

Annex 1: Measurement diagrams to
TEST REPORT
No.: 18-1-0048201T02a

According to:

FCC Regulations

Part 15.205 & Part 15.209

Part 15.247

ISED-Regulations

RSS-Gen, Issue 5

RSS-247, Issue 2

for

Robert Bosch Car Multimedia GmbH

AIVISBX0
Navigationsystem with WLAN and Bluetooth

FCC ID: YBN-AIVISBX0

ISED: 9595A-AIVISBX0

Laboratory Accreditation and Listings		
  Deutsche Akkreditierungsstelle D-PL-12047-01-01	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.:4452, C-20009, T-20006, G-20013
 AUTHORIZED RF LABORATORY	 ctia Authorized™ Test Lab Lab Code: 20011130-00	 FEDERAL COMMUNICATIONS COMMISSION U.S.A. MRA US-EU 0003
accredited according to DIN EN ISO/IEC 17025		
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com		

Table of contents

1. CONDUCTED MEASUREMENTS	3
1.1. Conducted Peak output power	3
1.2. 6dB Bandwidth	5
1.3. 99% Occupied Bandwidth	12
1.4. 20dBC Tx Spurious Emissions	19
2. RADIATED MEASUREMENTS	29
2.1. Radiated magnetic field measurements below 30 MHz.....	29
2.2. Radiated electric field measurement 30 MHz to 1 GHz	32
2.3. Radiated electric field measurement 1 GHz to 18 GHz.....	44
2.4. Radiated electric field measurement 18 GHz to 26.5 GHz.....	53
2.5. Low Band edge compliance.....	56
2.6. High Band edge compliance.....	60

1. Conducted Measurements

1.1. Conducted Peak output power

EUT Information

Manufacturer: Robert Bosch Car Multimedia
 Product: AIVISBX0
 EUT Model: 18-1-00482S06
 HW: tbd
 SW: 283C24194R
 Serial No.: 0005009
 Connected Devices: 13.5VDC

b-Mode	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz b-Mode	
1MBit	12,50	11,80	11,80	12,6	dBm
2Mbit	12,60	11,80	11,70		
5.5Mbit	11,50	10,70	10,60		
11MBit	12,00	11,10	11,00		

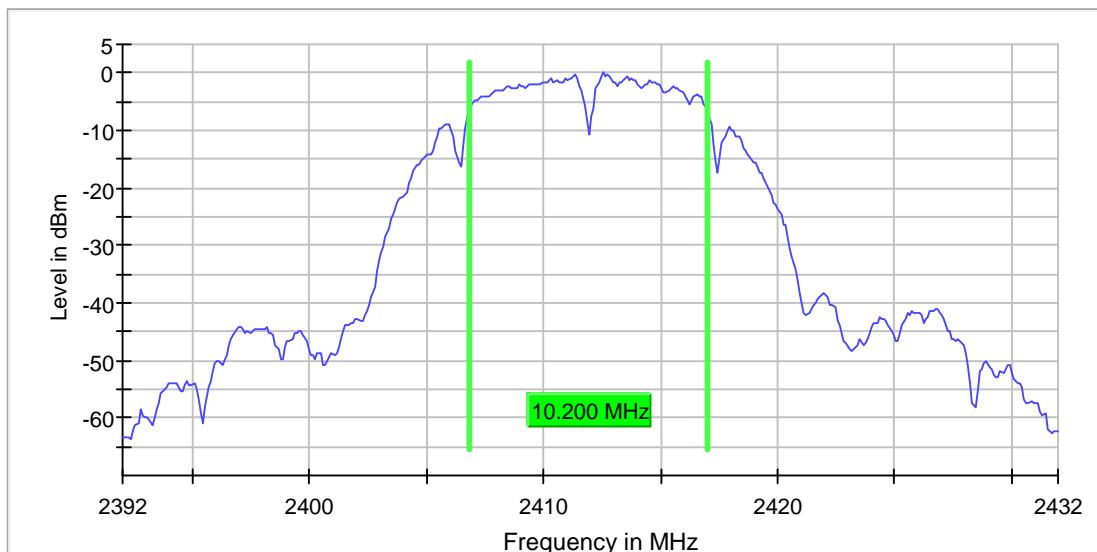
g-Mode	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz g-mode	
6Mbit	10,10	9,40	9,30	10,1	dBm
9Mbit	10,10	9,50	9,10		
12Mbit	10,00	9,40	9,20		
18Mbit	9,90	9,30	9,20		
24Mbit	9,90	9,30	9,10		
36Mbit	9,80	9,20	9,10		
48Mbit	9,80	9,20	9,10		
54MBit	9,80	9,20	9,10		

n-Mode HT20	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	1 (2412)	6 (2437)	11 (2462)	WLAN 2.4GHz n-mode	
MCS0 -6.5Mbps	9,70	9,20	8,90	9,8	dBm
MCS1 - 13Mbps	9,70	9,20	9,00		
MCS2 - 19.5Mbps	9,70	9,20	9,00		
MCS3 - 26Mbps	9,80	9,20	9,00		
MCS4 -39Mbps	9,70	9,20	8,90		
MCS5 - 52MBps	9,70	9,20	9,00		
MCS6 - 58.5MBps	9,70	9,10	8,90		
MCS7 - 65MBps	9,70	9,10	8,90		

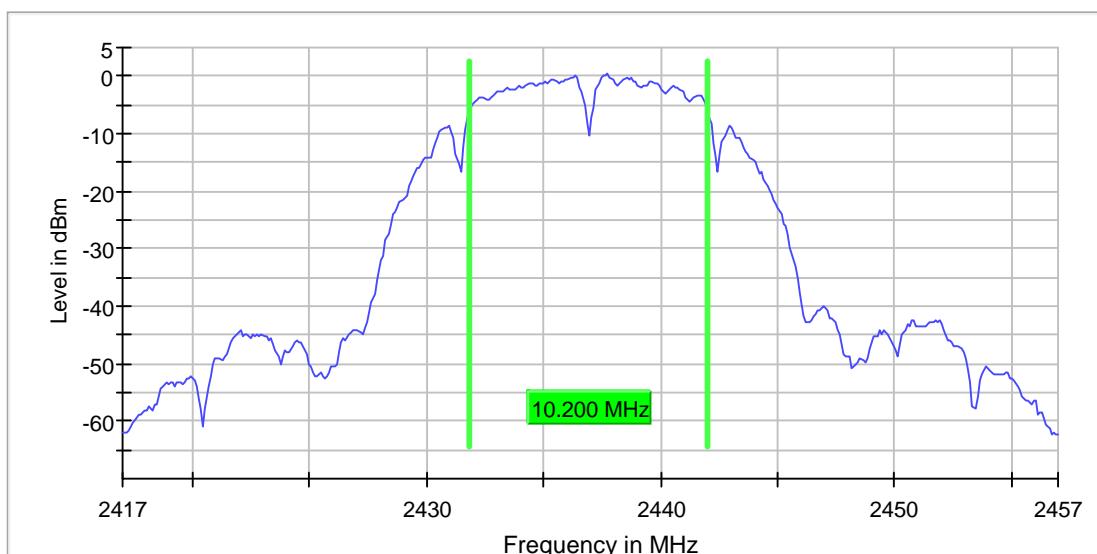
n-Mode HT40	Channel No. (Frequency MHz)			Max Rated Power	
Data rate	3 (2422)	6(2437)	9 (2452)	WLAN 2.4GHz n-mode	
MCS8	8,3	7,7	7,9	8,3	dBm
MCS9	8,3	7,7	8		
MCS10	8,3	7,7	7,5		
MCS11	8,3	7,6	7,9		
MCS12	8,3	7,5	7,9		
MCS13	8,2	7,9	7,9		
MCS14	8,2	7,9	7,7		
MCS15	8,1	7,9	7,8		

1.2. 6dB Bandwidth

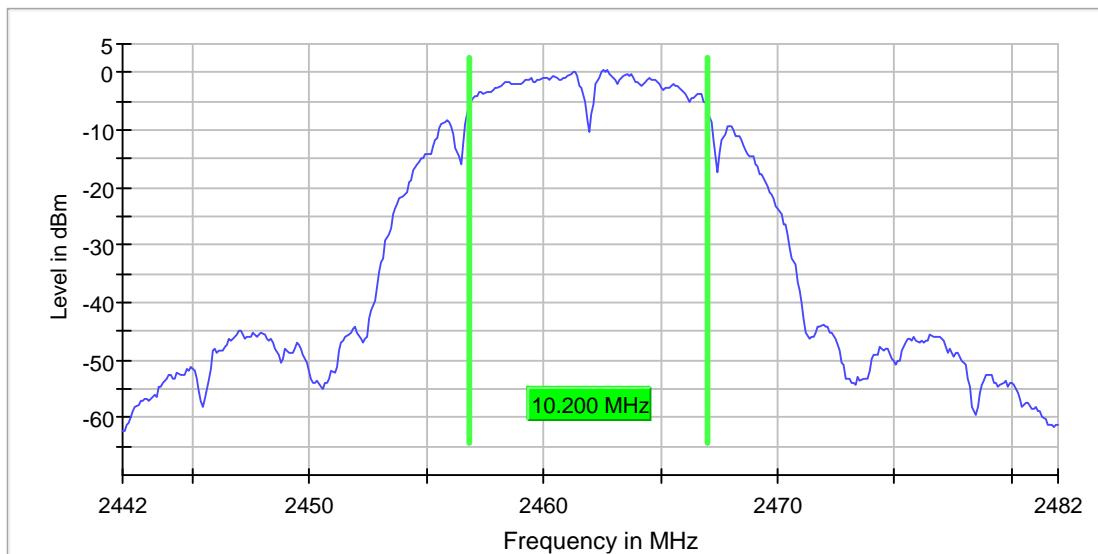
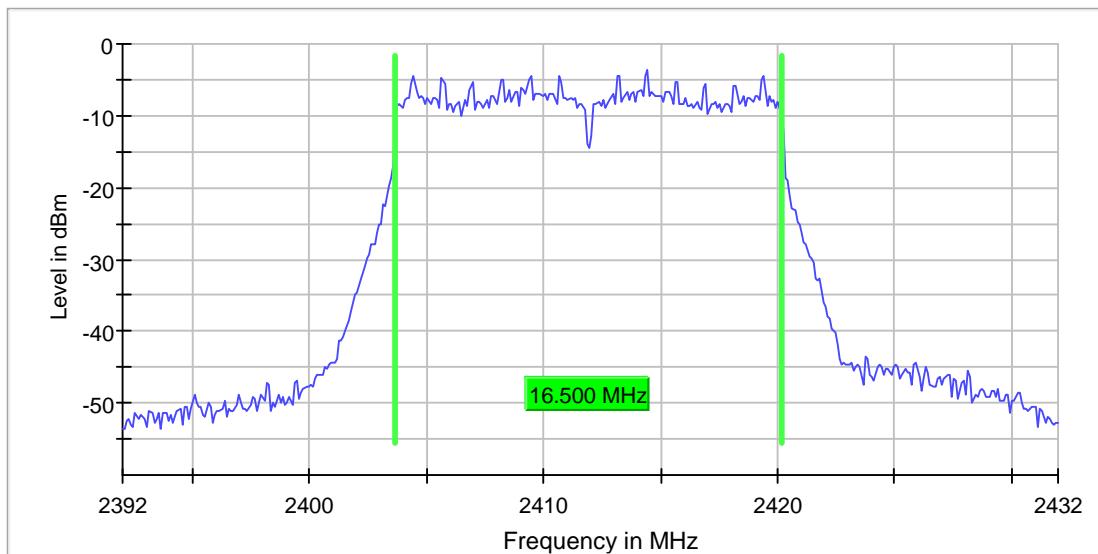
1.2.1. b-mode

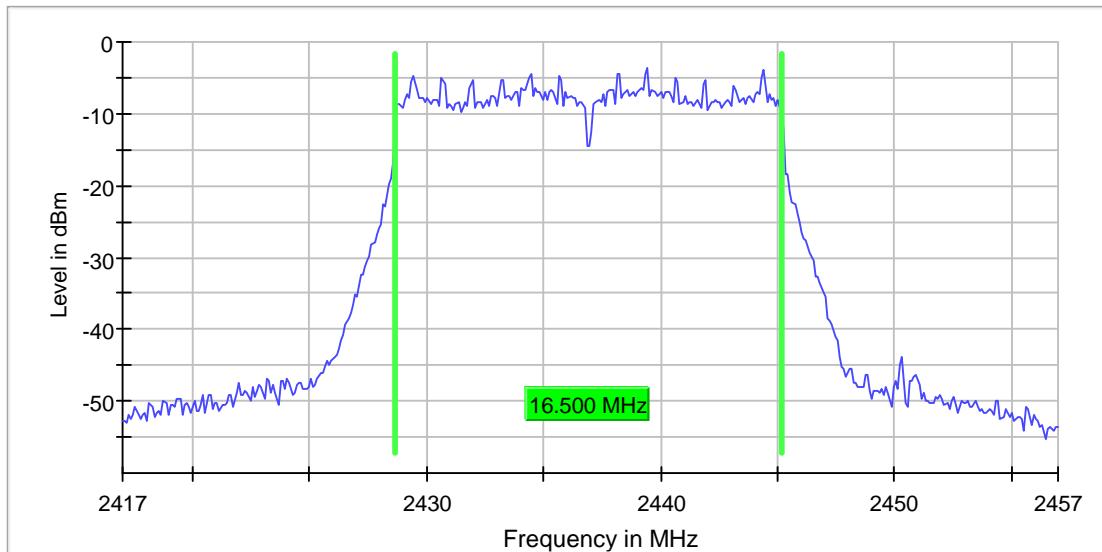
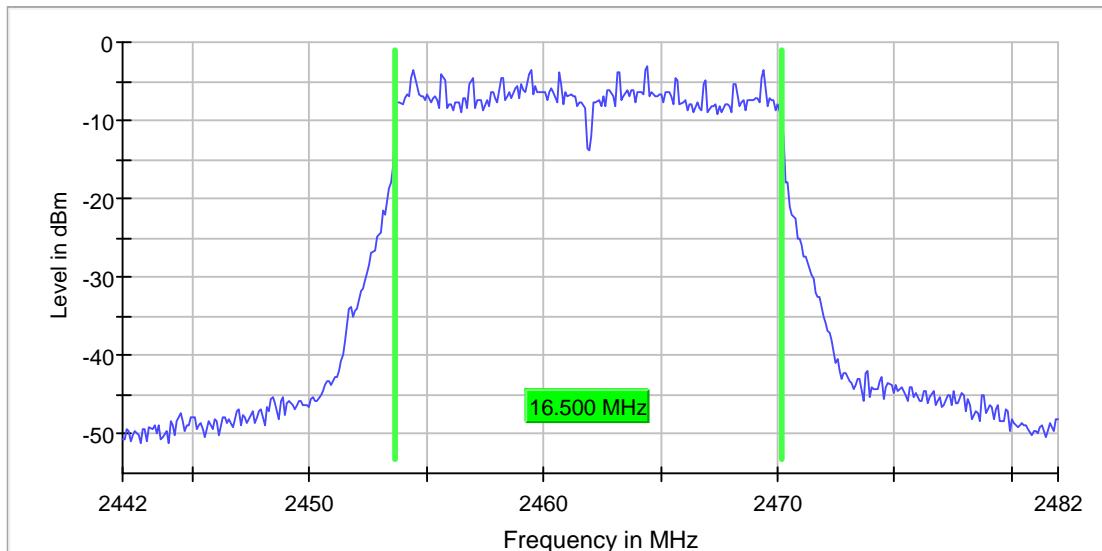


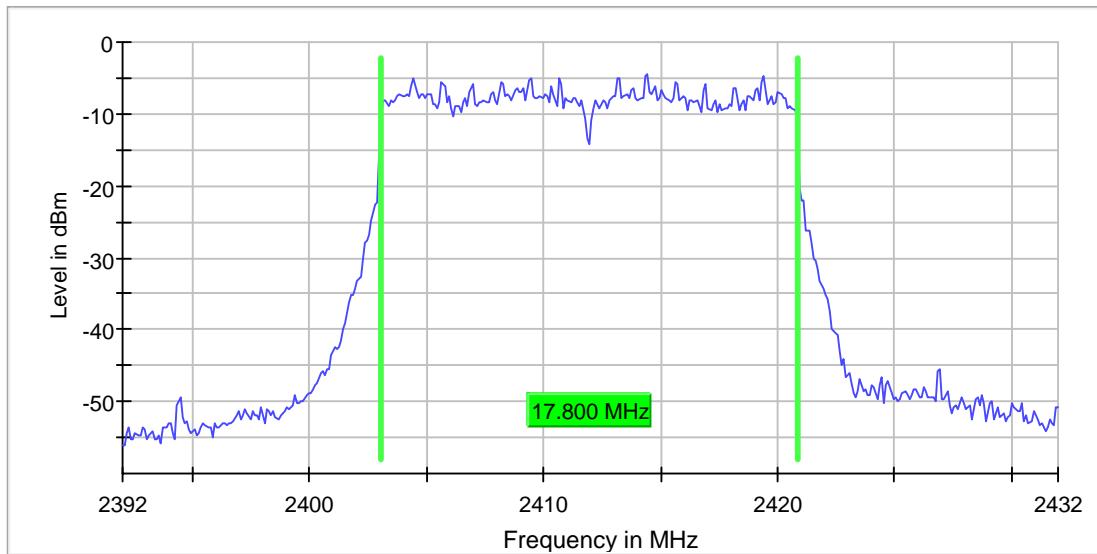
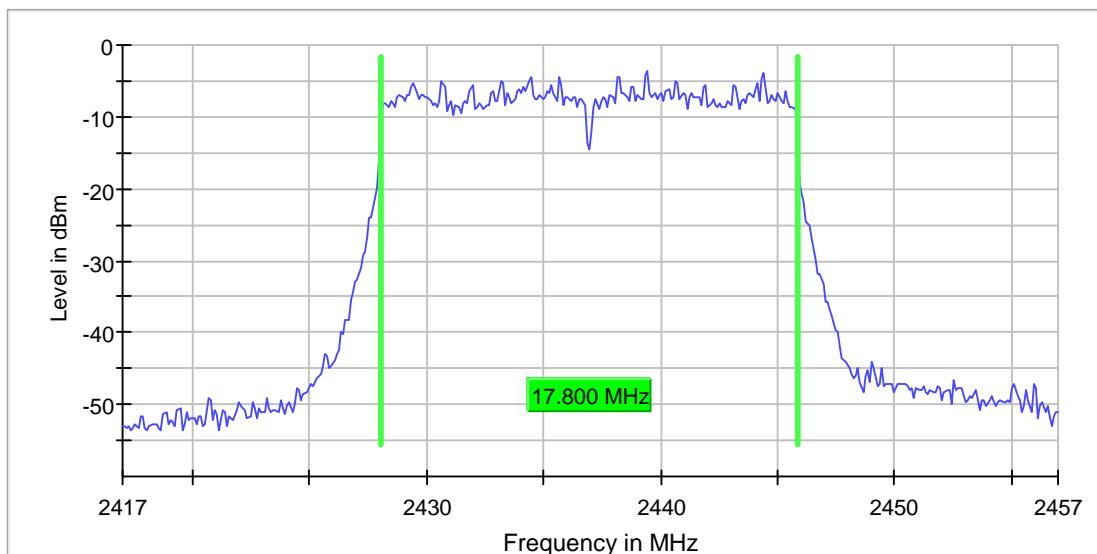
6dB_BW_CH01_ bmode_2MBIT

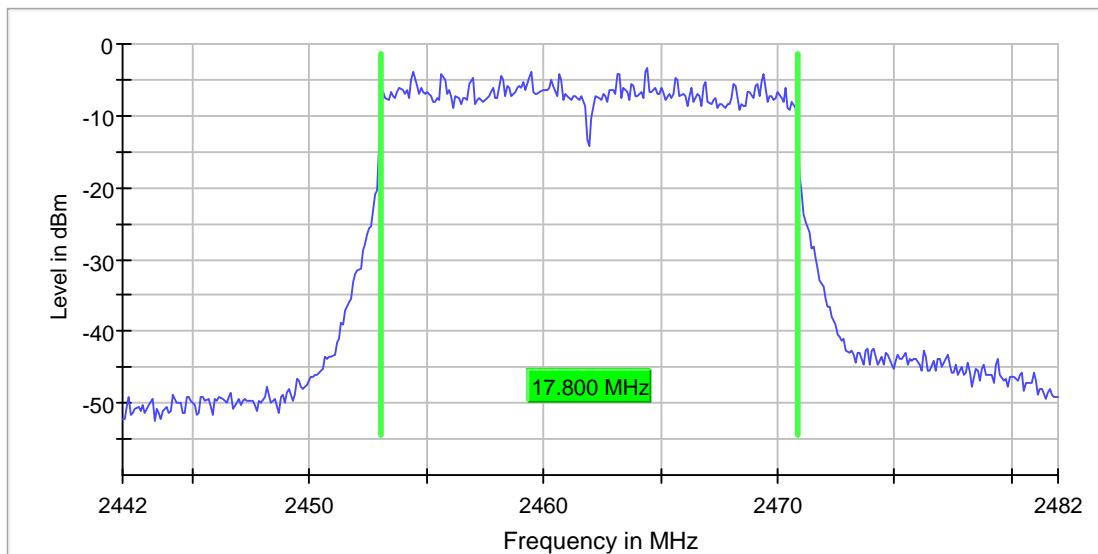


6dB_BW_CH06_bmode_2MBIT

**6dB_BW_CH11_bmode_2MBIT****1.2.2. g-mode****6dB_BW_CH01_g-mode_6MBIT**

**6dB_BW_CH06_g-mode_6MBIT****6dB_BW_CH11_g-mode_6MBIT**

1.2.3. n-mode(HT20)**6dB_BW_CH01_n-mode_MCS3****6dB_BW_CH06_n-mode_MCS3**



6dB_BW_CH11_n-mode_MCS3

1.2.4. n-mode(HT40)

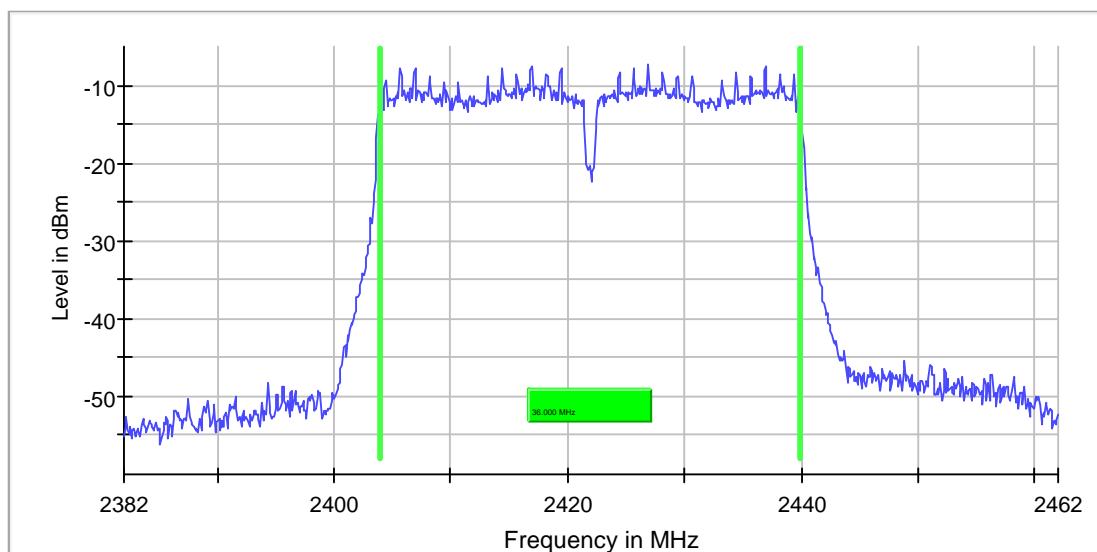
Minimum Emission Bandwidth 6 dB (2422 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.000000	0.500000	---	2403.950000	2439.950000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-7.2	PASS

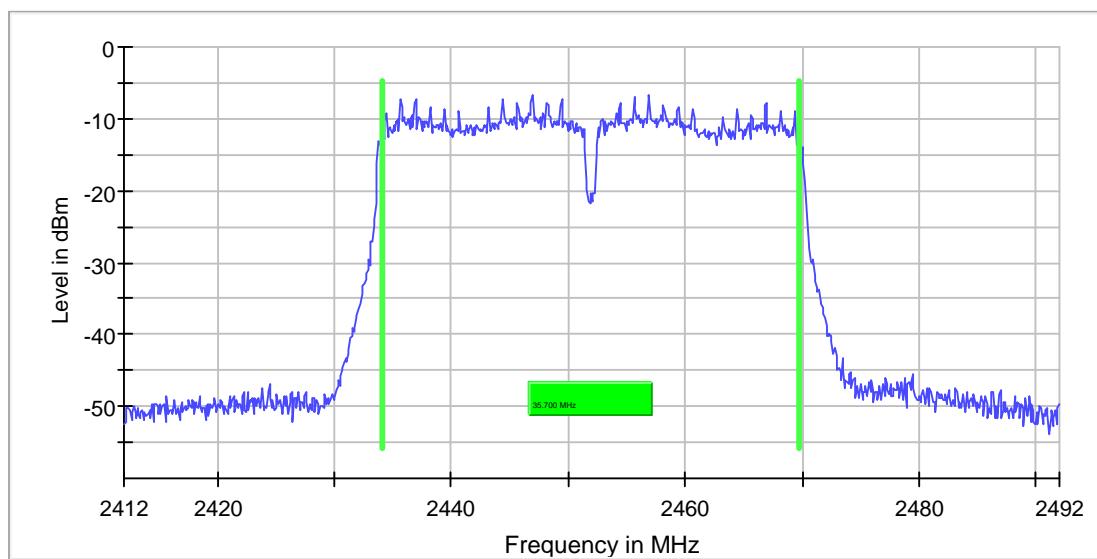


Minimum Emission Bandwidth 6 dB (2452 MHz; n40-mode [MCS0] (11 dBm); 40 MHz)**6 dB Bandwidth**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	35.700000	0.500000	---	2434.050000	2469.750000

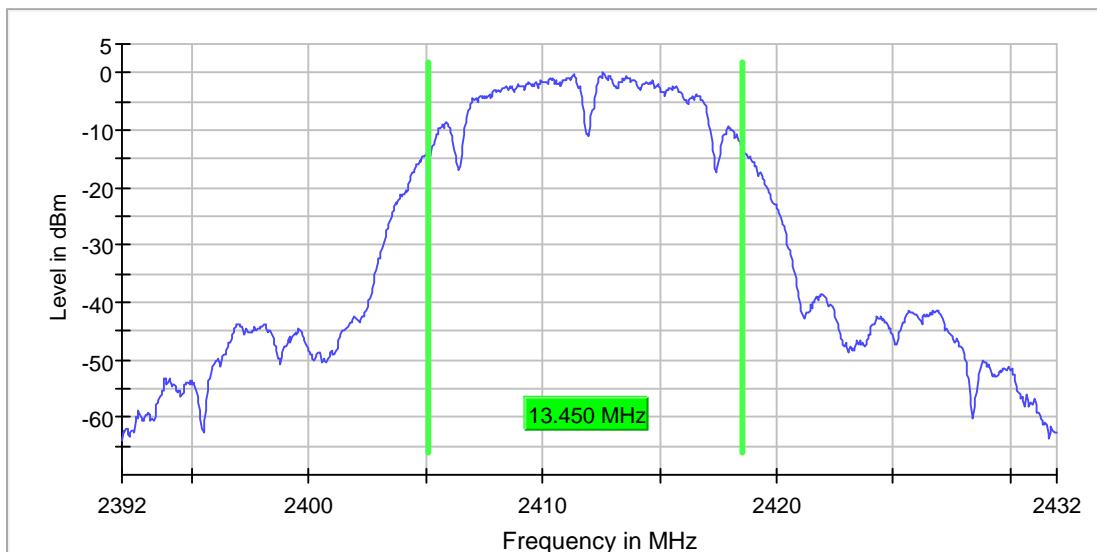
(continuation of the "6 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-6.7	PASS

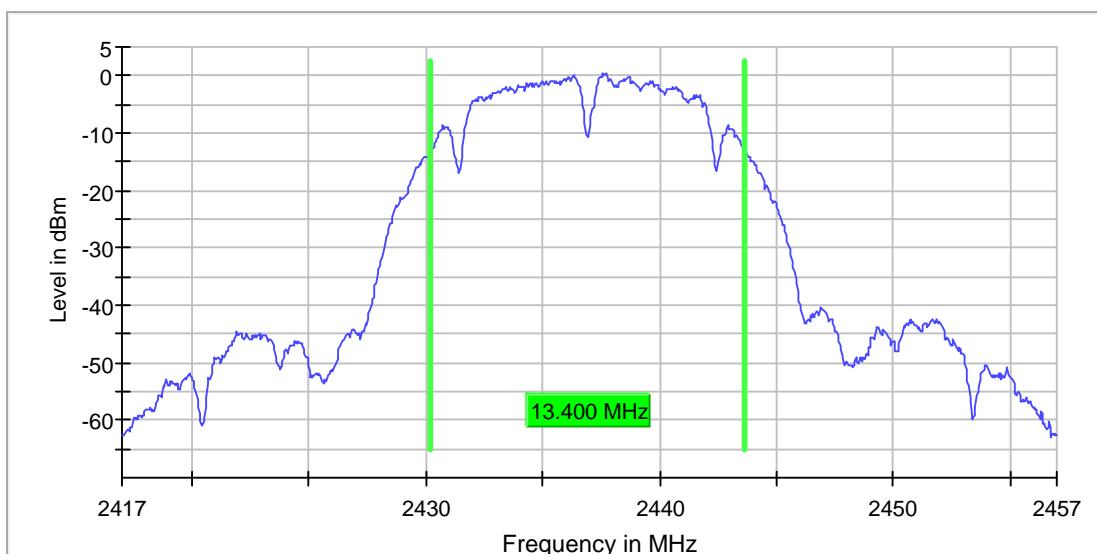


1.3. 99% Occupied Bandwidth

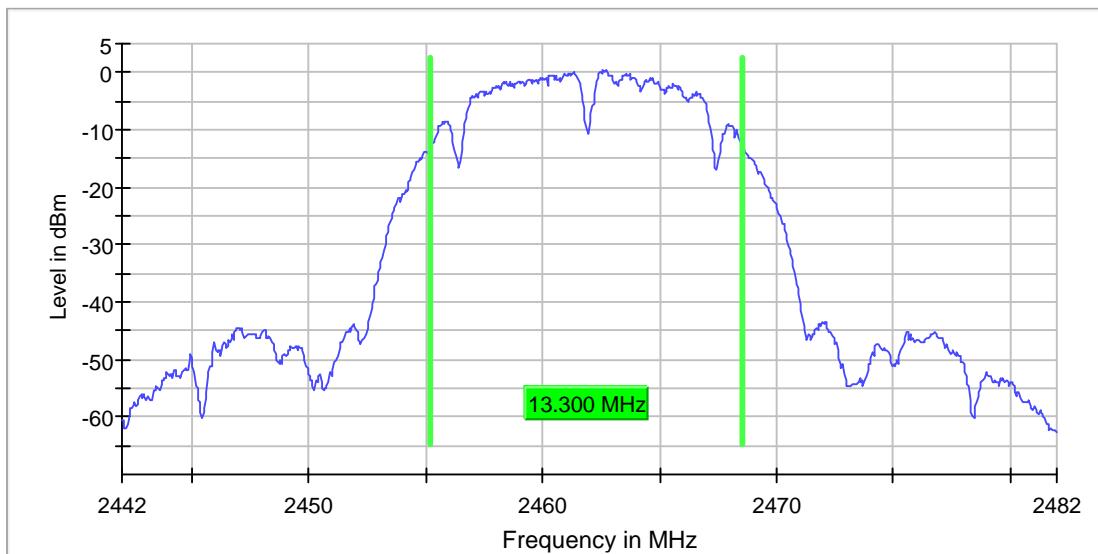
1.3.1. b-mode



99% Occupied Bandwidth CH1_b mode_2Mbit

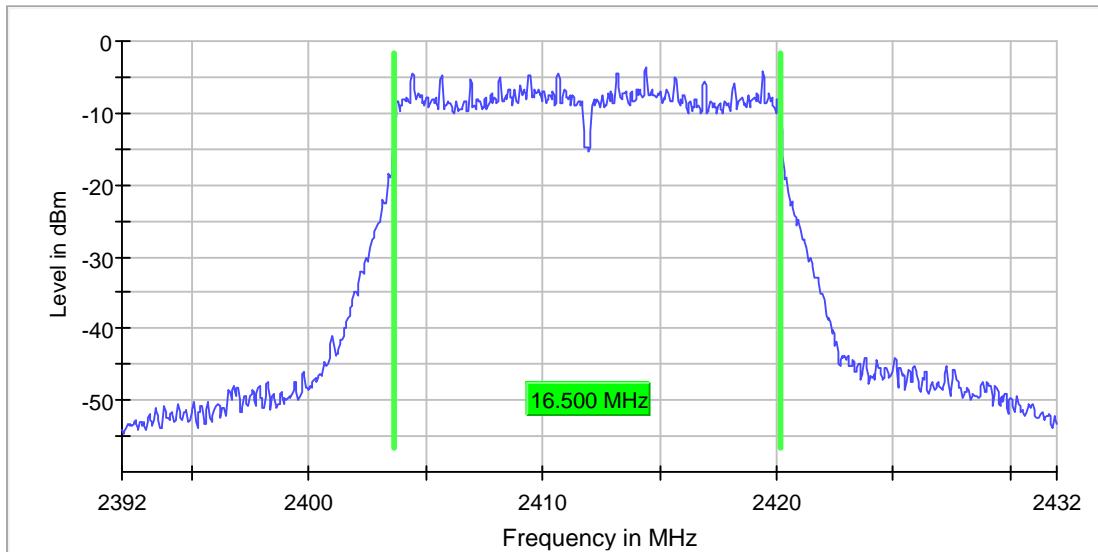


99% Occupied Bandwidth CH6_b mode_2Mbit

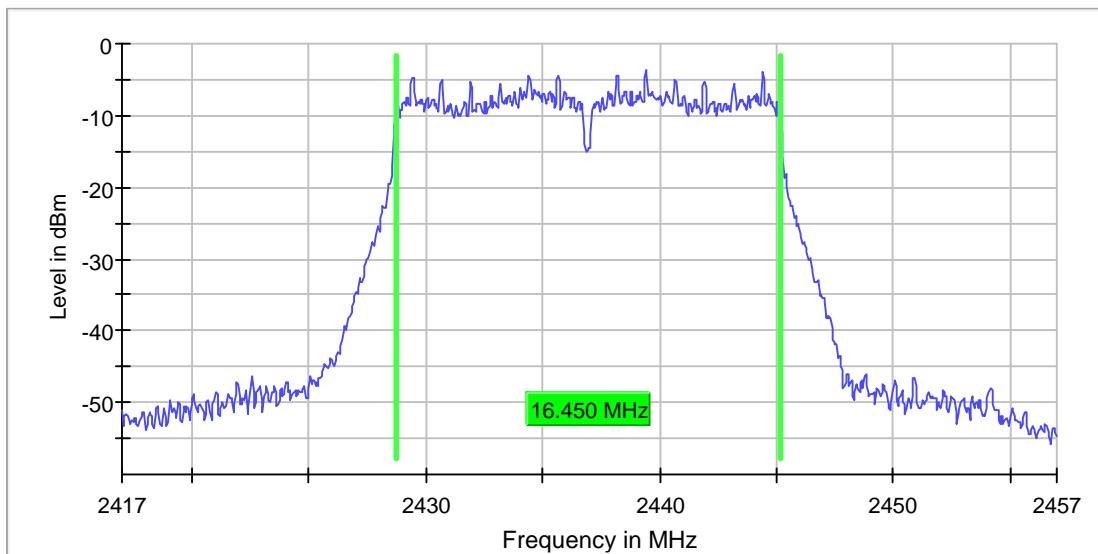


99% Occupied Bandwidth CH11_b mode_2Mbit

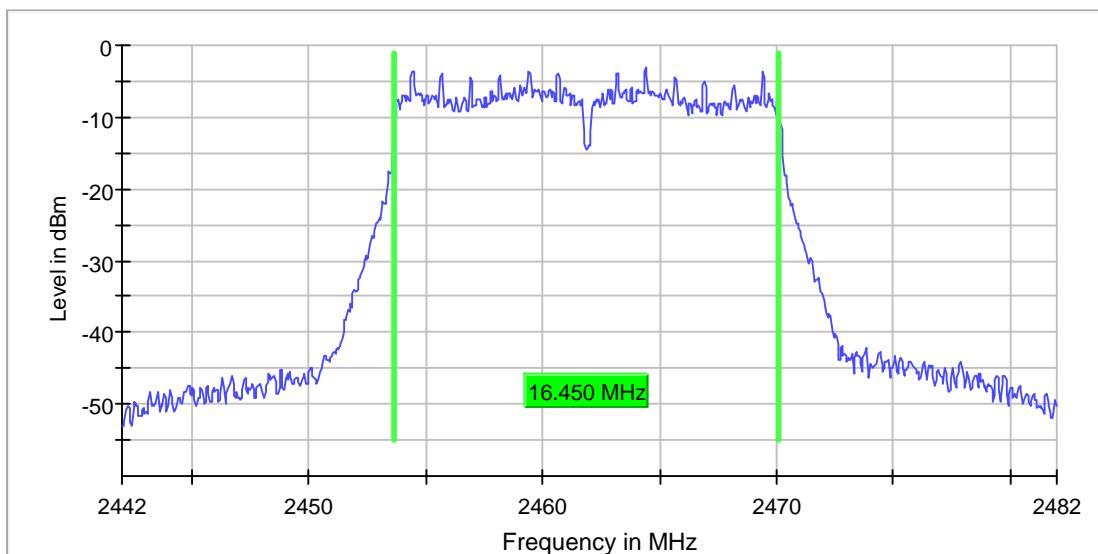
1.3.2. g-mode



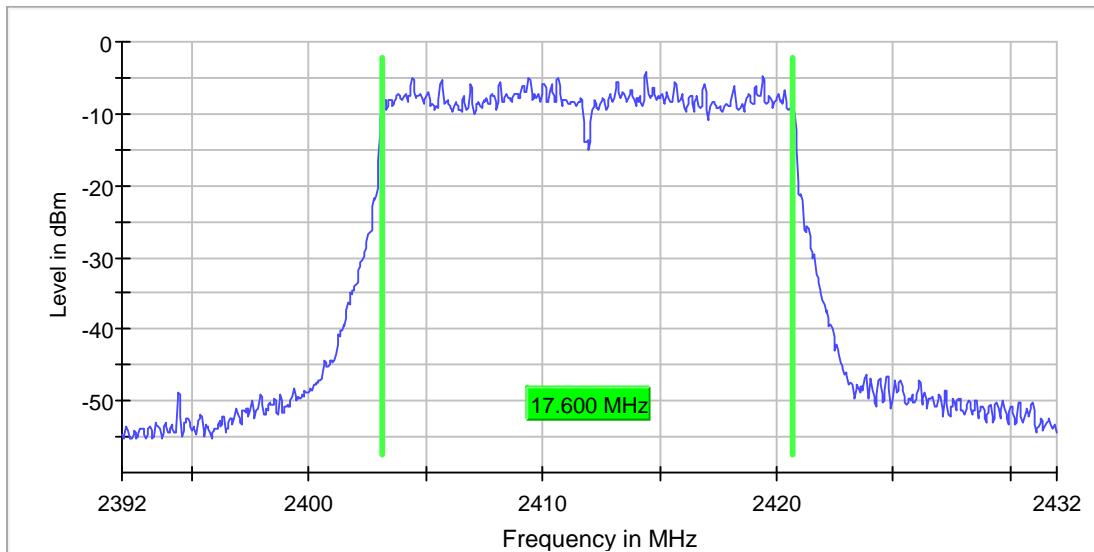
99% Occupied Bandwidth CH1_g mode_6Mbit



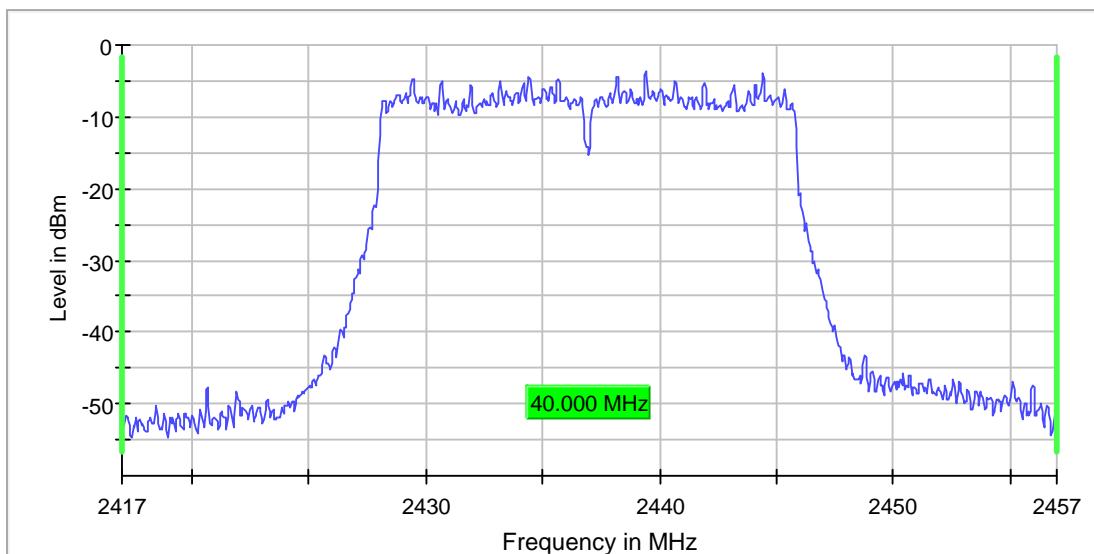
99% Occupied Bandwidth CH6_g mode_6Mbit



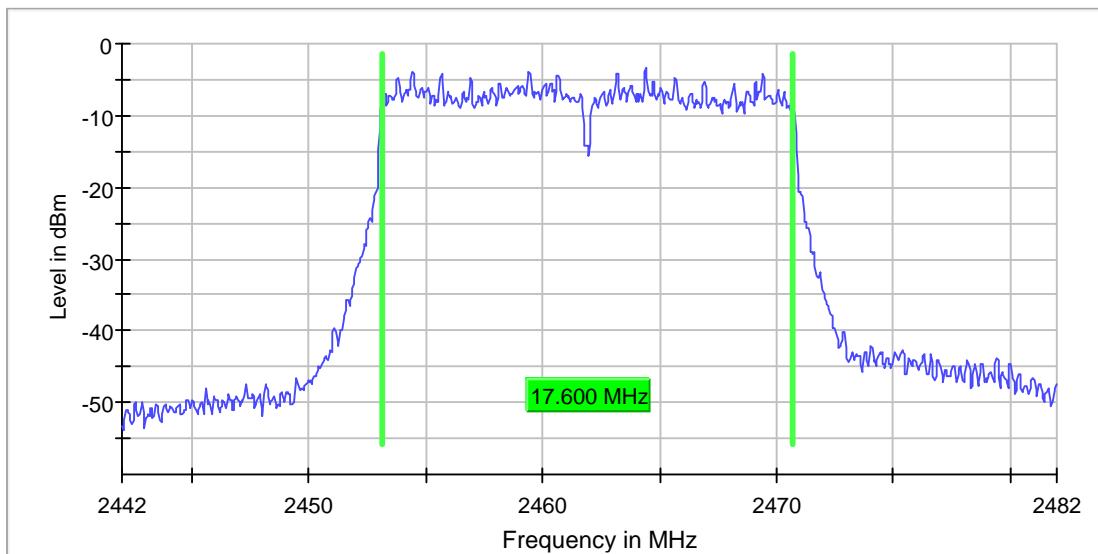
99% Occupied Bandwidth CH11_g mode_6Mbit

1.3.3. n-mode(HT20)

99% Occupied Bandwidth CH1_n mode_MCS3



99% Occupied Bandwidth CH6_n mode_MCS3



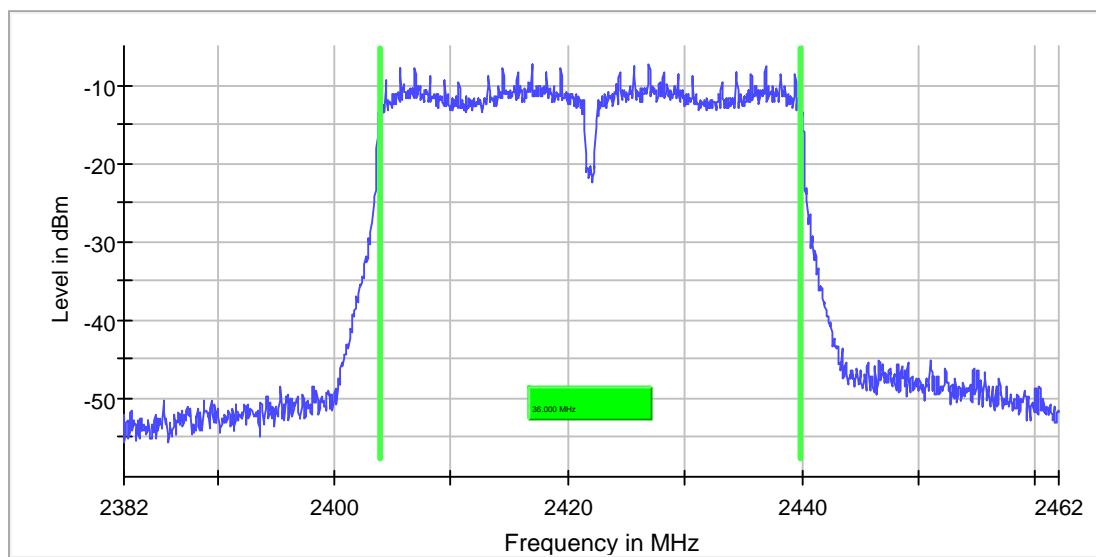
99% Occupied Bandwidth CH11 n mode_MCS3

1.3.4. n-mode(HT40)**99% Occupied Bandwidth CH3_n mode_MCS0**

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	36.000000	---	---	2403.925000	2439.925000

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-7.2	PASS

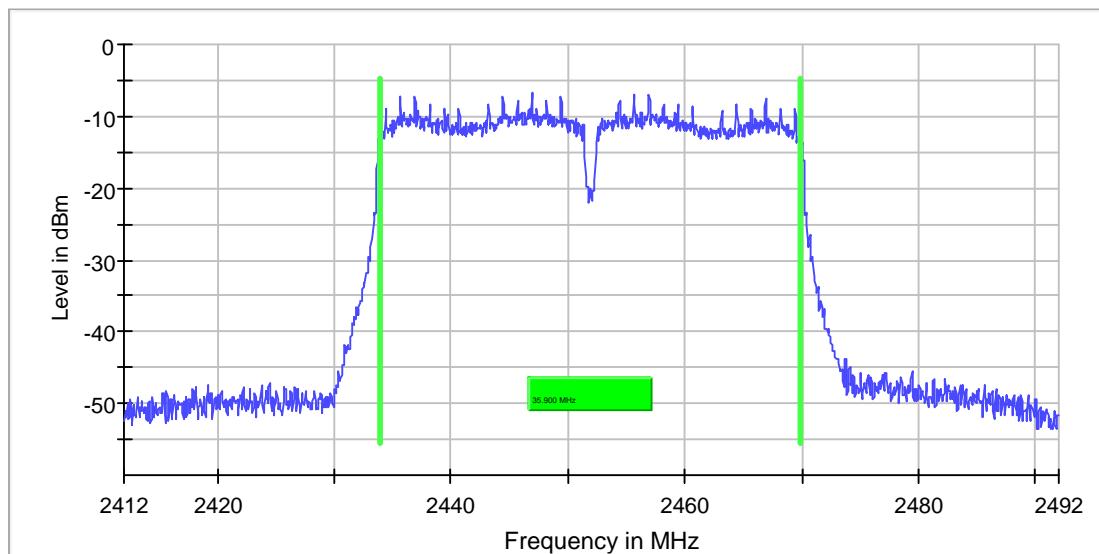


99% Occupied Bandwidth CH9_n mode_MCS0

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	35.900000	---	---	2433.975000	2469.875000

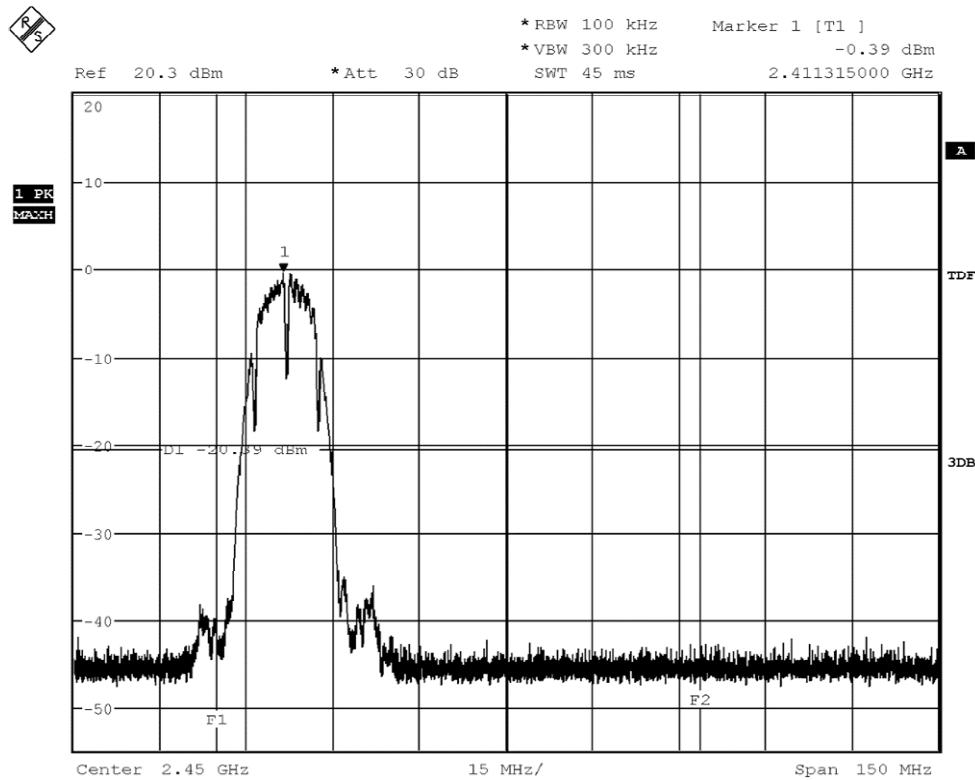
(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	-6.7	PASS

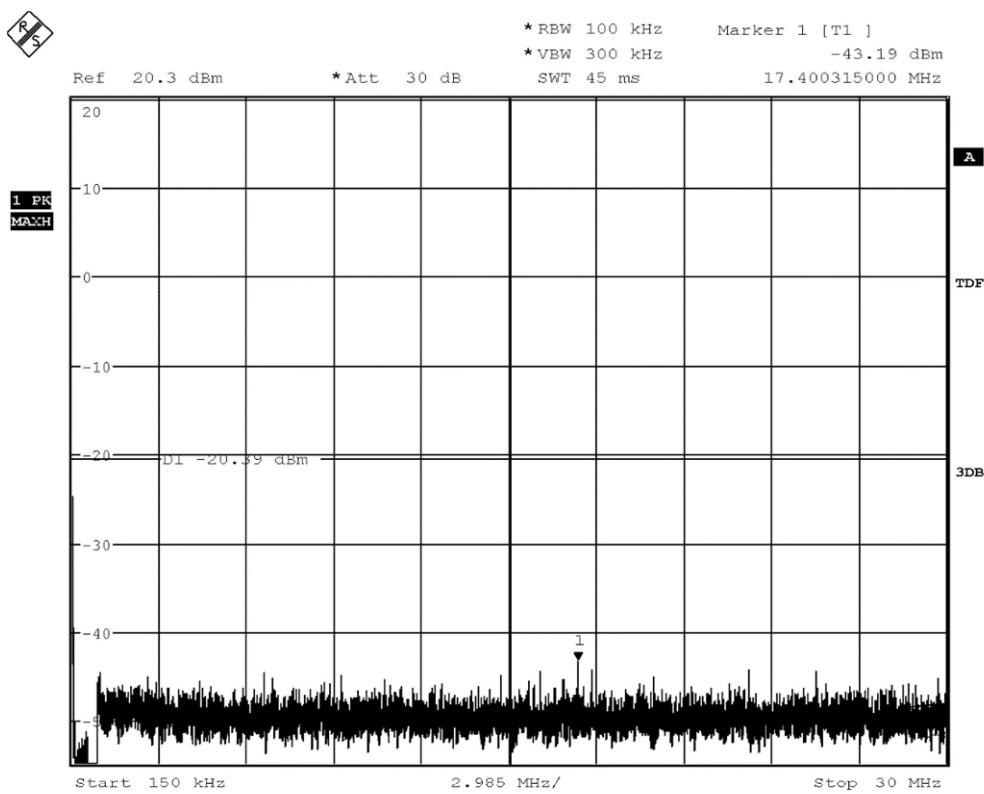


1.4. 20dBc Tx Spurious Emissions

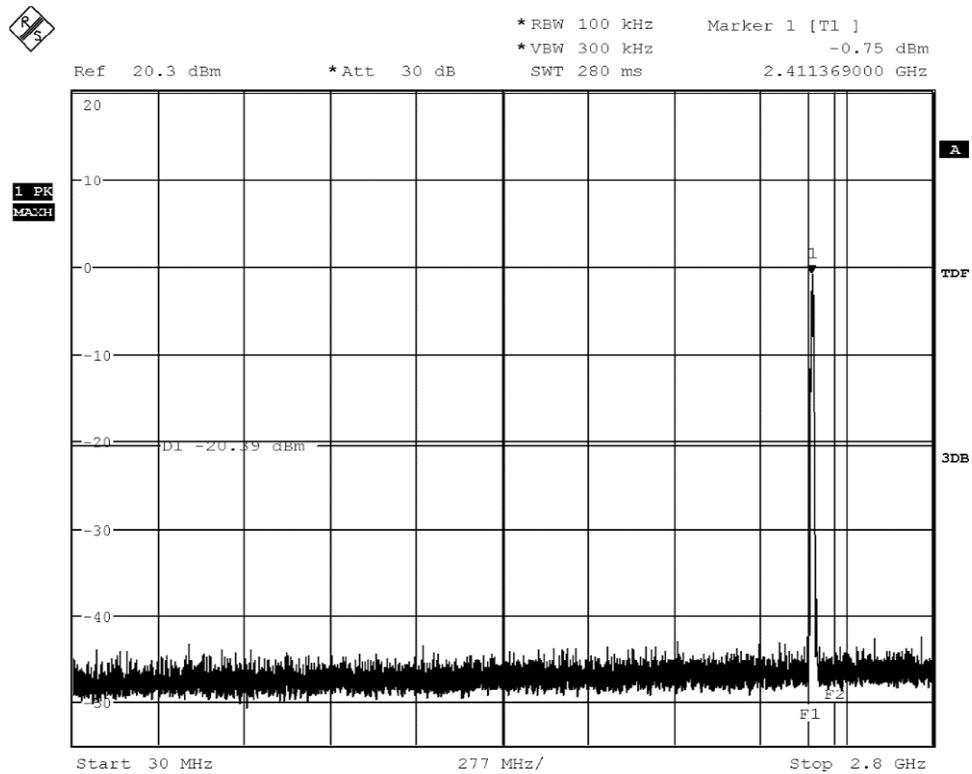
1.4.1. b-mode



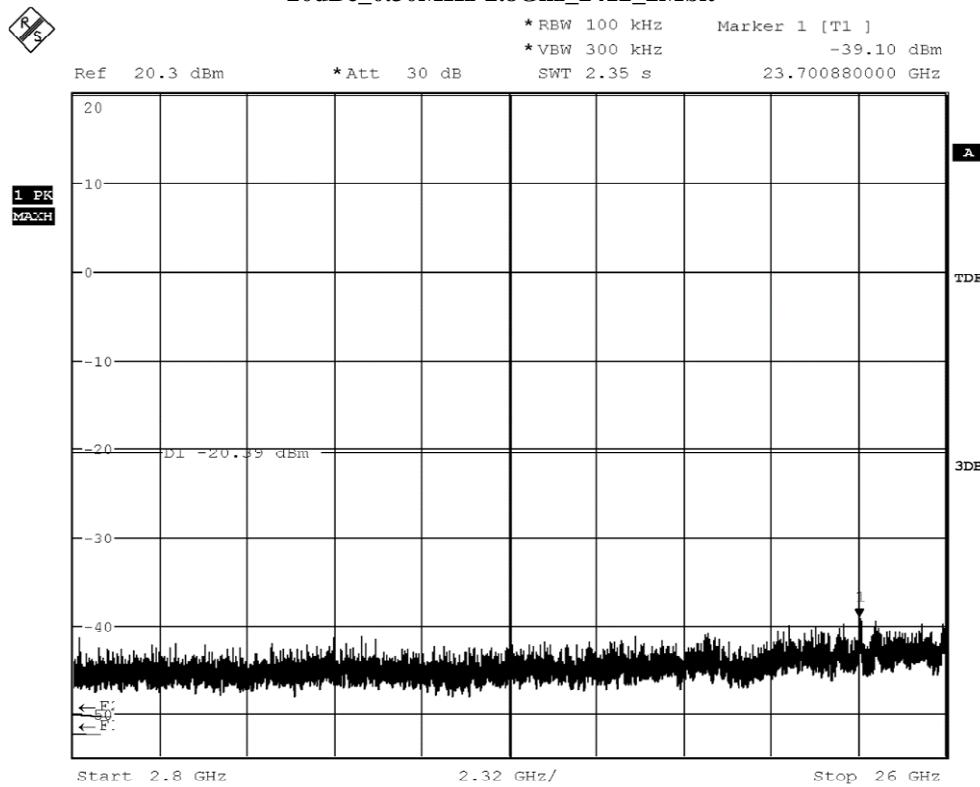
20dBc_REF_2412_bmode_2Mbit



20dBc_0.15MHz-30MHz_REF_2412_2Mbit

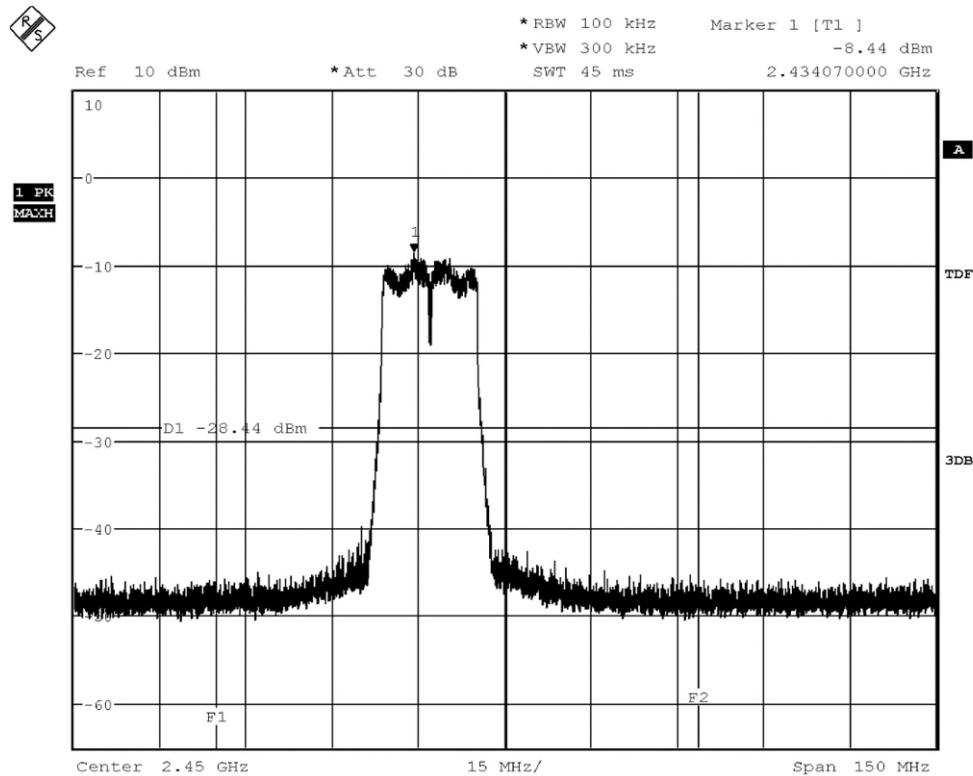


20dBc_0.30MHz-2.8Ghz_2412_2Mbit

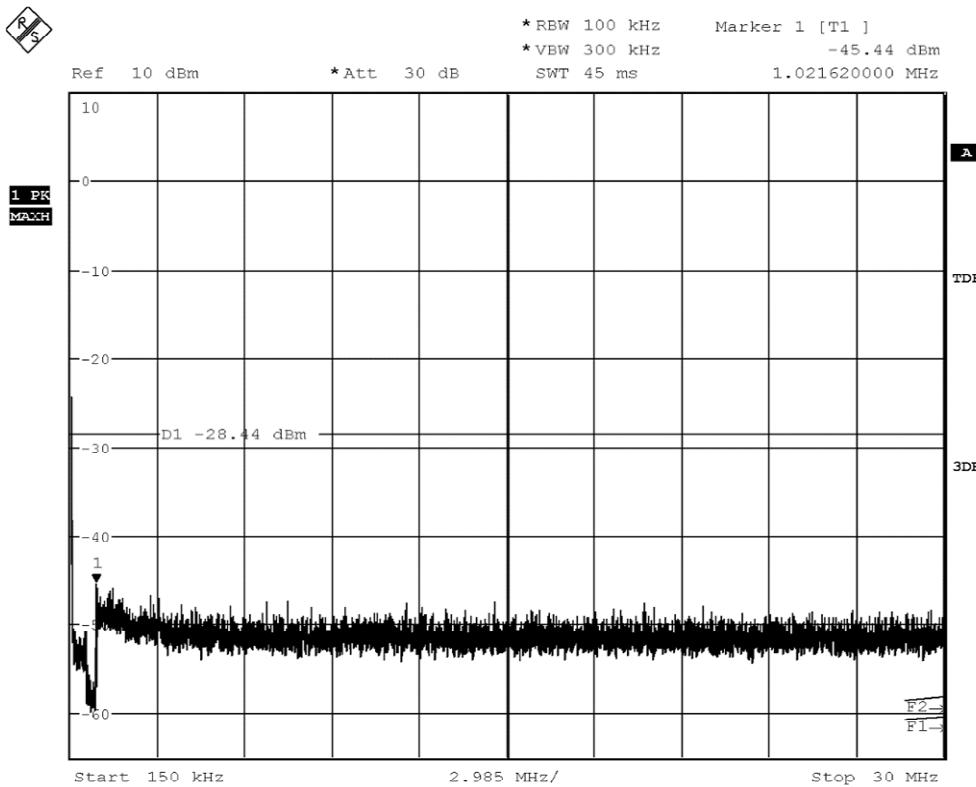


20dBc_2.8GHz-26Ghz_2412_2Mbit

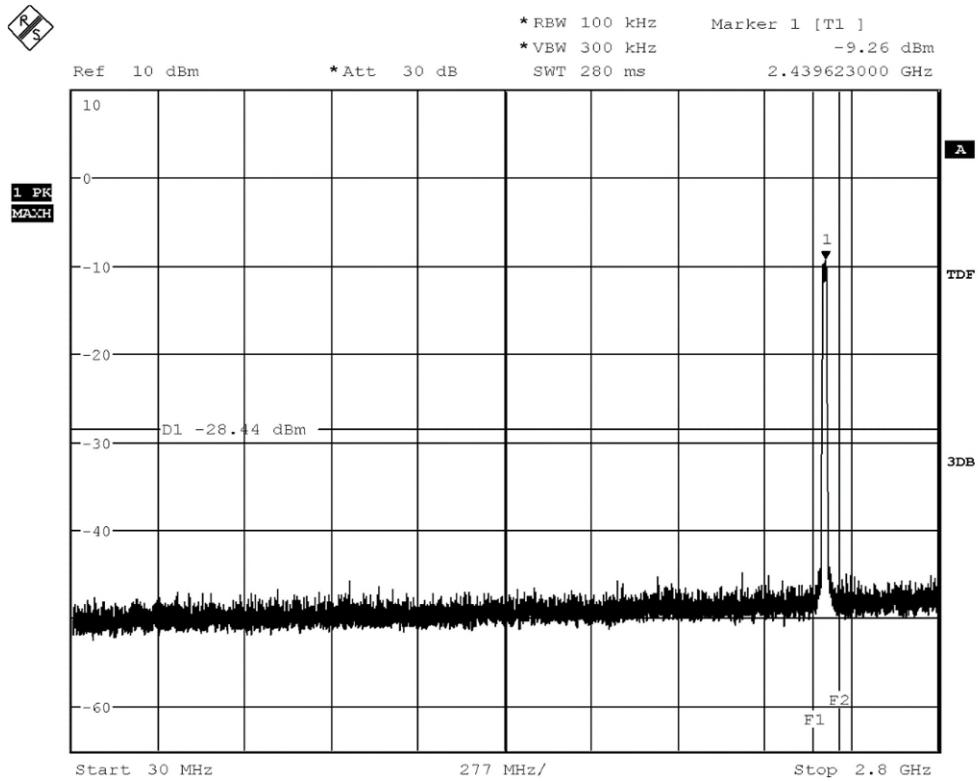
1.4.2. g-mode



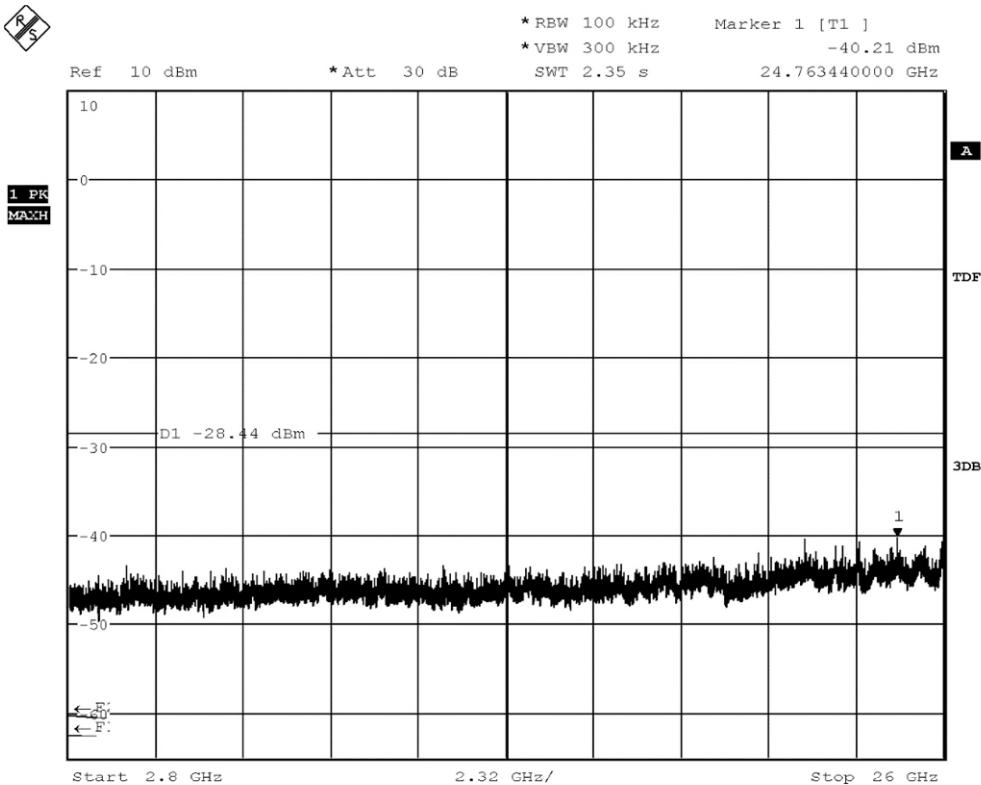
20dBc_REF_2437_gmode_6Mbit



20dBc_2.8GHz-26Ghz_gmode_6Mbit

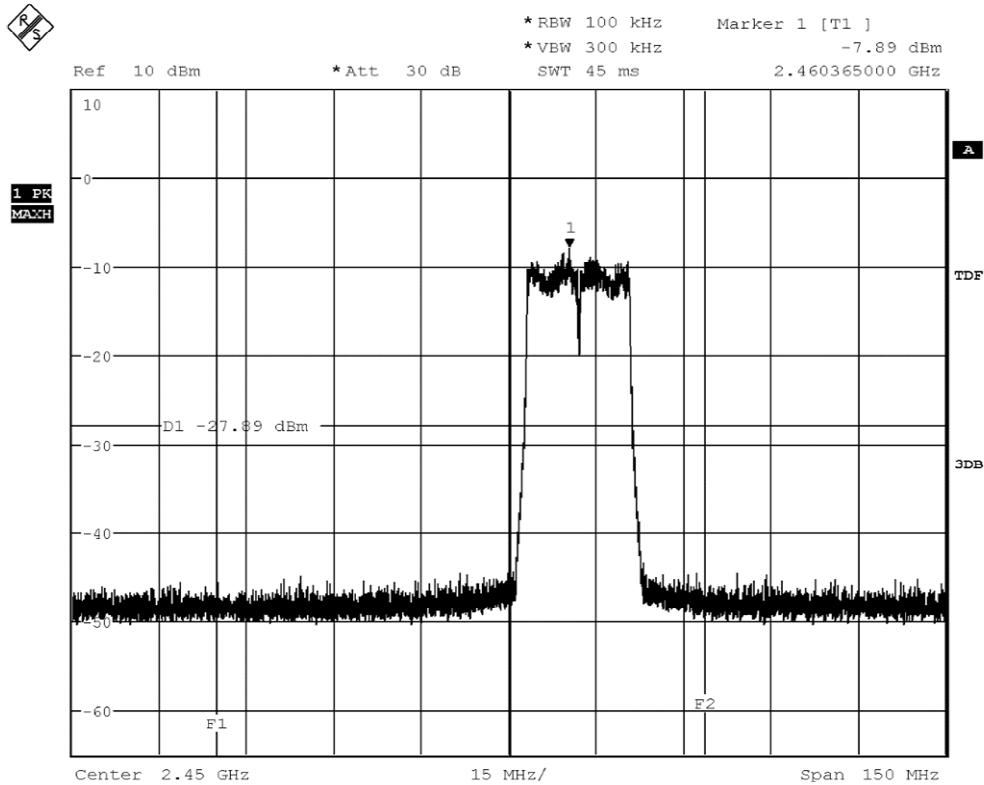


20dBc_0.30MHz-2.8Ghz_gmode_6Mbit

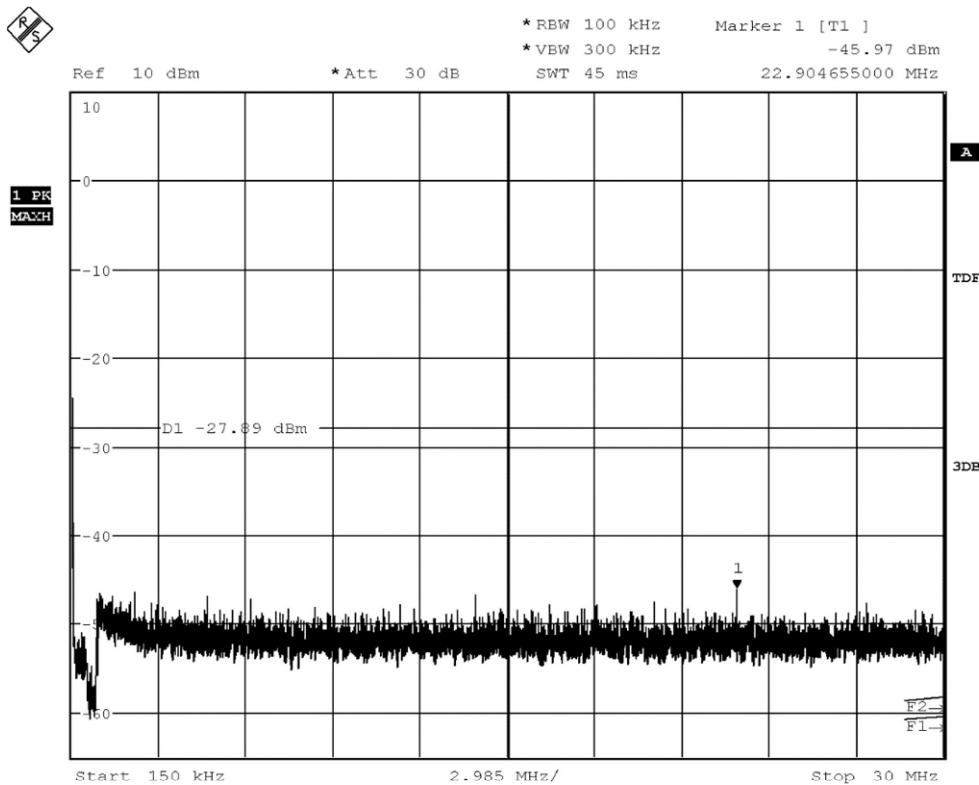


20dBc_2.8GHz-26Ghz_gmode_6Mbit

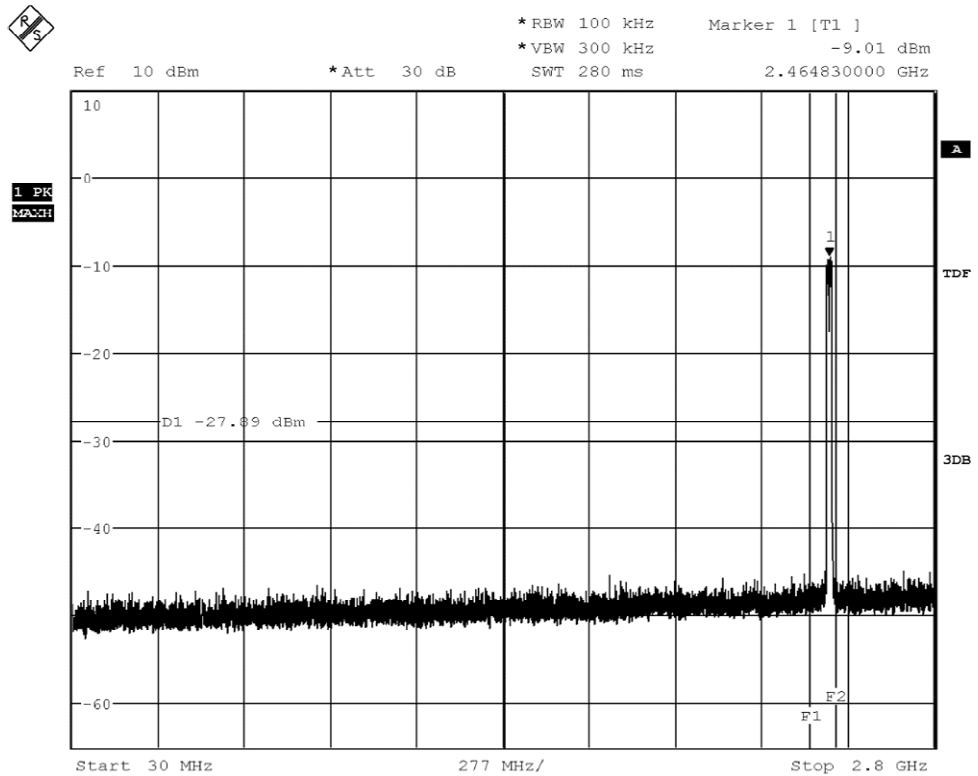
1.4.3. n-mode(HT20)



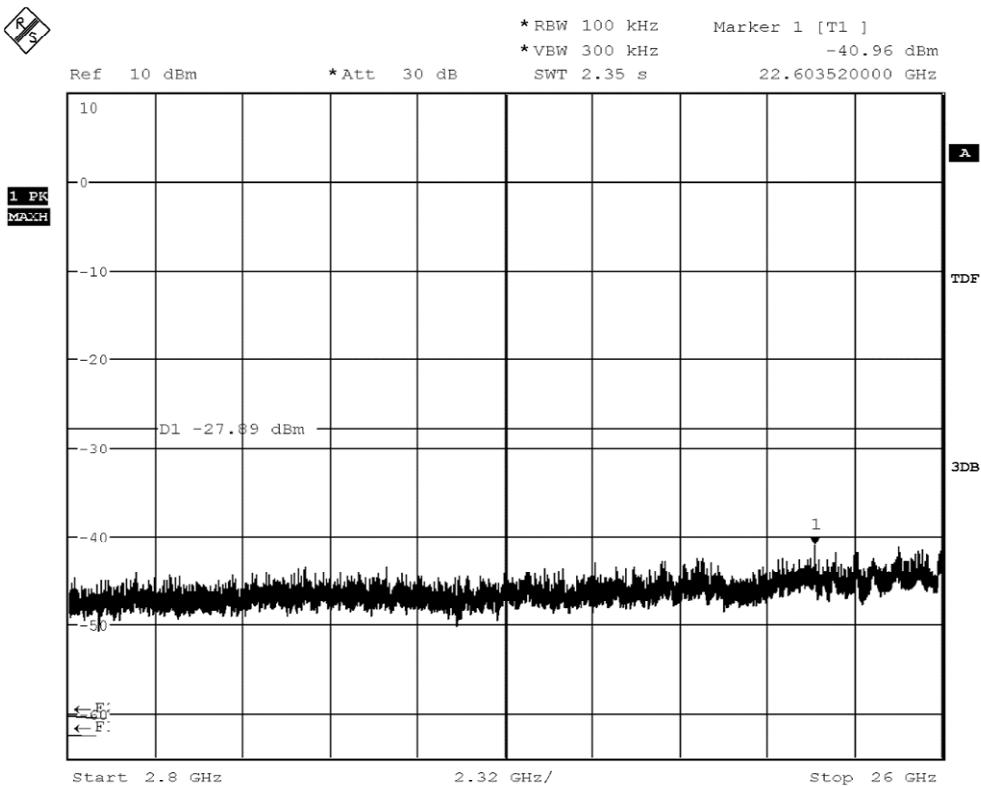
20dBc_REF_2462_nmode_MCS3



20dBc_0.15MHz-30MHz_2462_nmode_MCS3

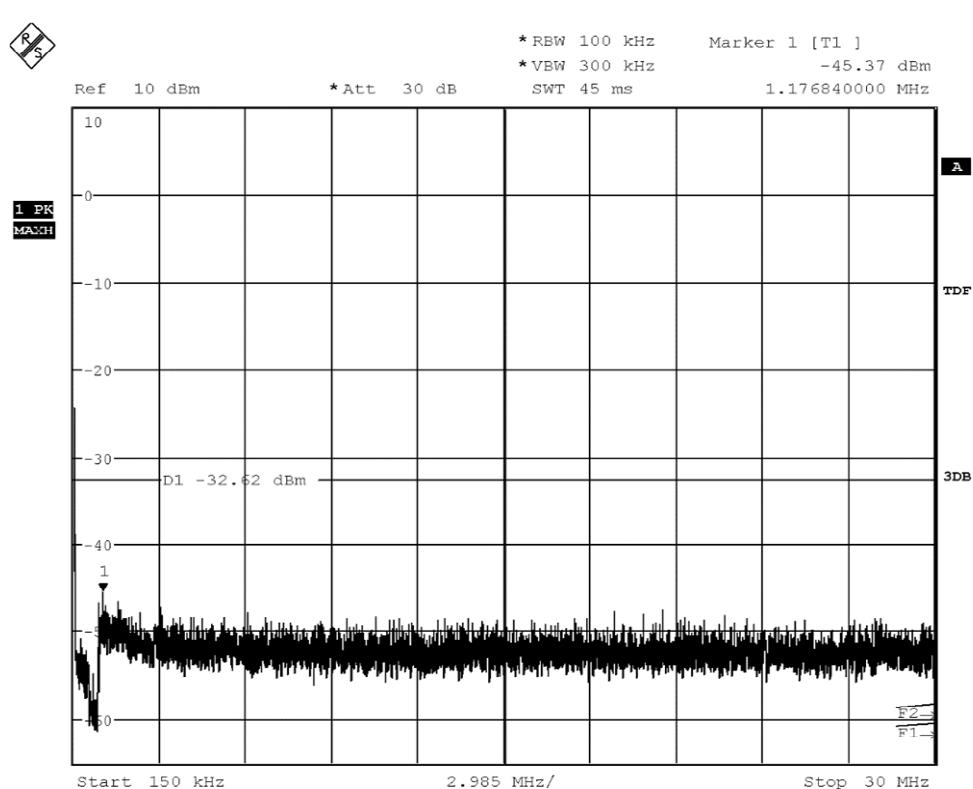
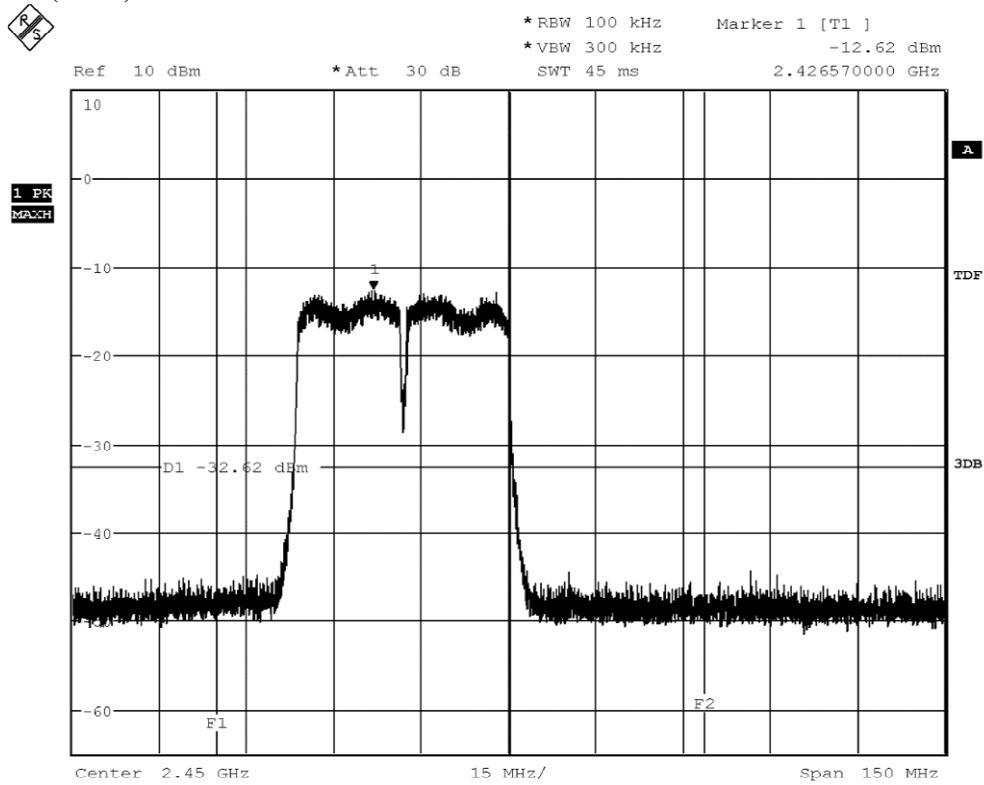


20dBc_0.30MHz-2.8Ghz_2462_nmode_MCS3

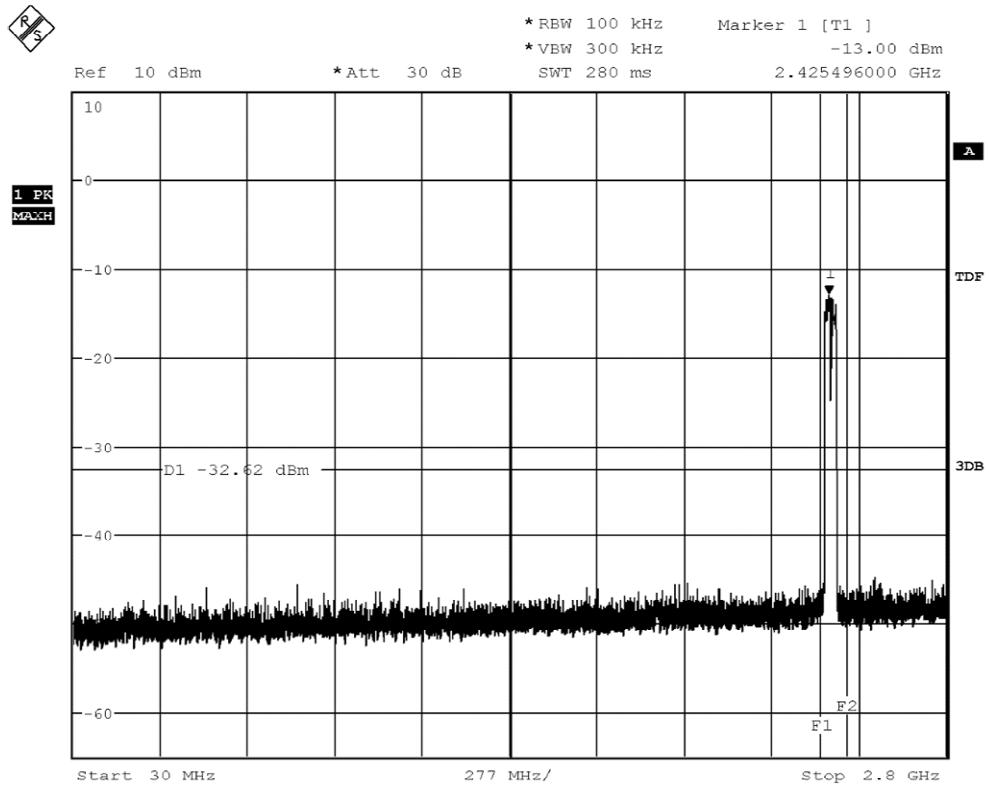


20dBc_2.8GHz-26Ghz_2462_nmode_MCS3

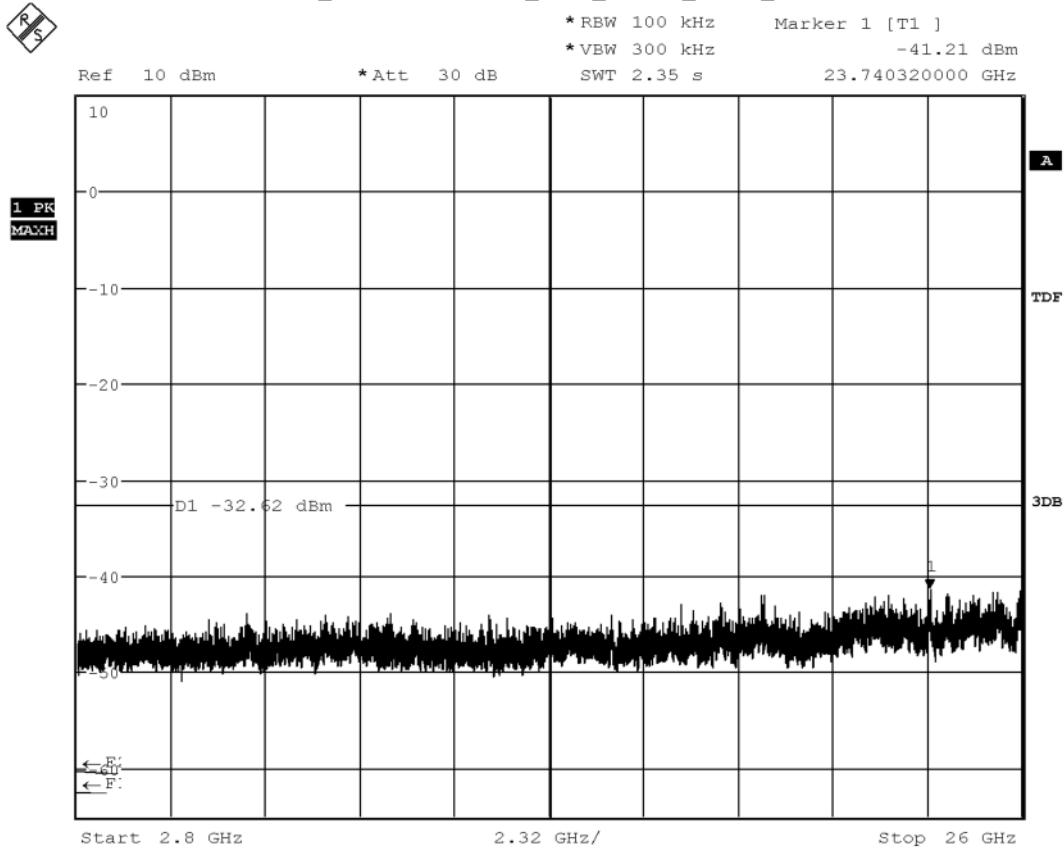
1.4.4. n-mode(HT40)



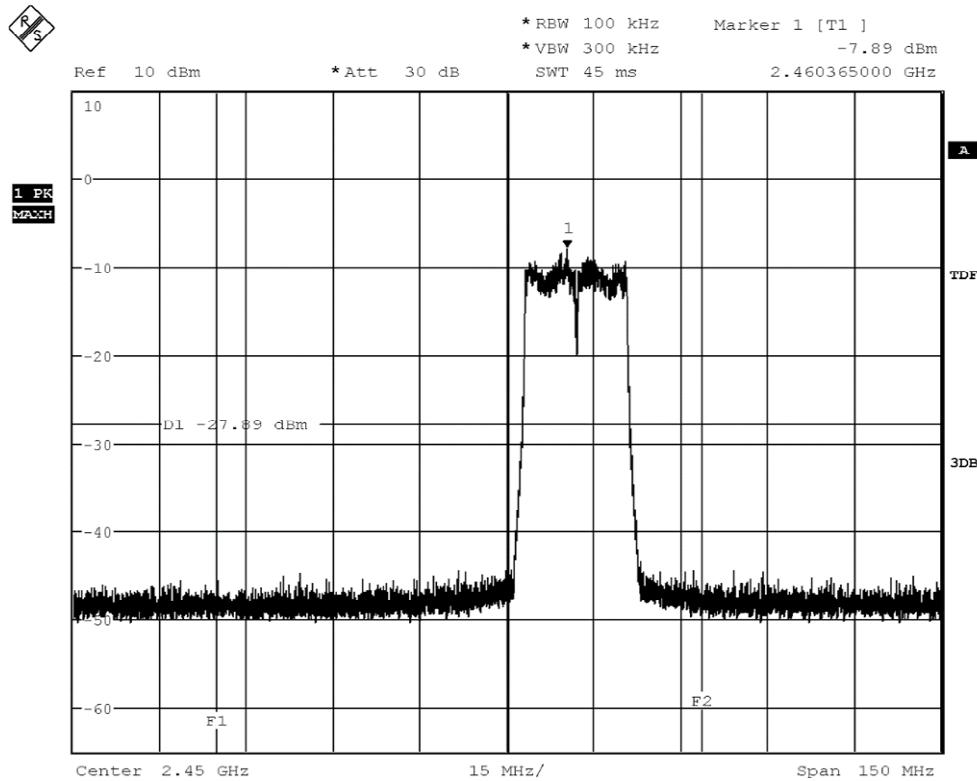
20dBc_0.15MHz-30MHz_2422_nmode_HT40_MCS0



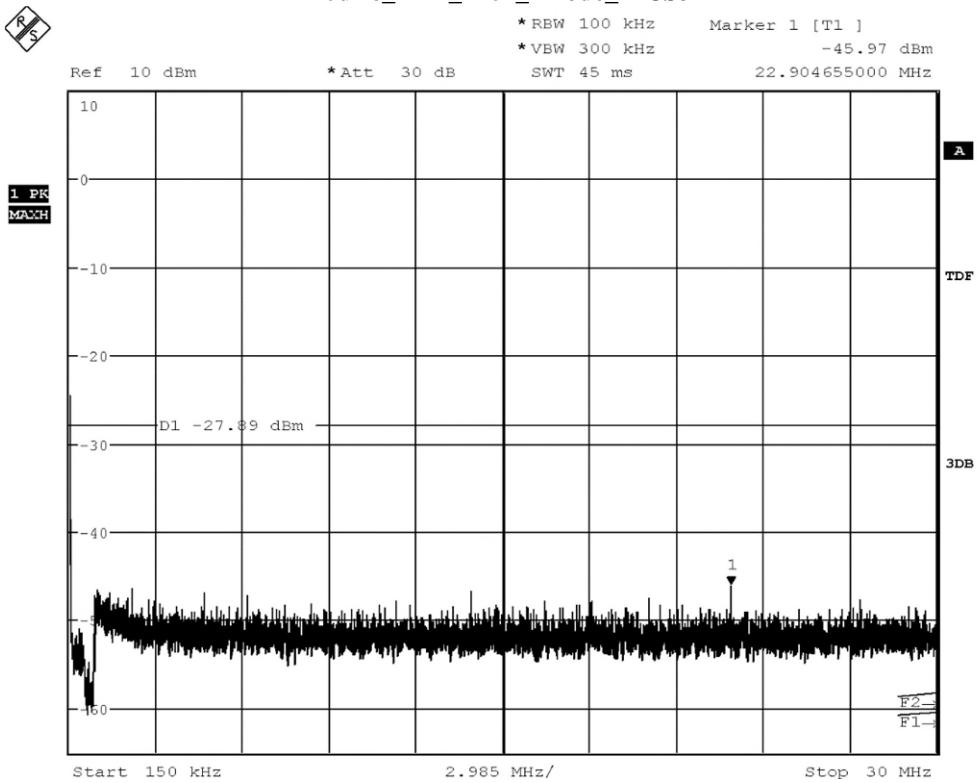
20dBc_0.30MHz-2.8Ghz_2422_nmode_HT40_MCS0



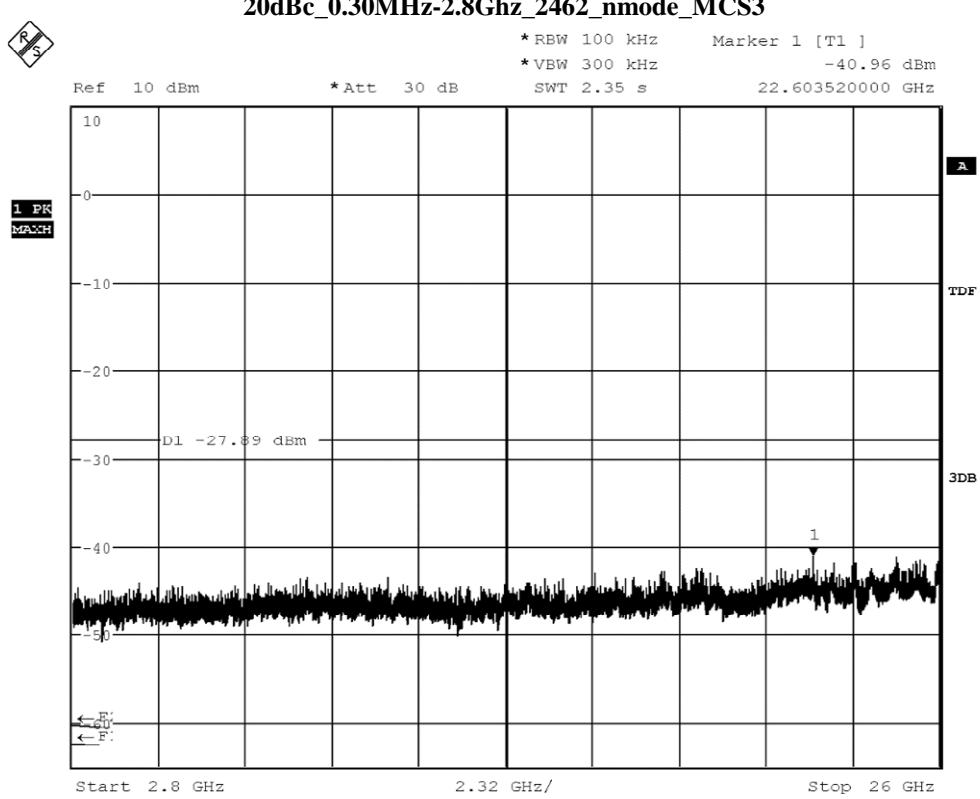
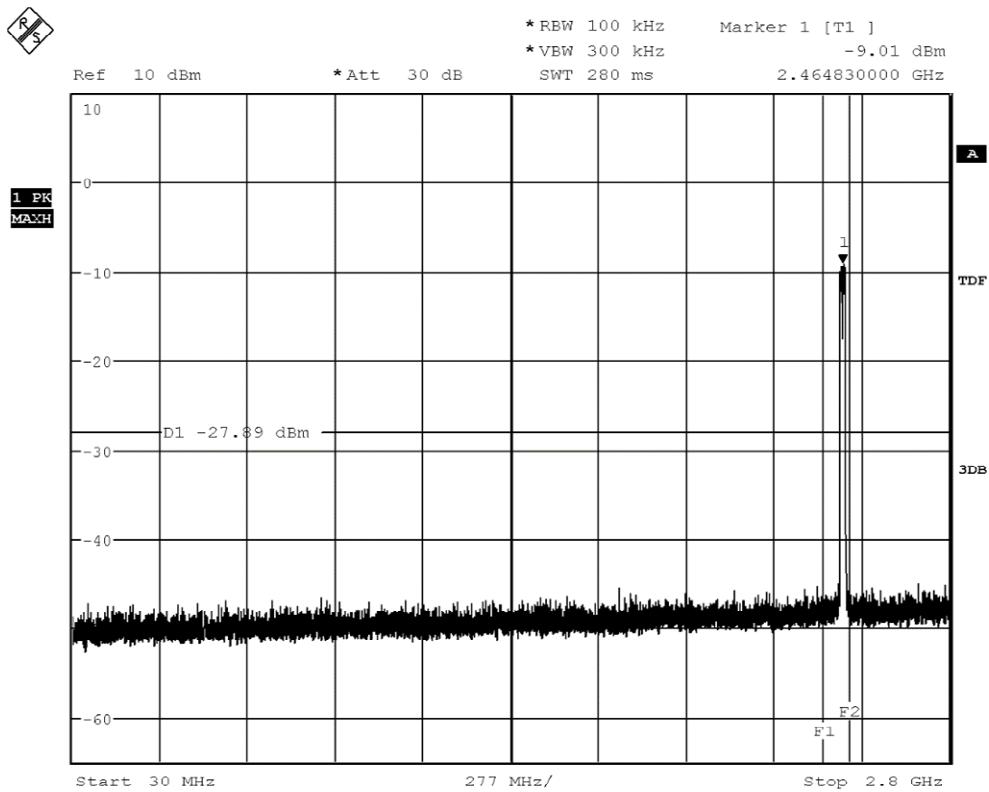
20dBc_2.8GHz-26Ghz_2422_nmode_HT40_MCS0



20dBc_REF_2462_nmode_MCS3



20dBc_0.15MHz-30MHz_2462_nmode_MCS3

**20dBc_2.8GHz-26Ghz_2462_nmode_MCS3**

2. Radiated Measurements

2.1. Radiated magnetic field measurements below 30 MHz

2.01a_b-mode_ch11

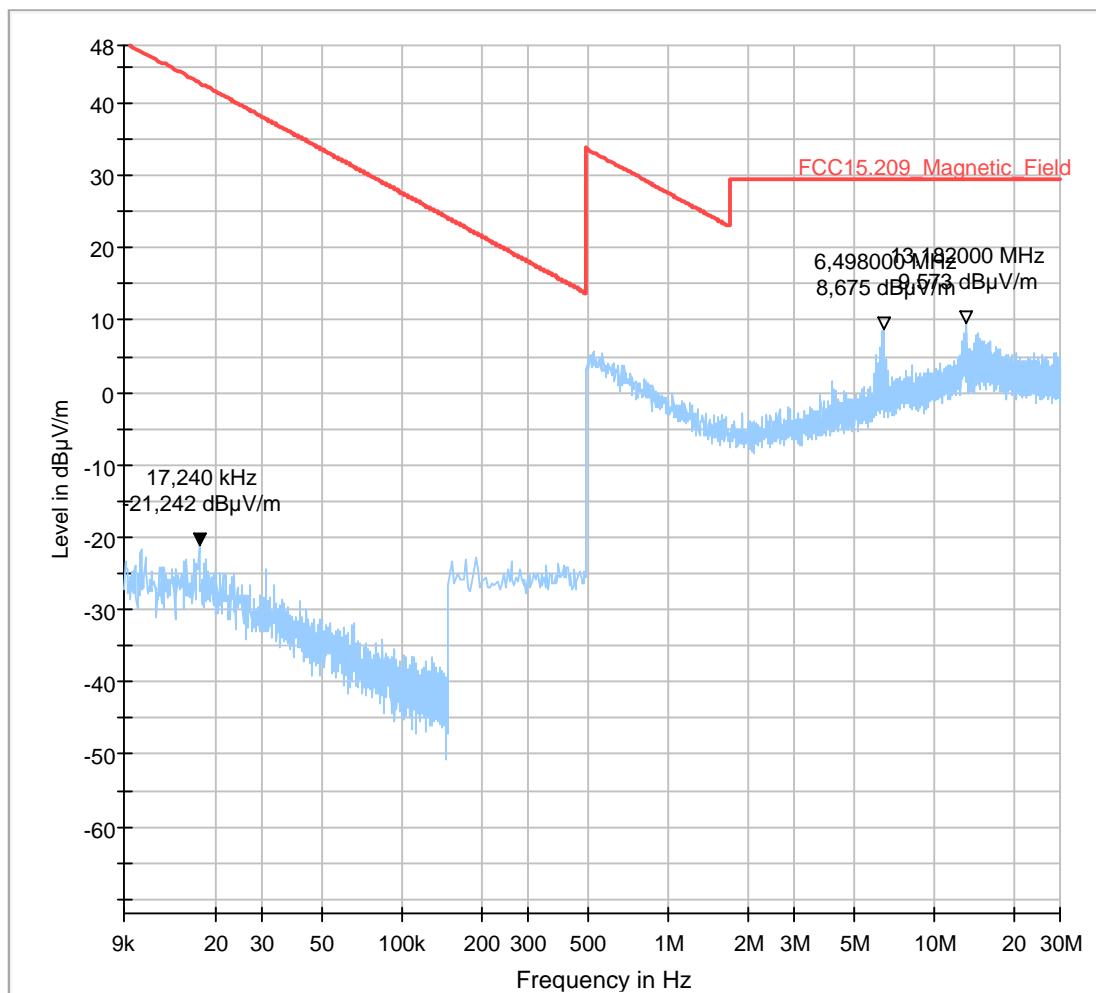
Common Information

Test description: Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Test software: EMC32 V9.25.0
Used filter: bypass
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator: TFr
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Power during tests: 13.5V DC
Comment: laying

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial No.: 0005000
Connected Devices: 13.5VDC

Full Spectrum



2.01b_b-mode_ch11

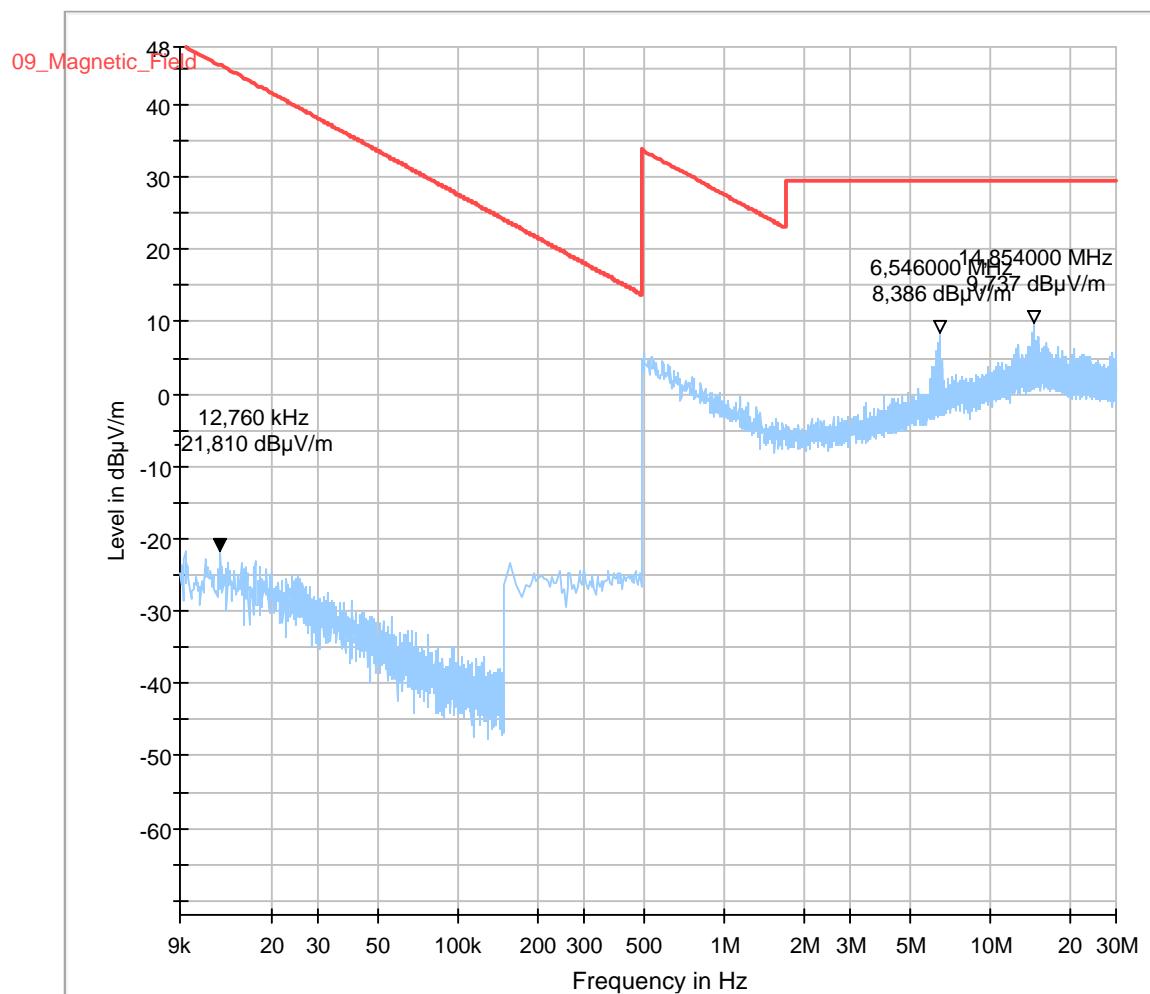
Common Information

Test description: Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Test software: EMC32 V9.25.0
Used filter: bypass
Test specification: FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator: TFr
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Power during tests: 13.5V DC
Comment: standing

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial No.: 0005000
Connected Devices: 13.5VDC

Full Spectrum



2.2. Radiated electric field measurement 30 MHz to 1 GHz

3.01a_b-mode_ch11

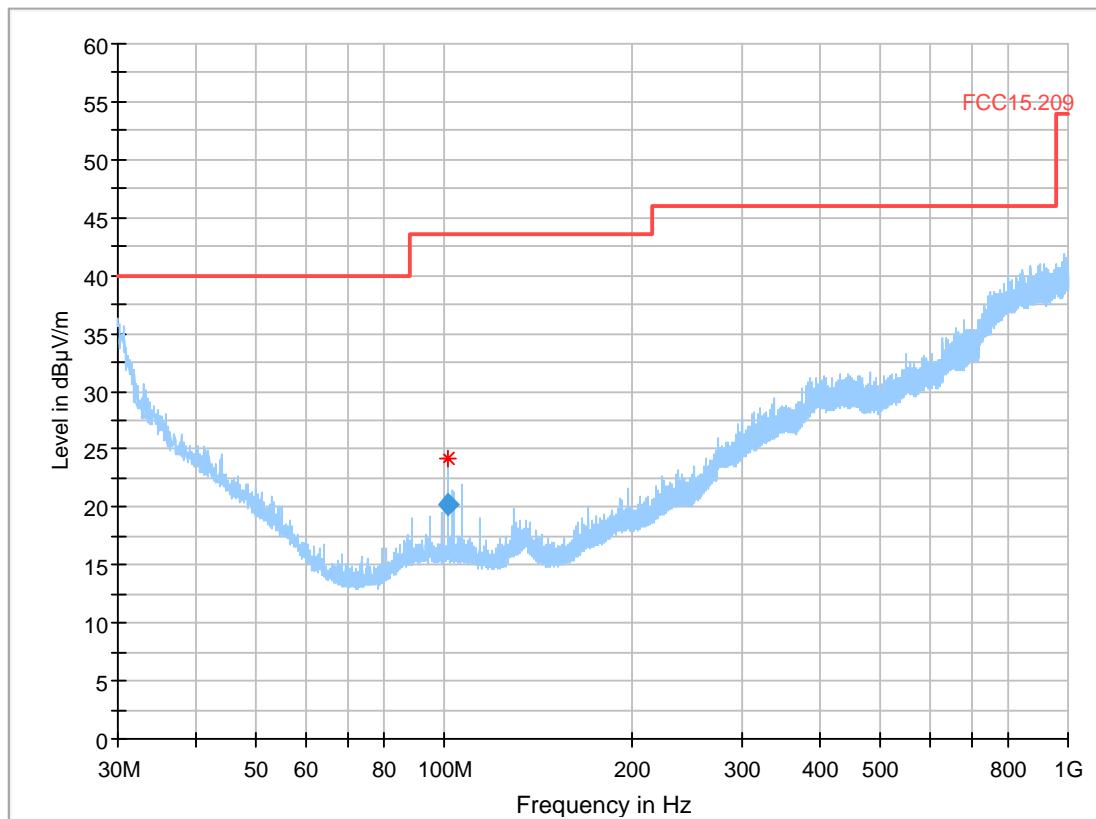
Common Information

Test description: Electric Field Strength Measurement
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Test software: EMC32 V9.25.0
Test specification.: FCC 15.209; RSS-Gen: Issue 3
Operator: TFr
Operating conditions: Humidity: 55%rH; Temperature: 20°C
Power during tests: 13,5V DC
Comment 1: Laying

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial No.: 0005000
Connected Devices: 13.5VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
101.308000	20.31	43.50	23.19	1000.0	120.000	183.0	H	113.0	8.1

3.01b_b-mode_ch11

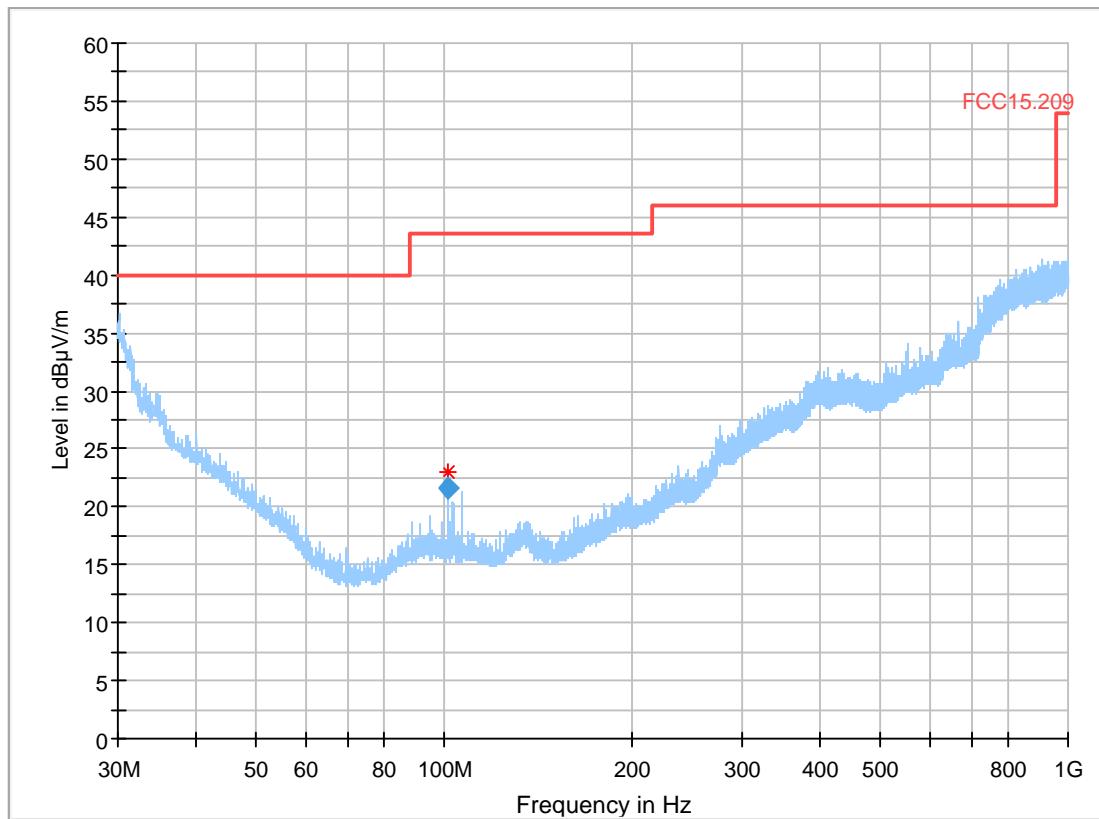
Common Information

Test description: Electric Field Strength Measurement
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Test software: EMC32 V9.25.0
Test specification.: FCC 15.209; RSS-Gen: Issue 3
Operator: TFr
Operating conditions: Humidity: 55%rH; Temperature: 20°C
Power during tests: 13,5V DC
Comment 1: standing

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial No.: 0005000
Connected Devices: 13.5VDC

Full Spectrum



Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
101.316000	21.64	43.50	21.86	1000.0	120.000	105.0	V	291.0	8.1

3.02a_g-mode_ch06

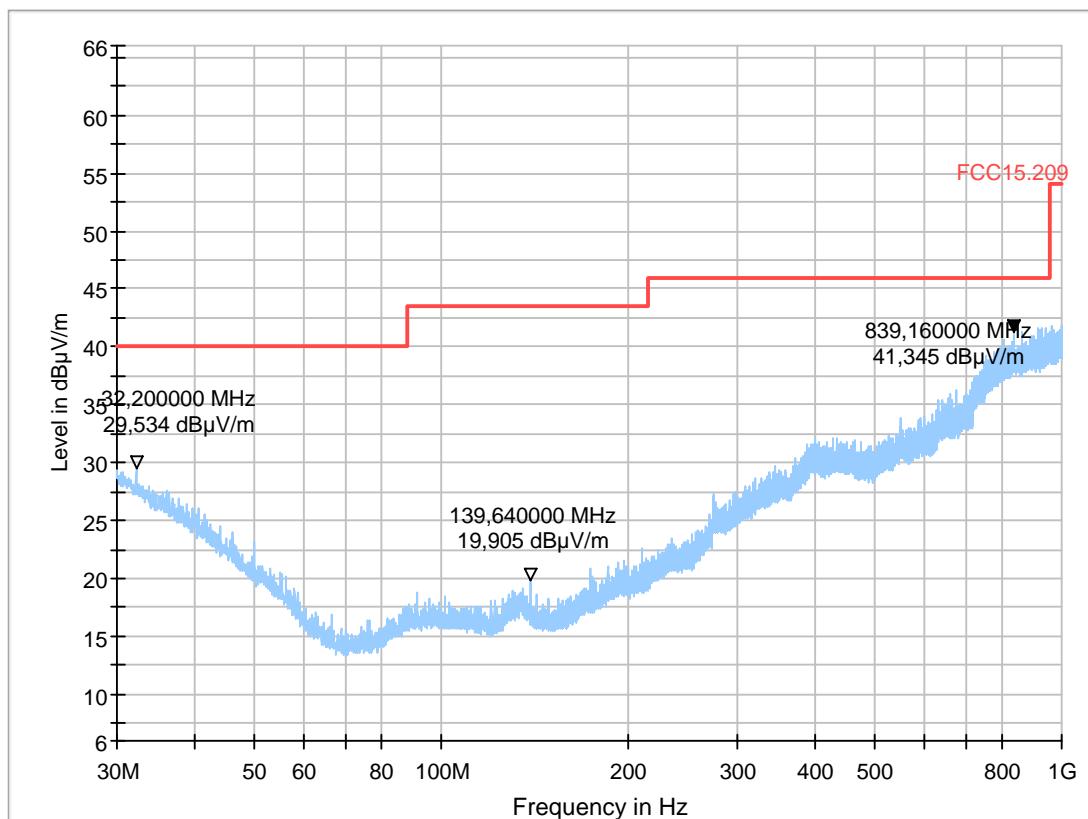
Test description:
Test site and distance:
Version of Testsoftware:
Distance correction:
Used filter:
Technical Data:
Test specification.:
Operatingmode:
Operator:
Operating conditions:
Comment 1:

08.11.2018 Page 1 of 1
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
EMC32 V9.25.0
not used
not used
please see page 2 for detailed data of measurement setup
FCC 15.209; RSS-Gen: Issue 3
g-mode | 6Mbit| ch06
SLo
Humidity: 48%rH; Temperature: 20°C
laying

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



3.02b_g-mode_ch06

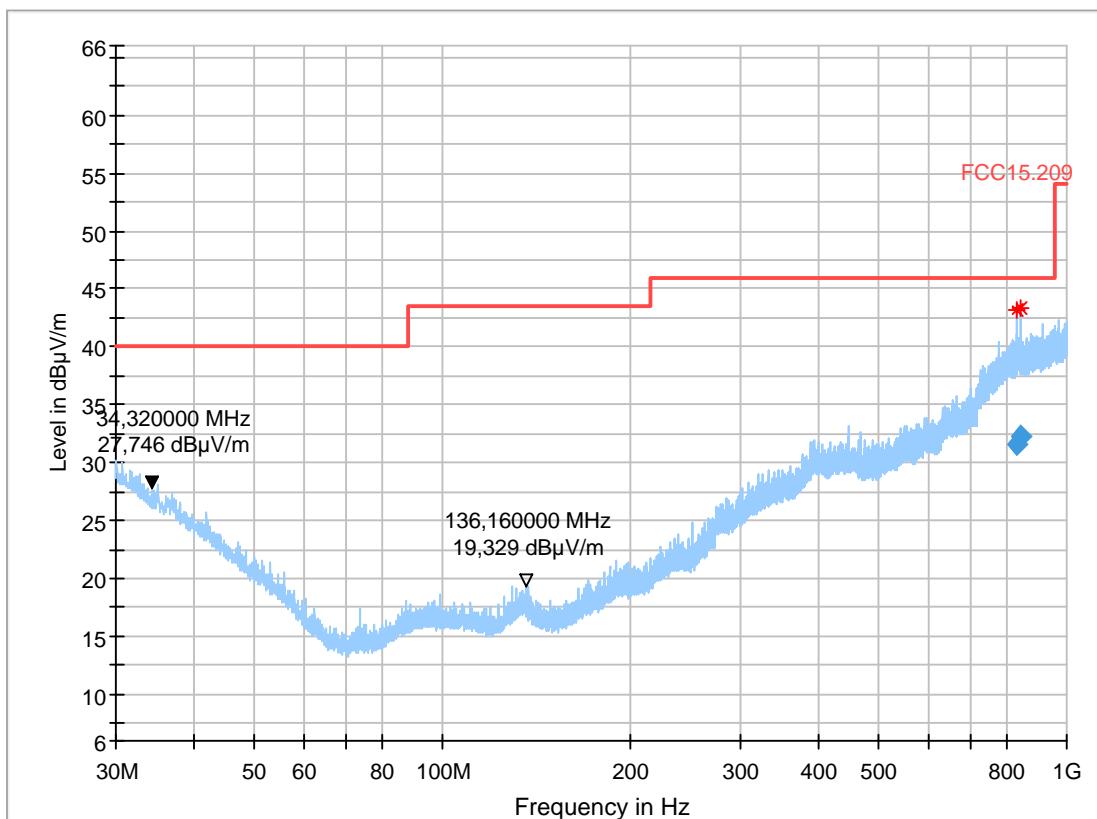
Test description:
Test site and distance:
Version of Testsoftware:
Distance correction:
Used filter:
Technical Data:
Test specification.:
Operatingmode:
Operator:
Operating conditions:
Comment 1:

08.11.2018 Page 1 of 1
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
EMC32 V9.25.0
not used
not used
please see page 2 for detailed data of measurement setup
FCC 15.209; RSS-Gen: Issue 3
g-mode | 6Mbit| ch06
SLo
Humidity: 48%rH; Temperature: 20°C
standing

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
832.436000	31.62	46.00	14.38	1000.0	120.000	224.0	V	274.0	25.6
841.416000	32.25	46.00	13.75	1000.0	120.000	344.0	V	255.0	25.9

3.03a_n-mode_ch01

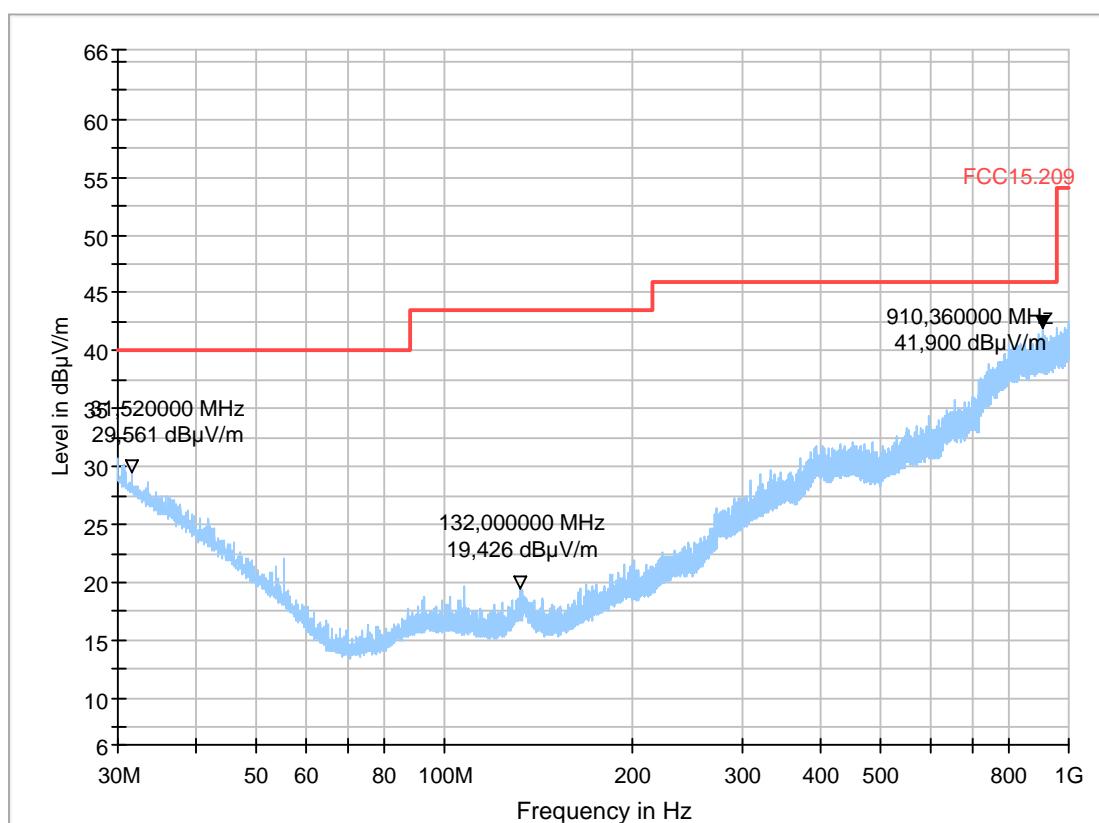
Test description:
Test site and distance:
Version of Testsoftware:
Distance correction:
Used filter:
Technical Data:
Test specification.:
Operatingmode:
Operator:
Operating conditions:
Comment 1:

08.11.2018 Page 1 of 1
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
EMC32 V9.25.0
not used
not used
please see page 2 for detailed data of measurement setup
FCC 15.209; RSS-Gen: Issue 3
n-mode | HT20 | MCS3| ch01
SLo
Humidity: 48%rH; Temperature: 20°C
laying

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



3.03b_n-mode_ch01

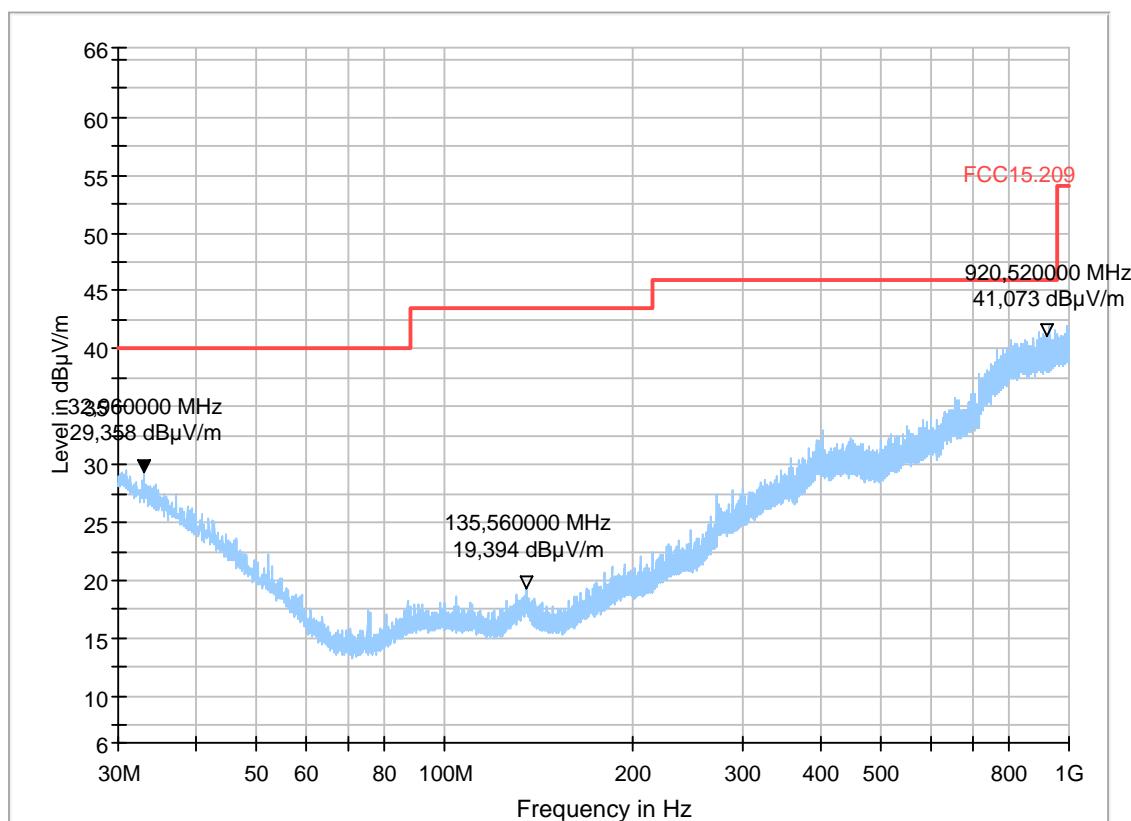
Test description:
Test site and distance:
Version of Testsoftware:
Distance correction:
Used filter:
Technical Data:
Test specification.:
Operatingmode:
Operator:
Operating conditions:
Comment 1:

08.11.2018 Page 1 of 1
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
EMC32 V9.25.0
not used
not used
please see page 2 for detailed data of measurement setup
FCC 15.209; RSS-Gen: Issue 3
n-mode | HT20 | MCS3| ch01
SLo
Humidity: 48%rH; Temperature: 20°C
standing

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



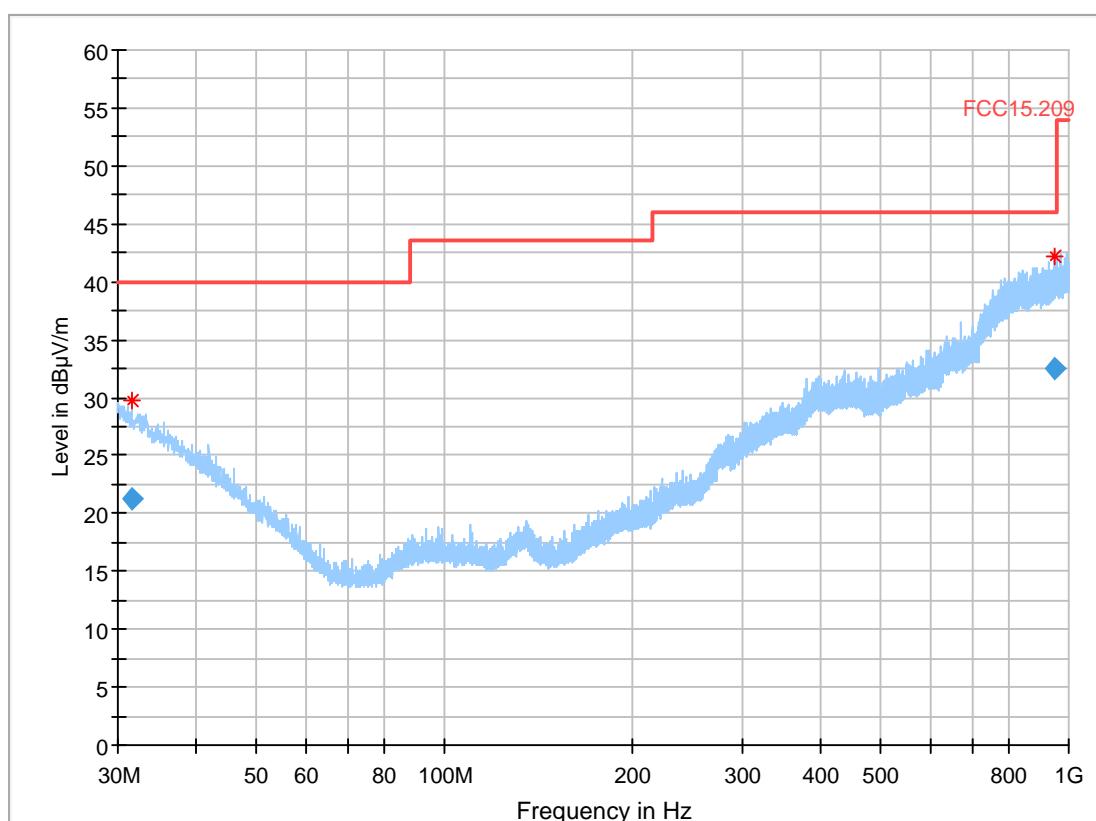
3.04a_n-mode_ch03

Test description: 09.11.2018 Page 1 of 2
Test site and distance: Electric Field Strength Measurement
Version of Testsoftware: 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
Operatingmode: n-mode_HT40_MCS0_ch3_laying
Operator: TFra
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Comment 1: laying_TX

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW:
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
31.524000	21.22	40.00	18.78	1000.0	120.000	210.0	V	76.0	20.8
949.052000	32.42	46.00	13.58	1000.0	120.000	105.0	H	63.0	27.1

3.04b_n-mode_ch03

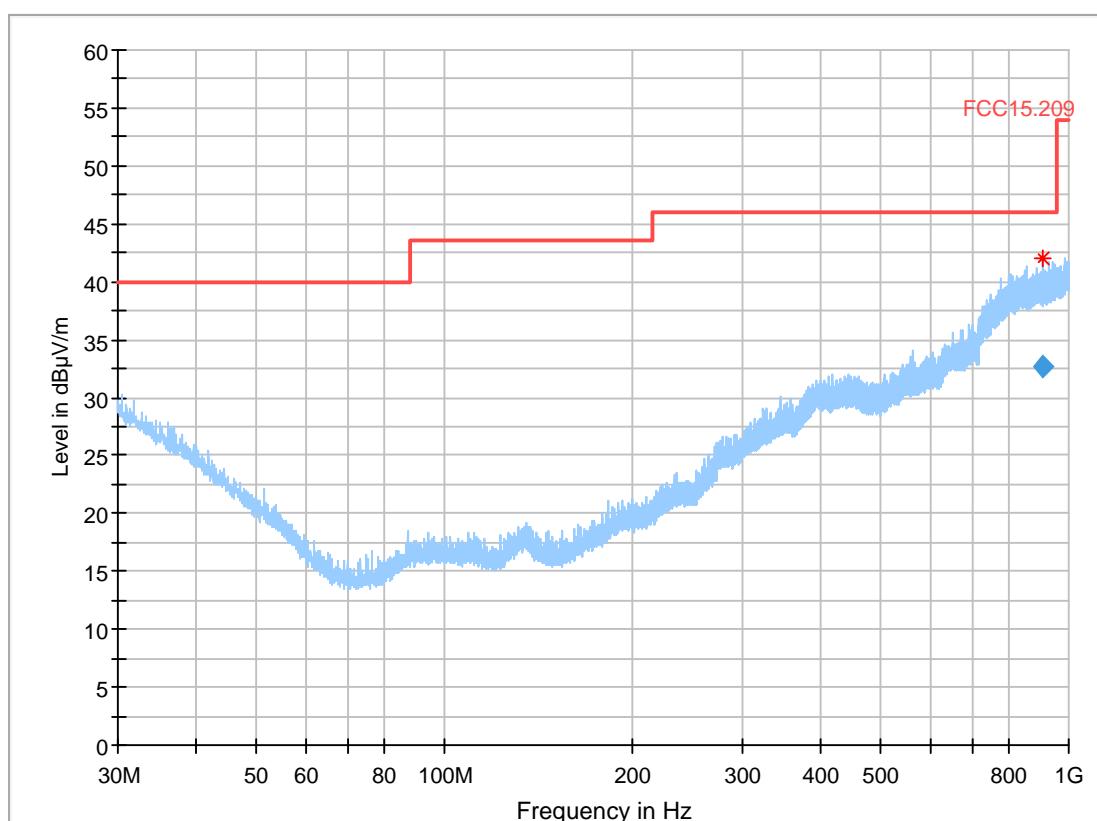
Test description:
Test site and distance:
Version of Testsoftware:
Distance correction:
Used filter:
Technical Data:
Test specification.:
Operatingmode:
Operator:
Operating conditions:
Comment 1:

09.11.2018 Page 1 of 2
Electric Field Strength Measurement
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
EMC32 V9.25.0
not used
not used
please see page 2 for detailed data of measurement setup
FCC 15.209; RSS-Gen: Issue 3
n-mode_HT40_MCS0_ch3_standing
TFra
Humidity: 48%RH; Temperature: 20°C
standing_TX

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW:
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
910.424000	32.73	46.00	13.27	1000.0	120.000	354.0	V	252.0	27.4

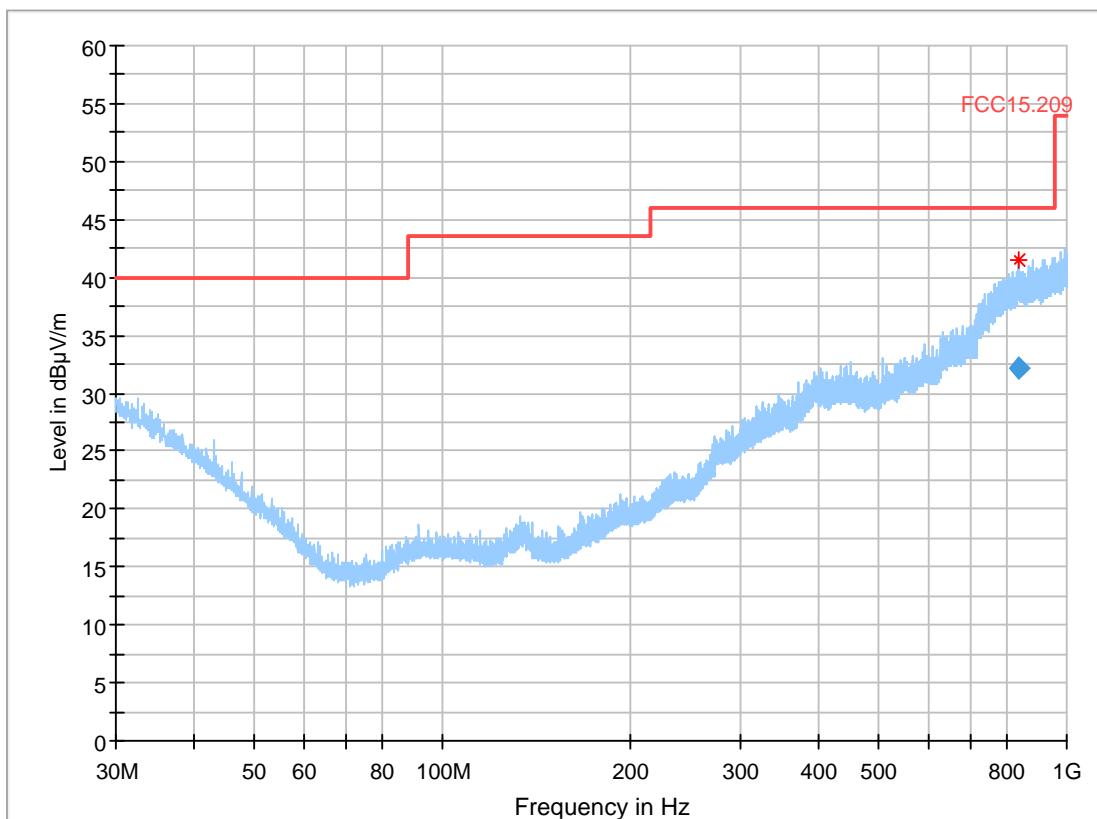
3.05a_n-mode_ch09

Test description: 09.11.2018 Page 1 of 2
Test site and distance: Electric Field Strength Measurement
Version of Testsoftware: 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
Operatingmode: n-mode_HT40_MCS0_ch9_laying
Operator: TFra
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Comment 1: laying_TX

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW:
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
838.400000	32.21	46.00	13.79	1000.0	120.000	185.0	V	355.0	26.1

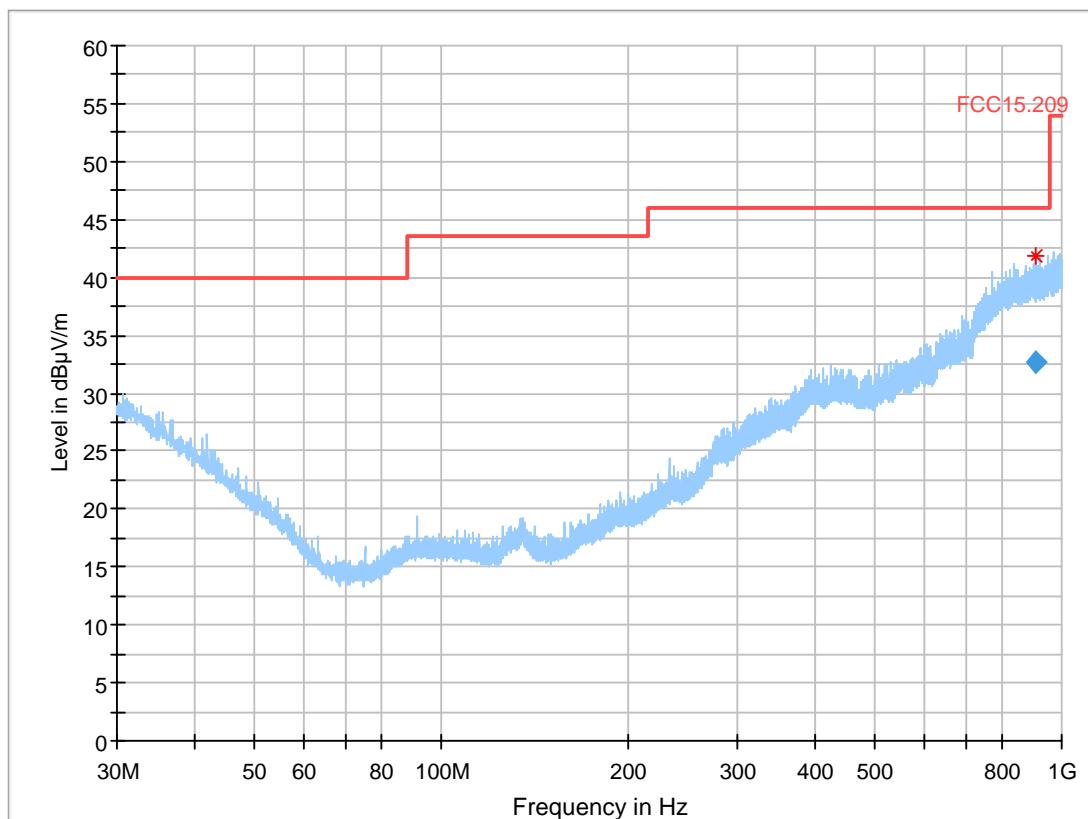
3.05b_n-mode_ch09

Test description: 09.11.2018 Page 1 of 2
Test site and distance: Electric Field Strength Measurement
Version of Testsoftware: 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
Operatingmode: n-mode_HT40_MCS0_ch9_standing
Operator: TFra
Operating conditions: Humidity: 48%rH; Temperature: 20°C
Comment 1: standing_TX

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW:
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	MARGIN (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	POL	Azimuth (deg)	Corr. (dB)
911.484000	32.59	46.00	13.41	1000.0	120.000	360.0	V	318.0	27.3

2.3. Radiated electric field measurement 1 GHz to 18 GHz

4.01a_b-mode_ch11

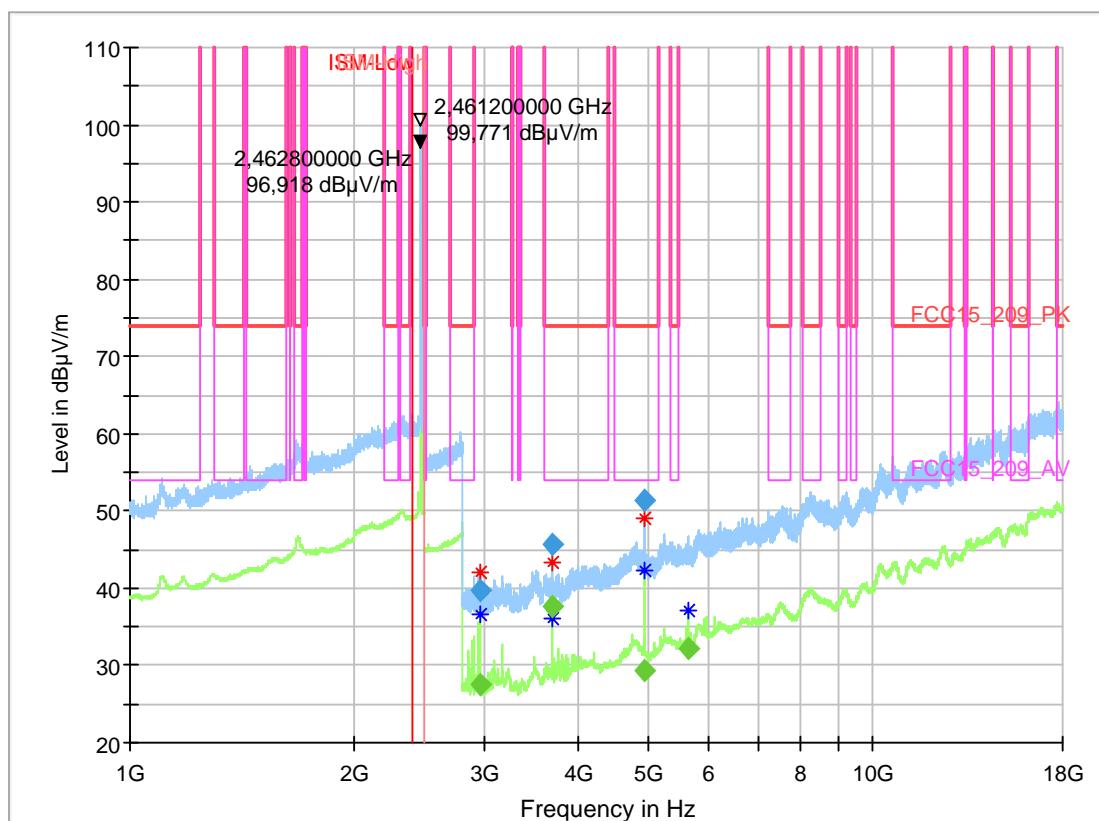
Common Information

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 4
Antenna polarisation: horizontal/vertical
Operation mode: TX_b-mode | 2Mbit| ch11
Environmental Conditions: Humidity: 40%RH; Temperature: 20°C
Operator Name: HEI

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margi n (dB)	Meas . Time	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Elevatio n (deg)
2963.480000	39.62	---	150.00	110.38	100.0	1000.000	155.0	V	-8.0	90.0
2963.560000	---	27.44	150.00	122.56	100.0	1000.000	155.0	V	-3.0	90.0
3695.840000	---	37.72	54.00	16.28	100.0	1000.000	155.0	V	180.0	0.0
3695.840000	45.76	---	74.00	28.24	100.0	1000.000	155.0	V	178.0	0.0
4923.960000	51.31	---	74.00	22.69	100.0	1000.000	155.0	H	63.0	0.0
4924.360000	---	29.45	54.00	24.55	100.0	1000.000	155.0	H	57.0	0.0
5651.120000	---	32.31	150.00	117.69	100.0	1000.000	155.0	V	234.0	0.0

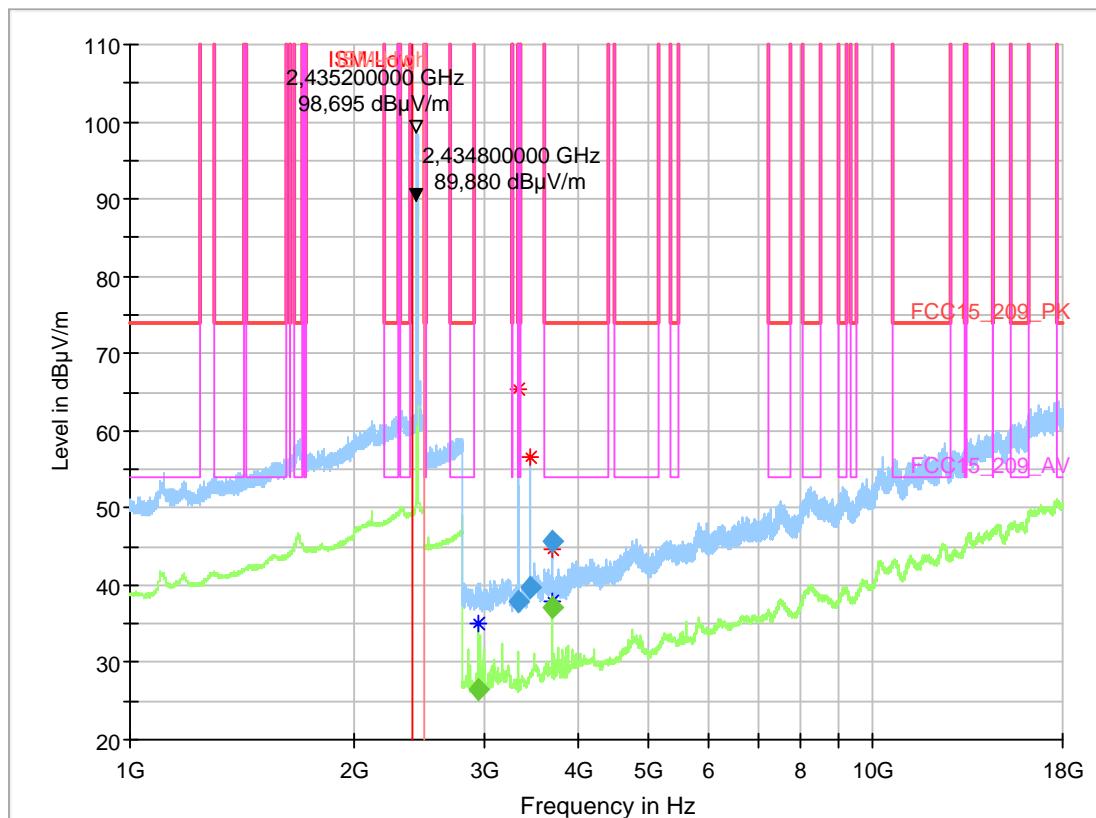
.02a_g-mode_ch06**Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical
Operation mode: TX_g-mode | 6Mbit| ch06
Environmental Conditions: Humidity: 40%rH; Temperature: 20°C
Operator Name: HEI

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margi n (dB)	Meas . Time	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Elevatio n (deg)
2938.000000	---	26.42	150.00	123.58	100.0	1000.000	155.0	V	157.0	0.0
3332.840000	37.90	---	74.00	36.10	100.0	1000.000	155.0	H	328.0	90.0
3455.800000	39.66	---	150.00	110.34	100.0	1000.000	155.0	H	196.0	90.0
3695.840000	---	37.06	54.00	16.94	100.0	1000.000	155.0	V	181.0	0.0
3695.840000	45.69	---	74.00	28.31	100.0	1000.000	155.0	V	181.0	0.0

4.03a_n-mode_ch01

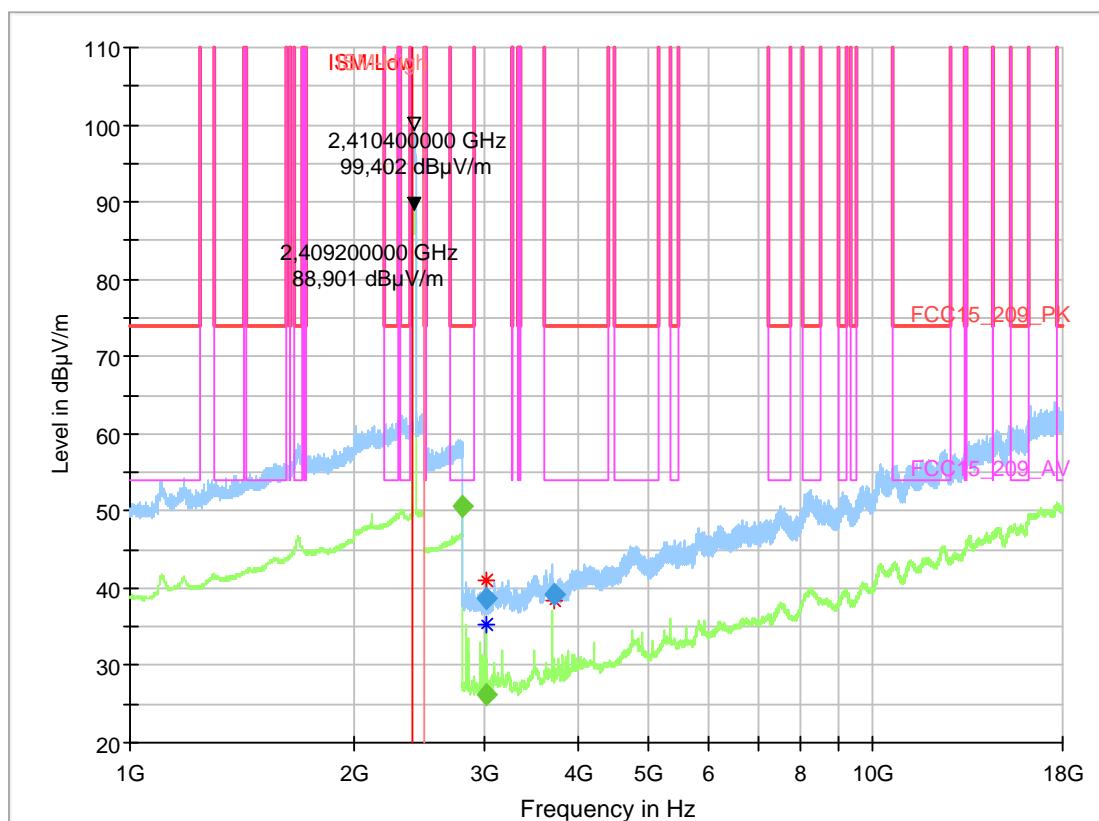
Common Information

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 4
Antenna polarisation: horizontal/vertical
Operation mode: TX_n-mode | HT20 | MCS3| ch01
Environmental Conditions: Humidity: 40%rH; Temperature: 20°C
Operator Name: HEI

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margi n (dB)	Meas . Time	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Elevatio n (deg)
2798.840000	---	50.67	54.00	3.33	100.0	1000.000	155.0	V	183.0	90.0
3009.760000	---	26.21	150.00	123.79	100.0	1000.000	155.0	V	10.0	0.0
3010.680000	38.60	---	150.00	111.40	100.0	1000.000	155.0	V	3.0	0.0
3725.840000	39.29	---	74.00	34.71	100.0	1000.000	155.0	V	135.0	90.0

4.04a_n-mode_ch03

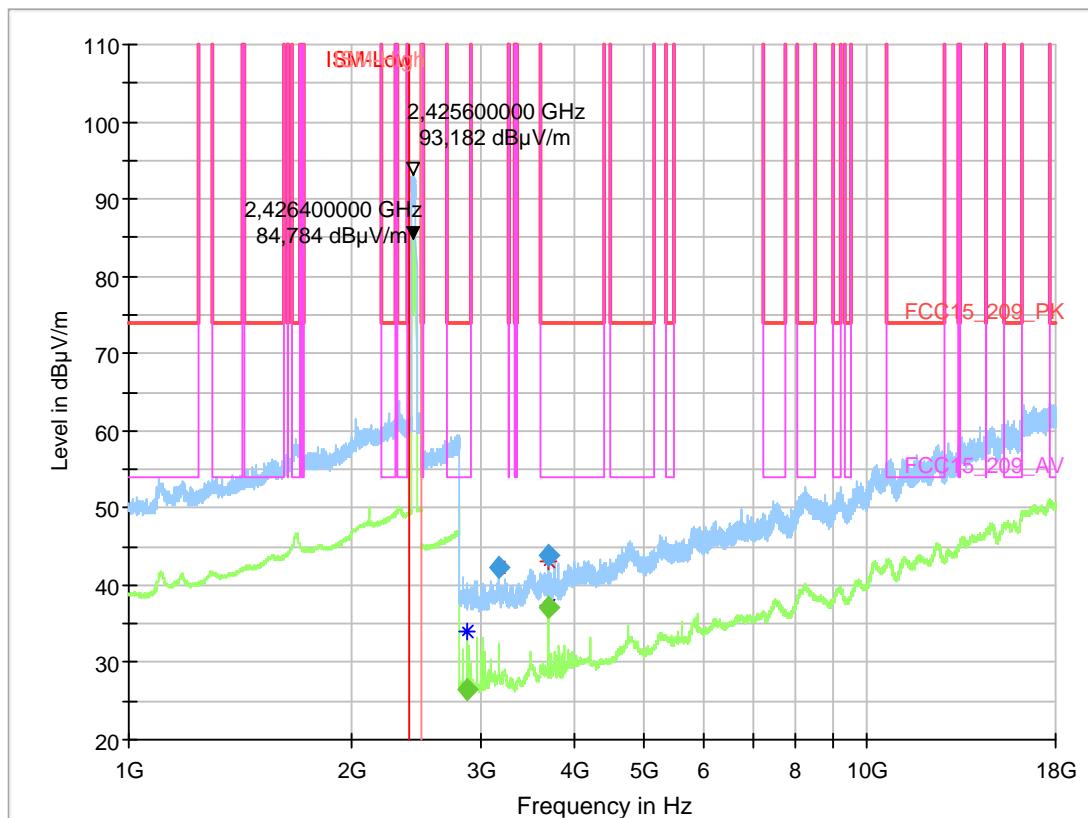
Common Information

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
 Antenna polarisation: horizontal/vertical
 Operation mode: TX,n-mode | HT40 | MCS0 | ch03
 Environmental Conditions: Humidity: 40%RH; Temperature: 20°C
 Operator Name: HEI

EUT Information

Manufacturer: Robert Bosch Car Multimedia
 Product: AlvisBX0
 EUT Model: 18-1-00482S06
 HW: tbd
 SW: 283C24194R
 Serial Nr.:
 Conected Devices: 13.5VDC

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas . Time	Bandwidth (kHz)	Height (cm)	Pol	Azimut h (deg)	Elevatio n (deg)
2863.640000	---	26.56	54.00	27.44	100.0	1000.000	155.0	V	182.0	0.0
3167.840000	42.29	---	150.00	107.71	100.0	1000.000	155.0	V	237.0	0.0
3695.840000	---	37.23	54.00	16.77	100.0	1000.000	155.0	V	227.0	0.0
3695.840000	43.85	---	74.00	30.15	100.0	1000.000	155.0	H	88.0	0.0

4.05a_n-mode_ch09

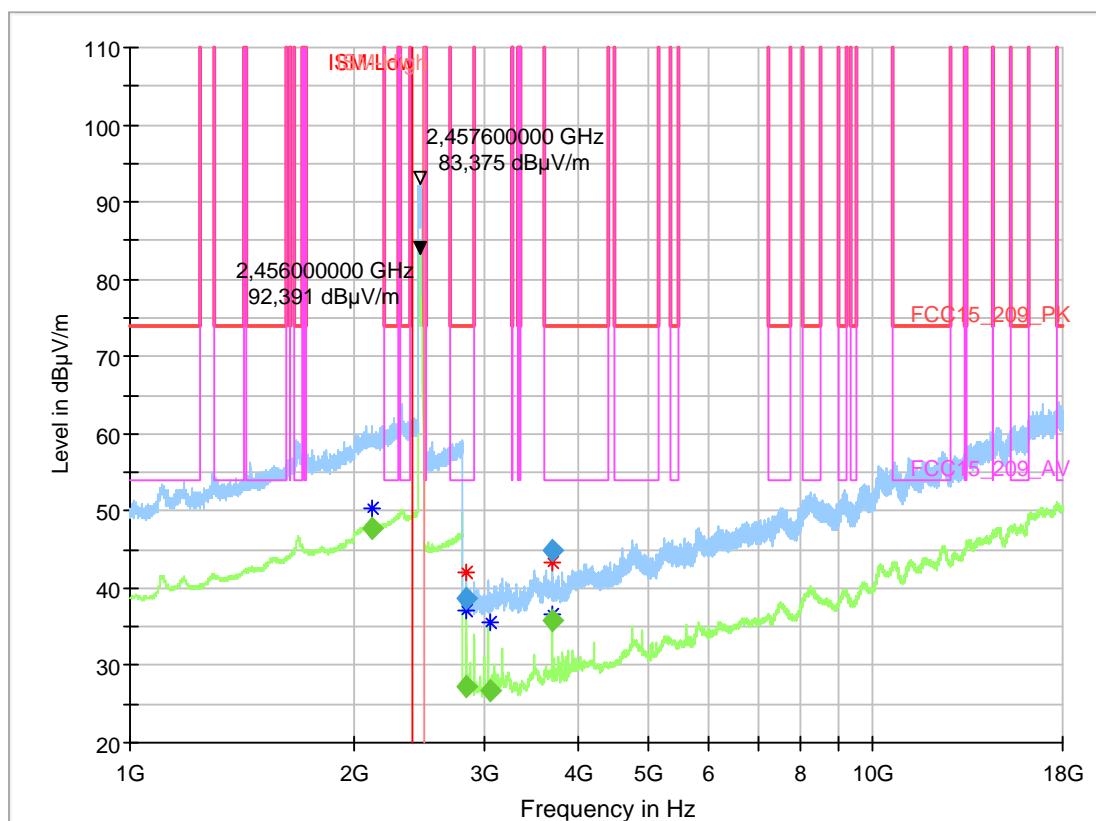
Common Information

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
 Test Site: CETECOM GmbH Essen
 Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
 Antenna polarisation: horizontal/vertical
 Operation mode: TX,n-mode | HT40 | MCS0 | ch09
 Environmental Conditions: Humidity: 40%RH; Temperature: 20°C
 Operator Name: HEI

EUT Information

Manufacturer: Robert Bosch Car Multimedia
 Product: AlvisBX0
 EUT Model: 18-1-00482S06
 HW: tbd
 SW: 283C24194R
 Serial Nr.:
 Conected Devices: 13.5VDC

Full Spectrum

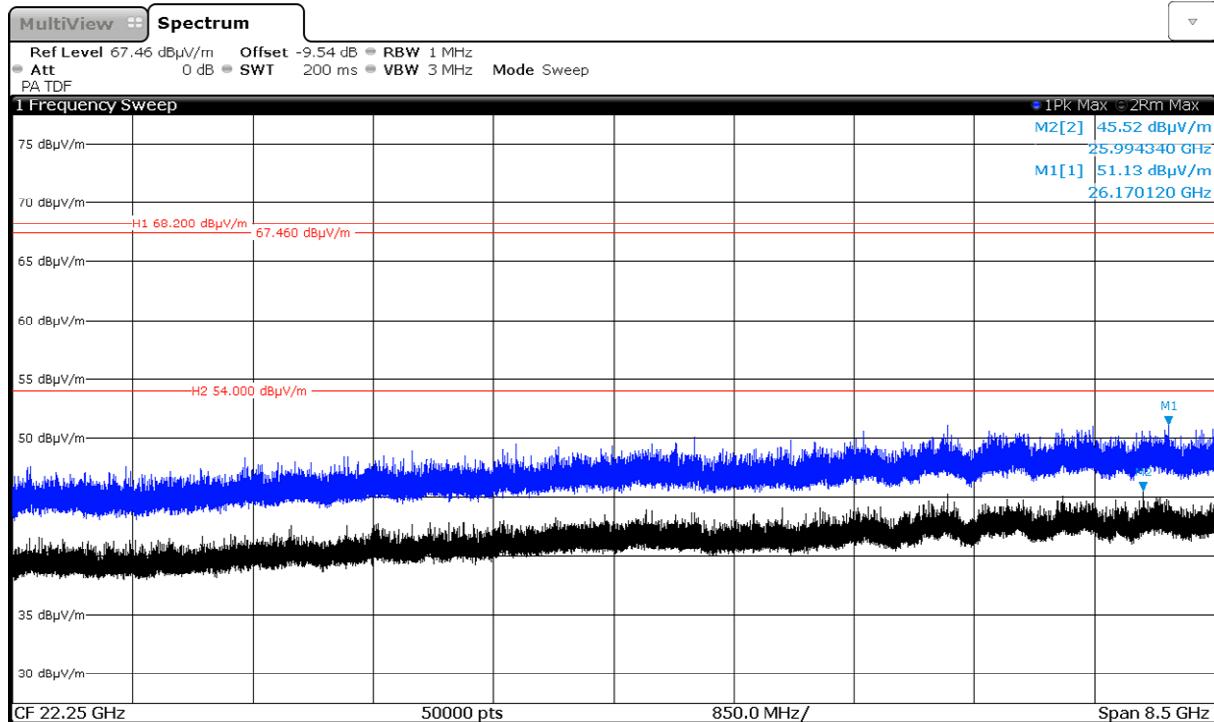


Final Result

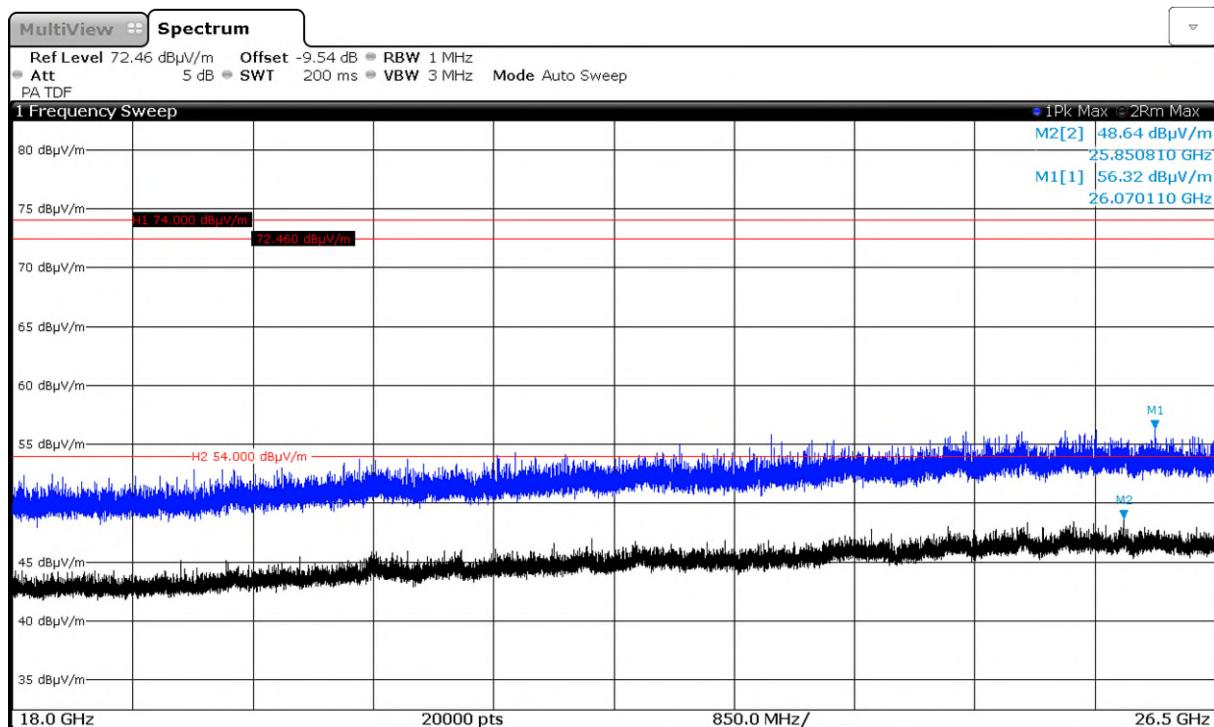
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margi n (dB)	Meas . Time	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimut h (deg)	Elevatio n (deg)
2111.960000	---	47.78	150.00	102.22	100.0	1000.000	155.0	V	268.0	0.0
2834.720000	---	27.31	54.00	26.69	100.0	1000.000	155.0	V	181.0	90.0
2837.080000	38.80	---	74.00	35.20	100.0	1000.000	155.0	V	168.0	90.0
3045.160000	---	26.66	150.00	123.35	100.0	1000.000	155.0	V	279.0	90.0
3695.840000	44.93	---	74.00	29.07	100.0	1000.000	155.0	V	180.0	0.0
3695.840000	---	35.90	54.00	18.10	100.0	1000.000	155.0	V	220.0	0.0

2.4. Radiated electric field measurement 18 GHz to 26.5 GHz

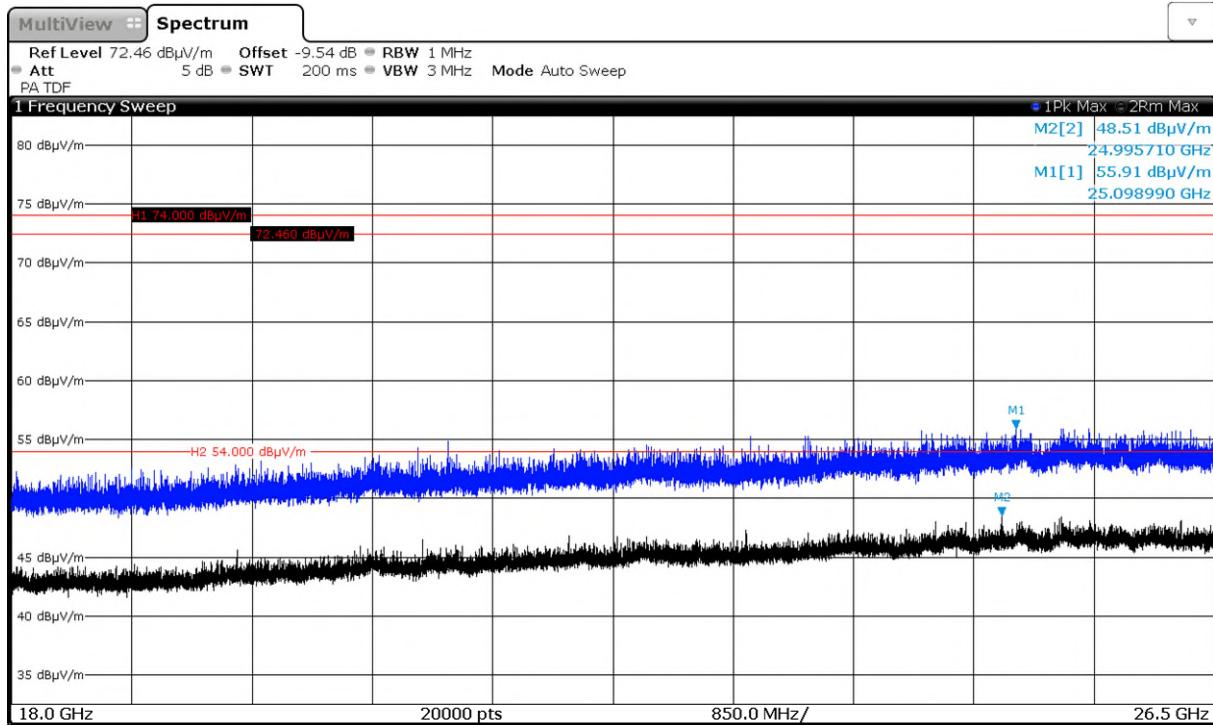
4.01b_b-Mode_ch11



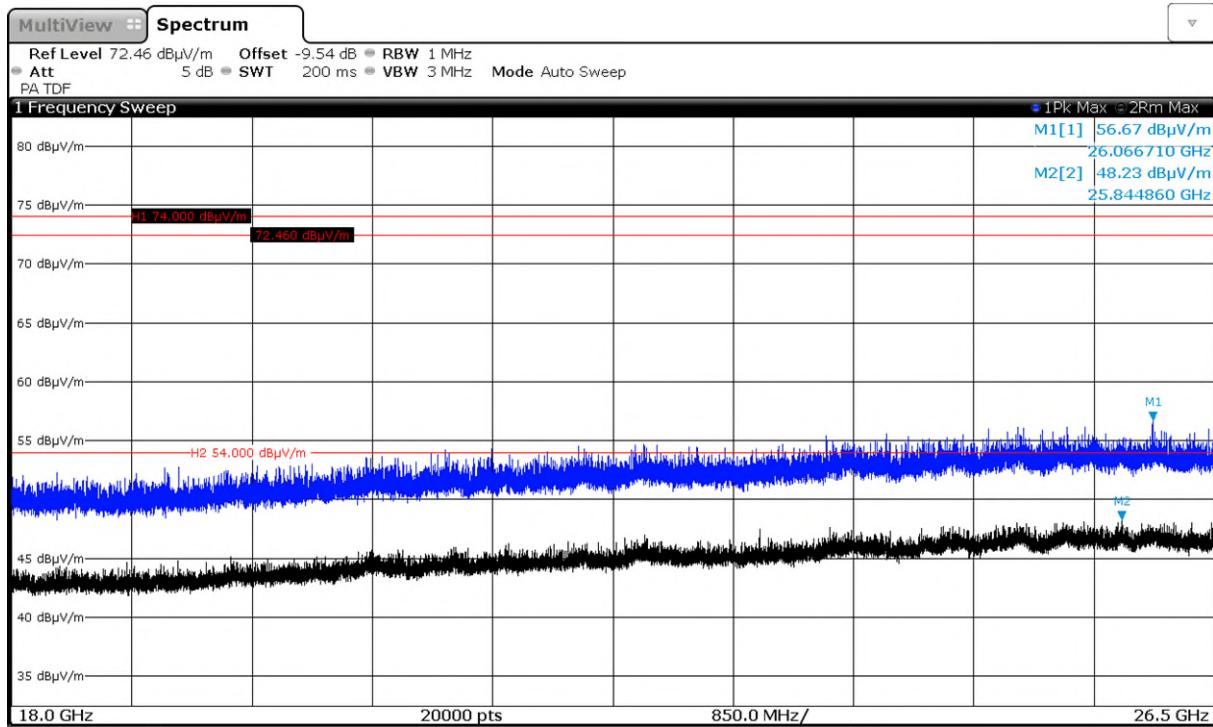
4.02b_g-Mode_ch06



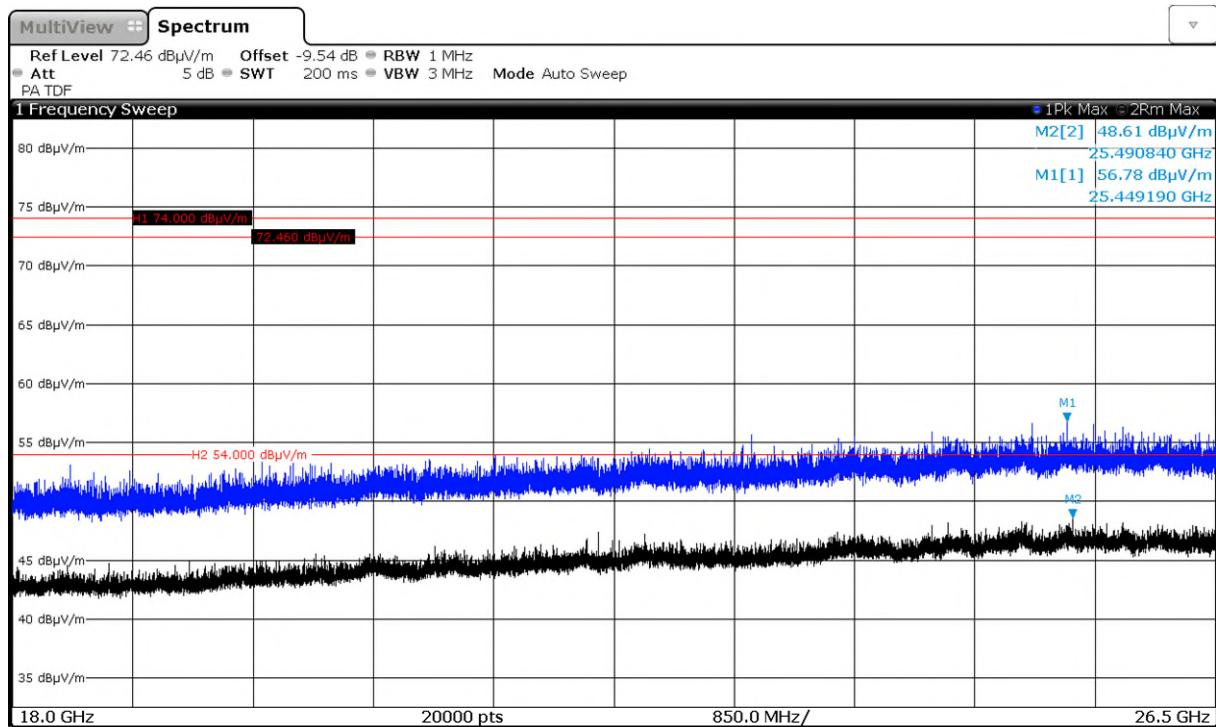
4.03b_n-Mode_ch01



4.04b_n-Mode_ch03



4.05b_n-Mode_ch09



2.5. Low Band edge compliance

9.01a_b-mode_ch01

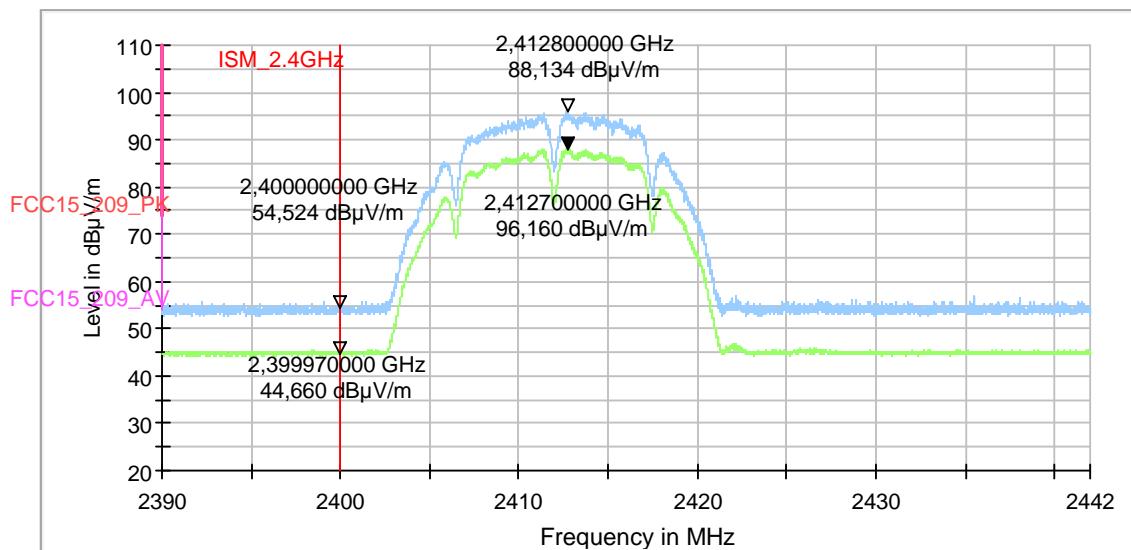
Common Information

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Version of Testsoftware: EMC32 V9.26.0
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical
Operation mode: TX, continuous
Operator Name: MSO
Comment: Channel no.01 low

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.: 0005000
Connected Devices: 13.5VDC

Full Spectrum



9.02a_g-mode_ch01

Common Information

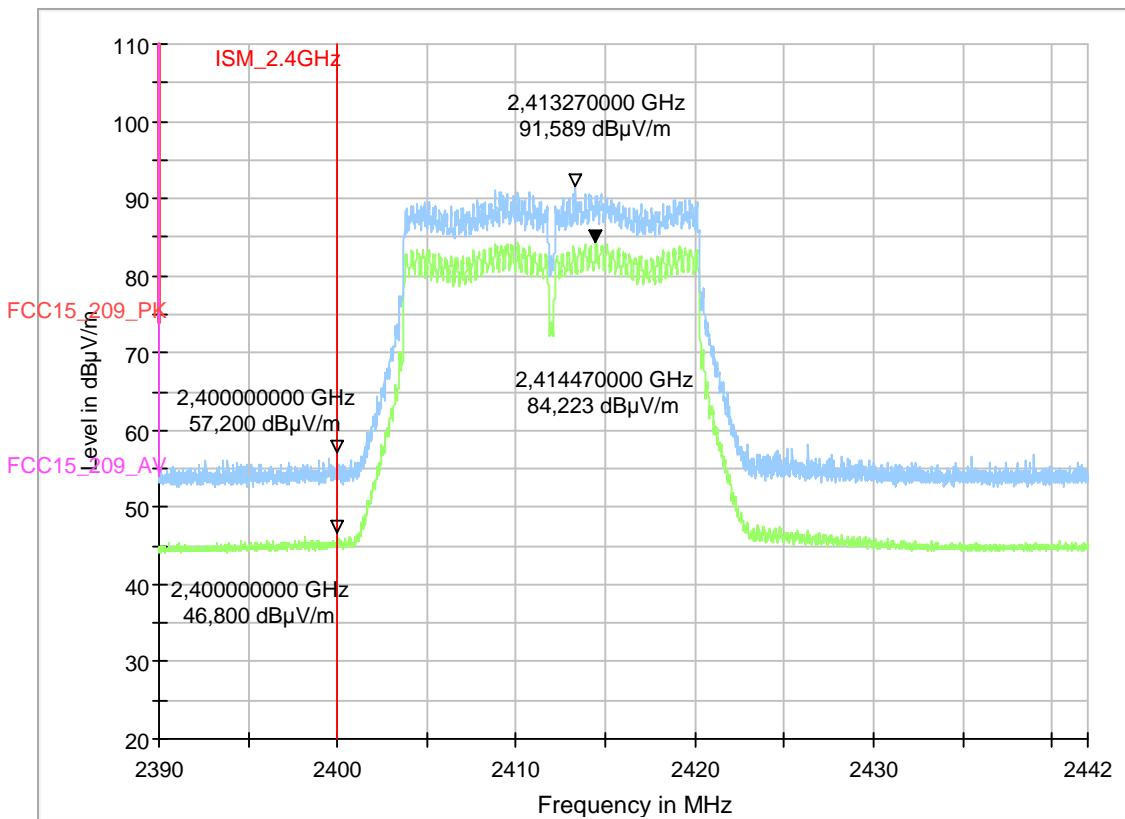
Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. low
Operationg conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW:
SW:
Serial Nr.:
Conected Devices: 13.5VDC

Full Spectrum



9.03a_n-mode_ch01

Common Information

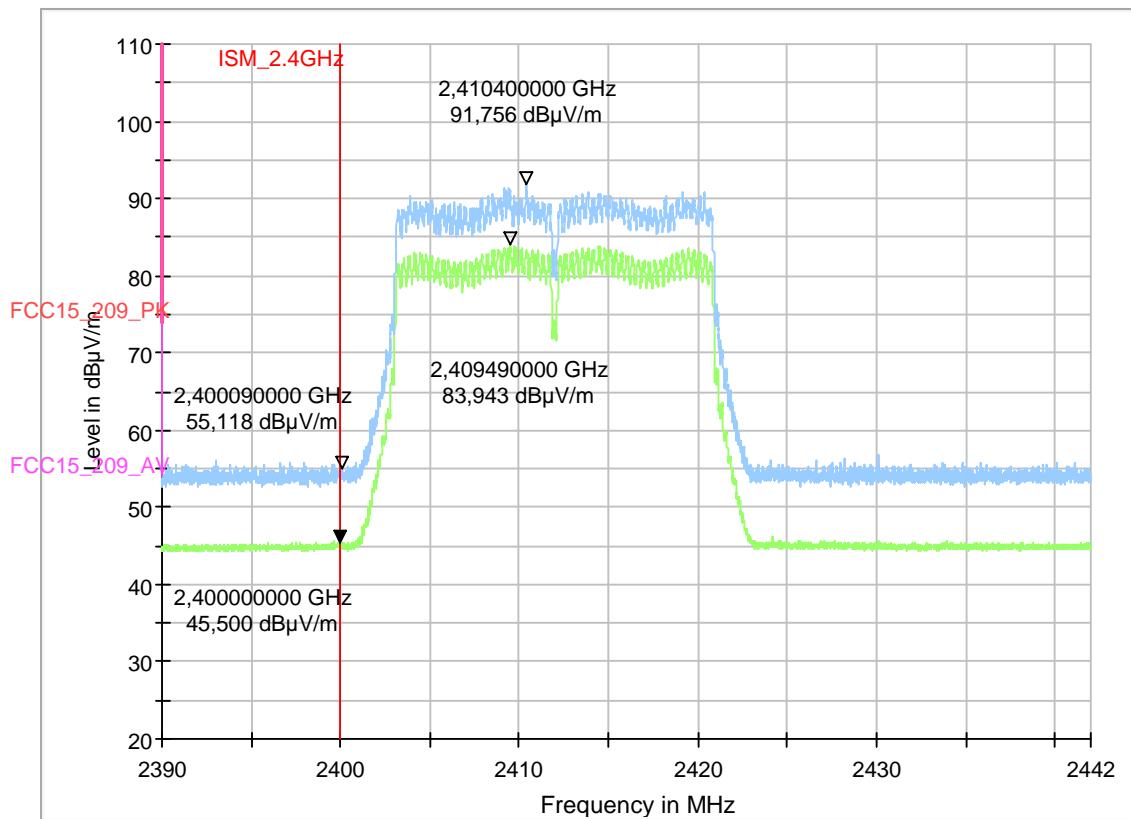
Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. low
Operating conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



9.04a_n-mode_ch03

Common Information

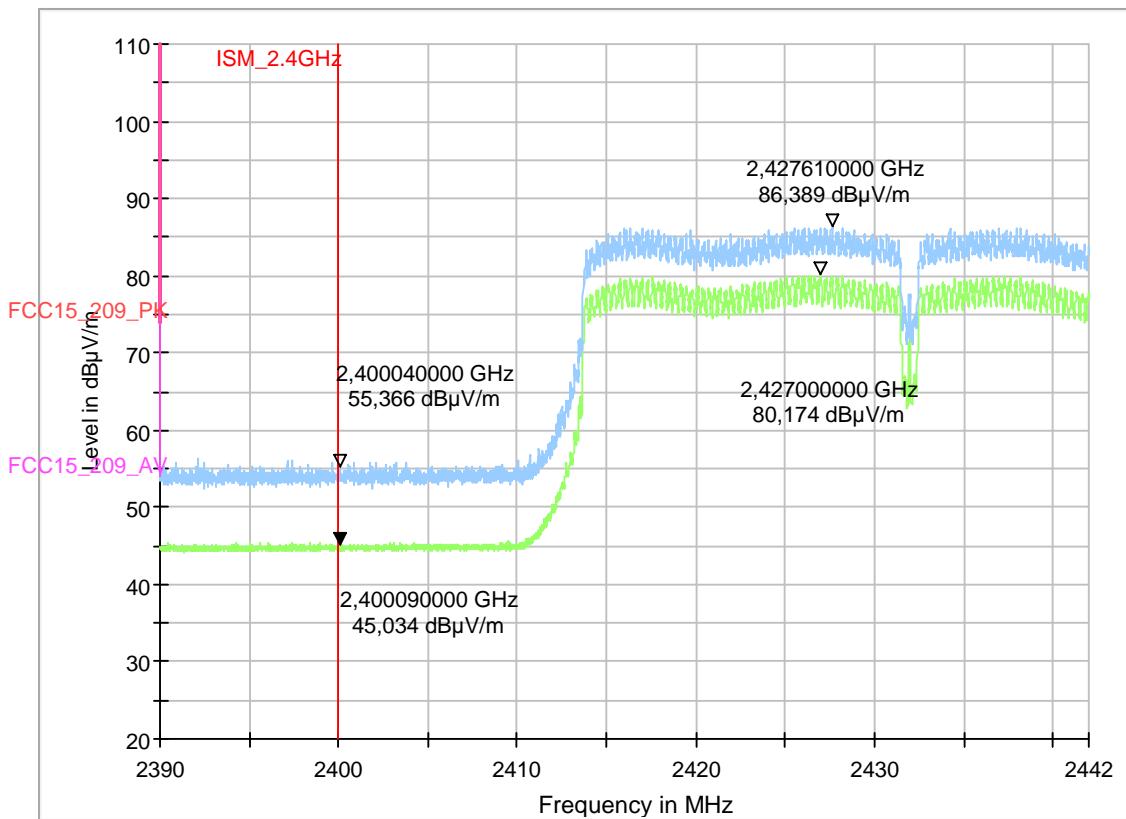
Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. low
Operating conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



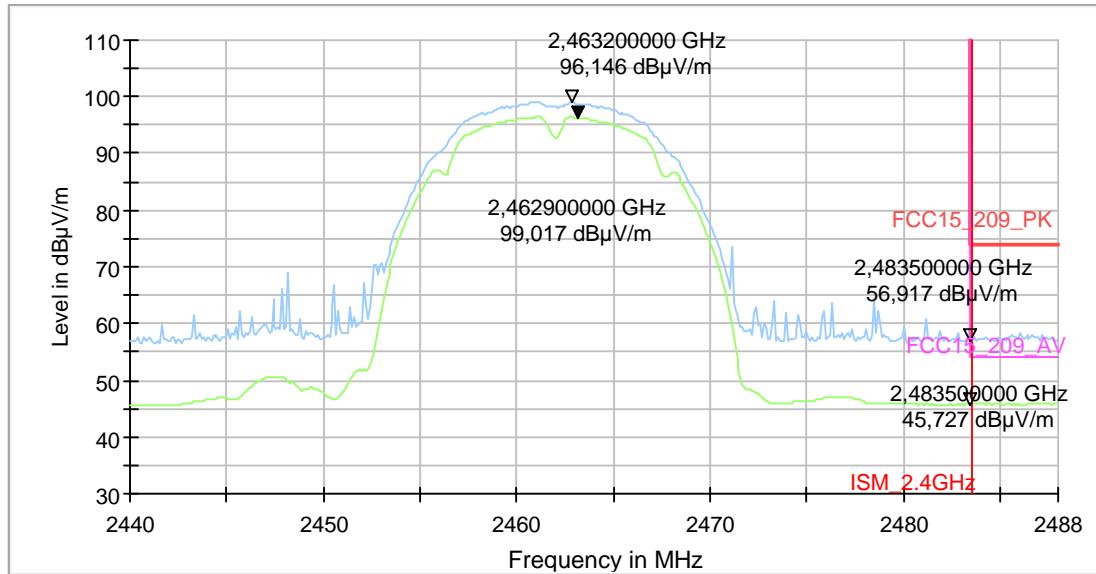
2.6. High Band edge compliance

2.6.1. High Band edge compliance according to Part 15.247 conducted

According to FCC Part 15.247 (d) the Limit is determined by the 20dBc below the inband power.

$$99,01\text{dBuV/m} - 20\text{dBc} = 79\text{dBuV/m} \text{ at } 2483 \text{ MHz}$$

$$96,14\text{dBuV/m} - 20\text{dBc} = 76\text{dBuV/m} \text{ at } 2483.5\text{MHz}$$



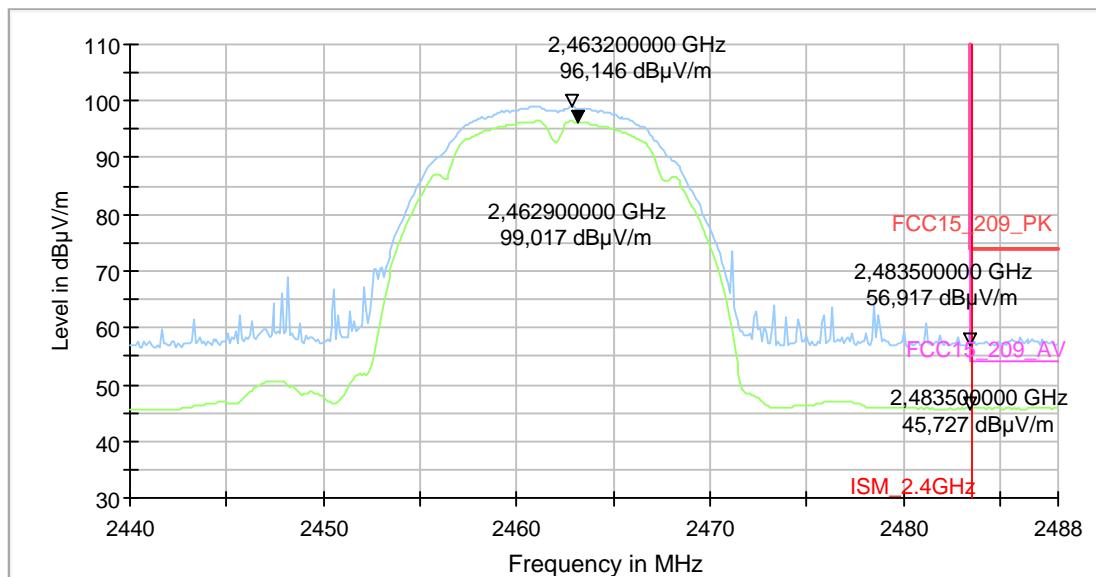
Verdict : Pass

2.6.2. High Band edge compliance according to Part 15.209 radiated**9.01b_b-mode_ch11****Common Information**

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Version of Test software: EMC32 V9.26.0
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarization: horizontal/vertical
Operation mode: TX, continuous
Operator Name: MSO
Comment: Channel no. CH11 high

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial No.: 0005000
Connected Devices: 13.5VDC



9.02b_g-mode_ch11

Common Information

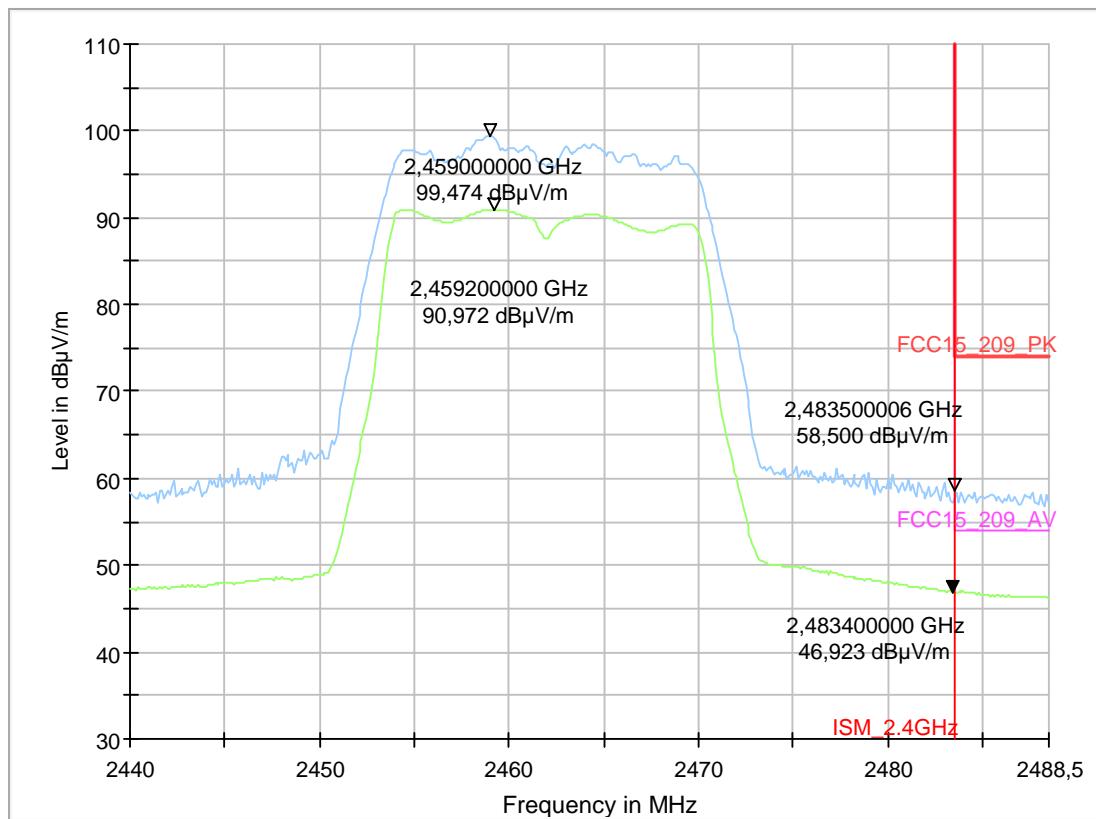
Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. high
Operationg conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



9.03b_n-mode_ch11

Common Information

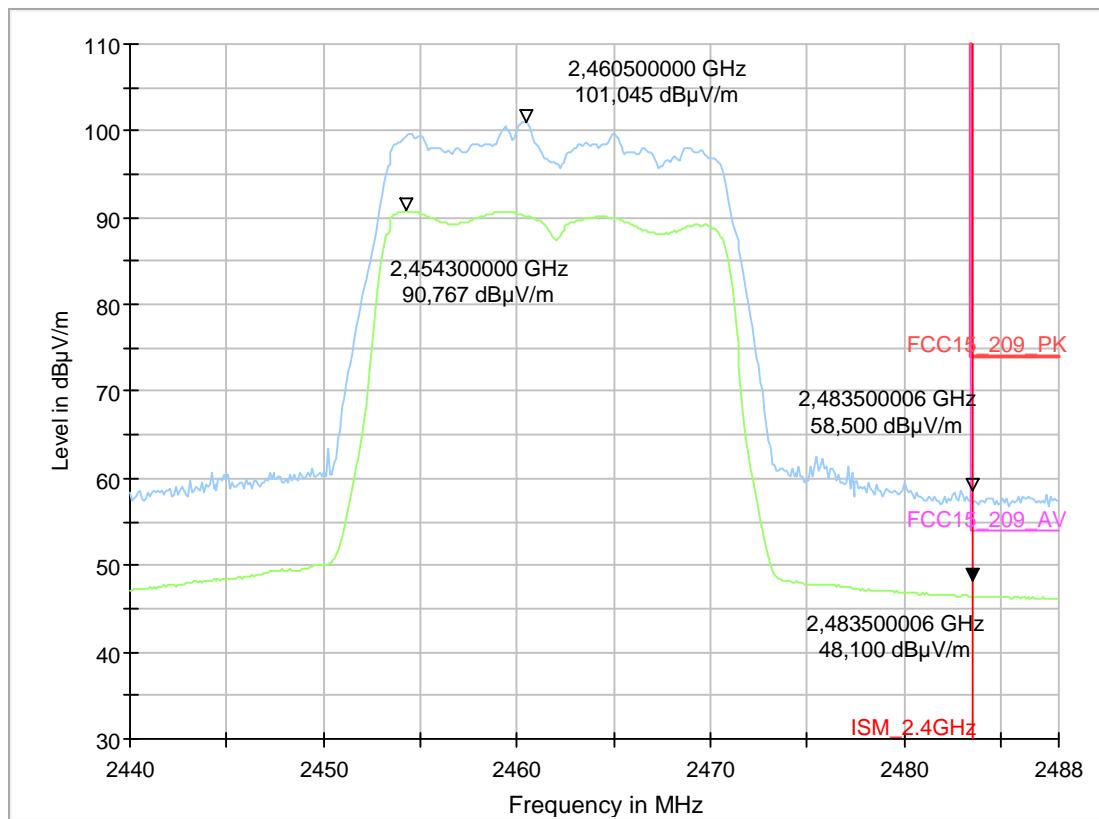
Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. high
Operating conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AIVISBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum



9.04b_n-mode_ch09

Common Information

Test Description: Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site: CETECOM GmbH Essen
Test Standard: FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation: horizontal/vertical

Operation mode: TX, continuous
Operator Name: TFra
Comment: Channel no. high
Operating conditions: Humidity: 40%rH; Temperature: 20°C

EUT Information

Manufacturer: Robert Bosch Car Multimedia
Product: AlvisBX0
EUT Model: 18-1-00482S06
HW: tbd
SW: 283C24194R
Serial Nr.:
Connected Devices: 13.5VDC

Full Spectrum

