

Annex 4: Measurement results to TEST REPORT No.: 2-20819544a-13

According to:
FCC Regulations
Part 15.107
Part 15.209, Part15.247

IC-Regulations
RSS-Gen, Issue 3
RSS-210, Issue 8

for

Sony Mobile Communications AB

RD-0060 Bluetooth® Headset

FCC-ID: PY7-RD0060
IC: 4170B-RD0060

Laboratory Accreditation and Listings			
 DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION • U.S.A. • Reg. No.: 736496 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 CTIA Authorized Test Lab LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

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1. Measurement results

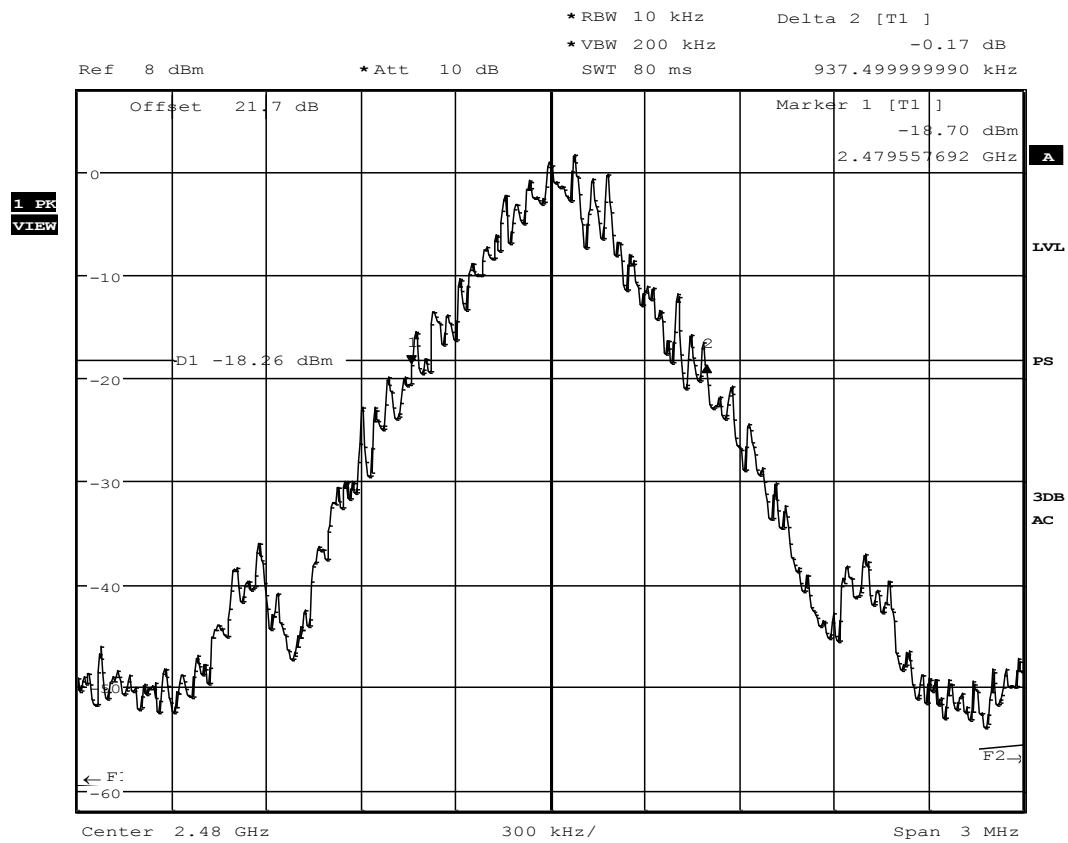
1.1. 20dB bandwidth

Following table show measured values for the 20dB bandwidth for different modulation types and channels. Minimum and Maximum data rates were tested for each mode.

Modulation type	20dB bandwidth [kHz]			
	Nominal Ch 1 =2402 MHz	Nominal Ch 39 =2440MHz	Nominal Ch 78 =2480MHz	absolute Max Value
DH1	--	913,4615		
DH3	--	937,4999		937,4999
DH5	927,8846	937,4999	937,4999	
	--			
2DH1	--	1274,0380		
2DH3	--	1317,3077		1322,1154
2DH5	1317,3077	1322,1153	1322,1154	
	--			
3DH1	--	1221,1538		
3DH3	1293,2692	1298,0769	1293,2692	1298,0769
3DH5		1298,0769		

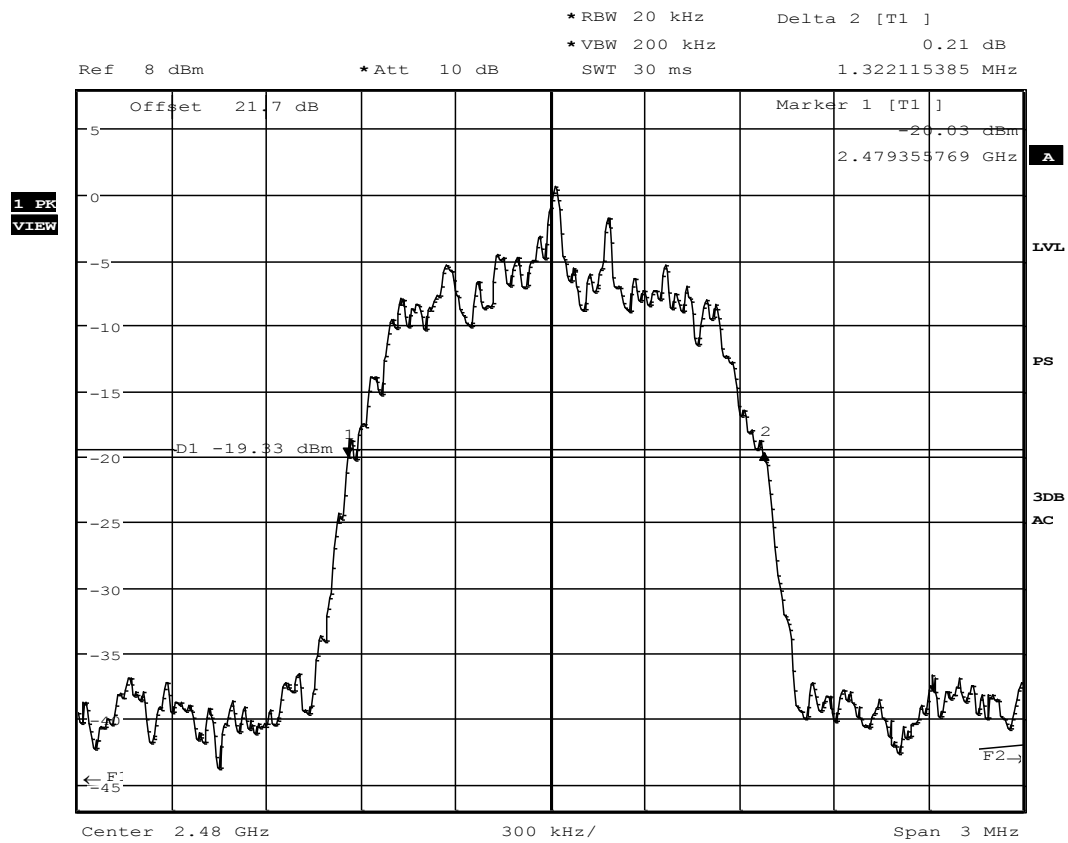
Maximum value: 1322.11 kHz

Enclosed some diagrams showing the maximum values determined:



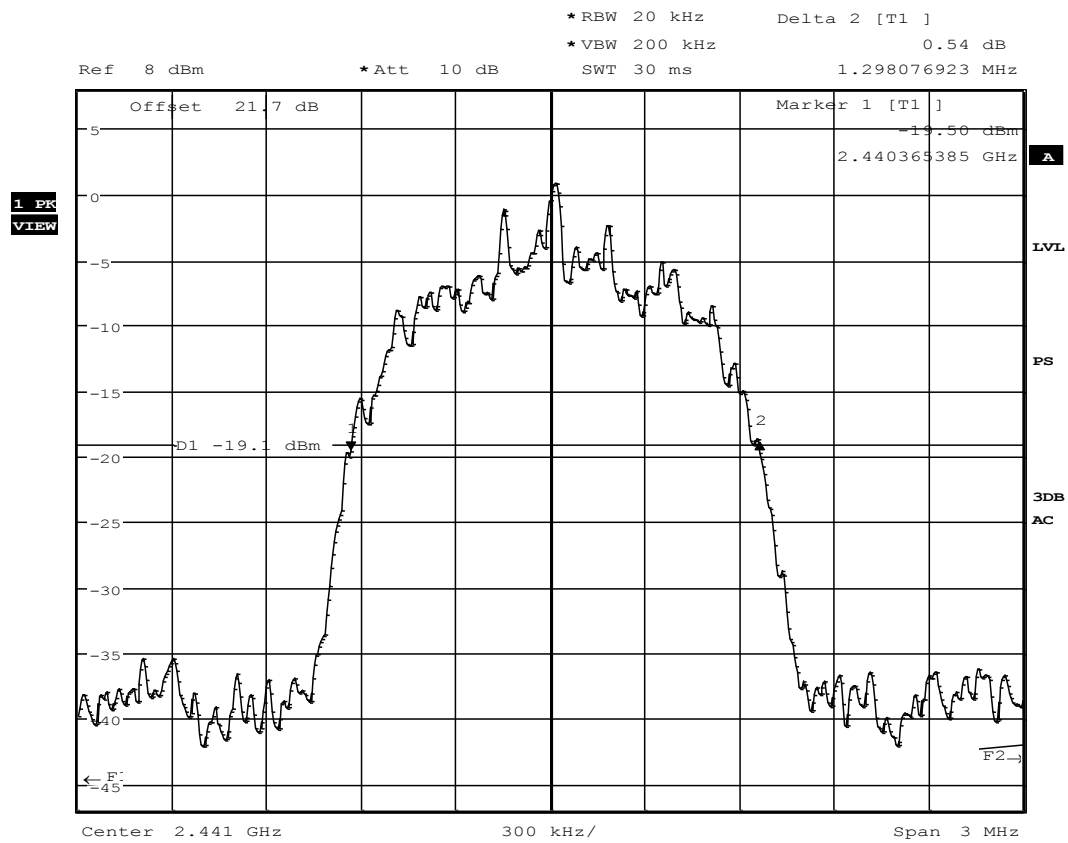
Date: 9.JUL.2013 15:52:42

DH5 Packet type, Channel 78



Date: 9.JUL.2013 15:42:21

2DH5 Packet type, Channel 78

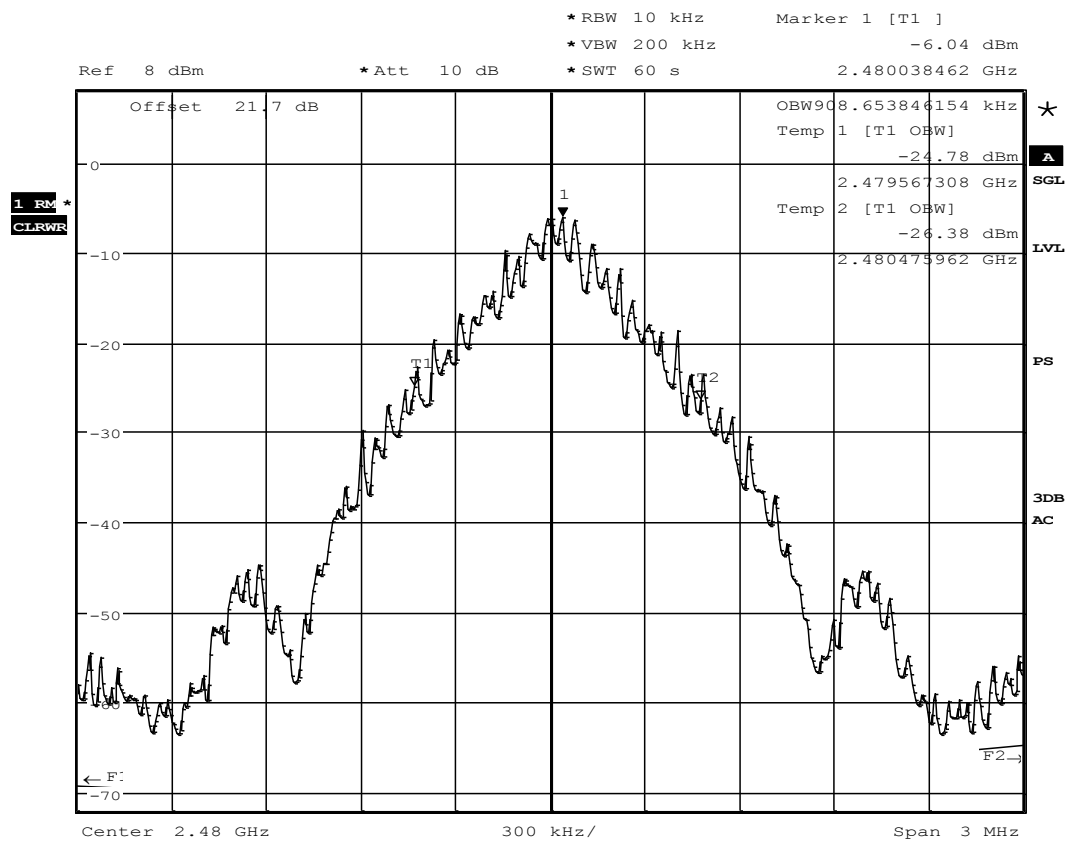


Date: 9.JUL.2013 15:32:15

3DH3 Packet type, Channel 39

1.2. 99% Occupied bandwidth

Values were measured for worst-case of 20dB bandwidth.

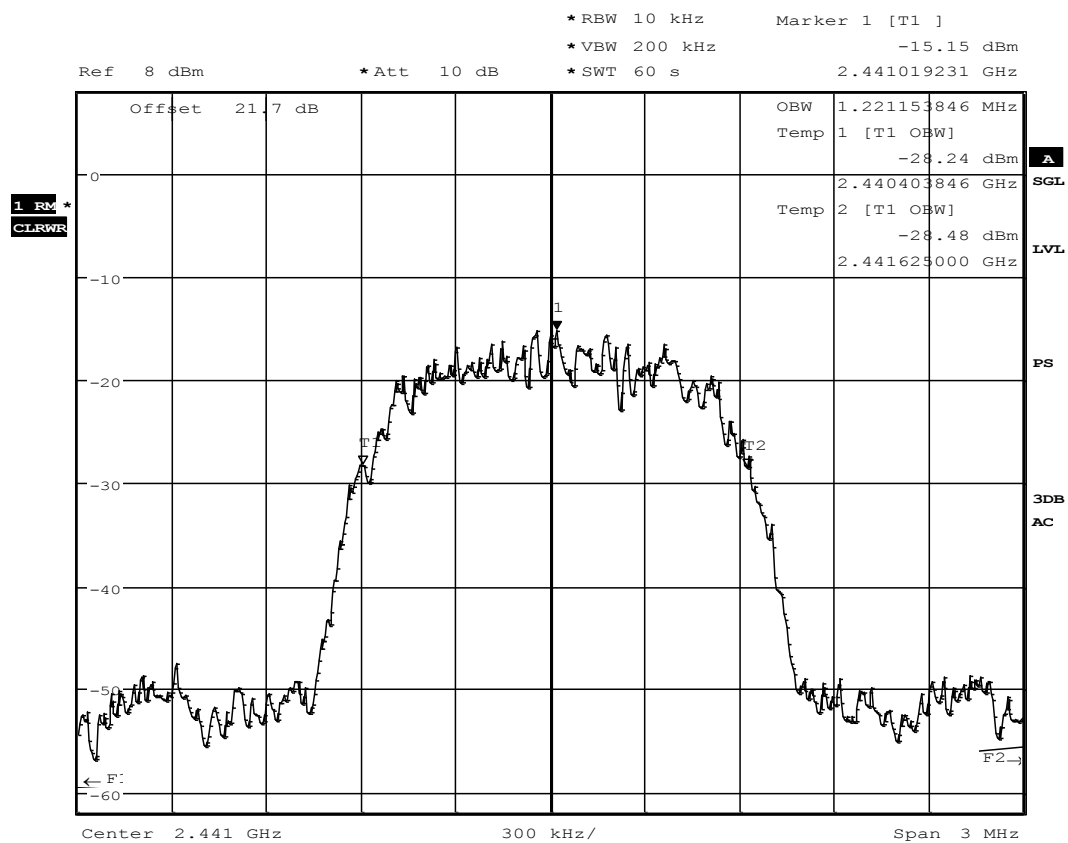


Date: 9.JUL.2013 15:56:34

DH5 Packet type, Channel 78



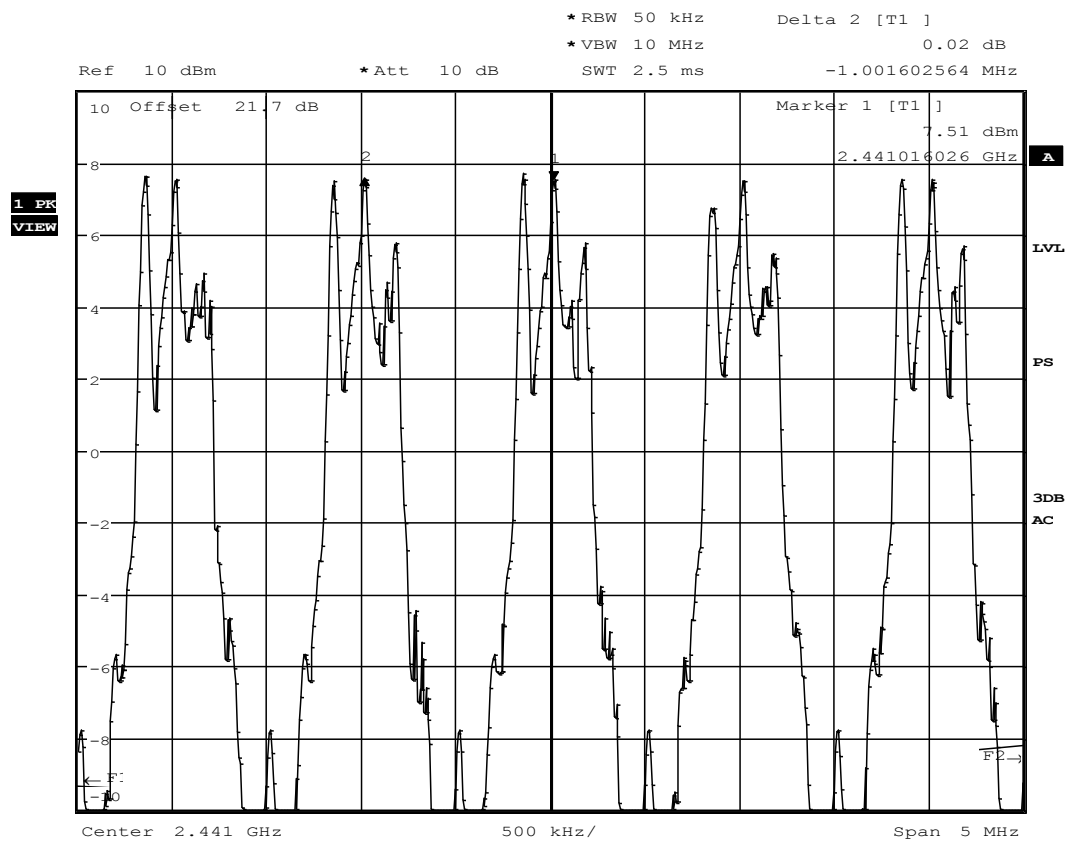
2DH5 Packet type, Channel 78



Date: 9.JUL.2013 15:59:12

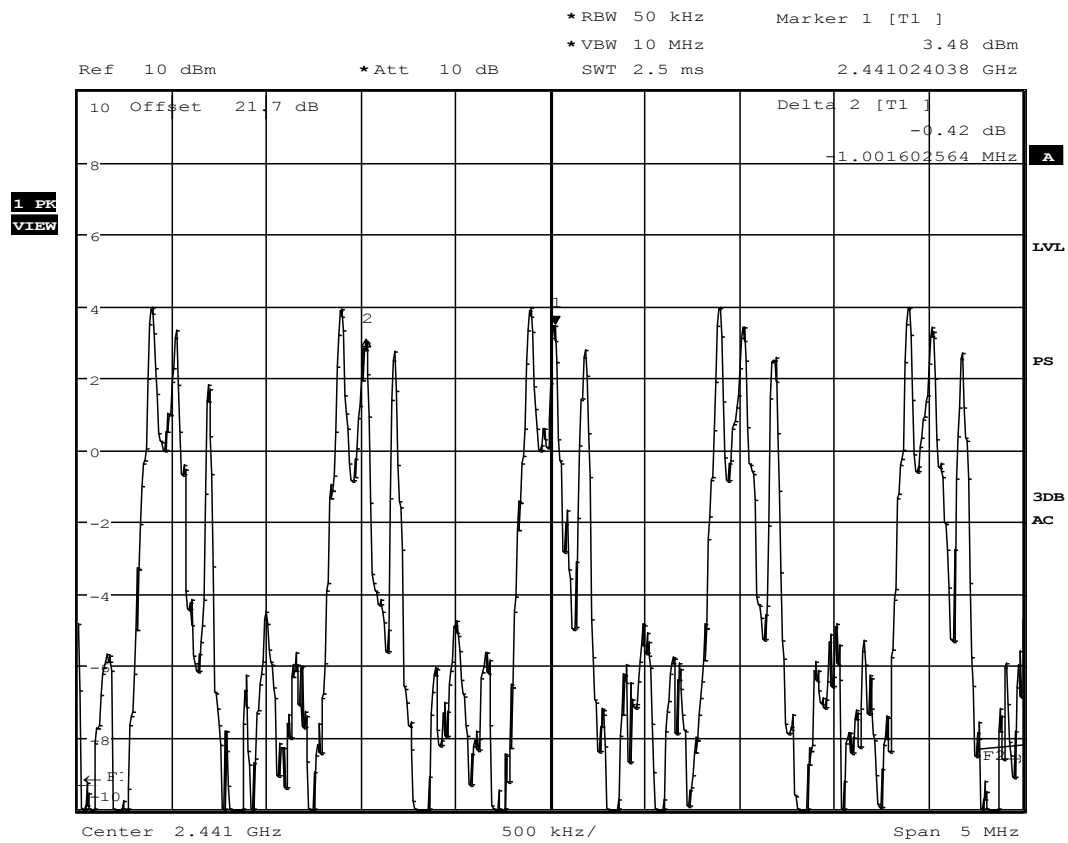
3DH3 Packet type, Channel 39

1.3. Channel carrier frequency separation for FHHS systems



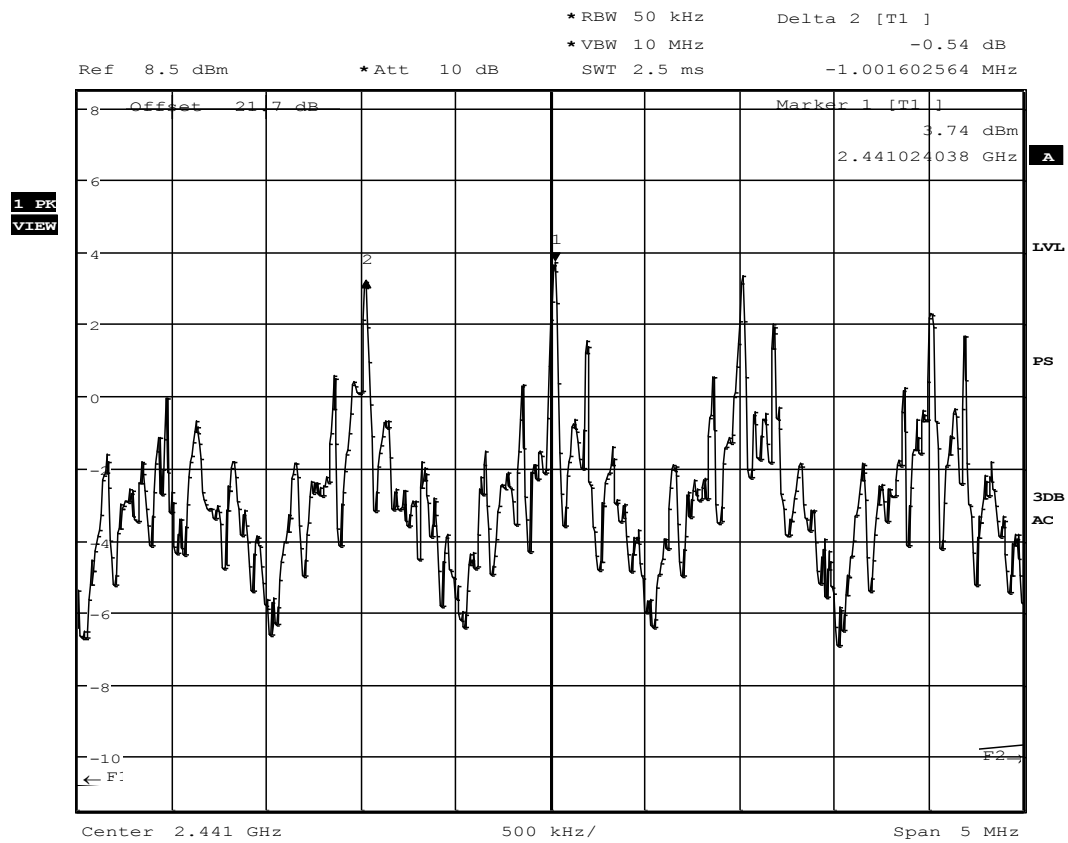
Date: 9.JUL.2013 16:52:28

DH1 – packet type



Date: 9.JUL.2013 17:00:31

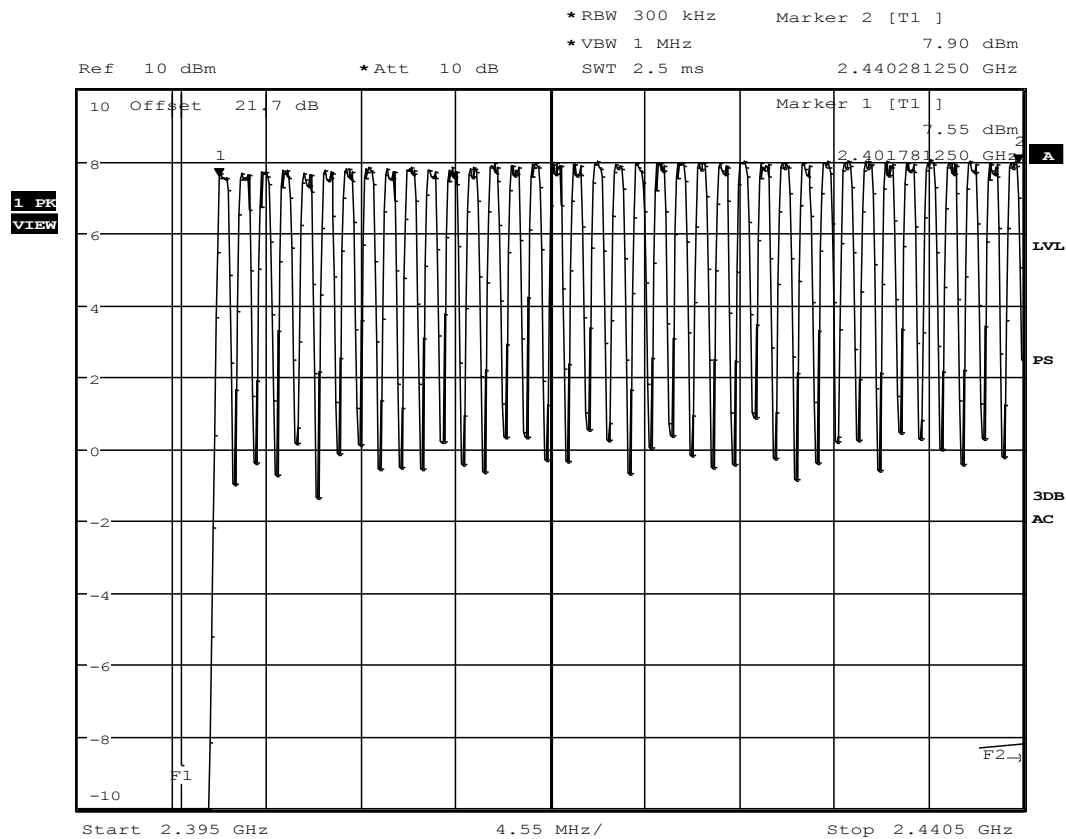
2DH3 – packet type



Date: 9.JUL.2013 16:42:40

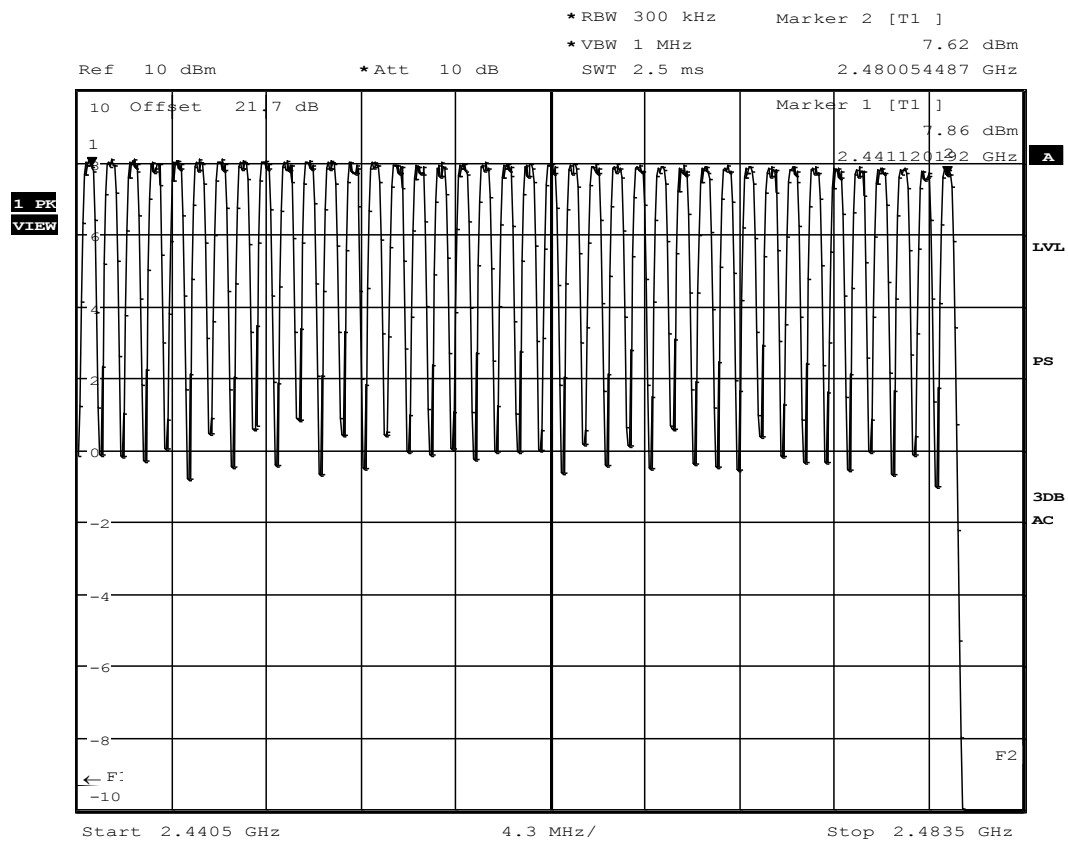
3DH5 – packet type

1.4. Minimum numbers of hopping channels



Date: 9.JUL.2013 17:19:37

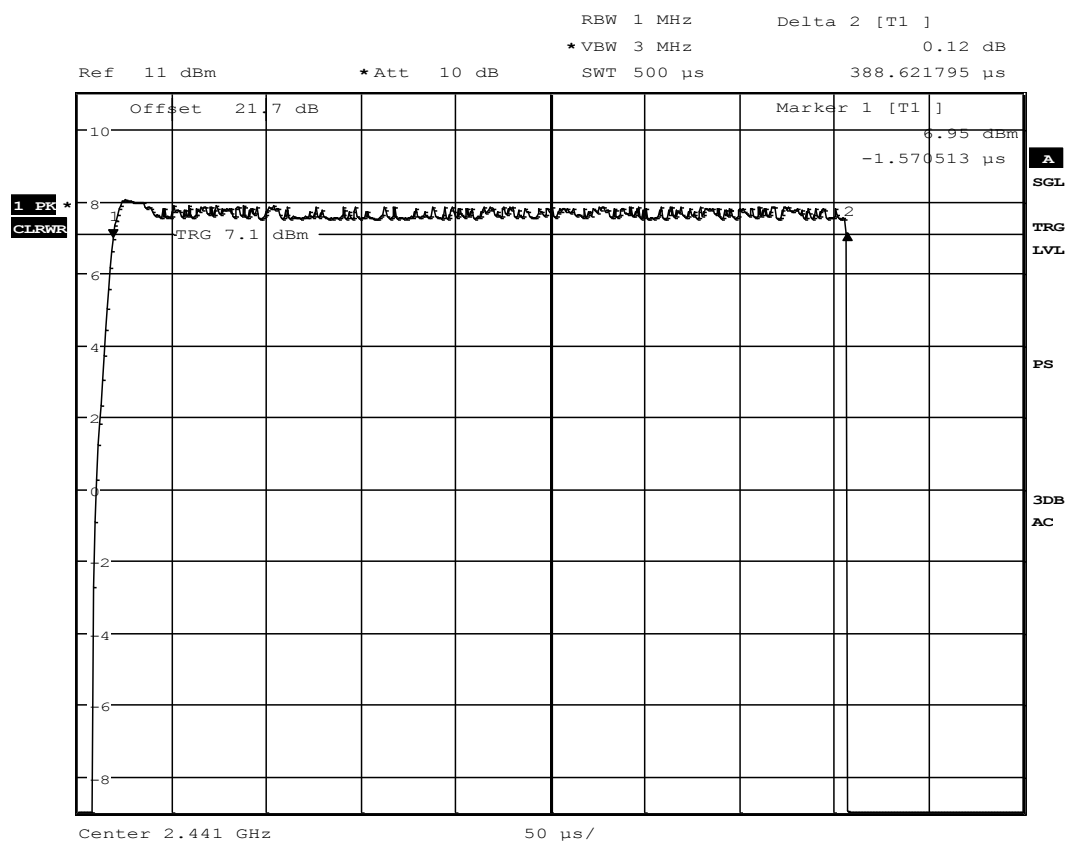
Number of channels: Overview of channels 0 - 38



Date: 9.JUL.2013 17:25:32

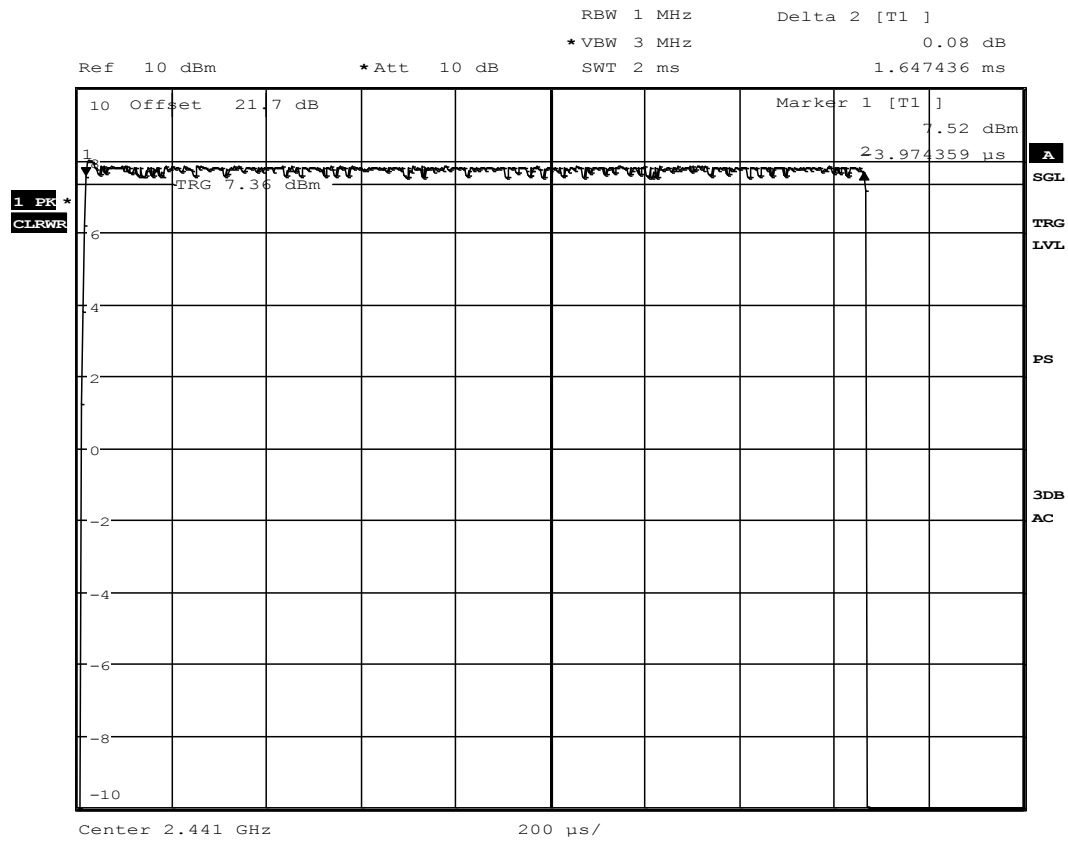
Number of channels: Overview of channels 39 - 78

1.5. Time of occupancy for FHSS systems



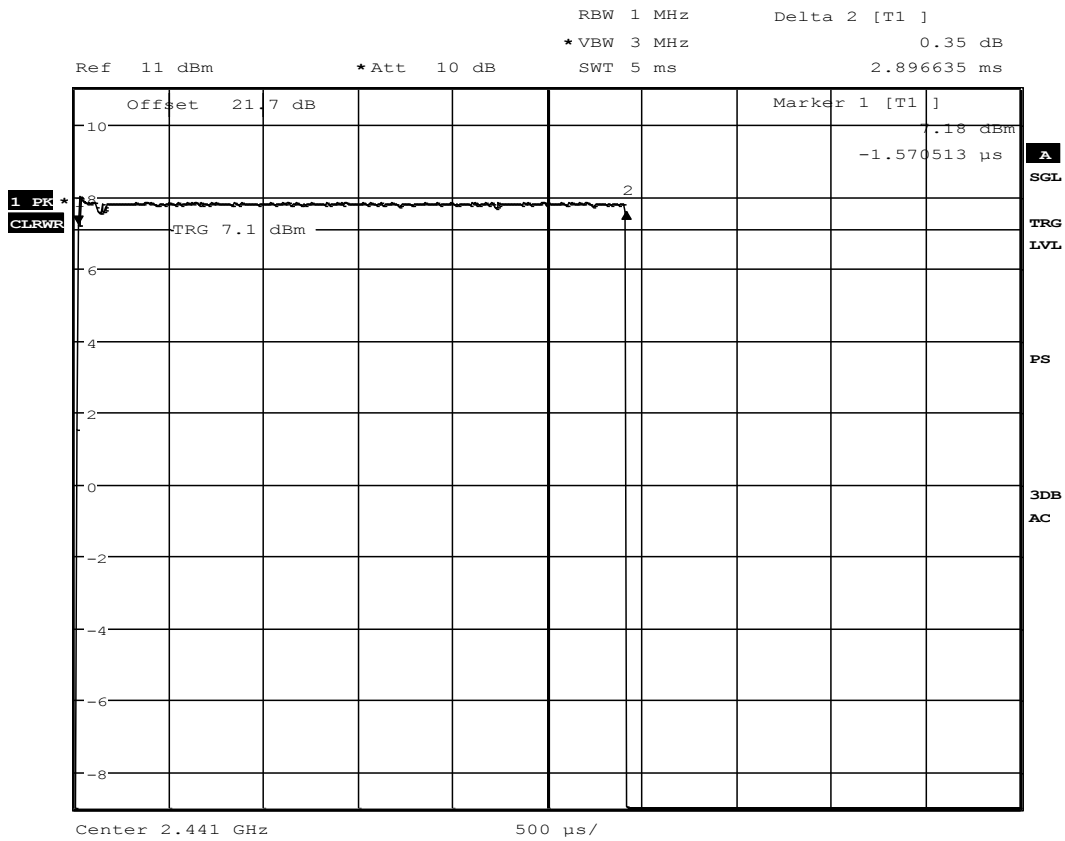
Date: 9.JUL.2013 17:36:26

DH1 – packet type



Date: 9.JUL.2013 17:34:35

DH3 – packet type



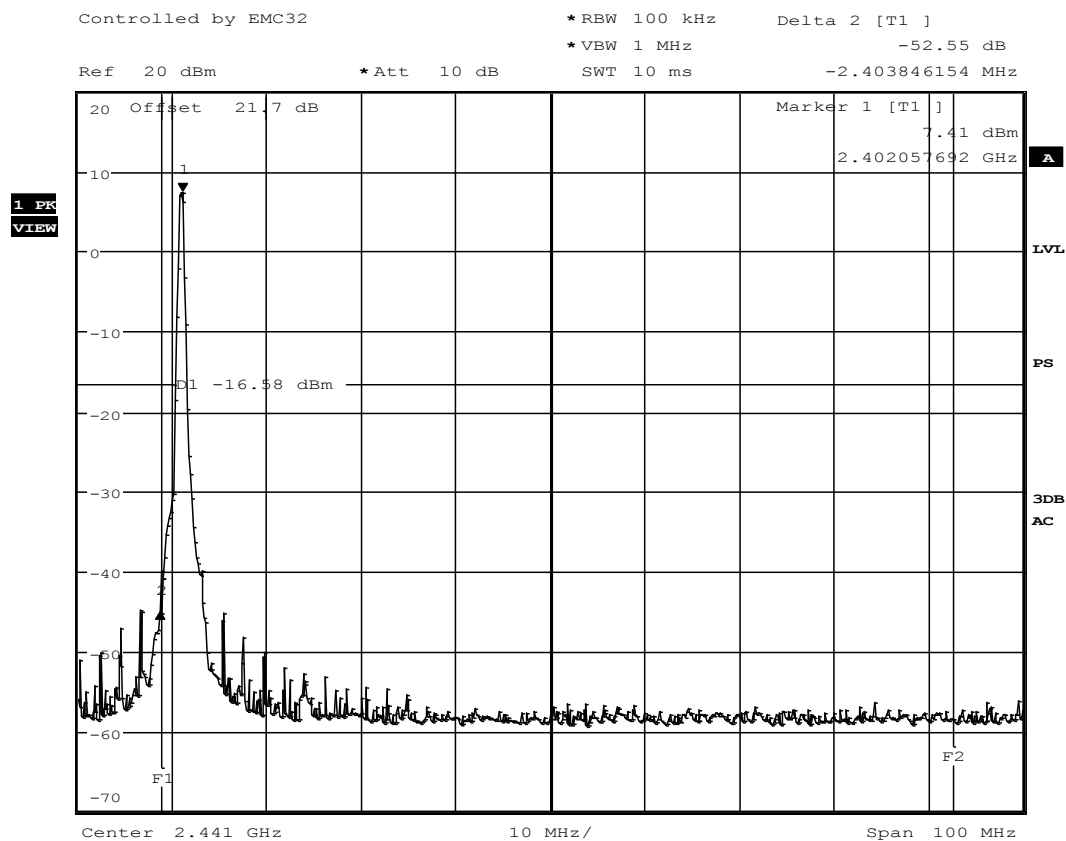
Date: 9.JUL.2013 17:37:07

DH5 – packet type

1.6. 20dBc conducted emissions

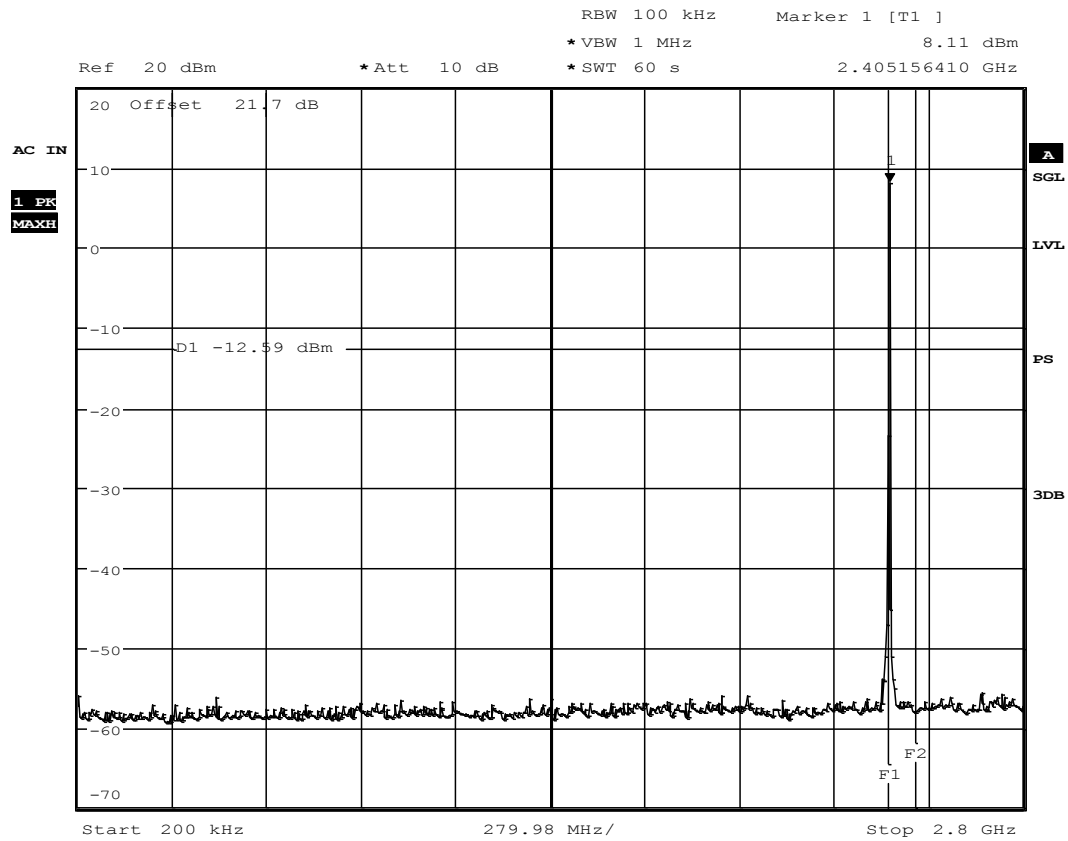
Tests have been performed at maximum measured power level of each modulation type. Pls. compare chapter conducted power for each worst-case. In addition the lowest and highest channel was checked against 20dBc compliance at the relevant band-edge.

1.6.1. DH1 modulation



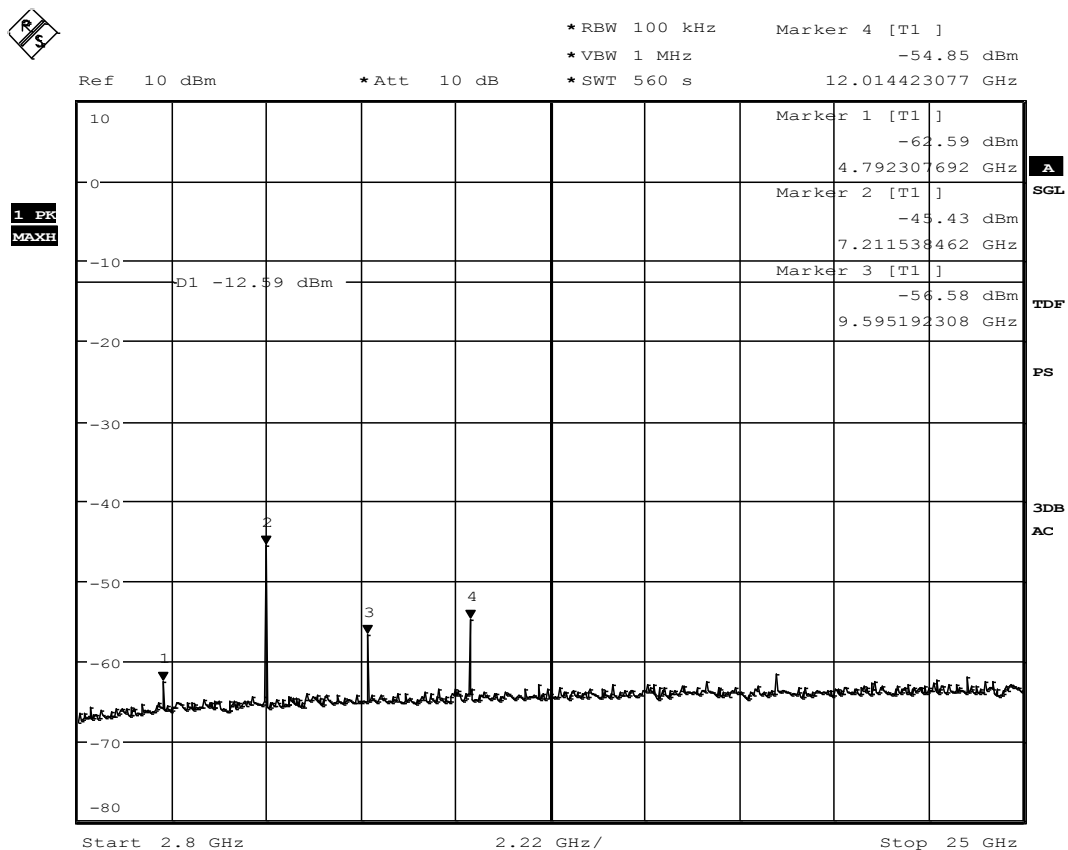
Date: 10.JUL.2013 11:41:13

In-BAND reference value for channel 0 and band-edge low



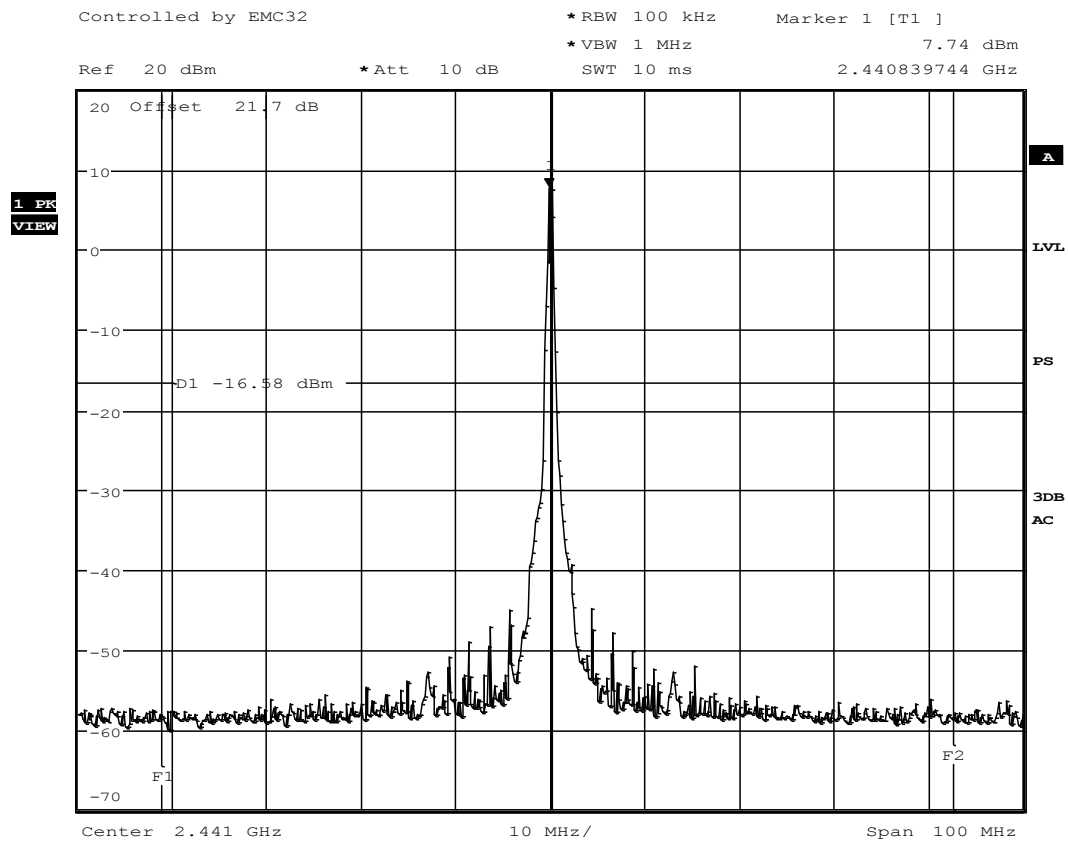
Date: 19.JUL.2013 13:25:57

Sweep 1: Channel 0 (200kHz to 2.8GHz)



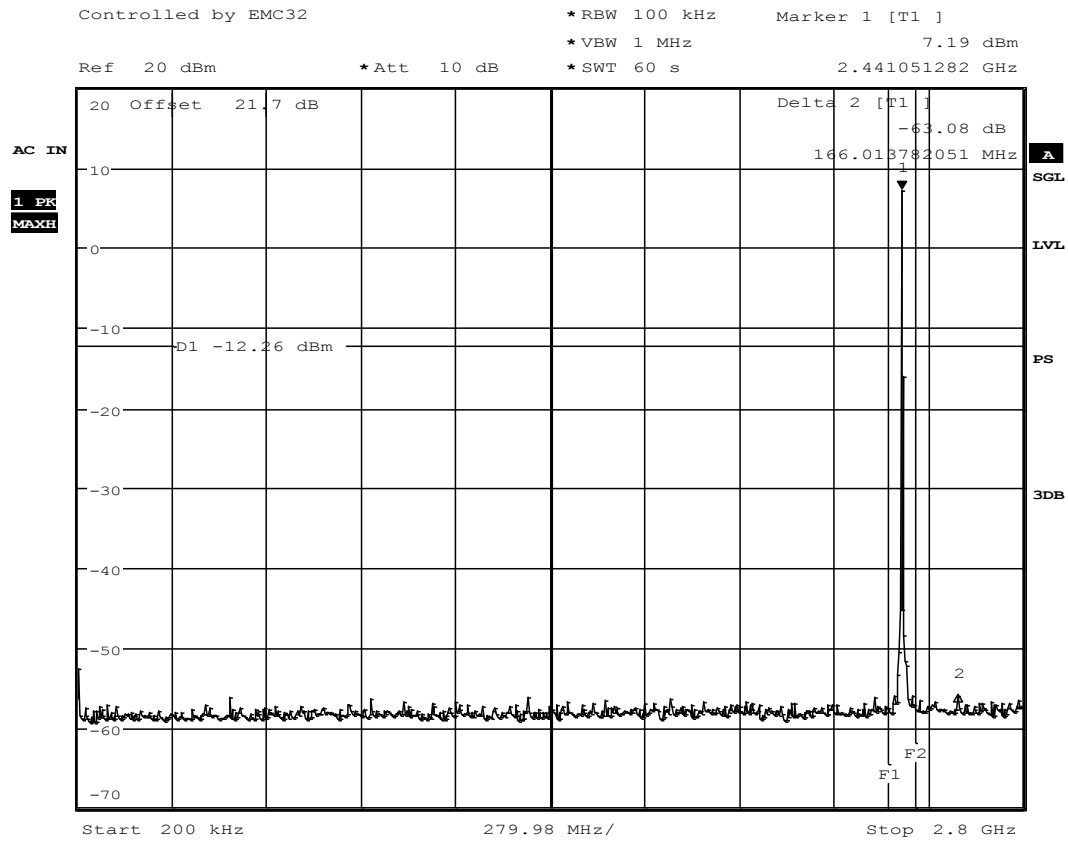
Date: 10.JUL.2013 15:14:18

Sweep 2: Channel 0 (2.8GHz to 25GHz)



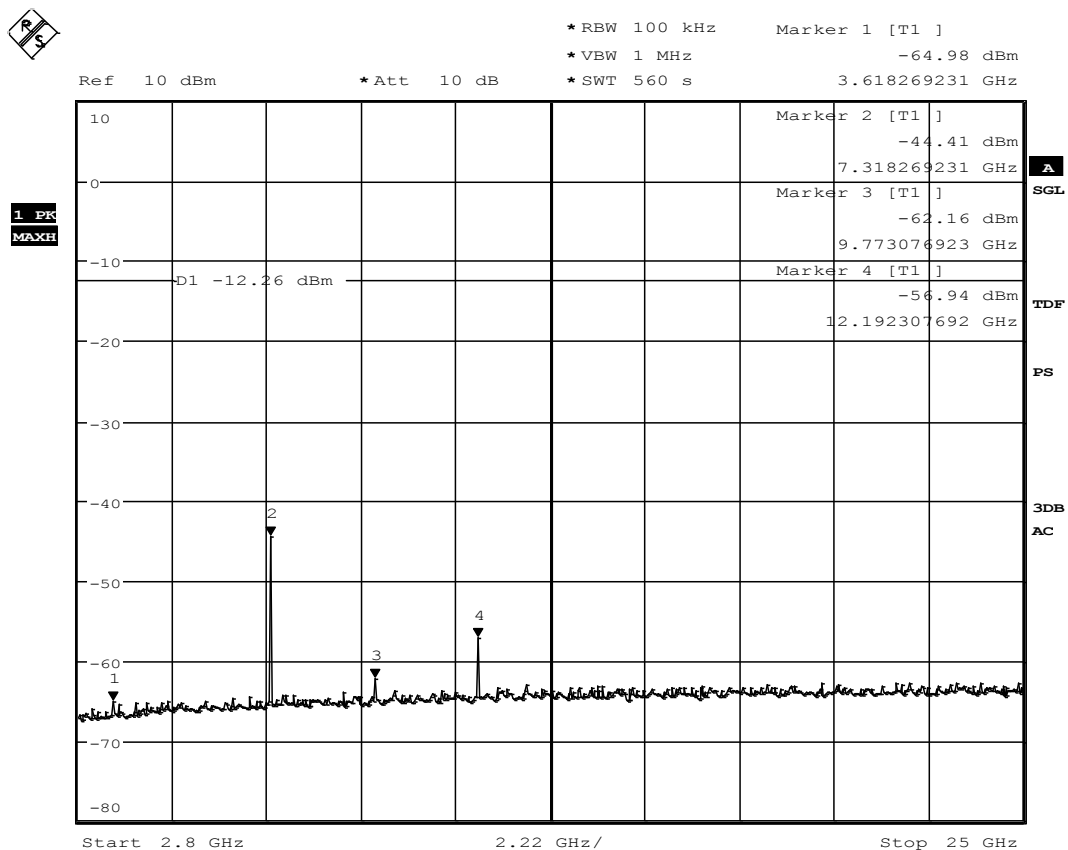
Date: 10.JUL.2013 11:39:55

In-BAND reference value for channel 39



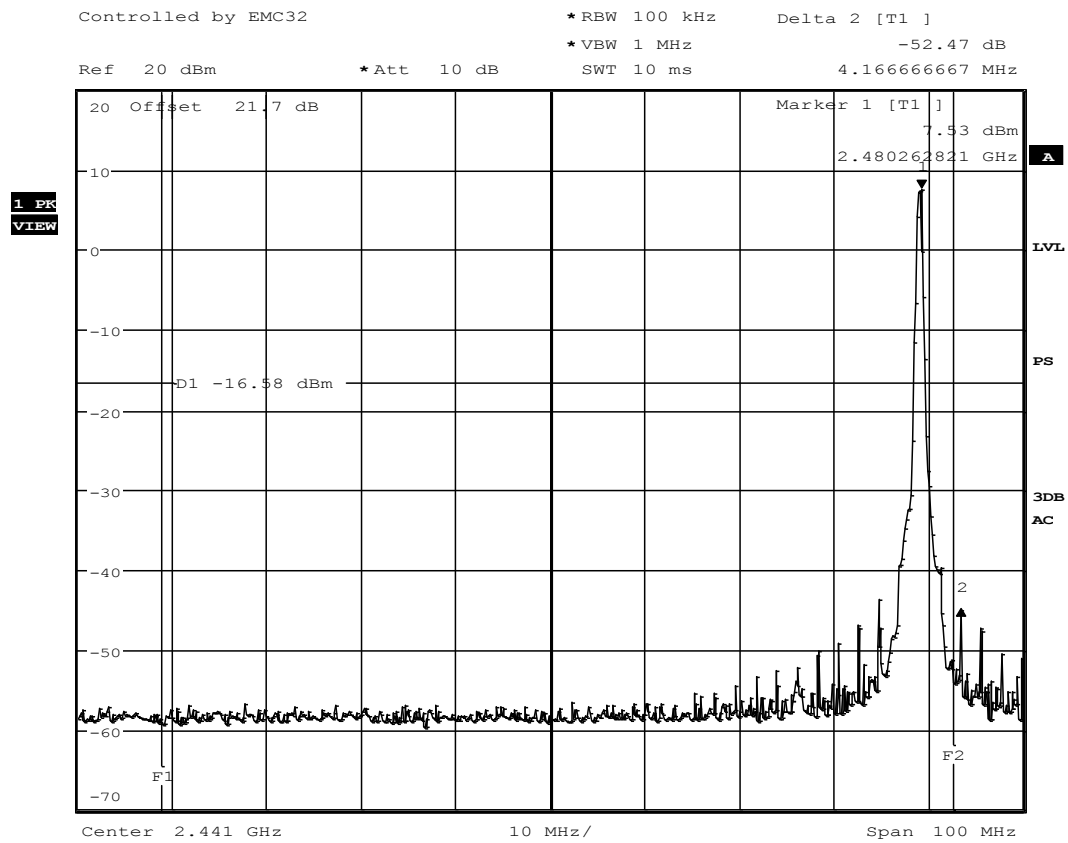
Date: 10.JUL.2013 11:50:19

Sweep 1: Channel 39 (200kHz to 2.8GHz)



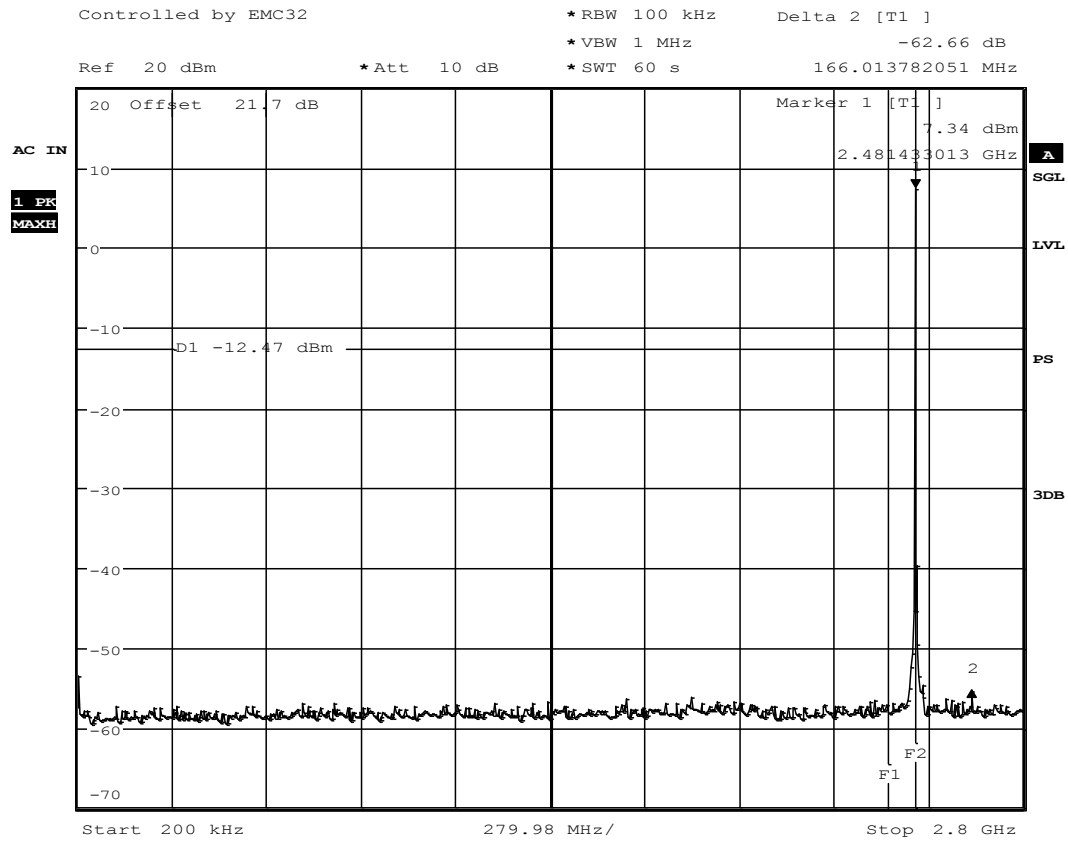
Date: 10.JUL.2013 15:24:22

Sweep 2: Channel 39 (2.8GHz to 25GHz)



Date: 10.JUL.2013 11:42:44

In-BAND reference value for channel 78 and band-edge high

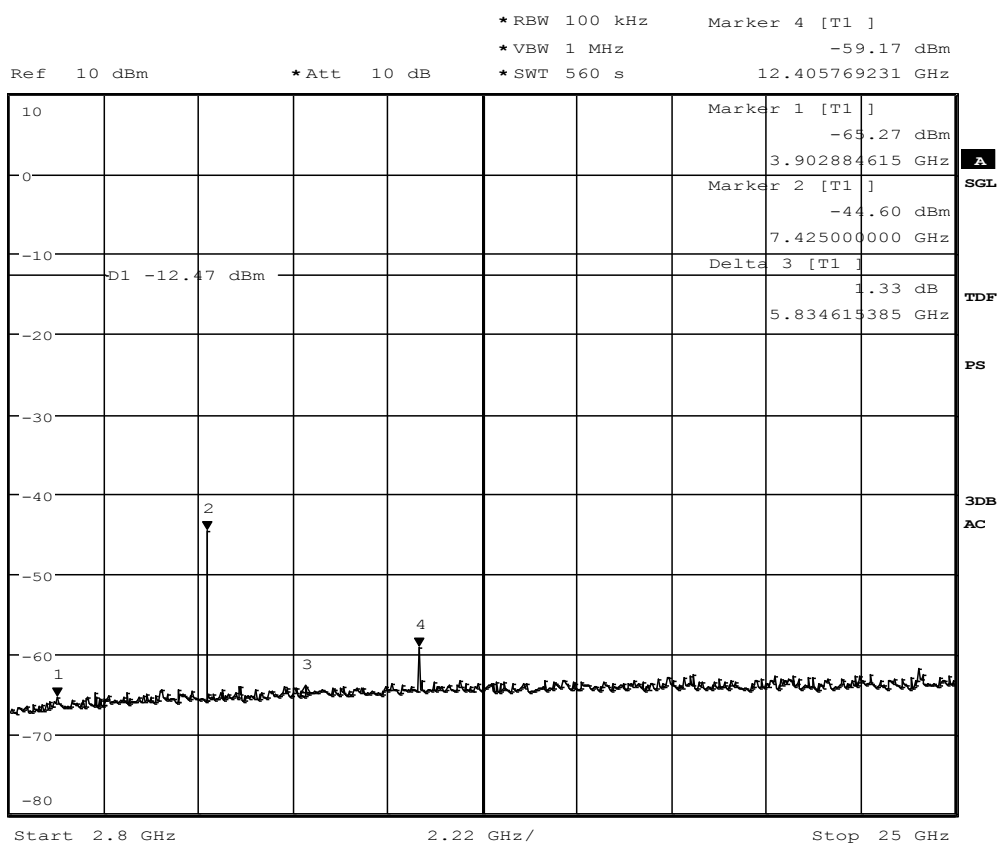


Date: 10.JUL.2013 11:47:57

Sweep 1: Channel 78 (200kHz to 2.8GHz)

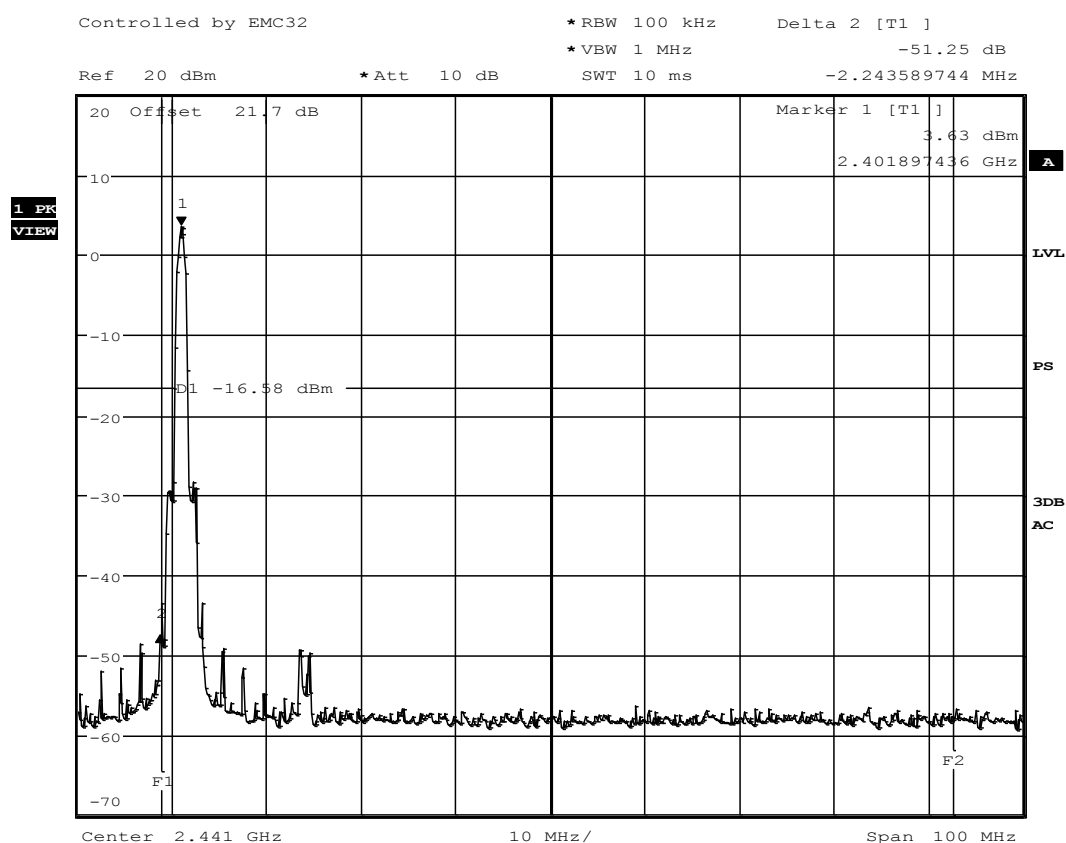


1 PK
MAXH



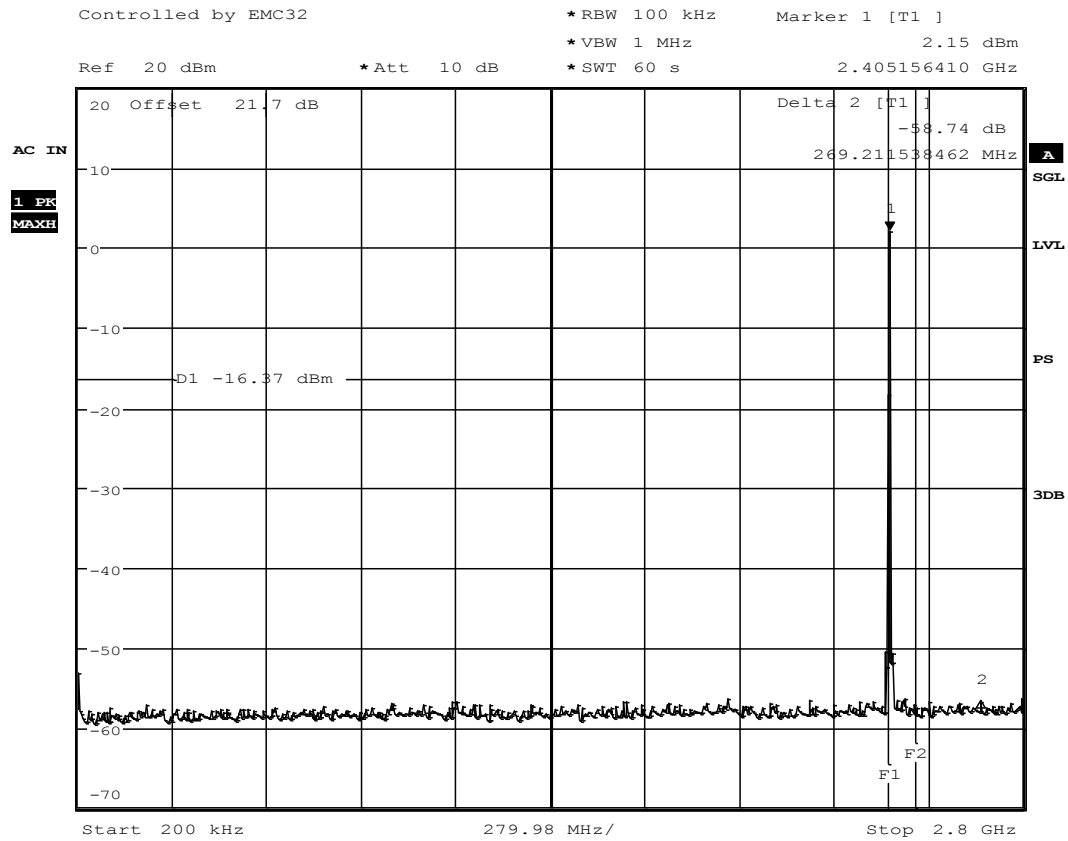
Date: 10.JUL.2013 15:35:24

Sweep 2: Channel 78 (2.8GHz to 25GHz)

1.6.2. 2DH5 modulation

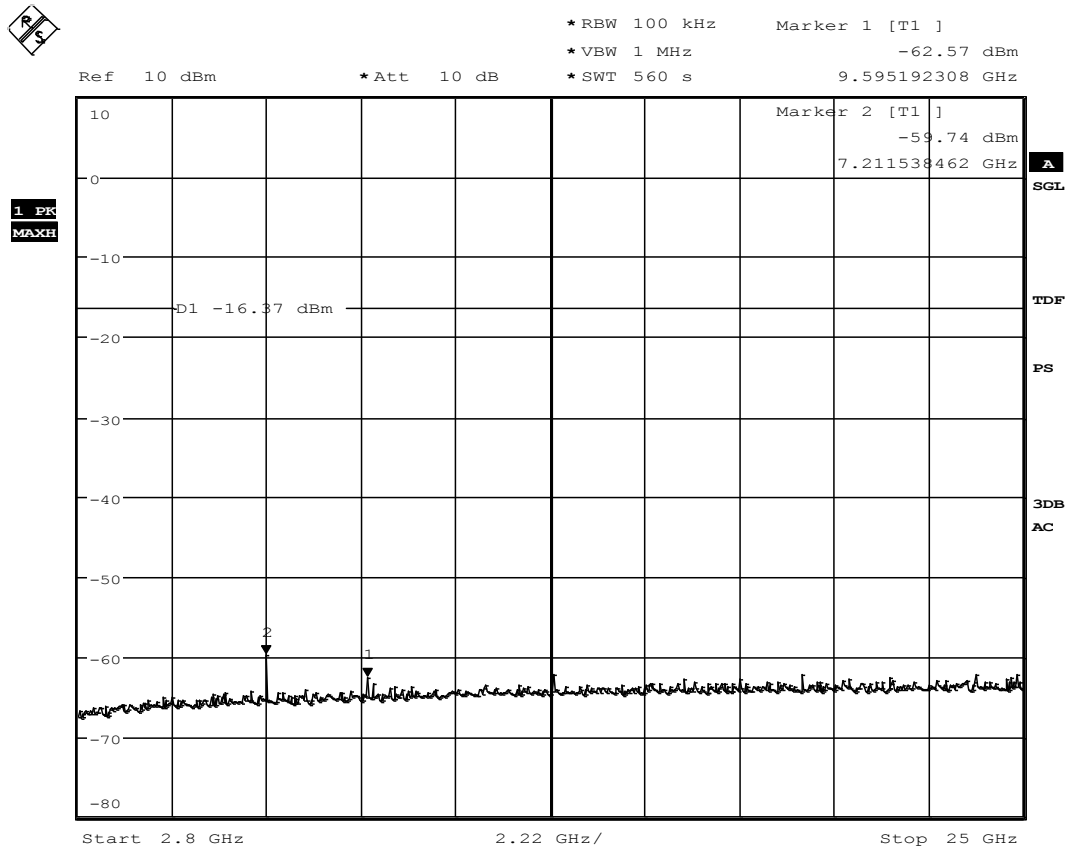
Date: 10.JUL.2013 11:36:00

In-BAND reference value for channel 0 and band edge low



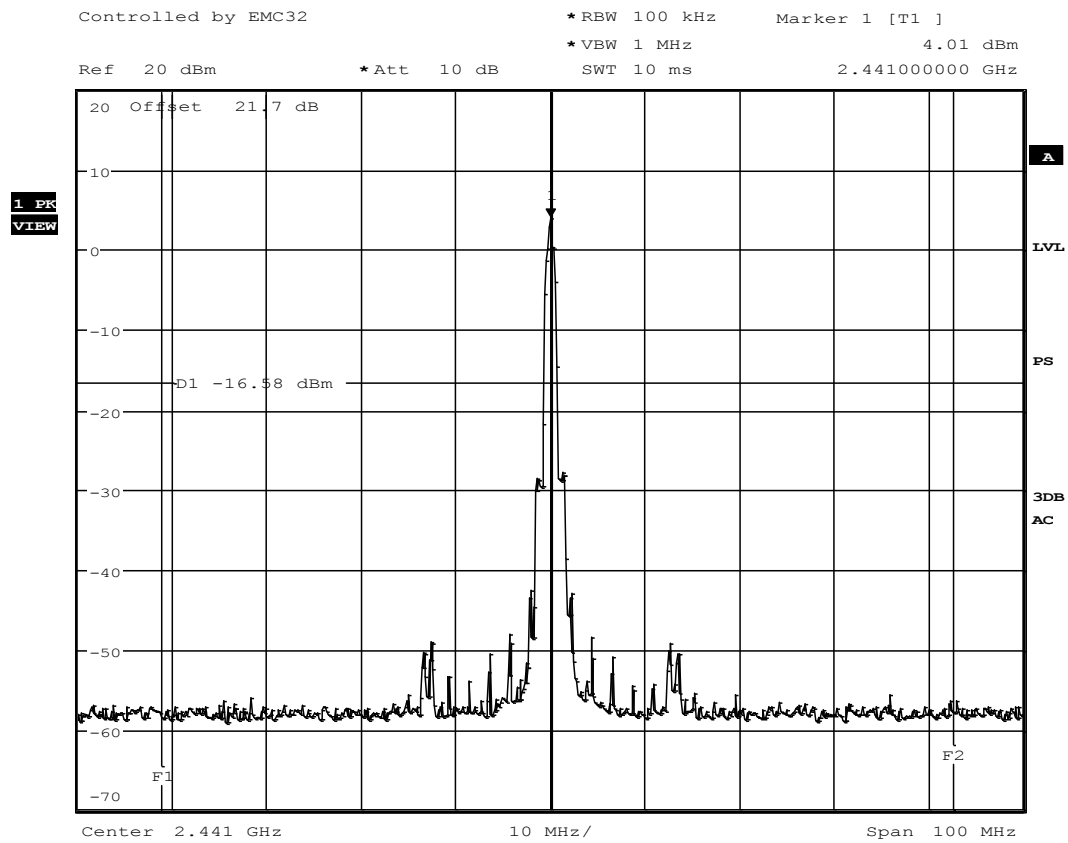
Date: 10.JUL.2013 11:55:01

Sweep 1: Channel 0 (200kHz to 2.8GHz)



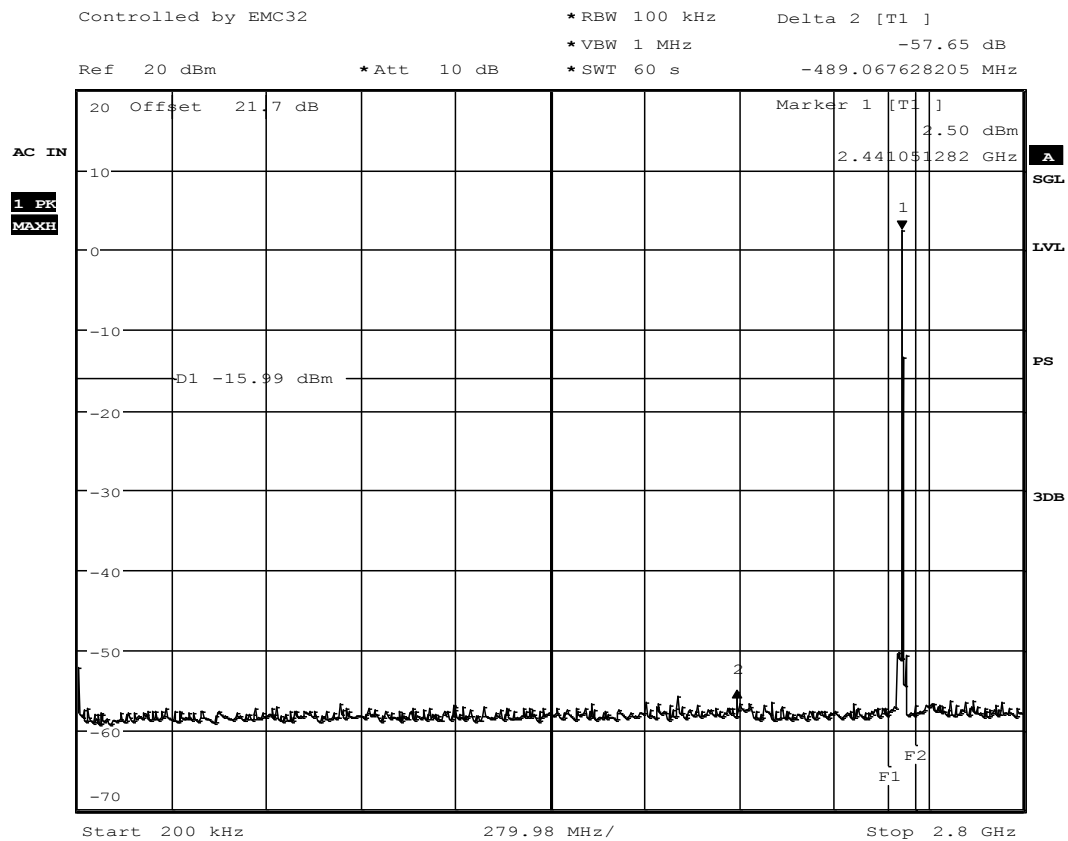
Date: 10.JUL.2013 15:02:57

Sweep 2: Channel 0 (2.8GHz to 25GHz)



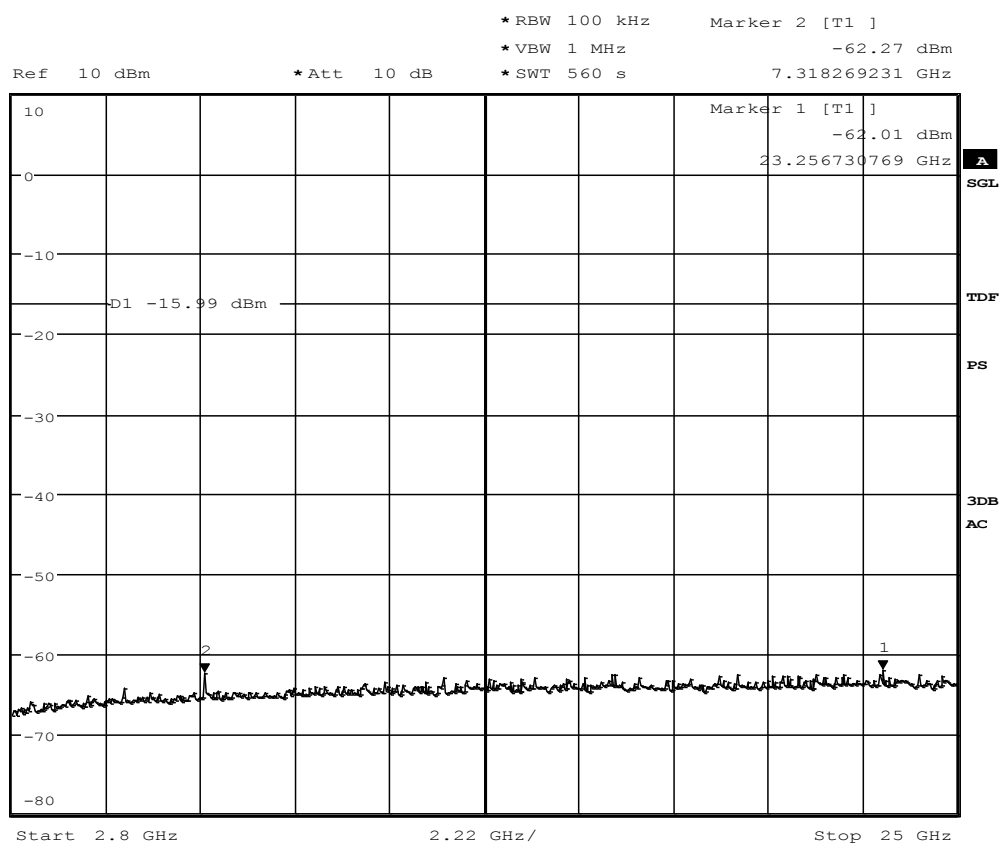
Date: 10.JUL.2013 11:37:57

In-BAND reference value for channel 39



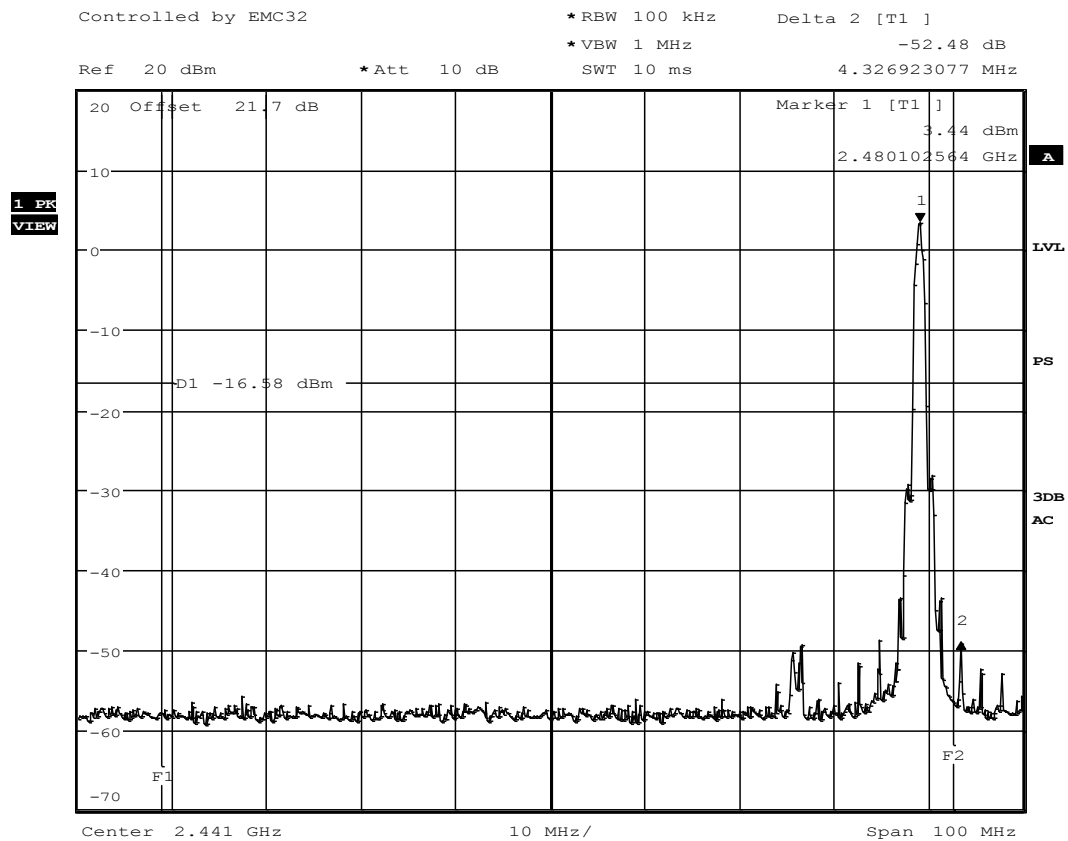
Date: 10.JUL.2013 11:58:54

Sweep 1: Channel 39 (200kHz to 2.8GHz)

**1 PK**
MAXH

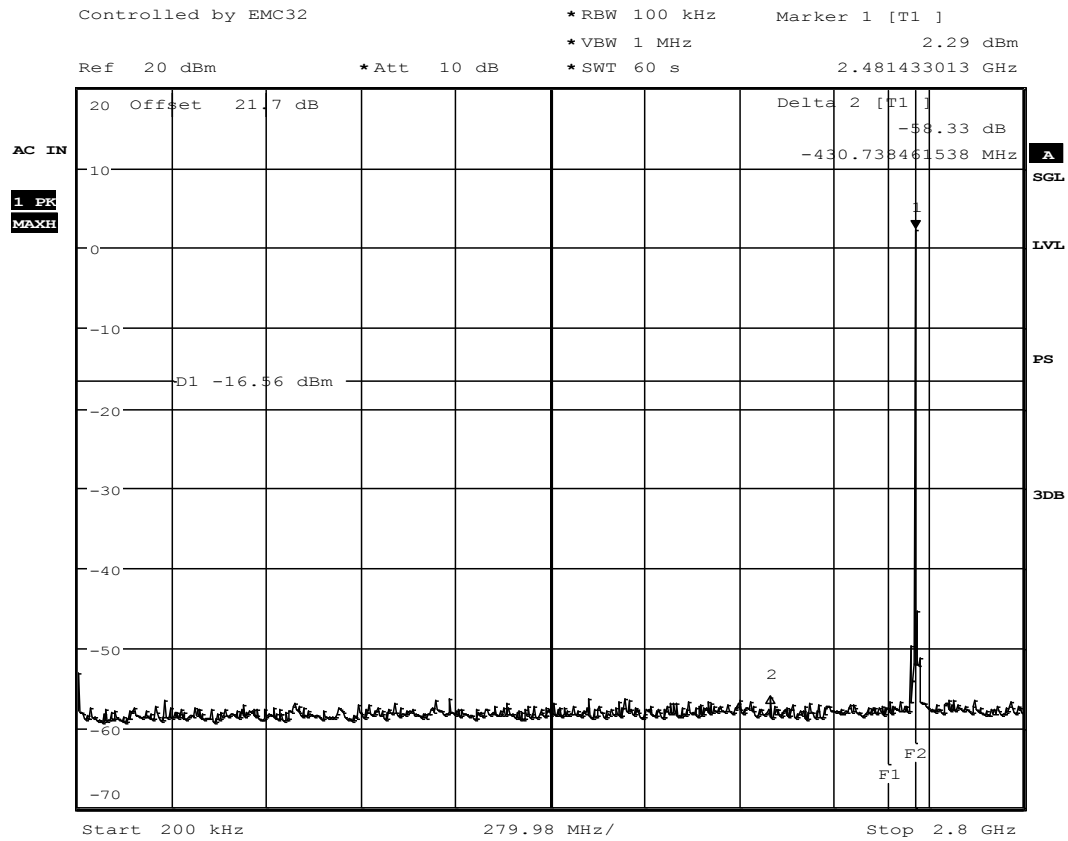
Date: 10.JUL.2013 14:52:24

Sweep 2: Channel 39 (2.8GHz to 25GHz)



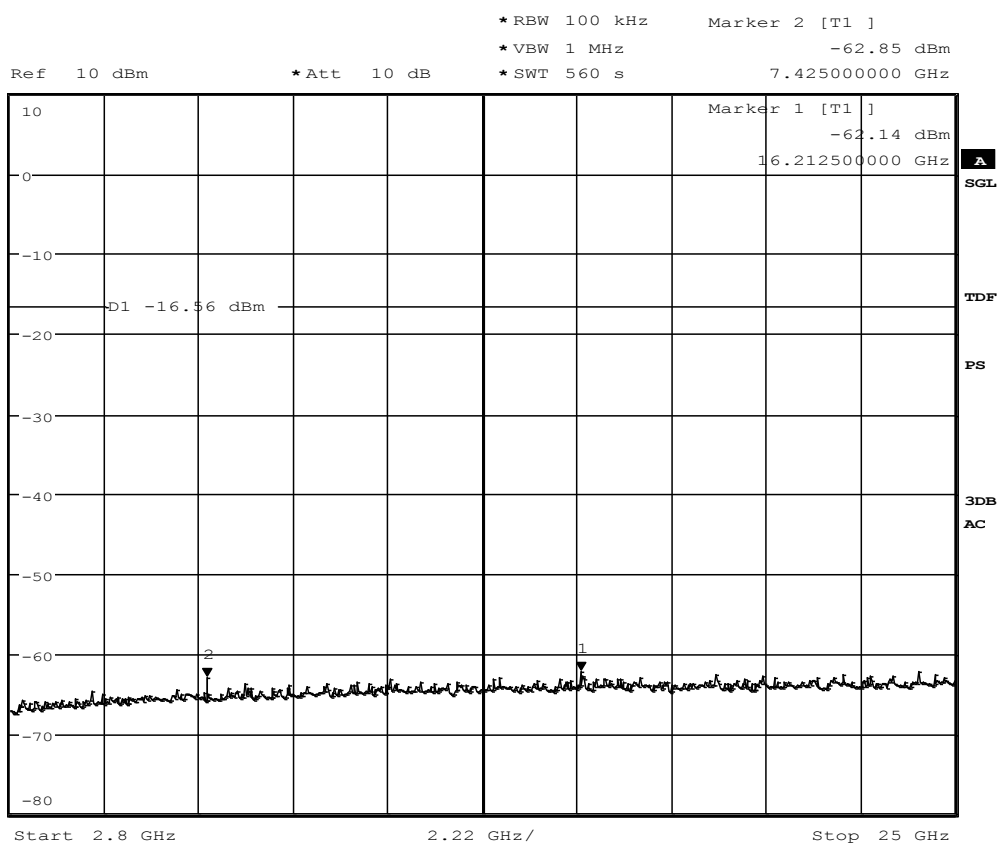
Date: 10.JUL.2013 11:31:47

In-BAND reference value for channel 78 and band-edge high



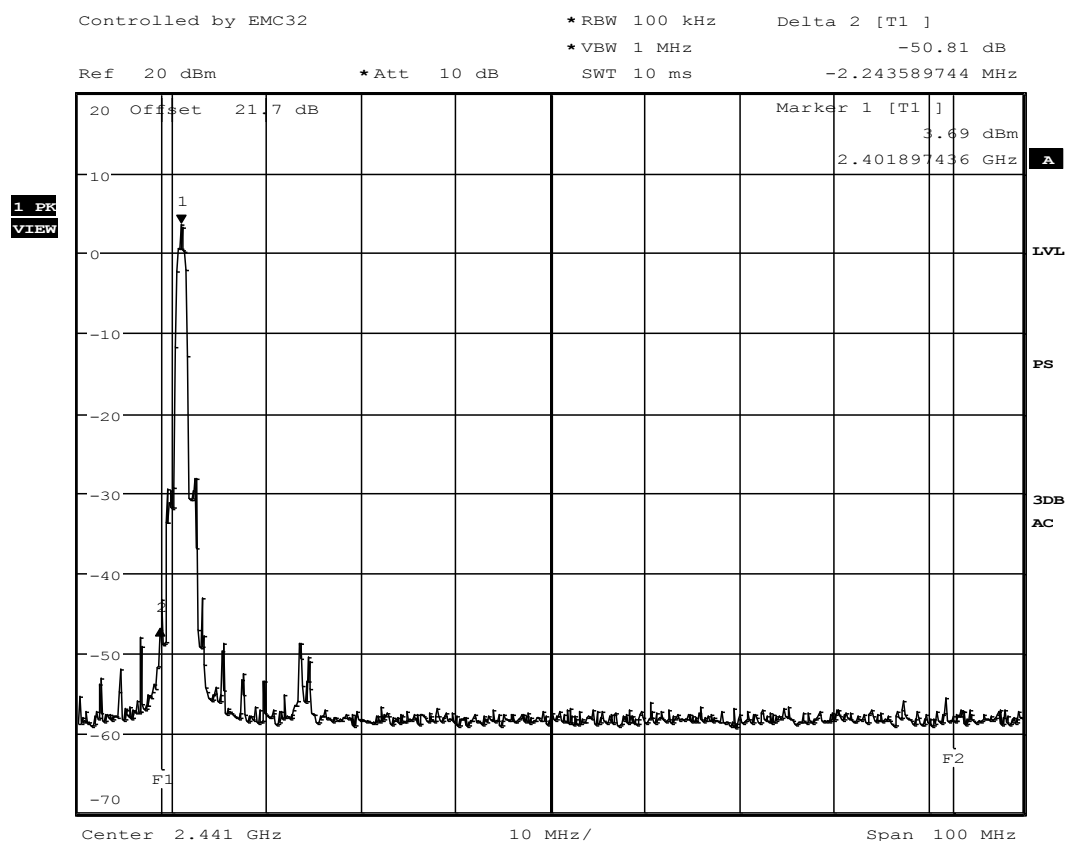
Date: 10.JUL.2013 12:00:30

Sweep 1: Channel 78 (200kHz to 2.8GHz)

**1 PK**
MAXH

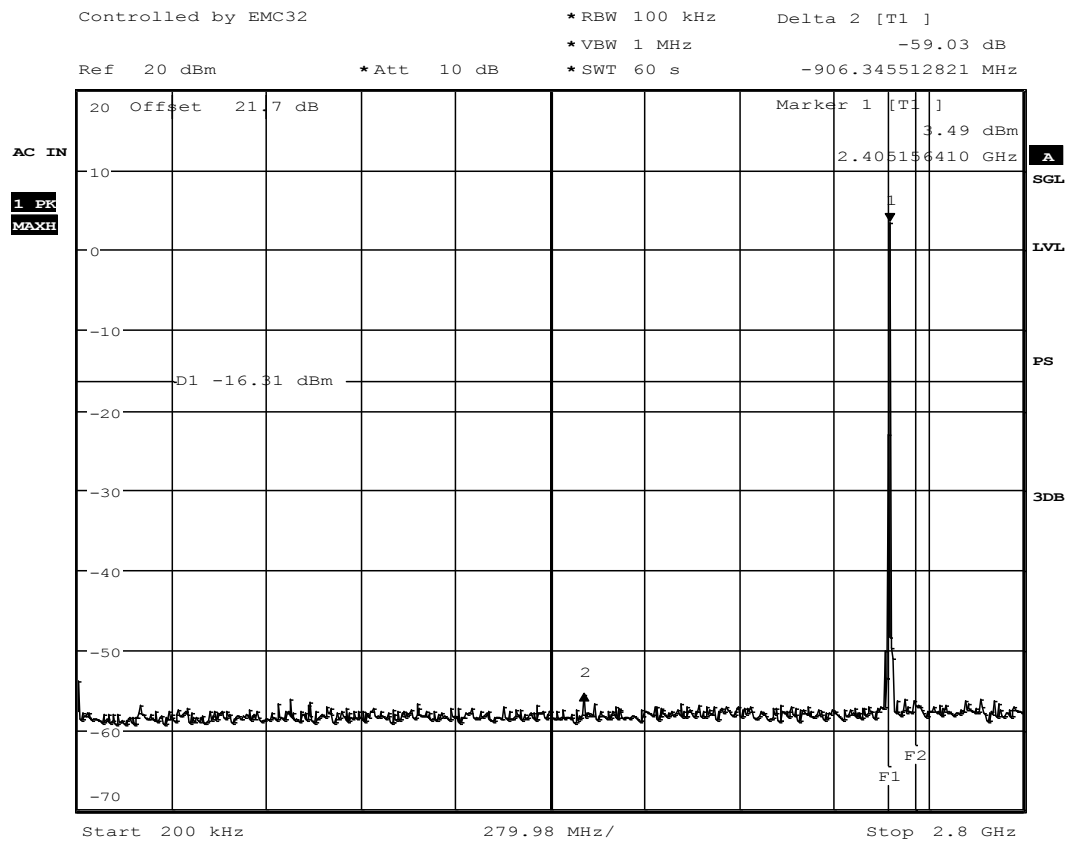
Date: 10.JUL.2013 14:42:10

Sweep 2: Channel 78 (2.8GHz to 25GHz)

1.6.3. 3DH3 modulation

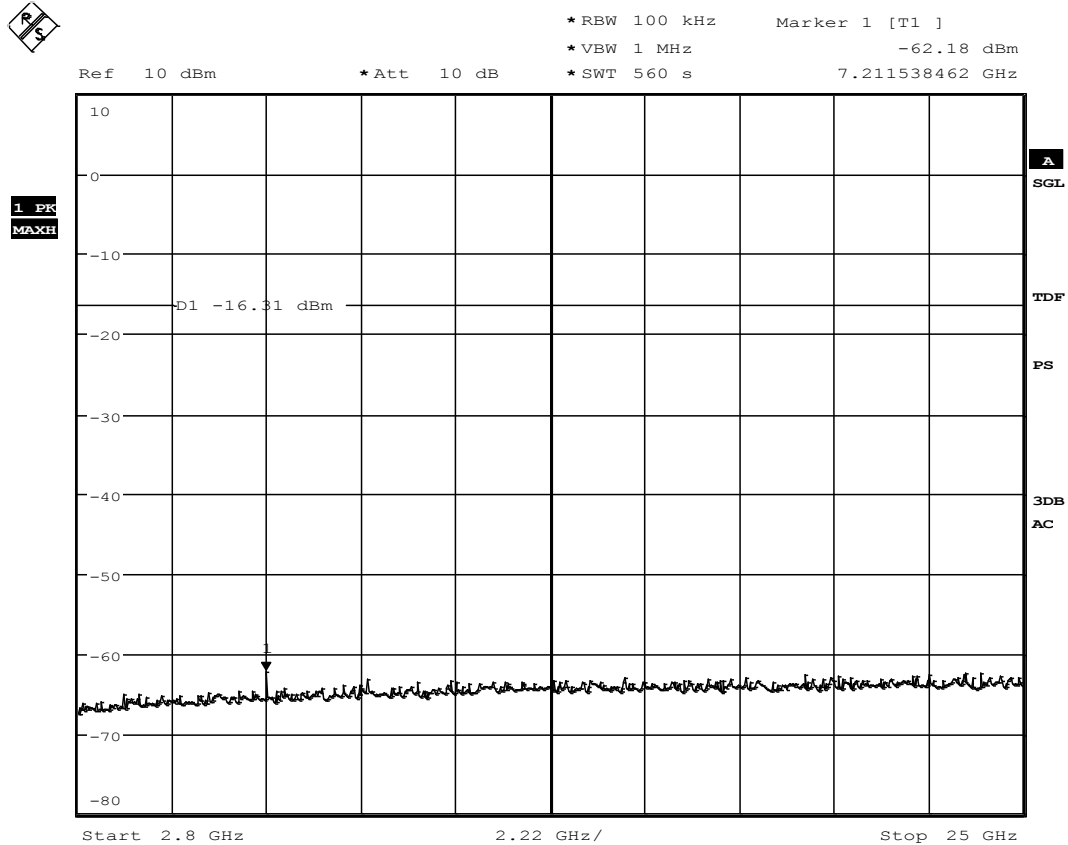
Date: 10.JUL.2013 10:34:13

In-BAND reference value for channel 0 and band-edge low



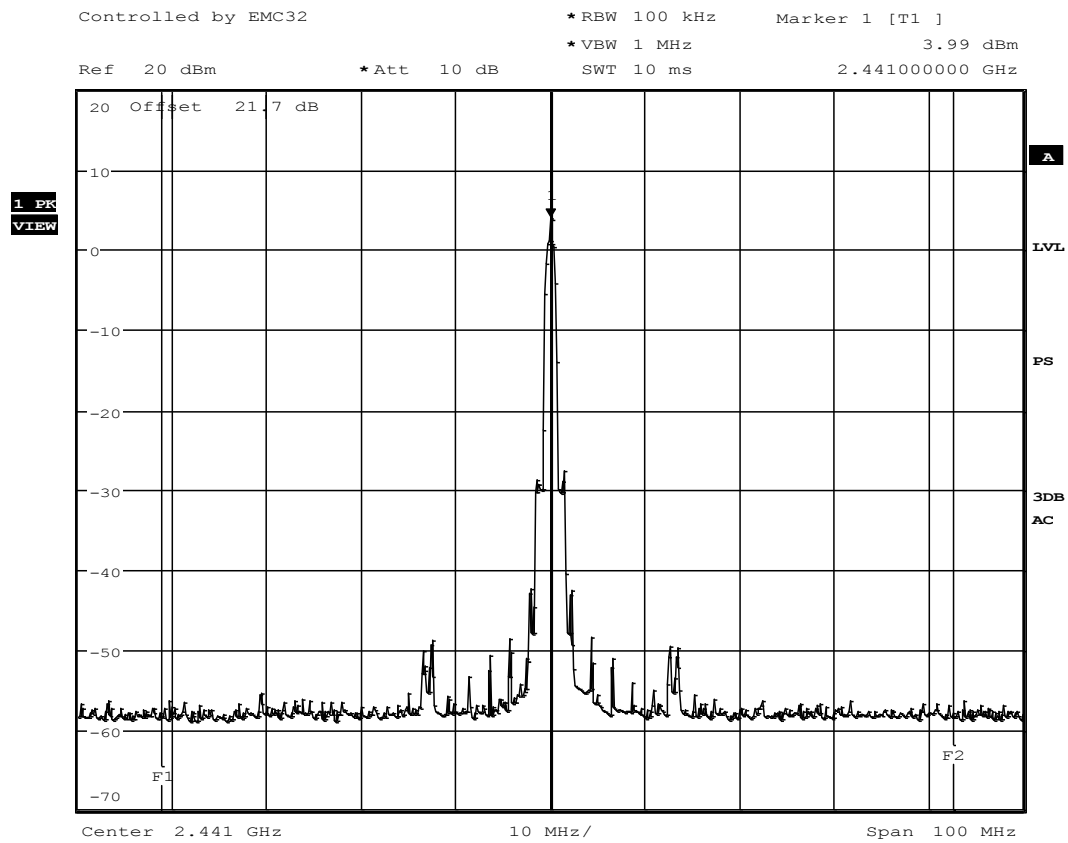
Date: 10.JUL.2013 10:41:45

Sweep 1: Channel 0 (200kHz to 2.8GHz)



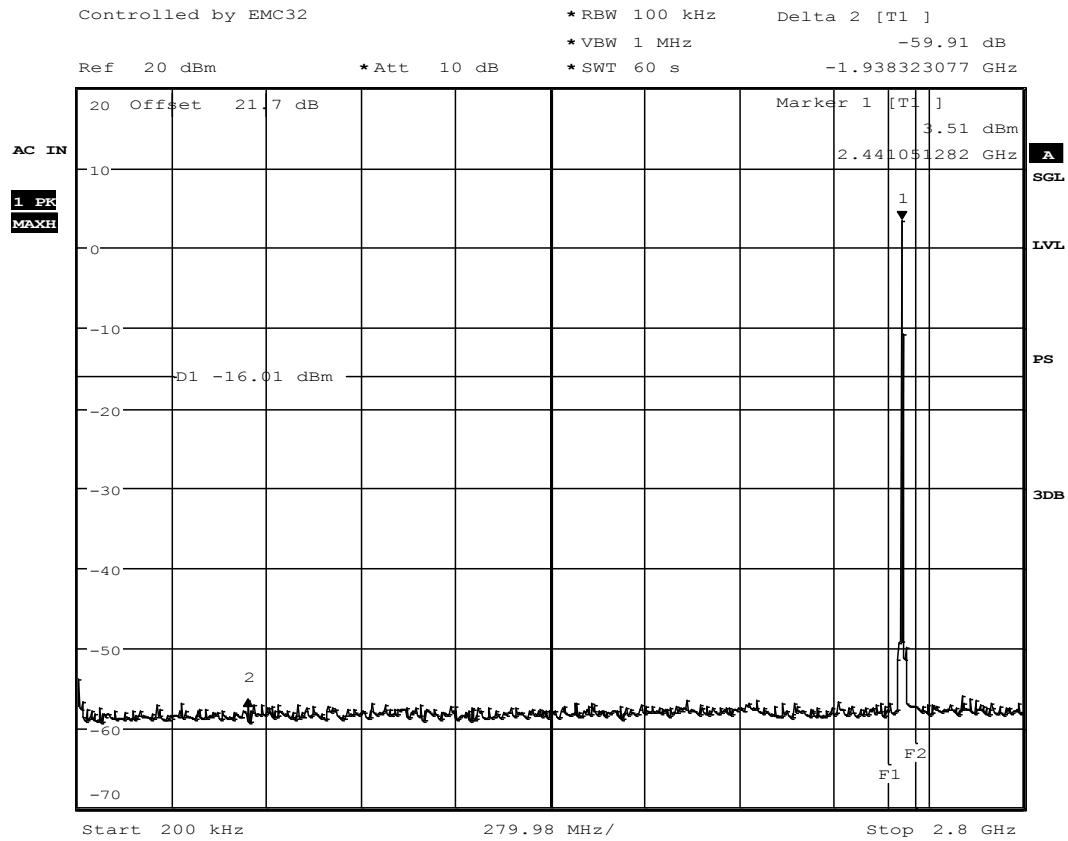
Date: 10.JUL.2013 16:05:10

Sweep 2: Channel 0 (2.8GHz to 25GHz)



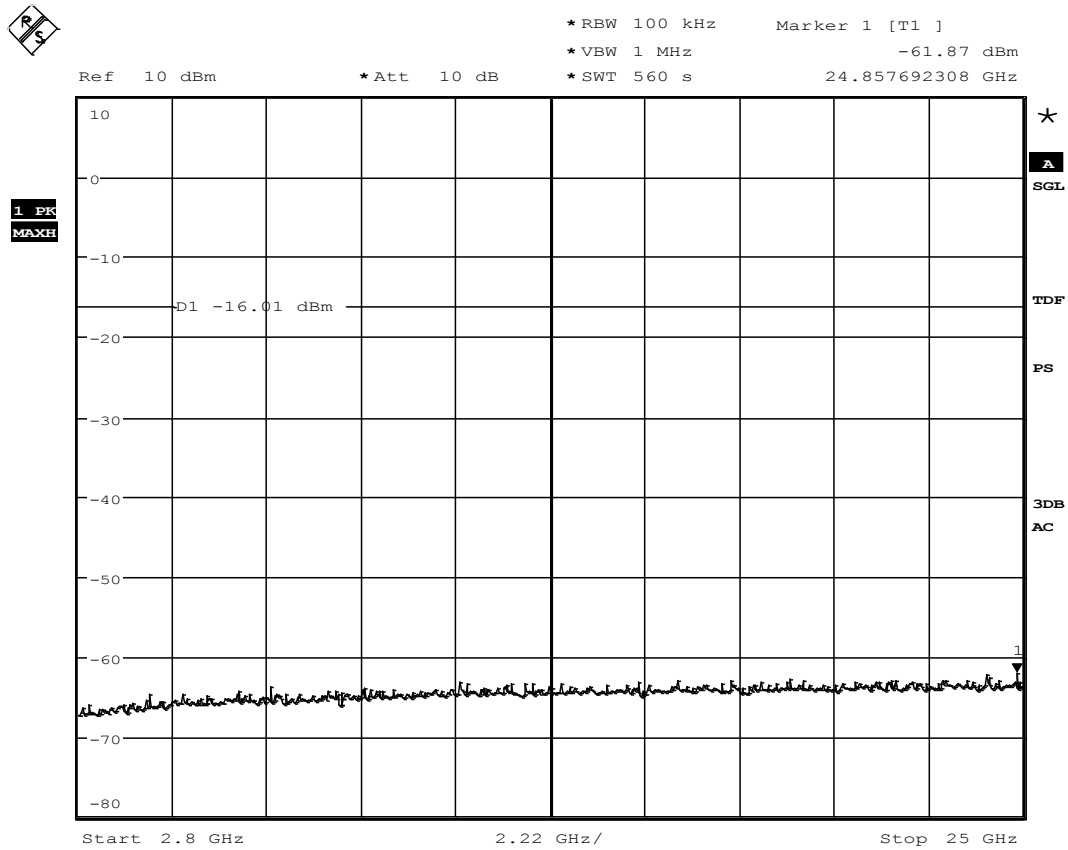
Date: 10.JUL.2013 10:33:11

In-BAND reference value for channel 39



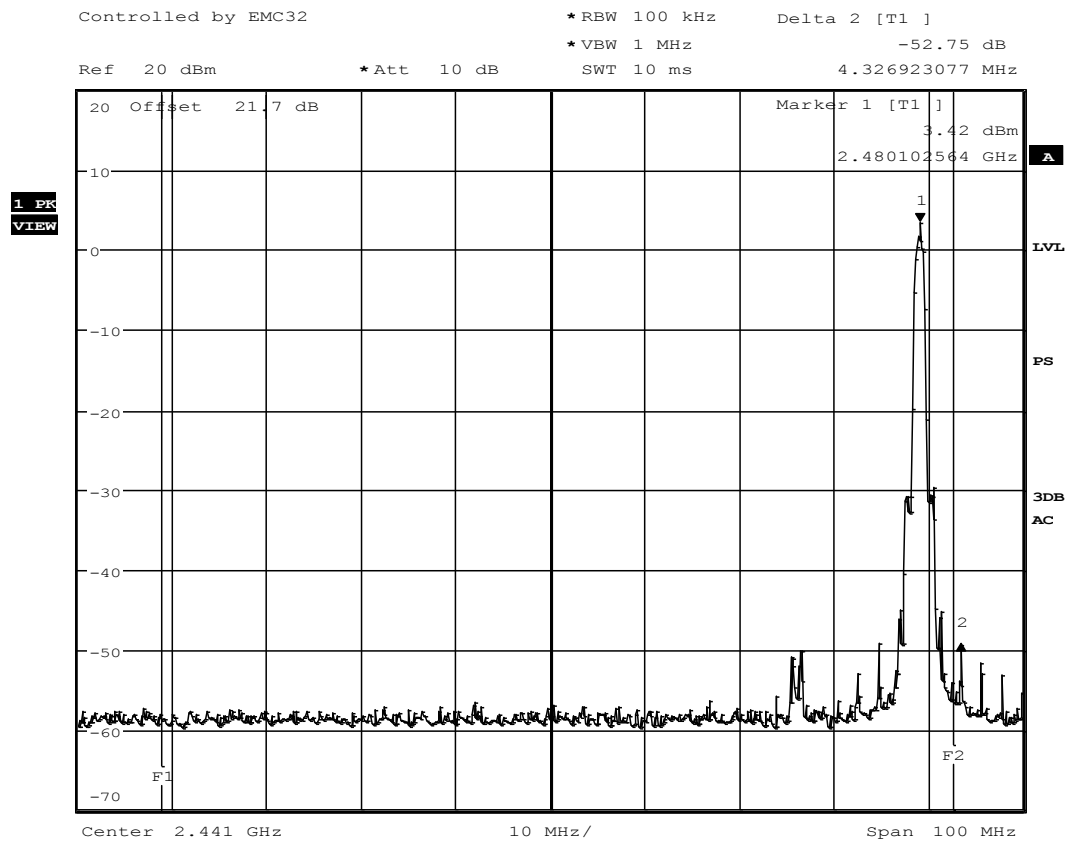
Date: 10.JUL.2013 10:53:10

Sweep 1: Channel 39 (200kHz to 2.8GHz)



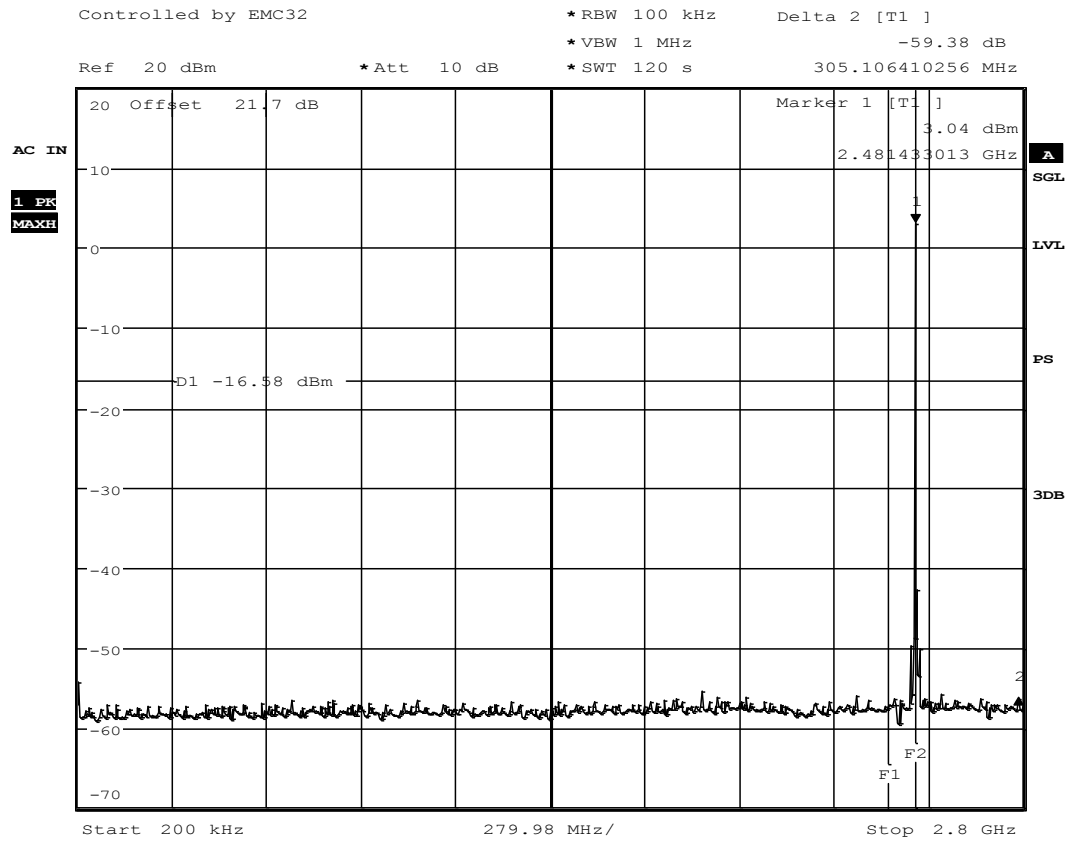
Date: 10.JUL.2013 15:53:40

Sweep 2: Channel 39 (2.8GHz to 25GHz)



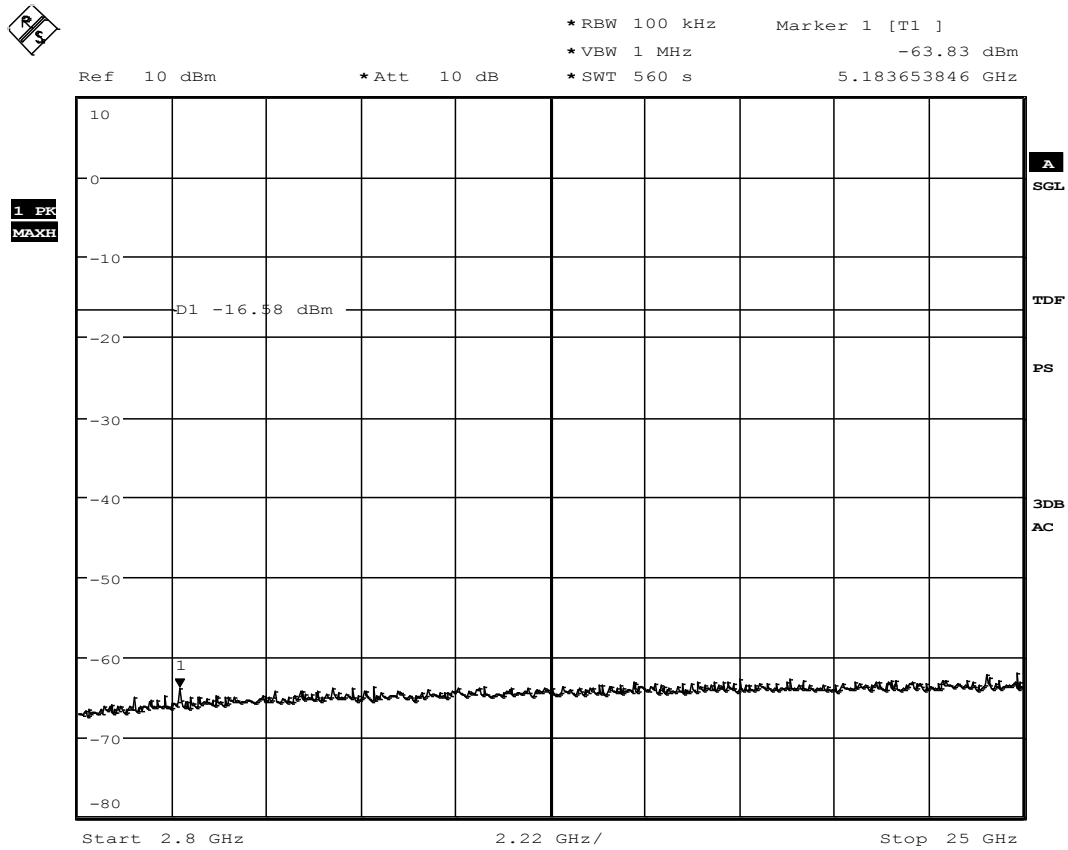
Date: 10.JUL.2013 10:31:41

In-BAND reference value for channel 78 and band-edge high



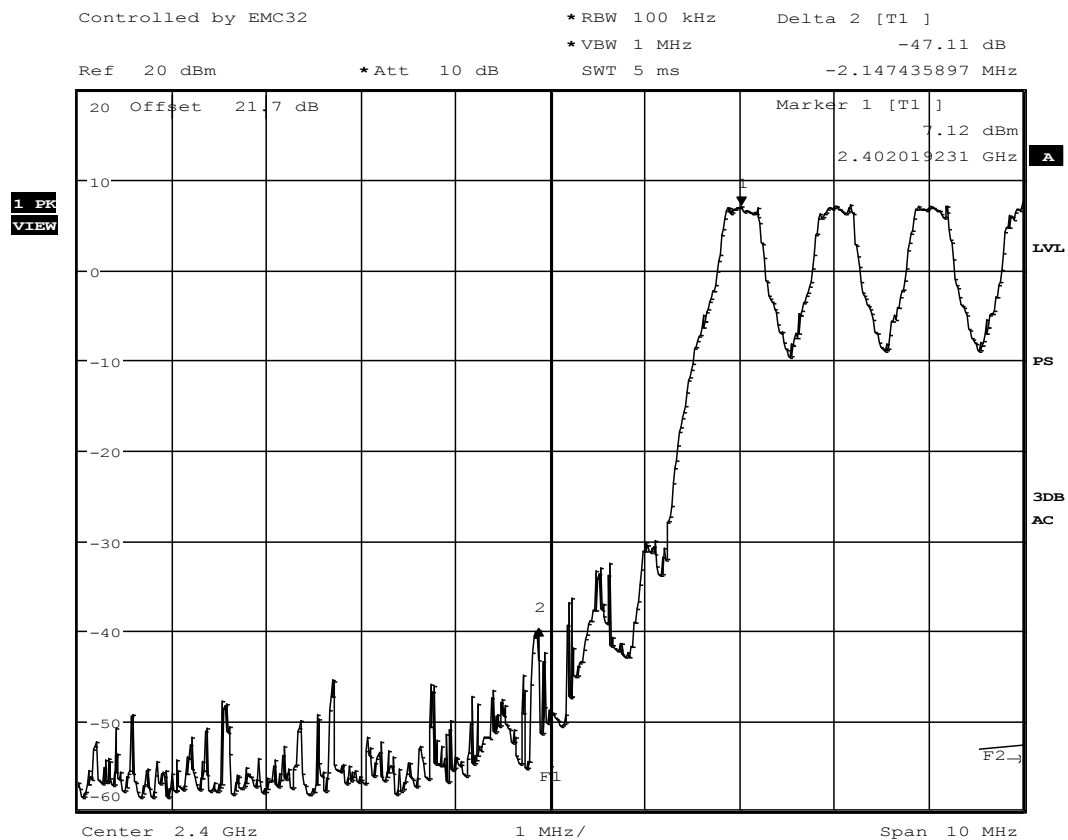
Date: 10.JUL.2013 11:25:26

Sweep 1: Channel 78 (200kHz to 2.8GHz)



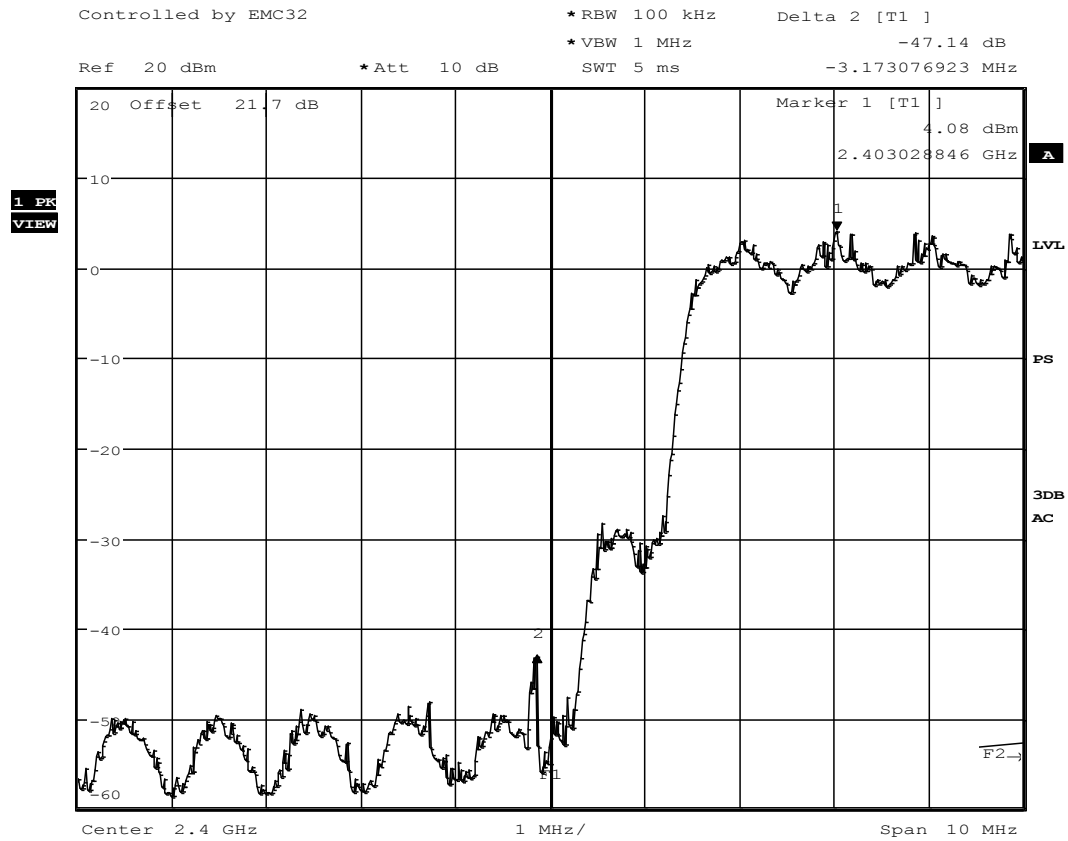
Date: 10.JUL.2013 15:46:16

Sweep 2: Channel 78 (2.8GHz to 25GHz)

1.6.4. Band-Edge low channel (hopping conditions)

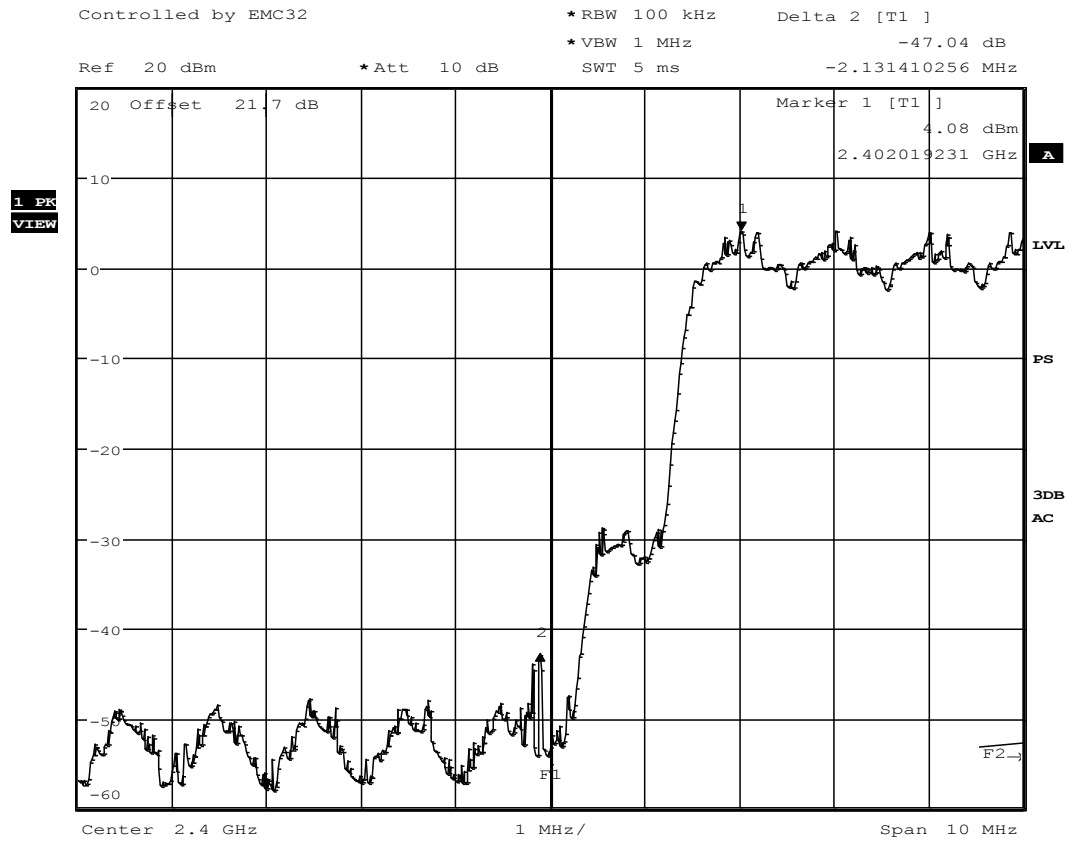
Date: 10.JUL.2013 09:56:30

Band-Edge left (hopping mode) at DH5 packets



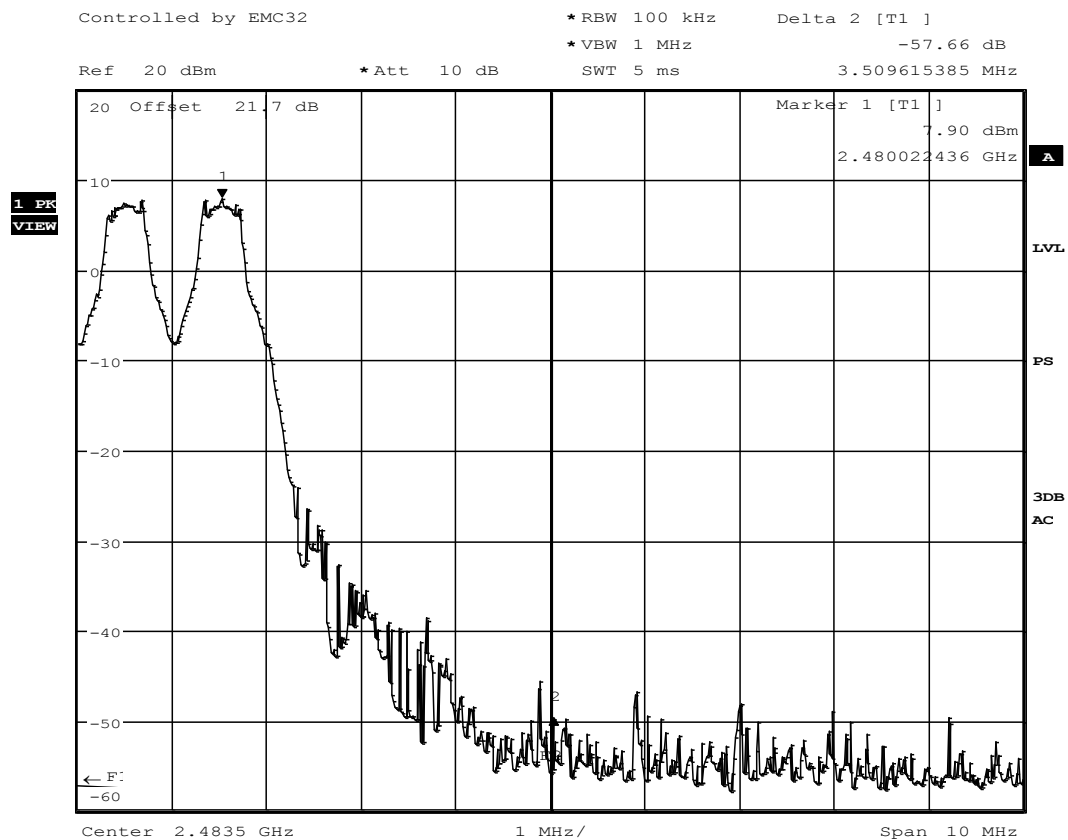
Date: 10.JUL.2013 09:59:10

Band-Edge low (hopping mode) at 2DH5 packets



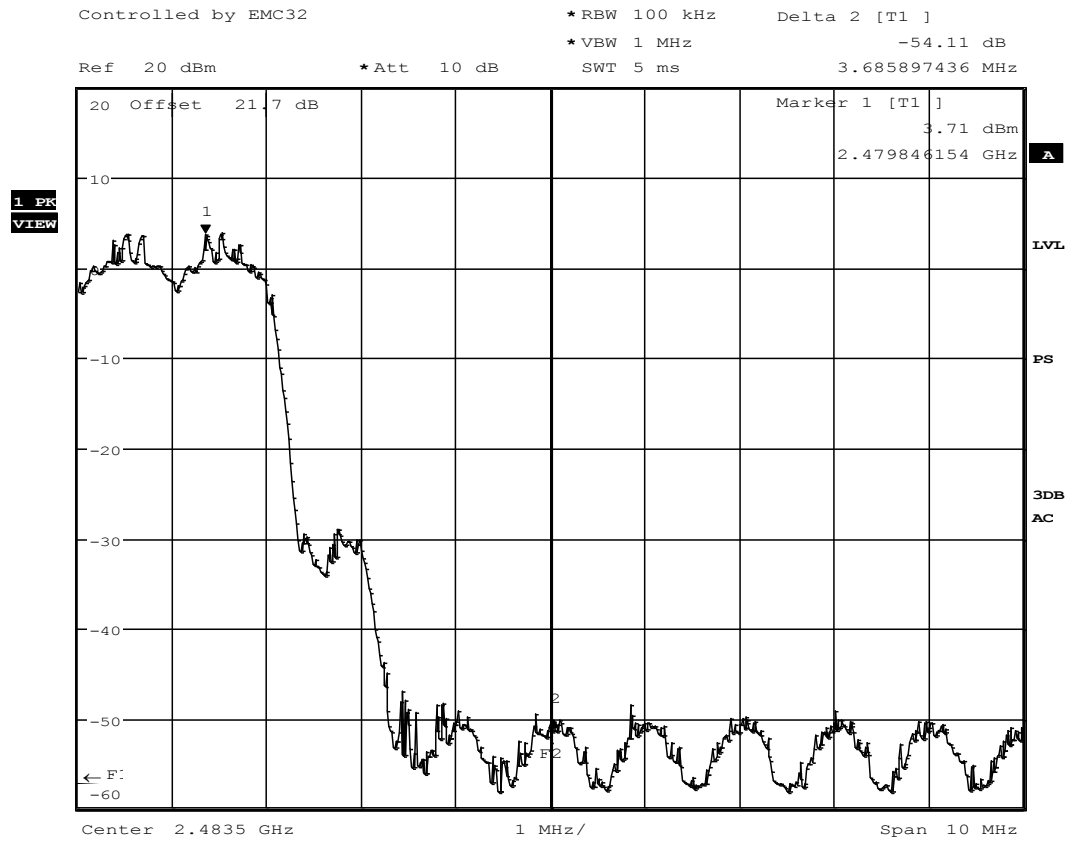
Date: 10.JUL.2013 10:05:53

Band-Edge low (hopping mode) at 3DH5 packets

1.6.5. Band-Edge high channel (hopping conditions)

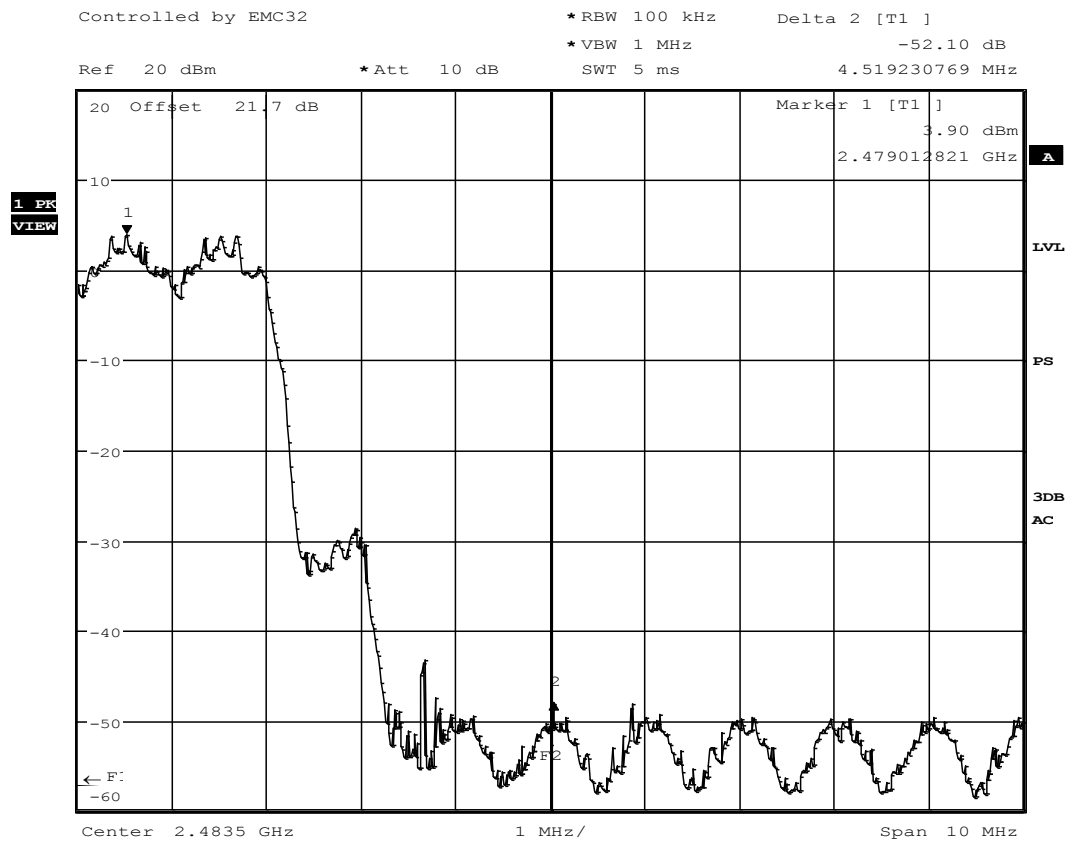
Date: 10.JUL.2013 10:16:22

Band-Edge low (hopping mode) at DH5 packets



Date: 10.JUL.2013 10:12:40

Band-Edge low (hopping mode) at 2DH5 packets



Date: 10.JUL.2013 10:09:47

Band-Edge low (hopping mode) at 3DH5 packets

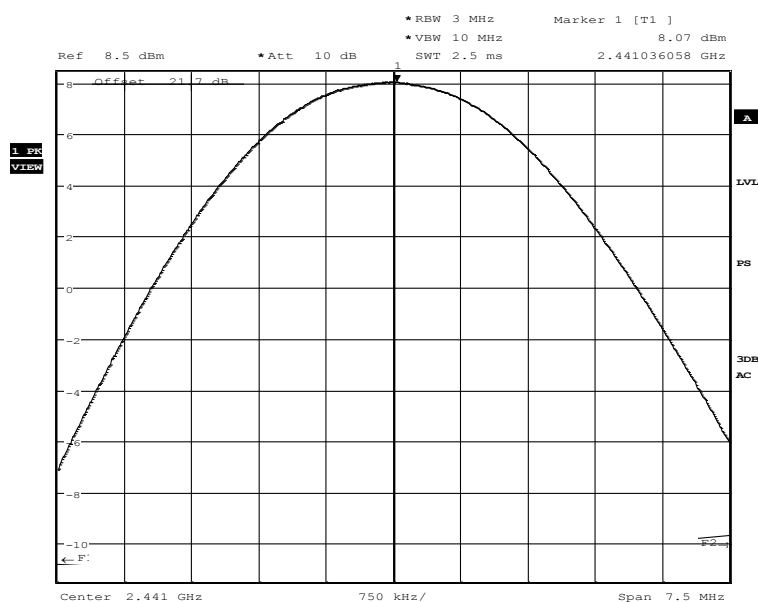
1.7. Maximum peak conducted power

Following table show measured values for the maximum peak conducted power for different modulation types and channels.

Modulation type/packet	Nominal Ch 0 =2402 MHz	Nominal Ch 39 =2441 MHz	Nominal Ch 78 =2480 MHz	Max. value	absolute Max Value		
DH1	7,74	8,07	7,84	8,07	8,07		
DH3	7,72	8,03	7,82				
DH5	7,70	8,02	7,83				
2DH1	5,38	5,69	5,26	5,75		8,07	
2DH3	5,39	5,75	5,28				
2DH5	5,41	5,75	5,54				
3DH1	5,66	5,88	5,58	5,93			8,07
3DH3	5,62	5,93	5,53				
3DH5	5,54	5,87	5,45				

Maximum value: 8.07 dBm (6.41mW)

Below also extract of diagrams showing the maximum values for different modulation/packet types:



Date: 9.JUL.2013 16:27:45

DH1 Packet type, Channel 39



Ref 8 dBm *Att 10 dB *RBW 3 MHz *VBW 10 MHz Marker 1 [T1] 5.93 dBm
SWT 2.5 ms 2.440927885 GHz

8 Offset 21.7 dB

1 PK
VIEW

1

10

8

6

4

2

0

-2

-4

-6

-8

-10

-12

← F1

→ F2

Center 2.441 GHz 750 kHz/ Span 7.5 MHz

3DH5 Packet type, Channel 78

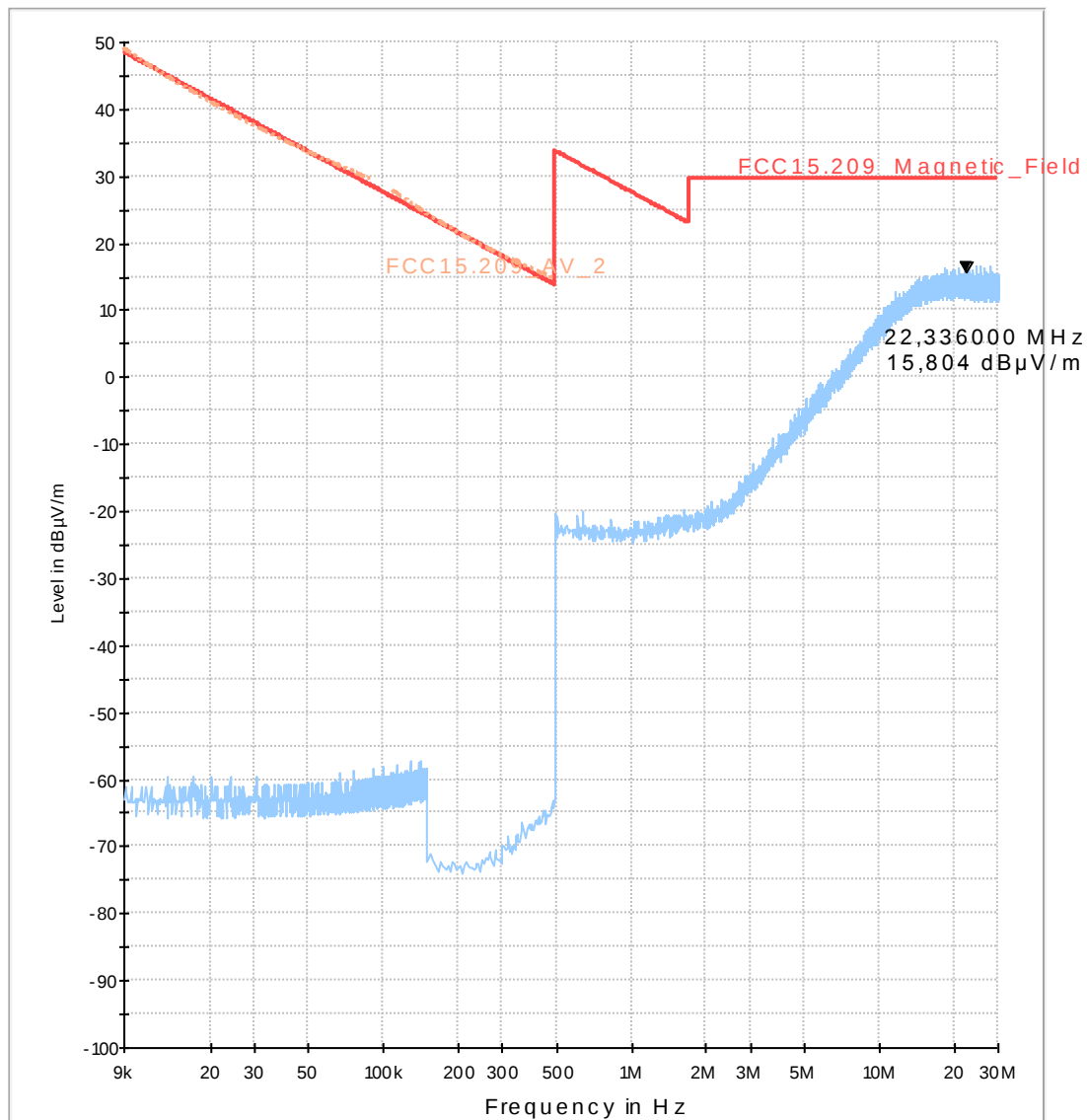
1.8. Radiated field strength (15.209/RSS-Gen.)

1.8.1. Radiated magnetic field strength measurements ($f < 30\text{MHz}$)

Diagram No. 2.01_Ch0_DH5

Date:	10.07.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 V8.51.0	
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 3	
Operator:	Mwe	
Operating conditions:	Channel 0, DH5	
Power during tests:	120V/60Hz	
Comment 1:	tested with AC/DC charger	

FCC15.209_magn hor+vert



EMI Auto Test Template: FCC15.209_magn hor+vert

Hardware Setup: HW25_FCC15109_ESCS_MgFeld_ohne_SAR_MATRIX
 Measurement Type: Open-Area-Test-Site
 Frequency Range: 9 kHz - 30 MHz
 Graphics Level Range: -100 dBµV/m - 50 dBµV/m

Preview Measurements:
 Antenna height: 1000 - 1000 cm , Step Size = 0 cm , Positioning Speed = 1
 Polarization: H + V
 Turntable position: 35 - 305 deg , Step Size = 90 deg , Positioning Speed = 8
 Scan Test Template: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209_Magnetic_Field
 Limit Line #2: FCC15.209_AV_2
 Peak Search: 20 dB , Maximum Results: 10
 Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -10 dB
 Maximum Number of Results: 10
 After Data Reduction: Interactive data reduction

Adjustment:
 Antenna height: Adjustment with full Range , Measuring Speed = 1
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Template for Single Meas.: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: 02_FCC_MG_FELD_QP_final_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	QPK	200 Hz	1 s	0 dB
150 kHz - 30 MHz	5 kHz	QPK	10 kHz	1 s	0 dB

Receiver: [ESS]

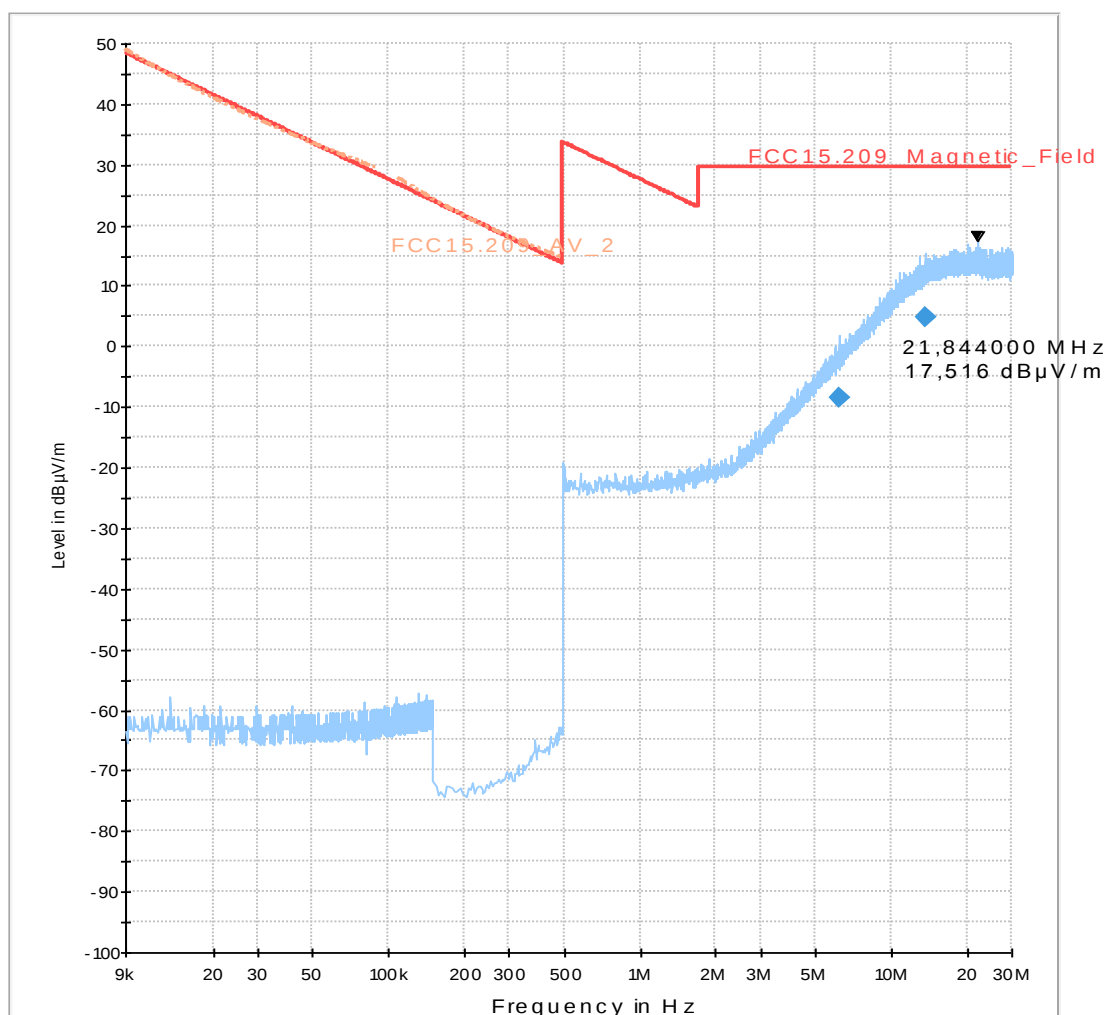
Report Settings:
 Report Template: FCC15_209_magn_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Preview Measurements: Before
 Notify: "Achtung: es gibt Frequenzbereich mit AVERAGE detector als Ergebniss..."
 Data Reduction: Before
 Notify: Sound (WAV file) 'tada.wav'
 Frequency Zoom 1: Before
 Notify: "EUT funktioniert noch ?"
 Final Measurements: After
 Notify: Sound (WAV file) 'tada.wav'

Diagram No. 2.02_Ch39_2DH5

Date: 10.07.2013 Page 1 of 3
 Test description: Magnetic Fieldstrength 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 V8.51.0
 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 3
 Operator: Mwe
 Operating conditions: Channel 39, 2DH5
 Power during tests: 120V/60Hz
 Comment 1: tested with AC/DC charger

FCC15.209_magn hor+vert



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
6.208000	-8.4	1000.0	10.000	H	91.0	-13.5	38.00	29.50
13.504000	4.9	1000.0	10.000	H	68.0	0.4	24.70	29.50

EMI Auto Test Template: FCC15.209_magn hor+vert

Hardware Setup: HW25_FCC15109_ESCS_MgFeld_ohne_SAR_MATRIX
 Measurement Type: Open-Area-Test-Site
 Frequency Range: 9 kHz - 30 MHz
 Graphics Level Range: -100 dBµV/m - 50 dBµV/m

Preview Measurements:
 Antenna height: 1000 - 1000 cm , Step Size = 0 cm , Positioning Speed = 1
 Polarization: H + V
 Turntable position: 35 - 305 deg , Step Size = 90 deg , Positioning Speed = 8
 Scan Test Template: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209_Magnetic_Field
 Limit Line #2: FCC15.209_AV_2
 Peak Search: 20 dB , Maximum Results: 10
 Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -10 dB
 Maximum Number of Results: 10
 After Data Reduction: Interactive data reduction

Adjustment:
 Antenna height: Adjustment with full Range , Measuring Speed = 1
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Template for Single Meas.: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: 02_FCC_MG_FELD_QP_final_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	QPK	200 Hz	1 s	0 dB
150 kHz - 30 MHz	5 kHz	QPK	10 kHz	1 s	0 dB

Receiver: [ESS]

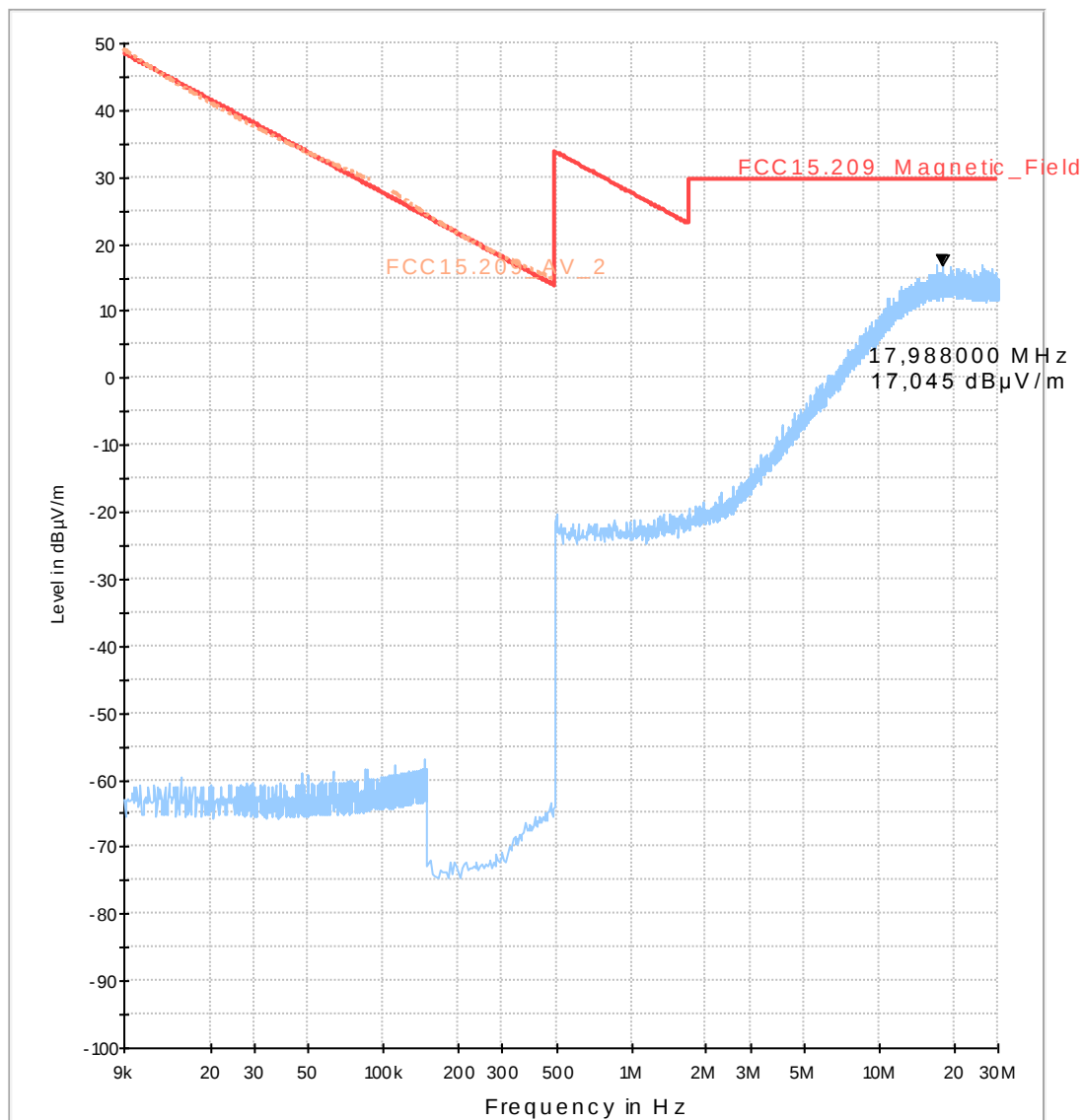
Report Settings:
 Report Template: FCC15_209_magn_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Preview Measurements: Before
 Notify: "Achtung: es gibt Frequenzbereich mit AVERAGE detector als Ergebniss..."
 Data Reduction: Before
 Notify: Sound (WAV file) 'tada.wav'
 Frequency Zoom 1: Before
 Notify: "EUT funktioniert noch ?"
 Final Measurements: After
 Notify: Sound (WAV file) 'tada.wav'

Diagram No. 2.03_Ch78_3DH5

Date:	10.07.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 V8.51.0	
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 3	
Operator:	Mwe	
Operating conditions:	Channel 78, 3DH5	
Power during tests:	120V/60Hz	
Comment 1:	tested with AC/DC charger	

FCC15.209_magn hor+vert



EMI Auto Test Template: FCC15.209_magn hor+vert

Hardware Setup: HW25_FCC15109_ESCS_MgFeld_ohne_SAR_MATRIX
 Measurement Type: Open-Area-Test-Site
 Frequency Range: 9 kHz - 30 MHz
 Graphics Level Range: -100 dBµV/m - 50 dBµV/m

Preview Measurements:
 Antenna height: 1000 - 1000 cm , Step Size = 0 cm , Positioning Speed = 1
 Polarization: H + V
 Turntable position: 35 - 305 deg , Step Size = 90 deg , Positioning Speed = 8
 Scan Test Template: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209_Magnetic_Field
 Limit Line #2: FCC15.209_AV_2
 Peak Search: 20 dB , Maximum Results: 10
 Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -10 dB
 Maximum Number of Results: 10
 After Data Reduction: Interactive data reduction

Adjustment:
 Antenna height: Adjustment with full Range , Measuring Speed = 1
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Template for Single Meas.: 01_FCC_MG_FELD_PK_FAST_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0,01 s	0 dB
150 kHz - 500 kHz	4 kHz	PK+	10 kHz	0,01 s	0 dB
500 kHz - 30 MHz	4 kHz	PK+	10 kHz	0,01 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: 02_FCC_MG_FELD_QP_final_H&V_EUT

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	QPK	200 Hz	1 s	0 dB
150 kHz - 30 MHz	5 kHz	QPK	10 kHz	1 s	0 dB

Receiver: [ESS]

Report Settings:
 Report Template: FCC15_209_magn_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Preview Measurements: Before
 Notify: "Achtung: es gibt Frequenzbereich mit AVERAGE detector als Ergebniss..."
 Data Reduction: Before
 Notify: Sound (WAV file) 'tada.wav'
 Frequency Zoom 1: Before
 Notify: "EUT funktioniert noch ?"
 Final Measurements: After
 Notify: Sound (WAV file) 'tada.wav'

1.8.1.1. Radiated field strength (30MHz < f < 1GHz)

Diagram No. 3.01_Ch0_DH5

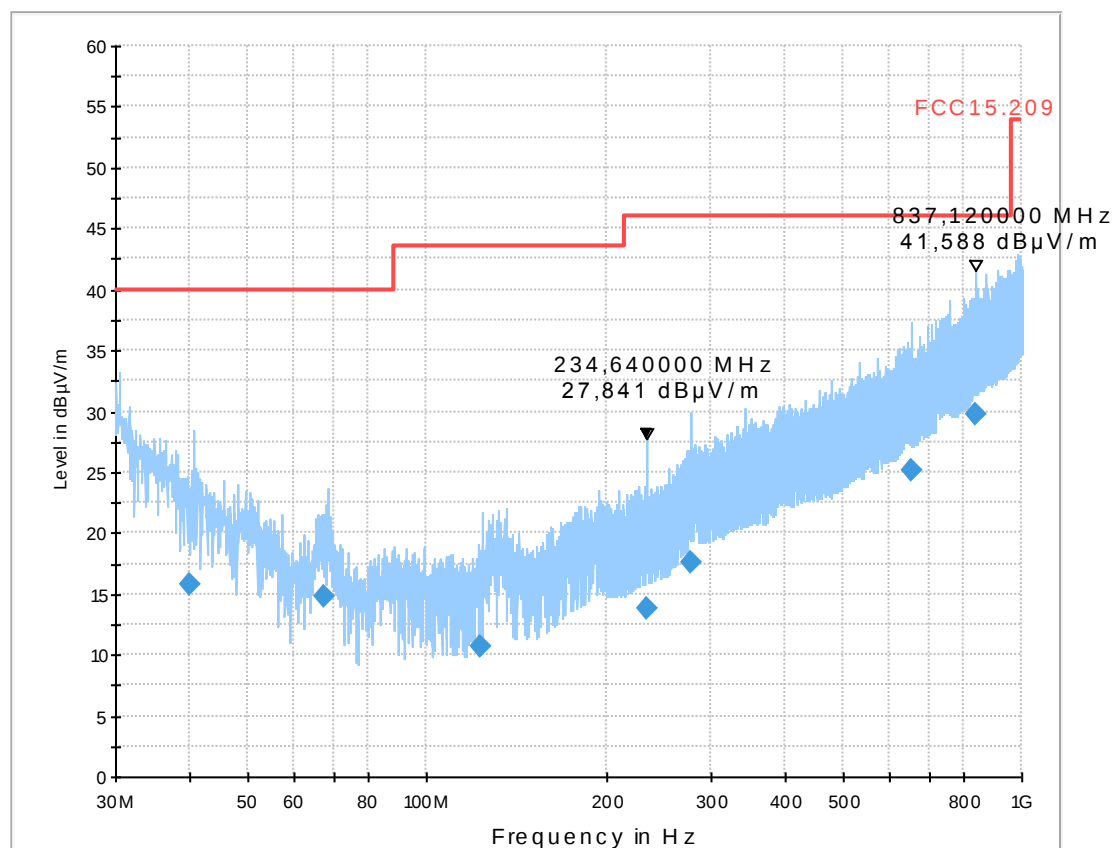
Test description:	10.07.2013 Page 1 of 3
Test site and distance:	Electric Fieldstrength Measurement
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V8.51.0
Used filter:	not used
Technical Data:	not used
Test specification.:	please see page 2 for detailed data of measurement setup
	FCC 15.209; RSS-Gen: Issue 3
Operator:	MWe
Operating conditions:	Channel 0, DH5
Power during tests:	120V 60Hz
Comment 1:	tested with AC/DC charger

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	Wired Headset, DC power
Power Supply:	5V DC over AC/DC adapter EP850, USB cable Ahab-M
Comments:	-

01_FCC15.209_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Marginal (dB)
39.950000	15.7	1000.0	120.000	143.0	H	0.0	90.0	17.5	24.30
67.390000	14.9	1000.0	120.000	149.0	V	178.0	90.0	8.2	25.10
123.370000	10.7	1000.0	120.000	142.0	H	76.0	0.0	8.2	32.80
234.580000	13.8	1000.0	120.000	225.0	H	157.0	0.0	13.0	32.20
277.210000	17.6	1000.0	120.000	233.0	H	13.0	0.0	14.9	28.40
653.930000	25.2	1000.0	120.000	330.0	V	319.0	0.0	23.2	20.80
836.330000	29.7	1000.0	120.000	225.0	V	43.0	0.0	26.2	16.30

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Limit (dBμV/m)
39.950000	40.00
67.390000	40.00
123.370000	43.50
234.580000	46.00
277.210000	46.00
653.930000	46.00
836.330000	46.00

EMI Auto Test Template: 01_FCC15.209_hor+vert_kipp

Hardware Setup: HW11_FCC_ESCS30_TP1200_EUTkipp
 Measurement Type: E(I)RP
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Positioning Speed = 8
 Elevation: 0 - 90 deg , Step Size = 90 deg , Positioning Speed = 5
 Polarization: H + V
 Scan Test Template: EMI Scan 01_fast_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	40 kHz	PK+	120 kHz	0,00005 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	10 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Adjustment:
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Elevation: Adjustment with full Range , Measuring Speed = 5
 Template for Single Meas.: EMI Scan 02_20ms_FCC_15_209B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	QPK	120 kHz	1 s	0 dB

Receiver: [ESS]

Report Settings:

Report Template: FCC15_209_vert_hor-30MHz-1GHz
Create Electronic Report: RTF PDF
Document Name: EMI Report

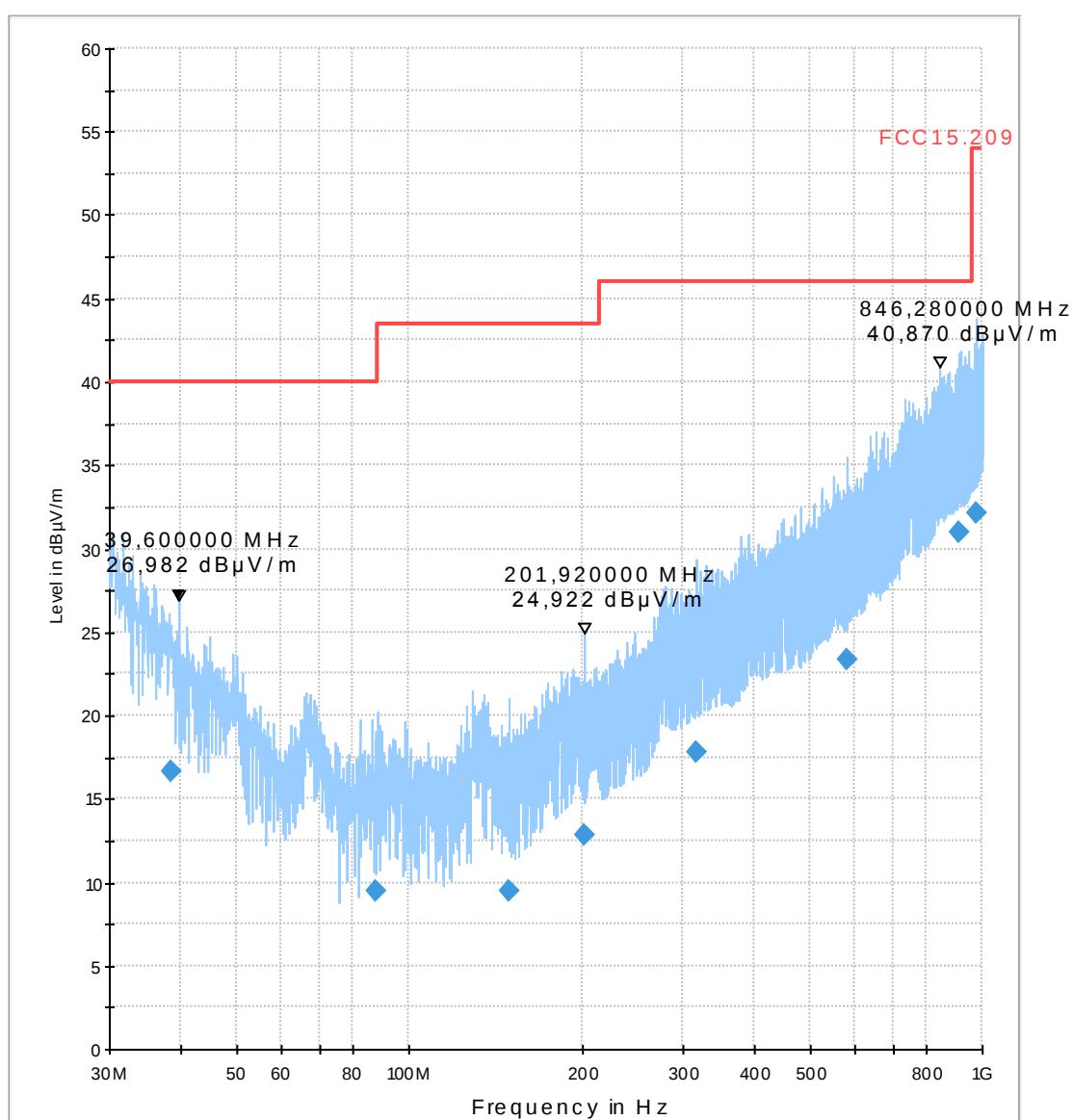
Actions:

Test start
 Notify: "EUT auf ersten/zweiten/dritten Sendekanal stellen !!!"
 Notify: "bitte beachten: es gibt Frequenzbereiche von strenger Grenzwert gil..."
Data Reduction: Before
 Notify: Sound (WAV file) 'tada.wav'
Frequency Zoom 2: Before
 Notify: "EUT sendet noch ?"
Final Measurements: After
 Notify: Sound (WAV file) 'tada.wav'

Diagram No. 3.02_Ch39_2DH5

Test description:	10.07.2013 Page 1 of 3
Test site and distance:	Electric Fieldstrength Measurement
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V8.51.0
Used filter:	not used
Technical Data:	not used
Test specification.:	please see page 2 for detailed data of measurement setup
	FCC 15.209; RSS-Gen: Issue 3
Operator:	MWe
Operating conditions:	Channel 39, 2DH5
Power during tests:	120V 60Hz
Comment 1:	tested with AC/DC charger

01_FCC15.209_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)
38.440000	16.7	1000.0	120.000	167.0	H	143.0	0.0	18.2	23.30
87.790000	9.5	1000.0	120.000	105.0	V	229.0	90.0	8.5	30.50
149.370000	9.5	1000.0	120.000	176.0	V	235.0	0.0	8.8	34.00
202.320000	12.8	1000.0	120.000	214.0	H	154.0	90.0	11.8	30.70
317.010000	17.8	1000.0	120.000	342.0	H	134.0	0.0	15.7	28.20
579.790000	23.3	1000.0	120.000	368.0	H	115.0	0.0	22.1	22.70
914.450000	31.0	1000.0	120.000	126.0	V	336.0	0.0	27.3	15.00
979.950000	32.2	1000.0	120.000	149.0	V	86.0	0.0	27.7	21.80

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Limit (dBμV/m)
38.440000	40.00
87.790000	40.00
149.370000	43.50
202.320000	43.50
317.010000	46.00
579.790000	46.00
914.450000	46.00
979.950000	54.00

EMI Auto Test Template: 01_FCC15.209_hor+vert_kipp

Hardware Setup: HW11_FCC_ESCS30_TP1200_EUTkipp
 Measurement Type: E(l)RP
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Positioning Speed = 8
 Elevation: 0 - 90 deg , Step Size = 90 deg , Positioning Speed = 5
 Polarization: H + V
 Scan Test Template: EMI Scan 01_fast_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	40 kHz	PK+	120 kHz	0,00005 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	10 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Adjustment:
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Elevation: Adjustment with full Range , Measuring Speed = 5
 Template for Single Meas.: EMI Scan 02_20ms_FCC_15_209B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	QPK	120 kHz	1 s	0 dB

Receiver:	[ESS]
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Report Settings:

Report Template:	FCC15_209_vert_hor-30MHz-1GHz
Create Electronic Report:	RTF PDF
Document Name:	EMI Report

Actions:

Test start	
Notify:	"EUT auf ersten/zweiten/dritten Sendekanal stellen !!!"
Notify:	"bitte beachten: es gibt Frequenzbereiche von strenger Grenzwert gil..."
Data Reduction: Before	
Notify:	Sound (WAV file) 'tada.wav'
Frequency Zoom 2: Before	
Notify:	"EUT sendet noch ?"
Final Measurements: After	
Notify:	Sound (WAV file) 'tada.wav'

Diagram No. 3.03_Ch78_3DH5

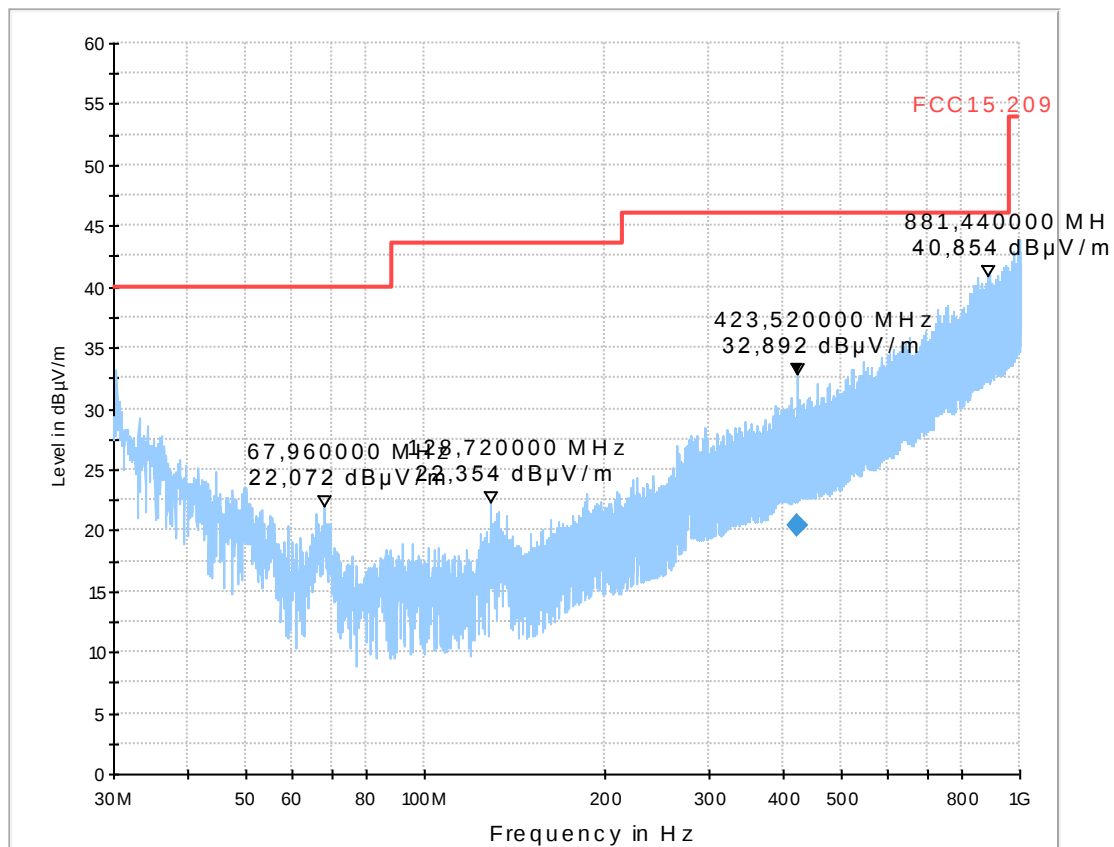
10.07.2013	Page 1 of 3
Test description:	Electric Fieldstrength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V8.51.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	MWe
Operating conditions:	Channel 78, 3DH5
Power during tests:	120V 60Hz
Comment 1:	tested with AC/DC charger

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

01_FCC15.209_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Marginal (dB)
422.740000	20.4	1000.0	120.000	209.0	V	289.0	90.0	19.0	25.60

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Limit (dBμV/m)
422.740000	46.00

EMI Auto Test Template: 01_FCC15.209_hor+vert_kipp

Hardware Setup: HW11_FCC_ESCS30_TP1200_EUTkipp
 Measurement Type: E(l)RP
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Positioning Speed = 8
 Elevation: 0 - 90 deg , Step Size = 90 deg , Positioning Speed = 5
 Polarization: H + V
 Scan Test Template: EMI Scan 01_fast_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	40 kHz	PK+	120 kHz	0,00005 s	0 dB

Receiver: [ESS]

Data Reduction:
 Limit Line #1: FCC15.209
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	10 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Adjustment:
 Turntable position: Adjustment with full Range , Measuring Speed = 3
 Elevation: Adjustment with full Range , Measuring Speed = 5
 Template for Single Meas.: EMI Scan 02_20ms_FCC_15_209B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	PK+	120 kHz	0,02 s	0 dB

Receiver: [ESS]

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC_15_209 B

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	100 kHz	QPK	120 kHz	1 s	0 dB

Receiver: [ESS]

Report Settings:
 Report Template: FCC15_209_vert_hor-30MHz-1GHz
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test start
 Notify: "EUT auf ersten/zweiten/dritten Sendekanal stellen !!!"
 Notify: "bitte beachten: es gibt Frequenzbereiche von strenger Grenzwert gil..."

Data Reduction: Before	
Notify:	Sound (WAV file) 'tada.wav'
Frequency Zoom 2: Before	
Notify:	"EUT sendet noch ?"
Final Measurements: After	
Notify:	Sound (WAV file) 'tada.wav'

1.8.2. Radiated field strength (1GHz < f < 18GHz)

Diagram No.: 4.01

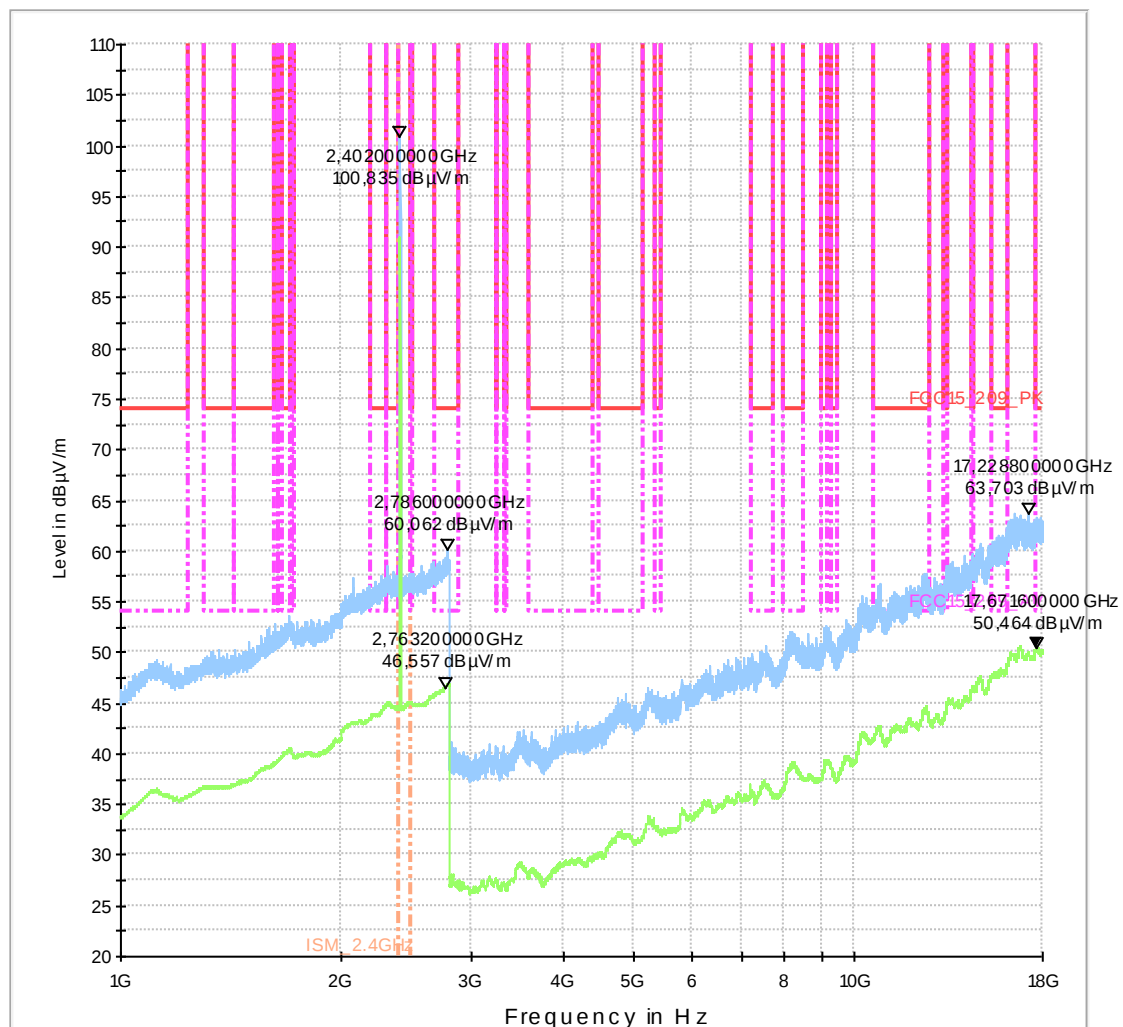
Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. low (=0)
Op. Mode:	BT DH1 packet type

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset
HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_SM1_KP1_BT_1.5ms



EMI Auto Test Template: 00431_SM1_KP1_BT_1.5ms

Hardware Setup: 00431_FCC_Part15_Unintentional_Radiator_1G-22G_dBuV_ESU
 Measurement Type: E(I)RP
 Frequency Range: 1 GHz - 18 GHz
 Graphics Level Range: 20 dB μ V/m - 110 dB μ V/m

Preview Measurements:
 Scan Test Template: Sweep_1_18GHz_Pre

Data Reduction:
 Limit Line #1: FCC15_209_PK
 Limit Line #2: FCC15_209_AV
 Limit Line #3: ISM_2.4GHz
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: Sweep_1_18GHz_Zoom

Adjustment:
 Template for Single Meas.: Sweep_1_18GHz_Zoom

Final Measurements:
 Template for Single Meas.: Sweep_1_18GHz_final
 Template for Single Meas.:(>1GHz) Sweep_1_18GHz_final

Report Settings:
 Report Template: Report Setup FCC 15_247
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test start
 Notify: "stelle passenden Kanal ein !"
 Frequency Zoom 2: Before
 Notify: "EUT sendet noch ?"

Diagram No.: 4.02

Common Information

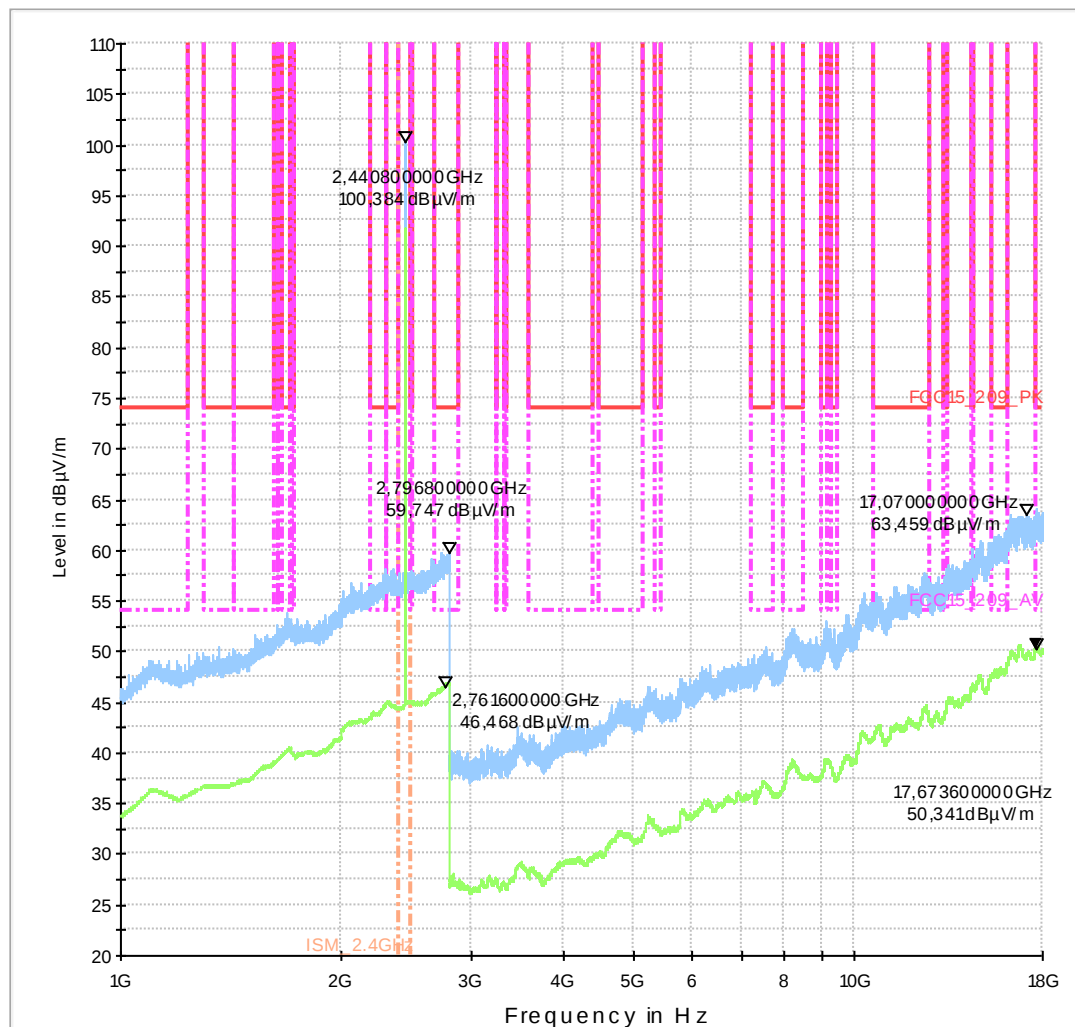
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. middle (=39)
Op. Mode:	BT DH1 packet type

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_SM1_KP1_BT_1.5ms



EMI Auto Test Template: 00431_SM1_KP1_BT_1.5ms

Hardware Setup: 00431_FCC_Part15_Unintentional_Radiator_1G-22G_dBuV_ESU
Measurement Type: E(I)RP
Frequency Range: 1 GHz - 18 GHz
Graphics Level Range: 20 dB μ V/m - 110 dB μ V/m

Preview Measurements:
Scan Test Template: Sweep_1_18GHz_Pre

Data Reduction:
Limit Line #1: FCC15_209_PK
Limit Line #2: FCC15_209_AV
Limit Line #3: ISM_2.4GHz
Peak Search: 6 dB , Maximum Results: 10
Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
Maximum Number of Results: 20
After Data Reduction: Interactive data reduction

Frequency Zoom:
Zoom Scan Template: Sweep_1_18GHz_Zoom

Adjustment:
Template for Single Meas.: Sweep_1_18GHz_Zoom

Final Measurements:
Template for Single Meas.: Sweep_1_18GHz_final
Template for Single Meas.:(>1GHz) Sweep_1_18GHz_final

Report Settings:
Report Template: Report Setup FCC 15_247
Create Electronic Report: RTF PDF
Document Name: EMI Report

Actions:
Test start
Notify: "stelle passenden Kanal ein !"
Frequency Zoom 2: Before
Notify: "EUT sendet noch ?"

Diagram No.: 4.03

Common Information

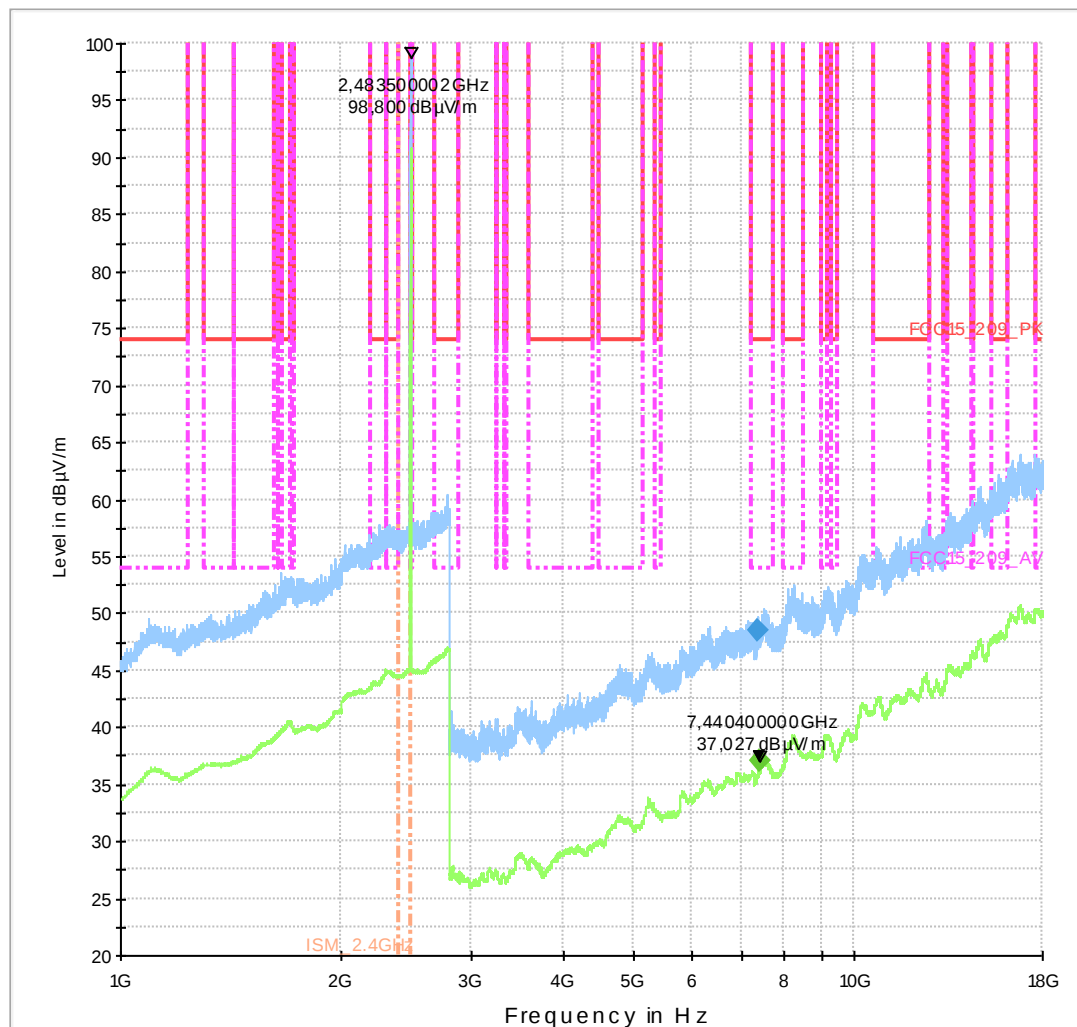
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & 15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. high (=78)
Op. Mode:	BT DH1 packet type

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_SM1_KP1_BT_1.5ms



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)
7378.900000	48.5	100.0	1000.000	155.0	V	207.0	90.0	10.7	25.5

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Limit (dBμV/m)	Comment
7378.900000	74.0	

Final Result 2

Frequency (MHz)	Average (dBμV/m)	Meas. Time	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Correction (dB)	Margin (dB)
7439.700000	37.1	100.0	1000.000	155.0	H	-23.0	90.0	11.3	16.9

(continuation of the "Final Result 2" table from column 10 ...)

Frequency (MHz)	Limit (dBμV/m)	Comment
7439.700000	54.0	

EMI Auto Test Template: 00431_SM1_KP1_BT_1.5ms

Hardware Setup: 00431_FCC_Part15_Unintentional_Radiator_1G-22G_dBuV_ESU
 Measurement Type: E(I)RP
 Frequency Range: 1 GHz - 18 GHz
 Graphics Level Range: 20 dBμV/m - 110 dBμV/m

Preview Measurements:
 Scan Test Template: Sweep_1_18GHz_Pre

Data Reduction:
 Limit Line #1: FCC15_209_PK
 Limit Line #2: FCC15_209_AV
 Limit Line #3: ISM_2.4GHz
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 10 Subranges , Maxima per Subrange: 1
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: Sweep_1_18GHz_Zoom

Adjustment:
 Template for Single Meas.: Sweep_1_18GHz_Zoom

Final Measurements:
 Template for Single Meas.: Sweep_1_18GHz_final

Template for Single Meas.:(>1GHz) Sweep_1_18GHz_final

Report Settings:
 Report Template: Report Setup FCC 15_247
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test start
 Notify: "stelle passenden Kanal ein !"
 Frequency Zoom 2: Before
 Notify: "EUT sendet noch ?"

1.8.3. Band-edge compliance radiated according FCC §15.205 (§15.209) and §15.247

1.8.3.1. Band-Edge left (DH1 Packet type)

Diagram No.: 4.04_Ch0_DH1

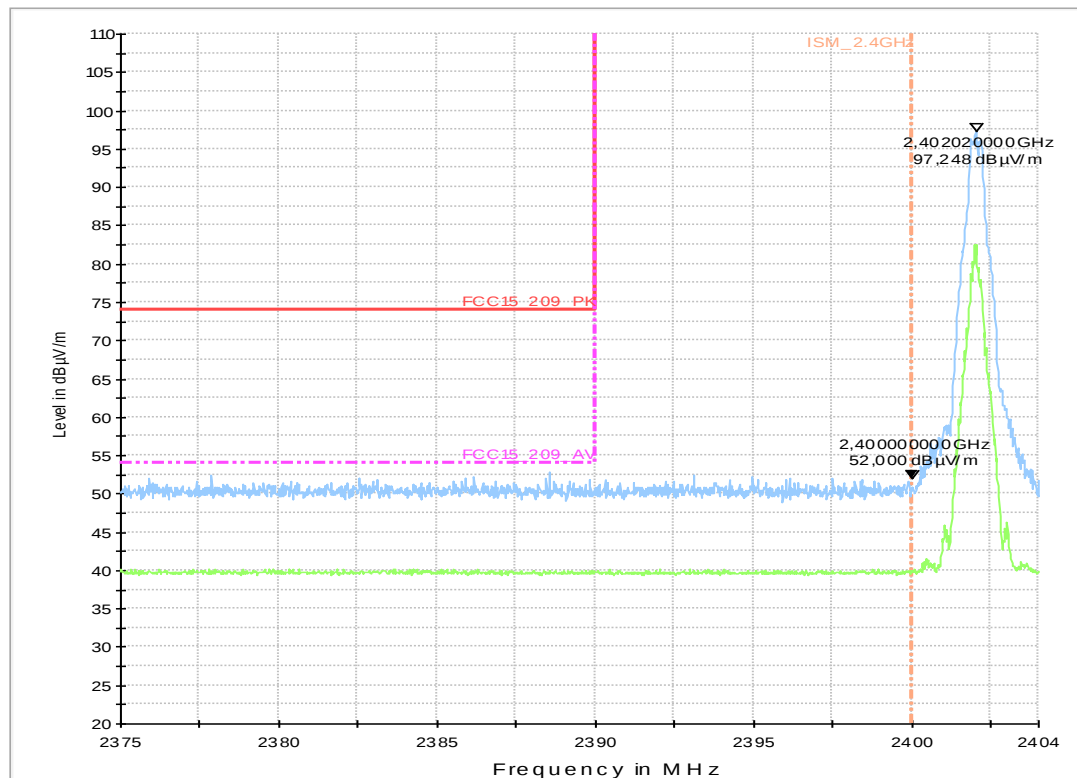
Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. low (=0), DH1 packet type
Op. Mode:	Bluetooth TX

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset
HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_BE_Low_SM1_KP1_BT_1.5ms



1.8.3.2. Band-Edge left (3DH3 Packet type)

Diagram No.: 4.05_Ch0_3DH3

Common Information

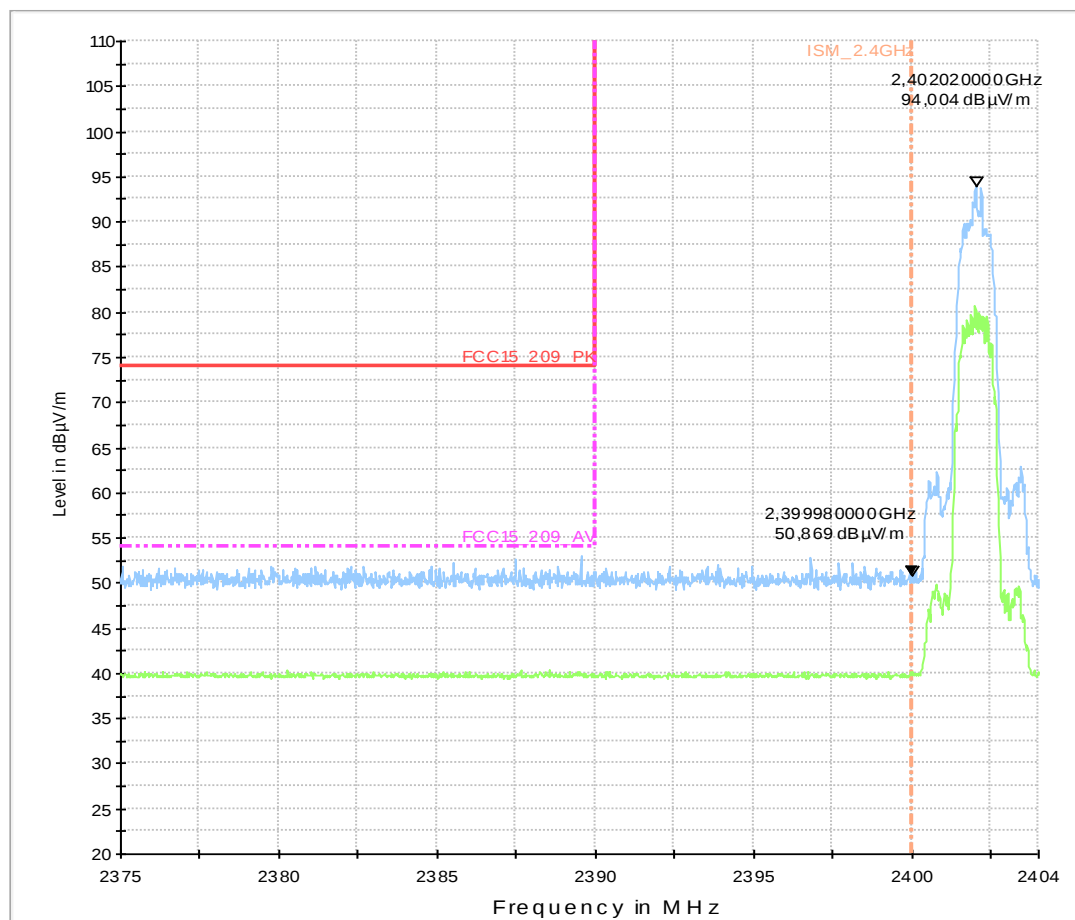
Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. low (=0), 3DH3 packet type
Op. Mode:	Bluetooth TX

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_BE_Low_SM1_KP1_BT_1.5ms



1.8.3.3. Band-Edge right (DH1 Packet type)

Diagram No.: 4.06_Ch78_DH1

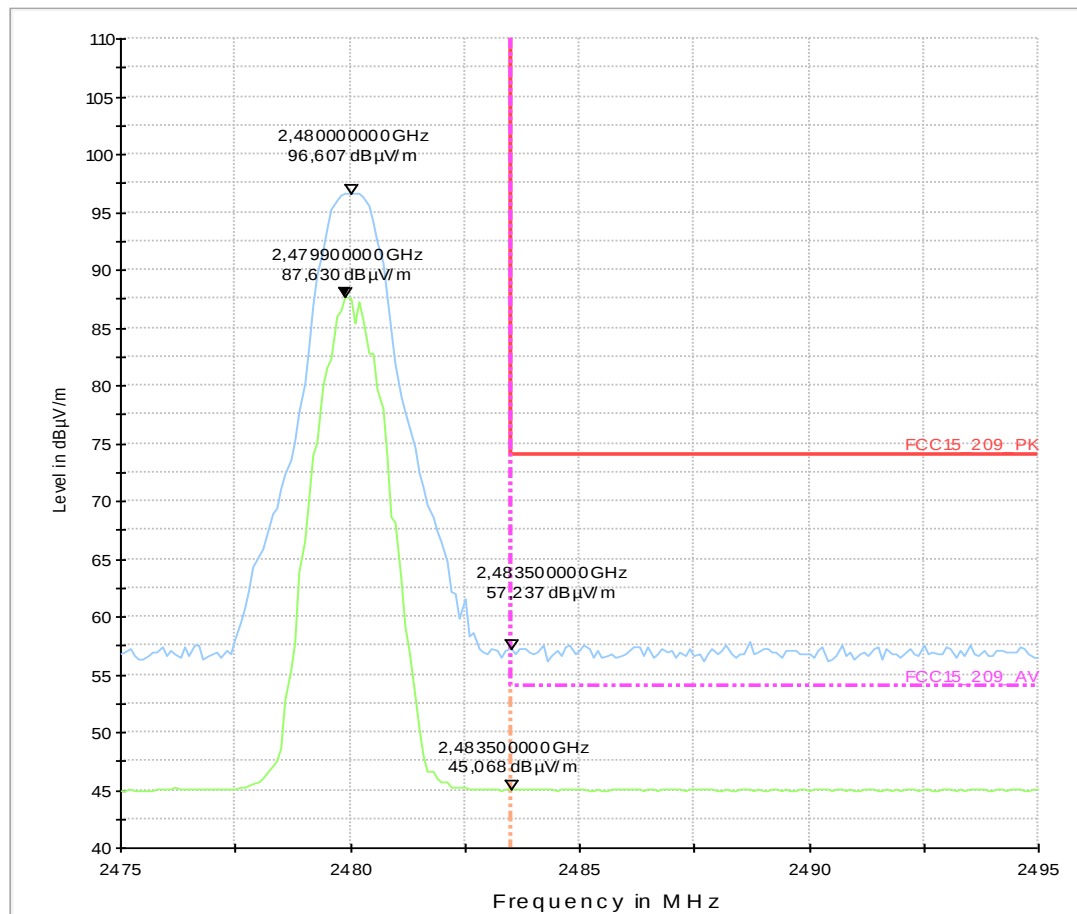
Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. high (=78)
Op. Mode:	Bluetooth TX, DH1 packet type

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset
HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_BE_High_SM1_KP1_BT_2ms



1.8.3.4. Band-Edge right (3DH3 Packet type)

Diagram No.: 4.07_Ch78_3DH3

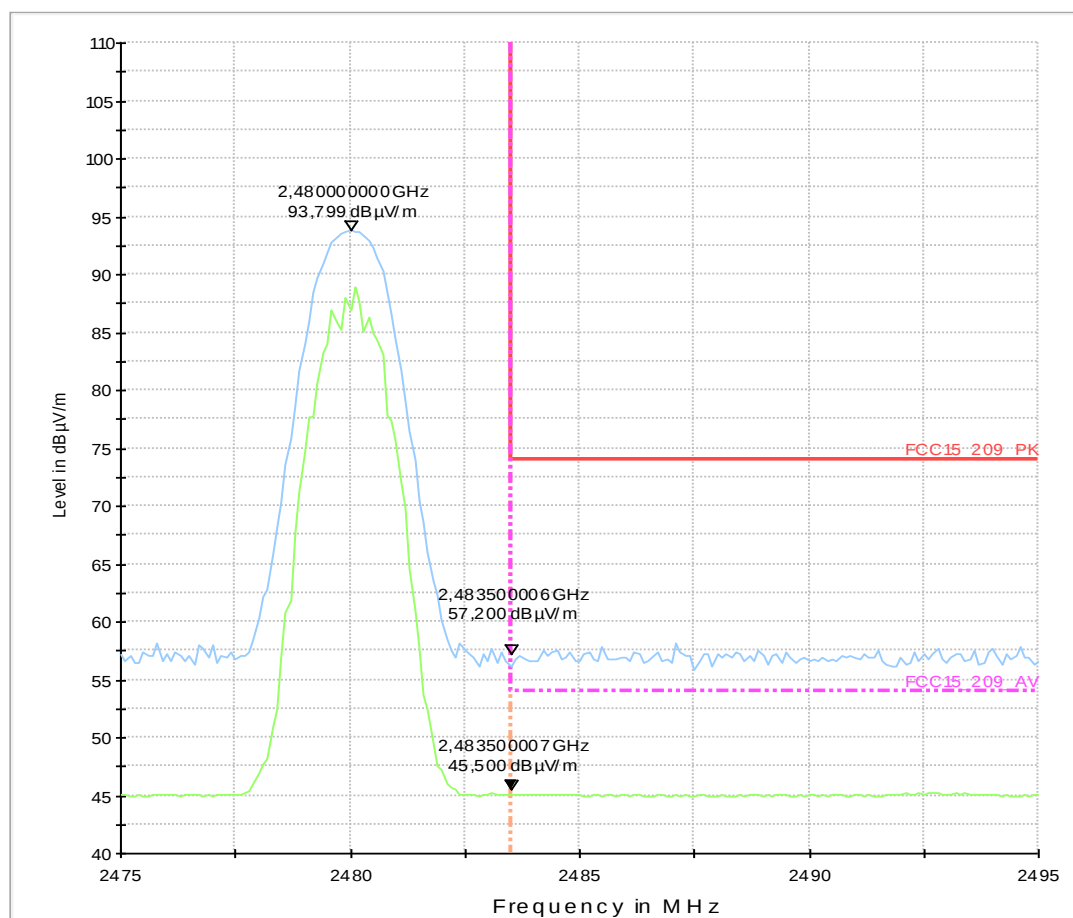
Common Information

Test Description:	Radiated field strength emission accord. §15.247 in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	§15.205 & §15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Operator Name:	Lor
Comment:	Channel no. high (=78)
Op. Mode:	Bluetooth TX, 3DH3 packet type

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset
HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	-
Power Supply:	-
Comments:	-

00431_BE_High_SM1_KP1_BT_2ms



1.9. Conducted emissions on AC-mains (§15.107, Class B and §15.207)

1.9.1. TX-Mode (§15.207)

Diagram No. 1.01_TX_Ch39_DH5

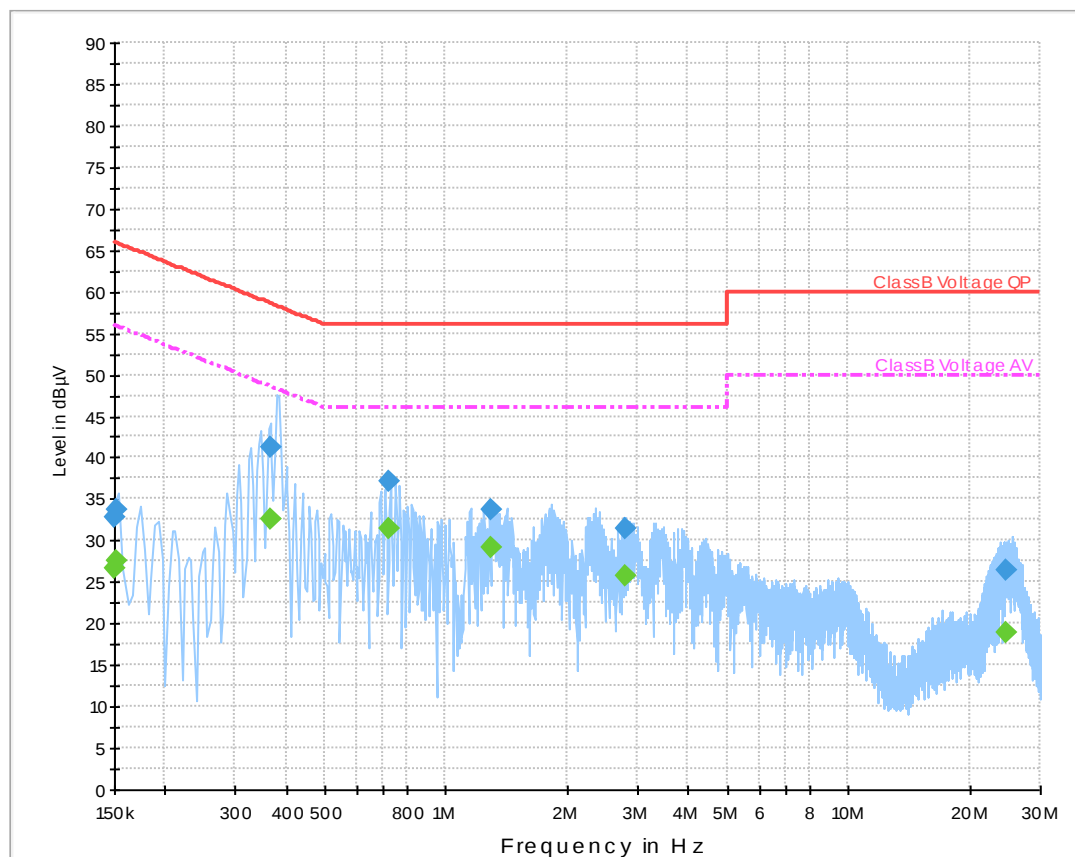
Test Description:	Date: 12.07.2013 Page 1 of 3
Version of Testsoftware:	Ref.-Nr. 348, Conducted Voltage Measurement
Testspecification:	EMC32 V8.52.0
Technical Data:	FCC 15.207
Diagram:	Please see next page for detailed information
Operator name:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Report.- Nr.	Lor
	2-20819544-13
Operating mode:	Bluetooth TX-mode, Channel 39, DH5-packet type
Measured on line:	Mains AC L1 and N
Power during test:	120 V AC 60 Hz
Comment 1:	--

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	Wired Headset, DC power
Power Supply:	5V DC over AC/DC adapter EP850, USB cable Ahab-M
Comments:	-

01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1



Date: 12.07.2013 Page 2 of 3

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.150000	32.8	1000.0	9.000	GND	L1	0.1	33.2	66.0
0.150938	33.6	1000.0	9.000	GND	L1	0.1	32.3	65.9
0.367969	41.4	1000.0	9.000	GND	L1	0.1	17.2	58.5
0.725156	37.1	1000.0	9.000	GND	L1	0.2	18.9	56.0
1.296406	33.6	1000.0	9.000	GND	L1	0.3	22.4	56.0
2.802031	31.4	1000.0	9.000	GND	L1	0.3	24.6	56.0
24.604531	26.4	1000.0	9.000	GND	L1	0.7	33.6	60.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.150000	26.7	1000.0	9.000	GND	L1	0.1	29.3	56.0
0.150938	27.6	1000.0	9.000	GND	L1	0.1	28.3	55.9
0.367969	32.7	1000.0	9.000	GND	L1	0.1	15.9	48.5
0.725156	31.4	1000.0	9.000	GND	L1	0.2	14.6	46.0
1.296406	29.2	1000.0	9.000	GND	L1	0.3	16.8	46.0
2.802031	25.7	1000.0	9.000	GND	L1	0.3	20.3	46.0
24.604531	18.8	1000.0	9.000	GND	L1	0.7	31.2	50.0

Technical Data of Measurements with R&S EMC32 V8.52.0**EMI Auto Test Template: 01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: 0 dBμV - 90 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	61.035 Hz	PK+	200 Hz	0,00005 s	0 dB
150 kHz - 30 MHz	3.906 kHz	PK+	9 kHz	0,00005 s	0 dB

Receiver: [ESCS 30]

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: 08_Class B maxZoom_PK100mS

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	5 kHz	PK+	200 Hz	0,1 s	0 dB
150 kHz - 30 MHz	5 kHz	PK+	9 kHz	0,1 s	0 dB

Receiver: [ESCS 30]

Final Measurements:
 Template for Single Meas.: 07a_FCC Class B fin AV QP 1sek

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
150 kHz - 30 MHz	4.5 kHz	QPK; CAV	9 kHz	1 s	0 dB

Receiver: [ESCS 30]

Diagram No. 1.03_TX_Ch39_3DH5

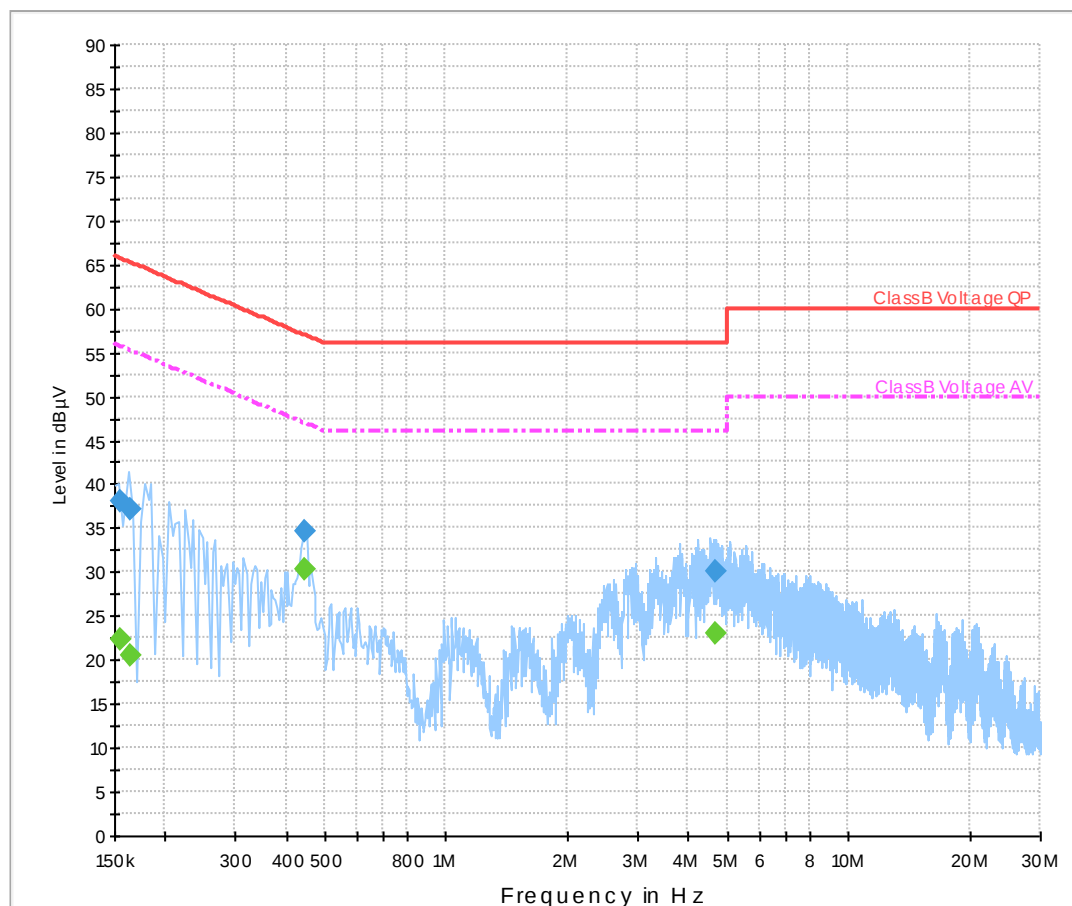
Test Description:	Date: 12.07.2013 Page 1 of 3
Version of Testsoftware:	Ref.-Nr. 348, Conducted Voltage Measurement
Testspecification:	EMC32 V8.52.0
Technical Data:	FCC 15.207
Diagram:	Please see next page for detailed information
Operator name:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Report.- Nr.	Lor 2-20819544-13
Operating mode:	Bluetooth TX-mode, Channel 39, 3DH5-packet type
Measured on line:	Mains AC L1 and N
Power during test:	110 V AC 60 Hz
Comment 1:	--

EUT Information

Manufacturer:	Sony
EuT:	RD-0060
Type:	Bluetooth headset

HW version:	SP1
SW version:	2.0.A.2.4
Serial number:	-
Connected Interfaces:	Wired Headset, DC power
Power Supply:	5V DC over AC/DC adapter EP800, USB cable EC300 (short)
Comments:	-

01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1



Date: 12.07.2013 Page 2 of 3

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.155000	38.0	1000.0	9.000	GND	L1	0.1	27.7	65.7
0.163750	37.1	1000.0	9.000	GND	L1	0.1	28.2	65.3
0.444375	34.7	1000.0	9.000	GND	L1	0.1	22.3	57.0
4.668594	30.1	1000.0	9.000	GND	L1	0.4	25.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.155000	22.4	1000.0	9.000	GND	L1	0.1	33.3	55.7
0.163750	20.6	1000.0	9.000	GND	L1	0.1	34.7	55.3
0.444375	30.3	1000.0	9.000	GND	L1	0.1	16.7	47.0
4.668594	22.9	1000.0	9.000	GND	L1	0.4	23.1	46.0

Technical Data of Measurements with R&S EMC32 V8.52.0**EMI Auto Test Template: 01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: 0 dBμV - 90 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	61.035 Hz	PK+	200 Hz	0,00005 s	0 dB
150 kHz - 30 MHz	3.906 kHz	PK+	9 kHz	0,00005 s	0 dB

Receiver: [ESCS 30]

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: 08_Class B maxZoom_PK100mS

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	5 kHz	PK+	200 Hz	0,1 s	0 dB
150 kHz - 30 MHz	5 kHz	PK+	9 kHz	0,1 s	0 dB

Receiver: [ESCS 30]

Final Measurements:
 Template for Single Meas.: 07a_FCC Class B fin AV QP 1sek

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
150 kHz - 30 MHz	4.5 kHz	QPK; CAV	9 kHz	1 s	0 dB

Receiver: [ESCS 30]

Diagram No. 1.04_TX_Ch39_DH5

Test Description:
Version of Testsoftware:
Testspecification:
Technical Data:
Diagram:
Operator name:
Report.- Nr.

Date: 12.07.2013 Page 1 of 3
Ref.-Nr. 348, Conducted Voltage Measurement
EMC32 V8.52.0
FCC 15.207
Please see next page for detailed information
Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Lor
2-20819544-13

Operating mode:
Measured on line:
Power during test:
Comment 1:

Bluetooth TX-mode, Channel 39, DH5-packet type
Mains AC L1 and N
110 V AC 60 Hz
--

EUT Information

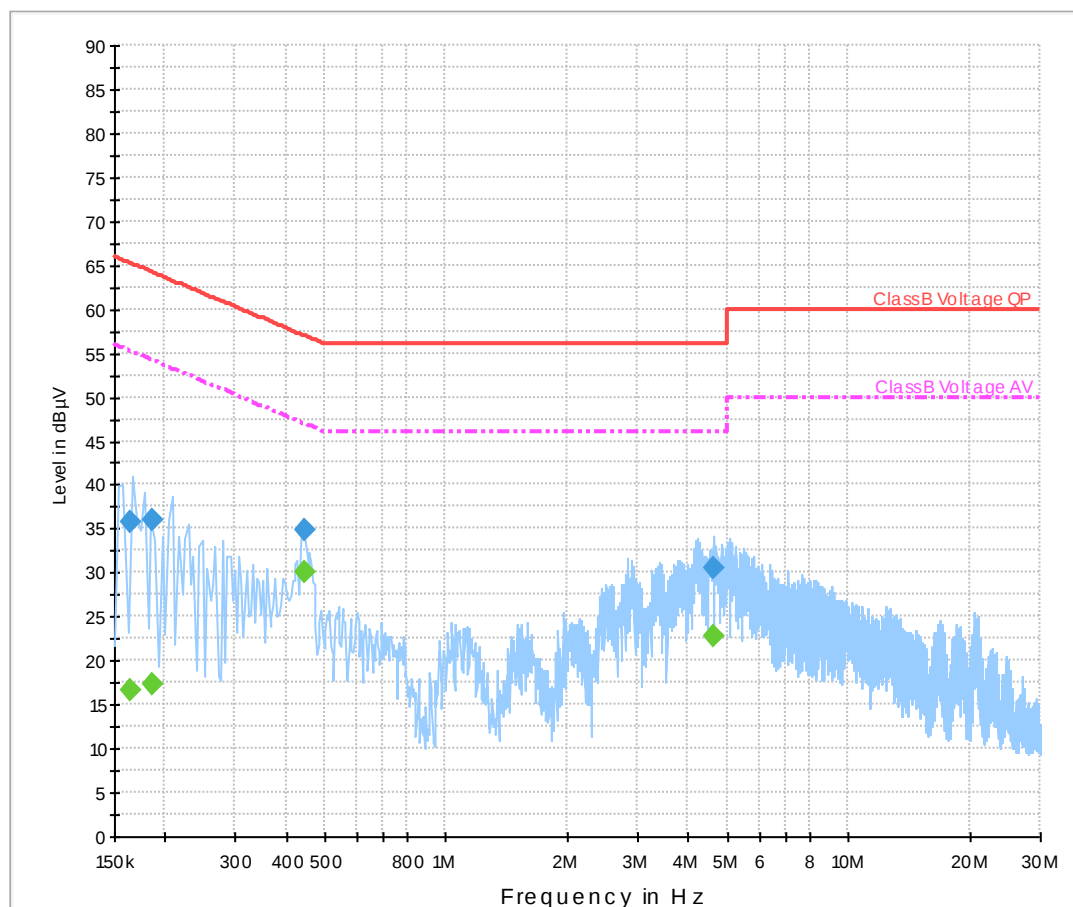
Manufacturer:
EuT:
Type:

Sony
RD-0060
Bluetooth headset

HW version:
SW version:
Serial number:
Connected Interfaces:
Power Supply:
Comments:

SP1
2.0.A.2.4
-
Wired Headset, DC power
5V DC over AC/DC adapter EP800, USB cable EC300 (short)
-

01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1



Date: 12.07.2013 Page 2 of 3

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.165000	35.8	1000.0	9.000	GND	N	0.1	29.4	65.2
0.186094	36.1	1000.0	9.000	GND	N	0.1	28.1	64.2
0.445469	34.9	1000.0	9.000	GND	L1	0.1	22.1	57.0
4.652500	30.6	1000.0	9.000	GND	L1	0.4	25.4	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.165000	16.6	1000.0	9.000	GND	N	0.1	38.6	55.2
0.186094	17.3	1000.0	9.000	GND	N	0.1	36.9	54.2
0.445469	30.1	1000.0	9.000	GND	L1	0.1	16.8	47.0
4.652500	22.8	1000.0	9.000	GND	L1	0.4	23.2	46.0

Technical Data of Measurements with R&S EMC32 V8.52.0**EMI Auto Test Template: 01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: 0 dBμV - 90 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	61.035 Hz	PK+	200 Hz	0,00005 s	0 dB
150 kHz - 30 MHz	3.906 kHz	PK+	9 kHz	0,00005 s	0 dB

Receiver: [ESCS 30]

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: 08_Class B maxZoom_PK100mS

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	5 kHz	PK+	200 Hz	0,1 s	0 dB
150 kHz - 30 MHz	5 kHz	PK+	9 kHz	0,1 s	0 dB

Receiver: [ESCS 30]

Final Measurements:
 Template for Single Meas.: 07a_FCC Class B fin AV QP 1sek

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
150 kHz - 30 MHz	4.5 kHz	QPK; CAV	9 kHz	1 s	0 dB

Receiver: [ESCS 30]

1.9.2. RX-Mode (§15.107)

Diagram No. 1.02_RX_Ch39

Test Description:
Version of Testsoftware:
Testspecification:
Technical Data:
Diagram:
Operator name:
Report.- Nr.

Date: 12.07.2013 Page 1 of 3
Ref.-Nr. 348, Conducted Voltage Measurement
EMC32 V8.52.0
FCC 15.107 classB
Please see next page for detailed information
Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Lor
2-20819544-13

Operating mode:
Measured on line:
Power during test:
Comment 1:

Bluetooth Rx attached mode
Mains AC L1 and N
120 V AC 60 Hz
--

EUT Information

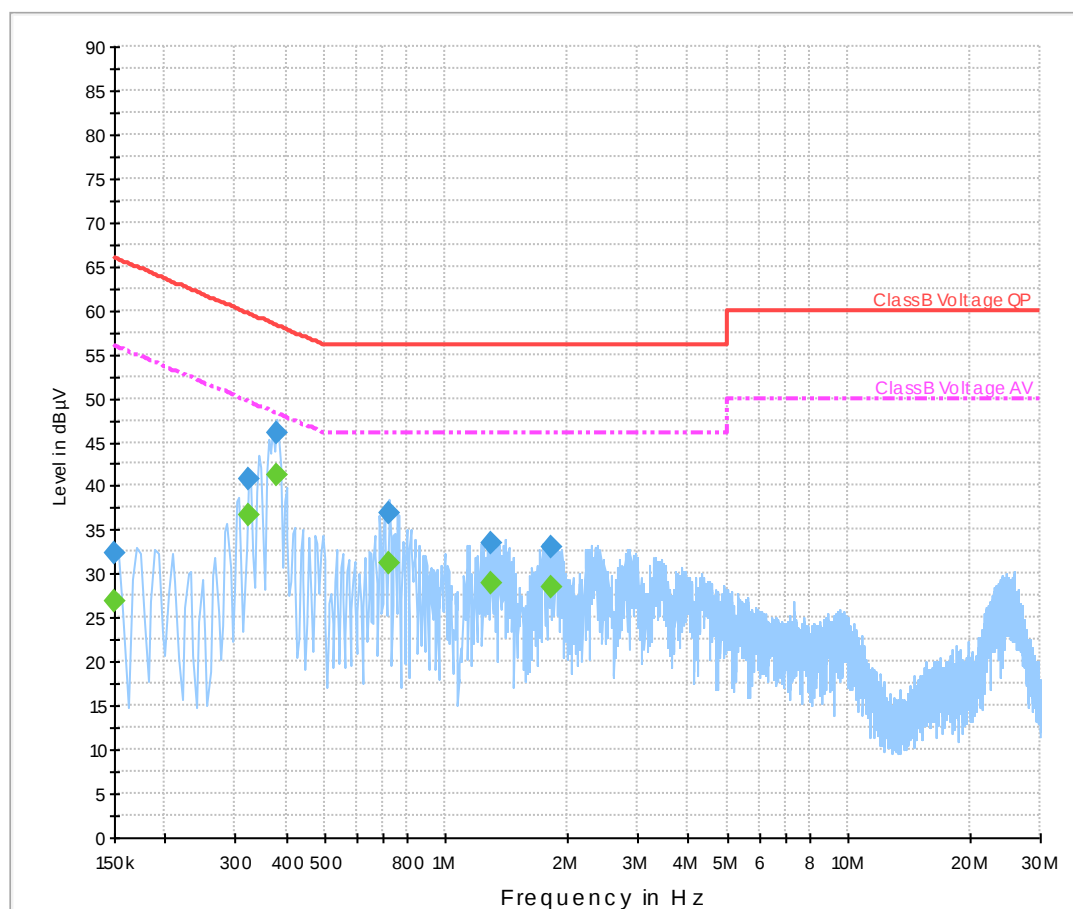
Manufacturer:
EuT:
Type:

Sony
RD-0060
Bluetooth headset

HW version:
SW version:
Serial number:
Connected Interfaces:
Power Supply:
Comments:

SP1
2.0.A.2.4
-
Wired Headset, DC power
5V DC over AC/DC adapter EP850, USB cable Ahab-M
-

01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1



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Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.150000	32.3	1000.0	9.000	GND	L1	0.1	33.7	66.0
0.323750	40.8	1000.0	9.000	GND	L1	0.1	18.8	59.6
0.377969	46.0	1000.0	9.000	GND	L1	0.1	12.3	58.3
0.721719	37.0	1000.0	9.000	GND	L1	0.2	19.0	56.0
1.293125	33.5	1000.0	9.000	GND	L1	0.3	22.5	56.0
1.827656	33.0	1000.0	9.000	GND	L1	0.3	23.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr .	Margin (dB)	Limit (dBμV)
0.150000	27.0	1000.0	9.000	GND	L1	0.1	29.0	56.0
0.323750	36.7	1000.0	9.000	GND	L1	0.1	12.9	49.6
0.377969	41.1	1000.0	9.000	GND	L1	0.1	7.2	48.3
0.721719	31.2	1000.0	9.000	GND	L1	0.2	14.8	46.0
1.293125	29.1	1000.0	9.000	GND	L1	0.3	17.0	46.0
1.827656	28.5	1000.0	9.000	GND	L1	0.3	17.5	46.0

Technical Data of Measurements with R&S EMC32 V8.52.0**EMI Auto Test Template: 01b_FCC_107_207_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: 0 dBμV - 90 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	61.035 Hz	PK+	200 Hz	0,00005 s	0 dB
150 kHz - 30 MHz	3.906 kHz	PK+	9 kHz	0,00005 s	0 dB

Receiver: [ESCS 30]

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: 08_Class B maxZoom_PK100mS

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	5 kHz	PK+	200 Hz	0,1 s	0 dB
150 kHz - 30 MHz	5 kHz	PK+	9 kHz	0,1 s	0 dB

Receiver: [ESCS 30]

Final Measurements:
 Template for Single Meas.: 07a_FCC Class B fin AV QP 1sek

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
150 kHz - 30 MHz	4.5 kHz	QPK; CAV	9 kHz	1 s	0 dB

Receiver: [ESCS 30]