Annex 1: Measurement diagrams to
T E S T R E P O R T
No.: 16-1-0068501T09a

According to:
FCC Regulations
Part15.247

IC-Regulations
RSS-Gen, Issue 4
RSS-247, Issue 1

for

Pugz Gear AB

PUGZ Bluetooth Headset PUGZ-L

FCC-ID: 2AIYL-01
IC: 21670-01

Laboratory Accreditation and Listings			
DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	MRA US-EU 0003	Industry Canada Reg. No.: 3462D-2 Reg. No.: 3462D-3	Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
AUTHORIZED RF LABORATORY	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

Table of contents

1. Conducted EMI measurements on AC-mains port according 15.207, class B

Not applicable since charged from mobile phone over its micro-usb cable. No direct connection to AC mains possible.

2. Radiated field strength measurements accord. §15.209&15.205

2.1. Magnetic field measurements f<30MHz

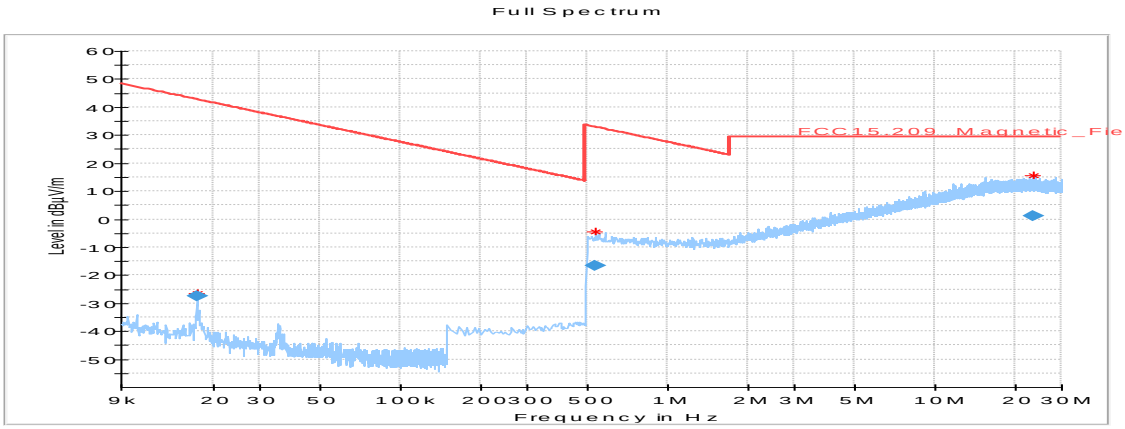
Diagram No. 2.05

Date: 22.07.2016 Page 1 of 2

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating conditions:	Humidity: 55%rH; Temperature: 20°C
Power during tests:	-
Operating mode:	TX | BR: Ch 78 DH5

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
0.017320	-27.42	42.83	70.25	1000.0	0.200	100.0	H	166.0	-58.7
0.542000	-16.49	32.93	49.42	1000.0	10.000	100.0	H	245.0	-20.0
23.486000	1.07	29.54	28.47	1000.0	10.000	100.0	H	327.0	0.9

(continuation of the "Final_Result" table from column 16 ...)

Frequency (MHz)	Comment
0.017320	09:53:03 - 22.07.2016
0.542000	10:00:10 - 22.07.2016
23.486000	10:06:33 - 22.07.2016

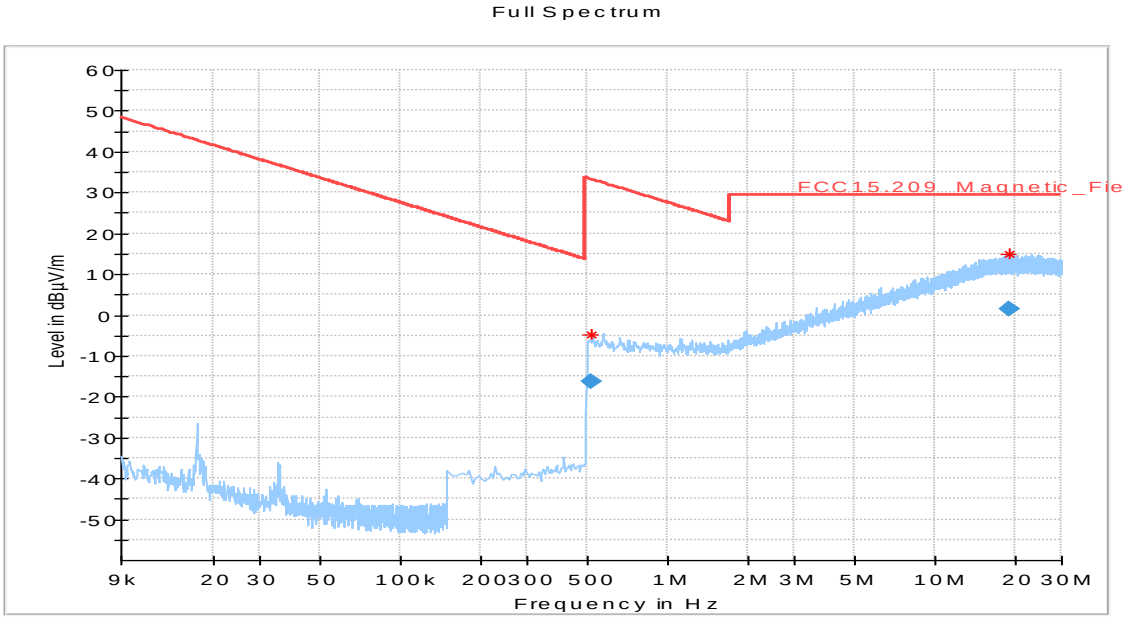
Diagram No. 2.06

Date: 22.07.2016 Page 1 of 2

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating conditions:	Humidity: 55%rH; Temperature: 20°C
Power during tests:	-
Operating mode:	TX | EDR: Ch 78 3DH5

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
0.522000	-16.26	33.25	49.51	1000.0	10.000	100.0	V	27.0	-20.0
19.246000	1.46	29.54	28.08	1000.0	10.000	100.0	V	336.0	0.7

(continuation of the "Final_Result" table from column 16 ...)

Frequency (MHz)	Comment
0.522000	11:08:01 - 22.07.2016
19.246000	11:14:43 - 22.07.2016

2.2. Field strength measurements 30MHz <f <1GHz

Diagram 3.05

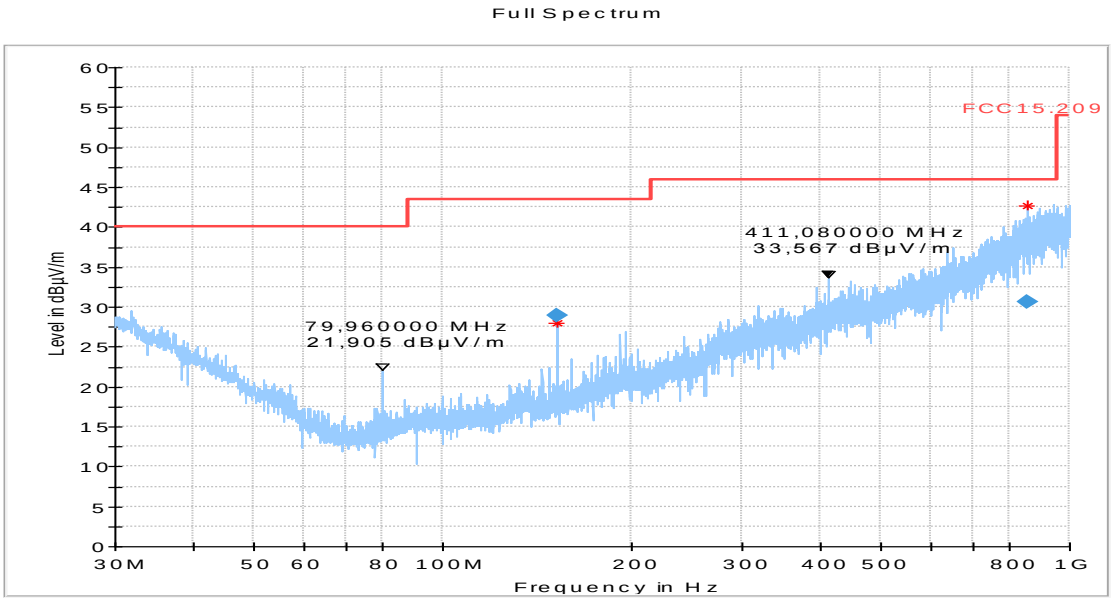
Common Information

20.07.2016 Page 1 of 7

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	TP NLP-1200
Technical Data:	Bluetooth: 2400-2483,5 MHz
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operator:	AHo
Operating conditions:	Humidity: 42%rH; Temperature: 22°C
Power during tests:	Fully charged internal batteries
Comments	Ch-78/high,Mod:DH5

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
151.990000	28.93	43.50	14.57	1000.0	120.000	196.0	H	17.0	0.0	8.7
856.300000	30.57	46.00	15.43	1000.0	120.000	134.0	V	283.0	90.0	25.7

Diagram No. 3.06

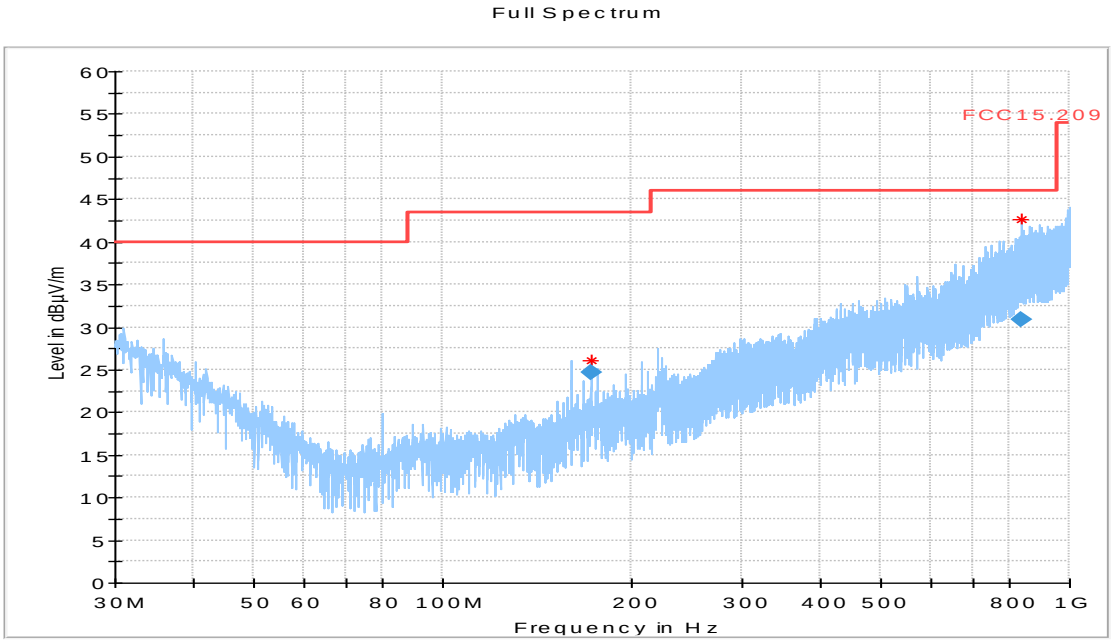
Common Information

22.07.2016 Page 1 of 2

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating conditions:	Humidity: 55%rH; Temperature: 20°C
Power during tests:	-
Operating mode:	TX | EDR Ch 78 3DH5

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
172.000000	24.68	43.50	18.82	1000.0	120.000	150.0	H	189.0	0.0	10.3
839.900000	30.86	46.00	15.14	1000.0	120.000	195.0	V	273.0	0.0	26.1

Diagram No. 3.09_TX_Ch39_DH5

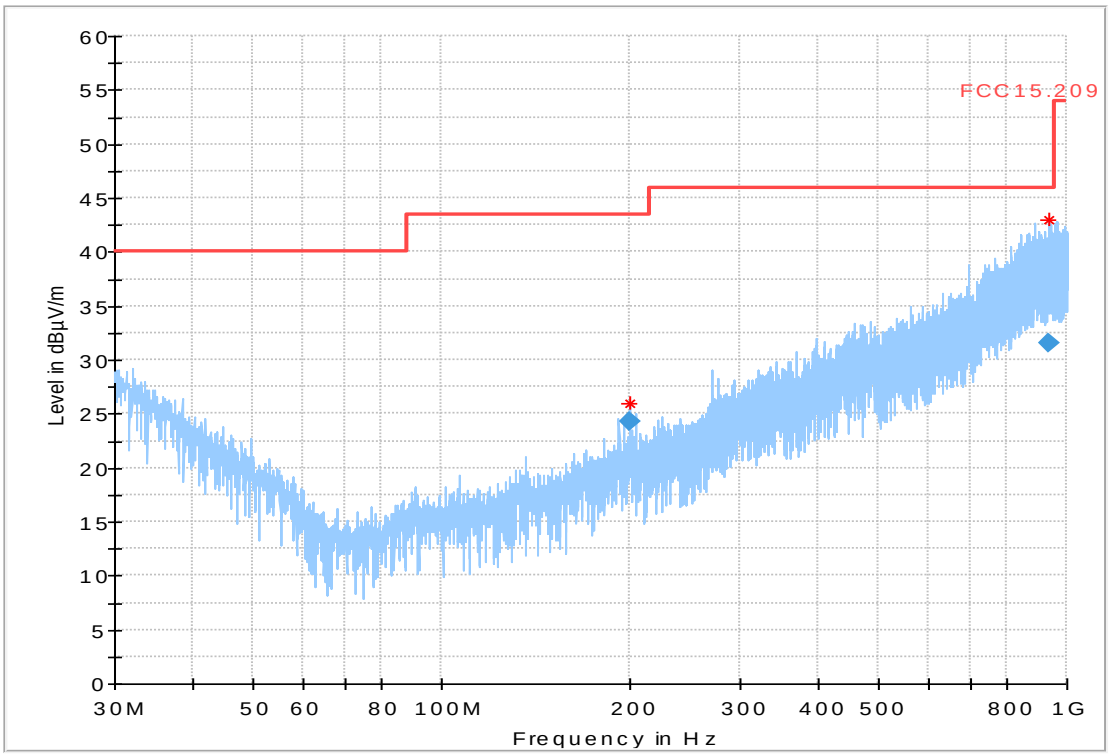
11.08.2016 Page 1 of 7

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operator:	Ase
Operating conditions:	UE transmits on channel 39 (UL = 2441MHz), Packet Type DH5
Power during tests:	full loaded batteries

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
199.970000	24.28	43.50	19.22	1000.0	120.000	105.0	H	10.0	90.0	11.3
936.780000	31.48	46.00	14.52	1000.0	120.000	362.0	H	19.0	90.0	26.9

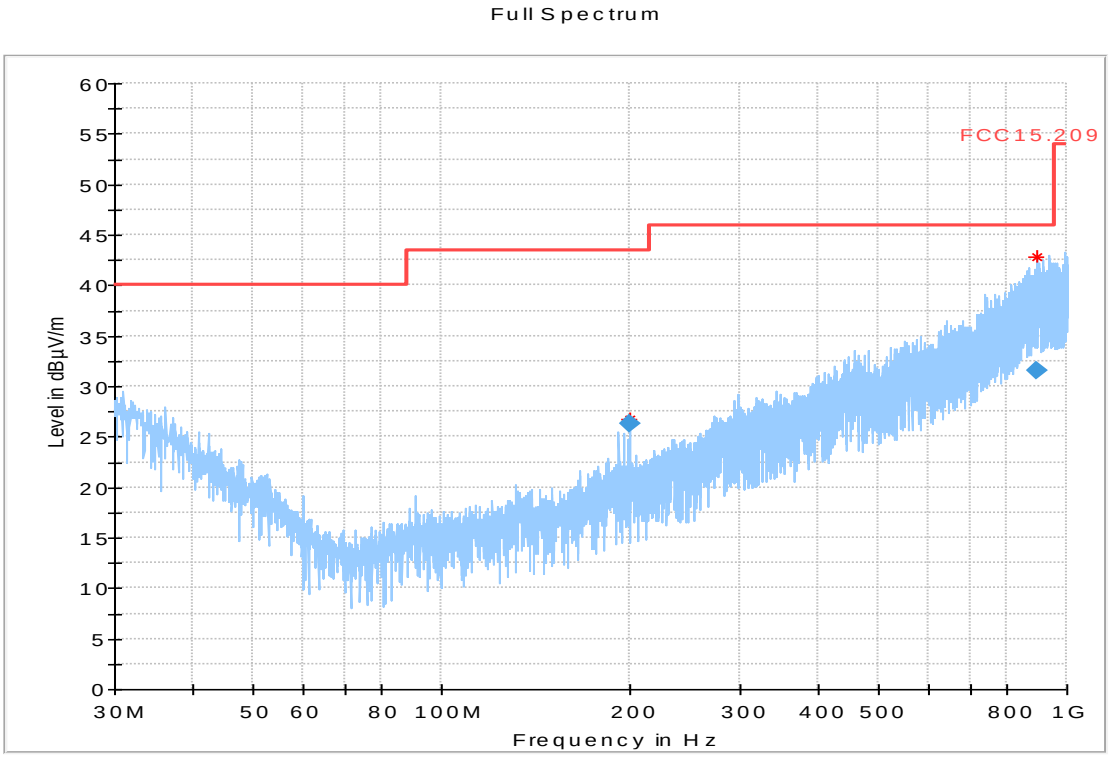
Diagram No. 3.10_TX_Ch0_2DH5

11.08.2016 Page 1 of 4

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.209; RSS-Gen: Issue 4
Operator:	Ase
Operating conditions:	UE transmits on channel 0 (UL = 2402MHz), Packet Type 2DH5
Power during tests:	full loaded batteries

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
200.000000	26.31	43.50	17.19	1000.0	120.000	145.0	H	11.0	90.0	11.3
895.570000	31.52	46.00	14.48	1000.0	120.000	215.0	V	149.0	90.0	26.8

2.3. Field strength measurements f < 18GHz

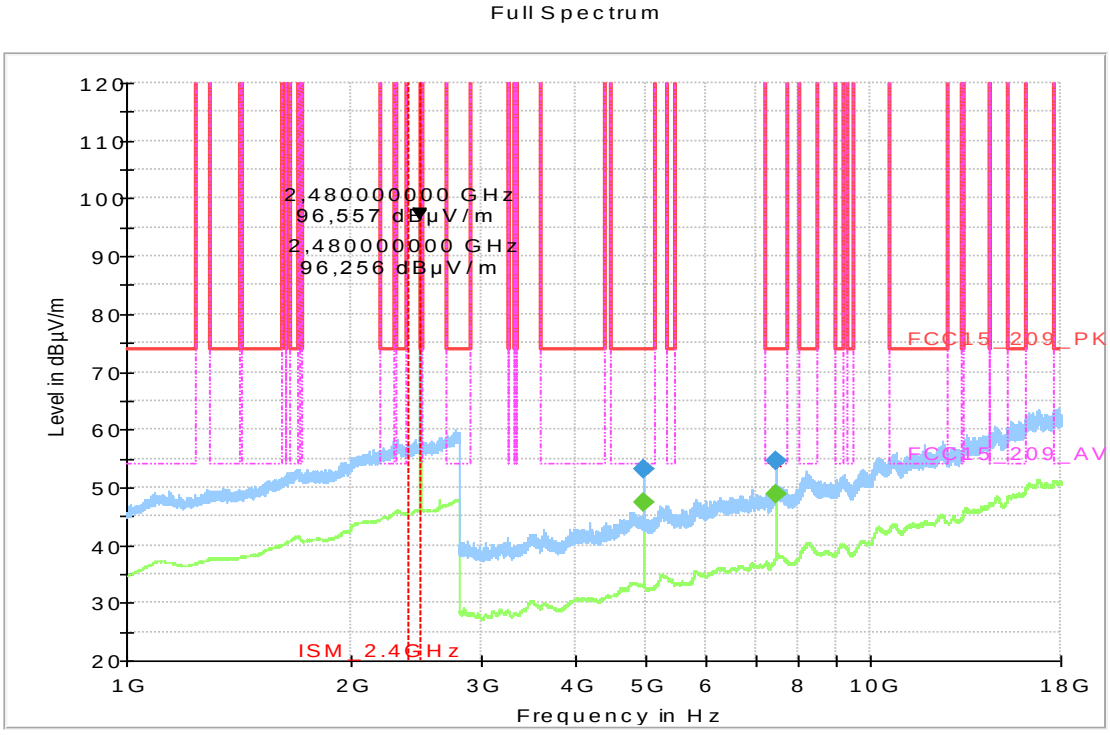
4.05_TX_Ch78_DH5

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Environmental Conditions:	Humidity: 59%rH; Temperature: 24°C
Operation mode:	UE transmits on channel 78 (UL = 2480MHz), Packet Type DH5
Operator Name:	KMo

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Azimuth (deg)	Elevation (deg)	Corr. (dB)
4960.000000	---	47.48	54.00	6.52	100.0	1000.000	270.0	0.0	4.3
4960.000000	53.06	---	74.00	20.94	100.0	1000.000	269.0	0.0	4.3
7440.000000	---	48.85	54.00	5.15	100.0	1000.000	355.0	90.0	11.3
7440.000000	54.54	---	74.00	19.46	100.0	1000.000	18.0	90.0	11.3

Diagram No.: 4.05a_High

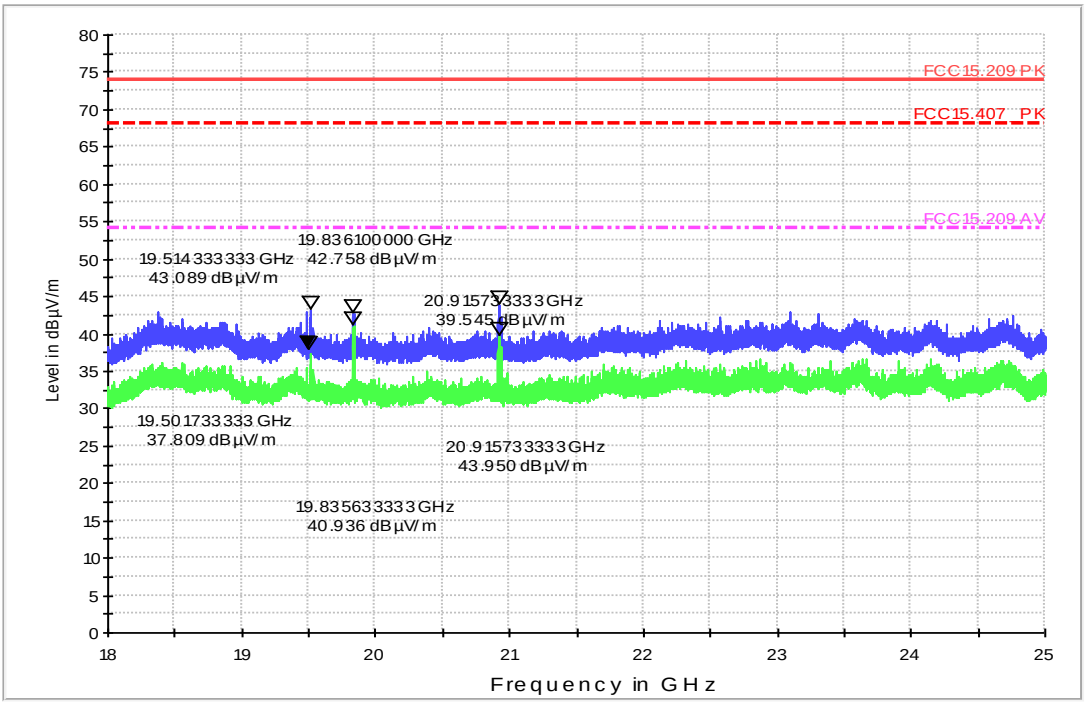
Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	Aho
Comment:	Channel no. 78/high,Mod: 3DH5

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable

FCC_Sweep_15.247_18_25GHz_Pre



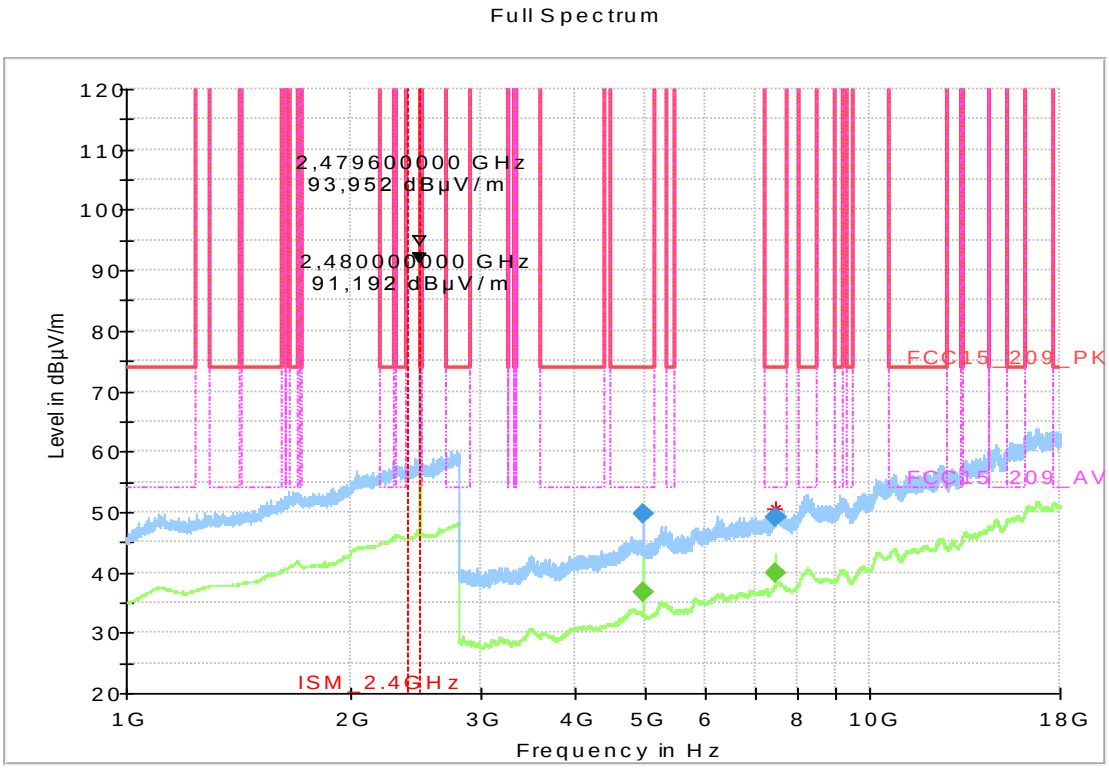
4.06_TX_Ch78_3DH5

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Environmental Conditions:	Humidity: 59%rH; Temperature: 24°C
Operation mode:	UE transmits on channel 78 (UL = 2480MHz), Packet Type 3DH5
Operator Name:	KMo

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Azimuth (deg)	Elevation (deg)	Corr. (dB)
4960.400000	---	36.82	54.00	17.18	100.0	1000.000	45.0	0.0	4.3
4960.400000	49.64	---	74.00	24.36	100.0	1000.000	45.0	0.0	4.3
7439.200000	---	39.91	54.00	14.09	100.0	1000.000	26.0	90.0	11.3
7439.200000	49.16	---	74.00	24.84	100.0	1000.000	351.0	0.0	11.3

Diagram No.: 4.06a_Ch-78_Mod-3DH5

Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	
Comment:	Channel no. low/middle/high

EUT Information

Manufacturer:	Pugz Gear AB
Product Name:	PUGZ
Product Variant:	Pugz-L
Model:	Leaking 11
Type:	Bluetooth Headset
---	---
EUT:	Pugz-L
HW version:	1.0
SW version:	1.0
Serial Number (S/N):	17
Connected Interfaces:	Charging pad micro USB cable

FCC_Sweep_15.247_18_25GHz_Pre

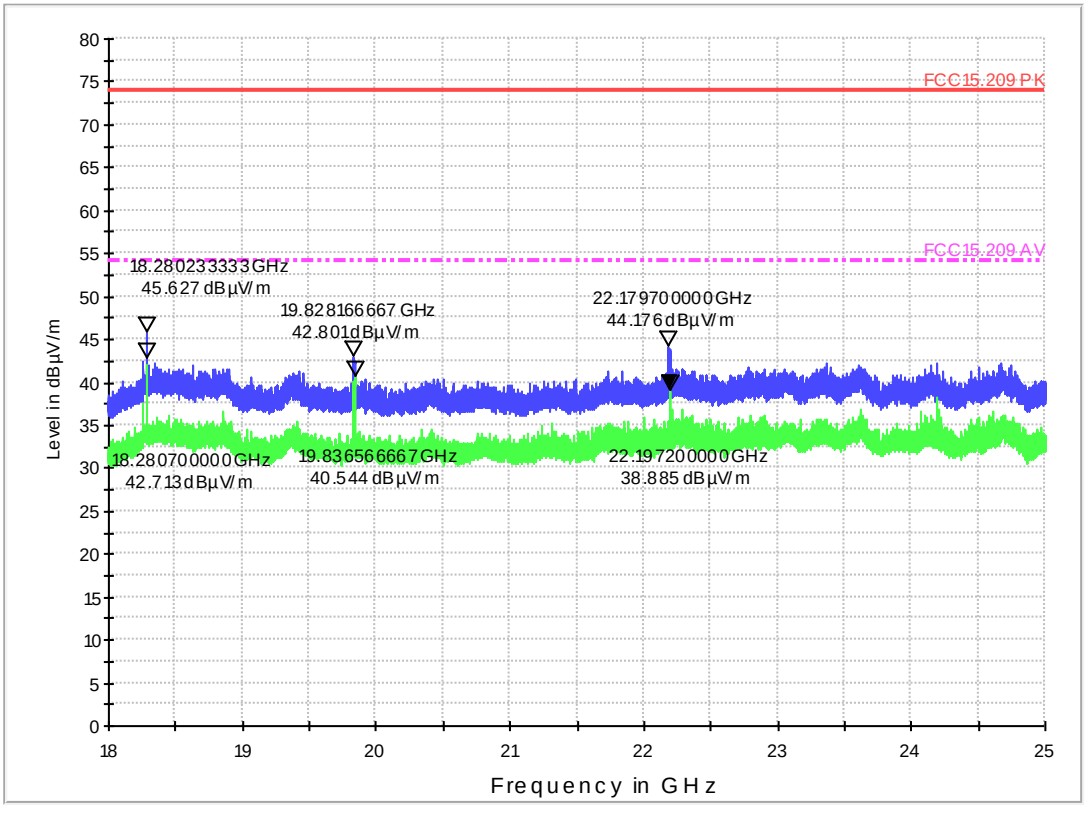


Diagram No.: 4.09_TX_Ch0_2DH5

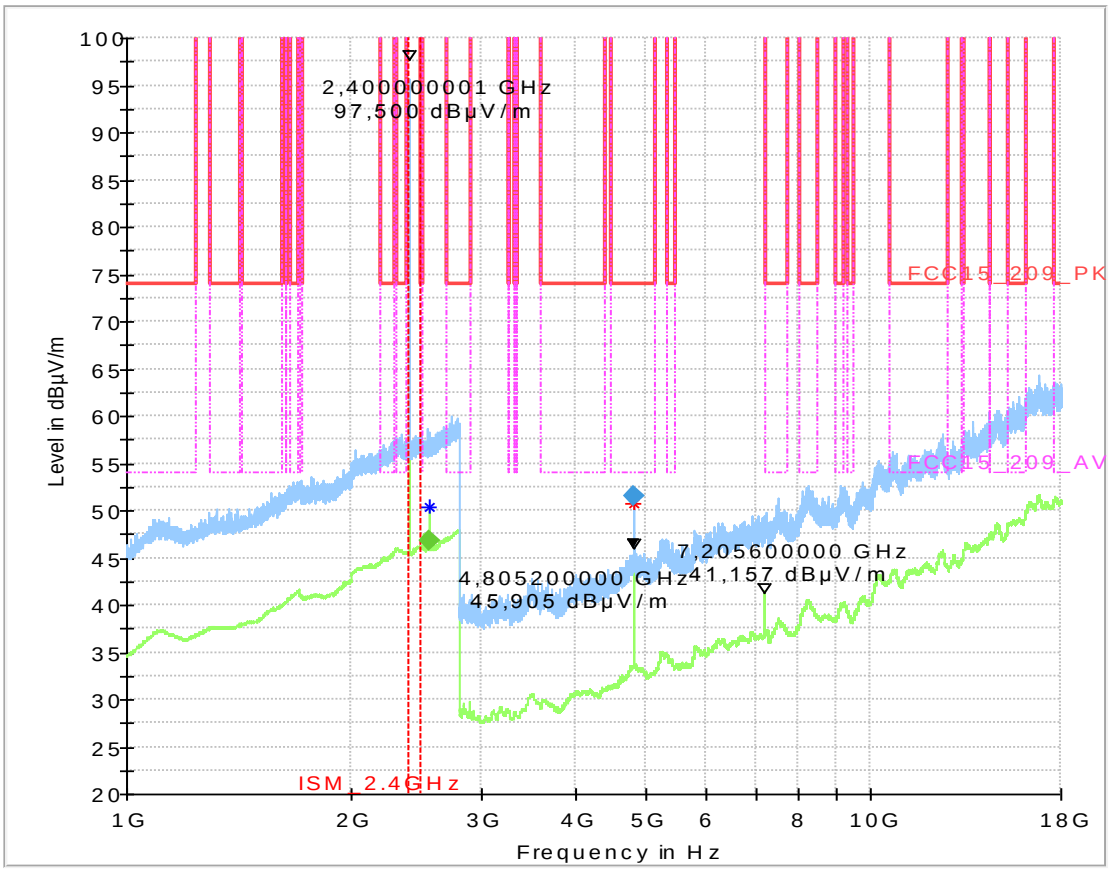
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. low=0 + charging condition from mobile phone S5
Comment2:	Modulation Type: Pi/4QPSK Data Rate: 2DH5 packet type

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
2558.000000	---	46.78	150.00	103.22	100.0	1000.000	155.0	V	-28.0	90.0
4804.000000	51.48	---	74.00	22.52	100.0	1000.000	155.0	H	235.0	0.0

(continuation of the "Final_Result" table from column 16 ...)

Frequency (MHz)	Corr.	Comment
2558.000000	36.0	11:24:41 - 12.08.2016
4804.000000	4.9	11:21:34 - 12.08.2016

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
2558.000000	---	46.78	150.00	103.22	100.0	1000.000	155.0	V	-28.0	90.0
4804.000000	51.48	---	74.00	22.52	100.0	1000.000	155.0	H	235.0	0.0

(continuation of the "Final_Result" table from column 16 ...)

Frequency (MHz)	Corr.	Comment
2558.000000	36.0	11:24:41 - 12.08.2016
4804.000000	4.9	11:21:34 - 12.08.2016

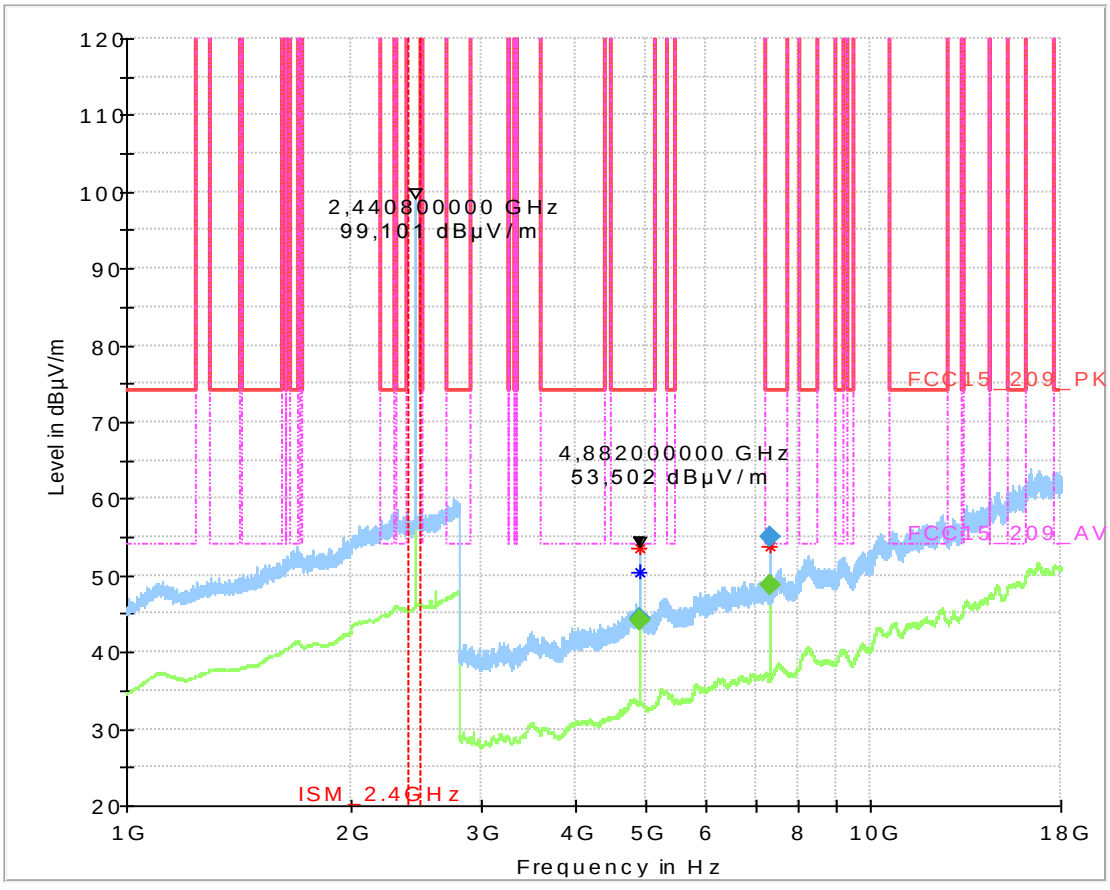
Diagram No.: 4.11_TX_Ch39_DH5_+4dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4
Antenna polarisation:	horizontal/vertical
Operation mode:	TX, continuous
Operator Name:	Lor
Comment:	Channel no. lmiddle=39
Comment2:	Data Rate: DH5 packet type
Power settings:	Reduced Power level (+4dBm +3dBi Antenna Gain))
Test Setup:	Measured without Charging Mode (without Mobile Phone)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
4882.000000	44.31	---	74.00	29.69	100.0	1000.000	155.0	H	270.0	0.0
4882.000000	---	44.05	54.00	9.95	100.0	1000.000	155.0	V	204.0	90.0
7322.800000	54.96	---	74.00	19.04	100.0	1000.000	155.0	V	15.0	90.0
7323.200000	---	48.67	54.00	5.33	100.0	1000.000	155.0	V	35.0	90.0

(continuation of the "Final_Result" table from column 16 ...)

Frequency (MHz)	Corr.	Comment
4882.000000	4.6	13:42:17 - 12.08.2016
4882.000000	4.6	13:45:14 - 12.08.2016
7322.800000	10.2	13:43:59 - 12.08.2016
7323.200000	10.3	13:46:29 - 12.08.2016

3. Radiated band-edge measurements accord. §15.209 & §15.205 (§15.247)

3.1. Channel 0 (left band edge)

Diagram No.: 9.11_BE_Ch0_DH5_4dBm

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:	APh
Comment:	Channel no. low = 0
Comment2:	Modulation Type: DH5
Power level settings:	Reduced power level (+4dBm +3dBi Antenna Gain)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

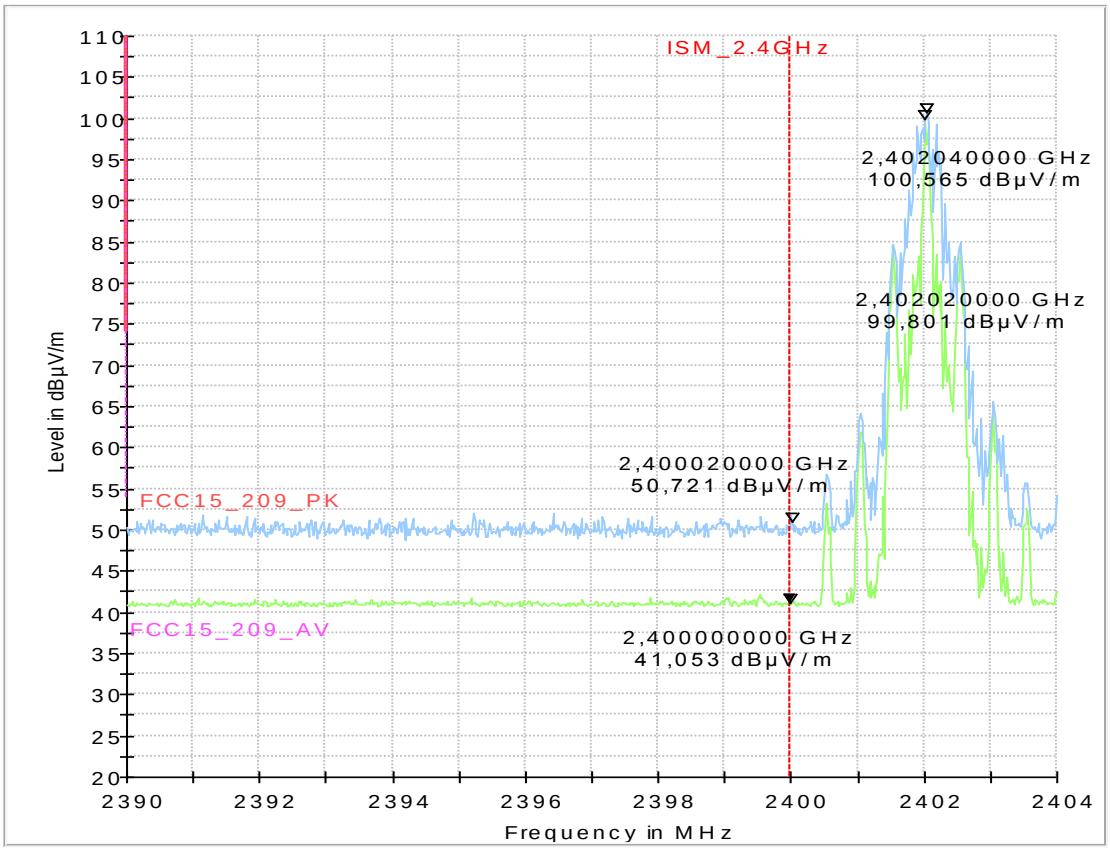


Diagram No.: 9.13_BE_Ch0_2DH5_4dBm

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 _Bluetooth_Ch0_2DH5
Operator Name:	APh
Comment:	Channel no. low
Comment2:	Modulation Type: 2DH5
Power level Settings:	Reduced power level (+4dBm + 3dBi)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

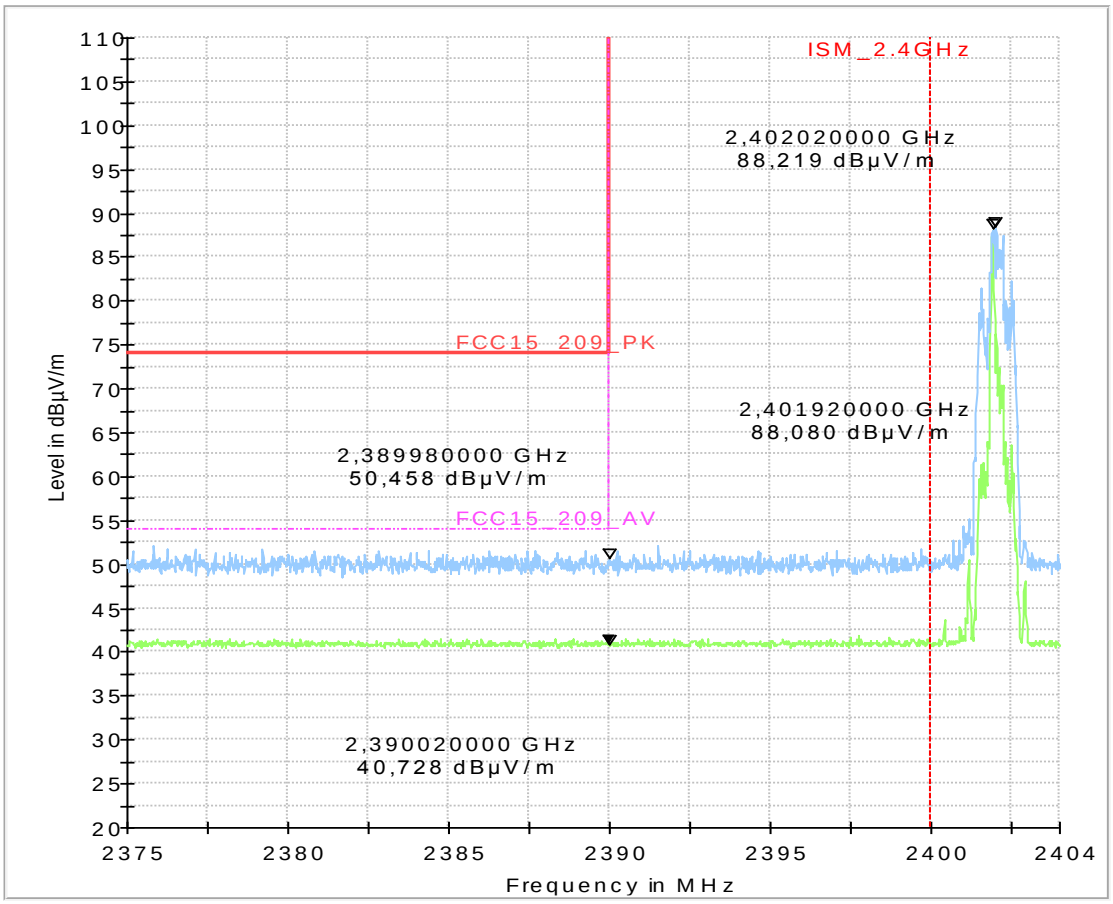


Diagram No.: 9.15_BE_Ch0_3DH5_4dBm

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 _Bluetooth_Ch0_3DH5
Operator Name:	APh
Comment:	Channel no. low
Comment2:	Modulation Type: 3DH5

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

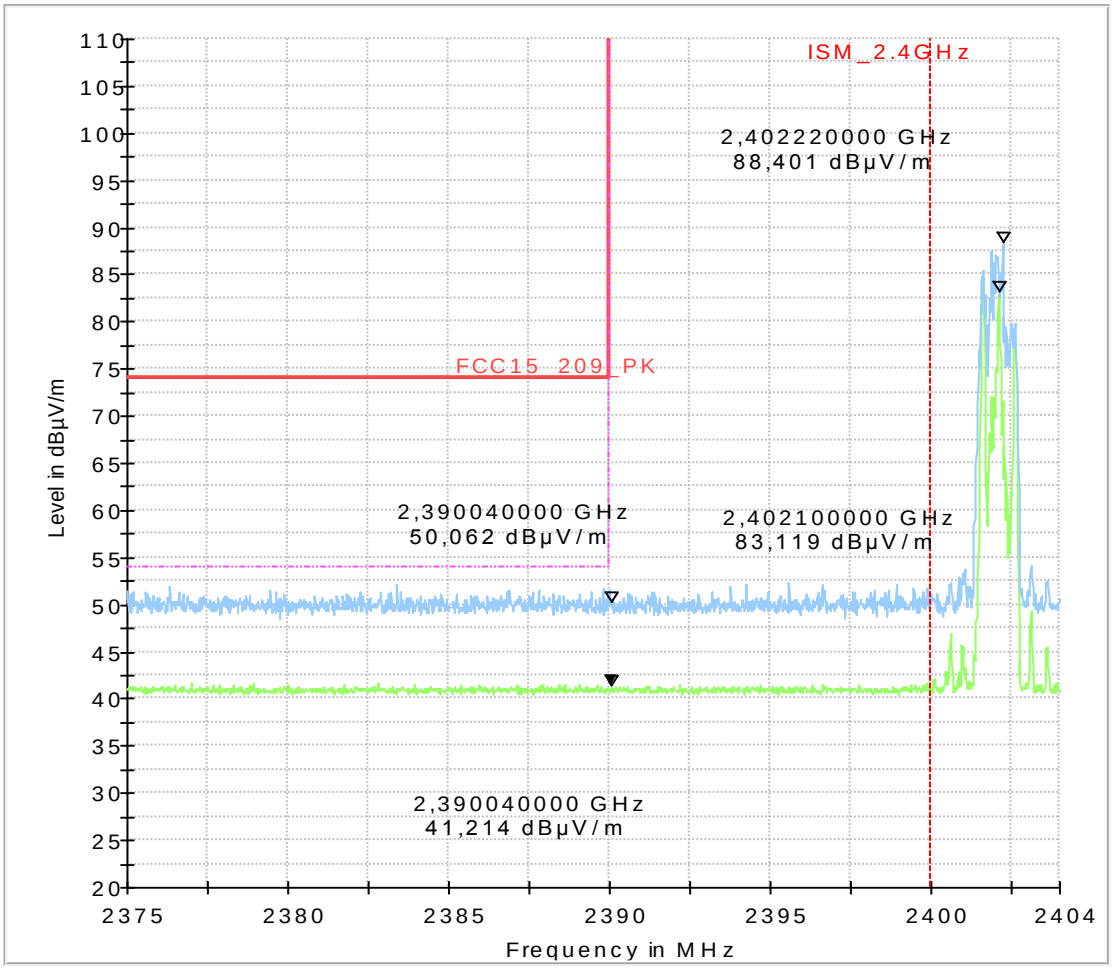


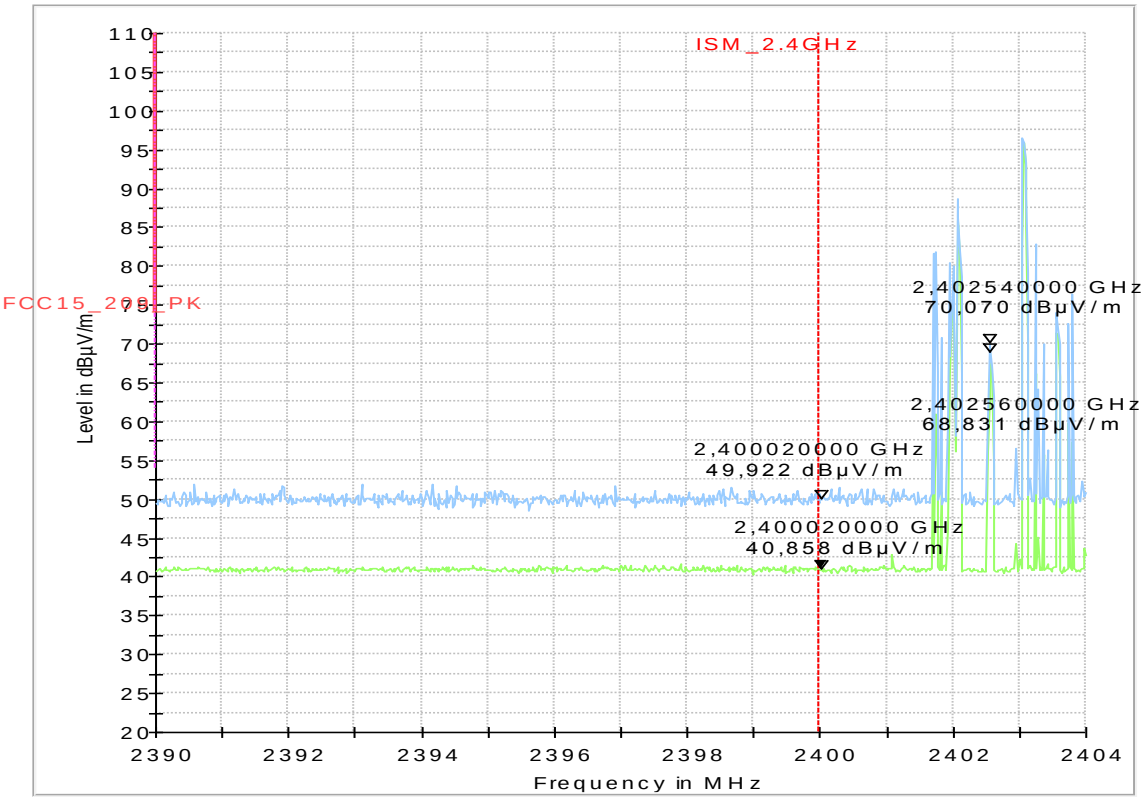
Diagram No.: 9.17_BE_Low_Hopping_DH5_4dBm

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 _Bluetooth_Hopping_DH5
Operator Name:	APh
Comment:	Hopping ON
Comment2:	Modulation Type: DH5

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage



3.2. Channel 78 (right band edge)

Diagram No.: 9.12_BE_Ch78_DH5_4dBm

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 _Bluetooth_Ch78_DH5
Operator Name:	APh
Comment:	Channel no. 78/high,
Comment2:	Modulation Type: DH5
Power level Settings:	Reduced power level (+4dBm + 3dBi)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

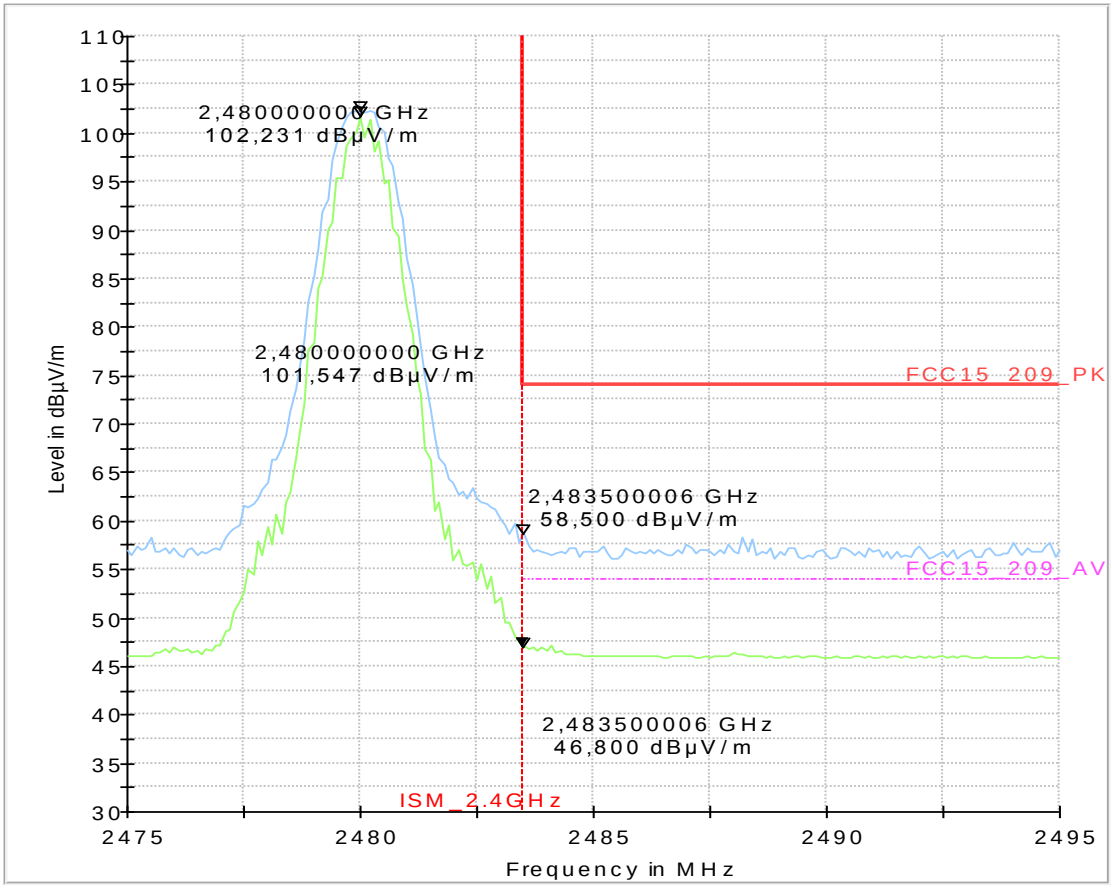


Diagram No.: 9.14_BE_Ch78_2DH5_4dBm

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 _Bluetooth_Ch78_2DH5
Operator Name:	APh
Comment:	Channel no. 78/high,
Comment2:	Modulation Type: 2DH5
Power level Settings:	Reduced power level (+4dBm + 3dBi)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

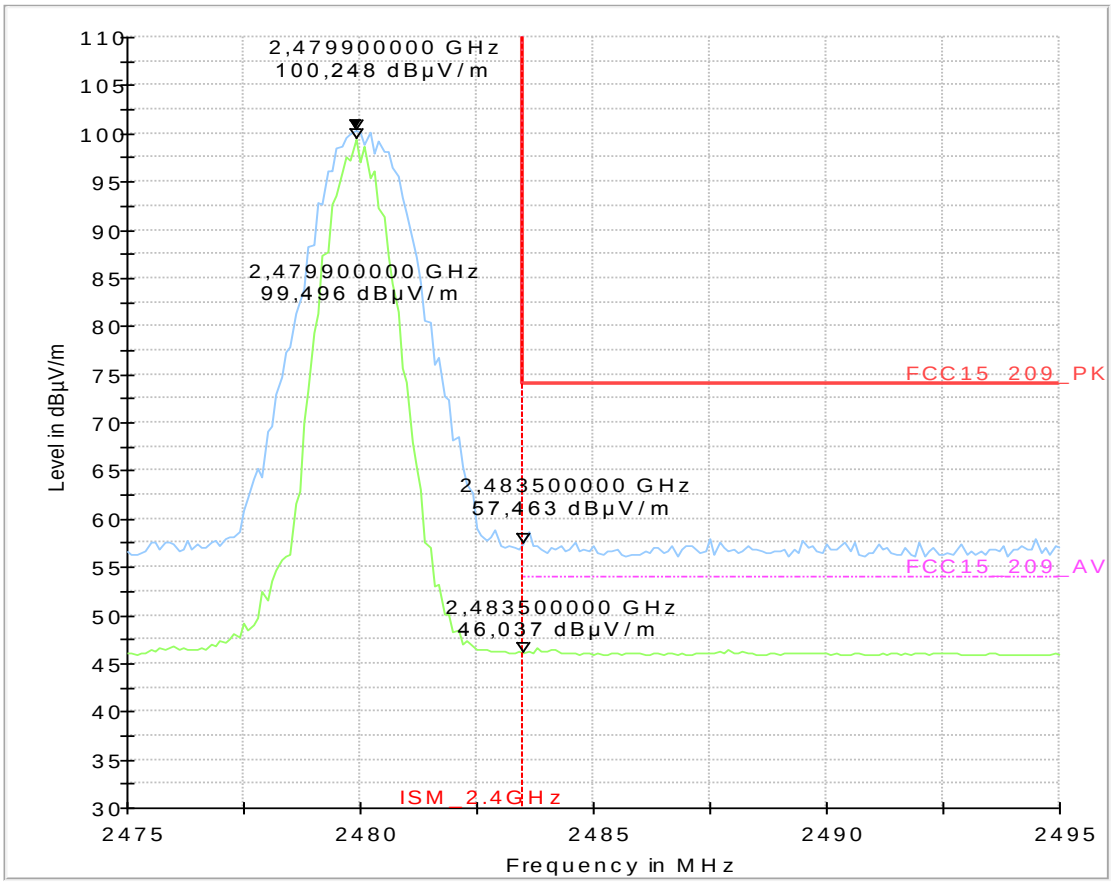


Diagram No.: 9.16_BE_Ch78_3DH5_4dBm

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 _Bluetooth_Ch78_3DH5
Operator Name:	APh
Comment:	Channel no. 78/high,
Comment2:	Modulation Type: 3DH5
Power level Settings:	Reduced power level (+4dBm + 3dBi)

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage

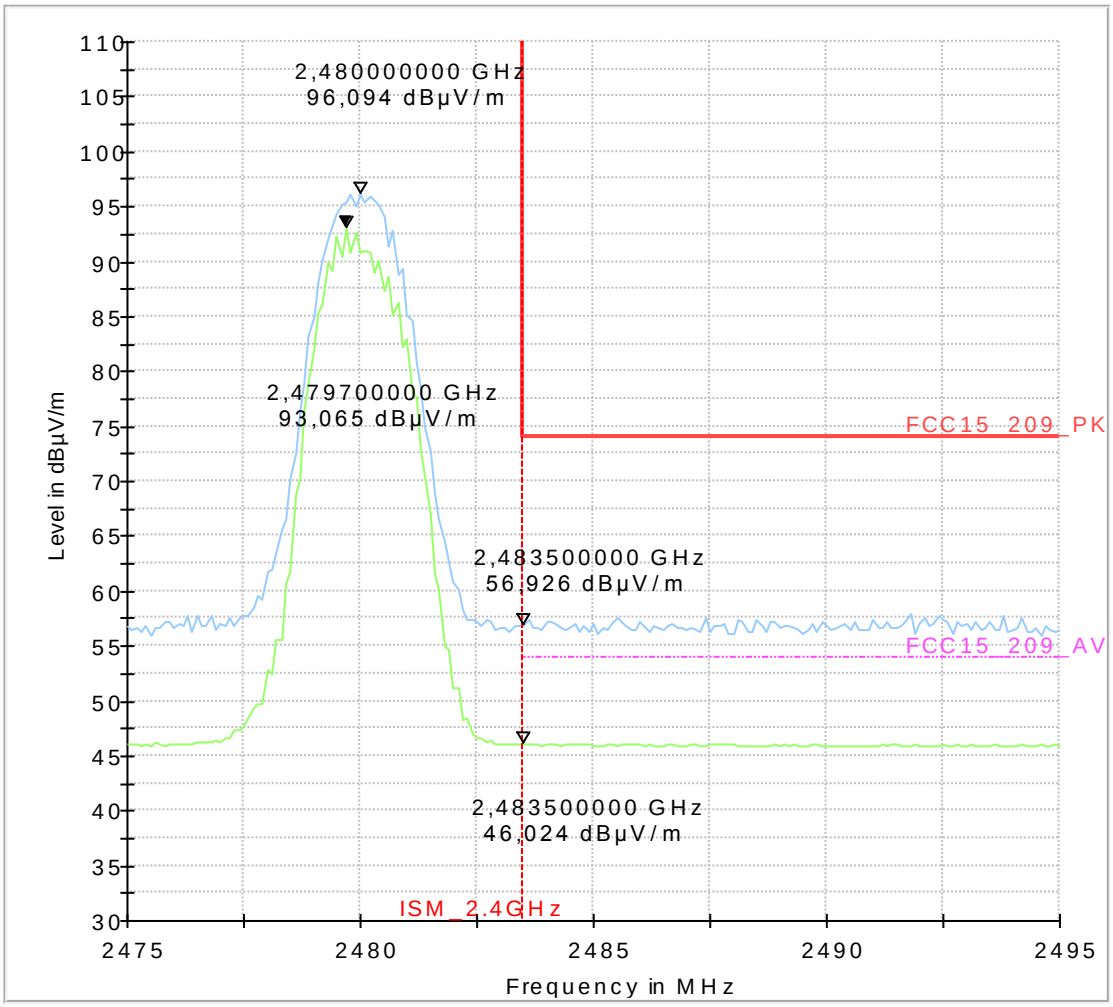


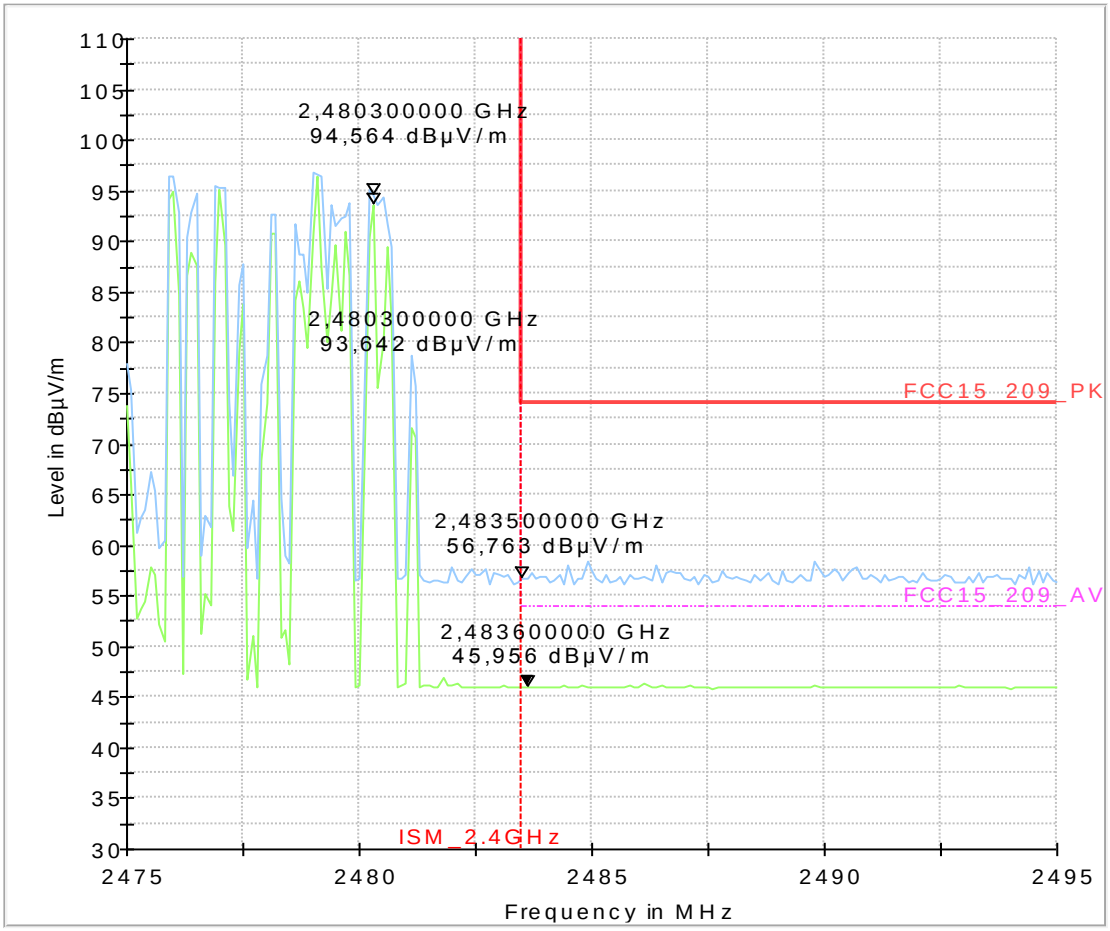
Diagram No.: 9.18_BE_High_Hopping_DH5_4dBm

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_Hopping_DH5
Operator Name:	APh
Comment:	Hopping ON
Comment2:	Data Rate: DH5 packet type
Power level settings:	Reduced Power level (+4dBm +3dBi Antenna Gain))

EUT Information

Manufacturer:	Pugz Gear AB
Model:	PUGZLeaking 11
Type:	PUGZ-L (Leaking 11) Bluetooth Head set
---	---
EUT:	-
HW version:	1.0
SW version:	1.0
SVN:	-
Config:	-
Serial number:	17
Connected Interfaces:	Charging pad micro USB cable
Power Supply:	Fully charged Internal Battery
Comments:	3.7 V DC Nominal Supply Voltage



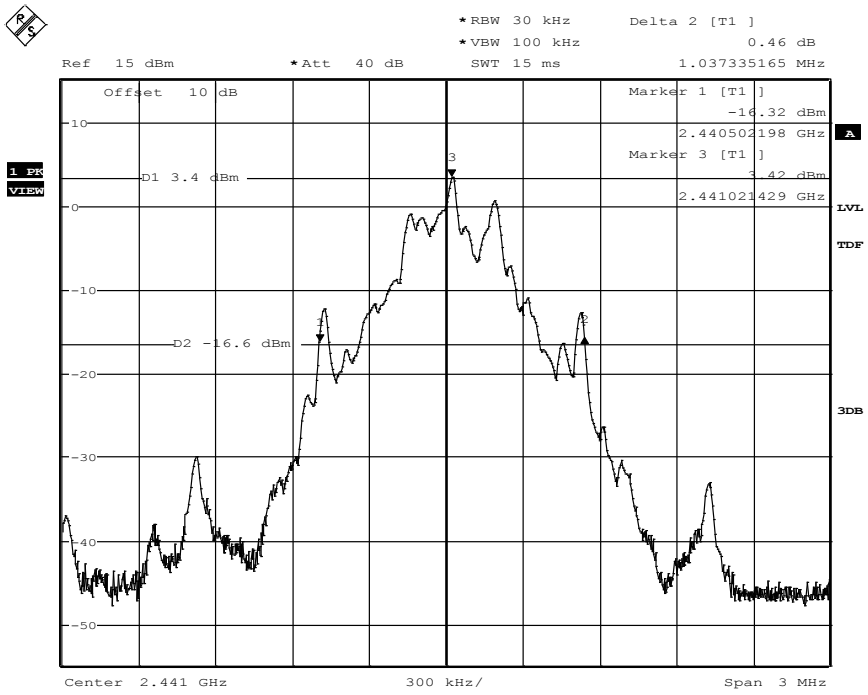
4. Conducted RF-measurements on antenna port

4.1. Conducted RF-power

Modulation Packet type	Nominal Ch 0 =2402 MHz	Nominal Ch 39 =2441MHz	Nominal Ch 79 =2480MHz	Maximum value over Modulation schemes [dBm]	Max. Value [dBm]	Max. Value [mW]
DH1	**1,26**	4,25	**4,85**	4,85	**4,85**	**3,055**
DH3	1,21	4,29	4,84			
DH5	1,14	**4,33**	4,79			
2DH1	0,26	3,32	3,87	3,94		
2DH3	**0,43**	**3,44**	**3,94**			
2DH5	0,08	2,81	3,63			
3DH1	**0,11**	3,10	3,75	3,78		
3DH3	0,05	3,02	**3,78**			
3DH5	0,02	**3,13**	3,75			

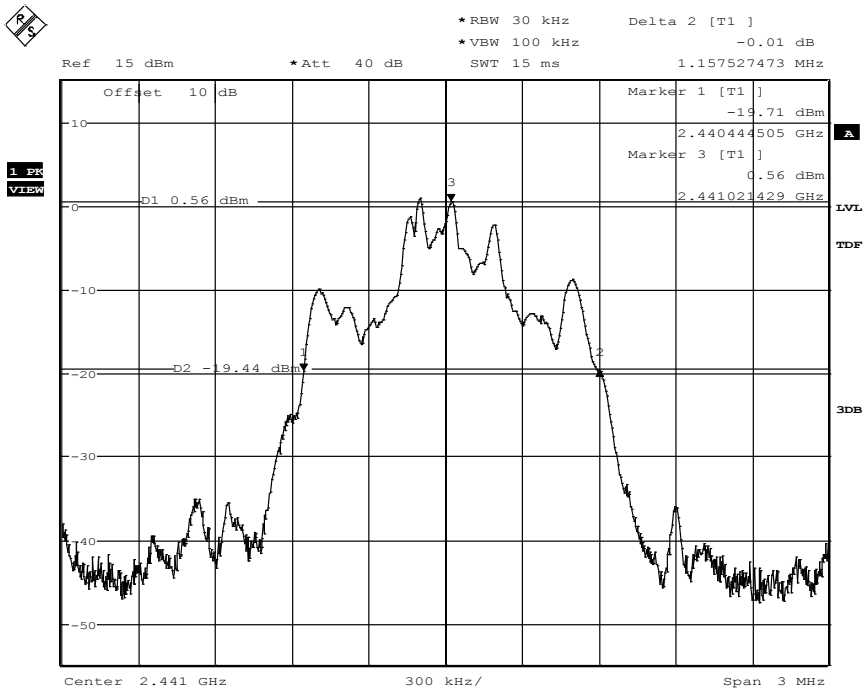
4.2. 20-dB Bandwidth

4.2.1. Modulation GFSK



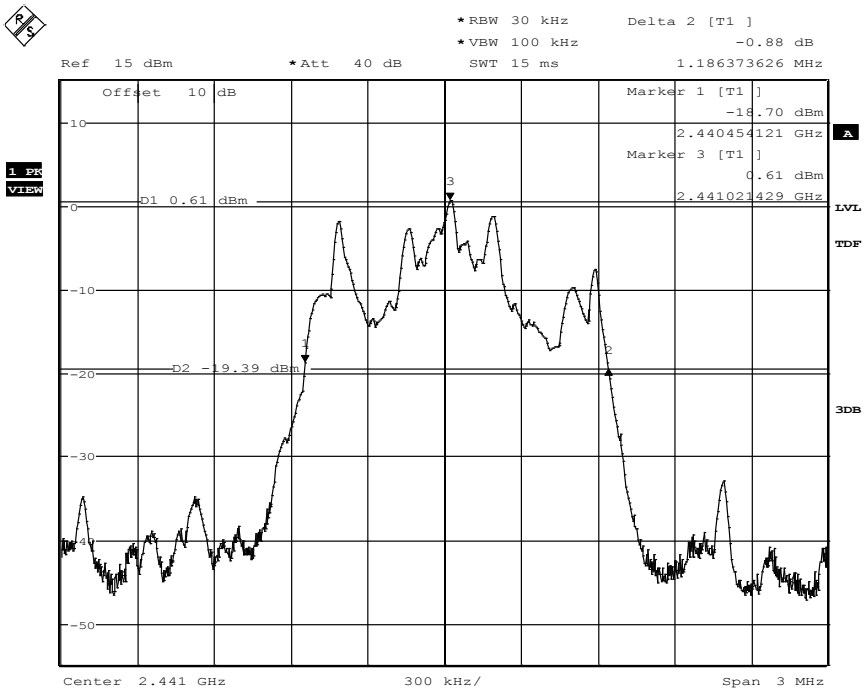
Date: 2.AUG.2016 12:44:30

4.2.2. Modulation Pi/4 QPSK



Date: 2.AUG.2016 12:48:46

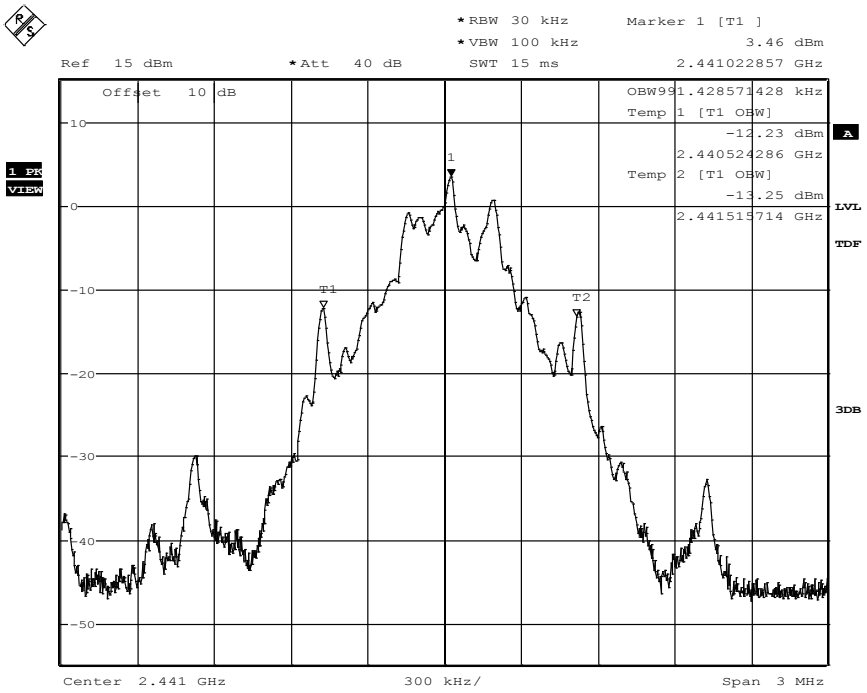
4.2.3. Modulation 8DPSK



Date: 2.AUG.2016 12:54:53

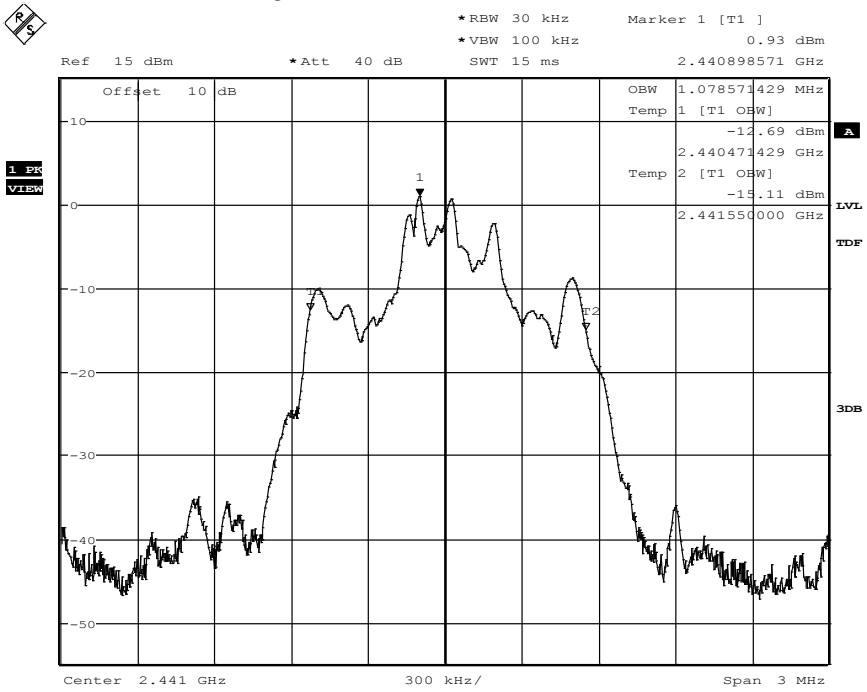
4.3. 99% Occupied Bandwidth

4.3.1. Modulation GFSK



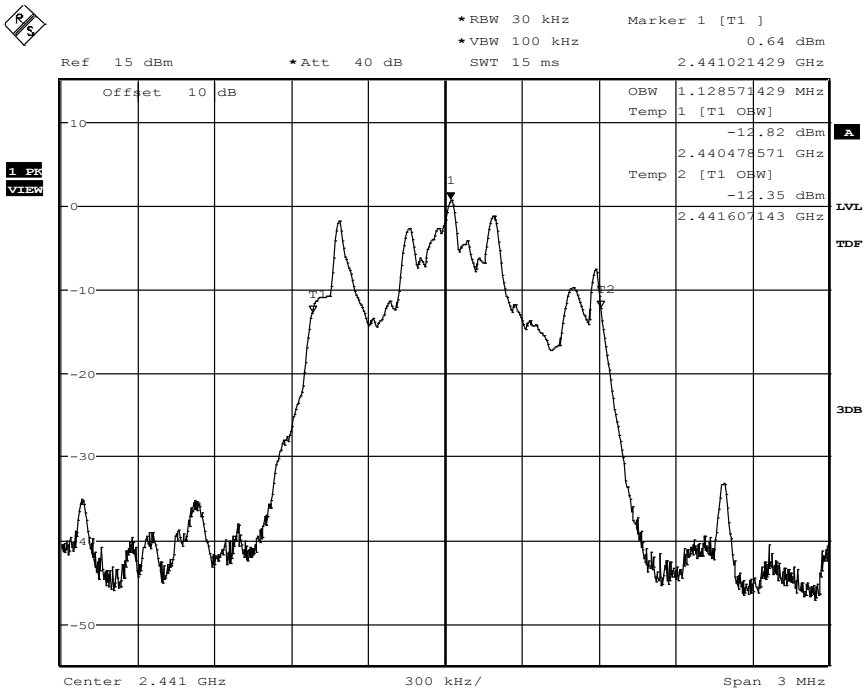
Date: 2.AUG.2016 16:14:08

4.3.2. Modulation Pi/4 QPSK



Date: 2.AUG.2016 16:17:28

4.3.3. Modulation 8DPSK

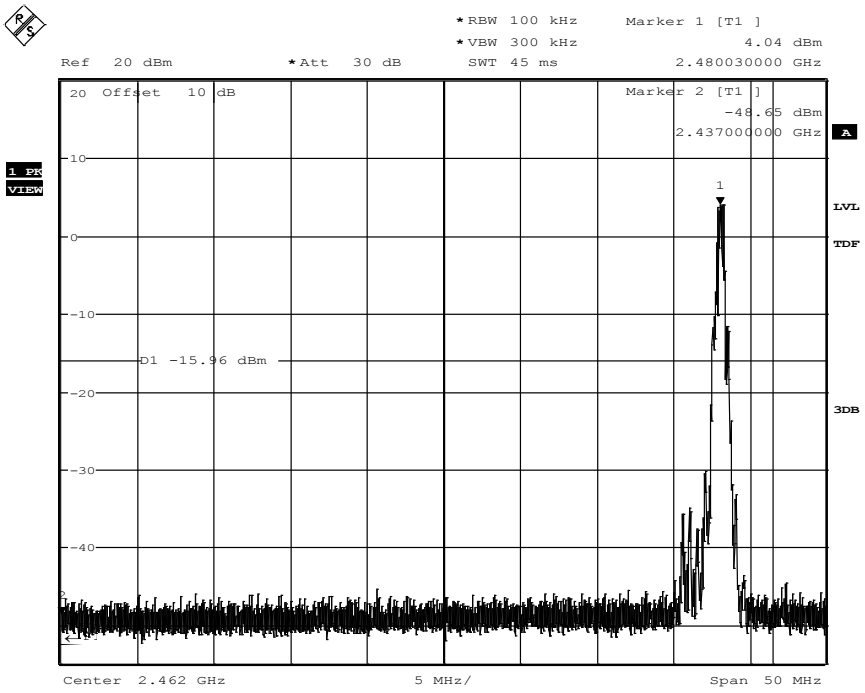


Date: 2.AUG.2016 16:20:42

4.4. 20dBc Emissions (hopping mode off)

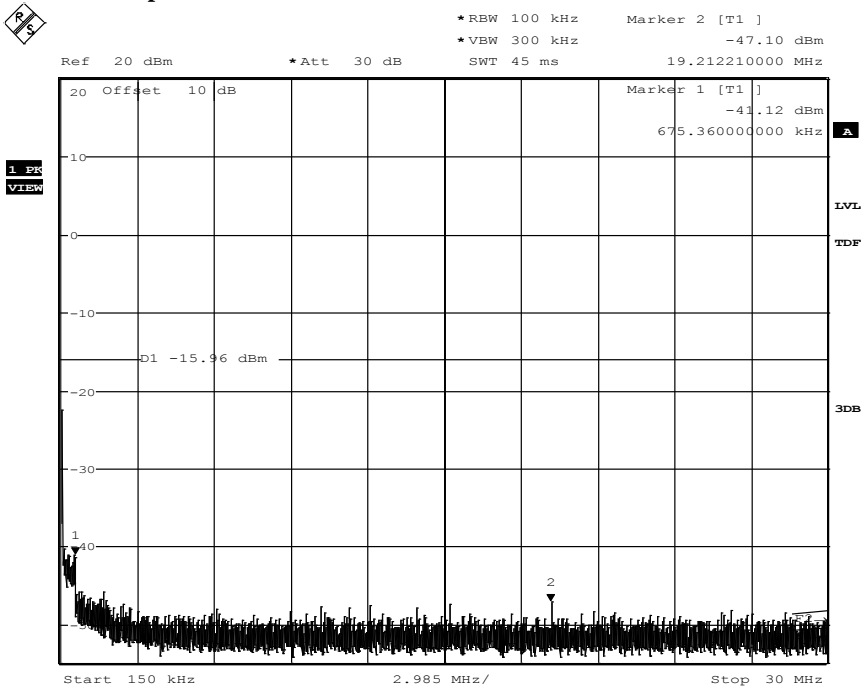
4.4.1. Modulation GFSK

4.4.1.1. Channel 78 Reference



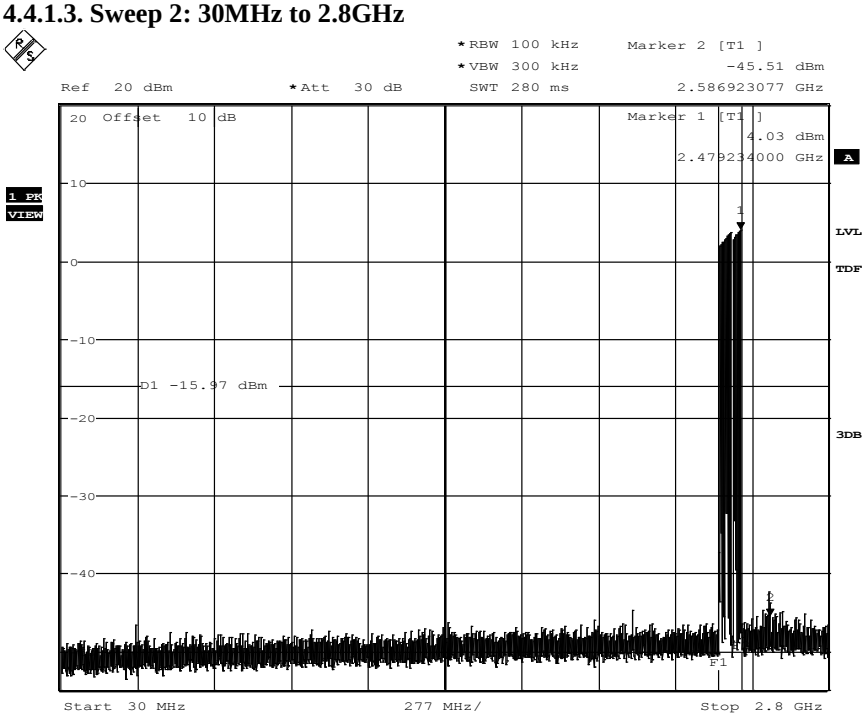
Date: 3.AUG.2016 09:55:29

4.4.1.2. Sweep 1: 150kHz to 30MHz



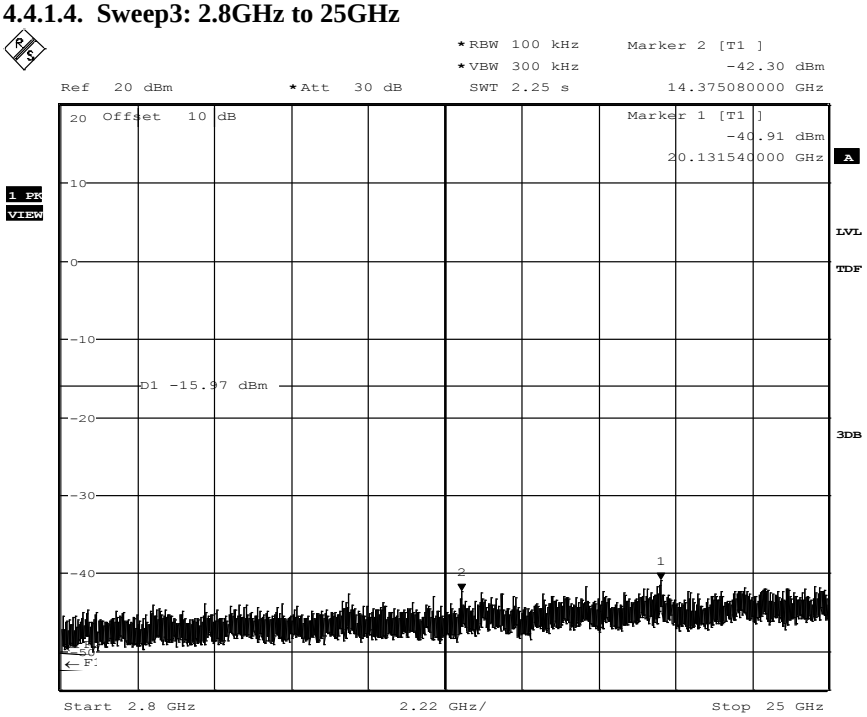
Date: 3.AUG.2016 09:56:33

4.4.1.3. Sweep 2: 30MHz to 2.8GHz



Date: 3.AUG.2016 10:44:43

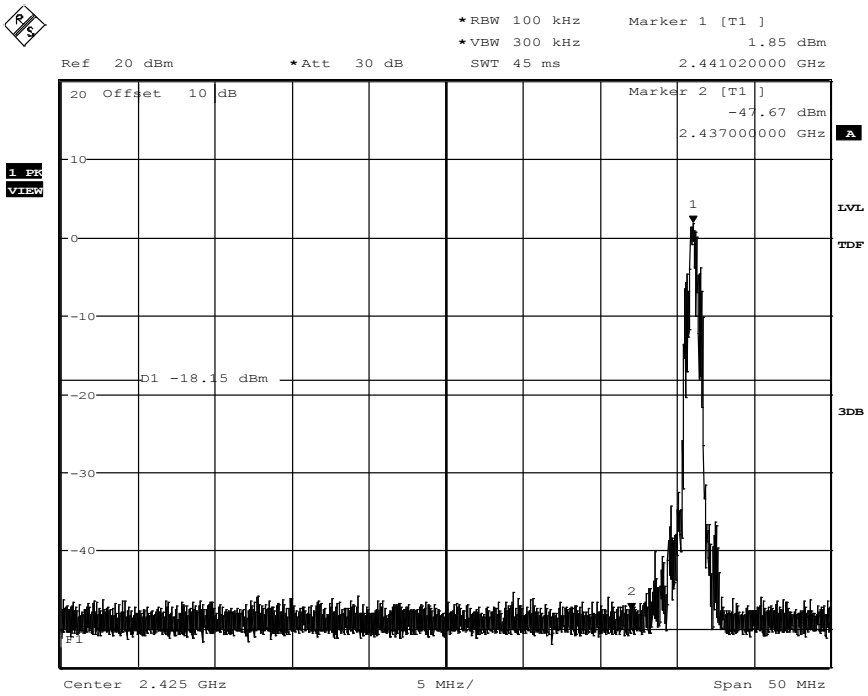
4.4.1.4. Sweep3: 2.8GHz to 25GHz



Date: 3.AUG.2016 10:45:53

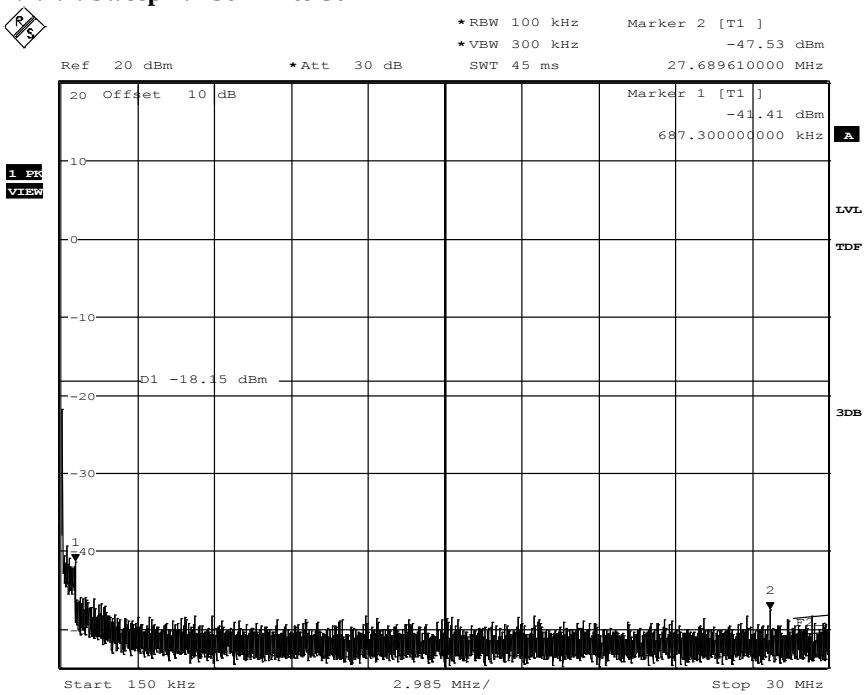
4.4.2. Modulation Pi/4-QPSK

4.4.2.1. Channel 39 Reference



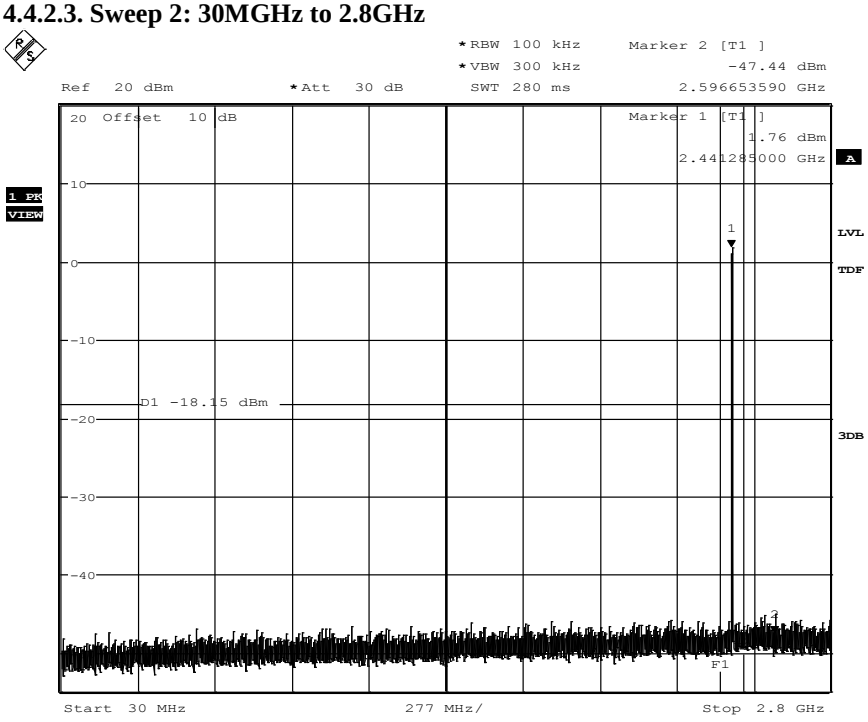
Date: 3.AUG.2016 09:48:31

4.4.2.2. Sweep 1: 150kHz to 30MHz



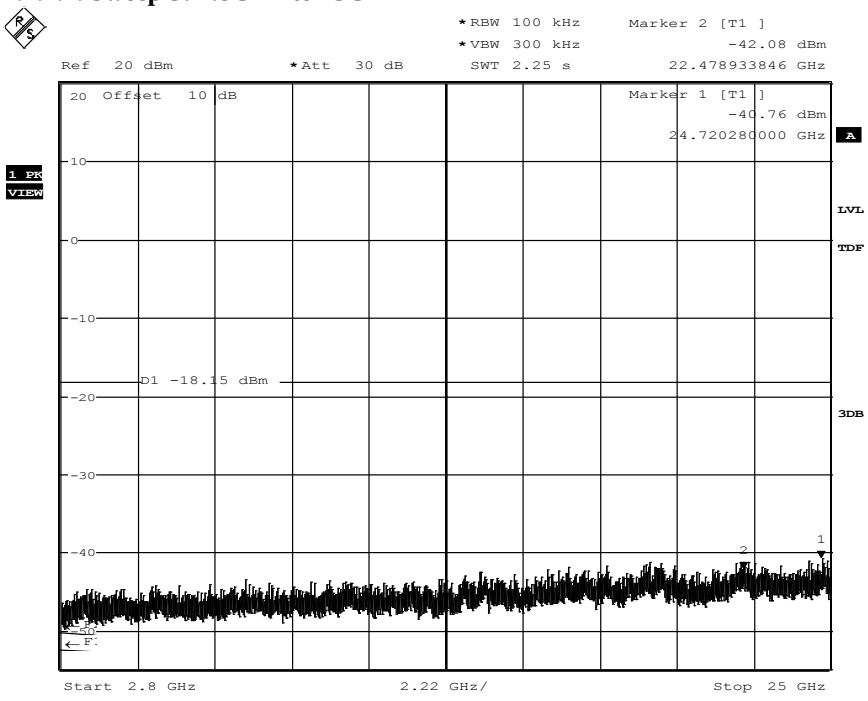
Date: 3.AUG.2016 09:49:55

4.4.2.3. Sweep 2: 30MGHz to 2.8GHz



Date: 3.AUG.2016 09:51:23

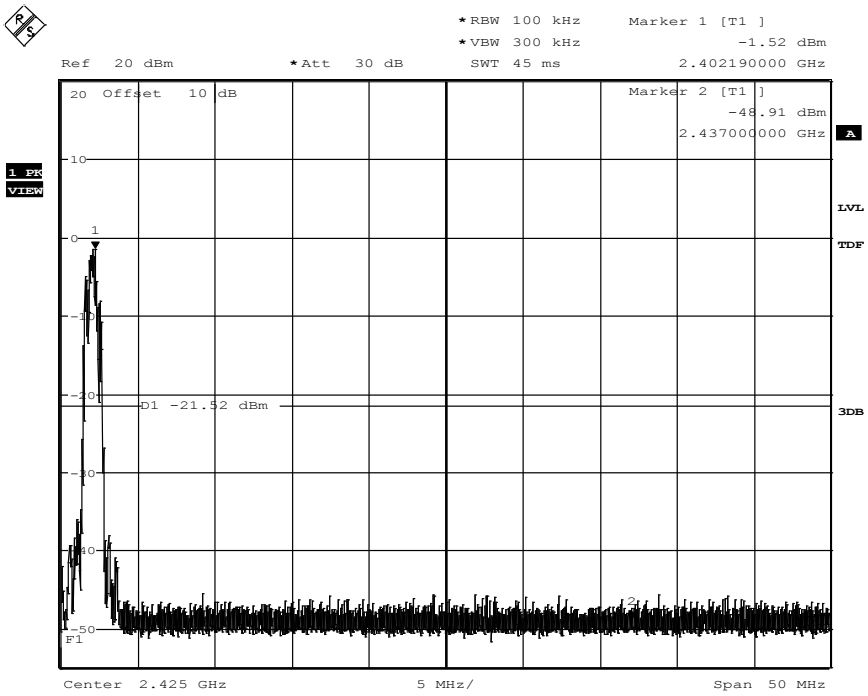
4.4.2.4. Sweep 3: 2.8GHz to 25GHz



Date: 3.AUG.2016 09:52:57

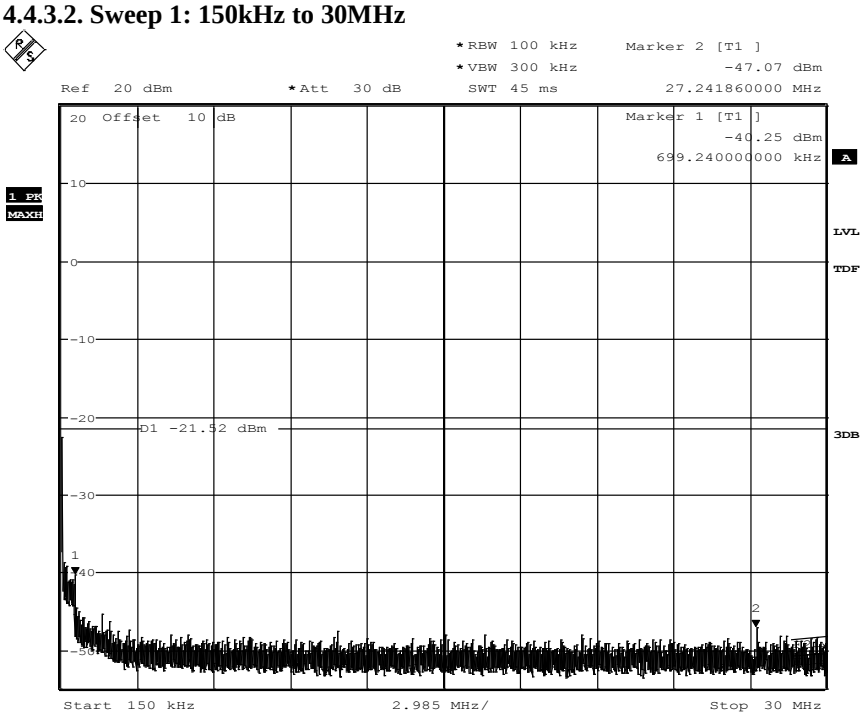
4.4.3. Modulation 8DPSK

4.4.3.1. Channel 0 Reference



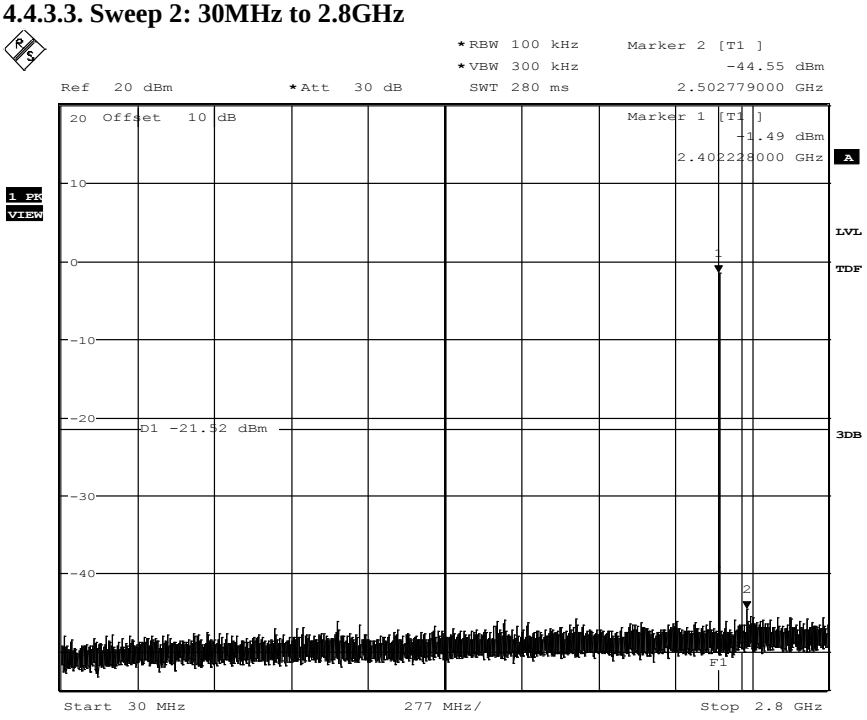
Date: 3.AUG.2016 10:03:48

4.4.3.2. Sweep 1: 150kHz to 30MHz



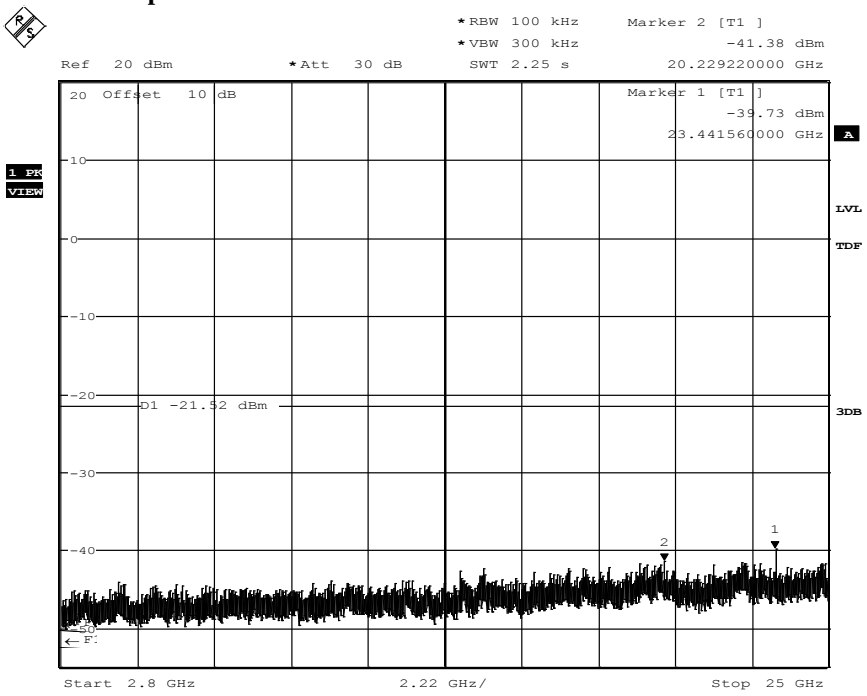
Date: 3.AUG.2016 10:05:12

4.4.3.3. Sweep 2: 30MHz to 2.8GHz



Date: 3.AUG.2016 10:06:17

4.4.3.4. Sweep 3: 2.8GHz to 25GHz

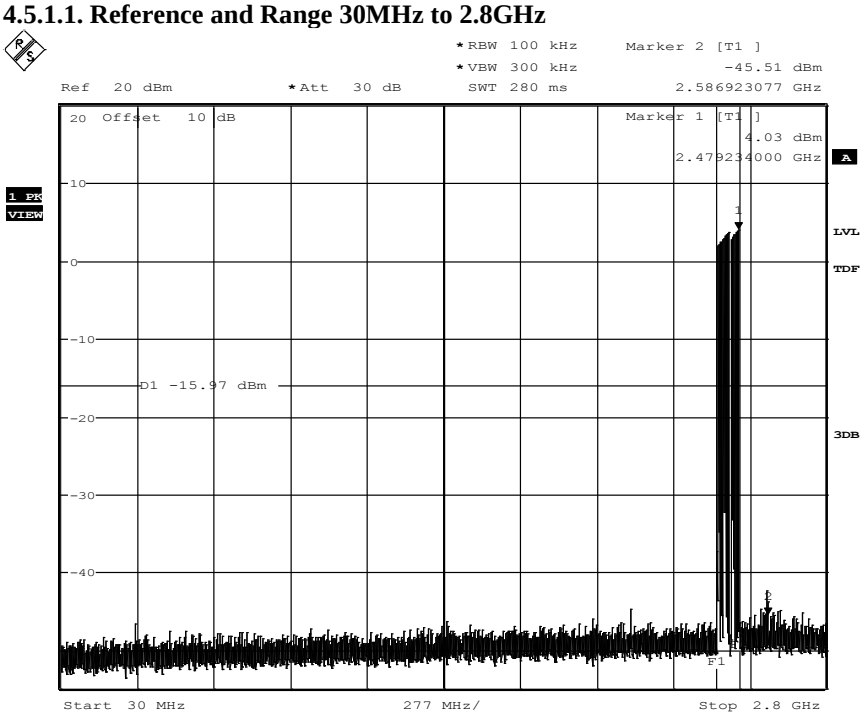


Date: 3.AUG.2016 10:07:23

4.5. 20dBc Emissions (hopping mode on)

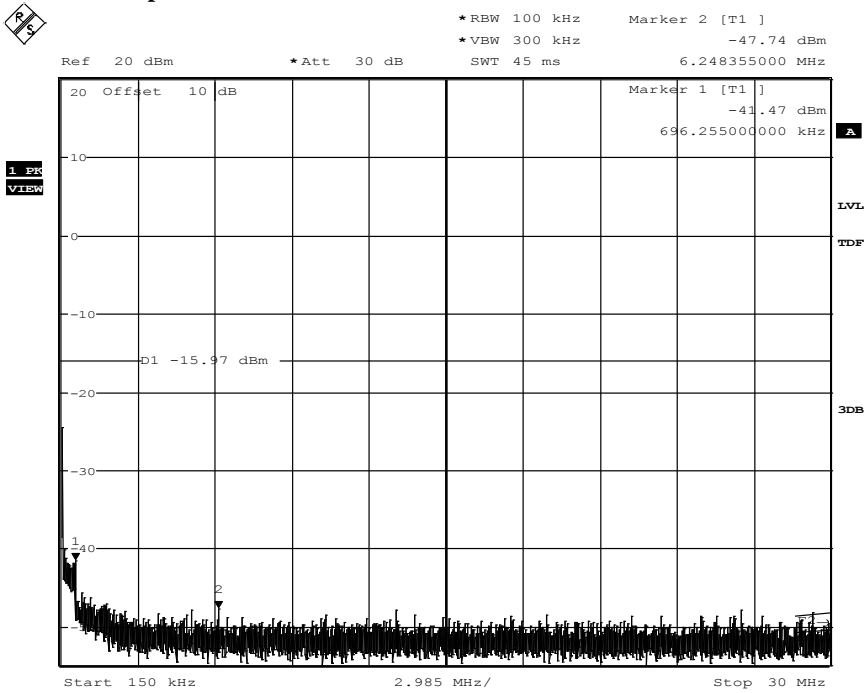
4.5.1. Modulation GFSK (hopping mode on)

4.5.1.1. Reference and Range 30MHz to 2.8GHz



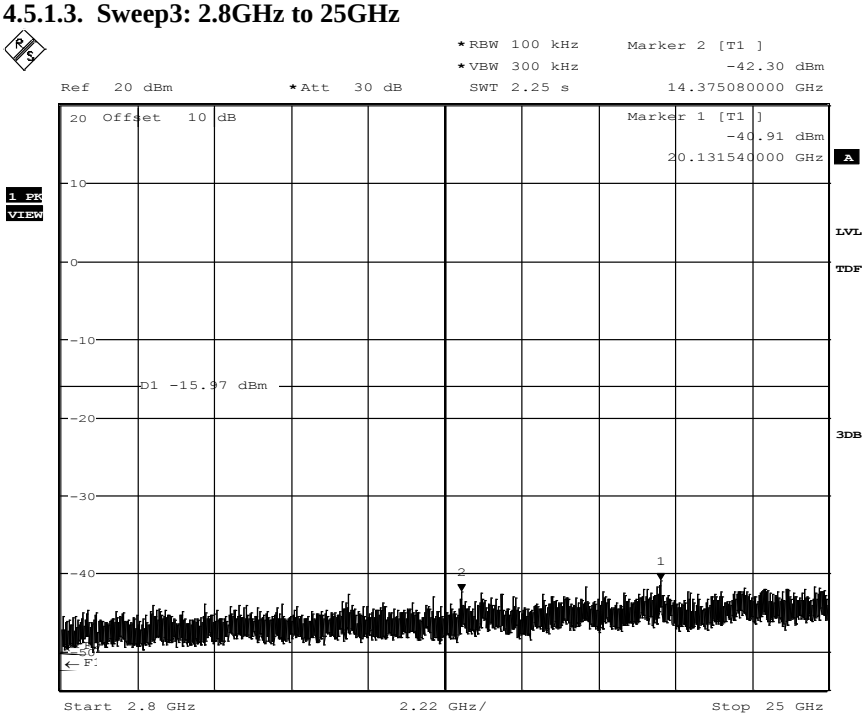
Date: 3.AUG.2016 10:44:43

4.5.1.2. Sweep 1: 150kHz to 30MHz



Date: 3.AUG.2016 10:43:27

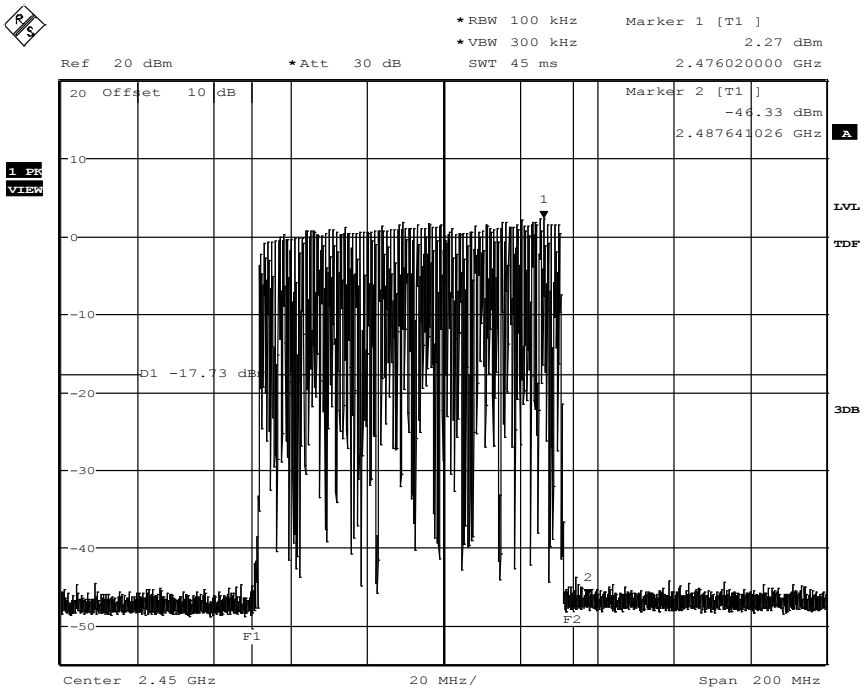
4.5.1.3. Sweep3: 2.8GHz to 25GHz



Date: 3.AUG.2016 10:45:53

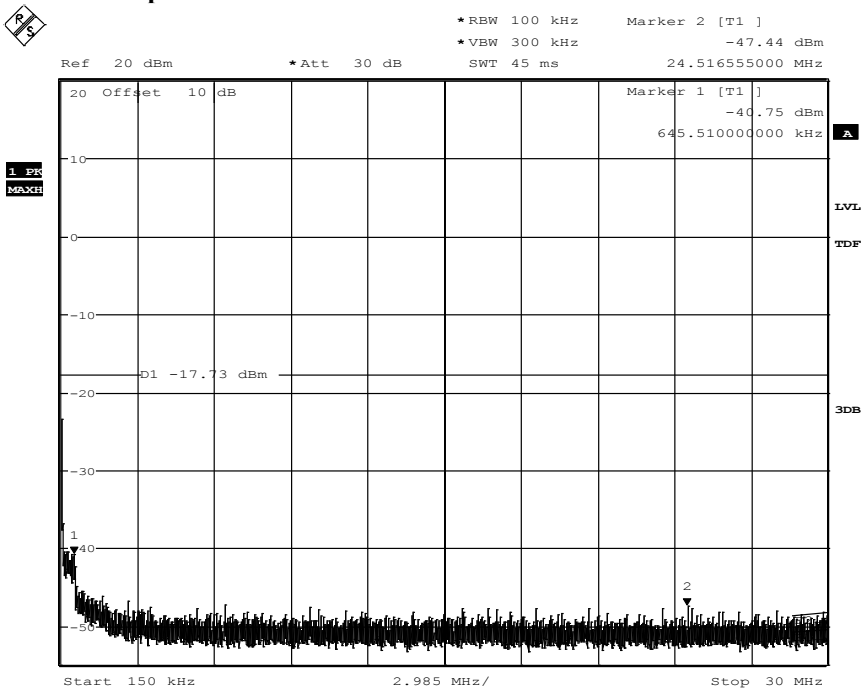
4.5.2. Modulation Pi/4 QPSK (hopping mode on)

4.5.2.1. Reference



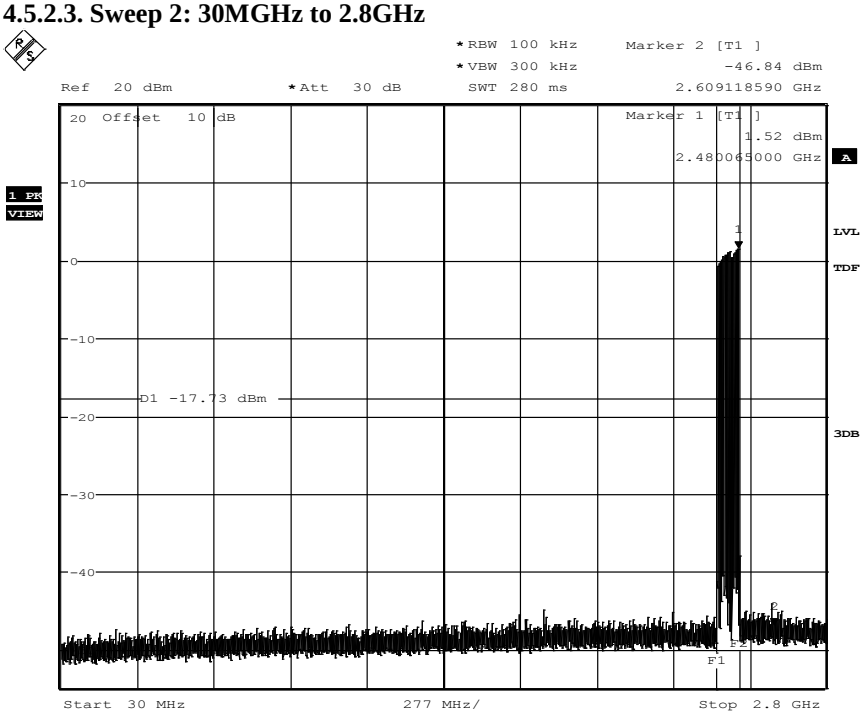
Date: 3.AUG.2016 10:28:39

4.5.2.2. Sweep 1: 150kHz to 30MHz



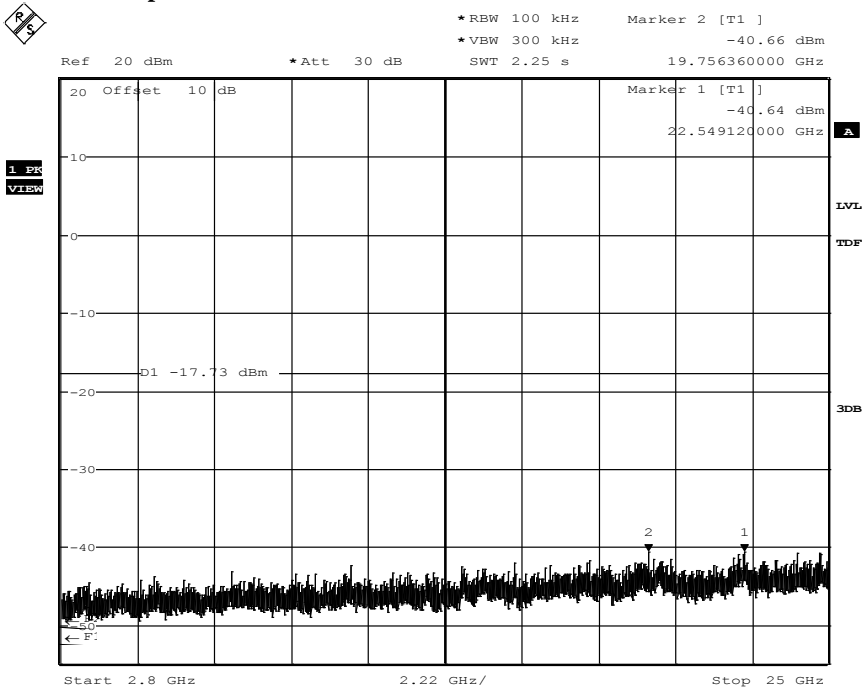
Date: 3.AUG.2016 10:30:15

4.5.2.3. Sweep 2: 30MGHz to 2.8GHz



Date: 3.AUG.2016 10:32:32

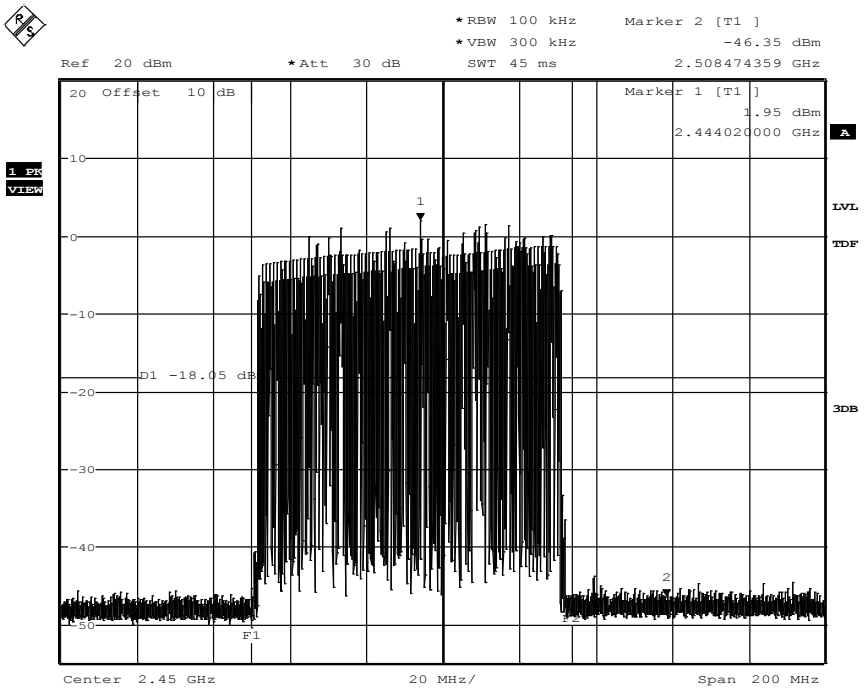
4.5.2.4. Sweep 3: 2.8GHz to 25GHz



Date: 3.AUG.2016 10:34:01

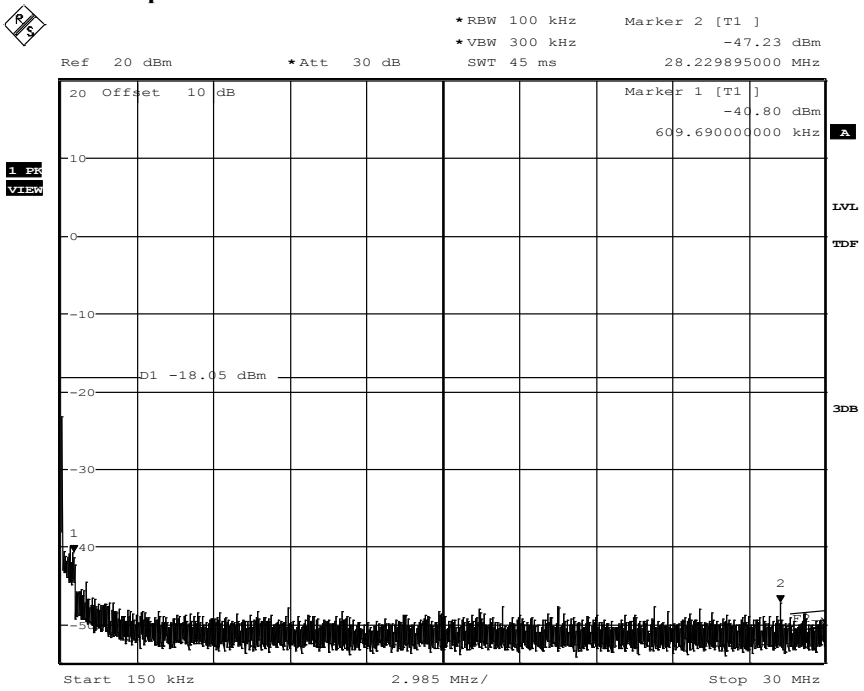
4.5.3. Modulation 8-DPSK (hopping mode on)

4.5.3.1. Reference



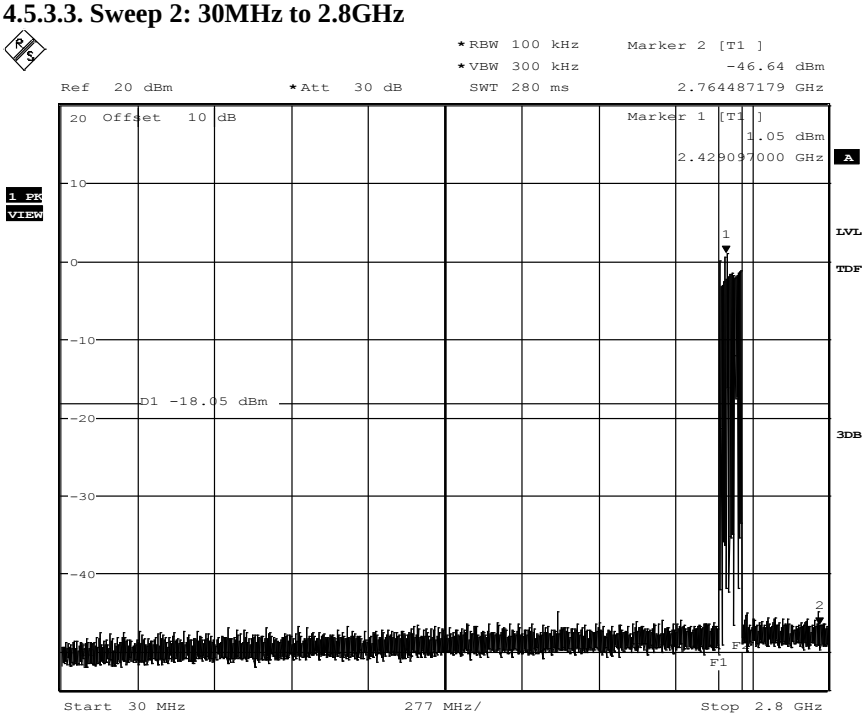
Date: 3.AUG.2016 10:13:52

4.5.3.2. Sweep 1: 150kHz to 30MHz



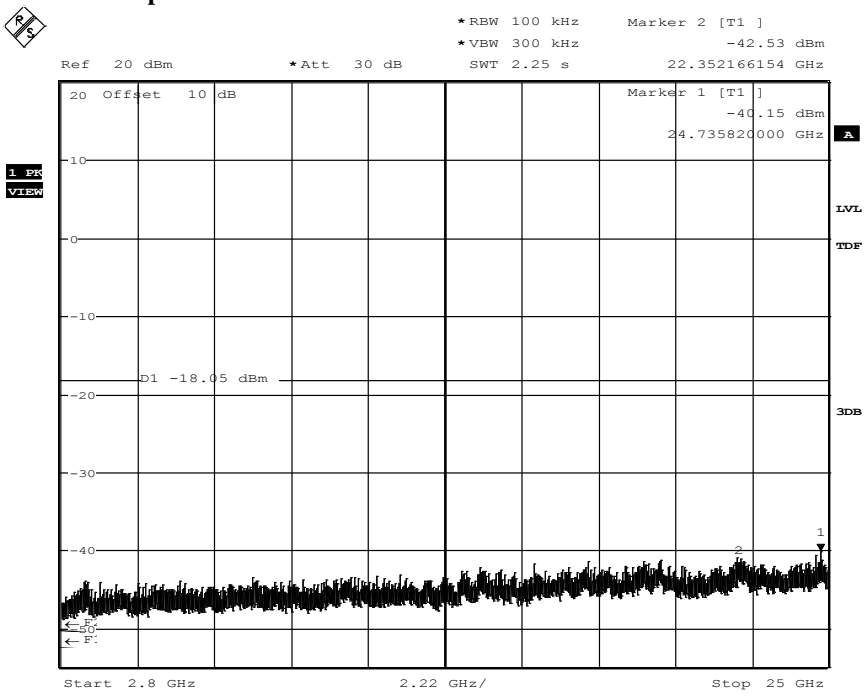
Date: 3.AUG.2016 10:15:29

4.5.3.3. Sweep 2: 30MHz to 2.8GHz



Date: 3.AUG.2016 10:17:54

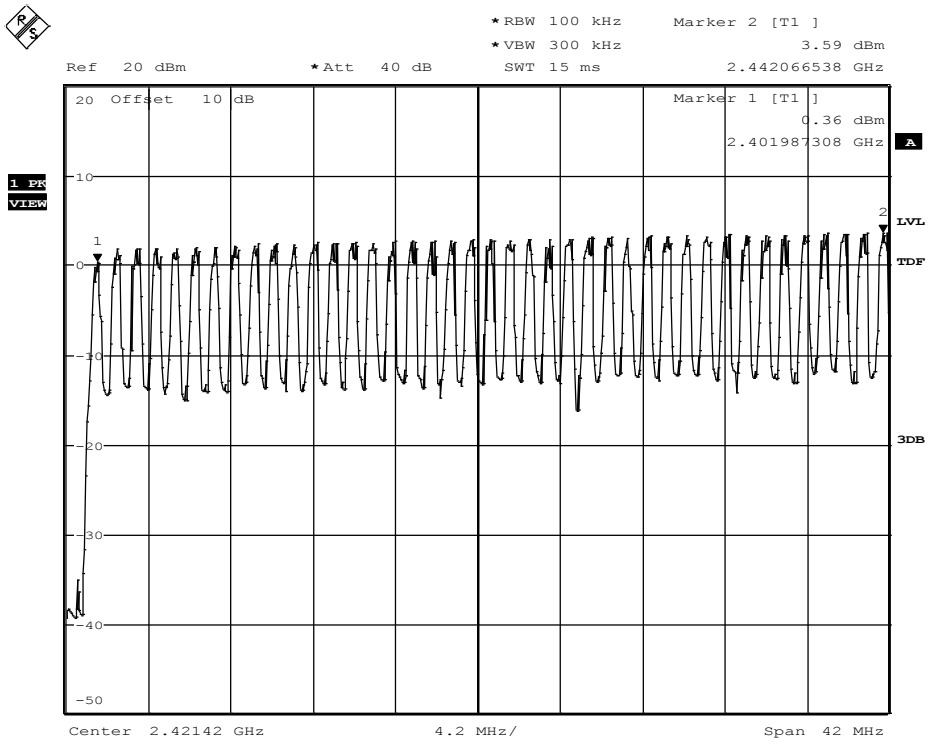
4.5.3.4. Sweep 3: 2.8GHz to 25GHz



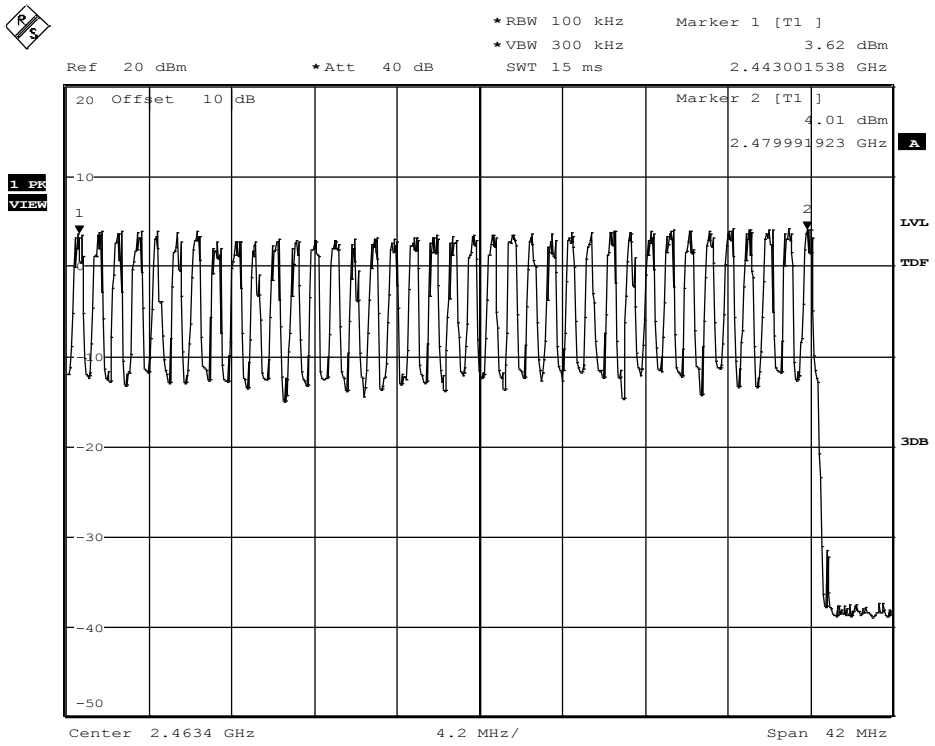
Date: 3.AUG.2016 10:20:00

4.6. Number of hopping frequencies

4.6.1. Modulation GFSK

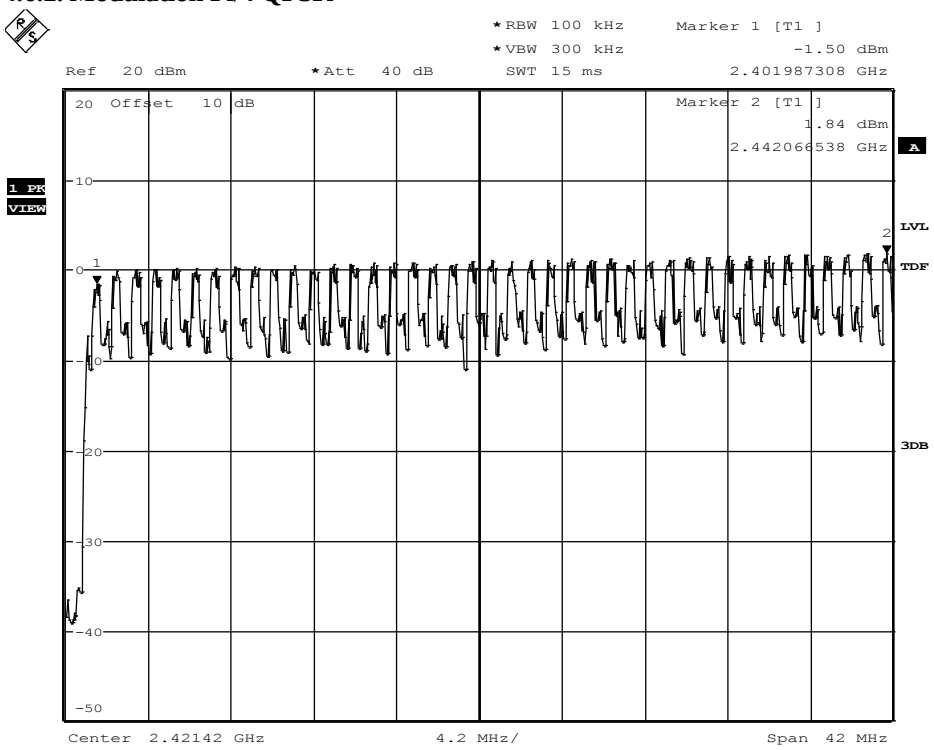


Date: 2.AUG.2016 14:03:39

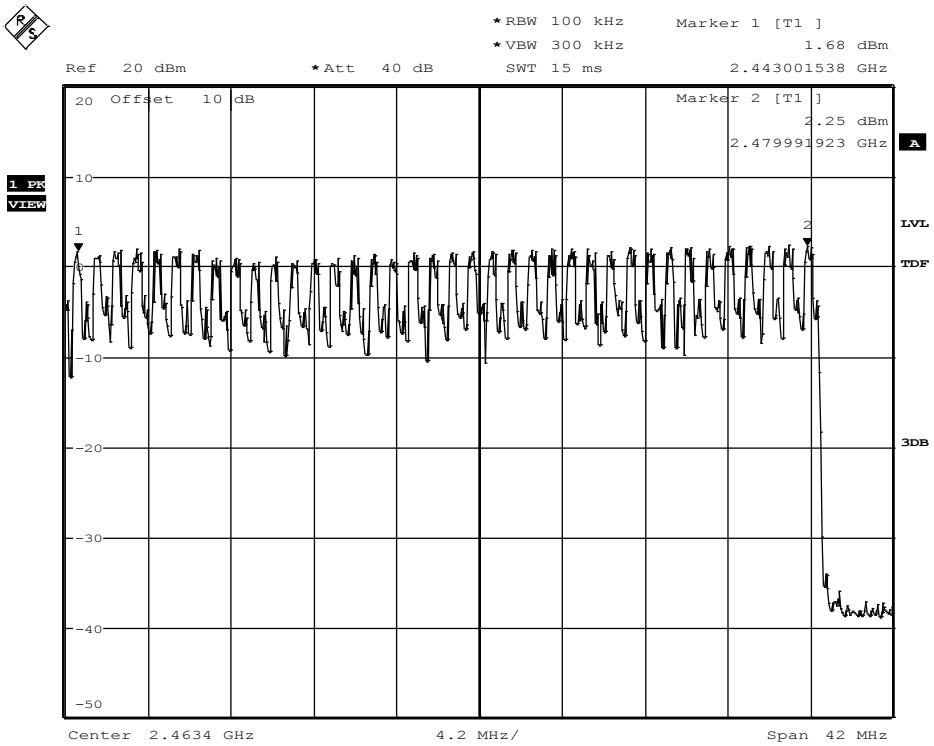


Date: 2.AUG.2016 14:19:01

4.6.2. Modulation Pi/4 QPSK

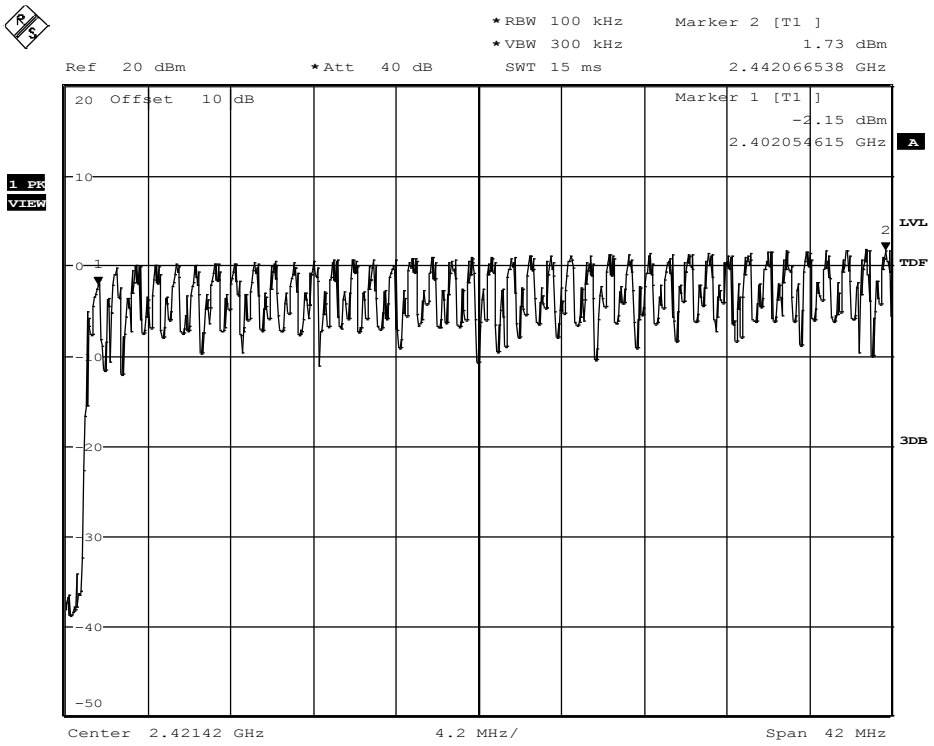


Date: 2.AUG.2016 13:48:15

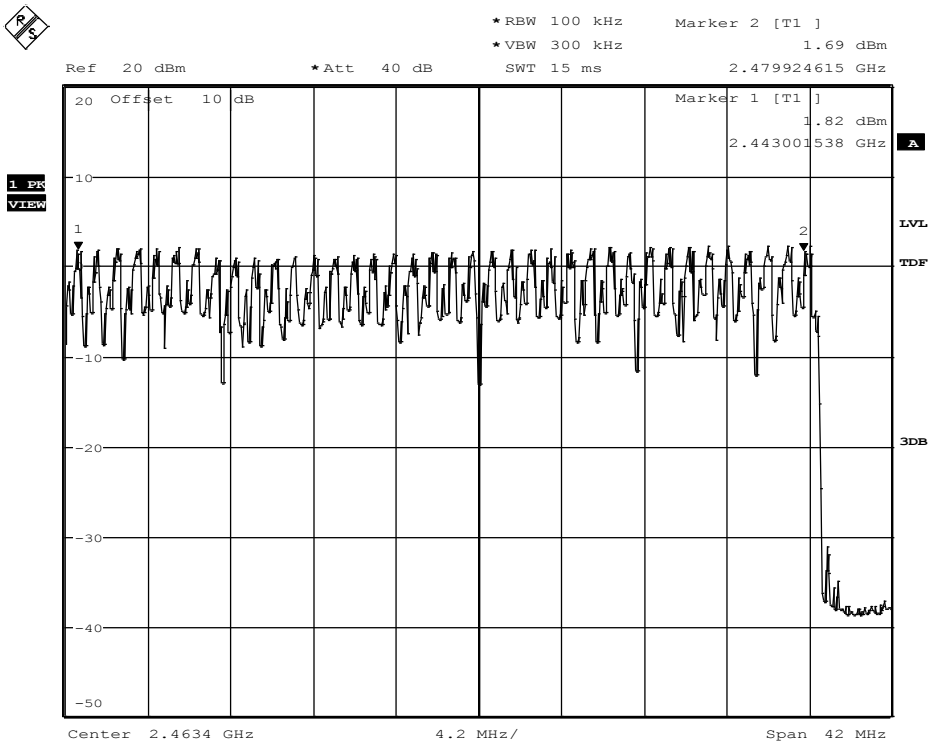


Date: 2.AUG.2016 14:41:52

4.6.3. Modulation 8DPSK



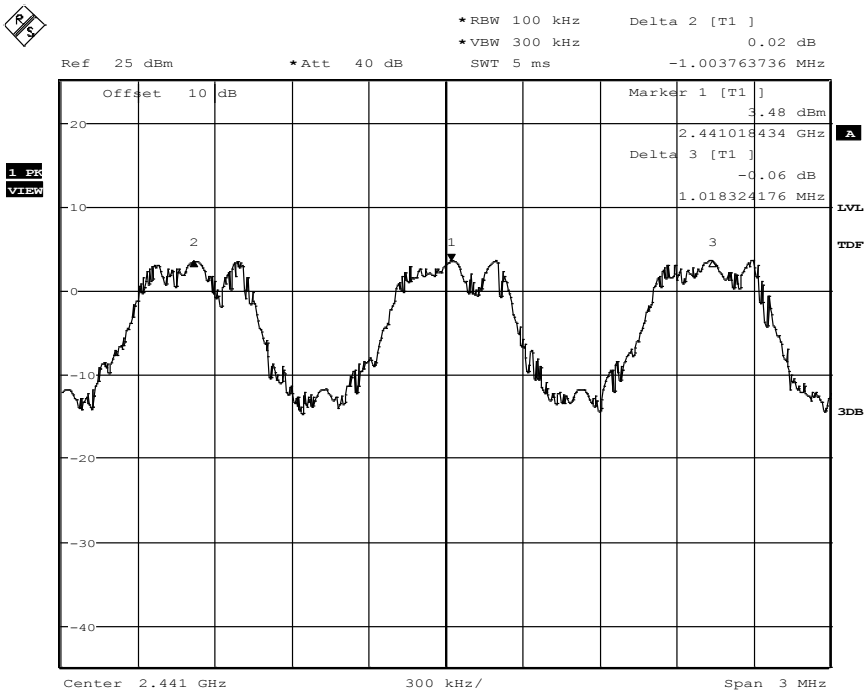
Date: 2.AUG.2016 13:19:12



Date: 2.AUG.2016 15:07:42

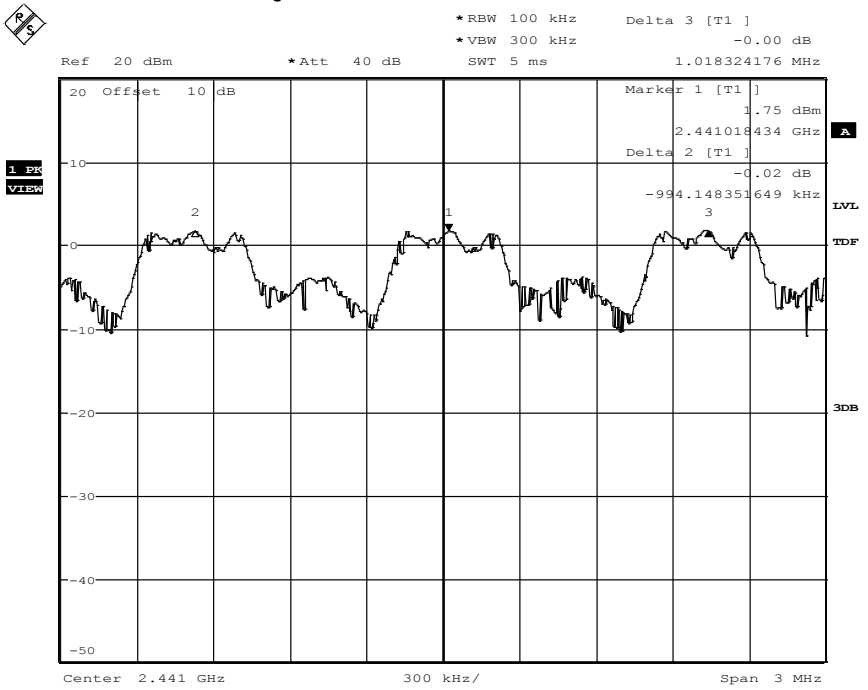
4.7. Channel separation (hopping mode)

4.7.1. Modulation GFSK



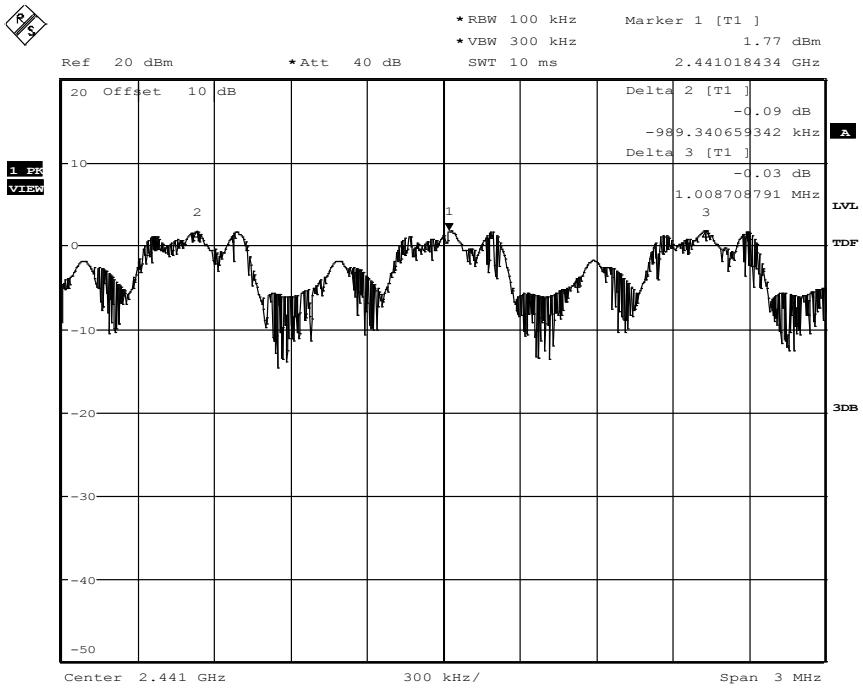
Date: 2.AUG.2016 16:09:08

4.7.2. Modulation Pi/4 QPSK



Date: 2.AUG.2016 16:00:44

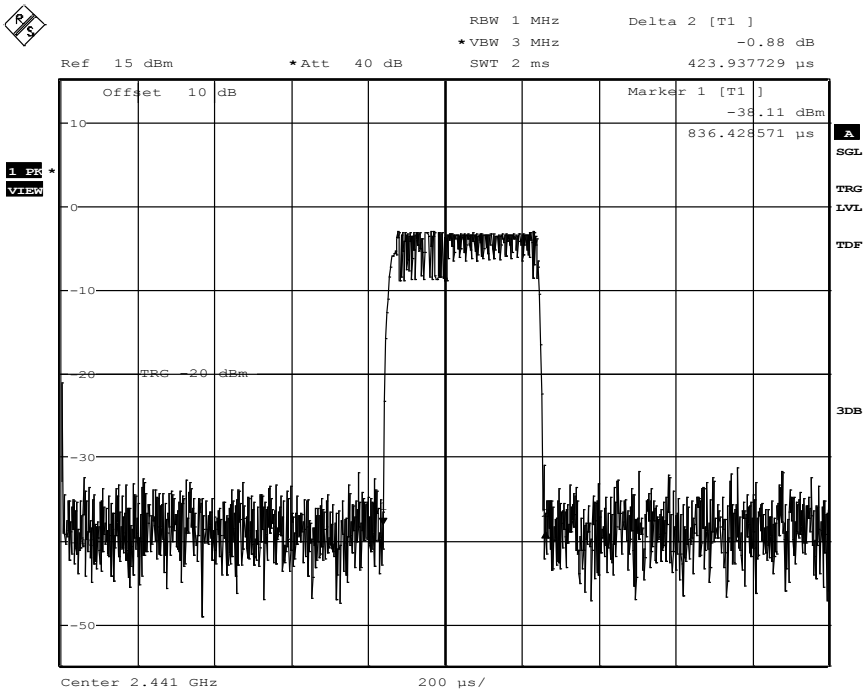
4.7.3. Modulation 8DPSK



Date: 2.AUG.2016 15:32:30

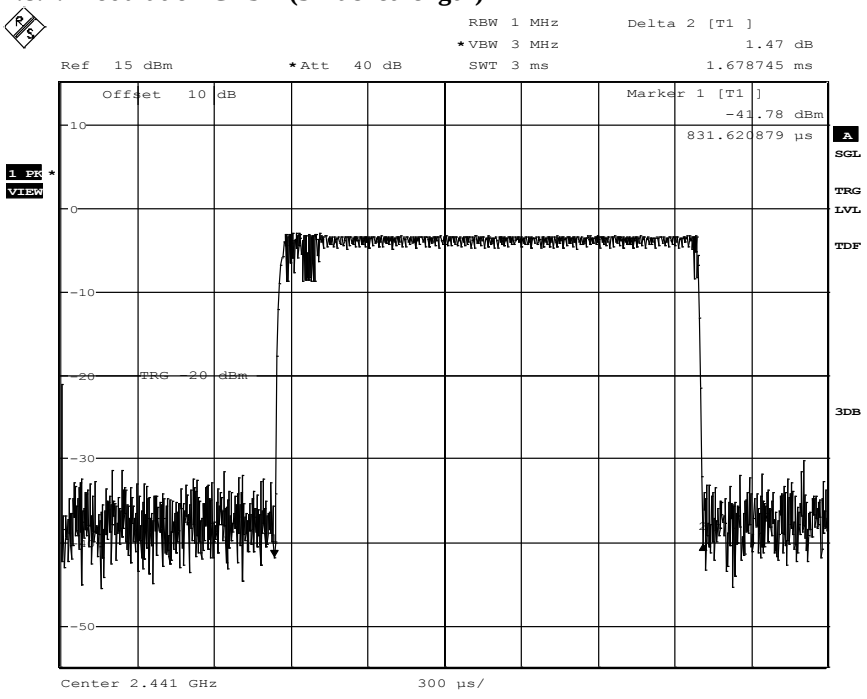
4.8. Time of occupancy

4.8.1. Modulation GFSK (1-Packet length)



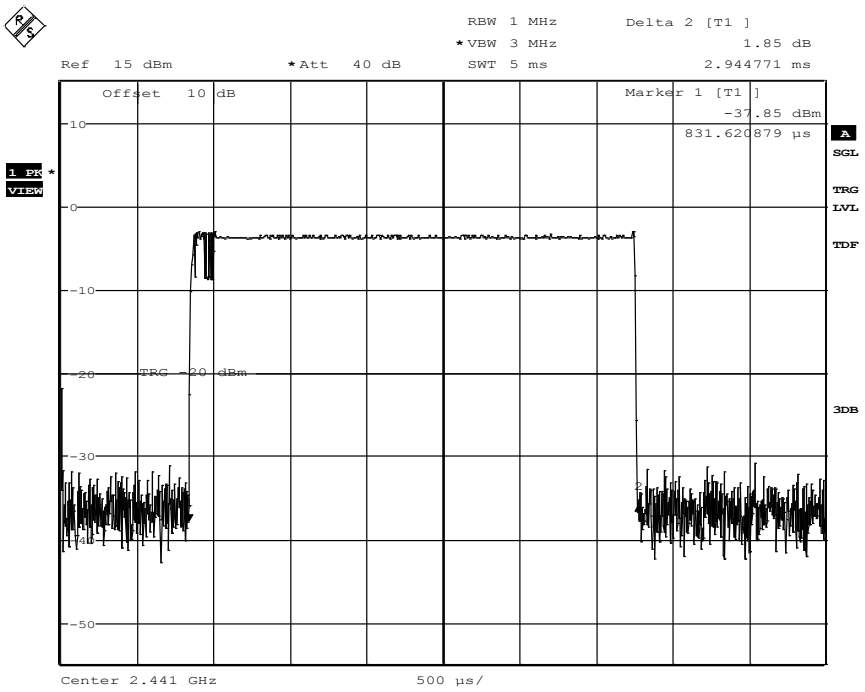
Date: 3.AUG.2016 10:55:32

4.8.2. Modulation GFSK (3-Packet length)



Date: 3.AUG.2016 10:57:55

4.8.3. Modulation GFSK (5-Packet length)



Date: 3.AUG.2016 11:00:44