



# **FCC TEST REPORT**

**FCC ID: RFD-FLX100**

On Behalf of

**Leica Geosystems AG**

**Smart Antenna**

**Model No.: Zeno FLX100**

Prepared for : Leica Geosystems AG  
Address : Heinrich-Wild-Strasse, 9435 Heerbrugg, Switzerland

Prepared By : Shenzhen Alpha Product Testing Co., Ltd.  
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## TEST REPORT DECLARATION

Applicant : Leica Geosystems AG  
Address : Heinrich-Wild-Strasse, 9435 Heerbrugg, Switzerland  
Manufacturer : Leica Geosystems AG  
Address : Heinrich-Wild-Strasse, 9435 Heerbrugg, Switzerland  
EUT Description : Smart Antenna  
(A) Model No. : Zeno FLX100  
(B) Trademark : Leica

Measurement Standard Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247**

**ANSI C63.10-2013**

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

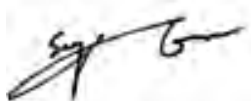
Tested by (name + signature).....:

Lucas Pang  
Project Engineer



Approved by (name + signature).....:

Simple Guan  
Project Manager



Date of issue.....:

August 6, 2020

**Revision History**

Revision	Issue Date	Revisions	Revised By
V0	August 6, 2020	Initial released Issue	Lucas Pang

## 1. SUMMARY OF STANDARDS AND RESULTS

### 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Test Requirement	Standards Paragraph	Result
Conducted Emission	FCC PART 15	15.207	P
6dB Bandwidth	FCC PART 15	15.247 (a)(2)	P
Output Power	FCC PART 15	15.247 (b)(3)	P
Radiated Spurious Emission	FCC PART 15	15.247 (c)	P
Conducted Spurious & Band Edge Emission	FCC PART 15	15.247 (d)	P
Power Spectral Density	FCC PART 15	15.247 (e)	P
Radiated Band Edge Emission	FCC PART 15	15.205	P
Antenna Requirement	FCC PART 15	15.203	P
Note:	1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable.		

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

EUT Name	: Smart Antenna
Trade Name	: Leica
Model No.	: Zeno FLX100
DIFF	: N/A
Power supply	: DC 3.85V from battery, DC 5V for charging
Radio Technology	: Bluetooth V4.2 BLE
Operation frequency	: 2402 MHz -2480 MHz
Modulation	: GFSK
Channel No.	: 40 Channels
Modulation rate	: 1Mbps
Antenna Type	: Internal antenna, Maximum Gain is 1dBi. (This value is supplied by applicant)
Software version	: V1.0
Hardware version	: V1.1
Connector cable loss	: 0.5dB(This value is supplied by applicant)
Intend use environment	: Residential, commercial and light industrial environment

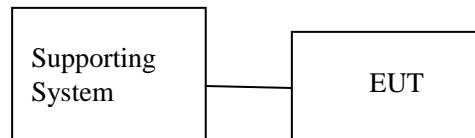
## 2.2.Accessories of Device (EUT)

Accessories1	:	USB-PD Chager
Manufacturer	:	Kuantech (Cambodia) Corpration Limited
Model	:	KSA-45P-45W D5
Input	:	AC 100-240V, 50/60Hz, 1.5A
Output	:	DC 5V/3A, DC 9V/3A, DC 12V/3A, DC 15V/3A, DC 20V/2.25A, DC 3.3-16V/3A Max., 45W Max.

## 2.3.Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDOC
1	Notebook PC	ACER	ZQT	--	--

## 2.4.Block Diagram of connection between EUT and simulators



## 2.5.Test Mode Description

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
GFSK (1M)	Low :CH1	2402
	Middle: CH20	2440
	High: CH40	2480
Charging		

## 2.6.Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	24℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	980kPa

## 2.7.Test Facility

Shenzhen Alpha Product Testing Co., Ltd

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103,  
Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission  
Registration Number: 293961

July 25, 2017 Certificated by IC  
Registration Number: 12135A

## 2.8.Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	2.74dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB(Polarize: V)
	2.57dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.77dB(Polarize: V)
	3.80dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	4.13dB(Polarize: H)
	4.16dB(Polarize: V)
Uncertainty for radio frequency	$5.4 \times 10^{-8}$
Uncertainty for conducted RF Power	0.37dB
Uncertainty for temperature	0.2℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

## 2.9.Test Equipment List

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	N/A	2019.09.06	3 Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	102137	2019.09.05	1 Year
Spectrum analyzer	Agilent	N9020A	MY499100060	2019.09.05	1 Year
Receiver	ROHDE&SCHWARZ	ESR	1316.3003K03-10208 2-Wa	2019.09.06	1 Year
Receiver	R&S	ESCI	101165	2019.09.05	1 Year
Bilog Antenna	Schwarzbeck	VULB 9168	VULB9168-438	2019.09.07	2 Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2020.04.12	2 Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00059	2019.09.07	2 Year
Cable	Resenberger	N/A	No.1	2019.09.05	1 Year
Cable	Resenberger	N/A	No.2	2019.09.05	1 Year
Cable	Resenberger	N/A	No.3	2019.09.05	1 Year
Pre-amplifier	HP	HP8347A	2834A00455	2019.09.05	1 Year
Pre-amplifier	Agilent	8449B	3008A02664	2019.09.05	1 Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2019.09.05	1 Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	101043	2019.09.05	1 Year
20db Attenuator	ICPROBING	IATS1	82347	2019.08.26	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	00946	2019.09.07	2 Year
Preamplifier	SKET	LNPA_1840-50	SK2018101801	2019.09.06	1 Year
Power Meter	Agilent	E9300A	MY41496625	2019.09.06	1 Year
Temp. & Humid. Chamber	Weihuang	WHTH-1000-40-880	100631	2019.09.06	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	20140927-6	2019.09.05	1 Year

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EZ-EMC	EZ	Alpha-3A1
CE	EZ-EMC	EZ	Alpha-3A1
RF-CE	MTS 8310	MW	V2.0.0.0

### 3. SPURIOUS EMISSION

#### 3.1. Test Limits

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

**NOTE:**

- a) The tighter limit applies at the band edges.
- b) Emission Level(dB uV/m)=20log Emission Level(uv/m)

#### 3.2. Test Procedure

The measuring distance of 3m shall be used for measurements at frequency up to 1GH and above 1GHz, The EUT was placed on a rotating 0.8 m high above ground for below 1GHz and 1.5m high for above 1GHz testing, The table was rotated 360 degrees to determine the position of the highest radiation

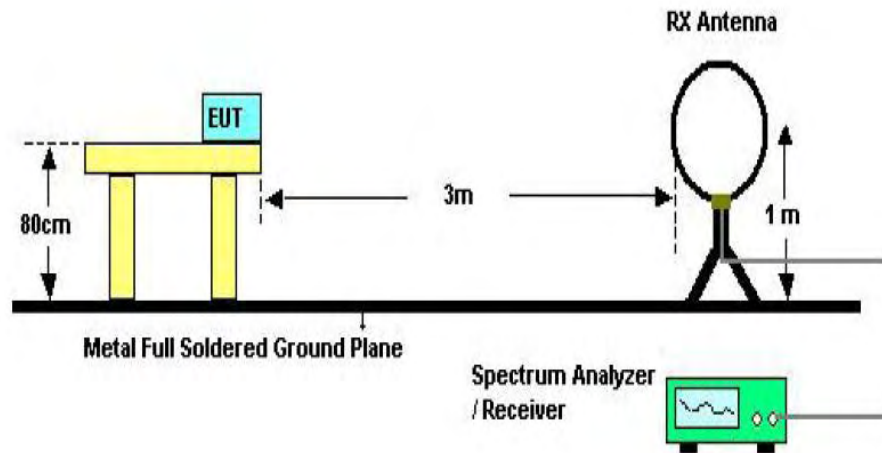
The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.

The initial step in collecting conducted emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Qusia Peak Detector mode premeasured

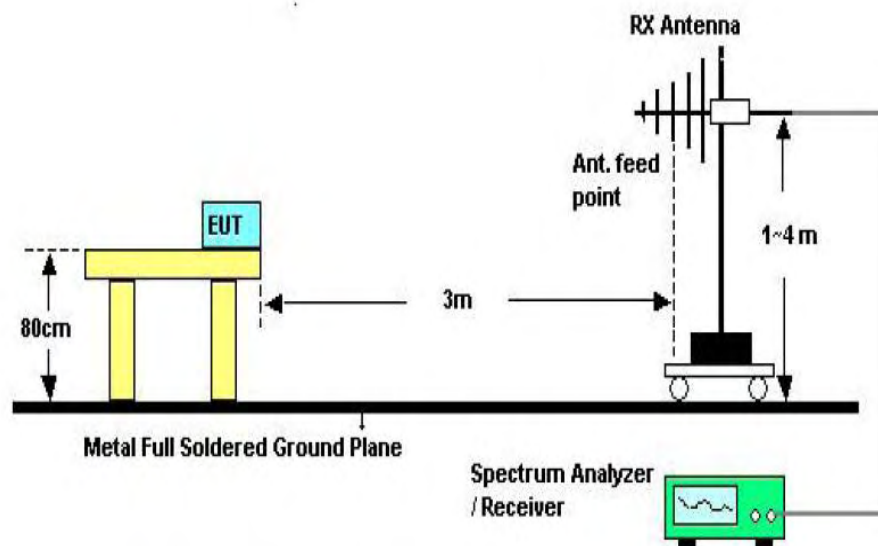
If Peak value comply with QP limit Below 1GHz. The EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.

For the actual test configuration, please see the test setup photo.

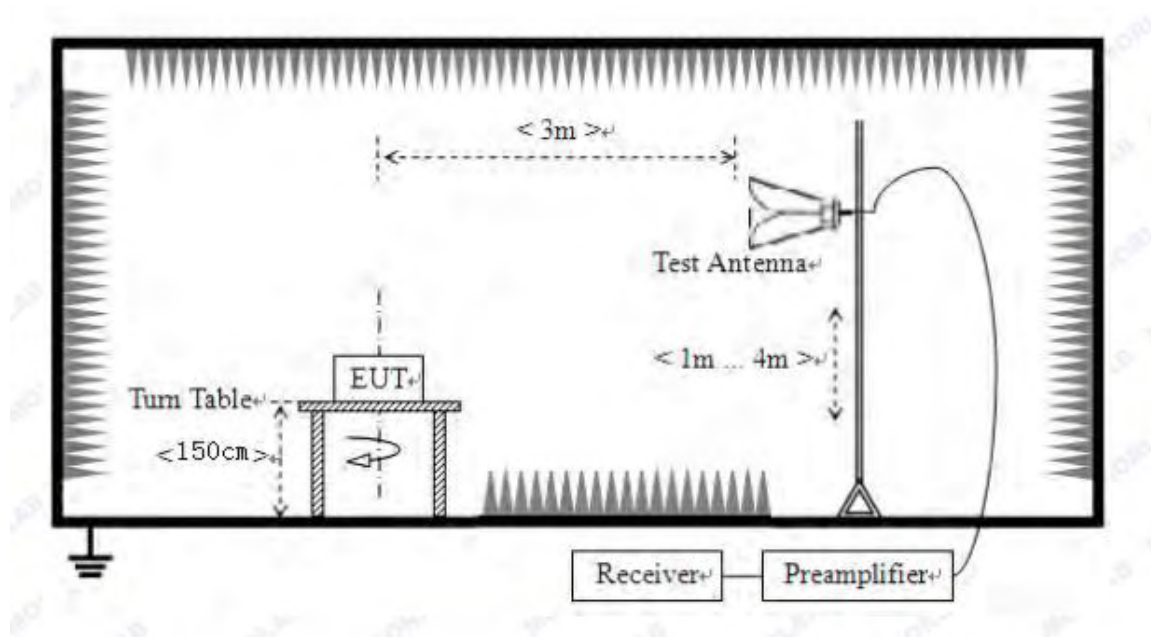
### 3.3. Test Setup



Below 30MHz Test Setup



Above 30MHz Test Setup



Above 1GHz Test Setup

### 3.4. Test Results

#### Test Condition

Continual Transmitting in maximum power.

9KHz~150KHz	RBW200Hz	VBW1KHz
150KHz~30MHz	RBW9KHz	VBW 30KHz
30MHz~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

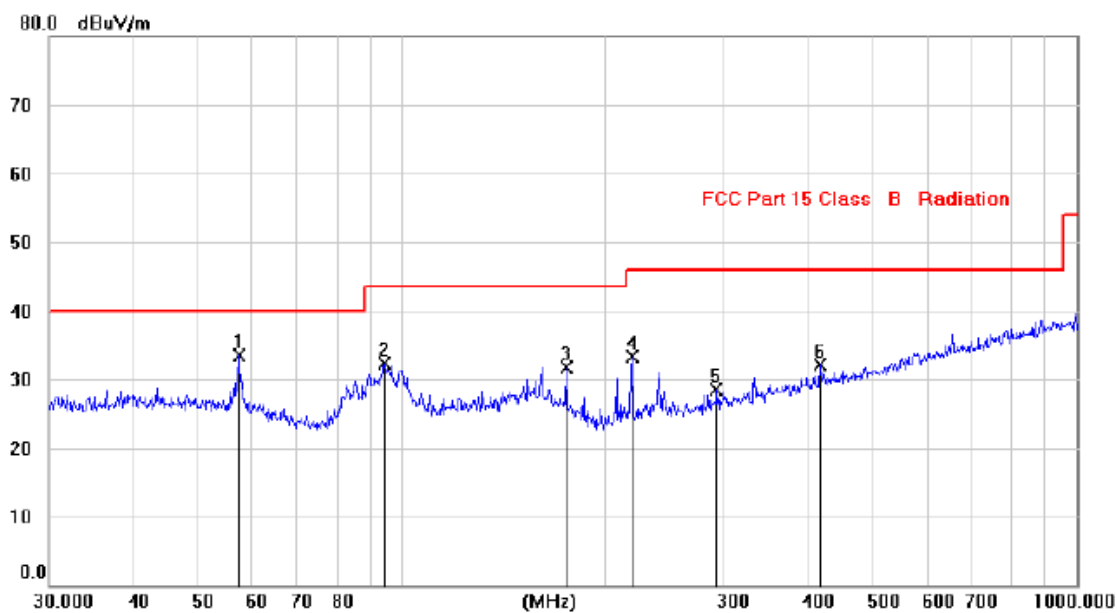
We have scanned the 10th harmonic from 9 kHz to the EUT.

Detailed information please see the following page.

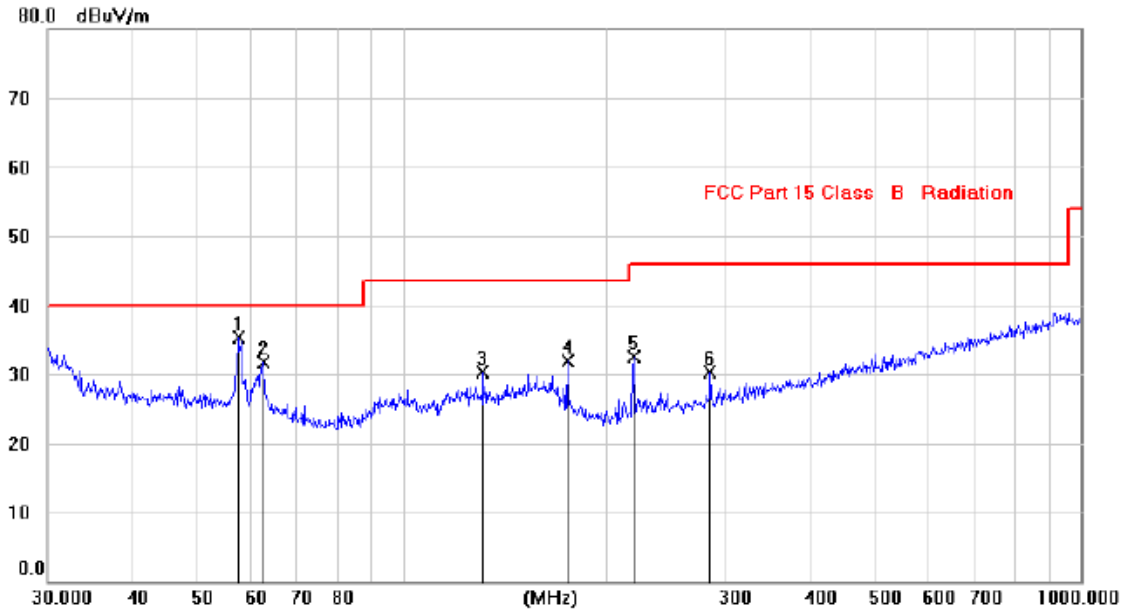
From 9KHz to 30MHz: Conclusion: PASS

Note: 1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

2. Only show the test data of the worst Channel in this report.

**Antenna polarity: Horizontal**

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	57.2667	20.15	13.40	33.55	40.00	-6.45	peak		
2		94.2630	21.84	10.41	32.25	43.50	-11.25	peak		
3		175.2671	18.47	13.29	31.76	43.50	-11.74	peak		
4		219.0753	21.67	11.62	33.29	46.00	-12.71	peak		
5		292.3144	14.59	13.86	28.45	46.00	-17.55	peak		
6		416.5441	15.43	16.65	32.08	46.00	-13.92	peak		

**Antenna polarity: Vertical**

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	57.3672	21.95	13.40	35.35	40.00	-4.65	peak		
2		62.2674	18.94	12.77	31.71	40.00	-8.29	peak		
3		131.4693	16.60	13.67	30.27	43.50	-13.23	peak		
4		175.3439	18.68	13.28	31.96	43.50	-11.54	peak		
5		219.0753	20.89	11.62	32.51	46.00	-13.49	peak		
6		284.7270	16.62	13.68	30.30	46.00	-15.70	peak		

**Notes:** Above is below 1GHz test data. This report only shall the worst case mode for TX 2402MHz.

Test Mode: TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	42.15	V	33.98	10.22	34.25	52.10	74	21.90	PK
4804	32.38	V	33.98	10.22	34.25	42.33	54	11.67	AV
7206	/	V	33.98	10.22	34.25	/	74	/	/
9608	/	V	33.98	10.22	34.25	/	74	/	/
4804	42.82	H	33.98	10.22	34.25	52.77	74	21.23	PK
4804	31.38	H	33.98	10.22	34.25	41.33	54	12.67	AV
7206	/	H	33.98	10.22	34.25	/	74	/	/
9608	/	H	33.98	10.22	34.25	/	74	/	/
Test Mode: TX Mid									
4880	41.93	V	33.98	10.22	34.25	51.88	74	22.12	PK
4880	32.75	V	33.98	10.22	34.25	42.70	54	11.30	AV
7320	/	V	33.98	10.22	34.25	/	74	/	/
9760	/	V	33.98	10.22	34.25	/	74	/	/
4880	42.14	H	33.98	10.22	34.25	52.09	74	21.91	PK
4880	32.31	H	33.98	10.22	34.25	42.26	54	11.74	AV
7320	/	H	33.98	10.22	34.25	/	74	/	/
9760	/	H	33.98	10.22	34.25	/	74	/	/
Test Mode: TX High									
4960	42.47	V	33.98	10.22	34.25	52.42	74	21.58	PK
4960	33.07	V	33.98	10.22	34.25	43.02	54	10.98	AV
7440	/	V	33.98	10.22	34.25	/	74	/	/
9920	/	V	33.98	10.22	34.25	/	74	/	/
4960	42.76	H	33.98	10.22	34.25	52.71	74	21.29	PK
4960	31.60	H	33.98	10.22	34.25	41.55	54	12.45	AV
7440	/	H	33.98	10.22	34.25	/	74	/	/
9920	/	H	33.98	10.22	34.25	/	74	/	/

Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

## 4. POWER LINE CONDUCTED EMISSION

### 4.1. Test Limits

Frequency MHz	Limits dB( $\mu$ V)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

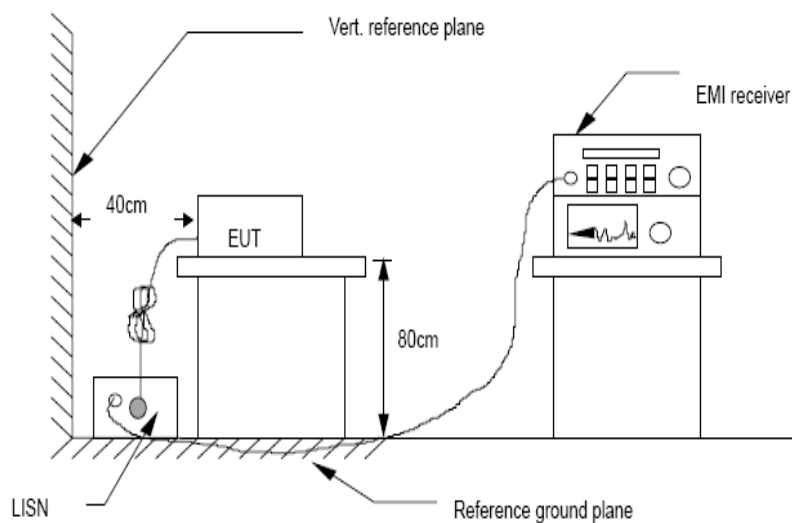
Notes: 1. \*Decreasing linearly with logarithm of frequency.  
 2. The lower limit shall apply at the transition frequencies.  
 3. The limit decreases in line with the logarithm of the frequency in rang of 0.15 to 0.50 MHz.

### 4.2. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10:2013 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

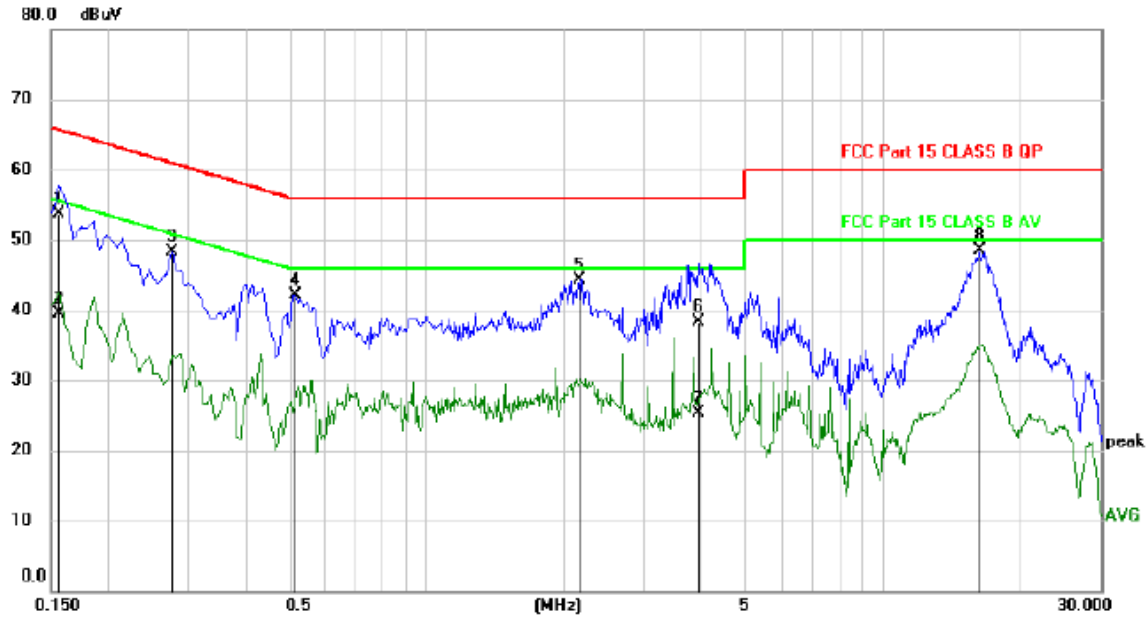
### 4.3. Test Setup



## 4.4. Test Results

Pass

Polarity: L



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1560	43.81	9.94	53.75	65.67	-11.92	QP	
2		0.1560	29.60	9.94	39.54	55.67	-16.13	AVG	
3		0.2760	38.41	9.94	48.35	60.94	-12.59	peak	
4		0.5160	32.19	9.95	42.14	56.00	-13.86	peak	
5		2.1660	34.39	9.89	44.28	56.00	-11.72	peak	
6		3.9360	28.44	9.96	38.40	56.00	-17.60	QP	
7		3.9360	15.39	9.96	25.35	46.00	-20.65	AVG	
8	*	16.2660	38.15	10.37	48.52	60.00	-11.48	peak	

**Polarity: N**

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1539	47.29	9.94	57.23	65.79	-8.56	QP	
2		0.1539	33.98	9.94	43.92	55.79	-11.87	AVG	
3		0.2160	40.51	9.94	50.45	62.97	-12.52	QP	
4		0.2160	28.66	9.94	38.60	52.97	-14.37	AVG	
5		0.2700	35.32	9.95	45.27	61.12	-15.85	QP	
6		0.2700	22.78	9.95	32.73	51.12	-18.39	AVG	
7		2.1719	35.49	9.89	45.38	56.00	-10.62	peak	
8		4.3380	28.97	9.99	38.96	56.00	-17.04	QP	
9		4.3380	15.45	9.99	25.44	46.00	-20.56	AVG	
10		16.2900	39.10	10.37	49.47	60.00	-10.53	peak	

Note: All modes and channels have been tested and only the Charging mode with the worst data is listed.

## 5. CONDUCTED MAXIMUM OUTPUT POWER

### 5.1. Test limits

Please refer section RSS-247 & 15.247.

### 5.2. Test Procedure

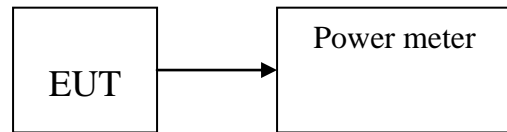
Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

5.2.1 Place the EUT on the table and set it in transmitting mode.

5.2.2 Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

### 5.3. Test Setup



### 5.4. Test Results

GFSK(1M)

Channel	Frequency (MHz)	PK Output Power (dBm)	PK Output Power (mW)	Limit (dBm)	Result
CH1	2402	2.61	1.824	30	Pass
CH20	2440	1.83	1.524	30	Pass
CH40	2480	<b>3.22</b>	<b>2.099</b>	30	Pass

## 6. PEAK POWER SPECTRAL DENSITY

### 6.1. Test limits

6.1.1 Please refer section RSS-247 & 15.247.

6.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

6.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

### 6.2. Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

6.2.1 Place the EUT on the table and set it in transmitting mode.

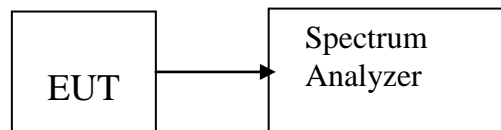
6.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

6.2.3 Set the spectrum analyzer as  $RBW = 3\text{kHz}$  (Set the  $RBW$  to:  $3\text{ kHz} \leq RBW \leq 100\text{ kHz}$ .),  $VBW = 10\text{kHz}$  (Set the  $VBW \geq 3 \times RBW$ ),  $\text{span} = 1.5 \times \text{DTS bandwidth}$ ., detail see the test plot.

6.2.4 Record the max reading.

6.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

### 6.3. Test Setup



### 6.4. Test Results

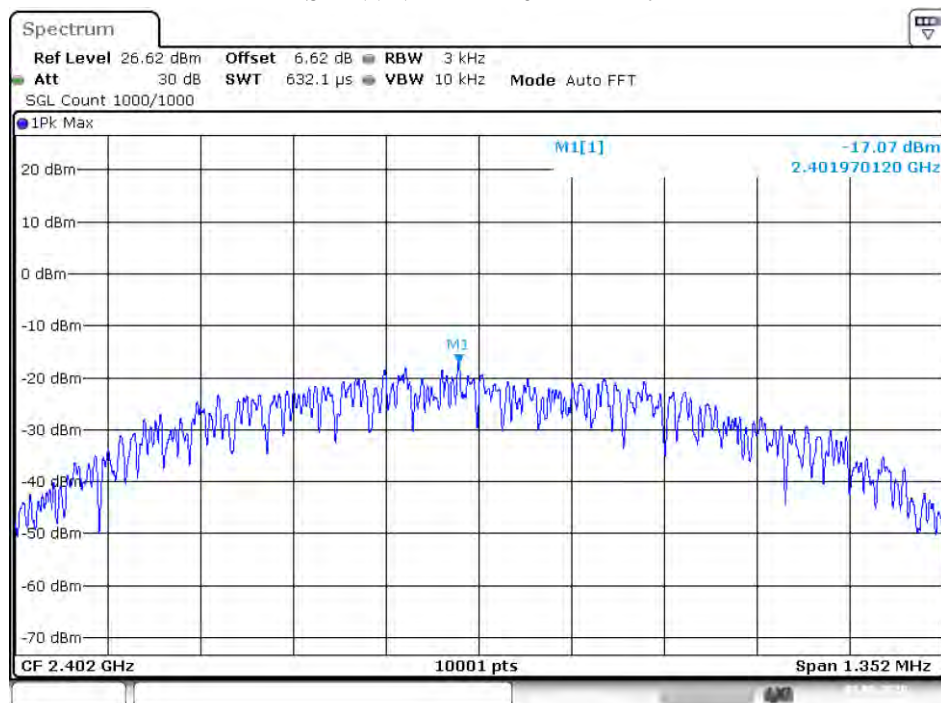
Pass

The test results are listed in next pages.

## GFSK (1M)

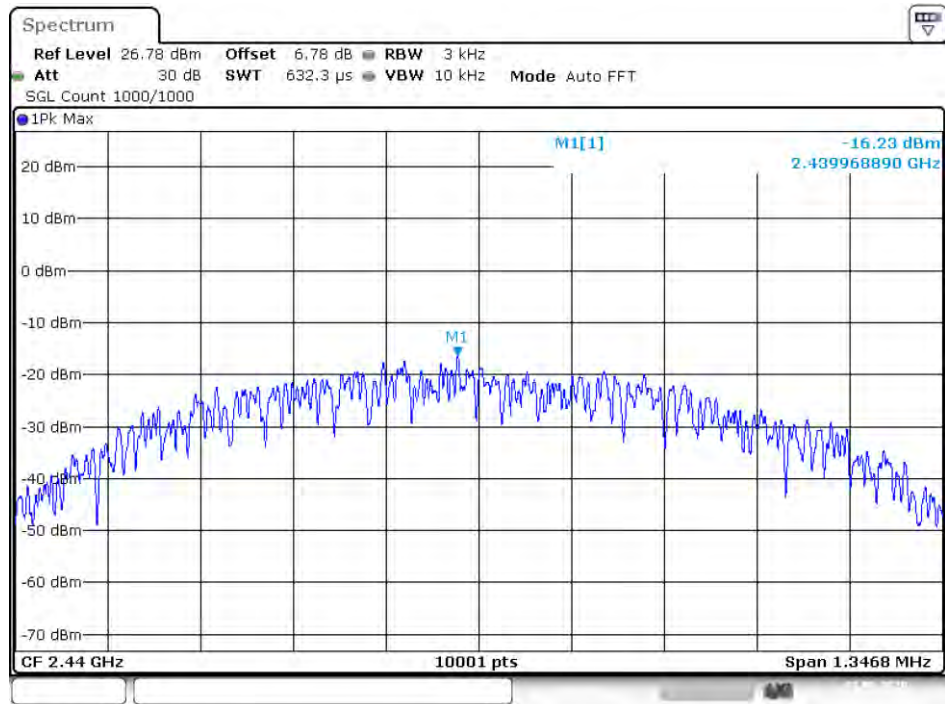
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE	2402	Ant 1	-17.067	8	Pass
NVNT	BLE	2440	Ant 1	-16.228	8	Pass
NVNT	BLE	2480	Ant 1	-16.833	8	Pass

PSD NVNT BLE 2402MHz Ant1



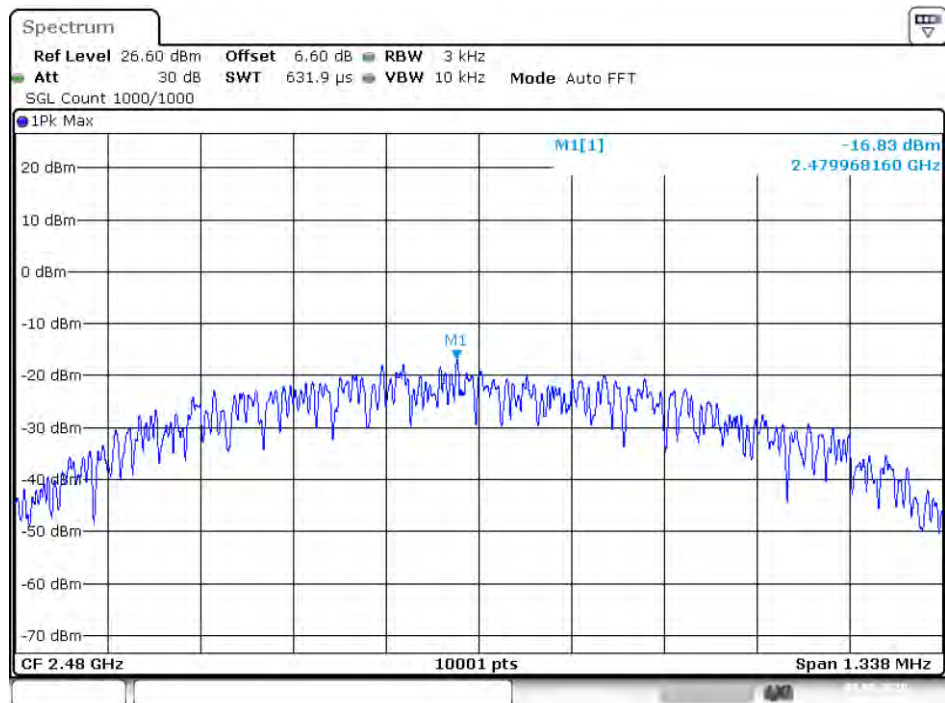
Date: 3.AUG.2020 14:08:13

## PSD NVNT BLE 2440MHz Ant1



Date: 3.AUG.2020 14:11:05

## PSD NVNT BLE 2480MHz Ant1



Date: 3.AUG.2020 14:13:44

## 7. BANDWIDTH

### 7.1. Test limits

Please refer section RSS-247 & 15.247

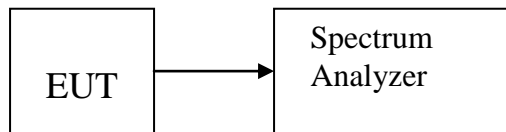
For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

### 7.2. Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

- a) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
- b) The test receiver set  $RBW = 100\text{kHz}$ ,  $VBW \geq 3 * RBW = 300\text{kHz}$ , Sweep time set auto, detail see the test plot.

### 7.3. Test Setup



### 7.4. Test Results

Pass

The test results are listed in next pages.

## GFSK(1M)

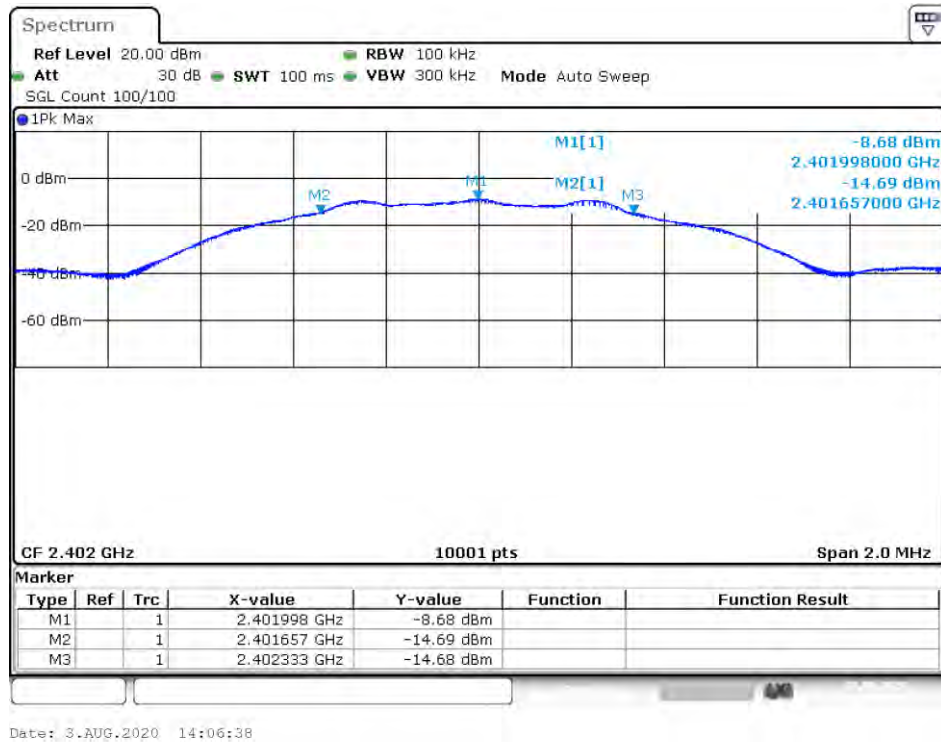
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE	2402	Ant 1	1.0513	0.676	0.5	Pass
NVNT	BLE	2440	Ant 1	1.0517	0.6734	0.5	Pass
NVNT	BLE	2480	Ant 1	1.0527	0.669	0.5	Pass

OBW NVNT BLE 2402MHz Ant1

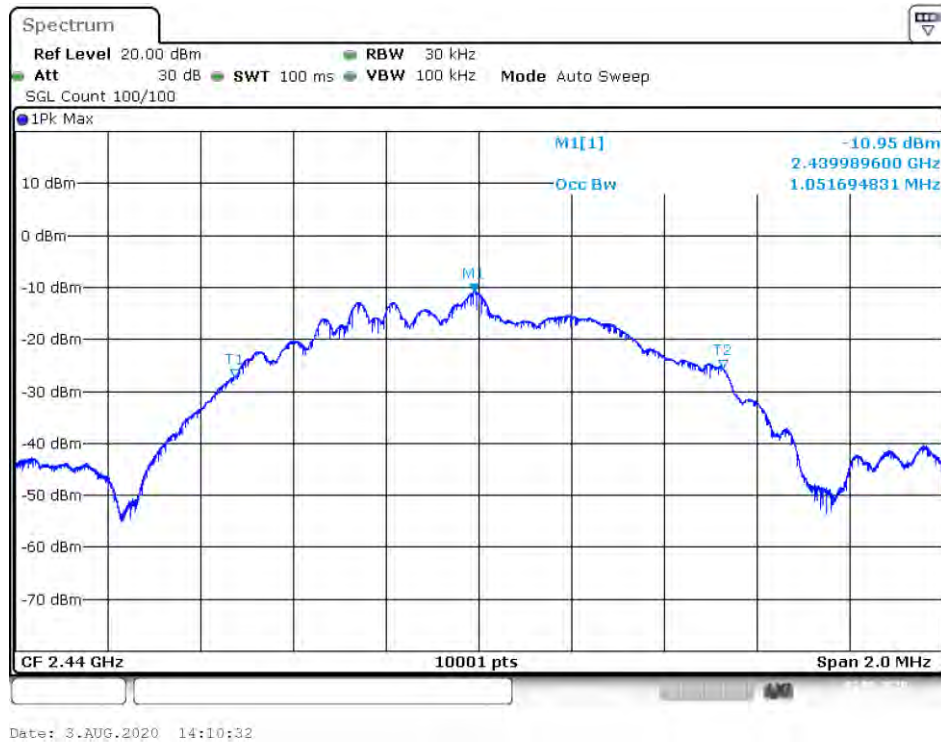


Date: 3.AUG.2020 14:06:25

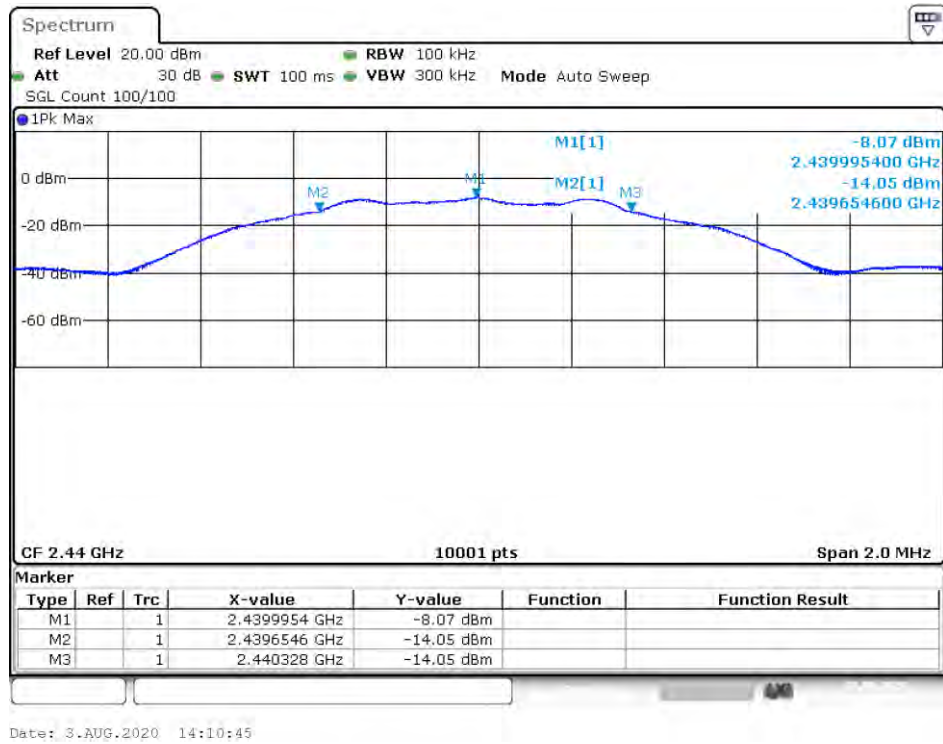
## -6 dB BW NVNT BLE 2402MHz Ant1



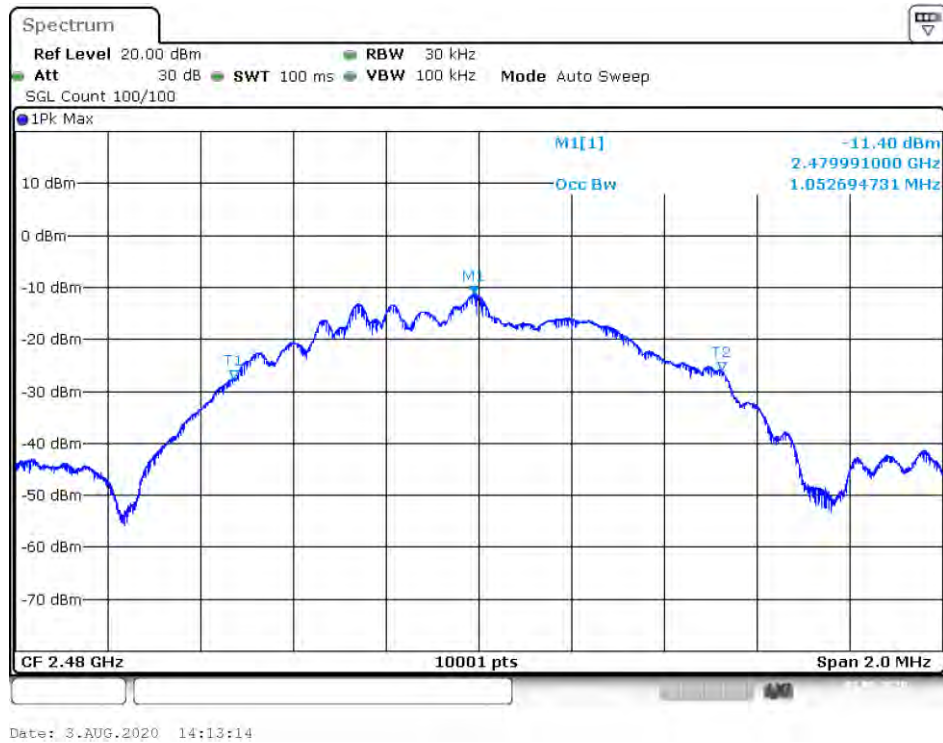
## OBW NVNT BLE 2440MHz Ant1



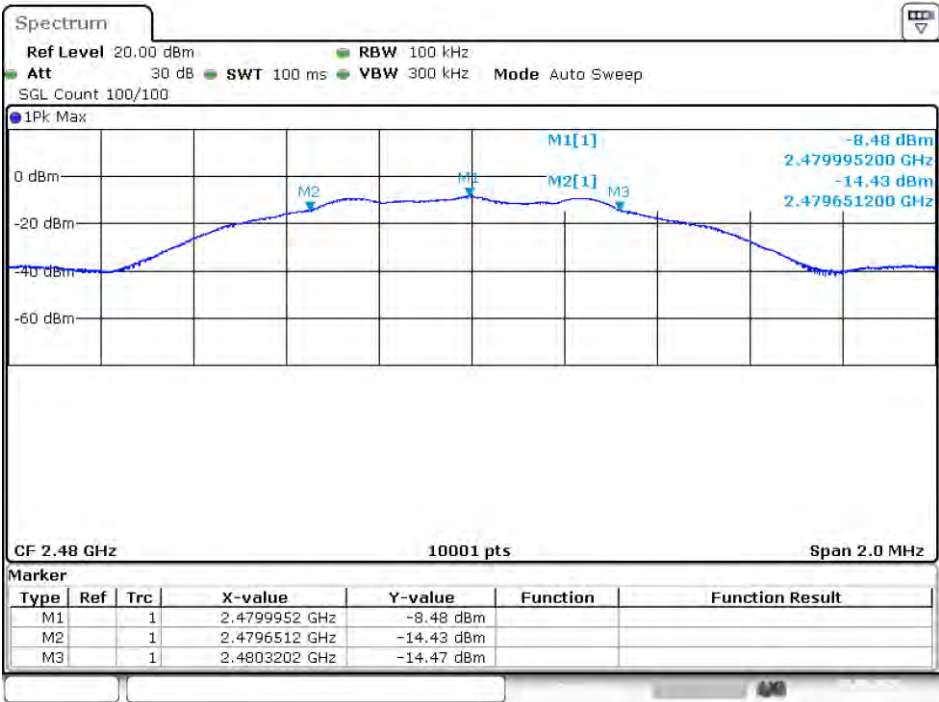
## -6 dB BW NVNT BLE 2440MHz Ant1



## OBW NVNT BLE 2480MHz Ant1



-6 dB BW NVNT BLE 2480MHz Ant1



Date: 3.AUG.2020 14:13:28

## **8. BAND EDGE CHECK**

### **8.1. Test limits**

Please refer section RSS-GEN&15.247.

### **8.2. Test Procedure**

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

8.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

8.2.2 Check the spurious emissions out of band.

8.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz ,RMS detector for AV value.

### **8.3. Test Setup**

Same as 5.2.2.

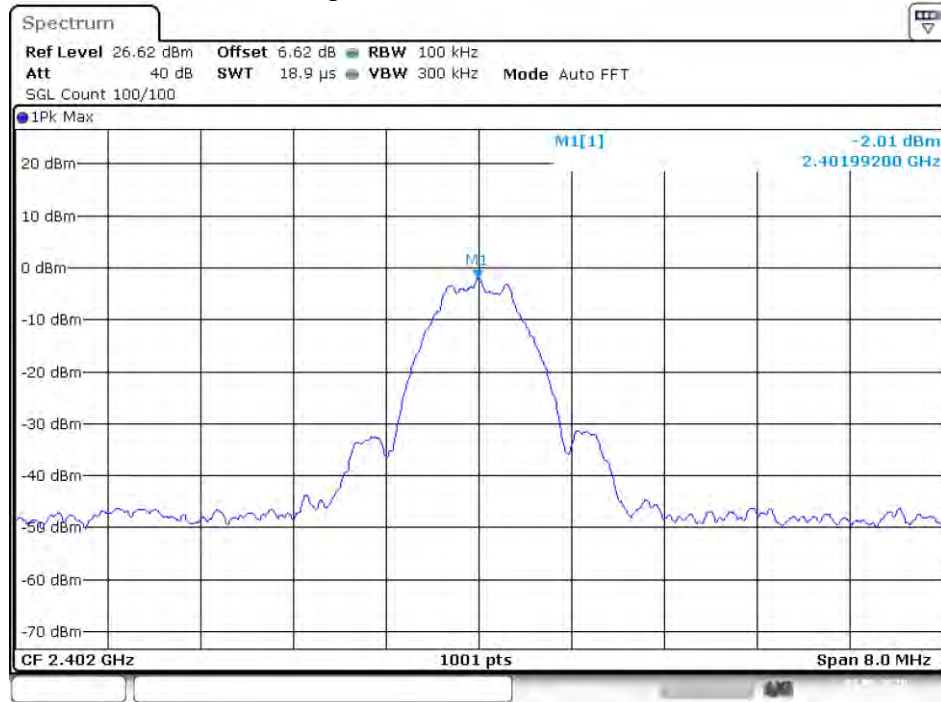
### **8.4. Test Results**

Pass

The test results are listed in next pages.

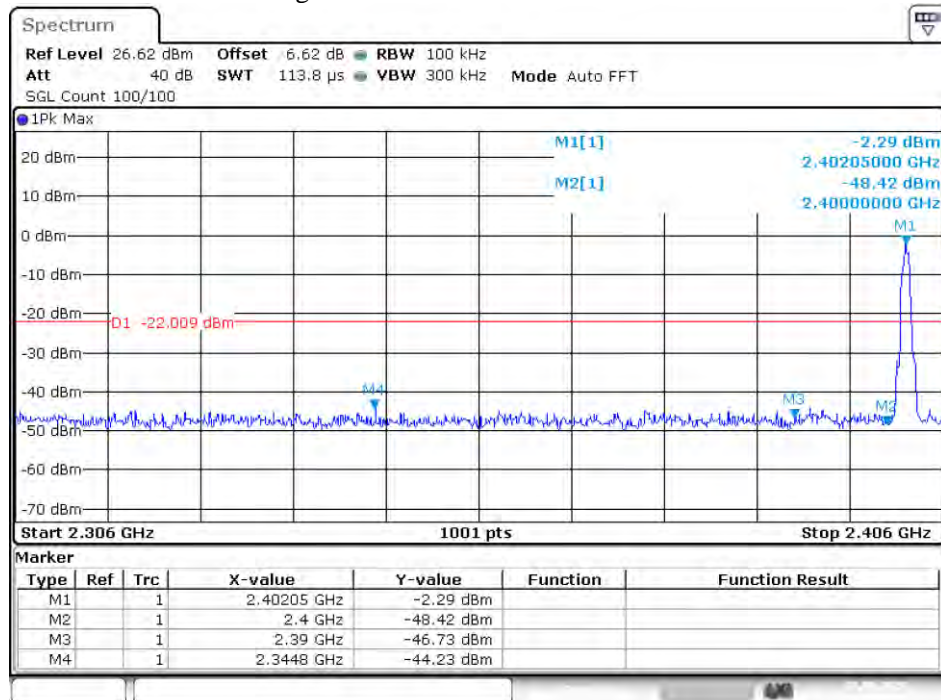
## GFSK (1M)

## Band Edge NVNT BLE 2402MHz Ant1 Ref



Date: 3.AUG.2020 14:08:35

## Band Edge NVNT BLE 2402MHz Ant1 Emission



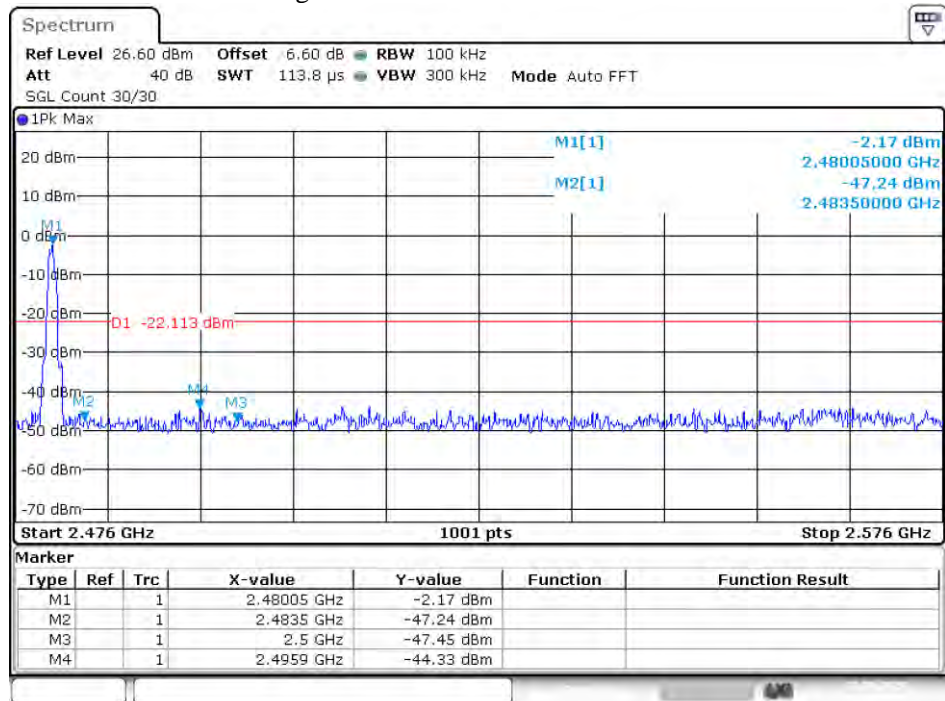
Date: 3.AUG.2020 14:08:40

## Band Edge NVNT BLE 2480MHz Ant1 Ref



Date: 3.AUG.2020 14:13:51

## Band Edge NVNT BLE 2480MHz Ant1 Emission

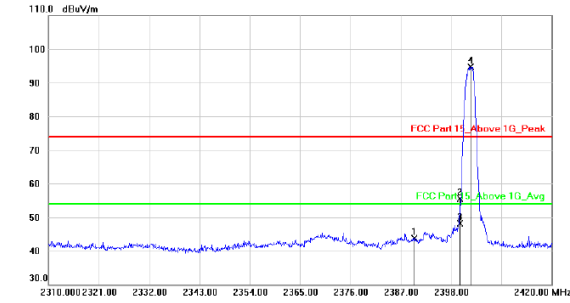


Date: 3.AUG.2020 14:13:54

Radiated Method: GFSK(1M)

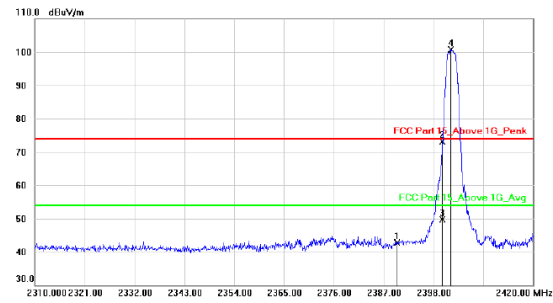
Test Mode: CH-L

Polarization: Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
1		2390.000	47.10	-3.40	43.70	74.00	-30.30	peak		
2		2400.000	59.00	-3.41	55.59	74.00	-18.41	peak		
3		2400.000	51.42	-3.41	48.01	54.00	-5.99	AVG		
4	*	2402.290	98.13	-3.41	94.72	74.00	20.72	peak		

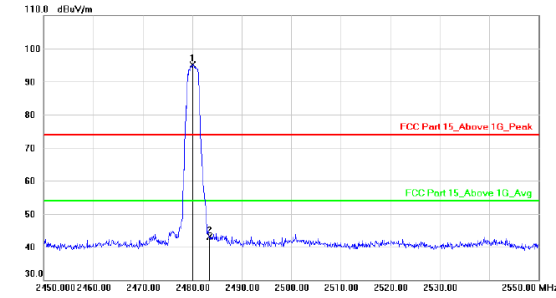
Polarization: Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
1		2390.000	46.00	-3.40	42.60	74.00	-31.40	peak		
2		2400.000	76.61	-3.41	73.20	74.00	-0.80	peak		
3		2400.000	53.04	-3.41	49.63	54.00	-4.37	AVG		
4	*	2401.850	104.19	-3.41	100.78	74.00	26.78	peak		

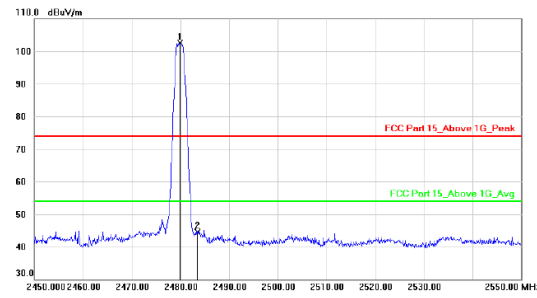
Test Mode: CH-H

Polarization: Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
1	*	2480.100	98.54	-3.38	95.16	74.00	21.16	peak		
2		2483.500	46.39	-3.38	43.01	74.00	-30.99	peak		

Polarization: Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
1	*	2479.900	105.94	-3.38	102.56	74.00	28.56	peak		
2		2483.500	47.84	-3.38	44.46	74.00	-29.54	peak		

## **9. ANTENNA REQUIREMENT**

### **9.1. Standard Requirement**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### **9.2. Antenna Connected Construction**

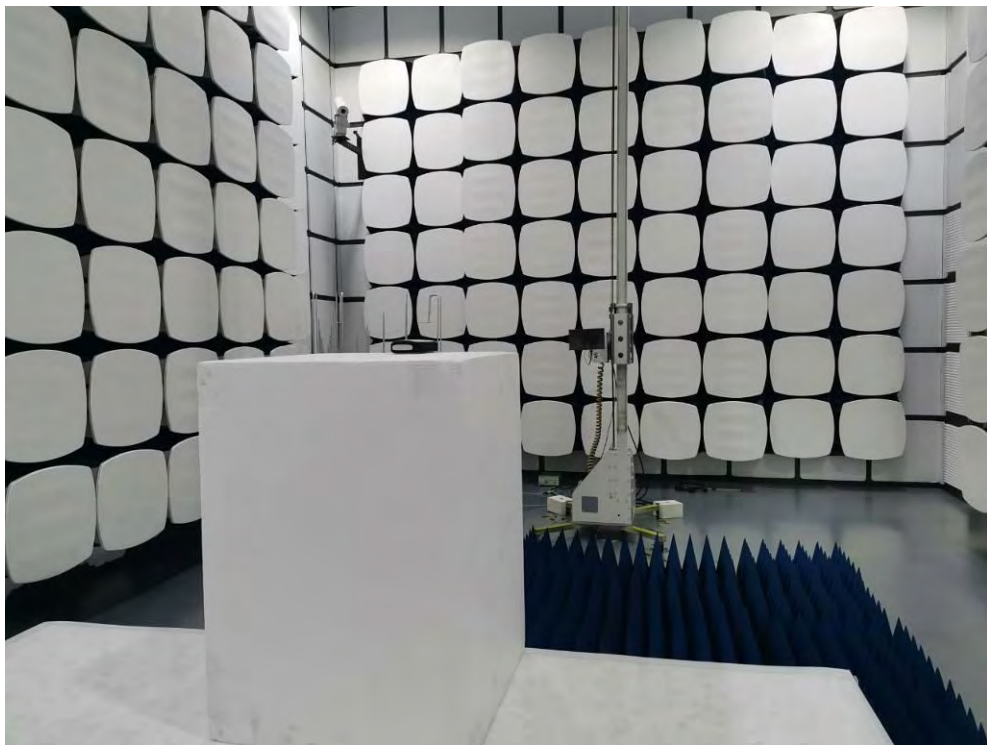
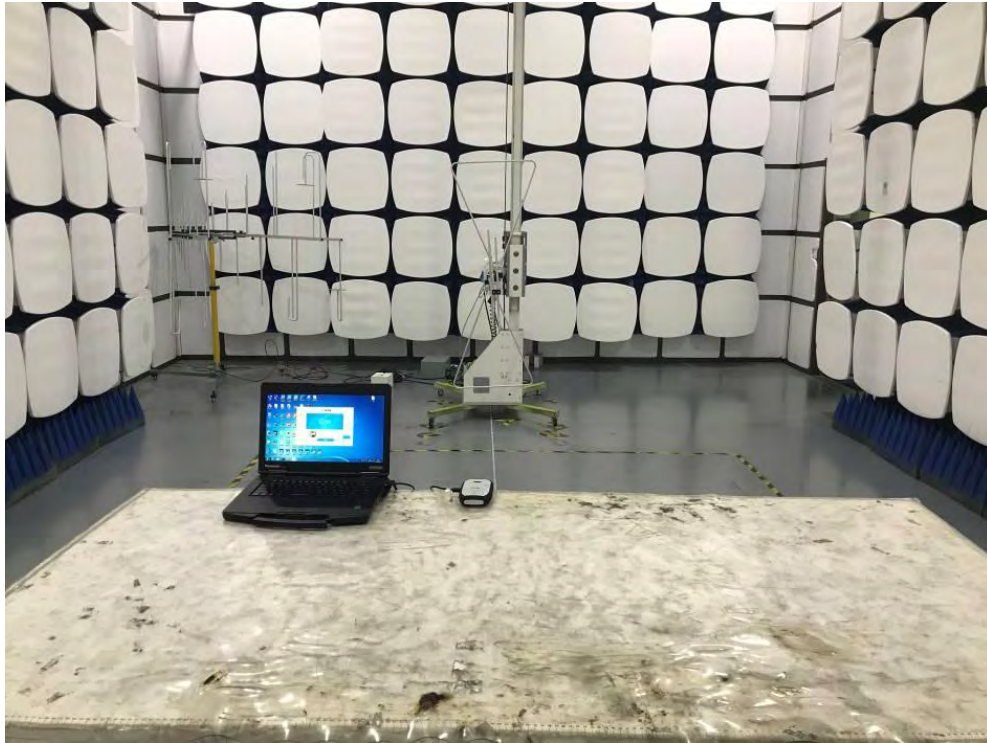
The antenna is internal antenna and no consideration of replacement. Please see EUT photo for details.

### **9.3. Results**

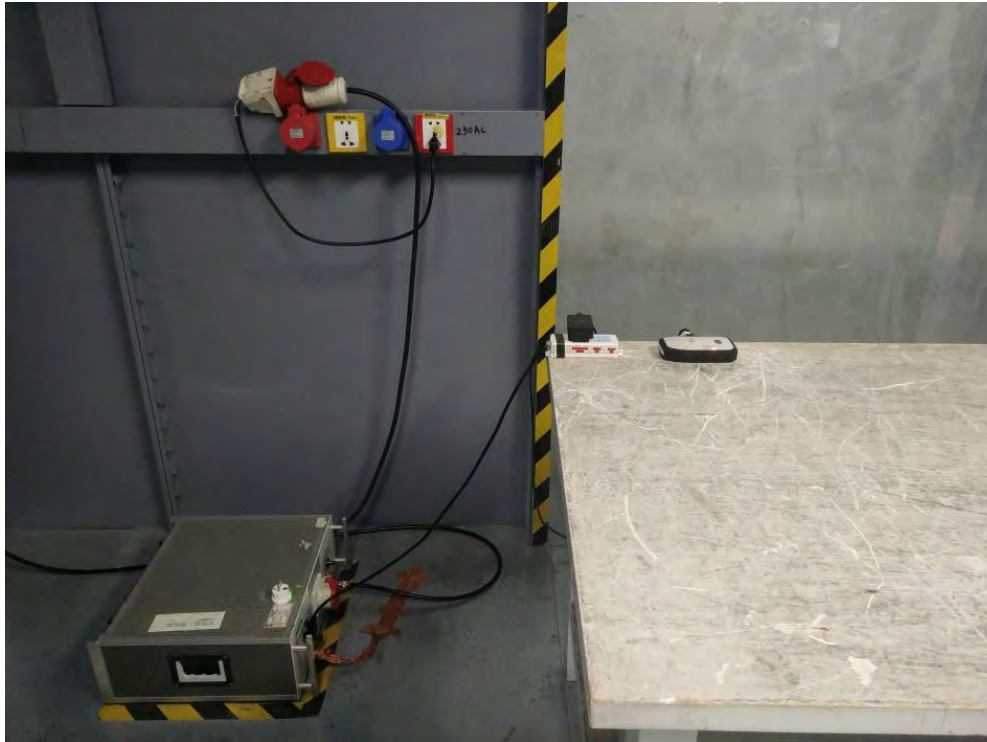
The EUT antenna is Internal Antenna. It complies with the standard requirement.

## 10. TEST SETUP PHOTO

### 10.1. Photos of Radiated emission



## 10.2.Photos of Conducted Emission test



## 11.EUT PHOTO

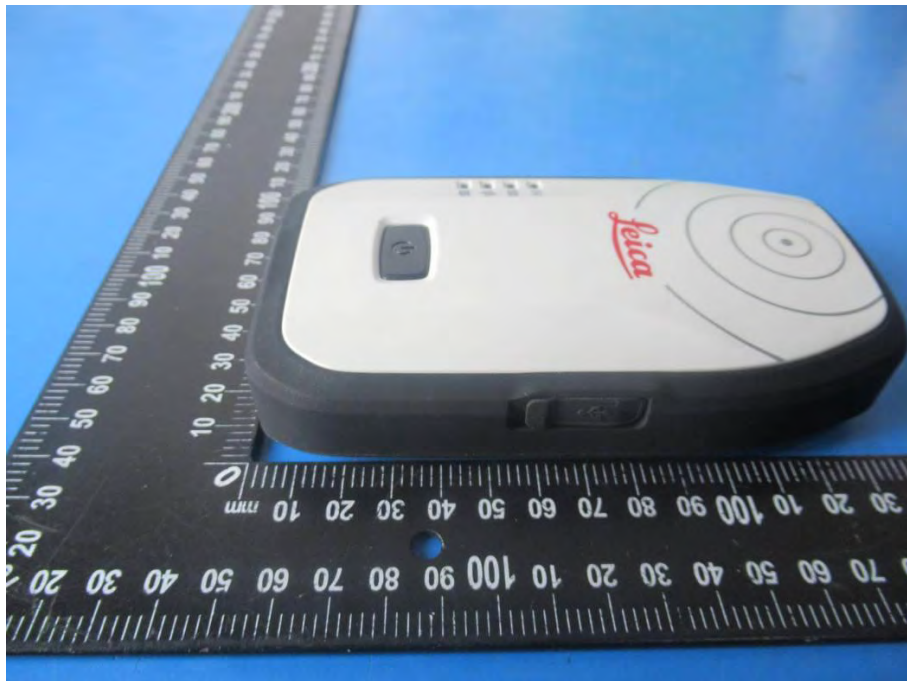


EUT View



EUT View

**EUT View****EUT View**

**EUT View****EUT View**



EUT View



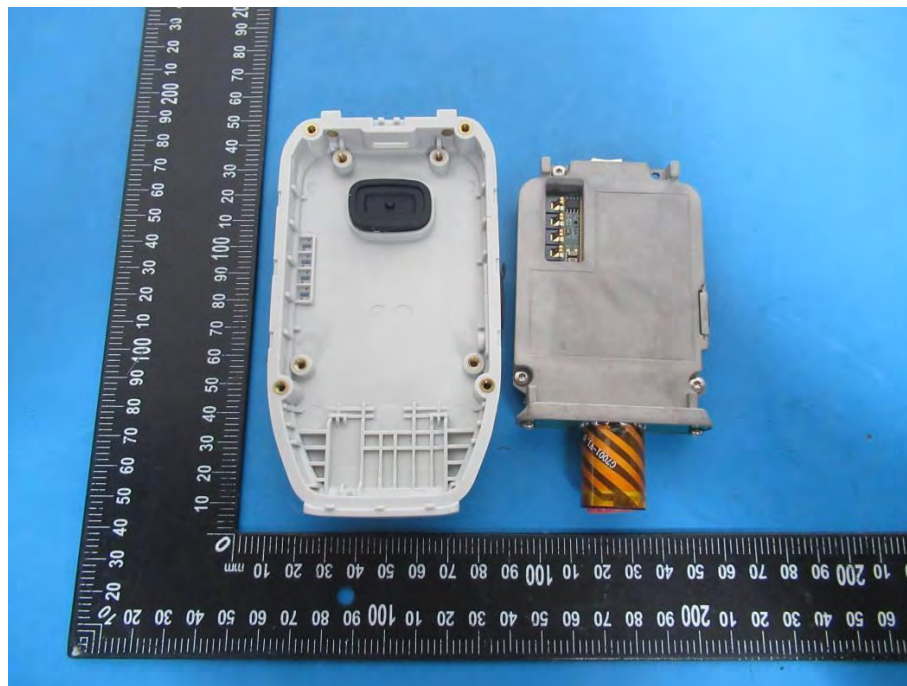
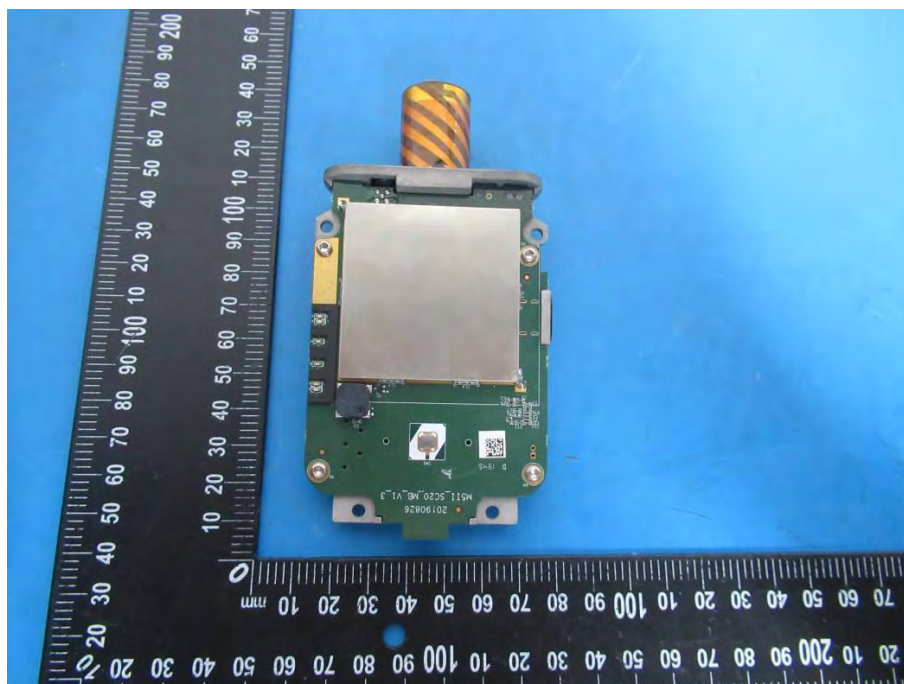
EUT View

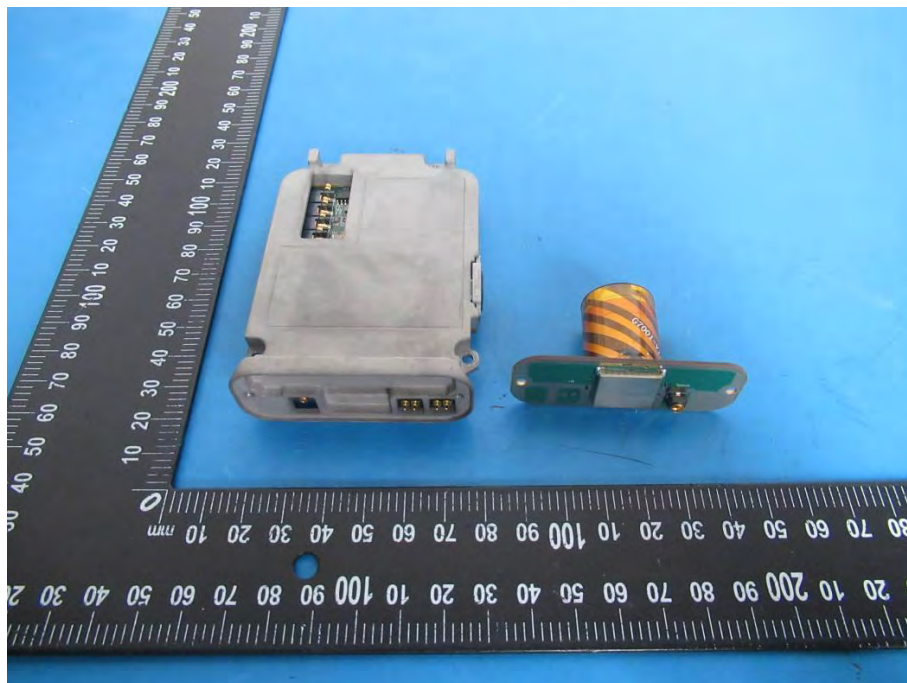


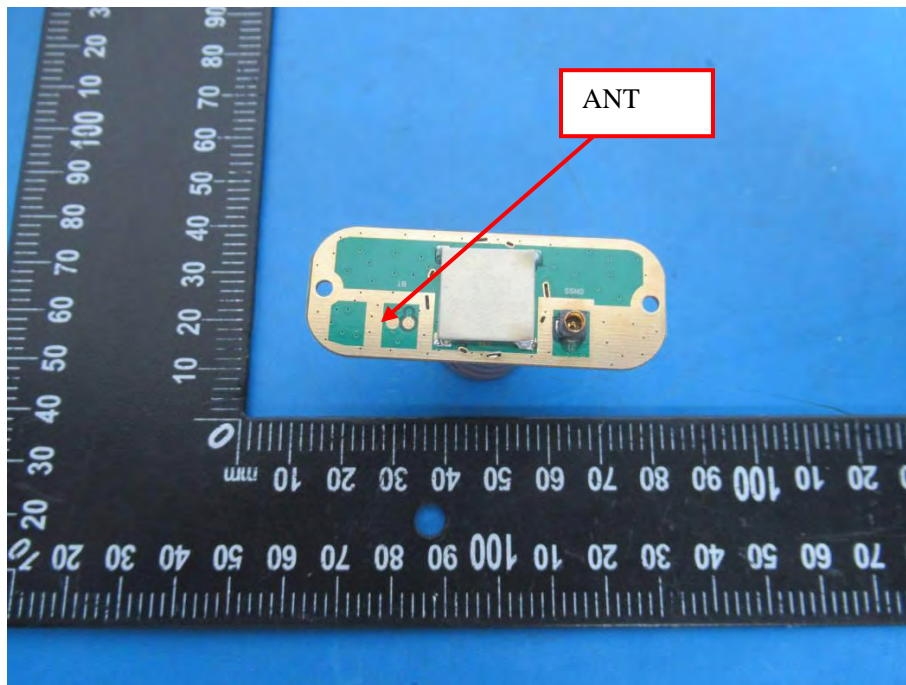
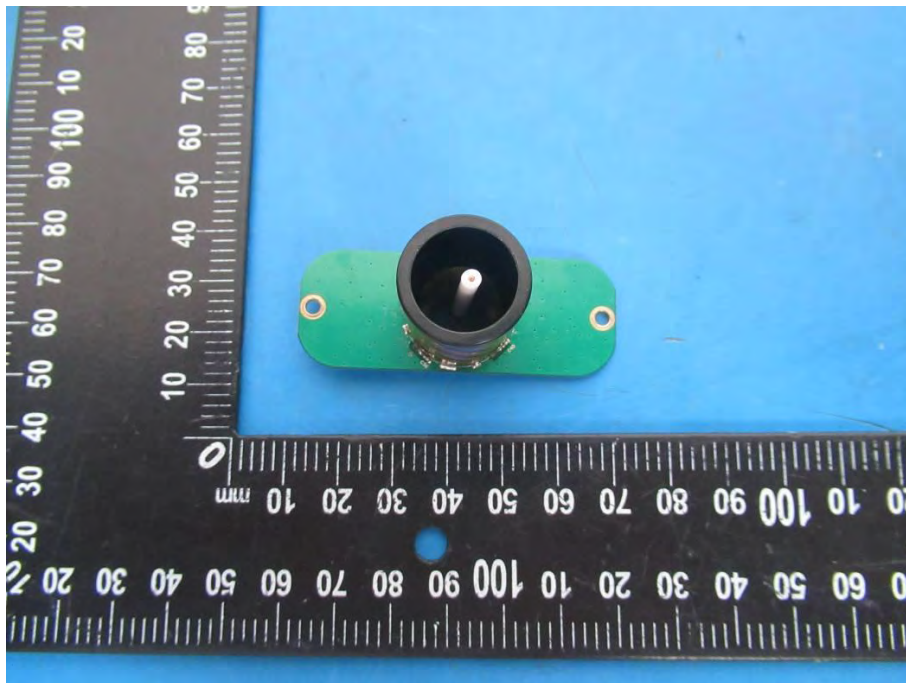
EUT View

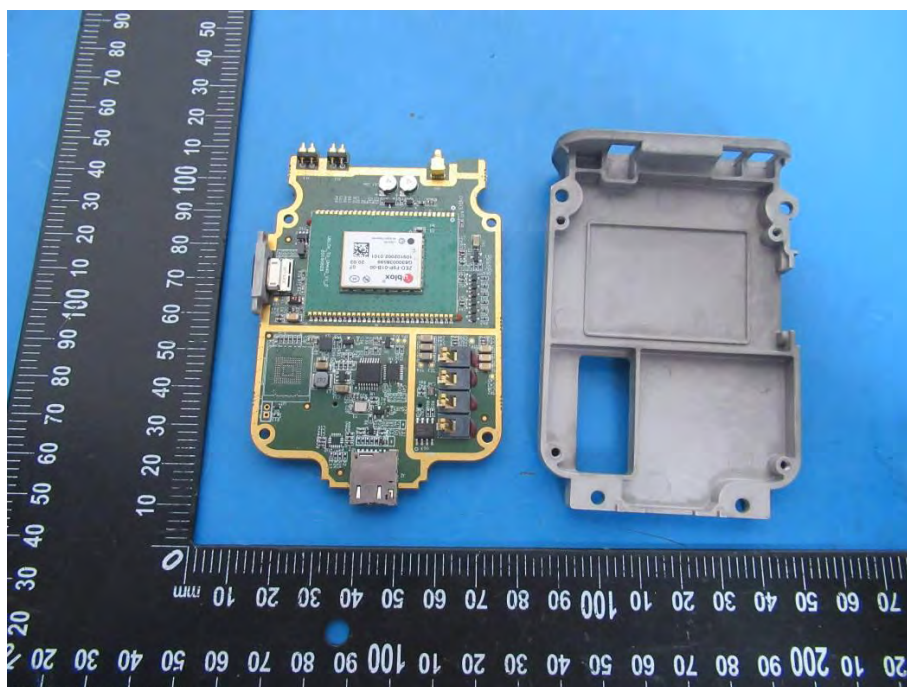
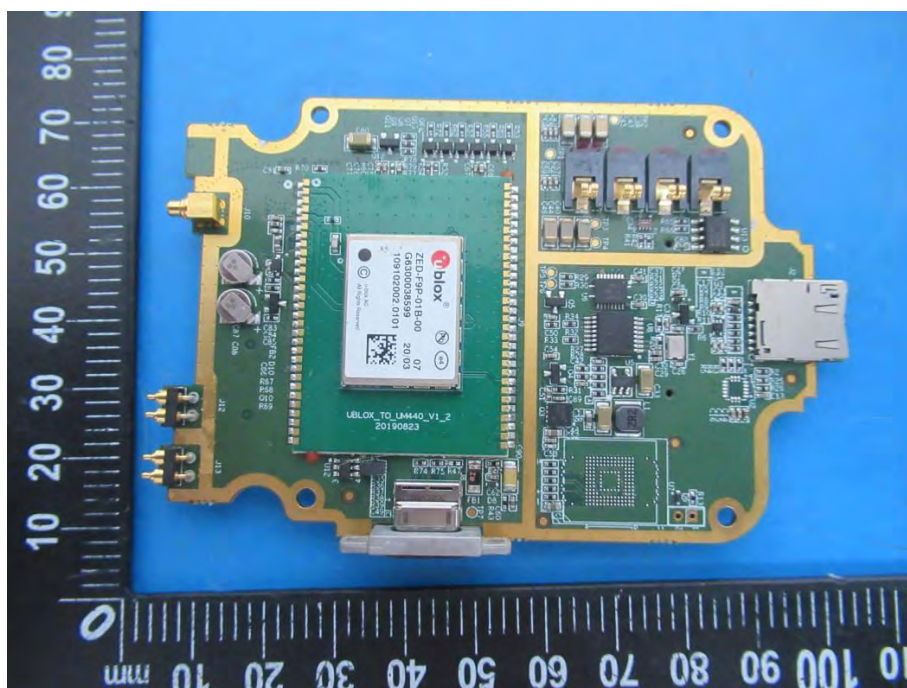


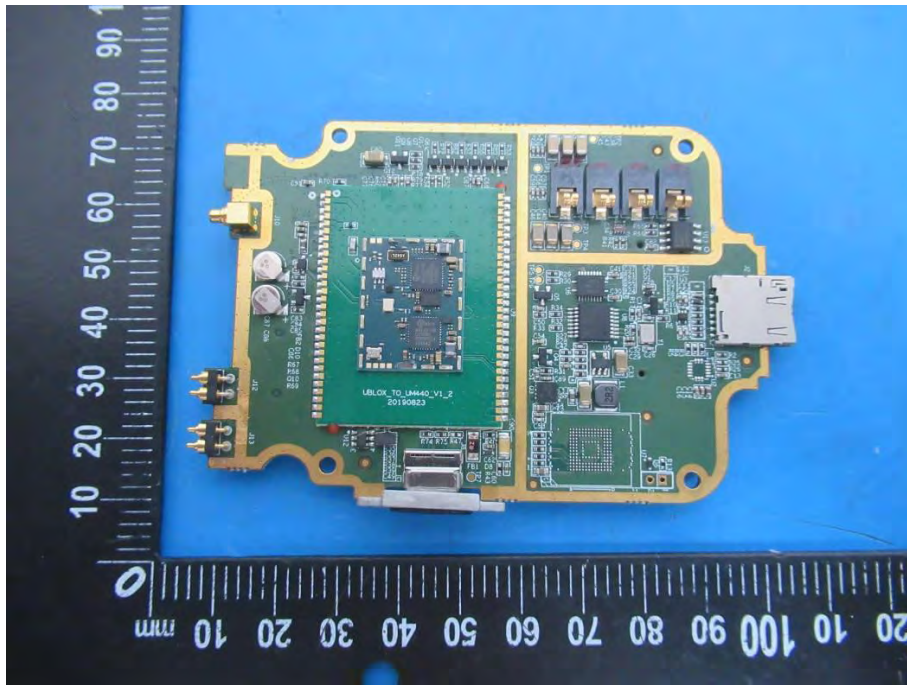
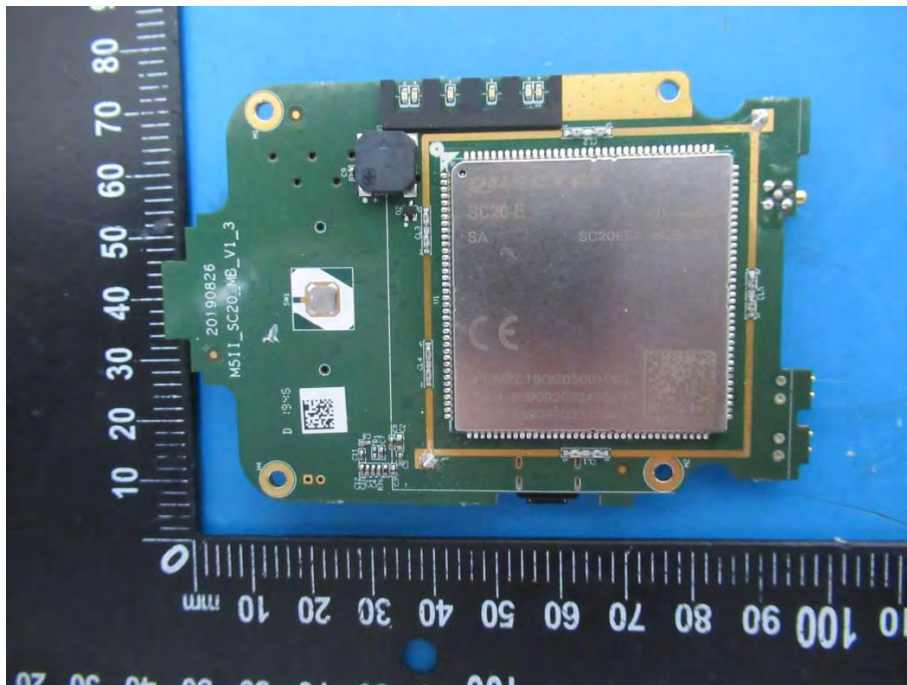
EUT View

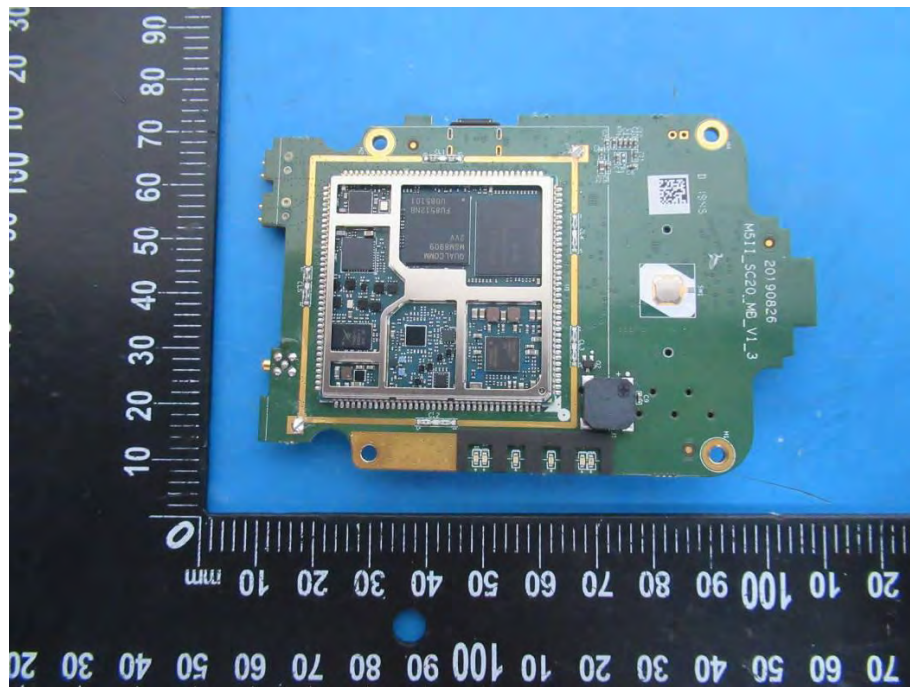
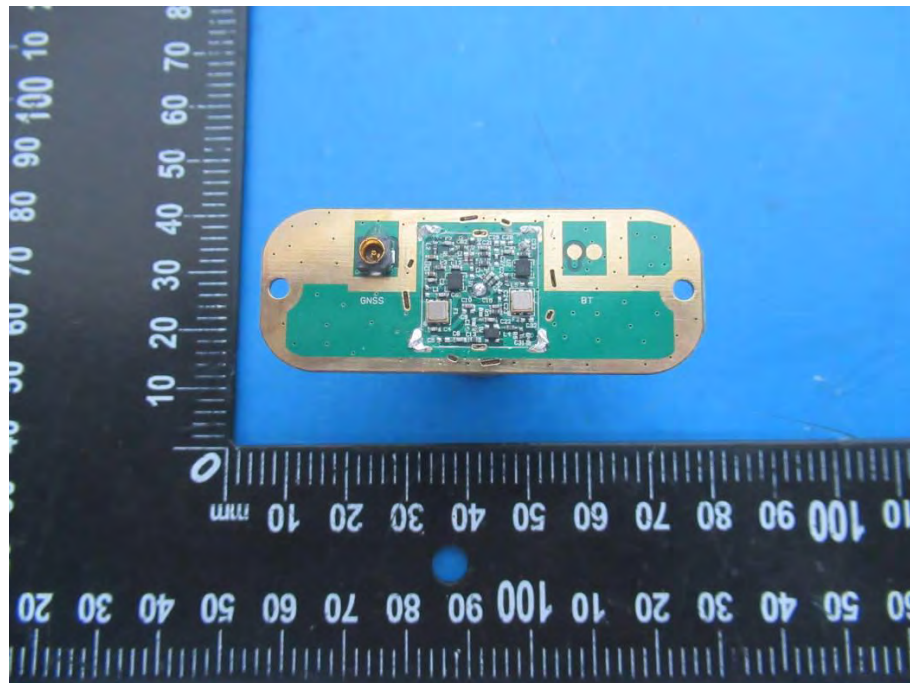
**EUT View****EUT View**

**EUT View****EUT View**

**EUT View****EUT View**

**EUT View****EUT View**

**EUT View****EUT View**

**EUT View****EUT View**

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