Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 17-1-0227101T04a

According to:
FCC Regulations
Part 15.247

for

Daimler Trucks

A 000 446 5860
CTPMID

FCC: 2AMIOCTP4465860

Laboratory Accreditation and Listings		
DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 Accredited EMC-Test Laboratory	Industry Canada Reg. No.: 3462D-2 Reg. No.: 3462D-3	Voluntary Controls for Electromagnetic Emissions Reg. No.: R-20013, C-20009, T-20006, G-20013
Wi Fi ALLIANCE AUTHORIZED RF LABORATORY	ctia Authorized™ Test Lab Lab Code: 20011130-00	FCC FEDERAL COMMUNICATIONS COMMISSION USA MRA US-EU 0003
accredited according to DIN EN ISO/IEC 17025		

CETECOM GmbH
Laboratory Radio Communications & Electromagnetic Compatibility
Im Teelbruch 116 • 45219 Essen • Germany
Registered in Essen, Germany, Reg. No.: HRB Essen 8984
Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964
E-mail: info@cetecom.com • Internet: www.cetecom.com

Laboratory Accreditation and Listings

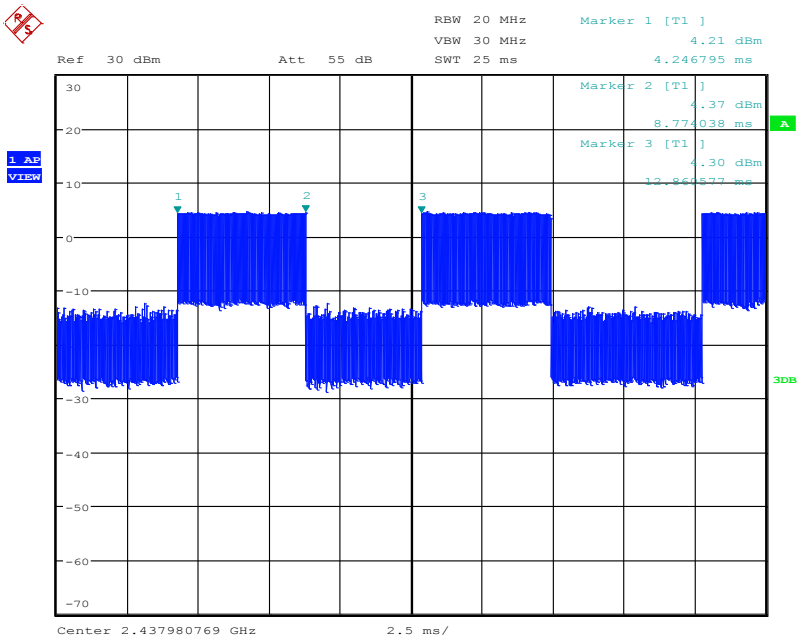
Table of Contents

1. Conducted RF-Measurements

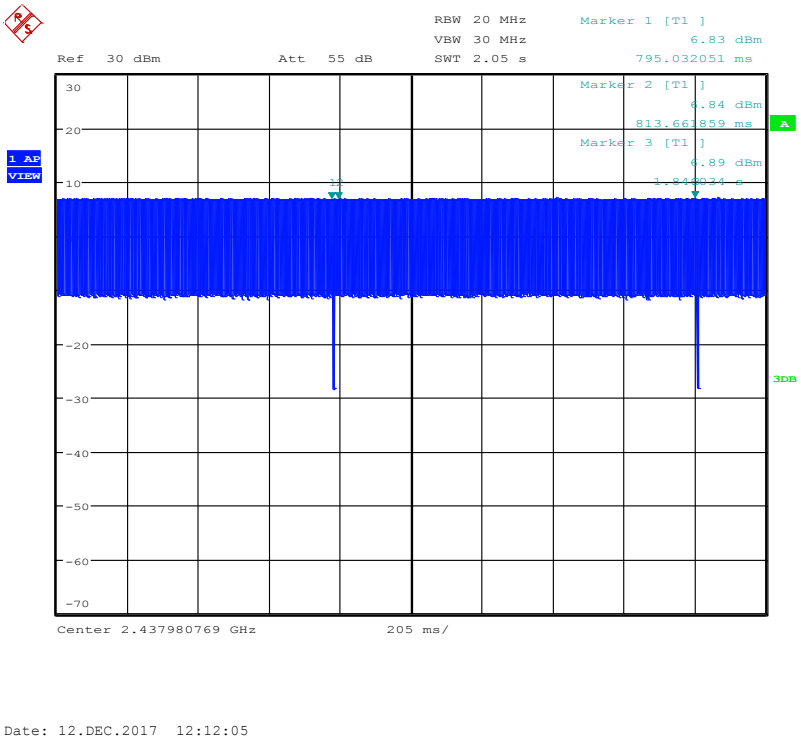
1.1. RF output Power

WLAN 2.4GHz b-Mode		Channel No. (Frequency MHz)			b-Mode	Power Units
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)	Maximum Value	
1MBit		12,47	12,29	12,27	12,47	dBm
2Mbit		12,30	12,23	11,77		
5.5Mbit		11,85	11,66	11,37		
11MBit		11,87	11,69	11,67		
WLAN 2.4 GHz Conducted Peak Power Limits					30.0	dBm
WLAN 2.4GHz g-Mode		Channel No. (Frequency MHz)			g-Mode	Power Units
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)	Maximum Value	
6Mbit		11,19	11,05	10,61	11,51	dBm
9Mbit		11,41	11,01	10,99		
12Mbit		11,39	11,35	10,75		
18Mbit		11,23	11,11	10,64		
24Mbit		11,51	11,18	10,73		
36Mbit		11,06	10,95	10,62		
48Mbit		11,13	10,73	10,61		
54MBit		10,79	10,78	10,74		
WLAN 2.4 GHz Conducted Peak Power Limits					30.0	dBm
WLAN 2.4GHz n-Mode HT20		Channel No. (Frequency MHz)			n-Mode HT20	Power Units
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)	Maximum Value	
MCS0 -6.5Mbps	BPSK	11,24	11,15	10,55	11,32	dBm
MCS1 - 13Mbps	QPSK	11,32	10,88	10,69		
MCS2 - 19.5Mbps	QPSK	10,80	10,58	10,55		
MCS3 - 26Mbps	QAM16	10,89	10,66	10,82		
MCS4 -39Mbps	QAM16	10,83	10,65	10,61		
MCS5 - 52MBps	QAM64	10,78	10,72	10,69		
MCS6 - 58.5MBps	QAM64	10,74	10,68	10,88		
MCS7 - 65MBps	QAM64	10,83	10,80	10,64		
WLAN 2.4 GHz Conducted Peak Power Limits					30.0	dBm

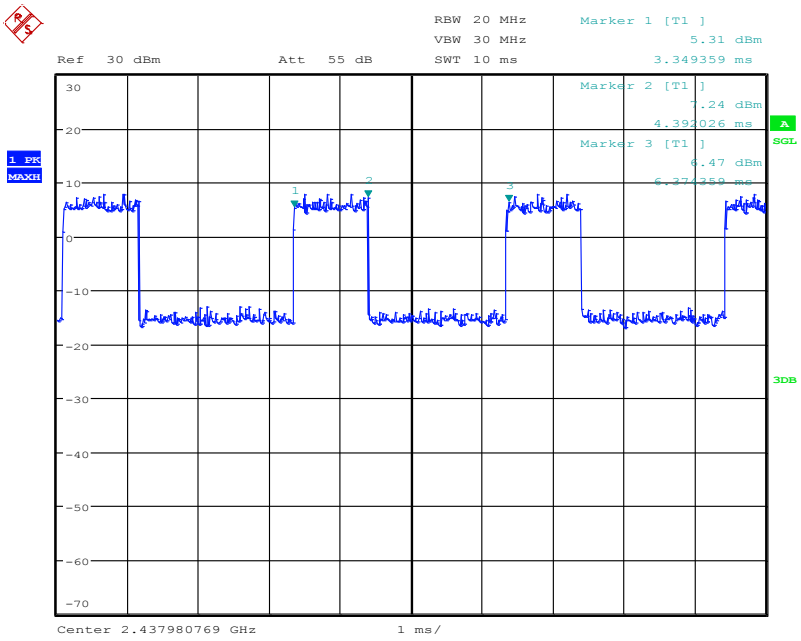
1.2. Duty Cycle Measurements



Plot 1: **Duty Cycle-WLAN 2.4 GHz-b Mode | 20 MHz | 1 Mbit | Ch 6 (2437 MHz)**

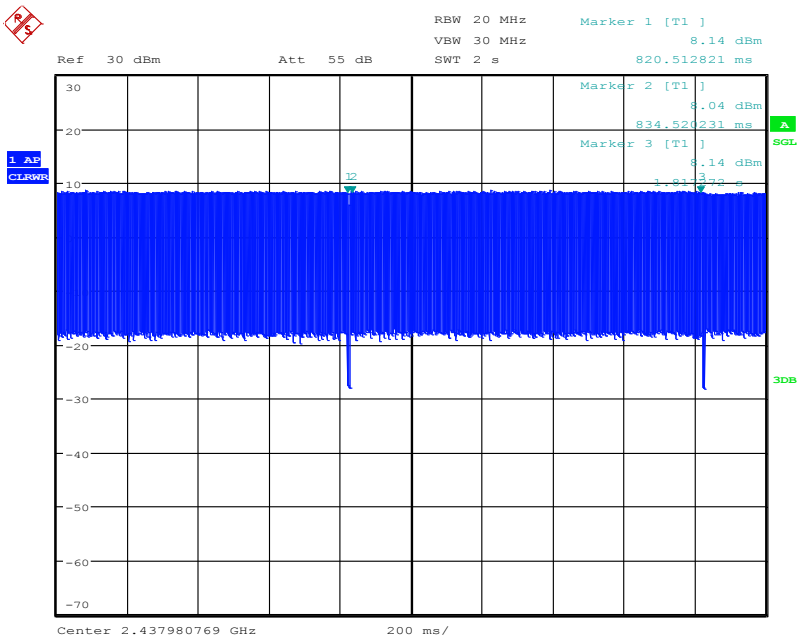


Plot 2: **Duty Cycle-WLAN 2.4 GHz-b Mode| 20 MHz | 1 Mbit burst mode | Ch 6 (2437 MHz)**



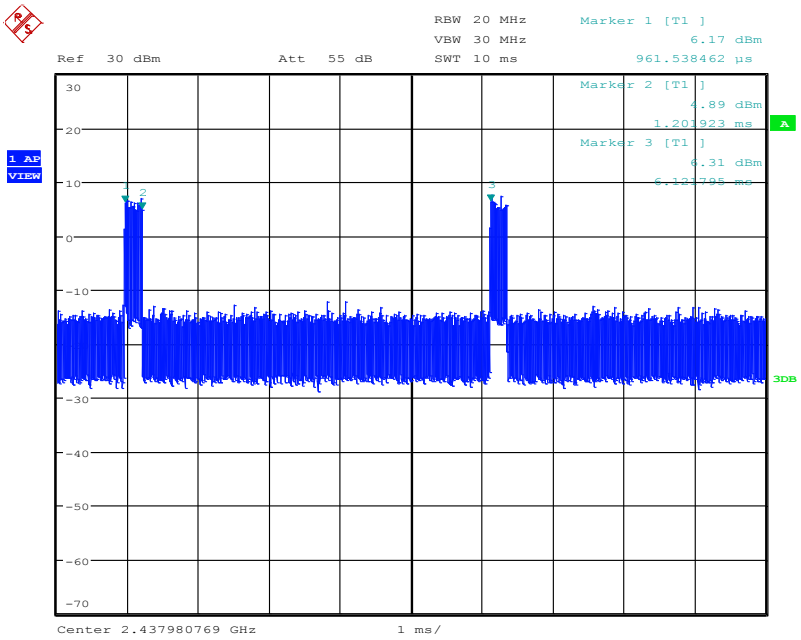
Date: 12.DEC.2017 12:18:30

Plot 3: **Duty Cycle-WLAN 2.4 GHz-g Mode | 20 MHz | 12Mbit | Ch 6 (2437 MHz)**



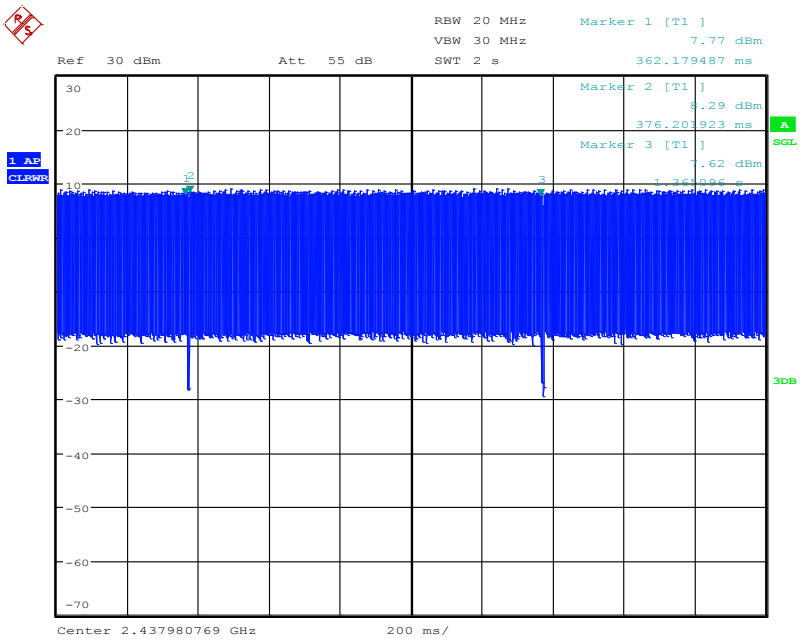
Date: 12.DEC.2017 12:23:08

Plot 4: **Duty Cycle-WLAN 2.4 GHz-g Mode | 20 MHz | 12Mbit burst mode | Ch 6 (2437 MHz)**



Date: 12.DEC.2017 12:25:47

Plot 5: Duty Cycle-WLAN 2.4 GHz-n Mode | 20 MHz | MCS6 | Ch 6 (2437 MHz)



Date: 12.DEC.2017 12:27:39

Plot 6: Duty Cycle-WLAN 2.4 GHz-n Mode | 20 MHz | MCS6 burst mode| Ch 6 (2437 MHz)

1.3. Power Spectral Density Measurements (b/g/n Mode)

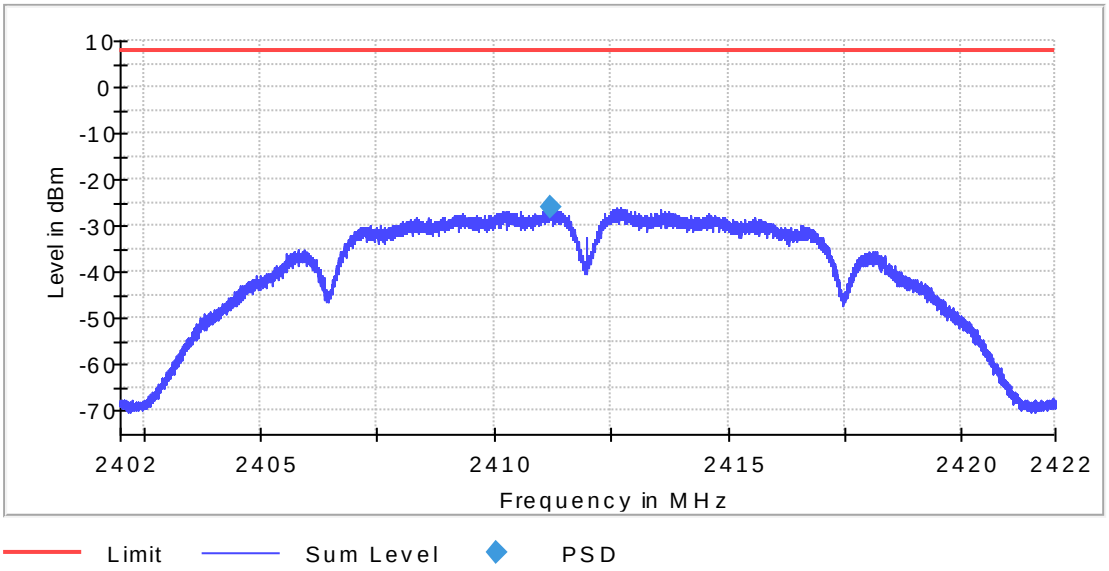
1.3.1. b-Mode |20 MHz| 1Mbit| Lowest Channel 1 (2412 MHz)

Power Spectral Density (2412 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2411.200000	-26.054	8.0	PASS



PSD Connector 1

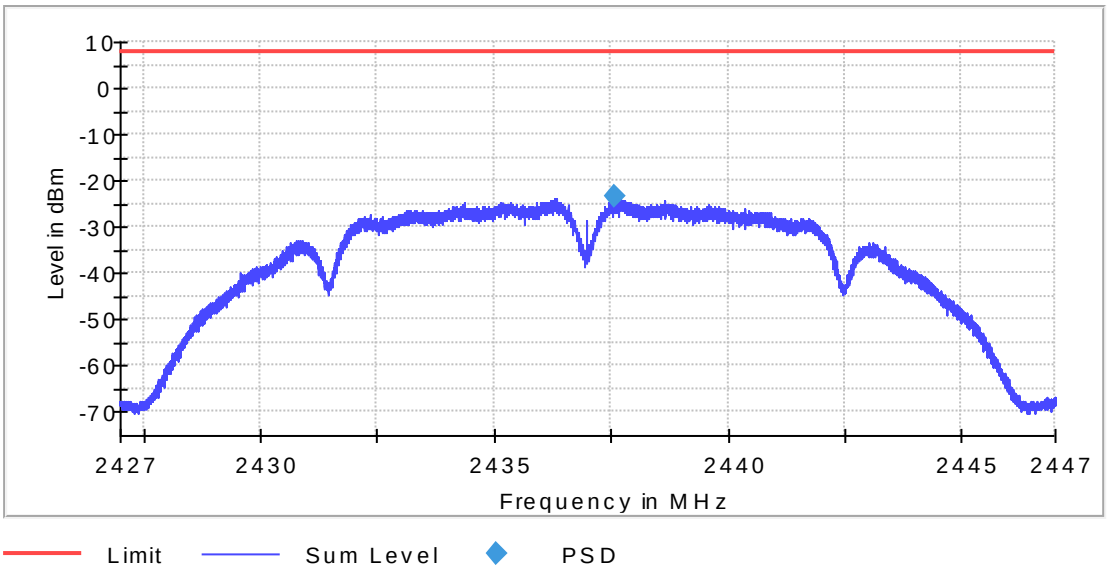
1.3.1.1. b-Mode |20 MHz| 1Mbit| Middle Channel 6 (2437 MHz)

Power Spectral Density (2437 MHz; b-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2437.572932	-23.376	8.0	PASS



PSD Connector 1

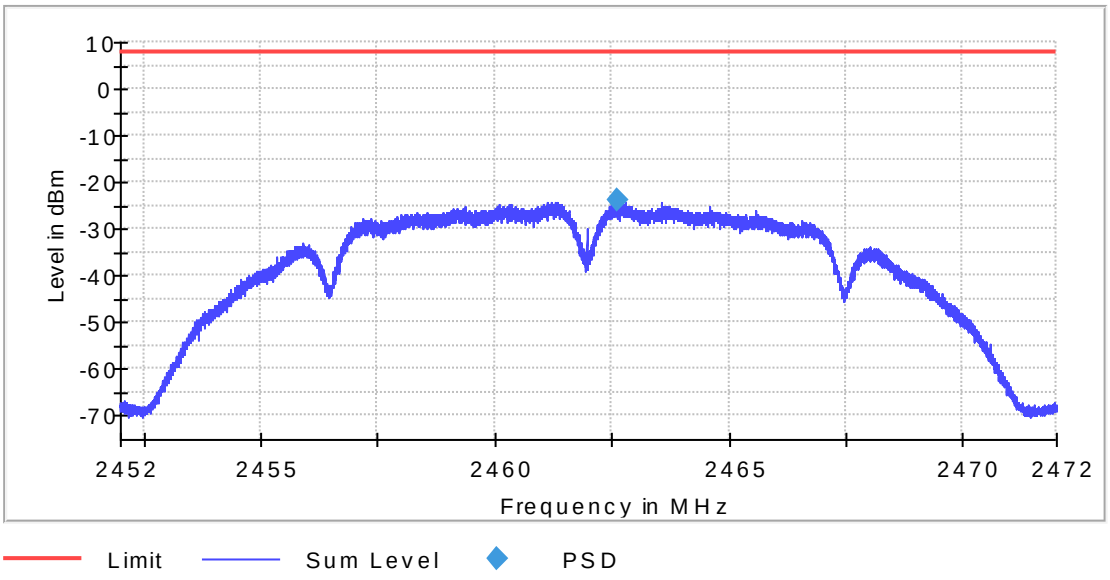
1.3.2. b-Mode |20 MHz| 1Mbit| Highest Channel 11 (2462 MHz)

Power Spectral Density (2462 MHz; b-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2462.640602	-23.915	8.0	PASS



PSD Connector 1

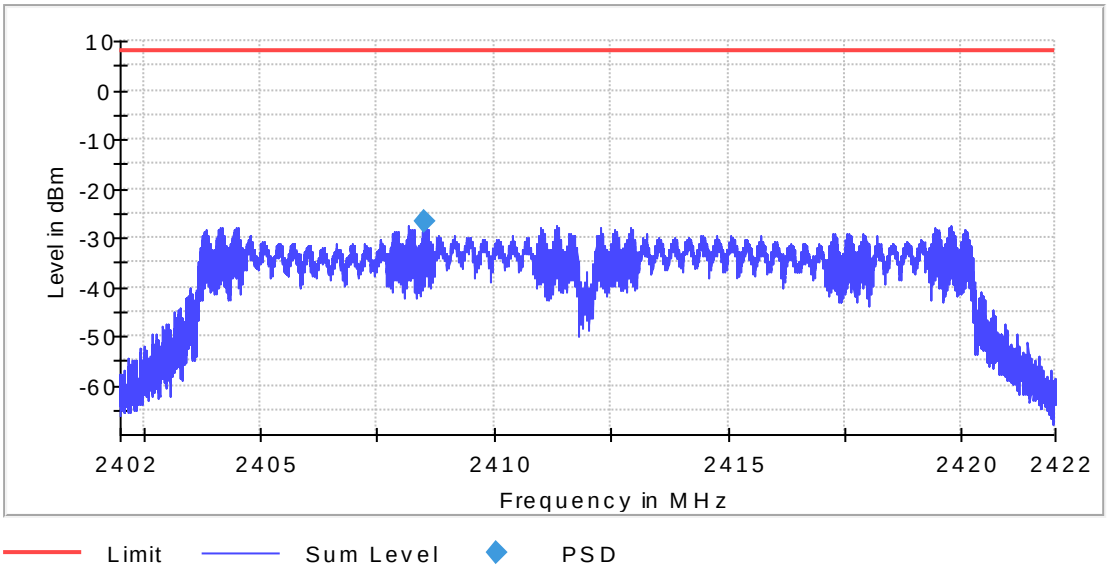
1.3.3. g-Mode |20 MHz| 12Mbit| Lowest Channel 1 (2412 MHz)

Power Spectral Density (2412 MHz; g-Mode (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2408.529323	-26.923	8.0	PASS



PSD Connector 1

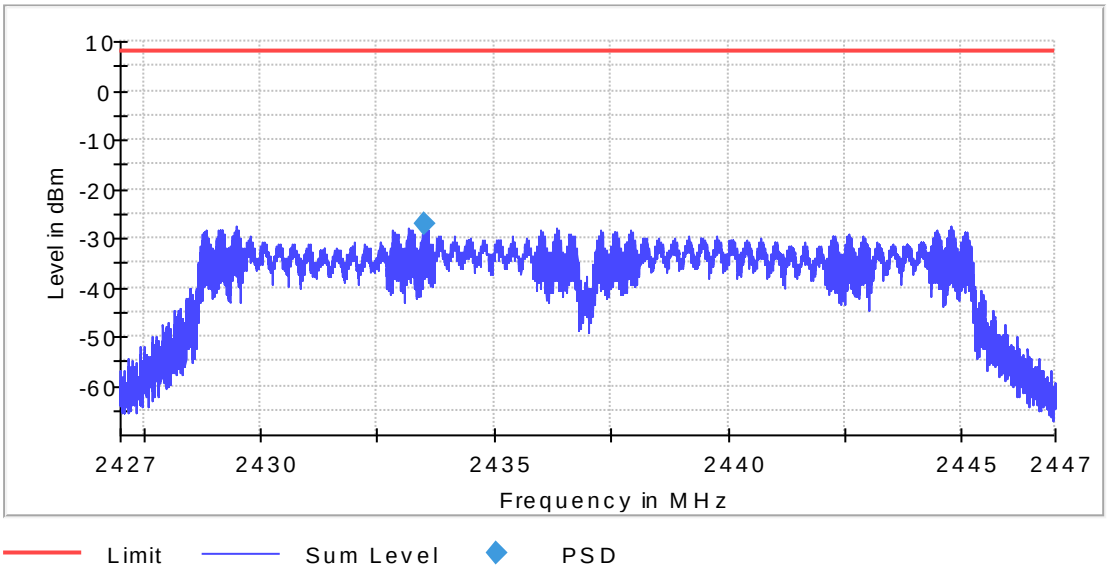
1.3.4. g-Mode |20 MHz| 12Mbit| Middle Channel 6 (2437 MHz)

Power Spectral Density (2437 MHz; g-Mode (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2433.527820	-26.983	8.0	PASS



PSD Connector 1

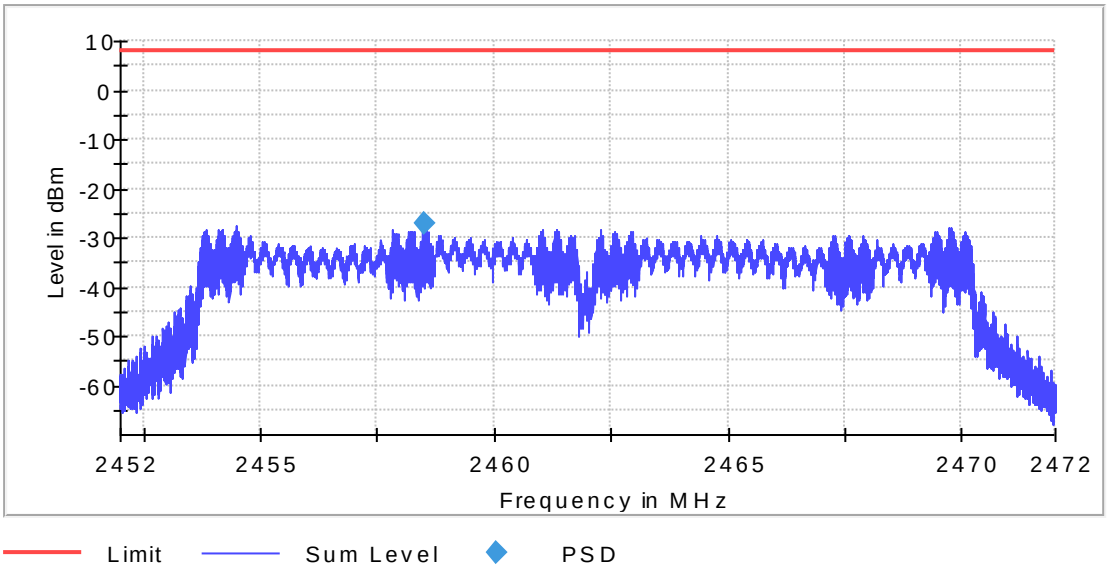
1.3.5. g-Mode |20 MHz| 12Mbit| Highest Channel 11 (2462 MHz)

Power Spectral Density (2462 MHz; g-Mode (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2458.527820	-27.298	8.0	PASS



PSD Connector 1

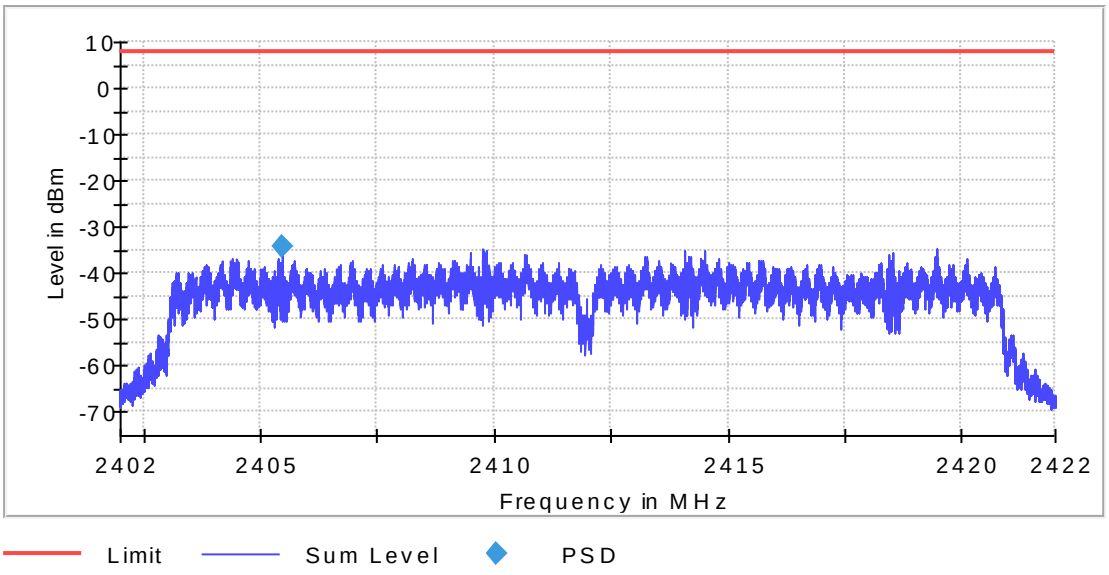
1.3.6. n-Mode |20 MHz| MCS6| Lowest Channel 1 (2412 MHz)

Power Spectral Density (2412 MHz; n-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2405.461654	-34.146	8.0	PASS



PSD Connector 1

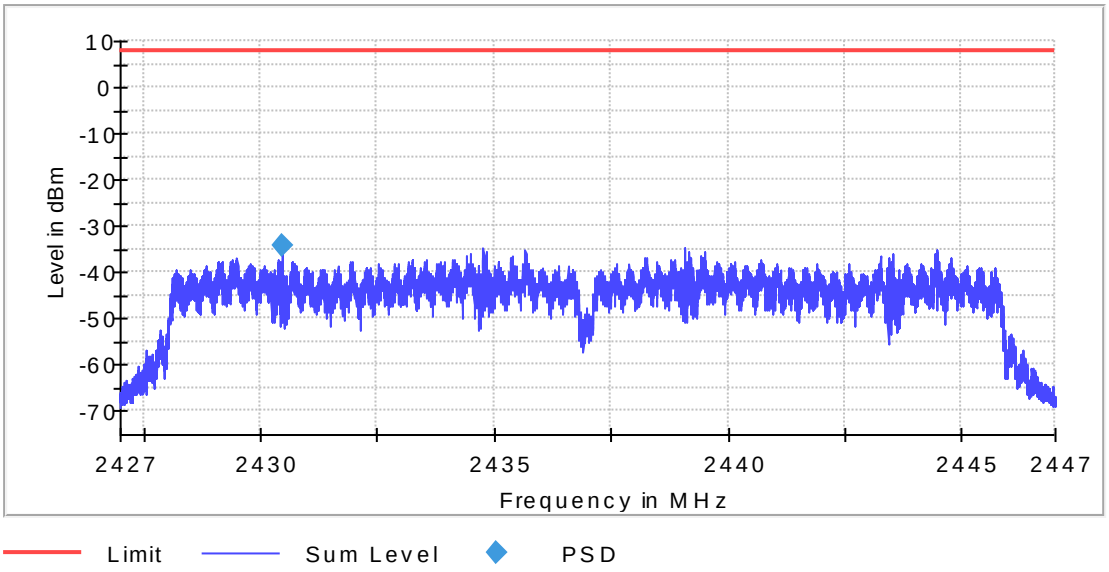
1.3.7. n-Mode |20 MHz| MCS6| Middle Channel 6 (2437 MHz)

Power Spectral Density (2437 MHz; n-Mode (11 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2430.461654	-34.206	8.0	PASS



PSD Connector 1

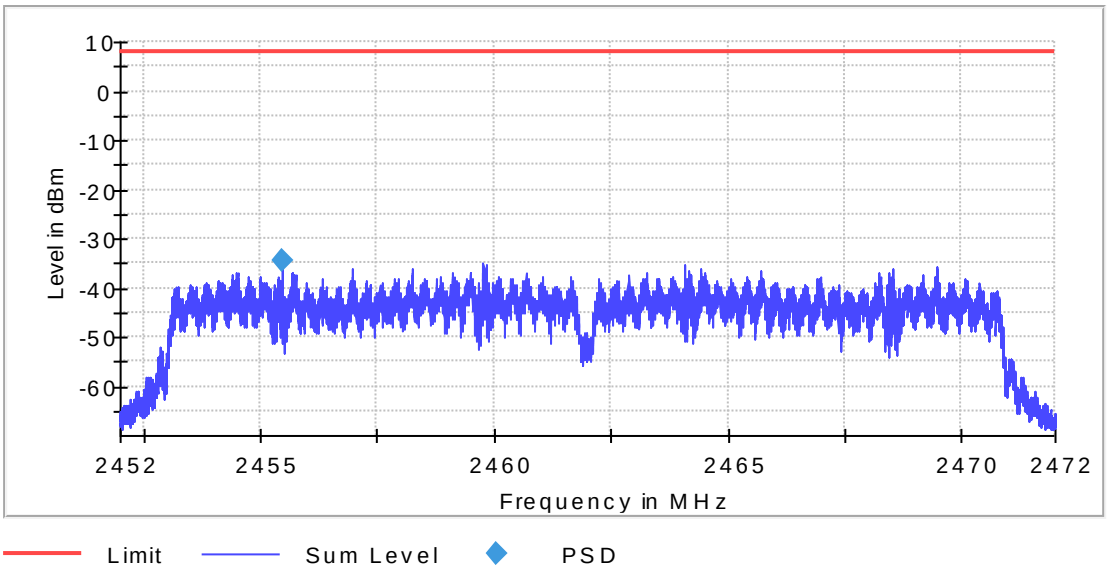
1.3.8. n-Mode |20 MHz| MCS6| Highest Channel 11 (2462 MHz)

Power Spectral Density (2462 MHz; n-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2455.461654	-34.349	8.0	PASS



PSD Connector 1

1.4. 6 dB Bandwidth Measurements (b/g/n Mode)

1.4.1. b-Mode |20 MHz| 1Mbit| Lowest Channel 1 (2412 MHz)

Minimum Emission Bandwidth 6 dB (2412 MHz; b-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

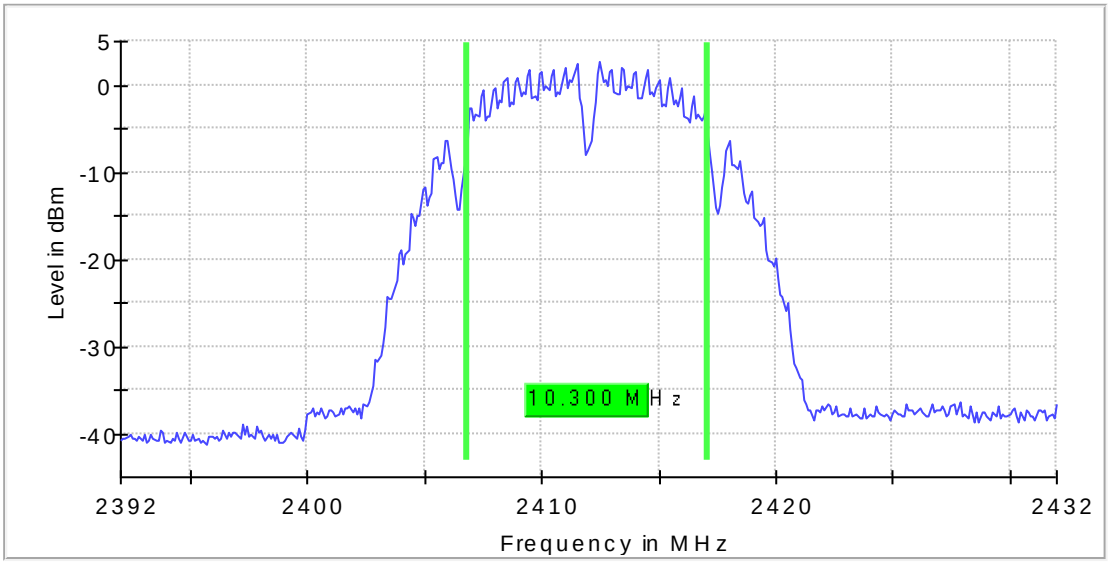
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2412.000000	10.300000	0.500000	---	2406.800000	2417.100000	2.7

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2412.000000	PASS



Bandwidth

1.4.2. b-Mode |20 MHz| 1Mbit| Middle Channel 6 (2437 MHz)

Minimum Emission Bandwidth 6 dB (2437 MHz; b-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

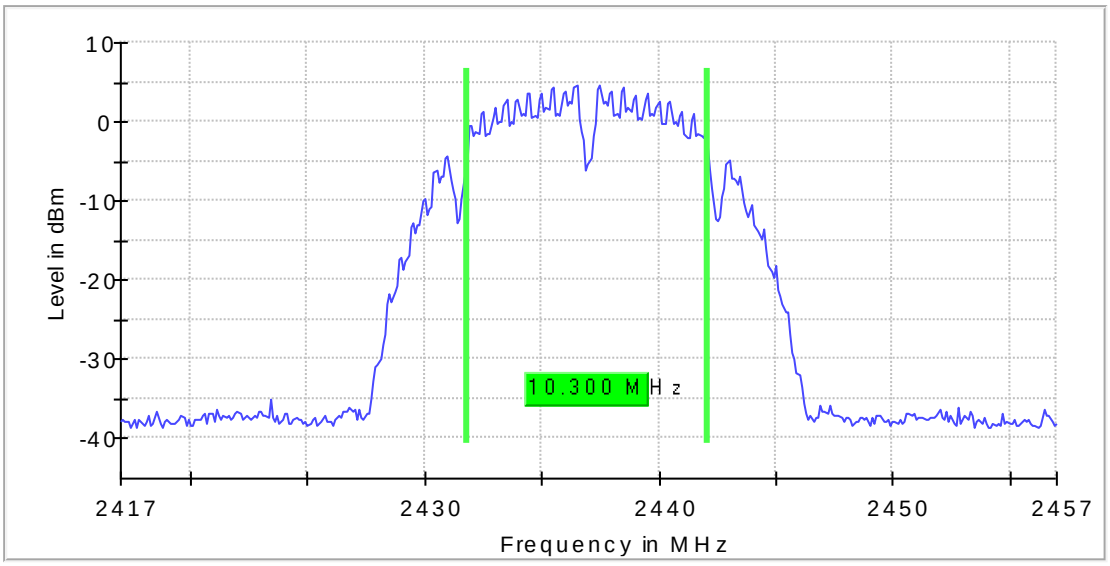
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2437.000000	10.300000	0.500000	---	2431.800000	2442.100000	4.6

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2437.000000	PASS



Bandwidth

1.4.3. b-Mode |20 MHz| 1Mbit| Highest Channel 11 (2462 MHz)

Minimum Emission Bandwidth 6 dB (2462 MHz; b-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

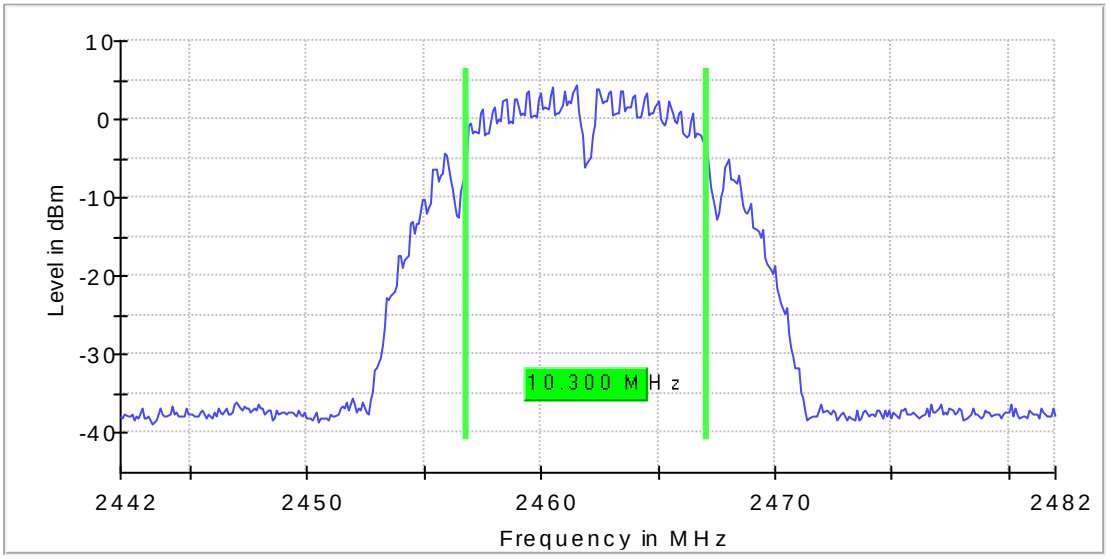
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2462.000000	10.300000	0.500000	---	2456.800000	2467.100000	4.5

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2462.000000	PASS



Bandwidth

1.4.4. g-Mode |20 MHz| 12Mbit| Lowest Channel 1 (2412 MHz)

Minimum Emission Bandwidth 6 dB (2412 MHz; g-Mode (11 dBm); 20 MHz)

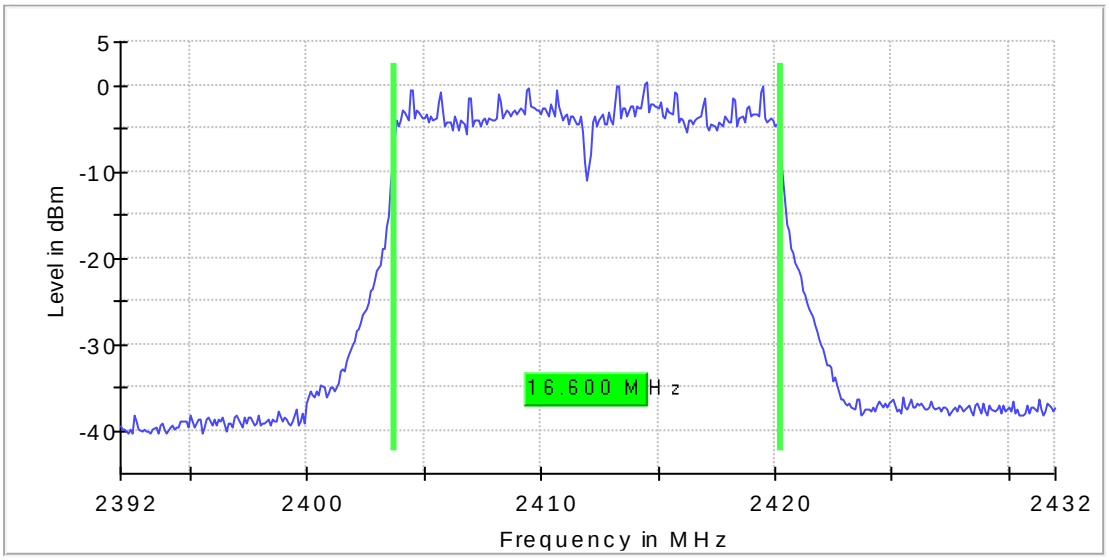
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2412.000000	16.600000	0.500000	---	2403.700000	2420.300000	0.4

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2412.000000	PASS



Bandwidth

1.4.5. g-Mode |20 MHz| 12Mbit| Middle Channel 6 (2437 MHz)

Minimum Emission Bandwidth 6 dB (2437 MHz; g-Mode (11 dBm); 20 MHz)

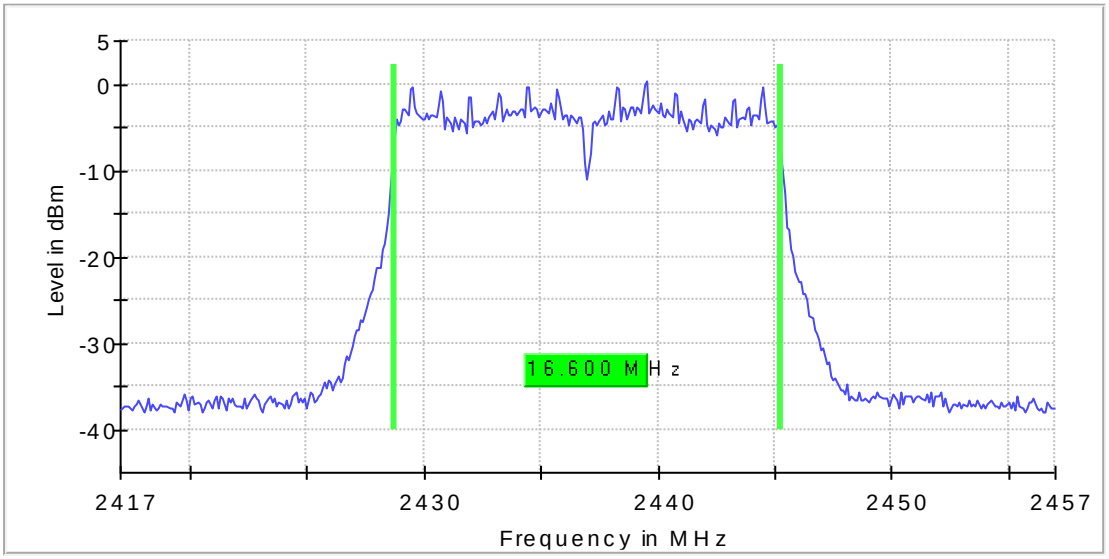
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2437.000000	16.600000	0.500000	---	2428.700000	2445.300000	0.2

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2437.000000	PASS



Bandwidth

1.4.6. g-Mode |20 MHz| 12Mbit| Highest Channel 11 (2462 MHz)

Minimum Emission Bandwidth 6 dB (2462 MHz; g-Mode (11 dBm); 20 MHz)

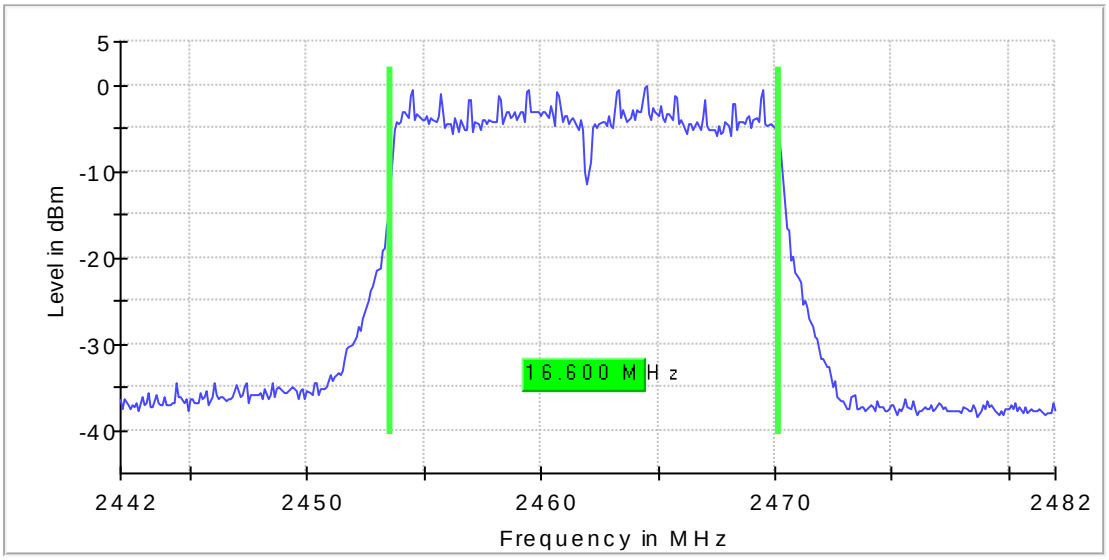
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2462.000000	16.600000	0.500000	---	2453.600000	2470.200000	0.0

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2462.000000	PASS



Bandwidth

1.4.7. n-Mode |20 MHz| MCS6| Lowest Channel 1 (2412 MHz)

Minimum Emission Bandwidth 6 dB (2412 MHz; n-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

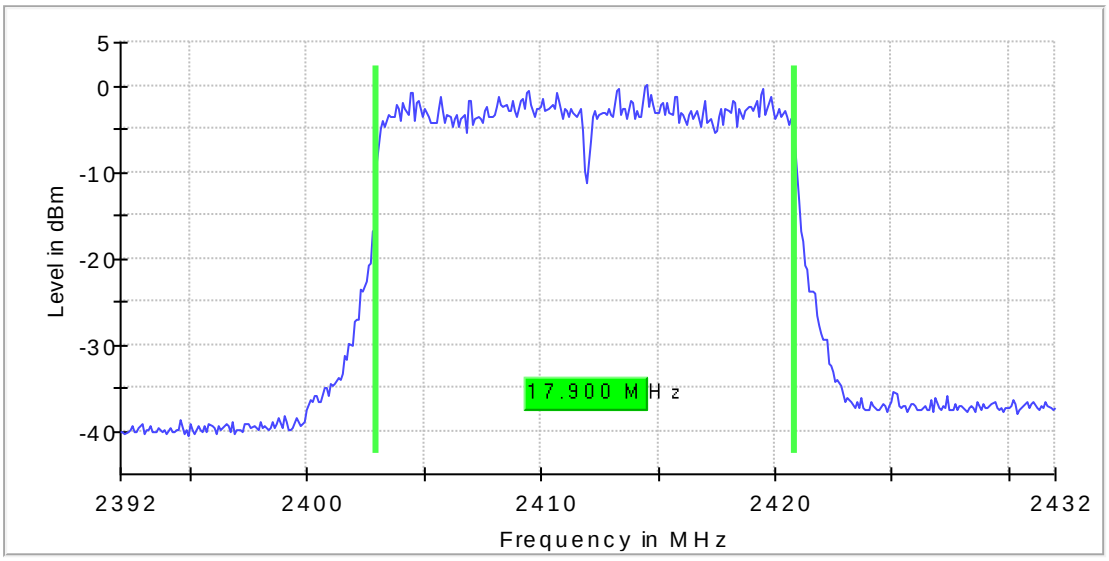
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2412.000000	17.900000	0.500000	---	2403.000000	2420.900000	0.1

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2412.000000	PASS



Bandwidth

1.4.8. n-Mode |20 MHz| MCS6| Middle Channel 6 (2437 MHz)

Minimum Emission Bandwidth 6 dB (2437 MHz; n-Mode (11 dBm); 20 MHz)

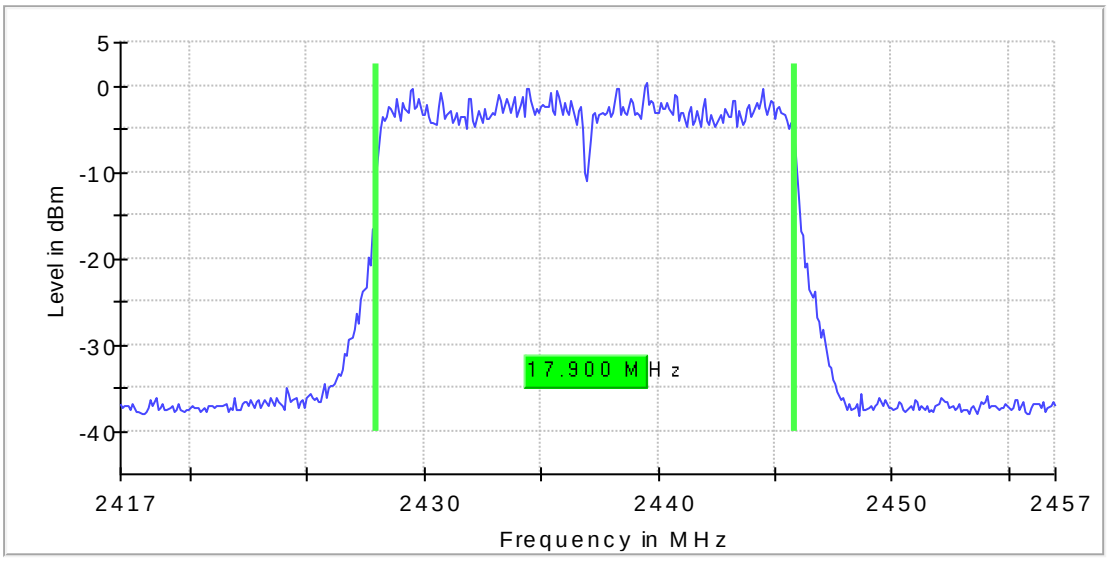
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2437.000000	17.900000	0.500000	---	2428.000000	2445.900000	0.4

(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2437.000000	PASS



Bandwidth

1.4.9. n-Mode |20 MHz| MCS6| Highest Channel 11 (2462 MHz)

Minimum Emission Bandwidth 6 dB (2462 MHz; n-Mode Worst-Case Modulation Type (14 dBm); 20 MHz)

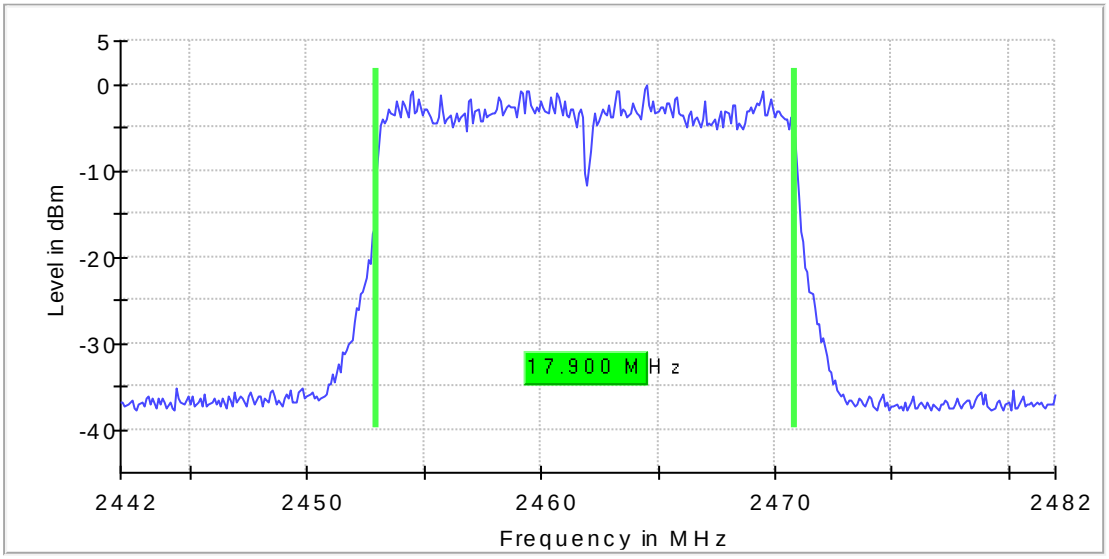
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2462.000000	17.900000	0.500000	---	2453.000000	2470.900000	-0.2

(continuation of the "6 dB Bandwidth" table from column 7 ...)

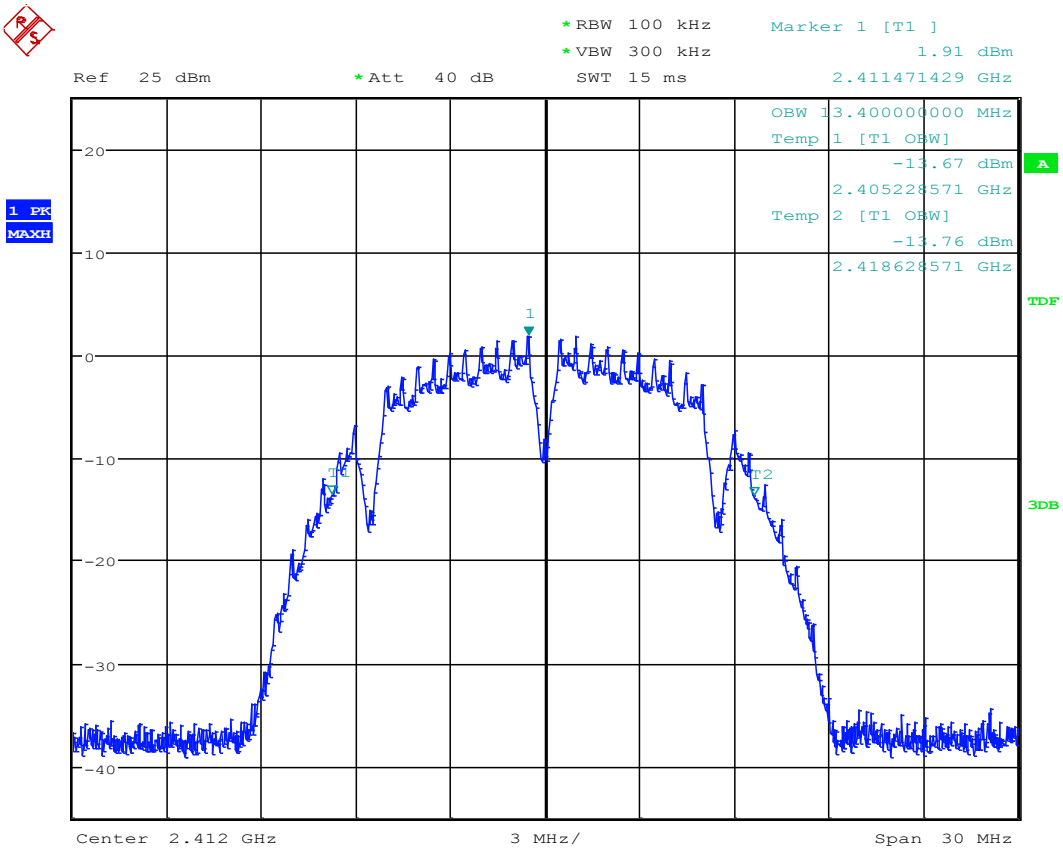
DUT Frequency (MHz)	Result
2462.000000	PASS



Bandwidth

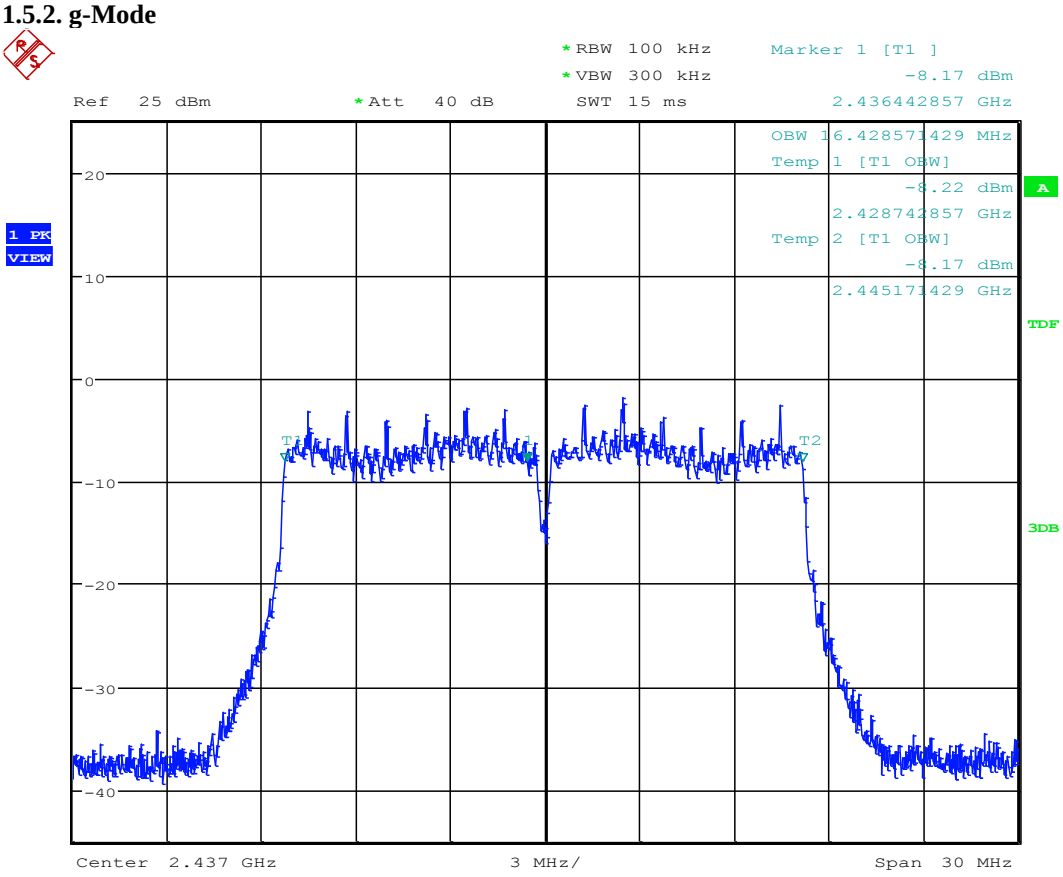
1.5. 99% Bandwidth Measurements

1.5.1. b-Mode



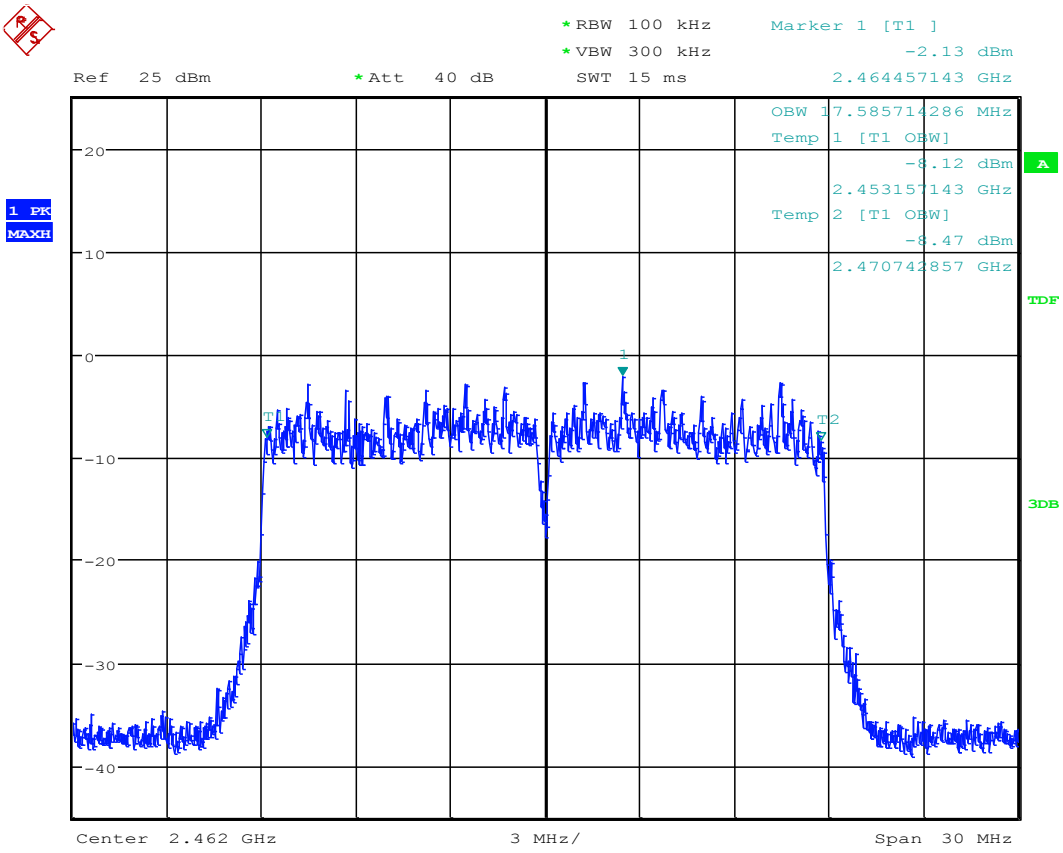
Plot 7: b-mode, channel 1, 1Mbit

1.5.2. g-Mode



Date: 12.DEC.2017 12:35:46

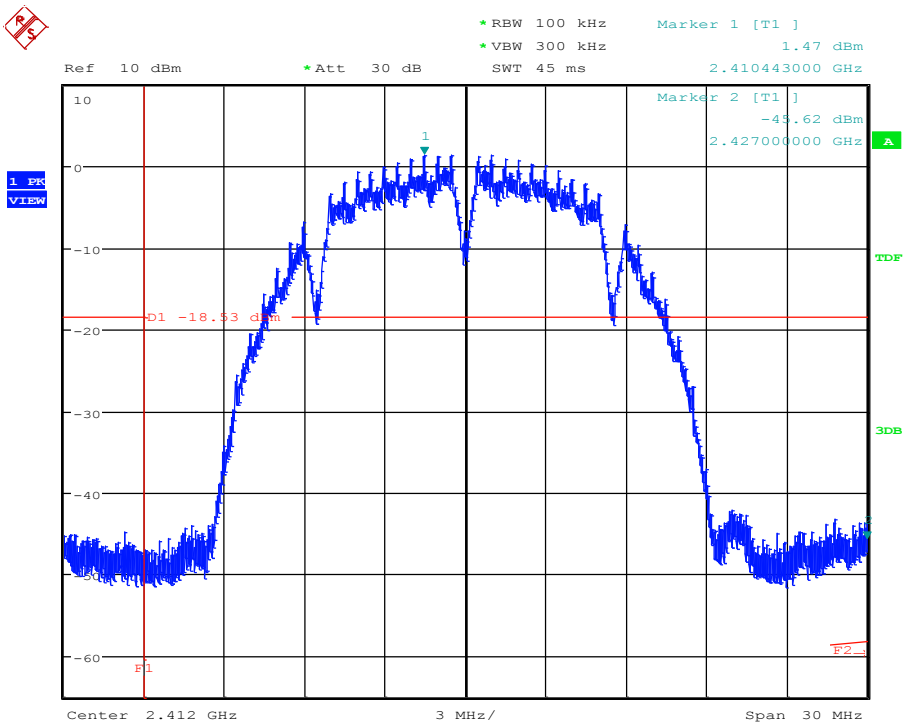
1.5.3. n-Mode



Plot 8: n-mode HT20, channel 11, MCS6

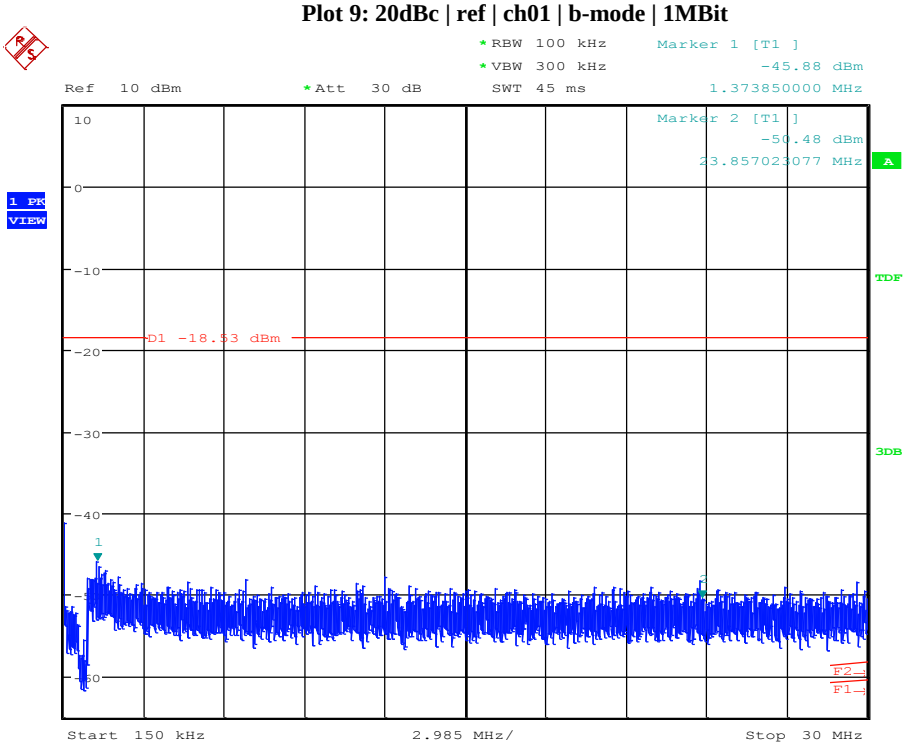
1.6. 20dBc Measurement

1.6.1. bMode 0,15MHz – 25 GHz CH01



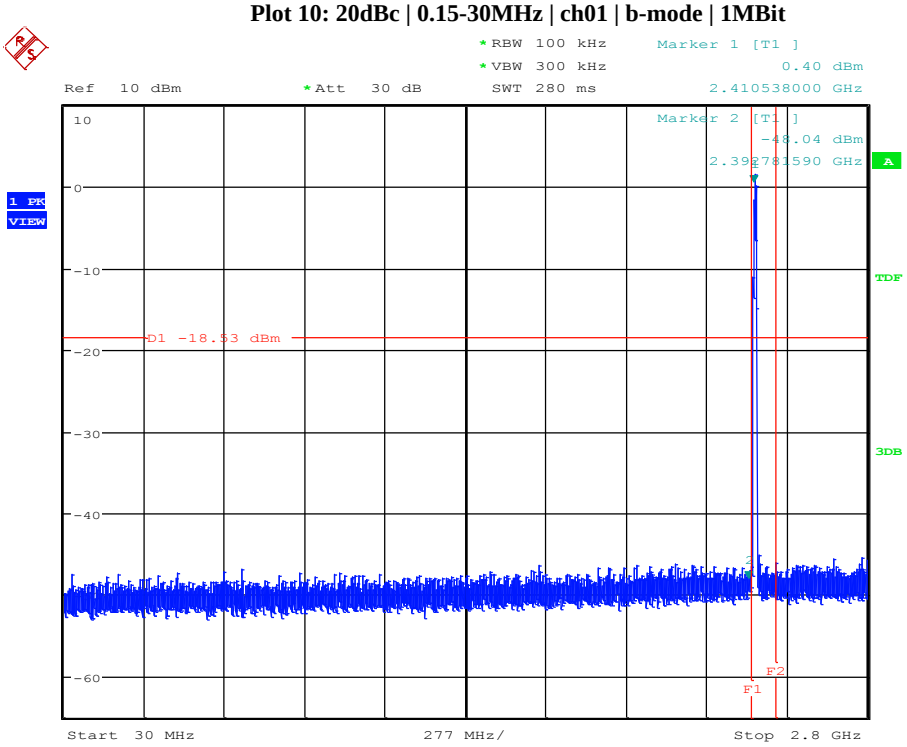
Date: 12.DEC.2017 12:30:22

Plot 9: 20dBc | ref | ch01 | b-mode | 1MBit



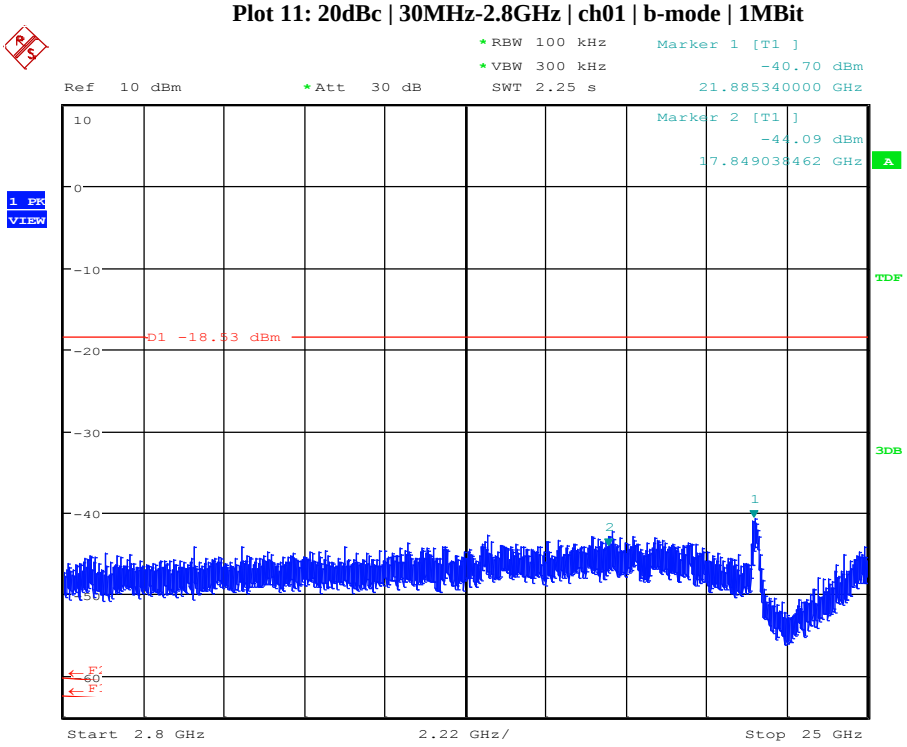
Date: 12.DEC.2017 12:32:08

Plot 10: 20dBc | 0.15-30MHz | ch01 | b-mode | 1MBit



Date: 12.DEC.2017 12:33:23

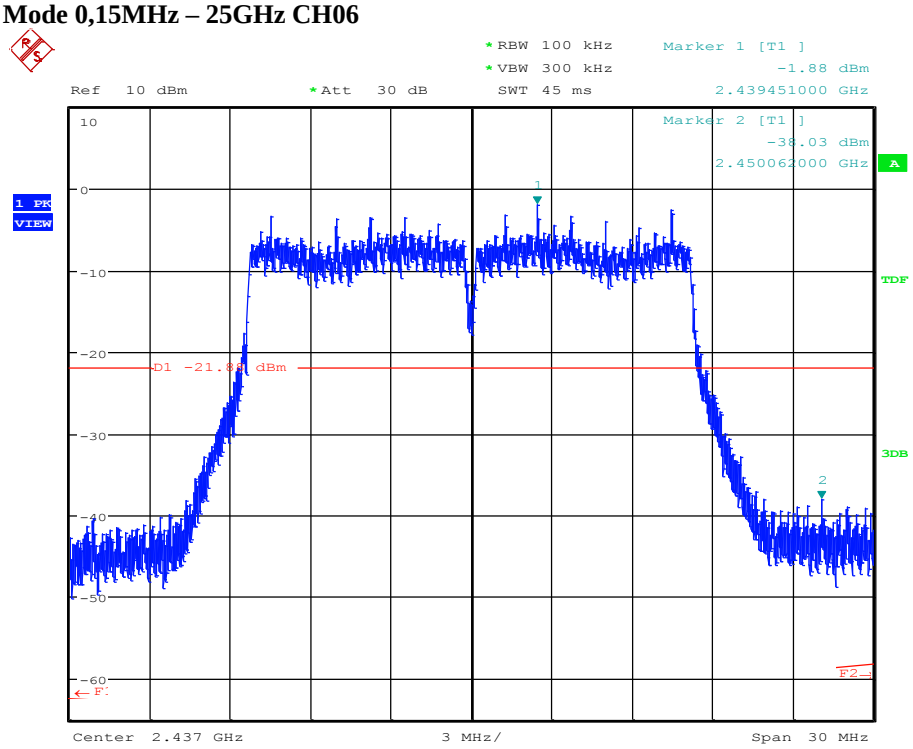
Plot 11: 20dBc | 30MHz-2.8GHz | ch01 | b-mode | 1MBit



Date: 12.DEC.2017 12:34:33

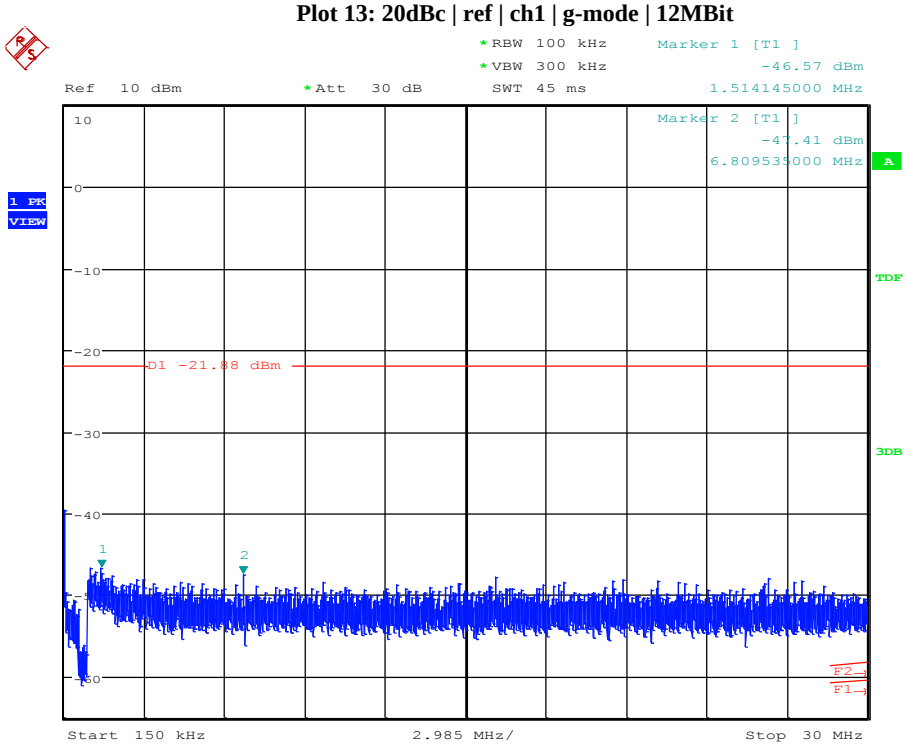
Plot 12: 20dBc | 2.8GHz-25GHz | ch01 | b-mode | 1MBit

1.6.2. g Mode 0,15MHz – 25GHz CH06



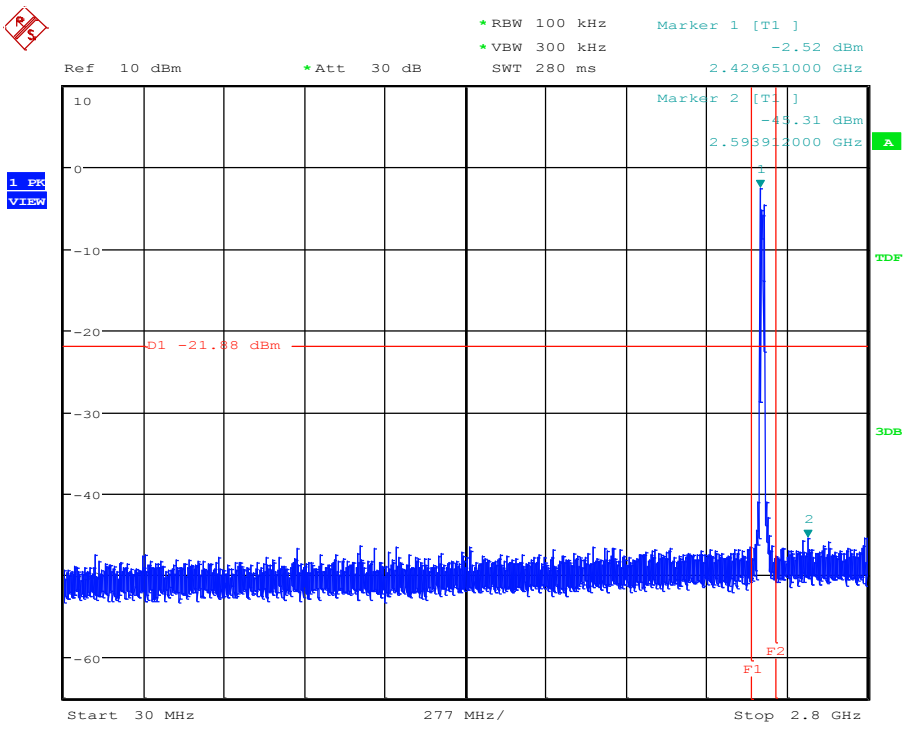
Date: 12.DEC.2017 12:53:03

Plot 13: 20dBc | ref | ch1 | g-mode | 12MBit

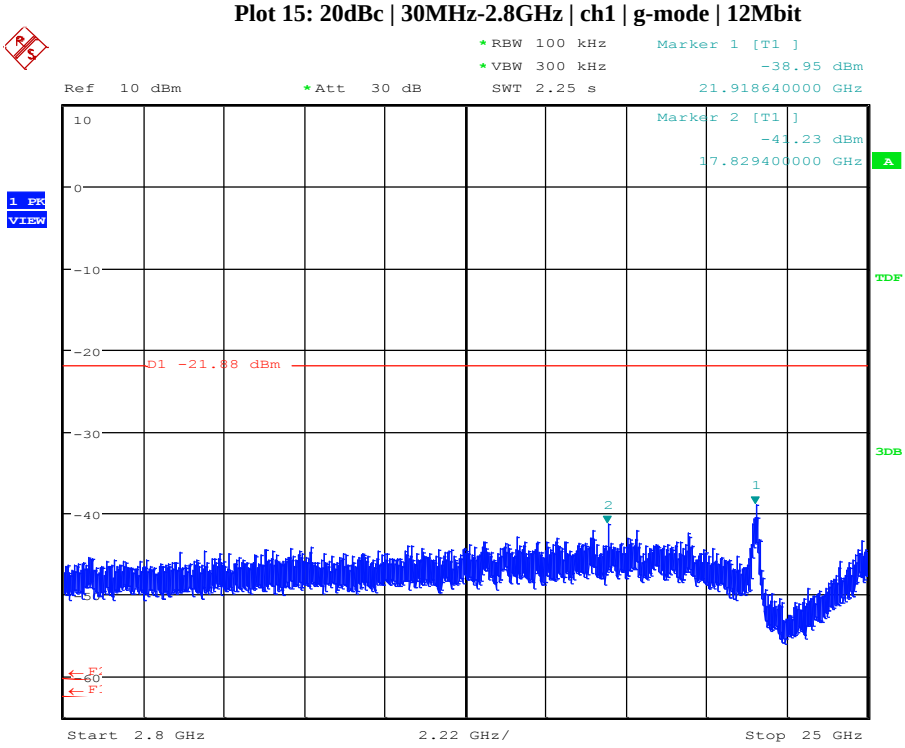


Date: 12.DEC.2017 12:54:02

Plot 14: 20dBc | 0.15-30MHz | ch1 | g-mode | 12MBit

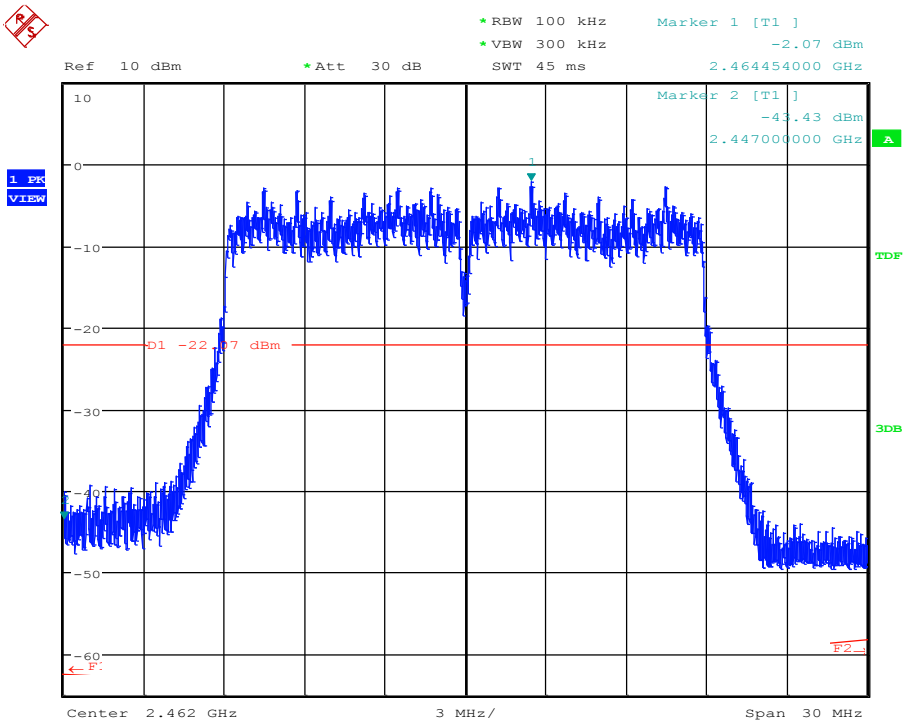


Plot 15: 20dBc | 30MHz-2.8GHz | ch1 | g-mode | 12Mbit



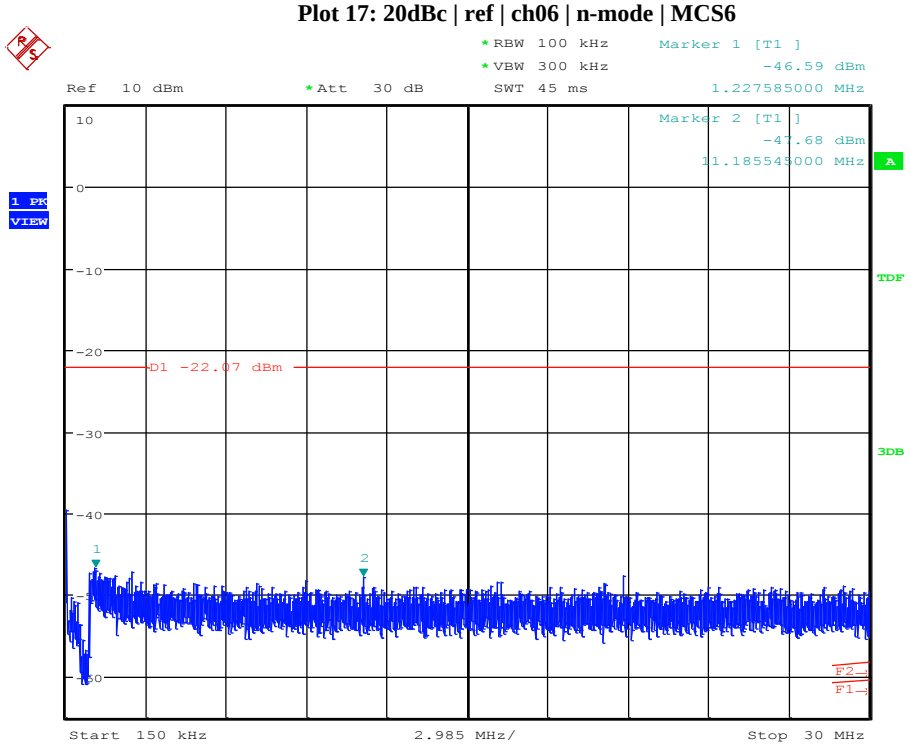
Plot 16: 20dBc | 2.8GHz-25GHz | ch1 | g-mode | 12MBit

1.6.3. n Mode 0,15MHz – 25 GHz CH11



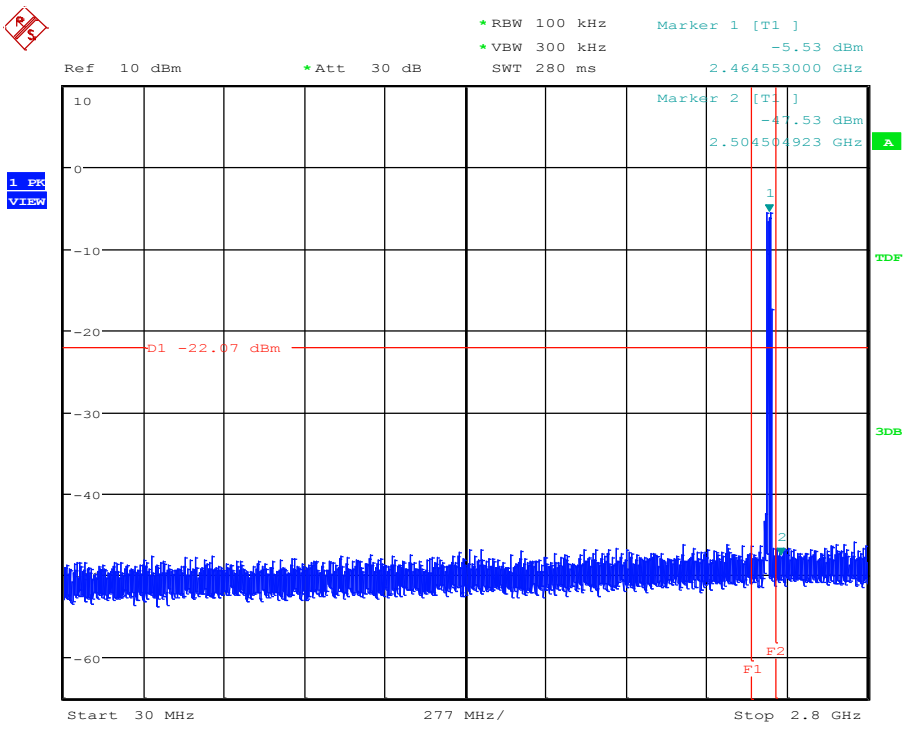
Date: 12.DEC.2017 12:47:32

Plot 17: 20dBc | ref | ch06 | n-mode | MCS6



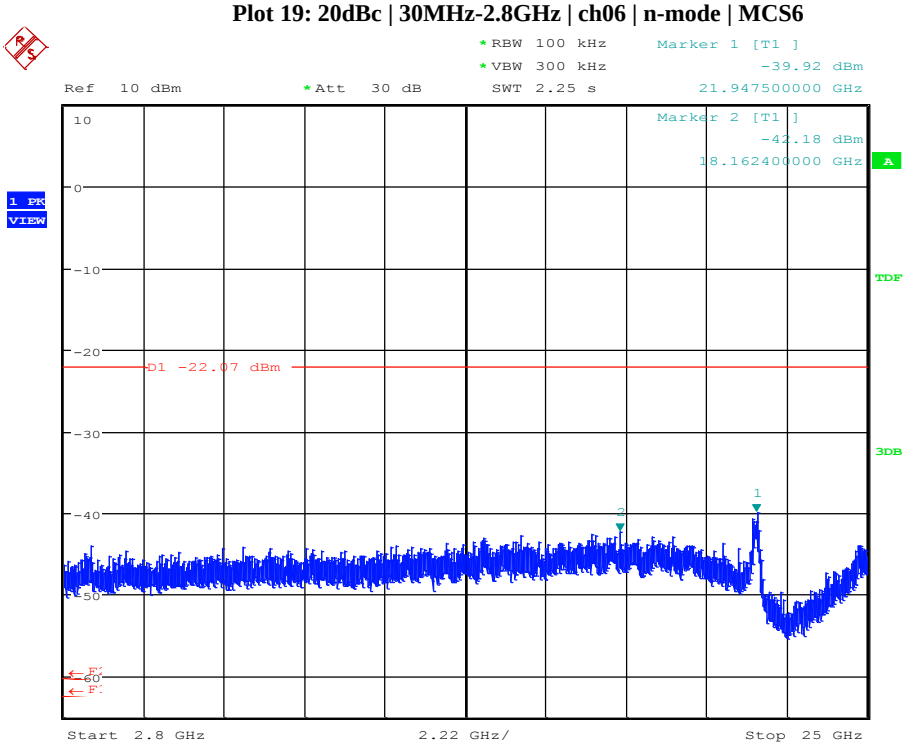
Date: 12.DEC.2017 12:48:45

Plot 18: 20dBc | 0.15-30MHz | ch06 | n-mode | MCS6



Date: 12.DEC.2017 12:49:53

Plot 19: 20dBc | 30MHz-2.8GHz | ch06 | n-mode | MCS6



Date: 12.DEC.2017 12:51:02

Plot 20: 20dBc | 2.8GHz-25GHz | ch06 | n-mode | MCS6

2. Radiated Field Strength Measurements

2.1. Radiated Field Strength Emissions – 9 kHz to 30 MHz

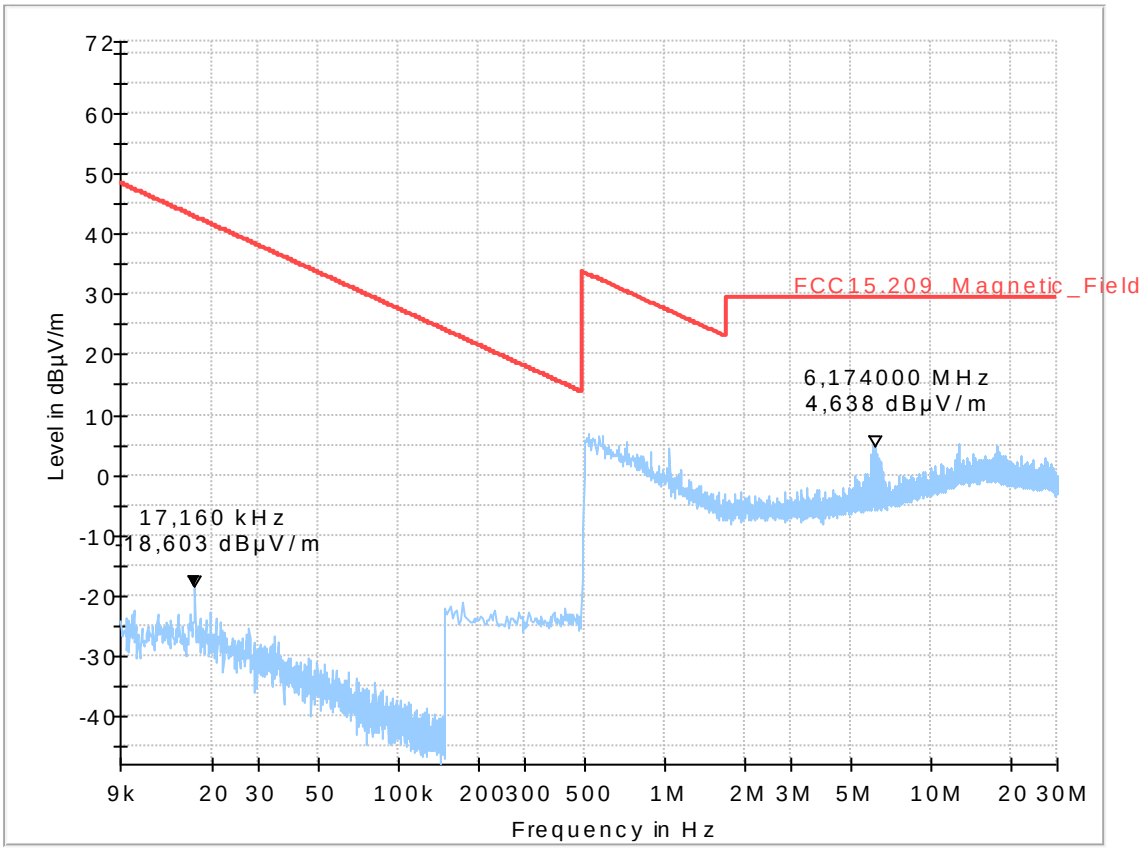
2.01_WLAN_b mode_1Mbps_Ch1

Common Information

Test Description:	EMI AutoTest\ESCS30_ESS\05_FCC\03_bypass\FCC15.209-magnet-Feld
Operating Conditions:	b mode| 1 Mbit | Ch 1| Power level 14
Operator Name:	DLe
Comment:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



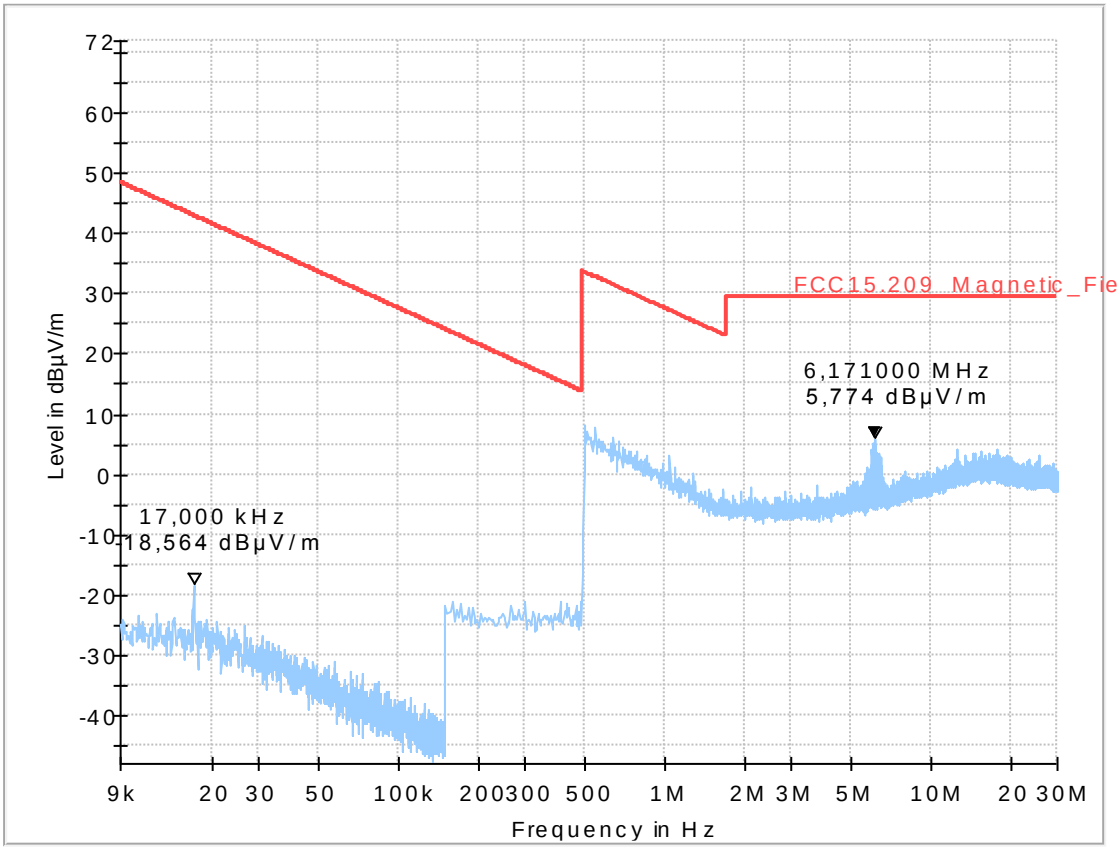
2.02_WLAN_g mode_12Mbps_Ch6

Common Information

Test Description:	EMI AutoTest\ESCS30_ESS\05_FCC\03_bypass\FCC15.209-magnet-Feld
Operating Conditions:	g | 12 Mbit | Ch 6| Power level 11
Operator Name:	DLe
Comment:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



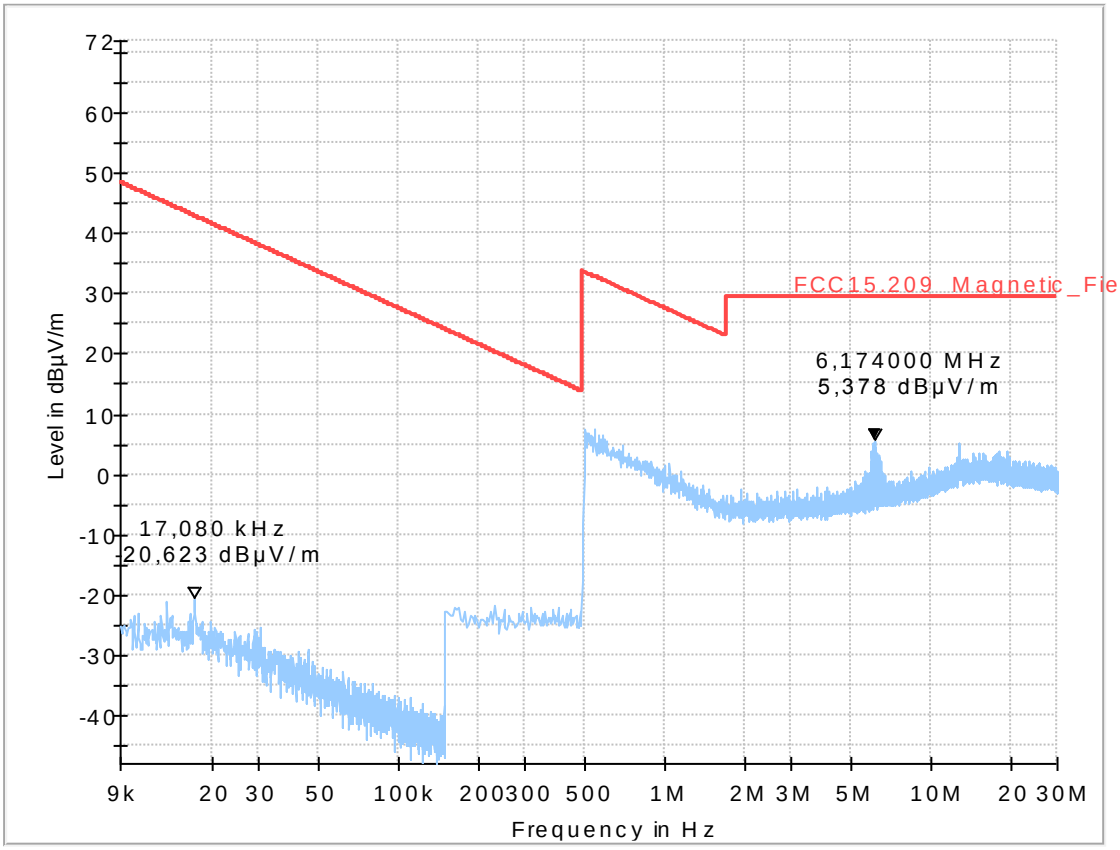
2.03_WLAN_n mode_MCS6_Ch11

Common Information

Test Description:	EMI AutoTest\ESCS30_ESS\05_FCC\03_bypass\FCC15.209-magnet-Feld
Operating Conditions:	n(HT20) | MCS6 | Ch 11| Power level 11
Operator Name:	DLe
Comment:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



2.2. Radiated Field Strength Emissions – 30 MHz to 1 GHz

Diagram No. 3.01_WLAN_b mode_1Mbps_Ch1

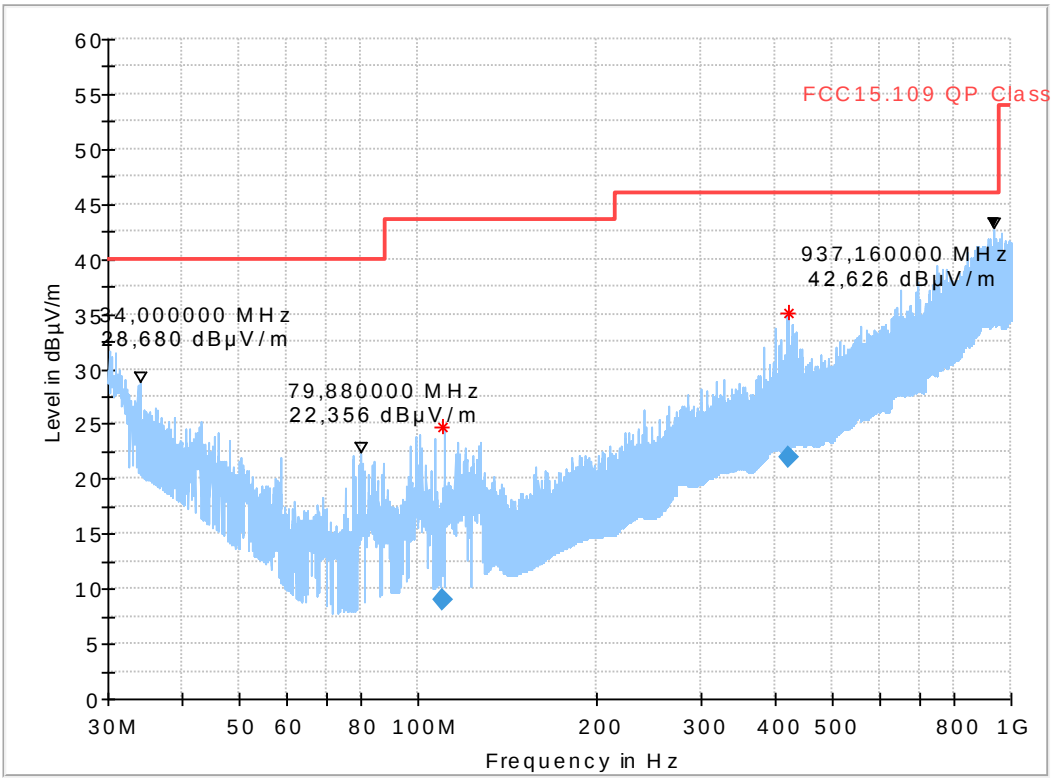
07.12.2017 Page 1 of 2

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 15.109 Class B; RSS-Gen. Issue 4
Operator:	DLe
Operating conditions:	b | 1 Mbit | Ch 1| Power level 14
Power during tests:	24V DC
Comment 1:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

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)
110.240000	8.96	43.50	34.54	1000.0	120.000	360.0	V	149.0	8.2
421.580000	21.99	46.00	24.01	1000.0	120.000	360.0	V	203.0	18.9

Diagram No. 3.02_WLAN_g mode_12Mbps_Ch6

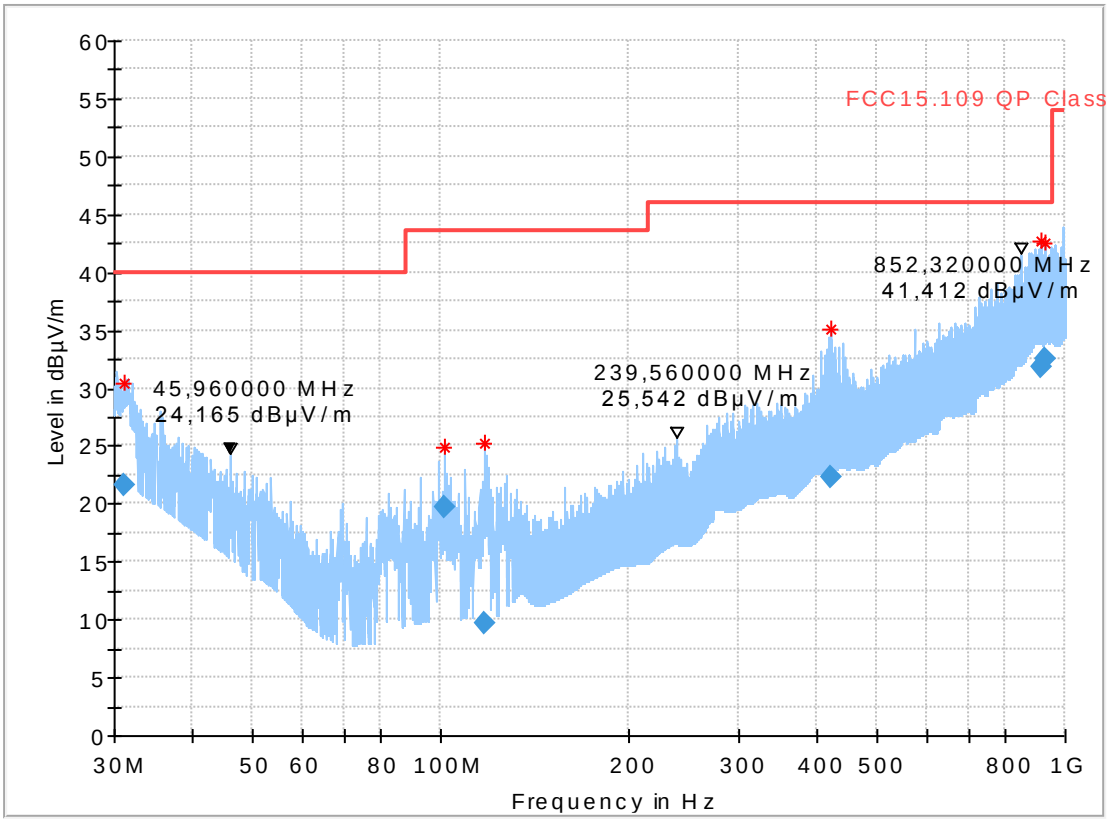
07.12.2017 Page 1 of 2

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 15.109 Class B; RSS-Gen. Issue 4
Operator:	DLe
Operating conditions:	g | 12 Mbit | Ch 6| Power level 11
Power during tests:	24V DC
Comment 1:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

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)
31.04000	21.62	40.00	18.38	1000.0	120.000	302.0	V	137.0	21.1
101.650000	19.75	43.50	23.75	1000.0	120.000	180.0	V	326.0	8.1
117.200000	9.76	43.50	33.74	1000.0	120.000	325.0	V	0.0	7.9
422.290000	22.34	46.00	23.66	1000.0	120.000	351.0	V	214.0	19.0
916.720000	31.82	46.00	14.18	1000.0	120.000	331.0	V	326.0	26.7
926.930000	32.42	46.00	13.58	1000.0	120.000	222.0	V	71.0	27.0

Diagram No. 3.03a_WLAN_n mode_MCS6_Ch11

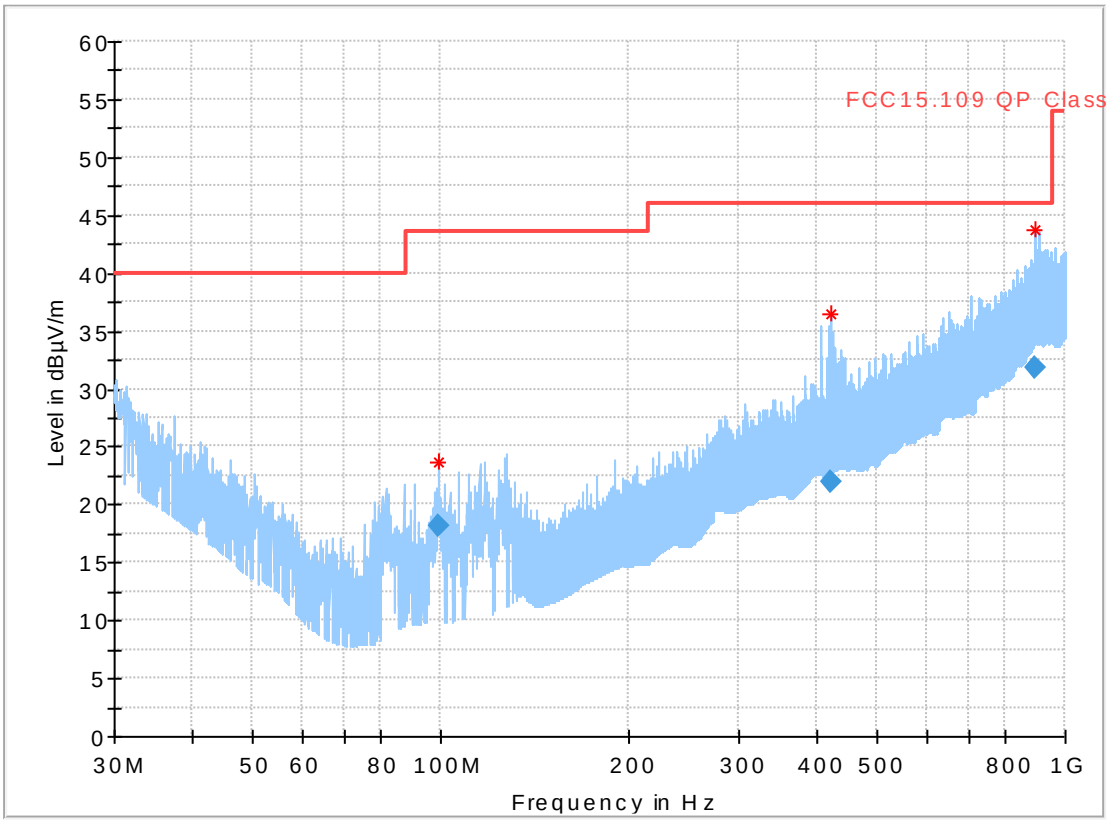
07.12.2017 Page 1 of 1

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 15.109 Class B; RSS-Gen. Issue 4
Operator:	DLe
Operating conditions:	n(HT20) | MCS6 | Ch 11| Power level 11
Power during tests:	24V DC
Comment 1:	--

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

Full Spectrum



2.3. Radiated Field Strength Emissions – 1 GHz to 18 GHz

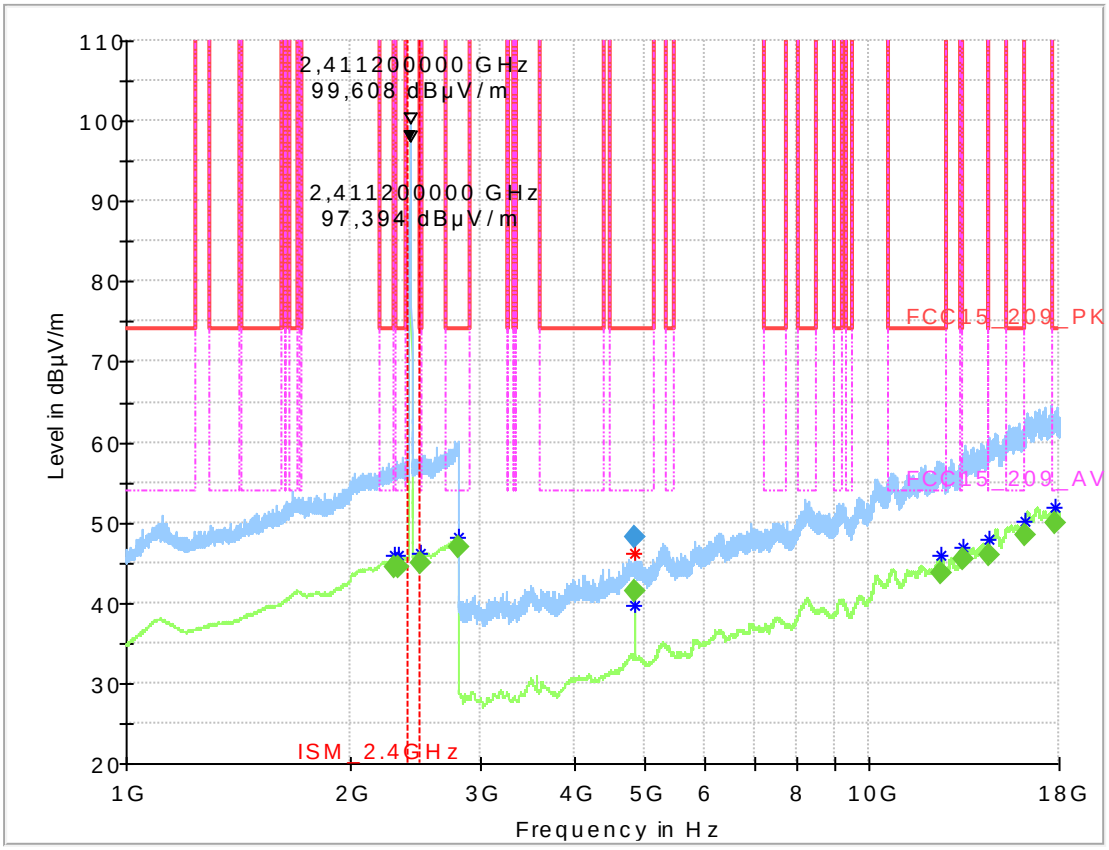
Diagram No.: 4.01_WLAN_b mode_1Mbps_Ch1

Common Information

Test Description:	Radiated field strength emission 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
Operation mode:	b | 1 Mbit | Ch 1| Power level 14
Operator Name:	KIv

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
----------	----------
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2299.210000	---	44.50	54.00	9.50	100.0	1000.000	155.0	V	241.0
2319.490000	---	44.45	54.00	9.55	100.0	1000.000	155.0	V	112.0
2483.500000	---	44.93	150.00	105.07	100.0	1000.000	155.0	H	126.0
2793.810000	---	46.80	54.00	7.20	100.0	1000.000	155.0	V	297.0
4823.930000	---	41.47	54.00	12.53	100.0	1000.000	155.0	V	327.0
4823.930000	48.10	---	74.00	25.90	100.0	1000.000	155.0	V	327.0
12499.250000	---	43.69	54.00	10.31	100.0	1000.000	155.0	V	237.0
13387.250000	---	45.44	54.00	8.56	100.0	1000.000	155.0	V	37.0
14498.330000	---	46.03	54.00	7.97	100.0	1000.000	155.0	V	266.0
16196.450000	---	48.44	54.00	5.56	100.0	1000.000	155.0	H	160.0
17782.890000	---	49.89	54.00	4.11	100.0	1000.000	155.0	V	-23.0

Diagram No.: 4.02_WLAN_g mode_12Mbps_Ch6

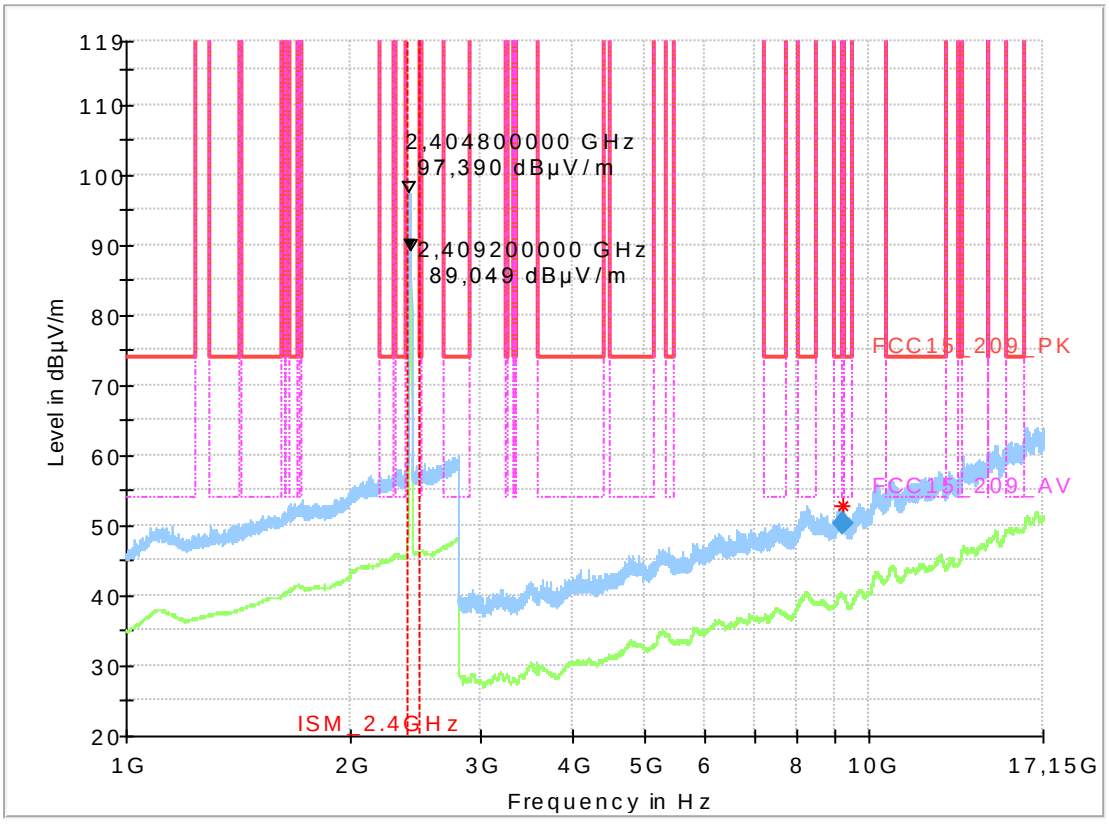
Common Information

Test Description:	Radiated field strength emission 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
Operation mode:	g | 12 Mbit | Ch 6| Power level 11
Operator Name:	HEI

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
9193.650000	50.28	---	74.00	23.72	100.0	1000.000	155.0	V	48.0

Diagram No.: 4.03_WLAN_n mode_MCS6_Ch11

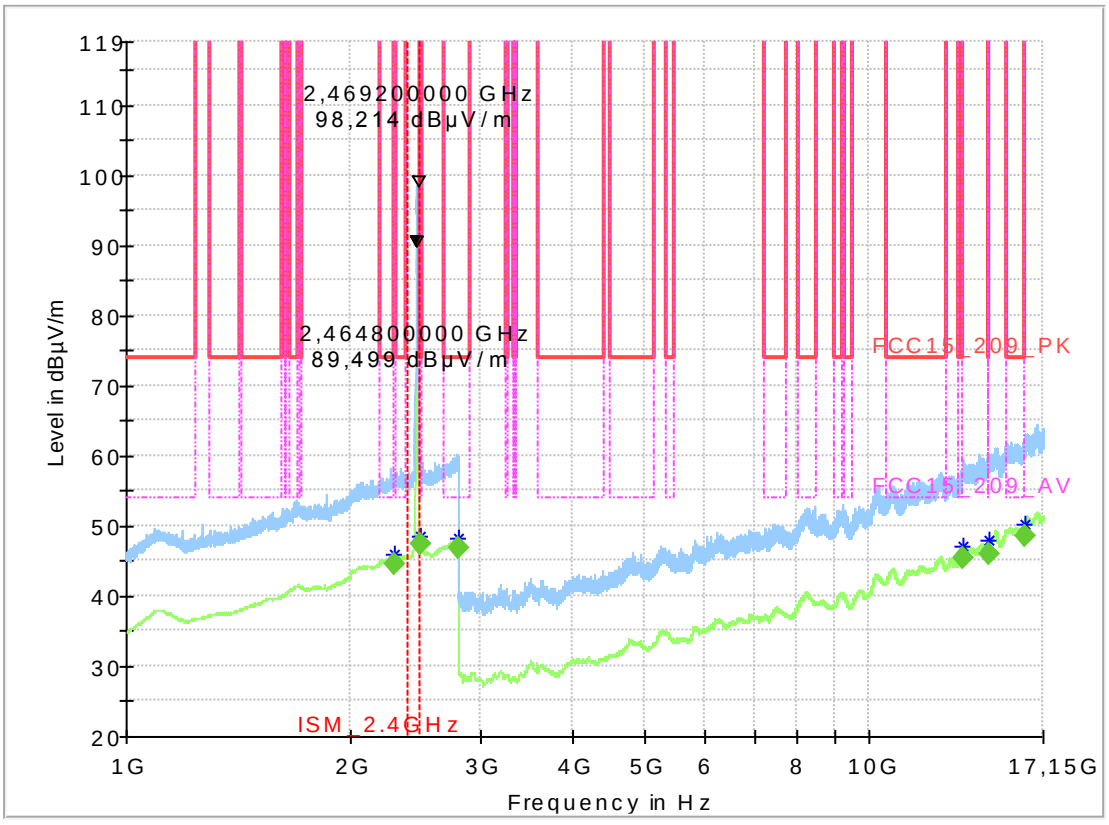
Common Information

Test Description:	Radiated field strength emission 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
Operation mode:	n(HT20) | MCS6 | Ch 11| Power level 11
Operator Name:	KIv

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
2296.330000	---	44.42	54.00	9.58	100.0	1000.000	155.0	V	87.0
2483.500000	---	47.50	150.00	102.50	100.0	1000.000	155.0	H	272.0
2793.410000	---	46.79	54.00	7.21	100.0	1000.000	155.0	V	167.0
13390.090000	---	45.47	54.00	8.53	100.0	1000.000	155.0	V	159.0
14491.770000	---	46.03	54.00	7.97	100.0	1000.000	155.0	V	135.0
16195.050000	---	48.47	54.00	5.53	100.0	1000.000	155.0	V	149.0
17767.890000	---	49.84	54.00	4.16	100.0	1000.000	155.0	V	301.0

2.4. Radiated Field Strength Emissions – 18 GHz to 25 GHz

Diagram No.: 4.01_WLAN_b-Mode_1Mbps_CH1

Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

FCC_Sweep_15.407_18_40GHz_Pre

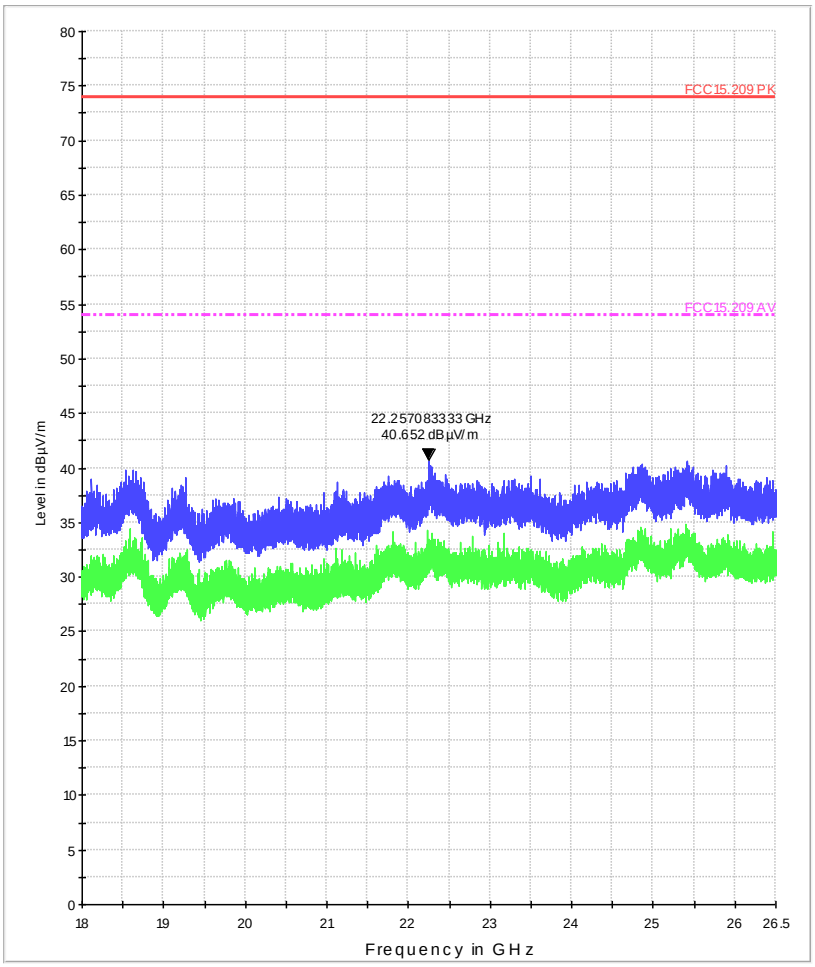


Diagram No.: 4.02_WLAN_g-Mode_12Mbps_CH6

Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

FCC_Sweep_15.407_18_40GHz_Pre

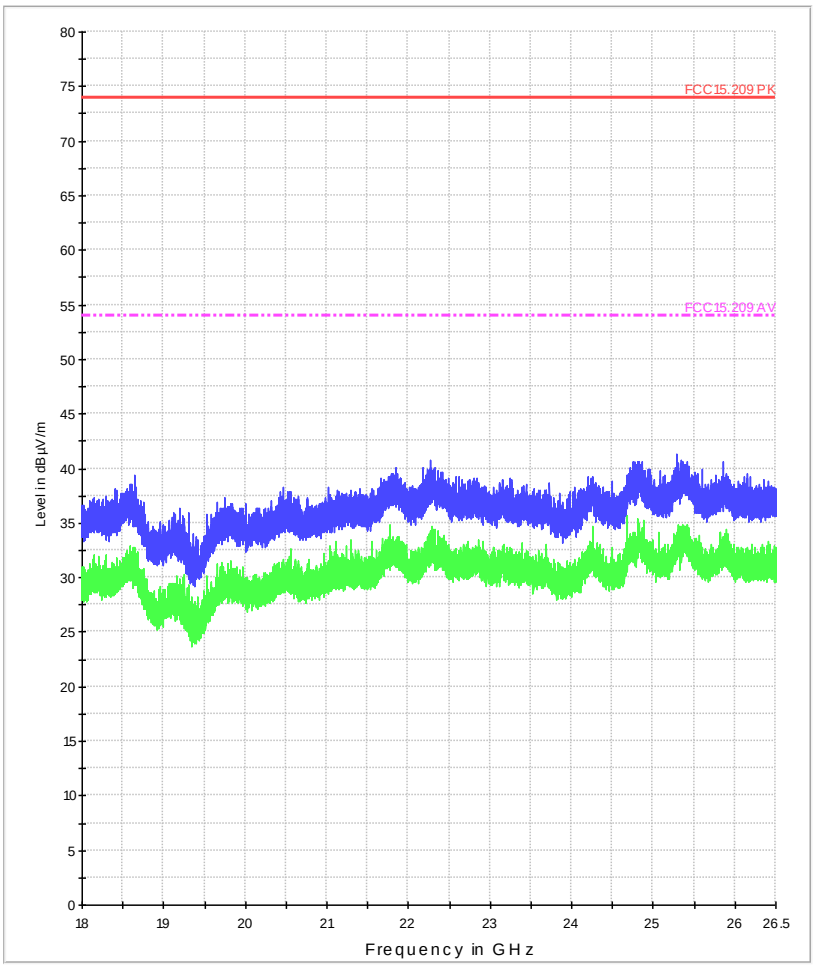


Diagram No.: 4.03_WLAN_n-Mode_MCS6_CH11

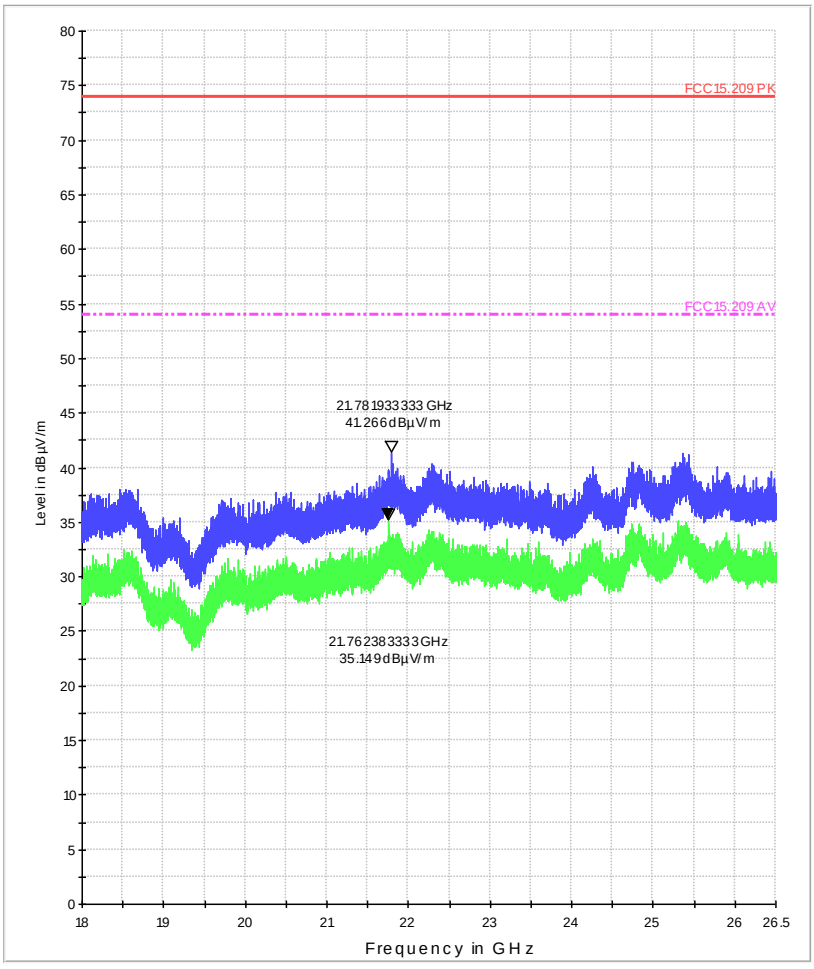
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC

FCC_Sweep_15.407_18_40GHz_Pre



3. Radiated Band-Edge Measurements

3.1. b SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

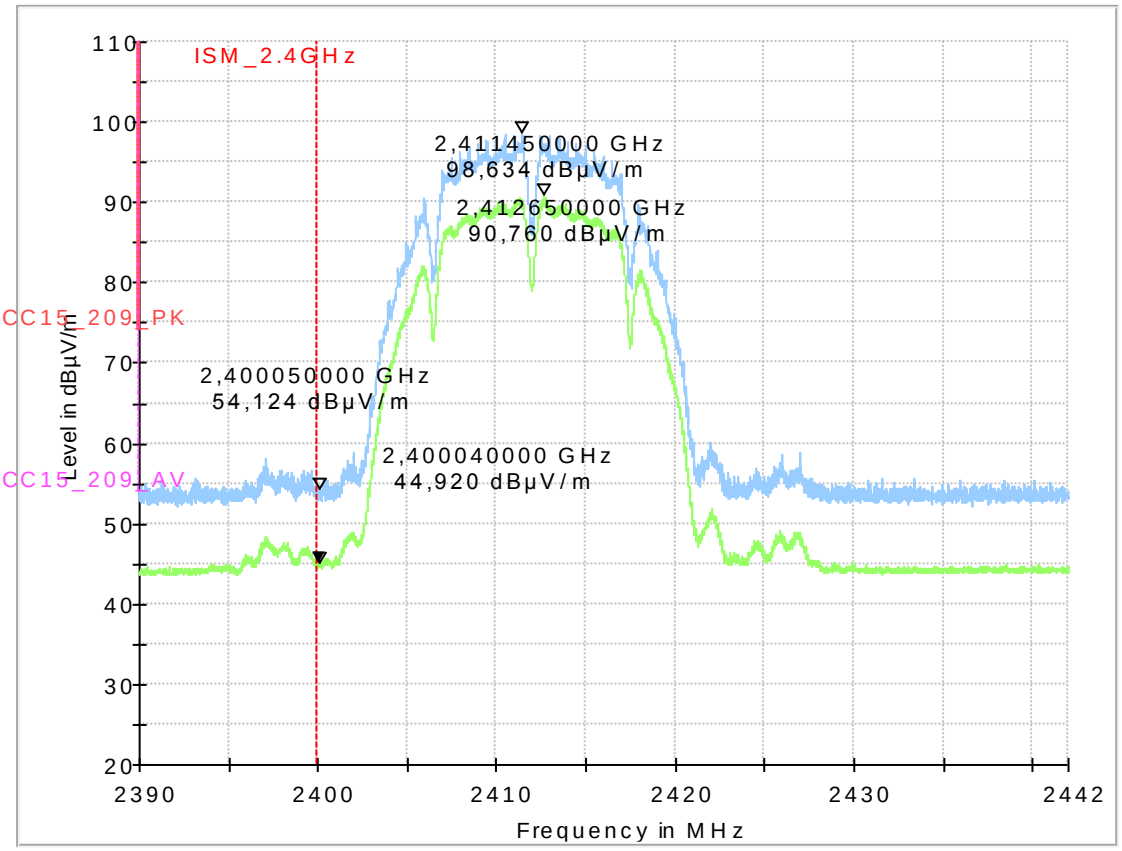
Diagram No.: 9.01_BE_WLAN_b mode_1Mbps_Ch1

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
Operation mode:	b | 1 Mbit | Ch 1| Power level 14
Operator Name:	KIv

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



3.2. b SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge)

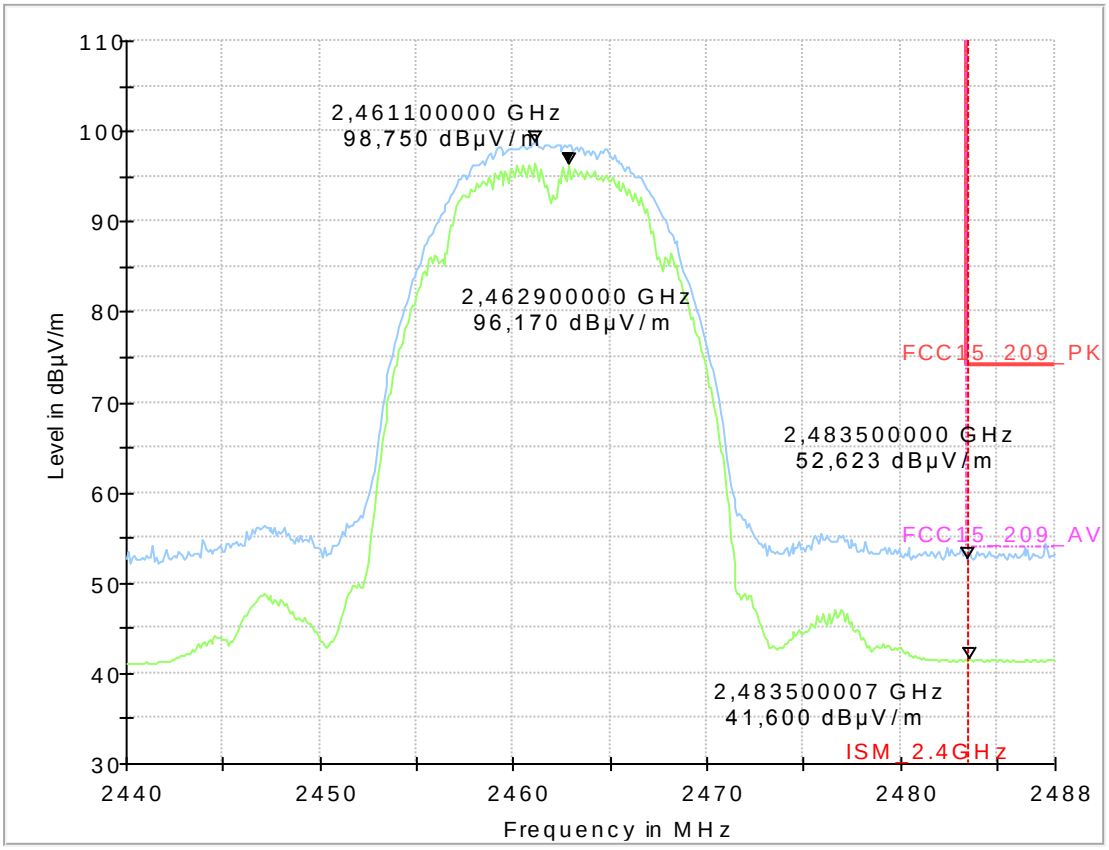
Diagram No.: 9.02_BE_WLAN_b mode_1Mbps_Ch11

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
Operation mode:	b | 1Mbit | Ch 11| Power level 14
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



3.3. g SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

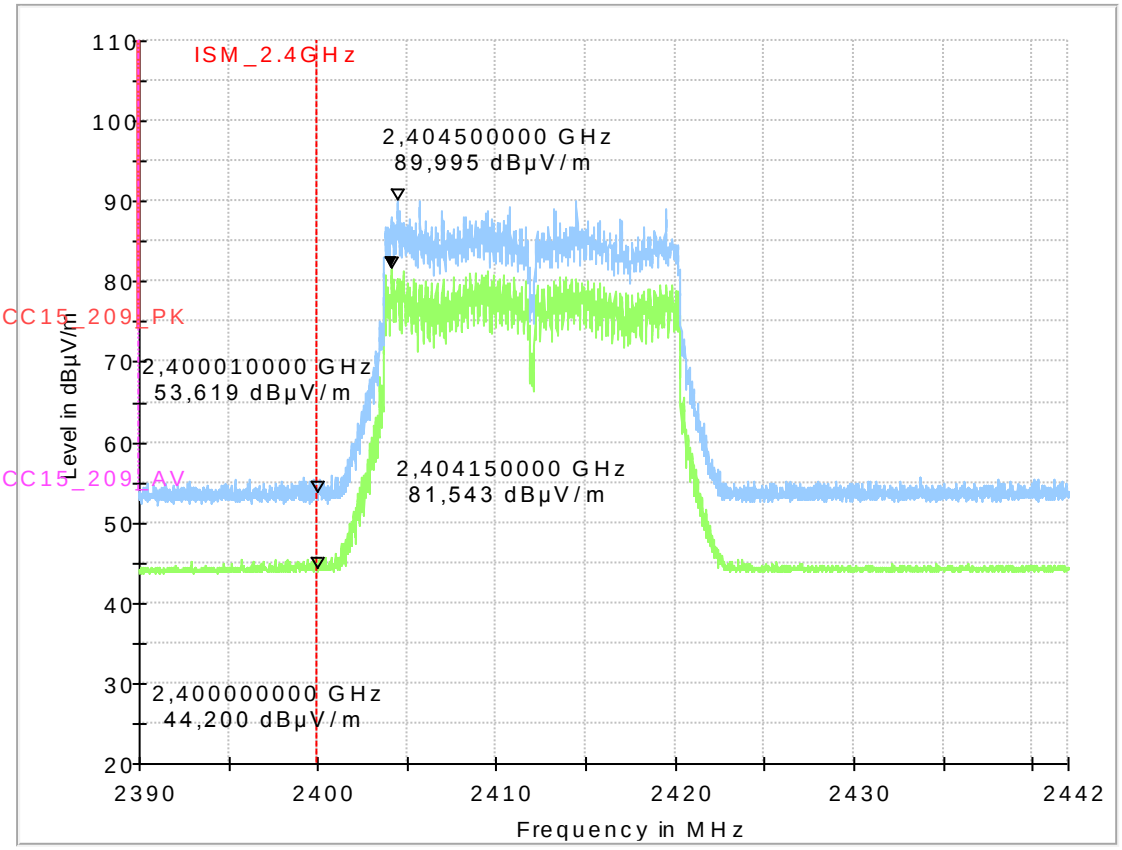
Diagram No.: 9.03_BE_WLAN _g mode_12Mbps_Ch1

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
Operation mode:	g | 12 Mbit | Ch 1| Power level 11
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



3.4. g SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge)

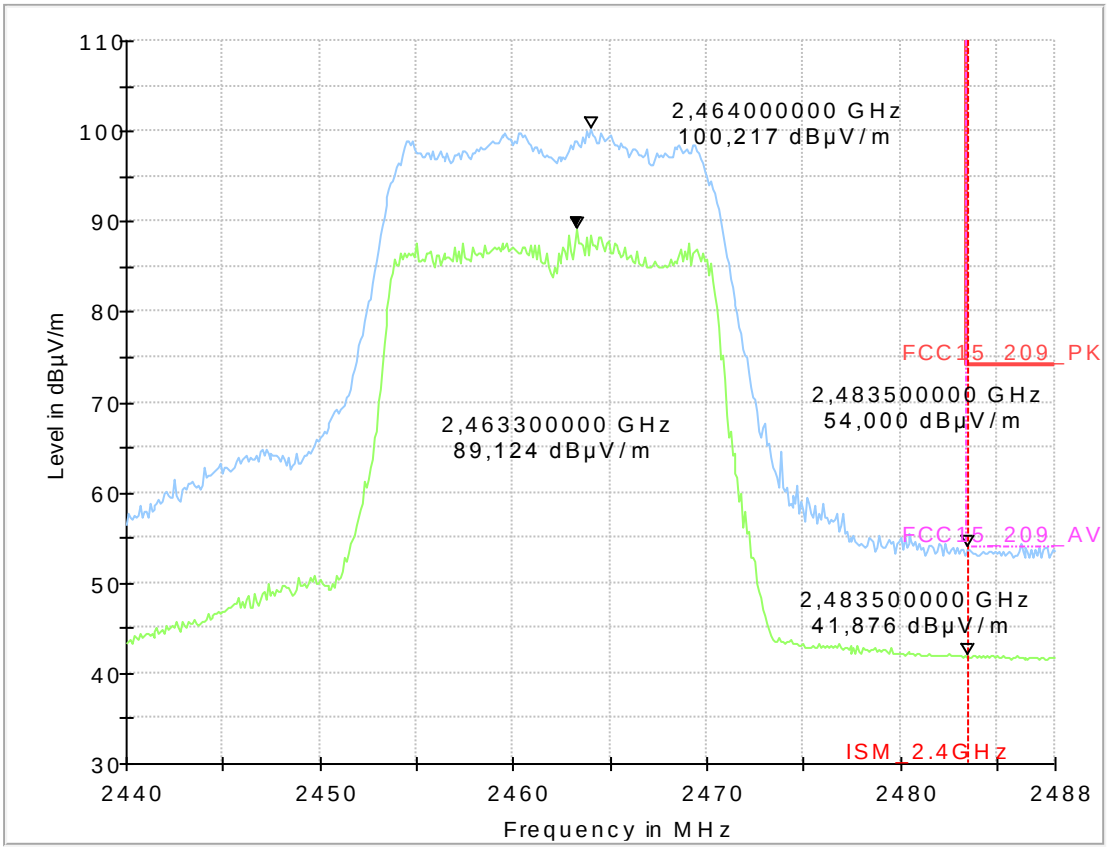
Diagram No.: 9.04_BE_WLAN _g mode_12Mbps_Ch11

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
Operation mode:	g | 12Mbit | Ch 11| Power level 11
Operator Name:	TFr

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



3.5. n SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge)

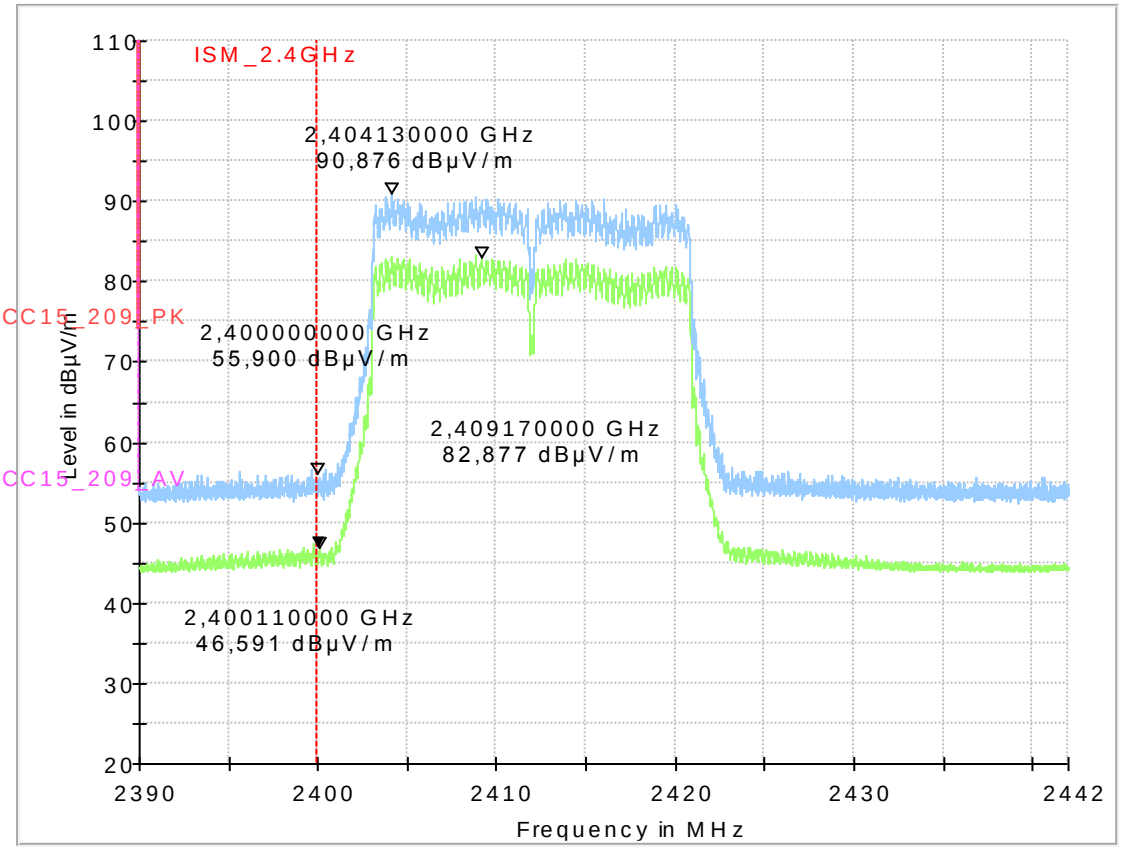
Diagram No.: 9.05_BE_WLAN _n mode_MCS6_Ch1

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
Operation mode:	n(HT20) | MCS6 | Ch 1| Power level 11
Operator Name:	KIv

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC



3.6. n SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge)

Diagram No.: 9.06_BE_WLAN _n mode_MCS6_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
Operation mode:	n(HT20) | MCS6 | Ch 11| Power level 11
Operator Name:	KIv

EUT Information

Manufacturer:	Daimler AG
EuT:	CTPMID/ A 000 446 58 60
---	---
HW Version:	0342G05
SW Version:	tbd
Serial Number:	3600003042
Connected Interfaces:	Main wiring + Antenna A005 820 30 75 + Splitter A005 820 43 75
Power Supply:	24 V DC