

Annex 1: Measurement diagrams to TEST REPORT No.: 17-1-0105501T05

According to:
FCC Regulations
Part 15.209
Part 15.247
ISED-Regulations
RSS-247, Issue 2
RSS-Gen, Issue 4

for
Daimler Trucks North America

CTPDIN
7 620 000 28396
FCC: 2AKC8CTP10777001
ISED: 22221-CTP10777001
PMN=CTPMIDDTNA
HVIN= CTPMIDDTNA
FVIN=17.02.S.016

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION USA • NOISISS MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 AUTHORIZED RF LABORATORY	 Authorized™ Test Lab Lab Code: 20011130-00		
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			

Table of contents

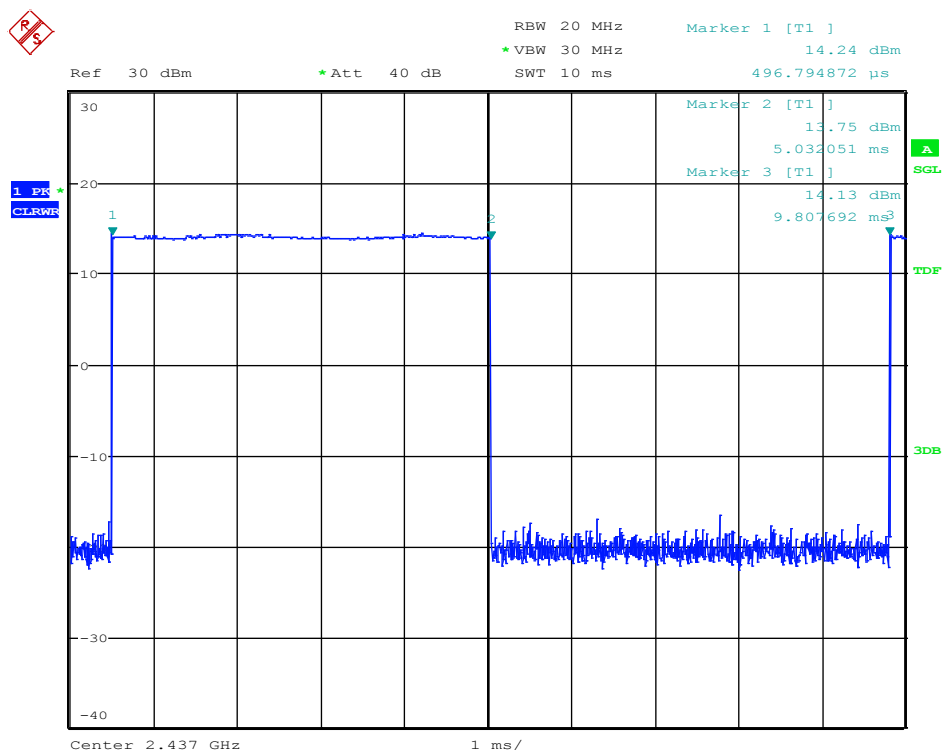
1. CONDUCTED RF-MEASUREMENTS	3
1.1. RF output Power	3
1.2. Duty Cycle Measurements	4
1.3. Power Spectral Density Measurements (b/g/n Mode)	8
1.4. 6 dB Bandwidth Measurements (b/g/n Mode)	17
1.5. 99% Bandwidth Measurements	26
1.6. 20dBc Measurement	32
2. RADIATED FIELD STRENGTH MEASUREMENTS	38
2.1. Radiated Field Strength Emissions – 9 kHz to 30 MHz	38
2.2. Radiated Field Strength Emissions – 30 MHz to 1 GHz	41
2.3. Radiated Field Strength Emissions – 1 GHz to 18 GHz	44
2.4. Radiated Field Strength Emissions – 18 GHz to 25 GHz	47
3. RADIATED BAND-EDGE MEASUREMENTS	50
3.1. b SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge).....	50
3.2. b SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge).....	51
3.3. g SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge).....	52
3.4. g SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge).....	53
3.5. n SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge).....	54
3.6. n SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge).....	55

1. Conducted RF-Measurements

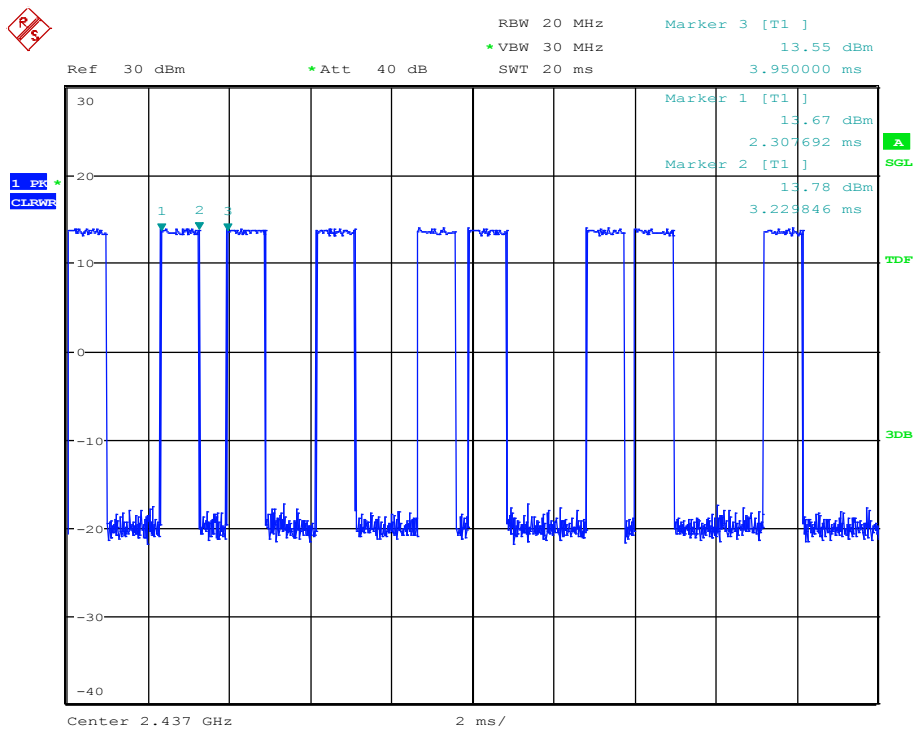
1.1. RF output Power

WLAN 802.11b/g/n(HT20)						
Conducted Power Measurements (using RF Peak Power Meter) [dBm]						
b-Mode (SISO)		Channel No. (Frequency MHz)			b-Mode (SISO) Maximum Conducted Value	b-Mode (SISO) Antenna Gain [dBi]
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)		
1MBit	DBPSK	13,32	12,93	12,34	13,32	1,70
2Mbit	DQPSK	13,29	12,62	12,35		
5.5Mbit	CCK-PBCC	12,71	12,33	11,78		
11MBit	ERP-PBCC	13,02	12,64	12,07		
FCC15.247 Conducted Peak Power Limits + Antenna Gain Requirement					30.0 dBm	< 6 dBi
g-Mode (SISO)		Channel No. (Frequency MHz)			g-Mode (SISO) Maximum Conducted Value	g-Mode (SISO) Antenna Gain [dBi]
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)		
6Mbit	BPSK	10,90	11,13	11,27	11,55	1,70
9Mbit	BPSK	11,55	11,36	11,35		
12Mbit	QPSK	11,03	11,35	11,41		
18Mbit	QPSK	11,03	11,35	10,92		
24Mbit	16-QAM	11,12	11,36	10,84		
36Mbit	16-QAM	11,03	10,68	10,67		
48Mbit	64-QAM	10,98	10,76	10,60		
54MBit	64-QAM	10,92	10,77	10,68		
FCC15.247 Conducted Peak Power Limits + Antenna Gain Requirement					30.0 dBm	< 6 dBi
n-Mode HT20 (SISO)		Channel No. (Frequency MHz)			n(HT20)-Mode (SISO) Maximum Conducted Value	n(HT20)-Mode (SISO) Antenna Gain [dBi]
Data rate	Modulation	1 (2412)	6 (2437)	11 (2462)		
MCS0 - 6.5Mbps	BPSK	11,32	10,68	11,25	11,32	1,70
MCS1 - 13Mbps	QPSK	11,08	10,68	10,99		
MCS2 - 19.5Mbps	QPSK	10,83	10,85	10,68		
MCS3 - 26Mbps	QAM16	11,01	10,87	10,87		
MCS4 - 39Mbps	QAM16	10,89	10,80	10,75		
MCS5 - 52MBps	QAM64	10,95	10,69	10,84		
MCS6 - 58.5MBps	QAM64	10,88	10,59	10,77		
MCS7 - 65MBps	QAM64	10,99	10,71	10,87		

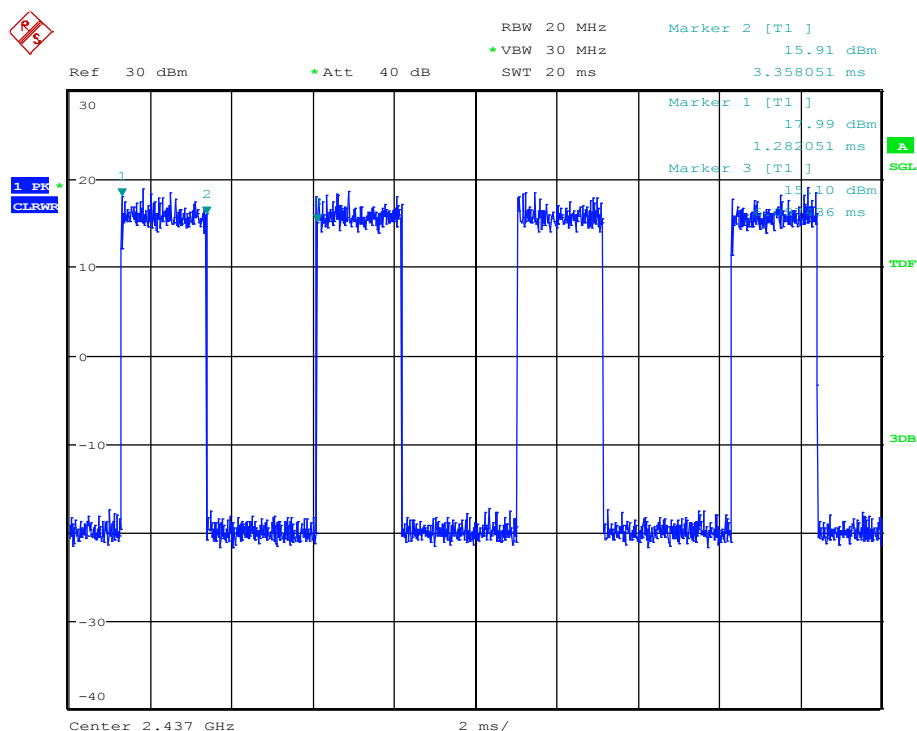
1.2. Duty Cycle Measurements



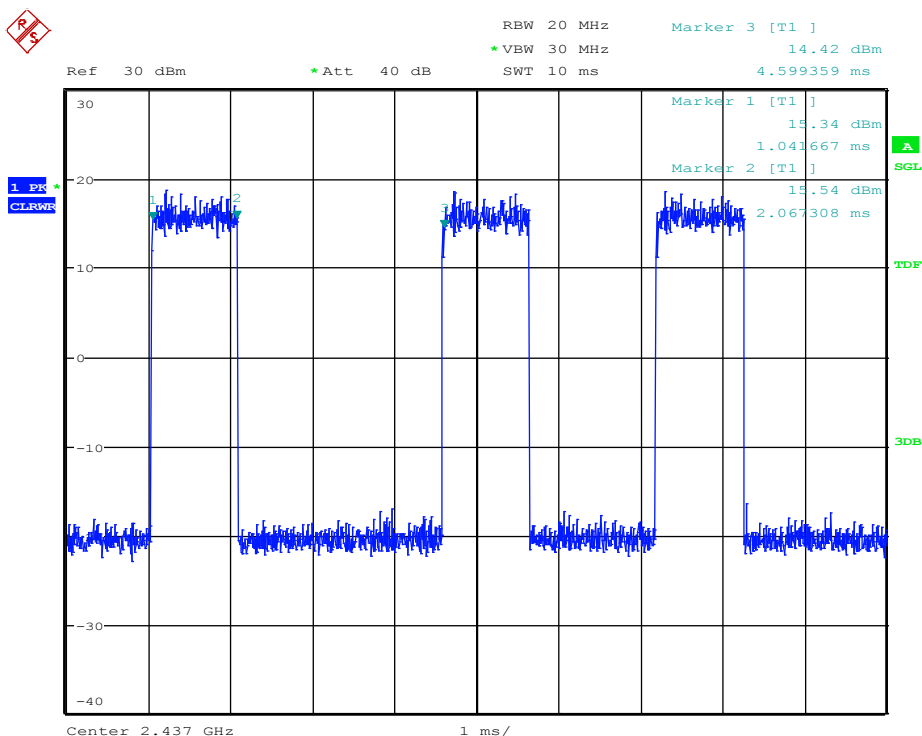
Plot 1: Duty Cycle-WLAN 2.4 GHz-b Mode | 20 MHz | 1 Mbit | Ch 6 (2437 MHz)



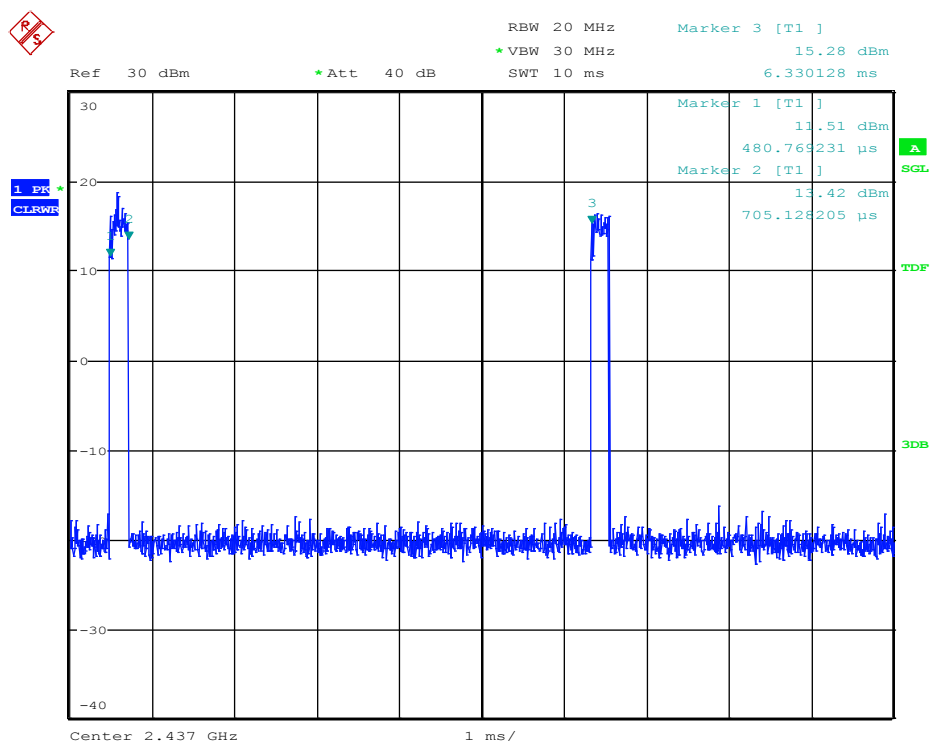
Plot 2: Duty Cycle-WLAN 2.4 GHz-b Mode | 20 MHz | 12 Mbit | Ch 6 (2437 MHz)



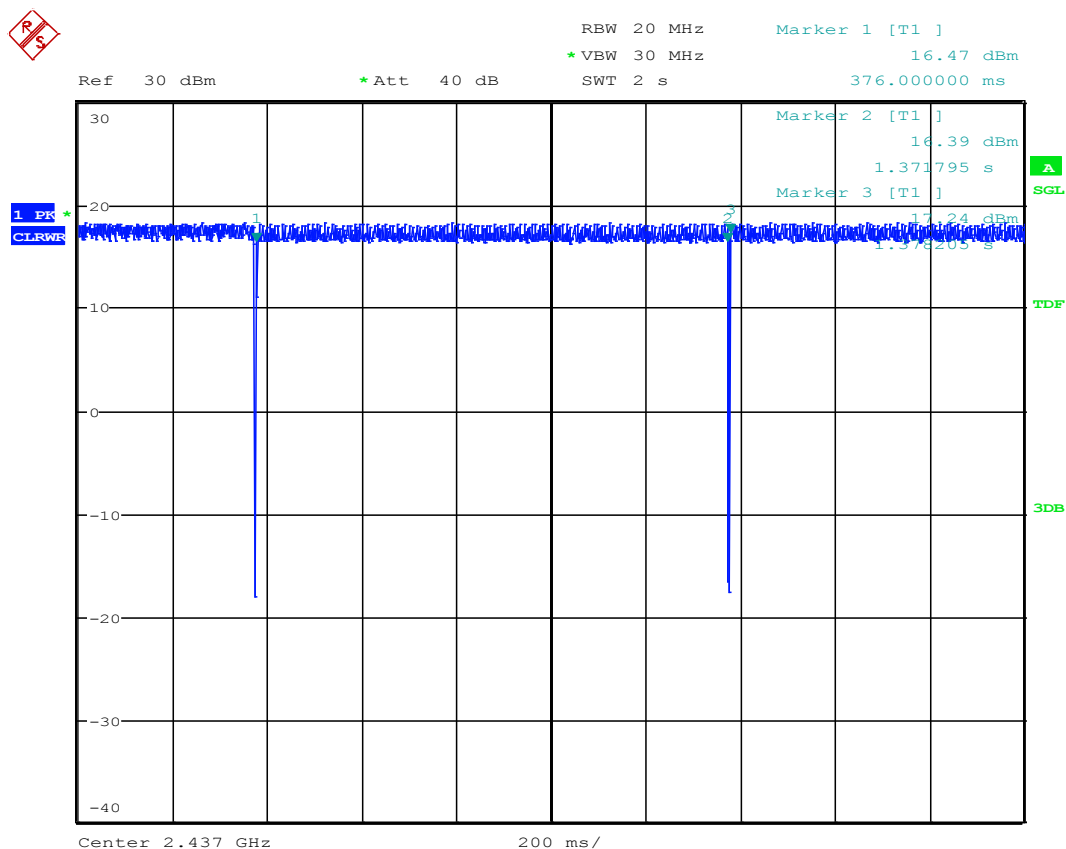
Plot 3: Duty Cycle-WLAN 2.4 GHz-g Mode | 20 MHz | 6Mbit | Ch 6 (2437 MHz)



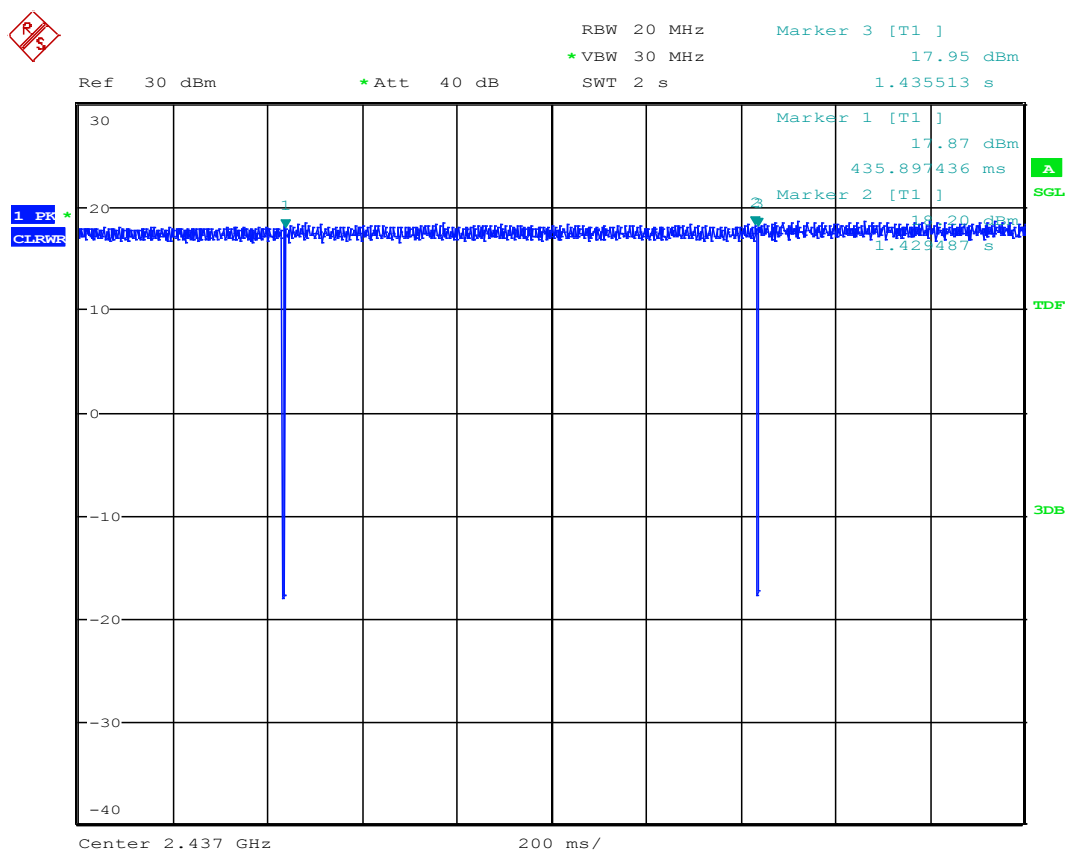
Plot 4: Duty Cycle-WLAN 2.4 GHz-g Mode | 20 MHz | 12Mbit | Ch 6 (2437 MHz)



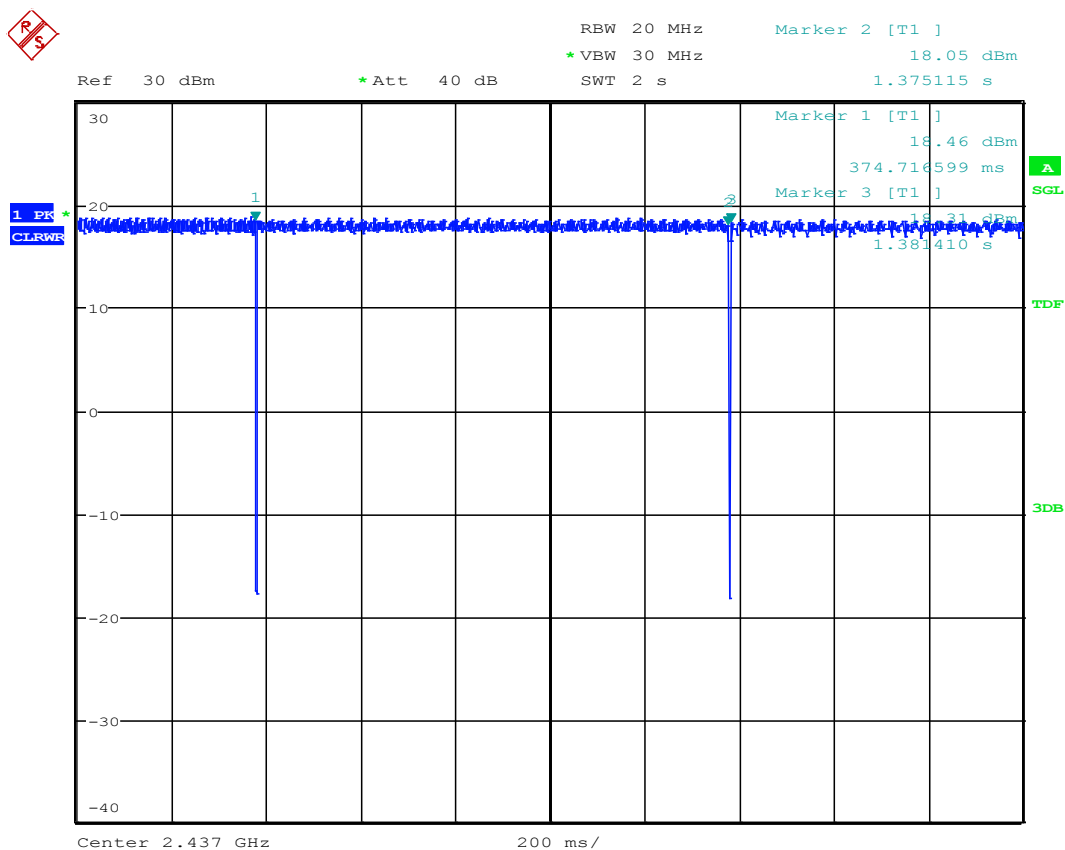
Plot 5: Duty Cycle-WLAN 2.4 GHz-g Mode | 20 MHz | 54Mbit | Ch 6 (2437 MHz)



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



Plot 7: Duty Cycle-WLAN 2.4 GHz-n Mode | 20 MHz | MCS6 | Ch 6 (2437 MHz)



Plot 8: Duty Cycle-WLAN 2.4 GHz-n Mode | 20 MHz | MCS7 | Ch 6 (2437 MHz)

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

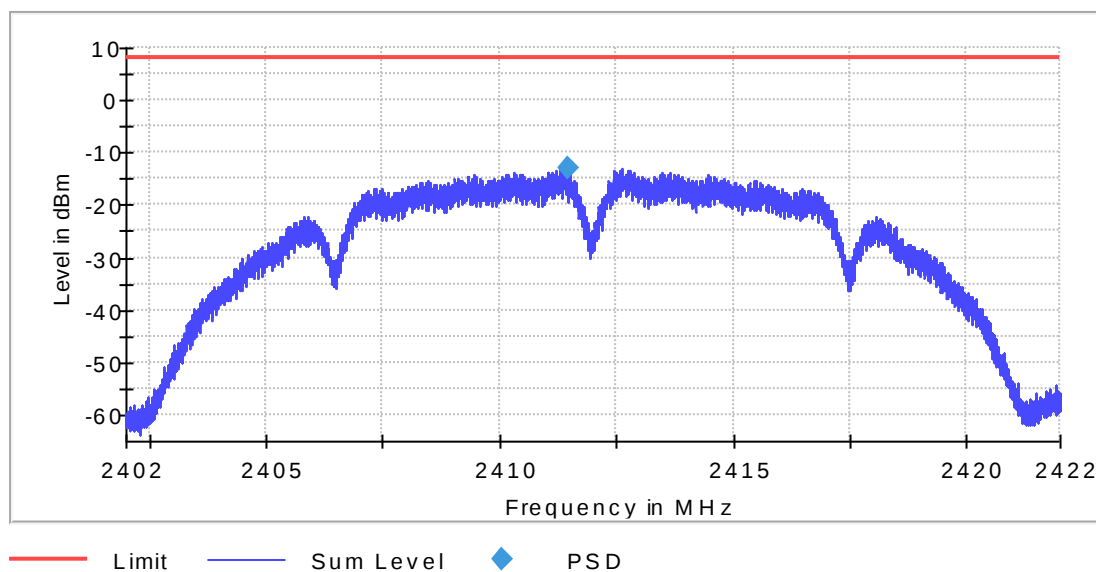
1.3.1. b-Mode [20 MHz] 1Mbit| Lowest Channel 1 (2412 MHz)

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	2411.467669	-13.110	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

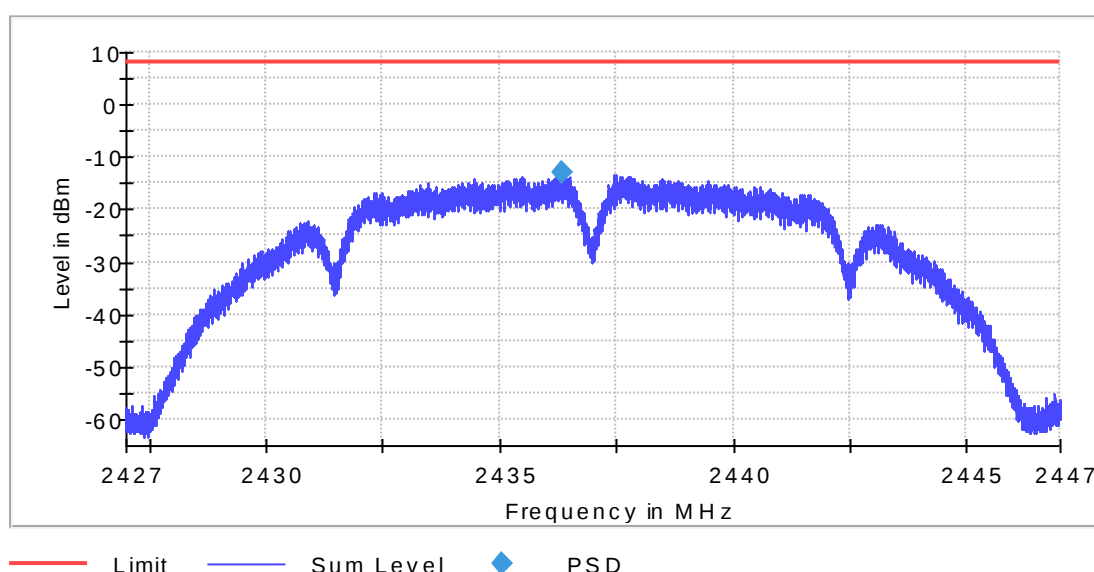
1.3.1.1. b-Mode [20 MHz] 1Mbit Middle Channel 6 (2437 MHz)

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	2436.341353	-13.066	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

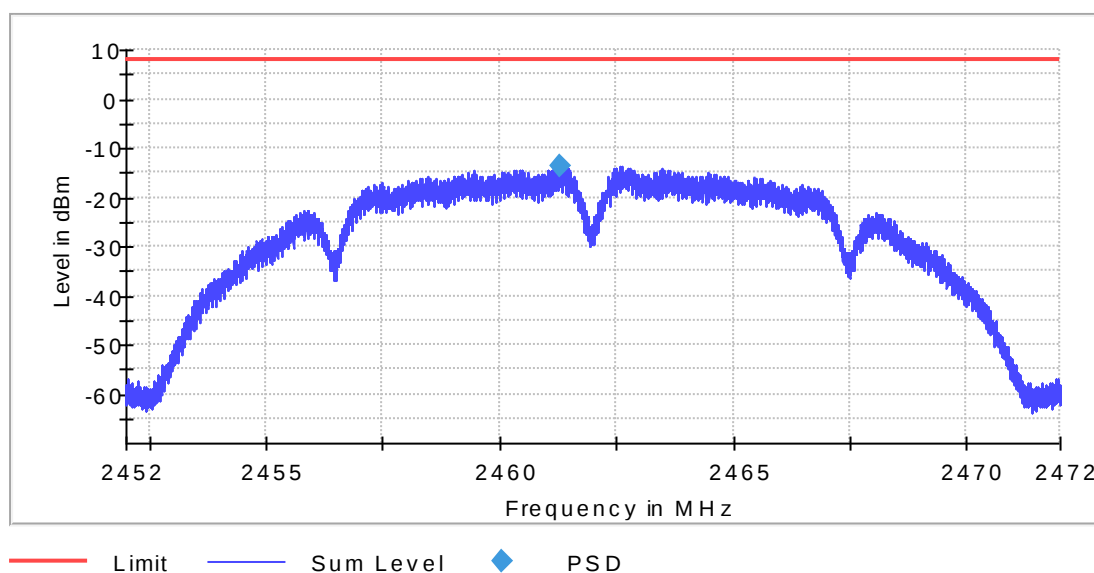
1.3.2. b-Mode |20 MHz| 1Mbit| Highest Channel 11 (2462 MHz)

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	2461.303759	-13.724	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

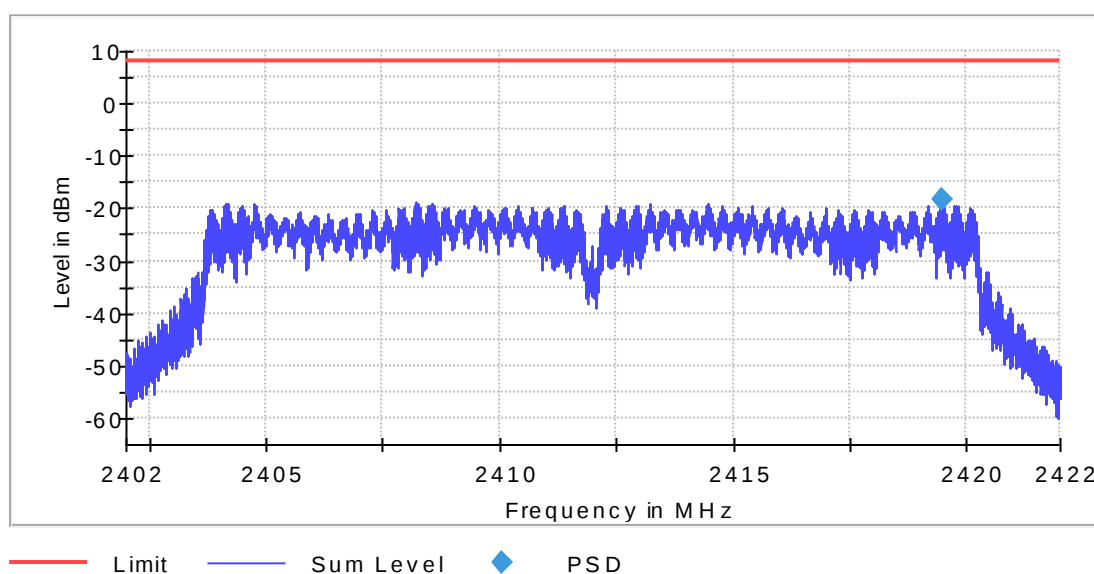
1.3.3. g-Mode |20 MHz| 12Mbit| Lowest Channel 1 (2412 MHz)

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	2419.475188	-18.385	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

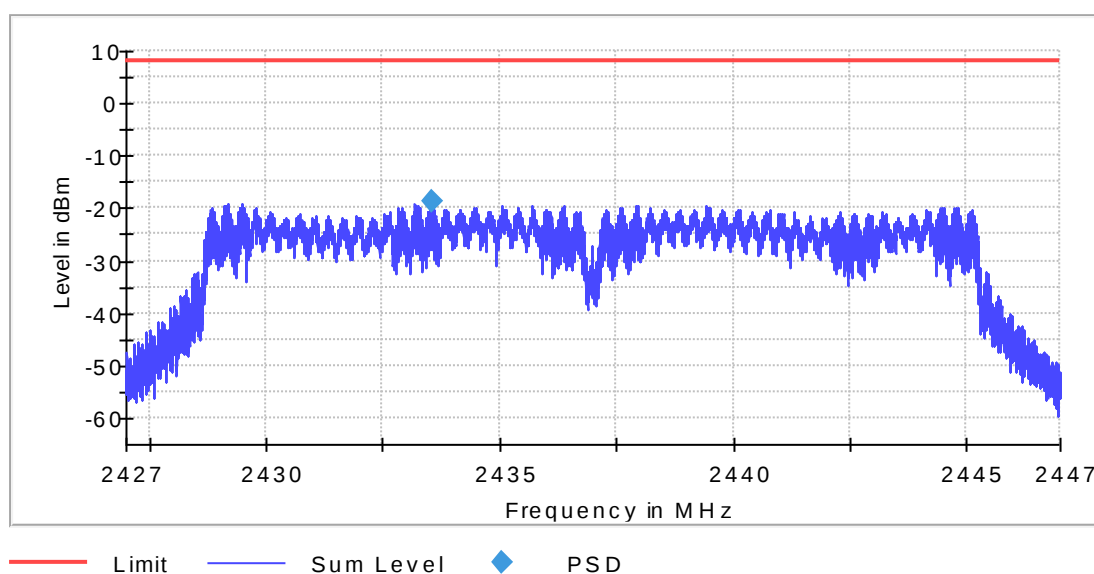
1.3.4. g-Mode |20 MHz| 12Mbit| Middle Channel 6 (2437 MHz)

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	2433.557895	-18.735	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

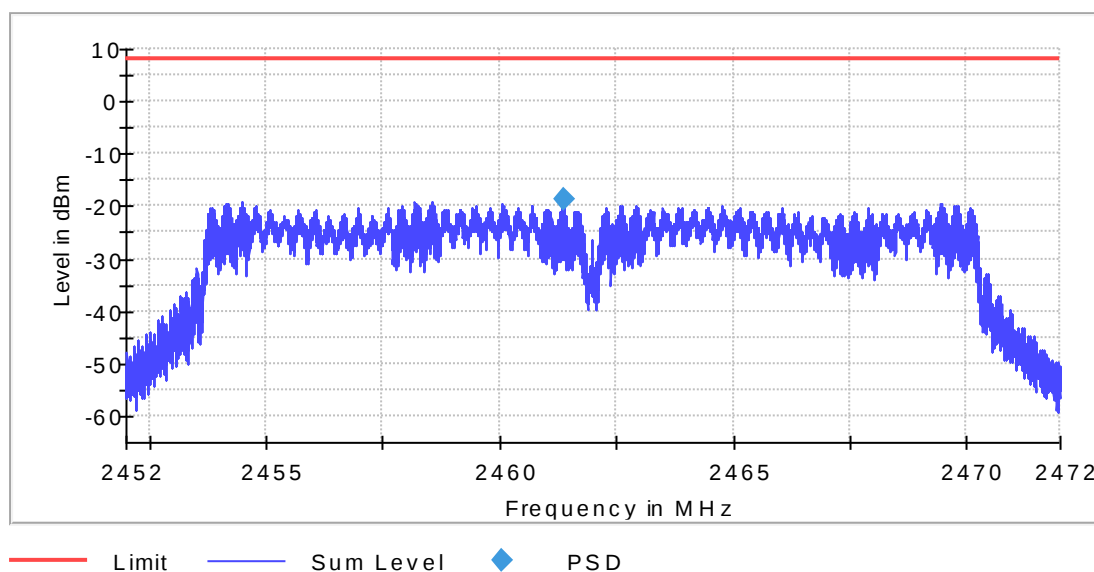
1.3.5. g-Mode |20 MHz| 12Mbit| Highest Channel 11 (2462 MHz)

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	2461.362406	-18.752	8.0	PASS



Measurement

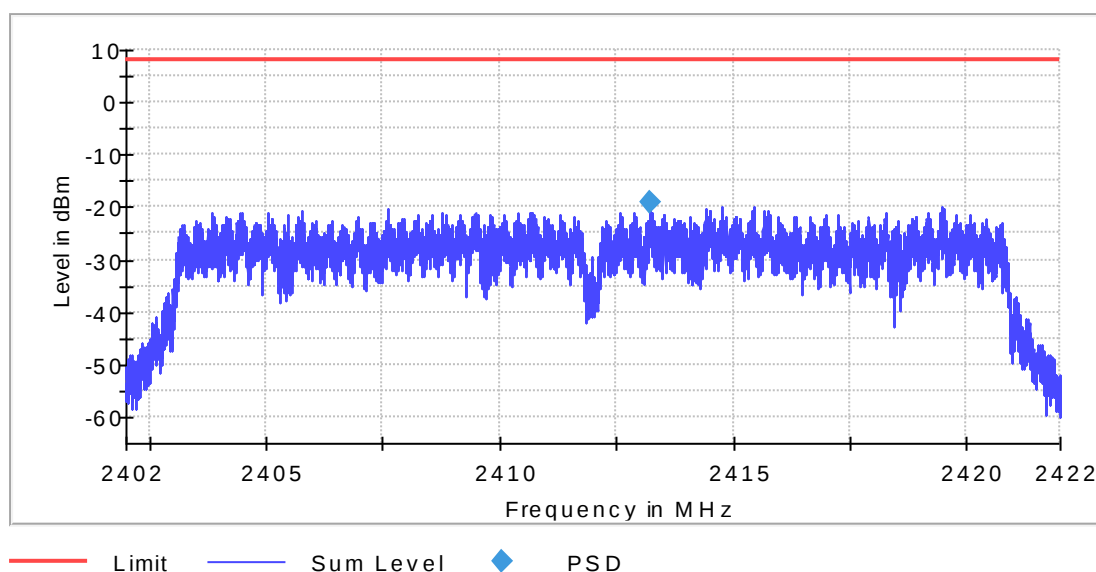
Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

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	2413.228571	-19.009	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

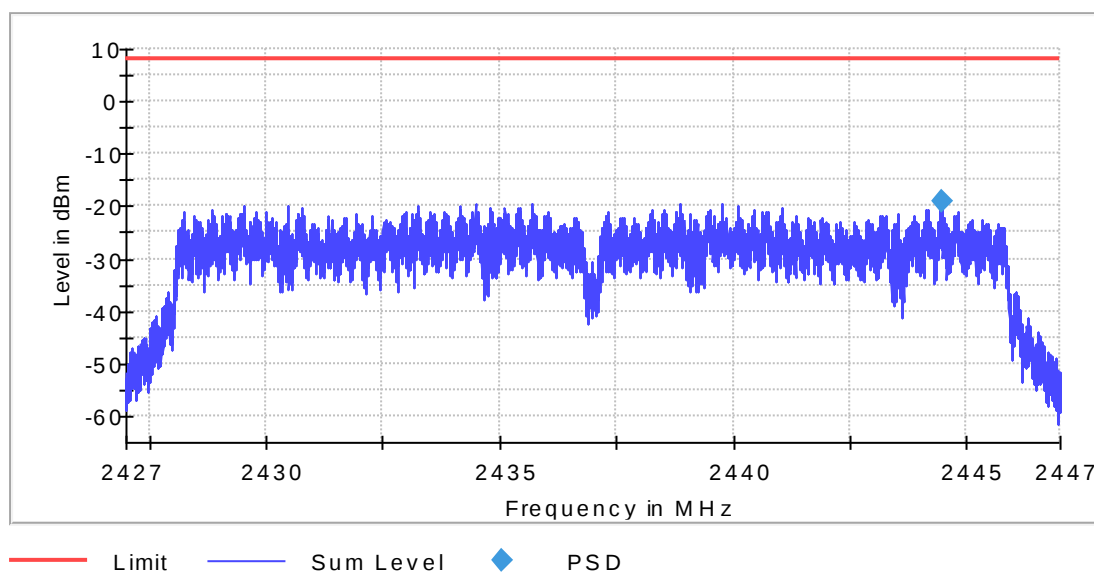
1.3.7. n-Mode [20 MHz] MCS6| Middle Channel 6 (2437 MHz)

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	2444.470677	-18.957	8.0	PASS



Measurement

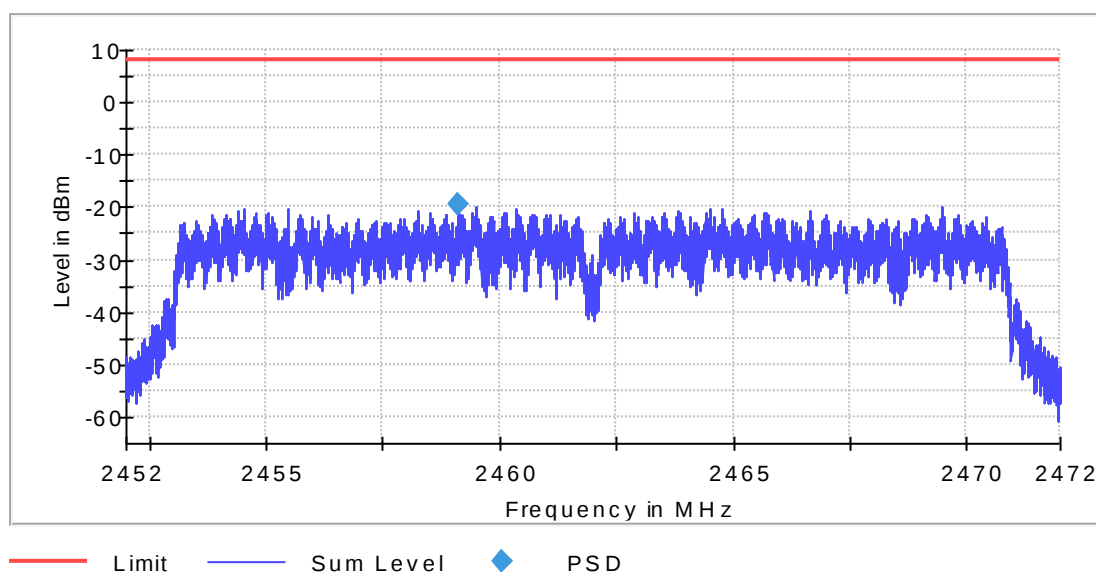
Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off

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	2459.129323	-19.455	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13301	~ 13333
SweepTime	450.000 s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off

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)

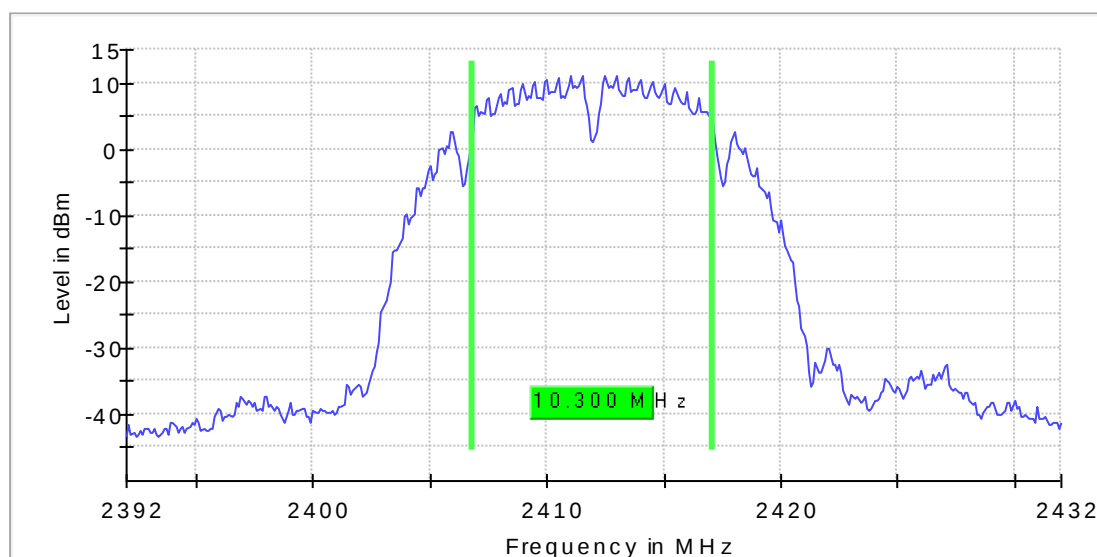
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	11.0

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

DUT Frequency (MHz)	Result
2412.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	24 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.09 dB	0.50 dB

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)

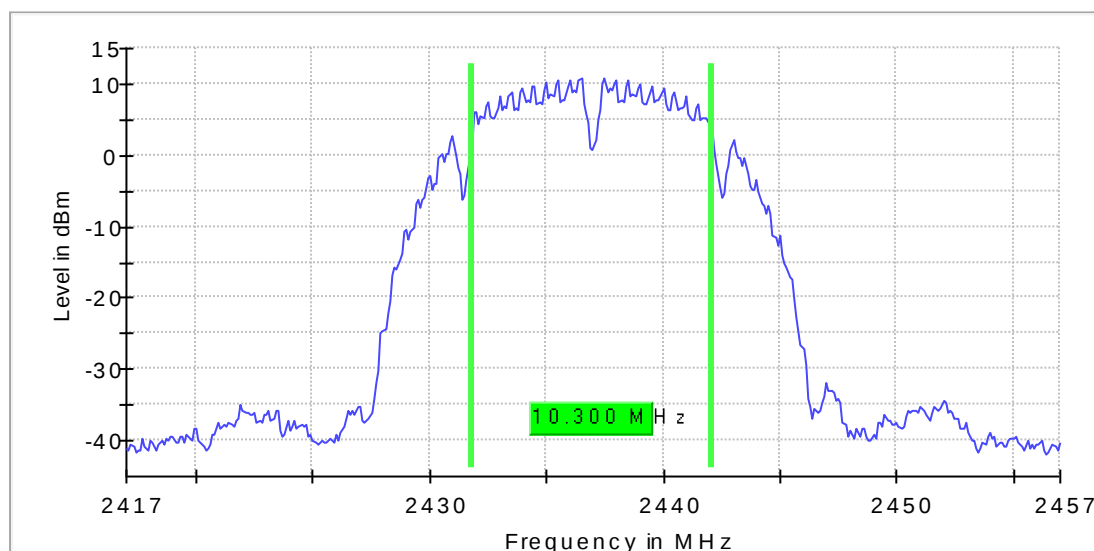
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	10.7

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

DUT Frequency (MHz)	Result
2437.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	23 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.09 dB	0.50 dB

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)

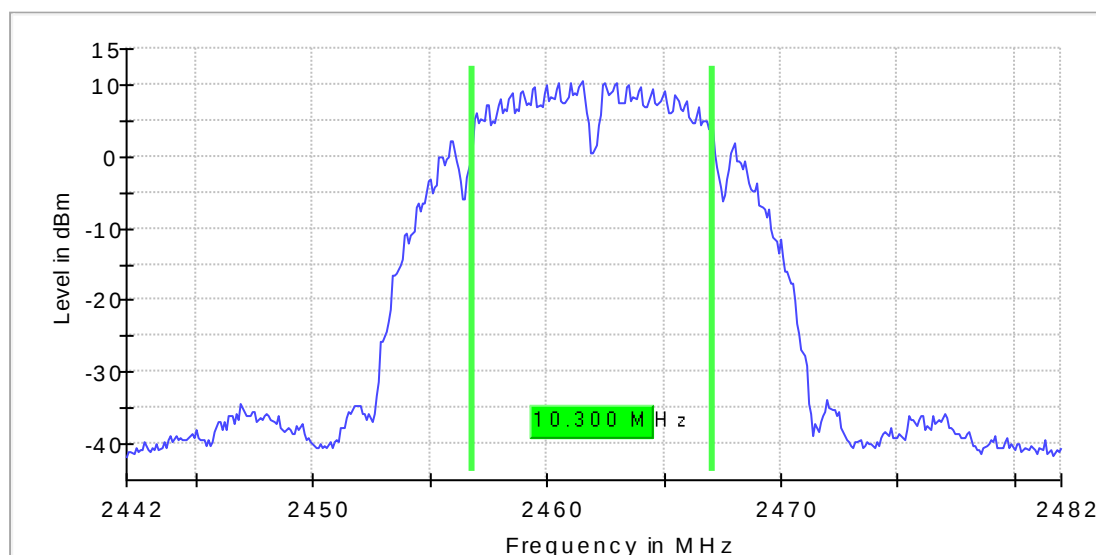
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	10.5

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

DUT Frequency (MHz)	Result
2462.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	23 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.03 dB	0.50 dB

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)

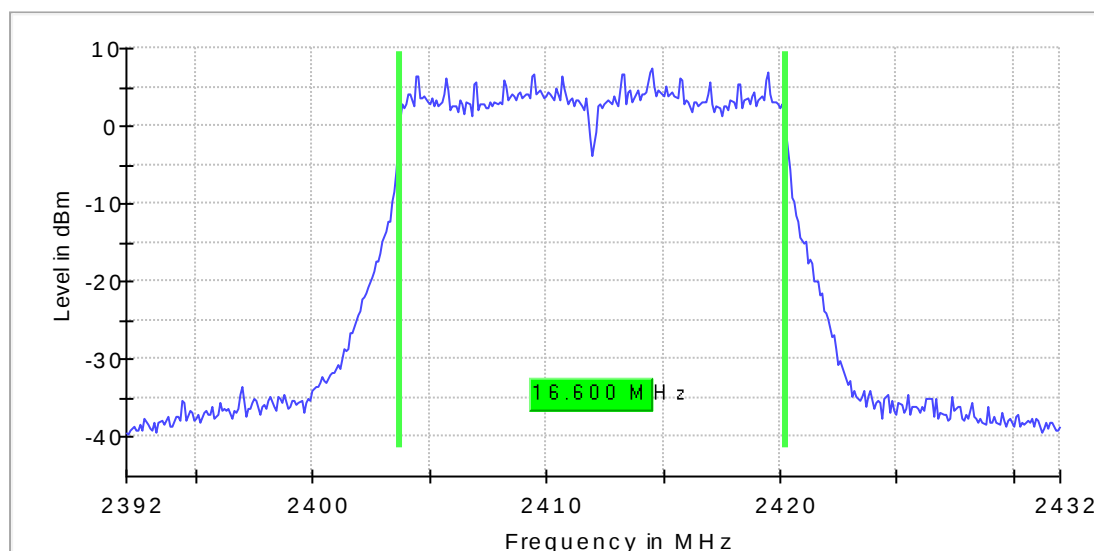
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	7.5

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

DUT Frequency (MHz)	Result
2412.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	41 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.11 dB	0.50 dB

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)

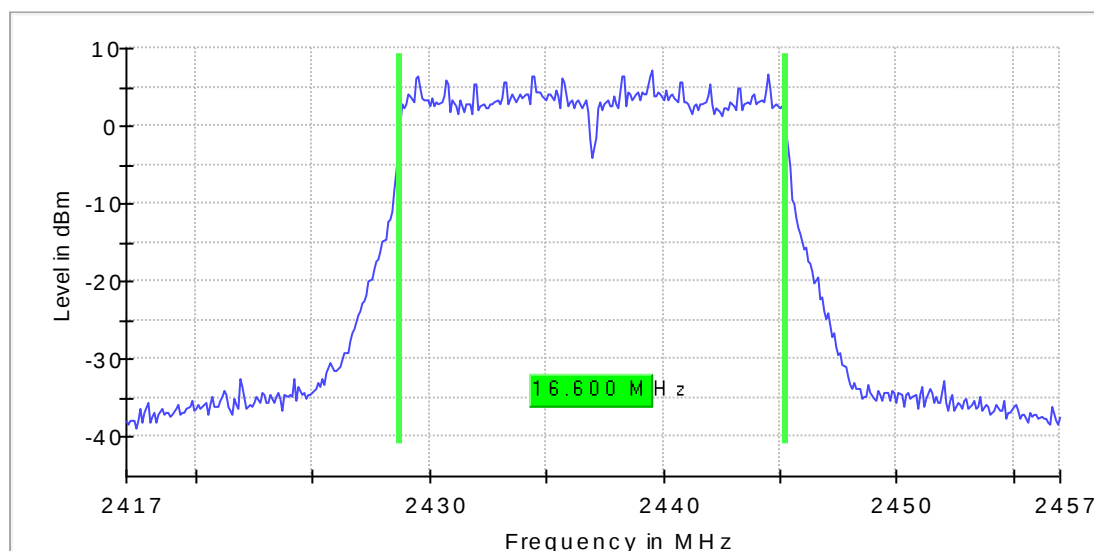
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	7.3

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

DUT Frequency (MHz)	Result
2437.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	68 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.01 dB	0.50 dB

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)

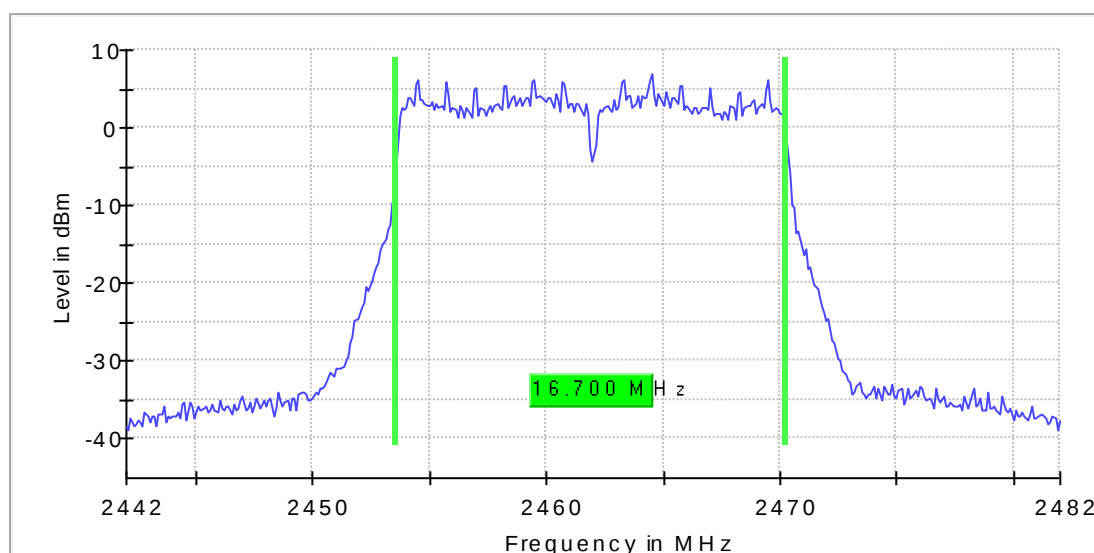
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	16.700000	0.500000	---	2453.600000	2470.300000	6.9

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

DUT Frequency (MHz)	Result
2462.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	45 / max. 150	max. 150
Stable	15 / 15	15
Max Stable Difference	0.11 dB	0.50 dB

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)

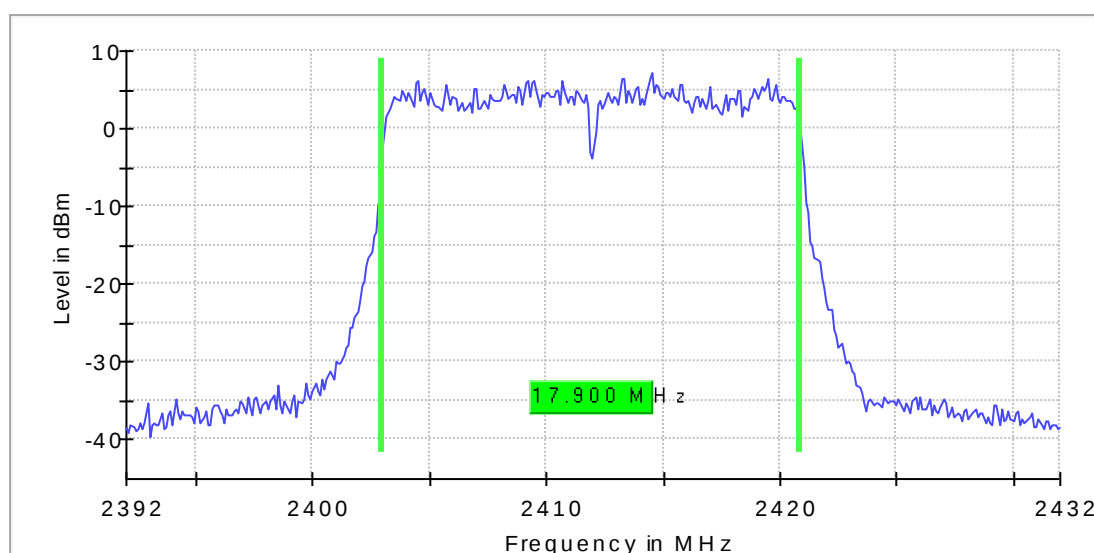
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	7.1

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

DUT Frequency (MHz)	Result
2412.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	150 / max. 150	max. 150
Stable	2 / 15	15
Max Stable Difference	0.00 dB	0.50 dB

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)

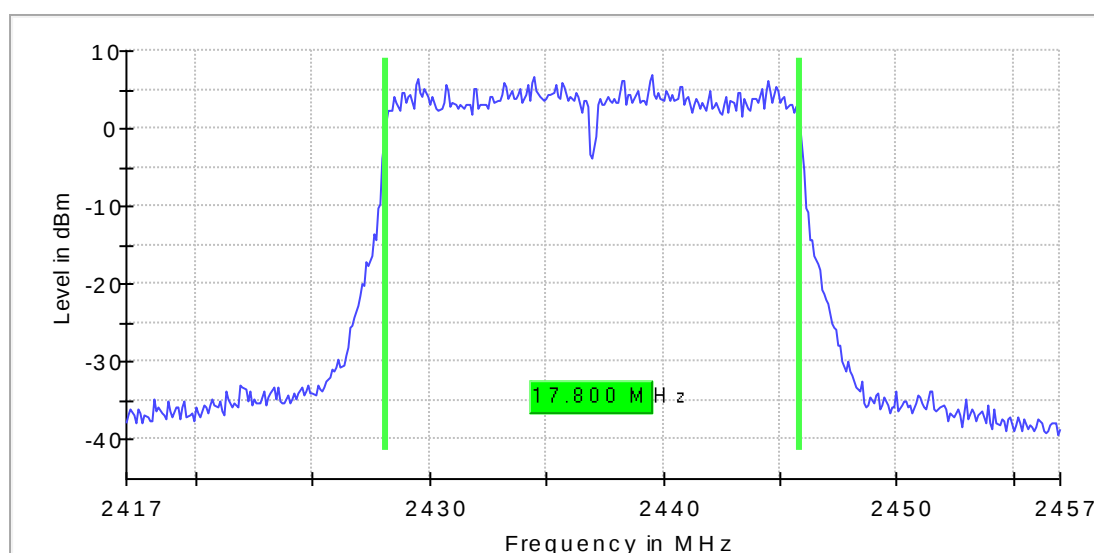
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	17.800000	0.500000	---	2428.100000	2445.900000	6.9

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

DUT Frequency (MHz)	Result
2437.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.41700 GHz	2.41700 GHz
Stop Frequency	2.45700 GHz	2.45700 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	150 / max. 150	max. 150
Stable	1 / 15	15
Max Stable Difference	0.08 dB	0.50 dB

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)

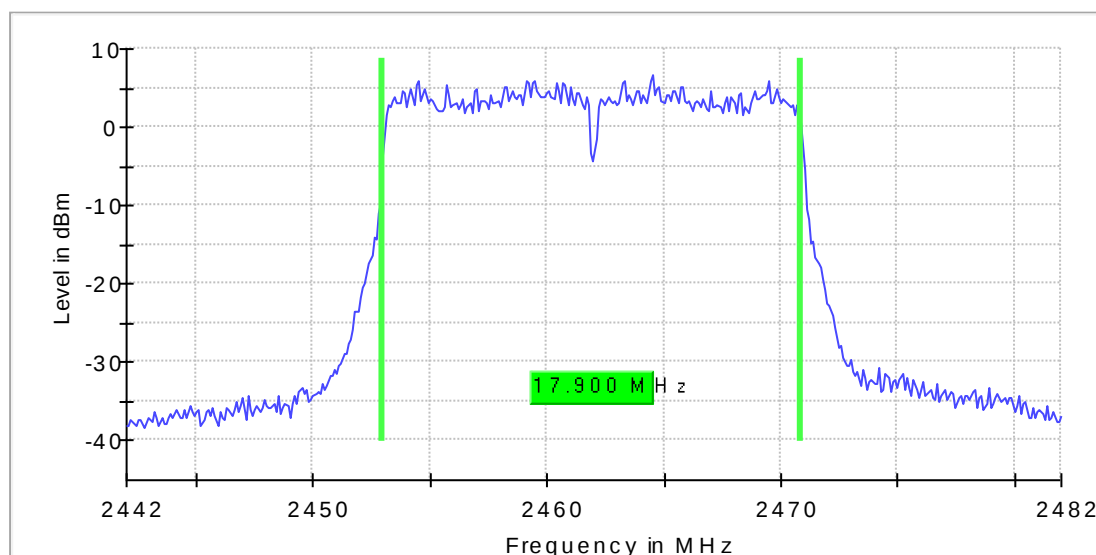
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10

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	6.6

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

DUT Frequency (MHz)	Result
2462.000000	PASS

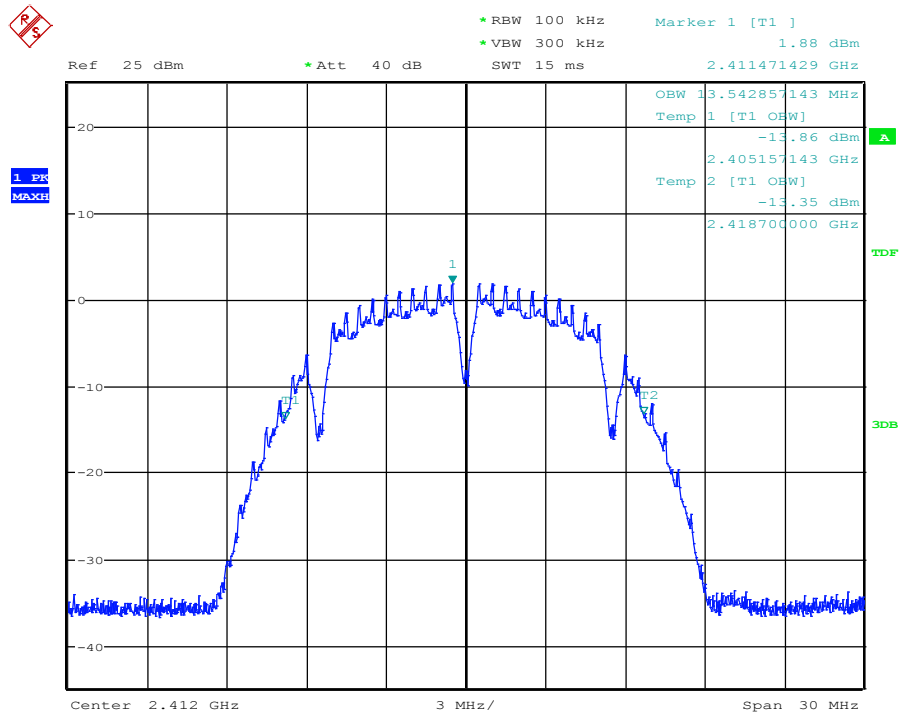


Measurement

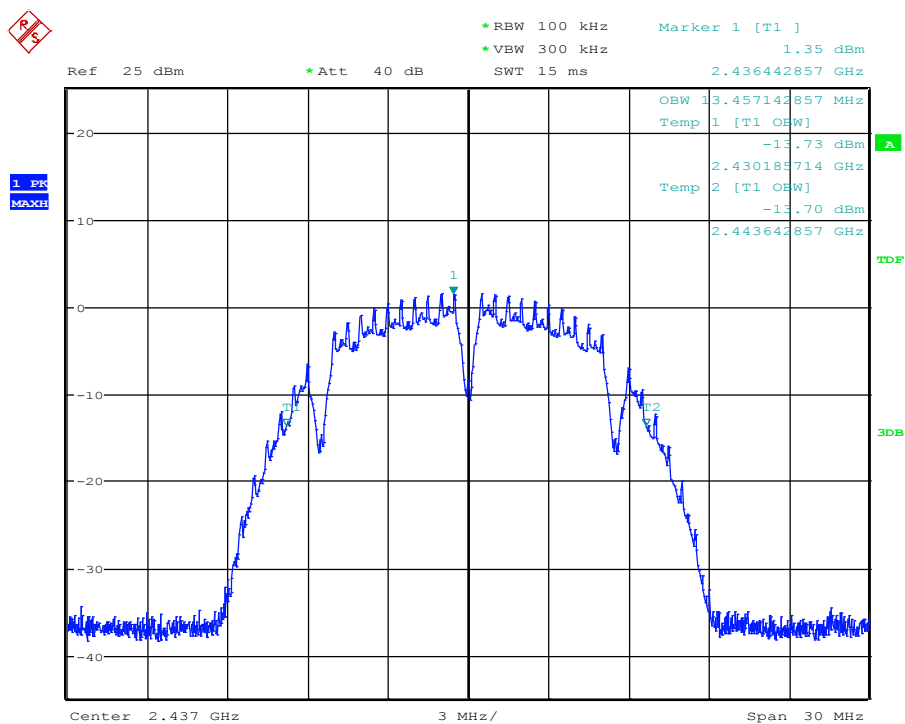
Setting	Instrument Value	Target Value
Start Frequency	2.44200 GHz	2.44200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	401	~ 400
SweepTime	15.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	150 / max. 150	max. 150
Stable	6 / 15	15
Max Stable Difference	0.00 dB	0.50 dB

1.5. 99% Bandwidth Measurements

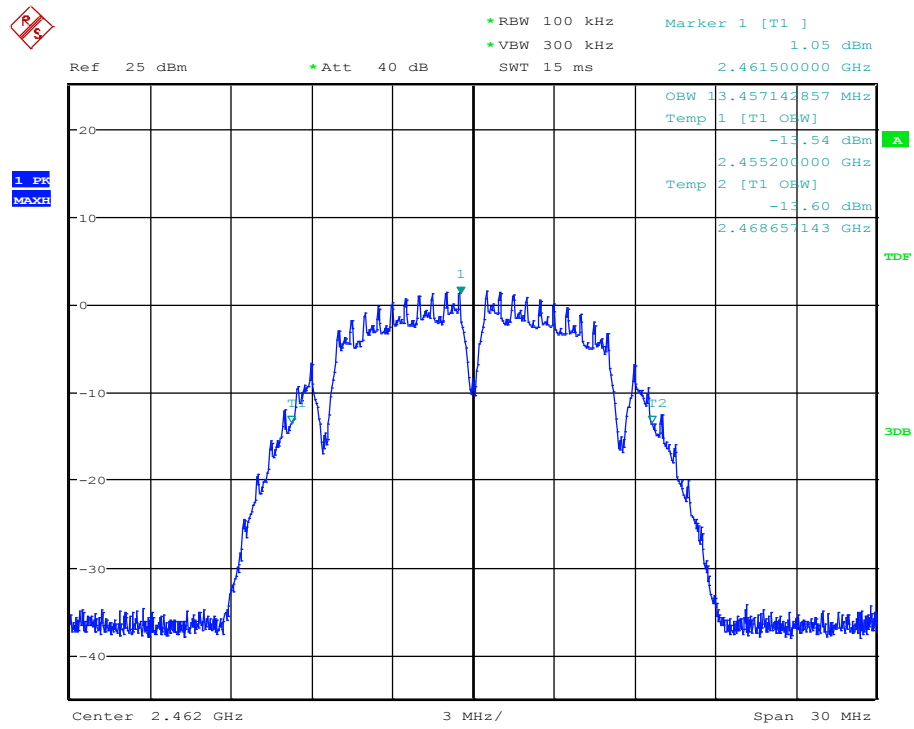
1.5.1. b-Mode



Plot 9: b-mode, channel 1, 1Mbit

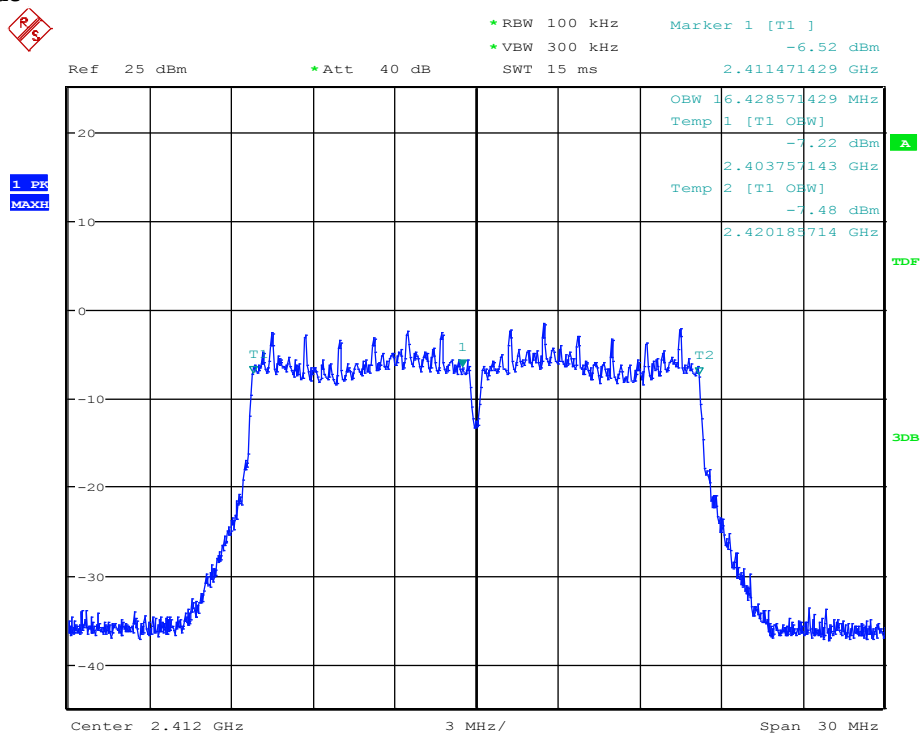


Plot 10: b-mode, channel 6, 1Mbit

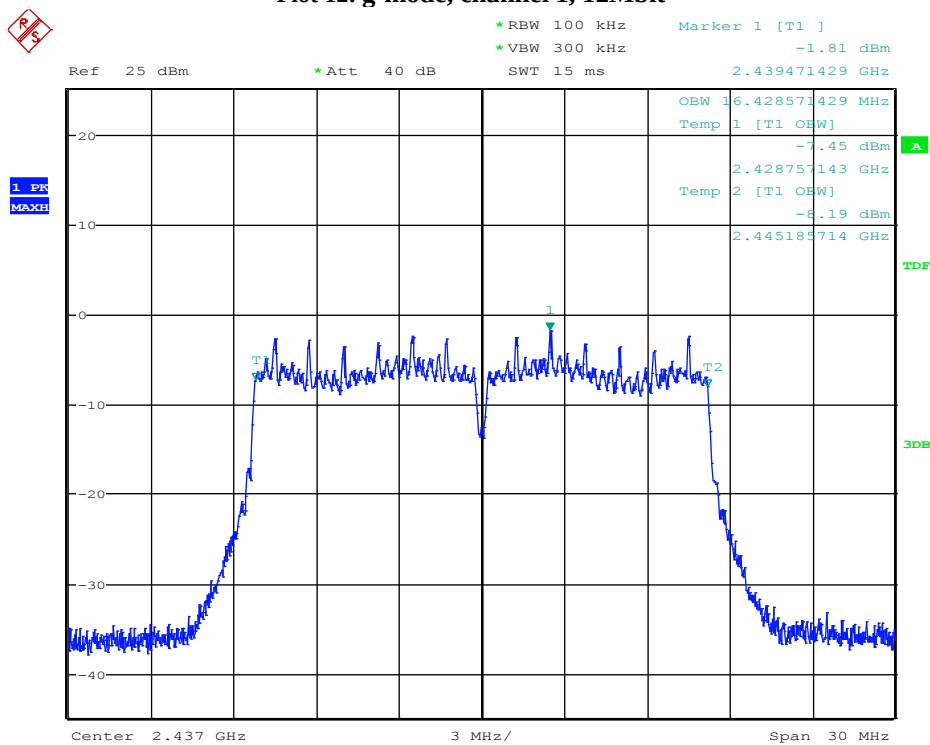


Plot 11: b-mode, channel 11, 1Mbit

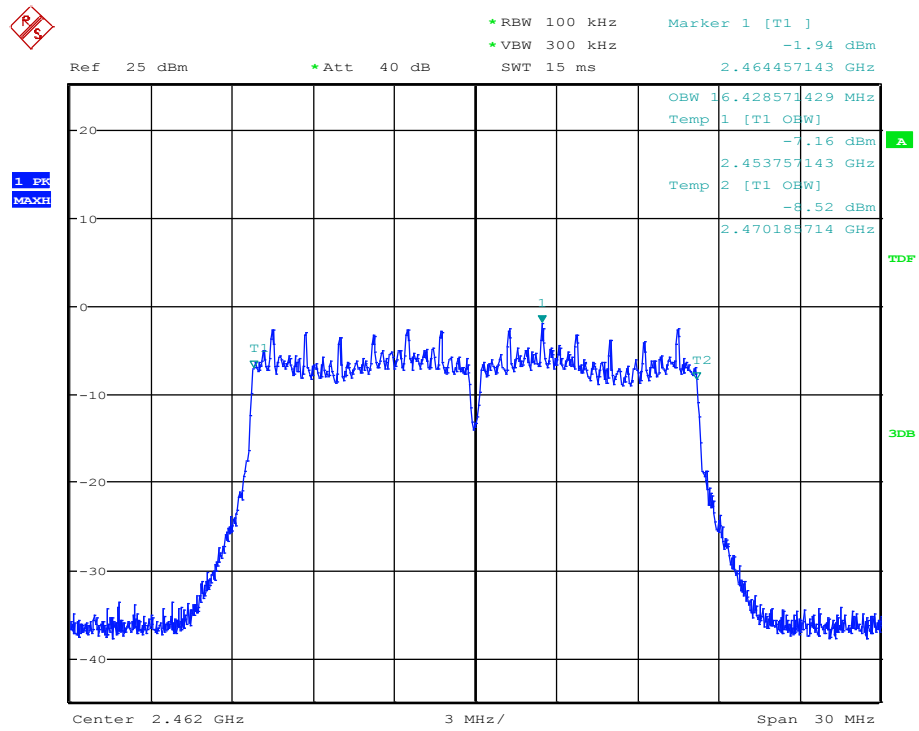
1.5.2. g-Mode



Plot 12: g-mode, channel 1, 12Mbit

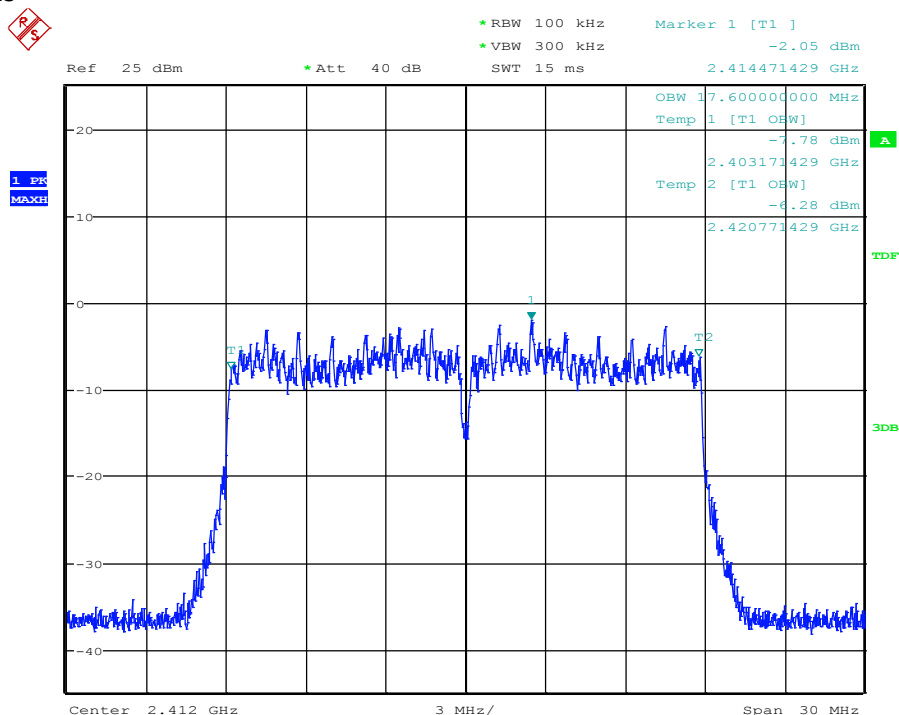


Plot 13: g-mode, channel 6, 12Mbit

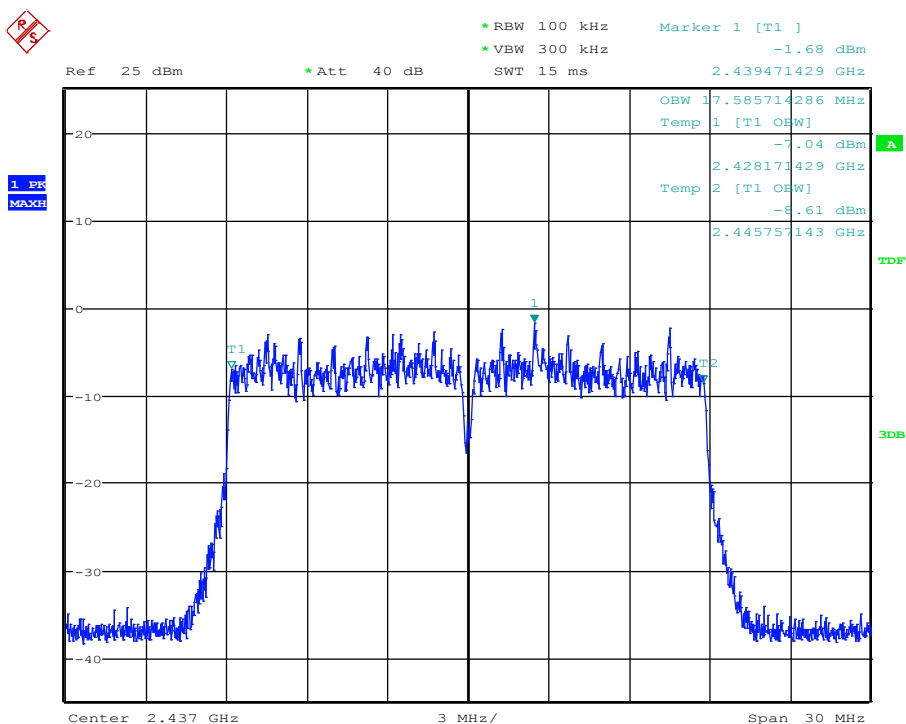


Plot 14: g-mode, channel 12, 12Mbit

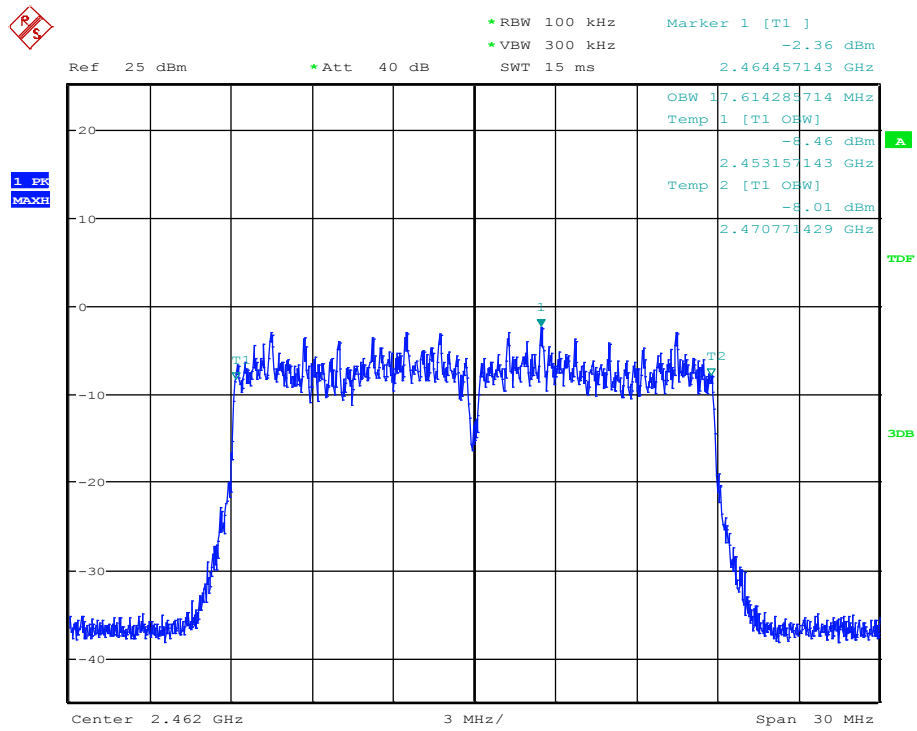
1.5.3. n-Mode



Plot 15: n-mode HT20, channel 1, MCS6



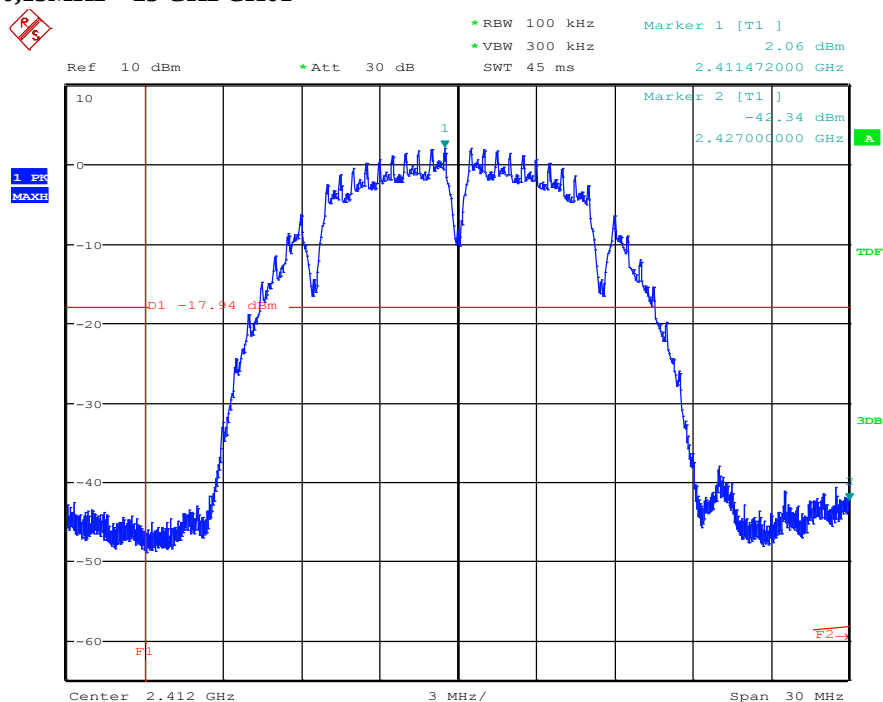
Plot 16: n-mode HT20, channel 6, MCS6



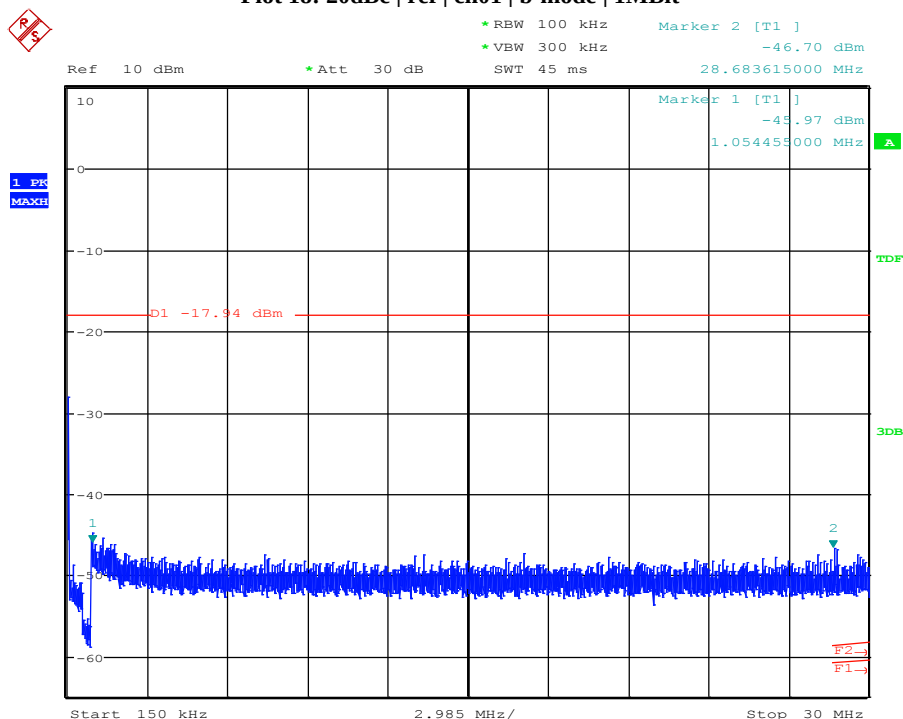
Plot 17: n-mode HT20, channel 11, MCS6

1.6. 20dBc Measurement

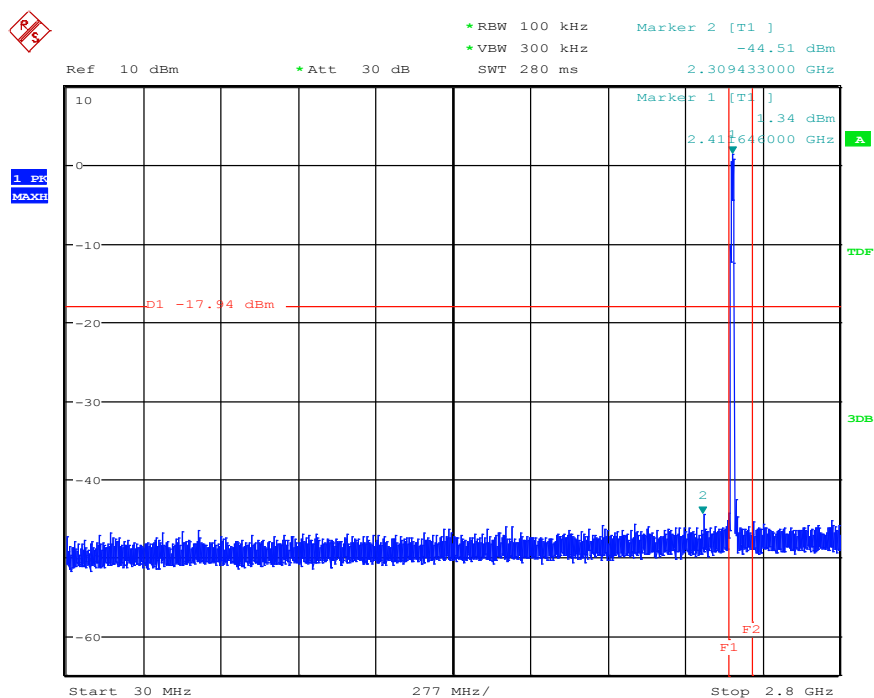
1.6.1. bMode 0,15MHz – 25 GHz CH01



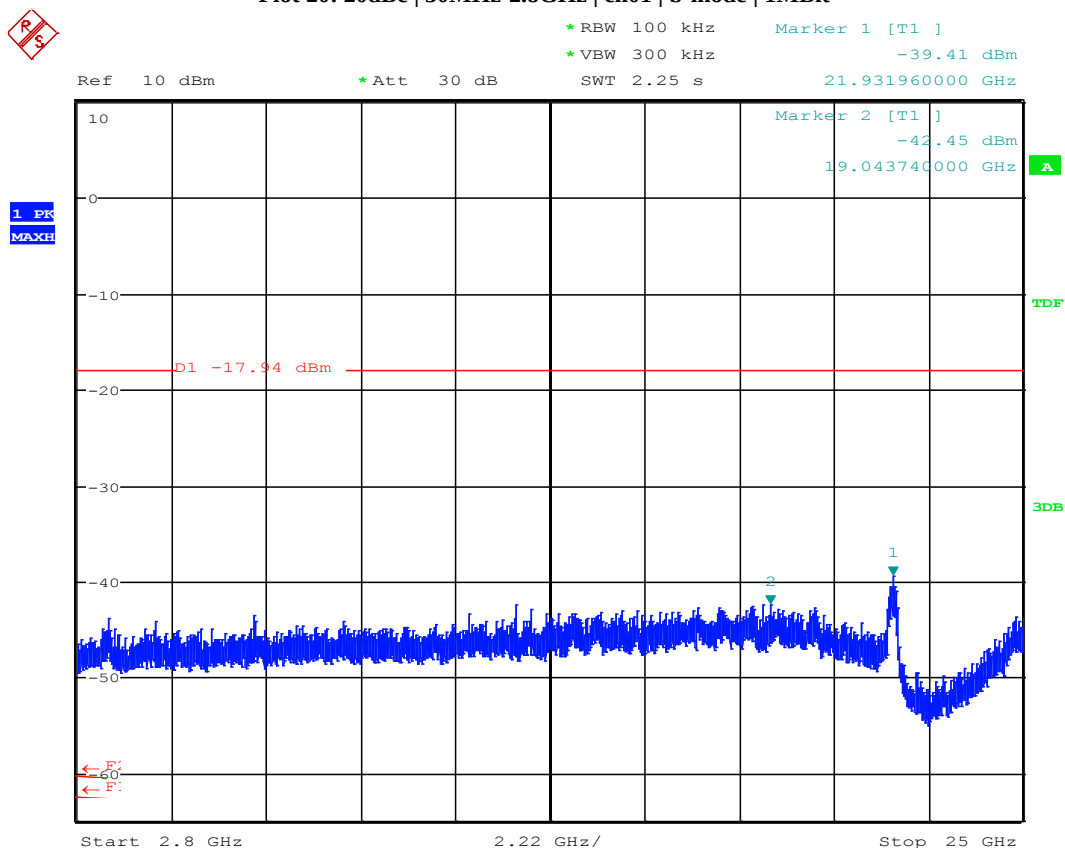
Plot 18: 20dBc | ref | ch01 | b-mode | 1MBit



Plot 19: 20dBc | 0.15-30MHz | ch01 | b-mode | 1MBit

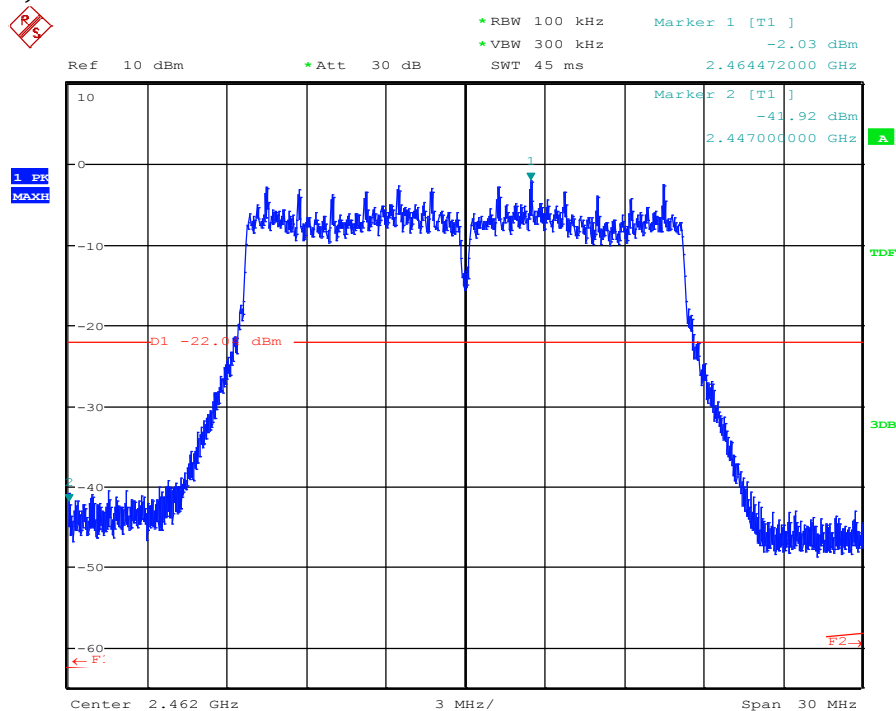


Plot 20: 20dBc | 30MHz-2.8GHz | ch01 | b-mode | 1MBit

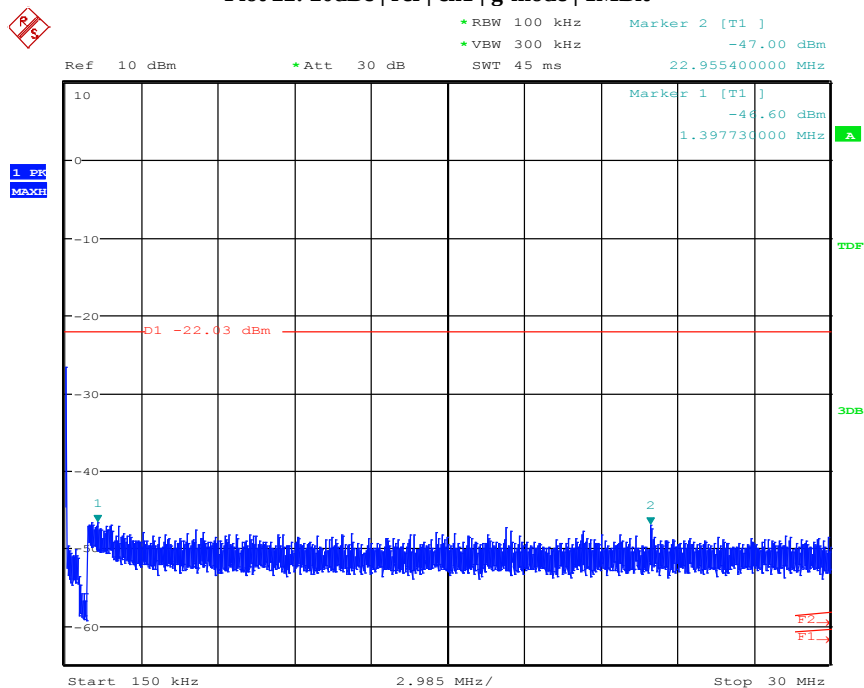


Plot 21: 20dBc | 2.8GHz-25GHz | ch01 | b-mode | 1MBit

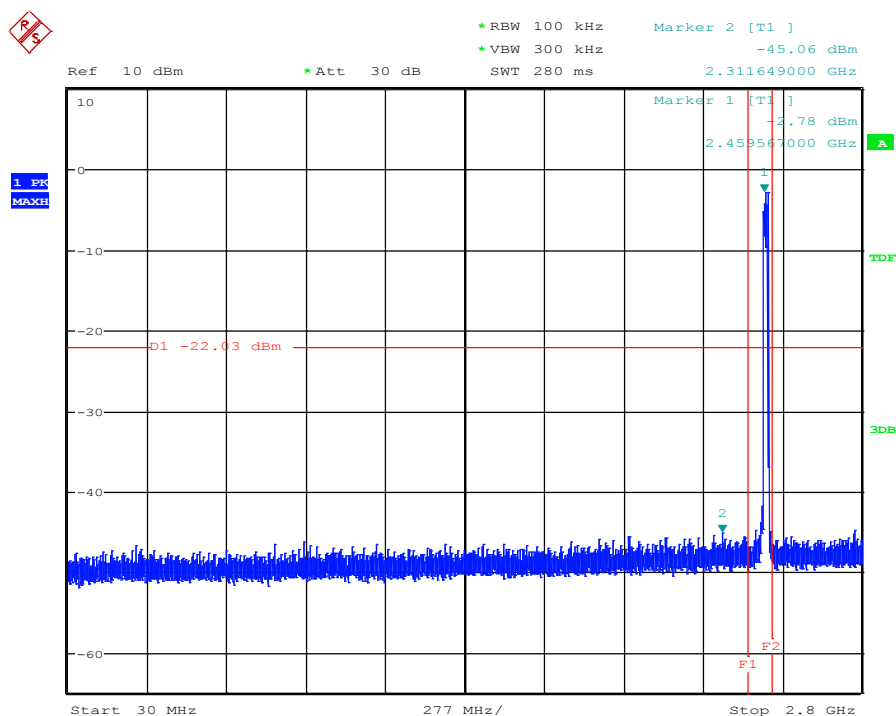
1.6.2. g Mode 0,15MHz – 25GHz CH11



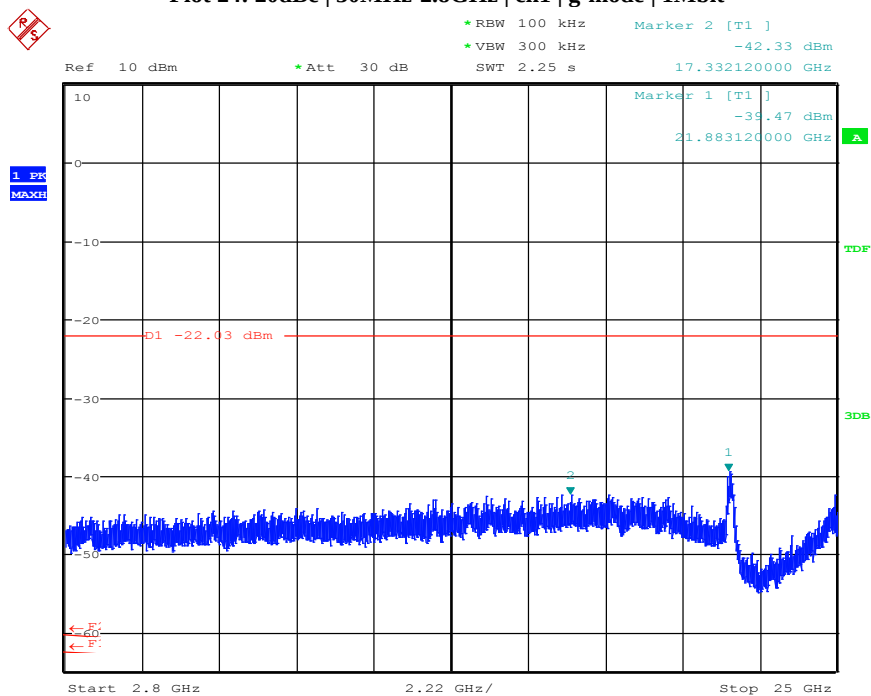
Plot 22: 20dBc | ref | ch1 | g-mode | 1MBit



Plot 23: 20dBc | 0.15-30MHz | ch1 | g-mode | 1MBit

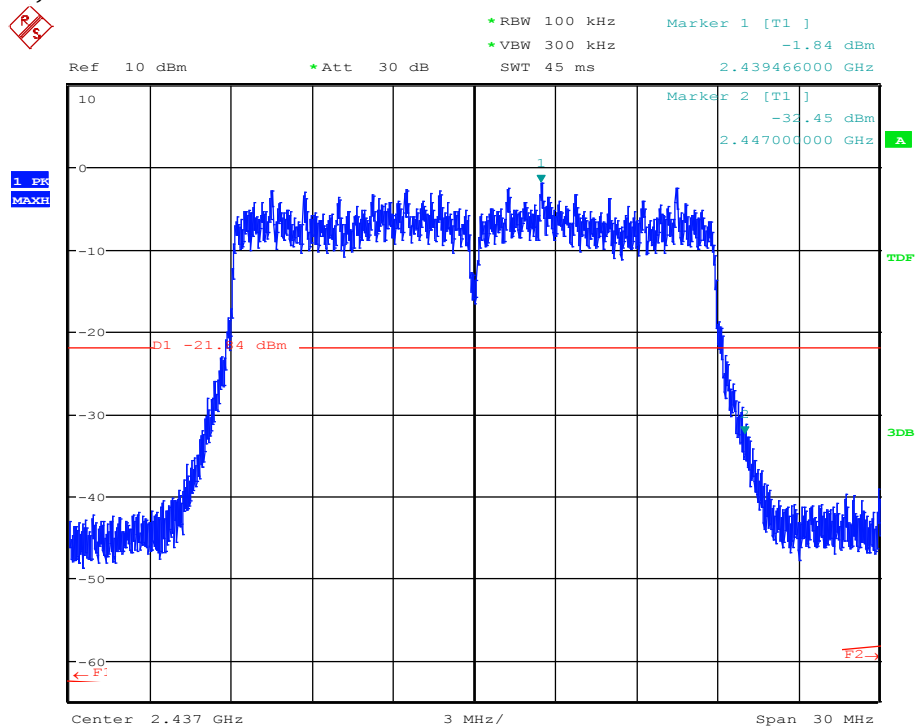


Plot 24: 20dBc | 30MHz-2.8GHz | ch1 | g-mode | 1Mbit

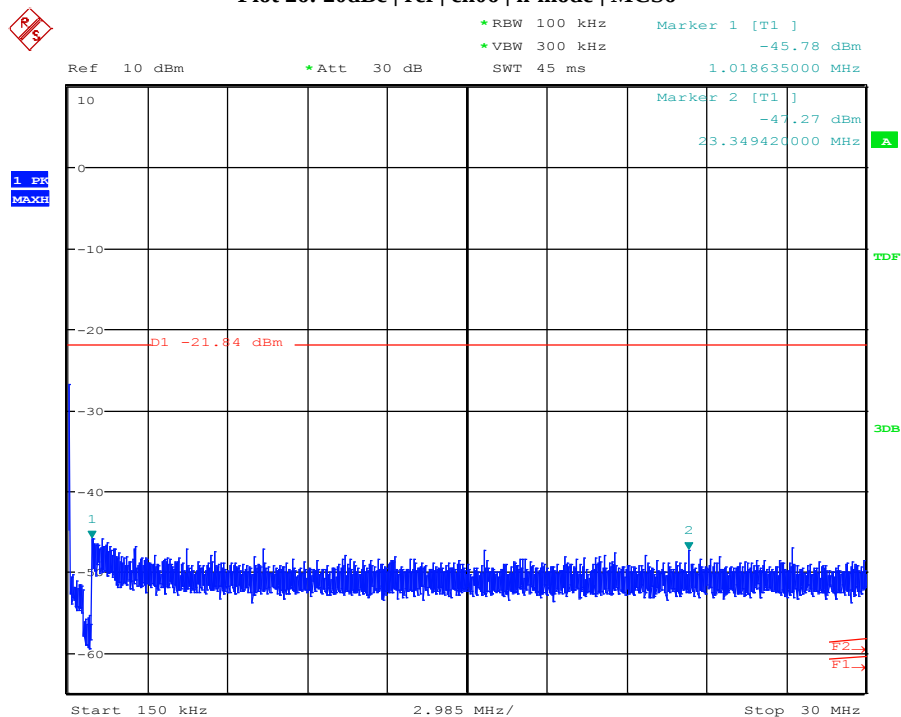


Plot 25: 20dBc | 2.8GHz-25GHz | ch1 | g-mode | 1MBit

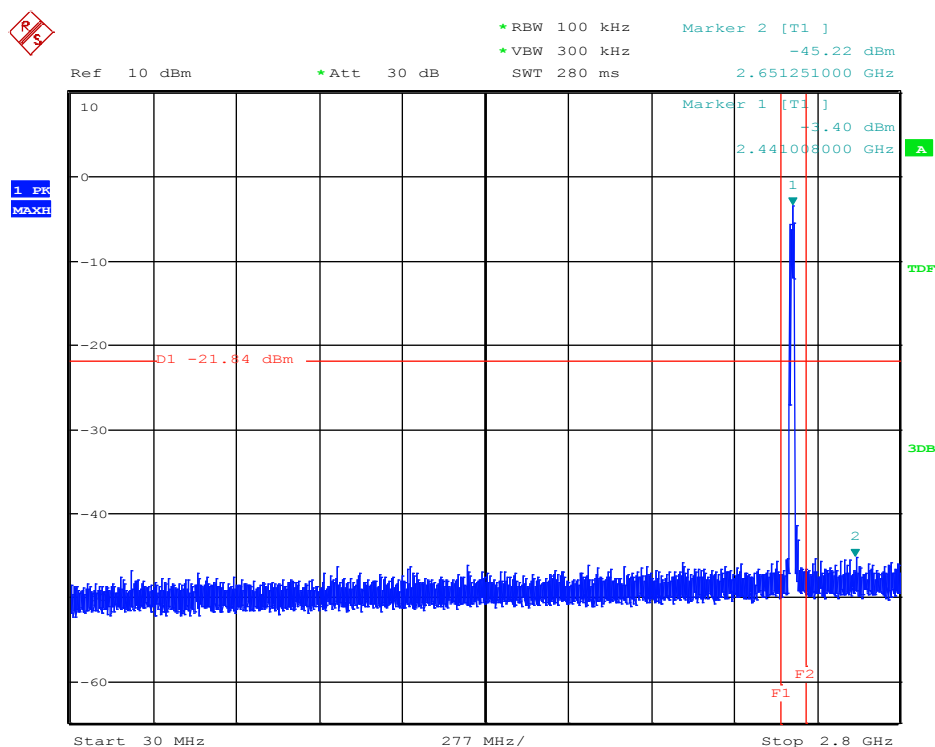
1.6.3. n Mode 0,15MHz – 25 GHz CH06



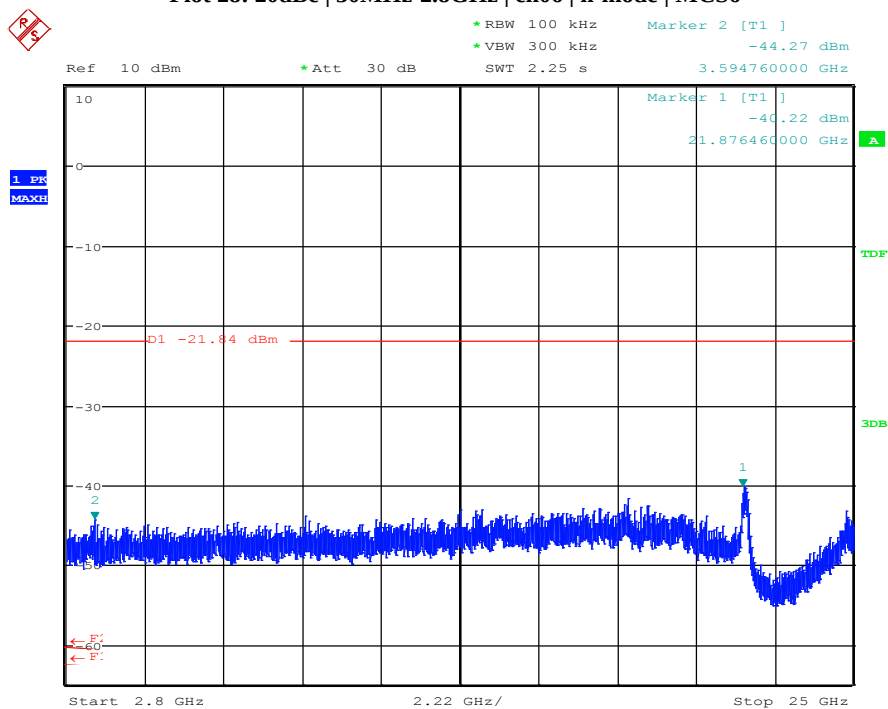
Plot 26: 20dBc | ref | ch06 | n-mode | MCS6



Plot 27: 20dBc | 0.15-30MHz | ch06 | n-mode | MCS6



Plot 28: 20dBc | 30MHz-2.8GHz | ch06 | n-mode | MCS6



Plot 29: 20dBc | 2.8GHz-25GHz | ch06 | n-mode | MCS6

2. Radiated Field Strength Measurements

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

2.01a_WLAN_g mode_12Mbps_Ch11

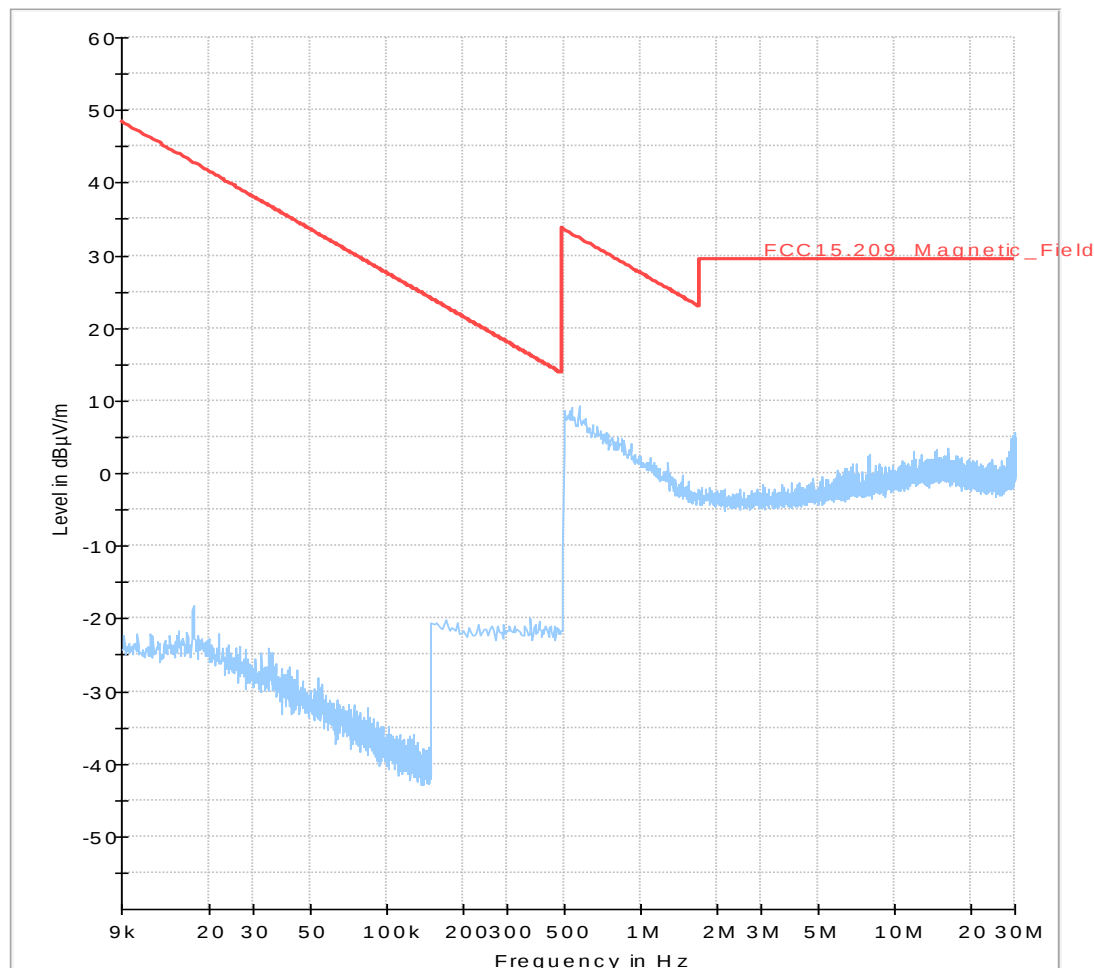
Common Information

Test Description:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Operating Conditions:	SRa
Operator Name:	b 1 Mbit Ch 1 Power level 14
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



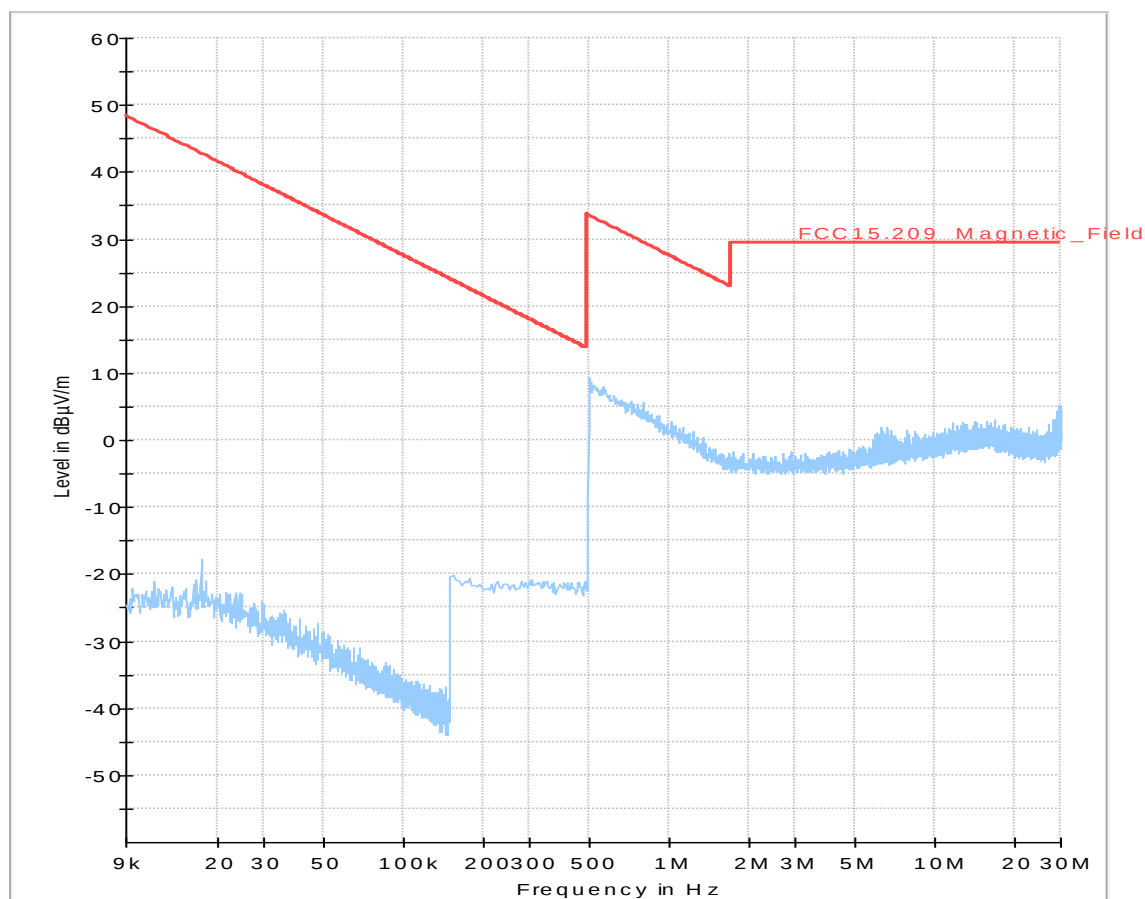
2.02a_WLAN_g mode_12Mbps_Ch11

Common Information

Test Description:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Operating Conditions:	SRa
Operator Name:	G Mode 12 Mbit Ch11 Power level 11
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



2.03a_WLAN_n mode_MCS6_Ch6

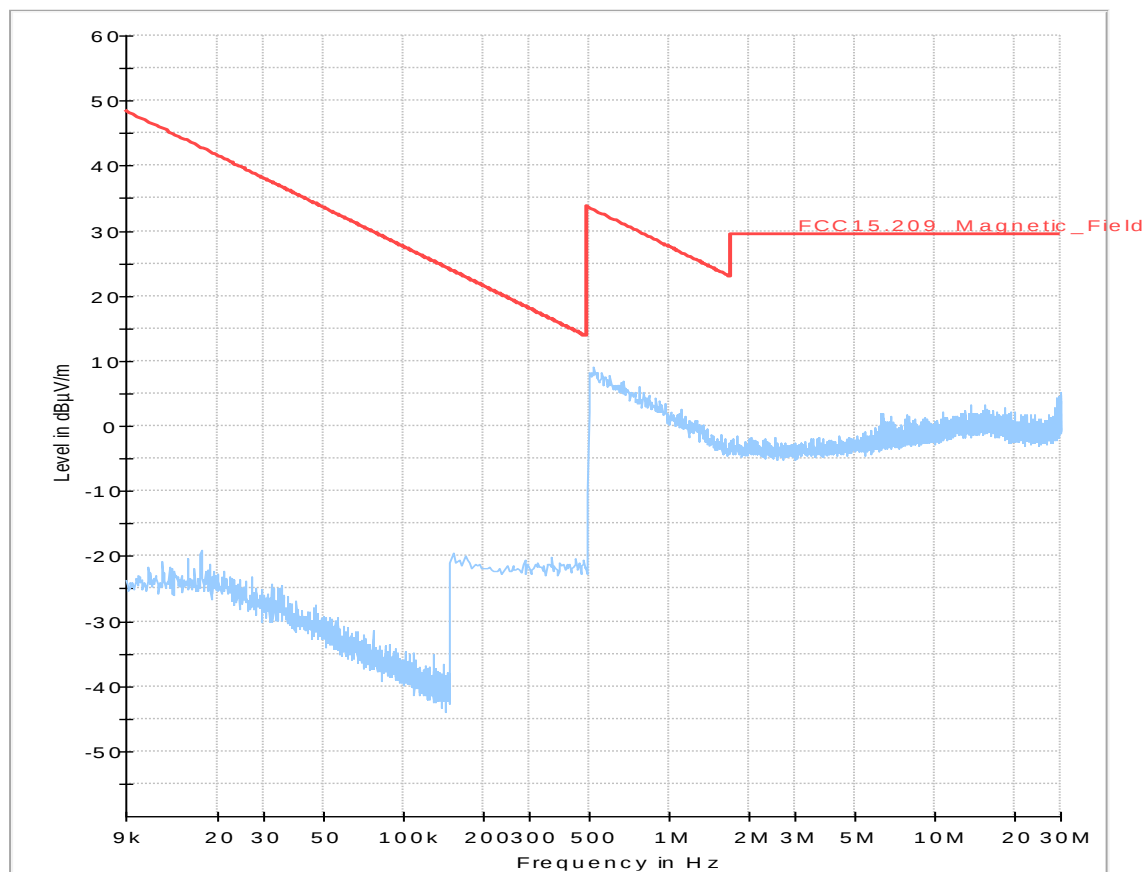
Common Information

Test Description:	
Operating Conditions:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Operator Name:	SRa
Comment:	G Mode MCS6 Mbit Ch6 Power level 11

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



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

Diagram No. 3.01a_WLAN_b mode_1Mbps_Ch1

24.08.2017 Page 1 of 1
 Electric Field Strength Measurement
 Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
 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

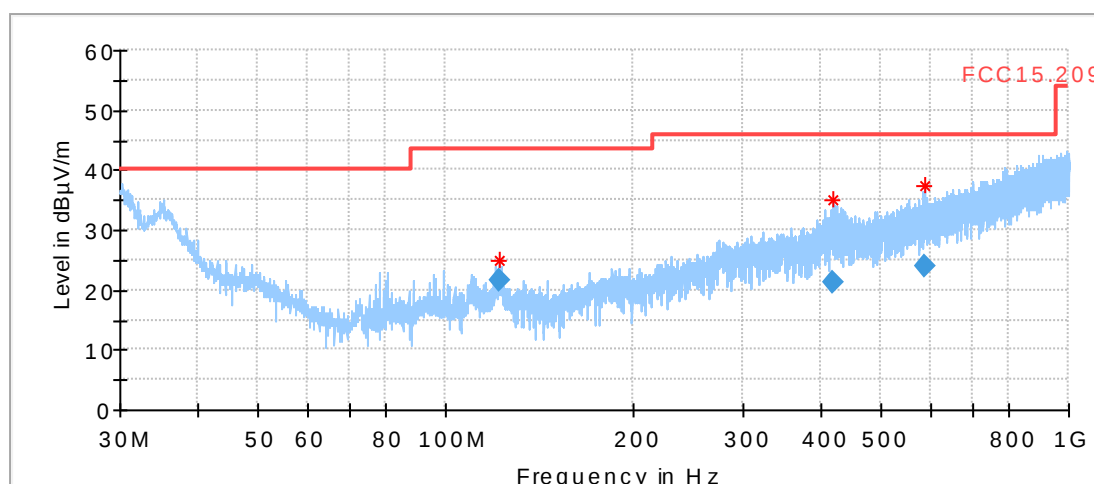
 Operator: DLe
 Operating conditions: WLAN TX
 Power during tests: 12V DC
 Comment 1: b | 1 Mbit | Ch 1 | Power level 14

EUT Information

Manufacturer: Robert Bosch Car Multimedia GmbH
 EuT: ECU cTP _DIN

 HW Version: 6797G04
 SW Version: 16.099.2
 Serial Number: 2830006236
 Connected Interfaces: Main wiring + SFTP 920 151 014
 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)	Elevation (deg)	Corr. (dB)
121.776000	21.72	43.50	21.78	1000.0	120.000	109.0	V	106.0	90.0	8.0
419.092000	21.16	46.00	24.84	1000.0	120.000	360.0	V	192.0	0.0	18.8
587.268000	23.82	46.00	22.18	1000.0	120.000	118.0	H	149.0	90.0	21.9

Diagram No. 3.02a_WLAN_g mode_11Mbps_Ch11

Test description:	24.08.2017 Page 1 of 1
Test site and distance:	Electric Field Strength Measurement
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V9.25.0
Used filter:	not used
Technical Data:	not used
Test specification.:	please see page 2 for detailed data of measurement setup
	FCC 15.209; RSS-Gen: Issue 3
Operator:	DLe
Operating conditions:	WLAN TX
Power during tests:	12V DC
Comment 1:	g 11 Mbit Ch 11 Power level 11

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

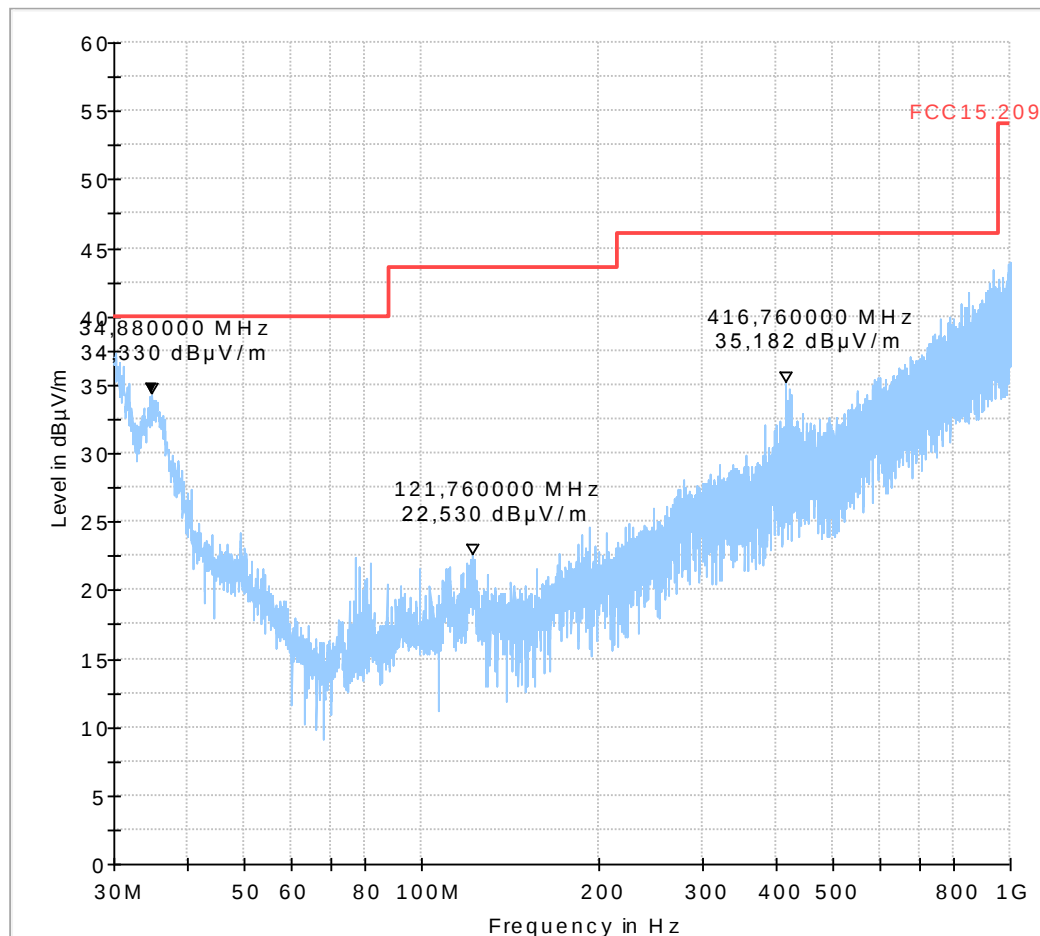


Diagram No. 3.03a_WLAN_n mode_MCS6_Ch6

25.08.2017 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 15.209; RSS-Gen: Issue 3

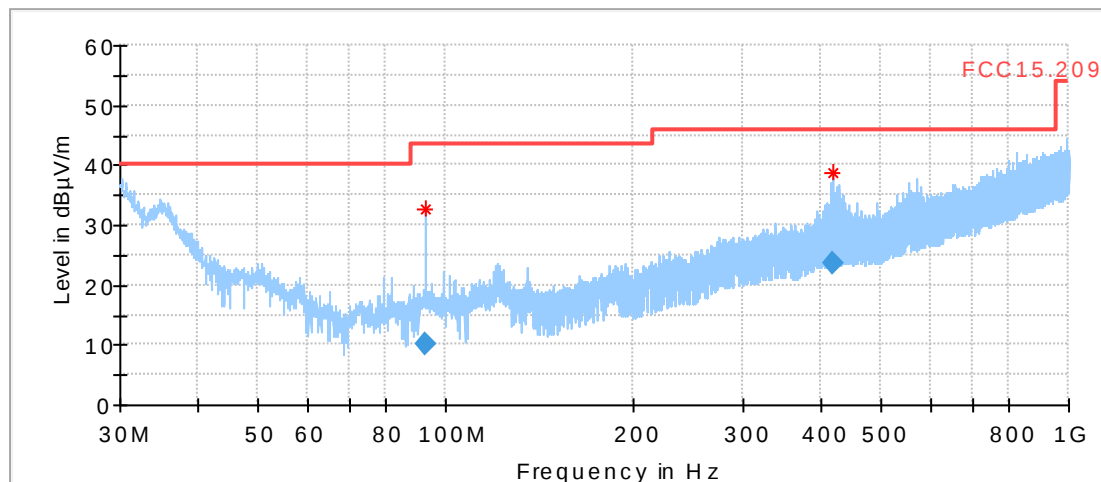
 Operator: Sra
 Operating conditions: WLAN TX
 Power during tests: 12V DC
 Comment 1: n(HT20) | MCS6 | Ch 6 | Power level 11

EUT Information

Manufacturer: Robert Bosch Car Multimedia GmbH
 EuT: ECU cTP_DIN

 HW Version: 6797G04
 SW Version: 16.099.2
 Serial Number: 2830006236
 Connected Interfaces: Main wiring + SFTP 920 151 014
 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)	Elevation (deg)	Corr. (dB)
92.912000	10.06	43.50	33.44	1000.0	120.000	249.0	V	140.0	90.0	8.3
419.176000	23.52	46.00	22.48	1000.0	120.000	360.0	V	183.0	0.0	18.8

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

Diagram No.: 4.01a_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:	TX, continuous
Operator Name:	DLe
Comment:	Ch_0
Comment2:	Modulation Type: 0Data Rate: 1Mbit

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

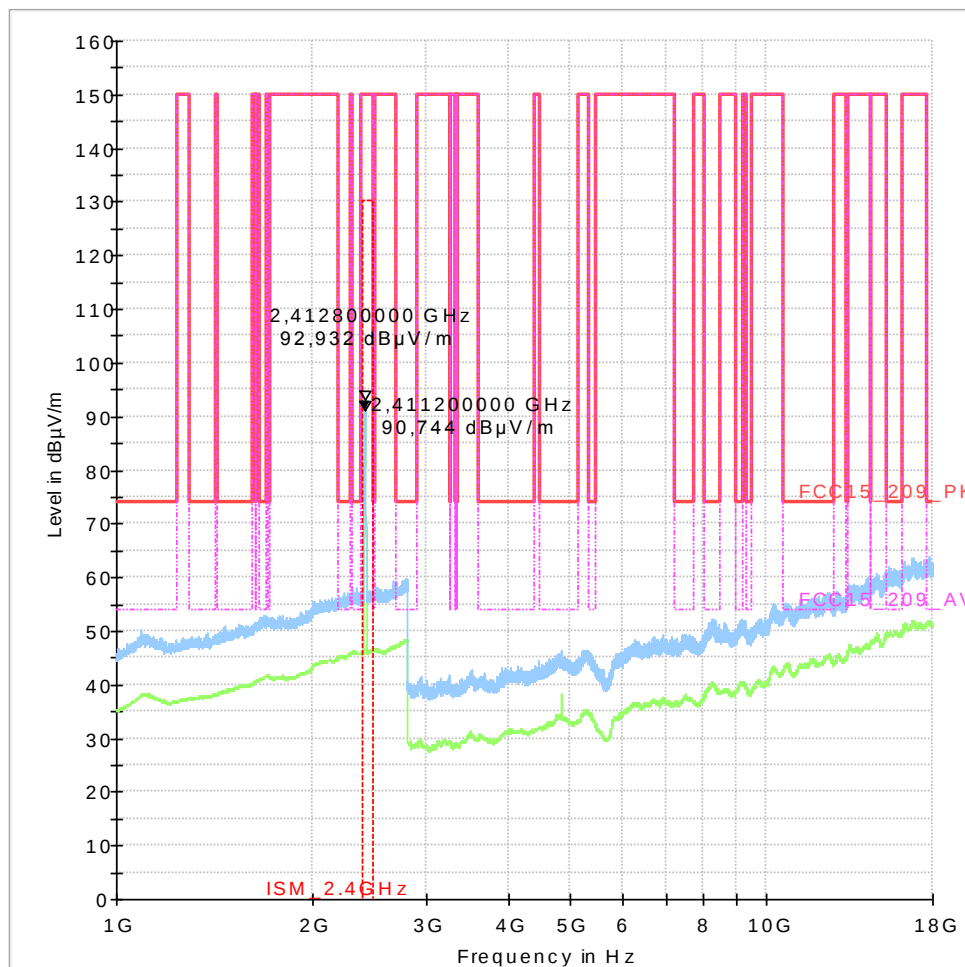


Diagram No.: 4.02a_WLAN_g mode_12Mbps_Ch11_Retest

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 11 Power level 11
Operator Name:	RI
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

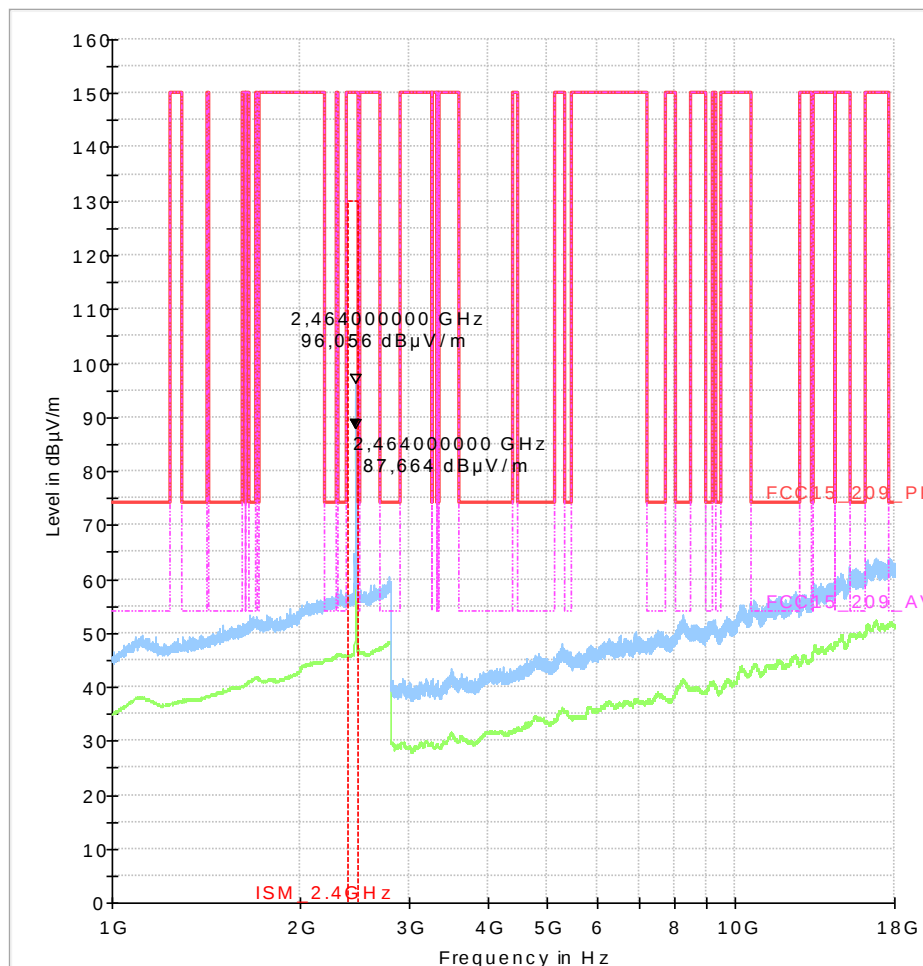


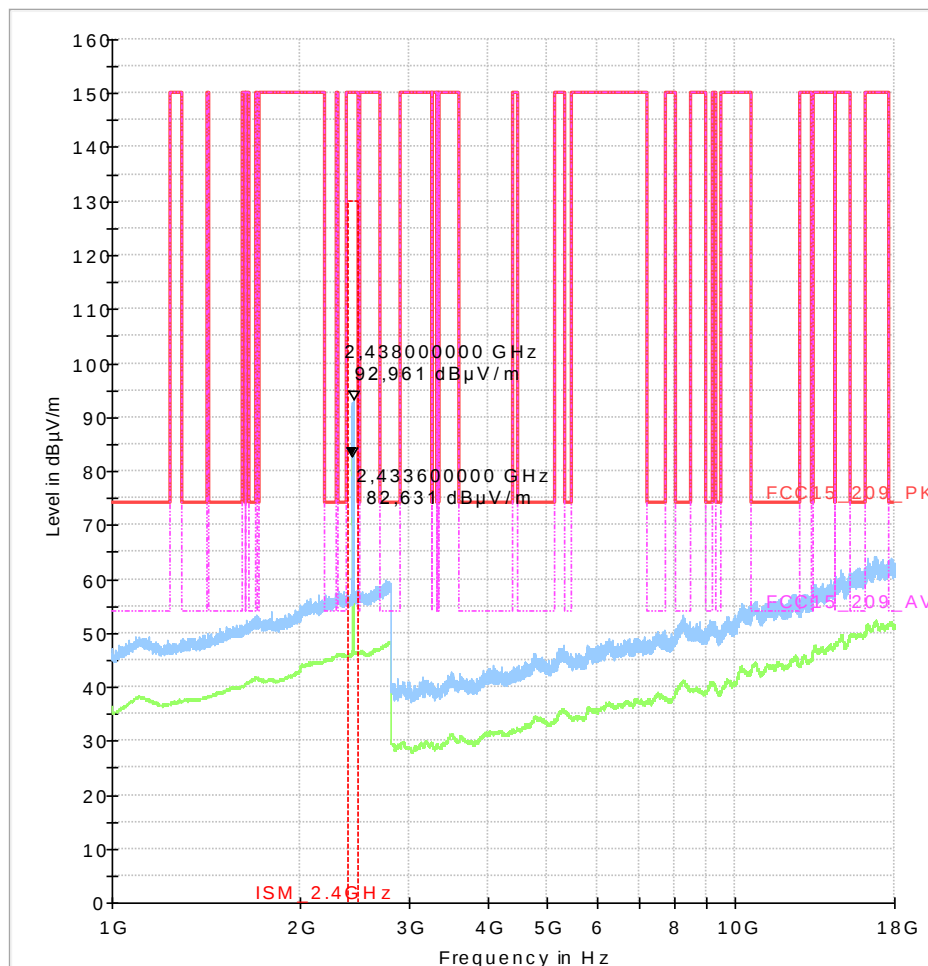
Diagram No.: 4.03a_WLAN_n mode_MCS6_Ch6

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 6 Power level 11
Operator Name:	HEI

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



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

4.01b_Diagram No.: WLAN-1MBIT-CH1

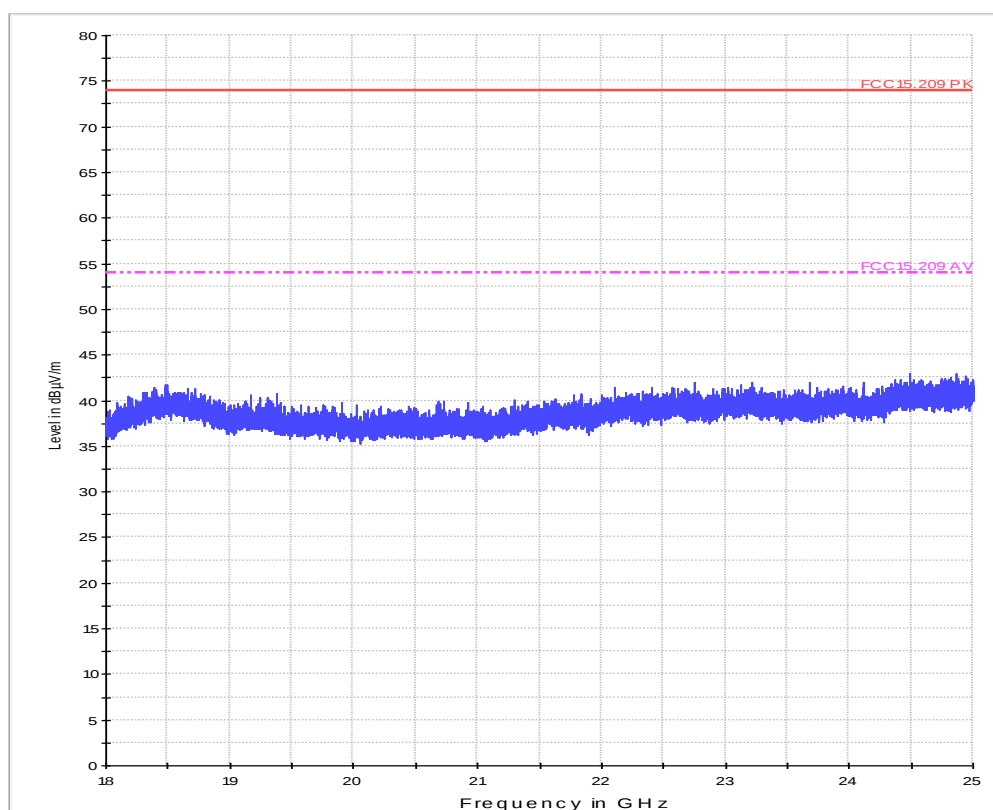
Common Information

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:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
-----	-----
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

FCC_Sweep_15.247_18_25GHz_Pre



4.02b_Diagram No.: WLAN-12MBIT-CH11

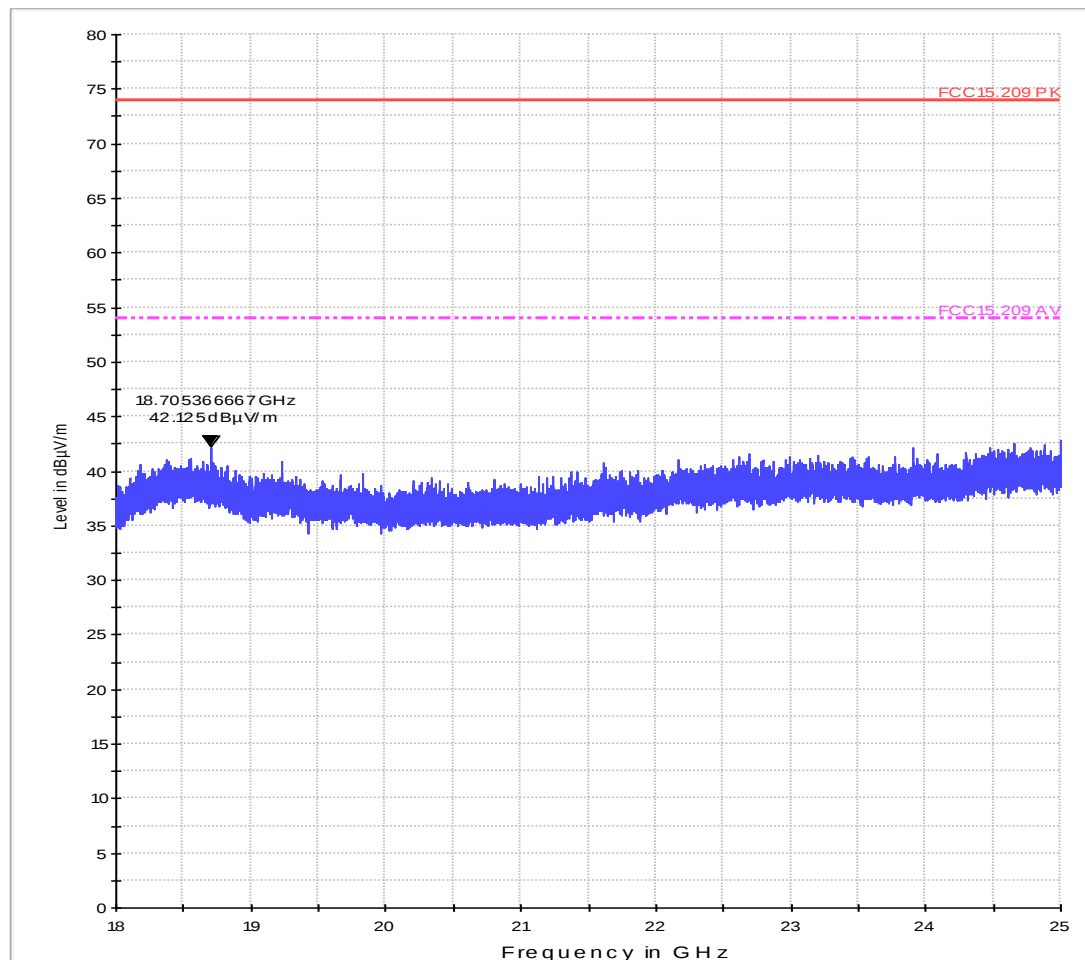
Common Information

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:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

FCC_Sweep_15.247_18_25GHz_Pre



4.03b_Diagram No.: WLAN-MCS6-CH6

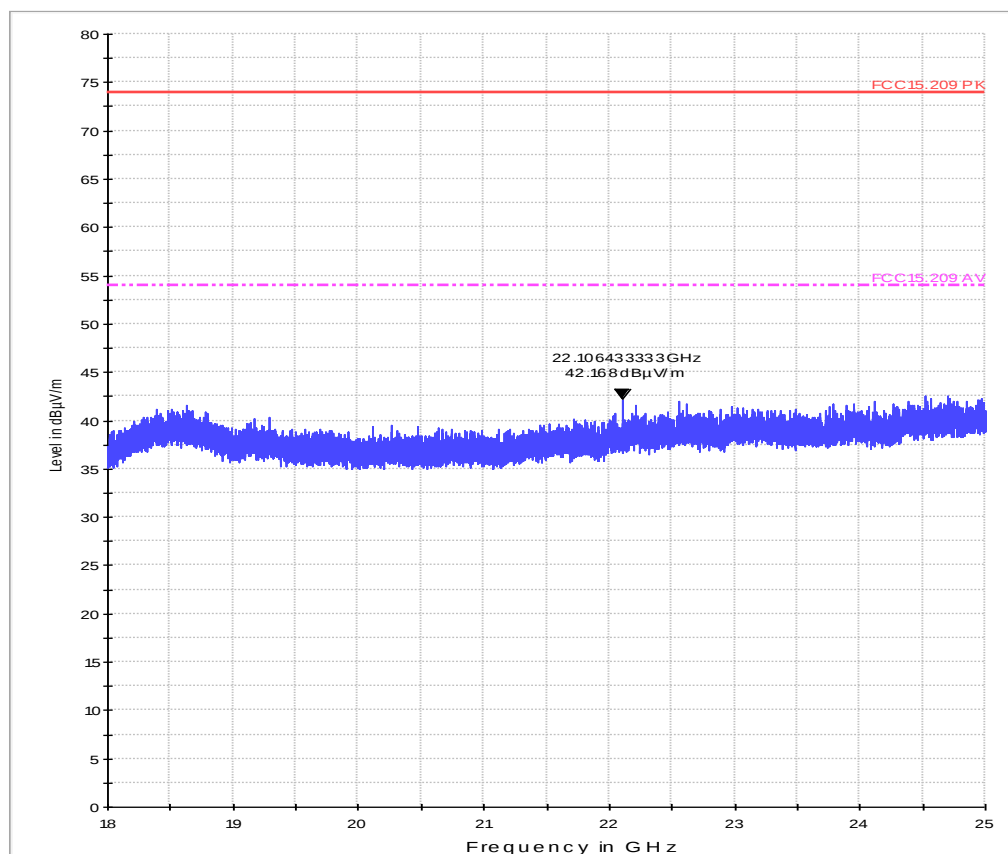
Common Information

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:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

FCC_Sweep_15.247_18_25GHz_Pre



3. Radiated Band-Edge Measurements

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

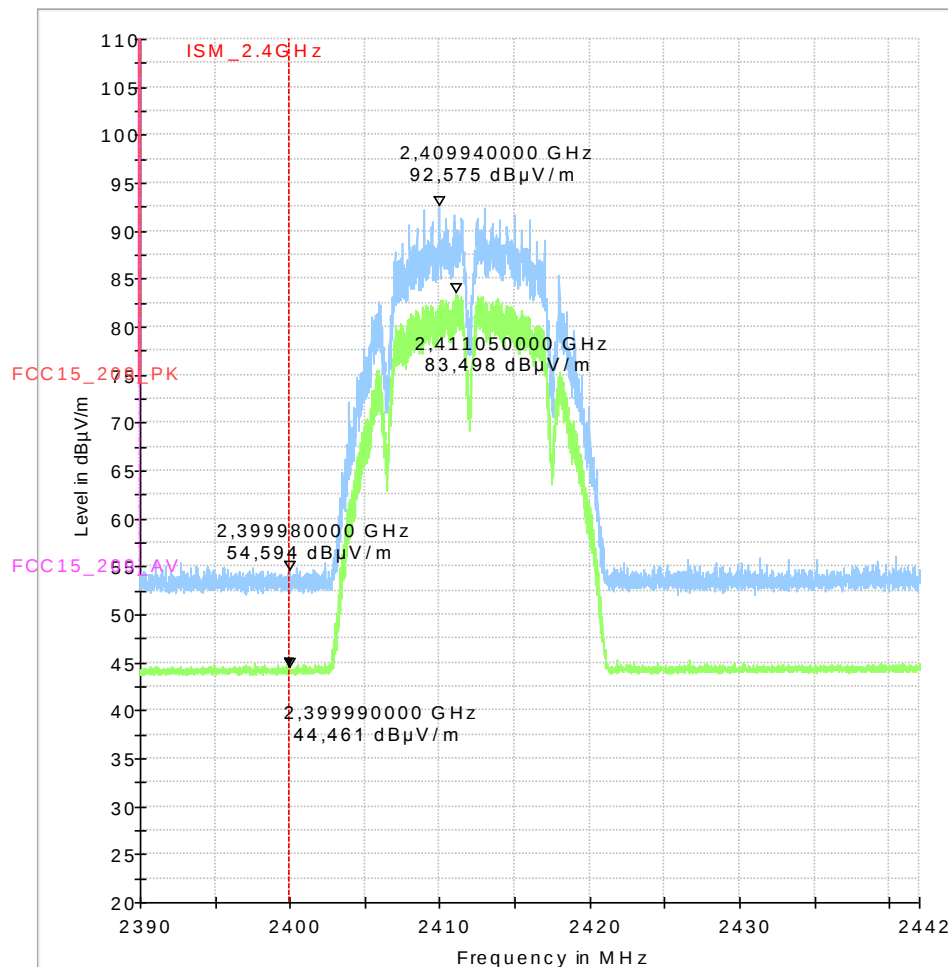
Diagram No.: 9.01a_BE_WLAN_b mode_1Mbps_Ch1

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:	RLs
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



3.2. b SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge) Diagram No.: 9.02a_BE_WLAN_b mode_1Mbps_Ch11

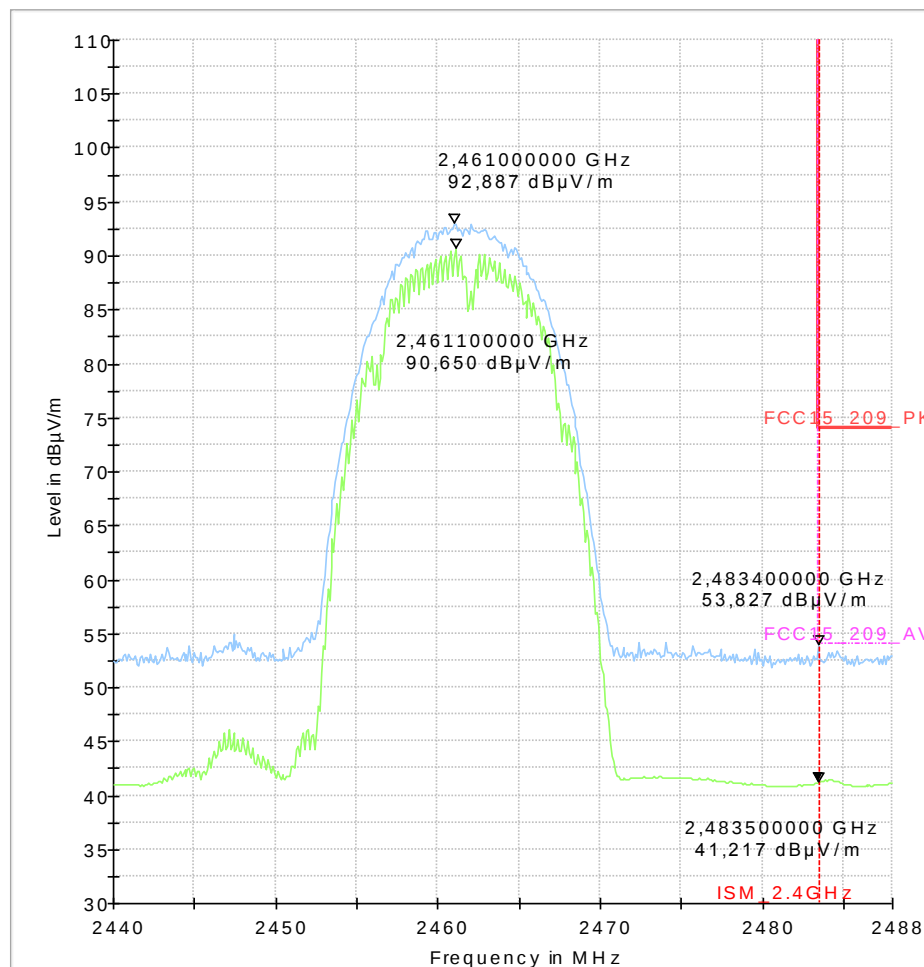
Common Information

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 1 Mbit Ch 1 Power level 14
Operator Name:	RI
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



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

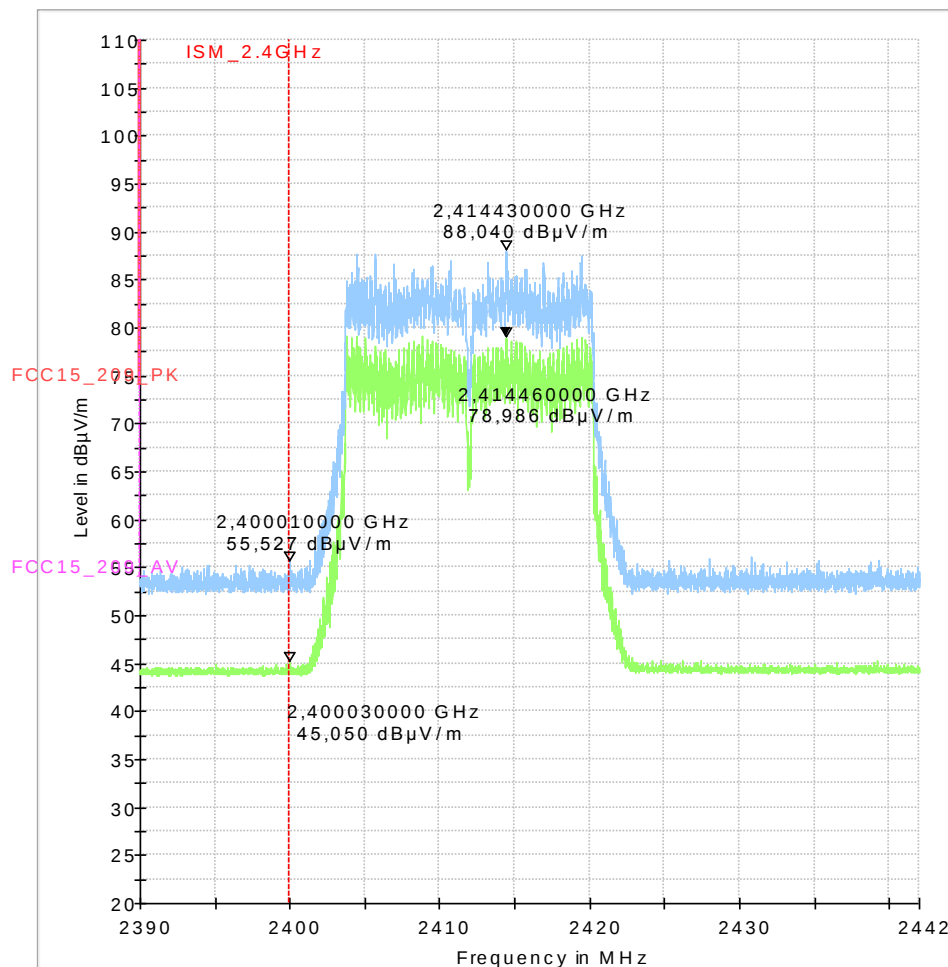
Diagram No.: 9.03a_BE_WLAN _g mode_12Mbps_Ch1

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 11 Power level 11
Operator Name:	RLs
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



3.4. g SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge) Diagram No.: 9.04a_BE_WLAN _g mode_12Mbps_Ch11

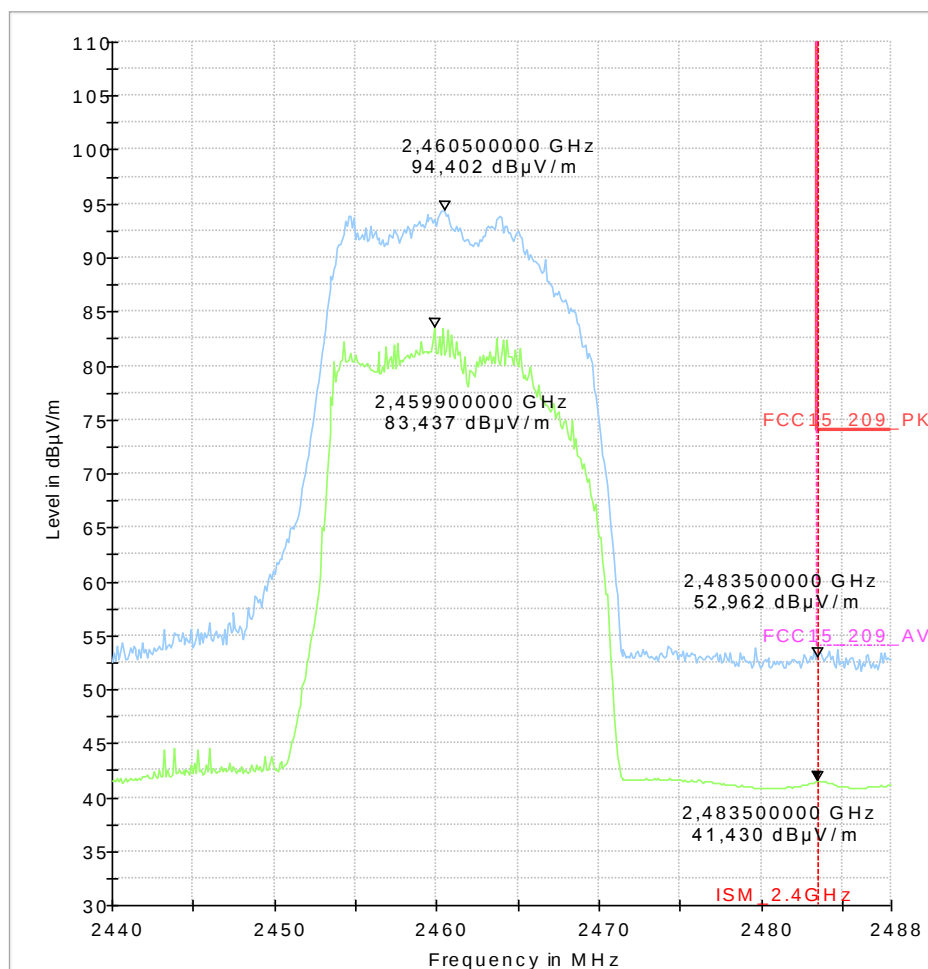
Common Information

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 12 Mbit Ch 11 Power level 11
Operator Name:	RLs
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



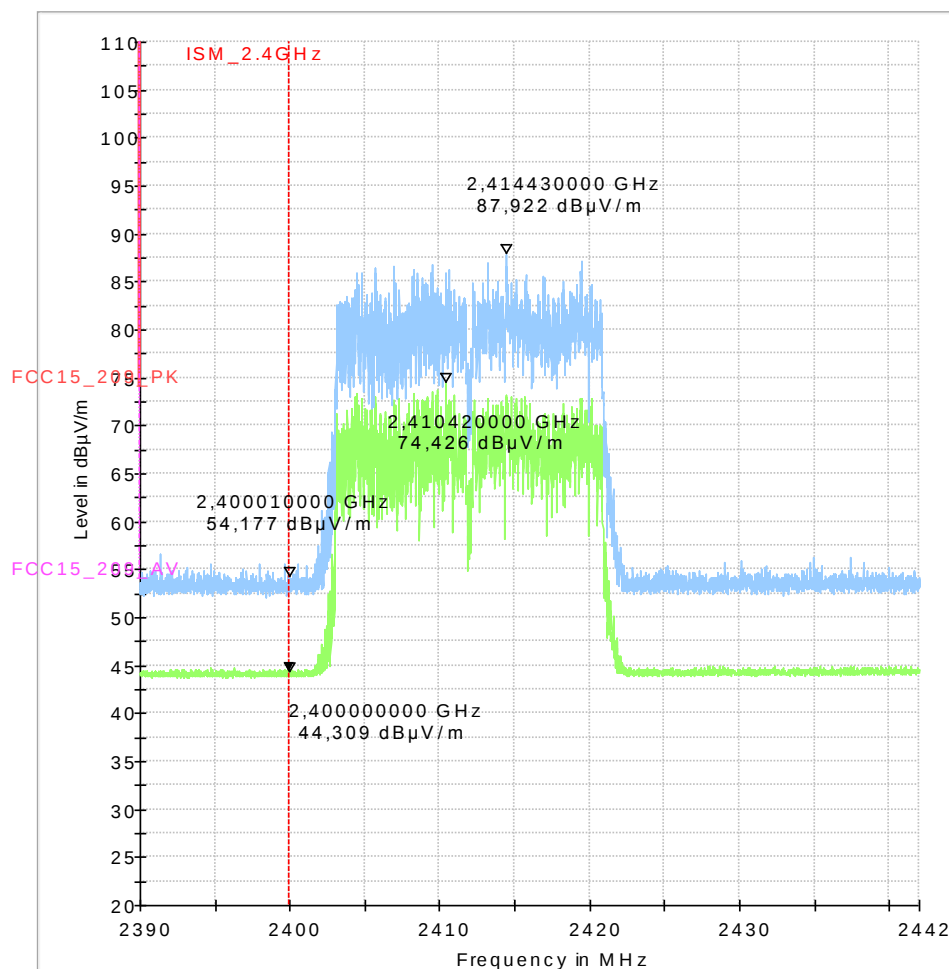
3.5. n SISO Mode-Low Channel 2412 MHz (2.4 GHz ISM: left band edge) Diagram No.: 9.05a_BE_WLAN_n mode_MCS6_Ch1

Common Information

Test Description:	Band-Edge: Radiated Field Strength 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:	RLs
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC



3.6. n SISO Mode-High Channel 2462 MHz (2.4 GHz ISM: right band edge) Diagram No.: 9.06a_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 6 Power level 11
Operator Name:	RI
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	cTP/TDC MID DTNA-4G

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	24 V DC

