FCC ID: A3LSMH204V

RF Exposure Part 0 Test Report
Power Density Characterization

Report SN: 1M2004140062-20.A3L

July 23, 2020

SAMSUNG ELECTRONICS

Power Density Characterization for f < 6 Ghz

1 Uncertainty for f < 6 GHz

For EUT, total uncertainty can be determined from the module level uncertainty at reference power level for f < 6GHz, antenna gain variation over each band, and the device-to-device uncertainty.

Table 1
EUT uncertainty for f < 6 GHz

Item	Uncertainty k=2 (dB)
Total uncertainty	1

2 PD_design_target for f < 6 GHz

PD_design_target for f < 6 GHz is determined as:

$$PD\_design\_target\ (f < 6\ GHz) < PD_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}} \qquad (1)$$

The PD_design_target (f < 1.5GHz) can be determined as:

$$PD\_design\_target\ (f \leq 1.5\ GHz) < 10 \times f/1.5 \times 10^{\frac{-1.0}{10}} \quad in\ W/m^2$$

where f, in GHz, corresponds to the low channel frequency of each band supported.

The PD_design_target values for each band in f < GHz are summarized below.

Table 2
PD_design_target for f < 6 GHz

Band	Low channel freq [GHz]	PD_design target
LTE B2	1.5	4.77
LTE B4	1.5	4.77
LTE B5	0.824	2.62
LTE B13	0.777	2.47
LTE B48	1.5	4.77
LTE B66	1.5	4.77
NR n2	1.5	4.77
NR n5	0.824	2.62
NR n66	1.5	4.77

Note: for bands where 1.5 GHz < f < 6 GHz, 1.5 GHz was indicated in the table above as the low channel frequency for simplification since when f > 1.5 GHz the compliance limit is not a function of frequency.

3 PD Char for f < 6 GHz

Friis equation as shown below:

$$power\ density = \frac{EIRP}{4\pi r^2} = \frac{P * G}{4\pi r^2} \qquad (2a)$$

Or

$$P = \frac{power\ density}{G} \times 4\pi r^2 \qquad (2b)$$

Where EIRP is effective isotropic radiated power, r is separation distance between radiating antenna to observation point, P is the conducted power, and G is the corresponding antenna gain.

Using above equation at 20cm distance, the Plimit corresponding to PD_design_target is shown below.

Table 3
PD char for f < 6 GHz

Band	Low channel freq [GHz]	PD_design target	P_limit [W]	P_limit [dBm]
LTE B2	1.5	4.77	0.93	29.69
LTE B4	1.5	4.77	0.95	29.79
LTE B5	0.824	2.62	1.73	32.39
LTE B13	0.777	2.47	1.19	30.74
LTE B48	1.5	4.77	1.07	30.29
LTE B66	1.5	4.77	0.85	29.29
NR n2	1.5	4.77	0.93	29.69
NR n5	0.824	2.62	1.73	32.39
NR n66	1.5	4.77	0.85	29.29

Notes:

1. For bands where 1.5 GHz < f < 6 GHz, 1.5 GHz was indicated in the table above as the low channel frequency for simplification since when f > 1.5 GHz the compliance limit is not a function of frequency.

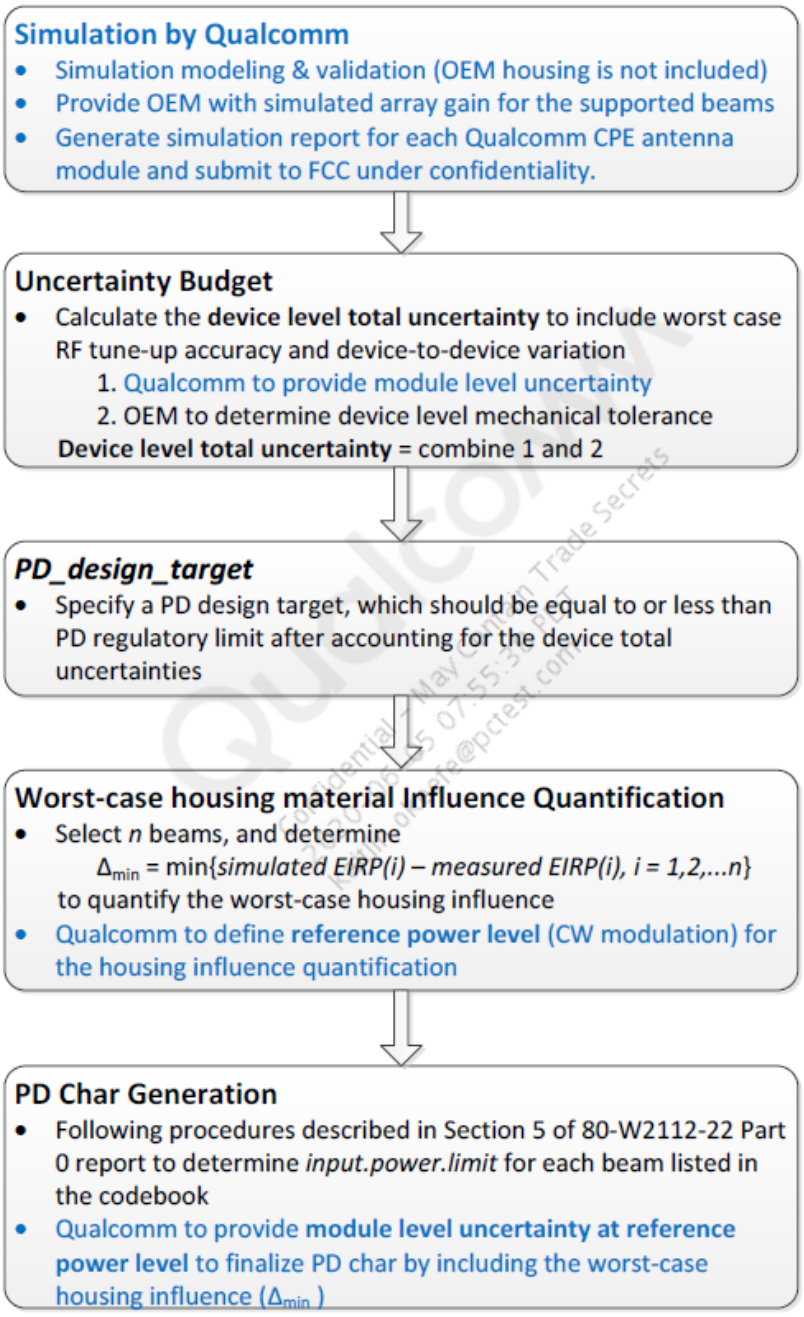
2. P_limit was calculated using the gain information as described in the equations above.

Power Density Characterization

1 Exposure Scenarios

At frequencies > 6 GHz, the total peak power density (PD) is required to be assessed for all antenna configurations (beams) from all mmW antenna modules installed inside the device.

2 Power Density Characterization Method



3 Codebook for all supported beams

Table 4
5G mmW NR Band n261 Codebook

SISO (V)	SISO (H)	MIMO (V+H)	
Beam ID	Beam ID	Beam ID	Beam ID
0	128	0	128
1	129	1	129
2	130	2	130
3	131	3	131
4	132	4	132
5	133	5	133
6	134	6	134
7	135	7	135
8	136	8	136
9	137	9	137
10	138	10	138
11	139	11	139
12	140	12	140
13	141	13	141
14	142	14	142
15	143	15	143
16	144	16	144
17	145	17	145
18	146	18	146
19	147	19	147
20	148	20	148
21	149	21	149
22	150	22	150
23	151	23	151
24	152	24	152
25	153	25	153
26	154	26	154
27	155	27	155
28	156	28	156
29	157	29	157
30	158	30	158
31	159	31	159
32	160	32	160
33	161	33	161
34	162	34	162
35	163	35	163
36	164	36	164
37	165	37	165
38	166	38	166
39	167	39	167
40	168	40	168
41	169	41	169
42	170	42	170
43	171	43	171
44	172	44	172
45	173	45	173
46	174	46	174
47	175	47	175
48	176	48	176
49	177	49	177
50	178	50	178
51	179	51	179
52	180	52	180
53	181	53	181
54	182	54	182
55	183	55	183
56	184	56	184
57	185	57	185
58	186	58	186
59	187	59	187
60	188	60	188
61	189	61	189
62	190	62	190
63	191	63	191
64	192	64	192
65	193	65	193
66	194	66	194
67	195	67	195
68	196	68	196
69	197	69	197
70	198	70	198
71	199	71	199
72	200	72	200
73	201	73	201
74	202	74	202
75	203	75	203
76	204	76	204
77	205	77	205
78	206	78	206
79	207	79	207
80	208	80	208
81	209	81	209
82	210	82	210
83	211	83	211
84	212	84	212
85	213	85	213
86	214	86	214
87	215	87	215
88	216	88	216
89	217	89	217
90	218	90	218
91	219	91	219
92	220	92	220
93	221	93	221
94	222	94	222
95	223	95	223
96	224	96	224
97	225	97	225
98	226	98	226
99	227	99	227
100	228	100	228
101	229	101	229
102	230	102	230
103	231	103	231
104	232	104	232
105	233	105	233
106	234	106	234
107	235	107	235
108	236	108	236
109	237	109	237

Table 5
5G mmW NR Band n260 Codebook

SISO (V)	SISO (H)	MIMO (V+H)	
Beam ID	Beam ID	Beam ID	Beam ID
0	128	0	128
1	129	1	129
2	130	2	130
3	131	3	131
4	132	4	132
5	133	5	133
6	134	6	134
7	135	7	135
8	136	8	136
9	137	9	137
10	138	10	138
11	139	11	139
12	140	12	140
13	141	13	141
14	142	14	142
15	143	15	143
16	144	16	144
17	145	17	145
18	146	18	146
19	147	19	147
20	148	20	148
21	149	21	149
22	150	22	150
23	151	23	151
24	152	24	152
25	153	25	153
26	154	26	154
27	155	27	155
28	156	28	156
29	157	29	157
30	158	30	158
31	159	31	159
32	160	32	160
33	161	33	161
34	162	34	162
35	163	35	163
36	164	36	164
37	165	37	165
38	166	38	166
39	167	39	167
40	168	40	168
41	169	41	169
42	170	42	170
43	171	43	171
44	172	44	172
45	173	45	173
46	174	46	174
47	175	47	175
48	176	48	176
49	177	49	177
50	178	50	178
51	179	51	179
52	180	52	180
53	181	53	181
54	182	54	182
55	183	55	183
56	184	56	184
57	185	57	185
58	186	58	186
59	187	59	187
60	188	60	188
61	189	61	189
62	190	62	190
63	191	63	191
64	192	64	192
65	193	65	193
66	194	66	194
67	195	67	195
68	196	68	196
69	197	69	197
70	198	70	198
71	199	71	199
72	200	72	200
73	201	73	201
74	202	74	202
75	203	75	203
76	204	76	204
77	205	77	205
78	206	78	206
79	207	79	207
80	208	80	208
81	209	81	209
82	210	82	210
83	211	83	211
84	212	84	212
85	213	85	213
86	214	86	214
87	215	87	215
88	216	88	216
89	217	89	217
90	218	90	218
91	219	91	219
92	220	92	220
93	221	93	221
94	222	94	222
95	223	95	223
96	224	96	224
97	225	97	225
98	226	98	226
99	227	99	227
100	228	100	228
101	229	101	229
102	230	102	230
103	231	103	231
104	232	104	232
105	233	105	233
106	234	106	234
107	235	107	235
108	236	108	236
109	237	109	237

4 PD_design_target

Table below includes a summary of the device to device variation to capture any potential RF performance impact due to mechanical design tolerance. A single device was used with multiple housings to determine the variation.

With an input power of 6 dBm for n261 band and 6 dBm for n260 band, peak EIRP is measured without housing and with each selected housing. The device to device variation is determined as the maximum standard deviation (k=2) out of all 2σ standard deviations.

Results will be used to determine worst-case housing influence for conservative assessment.

Table 6

	Beam ID									
	20		80		87		95		103	
QC Pi	0		0		90		180		270	
QC Theta	0		45		45		45		45	
Housing #	n261									
Average	38.25		36.29		35.82		36.49		35.62	
35	38.52	7112.14	36.32	4285.49	36.62	4591.98	36.32	4285.49	35.72	3732.50
36	38.62	7277.80	36.02	3999.45	36.22	4187.94	36.52	4487.45	35.52	3564.51
37	38.72	7447.32	36.12	4092.61	35.62	3647.54	37.02	5035.01	35.72	3732.50
39	37.42	5520.77	36.82	4808.39	35.62	3647.54	35.72	3732.50	35.32	3404.08
38	38.52	7112.14	36.62	4591.98	35.62	3647.54	36.52	4487.45	34.82	3033.89
40	37.72	5915.62	35.82	3819.44	35.22	3326.60	36.82	4808.39	36.62	4591.98
41	38.52	7112.14	36.42	4385.31	37.12	5152.29	36.62	4591.98	36.02	3999.45
42	38.42	6950.24	36.02	3999.45	36.22	4187.94	36.92	4920.40	35.52	3564.51
43	38.72	7447.32	35.62	3647.54	36.62	4591.98	37.02	5035.01	35.72	3732.50
44	37.92	6194.41	35.52	3564.51	35.62	3647.54	35.72	3732.50	35.32	3404.08
sigma(dB)	0.41	680.33	0.40	400.88	0.58	578.32	0.44	480.26	0.46	413.42
2σ std. dev, dB	0.83		0.81		1.16		0.88		0.93	

	Beam ID									
	19		80		88		95		103	
QC Pi	0		0		90		180		270	
QC Theta	0		45		45		45		45	
Housing #	n260									
Average	40.53		38.58		38.33		38.44		37.63	
35	40.78	11967.41	39.08	8090.96	38.68	7379.04	38.48	7046.93	37.98	6280.58
36	40.98	12531.41	38.68	7379.04	38.18	6576.58	38.78	7550.92	37.68	5861.38
37	39.58	9078.21	38.38	6886.52	38.48	7046.93	38.88	7726.81	37.38	5470.16
39	40.58	11428.78	37.78	5997.91	38.18	6576.58	37.43	5533.50	36.78	4764.31
38	40.68	11694.99	39.18	8279.42	38.98	7906.79	38.78	7550.92	36.78	4764.31
40	40.58	11428.78	38.38	6886.52	37.48	5597.58	38.28	6729.77	39.18	8279.42
41	40.98	12531.41	39.08	8090.96	38.68	7379.04	38.48	7046.93	37.88	6137.62
42	40.38	10914.40	38.68	7379.04	38.18	6576.58	38.78	7550.92	38.18	6576.58
43	40.58	11428.78	38.48	7046.93	38.48	7046.93	38.88	7726.81	37.68	5861.38
44	40.28	10665.96	38.78	7550.92	38.18	6576.58	37.43	5533.50	36.78	4764.31
sigma(dB)	0.48	1006.98	0.39	695.44	0.38	634.13	0.49	839.69	0.73	1073.52
2σ std. dev, dB	0.96		0.78		0.77		0.98		1.46	

The total uncertainty should be determined by combining module level uncertainty provided by chipset manufacturer and the device level uncertainty determined by OEM. After accounting for total uncertainty, mmW_PD_design_target is determined in table below.

Table 7

Note		n261	n260
ⓑ	device level uncertainty max[ⓐ]	1.16	1.46
ⓒ	Module Level Uncertainty	2.50	3.30
ⓓ	**Total Uncertatinty ⓑ+ⓒ**	2.64	3.44
ⓔ	*Design Limit*	6.00	6.00
ⓕ	***mmW_PD_design_target ⓔ * 10^[-ⓓ/10]***	3.27	2.72

5 Δmin

Device housing is not included in simulation model. Worst case housing material loss or influence should be quantified and counted towards finalizing PD char.

In order to identity the worst case hosing influence, beams representing DUTs spherical coverage needs to be evaluated.

For this DUT, the below procedure was used to determine worst-case housing influence, Δmin:

1. Based on array gain and reference power level, calculate simulation based peak EIRP.
2. Set DUT input power to reference power level for 1st beam selected.
3. Measured peak EIRP with the different housings.
4. Calculate the EIRP difference, Δmin(i), between simulated EIRP without housing the measured EIRP with housing and determine the minimum delta out of all the deltas for the 1st beam.
5. Repeat for the remaining beams.
6. Determine Δmin by taking the minimum value out of all the deltas.
7. If Δmin > module level uncertainty at reference power level, more beams should be selected to confirm the resulting Δmin is the minimum value for all the beams, including the additionally selected beams.

Table 8
n261 EIRP comparison and Δmin(i)

	Beam ID																							
	20			80			87			95			103			57			46			52			62		
QC Pi	0			0			90			180			270													
QC Theta	0			45			45			45			45													
# of housing	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta
35		38.52	4.28		36.32	4.58		36.62	4.58		36.32	4.88		35.72	5.18		35.46	6.04		37.64	4.76		37.74	4.36		36.94	4.64
36		38.62	4.18		36.02	4.88		36.22	4.98		36.52	4.68		35.52	5.38		35.29	6.21		37.74	4.66		37.38	4.72		36.66	4.92
37		38.72	4.08		36.12	4.78		35.62	5.58		37.02	4.18		35.72	5.18		35.75	5.75		38.26	4.14		37.43	4.67		36.27	5.31
39		37.42	5.38		36.82	4.08		35.62	5.58		35.72	5.48		35.32	5.58		35.54	5.96		37.10	5.30		37.35	4.75		36.25	5.33
38	42.8	38.52	4.28	40.9	36.62	4.28	41.2	35.62	5.58	41.2	36.52	4.68	40.9	34.82	6.08	41.5	35.66	5.84	42.4	37.06	5.34	42.1	37.11	4.99	41.6	37.31	4.27
40		37.72	5.08		35.82	5.08		35.22	5.98		36.82	4.38		36.62	4.28		35.51	5.99		37.62	4.78		37.84	4.26		36.24	5.34
41		38.52	4.28		36.42	4.48		37.12	4.08		36.62	4.58		36.02	4.88		35.23	6.27		37.06	5.34		37.68	4.42		36.77	4.81
42		38.42	4.38		36.02	4.88		36.22	4.98		36.92	4.28		35.52	5.38		36.05	5.45		37.53	4.87		37.37	4.73		36.93	4.65
43		38.72	4.08		35.62	5.28		36.62	4.58		37.02	4.18		35.72	5.18		35.41	6.09		37.15	5.25		37.74	4.36		36.61	4.97
44		37.92	4.88		35.52	5.38		35.62	5.58		35.72	5.48		35.32	5.58		35.99	5.51		37.31	5.09		37.78	4.32		37.00	4.58
	delta_min(1)		4.08	delta_min(2)		4.08	delta_min(3)		4.08	delta_min(4)		4.18	delta_min(5)		4.28	delta_min(6)		5.45	delta_min(7)		4.14	delta_min(8)		4.26	delta_min(9)		4.27

Note: Since Δmin > module level uncertainty at reference power level, more beams were selected to confirm the resulting Δmin is the minimum value for all the beams, including the additionally selected beams.

Table 9
n260 EIRP comparison and Δmin(i)

	Beam ID														
	19			80			88			95			103		
QC Pi	0			0			90			180			270		
QC Theta	0			45			45			45			45		
# of housing	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta	sim EIRP w/o housing	meas. EIRP w/ housing	delta
35		40.78	2.32		39.08	1.72		38.68	2.22		38.48	2.52		37.98	3.02
36		40.98	2.12		38.68	2.12		38.18	2.72		38.78	2.22		37.68	3.32
37		39.58	3.52		38.38	2.42		38.48	2.42		38.88	2.12		37.38	3.62
39		40.58	2.52		37.78	3.02		38.18	2.72		37.43	3.57		36.78	4.22
38	43.1	40.68	2.42	40.8	39.18	1.62	40.9	38.98	1.92	41.0	38.78	2.22	41.0	36.78	4.22
40		40.58	2.52		38.38	2.42		37.48	3.42		38.28	2.72		39.18	1.82
41		40.98	2.12		39.08	1.72		38.68	2.22		38.48	2.52		37.88	3.12
42		40.38	2.72		38.68	2.12		38.18	2.72		38.78	2.22		38.18	2.82
43		40.58	2.52		38.48	2.32		38.48	2.42		38.88	2.12		37.68	3.32
44		40.28	2.82		38.78	2.02		38.18	2.72		37.43	3.57		36.78	4.22
	delta_min(1)		2.12	delta_min(2)		1.62	delta_min(3)		1.92	delta_min(4)		2.12	delta_min(5)		1.82

Table 10
Δmin

Band	Δmin (dB)
n261	4.08
n260	1.62

6 PD Char

Ideally, if there is no uncertainty associated with hardware design, the input power limit, denoted as $input.power.limit(i)$, for beam i can be obtained after accounting for the housing influence (Δ_{min}) given by:

- For n260 and n261

$$input.power.limit(i) = sim.power_{limit}(\mathrm{i}) + \Delta_{min},\ i \in all\ beams \qquad (5)$$

where $sim.power_{limit}(\mathrm{i})$ is computed using mmW_PD_dseign_target and respective array gains.

In reality the hardware design has uncertainty which must be properly considered.

Thus, Equation 5 is modified to:

If - module level uncertainty at reference power level < Δmin < module level uncertainty at reference power level

$input.power.limit(i) = sim.power_{limit}(\mathrm{i})$ for n260 and n261 (6)

else if Δmin < - module level uncertainty at reference power level,

$input.power.limit(i) = sim.power_{limit}(\mathrm{i}) + (\Delta_{min} +$ module level uncertainty at reference power level),

$i \in all\ beams$, for n260 and n261 (7)

else if Δmin > module level uncertainty at reference power level,

$input.power.limit(i) = sim.power_{limit}(\mathrm{i}) + (\Delta_{min} -$ module level uncertainty at reference power level),

$i \in all\ beams$, for n260 and n261 (8)

Following above logic, the input.power.limit for this DUT can be calculated using Equations (6), (7), and (8), i.e.,

Table 11
***input.power.limit* Calculation**

Band	Δmin	module level uncertainty at reference power level	*input.power.limit*	Notes
	(dB)	(dB)	(dBm)	
n261	4.08	1.7	*input.power.limit(i) = sim.power limit (i) + 2.38*	Using Eq.8
n260	1.62	2.6	*input.power.limit(i) = sim.power limit (i)*	Using Eq.6

Table 12

5G NR n261 *input.power.limit*

Band	Beam ID	input.power.limit (dBm)
n261	0	15.6
n261	1	15.8
n261	2	15.8
n261	3	15.7
n261	4	15.7
n261	5	15.9
n261	6	15.9
n261	7	16.2
n261	8	16.3
n261	9	16.4
n261	10	16.4
n261	11	16.2
n261	12	16.1
n261	13	16.0
n261	14	16.3
n261	15	16.5
n261	16	16.6
n261	17	16.5
n261	18	16.3
n261	19	-2.3
n261	20	-2.2
n261	21	-2.3
n261	22	-2.3
n261	23	-2.3
n261	24	-2.3
n261	25	-2.2
n261	26	-2.0
n261	27	-2.0
n261	28	-2.0
n261	29	-2.1
n261	30	-2.2
n261	31	-2.2
n261	32	-2.1
n261	33	-2.1
n261	34	-2.0
n261	35	-2.0
n261	36	-2.0
n261	37	-2.0
n261	38	-1.6
n261	39	-1.6
n261	40	-1.6
n261	41	-1.6
n261	42	-1.7
n261	43	-1.8
n261	44	-1.9
n261	45	-1.9
n261	46	-1.9
n261	47	-1.8
n261	48	-1.7
n261	49	-1.7
n261	50	-1.6
n261	51	-1.6
n261	52	-1.6
n261	53	-1.7
n261	54	-1.7
n261	55	-1.7
n261	56	-1.1
n261	57	-1.0
n261	58	-1.0
n261	59	-1.0
n261	60	-1.0
n261	61	-1.1
n261	62	-1.3
n261	63	-1.4
n261	64	-1.5
n261	65	-1.5
n261	66	-1.5
n261	67	-1.5
n261	68	-1.4
n261	69	-1.2
n261	70	-1.1
n261	71	-1.0
n261	72	-1.0
n261	73	-1.0
n261	74	-1.1
n261	75	-1.1
n261	76	-1.2
n261	77	-1.2
n261	78	-1.2
n261	79	-1.2
n261	80	-0.4
n261	81	-0.3
n261	82	-0.2
n261	83	-0.1
n261	84	-0.1
n261	85	-0.2
n261	86	-0.4
n261	87	-0.5
n261	88	-0.7
n261	89	-0.8
n261	90	-1.0
n261	91	-1.0
n261	92	-1.0
n261	93	-1.0
n261	94	-0.8
n261	95	-0.7
n261	96	-0.5
n261	97	-0.4
n261	98	-0.3
n261	99	-0.2
n261	100	-0.2
n261	101	-0.2
n261	102	-0.3
n261	103	-0.4
n261	104	-0.5
n261	105	-0.6
n261	106	-0.6
n261	107	-0.7
n261	108	-0.6
n261	109	-0.5

Band	Beam ID	input.power.limit (dBm)
n261	128	15.7
n261	129	15.8
n261	130	15.8
n261	131	15.9
n261	132	15.9
n261	133	15.9
n261	134	15.9
n261	135	16.2
n261	136	16.1
n261	137	16.3
n261	138	16.5
n261	139	16.5
n261	140	16.3
n261	141	16.1
n261	142	16.2
n261	143	16.4
n261	144	16.6
n261	145	16.6
n261	146	16.3
n261	147	-2.4
n261	148	-2.3
n261	149	-2.3
n261	150	-2.3
n261	151	-2.2
n261	152	-2.2
n261	153	-2.3
n261	154	-2.1
n261	155	-2.2
n261	156	-2.2
n261	157	-2.1
n261	158	-2.0
n261	159	-2.0
n261	160	-2.0
n261	161	-2.0
n261	162	-2.0
n261	163	-2.0
n261	164	-2.0
n261	165	-2.1
n261	166	-1.8
n261	167	-1.9
n261	168	-1.9
n261	169	-1.9
n261	170	-1.8
n261	171	-1.7
n261	172	-1.6
n261	173	-1.6
n261	174	-1.6
n261	175	-1.6
n261	176	-1.7
n261	177	-1.7
n261	178	-1.7
n261	179	-1.7
n261	180	-1.6
n261	181	-1.6
n261	182	-1.7
n261	183	-1.8
n261	184	-1.4
n261	185	-1.5
n261	186	-1.5
n261	187	-1.5
n261	188	-1.5
n261	189	-1.4
n261	190	-1.3
n261	191	-1.1
n261	192	-1.0
n261	193	-1.0
n261	194	-1.0
n261	195	-1.1
n261	196	-1.1
n261	197	-1.2
n261	198	-1.2
n261	199	-1.2
n261	200	-1.2
n261	201	-1.2
n261	202	-1.1
n261	203	-1.1
n261	204	-1.0
n261	205	-1.1
n261	206	-1.1
n261	207	-1.2
n261	208	-0.7
n261	209	-0.9
n261	210	-1.0
n261	211	-1.0
n261	212	-1.0
n261	213	-1.0
n261	214	-0.9
n261	215	-0.7
n261	216	-0.5
n261	217	-0.4
n261	218	-0.2
n261	219	-0.2
n261	220	-0.2
n261	221	-0.2
n261	222	-0.3
n261	223	-0.4
n261	224	-0.5
n261	225	-0.6
n261	226	-0.7
n261	227	-0.6
n261	228	-0.6
n261	229	-0.5
n261	230	-0.5
n261	231	-0.3
n261	232	-0.3
n261	233	-0.2
n261	234	-0.2
n261	235	-0.3
n261	236	-0.4
n261	237	-0.6

Band	V Beam ID	H Beam ID	input.power.limit (dBm)
n261	0	128	12.7
n261	1	129	12.8
n261	2	130	12.8
n261	3	131	12.8
n261	4	132	12.8
n261	5	133	12.9
n261	6	134	12.9
n261	7	135	13.2
n261	8	136	13.2
n261	9	137	13.4
n261	10	138	13.5
n261	11	139	13.4
n261	12	140	13.2
n261	13	141	13.1
n261	14	142	13.3
n261	15	143	13.5
n261	16	144	13.6
n261	17	145	13.6
n261	18	146	13.3
n261	19	147	-5.3
n261	20	148	-5.2
n261	21	149	-5.3
n261	22	150	-5.3
n261	23	151	-5.2
n261	24	152	-5.2
n261	25	153	-5.2
n261	26	154	-5.0
n261	27	155	-5.1
n261	28	156	-5.1
n261	29	157	-5.1
n261	30	158	-5.1
n261	31	159	-5.1
n261	32	160	-5.0
n261	33	161	-5.0
n261	34	162	-5.0
n261	35	163	-5.0
n261	36	164	-5.0
n261	37	165	-5.0
n261	38	166	-4.7
n261	39	167	-4.7
n261	40	168	-4.7
n261	41	169	-4.7
n261	42	170	-4.7
n261	43	171	-4.7
n261	44	172	-4.7
n261	45	173	-4.7
n261	46	174	-4.7
n261	47	175	-4.7
n261	48	176	-4.7
n261	49	177	-4.7
n261	50	178	-4.6
n261	51	179	-4.6
n261	52	180	-4.6
n261	53	181	-4.6
n261	54	182	-4.7
n261	55	183	-4.7
n261	56	184	-4.2
n261	57	185	-4.2
n261	58	186	-4.2
n261	59	187	-4.2
n261	60	188	-4.2
n261	61	189	-4.2
n261	62	190	-4.3
n261	63	191	-4.2
n261	64	192	-4.2
n261	65	193	-4.2
n261	66	194	-4.2
n261	67	195	-4.3
n261	68	196	-4.2
n261	69	197	-4.2
n261	70	198	-4.1
n261	71	199	-4.1
n261	72	200	-4.1
n261	73	201	-4.1
n261	74	202	-4.1
n261	75	203	-4.1
n261	76	204	-4.1
n261	77	205	-4.1
n261	78	206	-4.1
n261	79	207	-4.2
n261	80	208	-3.5
n261	81	209	-3.6
n261	82	210	-3.6
n261	83	211	-3.5
n261	84	212	-3.5
n261	85	213	-3.6
n261	86	214	-3.6
n261	87	215	-3.6
n261	88	216	-3.6
n261	89	217	-3.6
n261	90	218	-3.6
n261	91	219	-3.6
n261	92	220	-3.6
n261	93	221	-3.6
n261	94	222	-3.5
n261	95	223	-3.5
n261	96	224	-3.5
n261	97	225	-3.5
n261	98	226	-3.5
n261	99	227	-3.4
n261	100	228	-3.4
n261	101	229	-3.3
n261	102	230	-3.4
n261	103	231	-3.3
n261	104	232	-3.4
n261	105	233	-3.4
n261	106	234	-3.4
n261	107	235	-3.5
n261	108	236	-3.5
n261	109	237	-3.5

Table 13

5G NR n260 *input.power.limit*

Band	Beam ID	input.power.limit (dBm)
n260	0	12.0
n260	1	12.2
n260	2	12.3
n260	3	12.3
n260	4	12.2
n260	5	12.3
n260	6	12.3
n260	7	12.6
n260	8	12.8
n260	9	13.1
n260	10	13.1
n260	11	13.1
n260	12	12.8
n260	13	12.8
n260	14	13.0
n260	15	13.1
n260	16	13.0
n260	17	12.8
n260	18	12.7
n260	19	-5.7
n260	20	-5.6
n260	21	-5.6
n260	22	-5.6
n260	23	-5.6
n260	24	-5.6
n260	25	-5.7
n260	26	-5.4
n260	27	-5.4
n260	28	-5.3
n260	29	-5.4
n260	30	-5.4
n260	31	-5.4
n260	32	-5.4
n260	33	-5.3
n260	34	-5.4
n260	35	-5.4
n260	36	-5.5
n260	37	-5.5
n260	38	-5.0
n260	39	-4.9
n260	40	-4.9
n260	41	-4.9
n260	42	-4.9
n260	43	-5.0
n260	44	-5.0
n260	45	-5.1
n260	46	-5.0
n260	47	-5.0
n260	48	-4.9
n260	49	-4.9
n260	50	-4.9
n260	51	-4.9
n260	52	-5.0
n260	53	-5.1
n260	54	-5.2
n260	55	-5.1
n260	56	-4.3
n260	57	-4.2
n260	58	-4.2
n260	59	-4.1
n260	60	-4.2
n260	61	-4.2
n260	62	-4.3
n260	63	-4.4
n260	64	-4.5
n260	65	-4.6
n260	66	-4.6
n260	67	-4.5
n260	68	-4.4
n260	69	-4.3
n260	70	-4.2
n260	71	-4.2
n260	72	-4.2
n260	73	-4.2
n260	74	-4.4
n260	75	-4.6
n260	76	-4.7
n260	77	-4.7
n260	78	-4.6
n260	79	-4.5
n260	80	-3.4
n260	81	-3.3
n260	82	-3.2
n260	83	-3.2
n260	84	-3.2
n260	85	-3.2
n260	86	-3.3
n260	87	-3.4
n260	88	-3.5
n260	89	-3.7
n260	90	-3.9
n260	91	-4.0
n260	92	-4.0
n260	93	-4.0
n260	94	-3.8
n260	95	-3.6
n260	96	-3.5
n260	97	-3.4
n260	98	-3.3
n260	99	-3.2
n260	100	-3.2
n260	101	-3.3
n260	102	-3.4
n260	103	-3.6
n260	104	-3.9
n260	105	-4.1
n260	106	-4.2
n260	107	-4.1
n260	108	-3.9
n260	109	-3.7

Band	Beam ID	input.power.limit (dBm)
n260	128	11.8
n260	129	12.0
n260	130	12.0
n260	131	12.0
n260	132	12.0
n260	133	12.0
n260	134	12.1
n260	135	12.6
n260	136	12.5
n260	137	12.6
n260	138	12.9
n260	139	12.8
n260	140	12.8
n260	141	12.5
n260	142	12.5
n260	143	12.6
n260	144	12.8
n260	145	12.8
n260	146	12.7
n260	147	-5.8
n260	148	-5.7
n260	149	-5.8
n260	150	-5.8
n260	151	-5.8
n260	152	-5.8
n260	153	-5.8
n260	154	-5.5
n260	155	-5.5
n260	156	-5.5
n260	157	-5.5
n260	158	-5.5
n260	159	-5.5
n260	160	-5.5
n260	161	-5.6
n260	162	-5.6
n260	163	-5.5
n260	164	-5.5
n260	165	-5.5
n260	166	-5.1
n260	167	-5.2
n260	168	-5.2
n260	169	-5.2
n260	170	-5.1
n260	171	-5.0
n260	172	-5.0
n260	173	-5.0
n260	174	-5.0
n260	175	-5.1
n260	176	-5.2
n260	177	-5.3
n260	178	-5.3
n260	179	-5.2
n260	180	-5.1
n260	181	-5.0
n260	182	-5.0
n260	183	-5.0
n260	184	-4.5
n260	185	-4.6
n260	186	-4.7
n260	187	-4.7
n260	188	-4.7
n260	189	-4.6
n260	190	-4.5
n260	191	-4.4
n260	192	-4.3
n260	193	-4.3
n260	194	-4.3
n260	195	-4.4
n260	196	-4.5
n260	197	-4.6
n260	198	-4.8
n260	199	-4.8
n260	200	-4.8
n260	201	-4.7
n260	202	-4.5
n260	203	-4.4
n260	204	-4.3
n260	205	-4.3
n260	206	-4.3
n260	207	-4.4
n260	208	-3.7
n260	209	-3.9
n260	210	-4.1
n260	211	-4.2
n260	212	-4.2
n260	213	-4.0
n260	214	-3.9
n260	215	-3.7
n260	216	-3.5
n260	217	-3.4
n260	218	-3.3
n260	219	-3.3
n260	220	-3.3
n260	221	-3.3
n260	222	-3.4
n260	223	-3.6
n260	224	-3.8
n260	225	-4.0
n260	226	-4.3
n260	227	-4.3
n260	228	-4.2
n260	229	-4.0
n260	230	-3.8
n260	231	-3.5
n260	232	-3.4
n260	233	-3.3
n260	234	-3.3
n260	235	-3.3
n260	236	-3.5
n260	237	-3.6

Band	V Beam ID	H Beam ID	input.power.limit (dBm)
n260	0	128	8.8
n260	1	129	9.0
n260	2	130	9.1
n260	3	131	9.1
n260	4	132	9.0
n260	5	133	9.1
n260	6	134	9.1
n260	7	135	9.5
n260	8	136	9.6
n260	9	137	9.8
n260	10	138	9.9
n260	11	139	9.9
n260	12	140	9.7
n260	13	141	9.6
n260	14	142	9.7
n260	15	143	9.8
n260	16	144	9.8
n260	17	145	9.7
n260	18	146	9.6
n260	19	147	-8.8
n260	20	148	-8.7
n260	21	149	-8.8
n260	22	150	-8.8
n260	23	151	-8.8
n260	24	152	-8.8
n260	25	153	-8.8
n260	26	154	-8.5
n260	27	155	-8.5
n260	28	156	-8.5
n260	29	157	-8.5
n260	30	158	-8.5
n260	31	159	-8.5
n260	32	160	-8.5
n260	33	161	-8.5
n260	34	162	-8.6
n260	35	163	-8.5
n260	36	164	-8.6
n260	37	165	-8.6
n260	38	166	-8.1
n260	39	167	-8.1
n260	40	168	-8.1
n260	41	169	-8.1
n260	42	170	-8.1
n260	43	171	-8.1
n260	44	172	-8.1
n260	45	173	-8.1
n260	46	174	-8.1
n260	47	175	-8.1
n260	48	176	-8.1
n260	49	177	-8.2
n260	50	178	-8.2
n260	51	179	-8.1
n260	52	180	-8.1
n260	53	181	-8.1
n260	54	182	-8.2
n260	55	183	-8.1
n260	56	184	-7.5
n260	57	185	-7.5
n260	58	186	-7.5
n260	59	187	-7.5
n260	60	188	-7.5
n260	61	189	-7.5
n260	62	190	-7.5
n260	63	191	-7.5
n260	64	192	-7.5
n260	65	193	-7.5
n260	66	194	-7.5
n260	67	195	-7.5
n260	68	196	-7.5
n260	69	197	-7.5
n260	70	198	-7.6
n260	71	199	-7.6
n260	72	200	-7.6
n260	73	201	-7.5
n260	74	202	-7.5
n260	75	203	-7.6
n260	76	204	-7.6
n260	77	205	-7.6
n260	78	206	-7.5
n260	79	207	-7.5
n260	80	208	-6.6
n260	81	209	-6.7
n260	82	210	-6.7
n260	83	211	-6.8
n260	84	212	-6.8
n260	85	213	-6.7
n260	86	214	-6.7
n260	87	215	-6.6
n260	88	216	-6.6
n260	89	217	-6.6
n260	90	218	-6.7
n260	91	219	-6.7
n260	92	220	-6.7
n260	93	221	-6.7
n260	94	222	-6.7
n260	95	223	-6.7
n260	96	224	-6.7
n260	97	225	-6.8
n260	98	226	-6.9
n260	99	227	-6.8
n260	100	228	-6.8
n260	101	229	-6.7
n260	102	230	-6.7
n260	103	231	-6.6
n260	104	232	-6.7
n260	105	233	-6.8
n260	106	234	-6.8
n260	107	235	-6.8
n260	108	236	-6.8
n260	109	237	-6.7