01	0.01	0.26	43.7%	7.6%	2.1%	43.7%																		
75			23		2	0.06	0.03	0.04	0.02	0.01	0.94	6.4%	1.1%	100.0%	0.04	0.00	0.04	0.02	0.00	0.31	33.4%	3.9%	0.2%	33.4%																		
76			29		5	0.21	0.11	0.02	0.17	0.02	2.88	7.3%	0.7%	100.0%	0.11	0.00	0.02	0.14	0.01	1.08	37.6%	3.8%	0.4%	37.6%																		
77			30		5	0.14	0.11	0.01	0.02	0.02	1.56	9.0%	1.3%	100.0%	0.10	0.00	0.01	0.01	0.01	0.75	48.3%	6.3%	0.7%	48.3%																		
78			31		5	0.15	0.05	0.05	0.02	0.05	0.97	15.5%	5.2%	100.0%	0.11	0.00	0.02	0.02	0.02	0.35	36.3%	11.3%	2.1%	36.3%																		
79			32		5	0.14	0.17	0.12	0.04	0.06	2.47	5.7%	2.4%	100.0%	0.10	0.00	0.09	0.02	0.02	1.12	45.2%	4.0%	0.9%	45.2%																		
80			33		5	0.24	0.09	0.19	0.03	0.07	2.73	8.8%	2.6%	100.0%	0.13	0.00	0.16	0.02	0.03	0.97	35.5%	4.8%	1.1%	35.5%																		
81			38		5	0.12	0.18	0.04	0.11	0.02	2.49	4.8%	0.8%	100.0%	0.07	0.00	0.03	0.08	0.01	1.18	47.4%	3.0%	0.4%	47.4%																		
82			39		5	0.17	0.07	0.02	0.00	0.02	1.02	16.7%	2.0%	100.0%	0.13	0.00	0.01	0.00	0.01	0.44	42.8%	12.3%	0.8%	42.8%																		
83			40		5	0.12	0.09	0.07	0.03	0.11	1.44	8.3%	7.6%	100.0%	0.08	0.00	0.04	0.02	0.05	0.71	49.2%	5.5%	3.3%	49.2%																		
84			41		5	0.24	0.12	0.18	0.03	0.06	3.05	7.9%	2.0%	100.0%	0.16	0.00	0.16	0.02	0.02	1.16	38.0%	6.2%	0.8%	38.0%																		
85			129		1	0.03	0.00	0.01	0.01	0.01	0.44	6.8%	2.3%	100.0%	0.02	0.00	0.01	0.00	0.01	0.21	46.7%	5.7%	1.3%	46.7%																		
86			131		1	0.05	0.01	0.01	0.01	0.01	0.48	10.4%	2.3%	100.0%	0.03	0.00	0.01	0.01	0.01	0.18	38.3%	6.8%	1.0%	38.3%																		
87			133		1	0.03	0.01	0.01	0.01	0.00	0.46	6.5%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.20	44.6%	4.3%	0.3%	44.6%																		
88			135		1	0.03	0.01	0.01	0.01	0.00	0.44	6.8%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.19	43.4%	4.3%	0.3%	43.4%																		
89			137		1	0.03	0.00	0.01	0.01	0.00	0.39	7.7%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.17	43.4%	4.4%	0.3%	43.4%																		
90			142		2	0.06	0.01	0.02	0.04	0.00	0.83	7.2%	0.0%	100.0%	0.03	0.00	0.02	0.03	0.00	0.34	40.4%	2.5%	0.3%	40.4%																		
91			143		2	0.10	0.02	0.00	0.01	0.00	0.95	10.5%	0.0%	100.0%	0.06	0.00	0.00	0.01	0.00	0.57	60.3%	6.2%	0.2%	60.3%																		
92			144		2	0.10	0.02	0.02	0.01	0.03	1.01	9.9%	3.0%	100.0%	0.06	0.00	0.02	0.00	0.01	0.60	59.1%	5.5%	1.2%	59.1%																		
93			145		2	0.07	0.01	0.05	0.01	0.04	0.88	8.0%	4.5%	100.0%	0.04	0.00	0.03	0.01	0.02	0.38	43.3%	4.8%	1.9%	43.3%																		
94			149		2	0.13	0.02	0.03	0.02	0.02	0.93	14.0%	2.2%	100.0%	0.08	0.00	0.02	0.02	0.01	0.34	37.1%	8.9%	1.0%	37.1%																		
95			150		2	0.09	0.02	0.01	0.01	0.01	0.95	9.5%	1.1%	100.0%	0.05	0.00	0.00	0.01	0.00	0.53	55.4%	5.5%	0.4%	55.4%																		
96			151		2	0.09	0.01	0.03	0.01	0.02	0.90	10.0%	2.2%	100.0%	0.05	0.00	0.02	0.01	0.01	0.36	39.7%	5.7%	1.1%	39.7%																		
97			157		5	0.34	0.06	0.02	0.16	0.03	2.61	13.0%	1.1%	100.0%	0.18	0.00	0.02	0.12	0.01	0.96	36.8%	6.9%	0.5%	36.8%																		
98			158		5	0.38	0.08	0.01	0.02	0.01	2.37	16.0%	0.4%	100.0%	0.24	0.00	0.01	0.01	0.01	1.47	62.0%	10.3%	0.3%	62.0%																		
99			159		5	0.35	0.07	0.01	0.01	0.01	1.91	18.3%	0.5%	100.0%	0.22	0.00	0.01	0.00	0.01	1.30	67.8%	11.8%	0.3%	67.8%																		
100			160		5	0.41	0.08	0.08	0.03	0.07	2.35	17.4%	3.0%	100.0%	0.26	0.00	0.05	0.02	0.03	1.19	50.8%	11.0%	1.2%	50.8%																		
101			161		5	0.18	0.03	0.18	0.04	0.05	2.00	9.0%	2.5%	100.0%	0.09	0.00	0.14	0.03	0.02	0.67	33.3%	4.4%	1.2%	33.3%																		
102			166		5	0.41	0.05	0.04	0.08	0.03	2.82	14.5%	1.1%	100.0%	0.24	0.00	0.03	0.06	0.01	1.35	47.8%	8.5%	0.4%	47.8%																		
103			167		5	0.37	0.07	0.01	0.01	0.01	2.01	18.4%	0.5%	100.0%	0.23	0.00	0.00	0.01	0.00	1.41	70.3%	11.7%	0.1%	70.3%																		
104			168		5	0.37	0.08	0.03	0.01	0.05	2.09	17.7%	2.4%	100.0%	0.25	0.00	0.02	0.00	0.02	1.28	61.4%	11.8%	0.9%	61.4%																		
105			169		5	0.33	0.05	0.11	0.03	0.04	2.42	13.6%	1.7%	100.0%	0.18	0.00	0.09	0.02	0.02	0.95	39.1%	7.5%	0.8%	39.1%																		
106			1	129	2	0.05	0.02	0.04	0.01	0.02	0.90	5.1%	2.0%	100.0%	0.03	0.00	0.02	0.01	0.01	0.38	39.3%	5.3%	1.0%	39.3%																		
107			3	131	2	0.06	0.02	0.02	0.01	0.02	0.68	8.8%	2.9%	100.0%	0.04	0.00	0.02	0.01	0.01	0.21	31.6%	5.9%	1.3%	31.6%																		
108			5	133	2	0.04	0.01	0.02	0.02	0.01	0.85	4.7%	1.2%	100.0%	0.02	0.00	0.02	0.02	0.00	0.30	34.9%	2.7%	0.3%	34.9%																		
109			7	135	2	0.06	0.01	0.02	0.02	0.00	0.87	6.9%	0.0%	100.0%	0.03	0.00	0.02	0.02	0.00	0.26	30.3%	3.4%	0.3%	30.3%																		
110			9	137	2	0.04	0.05	0.03	0.01	0.01	1.05	3.8%	1.0%	100.0%	0.02	0.00	0.02	0.01	0.00	0.30	28.3%	2.1%	0.3%	28.3%																		
111			14	142	4	0.07	0.04	0.06	0.06	0.01	1.94	3.6%	0.5%	100.0%	0.04	0.00	0.05	0.04	0.00	0.62	32.2%	2.0%	0.2%	32.2%																		
112			15	143	4	0.12	0.03	0.01	0.02	0.01	1.47	8.2%	0.7%	100.0%	0.06	0.00	0.01	0.02	0.00	0.81	55.2%	4.4%	0.2%	55.2%																		
113			16	144	4	0.13	0.05	0.07	0.03	0.05	1.88	6.9%	2.7%	100.0%	0.06	0.00	0.06	0.01	0.02	1.00	53.4%	5.5%	1.1%	53.4%																		
114			17	145	4	0.19	0.03	0.07	0.05	0.07	1.50	12.7%	4.7%	100.0%	0.12	0.00	0.05	0.04	0.03	0.61	40.9%	7.8%	1.7%	40.9%																		
115			21	149	4	0.29	0.02	0.03	0.08	0.02	1.92	15.1%	1.0%	100.0%	0.16	0.00	0.02	0.07	0.01	0.65	34.0%	8.3%	0.6%	34.0%																		
116			22	150	4	0.14	0.04	0.03	0.02	0.04	1.61	8.7%	2.5%	100.0%	0.09	0.00	0.01	0.02	0.02	0.81	50.4%	5.7%	1.0%	50.4%																		
117			23	151	4	0.16	0.03	0.06	0.04	0.02	1.59	10.1%	1.3%	100.0%	0.09	0.00	0.05	0.03	0.01	0.64	40.6%	5.6%	0.4%	40.6%																		
118			29	157	10	0.66	0.22	0.06	0.33	0.06	6.31	10.5%	1.0%	100.0%	0.34	0.00	0.05	0.27	0.03	2.13	33.8%	5.3%	0.4%	33.8%																		
119			30	158	10	0.44	0.22	0.03	0.03	0.03	4.25	10.4%	0.7%	100.0%	0.27	0.00	0.03	0.03	0.02	2.04	48.1%	6.4%	0.4%	48.1%																		
120			31	159	10	0.51	0.09	0.05	0.0																																	



ELECTRONICS

Samsung Confidential

- L-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)															max ratio out of all beams						
						4cm2 PD(mW/cm2)															22.1%	11.5%	100.0%	4cm2 PD(mW/cm2) at 10mm evaluation distance			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm/2mm)	ratio (Right 10mm)/(worst-surface 2mm)	ratio (Front 10mm)/(worst-surface 2mm)	ratio (Rear 10mm)/(worst-surface 2mm)			
64	L	Patch	1		1	0.03	0.01	0.02	0.01	0.02	0.39	7.7%	5.1%	100.0%	0.02	0.00	0.01	0.01	0.01	0.16	41.3%	4.2%	2.0%	41.3%			
65			3	1	0.02	0.01	0.02	0.01	0.02	0.24	8.3%	8.3%	100.0%	0.01	0.00	0.01	0.01	0.01	0.06	25.0%	5.1%	2.2%	25.0%				
66			5	1	0.02	0.01	0.01	0.02	0.01	0.41	4.9%	2.4%	100.0%	0.01	0.00	0.01	0.01	0.00	0.11	27.1%	2.9%	0.5%	27.1%				
67			7	1	0.02	0.01	0.01	0.01	0.00	0.33	6.1%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.08	24.4%	4.0%	0.4%	24.4%				
68			9	1	0.02	0.03	0.01	0.01	0.00	0.49	4.1%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.16	32.2%	2.0%	0.3%	32.2%				
69			14	2	0.05	0.02	0.03	0.03	0.00	0.89	5.6%	0.0%	100.0%	0.03	0.00	0.02	0.02	0.00	0.32	35.4%	2.9%	0.3%	35.4%				
70			15	2	0.04	0.03	0.01	0.01	0.01	0.58	6.9%	1.7%	100.0%	0.02	0.00	0.00	0.01	0.00	0.21	36.4%	5.8%	0.5%	36.4%				
71			16	2	0.04	0.02	0.06	0.03	0.06	0.52	7.7%	11.5%	100.0%	0.03	0.00	0.03	0.02	0.02	0.23	43.5%	5.4%	4.0%	43.5%				
72			17	2	0.04	0.02	0.05	0.03	0.06	0.69	5.8%	8.7%	100.0%	0.02	0.00	0.03	0.02	0.02	0.23	34.0%	3.1%	2.8%	34.0%				
73			21	2	0.05	0.03	0.02	0.04	0.01	0.97	5.2%	1.0%	100.0%	0.03	0.00	0.01	0.03	0.00	0.33	34.0%	2.7%	0.3%	34.0%				
74			22	2	0.07	0.02	0.03	0.02	0.03	0.45	15.6%	6.7%	100.0%	0.04	0.00	0.01	0.01	0.01	0.21	45.8%	9.9%	2.9%	45.8%				
75			23	2	0.06	0.02	0.04	0.03	0.01	0.86	7.0%	1.2%	100.0%	0.04	0.00	0.03	0.02	0.00	0.28	32.4%	4.3%	0.4%	32.4%				
76			29	5	0.20	0.13	0.04	0.17	0.03	2.88	6.9%	1.0%	100.0%	0.10	0.00	0.03	0.14	0.01	1.11	38.4%	3.6%	0.4%	38.4%				
77			30	5	0.11	0.07	0.02	0.01	0.02	1.20	9.2%	1.7%	100.0%	0.08	0.00	0.01	0.01	0.01	0.58	48.3%	6.4%	0.8%	48.3%				
78			31	5	0.21	0.04	0.04	0.02	0.05	0.95	22.1%	5.3%	100.0%	0.15	0.00	0.02	0.02	0.02	0.37	39.1%	16.1%	1.9%	39.1%				
79			32	5	0.10	0.16	0.12	0.04	0.06	2.29	4.4%	2.6%	100.0%	0.06	0.00	0.08	0.02	0.02	1.04	45.4%	2.5%	1.1%	45.4%				
80			33	5	0.22	0.08	0.16	0.03	0.08	2.42	9.1%	3.3%	100.0%	0.13	0.00	0.14	0.02	0.03	0.84	34.6%	5.2%	1.1%	34.6%				
81			38	5	0.13	0.14	0.02	0.10	0.02	2.26	5.8%	0.9%	100.0%	0.08	0.00	0.02	0.08	0.01	1.09	48.1%	3.7%	0.6%	48.1%				
82			39	5	0.16	0.06	0.01	0.00	0.02	0.93	17.2%	2.2%	100.0%	0.12	0.00	0.01	0.00	0.01	0.40	42.7%	13.0%	0.8%	42.7%				
83			40	5	0.15	0.06	0.10	0.05	0.11	1.18	12.7%	9.3%	100.0%	0.11	0.00	0.04	0.03	0.05	0.56	47.3%	9.2%	4.4%	47.3%				
84			41	5	0.22	0.12	0.17	0.03	0.07	2.71	7.3%	2.5%	100.0%	0.18	0.00	0.14	0.02	0.03	1.02	36.8%	6.5%	1.1%	36.8%				
85			129	1	0.03	0.00	0.02	0.01	0.01	0.42	7.1%	2.4%	100.0%	0.01	0.00	0.01	0.00	0.00	0.20	46.6%	3.4%	1.1%	46.6%				
86			131	1	0.04	0.01	0.01	0.01	0.01	0.47	8.5%	2.1%	100.0%	0.03	0.00	0.01	0.01	0.00	0.19	39.8%	6.1%	0.6%	39.8%				
87			133	1	0.03	0.01	0.01	0.01	0.00	0.45	6.7%	0.0%	100.0%	0.02	0.00	0.00	0.01	0.00	0.20	45.2%	4.0%	0.3%	45.2%				
88			135	1	0.03	0.01	0.01	0.01	0.00	0.45	6.7%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.19	42.8%	4.0%	0.2%	42.8%				
89			137	1	0.03	0.00	0.01	0.01	0.00	0.40	7.5%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.17	42.1%	4.4%	0.3%	42.1%				
90			142	2	0.06	0.01	0.03	0.03	0.00	0.84	7.1%	0.0%	100.0%	0.03	0.00	0.02	0.03	0.00	0.33	39.3%	3.4%	0.2%	39.3%				
91			143	2	0.10	0.02	0.00	0.01	0.00	0.91	11.0%	0.0%	100.0%	0.06	0.00	0.00	0.01	0.00	0.57	62.6%	6.5%	1.1%	62.6%				
92			144	2	0.10	0.01	0.02	0.01	0.02	0.99	10.1%	2.0%	100.0%	0.05	0.00	0.02	0.00	0.01	0.60	60.1%	5.4%	1.0%	60.1%				
93			145	2	0.07	0.01	0.06	0.02	0.03	0.86	8.1%	3.5%	100.0%	0.04	0.00	0.04	0.01	0.01	0.39	44.9%	4.2%	1.3%	44.9%				
94			149	2	0.11	0.02	0.04	0.02	0.01	0.82	13.4%	1.2%	100.0%	0.06	0.00	0.02	0.02	0.01	0.32	38.7%	7.9%	0.7%	38.7%				
95			150	2	0.09	0.02	0.01	0.01	0.01	0.92	9.8%	1.1%	100.0%	0.05	0.00	0.00	0.01	0.00	0.52	56.3%	5.5%	0.3%	56.3%				
96			151	2	0.08	0.01	0.04	0.01	0.02	0.91	8.8%	2.2%	100.0%	0.04	0.00	0.02	0.01	0.01	0.37	40.4%	4.8%	0.8%	40.4%				
97			157	5	0.29	0.05	0.03	0.15	0.03	2.40	12.1%	1.3%	100.0%	0.15	0.00	0.02	0.11	0.01	0.85	35.3%	6.4%	0.5%	35.3%				
98			158	5	0.37	0.08	0.01	0.01	0.01	2.28	16.4%	0.4%	100.0%	0.23	0.00	0.01	0.01	0.01	1.43	63.3%	10.3%	0.3%	63.3%				
99			159	5	0.34	0.07	0.01	0.00	0.01	1.86	18.3%	0.5%	100.0%	0.22	0.00	0.01	0.00	0.00	1.29	69.1%	11.7%	0.3%	69.1%				
100			160	5	0.37	0.08	0.06	0.03	0.08	2.38	15.5%	3.4%	100.0%	0.23	0.00	0.05	0.03	0.03	1.24	51.9%	9.5%	1.1%	51.9%				
101			161	5	0.22	0.03	0.23	0.03	0.06	2.20	10.0%	2.7%	100.0%	0.11	0.00	0.17	0.03	0.03	0.73	33.3%	5.0%	1.2%	33.3%				
102			166	5	0.34	0.05	0.04	0.06	0.02	2.58	13.2%	0.8%	100.0%	0.20	0.00	0.03	0.05	0.01	1.27	49.4%	7.9%	0.3%	49.4%				
103			167	5	0.35	0.07	0.01	0.01	0.00	1.94	18.0%	0.0%	100.0%	0.22	0.00	0.00	0.01	0.00	1.37	70.5%	11.5%	0.1%	70.5%				
104			168	5	0.35	0.08	0.04	0.01	0.03	2.03	17.2%	1.5%	100.0%	0.24	0.00	0.03	0.00	0.01	1.26	61.9%	11.7%	0.6%	61.9%				
105			169	5	0.33	0.05	0.12	0.03	0.05	2.52	13.1%	2.0%	100.0%	0.18	0.00	0.11	0.02	0.02	1.01	40.0%	7.0%	0.8%	40.0%				
106			1	129	2	0.04	0.04	0.02	0.02	0.80	4.5%	2.3%	100.0%	0.03	0.00	0.02	0.01	0.01	0.36	40.9%	2.9%	1.0%	40.9%				
107			3	131	2	0.05	0.05	0.02	0.01	0.02	0.67	7.5%	3.0%	100.0%	0.03	0.00	0.02	0.01	0.01	0.24	36.1%	4.6%	1.0%	36.1%			
108			5	133	2	0.05	0.02	0.01	0.01	0.02	0.86	5.8%	2.3%	100.0%	0.02	0.00	0.02	0.02	0.00	0.31	35.8%	2.8%	0.3%	35.8%			
109			7	135	2	0.06	0.03	0.00	0.01	0.02	0.81	7.4%	2.5%	100.0%	0.03	0.00	0.02	0.02	0.00	0.25	30.8%	4.1%	0.3%	30.8%			
110			9	137	2	0.04	0.03	0.01	0.05	0.01	1.03	3.9%	1.0%	100.0%	0.02	0.00	0.02	0.01	0.00	0.30	29.1%	2.2%	0.2%	29.1%			
111			14	142	4	0.07	0.08	0.01	0.03	0.06	1.91	3.7%	3.1%	100.0%	0.04	0.00	0.06	0.04	0.00	0.62	32.7%	1.9%	0.2%	32.7%			
112			15	143	4	0.11	0.02	0.01	0.03	0.02	1.31	8.4%	1.5%	100.0%	0.06	0.00	0.01	0.01	0.00	0.74	56.2%	4.8%	0.3%	56.2%			
113			16	144	4	0.11	0.13	0.07	0.05	0.04	1.64	6.7%	2.4%	100.0%	0.06	0.00	0.06	0.03	0.03	0.84	50.9%	5.5%	1.5%	50.9%			
114			17	145	4	0.17	0.07	0.07	0.03	0.05	1.57	10.8%	3.2%	100.0%	0.09	0.00	0.06	0.04	0.02	0.85	41.2%	5.7%	1.5%	41.2%			
115			21	149	4	0.25	0.02	0.02	0.01	0.09	1.75	14.3%	5.3%	100.0%	0.13	0.00	0.02	0.07	0.01	0.56	32.3%	7.7%	0.5%	32.3%			
116			22	150	4	0.11	0.04	0.03	0.04	0.02	1.44	7.6%	1.4%	100.0%	0.06	0.00	0.01	0.02	0.01	0.74	51.4%	4.4%	1.0%	51.4%			
117			23	151	4	0.13	0.06	0.02	0.03	0.04	1.49	8.7%	2.7%	100.0%	0.07	0.00	0.05	0.04	0.01	0.59	39.3%	4.7%	0.4%	39.3%			
118			29	157	10	0.52	0.07	0.08	0.23	0.35	6.03	8.6%	5.8%	100.0%	0.27	0.00	0.04	0.28	0.04	1.99	32.9%	4.4%	0.6%	32.9%			
119			30	158	10	0.43	0.05	0.03	0.19	0.03	3.85	11.2%	0.8%	100.0%	0.27	0.00	0.03	0.02	0.02	1.95	50.7%	7.1%	0.4%	50.7%			
120			31	159	10	0.57	0.05	0.05	0.08	0.03	3.12	16.3%	1.8%	100.0%	0.40	0.00	0.03	0.02	0.02	1.65	52.7%	12.9%	0.6%	52.7%			
121			32	160	10	0.27	0.27	0.22	0.40	0.04	3.26																

Table 7. PD of Ant L – patch antenna (24GHz – n258)

- L-Patch Low CH

No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm2 PD(mW/cm2)												max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams		
						S4(Right)	S3(Left)	S5(Top)	S6 (Bottom)	S1(Front)	S2(Rear)	21.5%			4.8%			100.0%			S4(Right)	S3(Left)	S5(Top)	S6 (Bottom)	S1(Front)	S2(Rear)	ratio (Right 10mm)/(worst-surface 2mm)	ratio (Front 10mm)/(worst-surface 2mm)	ratio (Rear 10mm)/(worst-surface 2mm)
												ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)	ratio (Right 2mm)/(worst-surface 2mm)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Rear 2mm)/(worst-surface 2mm)												
64			1		1	0.04	0.01	0.01	0.01	0.02	0.60	6.7%	3.3%	100.0%	0.02	0.00	0.01	0.01	0.01	0.20	4.1%	1.7%	33.6%						
65			3		1	0.02	0.02	0.01	0.01	0.01	0.56	3.6%	1.8%	100.0%	0.01	0.00	0.00	0.01	0.00	0.15	2.4%	0.5%	26.2%						
66			5		1	0.02	0.02	0.01	0.01	0.00	0.50	4.0%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.11	2.3%	0.2%	23.0%						
67			7		1	0.01	0.02	0.01	0.01	0.00	0.51	2.0%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.14	1.6%	0.4%	26.8%						
68			9		1	0.02	0.02	0.01	0.01	0.00	0.61	3.3%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.19	1.4%	0.3%	31.9%						
69			14		2	0.04	0.05	0.01	0.03	0.00	1.00	4.0%	0.0%	100.0%	0.02	0.00	0.01	0.02	0.00	0.41	2.1%	0.3%	40.6%						
70			15		2	0.05	0.03	0.01	0.04	0.02	1.15	4.3%	1.7%	100.0%	0.03	0.00	0.01	0.04	0.01	0.32	2.7%	0.9%	28.2%						
71			16		2	0.05	0.05	0.01	0.02	0.04	1.14	4.4%	3.5%	100.0%	0.03	0.00	0.01	0.02	0.02	0.43	2.7%	1.8%	38.0%						
72			17		2	0.07	0.04	0.03	0.01	0.02	1.09	6.4%	1.8%	100.0%	0.04	0.00	0.02	0.01	0.01	0.45	3.7%	1.0%	41.6%						
73			21		2	0.05	0.03	0.01	0.04	0.02	1.15	4.3%	1.7%	100.0%	0.03	0.00	0.01	0.04	0.01	0.32	2.7%	0.9%	28.2%						
74			22		2	0.05	0.05	0.01	0.03	0.03	1.19	4.2%	2.5%	100.0%	0.03	0.00	0.01	0.02	0.02	0.40	2.5%	1.5%	33.9%						
75			23		2	0.07	0.05	0.02	0.01	0.04	1.11	6.3%	3.6%	100.0%	0.04	0.00	0.01	0.00	0.02	0.48	3.4%	1.6%	43.0%						
76			29		5	0.25	0.10	0.03	0.21	0.03	3.23	7.7%	0.9%	100.0%	0.14	0.00	0.02	0.17	0.01	1.22	4.3%	0.4%	37.8%						
77			30		5	0.12	0.22	0.01	0.09	0.02	2.69	4.5%	0.7%	100.0%	0.07	0.00	0.01	0.06	0.01	1.26	2.6%	0.4%	46.7%						
78			31		5	0.11	0.27	0.02	0.01	0.04	2.65	4.2%	1.5%	100.0%	0.07	0.00	0.01	0.01	0.02	1.21	2.5%	0.7%	45.7%						
79			32		5	0.08	0.19	0.05	0.03	0.06	2.47	3.2%	2.4%	100.0%	0.05	0.00	0.04	0.02	0.03	1.14	1.8%	1.2%	46.0%						
80			33		5	0.30	0.17	0.20	0.03	0.02	3.67	8.2%	0.5%	100.0%	0.16	0.00	0.16	0.01	0.01	1.57	4.5%	0.3%	42.8%						
81			38		5	0.24	0.12	0.02	0.21	0.03	3.35	7.2%	0.9%	100.0%	0.14	0.00	0.01	0.16	0.01	1.37	4.2%	0.4%	40.8%						
82			39		5	0.12	0.25	0.02	0.02	0.03	2.50	4.8%	1.2%	100.0%	0.08	0.00	0.02	0.01	0.01	1.19	3.0%	0.6%	47.6%						
83			40		5	0.07	0.22	0.04	0.03	0.04	2.63	2.7%	1.5%	100.0%	0.04	0.00	0.03	0.02	0.02	1.18	1.3%	0.8%	44.9%						
84			41		5	0.13	0.18	0.08	0.02	0.04	2.66	4.9%	1.5%	100.0%	0.07	0.00	0.06	0.01	0.02	1.24	2.7%	0.8%	46.5%						
85			129		1	0.04	0.01	0.01	0.01	0.01	0.44	9.1%	2.3%	100.0%	0.02	0.00	0.00	0.00	0.00	0.23	5.2%	0.7%	52.1%						
86			131		1	0.03	0.01	0.02	0.01	0.02	0.42	7.1%	4.8%	100.0%	0.02	0.00	0.01	0.00	0.01	0.18	4.1%	2.0%	43.4%						
87			133		1	0.04	0.01	0.01	0.01	0.00	0.48	8.3%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.15	4.7%	0.3%	31.5%						
88			135		1	0.04	0.01	0.01	0.01	0.00	0.56	7.1%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.17	4.2%	0.3%	29.9%						
89			137		1	0.04	0.00	0.01	0.01	0.00	0.46	8.7%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.14	5.1%	0.2%	30.0%						
90			142		2	0.08	0.01	0.03	0.02	0.02	0.84	9.5%	2.4%	100.0%	0.04	0.00	0.02	0.02	0.01	0.31	5.3%	1.2%	36.7%						
91			143		2	0.12	0.02	0.00	0.02	0.01	1.09	11.0%	0.9%	100.0%	0.07	0.00	0.00	0.02	0.00	0.49	6.1%	0.2%	44.8%						
92			144		2	0.12	0.02	0.01	0.01	0.02	0.98	12.2%	2.0%	100.0%	0.07	0.00	0.01	0.01	0.01	0.50	7.1%	0.6%	51.4%						
93			145		2	0.11	0.02	0.03	0.01	0.03	0.98	11.2%	3.1%	100.0%	0.06	0.00	0.02	0.00	0.01	0.49	6.5%	1.2%	50.4%						
94			149		2	0.10	0.02	0.00	0.03	0.01	1.04	9.6%	1.0%	100.0%	0.06	0.00	0.00	0.03	0.00	0.45	5.5%	0.2%	43.1%						
95			150		2	0.12	0.02	0.01	0.01	0.02	1.17	10.3%	1.7%	100.0%	0.07	0.00	0.01	0.01	0.01	0.71	5.9%	0.6%	60.9%						
96			151		2	0.10	0.02	0.02	0.01	0.02	1.00	11.1%	2.2%	100.0%	0.06	0.00	0.01	0.01	0.01	0.42	6.3%	1.0%	46.7%						
97			157		5	0.32	0.04	0.03	0.15	0.05	2.41	13.3%	2.1%	100.0%	0.16	0.00	0.01	0.12	0.02	1.00	6.7%	1.0%	41.7%						
98			158		5	0.42	0.07	0.01	0.07	0.02	2.49	16.9%	0.8%	100.0%	0.24	0.00	0.01	0.05	0.01	1.29	9.7%	0.4%	51.6%						
99			159		5	0.43	0.07	0.01	0.01	0.02	2.40	17.9%	0.8%	100.0%	0.27	0.00	0.01	0.00	0.01	1.57	11.3%	0.4%	65.2%						
100			160		5	0.57	0.10	0.05	0.01	0.04	2.66	21.4%	1.5%	100.0%	0.36	0.00	0.02	0.01	0.02	1.30	13.6%	0.7%	48.9%						
101			161		5	0.51	0.06	0.12	0.02	0.05	2.78	18.3%	1.8%	100.0%	0.29	0.00	0.10	0.01	0.02	1.15	10.6%	0.8%	41.3%						
102			166		5	0.39	0.06	0.02	0.11	0.03	2.54	15.4%	1.2%	100.0%	0.20	0.00	0.01	0.09	0.02	1.15	8.0%	0.7%	45.1%						
103			167		5	0.42	0.07	0.01	0.03	0.02	2.46	17.1%	0.8%	100.0%	0.26	0.00	0.01	0.02	0.01	1.46	10.4%	0.3%	59.3%						
104			168		5	0.49	0.10	0.02	0.01	0.02	2.51	19.5%	0.8%	100.0%	0.33	0.00	0.01	0.00	0.01	1.44	13.1%	0.6%	57.2%						
105			169		5	0.58	0.09	0.06	0.02	0.05	2.70	21.5%	1.9%	100.0%	0.36	0.00	0.04	0.01	0.02	1.23	13.3%	0.8%	45.6%						
106			1 129		2	0.06	0.03	0.02	0.03	0.03	1.14	5.3%	2.6%	100.0%	0.03	0.00	0.01	0.01	0.02	0.46	2.8%	1.5%	40.5%						
107			3 131		2	0.03	0.02	0.03	0.02	0.03	0.86	3.5%	3.5%	100.0%	0.01	0.00	0.01	0.01	0.01	0.26	1.7%	1.6%	30.0%						
108			5 133		2	0.06	0.03	0.03	0.01	0.01	0.94	6.4%	1.1%	100.0%	0.04	0.00	0.02	0.01	0.00	0.21	4.2%	0.3%	22.4%						
109			7 135		2	0.05	0.04	0.03	0.02	0.01	1.18	4.2%	0.8%	100.0%	0.03	0.00	0.03	0.01	0.00	0.26	2.7%	0.3%	22.3%						
110			9 137		2	0.05	0.02	0.02	0.01	0.00	0.99	5.1%	0.0%	100.0%	0.03	0.00	0.02	0.01	0.00	0.31	3.0%	0.2%	31.2%						
111			14 142		4	0.15	0.05	0.05	0.06	0.03	1.60	9.4%	1.9%	100.0%	0.08	0.00	0.04	0.05	0.02	0.60	4.8%	1.0%	37.6%						
112			15 143		4	0.16	0.05	0.01	0.09	0.02	2.09	7.7%	1.0%	100.0%	0.10	0.00	0.01	0.08	0.01	0.78	4.6%	0.6%	37.3%						
113			16 144		4	0.16	0.06	0.03	0.03	0.04	2.25	7.1%	1.8%	100.0%	0.09	0.00	0.01	0.03	0.02	1.11	4.0%	0.9%	49.1%						
114			17 145		4	0.09	0.10	0.07	0.03	0.08	2.14	4.2%	3.7%	100.0%	0.05	0.00	0.05	0.01	0.03	0.92	2.3%	1.5%	43.0%						
115			21 149		4	0.15	0.08	0.01	0.08	0.02	1.97	7.6%	1.0%	100.0%	0.08	0.00	0.01	0.06	0.01	0.79	3.8%	0.5%	39.9%						
116			22 150		4	0.12	0.06	0.03	0.04	0.09	2.21	5.4%	4.1%	100.0%	0.06	0.00	0.01	0.02	0.05	0.96	2.9%	2.0%	43.6%						
117			23 151		4	0.10	0.10	0.04	0.02	0.07	2.18	4.6%	3.2%	100.0%	0.06	0.00	0.03	0.01	0.03	0.96	2.9%	1.6%	43.9%						
118			29 157		10	0.99	0.07	0.06	0.42	0.07	5.97	16.6%	1.2%	100.0%	0.52	0.00	0.03	0.35	0.03	2.46	8.8%	0.5%	41.2%						
119			30 158		10	0.74	0.12	0.03	0.16	0.04	4.18	17.7%	1.0%	100.0%	0.42	0.00	0.01	0.11	0.02	2.25	10.1%	0.4%	53.9%						
120			31 159		10	0.47	0.31	0.04																					



ELECTRONICS

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- L-Patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)											max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						4cm2 PD(mW/cm2)						max ratio out of all beams					4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams						
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/worst	ratio (Front 2mm)/worst	ratio (Rear 2mm)/worst	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio-worst surface (10mm)	ratio (Right 10mm)/worst	ratio (Front 10mm)/worst	ratio (Rear 10mm)/worst					
64			1		1	0.05	0.01	0.01	0.01	0.02	0.63	7.9%	3.2%	100.0%	0.03	0.00	0.01	0.01	0.01	0.00	0.23	35.8%	4.9%	1.1%	35.8%				
65			3		1	0.02	0.02	0.01	0.01	0.01	0.59	3.4%	1.7%	100.0%	0.01	0.00	0.01	0.01	0.00	0.15	25.1%	2.3%	0.5%	25.1%					
66			5		1	0.02	0.01	0.01	0.01	0.01	0.54	3.7%	1.9%	100.0%	0.01	0.00	0.01	0.01	0.00	0.13	24.6%	2.0%	0.5%	24.6%					
67			7		1	0.02	0.02	0.01	0.01	0.00	0.62	3.2%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.16	25.2%	1.5%	0.3%	25.2%					
68			9		1	0.02	0.02	0.01	0.01	0.00	0.65	3.1%	0.0%	100.0%	0.01	0.00	0.01	0.00	0.00	0.21	31.9%	1.5%	0.1%	31.9%					
69			14		2	0.04	0.06	0.01	0.03	0.00	1.13	3.5%	0.0%	100.0%	0.02	0.00	0.01	0.03	0.00	0.46	40.7%	2.1%	0.2%	40.7%					
70			15		2	0.06	0.04	0.01	0.04	0.02	1.24	4.8%	1.6%	100.0%	0.04	0.00	0.01	0.03	0.01	0.35	28.4%	2.9%	0.6%	28.4%					
71			16		2	0.07	0.04	0.01	0.02	0.04	1.14	6.1%	3.5%	100.0%	0.04	0.00	0.01	0.01	0.02	0.44	38.7%	3.8%	1.4%	38.7%					
72			17		2	0.08	0.04	0.03	0.01	0.02	1.15	7.0%	1.7%	100.0%	0.04	0.00	0.02	0.01	0.01	0.48	41.6%	3.9%	0.8%	41.6%					
73			21		2	0.06	0.04	0.01	0.04	0.02	1.24	4.8%	1.6%	100.0%	0.04	0.00	0.01	0.03	0.01	0.35	28.4%	2.9%	0.6%	28.4%					
74			22		2	0.07	0.05	0.01	0.02	0.03	1.21	5.8%	2.5%	100.0%	0.04	0.00	0.01	0.02	0.01	0.43	35.2%	3.5%	1.1%	35.2%					
75			23		2	0.08	0.04	0.02	0.01	0.04	1.13	7.1%	3.5%	100.0%	0.04	0.00	0.01	0.00	0.01	0.49	43.3%	3.9%	1.3%	43.3%					
76			29		5	0.25	0.11	0.02	0.22	0.02	3.61	6.9%	0.6%	100.0%	0.14	0.00	0.02	0.18	0.01	1.39	38.6%	3.9%	0.3%	38.6%					
77			30		5	0.12	0.25	0.01	0.08	0.01	2.94	4.1%	0.3%	100.0%	0.07	0.00	0.01	0.05	0.00	1.39	47.1%	2.5%	0.2%	47.1%					
78			31		5	0.18	0.25	0.02	0.01	0.05	2.71	6.6%	1.8%	100.0%	0.11	0.00	0.01	0.01	0.02	1.22	45.0%	4.2%	0.8%	45.0%					
79			32		5	0.10	0.22	0.05	0.02	0.07	2.64	3.8%	2.7%	100.0%	0.06	0.00	0.04	0.02	0.02	1.22	46.1%	2.2%	0.8%	46.1%					
80			33		5	0.30	0.18	0.19	0.02	0.03	3.63	8.3%	0.8%	100.0%	0.17	0.00	0.16	0.02	0.01	1.53	42.2%	4.8%	0.3%	42.2%					
81			38		5	0.26	0.16	0.02	0.20	0.02	3.58	7.3%	0.6%	100.0%	0.15	0.00	0.01	0.16	0.01	1.49	41.7%	4.2%	0.3%	41.7%					
82			39		5	0.17	0.27	0.02	0.01	0.02	2.70	6.3%	0.7%	100.0%	0.11	0.00	0.02	0.01	0.01	1.28	47.6%	4.0%	0.3%	47.6%					
83			40		5	0.11	0.23	0.03	0.02	0.06	2.65	4.2%	2.3%	100.0%	0.07	0.00	0.03	0.02	0.02	1.21	45.5%	2.7%	0.7%	45.5%					
84			41		5	0.14	0.21	0.07	0.02	0.06	2.82	5.0%	0.0%	100.0%	0.08	0.00	0.06	0.01	0.02	1.33	47.0%	2.8%	0.8%	47.0%					
85			129		1	0.04	0.01	0.01	0.01	0.02	0.47	8.5%	4.3%	100.0%	0.02	0.00	0.01	0.00	0.01	0.22	46.8%	5.1%	1.3%	46.8%					
86			131		1	0.03	0.01	0.02	0.01	0.02	0.45	6.7%	4.4%	100.0%	0.02	0.00	0.01	0.00	0.01	0.21	46.0%	3.9%	1.8%	46.0%					
87			133		1	0.04	0.00	0.01	0.01	0.00	0.49	8.2%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.18	35.8%	4.1%	0.3%	35.8%					
88			135		1	0.04	0.00	0.01	0.01	0.00	0.51	7.8%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.18	35.1%	4.0%	0.2%	35.1%					
89			137		1	0.04	0.00	0.01	0.01	0.00	0.43	9.3%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.14	33.2%	5.3%	0.3%	33.2%					
90			142		2	0.09	0.01	0.03	0.03	0.02	0.88	10.7%	1.6%	100.0%	0.05	0.00	0.02	0.12	0.02	1.10	42.8%	6.8%	0.7%	42.8%					
91			143		2	0.11	0.01	0.00	0.02	0.06	1.10	10.0%	0.0%	100.0%	0.06	0.00	0.00	0.02	0.00	0.56	50.5%	5.2%	0.2%	50.5%					
92			144		2	0.10	0.02	0.02	0.01	0.03	0.96	10.4%	3.1%	100.0%	0.06	0.00	0.01	0.00	0.01	0.55	57.0%	6.2%	1.3%	57.0%					
93			145		2	0.10	0.02	0.04	0.01	0.07	0.96	10.4%	7.3%	100.0%	0.05	0.00	0.02	0.01	0.02	0.49	51.4%	5.6%	2.2%	51.4%					
94			149		2	0.09	0.02	0.00	0.03	0.00	0.99	9.1%	0.0%	100.0%	0.05	0.00	0.00	0.03	0.00	0.47	47.5%	5.1%	0.2%	47.5%					
95			150		2	0.12	0.02	0.01	0.01	0.01	1.11	10.8%	0.9%	100.0%	0.07	0.00	0.01	0.00	0.01	0.70	63.1%	5.9%	0.5%	63.1%					
96			151		2	0.10	0.01	0.03	0.01	0.03	0.94	10.6%	3.2%	100.0%	0.06	0.00	0.02	0.00	0.01	0.50	52.9%	6.0%	1.3%	52.9%					
97			157		5	0.35	0.05	0.04	0.15	0.04	2.56	13.7%	1.6%	100.0%	0.17	0.00	0.02	0.12	0.02	1.10	42.8%	6.8%	0.7%	42.8%					
98			158		5	0.41	0.07	0.02	0.06	0.02	2.51	16.3%	0.0%	100.0%	0.24	0.00	0.01	0.04	0.01	1.45	57.9%	9.5%	0.5%	57.9%					
99			159		5	0.43	0.07	0.01	0.01	0.01	2.31	18.6%	0.4%	100.0%	0.26	0.00	0.01	0.00	0.00	1.65	71.5%	11.4%	0.2%	71.5%					
100			160		5	0.52	0.08	0.05	0.01	0.07	2.47	21.1%	2.8%	100.0%	0.33	0.00	0.03	0.01	0.02	1.30	52.5%	13.5%	0.8%	52.5%					
101			161		5	0.51	0.06	0.12	0.03	0.08	2.70	18.9%	3.0%	100.0%	0.29	0.00	0.11	0.02	0.03	1.17	43.2%	10.7%	1.1%	43.2%					
102			166		5	0.40	0.06	0.03	0.11	0.03	2.61	15.3%	1.1%	100.0%	0.22	0.00	0.02	0.08	0.02	1.25	47.7%	8.4%	0.6%	47.7%					
103			167		5	0.42	0.08	0.01	0.03	0.01	2.45	17.1%	0.4%	100.0%	0.25	0.00	0.01	0.02	0.01	1.63	66.4%	10.2%	0.3%	66.4%					
104			168		5	0.43	0.08	0.02	0.01	0.02	2.29	18.8%	0.9%	100.0%	0.29	0.00	0.02	0.01	0.01	1.39	60.7%	12.6%	0.4%	60.7%					
105			169		5	0.54	0.07	0.06	0.02	0.08	2.55	21.2%	3.1%	100.0%	0.34	0.00	0.04	0.01	0.02	1.27	50.0%	13.2%	0.9%	50.0%					
106			1	129	2	0.06	0.03	0.02	0.02	0.03	1.18	5.1%	2.5%	100.0%	0.04	0.00	0.01	0.01	0.01	0.46	39.1%	3.1%	1.1%	39.1%					
107			3	131	2	0.04	0.02	0.03	0.02	0.04	0.93	4.3%	4.3%	100.0%	0.02	0.00	0.01	0.01	0.01	0.30	32.1%	2.1%	1.6%	32.1%					
108			5	133	2	0.05	0.02	0.03	0.02	0.01	1.01	5.0%	1.0%	100.0%	0.03	0.00	0.02	0.02	0.01	0.24	23.4%	2.9%	0.5%	23.4%					
109			7	135	2	0.05	0.03	0.03	0.02	0.01	1.14	4.4%	0.9%	100.0%	0.03	0.00	0.02	0.01	0.00	0.25	22.1%	2.7%	0.3%	22.1%					
110			9	137	2	0.05	0.02	0.02	0.02	0.00	1.02	4.9%	0.0%	100.0%	0.03	0.00	0.01	0.01	0.00	0.34	32.9%	2.7%	0.1%	32.9%					
111			14	142	4	0.18	0.05	0.04	0.08	0.02	1.86	9.7%	1.1%	100.0%	0.10	0.00	0.03	0.06	0.01	0.74	39.9%	5.4%	0.4%	39.9%					
112			15	143	4	0.16	0.06	0.01	0.07	0.02	2.01	8.0%	1.0%	100.0%	0.09	0.00	0.01	0.06	0.01	0.79	39.3%	4.7%	0.4%	39.3%					
113			16	144	4	0.16	0.07	0.03	0.03	0.06	2.36	6.8%	2.5%	100.0%	0.09	0.00	0.01	0.03	0.02	1.19	50.5%	3.7%	1.0%	50.5%					
114			17	145	4	0.07	0.09	0.08	0.02	0.13	2.20	3.2%	5.9%	100.0%	0.04	0.00	0.05	0.01	0.04	0.90	41.0%	1.7%	1.7%	41.0%					
115			21	149	4	0.15	0.07	0.01	0.08	0.02	1.83	8.2%	1.1%	100.0%	0.08	0.00	0.01	0.06	0.01	0.72	39.3%	4.2%	0.5%	39.3%					
116			22	150	4	0.13	0.05	0.02	0.03	0.08	2.18	6.0%	3.7%	100.0%	0.07	0.00	0.01	0.02	0.03	1.02	46.9%	3.2%	1.5%	46.9%					
117			23	151	4	0.13	0.08	0.06	0.02	0.09	2.28	5.7%	3.9%	100.0%	0.07	0.00	0.04	0.01	0.03	1.05	45.9%	3.2%	1.3%	45.9%					
118			29	157	10	1.02	0.07	0.05	0.42	0.07	6.33	16.1%	1.1%	100.0%	0.53	0.00	0.03	0.36	0.03	2.61	41.2%	8.3%	0.5%	41.2%					
119			30	158	10	0.74	0.17	0.03	0.16	0.04	4.71	15.7%	0.8%	100.0%	0.43	0.00	0.01	0.11	0.02	2.66	56.6%	9.2%	0.4%	56.6%					
120			31	159	10	0.43	0.28	0.03	0.02	0.08	4.07	10.6%	2.0%	100.0%	0.28</														



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- L-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)												max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams							
						S4(Right)						S3(Left)						20.9%			7.1%			100.0%			73.9%		13.6%		2.4%		73.9%	
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/worst	ratio (Front 2mm)/worst	ratio (Rear 2mm)/worst	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio-worst surface (10mm)	ratio (Right 10mm)/worst	ratio (Front 10mm)/worst	ratio (Rear 10mm)/worst	ratio (Right 10mm)	ratio (Front 10mm)	ratio (Rear 10mm)							
64			1		1	0.05	0.01	0.01	0.01	0.02	0.63	7.9%	3.2%	100.0%	0.03	0.00	0.01	0.01	0.01	0.01	0.23	37.2%	4.6%	1.4%	37.2%									
65			3		1	0.02	0.02	0.01	0.01	0.01	0.59	3.4%	1.7%	100.0%	0.01	0.00	0.01	0.01	0.00	0.15	26.0%	2.2%	0.6%	26.0%										
66			5		1	0.02	0.01	0.01	0.01	0.00	0.57	3.5%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.13	23.3%	1.9%	0.3%	23.3%										
67			7		1	0.02	0.02	0.01	0.01	0.00	0.64	3.1%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.16	24.8%	1.6%	0.1%	24.8%										
68			9		1	0.02	0.02	0.01	0.01	0.00	0.67	3.0%	0.0%	100.0%	0.01	0.00	0.01	0.01	0.00	0.21	31.5%	1.5%	0.1%	31.5%										
69			14		2	0.04	0.06	0.01	0.04	0.00	1.21	3.3%	0.0%	100.0%	0.02	0.00	0.01	0.03	0.00	0.48	39.6%	1.8%	0.2%	39.6%										
70			15		2	0.07	0.04	0.01	0.04	0.01	1.24	5.6%	0.8%	100.0%	0.04	0.00	0.01	0.03	0.01	0.38	30.5%	2.4%	0.4%	30.5%										
71			16		2	0.09	0.04	0.01	0.02	0.04	1.17	7.7%	3.4%	100.0%	0.05	0.00	0.00	0.02	0.02	0.48	40.8%	4.3%	1.6%	40.8%										
72			17		2	0.08	0.04	0.03	0.01	0.04	1.16	6.9%	3.4%	100.0%	0.05	0.00	0.02	0.01	0.01	0.49	42.0%	4.0%	1.2%	42.0%										
73			21		2	0.07	0.04	0.01	0.04	0.01	1.24	5.6%	0.8%	100.0%	0.04	0.00	0.01	0.03	0.01	0.38	30.5%	3.4%	0.4%	30.5%										
74			22		2	0.09	0.04	0.01	0.03	0.03	1.23	7.3%	2.4%	100.0%	0.05	0.00	0.00	0.02	0.01	0.46	37.4%	4.2%	1.1%	37.4%										
75			23		2	0.08	0.04	0.02	0.01	0.05	1.17	6.8%	4.3%	100.0%	0.04	0.00	0.01	0.00	0.02	0.51	43.8%	3.8%	1.8%	43.8%										
76			29		5	0.26	0.12	0.02	0.22	0.02	3.59	7.2%	0.6%	100.0%	0.15	0.00	0.02	0.18	0.01	1.40	39.0%	4.1%	0.3%	39.0%										
77			30		5	0.14	0.28	0.01	0.08	0.01	3.12	4.5%	0.3%	100.0%	0.08	0.00	0.01	0.05	0.01	1.47	47.2%	2.6%	0.2%	47.2%										
78			31		5	0.21	0.24	0.02	0.01	0.05	2.67	7.9%	1.9%	100.0%	0.13	0.00	0.01	0.01	0.02	1.20	45.1%	5.0%	0.7%	45.1%										
79			32		5	0.10	0.22	0.04	0.03	0.08	2.66	3.8%	3.0%	100.0%	0.06	0.00	0.04	0.03	0.03	1.23	46.3%	2.4%	1.3%	46.3%										
80			33		5	0.29	0.18	0.18	0.03	0.04	3.60	8.1%	1.1%	100.0%	0.17	0.00	0.14	0.02	0.01	1.51	42.6%	4.7%	0.4%	42.6%										
81			38		5	0.26	0.18	0.02	0.20	0.02	3.57	7.3%	0.6%	100.0%	0.15	0.00	0.01	0.16	0.01	1.52	42.6%	4.3%	0.3%	42.6%										
82			39		5	0.21	0.30	0.02	0.01	0.03	2.82	7.4%	1.1%	100.0%	0.14	0.00	0.02	0.01	0.01	1.34	47.4%	5.0%	0.4%	47.4%										
83			40		5	0.13	0.21	0.04	0.03	0.06	2.53	5.1%	2.4%	100.0%	0.09	0.00	0.03	0.02	0.03	1.15	45.3%	3.4%	1.1%	45.3%										
84			41		5	0.14	0.23	0.07	0.01	0.08	2.95	4.7%	2.3%	100.0%	0.08	0.00	0.05	0.01	0.03	1.41	45.9%	2.7%	1.1%	45.9%										
85			129		1	0.04	0.01	0.01	0.01	0.02	0.44	9.1%	4.5%	100.0%	0.02	0.00	0.01	0.00	0.01	0.19	44.2%	5.4%	1.3%	44.2%										
86			131		1	0.03	0.01	0.01	0.00	0.02	0.47	6.4%	4.3%	100.0%	0.02	0.00	0.01	0.00	0.01	0.23	49.1%	4.0%	1.1%	49.1%										
87			133		1	0.03	0.00	0.01	0.01	0.00	0.47	6.4%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.18	39.0%	4.1%	0.2%	39.0%										
88			135		1	0.04	0.00	0.01	0.01	0.00	0.48	8.3%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.19	38.8%	4.1%	0.2%	38.8%										
89			137		1	0.04	0.00	0.01	0.01	0.00	0.42	9.5%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.16	37.3%	5.2%	0.3%	37.3%										
90			142		2	0.09	0.01	0.02	0.02	0.02	0.90	10.0%	1.3%	100.0%	0.05	0.00	0.01	0.02	0.00	0.38	42.7%	5.5%	0.4%	42.7%										
91			143		2	0.10	0.01	0.00	0.02	0.00	1.07	9.3%	0.0%	100.0%	0.06	0.00	0.00	0.02	0.00	0.60	55.9%	5.3%	0.2%	55.9%										
92			144		2	0.10	0.02	0.01	0.01	0.02	0.98	10.2%	2.0%	100.0%	0.06	0.00	0.01	0.00	0.01	0.57	58.1%	6.1%	0.7%	58.1%										
93			145		2	0.10	0.01	0.03	0.01	0.05	0.94	10.6%	5.3%	100.0%	0.05	0.00	0.01	0.01	0.02	0.52	55.0%	5.7%	1.7%	55.0%										
94			149		2	0.09	0.01	0.00	0.03	0.00	0.96	9.4%	0.0%	100.0%	0.05	0.00	0.00	0.02	0.00	0.50	51.6%	4.9%	0.2%	51.6%										
95			150		2	0.11	0.02	0.01	0.01	0.01	1.07	10.3%	0.9%	100.0%	0.06	0.00	0.01	0.00	0.00	0.68	63.9%	5.8%	0.2%	63.9%										
96			151		2	0.11	0.02	0.02	0.01	0.02	0.93	11.8%	2.2%	100.0%	0.06	0.00	0.01	0.00	0.01	0.52	55.8%	6.6%	0.9%	55.8%										
97			157		5	0.36	0.05	0.03	0.15	0.03	2.54	14.2%	1.2%	100.0%	0.19	0.00	0.02	0.11	0.01	1.08	42.6%	7.4%	0.5%	42.6%										
98			158		5	0.41	0.07	0.02	0.06	0.02	2.56	16.0%	0.0%	100.0%	0.24	0.00	0.01	0.04	0.01	1.55	60.6%	9.4%	0.3%	60.6%										
99			159		5	0.43	0.07	0.01	0.01	0.00	2.25	19.1%	0.0%	100.0%	0.26	0.00	0.01	0.00	0.00	1.66	73.9%	11.5%	0.1%	73.9%										
100			160		5	0.49	0.08	0.04	0.01	0.05	2.39	20.5%	2.1%	100.0%	0.32	0.00	0.02	0.01	0.02	1.35	56.4%	13.6%	0.8%	56.4%										
101			161		5	0.50	0.06	0.11	0.02	0.07	2.57	19.5%	2.7%	100.0%	0.29	0.00	0.09	0.01	0.02	1.16	45.2%	11.2%	0.9%	45.2%										
102			166		5	0.41	0.06	0.03	0.11	0.02	2.62	15.6%	0.8%	100.0%	0.22	0.00	0.02	0.08	0.01	1.29	49.1%	8.6%	0.4%	49.1%										
103			167		5	0.42	0.08	0.01	0.02	0.01	2.45	17.1%	0.4%	100.0%	0.25	0.00	0.00	0.01	0.01	1.69	69.1%	10.3%	0.3%	69.1%										
104			168		5	0.41	0.07	0.02	0.01	0.02	2.15	19.1%	0.9%	100.0%	0.26	0.00	0.01	0.00	0.01	1.38	64.0%	12.3%	0.4%	64.0%										
105			169		5	0.53	0.08	0.05	0.01	0.06	2.53	20.9%	2.4%	100.0%	0.34	0.00	0.03	0.01	0.02	1.35	53.4%	13.3%	0.8%	53.4%										
106			1	129	2	0.07	0.03	0.01	0.01	0.04	1.13	6.2%	3.5%	100.0%	0.05	0.00	0.01	0.01	0.01	0.44	38.6%	4.0%	1.3%	38.6%										
107			3	131	2	0.05	0.02	0.02	0.02	0.04	0.97	5.2%	4.1%	100.0%	0.03	0.00	0.01	0.01	0.02	0.36	37.1%	2.8%	1.6%	37.1%										
108			5	133	2	0.04	0.02	0.02	0.02	0.01	1.03	3.9%	1.0%	100.0%	0.03	0.00	0.02	0.02	0.00	0.27	26.1%	2.6%	0.3%	26.1%										
109			7	135	2	0.05	0.04	0.02	0.02	0.01	1.09	4.6%	0.9%	100.0%	0.03	0.00	0.02	0.01	0.00	0.26	23.7%	2.6%	0.2%	23.7%										
110			9	137	2	0.04	0.02	0.01	0.02	0.00	1.03	3.9%	0.9%	100.0%	0.02	0.00	0.01	0.01	0.00	0.35	34.4%	2.4%	0.1%	34.4%										
111			14	142	4	0.17	0.05	0.03	0.06	0.01	1.90	8.9%	0.5%	100.0%	0.10	0.00	0.03	0.06	0.00	0.76	40.0%	5.2%	0.2%	40.0%										
112			15	143	4	0.17	0.05	0.01	0.07	0.01	1.93	8.8%	0.5%	100.0%	0.10	0.00	0.01	0.06	0.01	0.78	40.3%	5.3%	0.3%	40.3%										
113			16	144	4	0.17	0.07	0.02	0.04	0.07	2.43	7.0%	2.9%	100.0%	0.10	0.00	0.01	0.03	0.03	1.22	50.3%	4.1%	1.2%	50.3%										
114			17	145	4	0.09	0.09	0.06	0.02	0.16	2.26	4.0%	7.1%	100.0%	0.05	0.00	0.05	0.01	0.05	0.96	42.6%	2.0%	2.4%	42.6%										
115			21	149	4	0.16	0.07	0.01	0.08	0.01	1.80	8.9%	0.6%	100.0%	0.09	0.00	0.01	0.07	0.01	0.73	40.3%	4.9%	0.4%	40.3%										
116			22	150	4	0.14	0.04	0.01	0.02	0.05	2.20	6.4%	2.3%	100.0%	0.08	0.00	0.01	0.02	0.02	1.06	48.3%	3.5%	1.0%	48.3%										
117			23	151	4	0.16	0.08	0.04	0.02	0.12	2.33	6.9%	5.2%	100.0%	0.09	0.00	0.03	0.01	0.05	1.10	47.1%	3.9%	1.9%	47.1%										
118			29	157	10	1.06	0.09	0.04	0.43	0.06	6.54	16.2%	0.9%	100.0%	0.57	0.00	0.03	0.37	0.03	2.71	41.4%	8.7%	0.4%	41.4%										
119			30	158	10	0.72	0.23	0.02	0.15	0.04	5.12	14.1%	0.8%	100.0%	0.42	0.00	0.01	0.11	0.02	2.88	56.2%	8.2%	0.3%	56.2%										
120			31	159	10	0.39	0.28																											



ELECTRONICS

Samsung Confidential

Table 8. PD of Ant L – patch antenna (39GHz – n260)

- L-Patch Low CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	23.5%	1.6%	100.0%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	79.4%	15.9%	0.8%	79.4%
64			1		1	0.04	0.01	0.01	0.00	0.00	0.46	8.7%	0.0%	100.0%	0.02	0.00	0.00	0.00	0.00	0.25	55.2%	4.3%	0.3%	55.2%
65			3		1	0.05	0.01	0.01	0.01	0.00	0.52	9.6%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.31	60.1%	4.6%	0.3%	60.1%
66			5		1	0.06	0.01	0.01	0.02	0.00	0.66	9.1%	0.0%	100.0%	0.03	0.00	0.00	0.01	0.00	0.38	58.3%	4.3%	0.2%	58.3%
67			7		1	0.05	0.01	0.00	0.03	0.00	0.65	7.7%	0.0%	100.0%	0.03	0.00	0.00	0.02	0.00	0.35	54.3%	4.3%	0.2%	54.3%
68			9		1	0.03	0.01	0.01	0.02	0.00	0.57	5.3%	0.0%	100.0%	0.02	0.00	0.01	0.02	0.00	0.25	44.3%	2.9%	0.2%	44.3%
69			14		2	0.10	0.02	0.02	0.08	0.01	1.32	7.6%	0.8%	100.0%	0.06	0.00	0.01	0.06	0.00	0.53	40.3%	4.3%	0.3%	40.3%
70			15		2	0.10	0.02	0.01	0.07	0.01	1.10	9.1%	0.9%	100.0%	0.05	0.00	0.01	0.05	0.00	0.59	53.7%	4.9%	0.3%	53.7%
71			16		2	0.15	0.03	0.02	0.04	0.00	1.36	11.0%	0.0%	100.0%	0.09	0.00	0.01	0.03	0.00	0.84	61.8%	6.3%	0.2%	61.8%
72			17		2	0.06	0.02	0.02	0.02	0.01	0.83	7.2%	1.2%	100.0%	0.04	0.00	0.01	0.02	0.01	0.35	42.1%	4.7%	0.6%	42.1%
73			21		2	0.07	0.02	0.02	0.05	0.01	1.05	6.7%	1.0%	100.0%	0.04	0.00	0.02	0.04	0.00	0.42	40.1%	4.0%	0.5%	40.1%
74			22		2	0.17	0.03	0.00	0.01	0.00	1.21	14.0%	0.0%	100.0%	0.09	0.00	0.00	0.01	0.00	0.96	79.4%	7.6%	0.1%	79.4%
75			23		2	0.05	0.01	0.02	0.03	0.01	0.87	5.7%	1.1%	100.0%	0.03	0.00	0.02	0.02	0.00	0.35	40.3%	3.3%	0.6%	40.3%
76			29		5	0.30	0.08	0.14	0.13	0.02	2.58	11.6%	0.8%	100.0%	0.18	0.00	0.10	0.10	0.01	1.32	51.0%	6.8%	0.4%	51.0%
77			30		5	0.20	0.04	0.03	0.27	0.03	1.83	10.9%	1.6%	100.0%	0.12	0.00	0.02	0.21	0.01	0.77	42.0%	6.6%	0.8%	42.0%
78			31		5	0.51	0.11	0.00	0.01	0.00	2.66	19.2%	0.0%	100.0%	0.30	0.00	0.00	0.01	0.00	2.08	78.2%	11.4%	0.1%	78.2%
79			32		5	0.32	0.06	0.14	0.09	0.02	2.56	12.5%	0.8%	100.0%	0.19	0.00	0.11	0.07	0.01	1.62	63.2%	7.4%	0.4%	63.2%
80			33		5	0.20	0.08	0.04	0.35	0.04	2.87	7.0%	1.4%	100.0%	0.11	0.00	0.03	0.27	0.02	0.62	21.7%	3.8%	0.6%	21.7%
81			38		5	0.34	0.10	0.07	0.21	0.02	2.84	12.0%	0.7%	100.0%	0.20	0.00	0.06	0.16	0.01	1.01	35.7%	7.0%	0.4%	35.7%
82			39		5	0.47	0.09	0.01	0.03	0.00	2.48	19.0%	0.0%	100.0%	0.29	0.00	0.01	0.02	0.00	1.90	76.5%	11.6%	0.1%	76.5%
83			40		5	0.50	0.10	0.01	0.02	0.01	2.64	18.9%	0.4%	100.0%	0.31	0.00	0.01	0.01	0.00	1.96	74.3%	11.6%	0.1%	74.3%
84			41		5	0.35	0.10	0.09	0.21	0.02	2.88	12.2%	0.7%	100.0%	0.21	0.00	0.07	0.16	0.01	1.04	36.0%	7.2%	0.4%	36.0%
85			129		1	0.04	0.01	0.02	0.01	0.00	0.47	8.5%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.18	38.6%	5.3%	0.2%	38.6%
86			131		1	0.07	0.01	0.02	0.01	0.00	0.52	13.5%	0.0%	100.0%	0.04	0.00	0.02	0.01	0.00	0.18	35.2%	8.2%	0.3%	35.2%
87			133		1	0.09	0.02	0.02	0.02	0.00	0.58	8.0%	0.0%	100.0%	0.06	0.00	0.01	0.01	0.00	0.25	42.3%	10.2%	0.3%	42.3%
88			135		1	0.08	0.01	0.01	0.02	0.00	0.63	12.7%	0.0%	100.0%	0.05	0.00	0.01	0.02	0.00	0.23	35.0%	7.9%	0.3%	35.0%
89			137		1	0.07	0.02	0.01	0.02	0.00	0.64	10.9%	0.0%	100.0%	0.04	0.00	0.00	0.01	0.00	0.25	38.3%	6.9%	0.3%	38.3%
90			142		2	0.16	0.05	0.02	0.04	0.01	1.20	13.3%	0.8%	100.0%	0.11	0.00	0.02	0.04	0.01	0.39	32.5%	9.4%	0.4%	32.5%
91			143		2	0.14	0.04	0.03	0.04	0.01	1.07	13.1%	0.9%	100.0%	0.10	0.00	0.03	0.03	0.00	0.46	42.6%	9.0%	0.3%	42.6%
92			144		2	0.13	0.04	0.07	0.02	0.01	1.05	12.4%	1.0%	100.0%	0.09	0.00	0.05	0.02	0.00	0.31	29.7%	8.8%	0.3%	29.7%
93			145		2	0.11	0.04	0.05	0.03	0.01	0.98	11.2%	1.0%	100.0%	0.07	0.00	0.04	0.02	0.00	0.36	37.2%	7.5%	0.3%	37.2%
94			149		2	0.09	0.04	0.03	0.07	0.01	1.16	7.8%	0.9%	100.0%	0.06	0.00	0.03	0.05	0.00	0.39	33.2%	5.6%	0.3%	33.2%
95			150		2	0.16	0.04	0.01	0.00	0.01	0.99	16.2%	1.0%	100.0%	0.10	0.00	0.01	0.00	0.00	0.45	45.1%	10.4%	0.3%	45.1%
96			151		2	0.08	0.04	0.06	0.03	0.01	0.99	8.1%	1.0%	100.0%	0.05	0.00	0.05	0.02	0.00	0.31	31.7%	5.4%	0.4%	31.7%
97			157		5	0.34	0.07	0.31	0.05	0.03	2.35	14.5%	1.3%	100.0%	0.17	0.00	0.24	0.04	0.01	0.67	28.5%	7.3%	0.5%	28.5%
98			158		5	0.26	0.17	0.03	0.16	0.02	2.55	10.2%	0.8%	100.0%	0.19	0.00	0.02	0.13	0.01	1.15	45.1%	7.6%	0.4%	45.1%
99			159		5	0.53	0.19	0.00	0.01	0.03	2.72	19.5%	1.1%	100.0%	0.39	0.00	0.00	0.01	0.02	1.34	49.4%	14.4%	0.6%	49.4%
100			160		5	0.31	0.08	0.31	0.02	0.03	2.37	13.1%	1.3%	100.0%	0.16	0.00	0.24	0.01	0.01	0.64	27.0%	6.7%	0.5%	27.0%
101			161		5	0.29	0.09	0.04	0.29	0.03	2.63	11.0%	1.1%	100.0%	0.15	0.00	0.03	0.23	0.02	0.69	26.4%	5.6%	0.6%	26.4%
102			166		5	0.29	0.05	0.21	0.17	0.02	2.02	14.4%	1.0%	100.0%	0.15	0.00	0.17	0.14	0.01	0.66	32.6%	7.4%	0.5%	32.6%
103			167		5	0.55	0.22	0.01	0.01	0.03	2.88	19.1%	1.0%	100.0%	0.39	0.00	0.00	0.01	0.01	1.39	48.1%	13.6%	0.5%	48.1%
104			168		5	0.51	0.22	0.01	0.01	0.03	2.72	18.8%	1.1%	100.0%	0.37	0.00	0.01	0.01	0.02	1.20	44.1%	13.6%	0.6%	44.1%
105			169		5	0.29	0.05	0.22	0.16	0.02	1.91	15.2%	1.0%	100.0%	0.15	0.00	0.18	0.13	0.01	0.61	31.8%	7.9%	0.5%	31.8%
106			1	129	2	0.05	0.03	0.03	0.01	0.00	1.02	4.9%	0.0%	100.0%	0.03	0.00	0.02	0.01	0.00	0.43	42.1%	2.8%	0.2%	42.1%
107			3	131	2	0.08	0.03	0.02	0.02	0.01	1.07	7.5%	0.9%	100.0%	0.05	0.00	0.01	0.01	0.00	0.53	49.5%	4.6%	0.3%	49.5%
108			5	133	2	0.11	0.03	0.01	0.03	0.01	1.32	8.3%	0.8%	100.0%	0.06	0.00	0.01	0.03	0.00	0.67	50.7%	4.5%	0.2%	50.7%
109			7	135	2	0.11	0.03	0.00	0.05	0.01	1.34	8.2%	0.7%	100.0%	0.06	0.00	0.00	0.04	0.00	0.60	45.1%	4.5%	0.3%	45.1%
110			9	137	2	0.09	0.02	0.01	0.03	0.00	1.22	7.4%	0.0%	100.0%	0.05	0.00	0.01	0.02	0.00	0.50	40.6%	4.4%	0.1%	40.6%
111			14	142	4	0.28	0.05	0.06	0.14	0.02	2.29	12.2%	0.9%	100.0%	0.19	0.00	0.05	0.10	0.01	0.86	37.4%	8.3%	0.4%	37.4%
112			15	143	4	0.15	0.07	0.04	0.10	0.01	1.96	7.7%	0.5%	100.0%	0.09	0.00	0.03	0.07	0.00	1.05	53.8%	4.6%	0.2%	53.8%
113			16	144	4	0.30	0.03	0.05	0.06	0.01	2.22	13.5%	0.5%	100.0%	0.19	0.00	0.04	0.05	0.01	1.18	53.1%	8.6%	0.3%	53.1%
114			17	145	4	0.12	0.08	0.03	0.06	0.02	1.78	6.7%	1.1%	100.0%	0.08	0.00	0.03	0.05	0.01	0.71	39.9%	4.5%	0.7%	39.9%
115			21	149	4	0.16	0.07	0.08	0.10	0.01	2.10	7.6%	0.5%	100.0%	0.10	0.00	0.06	0.08	0.00	0.75	35.9%	4.8%	0.2%	35.9%
116			22	150	4	0.31	0.06	0.02	0.01	0.01	2.08	14.9%	0.5%	100.0%	0.18	0.00	0.01	0.01	0.00	1.37	65.8%	8.7%	0.2%	65.8%
117			23	151	4	0.18	0.02	0.14	0.03	0.02	1.99	9.0%	1.0%	100.0%	0.10	0.00	0.11	0.03	0.01	0.70	35.1%	5.0%	0.5%	35.1%
118			29	157	10	0.44	0.06	0.49	0.20	0.05	3.85	11.4%	1.3%	100.0%	0.25	0.00	0.38	0.15	0.03	1.69	43.8%	6.5%	0.7%	43.8%
119			30	158	10	0.40	0.17	0.05	0.33	0.03	3.78	10.6%	0.8%	100.0%	0.24	0.00	0.03	0.25	0.02	2.28	60			



ELECTRONICS

Samsung Confidential

- L-Patch Mid CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)												max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams				
						S4(Right)						S5(Top)						25.5%			100.0%			78.1%		17.1%		1.3%		78.1%	
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio (Right 2mm)/ (worst-surface 2mm)	ratio (Front 2mm)/ (worst-surface 2mm)	ratio (Rear 2mm)/ (worst-surface 2mm)	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	ratio worst-surface (10mm /2mm)	ratio (Right 10mm) / (worst-surface 2mm)	ratio (Front 10mm) / (worst-surface 2mm)	ratio (Rear 10mm) / (worst-surface 2mm)							
64			1		1	0.04	0.01	0.01	0.00	0.00	0.40	10.0%	0.0%	100.0%	0.02	0.00	0.01	0.00	0.00	0.20	50.3%	5.3%	0.7%	50.3%							
65			3		1	0.05	0.01	0.01	0.00	0.01	0.51	9.8%	2.0%	100.0%	0.03	0.00	0.01	0.00	0.00	0.30	59.4%	5.5%	0.5%	59.4%							
66			5		1	0.06	0.01	0.00	0.02	0.00	0.64	9.4%	0.0%	100.0%	0.03	0.00	0.00	0.01	0.00	0.33	52.3%	4.6%	0.4%	52.3%							
67			7		1	0.05	0.01	0.00	0.03	0.00	0.61	8.2%	0.0%	100.0%	0.03	0.00	0.00	0.02	0.00	0.33	53.7%	4.7%	0.4%	53.7%							
68			9		1	0.03	0.01	0.00	0.02	0.00	0.49	6.1%	0.0%	100.0%	0.01	0.00	0.00	0.01	0.00	0.21	42.9%	3.0%	0.3%	42.9%							
69			14		2	0.10	0.02	0.01	0.07	0.01	1.28	7.8%	0.8%	100.0%	0.06	0.00	0.01	0.05	0.01	0.57	44.2%	4.7%	0.4%	44.2%							
70			15		2	0.08	0.01	0.01	0.07	0.01	0.96	8.3%	1.0%	100.0%	0.04	0.00	0.01	0.05	0.01	0.44	45.7%	4.3%	0.5%	45.7%							
71			16		2	0.13	0.03	0.01	0.02	0.00	1.33	9.8%	0.0%	100.0%	0.07	0.00	0.01	0.02	0.00	0.84	63.3%	5.5%	0.2%	63.3%							
72			17		2	0.07	0.02	0.03	0.01	0.02	0.79	8.9%	2.5%	100.0%	0.05	0.00	0.03	0.01	0.01	0.31	38.9%	5.9%	1.1%	38.9%							
73			21		2	0.05	0.02	0.02	0.03	0.02	1.03	4.9%	1.9%	100.0%	0.03	0.00	0.02	0.03	0.01	0.39	38.3%	3.0%	0.9%	38.3%							
74			22		2	0.17	0.02	0.00	0.02	0.01	1.99	15.6%	0.9%	100.0%	0.09	0.00	0.00	0.02	0.00	0.83	76.4%	8.4%	0.3%	76.4%							
75			23		2	0.08	0.02	0.03	0.01	0.01	0.85	9.4%	1.2%	100.0%	0.05	0.00	0.03	0.01	0.01	0.36	41.8%	5.7%	0.9%	41.8%							
76			29		5	0.27	0.07	0.07	0.09	0.02	2.63	10.3%	0.8%	100.0%	0.17	0.00	0.06	0.06	0.01	1.49	56.5%	6.3%	0.4%	56.5%							
77			30		5	0.14	0.04	0.03	0.26	0.05	1.99	7.0%	2.5%	100.0%	0.08	0.00	0.03	0.20	0.03	0.34	16.9%	4.0%	1.3%	16.9%							
78			31		5	0.48	0.11	0.01	0.00	0.01	2.48	19.4%	0.4%	100.0%	0.29	0.00	0.01	0.00	0.00	1.94	78.1%	11.6%	0.2%	78.1%							
79			32		5	0.32	0.08	0.05	0.07	0.02	2.62	12.2%	0.8%	100.0%	0.19	0.00	0.04	0.05	0.01	1.71	65.3%	7.4%	0.4%	65.3%							
80			33		5	0.22	0.06	0.06	0.21	0.04	2.43	9.1%	1.8%	100.0%	0.13	0.00	0.06	0.16	0.02	0.48	20.0%	5.2%	0.8%	20.0%							
81			38		5	0.24	0.06	0.10	0.10	0.04	2.50	9.6%	1.8%	100.0%	0.14	0.00	0.08	0.08	0.02	1.14	45.7%	5.7%	0.8%	45.7%							
82			39		5	0.39	0.06	0.02	0.03	0.01	2.97	18.8%	0.5%	100.0%	0.24	0.00	0.02	0.02	0.00	1.48	71.7%	11.5%	0.2%	71.7%							
83			40		5	0.46	0.10	0.01	0.02	0.01	2.36	19.5%	0.4%	100.0%	0.28	0.00	0.01	0.01	0.00	1.77	74.9%	12.0%	0.1%	74.9%							
84			41		5	0.25	0.06	0.10	0.11	0.04	2.56	9.8%	1.6%	100.0%	0.15	0.00	0.08	0.08	0.02	1.21	47.2%	5.8%	0.8%	47.2%							
85			129		1	0.03	0.02	0.01	0.01	0.01	0.40	7.5%	2.5%	100.0%	0.02	0.00	0.01	0.00	0.00	0.18	44.4%	5.5%	0.7%	44.4%							
86			131		1	0.04	0.01	0.02	0.01	0.00	0.45	8.9%	0.0%	100.0%	0.03	0.00	0.02	0.00	0.00	0.16	36.3%	5.6%	0.5%	36.3%							
87			133		1	0.07	0.02	0.02	0.02	0.00	0.58	12.1%	0.9%	100.0%	0.05	0.00	0.02	0.02	0.00	0.24	40.7%	9.1%	0.4%	40.7%							
88			135		1	0.06	0.02	0.01	0.01	0.04	0.86	12.8%	1.2%	100.0%	0.04	0.00	0.01	0.00	0.00	0.18	36.4%	8.8%	0.5%	36.4%							
89			137		1	0.06	0.02	0.01	0.02	0.01	0.58	10.3%	0.0%	100.0%	0.04	0.00	0.01	0.01	0.00	0.21	37.0%	6.8%	0.3%	37.0%							
90			142		2	0.11	0.04	0.03	0.02	0.01	1.02	10.8%	1.0%	100.0%	0.08	0.00	0.03	0.02	0.00	0.29	28.3%	7.6%	0.3%	28.3%							
91			143		2	0.10	0.04	0.03	0.04	0.01	1.04	9.6%	1.0%	100.0%	0.06	0.00	0.02	0.03	0.00	0.46	43.8%	6.0%	0.3%	43.8%							
92			144		2	0.09	0.03	0.09	0.04	0.01	1.02	8.8%	1.0%	100.0%	0.05	0.00	0.07	0.03	0.00	0.29	28.0%	5.3%	0.3%	28.0%							
93			145		2	0.06	0.03	0.03	0.02	0.01	0.88	6.8%	1.1%	100.0%	0.04	0.00	0.02	0.02	0.00	0.34	38.2%	4.5%	0.4%	38.2%							
94			149		2	0.08	0.03	0.04	0.07	0.01	1.00	8.0%	1.0%	100.0%	0.05	0.00	0.03	0.06	0.00	0.35	35.4%	4.9%	0.4%	35.4%							
95			150		2	0.11	0.05	0.02	0.01	0.01	0.86	12.8%	1.2%	100.0%	0.08	0.00	0.01	0.00	0.00	0.40	46.9%	8.8%	0.4%	46.9%							
96			151		2	0.06	0.03	0.05	0.02	0.01	0.84	7.1%	1.2%	100.0%	0.03	0.00	0.04	0.01	0.01	0.28	33.1%	5.9%	0.7%	33.1%							
97			157		5	0.30	0.03	0.29	0.08	0.03	2.27	13.2%	1.3%	100.0%	0.16	0.00	0.22	0.06	0.01	0.53	23.5%	6.9%	0.6%	23.5%							
98			158		5	0.18	0.09	0.02	0.23	0.02	1.91	9.4%	1.0%	100.0%	0.09	0.00	0.02	0.18	0.01	0.94	49.2%	4.9%	0.7%	49.2%							
99			159		5	0.49	0.19	0.01	0.01	0.03	2.54	19.3%	1.2%	100.0%	0.35	0.00	0.00	0.01	0.01	1.20	47.2%	14.0%	0.6%	47.2%							
100			160		5	0.29	0.03	0.31	0.07	0.03	2.29	12.7%	1.3%	100.0%	0.16	0.00	0.24	0.06	0.01	0.56	24.3%	6.8%	0.6%	24.3%							
101			161		5	0.25	0.03	0.04	0.25	0.03	1.93	13.0%	1.6%	100.0%	0.14	0.00	0.03	0.20	0.02	0.85	44.1%	7.2%	0.9%	44.1%							
102			166		5	0.22	0.03	0.16	0.10	0.02	2.05	10.7%	1.0%	100.0%	0.12	0.00	0.13	0.09	0.01	0.60	29.4%	5.7%	0.5%	29.4%							
103			167		5	0.39	0.22	0.01	0.02	0.02	2.60	15.0%	0.8%	100.0%	0.28	0.00	0.01	0.01	0.01	1.26	48.6%	10.9%	0.4%	48.6%							
104			168		5	0.30	0.18	0.03	0.04	0.03	2.28	13.2%	1.3%	100.0%	0.21	0.00	0.01	0.03	0.01	1.02	44.9%	9.1%	0.5%	44.9%							
105			169		5	0.25	0.03	0.17	0.10	0.02	2.10	11.9%	1.0%	100.0%	0.13	0.00	0.14	0.09	0.01	0.59	28.1%	6.4%	0.5%	28.1%							
106			1	129	2	0.06	0.04	0.03	0.01	0.01	0.87	6.9%	1.1%	100.0%	0.03	0.00	0.02	0.01	0.00	0.38	44.0%	3.9%	0.4%	44.0%							
107			3	131	2	0.06	0.03	0.02	0.01	0.00	0.97	6.2%	0.0%	100.0%	0.03	0.00	0.02	0.01	0.00	0.52	53.3%	3.2%	0.2%	53.3%							
108			5	133	2	0.09	0.04	0.02	0.04	0.01	1.28	7.0%	0.8%	100.0%	0.05	0.00	0.01	0.03	0.00	0.61	47.3%	4.1%	0.4%	47.3%							
109			7	135	2	0.08	0.04	0.01	0.05	0.01	1.18	6.8%	0.8%	100.0%	0.05	0.00	0.01	0.04	0.01	0.54	45.6%	4.4%	0.6%	45.6%							
110			9	137	2	0.10	0.02	0.01	0.02	0.01	1.06	9.4%	0.9%	100.0%	0.06	0.00	0.01	0.02	0.00	0.42	39.5%	5.5%	0.2%	39.5%							
111			14	142	4	0.24	0.03	0.06	0.09	0.03	1.94	12.4%	1.5%	100.0%	0.17	0.00	0.04	0.07	0.01	0.56	29.0%	8.5%	0.5%	29.0%							
112			15	143	4	0.15	0.06	0.03	0.06	0.01	1.72	8.7%	0.6%	100.0%	0.08	0.00	0.03	0.05	0.01	0.86	49.9%	4.9%	0.5%	49.9%							
113			16	144	4	0.20	0.04	0.07	0.08	0.01	2.21	9.0%	0.5%	100.0%	0.12	0.00	0.05	0.07	0.01	1.23	55.7%	5.5%	0.3%	55.7%							
114			17	145	4	0.10	0.06	0.03	0.04	0.03	1.64	6.1%	1.8%	100.0%	0.07	0.00	0.03	0.03	0.02	0.76	46.1%	4.0%	1.0%	46.1%							
115			21	149	4	0.14	0.05	0.06	0.06	0.02	2.02	6.9%	1.0%	100.0%	0.07	0.00	0.05	0.05	0.01	0.79	39.2%	3.7%	0.5%	39.2%							
116			22	150	4	0.26	0.06	0.02	0.03	0.01	1.82	14.3%	0.5%	100.0%	0.15	0.00	0.01	0.02	0.01	1.17	64.2%	8.4%	0.4%	64.2%							
117			23	151	4	0.25	0.02	0.11	0.02	0.03	1.74	14.4%	1.7%	100.0%	0.15	0.00	0.09	0.01	0.02	0.62	35.8%	8.6%	1.0%	35.8%							
118			29	157	10	0.48	0.08	0.30	0.17	0.08	4.45	10.8%	1.8%	100.0%	0.26	0.00	0.24	0.12	0.04	2.18	48.9%	5.8%	1.0%	48.9%							
119			30	158	10	0.34	0.11	0.08	0.35	0.06	3.13	10.9%	1.9%	100.0%	0.21	0.00	0.07	0.26	0.03	1.26	40.2%	6.6%	1.1%	40.2%							
120			31	159	10	1.13	0.15	0.02																							



ELECTRONICS

Samsung Confidential

- L-Patch High CH

No.	Module	Type	Beam ID_1	Bema ID_2	Feed no.	4cm2 PD(mW/cm2)						max ratio out of all beams			4cm2 PD(mW/cm2) at 10mm evaluation distance						max ratio out of all beams			
						S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	21.6%	1.4%	100.0%	S4(Right)	S3(Left)	S5(Top)	S6(Bottom)	S1(Front)	S2(Rear)	78.3%	13.8%	0.6%	78.3%
												ratio (Right 2mm)/ (worst-surface 2mm)	ratio (Front 2mm)/ (worst-surface 2mm)	ratio (Rear 2mm)/ (worst-surface 2mm)							ratio (Right 10mm)/ (10mm surface 2mm)	ratio (Front 10mm)/ (10mm surface 2mm)	ratio (Rear 10mm)/ (10mm surface 2mm)	
64			1		1	0.03	0.01	0.01	0.00	0.00	0.40	7.5%	0.0%	100.0%	0.02	0.00	0.01	0.00	0.00	0.18	45.5%	4.7%	0.4%	45.5%
65			3		1	0.04	0.01	0.01	0.01	0.00	0.48	8.3%	0.0%	100.0%	0.02	0.00	0.01	0.01	0.00	0.26	53.5%	5.1%	0.3%	53.5%
66			5		1	0.05	0.01	0.00	0.01	0.00	0.60	8.3%	0.0%	100.0%	0.03	0.00	0.00	0.01	0.00	0.32	53.8%	4.9%	0.3%	53.8%
67			7		1	0.05	0.01	0.00	0.01	0.00	0.57	8.8%	0.0%	100.0%	0.03	0.00	0.00	0.01	0.00	0.32	56.8%	4.5%	0.2%	56.8%
68			9		1	0.03	0.01	0.00	0.01	0.00	0.50	6.0%	0.0%	100.0%	0.02	0.00	0.00	0.01	0.00	0.28	55.2%	3.2%	0.1%	55.2%
69			14		2	0.10	0.02	0.01	0.03	0.01	1.14	8.8%	0.9%	100.0%	0.05	0.00	0.01	0.03	0.00	0.60	52.2%	4.8%	0.3%	52.2%
70			15		2	0.09	0.02	0.01	0.03	0.00	0.90	10.0%	0.0%	100.0%	0.05	0.00	0.00	0.02	0.00	0.48	53.8%	5.1%	0.3%	53.8%
71			16		2	0.12	0.02	0.01	0.01	0.01	1.21	9.9%	0.8%	100.0%	0.07	0.00	0.01	0.01	0.00	0.86	70.9%	5.4%	0.3%	70.9%
72			17		2	0.04	0.01	0.04	0.02	0.01	0.80	5.0%	1.3%	100.0%	0.03	0.00	0.03	0.02	0.00	0.26	32.2%	3.5%	0.5%	32.2%
73			21		2	0.05	0.01	0.02	0.04	0.01	1.08	4.6%	0.9%	100.0%	0.03	0.00	0.02	0.03	0.00	0.45	41.3%	2.5%	0.4%	41.3%
74			22		2	0.14	0.03	0.00	0.01	0.00	1.12	12.5%	0.0%	100.0%	0.08	0.00	0.00	0.01	0.00	0.82	72.8%	7.0%	0.2%	72.8%
75			23		2	0.05	0.01	0.05	0.03	0.01	0.84	6.0%	1.2%	100.0%	0.03	0.00	0.04	0.02	0.00	0.29	34.4%	3.5%	0.5%	34.4%
76			29		5	0.32	0.05	0.09	0.08	0.02	2.48	12.9%	0.8%	100.0%	0.18	0.00	0.07	0.05	0.01	1.74	70.2%	7.3%	0.5%	70.2%
77			30		5	0.16	0.03	0.03	0.13	0.02	1.55	10.3%	1.3%	100.0%	0.10	0.00	0.02	0.11	0.01	0.77	49.6%	6.3%	0.5%	49.6%
78			31		5	0.45	0.11	0.01	0.01	0.01	2.41	18.7%	0.4%	100.0%	0.26	0.00	0.01	0.00	0.00	1.89	78.3%	10.8%	0.2%	78.3%
79			32		5	0.36	0.06	0.10	0.06	0.02	2.48	14.5%	0.8%	100.0%	0.21	0.00	0.07	0.04	0.01	1.87	75.3%	8.4%	0.5%	75.3%
80			33		5	0.17	0.03	0.04	0.11	0.02	2.17	7.8%	0.9%	100.0%	0.11	0.00	0.03	0.09	0.01	0.93	42.8%	4.9%	0.3%	42.8%
81			38		5	0.24	0.04	0.07	0.12	0.02	2.40	10.0%	0.3%	100.0%	0.14	0.00	0.05	0.07	0.01	1.47	61.3%	5.7%	0.5%	61.3%
82			39		5	0.24	0.09	0.02	0.02	0.01	1.76	13.6%	0.6%	100.0%	0.15	0.00	0.01	0.01	0.00	1.19	66.9%	6.4%	0.2%	66.9%
83			40		5	0.41	0.10	0.02	0.01	0.01	2.25	18.2%	0.4%	100.0%	0.25	0.00	0.01	0.01	0.00	1.66	74.0%	10.9%	0.2%	74.0%
84			41		5	0.26	0.04	0.07	0.12	0.02	2.40	10.8%	0.8%	100.0%	0.15	0.00	0.06	0.07	0.01	1.55	64.4%	6.1%	0.5%	64.4%
85			129		1	0.03	0.01	0.01	0.00	0.00	0.42	7.1%	0.0%	100.0%	0.02	0.00	0.01	0.00	0.00	0.19	45.3%	4.6%	0.3%	45.3%
86			131		1	0.03	0.01	0.03	0.01	0.00	0.49	6.1%	0.0%	100.0%	0.02	0.00	0.02	0.01	0.00	0.18	36.1%	3.4%	0.4%	36.1%
87			133		1	0.05	0.02	0.02	0.01	0.00	0.56	8.9%	0.0%	100.0%	0.03	0.00	0.02	0.01	0.00	0.24	43.2%	4.9%	0.2%	43.2%
88			135		1	0.04	0.01	0.01	0.01	0.00	0.49	8.2%	0.3%	100.0%	0.02	0.00	0.01	0.01	0.00	0.18	36.2%	4.4%	0.4%	36.2%
89			137		1	0.06	0.02	0.01	0.02	0.00	0.54	11.1%	0.0%	100.0%	0.03	0.00	0.01	0.01	0.00	0.21	39.1%	3.9%	0.3%	39.1%
90			142		2	0.06	0.02	0.03	0.03	0.00	1.07	5.6%	0.0%	100.0%	0.03	0.00	0.02	0.03	0.00	0.32	30.1%	3.3%	0.2%	30.1%
91			143		2	0.09	0.03	0.02	0.03	0.00	1.12	8.0%	0.0%	100.0%	0.05	0.00	0.02	0.02	0.00	0.47	41.7%	4.7%	0.2%	41.7%
92			144		2	0.10	0.03	0.09	0.02	0.01	0.98	10.2%	1.0%	100.0%	0.06	0.00	0.07	0.02	0.01	0.37	37.9%	6.4%	0.5%	37.9%
93			145		2	0.07	0.02	0.02	0.03	0.00	0.94	7.4%	0.0%	100.0%	0.03	0.00	0.02	0.02	0.00	0.34	35.9%	3.6%	0.2%	35.9%
94			149		2	0.12	0.02	0.04	0.03	0.01	1.08	11.1%	0.9%	100.0%	0.07	0.00	0.03	0.03	0.00	0.41	37.7%	6.6%	0.3%	37.7%
95			150		2	0.09	0.05	0.03	0.00	0.01	0.86	10.5%	1.2%	100.0%	0.06	0.00	0.02	0.00	0.00	0.42	48.4%	6.4%	0.4%	48.4%
96			151		2	0.07	0.01	0.04	0.02	0.00	0.98	7.1%	0.0%	100.0%	0.04	0.00	0.03	0.02	0.00	0.29	30.1%	3.9%	0.3%	30.1%
97			157		5	0.28	0.02	0.24	0.08	0.03	2.25	12.4%	1.3%	100.0%	0.17	0.00	0.19	0.07	0.01	0.74	33.0%	7.5%	0.5%	33.0%
98			158		5	0.27	0.07	0.05	0.17	0.01	1.92	14.1%	0.5%	100.0%	0.19	0.00	0.03	0.14	0.01	1.08	56.2%	9.8%	0.4%	56.2%
99			159		5	0.45	0.23	0.02	0.01	0.02	2.50	18.0%	0.8%	100.0%	0.32	0.00	0.01	0.01	0.01	1.09	43.6%	12.7%	0.4%	43.6%
100			160		5	0.29	0.03	0.26	0.07	0.03	2.12	13.7%	1.4%	100.0%	0.18	0.00	0.21	0.06	0.01	0.77	36.3%	8.3%	0.6%	36.3%
101			161		5	0.34	0.04	0.09	0.18	0.02	2.12	16.0%	0.9%	100.0%	0.22	0.00	0.07	0.15	0.01	1.00	46.9%	10.3%	0.4%	46.9%
102			166		5	0.30	0.02	0.13	0.11	0.02	2.35	12.8%	0.9%	100.0%	0.16	0.00	0.11	0.09	0.01	0.79	33.6%	6.9%	0.4%	33.6%
103			167		5	0.23	0.19	0.02	0.02	0.01	2.28	10.1%	0.4%	100.0%	0.15	0.00	0.01	0.02	0.00	1.29	56.6%	6.7%	0.2%	56.6%
104			168		5	0.15	0.14	0.04	0.02	0.02	1.78	8.4%	1.1%	100.0%	0.09	0.00	0.02	0.02	0.01	1.05	59.2%	5.0%	0.5%	59.2%
105			169		5	0.28	0.02	0.13	0.11	0.02	2.37	11.8%	0.8%	100.0%	0.15	0.00	0.11	0.09	0.01	0.76	31.9%	6.4%	0.4%	31.9%
106			1	129	2	0.04	0.03	0.03	0.00	0.01	0.92	4.3%	1.1%	100.0%	0.02	0.00	0.02	0.00	0.00	0.40	43.9%	2.6%	0.3%	43.9%
107			3	131	2	0.07	0.03	0.05	0.01	0.01	0.94	7.4%	1.1%	100.0%	0.04	0.00	0.04	0.01	0.00	0.42	44.6%	4.5%	0.4%	44.6%
108			5	133	2	0.08	0.04	0.03	0.03	0.01	1.27	6.3%	0.8%	100.0%	0.04	0.00	0.02	0.03	0.00	0.60	46.9%	3.4%	0.2%	46.9%
109			7	135	2	0.06	0.03	0.01	0.04	0.00	1.10	5.5%	0.0%	100.0%	0.03	0.00	0.01	0.03	0.00	0.49	45.0%	3.0%	0.2%	45.0%
110			9	137	2	0.13	0.01	0.01	0.02	0.00	1.04	12.5%	0.0%	100.0%	0.07	0.00	0.01	0.02	0.00	0.43	41.7%	7.2%	0.2%	41.7%
111			14	142	4	0.12	0.02	0.05	0.07	0.02	1.83	6.6%	1.1%	100.0%	0.07	0.00	0.04	0.05	0.01	0.52	28.6%	3.7%	0.5%	28.6%
112			15	143	4	0.20	0.05	0.03	0.04	0.01	1.68	11.9%	0.6%	100.0%	0.13	0.00	0.02	0.03	0.01	0.76	45.5%	7.6%	0.3%	45.5%
113			16	144	4	0.23	0.03	0.06	0.04	0.01	2.09	11.0%	0.5%	100.0%	0.13	0.00	0.05	0.03	0.01	1.35	64.6%	6.1%	0.3%	64.6%
114			17	145	4	0.12	0.02	0.04	0.05	0.01	1.67	7.2%	0.6%	100.0%	0.06	0.00	0.03	0.05	0.01	0.62	36.9%	3.6%	0.3%	36.9%
115			21	149	4	0.17	0.03	0.05	0.03	0.01	2.03	8.4%	0.5%	100.0%	0.10	0.00	0.04	0.02	0.00	0.94	46.2%	4.9%	0.2%	46.2%
116			22	150	4	0.15	0.08	0.04	0.02	0.01	1.82	8.2%	0.5%	100.0%	0.09	0.00	0.03	0.01	0.00	1.24	68.0%	5.2%	0.2%	68.0%
117			23	151	4	0.15	0.02	0.09	0.04	0.01	1.93	7.8%	0.5%	100.0%	0.09	0.00	0.06	0.03	0.01	0.63	32.5%	4.8%	0.3%	32.5%
118			29	157	10	0.65	0.08	0.22	0.18	0.03	4.84	13.4%	0.6%	100.0%	0.39	0.00	0.18	0.14	0.02	2.69	55.7%	8.0%	0.3%	55.7%
119			30	158	10	0.52	0.07	0.11	0.30	0.03	3.26	16.0%	0.9%	100.0%	0.36	0.00	0.06	0.25	0.02	1.50	46.0%	11.1%	0.5%	46.0%
120			31	159	10	1.06	0.15	0.																