

EMI – TEST REPORT

Attachment D

to

Test Report No. :	T36325-00-12HS	08 April 2014 Date of issue
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Type / Model Name : SCALANCE W700 / MSN

Product Description : Industrial WLAN access point

Applicant : Siemens AG, Industrial Automation Division

Address : Gleiwitzer Strasse 555

90475 NUERNBERG, GERMANY

Manufacturer : Siemens AG, Automation & Drives

Address : Oestliche Rheinbrueckenstrasse 50

76187 KARLSRUHE, GERMANY

Licence holder : Siemens AG, Automation & Drives

Address : Oestliche Rheinbrueckenstrasse 50

76187 KARLSRUHE, GERMANY



The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test results
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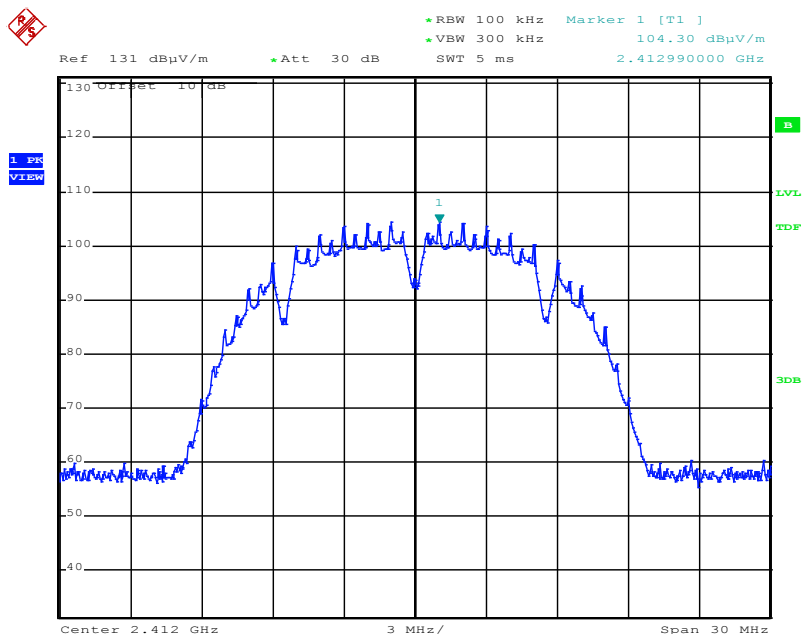
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1 TEST CONDITIONS AND RESULTS

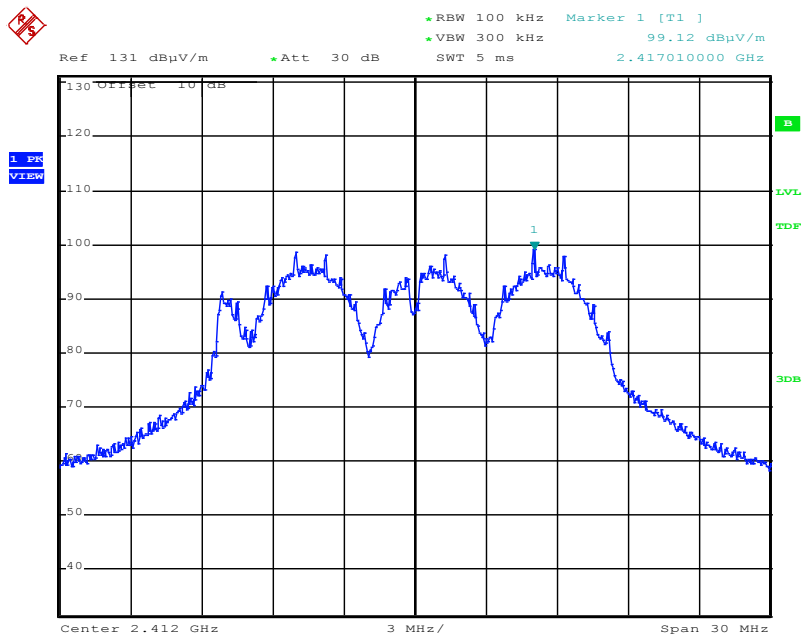
1.1 Test protocols of spurious emissions radiated

1.1.1 Determination of the reference level, 2.4 GHz, P14, antenna group 1 (6 dBi)

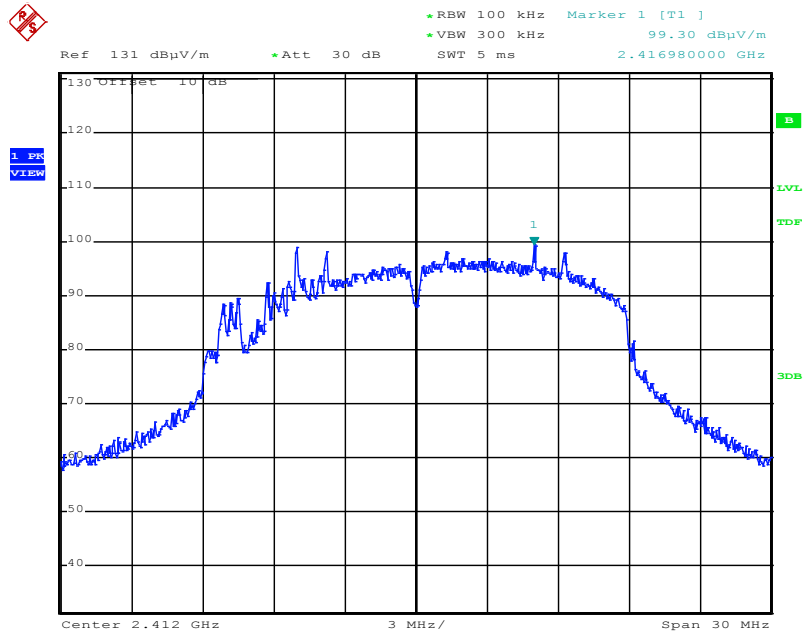
Determination of the reference level, 802.11b, 2.4 GHz



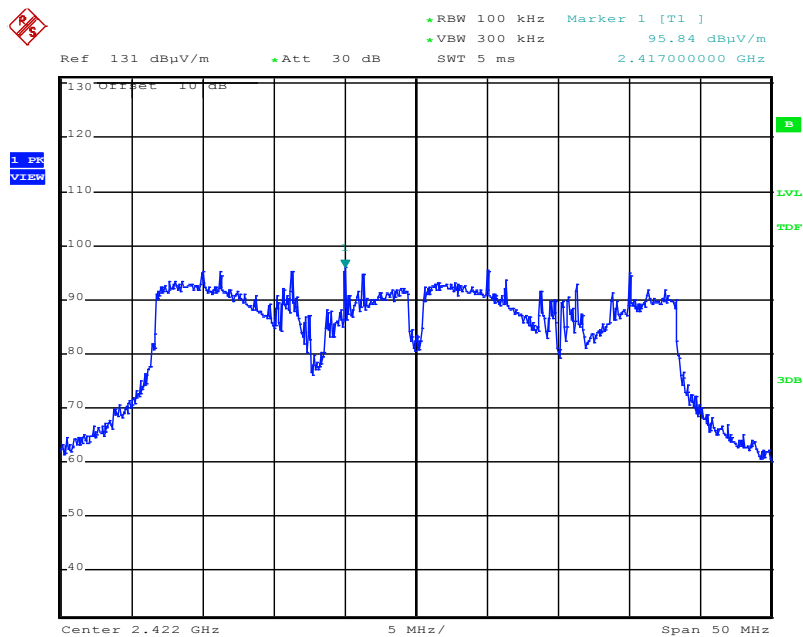
Determination of the reference level, 802.11g, 2.4 GHz



Determination of the reference level, 802.11n, HT20, 2.4 GHz

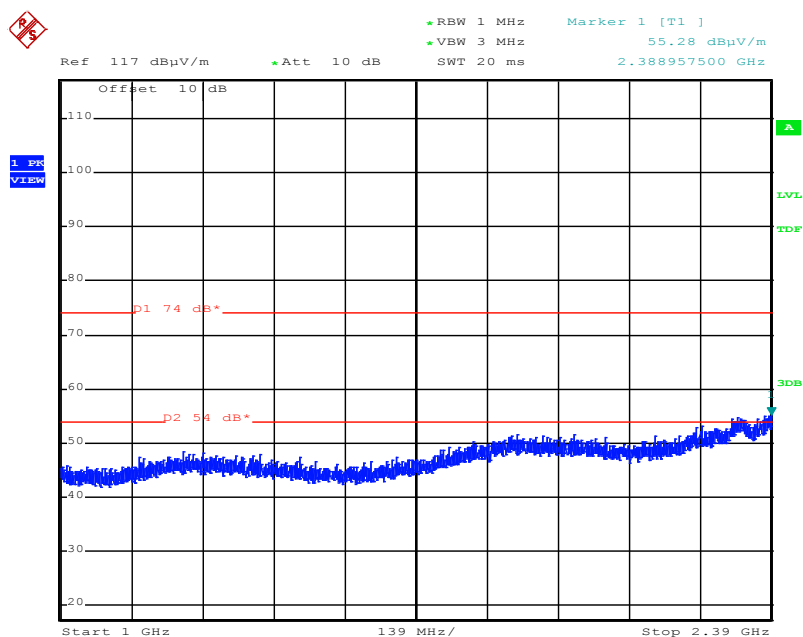


Determination of the reference level, 802.11n, HT40, 2.4 GHz

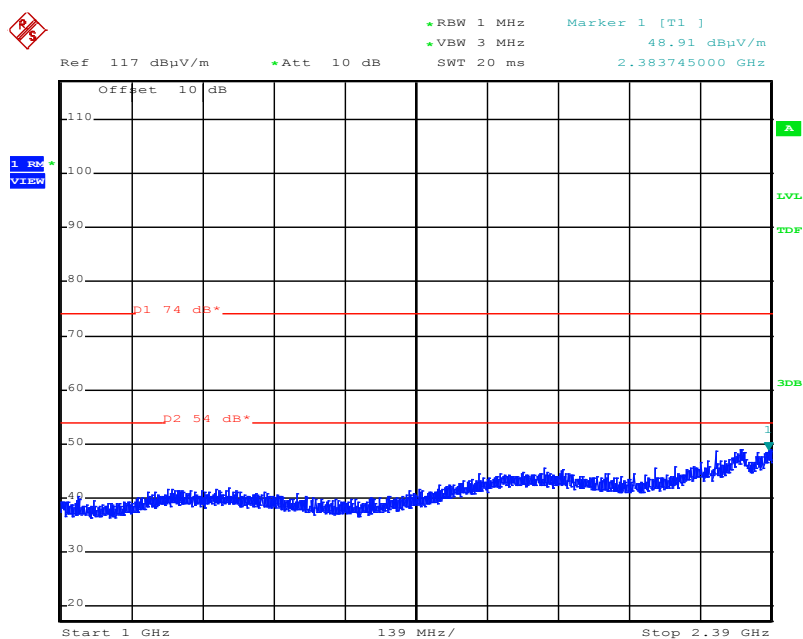


1.1.2 Plots of 802.11b, Ch1, 2 TX, 1 Mbps, P14, antenna group 1 (6 dBi)

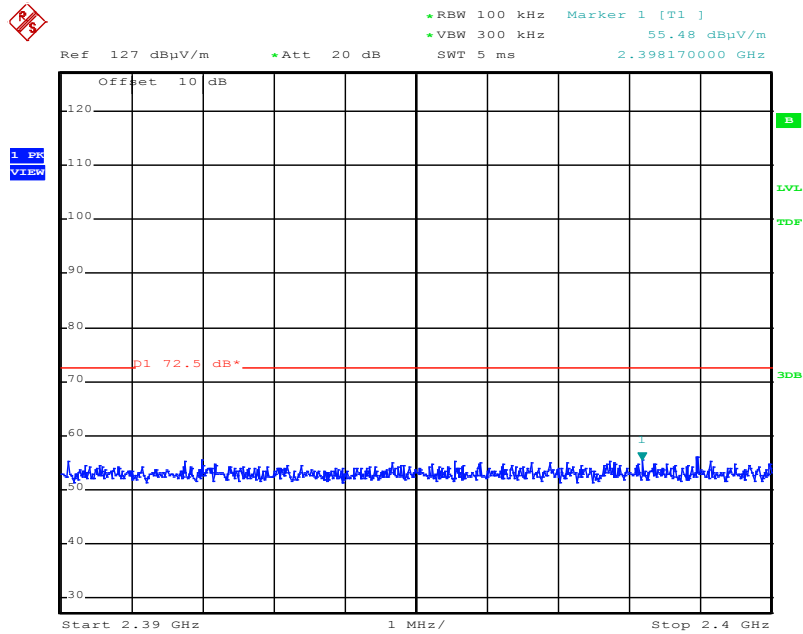
1 GHz to 2.39 GHz



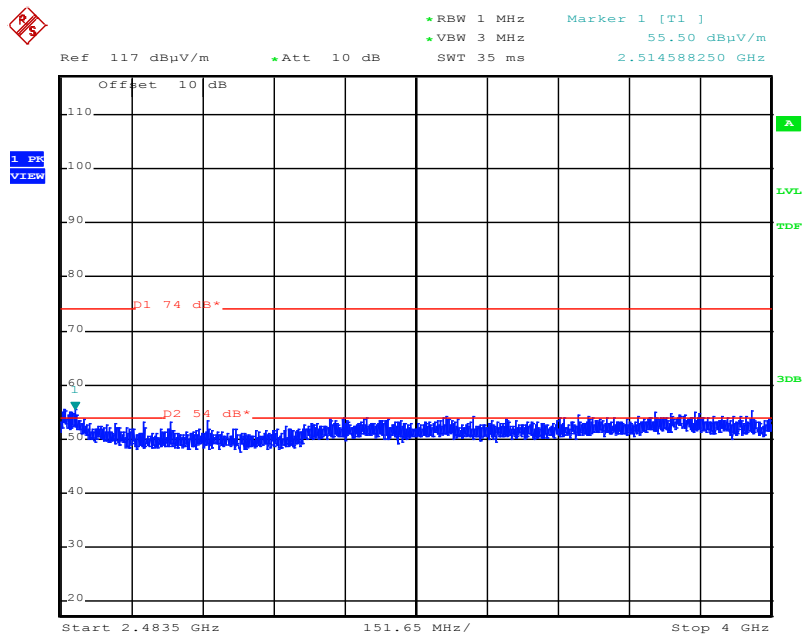
1 GHz to 2.39 GHz, AV



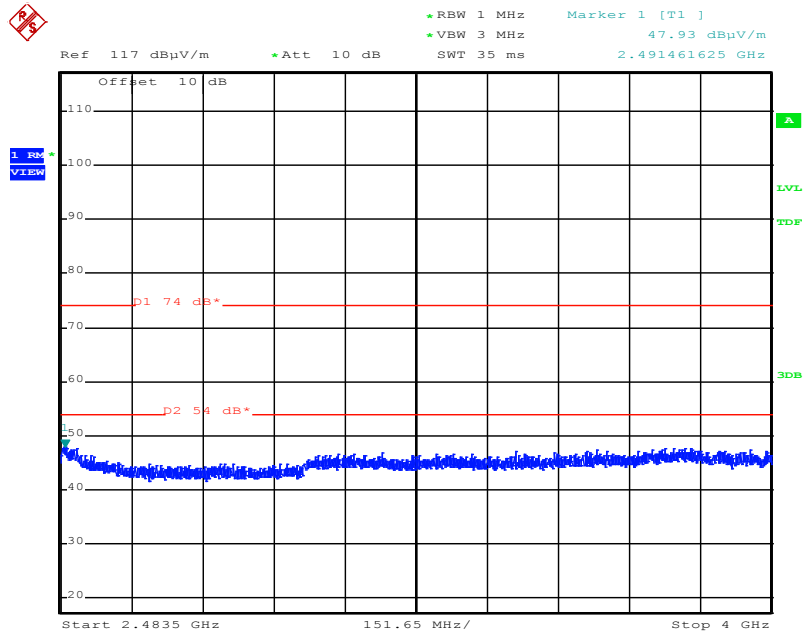
2.39 GHz to 2.4 GHz



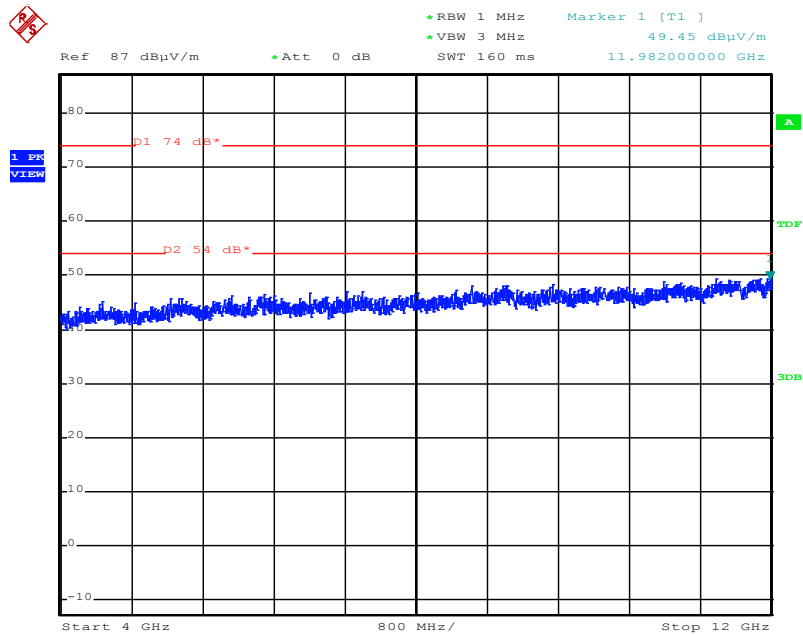
2.4835 GHz to 4 GHz



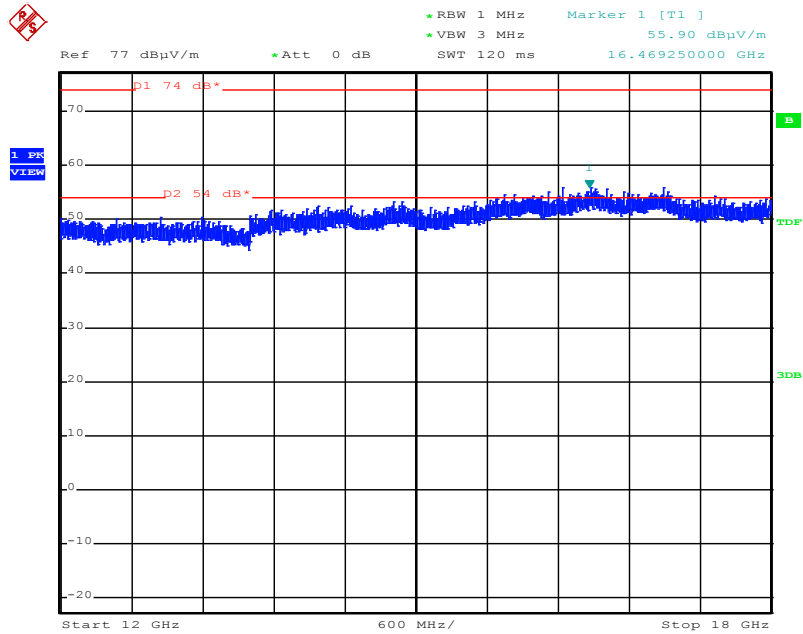
2.4835 GHz to 4 GHz, AV



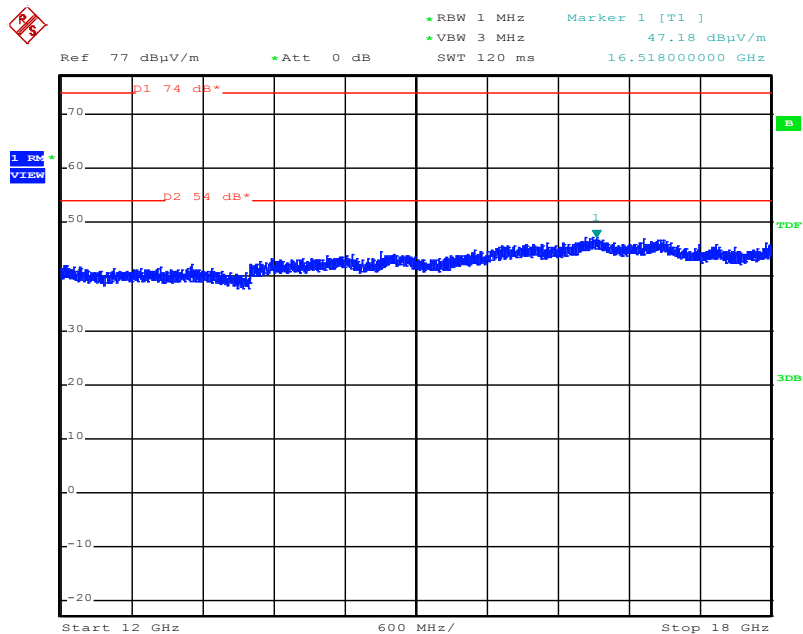
4 GHz to 12 GHz



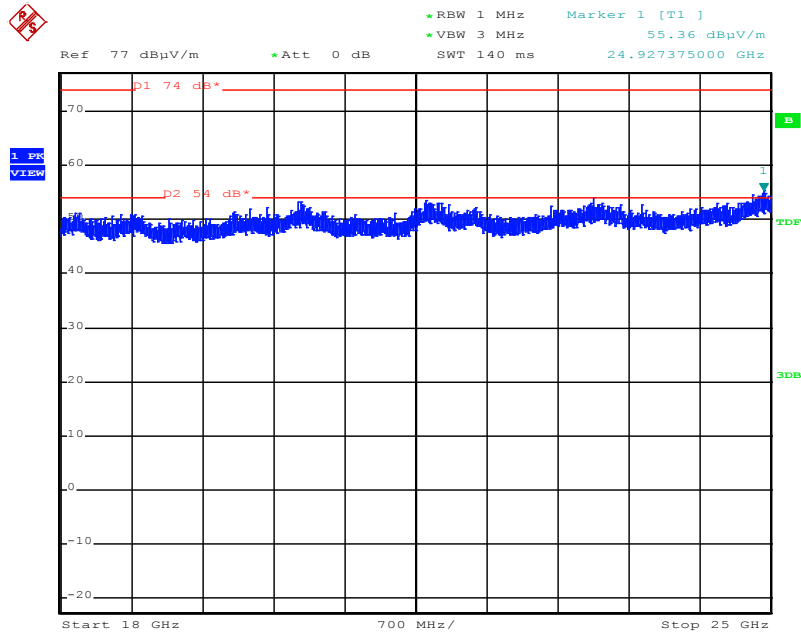
12 GHz to 18 GHz



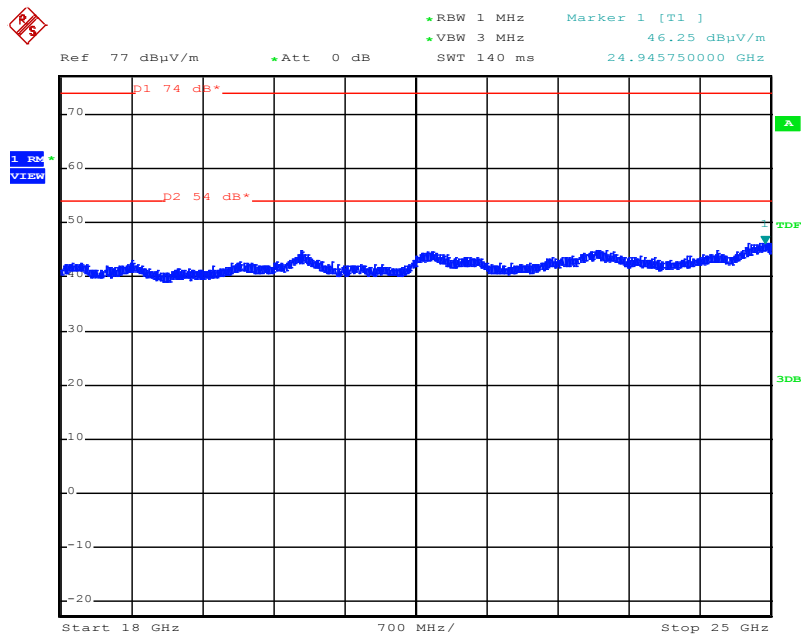
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

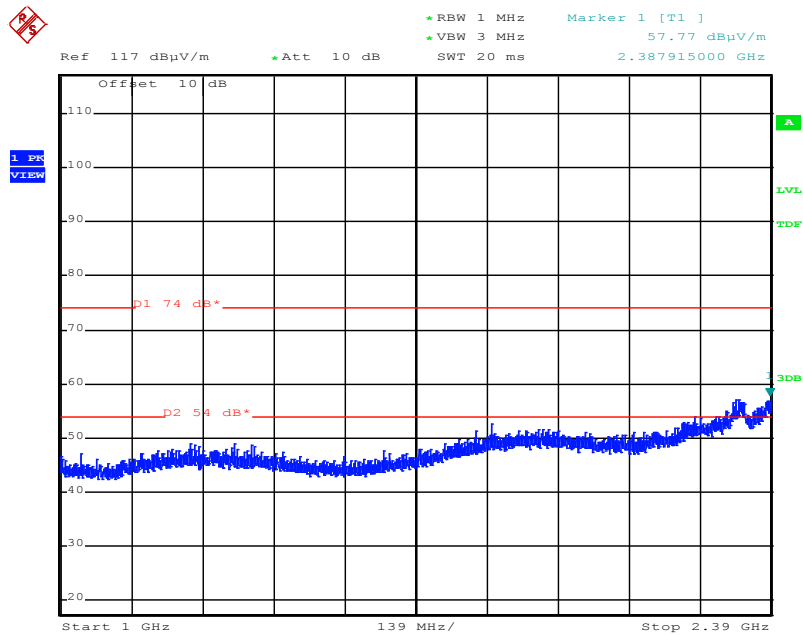


18 GHz to 25 GHz, AV

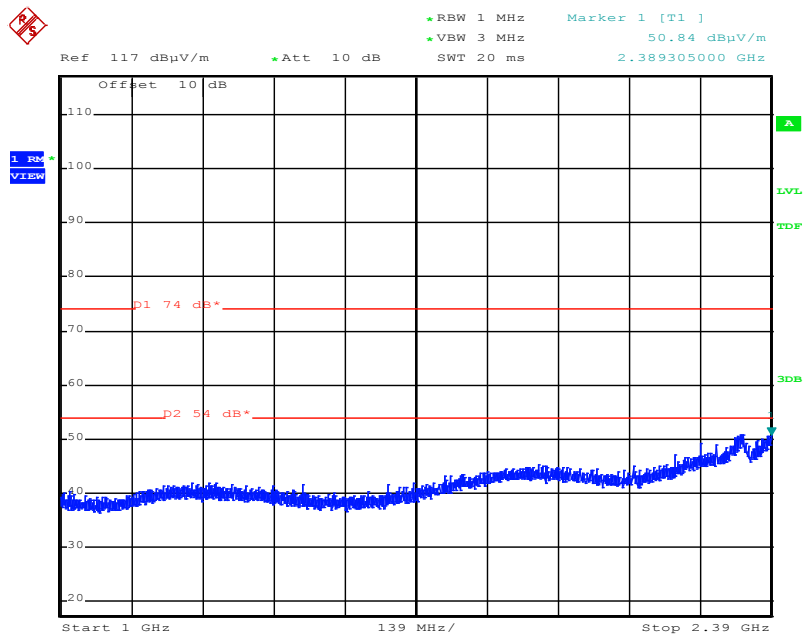


1.1.3 Plots of 802.11g, Ch1, 2 TX, 6 Mbps, P14, antenna group 1 (6 dBi)

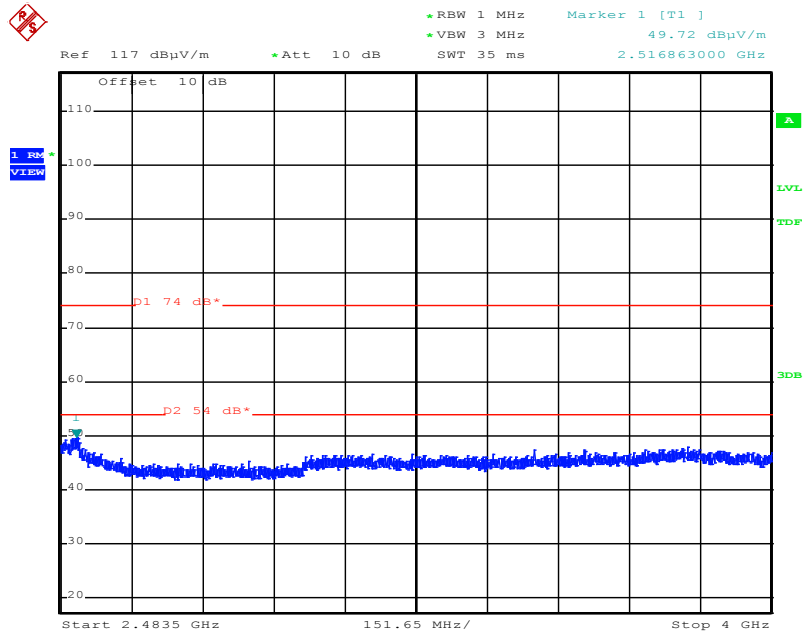
1 GHz to 2.39 GHz



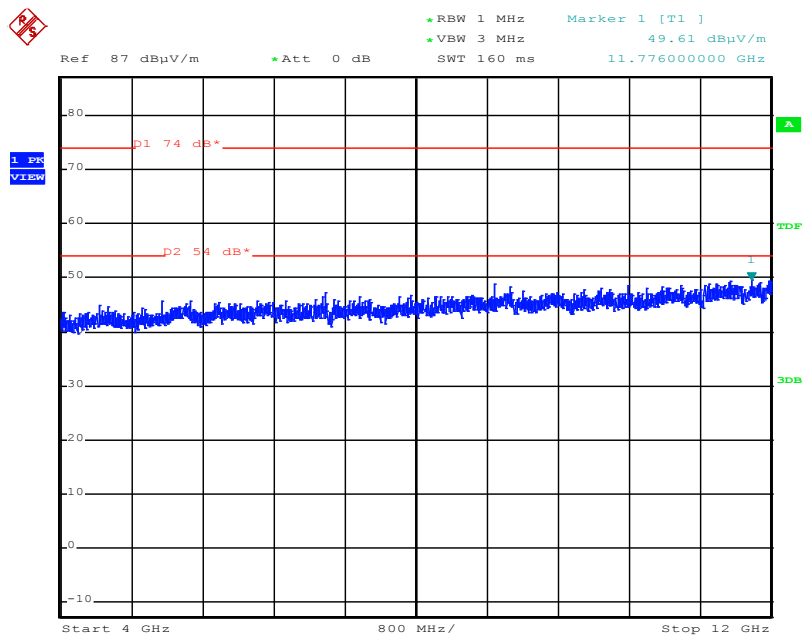
1 GHz to 2.39 GHz, AV



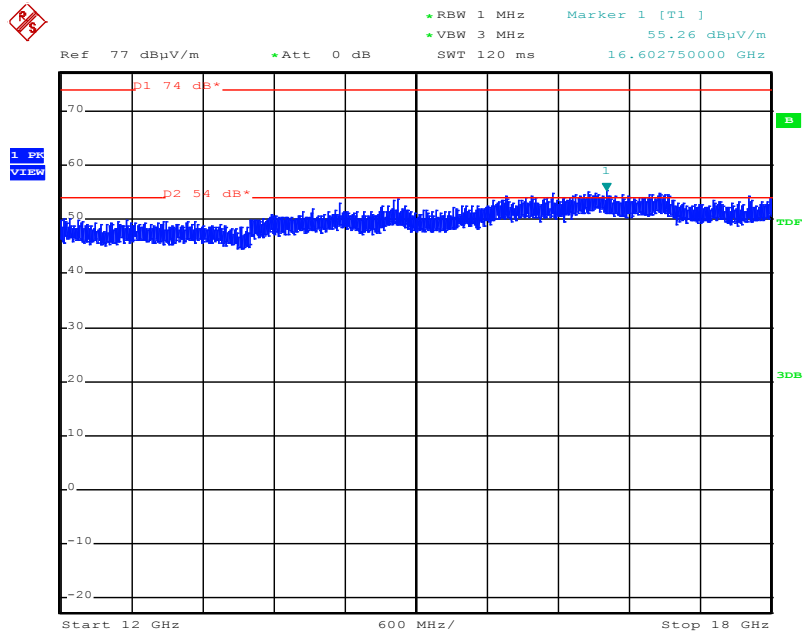
2.4835 GHz to 4 GHz, AV



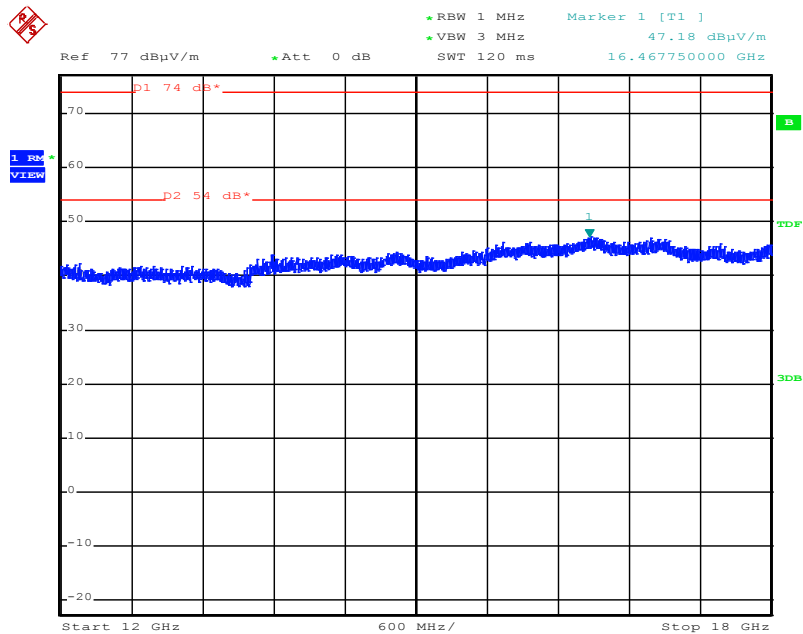
4 GHz to 12 GHz



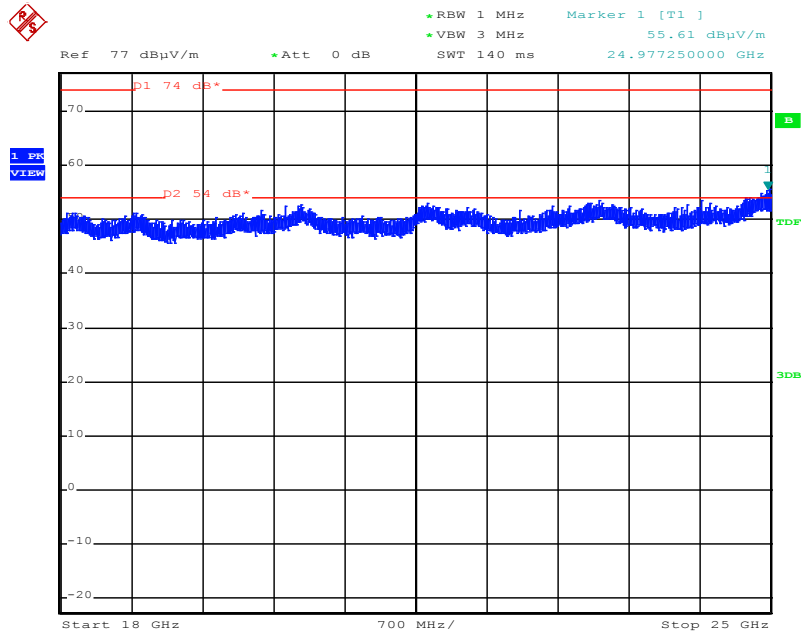
12 GHz to 18 GHz



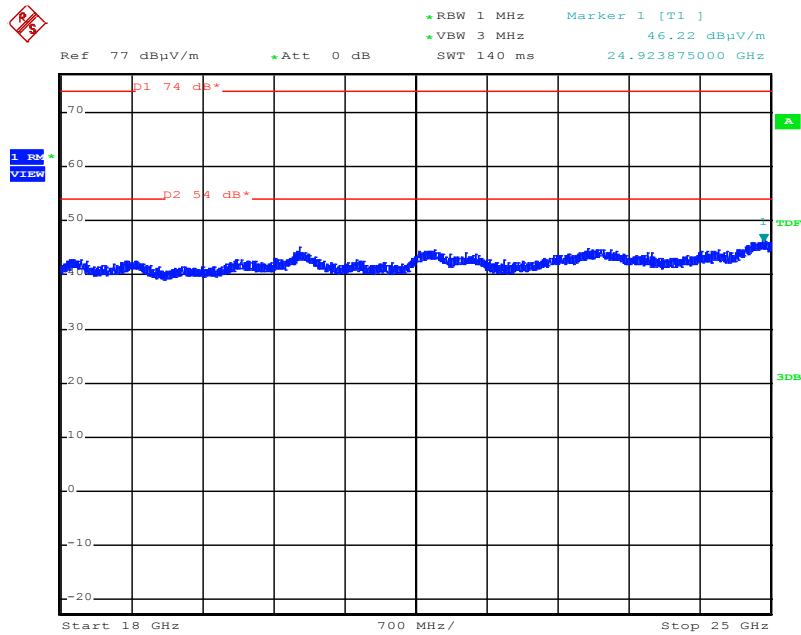
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

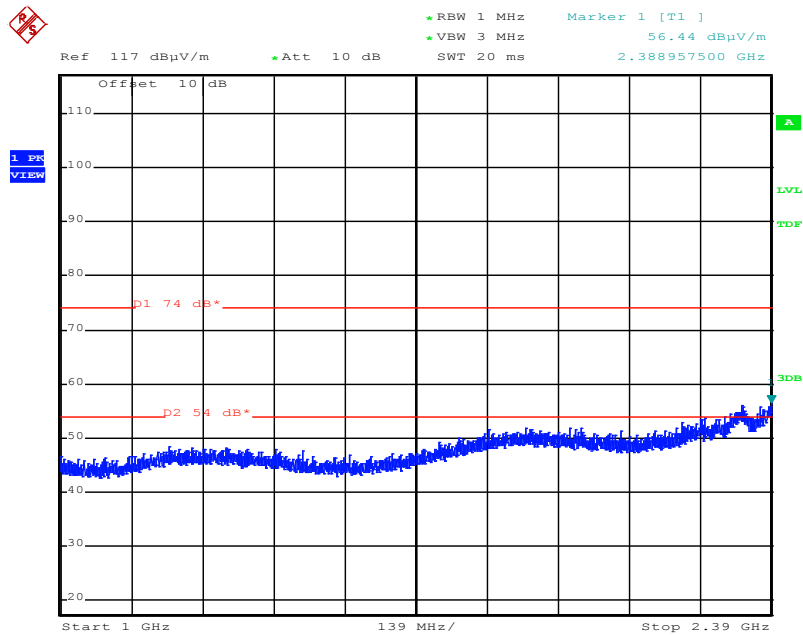


18 GHz to 25 GHz, AV

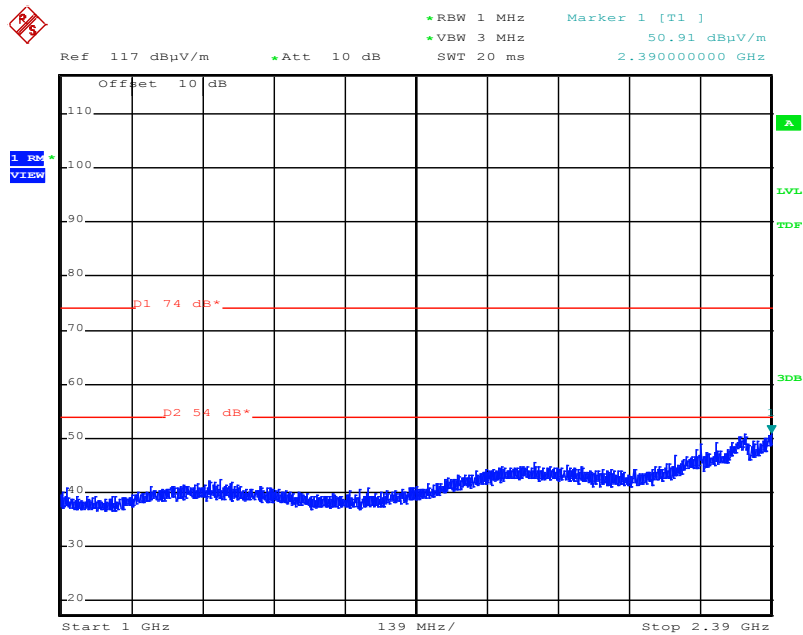


1.1.4 Plots of 802.11n, HT20, Ch1, 2 TX, MCS0, P14, antenna group 1 (6 dBi)

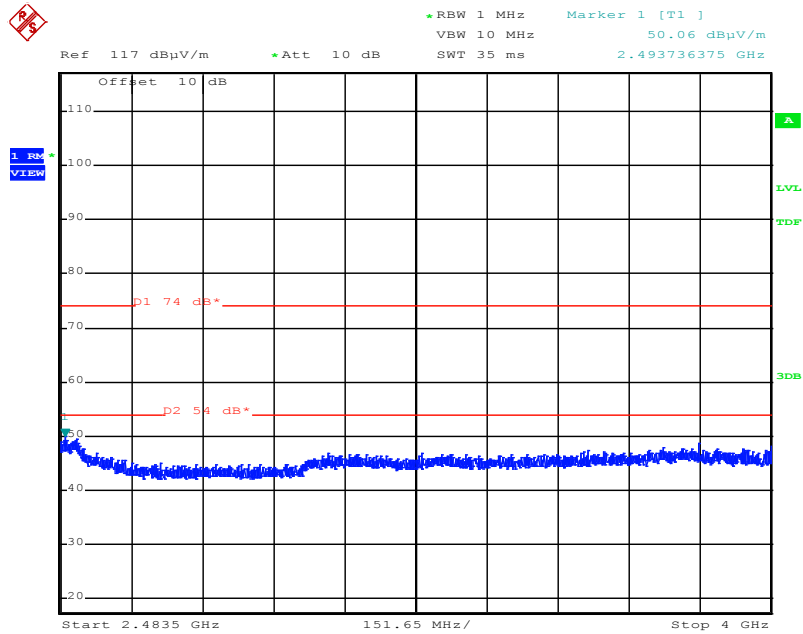
1 GHz to 2.39 GHz



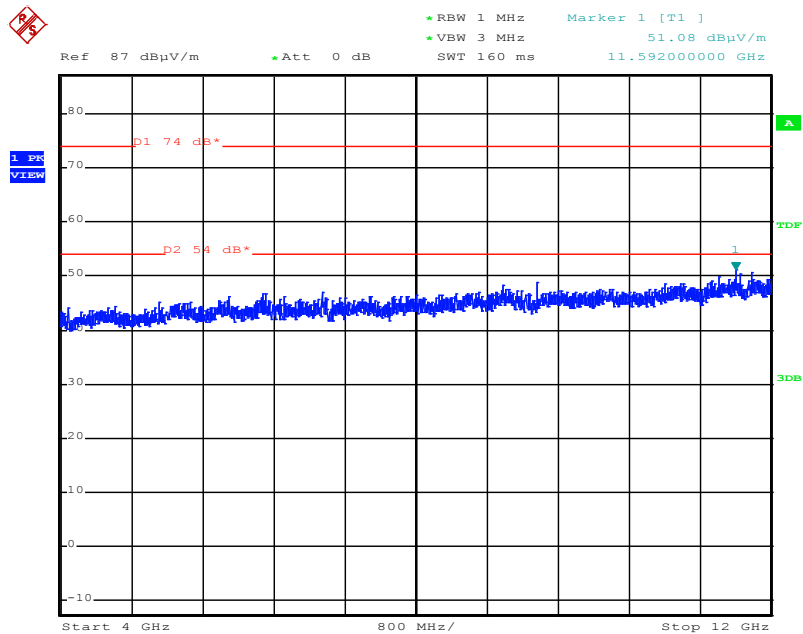
1 GHz to 2.39 GHz, AV



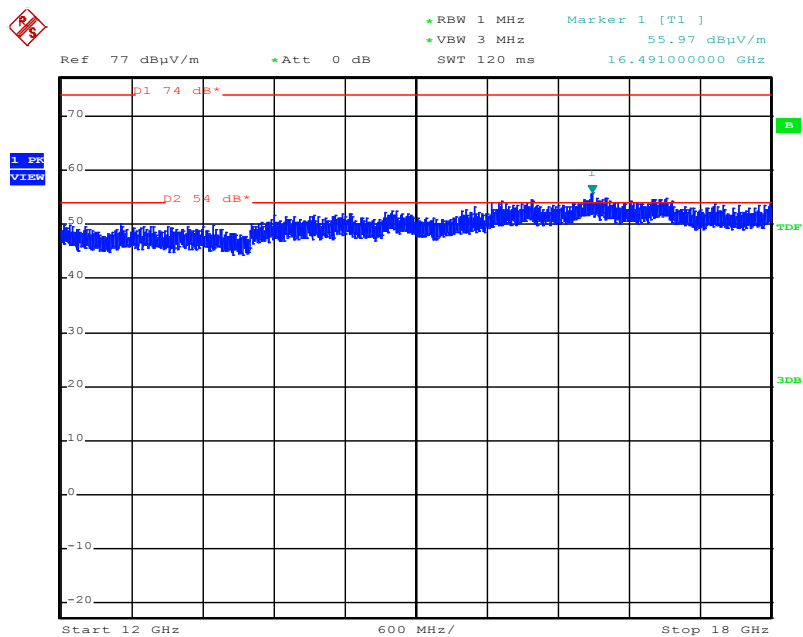
2.4835 GHz to 4 GHz, AV



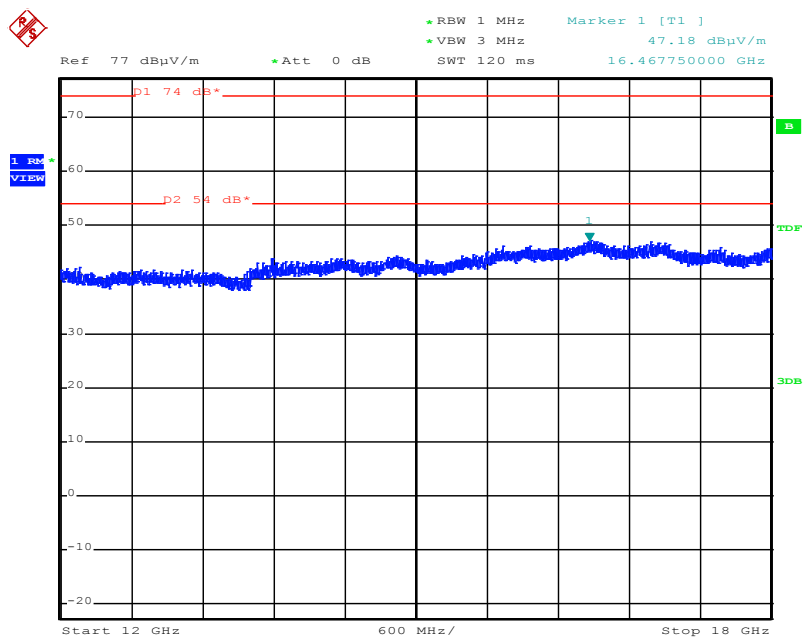
4 GHz to 12 GHz



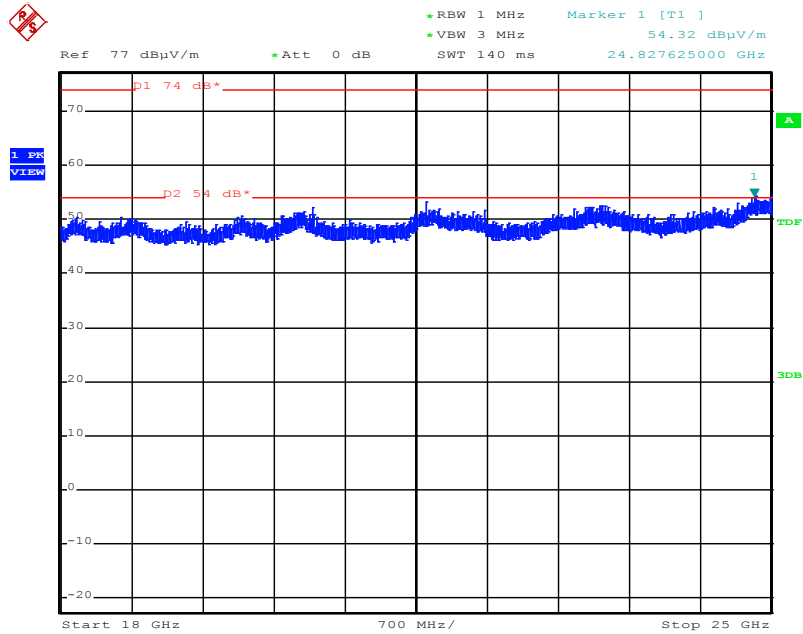
12 GHz to 18 GHz



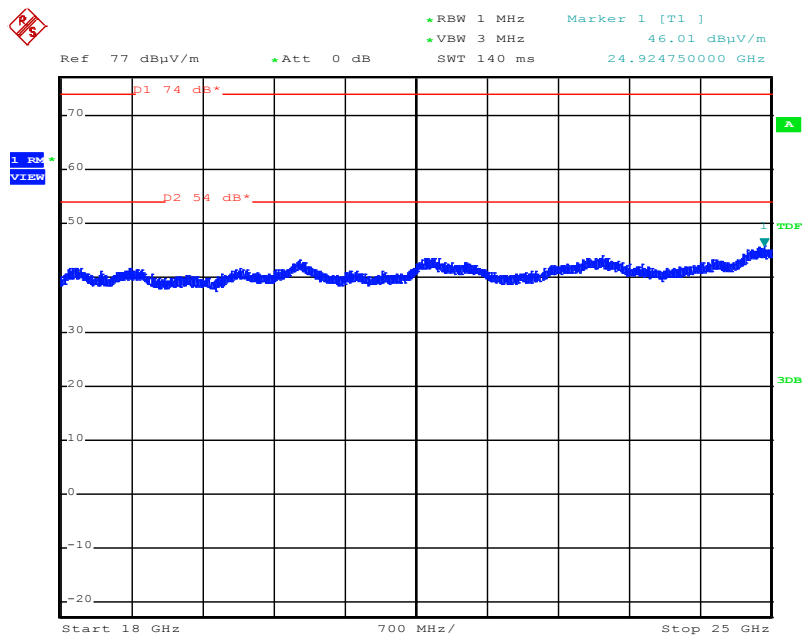
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

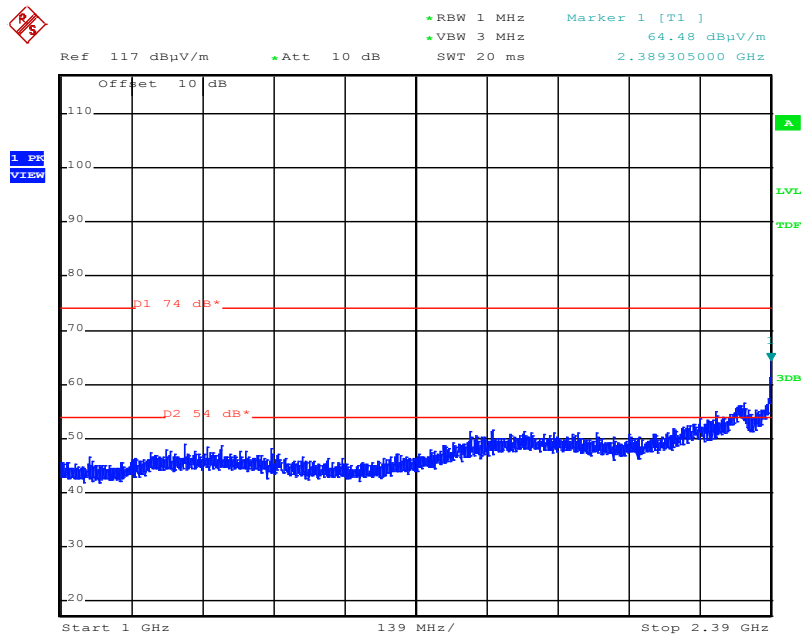


18 GHz to 25 GHz, AV

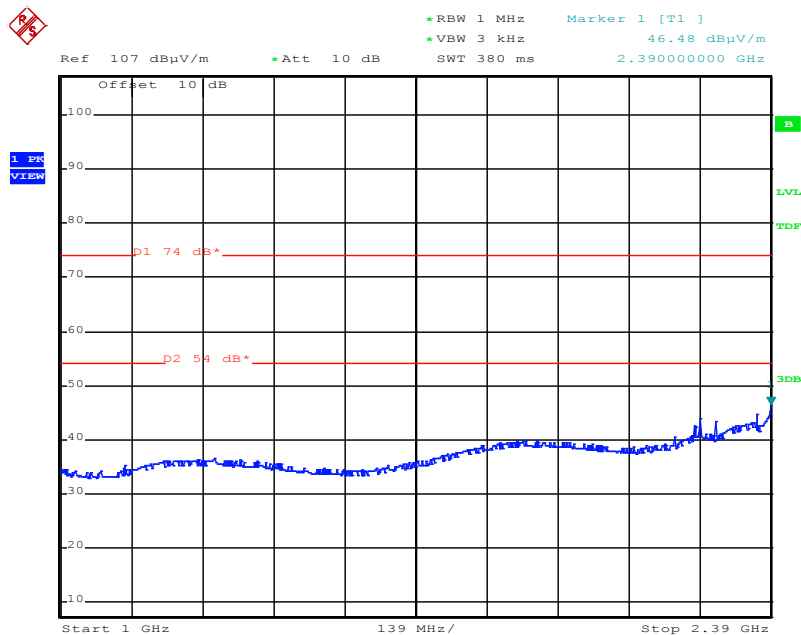


1.1.5 Plots of 802.11n, HT40, Ch1up, 2 TX, MCS8, P14, antenna group 1 (6 dBi)

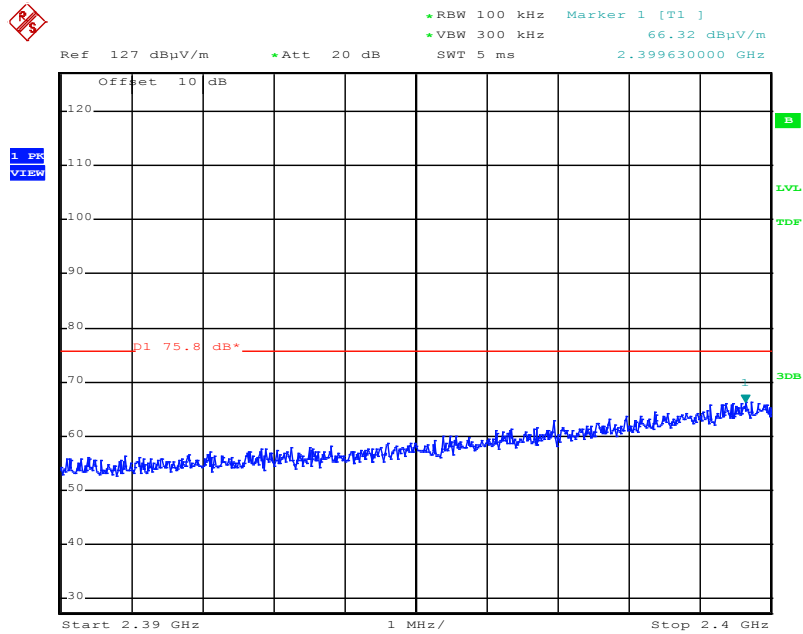
1 GHz to 2.39 GHz



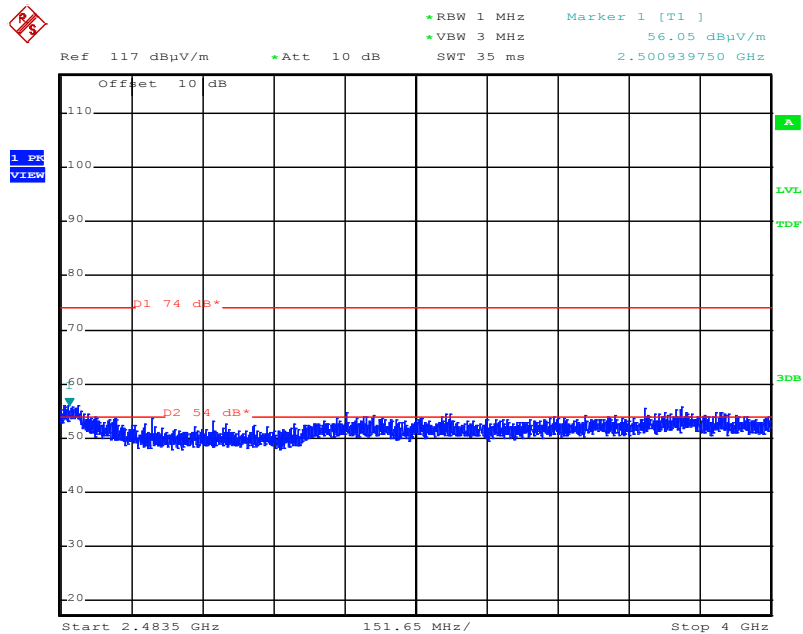
1 GHz to 2.39 GHz, AV



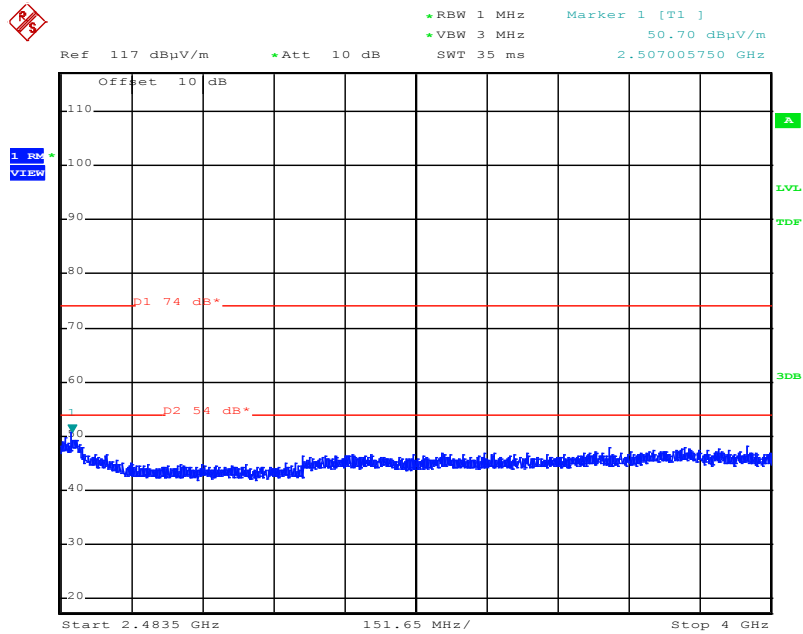
2.39 GHz to 2.4 GHz



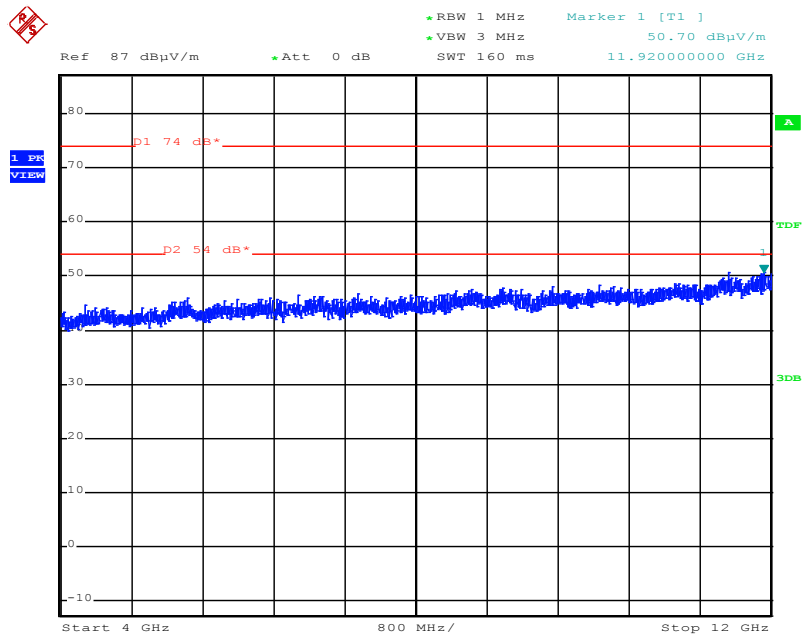
2.4835 GHz to 4 GHz



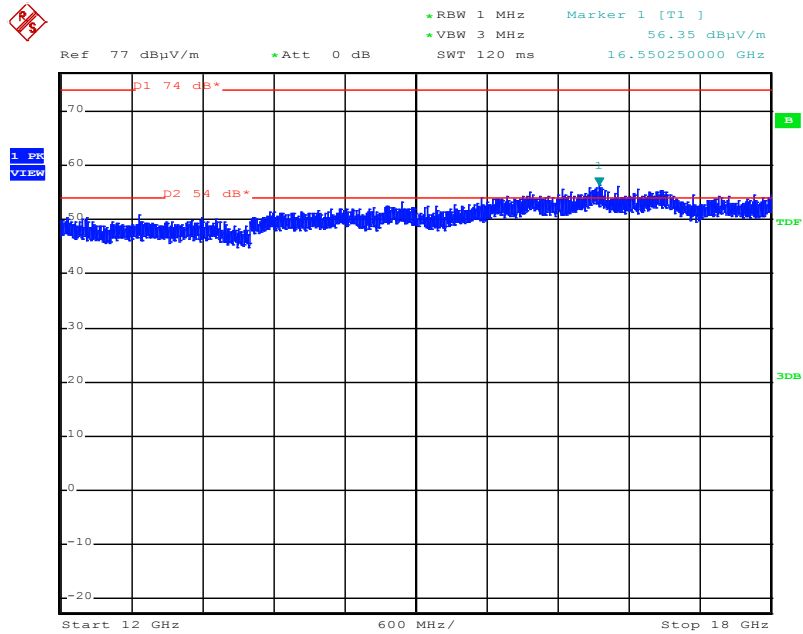
2.4835 GHz to 4 GHz, AV



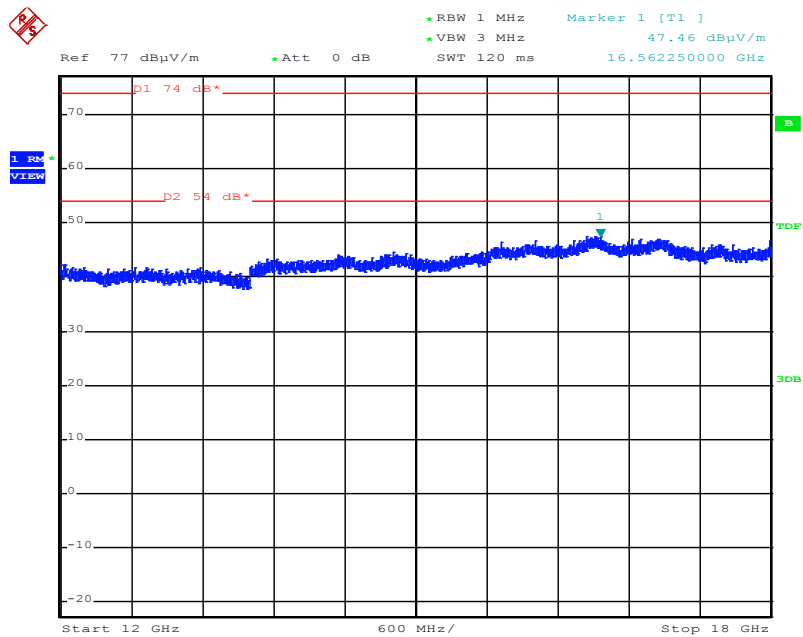
4 GHz to 12 GHz



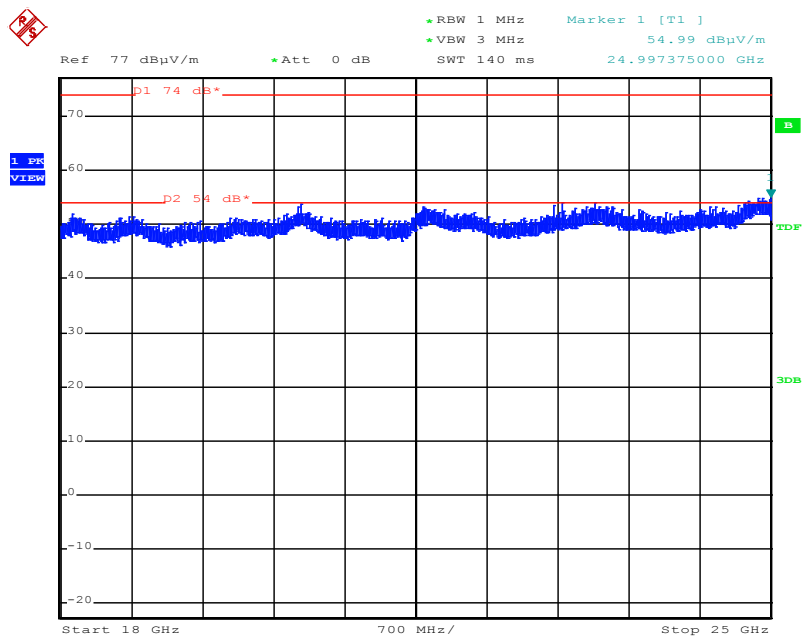
12 GHz to 18 GHz



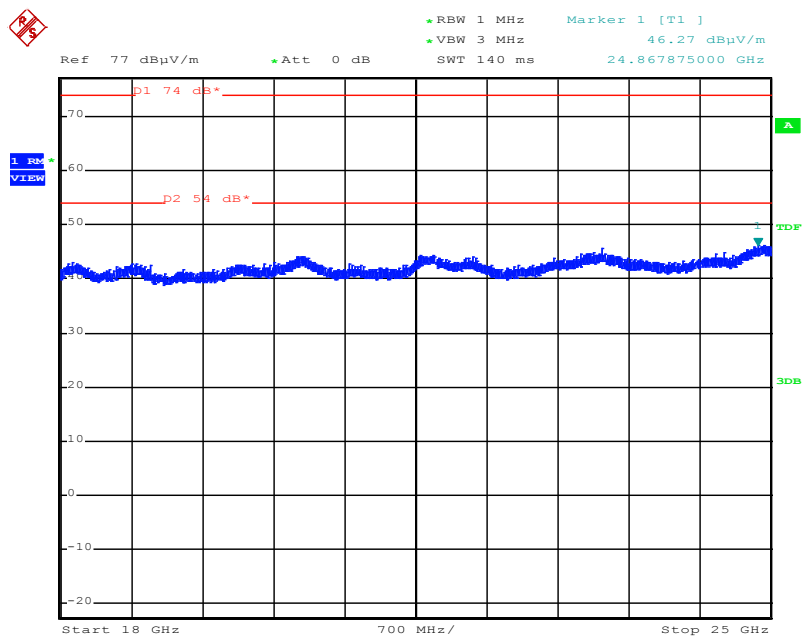
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

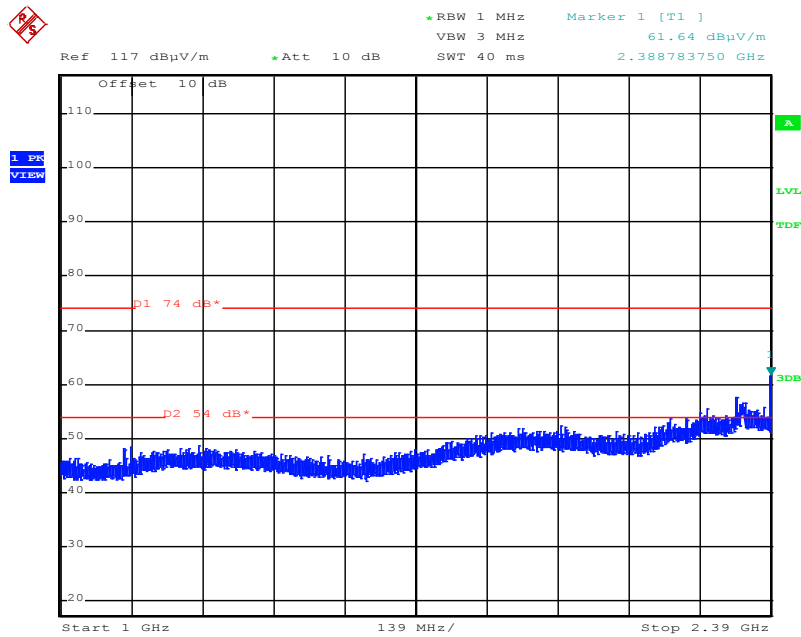


18 GHz to 25 GHz, AV

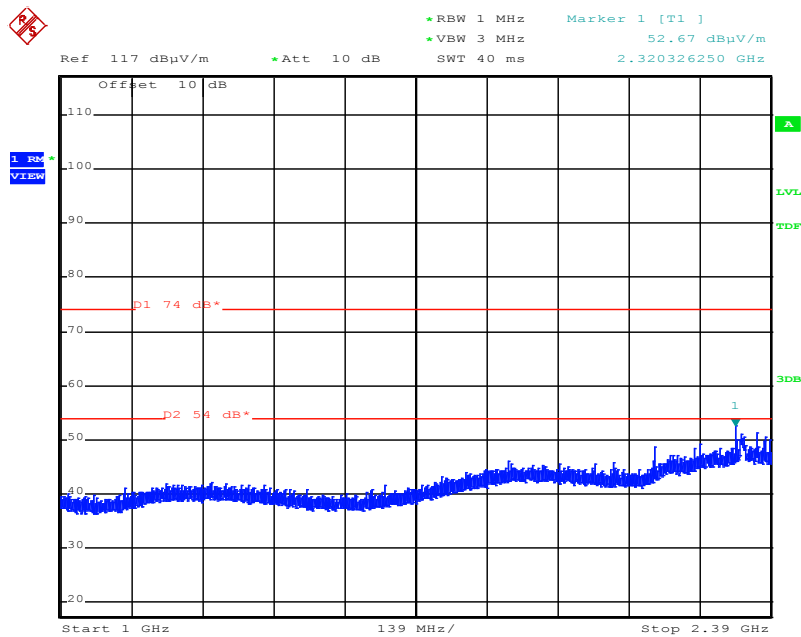


1.1.7 Plots of 802.11b, Ch1, 2 TX, 1 Mbps, P11, antenna group 2 (9 dBi)

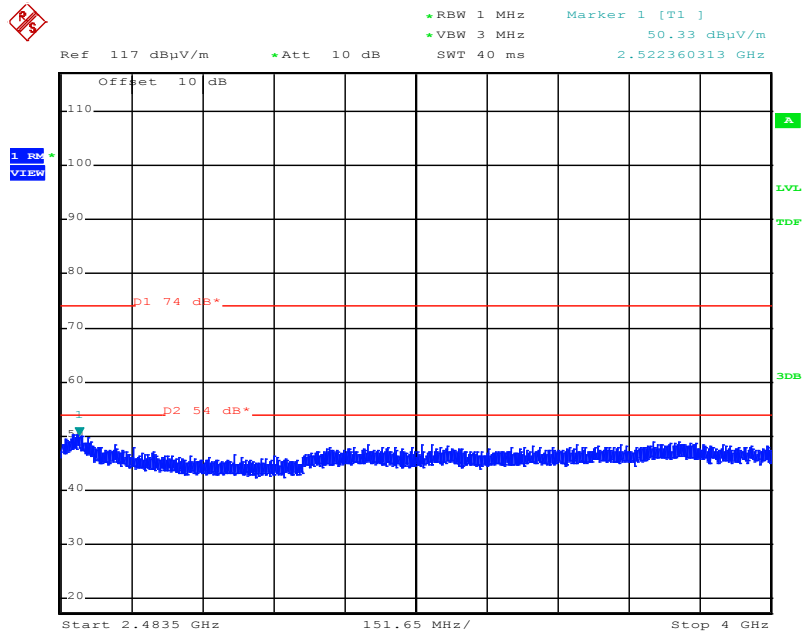
1 GHz to 2.39 GHz



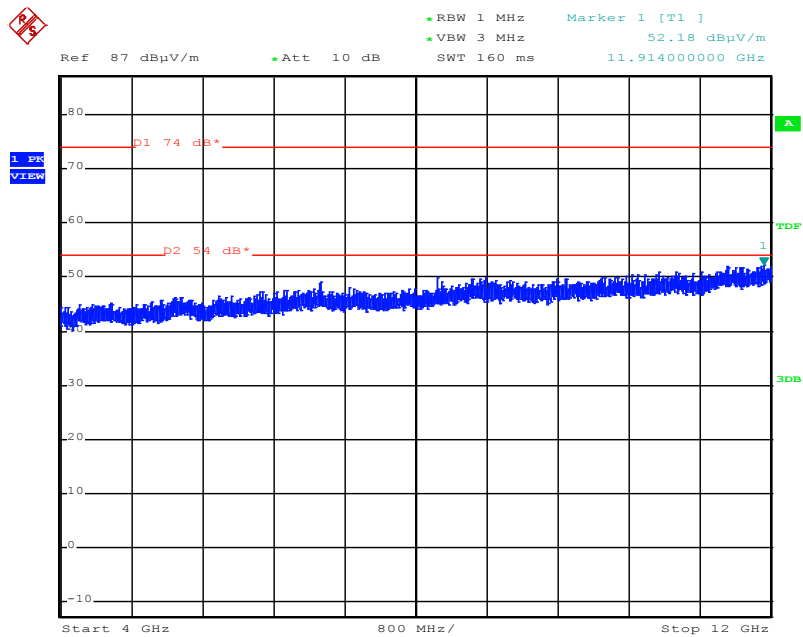
1 GHz to 2.39 GHz, AV



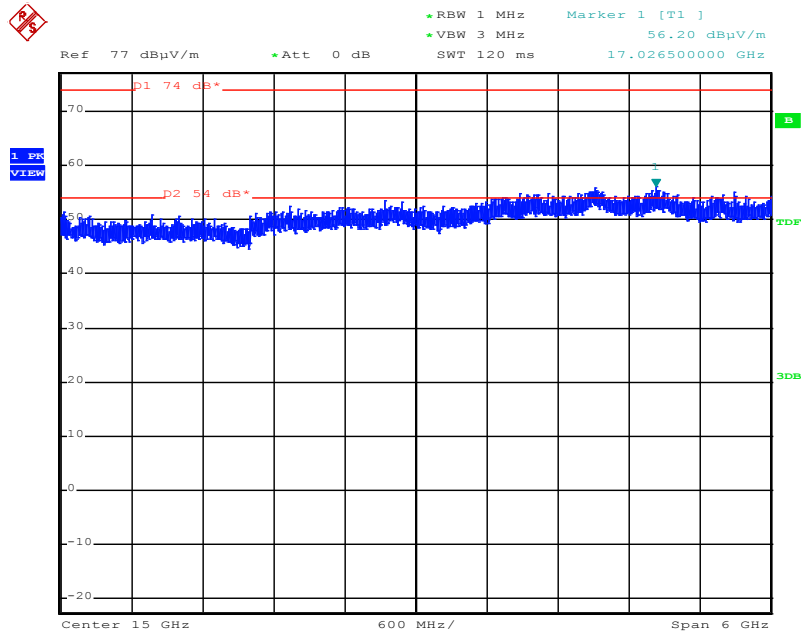
2.4835 GHz to 4 GHz, AV



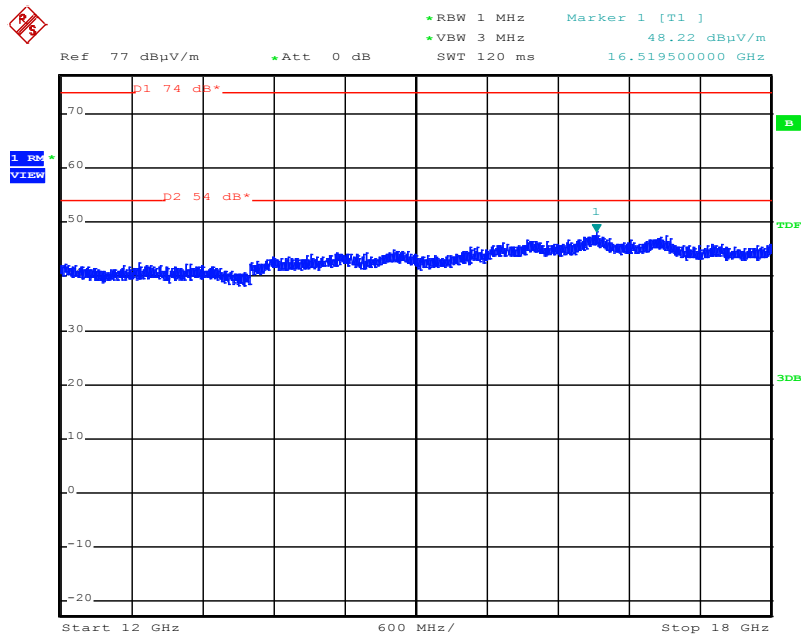
4 GHz to 12 GHz



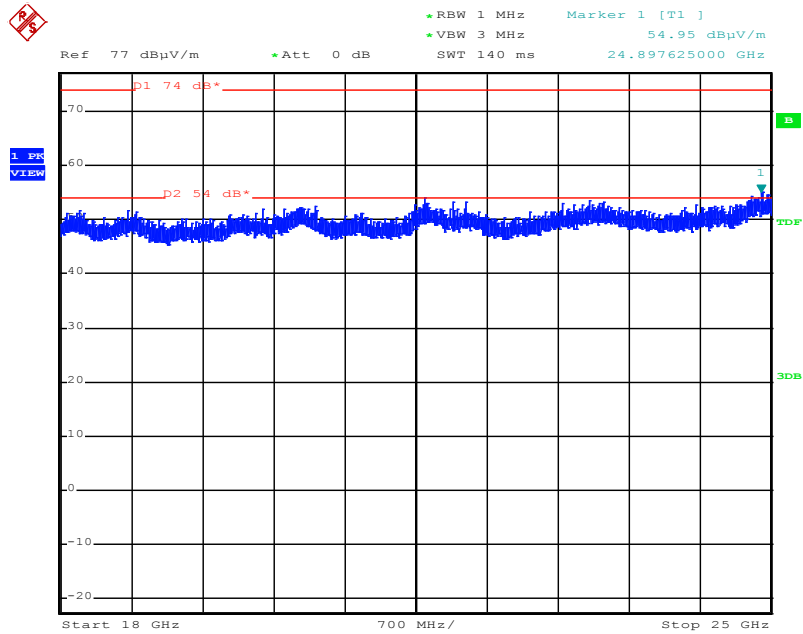
12 GHz to 18 GHz



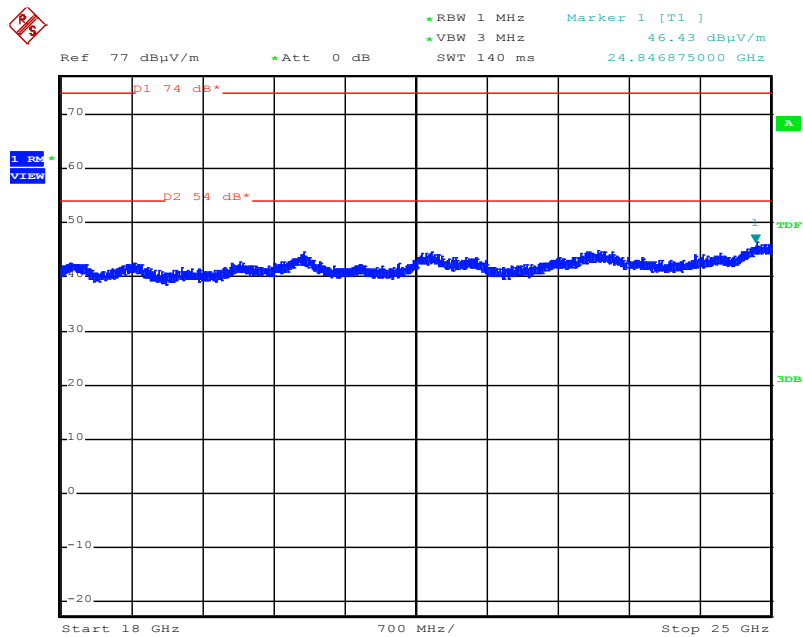
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

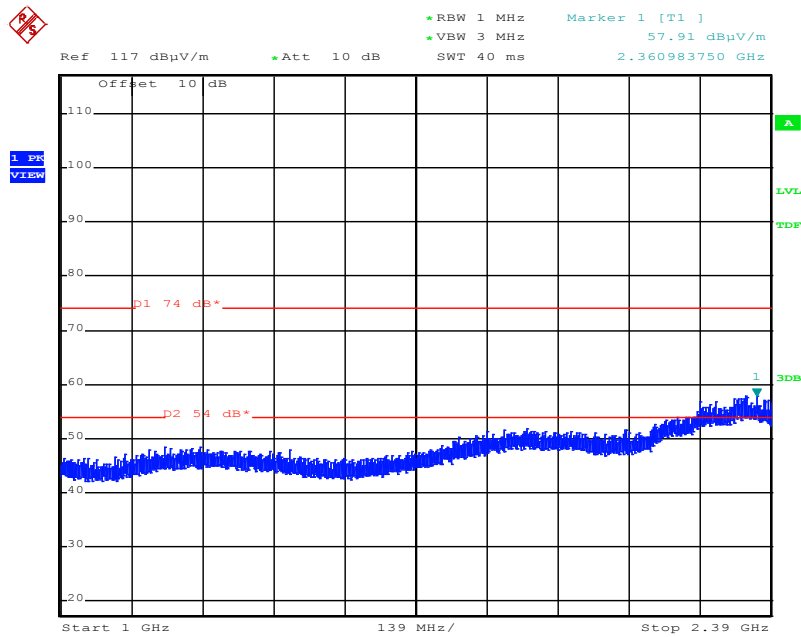


18 GHz to 25 GHz, AV

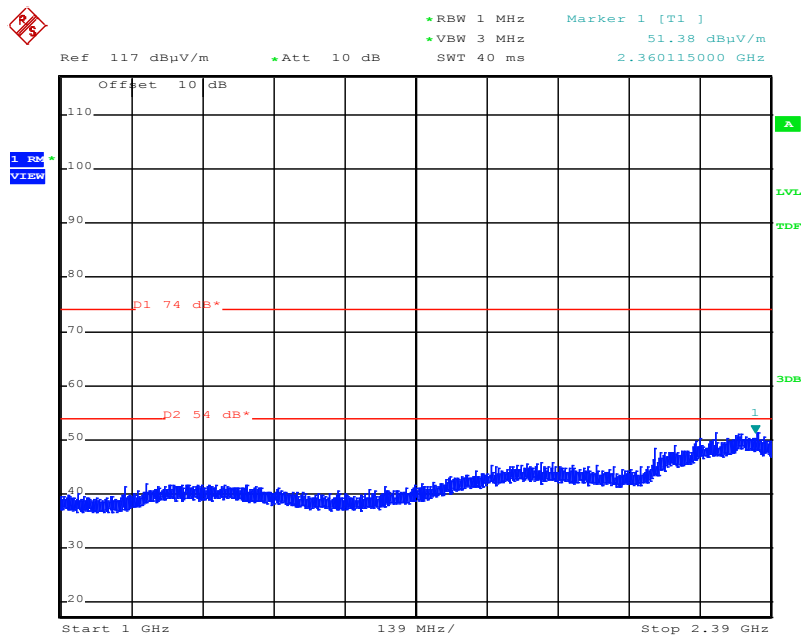


1.1.8 Plots of 802.11g, Ch1, 2 TX, 6 Mbps, P11, antenna group 2 (9 dBi)

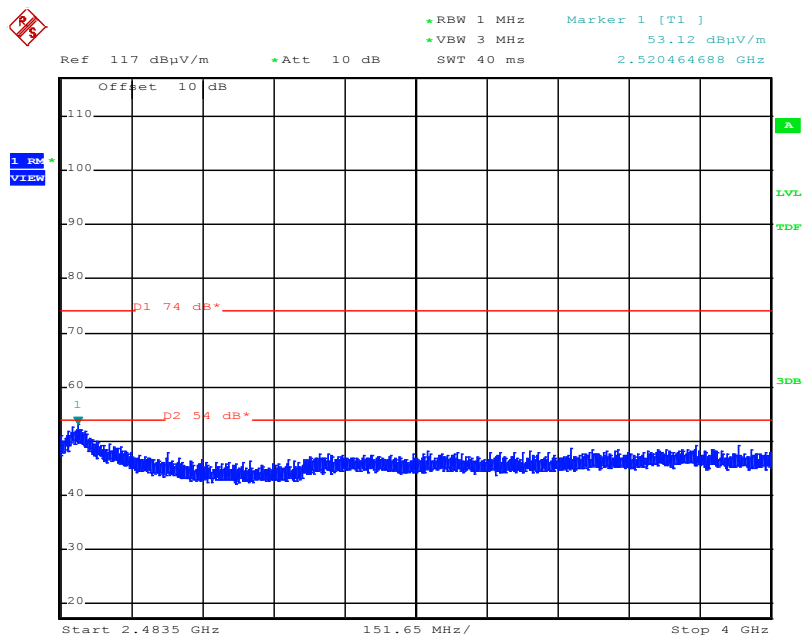
1 GHz to 2.39 GHz



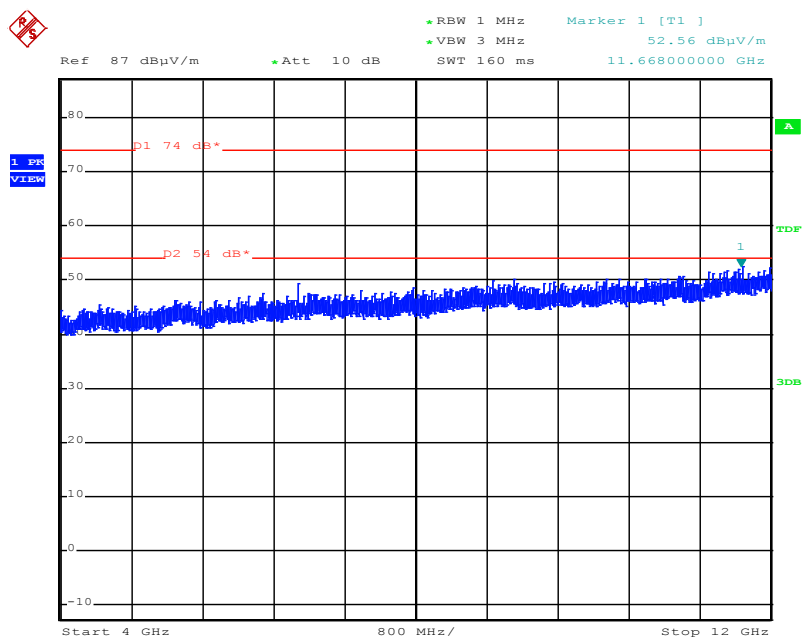
1 GHz to 2.39 GHz, AV



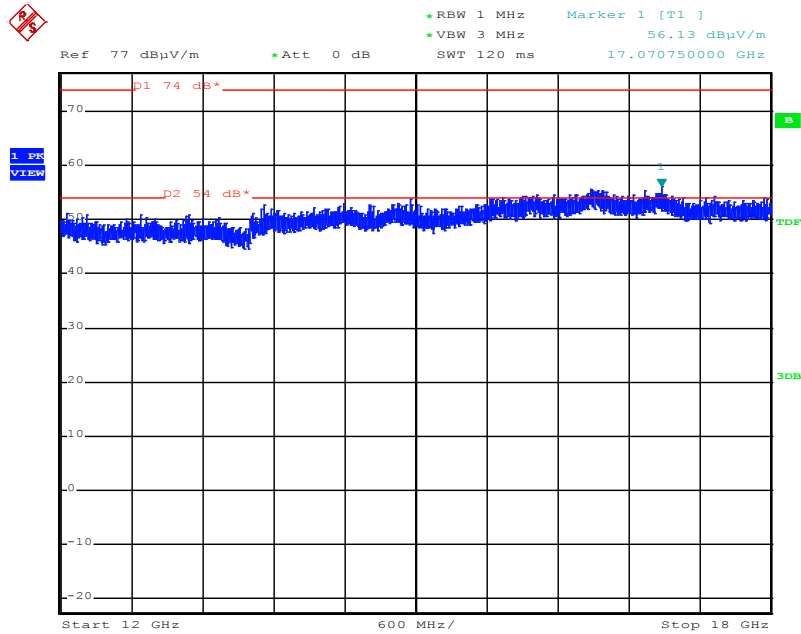
2.4835 GHz to 4 GHz, AV



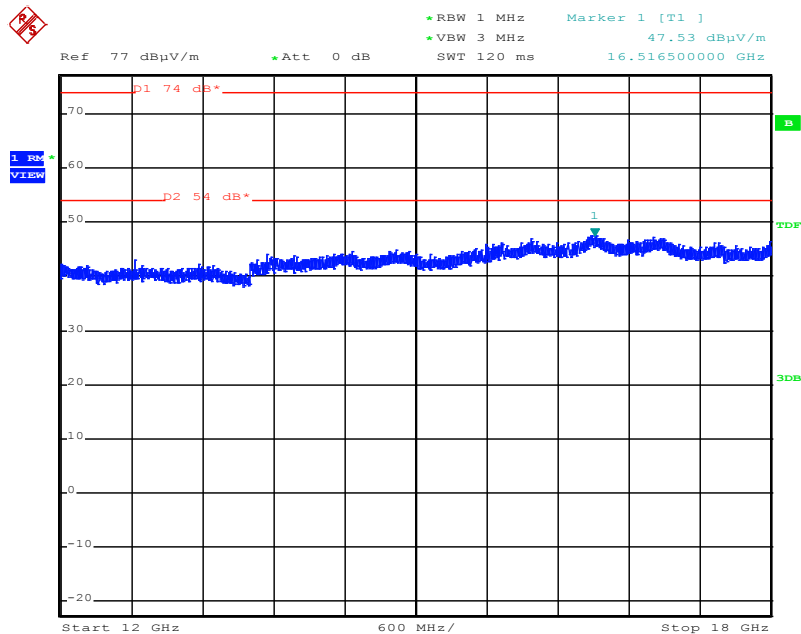
4 GHz to 12 GHz



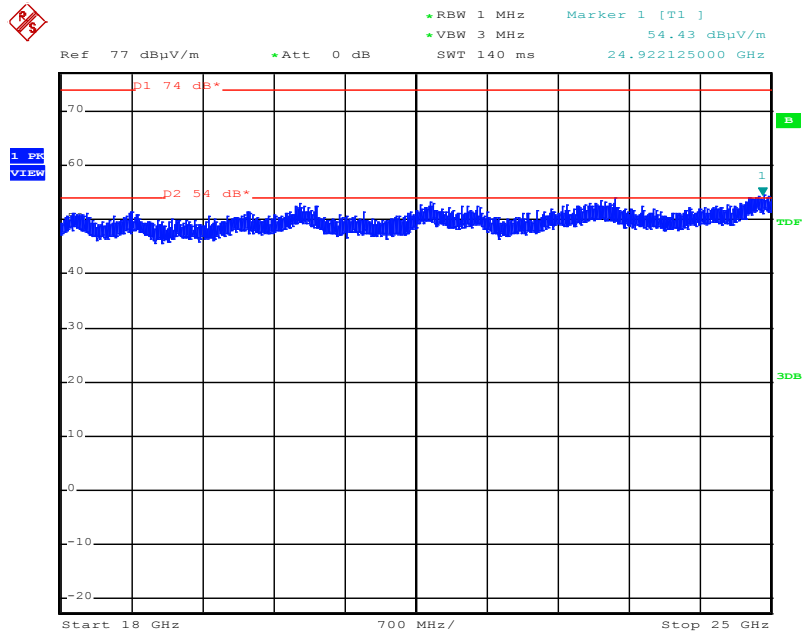
12 GHz to 18 GHz



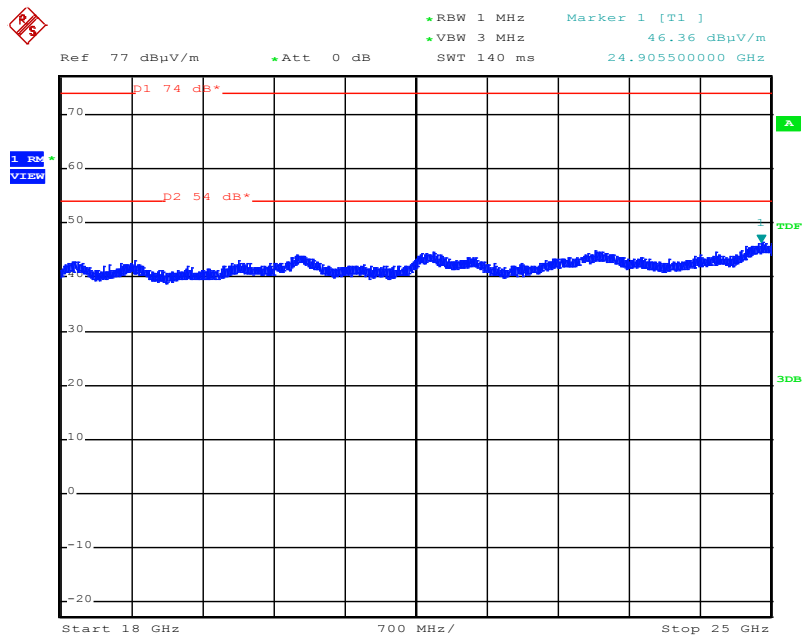
12 GHz to 18 GHz, AV



18 GHz to 25 GHz

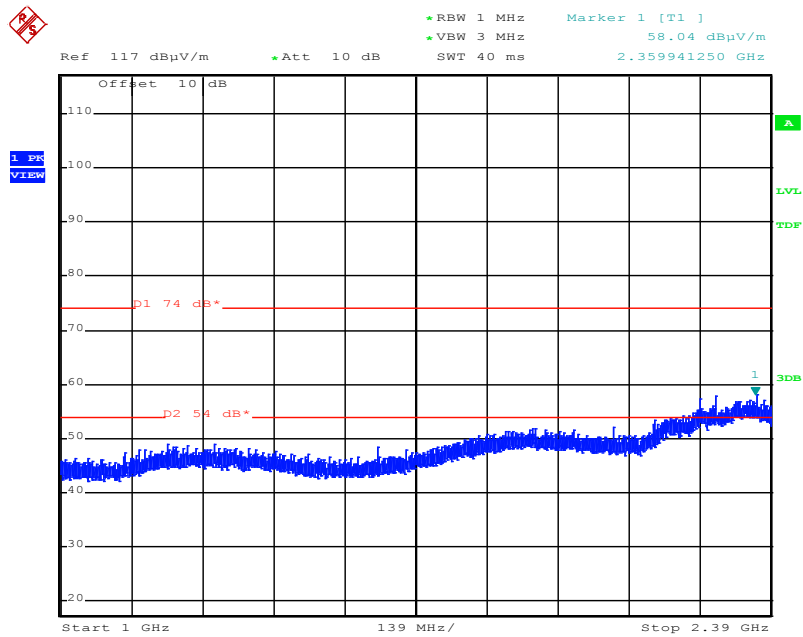


18 GHz to 25 GHz, AV

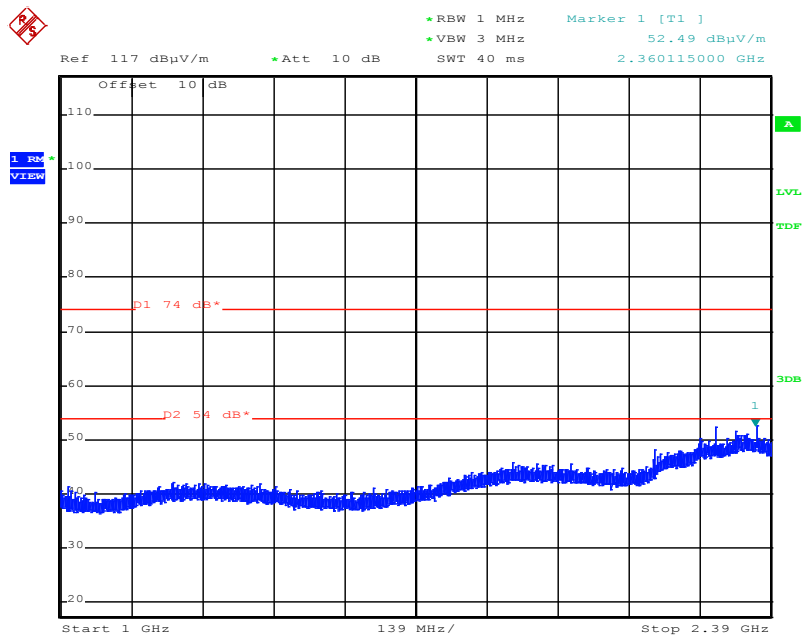


1.1.9 Plots of 802.11n, HT20, Ch1, 2 TX, MCS0, P11, antenna group 2 (9 dBi)

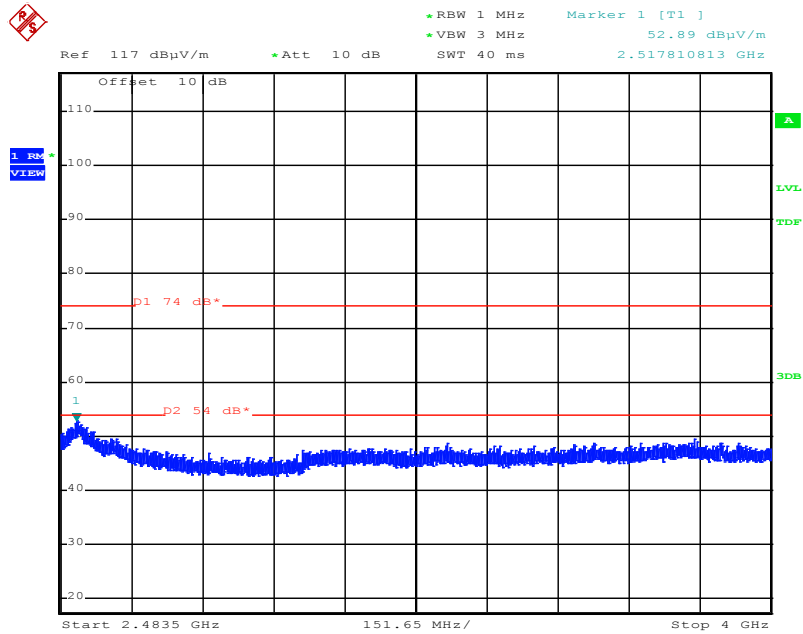
1 GHz to 2.39 GHz



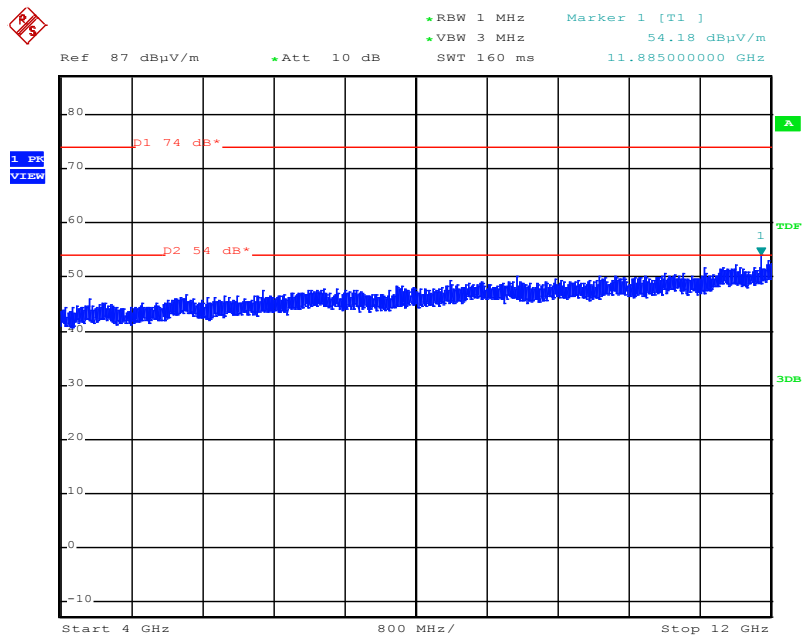
1 GHz to 2.39 GHz, AV



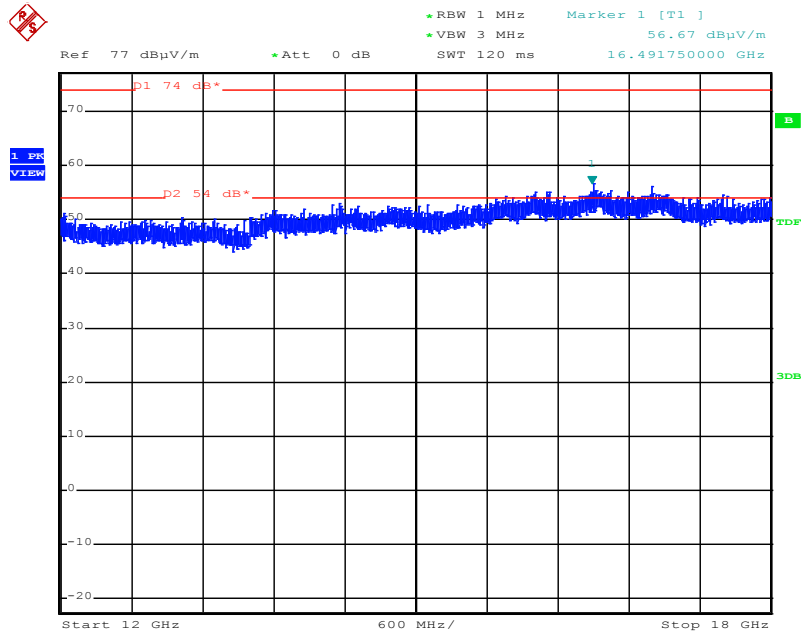
2.4835 GHz to 4 GHz, AV



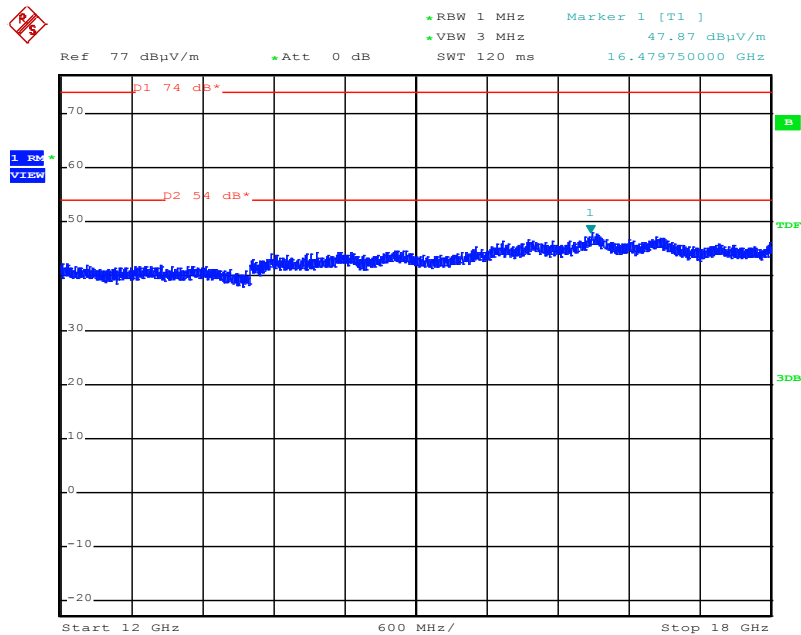
4 GHz to 12 GHz



12 GHz to 18 GHz



12 GHz to 18 GHz, AV



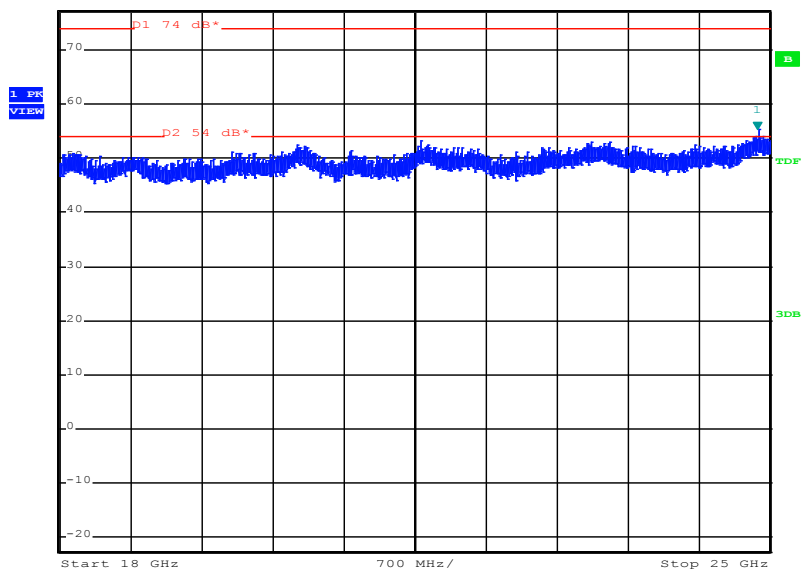
18 GHz to 25 GHz



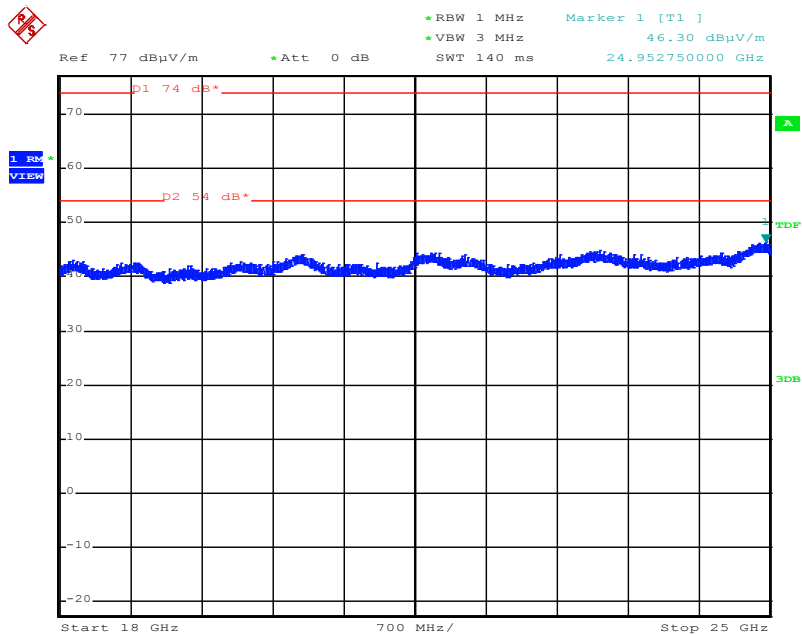
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*RBW 1 MHz      Marker 1 [T1 ]
*VBW 3 MHz      55.25 dBuV/m
SWT 140 ms      24.877500000 GHz

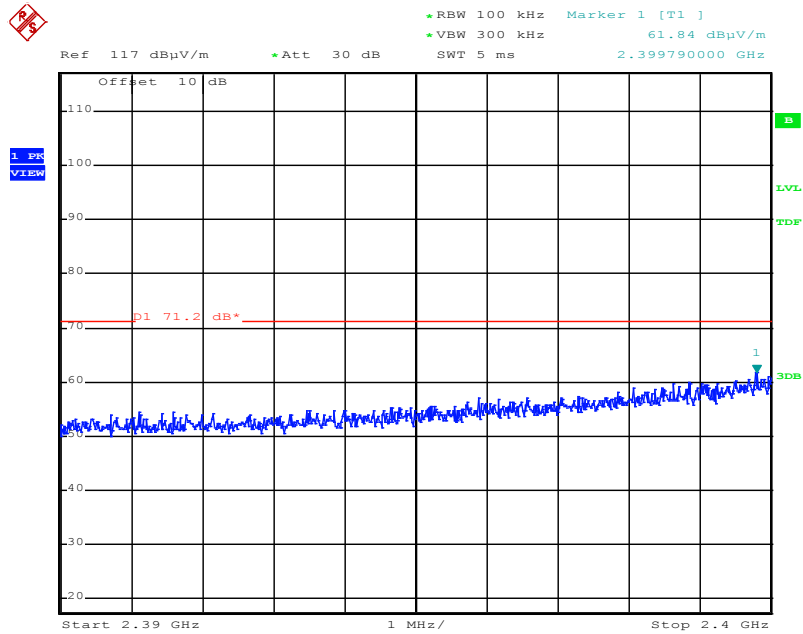
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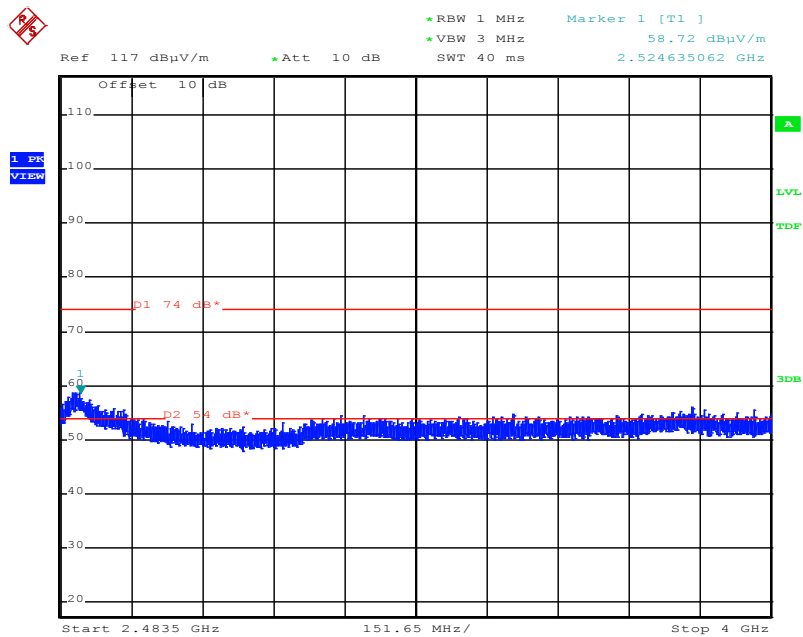
18 GHz to 25 GHz, AV



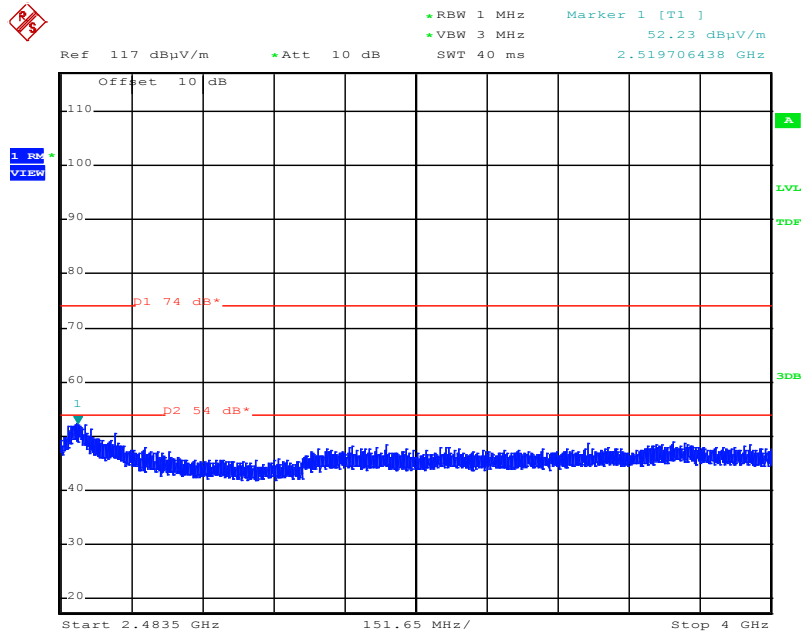
2.39 GHz to 2.4 GHz



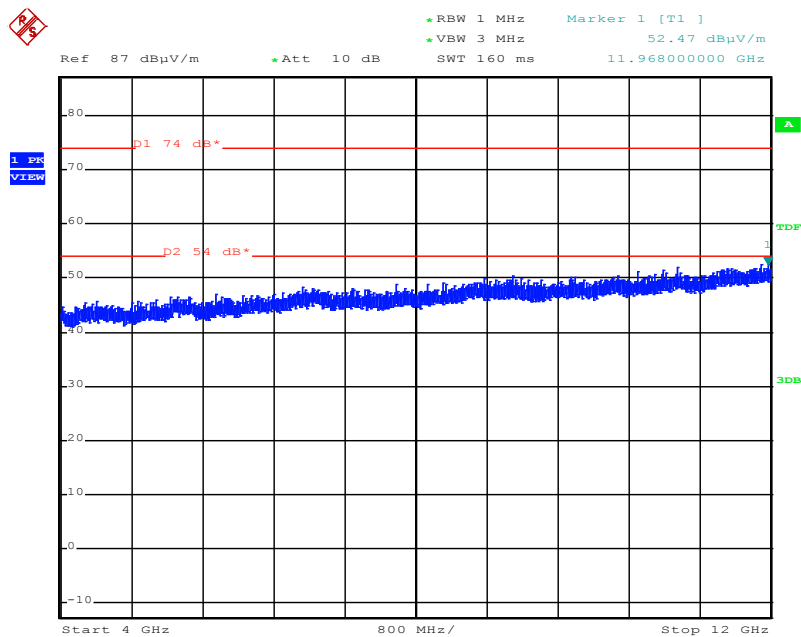
2.4835 GHz to 4 GHz



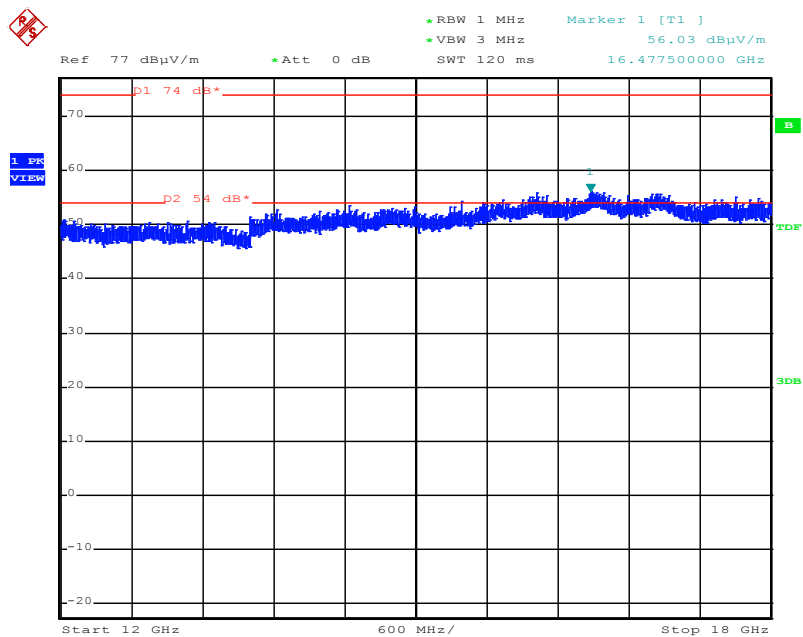
2.4835 GHz to 4 GHz, AV



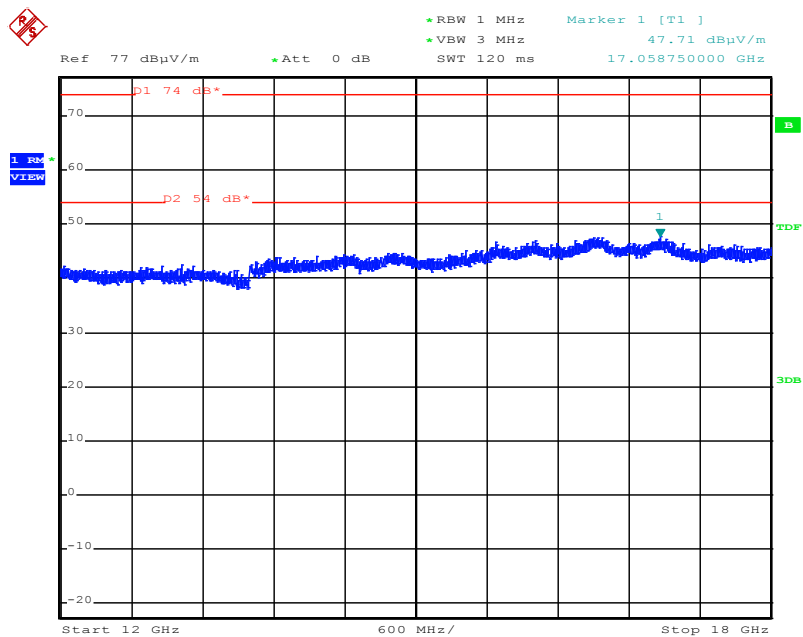
4 GHz to 12 GHz



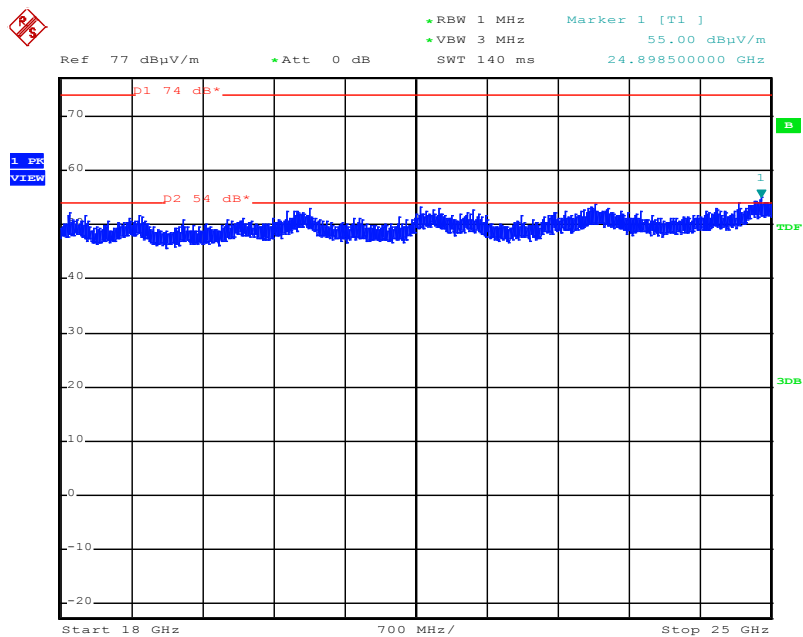
12 GHz to 18 GHz



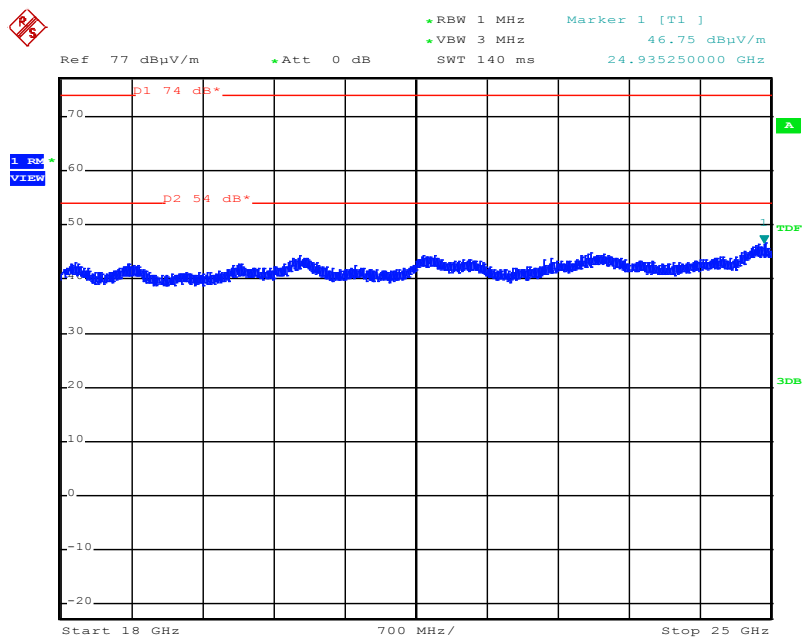
12 GHz to 18 GHz, AV



18 GHz to 25 GHz



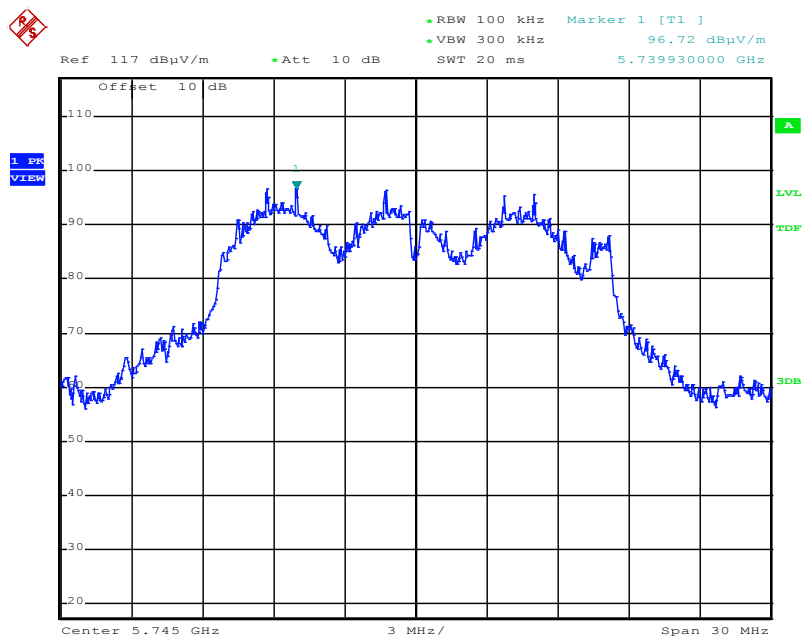
18 GHz to 25 GHz, AV



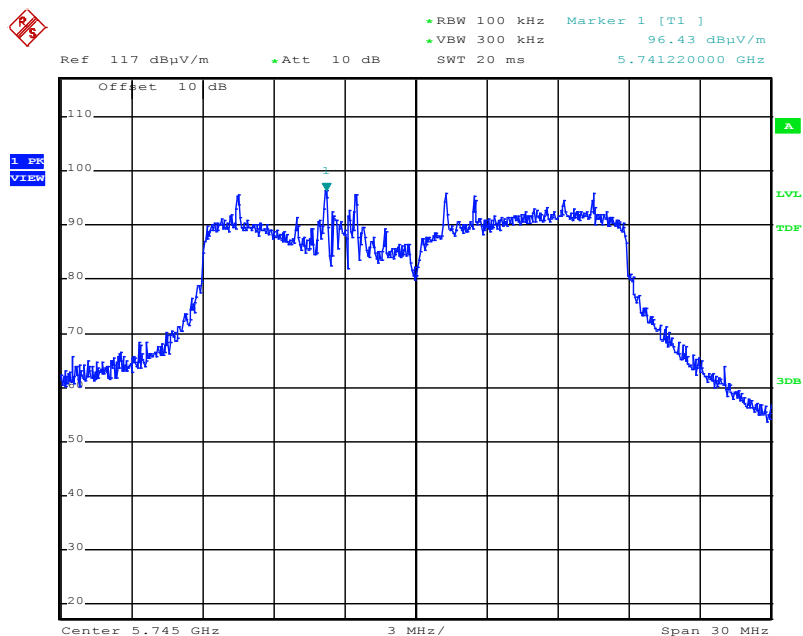
1.2 Test protocols of spurious emissions radiated 5 GHz range

1.2.1 Determination of the reference level, 5 GHz range, P20, antenna group 1 (6 dBi):

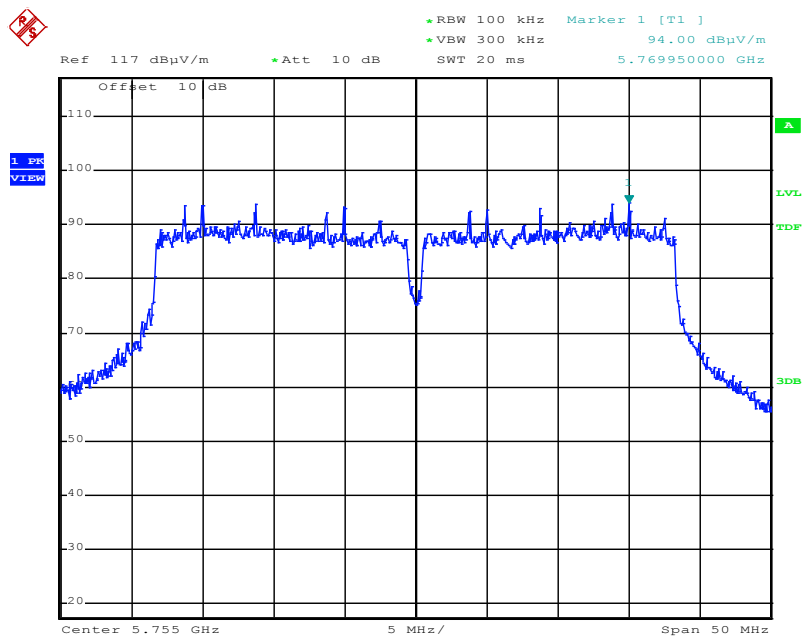
802.11a, 5 GHz



802.11n, HT20, 5 GHz

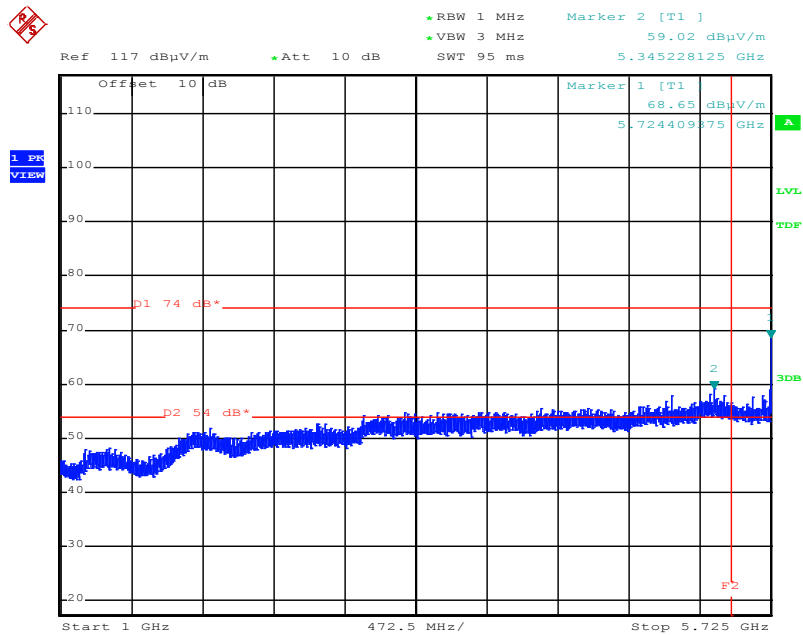


Determination of the reference level, 802.11n, HT40, 5 GHz

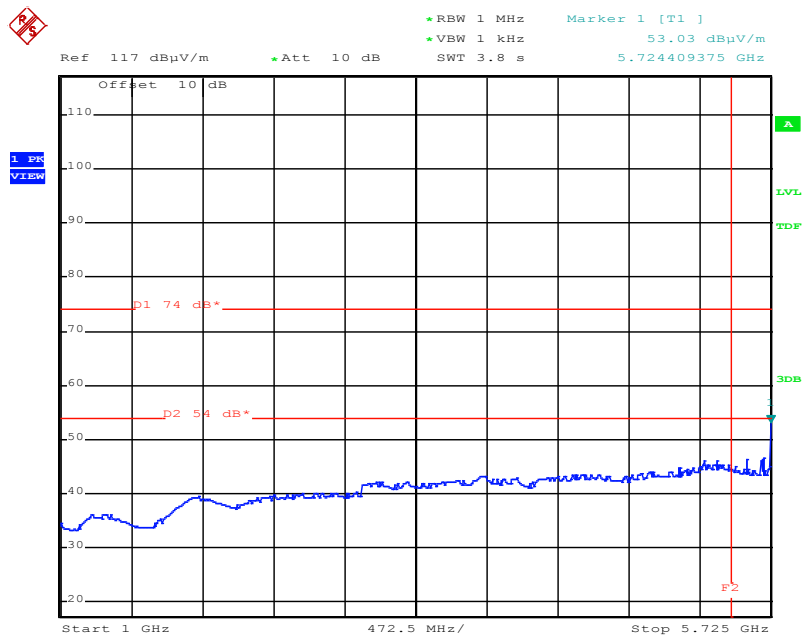


1.2.2 Plots of 802.11a, Ch149, 2 TX, 6 Mbps, P20, antenna group 1 (6 dBi)

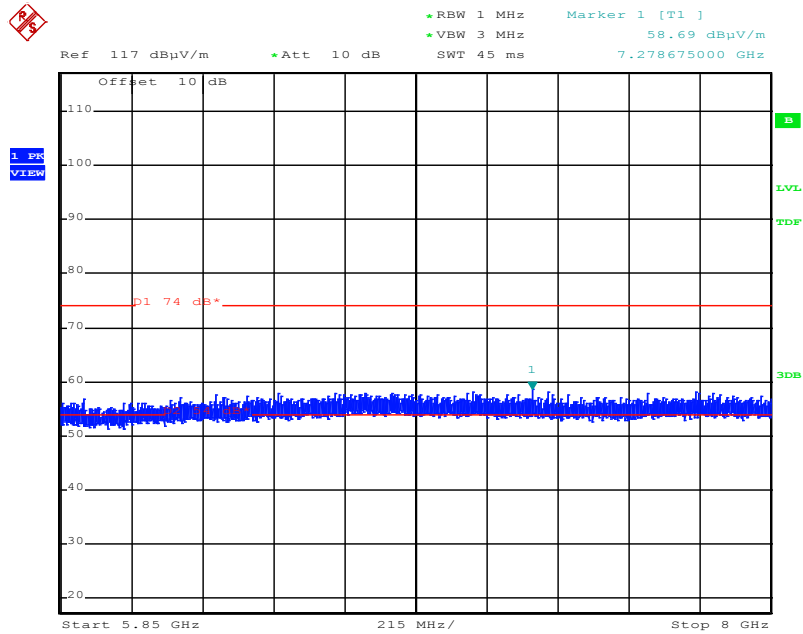
1 GHz to 5.725 GHz



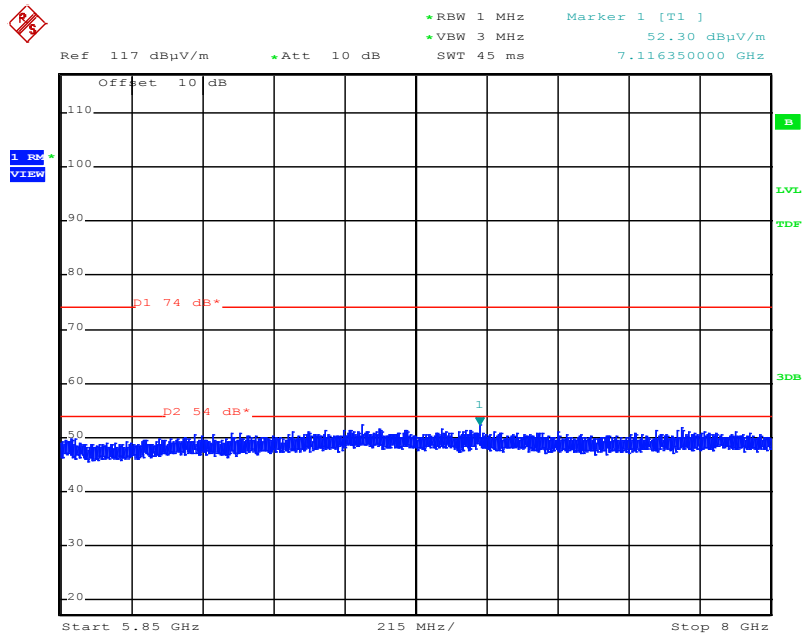
1 GHz to 5.725 GHz, AV



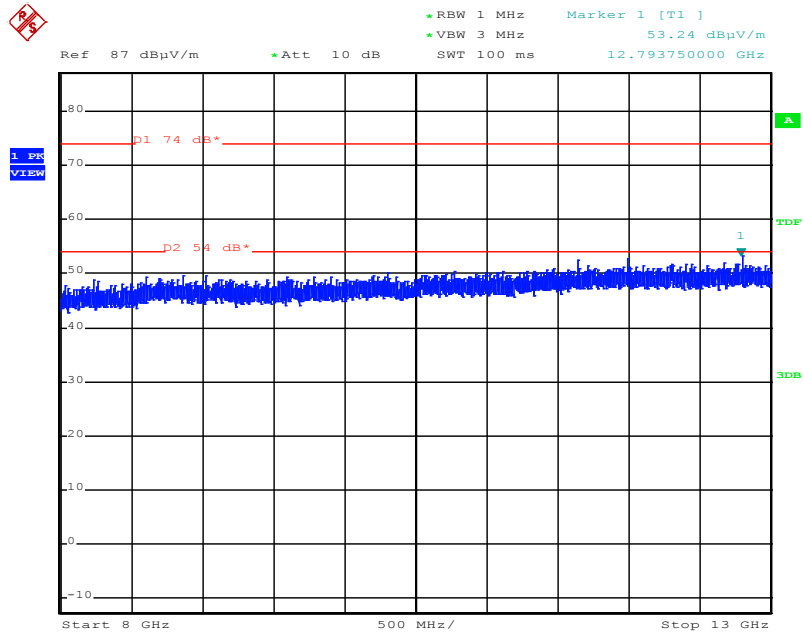
5.85 GHz to 8 GHz



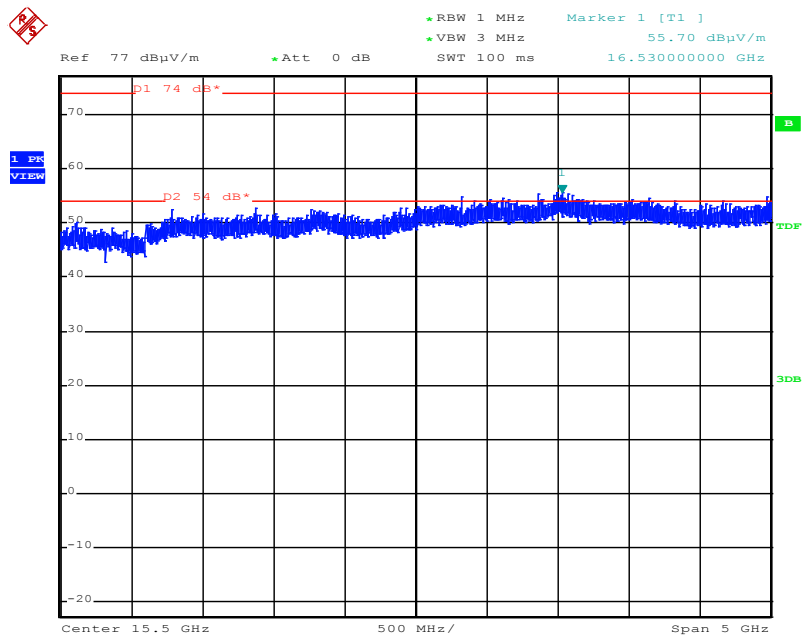
5.85 GHz to 8 GHz, AV



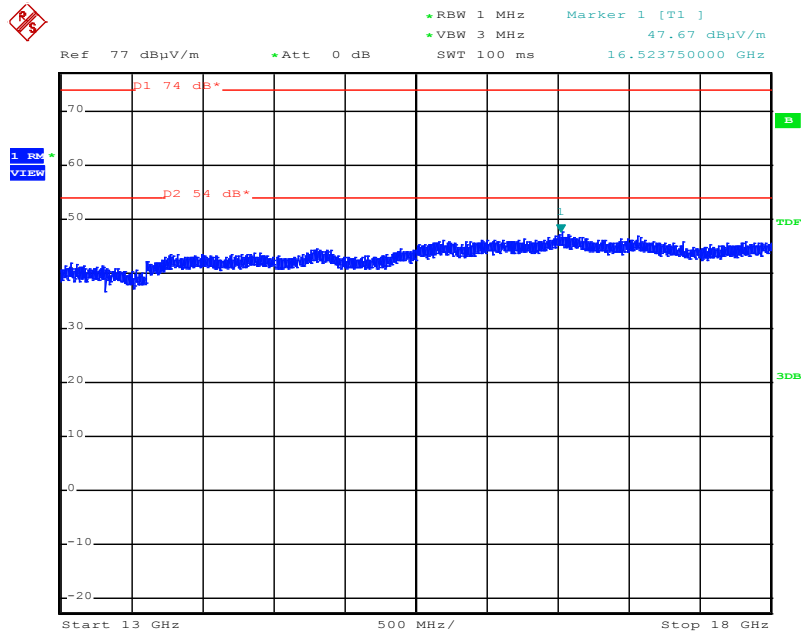
8 GHz to 13 GHz



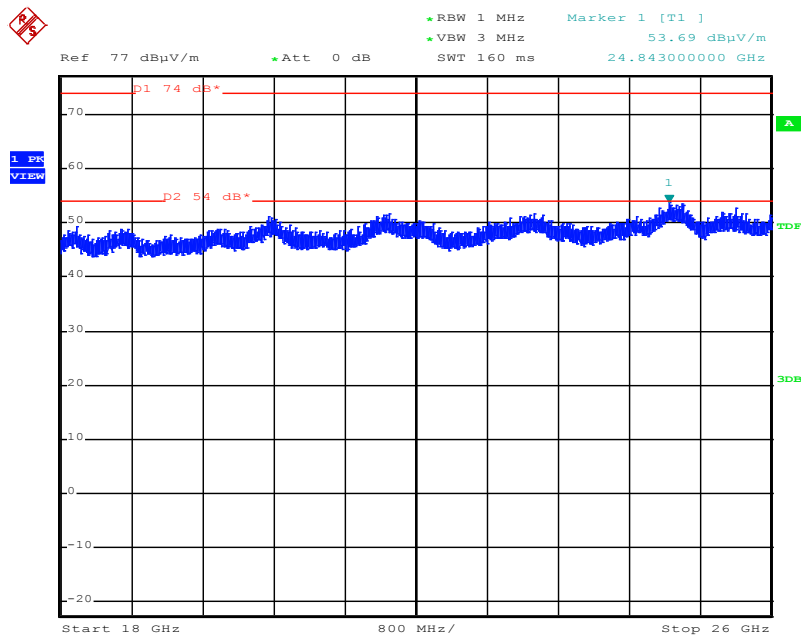
13 GHz to 18 GHz



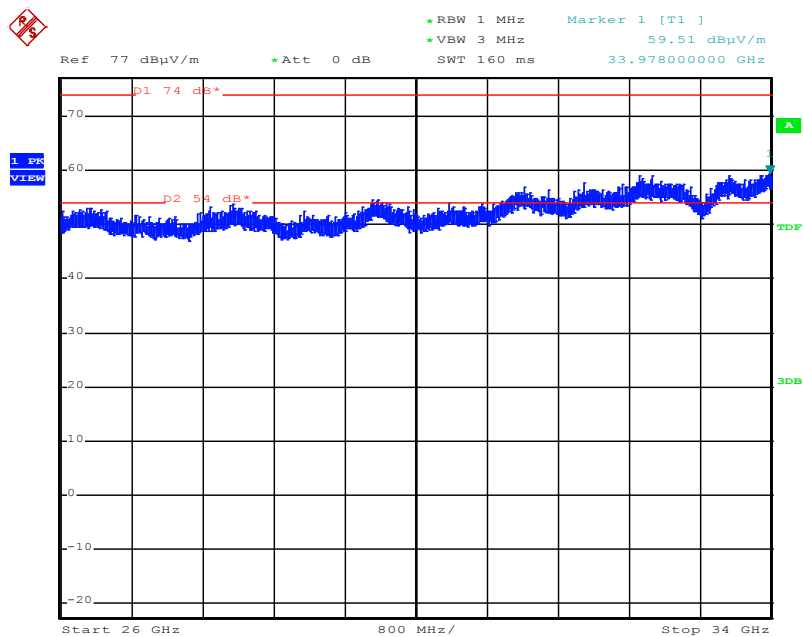
13 GHz to 18 GHz, AV



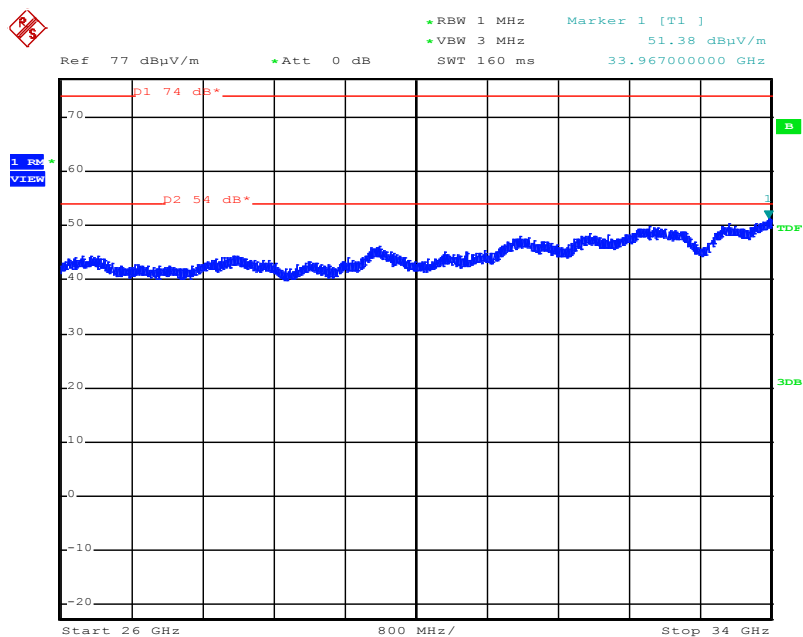
18 GHz to 26 GHz



26 GHz to 34 GHz

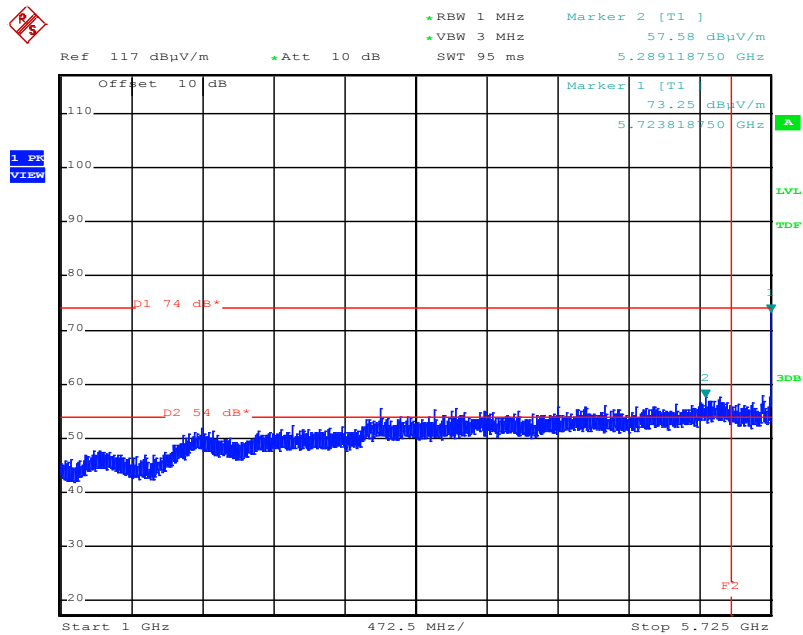


26 GHz to 34 GHz, AV

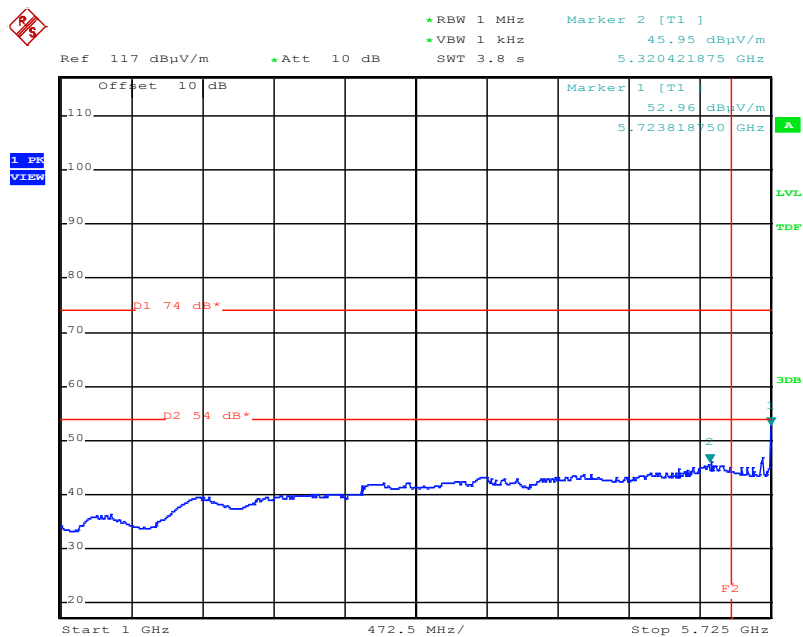


1.2.3 Plots of 802.11n, HT20, Ch149, 2 TX, MCS0, P20, antenna group 1 (6 dBi)

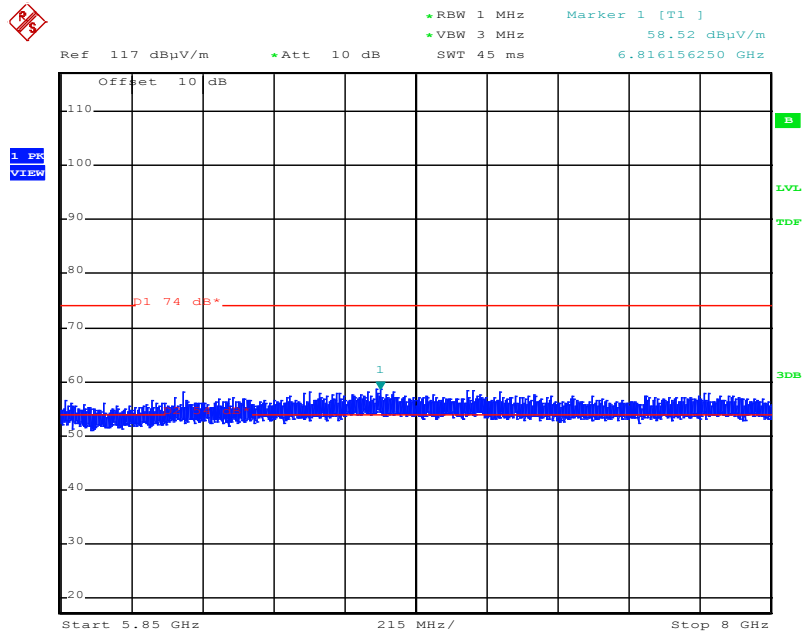
1 GHz to 5.725 GHz



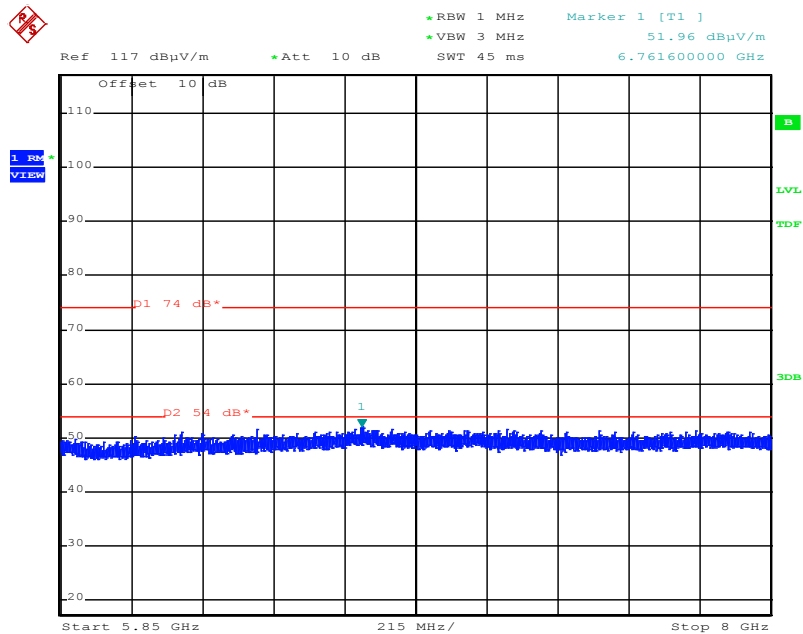
1 GHz to 5.725 GHz, AV



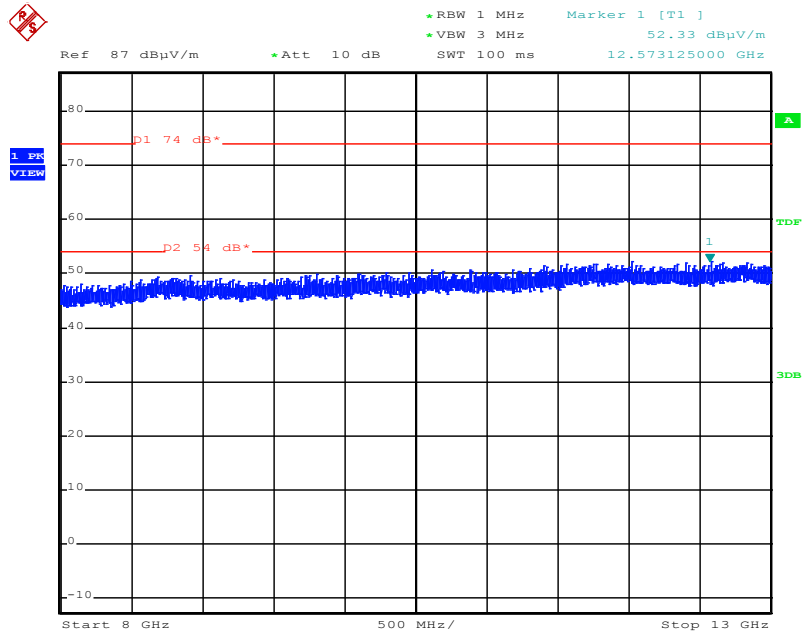
5.85 GHz to 8 GHz



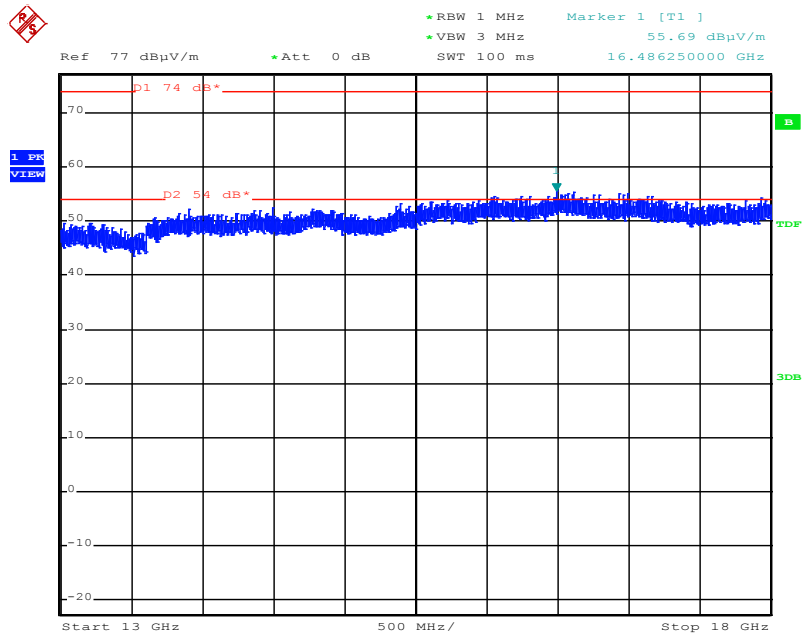
5.85 GHz to 8 GHz, AV



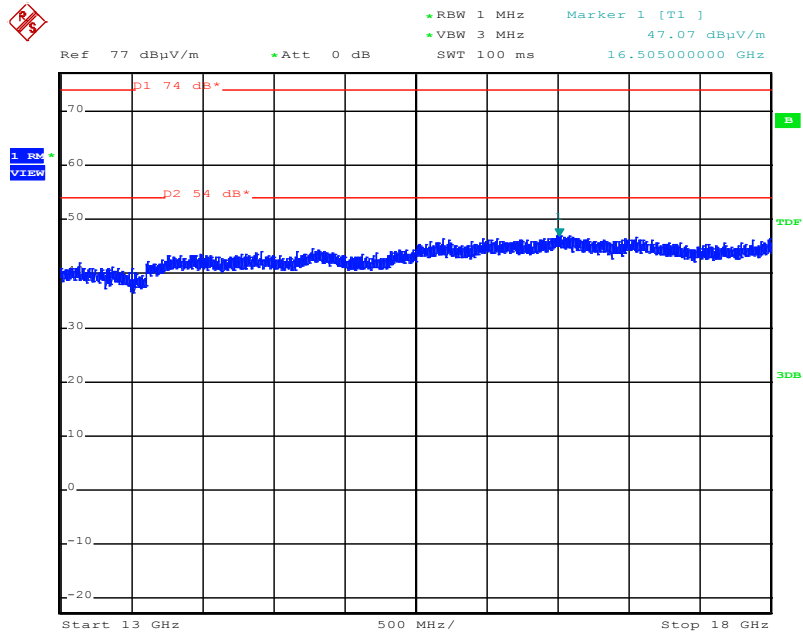
8 GHz to 13 GHz



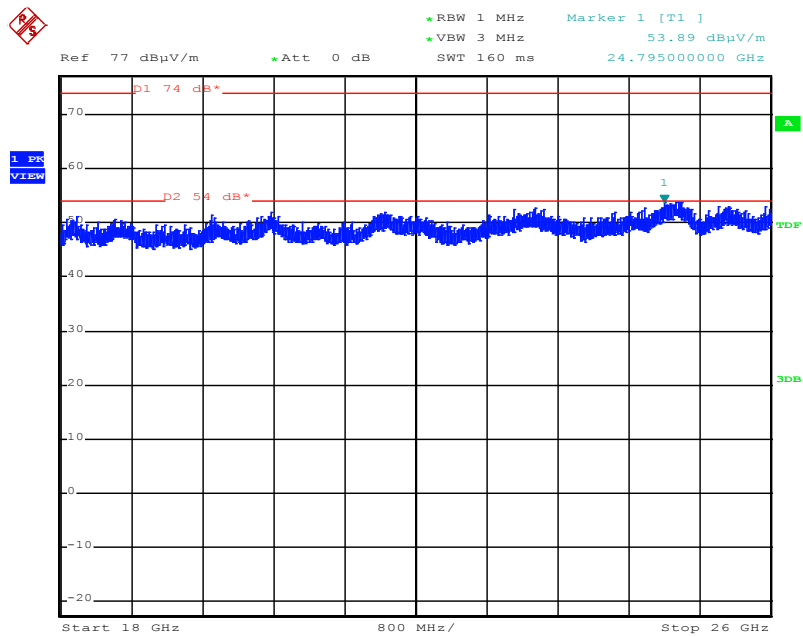
13 GHz to 18 GHz



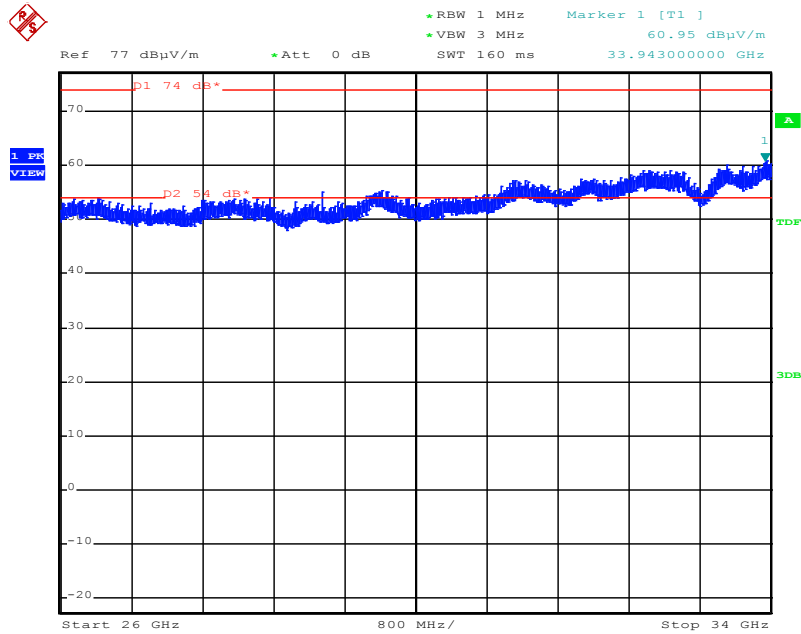
13 GHz to 18 GHz, AV



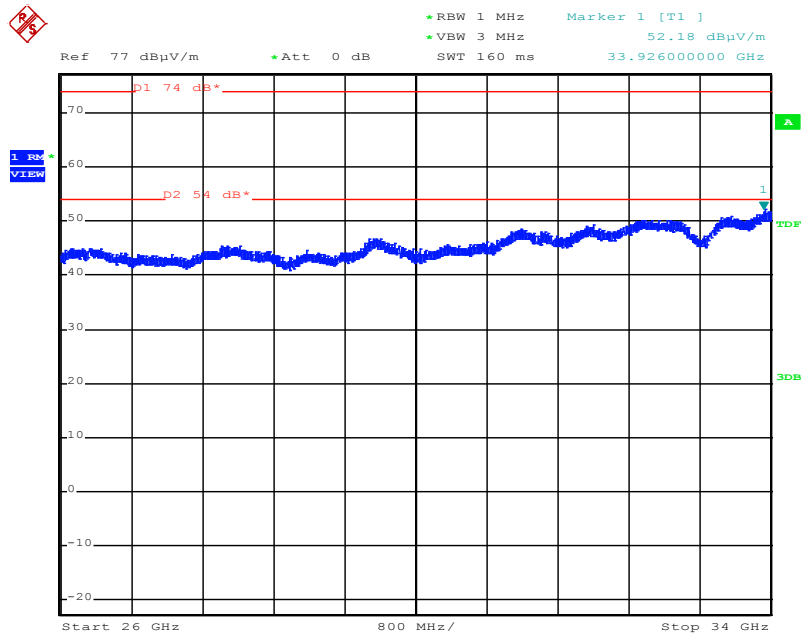
18 GHz to 26 GHz



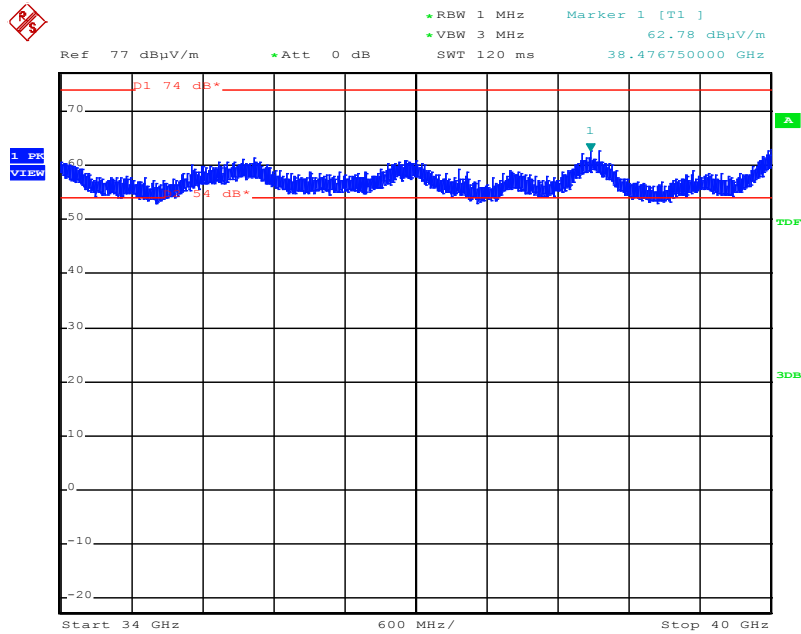
26 GHz to 34 GHz



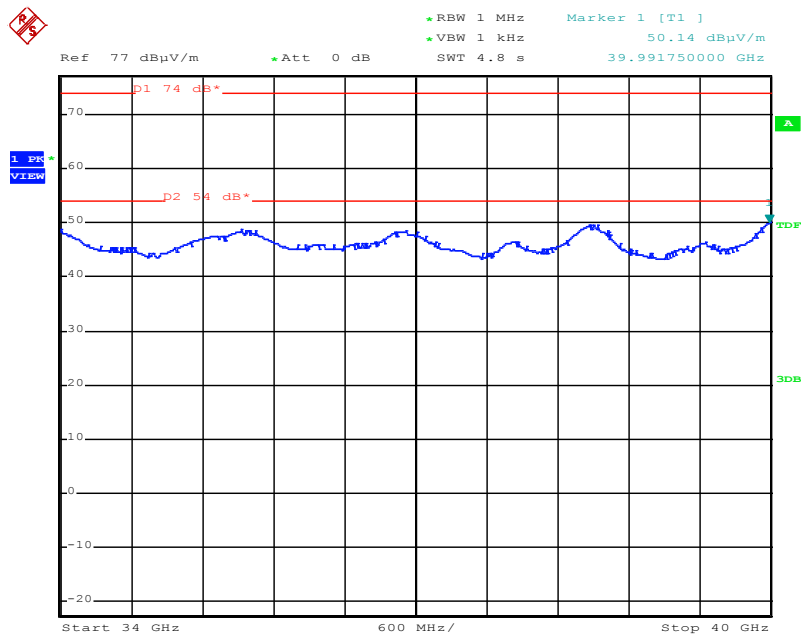
26 GHz to 34 GHz, AV



34 GHz to 40 GHz

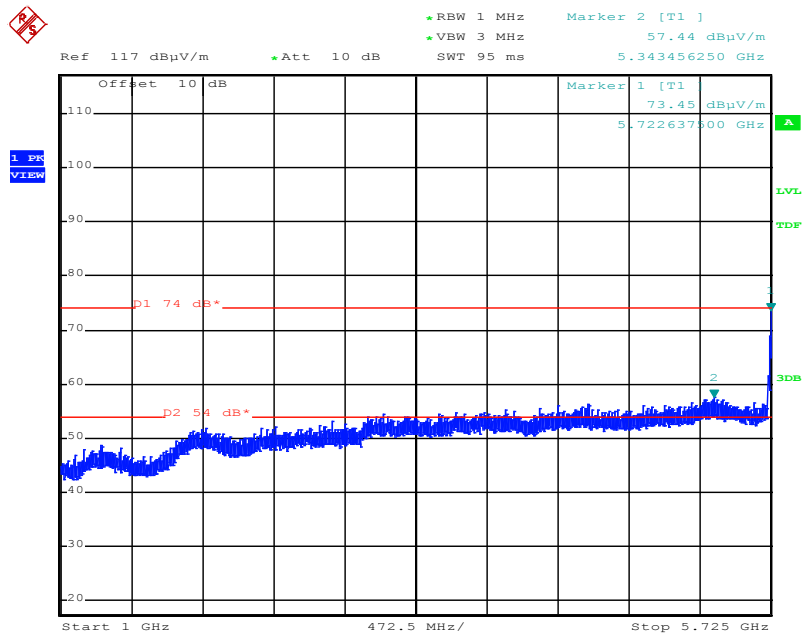


34 GHz to 40 GHz, AV

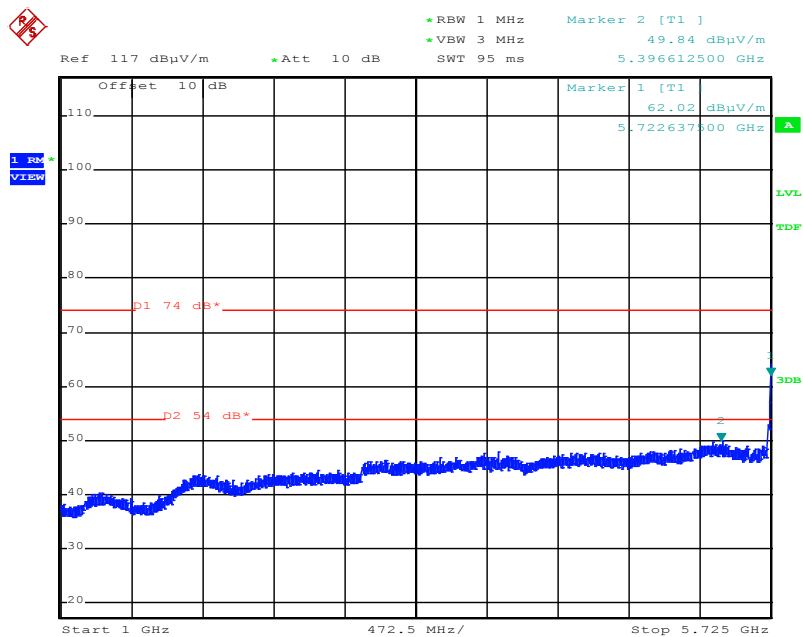


1.2.4 Plots of 802.11n, HT40, Ch149up, 2 TX, MCS8, P20, antenna group 1 (6 dBi)

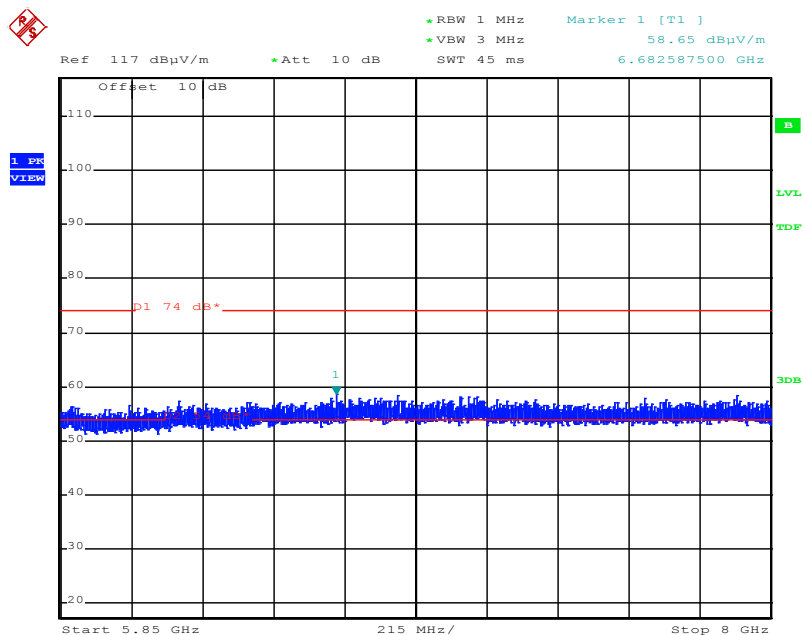
1 GHz to 5.725 GHz



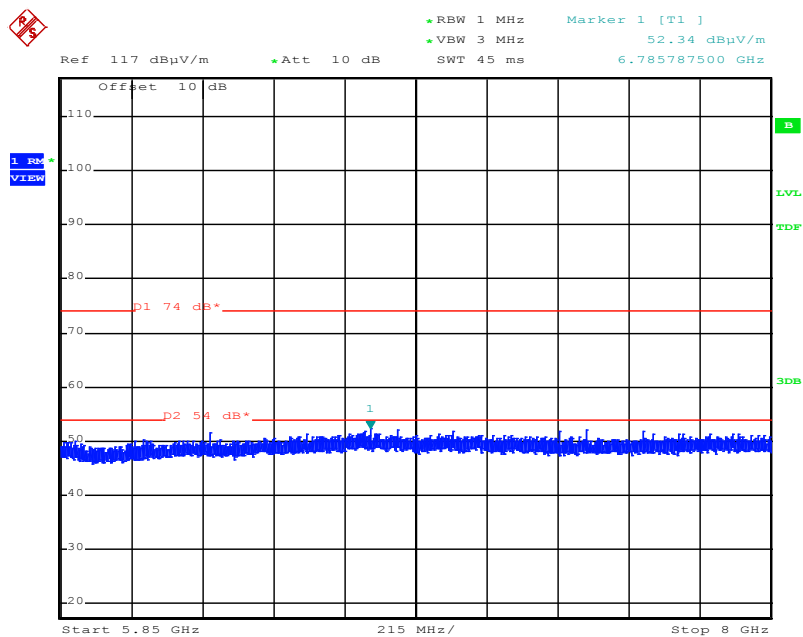
1 GHz to 5.725 GHz, AV



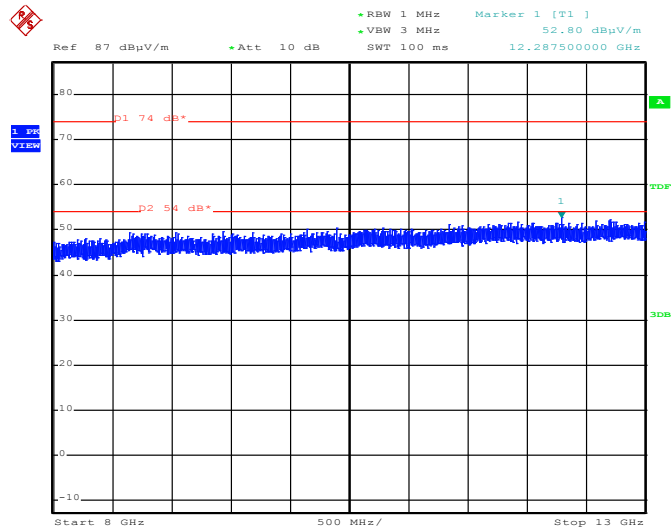
5.85 GHz to 8 GHz



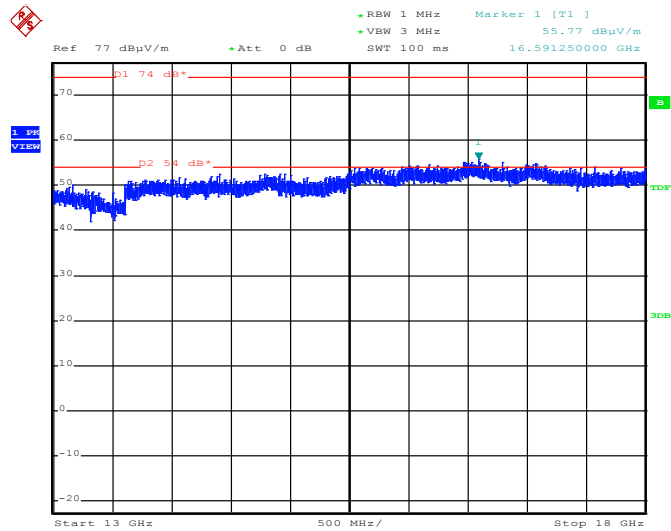
5.85 GHz to 8 GHz, AV



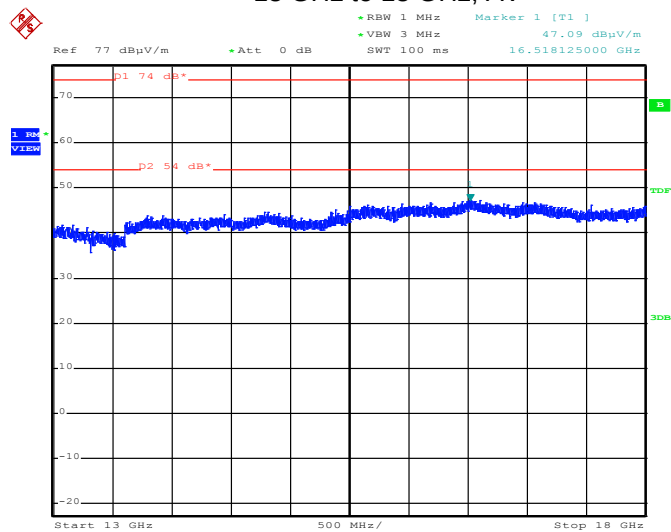
8 GHz to 13 GHz



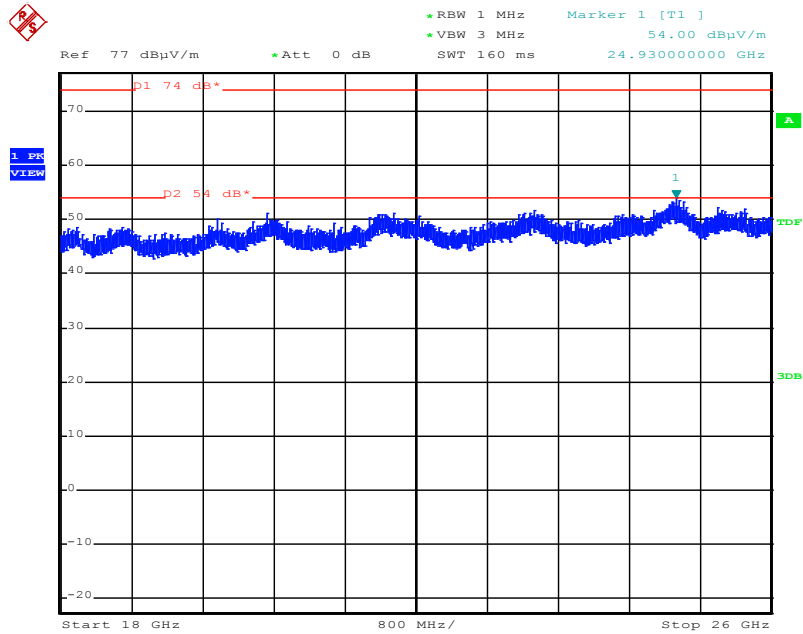
13 GHz to 18 GHz



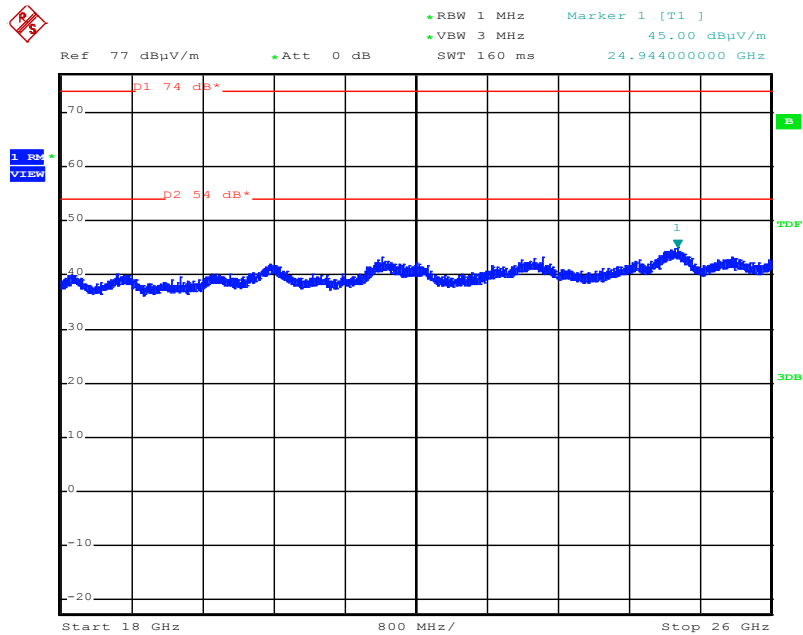
13 GHz to 18 GHz, AV



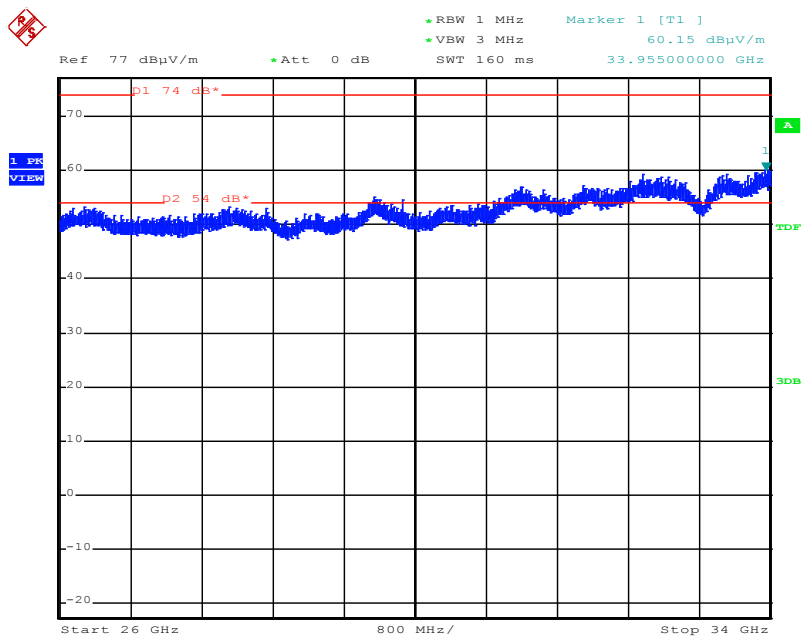
18 GHz to 26 GHz



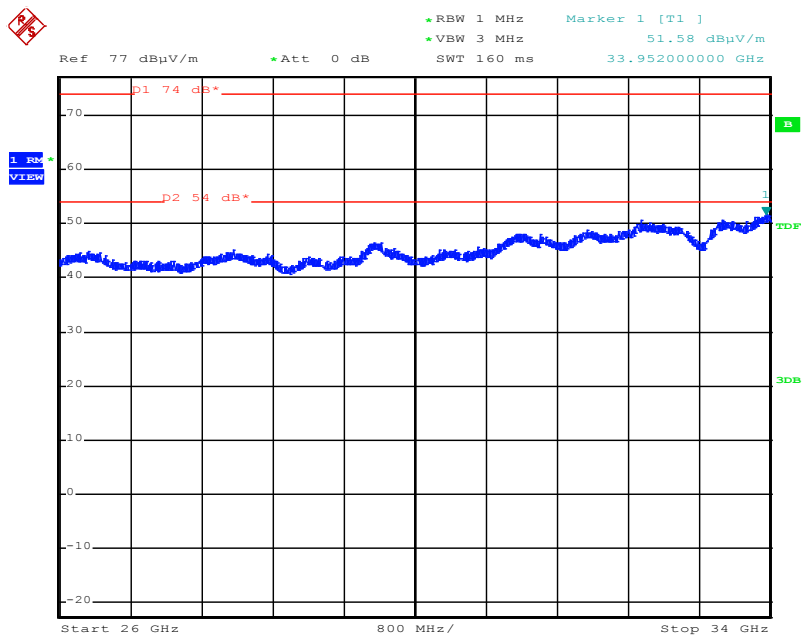
18 GHz to 26 GHz, AV



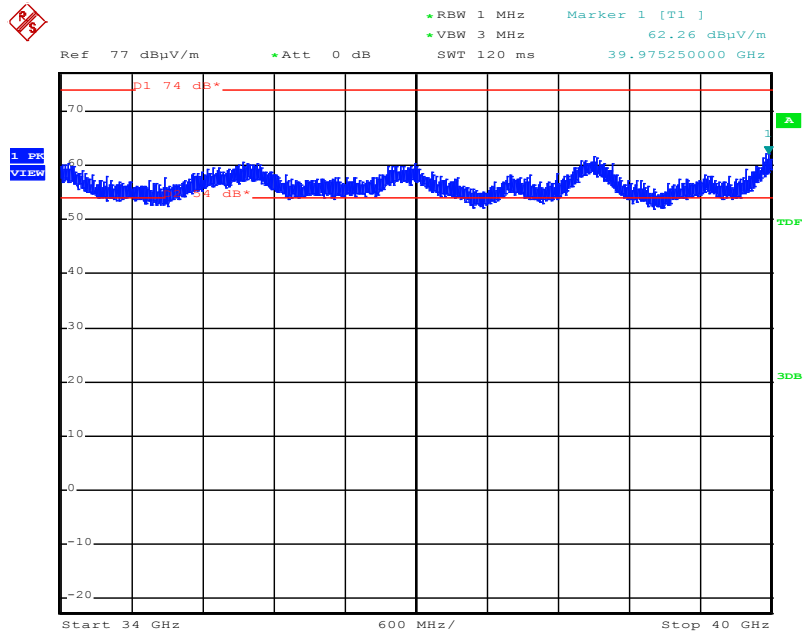
26 GHz to 34 GHz



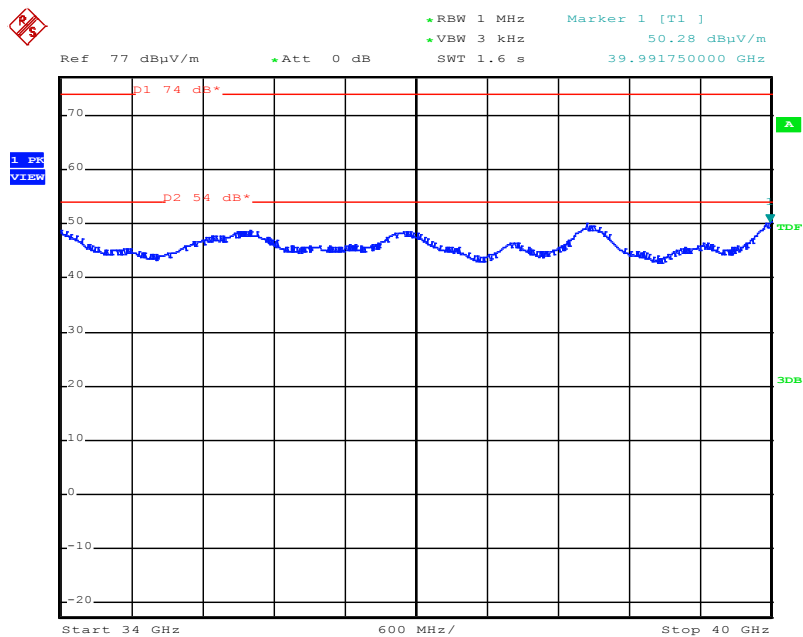
26 GHz to 34 GHz, AV



34 GHz to 40 GHz

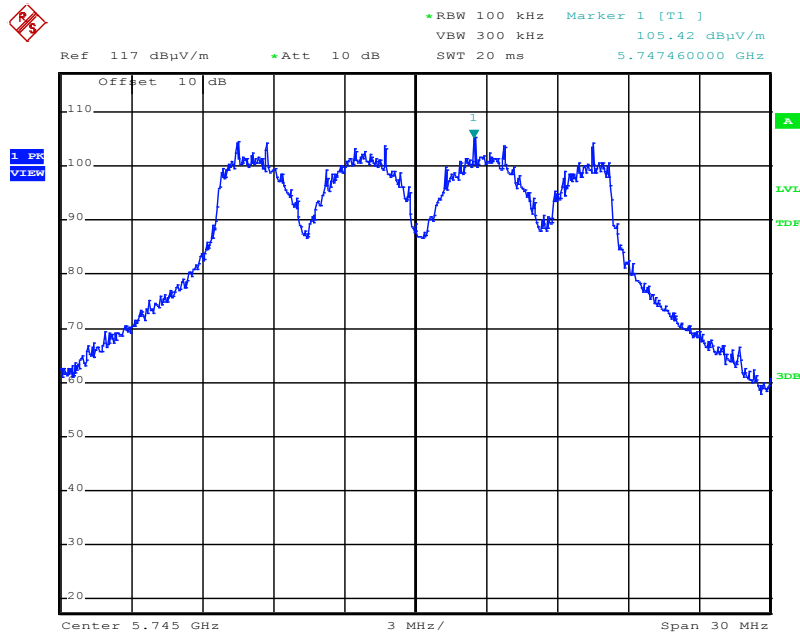


34 GHz to 40 GHz, AV

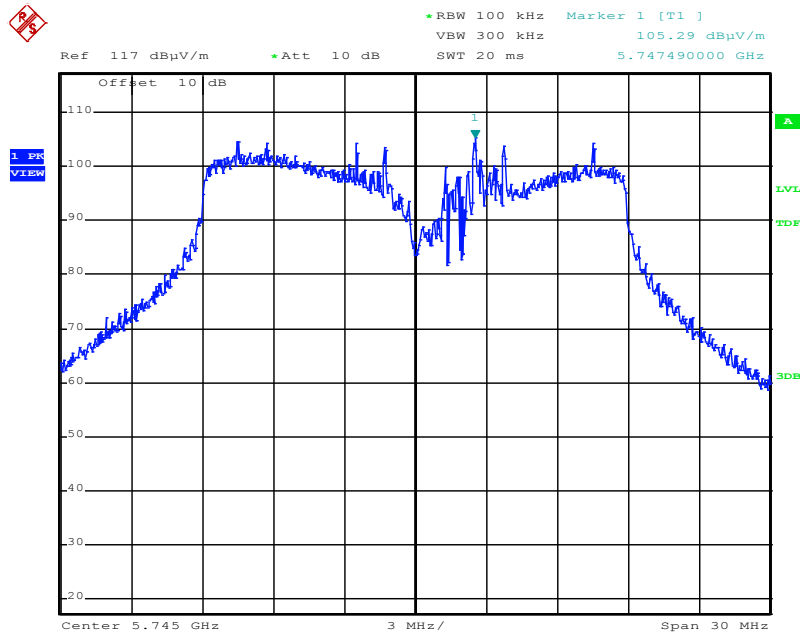


1.2.5 Determination of the reference level, 5 GHz range, P17, antenna group 2 (9 dBi):

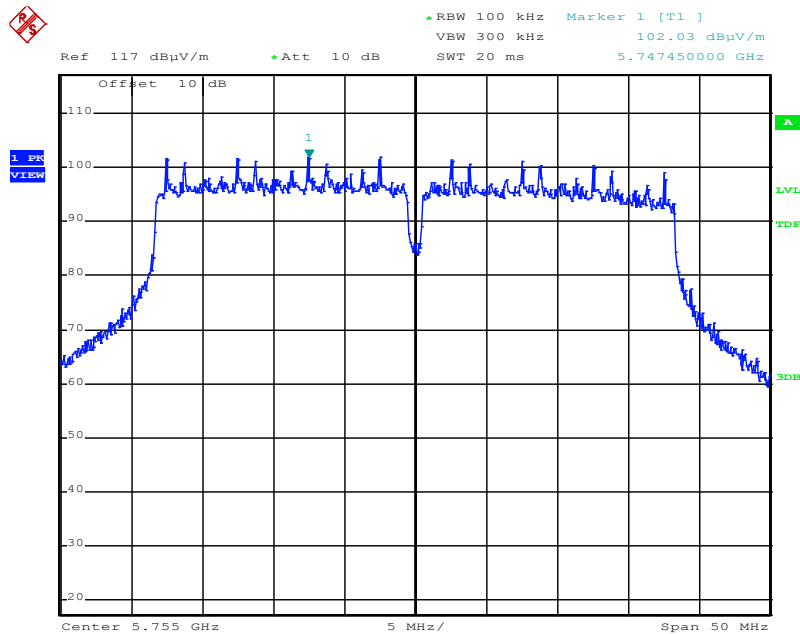
Determination of the reference level, 802.11a, 5 GHz



Determination of the reference level, 802.11n, HT20, 5 GHz

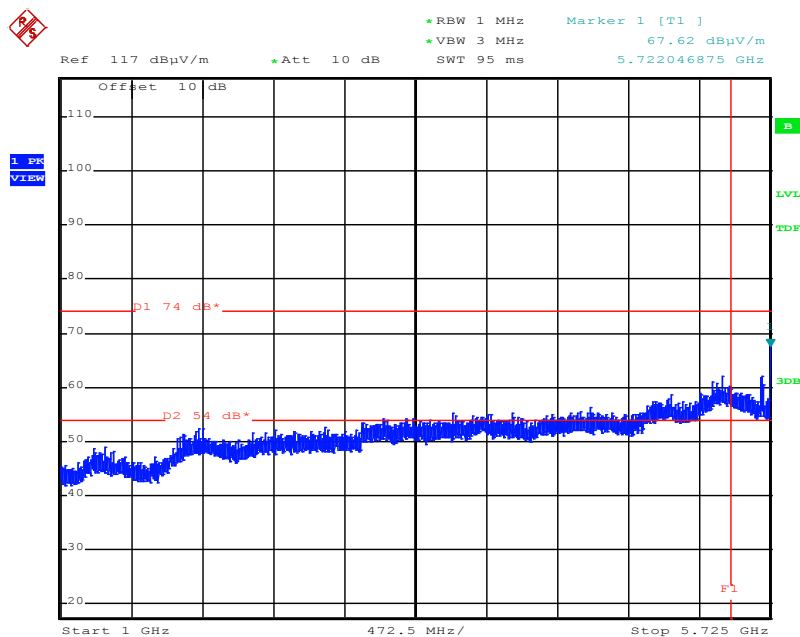


Determination of the reference level, 802.11n, HT40, 5 GHz

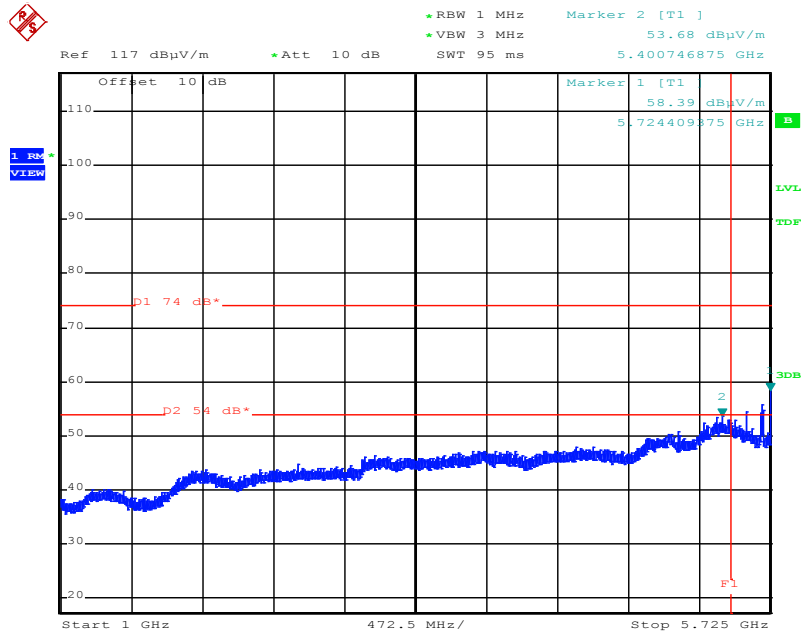


1.2.6 Plots of 802.11a, Ch149, 2 TX, 6 Mbps, P17, antenna group 2 (9 dBi)

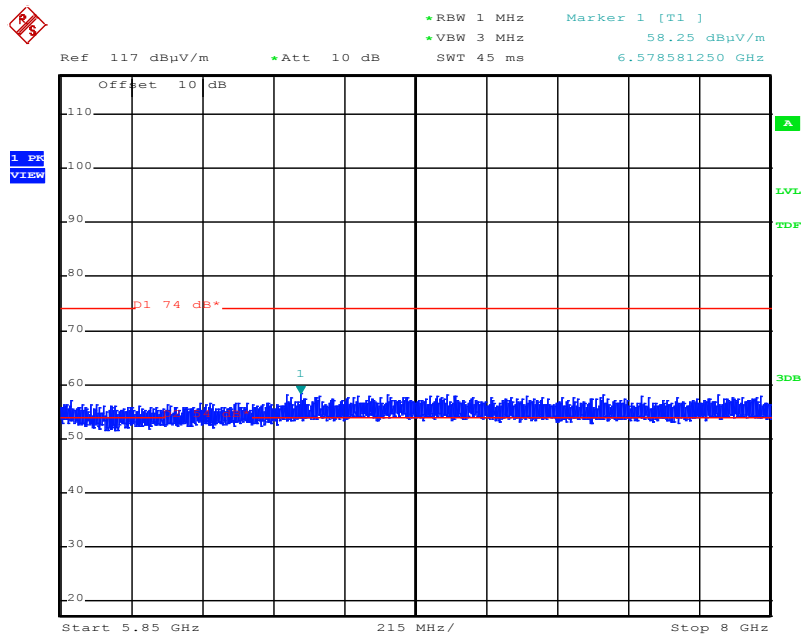
1 GHz to 5.725 GHz



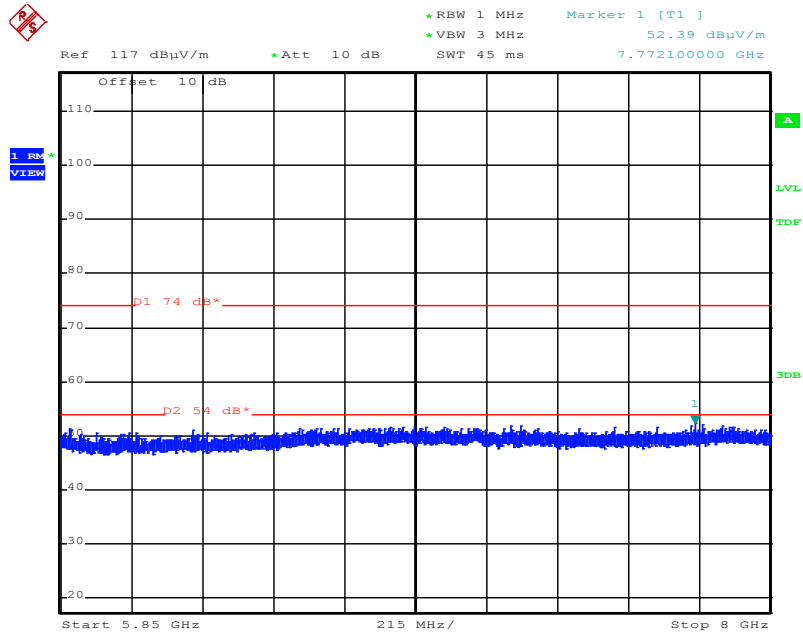
1 GHz to 5.725 GHz, AV



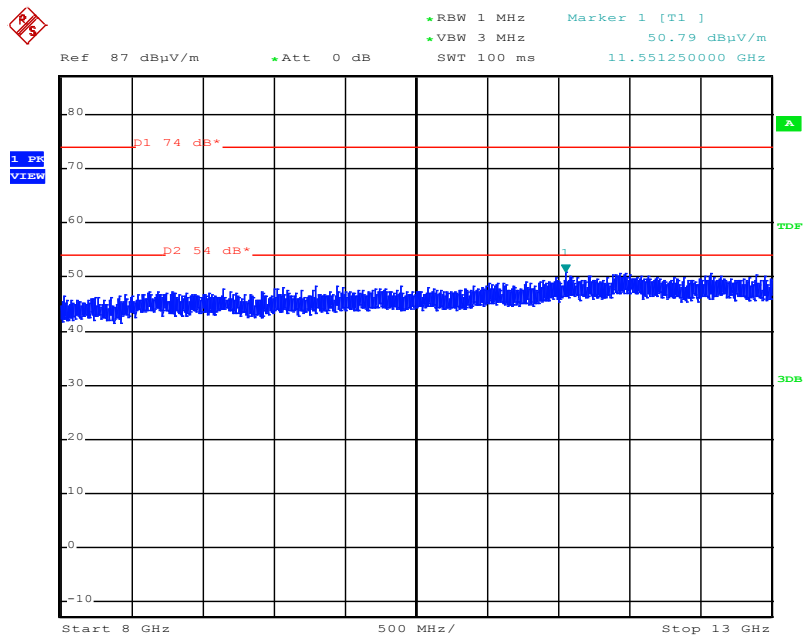
5.85 GHz to 8 GHz



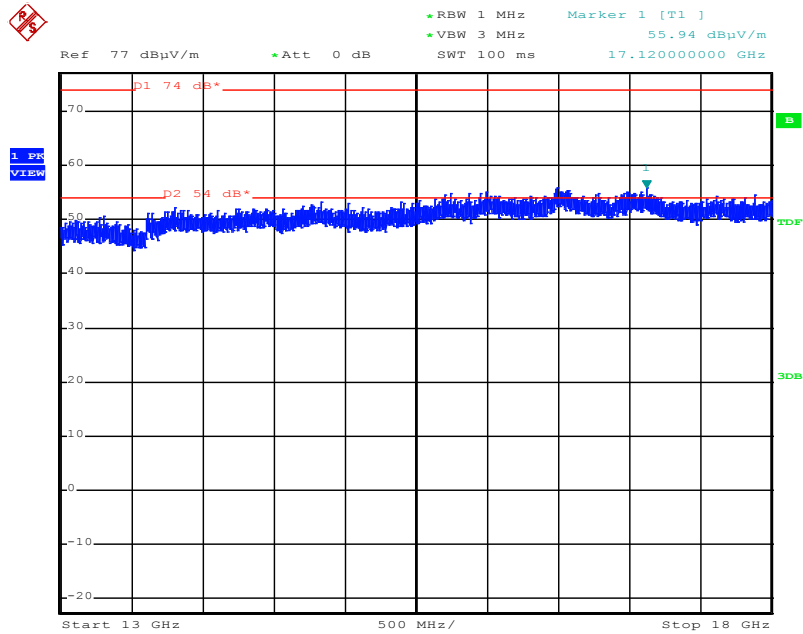
5.85 GHz to 8 GHz, AV



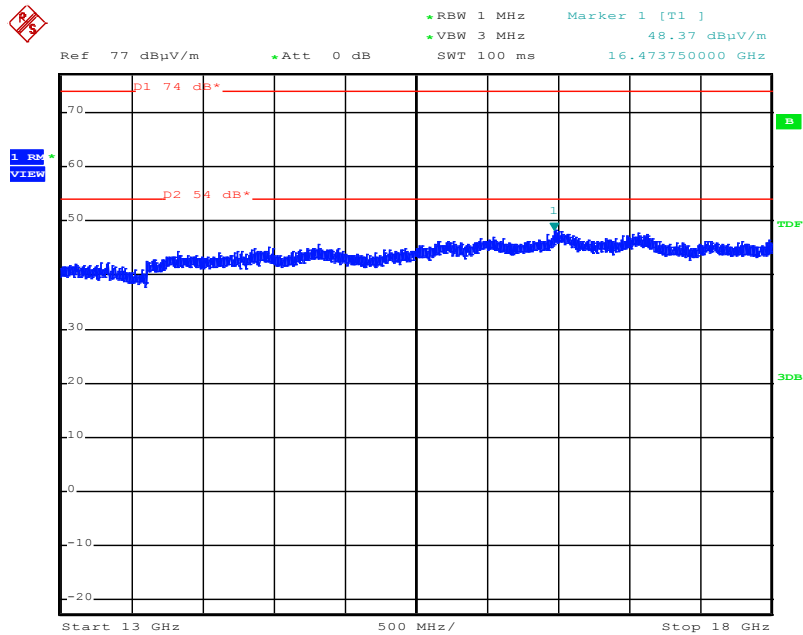
8 GHz to 13 GHz



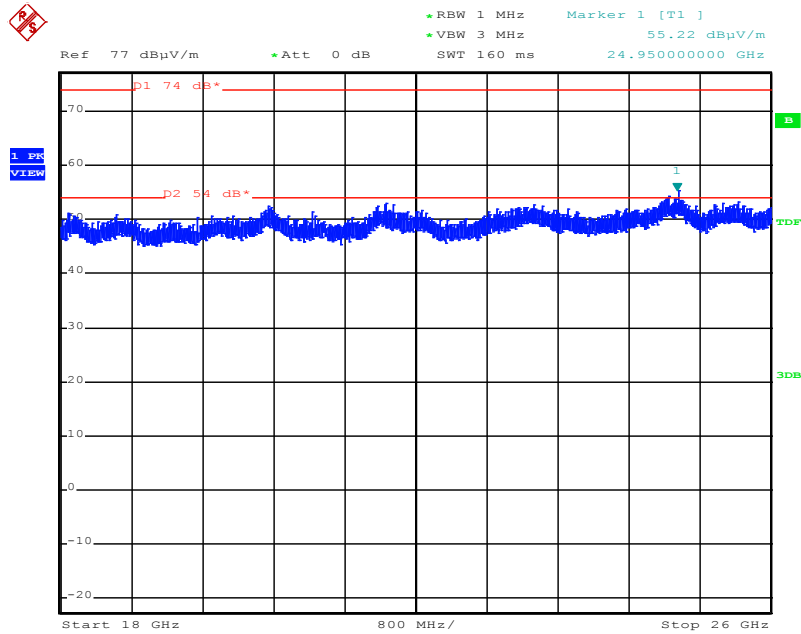
13 GHz to 18 GHz



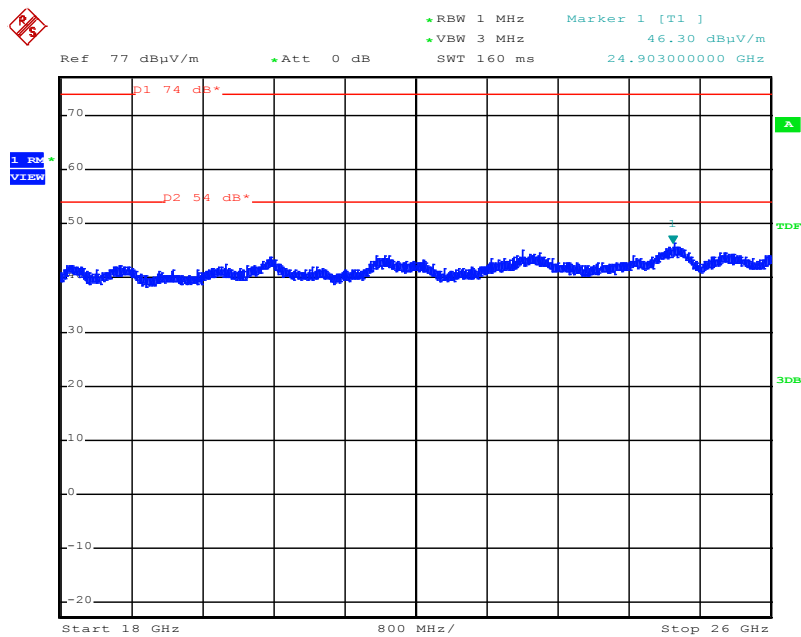
13 GHz to 18 GHz, AV



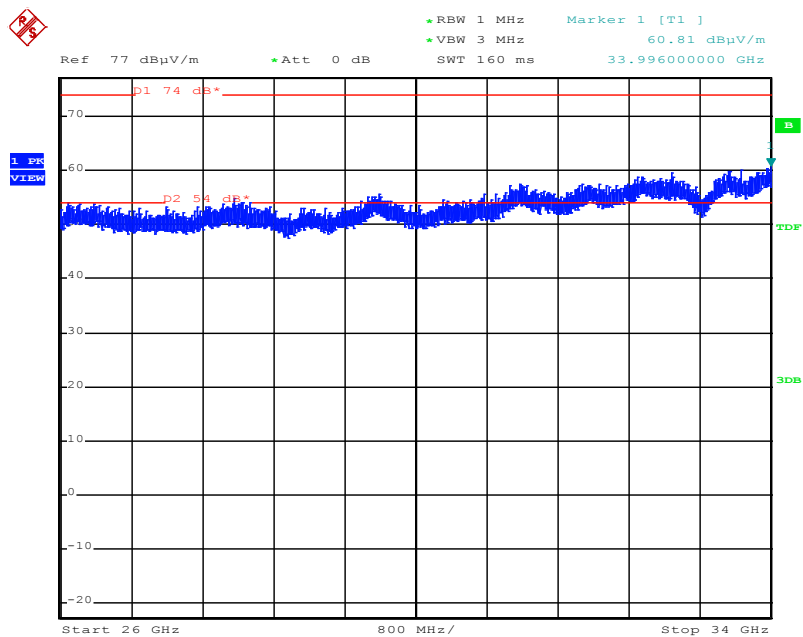
18 GHz to 26 GHz



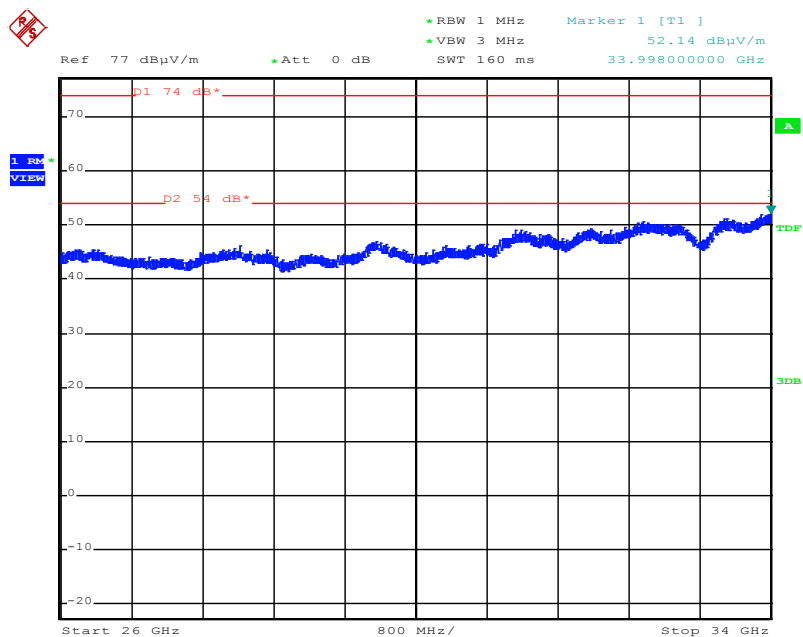
18 GHz to 26 GHz, AV



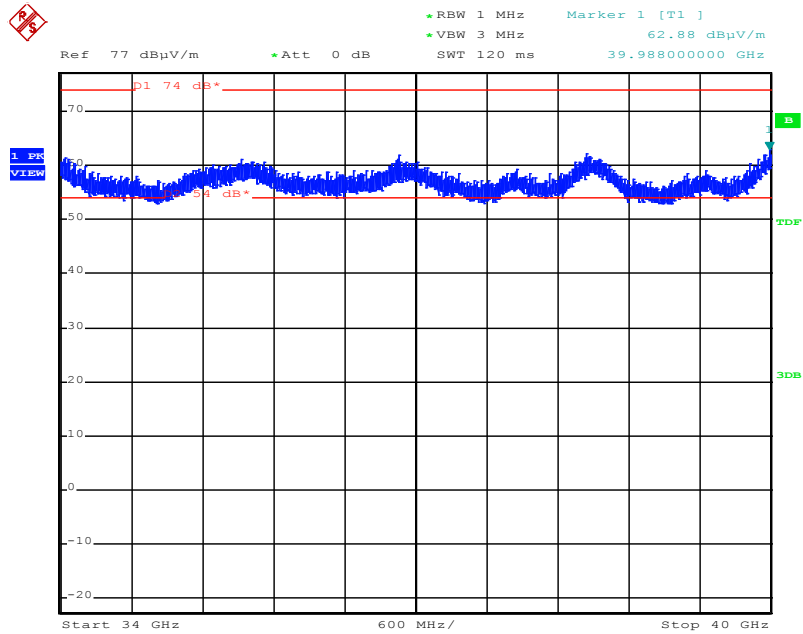
26 GHz to 34 GHz



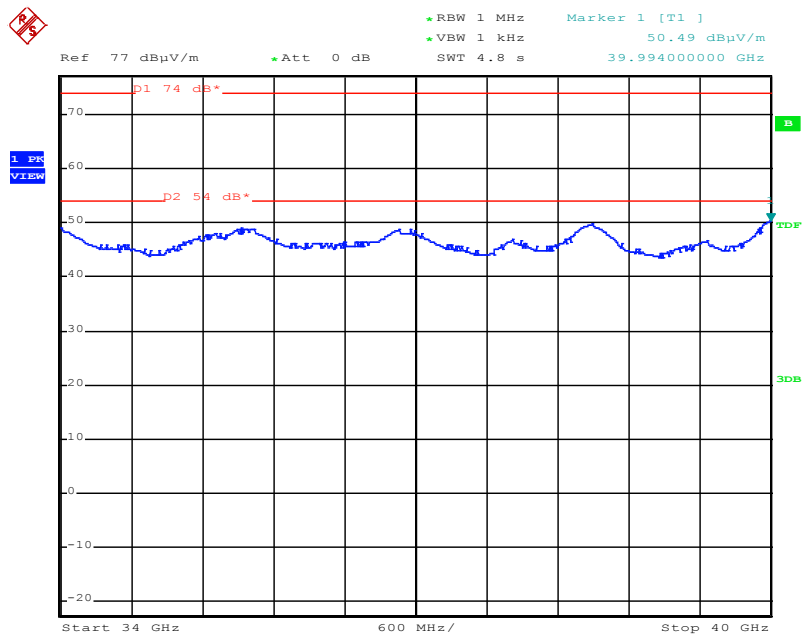
26 GHz to 34 GHz, AV



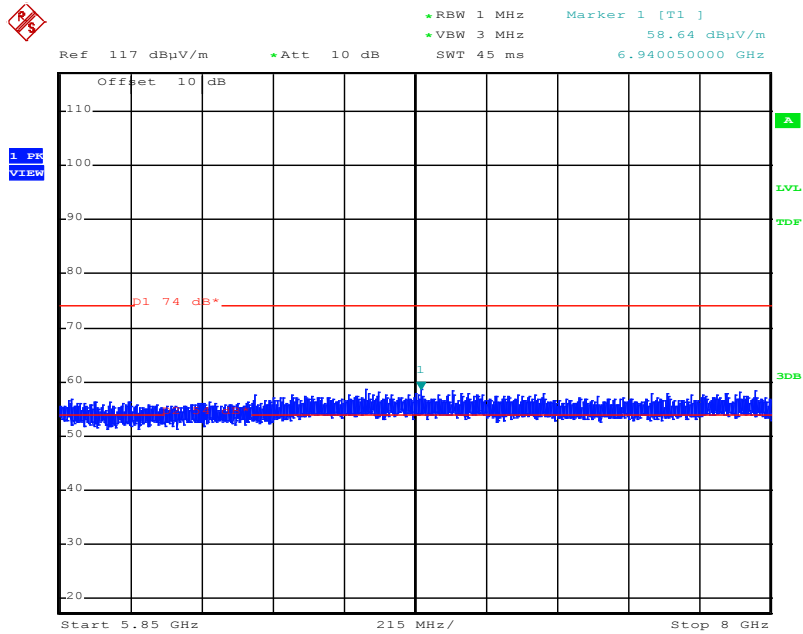
34 GHz to 40 GHz



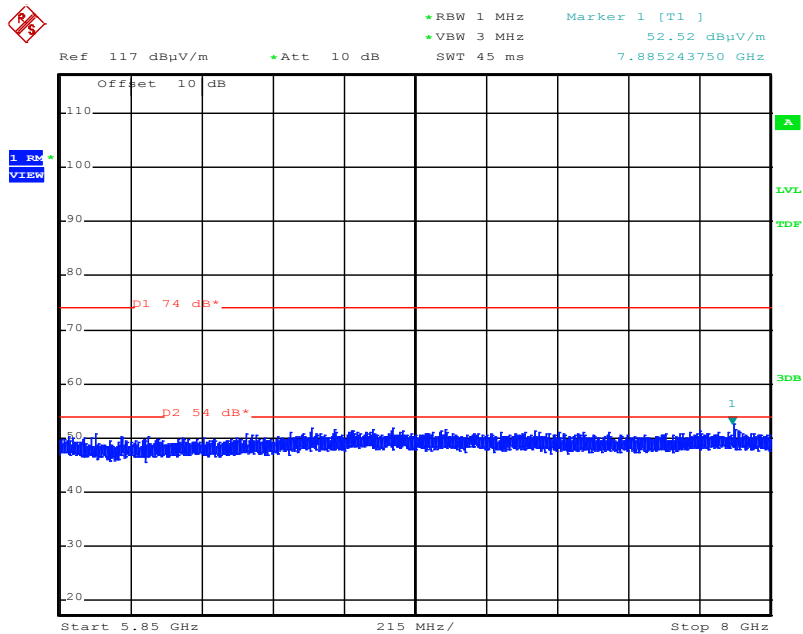
34 GHz to 40 GHz, AV



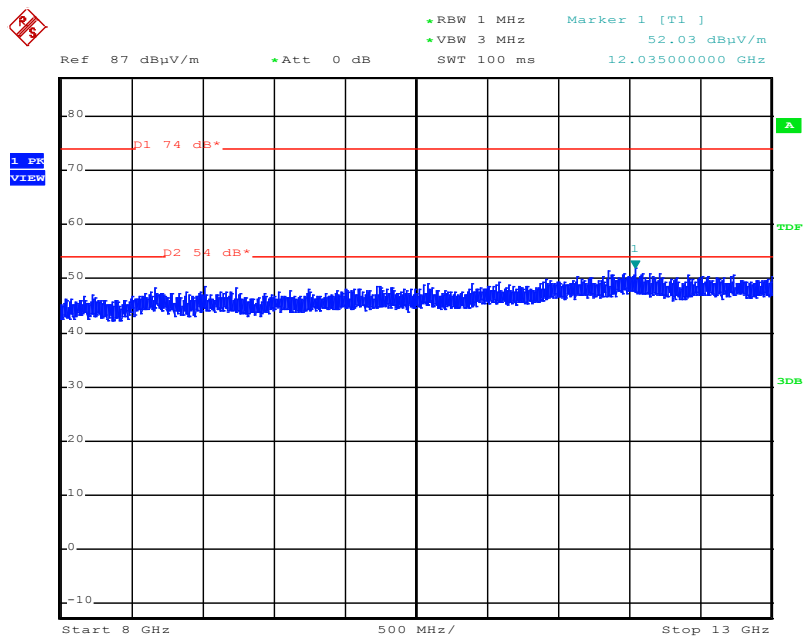
5.85 GHz to 8 GHz



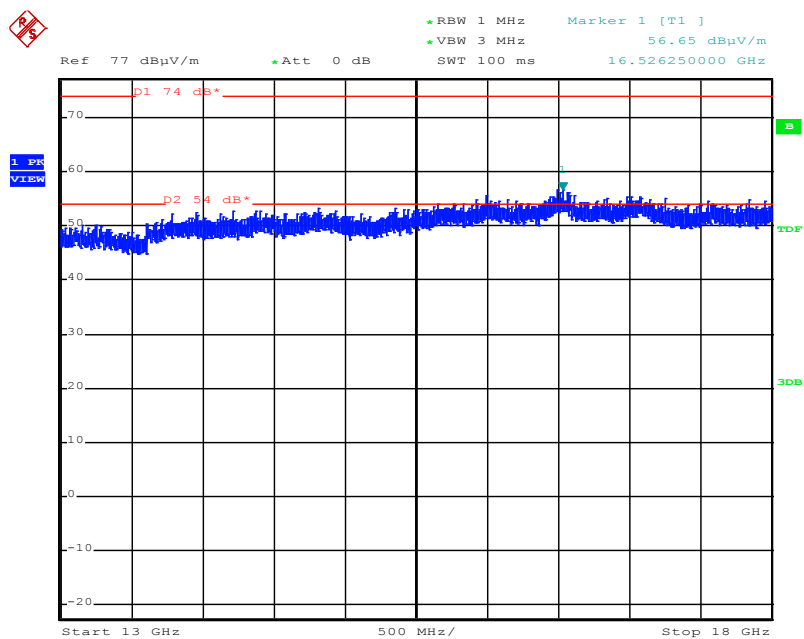
5.85 GHz to 8 GHz, AV



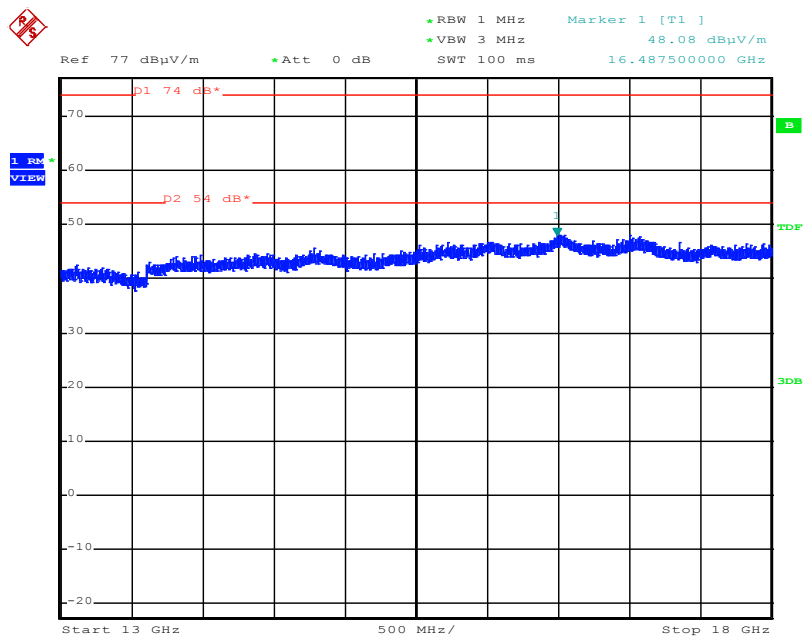
8 GHz to 13 GHz



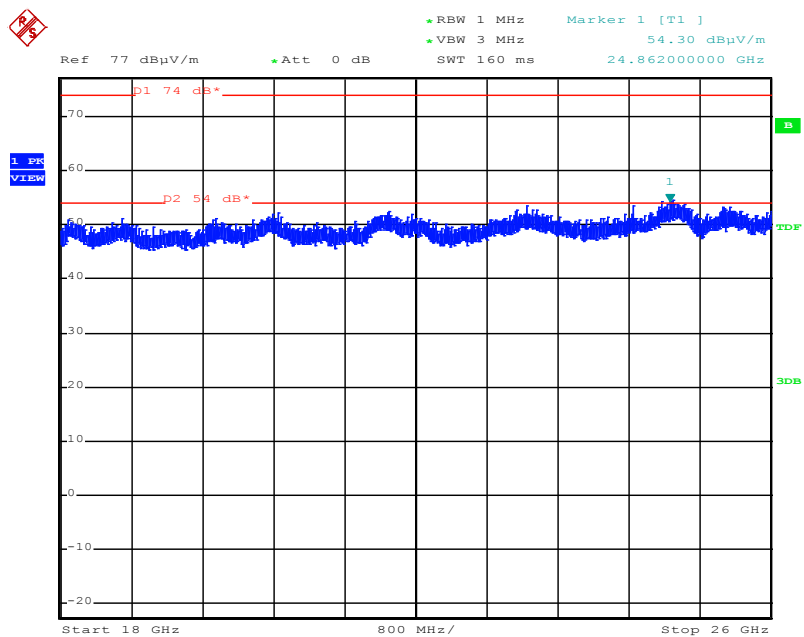
13 GHz to 18 GHz



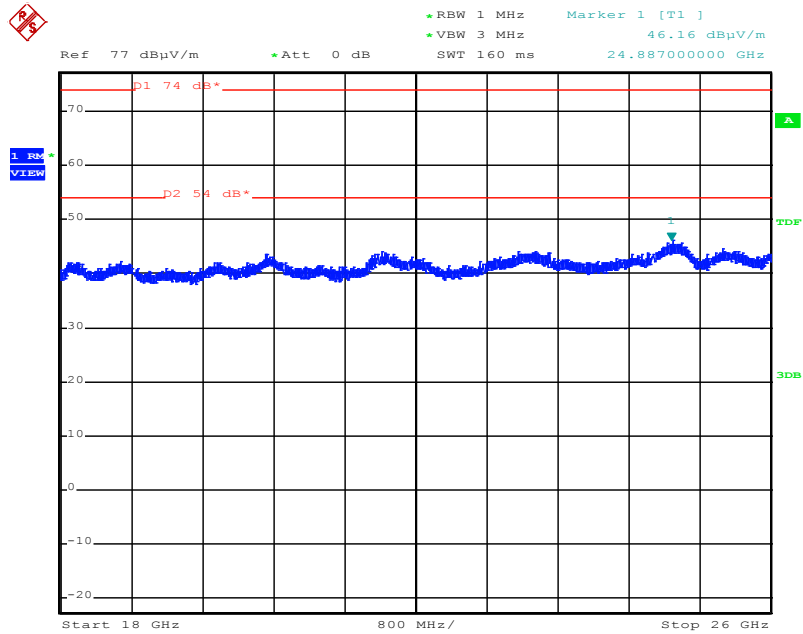
13 GHz to 18 GHz, AV



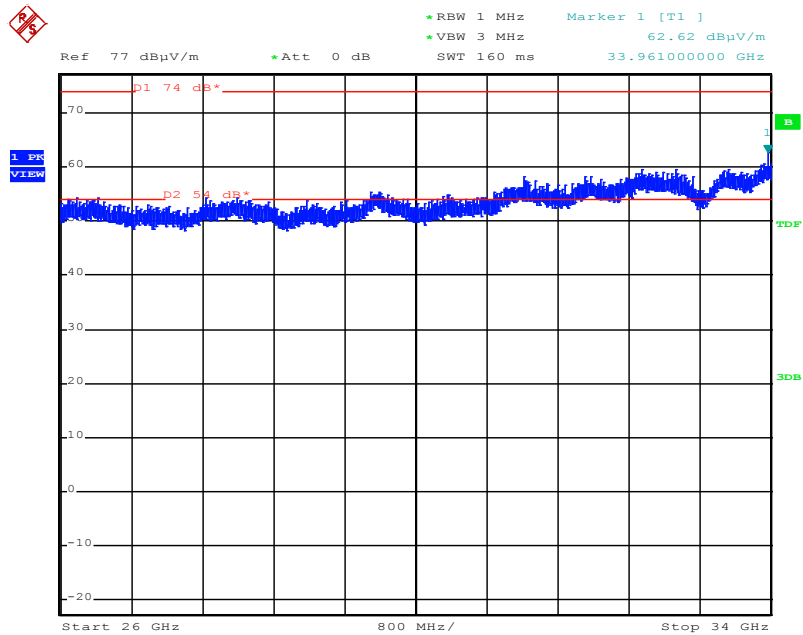
18 GHz to 26 GHz



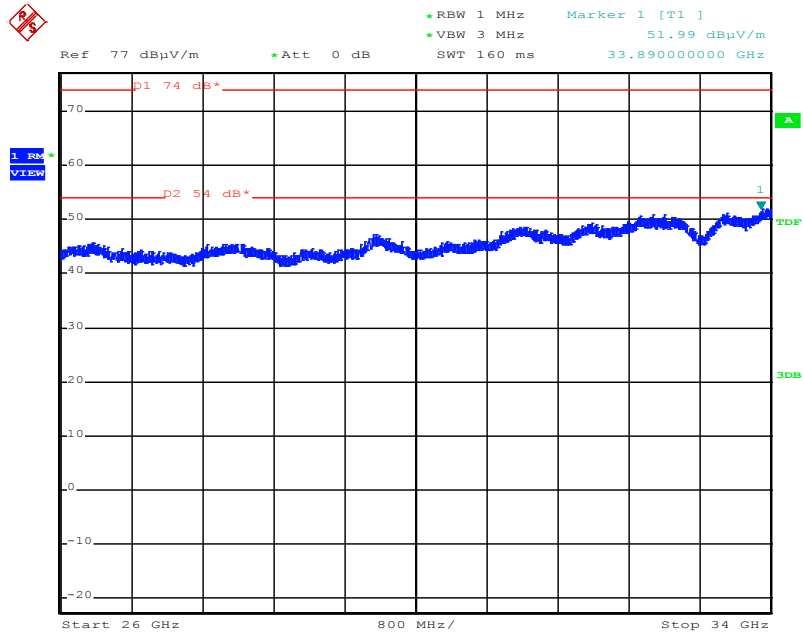
18 GHz to 26 GHz, AV



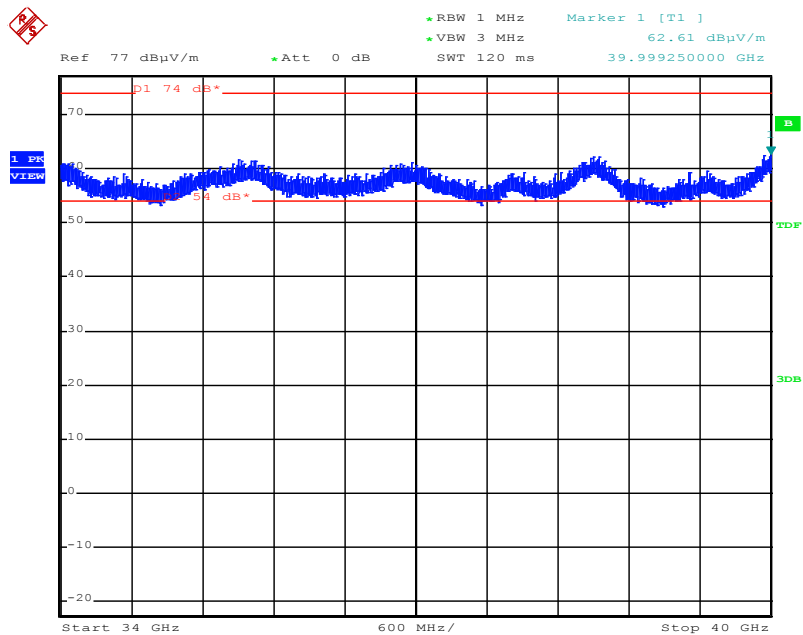
26 GHz to 34 GHz



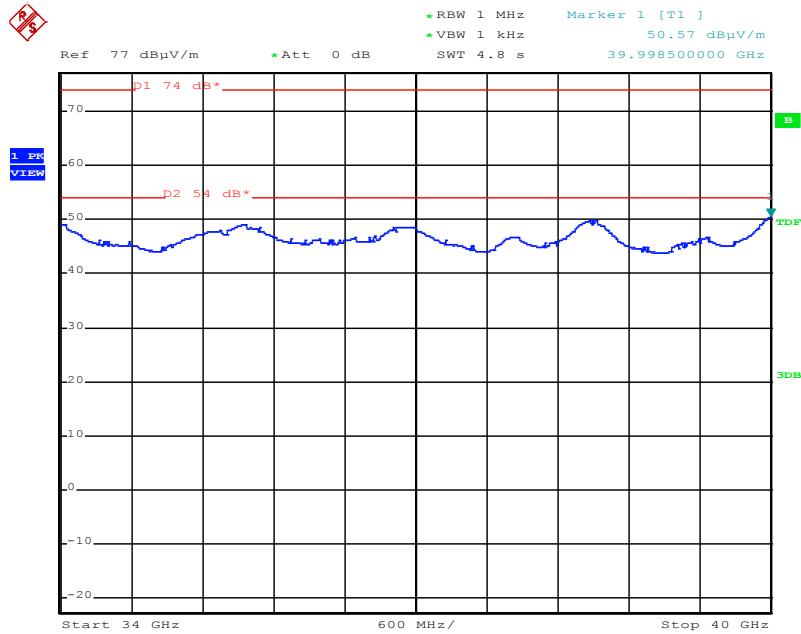
26 GHz to 34 GHz, AV



34 GHz to 40 GHz

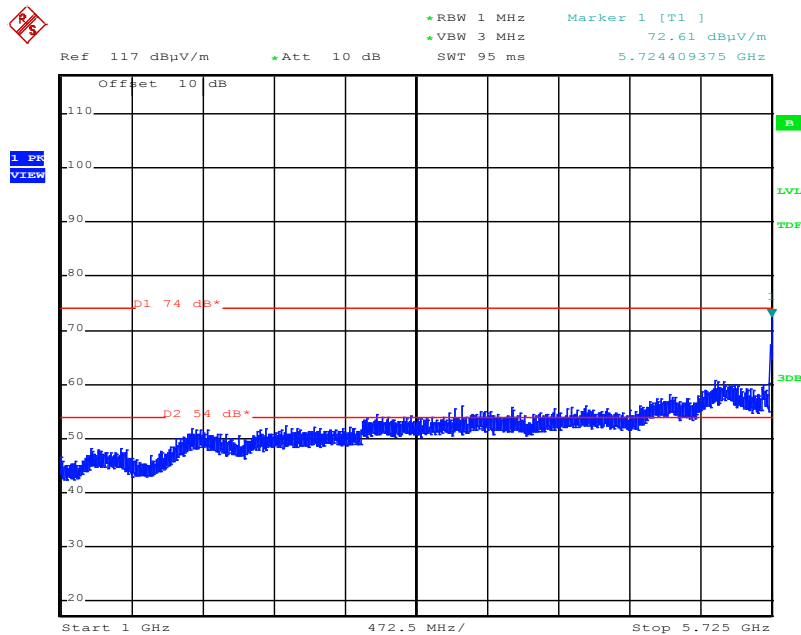


34 GHz to 40 GHz, AV

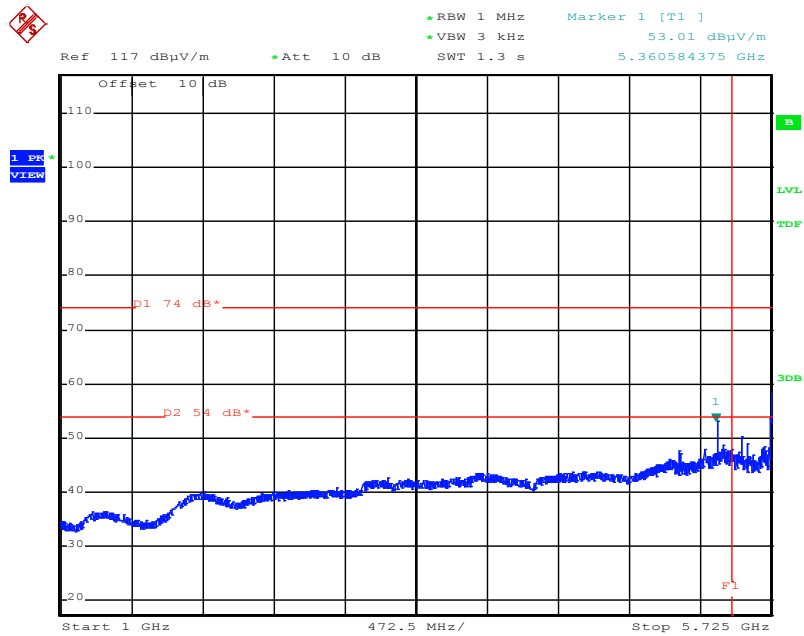


1.2.8 Plots of 802.11n, HT40, Ch149up, 2 TX, MCS8, P17, antenna group 2 (9 dBi)

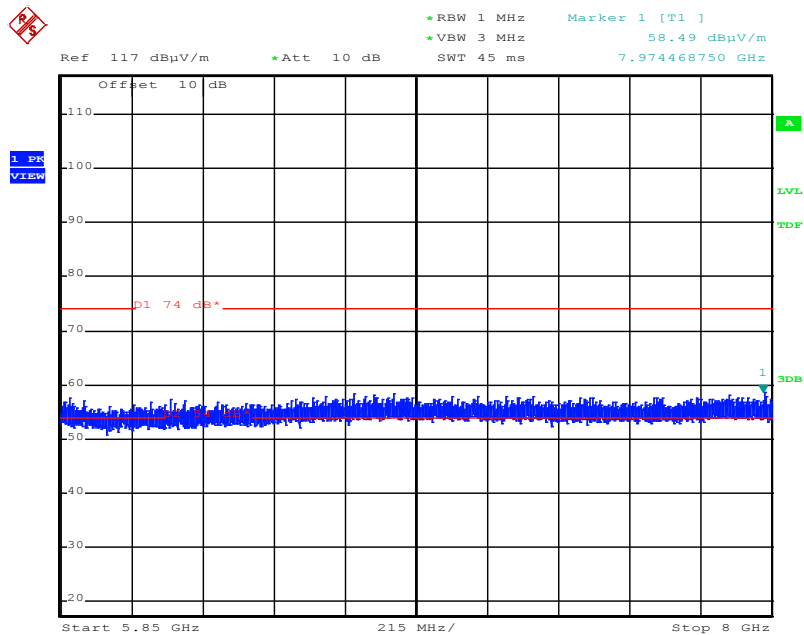
1 GHz to 5.725 GHz



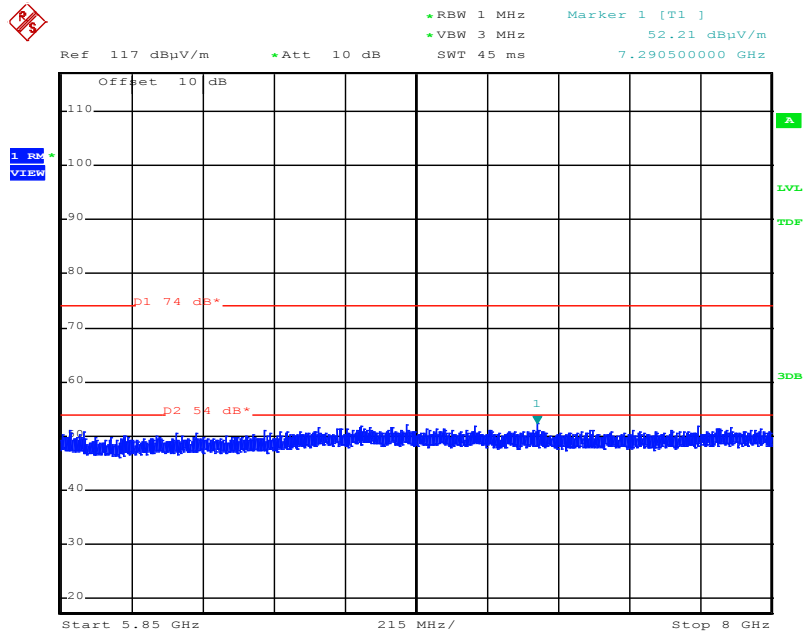
1 GHz to 5.725 GHz, AV



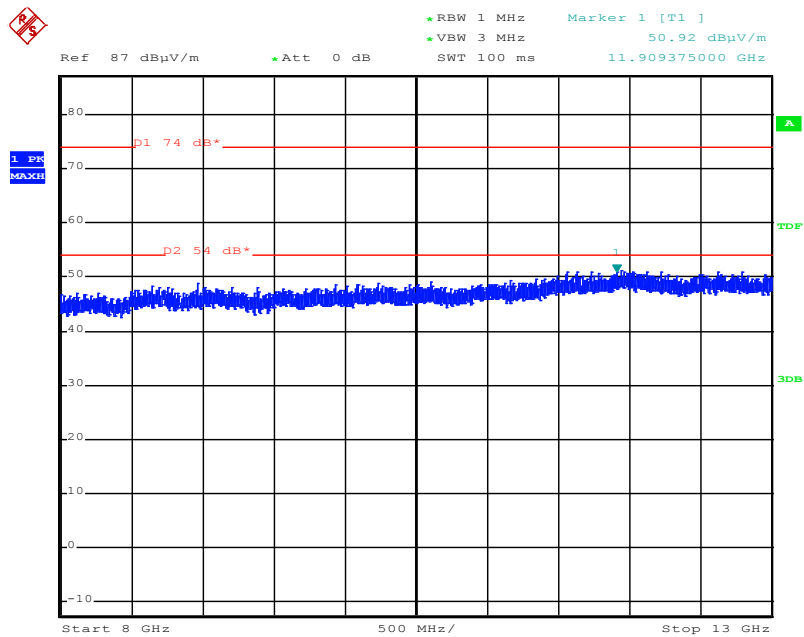
5.85 GHz to 8 GHz



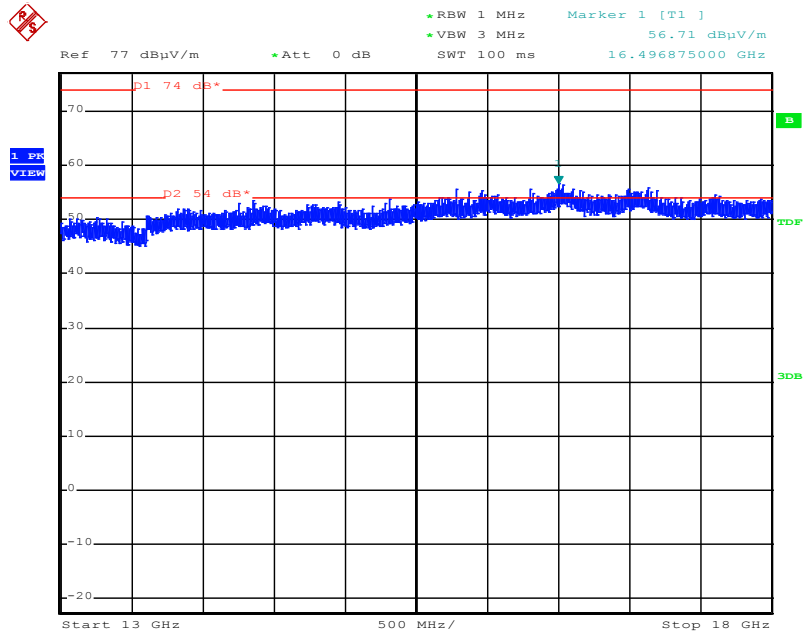
5.85 GHz to 8 GHz, AV



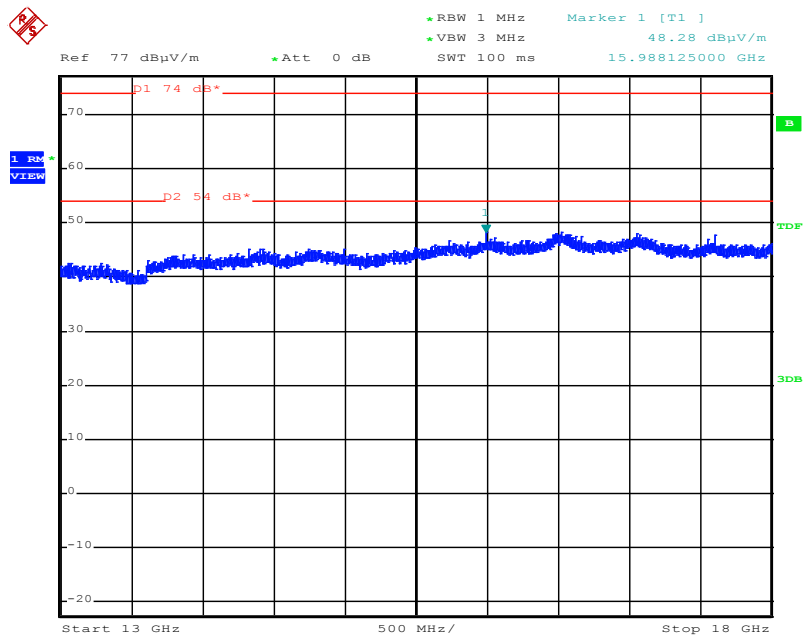
8 GHz to 13 GHz



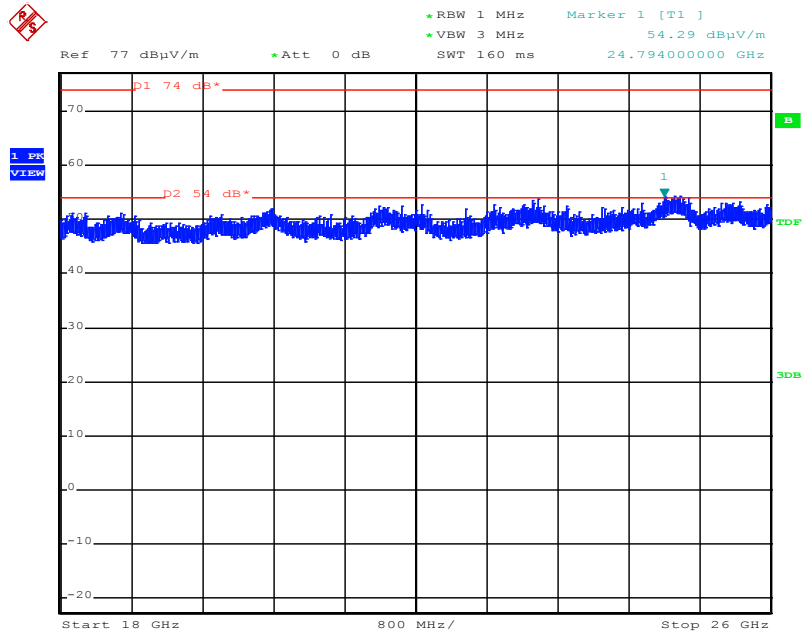
13 GHz to 18 GHz



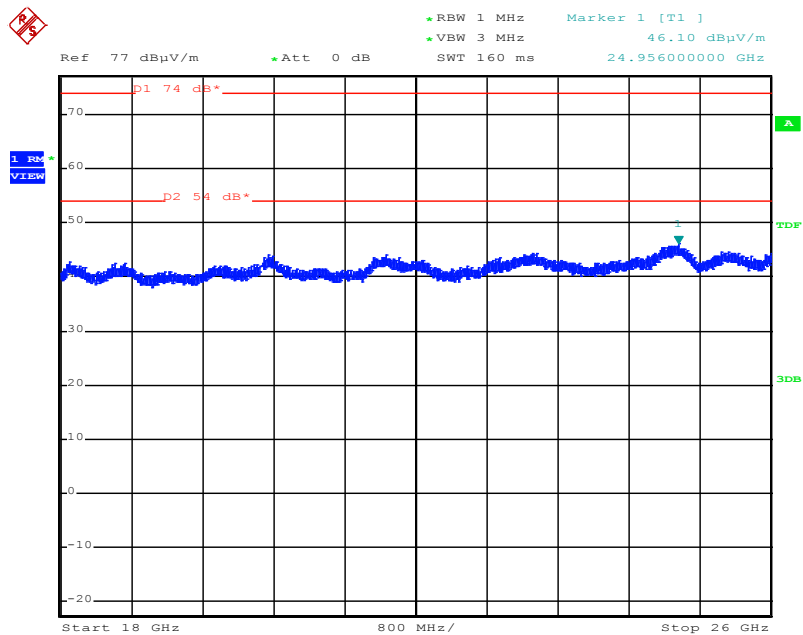
13 GHz to 18 GHz, AV



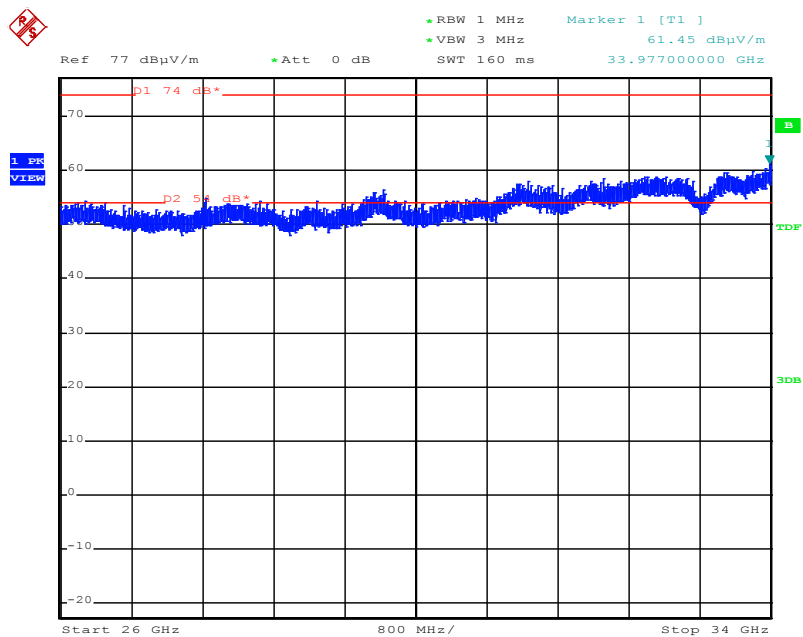
18 GHz to 26 GHz



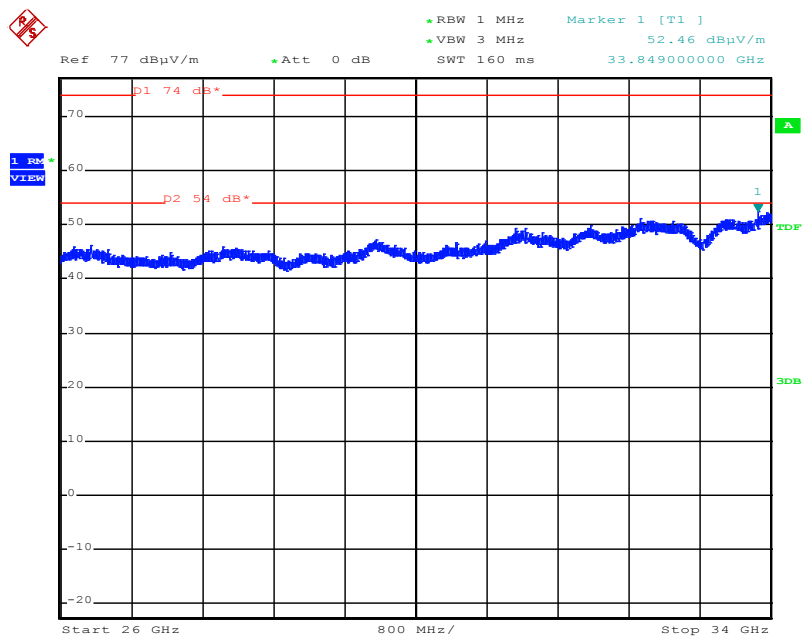
18 GHz to 26 GHz, AV



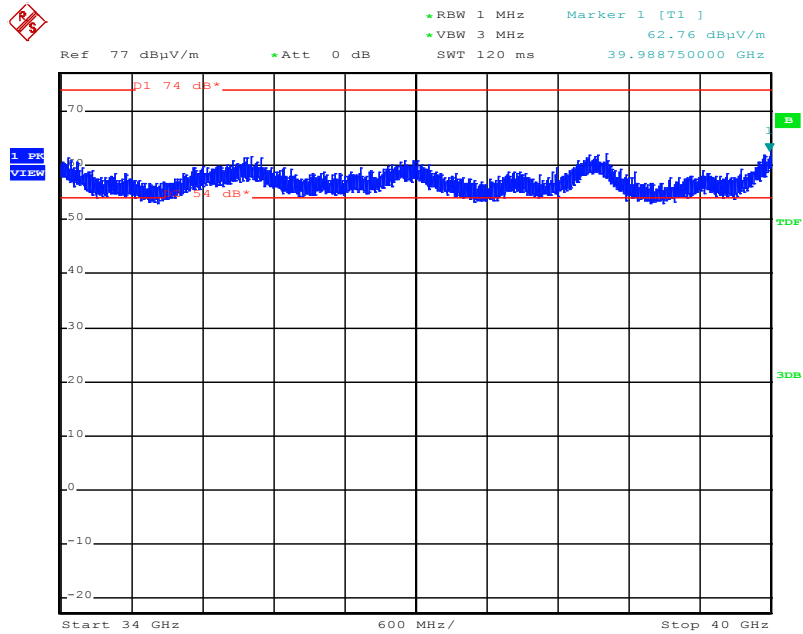
26 GHz to 34 GHz



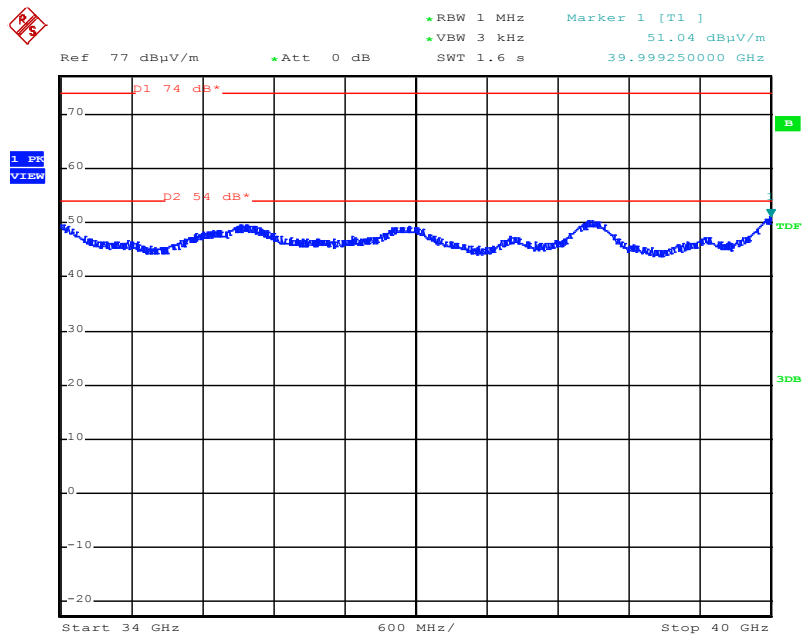
26 GHz to 34 GHz, AV



34 GHz to 40 GHz

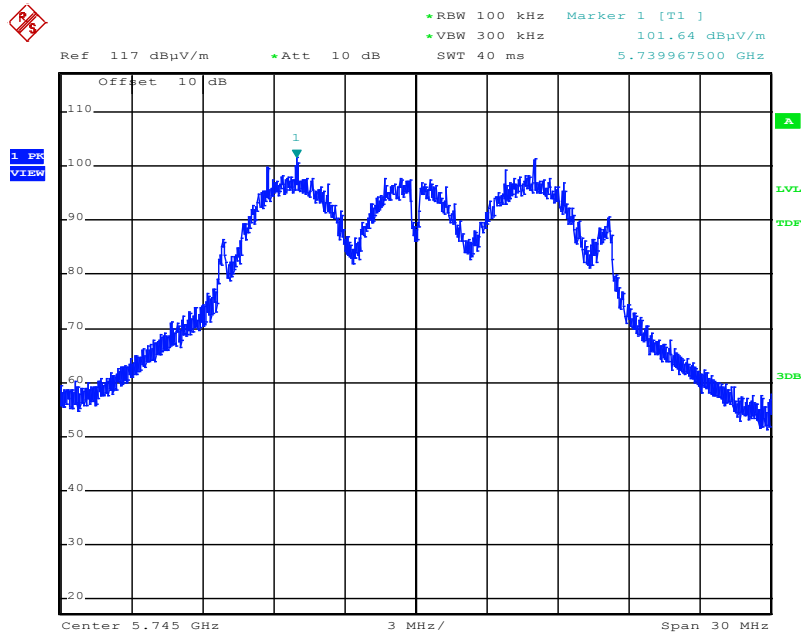


34 GHz to 40 GHz, AV

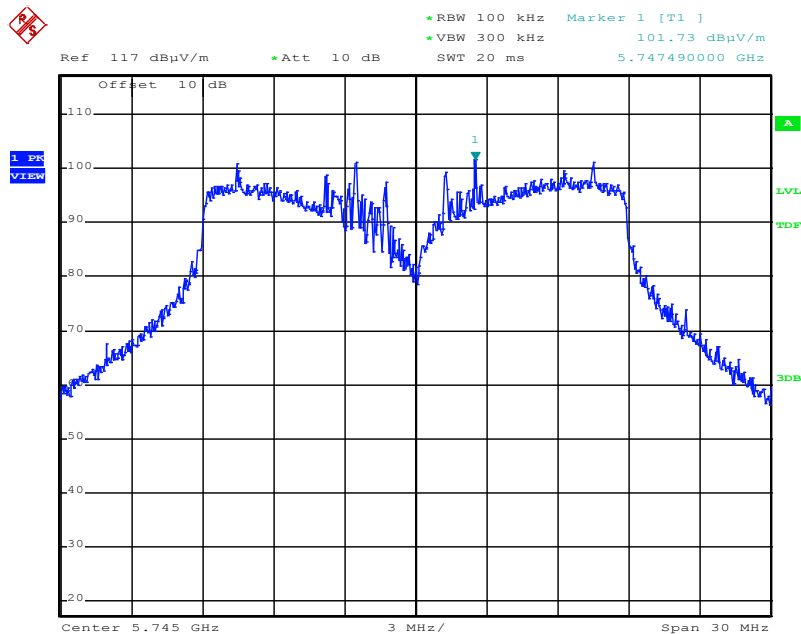


1.2.9 Determination of the reference level, 5 GHz range, P14, antenna group 3 (14 dBi):

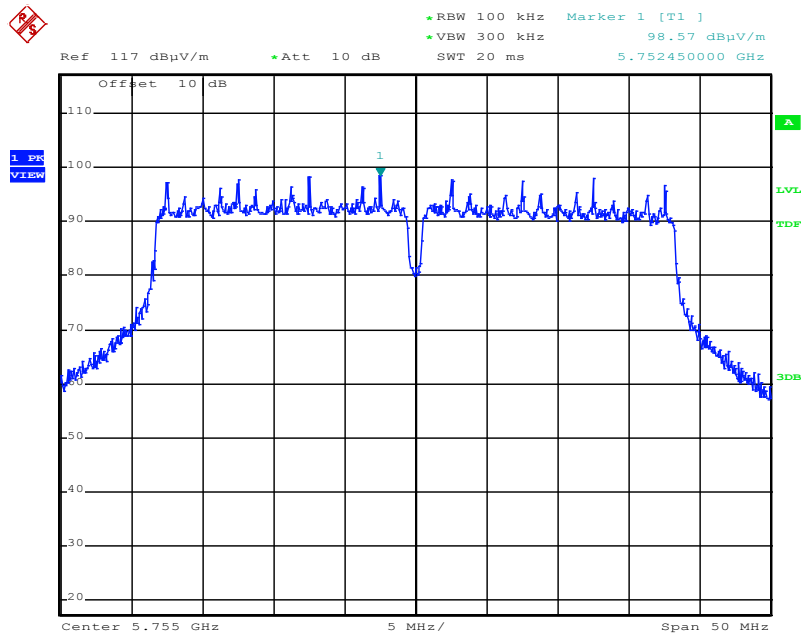
Determination of the reference level, 802.11a, 5 GHz



Determination of the reference level, 802.11n, HT20, 5 GHz

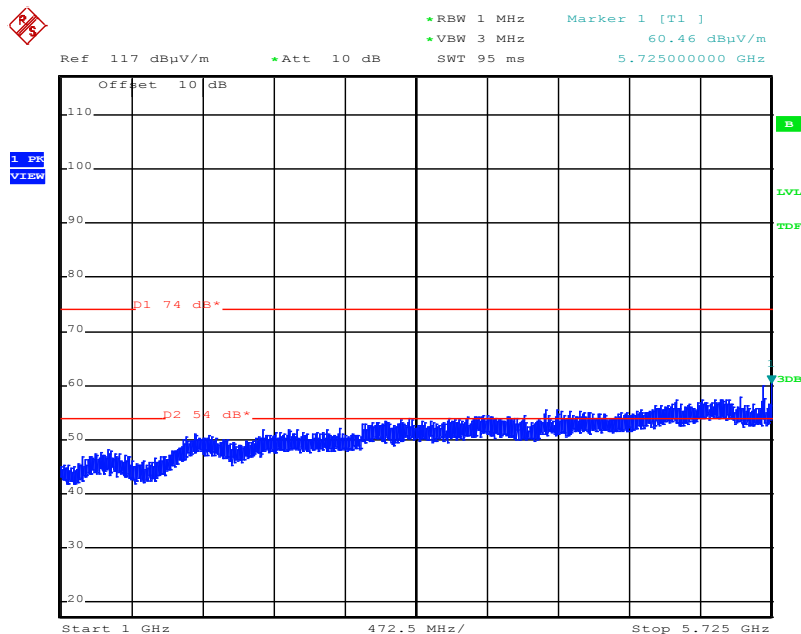


Determination of the reference level, 802.11n, HT40, 5 GHz

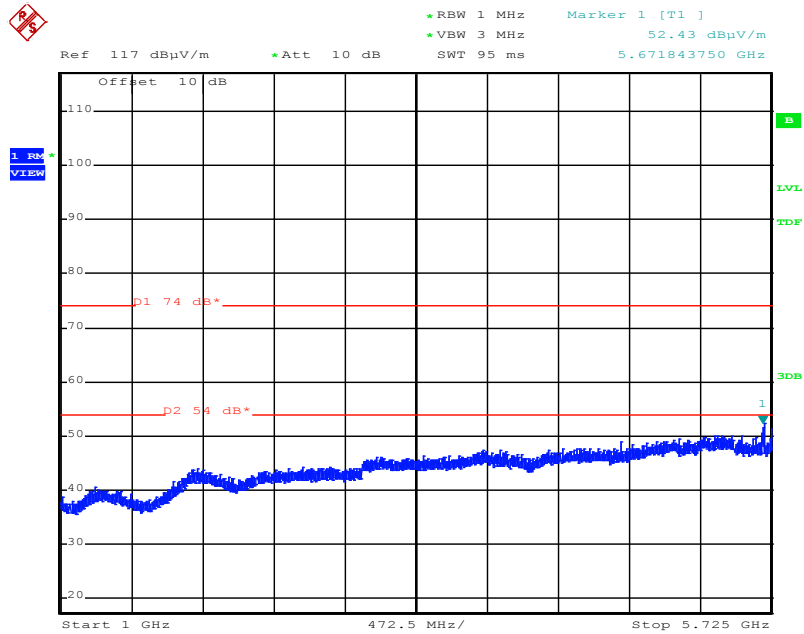


1.2.10 Plots of 802.11a, Ch149, 2 TX, 6 Mbps, P14, antenna group 3 (14 dBi)

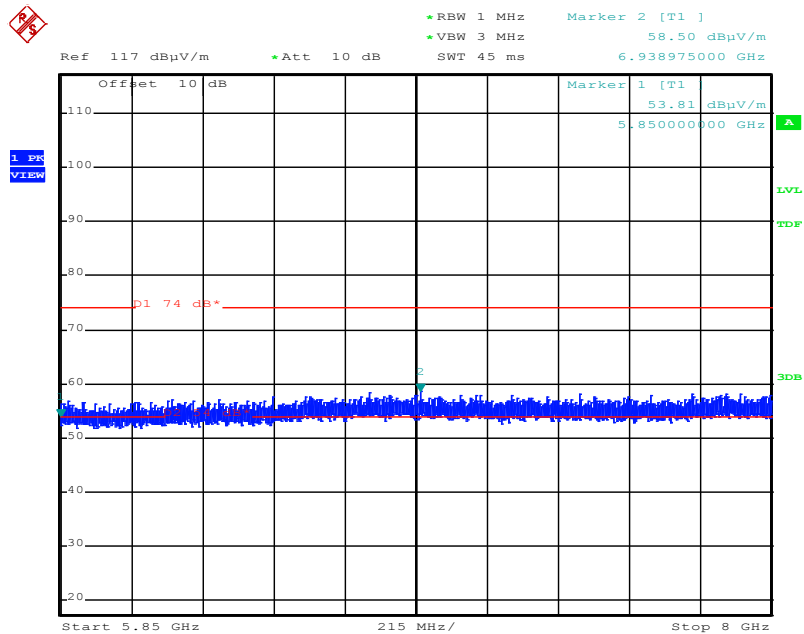
1 GHz to 5.725 GHz



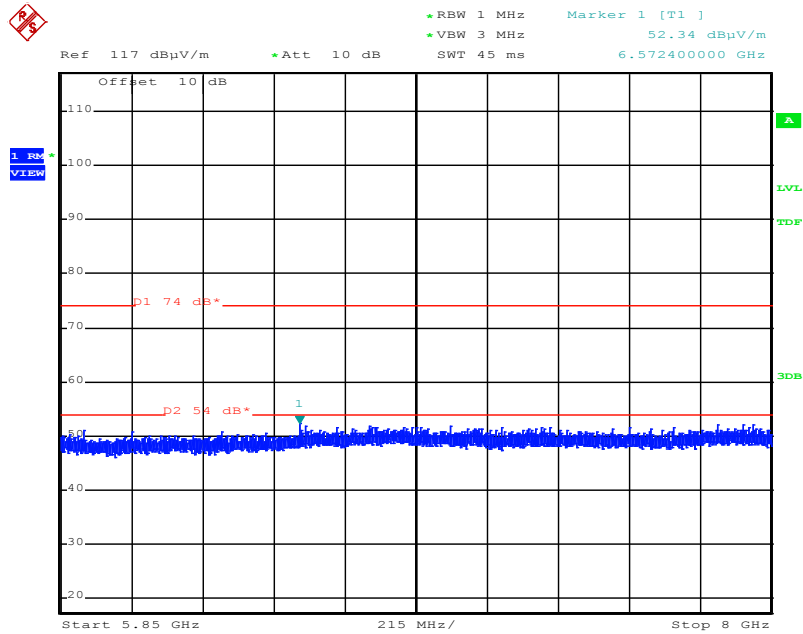
1 GHz to 5.725 GHz, AV



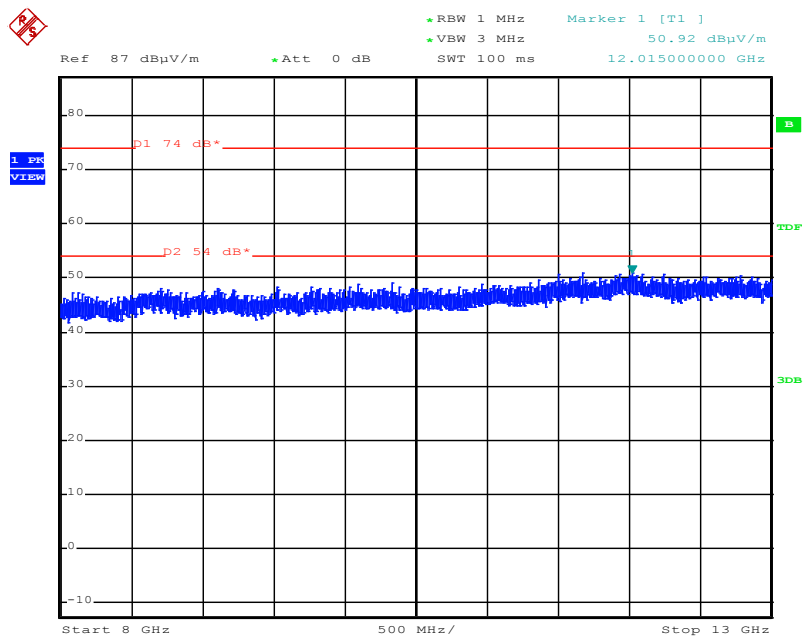
5.85 GHz to 8 GHz



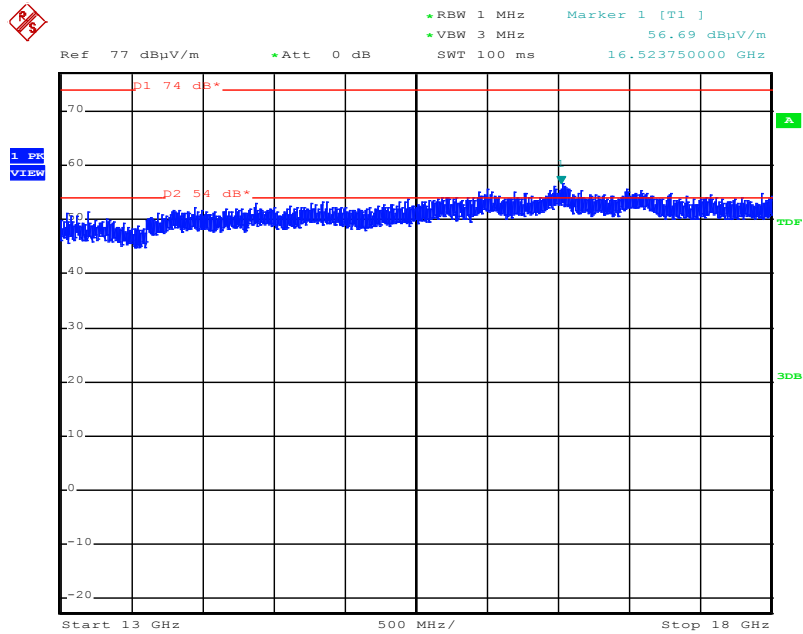
5.85 GHz to 8 GHz, AV



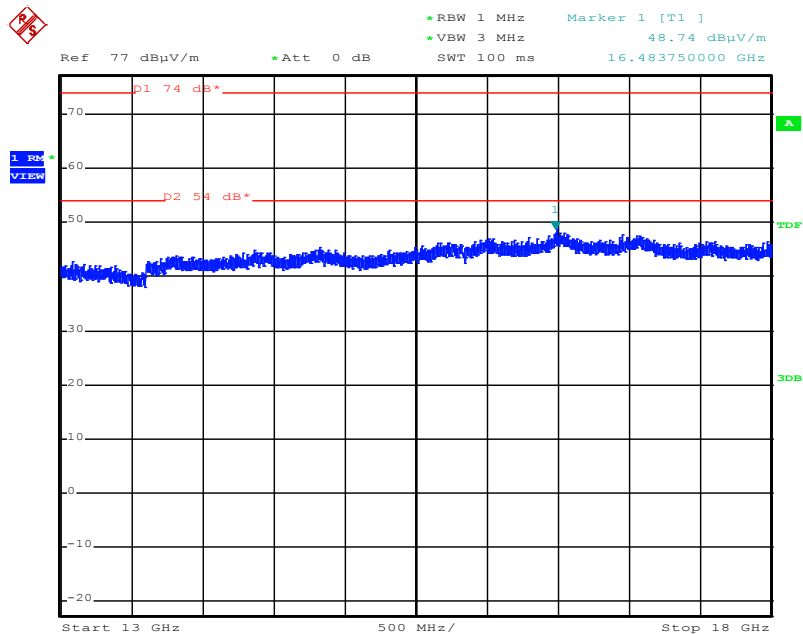
8 GHz to 13 GHz



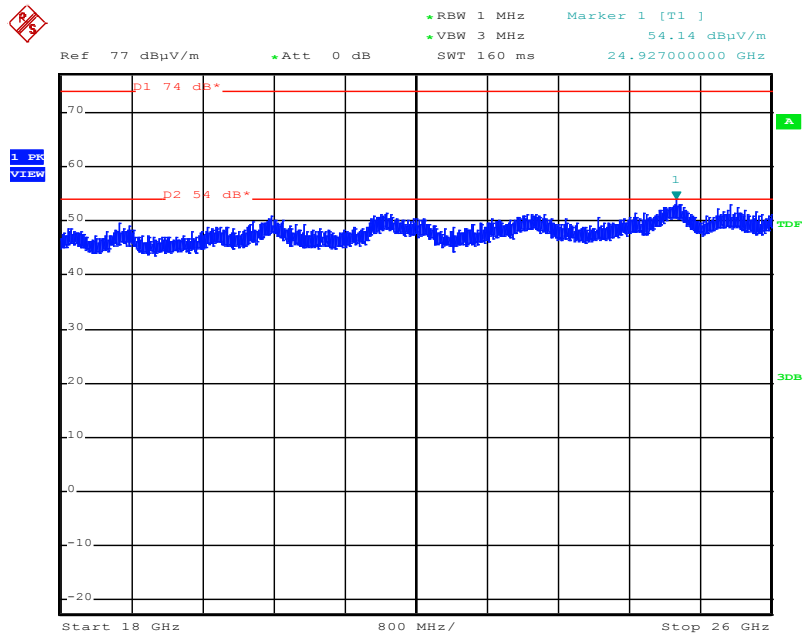
13 GHz to 18 GHz



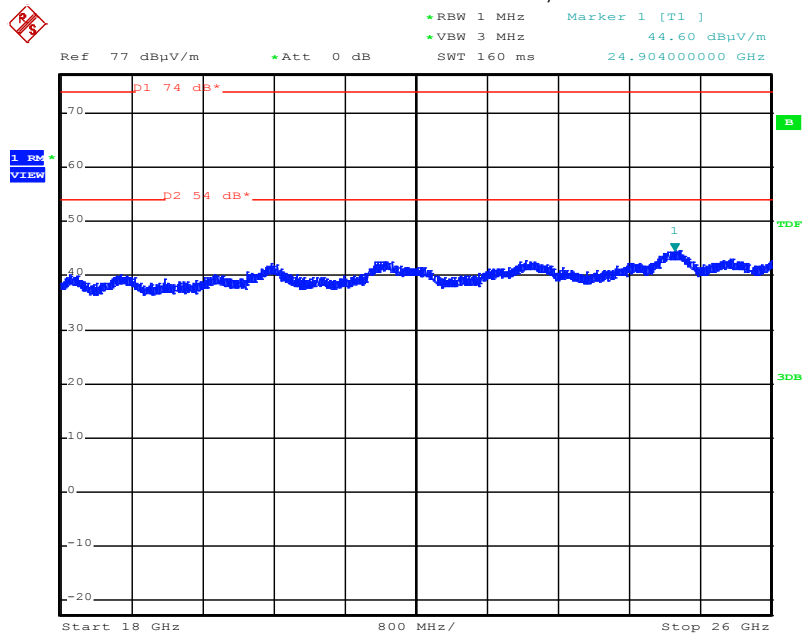
13 GHz to 18 GHz, AV



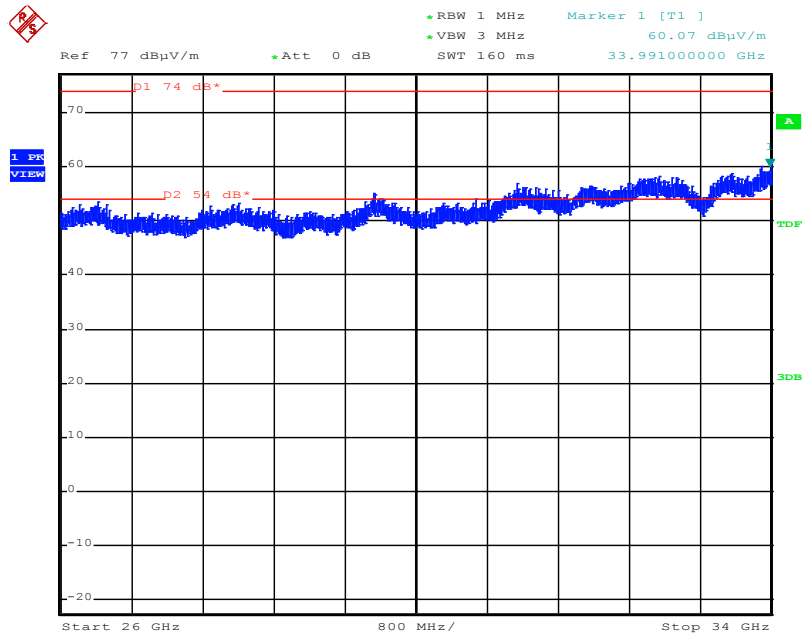
18 GHz to 26 GHz



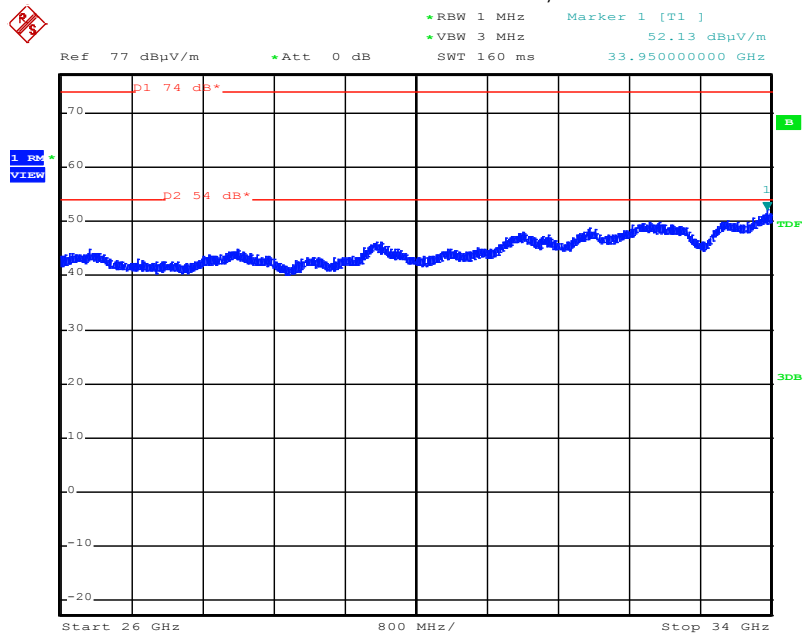
18 GHz to 26 GHz, AV



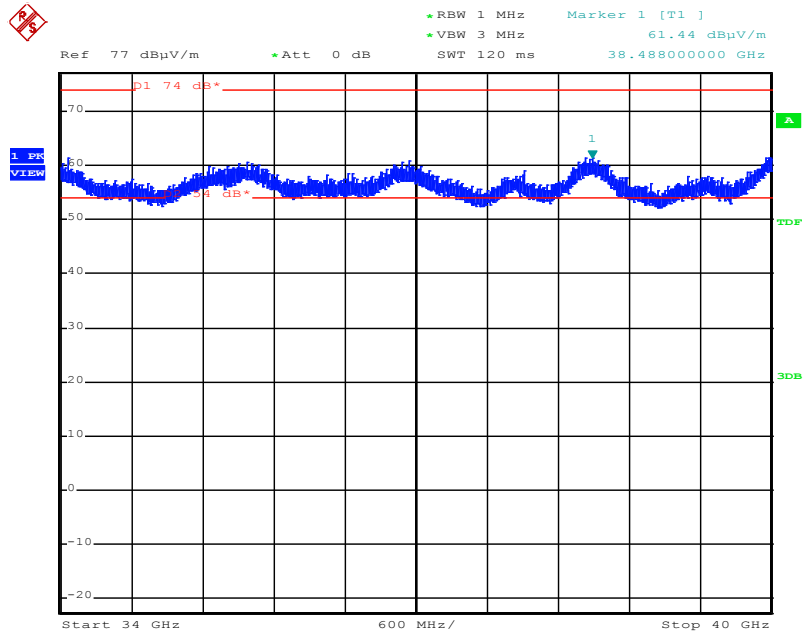
26 GHz to 34 GHz



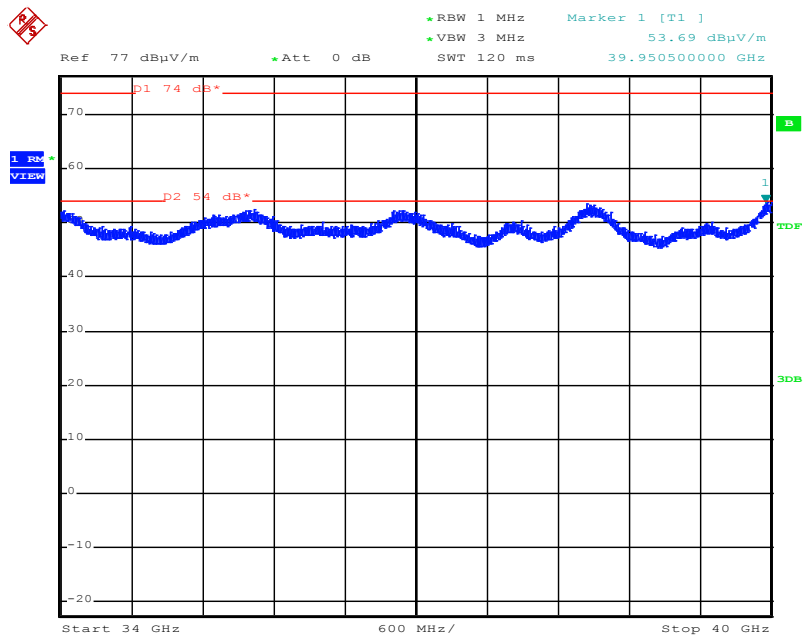
26 GHz to 34 GHz, AV



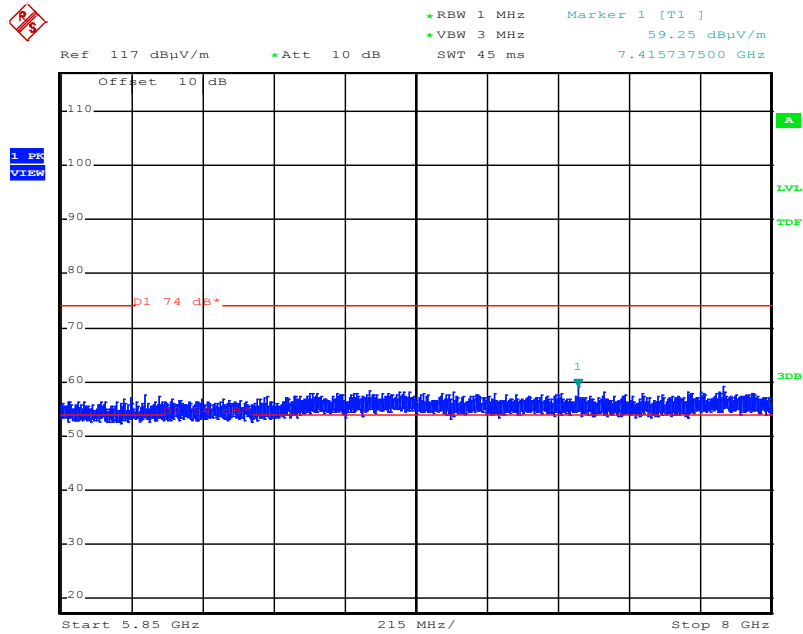
34 GHz to 40 GHz



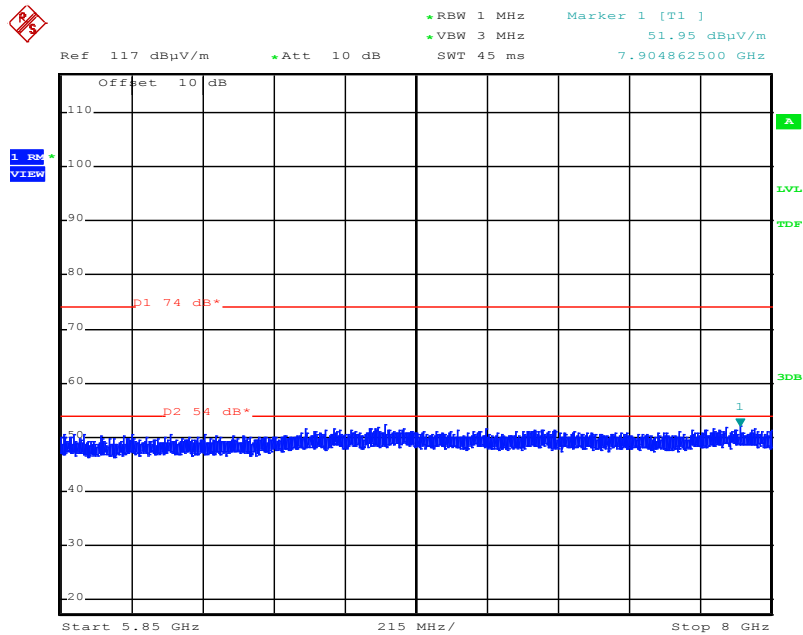
34 GHz to 40 GHz, AV



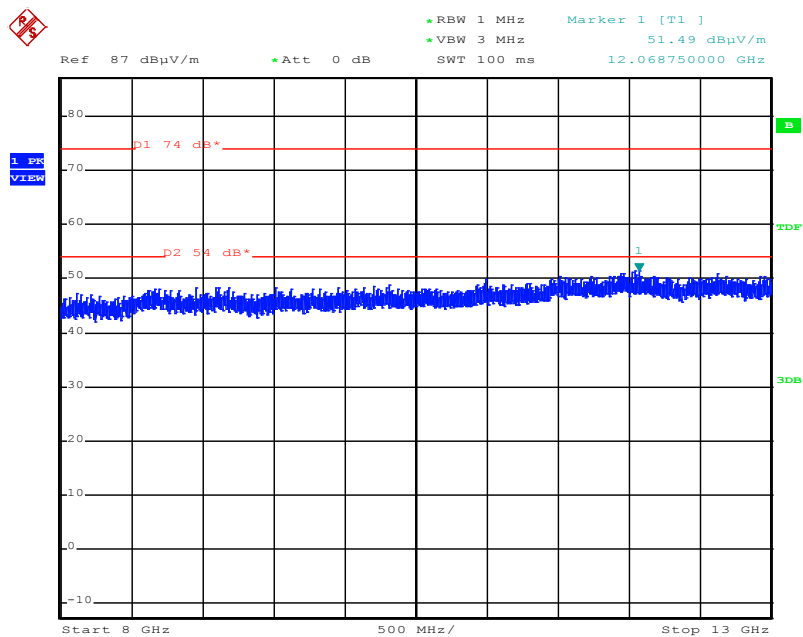
5.85 GHz to 8 GHz



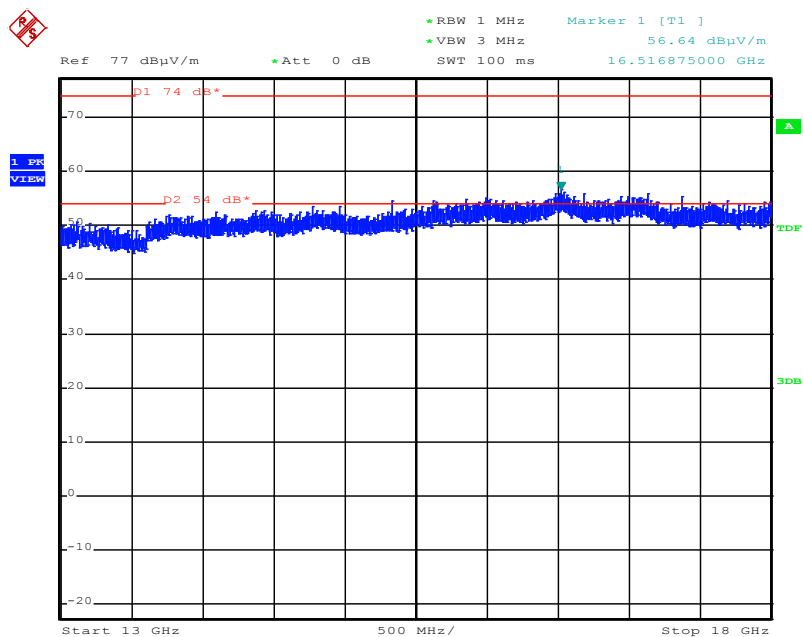
5.85 GHz to 8 GHz, AV



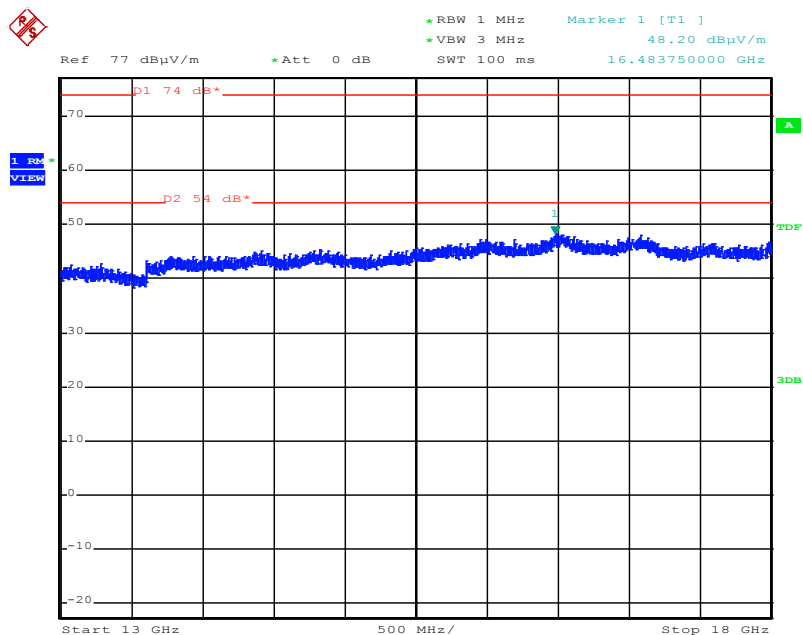
8 GHz to 13 GHz



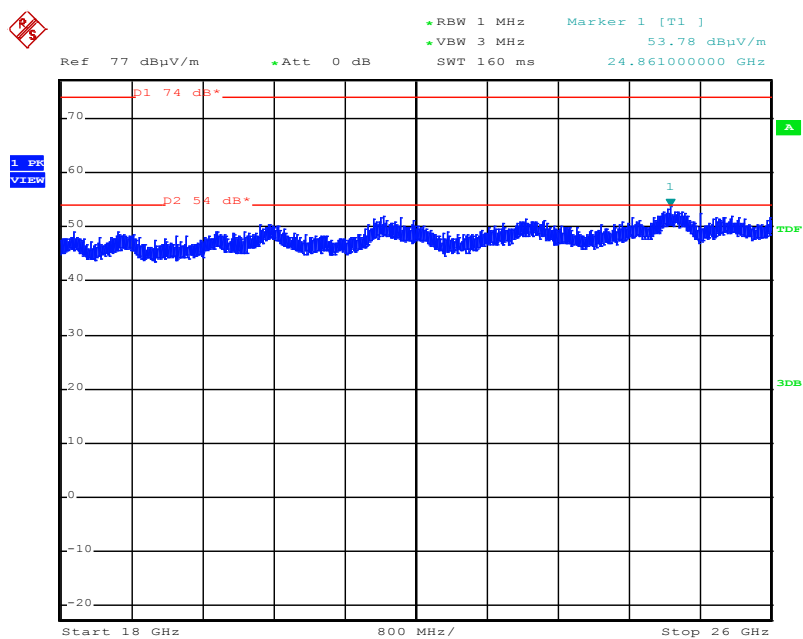
13 GHz to 18 GHz



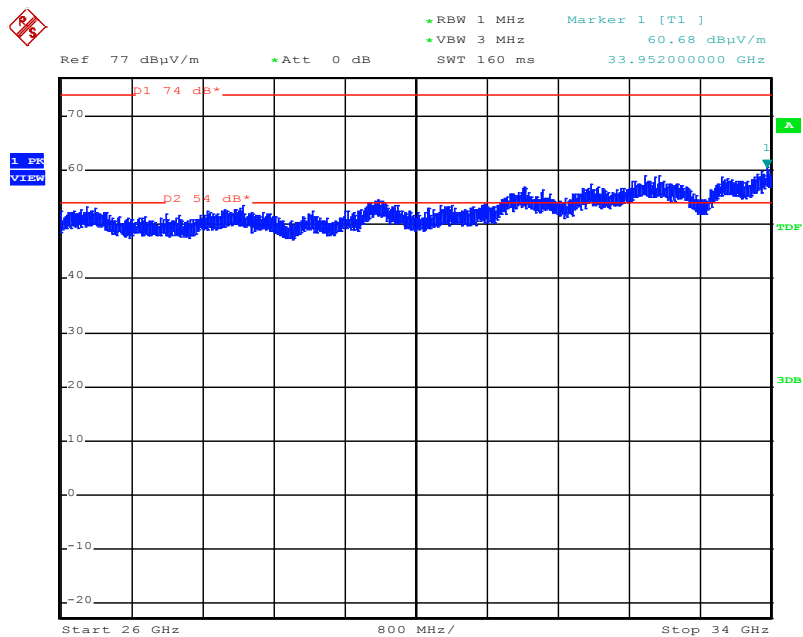
13 GHz to 18 GHz, AV



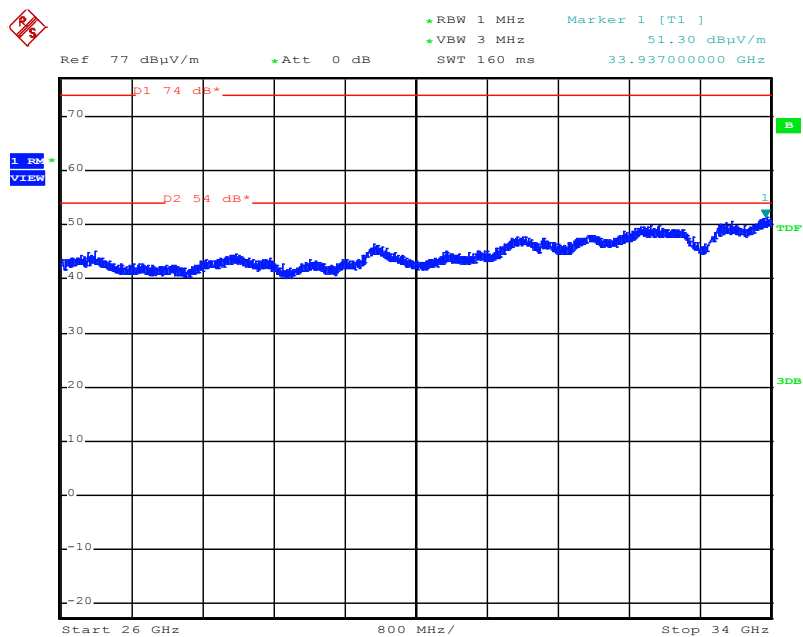
18 GHz to 26 GHz



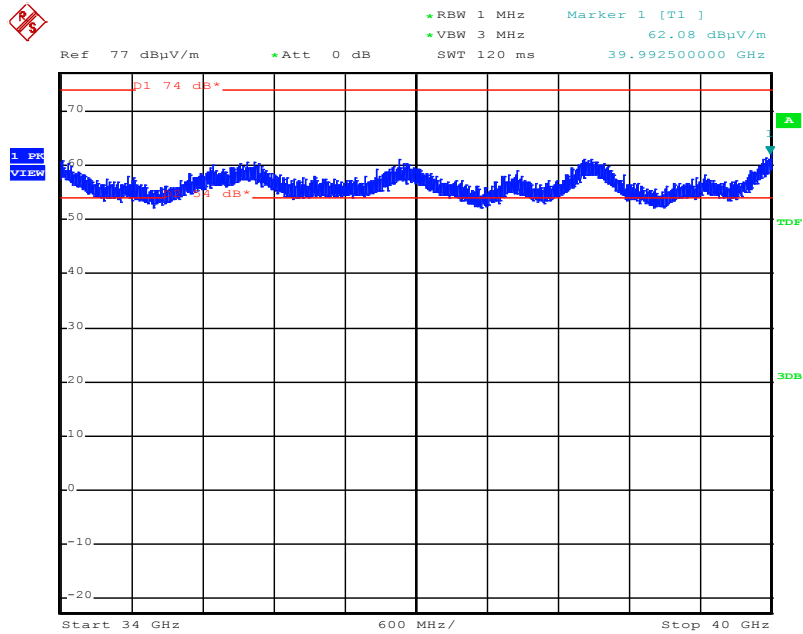
26 GHz to 34 GHz



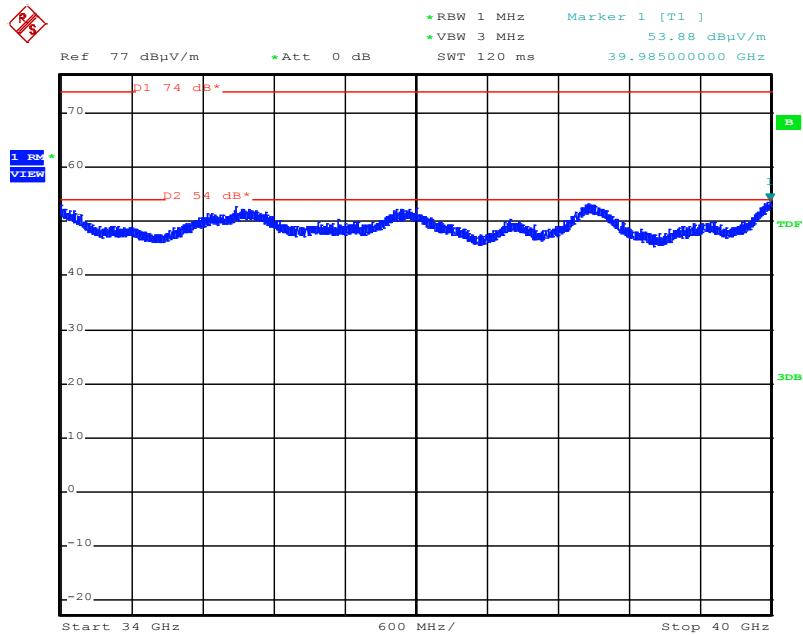
26 GHz to 34 GHz, AV



34 GHz to 40 GHz

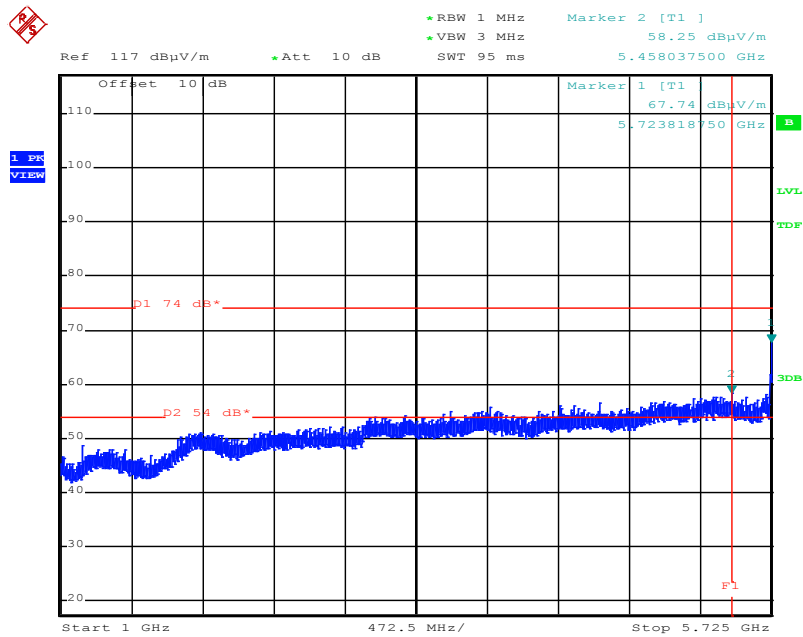


34 GHz to 40 GHz, AV

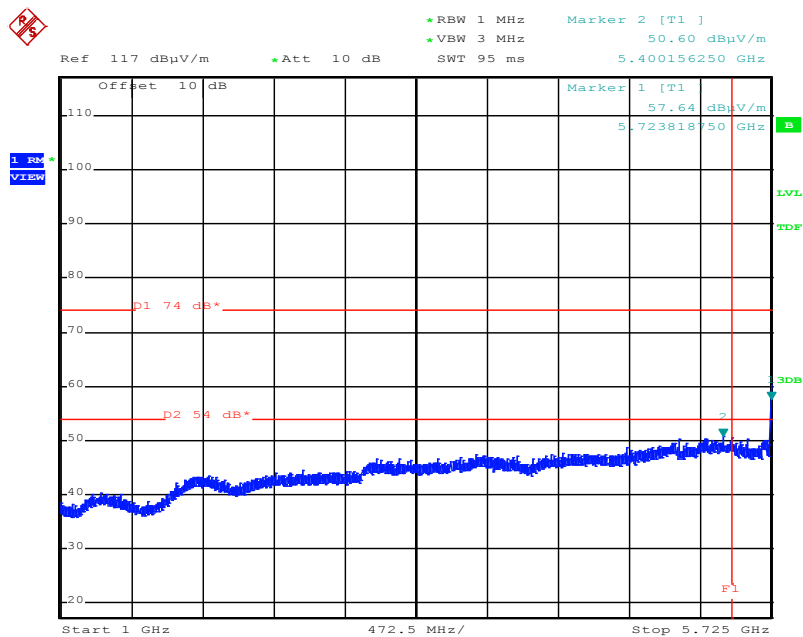


1.2.12 Plots of 802.11n, HT40, Ch149up, 2 TX, MCS8, P14, antenna group 3 (14 dBi)

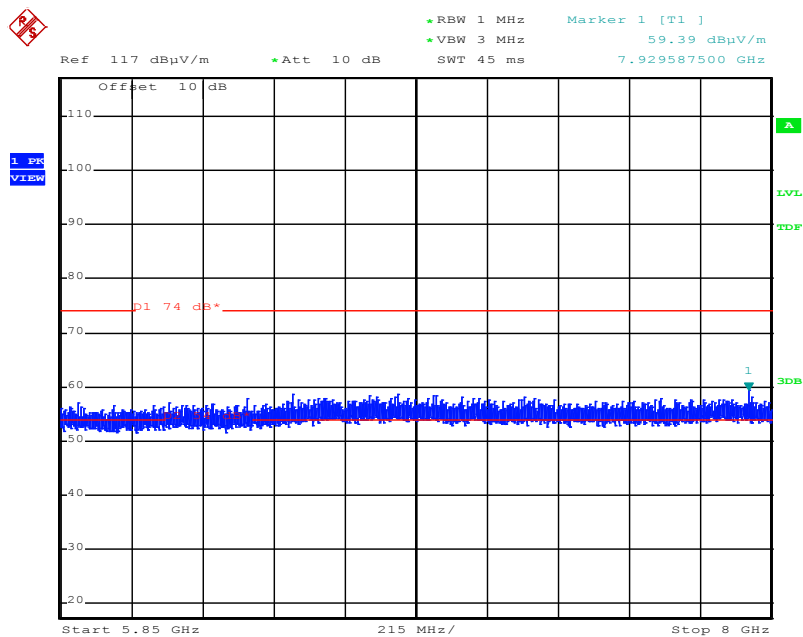
1 GHz to 5.725 GHz



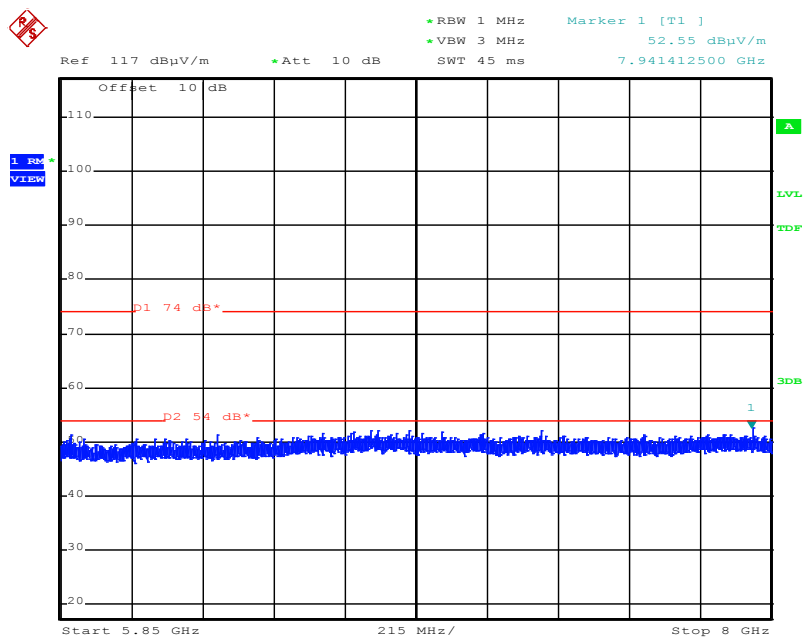
1 GHz to 5.725 GHz, AV



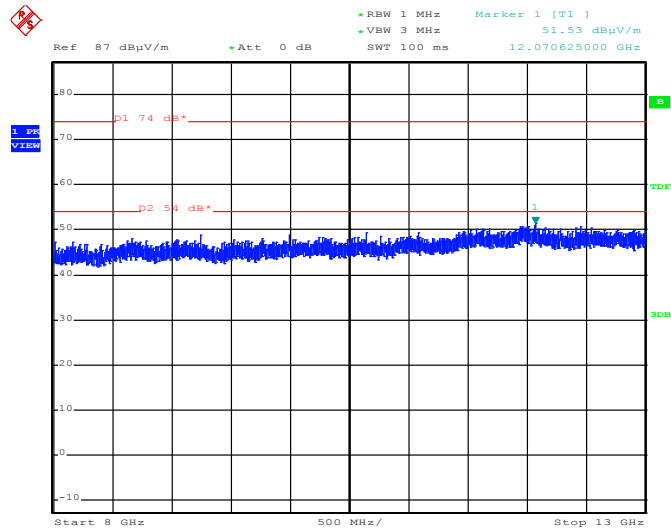
5.85 GHz to 8 GHz



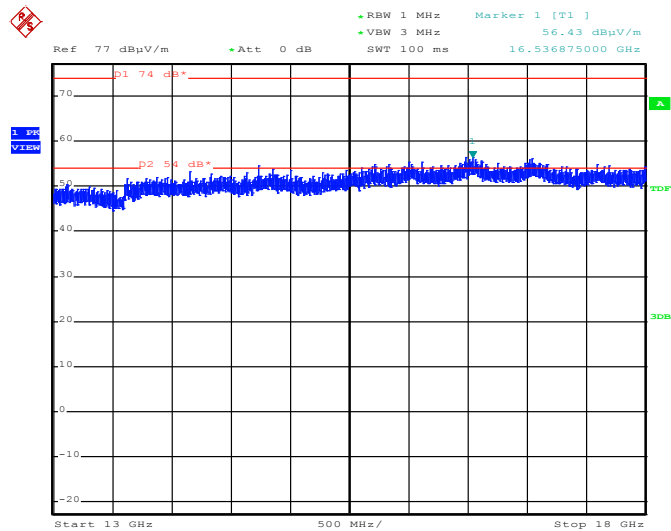
5.85 GHz to 8 GHz, AV



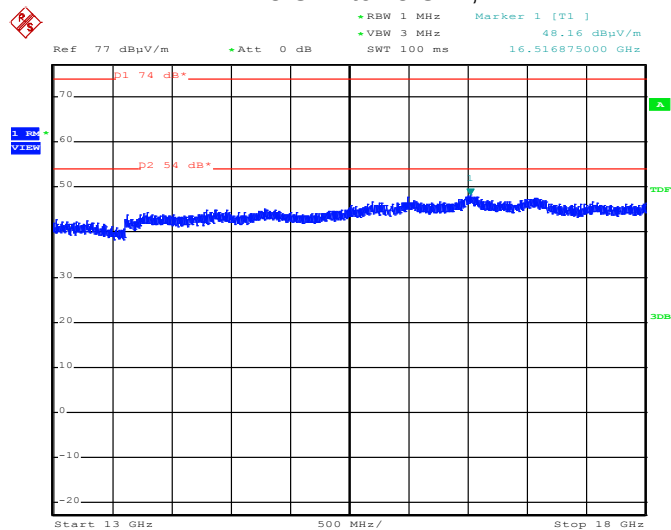
8 GHz to 13 GHz



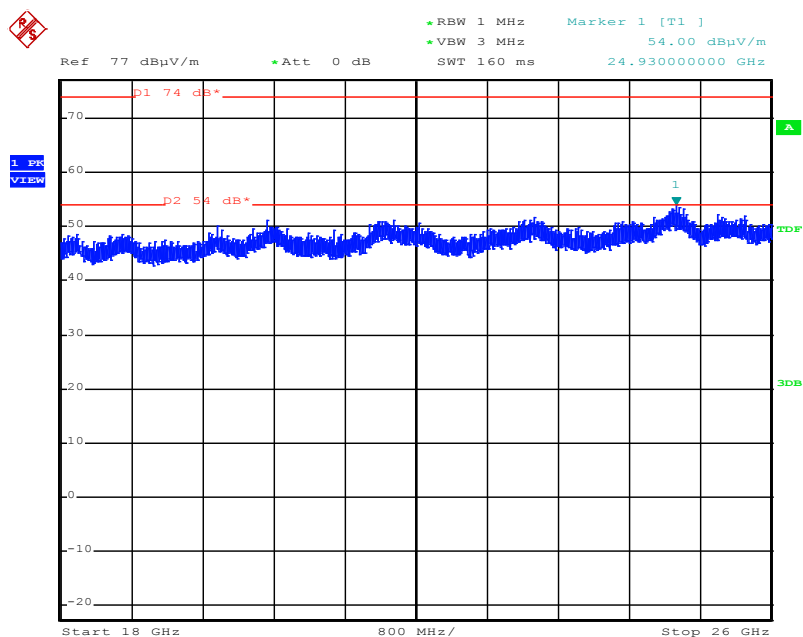
13 GHz to 18 GHz



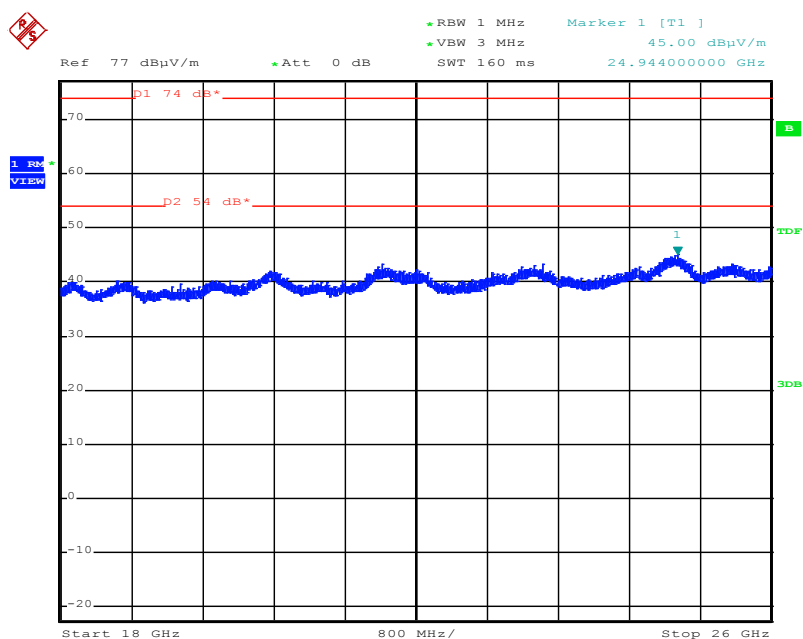
13 GHz to 18 GHz, AV



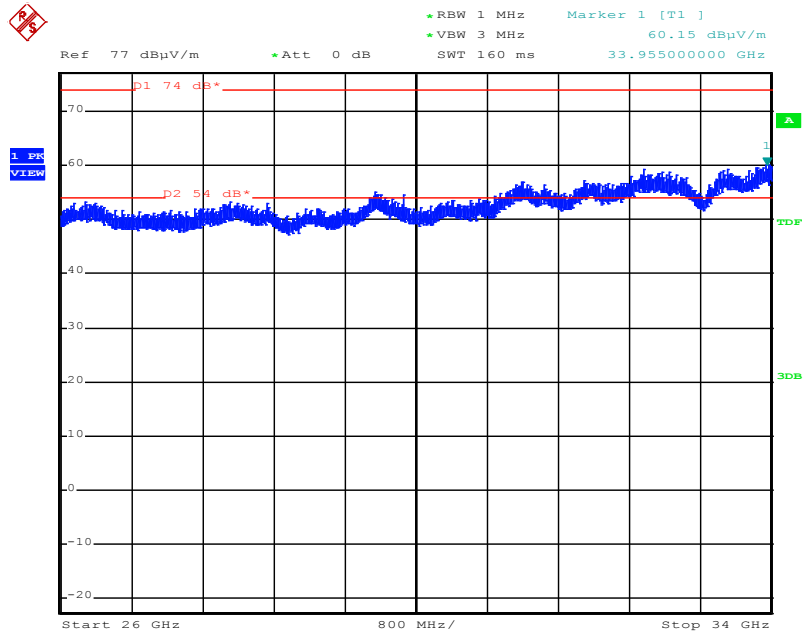
18 GHz to 26 GHz



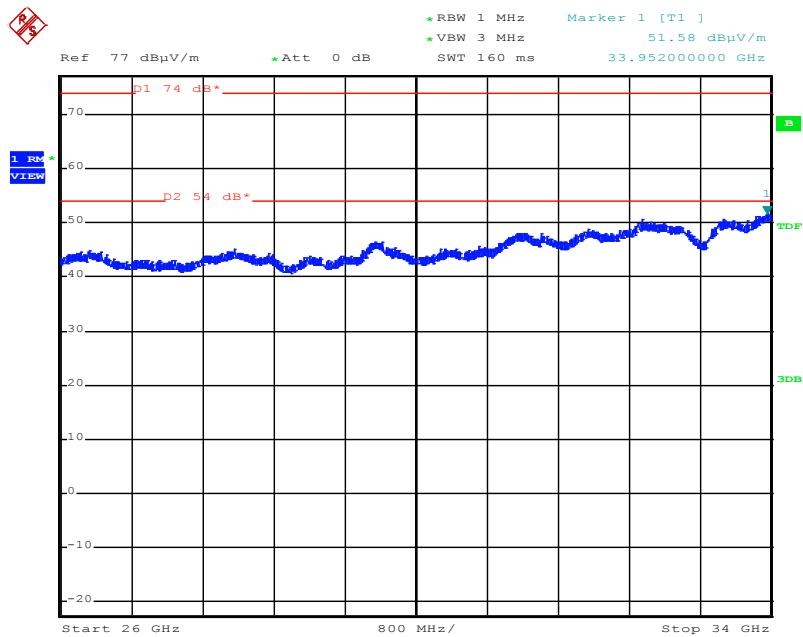
18 GHz to 26 GHz, AV



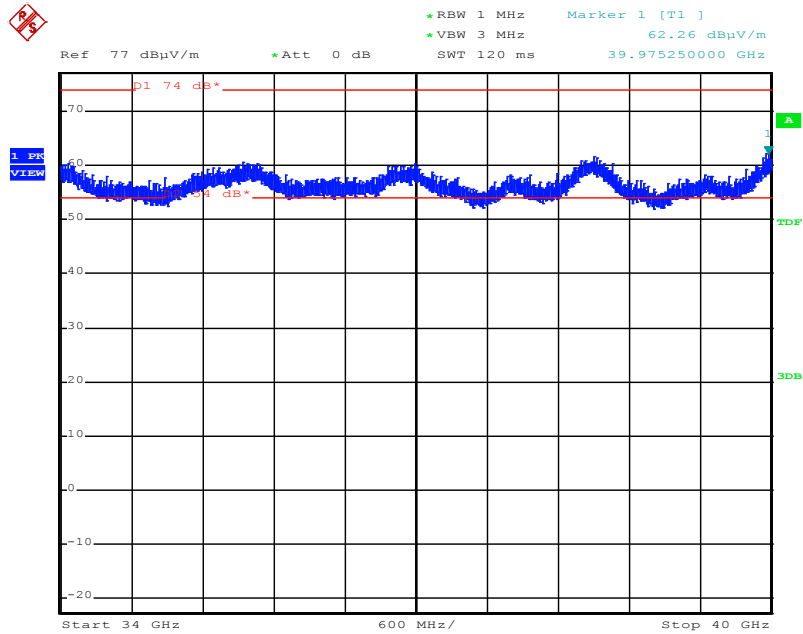
26 GHz to 34 GHz



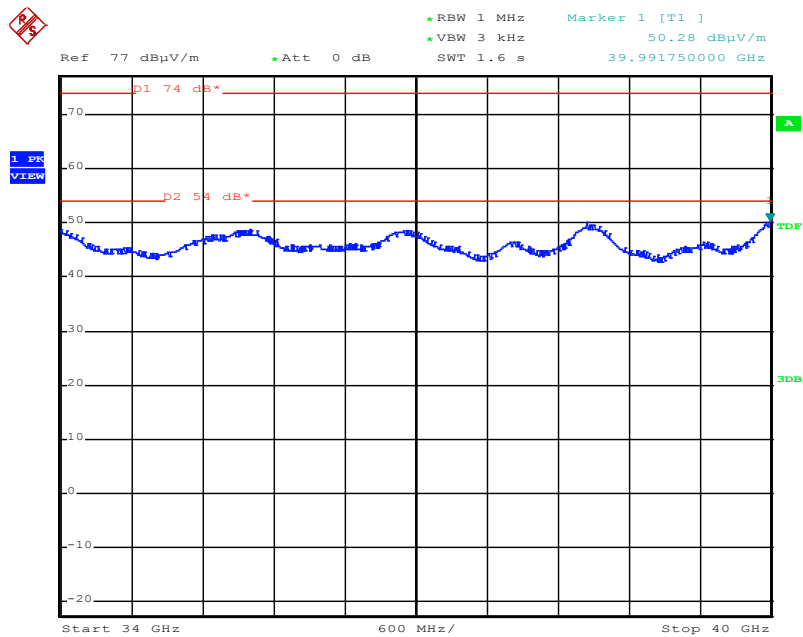
26 GHz to 34 GHz, AV



34 GHz to 40 GHz



34 GHz to 40 GHz, AV



Remark: All emissions are below the limits of part 15.209.