Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 18-1-0248301T07a

According to:

CFR Title 47, Part 15, Subpart C
§15.247 (DTS)

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

for

Robert Bosch Car Multimedia GmbH

AIVIV10
Multimedia device with Bluetooth and WLAN

FCC ID: YBN-AIVIV10
ISED: 9595A-AIVIV10

Laboratory Accreditation
ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04
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 Measurements

1.1. Conducted output power

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057

b-Mode	Channel No. (Frequency MHz)			Maximum Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz b-Mode	
1Mbit/s	10.84	10.15	10.75	10.84	dBm
2Mbit/s	10.75	9.92	10.77		
5.5Mbit/s	9.84	9.07	10.14		
11Mbit/s	10.29	9.56	10.19		

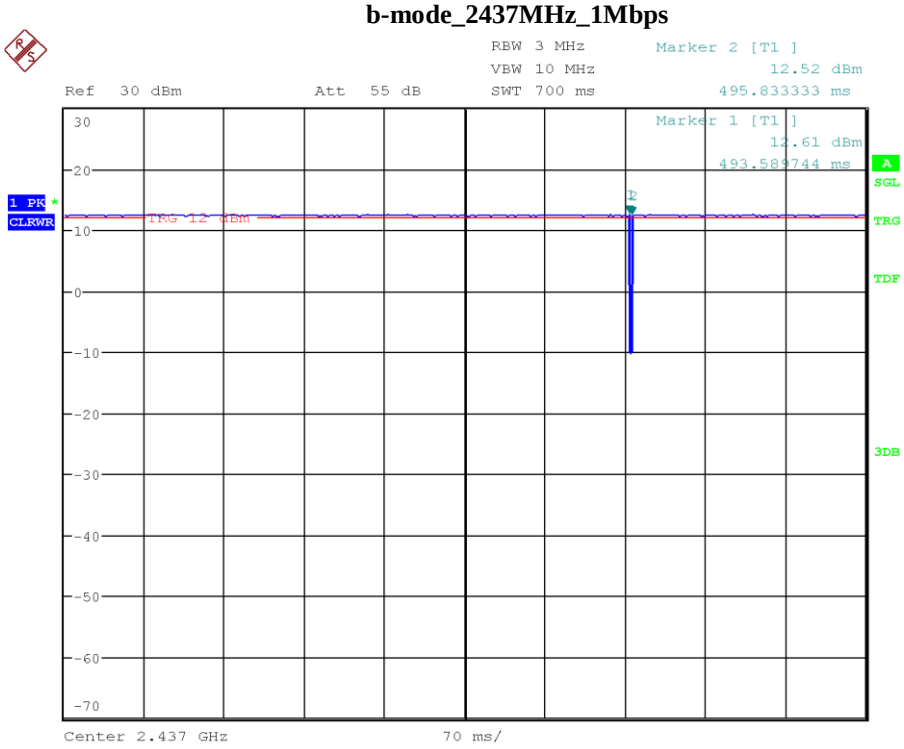
g-Mode	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz g-mode	
6Mbit/s	8.37	7.27	8.31	8.47	dBm
9Mbit/s	8.38	7.57	8.33		
12Mbit/s	8.47	7.31	8.38		
18Mbit/s	8.42	7.22	8.30		
24Mbit/s	8.38	7.22	8.36		
36Mbit/s	8.04	7.22	8.36		
48Mbit/s	8.29	7.23	8.38		
54Mbit/s	7.99	7.14	8.47		

n-Mode HT20	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz n-mode HT20	
MCS0 - 6.5Mbps	8.30	7.33	8.47	8.47	dBm
MCS1 - 13Mbps	8.01	7.36	8.45		
MCS2 - 19.5Mbps	8.08	7.37	8.38		
MCS3 - 26Mbps	8.05	7.27	8.03		
MCS4 -39Mbps	8.03	7.31	8.46		
MCS5 - 52MBps	7.98	7.26	8.33		
MCS6 - 58.5MBps	7.98	7.27	8.03		
MCS7 - 65MBps	8.34	7.21	8.37		

n-Mode HT40	**Channel No. (Frequency MHz)**			**Max Rated Power**	
Data rate	**3 (2422)**	**6(2437)**	**9 (2452)**	**WLAN 2.4GHz n-mode HT40**	
MCS0	8.07	7.83	7.87	7.83	dBm
MCS1	7.71	7.32	7.92		
MCS2	7.79	7.33	7.88		
MCS3	7.84	7.43	7.89		
MCS4	7.80	7.57	7.86		
MCS5	7.83	7.79	7.86		
MCS6	8.08	7.80	7.84		
MCS7	8.12	7.59	7.68		

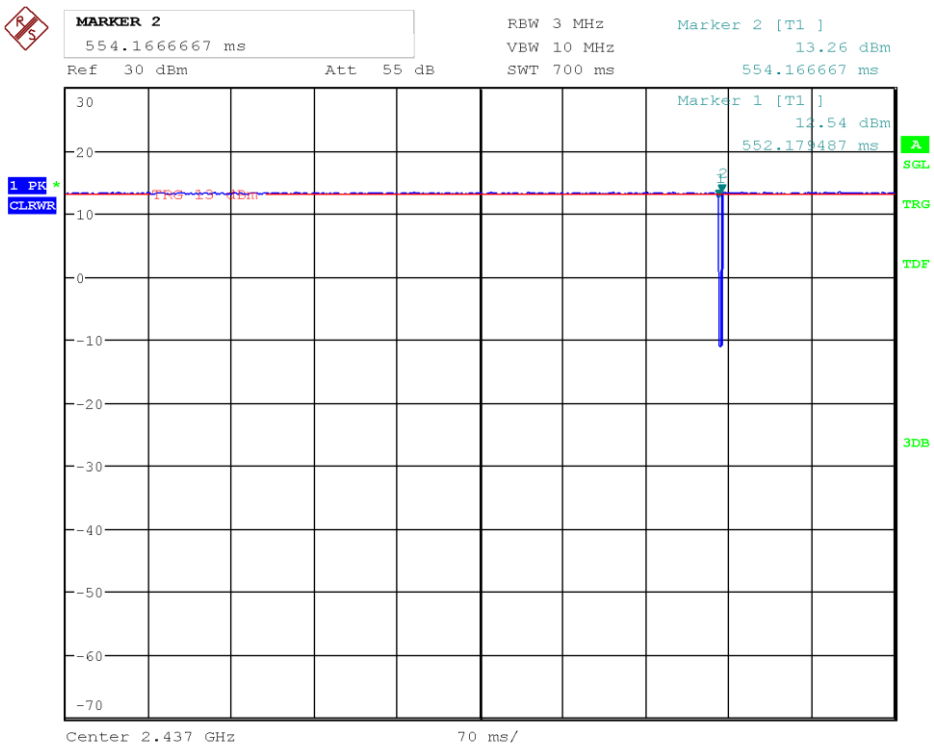
1.2. Duty Cycle

b-mode_2437MHz_1Mbps

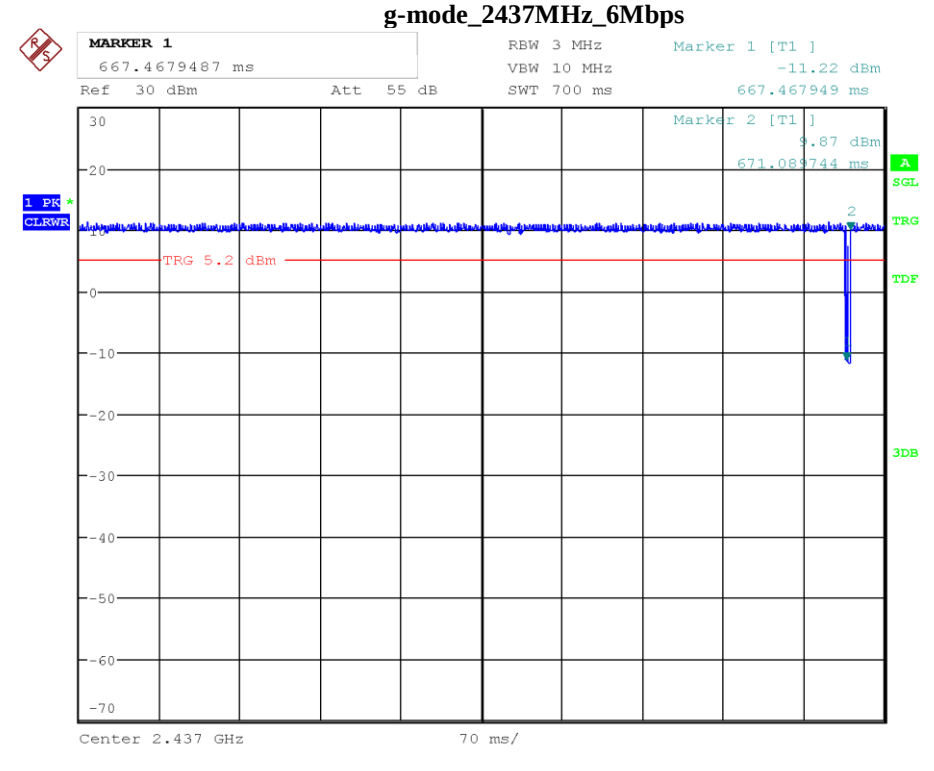


Date: 11.OCT.2019 10:33:53

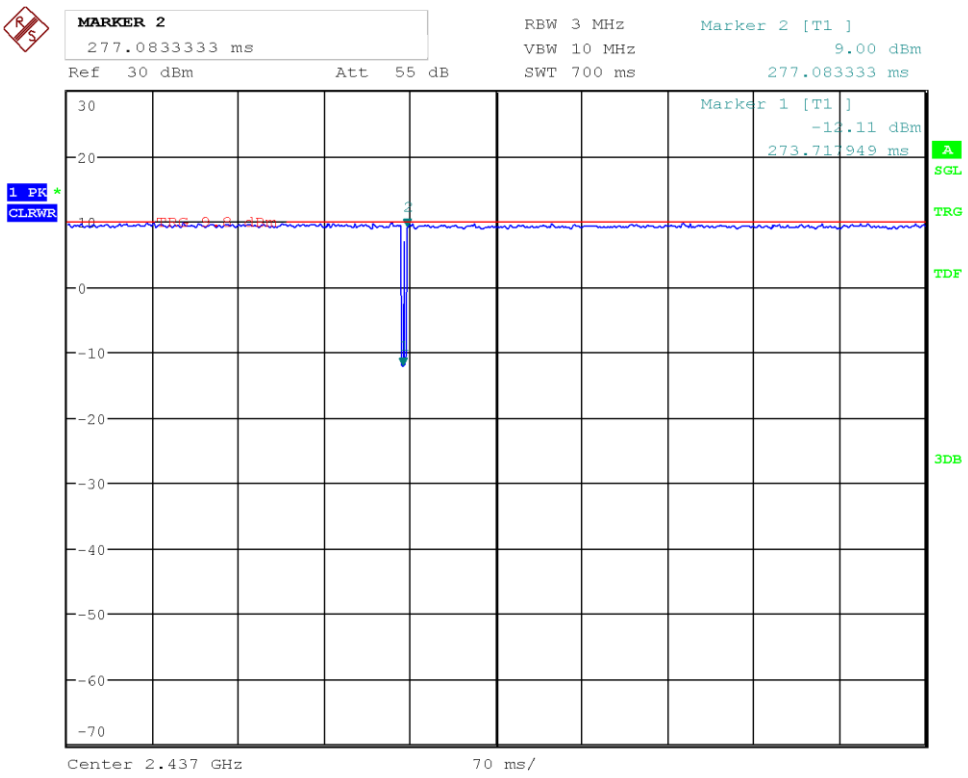
b-mode_2437MHz_11Mbps



g-mode_2437MHz_6Mbps

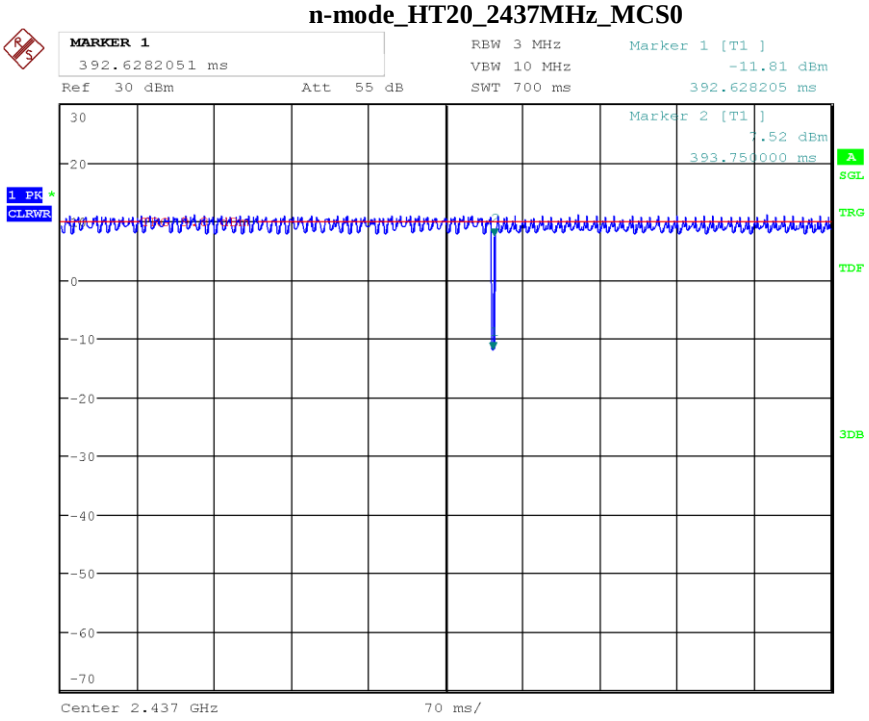


g-mode_2437MHz_12Mbps



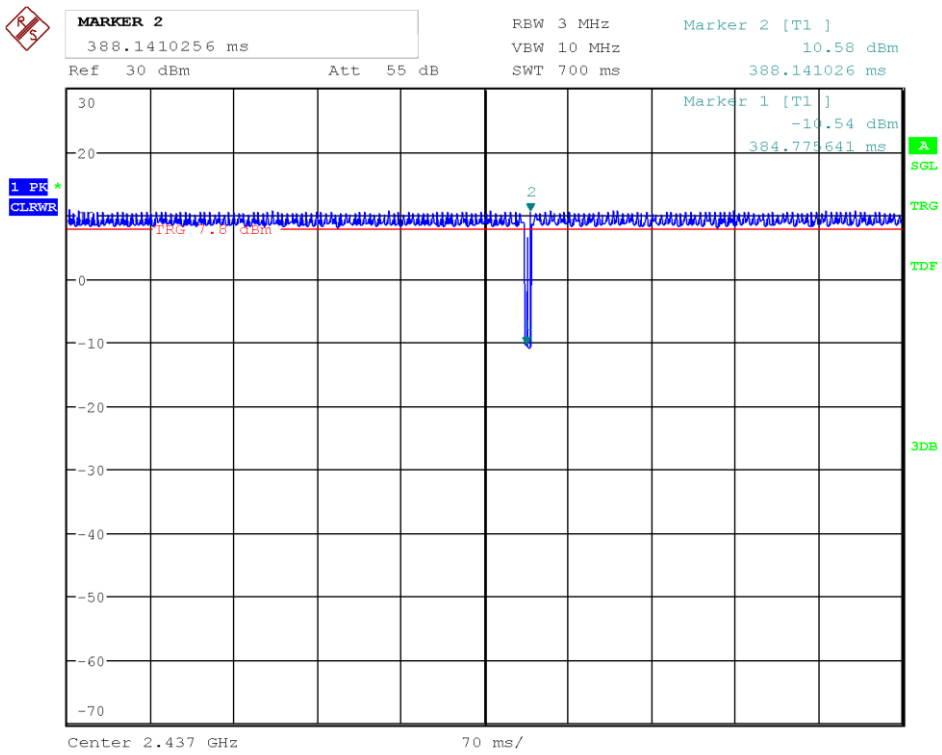
Date: 11.OCT.2019 10:46:05

n-mode_HT20_2437MHz_MCS0



Date: 11.OCT.2019 10:49:28

n-mode_HT20_2437MHz_MCS7


MARKER 2
388.1410256 ms
RBW 3 MHz
VBW 10 MHz
SWT 700 ms
Marker 2 [T1]
10.58 dBm
388.141026 ms
Ref 30 dBm
Att 55 dB
Marker 1 [T1]
-10.54 dBm
384.775641 ms
1 PK
CLRWR
TRG 7.8 dBm
A
SGL
TRG
TDF
3DB
Center 2.437 GHz
70 ms/
Date: 11.OCT.2019 10:51:34

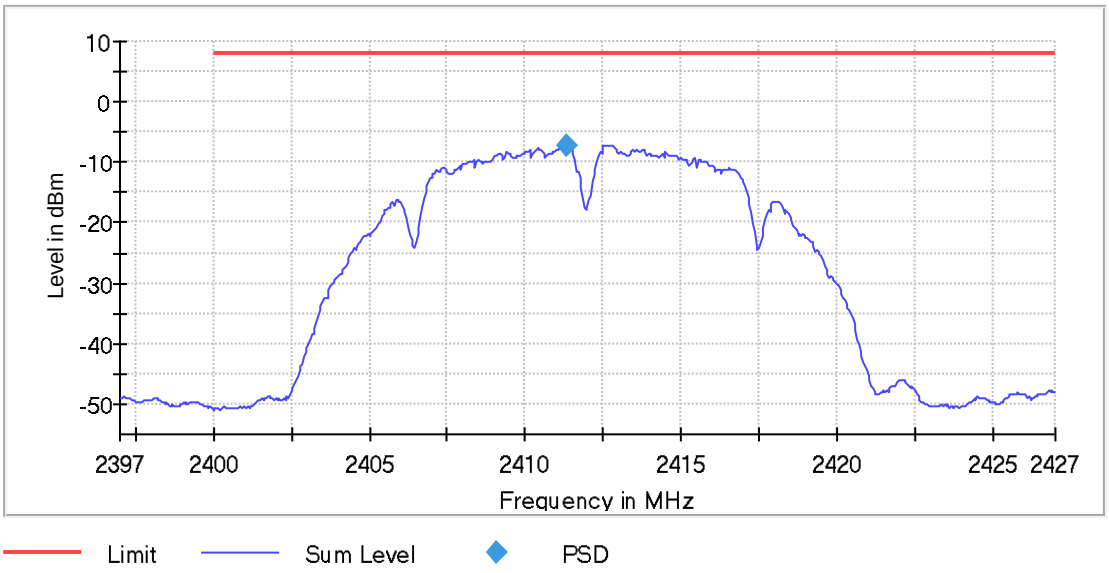
1.3. Power Spectral Density

,

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2411.350000	-7.099	8.0	PASS



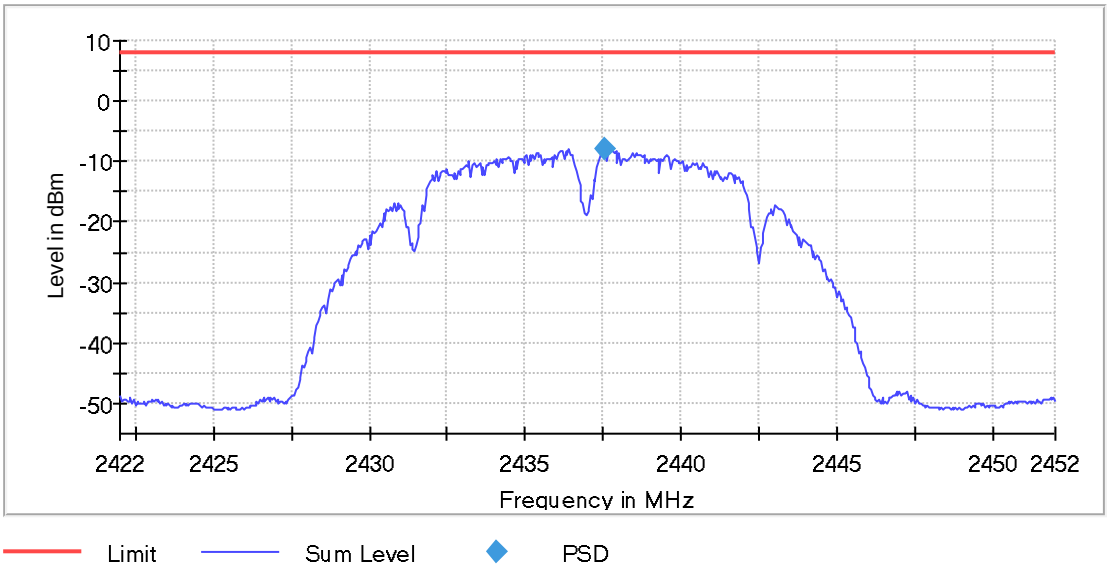
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39700 GHz	2.39700 GHz
Stop Frequency	2.42700 GHz	2.42700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	14 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2437.550000	-8.001	8.0	PASS



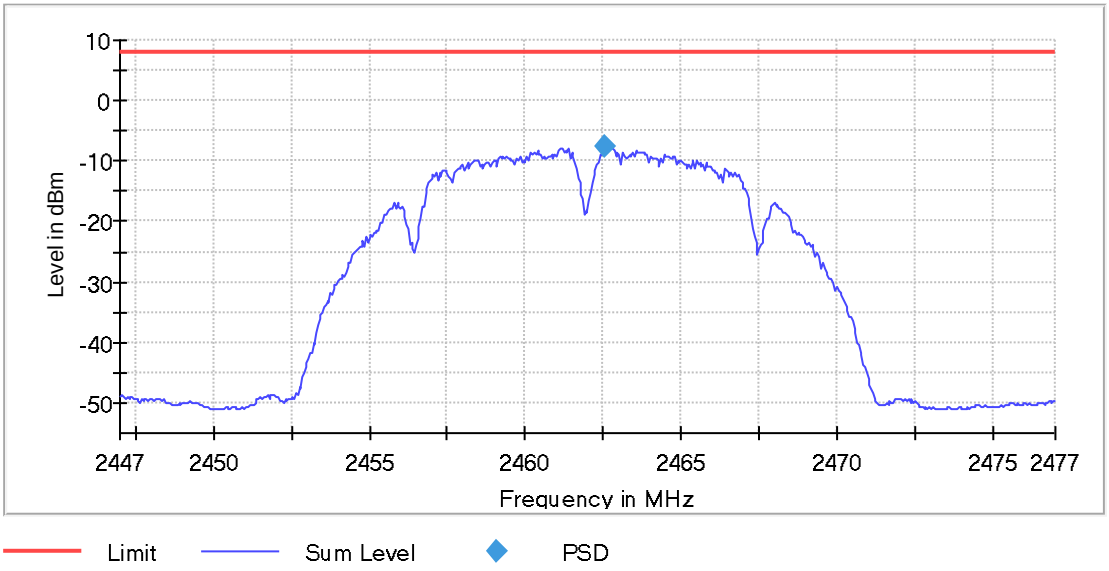
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42200 GHz	2.42200 GHz
Stop Frequency	2.45200 GHz	2.45200 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	13 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.33 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2462.550000	-7.685	8.0	PASS



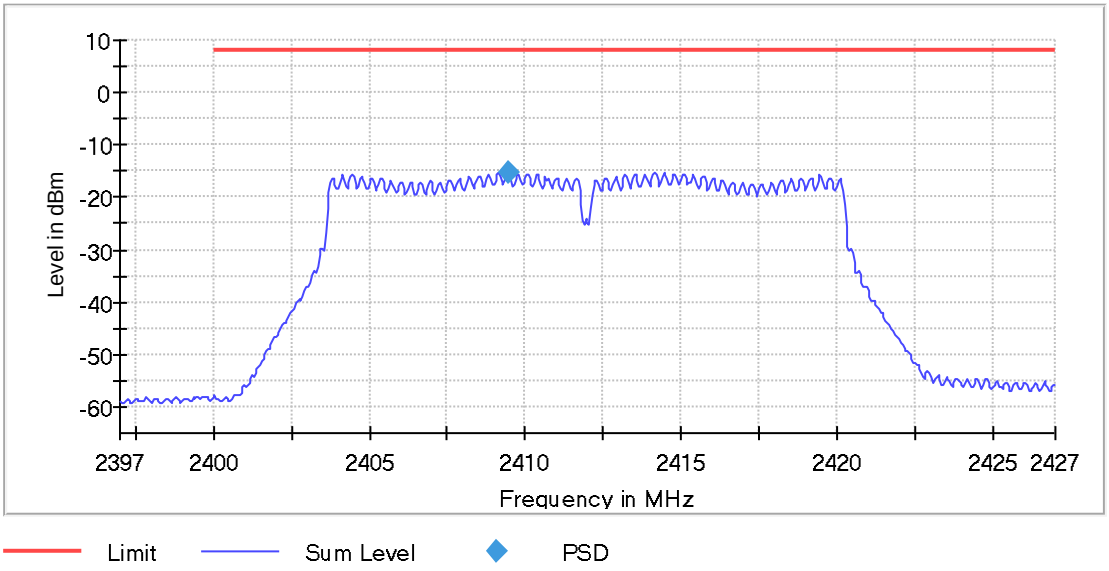
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44700 GHz	2.44700 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	35.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	15 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2409.450000	-15.206	8.0	PASS



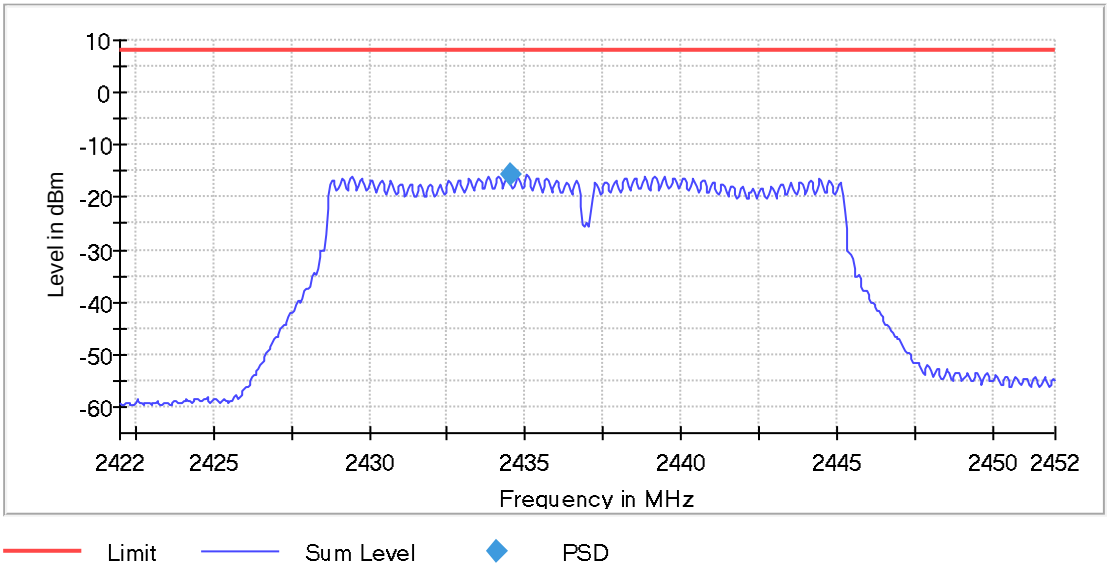
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39700 GHz	2.39700 GHz
Stop Frequency	2.42700 GHz	2.42700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.39 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2434.500000	-15.725	8.0	PASS



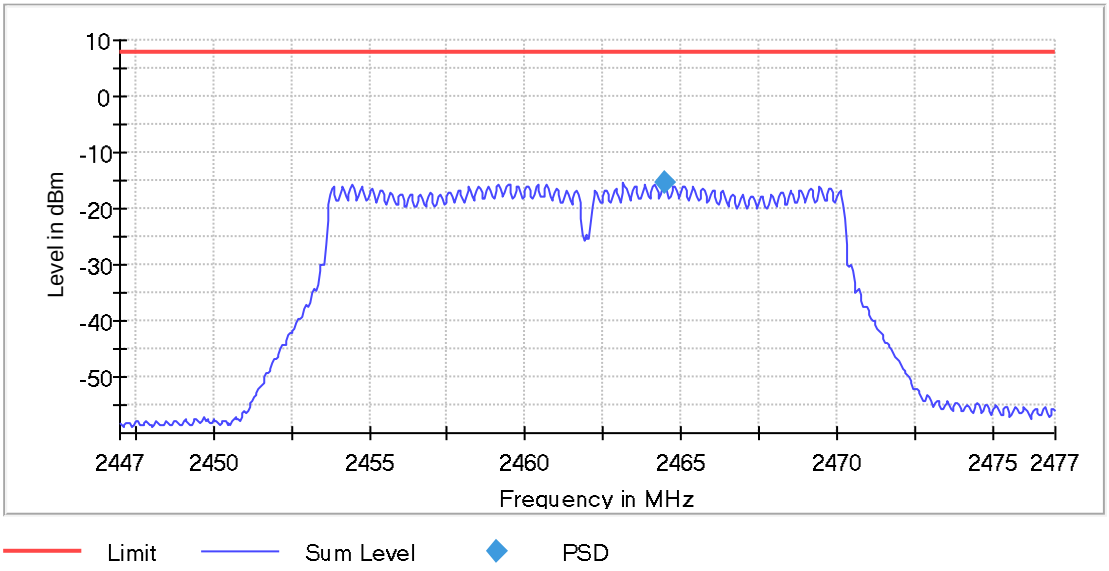
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42200 GHz	2.42200 GHz
Stop Frequency	2.45200 GHz	2.45200 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.21 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2464.450000	-15.526	8.0	PASS



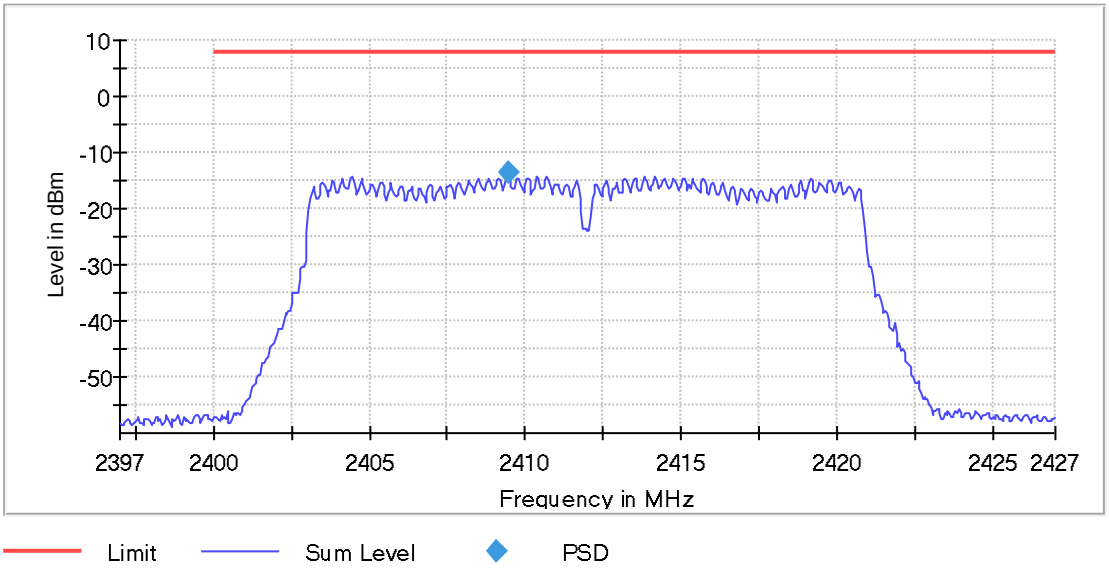
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44700 GHz	2.44700 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.38 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2409.450000	-13.635	8.0	PASS



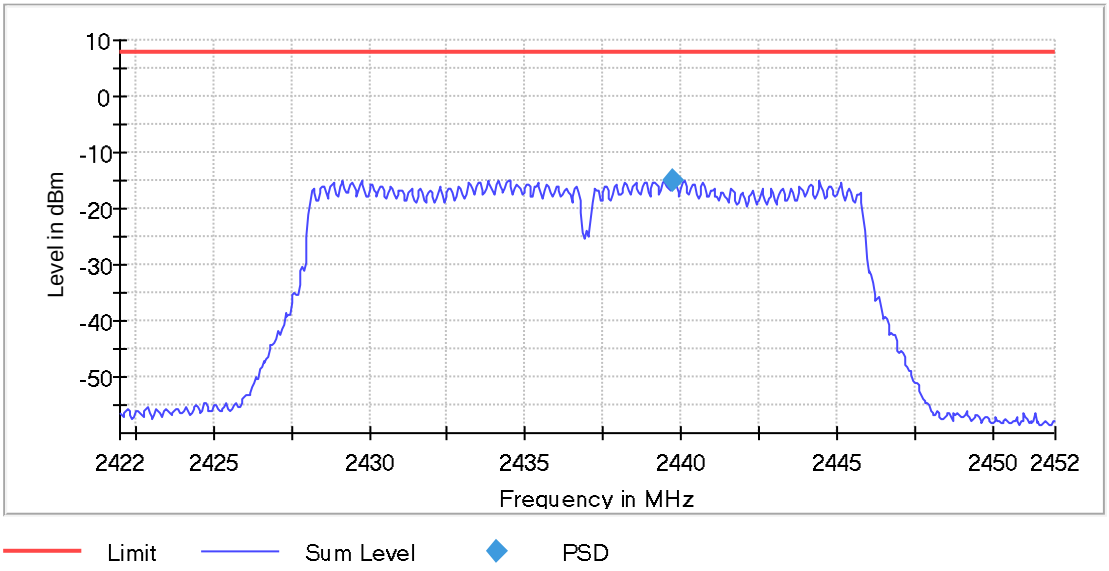
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39700 GHz	2.39700 GHz
Stop Frequency	2.42700 GHz	2.42700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	50 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.47 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2439.750000	-14.848	8.0	PASS



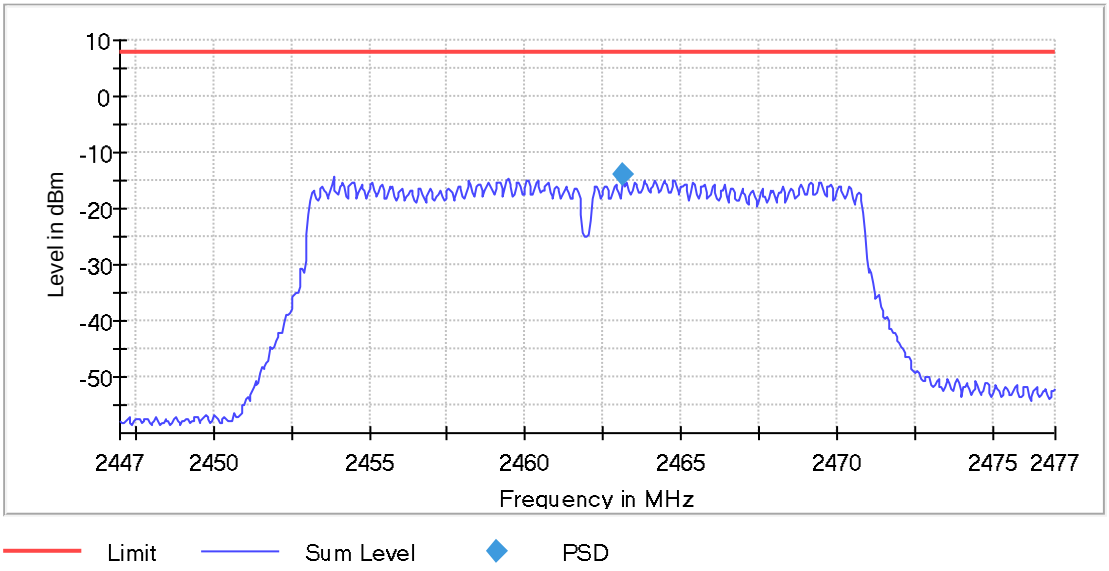
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42200 GHz	2.42200 GHz
Stop Frequency	2.45200 GHz	2.45200 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	80 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2463.150000	-13.945	8.0	PASS



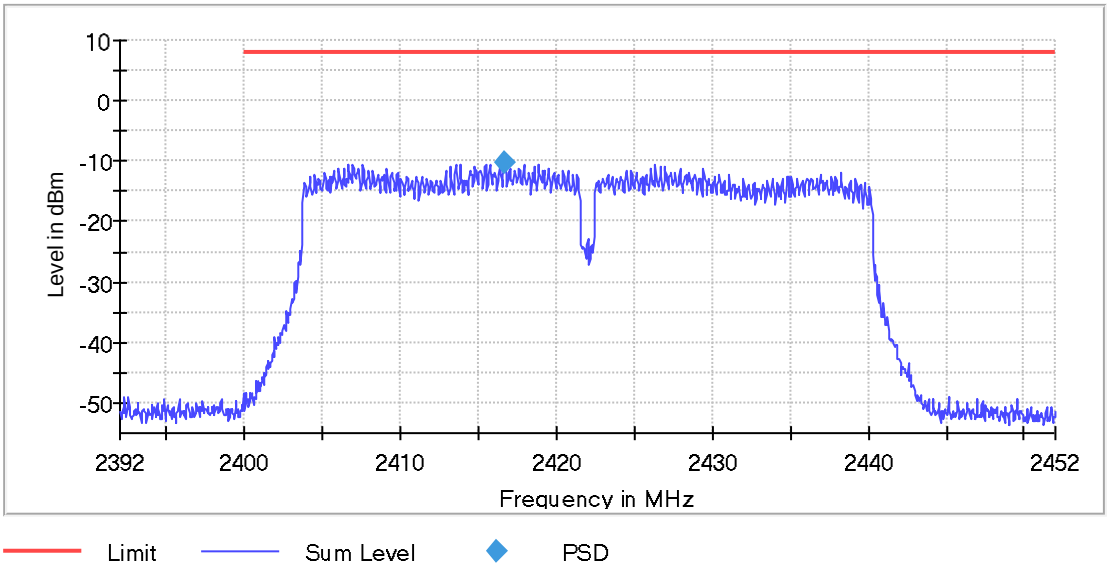
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44700 GHz	2.44700 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	601	~ 600
Sweeptime	3.100 s	3.005 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	57 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.15 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2422.000000	2416.700000	-10.190	8.0	PASS



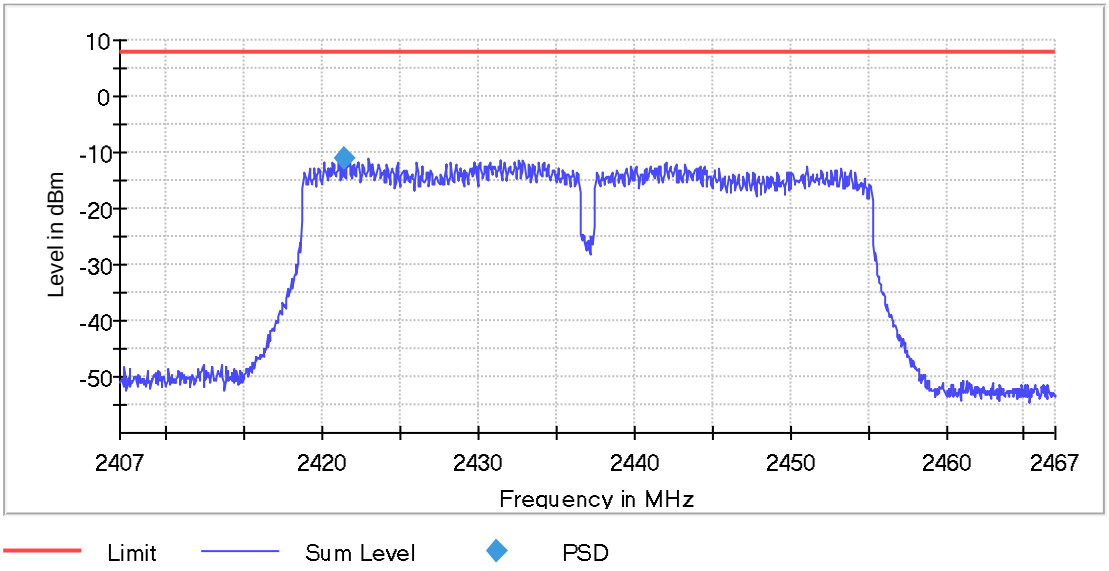
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.45200 GHz	2.45200 GHz
Span	60.000 MHz	60.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1201	~ 1200
Sweeptime	25.000 ms	24.020 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	98 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.33 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2421.350000	-11.077	8.0	PASS



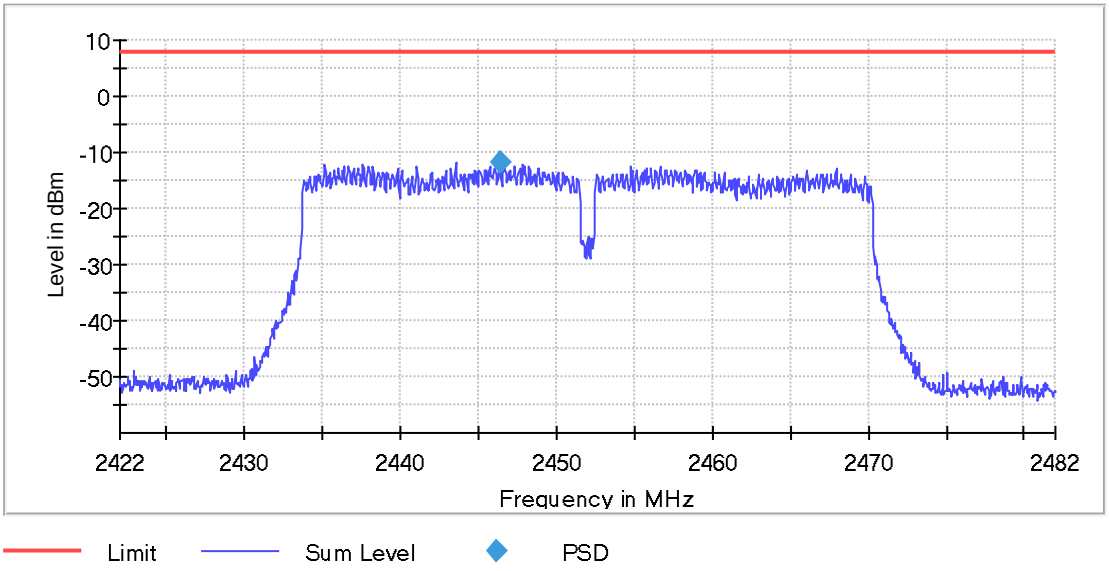
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40700 GHz	2.40700 GHz
Stop Frequency	2.46700 GHz	2.46700 GHz
Span	60.000 MHz	60.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1201	~ 1200
Sweeptime	25.000 ms	24.020 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	132 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

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

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2452.000000	2446.350000	-11.810	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42200 GHz	2.42200 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	60.000 MHz	60.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1201	~ 1200
Sweeptime	25.000 ms	24.020 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	25.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	121 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

1.4. 6dB Bandwidth

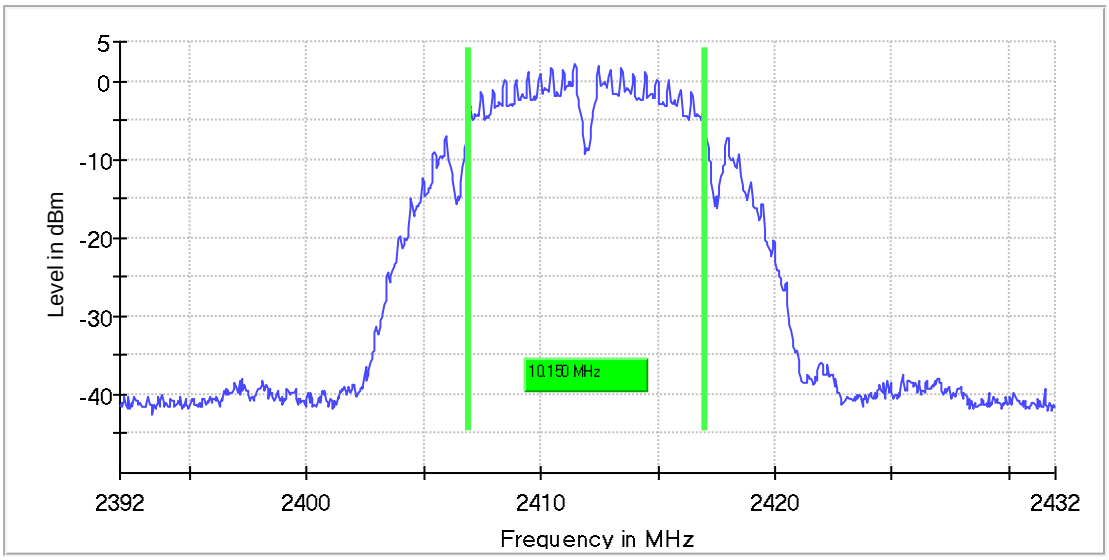
1.4.1. b-mode

6dB_BW_CH01_ bmode_1MBIT/S

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	10.150000	0.500000	---	2406.900000	2417.050000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	2.1	PASS

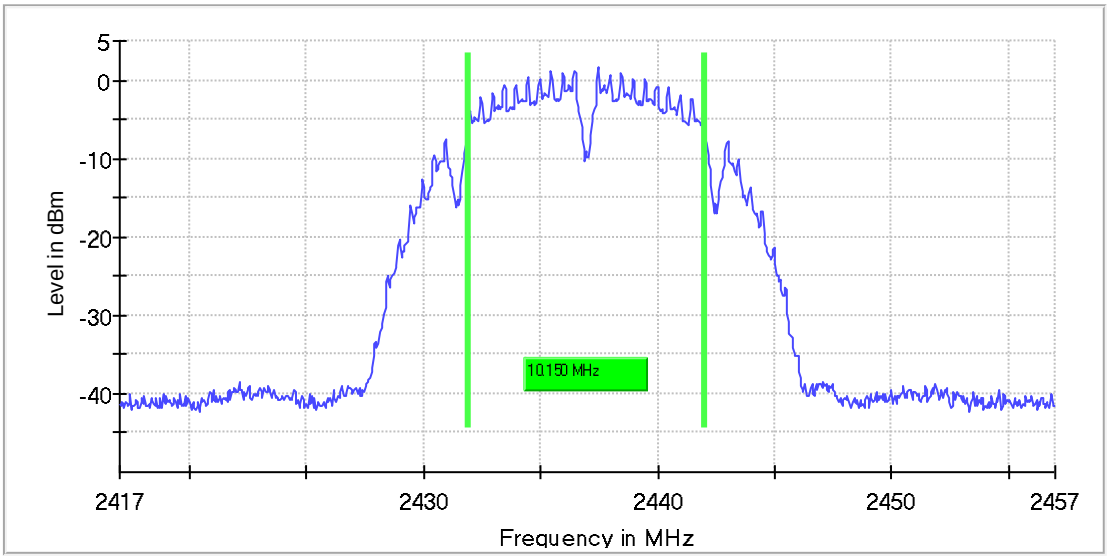


6dB_BW_CH06_bmode_1MBIT/S

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	10.150000	0.500000	---	2431.900000	2442.050000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	1.6	PASS

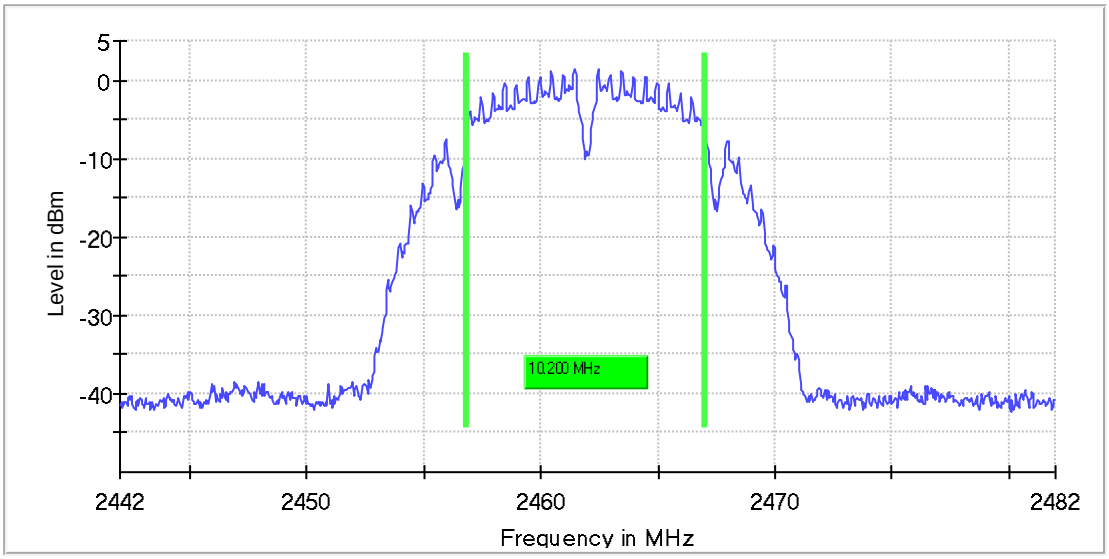


6dB_BW_CH11_bmode_1MBIT/S

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	10.200000	0.500000	---	2456.850000	2467.050000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	1.4	PASS



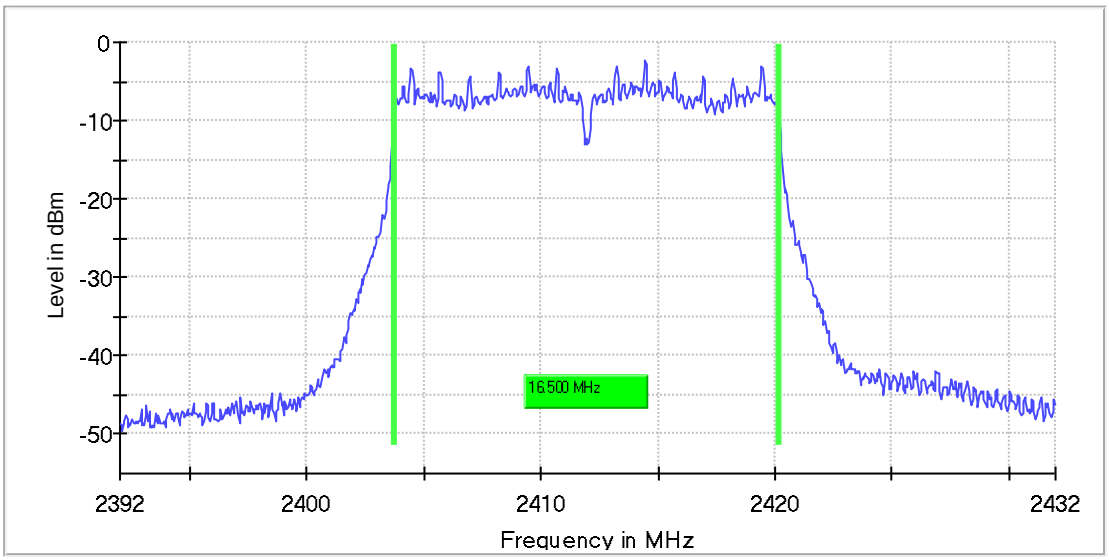
1.4.2. g-mode

6dB_BW_CH01_g-mode_12MBIT/S

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	---	2403.700000	2420.200000

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

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

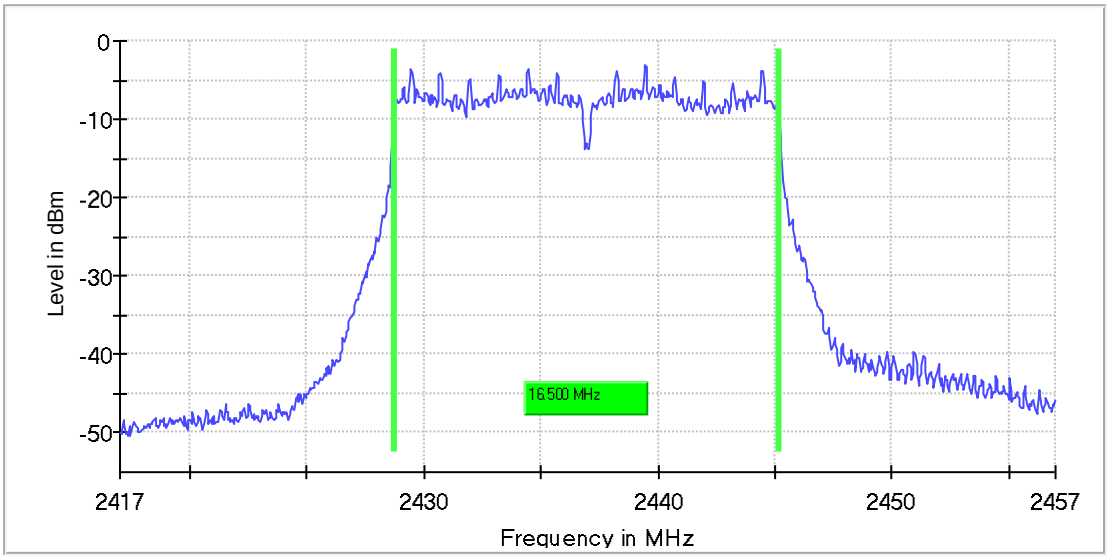


6dB_BW_CH06_g-mode_12MBIT/S

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	16.500000	0.500000	---	2428.700000	2445.200000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-3.0	PASS

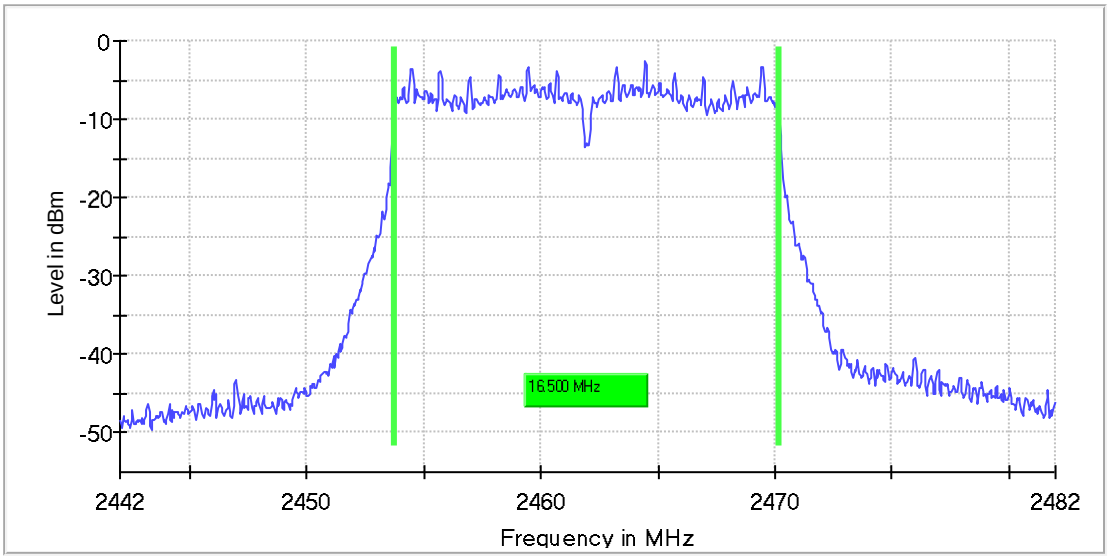


6dB_BW_CH11_g-mode_12MBIT/S

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	16.500000	0.500000	---	2453.700000	2470.200000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.7	PASS



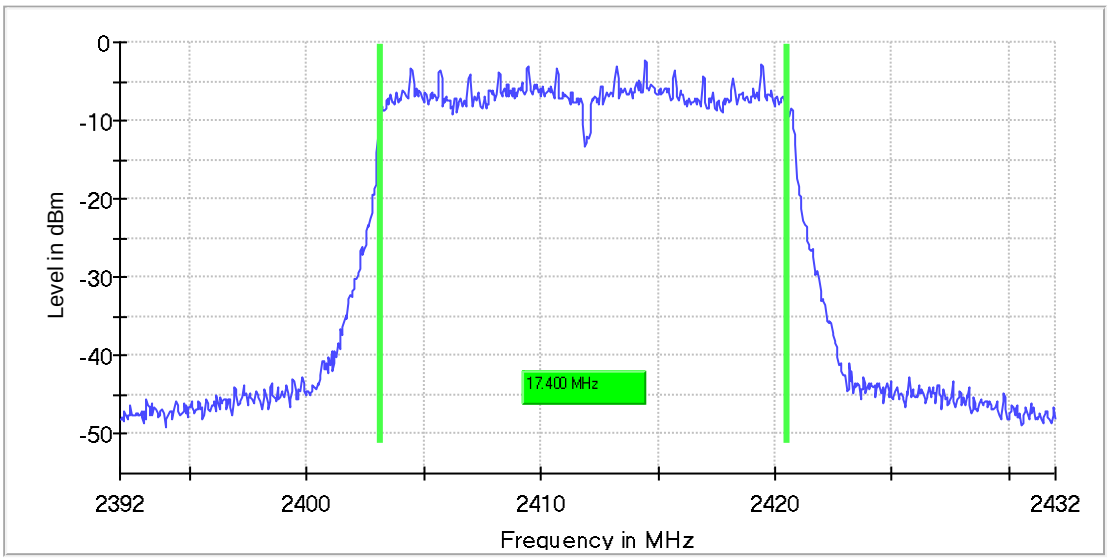
1.4.3. n-mode(HT20)

6dB_BW_CH01_n-mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	17.400000	0.500000	---	2403.150000	2420.550000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	-2.3	PASS

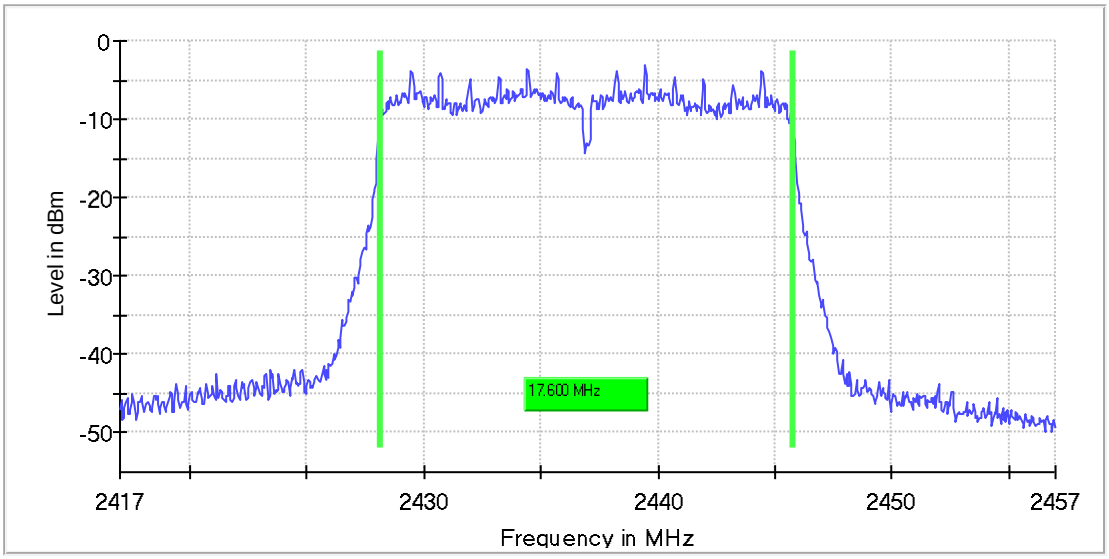


6dB_BW_CH06_n-mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	17.600000	0.500000	---	2428.150000	2445.750000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-3.2	PASS

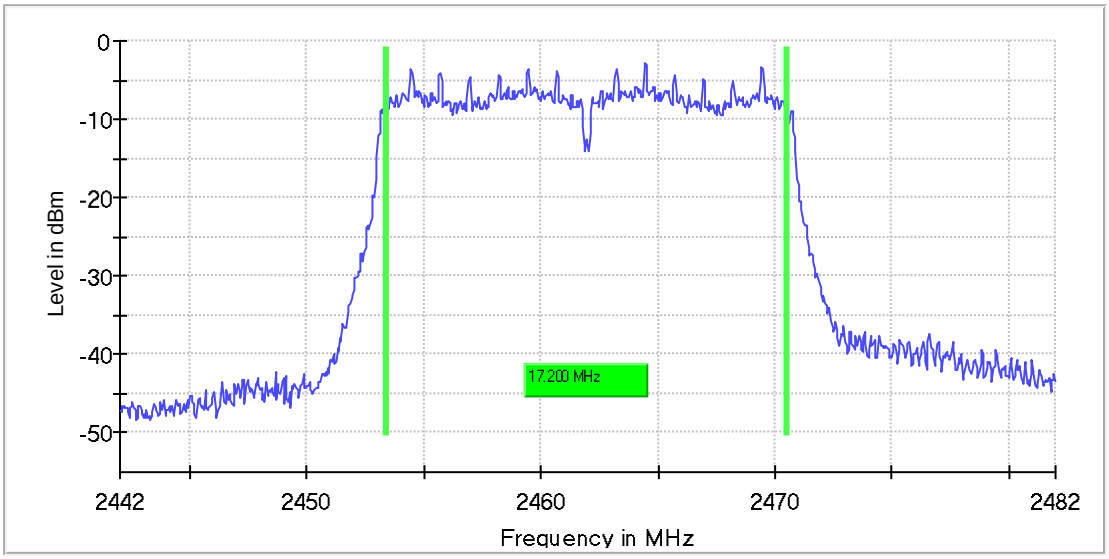


6dB_BW_CH11_n-mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	17.200000	0.500000	---	2453.350000	2470.550000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	-2.8	PASS



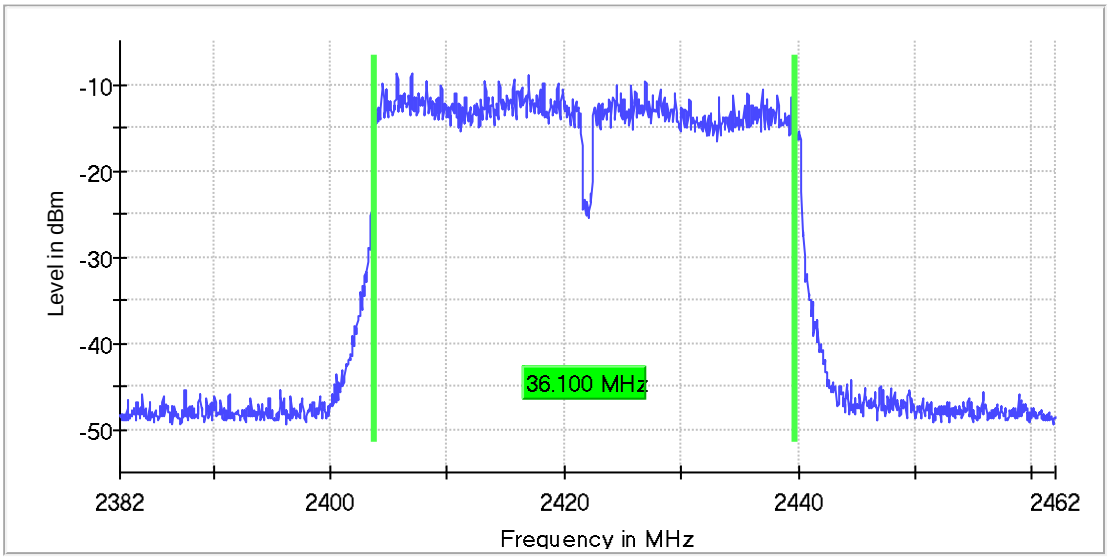
1.4.4. n-mode(HT40)

6dB_BW_CH3_n-mode_MCS7

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.100000	0.500000	---	2403.700000	2439.800000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-8.7	PASS

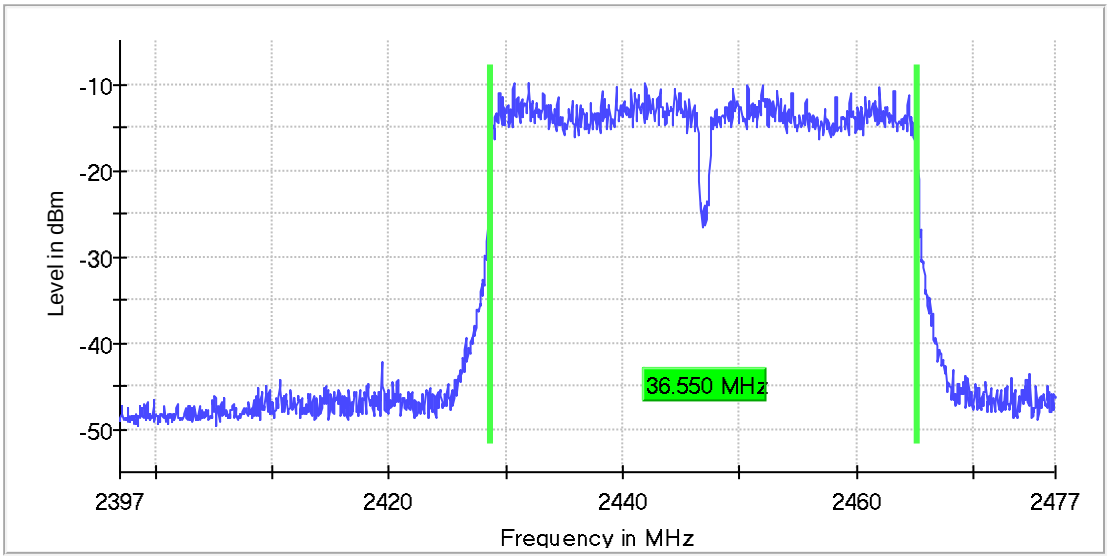


6dB_BW_CH6_n-mode_MCS7

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	36.550000	0.500000	---	2428.700000	2465.250000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	-9.8	PASS

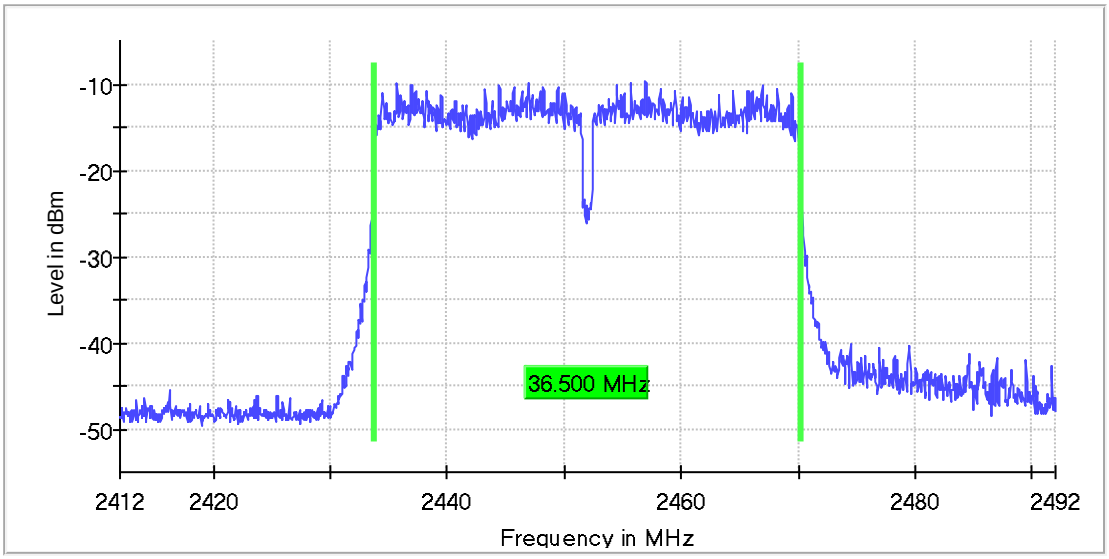


6dB_BW_CH9_n-mode_MCS7

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	36.500000	0.500000	---	2433.700000	2470.200000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-9.6	PASS



1.5. 99% Occupied Bandwidth

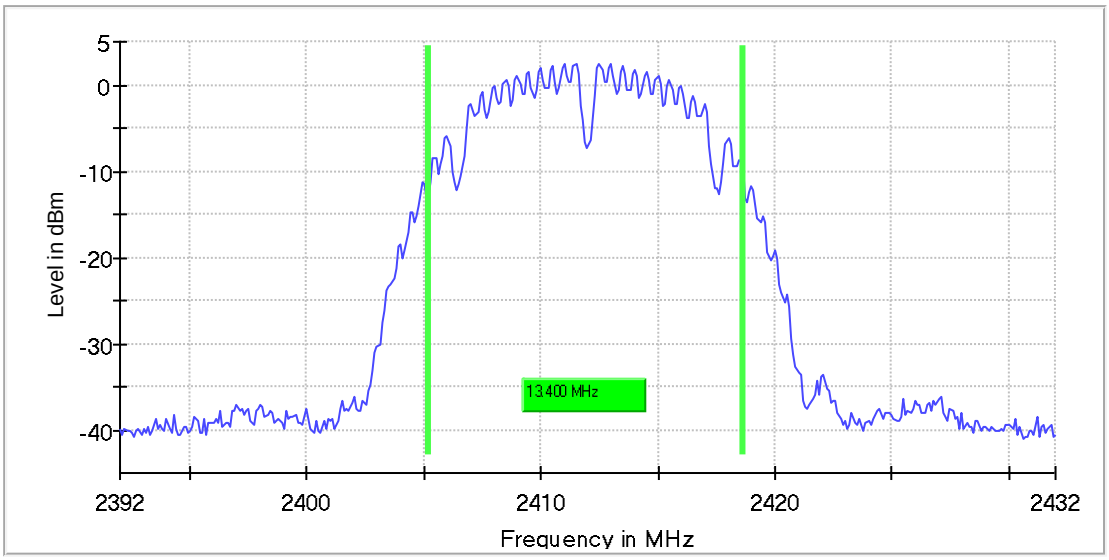
1.5.1. b-mode

99% Occupied Bandwidth CH1_b mode_1Mbit/s

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	13.400000	---	---	2405.200000	2418.600000

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

DUT Frequency (MHz)	Result
2412.000000	PASS

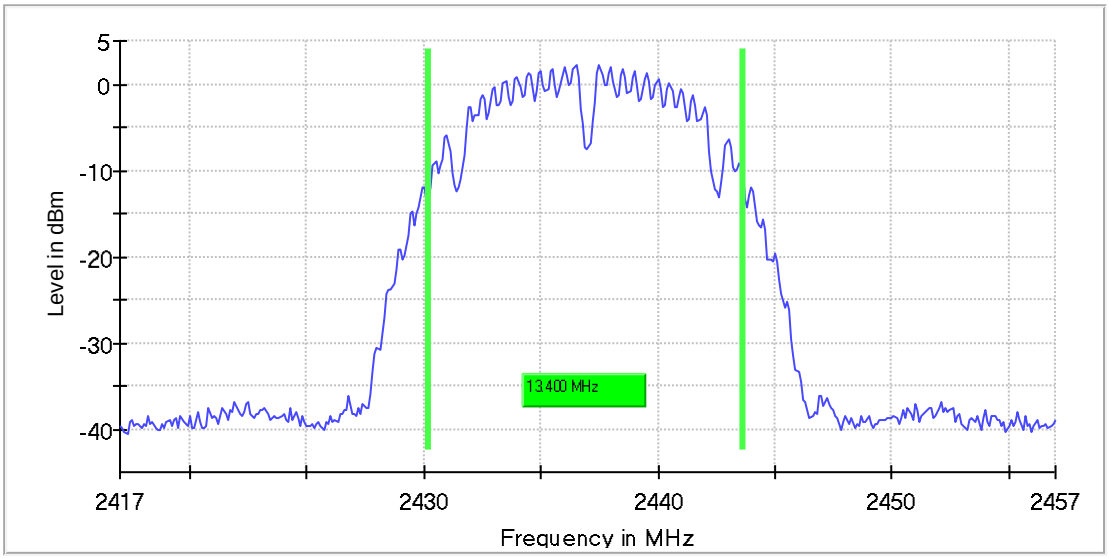


99% Occupied Bandwidth CH6_b mode_1Mbit/s

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	13.400000	---	---	2430.200000	2443.600000

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

DUT Frequency (MHz)	Result
2437.000000	PASS

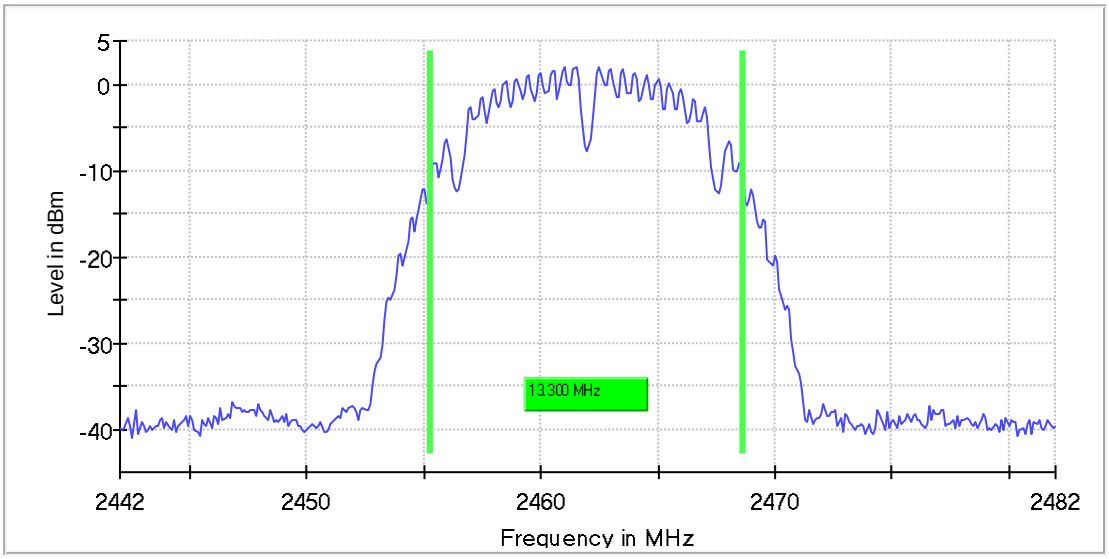


99% Occupied Bandwidth CH11_b mode_1Mbit/s

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	13.300000	---	---	2455.300000	2468.600000

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

DUT Frequency (MHz)	Result
2462.000000	PASS



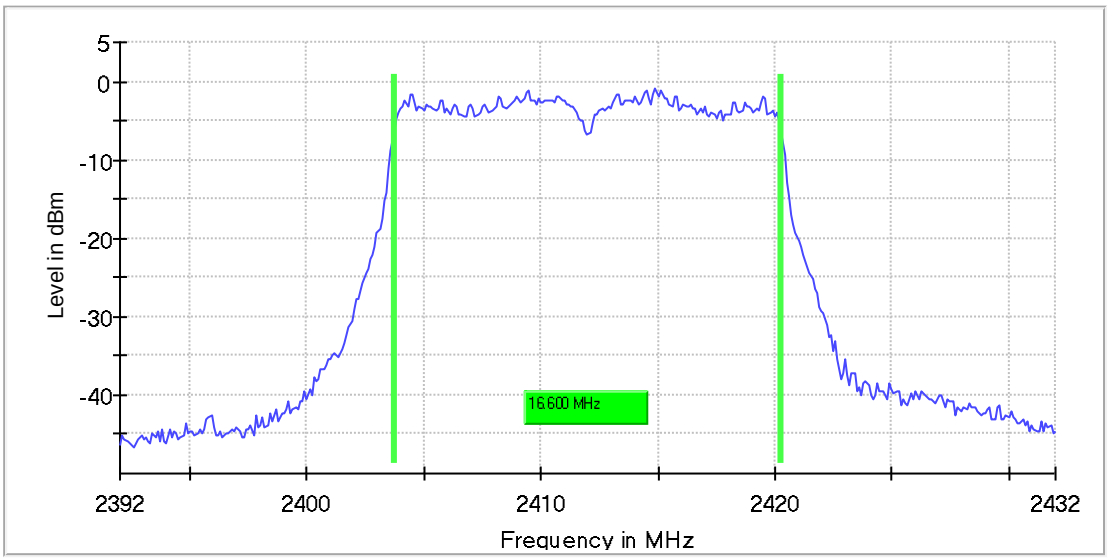
1.5.2. g-mode

99% Occupied Bandwidth CH1_g mode_12 Mbit/s

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

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

DUT Frequency (MHz)	Result
2412.000000	PASS

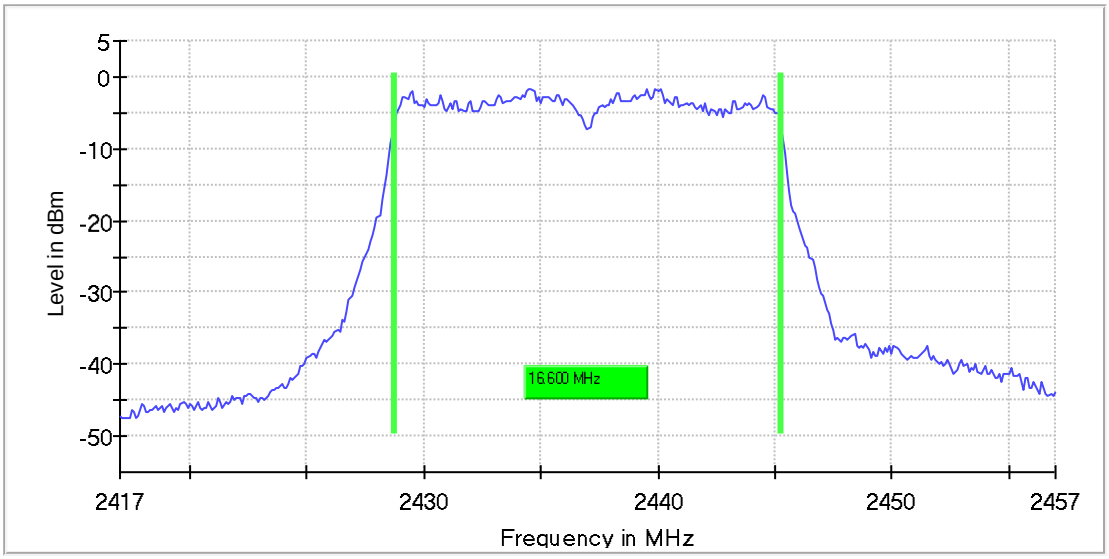


99% Occupied Bandwidth CH6_g mode_12 Mbit/s

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

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

DUT Frequency (MHz)	Result
2437.000000	PASS

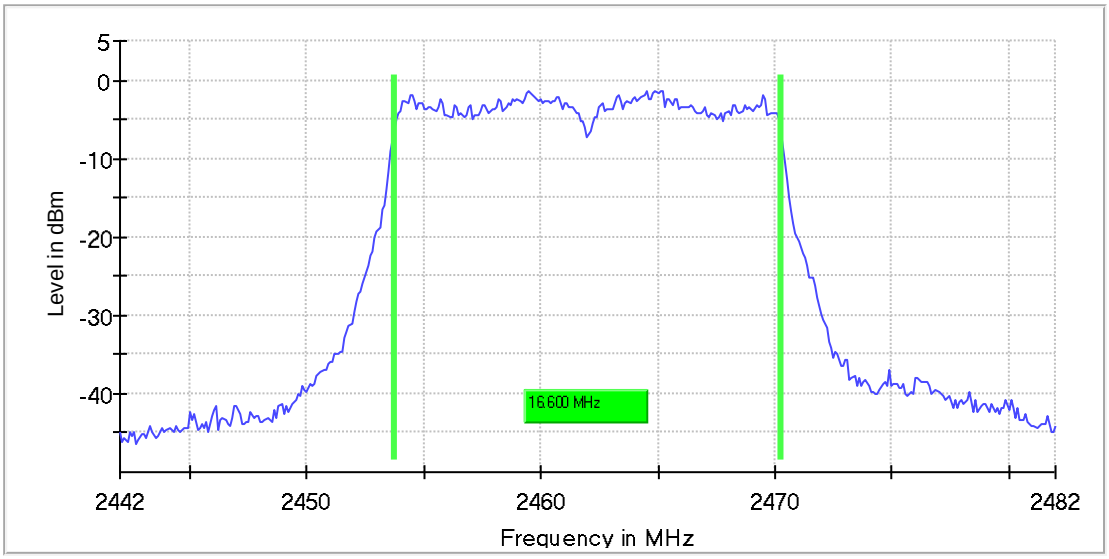


99% Occupied Bandwidth CH11_g mode_12 Mbit/s

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	16.600000	---	---	2453.700000	2470.300000

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

DUT Frequency (MHz)	Result
2462.000000	PASS



1.5.3. n-mode(HT20)

99% Occupied Bandwidth CH1_n mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	17.600000	---	---	2403.200000	2420.800000

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

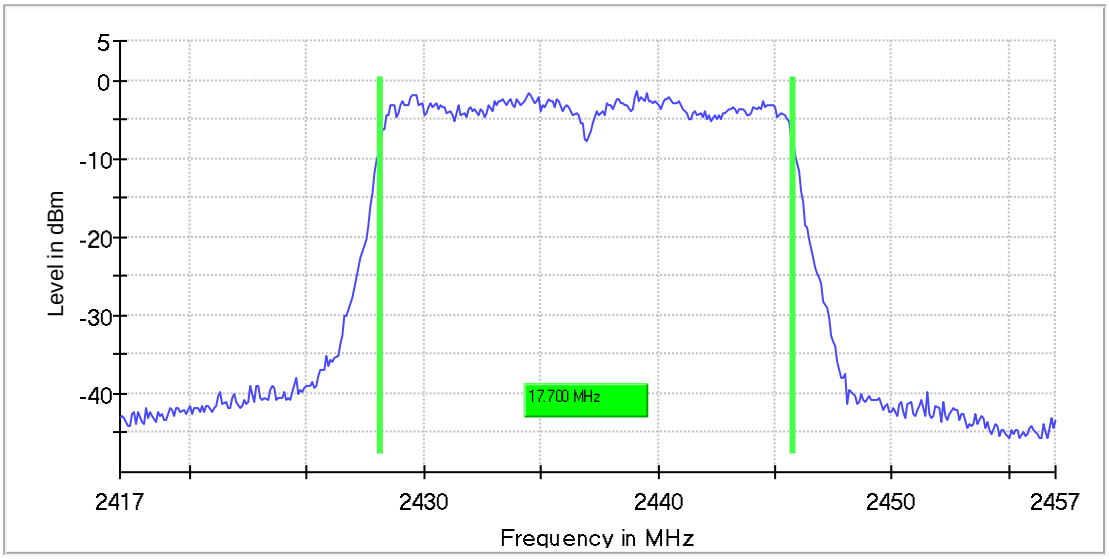
DUT Frequency (MHz)	Result
2412.000000	PASS

99% Occupied Bandwidth CH6 n mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	17.700000	---	---	2428.100000	2445.800000

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

DUT Frequency (MHz)	Result
2437.000000	PASS

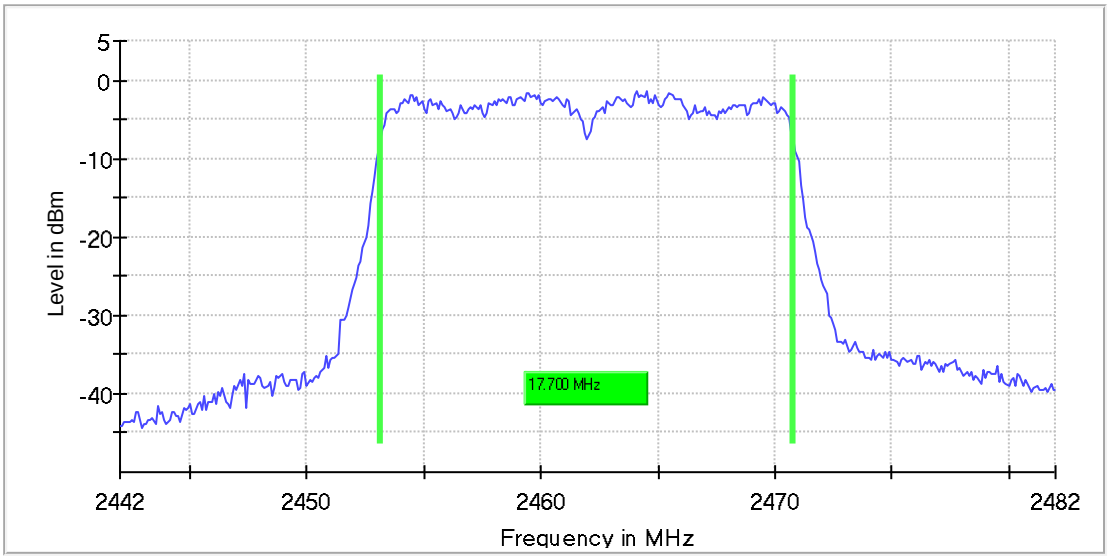


99% Occupied Bandwidth CH11 n mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	17.700000	---	---	2453.100000	2470.800000

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

DUT Frequency (MHz)	Result
2462.000000	PASS



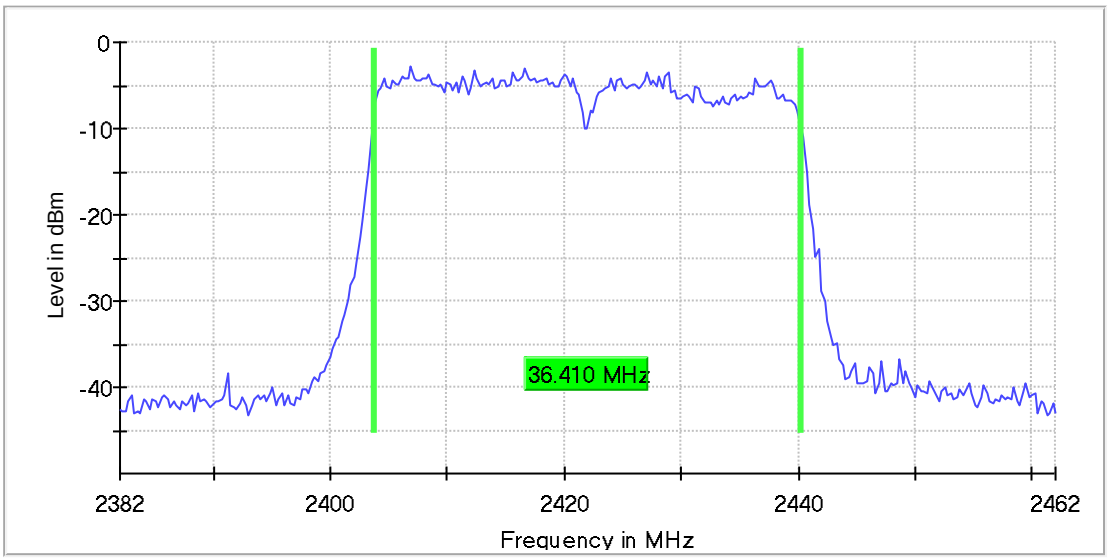
1.5.4. n-mode(HT40)

99% Occupied Bandwidth CH3_n mode_MCS7

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.410256	---	---	2403.794872	2440.205128

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

DUT Frequency (MHz)	Result
2422.000000	PASS

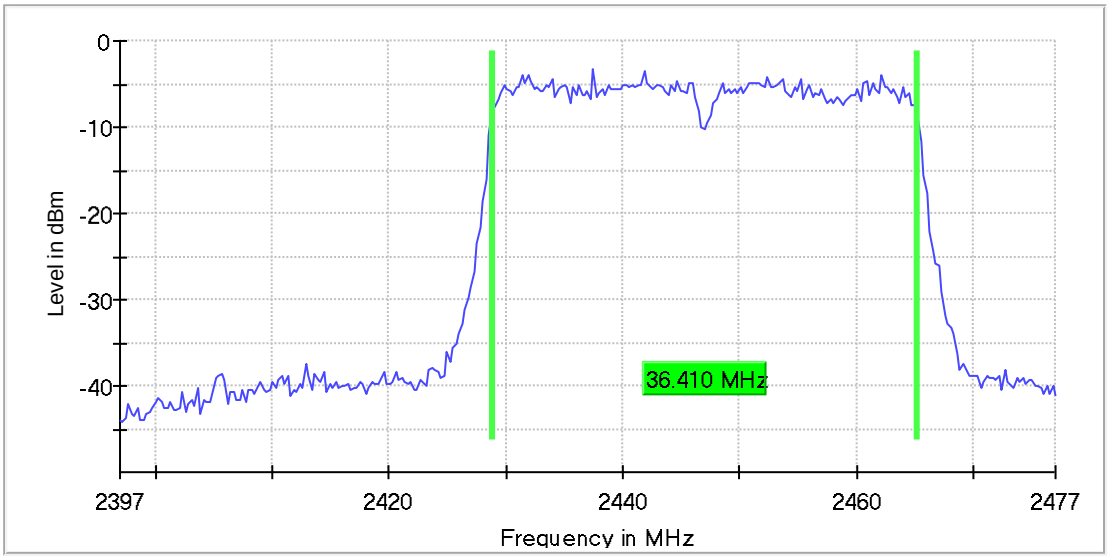


99% Occupied Bandwidth CH9_n mode_MCS7

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	36.410256	---	---	2428.794872	2465.205128

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

DUT Frequency (MHz)	Result
2437.000000	PASS



1.6. Frequency Stability

1.6.1. Tmin – Vnom

Modulation	Channel	99% OBW	Tnom - Vnom		Vnom -Tmin	
			left Bandedge	right Bandedge	left Bandedge	right Bandedge
	MHz	MHz	MHz	MHz	MHz	MHz
b-mode 1Mbit/s	2412	13.40000	2405.2000	2418.6000	2405.1000	2418.7000
	2437	13.40000	2430.2000	2443.6000	2430.2000	2443.7000
	2462	13.30000	2455.3000	2468.6000	2455.3000	2468.7000
g-mode 12 Mbit/s	2412	16.60000	2403.7000	2420.3000	2403.7000	2420.3000
	2437	16.60000	2428.7000	2445.3000	2428.7000	2445.3000
	2462	16.60000	2453.7000	2470.3000	2453.7000	2470.3000
n-mode HT20 MCS0	2412	17.60000	2403.2000	2420.8000	2403.2000	2420.8000
	2437	17.70000	2428.1000	2445.8000	2428.2000	2445.8000
	2462	17.70000	2453.1000	2470.8000	2453.2000	2470.9000
n-mode HT40 MCS1	2422	36.41026	2403.7949	2440.2051	2403.7949	2440.2051
	2452	36.41026	2433.7949	2470.2051	2403.7949	2440.2051

1.6.2. Tmax – Vnom

Modulation	Channel	99% OBW	Tnom - Vnom		Vnom -Tmax	
			left Bandedge	right Bandedge	left Bandedge	right Bandedge
	MHz	MHz	MHz	MHz	MHz	MHz
b-mode 1Mbit/s	2412	13.40000	2405.2000	2418.6000	2405.1000	2418.7000
	2437	13.40000	2430.2000	2443.6000	2430.2000	2443.6000
	2462	13.30000	2455.3000	2468.6000	2455.2000	2468.6000
g-mode 12 Mbit/s	2412	16.60000	2403.7000	2420.3000	2403.7000	2420.3000
	2437	16.60000	2428.7000	2445.3000	2428.7000	2445.3000
	2462	16.60000	2453.7000	2470.3000	2453.6000	2470.3000
n-mode HT20 MCS0	2412	17.60000	2403.2000	2420.8000	2403.2000	2420.8000
	2437	17.70000	2428.1000	2445.8000	2428.1000	2445.8000
	2462	17.70000	2453.1000	2470.8000	2453.1000	2470.8000
n-mode HT40 MCS1	2422	36.41026	2403.7949	2440.2051	2403.7949	2440.2051
	2452	36.41026	2433.7949	2470.2051	2433.7949	2470.2051

1.6.3. Tnom – Vmin

Modulation	Channel	99% OBW	Tnom - Vnom		Vmin -Tnom	
			left Bandedge	right Bandedge	left Bandedge	right Bandedge
	MHz	MHz	MHz	MHz	MHz	MHz
b-mode 1Mbit/s	2412	13.40000	2405.2000	2418.6000	2405.2000	2418.8000
	2437	13.40000	2430.2000	2443.6000	2430.2000	2443.6000
	2462	13.30000	2455.3000	2468.6000	2455.2000	2468.6000
g-mode 12 Mbit/s	2412	16.60000	2403.7000	2420.3000	2403.7000	2420.3000
	2437	16.60000	2428.7000	2445.3000	2428.7000	2445.3000
	2462	16.60000	2453.7000	2470.3000	2453.7000	2470.3000
n-mode HT20 MCS0	2412	17.60000	2403.2000	2420.8000	2403.2000	2420.8000
	2437	17.70000	2428.1000	2445.8000	2428.1000	2445.8000
	2462	17.70000	2453.1000	2470.8000	2453.1000	2470.8000
n-mode HT40 MCS1	2422	36.41026	2403.7949	2440.2051	2403.7949	2440.2051
	2452	36.41026	2433.7949	2470.2051	2433.7949	2470.2051

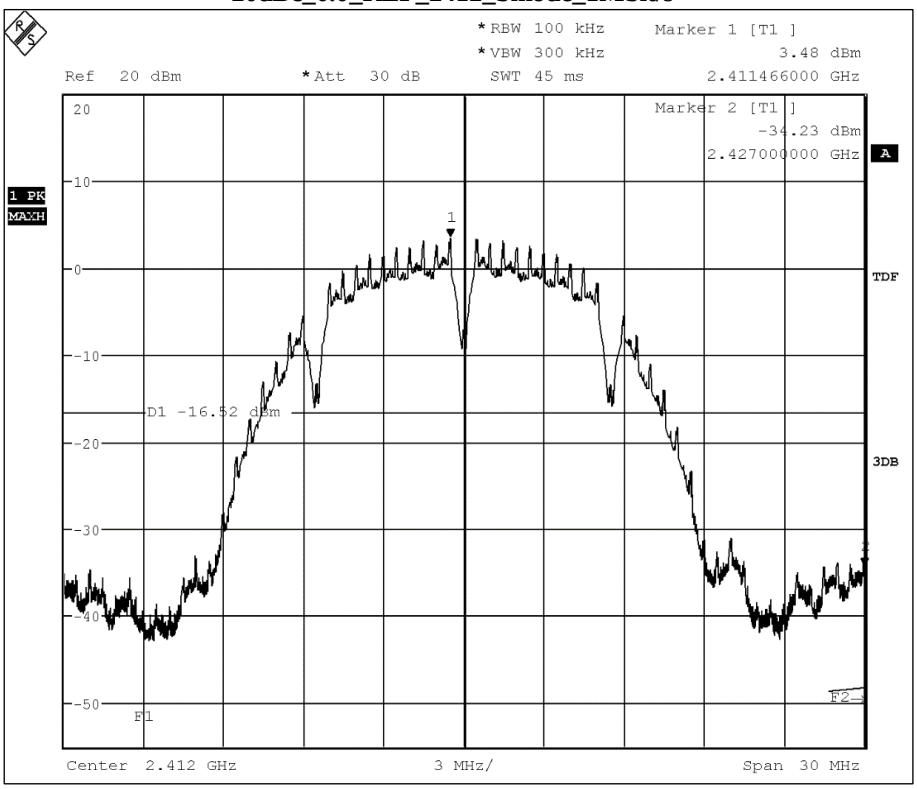
1.6.4. Tnom – Vmax

Modulation	Channel	99% OBW	Tnom - Vnom		Vmax -Tnom	
			left Bandedge	right Bandedge	left Bandedge	right Bandedge
	MHz	MHz	MHz	MHz	MHz	MHz
b-mode 1Mbit/s	2412	13.40000	2405.2000	2418.6000	2405.2000	2418.7000
	2437	13.40000	2430.2000	2443.6000	2430.2000	2443.6000
	2462	13.30000	2455.3000	2468.6000	2455.2000	2468.6000
g-mode 12 Mbit/s	2412	16.60000	2403.7000	2420.3000	2403.7000	2420.3000
	2437	16.60000	2428.7000	2445.3000	2428.7000	2445.3000
	2462	16.60000	2453.7000	2470.3000	2453.6000	2470.3000
n-mode HT20 MCS0	2412	17.60000	2403.2000	2420.8000	2403.2000	2420.8000
	2437	17.70000	2428.1000	2445.8000	2428.1000	2445.8000
	2462	17.70000	2453.1000	2470.8000	2453.1000	2470.8000
n-mode HT40 MCS1	2422	36.41026	2403.7949	2440.2051	2403.7949	2440.2051
	2452	36.41026	2433.7949	2470.2051	2433.7949	2470.2051

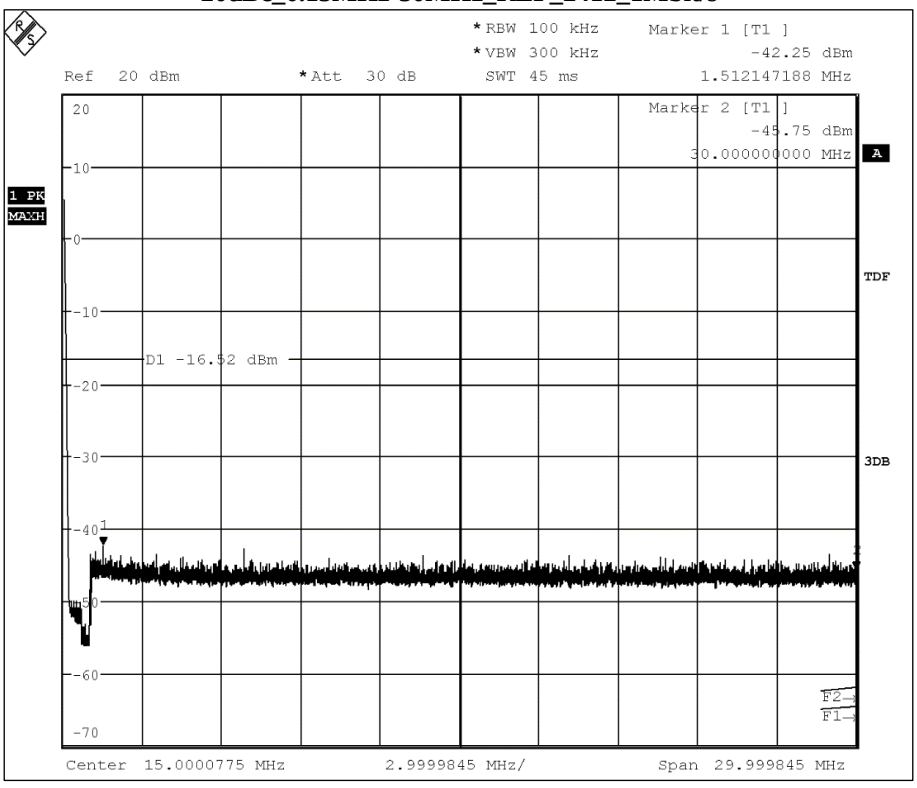
1.7. 20dBc Tx Spurious Emissions

1.7.1. b-mode

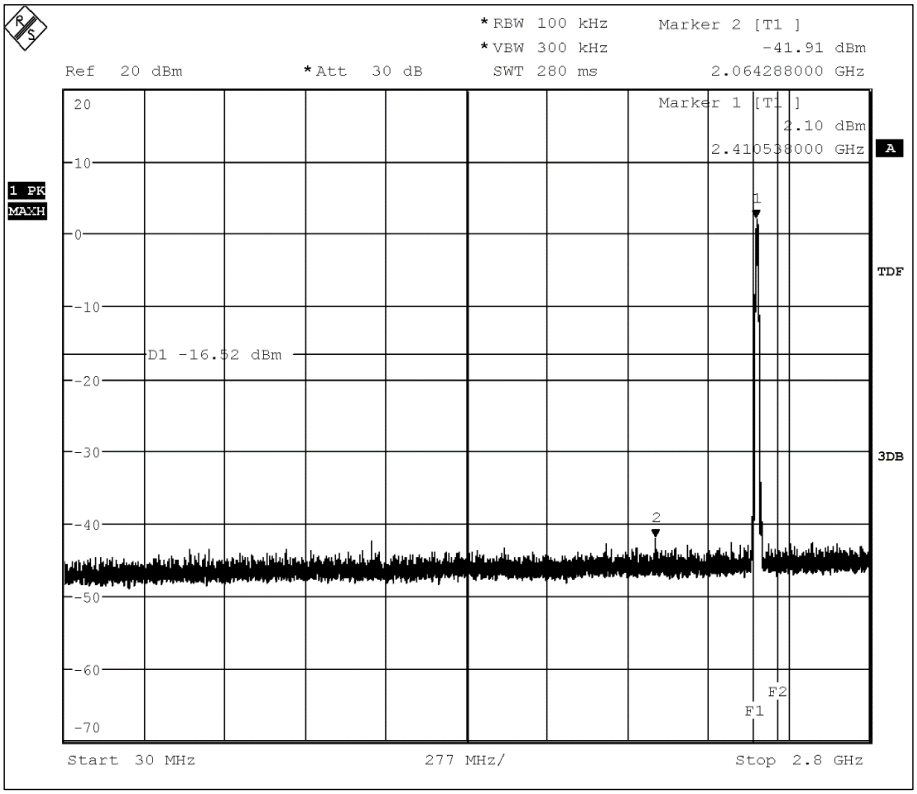
20dBc_0.0_REF_2412_bmode_1Mbit/s



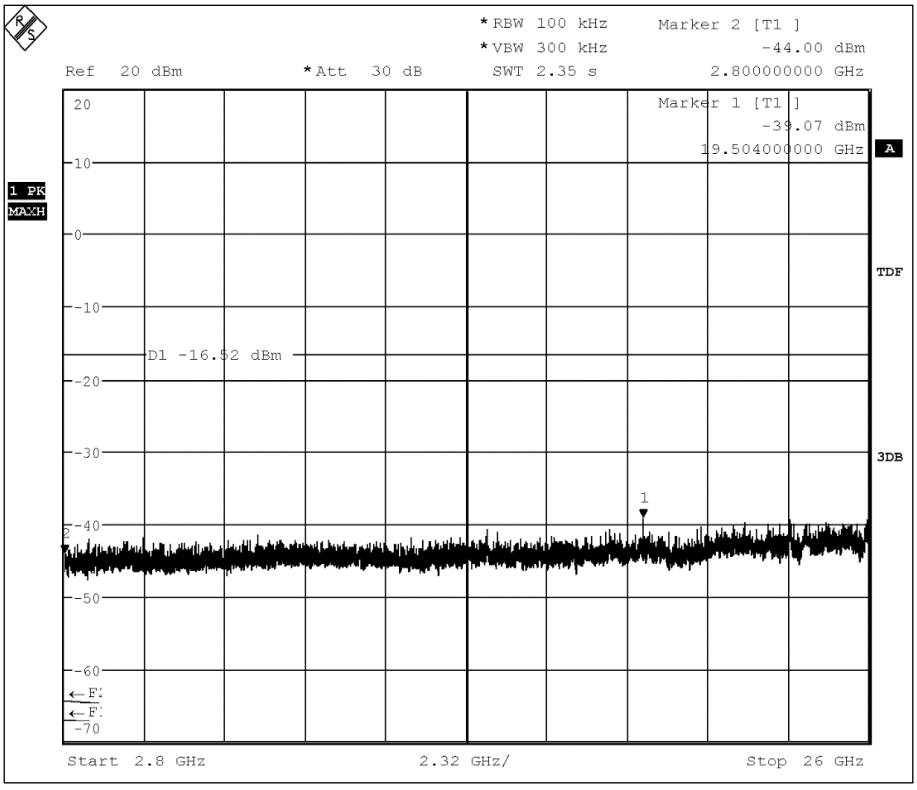
20dBc_0.15MHz-30MHz_REF_2412_1Mbit/s



20dBc_0.30MHz-2.8GHz_2412_1Mbit/s

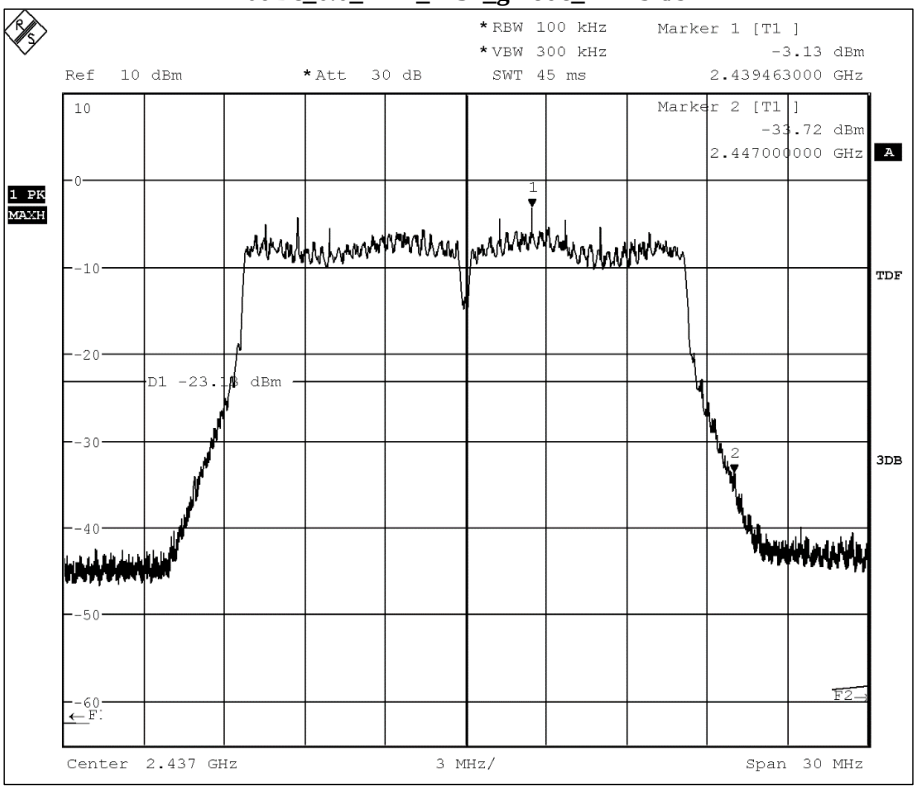


20dBc_2.8GHz-26GHz_2412_1Mbit/s

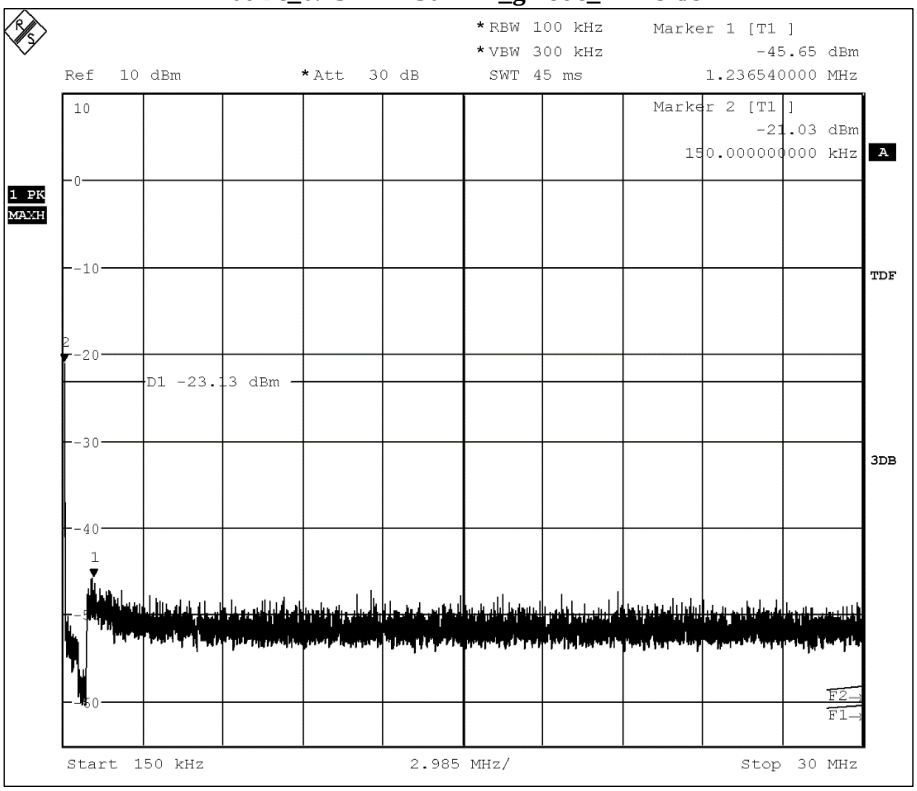


1.7.2. g-mode

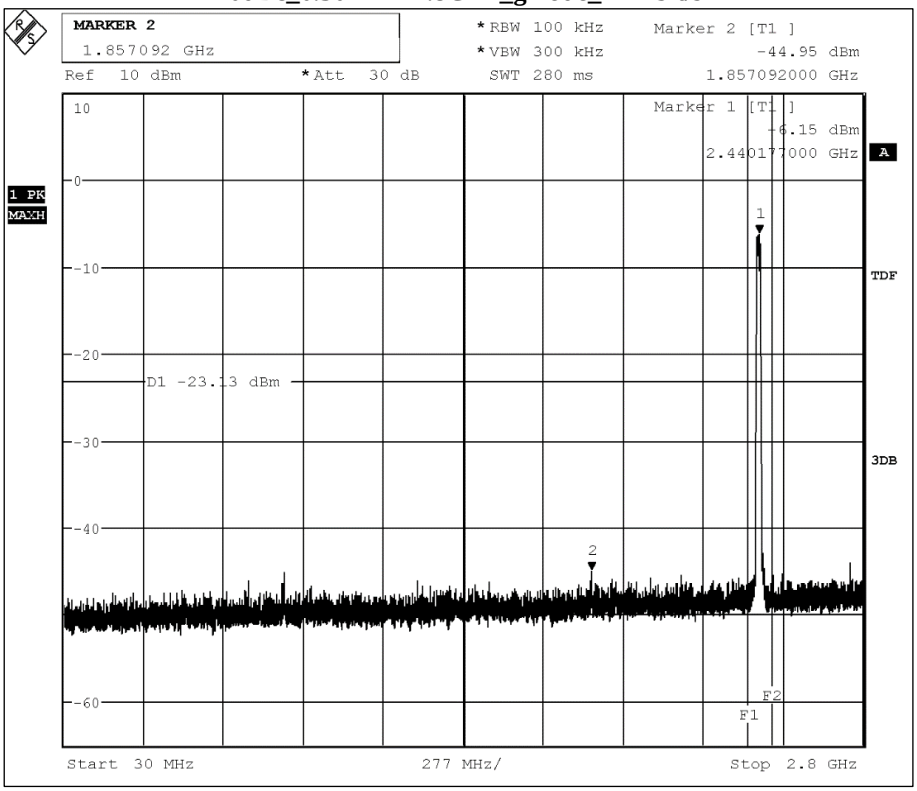
20dBc_0.0_REF_2437_gmode_12Mbit/s



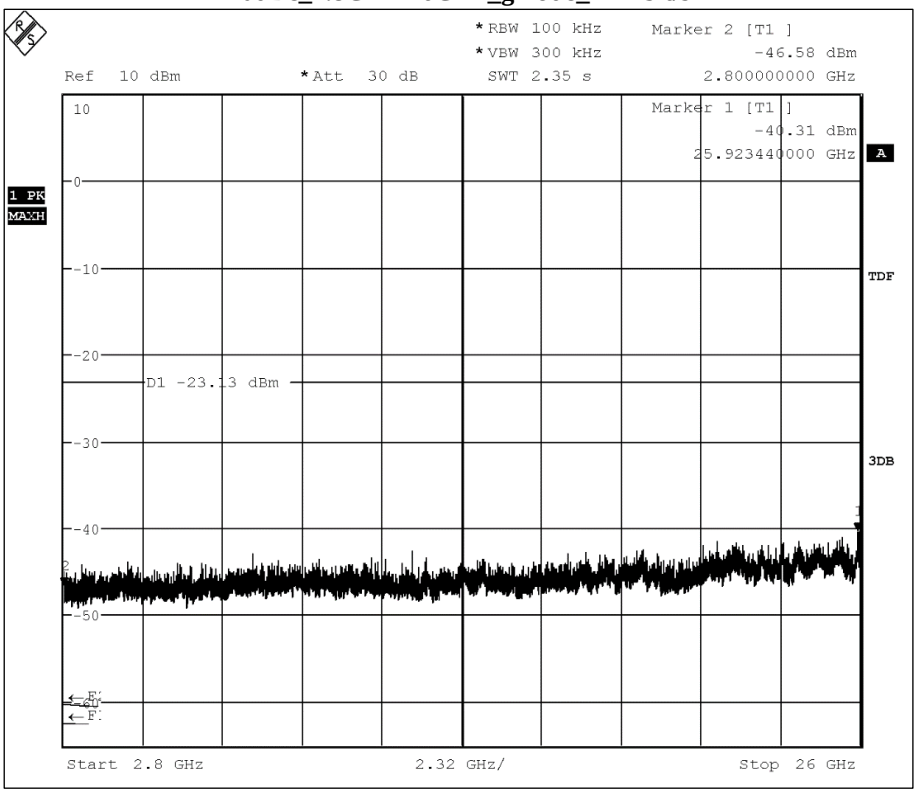
20dBc_0.15MHz-30MHz_gmode_12Mbit/s



20dBc_0.30MHz-2.8GHz_gmode_12Mbit/s

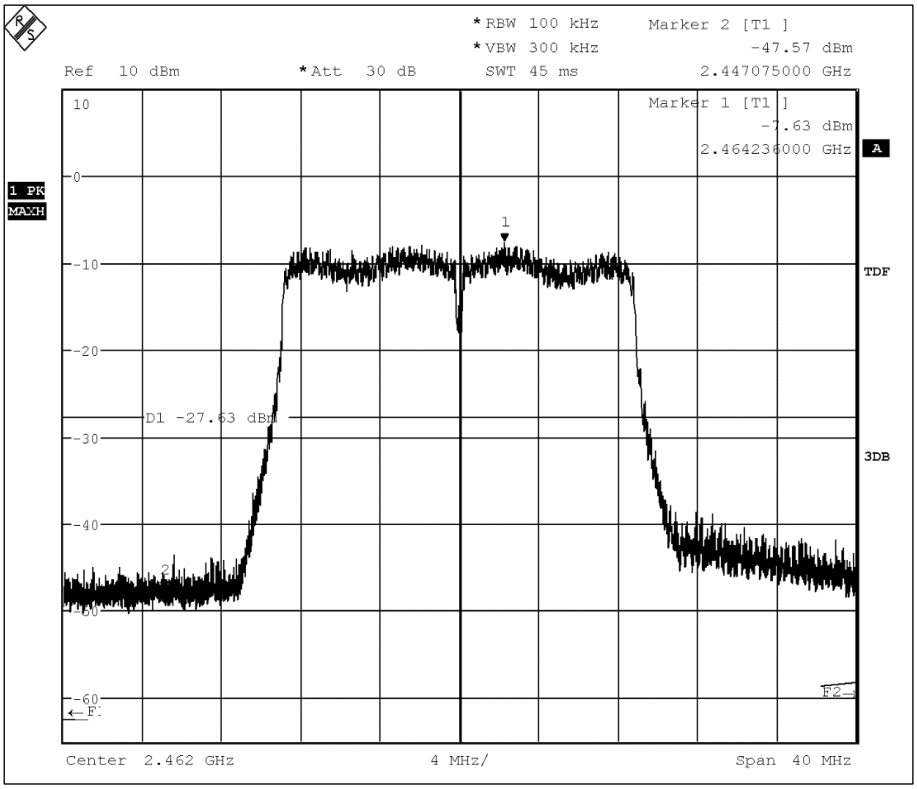


20dBc_2.8GHz-26GHz_gmode_12Mbit/s

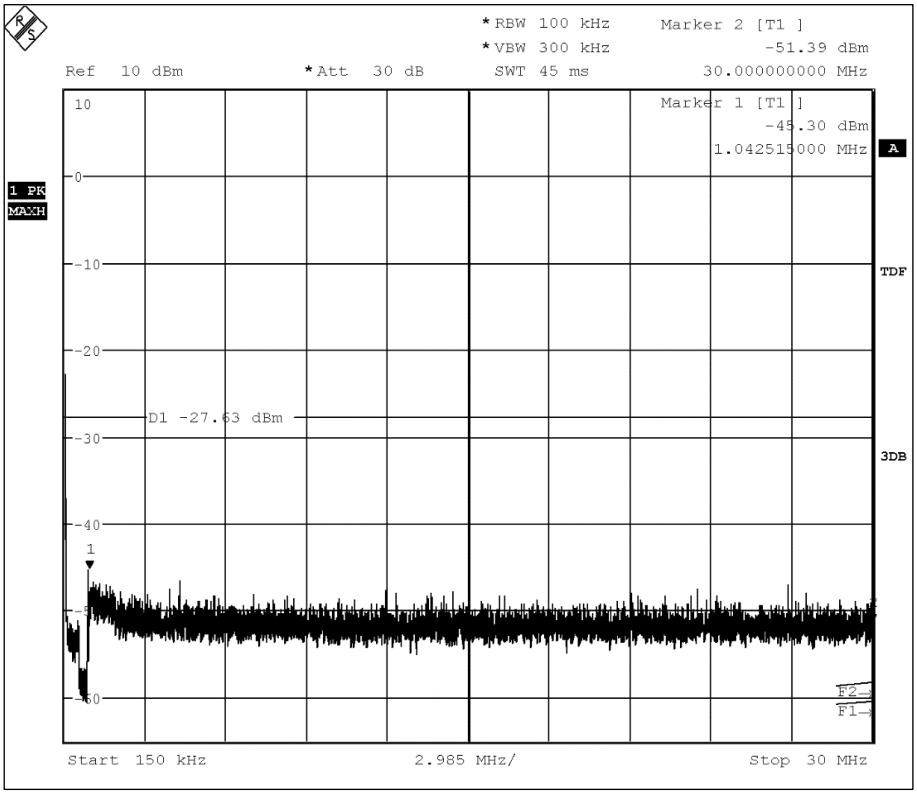


1.7.3. n-mode(HT20)

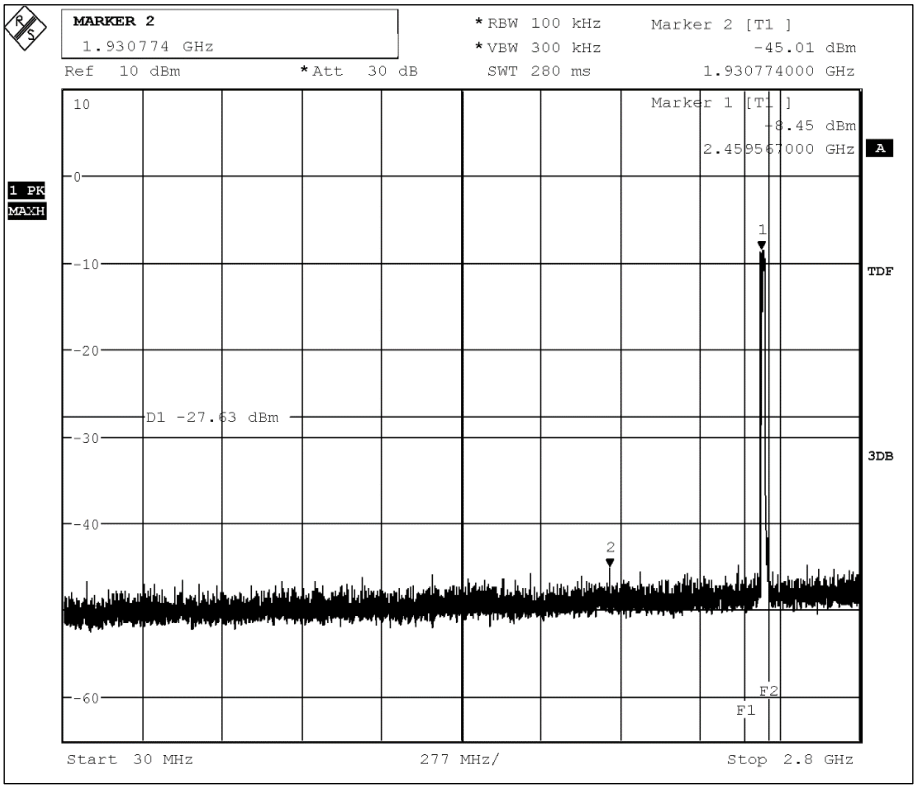
20dBc_0.0_REF_2462_nmode_MCS0



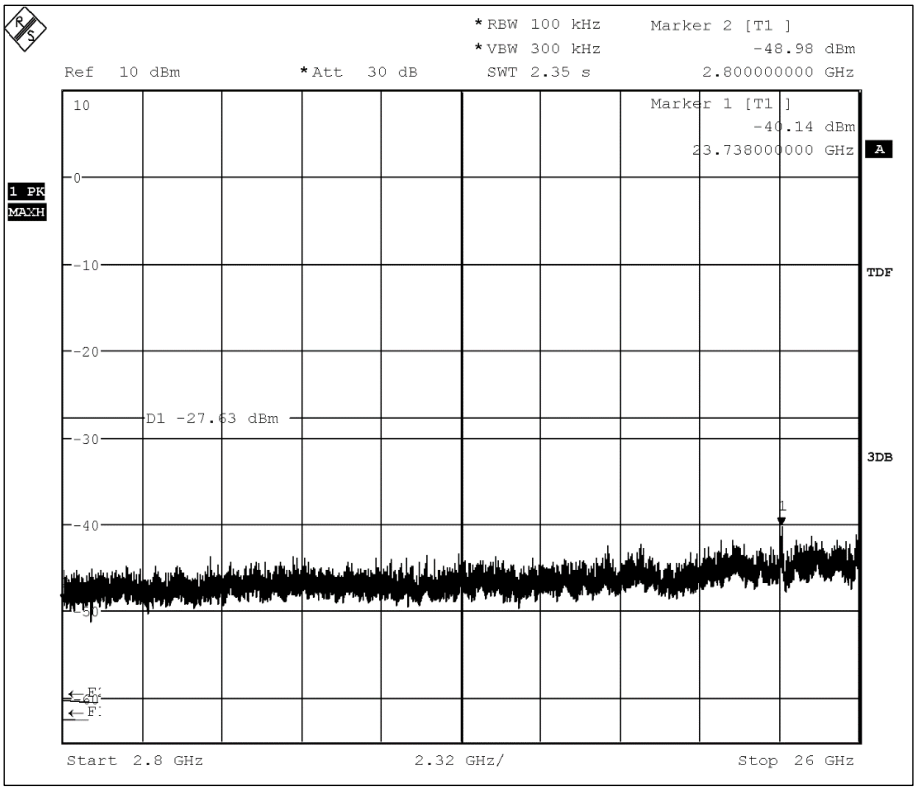
20dBc_0.15MHz-30MHz_2462_nmode_MCS0



20dBc_0.30MHz-2.8GHz_2462_nmode_MCS0

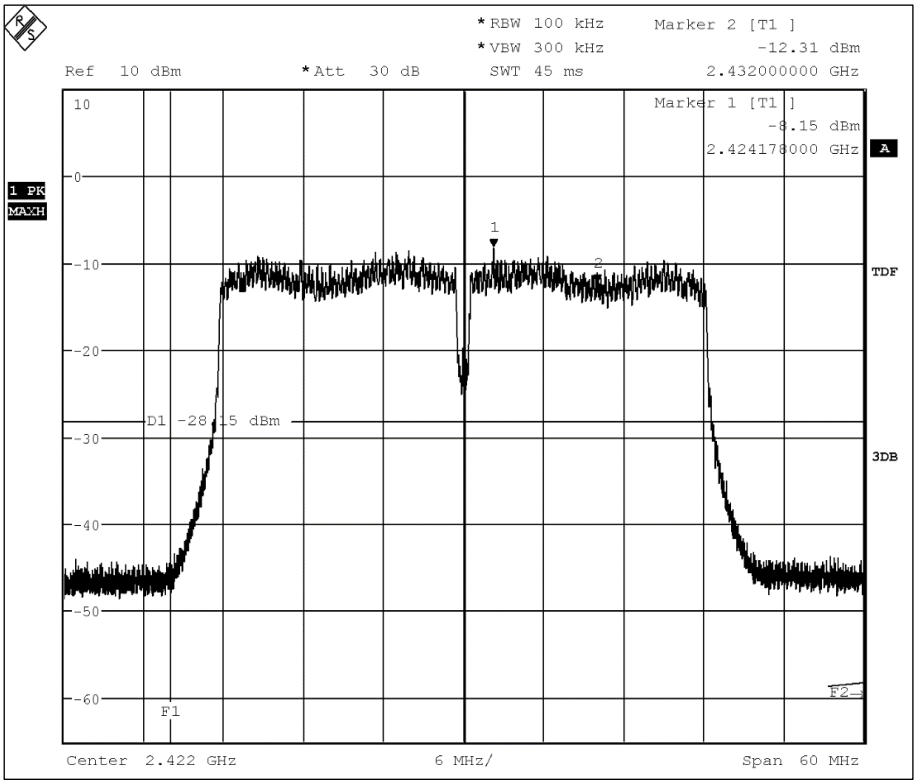


20dBc_2.8GHz-26GHz_2462_nmode_MCS0

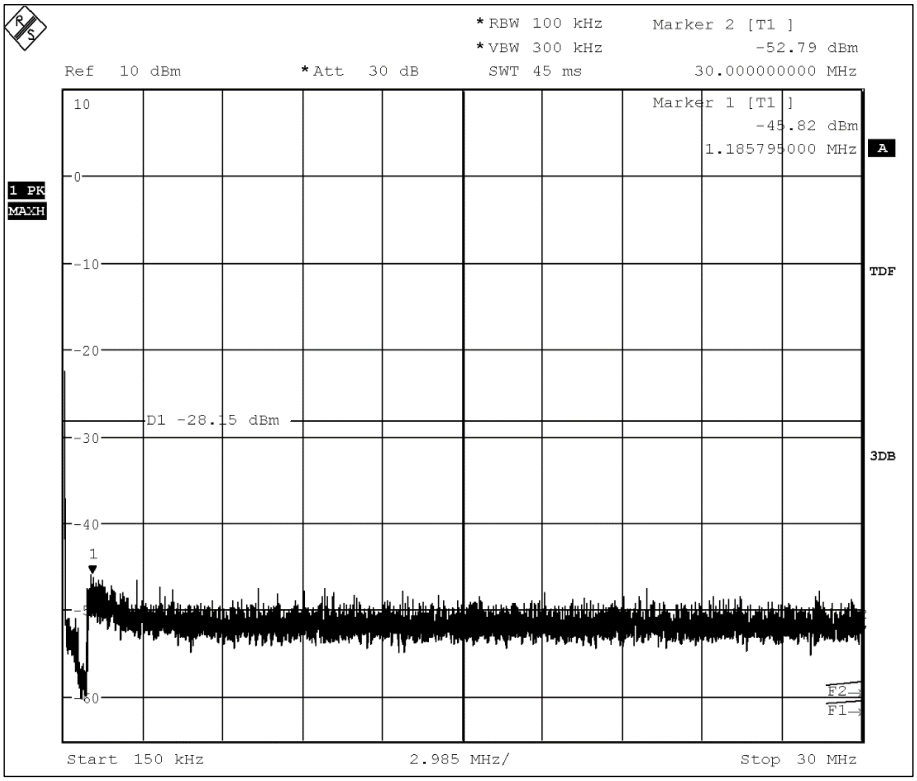


1.7.4. n-mode(HT40)

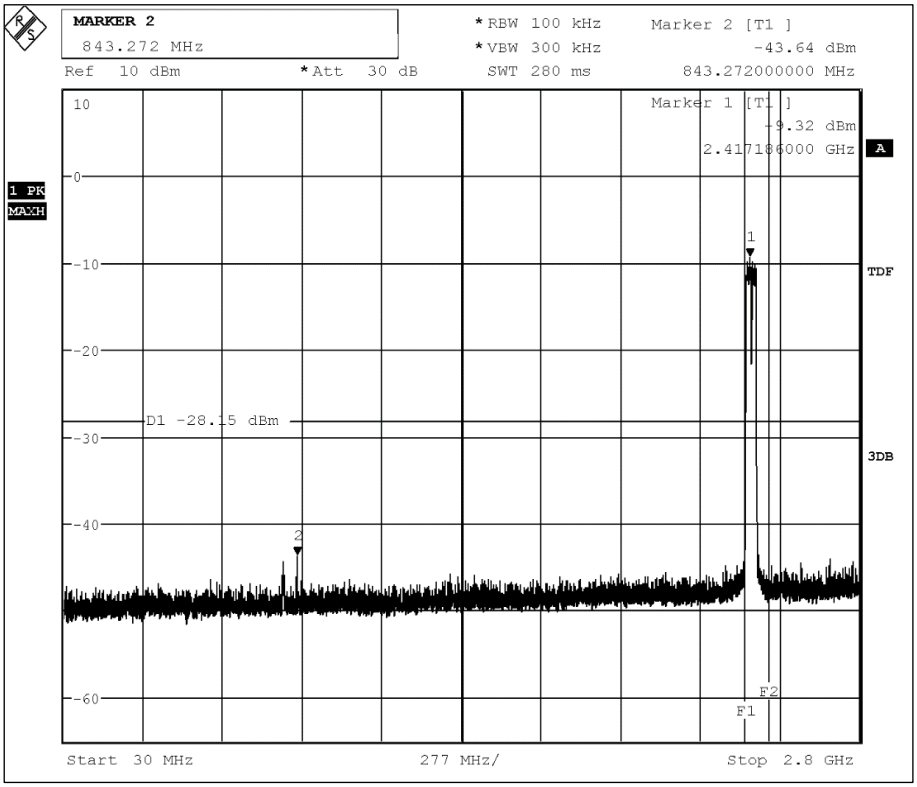
20dBc_0.0_REF_2422_nmode_HT40_MCS76



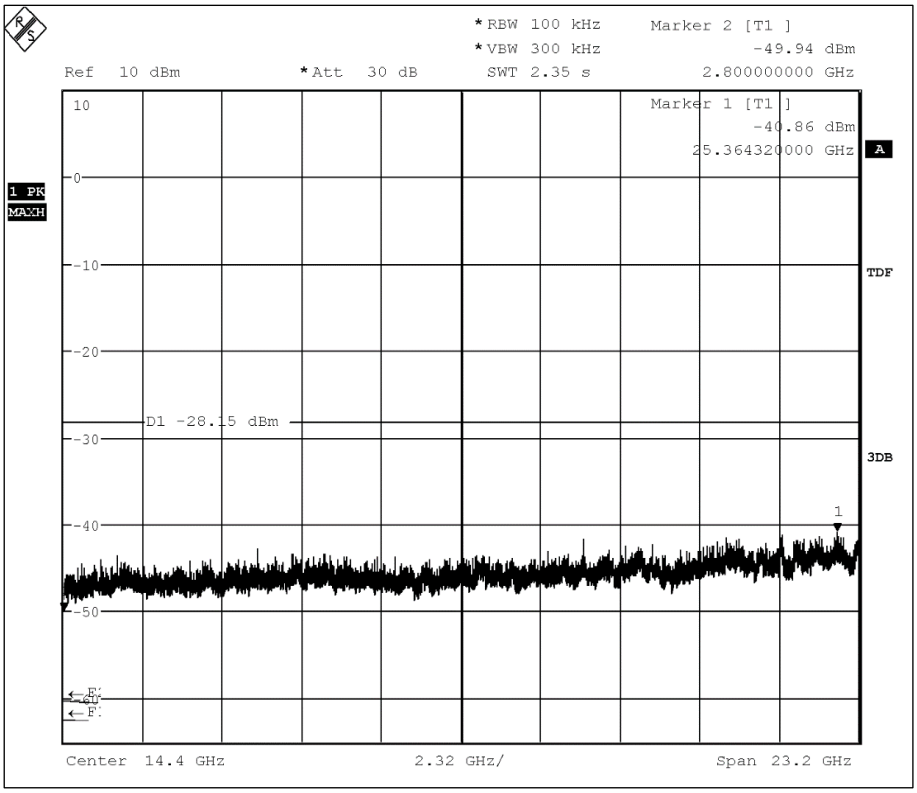
20dBc_0.15MHz-30MHz_2422_nmode_HT40_MCS7



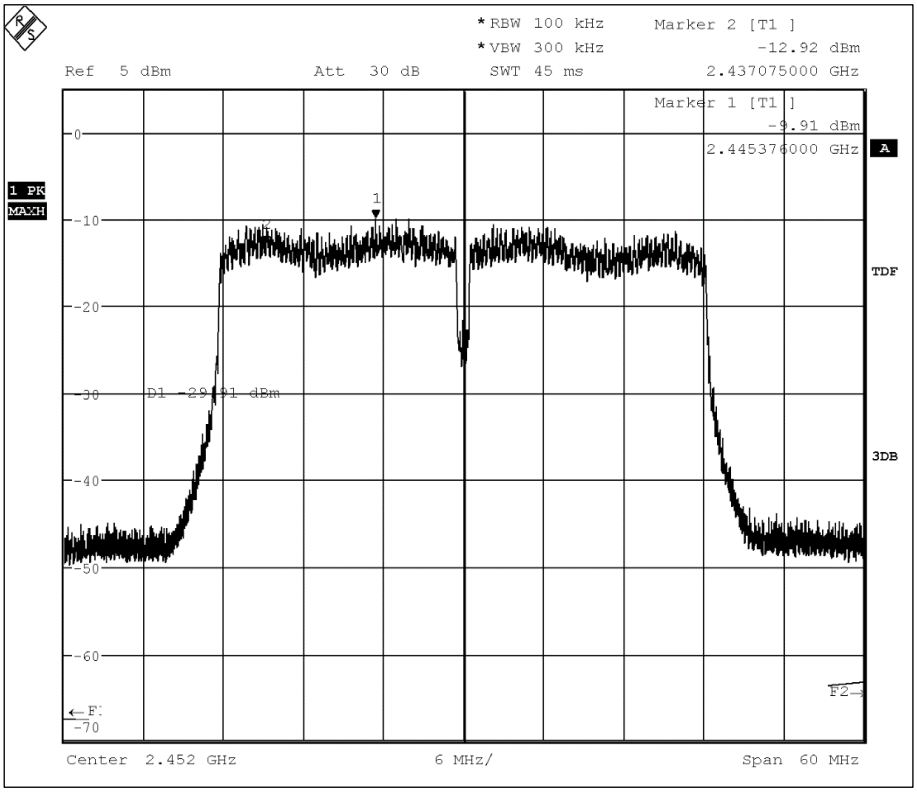
20dBc_0.30MHz-2.8GHz_2422_nmode_HT40_MCS7



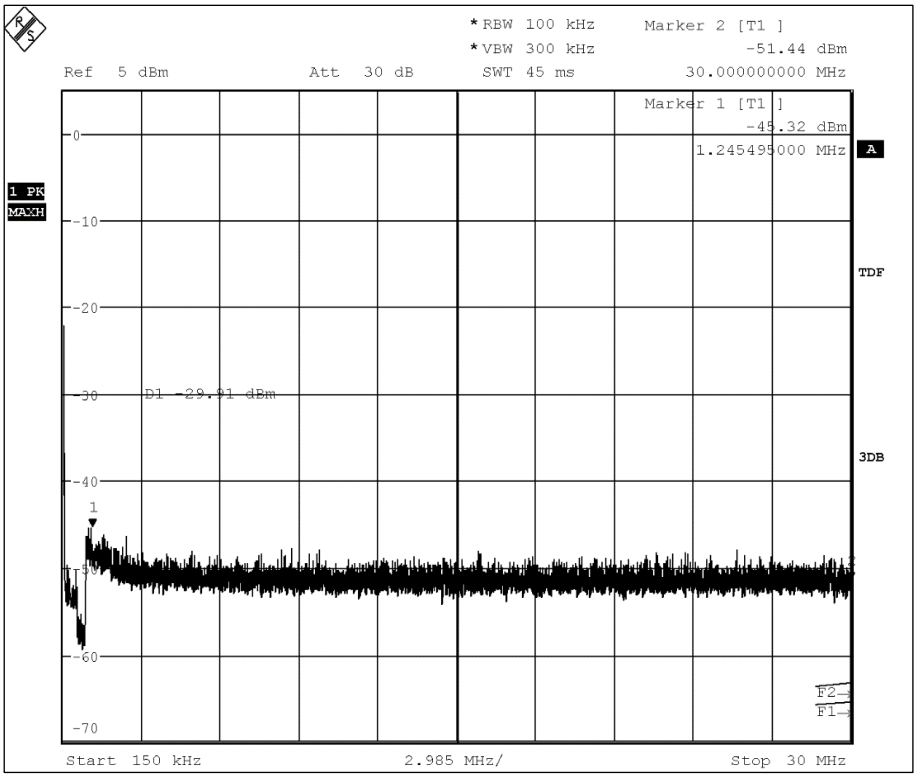
20dBc_2.8GHz-26GHz_2422_nmode_HT40_MCS7



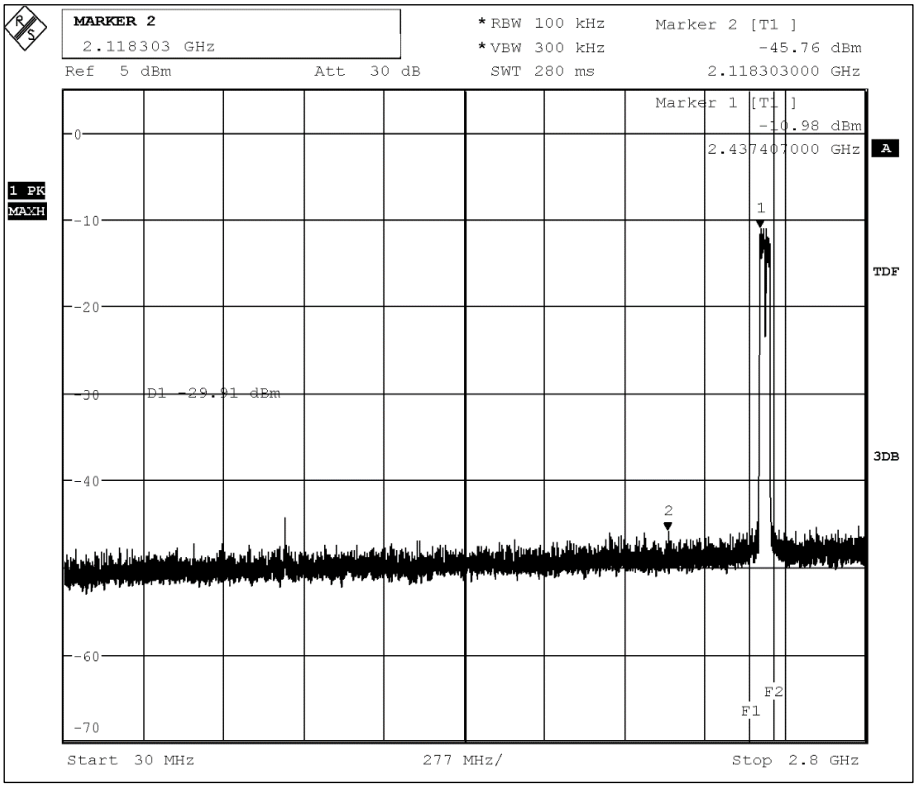
20dBc_0.0_REF_2452_nmode_HT40_MCS7



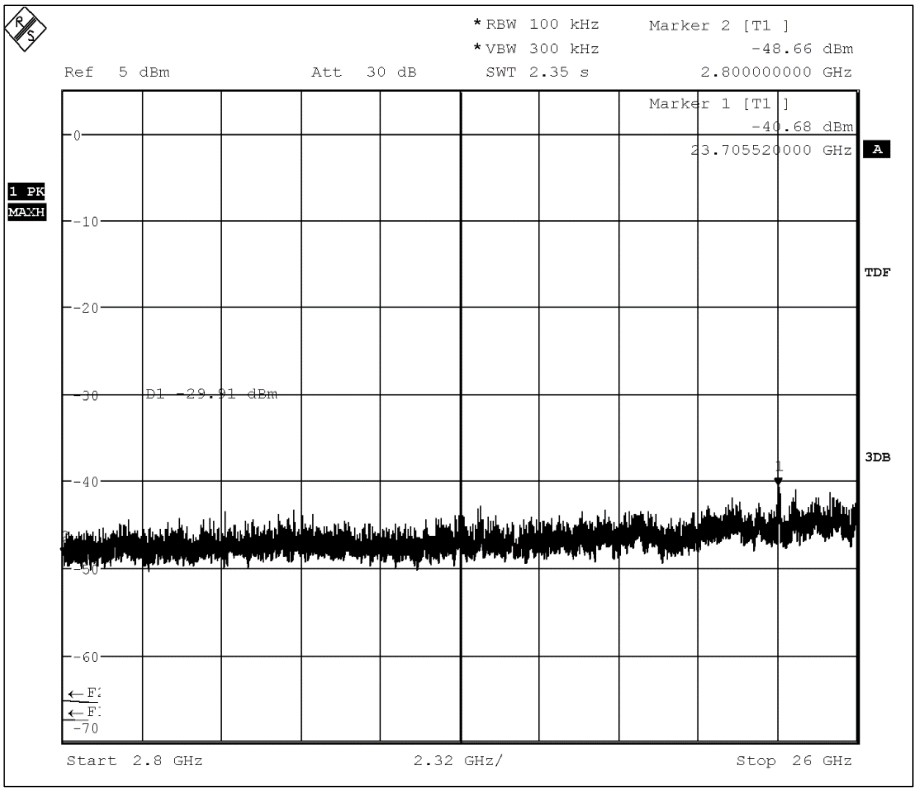
20dBc_0.15MHz-30MHz_2452_nmode_HT40_MCS7



20dBc_0.30MHz-2.8GHz_2452_nmode_HT40_MCS7



20dBc_2.8GHz-26GHz_2452_nmode_HT40_MCS7



2. Radiated Measurements

2.1. Radiated magnetic field measurements below 30 MHz

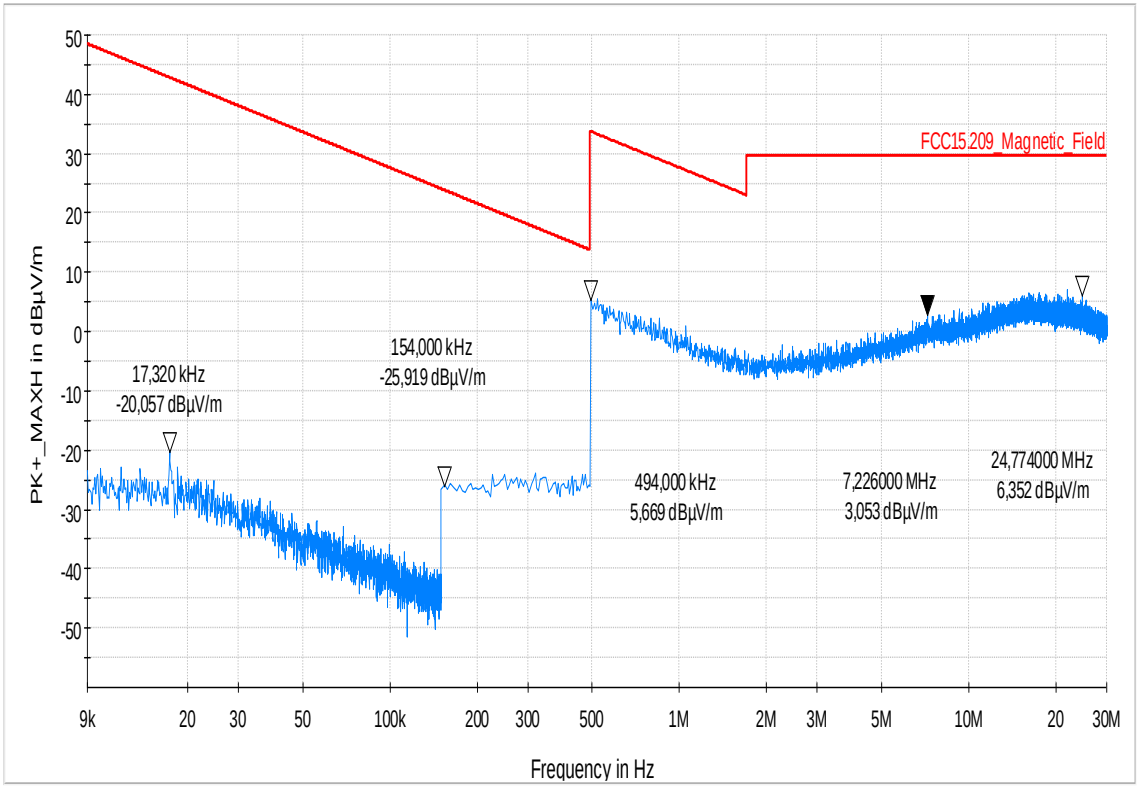
2.01a_b-mode_ch01

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:	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 5
Operator:	TFra
Operating Mode:	WLAN 2.4 | b-mode | 1Mbit/s | ch01
Comment 1:	Eut is Laying
Environmental Conditions::	Humidity : 62,8%rH; Temperature: 22,6°C
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



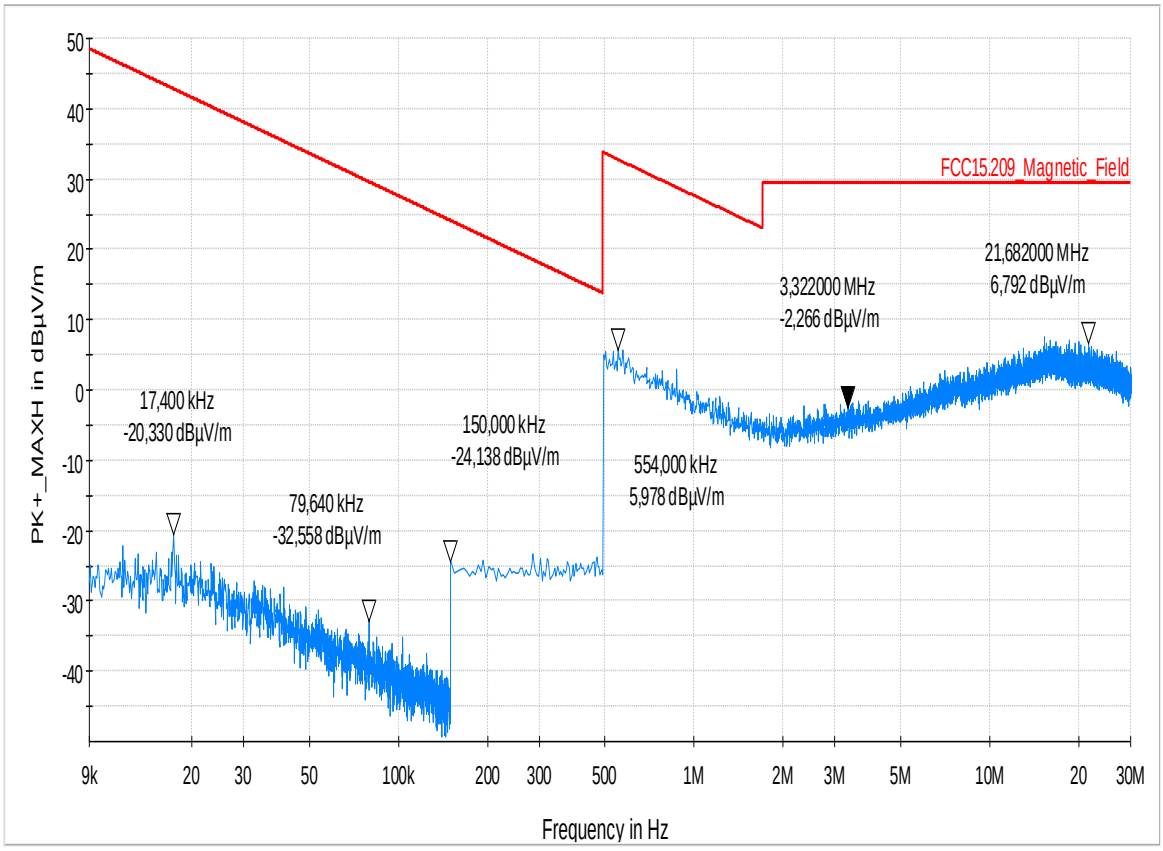
2.01b_b-mode_ch01

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:	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 5
Operator:	TFra
Operating Mode:	WLAN 2.4 | b-mode | 1Mbit/s | ch01
Comment 1:	Eut is Standing
Environmental Conditions::	Humidity : 64,9%rH; Temperature: 22,5°C
EUT Setup:	Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



2.2. Radiated electric field measurement 30 MHz to 1 GHz

3.01a_b-mode_ch01

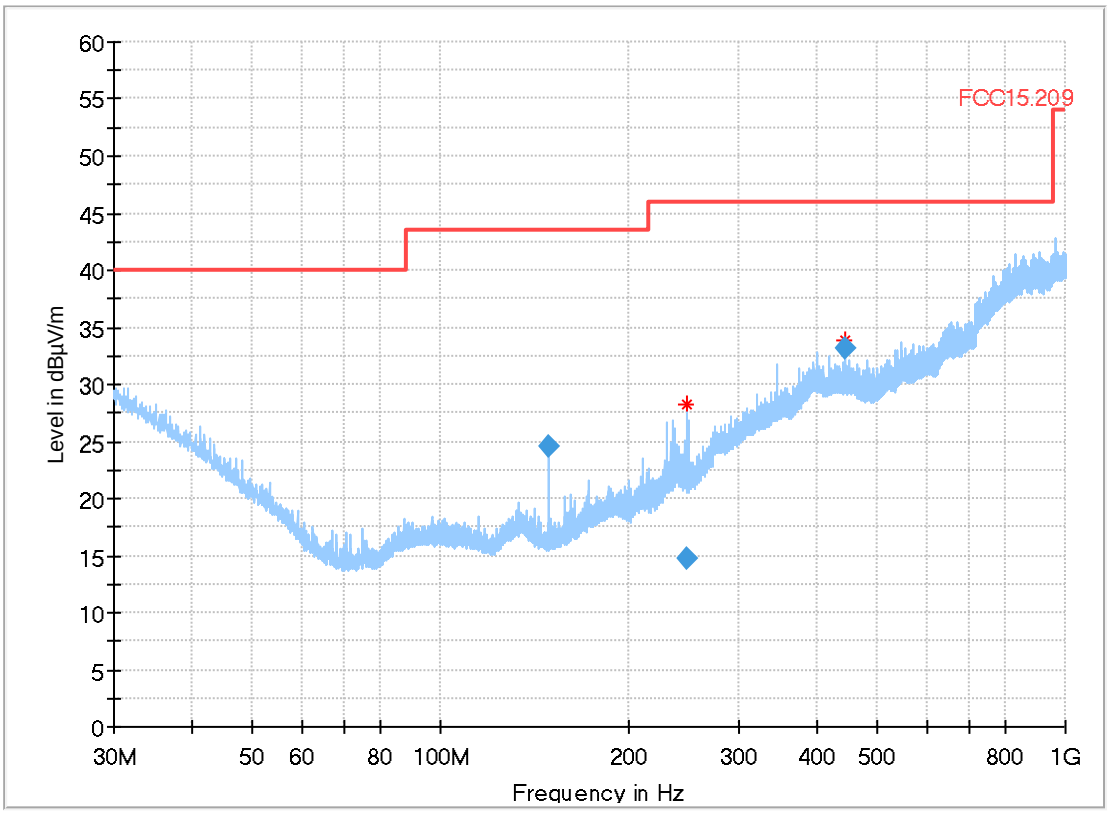
Common Information

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 5
Operator:	MKh
Operating Mode:	WLAN 2.4 GHz
Power during tests:	13.5V DC
Comment 1:	b-mode | 1Mbit/s| ch01
Environmental Conditions::	Humidity : 65,3%rH; Temperature: 21,6°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.55	43.50	18.95	120.000	180.0	H	107.0	8.6
247.256000	14.74	46.00	31.26	120.000	181.0	H	115.0	13.1
445.500000	33.18	46.00	12.82	120.000	186.0	H	70.0	19.4

3.01b_b-mode_ch01

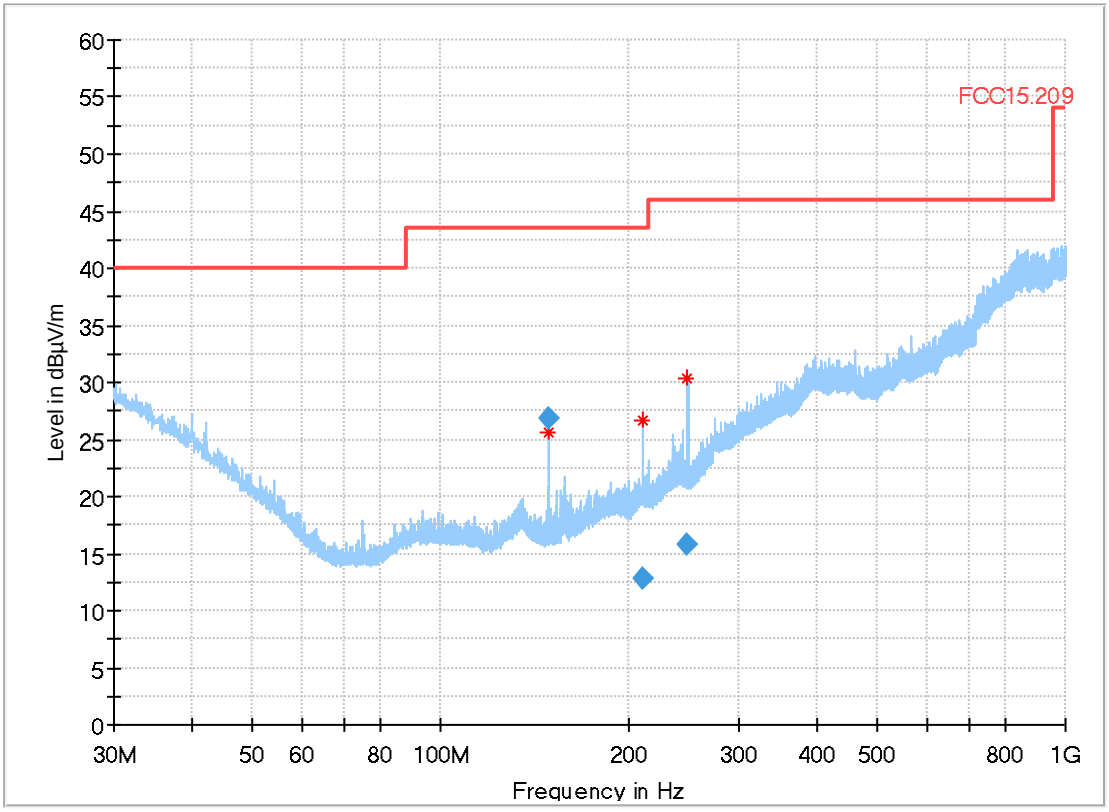
Common Information

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 5
Operator:	MKh
Operating Mode:	b-mode | 1Mbit/s| ch01
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 65,8%rH; Temperature: 21,4°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	26.92	43.50	16.58	120.000	200.0	H	99.0	8.6
211.268000	12.76	43.50	30.74	120.000	216.0	V	349.0	11.7
247.112000	15.77	46.00	30.23	120.000	121.0	H	160.0	13.1

3.02a_g-mode_ch06

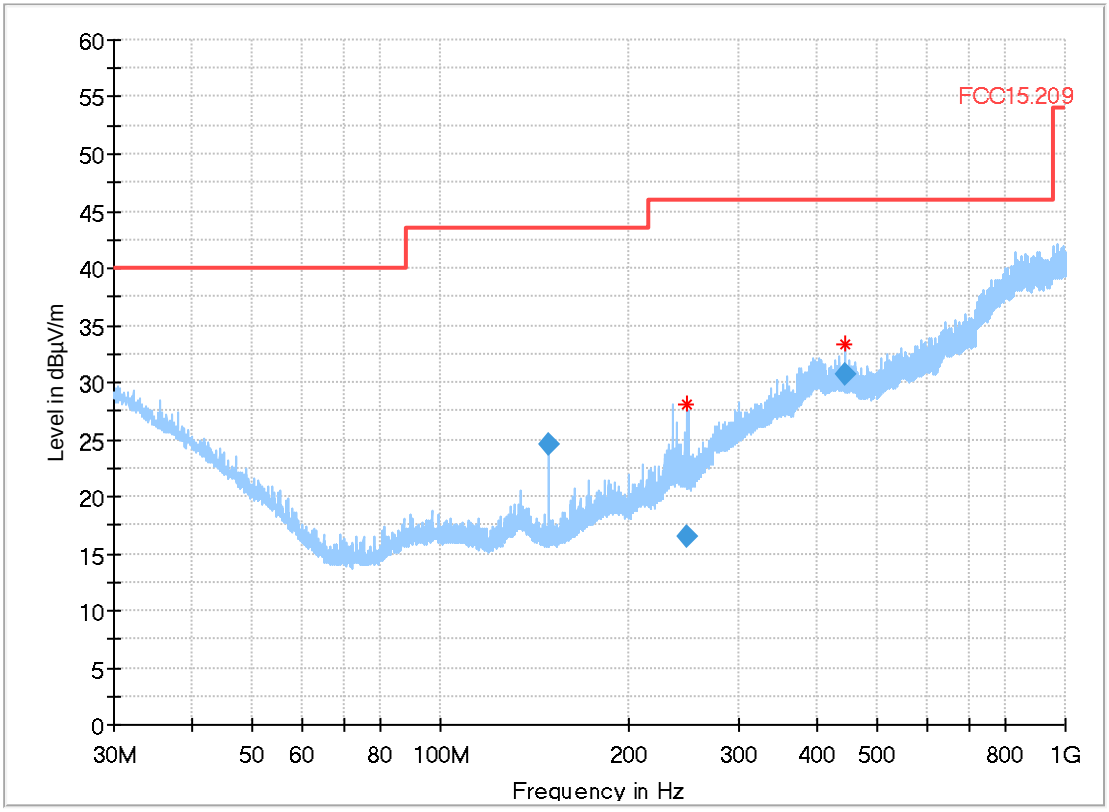
Common Information

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 5
Operator:	MKh
Operating Mode:	g-mode | 12Mbit/s| ch06
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 65,3%rH; Temperature: 21,7°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.53	43.50	18.97	120.000	220.0	H	89.0	8.6
247.128000	16.44	46.00	29.56	120.000	144.0	H	316.0	13.1
445.496000	30.69	46.00	15.31	120.000	179.0	H	63.0	19.4

3.02b_g-mode_ch06

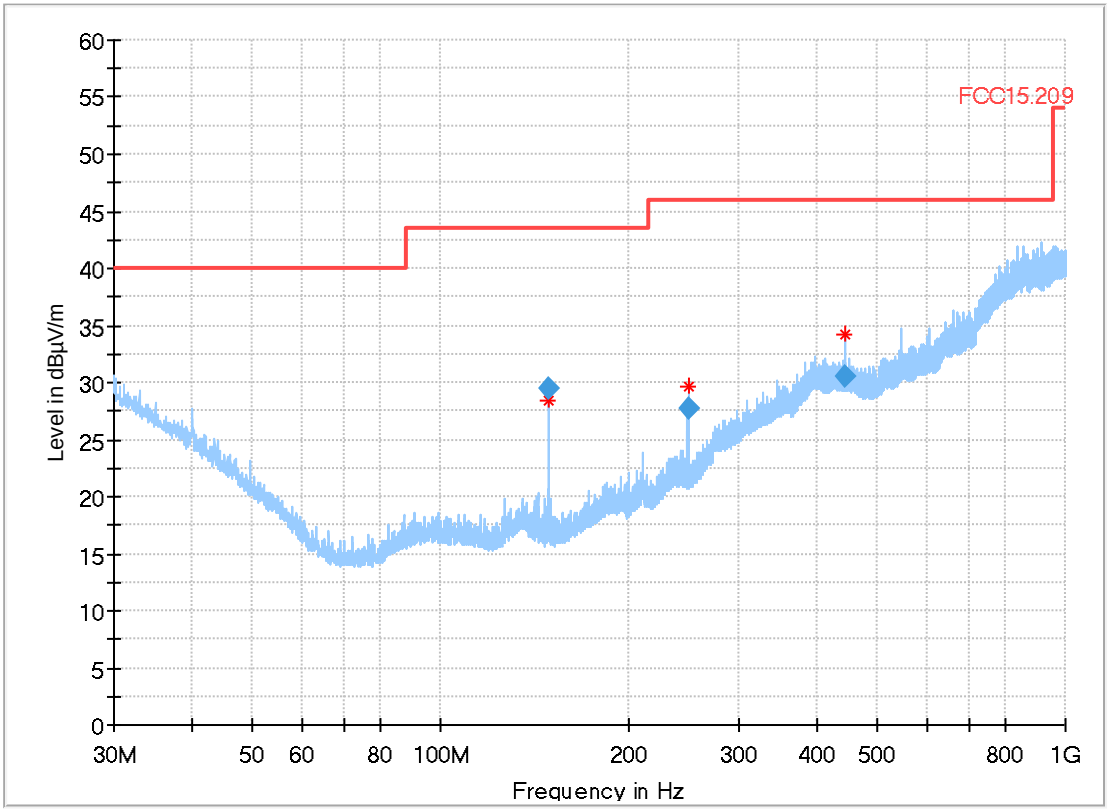
Common Information

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 5
Operator:	MKh
Operating Mode:	g-mode | 12Mbit/s| ch06
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 65,5%rH; Temperature: 21,7°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	29.47	43.50	14.03	120.000	167.0	H	304.0	8.6
249.992000	27.72	46.00	18.28	120.000	117.0	H	3.0	13.0
445.496000	30.47	46.00	15.53	120.000	129.0	V	171.0	19.4

3.03a_n-mode_ch11

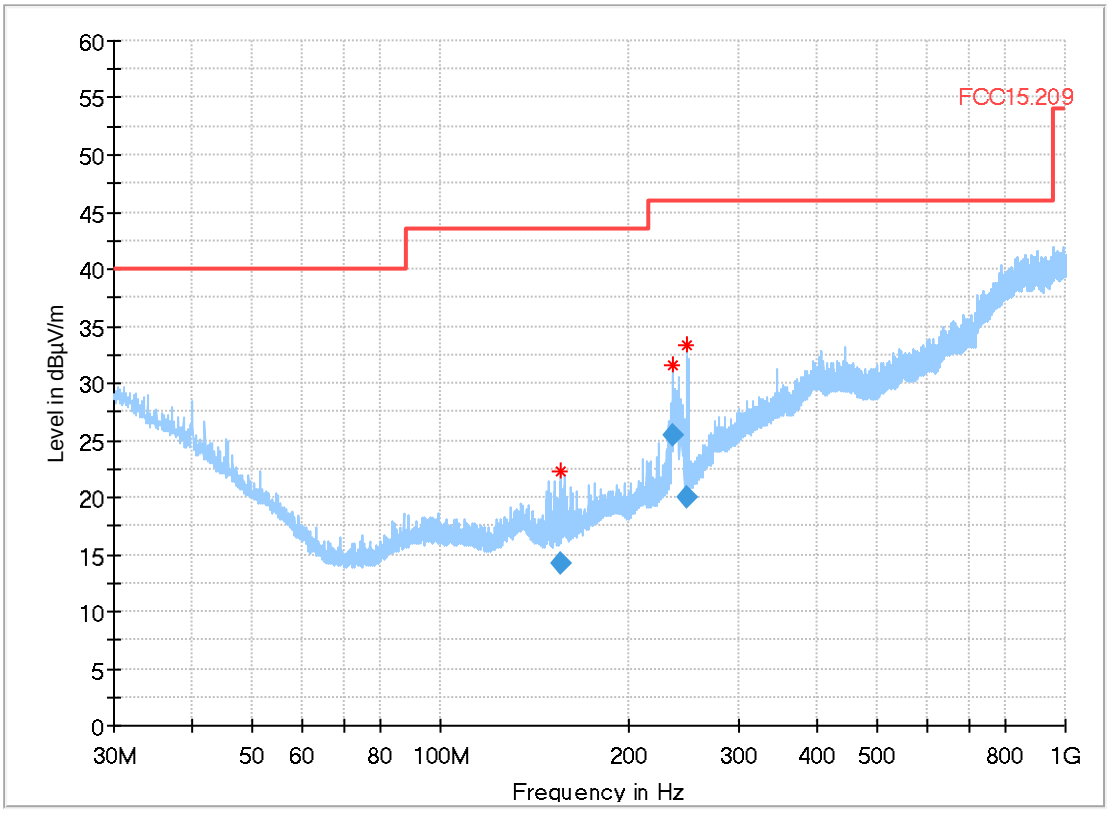
Common Information

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 5
Operator:	MKh
Operating Mode:	n-mode | MCS0 | ch11
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 64,6%rH; Temperature: 22,0°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
155.404000	14.26	43.50	29.24	120.000	134.0	H	248.0	8.9
235.224000	25.47	46.00	20.53	120.000	129.0	H	184.0	13.1
247.192000	19.93	46.00	26.07	120.000	143.0	H	196.0	13.1

3.03b_n-mode_ch11

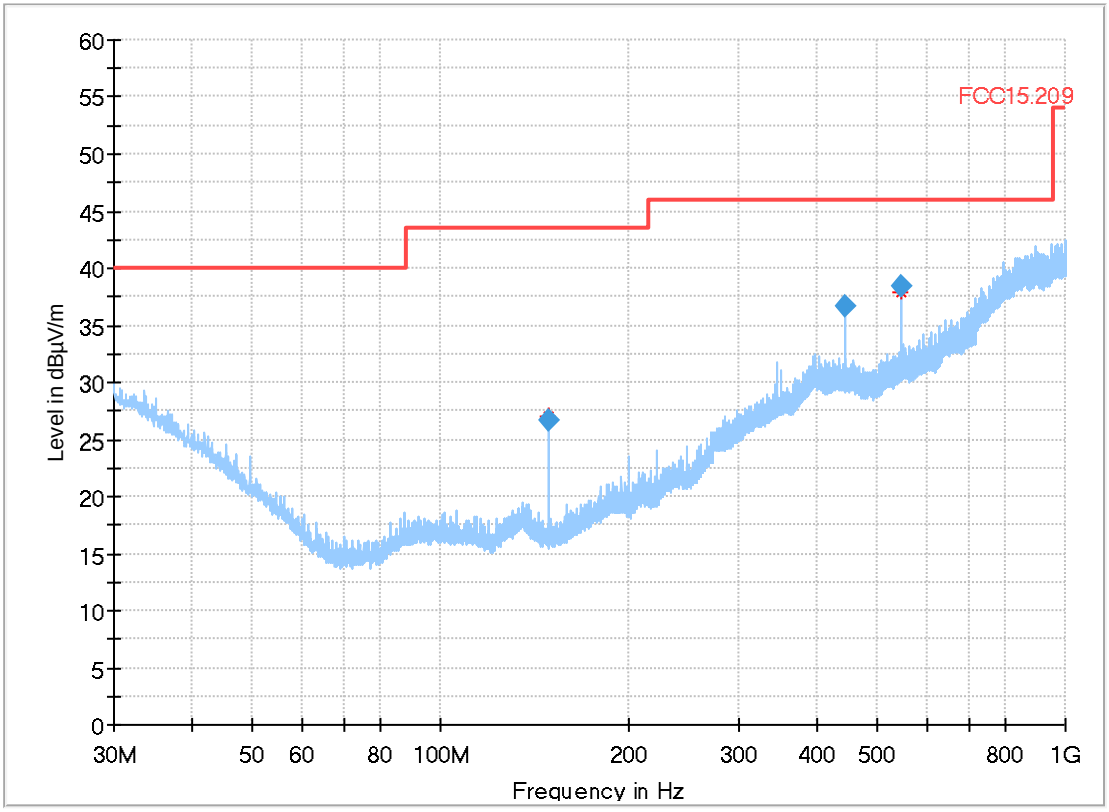
Common Information

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 5
Operator:	MKh
Operating Mode:	n-mode | MCS0 | ch11
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 64,0%rH; Temperature: 22,2°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	26.74	43.50	16.76	120.000	109.0	V	269.0	8.6
445.496000	36.60	46.00	9.40	120.000	113.0	V	163.0	19.4
544.496000	38.37	46.00	7.63	120.000	105.0	V	93.0	21.2

3.04a_n40-mode_ch03

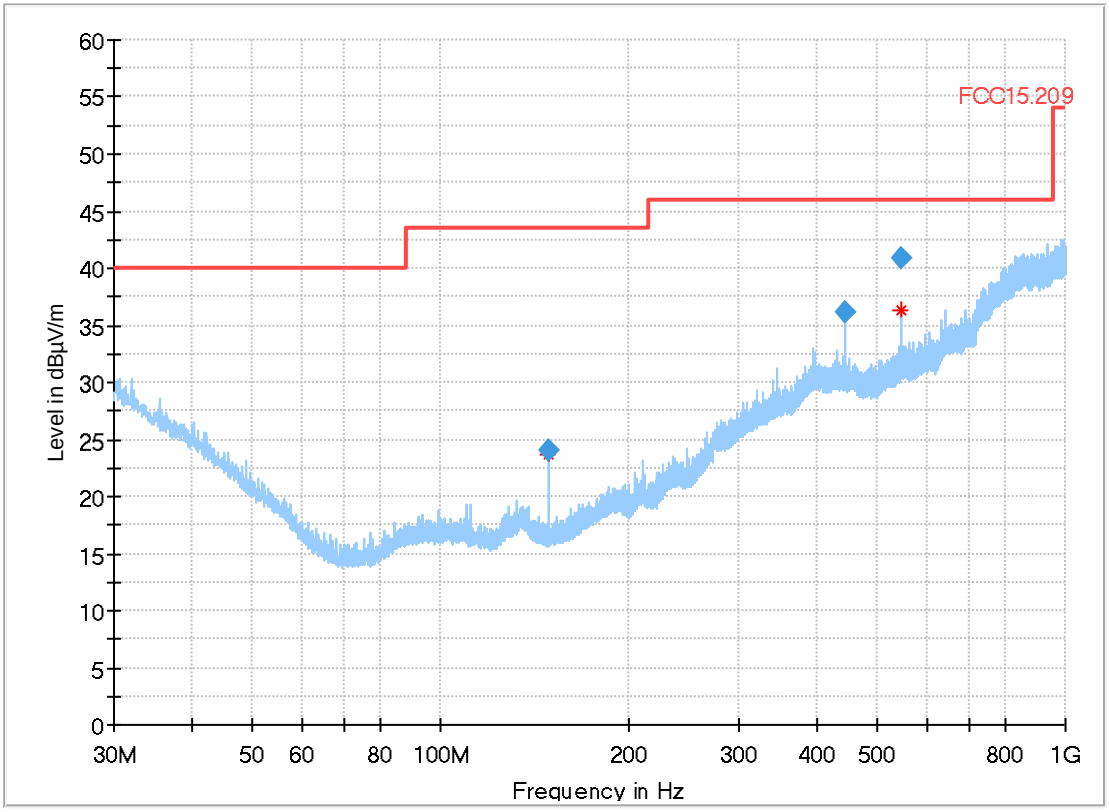
Common Information

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 5
Operator:	MKh
Operating Mode:	n40-mode | MCS7 | ch03
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 63,5%rH; Temperature: 22,4°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.11	43.50	19.39	120.000	105.0	V	68.0	8.6
445.496000	36.13	46.00	9.87	120.000	170.0	H	79.0	19.4
544.496000	40.94	46.00	5.06	120.000	145.0	H	133.0	21.2

3.04b_n40-mode_ch03

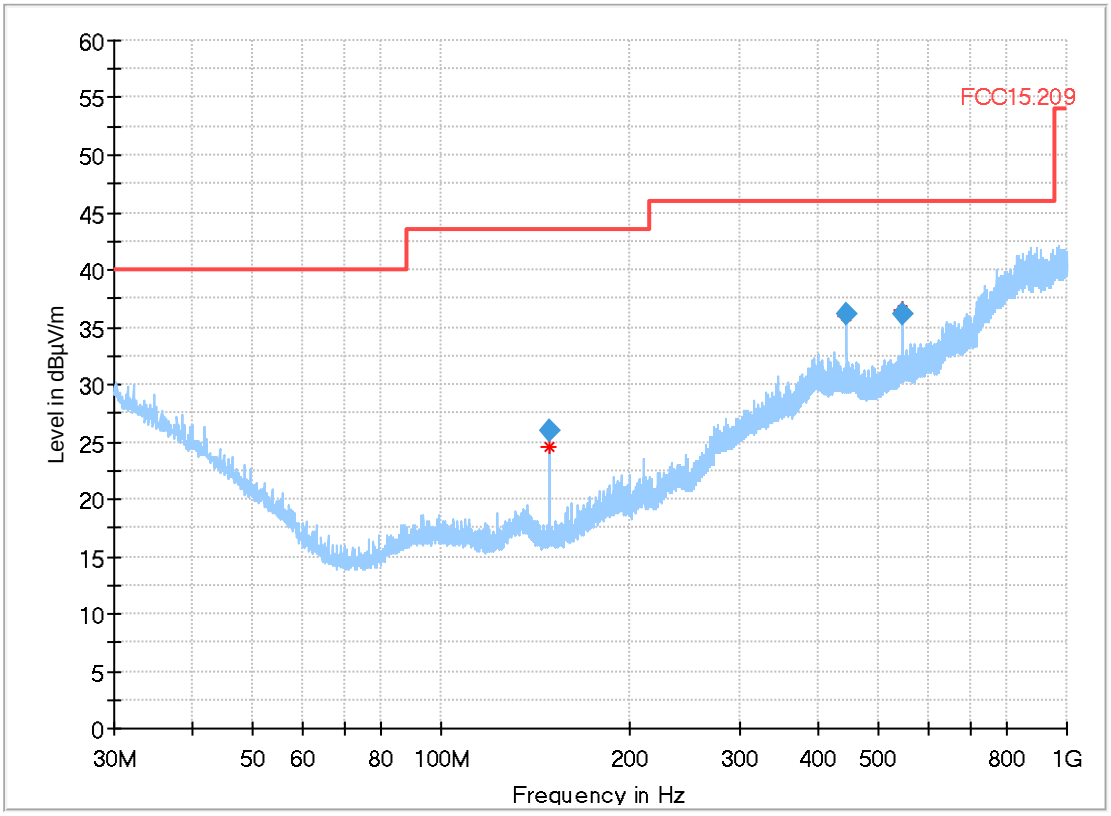
Common Information

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 5
Operator:	MKh
Operating Mode:	n40-mode | MCS7 | ch03
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 63,1%rH; Temperature: 22,5°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	26.00	43.50	17.50	120.000	105.0	V	67.0	8.6
445.496000	36.13	46.00	9.87	120.000	121.0	V	163.0	19.4
544.496000	36.19	46.00	9.81	120.000	105.0	V	66.0	21.2

3.05a_n40-mode_ch06

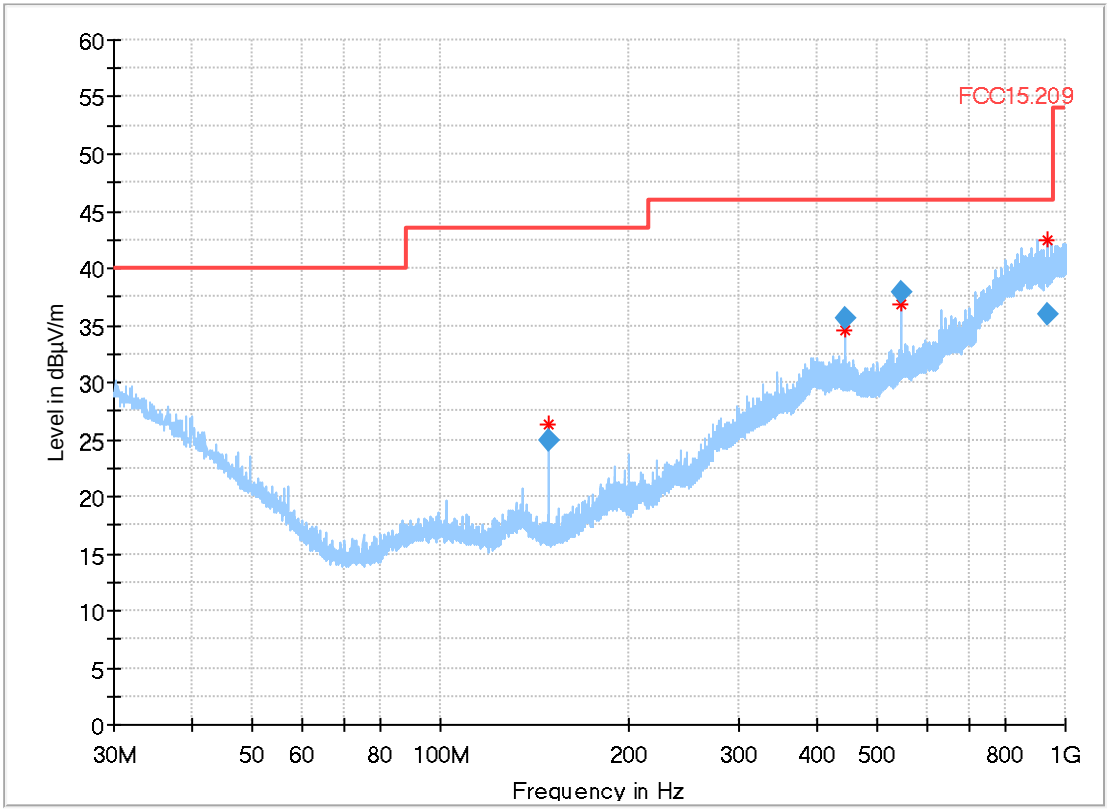
Common Information

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 5
Operator:	HEl
Operating Mode:	n40-mode | MCS7 | ch06
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 61,9%rH; Temperature: 22,9°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.99	43.50	18.51	120.000	207.0	H	89.0	8.6
445.496000	35.61	46.00	10.39	120.000	186.0	H	55.0	19.4
544.496000	37.88	46.00	8.12	120.000	142.0	H	47.0	21.2
933.468000	35.94	46.00	10.06	120.000	105.0	V	331.0	26.9

3.05b_n40-mode_ch06

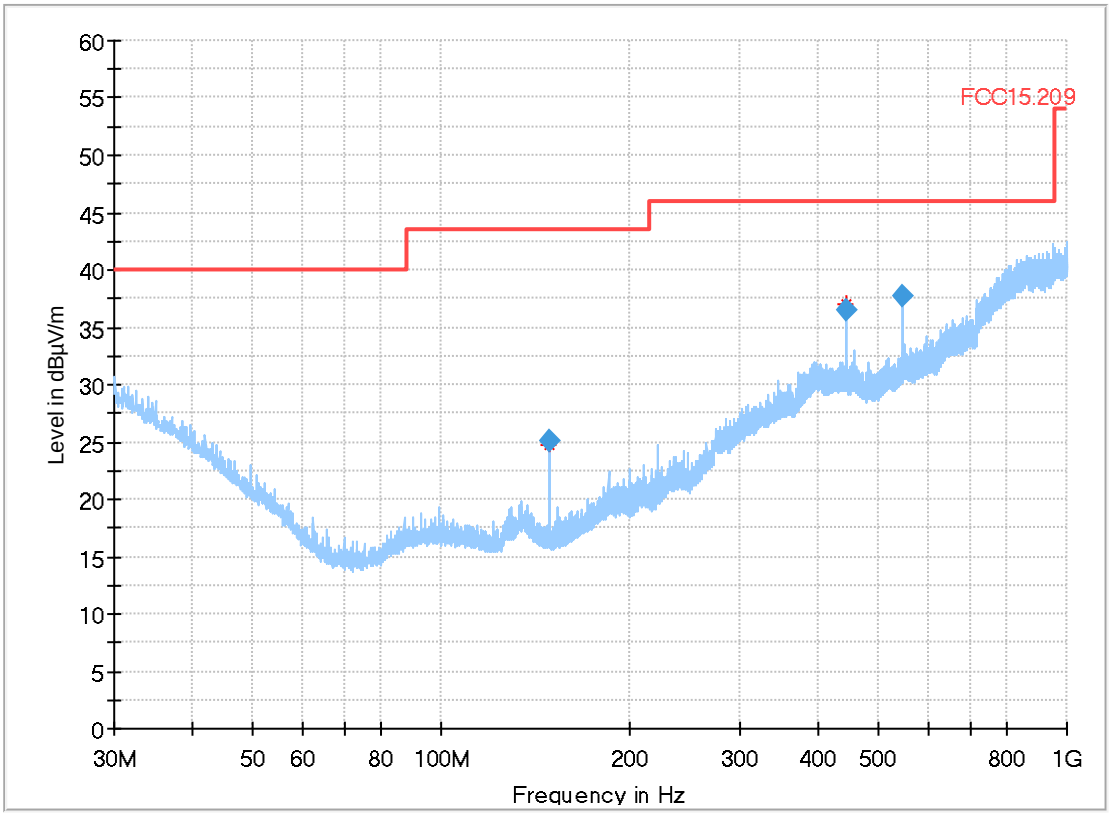
Common Information

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 5
Operator:	HEl
Operating Mode:	n40-mode | MCS7 | ch06
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 62,0%rH; Temperature: 22,8°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	25.05	43.50	18.45	120.000	105.0	V	280.0	8.6
445.496000	36.52	46.00	9.48	120.000	113.0	V	170.0	19.4
544.496000	37.74	46.00	8.26	120.000	105.0	V	6.0	21.2

3.06a_n40-mode_ch09

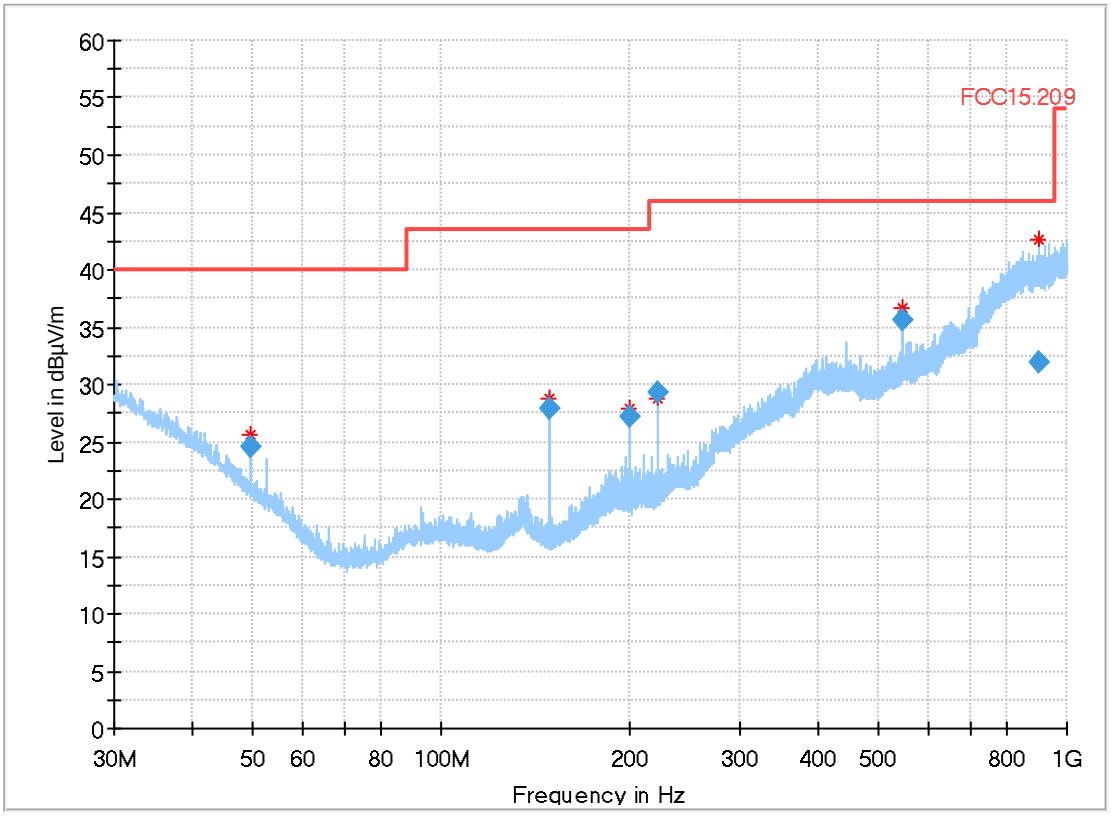
Common Information

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 5
Operator:	HEl
Operating Mode:	n40-mode | MCS7 | ch09
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 61,0%rH; Temperature: 23,1°C
EUT:	EUT Laying
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
49.500000	24.48	40.00	15.52	120.000	109.0	V	354.0	13.1
148.500000	27.83	43.50	15.67	120.000	193.0	H	90.0	8.6
200.000000	27.18	43.50	16.32	120.000	105.0	V	298.0	11.3
221.760000	29.25	46.00	16.75	120.000	105.0	V	0.0	12.4
544.496000	35.67	46.00	10.33	120.000	186.0	V	0.0	21.2
900.924000	31.85	46.00	14.15	120.000	317.0	H	150.0	26.8

3.06b_n40-mode_ch09

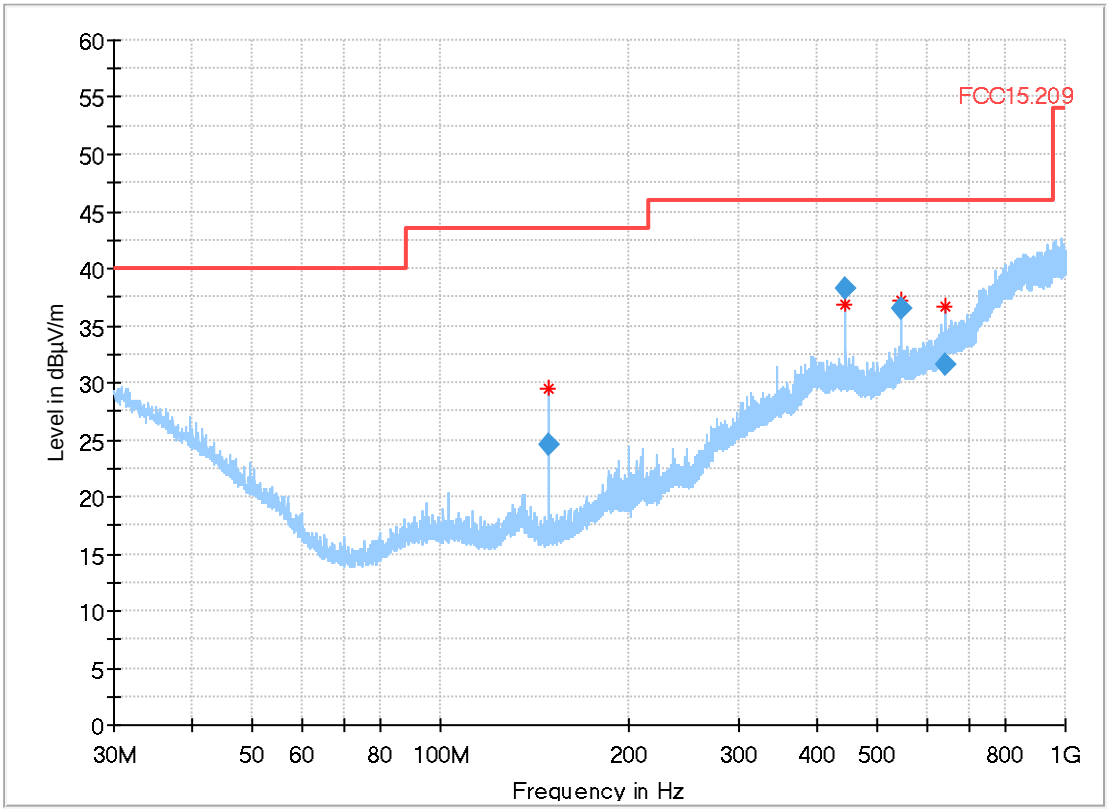
Common Information

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 5
Operator:	HEl
Operating Mode:	n40-mode | MCS7 | ch09
Power during tests:	13.5V DC
Environmental Conditions::	Humidity : 61,6%rH; Temperature: 22,9°C
EUT:	EUT Standing
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.500000	24.49	43.50	19.01	120.000	145.0	H	97.0	8.6
445.496000	38.24	46.00	7.76	120.000	109.0	V	170.0	19.4
544.496000	36.42	46.00	9.58	120.000	218.0	V	158.0	21.2
643.496000	31.65	46.00	14.35	120.000	185.0	V	101.0	23.2

2.3. Radiated electric field measurement 1 GHz to 18 GHz

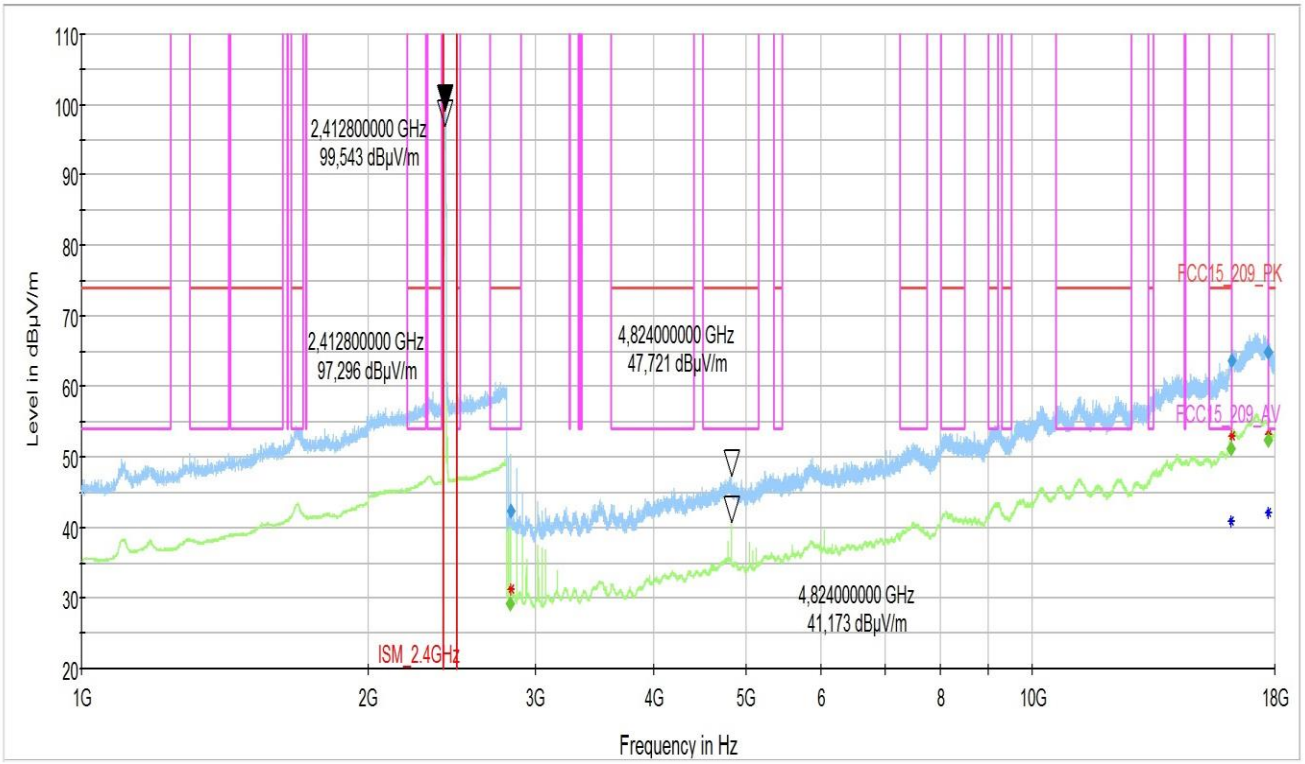
4.01a_b-mode_ch01

Common Information

Test Description:	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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous b-mode, ch01, 1Mbit/s
Operator:	npe
EUT Setup:	1
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB/m)
2825.810000	---	54.00	24.64	100.0	1000.000	V	240.0	90.0	1
2826.730000	42.37	74.00	31.63	100.0	1000.000	V	269.0	90.0	1
16197.850000	---	54.00	2.79	100.0	1000.000	H	184.0	90.0	28
16205.850000	63.73	150.00	86.27	100.0	1000.000	V	70.0	0.0	28
17696.930000	64.81	150.00	85.19	100.0	1000.000	V	71.0	0.0	29
17707.490000	---	54.00	1.51	100.0	1000.000	H	261.0	0.0	29

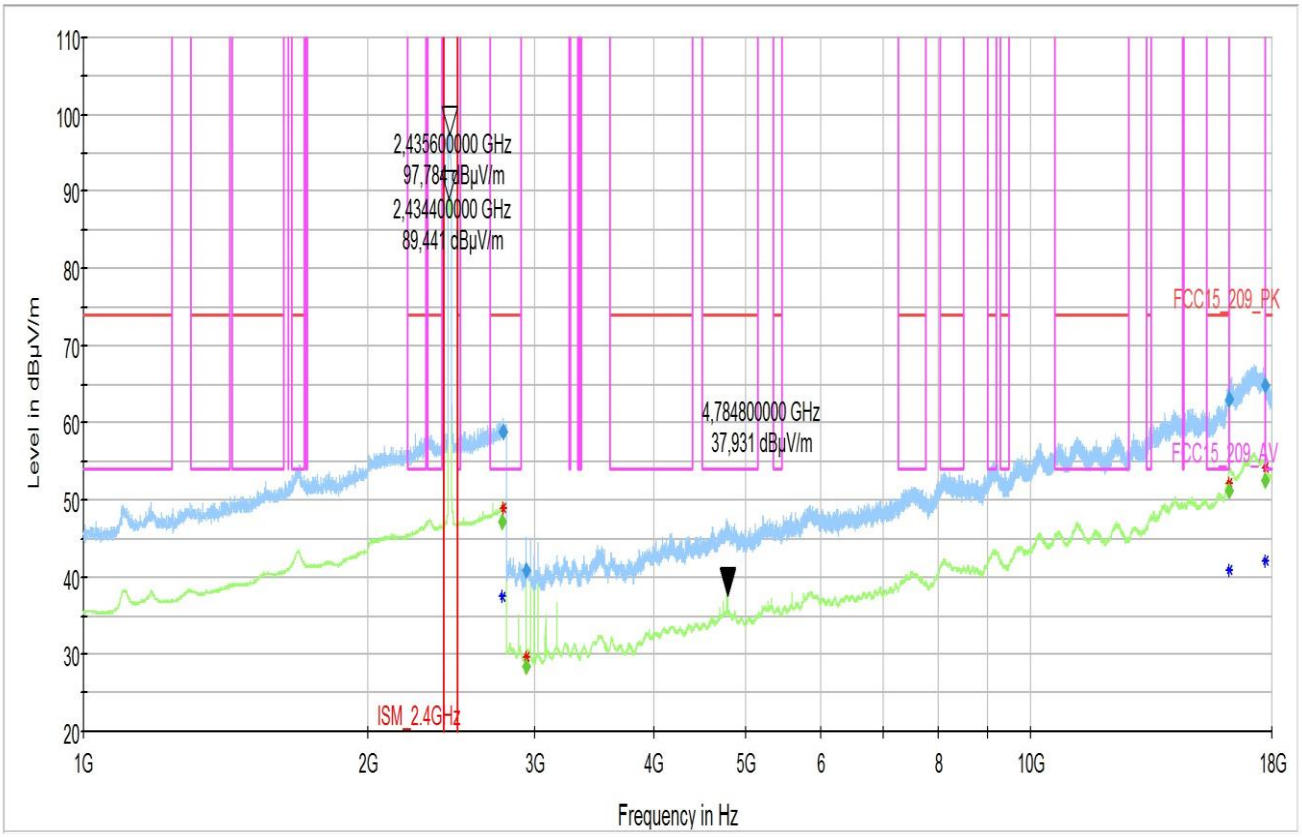
4.02a_g-mode_ch06

Common Information

Test Description:	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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous g-mode, ch06, 12Mbit/s
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2768.570000	---	54.00	6.76	100.0	1000.000	V	7.0	0.0	38.7
2774.050000	58.83	74.00	15.17	100.0	1000.000	V	0.0	90.0	38.7
2938.210000	---	150.00	121.51	100.0	1000.000	H	180.0	90.0	1.0
2939.050000	40.84	150.00	109.16	100.0	1000.000	H	142.0	90.0	1.0
16198.170000	---	54.00	2.72	100.0	1000.000	H	246.0	0.0	27.7
16199.650000	63.07	74.00	10.93	100.0	1000.000	H	209.0	0.0	27.7
17705.010000	---	54.00	1.46	100.0	1000.000	H	249.0	0.0	28.7
17706.010000	64.86	74.00	9.14	100.0	1000.000	V	5.0	0.0	28.7

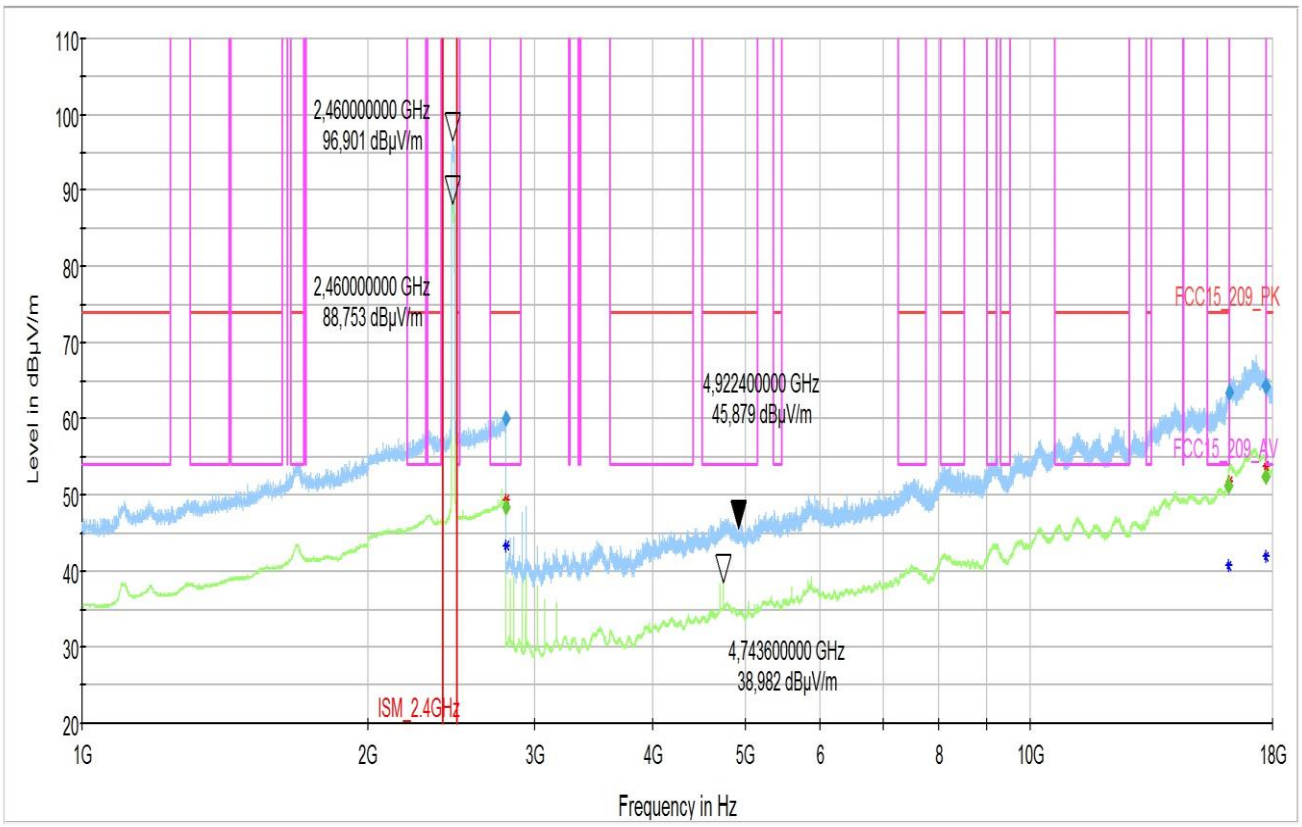
4.03a_n-mode_ch11

Common Information

Test Description:	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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, ch011, MCS0
Operator:	TFra
Comment:	Channel no. low
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2799.170000	---	54.00	5.56	100.0	1000.000	H	240.0	0.0	38.9
2799.210000	60.16	74.00	13.84	100.0	1000.000	V	0.0	0.0	38.9
16188.210000	---	54.00	2.88	100.0	1000.000	H	66.0	90.0	27.6
16193.690000	63.43	74.00	10.57	100.0	1000.000	V	323.0	90.0	27.7
17711.130000	---	54.00	1.53	100.0	1000.000	V	273.0	0.0	28.7
17718.090000	64.38	74.00	9.62	100.0	1000.000	H	335.0	90.0	28.7

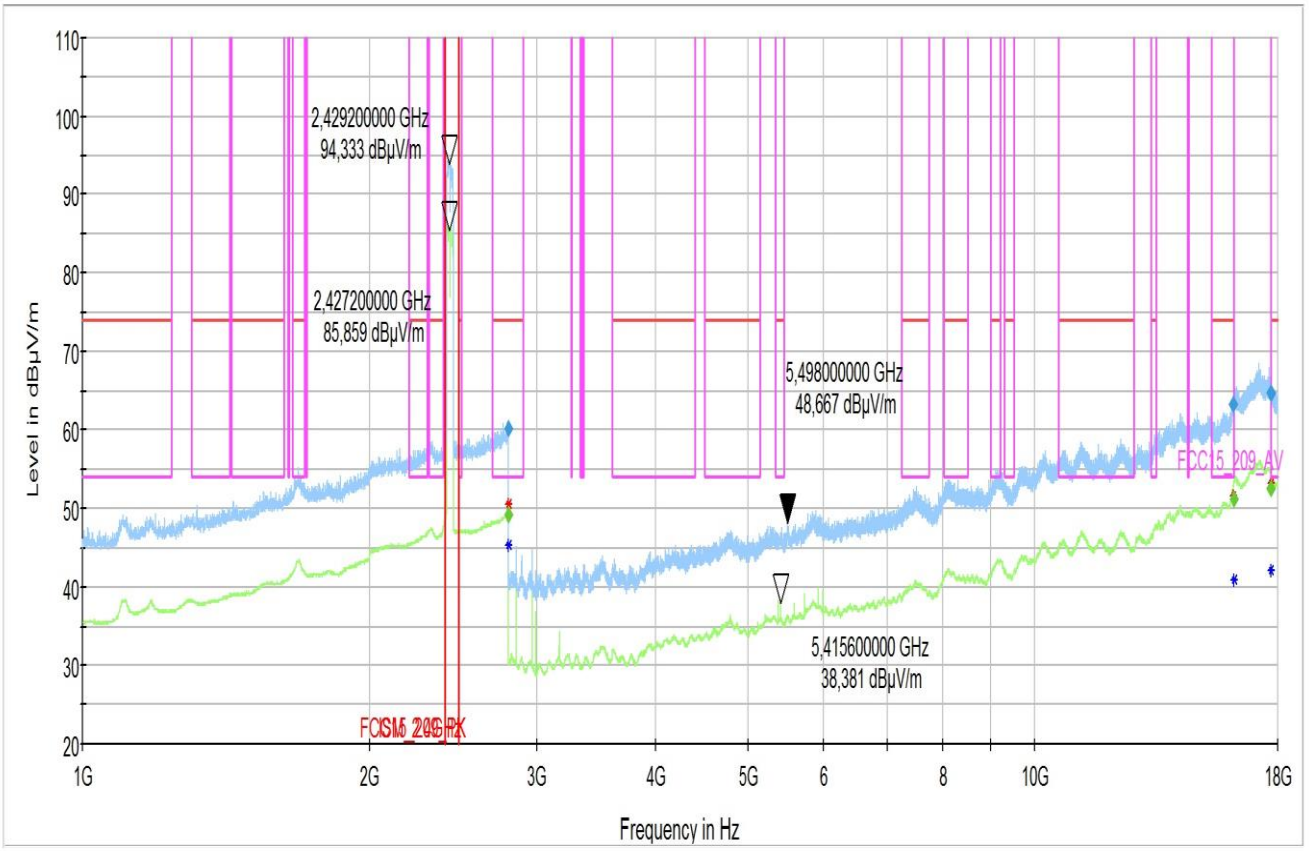
4.04a_n40-mode_ch03

Common Information

Test Description:	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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, BW40, ch03, MCS7
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2799.170000	---	54.00	4.90	100.0	1000.000	V	179.0	90.0	38.9
2799.210000	60.31	74.00	13.69	100.0	1000.000	V	40.0	0.0	38.9
16177.930000	63.31	74.00	10.69	100.0	1000.000	H	4.0	0.0	27.5
16194.930000	---	54.00	2.78	100.0	1000.000	H	-35.0	90.0	27.7
17702.930000	64.65	74.00	9.35	100.0	1000.000	H	23.0	90.0	28.7
17704.290000	---	54.00	1.45	100.0	1000.000	H	8.0	90.0	28.7

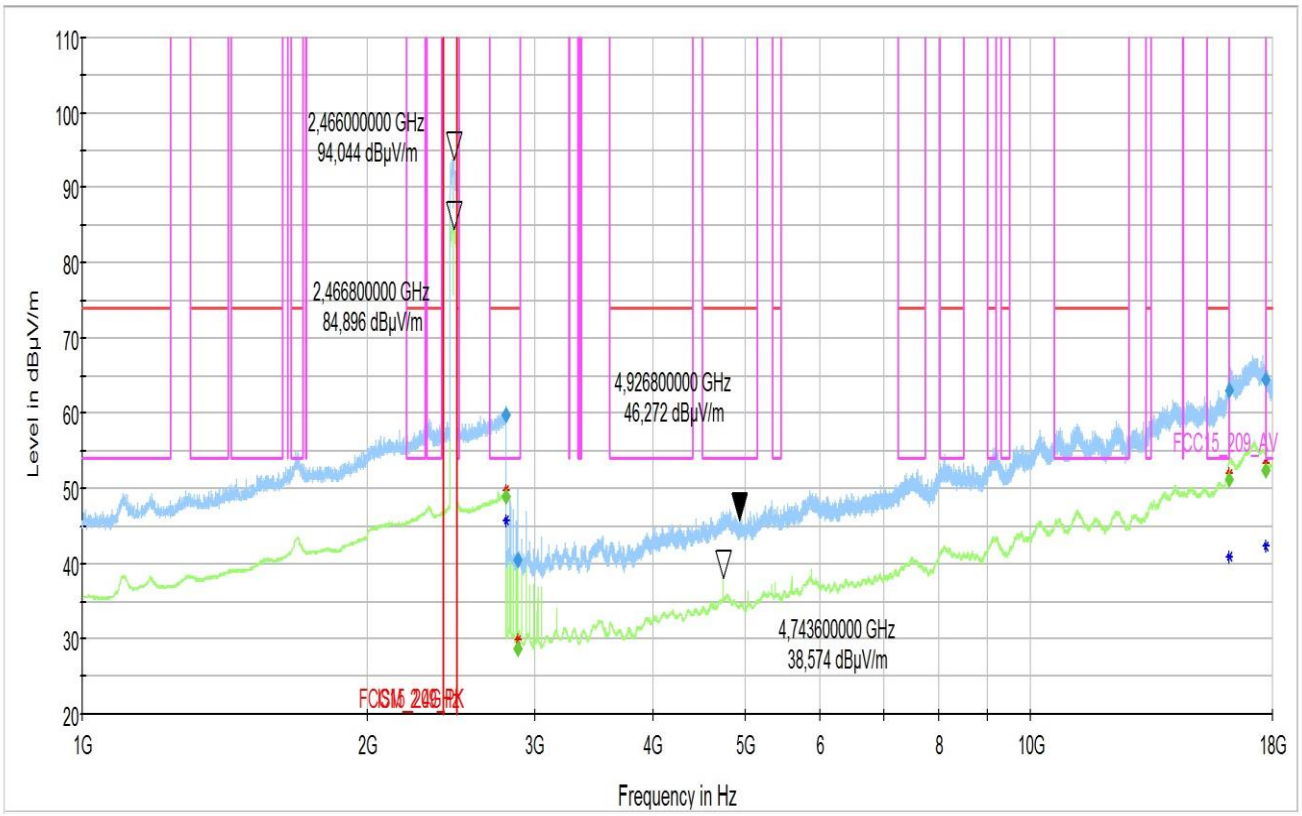
4.05a_n40-mode_ch09

Common Information

Test Description:	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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, BW40, ch09, MCS7
Operator:	TFra
Verdict:	Passed

EUT Information

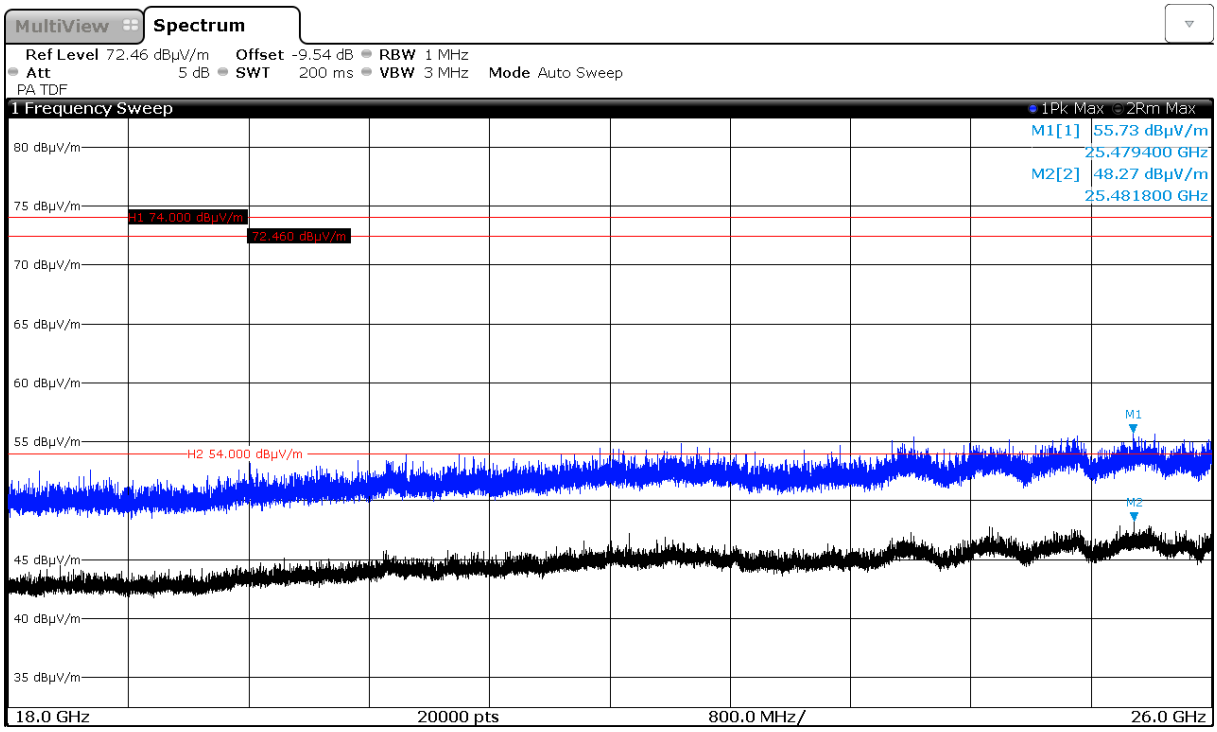
Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



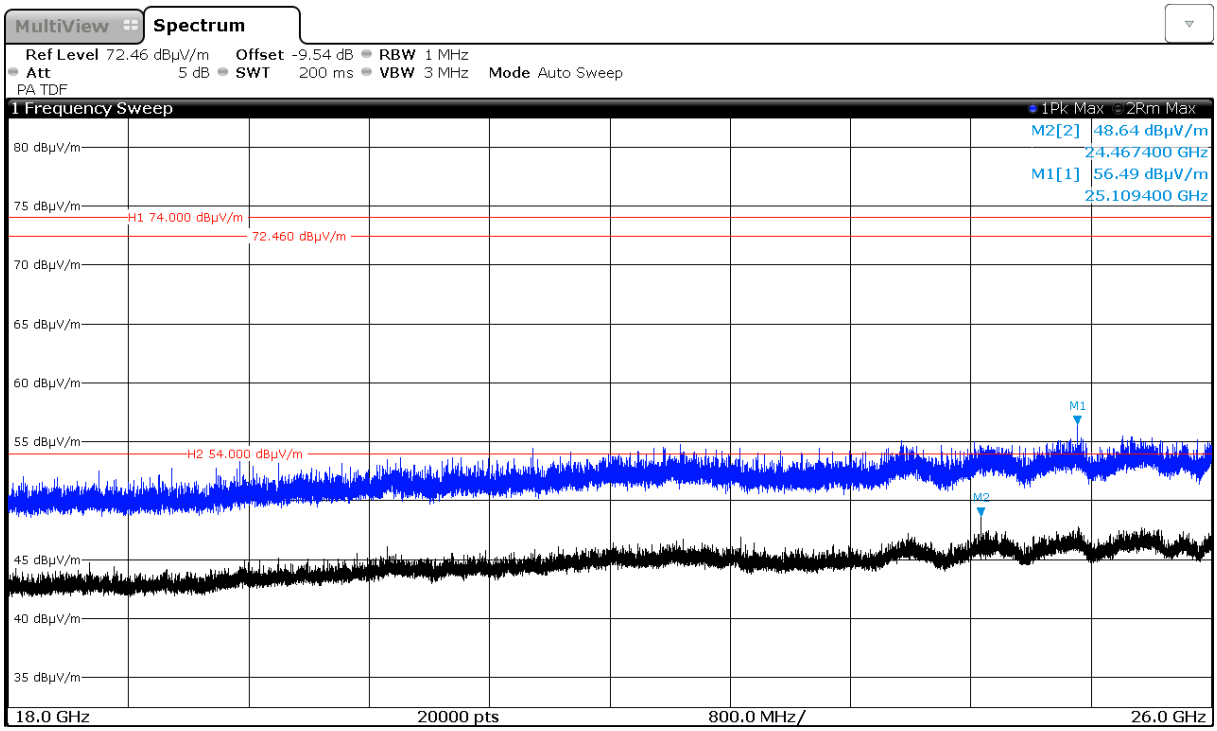
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2795.610000	59.95	74.00	14.05	100.0	1000.000	H	94.0	0.0	38.9
2799.170000	---	54.00	4.91	100.0	1000.000	V	187.0	90.0	38.9
2881.290000	---	54.00	25.43	100.0	1000.000	H	194.0	0.0	0.9
2881.490000	40.48	74.00	33.52	100.0	1000.000	H	166.0	0.0	0.9
16190.490000	62.99	74.00	11.01	100.0	1000.000	V	41.0	0.0	27.6
16195.130000	---	54.00	2.76	100.0	1000.000	V	293.0	0.0	27.7
17705.610000	64.52	74.00	9.48	100.0	1000.000	V	7.0	90.0	28.7
17707.530000	---	54.00	1.51	100.0	1000.000	V	270.0	90.0	28.7

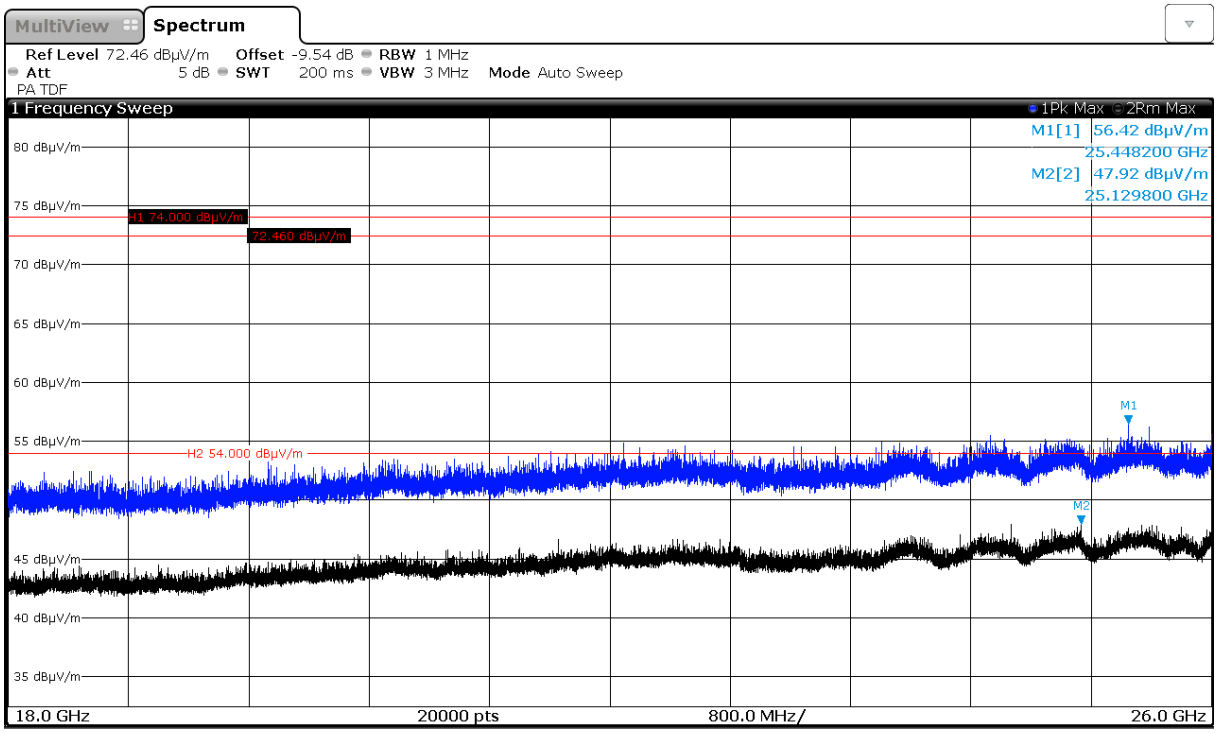
2.4. Radiated electric field measurement 18 GHz to 26.5 GHz



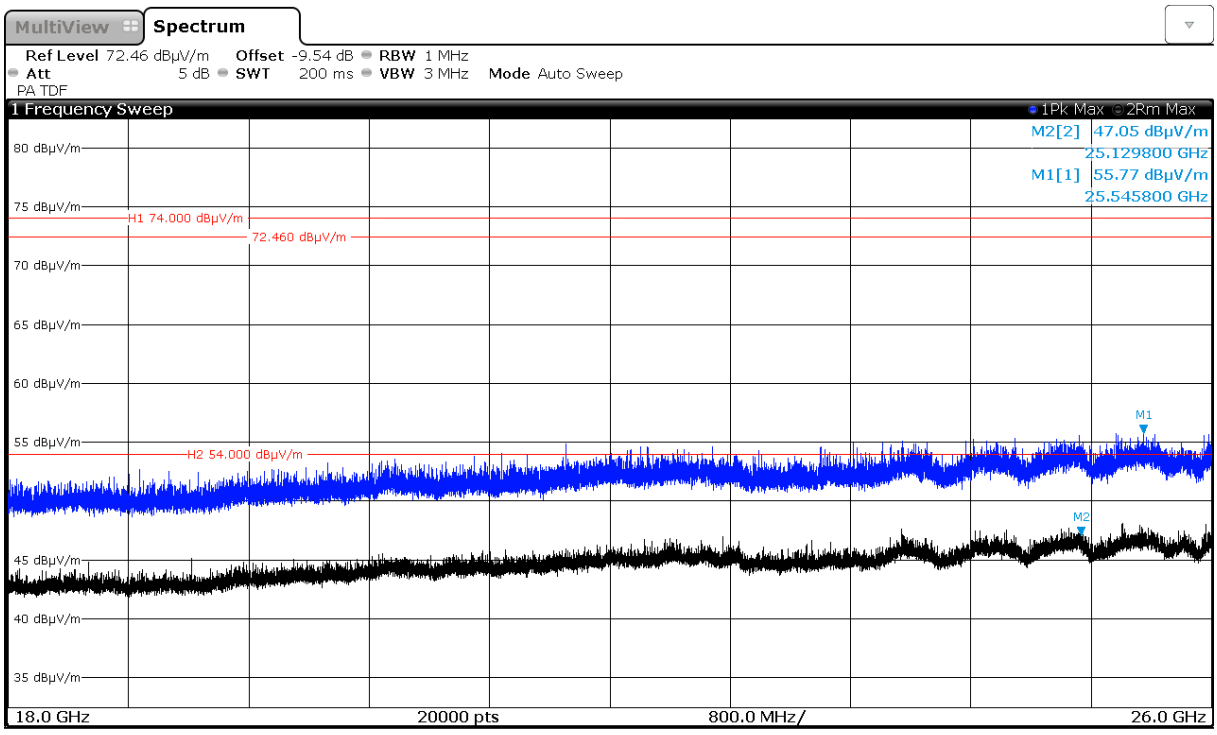
4.01b_b-mode_ch01



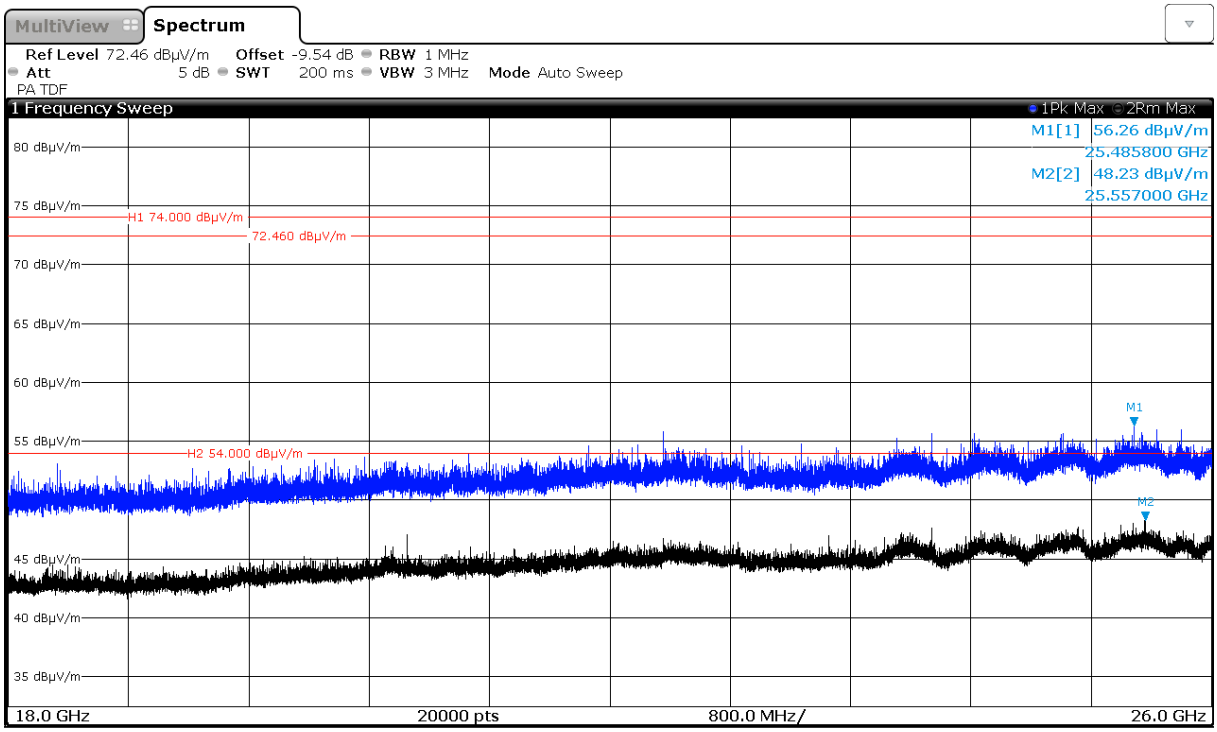
4.02b_g-mode_ch06



4.03b_n-mode_ch11



4.04b_n40-mode_ch03



4.05b_n40-mode_ch09

2.5. Low Band edge compliance

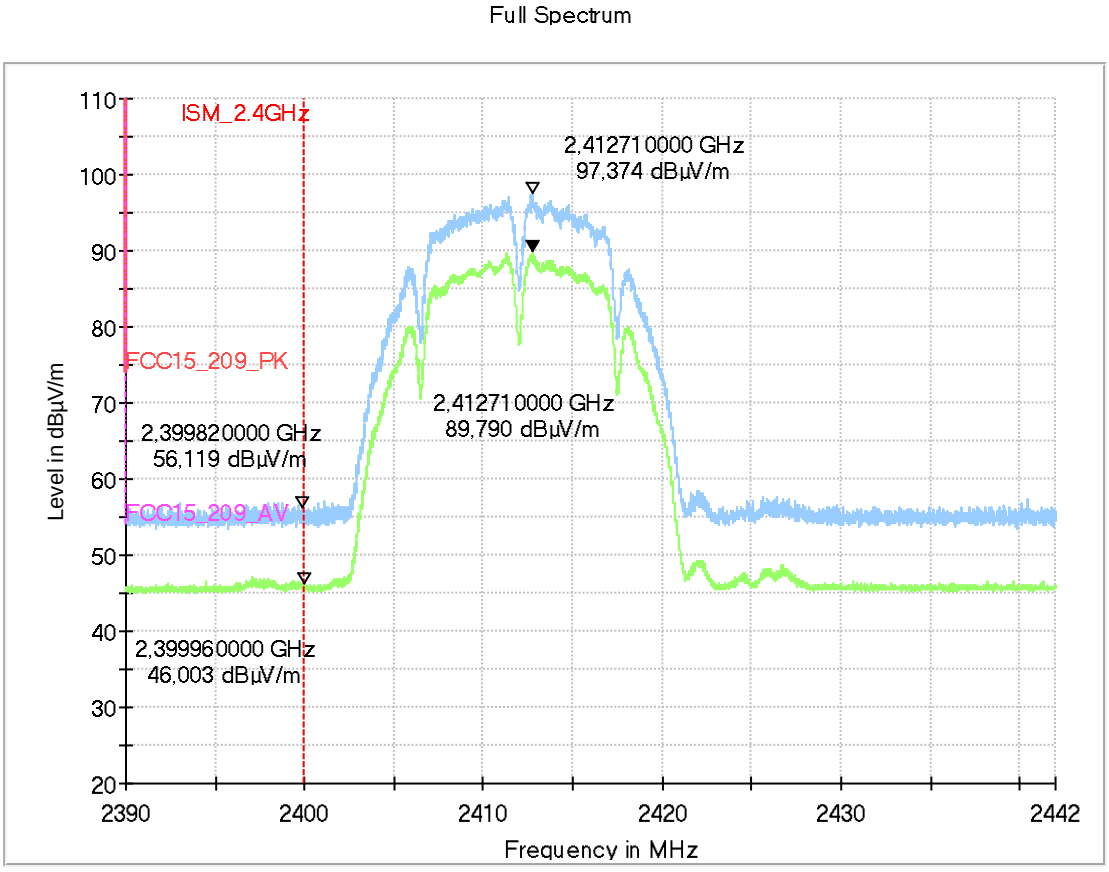
9.01a_b-mode_ch01

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous b-mode, ch01, 2Mbit/s
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



9.02a_g-mode_ch01

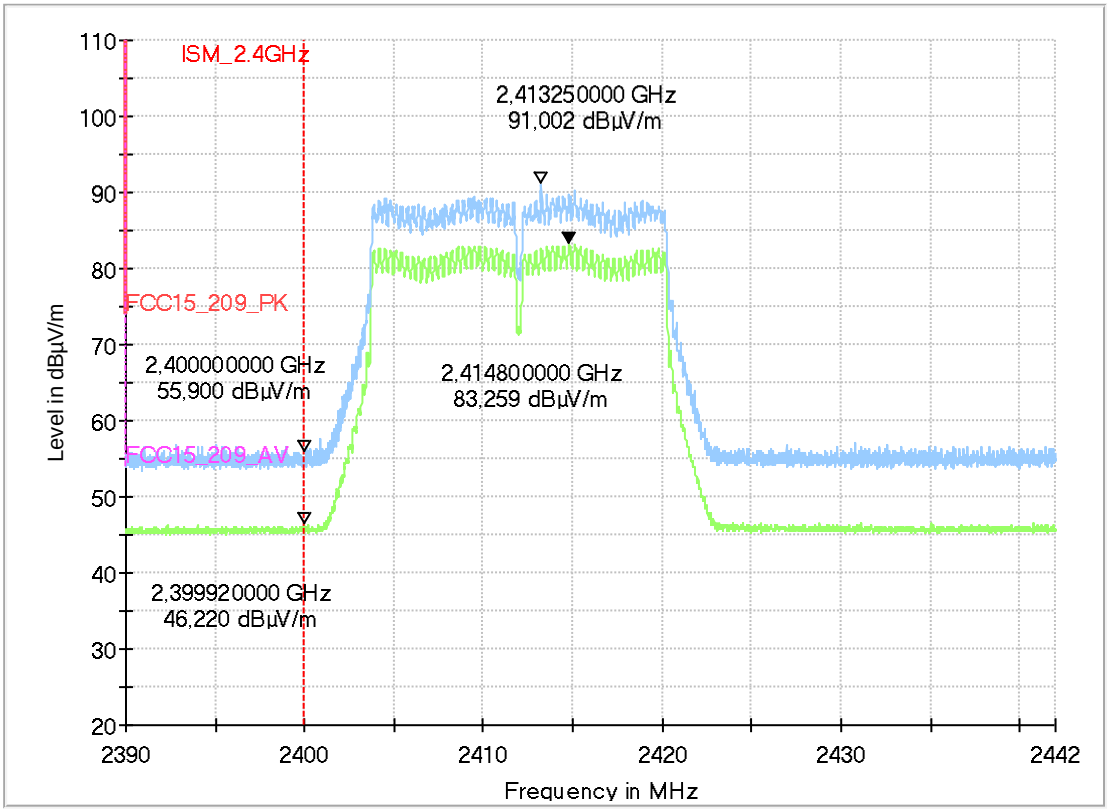
Common Information

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous g-mode, ch01, 12Mbit/s
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



9.03a_n-mode_ch01

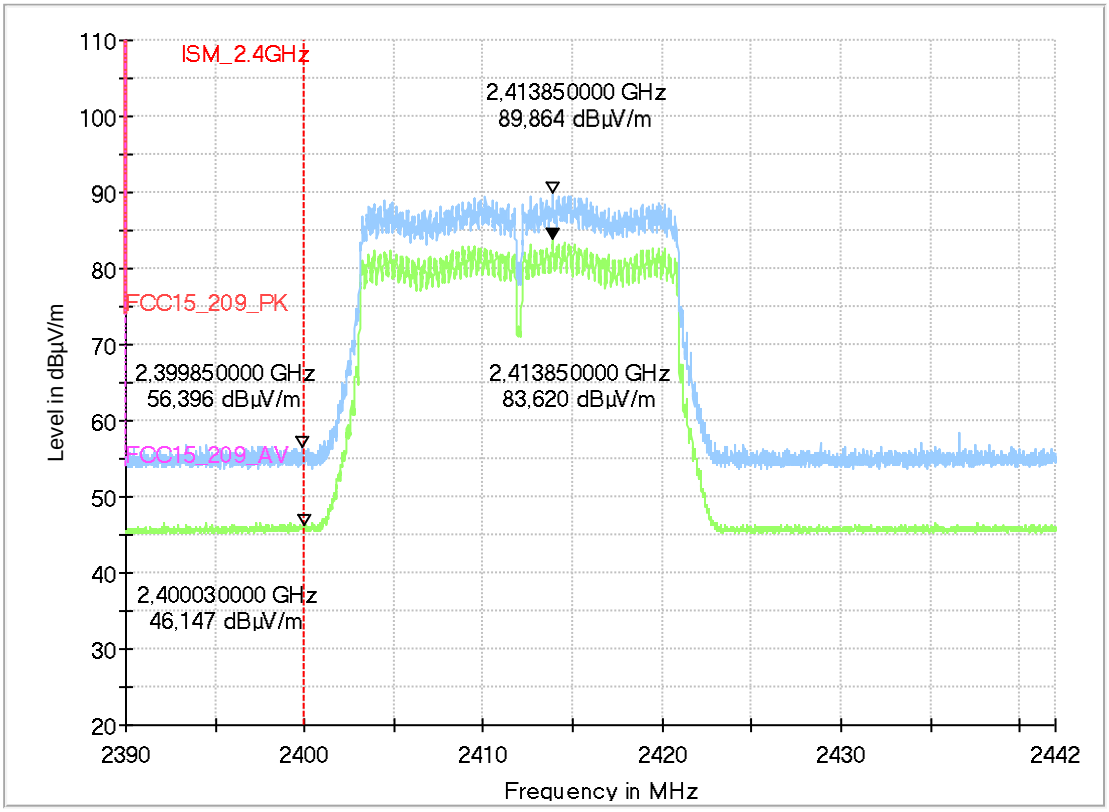
Common Information

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, ch01, MCS0
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



9.04a_n40-mode_ch03

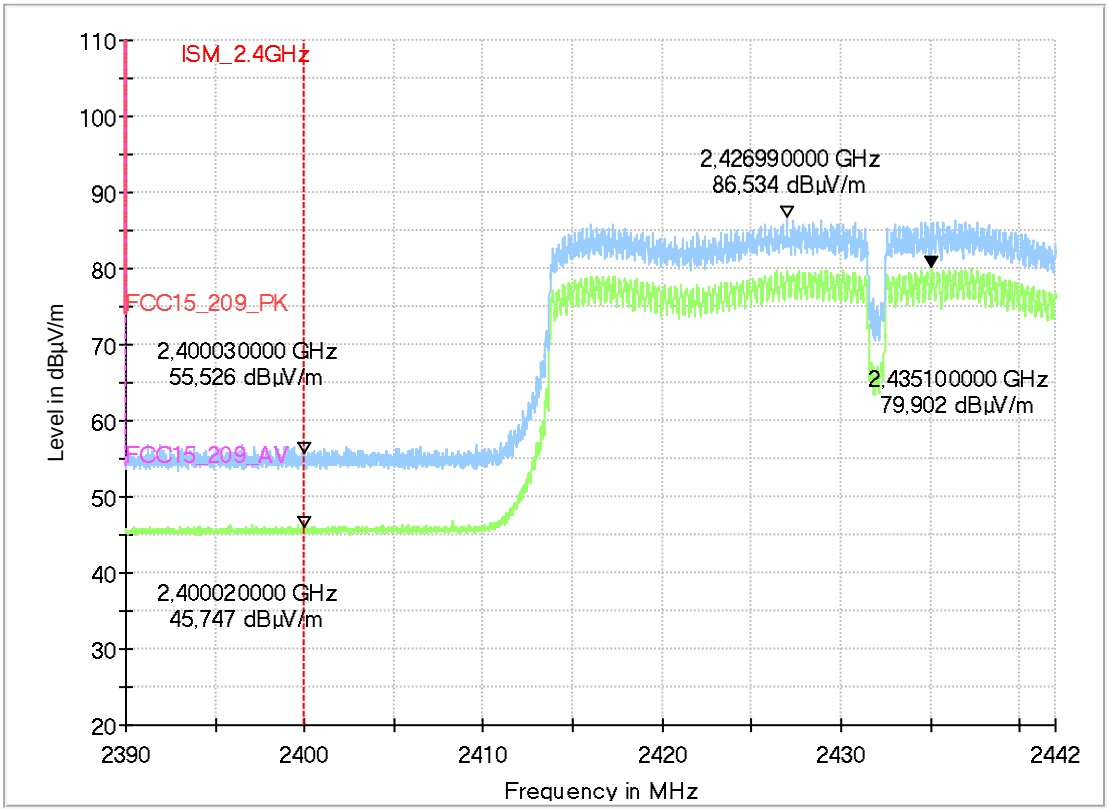
Common Information

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, BW40, ch03, MCS0
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC

Full Spectrum



2.6. High Band edge compliance

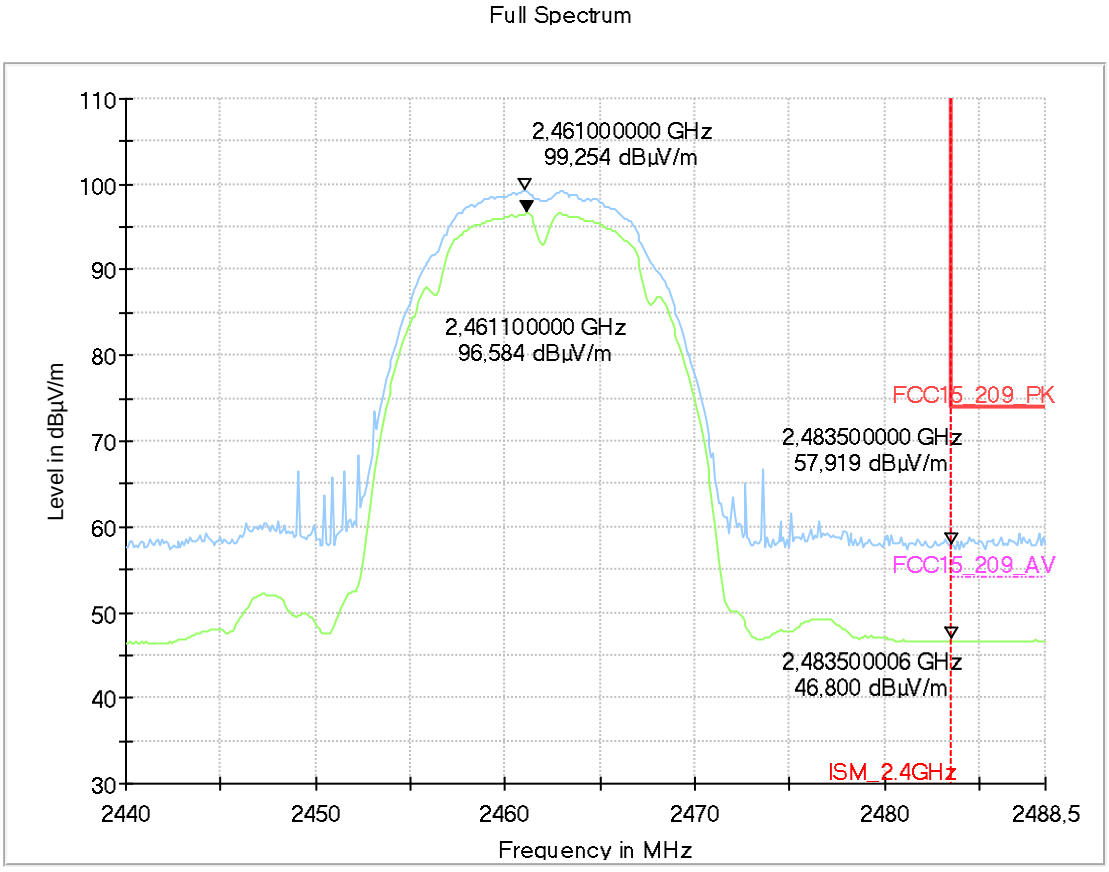
9.01b_b-mode_ch11

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous b-mode, ch11, 2Mbit/s
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



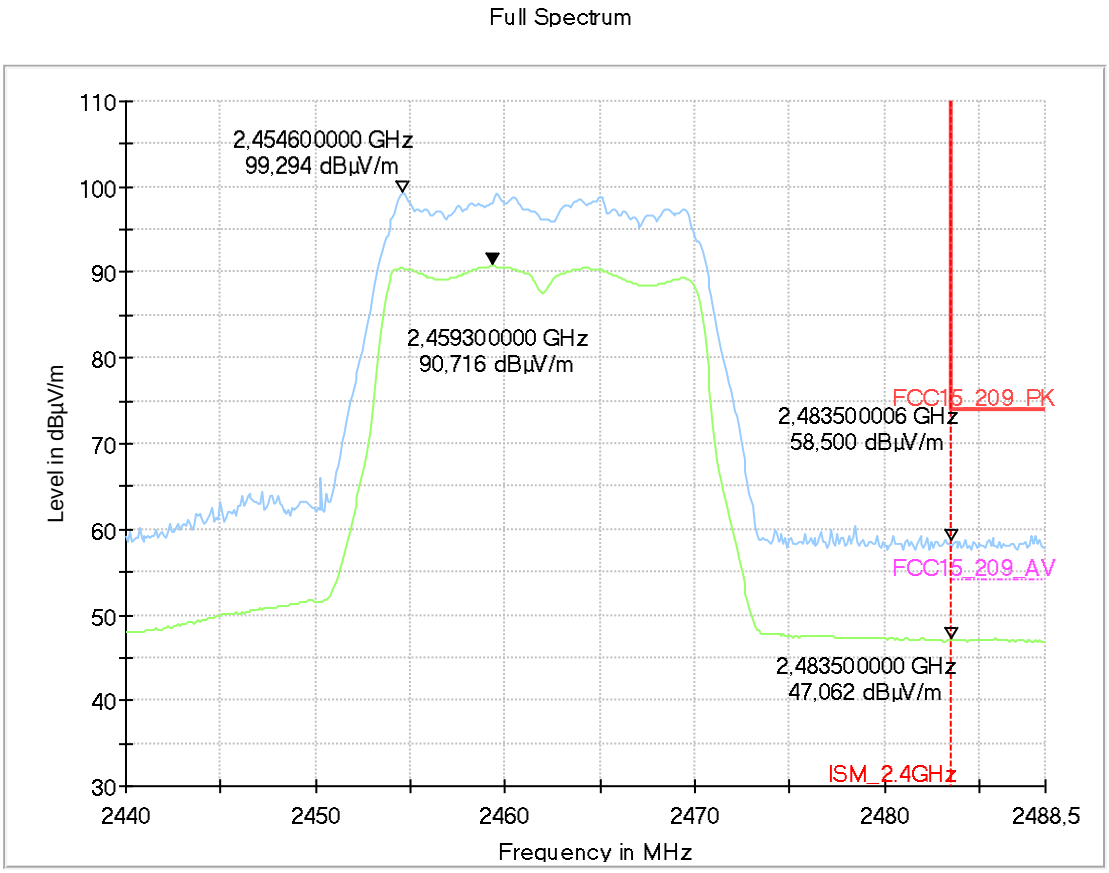
9.02b_g-mode_ch11

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous g-mode, ch11, 12Mbit/s
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



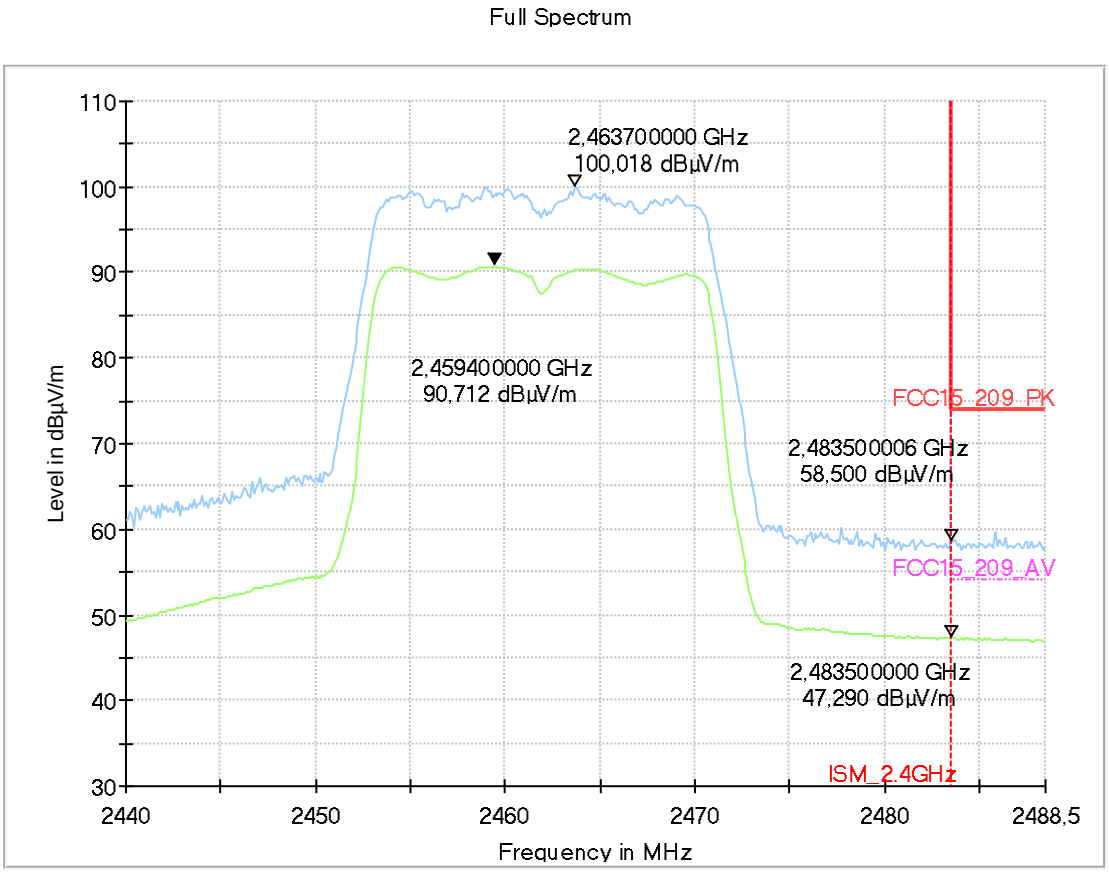
9.03b_n-mode_ch11

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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, ch11, MCS7
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC



9.04b_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 5
Antenna polarisation:	horizontal/vertical
Operating Mode:	WLAN TX, continuous n-mode, BW40, ch09, MCS7
Operator:	TFra
Verdict:	Passed

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
Model:	AIVIV10
Type:	Multimedia device with Bluetooth and WLAN
HW-Version	001
SW-Version	1049
Comment:	0005057
Power Supply:	13.5 V DC