1. Simulation methodology for Power Density (PD)

1.1 Simulation tool

In this report, OnePlus uses CST STUDIO SUITE 2020.02 (CST) and Python to simulate power density (PD) at millimeter-wave band. CST is a 3D full-wave electromagnetic simulation software including several different solvers, and the Time Domain Solver that based on Finite Integration Technique (FIT) is employed in this project. After getting the non-averaged result by CST, Python is used to calculate the 4 cm^2 averaged PD and draw the corresponding PD distribution.

The Time Domain Solver divides the calculation domain into small hexahedron cells, then calculates the Maxwell's equation based on this hexahedral mesh step by step. The energy in calculation domain is calculated at each step, and simulation will stop when the energy is smaller than the criteria that -40 dB as default. For improving the simulation accuracy, local mesh is performed at the QTM simulation model area. Figure 1 shows the mesh through one cross-section of this device as an example.

CST builds a vacuum box that contains the calculation domain automatically to simulate electromagnetic fields, and uses Perfectly Matched Layer (PML) as the boundary condition by default.

For reducing simulation time while keeping the simulation accuracy, the simulation model of this project is divided into 3 parts separately and simulated one by one.

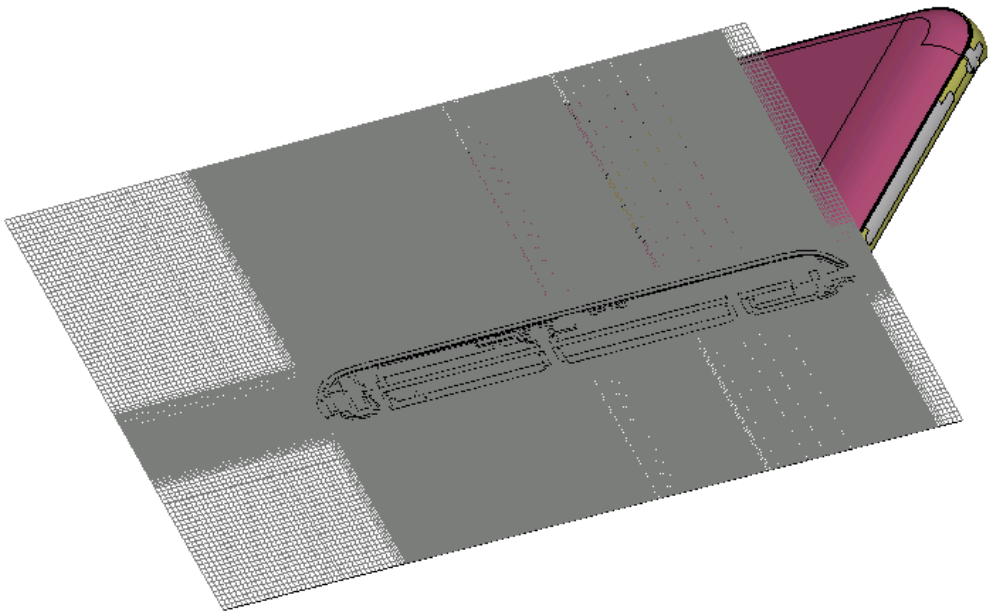


Figure 1. An example of the mesh (left view)

1.2 Power density calculation and distribution plot

After getting the electromagnetic field results by CST, the 4cm^2 averaged PD at point A could be calculated out by (1) and (2)

$$PD_{averag} = \frac{1}{N}\sum_{x=1}^{N} <\vec{S}> \quad (1)$$

$$<\vec{S}> = \mathrm{Re}\{\frac{1}{2}\vec{E} \times \vec{H}^{*}\} \quad (2)$$

where N points are in the 4 cm^2 area around point A, and the distance between two adjacent points is 2.5 mm. Figure 2 shows the averaging area for point A.

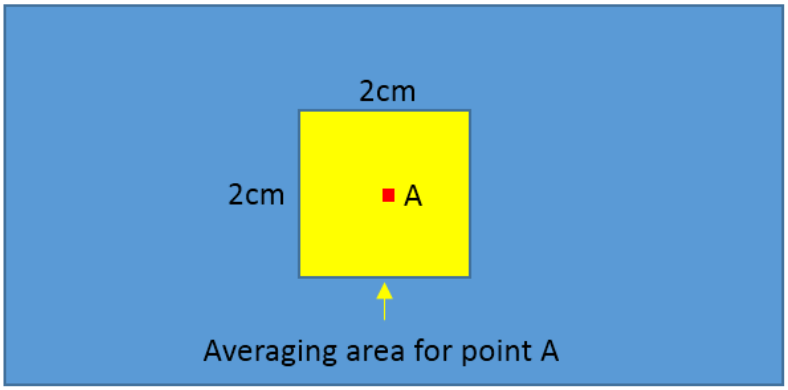
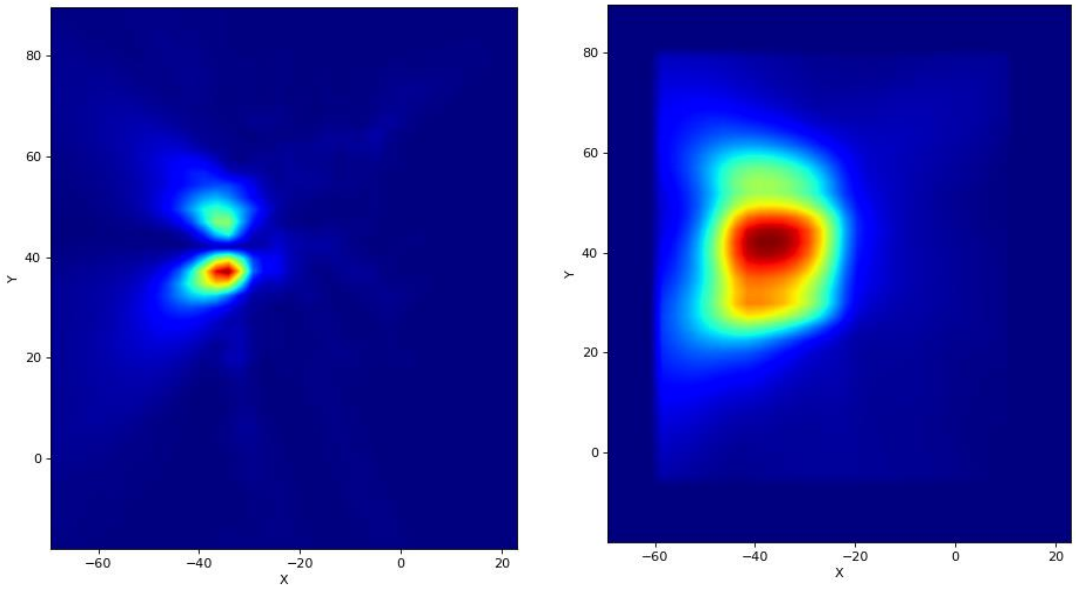


Figure 2 Averaging area

After getting all the 4cm^2 averaged PD values among the target area, both non-averaged and averaged PD distribution could be plotted, as shown in figure 3.



(a) (b)

Figure 3 (a) Non-averaged PD distribution. (b) Averaged PD distribution.

1.3 3D modeling and simulation setup

1.3.1 3D modeling

There are 3 mmWave antenna modules in the simulation model of this device, which are indicated as module 0, module 1 and module 2, as shown in figure 4. Module 0 is on the top side and its antennas face the back cover. Module 1 is on the left side and its antennas face the left side, and module 2 is on the right side and its antennas face the right side of the device. There are only patch antennas in the mmWave modules.

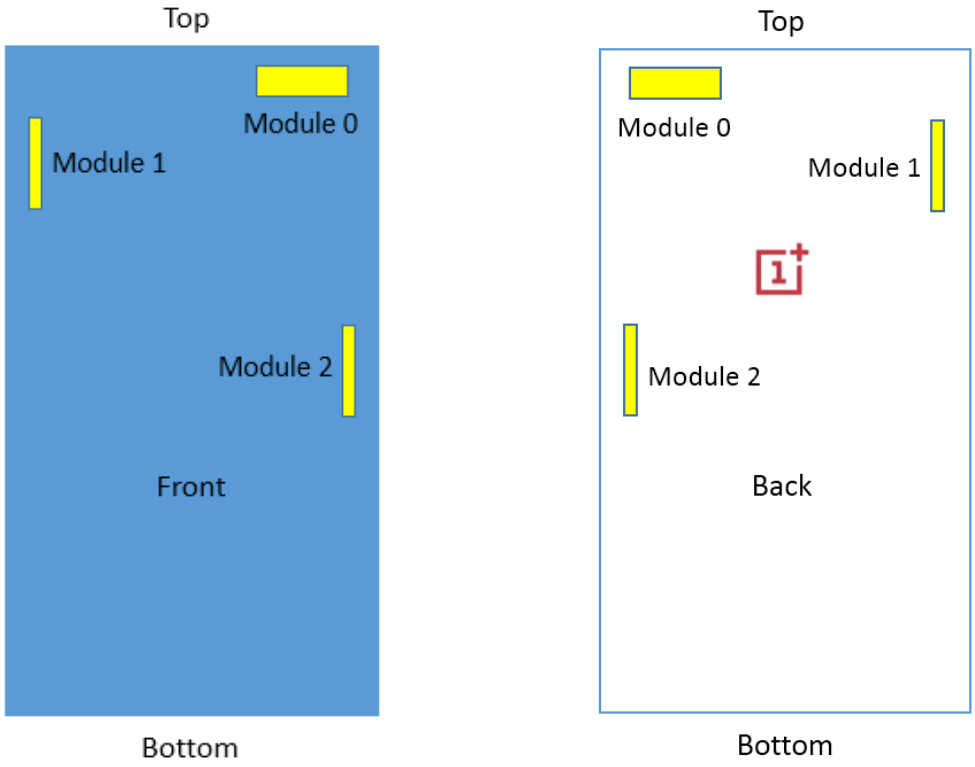


Figure 4 Placement of 3 mmWave modules. (a) front view. (b)back view.

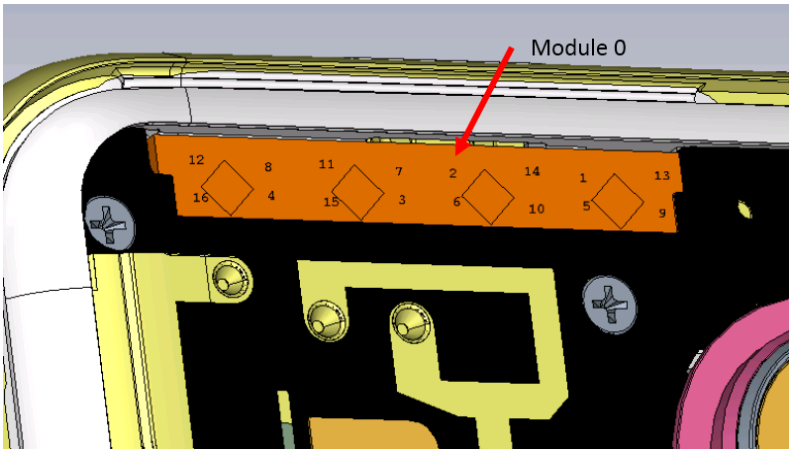


Figure 5 Structures around module 0.

For reducing simulation time while keeping the simulation accuracy, the simulation model of this project is divided into 3 parts separately. In each part, components and structures in the area that 5 cm away from the mmWave module are modeled precisely, such as battery, LDS antenna, PCB and module housing. Figure 5 shows the structures around one module as an example.

1.3.2 PD evaluation planes

Figure 6 shows PD evaluation planes for this device. Not all 6 planes but 3 nearest planes of each module are evaluated, as shown in table 1.1. PD on planes that 2 mm away from the device is simulated for PD char, and PD on planes that 10mm and 15 mm are also evaluated for RF exposure analysis for simultaneous transmission scenarios. In consideration of the 4 cm^2 averaging algorithm for PD, these planes are extend to the area whose edges are 10mm away from the area that PD would be investigated and plotted.

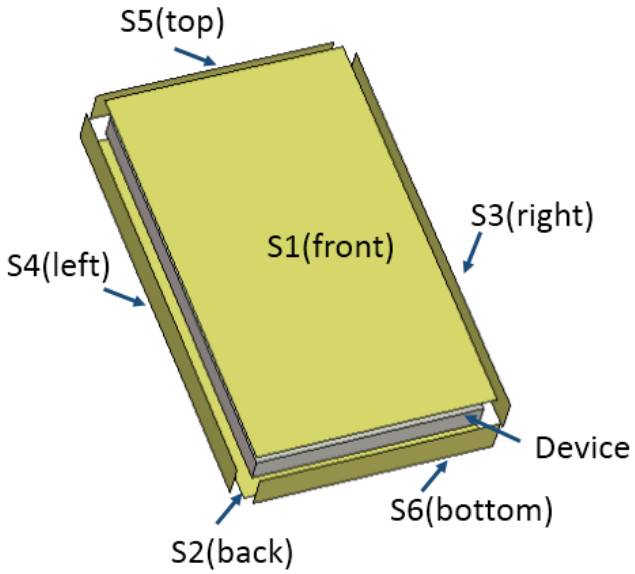


Figure 6 PD evaluation planes (front view).

Table 1.1 PD evaluation planes of each module (front view)

	Front	Back	Right	left	Top	Bottom
	S1	S2	S3	S4	S5	S6
Module 0	✓	✓	✓	×	✓	×
Module 1	✓	✓	×	✓	×	×
Module 2	✓	✓	✓	×	×	×

1.3.3 Source excitation setup

There are only one antenna type that patch antennas in the mmWave modules, and there are 16 ports for each mmWave module model. Eight ports are for n261 band,

and 4 ports among them are for H polarization, and other 4 ports are for V polarization. Eight ports are for n260 band, and 4 ports among them are for H polarization, and 4 ports are for V polarization.

After completing 3D full wave electromagnetic simulation of the device model, the EM fields of beams could be got by setting the corresponding magnitude and phase through the "Combine Results" function in the CST "Post-processing" panel, as shown in figure 7. Then EM fields is exported for PD calculation.

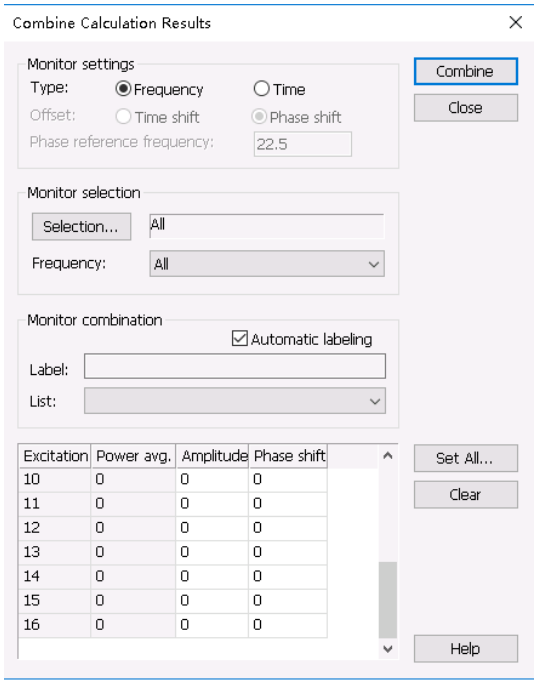


Figure 7 magnitude and phase setup.

2. Comparison between measurement and simulated results

The measured and simulated power density results for n261 band (27.9 GHz) and n260 band (38.5 GHz) are shown in table 2.1, which will be employed to decide the housing influence. The input power per each antenna element port for both simulation and measurement is 6 dbm, and the power density is measured/simulated at the evaluation surfaces that 2 mm distance from DUT.

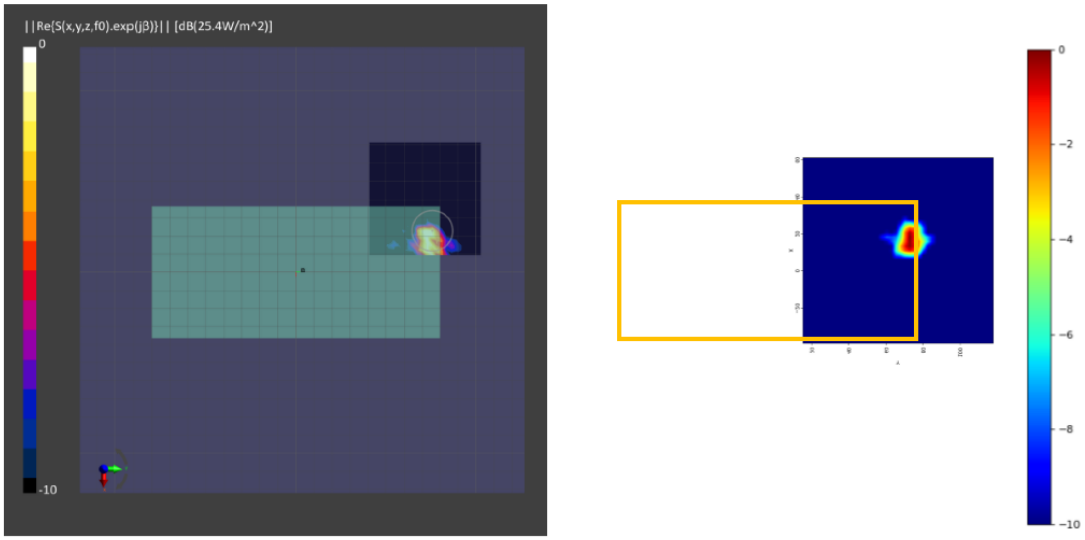
Table 2.1 Measured and simulated 4cm^2 averaged PD

					4cm2 avg. PD (W/m2)		
Band	Antenna module	Beam ID	surface	channel	meas.	Sim.	Delta (dB)
n261	0	20	Back (S2)	Middle	7.59	15.03	2.97
	0	162	Back (S2)	Middle	6.55	13.27	3.07
	1	38	Back (S2)	Middle	5.95	9.72	2.13
	1	155	Back (S2)	Middle	4.01	7.28	2.59
	1	38	Left (S4)	Middle	6.61	10.44	1.98
	1	155	Left (S4)	Middle	3.27	7.78	3.76
	2	30	Back (S2)	Middle	3.68	7.67	3.19
	2	157	Back (S2)	Middle	2.99	7.54	4.02
	2	30	Right (S3)	Middle	5.44	10.92	3.03
	2	157	Right (S3)	Middle	6.67	10.21	1.85
n260	0	18	Back (S2)	Middle	5.39	9.93	2.65
	0	146	Back (S2)	Middle	5.18	9.25	2.52
	1	25	Back (S2)	Middle	3.02	6.91	3.59
	1	168	Back (S2)	Middle	4.41	6.42	1.63
	1	26	Left (S4)	Middle	7.23	11.3	1.94
	1	154	Left (S4)	Middle	7.3	10.2	1.45
	2	31	Right (S3)	Middle	11.4	12.6	0.43
	2	159	Right (S3)	Middle	8.15	12.3	1.79
	2	41	Back (S2)	Middle	4.77	6.4	1.28
	2	158	Back (S2)	Middle	4.66	6.92	1.72

* Delta = Sim. - Meas

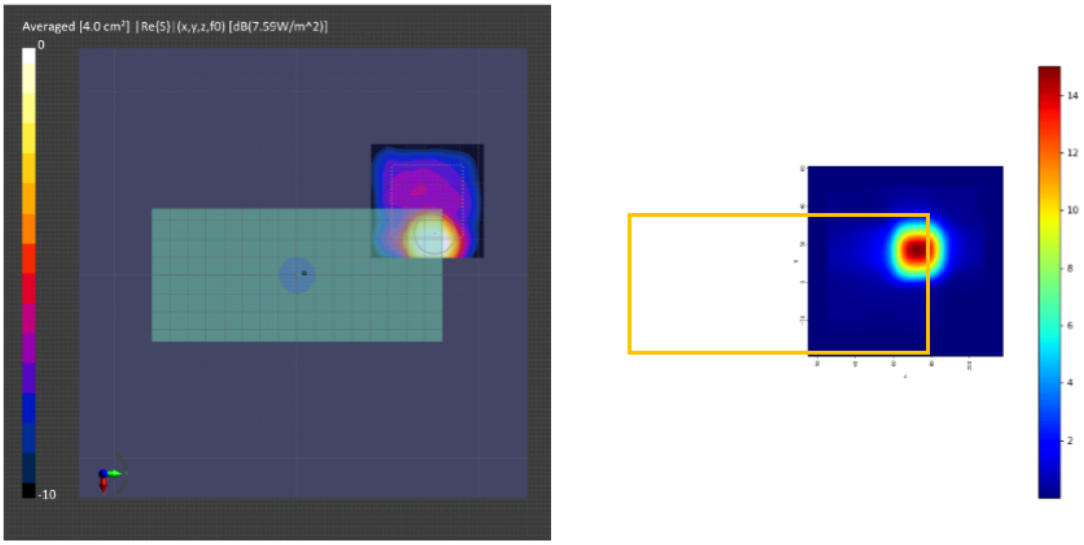
The measured and simulated PD distribution plots are listed as below.

Module 0: n261, Mid Channel, Beam ID: 20, Back



(a) Measurement (b) Simulation

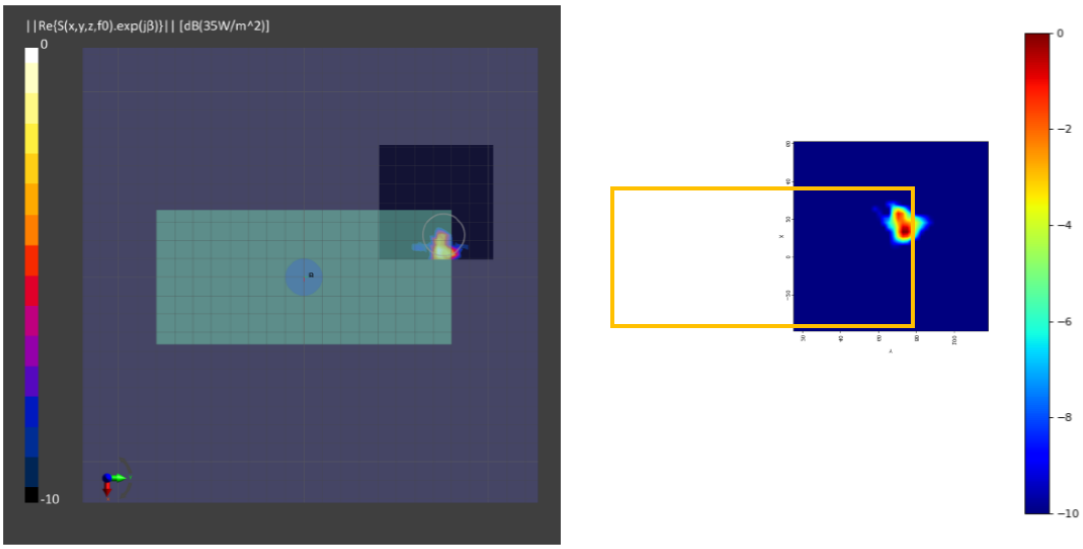
Module 0: Mid Channel, power density



(b) Measurement (b) Simulation

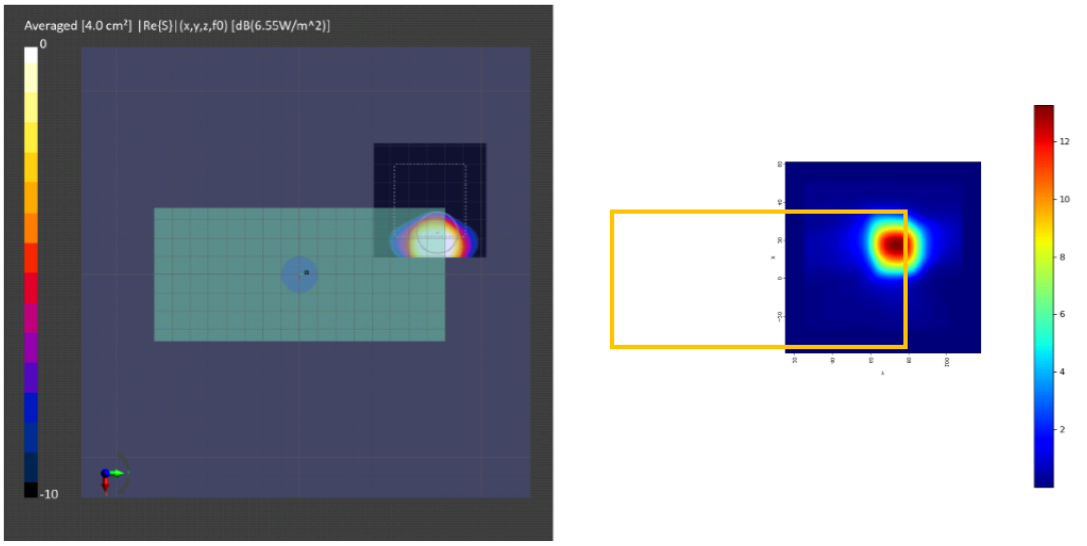
Module 0: Mid Channel, 4cm2 averaged power density

Module 0: n261, Mid Channel, Beam ID: 162, Back



(a) Measurement (b) Simulation

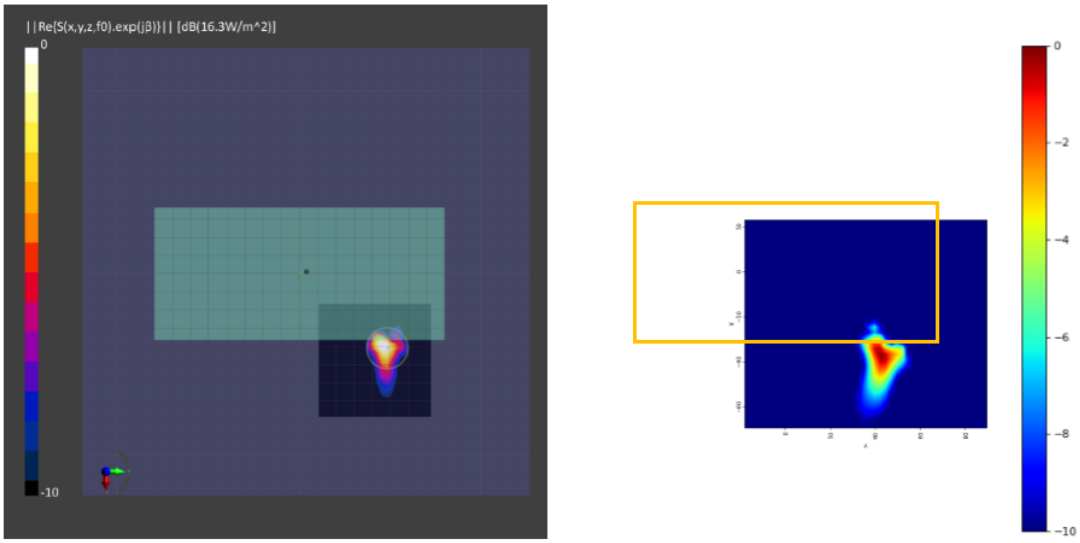
Module 0: Mid Channel, power density



(b) Measurement (b) Simulation

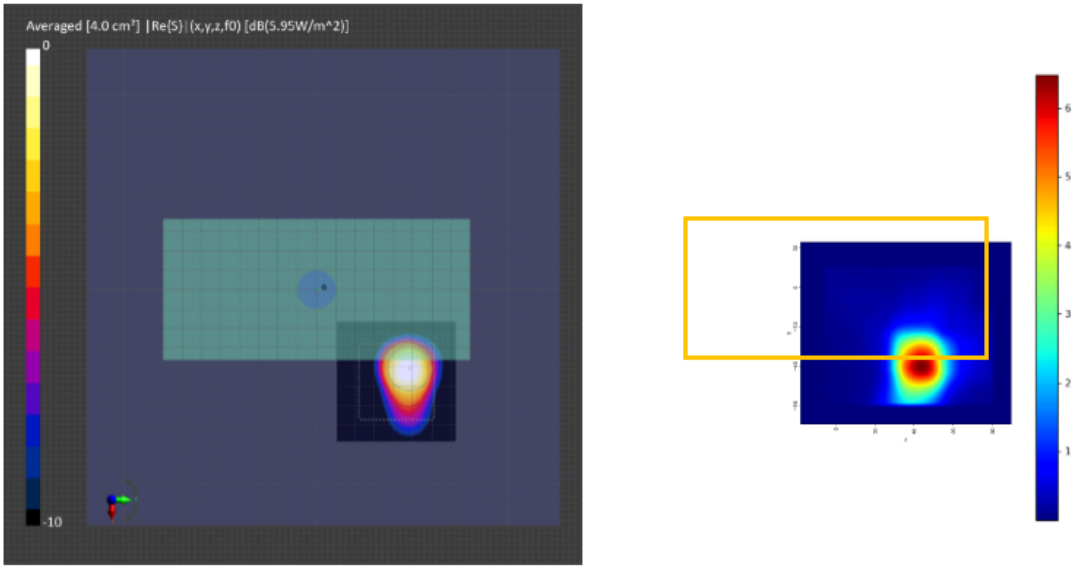
Module 0: Mid Channel, 4cm2 averaged power density

Module 1: n261, Mid Channel, Beam ID: 38, Back



(a) Measurement (b) Simulation

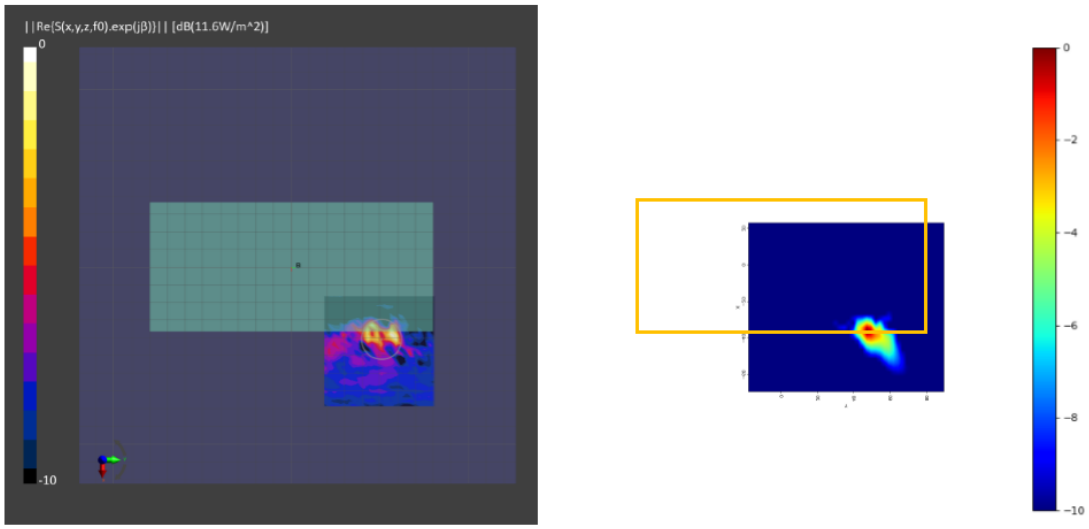
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

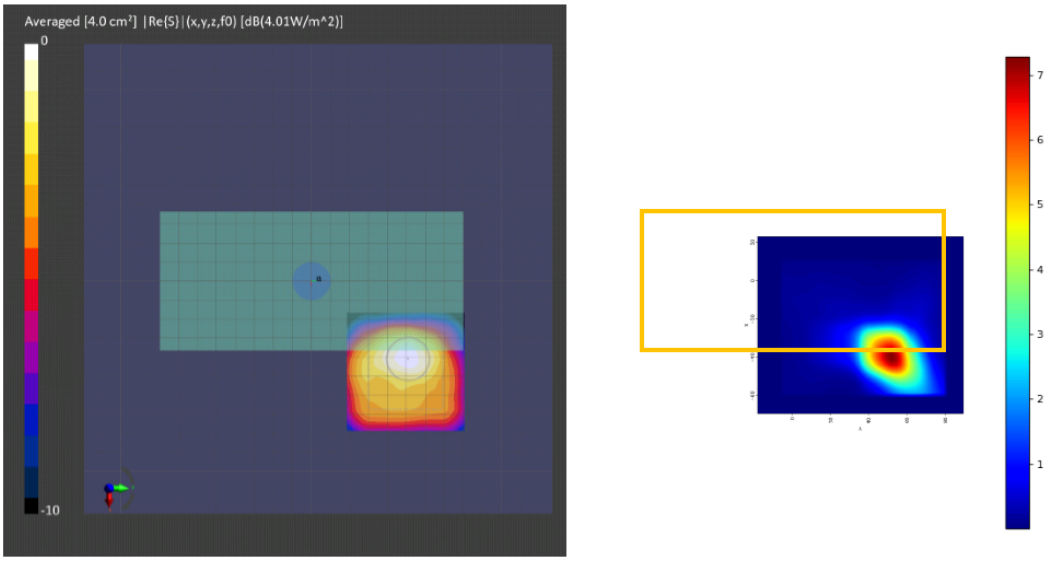
Module 1: Mid Channel, 4cm^2 averaged power density

Module 1: n261, Mid Channel, Beam ID: 155, Back



(a) Measurement (b) Simulation

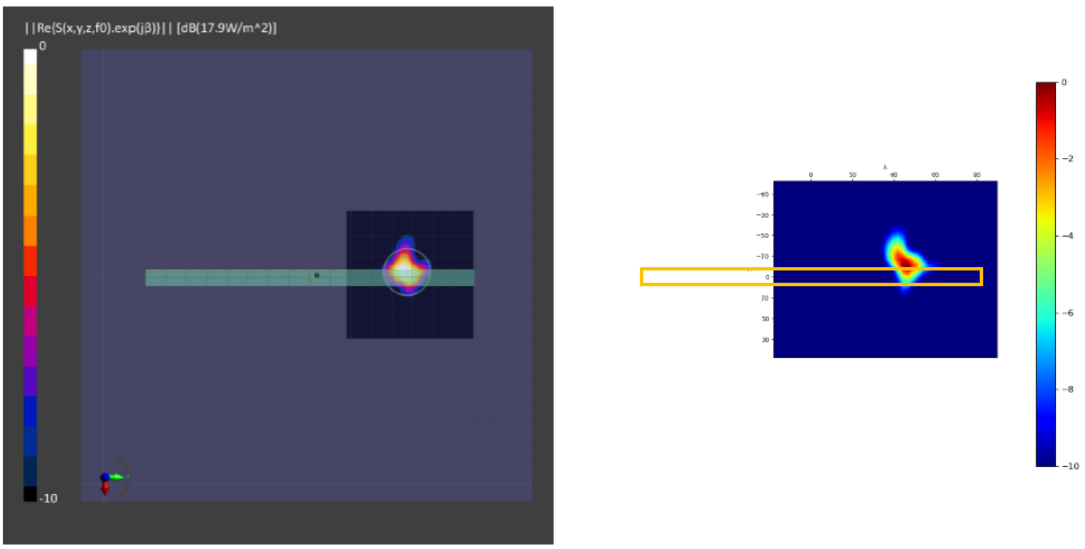
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

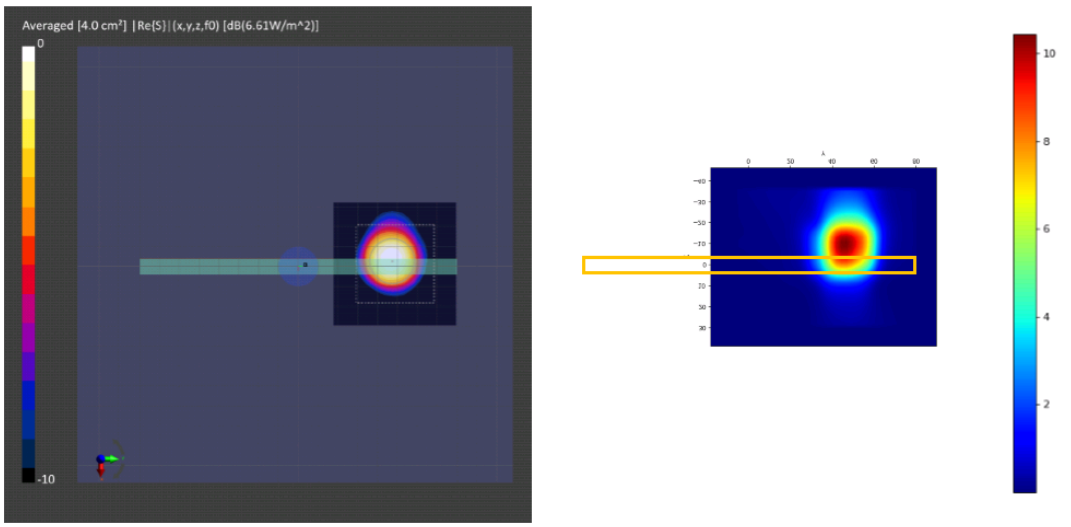
Module 1: Mid Channel, 4cm^2 averaged power density

Module 1: n261, Mid Channel, Beam ID: 38, Left



(a) Measurement (b) Simulation

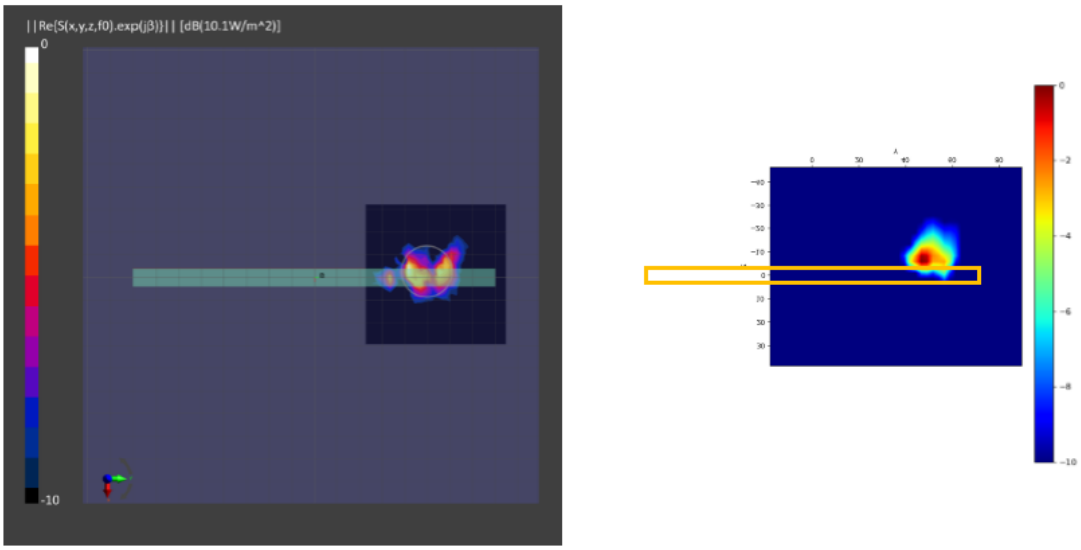
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

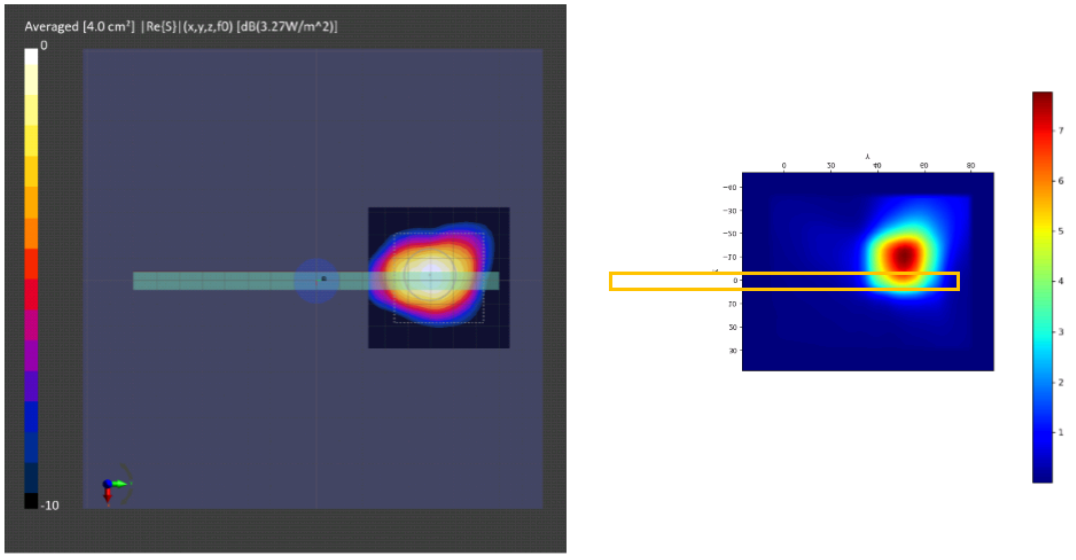
Module 1: Mid Channel, 4cm^2 averaged power density

Module 1: n261, Mid Channel, Beam ID: 155, Left



(a) Measurement (b) Simulation

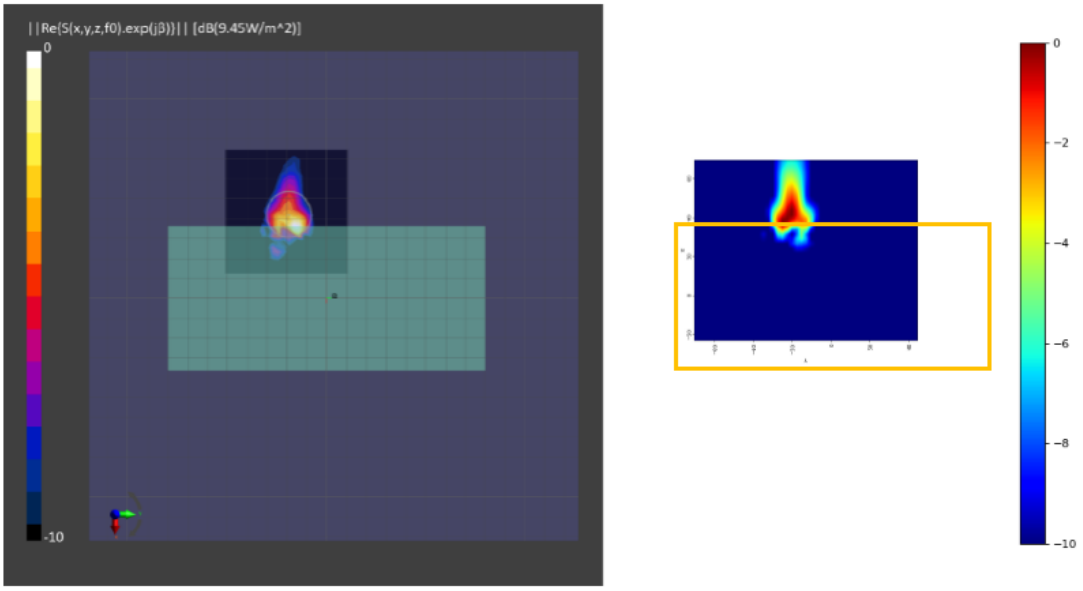
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

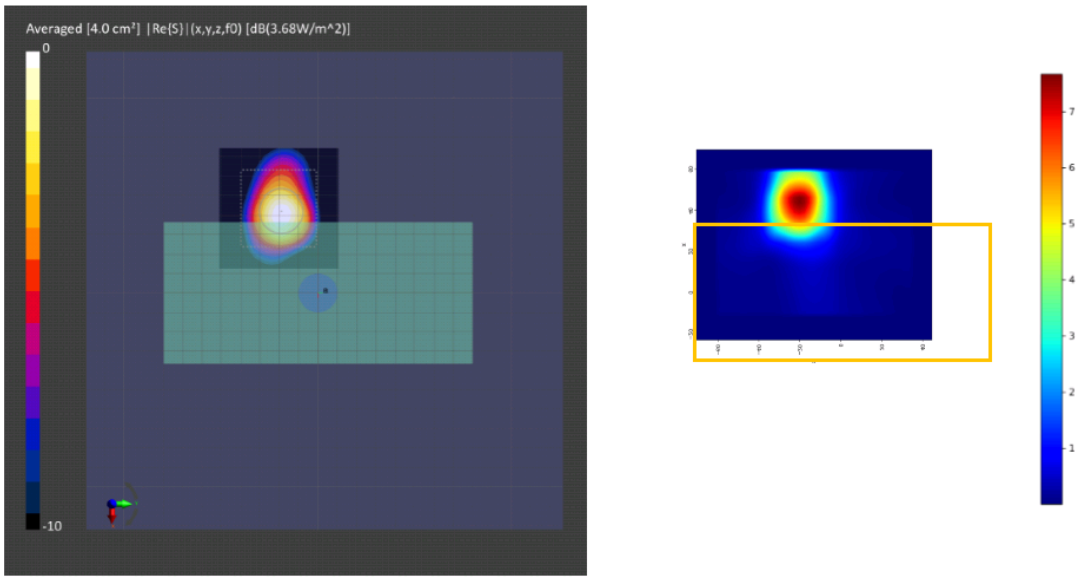
Module 1: Mid Channel, 4cm2 averaged power density

Module 2: n261, Mid Channel, Beam ID: 30, Back



(a) Measurement (b) Simulation

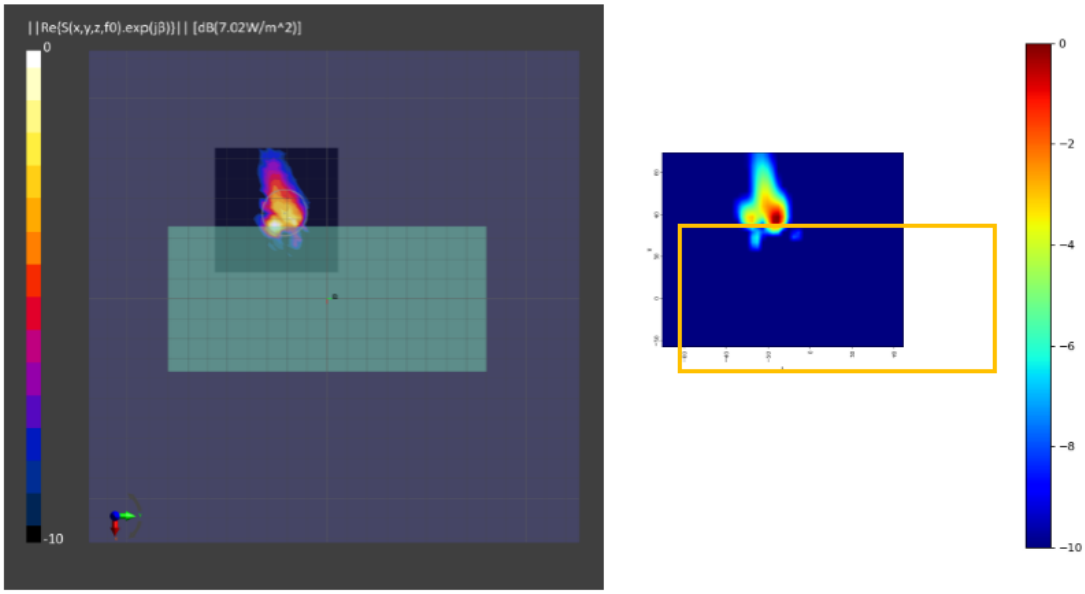
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

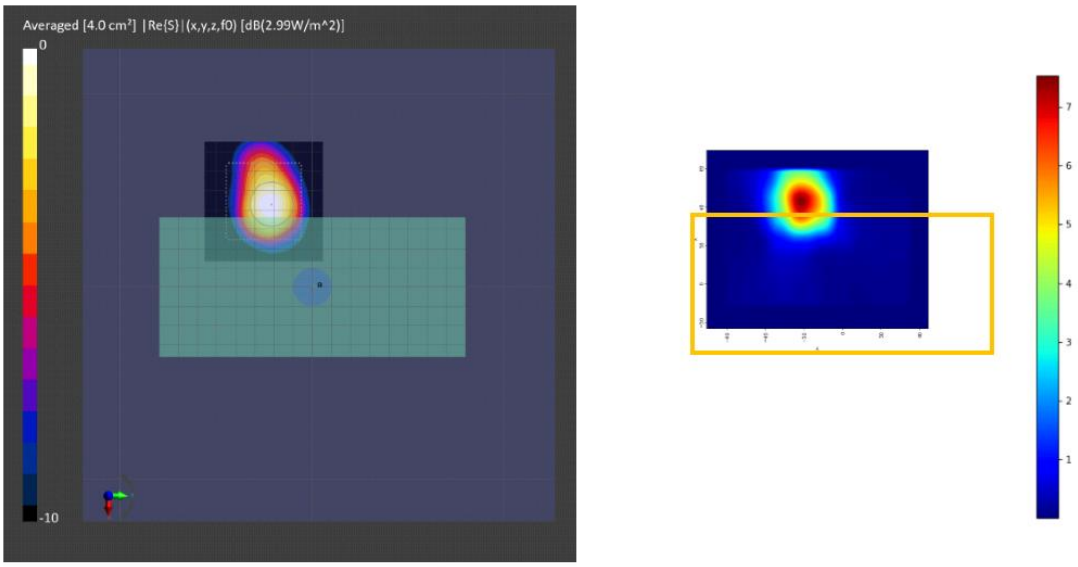
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n261, Mid Channel, Beam ID: 157, Back



(a) Measurement (b) Simulation

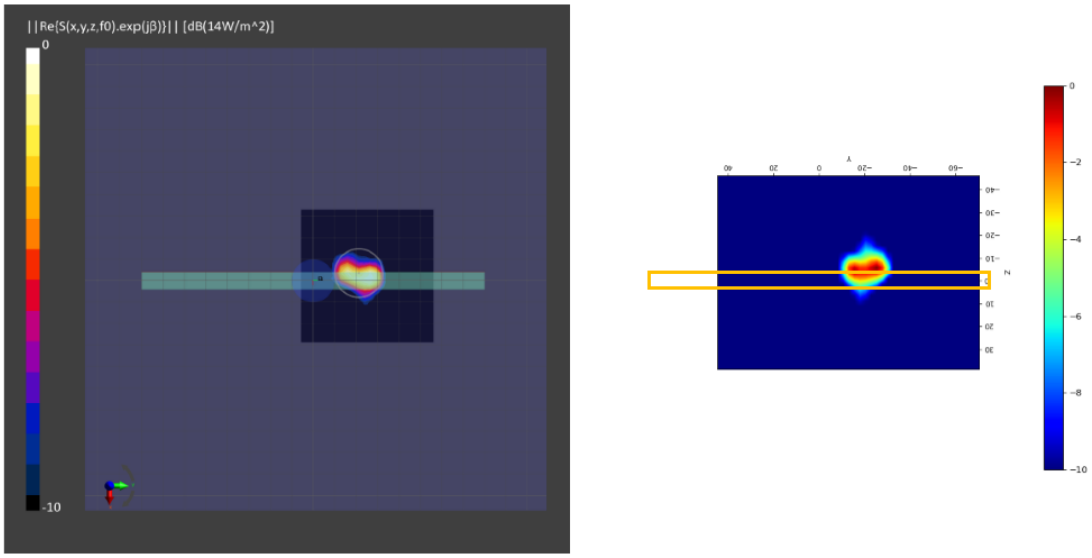
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

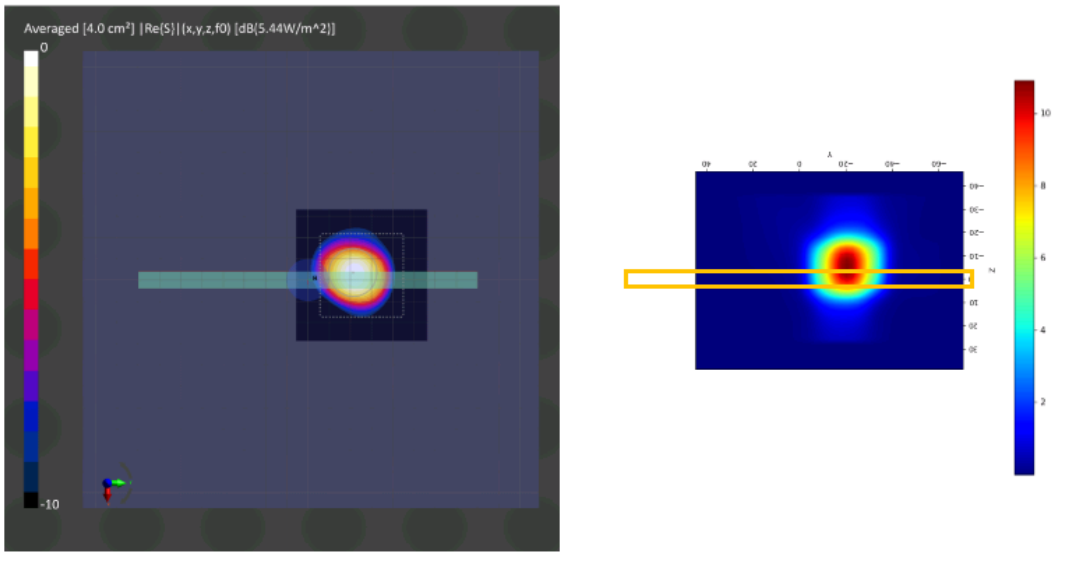
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n261, Mid Channel, Beam ID: 30, Right



(a) Measurement (b) Simulation

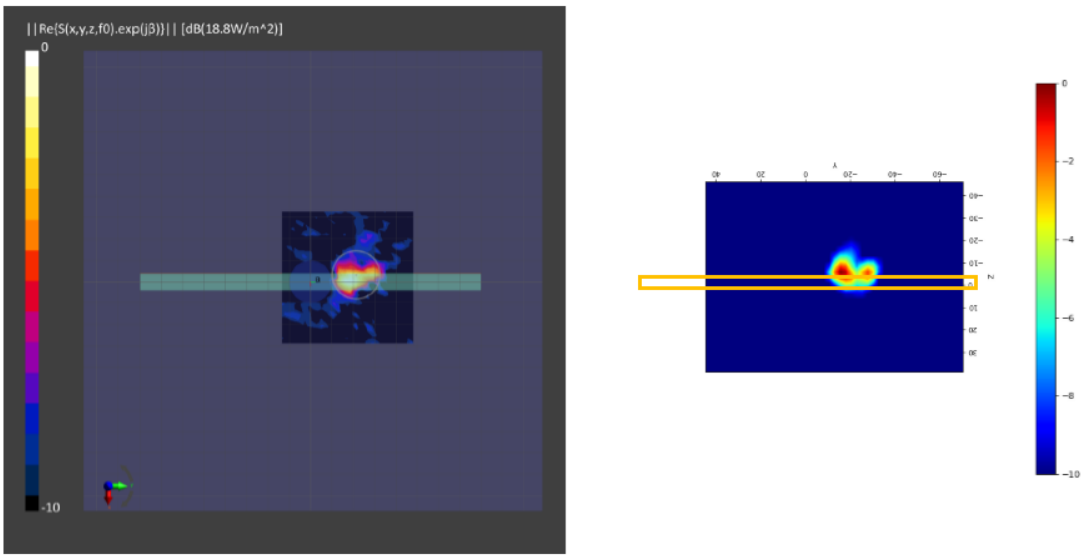
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

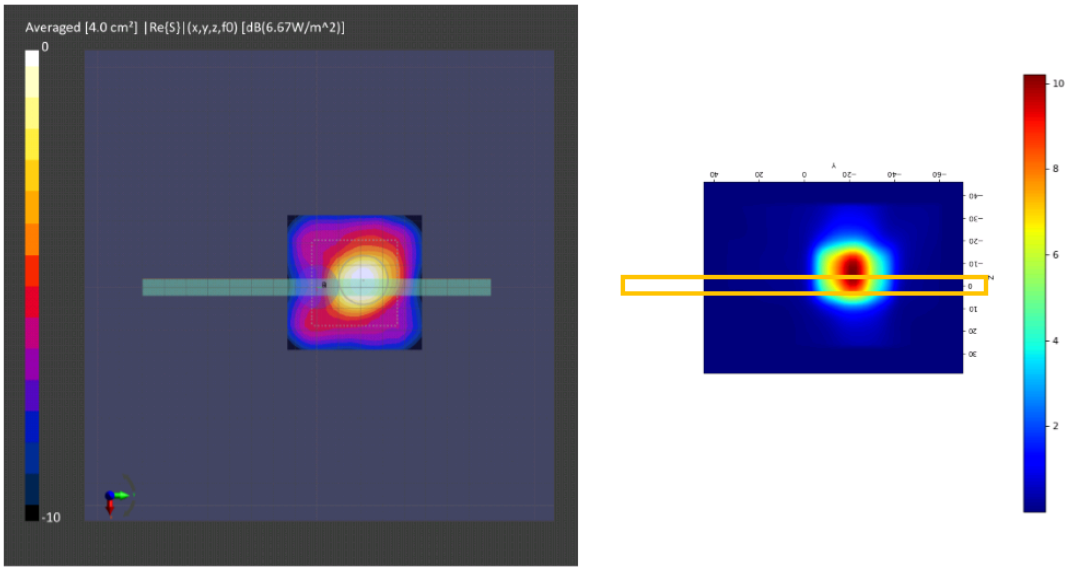
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n261, Mid Channel, Beam ID: 157, Right



(a) Measurement (b) Simulation

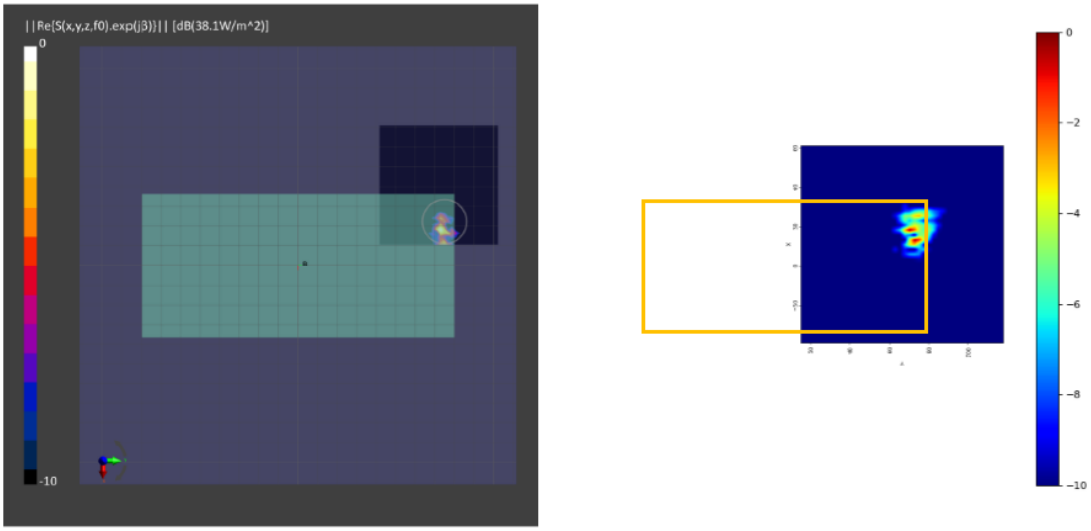
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

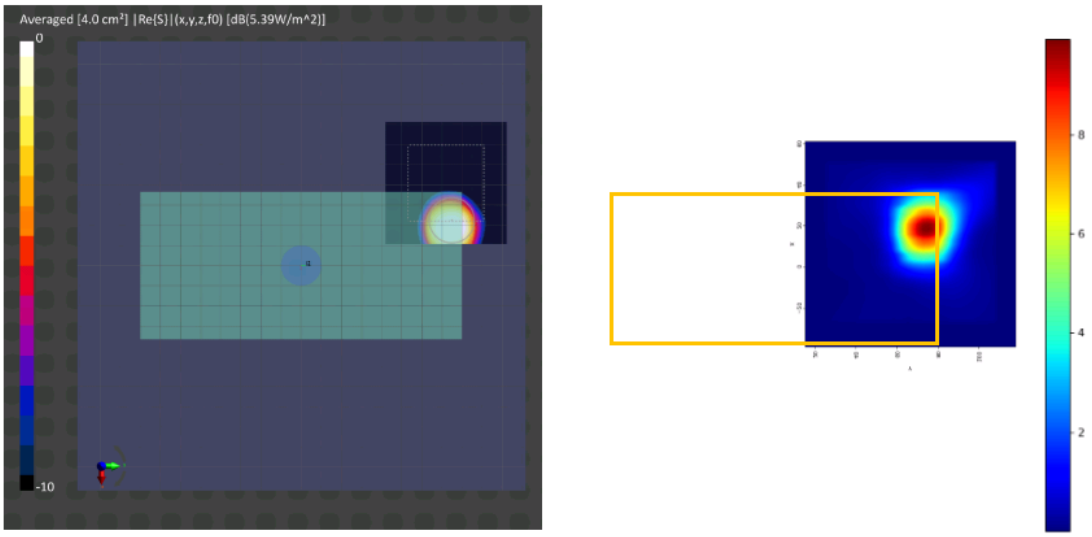
Module 2: Mid Channel, 4cm2 averaged power density

Module 0: n260, Mid Channel, Beam ID: 18, Back



(a) Measurement (b) Simulation

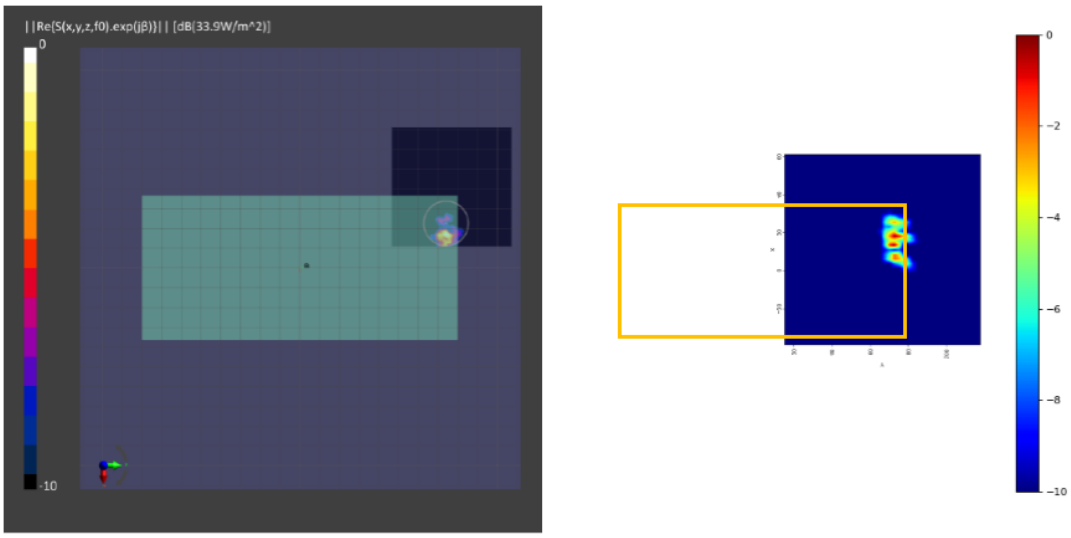
Module 0: Mid Channel, power density



(b) Measurement (b) Simulation

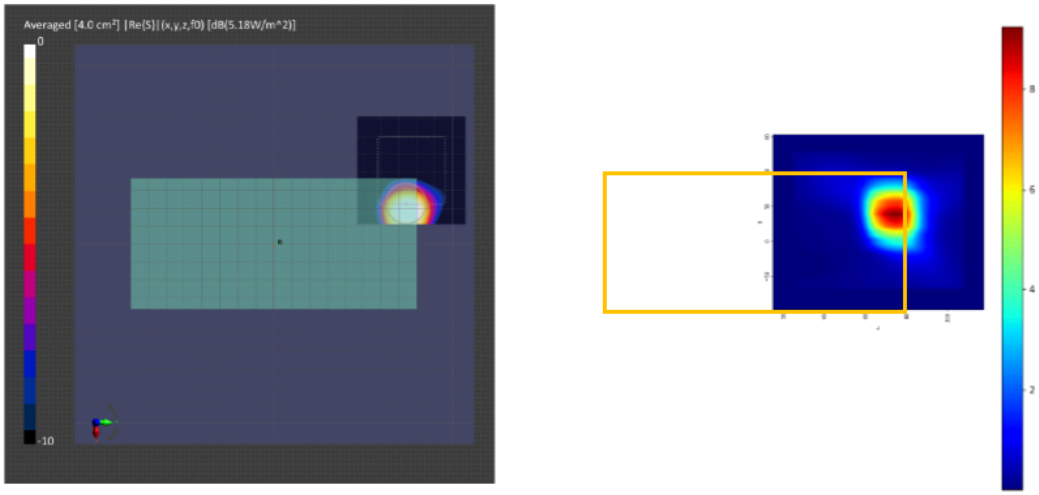
Module 0: Mid Channel, 4cm2 averaged power density

Module 0: n260, Mid Channel, Beam ID: 146, Back



(a) Measurement (b) Simulation

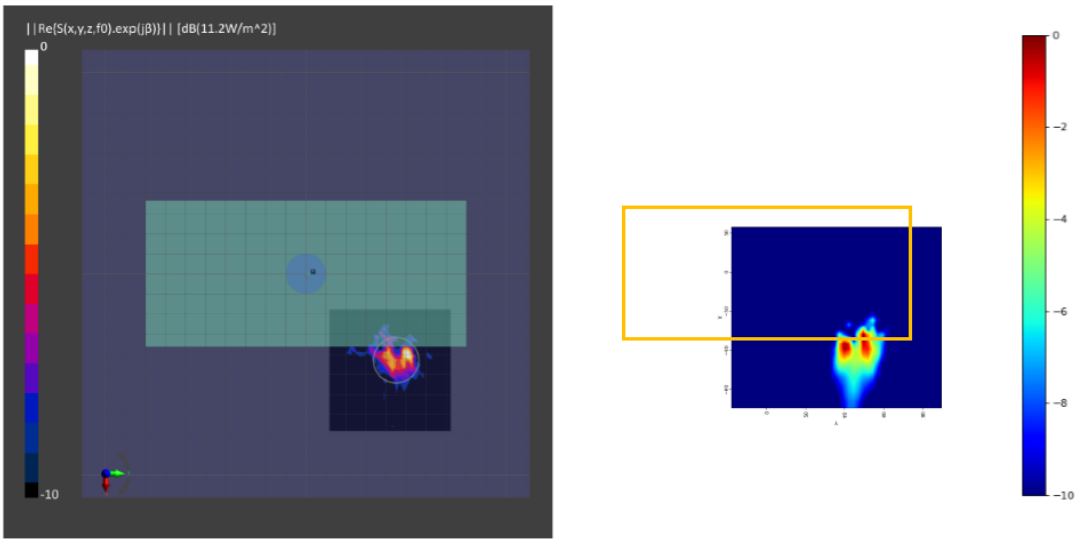
Module 0: Mid Channel, power density



(b) Measurement (b) Simulation

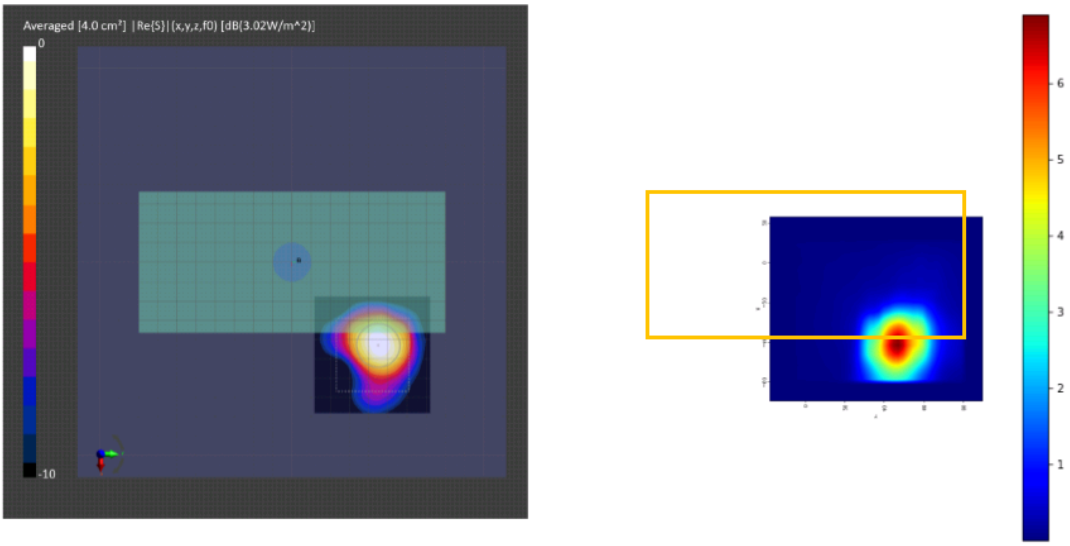
Module 0: Mid Channel, 4cm2 averaged power density

Module 1: n260, Mid Channel, Beam ID: 25, Back



(a) Measurement (b) Simulation

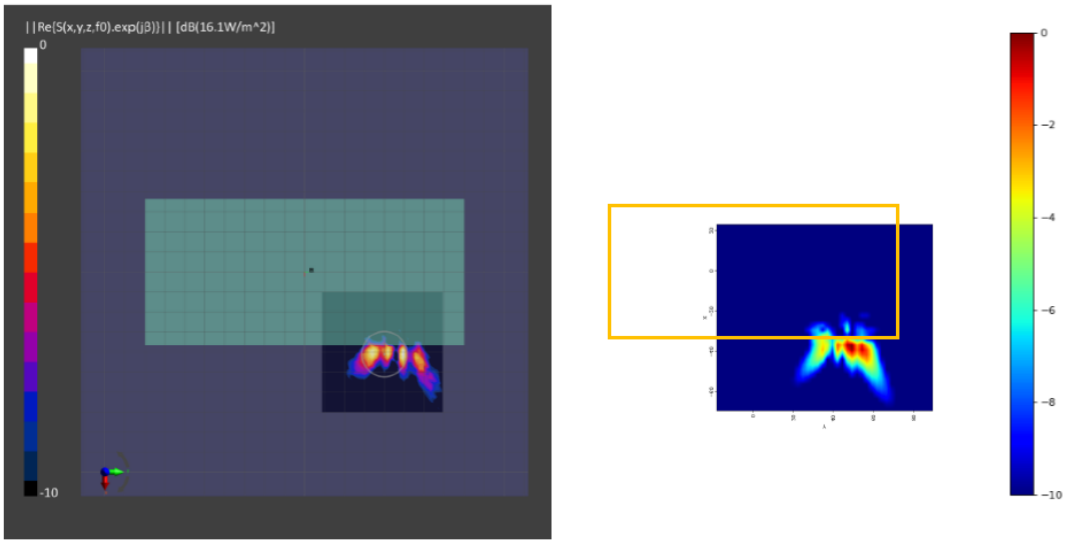
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

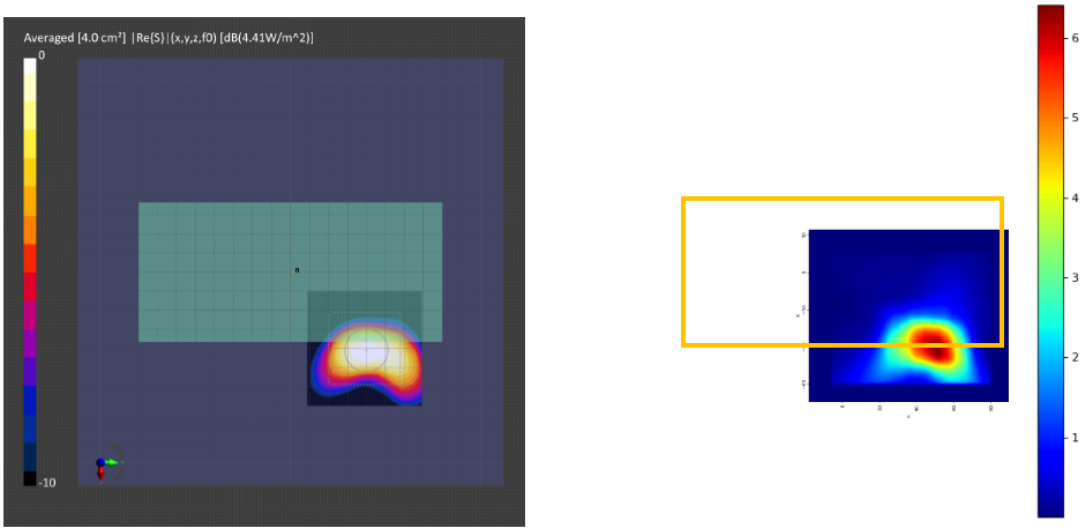
Module 1: Mid Channel, 4cm2 averaged power density

Module 1: n260, Mid Channel, Beam ID: 168, Back



(a) Measurement (b) Simulation

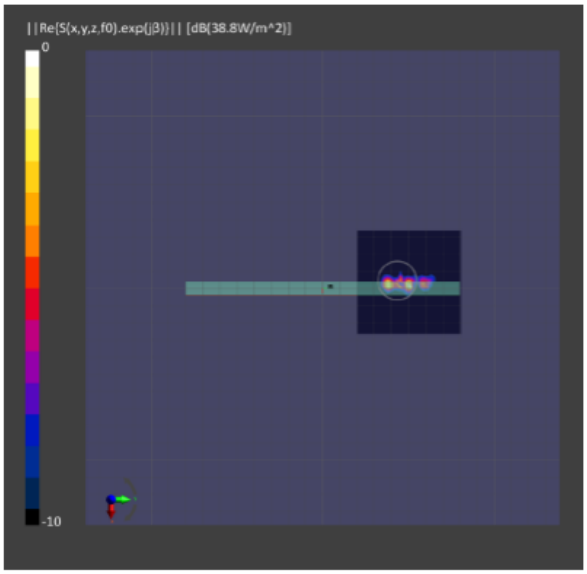
Module 1: Mid Channel, power density

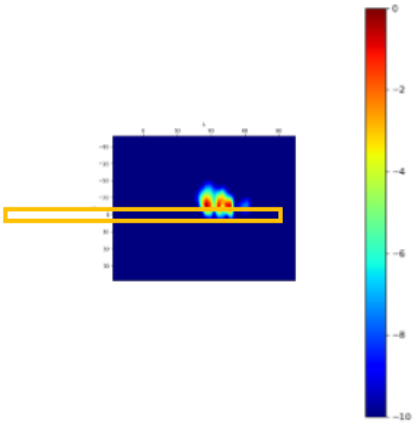


(b) Measurement (b) Simulation

Module 1: Mid Channel, 4cm2 averaged power density

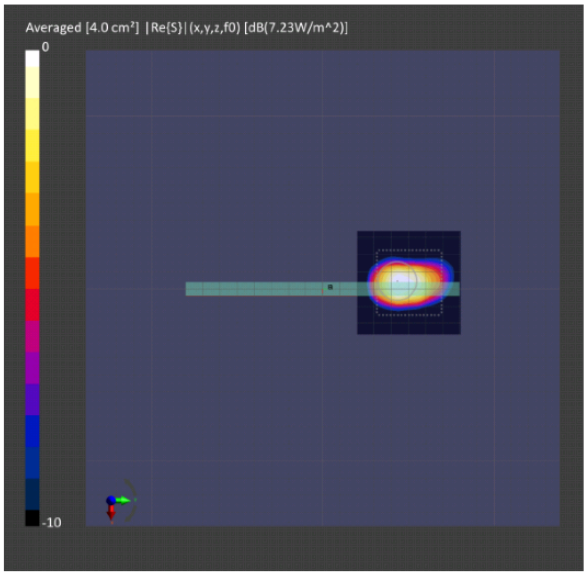
Module 1: n260, Mid Channel, Beam ID: 26, Left

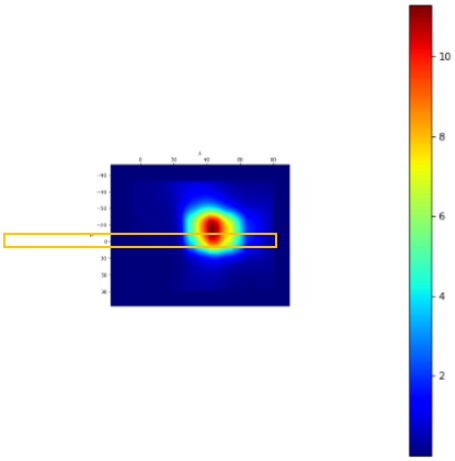




(a) Measurement (b) Simulation

Module 1: Mid Channel, power density

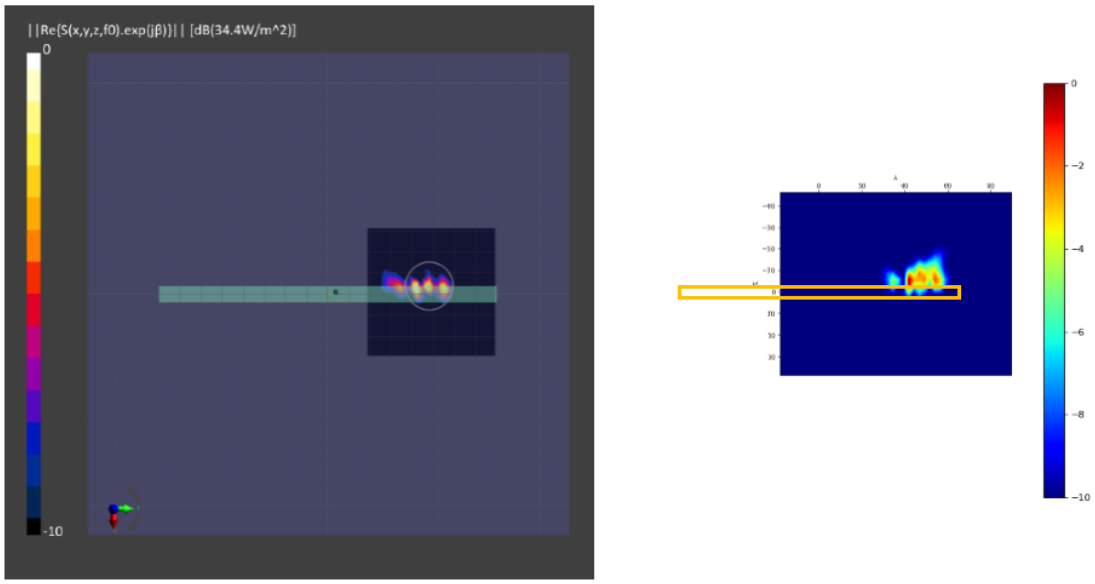




(b) Measurement (b) Simulation

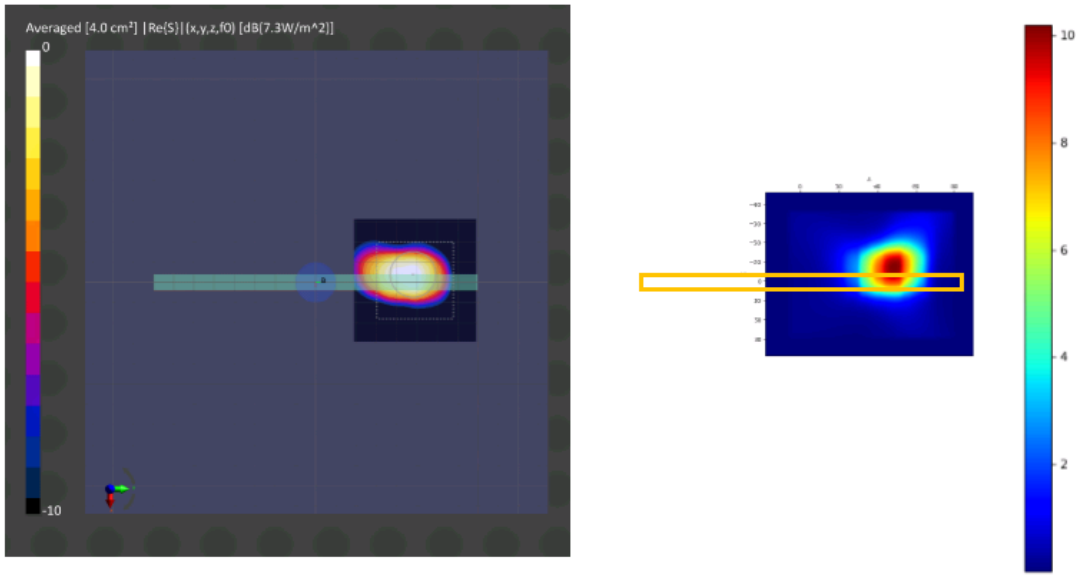
Module 1: Mid Channel, 4cm2 averaged power density

Module 1: n260, Mid Channel, Beam ID: 154, Left



(a) Measurement (b) Simulation

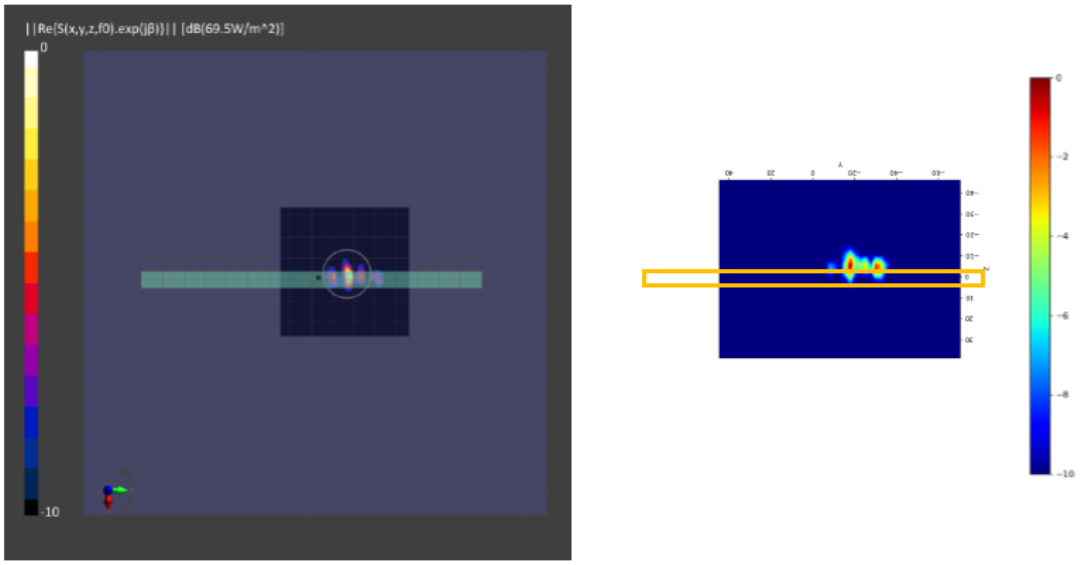
Module 1: Mid Channel, power density



(b) Measurement (b) Simulation

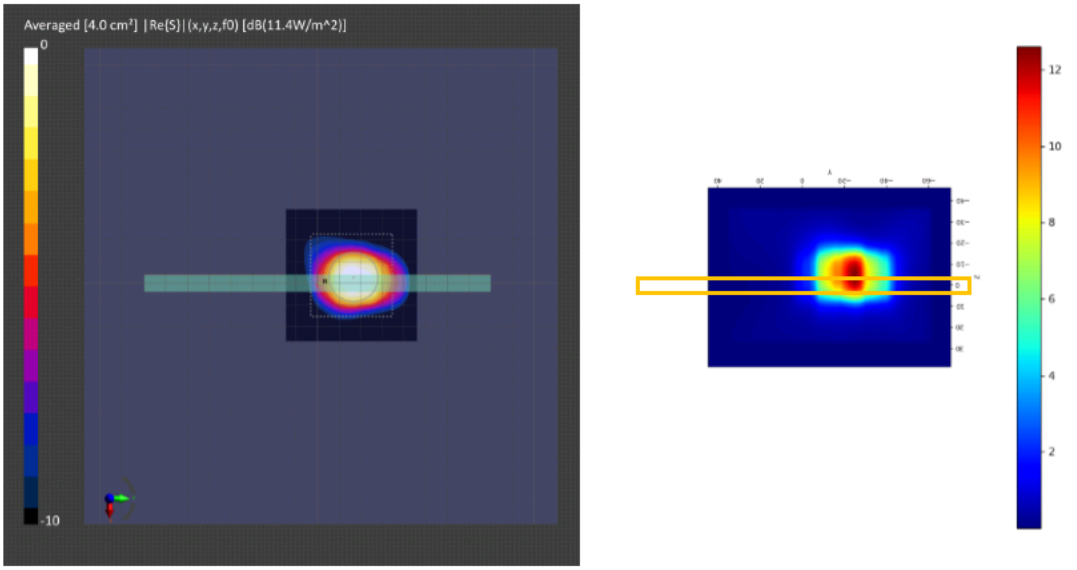
Module 1: Mid Channel, 4cm2 averaged power density

Module 2: n260, Mid Channel, Beam ID: 31, Right



(a) Measurement (b) Simulation

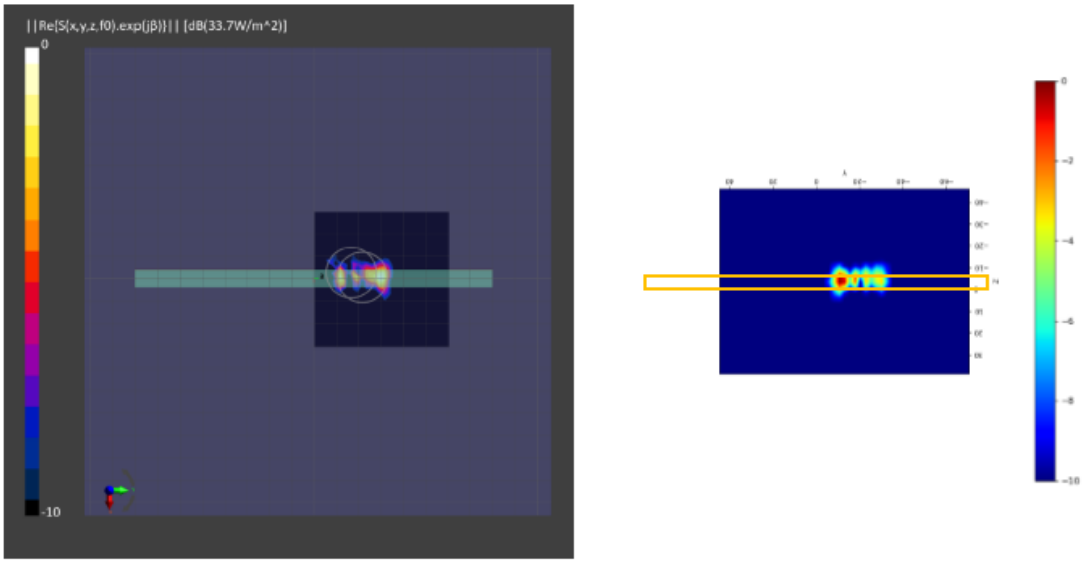
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

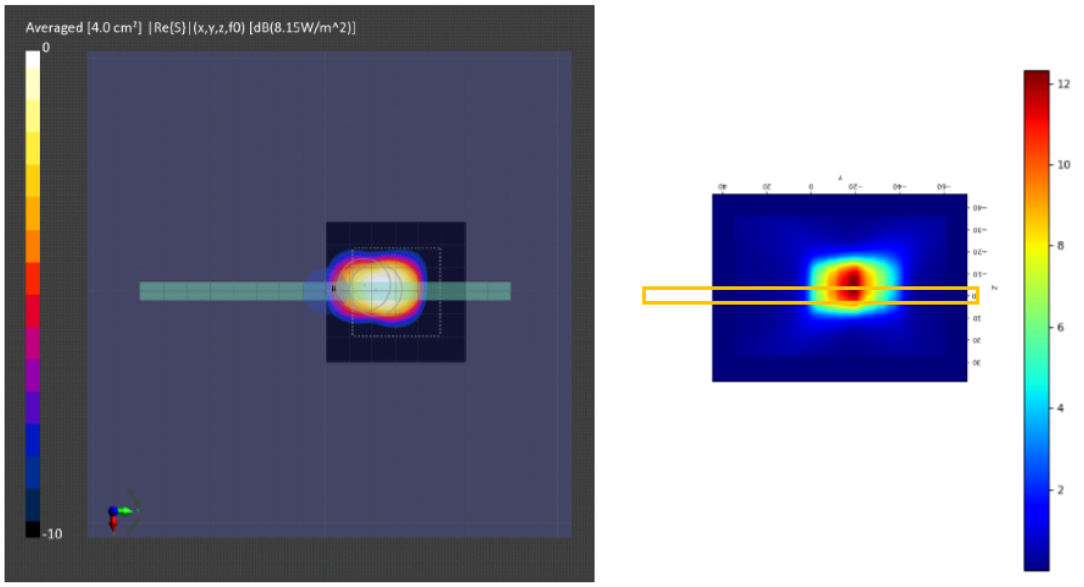
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n260, Mid Channel, Beam ID: 159, Right



(a) Measurement (b) Simulation

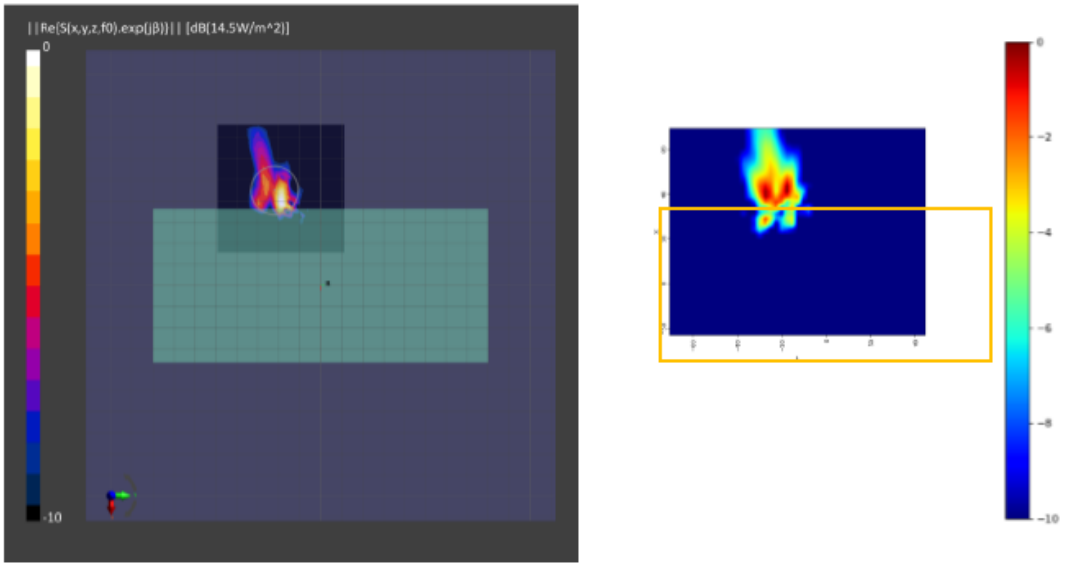
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

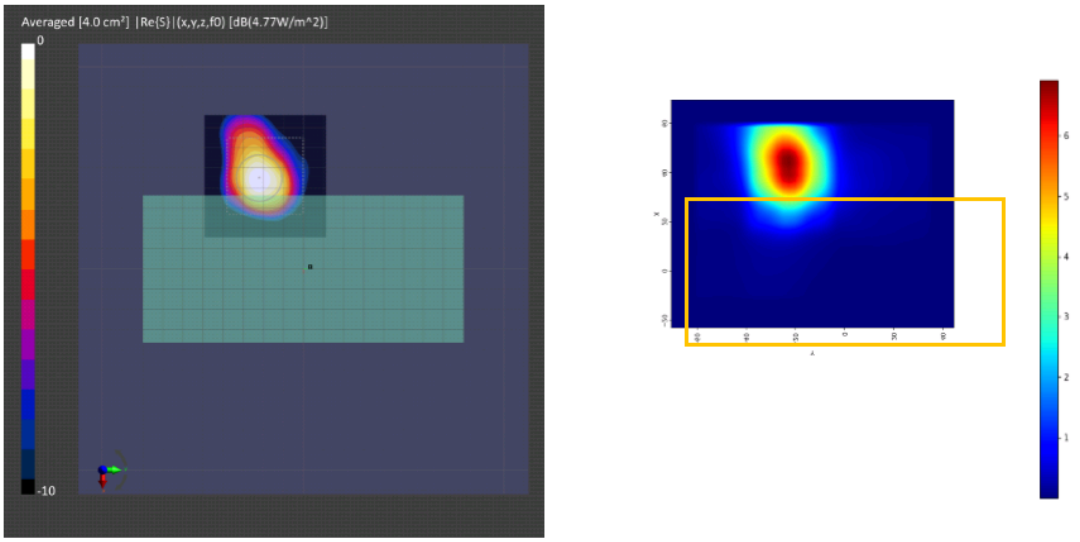
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n260, Mid Channel, Beam ID: 41, Back



(a) Measurement (b) Simulation

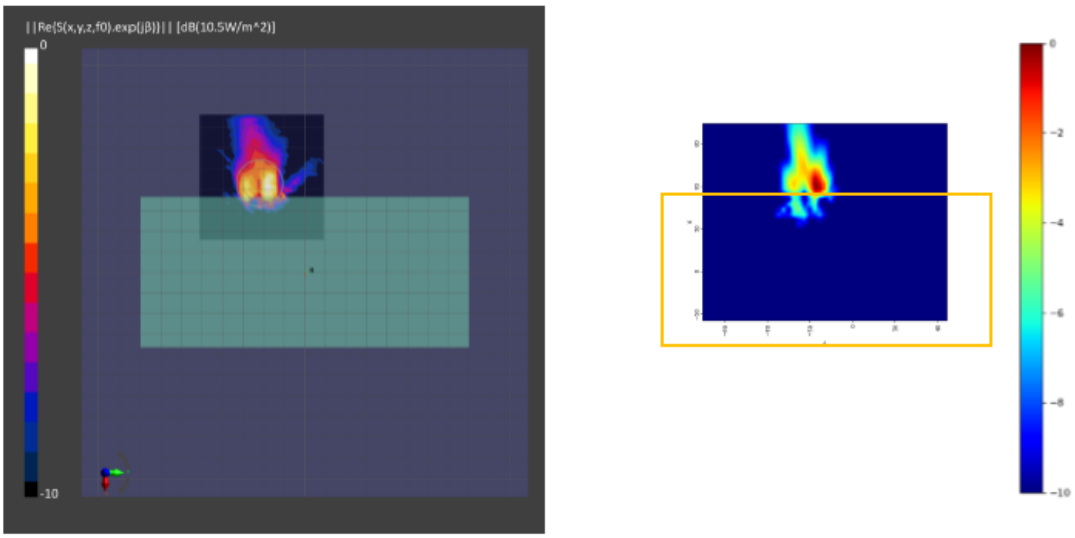
Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

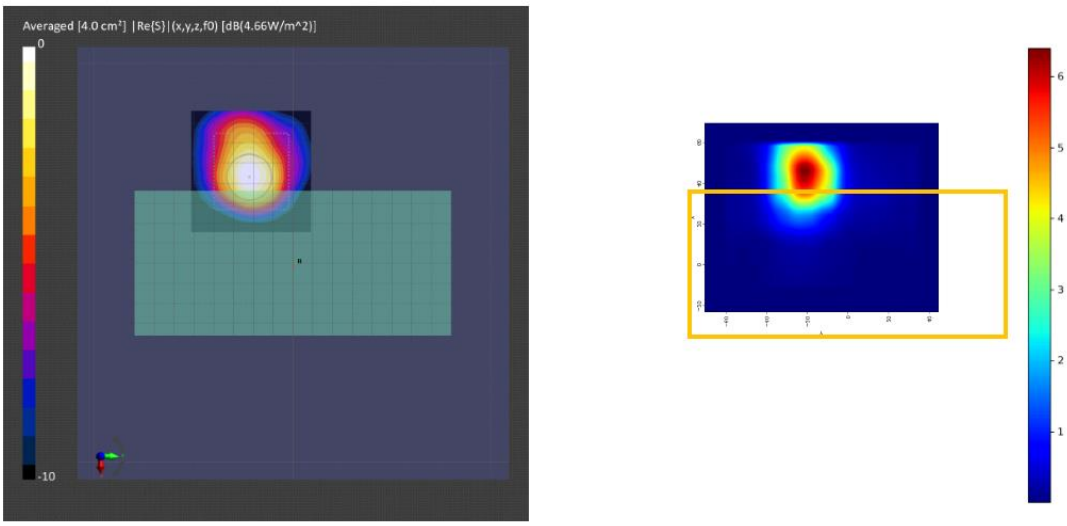
Module 2: Mid Channel, 4cm2 averaged power density

Module 2: n260, Mid Channel, Beam ID: 158, Back



(a) Measurement (b) Simulation

Module 2: Mid Channel, power density



(b) Measurement (b) Simulation

Module 2: Mid Channel, 4cm2 averaged power density

3 Simulation results

In this section, PD simulation results of Module 0, Module 1 and Module 2 at evaluation planes that 2mm and 10mm away from the device is reported. The PD is evaluated at Low/Mid/High Channel of n261 and n260 for each beam. The ratio of PD from front evaluation plane (S1) to the worst surface at 2mm, and the ratio of PD from 2mm to 10mm evaluation distance for each beam are also reported for RF exposure analysis for simultaneous transmission scenarios.

The relative phase between beam pair is not controlled and could vary from run to run. Therefore, for each beam pair, the highest PD among all evaluation planes is determined mathematically by sweeping the relative phase with a 5° step from 0° to 360°.

The worst-case simulated PD from these tables were used to decide worse-case housing influence △, which is used to calculate *input.power.limit* in RF Exposure Part 0 Report.

3.1 PD for Low/Mid/High Channel at 27.9 GHz / 38.5 GHz

3.1.1 Module 0

Table 3.1 & Table 3.2 show the PD simulation evaluation of Module 0 at 27.5 GHz / 38.5 GHz for the corresponding evaluation planes specified in Table 1.1.

Table 3.1 PD of Module 0 (27.9 GHz – n261)

Module 0 Low CH

										max ratio out of all beams				max ratio out of all beams	
						4cm2PD (W/m2)				7.9%	4cm2PD (W/m2) at 10mm evaluation distance			72.8%	72.8%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
1			0		1	1.31	**3.78**	0.22	0.07	1.7%	0.47	**2.05**	0.13	54.1%	54.1%
2			3		2	1.89	**6.53**	2.38	0.46	7.1%	0.86	**2.35**	1.52	36.0%	36.0%
3			4		2	3.93	**8.21**	0.43	0.10	1.2%	1.75	**5.09**	0.26	62.0%	62.0%
4			5		2	3.07	**6.88**	2.17	0.24	3.5%	1.28	**4.08**	1.30	59.3%	59.3%
5			12		2	2.72	**7.01**	0.51	0.13	1.9%	1.21	**3.28**	0.34	46.8%	46.8%
6			13		2	3.22	**7.01**	0.33	0.16	2.2%	1.36	**4.46**	0.18	63.7%	63.7%
7			18		4	4.36	**9.84**	2.55	0.74	7.5%	2.01	**5.45**	1.68	55.4%	55.4%
8			19		4	6.64	**13.76**	0.98	0.30	2.2%	3.64	**7.71**	0.62	56.0%	56.0%
9			20		4	7.21	**15.09**	0.71	0.37	2.4%	3.78	**10.00**	0.43	66.3%	66.3%
10			21		4	5.93	**11.82**	2.21	0.33	2.8%	3.05	**7.67**	0.89	64.9%	64.9%
11			22		4	4.10	**12.04**	3.13	0.50	4.1%	1.87	**6.14**	1.89	51.0%	51.0%
12			33		4	6.04	**11.71**	1.23	0.52	4.5%	3.05	**6.61**	0.67	56.5%	56.5%
13			34		4	6.56	**14.82**	1.06	0.24	1.6%	3.58	**8.57**	0.76	57.8%	57.8%
14			35		4	7.21	**13.17**	1.03	0.23	1.8%	3.82	**9.03**	0.34	68.5%	68.5%
15			36		4	4.18	**11.69**	2.95	0.43	3.7%	1.56	**6.32**	1.64	54.1%	54.1%
16			128		1	1.28	**3.14**	0.49	0.13	4.0%	0.52	**1.90**	0.28	60.5%	60.5%
17			131		2	1.84	**4.85**	1.14	0.37	7.6%	0.72	**2.99**	0.70	61.7%	61.7%
18			132		2	2.58	**5.58**	0.59	0.10	1.9%	1.17	**3.42**	0.31	61.3%	61.3%
19			133		2	2.43	**6.95**	0.79	0.27	3.9%	1.12	**2.41**	0.42	34.7%	34.7%
20			140		2	3.54	**7.08**	0.26	0.15	2.0%	1.76	**4.36**	0.17	61.6%	61.6%
21			141		2	3.24	**7.15**	0.84	0.26	3.6%	1.56	**3.25**	0.44	45.5%	45.5%
22			146		4	6.13	**11.68**	1.01	0.27	2.3%	3.19	**8.51**	0.64	72.8%	72.8%
23	0	Patch	147		4	6.41	**12.98**	0.72	0.30	2.3%	3.39	**9.06**	0.51	69.8%	69.8%
24			148		4	6.53	**13.23**	0.68	0.22	1.6%	3.62	**7.95**	0.26	60.1%	60.1%
25			149		4	5.11	**10.12**	3.03	0.33	3.3%	2.67	**5.60**	1.94	55.3%	55.3%
26			150		4	3.38	**8.07**	2.19	0.52	6.4%	1.33	**3.04**	1.38	37.6%	37.6%
27			161		4	6.42	**12.71**	0.81	0.28	2.2%	3.39	**9.12**	0.57	71.8%	71.8%
28			162		4	6.43	**13.42**	0.44	0.25	1.9%	3.57	**8.30**	0.24	61.9%	61.9%
29			163		4	6.91	**12.46**	2.28	0.35	2.8%	3.85	**6.93**	1.11	55.6%	55.6%
30			164		4	3.97	**8.26**	2.82	0.41	5.0%	2.01	**4.15**	1.85	50.3%	50.3%
31			0	128	2	2.61	**7.09**	0.92	0.30	4.3%	1.06	**3.97**	0.58	56.0%	56.0%
32			3	133	4	4.94	**10.58**	2.98	0.78	7.3%	1.96	**5.13**	1.82	48.5%	48.5%
33			4	132	4	6.68	**13.90**	1.42	0.25	1.8%	3.04	**8.74**	0.71	62.9%	62.9%
34			5	131	4	5.07	**13.96**	4.45	0.77	5.5%	1.83	**7.26**	2.76	52.0%	52.0%
35			12	141	4	6.19	**15.80**	1.35	0.53	3.3%	2.54	**7.58**	0.73	48.0%	48.0%
36			13	140	4	7.95	**16.35**	0.70	0.54	3.3%	3.76	**10.25**	0.39	62.7%	62.7%
37			18	148	8	11.23	**23.44**	3.50	1.25	5.3%	5.28	**12.26**	2.22	52.3%	52.3%
38			19	146	8	14.53	**26.49**	3.00	0.92	3.5%	7.65	**17.30**	1.96	65.3%	65.3%
39			20	147	8	14.28	**29.31**	2.32	1.19	4.1%	7.46	**20.41**	1.58	69.6%	69.6%
40			21	149	8	11.99	**23.92**	5.43	0.89	3.7%	6.22	**13.62**	3.19	56.9%	56.9%
41			22	150	8	9.49	**19.72**	7.27	1.56	7.9%	3.74	**10.42**	4.77	52.8%	52.8%
42			33	164	8	11.99	**21.99**	5.53	1.31	6.0%	5.61	**10.92**	3.35	49.7%	49.7%
43			34	161	8	14.81	**28.78**	2.91	0.88	3.1%	7.94	**19.19**	2.07	66.7%	66.7%
44			35	162	8	14.50	**28.97**	1.97	0.64	2.2%	7.85	**18.67**	0.75	64.4%	64.4%
45			36	163	8	13.97	**27.00**	6.65	1.21	4.5%	6.23	**15.49**	3.87	57.4%	57.4%

										max ratio out of all beams		max ratio out of all beams	
						4cm2PD (W/m2)				7.9%	4cm2PD (W/m2) at 15mm evaluation distance	58.2%	58.2%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	1.31	**3.78**	0.22	0.07	1.7%	**1.42**	37.4%	37.4%
2			3		2	1.89	**6.53**	2.38	0.46	7.1%	**1.69**	25.8%	25.8%
3			4		2	3.93	**8.21**	0.43	0.10	1.2%	**3.77**	46.0%	46.0%
4			5		2	3.07	**6.88**	2.17	0.24	3.5%	**2.96**	43.0%	43.0%
5			12		2	2.72	**7.01**	0.51	0.13	1.9%	**2.14**	30.6%	30.6%
6			13		2	3.22	**7.01**	0.33	0.16	2.2%	**3.36**	47.9%	47.9%
7			18		4	4.36	**9.84**	2.55	0.74	7.5%	**3.84**	39.0%	39.0%
8			19		4	6.64	**13.76**	0.98	0.30	2.2%	**5.71**	41.5%	41.5%
9			20		4	7.21	**15.09**	0.71	0.37	2.4%	**7.79**	51.6%	51.6%
10			21		4	5.93	**11.82**	2.21	0.33	2.8%	**5.84**	49.4%	49.4%
11			22		4	4.10	**12.04**	3.13	0.50	4.1%	**4.11**	34.2%	34.2%
12			33		4	6.04	**11.71**	1.23	0.52	4.5%	**4.86**	41.5%	41.5%
13			34		4	6.56	**14.82**	1.06	0.24	1.6%	**6.38**	43.0%	43.0%
14			35		4	7.21	**13.17**	1.03	0.23	1.8%	**7.16**	54.4%	54.4%
15			36		4	4.18	**11.69**	2.95	0.43	3.7%	**4.22**	36.1%	36.1%
16			128		1	1.28	**3.14**	0.49	0.13	4.0%	**1.40**	44.7%	44.7%
17			131		2	1.84	**4.85**	1.14	0.37	7.6%	**2.43**	50.1%	50.1%
18			132		2	2.58	**5.58**	0.59	0.10	1.9%	**2.58**	46.3%	46.3%
19			133		2	2.43	**6.95**	0.79	0.27	3.9%	**1.64**	23.6%	23.6%
20			140		2	3.54	**7.08**	0.26	0.15	2.0%	**3.14**	44.4%	44.4%
21			141		2	3.24	**7.15**	0.84	0.26	3.6%	**2.14**	30.0%	30.0%
22			146		4	6.13	**11.68**	1.01	0.27	2.3%	**6.80**	58.2%	58.2%
23	0	Patch	147		4	6.41	**12.98**	0.72	0.30	2.3%	**7.33**	56.5%	56.5%
24			148		4	6.53	**13.23**	0.68	0.22	1.6%	**5.61**	42.4%	42.4%
25			149		4	5.11	**10.12**	3.03	0.33	3.3%	**3.92**	38.7%	38.7%
26			150		4	3.38	**8.07**	2.19	0.52	6.4%	**1.70**	21.1%	21.1%
27			161		4	6.42	**12.71**	0.81	0.28	2.2%	**7.36**	57.9%	57.9%
28			162		4	6.43	**13.42**	0.44	0.25	1.9%	**6.20**	46.2%	46.2%
29			163		4	6.91	**12.46**	2.28	0.35	2.8%	**4.84**	38.9%	38.9%
30			164		4	3.97	**8.26**	2.82	0.41	5.0%	**2.71**	32.8%	32.8%
31			0	128	2	2.61	**7.09**	0.92	0.30	4.3%	**2.86**	40.3%	40.3%
32			3	133	4	4.94	**10.58**	2.98	0.78	7.3%	**3.26**	30.8%	30.8%
33			4	132	4	6.68	**13.90**	1.42	0.25	1.8%	**6.41**	46.1%	46.1%
34			5	131	4	5.07	**13.96**	4.45	0.77	5.5%	**4.84**	34.7%	34.7%
35			12	141	4	6.19	**15.80**	1.35	0.53	3.3%	**4.81**	30.4%	30.4%
36			13	140	4	7.95	**16.35**	0.70	0.54	3.3%	**7.55**	46.2%	46.2%
37			18	148	8	11.23	**23.44**	3.50	1.25	5.3%	**8.01**	34.2%	34.2%
38			19	146	8	14.53	**26.49**	3.00	0.92	3.5%	**13.41**	50.6%	50.6%
39			20	147	8	14.28	**29.31**	2.32	1.19	4.1%	**16.79**	57.3%	57.3%
40			21	149	8	11.99	**23.92**	5.43	0.89	3.7%	**10.49**	43.9%	43.9%
41			22	150	8	9.49	**19.72**	7.27	1.56	7.9%	**6.52**	33.1%	33.1%
42			33	164	8	11.99	**21.99**	5.53	1.31	6.0%	**8.05**	36.6%	36.6%
43			34	161	8	14.81	**28.78**	2.91	0.88	3.1%	**15.14**	52.6%	52.6%
44			35	162	8	14.50	**28.97**	1.97	0.64	2.2%	**14.60**	50.4%	50.4%
45			36	163	8	13.97	**27.00**	6.65	1.21	4.5%	**10.53**	39.0%	39.0%

Module 0 Mid CH

										max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)				8.4%	PD (W/m2) at 10mm evaluation di			71.9%	71.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fornt 2mm)/(worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio (worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
1			0		1	1.26	3.76	0.25	0.06	1.5%	0.47	2.02	0.16	53.7%	53.7%
2			3		2	1.96	6.30	2.25	0.46	7.2%	0.94	2.32	1.47	36.8%	36.8%
3			4		2	3.61	7.91	0.39	0.11	1.3%	1.61	4.93	0.24	62.3%	62.3%
4			5		2	2.72	6.55	1.88	0.23	3.5%	1.11	3.89	1.12	59.3%	59.3%
5			12		2	2.51	6.77	0.59	0.11	1.6%	1.13	3.23	0.43	47.6%	47.6%
6			13		2	3.24	6.87	0.35	0.13	1.9%	1.41	4.41	0.16	64.2%	64.2%
7			18		4	4.73	9.67	2.69	0.71	7.4%	2.22	5.31	1.93	54.9%	54.9%
8			19		4	6.21	13.56	0.93	0.37	2.7%	3.47	7.48	0.57	55.2%	55.2%
9			20		4	7.13	15.03	0.60	0.31	2.1%	3.74	9.95	0.35	66.2%	66.2%
10			21		4	5.62	11.33	2.07	0.26	2.3%	2.91	7.62	0.72	67.2%	67.2%
11			22		4	4.44	12.04	2.80	0.44	3.6%	2.05	5.98	1.76	49.6%	49.6%
12			33		4	6.11	11.65	1.29	0.60	5.1%	3.23	6.47	0.77	55.5%	55.5%
13			34		4	6.04	14.56	0.96	0.19	1.3%	3.29	8.39	0.70	57.6%	57.6%
14			35		4	6.73	12.59	0.94	0.20	1.6%	3.57	8.76	0.26	69.6%	69.6%
15			36		4	4.38	11.86	2.70	0.34	2.9%	1.65	6.53	1.39	55.1%	55.1%
16			128		1	1.18	2.93	0.49	0.14	4.6%	0.47	1.64	0.27	56.1%	56.1%
17			131		2	1.70	4.57	1.11	0.37	8.1%	0.68	2.69	0.63	58.9%	58.9%
18			132		2	2.37	5.27	0.42	0.10	1.9%	1.11	3.19	0.26	60.6%	60.6%
19			133		2	2.90	6.89	0.98	0.28	4.0%	1.39	2.61	0.54	38.0%	38.0%
20			140		2	3.39	7.06	0.27	0.12	1.7%	1.67	4.41	0.17	62.5%	62.5%
21			141		2	3.72	7.17	1.00	0.29	4.0%	1.85	3.45	0.56	48.1%	48.1%
22			146		4	5.30	10.74	1.01	0.29	2.7%	2.66	7.72	0.55	71.9%	71.9%
23	0	Patch	147		4	6.17	13.08	0.59	0.30	2.3%	3.18	9.11	0.38	69.6%	69.6%
24			148		4	6.23	12.81	0.62	0.25	2.0%	3.54	7.72	0.29	60.2%	60.2%
25			149		4	5.76	10.35	3.20	0.31	3.0%	3.10	5.67	2.01	54.7%	54.7%
26			150		4	3.47	7.67	2.45	0.50	6.5%	1.66	3.13	1.66	40.9%	40.9%
27			161		4	5.97	12.39	0.70	0.29	2.4%	3.06	8.82	0.44	71.2%	71.2%
28			162		4	6.26	13.27	0.47	0.27	2.0%	3.55	8.26	0.24	62.2%	62.2%
29			163		4	6.89	12.01	1.96	0.39	3.3%	3.85	6.47	0.99	53.8%	53.8%
30			164		4	4.83	8.68	3.10	0.41	4.7%	2.48	4.49	2.03	51.7%	51.7%
31			0	128	2	2.47	6.87	0.98	0.31	4.5%	1.04	3.86	0.59	56.3%	56.3%
32			3	133	4	5.36	10.38	2.94	0.85	8.2%	2.11	5.04	1.83	48.5%	48.5%
33			4	132	4	6.02	13.21	1.15	0.26	1.9%	2.69	8.39	0.65	63.5%	63.5%
34			5	131	4	4.89	13.00	3.88	0.78	6.0%	1.69	6.77	2.30	52.0%	52.0%
35			12	141	4	5.72	14.81	1.47	0.49	3.3%	2.68	7.26	0.83	49.0%	49.0%
36			13	140	4	7.55	16.28	0.69	0.42	2.6%	3.74	10.45	0.38	64.2%	64.2%
37			18	148	8	11.07	23.55	3.59	1.20	5.1%	5.00	11.95	2.48	50.8%	50.8%
38			19	146	8	13.04	24.89	2.53	0.87	3.5%	6.84	15.59	1.52	62.6%	62.6%
39			20	147	8	13.83	29.26	1.82	0.88	3.0%	7.16	20.00	1.17	68.4%	68.4%
40			21	149	8	12.48	22.81	5.64	0.71	3.1%	6.58	13.05	2.93	57.2%	57.2%
41			22	150	8	10.44	20.43	7.44	1.71	8.4%	4.42	10.13	5.00	49.6%	49.6%
42			33	164	8	11.65	21.37	5.47	1.36	6.4%	5.64	10.61	3.28	49.7%	49.7%
43			34	161	8	13.48	27.76	2.32	0.66	2.4%	7.11	18.52	1.64	66.7%	66.7%
44			35	162	8	13.38	28.19	1.74	0.64	2.3%	7.23	18.64	0.72	66.1%	66.1%
45			36	163	8	13.73	26.54	5.63	1.09	4.1%	6.34	14.80	3.49	55.7%	55.7%

										max ratio out of all beams		max ratio out of all beams	
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm 2PD (W/m2)				8.4%	4cm 2PD (W/m2) at 15mm evaluation distance	59.2%	59.2%
						S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(Worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	1.26	**3.76**	0.25	0.06	1.5%	**1.41**	37.5%	37.5%
2			3		2	1.96	**6.30**	2.25	0.46	7.2%	**1.62**	25.8%	25.8%
3			4		2	3.61	**7.91**	0.39	0.11	1.3%	**3.65**	46.1%	46.1%
4			5		2	2.72	**6.55**	1.88	0.23	3.5%	**2.86**	43.7%	43.7%
5			12		2	2.51	**6.77**	0.59	0.11	1.6%	**2.15**	31.7%	31.7%
6			13		2	3.24	**6.87**	0.35	0.13	1.9%	**3.26**	47.5%	47.5%
7			18		4	4.73	**9.67**	2.69	0.71	7.4%	**3.91**	40.5%	40.5%
8			19		4	6.21	**13.56**	0.93	0.37	2.7%	**5.50**	40.6%	40.6%
9			20		4	7.13	**15.03**	0.60	0.31	2.1%	**7.68**	51.1%	51.1%
10			21		4	5.62	**11.33**	2.07	0.26	2.3%	**5.76**	50.8%	50.8%
11			22		4	4.44	**12.04**	2.80	0.44	3.6%	**3.88**	32.2%	32.2%
12			33		4	6.11	**11.65**	1.29	0.60	5.1%	**4.74**	40.7%	40.7%
13			34		4	6.04	**14.56**	0.96	0.19	1.3%	**6.21**	42.6%	42.6%
14			35		4	6.73	**12.59**	0.94	0.20	1.6%	**6.94**	55.1%	55.1%
15			36		4	4.38	**11.86**	2.70	0.34	2.9%	**4.32**	36.4%	36.4%
16			128		1	1.18	**2.93**	0.49	0.14	4.6%	**1.24**	42.5%	42.5%
17			131		2	1.70	**4.57**	1.11	0.37	8.1%	**2.17**	47.5%	47.5%
18			132		2	2.37	**5.27**	0.42	0.10	1.9%	**2.41**	45.7%	45.7%
19			133		2	2.90	**6.89**	0.98	0.28	4.0%	**1.76**	25.6%	25.6%
20			140		2	3.39	**7.06**	0.27	0.12	1.7%	**3.23**	45.7%	45.7%
21			141		2	3.72	**7.17**	1.00	0.29	4.0%	**2.30**	32.0%	32.0%
22			146		4	5.30	**10.74**	1.01	0.29	2.7%	**6.36**	59.2%	59.2%
23	0	Patch	147		4	6.17	**13.08**	0.59	0.30	2.3%	**7.40**	56.6%	56.6%
24			148		4	6.23	**12.81**	0.62	0.25	2.0%	**5.50**	43.0%	43.0%
25			149		4	5.76	**10.35**	3.20	0.31	3.0%	**4.12**	39.8%	39.8%
26			150		4	3.47	**7.67**	2.45	0.50	6.5%	**1.85**	24.2%	24.2%
27			161		4	5.97	**12.39**	0.70	0.29	2.4%	**7.22**	58.3%	58.3%
28			162		4	6.26	**13.27**	0.47	0.27	2.0%	**6.16**	46.4%	46.4%
29			163		4	6.89	**12.01**	1.96	0.39	3.3%	**4.46**	37.2%	37.2%
30			164		4	4.83	**8.68**	3.10	0.41	4.7%	**3.08**	35.5%	35.5%
31			0	128	2	2.47	**6.87**	0.98	0.31	4.5%	**2.70**	39.4%	39.4%
32			3	133	4	5.36	**10.38**	2.94	0.85	8.2%	**3.14**	30.2%	30.2%
33			4	132	4	6.02	**13.21**	1.15	0.26	1.9%	**6.11**	46.3%	46.3%
34			5	131	4	4.89	**13.00**	3.88	0.78	6.0%	**4.55**	35.0%	35.0%
35			12	141	4	5.72	**14.81**	1.47	0.49	3.3%	**4.75**	32.0%	32.0%
36			13	140	4	7.55	**16.28**	0.69	0.42	2.6%	**7.75**	47.6%	47.6%
37			18	148	8	11.07	**23.55**	3.59	1.20	5.1%	**7.62**	32.3%	32.3%
38			19	146	8	13.04	**24.89**	2.53	0.87	3.5%	**12.42**	49.9%	49.9%
39			20	147	8	13.83	**29.26**	1.82	0.88	3.0%	**16.43**	56.2%	56.2%
40			21	149	8	12.48	**22.81**	5.64	0.71	3.1%	**9.97**	43.7%	43.7%
41			22	150	8	10.44	**20.43**	7.44	1.71	8.4%	**6.19**	30.3%	30.3%
42			33	164	8	11.65	**21.37**	5.47	1.36	6.4%	**7.92**	37.0%	37.0%
43			34	161	8	13.48	**27.76**	2.32	0.66	2.4%	**14.44**	52.0%	52.0%
44			35	162	8	13.38	**28.19**	1.74	0.64	2.3%	**14.47**	51.3%	51.3%
45			36	163	8	13.73	**26.54**	5.63	1.09	4.1%	**9.78**	36.8%	36.8%

Module 0 High CH

										max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)				10.1%	4cm 2PD (W/m2) at 10mm evaluation distance			71.4%	71.4%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (front 2mm)/(worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
1			0		1	1.20	3.70	0.24	0.07	1.8%	0.47	1.94	0.14	52.5%	52.5%
2			3		2	1.85	5.81	1.95	0.51	8.7%	0.87	2.13	1.28	36.6%	36.6%
3			4		2	3.23	7.51	0.33	0.11	1.5%	1.47	4.72	0.20	62.9%	62.9%
4			5		2	2.54	6.11	1.71	0.24	3.9%	0.98	3.64	1.00	59.6%	59.6%
5			12		2	2.35	6.63	0.60	0.11	1.6%	1.01	3.16	0.42	47.7%	47.7%
6			13		2	3.15	6.51	0.35	0.16	2.4%	1.37	4.22	0.16	64.9%	64.9%
7			18		4	4.70	9.47	2.70	0.74	7.8%	2.32	5.12	1.96	54.1%	54.1%
8			19		4	5.37	12.88	0.86	0.49	3.8%	3.00	6.98	0.47	54.2%	54.2%
9			20		4	6.90	14.43	0.54	0.25	1.8%	3.57	9.65	0.31	66.9%	66.9%
10			21		4	5.05	10.58	1.98	0.26	2.4%	2.55	7.24	0.70	68.4%	68.4%
11			22		4	4.71	11.41	2.43	0.58	5.1%	1.98	5.73	1.50	50.2%	50.2%
12			33		4	5.44	11.00	1.48	0.62	5.7%	2.98	6.87	0.93	53.4%	53.4%
13			34		4	5.35	14.16	0.79	0.25	1.7%	2.91	8.23	0.56	58.1%	58.1%
14			35		4	6.16	11.77	0.85	0.24	2.0%	3.19	8.40	0.22	71.4%	71.4%
15			36		4	4.50	11.38	2.55	0.39	3.4%	1.67	6.36	1.27	55.9%	55.9%
16			128		1	1.08	2.84	0.51	0.16	5.6%	0.45	1.48	0.28	52.1%	52.1%
17			131		2	1.56	4.44	1.05	0.41	9.2%	0.70	2.48	0.52	55.9%	55.9%
18			132		2	2.22	5.01	0.39	0.11	2.1%	1.02	2.87	0.24	57.2%	57.2%
19			133		2	2.74	6.34	0.86	0.29	4.6%	1.31	2.34	0.49	36.8%	36.8%
20			140		2	3.05	6.81	0.25	0.12	1.8%	1.41	4.21	0.14	61.8%	61.8%
21			141		2	3.47	6.52	0.90	0.32	4.9%	1.74	3.22	0.50	49.4%	49.4%
22			146		4	4.31	9.98	1.00	0.36	3.6%	2.10	6.79	0.50	68.0%	68.0%
23	0	Patch	147		4	5.46	12.05	0.52	0.33	2.8%	2.75	8.31	0.30	68.9%	68.9%
24			148		4	5.70	12.30	0.51	0.25	2.1%	3.21	7.19	0.26	58.4%	58.4%
25			149		4	5.53	9.67	2.93	0.33	3.4%	3.06	5.28	1.77	54.6%	54.6%
26			150		4	3.72	7.03	2.60	0.49	7.0%	1.82	3.28	1.69	46.6%	46.6%
27			161		4	5.08	11.34	0.64	0.33	2.9%	2.53	7.87	0.35	69.4%	69.4%
28			162		4	5.94	12.68	0.43	0.28	2.2%	3.31	7.71	0.20	60.8%	60.8%
29			163		4	6.12	11.22	1.79	0.35	3.1%	3.51	6.10	0.79	54.3%	54.3%
30			164		4	4.77	8.38	3.00	0.40	4.8%	2.53	4.42	1.91	52.7%	52.7%
31			0	128	2	2.32	6.54	0.95	0.34	5.2%	0.97	3.65	0.54	55.8%	55.8%
32			3	133	4	5.36	9.59	2.73	0.97	10.1%	2.10	4.76	1.68	49.7%	49.7%
33			4	132	4	5.76	12.72	1.07	0.25	2.0%	2.62	7.94	0.64	62.4%	62.4%
34			5	131	4	4.84	12.85	3.50	0.78	6.1%	1.65	6.64	1.96	51.7%	51.7%
35			12	141	4	5.55	14.35	1.30	0.47	3.3%	2.42	7.14	0.80	49.8%	49.8%
36			13	140	4	6.76	15.78	0.67	0.49	3.1%	3.31	10.22	0.37	64.8%	64.8%
37			18	148	8	10.18	22.65	3.57	1.17	5.2%	4.22	11.16	2.55	49.3%	49.3%
38			19	146	8	10.93	23.28	2.19	1.08	4.6%	5.56	14.56	1.24	62.5%	62.5%
39			20	147	8	12.78	28.05	1.58	0.77	2.8%	6.73	19.11	0.99	68.1%	68.1%
40			21	149	8	11.59	21.25	5.73	0.69	3.2%	6.11	12.73	2.82	59.9%	59.9%
41			22	150	8	11.06	19.70	7.24	1.89	9.6%	5.24	9.04	4.71	45.9%	45.9%
42			33	164	8	11.21	19.59	5.45	1.28	6.5%	5.75	9.72	3.16	49.6%	49.6%
43			34	161	8	11.37	27.22	1.94	0.68	2.5%	5.86	17.72	1.27	65.1%	65.1%
44			35	162	8	12.41	27.12	1.68	0.83	3.1%	6.46	17.95	0.68	66.2%	66.2%
45			36	163	8	13.03	24.77	4.66	1.16	4.7%	6.02	14.19	2.90	57.3%	57.3%

										max ratio out of all beams	max ratio out of all beams		ratio out of all b
						4cm2PD (W/m2)				10.1%	4cm2PD (W/m2) at 15mm evaluation distance	57.7%	57.7%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(Worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	1.20	**3.70**	0.24	0.07	1.8%	**1.35**	36.4%	36.4%
2			3		2	1.85	**5.81**	1.95	0.51	8.7%	**1.54**	26.4%	26.4%
3			4		2	3.23	**7.51**	0.33	0.11	1.5%	**3.54**	47.1%	47.1%
4			5		2	2.54	**6.11**	1.71	0.24	3.9%	**2.72**	44.5%	44.5%
5			12		2	2.35	**6.63**	0.60	0.11	1.6%	**2.11**	31.9%	31.9%
6			13		2	3.15	**6.51**	0.35	0.16	2.4%	**3.17**	48.7%	48.7%
7			18		4	4.70	**9.47**	2.70	0.74	7.8%	**3.71**	39.2%	39.2%
8			19		4	5.37	**12.88**	0.86	0.49	3.8%	**5.12**	39.7%	39.7%
9			20		4	6.90	**14.43**	0.54	0.25	1.8%	**7.47**	51.8%	51.8%
10			21		4	5.05	**10.58**	1.98	0.26	2.4%	**5.56**	52.5%	52.5%
11			22		4	4.71	**11.41**	2.43	0.58	5.1%	**3.64**	31.9%	31.9%
12			33		4	5.44	**11.00**	1.48	0.62	5.7%	**4.27**	38.8%	38.8%
13			34		4	5.35	**14.16**	0.79	0.25	1.7%	**6.12**	43.2%	43.2%
14			35		4	6.16	**11.77**	0.85	0.24	2.0%	**6.79**	57.7%	57.7%
15			36		4	4.50	**11.38**	2.55	0.39	3.4%	**4.13**	36.3%	36.3%
16			128		1	1.08	**2.84**	0.51	0.16	5.6%	**1.05**	37.1%	37.1%
17			131		2	1.56	**4.44**	1.05	0.41	9.2%	**1.92**	43.3%	43.3%
18			132		2	2.22	**5.01**	0.39	0.11	2.1%	**2.13**	42.6%	42.6%
19			133		2	2.74	**6.34**	0.86	0.29	4.6%	**1.55**	24.5%	24.5%
20			140		2	3.05	**6.81**	0.25	0.12	1.8%	**3.12**	45.8%	45.8%
21			141		2	3.47	**6.52**	0.90	0.32	4.9%	**2.18**	33.4%	33.4%
22			146		4	4.31	**9.98**	1.00	0.36	3.6%	**5.62**	56.3%	56.3%
23	0	Patch	147		4	5.46	**12.05**	0.52	0.33	2.8%	**6.75**	56.0%	56.0%
24			148		4	5.70	**12.30**	0.51	0.25	2.1%	**5.10**	41.4%	41.4%
25			149		4	5.53	**9.67**	2.93	0.33	3.4%	**3.96**	40.9%	40.9%
26			150		4	3.72	**7.03**	2.60	0.49	7.0%	**2.07**	29.4%	29.4%
27			161		4	5.08	**11.34**	0.64	0.33	2.9%	**6.50**	57.3%	57.3%
28			162		4	5.94	**12.68**	0.43	0.28	2.2%	**5.69**	44.9%	44.9%
29			163		4	6.12	**11.22**	1.79	0.35	3.1%	**4.18**	37.3%	37.3%
30			164		4	4.77	**8.38**	3.00	0.40	4.8%	**3.22**	38.4%	38.4%
31			0	128	2	2.32	**6.54**	0.95	0.34	5.2%	**2.54**	38.9%	38.9%
32			3	133	4	5.36	**9.59**	2.73	0.97	10.1%	**3.08**	32.1%	32.1%
33			4	132	4	5.76	**12.72**	1.07	0.25	2.0%	**5.73**	45.0%	45.0%
34			5	131	4	4.84	**12.85**	3.50	0.78	6.1%	**4.34**	33.8%	33.8%
35			12	141	4	5.55	**14.35**	1.30	0.47	3.3%	**4.81**	33.5%	33.5%
36			13	140	4	6.76	**15.78**	0.67	0.49	3.1%	**7.64**	48.4%	48.4%
37			18	148	8	10.18	**22.65**	3.57	1.17	5.2%	**7.15**	31.6%	31.6%
38			19	146	8	10.93	**23.28**	2.19	1.08	4.6%	**11.44**	49.1%	49.1%
39			20	147	8	12.78	**28.05**	1.58	0.77	2.8%	**15.52**	55.3%	55.3%
40			21	149	8	11.59	**21.25**	5.73	0.69	3.2%	**9.53**	44.9%	44.9%
41			22	150	8	11.06	**19.70**	7.24	1.89	9.6%	**6.20**	31.5%	31.5%
42			33	164	8	11.21	**19.59**	5.45	1.28	6.5%	**7.32**	37.4%	37.4%
43			34	161	8	11.37	**27.22**	1.94	0.68	2.5%	**13.85**	50.9%	50.9%
44			35	162	8	12.41	**27.12**	1.68	0.83	3.1%	**14.01**	51.7%	51.7%
45			36	163	8	13.03	**24.77**	4.66	1.16	4.7%	**9.28**	37.5%	37.5%

Table 3.2 PD of Module 0 (38.5GHz – n260)

Module 0 Low CH

										max ratio out of all beams				max ratio out of all beams	
						4cm 2 PD (W/m 2)				11.3%	4cm 2 PD (W/m 2) at 10mm evaluation distance			65.5%	65.5%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio (Worst-surface (10mm/2mm)	ratio (back 10mm)/(Worst-surface 2mm)
1	0	Patch	0		1	0.99	2.30	0.18	0.08	3.6%	0.51	0.91	0.12	39.3%	39.3%
2			3		2	1.86	3.76	0.40	0.25	6.6%	1.06	1.53	0.23	40.6%	40.6%
3			4		2	1.50	3.29	0.19	0.08	2.4%	0.91	1.70	0.14	51.6%	51.6%
4			5		2	1.57	4.44	0.63	0.13	2.9%	0.77	1.95	0.38	44.0%	44.0%
5			12		2	1.55	3.35	0.19	0.12	3.6%	0.93	1.66	0.13	49.5%	49.5%
6			13		2	1.76	3.98	0.35	0.17	4.2%	0.81	1.81	0.27	45.5%	45.5%
7			18		4	3.35	7.17	1.23	0.46	6.4%	1.90	2.89	0.78	40.3%	40.3%
8			19		4	2.29	5.38	0.74	0.42	7.7%	1.18	2.88	0.31	53.5%	53.5%
9			20		4	2.22	6.31	0.83	0.42	6.7%	1.14	3.60	0.37	57.1%	57.1%
10			21		4	2.37	6.70	1.45	0.21	3.1%	1.27	3.41	0.96	50.9%	50.9%
11			22		4	2.66	6.98	1.18	0.18	2.6%	1.42	2.84	0.82	40.7%	40.7%
12			33		4	3.22	6.87	1.00	0.41	6.0%	1.78	3.13	0.59	45.5%	45.5%
13			34		4	2.14	5.34	0.84	0.48	9.0%	1.07	2.89	0.37	54.1%	54.1%
14			35		4	2.16	6.22	0.99	0.31	5.0%	1.14	3.55	0.62	57.2%	57.2%
15			36		4	2.57	6.96	1.52	0.27	3.9%	1.18	2.90	0.97	41.7%	41.7%
16			128		1	0.76	2.08	0.17	0.04	1.7%	0.37	0.88	0.11	42.0%	42.0%
17			131		2	1.17	3.98	0.32	0.08	2.1%	0.47	1.82	0.17	45.7%	45.7%
18			132		2	1.20	3.39	0.31	0.11	3.2%	0.69	1.93	0.18	56.8%	56.8%
19			133		2	1.21	4.10	0.38	0.07	1.8%	0.50	1.83	0.22	44.7%	44.7%
20			140		2	1.16	3.33	0.17	0.08	2.5%	0.65	1.91	0.10	57.2%	57.2%
21			141		2	1.20	3.59	0.35	0.11	3.0%	0.69	1.91	0.21	53.3%	53.3%
22			146		4	2.28	6.37	1.18	0.37	5.9%	0.89	3.16	0.41	49.7%	49.7%
23			147		4	2.25	5.23	0.65	0.32	6.0%	1.28	3.42	0.28	65.5%	65.5%
24			148		4	2.31	5.36	0.83	0.46	8.6%	1.37	3.15	0.46	58.8%	58.8%
25			149		4	3.33	6.47	0.75	0.38	5.9%	1.97	3.18	0.46	49.2%	49.2%
26			150		4	3.14	6.45	0.94	0.37	5.7%	1.44	3.12	0.51	48.4%	48.4%
27			161		4	2.49	5.60	0.61	0.34	6.0%	1.33	3.26	0.21	58.2%	58.2%
28			162		4	2.07	5.25	0.90	0.46	8.8%	1.18	3.13	0.47	59.6%	59.6%
29			163		4	2.79	5.68	0.68	0.39	6.9%	1.73	3.28	0.36	57.7%	57.7%
30			164		4	3.19	7.05	0.96	0.30	4.2%	1.60	3.36	0.61	47.7%	47.7%
31			0	128	2	1.81	4.65	0.42	0.12	2.5%	0.97	2.03	0.26	43.7%	43.7%
32			3	131	4	3.60	8.04	0.77	0.40	5.0%	1.70	3.78	0.51	47.0%	47.0%
33			4	132	4	3.33	6.92	0.55	0.20	2.9%	2.00	3.88	0.34	56.1%	56.1%
34			5	133	4	2.96	8.52	1.35	0.29	3.4%	1.27	4.34	0.85	51.0%	51.0%
35			12	140	4	2.94	7.07	0.47	0.20	2.9%	1.82	3.92	0.22	55.5%	55.5%
36			13	141	4	3.35	7.83	1.05	0.34	4.3%	1.77	4.04	0.78	51.6%	51.6%
37			18	146	8	6.64	14.88	2.40	0.85	5.7%	3.06	6.34	1.14	42.6%	42.6%
38			19	147	8	4.90	11.27	1.92	0.97	8.6%	2.79	6.60	0.84	58.5%	58.5%
39			20	148	8	5.19	11.92	1.83	1.19	10.0%	2.90	6.86	1.00	57.6%	57.6%
40			21	149	8	6.33	13.64	3.06	0.79	5.8%	3.89	7.15	2.09	52.4%	52.4%
41			22	150	8	6.88	14.06	2.28	0.87	6.2%	3.04	6.13	1.41	43.6%	43.6%
42			33	161	8	6.59	13.23	1.97	0.77	5.8%	3.48	6.57	1.05	49.7%	49.7%
43			34	162	8	4.86	11.18	2.27	1.26	11.3%	2.96	6.68	1.12	59.8%	59.8%
44			35	163	8	5.97	12.31	2.05	0.97	7.8%	3.57	7.42	1.23	60.2%	60.2%
45			36	164	8	7.10	15.66	2.91	0.77	4.9%	3.36	6.76	1.83	43.2%	43.2%

										max ratio out of all beams		max ratio out of all beams	
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm 2PD (W/m2)				11.3%	4cm 2PD (W/m2) at 15mm evaluation distance	47.4%	47.4%
						S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(Worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	0.99	**2.30**	0.18	0.08	3.6%	**0.51**	22.3%	22.3%
2			3		2	1.86	**3.76**	0.40	0.25	6.6%	**1.03**	27.4%	27.4%
3			4		2	1.50	**3.29**	0.19	0.08	2.4%	**1.20**	36.5%	36.5%
4			5		2	1.57	**4.44**	0.63	0.13	2.9%	**1.29**	29.2%	29.2%
5			12		2	1.55	**3.35**	0.19	0.12	3.6%	**1.12**	33.5%	33.5%
6			13		2	1.76	**3.98**	0.35	0.17	4.2%	**1.24**	31.1%	31.1%
7			18		4	3.35	**7.17**	1.23	0.46	6.4%	**1.95**	27.2%	27.2%
8			19		4	2.29	**5.38**	0.74	0.42	7.7%	**2.04**	38.0%	38.0%
9			20		4	2.22	**6.31**	0.83	0.42	6.7%	**2.72**	43.1%	43.1%
10			21		4	2.37	**6.70**	1.45	0.21	3.1%	**2.36**	35.2%	35.2%
11			22		4	2.66	**6.98**	1.18	0.18	2.6%	**1.85**	26.6%	26.6%
12			33		4	3.22	**6.87**	1.00	0.41	6.0%	**2.03**	29.5%	29.5%
13			34		4	2.14	**5.34**	0.84	0.48	9.0%	**2.08**	39.0%	39.0%
14			35		4	2.16	**6.22**	0.99	0.31	5.0%	**2.57**	41.3%	41.3%
15			36		4	2.57	**6.96**	1.52	0.27	3.9%	**1.93**	27.8%	27.8%
16			128		1	0.76	**2.08**	0.17	0.04	1.7%	**0.48**	23.0%	23.0%
17			131		2	1.17	**3.98**	0.32	0.08	2.1%	**1.05**	26.5%	26.5%
18			132		2	1.20	**3.39**	0.31	0.11	3.2%	**1.36**	40.1%	40.1%
19			133		2	1.21	**4.10**	0.38	0.07	1.8%	**1.04**	25.4%	25.4%
20			140		2	1.16	**3.33**	0.17	0.08	2.5%	**1.40**	42.1%	42.1%
21			141		2	1.20	**3.59**	0.35	0.11	3.0%	**1.35**	37.5%	37.5%
22			146		4	2.28	**6.37**	1.18	0.37	5.9%	**2.41**	37.8%	37.8%
23	0	Patch	147		4	2.25	**5.23**	0.65	0.32	6.0%	**2.48**	47.4%	47.4%
24			148		4	2.31	**5.36**	0.83	0.46	8.6%	**2.30**	43.0%	43.0%
25			149		4	3.33	**6.47**	0.75	0.38	5.9%	**2.19**	33.9%	33.9%
26			150		4	3.14	**6.45**	0.94	0.37	5.7%	**2.00**	31.1%	31.1%
27			161		4	2.49	**5.60**	0.61	0.34	6.0%	**2.35**	41.9%	41.9%
28			162		4	2.07	**5.25**	0.90	0.46	8.8%	**2.33**	44.3%	44.3%
29			163		4	2.79	**5.68**	0.68	0.39	6.9%	**2.29**	40.2%	40.2%
30			164		4	3.19	**7.05**	0.96	0.30	4.2%	**2.32**	32.9%	32.9%
31			0	128	2	1.81	**4.65**	0.42	0.12	2.5%	**1.10**	23.7%	23.7%
32			3	131	4	3.60	**8.04**	0.77	0.40	5.0%	**2.49**	31.0%	31.0%
33			4	132	4	3.33	**6.92**	0.55	0.20	2.9%	**2.96**	42.8%	42.8%
34			5	133	4	2.96	**8.52**	1.35	0.29	3.4%	**2.82**	33.1%	33.1%
35			12	140	4	2.94	**7.07**	0.47	0.20	2.9%	**2.88**	40.7%	40.7%
36			13	141	4	3.35	**7.83**	1.05	0.34	4.3%	**2.81**	35.9%	35.9%
37			18	146	8	6.64	**14.88**	2.40	0.85	5.7%	**4.55**	30.6%	30.6%
38			19	147	8	4.90	**11.27**	1.92	0.97	8.6%	**4.78**	42.4%	42.4%
39			20	148	8	5.19	**11.92**	1.83	1.19	10.0%	**5.25**	44.1%	44.1%
40			21	149	8	6.33	**13.64**	3.06	0.79	5.8%	**5.28**	38.7%	38.7%
41			22	150	8	6.88	**14.06**	2.28	0.87	6.2%	**4.01**	28.5%	28.5%
42			33	161	8	6.59	**13.23**	1.97	0.77	5.8%	**4.45**	33.6%	33.6%
43			34	162	8	4.86	**11.18**	2.27	1.26	11.3%	**4.96**	44.4%	44.4%
44			35	163	8	5.97	**12.31**	2.05	0.97	7.8%	**5.56**	45.2%	45.2%
45			36	164	8	7.10	**15.66**	2.91	0.77	4.9%	**4.98**	31.8%	31.8%

Module 0 Mid CH

										max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)				13.5%	4cm 2PD (W/m2) at 10mm evaluation distance			61.9%	61.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Front 2mm)/(Worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio Worst-surface (10mm/2mm)	ratio (Back 10mm)/(Worst-surface 2mm)
1			0		1	1.01	2.91	0.30	0.10	3.3%	0.49	1.34	0.18	46.0%	46.0%
2			3		2	1.93	4.93	0.57	0.18	3.7%	1.06	2.50	0.33	50.7%	50.7%
3			4		2	1.16	3.55	0.35	0.12	3.4%	0.61	2.20	0.23	61.9%	61.9%
4			5		2	1.64	5.80	0.69	0.11	1.8%	0.79	2.75	0.44	47.5%	47.5%
5			12		2	1.36	3.76	0.33	0.14	3.6%	0.68	2.31	0.20	61.4%	61.4%
6			13		2	1.95	5.27	0.48	0.15	2.9%	0.89	2.48	0.31	47.0%	47.0%
7			18		4	4.19	9.93	1.82	0.37	3.7%	2.39	4.91	1.10	49.5%	49.5%
8			19		4	2.55	6.21	1.04	0.65	10.5%	1.33	3.66	0.62	58.9%	58.9%
9			20		4	2.39	7.40	0.87	0.34	4.7%	1.32	4.14	0.49	56.0%	56.0%
10			21		4	3.09	9.16	1.36	0.19	2.1%	1.58	5.25	0.92	57.3%	57.3%
11			22		4	2.82	9.65	1.21	0.18	1.9%	1.10	4.64	0.67	48.0%	48.0%
12			33		4	3.81	9.11	1.36	0.31	3.4%	2.04	4.68	0.74	51.3%	51.3%
13			34		4	2.25	5.80	1.04	0.66	11.3%	1.15	3.42	0.61	59.0%	59.0%
14			35		4	2.96	8.42	0.93	0.24	2.9%	1.59	4.70	0.65	55.8%	55.8%
15			36		4	3.01	9.45	1.39	0.28	3.0%	1.42	4.78	0.95	50.6%	50.6%
16			128		1	0.93	2.66	0.19	0.05	1.7%	0.36	1.39	0.11	52.2%	52.2%
17			131		2	1.70	5.60	0.32	0.13	2.3%	0.73	2.80	0.15	50.1%	50.1%
18			132		2	1.40	4.29	0.34	0.11	2.5%	0.73	2.49	0.19	58.0%	58.0%
19			133		2	1.83	5.63	0.35	0.12	2.1%	0.84	2.78	0.19	49.4%	49.4%
20			140		2	1.27	4.48	0.23	0.08	1.9%	0.66	2.74	0.12	61.2%	61.2%
21			141		2	1.49	4.45	0.34	0.11	2.4%	0.81	2.46	0.22	55.3%	55.3%
22			146		4	2.94	9.25	1.39	0.24	2.6%	1.56	4.91	0.44	53.1%	53.1%
23	0	Patch	147		4	2.23	6.57	0.85	0.50	7.6%	1.16	4.06	0.35	61.8%	61.8%
24			148		4	2.22	6.67	1.13	0.58	8.7%	1.13	4.07	0.60	61.0%	61.0%
25			149		4	3.43	8.40	0.89	0.29	3.4%	1.99	4.51	0.54	53.6%	53.6%
26			150		4	3.29	8.39	1.08	0.29	3.4%	1.30	4.48	0.64	53.5%	53.5%
27			161		4	3.01	8.34	0.84	0.19	2.2%	1.62	5.13	0.25	61.5%	61.5%
28			162		4	2.17	6.46	1.30	0.63	9.8%	1.02	3.79	0.69	58.7%	58.7%
29			163		4	2.59	7.27	0.81	0.44	6.0%	1.40	4.49	0.50	61.7%	61.7%
30			164		4	3.63	8.72	1.22	0.26	3.0%	1.77	4.67	0.76	53.6%	53.6%
31			0	128	2	2.46	5.75	0.64	0.19	3.3%	1.02	3.05	0.43	53.0%	53.0%
32			3	131	4	4.56	10.73	1.00	0.30	2.7%	2.29	5.52	0.59	51.4%	51.4%
33			4	132	4	3.22	8.37	1.05	0.32	3.8%	1.77	4.90	0.66	58.5%	58.5%
34			5	133	4	4.11	11.16	1.20	0.32	2.9%	1.85	5.89	0.87	52.9%	52.9%
35			12	140	4	3.08	8.71	0.72	0.25	2.9%	1.71	5.16	0.41	59.3%	59.3%
36			13	141	4	3.75	10.11	1.21	0.44	4.4%	2.06	5.37	0.85	53.2%	53.2%
37			18	146	8	8.04	20.43	3.42	0.55	2.7%	4.72	10.58	1.53	51.8%	51.8%
38			19	147	8	5.31	13.15	2.47	1.33	10.1%	2.97	7.84	1.12	59.7%	59.7%
39			20	148	8	5.37	15.67	2.47	1.28	8.2%	2.87	8.68	1.36	55.4%	55.4%
40			21	149	8	7.23	18.27	2.79	0.63	3.5%	3.97	10.13	1.97	55.4%	55.4%
41			22	150	8	6.38	18.74	3.17	0.63	3.4%	2.78	9.48	1.84	50.6%	50.6%
42			33	161	8	7.55	18.74	2.52	0.58	3.1%	4.27	10.64	1.14	56.8%	56.8%
43			34	162	8	5.30	12.65	3.05	1.71	13.5%	2.60	7.75	1.46	61.3%	61.3%
44			35	163	8	6.24	16.61	2.52	0.94	5.6%	3.36	9.74	1.74	58.6%	58.6%
45			36	164	8	7.91	19.94	3.32	0.78	3.9%	3.86	10.53	2.18	52.8%	52.8%

										max ratio out of all beams		max ratio out of all beams	
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm 2PD (W/m2)				13.5%	4cm 2PD (W/m2) at 15mm evaluation distance	49.5%	49.5%
						S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (front 2mm)/(worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	1.01	**2.91**	0.30	0.10	3.3%	**0.83**	28.4%	28.4%
2			3		2	1.93	**4.93**	0.57	0.18	3.7%	**1.85**	37.5%	37.5%
3			4		2	1.16	**3.55**	0.35	0.12	3.4%	**1.76**	49.5%	49.5%
4			5		2	1.64	**5.80**	0.69	0.11	1.8%	**2.04**	35.2%	35.2%
5			12		2	1.36	**3.76**	0.33	0.14	3.6%	**1.82**	48.5%	48.5%
6			13		2	1.95	**5.27**	0.48	0.15	2.9%	**1.63**	30.9%	30.9%
7			18		4	4.19	**9.93**	1.82	0.37	3.7%	**3.11**	31.3%	31.3%
8			19		4	2.55	**6.21**	1.04	0.65	10.5%	**2.93**	47.1%	47.1%
9			20		4	2.39	**7.40**	0.87	0.34	4.7%	**3.00**	40.6%	40.6%
10			21		4	3.09	**9.16**	1.36	0.19	2.1%	**3.76**	41.1%	41.1%
11			22		4	2.82	**9.65**	1.21	0.18	1.9%	**3.40**	35.2%	35.2%
12			33		4	3.81	**9.11**	1.36	0.31	3.4%	**3.22**	35.4%	35.4%
13			34		4	2.25	**5.80**	1.04	0.66	11.3%	**2.78**	48.0%	48.0%
14			35		4	2.96	**8.42**	0.93	0.24	2.9%	**3.36**	40.0%	40.0%
15			36		4	3.01	**9.45**	1.39	0.28	3.0%	**3.35**	35.5%	35.5%
16			128		1	0.93	**2.66**	0.19	0.05	1.7%	**0.83**	31.2%	31.2%
17			131		2	1.70	**5.60**	0.32	0.13	2.3%	**1.78**	31.7%	31.7%
18			132		2	1.40	**4.29**	0.34	0.11	2.5%	**1.85**	43.1%	43.1%
19			133		2	1.83	**5.63**	0.35	0.12	2.1%	**1.50**	26.7%	26.7%
20			140		2	1.27	**4.48**	0.23	0.08	1.9%	**2.13**	47.5%	47.5%
21			141		2	1.49	**4.45**	0.34	0.11	2.4%	**1.80**	40.5%	40.5%
22			146		4	2.94	**9.25**	1.39	0.24	2.6%	**3.49**	37.7%	37.7%
23	0	Patch	147		4	2.23	**6.57**	0.85	0.50	7.6%	**3.12**	47.5%	47.5%
24			148		4	2.22	**6.67**	1.13	0.58	8.7%	**3.14**	47.1%	47.1%
25			149		4	3.43	**8.40**	0.89	0.29	3.4%	**3.24**	38.6%	38.6%
26			150		4	3.29	**8.39**	1.08	0.29	3.4%	**2.93**	34.9%	34.9%
27			161		4	3.01	**8.34**	0.84	0.19	2.2%	**3.78**	45.3%	45.3%
28			162		4	2.17	**6.46**	1.30	0.63	9.8%	**2.94**	45.5%	45.5%
29			163		4	2.59	**7.27**	0.81	0.44	6.0%	**3.38**	46.5%	46.5%
30			164		4	3.63	**8.72**	1.22	0.26	3.0%	**3.22**	36.9%	36.9%
31			0	128	2	2.46	**5.75**	0.64	0.19	3.3%	**1.91**	33.3%	33.3%
32			3	131	4	4.56	**10.73**	1.00	0.30	2.7%	**3.82**	35.6%	35.6%
33			4	132	4	3.22	**8.37**	1.05	0.32	3.8%	**3.73**	44.6%	44.6%
34			5	133	4	4.11	**11.15**	1.20	0.32	2.9%	**3.86**	34.7%	34.7%
35			12	140	4	3.08	**8.71**	0.72	0.25	2.9%	**4.04**	46.4%	46.4%
36			13	141	4	3.75	**10.11**	1.21	0.44	4.4%	**3.56**	35.2%	35.2%
37			18	146	8	8.04	**20.43**	3.42	0.55	2.7%	**7.06**	34.5%	34.5%
38			19	147	8	5.31	**13.15**	2.47	1.33	10.1%	**6.40**	48.7%	48.7%
39			20	148	8	5.37	**15.67**	2.47	1.28	8.2%	**6.70**	42.7%	42.7%
40			21	149	8	7.23	**18.27**	2.79	0.63	3.5%	**7.51**	41.1%	41.1%
41			22	150	8	6.38	**18.74**	3.17	0.63	3.4%	**6.74**	36.0%	36.0%
42			33	161	8	7.55	**18.74**	2.52	0.58	3.1%	**7.94**	42.4%	42.4%
43			34	162	8	5.30	**12.65**	3.05	1.71	13.5%	**6.09**	48.1%	48.1%
44			35	163	8	6.24	**16.61**	2.52	0.94	5.6%	**7.33**	44.1%	44.1%
45			36	164	8	7.91	**19.94**	3.32	0.78	3.9%	**7.35**	36.9%	36.9%

Module 0 High CH

										max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)				8.3%	4cm 2PD (W/m2) at 10mm evaluation distance			62.7%	62.7%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Front 2mm)/(Worst-surface 2mm)	S5 (Top)	S2 (Back)	S3 (Right)	ratio Worst-surface (10mm/2mm)	ratio (Back 10mm)/(Worst-surface 2mm)
1			0		1	1.06	3.24	0.26	0.11	3.3%	0.55	1.69	0.15	52.1%	52.1%
2			3		2	2.21	5.39	0.34	0.20	3.7%	1.21	2.88	0.21	53.4%	53.4%
3			4		2	1.63	3.89	0.19	0.19	5.0%	1.01	2.34	0.11	60.1%	60.1%
4			5		2	1.41	6.35	0.80	0.17	2.7%	0.74	3.28	0.45	51.7%	51.7%
5			12		2	1.85	4.14	0.17	0.20	4.9%	1.15	2.46	0.09	59.5%	59.5%
6			13		2	1.58	5.78	0.46	0.13	2.3%	0.62	2.98	0.32	51.5%	51.5%
7			18		4	3.47	10.01	1.80	0.25	2.5%	1.74	5.36	1.11	53.6%	53.6%
8			19		4	3.82	8.39	0.81	0.35	4.2%	2.08	4.72	0.53	56.3%	56.3%
9			20		4	2.02	7.52	1.23	0.44	5.8%	0.89	4.63	0.69	61.5%	61.5%
10			21		4	2.93	10.72	1.76	0.21	2.0%	1.32	6.28	1.21	58.6%	58.6%
11			22		4	2.60	10.31	1.68	0.23	2.3%	1.31	5.09	0.98	49.3%	49.3%
12			33		4	3.58	9.44	1.46	0.27	2.8%	1.92	5.32	0.88	56.3%	56.3%
13			34		4	3.58	8.04	0.80	0.40	4.9%	1.89	4.45	0.54	55.3%	55.3%
14			35		4	2.36	8.86	1.56	0.36	4.0%	1.02	5.38	1.02	60.7%	60.7%
15			36		4	3.04	11.45	1.79	0.28	2.4%	1.34	5.98	1.13	52.2%	52.2%
16			128		1	1.01	2.83	0.27	0.06	2.2%	0.36	1.40	0.18	49.4%	49.4%
17			131		2	1.83	6.41	0.47	0.12	1.9%	0.77	3.19	0.22	49.7%	49.7%
18			132		2	1.52	4.27	0.38	0.15	3.4%	0.80	2.22	0.26	52.0%	52.0%
19			133		2	1.98	6.47	0.49	0.10	1.6%	0.86	3.07	0.28	47.5%	47.5%
20			140		2	1.42	4.90	0.31	0.12	2.4%	0.64	2.78	0.16	56.7%	56.7%
21			141		2	1.64	4.42	0.44	0.14	3.3%	0.90	2.18	0.30	49.5%	49.5%
22			146		4	2.89	10.29	2.02	0.19	1.9%	1.37	5.81	0.82	56.5%	56.5%
23	0	Patch	147		4	2.28	7.11	0.93	0.35	4.9%	1.09	4.29	0.42	60.4%	60.4%
24			148		4	2.92	7.12	0.94	0.41	5.7%	1.15	3.73	0.44	52.4%	52.4%
25			149		4	3.37	8.97	1.44	0.33	3.7%	1.74	4.15	0.90	46.3%	46.3%
26			150		4	3.10	9.14	1.81	0.23	2.5%	1.42	5.14	0.84	56.2%	56.2%
27			161		4	2.34	9.13	1.12	0.19	2.1%	1.06	5.73	0.40	62.7%	62.7%
28			162		4	2.95	6.95	1.03	0.44	6.3%	1.13	3.64	0.46	52.4%	52.4%
29			163		4	2.92	7.79	1.09	0.34	4.3%	1.28	3.93	0.63	50.5%	50.5%
30			164		4	3.63	9.72	1.61	0.23	2.4%	1.70	4.81	0.86	49.5%	49.5%
31			0	128	2	3.04	6.33	0.73	0.25	3.9%	1.34	3.33	0.39	52.7%	52.7%
32			3	131	4	5.56	12.32	1.02	0.46	3.7%	2.78	6.58	0.61	53.4%	53.4%
33			4	132	4	4.30	8.60	0.66	0.52	6.1%	2.49	5.03	0.39	58.5%	58.5%
34			5	133	4	4.24	12.85	1.30	0.32	2.5%	1.95	6.69	0.76	52.0%	52.0%
35			12	140	4	4.52	9.62	0.71	0.48	5.0%	2.64	5.62	0.31	58.4%	58.4%
36			13	141	4	4.14	10.52	1.05	0.39	3.7%	2.06	5.65	0.72	53.7%	53.7%
37			18	146	8	7.53	21.99	5.23	0.64	2.9%	4.04	12.42	2.68	56.5%	56.5%
38			19	147	8	8.60	16.52	2.24	0.95	5.8%	4.57	9.44	1.12	57.1%	57.1%
39			20	148	8	6.27	15.92	2.48	0.95	6.0%	2.51	8.81	1.37	55.4%	55.4%
40			21	149	8	7.98	21.48	3.70	0.73	3.4%	3.87	11.20	2.40	52.1%	52.1%
41			22	150	8	6.95	21.33	4.25	0.59	2.8%	3.19	10.72	2.53	50.3%	50.3%
42			33	161	8	7.76	21.22	3.47	0.55	2.6%	4.12	12.50	1.53	58.9%	58.9%
43			34	162	8	8.43	15.41	2.22	1.28	8.3%	4.23	8.89	1.14	57.7%	57.7%
44			35	163	8	6.23	18.18	2.72	0.72	4.0%	2.91	10.08	1.79	55.5%	55.5%
45			36	164	8	9.14	22.57	4.37	0.65	2.9%	4.26	11.77	2.67	52.1%	52.1%

										max ratio out of all beams		max ratio out of all beams	
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	4cm 2PD (W/m2)				8.3%	4cm 2PD (W/m2) at 15mm evaluation distance	48.3%	48.3%
						S5 (Top)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	ratio (back 15mm)/(Worst-surface 2mm)	ratio worst-surface (15mm/2mm)
1			0		1	1.06	**3.24**	0.26	0.11	3.3%	**1.11**	34.3%	34.3%
2			3		2	2.21	**5.39**	0.34	0.20	3.7%	**2.03**	37.7%	37.7%
3			4		2	1.63	**3.89**	0.19	0.19	5.0%	**1.88**	48.3%	48.3%
4			5		2	1.41	**6.35**	0.80	0.17	2.7%	**2.42**	38.1%	38.1%
5			12		2	1.85	**4.14**	0.17	0.20	4.9%	**1.94**	46.8%	46.8%
6			13		2	1.58	**5.78**	0.46	0.13	2.3%	**1.93**	33.5%	33.5%
7			18		4	3.47	**10.01**	1.80	0.25	2.5%	**3.60**	36.0%	36.0%
8			19		4	3.82	**8.39**	0.81	0.35	4.2%	**3.34**	39.8%	39.8%
9			20		4	2.02	**7.52**	1.23	0.44	5.8%	**3.41**	45.4%	45.4%
10			21		4	2.93	**10.72**	1.76	0.21	2.0%	**4.71**	44.0%	44.0%
11			22		4	2.60	**10.31**	1.68	0.23	2.3%	**3.88**	37.6%	37.6%
12			33		4	3.58	**9.44**	1.46	0.27	2.8%	**3.73**	39.5%	39.5%
13			34		4	3.58	**8.04**	0.80	0.40	4.9%	**3.08**	38.3%	38.3%
14			35		4	2.36	**8.86**	1.56	0.36	4.0%	**3.93**	44.4%	44.4%
15			36		4	3.04	**11.45**	1.79	0.28	2.4%	**4.35**	38.0%	38.0%
16			128		1	1.01	**2.83**	0.27	0.06	2.2%	**0.89**	31.6%	31.6%
17			131		2	1.83	**6.41**	0.47	0.12	1.9%	**2.15**	33.5%	33.5%
18			132		2	1.52	**4.27**	0.38	0.15	3.4%	**1.59**	37.1%	37.1%
19			133		2	1.98	**6.47**	0.49	0.10	1.6%	**1.80**	27.8%	27.8%
20			140		2	1.42	**4.90**	0.31	0.12	2.4%	**2.14**	43.7%	43.7%
21			141		2	1.64	**4.42**	0.44	0.14	3.3%	**1.52**	34.4%	34.4%
22			146		4	2.89	**10.29**	2.02	0.19	1.9%	**4.35**	42.3%	42.3%
23	0	Patch	147		4	2.28	**7.11**	0.93	0.35	4.9%	**3.30**	46.5%	46.5%
24			148		4	2.92	**7.12**	0.94	0.41	5.7%	**2.60**	36.6%	36.6%
25			149		4	3.37	**8.97**	1.44	0.33	3.7%	**2.71**	30.2%	30.2%
26			150		4	3.10	**9.14**	1.81	0.23	2.5%	**3.34**	36.6%	36.6%
27			161		4	2.34	**9.13**	1.12	0.19	2.1%	**4.34**	47.5%	47.5%
28			162		4	2.95	**6.95**	1.03	0.44	6.3%	**2.48**	35.7%	35.7%
29			163		4	2.92	**7.79**	1.09	0.34	4.3%	**2.84**	36.4%	36.4%
30			164		4	3.63	**9.72**	1.61	0.23	2.4%	**3.31**	34.1%	34.1%
31			0	128	2	3.04	**6.33**	0.73	0.25	3.9%	**2.16**	34.1%	34.1%
32			3	131	4	5.56	**12.32**	1.02	0.46	3.7%	**4.79**	38.8%	38.8%
33			4	132	4	4.30	**8.60**	0.66	0.52	6.1%	**4.05**	47.1%	47.1%
34			5	133	4	4.24	**12.85**	1.30	0.32	2.5%	**4.44**	34.6%	34.6%
35			12	140	4	4.52	**9.62**	0.71	0.48	5.0%	**4.43**	46.0%	46.0%
36			13	141	4	4.14	**10.52**	1.05	0.39	3.7%	**3.86**	36.7%	36.7%
37			18	146	8	7.53	**21.99**	5.23	0.64	2.9%	**8.95**	40.7%	40.7%
38			19	147	8	8.60	**16.52**	2.24	0.95	5.8%	**7.46**	45.1%	45.1%
39			20	148	8	6.27	**15.92**	2.48	0.95	6.0%	**6.26**	39.3%	39.3%
40			21	149	8	7.98	**21.48**	3.70	0.73	3.4%	**8.22**	38.3%	38.3%
41			22	150	8	6.95	**21.33**	4.25	0.59	2.8%	**7.51**	35.2%	35.2%
42			33	161	8	7.76	**21.22**	3.47	0.55	2.6%	**9.24**	43.5%	43.5%
43			34	162	8	8.43	**15.41**	2.22	1.28	8.3%	**6.47**	42.0%	42.0%
44			35	163	8	6.23	**18.18**	2.72	0.72	4.0%	**7.66**	42.1%	42.1%
45			36	164	8	9.14	**22.57**	4.37	0.65	2.9%	**8.33**	36.9%	36.9%

3.1.2 Module 1

Table 3.3 & Table 3.4 show the PD simulation evaluation of Module 1 at 27.9 GHz / 38.5 GHz for the corresponding evaluation planes specified in Table 1.1.

Table 3.3 PD of Module 1 (27.9GHz – n261)

Module 1 Low CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2 PD (W/m 2)			46.3%	4cm 2 PD (W/m 2) at 10mm evaluation distance			60.0%	50.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Fomt 2mm)/(Worst-surface 2mm)	S2 (Back)	S4 (Left)	S1 (Front)	ratio Worst-surface (10mm/2mm)	ratio (back 10mm)/(Worst-surface 2mm)
46			1		1	2.04	**2.36**	0.70	29.8%	0.65	**1.10**	0.27	46.6%	27.5%
47			6		2	3.49	**3.63**	0.64	17.7%	1.51	**1.87**	0.22	51.5%	41.7%
48			7		2	3.35	**4.04**	1.48	36.5%	1.37	**2.38**	0.69	58.9%	34.0%
49			8		2	3.86	**4.52**	1.07	23.6%	1.41	**1.86**	0.37	41.1%	31.1%
50			14		2	4.07	**4.15**	0.78	18.7%	1.72	**2.25**	0.31	54.2%	41.4%
51			15		2	2.70	**3.53**	1.42	40.4%	1.05	**1.90**	0.64	53.9%	29.8%
52			23		4	8.42	**8.70**	1.84	21.2%	4.42	**4.75**	0.75	54.6%	50.9%
53			24		4	9.74	**9.88**	2.19	22.2%	4.74	**5.42**	1.06	54.9%	48.0%
54			25		4	8.04	**8.52**	2.62	30.8%	4.00	**4.91**	1.34	57.7%	46.9%
55			26		4	6.33	**7.86**	2.71	34.5%	2.62	**3.92**	1.31	49.9%	33.3%
56			27		4	4.82	**6.33**	1.90	30.0%	1.72	**2.50**	0.83	39.5%	27.2%
57			37		4	8.18	**8.36**	1.89	22.6%	4.11	**4.44**	0.78	53.2%	49.2%
58			38		4	9.70	**10.42**	2.91	27.9%	5.09	**6.06**	1.48	58.2%	48.9%
59			39		4	7.13	**8.12**	2.54	31.3%	3.21	**4.33**	1.30	53.3%	39.5%
60			40		4	5.19	**7.08**	2.42	34.2%	1.98	**3.22**	1.12	45.5%	28.0%
61			129		1	1.67	**2.22**	0.75	33.9%	0.51	**0.98**	0.26	44.3%	23.1%
62			134		2	4.27	**4.51**	0.96	21.2%	1.48	**1.80**	0.29	40.0%	32.9%
63			135		2	**4.53**	4.08	0.62	13.7%	**2.20**	2.14	0.24	48.7%	48.7%
64			136		2	2.51	**3.20**	0.93	29.2%	0.97	**1.62**	0.38	50.8%	30.5%
65			142		2	**4.61**	4.49	0.82	17.8%	2.08	**2.27**	0.28	49.3%	45.1%
66			143		2	**4.33**	3.92	0.58	13.5%	**2.20**	2.06	0.22	50.8%	50.8%
67			151		4	5.02	**6.69**	3.10	46.3%	2.02	**3.32**	1.26	49.6%	30.3%
68	1	Patch	152		4	7.34	**7.67**	2.54	33.2%	3.16	**4.43**	1.28	57.8%	41.2%
69			153		4	6.96	**7.26**	2.02	27.9%	3.32	**4.04**	0.99	55.6%	45.7%
70			154		4	7.55	**8.01**	2.12	26.5%	3.78	**4.54**	1.06	56.7%	47.1%
71			155		4	6.45	**7.13**	1.64	23.0%	3.08	**3.86**	0.70	54.2%	43.2%
72			165		4	6.54	**7.59**	2.84	37.4%	2.81	**4.16**	1.32	54.7%	37.0%
73			166		4	6.50	**6.67**	2.29	34.4%	3.12	**4.00**	1.15	60.0%	46.8%
74			167		4	7.74	**8.07**	2.20	27.2%	3.81	**4.58**	1.08	56.7%	47.2%
75			168		4	5.56	**6.22**	1.51	24.3%	2.82	**3.25**	0.71	52.3%	45.4%
76			1	129	2	3.70	**4.89**	1.73	35.2%	1.21	**2.46**	0.73	50.2%	24.6%
77			6	134	4	**9.54**	8.87	2.17	22.8%	3.63	**4.58**	0.58	48.0%	38.1%
78			7	135	4	**9.46**	8.68	2.86	30.3%	4.43	**5.00**	1.25	52.9%	46.9%
79			8	136	4	6.86	**7.95**	2.74	34.5%	2.46	**3.30**	1.05	41.5%	31.0%
80			14	142	4	**10.48**	9.43	2.10	20.0%	4.42	**5.38**	0.77	51.4%	42.1%
81			15	143	4	**8.56**	7.63	2.92	34.1%	4.10	**4.28**	1.30	50.0%	47.9%
82			23	151	8	16.11	**16.27**	6.39	39.3%	6.75	**8.20**	2.65	50.4%	41.5%
83			24	152	8	**19.36**	18.91	6.33	32.7%	8.36	**10.49**	3.02	54.2%	43.2%
84			25	154	8	**19.41**	18.65	7.68	39.6%	9.77	**10.82**	4.01	55.8%	50.4%
85			26	153	8	13.42	**14.65**	4.66	31.8%	5.35	**7.05**	2.12	48.1%	36.5%
86			27	155	8	15.31	**15.59**	4.85	31.1%	6.60	**7.68**	2.05	49.3%	42.3%
87			37	165	8	16.67	**17.43**	6.08	34.9%	6.50	**8.98**	2.73	51.5%	37.3%
88			38	166	8	16.54	**18.34**	7.18	39.1%	8.12	**10.83**	3.57	59.0%	44.3%
89			39	168	8	**17.27**	16.25	6.27	36.3%	8.49	**8.81**	3.23	51.0%	49.2%
90			40	167	8	12.90	**15.79**	4.76	30.1%	5.30	**7.34**	1.91	46.5%	33.6%

									max ratio out of all beams			max ratio out of all beams	
						4cm2 PD (W/m2)			46.3%	4cm2 PD (W/m2) at 15mm evaluation distance		37.5%	37.5%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Front 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	2.04	**2.36**	0.70	29.8%	**0.40**	0.17	17.0%	17.0%
47			6		2	3.49	**3.63**	0.64	17.7%	**1.03**	0.14	28.3%	28.3%
48			7		2	3.35	**4.04**	1.48	36.5%	**0.91**	0.47	22.6%	22.6%
49			8		2	3.86	**4.52**	1.07	23.6%	**0.97**	0.24	21.4%	21.4%
50			14		2	4.07	**4.15**	0.78	18.7%	**1.15**	0.20	27.8%	27.8%
51			15		2	2.70	**3.53**	1.42	40.4%	**0.67**	0.43	19.0%	19.0%
52			23		4	8.42	**8.70**	1.84	21.2%	**3.08**	0.53	35.5%	35.5%
53			24		4	9.74	**9.88**	2.19	22.2%	**3.57**	0.75	36.1%	36.1%
54			25		4	8.04	**8.52**	2.62	30.8%	**2.98**	0.99	35.0%	35.0%
55			26		4	6.33	**7.86**	2.71	34.5%	**1.73**	0.91	22.0%	22.0%
56			27		4	4.82	**6.33**	1.90	30.0%	**1.08**	0.56	17.1%	17.1%
57			37		4	8.18	**8.36**	1.89	22.6%	**2.96**	0.53	35.5%	35.5%
58			38		4	9.70	**10.42**	2.91	27.9%	**3.89**	1.06	37.3%	37.3%
59			39		4	7.13	**8.12**	2.54	31.3%	**2.19**	0.94	27.0%	27.0%
60			40		4	5.19	**7.08**	2.42	34.2%	**1.34**	0.77	18.9%	18.9%
61			129		1	1.67	**2.22**	0.75	33.9%	**0.33**	0.16	14.7%	14.7%
62			134		2	4.27	**4.51**	0.96	21.2%	**0.95**	0.17	21.0%	21.0%
63			135		2	**4.53**	4.08	0.62	13.7%	**1.53**	0.16	33.7%	33.7%
64			136		2	2.51	**3.20**	0.93	29.2%	**0.64**	0.25	20.0%	20.0%
65			142		2	**4.61**	4.49	0.82	17.8%	**1.39**	0.18	30.1%	30.1%
66			143		2	**4.33**	3.92	0.58	13.5%	**1.57**	0.14	36.2%	36.2%
67			151		4	5.02	**6.69**	3.10	46.3%	**1.26**	0.85	18.8%	18.8%
68	1	Patch	152		4	7.34	**7.67**	2.54	33.2%	**2.18**	0.91	28.5%	28.5%
69			153		4	6.96	**7.26**	2.02	27.9%	**2.46**	0.73	33.9%	33.9%
70			154		4	7.55	**8.01**	2.12	26.5%	**2.86**	0.77	35.7%	35.7%
71			155		4	6.45	**7.13**	1.64	23.0%	**2.12**	0.48	29.7%	29.7%
72			165		4	6.54	**7.59**	2.84	37.4%	**1.74**	0.91	22.9%	22.9%
73			166		4	6.50	**6.67**	2.29	34.4%	**2.30**	0.83	34.5%	34.5%
74			167		4	7.74	**8.07**	2.20	27.2%	**2.87**	0.79	35.6%	35.6%
75			168		4	5.56	**6.22**	1.51	24.3%	**2.05**	0.50	32.9%	32.9%
76			1	129	2	3.70	**4.89**	1.73	35.2%	**0.83**	0.48	17.0%	17.0%
77			6	134	4	**9.54**	8.87	2.17	22.8%	**2.35**	0.38	24.6%	24.6%
78			7	135	4	**9.45**	8.68	2.86	30.3%	**2.99**	0.88	31.7%	31.7%
79			8	136	4	6.86	**7.95**	2.74	34.5%	**1.62**	0.69	20.4%	20.4%
80			14	142	4	**10.48**	9.43	2.10	20.0%	**2.89**	0.51	27.6%	27.6%
81			15	143	4	**8.56**	7.63	2.92	34.1%	**2.87**	0.90	33.5%	33.5%
82			23	151	8	16.11	**16.27**	6.39	39.3%	**4.60**	1.80	28.3%	28.3%
83			24	152	8	**19.36**	18.91	6.33	32.7%	**6.02**	2.11	31.1%	31.1%
84			25	154	8	**19.41**	18.65	7.68	39.6%	**7.28**	2.94	37.5%	37.5%
85			26	153	8	13.42	**14.65**	4.66	31.8%	**3.58**	1.41	24.4%	24.4%
86			27	155	8	15.31	**15.59**	4.85	31.1%	**4.36**	1.38	28.0%	28.0%
87			37	165	8	16.67	**17.43**	6.08	34.9%	**4.39**	1.90	25.2%	25.2%
88			38	166	8	16.54	**18.34**	7.18	39.1%	**5.98**	2.52	32.6%	32.6%
89			39	168	8	**17.27**	16.25	6.27	36.3%	**6.03**	2.34	34.9%	34.9%
90			40	167	8	12.90	**15.79**	4.76	30.1%	**3.87**	1.41	24.5%	24.5%

Module 1 Mid CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			43.6%	4cm 2PD (W/m2) at 10mm evaluation distance			60.1%	51.5%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (from t 2mm)/(worst-surface 2mm)	S2 (Back)	S4 (Left)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
46			1		1	2.08	**2.40**	0.74	30.6%	0.65	**1.13**	0.28	46.9%	27.0%
47			6		2	3.64	**3.78**	0.78	20.6%	1.47	**2.05**	0.29	54.4%	39.0%
48			7		2	3.64	**4.26**	1.57	37.0%	1.49	**2.53**	0.73	59.4%	34.9%
49			8		2	4.18	**4.83**	1.05	21.8%	1.53	**2.08**	0.37	43.2%	31.8%
50			14		2	4.29	**4.37**	0.94	21.5%	1.71	**2.48**	0.39	56.6%	39.2%
51			15		2	2.83	**3.59**	1.43	39.7%	1.13	**1.93**	0.66	53.7%	31.5%
52			23		4	8.27	**8.63**	1.79	20.8%	4.25	**4.81**	0.75	55.7%	49.3%
53			24		4	9.58	**9.88**	2.26	22.8%	4.56	**5.30**	1.10	53.6%	46.2%
54			25		4	8.23	**8.50**	2.46	28.9%	3.95	**4.90**	1.23	57.6%	46.5%
55			26		4	6.61	**8.27**	2.60	31.4%	2.80	**4.09**	1.26	49.5%	33.9%
56			27		4	5.02	**6.42**	1.69	26.3%	1.71	**2.50**	0.76	39.0%	26.6%
57			37		4	7.82	**7.98**	1.74	21.9%	3.75	**4.19**	0.79	52.5%	47.0%
58			38		4	9.72	**10.44**	2.95	28.2%	5.08	**6.02**	1.49	57.6%	48.7%
59			39		4	7.53	**8.61**	2.47	28.7%	3.34	**4.51**	1.26	52.4%	38.8%
60			40		4	5.47	**7.32**	2.26	30.8%	2.02	**3.22**	1.03	44.0%	27.7%
61			129		1	1.68	**2.20**	0.74	33.7%	0.50	**0.96**	0.27	43.8%	22.5%
62			134		2	4.63	**4.75**	1.03	21.7%	1.59	**1.93**	0.36	40.7%	33.4%
63			135		2	**4.16**	3.78	0.60	14.4%	**2.05**	1.85	0.23	49.2%	49.2%
64			136		2	2.57	**3.18**	1.01	31.6%	0.95	**1.71**	0.43	53.9%	29.8%
65			142		2	**4.40**	4.30	0.85	19.4%	2.03	**2.14**	0.29	48.6%	46.1%
66			143		2	**4.10**	3.75	0.56	13.6%	**2.11**	1.87	0.21	51.5%	51.5%
67			151		4	5.47	**6.96**	3.03	43.6%	2.21	**3.52**	1.30	50.5%	31.7%
68	1	Patch	152		4	7.07	**7.40**	2.56	34.5%	2.98	**4.24**	1.31	57.4%	40.2%
69			153		4	6.61	**6.99**	2.27	32.5%	3.08	**3.79**	1.14	54.3%	44.1%
70			154		4	6.66	**7.44**	2.22	29.8%	3.24	**4.17**	1.08	56.0%	43.5%
71			155		4	7.28	**7.78**	1.72	22.2%	3.52	**4.33**	0.76	55.7%	45.2%
72			165		4	6.47	**7.56**	2.74	36.2%	2.92	**4.11**	1.28	54.4%	38.6%
73			166		4	6.48	**6.68**	2.42	36.1%	2.95	**3.97**	1.24	59.5%	44.2%
74			167		4	6.62	**7.26**	2.33	32.2%	3.23	**3.97**	1.15	54.8%	44.5%
75			168		4	6.22	**6.89**	1.69	24.5%	3.13	**3.83**	0.81	55.6%	45.4%
76			1	129	2	3.67	**4.87**	1.75	36.0%	1.21	**2.41**	0.78	49.6%	24.8%
77			6	134	4	**10.52**	9.14	2.44	23.2%	4.02	**5.08**	0.75	48.3%	38.2%
78			7	135	4	**10.00**	8.97	3.10	31.0%	4.82	**5.24**	1.36	52.3%	48.2%
79			8	136	4	7.41	**8.26**	2.53	30.6%	2.42	**3.33**	1.00	40.3%	29.3%
80			14	142	4	**11.53**	9.87	2.44	21.2%	4.77	**5.76**	0.94	49.9%	41.4%
81			15	143	4	**8.87**	7.90	3.03	34.1%	4.43	**4.45**	1.36	50.2%	49.9%
82			23	151	8	**17.13**	16.58	5.98	34.9%	7.17	**8.62**	2.52	50.3%	41.9%
83			24	152	8	**20.11**	19.63	6.34	31.5%	8.35	**11.16**	3.15	55.5%	41.5%
84			25	154	8	**19.41**	17.75	7.54	38.8%	9.85	**10.30**	3.86	53.0%	50.7%
85			26	153	8	13.67	**15.85**	4.82	30.4%	5.62	**7.58**	1.96	47.8%	35.5%
86			27	155	8	**15.84**	14.92	4.48	28.3%	6.58	**7.59**	1.86	47.9%	41.5%
87			37	165	8	**17.81**	17.66	5.47	30.7%	6.76	**9.26**	2.46	52.0%	38.0%
88			38	166	8	18.21	**18.24**	7.40	40.6%	8.22	**10.97**	3.76	60.1%	45.1%
89			39	168	8	**19.00**	17.83	6.35	33.4%	9.48	**9.70**	3.25	51.0%	49.9%
90			40	167	8	13.31	**16.07**	5.05	31.4%	4.97	**7.43**	2.14	46.2%	30.9%

									max ratio out of all beams			max ratio out of all beams	
						4cm 2PD (W/m2)			43.6%	4cm 2PD (W/m2) at 15mm evaluation distance		38.6%	38.6%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	2.08	**2.40**	0.74	30.6%	**0.40**	0.19	16.5%	16.5%
47			6		2	3.64	**3.78**	0.78	20.6%	**0.98**	0.19	26.0%	26.0%
48			7		2	3.64	**4.26**	1.57	37.0%	**0.98**	0.51	23.0%	23.0%
49			8		2	4.18	**4.83**	1.05	21.8%	**1.03**	0.24	21.4%	21.4%
50			14		2	4.29	**4.37**	0.94	21.5%	**1.11**	0.25	25.5%	25.5%
51			15		2	2.83	**3.59**	1.43	39.7%	**0.74**	0.45	20.7%	20.7%
52			23		4	8.27	**8.63**	1.79	20.8%	**2.98**	0.54	34.5%	34.5%
53			24		4	9.58	**9.88**	2.26	22.8%	**3.41**	0.79	34.6%	34.6%
54			25		4	8.23	**8.50**	2.46	28.9%	**2.89**	0.91	34.0%	34.0%
55			26		4	6.61	**8.27**	2.60	31.4%	**1.78**	0.88	21.6%	21.6%
56			27		4	5.02	**6.42**	1.69	26.3%	**1.10**	0.52	17.2%	17.2%
57			37		4	7.82	**7.98**	1.74	21.9%	**2.70**	0.55	33.8%	33.8%
58			38		4	9.72	**10.44**	2.95	28.2%	**3.85**	1.08	36.9%	36.9%
59			39		4	7.53	**8.61**	2.47	28.7%	**2.26**	0.91	26.2%	26.2%
60			40		4	5.47	**7.32**	2.26	30.8%	**1.30**	0.72	17.8%	17.8%
61			129		1	1.68	**2.20**	0.74	33.7%	**0.31**	0.16	14.1%	14.1%
62			134		2	4.63	**4.75**	1.03	21.7%	**1.02**	0.22	21.4%	21.4%
63			135		2	**4.16**	3.78	0.60	14.4%	**1.41**	0.15	34.0%	34.0%
64			136		2	2.57	**3.18**	1.01	31.6%	**0.63**	0.28	19.8%	19.8%
65			142		2	**4.40**	4.30	0.85	19.4%	**1.36**	0.19	30.9%	30.9%
66			143		2	**4.10**	3.75	0.56	13.6%	**1.50**	0.14	36.7%	36.7%
67			151		4	5.47	**6.96**	3.03	43.6%	**1.37**	0.88	19.7%	19.7%
68	1	Patch	152		4	7.07	**7.40**	2.56	34.5%	**2.03**	0.96	27.5%	27.5%
69			153		4	6.61	**6.99**	2.27	32.5%	**2.26**	0.84	32.3%	32.3%
70			154		4	6.66	**7.44**	2.22	29.8%	**2.50**	0.78	33.6%	33.6%
71			155		4	7.28	**7.78**	1.72	22.2%	**2.47**	0.51	31.7%	31.7%
72			165		4	6.47	**7.56**	2.74	36.2%	**1.85**	0.89	24.4%	24.4%
73			166		4	6.48	**6.68**	2.42	36.1%	**2.07**	0.88	31.0%	31.0%
74			167		4	6.62	**7.26**	2.33	32.2%	**2.40**	0.84	33.1%	33.1%
75			168		4	6.22	**6.89**	1.69	24.5%	**2.32**	0.59	33.7%	33.7%
76			1	129	2	3.67	**4.87**	1.75	36.0%	**0.84**	0.51	17.2%	17.2%
77			6	134	4	**10.52**	9.14	2.44	23.2%	**2.60**	0.48	24.7%	24.7%
78			7	135	4	**10.00**	8.97	3.10	31.0%	**3.26**	0.93	32.6%	32.6%
79			8	136	4	7.41	**8.26**	2.53	30.6%	**1.56**	0.68	18.9%	18.9%
80			14	142	4	**11.53**	9.87	2.44	21.2%	**3.08**	0.62	26.7%	26.7%
81			15	143	4	**8.87**	7.90	3.03	34.1%	**3.14**	0.94	35.4%	35.4%
82			23	151	8	**17.13**	16.58	5.98	34.9%	**4.93**	1.71	28.8%	28.8%
83			24	152	8	**20.11**	19.63	6.34	31.5%	**5.83**	2.25	29.0%	29.0%
84			25	154	8	**19.41**	17.75	7.54	38.8%	**7.48**	2.85	38.6%	38.6%
85			26	153	8	13.67	**15.85**	4.82	30.4%	**3.83**	1.39	24.2%	24.2%
86			27	155	8	**15.84**	14.92	4.48	28.3%	**4.44**	1.26	28.0%	28.0%
87			37	165	8	**17.81**	17.66	5.47	30.7%	**4.56**	1.76	25.6%	25.6%
88			38	166	8	18.21	**18.24**	7.40	40.6%	**5.85**	2.67	32.1%	32.1%
89			39	168	8	**19.00**	17.83	6.35	33.4%	**6.94**	2.40	36.5%	36.5%
90			40	167	8	13.31	**16.07**	5.05	31.4%	**3.63**	1.57	22.6%	22.6%

Module 1 High CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			41.2%	4cm 2PD (W/m2) at 10mm evaluation distance			60.3%	53.5%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (from t2mm)/(worst-surface 2mm)	S2 (Back)	S4 (Left)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
46			1		1	2.15	**2.42**	0.74	30.5%	0.68	**1.15**	0.28	47.6%	28.2%
47			6		2	3.79	**4.02**	0.92	22.8%	1.49	**2.23**	0.36	55.4%	37.1%
48			7		2	4.10	**4.56**	1.63	35.7%	1.62	**2.75**	0.76	60.3%	35.6%
49			8		2	4.36	**4.92**	1.05	21.4%	1.64	**2.22**	0.37	45.2%	33.3%
50			14		2	4.63	**4.75**	1.13	23.8%	1.81	**2.77**	0.47	58.2%	38.2%
51			15		2	3.18	**3.72**	1.41	38.0%	1.27	**2.05**	0.65	55.0%	34.0%
52			23		4	8.40	**8.84**	1.77	20.1%	4.36	**4.96**	0.73	56.1%	49.3%
53			24		4	9.05	**9.30**	2.35	25.2%	3.89	**4.96**	1.14	53.3%	41.9%
54			25		4	**8.58**	8.46	2.29	26.6%	3.95	**4.85**	1.12	56.5%	46.0%
55			26		4	7.08	**8.55**	2.53	29.6%	2.98	**4.22**	1.18	49.3%	34.9%
56			27		4	5.59	**6.32**	1.81	28.5%	2.01	**2.50**	0.62	39.5%	31.8%
57			37		4	7.47	**7.82**	1.72	22.0%	3.51	**4.09**	0.79	52.3%	44.9%
58			38		4	9.40	**9.67**	2.78	28.7%	4.65	**5.51**	1.42	57.0%	48.1%
59			39		4	8.22	**9.26**	2.57	27.7%	3.49	**4.88**	1.21	52.7%	37.6%
60			40		4	6.05	**7.36**	2.08	28.3%	2.32	**3.21**	0.92	43.7%	31.5%
61			129		1	1.83	**2.27**	0.74	32.4%	0.54	**1.03**	0.27	45.3%	23.7%
62			134		2	**4.91**	4.73	1.05	21.4%	1.71	**2.02**	0.38	41.2%	34.9%
63			135		2	**4.26**	3.82	0.66	15.6%	**2.20**	1.83	0.25	51.6%	51.6%
64			136		2	2.59	**3.29**	1.13	34.2%	0.94	**1.79**	0.48	54.4%	28.6%
65			142		2	**4.51**	4.27	0.93	20.5%	**2.18**	2.12	0.32	48.4%	48.4%
66			143		2	**4.33**	3.91	0.61	14.1%	**2.31**	1.90	0.24	53.5%	53.5%
67			151		4	6.10	**7.02**	2.89	41.2%	2.36	**3.62**	1.28	51.6%	33.6%
68	1	Patch	152		4	7.07	**7.34**	2.60	35.4%	3.06	**4.07**	1.33	55.5%	41.7%
69			153		4	7.06	**7.18**	2.41	33.6%	3.16	**3.87**	1.26	53.8%	44.0%
70			154		4	6.36	**7.04**	2.15	30.6%	3.05	**3.81**	1.07	54.1%	43.3%
71			155		4	7.81	**8.15**	1.84	22.5%	3.82	**4.68**	0.81	57.4%	46.9%
72			165		4	6.55	**7.58**	2.77	36.6%	3.02	**4.14**	1.29	54.6%	39.8%
73			166		4	**7.25**	7.22	2.56	35.3%	3.29	**4.24**	1.34	58.5%	45.3%
74			167		4	6.61	**6.86**	2.32	33.8%	3.12	**3.68**	1.20	53.7%	45.5%
75			168		4	6.92	**7.58**	1.81	23.9%	3.36	**4.27**	0.87	56.3%	44.3%
76			1	129	2	3.87	**4.85**	1.68	34.7%	1.27	**2.42**	0.77	49.9%	26.2%
77			6	134	4	**11.56**	9.46	2.77	23.9%	4.32	**5.27**	0.94	45.6%	37.3%
78			7	135	4	**11.20**	9.62	3.33	29.8%	5.45	**5.71**	1.49	50.9%	48.7%
79			8	136	4	8.14	**8.64**	2.32	26.8%	2.57	**3.28**	0.99	37.9%	29.7%
80			14	142	4	**12.75**	10.20	2.95	23.1%	5.31	**6.11**	1.17	48.0%	41.7%
81			15	143	4	**9.93**	8.75	3.12	31.4%	**5.08**	5.02	1.40	51.1%	51.1%
82			23	151	8	**19.13**	17.31	5.70	29.8%	8.20	**9.51**	2.40	49.7%	42.8%
83			24	152	8	**20.31**	19.36	6.27	30.9%	8.14	**11.19**	3.21	55.1%	40.1%
84			25	154	8	**20.09**	17.42	6.94	34.5%	9.71	**10.08**	3.59	50.2%	48.3%
85			26	153	8	15.65	**17.28**	5.22	30.2%	6.44	**8.42**	2.19	48.7%	37.3%
86			27	155	8	**17.34**	15.26	4.48	25.8%	7.28	**7.87**	1.82	45.4%	42.0%
87			37	165	8	**18.66**	17.86	5.12	27.5%	7.34	**9.72**	2.28	52.1%	39.3%
88			38	166	8	**21.22**	19.70	7.28	34.3%	9.52	**11.93**	3.83	56.2%	44.9%
89			39	168	8	**20.98**	19.52	6.59	31.4%	10.01	**10.89**	3.18	51.9%	47.7%
90			40	167	8	14.64	**16.09**	5.08	31.6%	5.71	**7.40**	2.24	46.0%	35.5%

									max ratio out of all beams			max ratio out of all beams	
						4cm2 PD (W/m2)			41.2%	4cm2 PD (W/m2) at 15mm evaluation distance		37.0%	37.0%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	2.15	**2.42**	0.74	30.5%	**0.43**	0.18	17.8%	17.8%
47			6		2	3.79	**4.02**	0.92	22.8%	**0.99**	0.24	24.6%	24.6%
48			7		2	4.10	**4.56**	1.63	35.7%	**1.07**	0.52	23.4%	23.4%
49			8		2	4.36	**4.92**	1.05	21.4%	**1.06**	0.24	21.6%	21.6%
50			14		2	4.63	**4.75**	1.13	23.8%	**1.17**	0.31	24.6%	24.6%
51			15		2	3.18	**3.72**	1.41	38.0%	**0.84**	0.44	22.7%	22.7%
52			23		4	8.40	**8.84**	1.77	20.1%	**3.12**	0.52	35.3%	35.3%
53			24		4	9.05	**9.30**	2.35	25.2%	**2.90**	0.84	31.2%	31.2%
54			25		4	**8.58**	8.46	2.29	26.6%	**2.83**	0.83	33.0%	33.0%
55			26		4	7.08	**8.55**	2.53	29.6%	**1.92**	0.82	22.5%	22.5%
56			27		4	5.59	**6.32**	1.81	28.5%	**1.29**	0.41	20.4%	20.4%
57			37		4	7.47	**7.82**	1.72	22.0%	**2.54**	0.56	32.5%	32.5%
58			38		4	9.40	**9.67**	2.78	28.7%	**3.48**	1.05	36.0%	36.0%
59			39		4	8.22	**9.26**	2.57	27.7%	**2.34**	0.87	25.2%	25.2%
60			40		4	6.05	**7.36**	2.08	28.3%	**1.43**	0.63	19.5%	19.5%
61			129		1	1.83	**2.27**	0.74	32.4%	**0.34**	0.17	14.8%	14.8%
62			134		2	**4.91**	4.73	1.05	21.4%	**1.14**	0.24	23.1%	23.1%
63			135		2	**4.26**	3.82	0.66	15.6%	**1.52**	0.17	35.6%	35.6%
64			136		2	2.59	**3.29**	1.13	34.2%	**0.62**	0.31	18.7%	18.7%
65			142		2	**4.51**	4.27	0.93	20.5%	**1.49**	0.19	33.1%	33.1%
66			143		2	**4.33**	3.91	0.61	14.1%	**1.60**	0.16	37.0%	37.0%
67			151		4	6.10	**7.02**	2.89	41.2%	**1.47**	0.86	20.9%	20.9%
68	1	Patch	152		4	7.07	**7.34**	2.60	35.4%	**2.16**	0.99	29.5%	29.5%
69			153		4	7.06	**7.18**	2.41	33.6%	**2.23**	0.94	31.1%	31.1%
70			154		4	6.36	**7.04**	2.15	30.6%	**2.27**	0.78	32.2%	32.2%
71			155		4	7.81	**8.15**	1.84	22.5%	**2.67**	0.55	32.7%	32.7%
72			165		4	6.55	**7.58**	2.77	36.6%	**2.01**	0.87	26.5%	26.5%
73			166		4	**7.25**	7.22	2.56	35.3%	**2.27**	0.98	31.4%	31.4%
74			167		4	6.61	**6.86**	2.32	33.8%	**2.25**	0.90	32.7%	32.7%
75			168		4	6.92	**7.58**	1.81	23.9%	**2.46**	0.62	32.5%	32.5%
76			1	129	2	3.87	**4.85**	1.68	34.7%	**0.89**	0.52	18.4%	18.4%
77			6	134	4	**11.56**	9.46	2.77	23.9%	**2.85**	0.60	24.7%	24.7%
78			7	135	4	**11.20**	9.62	3.33	29.8%	**3.70**	1.01	33.1%	33.1%
79			8	136	4	8.14	**8.64**	2.32	26.8%	**1.64**	0.67	19.0%	19.0%
80			14	142	4	**12.75**	10.20	2.95	23.1%	**3.48**	0.77	27.3%	27.3%
81			15	143	4	**9.93**	8.75	3.12	31.4%	**3.52**	0.96	35.4%	35.4%
82			23	151	8	**19.13**	17.31	5.70	29.8%	**5.78**	1.63	30.2%	30.2%
83			24	152	8	**20.31**	19.36	6.27	30.9%	**5.51**	2.36	27.1%	27.1%
84			25	154	8	**20.09**	17.42	6.94	34.5%	**7.21**	2.67	35.9%	35.9%
85			26	153	8	15.65	**17.28**	5.22	30.2%	**4.17**	1.53	24.1%	24.1%
86			27	155	8	**17.34**	15.26	4.48	25.8%	**5.08**	1.22	29.3%	29.3%
87			37	165	8	**18.66**	17.86	5.12	27.5%	**5.05**	1.62	27.1%	27.1%
88			38	166	8	**21.22**	19.70	7.28	34.3%	**6.54**	2.80	30.8%	30.8%
89			39	168	8	**20.98**	19.52	6.59	31.4%	**7.34**	2.32	35.0%	35.0%
90			40	167	8	14.64	**16.09**	5.08	31.6%	**4.03**	1.61	25.0%	25.0%

Table 3.4 PD of Module 1 (38.5GHz – n260)

Module 1 Low CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2 PD (W/m 2)			53.5%	4cm 2 PD (W/m 2) at 10mm evaluation distance			70.0%	44.6%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (from t 2mm)/(worst-surface 2mm)	S2 (Back)	S4 (Left)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
46			1		1	1.50	**2.02**	0.63	30.9%	0.44	**0.91**	0.24	44.9%	21.6%
47			6		2	3.97	**5.15**	1.17	22.7%	1.18	**2.05**	0.42	39.8%	22.9%
48			7		2	2.66	**3.45**	1.23	35.6%	1.19	**1.95**	0.61	56.5%	34.6%
49			8		2	2.74	**3.34**	0.91	27.3%	0.84	**1.12**	0.30	33.7%	25.1%
50			14		2	2.63	**3.74**	1.30	34.7%	1.22	**2.09**	0.62	56.0%	32.5%
51			15		2	2.72	**3.19**	0.97	30.6%	0.93	**1.44**	0.46	45.1%	29.2%
52			23		4	6.19	**7.71**	2.11	27.4%	2.45	**3.32**	0.96	43.0%	31.8%
53			24		4	5.36	**6.96**	2.19	31.5%	1.93	**3.75**	0.99	53.9%	27.7%
54			25		4	4.80	**6.62**	2.53	38.2%	2.35	**3.99**	1.21	60.2%	35.4%
55			26		4	6.58	**7.59**	1.66	21.8%	2.79	**3.53**	0.76	46.5%	36.7%
56			27		4	6.63	**7.91**	1.97	25.0%	2.39	**3.14**	0.74	39.6%	30.3%
57			37		4	5.72	**7.35**	1.99	27.0%	1.76	**3.51**	0.89	47.8%	23.9%
58			38		4	4.86	**6.69**	2.56	38.3%	2.20	**4.06**	1.22	60.7%	32.9%
59			39		4	5.29	**7.03**	2.03	28.8%	2.55	**3.57**	0.93	50.7%	36.3%
60			40		4	6.78	**7.70**	1.64	21.3%	2.56	**3.28**	0.69	42.6%	33.3%
61			129		1	1.29	**1.66**	0.47	28.4%	0.41	**0.76**	0.15	45.9%	24.8%
62			134		2	2.31	**2.85**	1.00	35.0%	0.97	**1.14**	0.34	40.1%	33.9%
63			135		2	2.87	**3.99**	1.34	33.5%	1.38	**2.41**	0.63	60.5%	34.6%
64			136		2	3.37	**4.42**	0.98	22.2%	1.21	**1.61**	0.36	36.4%	27.4%
65			142		2	2.85	**4.01**	1.38	34.5%	1.11	**2.17**	0.62	54.2%	27.7%
66			143		2	3.53	**4.80**	1.05	21.9%	1.55	**2.21**	0.46	46.1%	32.3%
67			151		4	4.77	**6.63**	2.38	35.8%	1.80	**3.48**	1.23	52.4%	27.1%
68	1	Patch	152		4	4.27	**6.12**	2.21	36.2%	1.89	**3.53**	1.08	57.7%	30.8%
69			153		4	5.10	**6.12**	1.51	24.7%	2.52	**3.46**	0.72	56.5%	41.2%
70			154		4	5.93	**7.11**	1.65	23.2%	2.45	**2.98**	0.79	41.9%	34.4%
71			155		4	5.65	**7.33**	1.98	27.0%	1.95	**3.21**	0.93	43.8%	26.6%
72			165		4	4.62	**6.33**	2.26	35.8%	1.71	**3.35**	1.14	52.8%	27.1%
73			166		4	4.48	**6.00**	2.04	34.0%	2.26	**3.83**	0.97	63.9%	37.6%
74			167		4	5.32	**6.41**	1.59	24.8%	2.26	**3.11**	0.72	48.4%	35.2%
75			168		4	6.19	**7.58**	1.54	20.4%	2.48	**2.95**	0.71	39.0%	32.8%
76			1	129	2	3.22	**3.60**	1.22	33.9%	0.97	**1.82**	0.55	50.7%	27.0%
77			6	136	4	**10.58**	10.31	3.75	35.5%	3.70	**4.23**	1.33	40.0%	35.0%
78			7	135	4	7.05	**8.61**	4.61	53.5%	3.79	**5.65**	2.24	65.6%	44.0%
79			8	134	4	4.93	**5.77**	2.06	35.7%	1.90	**2.51**	0.98	43.5%	32.9%
80			14	143	4	8.30	**9.60**	4.21	43.9%	4.28	**5.11**	1.97	53.2%	44.6%
81			15	142	4	8.06	**8.86**	4.30	48.5%	2.90	**4.96**	2.02	55.9%	32.7%
82			23	154	8	16.36	**16.38**	5.39	32.9%	6.55	**6.95**	2.49	42.4%	40.0%
83			24	153	8	13.22	**14.13**	6.05	42.8%	6.31	**8.35**	2.92	59.1%	44.6%
84			25	152	8	10.30	**14.97**	7.35	49.1%	5.63	**9.88**	3.55	66.0%	37.6%
85			26	151	8	15.85	**16.25**	6.36	39.1%	6.54	**7.54**	3.19	46.4%	40.2%
86			27	155	8	**18.88**	16.98	5.95	31.5%	**7.03**	7.02	2.36	37.2%	37.2%
87			37	167	8	14.82	**15.17**	5.27	34.8%	6.00	**7.01**	2.39	46.2%	39.6%
88			38	166	8	10.35	**15.14**	7.63	50.4%	5.98	**10.59**	3.70	70.0%	39.5%
89			39	165	8	12.80	**15.45**	6.33	41.0%	5.88	**7.56**	3.08	48.9%	38.0%
90			40	168	8	15.34	**17.52**	3.74	21.4%	6.20	**6.28**	1.48	35.9%	35.4%

									max ratio out of all beams			max ratio out of all beams	
						4cm2PD (W/m2)			53.5%	4cm2PD (W/m2) at 15mm evaluation distance		33.4%	33.4%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Front 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	1.50	**2.02**	0.63	30.9%	**0.27**	0.15	13.1%	13.1%
47			6		2	3.97	**5.15**	1.17	22.7%	**0.75**	0.26	14.6%	14.6%
48			7		2	2.66	**3.45**	1.23	35.6%	**0.84**	0.43	24.2%	24.2%
49			8		2	2.74	**3.34**	0.91	27.3%	**0.54**	0.22	16.3%	16.3%
50			14		2	2.63	**3.74**	1.30	34.7%	**0.83**	0.43	22.1%	22.1%
51			15		2	2.72	**3.19**	0.97	30.6%	**0.64**	0.32	20.1%	20.1%
52			23		4	6.19	**7.71**	2.11	27.4%	**1.66**	0.69	21.5%	21.5%
53			24		4	5.36	**6.96**	2.19	31.5%	**1.26**	0.70	18.0%	18.0%
54			25		4	4.80	**6.62**	2.53	38.2%	**1.77**	0.85	26.8%	26.8%
55			26		4	6.58	**7.59**	1.66	21.8%	**1.90**	0.56	25.1%	25.1%
56			27		4	6.63	**7.91**	1.97	25.0%	**1.55**	0.48	19.6%	19.6%
57			37		4	5.72	**7.35**	1.99	27.0%	**1.11**	0.63	15.1%	15.1%
58			38		4	4.86	**6.69**	2.56	38.3%	**1.59**	0.89	23.8%	23.8%
59			39		4	5.29	**7.03**	2.03	28.8%	**1.86**	0.64	26.5%	26.5%
60			40		4	6.78	**7.70**	1.64	21.3%	**1.62**	0.50	21.0%	21.0%
61			129		1	1.29	**1.66**	0.47	28.4%	**0.26**	0.09	15.6%	15.6%
62			134		2	2.31	**2.85**	1.00	35.0%	**0.62**	0.22	21.9%	21.9%
63			135		2	2.87	**3.99**	1.34	33.5%	**0.98**	0.44	24.4%	24.4%
64			136		2	3.37	**4.42**	0.98	22.2%	**0.82**	0.24	18.5%	18.5%
65			142		2	2.85	**4.01**	1.38	34.5%	**0.75**	0.41	18.7%	18.7%
66			143		2	3.53	**4.80**	1.05	21.9%	**1.07**	0.32	22.3%	22.3%
67			151		4	4.77	**6.63**	2.38	35.8%	**1.22**	0.91	18.5%	18.5%
68	1	Patch	152		4	4.27	**6.12**	2.21	36.2%	**1.38**	0.81	22.5%	22.5%
69			153		4	5.10	**6.12**	1.51	24.7%	**1.87**	0.51	30.5%	30.5%
70			154		4	5.93	**7.11**	1.65	23.2%	**1.62**	0.57	22.8%	22.8%
71			155		4	5.65	**7.33**	1.98	27.0%	**1.29**	0.66	17.6%	17.6%
72			165		4	4.62	**6.33**	2.26	35.8%	**1.15**	0.83	18.2%	18.2%
73			166		4	4.48	**6.00**	2.04	34.0%	**1.71**	0.69	28.6%	28.6%
74			167		4	5.32	**6.41**	1.59	24.8%	**1.57**	0.50	24.6%	24.6%
75			168		4	6.19	**7.58**	1.54	20.4%	**1.65**	0.49	21.7%	21.7%
76			1	129	2	3.22	**3.60**	1.22	33.9%	**0.63**	0.37	17.4%	17.4%
77			6	136	4	**10.58**	10.31	3.75	35.5%	**2.51**	0.87	23.7%	23.7%
78			7	135	4	7.05	**8.61**	4.61	53.5%	**2.70**	1.56	31.4%	31.4%
79			8	134	4	4.93	**5.77**	2.06	35.7%	**1.37**	0.70	23.7%	23.7%
80			14	143	4	8.30	**9.60**	4.21	43.9%	**2.94**	1.38	30.6%	30.6%
81			15	142	4	8.06	**8.86**	4.30	48.5%	**2.05**	1.36	23.1%	23.1%
82			23	154	8	16.36	**16.38**	5.39	32.9%	**4.53**	1.85	27.6%	27.6%
83			24	153	8	13.22	**14.13**	6.05	42.8%	**4.72**	2.12	33.4%	33.4%
84			25	152	8	10.30	**14.97**	7.35	49.1%	**4.33**	2.60	29.0%	29.0%
85			26	151	8	15.85	**16.25**	6.36	39.1%	**4.53**	2.36	27.9%	27.9%
86			27	155	8	**18.88**	16.98	5.95	31.5%	**4.54**	1.63	24.1%	24.1%
87			37	167	8	14.82	**15.17**	5.27	34.8%	**4.25**	1.73	28.0%	28.0%
88			38	166	8	10.35	**15.14**	7.63	50.4%	**4.64**	2.67	30.7%	30.7%
89			39	165	8	12.80	**15.45**	6.33	41.0%	**4.43**	2.20	28.7%	28.7%
90			40	168	8	15.34	**17.52**	3.74	21.4%	**4.18**	1.02	23.9%	23.9%

Module 1 Mid CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			59.6%	4cm 2PD (W/m2) at 10mm evaluation distance			65.7%	47.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (from t 2mm)/(worst-surface 2mm)	S2 (Back)	S4 (Left)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
46			1		1	2.02	3.09	1.00	32.4%	0.70	1.51	0.36	48.9%	22.7%
47			6		2	4.40	7.19	2.13	29.7%	1.40	3.00	0.86	41.7%	19.5%
48			7		2	3.50	5.15	1.80	34.9%	1.92	2.91	0.88	56.4%	37.3%
49			8		2	3.83	5.19	1.36	26.3%	1.17	2.06	0.43	39.7%	22.6%
50			14		2	3.43	5.13	1.73	33.8%	1.79	2.91	0.79	56.7%	34.8%
51			15		2	3.82	5.19	1.60	30.9%	1.63	2.51	0.76	48.3%	31.5%
52			23		4	7.43	10.79	3.32	30.8%	2.69	5.14	1.57	47.7%	24.9%
53			24		4	6.38	9.83	3.28	33.4%	2.82	5.32	1.62	54.1%	28.7%
54			25		4	6.91	9.40	3.58	38.1%	3.25	5.38	1.79	57.2%	34.5%
55			26		4	8.14	11.30	3.23	28.6%	4.04	5.89	1.52	52.2%	35.8%
56			27		4	7.32	10.08	2.88	28.6%	2.74	4.47	1.15	44.3%	27.2%
57			37		4	7.65	11.15	3.36	30.1%	3.08	5.83	1.57	52.3%	27.7%
58			38		4	6.51	9.43	3.66	38.8%	2.96	5.62	1.68	59.6%	31.3%
59			39		4	7.27	10.27	3.37	32.8%	3.58	5.27	1.65	51.4%	34.9%
60			40		4	7.79	10.82	2.82	26.1%	3.58	5.13	1.23	47.4%	33.1%
61			129		1	1.75	2.66	0.81	30.3%	0.60	1.30	0.28	48.9%	22.7%
62			134		2	2.91	4.61	1.22	26.5%	0.90	1.85	0.44	40.1%	19.6%
63			135		2	3.55	5.76	2.59	45.0%	1.55	3.42	1.30	59.3%	26.8%
64			136		2	3.94	6.18	1.79	28.9%	1.46	2.57	0.62	41.6%	23.7%
65			142		2	3.30	5.77	2.45	42.5%	1.35	3.27	1.16	56.7%	23.3%
66			143		2	4.23	6.40	2.04	31.9%	1.99	3.11	0.99	48.6%	31.2%
67			151		4	6.47	9.75	3.42	35.1%	2.61	5.47	1.71	56.1%	26.7%
68	1	Patch	152		4	5.36	8.72	3.51	40.3%	2.12	5.06	1.66	58.1%	24.3%
69			153		4	6.78	9.08	2.86	31.5%	3.50	5.14	1.44	56.6%	38.5%
70			154		4	7.39	10.20	3.12	30.6%	3.71	5.34	1.45	52.3%	36.4%
71			155		4	6.13	9.48	2.80	29.5%	2.30	4.30	1.23	45.4%	24.3%
72			165		4	6.68	9.57	3.37	35.2%	2.78	5.62	1.62	58.7%	29.0%
73			166		4	5.64	9.05	3.93	43.5%	2.67	5.44	1.91	60.1%	29.5%
74			167		4	7.41	10.05	3.18	31.7%	3.74	5.55	1.51	55.2%	37.2%
75			168		4	6.42	9.15	2.46	26.9%	3.16	4.33	1.16	47.3%	34.6%
76			1	129	2	3.67	6.08	1.83	30.1%	1.38	2.87	0.82	47.2%	22.7%
77			6	136	4	11.12	16.16	6.68	41.4%	4.05	7.29	2.61	45.1%	25.1%
78			7	135	4	9.56	12.83	7.65	59.6%	5.34	8.27	3.92	64.4%	41.6%
79			8	134	4	6.18	8.41	2.79	33.1%	2.22	3.94	1.27	46.8%	26.3%
80			14	143	4	11.18	13.14	6.56	49.9%	5.76	7.24	3.19	55.1%	43.9%
81			15	142	4	9.75	13.64	7.00	51.3%	4.59	7.84	3.46	57.5%	33.7%
82			23	154	8	18.26	24.78	9.54	38.5%	8.73	12.49	4.53	50.4%	35.2%
83			24	153	8	17.33	19.49	9.29	47.6%	9.34	11.61	4.45	59.6%	47.9%
84			25	152	8	14.49	20.88	10.91	52.3%	7.27	13.23	5.26	63.4%	34.8%
85			26	151	8	17.67	24.74	10.16	41.1%	9.26	13.83	4.74	55.9%	37.4%
86			27	155	8	19.53	21.31	9.22	43.3%	7.25	9.98	3.72	46.8%	34.0%
87			37	167	8	19.40	23.75	9.73	40.9%	9.94	12.36	4.53	52.0%	41.8%
88			38	166	8	14.17	21.97	11.79	53.6%	7.35	14.43	5.74	65.7%	33.5%
89			39	165	8	14.96	23.30	9.18	39.4%	7.91	13.32	4.26	57.2%	33.9%
90			40	168	8	14.61	23.87	6.37	26.7%	5.81	9.50	2.56	39.8%	24.4%

									max ratio out of all beams			max ratio out of all beams	
						4cm 2PD (W/m2)			59.6%	4cm 2PD (W/m2) at 15mm evaluation distance		34.5%	34.5%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Front 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	2.02	**3.09**	1.00	32.4%	**0.46**	0.23	15.0%	15.0%
47			6		2	4.40	**7.19**	2.13	29.7%	**0.94**	0.58	13.1%	13.1%
48			7		2	3.50	**5.15**	1.80	34.9%	**1.44**	0.63	28.0%	28.0%
49			8		2	3.83	**5.19**	1.36	26.3%	**0.78**	0.31	15.1%	15.1%
50			14		2	3.43	**5.13**	1.73	33.8%	**1.27**	0.54	24.8%	24.8%
51			15		2	3.82	**5.19**	1.60	30.9%	**1.16**	0.55	22.3%	22.3%
52			23		4	7.43	**10.79**	3.32	30.8%	**1.81**	1.16	16.8%	16.8%
53			24		4	6.38	**9.83**	3.28	33.4%	**1.82**	1.18	18.5%	18.5%
54			25		4	6.91	**9.40**	3.58	38.1%	**2.28**	1.32	24.2%	24.2%
55			26		4	8.14	**11.30**	3.23	28.6%	**2.91**	1.05	25.7%	25.7%
56			27		4	7.32	**10.08**	2.88	28.6%	**1.80**	0.73	17.9%	17.9%
57			37		4	7.65	**11.15**	3.36	30.1%	**2.00**	1.15	18.0%	18.0%
58			38		4	6.51	**9.43**	3.66	38.8%	**2.12**	1.21	22.5%	22.5%
59			39		4	7.27	**10.27**	3.37	32.8%	**2.51**	1.19	24.4%	24.4%
60			40		4	7.79	**10.82**	2.82	26.1%	**2.46**	0.85	22.7%	22.7%
61			129		1	1.75	**2.66**	0.81	30.3%	**0.39**	0.18	14.7%	14.7%
62			134		2	2.91	**4.61**	1.22	26.5%	**0.60**	0.28	13.1%	13.1%
63			135		2	3.55	**5.76**	2.59	45.0%	**1.07**	0.91	18.6%	18.6%
64			136		2	3.94	**6.18**	1.79	28.9%	**1.00**	0.42	16.1%	16.1%
65			142		2	3.30	**5.77**	2.45	42.5%	**0.89**	0.79	15.4%	15.4%
66			143		2	4.23	**6.40**	2.04	31.9%	**1.35**	0.70	21.1%	21.1%
67			151		4	6.47	**9.75**	3.42	35.1%	**1.83**	1.25	18.8%	18.8%
68	1	Patch	152		4	5.36	**8.72**	3.51	40.3%	**1.42**	1.22	16.3%	16.3%
69			153		4	6.78	**9.08**	2.86	31.5%	**2.53**	1.04	27.9%	27.9%
70			154		4	7.39	**10.20**	3.12	30.6%	**2.65**	1.04	26.0%	26.0%
71			155		4	6.13	**9.48**	2.80	29.5%	**1.49**	0.89	15.7%	15.7%
72			165		4	6.68	**9.57**	3.37	35.2%	**1.96**	1.19	20.5%	20.5%
73			166		4	5.64	**9.05**	3.93	43.5%	**1.95**	1.42	21.5%	21.5%
74			167		4	7.41	**10.05**	3.18	31.7%	**2.63**	1.08	26.2%	26.2%
75			168		4	6.42	**9.15**	2.46	26.9%	**2.27**	0.83	24.8%	24.8%
76			1	129	2	3.67	**6.08**	1.83	30.1%	**0.89**	0.57	14.7%	14.7%
77			6	136	4	11.12	**16.16**	6.68	41.4%	**2.84**	1.76	17.6%	17.6%
78			7	135	4	9.56	**12.83**	7.65	59.6%	**3.85**	2.81	30.0%	30.0%
79			8	134	4	6.18	**8.41**	2.79	33.1%	**1.51**	0.87	17.9%	17.9%
80			14	143	4	11.18	**13.14**	6.56	49.9%	**3.94**	2.25	30.0%	30.0%
81			15	142	4	9.75	**13.64**	7.00	51.3%	**3.27**	2.41	24.0%	24.0%
82			23	154	8	18.26	**24.78**	9.54	38.5%	**6.29**	3.26	25.4%	25.4%
83			24	153	8	17.33	**19.49**	9.29	47.6%	**6.72**	3.26	34.5%	34.5%
84			25	152	8	14.49	**20.88**	10.91	52.3%	**5.22**	3.94	25.0%	25.0%
85			26	151	8	17.67	**24.74**	10.16	41.1%	**6.65**	3.50	26.9%	26.9%
86			27	155	8	19.53	**21.31**	9.22	43.3%	**4.90**	2.36	23.0%	23.0%
87			37	167	8	19.40	**23.75**	9.73	40.9%	**7.01**	3.23	29.5%	29.5%
88			38	166	8	14.17	**21.97**	11.79	53.6%	**5.55**	4.25	25.3%	25.3%
89			39	165	8	14.96	**23.30**	9.18	39.4%	**5.67**	3.11	24.3%	24.3%
90			40	168	8	14.61	**23.87**	6.37	26.7%	**4.02**	1.73	16.8%	16.8%

Module 1 High CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			64.3%	4cm 2PD (W/m2) at 10mm evaluation distance			68.6%	36.2%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (back)	S4 (Left)	S1 (front)	ratio (from t2mm)/(worst-surface 2mm)	S2 (back)	S4 (Left)	S1 (front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
46			1		1	2.06	**2.94**	0.98	33.3%	0.50	**1.55**	0.39	52.9%	17.0%
47			6		2	3.67	**6.04**	2.07	34.3%	1.18	**2.70**	0.93	44.7%	19.5%
48			7		2	3.05	**4.02**	1.67	41.5%	1.11	**2.36**	0.84	58.6%	27.5%
49			8		2	4.27	**5.98**	1.45	24.2%	1.42	**2.46**	0.49	41.1%	23.7%
50			14		2	2.97	**4.64**	1.88	40.6%	1.06	**2.71**	0.89	58.4%	22.7%
51			15		2	3.99	**4.85**	1.46	30.1%	1.22	**2.24**	0.70	46.2%	25.2%
52			23		4	6.80	**9.83**	3.27	33.2%	2.50	**4.99**	1.58	50.7%	25.5%
53			24		4	5.09	**9.15**	4.31	47.1%	1.84	**5.39**	2.13	58.9%	20.1%
54			25		4	5.88	**9.03**	4.26	47.1%	2.37	**5.20**	2.23	57.5%	26.3%
55			26		4	7.20	**10.21**	3.56	34.9%	3.03	**5.02**	1.80	49.2%	29.7%
56			27		4	7.16	**9.98**	2.80	28.0%	2.75	**4.24**	1.14	42.5%	27.5%
57			37		4	6.36	**10.16**	4.03	39.6%	2.34	**5.62**	1.90	55.3%	23.0%
58			38		4	5.66	**8.47**	4.03	47.5%	2.14	**5.22**	2.04	61.6%	25.2%
59			39		4	6.59	**10.05**	4.24	42.3%	2.80	**5.08**	2.26	50.6%	27.9%
60			40		4	7.29	**10.20**	2.71	26.6%	3.02	**4.71**	1.23	46.1%	29.6%
61			129		1	1.69	**2.40**	0.77	32.0%	0.46	**1.33**	0.29	55.3%	19.1%
62			134		2	3.05	**4.77**	1.23	25.8%	1.01	**2.11**	0.48	44.2%	21.2%
63			135		2	3.22	**5.12**	2.53	49.4%	1.29	**3.24**	1.28	63.4%	25.1%
64			136		2	3.29	**5.45**	1.87	34.4%	1.13	**2.40**	0.73	44.1%	20.7%
65			142		2	3.17	**5.89**	2.63	44.7%	0.97	**3.09**	1.27	52.4%	16.4%
66			143		2	3.47	**5.29**	2.00	37.8%	1.55	**2.72**	0.99	51.4%	29.4%
67			151		4	6.06	**9.68**	3.82	39.5%	2.11	**5.32**	1.91	55.0%	21.9%
68	1	Patch	152		4	5.19	**7.97**	3.30	41.4%	1.86	**4.92**	1.56	61.7%	23.4%
69			153		4	6.05	**8.17**	3.08	37.7%	2.63	**4.72**	1.54	57.7%	32.2%
70			154		4	6.09	**8.90**	3.06	34.4%	2.83	**4.61**	1.53	51.8%	31.8%
71			155		4	6.52	**9.11**	2.76	30.3%	2.75	**3.69**	1.23	40.5%	30.2%
72			165		4	6.04	**9.48**	4.12	43.4%	2.19	**5.77**	1.98	60.9%	23.1%
73			166		4	5.27	**7.58**	3.25	42.8%	2.02	**5.02**	1.62	66.2%	26.6%
74			167		4	6.00	**8.82**	3.42	38.7%	2.69	**4.81**	1.73	54.5%	30.6%
75			168		4	6.60	**9.14**	2.41	26.3%	3.10	**4.51**	1.19	49.3%	33.9%
76			1	129	2	4.27	**5.89**	1.91	32.4%	1.23	**3.25**	0.85	55.3%	20.9%
77			6	136	4	8.51	**14.22**	6.10	42.9%	3.08	**7.24**	2.37	50.9%	21.6%
78			7	135	4	8.34	**11.21**	7.21	64.3%	3.63	**7.69**	3.76	68.6%	32.4%
79			8	134	4	6.96	**9.51**	3.40	35.8%	2.61	**4.79**	1.37	50.3%	27.4%
80			14	143	4	8.99	**11.87**	6.55	55.2%	3.98	**6.86**	3.29	57.8%	33.5%
81			15	142	4	10.53	**12.80**	7.07	55.2%	3.40	**7.68**	3.51	60.0%	26.5%
82			23	154	8	16.16	**22.25**	8.77	39.4%	7.04	**11.88**	4.16	53.4%	31.6%
83			24	153	8	13.50	**20.84**	10.82	51.9%	6.21	**12.79**	5.50	61.4%	29.8%
84			25	152	8	13.62	**20.11**	11.16	55.5%	5.47	**13.08**	5.46	65.0%	27.2%
85			26	151	8	15.12	**23.26**	10.35	44.5%	6.35	**12.87**	5.00	55.3%	27.3%
86			27	155	8	17.90	**19.86**	8.40	42.3%	7.20	**9.25**	3.46	46.6%	36.2%
87			37	167	8	15.25	**23.06**	10.39	45.1%	6.53	**13.47**	5.15	58.4%	28.3%
88			38	166	8	13.11	**18.51**	10.40	56.2%	5.11	**12.41**	5.18	67.1%	27.6%
89			39	165	8	14.12	**23.87**	11.04	46.3%	5.29	**13.97**	5.33	58.5%	22.2%
90			40	168	8	16.13	**23.26**	6.49	27.9%	6.52	**10.05**	2.62	43.2%	28.0%

									max ratio out of all beams			max ratio out of all beams	
						4cm2 PD (W/m2)			64.3%	4cm2 PD (W/m2) at 15mm evaluation distance		24.6%	24.6%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S4 (Left)	S1 (Front)	ratio (Point 2mm)/(Worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(Worst-surface 2mm)	ratio Worst-surface (15mm/2mm)
46			1		1	2.06	2.94	0.98	33.3%	0.32	0.26	10.8%	10.8%
47			6		2	3.67	6.04	2.07	34.3%	0.82	0.63	13.5%	13.5%
48			7		2	3.05	4.02	1.67	41.5%	0.82	0.61	20.4%	20.4%
49			8		2	4.27	5.98	1.45	24.2%	0.92	0.31	15.4%	15.4%
50			14		2	2.97	4.64	1.88	40.6%	0.74	0.63	16.0%	16.0%
51			15		2	3.99	4.85	1.46	30.1%	0.88	0.50	18.1%	18.1%
52			23		4	6.80	9.83	3.27	33.2%	1.82	1.16	18.5%	18.5%
53			24		4	5.09	9.15	4.31	47.1%	1.25	1.60	13.6%	17.5%
54			25		4	5.88	9.03	4.26	47.1%	1.66	1.66	18.3%	18.4%
55			26		4	7.20	10.21	3.56	34.9%	2.10	1.36	20.6%	20.6%
56			27		4	7.16	9.98	2.80	28.0%	1.98	0.74	19.8%	19.8%
57			37		4	6.36	10.16	4.03	39.6%	1.57	1.41	15.5%	15.5%
58			38		4	5.66	8.47	4.03	47.5%	1.47	1.54	17.4%	18.1%
59			39		4	6.59	10.05	4.24	42.3%	1.93	1.70	19.2%	19.2%
60			40		4	7.29	10.20	2.71	26.6%	2.22	0.89	21.7%	21.7%
61			129		1	1.69	2.40	0.77	32.0%	0.28	0.19	11.7%	11.7%
62			134		2	3.05	4.77	1.23	25.8%	0.63	0.30	13.2%	13.2%
63			135		2	3.22	5.12	2.53	49.4%	0.89	0.90	17.5%	17.6%
64			136		2	3.29	5.45	1.87	34.4%	0.74	0.51	13.5%	13.5%
65			142		2	3.17	5.89	2.63	44.7%	0.65	0.87	11.1%	14.8%
66			143		2	3.47	5.29	2.00	37.8%	1.10	0.71	20.7%	20.7%
67			151		4	6.06	9.68	3.82	39.5%	1.44	1.43	14.9%	14.9%
68	1	Patch	152		4	5.19	7.97	3.30	41.4%	1.24	1.12	15.5%	15.5%
69			153		4	6.05	8.17	3.08	37.7%	1.90	1.14	23.3%	23.3%
70			154		4	6.09	8.90	3.06	34.4%	1.99	1.14	22.3%	22.3%
71			155		4	6.52	9.11	2.76	30.3%	1.95	0.91	21.4%	21.4%
72			165		4	6.04	9.48	4.12	43.4%	1.44	1.49	15.2%	15.7%
73			166		4	5.27	7.58	3.25	42.8%	1.41	1.19	18.6%	18.6%
74			167		4	6.00	8.82	3.42	38.7%	1.98	1.29	22.5%	22.5%
75			168		4	6.60	9.14	2.41	26.3%	2.25	0.87	24.6%	24.6%
76			1	129	2	4.27	5.89	1.91	32.4%	0.78	0.57	13.2%	13.2%
77			6	136	4	8.51	14.22	6.10	42.9%	1.90	1.66	13.4%	13.4%
78			7	135	4	8.34	11.21	7.21	64.3%	2.61	2.73	23.3%	24.3%
79			8	134	4	6.96	9.51	3.40	35.8%	1.84	0.85	19.3%	19.3%
80			14	143	4	8.99	11.87	6.55	55.2%	2.76	2.35	23.2%	23.2%
81			15	142	4	10.53	12.80	7.07	55.2%	2.34	2.47	18.3%	19.3%
82			23	154	8	16.16	22.25	8.77	39.4%	4.89	2.96	22.0%	22.0%
83			24	153	8	13.50	20.84	10.82	51.9%	4.54	4.13	21.8%	21.8%
84			25	152	8	13.62	20.11	11.16	55.5%	3.74	3.99	18.6%	19.8%
85			26	151	8	15.12	23.26	10.35	44.5%	4.37	3.67	18.8%	18.8%
86			27	155	8	17.90	19.86	8.40	42.3%	4.88	2.39	24.6%	24.6%
87			37	167	8	15.25	23.06	10.39	45.1%	4.61	3.72	20.0%	20.0%
88			38	166	8	13.11	18.51	10.40	56.2%	3.69	3.86	19.9%	20.9%
89			39	165	8	14.12	23.87	11.04	46.3%	3.57	3.80	15.0%	15.9%
90			40	168	8	16.13	23.26	6.49	27.9%	4.25	1.78	18.3%	18.3%

3.1.3 Module 2

Table 3.5 & Table 3.6 show the PD simulation evaluation of Module 2 at 27.9 GHz / 38.5 GHz for the corresponding evaluation plane specified in Table 1.1.

Table 3.5. PD of Module 2 (27.9GHz – n261)

Module 2 Low CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2 PD (W/m 2)			55.2%	4cm 2 PD (W/m 2) at 10mm evaluation distance			64.5%	42.2%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fom t 2mm)/(Worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(Worst-surface 2mm)
91	2	Patch	2		1	1.42	1.81	0.56	31.0%	0.45	0.89	0.19	48.9%	24.9%
92			9		2	2.19	4.51	1.70	37.7%	0.66	1.60	0.52	35.4%	14.7%
93			10		2	3.39	4.90	2.20	44.8%	1.47	3.11	0.95	63.4%	30.0%
94			11		2	2.70	3.61	1.14	31.6%	0.90	1.70	0.47	47.2%	24.8%
95			16		2	2.44	4.63	1.84	39.8%	0.93	2.22	0.70	47.9%	20.0%
96			17		2	3.46	4.81	1.97	41.0%	1.48	2.95	0.85	61.3%	30.8%
97			28		4	6.26	7.35	2.44	33.2%	2.81	3.88	1.03	52.7%	38.2%
98			29		4	6.09	8.39	3.64	43.4%	2.94	5.33	1.70	63.5%	35.0%
99			30		4	7.17	10.06	4.41	43.8%	3.33	6.38	2.08	63.4%	33.1%
100			31		4	5.67	7.81	3.41	43.7%	2.87	4.99	1.65	63.9%	36.8%
101			32		4	4.51	6.41	2.21	34.5%	2.07	3.43	0.77	53.6%	32.3%
102			41		4	6.07	7.84	3.03	38.6%	2.88	4.52	1.37	57.6%	36.7%
103			42		4	6.79	9.50	4.24	44.6%	3.19	6.12	1.98	64.5%	33.5%
104			43		4	6.83	9.40	4.13	43.9%	3.26	5.96	1.98	63.3%	34.7%
105			44		4	4.75	6.62	2.63	39.8%	2.35	4.10	1.18	61.9%	35.5%
106			130		1	1.49	2.22	0.72	32.4%	0.41	0.97	0.24	43.7%	18.4%
107			137		2	2.75	4.09	1.45	35.4%	1.08	2.11	0.57	51.7%	26.4%
108			138		2	4.32	5.30	1.79	33.8%	1.93	3.16	0.70	59.5%	36.4%
109			139		2	2.67	3.74	1.01	27.0%	0.89	1.23	0.28	32.9%	23.7%
110			144		2	4.32	5.50	1.93	35.2%	2.06	3.41	0.75	61.9%	37.4%
111			145		2	2.62	3.57	1.48	41.5%	0.91	2.06	0.62	57.9%	25.4%
112			156		4	5.41	7.74	3.20	41.3%	2.49	4.69	1.36	60.6%	32.1%
113			157		4	7.25	9.73	3.76	38.6%	3.23	5.85	1.65	60.2%	33.2%
114			158		4	6.01	8.39	3.17	37.8%	2.56	4.86	1.34	57.9%	30.5%
115			159		4	5.82	7.37	2.39	32.5%	2.69	4.00	1.09	54.2%	36.5%
116			160		4	5.14	5.59	2.03	36.3%	1.84	2.39	0.63	42.8%	32.9%
117			169		4	6.62	8.81	3.67	41.7%	3.13	5.63	1.61	63.9%	35.6%
118			170		4	6.82	9.49	3.61	38.1%	3.00	5.60	1.60	59.0%	31.6%
119			171		4	5.66	7.44	2.69	36.1%	2.55	4.27	1.13	57.4%	34.3%
120			172		4	5.60	6.40	2.03	31.8%	2.20	3.03	0.80	47.4%	34.4%
121			2	130	2	3.06	4.00	1.52	37.8%	1.20	1.95	0.58	48.7%	29.9%
122			9	137	4	5.30	8.97	4.75	52.9%	1.98	4.55	1.72	50.7%	22.1%
123			10	138	4	9.66	10.99	5.97	54.3%	4.49	6.86	2.54	62.4%	40.9%
124			11	139	4	5.92	7.59	2.37	31.2%	2.12	3.26	1.00	42.9%	28.0%
125			16	144	4	7.84	11.00	5.20	47.3%	3.44	5.87	1.99	53.4%	31.3%
126			17	145	4	6.12	8.43	3.69	43.7%	2.38	5.03	1.65	59.6%	28.2%
127			28	156	8	14.43	17.36	7.68	44.2%	6.15	9.15	3.39	52.7%	35.4%
128			29	157	8	15.47	19.74	10.82	54.8%	7.21	12.67	4.98	64.2%	36.5%
129			30	158	8	15.76	20.70	11.42	55.2%	7.27	13.21	5.27	63.8%	35.1%
130			31	159	8	14.19	15.84	8.44	53.3%	6.69	9.39	4.04	59.3%	42.2%
131			32	160	8	14.74	14.67	6.83	46.4%	5.89	7.44	1.78	50.5%	40.0%
132			41	169	8	14.68	17.35	9.21	53.1%	6.53	10.18	4.30	58.7%	37.6%
133			42	170	8	15.95	21.40	11.78	55.1%	7.38	13.80	5.44	64.5%	34.5%
134			43	171	8	14.89	18.71	10.10	54.0%	7.05	11.67	4.74	62.4%	37.7%
135			44	172	8	14.02	14.51	6.13	42.3%	5.70	7.80	2.64	53.7%	39.3%

									max ratio out of all beams			max ratio out of all beams	
						4cm 2PD (W/m2)			55.2%	4cm 2PD (W/m2) at 15mm evaluation distance		30.4%	30.4%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fomt 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
91			2		1	1.42	1.81	0.56	31.0%	0.26	0.12	14.6%	14.6%
92			9		2	2.19	4.51	1.70	37.7%	0.41	0.33	9.2%	9.2%
93			10		2	3.39	4.90	2.20	44.8%	0.98	0.65	19.9%	19.9%
94			11		2	2.70	3.61	1.14	31.6%	0.59	0.31	16.3%	16.3%
95			16		2	2.44	4.63	1.84	39.8%	0.58	0.46	12.6%	12.6%
96			17		2	3.46	4.81	1.97	41.0%	0.97	0.58	20.2%	20.2%
97			28		4	6.26	7.35	2.44	33.2%	1.86	0.70	25.2%	25.2%
98			29		4	6.09	8.39	3.64	43.4%	2.13	1.23	25.3%	25.3%
99			30		4	7.17	10.06	4.41	43.8%	2.46	1.52	24.4%	24.4%
100			31		4	5.67	7.81	3.41	43.7%	2.14	1.21	27.4%	27.4%
101			32		4	4.51	6.41	2.21	34.5%	1.43	0.52	22.3%	22.3%
102			41		4	6.07	7.84	3.03	38.6%	1.97	0.97	25.2%	25.2%
103			42		4	6.79	9.50	4.24	44.6%	2.34	1.44	24.6%	24.6%
104			43		4	6.83	9.40	4.13	43.9%	2.43	1.44	25.8%	25.8%
105			44		4	4.75	6.62	2.63	39.8%	1.73	0.83	26.1%	26.1%
106			130		1	1.49	2.22	0.72	32.4%	0.25	0.16	11.3%	11.3%
107			137		2	2.75	4.09	1.45	35.4%	0.75	0.39	18.4%	18.4%
108			138		2	4.32	5.30	1.79	33.8%	1.28	0.45	24.2%	24.2%
109			139		2	2.67	3.74	1.01	27.0%	0.52	0.18	13.9%	13.9%
110			144		2	4.32	5.50	1.93	35.2%	1.41	0.48	25.7%	25.7%
111			145		2	2.62	3.57	1.48	41.5%	0.57	0.41	16.1%	16.1%
112			156		4	5.41	7.74	3.20	41.3%	1.72	1.00	22.2%	22.2%
113	2	Patch	157		4	7.25	9.73	3.76	38.6%	2.37	1.18	24.3%	24.3%
114			158		4	6.01	8.39	3.17	37.8%	1.87	0.97	22.2%	22.2%
115			159		4	5.82	7.37	2.39	32.5%	1.90	0.78	25.7%	25.7%
116			160		4	5.14	5.59	2.03	36.3%	1.20	0.40	21.5%	21.5%
117			169		4	6.62	8.81	3.67	41.7%	2.29	1.17	26.0%	26.0%
118			170		4	6.82	9.49	3.61	38.1%	2.21	1.16	23.3%	23.3%
119			171		4	5.66	7.44	2.69	36.1%	1.83	0.83	24.5%	24.5%
120			172		4	5.60	6.40	2.03	31.8%	1.46	0.55	22.8%	22.8%
121			2	130	2	3.06	4.00	1.52	37.8%	0.79	0.39	19.6%	19.6%
122			9	137	4	5.30	8.97	4.75	52.9%	1.33	1.13	14.8%	14.8%
123			10	138	4	9.66	10.99	5.97	54.3%	3.01	1.72	27.4%	27.4%
124			11	139	4	5.92	7.59	2.37	31.2%	1.37	0.67	18.1%	18.1%
125			16	144	4	7.84	11.00	5.20	47.3%	2.31	1.29	21.0%	21.0%
126			17	145	4	6.12	8.43	3.69	43.7%	1.65	1.19	19.6%	19.6%
127			28	156	8	14.43	17.36	7.68	44.2%	4.22	2.43	24.3%	24.3%
128			29	157	8	15.47	19.74	10.82	54.8%	5.27	3.61	26.7%	26.7%
129			30	158	8	15.76	20.70	11.42	55.2%	5.22	3.85	25.2%	25.2%
130			31	159	8	14.19	15.84	8.44	53.3%	4.81	2.96	30.4%	30.4%
131			32	160	8	14.74	14.67	6.83	46.4%	3.93	1.16	26.7%	26.7%
132			41	169	8	14.68	17.35	9.21	53.1%	4.70	3.13	27.1%	27.1%
133			42	170	8	15.95	21.40	11.78	55.1%	5.39	3.93	25.2%	25.2%
134			43	171	8	14.89	18.71	10.10	54.0%	5.07	3.49	27.1%	27.1%
135			44	172	8	14.02	14.51	6.13	42.3%	3.93	1.85	27.1%	27.1%

Module 2 Mid CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			59.1%	4cm 2PD (W/m2) at 10mm evaluation distance			64.6%	43.4%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (from t 2mm)/(worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
91			2		1	1.59	1.98	0.58	29.5%	0.54	0.98	0.19	49.6%	27.2%
92			9		2	2.34	4.51	1.69	37.5%	0.68	1.56	0.52	34.6%	15.2%
93			10		2	3.47	5.10	2.37	46.4%	1.55	3.19	1.05	62.5%	30.4%
94			11		2	2.87	4.01	1.17	29.1%	1.01	1.80	0.48	44.9%	25.2%
95			16		2	2.59	4.66	1.90	40.8%	0.96	2.22	0.74	47.7%	20.6%
96			17		2	3.53	5.00	2.11	42.3%	1.52	3.02	0.92	60.5%	30.4%
97			28		4	6.94	7.96	2.43	30.5%	3.14	4.09	1.08	51.3%	39.4%
98			29		4	6.21	8.50	3.69	43.4%	3.04	5.37	1.73	63.2%	35.7%
99			30		4	7.67	10.92	5.01	45.9%	3.60	6.86	2.42	62.9%	33.0%
100			31		4	5.81	7.88	3.35	42.5%	2.97	4.99	1.64	63.3%	37.7%
101			32		4	4.71	6.85	2.79	40.7%	2.22	3.63	0.86	53.0%	32.5%
102			41		4	6.79	8.26	2.98	36.1%	3.23	4.67	1.39	56.5%	39.1%
103			42		4	7.11	9.97	4.61	46.2%	3.45	6.44	2.20	64.6%	34.6%
104			43		4	7.26	10.05	4.53	45.0%	3.47	6.32	2.23	62.9%	34.5%
105			44		4	4.84	6.66	2.53	38.0%	2.42	4.02	1.17	60.4%	36.3%
106			130		1	1.57	2.42	0.85	35.1%	0.47	1.05	0.28	43.4%	19.5%
107			137		2	3.06	4.54	1.55	34.2%	1.20	2.29	0.61	50.6%	26.4%
108			138		2	4.40	5.30	1.73	32.6%	2.03	3.11	0.68	58.8%	38.2%
109			139		2	2.99	4.19	1.14	27.2%	0.94	1.30	0.32	31.0%	22.3%
110			144		2	4.44	5.58	1.89	33.9%	2.13	3.35	0.76	60.1%	38.2%
111			145		2	2.74	3.70	1.57	42.5%	0.97	2.05	0.66	55.4%	26.2%
112			156		4	5.77	8.05	3.13	38.9%	2.65	4.76	1.35	59.2%	32.9%
113	2	Patch	157		4	7.54	10.21	4.08	39.9%	3.42	6.11	1.86	59.8%	33.5%
114			158		4	6.10	8.06	3.22	40.0%	2.41	4.57	1.37	56.8%	30.0%
115			159		4	6.20	7.58	2.46	32.5%	2.68	4.17	1.09	55.1%	35.4%
116			160		4	5.27	6.03	2.24	37.1%	1.88	2.59	0.70	43.0%	31.2%
117			169		4	6.93	9.11	3.62	39.8%	3.38	5.72	1.62	62.8%	37.1%
118			170		4	6.81	9.57	3.97	41.5%	2.89	5.57	1.79	58.2%	30.2%
119			171		4	5.93	7.21	2.54	35.3%	2.47	4.04	1.09	56.0%	34.3%
120			172		4	5.73	6.83	2.28	33.4%	2.18	3.27	0.88	48.0%	32.0%
121			2	130	2	3.42	4.51	1.67	37.1%	1.41	2.18	0.65	48.4%	31.3%
122			9	137	4	6.11	9.40	4.72	50.2%	2.20	4.72	1.82	50.2%	23.4%
123			10	138	4	10.19	11.17	6.31	56.5%	4.84	6.97	2.72	62.4%	43.4%
124			11	139	4	6.67	8.18	2.79	34.1%	2.32	3.47	1.10	42.4%	28.3%
125			16	144	4	8.16	11.25	5.47	48.6%	3.75	6.07	2.15	54.0%	33.4%
126			17	145	4	6.37	8.92	4.13	46.3%	2.51	5.18	1.92	58.0%	28.1%
127			28	156	8	16.30	18.84	7.82	41.5%	6.85	10.06	3.63	53.4%	36.3%
128			29	157	8	15.58	21.31	11.90	55.8%	7.38	13.56	5.56	63.6%	34.6%
129			30	158	8	16.42	22.09	12.98	58.8%	7.61	14.11	6.15	63.9%	34.5%
130			31	159	8	15.42	16.68	8.31	49.9%	7.17	9.86	3.98	59.1%	43.0%
131			32	160	8	15.47	15.77	8.18	51.8%	6.03	8.12	2.14	51.4%	38.3%
132			41	169	8	15.72	18.48	9.35	50.6%	7.16	10.81	4.38	58.5%	38.8%
133			42	170	8	16.37	23.09	13.64	59.1%	7.55	14.91	6.47	64.6%	32.7%
134			43	171	8	15.81	19.21	10.66	55.5%	7.42	12.13	5.08	63.1%	38.6%
135			44	172	8	15.12	15.65	7.58	48.4%	6.11	8.42	2.86	53.8%	39.0%

									max ratio out of all beams			max ratio out of all beams	
						4cm 2 PD (W/m2)			59.1%	4cm 2 PD (W/m2) at 15mm evaluation distance		31.0%	31.0%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (fomt 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
91			2		1	1.59	1.98	0.58	29.5%	0.32	0.12	16.4%	16.4%
92			9		2	2.34	4.51	1.69	37.5%	0.42	0.34	9.3%	9.3%
93			10		2	3.47	5.10	2.37	46.4%	1.05	0.71	20.6%	20.6%
94			11		2	2.87	4.01	1.17	29.1%	0.67	0.32	16.6%	16.6%
95			16		2	2.59	4.66	1.90	40.8%	0.62	0.49	13.4%	13.4%
96			17		2	3.53	5.00	2.11	42.3%	1.00	0.62	20.0%	20.0%
97			28		4	6.94	7.96	2.43	30.5%	2.08	0.77	26.1%	26.1%
98			29		4	6.21	8.50	3.69	43.4%	2.20	1.24	25.9%	25.9%
99			30		4	7.67	10.92	5.01	45.9%	2.67	1.77	24.5%	24.5%
100			31		4	5.81	7.88	3.35	42.5%	2.26	1.19	28.6%	28.6%
101			32		4	4.71	6.85	2.79	40.7%	1.54	0.58	22.5%	22.5%
102			41		4	6.79	8.26	2.98	36.1%	2.20	0.99	26.6%	26.6%
103			42		4	7.11	9.97	4.61	46.2%	2.53	1.59	25.4%	25.4%
104			43		4	7.26	10.05	4.53	45.0%	2.56	1.63	25.5%	25.5%
105			44		4	4.84	6.66	2.53	38.0%	1.82	0.82	27.3%	27.3%
106			130		1	1.57	2.42	0.85	35.1%	0.28	0.18	11.6%	11.6%
107			137		2	3.06	4.54	1.55	34.2%	0.80	0.40	17.7%	17.7%
108			138		2	4.40	5.30	1.73	32.6%	1.34	0.44	25.2%	25.2%
109			139		2	2.99	4.19	1.14	27.2%	0.57	0.20	13.6%	13.6%
110			144		2	4.44	5.58	1.89	33.9%	1.46	0.50	26.2%	26.2%
111			145		2	2.74	3.70	1.57	42.5%	0.61	0.44	16.5%	16.5%
112			156		4	5.77	8.05	3.13	38.9%	1.85	0.98	23.0%	23.0%
113	2	Patch	157		4	7.54	10.21	4.08	39.9%	2.53	1.34	24.8%	24.8%
114			158		4	6.10	8.06	3.22	40.0%	1.68	0.99	20.9%	20.9%
115			159		4	6.20	7.58	2.46	32.5%	1.87	0.77	24.7%	24.7%
116			160		4	5.27	6.03	2.24	37.1%	1.23	0.47	20.4%	20.4%
117			169		4	6.93	9.11	3.62	39.8%	2.50	1.15	27.4%	27.4%
118			170		4	6.81	9.57	3.97	41.5%	2.12	1.30	22.2%	22.2%
119			171		4	5.93	7.21	2.54	35.3%	1.73	0.77	24.0%	24.0%
120			172		4	5.73	6.83	2.28	33.4%	1.44	0.60	21.0%	21.0%
121			2	130	2	3.42	4.51	1.67	37.1%	0.92	0.43	20.3%	20.3%
122			9	137	4	6.11	9.40	4.72	50.2%	1.45	1.19	15.5%	15.5%
123			10	138	4	10.19	11.17	6.31	56.5%	3.30	1.84	29.5%	29.5%
124			11	139	4	6.67	8.18	2.79	34.1%	1.56	0.74	19.0%	19.0%
125			16	144	4	8.16	11.25	5.47	48.6%	2.58	1.40	23.0%	23.0%
126			17	145	4	6.37	8.92	4.13	46.3%	1.75	1.39	19.6%	19.6%
127			28	156	8	16.30	18.84	7.82	41.5%	4.62	2.66	24.5%	24.5%
128			29	157	8	15.58	21.31	11.90	55.8%	5.38	3.97	25.3%	25.3%
129			30	158	8	16.42	22.09	12.98	58.8%	5.42	4.48	24.5%	24.5%
130			31	159	8	15.42	16.68	8.31	49.9%	5.17	2.87	31.0%	31.0%
131			32	160	8	15.47	15.77	8.18	51.8%	4.04	1.45	25.6%	25.6%
132			41	169	8	15.72	18.48	9.35	50.6%	5.05	3.11	27.3%	27.3%
133			42	170	8	16.37	23.09	13.64	59.1%	5.49	4.68	23.8%	23.8%
134			43	171	8	15.81	19.21	10.66	55.5%	5.32	3.71	27.7%	27.7%
135			44	172	8	15.12	15.65	7.58	48.4%	4.17	1.99	26.7%	26.7%

Module 2 High CH

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (W/m2)			62.3%	4cm 2PD (W/m2) at 10mm evaluation distance			63.2%	44.8%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (from t 2mm)/(worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
91			2		1	1.60	**2.06**	0.62	30.3%	0.52	**0.95**	0.20	46.4%	25.4%
92			9		2	2.64	**4.63**	1.55	33.5%	0.81	**1.52**	0.50	32.8%	17.5%
93			10		2	3.41	**5.08**	2.38	46.9%	1.46	**3.03**	1.11	59.7%	28.9%
94			11		2	2.86	**4.25**	1.33	31.2%	0.90	**1.80**	0.55	42.3%	21.3%
95			16		2	2.91	**4.77**	1.85	38.8%	1.04	**2.21**	0.76	46.4%	21.9%
96			17		2	3.44	**4.96**	2.15	43.3%	1.53	**2.95**	0.97	59.5%	30.9%
97			28		4	6.81	**8.06**	2.37	29.4%	3.03	**4.01**	1.00	49.8%	37.6%
98			29		4	6.01	**7.94**	3.49	43.9%	2.80	**4.82**	1.68	60.7%	35.2%
99			30		4	6.36	**9.72**	4.79	49.3%	2.98	**5.94**	2.45	61.1%	30.7%
100			31		4	5.24	**7.67**	3.62	47.2%	2.58	**4.85**	1.81	63.2%	33.6%
101			32		4	4.93	**7.23**	2.38	32.9%	2.39	**3.92**	1.00	54.3%	33.0%
102			41		4	6.78	**8.08**	2.77	34.4%	3.20	**4.42**	1.26	54.7%	39.6%
103			42		4	6.00	**8.90**	4.33	48.7%	2.90	**5.44**	2.20	61.1%	32.6%
104			43		4	6.27	**9.28**	4.51	48.6%	3.02	**5.81**	2.31	62.6%	32.5%
105			44		4	4.81	**6.86**	2.87	41.9%	2.26	**4.15**	1.35	60.6%	33.0%
106			130		1	1.53	**2.53**	0.96	37.9%	0.48	**1.08**	0.34	42.8%	18.8%
107			137		2	2.95	**4.53**	1.64	36.3%	1.16	**2.36**	0.69	52.2%	25.7%
108			138		2	3.87	**4.70**	1.60	34.0%	1.79	**2.79**	0.62	59.3%	38.1%
109			139		2	2.85	**4.38**	1.28	29.3%	0.84	**1.41**	0.38	32.3%	19.2%
110			144		2	3.90	**5.00**	1.86	37.1%	1.85	**3.06**	0.76	61.1%	37.0%
111			145		2	2.64	**4.05**	1.82	44.9%	0.99	**2.21**	0.81	54.5%	24.6%
112			156		4	5.56	**8.09**	3.28	40.5%	2.52	**4.82**	1.48	59.6%	31.2%
113	2	Patch	157		4	6.53	**9.48**	4.23	44.6%	2.96	**5.63**	2.08	59.4%	31.2%
114			158		4	5.86	**7.96**	3.24	40.7%	2.39	**4.38**	1.44	55.1%	30.0%
115			159		4	6.11	**7.73**	2.66	34.5%	2.62	**4.46**	1.16	57.6%	33.9%
116			160		4	5.30	**6.37**	2.62	41.2%	1.83	**2.75**	0.85	43.1%	28.7%
117			169		4	6.15	**8.84**	3.85	43.6%	2.92	**5.41**	1.87	61.3%	33.1%
118			170		4	6.22	**8.98**	4.00	44.6%	2.63	**5.13**	1.91	57.1%	29.3%
119			171		4	5.91	**7.53**	2.68	35.6%	2.54	**4.23**	1.20	56.2%	33.7%
120			172		4	5.54	**7.03**	2.64	37.6%	2.06	**3.50**	1.01	49.9%	29.3%
121			2	130	2	3.45	**4.76**	1.89	39.6%	1.40	**2.26**	0.79	47.4%	29.4%
122			9	137	4	6.36	**9.30**	4.32	46.4%	2.27	**4.70**	1.83	50.5%	24.4%
123			10	138	4	10.06	**10.55**	6.13	58.1%	4.72	**6.29**	2.72	59.6%	44.8%
124			11	139	4	6.64	**8.61**	3.33	38.7%	2.10	**3.47**	1.32	40.3%	24.4%
125			16	144	4	8.20	**10.47**	5.41	51.7%	3.71	**5.68**	2.31	54.3%	35.4%
126			17	145	4	6.36	**9.22**	4.30	46.7%	2.50	**5.19**	2.12	56.3%	27.2%
127			28	156	8	16.51	**19.76**	7.83	39.6%	7.11	**10.64**	3.47	53.8%	36.0%
128			29	157	8	15.22	**20.24**	12.19	60.2%	6.94	**12.17**	6.11	60.1%	34.3%
129			30	158	8	15.30	**20.98**	12.90	61.5%	6.71	**12.67**	6.49	60.4%	32.0%
130			31	159	8	15.40	**16.41**	9.31	56.7%	7.04	**9.75**	4.55	59.4%	42.9%
131			32	160	8	15.62	**16.63**	7.09	42.7%	6.35	**8.60**	2.70	51.7%	38.2%
132			41	169	8	15.90	**18.28**	9.35	51.1%	7.11	**10.51**	4.60	57.5%	38.9%
133			42	170	8	14.98	**21.63**	13.47	62.3%	6.68	**12.94**	6.86	59.8%	30.9%
134			43	171	8	14.92	**19.06**	11.11	58.3%	6.74	**11.71**	5.54	61.4%	35.3%
135			44	172	8	15.18	**16.36**	7.77	47.5%	6.30	**8.89**	3.45	54.4%	38.5%

									max ratio out of all beams			max ratio out of all beams	
						4cm 2PD (W/m2)			62.3%	4cm 2PD (W/m2) at 15mm evaluation distance		30.6%	30.6%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fomt 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
91			2		1	1.60	2.06	0.62	30.3%	0.32	0.13	15.5%	15.5%
92			9		2	2.64	4.63	1.55	33.5%	0.48	0.33	10.4%	10.4%
93			10		2	3.41	5.08	2.38	46.9%	0.98	0.76	19.4%	19.4%
94			11		2	2.86	4.25	1.33	31.2%	0.59	0.37	14.0%	14.0%
95			16		2	2.91	4.77	1.85	38.8%	0.67	0.52	14.0%	14.0%
96			17		2	3.44	4.96	2.15	43.3%	1.01	0.66	20.3%	20.3%
97			28		4	6.81	8.06	2.37	29.4%	2.06	0.70	25.5%	25.5%
98			29		4	6.01	7.94	3.49	43.9%	2.07	1.24	26.1%	26.1%
99			30		4	6.36	9.72	4.79	49.3%	2.21	1.83	22.8%	22.8%
100			31		4	5.24	7.67	3.62	47.2%	1.94	1.33	25.2%	25.2%
101			32		4	4.93	7.23	2.38	32.9%	1.70	0.68	23.6%	23.6%
102			41		4	6.78	8.08	2.77	34.4%	2.24	0.92	27.7%	27.7%
103			42		4	6.00	8.90	4.33	48.7%	2.15	1.62	24.2%	24.2%
104			43		4	6.27	9.28	4.51	48.6%	2.24	1.70	24.1%	24.1%
105			44		4	4.81	6.86	2.87	41.9%	1.70	0.97	24.8%	24.8%
106			130		1	1.53	2.53	0.96	37.9%	0.29	0.22	11.5%	11.5%
107			137		2	2.95	4.53	1.64	36.3%	0.76	0.47	16.7%	16.7%
108			138		2	3.87	4.70	1.60	34.0%	1.18	0.39	25.2%	25.2%
109			139		2	2.85	4.38	1.28	29.3%	0.50	0.24	11.4%	11.4%
110			144		2	3.90	5.00	1.86	37.1%	1.26	0.51	25.1%	25.1%
111			145		2	2.64	4.05	1.82	44.9%	0.64	0.55	15.8%	15.8%
112			156		4	5.56	8.09	3.28	40.5%	1.82	1.07	22.5%	22.5%
113	2	Patch	157		4	6.53	9.48	4.23	44.6%	2.18	1.55	23.0%	23.0%
114			158		4	5.86	7.96	3.24	40.7%	1.68	1.04	21.2%	21.2%
115			159		4	6.11	7.73	2.66	34.5%	1.84	0.84	23.8%	23.8%
116			160		4	5.30	6.37	2.62	41.2%	1.15	0.58	18.1%	18.1%
117			169		4	6.15	8.84	3.85	43.6%	2.16	1.37	24.5%	24.5%
118			170		4	6.22	8.98	4.00	44.6%	1.93	1.42	21.5%	21.5%
119			171		4	5.91	7.53	2.68	35.6%	1.76	0.87	23.4%	23.4%
120			172		4	5.54	7.03	2.64	37.6%	1.30	0.70	18.6%	18.6%
121			2	130	2	3.45	4.76	1.89	39.6%	0.93	0.54	19.5%	19.5%
122			9	137	4	6.36	9.30	4.32	46.4%	1.51	1.27	16.2%	16.2%
123			10	138	4	10.06	10.55	6.13	58.1%	3.17	1.84	30.1%	30.1%
124			11	139	4	6.64	8.61	3.33	38.7%	1.36	0.88	15.8%	15.8%
125			16	144	4	8.20	10.47	5.41	51.7%	2.51	1.55	23.9%	23.9%
126			17	145	4	6.36	9.22	4.30	46.7%	1.65	1.58	17.9%	17.9%
127			28	156	8	16.51	19.76	7.83	39.6%	4.85	2.54	24.5%	24.5%
128			29	157	8	15.22	20.24	12.19	60.2%	5.07	4.50	25.0%	25.0%
129			30	158	8	15.30	20.98	12.90	61.5%	4.70	4.81	22.4%	22.9%
130			31	159	8	15.40	16.41	9.31	56.7%	5.02	3.33	30.6%	30.6%
131			32	160	8	15.62	16.63	7.09	42.7%	4.24	1.87	25.5%	25.5%
132			41	169	8	15.90	18.28	9.35	51.1%	5.13	3.35	28.1%	28.1%
133			42	170	8	14.98	21.63	13.47	62.3%	4.75	5.08	22.0%	23.5%
134			43	171	8	14.92	19.06	11.11	58.3%	4.74	4.08	24.9%	24.9%
135			44	172	8	15.18	16.36	7.77	47.5%	4.42	2.41	27.0%	27.0%

Table 3.6. PD of Module 2 (38.5GHz – n260)

Module 2 Low CH

									max ratio out of all beams					max ratio out of all beams	
						4cm 2 PD (W/m 2)			57.2%	84.1%	4cm 2 PD (W/m 2) at 10mm evaluation distance			65.8%	39.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
91			2		1	1.56	3.06	1.11	36.4%	50.9%	0.44	1.29	0.34	42.2%	14.5%
92			9		2	3.93	6.88	1.69	24.5%	57.1%	1.62	2.50	0.55	36.3%	23.6%
93			10		2	2.92	5.02	2.01	40.0%	58.2%	1.19	2.67	0.90	53.1%	23.8%
94			11		2	3.79	6.75	1.78	26.4%	56.2%	1.50	2.47	0.66	36.6%	22.2%
95			16		2	2.99	4.68	2.06	44.1%	63.9%	1.34	2.83	0.90	60.4%	28.6%
96			17		2	2.68	5.23	2.07	39.5%	51.2%	1.04	2.17	0.71	41.4%	19.8%
97			28		4	6.39	10.48	3.18	30.4%	61.0%	2.27	4.61	1.05	44.0%	21.7%
98			29		4	4.89	8.38	3.88	46.3%	58.3%	1.92	4.92	1.75	58.7%	22.9%
99			30		4	4.93	8.13	3.28	40.4%	60.7%	2.15	4.57	1.28	56.2%	26.4%
100			31		4	6.27	11.08	3.31	29.9%	56.6%	2.59	4.81	1.21	43.4%	23.4%
101			32		4	6.21	10.86	3.14	28.9%	57.2%	2.28	4.56	0.99	42.0%	21.0%
102			41		4	5.51	9.32	4.35	46.7%	59.2%	2.15	5.51	2.05	59.2%	23.1%
103			42		4	4.90	7.78	3.43	44.1%	62.9%	2.10	4.72	1.42	60.7%	27.0%
104			43		4	6.49	11.31	3.31	29.2%	57.4%	2.79	5.13	1.29	45.3%	24.7%
105			44		4	6.18	10.73	3.10	28.9%	57.6%	2.39	4.53	1.06	42.2%	22.3%
106			130		1	1.25	2.46	0.93	37.8%	50.8%	0.36	1.00	0.29	40.7%	14.7%
107			137		2	2.01	4.30	1.58	36.7%	46.8%	0.73	1.59	0.52	36.9%	17.1%
108			138		2	3.34	4.85	2.12	43.8%	68.8%	1.40	3.16	0.95	65.2%	29.0%
109			139		2	3.35	6.44	2.26	35.1%	52.0%	1.14	2.91	0.97	45.2%	17.6%
110			144		2	2.99	5.45	2.38	43.7%	54.9%	1.09	3.06	1.10	56.1%	20.1%
111			145		2	2.13	4.46	1.48	33.3%	47.7%	0.76	1.66	0.54	37.0%	17.1%
112			156		4	5.08	8.73	3.76	43.1%	58.2%	1.75	4.76	1.80	54.6%	20.1%
113	2	Patch	157		4	4.99	7.86	4.11	52.4%	63.5%	2.13	5.17	1.92	65.8%	27.1%
114			158		4	5.26	7.39	3.08	41.8%	71.2%	2.35	4.80	1.34	65.0%	31.9%
115			159		4	5.76	11.24	3.13	27.8%	51.3%	2.67	4.58	1.38	40.8%	23.7%
116			160		4	5.00	9.40	3.50	37.3%	53.3%	1.85	4.66	1.67	49.6%	19.7%
117			169		4	4.94	8.32	4.14	49.8%	59.3%	2.00	5.00	1.99	60.1%	24.0%
118			170		4	4.74	7.37	3.62	49.0%	64.3%	2.04	4.78	1.66	64.8%	27.7%
119			171		4	5.32	7.78	2.92	37.6%	68.4%	2.29	4.55	1.21	58.5%	29.4%
120			172		4	5.21	10.36	3.43	33.1%	50.3%	2.30	4.75	1.58	45.9%	22.2%
121			2	130	2	3.64	5.98	2.10	35.2%	61.0%	1.13	2.72	0.75	45.6%	19.0%
122			9	137	4	9.67	12.63	4.77	37.7%	76.6%	4.14	5.34	1.48	42.3%	32.8%
123			10	138	4	7.65	10.05	5.14	51.2%	76.1%	3.61	6.31	2.40	62.8%	36.0%
124			11	139	4	6.83	11.39	3.33	29.2%	60.0%	2.35	5.08	1.42	44.6%	20.7%
125			16	144	4	8.38	11.12	5.82	52.3%	75.4%	3.88	6.67	2.73	60.0%	34.9%
126			17	145	4	5.32	8.84	3.18	36.0%	60.2%	2.13	4.21	1.25	47.6%	24.0%
127			28	160	8	15.45	22.20	7.61	34.3%	69.6%	5.97	10.16	3.21	45.8%	26.9%
128			29	158	8	14.82	17.97	9.92	55.2%	82.5%	7.05	10.94	4.70	60.9%	39.2%
129			30	157	8	13.19	17.40	9.52	54.7%	75.8%	6.64	10.19	4.49	58.6%	38.2%
130			31	159	8	17.02	22.97	8.53	37.2%	74.1%	6.05	10.46	3.30	45.5%	26.4%
131			32	156	8	14.78	21.50	7.67	35.7%	68.7%	6.40	10.18	3.34	47.4%	29.8%
132			41	171	8	16.45	19.57	10.27	52.5%	84.1%	7.29	11.23	4.86	57.4%	37.3%
133			42	170	8	13.55	16.73	9.57	57.2%	81.0%	6.67	10.41	4.53	62.2%	39.9%
134			43	172	8	16.63	23.93	8.77	36.6%	69.5%	6.18	10.81	3.59	45.1%	25.8%
135			44	169	8	14.32	20.51	8.58	41.9%	69.8%	6.36	10.25	3.79	50.0%	31.0%

									max ratio out of all beams					max ratio out of all beams	
						4cm 2 PD (W/m 2)			57.2%	84.1%	4cm 2 PD (W/m 2) at 15mm evaluation distance			29.6%	29.6%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Front 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)		ratio (back 15mm)/(worst-surface 2mm)	ratio (worst-surface (15mm/2mm)
91			2		1	1.56	3.06	1.11	36.4%	50.9%	0.28	0.20		9.3%	9.3%
92			9		2	3.93	6.88	1.69	24.5%	57.1%	1.09	0.33		15.9%	15.9%
93			10		2	2.92	5.02	2.01	40.0%	58.2%	0.77	0.62		15.3%	15.3%
94			11		2	3.79	6.75	1.78	26.4%	56.2%	1.00	0.42		14.8%	14.8%
95			16		2	2.99	4.68	2.06	44.1%	63.9%	0.88	0.62		18.8%	18.8%
96			17		2	2.68	5.23	2.07	39.5%	51.2%	0.66	0.48		12.6%	12.6%
97			28		4	6.39	10.48	3.18	30.4%	61.0%	1.44	0.72		13.7%	13.7%
98			29		4	4.89	8.38	3.88	46.3%	58.3%	1.34	1.28		16.0%	16.0%
99			30		4	4.93	8.13	3.28	40.4%	60.7%	1.46	0.86		18.0%	18.0%
100			31		4	6.27	11.08	3.31	29.9%	56.6%	1.68	0.75		15.1%	15.1%
101			32		4	6.21	10.86	3.14	28.9%	57.2%	1.40	0.68		12.9%	12.9%
102			41		4	5.51	9.32	4.35	46.7%	59.2%	1.55	1.53		16.6%	16.6%
103			42		4	4.90	7.78	3.43	44.1%	62.9%	1.49	1.01		19.2%	19.2%
104			43		4	6.49	11.31	3.31	29.2%	57.4%	1.83	0.81		16.2%	16.2%
105			44		4	6.18	10.73	3.10	28.9%	57.6%	1.48	0.65		13.8%	13.8%
106			130		1	1.25	2.46	0.93	37.8%	50.8%	0.22	0.17		8.8%	8.8%
107			137		2	2.01	4.30	1.58	36.7%	46.8%	0.47	0.34		11.0%	11.0%
108			138		2	3.34	4.85	2.12	43.8%	68.8%	0.91	0.64		18.8%	18.8%
109			139		2	3.35	6.44	2.26	35.1%	52.0%	0.75	0.65		11.6%	11.6%
110			144		2	2.99	5.45	2.38	43.7%	54.9%	0.70	0.76		12.9%	13.9%
111			145		2	2.13	4.46	1.48	33.3%	47.7%	0.53	0.35		11.8%	11.8%
112			156		4	5.08	8.73	3.76	43.1%	58.2%	1.27	1.32		14.5%	15.2%
113	2	Patch	157		4	4.99	7.86	4.11	52.4%	63.5%	1.52	1.42		19.4%	19.4%
114			158		4	5.26	7.39	3.08	41.8%	71.2%	1.64	0.96		22.3%	22.3%
115			159		4	5.76	11.24	3.13	27.8%	51.3%	1.95	0.92		17.4%	17.4%
116			160		4	5.00	9.40	3.50	37.3%	53.3%	1.29	1.19		13.7%	13.7%
117			169		4	4.94	8.32	4.14	49.8%	59.3%	1.44	1.51		17.3%	18.2%
118			170		4	4.74	7.37	3.62	49.0%	64.3%	1.48	1.24		20.1%	20.1%
119			171		4	5.32	7.78	2.92	37.6%	68.4%	1.54	0.84		19.9%	19.9%
120			172		4	5.21	10.36	3.43	33.1%	50.3%	1.65	1.11		15.9%	15.9%
121			2	130	2	3.64	5.98	2.10	35.2%	61.0%	0.73	0.50		12.3%	12.3%
122			9	137	4	9.67	12.63	4.77	37.7%	76.6%	2.76	0.94		21.9%	21.9%
123			10	138	4	7.65	10.05	5.14	51.2%	76.1%	2.47	1.70		24.5%	24.5%
124			11	139	4	6.83	11.39	3.33	29.2%	60.0%	1.60	1.01		14.1%	14.1%
125			16	144	4	8.38	11.12	5.82	52.3%	75.4%	2.60	1.89		23.4%	23.4%
126			17	145	4	5.32	8.84	3.18	36.0%	60.2%	1.49	0.89		16.8%	16.8%
127			28	160	8	15.45	22.20	7.61	34.3%	69.6%	4.02	2.26		18.1%	18.1%
128			29	158	8	14.82	17.97	9.92	55.2%	82.5%	4.99	3.43		27.7%	27.7%
129			30	157	8	13.19	17.40	9.52	54.7%	75.8%	4.93	3.25		28.4%	28.4%
130			31	159	8	17.02	22.97	8.53	37.2%	74.1%	4.34	2.30		18.9%	18.9%
131			32	156	8	14.78	21.50	7.67	35.7%	68.7%	4.32	2.32		20.1%	20.1%
132			41	171	8	16.45	19.57	10.27	52.5%	84.1%	5.12	3.52		26.2%	26.2%
133			42	170	8	13.55	16.73	9.57	57.2%	81.0%	4.95	3.32		29.6%	29.6%
134			43	172	8	16.63	23.93	8.77	36.6%	69.5%	3.95	2.59		16.5%	16.5%
135			44	169	8	14.32	20.51	8.58	41.9%	69.8%	4.32	2.74		21.1%	21.1%

Module 2 Mid CH

									max ratio outofallbeams						max ratio outofallbeams	
						4cm 2PD (@ /n 2)			63.5%	82.2%	4cm 2PD (@ /n 2) at10mm evaluation distance			70.2%	41.2%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fornt 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
91			2		1	1.90	3.44	1.24	36.0%	55.1%	0.66	1.63	0.40	47.4%	19.3%
92			9		2	3.86	7.73	2.45	31.7%	49.9%	1.27	3.51	0.97	45.4%	16.4%
93			10		2	3.99	6.51	2.47	38.0%	61.2%	1.83	3.67	1.09	56.3%	28.2%
94			11		2	3.86	7.66	2.63	34.4%	50.4%	1.09	3.58	1.09	46.8%	14.2%
95			16		2	3.46	5.22	2.37	45.4%	66.3%	1.66	3.40	1.05	65.1%	31.8%
96			17		2	3.11	6.20	2.29	36.9%	50.1%	1.24	2.65	0.76	42.7%	20.0%
97			28		4	6.60	11.98	4.08	34.1%	55.1%	1.92	5.63	1.57	47.0%	16.1%
98			29		4	6.52	10.26	4.71	45.9%	63.5%	2.78	6.60	2.08	64.4%	27.1%
99			30		4	6.20	9.95	4.31	43.3%	62.4%	2.79	5.81	1.79	58.4%	28.1%
100			31		4	6.71	12.60	3.94	31.2%	53.2%	2.53	5.81	1.27	46.1%	20.1%
101			32		4	6.53	12.16	3.97	32.6%	53.7%	2.12	5.59	1.51	46.0%	17.4%
102			41		4	6.92	10.67	4.69	44.0%	64.8%	3.04	6.93	2.14	65.0%	28.5%
103			42		4	6.36	9.75	4.39	45.0%	65.2%	2.88	6.22	1.89	63.8%	29.5%
104			43		4	6.70	12.13	3.55	29.2%	55.2%	2.86	5.64	1.37	46.5%	23.6%
105			44		4	6.62	12.39	4.06	32.7%	53.4%	2.14	5.65	1.50	45.6%	17.3%
106			130		1	1.52	2.88	1.16	40.2%	52.9%	0.48	1.35	0.36	47.1%	16.8%
107			137		2	2.51	5.02	1.87	37.3%	50.1%	0.93	1.95	0.62	38.8%	18.6%
108			138		2	3.73	5.69	2.54	44.6%	65.5%	1.61	3.65	1.15	64.1%	28.3%
109			139		2	3.64	7.67	2.97	38.7%	47.4%	1.25	3.85	1.22	50.1%	16.3%
110			144		2	3.45	6.33	2.89	45.7%	54.5%	1.41	3.78	1.27	59.7%	22.2%
111			145		2	2.62	4.95	1.89	38.2%	52.9%	0.83	2.00	0.65	40.5%	16.8%
112			156		4	5.63	9.80	4.35	44.3%	57.4%	2.28	5.69	2.05	58.1%	23.3%
113	2	Patch	157		4	5.78	8.87	4.57	51.6%	65.2%	2.52	5.96	2.13	67.0%	28.4%
114			158		4	6.40	9.25	4.09	44.2%	69.2%	3.04	6.23	1.81	67.3%	32.8%
115			159		4	5.53	12.33	4.01	32.5%	44.9%	2.20	5.60	1.80	45.4%	17.8%
116			160		4	5.53	10.54	4.17	39.6%	52.4%	2.23	5.56	1.95	52.7%	21.1%
117			169		4	5.78	9.43	4.49	47.7%	61.3%	2.44	5.88	2.16	62.3%	25.8%
118			170		4	6.15	9.24	4.58	49.6%	66.6%	2.76	6.41	2.12	69.4%	29.9%
119			171		4	6.07	9.24	3.70	40.1%	65.7%	2.84	5.50	1.55	59.5%	30.8%
120			172		4	5.56	11.59	4.15	35.8%	48.0%	2.18	5.61	1.90	48.4%	18.8%
121			2	130	2	3.76	6.10	2.42	39.6%	61.6%	1.42	3.13	0.87	51.3%	23.3%
122			9	137	4	9.31	14.39	6.22	43.2%	64.7%	3.93	5.81	2.25	40.4%	27.3%
123			10	138	4	9.11	12.47	6.03	48.4%	73.1%	4.49	7.70	2.82	61.8%	36.0%
124			11	139	4	7.00	12.59	3.93	31.2%	55.6%	2.35	5.41	1.57	43.0%	18.7%
125			16	144	4	9.00	12.07	6.81	56.4%	74.6%	4.35	7.57	3.19	62.7%	36.0%
126			17	145	4	5.65	9.33	3.86	41.4%	60.6%	2.50	5.09	1.41	54.5%	26.8%
127			28	160	8	16.00	24.01	8.52	35.5%	66.6%	6.23	10.98	3.54	45.7%	25.9%
128			29	158	8	17.25	21.21	11.85	55.9%	81.3%	8.68	13.76	5.52	64.9%	41.0%
129			30	157	8	14.90	19.48	11.46	58.8%	76.5%	7.72	12.23	5.38	62.8%	39.6%
130			31	159	8	17.27	25.88	9.55	36.9%	66.7%	6.04	12.25	3.86	47.4%	23.3%
131			32	156	8	14.75	23.26	8.27	35.6%	63.4%	6.90	11.42	3.31	49.1%	29.7%
132			41	171	8	18.29	22.71	10.73	47.2%	80.5%	9.24	14.22	4.87	62.6%	40.7%
133			42	170	8	16.06	19.53	12.39	63.5%	82.2%	8.06	13.71	5.86	70.2%	41.2%
134			43	172	8	15.94	23.58	9.71	41.2%	67.6%	6.72	12.74	3.99	54.0%	28.5%
135			44	169	8	15.03	23.52	8.69	37.0%	63.9%	6.96	11.98	3.64	50.9%	29.6%

									max ratio outofallbeams					max ratio outofallbeams	
						4cm 2PD (@ /n 2)			63.5%	82.2%	4cm 2PD (@ /n 2) at15mm evaluation distance			30.9%	30.9%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Fornt 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)		ratio (back 15mm)/(worst-surface 2mm)	ratio worst-surface (15mm/2mm)
91			2		1	1.90	3.44	1.24	36.0%	55.1%	0.42	0.25		12.2%	12.2%
92			9		2	3.86	7.73	2.45	31.7%	49.9%	0.82	0.62		10.6%	10.6%
93			10		2	3.99	6.51	2.47	38.0%	61.2%	1.26	0.75		19.4%	19.4%
94			11		2	3.86	7.66	2.63	34.4%	50.4%	0.69	0.71		9.1%	9.2%
95			16		2	3.46	5.22	2.37	45.4%	66.3%	1.13	0.72		21.7%	21.7%
96			17		2	3.11	6.20	2.29	36.9%	50.1%	0.80	0.51		12.9%	12.9%
97			28		4	6.60	11.98	4.08	34.1%	55.1%	1.19	1.11		9.9%	9.9%
98			29		4	6.52	10.26	4.71	45.9%	63.5%	1.97	1.52		19.2%	19.2%
99			30		4	6.20	9.95	4.31	43.3%	62.4%	1.95	1.22		19.6%	19.6%
100			31		4	6.71	12.60	3.94	31.2%	53.2%	1.62	0.88		12.8%	12.8%
101			32		4	6.53	12.16	3.97	32.6%	53.7%	1.29	1.05		10.6%	10.6%
102			41		4	6.92	10.67	4.69	44.0%	64.8%	2.12	1.59		19.9%	19.9%
103			42		4	6.36	9.75	4.39	45.0%	65.2%	2.08	1.34		21.4%	21.4%
104			43		4	6.70	12.13	3.55	29.2%	55.2%	1.91	0.88		15.7%	15.7%
105			44		4	6.62	12.39	4.06	32.7%	53.4%	1.34	1.05		10.8%	10.8%
106			130		1	1.52	2.88	1.16	40.2%	52.9%	0.31	0.23		10.9%	10.9%
107			137		2	2.51	5.02	1.87	37.3%	50.1%	0.58	0.41		11.5%	11.5%
108			138		2	3.73	5.69	2.54	44.6%	65.5%	1.06	0.79		18.6%	18.6%
109			139		2	3.64	7.67	2.97	38.7%	47.4%	0.80	0.79		10.4%	10.4%
110			144		2	3.45	6.33	2.89	45.7%	54.5%	0.93	0.84		14.7%	14.7%
111			145		2	2.62	4.95	1.89	38.2%	52.9%	0.55	0.43		11.1%	11.1%
112			156		4	5.63	9.80	4.35	44.3%	57.4%	1.62	1.51		16.5%	16.5%
113	2	Patch	157		4	5.78	8.87	4.57	51.6%	65.2%	1.79	1.56		20.2%	20.2%
114			158		4	6.40	9.25	4.09	44.2%	69.2%	2.20	1.27		23.7%	23.7%
115			159		4	5.53	12.33	4.01	32.5%	44.9%	1.55	1.23		12.5%	12.5%
116			160		4	5.53	10.54	4.17	39.6%	52.4%	1.54	1.39		14.6%	14.6%
117			169		4	5.78	9.43	4.49	47.7%	61.3%	1.77	1.64		18.8%	18.8%
118			170		4	6.15	9.24	4.58	49.6%	66.6%	2.02	1.53		21.9%	21.9%
119			171		4	6.07	9.24	3.70	40.1%	65.7%	2.00	1.08		21.6%	21.6%
120			172		4	5.56	11.59	4.15	35.8%	48.0%	1.48	1.34		12.7%	12.7%
121			2	130	2	3.76	6.10	2.42	39.6%	61.6%	0.94	0.59		15.4%	15.4%
122			9	137	4	9.31	14.39	6.22	43.2%	64.7%	2.52	1.47		17.5%	17.5%
123			10	138	4	9.11	12.47	6.03	48.4%	73.1%	3.11	2.00		24.9%	24.9%
124			11	139	4	7.00	12.59	3.93	31.2%	55.6%	1.67	1.04		13.2%	13.2%
125			16	144	4	9.00	12.07	6.81	56.4%	74.6%	3.04	2.21		25.2%	25.2%
126			17	145	4	5.65	9.33	3.86	41.4%	60.6%	1.72	0.99		18.4%	18.4%
127			28	160	8	16.00	24.01	8.52	35.5%	66.6%	4.23	2.44		17.6%	17.6%
128			29	158	8	17.25	21.21	11.85	55.9%	81.3%	6.38	4.01		30.1%	30.1%
129			30	157	8	14.90	19.48	11.46	58.8%	76.5%	5.77	3.84		29.6%	29.6%
130			31	159	8	17.27	25.88	9.55	36.9%	66.7%	3.79	2.70		14.7%	14.7%
131			32	156	8	14.75	23.26	8.27	35.6%	63.4%	4.76	2.25		20.5%	20.5%
132			41	171	8	18.29	22.71	10.73	47.2%	80.5%	6.67	3.51		29.4%	29.4%
133			42	170	8	16.06	19.53	12.39	63.5%	82.2%	6.04	4.22		30.9%	30.9%
134			43	172	8	15.94	23.58	9.71	41.2%	67.6%	4.10	2.87		17.4%	17.4%
135			44	169	8	15.03	23.52	8.69	37.0%	63.9%	4.62	2.56		20.5%	20.5%

Module 2 High CH

									max ratio out of all beams					max ratio out of all beams	
						4cm 2PD (f/n 2)			53.4%	78.9%	4cm 2PD (f/n 2) at 10mm evaluation distance			72.6%	38.8%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Font 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S3 (Right)	S1 (Front)	ratio (worst-surface (10mm/2mm)	ratio (back 10mm)/(worst-surface 2mm)
91			2		1	1.70	3.13	1.09	34.8%	54.3%	0.58	1.52	0.34	48.6%	18.6%
92			9		2	3.39	7.59	2.77	36.5%	44.7%	1.11	3.53	1.17	46.6%	14.6%
93			10		2	3.37	5.72	2.15	37.6%	58.9%	1.53	3.35	0.85	58.6%	26.7%
94			11		2	3.45	7.66	2.88	37.6%	45.0%	1.29	3.86	1.26	50.4%	16.8%
95			16		2	2.75	3.91	1.58	40.5%	70.3%	1.39	2.63	0.65	67.2%	35.5%
96			17		2	2.76	5.70	1.93	33.9%	48.5%	1.06	2.54	0.59	44.7%	18.6%
97			28		4	5.71	11.37	4.16	36.6%	50.2%	2.27	6.01	1.70	52.9%	20.0%
98			29		4	5.79	9.23	4.08	44.2%	62.8%	2.54	5.97	1.65	64.7%	27.5%
99			30		4	5.70	9.47	4.02	42.5%	60.1%	2.50	5.82	1.68	61.5%	26.4%
100			31		4	5.62	11.13	3.52	31.6%	50.5%	1.80	5.34	1.42	48.0%	16.1%
101			32		4	5.30	11.03	3.62	32.9%	48.1%	2.09	5.18	1.57	47.0%	19.0%
102			41		4	5.75	9.53	4.13	43.3%	60.3%	2.64	5.96	1.86	62.5%	27.7%
103			42		4	5.58	8.75	3.87	44.2%	63.8%	2.47	5.88	1.60	67.3%	28.2%
104			43		4	5.01	10.40	3.22	31.0%	48.1%	2.25	4.78	1.21	45.9%	21.6%
105			44		4	5.64	11.30	3.71	32.8%	49.9%	2.10	5.50	1.61	48.7%	18.6%
106			130		1	1.50	2.88	1.08	37.4%	51.9%	0.51	1.54	0.31	53.4%	17.8%
107			137		2	2.46	5.39	1.80	33.5%	45.6%	0.88	2.35	0.56	43.6%	16.4%
108			138		2	3.97	6.03	2.56	42.5%	65.8%	1.84	3.82	1.15	63.4%	30.6%
109			139		2	3.53	7.66	2.82	36.9%	46.1%	1.48	3.96	1.21	51.7%	19.4%
110			144		2	3.81	6.64	2.68	40.3%	57.3%	1.69	3.92	1.18	59.1%	25.5%
111			145		2	2.60	4.95	1.62	32.7%	52.4%	0.94	2.30	0.58	46.5%	18.9%
112			156		4	6.16	10.81	4.54	42.0%	56.9%	2.86	6.64	2.17	61.4%	26.4%
113	2	Patch	157		4	6.55	9.33	4.17	44.7%	70.2%	2.99	6.59	1.98	70.6%	32.1%
114			158		4	6.20	8.80	3.67	41.6%	70.4%	2.93	6.00	1.59	68.2%	33.2%
115			159		4	5.04	12.12	4.34	35.8%	41.6%	2.07	6.17	2.01	50.9%	17.1%
116			160		4	5.87	11.52	4.68	40.6%	50.9%	2.66	6.65	2.27	57.8%	23.1%
117			169		4	6.31	9.70	4.04	41.7%	65.1%	2.95	6.36	1.89	65.6%	30.5%
118			170		4	6.42	9.10	4.18	45.9%	70.5%	2.93	6.60	1.88	72.6%	32.2%
119			171		4	6.01	8.87	3.28	37.0%	67.8%	2.89	5.46	1.38	61.5%	32.5%
120			172		4	5.64	12.20	4.77	39.1%	46.3%	2.44	6.64	2.26	54.5%	20.0%
121			2	130	2	3.29	6.05	2.37	39.1%	54.4%	1.27	3.27	0.72	54.1%	21.0%
122			9	137	4	8.29	13.97	6.43	46.0%	59.4%	3.05	6.23	2.57	44.6%	21.9%
123			10	138	4	8.68	11.96	5.34	44.6%	72.5%	4.31	7.84	2.29	65.5%	36.0%
124			11	139	4	5.49	12.98	4.02	31.0%	42.3%	2.44	5.72	1.74	44.1%	18.8%
125			16	144	4	8.80	11.81	5.29	44.8%	74.5%	4.53	7.54	2.44	63.8%	38.4%
126			17	145	4	5.26	9.18	3.33	36.3%	57.3%	2.24	5.25	1.17	57.2%	24.4%
127			28	160	8	11.92	23.18	8.81	38.0%	51.4%	5.03	11.03	3.71	47.6%	21.7%
128			29	158	8	15.68	20.06	9.39	46.8%	78.1%	7.69	13.54	4.04	67.5%	38.3%
129			30	157	8	14.85	20.84	8.97	43.1%	71.2%	7.42	13.40	4.14	64.3%	35.6%
130			31	159	8	12.50	24.50	8.90	36.3%	51.0%	4.99	10.44	3.63	42.6%	20.4%
131			32	156	8	12.59	21.74	8.16	37.5%	57.9%	6.00	11.52	3.41	53.0%	27.6%
132			41	171	8	16.27	21.93	8.63	39.4%	74.2%	8.37	13.95	3.84	63.6%	38.2%
133			42	170	8	14.79	18.75	10.01	53.4%	78.9%	7.28	13.15	4.40	70.1%	38.8%
134			43	172	8	12.57	23.24	9.44	40.6%	54.1%	5.41	11.78	3.98	50.7%	23.3%
135			44	169	8	13.85	22.08	7.73	35.0%	62.7%	6.50	12.49	3.13	56.6%	29.4%

									max ratio out of all beams				max ratio out of all beams	
						4cm 2PD (f/n 2)			53.4%	78.9%	4cm 2PD (f/n 2) at 15mm evaluation distance		29.1%	29.1%
No.	Module	Type	Beam ID_1	Beam ID_2	Feed no.	S2 (Back)	S3 (Right)	S1 (Front)	ratio (Font 2mm)/(worst-surface 2mm)	ratio (Back 2mm)/(worst-surface 2mm)	S2 (Back)	S1 (Front)	ratio (back 15mm)/(worst-surface 2mm)	ratio (worst-surface (15mm/2mm)
91			2		1	1.70	3.13	1.09	34.8%	54.3%	0.40	0.21	12.8%	12.8%
92			9		2	3.39	7.59	2.77	36.5%	44.7%	0.71	0.78	9.3%	10.3%
93			10		2	3.37	5.72	2.15	37.6%	58.9%	1.06	0.57	18.5%	18.5%
94			11		2	3.45	7.66	2.88	37.6%	45.0%	0.83	0.85	10.8%	11.1%
95			16		2	2.75	3.91	1.58	40.5%	70.3%	1.00	0.43	25.7%	25.7%
96			17		2	2.76	5.70	1.93	33.9%	48.5%	0.64	0.38	11.2%	11.2%
97			28		4	5.71	11.37	4.16	36.6%	50.2%	1.58	1.22	13.9%	13.9%
98			29		4	5.79	9.23	4.08	44.2%	62.8%	1.81	1.15	19.6%	19.6%
99			30		4	5.70	9.47	4.02	42.5%	60.1%	1.74	1.14	18.4%	18.4%
100			31		4	5.62	11.13	3.52	31.6%	50.5%	1.20	0.97	10.8%	10.8%
101			32		4	5.30	11.03	3.62	32.9%	48.1%	1.43	1.10	13.0%	13.0%
102			41		4	5.75	9.53	4.13	43.3%	60.3%	1.85	1.34	19.4%	19.4%
103			42		4	5.58	8.75	3.87	44.2%	63.8%	1.77	1.08	20.2%	20.2%
104			43		4	5.01	10.40	3.22	31.0%	48.1%	1.56	0.81	15.0%	15.0%
105			44		4	5.64	11.30	3.71	32.8%	49.9%	1.41	1.12	12.5%	12.5%
106			130		1	1.50	2.88	1.08	37.4%	51.9%	0.33	0.19	11.6%	11.6%
107			137		2	2.46	5.39	1.80	33.5%	45.6%	0.55	0.36	10.2%	10.2%
108			138		2	3.97	6.03	2.56	42.5%	65.8%	1.21	0.80	20.0%	20.0%
109			139		2	3.53	7.66	2.82	36.9%	46.1%	0.97	0.80	12.7%	12.7%
110			144		2	3.81	6.64	2.68	40.3%	57.3%	1.13	0.78	17.0%	17.0%
111			145		2	2.60	4.95	1.62	32.7%	52.4%	0.63	0.39	12.6%	12.6%
112			156		4	6.16	10.81	4.54	42.0%	56.9%	2.05	1.59	18.9%	18.9%
113	2	Patch	157		4	6.55	9.33	4.17	44.7%	70.2%	2.15	1.44	23.0%	23.0%
114			158		4	6.20	8.80	3.67	41.6%	70.4%	2.10	1.09	23.8%	23.8%
115			159		4	5.04	12.12	4.34	35.8%	41.6%	1.35	1.41	11.1%	11.6%
116			160		4	5.87	11.52	4.68	40.6%	50.9%	1.86	1.63	16.2%	16.2%
117			169		4	6.31	9.70	4.04	41.7%	65.1%	2.15	1.40	22.2%	22.2%
118			170		4	6.42	9.10	4.18	45.9%	70.5%	2.13	1.34	23.4%	23.4%
119			171		4	6.01	8.87	3.28	37.0%	67.8%	2.07	0.94	23.3%	23.3%
120			172		4	5.64	12.20	4.77	39.1%	46.3%	1.63	1.60	13.4%	13.4%
121			2	130	2	3.29	6.05	2.37	39.1%	54.4%	0.84	0.47	13.9%	13.9%
122			9	137	4	8.29	13.97	6.43	46.0%	59.4%	2.00	1.74	14.3%	14.3%
123			10	138	4	8.68	11.96	5.34	44.6%	72.5%	3.05	1.62	25.5%	25.5%
124			11	139	4	5.49	12.98	4.02	31.0%	42.3%	1.74	1.18	13.4%	13.4%
125			16	144	4	8.80	11.81	5.29	44.8%	74.5%	3.23	1.70	27.3%	27.3%
126			17	145	4	5.26	9.18	3.33	36.3%	57.3%	1.56	0.81	17.0%	17.0%
127			28	160	8	11.92	23.18	8.81	38.0%	51.4%	3.46	2.65	14.9%	14.9%
128			29	158	8	15.68	20.06	9.39	46.8%	78.1%	5.65	2.85	28.2%	28.2%
129			30	157	8	14.85	20.84	8.97	43.1%	71.2%	5.61	2.93	26.9%	26.9%
130			31	159	8	12.50	24.50	8.90	36.3%	51.0%	3.50	2.58	14.3%	14.3%
131			32	156	8	12.59	21.74	8.16	37.5%	57.9%	4.14	2.32	19.0%	19.0%
132			41	171	8	16.27	21.93	8.63	39.4%	74.2%	6.09	2.72	27.8%	27.8%
133			42	170	8	14.79	18.75	10.01	53.4%	78.9%	5.46	3.01	29.1%	29.1%
134			43	172	8	12.57	23.24	9.44	40.6%	54.1%	3.58	2.87	15.4%	15.4%
135			44	169	8	13.85	22.08	7.73	35.0%	62.7%	4.66	2.22	21.1%	21.1%