

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 179 von 342
Page 179 of 342

Figure 171: Maximum Power Spectral Density, 802.11n-20, MIMO, RF0, 5785MHz

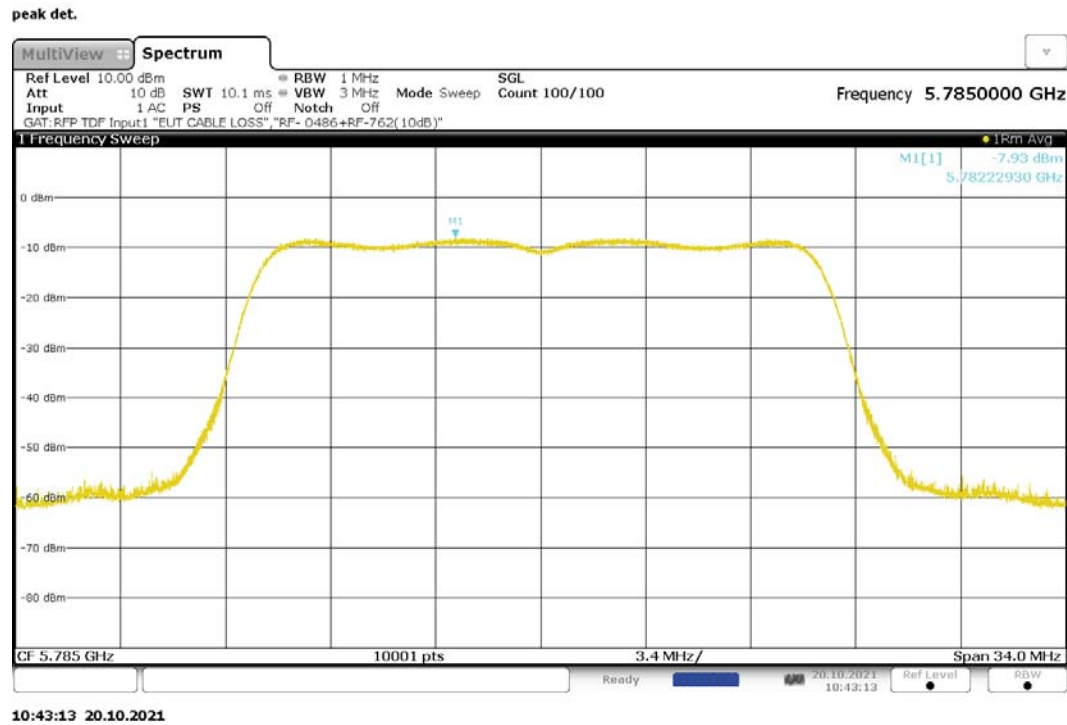
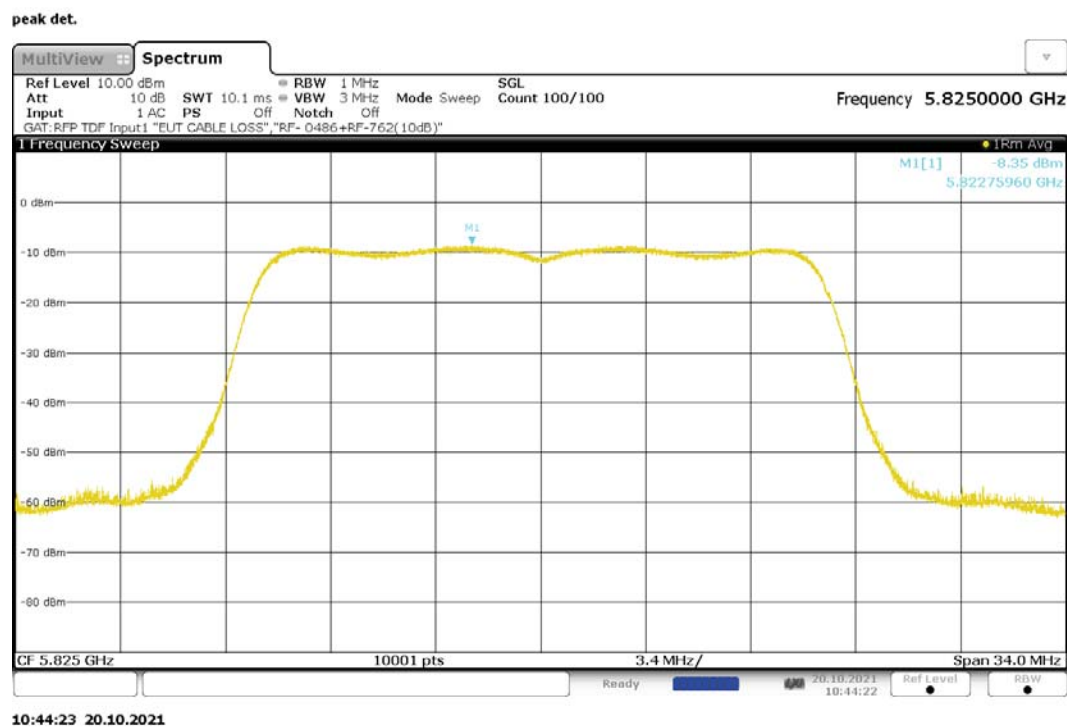


Figure 172: Maximum Power Spectral Density, 802.11n-20, MIMO, RF0, 5825MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 180 von 342
Page 180 of 342

Figure 173: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5180MHz

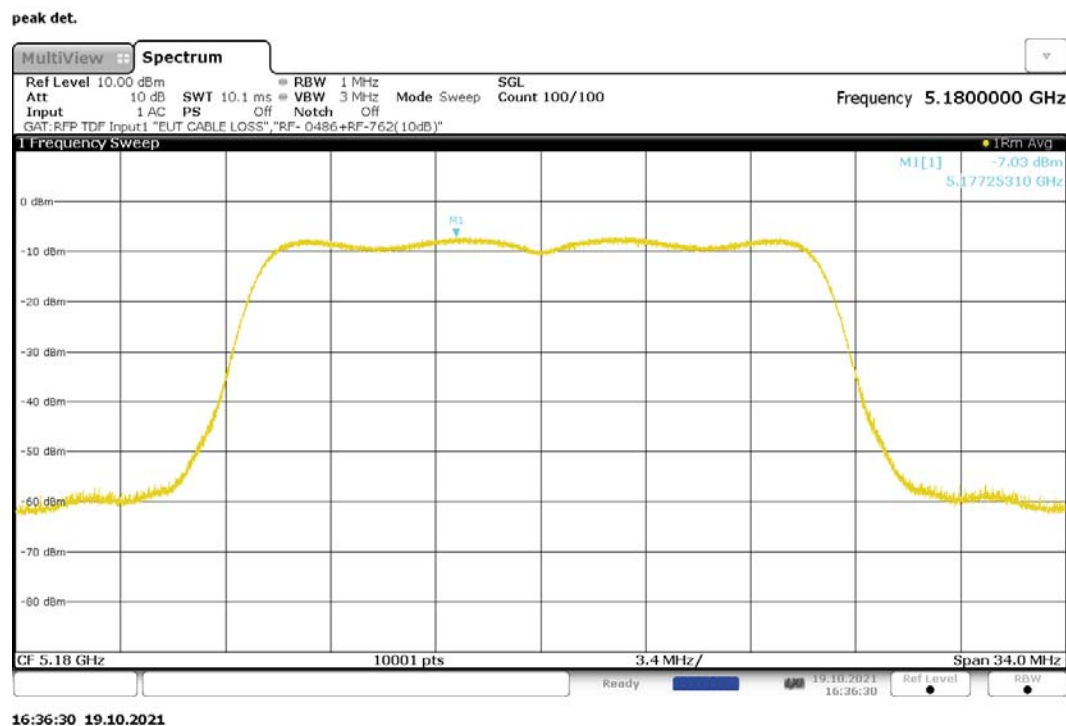
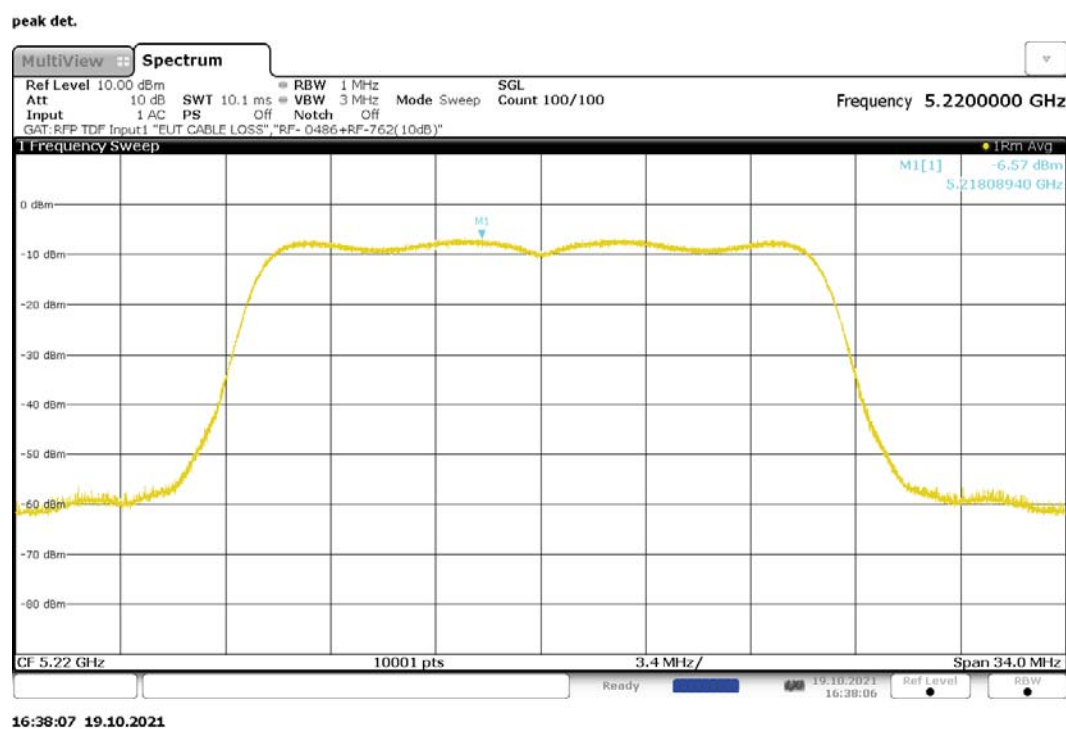


Figure 174: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5220MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 181 von 342
Page 181 of 342

Figure 175: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5240MHz

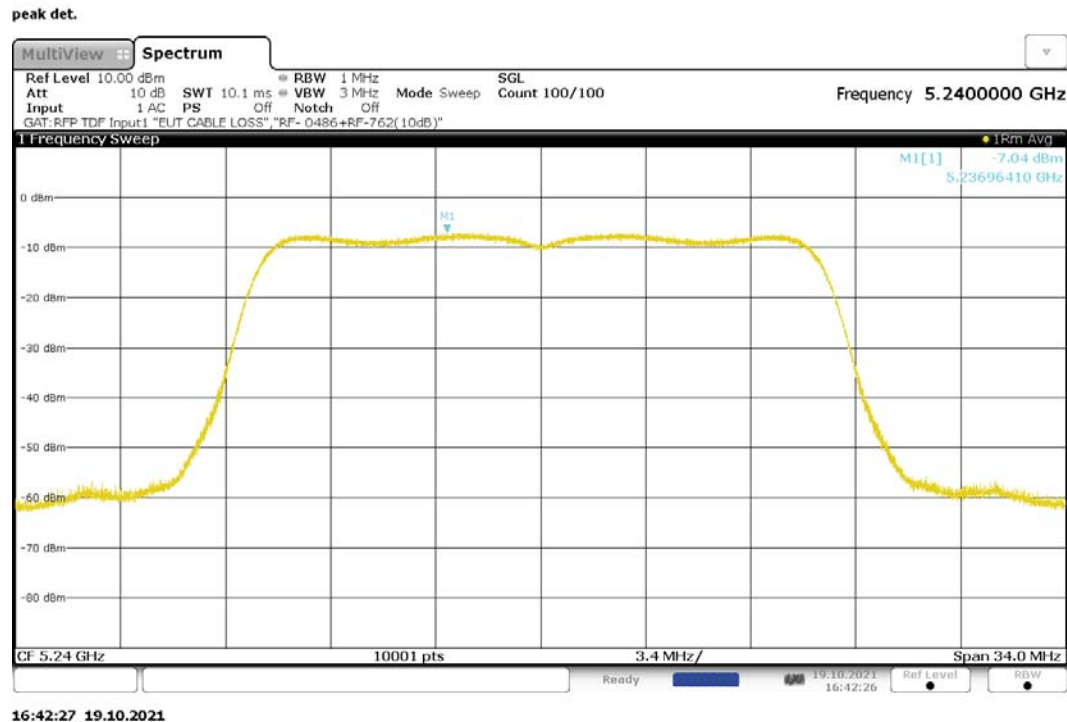
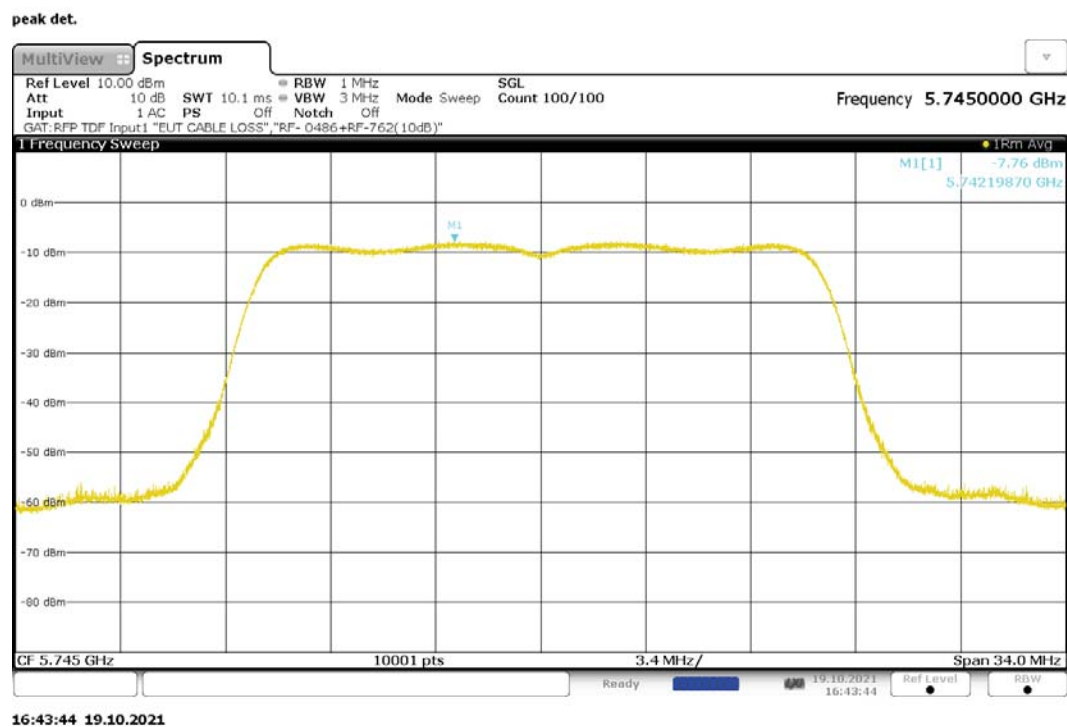


Figure 176: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5745MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 182 von 342
Page 182 of 342

Figure 177: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5785MHz

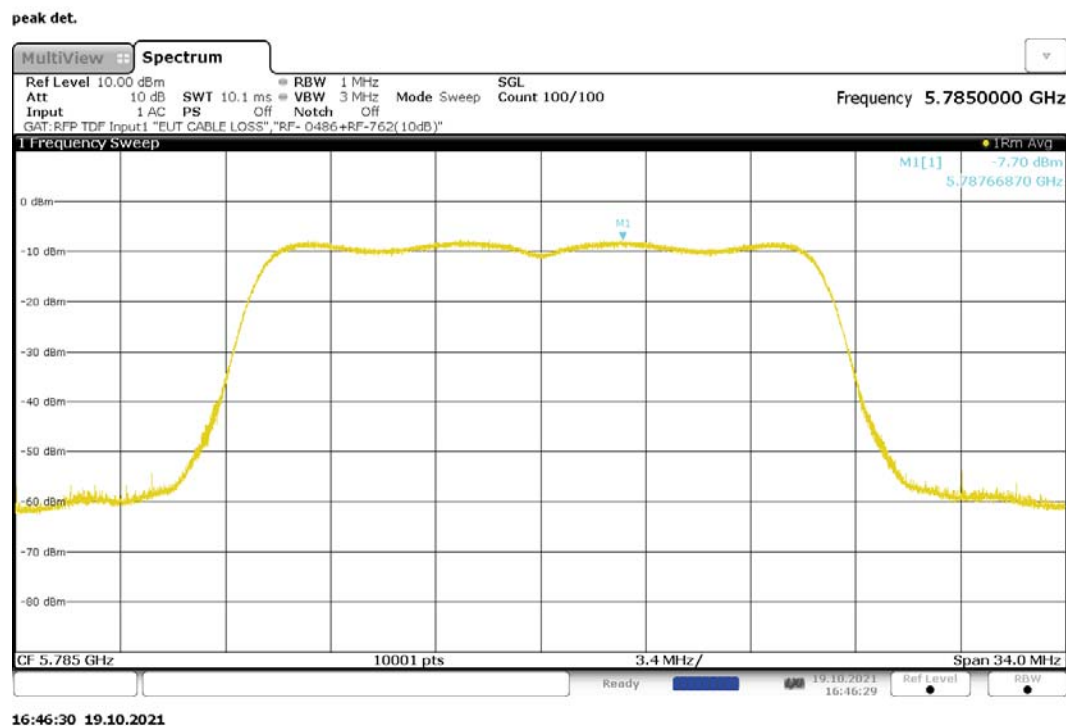


Figure 178: Maximum Power Spectral Density, 802.11n-20, MIMO, RF1, 5825MHz

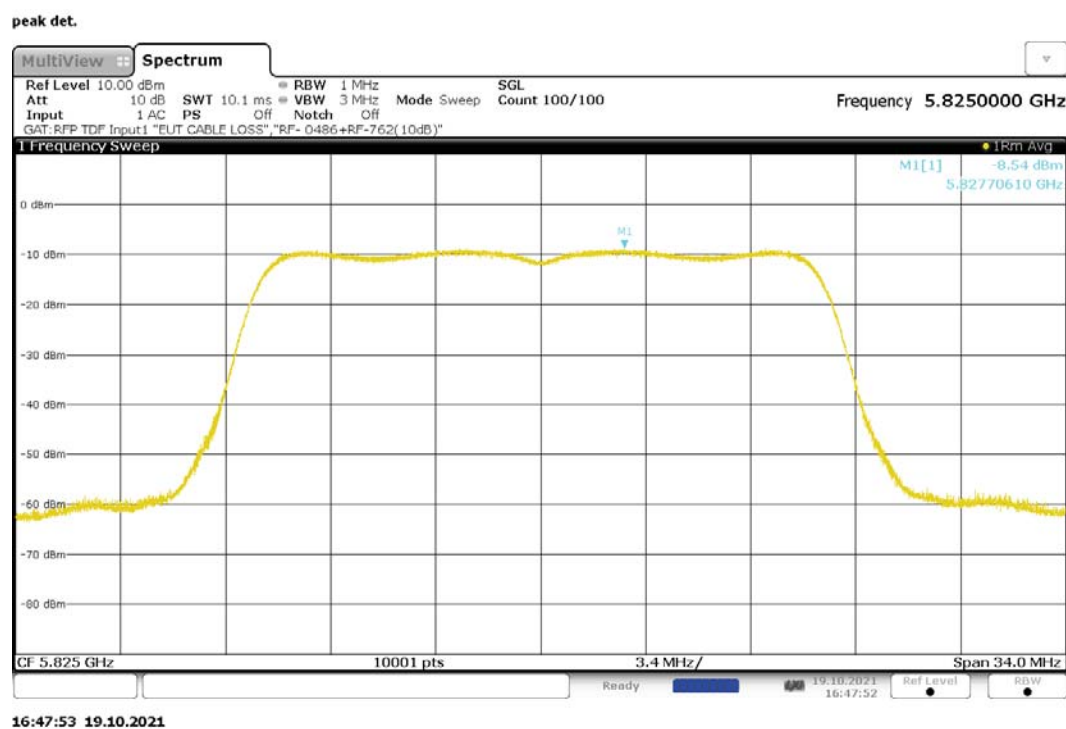


Table 115: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5180	-7.71	11	18.71	2.14	-5.57	17	22.57
5220	-7.77	11	18.77	2.14	-5.63	17	22.63
5240	-7.92	11	18.92	2.14	-5.78	17	22.78
5745	-7.90	30	37.90	1.00	-6.90	36	42.90
5785	-7.59	30	37.59	1.00	-6.59	36	42.59
5825	-8.18	30	38.18	1.00	-7.18	36	43.18

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.

PSD e.i.r.p. [dBm/MHz] = Cond. PSD [dBm/MHz] + Antenna Gain [dBi]

For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Table 116: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5180	-7.24	11	18.24	2.43	-4.81	17	21.81
5220	-6.94	11	17.94	2.43	-4.51	17	21.51
5240	-7.07	11	18.07	2.43	-4.64	17	21.64
5745	-7.53	30	37.53	2.59	-4.94	36	40.94
5785	-7.49	30	37.49	2.59	-4.90	36	40.90
5825	-8.18	30	38.18	2.59	-5.59	36	41.59

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.

PSD e.i.r.p. [dBm/MHz] = Cond. PSD [dBm/MHz] + Antenna Gain [dBi]

For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 184 von 342
Page 184 of 342

Figure 179: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5180MHz

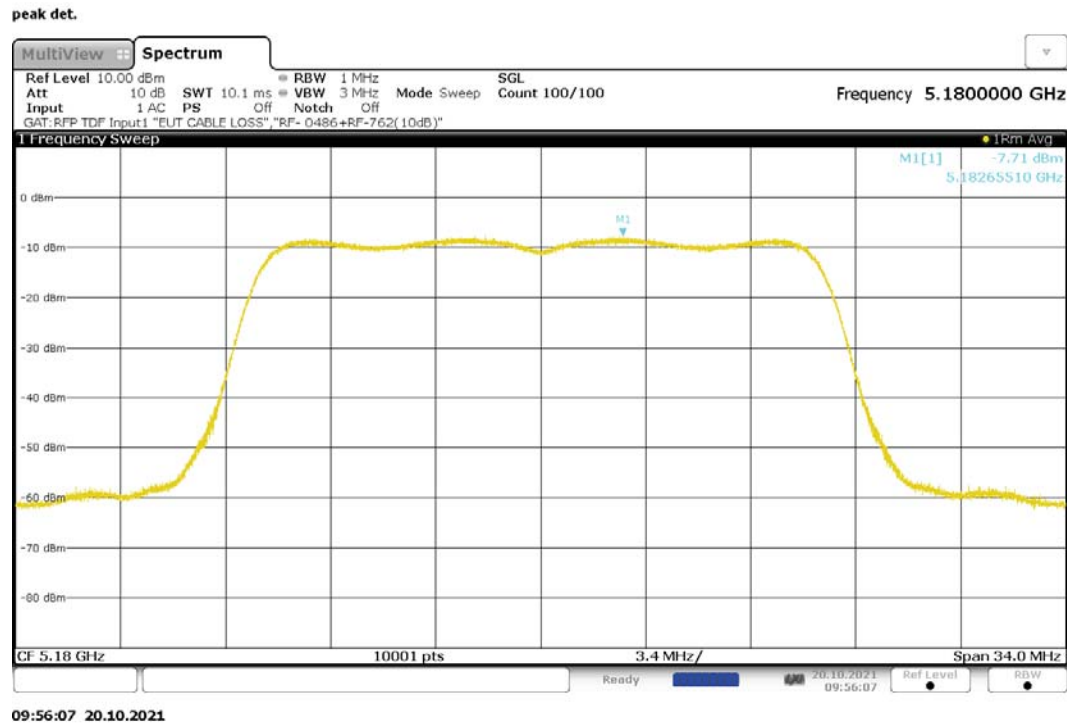


Figure 180: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5220MHz

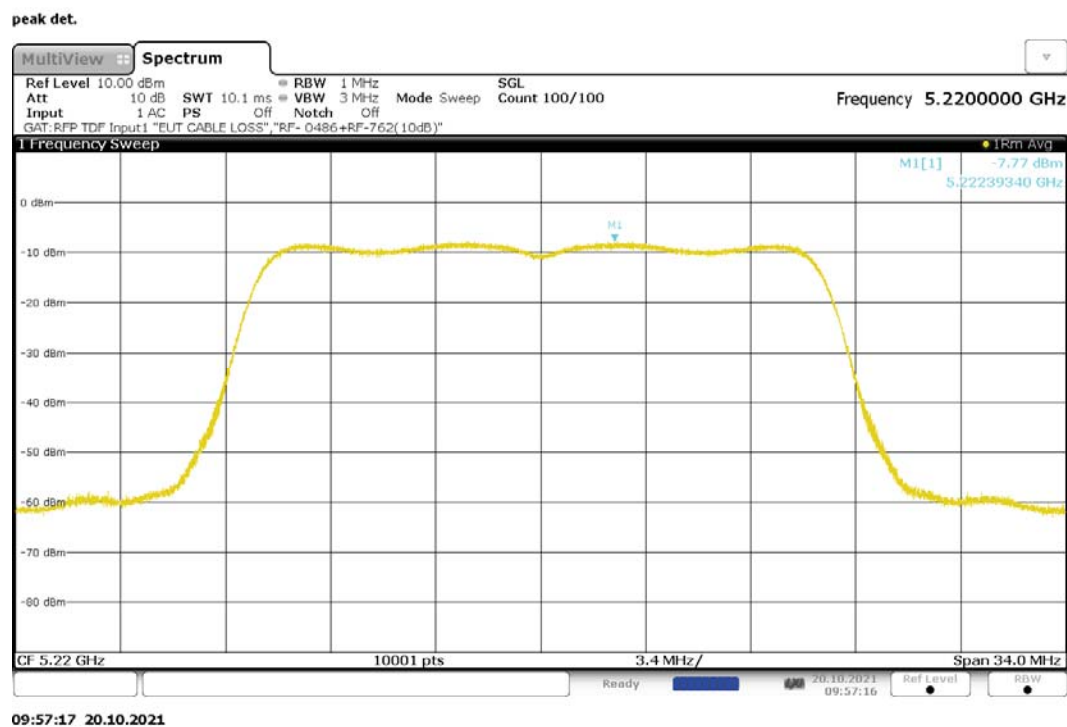
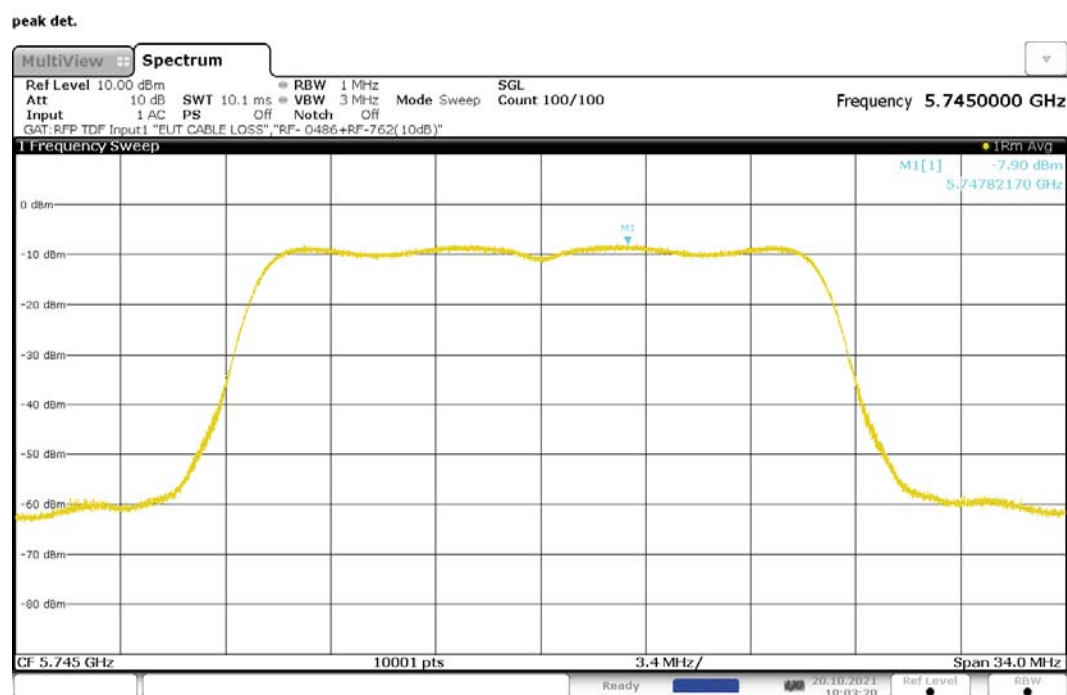


Figure 181: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5240MHz



09:58:22 20.10.2021

Figure 182: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5745MHz



10:03:21 20.10.2021

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 186 von 342
Page 186 of 342

Figure 183: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5785MHz

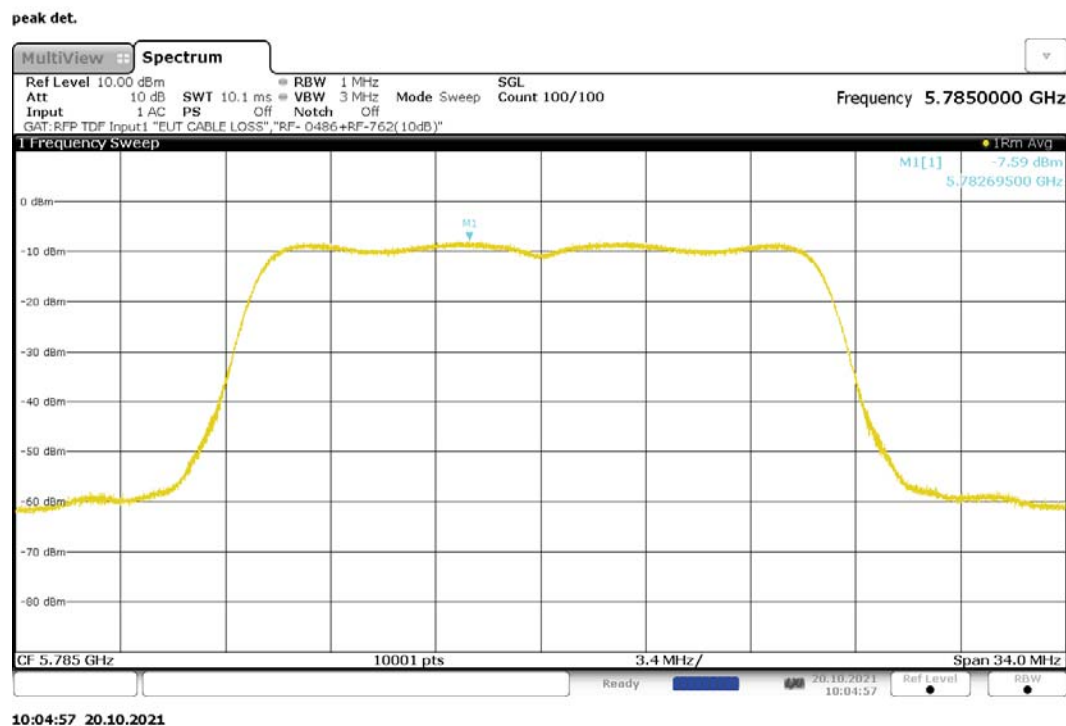
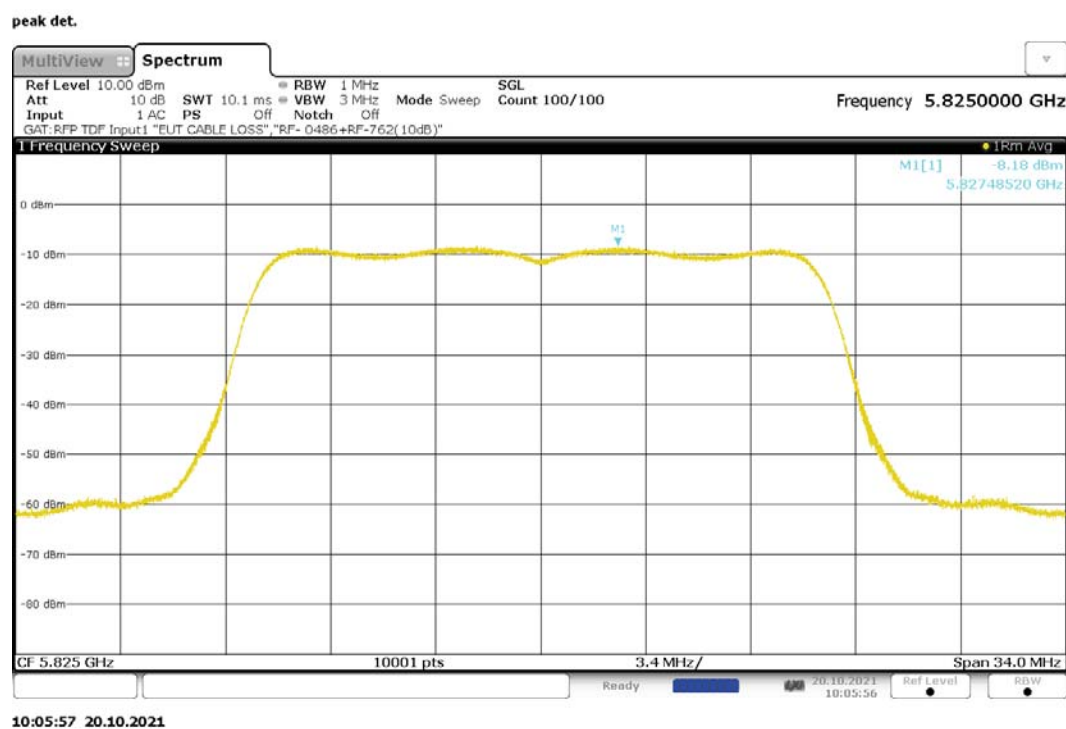


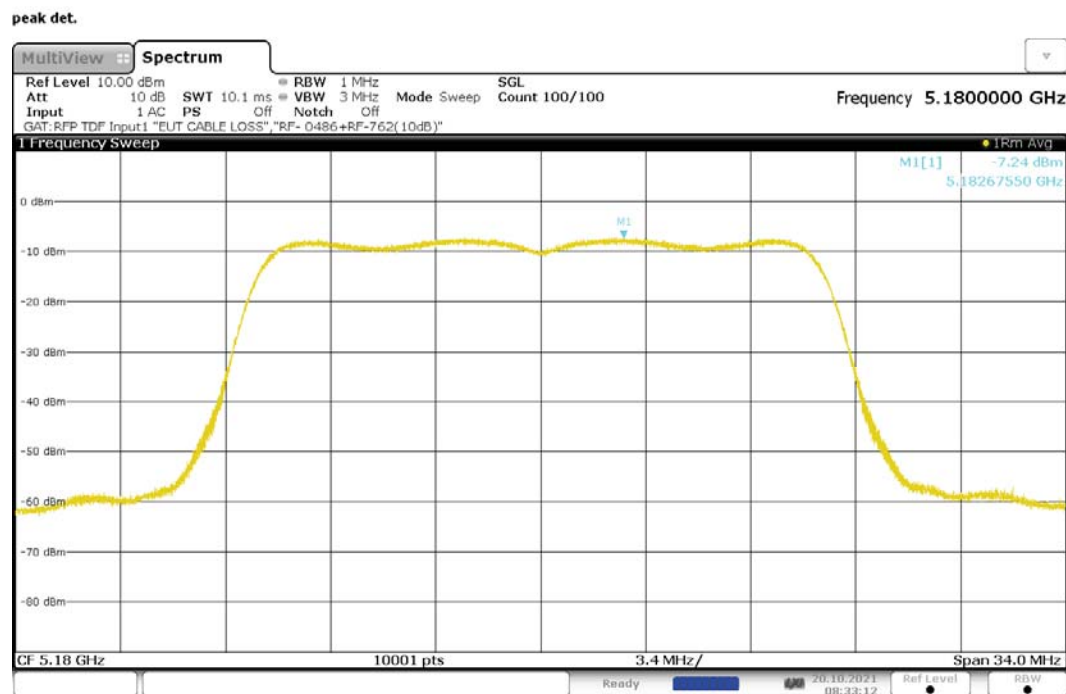
Figure 184: Maximum Power Spectral Density, 802.11ac-20, SISO, RF0, 5825MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 187 von 342
Page 187 of 342

Figure 185: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5180MHz



08:33:12 20.10.2021

Figure 186: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5220MHz



08:34:32 20.10.2021

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 188 von 342
Page 188 of 342

Figure 187: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5240MHz



Figure 188: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5745MHz

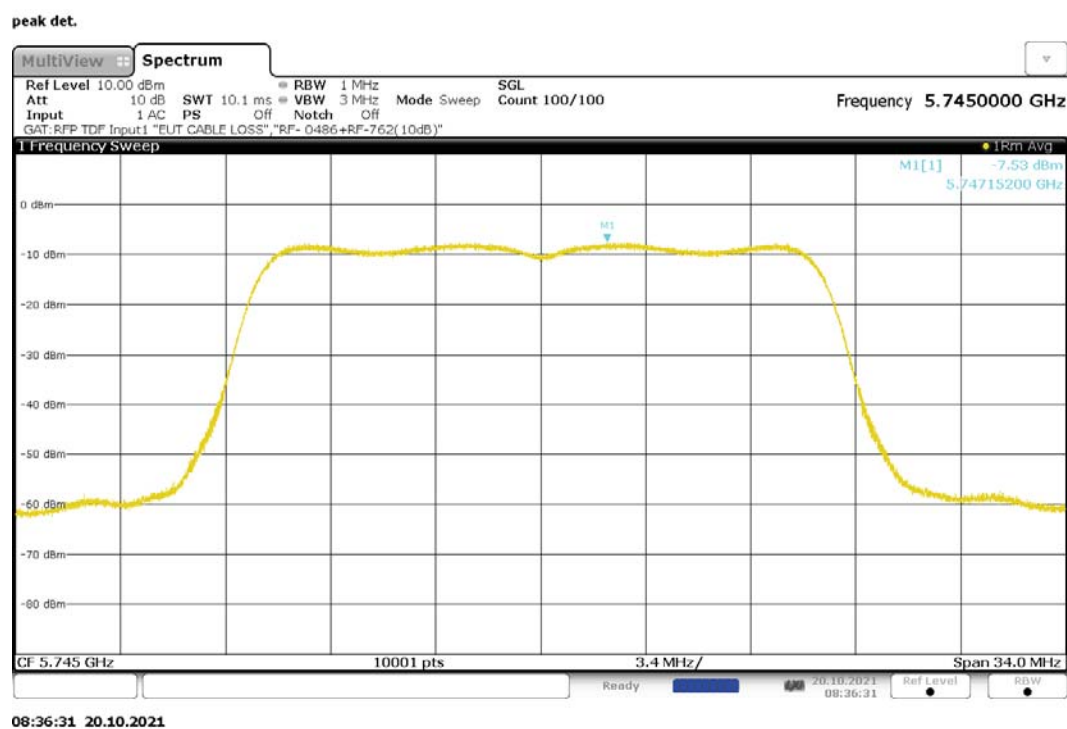
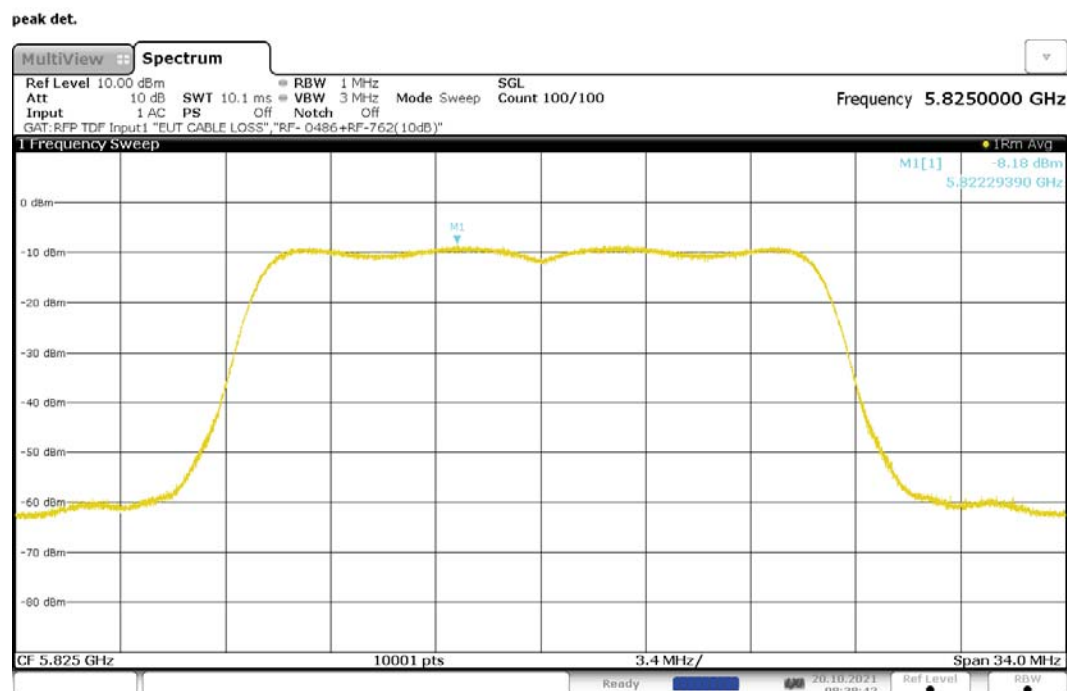


Figure 189: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5785MHz



08:37:41 20.10.2021

Figure 190: Maximum Power Spectral Density, 802.11ac-20, SISO, RF1, 5825MHz



08:38:43 20.10.2021

Table 117: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5180	-4.55	11	15.55	0.89	17	16.11
5220	-4.05	11	15.05	1.39	17	15.61
5240	-4.40	11	15.40	1.04	17	15.96
5745	-4.70	30	34.70	0.90	36	35.10
5785	-4.76	30	34.76	0.84	36	35.16
5825	-5.60	30	35.60	0.00	36	36.00

Table 118: Individual - Maximum Power Spectral Density, 802.11ac-20, CDD, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5180	-7.98	5.44	-2.54
5220	-7.68	5.44	-2.24
5240	-7.84	5.44	-2.40
5745	-7.80	5.60	-2.20
5785	-7.83	5.60	-2.23
5825	-8.51	5.60	-2.91

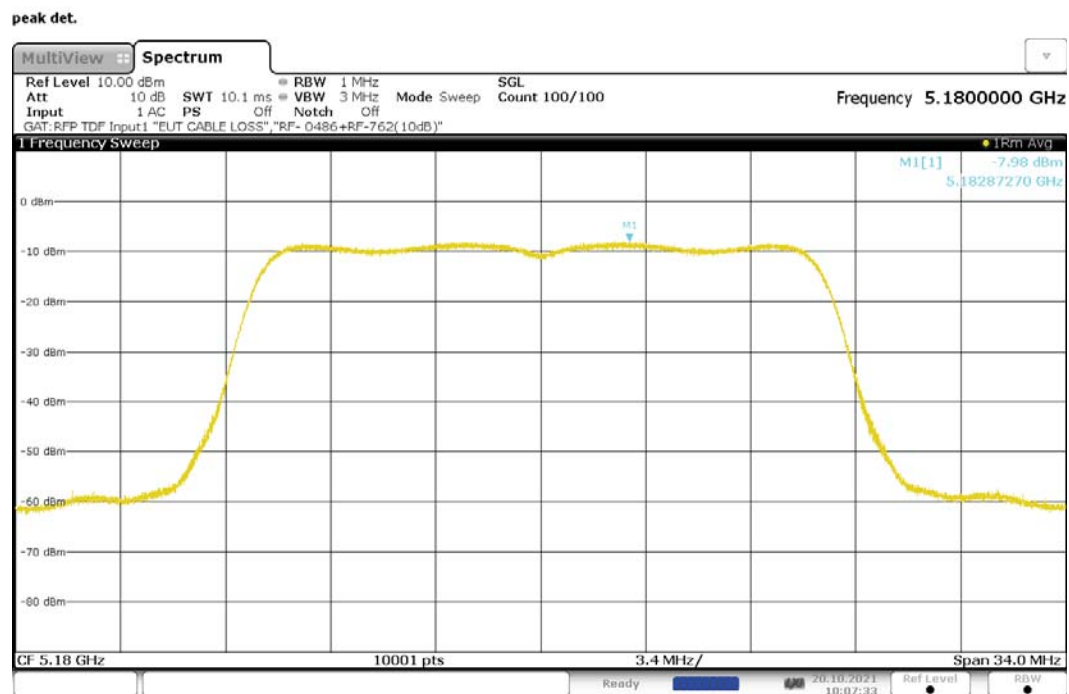
Table 119: Individual - Maximum Power Spectral Density, 802.11ac-20, CDD, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5180	-7.18	5.44	-1.74
5220	-6.51	5.44	-1.07
5240	-7.02	5.44	-1.58
5745	-7.62	5.60	-2.02
5785	-7.71	5.60	-2.11
5825	-8.72	5.60	-3.12

Note:

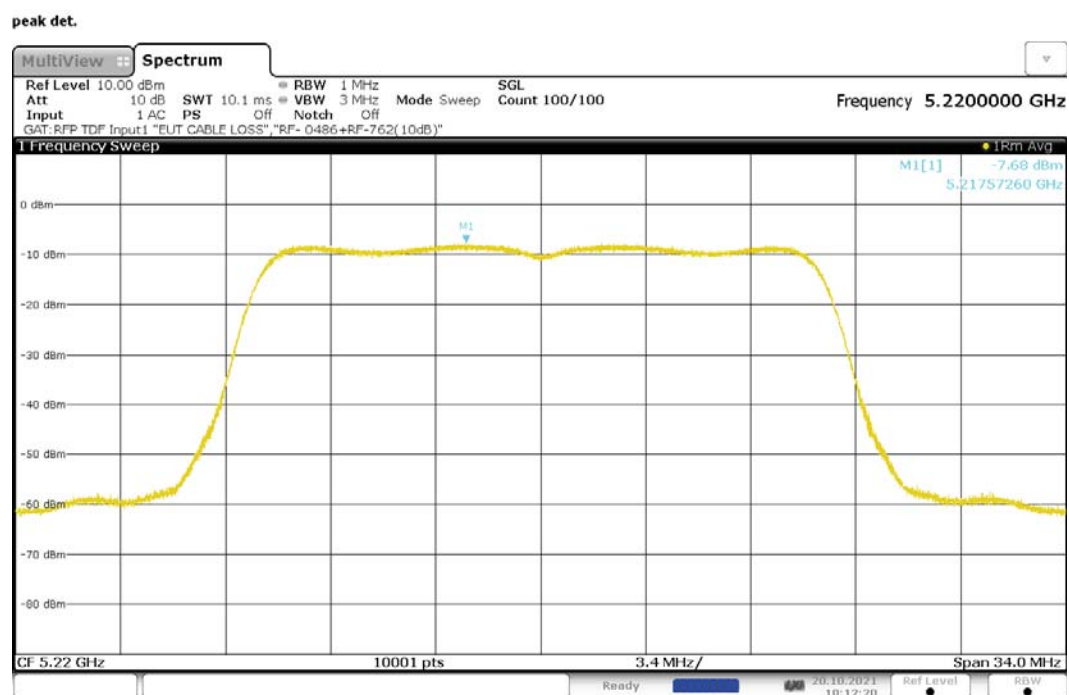
Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Directional Gain [dBi]}$
 $\text{Directional Gain [dBi]} = \text{Individual Antenna Gain [dBi]} + \text{Array Gain [dB]}$
 $\text{Array Gain} = 10 \times \log_{10} (N_{\text{ANT}}/N_{\text{SS}}) \text{ [dB]}, \text{ here } N_{\text{ANT}} = 2, N_{\text{SS}} = 1$
For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 191: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5180MHz



10:07:34 20.10.2021

Figure 192: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5220MHz



10:12:20 20.10.2021

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 192 von 342
Page 192 of 342

Figure 193: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5240MHz

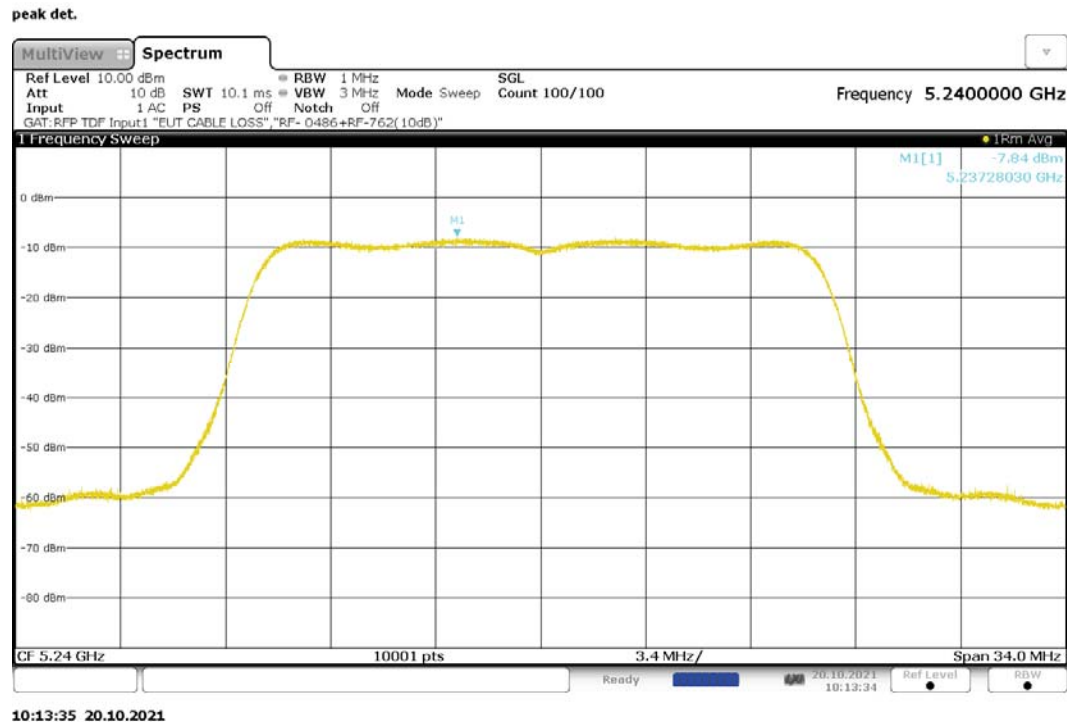
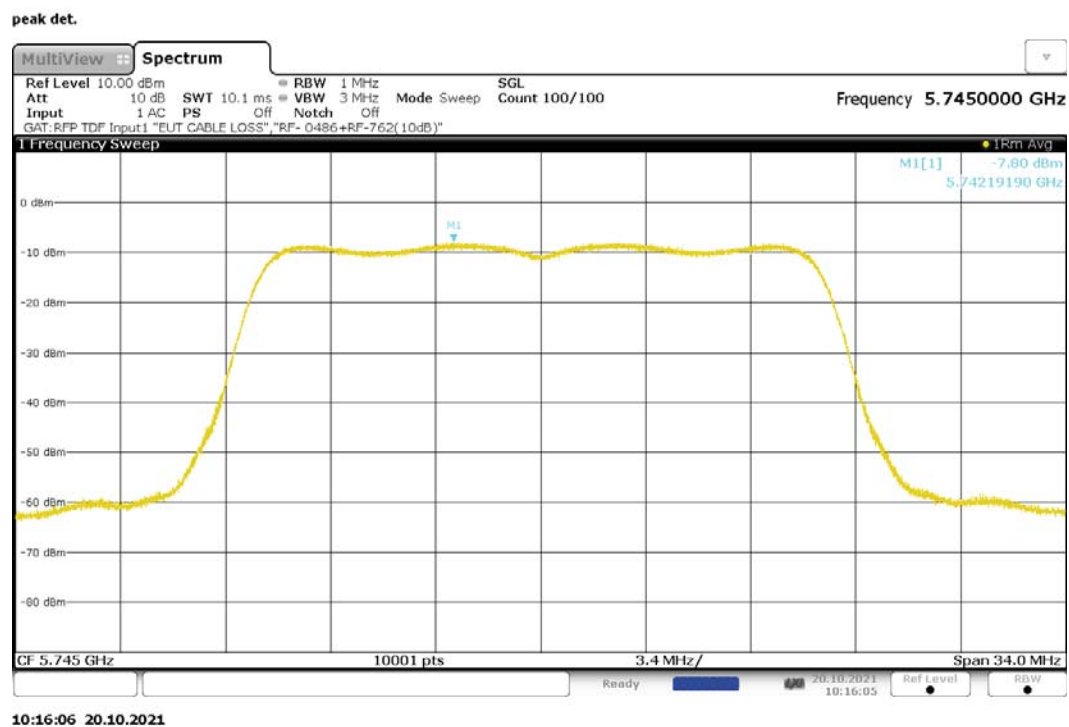


Figure 194: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5745MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 193 von 342
Page 193 of 342

Figure 195: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5785MHz

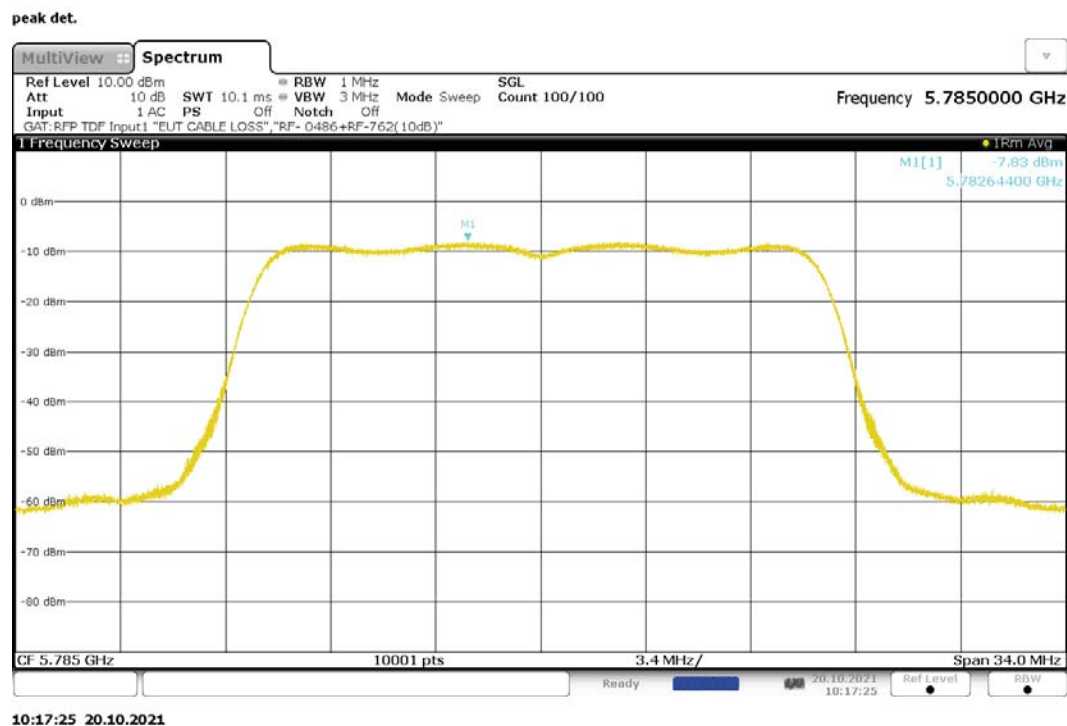


Figure 196: Maximum Power Spectral Density, 802.11ac-20, CDD, RF0, 5825MHz

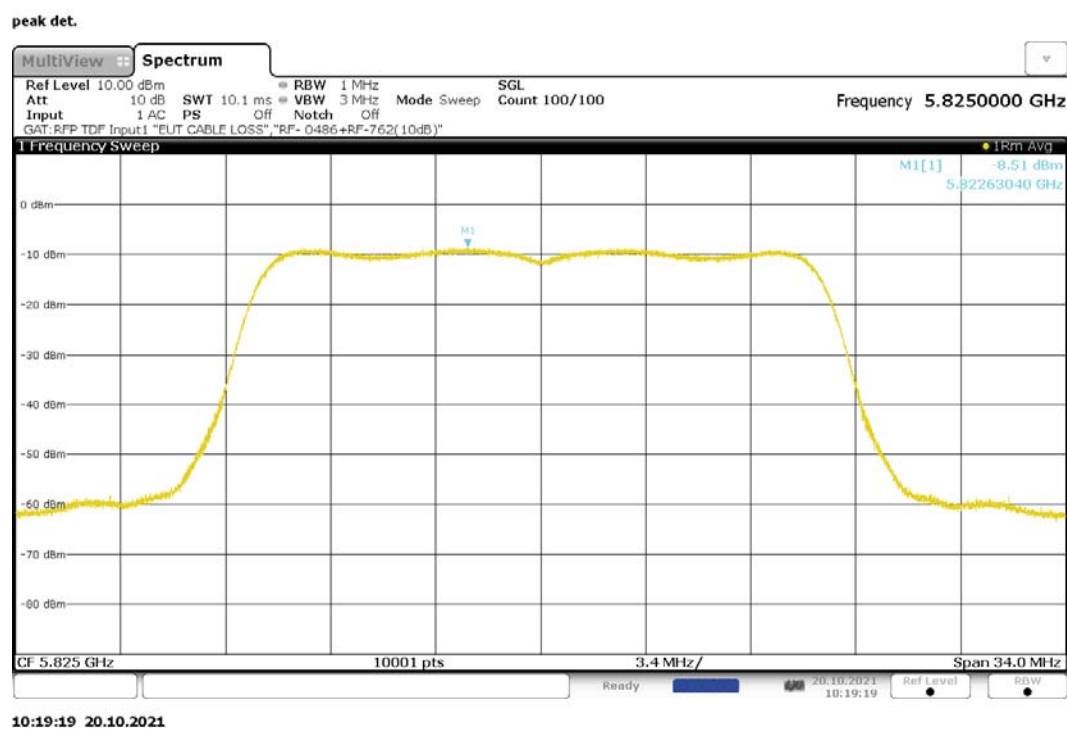
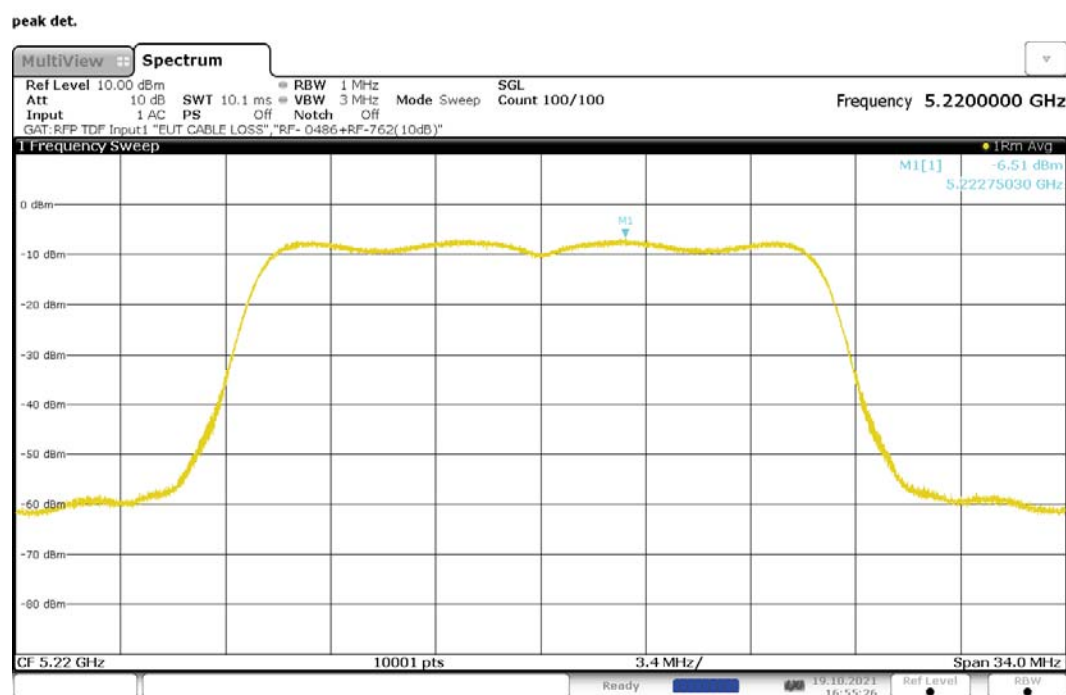


Figure 197: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5180MHz



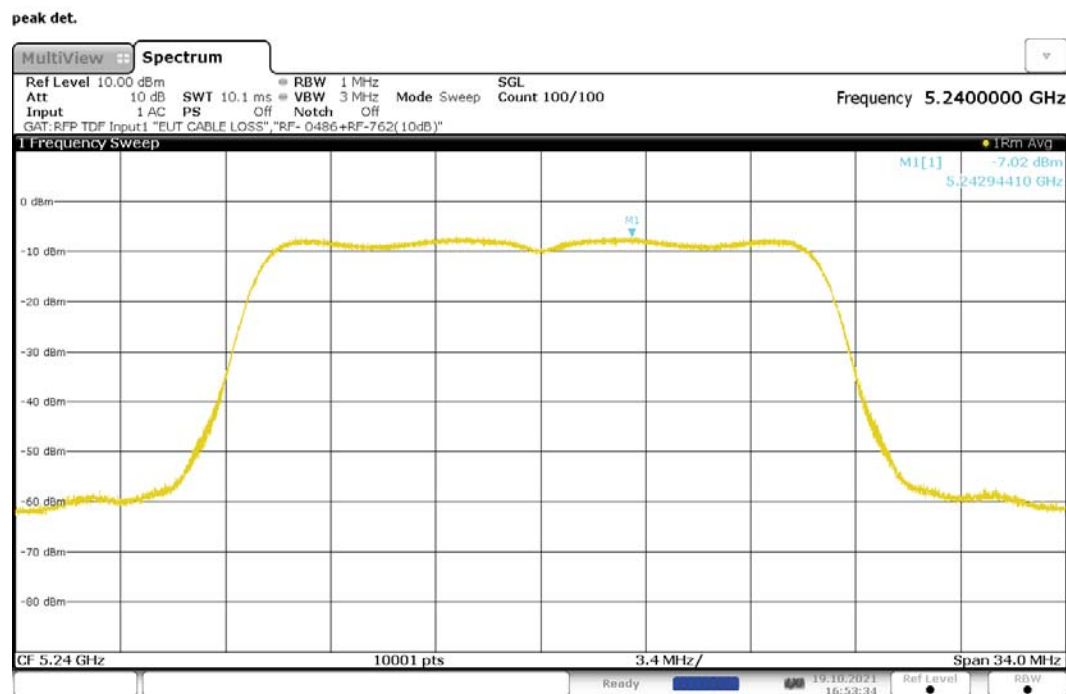
16:50:57 19.10.2021

Figure 198: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5220MHz



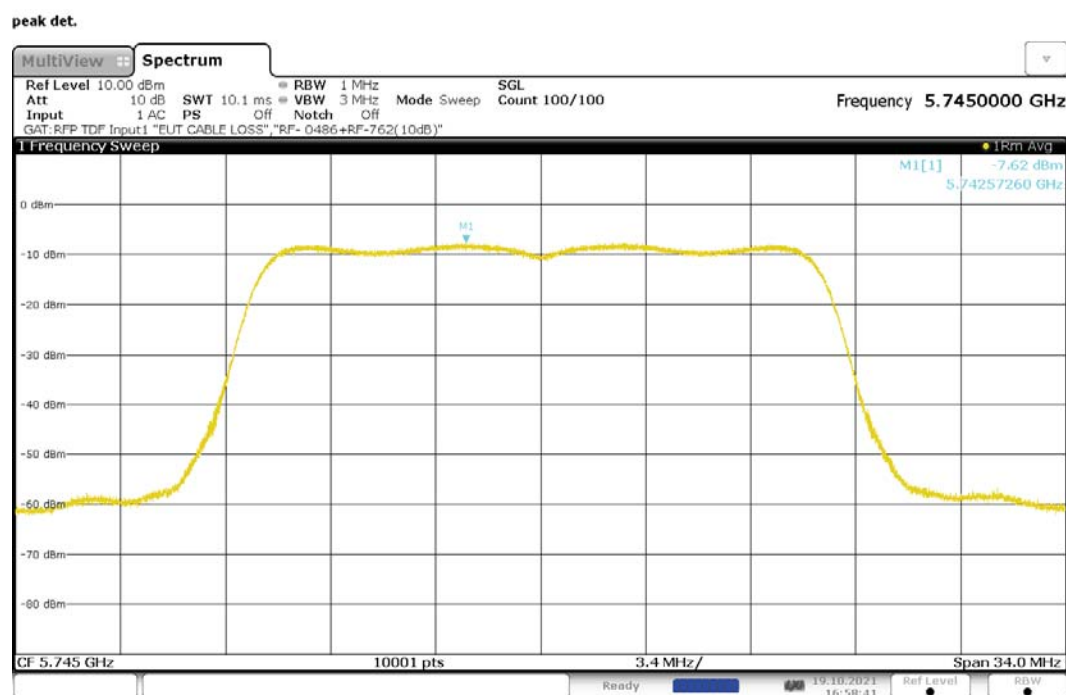
16:55:26 19.10.2021

Figure 199: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5240MHz



16:53:35 19.10.2021

Figure 200: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5745MHz



16:58:42 19.10.2021

Figure 201: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5785MHz

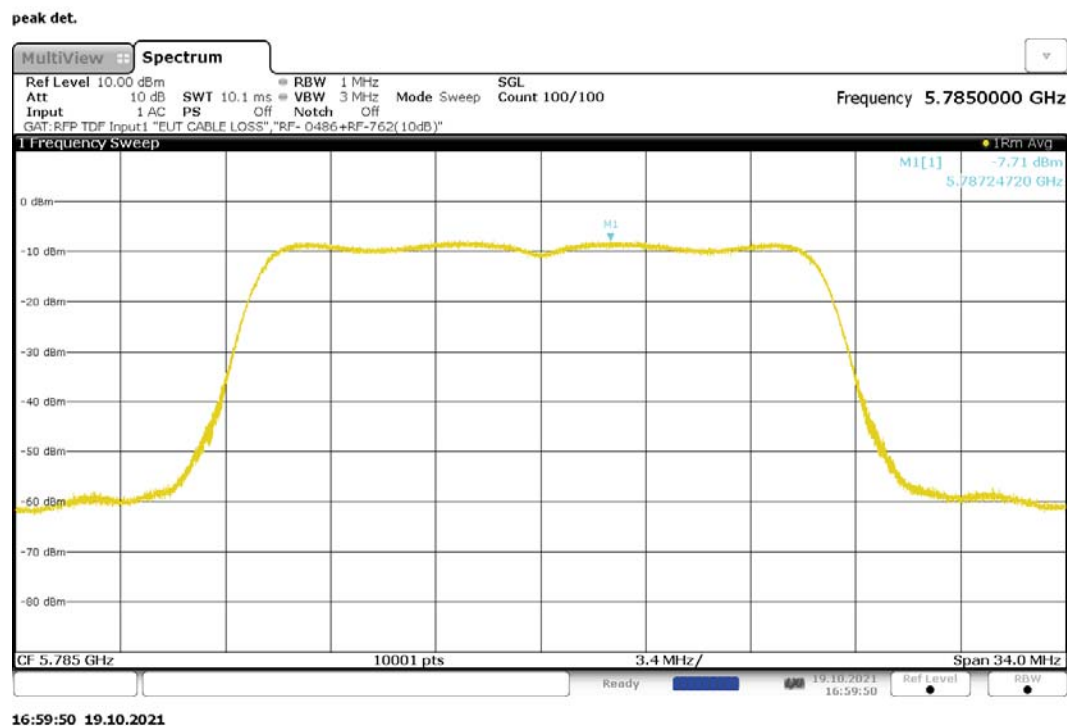


Figure 202: Maximum Power Spectral Density, 802.11ac-20, CDD, RF1, 5825MHz

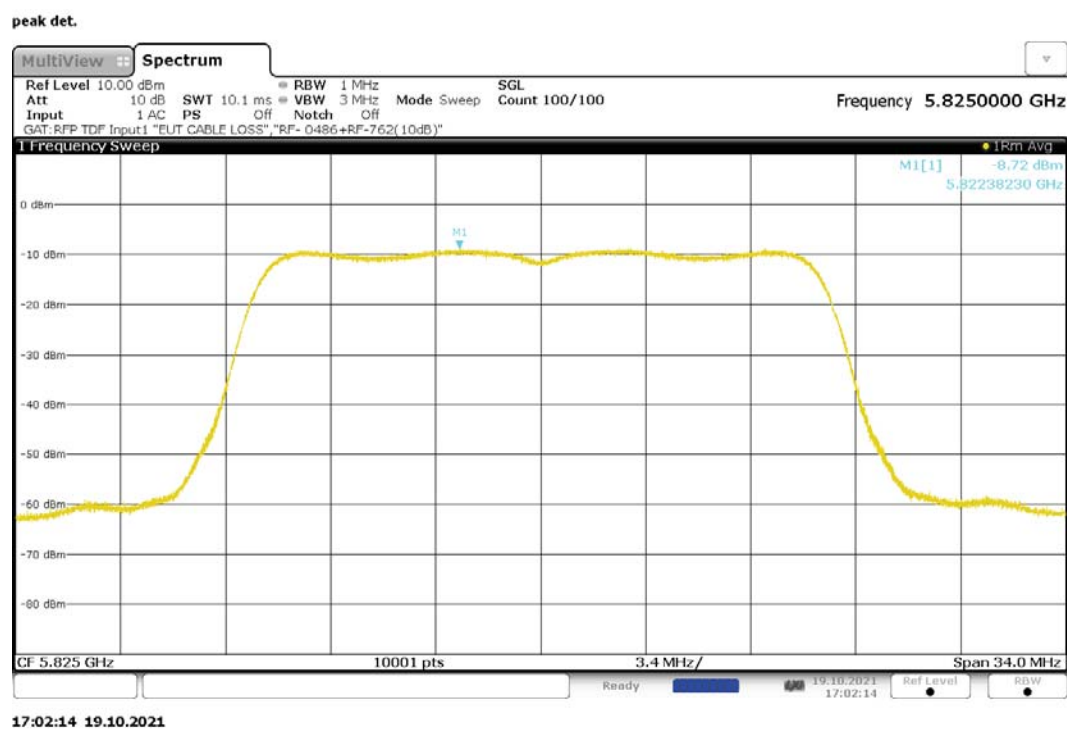


Table 120: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5180	-4.36	11	15.36	-2.06	17	19.06
5220	-4.29	11	15.29	-1.98	17	18.98
5240	-4.47	11	15.47	-2.17	17	19.17
5745	-4.81	30	34.81	-2.92	36	38.92
5785	-4.91	30	34.91	-3.02	36	39.02
5825	-5.48	30	35.48	-3.62	36	39.62

Table 121: Individual - Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5180	-7.78	2.14	-5.64
5220	-7.78	2.14	-5.64
5240	-7.93	2.14	-5.79
5745	-7.96	1.00	-6.96
5785	-8.02	1.00	-7.02
5825	-8.46	1.00	-7.46

Table 122: Individual - Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5180	-7.00	2.43	-4.57
5220	-6.86	2.43	-4.43
5240	-7.08	2.43	-4.65
5745	-7.69	2.59	-5.10
5785	-7.82	2.59	-5.23
5825	-8.52	2.59	-5.93

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 198 von 342
Page 198 of 342

Figure 203: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5180MHz

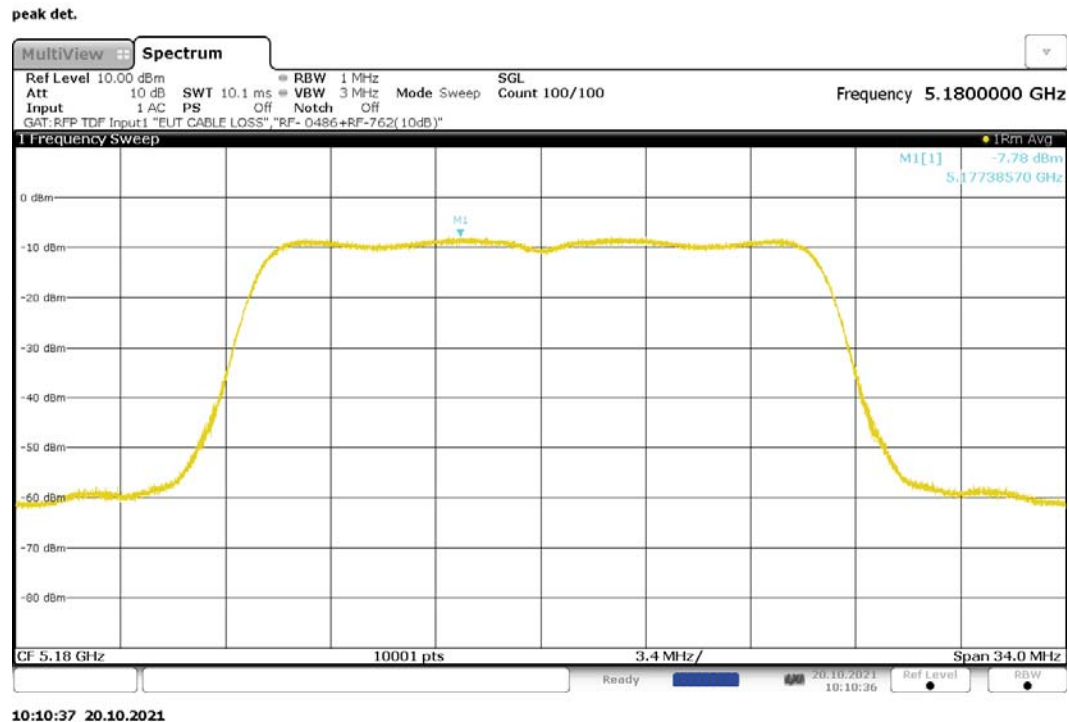
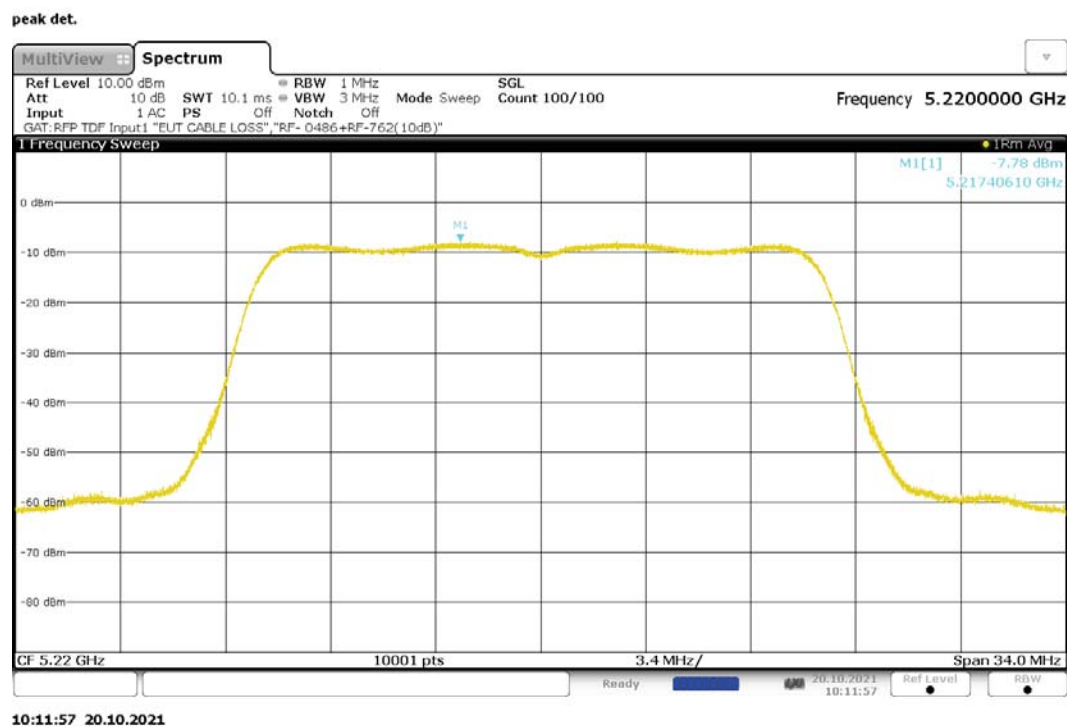


Figure 204: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5220MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 199 von 342
Page 199 of 342

Figure 205: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5240MHz

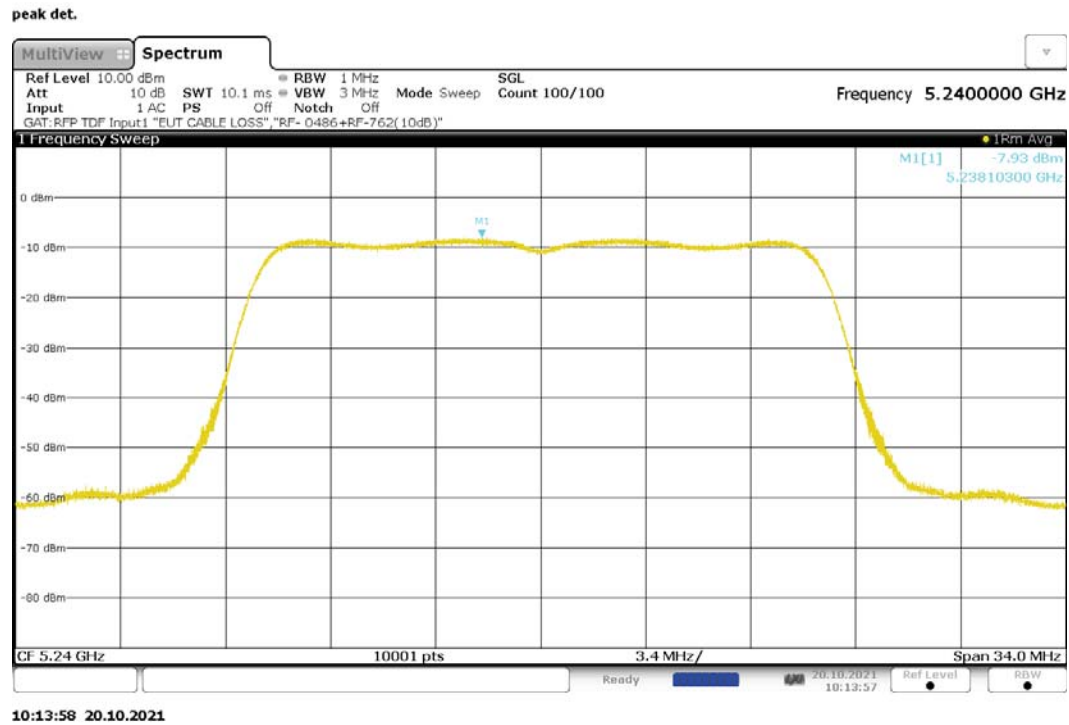


Figure 206: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5745MHz

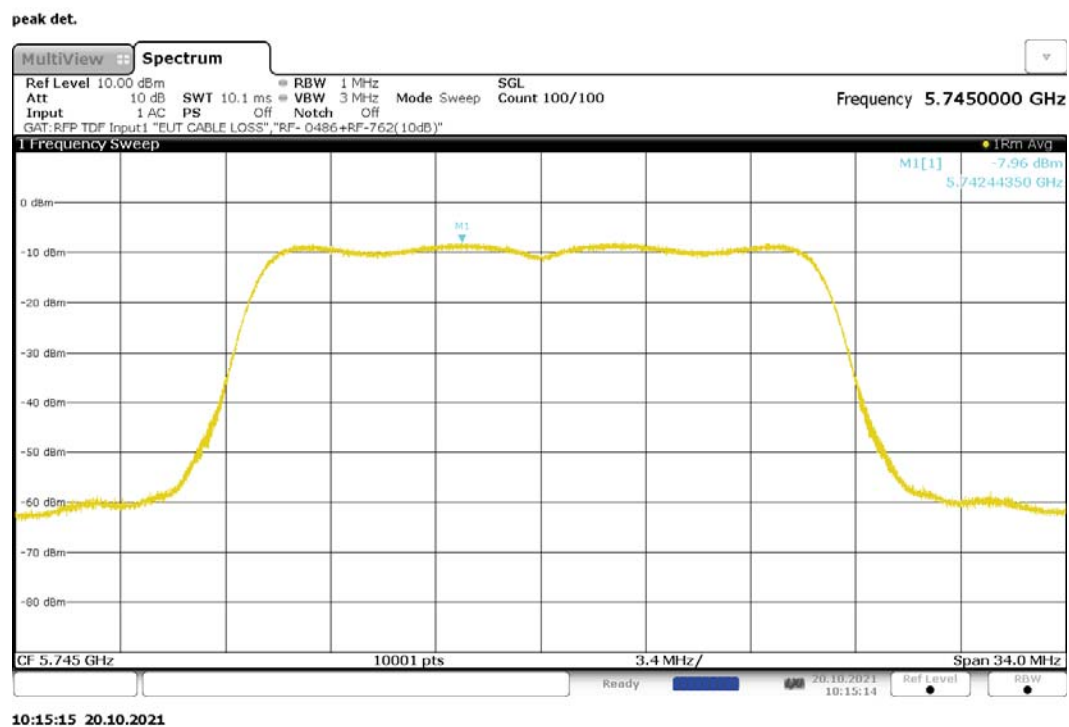


Figure 207: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5785MHz

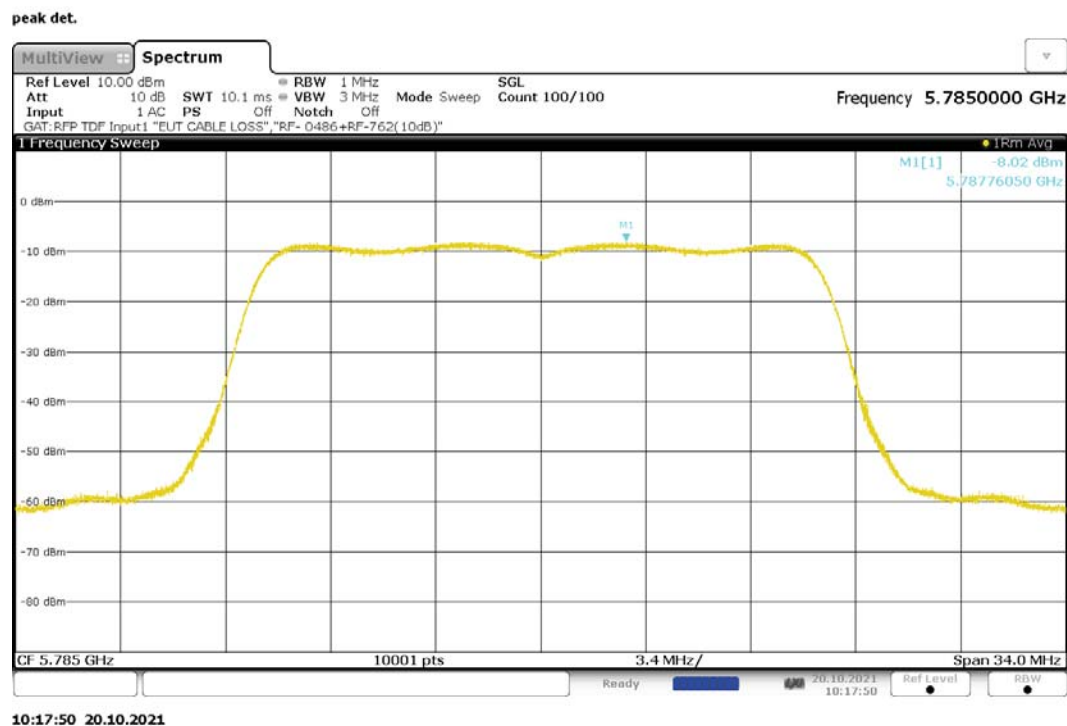


Figure 208: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF0, 5825MHz

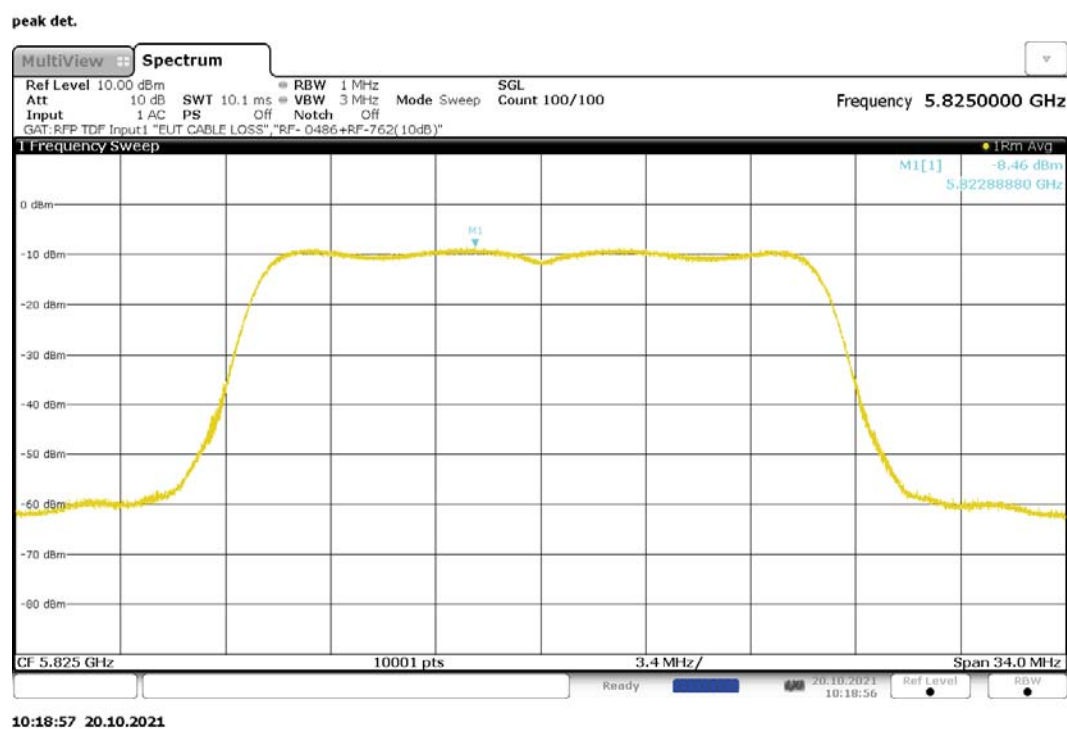


Figure 209: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5180MHz

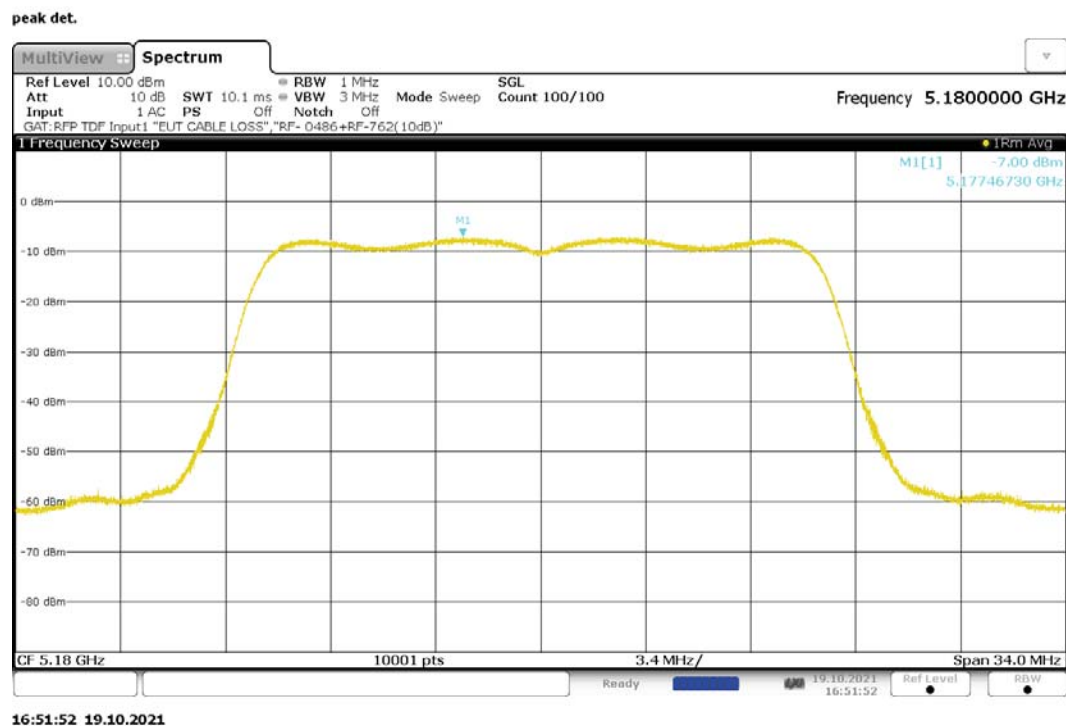


Figure 210: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5220MHz

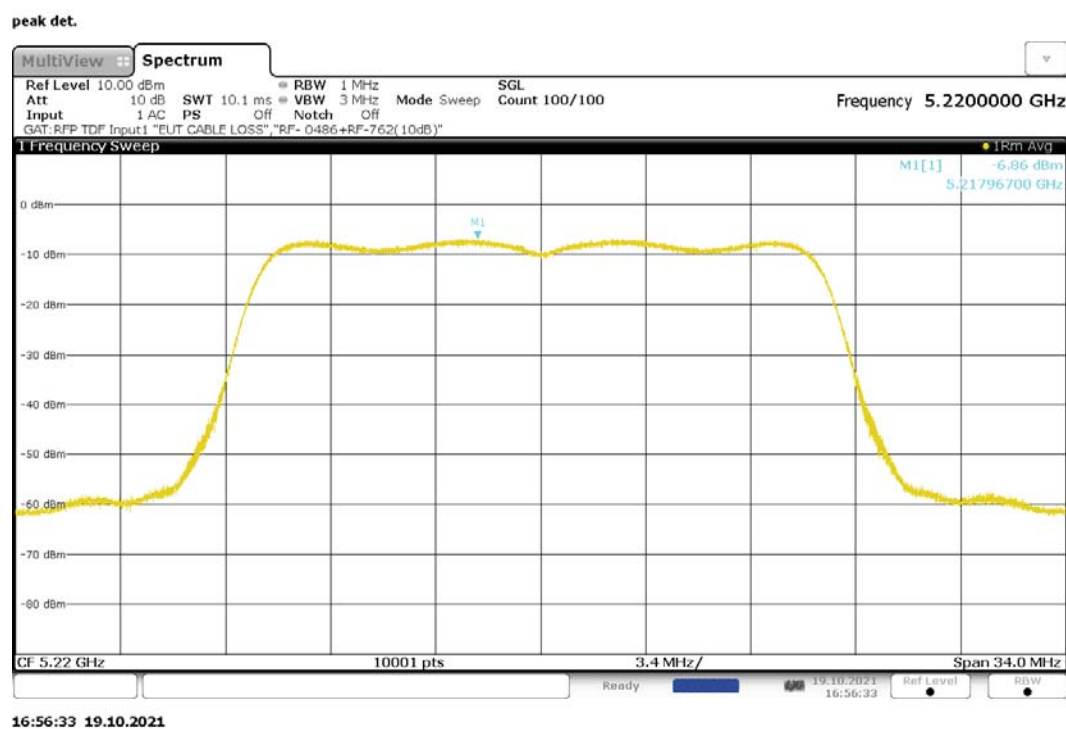


Figure 211: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5240MHz



Figure 212: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5745MHz

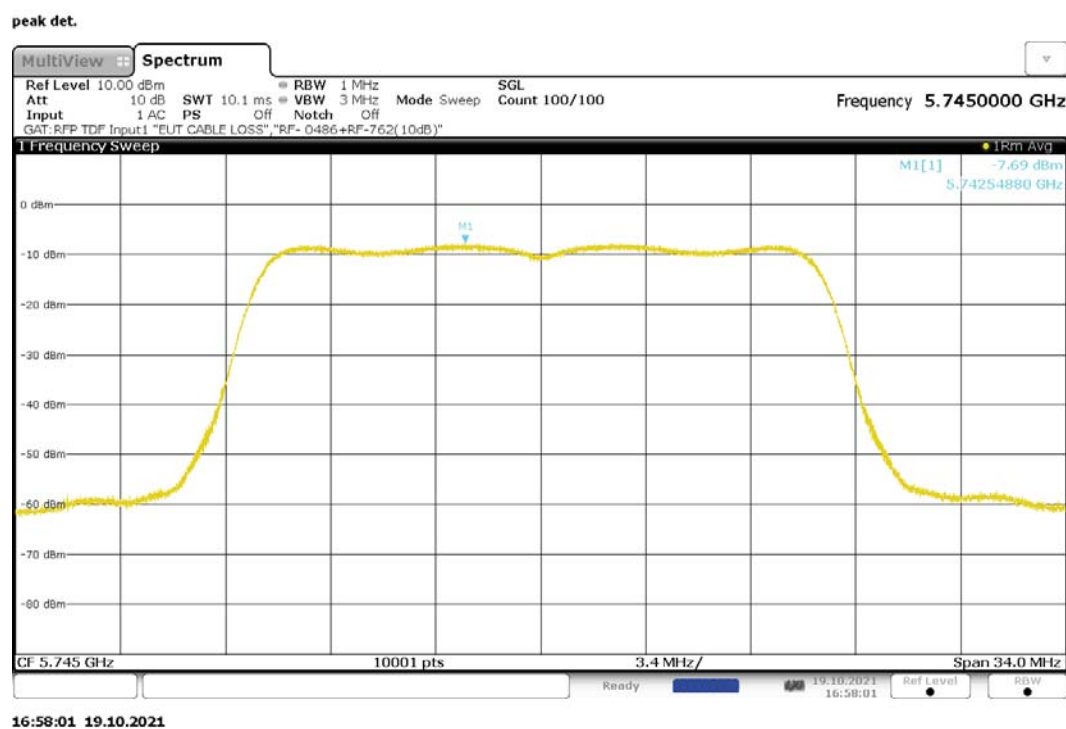


Figure 213: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5785MHz

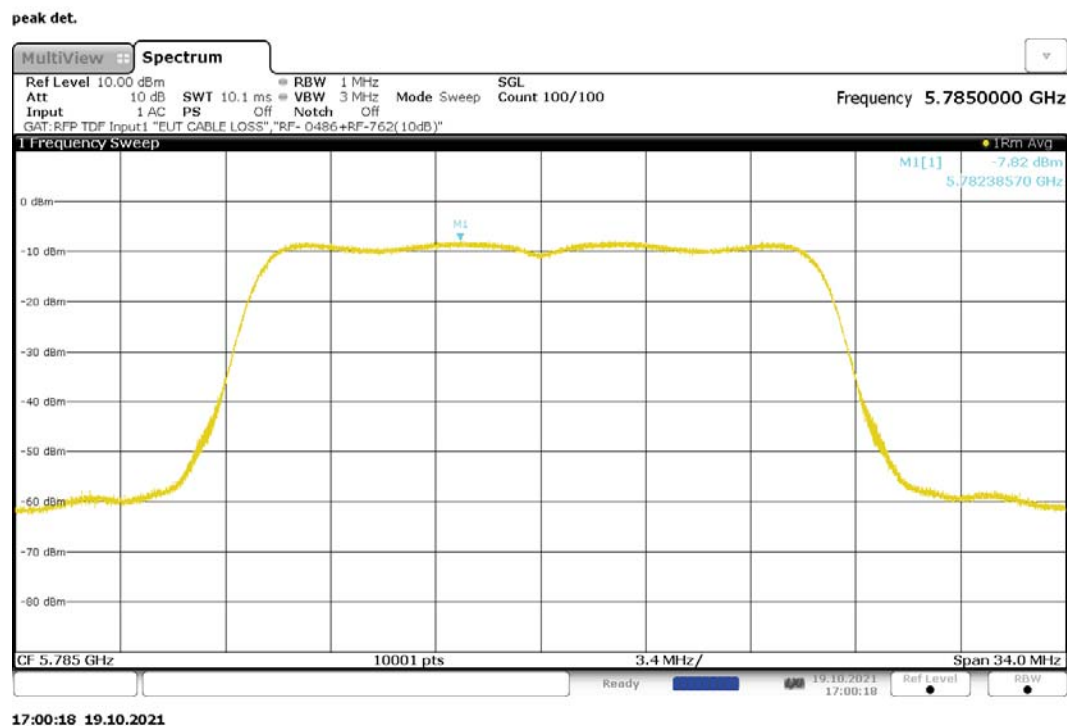


Figure 214: Maximum Power Spectral Density, 802.11ac-20, MIMO, RF1, 5825MHz

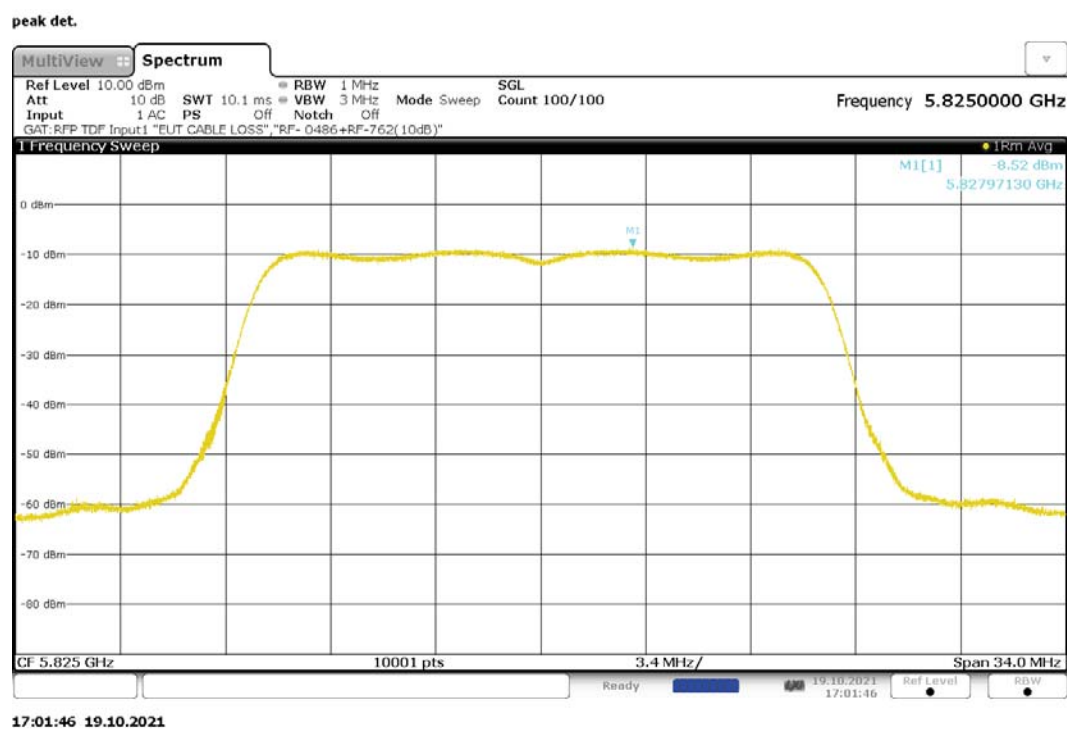


Table 123: Maximum Power Spectral Density, 802.11n-40, SISO, RF0

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5190	-10.77	11	21.77	2.14	-8.63	17	25.63
5230	-10.79	11	21.79	2.14	-8.65	17	25.65
5755	-10.88	30	40.88	1.00	-9.88	36	45.88
5795	-10.82	30	40.82	1.00	-9.82	36	45.82

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Table 124: Maximum Power Spectral Density, 802.11n-40, SISO, RF1

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5190	-10.17	11	21.17	2.43	-7.74	17	24.74
5230	-10.06	11	21.06	2.43	-7.63	17	24.63
5755	-10.50	30	40.5	2.59	-7.91	36	43.91
5795	-10.62	30	40.62	2.59	-8.03	36	44.03

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 205 von 342
Page 205 of 342

Figure 215: Maximum Power Spectral Density, 802.11n-40, SISO, RF0, 5190MHz

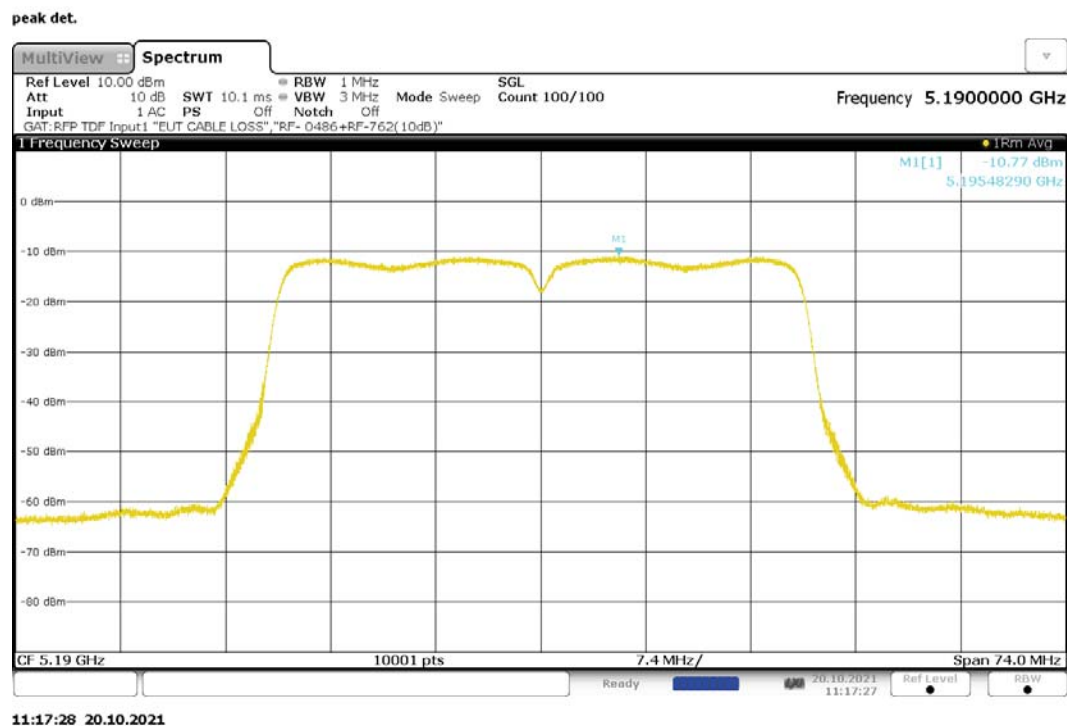


Figure 216: Maximum Power Spectral Density, 802.11n-40, SISO, RF0, 5230MHz

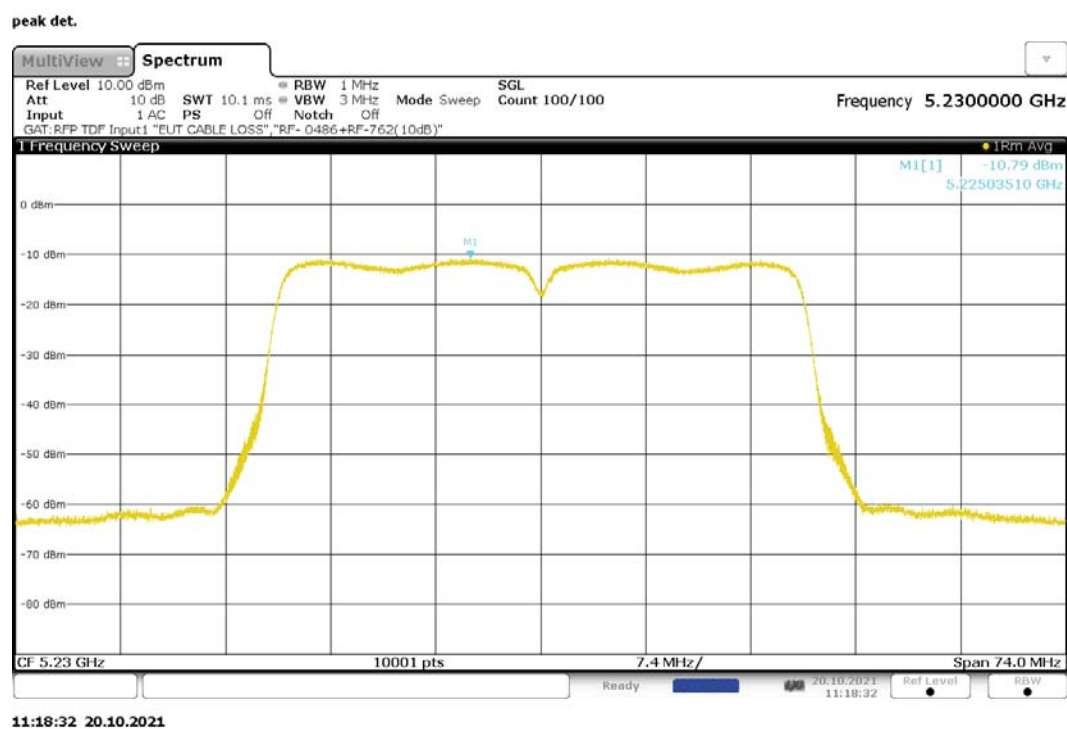


Figure 217: Maximum Power Spectral Density, 802.11n-40, SISO, RF0, 5755MHz

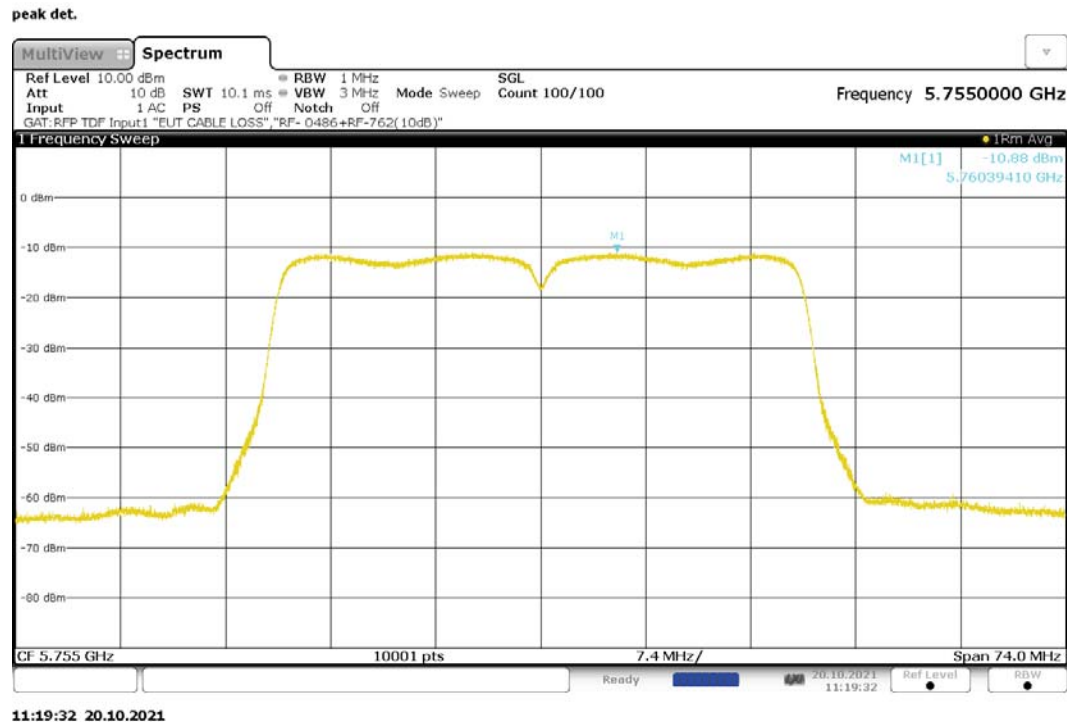


Figure 218: Maximum Power Spectral Density, 802.11n-40, SISO, RF0, 5795MHz

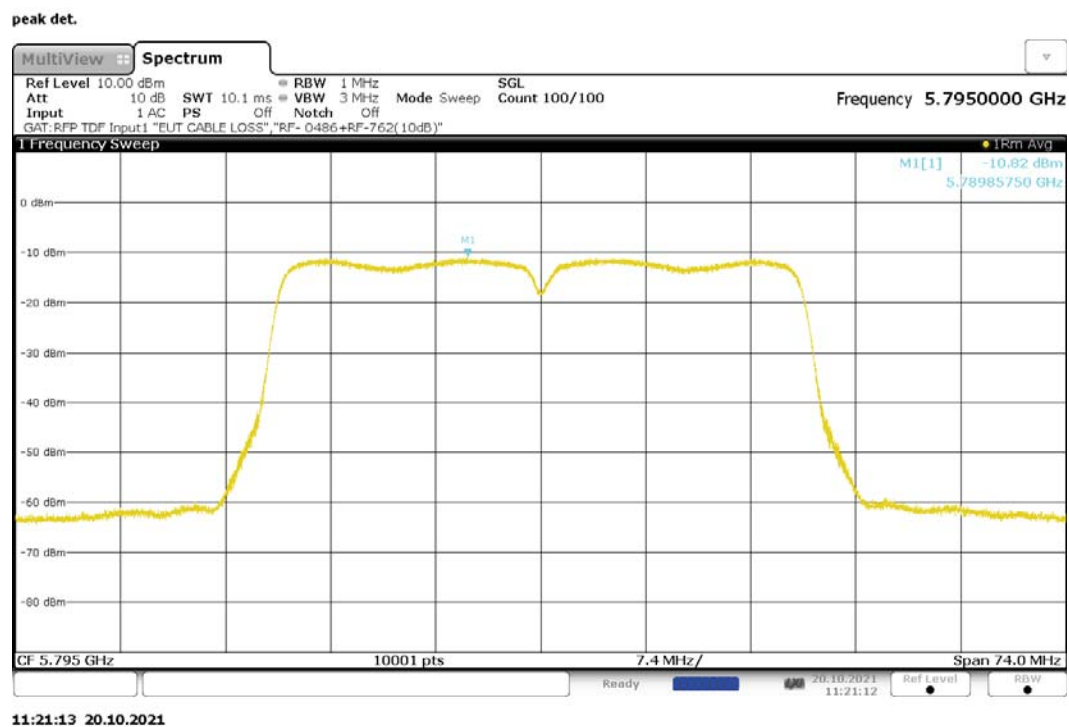
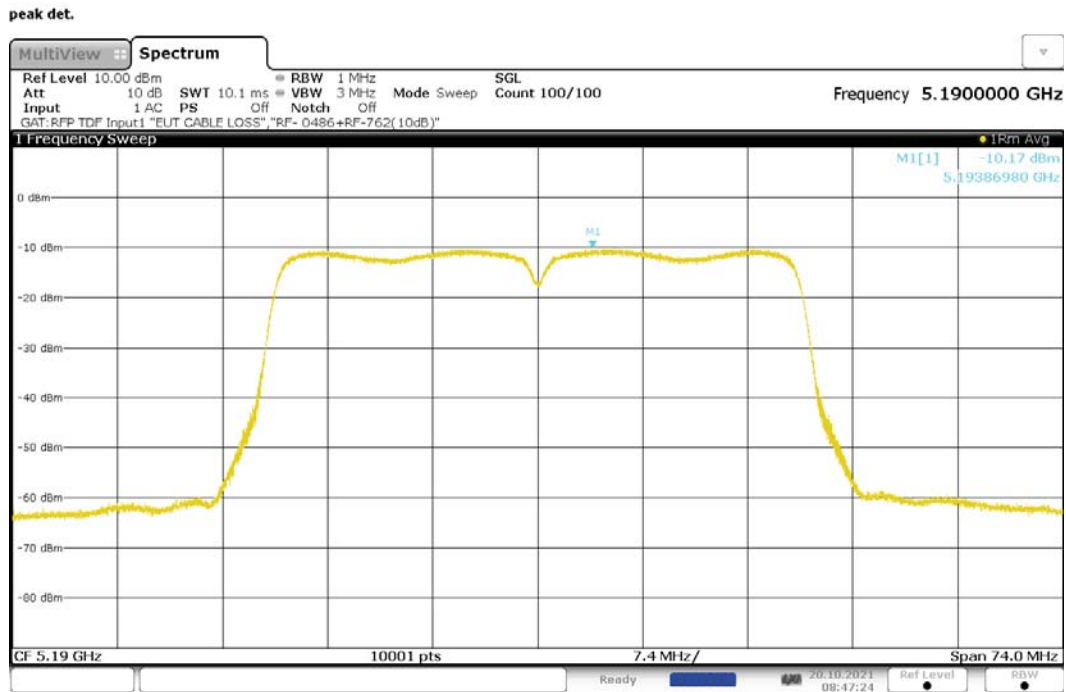
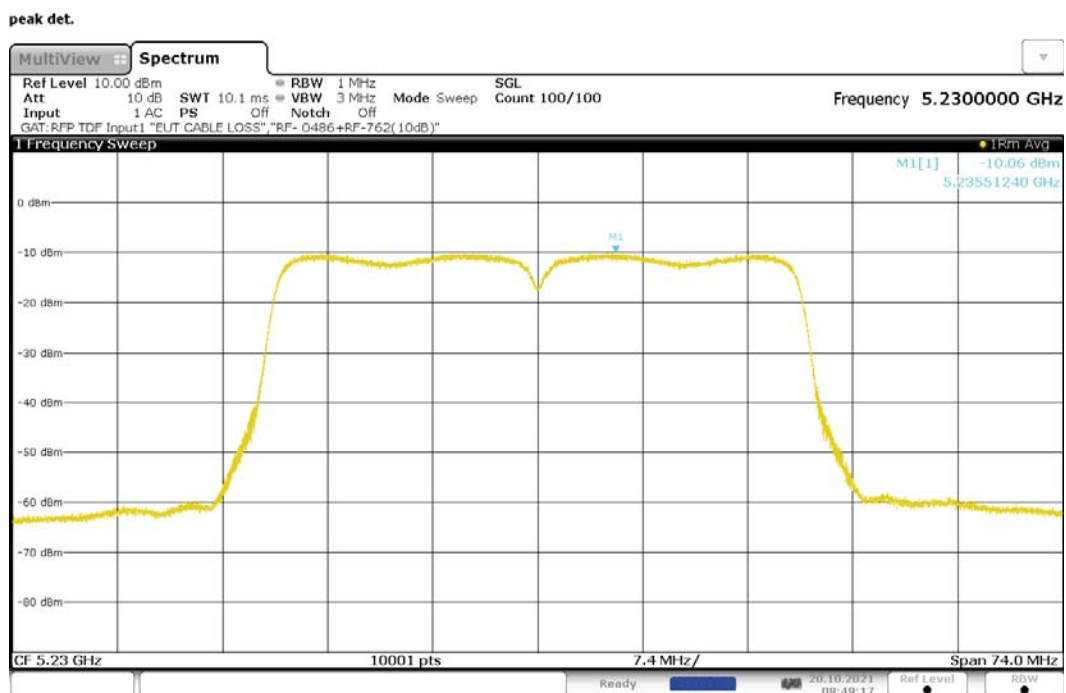


Figure 219: Maximum Power Spectral Density, 802.11n-40, SISO, RF1, 5190MHz



08:47:24 20.10.2021

Figure 220: Maximum Power Spectral Density, 802.11n-40, SISO, RF1, 5230MHz



08:49:17 20.10.2021

Figure 221: Maximum Power Spectral Density, 802.11n-40, SISO, RF1, 5755MHz



08:50:23 20.10.2021

Figure 222: Maximum Power Spectral Density, 802.11n-40, SISO, RF1, 5795MHz



08:51:27 20.10.2021

Table 125: Maximum Power Spectral Density, 802.11n-40, CDD, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5190	-7.34	11	18.34	-1.90	17	18.90
5230	-7.30	11	18.30	-1.86	17	18.86
5755	-7.93	30	37.93	-2.33	36	38.33
5795	-7.82	30	37.82	-2.21	36	38.21

Table 126: Individual - Maximum Power Spectral Density, 802.11n-40, CDD, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-10.91	5.44	-5.47
5230	-10.85	5.44	-5.41
5755	-11.12	5.60	-5.52
5795	-11.03	5.60	-5.43

Table 127: Individual - Maximum Power Spectral Density, 802.11n-40, CDD, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-9.85	5.44	-4.41
5230	-9.83	5.44	-4.39
5755	-10.76	5.60	-5.16
5795	-10.63	5.60	-5.03

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Directional Gain [dBi]}$
 $\text{Directional Gain [dBi]} = \text{Individual Antenna Gain [dBi]} + \text{Array Gain [dB]}$
 $\text{Array Gain} = 10 \times \log_{10} (N_{\text{ANT}}/N_{\text{SS}}) \text{ [dB]}$, here $N_{\text{ANT}} = 2$, $N_{\text{SS}} = 1$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 223: Maximum Power Spectral Density, 802.11n-40, CDD, RF0, 5190MHz



10:47:30 20.10.2021

Figure 224: Maximum Power Spectral Density, 802.11n-40, CDD, RF0, 5230MHz



10:56:00 20.10.2021

Figure 225: Maximum Power Spectral Density, 802.11n-40, CDD, RF0, 5755MHz



10:57:12 20.10.2021

Figure 226: Maximum Power Spectral Density, 802.11n-40, CDD, RF0, 5795MHz



11:00:44 20.10.2021

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 212 von 342
Page 212 of 342

Figure 227: Maximum Power Spectral Density, 802.11n-40, CDD, RF1, 5190MHz

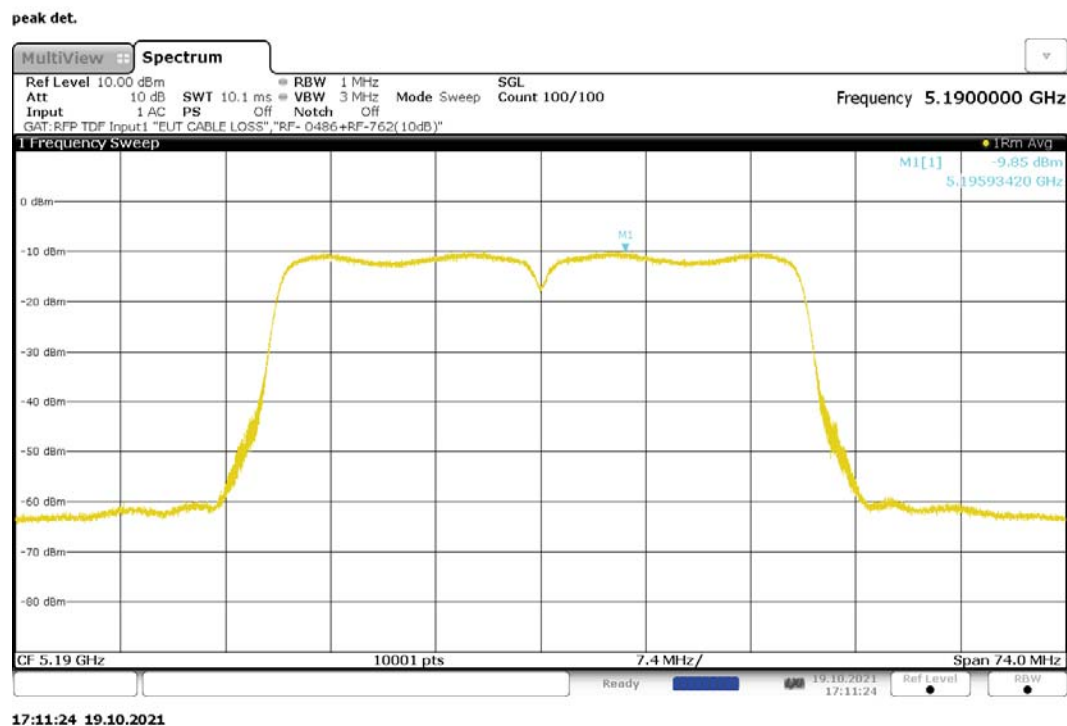


Figure 228: Maximum Power Spectral Density, 802.11n-40, CDD, RF1, 5230MHz

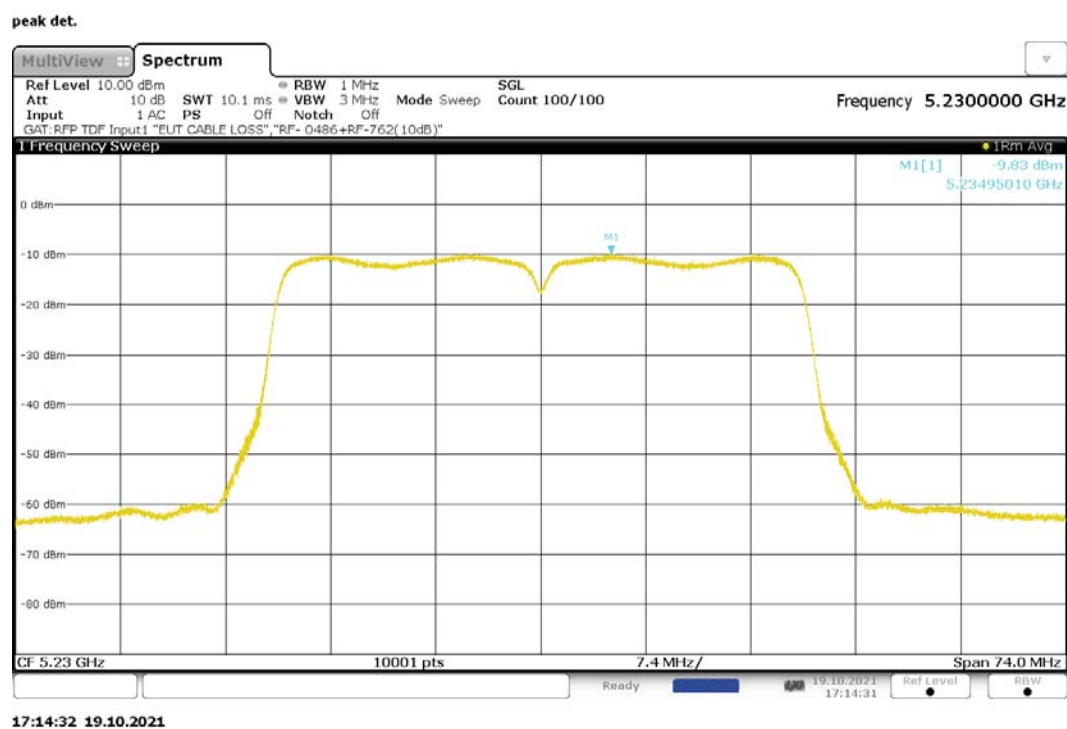


Figure 229: Maximum Power Spectral Density, 802.11n-40, CDD, RF1, 5755MHz

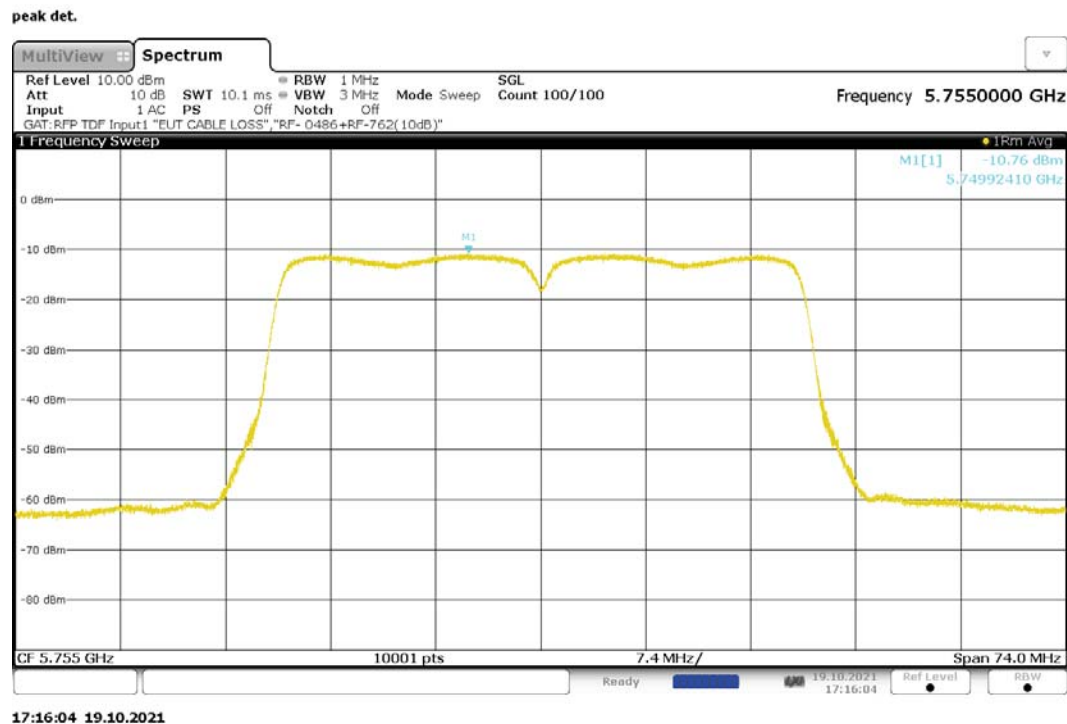


Figure 230: Maximum Power Spectral Density, 802.11n-40, CDD, RF1, 5795MHz

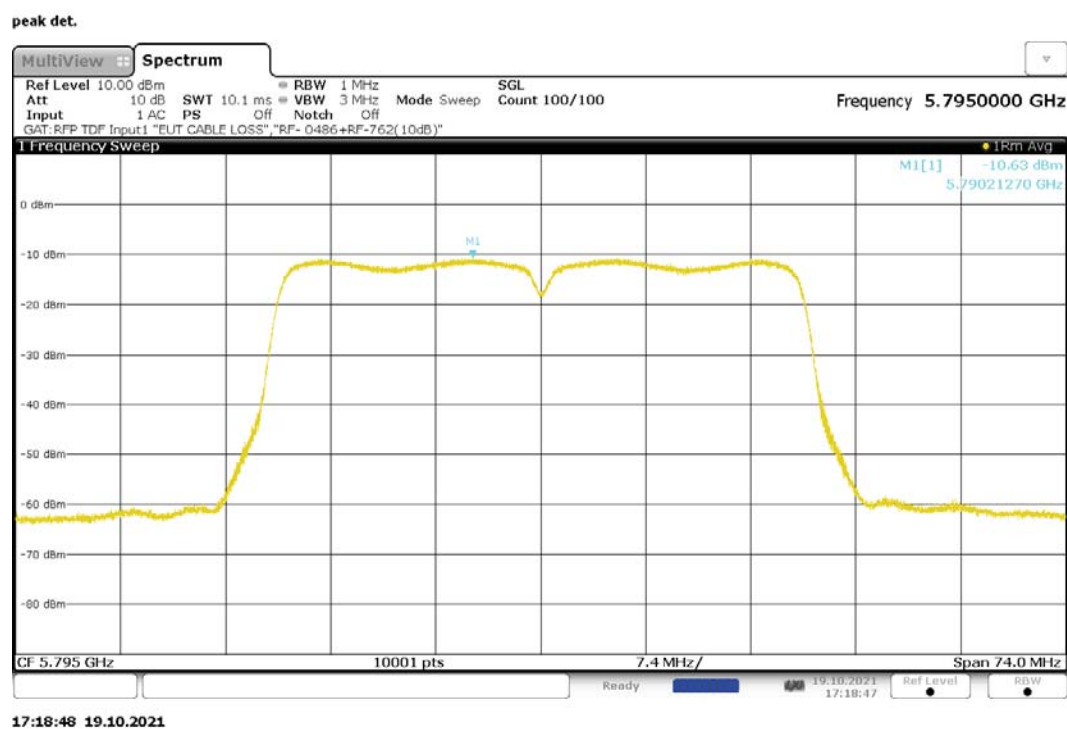


Table 128: Maximum Power Spectral Density, 802.11n-40, MIMO, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5190	-7.23	11	18.23	-4.96	17	21.96
5230	-7.33	11	18.33	-5.03	17	22.03
5755	-7.78	30	37.78	-5.89	36	41.89
5795	-7.87	30	37.87	-5.98	36	41.98

Table 129: Individual - Maximum Power Spectral Density, 802.11n-40, MIMO, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-9.92	2.14	-7.78
5230	-10.88	2.14	-8.74
5755	-10.90	1.00	-9.90
5795	-11.01	1.00	-10.01

Table 130: Individual - Maximum Power Spectral Density, 802.11n-40, MIMO, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-10.59	2.43	-8.16
5230	-9.86	2.43	-7.43
5755	-10.68	2.59	-8.09
5795	-10.76	2.59	-8.17

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 231: Maximum Power Spectral Density, 802.11n-40, MIMO, RF0, 5190MHz

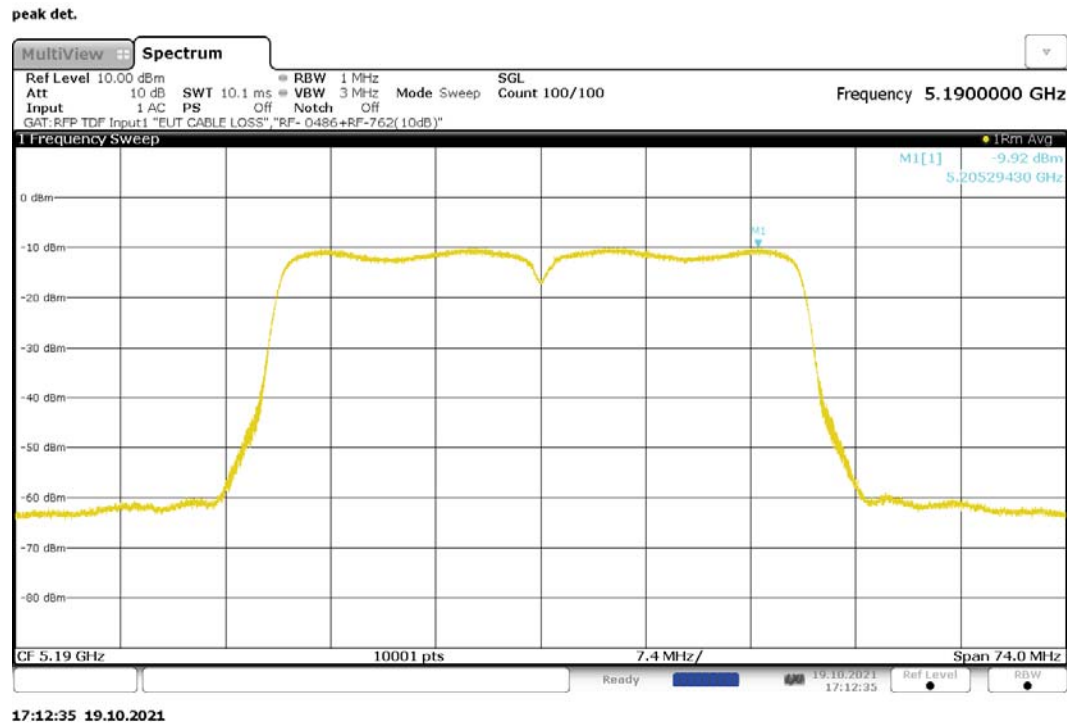
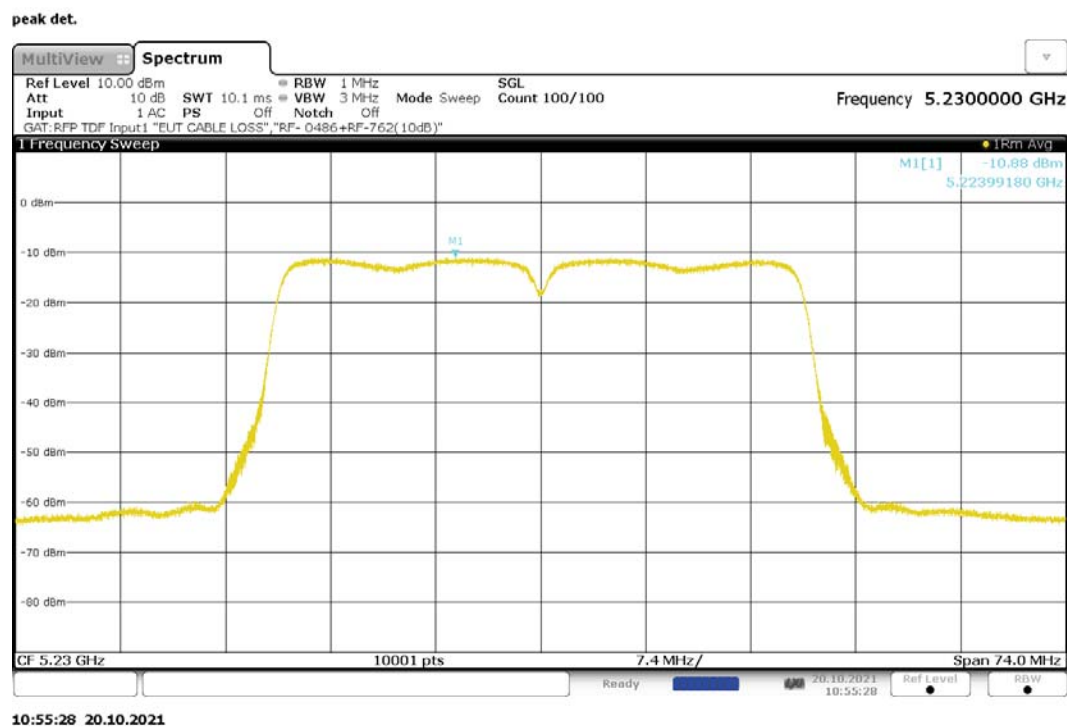


Figure 232: Maximum Power Spectral Density, 802.11n-40, MIMO, RF0, 5230MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 216 von 342
Page 216 of 342

Figure 233: Maximum Power Spectral Density, 802.11n-40, MIMO, RF0, 5755MHz

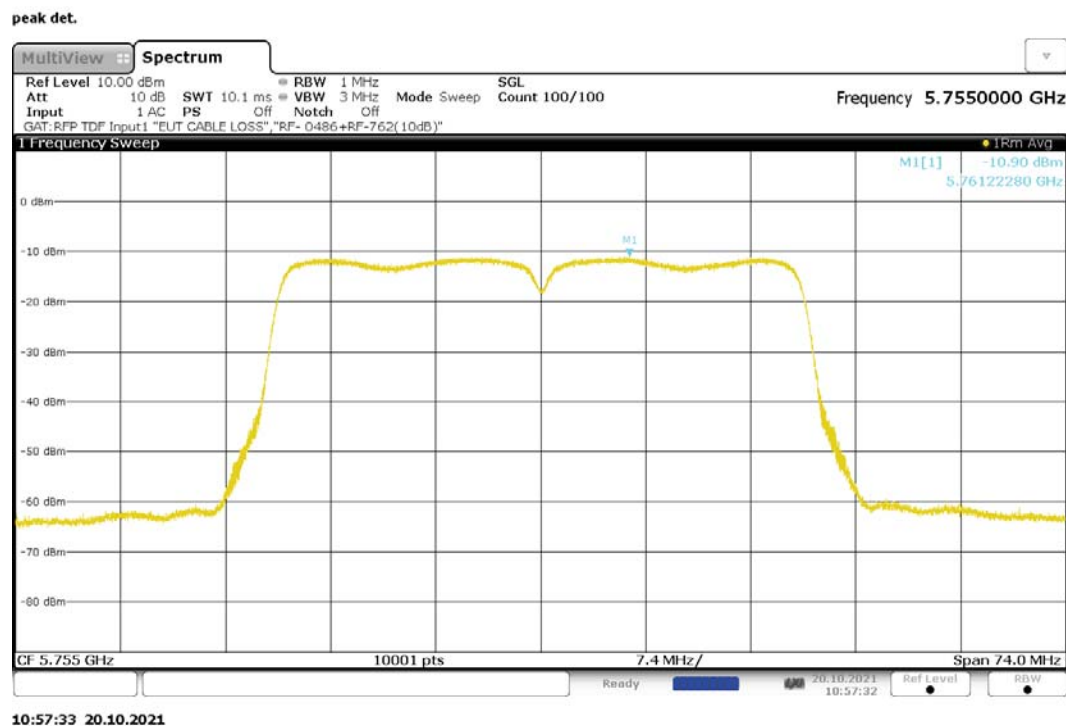
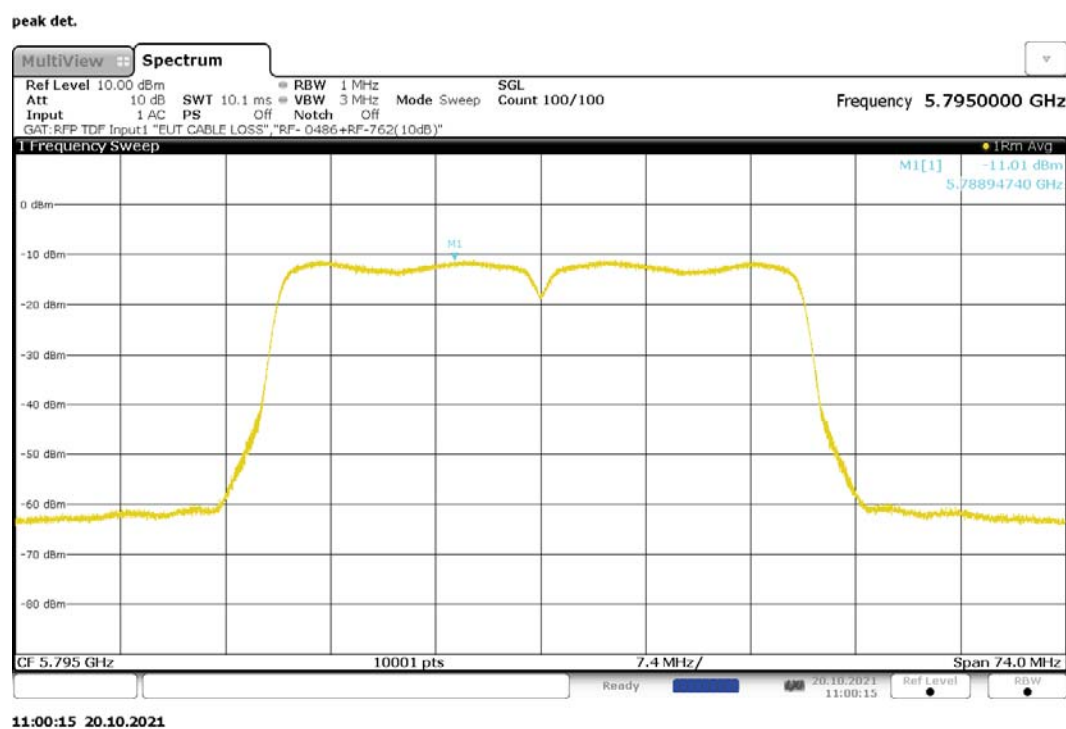


Figure 234: Maximum Power Spectral Density, 802.11n-40, MIMO, RF0, 5795MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 217 von 342
Page 217 of 342

Figure 235: Maximum Power Spectral Density, 802.11n-40, MIMO, RF1, 5190MHz



10:54:02 20.10.2021

Figure 236: Maximum Power Spectral Density, 802.11n-40, MIMO, RF1, 5230MHz



17:13:57 19.10.2021

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 218 von 342
Page 218 of 342

Figure 237: Maximum Power Spectral Density, 802.11n-40, MIMO, RF1, 5755MHz

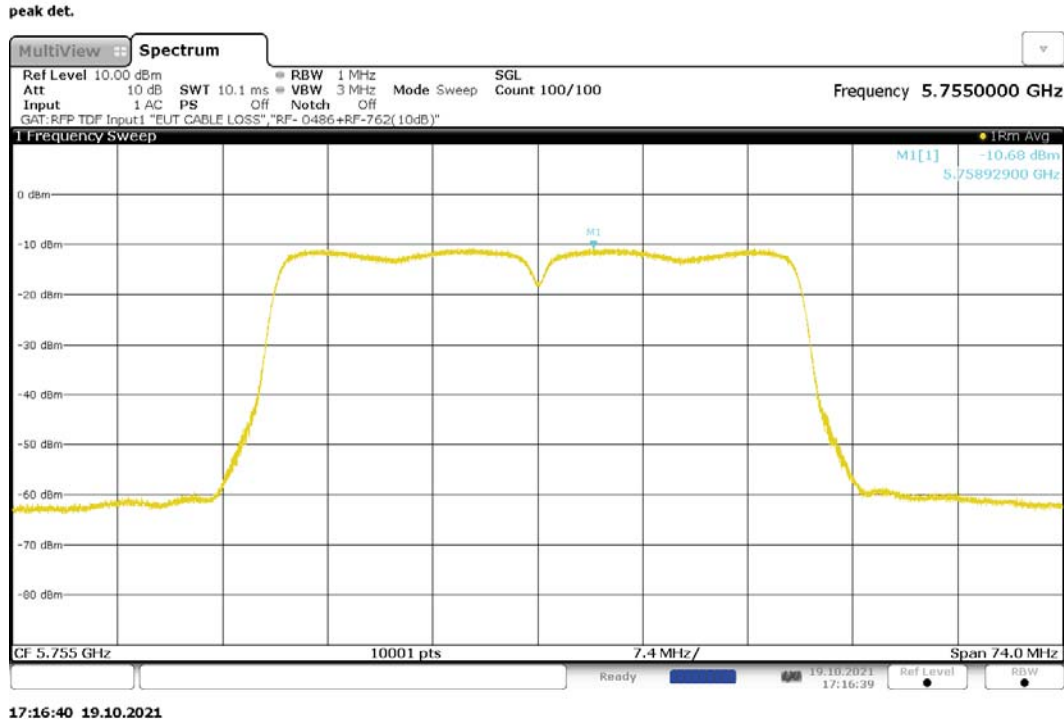


Figure 238: Maximum Power Spectral Density, 802.11n-40, MIMO, RF1, 5795MHz

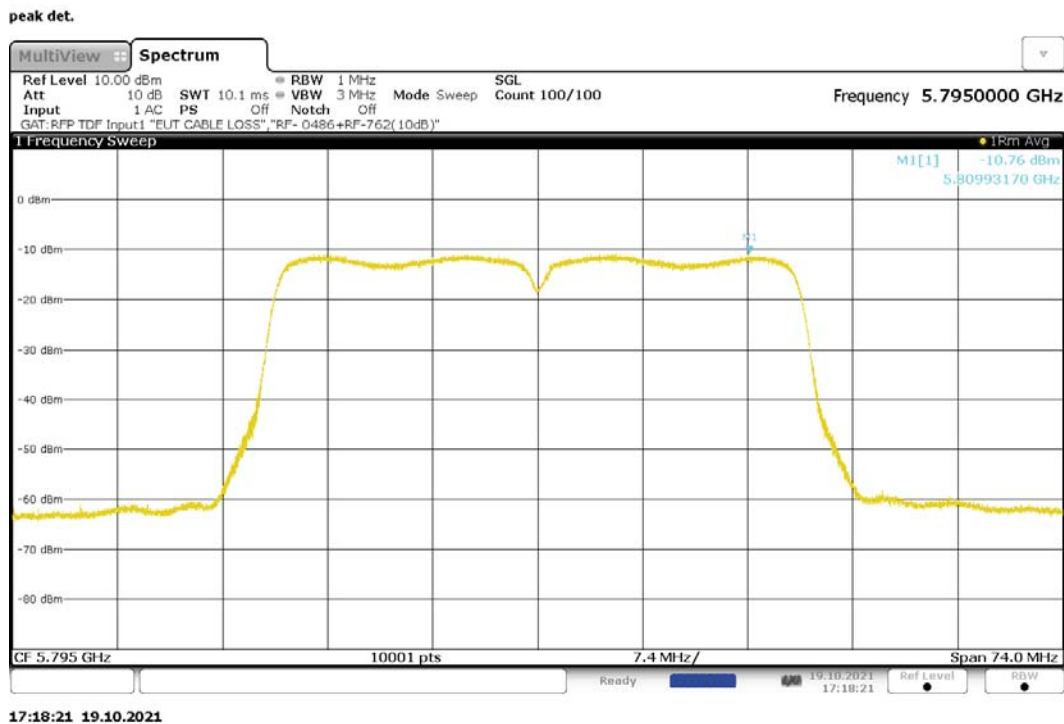


Table 131: Maximum Power Spectral Density, 802.11ac-40, SISO, RF0

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5190	-10.83	11	21.83	2.14	-8.69	17	25.69
5230	-10.82	11	21.82	2.14	-8.68	17	25.68
5755	-10.88	30	40.88	1.00	-9.88	36	45.88
5795	-11.12	30	41.12	1.00	-10.12	36	46.12

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Table 132: Maximum Power Spectral Density, 802.11ac-40, SISO, RF1

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5190	-10.59	11	21.59	2.43	-8.16	17	25.16
5230	-10.53	11	21.53	2.43	-8.10	17	25.10
5755	-10.49	30	40.49	2.59	-7.90	36	43.90
5795	-10.96	30	40.96	2.59	-8.37	36	44.37

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 220 von 342
Page 220 of 342

Figure 239: Maximum Power Spectral Density, 802.11ac-40, SISO, RF0, 5190MHz

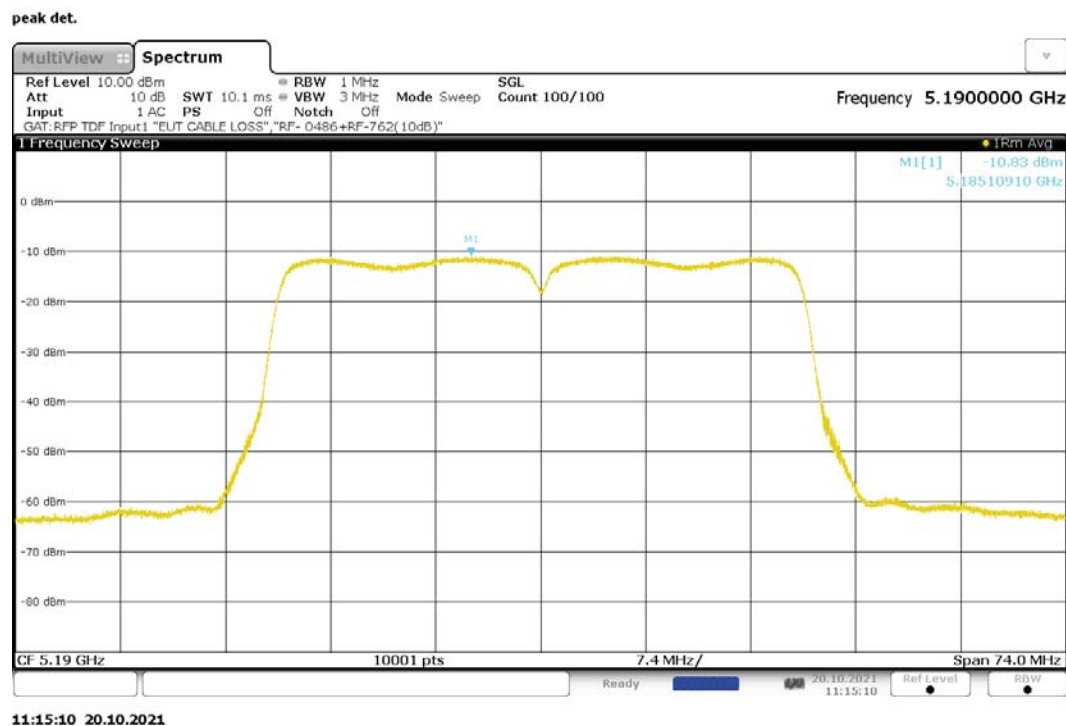


Figure 240: Maximum Power Spectral Density, 802.11ac-40, SISO, RF0, 5230MHz



Figure 241: Maximum Power Spectral Density, 802.11ac-40, SISO, RF0, 5755MHz

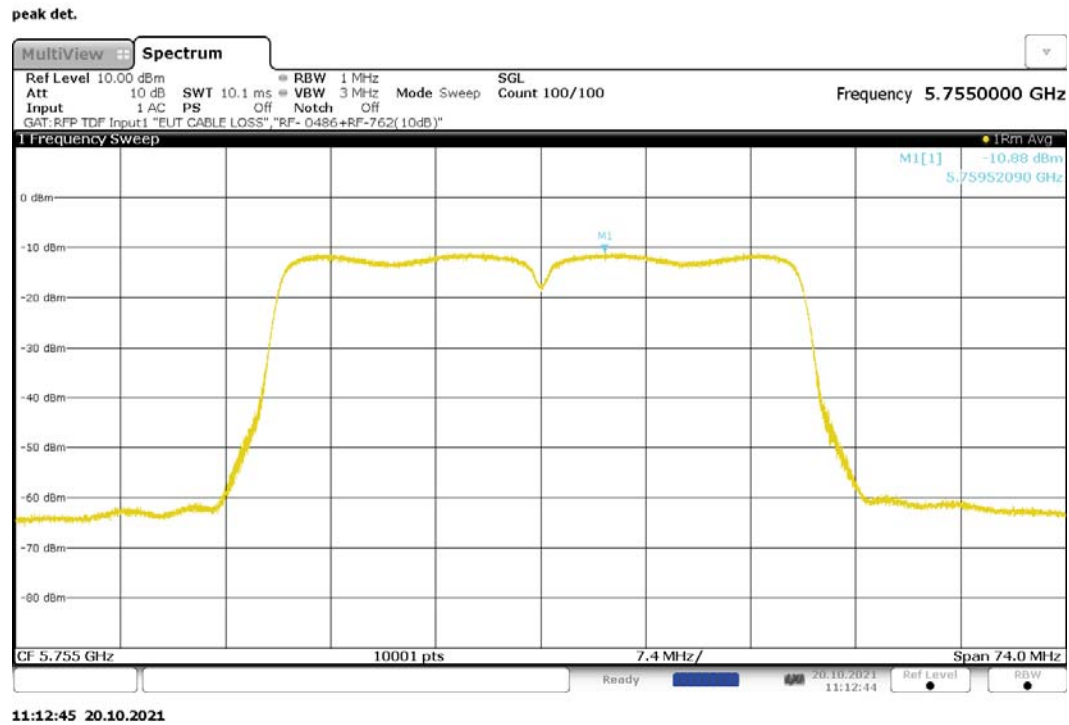


Figure 242: Maximum Power Spectral Density, 802.11ac-40, SISO, RF0, 5795MHz

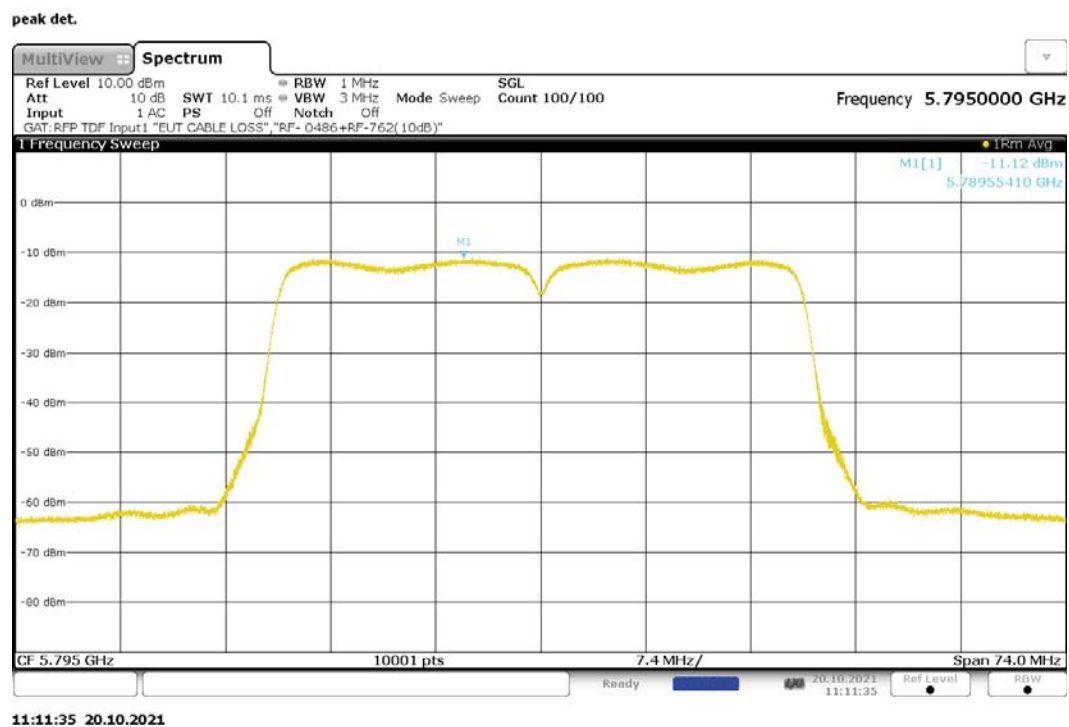
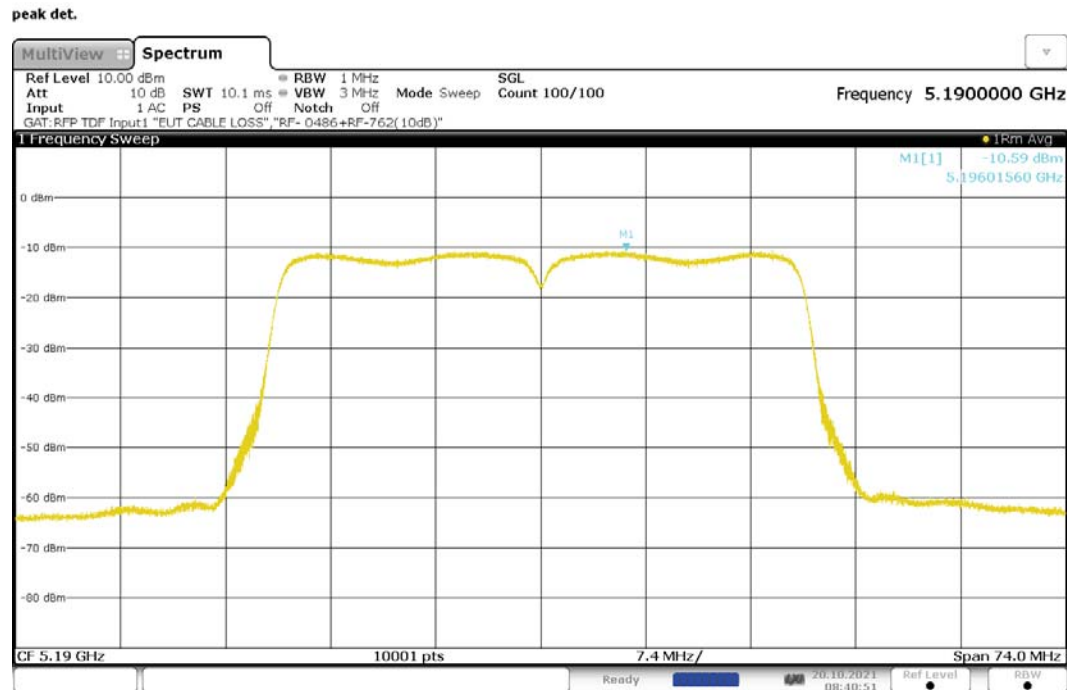
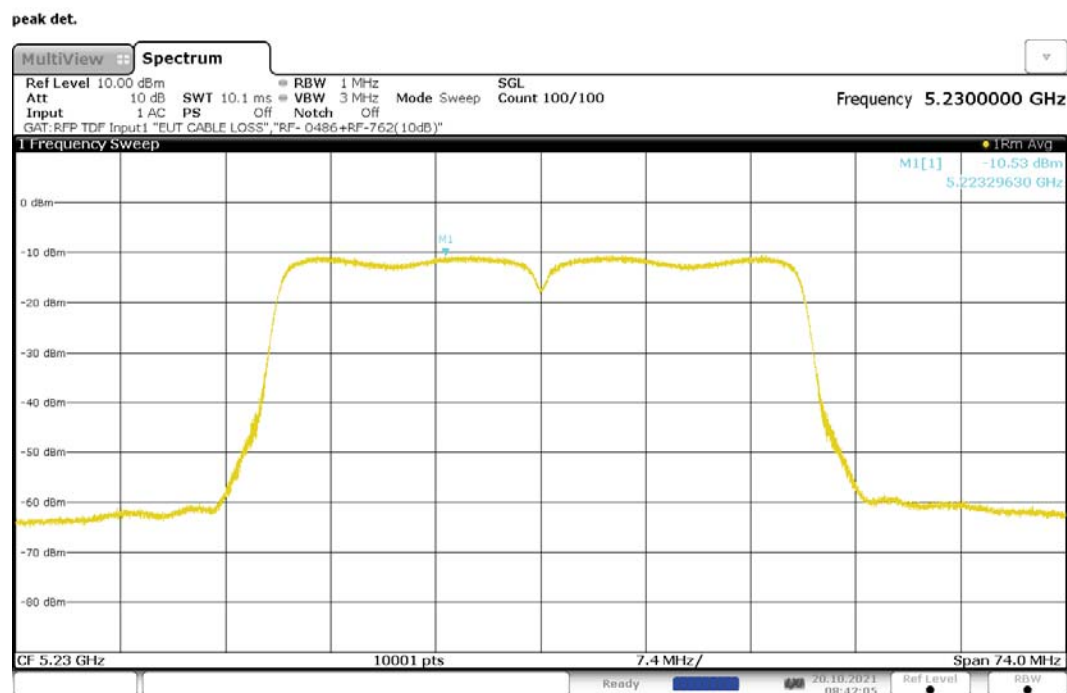


Figure 243: Maximum Power Spectral Density, 802.11ac-40, SISO, RF1, 5190MHz



08:40:52 20.10.2021

Figure 244: Maximum Power Spectral Density, 802.11ac-40, SISO, RF1, 5230MHz



08:42:06 20.10.2021

Figure 245: Maximum Power Spectral Density, 802.11ac-40, SISO, RF1, 5755MHz



08:43:11 20.10.2021

Figure 246: Maximum Power Spectral Density, 802.11ac-40, SISO, RF1, 5795MHz



08:44:40 20.10.2021

Table 133: Maximum Power Spectral Density, 802.11ac-40, CDD, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5190	-7.35	11	18.35	-1.91	17	18.91
5230	-7.21	11	18.21	-1.77	17	18.77
5755	-7.81	30	37.81	-2.21	36	38.21
5795	-7.80	30	37.80	-2.20	36	38.20

Table 134: Individual - Maximum Power Spectral Density, 802.11ac-40, CDD, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-10.76	5.44	-5.32
5230	-10.78	5.44	-5.34
5755	-11.08	5.60	-5.48
5795	-10.95	5.60	-5.35

Table 135: Individual - Maximum Power Spectral Density, 802.11ac-40, CDD, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-9.99	5.44	-4.55
5230	-9.73	5.44	-4.29
5755	-10.58	5.60	-4.98
5795	-10.68	5.60	-5.08

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Directional Gain [dBi]}$
 $\text{Directional Gain [dBi]} = \text{Individual Antenna Gain [dBi]} + \text{Array Gain [dB]}$
 $\text{Array Gain} = 10 \times \log_{10} (N_{\text{ANT}}/N_{\text{ss}}) \text{ [dB]}$, here $N_{\text{ANT}} = 2$, $N_{\text{ss}} = 1$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 247: Maximum Power Spectral Density, 802.11ac-40, CDD, RF0, 5190MHz

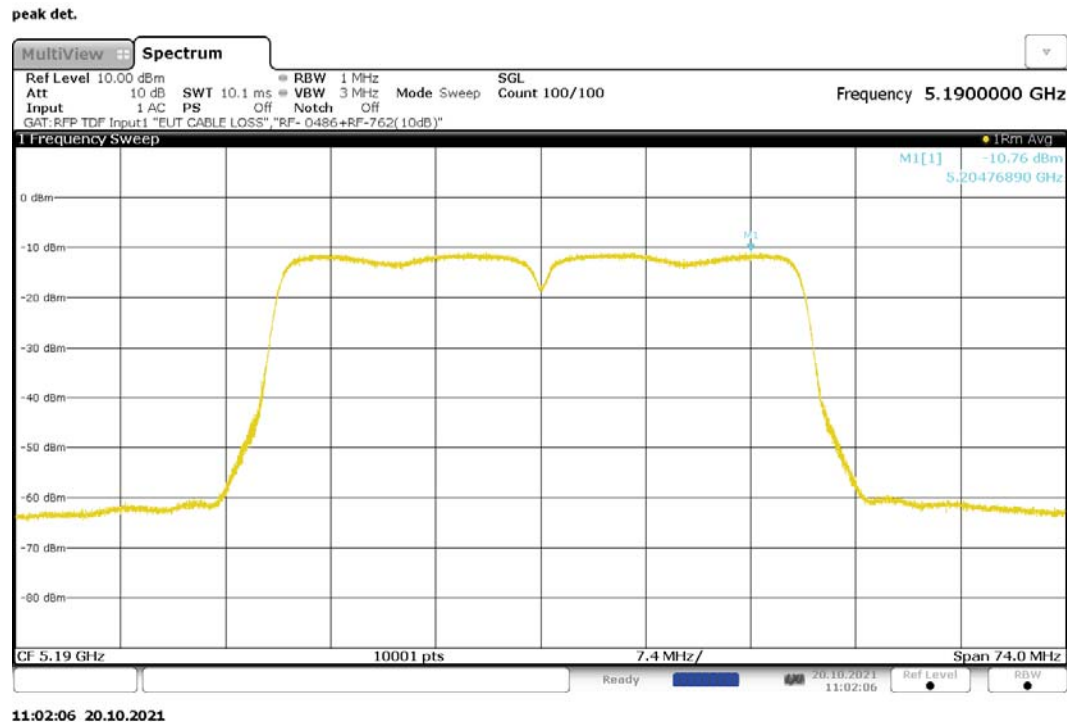
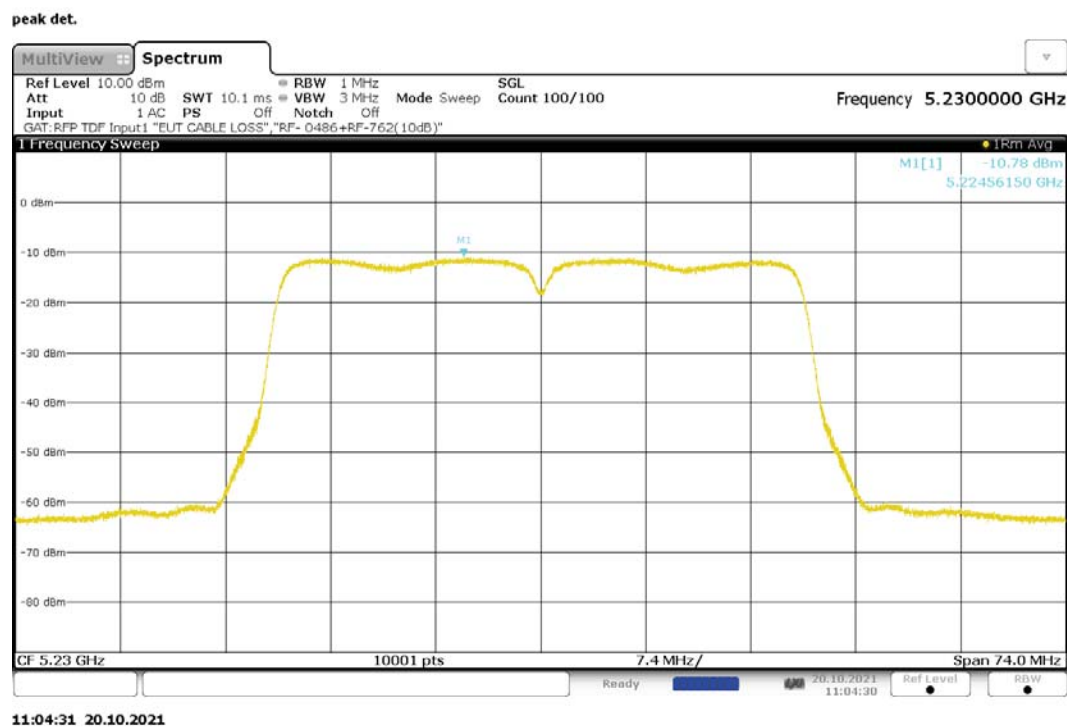


Figure 248: Maximum Power Spectral Density, 802.11ac-40, CDD, RF0, 5230MHz



Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 226 von 342
Page 226 of 342

Figure 249: Maximum Power Spectral Density, 802.11ac-40, CDD, RF0, 5755MHz

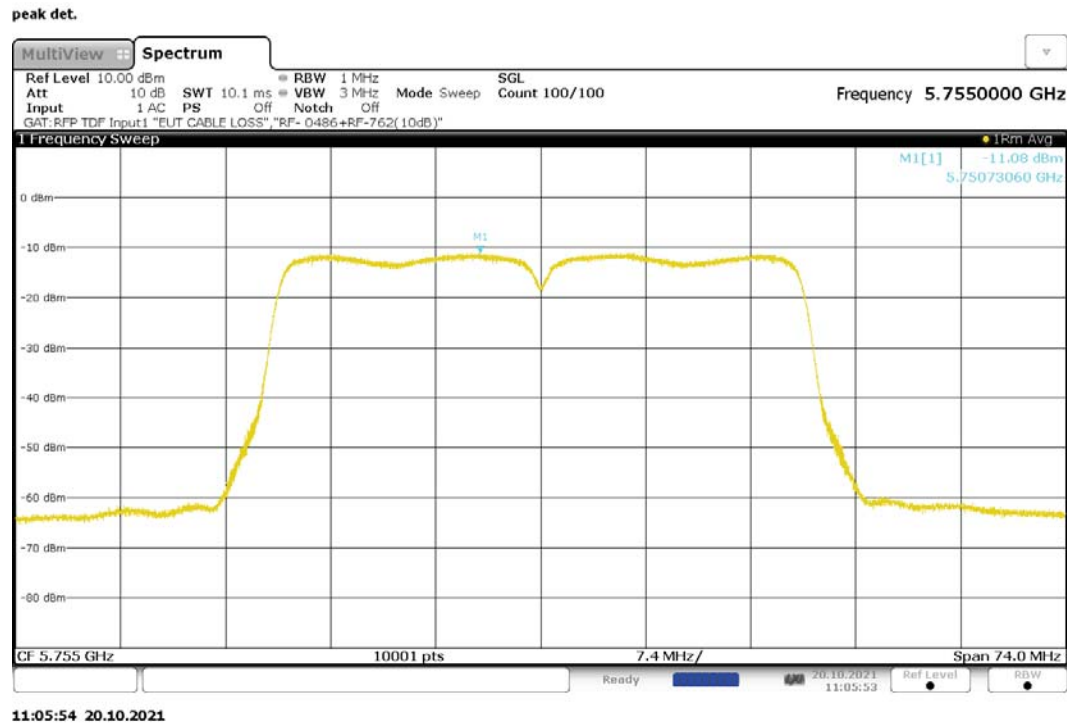


Figure 250: Maximum Power Spectral Density, 802.11ac-40, CDD, RF0, 5795MHz

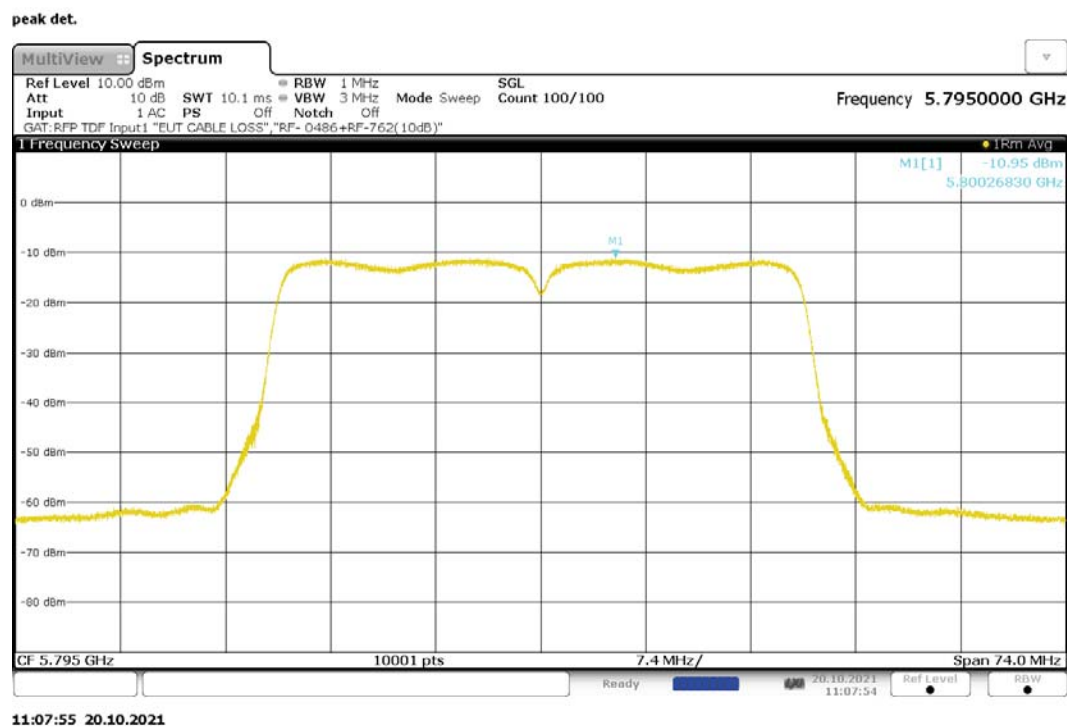
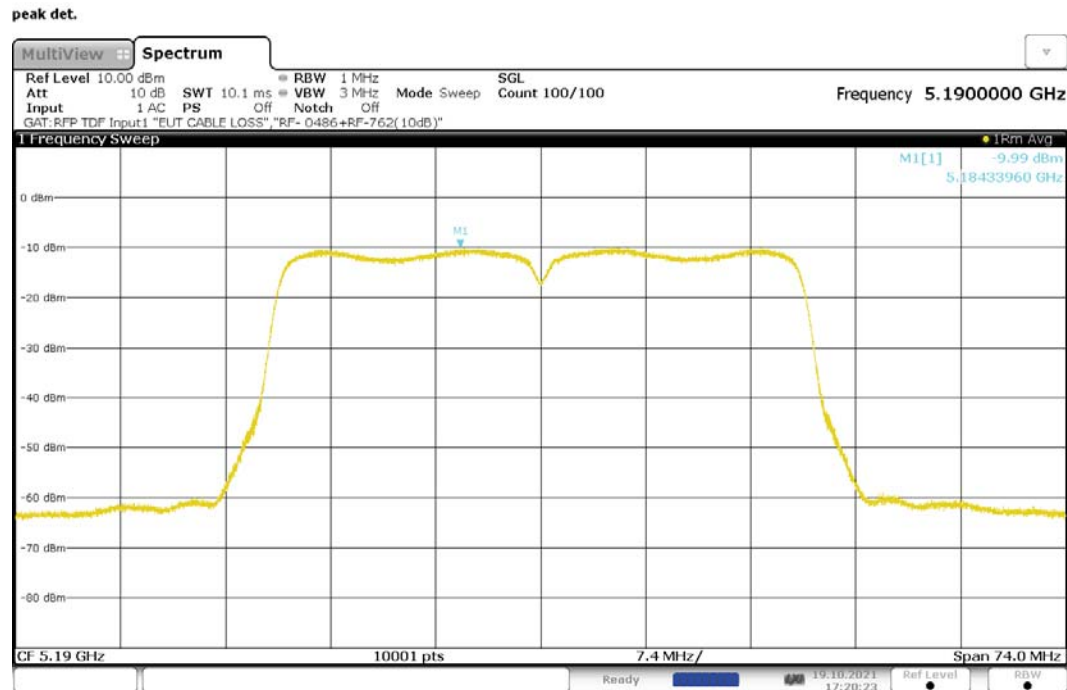
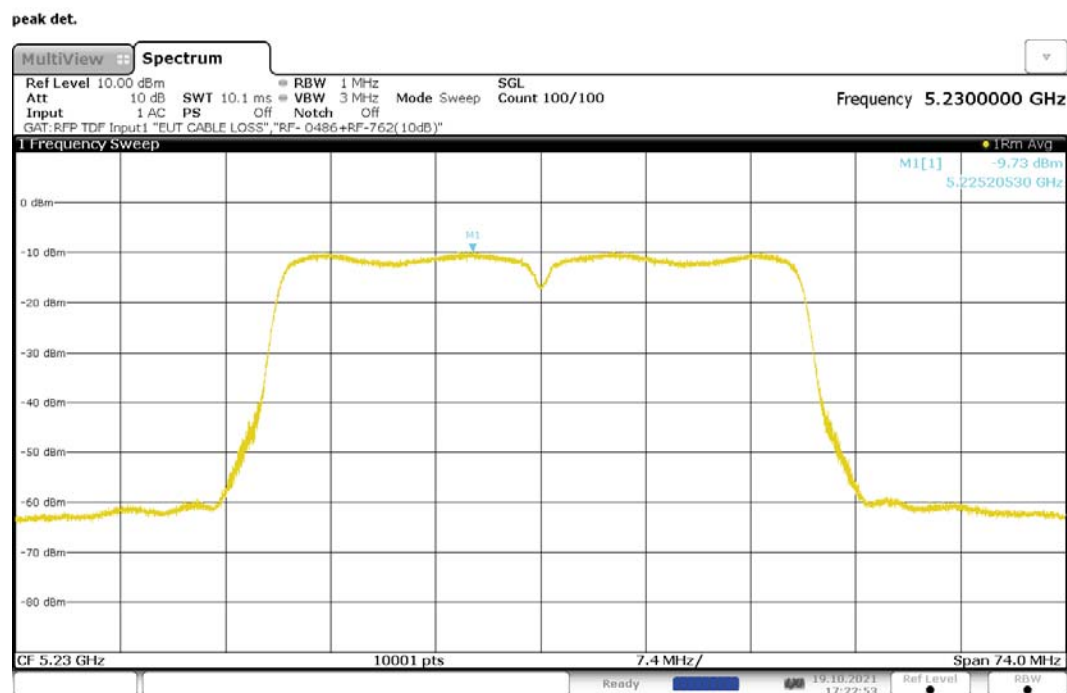


Figure 251: Maximum Power Spectral Density, 802.11ac-40, CDD, RF1, 5190MHz



17:20:24 19.10.2021

Figure 252: Maximum Power Spectral Density, 802.11ac-40, CDD, RF1, 5230MHz



17:22:54 19.10.2021

Figure 253: Maximum Power Spectral Density, 802.11ac-40, CDD, RF1, 5755MHz

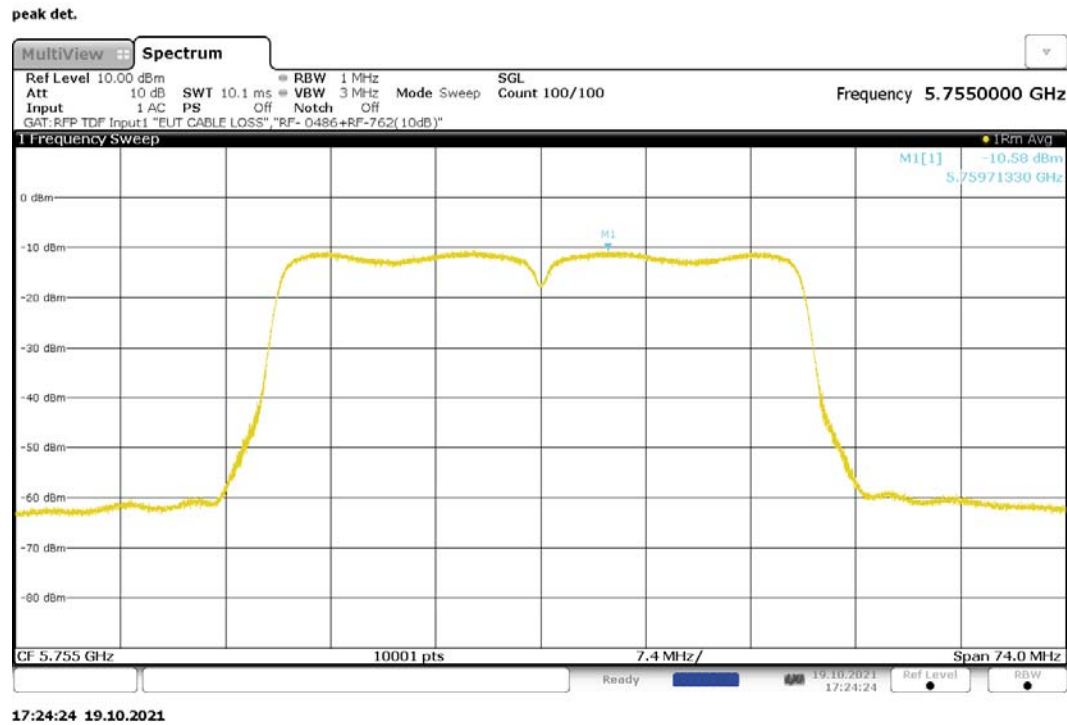


Figure 254: Maximum Power Spectral Density, 802.11ac-40, CDD, RF1, 5795MHz

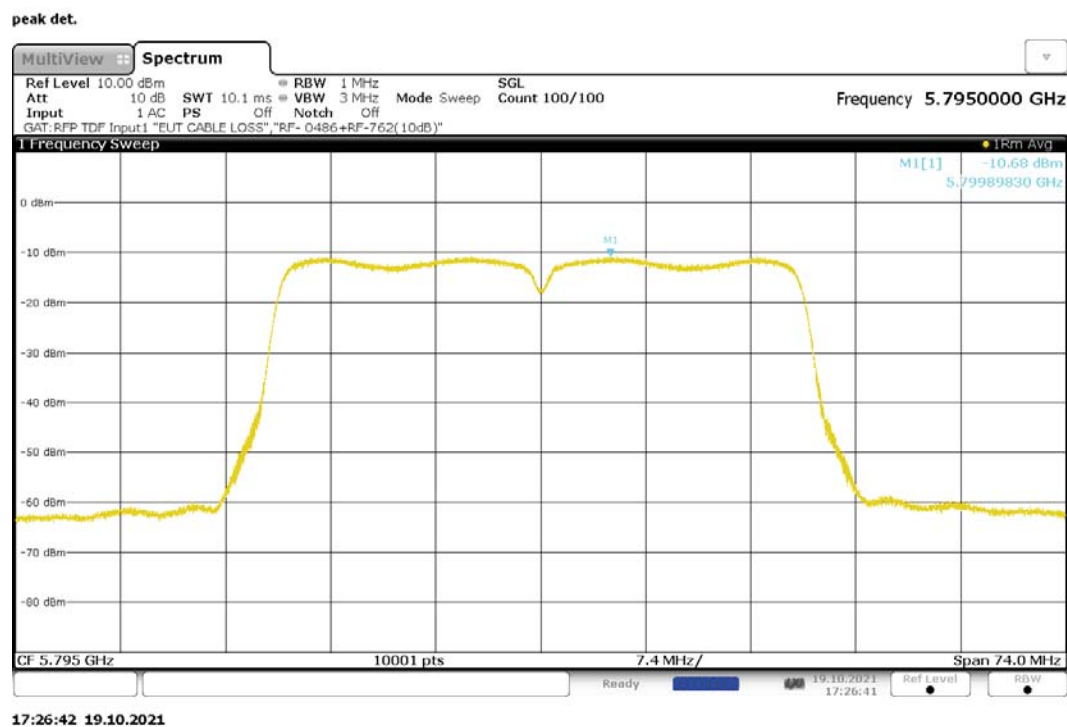


Table 136: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5190	-7.29	11	18.29	-4.99	17	21.99
5230	-7.52	11	18.52	-5.22	17	22.22
5755	-7.68	30	37.68	-5.77	36	41.77
5795	-8.08	30	38.08	-6.15	36	42.15

Table 137: Individual - Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-10.76	2.14	-8.62
5230	-10.87	2.14	-8.73
5755	-10.97	1.00	-9.97
5795	-11.44	1.00	-10.44

Table 138: Individual - Maximum Power Spectral Density, 802.11ac-40, MIMO, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5190	-9.88	2.43	-7.45
5230	-10.21	2.43	-7.78
5755	-10.43	2.59	-7.84
5795	-10.76	2.59	-8.17

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 230 von 342
Page 230 of 342

Figure 255: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0, 5190MHz

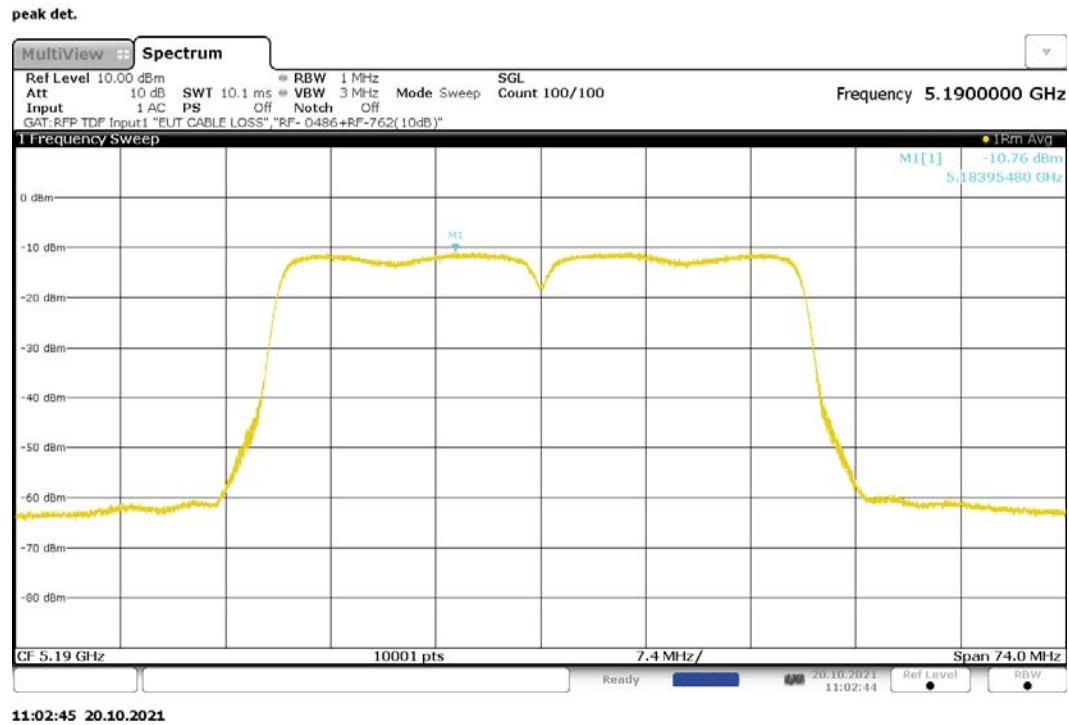


Figure 256: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0, 5230MHz

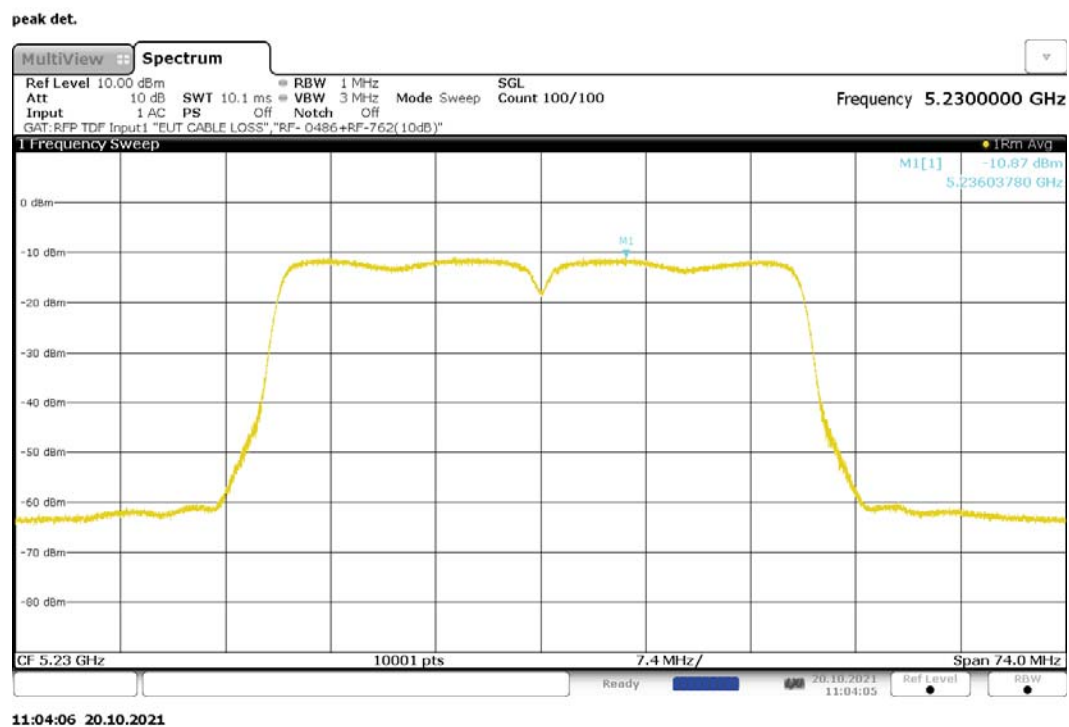


Figure 257: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0, 5755MHz

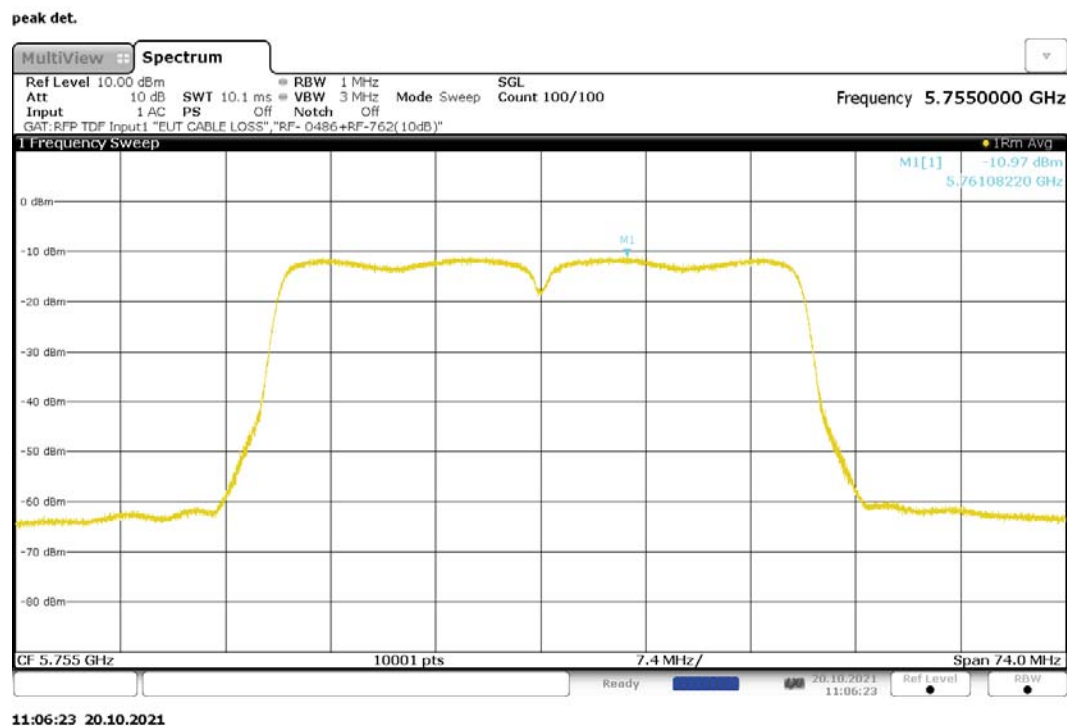


Figure 258: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF0, 5795MHz

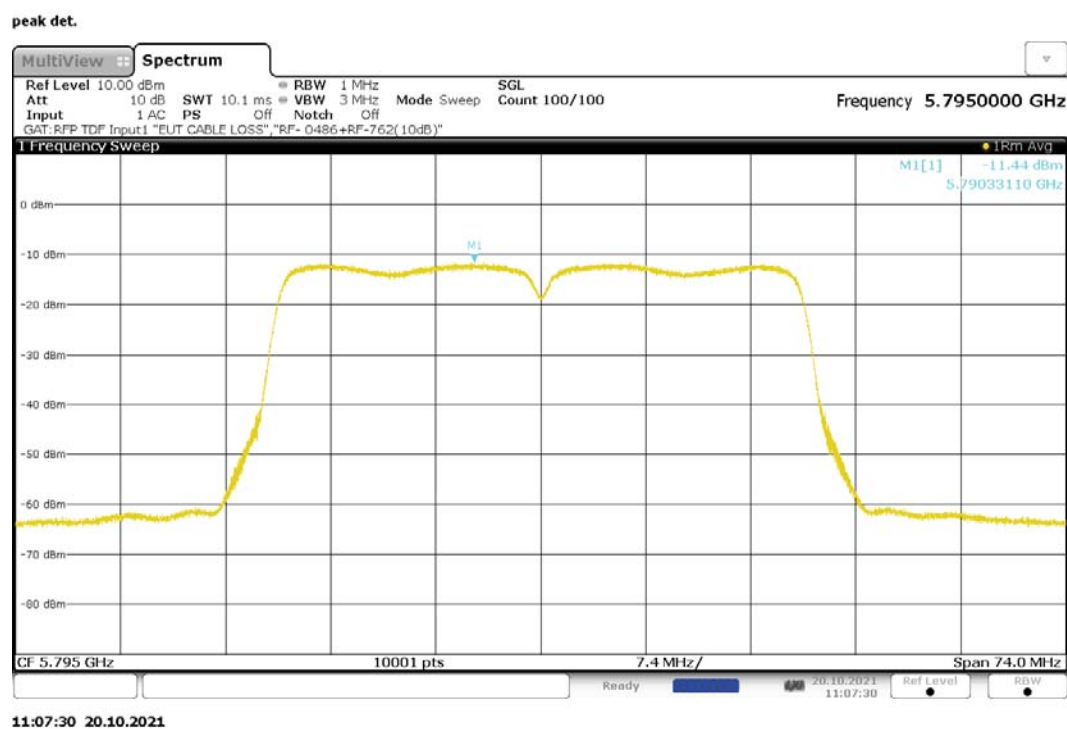


Figure 259: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF1, 5190MHz

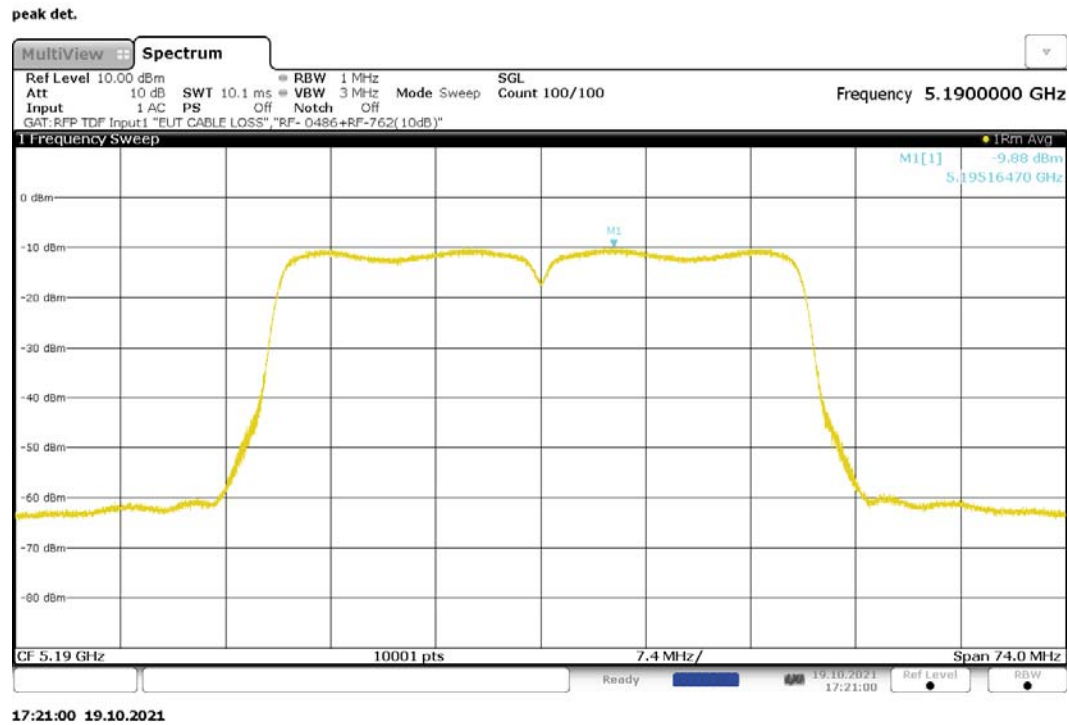


Figure 260: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF1, 5230MHz

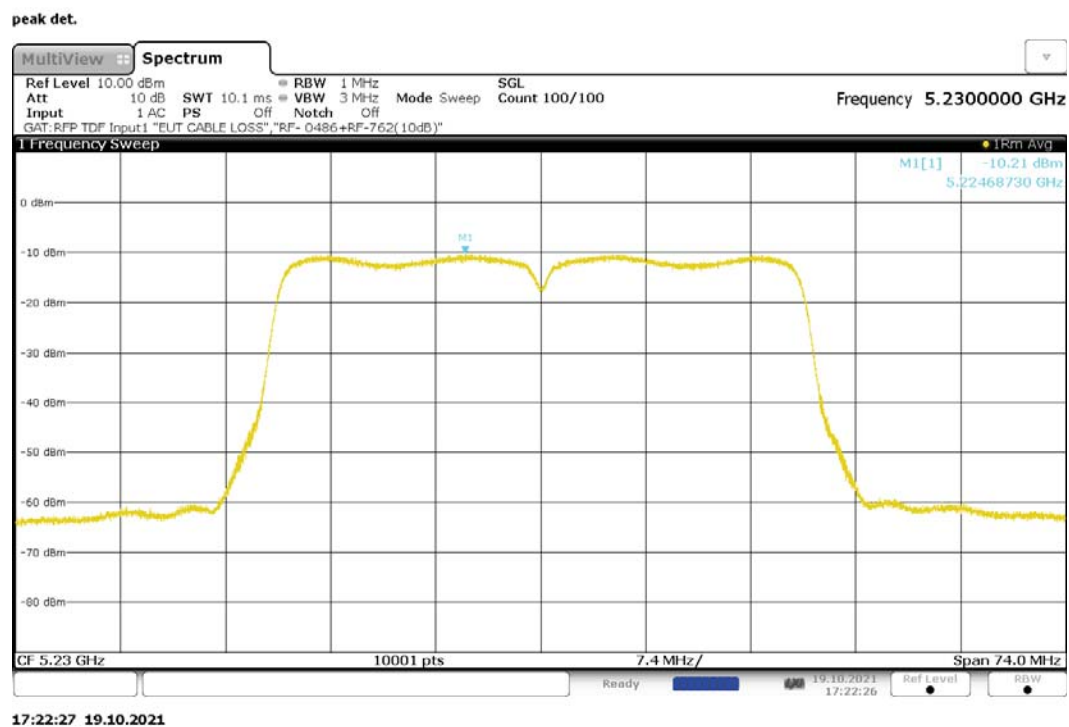


Figure 261: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF1, 5755MHz

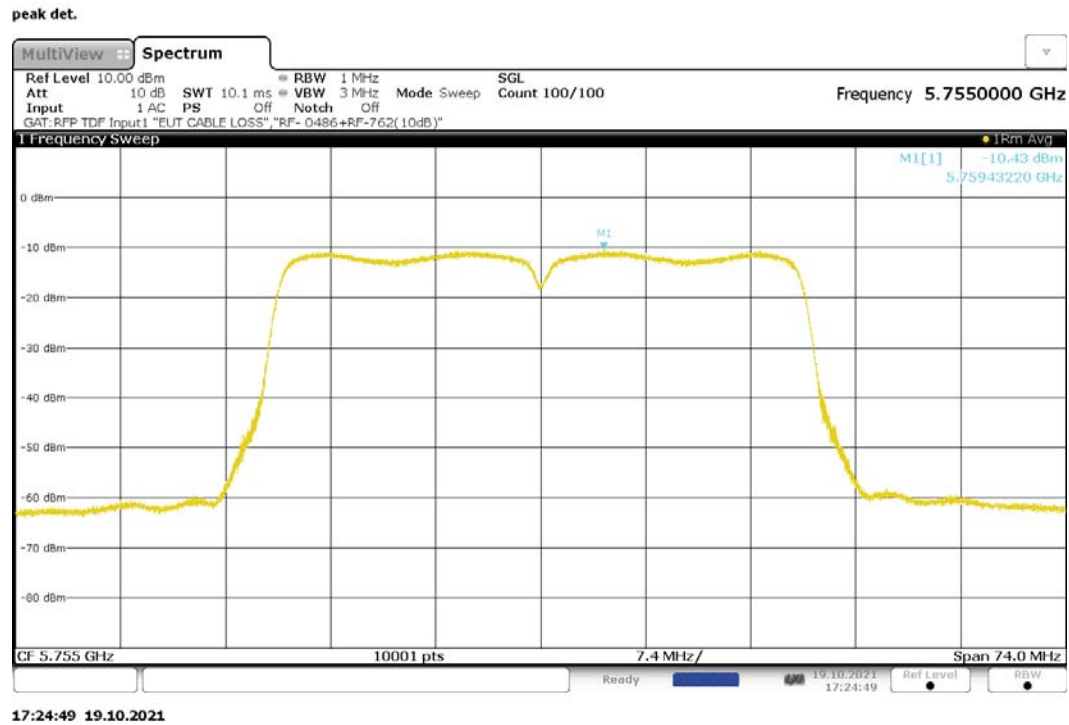
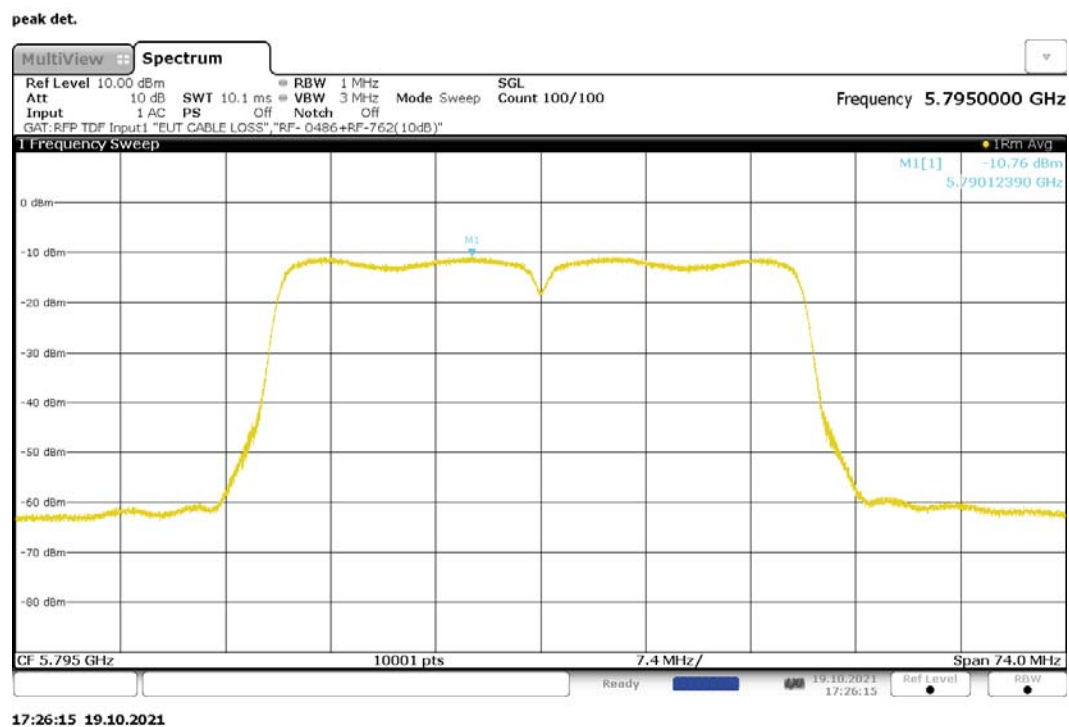


Figure 262: Maximum Power Spectral Density, 802.11ac-40, MIMO, RF1, 5795MHz



Prüfbericht-Nr.:
Test Report No.:

JP211UTZ 001

Seite 234 von 342
Page 234 of 342

Table 139: Maximum Power Spectral Density, 802.11ac-80, SISO, RF0

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5210	-14.41	11	25.41	2.14	-12.27	17	29.27
5775	-14.62	30	44.62	1.00	-13.62	36	49.62

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Table 140: Maximum Power Spectral Density, 802.11ac-80, SISO, RF1

Freq. [MHz]	Cond. PSD [dBm]	Cond. PSD Limit [dBm]	Cond. PSD Margin [dB]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm]	PSD e.i.r.p. Limit [dBm]	PSD e.i.r.p. Margin [dB]
5210	-13.63	11	24.63	2.43	-11.20	17	28.20
5775	-14.16	30	44.16	2.59	-11.57	36	47.57

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
 $\text{PSD e.i.r.p. [dBm/MHz]} = \text{Cond. PSD [dBm/MHz]} + \text{Antenna Gain [dBi]}$
 For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 263: Maximum Power Spectral Density, 802.11ac-80, SISO, RF0, 5210MHz

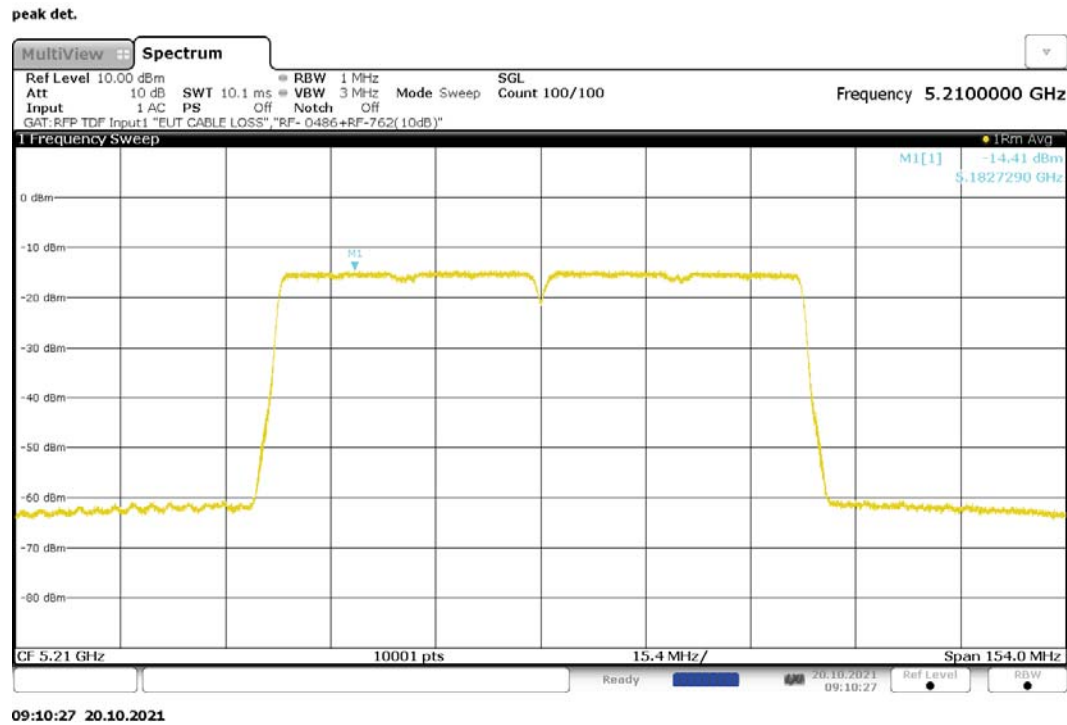


Figure 264: Maximum Power Spectral Density, 802.11ac-80, SISO, RF0, 5775MHz

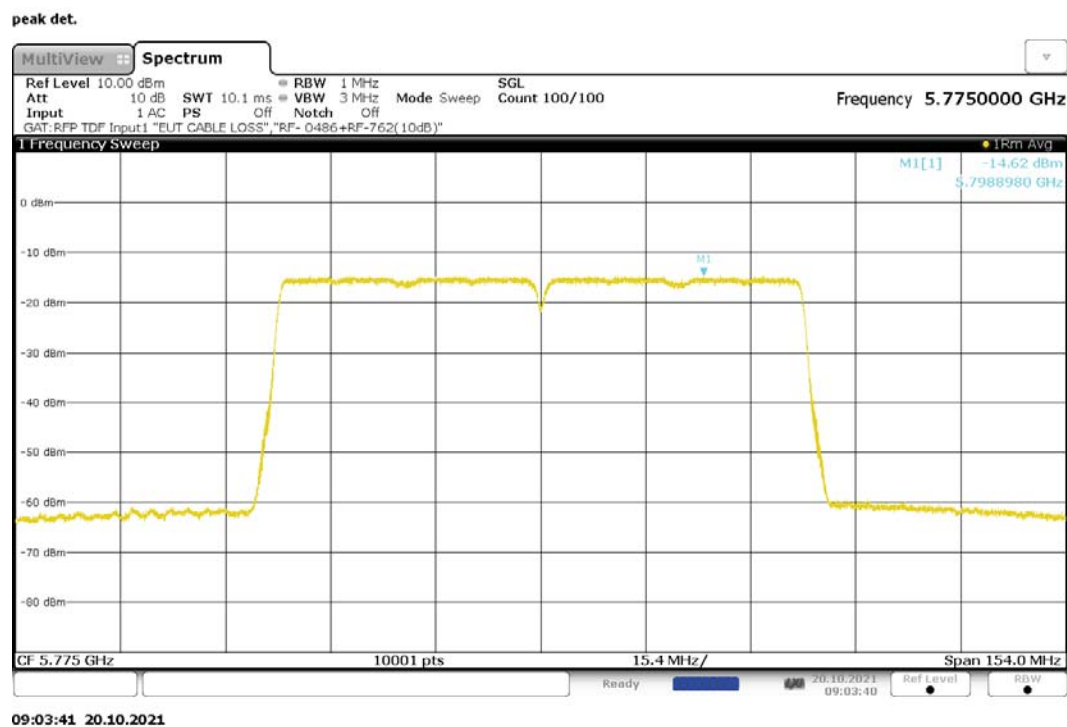
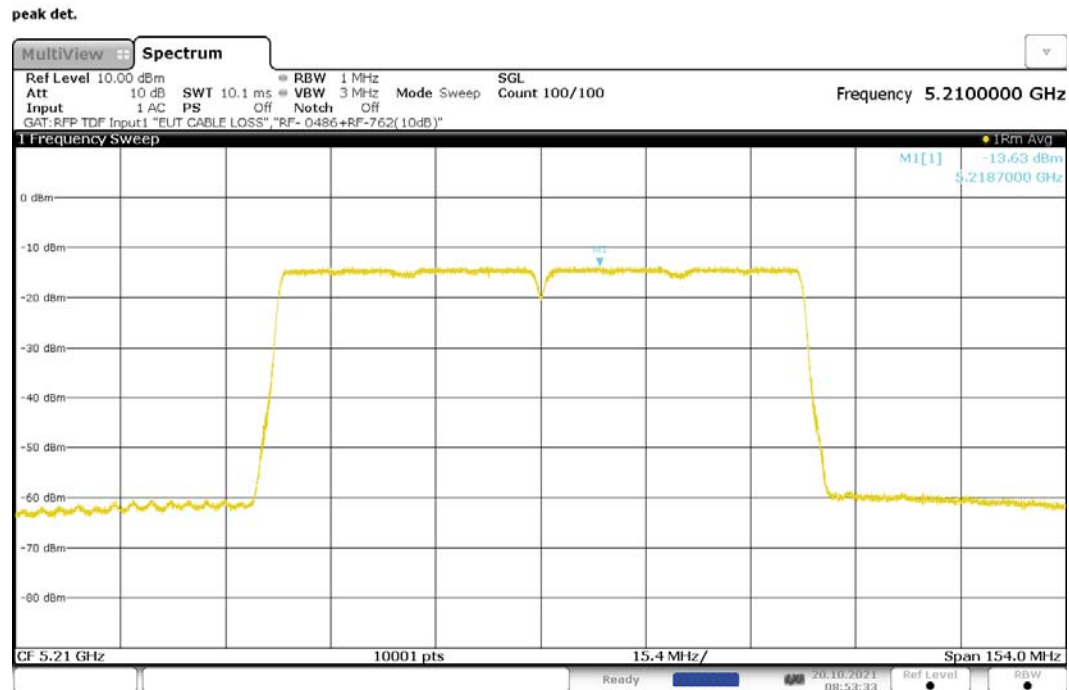
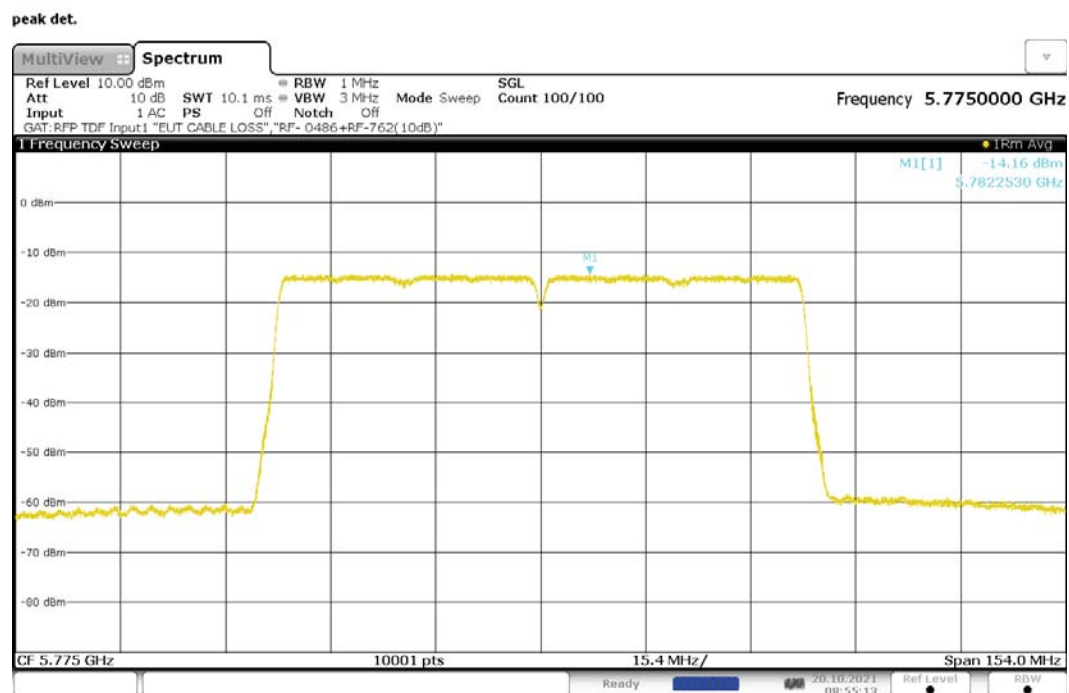


Figure 265: Maximum Power Spectral Density, 802.11ac-80, SISO, RF1, 5210MHz



08:53:33 20.10.2021

Figure 266: Maximum Power Spectral Density, 802.11ac-80, SISO, RF1, 5775MHz



08:55:14 20.10.2021

Prüfbericht-Nr.:
Test Report No.:

JP211UTZ 001

Seite 237 von 342
Page 237 of 342

Table 141: Maximum Power Spectral Density, 802.11ac-80, CDD, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5210	-10.85	11	21.85	-5.41	17	22.41
5775	-11.27	30	41.27	-5.67	36	41.67

Table 142: Individual - Maximum Power Spectral Density, 802.11ac-80, CDD, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5210	-14.28	5.44	-8.84
5775	-14.60	5.60	-9.00

Table 143: Individual - Maximum Power Spectral Density, 802.11ac-80, CDD, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Directional Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5210	-13.47	5.44	-8.03
5775	-13.99	5.60	-8.39

Note:

Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.

PSD e.i.r.p. [dBm/MHz] = Cond. PSD [dBm/MHz] + Directional Gain [dBi]

Directional Gain [dBi] = Individual Antenna Gain [dBi] + Array Gain [dB]

Array Gain = $10 \times \log_{10} (N_{\text{ANT}}/N_{\text{ss}})$ [dB], here $N_{\text{ANT}} = 2$, $N_{\text{ss}} = 1$

For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Prüfbericht-Nr.: **JP211UTZ 001**
Test Report No.:

Seite 238 von 342
Page 238 of 342

Figure 267: Maximum Power Spectral Density, 802.11ac-80, CDD, RF0, 5210MHz

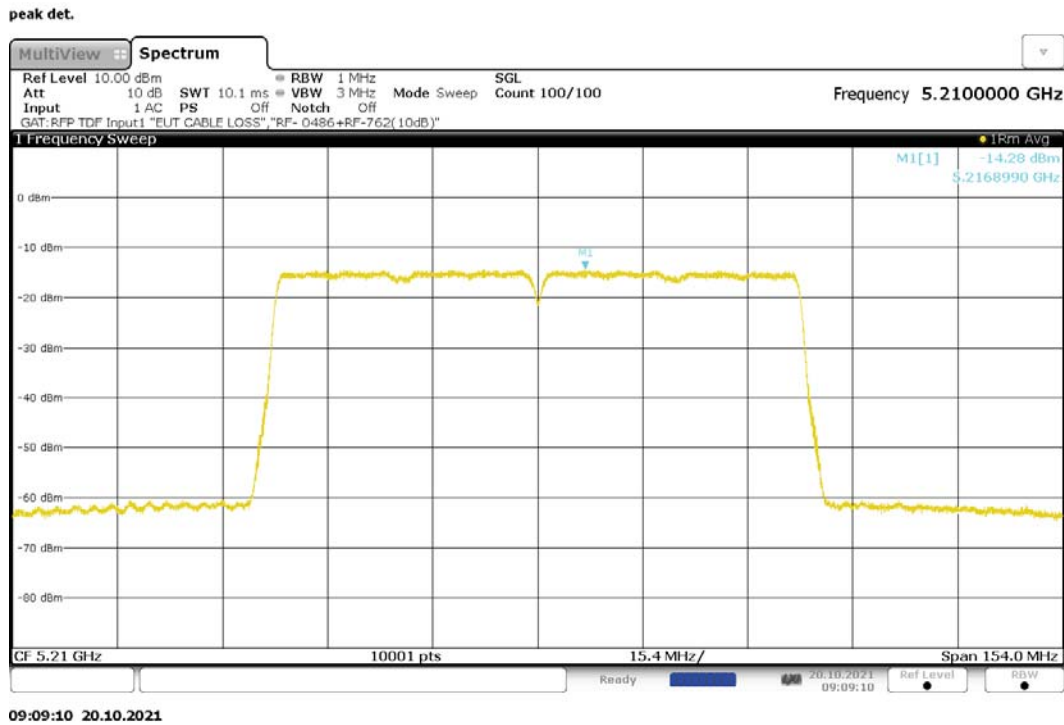


Figure 268: Maximum Power Spectral Density, 802.11ac-80, CDD, RF0, 5775MHz

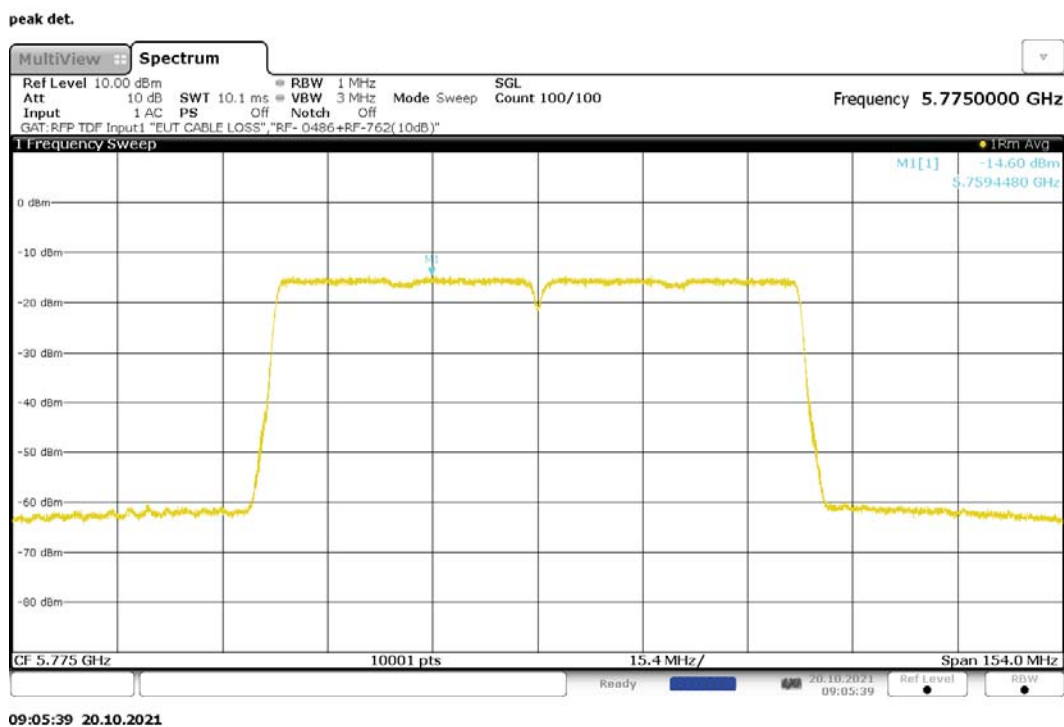


Figure 269: Maximum Power Spectral Density, 802.11ac-80, CDD, RF1, 5210MHz

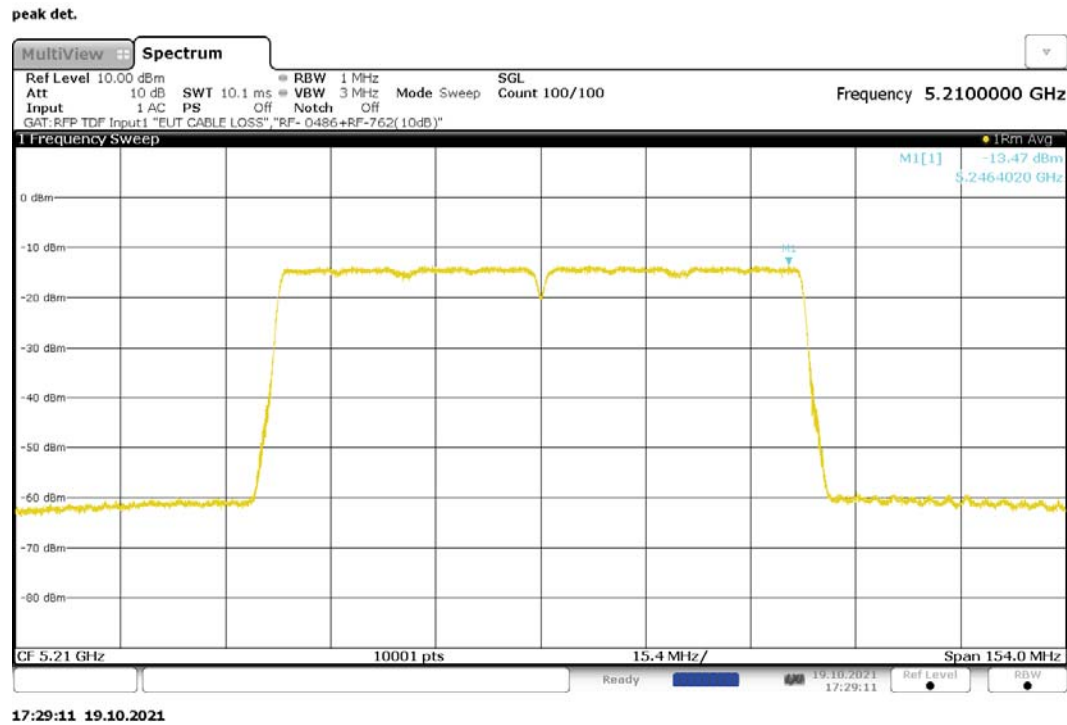
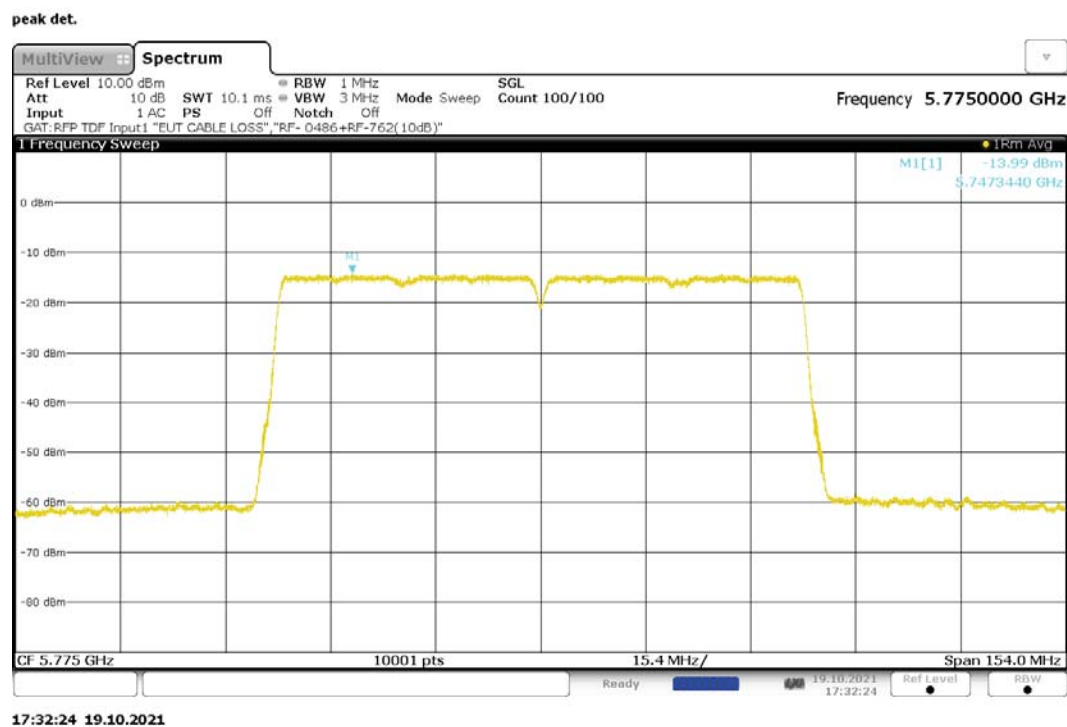


Figure 270: Maximum Power Spectral Density, 802.11ac-80, CDD, RF1, 5775MHz



Prüfbericht-Nr.:
Test Report No.:

JP211UTZ 001

Seite 240 von 342
Page 240 of 342

Table 144: Maximum Power Spectral Density, 802.11ac-80, MIMO, RF0+RF1

Freq. [MHz]	Sum Cond. PSD [dBm/MHz]	Cond. PSD Limit [dBm/MHz]	Cond. PSD Margin [dB]	Sum PSD e.i.r.p. [dBm/MHz]	PSD e.i.r.p. Limit [dBm/MHz]	PSD e.i.r.p. Margin [dB]
5210	-10.88	11	21.88	-8.58	17	25.58
5775	-11.48	30	41.48	-9.59	36	45.59

Table 145: Individual - Maximum Power Spectral Density, 802.11ac-80, MIMO, RF0

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5210	-14.33	2.14	-12.19
5775	-14.63	1.00	-13.63

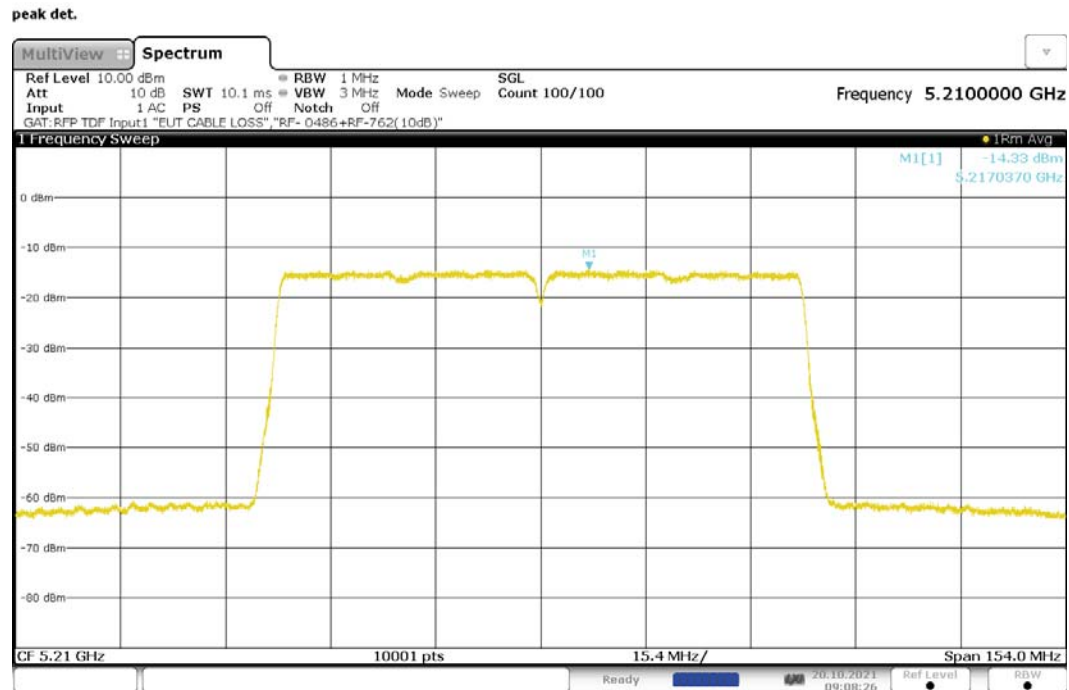
Table 146: Individual - Maximum Power Spectral Density, 802.11ac-80, MIMO, RF1

Freq. [MHz]	Cond. PSD [dBm/MHz]	Antenna Gain [dBi]	PSD e.i.r.p. [dBm/MHz]
5210	-13.49	2.43	-11.06
5775	-14.36	2.59	-11.77

Note:

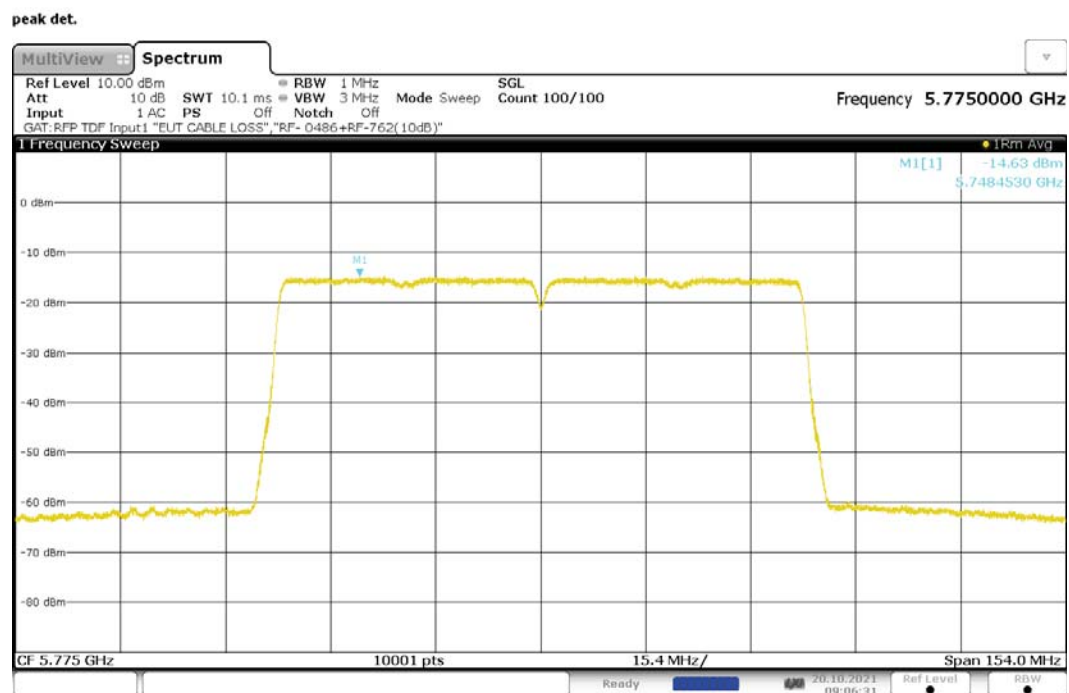
Cable (including temporary RF cable) and attenuator loss has been compensated for Cond. PSD.
PSD e.i.r.p. [dBm/MHz] = Cond. PSD [dBm/MHz] + Antenna Gain [dBi]
For the band 5.725-5.85 GHz, power density in 1MHz is measured to show conformity.

Figure 271: Maximum Power Spectral Density, 802.11ac-80, MIMO, RF0, 5210MHz



09:08:27 20.10.2021

Figure 272: Maximum Power Spectral Density, 802.11ac-80, MIMO, RF0, 5775MHz



09:06:32 20.10.2021