

Motorola Model: XT2205-3 FCC ID: IHDT56AE8

Power Density Simulation Report

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2. Simulation Approach for MPE

This section details the approach taken to identify the worst-case beams and beam pairs for each mm-wave antenna array module for evaluation planes 2 mm away from the mobile device.

2.1. General Approach

The concept of beamforming adds an additional dimension to the test matrix, effectively increasing the number of the exposure test cases to be checked, by a factor equal to the number of beams that the device can form. This makes it impractical to measure every beam in every measurement plane. Because the mm-wave power density measurement is time-consuming per beam and measurement plane, it is necessary to identify a-priori the worst-case beams for each measurement condition (plane) via simulation, so that these beams can then be measured to characterize the worst-case power density of the device.

The Ansys HFSS simulation tool (HFSS 2021 R2) was used for the simulation of near-field power density for this process.

2.2. Finding Worst-Case Near-Field Results

This process consists of two parts:

- 1. Finding worst-case surface(s) for each beam, per antenna group and per antenna module in the middle channel of each band for determining worst-case housing influence.
- 2. Finding worst-case PD value for all three channels of each band for each beam and beam pair, per antenna polarization and per antenna module for determining the scaling factor for input power limit.

For part 1, only a few measurement planes are considered. The details of selection criteria are as described in a later section. At each x-y-z location on any of the selected measurement planes which are near to a mm-wave module, the simulated PD for each beam from that module is assessed in the middle channel of each band. The test separation distance is 2mm from the device. The worst case of all of these PD results in a worst measurement plane is then identified, and that module and beam configuration is selected for the measurement of PD on the measurement plane in question.

For part 2, only the identified worst-case surfaces are considered as the evaluation planes. At each x-y-z location on any of the selected measurement planes which are near to a mm-wave module, the simulated PD for each beam and beam pair from that module is assessed for all three channels of each band. The test separation distance is 2mm from the device. The worst cases of all these PD results for each individual beam and beam pair are then identified, and that PD value is then compared to PD design target for determining the scaling factor for input power limit as described in RF Exposure Part 0 Report.

For single beams (single-polarization beam generated by transmission), the PD is simulated directly from the phase weights applied by the modem. For dual beams (beam pairs, i.e. a dual-polarization beam pair), a conservative uncertainty factor was applied based on simulated PD recalculated for every possible group phase relationship between the two beams, to conservatively cover the worst possible combination of relative phase between the two beams (worst-case addition of the fields).

The six measurement planes are named as follows:

- S1 = front
- \blacksquare S2 = back
- S3 = left
- \blacksquare S4 = right
- \blacksquare S5 = top
- S6 = bottom

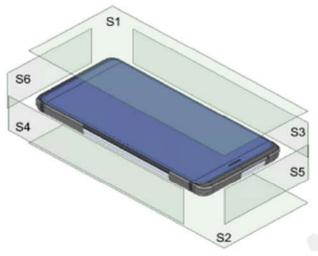


Figure 2.2-1 Identification of the six measurement planes.

2.3. Simulation Tool

2.3.1. Tool Description

For the mm-wave power density simulations, the commercially-available ANSYS Electromagnetics suite version 2021R2(HFSS) is used. The ANSYS HFSS tool is used in the industry for simulating 3D, full-wave electromagnetic fields. Motorola uses this EM simulation tool for mm-wave problems due to its established accuracy, advanced solver, and high-performance computing technology capabilities for doing accurate and rapid characterization of high-frequency components.

2.3.2. Solver Description

HFSS' solver employs the Finite Element Method, which operates in the frequency domain. The HFSS simulation employed a direct solver with first order basis functions.

2.3.3. Convergence Criteria and Power Density Calculations

HFSS uses a volume air box containing the simulated area to calculate the EM fields. The box is truncated by an Absorbing Boundary Condition. The simulation uses the adaptive mesh technique to meet the exit criteria of delta S < 0.02. The delta S is the change in the magnitude of the S-parameters between two consecutive passes; if the magnitude and phase of all S-parameters change by an amount less than the Maximum-Delta-S-per-Pass value from one iteration to the next, the adaptive analysis stops. Otherwise, the mesh is refined in higher energy areas, according to proprietary Ansys algorithms, and an additional solution pass is taken. An example of a fully refined mesh through one cross-section of the device is shown in the figure below.

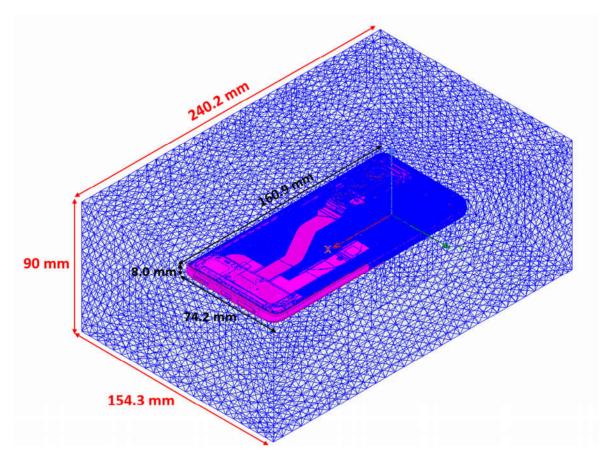


Figure 2.3.3-1: Example of the adaptive mesh technique & Mobile size

Figure 2.3.3-1: The HFSS mesh in a model of the device. After finding the simulated electric and magnetic (E and H) fields, the Poynting vector is calculated based on "peak" (i.e. non-RMS) field values in a grid with a 1 mm step, on the appropriate measurement planes as defined in previous sections. The Poynting vector at each spatial point is readily available in HFSS through the "Field Calculator" navigation option. The magnitude of the real part of the Poynting vector (all X, Y, Z components) at each spatial point i.e. the point power density is exported from HFSS to do the averaging. The spatially averaged power density at each point on a given surface is then calculated by taking the average of the point power density over a 4 square cm area. Thus the total power density (all X, Y, Z components) through any given surface is used to calculate the averaged power density.

Hence the spatially averaged power density on a given surface is calculated as the surface integral of the Poynting vector over a 4 square cm averaging area A:

$$P_{av} = \frac{1}{2A} \int_{A} \left| Re(\vec{E} \times \vec{H}^{*}) \right| \cdot dS$$

Note that E and H are the complex field vectors, and the calculation thus leads to the total power density average.

2.3.4. 3D Models Used in the Simulations

The 3D model simulated consists of the full CAD model of the mobile device that includes all of the significant structure such as PCB, metal frame, battery, cables and legacy antennas as well as mmWave antenna integration modules, AiM, called AiM0 locates on Top of DUT and AiM1 on Back. The modeling contains the entire EUT to enable a Time Averaging PD Algorithm as well. AiM0 (Top module) is placed at the top side of the device, facing the back side and AiM1(Back module) is placed at the back side of the device, facing the top side. A view of the 3D model variant used in each of the various module simulations is shown in the figures 2.3.4-1 to 2.3.4-2.

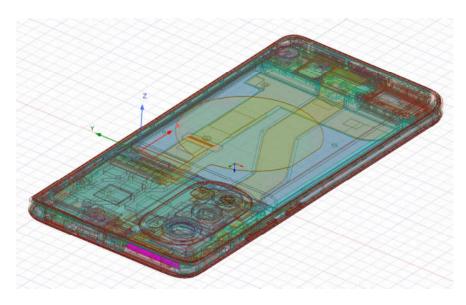


Figure 2.3.4-1: 3D model used for AiM 0 (Top module), the antenna array is highlighted

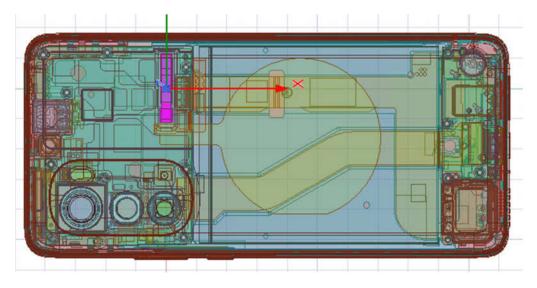


Figure 2.3.4-1: 3D model used for AiM 1 (Back module), the antenna array is highlighted

2.3.5. PD Evaluation Planes

Due to the location of the mmWave module and the antenna array orientation relative to the surface of the device, one or more surface(s) might be excluded for PD calculation as they will have no impact for the worst-case PD determination when using Equation below:

 $PD = max\{PD_{s1}, PD_{s2}, PD_{s3}, PD_{s4}, PD_{s5}, PD_{s6}\}$

Where PD_{s1} , PD_{s2} , PD_{s3} , PD_{s4} , PD_{s5} , PD_{s6} are the highest PD on surface S1,S2,S3,S4,S5 and S6 of the devices respectively.

Please note that the 'Right' and 'Left' edge mentioned in this report are defined from the perspective of looking at the device from the front side (display) with the top of the device pointing up. PD surface performs 2mm. It is used to export PD data of 2mm on each surface, and then calculate PD data of 4cm² after export.

	Front	Back	Left	Right	Тор	Bottom
	S1	S2	S3	S4	S5	S6
AiM0 (Top Module)	0	0	О	О	О	0
AiM1 (Back Module)	О	О	О	0	0	0

Table 1. PD evaluation planes

2.3.6. Boundary Condition

To simulate electromagnetic tool based on FEM, the boundary condition allows electromagnetic waves to be electrically open at the boundary and radiated far away without reflection. ANSYS Electromagnetics suite version 2021.R2 (HFSS) can support the absorbing boundary condition (ABC) for radiation boundary and normally make a quarter wavelength from the radiating structure. In this report, to cover all beamforming cases of mmWave antenna modules, 40 mm spacing from the device for each surfaces were adopted. This distance is sufficiently large enough to extract valid E- and H-fields from all adjacent exposure surfaces of the EUT.

2.3.7. Source Excitation Condition

The number of antenna ports of AiM 0 and AiM 1 for source excitation are the same. The antenna port of AiM 0 and AiM1 is divided into 8 ports included in each patch antenna, 4 ports are divided into vertical polarization feeding, and the other 4 ports are divided into horizontal polarization feeding.

Figure 2.3.7.1 shows the AiM 0 structure and surrounding structure. The AiM 0 is encrypted in the ANSYS Electromagnetics suite (HFSS) and can only check the feeding position.

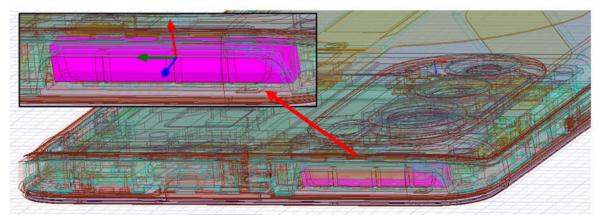


Figure 2.3.7.1 mmWave AiM0

After finishing 3D full wave electromagnetic simulation of modeling structure, the magnitude and phase information can be loaded for each port by using "Edit Sources" function in ANSYS Electromagnetics suite (HFSS). Figure 2.3.7.2 shows an example of antenna port excitations.

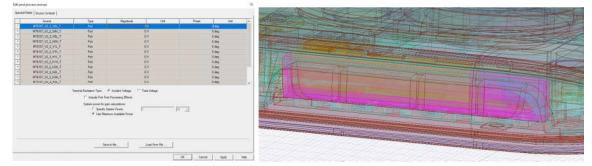


Figure 2.3.7.2 An example of port excitation (AiM 0)

Since ANSYS Electromagnetics suite (HFSS) uses FEM solver based on frequency domain analysis method, the input source for the port excitation applies sinusoidal waveform for each frequency.

2.3.8. Condition of Simulation Completion

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

2.4. Simulated Verification

2.4.1. Spatial-Averaged Power Density

As mentioned in the previous section, the Poynting vector (\vec{S}) can be obtained through cross product of an electric field (\vec{E}) and complex conjugate of a magnetic field (\vec{H}) . The real term of the Poynting vector can be described as the point power density or peak power density. Using the point power density, the spatial-averaged power density can be obtained by the integral of a 4 square cm area at 1 mm intervals of the point power density result.

Figure 2.4.1-1 shows examples of the distribution plot of point power density and the averaged power density.

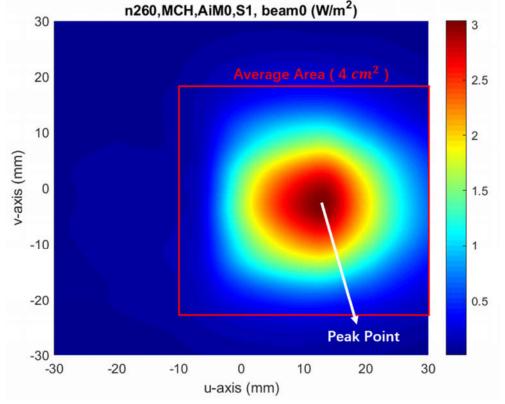


Figure 2.4.1-1 Power density distribution (Example)

2.4.2. Simulated and Measured Results

In this section, the simulated power density distribution and measured power density distributions are compared to each mmWave antenna. The input powers per each active port are listed below for both Simulation and Measurement validation and power density characterization. For Simulation, these values were entered directly into the HFSS model. For measurements, using FTM, the phone was configured to set the active port power to these powers in CW modulation.

Band	Antenna	Input Power (dBm)	Input Power (dBm)
Ballu	Antenna	SISO	MIMO
n261	AiM0 (Top Module)	0	0
	AiM1 (Back Module)	0	0
n260	AiM0 (Top Module)	0	0
	AiM1 (Back Module)	0	0

Table 2 Input power for simulations and measurements

PD evaluations were performed based on simulation for all the beams on all determined surfaces of the device. The beams that correspond to the worst PD for each antenna group for each antenna module for both bands with their corresponding worst surfaces are listed in below table:

Band	Antenna	Beam ID	Surface
		0	Top (S5)
	AiM 0 Top module (patch)	1	Top (S5)
		18	Top (S5)
n260		23	Top (S5)
		11	Back (S2)
	AiM 1 Back module (patch)	12	Back (S2)
	ч <i>/</i>	19	Back (S2)
		26	Back (S2)
		0	Top (S5)
	AiM 0 Top module (patch)	14	Top (S5)
		23	Top (S5)
n261		27	Top (S5)
		1	Back (S2)
	AiM 1 Back module (patch)	6	Back (S2)
	(F	16	Back (S2)
		18	Back (S2)

Table 3 Worst case beams for each antenna group for each antenna module identified through HFSS simulations

2.4.3. Comparison Between Simulated and Measured Results

The below simulation at measurement results were performed at 2mm evaluation distance and 27.925 GHz/38.5GHz. The input.power.limit was determined based on the results below from the RF Exposure Part 0 Report.

					4 cm2 avg.	PD (W/m2)
Band	Antenna	Beam ID	Surface	Channel	Meas.	Sim.
		0	Top(85)	Mid	1.71	3.29
	AiM0 Top module	14	Top(85)	Mid	1.58	3.23
	(patch)	23	Top(S5)	Mid	2.2	3.42
n261		27	Top(S5)	Mid	2.03	3.43
		1	Back(S2)	Mid	2.34	4.42
	AiM1 Back module	6	Back(S2)	Mid	2.48	4.12
	(patch)	16	Back(S2)	Mid	2.66	4.18
		18	Back(S2)	Mid	2.65	4.05
		0	Top(85)	Mid	2.42	3.17
	AiM0 Top module	1	Top(85)	Mid	2.04	3.07
n260	(patch)	18	Top(85)	Mid	1.73	2.99
		23	Top(S5)	Mid	1.38	3.1
	AiM1	11	Back(S2)	Mid	2.4	3.91
	Back module	12	Back(S2)	Mid	2.16	3.9

(patch)	19	Back(S2)	Mid	1.74	3.89
	26	Back(S2)	Mid	1.8	3.9

Table 4 Comparison between simulated and measured results

Based on comparison of power density distributions, simulated power density and measured power density have a good correlation. The discrepancy in amplitude between simulated 4cm2 averaged power density and measured 4cm2 averaged power density is considered as housing influence and used in determining input power limit for each beam for RF exposure compliance (see RF Exposure Part 0 Report).

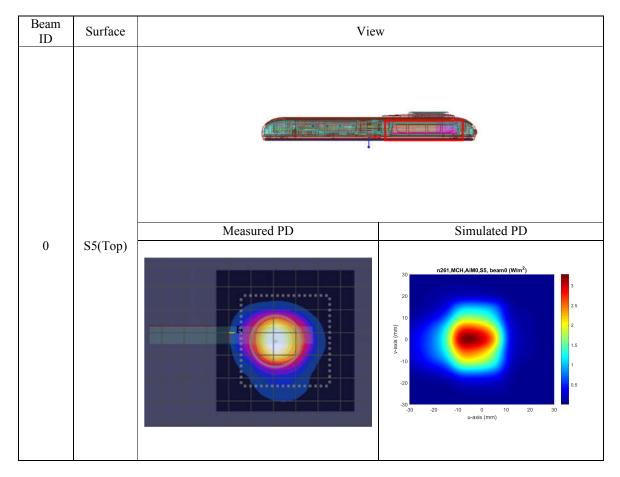


Table 5-1 n261 AiM 0: Mid Channel , Beam ID 0

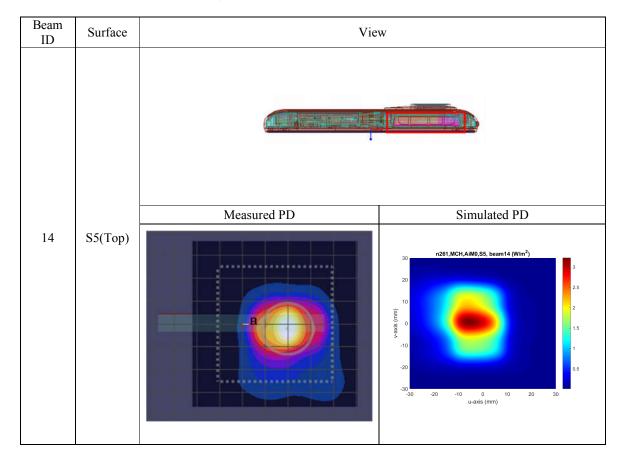


Table 5-2 n261 AiM0: Mid Channel, Beam ID 14

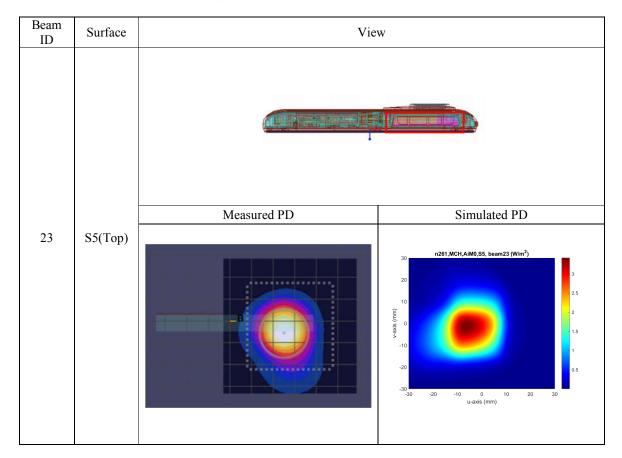


Table 5-3 n261 AiM0: Mid Channel, Beam ID 23

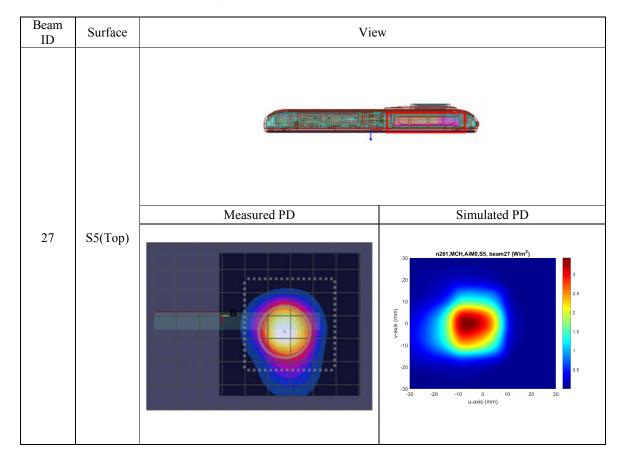
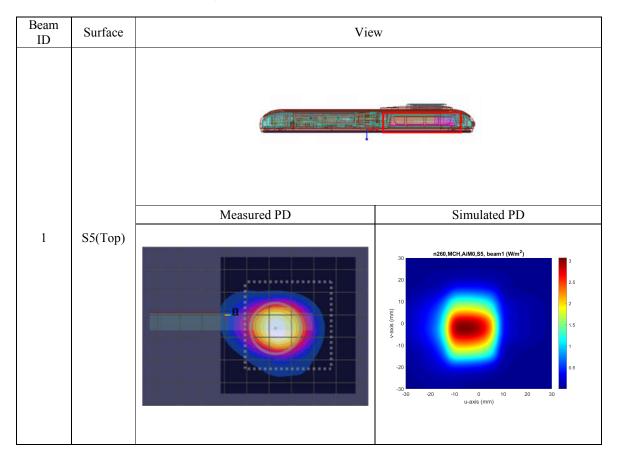


Table 5-4 n261 AiM0: Mid Channel, Beam ID 27

Beam ID Surface View Measured PD Simulated PD 0 S5(Top) n260,MCH,AiM0,S5, beam0 (W/m²) 30 20 10 v-axis (mm) -10 -20 -30 -30 -20 -10 0 u-axis (mm) 10 20

Table 5-5 n260 AiM0: Mid Channel, Beam ID 0

Table 5-6 n260 AiM0: Mid Channel, Beam ID 1



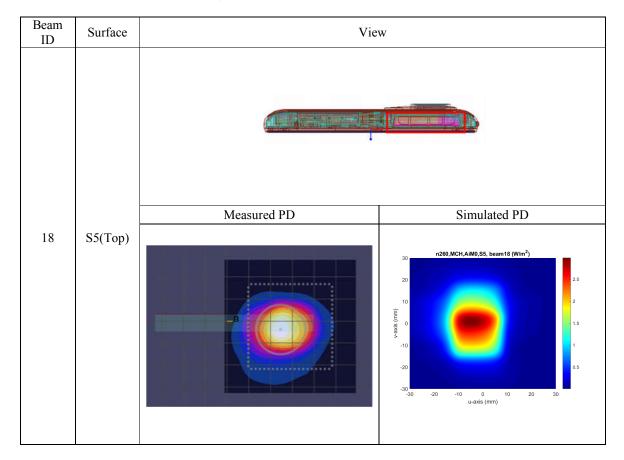


Table 5-7 n260 AiM0: Mid Channel, Beam ID 18

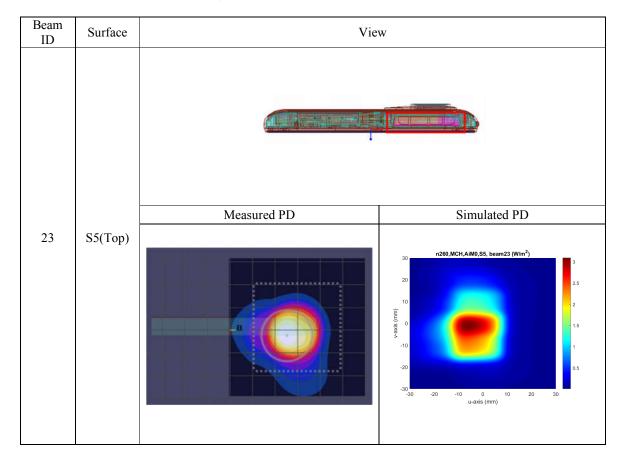
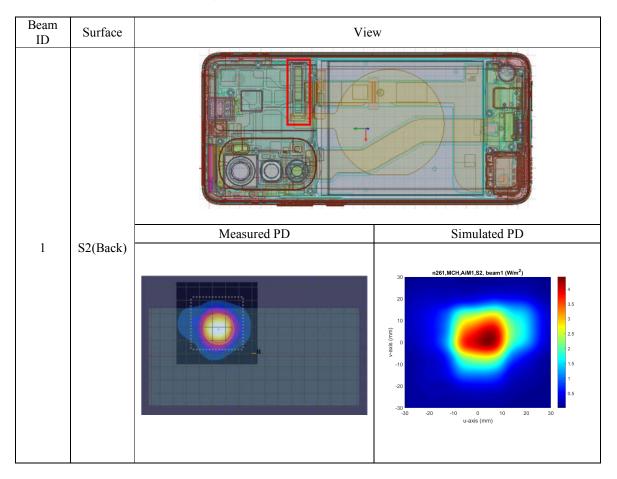


Table 5-8 n260 AiM0: Mid Channel, Beam ID 23

Table 5-9 n261 AiM1: Mid Channel, Beam ID 1



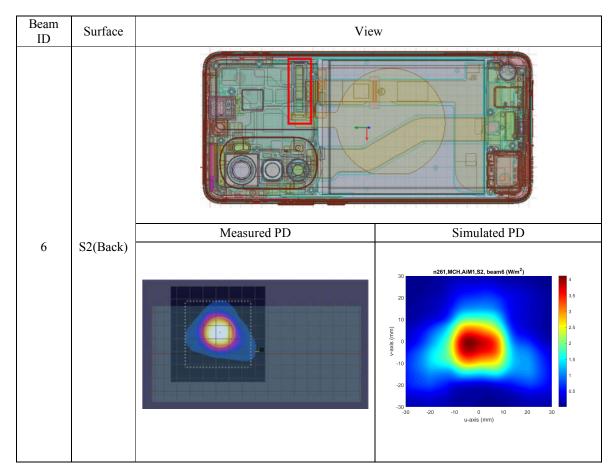


Table 5-10 n261 AiM1: Mid Channel, Beam ID 6

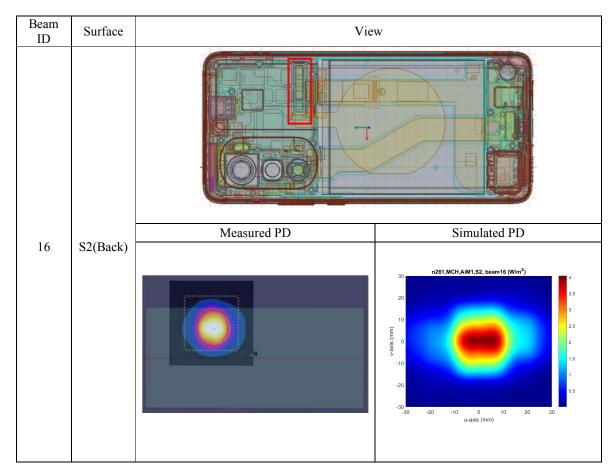


Table 5-11 n261 AiM1: Mid Channel, Beam ID 16

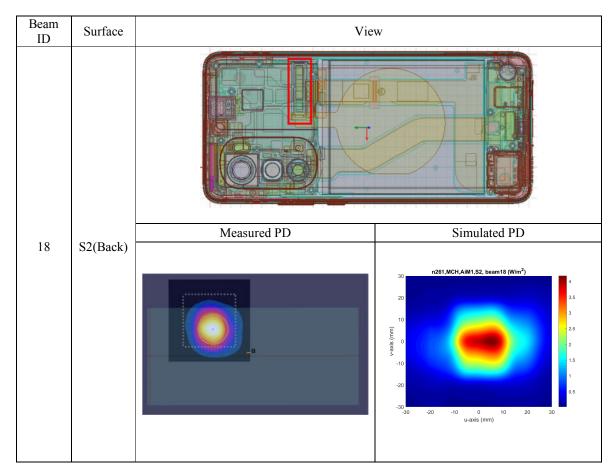


Table 5-12 n261 AiM1: Mid Channel, Beam ID 18

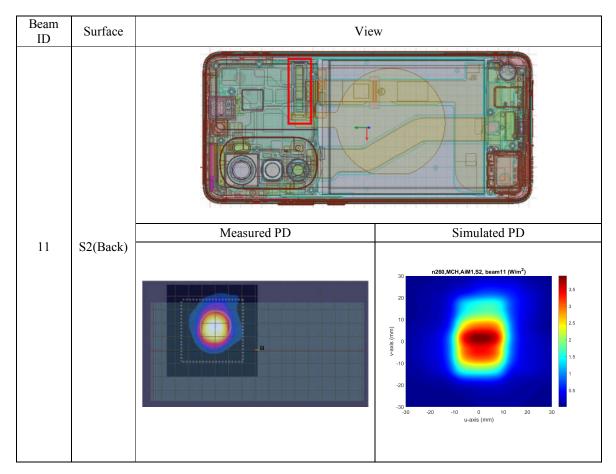


Table 5-13 n260 AiM1: Mid Channel, Beam ID 11

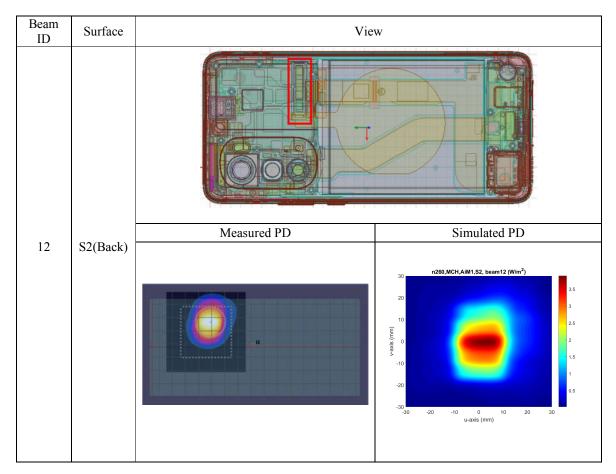


Table 5-14 n260 AiM1: Mid Channel, Beam ID 12

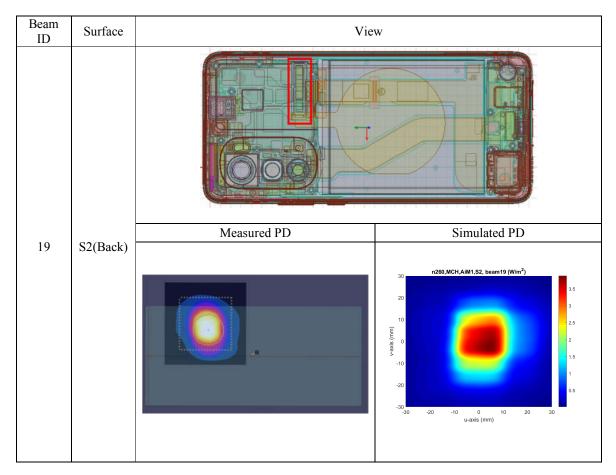


Table 5-15 n260 AiM1: Mid Channel, Beam ID 19

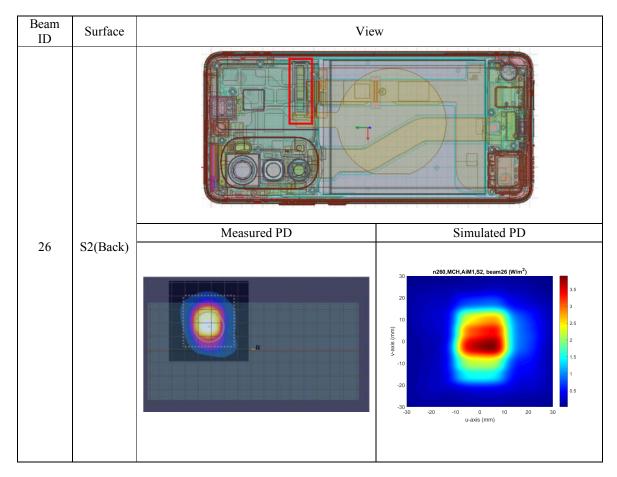


Table 5-16 n260 AiM1: Mid Channel, Beam ID 26

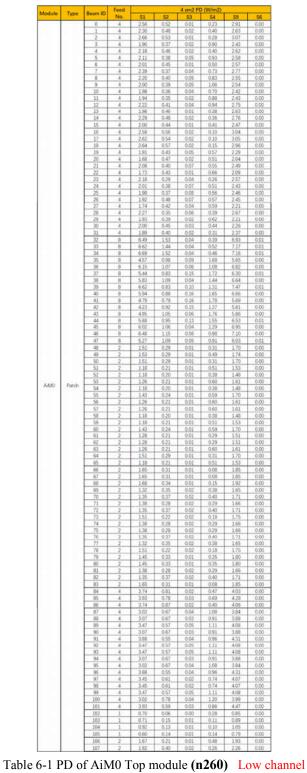
2.4.4. Simulated and Measured Results

This section shows the PD simulation results of both the back module and the top module at 27.925 GHz and 38.5 GHz for each evaluation plane specified in Table 2 at separation distance of 2mm.

The relative phase between beam pairs is not controlled in the chipset design. Therefore, the relative phase between each beam pair was considered mathematically to identify the worst-case conditions. The below MIMO results represent the highest reported MIMO simulation results after a conservative uncertainty factor was applied based on simulated PD recalculated for every group phase relationship between the two beams sweeping from 0° to 360° at a 45° step interval. The worst-case simulated PD determined from the tables in this section were used for conservativeness in input.power.limit determination in RF Exposure Part 0 Report.

2.4.4.1 AiM0 Top Module

Table 6-1 to 6-6 show the PD simulation evaluation of the AiM0 top module at low, middle and high channel that 27.5GHz/27.925GHz/28.35GHz in n261 and 37GHz/38.5GHz/40GHz in n260 for the corresponding evaluation planes specified in Table 2.



	Туре	Beam ID	Feed No.	51	52	4 cm2 Pt \$3	54 (W/m2)	\$5	56
	-	0	4	3.04	0.41	0.02	0.25	3.17	0.00
		1	4	2.97	0.43	0.01	0.29	3.07	0.00
		2	4	2.73	0.42	0.01	0.28	2.96	0.00
		3	4	2.05	0.68	0.02	0.42	2.39	0.00
		4	4	2.02	0.57	0.04	0.42	2.35	0.00
		6	4	1.93	0.62	0.02	0.48	2.34	0.00
		7	4	1.74	0.46	0.07	0.58	2.05	0.00
		8	4	1.81	0.67	0.09	0.54	1.80	0.00
		9	4	2.06	0.76	0.07	0.44	2.08	0.00
		10	4	2.18	0.66	0.05	0.27	2.32	0.00
		12	4	1.95	0.70	0.06	0.49	2.04	0.00
		13	4	1.99	0.62	0.03	0.45	2.35	0.00
		14	4	2.18	0.52	0.03	0.39	2.46	0,00
		15	4	1.87	0.48	0.03	0.47	2.40	0.00
		16	4	2.78	0.50	0.01	0.15	2.94	0.00
		18	4	2.88	0.55	0.01	0.22	2.99	0.00
		19	4	2.32	0.57	0.03	0.86	2.64	0.00
		20	4	1.75	0.40	0.02	0.41	1.99	0.00
		21	4	2.30	0.52	0.05	0.67	2.76	0.00
		22	4	2.12	0.45	0.02	0.57	3.10	0.00
		24	4	2.30	0.47	0.05	0.52	2.83	0.00
		25	4	2.33	0.59	0.04	0.78	2.70	0.00
		26	4	2.22	0.61	0.04	0.86	2.62	0.00
		27	4	2.27	0.59	0.03	0.81	2.52	0.00
		28	4	2.51	0.45	0.04	0.51	2.82	0.00
		30	4	1.81	0.41	0.02	0.39	2.11	0.00
		31	4	2.05	0.33	0.02	0.28	2.43	0.00
		32	8	6.38	1.37	0.04	0.67	6.40	0.01
		33	8	6.69	1.26	0.03	0.80	6.59	0.01
		34 35	8	6.10 3.94	1.49	0.04	0.69	6.16	0.01
		36	8	3.84	1.06	0.10	0.83	4,59	0.01
		37	8	4.17	1.29	0.18	1.20	4.87	0.01
		38	8	4.01	1.38	0.05	1.00	4.78	0.00
		39 40	00 00	5.23 4.26	1.01	0.13	0.93	5.82	0.01
		41	8	4 13	1.53	0.15	1.35	4.90	0.01
		42	8	4.22	1.38	0.12	1.26	4.93	0.00
		43	8	3.82	1.48	0.04	1.28	4.78	0.01
		45	8	4.86	1.26	0.14	1.06	5.38	0.01
		45	8	4.30	1.36	0.08	0.96	4.73	0.00
		47	8	4.21	1.21	0.08	0.84	518	0.01
		48	2	2.06	0.21	0.01	0.25	2.04	0.00
		49	2	1.84	0.22	0.02	0.38	1.91	0.00
		50	2	2.06	0.21	0.01	0.25	2.04	0.00
		51 52	2	1.23	0.31	0.02	0.36	1.52	0.00
		\$3	2	1.27	0.28	0.02	0.43	1.55	0.00
AM0	Patch	54	2	1.41	0.32	0.01	0.28	1.63	0.00
		55	2	1.51	0.22	0.02	0.44	171	0.00
		56	2	1.27	0.28	0.02	0.43	1.55	0.00
		57 58	2	1.27	0.28	0.02	0.43	1.55	0.00
		59	2	1.23	0.31	0.02	0.36	1.52	0.00
		60	2	1.51	0.22	0.02	0.44	1.71	0.00
		61	2	1.73	0.28	0.00	0.24	1.83	0.00
		62 63	2	1.73	0.28	0.00	0.24	1.83	0.00
		64	2	2.06	0.28	0.01	0.25	2.04	0.00
		65	2	1.23	0.31	0.02	0.36	1.52	0.00
		65	2	1.94	0.31	0.00	0.15	1.99	0.00
		67	2	1.94	0.31	0.00	0.15	1.99	0,00
		68	2	1.93	0.30	0.00	0.21	2.01	0.00
		69 70	2	1.45	0.33	0.02	0.39	1.75	0.00
		71	2	1.57	0.28	0.01	0.32	1.83	0.00
		72	2	1.45	0.33	0.02	0.41	1.76	0.00
		73	2	1.79	0.25	0.01	0.20	1.92	0.00
		74	2	1.57	0.28	0.01	0.32	1.83	0.00
		76	2	1.46	0.33	0.02	0.41	1.76	0.00
		77	2	1.45	0.33	0.02	0.39	1.75	0.00
		78	2	179	0.25	0.01	0.20	1.92	0.00
		79	2	1.58	0.29	0.01	0.37	184	0.00
		80	2	1.58	0.29	0.01	0.37	1.84	0.00
		82	2	1.46	0.33	0.02	0.41	1.76	0.00
		83	2	194	0.31	0.00	0.15	199	0.00
		84	4	4.85	0.65	0.03	0.49	4.67	0.00
		85	4	4.72	0.65	0.03	0.59	4.65	0.00
		87	4	3.08	0.63	0.04	0.90	3.69	0.00
		88	4	3.18	0.81	20.0	0.78	3.73	0.00
			4	3.49	0.64	0.05	0.85	3.97	0.00
		89	14	3.18	0.81	0.04	0.78	3.73	0.00
		90	4	4 10					
		90 91	4	4.18	0.59	0.04	0.72	4.37	
		90 91 92		4 18 3 49	0.64	0.05	0.85	3.97	0.00
		90 91	4 4 4	4.18	0.64	0.04 0.05 0.05 0.04		4.37 3.97 3.97 3.73	
		90 91 92 93 94 95	4 4 4 4	4 18 3 49 3 49 3 18 3 08	0.64 0.64 0.81 0.78	0 05 0 05 0 04 0 04	0.85 0.85 0.78 0.90	3.97 3.97 3.73 3.69	0.00 0.00 0.00
		90 91 92 93 94 95 95	4 4 4 4 4	4 18 3.49 3.49 3.18 3.08 4.18	0.64 0.64 0.81 0.78 0.59	0 05 0 05 0 04 0 04 0 04	0.85 0.85 0.78 0.90 0.72	3 97 3 97 3 73 3 69 4 37	0.00 0.00 0.00 0.00 0.00 0.00
		90 91 92 93 94 95 95 95 97	4 4 4 4 4 4	4 18 3.49 3.49 3.18 3.08 4.18 3.72	0.64 0.64 0.81 0.78 0.59 0.69	0 05 0 05 0 04 0 04 0 04 0 04	0.85 0.85 0.78 0.90 0.72 0.58	3.97 3.97 3.73 3.69 4.37 4.06	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
		90 91 93 94 95 95 96 97 98	4 4 4 4 4	4 18 3.49 3.49 3.18 3.08 4.18 3.72 3.72	0.64 0.64 0.81 0.78 0.59 0.69 0.69	0 05 0 05 0 04 0 04 0 04 0 02 0 02	0.85 0.85 0.78 0.90 0.72 0.58 0.58	3.97 3.97 3.73 3.69 4.37 4.06 4.06	0.00 0.
		90 91 92 93 94 95 95 95 97	4 4 4 4 4 4 4 4	4 18 3.49 3.49 3.18 3.08 4.18 3.72	0.64 0.64 0.81 0.78 0.59 0.69	0 05 0 05 0 04 0 04 0 04 0 04	0.85 0.85 0.78 0.90 0.72 0.58	3.97 3.97 3.73 3.69 4.37 4.06	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
		90 91 92 93 94 95 95 95 97 98 99 99	4 4 4 4 4 4 4 4	4 18 3.49 3.18 3.08 4.18 3.72 3.72 3.49	0.64 0.64 0.81 0.78 0.59 0.69 0.69 0.64	0 05 0 05 0 04 0 04 0 04 0 02 0 02 0 05	0.85 0.85 0.78 0.90 0.72 0.58 0.58 0.85	3.97 3.97 3.73 3.69 4.37 4.06 4.06 3.97	0.00 0.
		90 91 92 93 94 95 95 97 98 99 99 100 101 102	4 4 4 4 4 4 4 4	4 18 3.49 3.49 3.18 3.08 4.18 3.72 3.72 3.49 3.11 4.01 0.80	0.64 0.54 0.78 0.59 0.69 0.69 0.69 0.64 0.79 0.65 0.14	0 05 0 05 0 04 0 04 0 04 0 02 0 02 0 05 0 05 0 05 0 03 0 01	0.85 0.85 0.78 0.90 0.72 0.58 0.58 0.85 1.10 0.73 0.20	3.97 3.97 3.73 3.69 4.37 4.06 4.06 3.97 3.69 4.23 0.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
		90 91 92 93 94 95 96 97 98 99 90 100 101 102 103	4 4 4 4 4 4 4 4 4 1 1	4 18 3.49 3.18 3.08 4.18 3.72 3.72 3.72 3.49 3.11 4.01 0.80 0.86	0.64 0.64 0.78 0.59 0.69 0.69 0.64 0.79 0.64 0.79 0.65 0.14 0.12	0 05 0 05 0 04 0 04 0 04 0 02 0 02 0 05 0 05 0 05 0 05 0 03 0 01 0 01	0.85 0.85 0.78 0.90 0.72 0.58 0.58 0.85 1.10 0.73 0.20 0.08	3.97 3.97 3.73 3.69 4.37 4.06 4.06 3.97 3.69 4.23 0.91 0.94	000 000 000 000 000 000 000 000 000 00
		90 91 92 93 94 95 96 97 98 99 90 100 101 102 103 104	4 4 4 4 4 4 4 4	4 18 3.49 3.18 3.08 4.08 3.72 3.72 3.72 3.49 3.11 4.01 0.80 0.86 1.04	0.64 0.64 0.81 0.78 0.59 0.69 0.69 0.64 0.79 0.65 0.14 0.12 0.09	0 05 0 04 0 04 0 04 0 02 0 02 0 05 0 05 0 05 0 05 0 01 0 01 0 01 0 01	0.85 0.85 0.78 0.90 0.72 0.58 0.58 0.58 0.85 1.10 0.73 0.20 0.08 0.14	3 97 3 97 3 73 3 69 4 37 4 06 4 06 3 97 3 69 4 23 0 91 0 94 1 14	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
		90 91 92 93 94 95 96 97 98 99 90 100 101 102 103	4 4 4 4 4 4 4 4 4 1 1	4 18 3.49 3.18 3.08 4.18 3.72 3.72 3.72 3.49 3.11 4.01 0.80 0.86	0.64 0.64 0.78 0.59 0.69 0.69 0.64 0.79 0.64 0.79 0.65 0.14 0.12	0 05 0 05 0 04 0 04 0 04 0 02 0 02 0 05 0 05 0 05 0 05 0 03 0 01 0 01	0.85 0.85 0.78 0.90 0.72 0.58 0.58 0.85 1.10 0.73 0.20 0.08	3.97 3.97 3.73 3.69 4.37 4.06 4.06 3.97 3.69 4.23 0.91 0.94	000 000 000 000 000 000 000 000 000 00

 Table 6-2 PD of AiM0 Top module (n260)
 Middle channel

Module	Type	Beam ID	Feed No.	S1	52	4 cm2 Pl 53	\$4	\$5	58
		0	4	3.33	0.49	0.01	0.22	3.47	0.00
		1	- 4	2.82	0.48	0.02	0.31	3.00	0.00
		2	4	3.18	0.41	0.01	0.24	3.35	0.00
		3	4	2.44	0.69	0.03	0.72	2.21	0.00
		5	4	2.04	0.73	0.05	1.02	2.50	0.00
		6	4	2,17	0.59	0.01	0.83	2.55	0.00
		7	4	2.65	0.51	0.03	0.81	2.91	0.00
		8	4	2.51	0.68	0.04	0.99	2.73	0.00
		20	4	2.24	0.74	0.04	0.58	2.41	0.00
		11	4	1.83	0.61	0.02	0.79	2.32	0.00
		12	4	2.13	0.67	0.04	0.99	2.63	0.00
		13	4	2.35	0.62	0.02	0.72	2.70	0.00
		15	4	1.95	0.43	0.02	0.73	2.65	0.00
		16	4	3.24	0.46	0.02	0.20	3.35	0.00
		17	4	3.01	0.37	0.04	0.21	3.06	0.00
		18	4	3.39	0.52	0.02	0.25	3.48	0.00
		20	4	2.89	0.48	0.03	0.28	3.10	0.00
		21	4	2.34	0.69	0.04	0.58	2.77	0.00
		22	4	2.83	0.44	0.03	0.49	3.04	0.00
		23 24	4	2.36	0.57	0.06	0.22	2.67	0.00
		25	4	2.20	0.76	0.03	0.58	2.65	0.00
		26	-4	2.00	0.71	0.02	0.67	2.42	0.00
		27	4	2.24	0.51	0.02	0.61	2.71	0.00
		28	4	2.82	0.56	0.03	0.41	3.03	0.00
		30	4	3.09	0.47	0.02	0.26	3.17	0.00
		31	4	2.73	0.40	0.03	0.26	3.20	0.00
		32 33	8	6.74 5.90	131	0.05	0.53	7.27	0.01
		33	8	5.90	1.42	0.04	0.63	6.17	0.00
		35	8	4.37	1.52	0.06	1.57	5.87	0.01
		36	8.	5,93	1.41	0.06	1.14	6.24	0.01
		37	8	5.17 6.29	1.86	0.05	2.07	5.97	0.01
		39	8	5,79	1 10	0.13	1.42	6.15	0.01
		40	8	5.56	1.76	0.14	2.05	5.07	0.01
		41	8	4.73	2.03	011	2.05	5.64	0.01
		42	8	4.70	2.01	0.07	1.61	5.63	0.01
		- 44	0	5.70	1.47	0.09	1.72	6.05	0.01
		45	8	6.75	1.21	0.05	1.07	6.80	0.01
		45	8	6.25	1.37	0.06	0.90	6.28	0.00
		41	8	5.15	0.24	0.06	0.27	6.28 1.96	0.01
		49	2	1.86	0.25	0.01	0.46	1.92	0.00
		50	2	2.00	0.24	0.01	0.27	1.96	0.00
		51	2	139	0.31	0.01	0.53	1.78	0.00
		52 53	2	1.52	0.35	0.01	0.43	1.83	0.00
AiM0	Patch	54	2	1.52	0.35	0.01	0.43	1.83	0.00
		55	2	1.64	0.26	0.01	0.57	1.84	0.00
		55	2	1.44	0.27	0.01	0.59	1.79	0.00
		58	2	1.52	0.35	0.01	0.43	1.83	0.00
		59	2	1.39	0.31	0.01	0.52	178	0.00
		60	2	1.64	0.26	0.01	0.57	1.84	0.00
		61 62	2	178	0.34	0.01	0.31	1.89	0.00
		63	2	1.44	0.27	0.01	0.59	1.79	0.00
		64	2	2.00	0.24	0.01	0.27	1.96	0.00
		65	2	1.39	0.31	0.01	0.53	1.78	0.00
		66	2	2.01	0.25	0.01	0.15	1.92	0.00
		68	2	2.13	0.25	0.01	0.20	2.07	0.00
		69	2	1.61	0.33	0.02	034	196	0.00
		70	2	1.62	0.31	0.02	0.34	2.08	0.00
		72	2	1.02	0.30	0.02	0.26	2.08	0.00
		73	2	1.79	0.24	0.02	0.14	1.87	0.00
		74	2	1.62	0.30	0.02	0.26	1.88	0.00
		75	2	1.62	0.30	0.02	0.26	1.88	0.00
		70	2	1.61	0.31	0.02	0.34	1.96	0.00
		78	2	1.79	0.24	0.02	0.14	1.87	0.00
		79	2	1.93	0.27	0.01	0.31	2.18	0.00
		80	2	1.93	0.27	0.01	0.31	218	0.00
		82	2	1.74	0.31	0.02	0.34	2.08	0.00
		83	2	2.01	0.25	0.01	0.15	1.92	0.00
		84	4	4 33	0.54	0.03	0.35	4.17	0.00
		85	4	4.14	0.55	0.03	0.55	4.33	0.00
		87	4	3.26	0.68	0.04	0.91	4.16	0.00
		88	4	3.53	0.90	0.03	0.72	4.38	0.00
		89	4	3.29	0.75	0.04	0.97	4.02	0.00
		90	4	3.65	0.90	0.03	0.73	4.38	0.00
		92	4	3.29	0.75	0.04	0.97	4.02	0.00
		93	4	3.29	0.75	0.04	0.97	4.02	0.00
		94	4	3.63	0.90	0.03	0.73	4.38	0.00
		95 95	4	3.26	0.88	0.04	0.91	4.16	0.00
		97	4	4.15	0.78	0.02	0.63	4.55	0.00
		98	- 4	4.15	0.78	0.02	0.63	4.55	0.00
		99	4	3.29	0.75	0.04	0.97	4.02	0.00
		100	4	3.45	0.83	0.04	115	4.18	0.00
		102	1	0.73	0.18	0.03	0.82	0.88	0.00
		103	1	0.98	0.10	0.00	0.14	1.06	0.00
		104	1	1.08	0.12	0.01	0.10	1.18	0.00
		105	2	0.82	0.15	0.01	0.10	0.90	0.00
					0.00	1 0.02	1 12 HJ	6.36	

Table 6-3 PD of AiM0 Top module (n260) High channel

Module	Туре	Beam ID	Feed No.	S1	\$2	4 cm2 PI \$3	\$4	55	56
		0	4	2.60	0.68	0.00	0.11	3.13	0.00
		1	4	2.18	0.48	0.01	0.27	2.60	0.00
		2	4	2.22	0.53	0.02	0.13	2.71	0.00
		4	4	1.85	0.75	0.05	0.87	1.57	0.00
		5	4	1.29	0.73	0.04	0.82	1.86	0.00
		6	4	1.21	0.68	0.06	0.74	1.66	0.00
		7	4	2.37	0.71	0.01	0.23	2.93	0.00
		9	4	1.38	0.49	0.02	0.81	2.20	0.00
		10	- 4	1.68	0.60	0.04	0.53	2.12	0.00
		11	4	2.46	0.65	0.01	0.20	3.00	0.00
		12	4	170 198	0.65	0.01	0.63	2.37	0.00
		14	4	2.44	0.41	0.01	0.19	2.97	0.00
		15	4	1.93	0.66	0.02	0.41	2.48	0.00
		16	4	2.40	0.54	0.01	0.18	2.92	0.00
		17	4	1.76 2.48	0.70	0.01	0.31	3.04	0.00
		18	4	2.48	0.64	0.02	0.69	2.59	0.00
		20	4	1.16	0.76	80.0	0.49	1.60	0.00
		21	4	1.17	0.64	80.0	0.69	1.75	0.00
		22	4	1.40	0.86	0.07	0.30	2.08	0.00
		24	4	2.18	0.53	0.01	0.29	2.74	0.00
		25	4	1.53	0.46	0.05	0.77	2.29	0.00
		26	4	1.55	0.83	0.04	0.26	2.38	0.00
		27	4	2.70	0.55	0.00	0.11	3.16 2.31	0.00
		29	4	1.89	0.37	0.03	0.72	2.31	0.00
		30	4	2.37	0.56	0.01	0.14	2.89	0.00
		31	4	1.34	0.64	0.06	0.22	2.01	0.00
		32	8	6.20 4.65	1.85	0.01	0.30	7.50	0.01
		33	8	5.01	1.45	0.04	0.08	7.11	0.01
		35	8	4.59	1.79	0.05	1.55	6.13	0.01
		36	8	2.70	1.39	0.16	174	3.18	0.01
		37 38	8	3.00	1.36	0.14	1.77	3.82	0.01
		38	8	6.26	136	0.03	0.62	7.51	0.01
		40	8	5.53	1.72	0.04	0.50	6.77	0.00
		41	8	3 31	1.37	0.08	1.92	5.05	0.01
		42	8	3.63	1.27	0.12	0.32	4.88	0.01
		43	8	6.48 3.79	1.78	0.01	0.32	7.77	0.00
		45	8	416	1.48	0.05	1.50	5.42	0.00
		46	8	5.92	1.42	0.02	0.46	7.25	0.01
		47	8	3.51	1.42	0.09	0.69	4.93	0.01
		48	2	139	0.34	0.00	0.12	1.36	0.00
		50	2	1.39	0.34	0.00	0.12	1,70	0.00
		51	2	0.89	0.45	0.01	0.47	1.31	0.00
		52 53	2	0.81	0.38	0.01	0.47	1.24	0.00
AiM0	Patch	53	2	0.81	0.38	0.01	0.47	1.24	0.00
		55	2	1.05	0.44	0.01	0.37	1.45	0.00
		56	2	1.41	0.30	0.00	0.09	1.71	0.00
		57	2	0.89	0.45	0.01	0.47	131	0.00
		58 59	2	0.81	0.38	0.01	0.47	1.24	0.00
		60	2	0.81	0.38	0.01	0.47	1.24	0.00
		61	2	0.97	0.26	0.01	0.36	1.36	0.00
		62	2	139	0.34	0.00	0.12	1.70	0.00
		63	2	1.39	0.34	0.00	0.12	1.70	0.00
		65	2	0.81	0.38	0.01	0.47	1.24	0.00
		66	2	1.32	0.27	0.00	0.20	1.58	0.00
		67	2	0.85	0.24	0.02	0.32	1.22	0.00
		68 69	2	131	0.33	0.01	0.06	1.56	0.00
		70	2	0.95	0.21	0.01	0.34	1.30	0.00
		71	2	0.96	0.21	0.01	0.34	1.30	0.00
		72	2	0.96	0.21	0.01	0.34	1.30	0.00
		73	2	1.32	0.27	0.00	0.20	1.58	0.00
		75	2	1.16	0.24	0.01	0.30	1.45	0.00
		76	2	0.96	0.21	0.01	0.34	1.30	0.00
		77	2	1.37	031	0.00	0.10	1.62	0.00
		78	2	0.96	0.21	0.01	0.34	1.30	0.00
		80	2	131	0.33	0.01	0.06	1.56	0.00
		81	2	1.31	0.33	0.01	0.06	1.56	0.00
		82	2	137	0.31	0.00	0.10	1.62	0.00
		83	4	0.85	0.24	0.02	0.32	4.01	0.00
		85	4	2.01	0.61	0.03	0.89	2.87	0.00
		86	- 4	3 11	0.90	0.01	0.19	3.87	0.00
		87	4	2.30	0.83	0.02	0.84	3.19	0.00
		88	4	2.03	0.67	0.03	0.96	2.95	0.00
		89 90	4	2.03	0.67	0.03	0.96	2.95	0.00
		91	4	2.66	0.92	0.02	0.62	3.47	0.00
		92	- 4	2.86	0.85	0.02	0.29	3.63	0.00
		90	4	2.30	0.83	0.02	0.84	3.19	0.00
		94 95	4	2.03	0.67	0.03	0.96	2.95	0.00
		95	4	3.00	0.94	0.01	0.33	2.95	0.00
		97	4	2.01	0.61	0.03	0.89	2.87	0.00
		98	4	3.11	0.90	0.01	0.19	3.87	0.00
		99	4	311	0.90	0.01	0.19	3.87	0.00
		100	4	3.29	0.92	0.01	0.24	4.01	0.00
		101	4	2.52	0.70	0.02	0.50	3.49	0.00
		102 103	1	0.59	0.15	0.00	0.18	0.79	0.00
I		104	1	0.55	0 10	0.00	0.11	0.69	0.00
		105	1	0.60	0.19	0.01	0.08	0.83	0.00
							0.36	1.72	0.00
		106 107	2	124	0.35	0.01	0.23	1.96	0.00

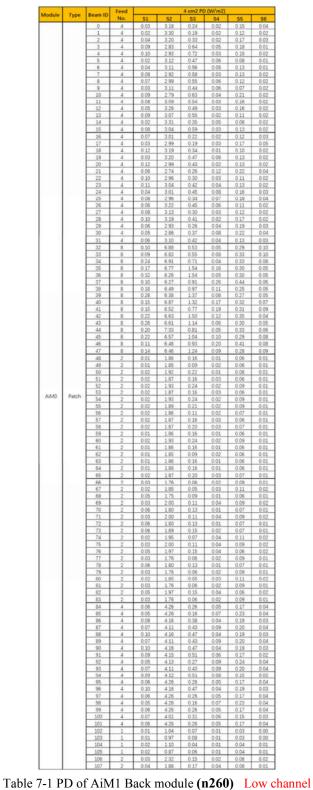
Module	Type	Beam ID	Feed No.	51			0 (W/m2)	\$5	56
	1	0	4	2.77	\$2 0.63	0.00	0.15	3 29	0.00
		1	4	2.44	0.43	0.01	0.31	2.85	0.00
		2	4	2.44	0.49	0.01	0.16	2.95	0.00
		3	4	2.13	0.63	0.02	0.69	2.96	0.00
		5	4	1.63	0.65	0.04	0.99	199 2.37	0.00
		6	4	1.44	0.55	0.05	0.82	1.90	0.00
		7	4	2.57	0.68	0.01	0.30	3.17	0.00
		8	4	2.56	0.50	0.01	0.22	2.95	0.00
		9	4	1.80	0.72	0.03	0.96	2.81	0.00
		10	4	194 2.67	0.49	0.04	0.56	2.39	0.00
		11 12	4	2.12	0.62	0.02	0.78	2.90	0.00
		13	4	2.33	0.61	0.02	0.58	2.97	0.00
		14	4	2.64	0.47	0.01	0.21	3.23	0.00
		15	4	2.25	0.68	0.02	0.53	2.85	0.00
		16	4	2.56	0.49	0.01	0.20	3.13	0.00
		17	4	2.68	0.69	0.02	0.34	2.56	0.00
		19	4	2.58	0.49	0.03	0.76	3.01	0.00
		20	4	1.34	0.80	0.08	0.63	1.85	0.00
		21	4	1.46	0.69	0.08	0.83	2.22	0.00
		22	4	1.55	0.90	0.07	0.44	2.30	0.00
		23	4	301	0.50	0.01	0.35	3.42	0.00
		24	4	2.30	0.68	0.02	0.27	2.92	0.00
		25 26	4	1.93	0.50	0.04	0.86	2.52	0.00
		27	4	2.94	0.51	0.00	013	3.43	0.00
		28	4	2.07	0.43	0.03	0.79	2.60	0.00
		29	4	2.24	0.40	0.03	0.76	2.71	0.00
		30	4	2.55	0.63	0.01	0.18	3.17	0.00
		31	4	1.51	0.80	0.05	0.28	2.26	0.00
		32	8	6.56 4.97	1.55	0.01	0.39	7.82	0.01
		34	8	6.21	1.59	0.06	0.31	7.56	0.01
		35	8	5.59	1.74	0.06	1.68	7.21	0.00
		35	8	3.74	1.34	0.16	2.10	4.05	0.01
		37	8	4.10	1.35	0.14	2.14	4.74	0.01
		38	8	3.42 6.91	1.33	0.16	1.82	4.46	0.01
		39	8	6.04	1.67	0.04	0.55	8.25	0.00
		41	8	4.25	1.46	0.10	2.03	5.93	0.01
		42	8	4.11	1.28	0.11	1,33	5.34	0.00
		43	8	6.94	1.51	0.01	0.34	8.28	0.01
		44	8	4.60	1.41	0.07	1.78	6.01	0.00
		45	8	4.97	1.44	0.07	1.54	6.28 7.88	0.00
		46 47	8	6.36 4.32	159	0.03	0.44	5.68	0.01
		48	2	151	0.34	0.00	0.16	183	0.00
		49	2	1.12	0.23	0.01	0.42	1.49	0.00
		50	2	1.51	0.34	0.00	0.16	183	0.00
		51	2	1.05	0.43	0.01	0.55	155	0.00
- C.		52 53	2	0.99	0.35	0.01	0.54	1.47	0.00
Aiht0	Patch	54	2	0.99	0.35	0.01	0.54	1.47	0.00
		55	2	1.22	0.43	0.01	0.45	1.68	0.00
		56	2	1.52	0.30	0.00	0.11	1.80	0.00
		57	- 2	1.05	0.43	0.01	0.55	1.56	0.00
		58	2	0.99	0.35	0.01	0.54	1.47	0.00
		59 60	2	0.99	0.39	0.01	0.30	1.79	0.00
		61	2	1.12	0.23	0.01	0.42	1.49	0.00
		62	2	1.51	0.34	0.00	0.16	1.83	0.00
		63	2	1.51	0.34	0.00	0.16	1.83	0.00
		64	2	151	0.34	0.00	0.16	1.83	0.00
		65	2	0.99	0.35	0.01	0.54	1.47	0.00
		66	2	0.96	0.26	0.01	0.22	171	0.00
		67 68	2	1.37	0.25	0.01	0.36	133	0.00
		69	2	1.31	0.25	0.01	0.33	1.59	0.00
		70	2	1.09	0.25	0.01	0.38	1.43	0.00
		71	2	1.09	0.25	0.01	0.38	1.43	0.00
		72	2	1.09	0.25	0.01	0.38	143	0.00
		73	2	1.44	0.26	0.01	0.22	1.52	0.00
		75	2	1.31	0.25	0.01	0.33	1.59	0.00
		76	2	1.09	0.25	0.01	0.38	1.43	0.00
		77	2	1.46	0.31	0.00	0.12	1.73	0.00
		78	2	1.09	0.25	0.01	0.38	1.43	0.00
		79	2	0.96	0.25	0.01	0.36	1.33	0.00
		80	2	1.37	0.35	0.01	0.07	1.65	0.00
		82	2	1.46	0.31	0.00	0.12	173	0.00
		83	2	0.96	0.25	0.01	0.36	1.03	0.00
		84	4	2.53	0.85	0.01	0.40	1.03	0.00
		85	4	2.38	0.61	0.03	1.05	3.21	0.00
		86	4	3.27	0.94	0.01	0.23	4.09	0.00
		87 88	4	2.68	0.86	0.03	0.93	3.66	0.00
		89	4	2.41	0.76	0.03	1.09	3.38	0.00
		90	4	2.41	0.76	0.03	1.09	3.38	0.00
		91	4	3.00	0.88	0.02	0.69	3.90	0.00
		92	4	3.00	0.90	0.02	0.39	3,79	0.00
		93	4	2.68	0.86	0.03	0.93	3.65	0.00
		94	4	2.41	0.76	0.03	1.09	3.38	0.00
		95	4	3.23 2.41	0.90	0.01	0.39	4.08	0.00
		97	4	2.38	0.61	0.03	1.05	3.21	0.00
		98	4	3.27	0.94	0.01	0.23	4.09	0.00
		99	4	3.27	0.94	0.01	0.23	4.09	0.00
		100	- 4	3.51	0.91	0.01	0.29	4.25	0.00
		101	4	2.75	0.74	0.02	0.53	3.65	0.00
		102	1	0.65	0.18	0.00	0.23	0.91	0.00
		103	1	0.66	0.14	0.00	0.10	0.84	0.00
		104	1	0.66	0.19	0.00	0.09	0.89	0.00
		105	2	1.40	0.37	0.01	0.41	1.92	0.00

 Table 6-5 PD of AiM0 Top module (n261)
 Middle channel

Module	Type	Beam ID	Feed No.	\$1	52	4 cm2 P1 \$3	0 (W/m2) \$4	\$5	56
		0	4	2.77	0.59	0.00	0.18	3.25	0.00
		1	4	2.58	0.38	0.01	0.37	2.93	0.00
		3	4	2.49	0.45	0.02	0.20	3.05	0.00
		- 4	4	1.69	0.51	0.06	0.94	2.13	0.00
		5	4	1.90	0.57	0.04	0.95	2.60	0.00
		7	4	2.52	0.62	0.05	0.36	3.16	0.00
		8	4	2.68	0.45	0.02	0.27	3.01	0.00
		9	4	2.05	0.74	0.02	1.05	3.17	0.00
		10	4	2.16	0.36	0.04	0.81	2.62	0.00
		12	4	2.42	0.61	0.02	0.93	3.26	0.00
		13	4	2.58	0.61	0.01	0.68	3.26	0.00
		14	4	2.67	0.65	0.01	0.64	3.31 2.95	0.00
		16	4	2.66	0.48	0.01	0.24	3.22	0.00
		17	4	1.87	0.76	0.03	0.34	2.70	0.00
		18	4	2.71 2.88	0.63	0.03	0.08	3.27	0.00
		20	4	1.52	0.76	0.10	0.73	2.10	0.00
		21	4	1.71	0.60	0.09	0.95	2.52	0.00
		22	4	1.75	0.89	0.09	0.41	2.55	0.00
		24	4	2.25	0.72	0.03	0.26	2.98	0.00
		25	4	2.30	0.49	0.04	1.04	3.13	0.00
		26	4	2.99	0.87	0.06	0.29	2.70	0.00
		28	4	2 29	0.61	0.03	0.91	3.47	0.00
		29	4	2.45	0.43	0.03	0.86	2.96	0.00
		30	4	2.62	0.64	0.01	0.22	3.30	0.00
		31 32	4	1.61 6.53	0.85	0.06	0.34	2.43	0.00
		33	8	5.10	1.44	0.06	0.87	6.39	0.00
		34	8	6.06	1.43	0.05	0.41	7.35	0,01
		35	8	6.03 4.18	173	0.07	1.91	7.71	0.01
		37	8	4.60	1.36	0.15	2.17	5,55	0.01
		38	8	4 10	1.26	0 15	1.61	5.02	0.01
		39 40	8	6.71 6.04	1.44	0.03	0.68	8.03	0.01
		41	8	4.74	1.52	0.09	2.27	6.65	0.01
		42	8	4.58	1.35	0.11	1.27	5.72	0.00
		43	8	6.81 5.03	133	0.01	0.42	8.02 6.66	0.01
		45	8	5.40	1.48	0.06	1.68	6.89	0.00
		45	8	6.23	164	0.02	0.51	7.83	0.01
		47 48	8	4.63	1.61	0.00	1.08	6.16 1.82	0.00
		49	2	1.25	0.19	0.01	0.45	1.65	0.00
		50	2	1.51	0.32	0.00	0.19	1.82	0.00
		51 52	2	1.12	0.40	0.01	0.60	1.73	0.00
AMO	Patch	53	2	1.13	0.30	0.01	0.56	1.65	0.00
- Perind	- 90CD	54	2	1.13	0.30	0.01	0.56	1.65	0.00
		55 56	2	1.27	0.43	0.01	0.52	1.79	0.00
		57	2	1.12	0.40	0.01	0.60	1.73	0.00
		58 59	2	1.13	0.30	0.01	0.56	1.65	0.00
		60	2	1 13	0.30	0.01	0.56	1.65	0.00
		61	2	1.25	0.19	0.01	0.45	1.65	0.00
		62 63	2	151	0.32	0.00	0.19	1.82	0.00
		64	2	1.51	0.32	0.00	0.19	1.82	0.00
		65	2	1.13	0.30	0.01	0.56	1.65	0.00
		66 67	2	1.52	0.28	0.00	0.28	1.79	0.00
		68	2	1.05	0.26	0.02	0.09	1.45	0.00
		69	2	1.43	0.27	0.01	0.40	1.72	0.00
		70	2	122	0.27	0.01	0.45	1.58	0.00
		72	2	1.22	0.27	0.01	0.45	1,58	0.00
		73	2	1.52	0.28	0.00	0.28	1.79	0.00
		74	2	1.19	0.35	0.01	0.17	1.56	0.00
		76	2	1.43	0.27	0.01	0.40	1.58	0.00
		77	2	1.48	0.33	0.00	0.14	1.75	0.00
		78	2	1.22	0.27	0.01	0.45	1.58	0.00
		79 80	2	1.05	0.36	0.02	0.09	1.45	0.00
		81	2	1.06	0.36	0.01	0.09	1.68	0.00
		82	2	1.48	0.33	0.00	0.14	1.75	0.00
		<u>83</u>	4	3.53	0.26	0.02	0.39	1.45 4.18	0.00
		85	4	2.69	0.62	0.03	1.02	3.52	0.00
		86	4	3 15	0.96	0.01	0.28	3.96	0.00
		87 88	4	2.86	0.85	0.02	1.02	3.90	0.00
		89	4	2.72	0.77	0.03	1.08	3.71	0.00
		90	4	2.72	0.77	0.03	1.08	3.71	0.00
		91	4	3.07	0.84	0.02	0.79	3.98	0.00
		93	4	2.86	0.86	0.02	1.02	3.90	0,00
		94	4	2.72	0.77	0.03	1.08	3.71	0.00
		95 96	4	3.18	0.88	0.01	0.52	4.00	0.00
		97	4	2.69	0.62	0.03		3.52	0.00
		98	4	3.15	0.96	0.01	1.02	3.95	0.00
		99	4	3.15	0.96	0.01	0.28	3.96	0.00
		100	4	3.42 2.83	0.91	0.01	0.37	414	0.00
		102	1	0.70	0.17	0.00	0.26	0.98	0.00
		103	1	0.70	0.13	0.00	0.09	0.88	0.00
		104	1	0.60	0.14	0.00	0.14	0.80	0.00
		105	2	0.68	0.18	0.01	0.11 0.48	0.91	0.00
		107	2	1.51	0.41	0.01	0.48	2.06	0.00
		101	1.10	4.0%	1.41				

2.4.4.2 AiM1 Back Module

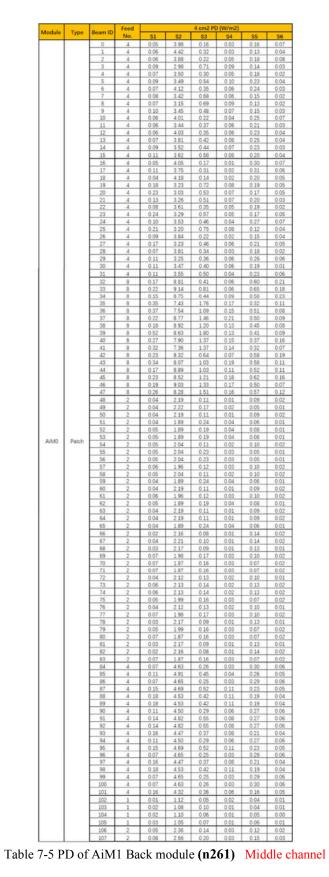
Table 7-1 to 7-6 show the PD simulation evaluation of the AiM1 Back module at low, middle and high channel that 27.5GHz/27.925GHz/28.35GHz in n261 and 37GHz/38.5GHz/40GHz in n260



Module	Type	Beam ID	Feed No.	51	\$2	4 cm2 Pl \$3	54 (W/m2)	55	56
	-	0	4	0.03	3.53	0.31	0.05	0.11	0.03
		1	4	0.02	3.64	0.20	0.06	0.14	0.02
		2	4	0.04	3.88	0.32	0.03	0.10	0.03
		3	4	0.05	3.85	0.80	0.06	0.13	0.01
		5	4	0.03	3.58	0.63	0.06	0.12	0.02
		6	4	0.04	3.72	0.67	0.04	0.11	0.02
		7	4	0.05	3.86	0.49	0.03	0.13	0.02
		8	4	0.04	3.50	0.69	0.08	0.10	0.03
		10	4	0.04	3.73	0.73	0.05	0.13	0.02
		11	4	0.06	3.91	0.51	0.03	0.13	0.02
		12	4	0.03	3.90 3.67	0.37	0.02	0.12	0.03
		14	4	0.02	3.66	0.46	0.07	0.10	0.02
		15	4	0.06	3.65	0.66	0.05	0.12	0.03
		16	4	0.14	3.53	0.43	0.04	0.10	0.02
		17	4	0.10	3.52	0.38	0.05	0.12	0.04
		19	4	0.07	3.89	0.31	0.02	0.11	0.02
		20	4	0.07	3.61	0.52	0.03	0.14	0.01
		21	4	0.08	3.72	0.35	0.10	0.14	0.05
		22 23	4	0.08	3 55 3 73	0.38	0.05	0.14	0.02
		24	4	0 10	3.87	0.49	0.10	0.13	0.02
		25	. 4	80.0	3.79	0.48	0.07	0.11	0.03
		26	4	0.05	3.90	0.41	0.05	0.11	0.02
		27	4	0.05	3.63	0.42	0.03	0.15	0.01
		29	4	0.06	3.66	0.36	0.05	0.12	0.05
		30	4	0.07	3.79	0.42	80.0	0.13	0.06
		31	4	0.08	3.77	0.54	0.05	0.14	0.02
		32	8	0.24	8.03	0.71	0.13	0.29	0.07
		34	8	0.21	8.59	0.79	0.05	0.32	0.06
		35	8	0.16	8.30	1.57	0.17	0.30	0.05
		36	8	0.19	8.41	155	0.07	0.43	0.05
		38	8	0.14	7.80	1.27	0.27	0.32	0.05
		39	8	0.14	8.21	1.27	80.0	0.37	0.05
		40	8	0.23	8 18	1.40	0.24	0.30	0.08
		41 42	8	0.13	8.19 8.41	1.11 1.41	0.22	0.28	0.10
		43	8	0.13	8.47	1.28	0.07	0.42	0.04
		- 44	8	0 13	8 13	0.98	0.06	0.36	0.07
		45	8	018	8.42 8.14	1.02	0.17 0.26	0.38	011
		46	8	0.25	8.14	1.35	0.13	0.33	0.08
		48	2	0.02	2.18	0.11	0.04	0.06	0.01
		49	2	0.02	2.18	0.08	0.05	0.08	0.01
		50 51	2	0.02	2.26	0.15	0.02	0.07	0.01
		52	2	0.02	2.34	0.20	0.02	0.08	0.00
AiM0	Patch	53	2	0.01	2.34	0.19	0.04	0.08	0.00
MINTU	Patton	54	2	0.02	2.35	0.20	0.02	0.06	0.01
		55 56	2	0.01	2.40	0.26	0.02	0.07	0.00
		57	2	0.01	2.34	0.19	0.04	0.08	0.00
		58	2	0.01	2.39	0.25	0.03	0.06	0.00
		59	2	0.02	2.18	0.11	0.04	0.06	0.01
		60 61	2	0.02	2.35	0.20	0.02	0.08	0.01
		62	2	0.02	2.18	0.08	0.05	80.0	0.01
		63	2	0.02	2.18	0.11	0.04	0.06	0.01
		64 65	2	0.02	2.18	0.11	0.04	0.06	0.01
		66	2	0.01	2.39	0.06	0.03	0.06	0.00
		67	2	0.02	2.18	0.06	0.04	0.07	0.02
		68	2	0.03	2.18	80.0	0.01	0.09	0.01
		69 70	2	0.03	2.36	0.17	0.05	0.07	0.02
		71	2	0.03	2.27 2.36	0.1*	0.05	0.07	0.02
		72	2	0.03	2.27	0.14	0.01	0.10	0.01
		73	2	0.03	2.33	0.18	0.03	0.09	0.01
		74	2	0.02	2.28	0.11	0.05	0.07	0.02
		76	2	0.03	2.37	0.19	0.04	0.07	0.01
		77	2	0.02	2.14	0.06	0.02	80.0	0.02
		78 79	2	0.03	2.27	0.14	0.01	0.10	0.01
		80	2	0.02	2.14	0.06	0.02	0.08	0.02
		81	2	0.02	2.14	0.05	0.02	0.08	0.02
		82	2	0.03	2.37	0.19	0.04	0.07	0.01
		83	2	0.02	2.14	0.06	0.02	0.08	0.02
		85	4	0.07	5.15	0.23	0.11	0.17	0.04
		86	4	0.07	4.96	0.34	0.05	0.28	0.02
		87	4	0.05	5.18	0.50	0.14	0.16	0.03
		88	4	0.05	4.98	0.44	0.04	0.29	0.02
		90	4	0.06	4.98	0.44	0.04	0.29	0.02
		91	4	0.05	5.01	0.60	0.08	0.29	0.01
		92	4	0.05	5.19	0.29	0.15	0.18	0.04
		93 94	4	0.05	518 511	0.50	0.14	0.16	0.03
		95	4	0.08	5.06	0.03	0.11	0.22	0.02
		.96	-4	0.06	4.98	0.44	0.04	0.29	0.02
		97 98	4	0.08	5.06	0.23	0.11	0.22	0.03
		98	4	0.07	5.06	0.17	0.15	0.17	0.04
		100	4	0.06	4.70	0.31	0.10	0.16	0.02
		101	4	0.08	5.06	0.23	0.11	0.22	0.03
		102	1	0.01	1.22	0.07	0.01	0.03	0.00
		103	1	0.01	1.21	0.08	0.02	0.03	0.00
		105	1	0.01	1.09	0.05	0.01	0.03	0.01
		105	2	0.02	2.75	0.21	0.05	0.12	0.01
		107	2	0.03	2.49	0.16	0.06	0.08	0.01
		105	2	0.02	2.75	0.21	0.05	0.12	0.01

Module	Туре	Beam ID	Feed No.	\$1	52	\$3	54 (W/m2)	\$5	56
		0	4	0.04	3.48	0.32	0.05	0.17	0.03
		1	4	0.04	3.58	0.26	0.05	0.19	0.03
		2 3	4	0.04	3.79	0.39	0.03	0.13	0.04
		4	4	0.05	4.18	0.47	0.03	0.10	0.03
		5	4	0.02	411	0.42	80,0	0.12	0.02
		6	4	0.04	3.93	0.63	0.04	0.10	0.02
		7	4	0.04	4.15	0.42	0.03	0.11	0.02
		9	4	0.03	3.93	0.38	0.07	0.09	0.03
		10	4	0.05	3.81	0.71	0.03	0.13	0.03
		- 11	4	0.06	3.86	0.54	0.03	0.10	0.02
		12	4	0.03	4.07	0.40	0.03	0.09	0.02
		14	4	0.05	4.19	0.52	0.08	0.12	0.02
		15	4	0.05	3.83	0.60	0.05	0.10	0.03
		16	4	0.09	3.74	0.35	0.04	0.11	0.03
		17	4	0.09	3.92	0.39	0.04	0.09	0.04
		19	4	0.10	3.96	0.55	0.08	0.08	0.02
		20	4	011	3.92	0.48	0.03	0.13	0.01
		21	4	0.04	3.83	0.32	0.08	0.11	0.06
		22 23	4	0.11 0.07	3 49	0.35	0.04	0.17	0.02
		24	4	0.11	3.82	0.58	0.09	0.10	0.03
		25	4	0.07	3.62	0.55	0.07	0.11	0.03
		26	4	0.07	4.09	0.39	0.06	0.08	0.01
		27	4	0.11	3.70	0.43	0.04	0.17	0.02
		29	4	0.10	3.96	0.32	0.05	0.09	0.04
		30	4	0.04	3.94	0.43	0.07	0.12	0.05
		31 32	4	0.13	3.90	0.62	0.06	0.14	0.02
		32	8	0.20	7.56	0.75	0.14	0.33	0.09
		34	8	0.16	8.10	0.80	0.10	0.40	0.09
		35	8	0.23	8.74	1.71	0.21	0.27	0.05
		36	8	0.24	9.30 8.68	0.94	0.06	0.32	0.06
		38	8	0.20	7.85	129	0.12	0.34	0.06
		39	8	0.15	9.02	1.12	0.09	0.26	0.07
		40	8	0.22	8.88	1.61	0.29	0.23	80.0
		41 42	8	0.13	8.50	1.14	0.22	0.29	0.09
	Patch	43	8	0.27	8.38	127	0.09	0.36	0.04
		44	8	0.10	8.67	1.00	0.06	0.26	0.10
		45	8	0.22	9.14 9.26	0.92	0.13	0.28	0.11
		46	8	0.09	9.26	1.10	0.23	0.32	0.11
		48	2	0.02	2.18	0.15	0.03	0.07	0.00
		49	2	0.02	2.19	0.13	0.04	0.07	0.01
		50 51	2	0.02	2.30	0.17	0.02	0.06	0.01
		52	2	0.01	2.46	0.20	0.05	0.07	0.01
		53	2	0.01	2,52	0.20	0.05	0.07	0.01
AiM0		54	2	0.01	2.46	0.23	0.01	0.07	0.01
		55 56	2	0.01	2.55	0.28	0.02	0.06	0.01
		57	2	0.02	2.35	0.11	0.05	0.08	0.01
		58	2	0.01	2.57	0.27	0.03	0.06	0.01
		59	2	0.02	2.18	0.15	0.03	0.07	0.00
		60	2	0.01	2.46	0.23	0.01	0.07	0.01
		62	2	0.02	2.19	0.13	0.04	0.07	0.01
		63	2	0.02	2.18	0.15	0.03	0.07	0.00
		64	2	0.02	2.18	0.15	0.03	0.07	0.00
		65 66	2	0.01	2.57	0.27	0.03	0.06	0.01
		67	2	0.02	2.33	0.05	0.02	0.05	0.02
		68	2	0.03	2.28	80.0	0.02	0.07	0.01
		69	2	0.01	2.51	0.13	0.04	0.05	0.01
		70	2	0.03	2.41	0,11	0.02	0.07	0.00
		72	2	0.03	2.41	0,11	0.02	0.07	0.00
		73	2	0.02	2.51	0.12	0.02	0.07	0.00
		74	2	0.01	2.45	0.10	0.04	0.06	0.02
		75	2	0.01	2.51	0.13	0.04	0.05	0.01
		.77	2	0.03	2.25	0.05	0.02	0.06	0.01
		78	2	0.03	2.41	0.11	0.02	0.07	0.00
		79 80	2	0.03	2.25	0.05	0.02	0.06	0.01
		80	2	0.03	2.35	0.06	0.02	0.05	0.02
		82	2	0.01	2.52	0.14	0.03	0.05	0.01
		83	2	0.03	2.25	0.06	0.02	0.06	0.01
		84	4	0.07	5.02	0.20	0.09	0.14	0.03
		86	4	0.07	5.03	0.28	0.06	0.18	0.02
	9	87	4	0.04	5.57	0.46	0.12	0.15	0.03
		88	4	0.06	519	0.42	0.05	0.18	0.01
		<u>89</u> 90	4	0.04	5.57 5.19	0.45	0.12	0.15	0.03
		91	4	0.04	5.38	0.57	0.05	0.16	0.01
		92	4	0.05	5.41	0.27	0.14	0.18	0.04
		93	4	0.04	5.57	0,45	0.12	0.15	0.03
		94 95	4	0.04	5.54	0.58	0.09	0.11	0.02
		90	4	0.06	5.02	0.42	0.05	0.14	0.01
		97	4	0.07	5.02	0.20	0.09	0.14	0.03
		98	4	0.05	5.17	0.21	0.13	0.17	0.04
		99 100	4	0.07	5.02	0.20	0.09	0.14	0.03
		100	4	0.04	4.92 5.02	0.31	80.0	0.12	0.01
		101	1	0.01	1.23	0.06	0.01	0.03	0.00
		103	1	0.01	1.27	0.10	0.02	0.02	0.00
		104	1	0.01	1.36	0.04	0.01	0.03	0.01
		105	2	0.01	2.83	0.04	0.01	0.02	0.01
1			1.00		2.83	0.16	0.05	0.06	W.W.R

Module	Туре	Beam ID	Feed No.	51	52	\$3	54 (W/m2)	55	S6
		0	4	0.05	4.22	0.23	0.04	0.18	0.07
		2	4	0.08	451	0.33	0.04	0.11	0.04
		3	4	0.04	414 319	0.29	0.05	0.19	0.07
		4	4	0.06	3,68	0.29	0.05	0.22	0.02
		5	4	0.07	3,86	0.48	0.08	0.20	0.03
		7	4	0.05	3,41	0.86	0.08	0.16	0.02
		8	4	0.09	3.28	0.58	011	0.11	0.03
		9	4	0 10 0 05	3 53	0.50	0.05	0.17	0.03
		10	4	0.05	4.20	0.20	0.09	0.24	0.05
		12	4	0.05	4.22	0.26	0.08	0.20	0.04
		13	4	0.06	4.13	0.29	0.09	0.22	0.04
		14	4	0.08	3.79	0.43	0.09	0.20	0.02
		15	4	0.07	4.02	0.60	0.02	0.17	0.04
		17	- 4	0.14	3.83	0.44	0.02	0.23	0.07
		18	4	0.04	4.04	0.18	0.03	0.23	0.06
		19 20	4	0.17	3.36	0.68	0.09	0.15	0.03
		21	4	0.14	3.67	0.40	0.08	0.15	0.01
		22	4	0.08	3.91	0.30	0.05	0.13	0.02
		23 24	4	0.19	3.44	0.64	0.05	0.16	0.03
		25	4	0.17	3.55	0.64	0.10	0.08	0.02
		26	- 4	0.06	3.83	0.19	0.04	0.16	0.03
		27	4	0.18	3.50	0.45	0.06	0.24	0.03
		28	4	0.06	3.96	0.29	0.04	0.16	0.03
		30	4	0.11	3.80	0.31	0.06	0.16	0.01
		31	4	0.08	3.84	0.46	0.06	0.16	0.04
		32	8	0.14	9 20 9 77	0.60	0.08	0.60	0.23
		33 34	8	0.39	8.94	0.47	0.09	0.55	0.23
		35	8	0.38	7.36	1.69	0.25	0.34	0.12
		36 37	8	0.35	8,07 9,39	1.27	0.19	0.52	0.07
		38	8	0.18	951	0.94	0.18	0.45	0.05
		39	8	0.45	8.86	2.14	0.15	0.47	0.07
		40	8	0.26	8.03	1.29	0.19	0.32	0.15
		41 42	8	0.31	8.76	0.54	0.18	0.25	0.06
AiM0		43	8	0.38	8.71	1.11	0.22	0.58	0.08
		44	8	0.14	9.26	0.76	0.17	0.51	0.08
	Patch	45	8	0.28	9.33	1.07	0.22	0.48	0.12
		47	8	0.22	8.72	1.46	0.16	0.39	0.11
		48	2	0.02	2.31	0.07	0.01	0.09	0.03
		49 50	2	0.05	236	0.23	0.03	0.06	0.02
		51	2	0.05	2.03	0.22	0.05	0.07	0.01
		52	2	0.05	2.08	0.17	0.05	0.09	0.01
		53 54	2	0.05	2.08	0.09	0.05	0.09	0.01
		55	2	0.06	2.16	0.24	0.04	0.07	0.01
		56	2	0.06	2.16	0.24	0.04	0.07	0.01
		57 58	2	0.05	2.16	0.12	0.04	011	0.02
		59	2	0.05	2.20	0.22	0.05	0.07	0.01
		60	2	0.02	2.31	0.07	0.01	0.09	0.03
		61 62	2	0.05	2.16	012	0.04	0.11	0.02
		63	2	0.02	2.31	0.07	0.01	0.09	0.03
		64	2	0.02	231	0.07	0.01	0.09	0.03
		65 66	2	0.05	2.03	0.22	0.05	0.07	0.01
		65	2	0.02	2.22	0 10	0.01	0.12	0.02
		68	2	0.02	2.28	0.09	0.02	0.10	0.02
		69	2	0.07	2.16	0.17	0.03	0.10	0.02
		70	2	0.07	2.14	0 15	0.04	0.06	0.01
		72	2	0.03	2.33	0.10	0.03	0.08	0.01
		73	2	0.06	2.25	0.18	0.02	0.12	0.02
		74	2	0.05	2 25 2 28	0.18	0.02	0.12	0.02
		76	2	0.03	2.33	0.10	0.03	0.08	0.01
		77	2	0.07	2 16	0.17	0.03	0.10	0.02
		78 79	2	0.02	2.28	0.09	0.02	0.10	0.02
		80	2	0.07	2.14	0.15	0.04	0.06	0.01
		81	2	0.02	2.28	0.09	0.02	0.10	0.02
		82	2	0.02	2.22	0.10	0.01	0.12	0.02
		83 84	4	0.07	2.14	0.15	0.04	0.06	0.01
		85	4	0.08	5.26	0.54	0.05	0.25	0.06
		86	4	0.05	4.99	0.23	0.04	0.27	0.07
		87 88	4	0.15	5.06 5.03	0.56	0.14	0.23	0.05
		89	4	0.14	5.03	0.41	0.14	0.18	0.03
		90	4	0.08	4.94	0.26	0.06	0.25	0.06
		91	4	0.12	517	0.63	0.10	0.27	0.06
		92	4	0.12	5.17	0.63	0.10	0.27	0.06
		94	4	0.08	4.94	0.26	0.06	0.25	0.06
		95	4	0.15	5.06	0.56	0.14	0.23	0.05
		95 97	4	0.05	4.99	0.23	0.04	0.27	0.07
		98	4	0.14	5.03	0.41	0.14	0.18	0.03
		99	4	0.05	4.99	0.23	0.04	0.27	0.07
		100	4	0.05	4.96	0.24	0.03	0.29	0.07
		101	4	0.13	4.71	0.27	0.06	0.15	0.04
		102	1	0.02	1 15	0.06	0.02	0.04	0.01
		104	1	0.02	1.17	0.05	0.01	0.04	0.01
		105	1	0.03	1.15	0.06	0.01	0.06	0.01
		106	2	0.04	2.52	0.15	0.05	0.11	0.02
		107							



Module	Туре	Beam ID	Feed No.	51	52	4 cm2 PI \$3	54	\$5	56
		0	- 4	0.05	3.94	0.17	0.03	0.15	0.07
		1	-4	0.04	4.29	0.33	0.03	0.12	0.02
		2 3	4	0.06	3.84	0.21	0.04	0.20	0.07
		4	4	0.05	3.20	0.36	0.03	0.16	0.02
		5	- 4	0.06	3.31	0.52	80.0	0.20	0.03
		6	4	0.05	3.95	0.35	0.05	0.23	0.02
		7	4	0.08	3,22	0.66	0.05	0 15	0.03
		9	4	0.08	3.34	0.45	0.06	0.16	0.02
		10	4	0.05	3.90	0.18	0.04	0.26	0.03
		11	4	0.05	3.20	0.44	0.04	0.17	0.03
		12	4	0.06	3.56	0.50	0.08	0.23	0.03
		14	- 34	0.05	3.33	0.39	0.05	0.20	0.02
		15	4	0.09	3.53	0.55	80.0	0.18	0.03
		16	4	0.05	3.90	0.13	0.02	0.27	0.06
		17	4	0.08	3.75	0.27	0.03	0.33	0.04
		19	4	0.17	3.24	0.65	0.09	0.18	0.04
		20	4	0.22	3.29	0.57	0.05	0.15	0.04
		21	4	0.11	321	0.52	0.07	0.17	0.02
		22 23	4	0.10	3 55	0.50	0.02	0.20	0.03
		24	4	0.12	3.53	0.41	0.05	0.27	0.05
		25	4	0.17	3.12	0.73	0.10	0.15	0.03
		26	4	0.11	3.72	0.29	0.02	0.15	0.04
		27 28	4	0.05	3.42	0.53	0.04	0.17	0.04
		29	- 4	0.13	3.25	0.41	0.04	0.27	0.04
		30	4	0.12	3.33	0.40	0.04	0.15	0.02
		31	4	0.13	3,49	0.47	0.05	0.25	0.04
		32	8	0.17	8.62	0.37	0.07	0.55	0.22
		34	6	0.14	0.34	0.43	0.05	0.56	0.21
		35	8	0.29	7 18	1.47	0.22	0.37	0.06
		36	8	0.32	7.35	1.03	011 018	0.47	0.06
		38	8	0.24	8.72	131	0.18	0.49	0.07
		39	8	0.39	8,67	1.80	0.12	0.34	0.06
		40	8	0.29	7.53	133	0.18	0.45	0.08
		41 42	8	0.24	7.20	0.71	0.19	0.42	0.06
	Patch	42	8	0.23	7.69	1.20	0.07	0.53	0.09
		44	8	0.21	8.68	1.15	0.10	0.59	0.08
		45	8	0.20	8.23	1 19	0.12	0.58	0.10
		46	8	0.18	8.51 8.47	1.15	0.13	0.43	0.07
		48	2	0.04	2.17	0.11	0.01	0.09	0.02
AiM0		49	2	0.03	2.15	0.16	0.02	0.04	0.02
		50	2	0.04	2.17	0.11	0.01	0.09	0.02
		51 52	2	0.03	1.84	0.23	0.03	0.07	0.00
		53	2	0.03	1.90	0.19	0.03	0.07	0.01
		54	2	0.04	2.04	0.09	0.01	0.10	0.01
		55	2	0.03	1.94	0.22	0.02	0.05	0.01
		56 57	2	0.03	1.94 1.97	0.22	0.02	0.05	0.01
		58	2	0.04	2.04	0.09	0.01	0.10	0.01
		59	2	0.03	1.84	0.23	0.03	0.07	0.00
		60	2	0.04	2.17	011	0.01	0.09	0.02
		62	2	0.03	1.90	0.19	0.03	0.07	0.01
		63	2	0.04	2.17	0.11	0.01	0.09	0.02
		64	2	0.04	2.17	0.11	0.01	0.09	0.02
		65 66	2	0.03	1.84	0.23	0.03	0.07	0.00
		.67	2	0.04	2.15	0.08	0.01	0.13	0.01
		68	2	0.02	2.11	0 10	0.01	0.12	0.02
		69	2	0.09	1.97	0.17	0.02	0.09	0.01
		70	2	0.08	1.86	017	0.03	0.07	0.02
		72	2	0.04	2.05	0 13	0.02	0.09	0.02
		73	2	0.07	2.10	013	0.02	0.11	0.01
		74	2	0.07	2 10	0.13	0.02	0.11	0.01
		76	2	0.04	2.05	0.13	0.02	0.09	0.02
		77	2	0.09	1.97	0.17	0.02	0.09	0.01
		78	2	0.02	2 11 1 92	0 10	0.01	0.12	0.02
		80	2	0.08	1.86	0.16	0.03	0.07	0.02
		81	2	0.02	2.11	0.10	0.01	0.12	0.02
		92	2	0.02	2.11	0.07	0.01	0.14	0.02
		83 84	2	0.08	1.86	0.17	0.03	0.07	0.02
		85	4	0.09	4.75	0.36	0.04	0.24	0.05
		86	4	0.07	4.63	0.26	0.03	0.28	0.07
		87	4	0.14	4.52	0.48	0.07	0.22	0.03
		88	4	0.15	4.41	0.39	0.07	0 19	0.02
		90	4	0.15	4.53	0.28	0.04	0.26	0.05
		91	- 4	0.13	4.64	0.47	0.05	0.24	0.03
		92	4	0.13	4.64	0.47	0.05	0.24	0.03
		93	4	0.15	4.42	0.30	0.05	0.20	0.04
		94	4	0.14	4.50	0.28	0.04	0.26	0.08
		.96	4	0.07	4.63	0.28	0.03	0.28	0.07
		97	4	0.15	4.42	0.30	0.05	0.20	0.04
		98	4	0.16	4.41	0.39	0.07	0.19	0.02
		99 100	4	0.07	4.65	0.28	0.03	0.28	0.07
		100	4	0.18	4.28	0.42	0.05	0.19	0.05
		102	1	0.01	1.12	0.05	0.01	0.03	0.01
		103	1	0.02	1.00	0.09	0.01	0.04	0.00
		104	1	0.03	1.03	0.06	0.01	0.05	0.00
		105	1	0.03	2.31	0.08	0.01	0.06	0.01
		106	2	0.06	2.31	0.18	0.02	0.16	0.02