

# Annex 1: Measurement diagrams to TEST REPORT No.: 17-1-0135301T01b







According to:  
**FCC Regulations**  
Part 15.209  
Part 15.247

**IC-Regulations**  
RSS-Gen, Issue 4  
RSS-247, Issue 2

for  
**Husqvarna AB**

**Bluetooth Low-Energy Module HQ-BLE-1**  
**590 11 35**

FCC ID: ZASHQ-BLE-1B  
ISED: 23307-HQBLE1B  
PMN: HMI Board Type 13  
HVIN: HMI Board Type 13

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01  Accredited EMC-Test Laboratory	 FEDERAL COMMUNICATIONS COMMISSION USA MRA US-EU 0003	 Industry Canada  Reg N.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions  Reg. No.: R-2666 C-2914, T-1967, G-301
 AUTHORIZED RF LABORATORY	 Authorized <sup>TM</sup> Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
<b>CETECOM GmbH</b> 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

<b>1. CONDUCTED RF-MEASUREMENTS ON ANTENNA PORT.....</b>	<b>3</b>
1.1. RF output Power .....	3
1.2. Dutycycle.....	6
1.3. Power spectral density .....	7
1.4. 6dB bandwidth.....	10
1.5. 99% occupied channel bandwidth .....	13
1.6. 20dBc.....	16
<b>2. RADIATED FIELD STRENGTH MEASUREMENTS ACCORD. §15.209&amp;15.205.....</b>	<b>22</b>
2.1. Magnetic field measurements $f < 30\text{MHz}$ .....	22
2.2. Field strength measurements $30\text{MHz} < f < 1\text{GHz}$ .....	25
2.3. Field strength measurements $1\text{GHz} < f < 18\text{GHz}$ .....	28
2.4. Field strength measurements $f > 18\text{GHz}$ .....	31
<b>3. RADIATED BAND-EDGE MEASUREMENTS ACCORD. §15.209 &amp; §15.205 (§15.247) .....</b>	<b>34</b>
3.1. Channel 37 (left band edge).....	34
3.2. Channel 39 (right band edge).....	35

## 1. Conducted RF-measurements on antenna port

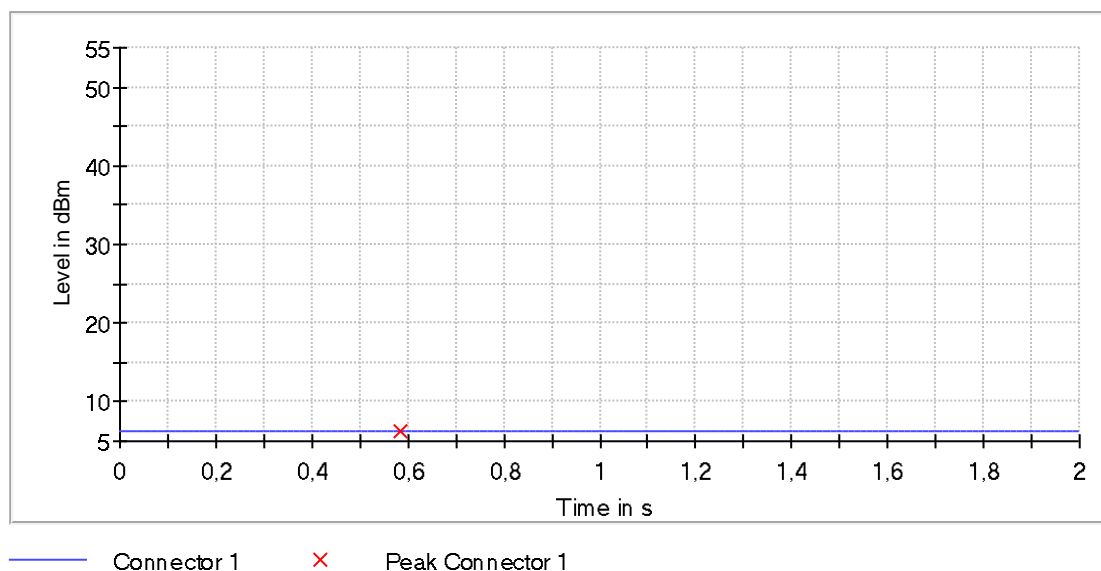
### 1.1. RF output Power

#### Peak output power (2402 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

#### Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2402.000000	6.4	30.0	PASS



Peak Power 1

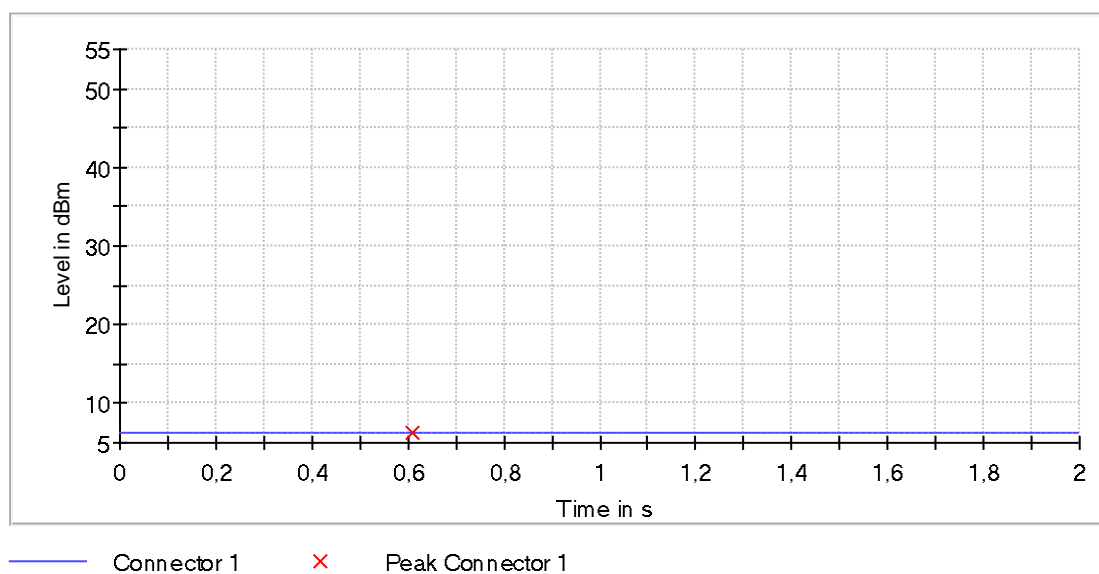
Peak Power\_low\_2402

## Peak output power (2442 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2442.000000	6.4	30.0	PASS



Peak Power 1

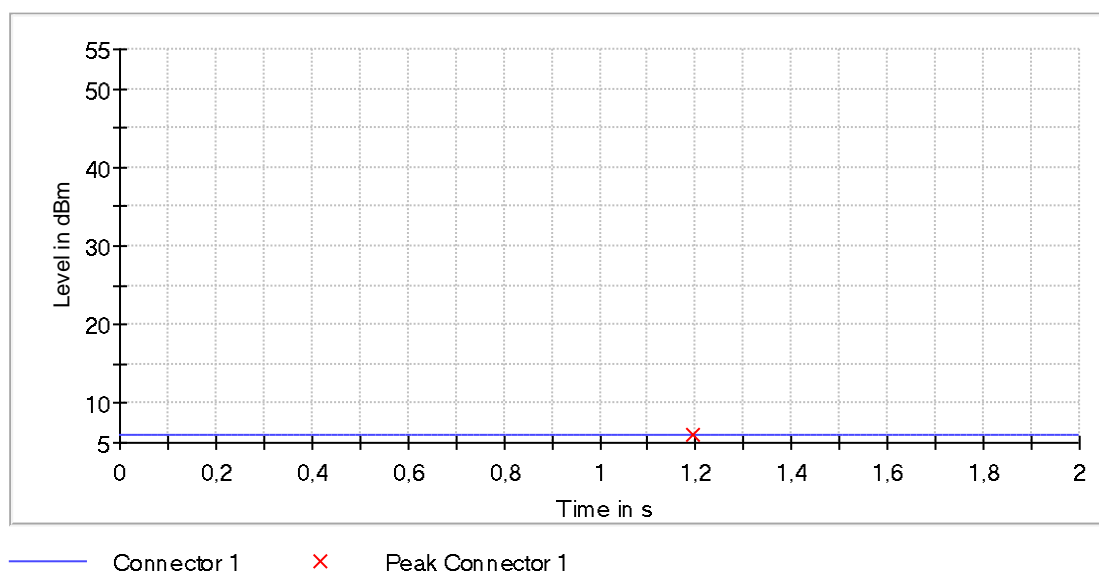
Peak Power\_mid\_2442

## Peak output power (2480 MHz)

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2480.000000	6.1	30.0	PASS



Peak Power 1

Peak Power\_high\_2480

## 1.2. Dutycycle

### DutyCycle

Definition: Duty Cycle is defined as the ratio of the total transmitter 'on'-time to the observation period.

Frequency (MHz)	DutyCycle (%)	Limit Max (%)	Result
2402	100.000	---	PASS
2442	100.000	---	PASS
2480	100.000	---	PASS

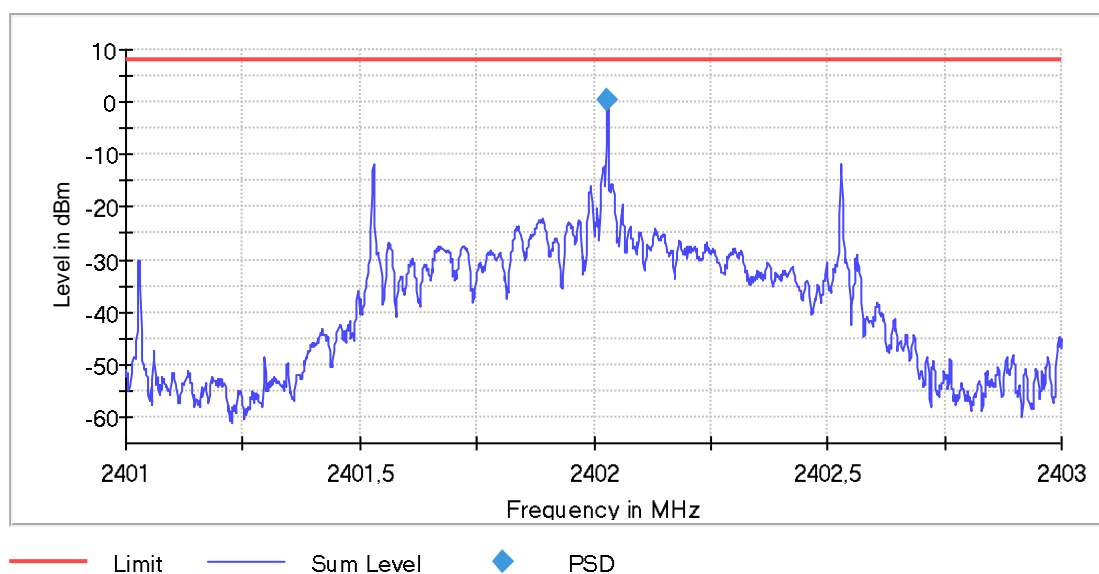
### 1.3.Power spectral density

## Power Spectral Density (2402 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2402.000000	2402.029231	0.491	8.0	PASS



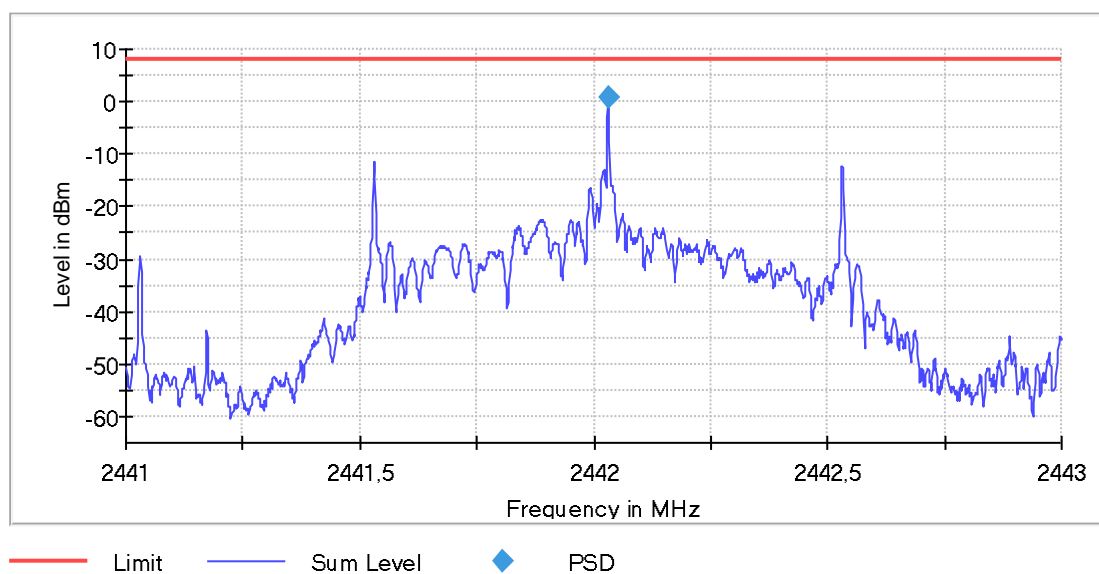
PSD Connector 1

## Power Spectral Density (2442 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2442.000000	2442.030769	0.705	8.0	PASS



PSD Connector 1

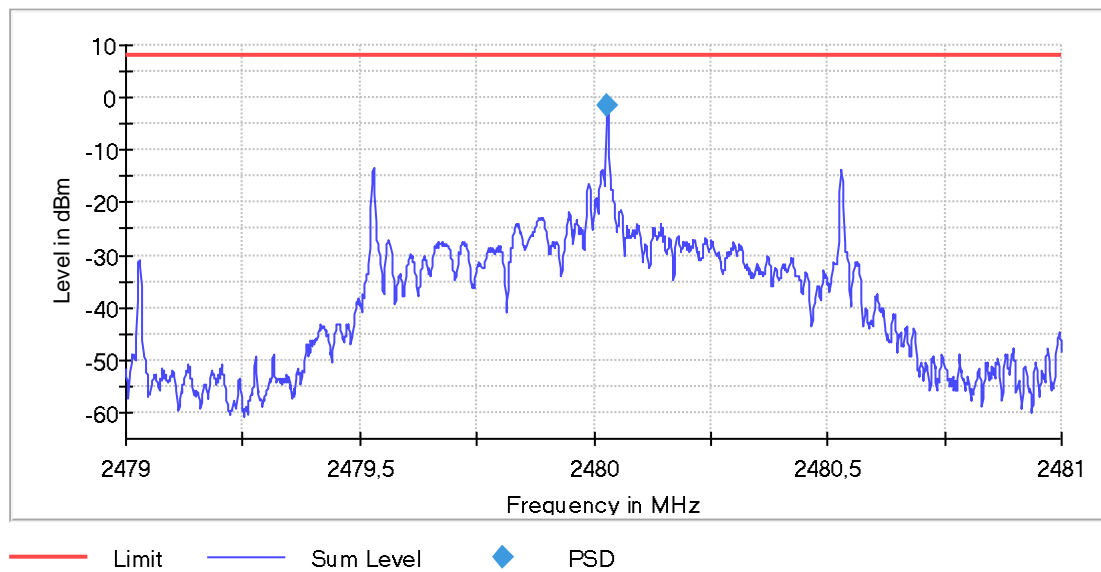


## Power Spectral Density (2480 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2480.000000	2480.029231	-1.548	8.0	PASS



PSD Connector 1

## 1.4. 6dB bandwidth

### Minimum Emission Bandwidth 6 dB (2402 MHz)

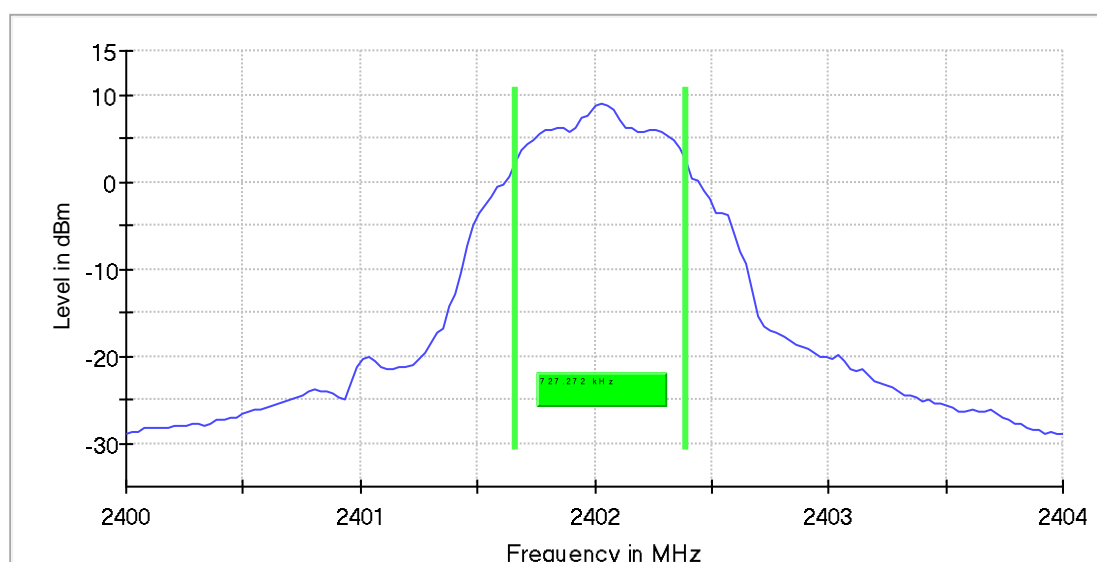
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

#### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2402.000000	0.727272	0.500000	---	2401.662338	2402.389610	8.8

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

DUT Frequency (MHz)	Result
2402.000000	PASS



Bandwidth

## Minimum Emission Bandwidth 6 dB (2442 MHz)

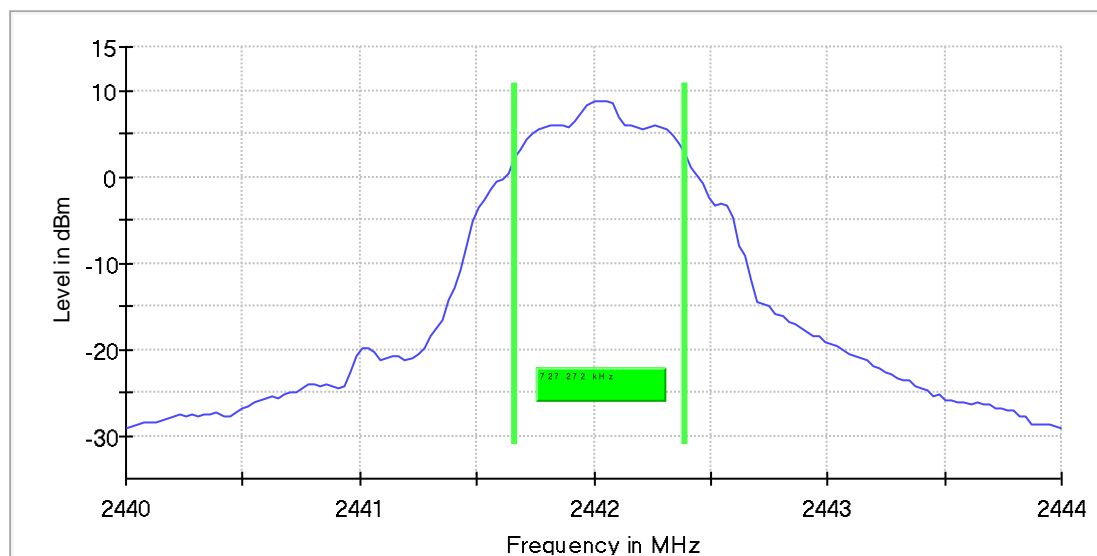
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2442.000000	0.727272	0.500000	---	2441.662338	2442.389610	8.8

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

DUT Frequency (MHz)	Result
2442.000000	PASS



Bandwidth

## Minimum Emission Bandwidth 6 dB (2480 MHz)

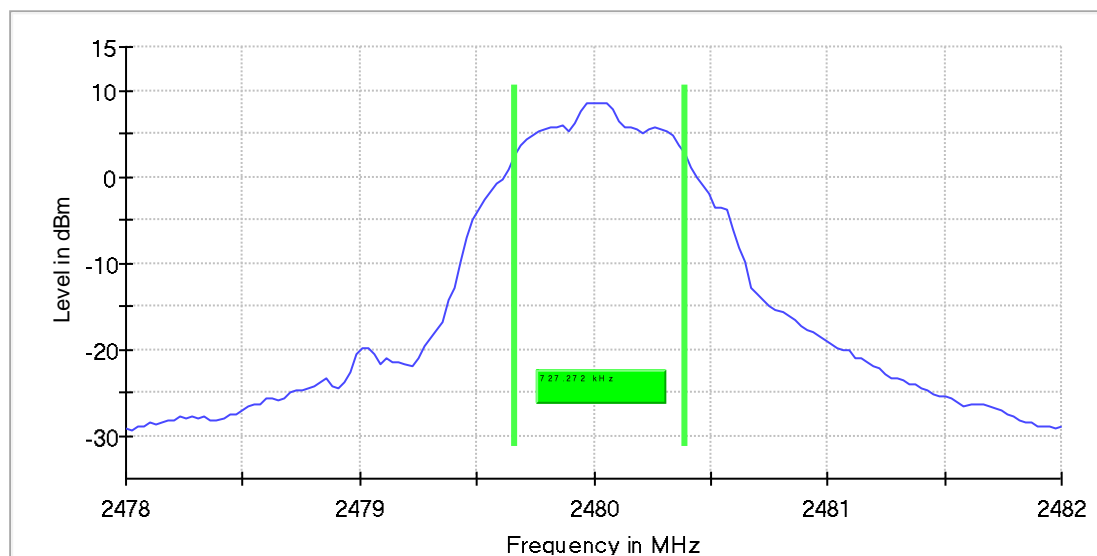
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v03r05 and ANSI C63.10

### 6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)
2480.000000	0.727272	0.500000	---	2479.662338	2480.389610	8.6

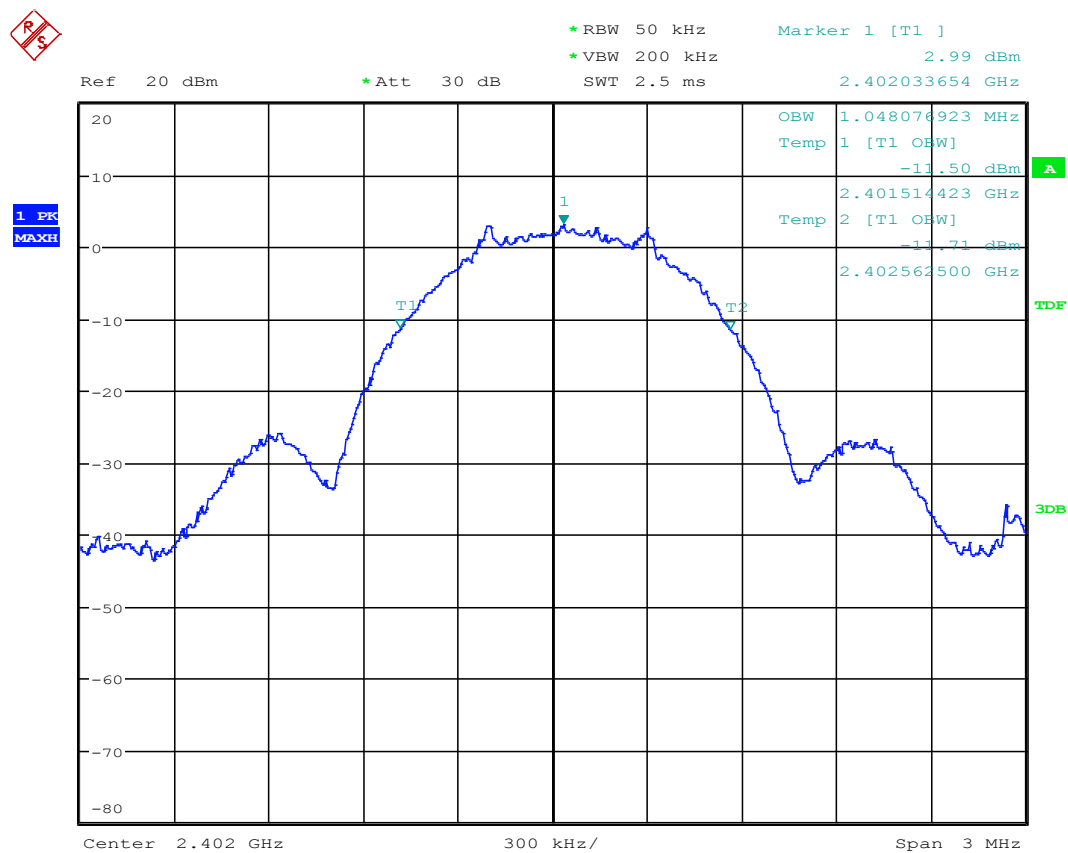
(continuation of the "6 dB Bandwidth" table from column 7 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS



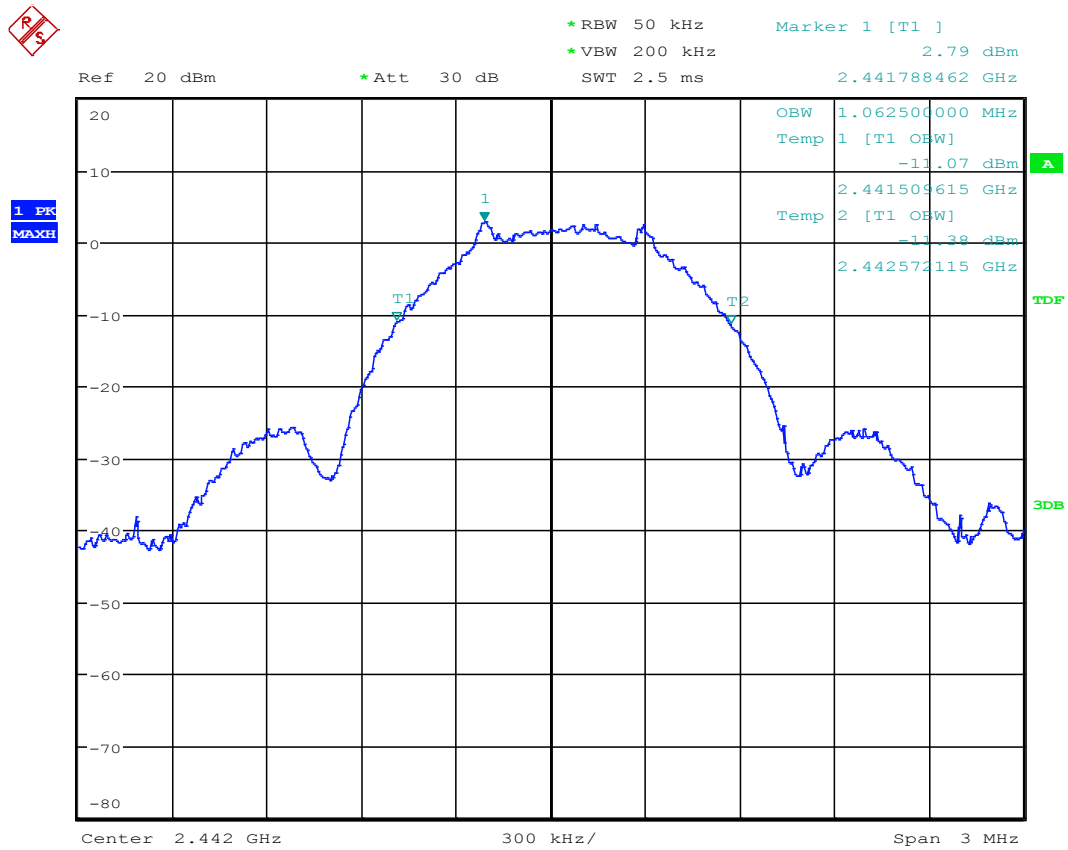
Bandwidth

## 1.5. 99% occupied channel bandwidth



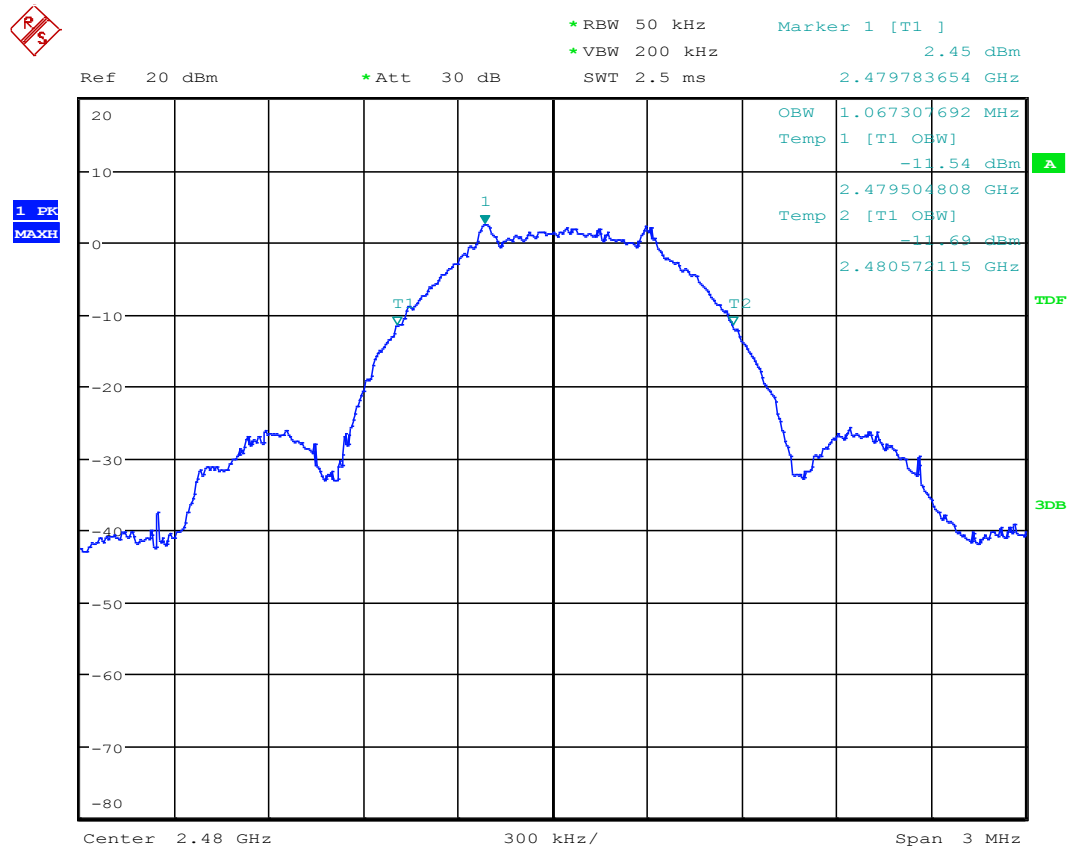
Date: 7.NOV.2017 18:17:41

99%OBW\_low\_2402



Date: 7.NOV.2017 18:18:54

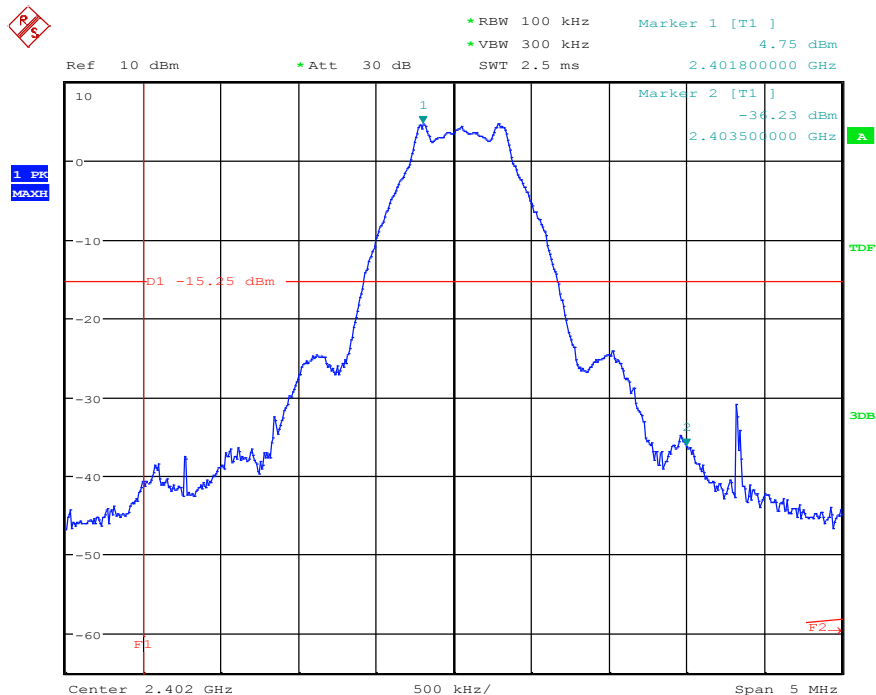
99%OBW\_mid\_2442



Date: 7.NOV.2017 18:20:13

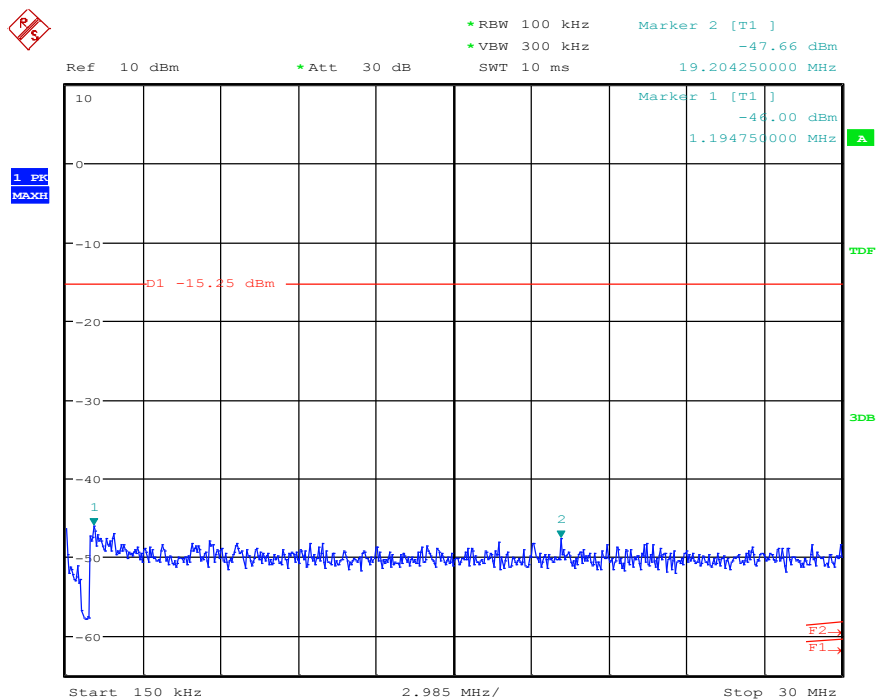
99%OBW\_high\_2480

## 1.6. 20dBc



Date: 7.NOV.2017 18:12:40

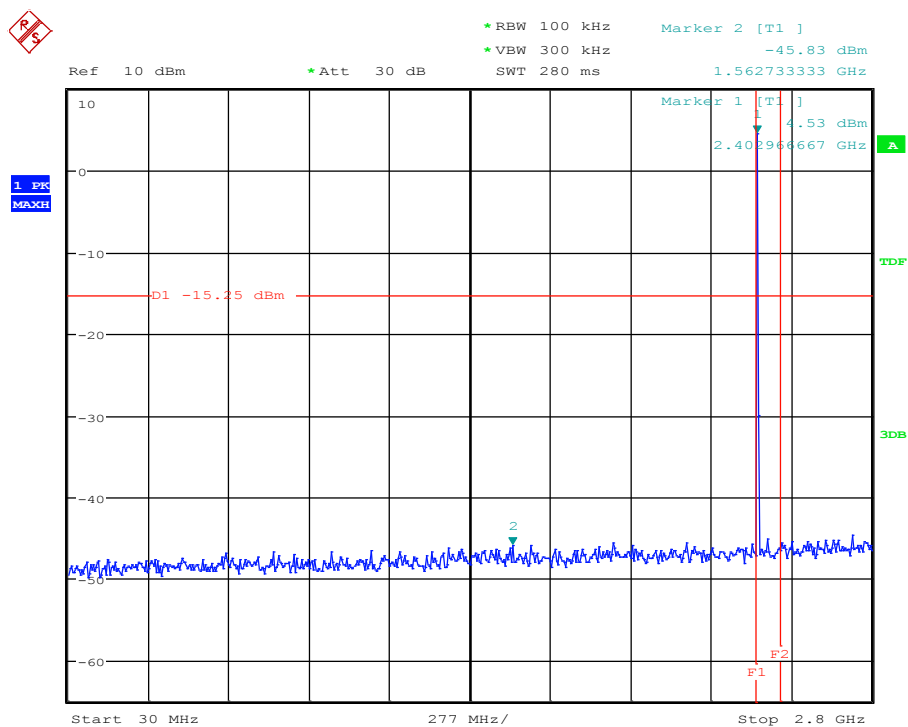
### 20dBc\_ref\_low\_BT\_LE



Date: 7.NOV.2017 18:14:08

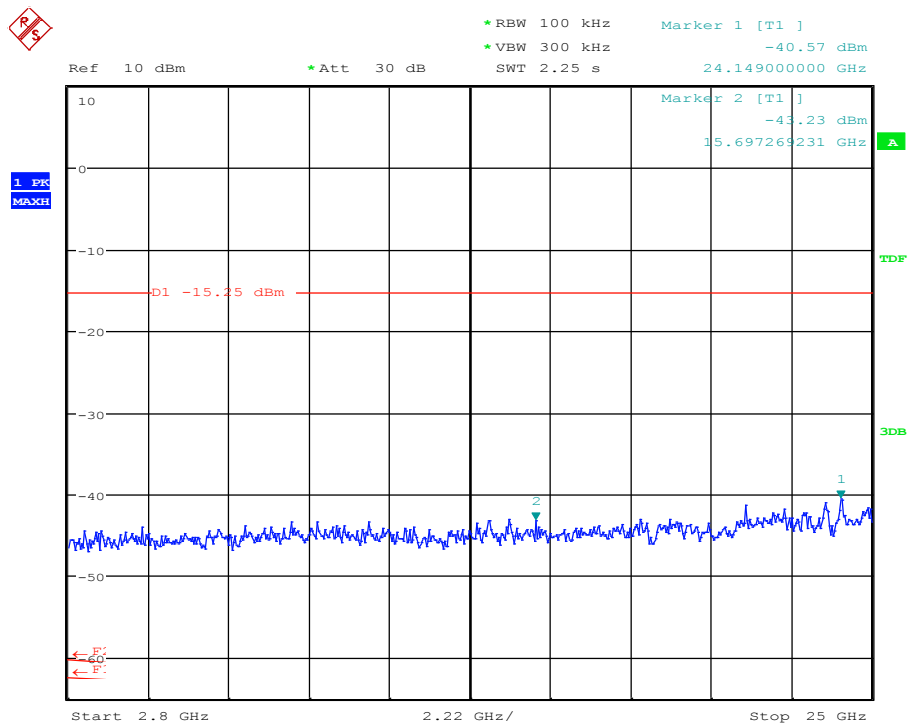
### 20dBc\_150kHz-30MHz\_low\_BT\_LE





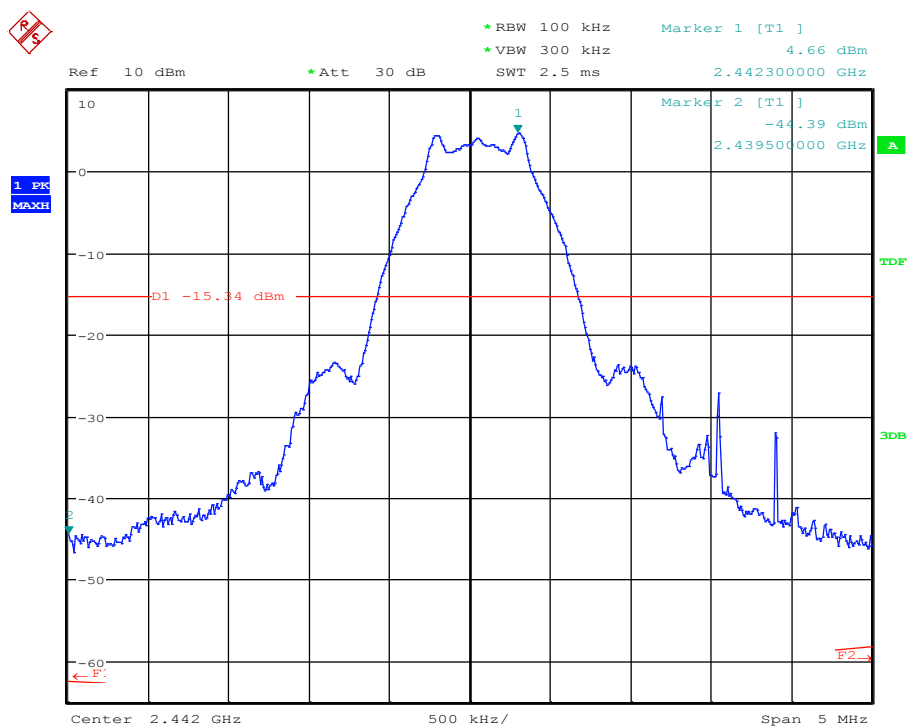
Date: 7.NOV.2017 18:14:54

20dBc\_30MHz-2.8GHz\_low\_BT\_LE



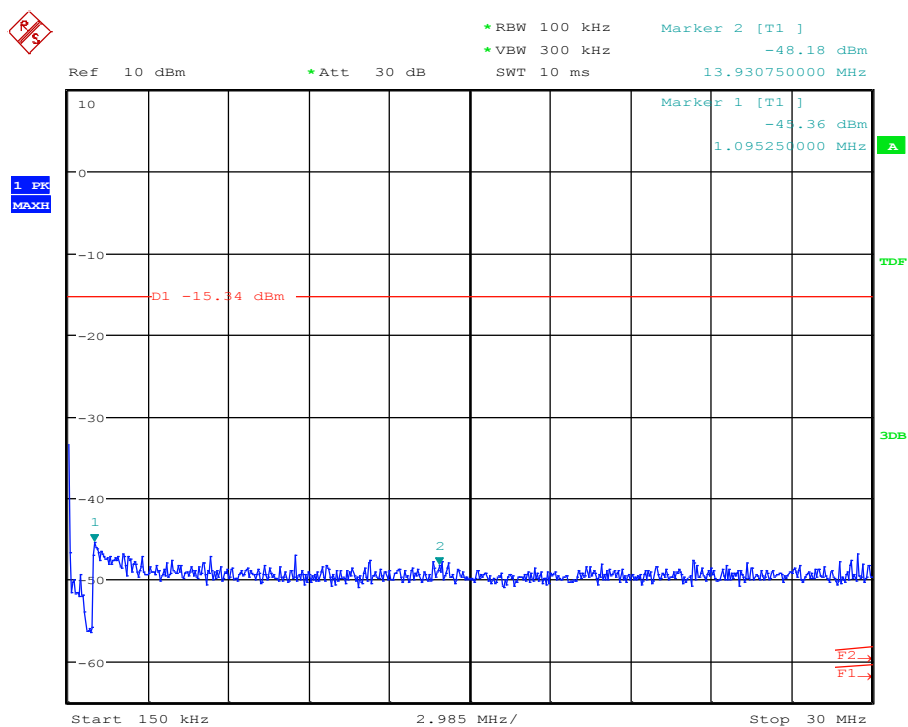
Date: 7.NOV.2017 18:16:21

20dBc\_2.8-25GHz\_low\_BT\_LE



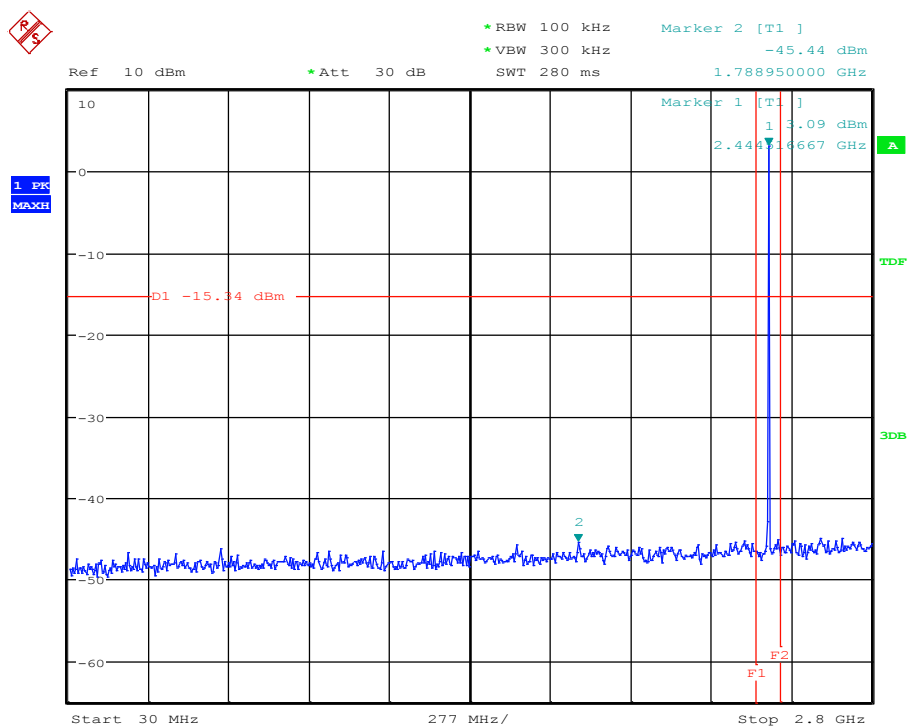
Date: 7.NOV.2017 18:41:43

20dBc\_ref\_mid\_BT\_LE



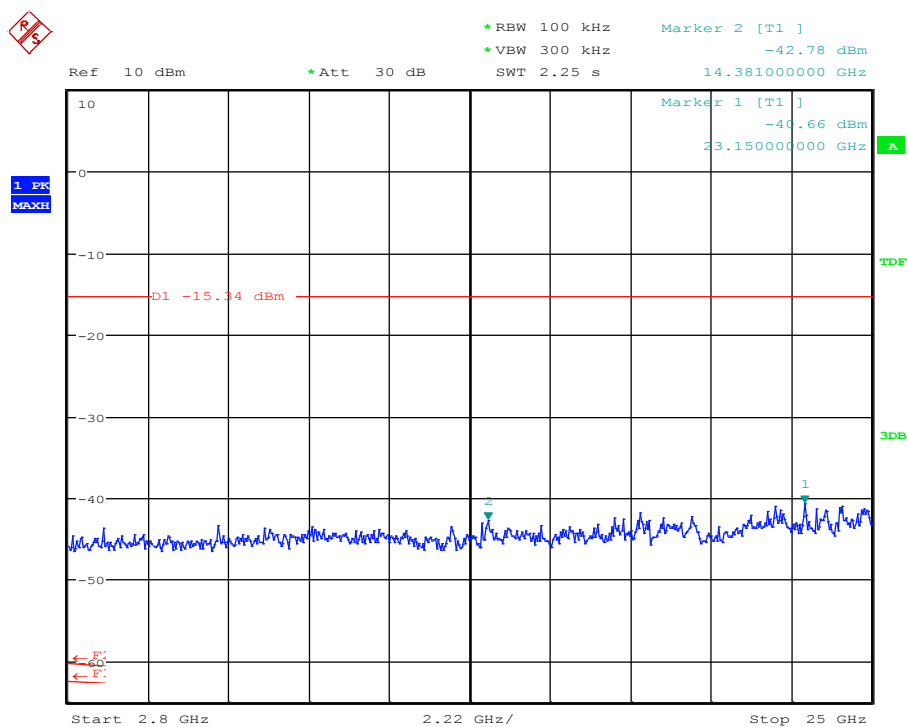
Date: 7.NOV.2017 18:43:20

20dBc\_150kHz-30MHz \_mid\_BT\_LE



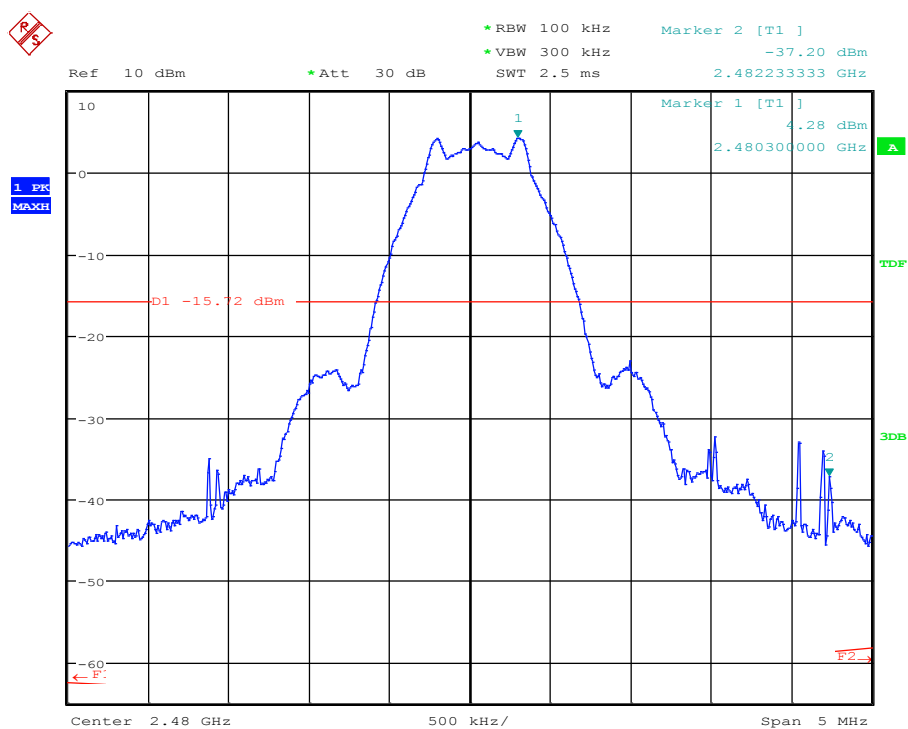
Date: 7.NOV.2017 18:44:14

## 20dBc\_30MHz-2.8GHz\_mid\_BT\_LE



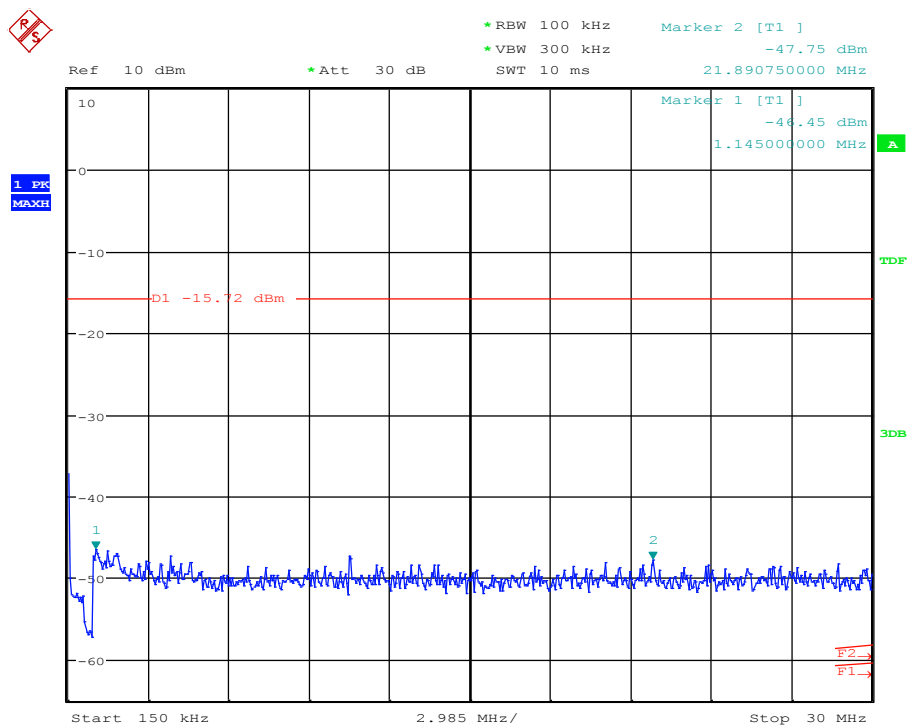
Date: 7.NOV.2017 18:45:03

## 20dBc\_2.8-25GHz\_mid\_BT\_LE



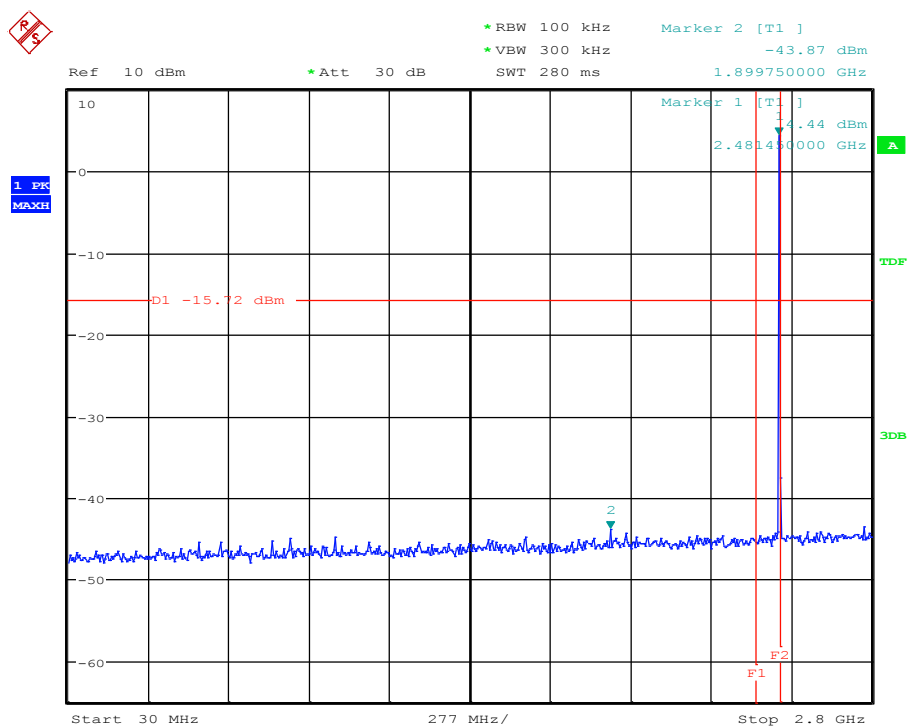
Date: 7.NOV.2017 18:23:11

## 20dBc\_ref\_high\_BT\_LE



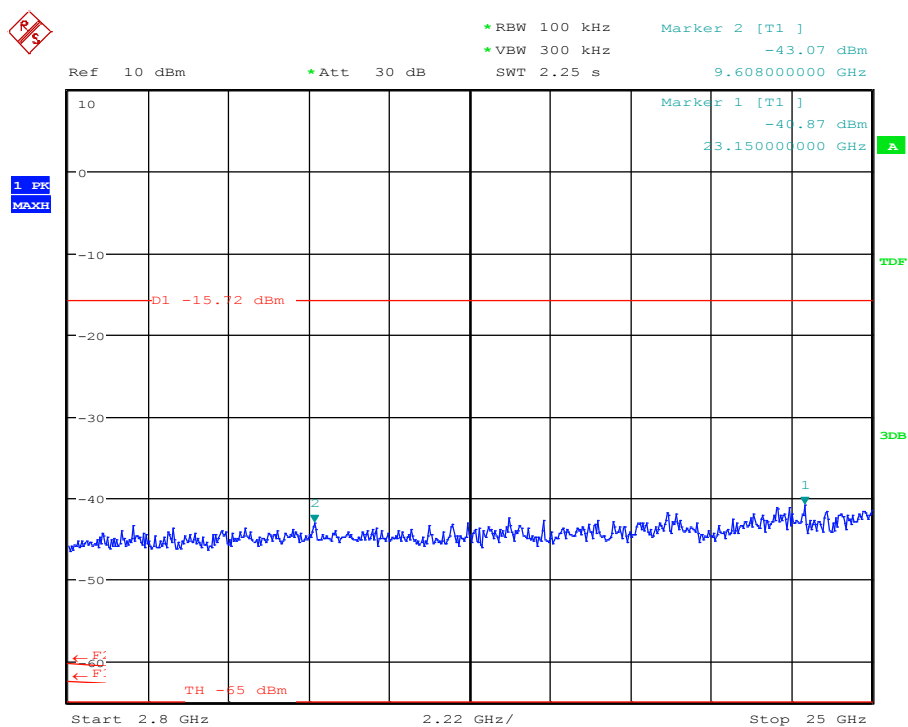
Date: 7.NOV.2017 18:24:04

## 20dBc\_150kHz-30MHz\_high\_BT\_LE



Date: 7.NOV.2017 18:38:10

## 20dBc\_30MHz-2.8GHz\_high\_BT\_LE



Date: 7.NOV.2017 18:40:09

## 20dBc\_2.8-25GHz\_high\_BT\_LE

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

### 2.1. Magnetic field measurements $f < 30\text{MHz}$

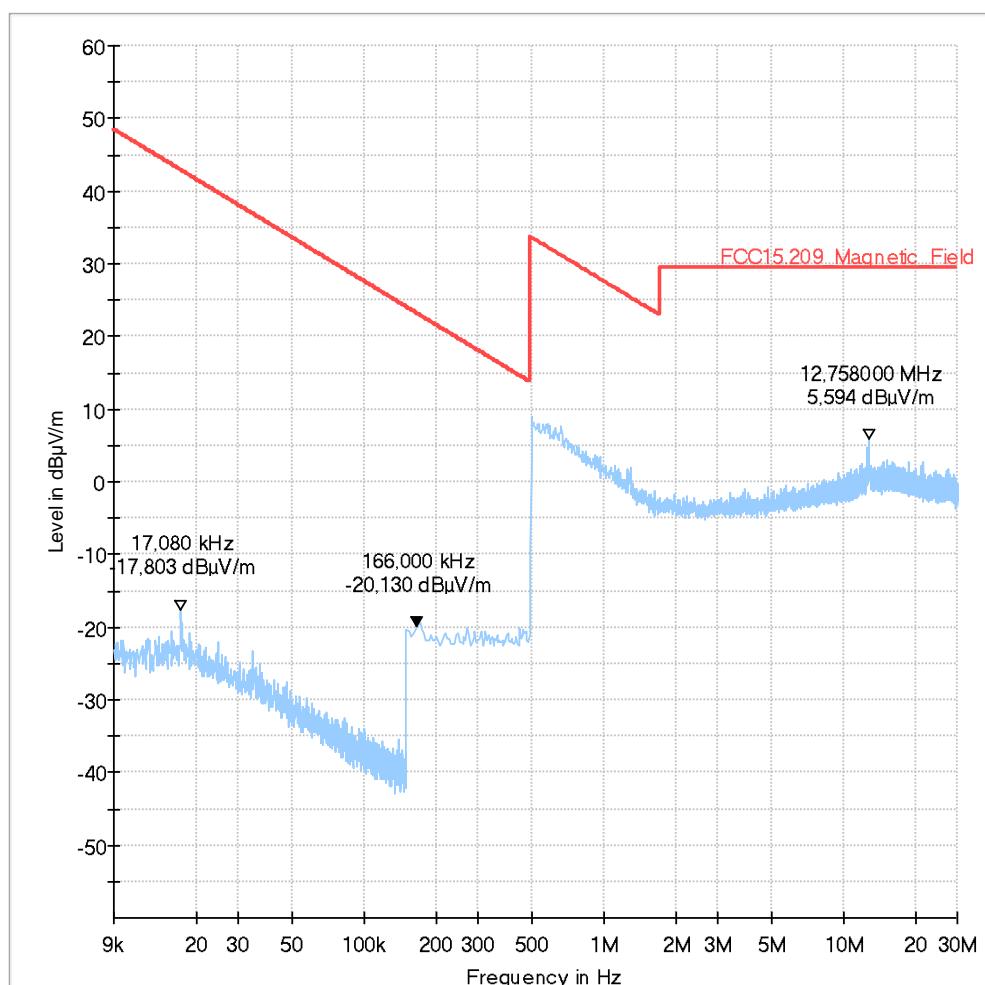
#### 2.01\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch0-MAX

##### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Operating Conditions:	Continuous TX-BT-LE Mode-GFSK-1 Mbps-Pattern Length 37-Ch 0 (2402 MHz)-PWRMAX
Operator Name:	Klv
Comment:	

##### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies



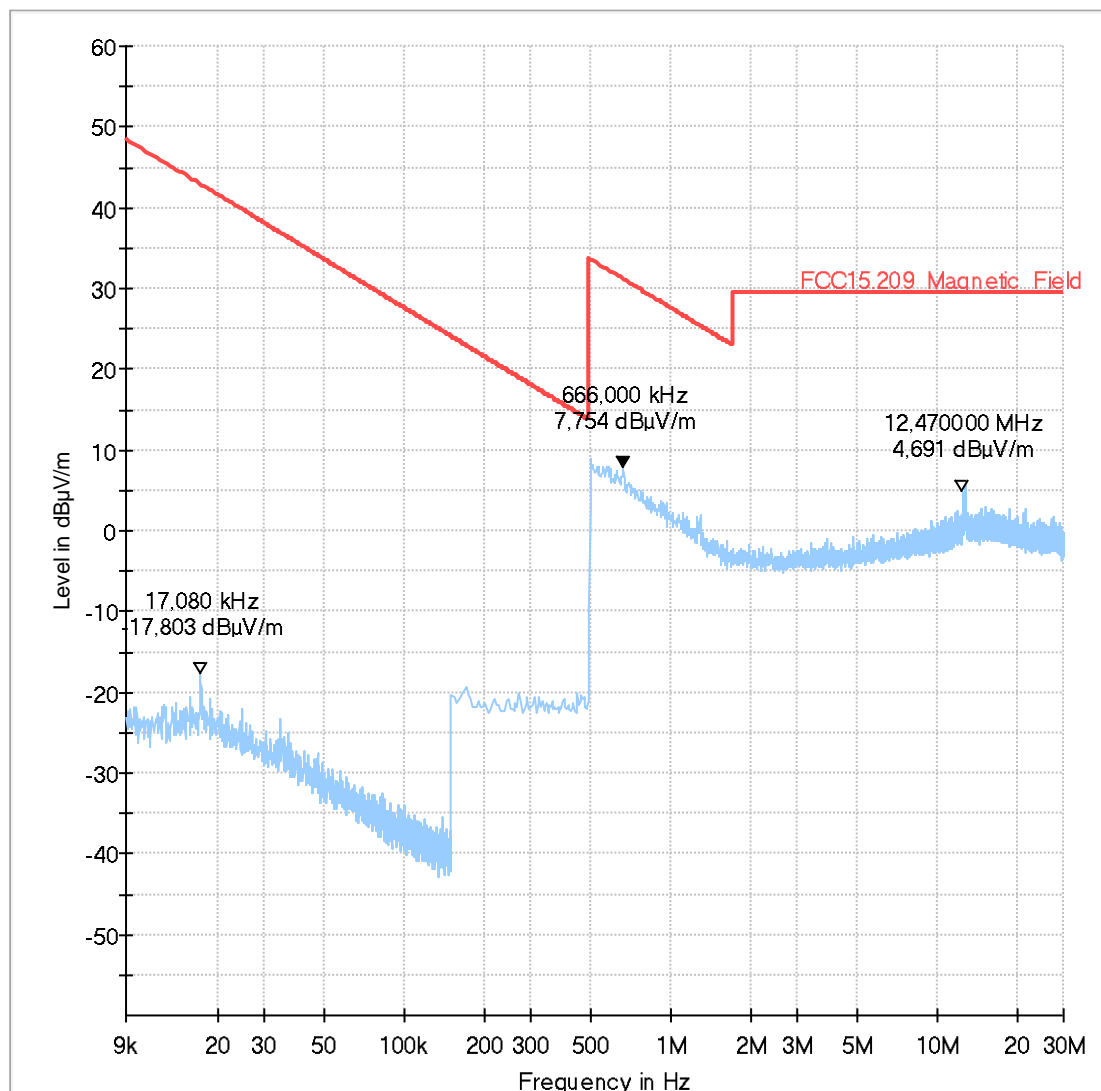
## 2.02\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch20-MAX

### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Operating Conditions:	Continuous TX-BT-LE Mode-GFSK-1 Mbps-Pattern Length37-Ch 20 (2442 MHz)-PWRMAX
Operator Name:	Klv
Comment:	

### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies



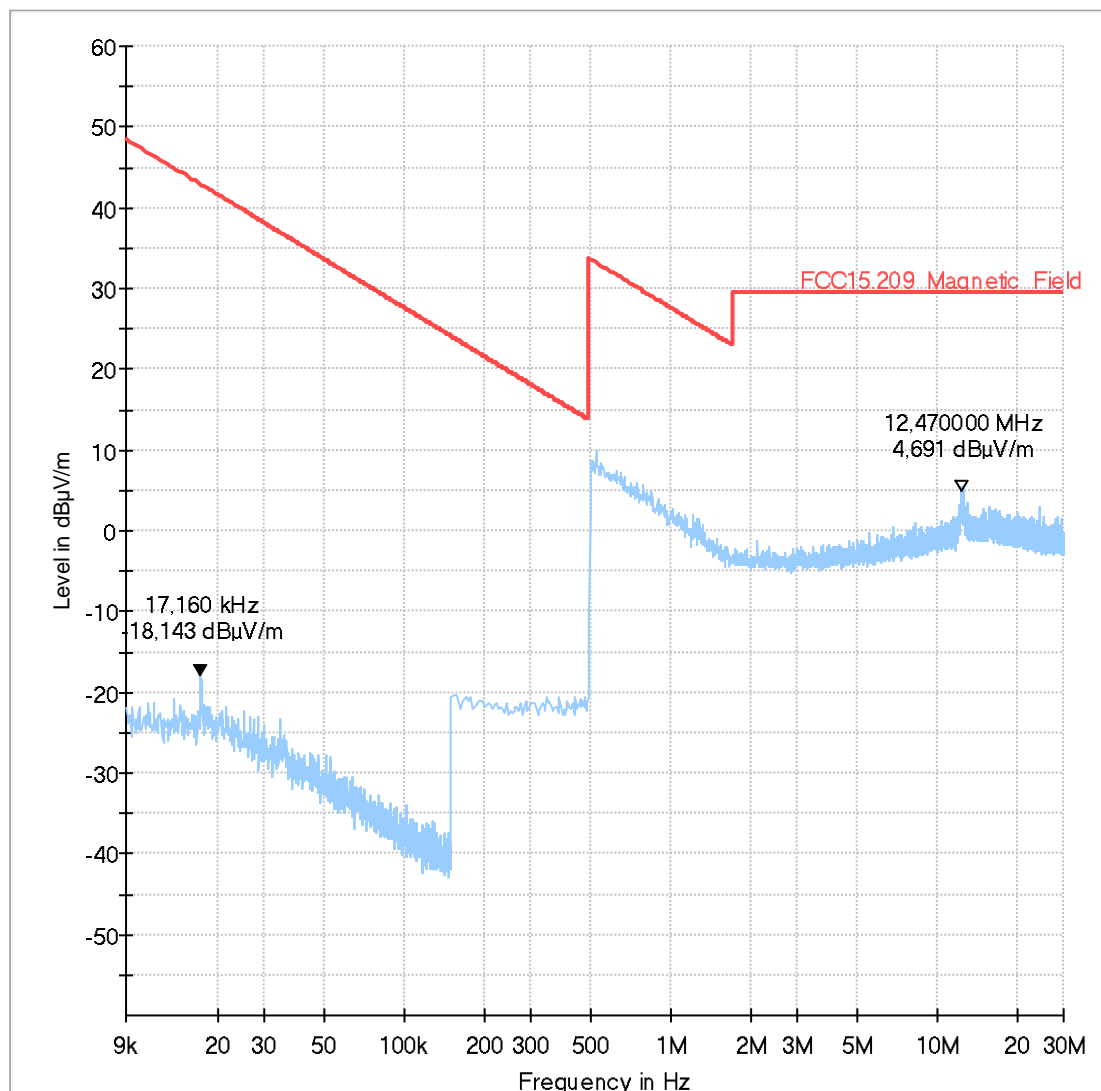
## 2.03\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch39-MAX

### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Operating Conditions:	Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Length37--Ch 39 (2480 MHz)- PWRMAX
Operator Name:	Klv
Comment:	

### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies





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

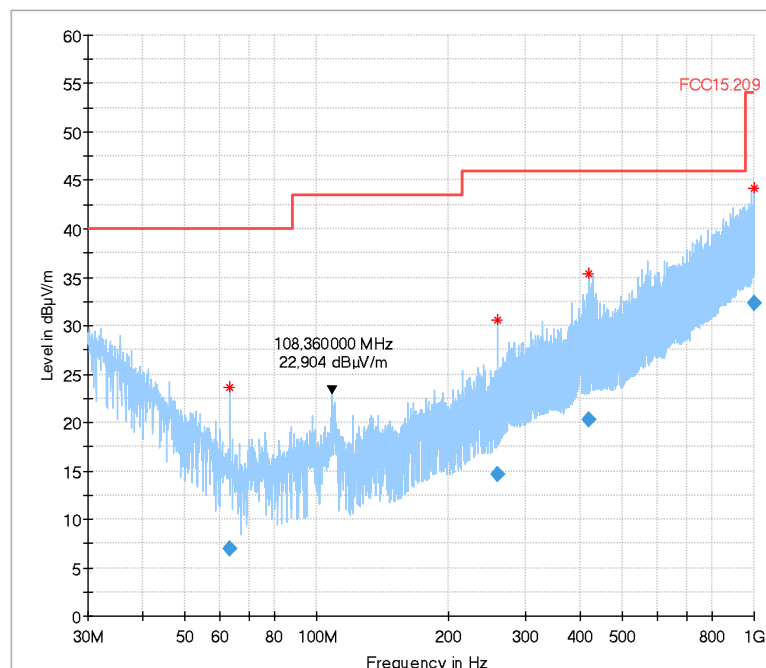
### Diagram No. 3.01\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch0-MAX

23.09.2017 Page 1 of 2  
 Electric Field Strength Measurement  
 Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance  
 Version of Testsoftware: EMC32 V9.25.0  
 Distance correction: not used  
 Used filter: not used  
 Technical Data: please see page 2 for detailed data of measurement setup  
 Test specification.: FCC 15.209; RSS-Gen: Issue 3  
 Operator: Klv  
 Operating conditions: Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Length 37-Ch 0 (2402 MHz)-

#### EUT Information

Manufacturer: Husqvarna AB-  
 EUT: BT Solution (lawn mower)II  
 EUT Model: 590 11 35  
 S/N: 172300024  
 HW version: 590 11 35  
 SW version: 37.2\_BLE\_Peripheral\_release-10.5d  
 Test Software : TifApp  
 Connected Interfaces: Power Supplies + USB-Serial Cable  
 Power Supply: 3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

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)	Correction (dB)
63.184000	6.94	40.00	33.06	1000.0	120.000	154.0	V	85.0	90.0	7.8
259.164000	14.61	46.00	31.39	1000.0	120.000	189.0	V	39.0	0.0	13.6
419.076000	20.23	46.00	25.77	1000.0	120.000	277.0	H	134.0	0.0	18.8
996.892000	32.26	54.00	21.74	1000.0	120.000	168.0	V	45.0	90.0	27.8

## Diagram No. 3.02\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch19-MAX

23.09.2017 Page 1 of 2

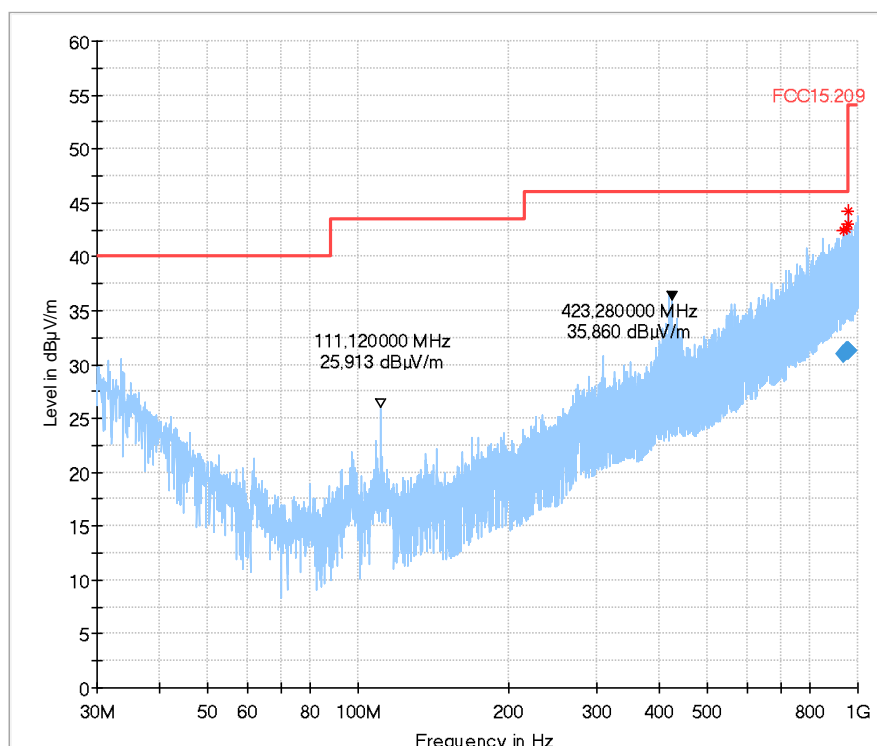
Test description: Electric Field Strength Measurement  
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance  
Version of Testsoftware: EMC32 V9.25.0  
Distance correction: not used  
Used filter: not used  
Technical Data: please see page 2 for detailed data of measurement setup  
Test specification.: FCC 15.209; RSS-Gen: Issue 4  
Operator: Klv  
Operating conditions: Continuous TX-BT-LE Mode-GFSK-1 Mbps-Pattern Length 37-Ch 19 (2440 MHz)-PWRMAX

### EUT Information

Manufacturer: Husqvarna AB-

EUT: BT Solution (lawn mower)II  
EUT Model: 590 11 35  
S/N: 172300024  
HW version: 590 11 35  
SW version: 37.2\_BLE\_Peripheral\_release-10.5d  
Test Software : TifApp  
Connected Interfaces: Power Supplies + USB-Serial Cable  
Power Supply: 3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

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)
935.148000	30.94	46.00	15.06	1000.0	120.000	252.0	V	71.0	0.0	26.9
948.664000	31.21	46.00	14.79	1000.0	120.000	203.0	V	80.0	0.0	27.1
956.128000	31.30	46.00	14.70	1000.0	120.000	359.0	H	225.0	0.0	27.4
957.044000	31.32	46.00	14.68	1000.0	120.000	244.0	H	306.0	0.0	27.4

## Diagram No. 3.03\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch39-MAX

23.09.2017 Page 1 of 2

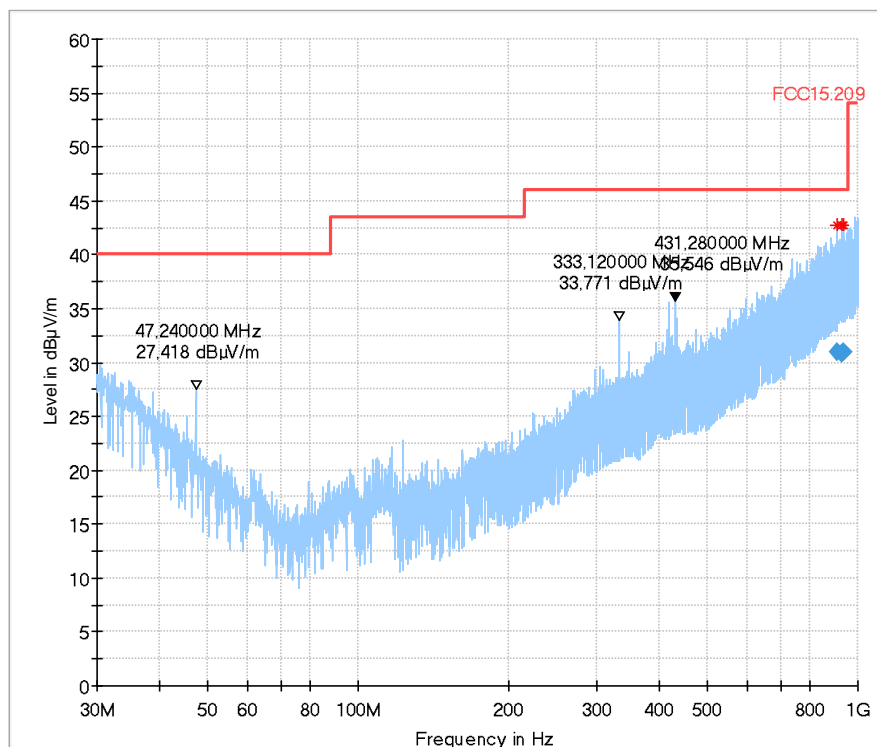
Test description: Electric Field Strength Measurement  
Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance  
Version of Testsoftware: EMC32 V9.25.0  
Distance correction: not used  
Used filter: not used  
Technical Data: please see page 2 for detailed data of measurement setup  
Test specification.: FCC 15.209; RSS-Gen: Issue 4  
Operator: Klv  
Operating conditions: Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Lenght37--Ch 39 (2480 MHz)- PWRMAX

### EUT Information

Manufacturer: Husqvarna AB-

EUT: BT Solution ( lawn mower)II  
EUT Model: 590 11 35  
S/N: 172300024  
HW version: 590 11 35  
SW version: 37.2\_BLE\_Peripheral\_release-10.5d  
Test Software : TifApp  
Connected Interfaces: Power Supplies + USB-Serial Cable  
Power Supply: 3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

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)
911.368000	30.92	46.00	15.08	1000.0	120.000	249.0	H	151.0	90.0	27.3
929.616000	30.89	46.00	15.11	1000.0	120.000	336.0	V	268.0	90.0	27.0
935.184000	31.02	46.00	14.98	1000.0	120.000	235.0	H	104.0	0.0	26.9

## 2.3. Field strength measurements 1GHz < f < 18GHz

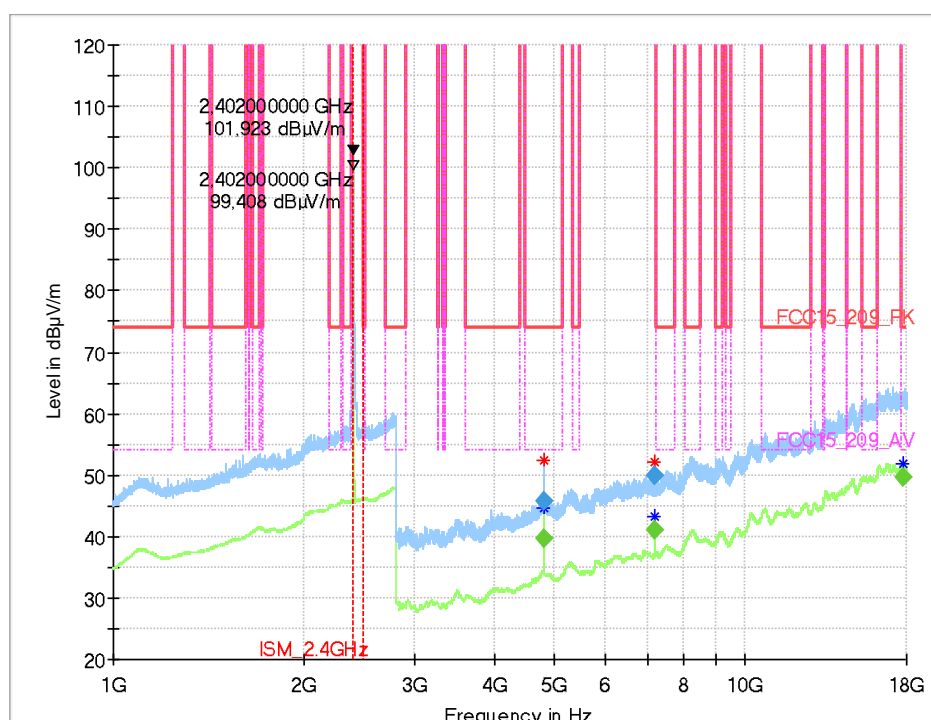
### 4.01\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch0-MAX

#### 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:	Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Length37-Ch 0 (2402 MHz)-PWR MAX
Operator Name:	AFr
Comment:	Channel 0 (low)

#### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies



#### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
4804.000000	---	39.61	14.39	1000.000	V	4.0	90.0	4.9
4804.000000	45.85	---	28.15	1000.000	H	5.0	0.0	4.9
7206.000000	49.84	---	100.16	1000.000	V	65.0	90.0	10.6
7206.800000	---	40.96	109.04	1000.000	V	44.0	90.0	10.6
17779.200000	---	49.73	4.27	1000.000	V	183.0	90.0	26.5

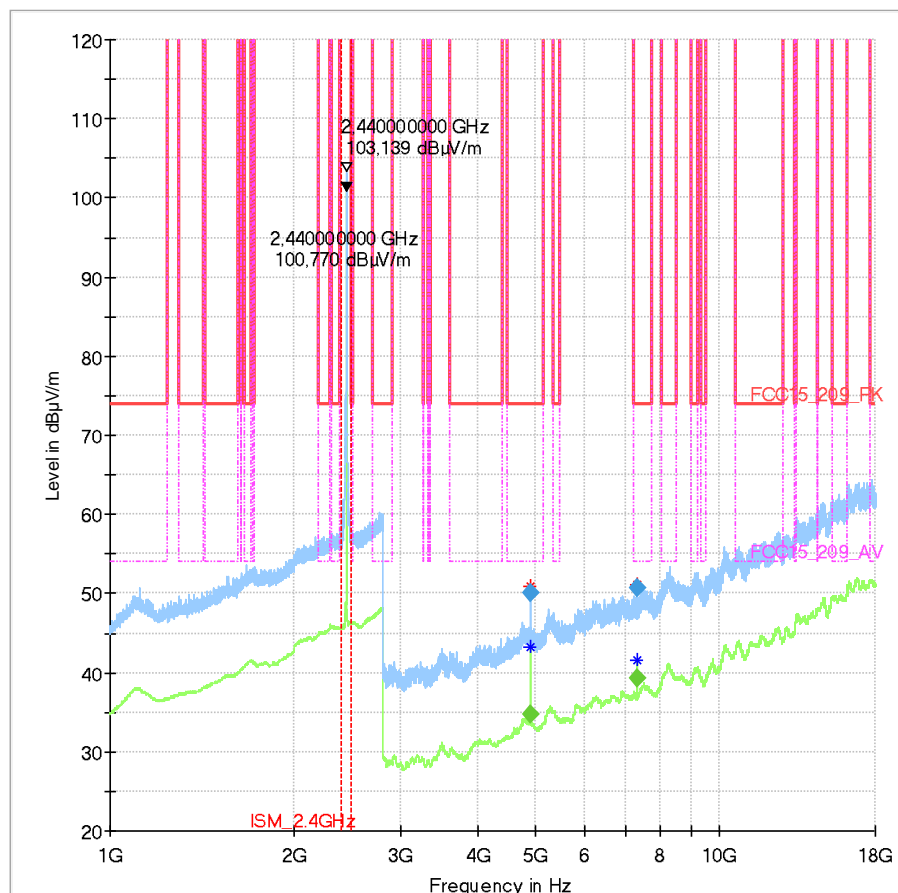
## 4.02\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch19-MAX

### 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:	Continuous TX-BT-LE Mode-GFSK-1 Mbps-Pattern Length37-Ch 19 (2442 MHz)-PWRMAX
Operator Name:	RLs

### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies



### 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)
4879.600000	50.00	---	74.00	24.00	100.0	1000.000	155.0	H	7.0	0.0
4880.000000	---	34.74	54.00	19.26	100.0	1000.000	155.0	V	4.0	90.0
7319.600000	---	39.38	54.00	14.62	100.0	1000.000	155.0	V	324.0	90.0
7320.000000	50.62	---	74.00	23.38	100.0	1000.000	155.0	V	66.0	90.0

## 4.03\_BT SOLUTION-BT-TX-LE Mode-GFSK-1 Mbps-Ch39-MAX

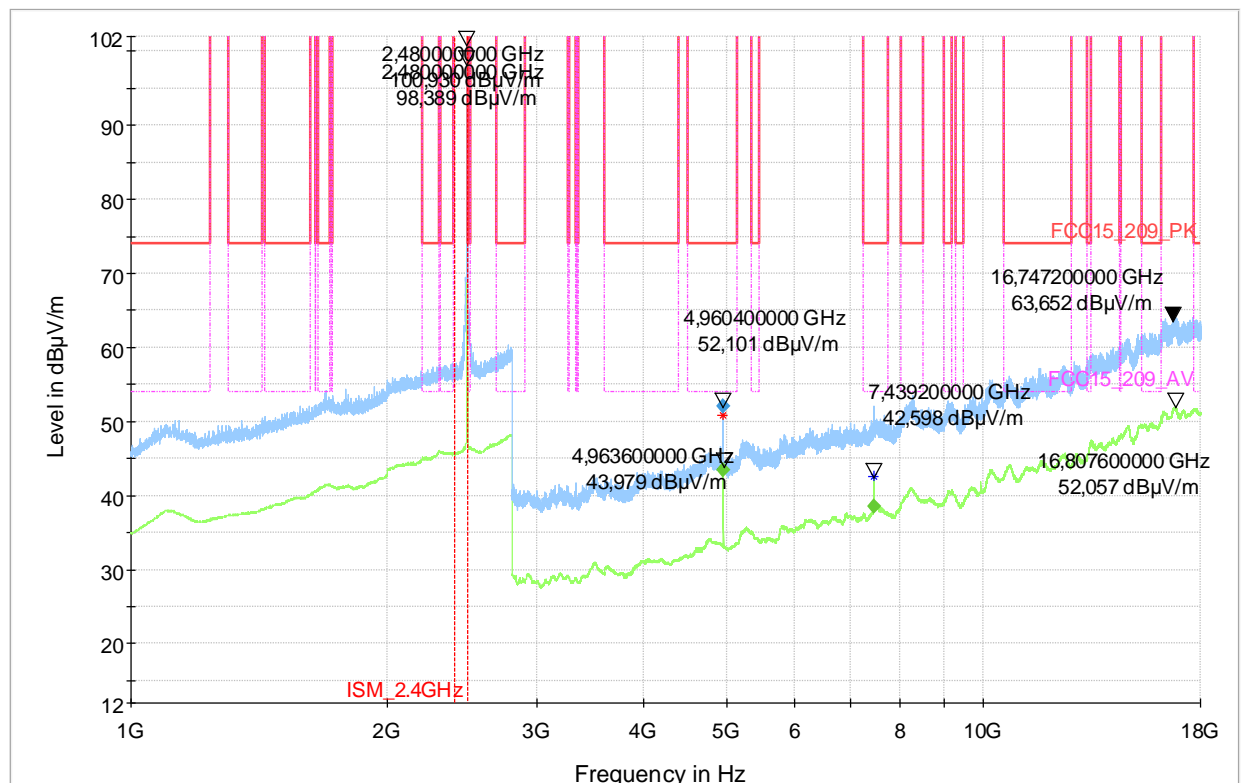
### Common Information

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:	Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Length37--Ch 39 (2480 MHz)- PWRMAX
Operator Name:	HEI

### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

Full Spectrum



### Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
4960.000000	---	43.49	10.51	1000.000	H	318.0	90.0	4.3
4960.400000	52.10	---	21.90	1000.000	H	318.0	90.0	4.3
7439.600000	---	38.56	15.44	1000.000	H	35.0	90.0	11.6

## 2.4. Field strength measurements $f > 18\text{GHz}$

### 4.01b\_BT-LE\_CH0\_2402MHz

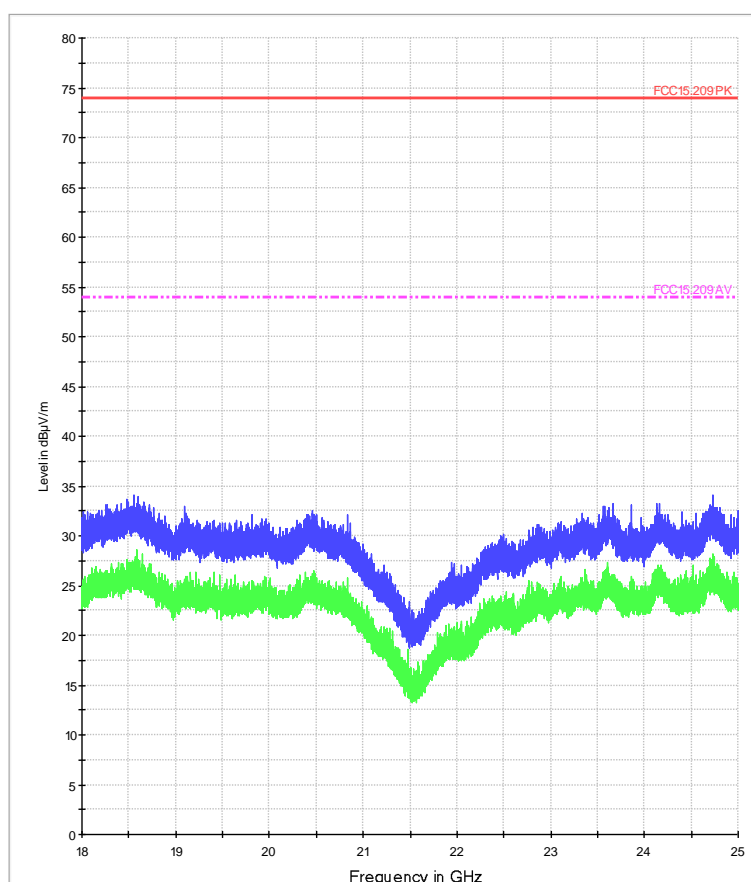
#### Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr
Comment:	Channel no. low   SN-No. 172300012

#### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

FCC\_Sweep\_15.407\_18\_40GHz\_Pre



### 4.02b\_BT-LE\_CH19\_2440MHz

## Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr
Comment:	Channel no. mid   SN-No. 172300012

## EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

FCC\_Sweep\_15.407\_18\_40GHz\_Pre

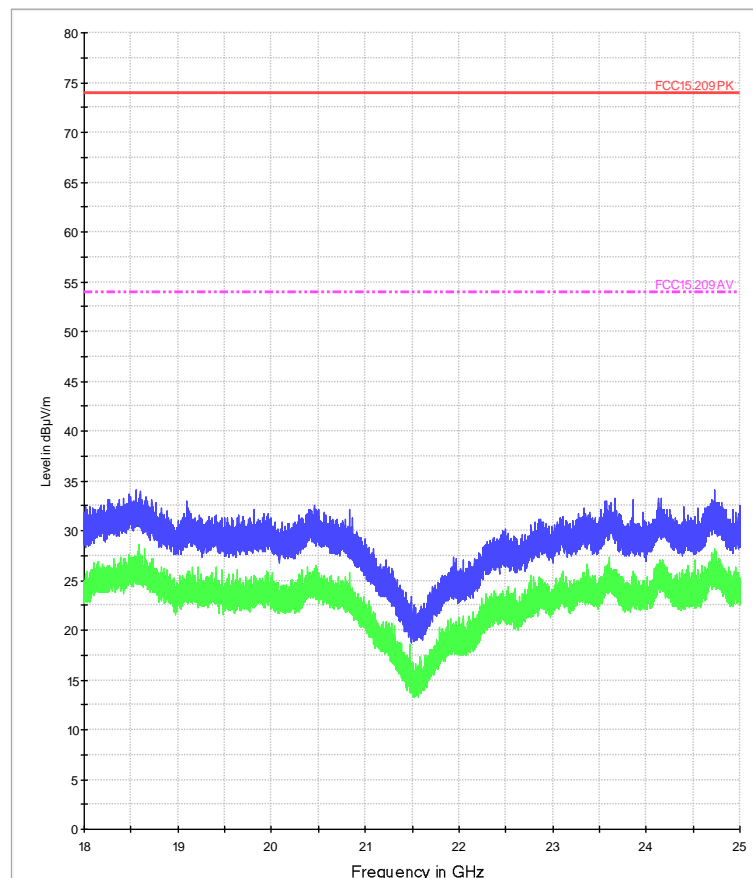


Diagram No.: BT-LE\_CH39\_2480MHz\_a\_590



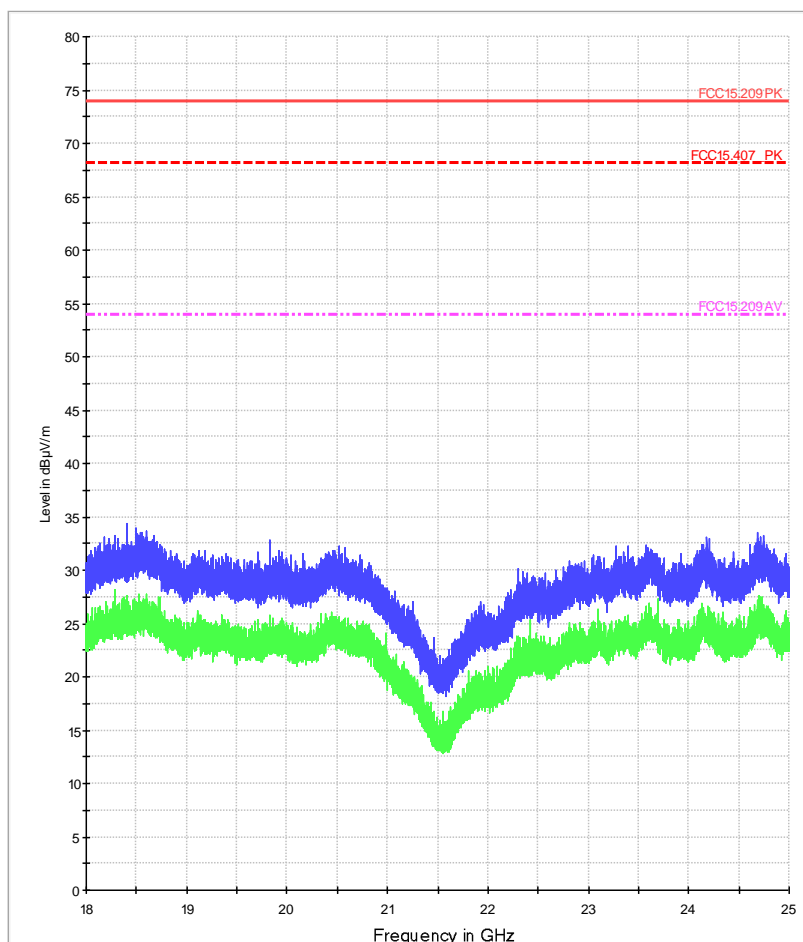
## Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.247, 15.205&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr
Comment:	Channel no. high   SN-No. 172300012

## EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

FCC\_Sweep\_15.407\_18\_40GHz\_Pre



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

#### 3.1. Channel 37 (left band edge)

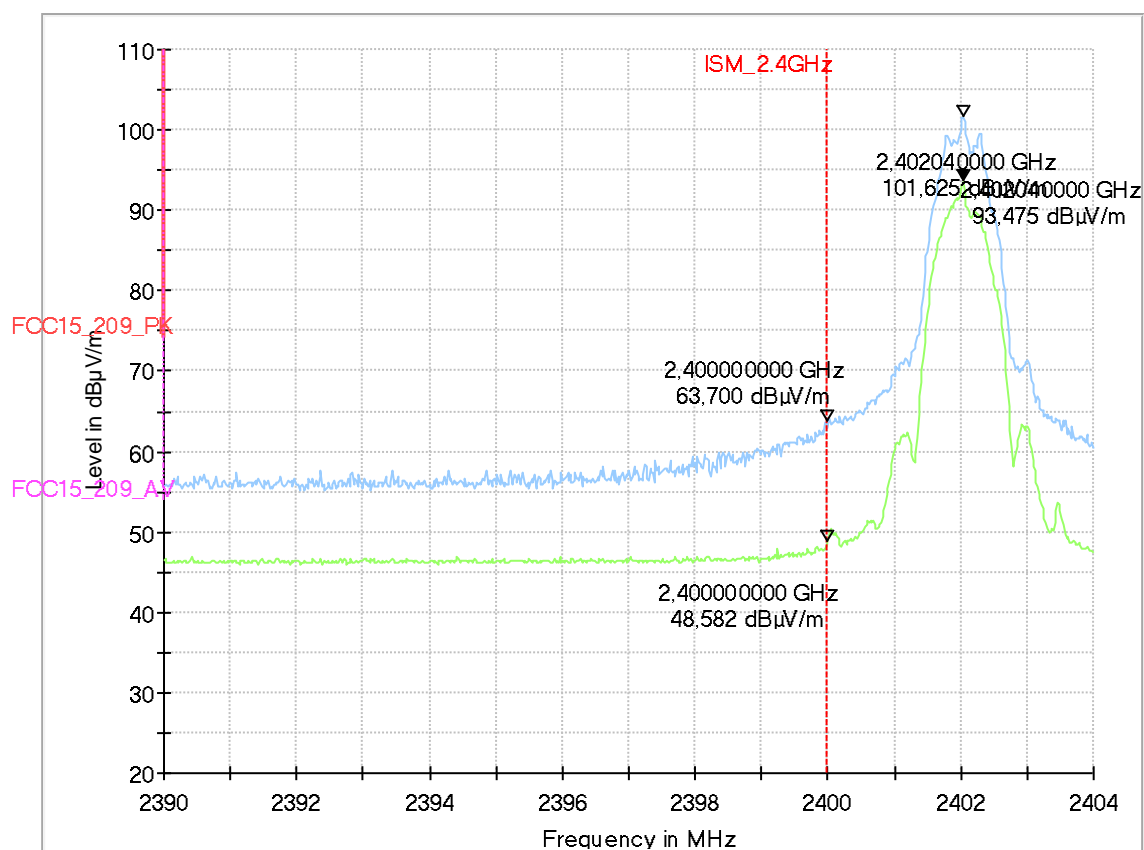
#### 9.01\_BE-Low- BT SOLUTION-BT-TX--LE Mode-GFSK-1 Mbps-Ch0-MAX

##### 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:	Continuous TX-BT-LE Mode-GFSK-1 Mbps-Pattern Lenght37-Ch 0 (2402 MHz)-PWRMAX
Operator Name:	AFr
Comment:	Channel 0 (low)

##### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies



### 3.2. Channel 39 (right band edge)

## Diagram No.: 9.02\_BE-High- BT SOLUTION-BT-TX- LE Mode-GFSK-1 Mbps-Ch39-MAX

### 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:	Continuous TX-BT-LE Mode-GFSK-1 Mbps- Pattern Lenght37--Ch 39 (2480 MHz)- PWRMAX
Operator:	HEI

### EUT Information

Manufacturer:	Husqvarna AB-
EUT:	BT Solution ( lawn mower)II
EUT Model:	590 11 35
S/N:	172300024
HW version:	590 11 35
SW version:	37.2_BLE_Peripheral_release-10.5d
Test Software :	TifApp
Connected Interfaces:	Power Supplies + USB-Serial Cable
Power Supply:	3.3 V DC (for BT-LE Module) + 18 VDC (for Main PCB Board) using Laboratory Power Supplies

Full Spectrum

