# FCC ID: A3LSMG991U

# Power Density Simulation Report

# Revision A

November 26, 2020

SAMSUNG ELECTRONICS

## 1. Simulation methodology for Power Density (PD)

### 1.1 Simulation tool

#### 1.1.1 Tool description

For the simulation approach to calculating power density (PD) evaluation for mobile phone with mmWave antenna modules, ANSYS Electromagnetics suite version 2020.R2 (HFSS) is used. ANSYS HFSS is one of several commercial tools for 3D full-wave electromagnetic simulation used for antenna and RF structure design of high frequency component. ANSYS Electromagnetics suite version 2020.R2 (HFSS) is implemented based on Finite Element Method (FEM), which operates in the frequency domain.

#### 1.1.2 Mesh and Convergence criteria

To solve the PD analysis using FEM, volume area containing simulated objects should be subdivided into electrically small parts that are called finite elements as the unknown functions. To subdivide system, the adaptive mesh technique in ANSYS Electromagnetics suite version 2020.R2 (HFSS) is used. ANSYS Electromagnetics suite version 2020.R2 (HFSS) starts to refine the initial mesh based on wavelength and calculate the error to iterative process for adaptive mesh refinement. The determination parameter of the number of iteration in ANSYS Electromagnetics suite version 2020.R2 (HFSS) is defined as convergence criteria, delta S, and the iterative adaptive mesh process repeats until the delta S is met. In ANSYS Electromagnetics suite version 2020.R2 (HFSS), the accuracy of converged results depends on the delta S. Figure 1 is an example of adaptive mesh of the device (cross-section of top view).

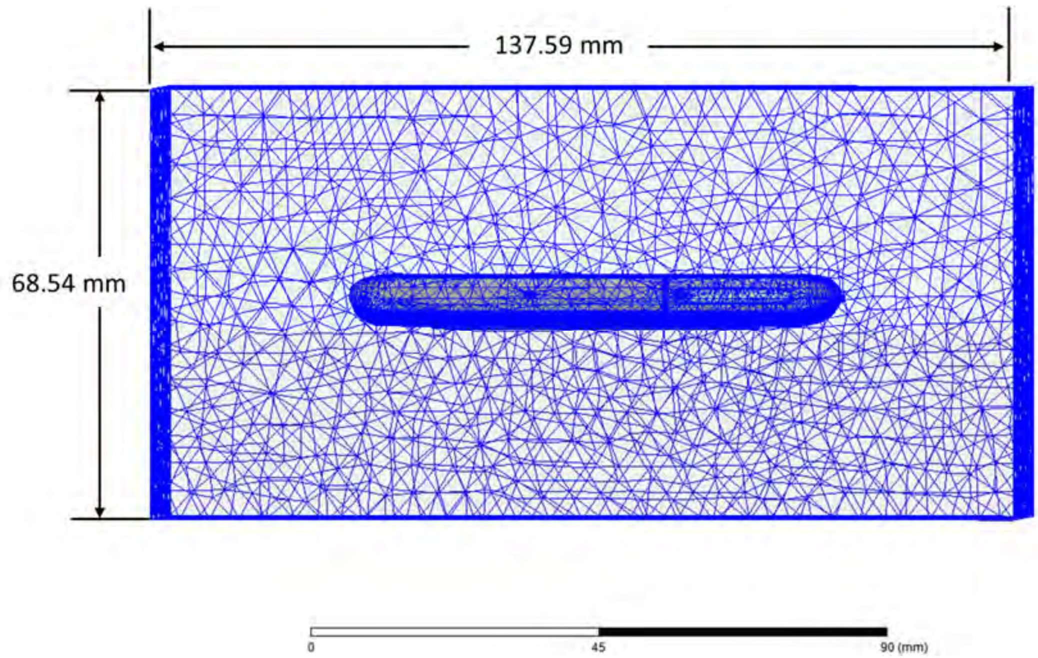



Figure 1 Example of the adaptive mesh technique (Top view)

### 1.1.3 Power density calculation

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

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

$\langle\vec{S}\rangle$ can be expressed as point power density based on a peak value of each spatial point on mesh grids, and obtained directly from ANSYS Electromagnetics suite version 2020.R2 (HFSS).

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

$$\mathrm{PD}_{av} = \frac{1}{A}\int_{A} \langle\vec{S}\rangle \cdot ds = \frac{1}{2A_{av}}\iint_{A_{av}} \|Re\{ExH^*\}\|\, dA$$

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

## 1.2 Simulation setup

### 1.2.1 3D modeling

Figure 2 shows the simulation model which is mounted two mmWave antenna modules. The simulation modeling includes most of the entire structure of device itself such as PCB, metal frame, battery, cables, and legacy antennas as well as mmWave antenna modules called as Ant K and Ant L. The modeling contains the entire EUT to enable a Smart transmit GEN2, as well. Ant K is placed on the left side and antennas are facing the left side, and Ant L is placed on the right side and antennas are facing the right side of the device.

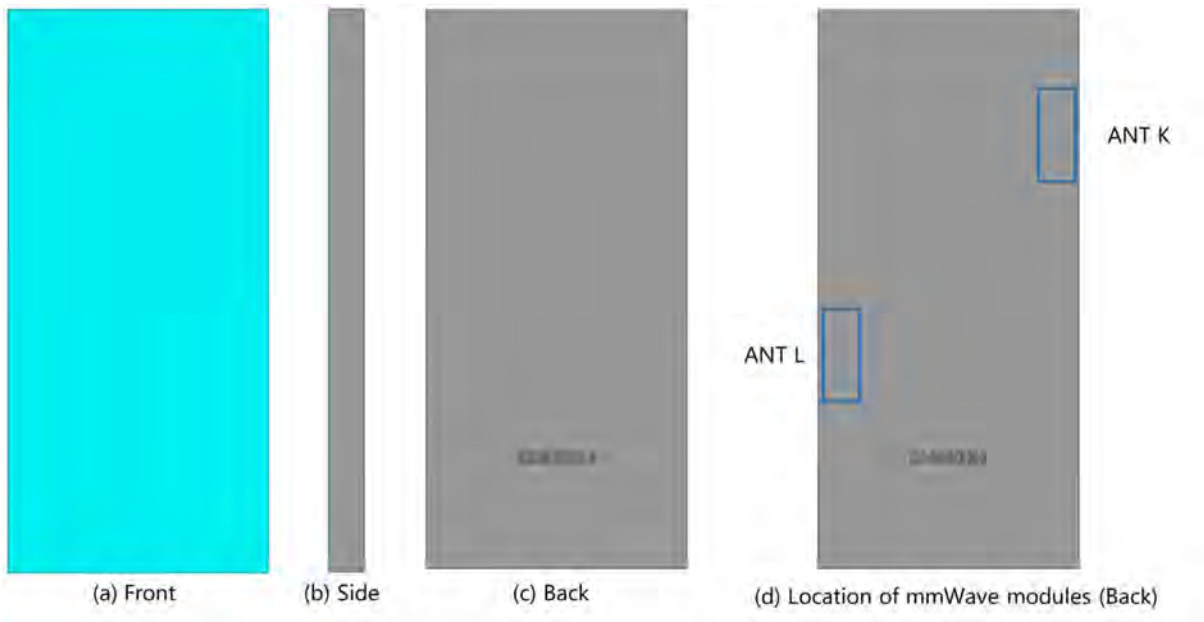



Figure 2 Simulation model which is mounted two mmWave antenna modules

### 1.2.2 PD evaluation planes

Table 1 shows the PD evaluation planes for each mmWave antenna module and Figure 3 shows the PD evaluation planes and truncation area of the simulation model to find worst case of beamforming cases. In Ant K case, five PD evaluation planes except bottom side are set up. The Ant K is placed at the upper of the device and the bottom side is excluded from the worst case because the distance from the bottom side is more than 10 lambda at 28GHz and 39 GHz. In Ant L case, five PD evaluation planes except top side are set up, Ant L is placed at the lower of the device and the top side is excluded from the worst case for the same reason as Ant K.

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

Table 1. PD evaluation planes

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

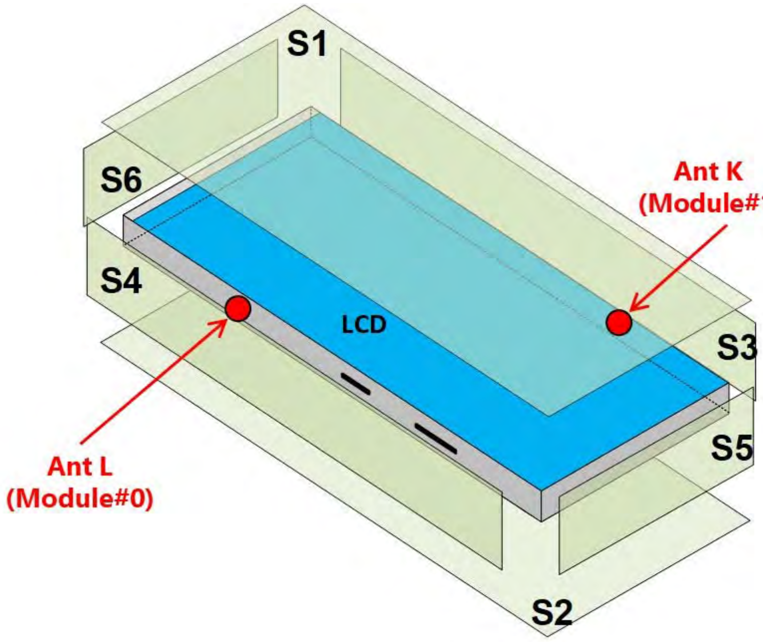



Figure 3. PD evaluation planes

1.2.3 Boundary condition

To simulate electromagnetic tool based on FEM, the boundary condition allows electromagnetic waves to be electrically open at the boundary and radiated far away without reflection. ANSYS Electromagnetics suite version 2020.R2 (HFSS) can support the absorbing boundary condition (ABC) for radiation boundary and make normally a quarter wave length from the radiating structure. In this report, to cover all beamforming cases of mmWave antenna modules, 40 mm spacing from the device for each surfaces were adopted. This distance is sufficiently large enough for "Qualcomm MG script" to extract valid E- and H-fields from all adjacent exposure surfaces of the EUT.

1.2.4 Source excitation condition

The number of antenna ports of ANT K and ANT L for source excitation are the same as 20. The antenna port of ANT K and L is divided into 10 ports for n261 1 x 5 patch array antennas, 10 ports for n260 1 x 5 patch array antennas. In the 10 ports included in each patch antenna, 5 ports are divided into vertical polarization feeding, and the other 5 ports are divided into horizontal polarization feeding.

Figure 4 shows the ANT K module structure and surrounding structure. The ANT K module is encrypted in the ANSYS Electromagnetics suite (HFSS) and can only check the feeding position.

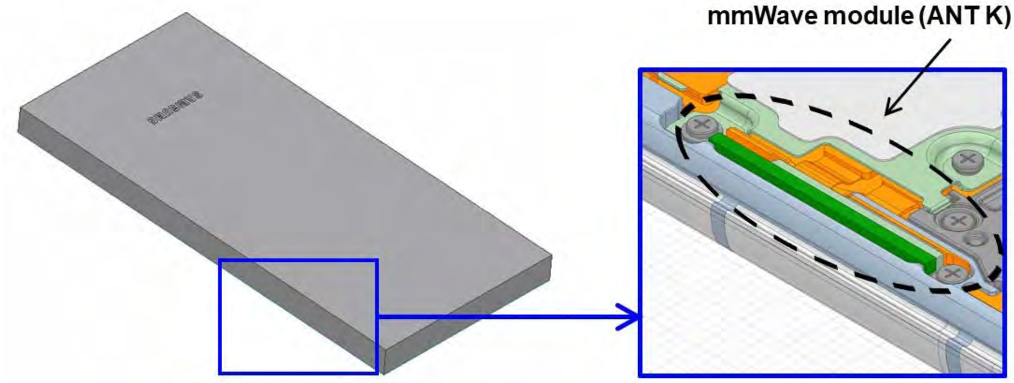



Figure 4. mmWave module (ANT K)

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 5 shows an example of antenna port excitations.

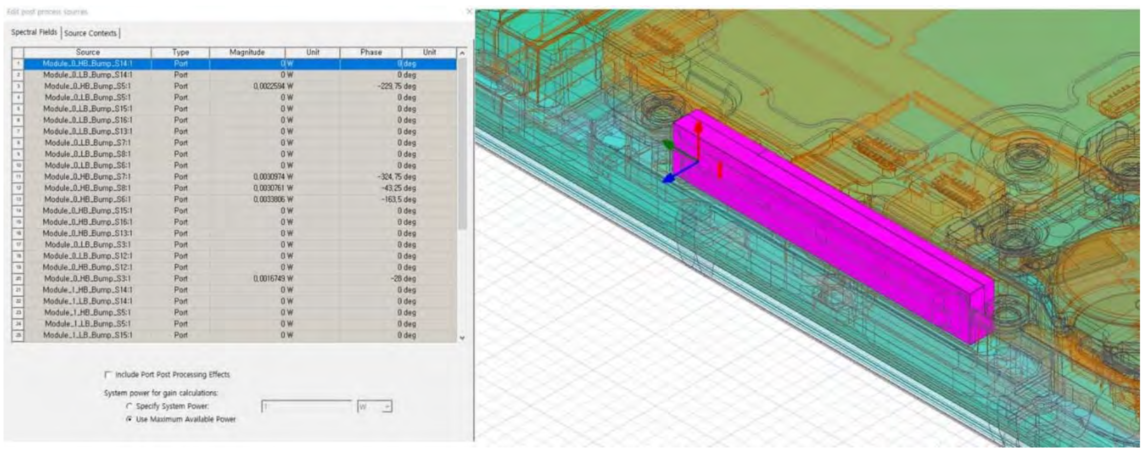


Figure 5. An example of port excitation (ANT K)

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

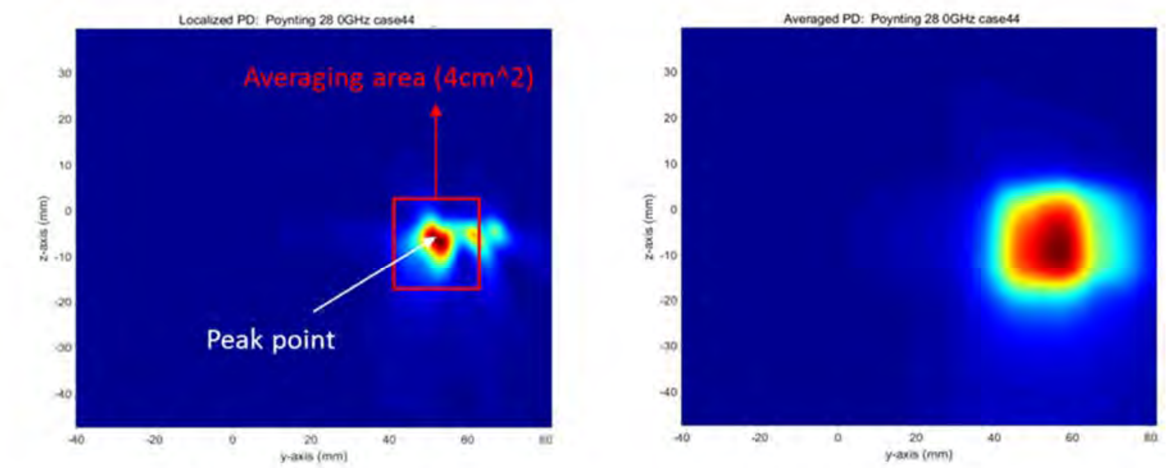
1.2.5 Condition of simulation completion

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

## 2. Simulation verification

### 2.1 Spatial-averaged power density and $sim.power_{limit}$

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




(a) Point power density (b) Averaged power density

Figure 6. Power density distribution (Example)

For the Smart transmit GEN2, the “Qualcomm MG script” were used to extract E- and H-fields from the validated simulation and to assess the mutual coupling between all the mmWave antenna modules and all the beams in the codebook to determine the backoff value for each mmWave module. Note the assessment and backoff value derivation are automated with “Qualcomm MG script”. Once the script is done with assessment, it will provide the $sim.power_{limit}$ (backoff is already included) for all the beams for all three channels for the specified PD_design_target. This mode take the minimum $sim.power_{limit}$ out of all three channels (low, mid and high) and use the resulted $sim.power_{limit}$.

### 2.2 Comparison between simulation, measurement

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

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

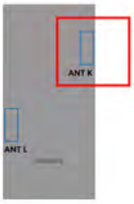
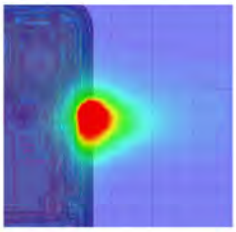
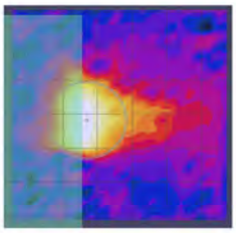
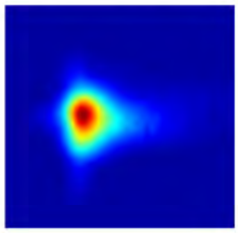
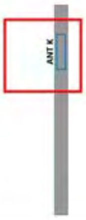
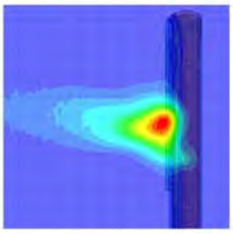
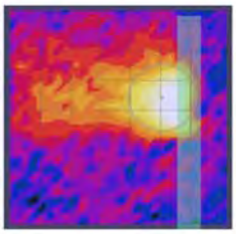
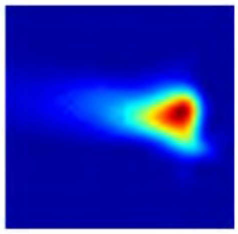
The input powers per each active port are listed below for both Simulation and Measurement validation and power density characterization. For Simulation, these values were entered directly into HFSS model. For measurement, FTM S/W was used to input these values for each active port also.

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

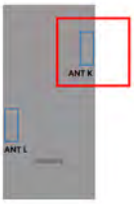
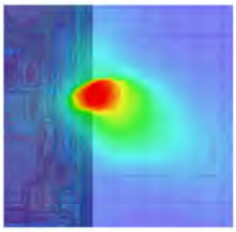
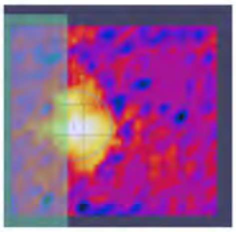
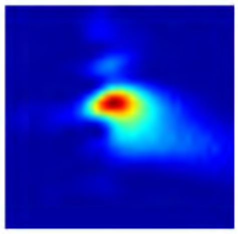
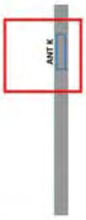
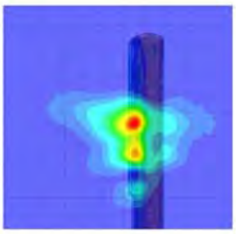
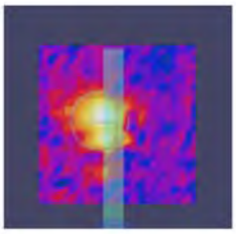
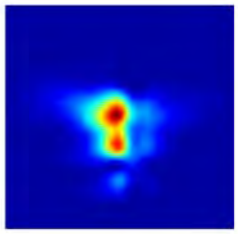
* The below simulation and measurement result were performed at 2mm evaluation distance and 28GHz / 38.5GHz. The *input.power.limit* was determined based on below results.

| | | | | | 4cm² avg. PD (mW/cm²) | |
|---|---|---|---|---|---|---|
| **Band** | **Beam ID** | **Antenna** | **Surface** | **Channel** | **Meas.** | **Sim** |
| n261 | 28 | K | Rear | Mid Ch. 2077891 (27923.5 MHz) | 1.180 | 1.764 |
| | | | Left | | 1.060 | 1.720 |
| | 157 | | Rear | | 0.542 | 1.106 |
| | 148 | | Left | | 0.610 | 1.383 |
| | 16 | L | Rear | | 1.370 | 1.822 |
| | | | Right | | 1.300 | 1.674 |
| | 145 | | Rear | | 0.654 | 1.479 |
| | | | Right | | 0.906 | 1.691 |
| n260 | 33 | K | Rear | Mid Ch. 2253331 (38449.9 MHz) | 0.510 | 0.712 |
| | | | Left | | 0.680 | 0.960 |
| | 151 | | Rear | | 1.020 | 1.356 |
| | | | Left | | 1.030 | 1.398 |
| | 29 | L | Rear | | 0.552 | 1.016 |
| | | | Right | | 0.810 | 1.190 |
| | 145 | | Rear | | 1.150 | 1.674 |
| | | | Right | | 1.090 | 1.658 |

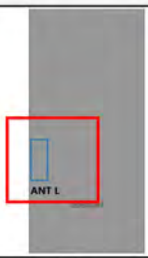
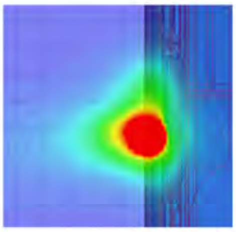
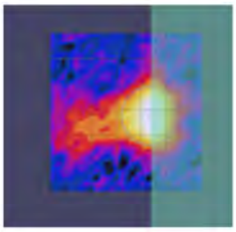
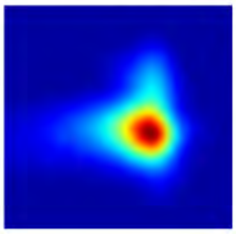
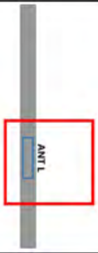
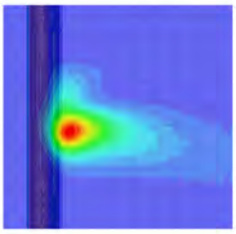
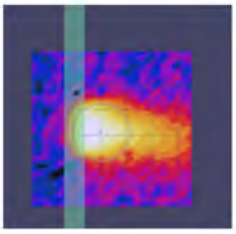
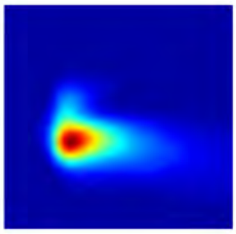
- Table 2-1, n261 ANT K-Patch: Mid Channel, Beam ID 28

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 28 | S2 (Rear) |  |  |  |  |
| | S3 (Left) |  |  |  |  |

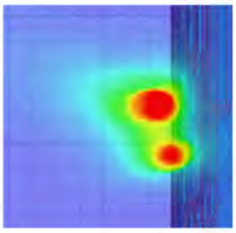
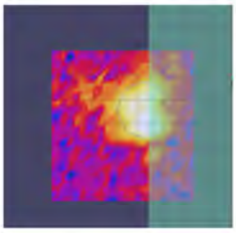
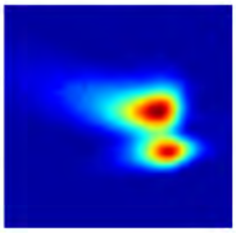
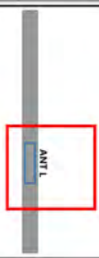
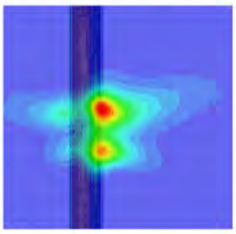
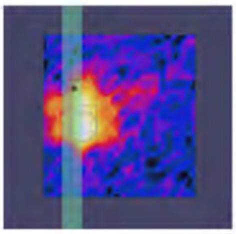
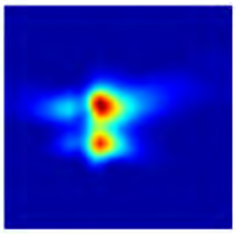
- Table 2-2, n261 ANT K-Patch: Mid Channel, Beam ID 157 for Rear and 148 for Left surfaces

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 157 | S2 (Rear) |  |  |  |  |
| 148 | S3 (Left) |  |  |  |  |

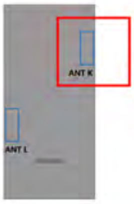
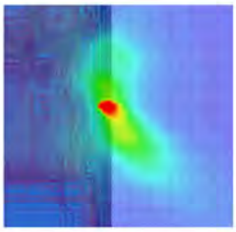
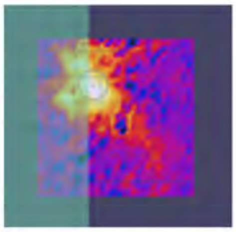
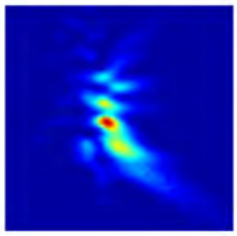
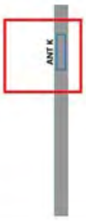
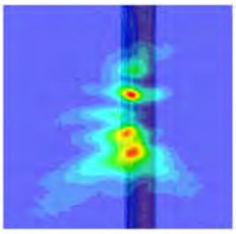
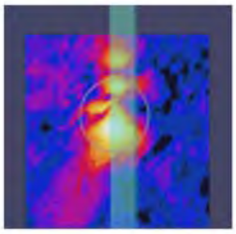
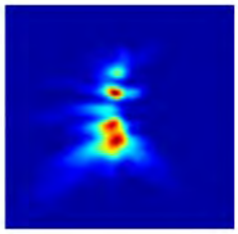
- Table 2-3, n261 ANT L-Patch: Mid Channel, Beam ID 16

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 16 | S2 (Rear) |  |  |  |  |
| | S4 (Right) |  |  |  |  |

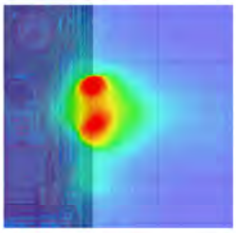
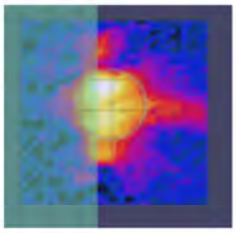
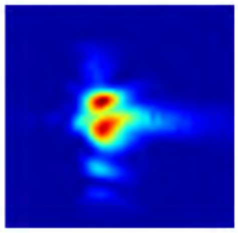
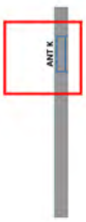
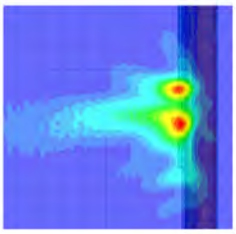
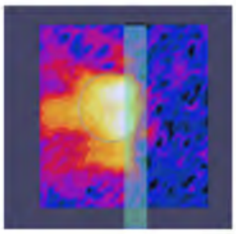
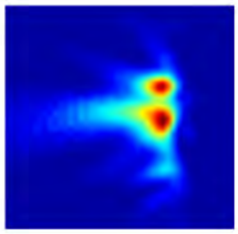
- Table 2-4, n261 ANT L-Patch: Mid Channel, Beam ID 145

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 145 | S2 (Rear) |  |  |  |  |
| | S4 (Right) |  |  |  |  |

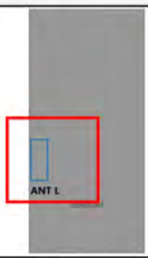
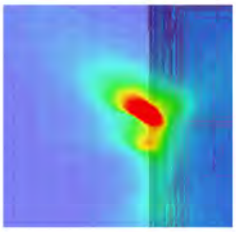
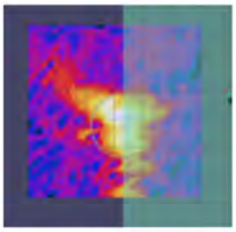
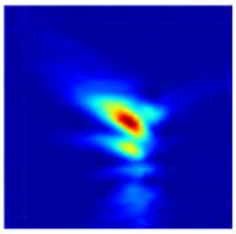
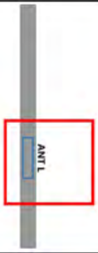
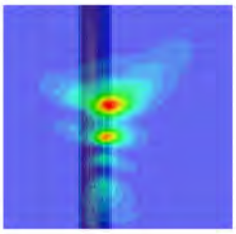
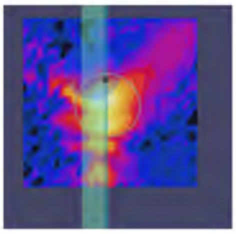
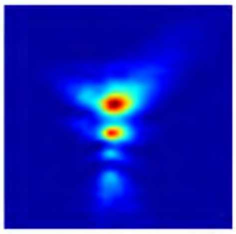
- Table 2-5, n260 ANT K-Patch: Mid Channel, Beam ID 33

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 33 | S2 (Rear) |  |  |  |  |
| | S3 (Left) |  |  |  |  |

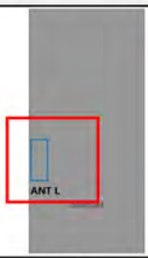
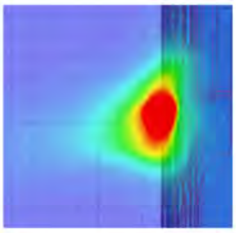
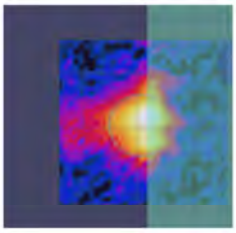
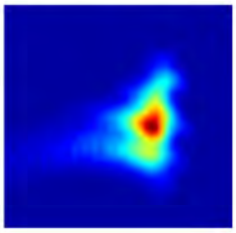
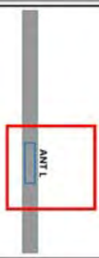
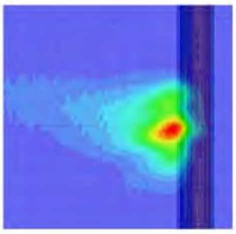
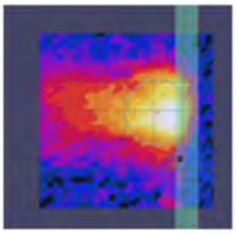
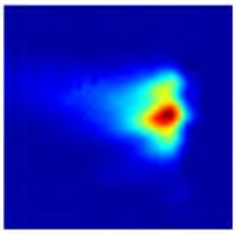
- Table 2-6, n260 ANT K-Patch: Mid Channel, Beam ID 151

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 151 | S2 (Rear) |  |  |  |  |
| | S3 (Left) |  |  |  |  |

- Table 2-7, n260 ANT L-Patch: Mid Channel, Beam ID 29

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 29 | S2 (Rear) |  |  |  |  |
| | S4 (Right) |  |  |  |  |

- Table 2-8, n260 ANT L-Patch: Mid Channel, Beam ID 145

| Beam ID | Surface | View | Simulated PD | Measured PD | Print out from Qualcomm MG Script |
|---|---|---|---|---|---|
| 145 | S2 (Rear) |  |  |  |  |
| | S4 (Right) |  |  |  |  |

The Smart transmit GEN2 cannot be finalized until the additional verifications are performed and passed. Follow the below steps for verifications in the mid channel:

**VERIFICATION 1:** Use "Qualcomm MG script" to print the PD plots for all the beams selected and evaluated for model validation.

- Throughout above comparisons (Table 2-1 to 2-8), the model validation including MG script were verified.

**VERIFICATION 2:** Contribution factors from Qualcomm MG script and from HFSS for selected beams, and normalized combined PD verification, for A3LSMG991U device with 2 QTMs

[n261 band]

| | | | | | | |
|---|---|---|---|---|---|---|
| Worst-case surface: | | | | | S2 (Back surface) | |
| Worst-case location (x,y,z) in meters: | | | | | Worst 4cm2 PD value location is 0.02742m, 0.03694m, -0.01097m | |
| PD_design_target (W/m$^2$) | | | | | 6.166 | |
| Values printed from Qualcomm MG Script | | | | | Values obtained by OEM using EM simulation tool | |
| QTM # | Beam ID | c(i,j) i = beam ID j = QTM # | Backoff factor $b_j$ | *verification.sim.power* $_{limit}$ (before backoffs) [dBm] | simulated 4cm2 PD(i,j) at (0.02742, 0.03694, -0.01097) at *verification.sim.power* $_{limit}$ on S2 | $C_{simulated}$(i,j)= 4cm$^2$PD(i,j)/ *PD_design_target* |
| 0 | 2 | 1.000 | 0.955 | 8.4 | 6.16884 | 1.000 |
| 1 | 151 | 0.041 | 0.933 | 4.85 | 0.25572 | 0.041 |
| **Verify 1:** | $C(i,j) = C_{simulated}(i,j)$, $i = 2, 151; j = 0, 1$ | | | | | |
| **Verify 2:** | $b_0*c(2,0) + b_1*c(151,1) = 0.955*1 + 0.933*0.041 = 0.993 \leq 1$ | | | | | |

[n260 band]

| | | | | | | |
|---|---|---|---|---|---|---|
| Worst-case surface: | | | | | S2 (Back surface) | |
| Worst-case location (x,y,z) in meters: | | | | | Worst 4cm2 PD value location is -0.04459m, 0.10594m, -0.01097m | |
| PD_design_target (W/m$^2$) | | | | | 6.166 | |
| Values printed from Qualcomm MG Script | | | | | Values obtained by OEM using EM simulation tool | |
| QTM # | Beam ID | c(i,j) i = beam ID j = QTM # | Backoff factor $b_j$ | *verification.sim.power* $_{limit}$ (before backoffs) [dBm] | simulated 4cm2 PD(i,j) at (-0.04459, 0.10594, -0.01097) at *verification.sim.power* $_{limit}$ on S2 | $C_{simulated}$(i,j)= 4cm$^2$PD(i,j)/ *PD_design_target* |
| 0 | 20 | 0.033 | 0.955 | 3.32 | 0.20367 | 0.033 |
| 1 | 14 | 1.000 | 0.933 | 8.53 | 6.17674 | 1.002 |
| **Verify 1:** | $C(i,j) = C_{simulated}(i,j)$, $i = 20, 14; j = 0, 1$ | | | | | |
| **Verify 2:** | $b_0*c(20,0) + b_1*c(14,1) = 0.955*0.033 + 0.933*1.000 = 0.965 \leq 1$ | | | | | |

**VERIFICATION3:** Measured 4cm$^2$ PD on worst surface and combined PD at worst-case location for A3LSMG991U device with 2 QTMS

[n261 band]

| QTM # | Beam ID | Dominant surface | Measured 4cm2 PD at input.power.limit on QTM dominant surface (W/m$^2$) |
|---|---|---|---|
| 0 | 2 | S2 (Back) | 5.360 |
| 1 | 151 | S3 (Left) | 3.300 |
| combined PD at the worst-case location (x,y,z) | | | c(2,0)*meas.4cm$^2$PD(2,0) + c(151,1)*meas.4cm$^2$PD(151,1)<br>= 1.000*5.360 + 0.041*3.300 = 5.495 W/m$^2$ |
| PD_design_target + uncertainty at reference power level of 0.5 dB | | | = 6.166*10^(0.5/10) = 6.918 W/m$^2$ |
| **Verify** | | | combined PD < PD_design_target + uncertainty at reference power level |

[n260 band]

| QTM # | Beam ID | Dominant surface | Measured 4cm2 PD at input.power.limit on QTM dominant surface (W/m$^2$) |
|---|---|---|---|
| 0 | 20 | S4 (Right) | 4.833 |
| 1 | 14 | S2 (Back) | 3.164 |
| combined PD at the worst-case location (x,y,z) | | | c(20,0)*meas.4cm$^2$PD(20,0) + c(14,1)*meas.4cm$^2$PD(14,1)<br>= 0.033*4.833 + 1.000*3.164 = 3.323 W/m$^2$ |
| PD_design_target + uncertainty at reference power level of 0.5 dB | | | = 6.166*10^(0.5/10) = 6.918 W/m$^2$ |
| **Verify** | | | combined PD < PD_design_target + uncertainty at reference power level |

## 3 Simulation results

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

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

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

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

#### 3.1.1 Ant K– Patch Antenna

Table 2 & Table 3 show the PD simulation evaluation of Ant K patch antenna at 28GHz / 39GHz for the corresponding evaluation planes specified in Table 1.

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

- K–patch Low CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 41.9% | 16.1% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 58.3% | 58.3% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | K | Patch | 3 | | 1 | 0.00 | 0.33 | 0.01 | 0.00 | 0.02 | **0.37** | 4.7% | 3.8% | 0.00 | 0.12 | 0.01 | 0.00 | 0.01 | **0.15** | 41.9% | 41.9% |
| 2 | | | 4 | | 1 | 0.00 | 0.37 | 0.02 | 0.00 | 0.02 | **0.41** | 4.9% | 5.1% | 0.00 | 0.13 | 0.01 | 0.00 | 0.01 | **0.17** | 42.2% | 42.2% |
| 3 | | | 8 | | 2 | 0.00 | 0.55 | 0.04 | 0.00 | 0.05 | **0.58** | 8.7% | 6.9% | 0.00 | 0.21 | 0.03 | 0.00 | 0.02 | **0.28** | 48.1% | 48.1% |
| 4 | | | 9 | | 2 | 0.00 | 0.37 | 0.01 | 0.00 | 0.10 | **0.44** | 21.8% | 1.6% | 0.00 | 0.17 | 0.01 | 0.00 | 0.03 | **0.20** | 45.4% | 45.4% |
| 5 | | | 10 | | 2 | 0.00 | 0.47 | 0.03 | 0.01 | 0.03 | **0.57** | 5.8% | 4.7% | 0.00 | 0.18 | 0.02 | 0.00 | 0.01 | **0.25** | 43.4% | 43.4% |
| 6 | | | 13 | | 2 | 0.00 | 0.39 | 0.01 | 0.00 | 0.09 | **0.44** | 20.9% | 2.5% | 0.00 | 0.17 | 0.01 | 0.00 | 0.03 | **0.21** | 46.5% | 46.5% |
| 7 | | | 14 | | 2 | 0.01 | 0.31 | 0.01 | 0.00 | 0.04 | **0.40** | 9.5% | 3.2% | 0.01 | 0.14 | 0.01 | 0.00 | 0.02 | **0.19** | 48.1% | 48.1% |
| 8 | | | 19 | | 5 | 0.01 | 1.47 | 0.25 | 0.00 | 0.16 | **1.57** | 10.3% | 16.1% | 0.01 | 0.67 | 0.17 | 0.00 | 0.07 | **0.78** | 49.7% | 49.7% |
| 9 | | | 20 | | 5 | 0.01 | 1.81 | 0.04 | 0.00 | 0.13 | **1.89** | 7.0% | 1.9% | 0.01 | 0.90 | 0.02 | 0.00 | 0.06 | **1.10** | 58.2% | 58.2% |
| 10 | | | 21 | | 5 | 0.01 | 1.83 | 0.03 | 0.00 | 0.13 | **1.92** | 6.6% | 1.5% | 0.01 | 0.92 | 0.02 | 0.00 | 0.06 | **1.12** | 58.3% | 58.3% |
| 11 | | | 22 | | 5 | 0.02 | 1.53 | 0.02 | 0.01 | 0.13 | **1.71** | 7.4% | 1.4% | 0.01 | 0.67 | 0.01 | 0.00 | 0.06 | **0.87** | 50.9% | 50.9% |
| 12 | | | 23 | | 5 | 0.02 | 1.07 | 0.03 | 0.01 | 0.09 | **1.35** | 6.7% | 2.5% | 0.02 | 0.37 | 0.03 | 0.01 | 0.03 | **0.57** | 41.8% | 41.8% |
| 13 | | | 27 | | 5 | 0.01 | 1.58 | 0.24 | 0.00 | 0.16 | **1.68** | 9.3% | 14.5% | 0.01 | 0.75 | 0.16 | 0.00 | 0.07 | **0.89** | 52.9% | 52.9% |
| 14 | | | 28 | | 5 | 0.01 | 1.85 | 0.03 | 0.00 | 0.13 | **1.94** | 6.7% | 1.7% | 0.01 | 0.92 | 0.02 | 0.00 | 0.06 | **1.12** | 58.0% | 58.0% |
| 15 | | | 29 | | 5 | 0.01 | 1.67 | 0.03 | 0.00 | 0.13 | **1.75** | 7.1% | 1.6% | 0.01 | 0.80 | 0.02 | 0.00 | 0.06 | **1.00** | 56.8% | 56.8% |
| 16 | | | 30 | | 5 | 0.02 | 1.32 | 0.02 | 0.01 | 0.11 | **1.60** | 6.9% | 1.4% | 0.02 | 0.54 | 0.01 | 0.01 | 0.04 | **0.76** | 47.7% | 47.7% |
| 17 | | | 131 | | 1 | 0.01 | **0.28** | 0.01 | 0.00 | 0.09 | 0.21 | 32.3% | 5.0% | 0.00 | **0.10** | 0.01 | 0.00 | 0.04 | 0.08 | 37.3% | 29.0% |
| 18 | | | 132 | | 1 | 0.00 | **0.22** | 0.02 | 0.00 | 0.09 | 0.17 | 41.2% | 10.4% | 0.00 | **0.08** | 0.01 | 0.00 | 0.03 | 0.06 | 35.3% | 28.1% |
| 19 | | | 136 | | 2 | 0.01 | **0.65** | 0.02 | 0.00 | 0.26 | 0.50 | 39.6% | 3.5% | 0.00 | **0.29** | 0.02 | 0.00 | 0.13 | 0.23 | 44.5% | 35.0% |
| 20 | | | 137 | | 2 | 0.00 | **0.41** | 0.02 | 0.00 | 0.13 | 0.30 | 32.0% | 3.6% | 0.00 | **0.17** | 0.01 | 0.00 | 0.07 | 0.14 | 40.4% | 34.6% |
| 21 | | | 138 | | 2 | 0.01 | **0.41** | 0.01 | 0.00 | 0.13 | 0.25 | 30.8% | 2.2% | 0.00 | **0.15** | 0.01 | 0.00 | 0.06 | 0.09 | 36.6% | 21.3% |
| 22 | | | 141 | | 2 | 0.00 | **0.41** | 0.01 | 0.00 | 0.13 | 0.29 | 31.5% | 3.4% | 0.00 | **0.16** | 0.01 | 0.00 | 0.06 | 0.14 | 38.0% | 33.4% |
| 23 | | | 142 | | 2 | 0.01 | **0.49** | 0.02 | 0.00 | 0.12 | 0.37 | 24.5% | 4.1% | 0.01 | **0.18** | 0.01 | 0.00 | 0.05 | 0.13 | 36.2% | 26.7% |
| 24 | | | 147 | | 5 | 0.01 | **1.03** | 0.13 | 0.00 | 0.43 | 0.84 | 41.9% | 12.7% | 0.01 | **0.40** | 0.08 | 0.00 | 0.19 | 0.37 | 38.9% | 36.1% |
| 25 | | | 148 | | 5 | 0.01 | **1.39** | 0.05 | 0.00 | 0.50 | 1.13 | 36.3% | 3.3% | 0.01 | **0.69** | 0.02 | 0.00 | 0.29 | 0.60 | 49.4% | 43.2% |
| 26 | | | 149 | | 5 | 0.01 | **1.27** | 0.05 | 0.00 | 0.44 | 0.96 | 34.5% | 4.0% | 0.01 | **0.66** | 0.03 | 0.00 | 0.28 | 0.53 | 52.1% | 41.8% |
| 27 | | | 150 | | 5 | 0.02 | **1.25** | 0.07 | 0.00 | 0.44 | 0.89 | 34.9% | 5.3% | 0.02 | **0.59** | 0.05 | 0.00 | 0.24 | 0.43 | 47.1% | 34.8% |
| 28 | | | 151 | | 5 | 0.01 | **0.78** | 0.02 | 0.01 | 0.29 | 0.66 | 37.2% | 3.1% | 0.01 | **0.29** | 0.02 | 0.01 | 0.12 | 0.25 | 36.5% | 32.4% |
| 29 | | | 155 | | 5 | 0.02 | **1.19** | 0.12 | 0.00 | 0.45 | 0.99 | 37.7% | 9.9% | 0.01 | **0.50** | 0.07 | 0.00 | 0.23 | 0.48 | 42.3% | 40.4% |
| 30 | | | 156 | | 5 | 0.01 | **1.44** | 0.04 | 0.00 | 0.51 | 1.14 | 35.7% | 2.5% | 0.01 | **0.78** | 0.02 | 0.00 | 0.33 | 0.65 | 54.2% | 45.1% |
| 31 | | | 157 | | 5 | 0.02 | **1.36** | 0.05 | 0.00 | 0.49 | 0.99 | 35.9% | 4.0% | 0.02 | **0.68** | 0.04 | 0.00 | 0.30 | 0.55 | 50.4% | 40.2% |
| 32 | | | 158 | | 5 | 0.02 | **0.92** | 0.04 | 0.01 | 0.30 | 0.67 | 33.0% | 4.5% | 0.01 | **0.39** | 0.02 | 0.00 | 0.15 | 0.27 | 43.0% | 29.2% |
| 33 | | | 3 | 131 | 2 | 0.01 | 0.64 | 0.05 | 0.01 | 0.11 | **0.66** | 16.9% | 6.8% | 0.01 | 0.26 | 0.03 | 0.00 | 0.05 | **0.26** | 39.7% | 39.7% |
| 34 | | | 4 | 132 | 2 | 0.00 | **0.62** | 0.06 | 0.00 | 0.13 | 0.59 | 21.0% | 9.1% | 0.00 | **0.24** | 0.04 | 0.00 | 0.05 | 0.23 | 38.2% | 37.6% |
| 35 | | | 8 | 136 | 4 | 0.01 | **1.38** | 0.08 | 0.00 | 0.38 | 1.16 | 27.5% | 6.0% | 0.01 | **0.52** | 0.06 | 0.00 | 0.18 | **0.52** | 37.6% | 37.6% |
| 36 | | | 9 | 137 | 4 | 0.01 | **0.86** | 0.03 | 0.00 | 0.35 | 0.85 | 40.1% | 3.4% | 0.01 | 0.42 | 0.02 | 0.00 | 0.14 | **0.43** | 49.6% | 49.6% |
| 37 | | | 10 | 138 | 4 | 0.01 | **0.97** | 0.05 | 0.01 | 0.21 | 0.92 | 21.4% | 5.5% | 0.01 | 0.32 | 0.03 | 0.01 | 0.08 | **0.36** | 37.5% | 37.5% |
| 38 | | | 13 | 141 | 4 | 0.01 | **0.86** | 0.03 | 0.01 | 0.35 | 0.83 | 40.7% | 3.4% | 0.00 | 0.40 | 0.02 | 0.00 | 0.15 | **0.43** | 50.0% | 50.0% |
| 39 | | | 14 | 142 | 4 | 0.02 | **0.90** | 0.05 | 0.01 | 0.19 | **0.90** | 21.5% | 5.9% | 0.01 | 0.35 | 0.04 | 0.01 | 0.08 | **0.39** | 43.9% | 43.9% |
| 40 | | | 19 | 147 | 10 | 0.02 | **3.13** | 0.46 | 0.01 | 0.79 | 2.87 | 25.4% | 14.6% | 0.02 | **1.35** | 0.32 | 0.01 | 0.40 | 1.33 | 43.2% | 42.4% |
| 41 | | | 20 | 148 | 10 | 0.02 | **3.42** | 0.10 | 0.01 | 0.80 | 3.11 | 23.4% | 3.0% | 0.02 | 1.73 | 0.06 | 0.01 | 0.44 | **1.74** | 51.1% | 51.1% |
| 42 | | | 21 | 149 | 10 | 0.02 | **3.16** | 0.10 | 0.01 | 0.69 | 3.14 | 21.8% | 3.1% | 0.02 | 1.71 | 0.06 | 0.01 | 0.43 | **1.76** | 55.7% | 55.7% |
| 43 | | | 22 | 150 | 10 | 0.05 | **3.12** | 0.10 | 0.01 | 0.78 | 3.11 | 25.1% | 3.2% | 0.03 | 1.49 | 0.07 | 0.01 | 0.39 | **1.57** | 50.2% | 50.2% |
| 44 | | | 23 | 151 | 10 | 0.06 | 2.34 | 0.08 | 0.04 | 0.41 | **2.99** | 13.7% | 2.7% | 0.04 | 0.82 | 0.05 | 0.03 | 0.16 | **1.15** | 38.5% | 38.5% |
| 45 | | | 27 | 155 | 10 | 0.03 | **3.17** | 0.39 | 0.01 | 0.79 | 2.88 | 24.8% | 12.3% | 0.01 | 1.47 | 0.27 | 0.01 | 0.42 | **1.47** | 46.5% | 46.5% |
| 46 | | | 28 | 156 | 10 | 0.02 | **3.40** | 0.11 | 0.01 | 0.78 | 3.18 | 22.9% | 3.4% | 0.02 | **1.84** | 0.07 | 0.01 | 0.48 | 1.77 | 54.1% | 52.2% |
| 47 | | | 29 | 157 | 10 | 0.04 | **3.21** | 0.11 | 0.01 | 0.76 | 3.18 | 23.7% | 3.3% | 0.03 | 1.62 | 0.07 | 0.01 | 0.45 | **1.74** | 54.2% | 54.2% |
| 48 | | | 30 | 158 | 10 | 0.07 | 2.68 | 0.06 | 0.03 | 0.61 | **2.92** | 20.9% | 2.2% | 0.04 | 1.10 | 0.04 | 0.02 | 0.28 | **1.32** | 45.2% | 45.2% |

## - K–patch Mid CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | **39.1%** | **16.6%** | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | **59.5%** | **59.5%** |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | | | 3 | | 1 | 0.00 | 0.33 | 0.01 | 0.00 | 0.02 | **0.36** | 4.5% | 3.9% | 0.00 | 0.11 | 0.01 | 0.00 | 0.01 | **0.15** | 41.9% | 41.9% |
| 2 | | | 4 | | 1 | 0.00 | 0.35 | 0.02 | 0.00 | 0.02 | **0.38** | 5.0% | 5.5% | 0.00 | 0.12 | 0.01 | 0.00 | 0.01 | **0.16** | 41.1% | 41.1% |
| 3 | | | 8 | | 2 | 0.00 | 0.58 | 0.04 | 0.00 | 0.04 | **0.59** | 7.5% | 7.0% | 0.00 | 0.22 | 0.03 | 0.00 | 0.02 | **0.29** | 50.1% | 50.1% |
| 4 | | | 9 | | 2 | 0.00 | 0.38 | 0.01 | 0.00 | 0.06 | **0.43** | 14.3% | 1.4% | 0.00 | 0.17 | 0.00 | 0.00 | 0.02 | **0.21** | 48.6% | 48.6% |
| 5 | | | 10 | | 2 | 0.01 | 0.47 | 0.03 | 0.01 | 0.04 | **0.58** | 6.1% | 5.0% | 0.00 | 0.17 | 0.02 | 0.00 | 0.01 | **0.24** | 41.6% | 41.6% |
| 6 | | | 13 | | 2 | 0.00 | 0.40 | 0.01 | 0.00 | 0.07 | **0.43** | 16.0% | 3.0% | 0.00 | 0.18 | 0.01 | 0.00 | 0.03 | **0.22** | 51.3% | 51.3% |
| 7 | | | 14 | | 2 | 0.00 | 0.29 | 0.01 | 0.00 | 0.03 | **0.41** | 6.6% | 2.7% | 0.00 | 0.12 | 0.01 | 0.00 | 0.01 | **0.19** | 46.6% | 46.6% |
| 8 | | | 19 | | 5 | 0.01 | 1.54 | 0.26 | 0.00 | 0.16 | **1.54** | 10.5% | 16.6% | 0.00 | 0.70 | 0.17 | 0.00 | 0.07 | **0.80** | 51.9% | 51.9% |
| 9 | | | 20 | | 5 | 0.01 | 1.66 | 0.03 | 0.00 | 0.13 | **1.71** | 7.5% | 1.6% | 0.01 | 0.85 | 0.02 | 0.00 | 0.06 | **1.01** | 59.3% | 59.3% |
| 10 | | | 21 | | 5 | 0.01 | 1.69 | 0.03 | 0.00 | 0.12 | **1.74** | 6.7% | 1.6% | 0.01 | 0.86 | 0.02 | 0.00 | 0.06 | **1.04** | 59.5% | 59.5% |
| 11 | | | 22 | | 5 | 0.01 | 1.46 | 0.02 | 0.00 | 0.13 | **1.67** | 7.5% | 1.1% | 0.01 | 0.67 | 0.01 | 0.00 | 0.06 | **0.88** | 52.3% | 52.3% |
| 12 | | | 23 | | 5 | 0.02 | 1.05 | 0.03 | 0.01 | 0.11 | **1.41** | 7.6% | 2.1% | 0.02 | 0.38 | 0.02 | 0.01 | 0.04 | **0.57** | 40.1% | 40.1% |
| 13 | | | 27 | | 5 | 0.01 | 1.60 | 0.25 | 0.00 | 0.16 | **1.63** | 9.5% | 15.5% | 0.01 | 0.75 | 0.16 | 0.00 | 0.07 | **0.89** | 54.7% | 54.7% |
| 14 | | | 28 | | 5 | 0.01 | 1.72 | 0.02 | 0.00 | 0.13 | **1.76** | 7.1% | 1.4% | 0.01 | 0.88 | 0.02 | 0.00 | 0.06 | **1.05** | 59.4% | 59.4% |
| 15 | | | 29 | | 5 | 0.01 | 1.56 | 0.03 | 0.00 | 0.11 | **1.66** | 6.9% | 1.8% | 0.01 | 0.75 | 0.02 | 0.00 | 0.05 | **0.93** | 56.1% | 56.1% |
| 16 | | | 30 | | 5 | 0.02 | 1.25 | 0.02 | 0.01 | 0.11 | **1.57** | 7.2% | 1.3% | 0.01 | 0.54 | 0.01 | 0.01 | 0.05 | **0.77** | 48.9% | 48.9% |
| 17 | | | 131 | | 1 | 0.00 | **0.30** | 0.01 | 0.00 | 0.08 | 0.24 | 27.5% | 3.7% | 0.00 | **0.12** | 0.01 | 0.00 | 0.04 | 0.10 | 39.9% | 32.6% |
| 18 | | | 132 | | 1 | 0.00 | **0.21** | 0.02 | 0.00 | 0.07 | 0.16 | 35.7% | 9.2% | 0.00 | **0.08** | 0.01 | 0.00 | 0.03 | 0.05 | 37.7% | 25.1% |
| 19 | | | 136 | | 2 | 0.01 | **0.70** | 0.02 | 0.00 | 0.25 | 0.55 | 35.1% | 2.4% | 0.00 | **0.32** | 0.01 | 0.00 | 0.12 | 0.25 | 46.3% | 35.4% |
| 20 | | | 137 | | 2 | 0.00 | **0.38** | 0.02 | 0.00 | 0.13 | 0.26 | 33.1% | 4.2% | 0.00 | **0.15** | 0.01 | 0.00 | 0.06 | 0.12 | 38.8% | 30.7% |
| 21 | | | 138 | | 2 | 0.01 | **0.40** | 0.01 | 0.00 | 0.14 | 0.23 | 35.3% | 2.7% | 0.00 | **0.15** | 0.01 | 0.00 | 0.05 | 0.07 | 36.3% | 17.9% |
| 22 | | | 141 | | 2 | 0.00 | **0.39** | 0.02 | 0.00 | 0.13 | 0.26 | 32.9% | 4.1% | 0.00 | **0.14** | 0.01 | 0.00 | 0.06 | 0.12 | 36.5% | 29.8% |
| 23 | | | 142 | | 2 | 0.01 | **0.48** | 0.03 | 0.00 | 0.11 | 0.38 | 23.8% | 5.3% | 0.01 | **0.18** | 0.02 | 0.00 | 0.04 | 0.13 | 37.1% | 26.3% |
| 24 | K | Patch | 147 | | 5 | 0.01 | **0.97** | 0.12 | 0.00 | 0.38 | 0.76 | 39.1% | 12.6% | 0.01 | **0.37** | 0.09 | 0.00 | 0.18 | 0.33 | 38.6% | 34.0% |
| 25 | | | 148 | | 5 | 0.01 | **1.38** | 0.06 | 0.00 | 0.46 | 1.10 | 33.4% | 4.3% | 0.01 | **0.69** | 0.02 | 0.00 | 0.26 | 0.59 | 50.0% | 42.5% |
| 26 | | | 149 | | 5 | 0.01 | **1.19** | 0.08 | 0.01 | 0.38 | 0.91 | 31.6% | 6.3% | 0.01 | **0.63** | 0.05 | 0.00 | 0.22 | 0.49 | 52.8% | 40.8% |
| 27 | | | 150 | | 5 | 0.02 | **1.29** | 0.06 | 0.00 | 0.44 | 0.99 | 34.2% | 4.8% | 0.01 | **0.63** | 0.04 | 0.00 | 0.23 | 0.48 | 49.0% | 37.0% |
| 28 | | | 151 | | 5 | 0.02 | **0.80** | 0.03 | 0.02 | 0.29 | 0.67 | 35.6% | 3.5% | 0.01 | **0.28** | 0.02 | 0.01 | 0.12 | 0.27 | 35.2% | 34.1% |
| 29 | | | 155 | | 5 | 0.01 | **1.17** | 0.11 | 0.00 | 0.42 | 0.93 | 35.5% | 9.7% | 0.01 | **0.50** | 0.07 | 0.00 | 0.22 | 0.46 | 42.6% | 39.4% |
| 30 | | | 156 | | 5 | 0.01 | **1.37** | 0.04 | 0.01 | 0.46 | 1.08 | 33.5% | 3.0% | 0.01 | **0.75** | 0.03 | 0.00 | 0.27 | 0.60 | 54.3% | 43.4% |
| 31 | | | 157 | | 5 | 0.01 | **1.38** | 0.05 | 0.00 | 0.44 | 1.11 | 31.9% | 3.9% | 0.01 | **0.75** | 0.04 | 0.00 | 0.27 | 0.59 | 54.6% | 42.5% |
| 32 | | | 158 | | 5 | 0.02 | **1.00** | 0.03 | 0.01 | 0.34 | 0.74 | 33.5% | 2.6% | 0.02 | **0.38** | 0.02 | 0.01 | 0.15 | 0.30 | 38.4% | 29.6% |
| 33 | | | 3 | 131 | 2 | 0.01 | 0.68 | 0.04 | 0.01 | 0.11 | **0.68** | 15.4% | 6.3% | 0.01 | 0.26 | 0.03 | 0.00 | 0.04 | **0.27** | 39.4% | 39.4% |
| 34 | | | 4 | 132 | 2 | 0.01 | **0.61** | 0.05 | 0.00 | 0.12 | 0.60 | 19.1% | 8.2% | 0.01 | **0.23** | 0.03 | 0.00 | 0.04 | 0.22 | 38.1% | 36.3% |
| 35 | | | 8 | 136 | 4 | 0.01 | **1.49** | 0.08 | 0.00 | 0.38 | 1.19 | 25.4% | 5.2% | 0.01 | **0.60** | 0.06 | 0.00 | 0.19 | 0.55 | 40.1% | 37.1% |
| 36 | | | 9 | 137 | 4 | 0.01 | 0.80 | 0.03 | 0.01 | 0.30 | **0.80** | 37.2% | 3.2% | 0.01 | 0.35 | 0.02 | 0.00 | 0.13 | **0.41** | 50.6% | 50.6% |
| 37 | | | 10 | 138 | 4 | 0.02 | **0.96** | 0.06 | 0.01 | 0.22 | 0.91 | 23.2% | 6.1% | 0.01 | 0.31 | 0.04 | 0.01 | 0.08 | **0.31** | 32.5% | 32.5% |
| 38 | | | 13 | 141 | 4 | 0.01 | **0.87** | 0.04 | 0.00 | 0.33 | 0.79 | 37.7% | 4.1% | 0.00 | 0.35 | 0.02 | 0.00 | 0.14 | **0.42** | 48.4% | 48.4% |
| 39 | | | 14 | 142 | 4 | 0.02 | 0.89 | 0.06 | 0.01 | 0.16 | **0.97** | 16.0% | 5.7% | 0.01 | 0.31 | 0.04 | 0.01 | 0.06 | **0.40** | 41.5% | 41.5% |
| 40 | | | 19 | 147 | 10 | 0.02 | **3.11** | 0.45 | 0.01 | 0.74 | 2.70 | 23.7% | 14.4% | 0.01 | **1.34** | 0.31 | 0.01 | 0.39 | 1.34 | 43.0% | 42.9% |
| 41 | | | 20 | 148 | 10 | 0.02 | **3.36** | 0.09 | 0.01 | 0.77 | 3.05 | 22.8% | 2.6% | 0.02 | **1.78** | 0.05 | 0.01 | 0.42 | 1.71 | 52.9% | 50.7% |
| 42 | | | 21 | 149 | 10 | 0.02 | **3.07** | 0.13 | 0.01 | 0.59 | 3.03 | 19.3% | 4.3% | 0.02 | 1.68 | 0.08 | 0.01 | 0.34 | **1.69** | 55.1% | 55.1% |
| 43 | | | 22 | 150 | 10 | 0.04 | 3.03 | 0.07 | 0.01 | 0.74 | **3.16** | 23.3% | 2.3% | 0.03 | 1.54 | 0.05 | 0.01 | 0.37 | **1.63** | 51.4% | 51.4% |
| 44 | | | 23 | 151 | 10 | 0.08 | 2.38 | 0.10 | 0.05 | 0.38 | **3.12** | 12.3% | 3.0% | 0.05 | 0.82 | 0.06 | 0.04 | 0.17 | **1.25** | 39.9% | 39.9% |
| 45 | | | 27 | 155 | 10 | 0.01 | **3.23** | 0.43 | 0.01 | 0.75 | 2.80 | 23.3% | 13.4% | 0.01 | 1.49 | 0.28 | 0.01 | 0.42 | **1.51** | 46.6% | 46.6% |
| 46 | | | 28 | 156 | 10 | 0.02 | **3.32** | 0.10 | 0.01 | 0.74 | 3.13 | 22.3% | 3.1% | 0.02 | **1.86** | 0.06 | 0.01 | 0.43 | 1.72 | 55.8% | 51.8% |
| 47 | | | 29 | 157 | 10 | 0.03 | 3.23 | 0.10 | 0.01 | 0.65 | **3.24** | 20.2% | 3.1% | 0.02 | 1.70 | 0.07 | 0.01 | 0.37 | **1.75** | 54.0% | 54.0% |
| 48 | | | 30 | 158 | 10 | 0.08 | 2.53 | 0.05 | 0.03 | 0.58 | **2.95** | 19.6% | 1.8% | 0.06 | 1.05 | 0.03 | 0.03 | 0.26 | **1.40** | 47.6% | 47.6% |

## - K–patch High CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | **40.1%** | **16.8%** | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | **59.9%** | **59.9%** |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | | | 3 | | 1 | 0.00 | 0.30 | 0.01 | 0.00 | 0.02 | **0.33** | 4.8% | 3.6% | 0.00 | 0.10 | 0.01 | 0.00 | 0.01 | **0.14** | 41.2% | 41.2% |
| 2 | | | 4 | | 1 | 0.00 | 0.32 | 0.02 | 0.00 | 0.02 | **0.35** | 5.1% | 5.7% | 0.00 | 0.11 | 0.01 | 0.00 | 0.01 | **0.14** | 39.1% | 39.1% |
| 3 | | | 8 | | 2 | 0.00 | 0.52 | 0.04 | 0.00 | 0.04 | **0.52** | 8.2% | 7.1% | 0.00 | 0.19 | 0.03 | 0.00 | 0.02 | **0.24** | 46.7% | 46.7% |
| 4 | | | 9 | | 2 | 0.00 | 0.35 | 0.01 | 0.00 | 0.05 | **0.40** | 13.0% | 1.7% | 0.00 | 0.15 | 0.00 | 0.00 | 0.02 | **0.20** | 50.1% | 50.1% |
| 5 | | | 10 | | 2 | 0.01 | 0.43 | 0.03 | 0.00 | 0.04 | **0.54** | 6.6% | 6.1% | 0.00 | 0.15 | 0.02 | 0.00 | 0.01 | **0.22** | 40.8% | 40.8% |
| 6 | | | 13 | | 2 | 0.00 | 0.35 | 0.01 | 0.00 | 0.06 | **0.39** | 16.5% | 3.1% | 0.00 | 0.16 | 0.01 | 0.00 | 0.02 | **0.20** | 51.7% | 51.7% |
| 7 | | | 14 | | 2 | 0.00 | 0.26 | 0.01 | 0.00 | 0.03 | **0.37** | 7.2% | 3.5% | 0.00 | 0.10 | 0.01 | 0.00 | 0.01 | **0.16** | 43.3% | 43.3% |
| 8 | | | 19 | | 5 | 0.01 | 1.40 | 0.24 | 0.00 | 0.14 | **1.41** | 9.9% | 16.8% | 0.00 | 0.62 | 0.16 | 0.00 | 0.06 | **0.72** | 50.7% | 50.7% |
| 9 | | | 20 | | 5 | 0.01 | 1.46 | 0.02 | 0.00 | 0.12 | **1.49** | 7.7% | 1.6% | 0.01 | 0.74 | 0.01 | 0.00 | 0.06 | **0.89** | 59.6% | 59.6% |
| 10 | | | 21 | | 5 | 0.01 | 1.50 | 0.02 | 0.00 | 0.11 | **1.55** | 7.0% | 1.4% | 0.01 | 0.76 | 0.01 | 0.00 | 0.05 | **0.93** | 59.6% | 59.6% |
| 11 | | | 22 | | 5 | 0.01 | 1.36 | 0.02 | 0.00 | 0.12 | **1.54** | 7.5% | 1.0% | 0.01 | 0.63 | 0.01 | 0.00 | 0.05 | **0.82** | 53.2% | 53.2% |
| 12 | | | 23 | | 5 | 0.02 | 0.90 | 0.03 | 0.01 | 0.10 | **1.29** | 7.8% | 2.0% | 0.01 | 0.34 | 0.02 | 0.01 | 0.04 | **0.52** | 40.5% | 40.5% |
| 13 | | | 27 | | 5 | 0.01 | 1.43 | 0.23 | 0.00 | 0.14 | **1.47** | 9.4% | 15.6% | 0.01 | 0.66 | 0.15 | 0.00 | 0.06 | **0.79** | 53.5% | 53.5% |
| 14 | | | 28 | | 5 | 0.01 | 1.52 | 0.02 | 0.00 | 0.11 | **1.54** | 7.3% | 1.2% | 0.01 | 0.77 | 0.01 | 0.00 | 0.06 | **0.93** | 59.9% | 59.9% |
| 15 | | | 29 | | 5 | 0.01 | 1.42 | 0.03 | 0.01 | 0.11 | **1.53** | 6.9% | 1.8% | 0.01 | 0.69 | 0.02 | 0.00 | 0.05 | **0.86** | 56.5% | 56.5% |
| 16 | | | 30 | | 5 | 0.02 | 1.11 | 0.02 | 0.01 | 0.11 | **1.41** | 7.7% | 1.6% | 0.01 | 0.48 | 0.01 | 0.01 | 0.04 | **0.70** | 49.5% | 49.5% |
| 17 | | | 131 | | 1 | 0.00 | **0.32** | 0.01 | 0.00 | 0.09 | 0.23 | 28.5% | 3.7% | 0.00 | **0.13** | 0.01 | 0.00 | 0.04 | 0.10 | 40.2% | 29.7% |
| 18 | | | 132 | | 1 | 0.00 | **0.19** | 0.02 | 0.00 | 0.07 | 0.14 | 36.7% | 11.7% | 0.00 | **0.07** | 0.02 | 0.00 | 0.02 | 0.05 | 35.6% | 26.1% |
| 19 | | | 136 | | 2 | 0.01 | **0.70** | 0.02 | 0.00 | 0.25 | 0.53 | 36.1% | 3.0% | 0.00 | **0.32** | 0.02 | 0.00 | 0.12 | 0.23 | 46.2% | 32.7% |
| 20 | | | 137 | | 2 | 0.00 | **0.33** | 0.01 | 0.00 | 0.12 | 0.21 | 37.0% | 3.9% | 0.00 | **0.12** | 0.01 | 0.00 | 0.06 | 0.08 | 36.7% | 25.2% |
| 21 | | | 138 | | 2 | 0.01 | **0.37** | 0.02 | 0.00 | 0.14 | 0.21 | 37.7% | 4.6% | 0.00 | **0.13** | 0.01 | 0.00 | 0.05 | 0.07 | 35.5% | 19.5% |
| 22 | | | 141 | | 2 | 0.00 | **0.34** | 0.01 | 0.00 | 0.13 | 0.21 | 36.9% | 3.8% | 0.00 | **0.12** | 0.01 | 0.00 | 0.06 | 0.08 | 33.9% | 24.2% |
| 23 | | | 142 | | 2 | 0.01 | **0.48** | 0.03 | 0.01 | 0.13 | 0.36 | 27.4% | 5.9% | 0.01 | **0.17** | 0.02 | 0.00 | 0.05 | 0.12 | 35.6% | 24.1% |
| 24 | K | Patch | 147 | | 5 | 0.01 | **1.00** | 0.12 | 0.00 | 0.40 | 0.74 | 40.1% | 12.0% | 0.01 | **0.38** | 0.09 | 0.00 | 0.19 | 0.32 | 37.7% | 32.3% |
| 25 | | | 148 | | 5 | 0.01 | **1.28** | 0.05 | 0.00 | 0.45 | 0.96 | 35.2% | 4.2% | 0.01 | **0.63** | 0.02 | 0.00 | 0.26 | 0.49 | 49.4% | 38.5% |
| 26 | | | 149 | | 5 | 0.01 | **1.03** | 0.08 | 0.01 | 0.34 | 0.77 | 33.2% | 7.5% | 0.01 | **0.54** | 0.05 | 0.01 | 0.19 | 0.40 | 52.2% | 39.2% |
| 27 | | | 150 | | 5 | 0.01 | **1.31** | 0.09 | 0.00 | 0.43 | 1.00 | 32.7% | 6.8% | 0.01 | **0.62** | 0.06 | 0.00 | 0.22 | 0.49 | 47.8% | 37.3% |
| 28 | | | 151 | | 5 | 0.03 | **0.79** | 0.03 | 0.02 | 0.28 | 0.64 | 36.0% | 4.3% | 0.02 | **0.27** | 0.02 | 0.02 | 0.11 | 0.24 | 34.0% | 30.8% |
| 29 | | | 155 | | 5 | 0.01 | **1.20** | 0.10 | 0.00 | 0.44 | 0.90 | 36.8% | 8.7% | 0.01 | **0.51** | 0.07 | 0.00 | 0.24 | 0.43 | 42.1% | 35.9% |
| 30 | | | 156 | | 5 | 0.01 | **1.15** | 0.04 | 0.01 | 0.41 | 0.88 | 35.7% | 3.0% | 0.01 | **0.63** | 0.02 | 0.00 | 0.24 | 0.48 | 54.4% | 41.4% |
| 31 | | | 157 | | 5 | 0.01 | **1.30** | 0.07 | 0.00 | 0.41 | 1.05 | 31.4% | 5.1% | 0.01 | **0.71** | 0.05 | 0.00 | 0.25 | 0.55 | 54.3% | 42.2% |
| 32 | | | 158 | | 5 | 0.02 | **1.05** | 0.04 | 0.01 | 0.35 | 0.71 | 33.4% | 3.5% | 0.01 | **0.38** | 0.03 | 0.01 | 0.15 | 0.29 | 36.2% | 27.1% |
| 33 | | | 3 | 131 | 2 | 0.01 | **0.69** | 0.04 | 0.01 | 0.11 | 0.64 | 16.3% | 5.9% | 0.01 | **0.27** | 0.03 | 0.00 | 0.05 | 0.26 | 38.7% | 37.4% |
| 34 | | | 4 | 132 | 2 | 0.01 | **0.58** | 0.05 | 0.00 | 0.11 | 0.57 | 19.2% | 8.3% | 0.01 | **0.21** | 0.03 | 0.00 | 0.04 | 0.20 | 37.0% | 35.2% |
| 35 | | | 8 | 136 | 4 | 0.01 | **1.47** | 0.08 | 0.01 | 0.39 | 1.14 | 26.7% | 5.6% | 0.01 | **0.60** | 0.06 | 0.00 | 0.20 | 0.48 | 41.0% | 32.8% |
| 36 | | | 9 | 137 | 4 | 0.01 | 0.72 | 0.02 | 0.01 | 0.28 | **0.76** | 36.3% | 3.0% | 0.01 | 0.31 | 0.01 | 0.01 | 0.12 | **0.38** | 50.2% | 50.2% |
| 37 | | | 10 | 138 | 4 | 0.02 | **0.90** | 0.06 | 0.01 | 0.23 | 0.86 | 25.8% | 6.9% | 0.01 | **0.30** | 0.04 | 0.01 | 0.08 | 0.27 | 33.0% | 30.4% |
| 38 | | | 13 | 141 | 4 | 0.01 | **0.78** | 0.04 | 0.00 | 0.31 | 0.74 | 40.1% | 4.5% | 0.01 | 0.29 | 0.02 | 0.00 | 0.13 | **0.37** | 47.6% | 47.6% |
| 39 | | | 14 | 142 | 4 | 0.02 | 0.85 | 0.06 | 0.01 | 0.18 | **0.91** | 19.4% | 6.3% | 0.01 | 0.28 | 0.04 | 0.01 | 0.07 | **0.36** | 39.3% | 39.3% |
| 40 | | | 19 | 147 | 10 | 0.01 | **3.07** | 0.44 | 0.01 | 0.72 | 2.59 | 23.6% | 14.4% | 0.01 | **1.32** | 0.31 | 0.01 | 0.37 | 1.28 | 42.9% | 41.6% |
| 41 | | | 20 | 148 | 10 | 0.02 | **3.06** | 0.08 | 0.01 | 0.73 | 2.71 | 23.7% | 2.5% | 0.01 | **1.62** | 0.05 | 0.01 | 0.40 | 1.50 | 53.0% | 48.8% |
| 42 | | | 21 | 149 | 10 | 0.03 | **2.72** | 0.11 | 0.01 | 0.52 | 2.72 | 18.9% | 4.0% | 0.02 | **1.50** | 0.07 | 0.01 | 0.29 | 1.49 | 54.9% | 54.8% |
| 43 | | | 22 | 150 | 10 | 0.03 | 2.86 | 0.11 | 0.01 | 0.64 | **2.95** | 21.8% | 3.6% | 0.02 | 1.48 | 0.08 | 0.01 | 0.32 | **1.51** | 51.1% | 51.1% |
| 44 | | | 23 | 151 | 10 | 0.09 | 2.17 | 0.10 | 0.06 | 0.38 | **2.84** | 13.5% | 3.5% | 0.06 | 0.74 | 0.07 | 0.05 | 0.16 | **1.11** | 39.0% | 39.0% |
| 45 | | | 27 | 155 | 10 | 0.02 | **3.20** | 0.40 | 0.01 | 0.77 | 2.69 | 23.9% | 12.4% | 0.01 | **1.48** | 0.26 | 0.01 | 0.43 | 1.38 | 46.2% | 43.1% |
| 46 | | | 28 | 156 | 10 | 0.02 | **2.89** | 0.09 | 0.01 | 0.64 | 2.73 | 22.1% | 3.0% | 0.02 | **1.63** | 0.05 | 0.01 | 0.37 | 1.48 | 56.3% | 51.2% |
| 47 | | | 29 | 157 | 10 | 0.02 | 2.97 | 0.11 | 0.01 | 0.59 | **3.01** | 19.4% | 3.7% | 0.02 | **1.61** | 0.07 | 0.01 | 0.33 | 1.58 | 53.4% | 52.4% |
| 48 | | | 30 | 158 | 10 | 0.07 | 2.37 | 0.07 | 0.03 | 0.53 | **2.58** | 20.4% | 2.6% | 0.04 | 0.95 | 0.04 | 0.03 | 0.23 | **1.22** | 47.2% | 47.2% |

Table 4. PD of Ant K – patch antenna (39GHz – n260)

## - K–patch Low CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 38.6% | 24.3% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 58.0% | 58.0% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | | | 3 | | 1 | 0.00 | 0.13 | 0.01 | 0.00 | 0.04 | 0.11 | 26.5% | 3.8% | 0.00 | 0.06 | 0.00 | 0.00 | 0.02 | 0.04 | 43.9% | 31.1% |
| 2 | | | 4 | | 1 | 0.00 | 0.10 | 0.01 | 0.00 | 0.04 | 0.09 | 38.6% | 10.9% | 0.00 | 0.04 | 0.01 | 0.00 | 0.01 | 0.04 | 40.6% | 38.6% |
| 3 | | | 5 | | 1 | 0.00 | 0.15 | 0.03 | 0.00 | 0.04 | 0.10 | 29.1% | 16.6% | 0.00 | 0.05 | 0.01 | 0.00 | 0.02 | 0.04 | 31.1% | 25.2% |
| 4 | | | 9 | | 2 | 0.01 | 0.33 | 0.03 | 0.00 | 0.11 | 0.26 | 34.1% | 8.1% | 0.00 | 0.15 | 0.02 | 0.00 | 0.04 | 0.12 | 43.4% | 35.3% |
| 5 | | | 10 | | 2 | 0.01 | 0.20 | 0.02 | 0.00 | 0.07 | 0.19 | 36.5% | 10.7% | 0.00 | 0.09 | 0.02 | 0.00 | 0.04 | 0.07 | 43.7% | 35.5% |
| 6 | | | 11 | | 2 | 0.01 | 0.23 | 0.01 | 0.00 | 0.08 | 0.19 | 34.5% | 5.2% | 0.00 | 0.11 | 0.01 | 0.00 | 0.03 | 0.08 | 46.3% | 34.5% |
| 7 | | | 14 | | 2 | 0.01 | 0.37 | 0.03 | 0.00 | 0.09 | 0.30 | 22.8% | 7.5% | 0.01 | 0.11 | 0.02 | 0.00 | 0.04 | 0.10 | 28.4% | 27.9% |
| 8 | | | 15 | | 2 | 0.00 | 0.27 | 0.02 | 0.00 | 0.08 | 0.22 | 28.9% | 5.9% | 0.00 | 0.13 | 0.01 | 0.00 | 0.04 | 0.08 | 46.5% | 30.8% |
| 9 | | | 21 | | 5 | 0.01 | 0.63 | 0.06 | 0.00 | 0.21 | 0.46 | 33.5% | 9.2% | 0.01 | 0.27 | 0.03 | 0.00 | 0.09 | 0.20 | 43.2% | 31.7% |
| 10 | | | 22 | | 5 | 0.01 | 0.47 | 0.06 | 0.01 | 0.15 | 0.46 | 30.6% | 13.3% | 0.01 | 0.18 | 0.04 | 0.01 | 0.07 | 0.19 | 39.5% | 39.5% |
| 11 | | | 23 | | 5 | 0.02 | 0.66 | 0.04 | 0.01 | 0.23 | 0.53 | 34.2% | 6.4% | 0.01 | 0.31 | 0.03 | 0.01 | 0.13 | 0.20 | 47.6% | 29.7% |
| 12 | | | 24 | | 5 | 0.02 | 0.67 | 0.09 | 0.00 | 0.18 | 0.48 | 26.7% | 12.6% | 0.01 | 0.30 | 0.05 | 0.00 | 0.09 | 0.25 | 44.9% | 36.8% |
| 13 | | | 25 | | 5 | 0.01 | 0.74 | 0.08 | 0.01 | 0.22 | 0.56 | 29.3% | 10.3% | 0.01 | 0.27 | 0.03 | 0.01 | 0.09 | 0.26 | 37.1% | 35.8% |
| 14 | | | 30 | | 5 | 0.01 | 0.54 | 0.07 | 0.01 | 0.17 | 0.47 | 31.6% | 12.9% | 0.01 | 0.20 | 0.05 | 0.01 | 0.06 | 0.19 | 37.6% | 35.3% |
| 15 | | | 31 | | 5 | 0.02 | 0.60 | 0.06 | 0.01 | 0.19 | 0.56 | 32.1% | 10.0% | 0.01 | 0.25 | 0.04 | 0.01 | 0.11 | 0.21 | 40.7% | 34.6% |
| 16 | | | 32 | | 5 | 0.01 | 0.53 | 0.09 | 0.01 | 0.17 | 0.43 | 31.1% | 15.9% | 0.01 | 0.25 | 0.06 | 0.00 | 0.09 | 0.18 | 46.0% | 33.2% |
| 17 | | | 33 | | 5 | 0.01 | 0.89 | 0.07 | 0.01 | 0.26 | 0.62 | 28.6% | 8.2% | 0.01 | 0.38 | 0.03 | 0.01 | 0.12 | 0.30 | 42.2% | 33.4% |
| 18 | | | 131 | | 1 | 0.00 | 0.30 | 0.00 | 0.00 | 0.03 | 0.30 | 9.0% | 1.3% | 0.00 | 0.11 | 0.00 | 0.00 | 0.01 | 0.12 | 40.5% | 40.5% |
| 19 | | | 132 | | 1 | 0.00 | 0.30 | 0.02 | 0.00 | 0.03 | 0.32 | 8.0% | 6.8% | 0.00 | 0.11 | 0.02 | 0.00 | 0.01 | 0.14 | 43.3% | 43.3% |
| 20 | | | 133 | | 1 | 0.00 | 0.23 | 0.02 | 0.00 | 0.01 | 0.26 | 5.4% | 8.8% | 0.00 | 0.07 | 0.02 | 0.00 | 0.01 | 0.11 | 41.8% | 41.8% |
| 21 | | | 137 | | 2 | 0.00 | 0.48 | 0.08 | 0.00 | 0.05 | 0.54 | 8.7% | 13.8% | 0.00 | 0.16 | 0.05 | 0.00 | 0.01 | 0.21 | 37.8% | 37.8% |
| 22 | | | 138 | | 2 | 0.00 | 0.58 | 0.01 | 0.00 | 0.04 | 0.59 | 6.3% | 2.2% | 0.00 | 0.25 | 0.01 | 0.00 | 0.01 | 0.33 | 55.2% | 55.2% |
| 23 | | | 139 | | 2 | 0.00 | 0.48 | 0.08 | 0.00 | 0.04 | 0.56 | 6.7% | 14.2% | 0.00 | 0.19 | 0.05 | 0.00 | 0.01 | 0.25 | 44.1% | 44.1% |
| 24 | | | 142 | | 2 | 0.01 | 0.53 | 0.03 | 0.00 | 0.04 | 0.54 | 6.5% | 5.9% | 0.00 | 0.21 | 0.02 | 0.00 | 0.01 | 0.26 | 48.5% | 48.5% |
| 25 | | | 143 | | 2 | 0.00 | 0.48 | 0.08 | 0.00 | 0.03 | 0.58 | 5.4% | 14.0% | 0.00 | 0.15 | 0.05 | 0.00 | 0.01 | 0.19 | 32.6% | 32.6% |
| 26 | K | Patch | 149 | | 5 | 0.01 | 0.87 | 0.27 | 0.01 | 0.12 | 1.12 | 10.9% | 24.3% | 0.01 | 0.35 | 0.17 | 0.01 | 0.05 | 0.49 | 44.2% | 44.2% |
| 27 | | | 150 | | 5 | 0.01 | 1.09 | 0.16 | 0.01 | 0.10 | 1.22 | 7.8% | 13.1% | 0.01 | 0.51 | 0.07 | 0.00 | 0.04 | 0.66 | 53.9% | 53.9% |
| 28 | | | 151 | | 5 | 0.01 | 1.35 | 0.02 | 0.01 | 0.12 | 1.29 | 8.9% | 1.4% | 0.01 | 0.66 | 0.01 | 0.01 | 0.06 | 0.78 | 57.7% | 57.7% |
| 29 | | | 152 | | 5 | 0.01 | 1.16 | 0.07 | 0.00 | 0.14 | 1.17 | 12.0% | 6.2% | 0.01 | 0.58 | 0.04 | 0.00 | 0.06 | 0.67 | 56.8% | 56.8% |
| 30 | | | 153 | | 5 | 0.01 | 1.07 | 0.29 | 0.02 | 0.11 | 1.34 | 8.1% | 21.8% | 0.01 | 0.44 | 0.19 | 0.02 | 0.04 | 0.62 | 46.0% | 46.0% |
| 31 | | | 158 | | 5 | 0.01 | 1.10 | 0.24 | 0.02 | 0.10 | 1.29 | 7.6% | 18.5% | 0.01 | 0.49 | 0.16 | 0.02 | 0.04 | 0.65 | 50.4% | 50.4% |
| 32 | | | 159 | | 5 | 0.01 | 1.18 | 0.07 | 0.00 | 0.07 | 1.26 | 5.6% | 5.5% | 0.01 | 0.55 | 0.05 | 0.00 | 0.03 | 0.67 | 53.0% | 53.0% |
| 33 | | | 160 | | 5 | 0.01 | 1.31 | 0.02 | 0.00 | 0.13 | 1.25 | 9.6% | 1.8% | 0.01 | 0.62 | 0.02 | 0.00 | 0.06 | 0.76 | 58.0% | 58.0% |
| 34 | | | 161 | | 5 | 0.01 | 0.82 | 0.23 | 0.01 | 0.12 | 0.98 | 11.9% | 23.3% | 0.01 | 0.35 | 0.14 | 0.01 | 0.05 | 0.38 | 38.9% | 38.9% |
| 35 | | | 3 | 131 | 2 | 0.01 | 0.54 | 0.01 | 0.01 | 0.08 | 0.46 | 15.7% | 2.4% | 0.00 | 0.21 | 0.01 | 0.01 | 0.04 | 0.20 | 39.9% | 37.5% |
| 36 | | | 4 | 132 | 2 | 0.01 | 0.45 | 0.05 | 0.00 | 0.08 | 0.46 | 16.7% | 11.0% | 0.00 | 0.16 | 0.03 | 0.00 | 0.02 | 0.18 | 38.6% | 38.6% |
| 37 | | | 5 | 133 | 2 | 0.01 | 0.47 | 0.06 | 0.00 | 0.07 | 0.46 | 15.6% | 12.6% | 0.00 | 0.14 | 0.04 | 0.00 | 0.03 | 0.18 | 39.1% | 39.1% |
| 38 | | | 9 | 137 | 4 | 0.02 | 1.10 | 0.12 | 0.01 | 0.24 | 0.99 | 21.8% | 11.2% | 0.01 | 0.43 | 0.08 | 0.01 | 0.09 | 0.40 | 38.5% | 35.9% |
| 39 | | | 10 | 138 | 4 | 0.01 | 0.79 | 0.05 | 0.00 | 0.11 | 0.80 | 13.9% | 6.3% | 0.01 | 0.34 | 0.04 | 0.00 | 0.06 | 0.40 | 50.6% | 50.6% |
| 40 | | | 11 | 139 | 4 | 0.01 | 0.63 | 0.10 | 0.01 | 0.12 | 0.72 | 16.9% | 13.6% | 0.01 | 0.29 | 0.06 | 0.01 | 0.06 | 0.32 | 44.6% | 44.6% |
| 41 | | | 14 | 142 | 4 | 0.01 | 1.05 | 0.07 | 0.01 | 0.13 | 0.98 | 12.1% | 6.2% | 0.01 | 0.35 | 0.05 | 0.01 | 0.06 | 0.44 | 41.5% | 41.5% |
| 42 | | | 15 | 143 | 4 | 0.01 | 0.66 | 0.13 | 0.01 | 0.14 | 0.78 | 17.4% | 16.3% | 0.01 | 0.30 | 0.08 | 0.01 | 0.07 | 0.30 | 38.7% | 37.9% |
| 43 | | | 21 | 149 | 10 | 0.02 | 2.04 | 0.35 | 0.02 | 0.50 | 1.77 | 24.6% | 17.3% | 0.01 | 0.93 | 0.22 | 0.02 | 0.23 | 0.83 | 45.4% | 40.8% |
| 44 | | | 22 | 150 | 10 | 0.03 | 1.80 | 0.26 | 0.02 | 0.26 | 1.95 | 13.2% | 13.3% | 0.02 | 0.85 | 0.13 | 0.02 | 0.14 | 1.05 | 53.6% | 53.6% |
| 45 | | | 23 | 151 | 10 | 0.03 | 2.40 | 0.08 | 0.02 | 0.40 | 2.25 | 16.5% | 3.3% | 0.02 | 1.22 | 0.05 | 0.02 | 0.21 | 1.19 | 50.8% | 49.5% |
| 46 | | | 24 | 152 | 10 | 0.03 | 2.30 | 0.18 | 0.01 | 0.51 | 2.16 | 22.3% | 7.9% | 0.02 | 1.19 | 0.11 | 0.01 | 0.27 | 1.12 | 51.9% | 48.9% |
| 47 | | | 25 | 153 | 10 | 0.02 | 2.18 | 0.38 | 0.05 | 0.47 | 1.77 | 21.6% | 17.6% | 0.01 | 0.84 | 0.26 | 0.04 | 0.20 | 0.79 | 38.4% | 36.4% |
| 48 | | | 30 | 158 | 10 | 0.02 | 1.77 | 0.34 | 0.04 | 0.30 | 1.77 | 17.1% | 19.3% | 0.01 | 0.76 | 0.24 | 0.04 | 0.12 | 0.84 | 47.4% | 47.4% |
| 49 | | | 31 | 159 | 10 | 0.03 | 2.15 | 0.16 | 0.02 | 0.32 | 2.20 | 14.7% | 7.2% | 0.02 | 0.95 | 0.11 | 0.02 | 0.16 | 1.19 | 54.0% | 54.0% |
| 50 | | | 32 | 160 | 10 | 0.03 | 2.42 | 0.13 | 0.01 | 0.36 | 2.29 | 14.7% | 5.3% | 0.02 | 1.16 | 0.09 | 0.01 | 0.18 | 1.23 | 50.9% | 50.9% |
| 51 | | | 33 | 161 | 10 | 0.02 | 2.37 | 0.33 | 0.02 | 0.59 | 2.06 | 24.9% | 13.7% | 0.02 | 1.13 | 0.20 | 0.02 | 0.29 | 1.01 | 47.5% | 42.5% |

## - K–patch Mid CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 37.0% | 21.6% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 56.1% | 56.1% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | | | 3 | | 1 | 0.00 | 0.16 | 0.00 | 0.00 | 0.04 | 0.11 | 24.1% | 1.9% | 0.00 | 0.07 | 0.00 | 0.00 | 0.02 | 0.04 | 43.0% | 23.4% |
| 2 | | | 4 | | 1 | 0.00 | 0.16 | 0.01 | 0.00 | 0.05 | 0.11 | 32.7% | 6.9% | 0.00 | 0.06 | 0.01 | 0.00 | 0.02 | 0.04 | 35.2% | 22.6% |
| 3 | | | 5 | | 1 | 0.00 | 0.17 | 0.02 | 0.00 | 0.05 | 0.16 | 26.6% | 12.7% | 0.00 | 0.07 | 0.02 | 0.00 | 0.02 | 0.05 | 38.2% | 28.3% |
| 4 | | | 9 | | 2 | 0.00 | 0.42 | 0.02 | 0.00 | 0.15 | 0.30 | 37.0% | 3.6% | 0.00 | 0.18 | 0.01 | 0.00 | 0.07 | 0.11 | 42.8% | 26.7% |
| 5 | | | 10 | | 2 | 0.00 | 0.24 | 0.01 | 0.00 | 0.08 | 0.20 | 34.4% | 5.8% | 0.00 | 0.12 | 0.01 | 0.00 | 0.04 | 0.06 | 48.5% | 26.1% |
| 6 | | | 11 | | 2 | 0.01 | 0.36 | 0.02 | 0.00 | 0.09 | 0.23 | 26.0% | 4.1% | 0.00 | 0.15 | 0.01 | 0.00 | 0.04 | 0.07 | 40.9% | 20.2% |
| 7 | | | 14 | | 2 | 0.01 | 0.33 | 0.03 | 0.00 | 0.09 | 0.35 | 24.6% | 7.5% | 0.01 | 0.12 | 0.02 | 0.00 | 0.05 | 0.12 | 35.4% | 35.4% |
| 8 | | | 15 | | 2 | 0.00 | 0.31 | 0.01 | 0.00 | 0.10 | 0.24 | 31.9% | 3.9% | 0.00 | 0.14 | 0.01 | 0.00 | 0.05 | 0.08 | 43.5% | 25.2% |
| 9 | | | 21 | | 5 | 0.01 | 0.80 | 0.06 | 0.00 | 0.25 | 0.58 | 31.5% | 7.3% | 0.01 | 0.33 | 0.04 | 0.00 | 0.14 | 0.25 | 41.6% | 31.3% |
| 10 | | | 22 | | 5 | 0.01 | 0.54 | 0.08 | 0.01 | 0.16 | 0.55 | 29.2% | 13.9% | 0.01 | 0.21 | 0.05 | 0.01 | 0.08 | 0.20 | 38.1% | 36.1% |
| 11 | | | 23 | | 5 | 0.02 | 0.67 | 0.04 | 0.00 | 0.23 | 0.55 | 34.3% | 6.6% | 0.01 | 0.36 | 0.03 | 0.00 | 0.12 | 0.21 | 54.4% | 31.6% |
| 12 | | | 24 | | 5 | 0.01 | 0.80 | 0.05 | 0.00 | 0.23 | 0.59 | 28.4% | 5.8% | 0.01 | 0.31 | 0.03 | 0.00 | 0.13 | 0.24 | 38.8% | 30.5% |
| 13 | | | 25 | | 5 | 0.01 | 0.86 | 0.06 | 0.01 | 0.23 | 0.66 | 26.4% | 6.7% | 0.01 | 0.33 | 0.04 | 0.01 | 0.11 | 0.27 | 38.7% | 31.0% |
| 14 | | | 30 | | 5 | 0.01 | 0.67 | 0.05 | 0.01 | 0.20 | 0.55 | 30.6% | 7.8% | 0.01 | 0.26 | 0.04 | 0.00 | 0.10 | 0.24 | 39.5% | 35.4% |
| 15 | | | 31 | | 5 | 0.01 | 0.69 | 0.06 | 0.00 | 0.21 | 0.63 | 30.6% | 8.2% | 0.01 | 0.32 | 0.04 | 0.00 | 0.12 | 0.23 | 47.0% | 33.6% |
| 16 | | | 32 | | 5 | 0.02 | 0.80 | 0.05 | 0.00 | 0.25 | 0.63 | 31.8% | 6.5% | 0.01 | 0.41 | 0.03 | 0.00 | 0.14 | 0.26 | 51.0% | 32.0% |
| 17 | | | 33 | | 5 | 0.01 | 0.96 | 0.05 | 0.00 | 0.27 | 0.71 | 28.1% | 4.8% | 0.01 | 0.41 | 0.03 | 0.00 | 0.15 | 0.33 | 42.6% | 34.0% |
| 18 | | | 131 | | 1 | 0.00 | 0.36 | 0.01 | 0.01 | 0.04 | 0.31 | 10.0% | 2.2% | 0.00 | 0.13 | 0.01 | 0.01 | 0.01 | 0.12 | 35.4% | 34.3% |
| 19 | | | 132 | | 1 | 0.00 | 0.28 | 0.02 | 0.00 | 0.03 | 0.28 | 9.6% | 6.1% | 0.00 | 0.11 | 0.01 | 0.00 | 0.01 | 0.13 | 47.1% | 47.1% |
| 20 | | | 133 | | 1 | 0.00 | 0.23 | 0.02 | 0.00 | 0.02 | 0.26 | 6.2% | 5.8% | 0.00 | 0.08 | 0.01 | 0.00 | 0.01 | 0.11 | 40.7% | 40.7% |
| 21 | | | 137 | | 2 | 0.00 | 0.49 | 0.06 | 0.00 | 0.06 | 0.49 | 12.2% | 12.2% | 0.00 | 0.14 | 0.04 | 0.00 | 0.02 | 0.17 | 35.3% | 35.3% |
| 22 | | | 138 | | 2 | 0.00 | 0.54 | 0.02 | 0.00 | 0.05 | 0.56 | 9.7% | 3.8% | 0.00 | 0.26 | 0.02 | 0.00 | 0.02 | 0.28 | 50.7% | 50.7% |
| 23 | | | 139 | | 2 | 0.00 | 0.50 | 0.05 | 0.00 | 0.04 | 0.54 | 8.2% | 9.9% | 0.00 | 0.16 | 0.04 | 0.00 | 0.02 | 0.22 | 40.7% | 40.7% |
| 24 | | | 142 | | 2 | 0.00 | 0.59 | 0.04 | 0.01 | 0.04 | 0.56 | 7.3% | 6.1% | 0.00 | 0.21 | 0.03 | 0.01 | 0.01 | 0.26 | 43.7% | 43.7% |
| 25 | | | 143 | | 2 | 0.01 | 0.45 | 0.05 | 0.00 | 0.05 | 0.51 | 10.4% | 10.2% | 0.00 | 0.15 | 0.04 | 0.00 | 0.02 | 0.17 | 33.4% | 33.4% |
| 26 | K | Patch | 149 | | 5 | 0.02 | 0.99 | 0.18 | 0.01 | 0.15 | 0.96 | 15.5% | 17.8% | 0.01 | 0.41 | 0.12 | 0.01 | 0.06 | 0.42 | 42.8% | 42.8% |
| 27 | | | 150 | | 5 | 0.01 | 1.15 | 0.16 | 0.01 | 0.08 | 1.15 | 7.1% | 13.5% | 0.01 | 0.52 | 0.09 | 0.01 | 0.04 | 0.64 | 55.7% | 55.7% |
| 28 | | | 151 | | 5 | 0.01 | 1.40 | 0.03 | 0.01 | 0.12 | 1.36 | 8.5% | 2.4% | 0.01 | 0.68 | 0.02 | 0.01 | 0.06 | 0.76 | 54.1% | 54.1% |
| 29 | | | 152 | | 5 | 0.02 | 1.05 | 0.07 | 0.00 | 0.16 | 1.02 | 15.3% | 6.2% | 0.01 | 0.50 | 0.04 | 0.00 | 0.07 | 0.59 | 56.1% | 56.1% |
| 30 | | | 153 | | 5 | 0.01 | 0.87 | 0.22 | 0.03 | 0.15 | 1.03 | 14.6% | 21.6% | 0.01 | 0.37 | 0.16 | 0.03 | 0.06 | 0.48 | 46.9% | 46.9% |
| 31 | | | 158 | | 5 | 0.01 | 1.01 | 0.23 | 0.03 | 0.13 | 1.11 | 11.3% | 20.8% | 0.00 | 0.46 | 0.16 | 0.03 | 0.05 | 0.59 | 52.9% | 52.9% |
| 32 | | | 159 | | 5 | 0.01 | 1.28 | 0.08 | 0.01 | 0.12 | 1.26 | 9.1% | 6.3% | 0.01 | 0.61 | 0.06 | 0.01 | 0.04 | 0.65 | 50.8% | 50.8% |
| 33 | | | 160 | | 5 | 0.01 | 1.25 | 0.04 | 0.01 | 0.13 | 1.21 | 10.7% | 3.3% | 0.01 | 0.60 | 0.03 | 0.01 | 0.07 | 0.66 | 52.8% | 52.8% |
| 34 | | | 161 | | 5 | 0.02 | 0.98 | 0.15 | 0.01 | 0.15 | 0.93 | 15.7% | 15.6% | 0.01 | 0.42 | 0.11 | 0.01 | 0.07 | 0.41 | 42.3% | 42.2% |
| 35 | | | 3 | 131 | 2 | 0.01 | 0.71 | 0.02 | 0.01 | 0.12 | 0.53 | 17.3% | 2.3% | 0.00 | 0.29 | 0.01 | 0.01 | 0.05 | 0.22 | 40.4% | 31.1% |
| 36 | | | 4 | 132 | 2 | 0.01 | 0.58 | 0.04 | 0.00 | 0.11 | 0.51 | 18.1% | 7.4% | 0.00 | 0.24 | 0.03 | 0.00 | 0.04 | 0.22 | 41.9% | 37.9% |
| 37 | | | 5 | 133 | 2 | 0.01 | 0.50 | 0.06 | 0.00 | 0.08 | 0.49 | 16.3% | 12.0% | 0.00 | 0.19 | 0.04 | 0.00 | 0.03 | 0.19 | 38.2% | 38.2% |
| 38 | | | 9 | 137 | 4 | 0.01 | 1.17 | 0.11 | 0.01 | 0.32 | 0.87 | 27.5% | 9.1% | 0.01 | 0.46 | 0.08 | 0.01 | 0.14 | 0.33 | 39.4% | 28.0% |
| 39 | | | 10 | 138 | 4 | 0.01 | 0.77 | 0.05 | 0.00 | 0.16 | 0.76 | 21.4% | 7.0% | 0.01 | 0.41 | 0.04 | 0.00 | 0.07 | 0.36 | 52.7% | 47.1% |
| 40 | | | 11 | 139 | 4 | 0.01 | 0.72 | 0.08 | 0.02 | 0.17 | 0.70 | 23.5% | 11.0% | 0.01 | 0.30 | 0.06 | 0.01 | 0.08 | 0.28 | 41.7% | 38.0% |
| 41 | | | 14 | 142 | 4 | 0.01 | 0.96 | 0.10 | 0.01 | 0.14 | 0.91 | 15.0% | 10.7% | 0.01 | 0.36 | 0.07 | 0.01 | 0.07 | 0.39 | 40.6% | 40.6% |
| 42 | | | 15 | 143 | 4 | 0.01 | 0.71 | 0.08 | 0.01 | 0.18 | 0.79 | 22.9% | 10.6% | 0.01 | 0.34 | 0.06 | 0.01 | 0.09 | 0.35 | 44.4% | 44.4% |
| 43 | | | 21 | 149 | 10 | 0.03 | 2.49 | 0.31 | 0.03 | 0.67 | 2.00 | 26.9% | 12.2% | 0.02 | 1.15 | 0.21 | 0.02 | 0.32 | 0.91 | 46.2% | 36.6% |
| 44 | | | 22 | 150 | 10 | 0.02 | 1.82 | 0.22 | 0.02 | 0.31 | 1.77 | 17.2% | 12.3% | 0.01 | 0.80 | 0.13 | 0.02 | 0.13 | 0.86 | 47.0% | 47.0% |
| 45 | | | 23 | 151 | 10 | 0.03 | 2.86 | 0.12 | 0.02 | 0.50 | 2.61 | 17.4% | 4.1% | 0.02 | 1.57 | 0.08 | 0.02 | 0.27 | 1.27 | 55.0% | 44.5% |
| 46 | | | 24 | 152 | 10 | 0.04 | 2.56 | 0.19 | 0.01 | 0.65 | 2.19 | 25.4% | 7.3% | 0.02 | 1.20 | 0.13 | 0.01 | 0.36 | 1.07 | 47.0% | 41.8% |
| 47 | | | 25 | 153 | 10 | 0.03 | 2.46 | 0.39 | 0.06 | 0.58 | 1.76 | 23.7% | 15.8% | 0.01 | 1.03 | 0.26 | 0.05 | 0.25 | 0.76 | 41.8% | 30.9% |
| 48 | | | 30 | 158 | 10 | 0.02 | 1.79 | 0.38 | 0.05 | 0.35 | 1.89 | 18.6% | 20.1% | 0.02 | 0.76 | 0.26 | 0.04 | 0.14 | 0.91 | 48.4% | 48.4% |
| 49 | | | 31 | 159 | 10 | 0.03 | 2.07 | 0.22 | 0.01 | 0.48 | 2.11 | 22.6% | 10.6% | 0.02 | 1.16 | 0.15 | 0.01 | 0.23 | 0.98 | 55.0% | 46.7% |
| 50 | | | 32 | 160 | 10 | 0.03 | 2.95 | 0.14 | 0.01 | 0.55 | 2.68 | 18.7% | 4.6% | 0.02 | 1.56 | 0.10 | 0.01 | 0.31 | 1.29 | 52.8% | 43.8% |
| 51 | | | 33 | 161 | 10 | 0.05 | 2.75 | 0.26 | 0.02 | 0.76 | 2.13 | 27.5% | 9.3% | 0.02 | 1.31 | 0.17 | 0.02 | 0.38 | 1.00 | 47.6% | 36.3% |

- K–patch High CH

| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | max ratio out of all beams<br>33.2% | 19.1% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | max ratio out of all beams<br>61.7% | 57.4% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Top 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 1 | | | 3 | | 1 | 0.00 | **0.14** | 0.00 | 0.00 | 0.03 | 0.10 | 22.7% | 2.8% | 0.00 | **0.06** | 0.00 | 0.00 | 0.01 | 0.03 | 45.4% | 24.1% |
| 2 | | | 4 | | 1 | 0.00 | **0.18** | 0.01 | 0.00 | 0.05 | 0.14 | 25.1% | 3.8% | 0.00 | **0.07** | 0.01 | 0.00 | 0.02 | 0.05 | 39.3% | 28.4% |
| 3 | | | 5 | | 1 | 0.00 | **0.19** | 0.01 | 0.00 | 0.04 | 0.15 | 22.2% | 6.9% | 0.00 | **0.07** | 0.01 | 0.00 | 0.02 | 0.05 | 37.6% | 26.5% |
| 4 | | | 9 | | 2 | 0.00 | **0.39** | 0.02 | 0.00 | 0.12 | 0.30 | 31.5% | 5.6% | 0.00 | **0.17** | 0.02 | 0.00 | 0.05 | 0.12 | 42.7% | 30.9% |
| 5 | | | 10 | | 2 | 0.00 | **0.24** | 0.01 | 0.00 | 0.07 | 0.21 | 30.0% | 3.3% | 0.00 | **0.15** | 0.01 | 0.00 | 0.04 | 0.10 | 61.7% | 41.2% |
| 6 | | | 11 | | 2 | 0.00 | **0.38** | 0.01 | 0.00 | 0.09 | 0.29 | 23.0% | 3.1% | 0.00 | **0.13** | 0.01 | 0.00 | 0.04 | 0.09 | 35.0% | 24.5% |
| 7 | | | 14 | | 2 | 0.01 | **0.42** | 0.03 | 0.00 | 0.11 | 0.33 | 26.4% | 7.5% | 0.01 | **0.20** | 0.02 | 0.00 | 0.06 | 0.10 | 46.5% | 24.1% |
| 8 | | | 15 | | 2 | 0.00 | **0.30** | 0.01 | 0.00 | 0.08 | 0.25 | 26.4% | 3.0% | 0.00 | **0.15** | 0.01 | 0.00 | 0.04 | 0.10 | 51.0% | 34.5% |
| 9 | | | 21 | | 5 | 0.01 | **0.70** | 0.09 | 0.00 | 0.19 | 0.58 | 27.1% | 13.1% | 0.01 | **0.28** | 0.06 | 0.00 | 0.09 | 0.22 | 39.9% | 31.7% |
| 10 | | | 22 | | 5 | 0.02 | **0.75** | 0.06 | 0.00 | 0.19 | 0.65 | 25.4% | 7.3% | 0.01 | **0.38** | 0.03 | 0.00 | 0.10 | 0.24 | 50.7% | 31.3% |
| 11 | | | 23 | | 5 | 0.01 | **0.79** | 0.03 | 0.00 | 0.24 | 0.60 | 30.5% | 3.8% | 0.01 | **0.42** | 0.02 | 0.00 | 0.12 | 0.24 | 53.1% | 30.7% |
| 12 | | | 24 | | 5 | 0.02 | **0.89** | 0.04 | 0.00 | 0.23 | 0.63 | 26.2% | 4.6% | 0.01 | **0.37** | 0.03 | 0.00 | 0.13 | 0.25 | 41.6% | 28.5% |
| 13 | | | 25 | | 5 | 0.01 | **0.82** | 0.09 | 0.02 | 0.23 | 0.74 | 27.7% | 11.4% | 0.01 | **0.32** | 0.07 | 0.01 | 0.10 | 0.27 | 38.6% | 32.3% |
| 14 | | | 30 | | 5 | 0.01 | **0.64** | 0.07 | 0.01 | 0.21 | 0.57 | 33.2% | 10.7% | 0.01 | **0.28** | 0.04 | 0.01 | 0.08 | 0.19 | 43.8% | 29.3% |
| 15 | | | 31 | | 5 | 0.02 | **0.87** | 0.03 | 0.00 | 0.25 | 0.67 | 28.7% | 3.3% | 0.01 | **0.48** | 0.02 | 0.00 | 0.13 | 0.26 | 54.9% | 29.4% |
| 16 | | | 32 | | 5 | 0.01 | **0.79** | 0.03 | 0.00 | 0.24 | 0.56 | 30.3% | 4.3% | 0.01 | **0.36** | 0.03 | 0.00 | 0.12 | 0.22 | 45.6% | 27.4% |
| 17 | | | 33 | | 5 | 0.01 | **0.84** | 0.11 | 0.01 | 0.19 | 0.74 | 22.4% | 13.0% | 0.01 | **0.30** | 0.08 | 0.01 | 0.10 | 0.27 | 35.2% | 31.7% |
| 18 | | | 131 | | 1 | 0.00 | **0.30** | 0.01 | 0.00 | 0.03 | 0.27 | 8.8% | 3.7% | 0.00 | 0.11 | 0.01 | 0.00 | 0.01 | **0.11** | 37.8% | 37.8% |
| 19 | | | 132 | | 1 | 0.00 | **0.31** | 0.01 | 0.00 | 0.04 | 0.30 | 13.4% | 3.6% | 0.00 | 0.12 | 0.01 | 0.00 | 0.01 | **0.13** | 41.4% | 41.4% |
| 20 | | | 133 | | 1 | 0.00 | 0.23 | 0.01 | 0.00 | 0.02 | **0.26** | 6.5% | 4.6% | 0.00 | 0.09 | 0.01 | 0.00 | 0.01 | **0.12** | 45.4% | 45.4% |
| 21 | | | 137 | | 2 | 0.00 | **0.60** | 0.04 | 0.01 | 0.08 | 0.59 | 12.6% | 7.2% | 0.00 | **0.22** | 0.03 | 0.01 | 0.03 | 0.22 | 36.7% | 36.2% |
| 22 | | | 138 | | 2 | 0.00 | 0.54 | 0.02 | 0.00 | 0.05 | **0.56** | 8.6% | 3.8% | 0.00 | 0.25 | 0.01 | 0.00 | 0.02 | **0.29** | 51.1% | 51.1% |
| 23 | | | 139 | | 2 | 0.01 | 0.44 | 0.04 | 0.00 | 0.05 | **0.48** | 10.0% | 8.9% | 0.00 | 0.15 | 0.03 | 0.00 | 0.02 | **0.18** | 37.4% | 37.4% |
| 24 | | | 142 | | 2 | 0.01 | 0.45 | 0.03 | 0.01 | 0.05 | **0.47** | 11.0% | 6.6% | 0.00 | 0.20 | 0.02 | 0.01 | 0.01 | **0.21** | 44.2% | 44.2% |
| 25 | | | 143 | | 2 | 0.01 | 0.39 | 0.04 | 0.00 | 0.06 | **0.44** | 13.3% | 8.4% | 0.00 | 0.17 | 0.02 | 0.00 | 0.02 | **0.18** | 40.6% | 40.6% |
| 26 | K | Patch | 149 | | 5 | 0.02 | **1.16** | 0.11 | 0.01 | 0.19 | 1.10 | 16.5% | 9.5% | 0.01 | **0.54** | 0.07 | 0.01 | 0.08 | 0.53 | 46.3% | 45.5% |
| 27 | | | 150 | | 5 | 0.01 | 1.13 | 0.16 | 0.01 | 0.09 | **1.13** | 8.2% | 14.5% | 0.01 | 0.58 | 0.08 | 0.01 | 0.04 | **0.65** | 57.4% | 57.4% |
| 28 | | | 151 | | 5 | 0.01 | **1.23** | 0.03 | 0.01 | 0.13 | 1.21 | 10.2% | 2.7% | 0.01 | 0.63 | 0.02 | 0.01 | 0.05 | **0.66** | 53.2% | 53.2% |
| 29 | | | 152 | | 5 | 0.01 | **1.06** | 0.08 | 0.00 | 0.18 | 1.03 | 16.8% | 7.3% | 0.01 | **0.53** | 0.06 | 0.00 | 0.08 | 0.52 | 50.1% | 48.7% |
| 30 | | | 153 | | 5 | 0.01 | **0.99** | 0.14 | 0.03 | 0.15 | 0.93 | 15.1% | 13.9% | 0.01 | 0.39 | 0.10 | 0.03 | 0.06 | **0.40** | 40.6% | 40.6% |
| 31 | | | 158 | | 5 | 0.01 | 0.84 | 0.17 | 0.03 | 0.09 | **0.89** | 10.4% | 19.1% | 0.00 | 0.39 | 0.12 | 0.03 | 0.04 | **0.43** | 48.0% | 48.0% |
| 32 | | | 159 | | 5 | 0.01 | **1.21** | 0.04 | 0.01 | 0.13 | 1.20 | 10.7% | 3.6% | 0.01 | 0.61 | 0.03 | 0.01 | 0.05 | **0.66** | 54.5% | 54.5% |
| 33 | | | 160 | | 5 | 0.01 | **1.23** | 0.05 | 0.01 | 0.12 | 1.20 | 9.7% | 3.8% | 0.01 | 0.61 | 0.03 | 0.01 | 0.05 | **0.63** | 51.1% | 51.1% |
| 34 | | | 161 | | 5 | 0.02 | **1.09** | 0.10 | 0.01 | 0.18 | 1.09 | 16.3% | 9.6% | 0.01 | 0.51 | 0.07 | 0.01 | 0.07 | **0.52** | 48.0% | 48.0% |
| 35 | | | 3 | 131 | 2 | 0.01 | **0.58** | 0.03 | 0.01 | 0.09 | 0.46 | 16.3% | 4.5% | 0.00 | **0.22** | 0.02 | 0.01 | 0.04 | 0.16 | 38.3% | 27.4% |
| 36 | | | 4 | 132 | 2 | 0.01 | **0.73** | 0.03 | 0.00 | 0.13 | 0.59 | 17.7% | 3.5% | 0.00 | **0.28** | 0.02 | 0.00 | 0.05 | 0.22 | 38.5% | 30.4% |
| 37 | | | 5 | 133 | 2 | 0.01 | **0.51** | 0.04 | 0.00 | 0.07 | 0.44 | 13.5% | 6.8% | 0.00 | 0.18 | 0.02 | 0.00 | 0.03 | **0.19** | 37.8% | 37.8% |
| 38 | | | 9 | 137 | 4 | 0.01 | **1.60** | 0.09 | 0.02 | 0.34 | 1.34 | 21.4% | 5.3% | 0.01 | **0.70** | 0.06 | 0.01 | 0.15 | 0.56 | 43.4% | 34.8% |
| 39 | | | 10 | 138 | 4 | 0.01 | **0.80** | 0.04 | 0.00 | 0.13 | 0.79 | 16.3% | 5.1% | 0.01 | **0.40** | 0.03 | 0.00 | 0.07 | 0.39 | 49.3% | 48.3% |
| 40 | | | 11 | 139 | 4 | 0.01 | **0.89** | 0.05 | 0.02 | 0.16 | 0.86 | 18.3% | 6.0% | 0.01 | **0.40** | 0.03 | 0.01 | 0.08 | 0.33 | 44.6% | 37.5% |
| 41 | | | 14 | 142 | 4 | 0.01 | **0.84** | 0.08 | 0.02 | 0.18 | 0.80 | 21.2% | 9.6% | 0.01 | **0.44** | 0.06 | 0.02 | 0.08 | 0.32 | 52.6% | 37.7% |
| 42 | | | 15 | 143 | 4 | 0.01 | **0.72** | 0.05 | 0.01 | 0.16 | 0.71 | 22.8% | 7.5% | 0.01 | **0.38** | 0.04 | 0.01 | 0.09 | 0.30 | 52.8% | 41.5% |
| 43 | | | 21 | 149 | 10 | 0.04 | **2.80** | 0.21 | 0.03 | 0.66 | 2.18 | 23.6% | 7.6% | 0.02 | **1.34** | 0.15 | 0.02 | 0.32 | 0.96 | 47.8% | 34.2% |
| 44 | | | 22 | 150 | 10 | 0.03 | **2.05** | 0.26 | 0.02 | 0.38 | 1.86 | 18.5% | 12.6% | 0.02 | **1.17** | 0.14 | 0.02 | 0.18 | 1.01 | 57.2% | 49.3% |
| 45 | | | 23 | 151 | 10 | 0.02 | **2.62** | 0.08 | 0.02 | 0.49 | 2.32 | 18.6% | 2.9% | 0.02 | **1.40** | 0.05 | 0.02 | 0.25 | 1.16 | 53.5% | 44.1% |
| 46 | | | 24 | 152 | 10 | 0.05 | **2.87** | 0.20 | 0.01 | 0.73 | 2.33 | 25.5% | 7.1% | 0.02 | **1.50** | 0.15 | 0.01 | 0.39 | 1.16 | 52.4% | 40.2% |
| 47 | | | 25 | 153 | 10 | 0.04 | **3.05** | 0.29 | 0.08 | 0.68 | 2.43 | 22.3% | 9.6% | 0.02 | **1.26** | 0.20 | 0.07 | 0.28 | 0.96 | 41.2% | 31.3% |
| 48 | | | 30 | 158 | 10 | 0.03 | **2.29** | 0.28 | 0.05 | 0.44 | 1.84 | 19.3% | 12.3% | 0.02 | **0.80** | 0.19 | 0.05 | 0.15 | 0.75 | 35.0% | 32.6% |
| 49 | | | 31 | 159 | 10 | 0.03 | **2.28** | 0.08 | 0.01 | 0.54 | 1.99 | 23.5% | 3.4% | 0.03 | **1.35** | 0.05 | 0.01 | 0.27 | 0.99 | 59.2% | 43.3% |
| 50 | | | 32 | 160 | 10 | 0.03 | **2.84** | 0.11 | 0.01 | 0.50 | 2.50 | 17.8% | 3.9% | 0.01 | **1.45** | 0.07 | 0.01 | 0.26 | 1.24 | 51.0% | 43.8% |
| 51 | | | 33 | 161 | 10 | 0.06 | **2.94** | 0.27 | 0.03 | 0.67 | 2.44 | 22.8% | 9.3% | 0.03 | **1.43** | 0.19 | 0.03 | 0.33 | 1.04 | 48.5% | 35.5% |

## 3.1.2 Ant L – Patch Antenna

Table 4 & Table 5 show the PD simulation evaluation of Ant L patch antenna at 28GHz / 39GHz for the corresponding evaluation plane specified in Table 1.

Table 5. PD of Ant L – patch antenna (28GHz – n261)

- L–patch Low CH

| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | max ratio out of all beams<br>56.7% | 4.7% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | max ratio out of all beams<br>59.7% | 59.7% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 49 | | | 0 | | 1 | 0.23 | 0.00 | 0.00 | 0.00 | 0.01 | **0.28** | 4.0% | 1.1% | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | **0.13** | 46.0% | 46.0% |
| 50 | | | 1 | | 1 | 0.32 | 0.00 | 0.00 | 0.01 | 0.02 | **0.38** | 4.7% | 1.3% | 0.12 | 0.00 | 0.00 | 0.00 | 0.01 | **0.16** | 41.8% | 41.8% |
| 51 | | | 2 | | 1 | 0.30 | 0.00 | 0.00 | 0.01 | 0.02 | **0.37** | 4.1% | 2.5% | 0.11 | 0.00 | 0.00 | 0.01 | 0.01 | **0.15** | 41.6% | 41.6% |
| 52 | | | 5 | | 2 | 0.80 | 0.00 | 0.00 | 0.01 | 0.06 | **0.89** | 6.3% | 1.6% | 0.33 | 0.00 | 0.00 | 0.01 | 0.02 | **0.44** | 49.8% | 49.8% |
| 53 | | | 6 | | 2 | 0.54 | 0.00 | 0.00 | 0.00 | 0.03 | **0.66** | 3.9% | 0.2% | 0.23 | 0.00 | 0.00 | 0.00 | 0.01 | **0.33** | 50.2% | 50.2% |
| 54 | | | 7 | | 2 | 0.46 | 0.01 | 0.00 | 0.02 | 0.03 | **0.60** | 5.0% | 2.7% | 0.19 | 0.00 | 0.00 | 0.01 | 0.01 | **0.27** | 44.8% | 44.8% |
| 55 | | | 11 | | 2 | 0.56 | 0.00 | 0.00 | 0.00 | 0.03 | **0.65** | 4.6% | 0.6% | 0.24 | 0.00 | 0.00 | 0.00 | 0.01 | **0.34** | 51.4% | 51.4% |
| 56 | | | 12 | | 2 | 0.41 | 0.00 | 0.01 | 0.00 | 0.03 | **0.55** | 5.3% | 0.4% | 0.17 | 0.00 | 0.01 | 0.00 | 0.01 | **0.26** | 46.4% | 46.4% |
| 57 | | | 15 | | 5 | 1.45 | 0.01 | 0.00 | 0.07 | 0.16 | **1.67** | 9.8% | 4.1% | 0.68 | 0.01 | 0.00 | 0.05 | 0.07 | **0.91** | 54.8% | 54.8% |
| 58 | | | 16 | | 5 | 1.87 | 0.01 | 0.00 | 0.01 | 0.14 | **2.04** | 6.8% | 0.3% | 0.96 | 0.01 | 0.00 | 0.00 | 0.06 | **1.21** | 59.2% | 59.2% |
| 59 | | | 17 | | 5 | 1.73 | 0.01 | 0.00 | 0.01 | 0.12 | **1.92** | 6.1% | 0.3% | 0.88 | 0.01 | 0.00 | 0.00 | 0.05 | **1.15** | 59.7% | 59.7% |
| 60 | | | 18 | | 5 | 1.10 | 0.01 | 0.02 | 0.02 | 0.10 | **1.52** | 6.4% | 1.4% | 0.45 | 0.01 | 0.02 | 0.01 | 0.04 | **0.69** | 45.3% | 45.3% |
| 61 | | | 24 | | 5 | 1.68 | 0.01 | 0.00 | 0.02 | 0.15 | **1.87** | 7.9% | 1.2% | 0.84 | 0.01 | 0.00 | 0.01 | 0.07 | **1.07** | 57.2% | 57.2% |
| 62 | | | 25 | | 5 | 1.81 | 0.01 | 0.00 | 0.02 | 0.13 | **1.97** | 6.4% | 0.8% | 0.93 | 0.01 | 0.00 | 0.01 | 0.06 | **1.17** | 59.7% | 59.7% |
| 63 | | | 26 | | 5 | 1.49 | 0.01 | 0.01 | 0.02 | 0.11 | **1.78** | 6.1% | 0.8% | 0.70 | 0.01 | 0.01 | 0.01 | 0.05 | **0.97** | 54.5% | 54.5% |
| 64 | | | 128 | | 1 | **0.27** | 0.01 | 0.00 | 0.00 | 0.13 | 0.21 | 47.6% | 0.7% | **0.10** | 0.00 | 0.00 | 0.00 | 0.05 | 0.09 | 38.6% | 33.7% |
| 65 | | | 129 | | 1 | **0.24** | 0.00 | 0.00 | 0.01 | 0.09 | 0.19 | 39.7% | 2.5% | **0.09** | 0.00 | 0.00 | 0.00 | 0.04 | 0.07 | 39.7% | 30.4% |
| 66 | | | 130 | | 1 | **0.26** | 0.00 | 0.00 | 0.01 | 0.10 | 0.23 | 40.0% | 1.9% | **0.12** | 0.00 | 0.00 | 0.00 | 0.04 | 0.11 | 44.6% | 41.2% |
| 67 | | | 133 | | 2 | **0.44** | 0.01 | 0.00 | 0.01 | 0.22 | 0.36 | 49.5% | 2.5% | **0.19** | 0.00 | 0.00 | 0.01 | 0.10 | 0.18 | 42.5% | 41.6% |
| 68 | | | 134 | | 2 | **0.68** | 0.01 | 0.00 | 0.00 | 0.31 | 0.57 | 45.5% | 0.6% | **0.31** | 0.01 | 0.00 | 0.00 | 0.16 | 0.27 | 46.0% | 39.1% |
| 69 | | | 135 | | 2 | **0.45** | 0.01 | 0.01 | 0.01 | 0.22 | 0.35 | 48.9% | 2.7% | **0.16** | 0.01 | 0.00 | 0.01 | 0.10 | 0.15 | 36.3% | 34.5% |
| 70 | | | 139 | | 2 | **0.53** | 0.01 | 0.00 | 0.01 | 0.30 | 0.42 | 56.7% | 0.9% | **0.22** | 0.01 | 0.00 | 0.00 | 0.14 | 0.20 | 41.4% | 36.5% |
| 71 | L | Patch | 140 | | 2 | **0.72** | 0.01 | 0.00 | 0.00 | 0.27 | 0.61 | 37.3% | 0.3% | **0.33** | 0.01 | 0.00 | 0.00 | 0.12 | 0.27 | 45.8% | 37.5% |
| 72 | | | 143 | | 5 | **1.08** | 0.01 | 0.01 | 0.05 | 0.48 | 1.04 | 44.9% | 4.5% | 0.49 | 0.01 | 0.01 | 0.03 | 0.24 | **0.56** | 51.9% | 51.9% |
| 73 | | | 144 | | 5 | **1.56** | 0.02 | 0.00 | 0.01 | 0.68 | 1.31 | 43.5% | 0.4% | **0.84** | 0.02 | 0.00 | 0.00 | 0.42 | 0.75 | 53.8% | 48.2% |
| 74 | | | 145 | | 5 | **1.77** | 0.02 | 0.00 | 0.01 | 0.66 | 1.54 | 36.9% | 0.3% | **0.88** | 0.02 | 0.00 | 0.01 | 0.38 | 0.80 | 49.8% | 45.3% |
| 75 | | | 146 | | 5 | **1.05** | 0.04 | 0.02 | 0.01 | 0.53 | 0.90 | 51.1% | 0.8% | **0.38** | 0.02 | 0.01 | 0.00 | 0.21 | 0.34 | 36.0% | 32.1% |
| 76 | | | 152 | | 5 | **1.39** | 0.02 | 0.00 | 0.01 | 0.67 | 1.19 | 47.9% | 0.8% | **0.70** | 0.02 | 0.00 | 0.01 | 0.39 | 0.67 | 50.3% | 48.2% |
| 77 | | | 153 | | 5 | **1.73** | 0.02 | 0.00 | 0.01 | 0.70 | 1.48 | 40.5% | 0.3% | **0.93** | 0.02 | 0.00 | 0.00 | 0.44 | 0.83 | 54.1% | 47.9% |
| 78 | | | 154 | | 5 | **1.45** | 0.04 | 0.01 | 0.01 | 0.62 | 1.24 | 42.7% | 0.5% | **0.60** | 0.02 | 0.01 | 0.00 | 0.29 | 0.55 | 41.6% | 37.8% |
| 79 | | | 0 | 128 | 2 | 0.49 | 0.01 | 0.01 | 0.01 | 0.14 | **0.54** | 26.8% | 1.3% | 0.20 | 0.01 | 0.01 | 0.00 | 0.06 | **0.23** | 42.2% | 42.2% |
| 80 | | | 1 | 129 | 2 | 0.58 | 0.01 | 0.01 | 0.02 | 0.13 | **0.62** | 21.2% | 2.4% | 0.24 | 0.00 | 0.00 | 0.01 | 0.06 | **0.25** | 39.6% | 39.6% |
| 81 | | | 2 | 130 | 2 | 0.59 | 0.01 | 0.00 | 0.02 | 0.13 | **0.65** | 19.4% | 3.7% | 0.24 | 0.00 | 0.00 | 0.01 | 0.05 | **0.26** | 40.5% | 40.5% |
| 82 | | | 5 | 133 | 4 | 1.33 | 0.01 | 0.01 | 0.04 | 0.34 | **1.40** | 24.3% | 2.6% | 0.58 | 0.01 | 0.01 | 0.02 | 0.16 | **0.66** | 47.1% | 47.1% |
| 83 | | | 6 | 134 | 4 | 1.24 | 0.01 | 0.01 | 0.01 | 0.35 | **1.29** | 26.9% | 0.4% | 0.61 | 0.01 | 0.01 | 0.00 | 0.18 | **0.62** | 48.0% | 48.0% |
| 84 | | | 7 | 135 | 4 | 1.10 | 0.02 | 0.01 | 0.05 | 0.29 | **1.26** | 22.9% | 4.2% | 0.42 | 0.01 | 0.01 | 0.02 | 0.12 | **0.54** | 42.7% | 42.7% |
| 85 | | | 11 | 139 | 4 | 1.17 | 0.01 | 0.00 | 0.02 | 0.38 | **1.17** | 32.2% | 1.3% | 0.49 | 0.01 | 0.00 | 0.01 | 0.19 | **0.54** | 46.6% | 46.6% |
| 86 | | | 12 | 140 | 4 | 1.23 | 0.02 | 0.01 | 0.01 | 0.32 | **1.33** | 23.9% | 0.5% | 0.59 | 0.02 | 0.01 | 0.00 | 0.14 | **0.61** | 45.4% | 45.4% |
| 87 | | | 15 | 143 | 10 | 3.24 | 0.04 | 0.01 | 0.15 | 0.90 | **3.25** | 27.8% | 4.7% | 1.47 | 0.04 | 0.01 | 0.10 | 0.48 | **1.75** | 54.0% | 54.0% |
| 88 | | | 16 | 144 | 10 | **3.58** | 0.03 | 0.01 | 0.01 | 0.87 | 3.50 | 24.2% | 0.4% | **1.96** | 0.03 | 0.00 | 0.01 | 0.55 | 1.94 | 54.8% | 54.2% |
| 89 | | | 17 | 145 | 10 | 3.74 | 0.04 | 0.01 | 0.01 | 0.85 | **3.92** | 21.6% | 0.4% | 1.98 | 0.02 | 0.01 | 0.01 | 0.50 | **2.15** | 54.8% | 54.8% |
| 90 | | | 18 | 146 | 10 | 2.66 | 0.08 | 0.04 | 0.03 | 0.73 | **3.30** | 22.0% | 1.0% | 1.02 | 0.05 | 0.03 | 0.02 | 0.35 | **1.39** | 42.0% | 42.0% |
| 91 | | | 24 | 152 | 10 | **3.36** | 0.03 | 0.00 | 0.04 | 0.98 | 3.14 | 29.1% | 1.3% | 1.73 | 0.03 | 0.00 | 0.03 | 0.59 | **1.78** | 52.8% | 52.8% |
| 92 | | | 25 | 153 | 10 | 3.74 | 0.03 | 0.01 | 0.03 | 0.83 | **3.79** | 21.9% | 0.7% | 2.08 | 0.02 | 0.01 | 0.01 | 0.53 | **2.09** | 55.2% | 55.2% |
| 93 | | | 26 | 154 | 10 | 3.26 | 0.07 | 0.02 | 0.02 | 0.85 | **3.61** | 23.5% | 0.6% | 1.51 | 0.04 | 0.01 | 0.01 | 0.44 | **1.84** | 50.9% | 50.9% |

- L–patch Mid CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 55.4% | 4.7% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 59.8% | 59.8% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 49 | | | 0 | | 1 | 0.21 | 0.00 | 0.00 | 0.00 | 0.01 | **0.26** | 3.8% | 1.1% | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | **0.12** | 45.2% | 45.2% |
| 50 | | | 1 | | 1 | 0.31 | 0.00 | 0.00 | 0.01 | 0.02 | **0.37** | 4.8% | 1.6% | 0.11 | 0.00 | 0.00 | 0.01 | 0.01 | **0.15** | 39.4% | 39.4% |
| 51 | | | 2 | | 1 | 0.29 | 0.00 | 0.00 | 0.01 | 0.01 | **0.36** | 3.9% | 2.8% | 0.10 | 0.00 | 0.00 | 0.01 | 0.01 | **0.14** | 39.7% | 39.7% |
| 52 | | | 5 | | 2 | 0.77 | 0.00 | 0.00 | 0.02 | 0.05 | **0.85** | 6.4% | 2.1% | 0.32 | 0.00 | 0.00 | 0.01 | 0.02 | **0.42** | 49.4% | 49.4% |
| 53 | | | 6 | | 2 | 0.50 | 0.00 | 0.00 | 0.00 | 0.02 | **0.59** | 3.9% | 0.2% | 0.21 | 0.00 | 0.00 | 0.00 | 0.01 | **0.31** | 51.8% | 51.8% |
| 54 | | | 7 | | 2 | 0.45 | 0.01 | 0.01 | 0.02 | 0.03 | **0.61** | 5.2% | 3.1% | 0.19 | 0.00 | 0.00 | 0.01 | 0.01 | **0.26** | 42.5% | 42.5% |
| 55 | | | 11 | | 2 | 0.50 | 0.00 | 0.00 | 0.00 | 0.03 | **0.57** | 4.7% | 0.5% | 0.21 | 0.00 | 0.00 | 0.00 | 0.01 | **0.30** | 53.0% | 53.0% |
| 56 | | | 12 | | 2 | 0.40 | 0.00 | 0.01 | 0.00 | 0.03 | **0.52** | 4.8% | 0.2% | 0.16 | 0.00 | 0.01 | 0.00 | 0.01 | **0.25** | 47.4% | 47.4% |
| 57 | | | 15 | | 5 | 1.37 | 0.01 | 0.00 | 0.06 | 0.15 | **1.55** | 9.5% | 4.1% | 0.65 | 0.01 | 0.00 | 0.04 | 0.06 | **0.85** | 54.9% | 54.9% |
| 58 | | | 16 | | 5 | 1.67 | 0.01 | 0.00 | 0.01 | 0.12 | **1.82** | 6.8% | 0.4% | 0.86 | 0.01 | 0.00 | 0.00 | 0.06 | **1.07** | 58.7% | 58.7% |
| 59 | | | 17 | | 5 | 1.59 | 0.01 | 0.00 | 0.00 | 0.11 | **1.77** | 6.4% | 0.2% | 0.81 | 0.01 | 0.00 | 0.00 | 0.05 | **1.05** | 59.6% | 59.6% |
| 60 | | | 18 | | 5 | 1.07 | 0.02 | 0.02 | 0.03 | 0.09 | **1.49** | 6.3% | 1.7% | 0.46 | 0.01 | 0.01 | 0.01 | 0.04 | **0.71** | 47.8% | 47.8% |
| 61 | | | 24 | | 5 | 1.55 | 0.01 | 0.00 | 0.02 | 0.14 | **1.71** | 8.0% | 1.1% | 0.78 | 0.01 | 0.00 | 0.01 | 0.06 | **0.96** | 56.2% | 56.2% |
| 62 | | | 25 | | 5 | 1.62 | 0.01 | 0.00 | 0.01 | 0.12 | **1.77** | 6.5% | 0.6% | 0.83 | 0.01 | 0.00 | 0.01 | 0.05 | **1.06** | 59.8% | 59.8% |
| 63 | | | 26 | | 5 | 1.44 | 0.01 | 0.00 | 0.01 | 0.11 | **1.70** | 6.3% | 0.8% | 0.69 | 0.01 | 0.00 | 0.01 | 0.05 | **0.94** | 55.1% | 55.1% |
| 64 | | | 128 | | 1 | **0.24** | 0.00 | 0.00 | 0.00 | 0.12 | 0.19 | 47.5% | 1.2% | **0.10** | 0.00 | 0.00 | 0.00 | 0.05 | 0.08 | 38.9% | 32.0% |
| 65 | | | 129 | | 1 | **0.22** | 0.00 | 0.00 | 0.00 | 0.09 | 0.19 | 39.4% | 1.4% | **0.09** | 0.00 | 0.00 | 0.00 | 0.04 | 0.07 | 40.3% | 32.6% |
| 66 | | | 130 | | 1 | **0.27** | 0.00 | 0.00 | 0.00 | 0.10 | 0.23 | 36.6% | 1.5% | **0.12** | 0.00 | 0.00 | 0.00 | 0.04 | 0.11 | 44.2% | 40.0% |
| 67 | | | 133 | | 2 | **0.42** | 0.00 | 0.00 | 0.01 | 0.22 | 0.36 | 52.0% | 2.1% | **0.18** | 0.00 | 0.00 | 0.01 | 0.11 | 0.17 | 43.9% | 40.1% |
| 68 | | | 134 | | 2 | **0.60** | 0.01 | 0.00 | 0.00 | 0.26 | 0.51 | 43.7% | 0.7% | **0.29** | 0.01 | 0.00 | 0.00 | 0.13 | 0.24 | 47.8% | 39.4% |
| 69 | | | 135 | | 2 | **0.42** | 0.01 | 0.00 | 0.01 | 0.18 | 0.35 | 43.2% | 1.9% | **0.17** | 0.00 | 0.00 | 0.00 | 0.09 | 0.16 | 40.1% | 38.4% |
| 70 | | | 139 | | 2 | **0.47** | 0.01 | 0.00 | 0.01 | 0.26 | 0.37 | 55.4% | 1.3% | **0.21** | 0.01 | 0.00 | 0.01 | 0.12 | 0.18 | 44.8% | 37.4% |
| 71 | L | Patch | 140 | | 2 | **0.67** | 0.02 | 0.00 | 0.00 | 0.23 | 0.57 | 34.6% | 0.3% | **0.31** | 0.01 | 0.00 | 0.00 | 0.10 | 0.24 | 45.7% | 36.4% |
| 72 | | | 143 | | 5 | **1.14** | 0.01 | 0.01 | 0.05 | 0.53 | 1.07 | 46.6% | 4.6% | 0.50 | 0.01 | 0.00 | 0.04 | 0.29 | **0.55** | 47.9% | 47.9% |
| 73 | | | 144 | | 5 | **1.44** | 0.02 | 0.00 | 0.01 | 0.60 | 1.20 | 41.8% | 0.4% | **0.80** | 0.01 | 0.00 | 0.01 | 0.35 | 0.68 | 55.5% | 47.4% |
| 74 | | | 145 | | 5 | **1.69** | 0.02 | 0.00 | 0.01 | 0.58 | 1.48 | 34.0% | 0.4% | **0.88** | 0.01 | 0.00 | 0.00 | 0.32 | 0.77 | 51.8% | 45.7% |
| 75 | | | 146 | | 5 | **1.09** | 0.03 | 0.01 | 0.01 | 0.48 | 1.01 | 43.7% | 0.7% | **0.40** | 0.02 | 0.01 | 0.01 | 0.21 | 0.37 | 36.7% | 34.1% |
| 76 | | | 152 | | 5 | **1.34** | 0.02 | 0.00 | 0.01 | 0.60 | 1.15 | 44.6% | 0.7% | **0.71** | 0.02 | 0.00 | 0.01 | 0.34 | 0.63 | 52.8% | 47.2% |
| 77 | | | 153 | | 5 | **1.66** | 0.02 | 0.00 | 0.01 | 0.63 | 1.45 | 37.6% | 0.4% | **0.92** | 0.01 | 0.00 | 0.01 | 0.37 | 0.80 | 55.2% | 48.3% |
| 78 | | | 154 | | 5 | **1.44** | 0.03 | 0.01 | 0.01 | 0.55 | 1.26 | 38.2% | 0.5% | **0.63** | 0.02 | 0.01 | 0.01 | 0.28 | 0.56 | 43.9% | 39.1% |
| 79 | | | 0 | 128 | 2 | 0.46 | 0.01 | 0.01 | 0.01 | 0.14 | **0.53** | 26.8% | 1.1% | 0.19 | 0.01 | 0.01 | 0.01 | 0.06 | **0.20** | 37.9% | 37.9% |
| 80 | | | 1 | 129 | 2 | 0.58 | 0.01 | 0.00 | 0.01 | 0.13 | **0.63** | 20.1% | 2.1% | **0.24** | 0.00 | 0.00 | 0.01 | 0.05 | 0.23 | 38.2% | 36.4% |
| 81 | | | 2 | 130 | 2 | 0.62 | 0.01 | 0.00 | 0.02 | 0.12 | **0.66** | 18.1% | 3.5% | 0.25 | 0.00 | 0.00 | 0.01 | 0.04 | **0.26** | 38.9% | 38.9% |
| 82 | | | 5 | 133 | 4 | **1.32** | 0.01 | 0.01 | 0.04 | 0.35 | 1.32 | 26.2% | 2.6% | 0.59 | 0.01 | 0.00 | 0.02 | 0.16 | **0.62** | 46.5% | 46.5% |
| 83 | | | 6 | 134 | 4 | 1.14 | 0.02 | 0.01 | 0.01 | 0.31 | **1.20** | 25.4% | 0.5% | 0.56 | 0.01 | 0.00 | 0.00 | 0.16 | **0.57** | 47.1% | 47.1% |
| 84 | | | 7 | 135 | 4 | 1.06 | 0.02 | 0.02 | 0.05 | 0.24 | **1.31** | 18.4% | 3.6% | 0.43 | 0.01 | 0.01 | 0.02 | 0.10 | **0.54** | 41.2% | 41.2% |
| 85 | | | 11 | 139 | 4 | **1.05** | 0.01 | 0.00 | 0.01 | 0.35 | 1.04 | 33.1% | 1.2% | 0.47 | 0.01 | 0.00 | 0.01 | 0.17 | **0.49** | 46.9% | 46.9% |
| 86 | | | 12 | 140 | 4 | 1.19 | 0.02 | 0.01 | 0.01 | 0.26 | **1.32** | 19.7% | 0.4% | 0.56 | 0.02 | 0.01 | 0.00 | 0.12 | **0.58** | 44.3% | 44.3% |
| 87 | | | 15 | 143 | 10 | **3.20** | 0.04 | 0.01 | 0.15 | 0.95 | 3.03 | 29.5% | 4.7% | 1.49 | 0.03 | 0.01 | 0.10 | 0.53 | **1.60** | 50.0% | 50.0% |
| 88 | | | 16 | 144 | 10 | **3.39** | 0.03 | 0.01 | 0.01 | 0.79 | 3.33 | 23.4% | 0.4% | **1.94** | 0.02 | 0.00 | 0.01 | 0.48 | 1.82 | 57.1% | 53.6% |
| 89 | | | 17 | 145 | 10 | 3.53 | 0.03 | 0.01 | 0.01 | 0.75 | **3.69** | 20.3% | 0.4% | 1.90 | 0.02 | 0.01 | 0.01 | 0.44 | **2.02** | 54.6% | 54.6% |
| 90 | | | 18 | 146 | 10 | 2.66 | 0.07 | 0.04 | 0.04 | 0.69 | **3.49** | 19.7% | 1.3% | 1.09 | 0.05 | 0.03 | 0.02 | 0.33 | **1.53** | 43.8% | 43.8% |
| 91 | | | 24 | 152 | 10 | **3.32** | 0.03 | 0.00 | 0.04 | 0.89 | 3.16 | 26.8% | 1.1% | **1.81** | 0.03 | 0.00 | 0.02 | 0.52 | 1.68 | 54.3% | 50.7% |
| 92 | | | 25 | 153 | 10 | 3.52 | 0.03 | 0.01 | 0.02 | 0.74 | **3.55** | 20.9% | 0.5% | **1.99** | 0.02 | 0.01 | 0.01 | 0.46 | 1.95 | 56.1% | 55.0% |
| 93 | | | 26 | 154 | 10 | 3.13 | 0.06 | 0.02 | 0.03 | 0.77 | **3.52** | 21.7% | 0.7% | 1.49 | 0.04 | 0.01 | 0.01 | 0.41 | **1.80** | 51.1% | 51.1% |

- L–patch High CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 50.7% | 5.1% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 59.6% | 59.6% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 49 | | | 0 | | 1 | 0.19 | 0.00 | 0.00 | 0.00 | 0.01 | **0.23** | 4.4% | 0.9% | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | **0.10** | 45.0% | 45.0% |
| 50 | | | 1 | | 1 | 0.28 | 0.00 | 0.00 | 0.01 | 0.02 | **0.34** | 5.2% | 1.7% | 0.10 | 0.00 | 0.00 | 0.00 | 0.01 | **0.14** | 39.5% | 39.5% |
| 51 | | | 2 | | 1 | 0.26 | 0.00 | 0.00 | 0.01 | 0.01 | **0.33** | 4.3% | 3.1% | 0.09 | 0.00 | 0.00 | 0.01 | 0.01 | **0.13** | 38.5% | 38.5% |
| 52 | | | 5 | | 2 | 0.70 | 0.00 | 0.00 | 0.02 | 0.05 | **0.76** | 6.8% | 2.2% | 0.29 | 0.00 | 0.00 | 0.01 | 0.02 | **0.38** | 49.5% | 49.5% |
| 53 | | | 6 | | 2 | 0.45 | 0.00 | 0.00 | 0.00 | 0.02 | **0.54** | 3.9% | 0.2% | 0.19 | 0.00 | 0.00 | 0.00 | 0.01 | **0.28** | 51.4% | 51.4% |
| 54 | | | 7 | | 2 | 0.42 | 0.01 | 0.01 | 0.02 | 0.03 | **0.59** | 4.9% | 3.4% | 0.17 | 0.00 | 0.01 | 0.01 | 0.01 | **0.24** | 41.1% | 41.1% |
| 55 | | | 11 | | 2 | 0.44 | 0.00 | 0.00 | 0.00 | 0.03 | **0.51** | 5.1% | 0.8% | 0.18 | 0.00 | 0.00 | 0.00 | 0.01 | **0.26** | 51.6% | 51.6% |
| 56 | | | 12 | | 2 | 0.36 | 0.00 | 0.01 | 0.00 | 0.02 | **0.48** | 4.8% | 0.2% | 0.15 | 0.00 | 0.00 | 0.00 | 0.01 | **0.23** | 47.3% | 47.3% |
| 57 | | | 15 | | 5 | 1.23 | 0.01 | 0.00 | 0.06 | 0.14 | **1.38** | 10.3% | 4.0% | 0.59 | 0.01 | 0.00 | 0.04 | 0.06 | **0.74** | 53.8% | 53.8% |
| 58 | | | 16 | | 5 | 1.47 | 0.01 | 0.00 | 0.01 | 0.11 | **1.60** | 7.1% | 0.5% | 0.76 | 0.01 | 0.00 | 0.00 | 0.05 | **0.93** | 58.4% | 58.4% |
| 59 | | | 17 | | 5 | 1.41 | 0.01 | 0.00 | 0.00 | 0.11 | **1.58** | 6.6% | 0.2% | 0.72 | 0.01 | 0.00 | 0.00 | 0.05 | **0.94** | 59.6% | 59.6% |
| 60 | | | 18 | | 5 | 0.98 | 0.01 | 0.02 | 0.03 | 0.09 | **1.37** | 6.2% | 2.2% | 0.43 | 0.01 | 0.01 | 0.02 | 0.04 | **0.67** | 49.1% | 49.1% |
| 61 | | | 24 | | 5 | 1.39 | 0.01 | 0.00 | 0.02 | 0.13 | **1.52** | 8.6% | 1.1% | 0.71 | 0.01 | 0.00 | 0.01 | 0.06 | **0.86** | 56.2% | 56.2% |
| 62 | | | 25 | | 5 | 1.46 | 0.01 | 0.00 | 0.01 | 0.11 | **1.59** | 6.8% | 0.6% | 0.76 | 0.01 | 0.00 | 0.00 | 0.05 | **0.95** | 59.3% | 59.3% |
| 63 | | | 26 | | 5 | 1.30 | 0.01 | 0.00 | 0.02 | 0.10 | **1.55** | 6.3% | 1.0% | 0.63 | 0.01 | 0.00 | 0.01 | 0.04 | **0.86** | 55.6% | 55.6% |
| 64 | | | 128 | | 1 | **0.22** | 0.01 | 0.00 | 0.00 | 0.10 | 0.17 | 43.8% | 1.8% | **0.08** | 0.00 | 0.00 | 0.00 | 0.04 | 0.07 | 37.5% | 29.9% |
| 65 | | | 129 | | 1 | **0.19** | 0.00 | 0.00 | 0.00 | 0.07 | 0.18 | 34.7% | 2.1% | **0.08** | 0.00 | 0.00 | 0.00 | 0.03 | 0.06 | 41.1% | 32.6% |
| 66 | | | 130 | | 1 | **0.26** | 0.00 | 0.00 | 0.00 | 0.10 | 0.23 | 36.7% | 1.1% | **0.12** | 0.00 | 0.00 | 0.00 | 0.04 | 0.10 | 44.3% | 39.0% |
| 67 | | | 133 | | 2 | **0.38** | 0.01 | 0.00 | 0.01 | 0.17 | 0.36 | 44.9% | 2.9% | **0.17** | 0.00 | 0.00 | 0.01 | 0.09 | 0.15 | 44.9% | 39.2% |
| 68 | | | 134 | | 2 | **0.60** | 0.01 | 0.00 | 0.01 | 0.26 | 0.50 | 42.8% | 0.8% | **0.29** | 0.01 | 0.00 | 0.00 | 0.12 | 0.23 | 47.3% | 38.5% |
| 69 | | | 135 | | 2 | **0.38** | 0.01 | 0.00 | 0.01 | 0.14 | 0.35 | 35.2% | 1.8% | **0.16** | 0.00 | 0.00 | 0.00 | 0.07 | 0.15 | 41.4% | 39.8% |
| 70 | | | 139 | | 2 | **0.48** | 0.01 | 0.00 | 0.01 | 0.24 | 0.38 | 50.7% | 2.1% | **0.21** | 0.01 | 0.00 | 0.01 | 0.11 | 0.17 | 43.4% | 35.7% |
| 71 | L | Patch | 140 | | 2 | **0.65** | 0.02 | 0.00 | 0.00 | 0.23 | 0.56 | 35.5% | 0.2% | **0.30** | 0.01 | 0.00 | 0.00 | 0.11 | 0.24 | 46.6% | 36.8% |
| 72 | | | 143 | | 5 | **1.17** | 0.01 | 0.01 | 0.06 | 0.52 | 1.11 | 44.3% | 5.1% | 0.53 | 0.01 | 0.01 | 0.04 | 0.29 | **0.56** | 47.6% | 47.6% |
| 73 | | | 144 | | 5 | **1.32** | 0.01 | 0.00 | 0.01 | 0.52 | 1.09 | 39.7% | 0.8% | **0.73** | 0.01 | 0.00 | 0.01 | 0.32 | 0.60 | 55.4% | 45.7% |
| 74 | | | 145 | | 5 | **1.66** | 0.02 | 0.00 | 0.01 | 0.55 | 1.46 | 33.2% | 0.3% | **0.86** | 0.01 | 0.00 | 0.00 | 0.31 | 0.74 | 51.9% | 44.6% |
| 75 | | | 146 | | 5 | **1.00** | 0.03 | 0.02 | 0.01 | 0.41 | 0.99 | 40.7% | 1.1% | 0.36 | 0.02 | 0.01 | 0.01 | 0.18 | **0.37** | 36.4% | 36.4% |
| 76 | | | 152 | | 5 | **1.29** | 0.02 | 0.00 | 0.01 | 0.55 | 1.09 | 42.2% | 0.5% | **0.70** | 0.02 | 0.00 | 0.00 | 0.33 | 0.60 | 54.3% | 46.3% |
| 77 | | | 153 | | 5 | **1.54** | 0.02 | 0.00 | 0.01 | 0.55 | 1.32 | 36.0% | 0.6% | **0.86** | 0.01 | 0.00 | 0.01 | 0.32 | 0.73 | 55.5% | 47.4% |
| 78 | | | 154 | | 5 | **1.44** | 0.03 | 0.01 | 0.00 | 0.52 | 1.27 | 36.4% | 0.3% | **0.63** | 0.02 | 0.01 | 0.00 | 0.26 | 0.59 | 43.9% | 40.7% |
| 79 | | | 0 | 128 | 2 | 0.44 | 0.01 | 0.01 | 0.01 | 0.13 | **0.50** | 25.1% | 1.8% | 0.17 | 0.01 | 0.01 | 0.01 | 0.05 | **0.18** | 35.9% | 35.9% |
| 80 | | | 1 | 129 | 2 | 0.54 | 0.01 | 0.01 | 0.01 | 0.11 | **0.60** | 17.8% | 2.2% | **0.23** | 0.00 | 0.00 | 0.01 | 0.05 | 0.22 | 37.8% | 37.0% |
| 81 | | | 2 | 130 | 2 | 0.61 | 0.01 | 0.00 | 0.02 | 0.12 | **0.64** | 18.7% | 3.1% | 0.24 | 0.00 | 0.00 | 0.01 | 0.04 | **0.25** | 39.5% | 39.5% |
| 82 | | | 5 | 133 | 4 | **1.27** | 0.01 | 0.01 | 0.04 | 0.31 | 1.21 | 24.1% | 3.0% | 0.58 | 0.01 | 0.01 | 0.03 | 0.15 | **0.59** | 46.9% | 46.9% |
| 83 | | | 6 | 134 | 4 | 1.13 | 0.01 | 0.00 | 0.01 | 0.30 | **1.17** | 25.7% | 0.7% | 0.55 | 0.01 | 0.00 | 0.01 | 0.15 | **0.55** | 47.5% | 47.5% |
| 84 | | | 7 | 135 | 4 | 0.95 | 0.02 | 0.02 | 0.04 | 0.19 | **1.26** | 14.7% | 3.4% | 0.39 | 0.01 | 0.01 | 0.02 | 0.08 | **0.49** | 38.8% | 38.8% |
| 85 | | | 11 | 139 | 4 | **1.07** | 0.01 | 0.00 | 0.02 | 0.33 | 1.04 | 30.5% | 1.9% | **0.47** | 0.01 | 0.00 | 0.01 | 0.16 | 0.46 | 44.1% | 42.7% |
| 86 | | | 12 | 140 | 4 | 1.15 | 0.02 | 0.01 | 0.00 | 0.26 | **1.26** | 20.5% | 0.2% | 0.55 | 0.01 | 0.01 | 0.00 | 0.13 | **0.57** | 45.1% | 45.1% |
| 87 | | | 15 | 143 | 10 | **3.28** | 0.03 | 0.01 | 0.16 | 0.95 | 3.04 | 29.0% | 4.8% | **1.59** | 0.03 | 0.01 | 0.10 | 0.53 | 1.58 | 48.4% | 48.2% |
| 88 | | | 16 | 144 | 10 | **3.17** | 0.02 | 0.01 | 0.02 | 0.69 | 3.12 | 21.8% | 0.6% | **1.82** | 0.02 | 0.00 | 0.01 | 0.44 | 1.67 | 57.3% | 52.6% |
| 89 | | | 17 | 145 | 10 | 3.37 | 0.02 | 0.01 | 0.01 | 0.72 | **3.49** | 20.7% | 0.3% | 1.81 | 0.02 | 0.01 | 0.01 | 0.42 | **1.88** | 53.7% | 53.7% |
| 90 | | | 18 | 146 | 10 | 2.36 | 0.06 | 0.04 | 0.06 | 0.58 | **3.27** | 17.6% | 1.8% | 0.95 | 0.05 | 0.03 | 0.03 | 0.28 | **1.42** | 43.5% | 43.5% |
| 91 | | | 24 | 152 | 10 | **3.30** | 0.03 | 0.00 | 0.04 | 0.82 | 3.12 | 24.9% | 1.2% | **1.83** | 0.03 | 0.00 | 0.02 | 0.51 | 1.68 | 55.5% | 50.8% |
| 92 | | | 25 | 153 | 10 | 3.30 | 0.03 | 0.01 | 0.02 | 0.67 | **3.31** | 20.2% | 0.7% | **1.88** | 0.02 | 0.01 | 0.01 | 0.41 | 1.80 | 56.7% | 54.3% |
| 93 | | | 26 | 154 | 10 | 2.94 | 0.06 | 0.02 | 0.02 | 0.71 | **3.31** | 21.5% | 0.6% | 1.40 | 0.04 | 0.01 | 0.01 | 0.38 | **1.68** | 50.7% | 50.7% |

Table 6. PD of Ant L – patch antenna (39GHz – n260)

## - L–patch Low CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | **46.7%** | **8.8%** | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | **59.8%** | **59.8%** |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 52 | | | 0 | | 1 | **0.17** | 0.00 | 0.00 | 0.00 | 0.05 | 0.12 | 30.7% | 1.2% | **0.06** | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 34.3% | 24.7% |
| 53 | | | 1 | | 1 | **0.19** | 0.00 | 0.00 | 0.00 | 0.08 | 0.13 | 39.7% | 2.1% | **0.07** | 0.00 | 0.00 | 0.00 | 0.03 | 0.04 | 36.6% | 22.2% |
| 54 | | | 2 | | 1 | **0.23** | 0.01 | 0.00 | 0.01 | 0.08 | 0.18 | 32.3% | 5.2% | **0.08** | 0.00 | 0.00 | 0.01 | 0.03 | 0.06 | 32.3% | 26.7% |
| 55 | | | 6 | | 2 | **0.41** | 0.01 | 0.01 | 0.01 | 0.13 | 0.27 | 31.1% | 3.5% | **0.13** | 0.00 | 0.00 | 0.01 | 0.06 | 0.10 | 31.1% | 24.0% |
| 56 | | | 7 | | 2 | **0.37** | 0.01 | 0.00 | 0.00 | 0.13 | 0.29 | 36.7% | 1.1% | **0.19** | 0.01 | 0.00 | 0.00 | 0.07 | 0.12 | 52.1% | 33.7% |
| 57 | | | 8 | | 2 | **0.39** | 0.00 | 0.01 | 0.01 | 0.15 | 0.28 | 38.1% | 2.8% | **0.16** | 0.00 | 0.01 | 0.01 | 0.05 | 0.11 | 40.7% | 26.9% |
| 58 | | | 12 | | 2 | **0.31** | 0.01 | 0.00 | 0.01 | 0.14 | 0.25 | 45.5% | 2.2% | **0.15** | 0.01 | 0.00 | 0.01 | 0.06 | 0.10 | 46.8% | 31.4% |
| 59 | | | 13 | | 2 | **0.43** | 0.01 | 0.01 | 0.01 | 0.13 | 0.32 | 31.5% | 1.9% | **0.20** | 0.00 | 0.00 | 0.01 | 0.06 | 0.13 | 46.5% | 30.0% |
| 60 | | | 16 | | 5 | **0.83** | 0.01 | 0.02 | 0.05 | 0.33 | 0.63 | 40.2% | 5.6% | **0.35** | 0.01 | 0.02 | 0.03 | 0.19 | 0.27 | 42.1% | 32.4% |
| 61 | | | 17 | | 5 | **0.80** | 0.04 | 0.01 | 0.02 | 0.37 | 0.62 | 46.7% | 2.0% | **0.39** | 0.02 | 0.01 | 0.01 | 0.23 | 0.27 | 48.6% | 33.3% |
| 62 | | | 18 | | 5 | **0.95** | 0.03 | 0.00 | 0.02 | 0.41 | 0.72 | 43.1% | 2.4% | **0.49** | 0.02 | 0.00 | 0.02 | 0.26 | 0.32 | 52.0% | 33.3% |
| 63 | | | 19 | | 5 | **0.88** | 0.01 | 0.00 | 0.04 | 0.34 | 0.66 | 38.0% | 4.3% | **0.43** | 0.01 | 0.00 | 0.03 | 0.20 | 0.32 | 48.4% | 36.7% |
| 64 | | | 20 | | 5 | **0.84** | 0.01 | 0.02 | 0.07 | 0.27 | 0.58 | 32.2% | 8.2% | **0.34** | 0.01 | 0.02 | 0.05 | 0.11 | 0.25 | 39.9% | 30.0% |
| 65 | | | 26 | | 5 | **0.81** | 0.01 | 0.01 | 0.02 | 0.33 | 0.60 | 40.5% | 2.7% | **0.34** | 0.01 | 0.01 | 0.01 | 0.18 | 0.26 | 41.5% | 31.9% |
| 66 | | | 27 | | 5 | **0.97** | 0.04 | 0.00 | 0.02 | 0.42 | 0.75 | 43.0% | 2.3% | **0.51** | 0.03 | 0.00 | 0.01 | 0.27 | 0.33 | 52.3% | 33.8% |
| 67 | | | 28 | | 5 | **0.91** | 0.02 | 0.00 | 0.03 | 0.38 | 0.70 | 42.0% | 2.9% | **0.47** | 0.01 | 0.00 | 0.02 | 0.24 | 0.32 | 52.0% | 35.0% |
| 68 | | | 29 | | 5 | **0.90** | 0.01 | 0.01 | 0.06 | 0.29 | 0.65 | 31.9% | 6.8% | **0.37** | 0.01 | 0.01 | 0.05 | 0.15 | 0.29 | 41.3% | 32.3% |
| 69 | | | 128 | | 1 | 0.34 | 0.00 | 0.00 | 0.00 | 0.03 | **0.41** | 6.8% | 0.7% | 0.12 | 0.00 | 0.00 | 0.00 | 0.01 | **0.19** | 46.7% | 46.7% |
| 70 | | | 129 | | 1 | 0.27 | 0.00 | 0.00 | 0.01 | 0.02 | **0.31** | 7.1% | 2.6% | 0.12 | 0.00 | 0.00 | 0.01 | 0.01 | **0.14** | 43.6% | 43.6% |
| 71 | | | 130 | | 1 | 0.29 | 0.00 | 0.00 | 0.01 | 0.03 | **0.37** | 9.2% | 1.9% | 0.11 | 0.00 | 0.00 | 0.01 | 0.01 | **0.16** | 42.1% | 42.1% |
| 72 | | | 134 | | 2 | 0.53 | 0.01 | 0.00 | 0.02 | 0.06 | **0.67** | 8.5% | 2.2% | 0.23 | 0.00 | 0.00 | 0.01 | 0.02 | **0.33** | 48.6% | 48.6% |
| 73 | | | 135 | | 2 | 0.71 | 0.00 | 0.00 | 0.01 | 0.06 | **0.78** | 7.5% | 0.9% | 0.33 | 0.00 | 0.00 | 0.01 | 0.02 | **0.43** | 54.9% | 54.9% |
| 74 | | | 136 | | 2 | 0.46 | 0.01 | 0.01 | 0.01 | 0.04 | **0.60** | 6.5% | 2.2% | 0.14 | 0.00 | 0.01 | 0.01 | 0.02 | **0.20** | 32.6% | 32.6% |
| 75 | | | 140 | | 2 | 0.63 | 0.00 | 0.01 | 0.01 | 0.05 | **0.69** | 7.5% | 1.2% | 0.30 | 0.00 | 0.00 | 0.01 | 0.02 | **0.38** | 54.6% | 54.6% |
| 76 | | | 141 | | 2 | 0.60 | 0.01 | 0.01 | 0.01 | 0.05 | **0.72** | 6.8% | 1.5% | 0.25 | 0.00 | 0.01 | 0.01 | 0.02 | **0.36** | 49.4% | 49.4% |
| 77 | L | Patch | 144 | | 5 | 1.10 | 0.01 | 0.02 | 0.06 | 0.10 | **1.41** | 7.2% | 4.5% | 0.51 | 0.01 | 0.02 | 0.04 | 0.04 | **0.73** | 51.4% | 51.4% |
| 78 | | | 145 | | 5 | 1.24 | 0.02 | 0.01 | 0.01 | 0.16 | **1.35** | 11.5% | 0.7% | 0.62 | 0.01 | 0.01 | 0.01 | 0.06 | **0.81** | 59.8% | 59.8% |
| 79 | | | 146 | | 5 | 1.41 | 0.02 | 0.00 | 0.01 | 0.12 | **1.51** | 8.2% | 0.7% | 0.72 | 0.01 | 0.00 | 0.01 | 0.05 | **0.87** | 57.6% | 57.6% |
| 80 | | | 147 | | 5 | 1.42 | 0.02 | 0.00 | 0.03 | 0.13 | **1.56** | 8.6% | 2.1% | 0.69 | 0.01 | 0.00 | 0.02 | 0.05 | **0.89** | 56.8% | 56.8% |
| 81 | | | 148 | | 5 | 0.82 | 0.02 | 0.03 | 0.08 | 0.11 | **1.10** | 10.0% | 7.2% | 0.33 | 0.01 | 0.02 | 0.06 | 0.04 | **0.41** | 37.0% | 37.0% |
| 82 | | | 154 | | 5 | 1.26 | 0.01 | 0.00 | 0.01 | 0.15 | **1.41** | 10.4% | 0.9% | 0.64 | 0.01 | 0.00 | 0.01 | 0.05 | **0.83** | 59.1% | 59.1% |
| 83 | | | 155 | | 5 | 1.31 | 0.02 | 0.00 | 0.01 | 0.13 | **1.42** | 9.3% | 0.8% | 0.67 | 0.01 | 0.00 | 0.01 | 0.06 | **0.84** | 59.2% | 59.2% |
| 84 | | | 156 | | 5 | 1.44 | 0.02 | 0.00 | 0.02 | 0.13 | **1.56** | 8.2% | 1.1% | 0.73 | 0.01 | 0.00 | 0.01 | 0.05 | **0.92** | 58.8% | 58.8% |
| 85 | | | 157 | | 5 | 1.15 | 0.02 | 0.02 | 0.06 | 0.13 | **1.31** | 9.8% | 4.9% | 0.52 | 0.01 | 0.01 | 0.04 | 0.05 | **0.65** | 49.8% | 49.8% |
| 86 | | | 0 | 128 | 2 | 0.63 | 0.01 | 0.01 | 0.01 | 0.12 | **0.66** | 17.5% | 1.2% | 0.24 | 0.00 | 0.01 | 0.01 | 0.04 | **0.30** | 46.0% | 46.0% |
| 87 | | | 1 | 129 | 2 | **0.58** | 0.01 | 0.01 | 0.02 | 0.14 | 0.50 | 24.6% | 2.9% | **0.25** | 0.01 | 0.00 | 0.02 | 0.06 | 0.18 | 42.7% | 30.6% |
| 88 | | | 2 | 130 | 2 | 0.65 | 0.01 | 0.01 | 0.03 | 0.16 | **0.69** | 23.7% | 4.2% | 0.22 | 0.01 | 0.00 | 0.02 | 0.05 | **0.25** | 36.9% | 36.9% |
| 89 | | | 6 | 134 | 4 | 1.19 | 0.02 | 0.02 | 0.05 | 0.26 | **1.33** | 19.9% | 3.5% | 0.48 | 0.01 | 0.01 | 0.04 | 0.10 | **0.61** | 45.7% | 45.7% |
| 90 | | | 7 | 135 | 4 | **1.30** | 0.02 | 0.01 | 0.01 | 0.26 | 1.27 | 20.1% | 0.8% | 0.62 | 0.01 | 0.01 | 0.01 | 0.12 | **0.67** | 51.7% | 51.7% |
| 91 | | | 8 | 136 | 4 | **1.12** | 0.01 | 0.02 | 0.04 | 0.22 | 1.02 | 19.8% | 3.3% | **0.45** | 0.01 | 0.02 | 0.03 | 0.10 | 0.40 | 39.7% | 35.7% |
| 92 | | | 12 | 140 | 4 | 1.04 | 0.01 | 0.01 | 0.02 | 0.29 | **1.09** | 26.5% | 1.5% | 0.45 | 0.01 | 0.01 | 0.01 | 0.14 | **0.57** | 52.3% | 52.3% |
| 93 | | | 13 | 141 | 4 | **1.35** | 0.01 | 0.02 | 0.03 | 0.21 | 1.28 | 15.8% | 1.9% | **0.63** | 0.01 | 0.02 | 0.02 | 0.10 | 0.62 | 46.5% | 46.0% |
| 94 | | | 16 | 144 | 10 | 2.76 | 0.03 | 0.06 | 0.17 | 0.59 | **2.99** | 19.7% | 5.8% | 1.28 | 0.02 | 0.05 | 0.11 | 0.28 | **1.49** | 49.9% | 49.9% |
| 95 | | | 17 | 145 | 10 | 2.04 | 0.08 | 0.02 | 0.04 | 0.68 | **2.10** | 32.5% | 1.7% | 1.09 | 0.05 | 0.01 | 0.03 | 0.33 | **1.20** | 57.2% | 57.2% |
| 96 | | | 18 | 146 | 10 | **2.88** | 0.08 | 0.01 | 0.04 | 0.63 | 2.79 | 21.7% | 1.4% | **1.65** | 0.05 | 0.01 | 0.03 | 0.38 | 1.40 | 57.1% | 48.6% |
| 97 | | | 19 | 147 | 10 | **2.93** | 0.05 | 0.01 | 0.08 | 0.59 | 2.78 | 20.2% | 2.7% | **1.56** | 0.03 | 0.01 | 0.05 | 0.33 | 1.46 | 53.0% | 49.7% |
| 98 | | | 20 | 148 | 10 | **2.35** | 0.04 | 0.08 | 0.21 | 0.52 | 2.22 | 22.0% | 8.8% | **1.05** | 0.03 | 0.07 | 0.17 | 0.22 | 0.84 | 44.9% | 35.7% |
| 99 | | | 26 | 154 | 10 | **2.71** | 0.03 | 0.02 | 0.04 | 0.62 | 2.70 | 22.8% | 1.6% | 1.35 | 0.02 | 0.02 | 0.03 | 0.26 | **1.52** | 55.9% | 55.9% |
| 100 | | | 27 | 155 | 10 | 2.49 | 0.08 | 0.01 | 0.04 | 0.62 | **2.50** | 24.7% | 1.7% | **1.45** | 0.05 | 0.01 | 0.03 | 0.37 | 1.23 | 57.9% | 49.4% |
| 101 | | | 28 | 156 | 10 | **3.09** | 0.05 | 0.01 | 0.05 | 0.62 | 2.96 | 20.2% | 1.6% | **1.71** | 0.03 | 0.01 | 0.04 | 0.35 | 1.59 | 55.3% | 51.5% |
| 102 | | | 29 | 157 | 10 | **2.72** | 0.05 | 0.04 | 0.18 | 0.59 | 2.42 | 21.9% | 6.4% | **1.30** | 0.03 | 0.03 | 0.13 | 0.31 | 1.11 | 47.8% | 41.0% |

## - L–patch Mid CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | **42.9%** | **5.8%** | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | **58.1%** | **58.1%** |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 52 | | | 0 | | 1 | **0.16** | 0.00 | 0.00 | 0.00 | 0.05 | 0.13 | 32.3% | 0.6% | **0.07** | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 41.5% | 24.4% |
| 53 | | | 1 | | 1 | **0.20** | 0.00 | 0.00 | 0.01 | 0.05 | 0.16 | 26.1% | 2.5% | **0.07** | 0.00 | 0.00 | 0.00 | 0.02 | 0.05 | 36.7% | 23.1% |
| 54 | | | 2 | | 1 | **0.24** | 0.01 | 0.00 | 0.01 | 0.08 | 0.23 | 33.1% | 5.1% | **0.08** | 0.00 | 0.00 | 0.01 | 0.03 | 0.07 | 35.2% | 30.1% |
| 55 | | | 6 | | 2 | **0.51** | 0.01 | 0.01 | 0.01 | 0.12 | 0.44 | 24.3% | 1.8% | **0.15** | 0.00 | 0.01 | 0.01 | 0.06 | 0.13 | 29.5% | 26.0% |
| 56 | | | 7 | | 2 | **0.39** | 0.01 | 0.00 | 0.00 | 0.12 | 0.32 | 30.3% | 0.8% | **0.20** | 0.00 | 0.00 | 0.00 | 0.06 | 0.11 | 51.9% | 28.3% |
| 57 | | | 8 | | 2 | **0.44** | 0.00 | 0.01 | 0.01 | 0.13 | 0.34 | 28.4% | 1.8% | **0.19** | 0.00 | 0.01 | 0.01 | 0.05 | 0.14 | 42.3% | 31.1% |
| 58 | | | 12 | | 2 | **0.32** | 0.01 | 0.00 | 0.01 | 0.12 | 0.28 | 35.9% | 1.9% | **0.16** | 0.00 | 0.00 | 0.01 | 0.06 | 0.09 | 50.0% | 27.5% |
| 59 | | | 13 | | 2 | **0.46** | 0.01 | 0.01 | 0.00 | 0.11 | 0.36 | 24.7% | 0.9% | **0.21** | 0.00 | 0.00 | 0.00 | 0.05 | 0.14 | 45.4% | 31.0% |
| 60 | | | 16 | | 5 | **0.80** | 0.01 | 0.03 | 0.04 | 0.34 | 0.68 | 42.9% | 4.6% | **0.33** | 0.01 | 0.03 | 0.03 | 0.19 | 0.31 | 41.4% | 38.2% |
| 61 | | | 17 | | 5 | 0.73 | 0.02 | 0.01 | 0.02 | 0.30 | **0.73** | 41.3% | 2.2% | **0.37** | 0.01 | 0.01 | 0.01 | 0.18 | 0.23 | 50.1% | 32.0% |
| 62 | | | 18 | | 5 | **0.87** | 0.02 | 0.01 | 0.02 | 0.34 | 0.76 | 38.5% | 2.2% | **0.43** | 0.01 | 0.00 | 0.01 | 0.20 | 0.28 | 49.3% | 31.8% |
| 63 | | | 19 | | 5 | **0.94** | 0.02 | 0.00 | 0.04 | 0.36 | 0.77 | 38.2% | 3.7% | **0.45** | 0.01 | 0.00 | 0.03 | 0.21 | 0.34 | 48.1% | 35.8% |
| 64 | | | 20 | | 5 | **1.14** | 0.02 | 0.02 | 0.04 | 0.31 | 0.97 | 26.8% | 3.5% | **0.47** | 0.01 | 0.02 | 0.03 | 0.16 | 0.44 | 40.6% | 38.8% |
| 65 | | | 26 | | 5 | **0.85** | 0.02 | 0.02 | 0.02 | 0.35 | 0.72 | 41.8% | 2.5% | **0.33** | 0.01 | 0.01 | 0.01 | 0.21 | 0.29 | 39.4% | 33.9% |
| 66 | | | 27 | | 5 | **0.84** | 0.03 | 0.01 | 0.03 | 0.32 | 0.77 | 38.6% | 3.4% | **0.42** | 0.02 | 0.00 | 0.02 | 0.19 | 0.25 | 49.8% | 29.9% |
| 67 | | | 28 | | 5 | **0.92** | 0.02 | 0.01 | 0.03 | 0.35 | 0.77 | 37.7% | 3.3% | **0.47** | 0.01 | 0.00 | 0.02 | 0.21 | 0.33 | 51.1% | 35.8% |
| 68 | | | 29 | | 5 | **1.19** | 0.03 | 0.01 | 0.04 | 0.36 | 1.02 | 30.5% | 3.4% | **0.49** | 0.01 | 0.01 | 0.03 | 0.21 | 0.45 | 41.1% | 37.7% |
| 69 | | | 128 | | 1 | 0.32 | 0.00 | 0.00 | 0.00 | 0.02 | **0.38** | 6.3% | 0.8% | 0.12 | 0.00 | 0.00 | 0.00 | 0.01 | **0.18** | 46.6% | 46.6% |
| 70 | | | 129 | | 1 | 0.33 | 0.00 | 0.00 | 0.01 | 0.02 | **0.36** | 5.3% | 1.9% | 0.14 | 0.00 | 0.00 | 0.01 | 0.01 | **0.17** | 46.3% | 46.3% |
| 71 | | | 130 | | 1 | 0.32 | 0.00 | 0.00 | 0.01 | 0.03 | **0.39** | 8.5% | 1.8% | 0.12 | 0.00 | 0.00 | 0.01 | 0.01 | **0.17** | 43.8% | 43.8% |
| 72 | | | 134 | | 2 | 0.60 | 0.00 | 0.00 | 0.01 | 0.05 | **0.74** | 7.3% | 1.9% | 0.25 | 0.00 | 0.00 | 0.01 | 0.02 | **0.34** | 46.0% | 46.0% |
| 73 | | | 135 | | 2 | 0.78 | 0.01 | 0.00 | 0.01 | 0.05 | **0.84** | 5.9% | 0.8% | 0.35 | 0.00 | 0.00 | 0.01 | 0.02 | **0.47** | 55.4% | 55.4% |
| 74 | | | 136 | | 2 | 0.45 | 0.01 | 0.01 | 0.01 | 0.04 | **0.54** | 7.9% | 2.4% | 0.14 | 0.00 | 0.01 | 0.01 | 0.02 | **0.17** | 30.8% | 30.8% |
| 75 | | | 140 | | 2 | 0.67 | 0.00 | 0.00 | 0.01 | 0.04 | **0.76** | 5.8% | 0.9% | 0.31 | 0.00 | 0.00 | 0.01 | 0.02 | **0.40** | 52.9% | 52.9% |
| 76 | | | 141 | | 2 | 0.61 | 0.01 | 0.01 | 0.01 | 0.05 | **0.67** | 7.5% | 1.8% | 0.27 | 0.00 | 0.01 | 0.01 | 0.02 | **0.32** | 47.9% | 47.9% |
| 77 | L | Patch | 144 | | 5 | 0.94 | 0.01 | 0.02 | 0.05 | 0.13 | **1.23** | 10.4% | 3.7% | 0.46 | 0.01 | 0.02 | 0.03 | 0.05 | **0.65** | 53.3% | 53.3% |
| 78 | | | 145 | | 5 | 1.66 | 0.01 | 0.00 | 0.01 | 0.15 | **1.67** | 9.0% | 0.5% | 0.87 | 0.01 | 0.00 | 0.01 | 0.07 | **0.96** | 57.3% | 57.3% |
| 79 | | | 146 | | 5 | 1.32 | 0.02 | 0.00 | 0.01 | 0.11 | **1.43** | 7.4% | 0.7% | 0.66 | 0.01 | 0.00 | 0.01 | 0.05 | **0.83** | 58.0% | 58.0% |
| 80 | | | 147 | | 5 | 1.26 | 0.02 | 0.01 | 0.04 | 0.17 | **1.37** | 12.4% | 2.8% | 0.65 | 0.01 | 0.01 | 0.02 | 0.07 | **0.76** | 55.8% | 55.8% |
| 81 | | | 148 | | 5 | 0.98 | 0.02 | 0.03 | 0.06 | 0.16 | **1.02** | 15.4% | 5.8% | **0.43** | 0.01 | 0.02 | 0.05 | 0.06 | 0.41 | 42.0% | 40.6% |
| 82 | | | 154 | | 5 | 1.32 | 0.01 | 0.00 | 0.01 | 0.13 | **1.41** | 9.4% | 0.9% | 0.68 | 0.01 | 0.00 | 0.01 | 0.06 | **0.80** | 57.0% | 57.0% |
| 83 | | | 155 | | 5 | 1.58 | 0.01 | 0.01 | 0.01 | 0.14 | **1.62** | 8.3% | 0.7% | 0.82 | 0.01 | 0.00 | 0.01 | 0.06 | **0.94** | 58.1% | 58.1% |
| 84 | | | 156 | | 5 | 1.28 | 0.02 | 0.01 | 0.03 | 0.16 | **1.39** | 11.2% | 1.9% | 0.64 | 0.01 | 0.01 | 0.02 | 0.06 | **0.78** | 56.4% | 56.4% |
| 85 | | | 157 | | 5 | 1.12 | 0.02 | 0.01 | 0.05 | 0.16 | **1.25** | 12.7% | 4.2% | 0.54 | 0.01 | 0.01 | 0.04 | 0.06 | **0.58** | 46.2% | 46.2% |
| 86 | | | 0 | 128 | 2 | **0.58** | 0.01 | 0.01 | 0.01 | 0.10 | 0.57 | 17.6% | 1.2% | 0.21 | 0.00 | 0.01 | 0.00 | 0.04 | **0.25** | 42.5% | 42.5% |
| 87 | | | 1 | 129 | 2 | **0.66** | 0.00 | 0.01 | 0.02 | 0.10 | 0.61 | 14.5% | 3.0% | **0.28** | 0.00 | 0.01 | 0.02 | 0.04 | 0.24 | 42.0% | 35.5% |
| 88 | | | 2 | 130 | 2 | 0.68 | 0.01 | 0.00 | 0.03 | 0.16 | **0.69** | 22.5% | 4.5% | 0.26 | 0.01 | 0.00 | 0.02 | 0.05 | **0.28** | 40.6% | 40.6% |
| 89 | | | 6 | 134 | 4 | 1.29 | 0.02 | 0.02 | 0.04 | 0.23 | **1.38** | 16.6% | 2.6% | 0.51 | 0.01 | 0.02 | 0.03 | 0.08 | **0.65** | 47.3% | 47.3% |
| 90 | | | 7 | 135 | 4 | **1.43** | 0.01 | 0.01 | 0.02 | 0.21 | 1.38 | 14.9% | 1.2% | **0.70** | 0.01 | 0.00 | 0.01 | 0.10 | 0.63 | 49.2% | 44.2% |
| 91 | | | 8 | 136 | 4 | **1.21** | 0.02 | 0.03 | 0.04 | 0.23 | 1.04 | 19.4% | 3.0% | **0.51** | 0.01 | 0.02 | 0.03 | 0.09 | 0.40 | 42.1% | 33.3% |
| 92 | | | 12 | 140 | 4 | 1.07 | 0.01 | 0.01 | 0.02 | 0.18 | **1.12** | 16.3% | 1.8% | 0.53 | 0.01 | 0.01 | 0.02 | 0.09 | **0.54** | 47.9% | 47.9% |
| 93 | | | 13 | 141 | 4 | **1.50** | 0.02 | 0.02 | 0.03 | 0.23 | 1.36 | 15.3% | 1.7% | **0.68** | 0.01 | 0.01 | 0.02 | 0.09 | 0.59 | 45.3% | 39.1% |
| 94 | | | 16 | 144 | 10 | 2.57 | 0.03 | 0.08 | 0.14 | 0.65 | **2.91** | 22.2% | 4.8% | 1.20 | 0.02 | 0.07 | 0.08 | 0.29 | **1.61** | 55.4% | 55.4% |
| 95 | | | 17 | 145 | 10 | **2.64** | 0.04 | 0.03 | 0.04 | 0.50 | 2.60 | 18.7% | 1.5% | **1.52** | 0.03 | 0.03 | 0.03 | 0.28 | 1.28 | 57.6% | 48.3% |
| 96 | | | 18 | 146 | 10 | 2.74 | 0.06 | 0.01 | 0.05 | 0.55 | **2.79** | 19.7% | 1.8% | **1.53** | 0.04 | 0.01 | 0.03 | 0.33 | 1.34 | 54.8% | 48.0% |
| 97 | | | 19 | 147 | 10 | **3.21** | 0.06 | 0.01 | 0.12 | 0.73 | 3.06 | 22.6% | 3.8% | **1.75** | 0.04 | 0.01 | 0.08 | 0.40 | 1.48 | 54.5% | 46.2% |
| 98 | | | 20 | 148 | 10 | **3.26** | 0.07 | 0.09 | 0.17 | 0.77 | 2.74 | 23.7% | 5.2% | **1.52** | 0.04 | 0.08 | 0.13 | 0.34 | 1.18 | 46.7% | 36.2% |
| 99 | | | 26 | 154 | 10 | 3.01 | 0.03 | 0.03 | 0.04 | 0.58 | **3.07** | 19.1% | 1.3% | 1.42 | 0.03 | 0.03 | 0.02 | 0.30 | **1.68** | 54.9% | 54.9% |
| 100 | | | 27 | 155 | 10 | 2.81 | 0.05 | 0.02 | 0.05 | 0.47 | **2.93** | 16.0% | 1.7% | **1.58** | 0.04 | 0.01 | 0.04 | 0.29 | 1.45 | 54.0% | 49.4% |
| 101 | | | 28 | 156 | 10 | **3.00** | 0.07 | 0.02 | 0.07 | 0.68 | 2.89 | 22.6% | 2.2% | **1.66** | 0.04 | 0.01 | 0.04 | 0.38 | 1.41 | 55.4% | 47.0% |
| 102 | | | 29 | 157 | 10 | **3.54** | 0.08 | 0.04 | 0.16 | 0.84 | 3.18 | 23.7% | 4.5% | **1.75** | 0.05 | 0.03 | 0.13 | 0.41 | 1.46 | 49.4% | 41.2% |

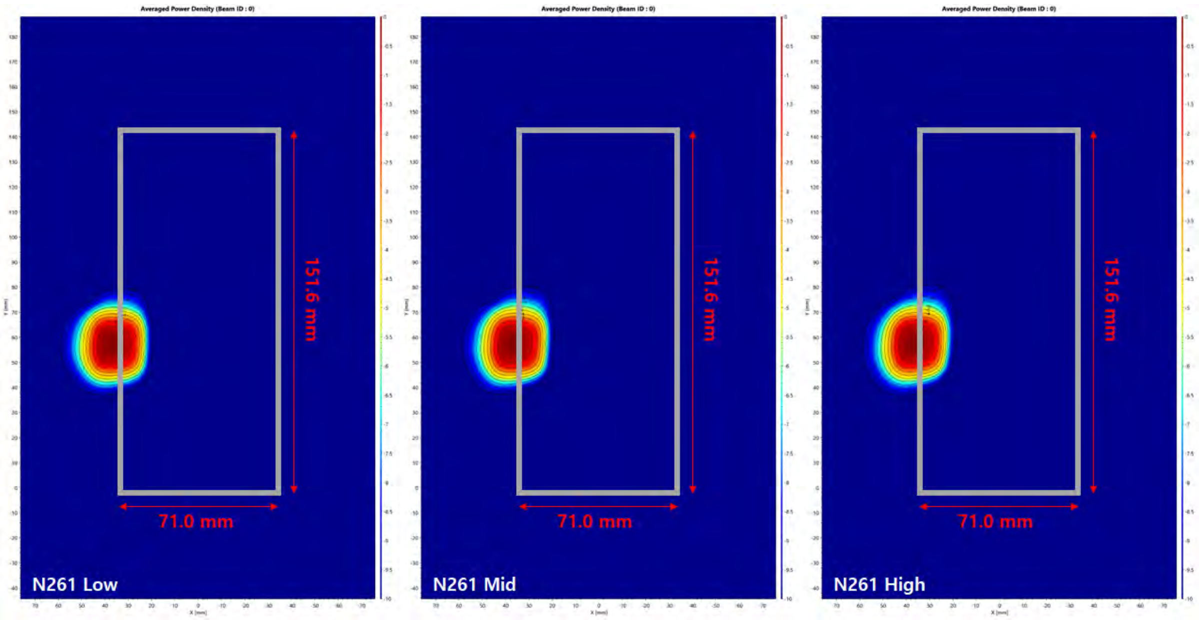
- L–patch High CH

| | | | | | | | | | | | | max ratio out of all beams | | | | | | | | max ratio out of all beams | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Module | Type | Beam ID_1 | Bema ID_2 | Feed no. | 4cm2 PD(mW/cm2) | | | | | | 42.8% | 5.5% | 4cm2 PD(mW/cm2) at 10mm evaluation distance | | | | | | 56.9% | 56.3% |
| | | | | | | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio (Fornt 2mm)/(worst-surface 2mm) | ratio (Bottom 2mm)/(worst-surface 2mm) | S4(Right) | S3(Left) | S5(Top) | S6(Bottom) | S1(Front) | S2(Rear) | ratio worst-surface (10mm/2mm) | ratio (back 10mm)/(worst-surface 2mm) |
| 52 | | | 0 | | 1 | **0.19** | 0.00 | 0.00 | 0.00 | 0.05 | 0.14 | 23.3% | 1.0% | **0.08** | 0.00 | 0.00 | 0.00 | 0.02 | 0.05 | 41.5% | 26.4% |
| 53 | | | 1 | | 1 | **0.17** | 0.00 | 0.00 | 0.00 | 0.06 | 0.16 | 33.3% | 1.8% | **0.06** | 0.00 | 0.00 | 0.00 | 0.02 | 0.05 | 34.5% | 30.9% |
| 54 | | | 2 | | 1 | **0.20** | 0.00 | 0.00 | 0.01 | 0.06 | 0.20 | 27.7% | 5.0% | **0.08** | 0.00 | 0.00 | 0.01 | 0.03 | 0.06 | 41.6% | 29.7% |
| 55 | | | 6 | | 2 | **0.39** | 0.01 | 0.01 | 0.01 | 0.11 | 0.35 | 28.4% | 1.8% | **0.12** | 0.00 | 0.01 | 0.01 | 0.05 | 0.12 | 31.8% | 30.7% |
| 56 | | | 7 | | 2 | **0.31** | 0.00 | 0.00 | 0.01 | 0.10 | 0.25 | 32.1% | 1.9% | **0.17** | 0.00 | 0.00 | 0.01 | 0.05 | 0.10 | 53.6% | 31.8% |
| 57 | | | 8 | | 2 | **0.41** | 0.01 | 0.01 | 0.01 | 0.12 | 0.35 | 29.1% | 1.2% | **0.15** | 0.00 | 0.01 | 0.01 | 0.05 | 0.13 | 37.0% | 32.8% |
| 58 | | | 12 | | 2 | **0.30** | 0.00 | 0.00 | 0.01 | 0.10 | 0.25 | 33.3% | 1.7% | **0.17** | 0.00 | 0.00 | 0.00 | 0.06 | 0.10 | 55.3% | 31.7% |
| 59 | | | 13 | | 2 | **0.35** | 0.00 | 0.01 | 0.01 | 0.11 | 0.29 | 30.1% | 2.0% | **0.15** | 0.00 | 0.00 | 0.01 | 0.05 | 0.11 | 42.6% | 32.4% |
| 60 | | | 16 | | 5 | **0.86** | 0.01 | 0.03 | 0.02 | 0.29 | 0.75 | 34.1% | 2.3% | **0.33** | 0.01 | 0.03 | 0.01 | 0.16 | 0.30 | 38.4% | 34.3% |
| 61 | | | 17 | | 5 | **0.72** | 0.02 | 0.01 | 0.02 | 0.26 | 0.58 | 35.8% | 2.9% | **0.41** | 0.01 | 0.01 | 0.02 | 0.16 | 0.24 | 56.9% | 33.4% |
| 62 | | | 18 | | 5 | **0.69** | 0.02 | 0.01 | 0.01 | 0.29 | 0.61 | 42.8% | 1.9% | **0.35** | 0.01 | 0.01 | 0.01 | 0.18 | 0.24 | 50.5% | 34.6% |
| 63 | | | 19 | | 5 | **0.81** | 0.02 | 0.01 | 0.02 | 0.28 | 0.76 | 34.6% | 2.5% | **0.40** | 0.01 | 0.01 | 0.01 | 0.16 | 0.29 | 49.5% | 35.7% |
| 64 | | | 20 | | 5 | **1.05** | 0.02 | 0.02 | 0.04 | 0.31 | 1.02 | 29.0% | 3.9% | 0.39 | 0.01 | 0.01 | 0.03 | 0.17 | **0.43** | 40.5% | 40.5% |
| 65 | | | 26 | | 5 | **0.79** | 0.01 | 0.02 | 0.01 | 0.31 | 0.64 | 39.7% | 1.3% | **0.36** | 0.01 | 0.02 | 0.01 | 0.19 | 0.23 | 46.0% | 28.9% |
| 66 | | | 27 | | 5 | **0.65** | 0.02 | 0.01 | 0.02 | 0.26 | 0.60 | 39.7% | 2.8% | **0.34** | 0.01 | 0.01 | 0.01 | 0.16 | 0.22 | 52.1% | 33.7% |
| 67 | | | 28 | | 5 | **0.73** | 0.02 | 0.01 | 0.01 | 0.30 | 0.66 | 41.5% | 1.7% | **0.37** | 0.01 | 0.01 | 0.01 | 0.19 | 0.27 | 50.5% | 36.7% |
| 68 | | | 29 | | 5 | **1.05** | 0.02 | 0.01 | 0.04 | 0.35 | 0.99 | 33.0% | 3.5% | **0.46** | 0.01 | 0.01 | 0.03 | 0.19 | 0.45 | 43.6% | 43.3% |
| 69 | | | 128 | | 1 | 0.22 | 0.00 | 0.00 | 0.01 | 0.02 | **0.28** | 5.6% | 1.8% | 0.08 | 0.00 | 0.00 | 0.00 | 0.01 | **0.14** | 48.2% | 48.2% |
| 70 | | | 129 | | 1 | 0.30 | 0.00 | 0.00 | 0.01 | 0.03 | **0.31** | 8.9% | 1.6% | 0.11 | 0.00 | 0.00 | 0.00 | 0.01 | **0.13** | 40.3% | 40.3% |
| 71 | | | 130 | | 1 | 0.28 | 0.00 | 0.00 | 0.00 | 0.03 | **0.34** | 9.0% | 1.2% | 0.11 | 0.00 | 0.00 | 0.00 | 0.01 | **0.16** | 47.8% | 47.8% |
| 72 | | | 134 | | 2 | 0.58 | 0.00 | 0.00 | 0.01 | 0.04 | **0.67** | 6.3% | 1.8% | 0.25 | 0.00 | 0.00 | 0.01 | 0.02 | **0.31** | 46.0% | 46.0% |
| 73 | | | 135 | | 2 | 0.66 | 0.00 | 0.00 | 0.01 | 0.06 | **0.73** | 7.7% | 1.1% | 0.27 | 0.00 | 0.00 | 0.01 | 0.02 | **0.39** | 54.3% | 54.3% |
| 74 | | | 136 | | 2 | 0.35 | 0.01 | 0.01 | 0.01 | 0.05 | **0.42** | 10.6% | 2.6% | 0.12 | 0.00 | 0.01 | 0.01 | 0.01 | **0.14** | 31.8% | 31.8% |
| 75 | | | 140 | | 2 | 0.52 | 0.00 | 0.01 | 0.01 | 0.05 | **0.58** | 8.1% | 1.7% | 0.21 | 0.00 | 0.00 | 0.01 | 0.02 | **0.27** | 46.4% | 46.4% |
| 76 | | | 141 | | 2 | 0.55 | 0.01 | 0.01 | 0.01 | 0.06 | **0.60** | 9.6% | 1.3% | 0.22 | 0.00 | 0.01 | 0.01 | 0.02 | **0.30** | 49.9% | 49.9% |
| 77 | L | Patch | 144 | | 5 | 0.88 | 0.01 | 0.02 | 0.05 | 0.09 | **1.02** | 8.4% | 4.7% | 0.45 | 0.01 | 0.02 | 0.03 | 0.03 | **0.57** | 55.6% | 55.6% |
| 78 | | | 145 | | 5 | 1.33 | 0.01 | 0.00 | 0.02 | 0.13 | **1.40** | 9.0% | 1.1% | 0.69 | 0.01 | 0.00 | 0.01 | 0.06 | **0.76** | 54.5% | 54.5% |
| 79 | | | 146 | | 5 | 1.22 | 0.01 | 0.00 | 0.01 | 0.13 | **1.30** | 9.6% | 0.7% | 0.59 | 0.01 | 0.00 | 0.01 | 0.05 | **0.72** | 55.2% | 55.2% |
| 80 | | | 147 | | 5 | 0.94 | 0.03 | 0.01 | 0.03 | 0.17 | **1.09** | 15.4% | 3.1% | 0.46 | 0.02 | 0.01 | 0.02 | 0.07 | **0.58** | 53.0% | 53.0% |
| 81 | | | 148 | | 5 | **0.93** | 0.02 | 0.02 | 0.05 | 0.17 | 0.92 | 18.7% | 5.5% | **0.46** | 0.01 | 0.02 | 0.04 | 0.06 | 0.40 | 49.6% | 42.8% |
| 82 | | | 154 | | 5 | 1.33 | 0.01 | 0.01 | 0.01 | 0.12 | **1.43** | 8.3% | 0.8% | 0.68 | 0.01 | 0.01 | 0.01 | 0.05 | **0.79** | 55.5% | 55.5% |
| 83 | | | 155 | | 5 | 1.46 | 0.01 | 0.00 | 0.01 | 0.12 | **1.51** | 8.2% | 0.9% | 0.72 | 0.01 | 0.00 | 0.01 | 0.05 | **0.85** | 56.3% | 56.3% |
| 84 | | | 156 | | 5 | 1.10 | 0.02 | 0.01 | 0.03 | 0.17 | **1.23** | 13.4% | 2.4% | 0.51 | 0.02 | 0.01 | 0.02 | 0.07 | **0.64** | 52.2% | 52.2% |
| 85 | | | 157 | | 5 | 0.91 | 0.02 | 0.01 | 0.04 | 0.17 | **1.00** | 17.5% | 3.5% | 0.45 | 0.01 | 0.01 | 0.03 | 0.06 | **0.51** | 51.4% | 51.4% |
| 86 | | | 0 | 128 | 2 | **0.54** | 0.01 | 0.01 | 0.01 | 0.07 | 0.51 | 13.4% | 2.6% | 0.21 | 0.00 | 0.01 | 0.01 | 0.03 | **0.21** | 38.8% | 38.8% |
| 87 | | | 1 | 129 | 2 | **0.71** | 0.01 | 0.01 | 0.01 | 0.10 | 0.66 | 14.4% | 2.0% | **0.29** | 0.00 | 0.01 | 0.01 | 0.04 | 0.27 | 40.3% | 37.7% |
| 88 | | | 2 | 130 | 2 | 0.60 | 0.01 | 0.01 | 0.02 | 0.14 | **0.62** | 22.6% | 3.9% | 0.24 | 0.01 | 0.01 | 0.02 | 0.06 | **0.26** | 41.1% | 41.1% |
| 89 | | | 6 | 134 | 4 | **1.31** | 0.01 | 0.02 | 0.02 | 0.21 | 1.21 | 16.0% | 1.8% | 0.47 | 0.01 | 0.01 | 0.02 | 0.09 | **0.52** | 39.4% | 39.4% |
| 90 | | | 7 | 135 | 4 | **1.40** | 0.01 | 0.01 | 0.02 | 0.21 | 1.35 | 15.1% | 1.7% | **0.69** | 0.01 | 0.01 | 0.02 | 0.09 | 0.67 | 49.6% | 48.2% |
| 91 | | | 8 | 136 | 4 | **1.15** | 0.02 | 0.02 | 0.02 | 0.20 | 1.05 | 17.2% | 1.9% | **0.48** | 0.01 | 0.02 | 0.02 | 0.08 | 0.42 | 41.4% | 36.6% |
| 92 | | | 12 | 140 | 4 | **1.10** | 0.01 | 0.02 | 0.03 | 0.20 | 1.01 | 18.4% | 2.4% | **0.59** | 0.01 | 0.01 | 0.02 | 0.10 | 0.46 | 53.6% | 41.6% |
| 93 | | | 13 | 141 | 4 | **1.41** | 0.01 | 0.01 | 0.02 | 0.21 | 1.35 | 15.1% | 1.4% | **0.62** | 0.01 | 0.01 | 0.02 | 0.09 | 0.61 | 43.9% | 43.4% |
| 94 | | | 16 | 144 | 10 | **2.30** | 0.03 | 0.09 | 0.08 | 0.54 | 2.15 | 23.4% | 3.3% | 0.89 | 0.02 | 0.08 | 0.05 | 0.25 | **1.16** | 50.5% | 50.5% |
| 95 | | | 17 | 145 | 10 | **2.46** | 0.03 | 0.02 | 0.06 | 0.45 | 2.45 | 18.2% | 2.5% | **1.40** | 0.02 | 0.02 | 0.05 | 0.26 | 1.21 | 56.9% | 49.4% |
| 96 | | | 18 | 146 | 10 | 2.47 | 0.04 | 0.02 | 0.04 | 0.55 | **2.49** | 22.2% | 1.4% | **1.28** | 0.03 | 0.02 | 0.03 | 0.28 | 1.28 | 51.6% | 51.4% |
| 97 | | | 19 | 147 | 10 | **2.74** | 0.06 | 0.02 | 0.09 | 0.62 | 2.73 | 22.6% | 3.1% | **1.51** | 0.03 | 0.02 | 0.06 | 0.31 | 1.27 | 54.9% | 46.2% |
| 98 | | | 20 | 148 | 10 | **3.35** | 0.07 | 0.07 | 0.11 | 0.77 | 2.95 | 22.9% | 3.3% | **1.54** | 0.05 | 0.06 | 0.09 | 0.35 | 1.30 | 46.1% | 38.7% |
| 99 | | | 26 | 154 | 10 | **2.45** | 0.03 | 0.04 | 0.03 | 0.58 | 2.44 | 23.5% | 1.1% | 1.27 | 0.02 | 0.04 | 0.02 | 0.31 | **1.35** | 55.2% | 55.2% |
| 100 | | | 27 | 155 | 10 | 2.36 | 0.03 | 0.01 | 0.04 | 0.46 | **2.49** | 18.3% | 1.7% | 1.19 | 0.03 | 0.01 | 0.03 | 0.24 | **1.30** | 52.2% | 52.2% |
| 101 | | | 28 | 156 | 10 | 2.61 | 0.06 | 0.02 | 0.06 | 0.56 | **2.62** | 21.5% | 2.4% | **1.36** | 0.04 | 0.02 | 0.04 | 0.28 | 1.25 | 52.1% | 47.6% |
| 102 | | | 29 | 157 | 10 | **3.18** | 0.07 | 0.03 | 0.10 | 0.74 | 2.94 | 23.3% | 3.1% | **1.61** | 0.04 | 0.02 | 0.08 | 0.38 | 1.43 | 50.6% | 44.8% |

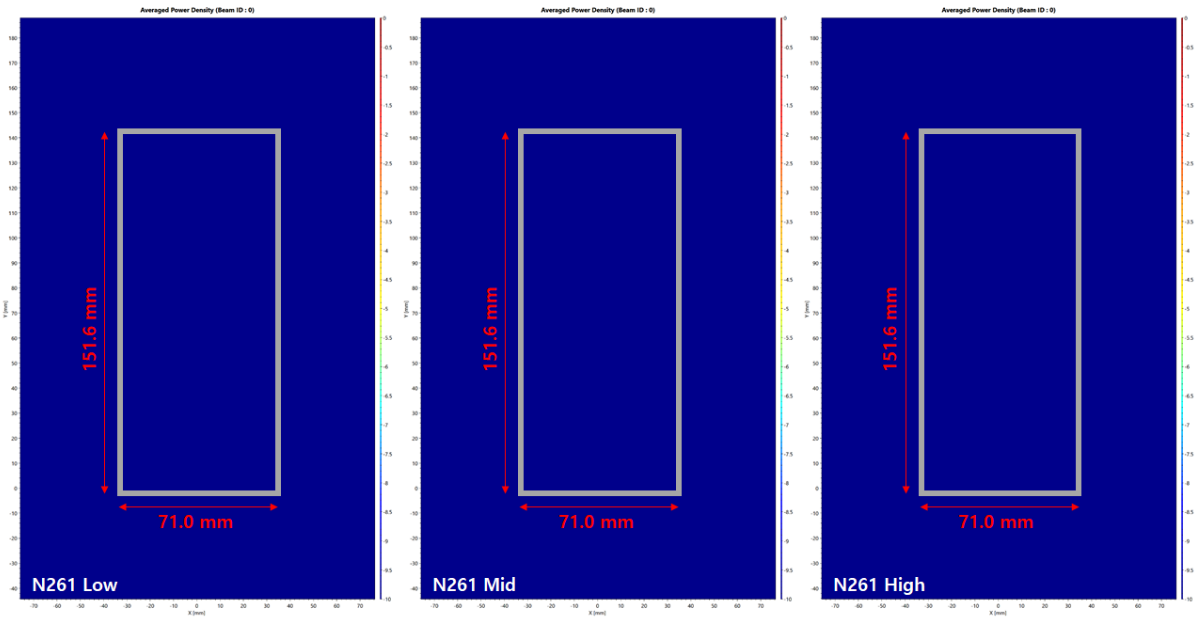
## Appendix A – Simulated PD Distributions for Ant. L for simultaneous transmission analysis

This section shows the 4cm$^2$ 10 PD simulation plots with 10 dB contour for each beam IDs, channels of Ant. L (Back /Front surfaces). These figures are normalized to peak 4cm$^2$ PD values of each beam ID. For the front surface, if the ratio of (2mm front PD)/(2mm worst surface PD) below 10%, then nothing will be shown in the PD distribution.

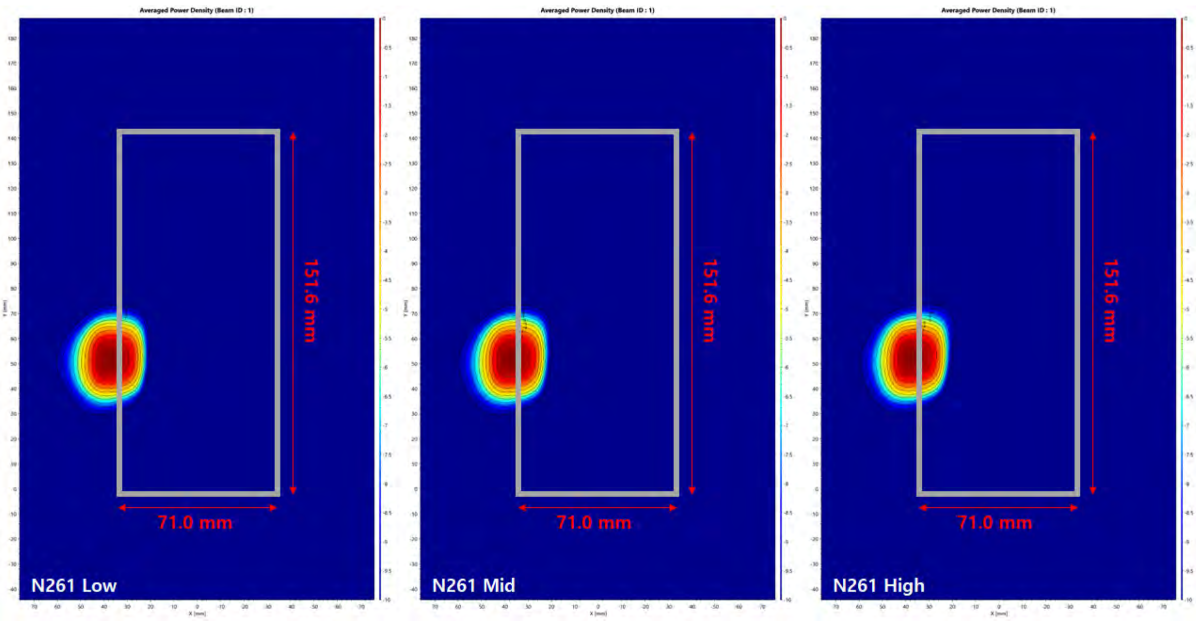
- n261 / Beam ID: 0 / Back surface



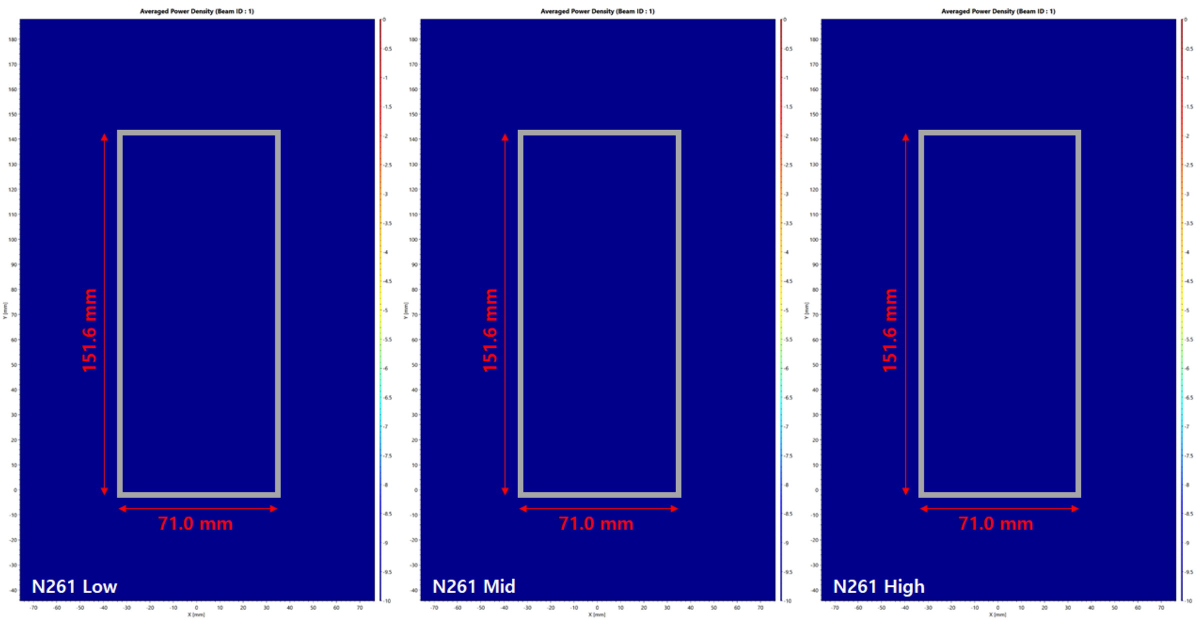

- n261 / Beam ID: 0 / Front surface



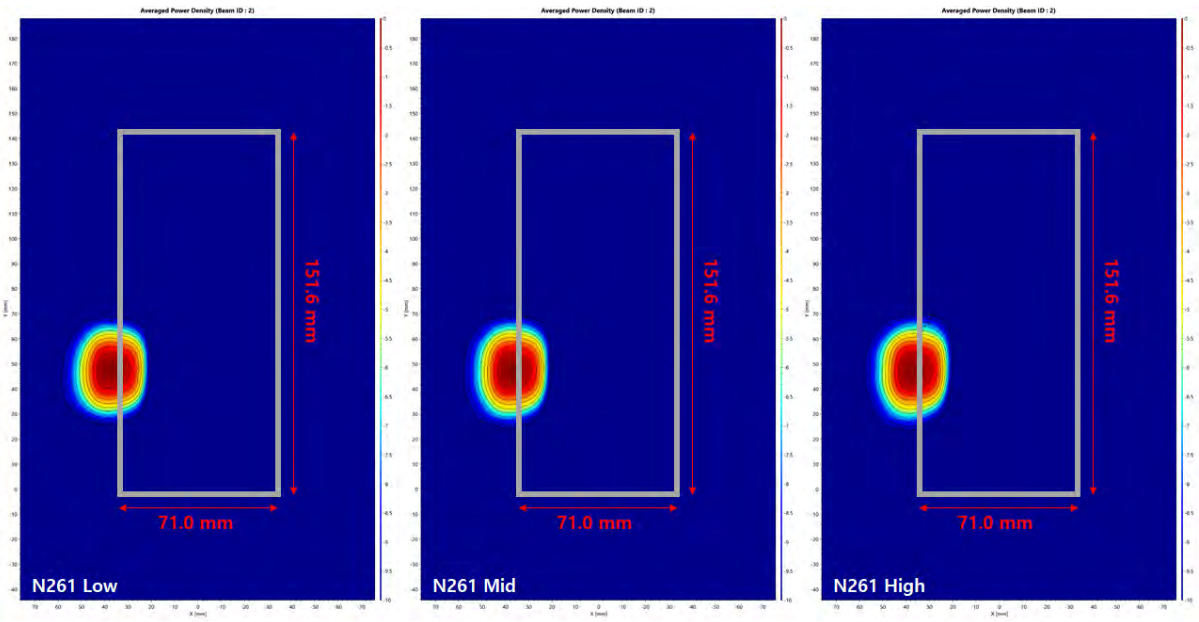
- n261 / Beam ID: 1 / Back surface



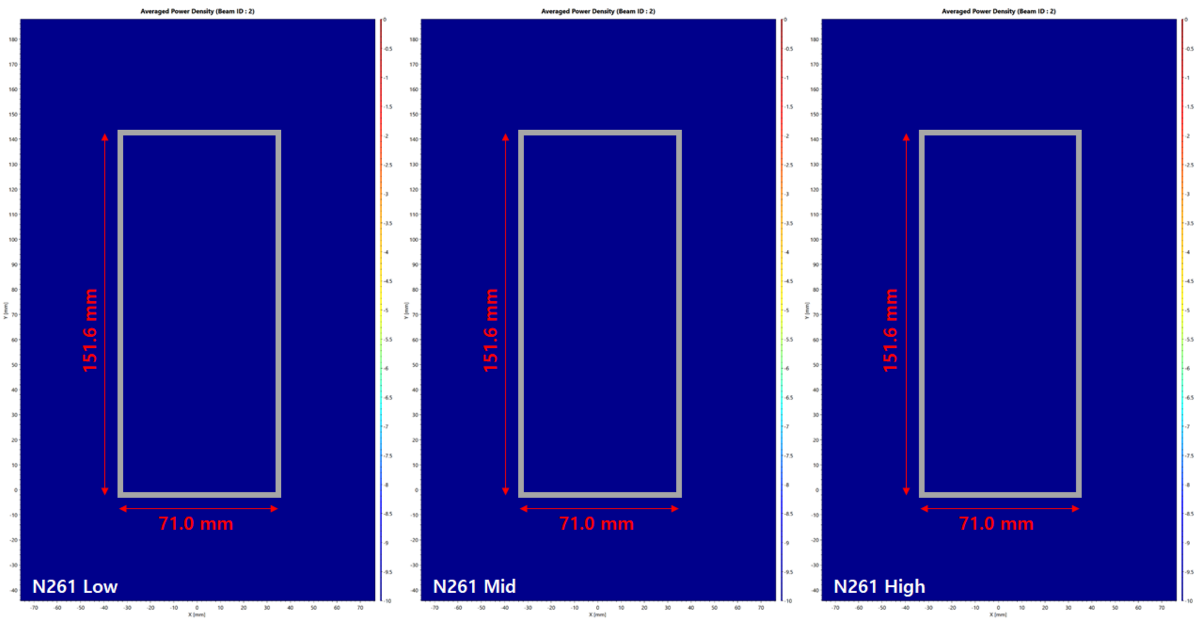

- n261 / Beam ID: 1 / Front surface



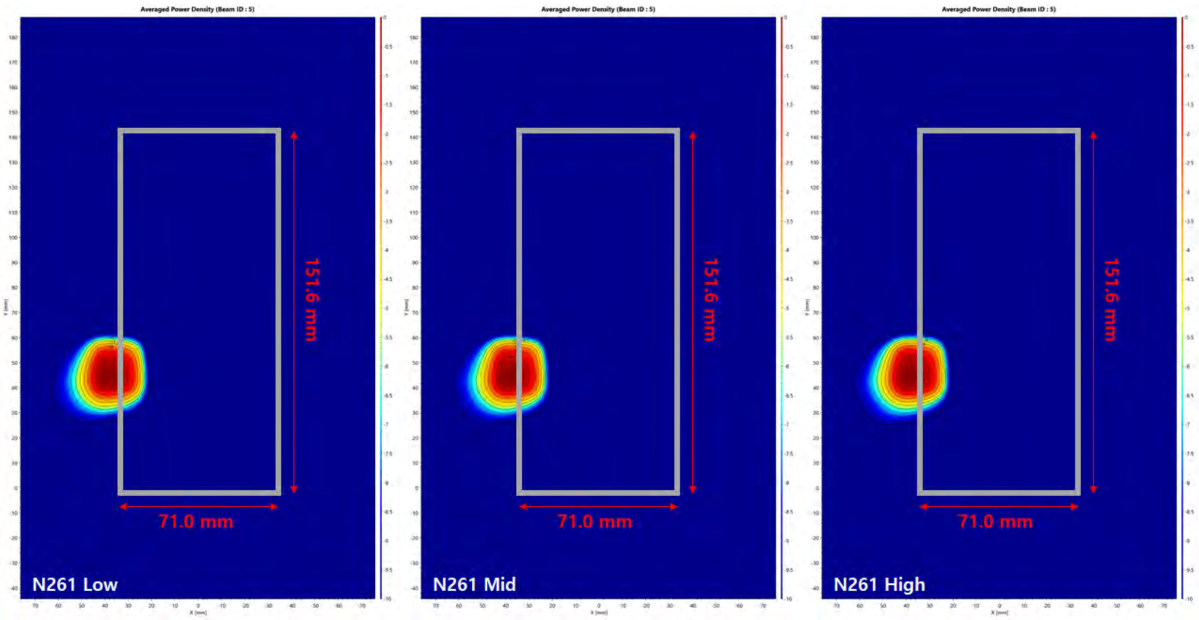
- n261 / Beam ID: 2 / Back surface



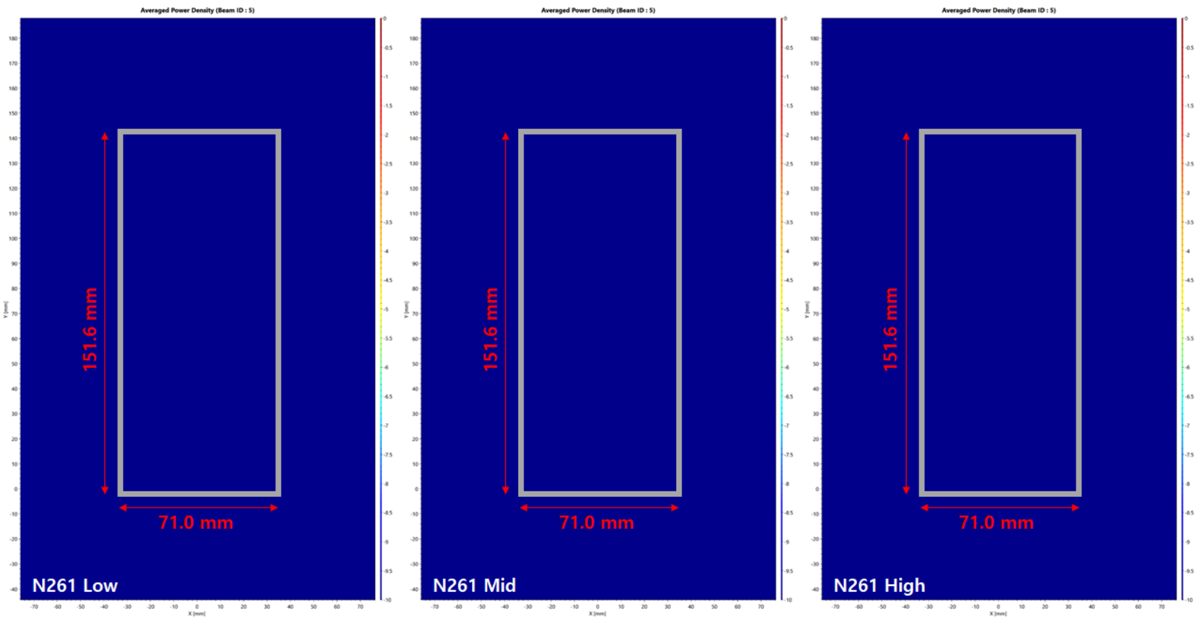

- n261 / Beam ID: 2 / Front surface



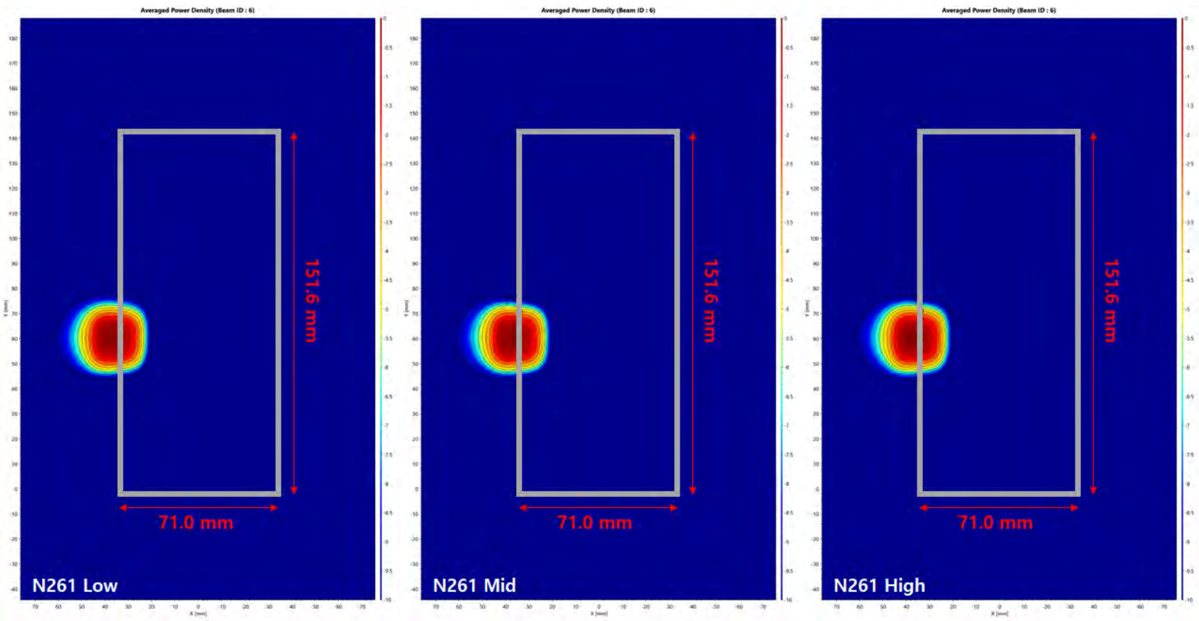
- n261 / Beam ID: 5 / Back surface



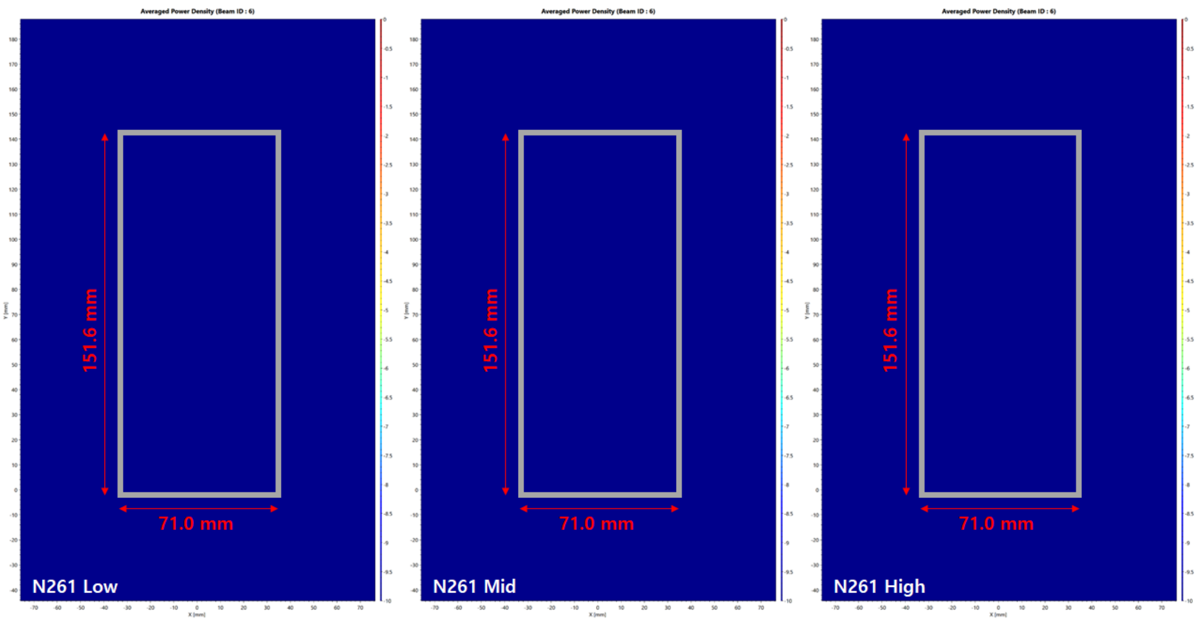

- n261 / Beam ID: 5 / Front surface



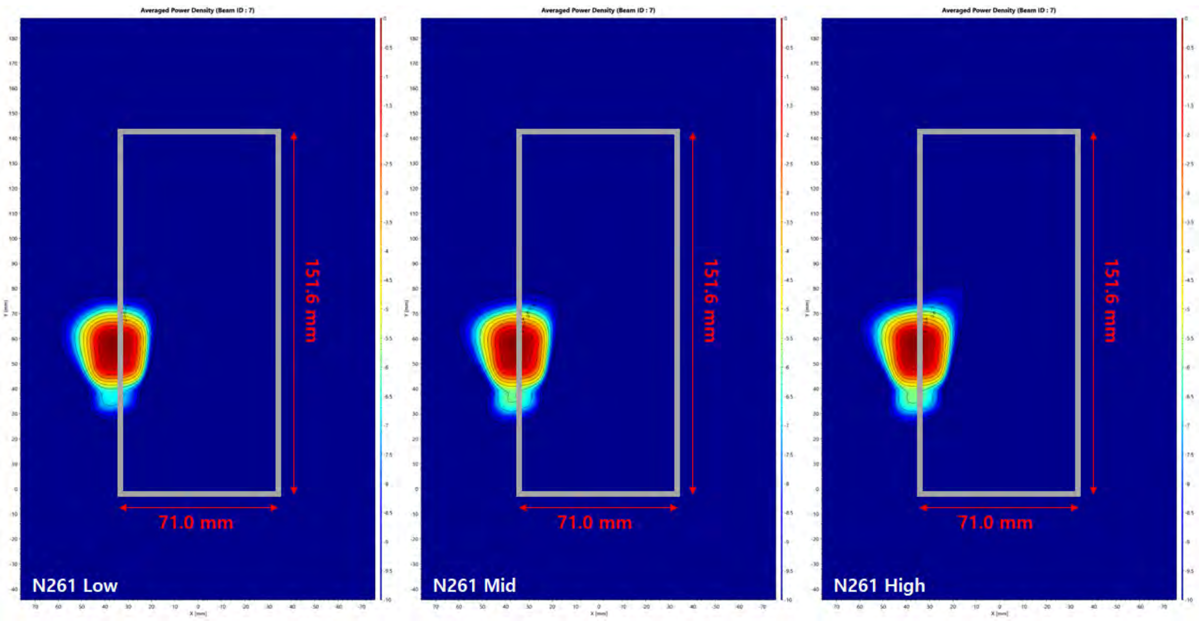
- n261 / Beam ID: 6 / Back surface



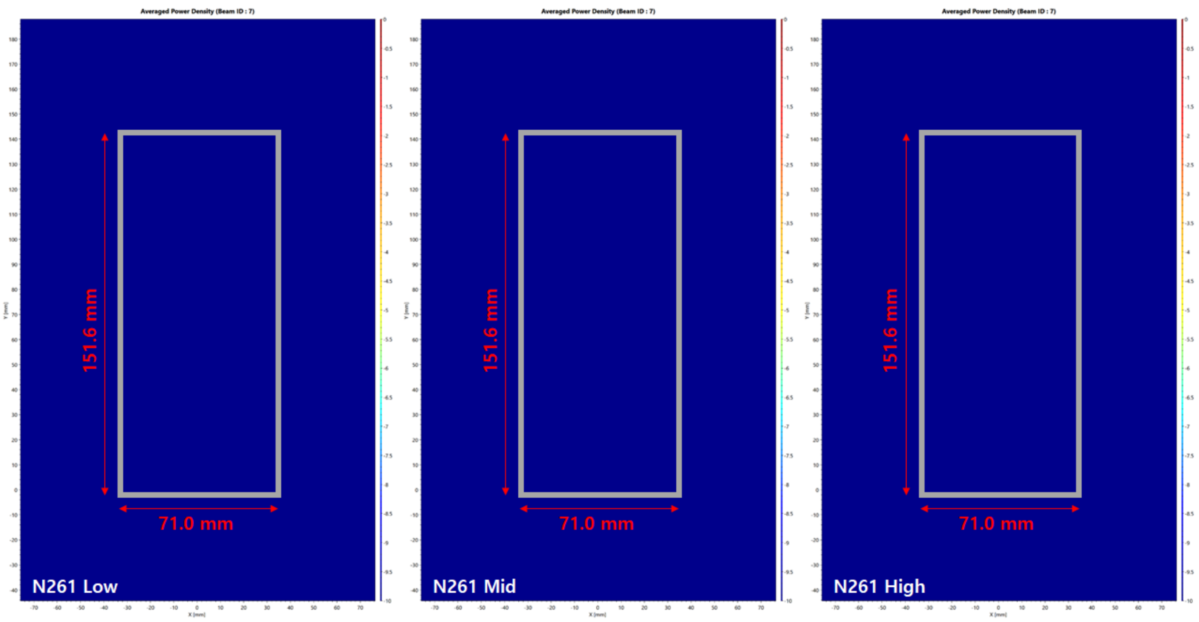

- n261 / Beam ID: 6 / Front surface



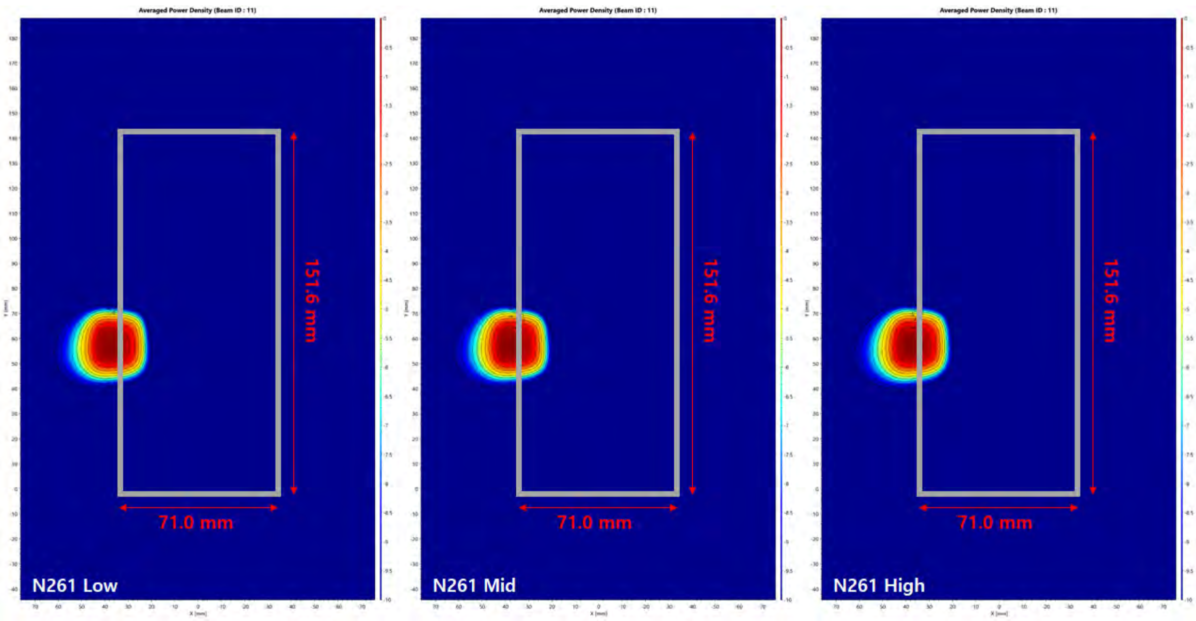
- n261 / Beam ID: 7 / Back surface



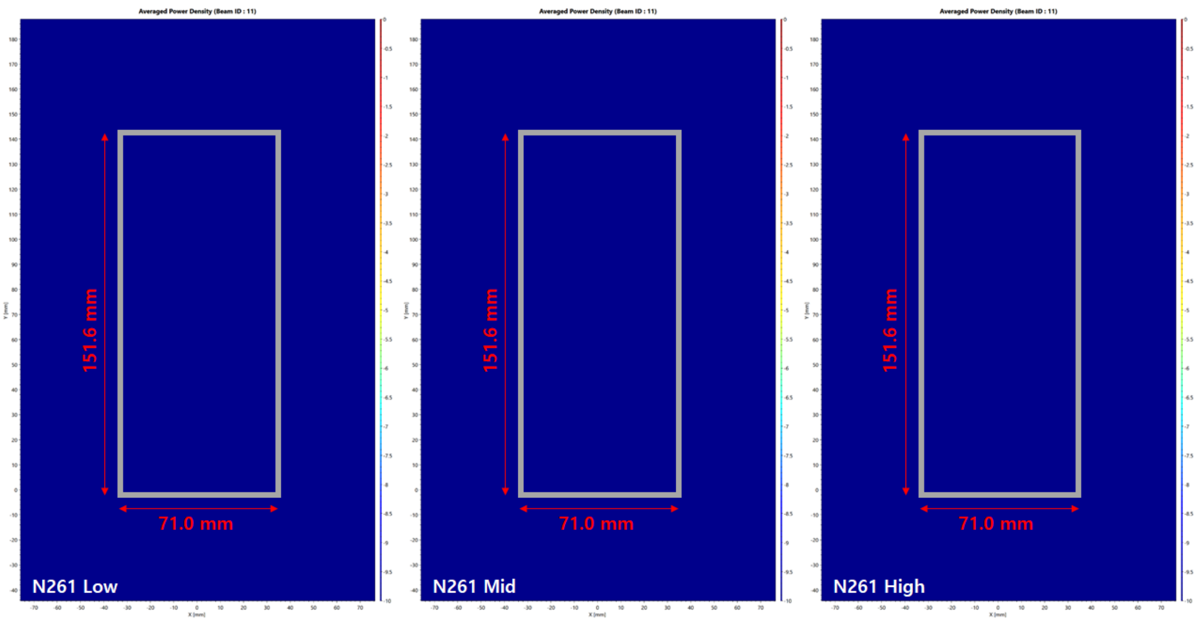

- n261 / Beam ID: 7 / Front surface



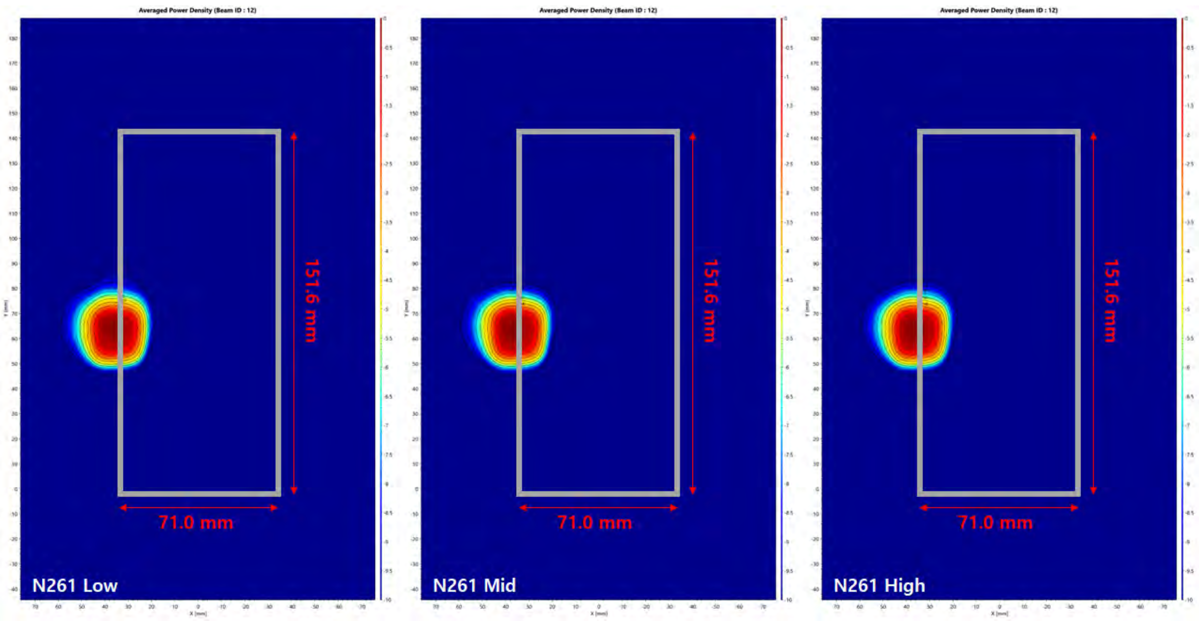
- n261 / Beam ID: 11 / Back surface



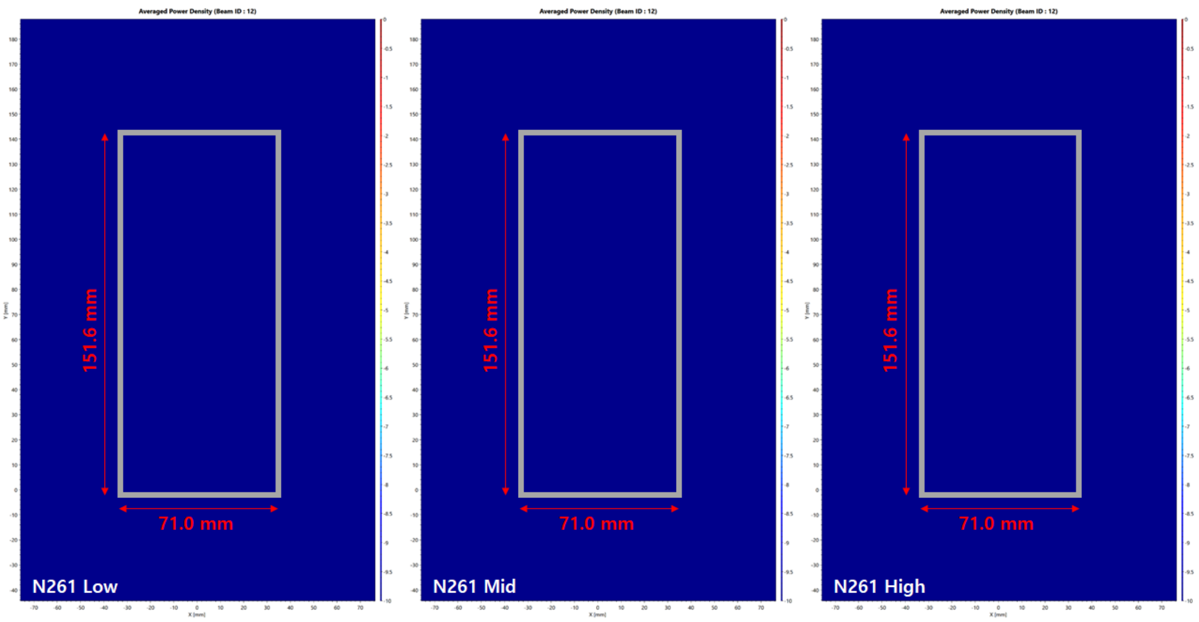

- n261 / Beam ID: 11 / Front surface



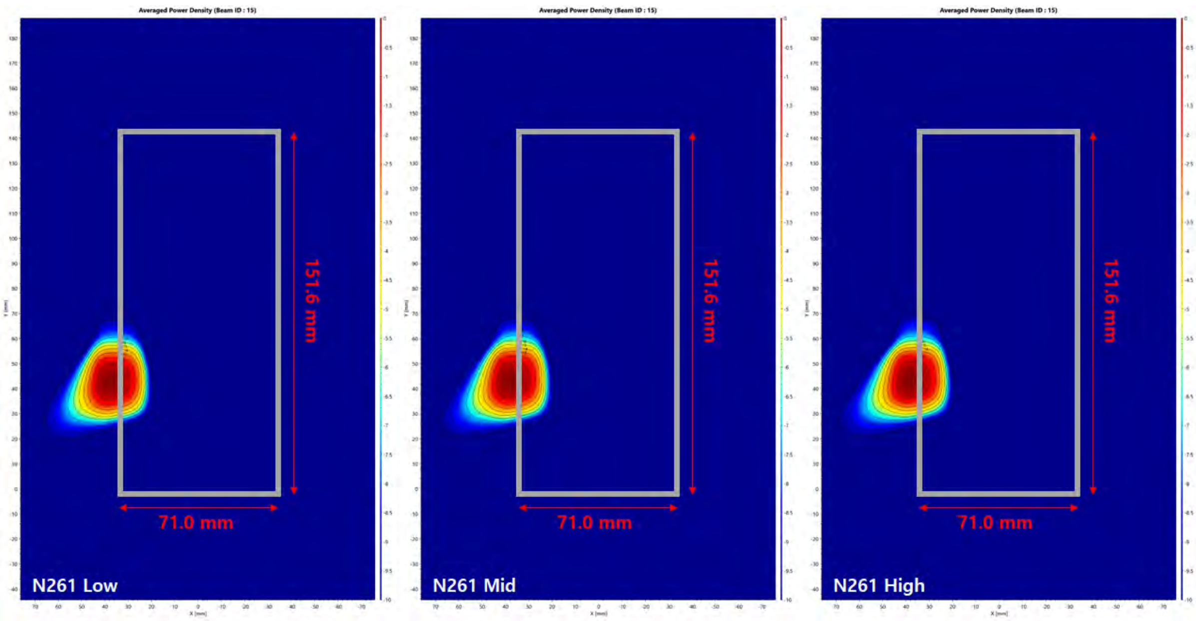
- n261 / Beam ID: 12 / Back surface



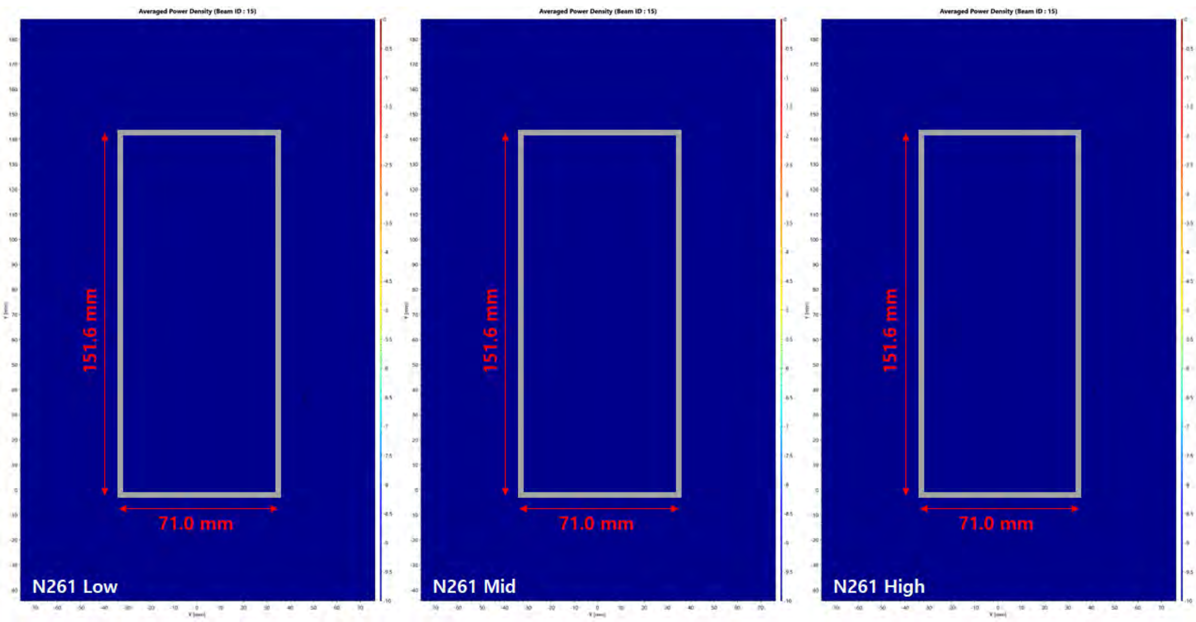

- n261 / Beam ID: 12 / Front surface



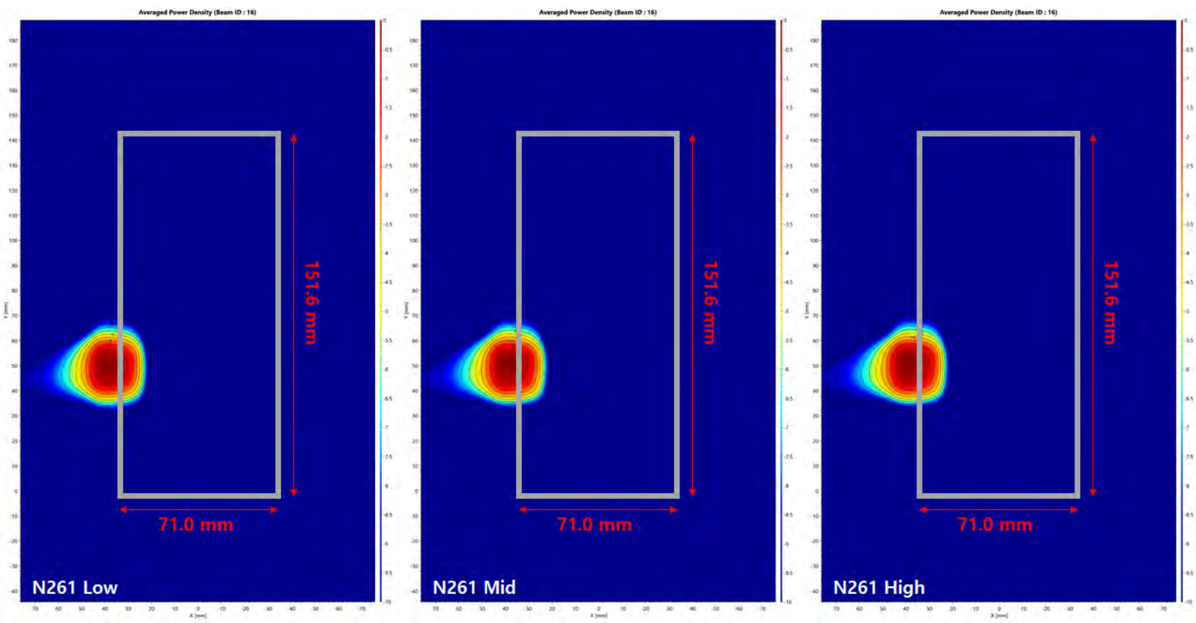
- n261 / Beam ID: 15 / Back surface



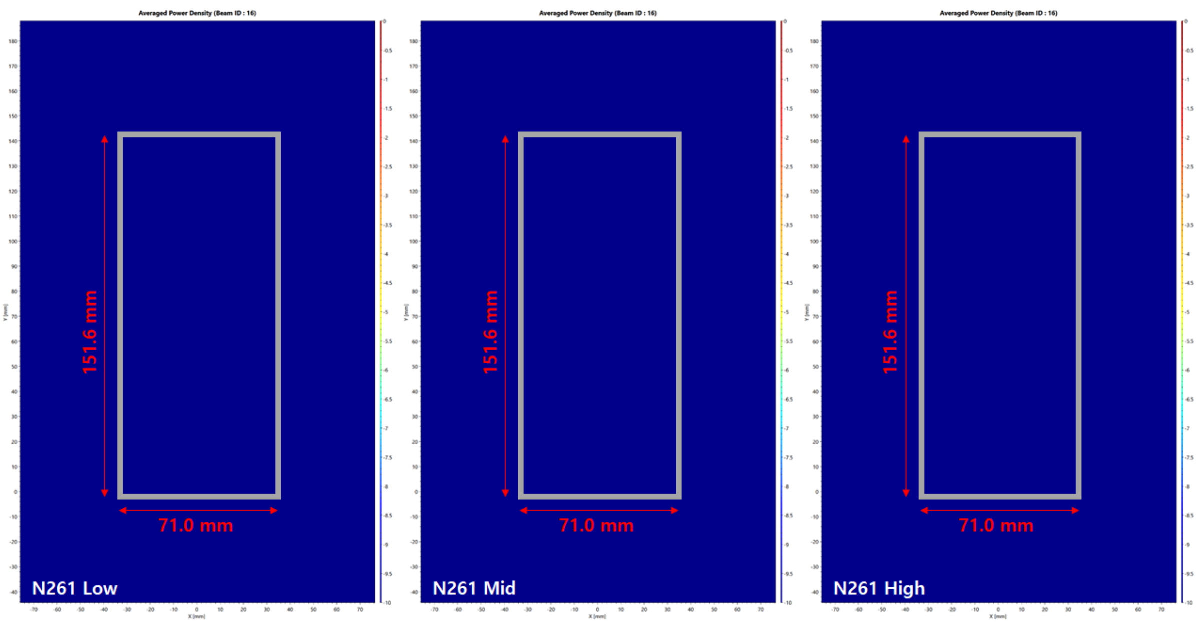

- n261 / Beam ID: 15 / Front surface



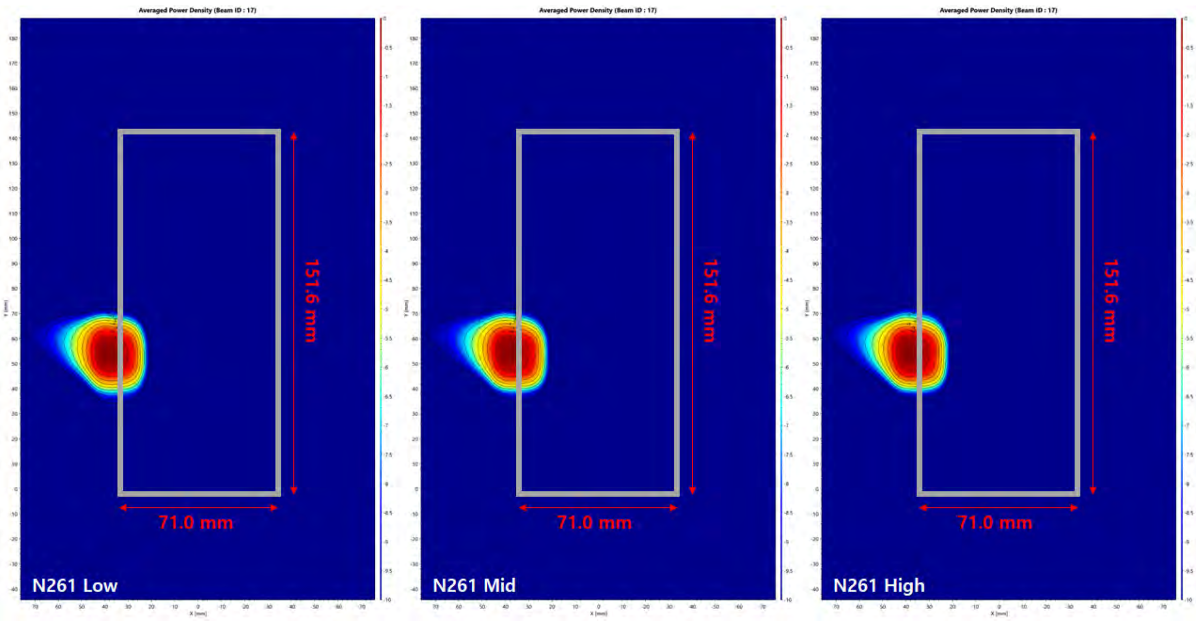
- n261 / Beam ID: 16 / Back surface



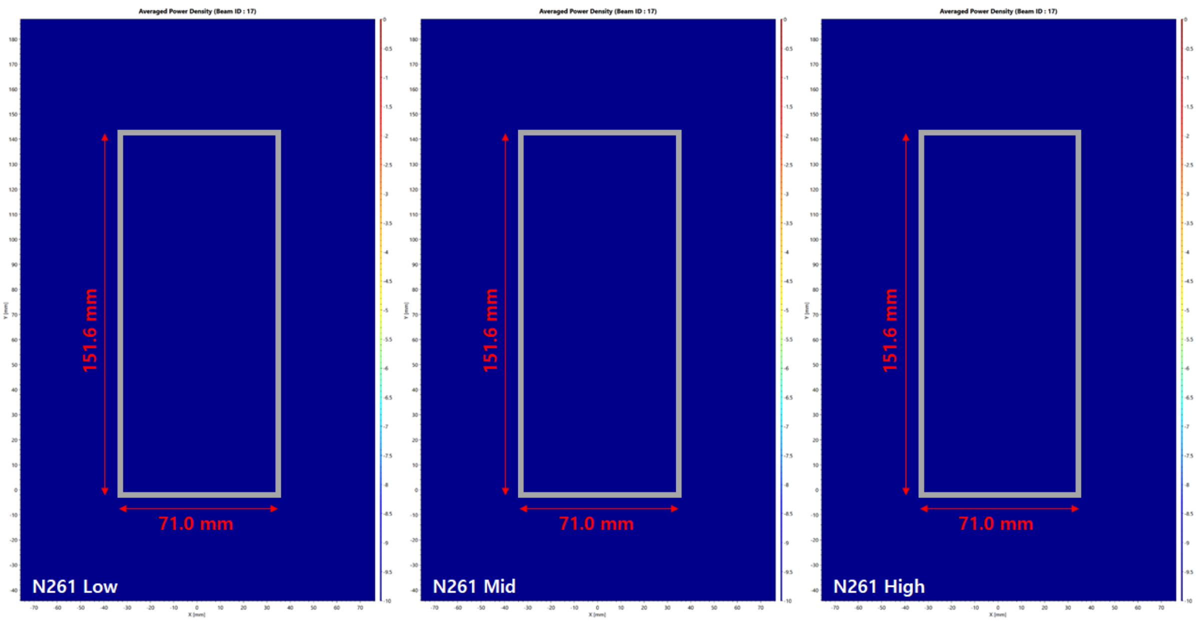

- n261 / Beam ID: 16 / Front surface



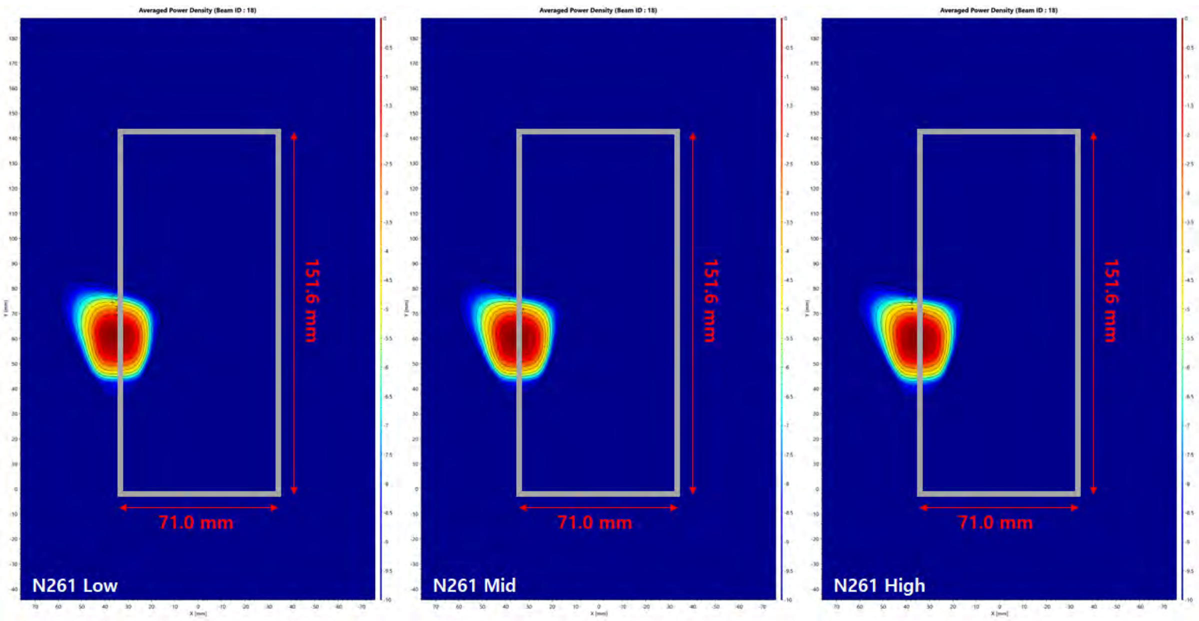
- n261 / Beam ID: 17 / Back surface



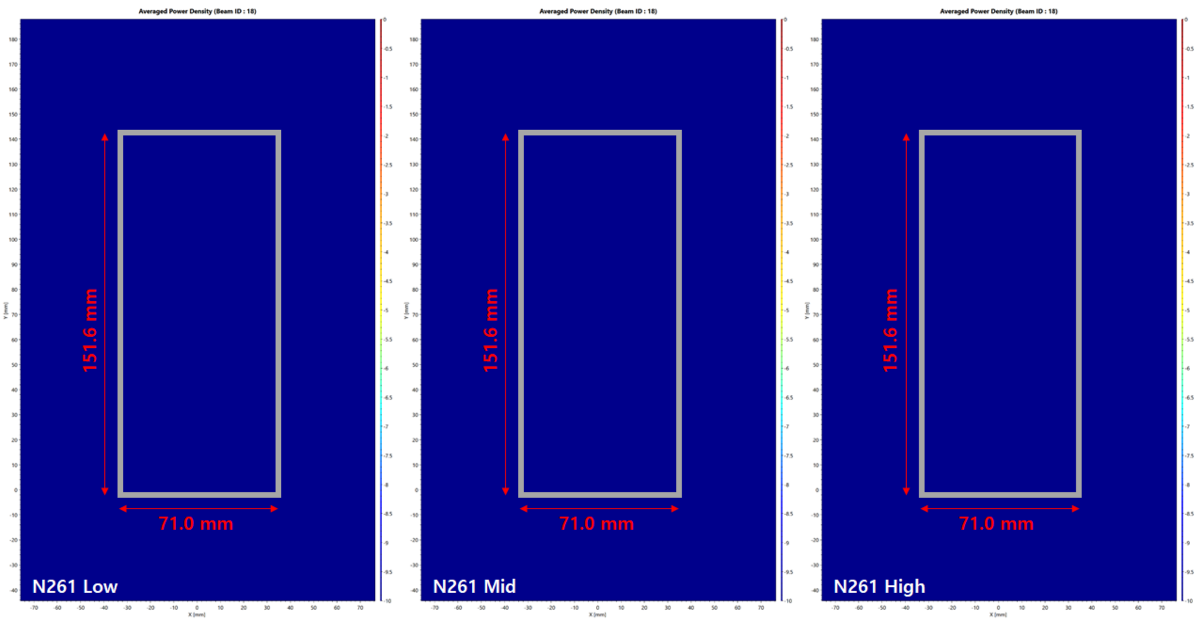

- n261 / Beam ID: 17 / Front surface



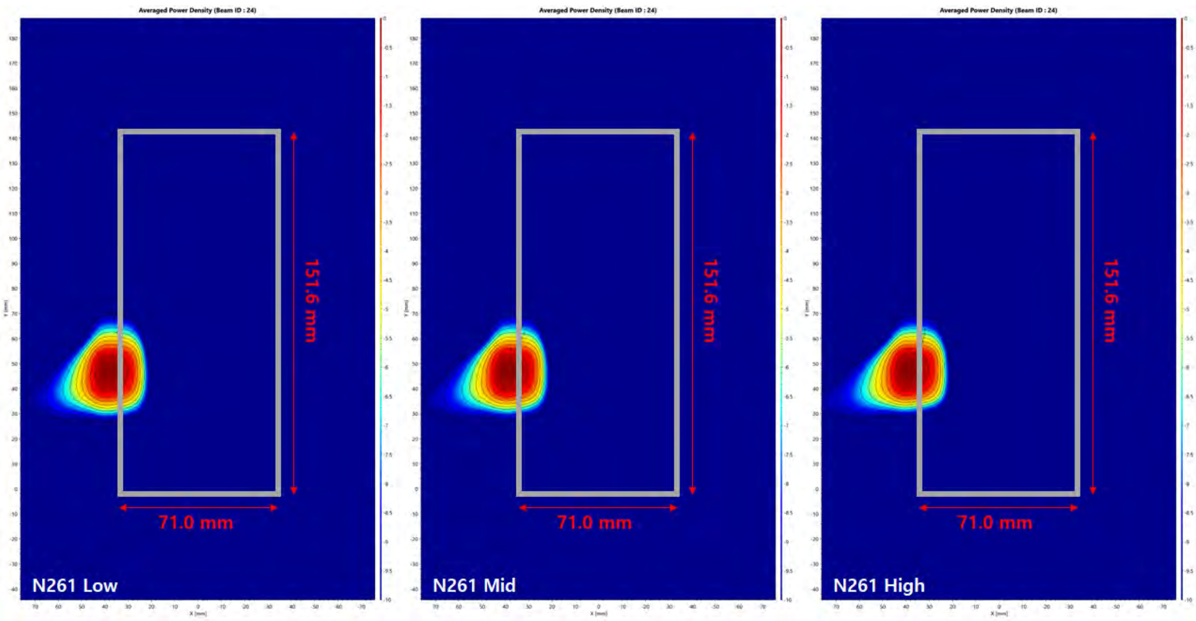
- n261 / Beam ID: 18 / Back surface



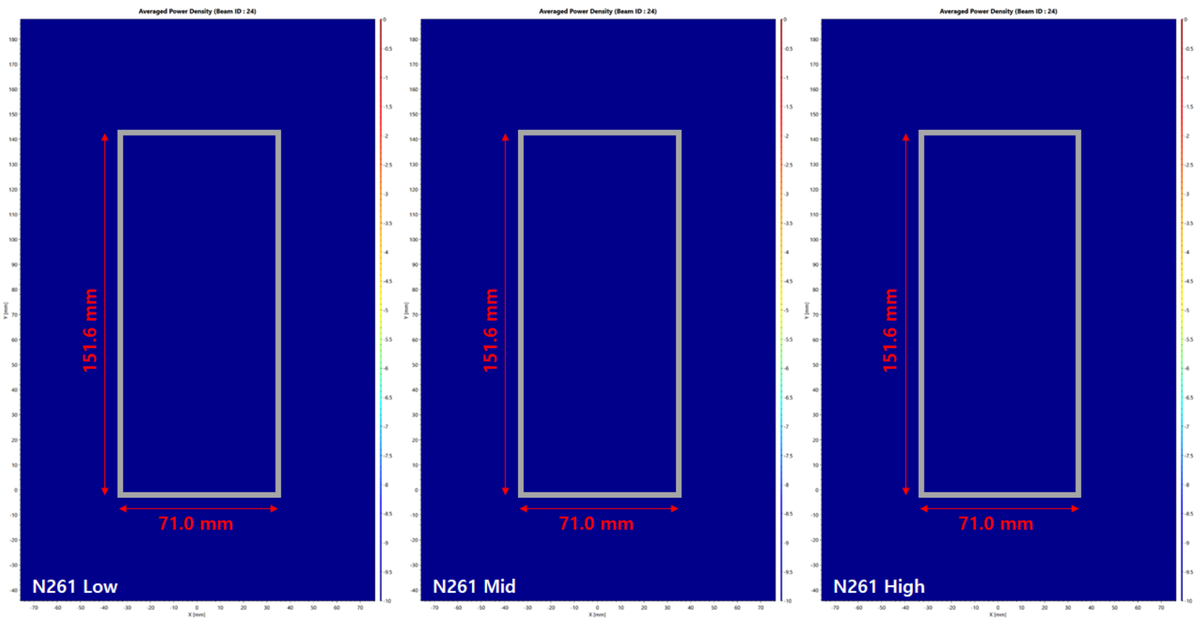

- n261 / Beam ID: 18 / Front surface



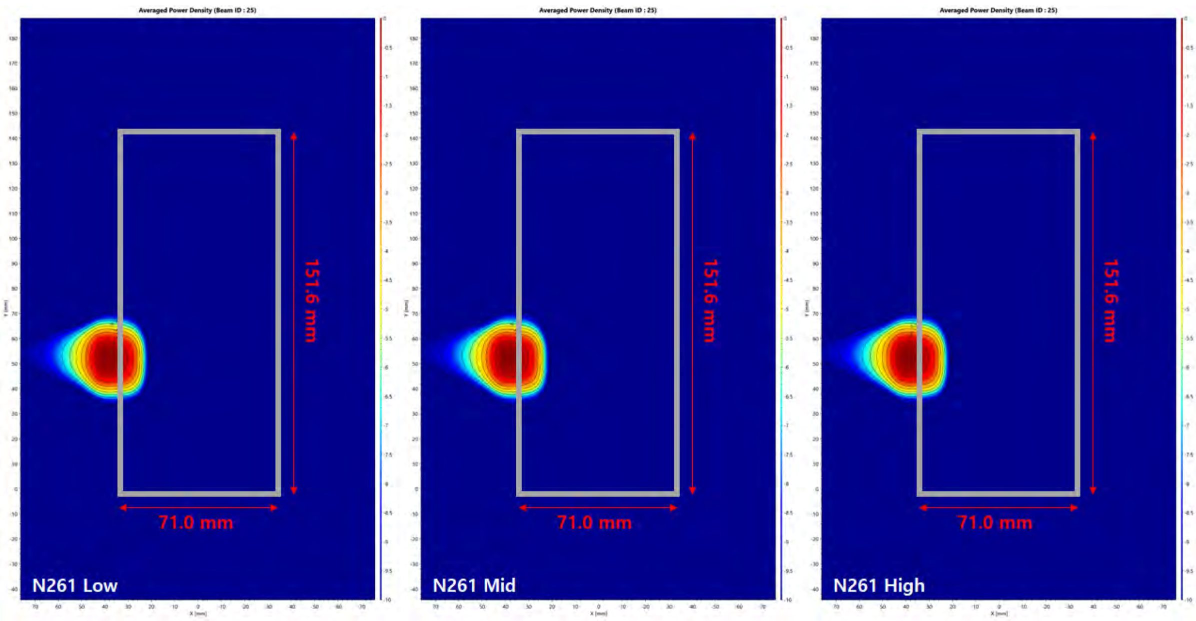
- n261 / Beam ID: 24 / Back surface



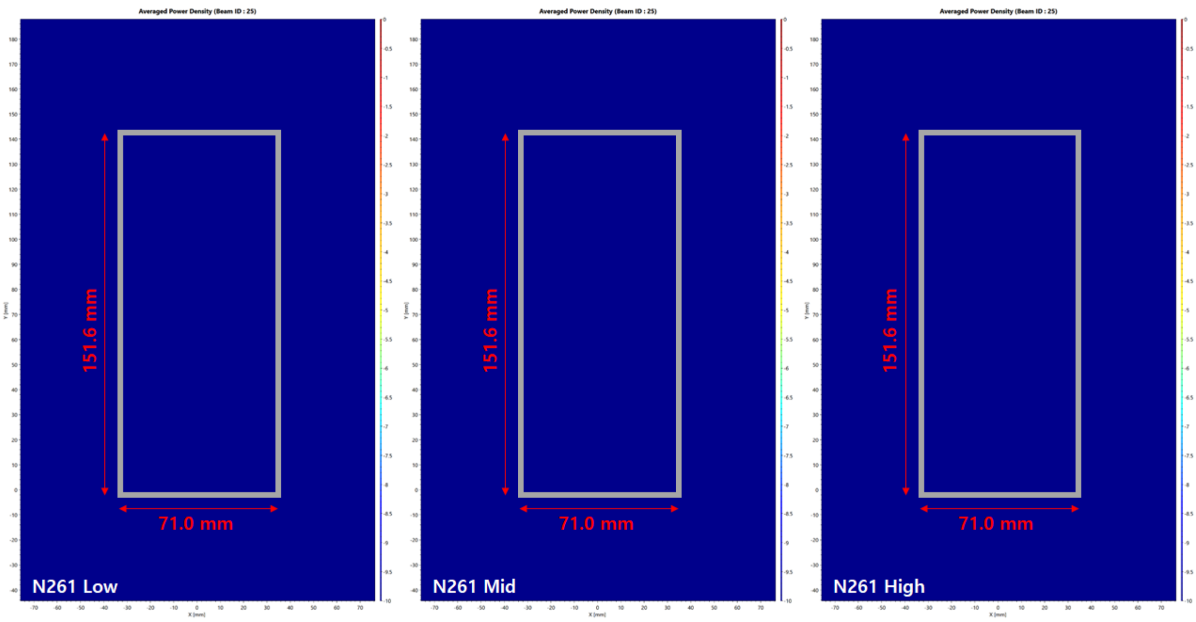

- n261 / Beam ID: 24 / Front surface



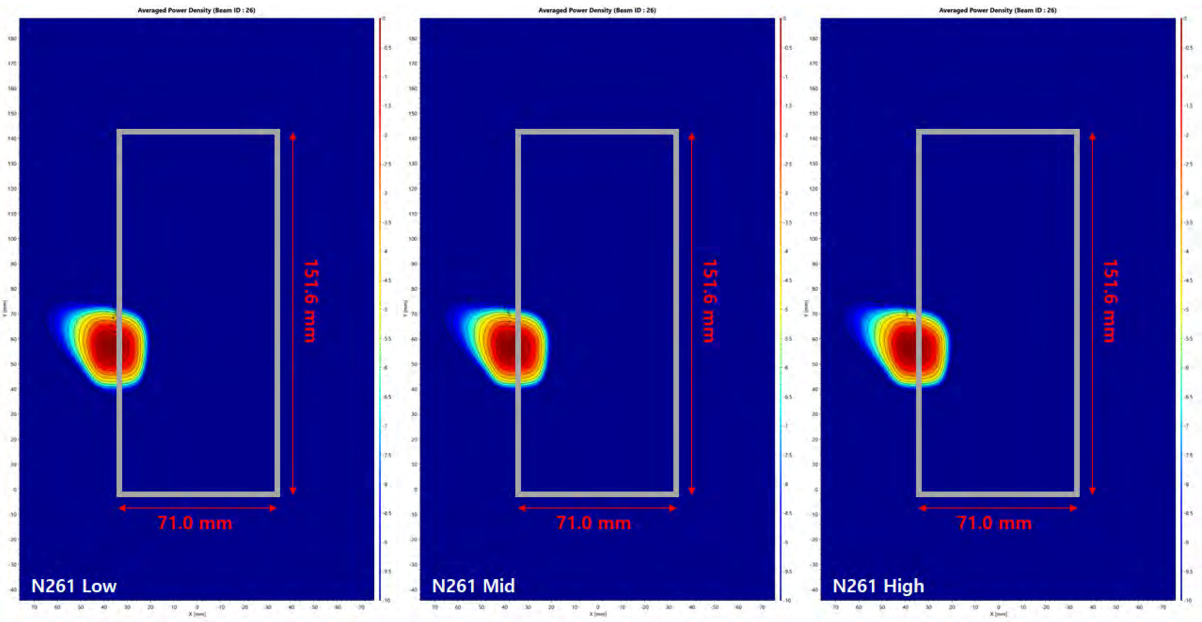
- n261 / Beam ID: 25 / Back surface



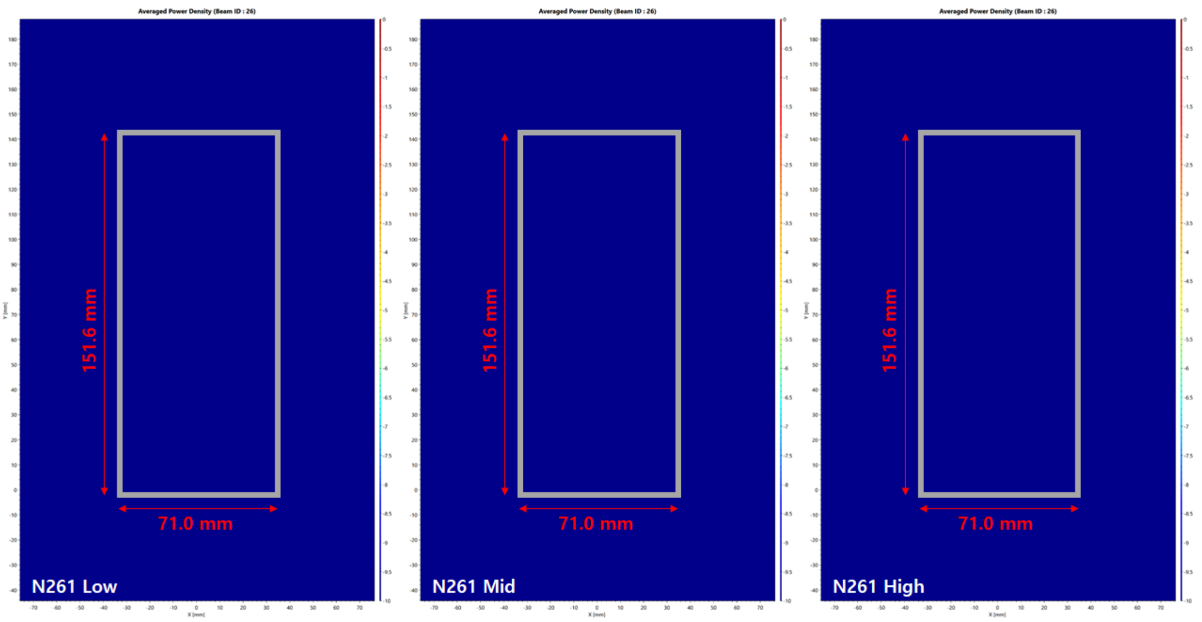

- n261 / Beam ID: 25 / Front surface



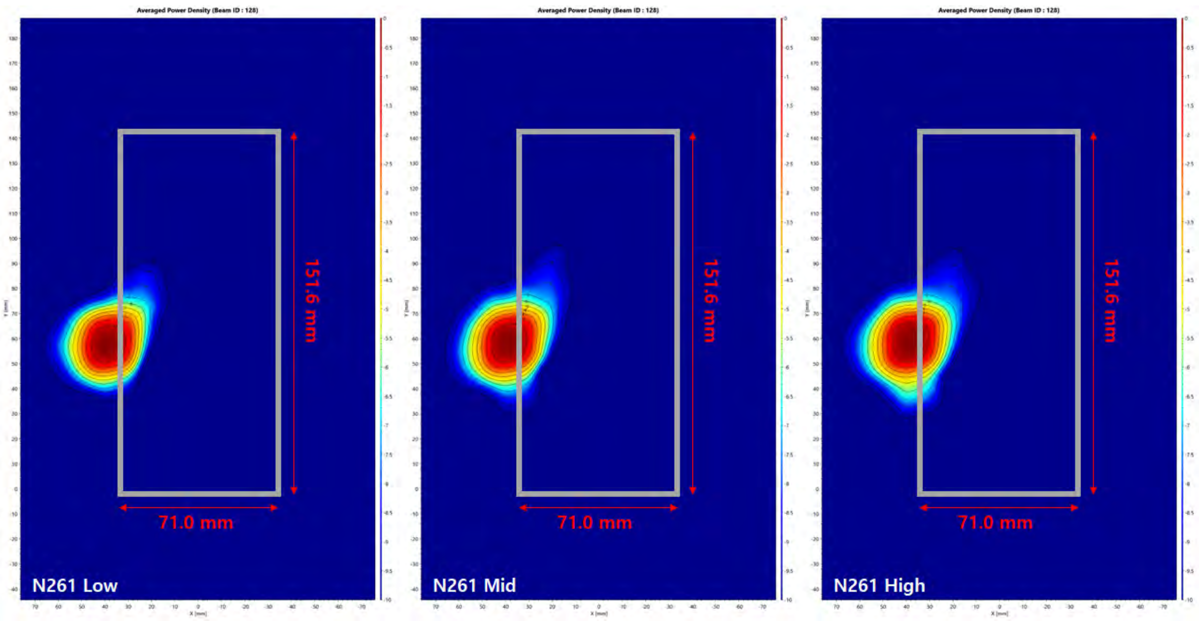
- n261 / Beam ID: 26 / Back surface



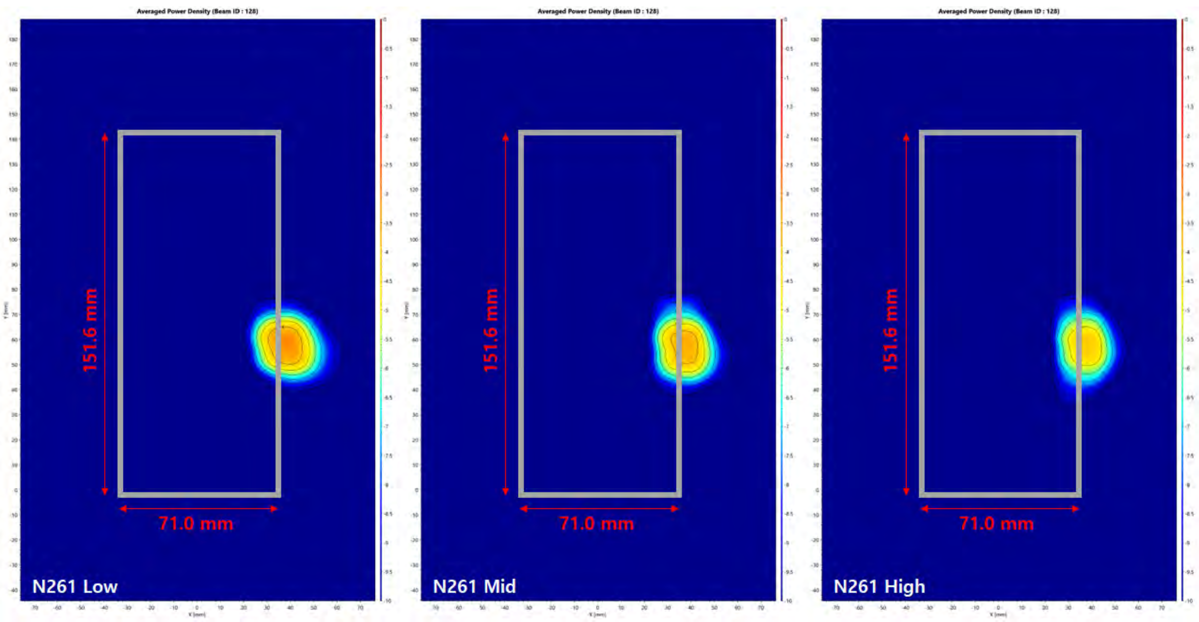

- n261 / Beam ID: 26 / Front surface



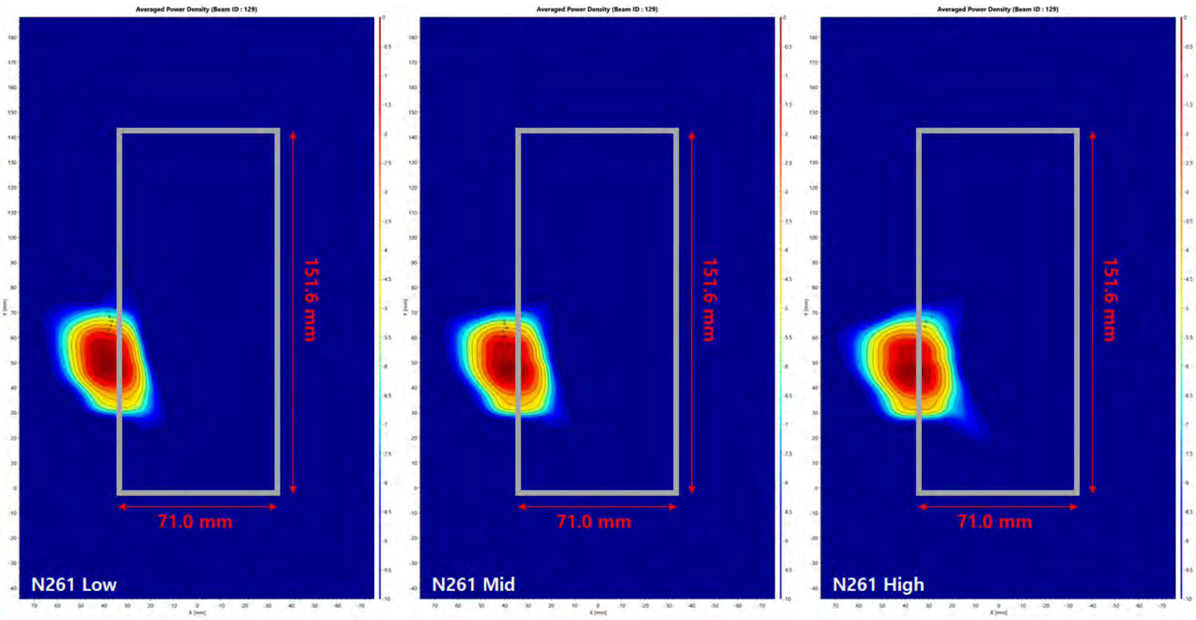
- n261 / Beam ID: 128 / Back surface



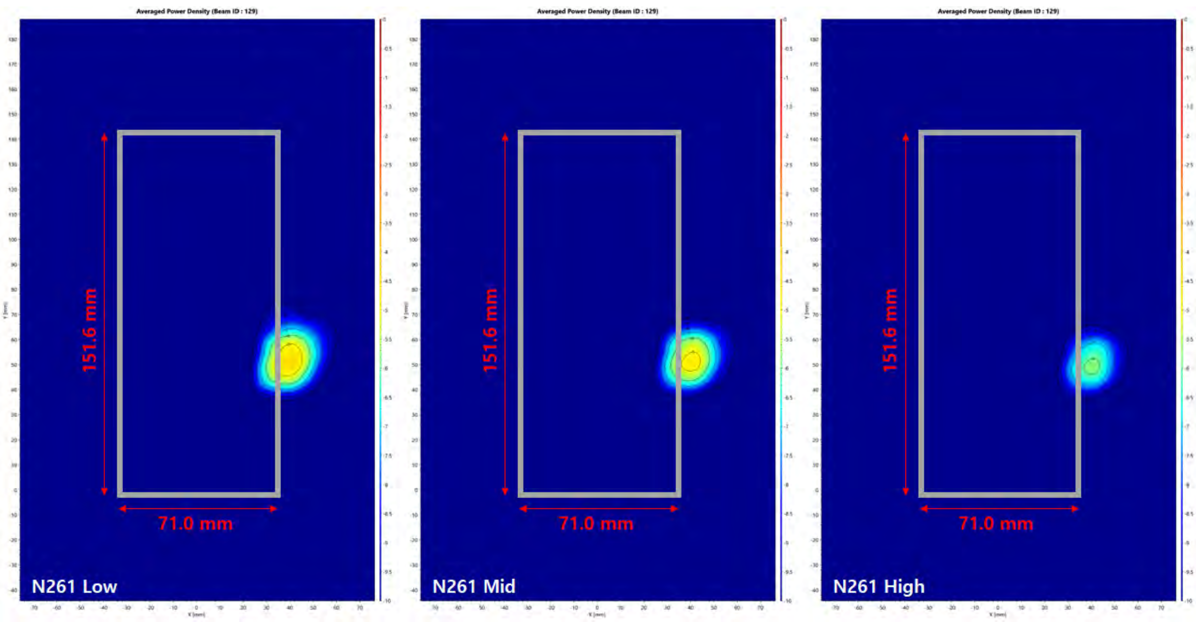

- n261 / Beam ID: 128 / Front surface



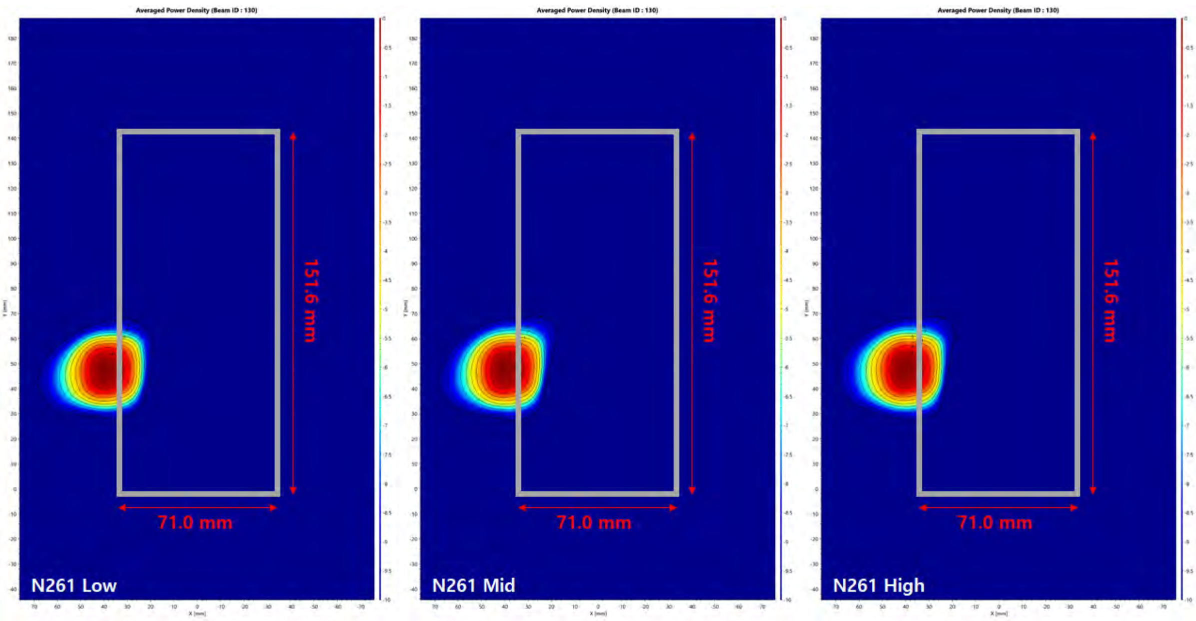
- n261 / Beam ID: 129 / Back surface



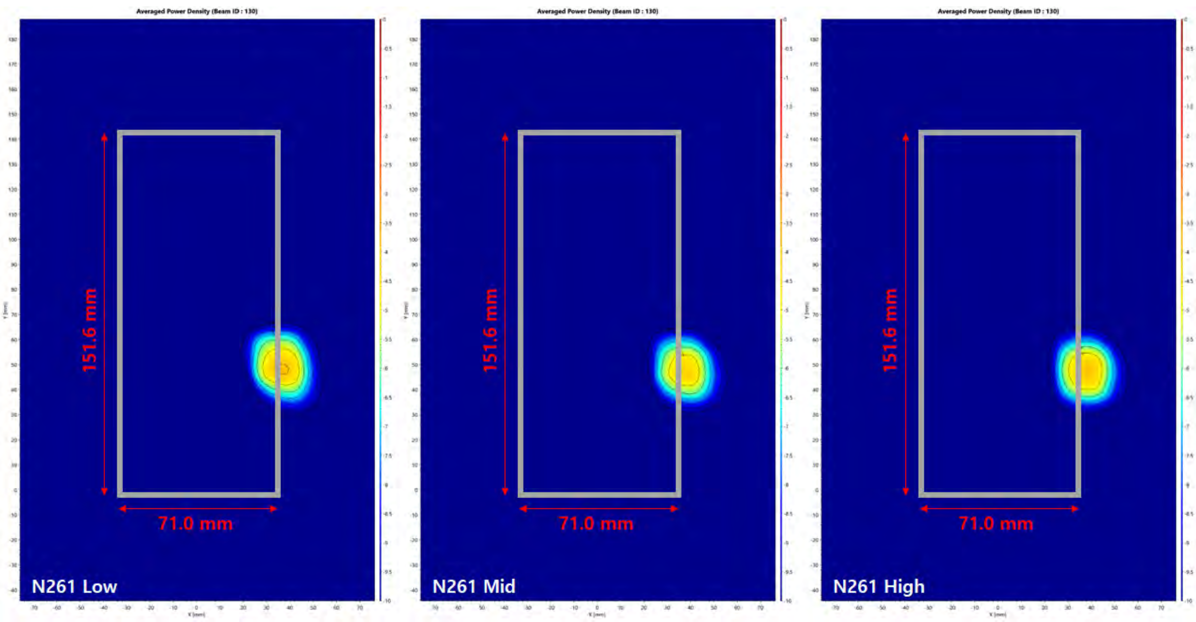

- n261 / Beam ID: 129 / Front surface



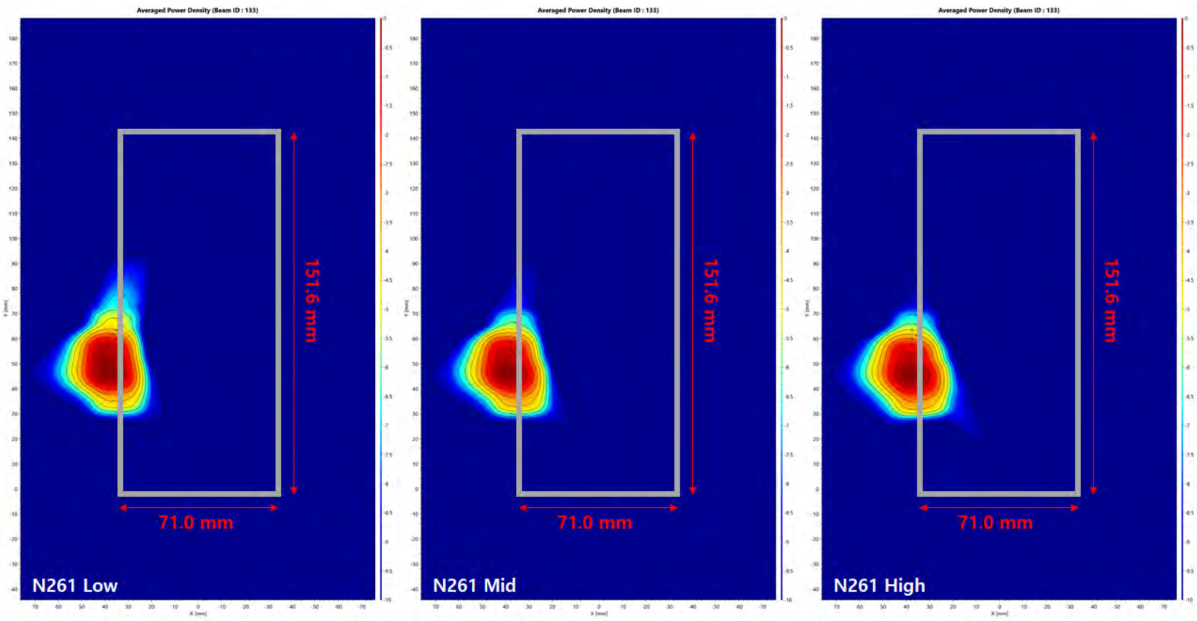
- n261 / Beam ID: 130 / Back surface



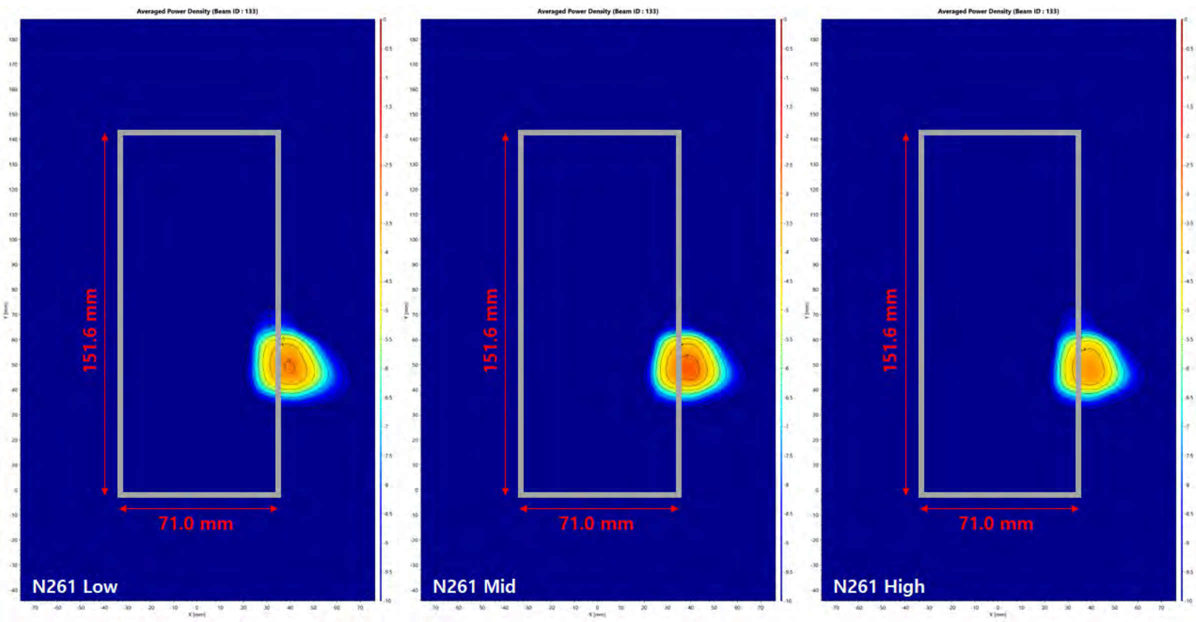

- n261 / Beam ID: 130 / Front surface



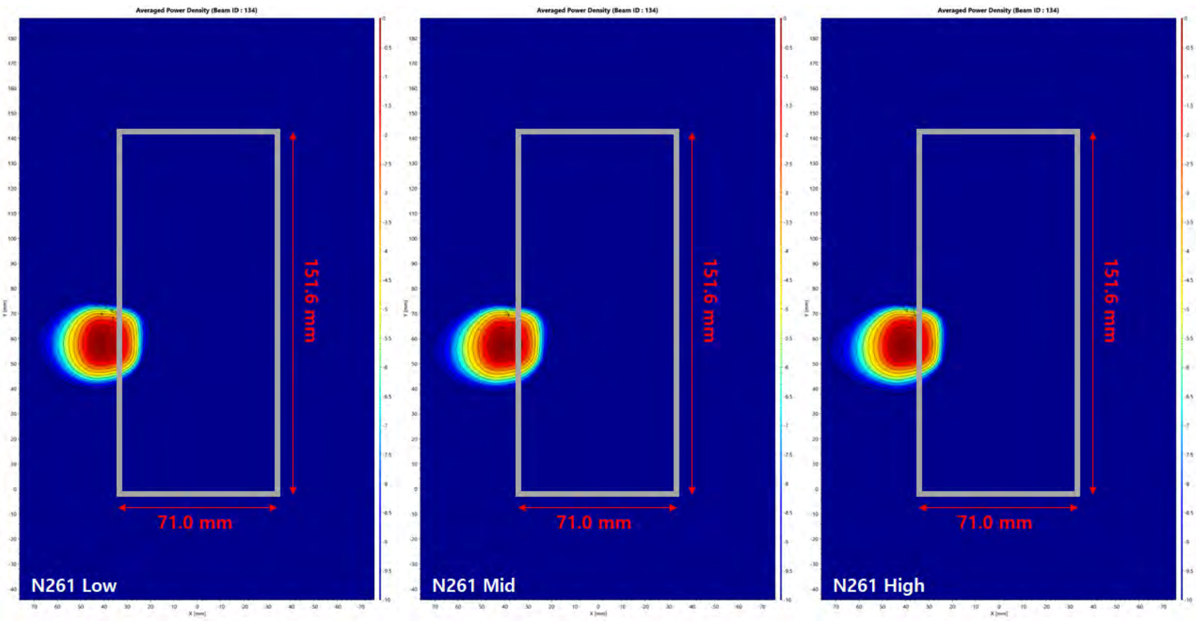
- n261 / Beam ID: 133 / Back surface



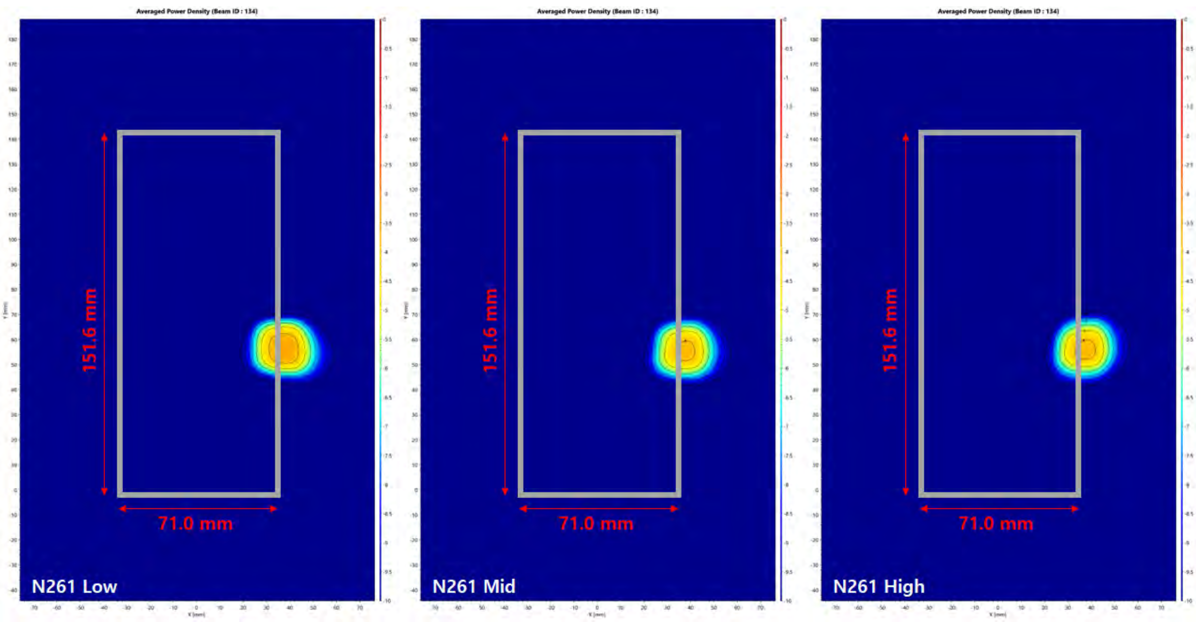

- n261 / Beam ID: 133 / Front surface



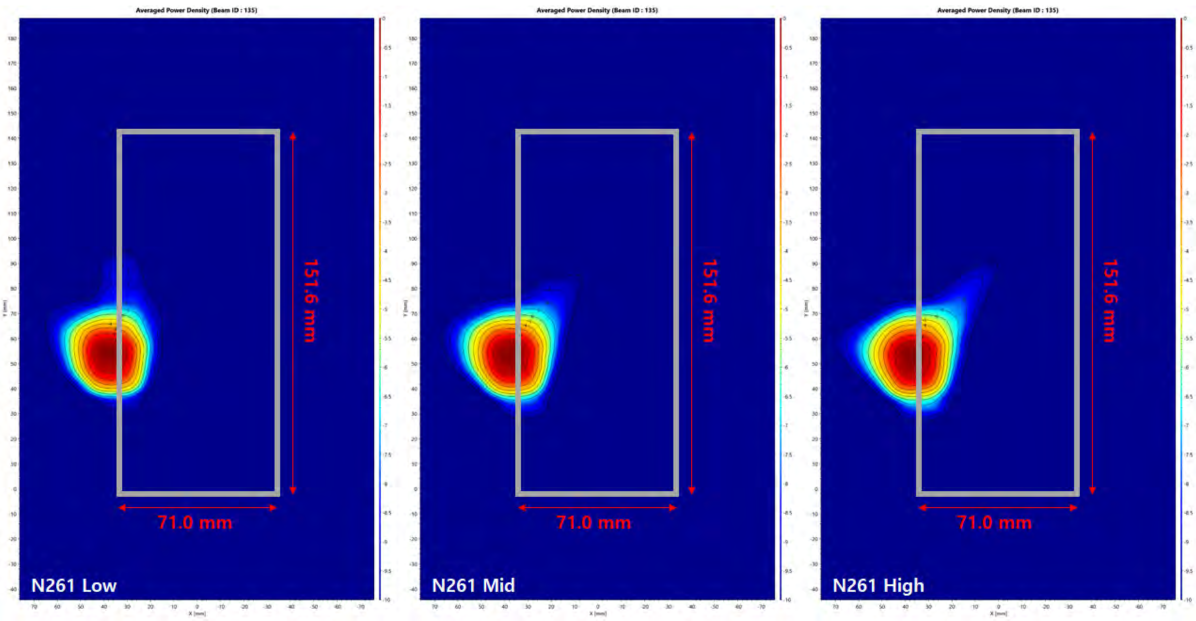
- n261 / Beam ID: 134 / Back surface



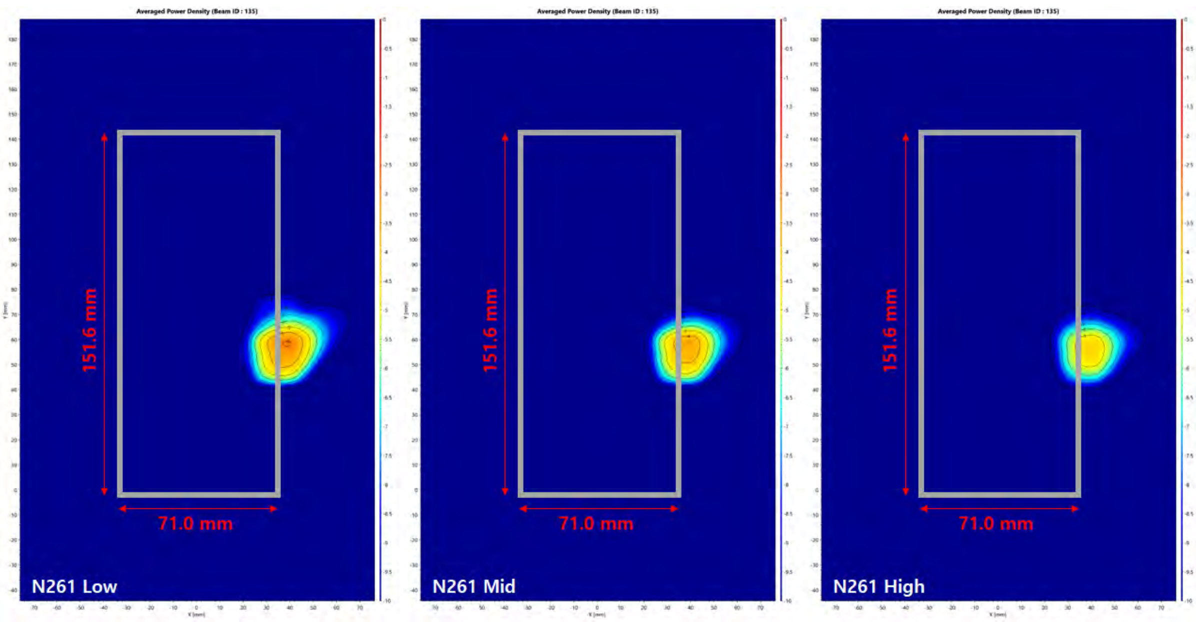

- n261 / Beam ID: 134 / Front surface



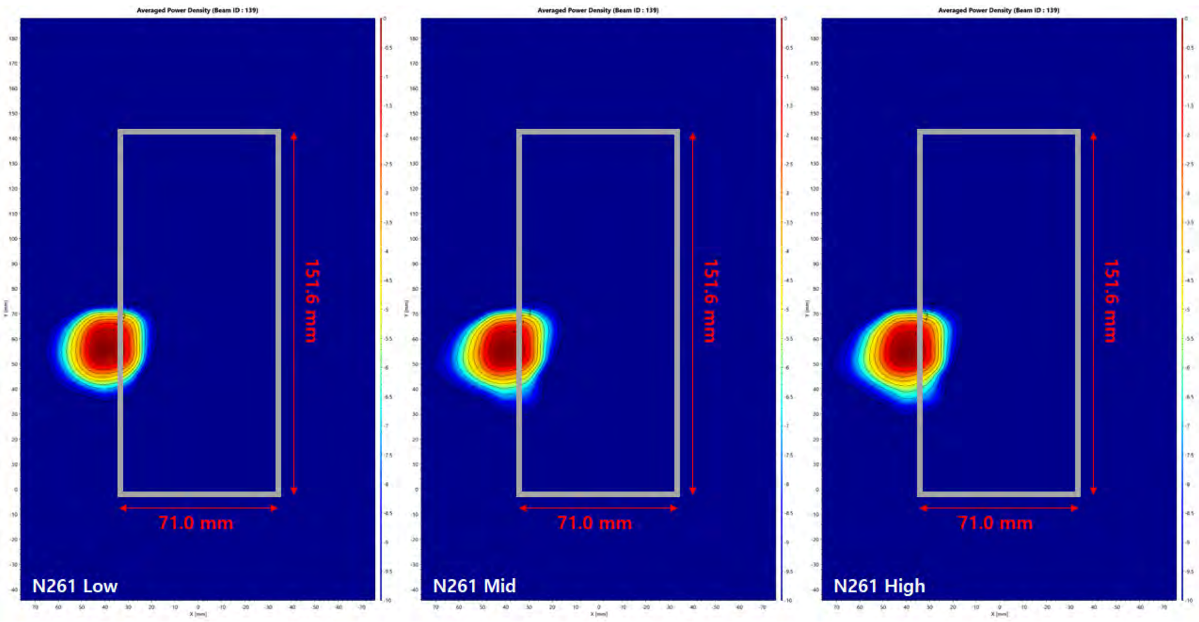
- n261 / Beam ID: 135 / Back surface



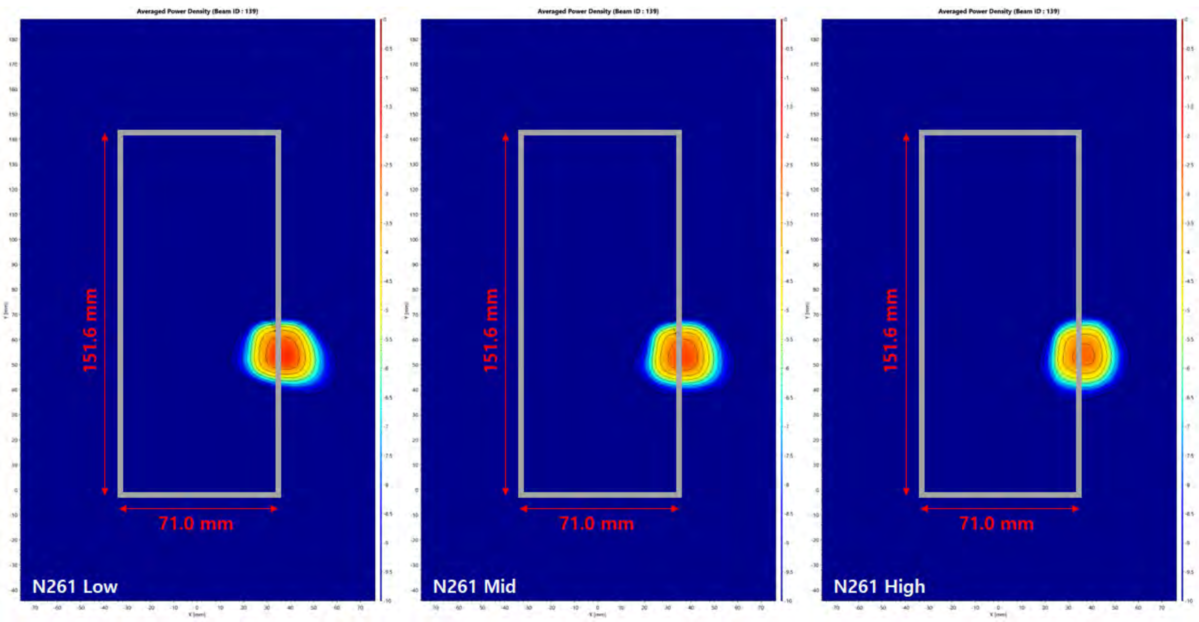

- n261 / Beam ID: 135 / Front surface



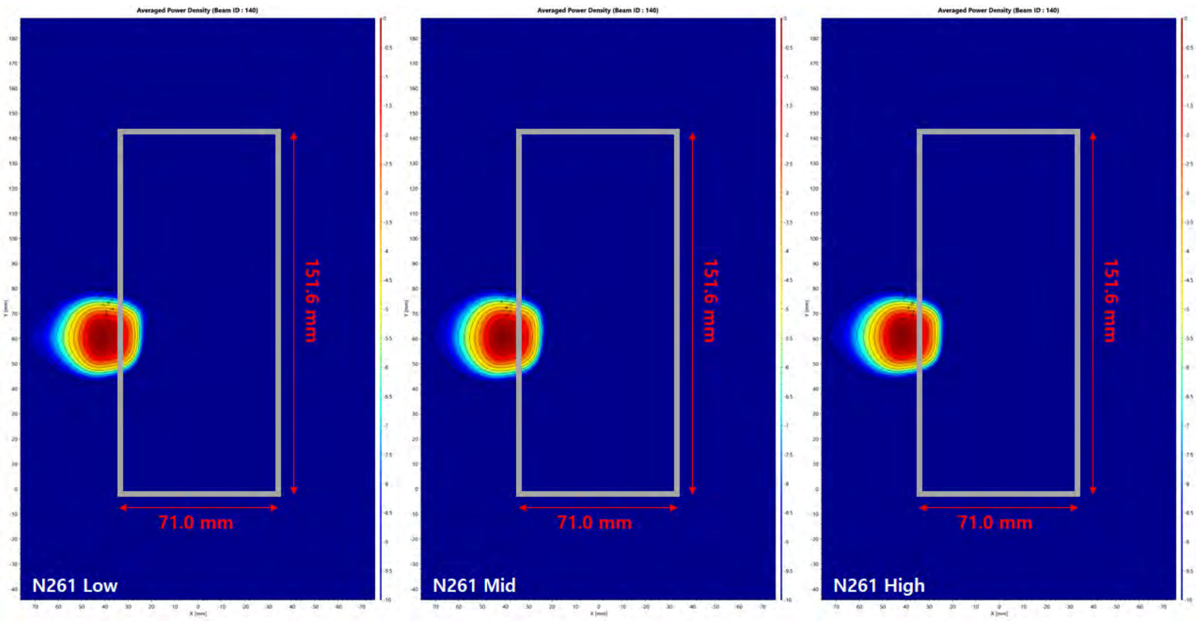
- n261 / Beam ID: 139 / Back surface



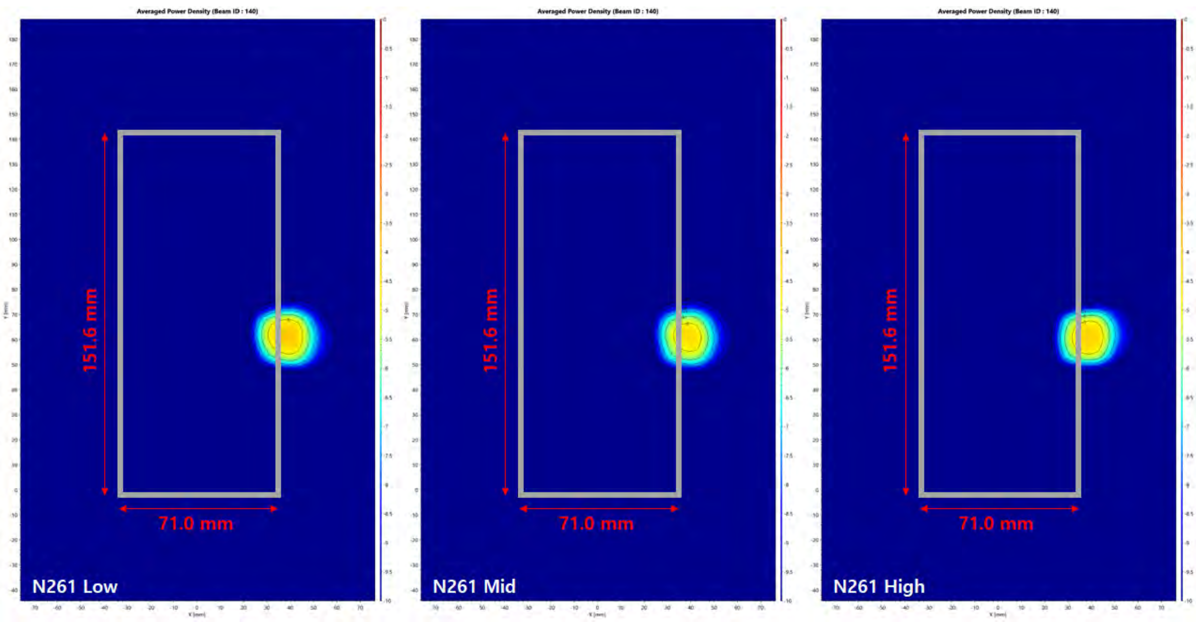

- n261 / Beam ID: 139 / Front surface



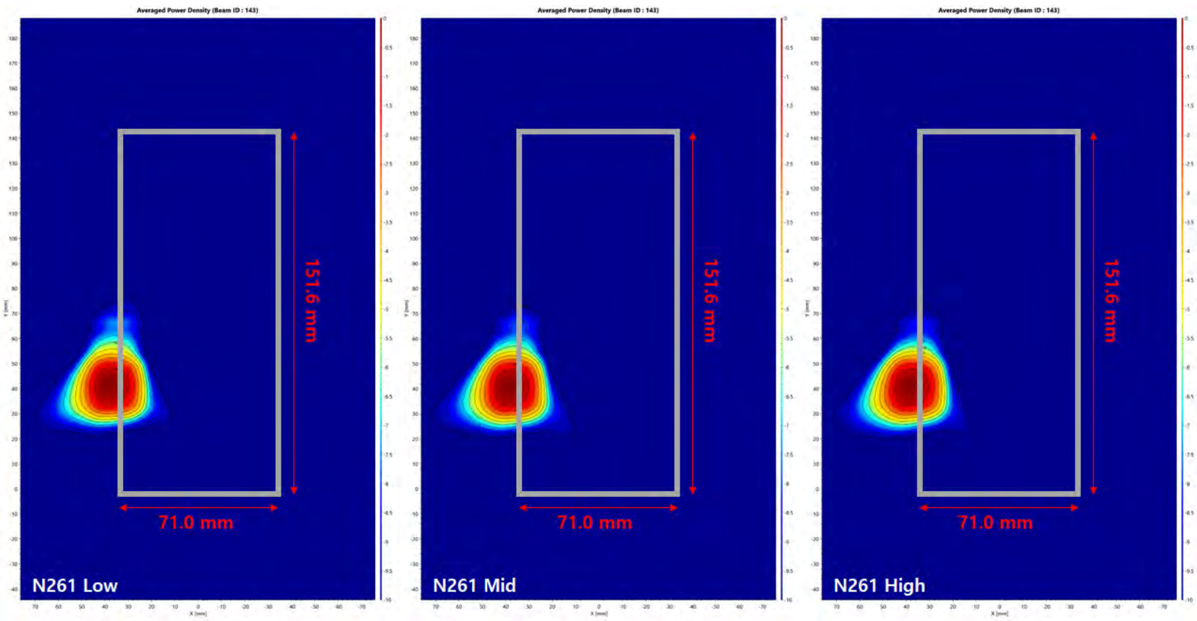
- n261 / Beam ID: 140 / Back surface



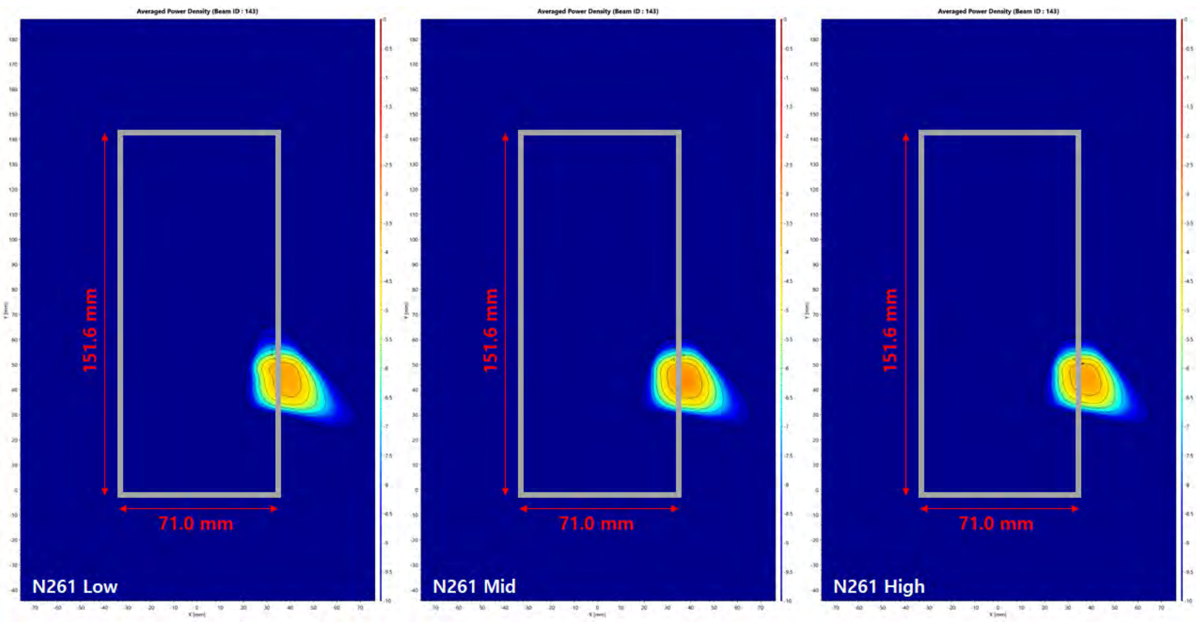

- n261 / Beam ID: 140 / Front surface



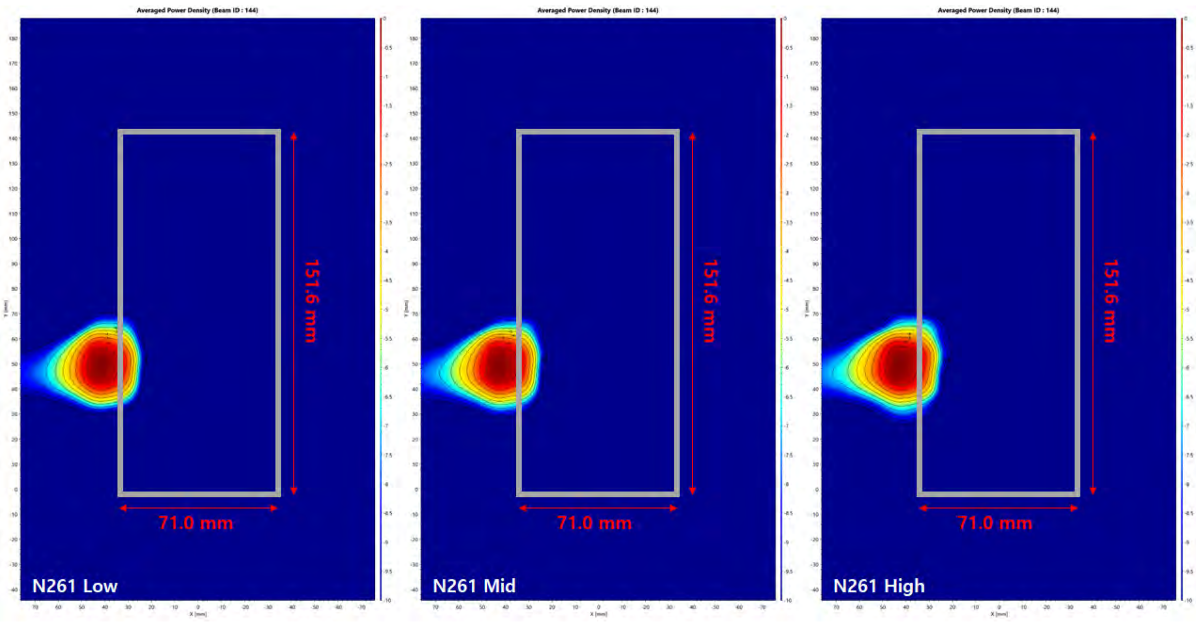
- n261 / Beam ID: 143 / Back surface



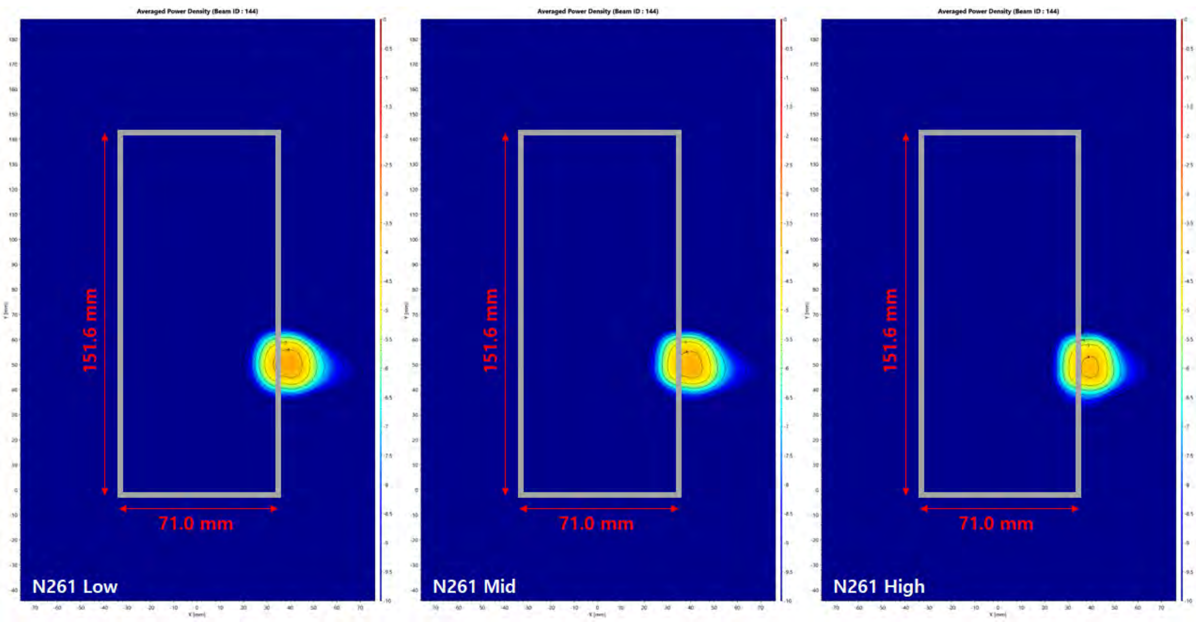

- n261 / Beam ID: 143 / Front surface



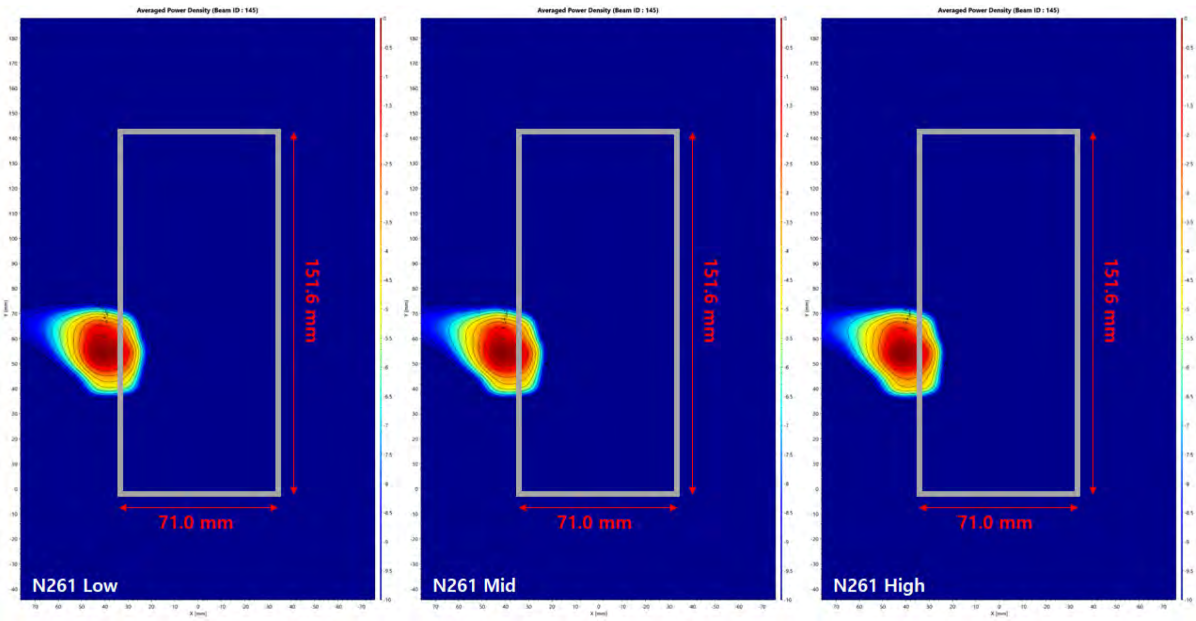
- n261 / Beam ID: 144 / Back surface



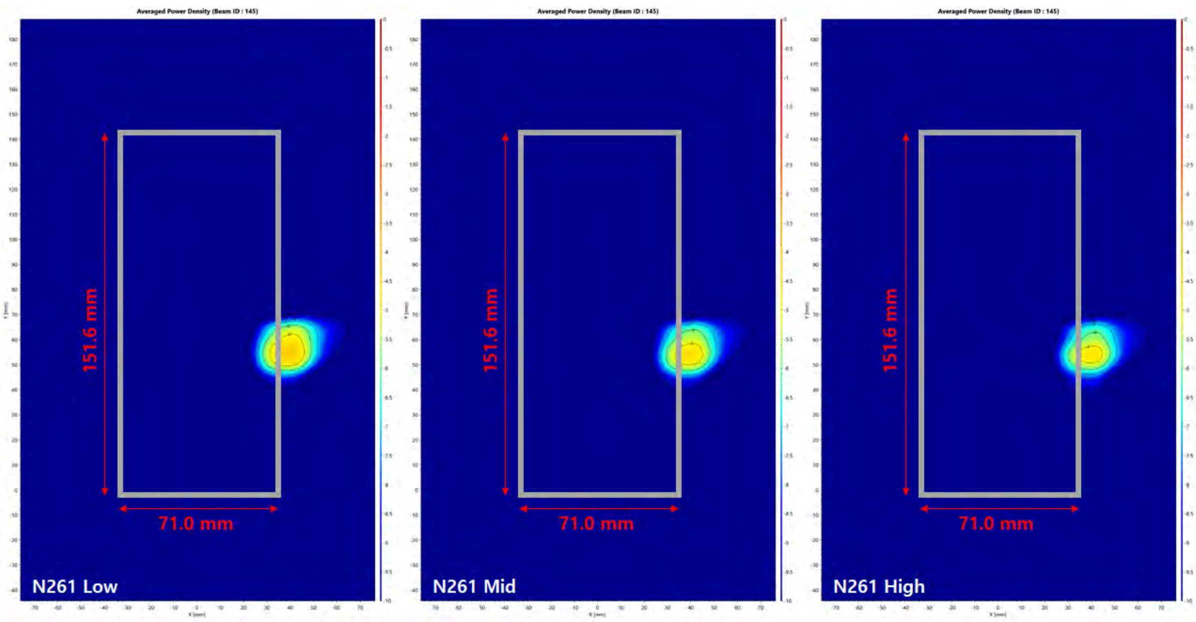

- n261 / Beam ID: 144 / Front surface



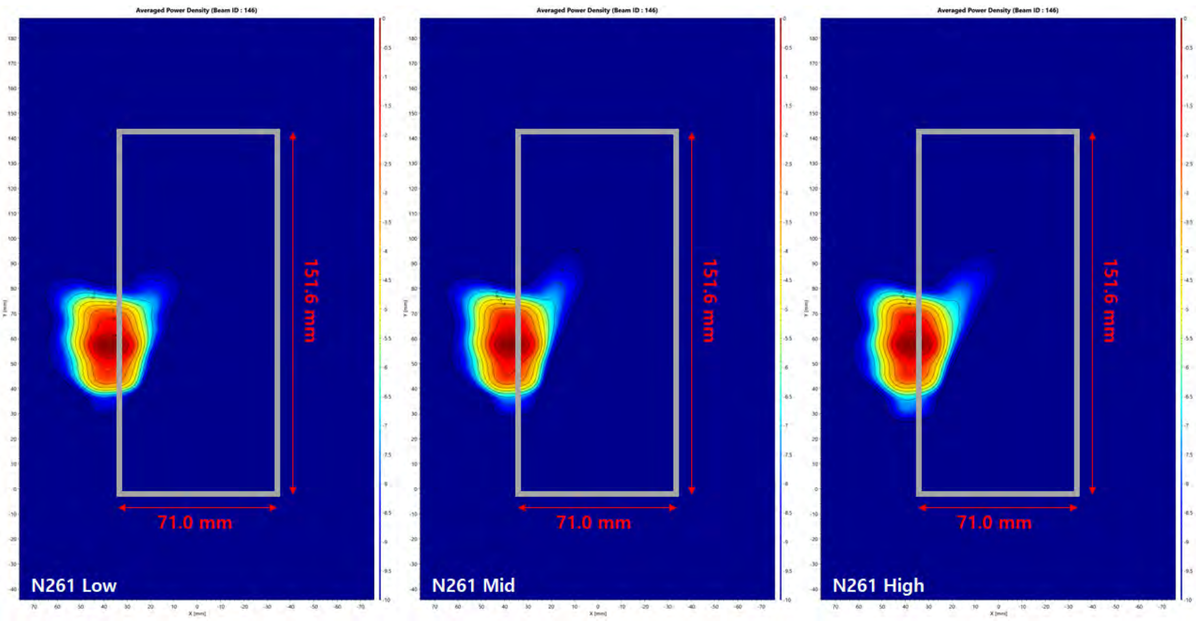
- n261 / Beam ID: 145 / Back surface



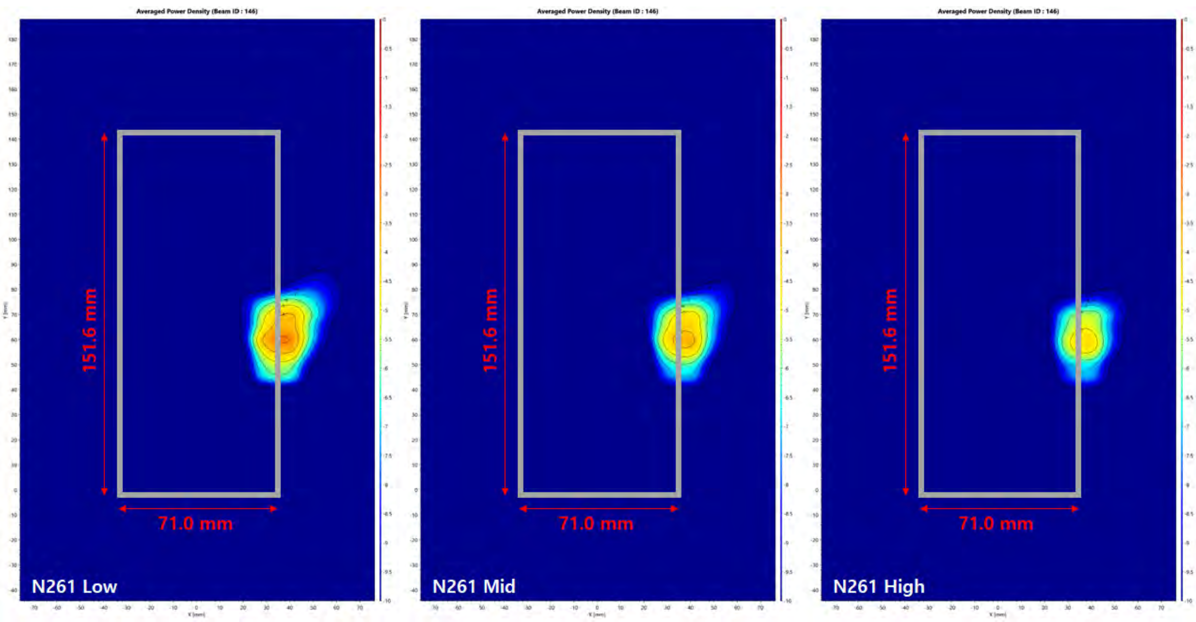

- n261 / Beam ID: 145 / Front surface



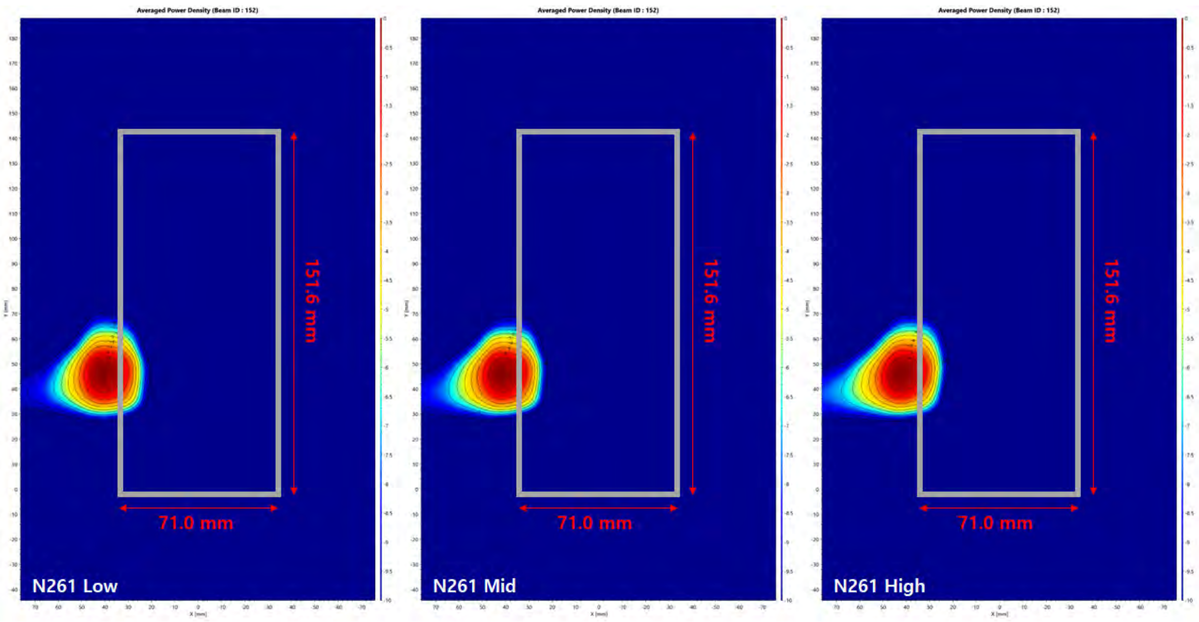
- n261 / Beam ID: 146 / Back surface



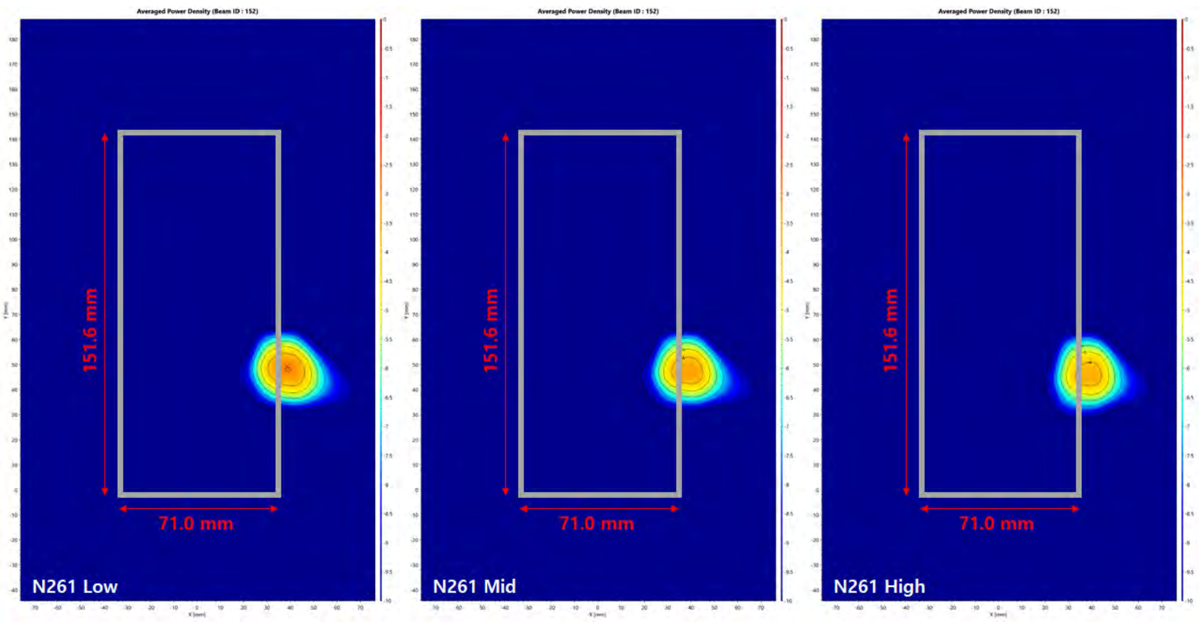

- n261 / Beam ID: 146 / Front surface



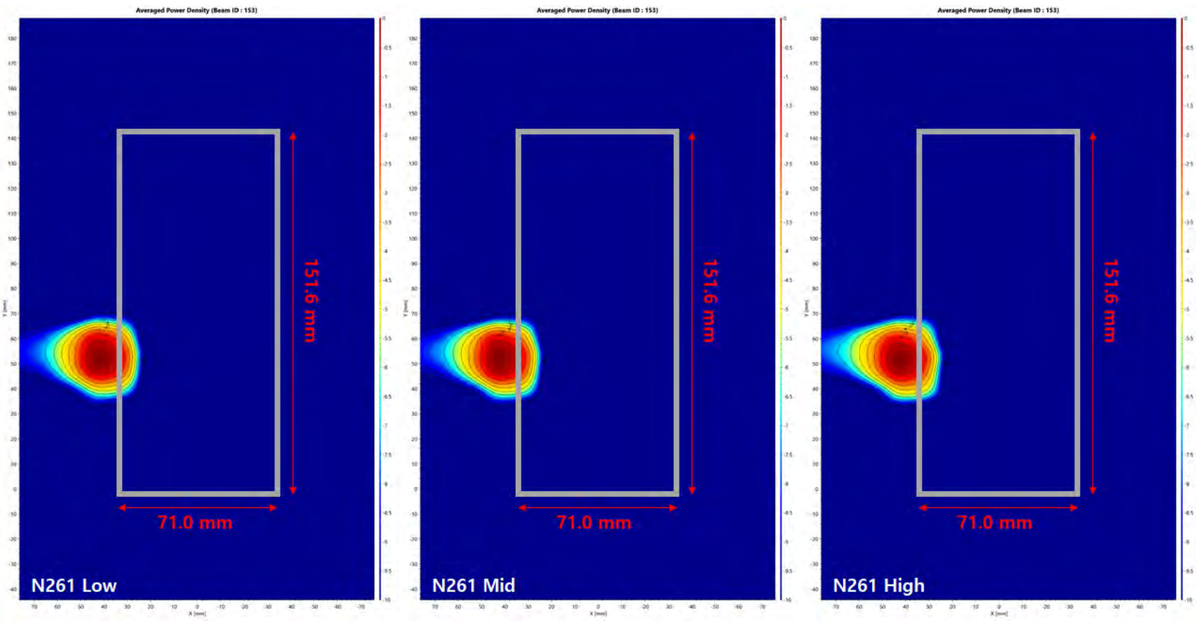
- n261 / Beam ID: 152 / Back surface



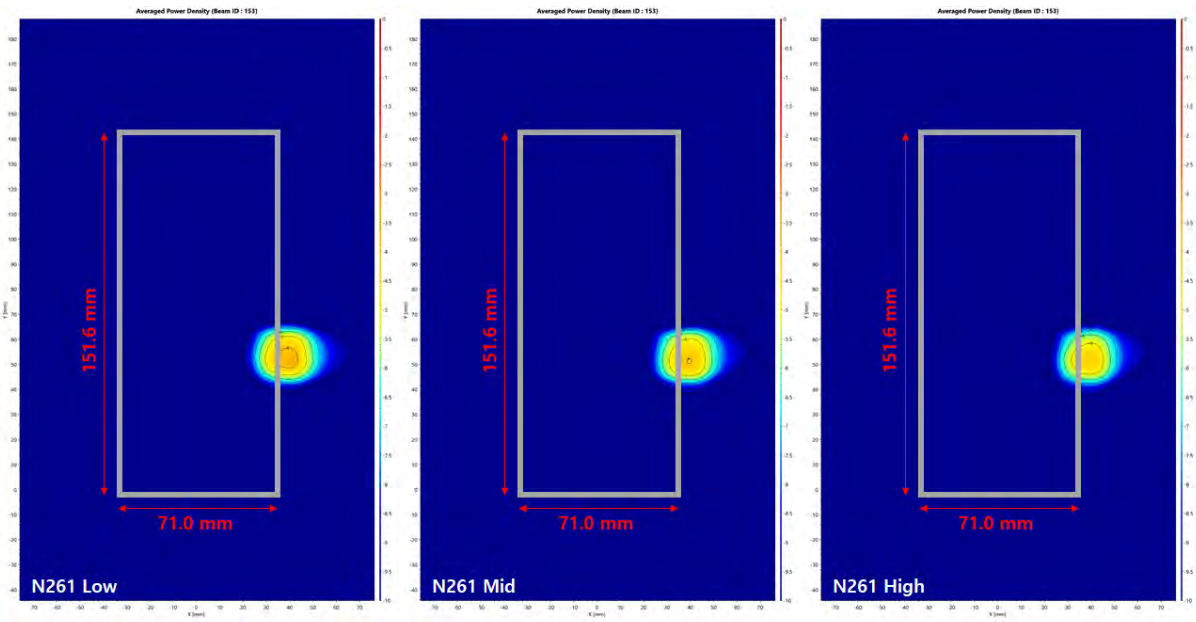

- n261 / Beam ID: 152 / Front surface



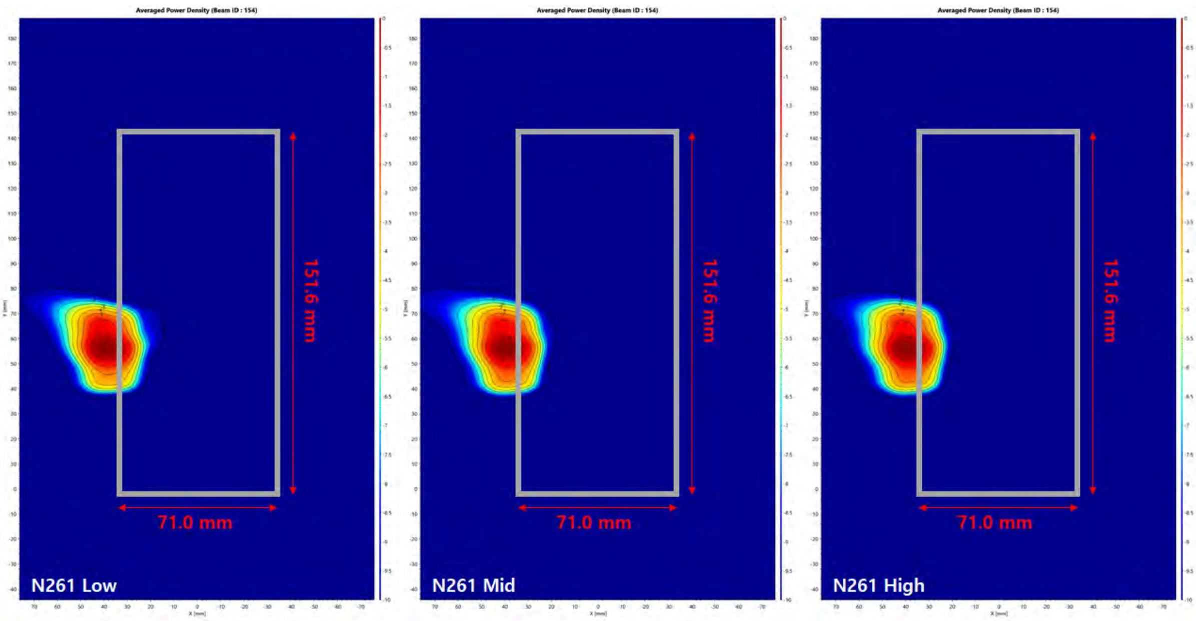
- n261 / Beam ID: 153 / Back surface



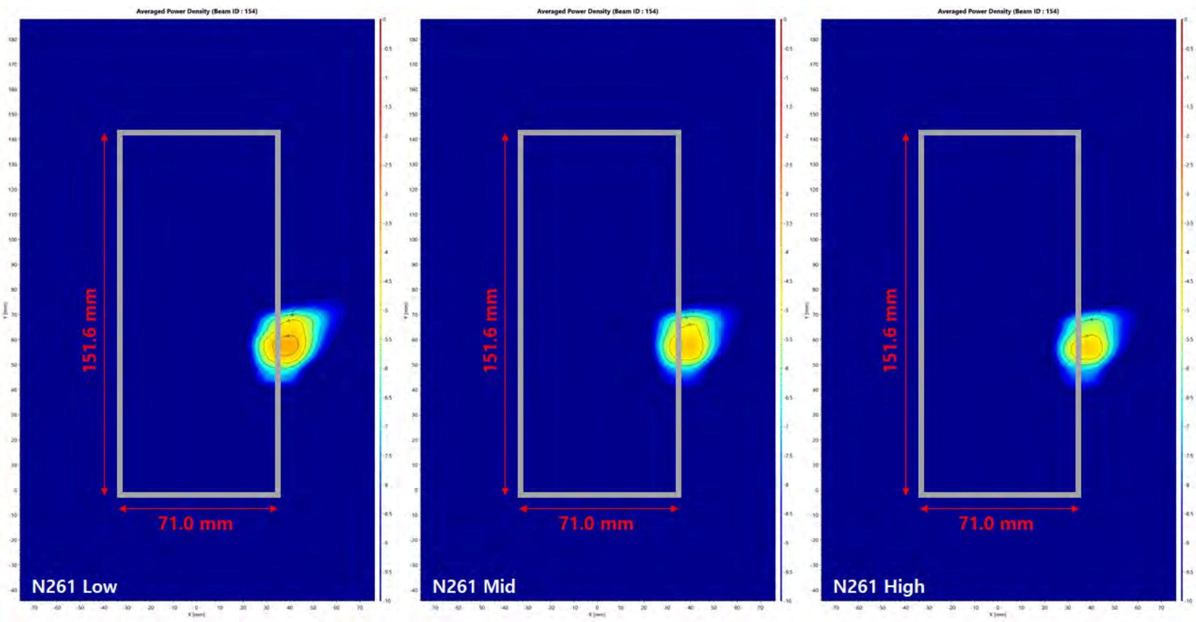

- n261 / Beam ID: 153 / Front surface



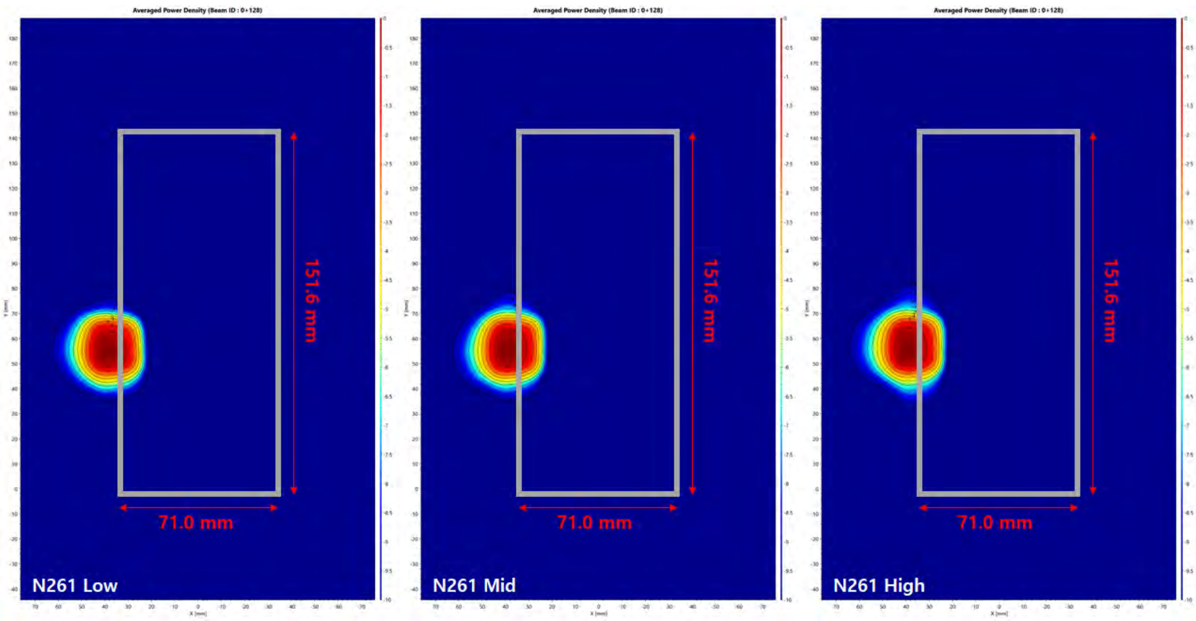
- n261 / Beam ID: 154 / Back surface



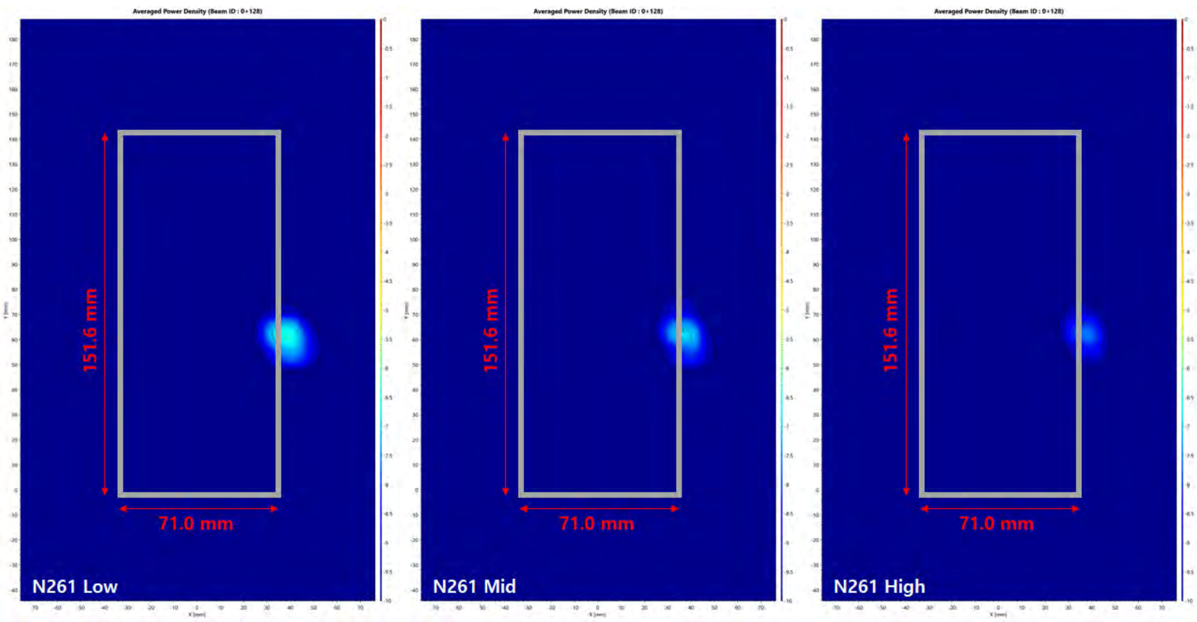

- n261 / Beam ID: 154 / Front surface



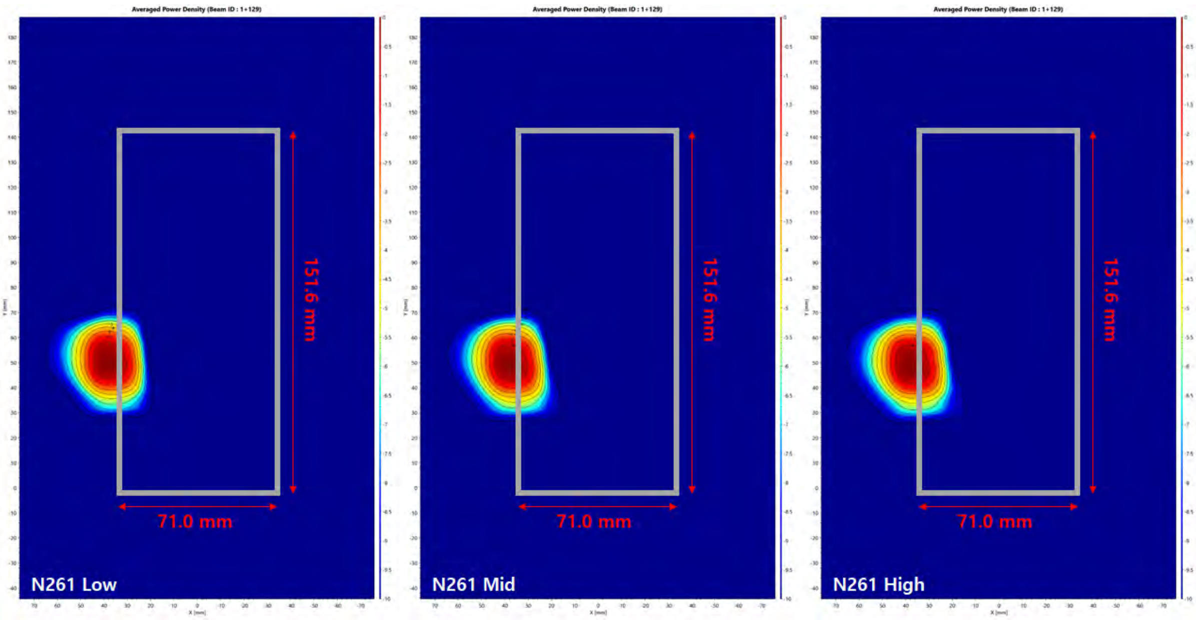
- n261 / Beam ID: 0+128 / Back surface



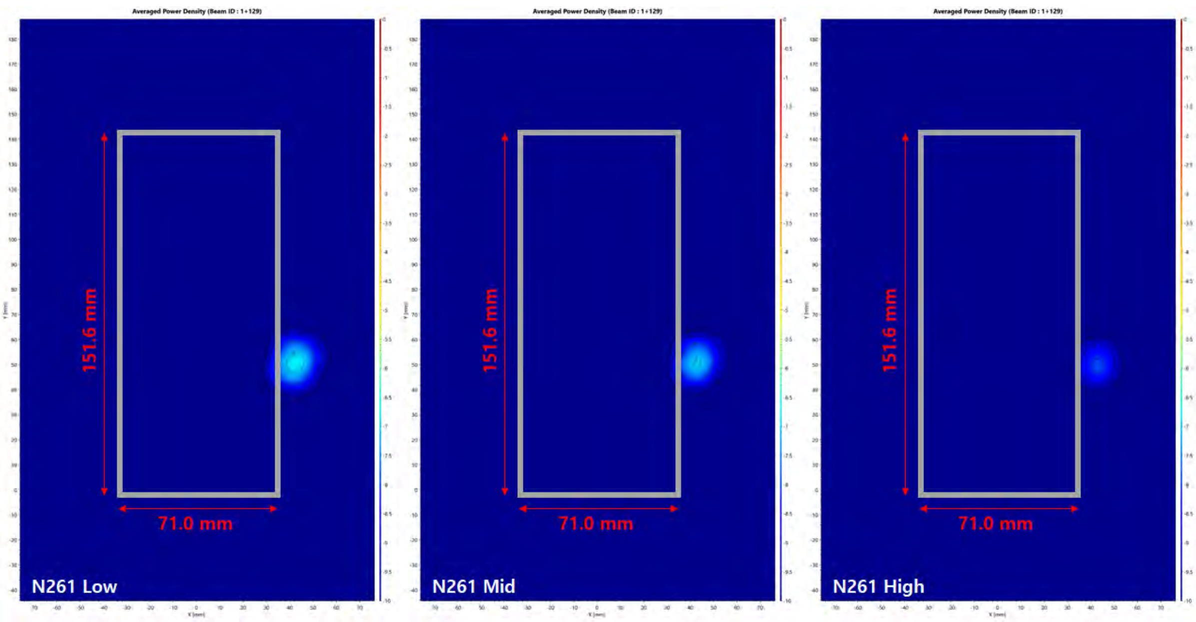

- n261 / Beam ID: 0+128 / Front surface



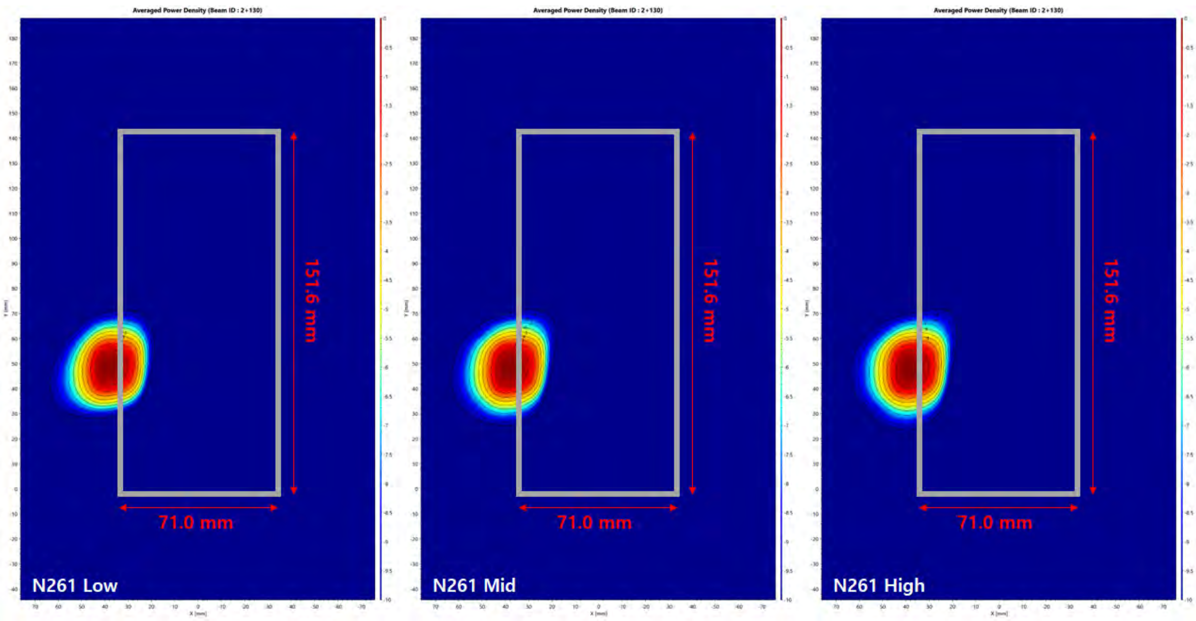
- n261 / Beam ID: 1+129 / Back surface



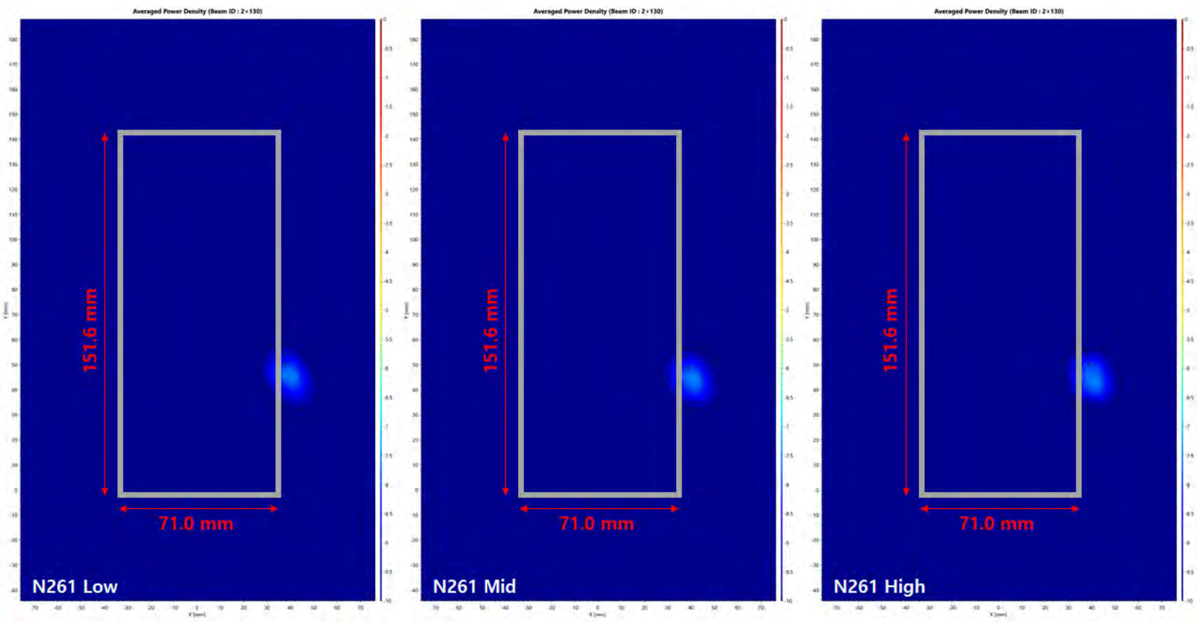

- n261 / Beam ID: 1+129 / Front surface



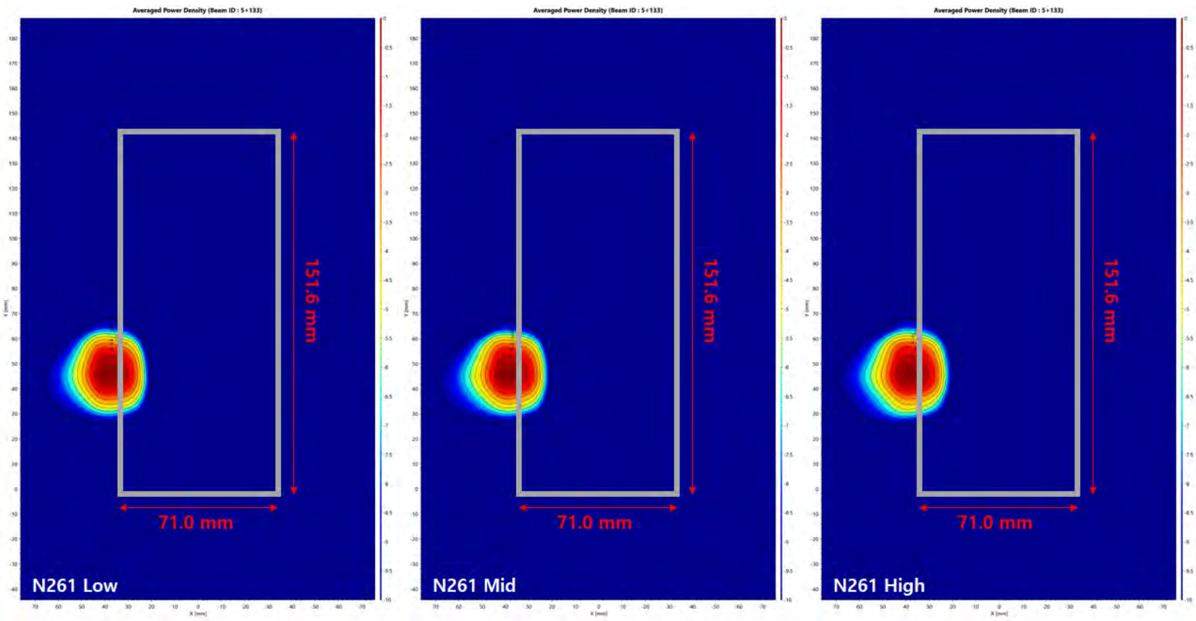
- n261 / Beam ID: 2+130 / Back surface



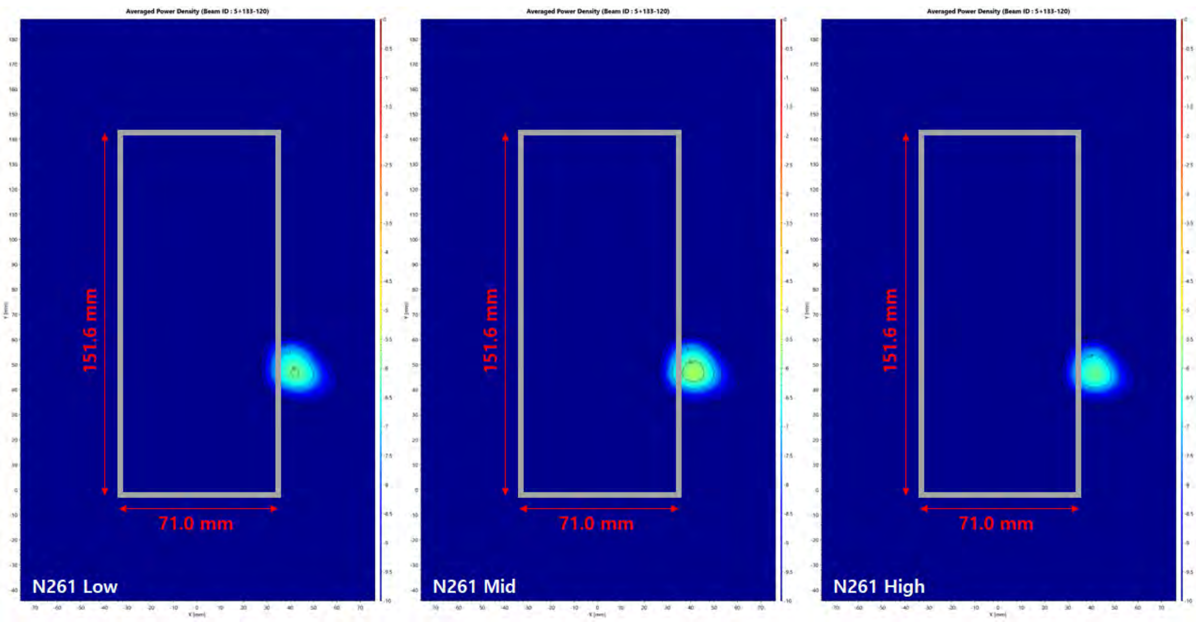

- n261 / Beam ID: 2+130 / Front surface



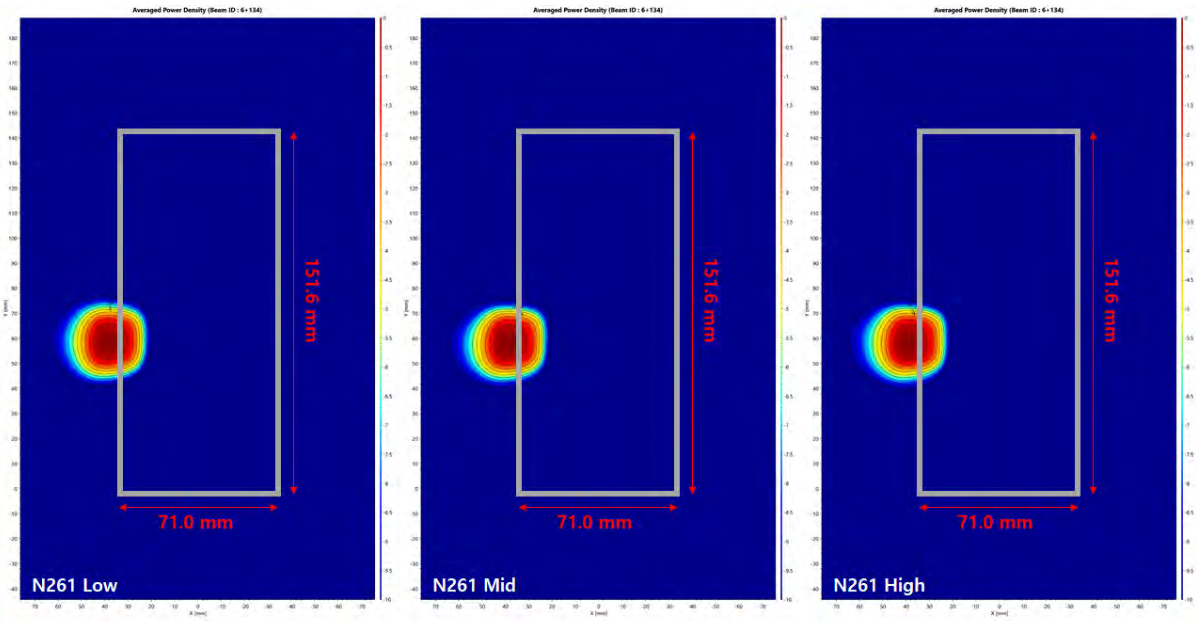
- n261 / Beam ID: 5+133 / Back surface



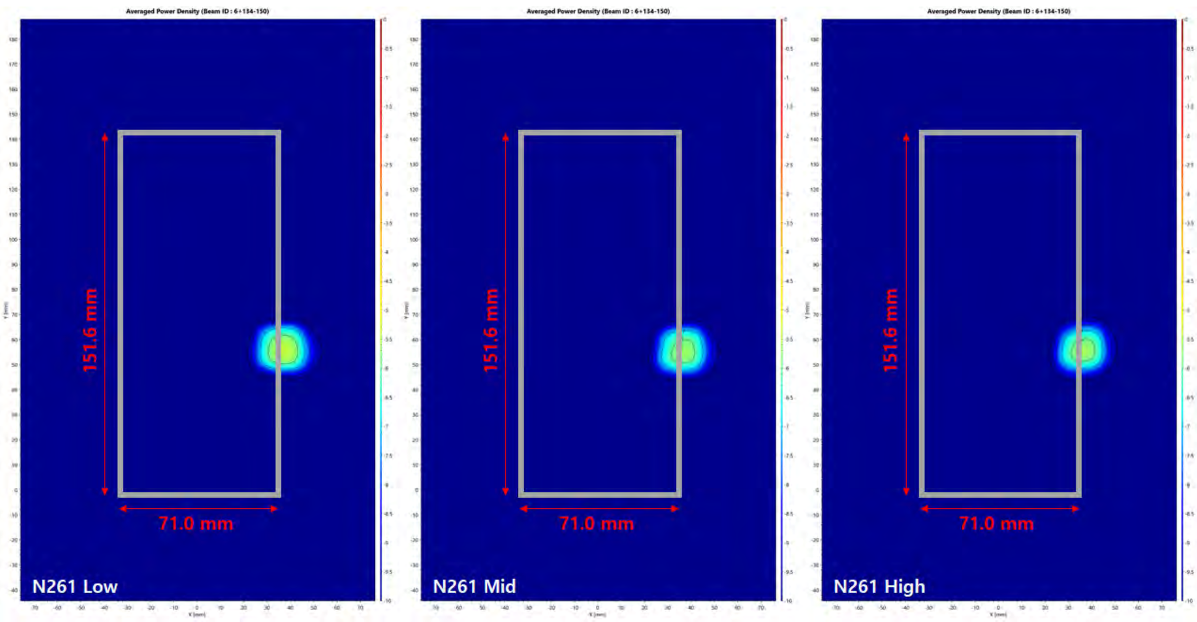

- n261 / Beam ID: 5+133 / Front surface



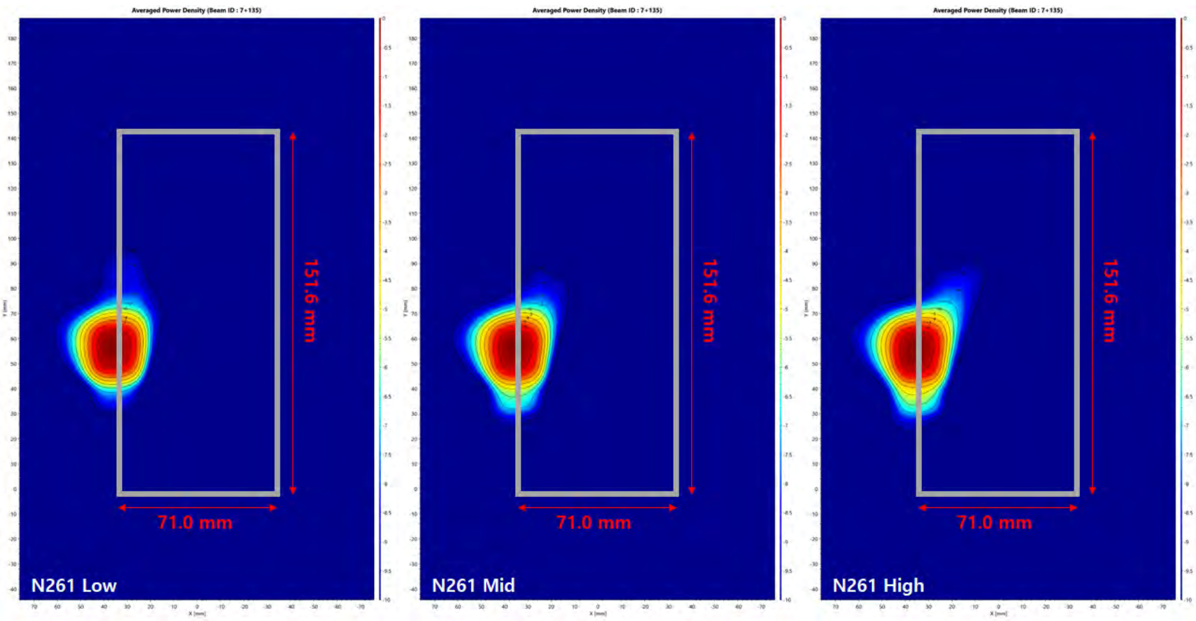
- n261 / Beam ID: 6+134 / Back surface



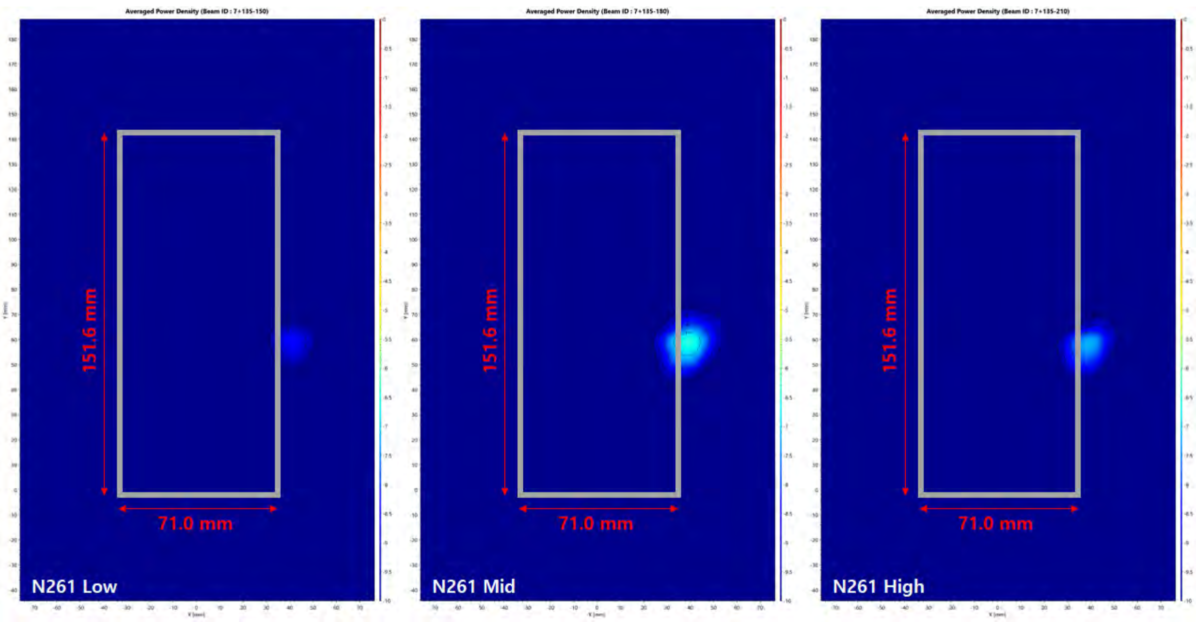

- n261 / Beam ID: 6+134 / Front surface



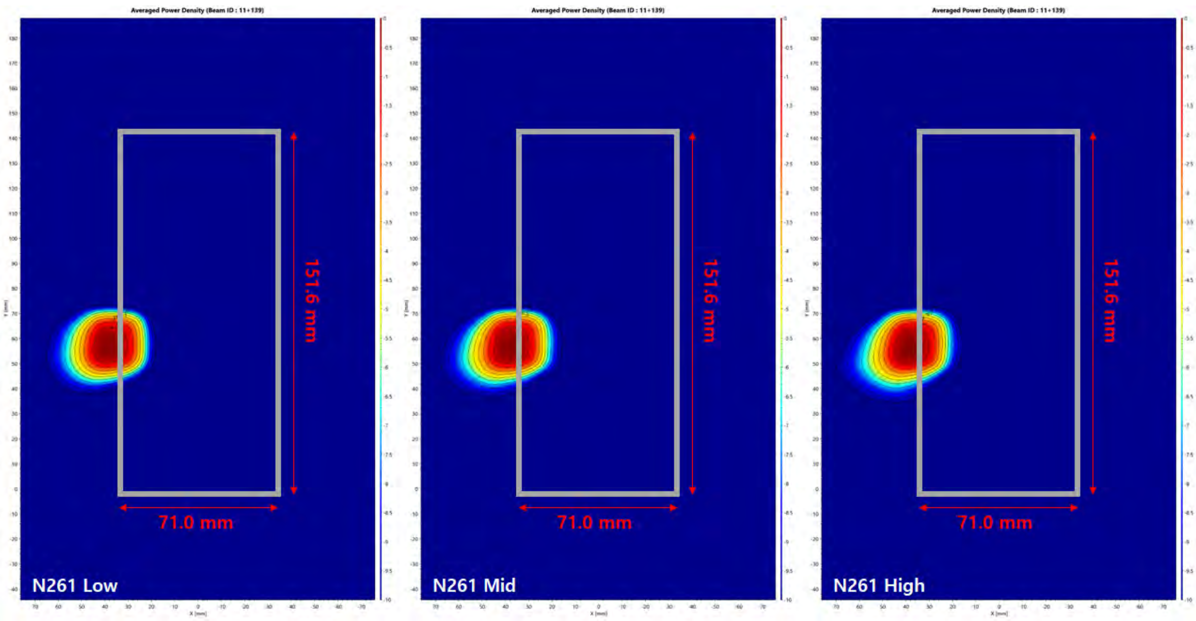
- n261 / Beam ID: 7+135 / Back surface



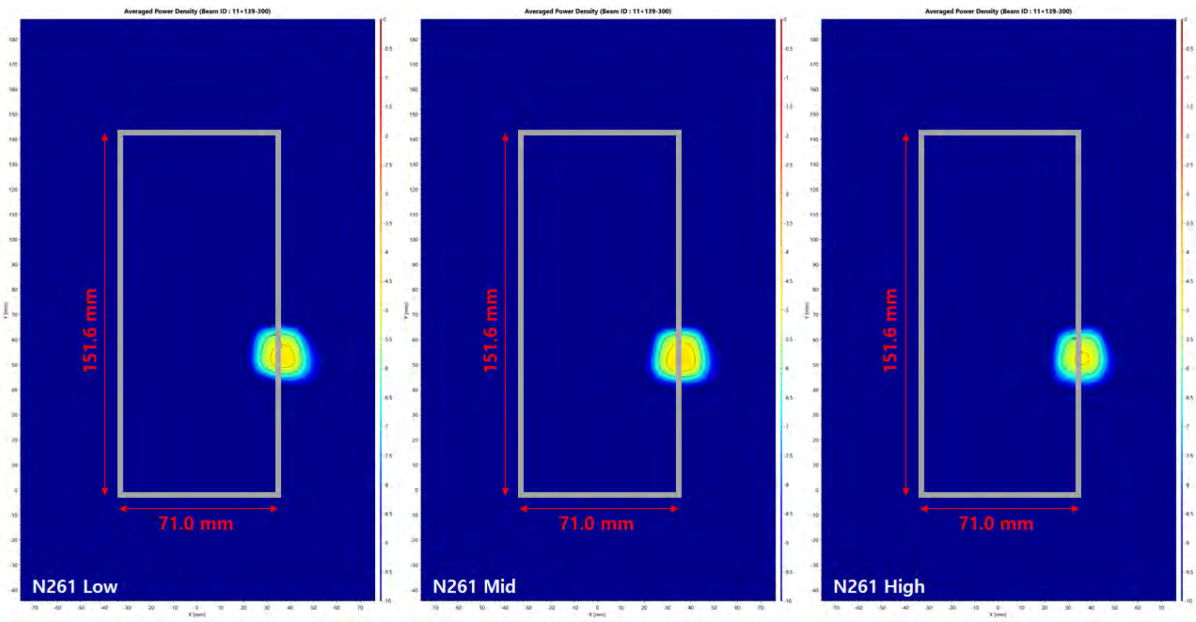

- n261 / Beam ID: 7+135 / Front surface



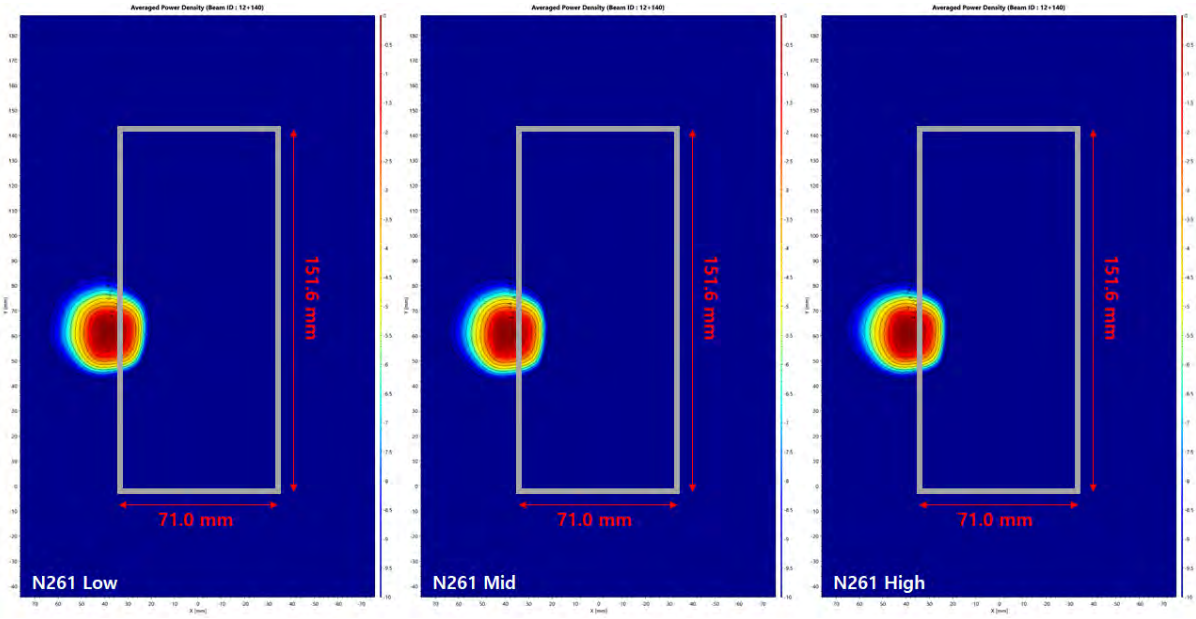
- n261 / Beam ID: 11+139 / Back surface



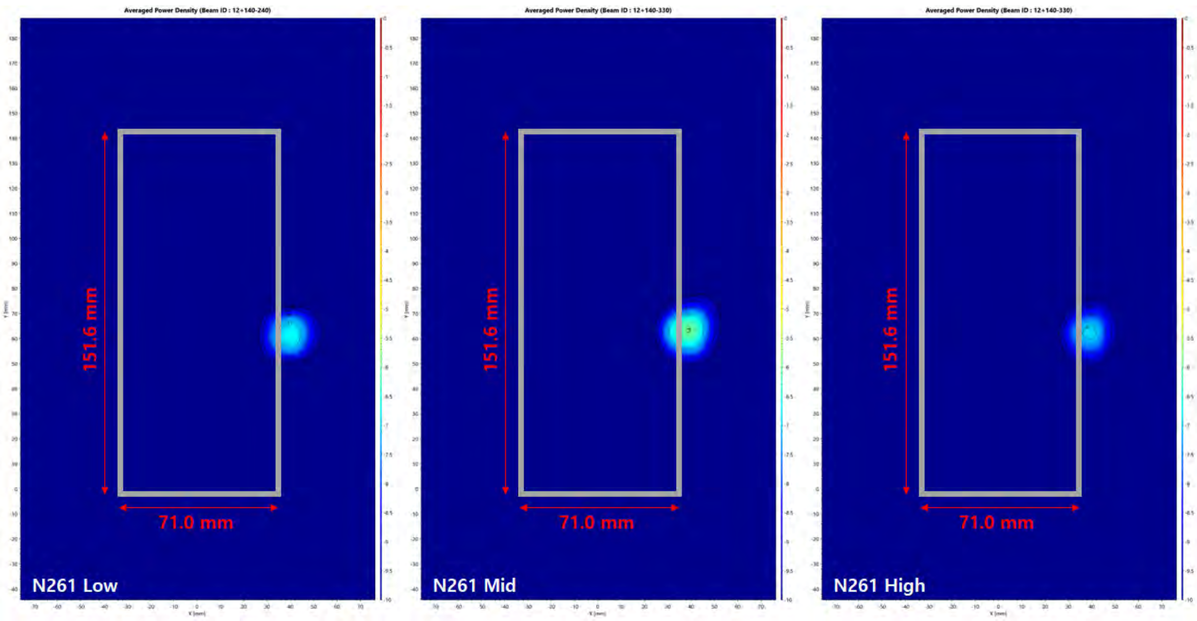

- n261 / Beam ID: 11+139 / Front surface



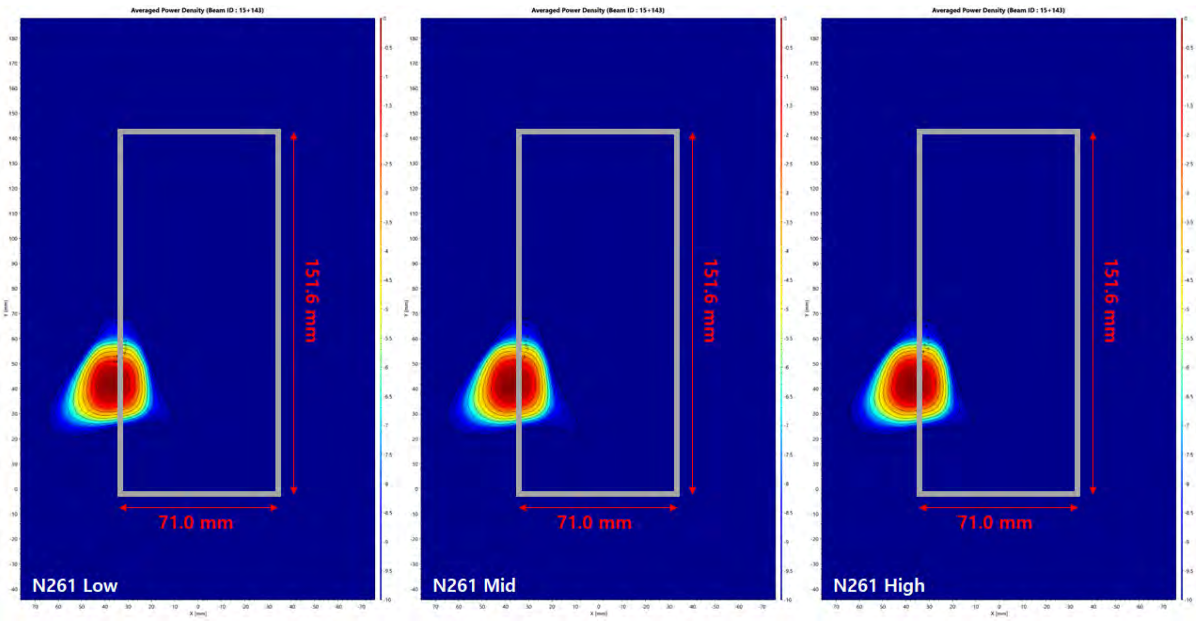
- n261 / Beam ID: 12+140 / Back surface



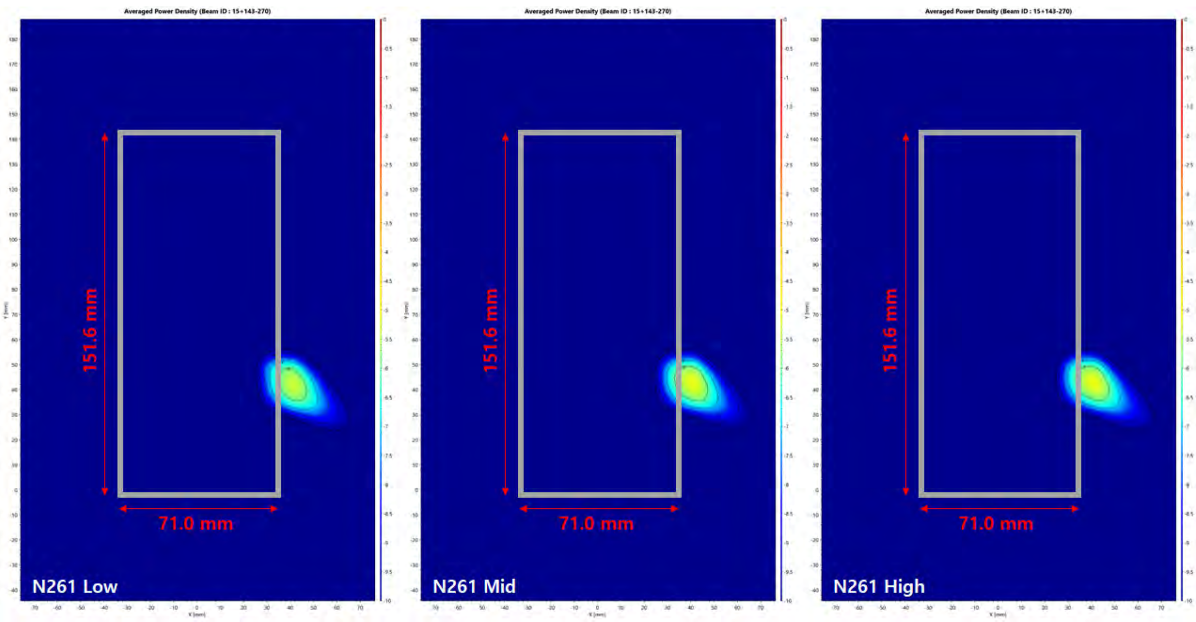

- n261 / Beam ID: 12+140 / Front surface



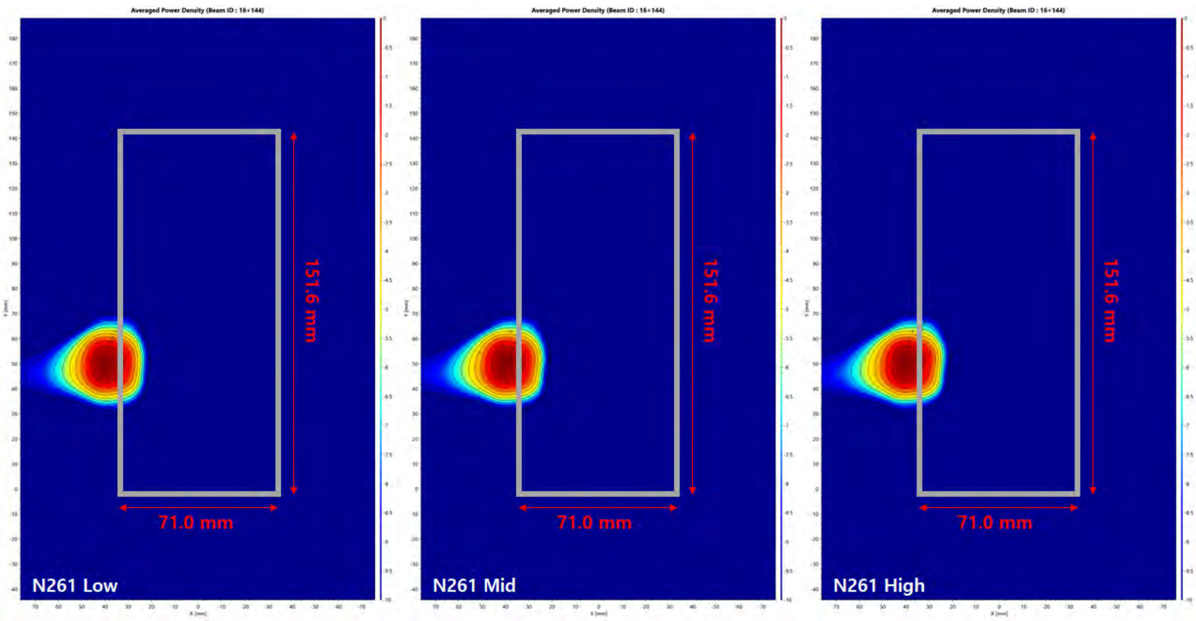
- n261 / Beam ID: 15+143 / Back surface



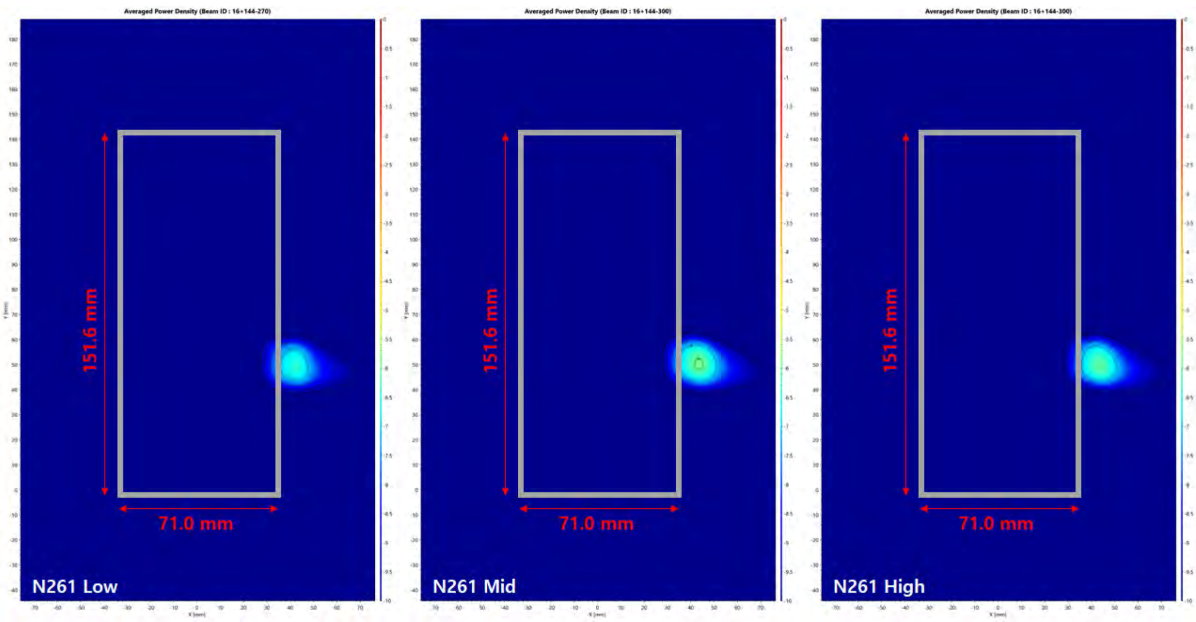

- n261 / Beam ID: 15+143 / Front surface



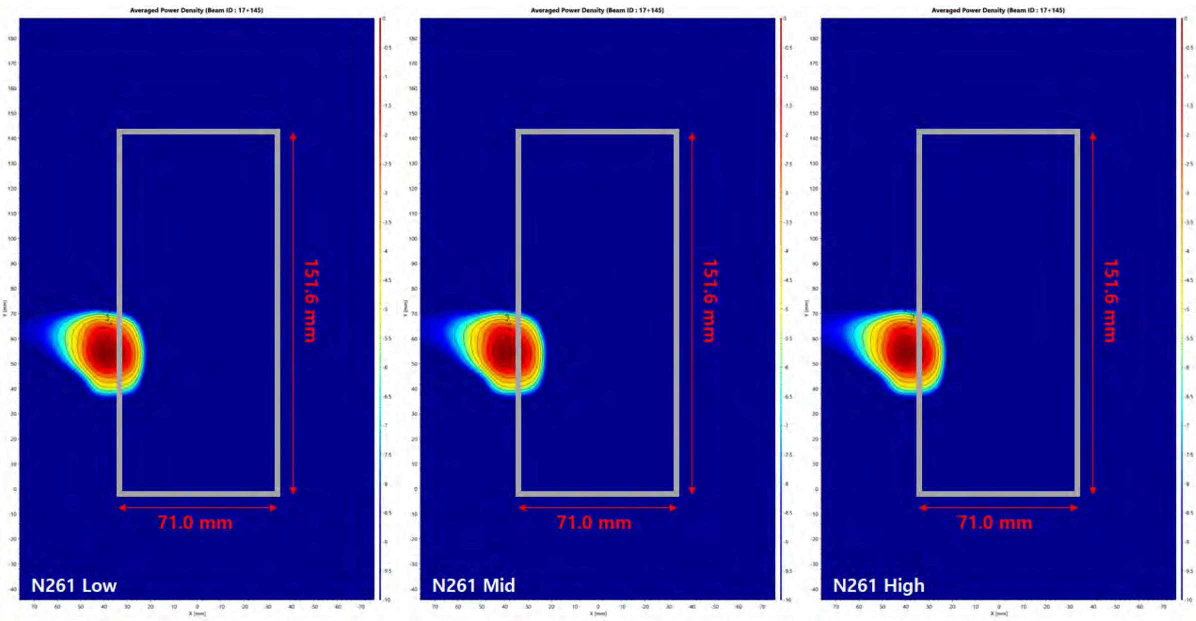
- n261 / Beam ID: 16+144 / Back surface



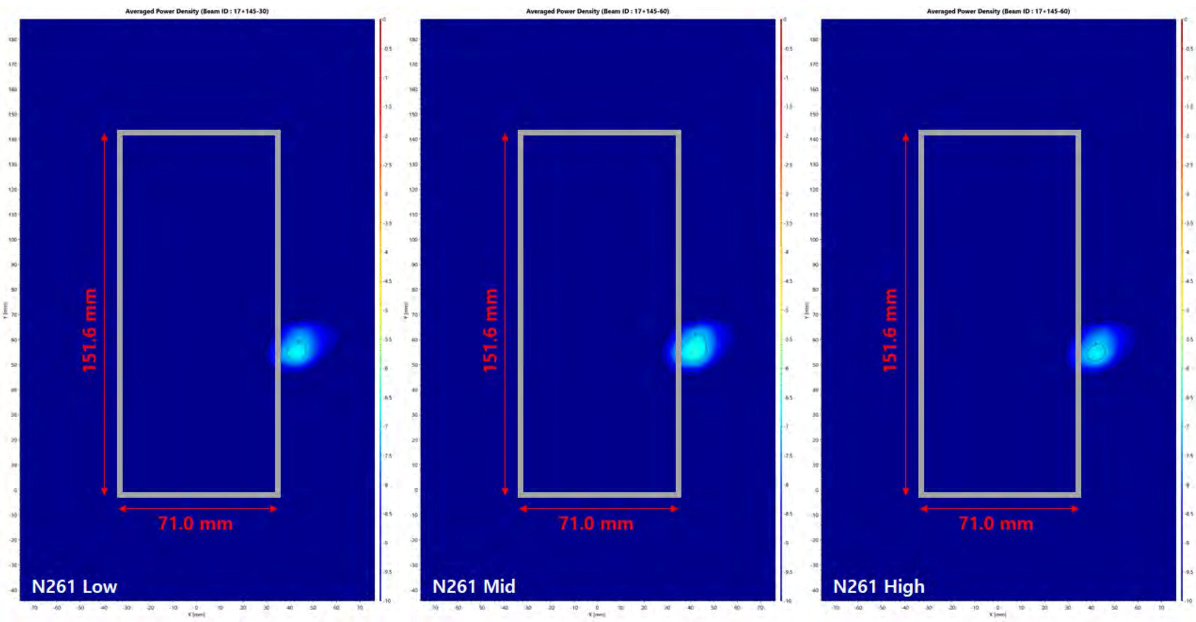

- n261 / Beam ID: 16+144 / Front surface



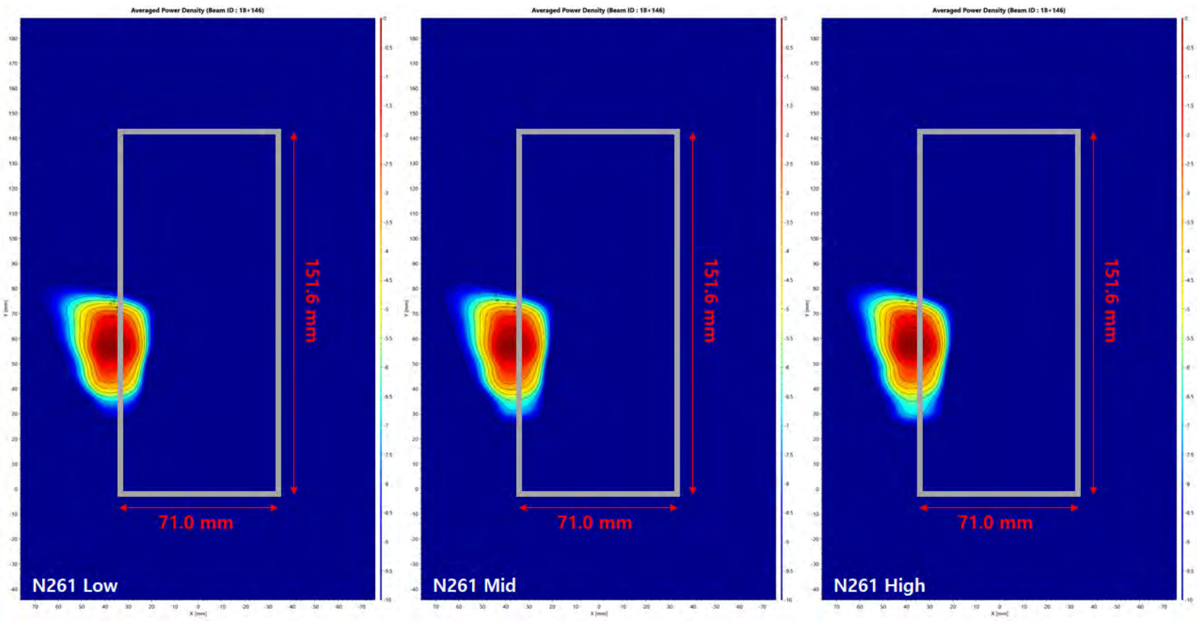
- n261 / Beam ID: 17+145 / Back surface



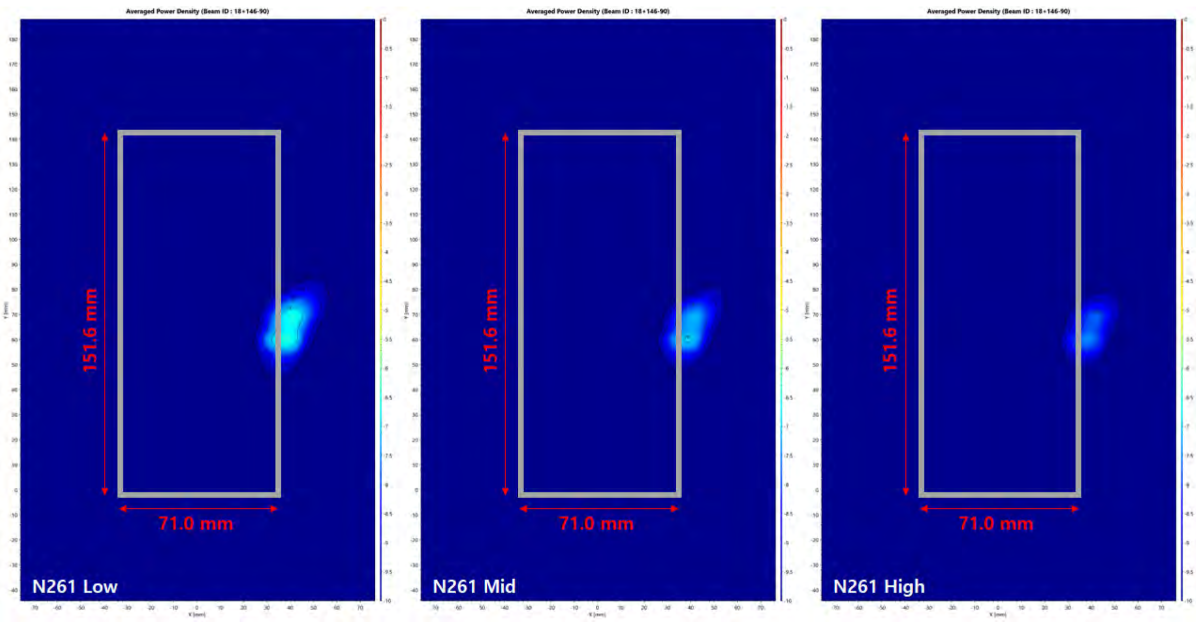

- n261 / Beam ID: 17+145 / Front surface



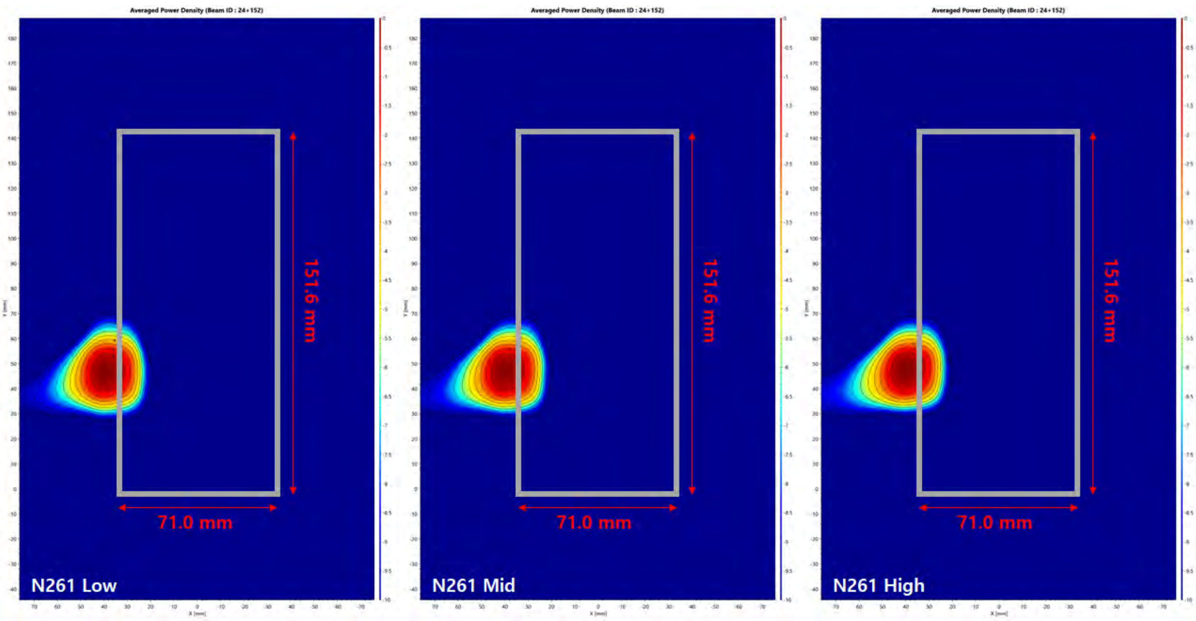
- n261 / Beam ID: 18+146 / Back surface



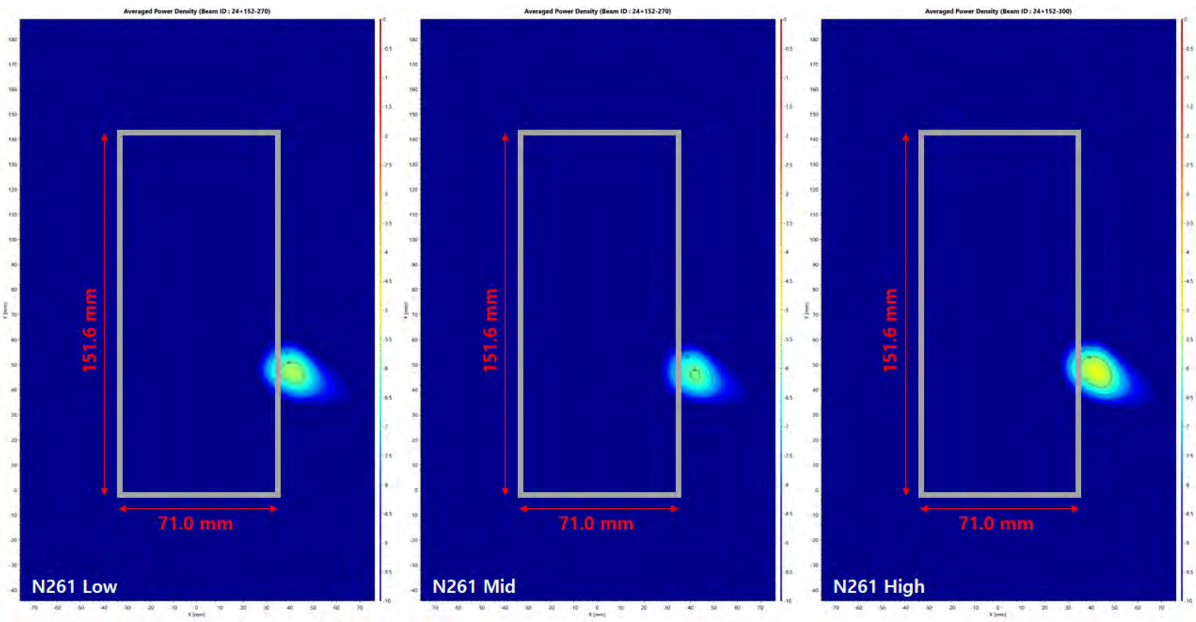

- n261 / Beam ID: 18+146 / Front surface



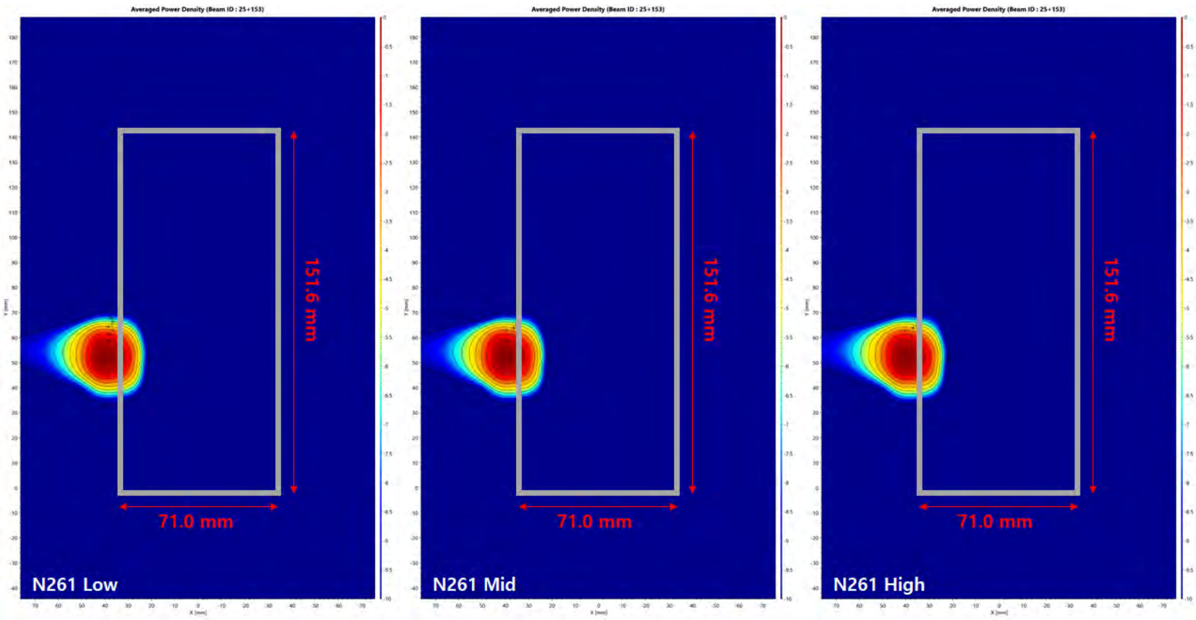
- n261 / Beam ID: 24+152 / Back surface



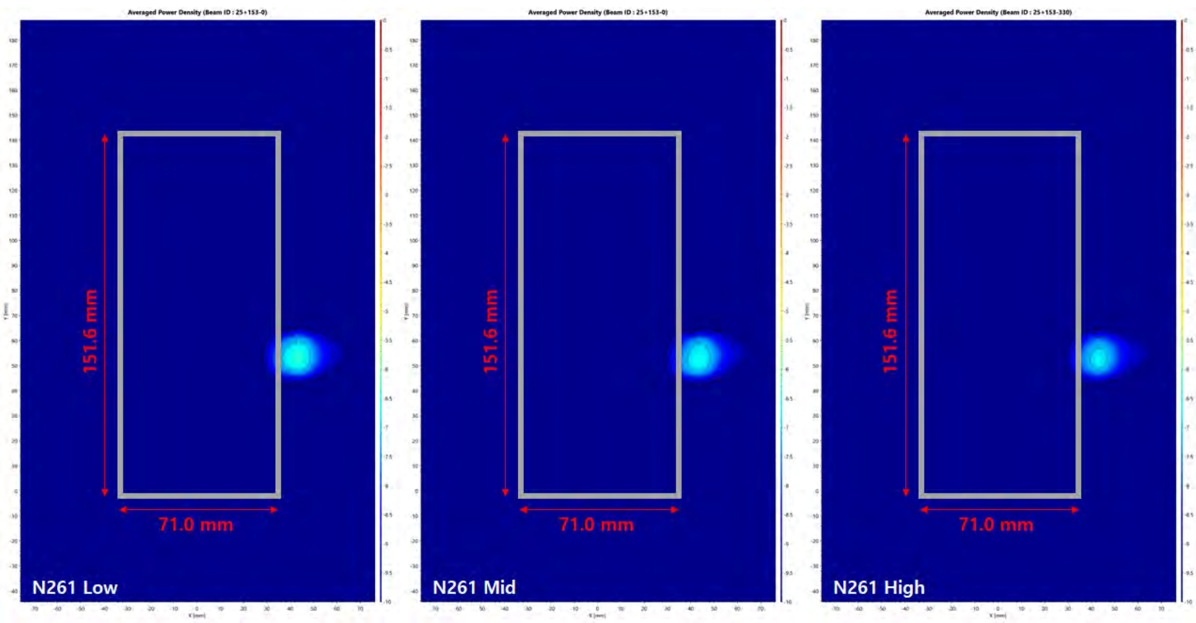

- n261 / Beam ID: 24+152 / Front surface



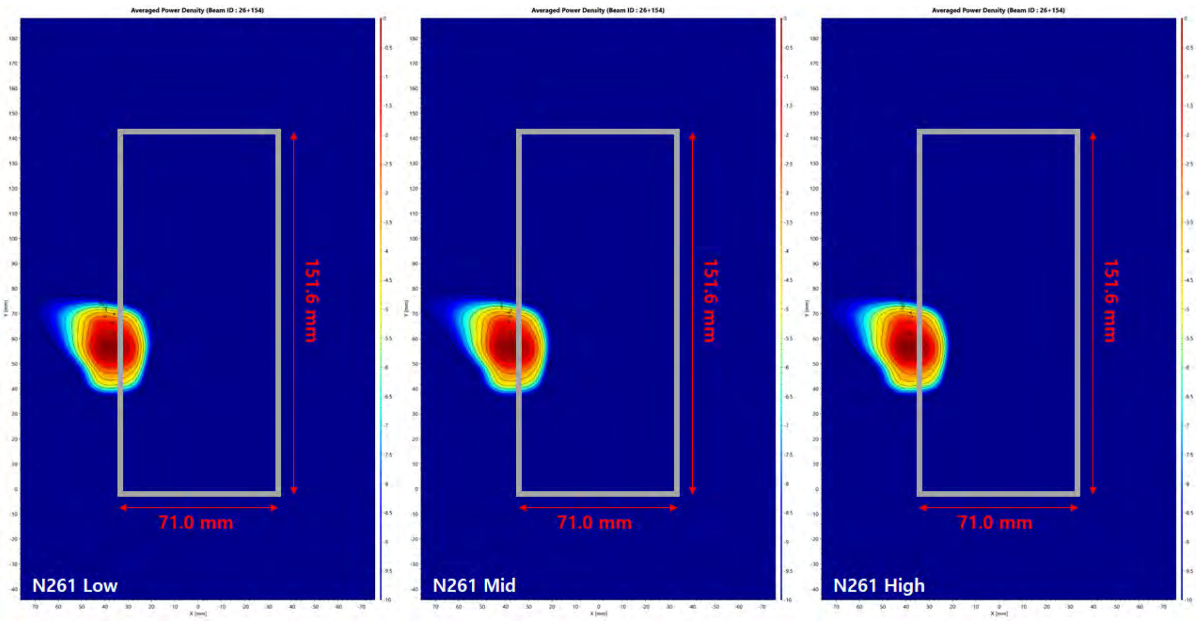
- n261 / Beam ID: 25+153 / Back surface




- n261 / Beam ID: 25+153 / Front surface



- n261 / Beam ID: 26+154 / Back surface




- n261 / Beam ID: 26+154 / Front surface