Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 18-1-0048601T02a-C1

According to:
FCC Regulations
Part 15.205 & Part 15.209
Part 15.247

ISED-Regulations
RSS-Gen, Issue 5
RSS-247, Issue 2

for

Robert Bosch Car and Multimedia GmbH

AIVIV20
Car radio with navigation, WLAN and Bluetooth

FCC ID: YBN-AIVIV20
ISED: 9595A-AIVIV20

Laboratory Accreditation and Listings
ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04 Accredited EMC-Test Laboratory
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Laboratory Accreditation and Listings

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1.2. RF-Parameter – 6dB and 99% Occupied Bandwidth

1.2.1. 6dB b-mode

Minimum Emission Bandwidth 6 dB (2412 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

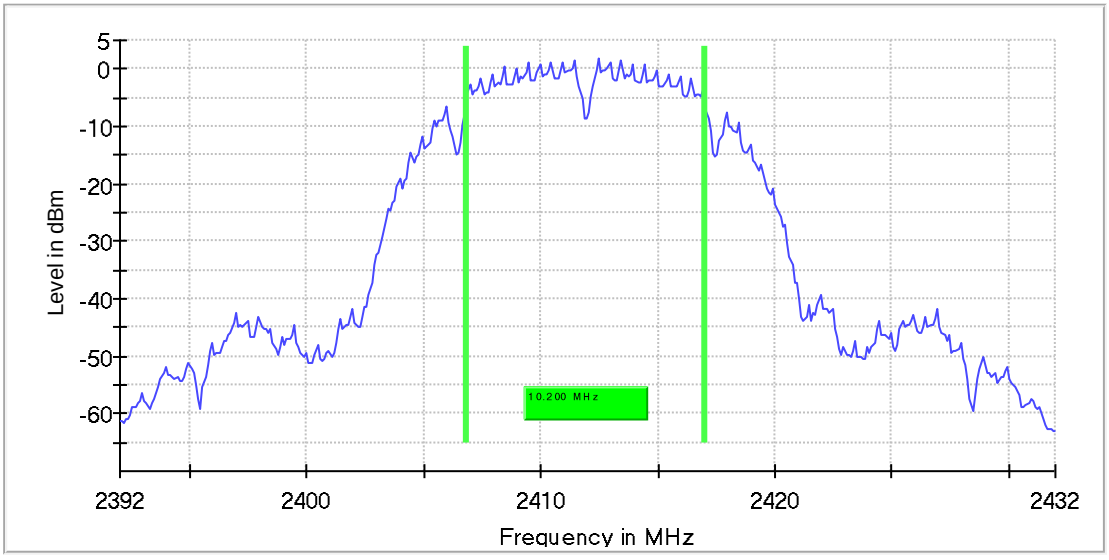
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	10.200000	0.500000	---	2406.850000	2417.050000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	1.9	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2437 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

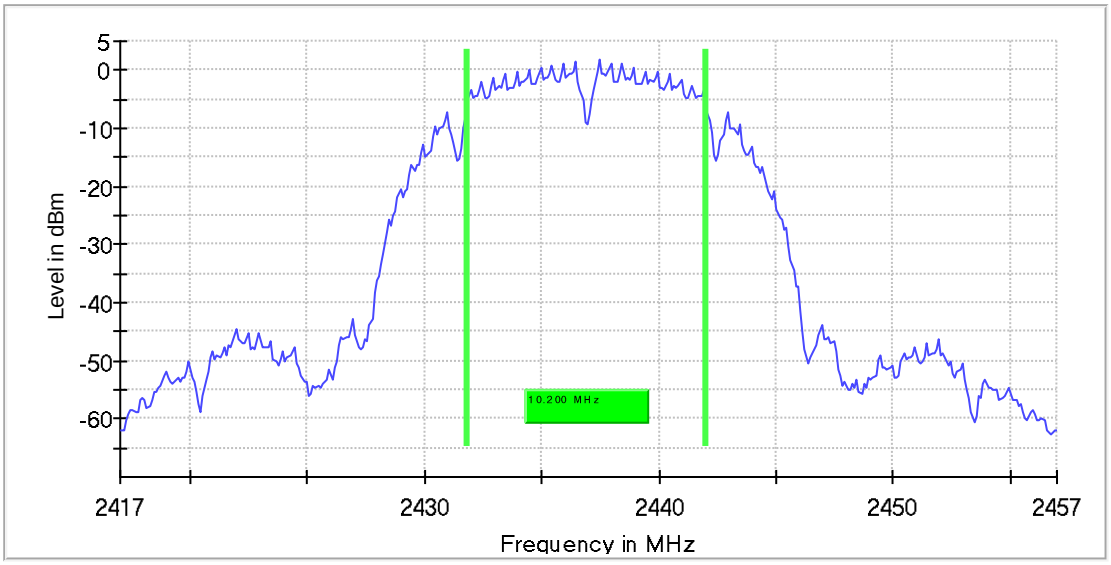
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	10.200000	0.500000	---	2431.850000	2442.050000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	1.7	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2462 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

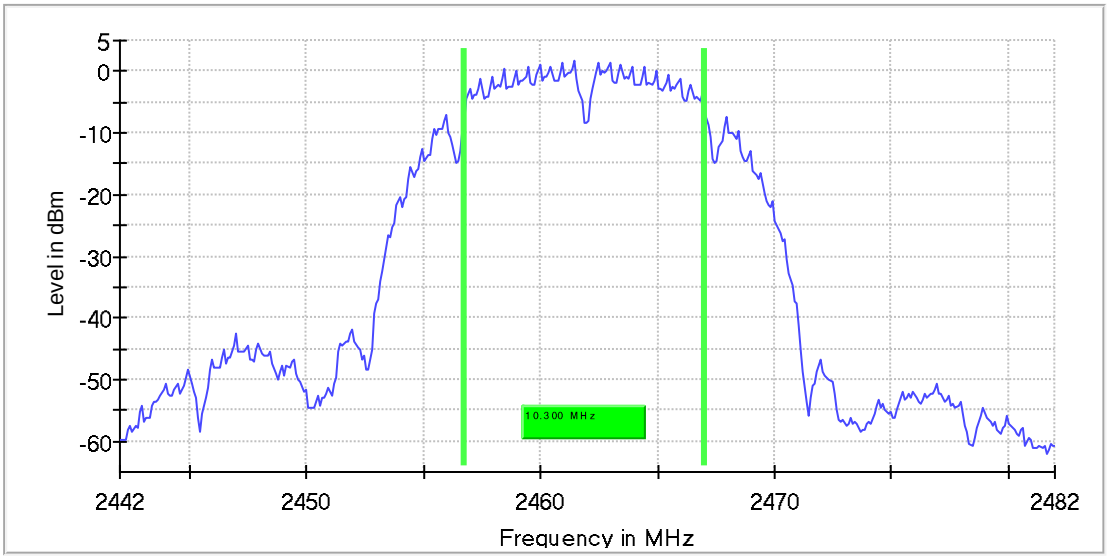
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	10.300000	0.500000	---	2456.750000	2467.050000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	1.6	PASS



Bandwidth

1.2.2. 6dB g-mode

Minimum Emission Bandwidth 6 dB (2412 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

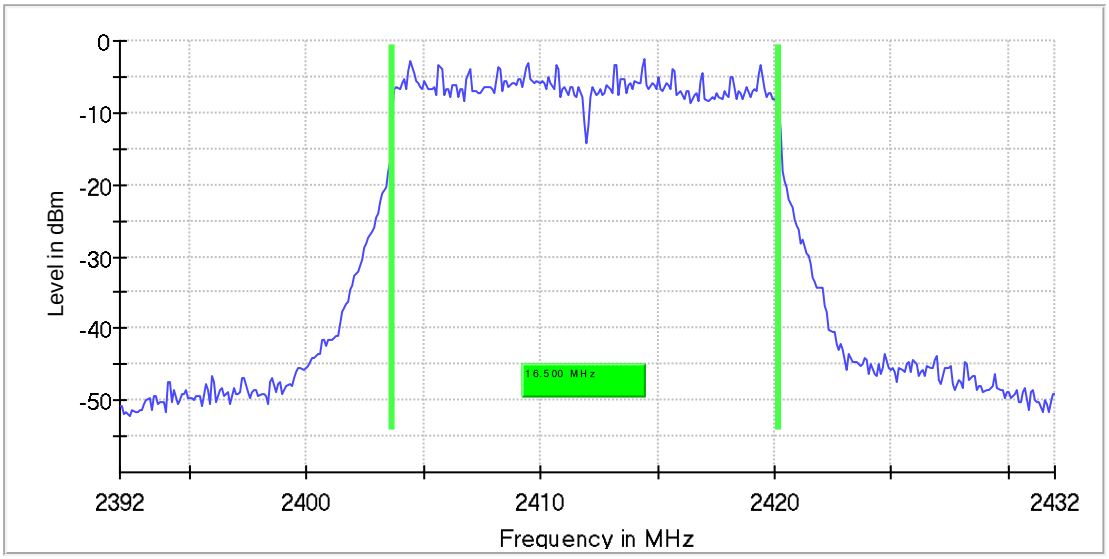
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	16.500000	0.500000	---	2403.650000	2420.150000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-2.4	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2437 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

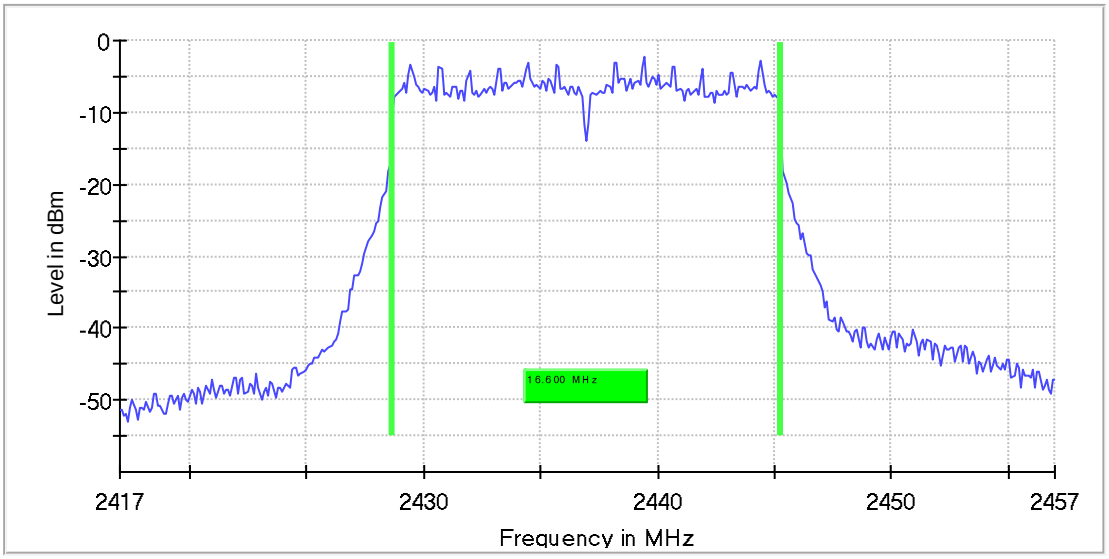
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	16.600000	0.500000	---	2428.650000	2445.250000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-2.2	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2462 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

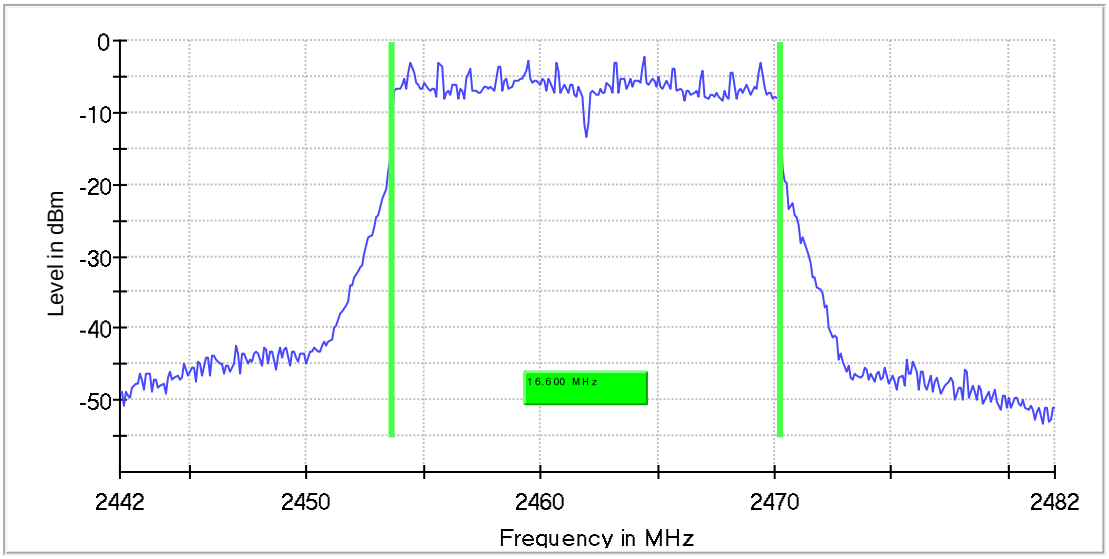
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	16.600000	0.500000	---	2453.650000	2470.250000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.2	PASS



Bandwidth

1.2.3. 6dB n20-mode

Minimum Emission Bandwidth 6 dB (2412 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

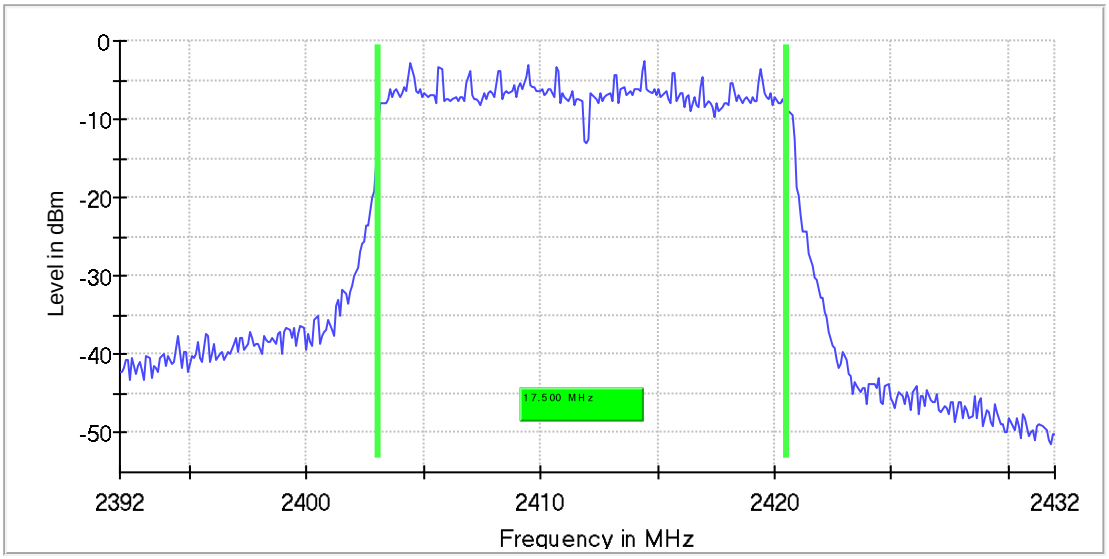
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	17.500000	0.500000	---	2403.050000	2420.550000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-2.6	PASS



dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

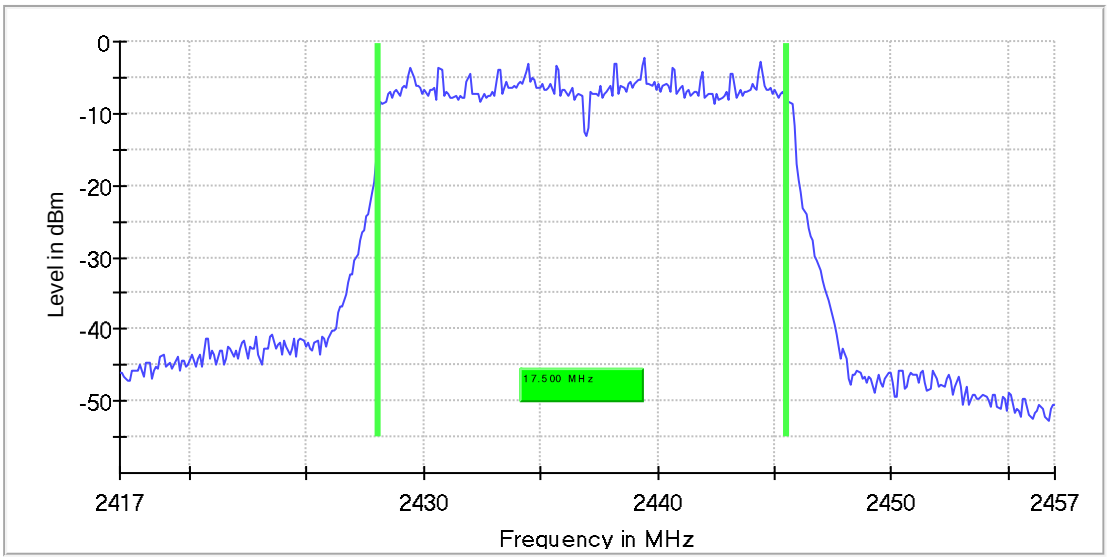
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	17.500000	0.500000	---	2428.050000	2445.550000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-2.3	PASS



Minimum Emission Bandwidth 6 dB (2462 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

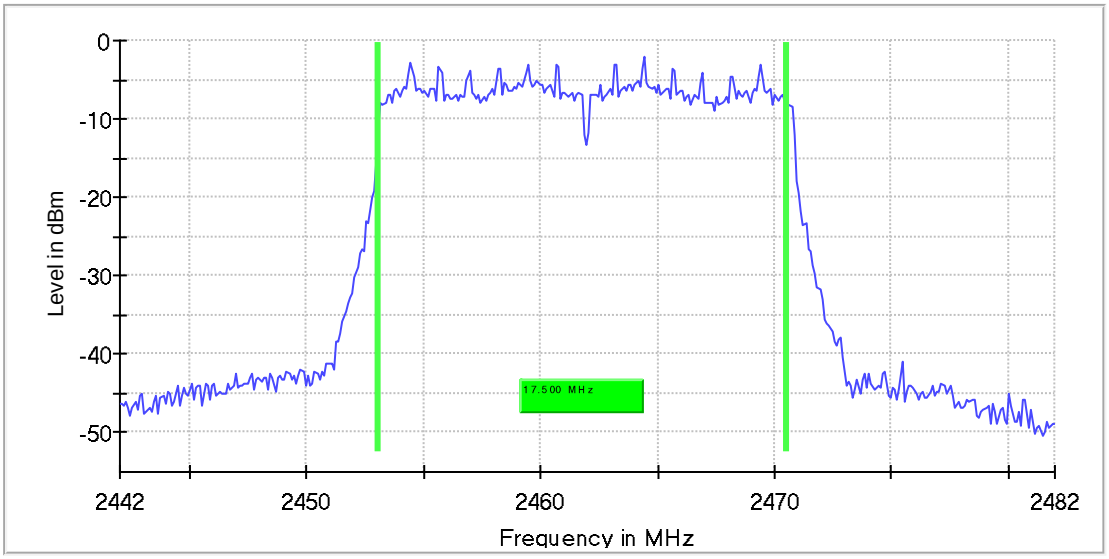
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	17.500000	0.500000	---	2453.050000	2470.550000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.2	PASS



1.2.4. 6dB n40-mode

Minimum Emission Bandwidth 6 dB (2422 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

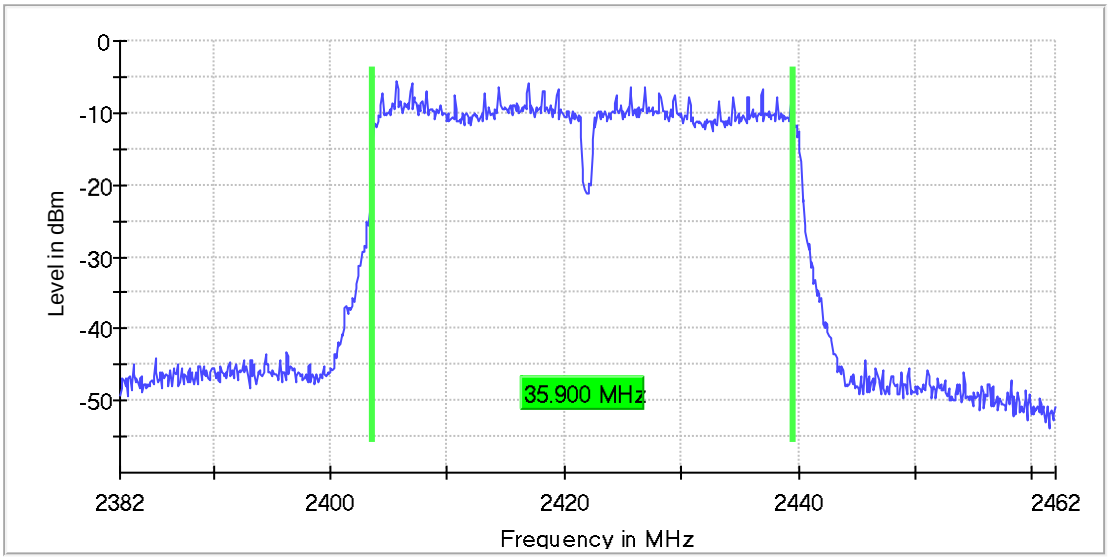
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	35.900000	0.500000	---	2403.650000	2439.550000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-5.6	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2437 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

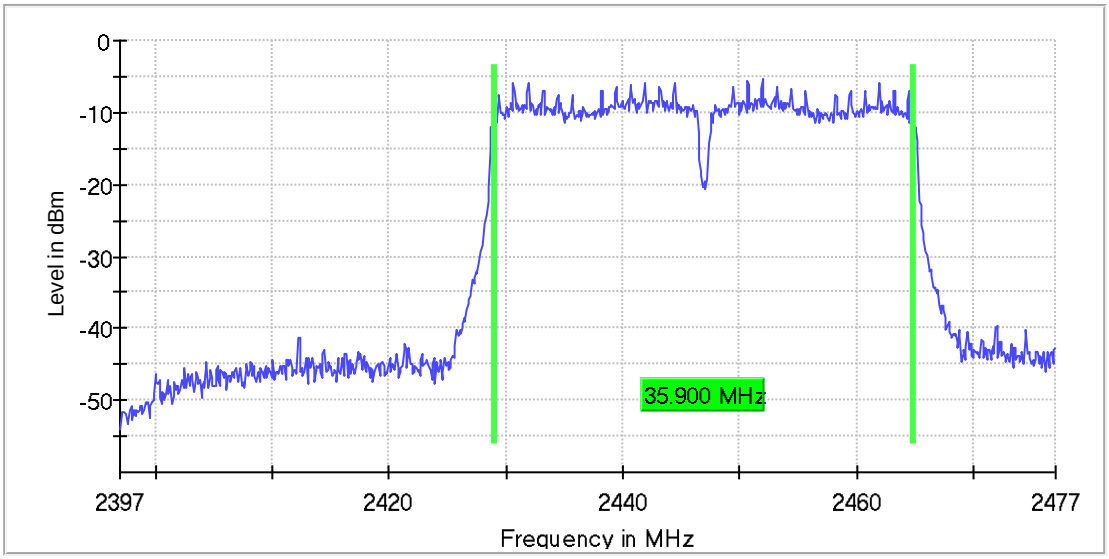
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	35.900000	0.500000	---	2428.950000	2464.850000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-5.3	PASS



Bandwidth

Minimum Emission Bandwidth 6 dB (2452 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

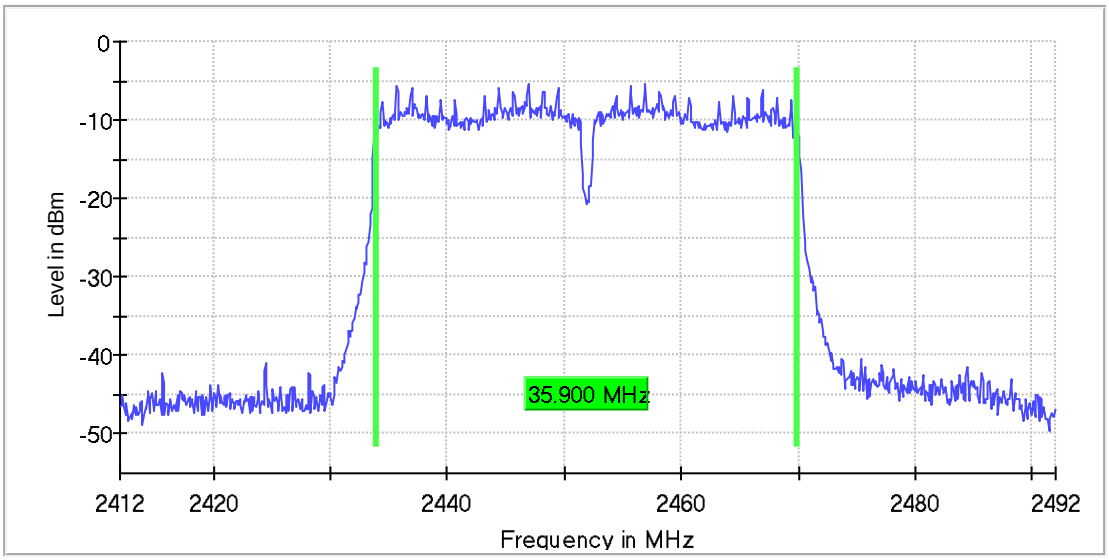
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	35.900000	0.500000	---	2433.950000	2469.850000

(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-5.4	PASS



Bandwidth

1.2.5. 99% b-mode

Emission Bandwidth 99% (2412 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

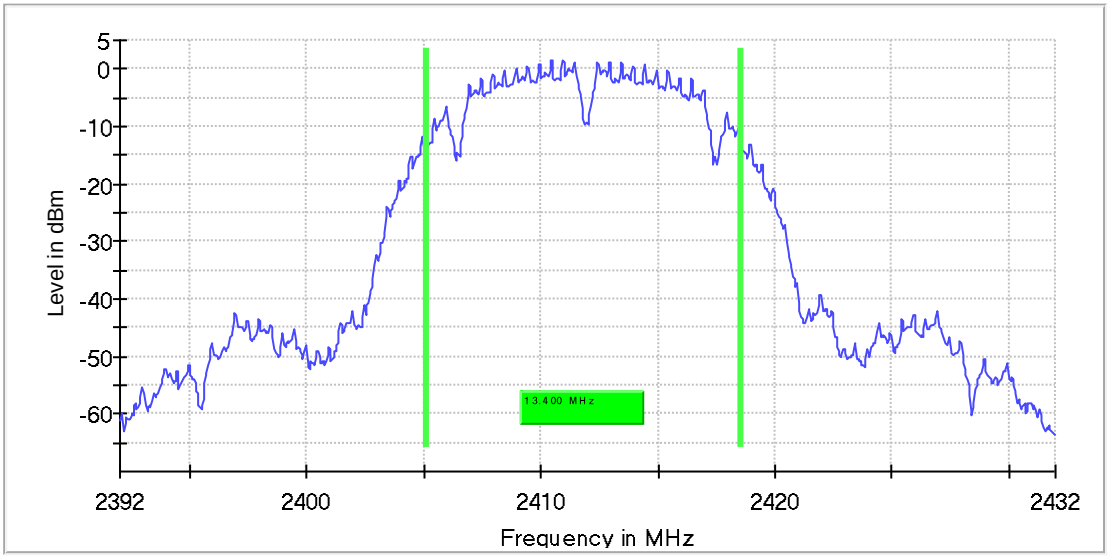
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	13.400000	---	---	2405.125000	2418.525000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	1.5	PASS



Bandwidth

Emission Bandwidth 99% (2437 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

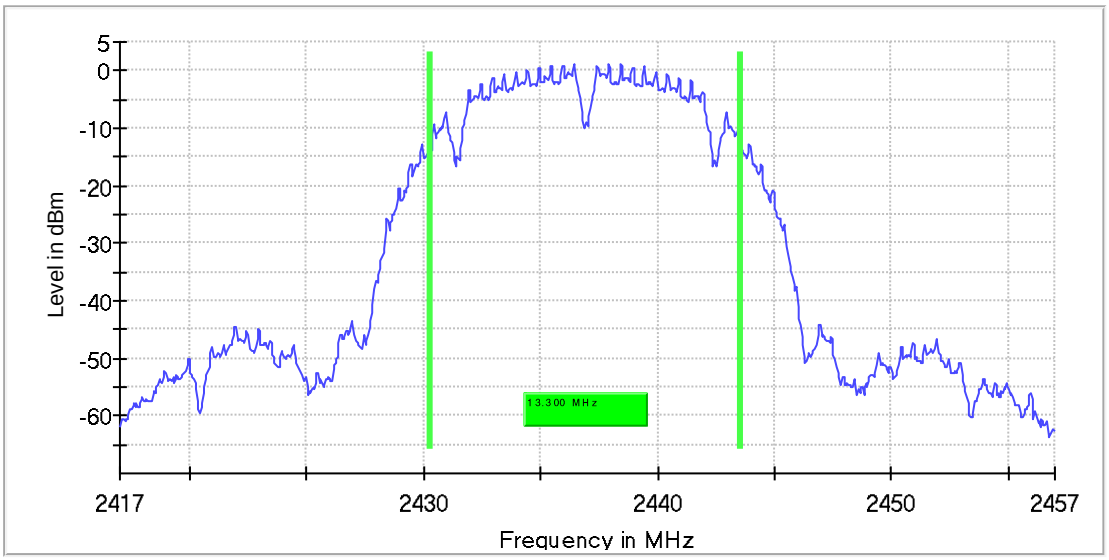
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	13.300000	---	---	2430.275000	2443.575000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	1.2	PASS



Bandwidth

Emission Bandwidth 99% (2462 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Customized settings.

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

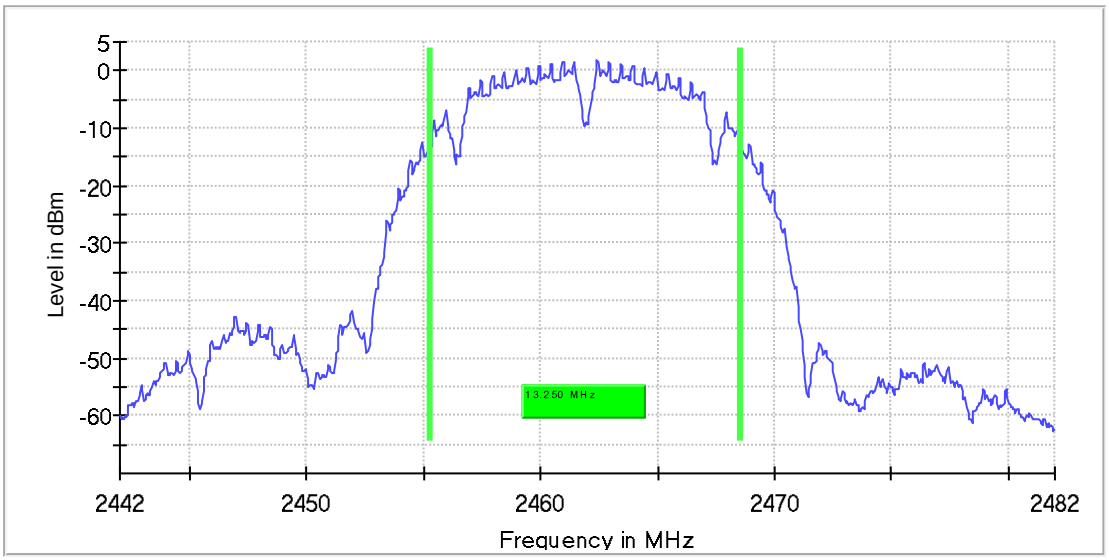
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	13.250000	---	---	2455.275000	2468.525000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	1.8	PASS



Bandwidth

1.2.6. 99% g-mode

Emission Bandwidth 99% (2412 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

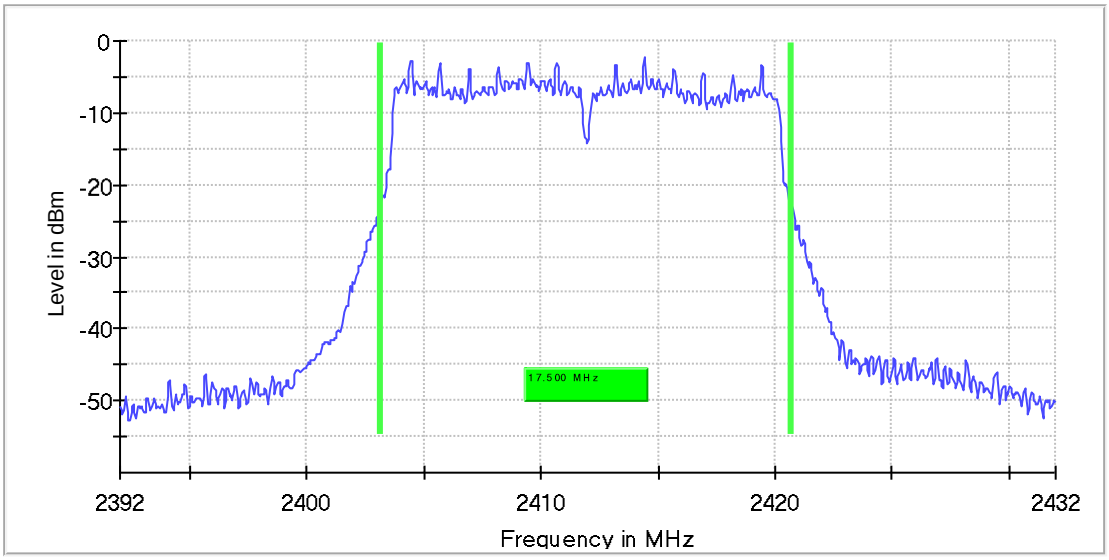
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	17.500000	---	---	2403.175000	2420.675000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-2.4	PASS



Bandwidth

Emission Bandwidth 99% (2437 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

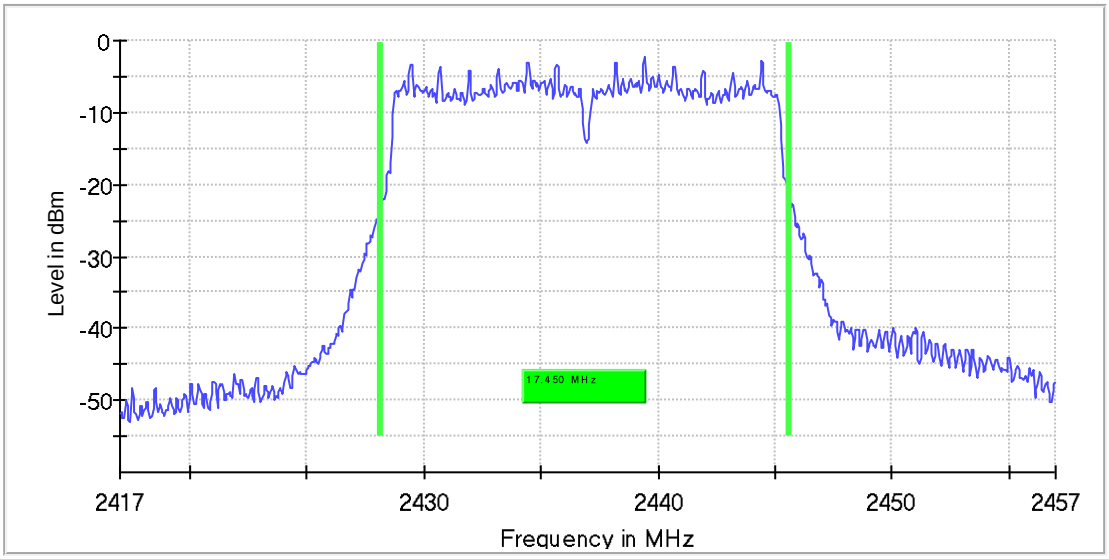
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	17.450000	---	---	2428.175000	2445.625000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-2.2	PASS



Bandwidth

Emission Bandwidth 99% (2462 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

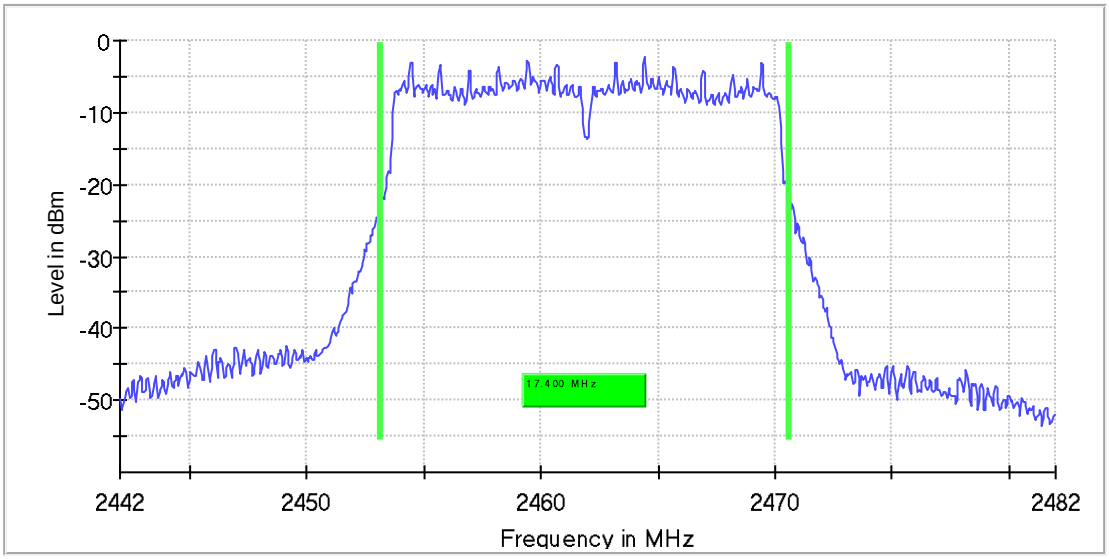
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	17.400000	---	---	2453.175000	2470.575000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.2	PASS



Bandwidth

1.2.7. 99% n20-mode

Emission Bandwidth 99% (2412 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

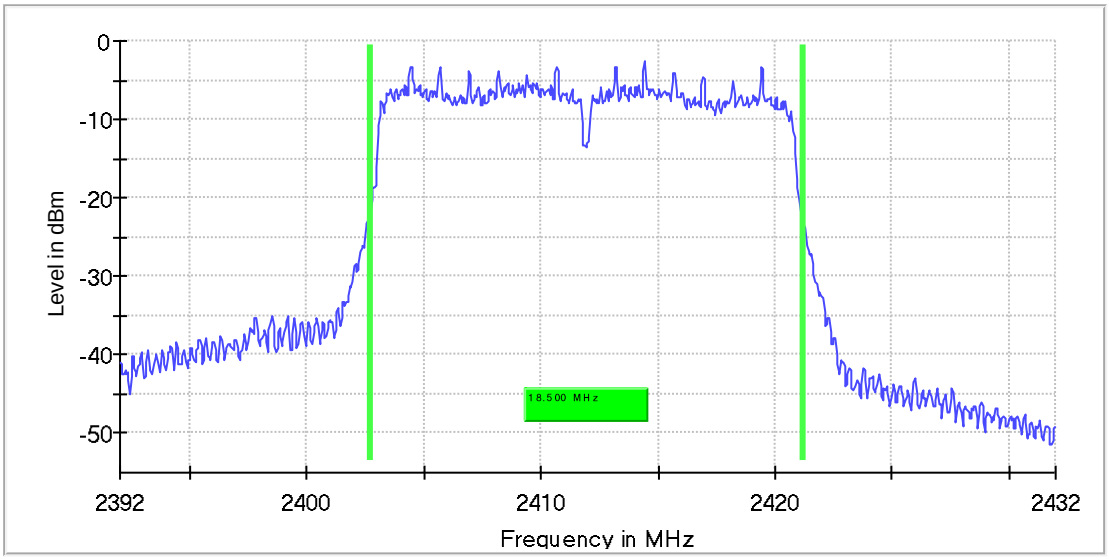
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	18.500000	---	---	2402.675000	2421.175000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-2.5	PASS



Bandwidth

Emission Bandwidth 99% (2437 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

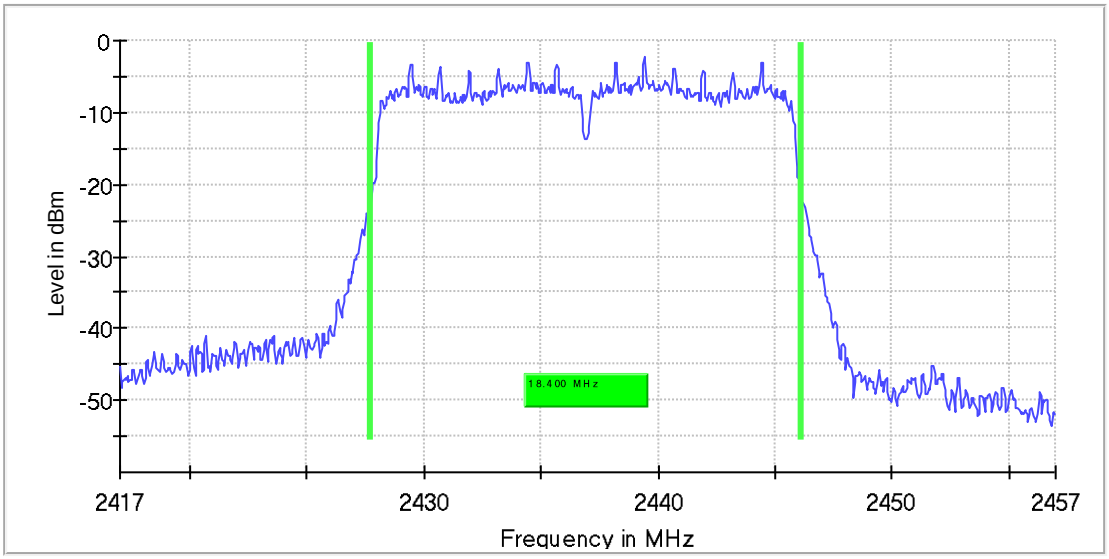
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	18.400000	---	---	2427.725000	2446.125000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-2.3	PASS



Emission Bandwidth 99% (2462 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

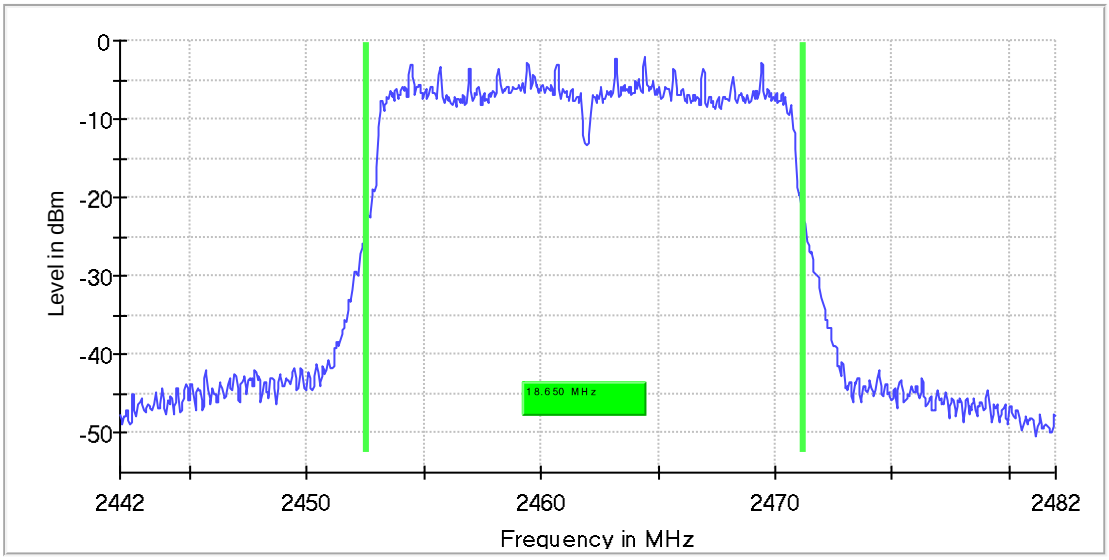
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	18.650000	---	---	2452.525000	2471.175000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.2	PASS



1.2.8. 99% n40-mode

Emission Bandwidth 99% (2422 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

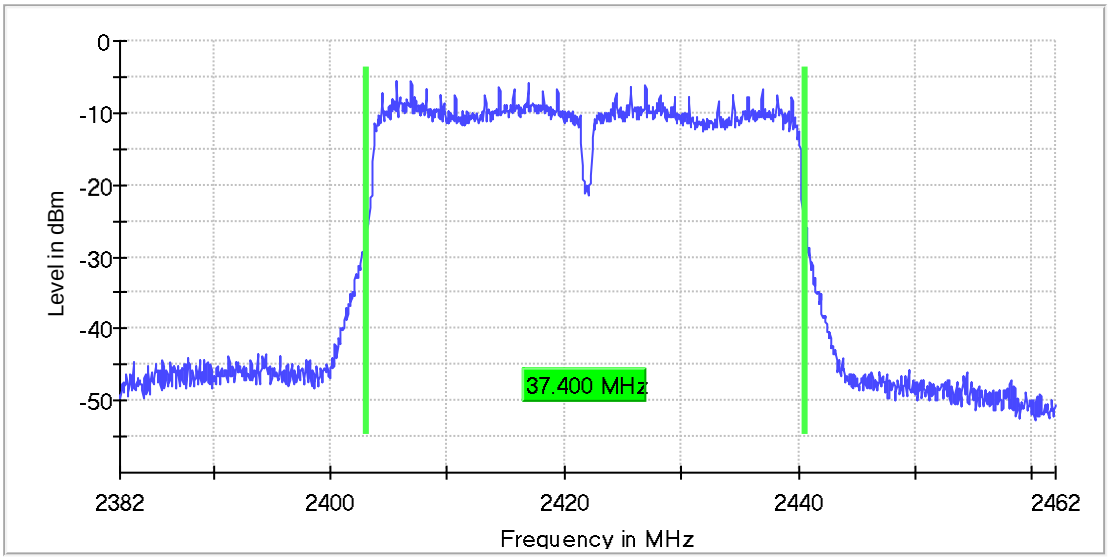
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	37.400000	---	---	2403.125000	2440.525000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-5.5	PASS



Bandwidth

Emission Bandwidth 99% (2437 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

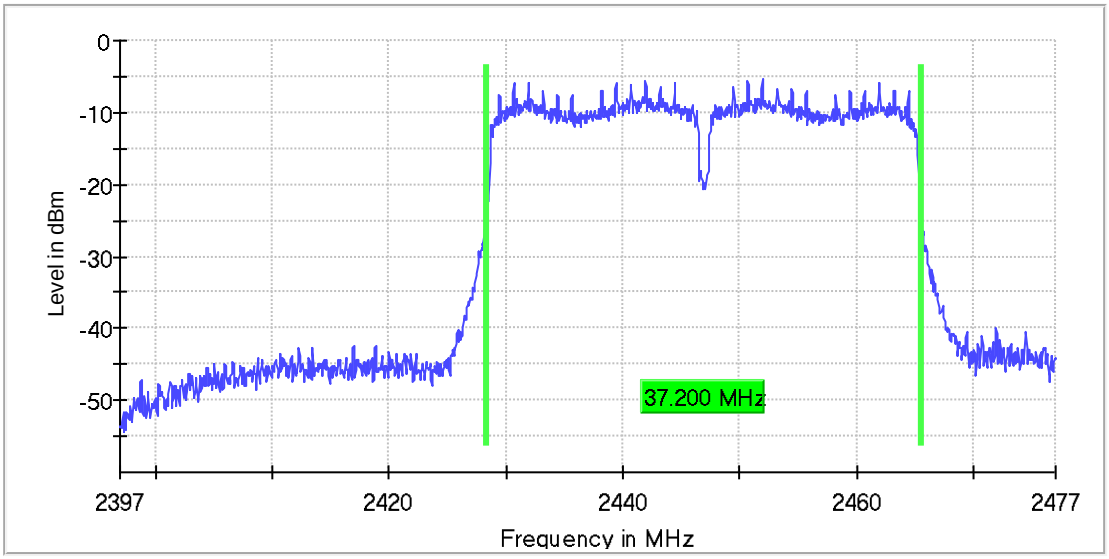
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	37.200000	---	---	2428.325000	2465.525000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-5.4	PASS



Bandwidth

Emission Bandwidth 99% (2452 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

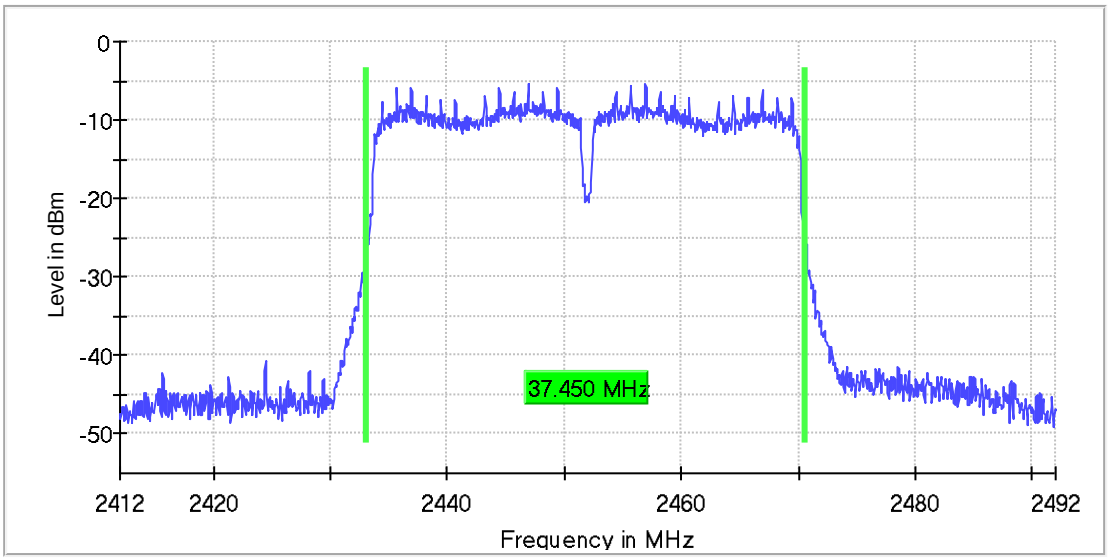
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99% Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	37.450000	---	---	2433.125000	2470.575000

(continuation of the "99% Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-5.4	PASS



Bandwidth

1.3. General Limit – Maximum power output conducted

Operational bands:	b-mode		
Channel no.:	1	6	11
b-mode			
1MBit	10,92	10,30	10,60
2Mbit	10,90	10,92	10,60
5.5Mbit	9,89	9,33	10,01
11MBit	9,98	9,85	10,08
Operational bands:	**b-mode**		
FCC&IC-Limits output power [dBm]	30,00		
FCC&IC-Limits EIRP [dBm]	36,00		
Limit Check:	**Limit Check:**		
Highest conducted power value over channels and modulations:	10,92		
Margin to Limit output power:	19,08		
Declared antenna Gain max:	6,10		
EIRP	17,02		
Margin to Limit EIRP:	18,98		
Verdict:	pass		

Operational bands:	g-mode		
Channel no.:	1	6	11
g-mode			
6Mbit	8,18	7,69	8,34
9Mbit	8,04	7,73	8,32
12Mbit	8,14	7,82	8,40
18Mbit	8,24	7,69	8,36
24Mbit	8,20	7,75	8,31
36Mbit	8,28	7,85	7,95
48Mbit	8,29	7,76	8,01
54MBit	8,30	7,85	8,00
Operational bands:	**g-mode**		
FCC&IC-Limits output power [dBm]	30,00		
FCC&IC-Limits EIRP [dBm]	36,00		
Limit Check:	**Limit Check:**		
Highest conducted power value over channels and modulations:	8,4		
Margin to Limit output power:	21,60		
Declared antenna Gain max:	6,10		
EIRP	14,50		
Margin to Limit EIRP:	21,50		
Verdict:	pass		

Operational bands:	n-mode		
Channel no.:	1	6	11
n-mode			
MCS0	8,36	7,79	8,37
MCS1	8,26	7,89	8,00
MCS2	8,35	7,93	8,14
MCS3	8,37	7,85	8,14
MCS4	8,30	7,91	8,13
MCS5	7,65	7,89	8,17
MCS6	7,93	7,88	8,16
MCS7	7,96	7,90	8,11
Operational bands:	**n-mode**		
FCC&IC-Limits output power [dBm]	30,00		
FCC&IC-Limits EIRP [dBm]	36,00		
Limit Check:	**Limit Check:**		
Highest conducted power value over channels and modulations:	8,37		
Margin to Limit output power:	21,63		
Declared antenna Gain max:	6,10		
EIRP	14,47		
Margin to Limit EIRP:	21,53		
Verdict:	pass		

Operational bands:	n-mode		
Channel no.:	3	6	9
n-mode			
MCS0	8,18	8,61	8,52
MCS1	8,16	8,58	8,50
MCS2	8,06	8,54	8,53
MCS3	8,07	8,54	8,47
MCS4	8,02	8,47	8,46
MCS5	8,08	8,52	8,44
MCS6	8,43	8,40	8,50
MCS7	8,38	8,45	8,45
Operational bands:	**n-mode**		
FCC&IC-Limits output power [dBm]	30,00		
FCC&IC-Limits EIRP [dBm]	36,00		
Limit Check:	**Limit Check:**		
Highest conducted power value over channels and modulations:	8,61		
Margin to Limit output power:	21,39		
Declared antenna Gain max:	6,10		
EIRP	14,71		
Margin to Limit EIRP:	21,29		
Verdict:	pass		

1.4. RF-Parameter – Power spectral density

1.4.1. PSD b-mode

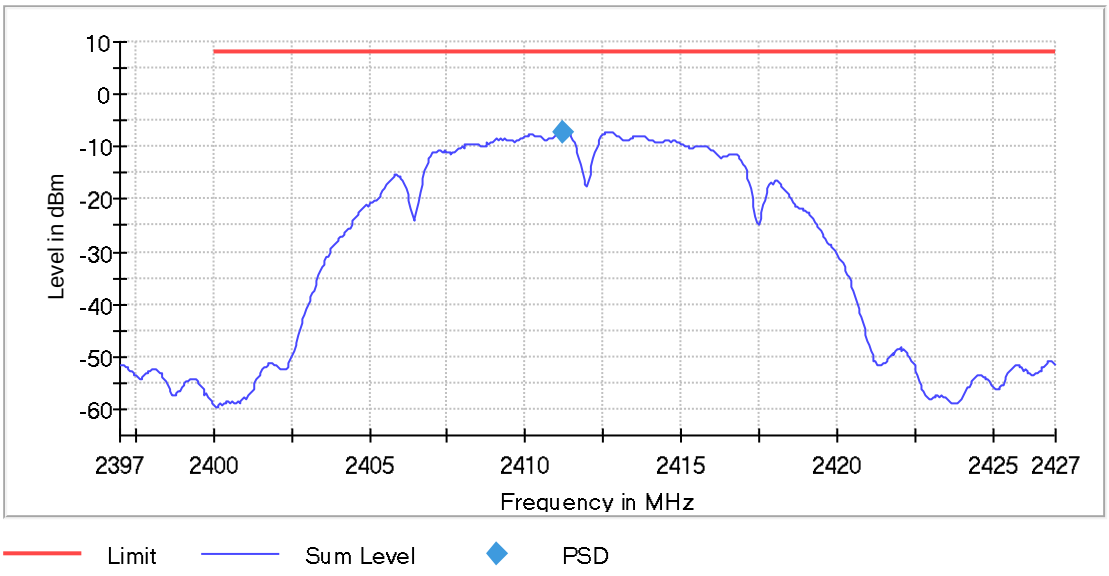
Power Spectral Density (2412 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2411.175000	-7.030	8.0	PASS



PSD Connector 1

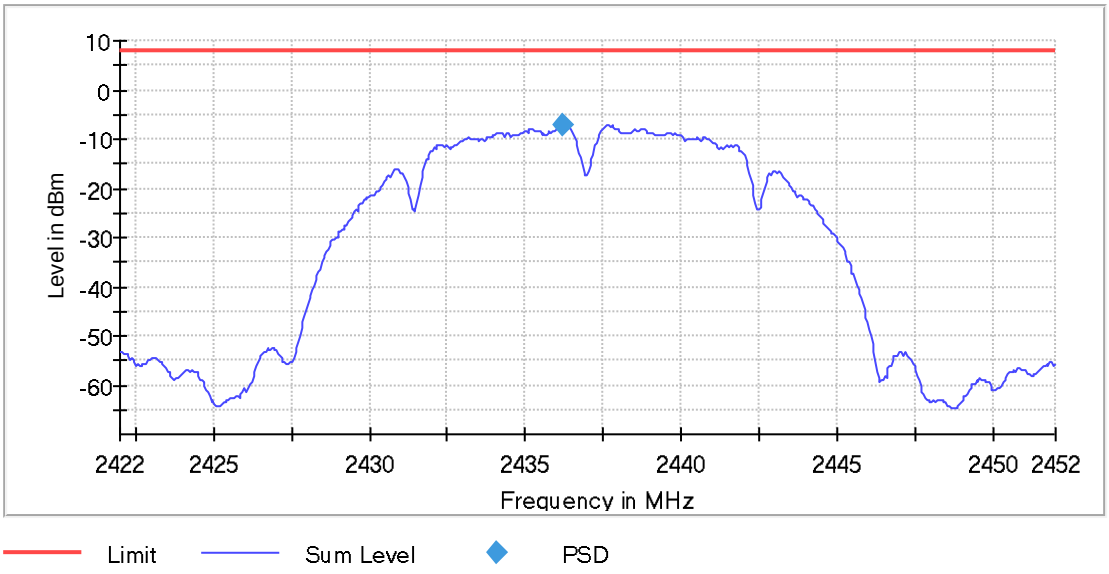
Power Spectral Density (2437 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2436.175000	-7.241	8.0	PASS



PSD Connector 1

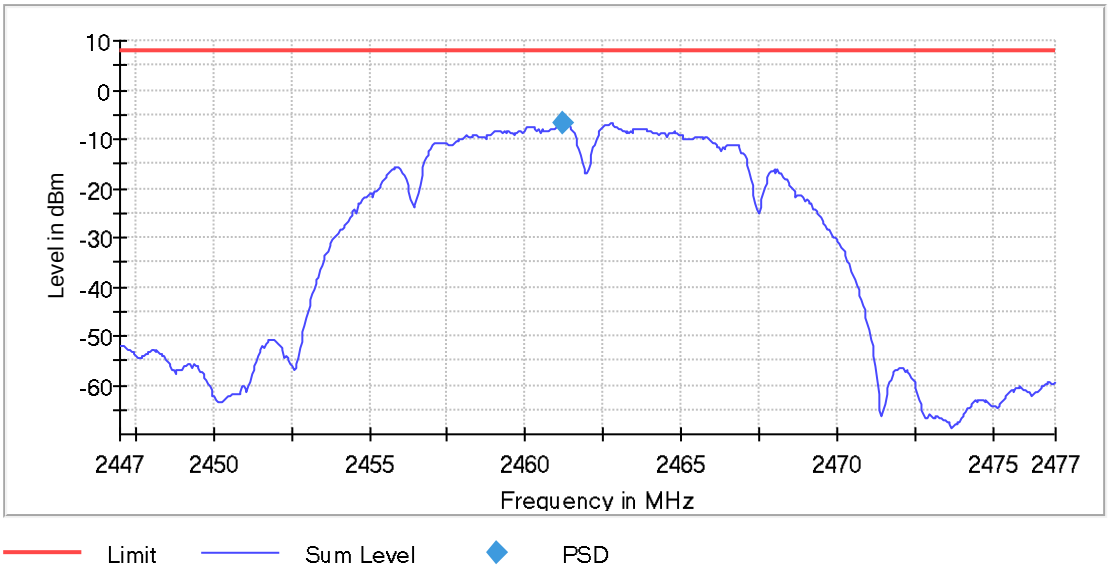
Power Spectral Density (2462 MHz; b-mode [01Mbps] (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2461.225000	-6.837	8.0	PASS



PSD Connector 1

1.4.2. PSD g-mode

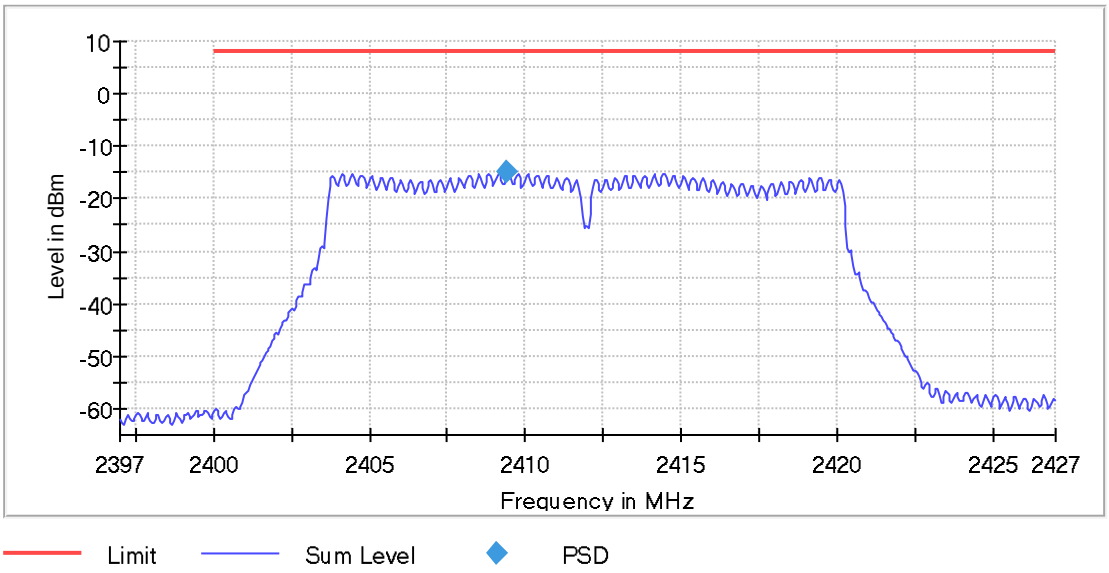
Power Spectral Density (2412 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2409.425000	-15.018	8.0	PASS



PSD Connector 1

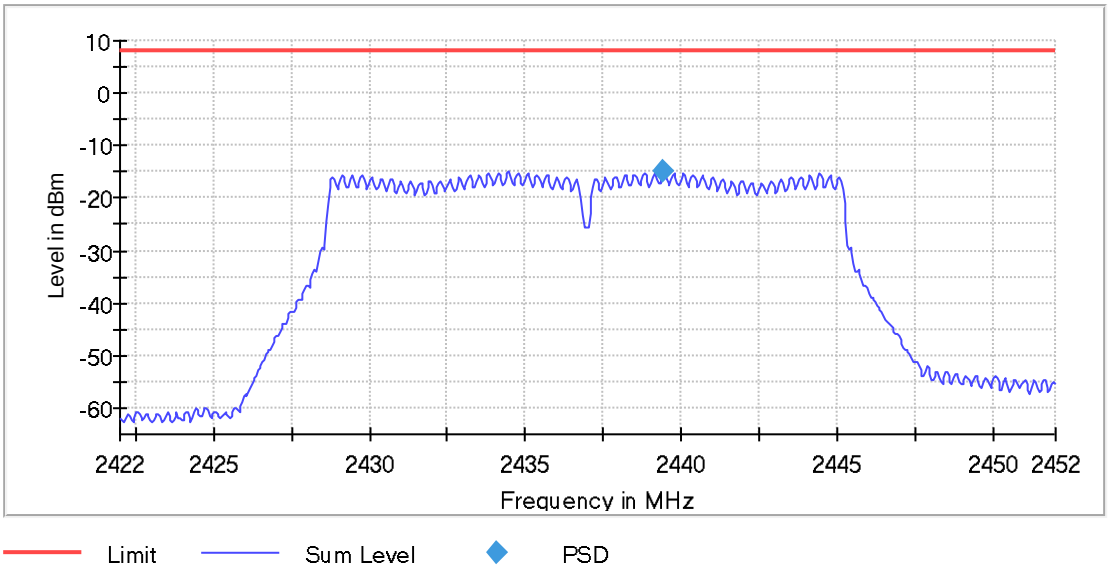
Power Spectral Density (2437 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2439.425000	-14.858	8.0	PASS



PSD Connector 1

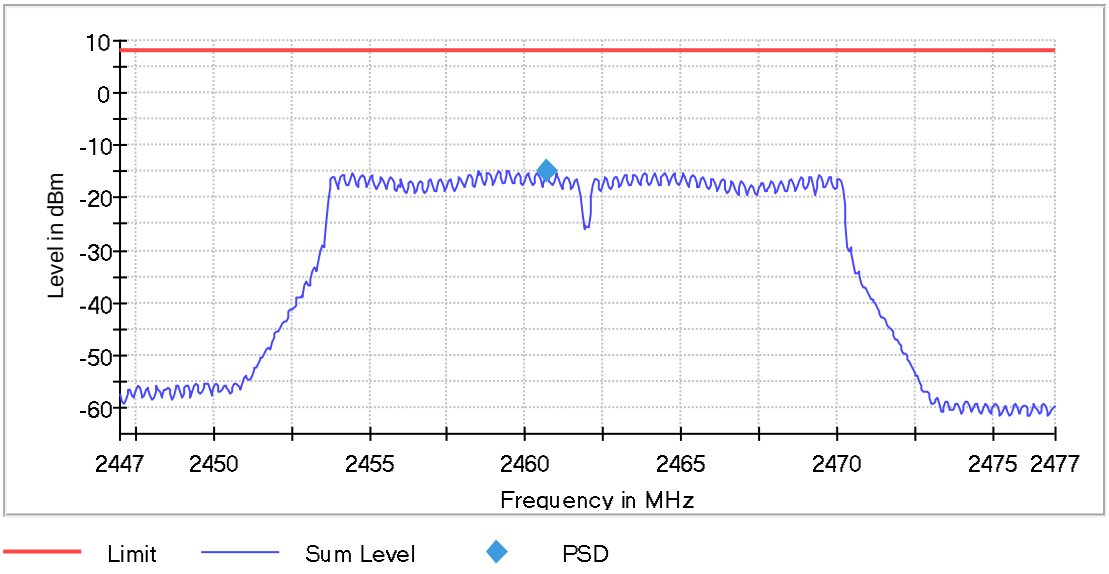
Power Spectral Density (2462 MHz; g-mode [12Mbps] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2460.675000	-14.922	8.0	PASS



PSD Connector 1

1.4.3. PSD n20-mode

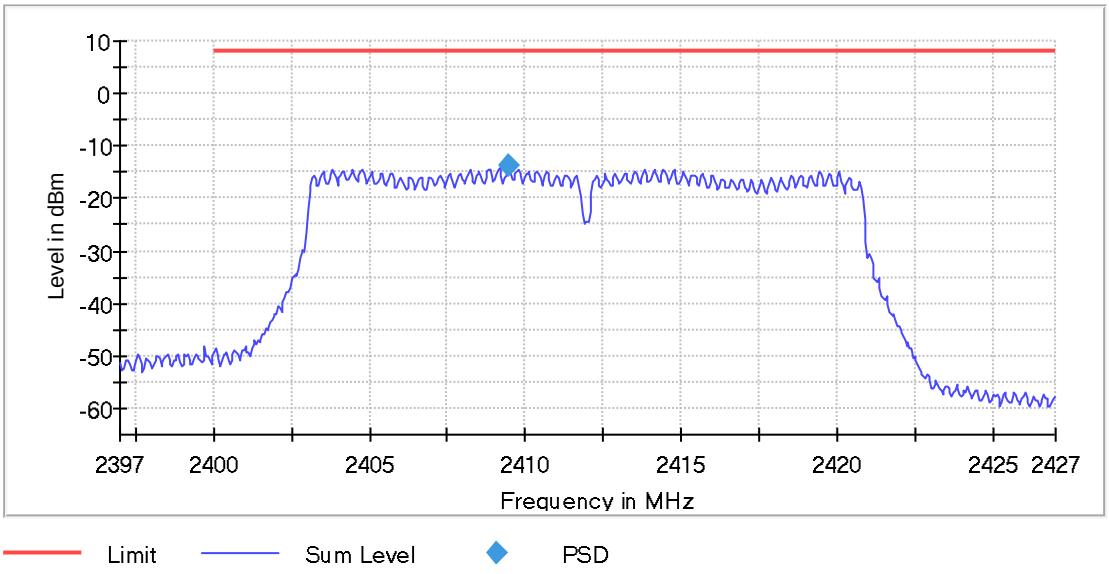
Power Spectral Density (2412 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2409.475000	-13.826	8.0	PASS



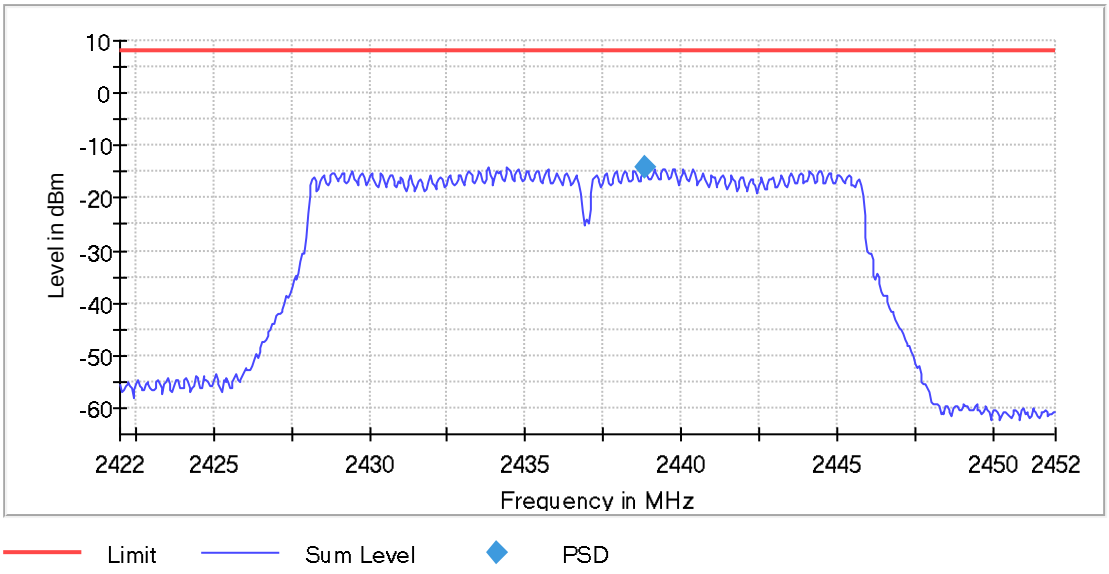
Power Spectral Density (2437 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2438.825000	-14.061	8.0	PASS



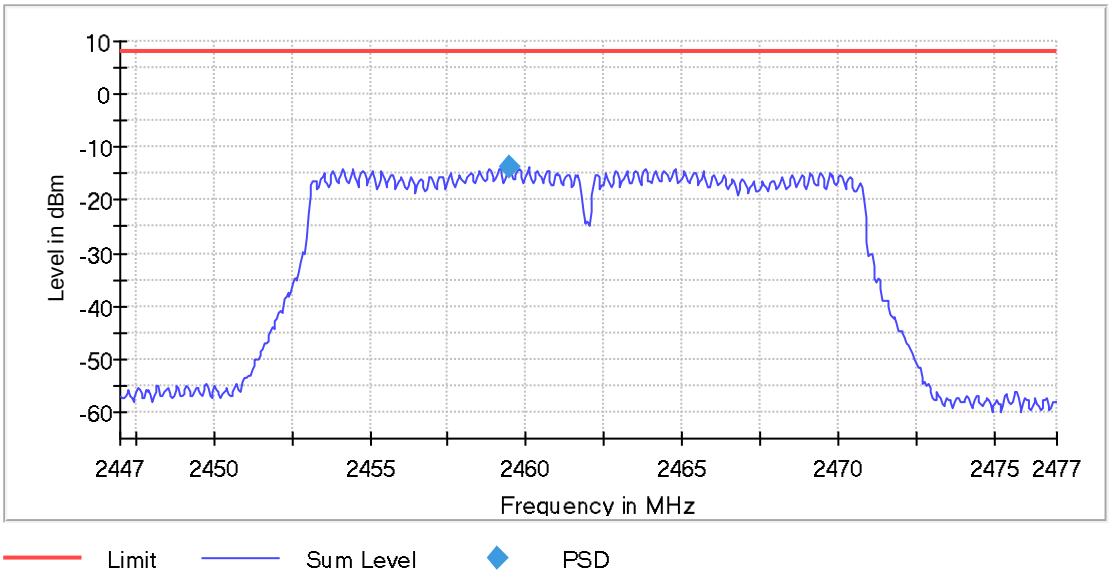
Power Spectral Density (2462 MHz; n-mode [MCS0] (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2459.475000	-13.854	8.0	PASS



1.4.4. PSD n40-mode

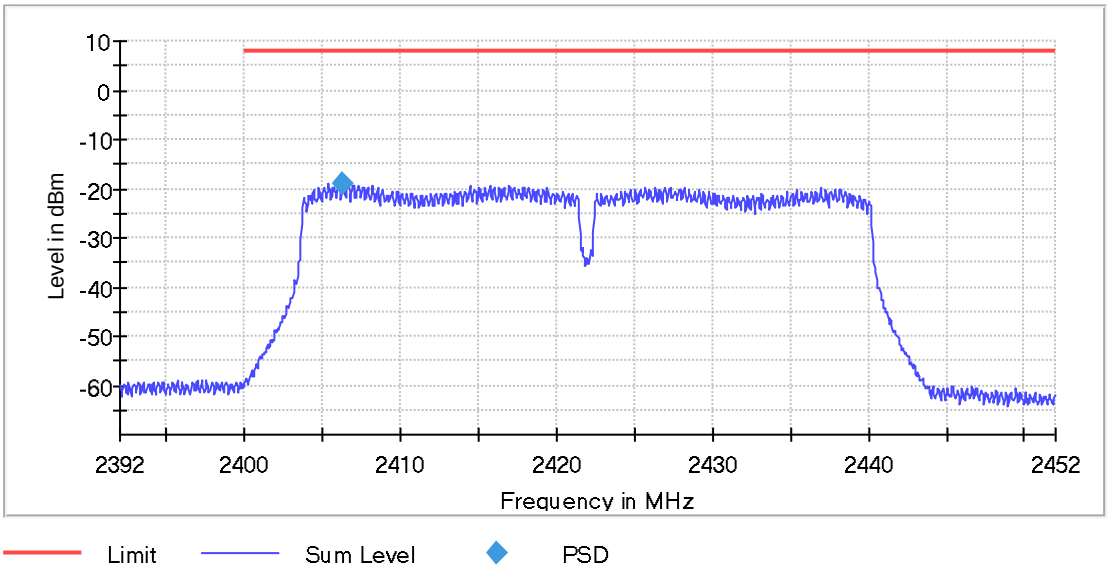
Power Spectral Density (2422 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2422.000000	2406.325000	-18.963	8.0	PASS



PSD Connector 1

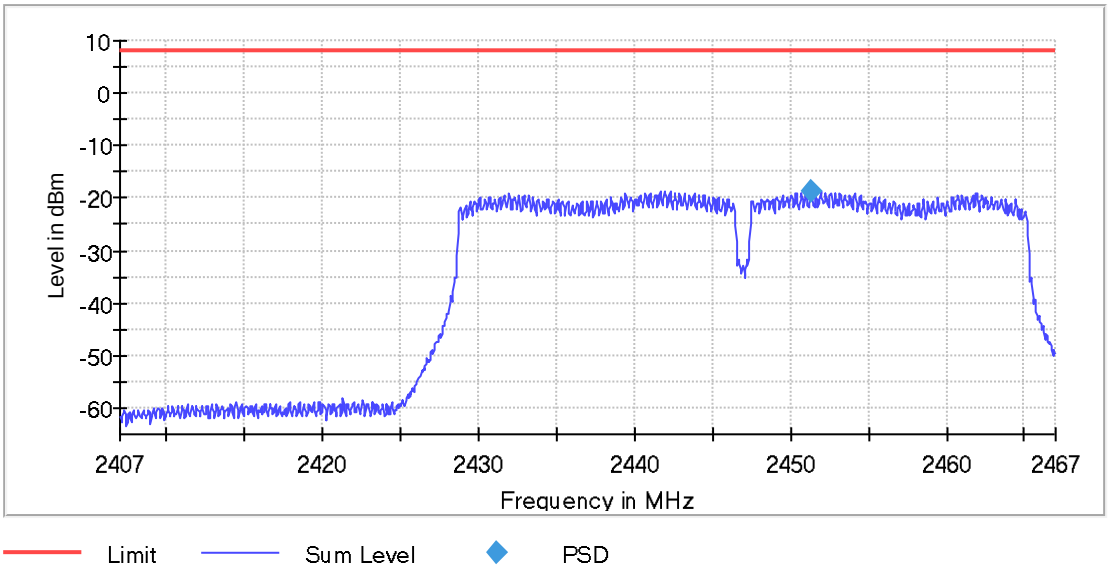
Power Spectral Density (2437 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2451.325000	-18.609	8.0	PASS



PSD Connector 1

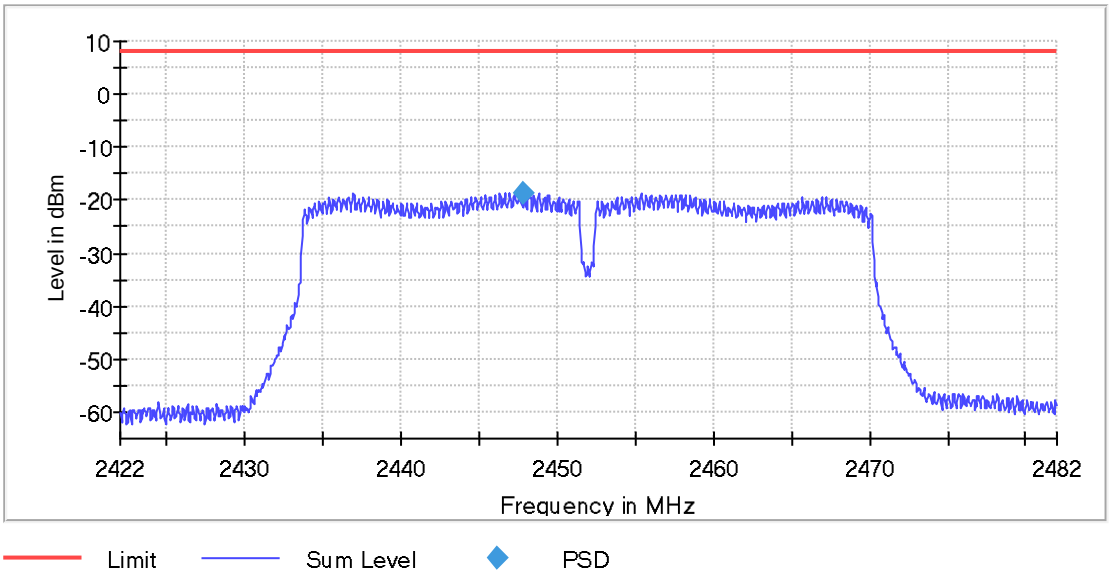
Power Spectral Density (2452 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

Test according to FCC title 47 part 15 §15.247(a),(e), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1,3 dB

Result

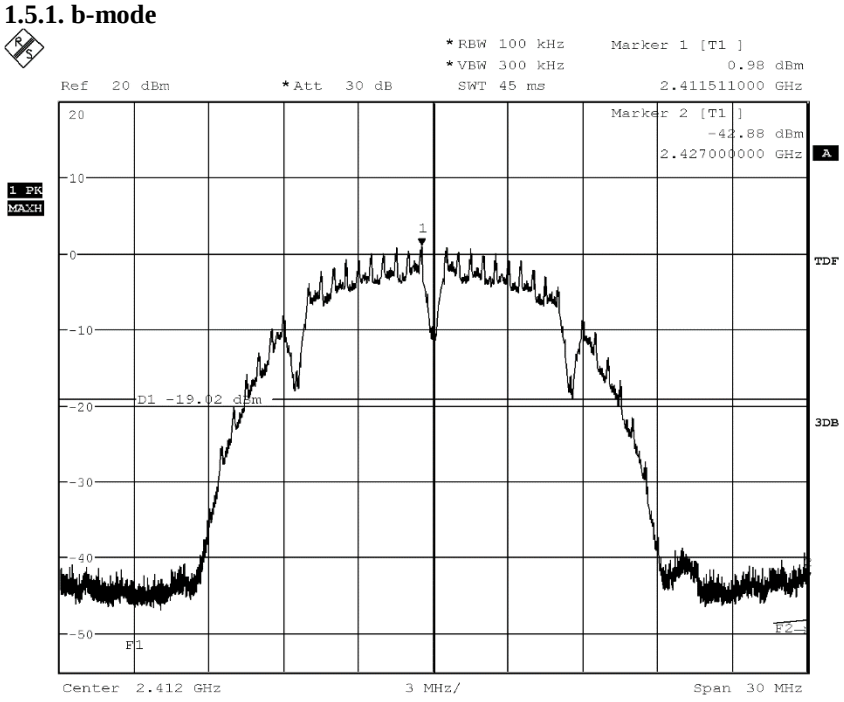
DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2452.000000	2447.875000	-18.599	8.0	PASS



PSD Connector 1

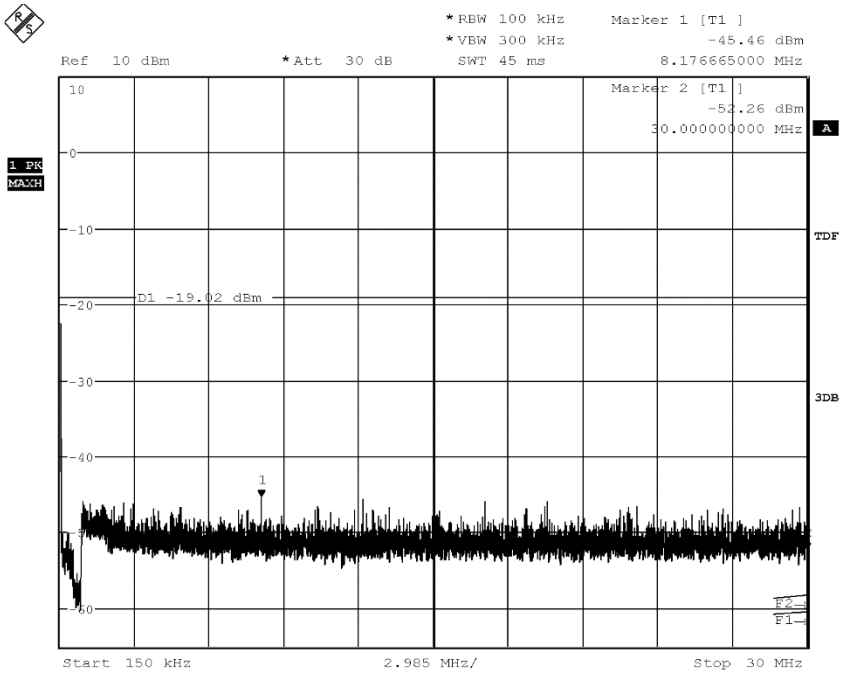
1.5. RF-Parameter – Out-of-Band 20dBc Conducted Emissions

1.5.1. b-mode



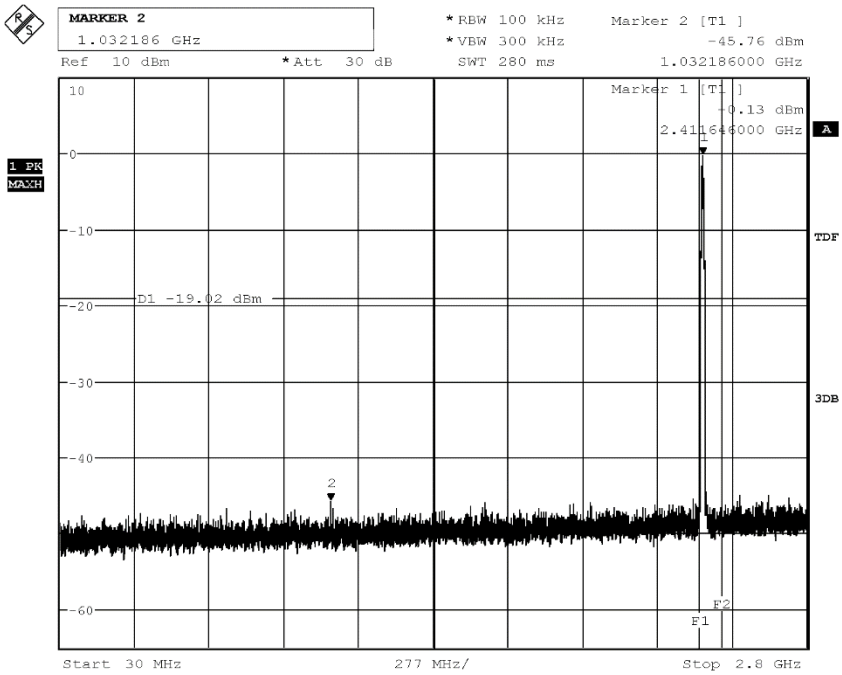
Date: 11.DEC.2018 09:52:25

20dBc_REF_2412_bmode_1Mbit



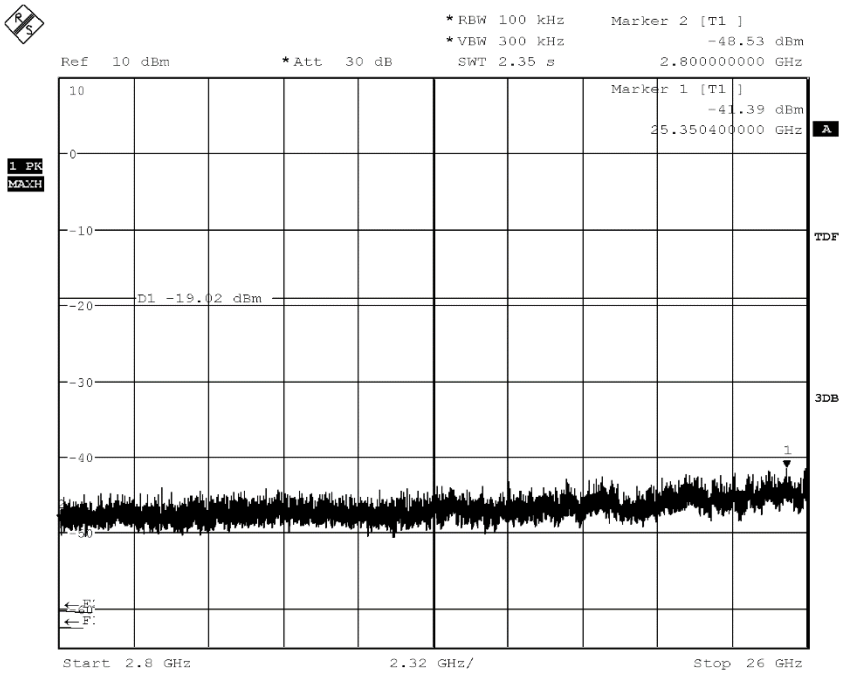
Date: 11.DEC.2018 09:54:00

20dBc_0.15MHz-30MHz_REF_2412_1Mbit



Date: 11.DEC.2018 09:54:49

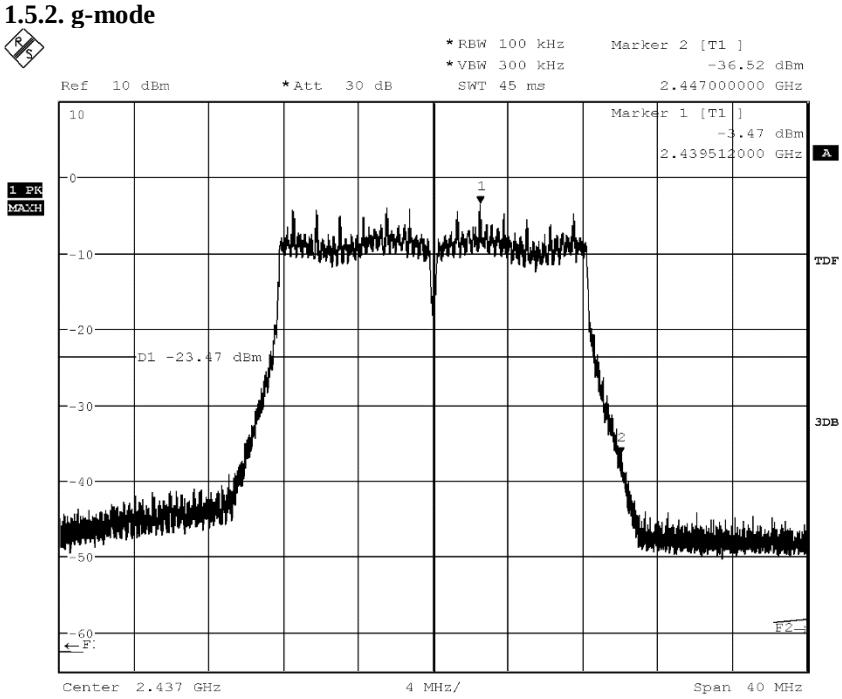
20dBc_0.30MHz-2.8Ghz_2412_1Mbit



Date: 11.DEC.2018 09:56:58

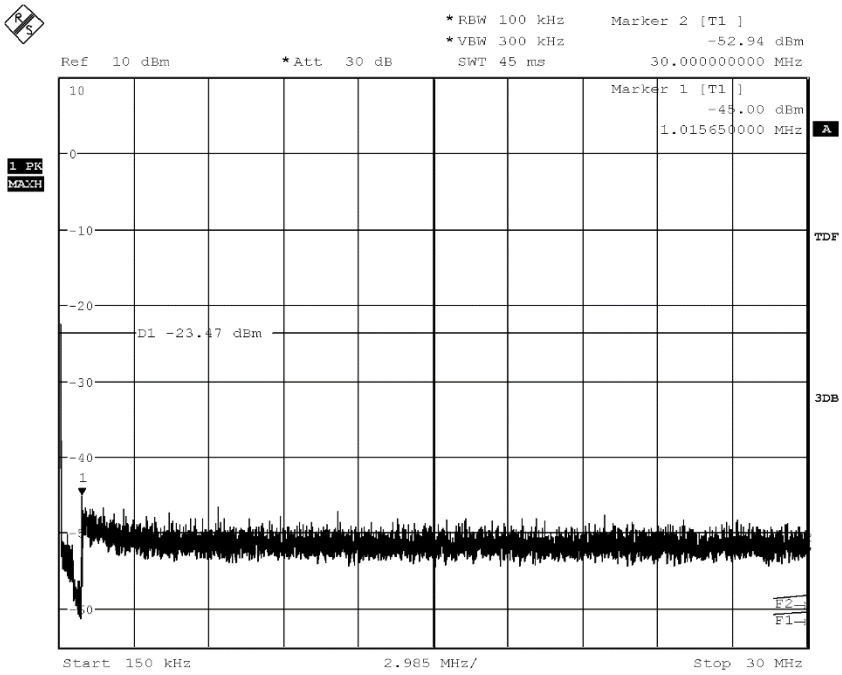
20dBc_2.8GHz-26Ghz_2412_1Mbit

1.5.2. g-mode



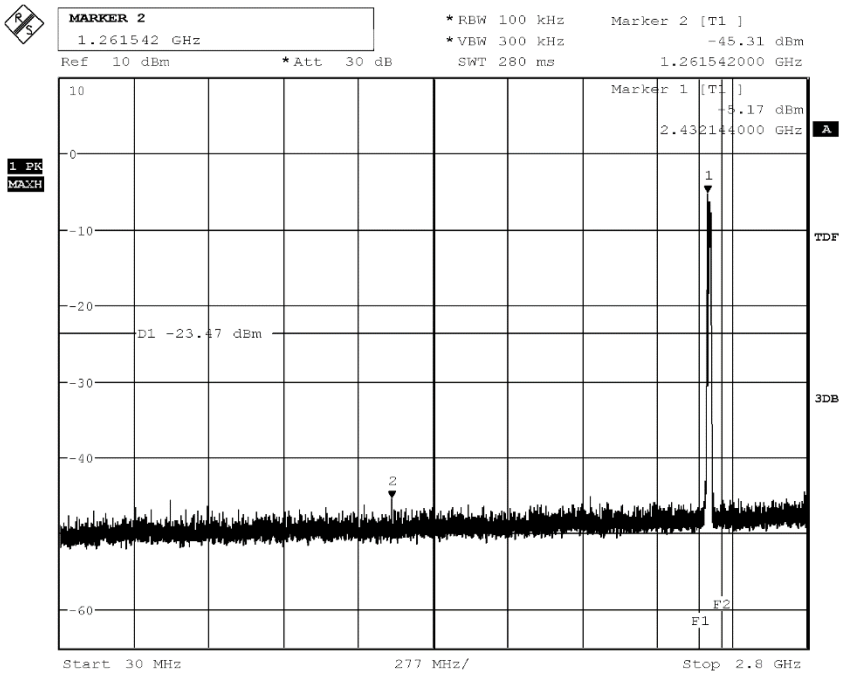
Date: 11.DEC.2018 09:58:51

20dBc_REF_2437_gmode_12Mbit



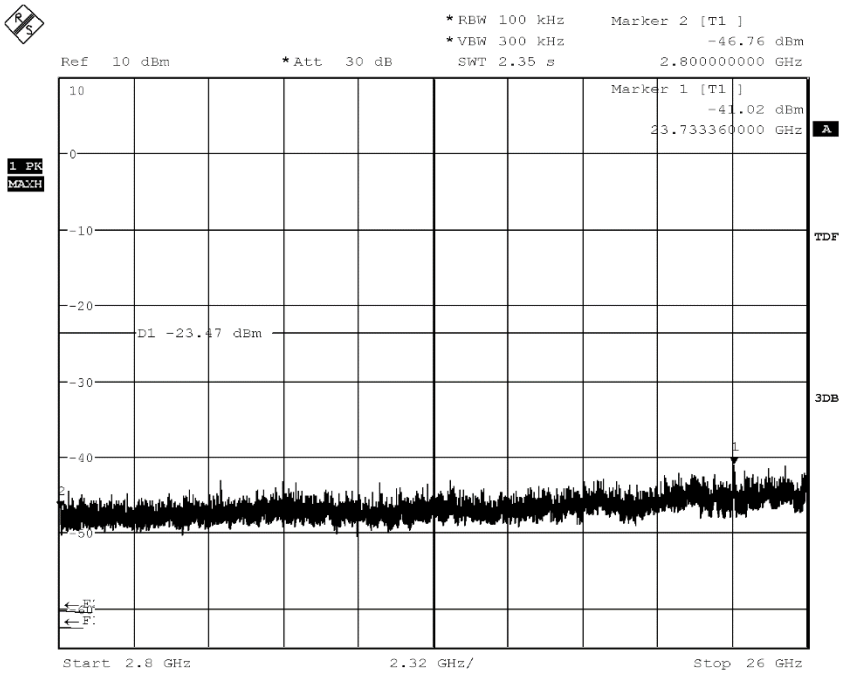
Date: 11.DEC.2018 09:59:48

20dBc_0.15MHz-30MHz_gmode_12Mbit



Date: 11.DEC.2018 10:00:35

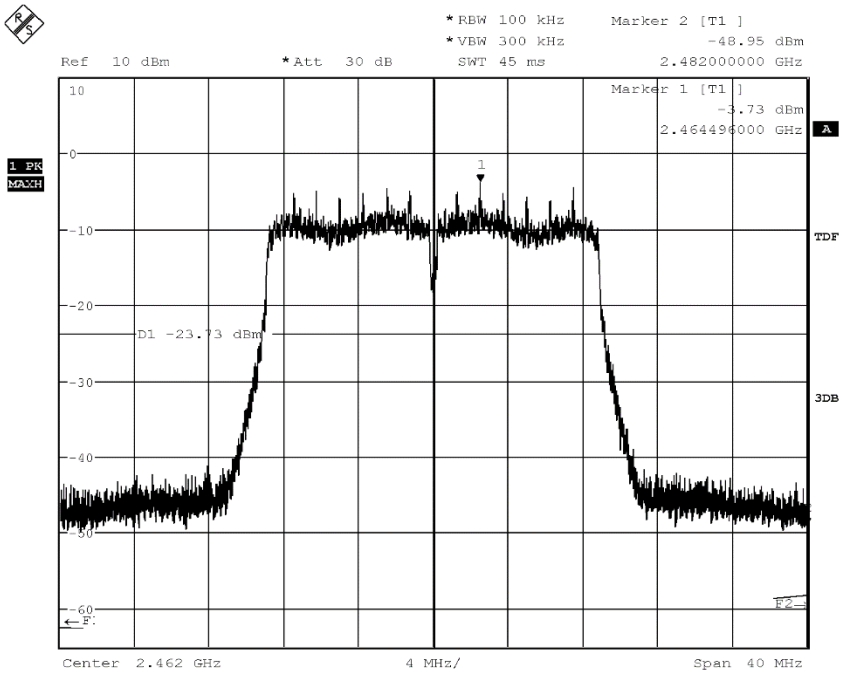
20dBc_0.30MHz-2.8Ghz_gmode_12Mbit



Date: 11.DEC.2018 10:01:13

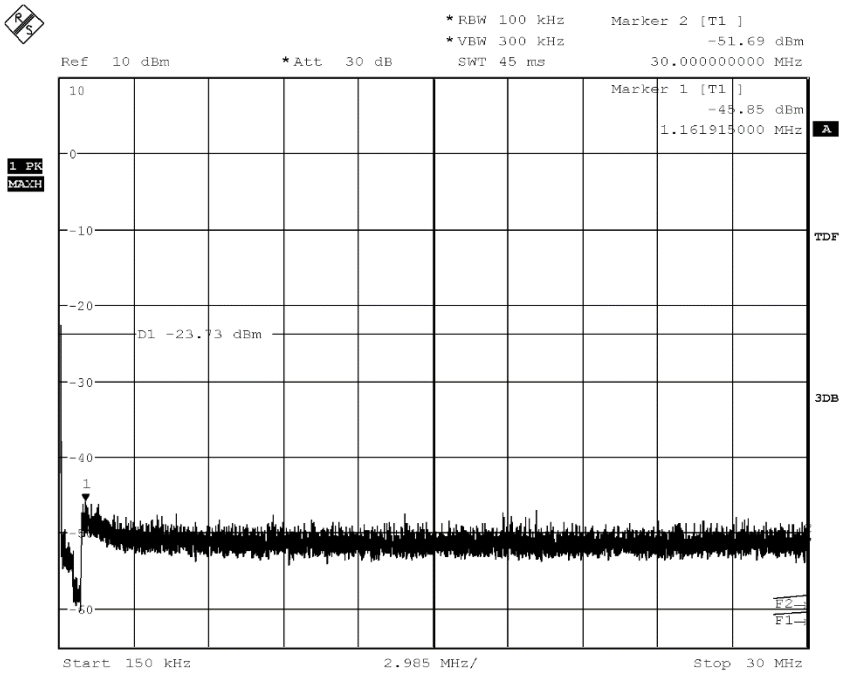
20dBc_2.8GHz-26Ghz_gmode_12Mbit

1.5.3. n20-mode



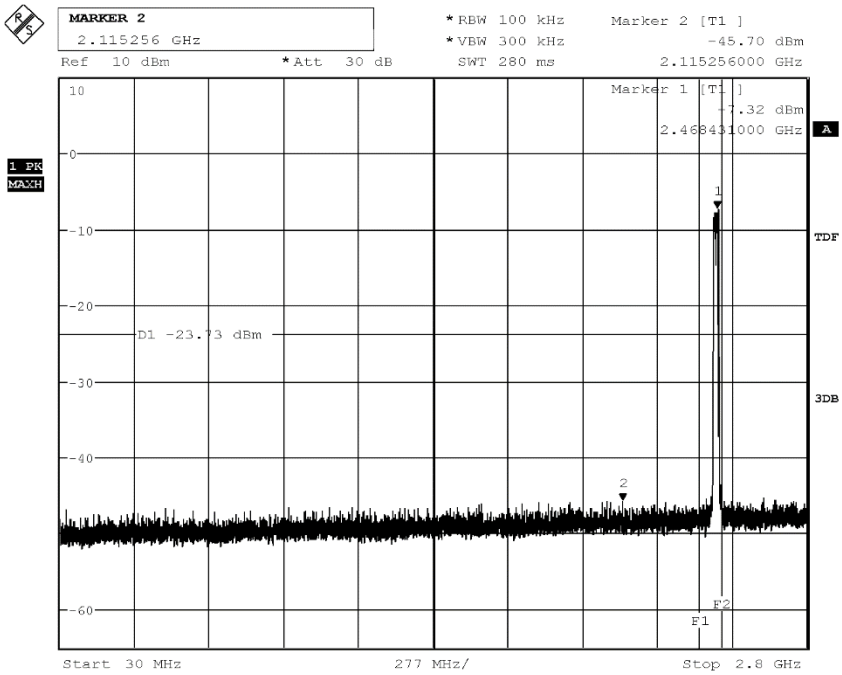
Date: 11.DEC.2018 10:02:39

20dBc_REF_2462_nmode_MCS0



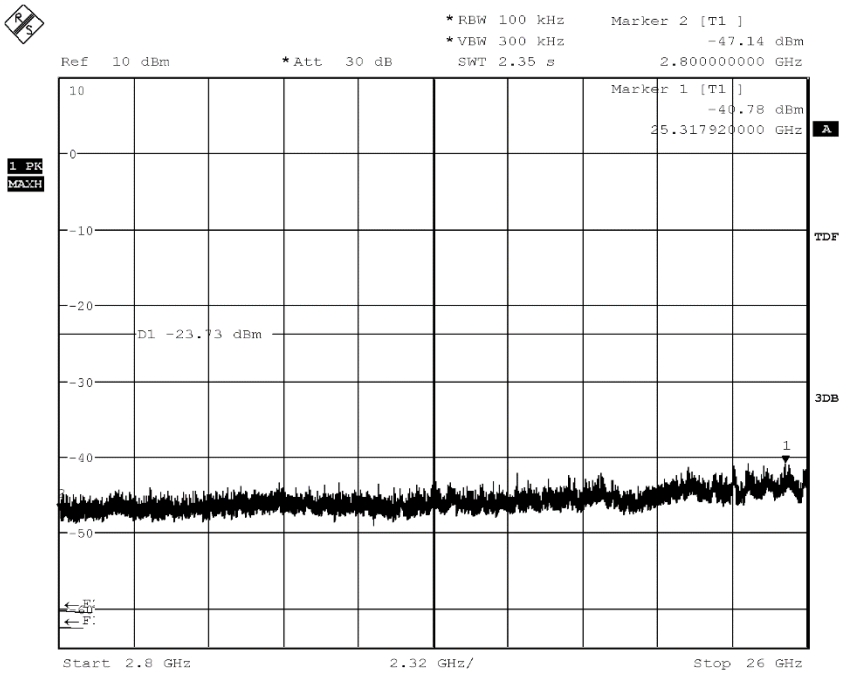
Date: 11.DEC.2018 10:03:24

20dBc_0.15MHz-30MHz_2462_nmode_MCS0



Date: 11.DEC.2018 10:04:14

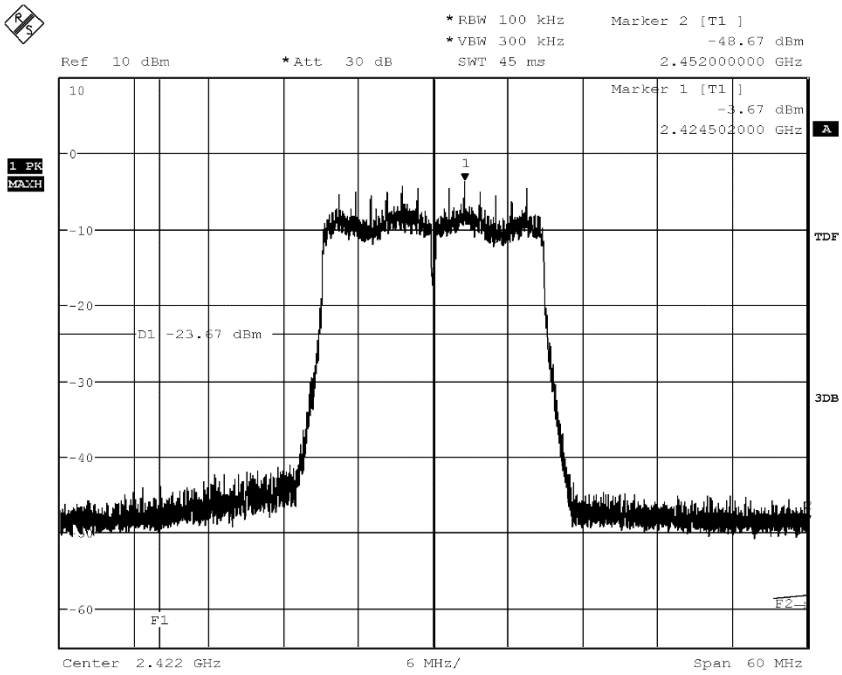
20dBc_0.30MHz-2.8Ghz_2462_nmode_MCS0



Date: 11.DEC.2018 10:05:24

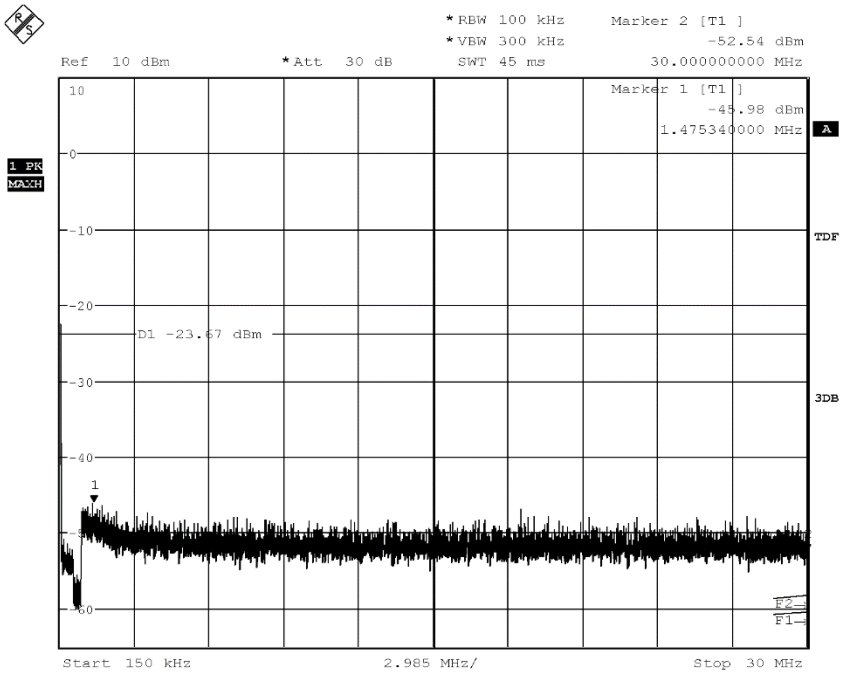
20dBc_2.8GHz-26Ghz_2462_nmode_MCS0

1.5.4. n40-mode



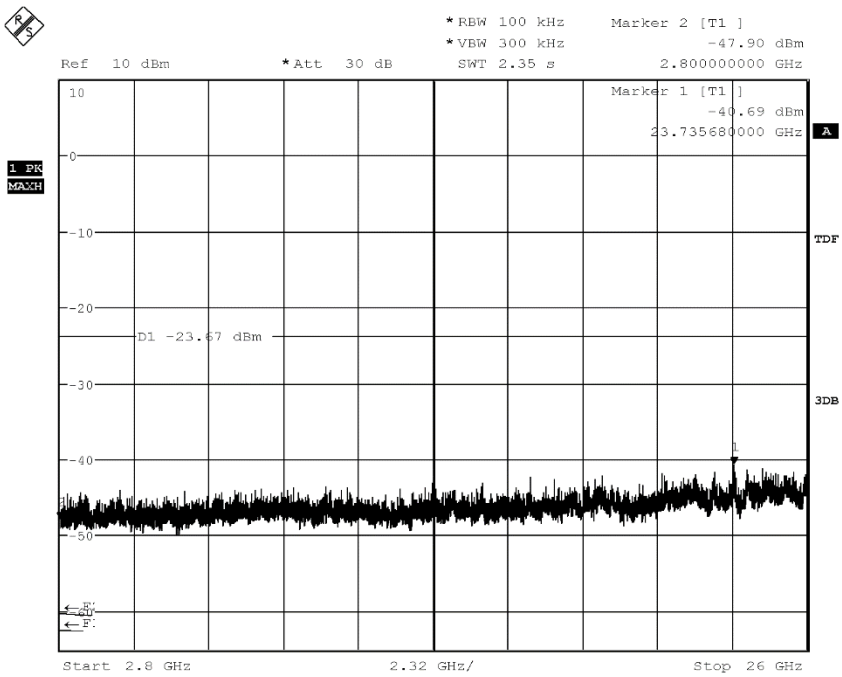
Date: 11.DEC.2018 10:06:22

20dBc_REF_2422_nmode_HT40_MCS0



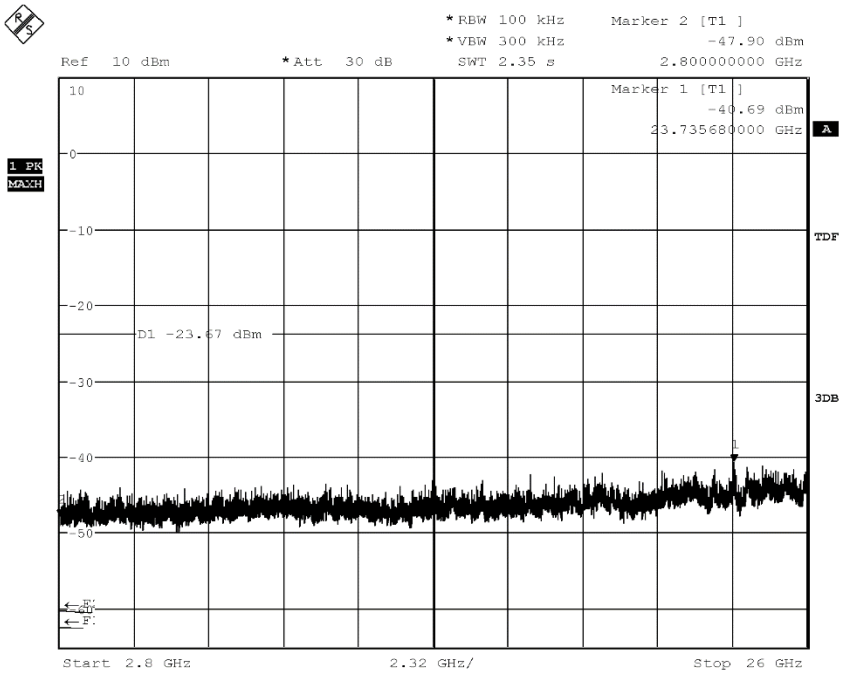
Date: 11.DEC.2018 10:07:15

20dBc_0.15MHz-30MHz_2422_nmode_HT40_MCS0



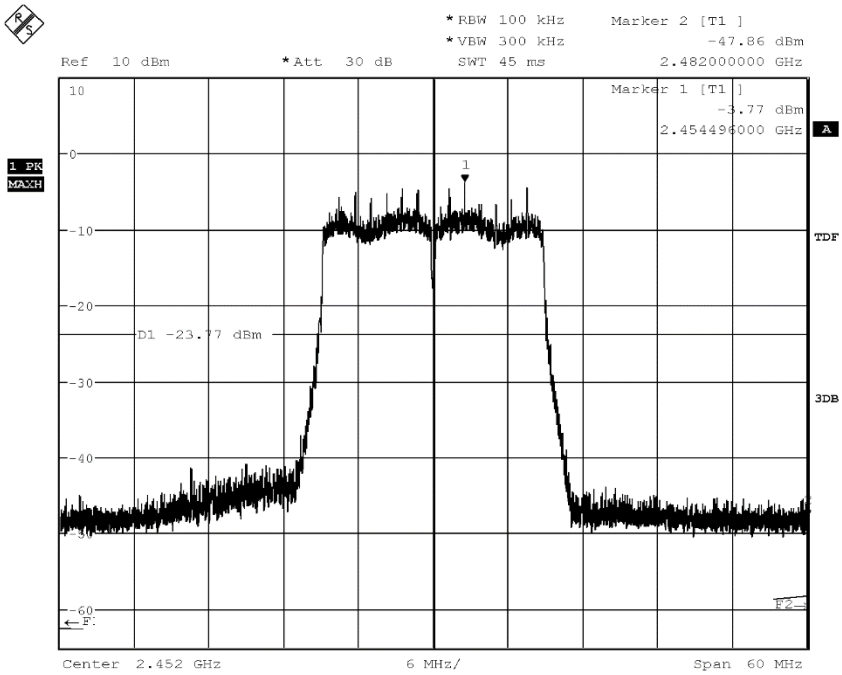
Date: 11.DEC.2018 10:08:12

20dBc_0.30MHz-2.8Ghz_2422_nmode_HT40_MCS0



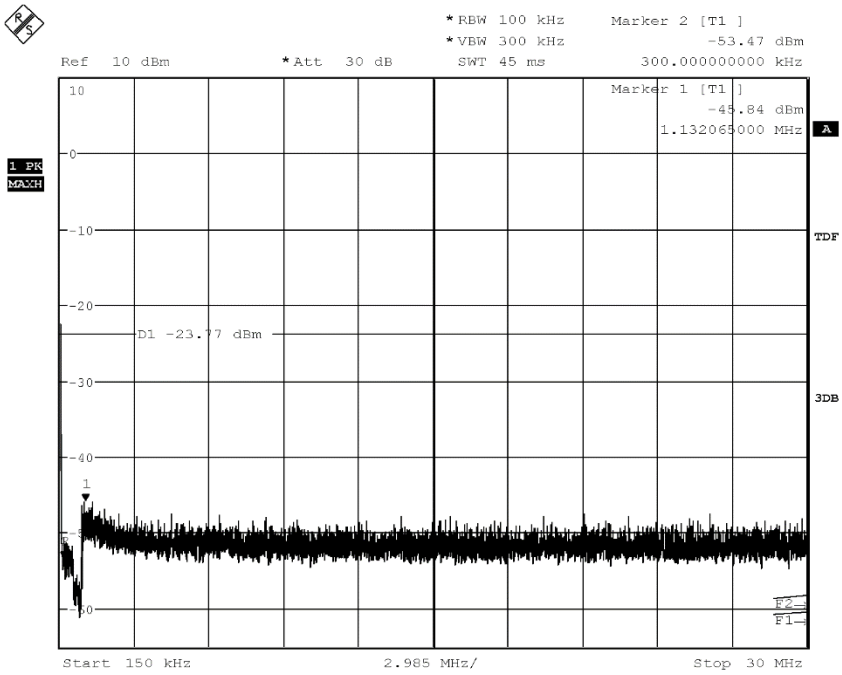
Date: 11.DEC.2018 10:08:12

20dBc_2.8GHz-26Ghz_2422_nmode_HT40_MCS0



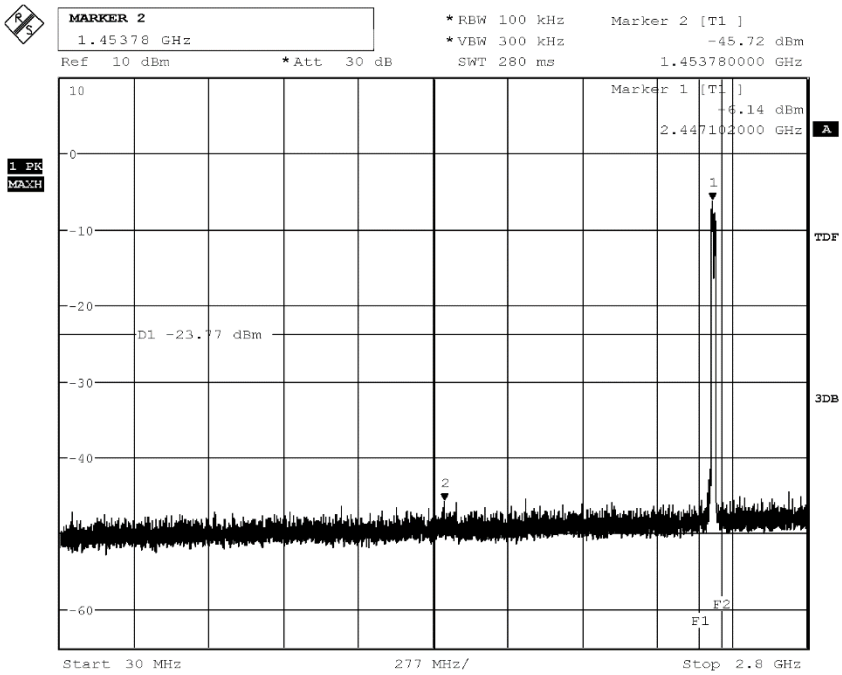
Date: 11.DEC.2018 10:09:13

20dBc_REF_2452_nmode_HT40_MCS0



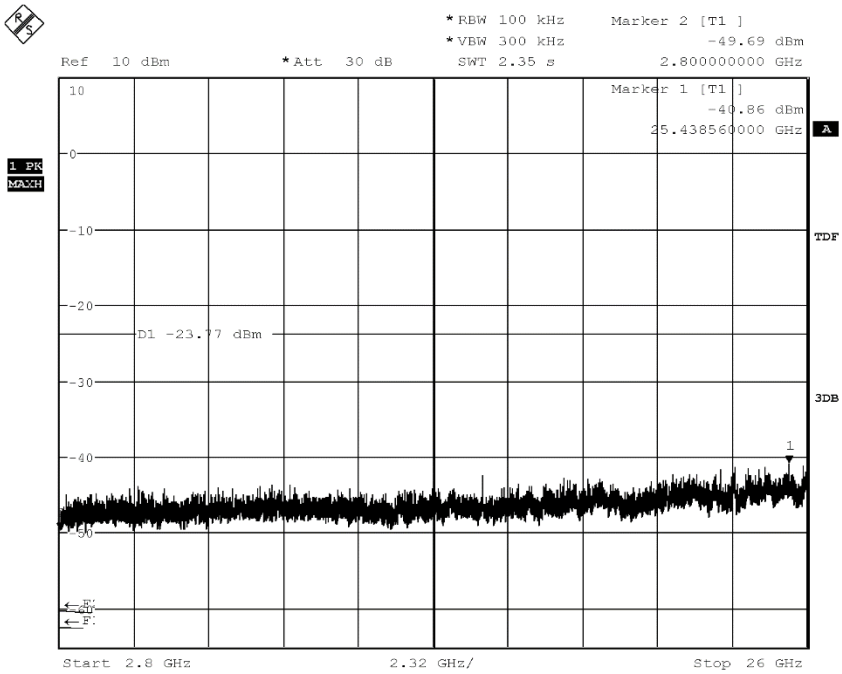
Date: 11.DEC.2018 10:09:52

20dBc_0.15MHz-30MHz_2452_nmode_HT40_MCS0



Date: 11.DEC.2018 10:10:27

20dBc_0.30MHz-2.8Ghz_2452_nmode_HT40_MCS0



Date: 11.DEC.2018 10:10:53

20dBc_2.8GHz-26Ghz_2452_nmode_HT40_MCS0

1.6. General Limit - Radiated field strength emissions below 30 MHz

2.01a_laying_b-mode_ch01

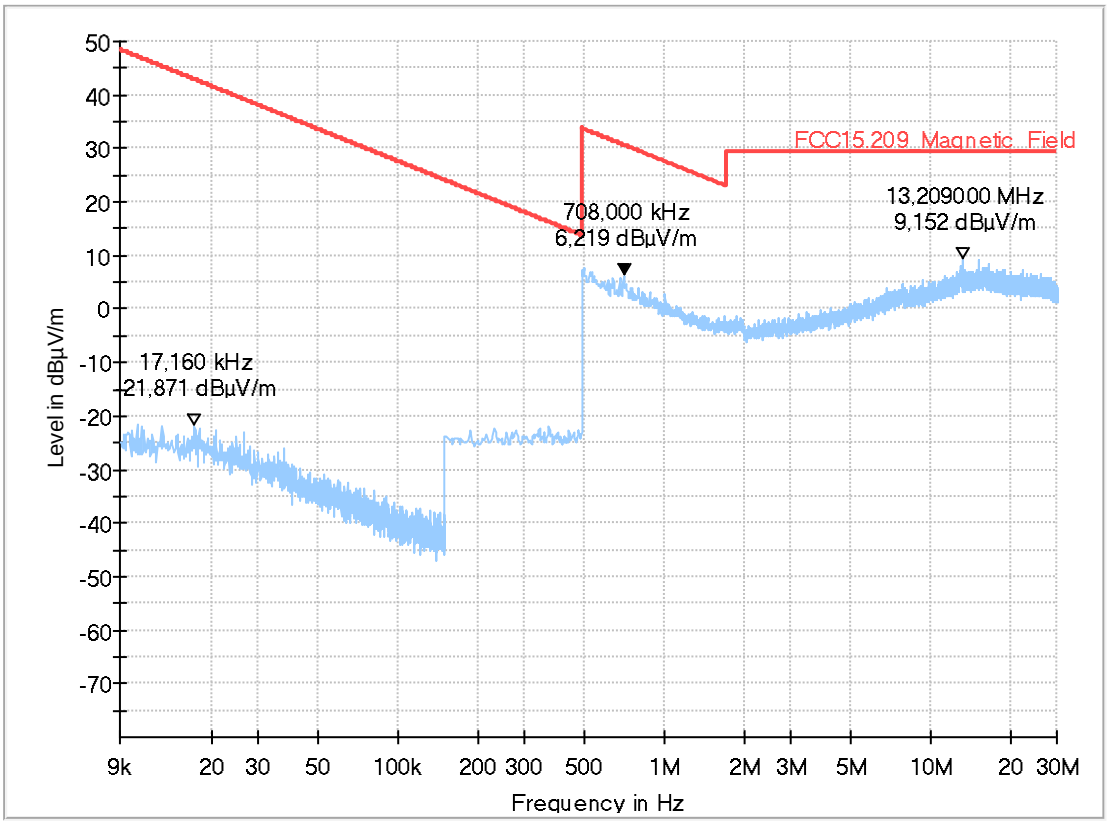
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC.V9.25.00
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	b-mode | 1Mbit| ch01_Laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



2.01b_standing_b-mode_ch01

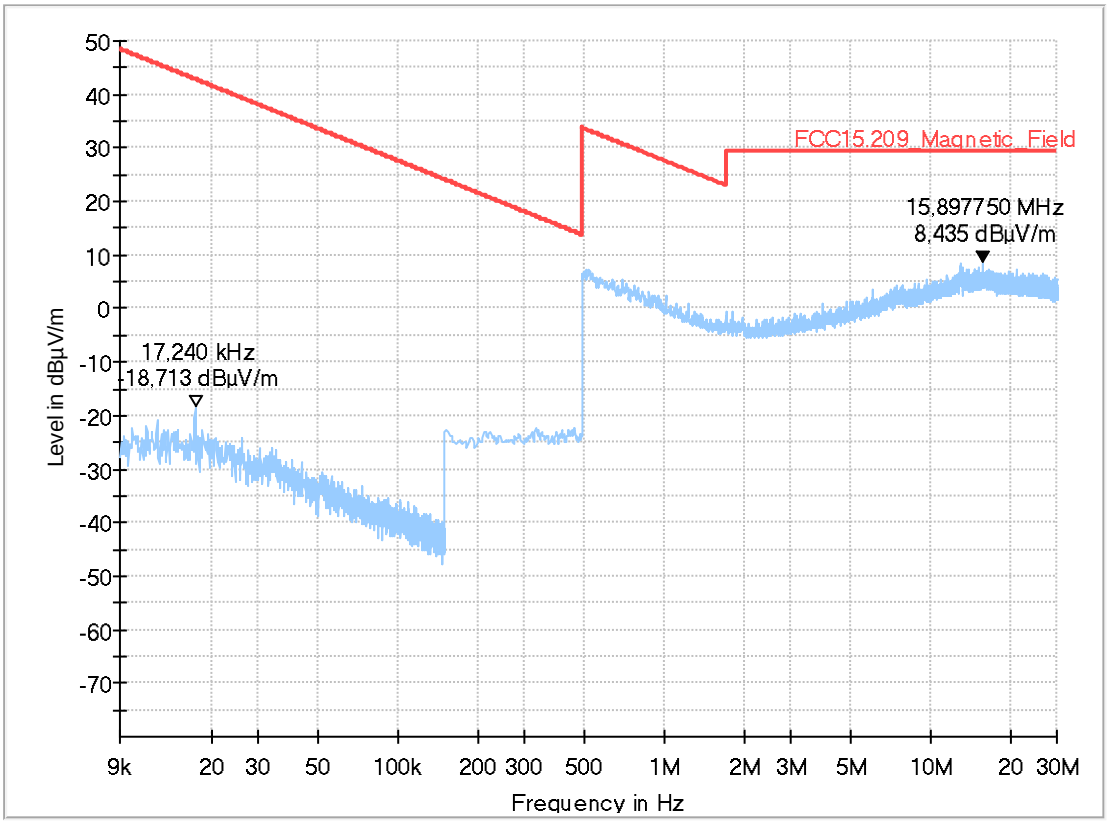
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC.V9.25.00
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	b-mode | 1Mbit| ch01_standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



2.02a_laying_g-mode_ch06

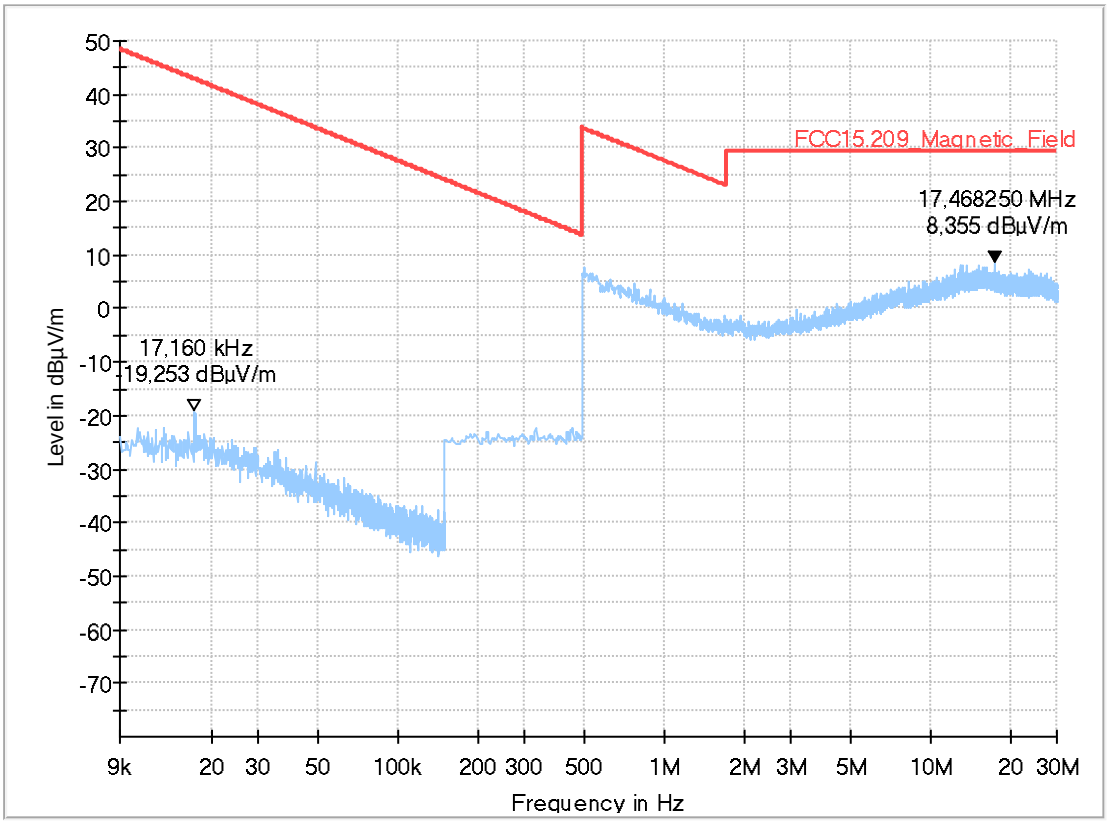
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC.V9.25.00
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	g-mode | 12Mbit| ch06:Laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



2.02b_standing_g-mode_ch06

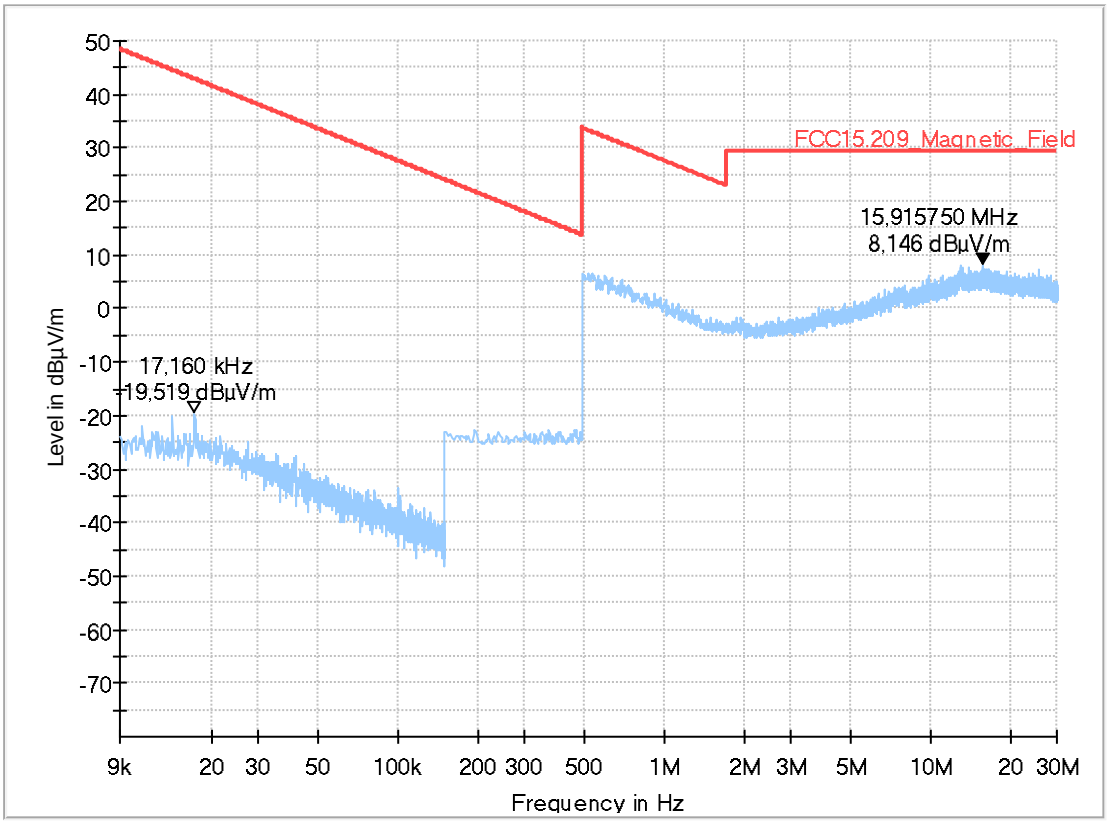
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC.V9.25.00
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	g-mode | 12Mbit| ch06:Standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



2.03a_laying_n-mode_ch11

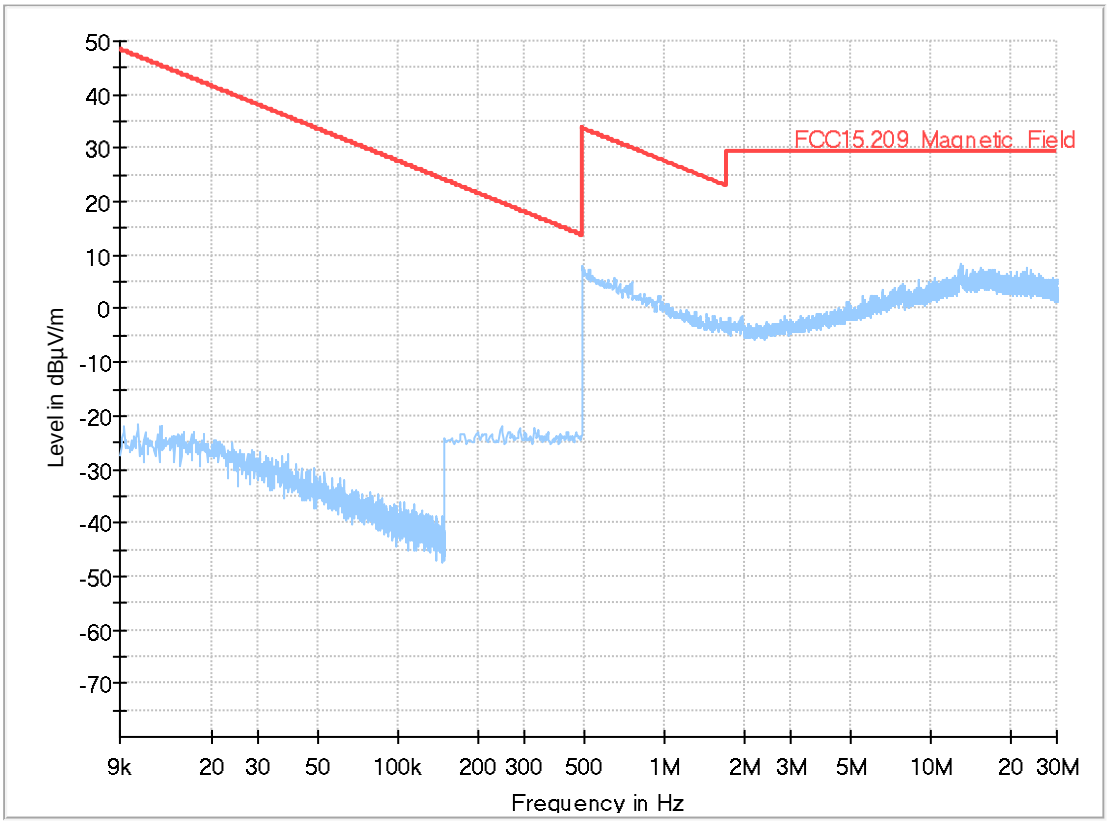
Date: 05.11.2018 Page 1 of 2

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	WLAN 2,4 GHz, n-mode, MCS0, ch 11, laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



2.03b_standing_n-mode_ch11

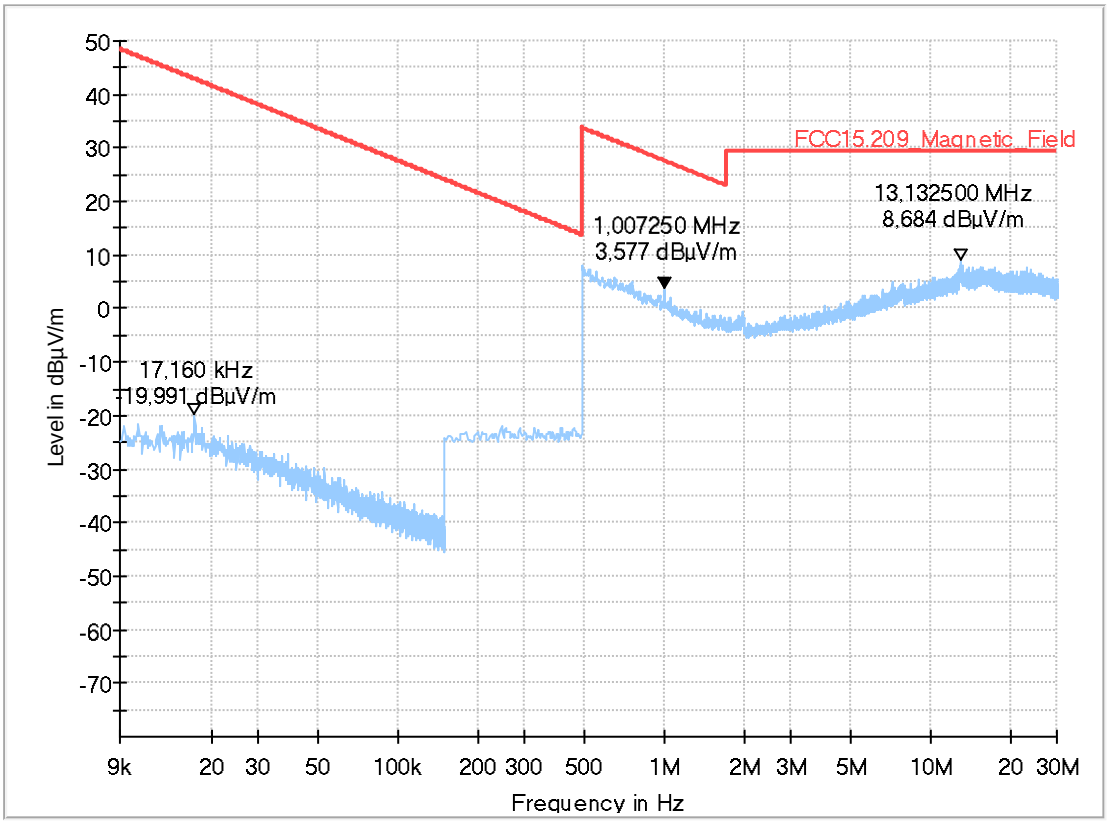
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC.V9.25.00
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	WLAN 2,4 GHz, n-mode, MCS0, ch 11, standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



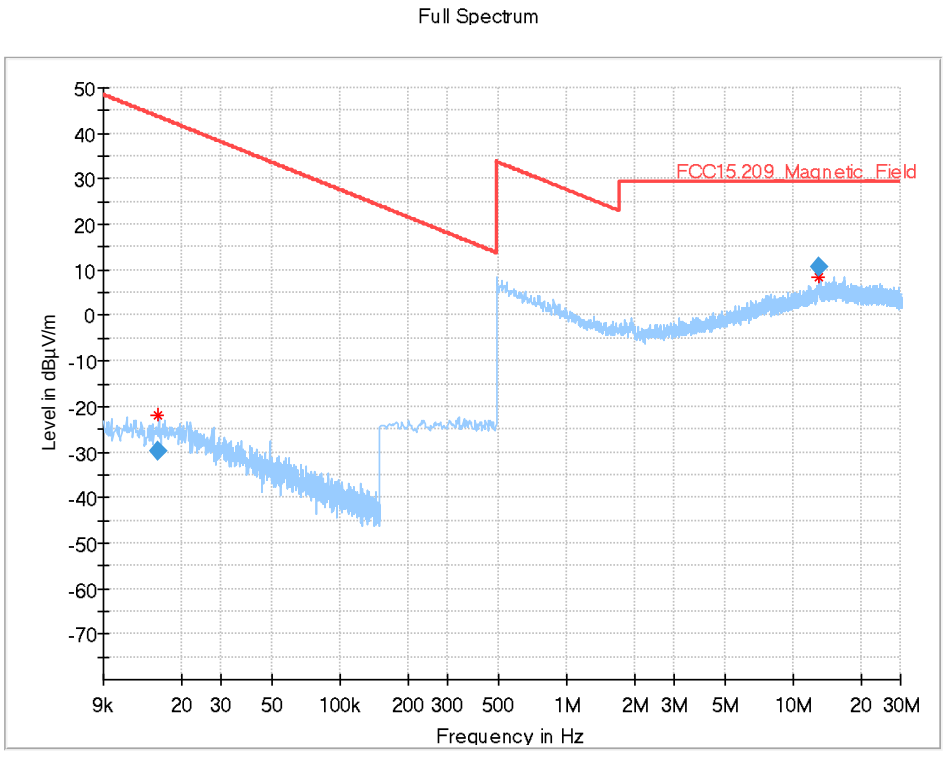
2.04a_laying_n40-mode_ch11

Date: 05.11.2018 Page 1 of 2

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	WLAN 2,4 GHz, n-mode, BW 40 MHz, MCS0, ch 11, laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)
0.015620	-29.79	43.72	73.51	1000.0	0.200	H	300.0	-64.5
13.137750	10.49	29.54	19.05	1000.0	9.000	H	300.0	-12.0

2.04b_standing_n40-mode_ch11

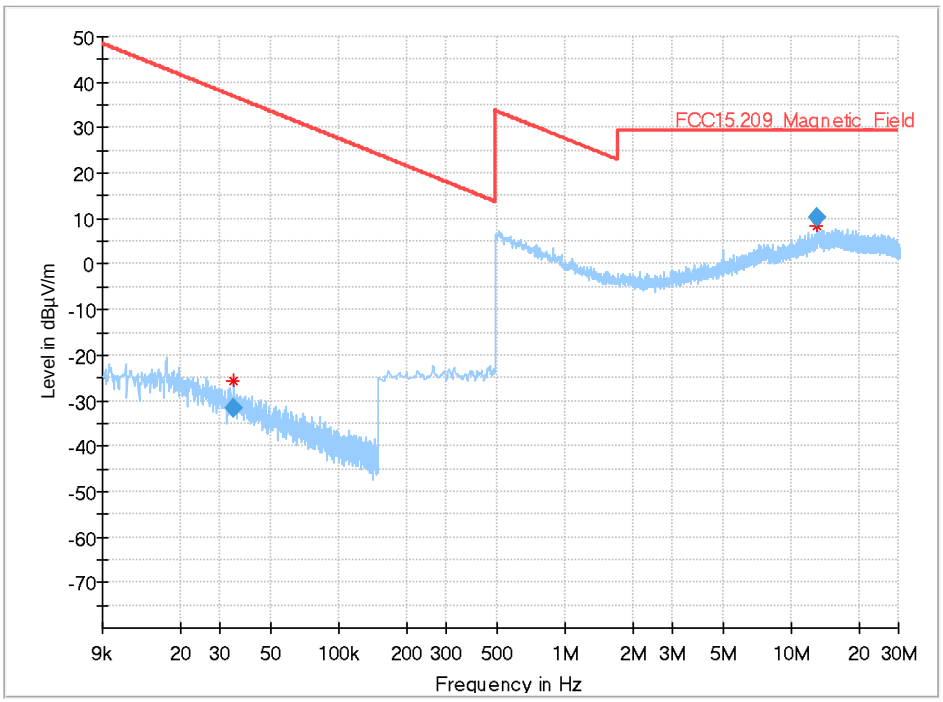
Date: 05.11.2018 Page 1 of 2

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Operatingmode:	WLAN 2,4 GHz, n-mode, BW 40 MHz, MCS0, ch 11, standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)
0.034380	-31.53	36.87	68.40	1000.0	0.200	V	165.0	-66.6
13.088000	10.47	29.54	19.07	1000.0	9.000	V	255.0	-12.0

1.7. General Limit - Radiated field strength emissions, 30 MHz - 1 GHz

3.01a_laying_b-mode_ch01

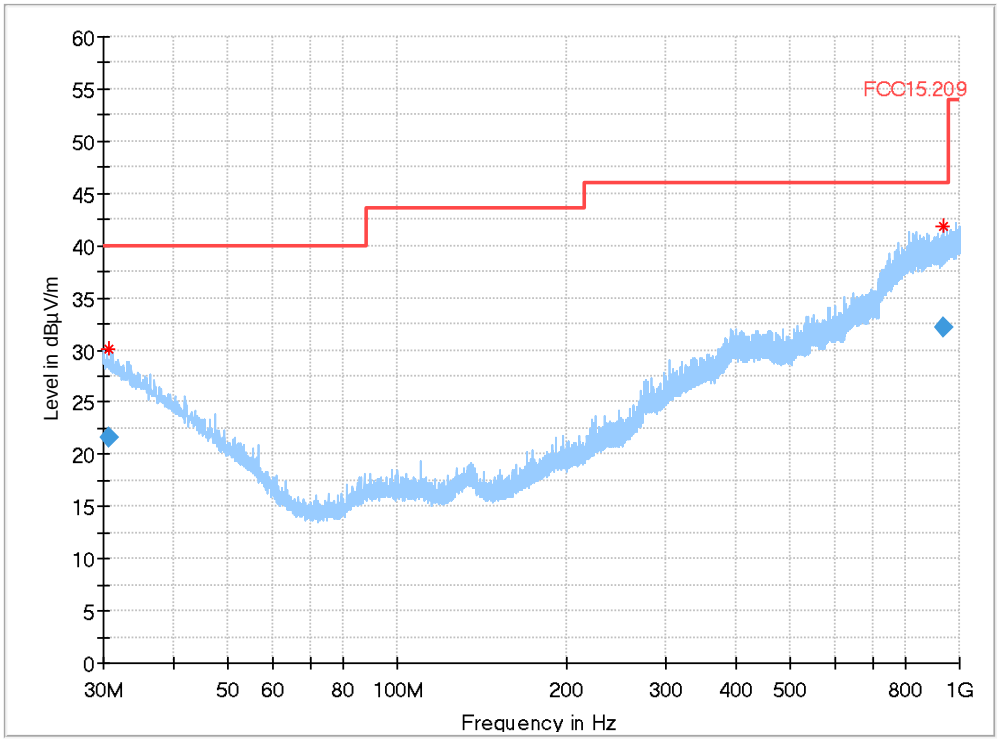
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	b-mode, 1 Mbit, laying
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.740000	21.62	40.00	18.38	1000.0	120.000	355.0	H	275.0	21.2
936.408000	32.19	46.00	13.81	1000.0	120.000	293.0	V	177.0	26.9

3.01b_standing_b-mode_ch01

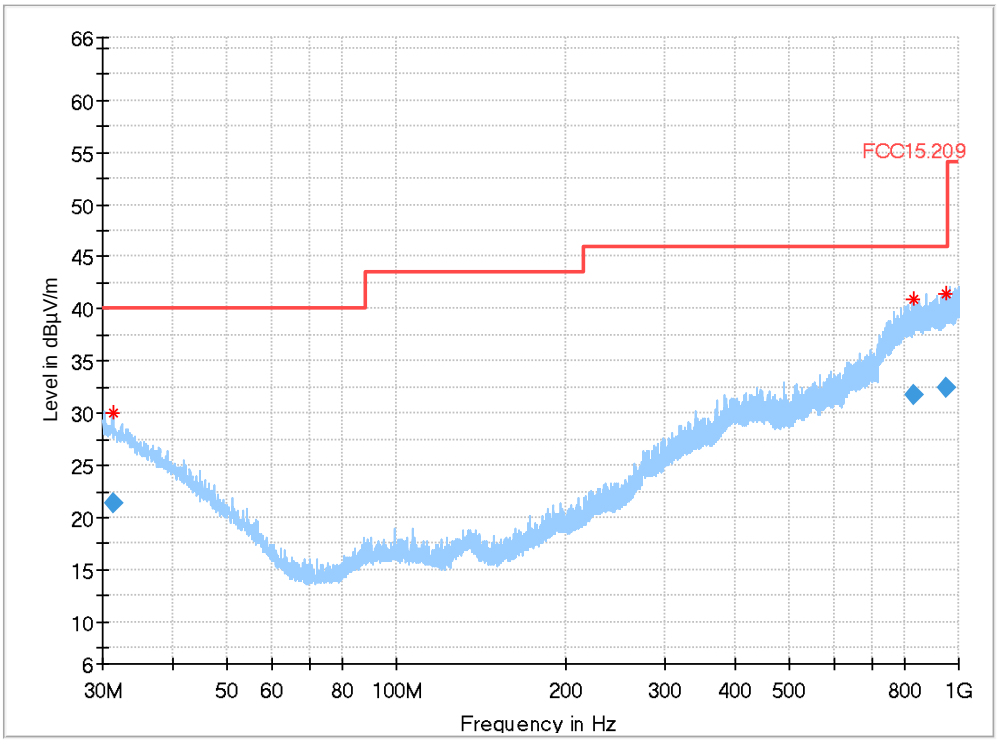
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	b-mode, 1 Mbit, standing
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.324000	21.31	40.00	18.69	1000.0	120.000	222.0	V	283.0	20.9
833.896000	31.69	46.00	14.31	1000.0	120.000	304.0	V	239.0	25.7
949.124000	32.49	46.00	13.51	1000.0	120.000	360.0	V	201.0	27.2

3.02a_laying_g-mode_ch06

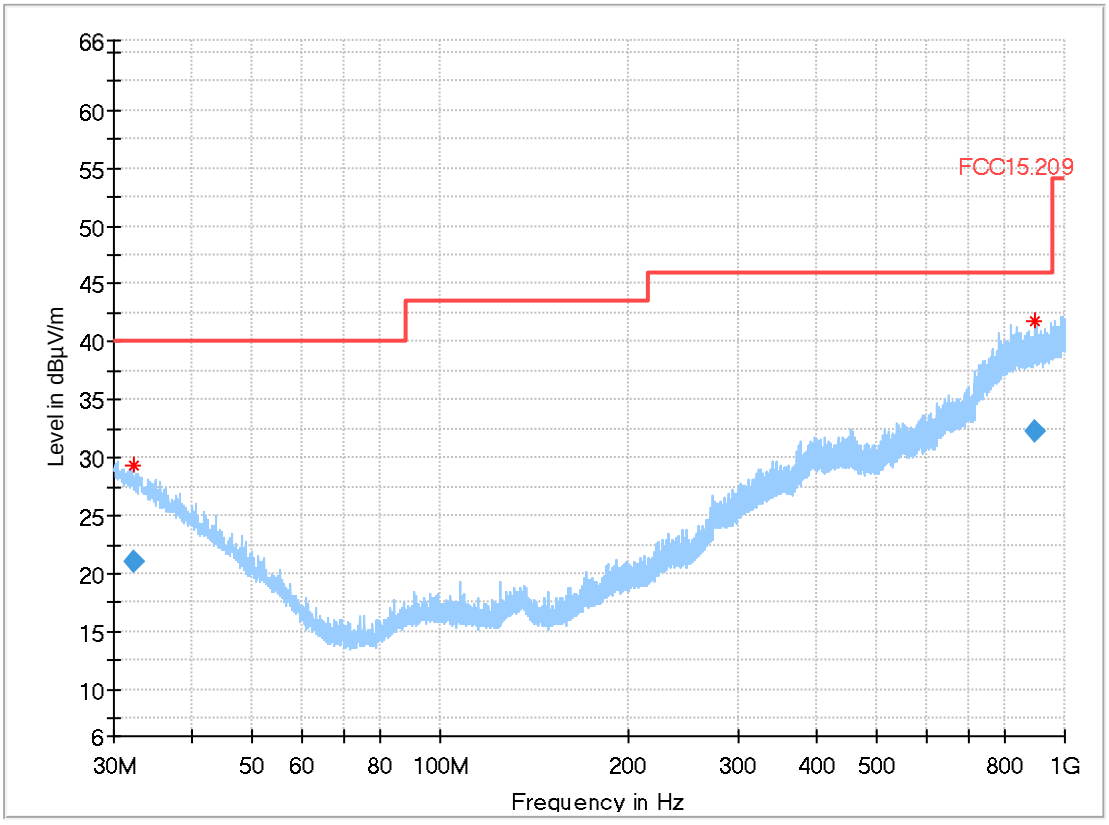
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	g-mode, 12 Mbit, laying
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
32.192000	20.98	40.00	19.02	1000.0	120.000	142.0	H	264.0	20.5
897.960000	32.33	46.00	13.67	1000.0	120.000	105.0	V	114.0	26.9

3.02b_standing_g-mode_ch06

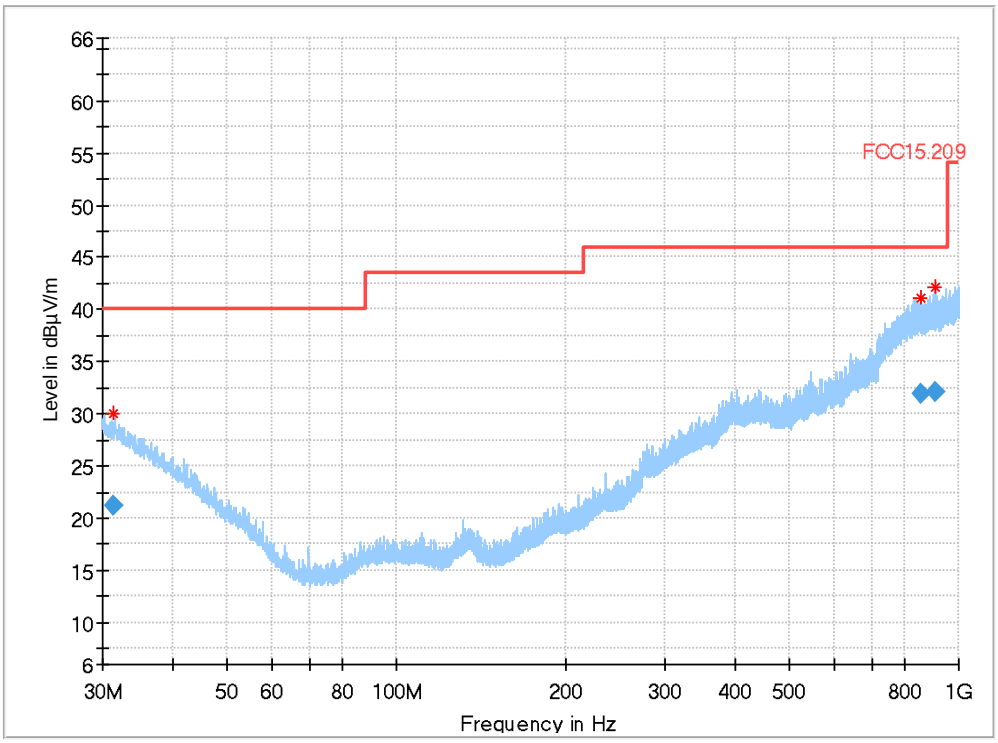
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	g-mode, 12 Mbit, standing
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.440000	21.28	40.00	18.72	1000.0	120.000	159.0	V	296.0	20.9
853.856000	31.85	46.00	14.15	1000.0	120.000	187.0	H	248.0	26.0
911.736000	32.03	46.00	13.97	1000.0	120.000	322.0	H	226.0	26.7

3.03a_laying_n-mode_ch11

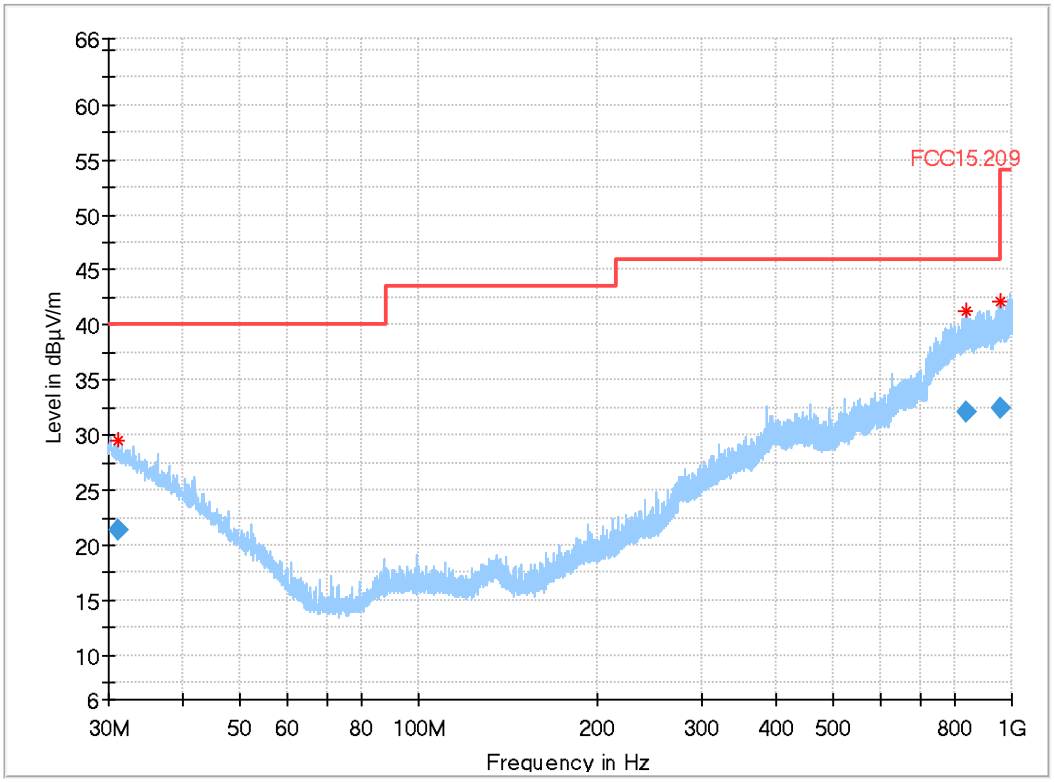
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n-mode, MCS0, laying
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.140000	21.39	40.00	18.61	1000.0	120.000	360.0	V	10.0	21.0
839.244000	32.04	46.00	13.96	1000.0	120.000	299.0	V	8.0	26.0
959.708000	32.39	46.00	13.61	1000.0	120.000	270.0	H	0.0	27.1

3.03b_standing_n-mode_ch11

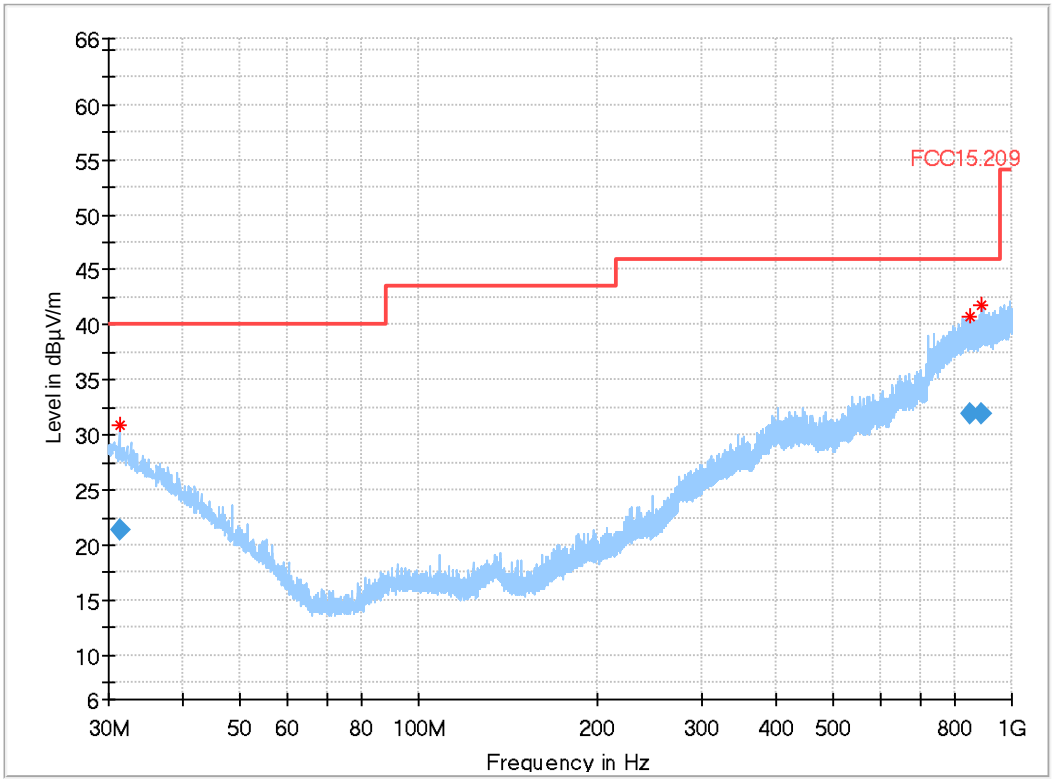
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n-mode, MCS0, standing
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.312000	21.39	40.00	18.61	1000.0	120.000	271.0	V	277.0	20.9
851.452000	32.01	46.00	13.99	1000.0	120.000	144.0	V	280.0	26.1
887.116000	31.93	46.00	14.07	1000.0	120.000	368.0	H	86.0	26.4

3.04a_laying_n40-mode_ch06

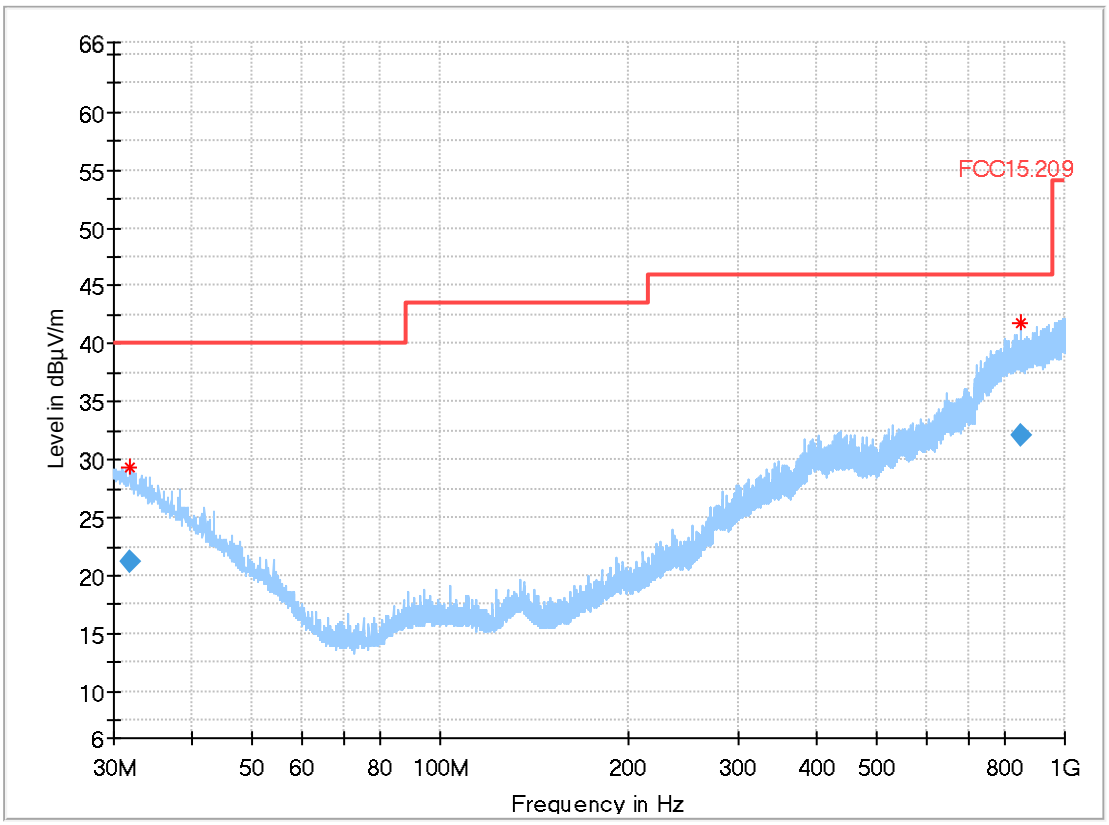
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n-mode40, MCS0, laying
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.864000	21.27	40.00	18.73	1000.0	120.000	215.0	H	238.0	20.7

851.056000	32.07	46.00	13.93	1000.0	120.000	109.0	V	124.0	26.1

3.04b_n40-mode_ch06

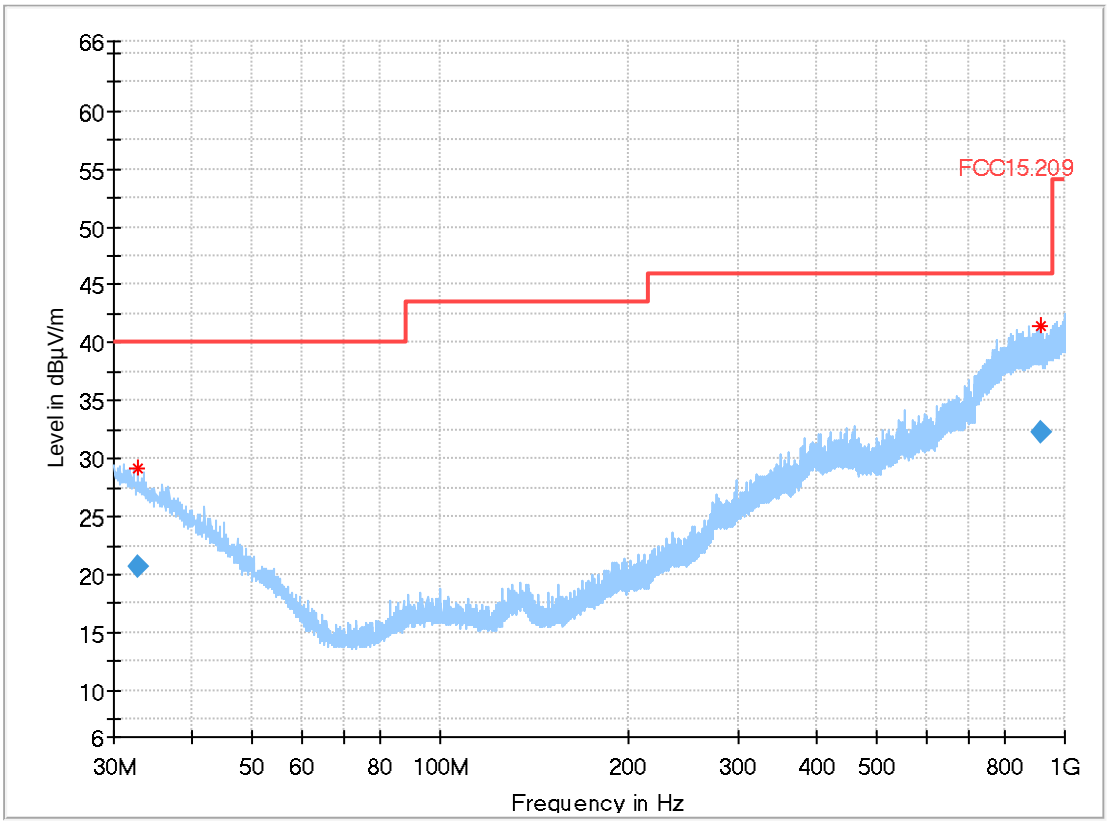
05.11.2018 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n-mode40, MCS0, standing
Operator:	TFra
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing_TX

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
32.876000	20.71	40.00	19.29	1000.0	120.000	197.0	V	249.0	20.2

913.332000	32.20	46.00	13.80	1000.0	120.000	206.0	V	37.0	26.8

3.05a_laying_n40-mode_ch03

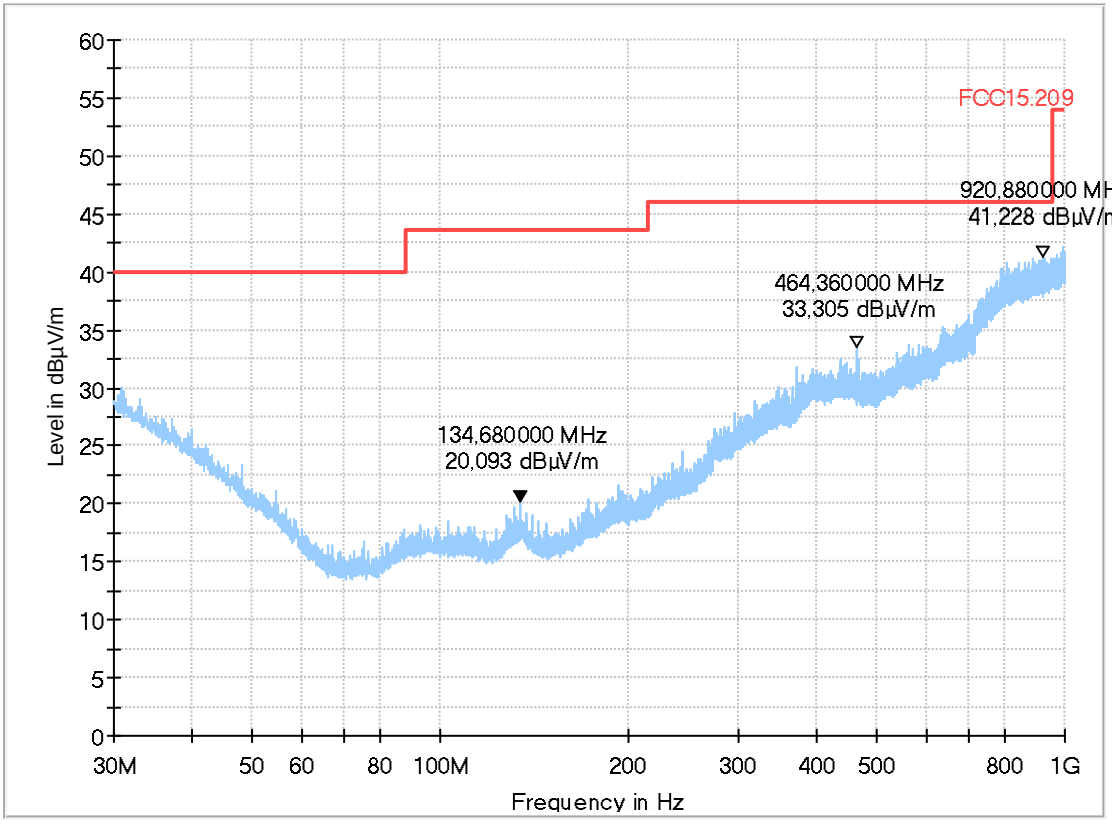
12.11.2018 Page 1 of 1

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n40-mode | MCS0 | ch03 | laying
Operator:	LKu
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



3.05b_n40-mode_ch03

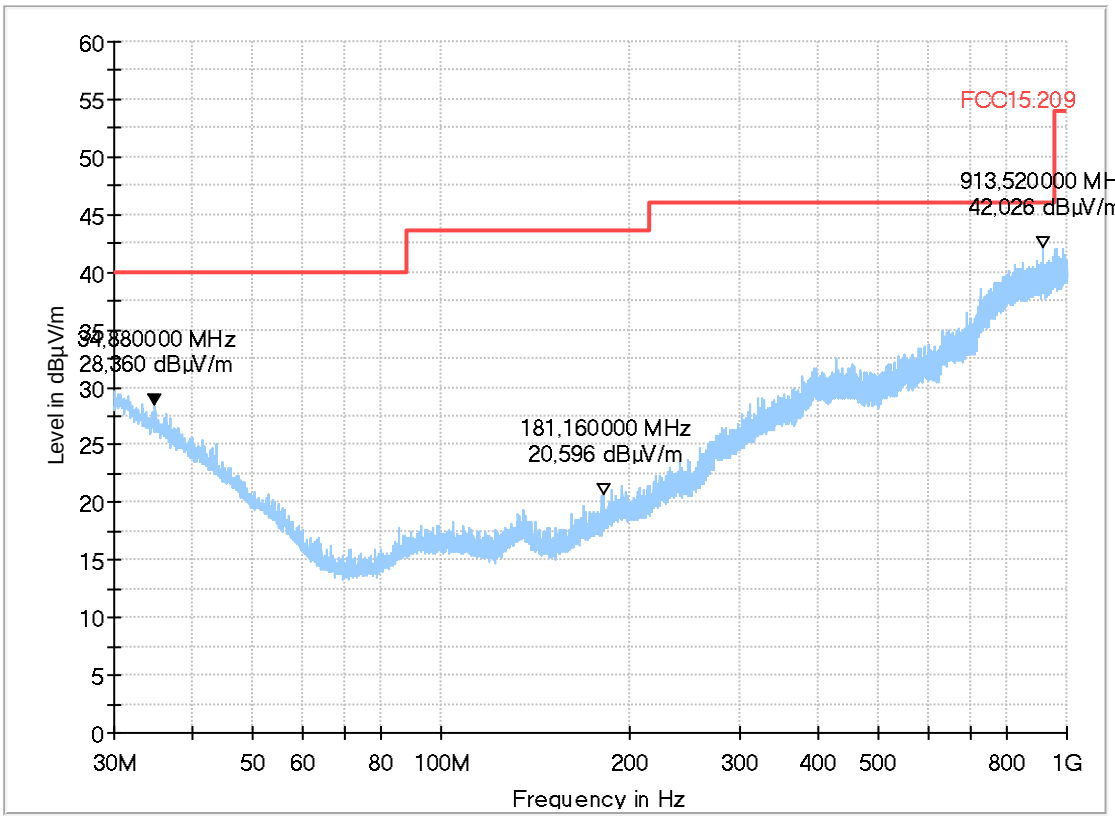
12.11.2018 Page 1 of 1

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n40-mode | MCS0 | ch03 | standing
Operator:	LKu
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



3.06a_laying_n40-mode_ch09

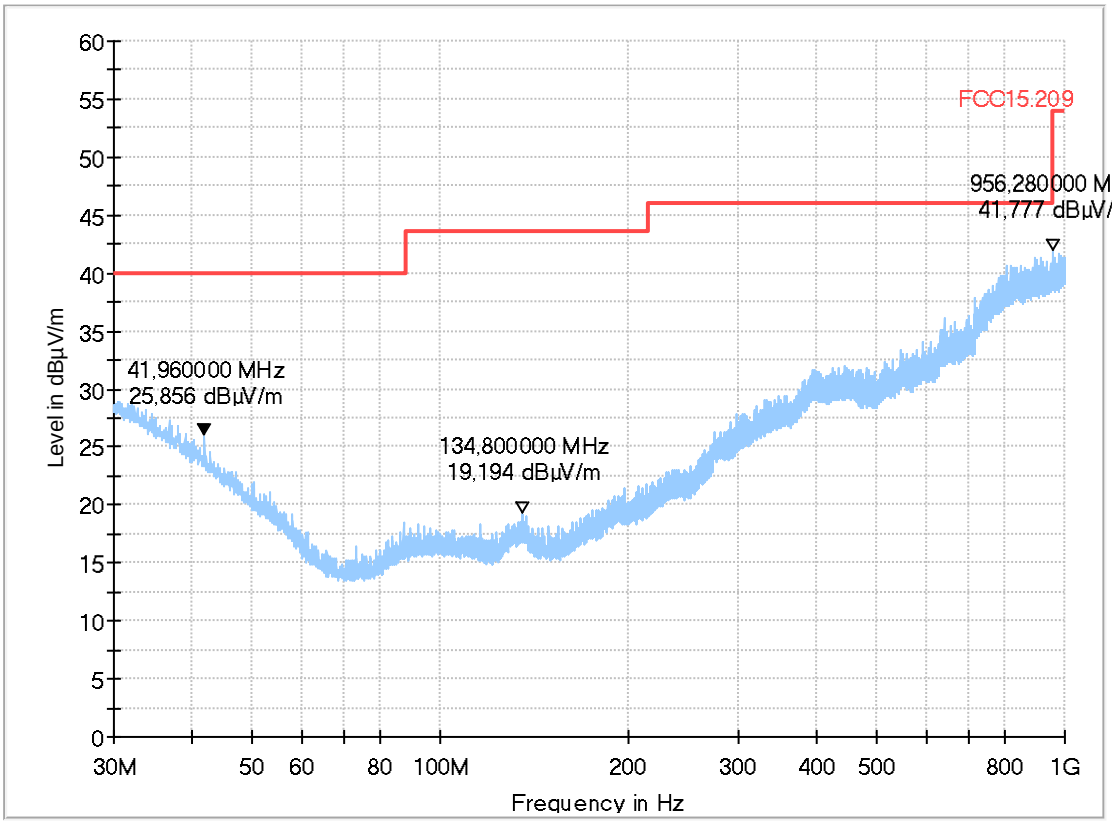
12.11.2018 Page 1 of 1

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n40-mode | MCS0 | ch09 | laying
Operator:	LKu
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	laying

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



3.06b_standing_n40-mode_ch09

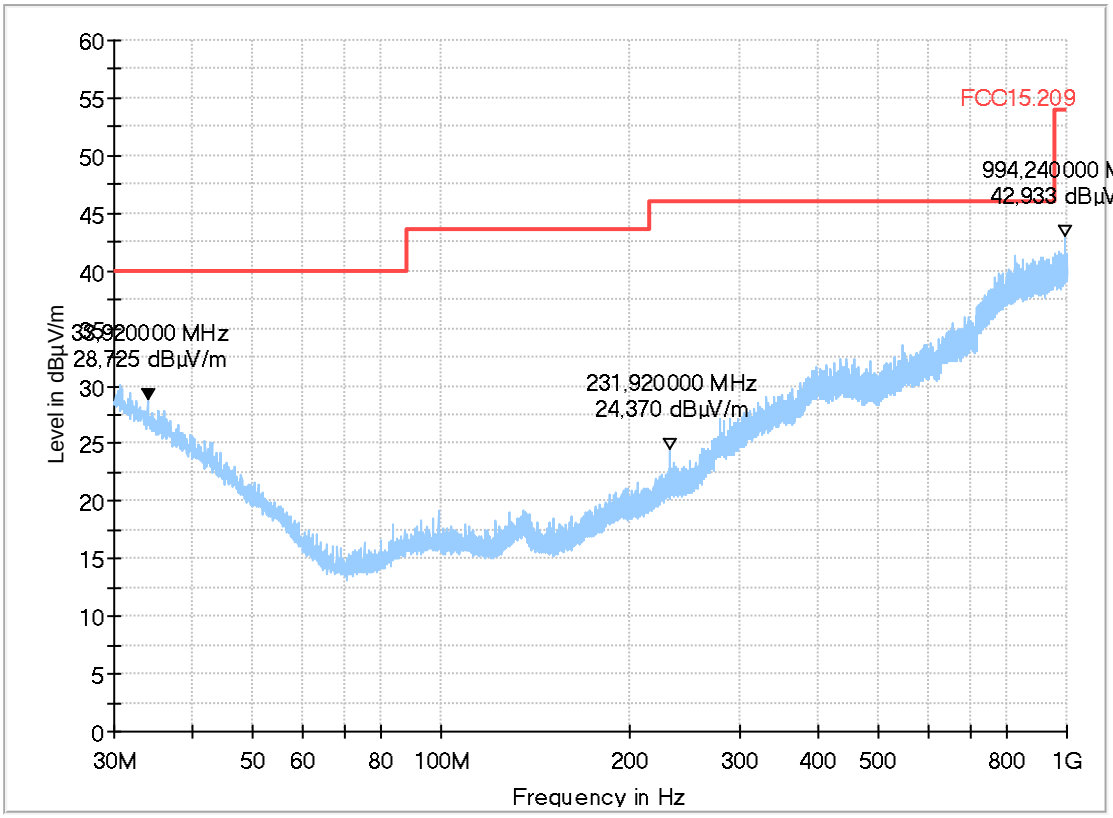
12.11.2018 Page 1 of 1

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operatingmode:	n40-mode | MCS0 | ch09 | standing
Operator:	LKu
Operating conditions:	Humidity: 48%rH; Temperature: 20°C
Comment 1:	standing

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



1.8. General Limit - Radiated emissions, above 1 GHz

8.01a_b-mode_ch01

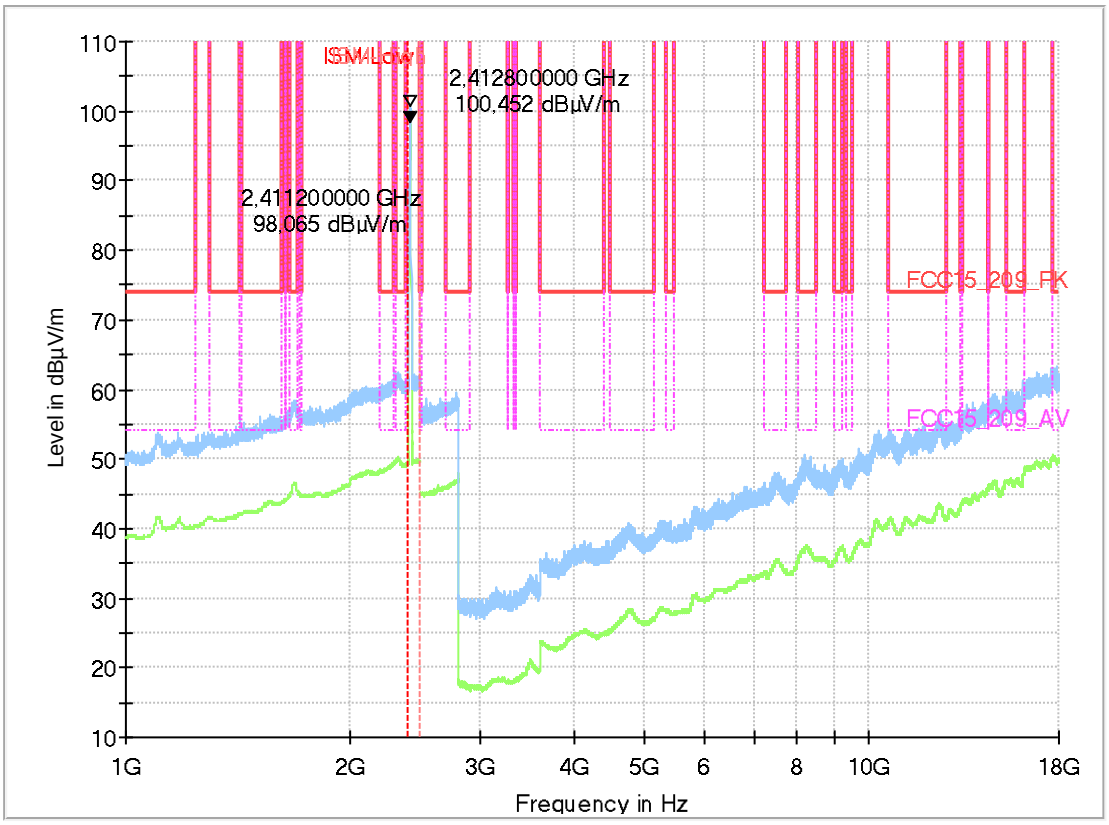
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Enviroment Condition:	Humidity: 40%rH; Temperature: 20°C
Operation mode:	TX_b-mode | 1Mbit| ch01
Operator Name:	HEI

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



8.02a_g-mode_ch06

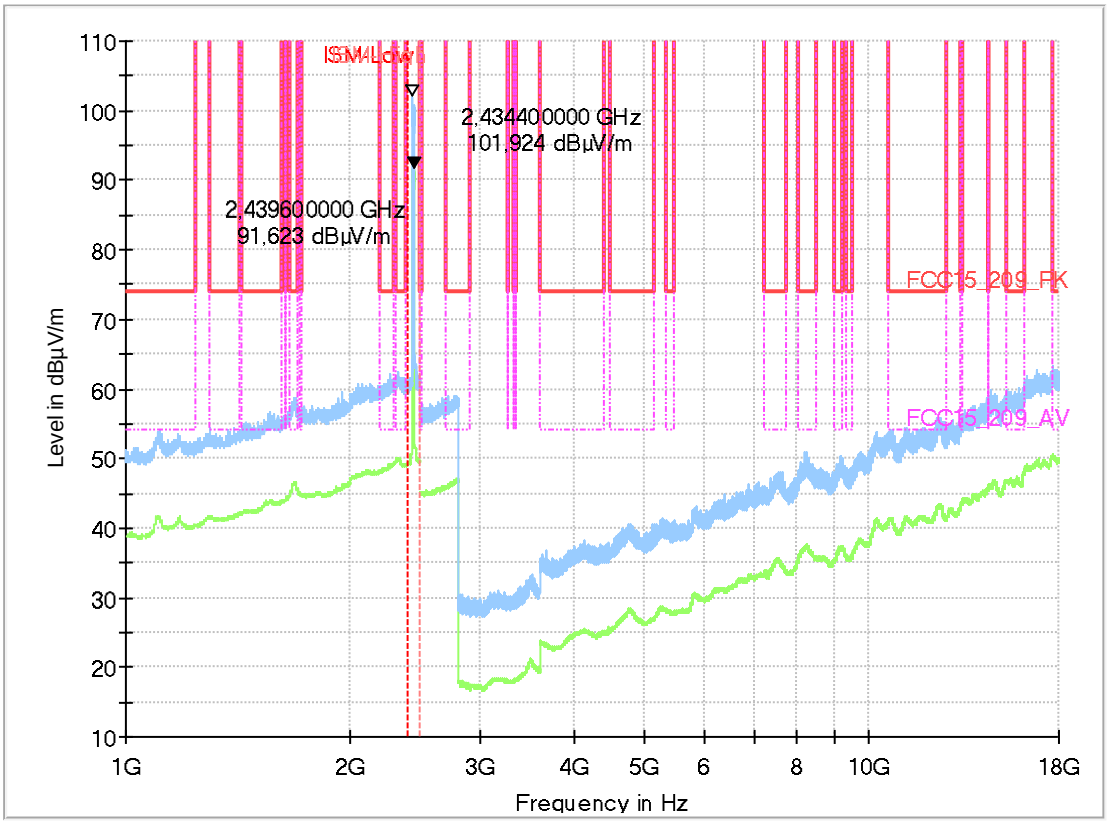
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Enviroment Condition:	Humidity: 40%rH; Temperature: 20°C
Operation mode:	TX_g-mode | 12Mbit| ch06
Operator Name:	HEI

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



8.03a_n-mode_ch11

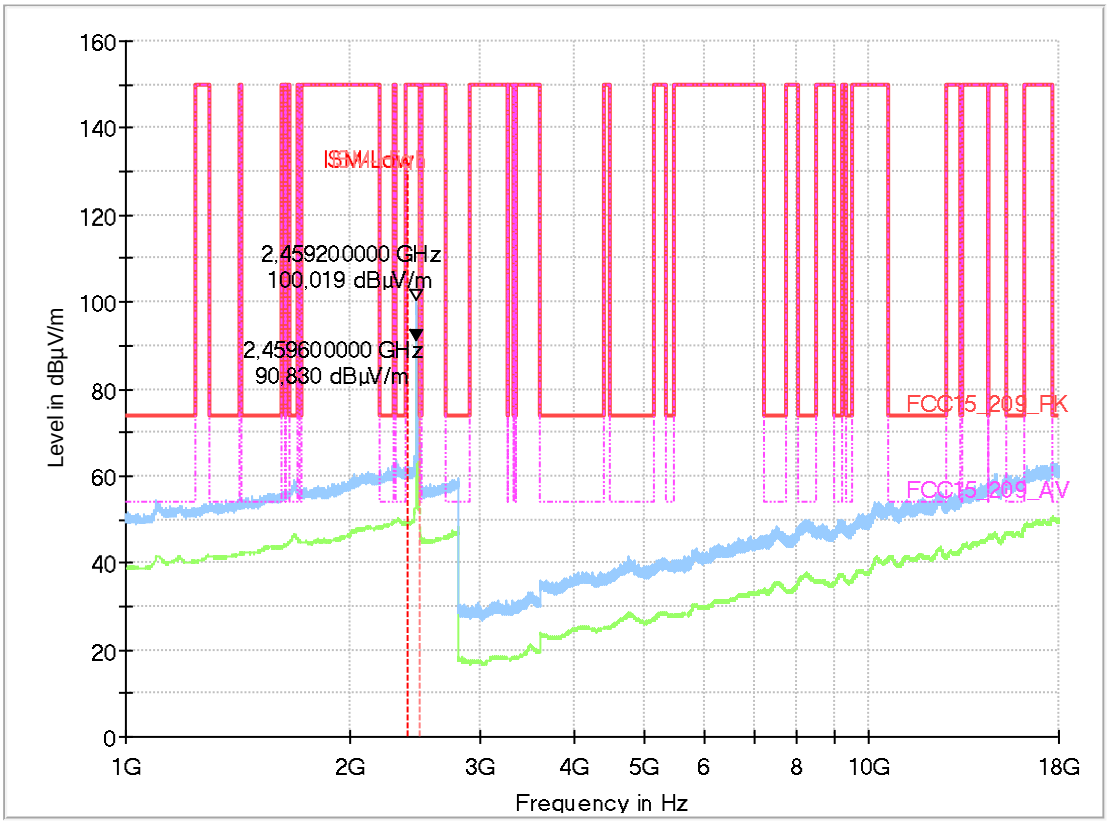
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Enviroment Condition:	Humidity: 40%rH; Temperature: 20°C
Operation mode:	n-mode | MCS0| ch11
Operator Name:	SLo

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



8.04a_n40-mode_ch03

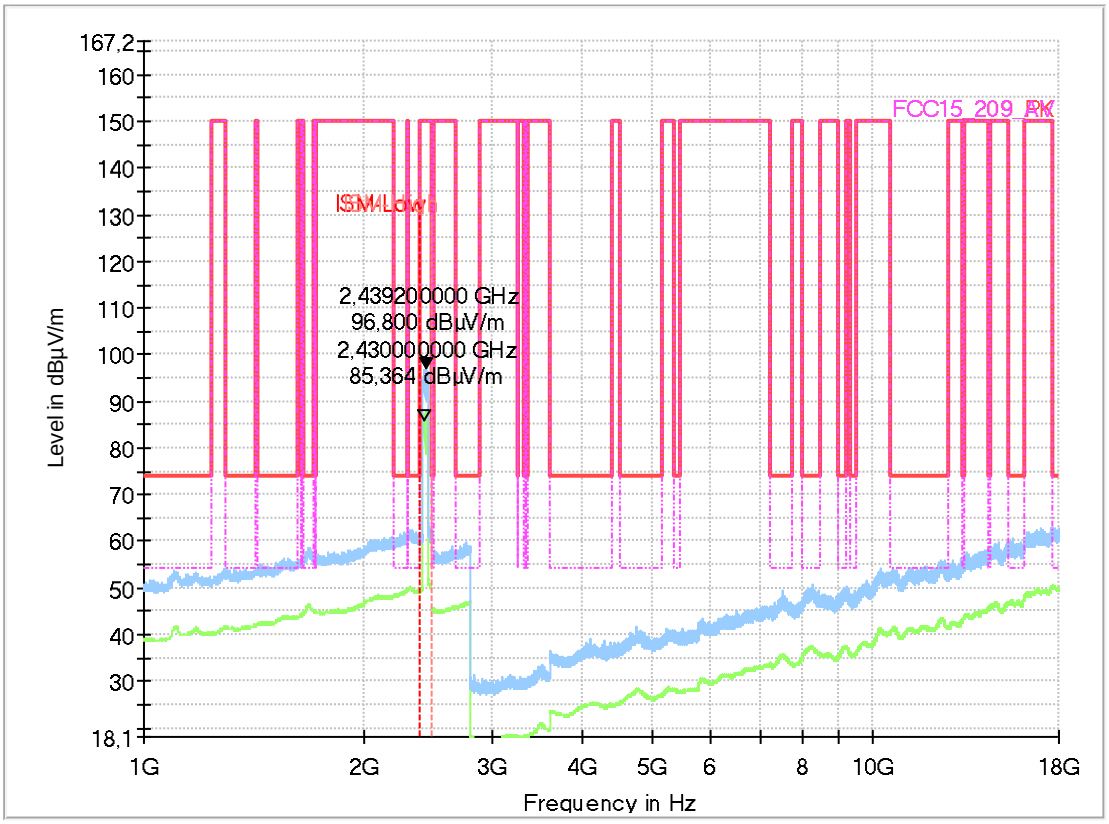
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Enviroment Condition:	Humidity: 40%rH; Temperature: 20°C
Operation mode:	n40-mode | MCS0 | ch03
Operator Name:	SLo

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

Full Spectrum



8.05a_n40-mode_ch09

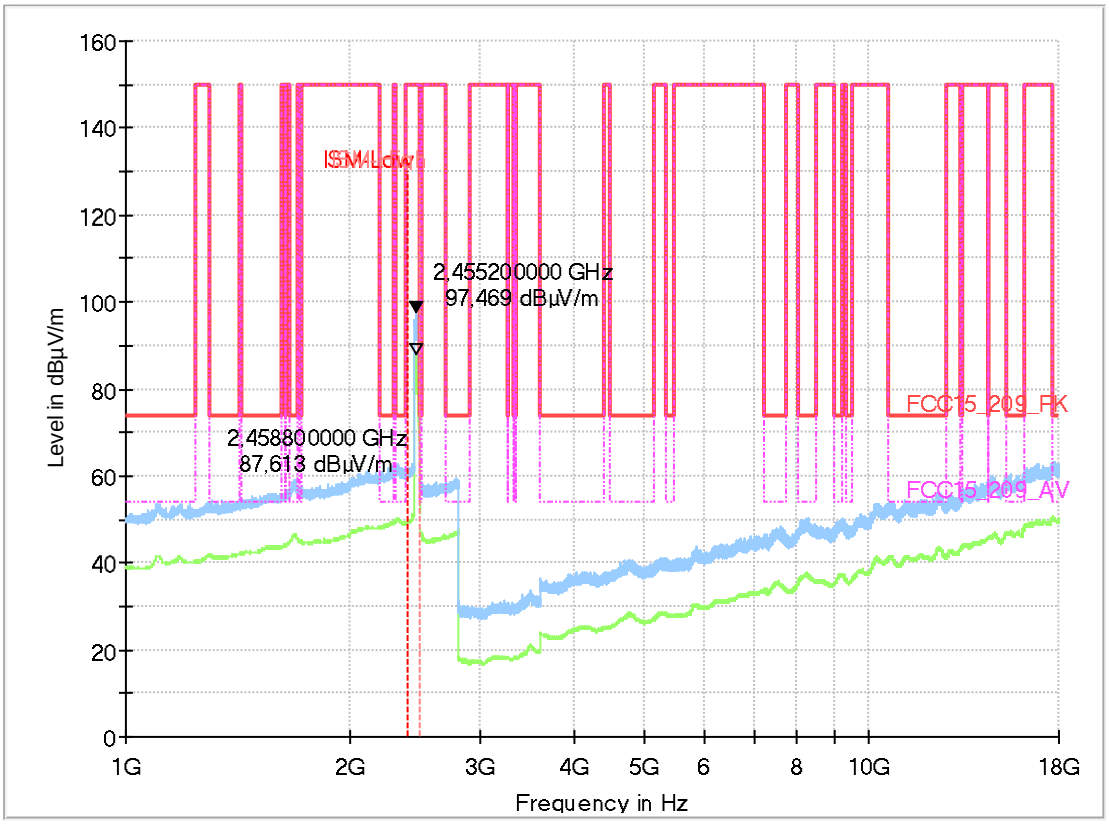
Common Information

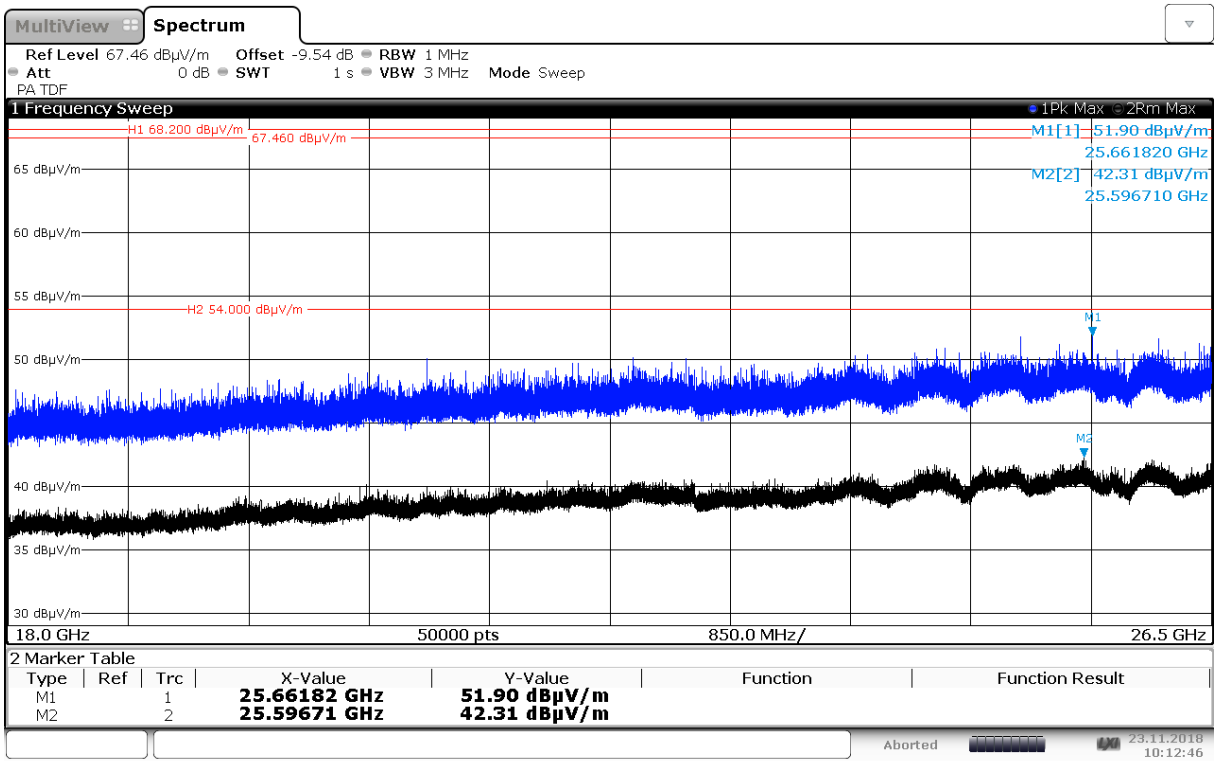
Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Enviroment Condition:	Humidity: 40%rH; Temperature: 20°C
Operation mode:	n40-mode | MCS0 | ch09
Operator Name:	SLo

EUT Information

	Manufacturer:Robert Bosch Car Multimedia GmbH
Model:	AIVIV20
Type:	Navigations- und Multimediagerät
---	---
EUT:	FCC/ S05
HW version:	001
SW version:	283C37820R
SVN:	-
Config:	-
Serial number:	0005111
Connected Interfaces:	-
Power Supply:	13.5VDC
Comments:	-

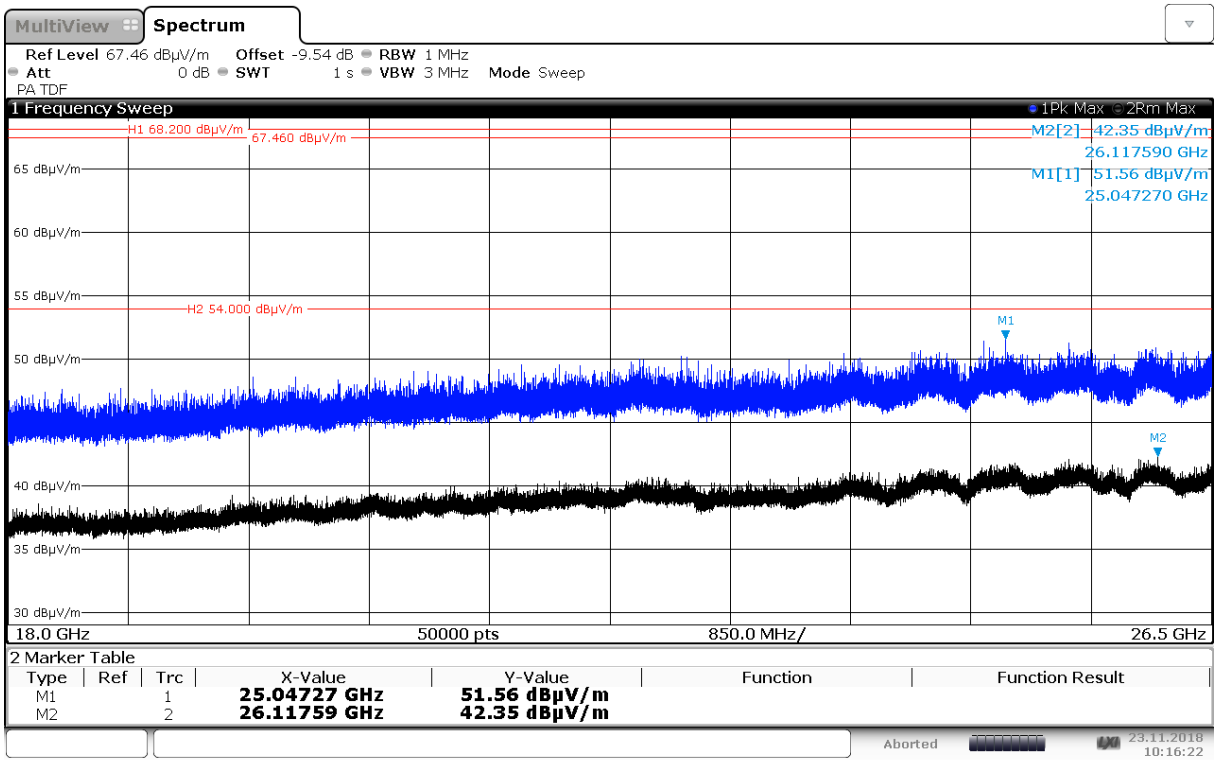
Full Spectrum





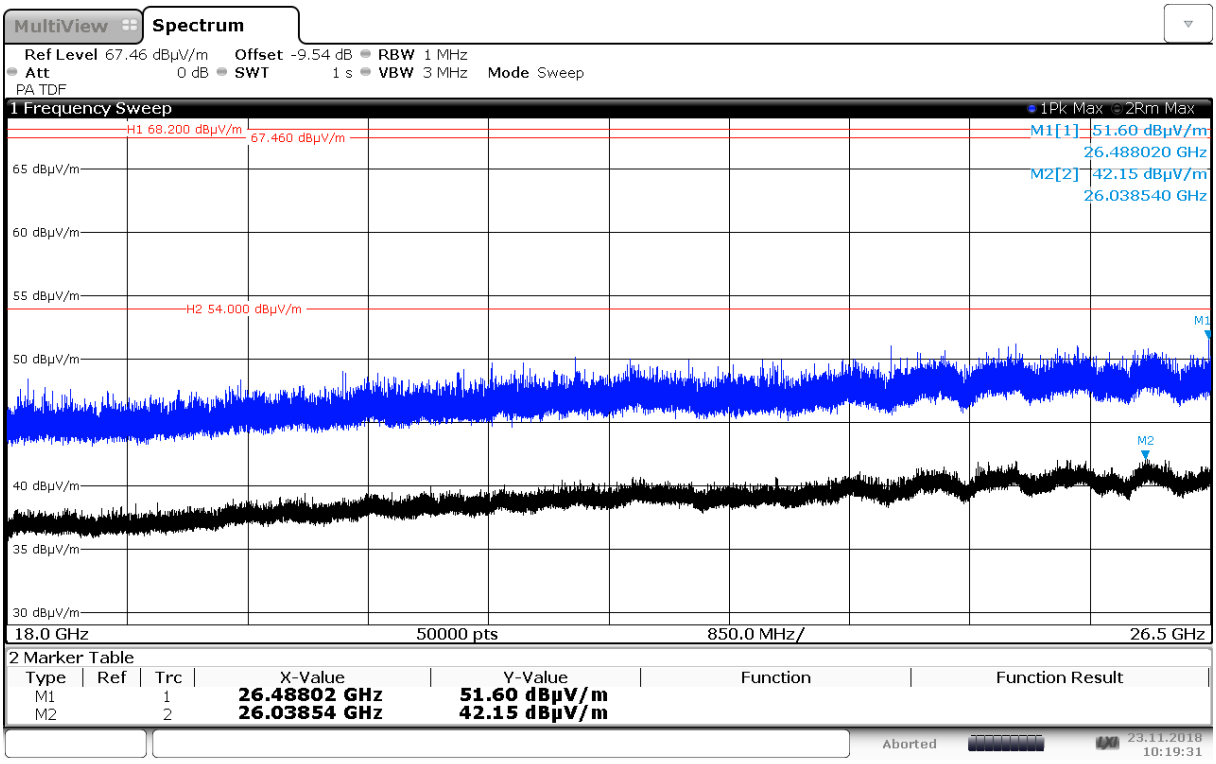
10:12:47 23.11.2018

8.01b_b-mode_ch01



10:16:23 23.11.2018

8.02b_g-mode_ch06



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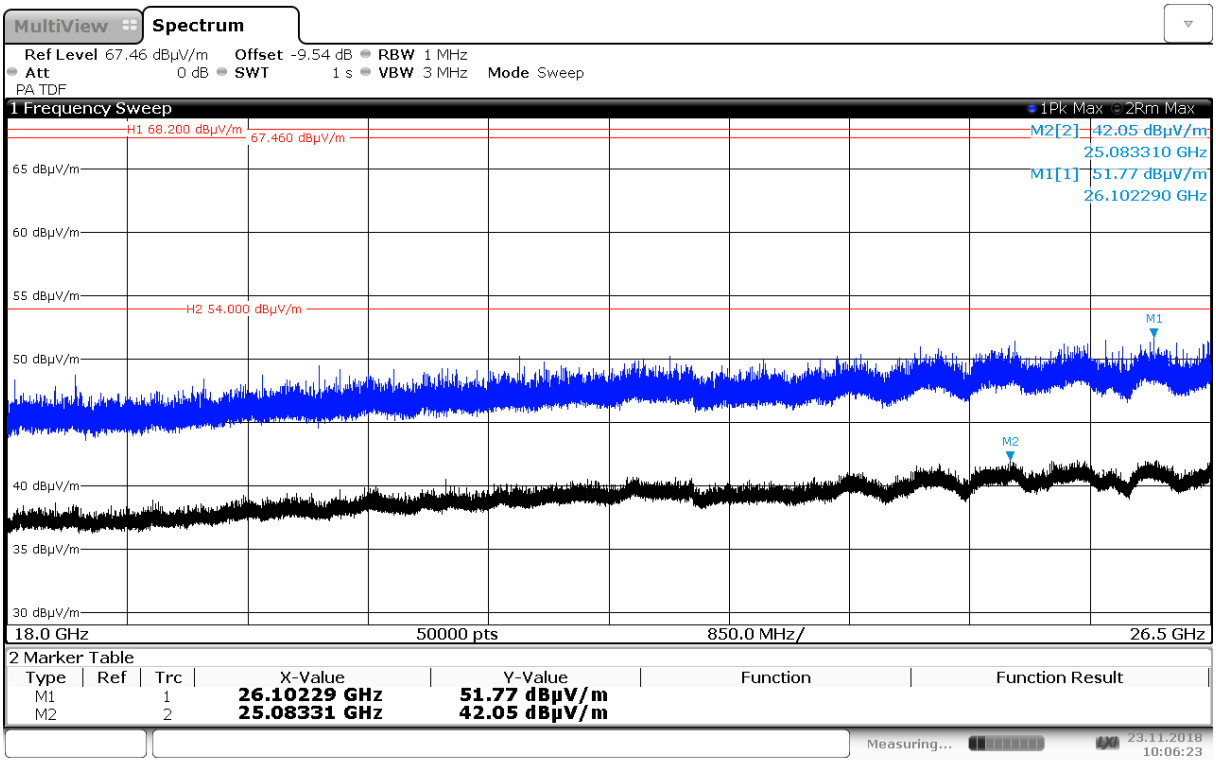
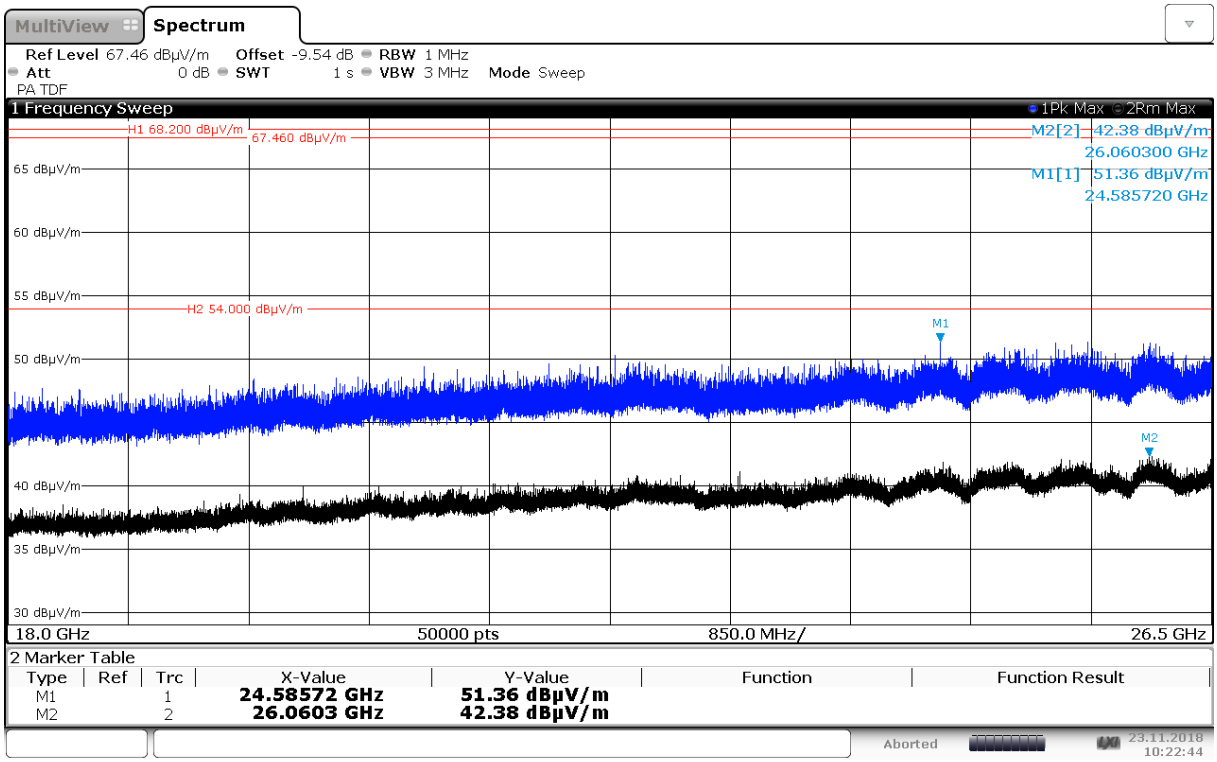
8.03b_n-mode_ch11



10:06:23 23.11.2018

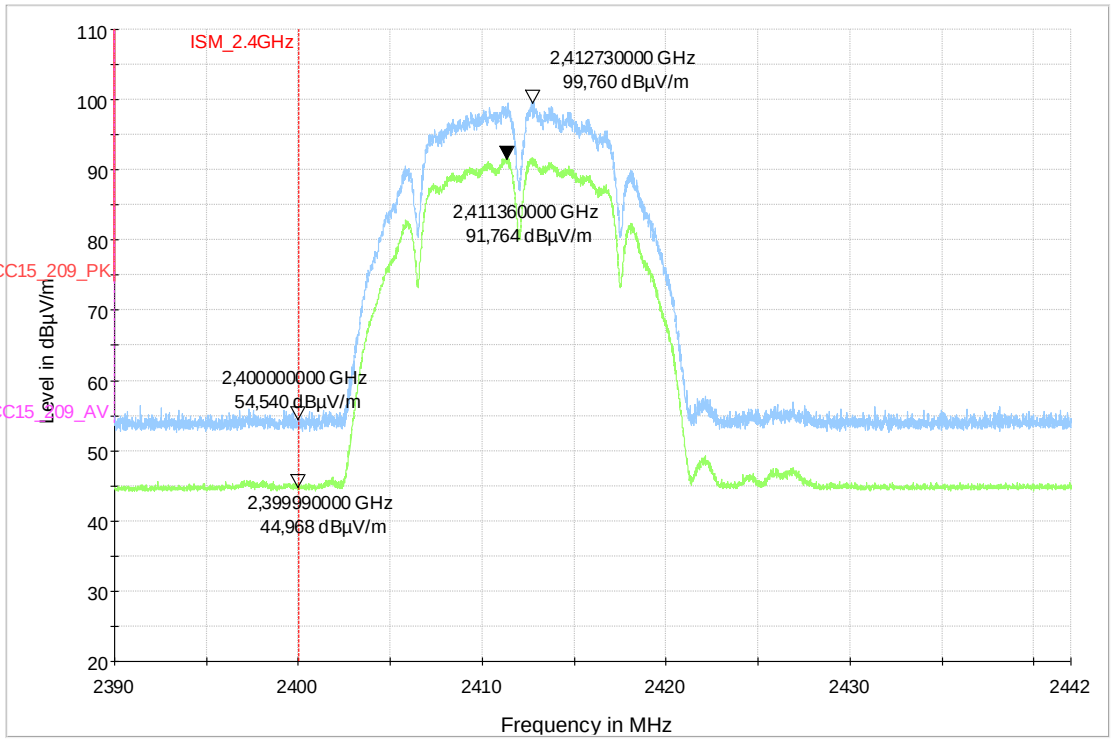
8.04b_n40-mode_ch03



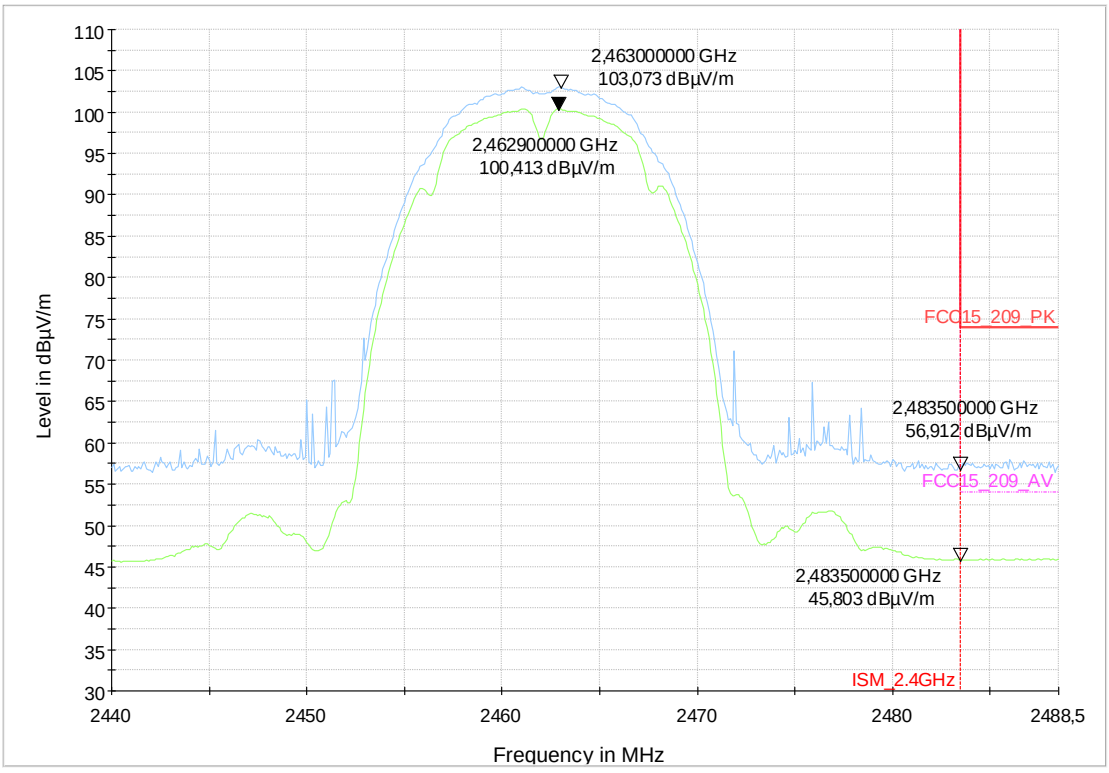
10:22:44 23.11.2018

8.05b_n40-mode_ch09

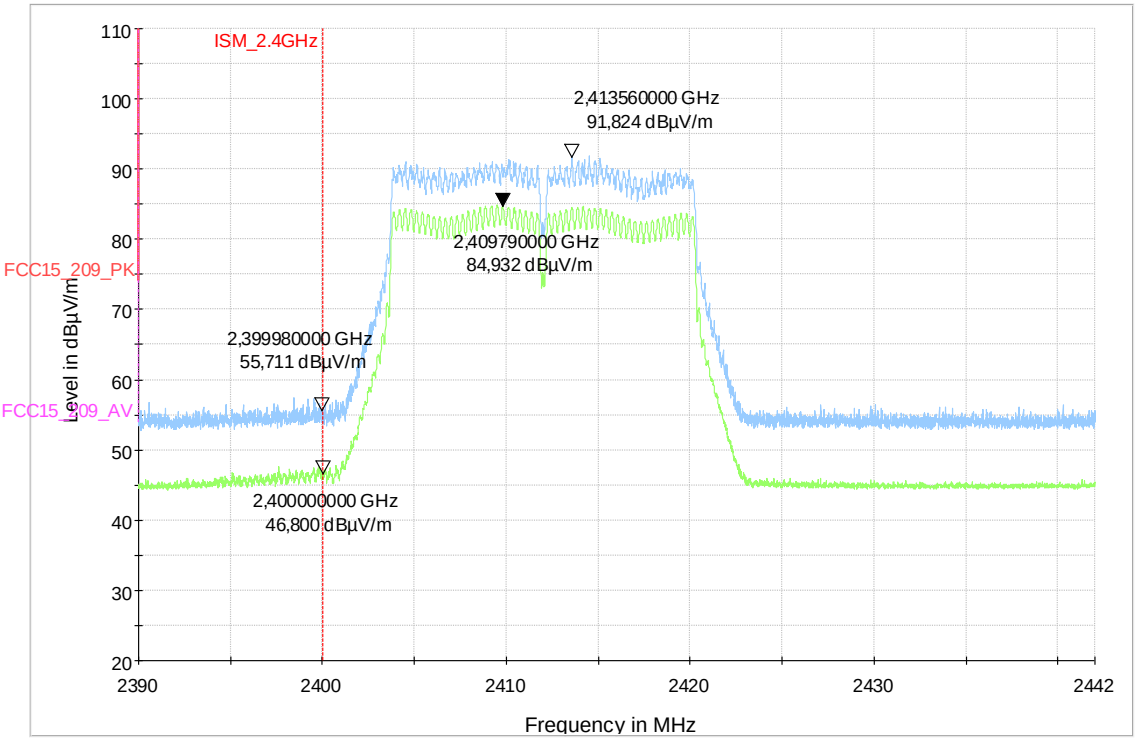
1.9. RF-Parameter - Band Edge compliance measurements



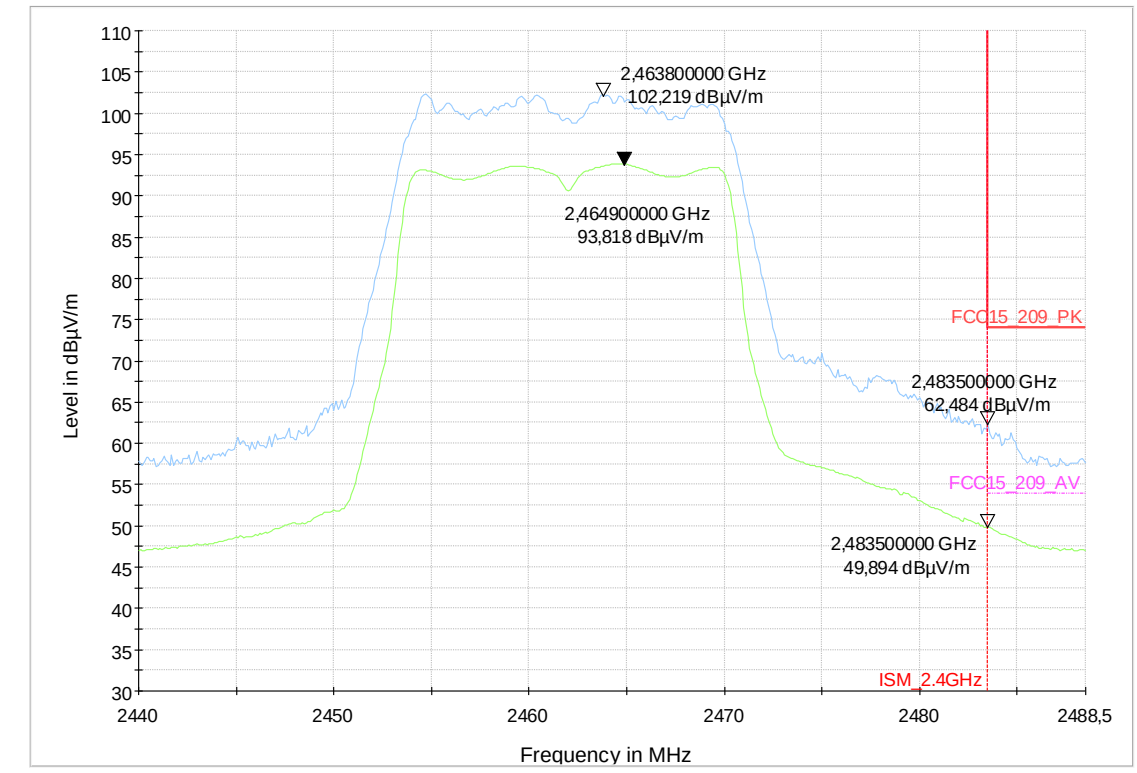
9.01a_b-mode_ch01



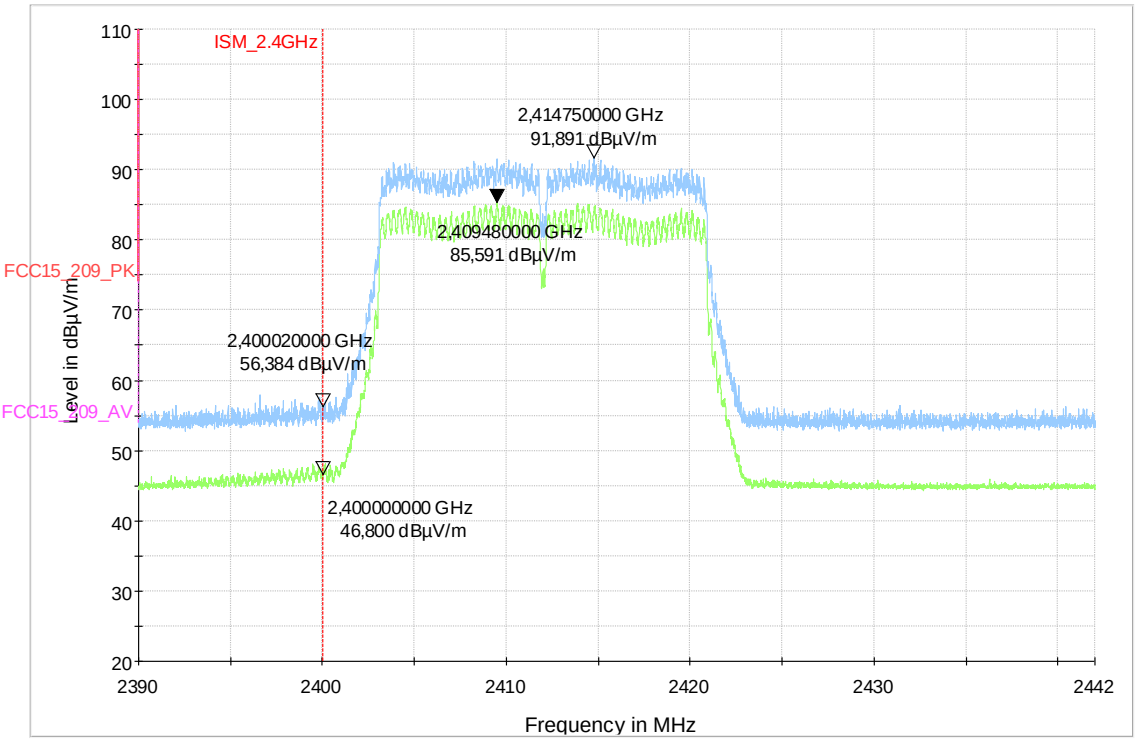
9.01b_b-mode_ch11



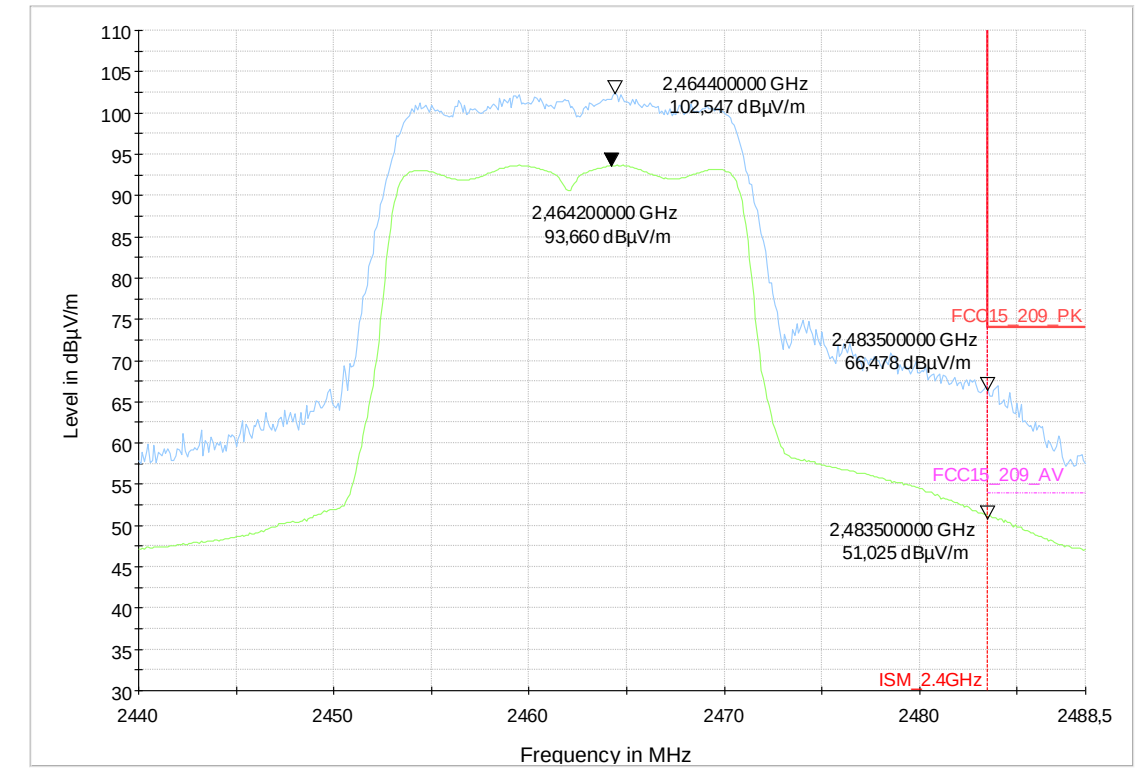
9.02a_g-mode_ch01



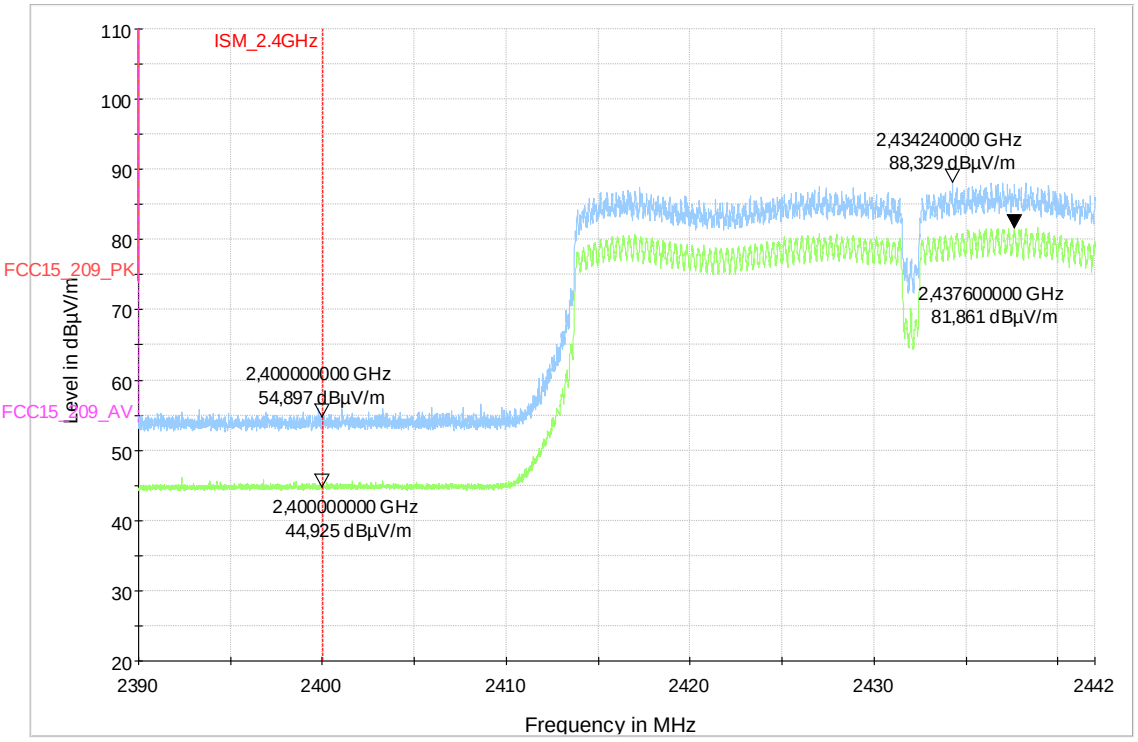
9.02b_g-mode_ch11



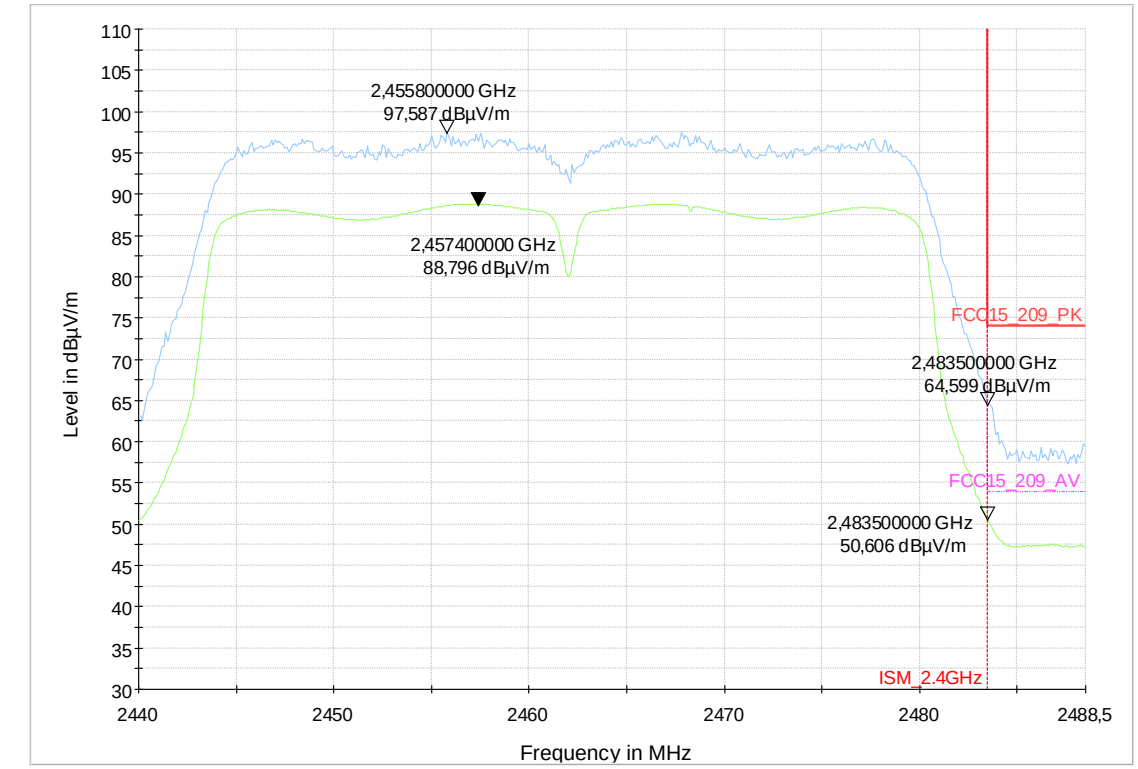
9.03a_n-mode_ch01



9.03b_n-mode_ch11



9.04a_n40-mode_ch03



9.04b_n40-mode_ch09