

Radio Test Report (BT-LE)

Report No.: RJBHQC-WTW-P20110170-3

Test Model: T99H209

Received Date: Nov. 12, 2020

Test Date: Nov. 13, 2020

Issued Date: Jan. 18, 2021

Applicant: BROTHER INDUSTRIES, LTD.

Address: 15-1, Naeshiro-cho, Mizuho-ku, Nagoya, Aichi, Japan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Summary of Test Results	5
2.1 Test Instruments	6
2.2 Measurement Uncertainty	7
2.3 Modification Record	7
3 General Information	8
3.1 General Description of EUT (BT-LE)	8
3.2 Description of Test Modes	9
3.3 Test Conditions	10
3.4 Assembly	10
3.5 Antenna Specifications	11
3.5.1 Antenna Gain	11
3.5.2 Antenna Pattern	11
4 Test Results	12
4.1 Frequency Tolerance Measurement	12
4.1.1 Limits of Frequency Tolerance Measurement	12
4.1.2 Test Setup	12
4.1.3 Test Results	12
4.2 Occupied Bandwidth Measurement (99% power bandwidth)	13
4.2.1 Limits of Occupied Bandwidth Measurement	13
4.2.2 Test Setup	13
4.2.3 Test Results	13
4.3 Spurious Emissions for Transmitter Measurement	17
4.3.1 Limits of Spurious Emissions	17
4.3.2 Test Setup	17
4.3.3 Test Results	18
4.4 Antenna Power Measurement	29
4.4.1 Limits of Antenna Power	29
4.4.2 Test Setup	29
4.4.3 Test Results	30
4.5 Spurious Emissions for Receiver	31
4.5.1 Limits of Spurious Emissions for Receiver	31
4.5.2 Test Setup	31
4.5.3 Test Result	32
4.6 Interference Prevention Function	36
4.6.1 Limits of Interference Prevention Function	36
4.6.2 Test Setup	36
4.6.3 Test Results	36
5 Photographs of the Test Configuration	37
Appendix - Information of the Testing Laboratories	38

Release Control Record

Issue No.	Description	Date Issued
RJBHQC-WTW-P20110170-3	Original release.	Jan. 18, 2021

1 Certificate of Conformity

Product: IEEE802.11a/b/g/n/ac (1x1)+BT 5.0 Combo Module

Brand: Brother

Test Model: T99H209

Sample Status: Engineering sample

Applicant: BROTHER INDUSTRIES, LTD.

Test Date: Nov. 13, 2020

Standards: ARIB STD-T66 (V3.7), MIC notice 88 Appendix 43
Certification Ordinance Article 2-1-19

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Vivian Huang , **Date:** Jan. 18, 2021
Vivian Huang / Specialist

Approved by : Clark Lin , **Date:** Jan. 18, 2021
Clark Lin / Technical Manager

2 Summary of Test Results

The EUT has been tested according to the following specifications:

Notice 88 Appendix 43 Reference	ARIB STD-T66 Ref.	Report Reference	Parameter	Test Results (Note)
General Provisions				
C	3.2 (4)	4.1	Frequency tolerance	C
D	3.2 (7)	4.2	Occupied bandwidth	C
E	3.2 (6)	4.3	Spurious emissions	C
Transmitting Equipment				
F	--	4.4	Antenna power	C
--	--	--	SAR	NA
Transmitting Antenna				
--	--	3.5	Type, configuration, etc. of transmitting antenna	C
--	--	3.5	Direction pattern of transmitting antenna	C
Receiving Equipment				
G	3.3 (1)	4.5	Spurious emissions of receiver	C
--	--	3.5	Refer to all articles for transmitting antenna	C
Operating Frequency 2400 to 2483.5MHz				
--	3.7-1	3.4	High frequency / modulation section cannot be opened easily	C
--	3.1 (1)	3.1	Communication method	C
--	3.2 (1)a	3.1	Modulation method	C
--	3.2 (1)a	3.1	Spread spectrum method	C
--	3.2 (2)	4.4	Antenna power	C
--	3.6 (2)	4.4	Absolute gain of transmitting antenna	C
--	3.6 (2)	--	Angular width of principal radiation (AWPR)	NA
--	3.2 (10)	--	Number of carriers within 1 MHz bandwidth in OFDM	NA
--	3.2 (8)	--	Spreading bandwidth	NA
--	3.2 (9)	--	Spreading factor	NA
--	3.2 (11)	--	Frequency retention time (FH employed)	NA
--	3.4.1 (1)	4.6	Interference Prevention Function	C
--	3.4.1 (3)	--	Carrier Sense Capability	NA
Note: 1. C = Conform NC = Not Conform NT = Not Tested NA = Not Applicable 2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.				

2.1 Test Instruments

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until	Calibration Authority	Calibration Method
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021	ETC	(c)
ESG Vector signal generator Agilent	E4438C	MY45094468	Nov. 14, 2019	Nov. 13, 2020	ETC	(c)
Power Meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021	ETC	(c)
Power Sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021	ETC	(c)
DC Power Supply Topward	6603D	795558	NA	NA	NA	NA
AC Power Source Extech Electronics	6205	1440452	NA	NA	NA	NA
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021	ETC	(c)
Power Combiner Mini-circuits	ZFRSC-123-S+	F698501347_02	Dec. 24, 2019	Dec. 23, 2020	BV CPS E&E	(d)
Power Divide Warison	WDIV-4R4029	0001	Jan. 14, 2020	Jan. 13, 2021	BV CPS E&E	(d)

- Note:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. Calibration method :
 - a) : Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph (1).
 - b) : Calibration conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) Japan Calibration Service System.
 - c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
 - d) : Calibration conducted by using other equipment that listed above from a) to c).
 3. The power supply no evaluation calibrated, which used the digital multimeter to verify.
 4. Tested Date: Nov. 13, 2020

2.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in TR 100 028-1.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Parameter	Uncertainty
Occupied Bandwidth	± 960 Hz
Spurious emissions	± 2.5 dB
Output power density	± 1.2 dB
Out of band radiated power	± 2.5 dB
Frequency Tolerance	± 960 Hz

2.3 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (BT-LE)

Product	IEEE802.11a/b/g/n/ac (1x1)+BT 5.0 Combo Module
Brand	Brother
Test Model	T99H209
Status of EUT	Engineering sample
Nominal Voltage	3.3Vdc from host equipment
Modulation Type	GFSK
Modulation Technology	DTS
Transfer Rate	Up to 1Mbps
Operating Frequency	2.402 ~ 2.480GHz
Number of Channel	40
Rated RF Output Power	3 mW
Conducted RF Output Power	2.541 mW
Radiated RF Output Power	5.888 mW
Antenna Type	Refer to section 3.5
Antenna Connector	Refer to section 3.5
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. There are WLAN and Bluetooth technology used for the EUT. The EUT has two radios as following table:

Radio 1	Radio 2
WLAN 2.4GHz + 5GHz	Bluetooth

2. Simultaneously transmission condition.

Condition	Technology
1	WLAN 5GHz + Bluetooth

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

40 channels are provided for BT-LE mode:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Note:

1. The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.

By means of test software (Broadcom BLUETOOL_MI_1.9.5.8) provided by manufacturer, the power levels during the tests were set according to the following codes:

BT-LE 1M	
Channel	Power Setting
0	Default
19	Default
39	Default

3.3 Test Conditions

Test Conditions		Voltage (Vdc)
V_{normal}		3.3
$V_{max.}$	+10%	3.63
$V_{min.}$	-10%	2.97

Test mode is presented in the report as below:

Test Item	Environmental Conditions
Frequency Tolerance	25 deg.C, 60 % RH
Occupied Bandwidth	25 deg.C, 60 % RH
Spurious Emissions for Transmitter	25 deg.C, 60 % RH
Antenna Power	25 deg.C, 60 % RH
Spurious Emissions for Receiver	25 deg.C, 60 % RH

3.4 Assembly

The EUT is constructed as an IEEE802.11a/b/g/n/ac (1x1)+BT 5.0 Combo Module. The RF circuit was covered by metal shielding case, and the metal shielding case was soldered on PCB.

3.5 Antenna Specifications

3.5.1 Antenna Gain

Antenna No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	3.65	2.4~2.4835	PCB	None
	3.98	5.15~5.85		

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.5.2 Antenna Pattern

Please refer to the attached file (Antenna pattern).

4 Test Results

4.1 Frequency Tolerance Measurement

4.1.1 Limits of Frequency Tolerance Measurement

Tolerance of frequency shall be +/- 50ppm

4.1.2 Test Setup



4.1.3 Test Results

BT-LE 1M

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)
0	2402	2402.014244	5.930	2402.014072	5.858	2402.014073	5.858
19	2440	2440.018501	7.582	2440.018560	7.606	2440.018444	7.559
39	2480	2480.023260	9.379	2480.023295	9.393	2480.023260	9.379

4.2 Occupied Bandwidth Measurement (99% power bandwidth)

4.2.1 Limits of Occupied Bandwidth Measurement

Item	Limit
Occupied bandwidth	<26MHz

4.2.2 Test Setup



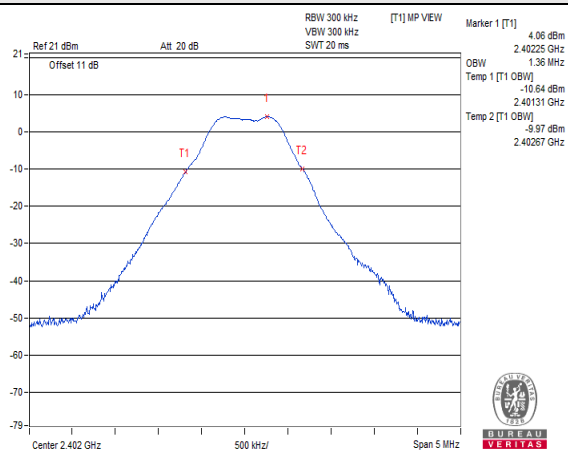
4.2.3 Test Results

BT-LE 1M

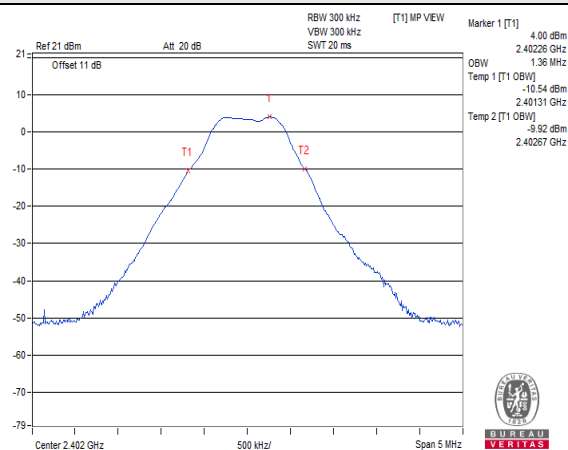
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
0	2402	1.36	1.36	1.36
19	2440	1.36	1.37	1.37
39	2480	1.36	1.36	1.36

NOTE: For the test plots please refer to the below pages.

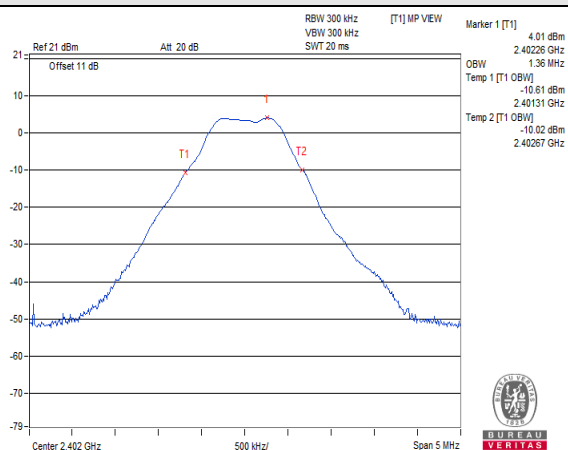
V_{normal}



V_{max.}

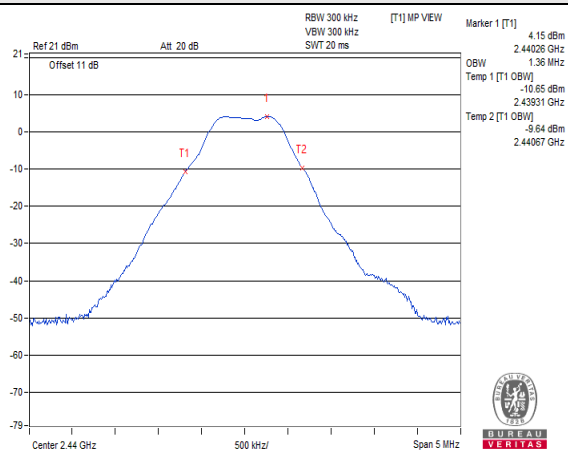


V_{min.}

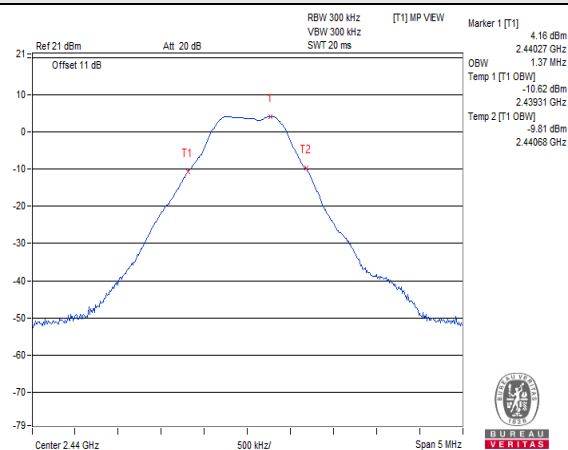


CH 0 (2402MHz)

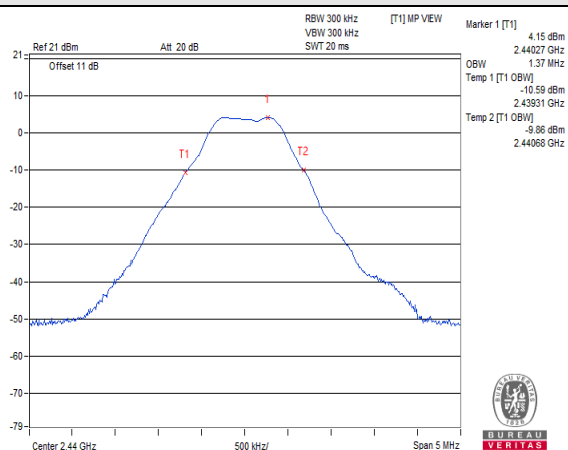
V_{normal}



V_{max.}

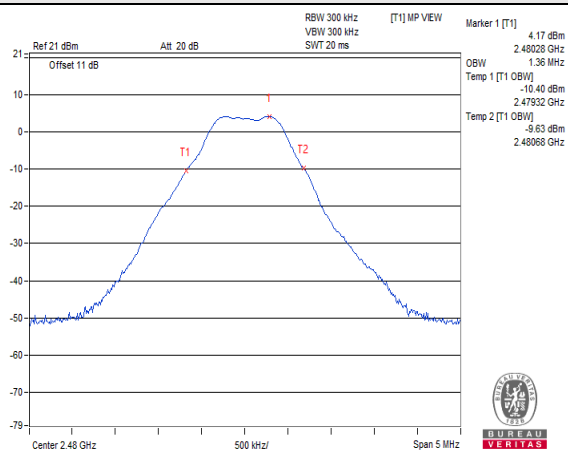


V_{min.}

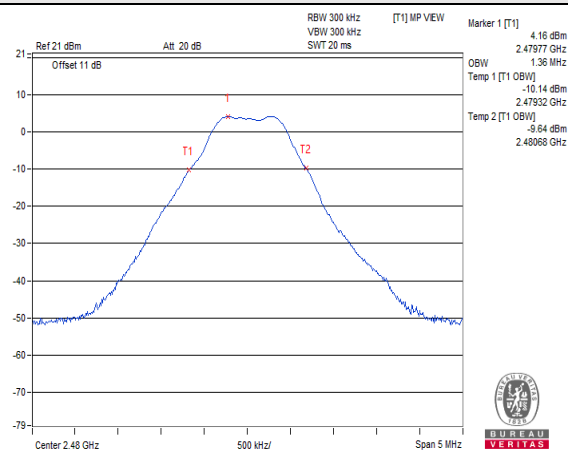


CH 19 (2440MHz)

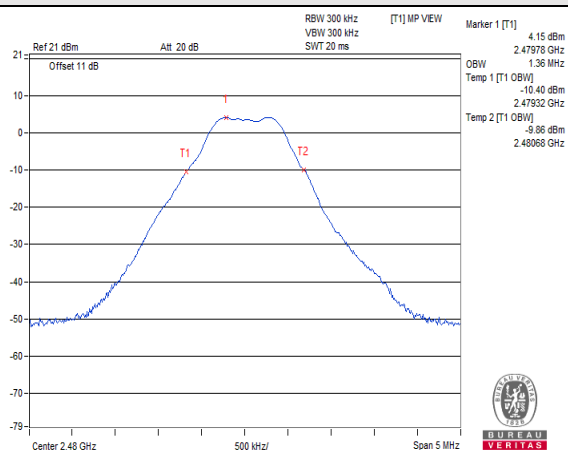
V_{normal}



V_{max.}



V_{min.}



CH 39 (2480MHz)

4.3 Spurious Emissions for Transmitter Measurement

4.3.1 Limits of Spurious Emissions

Frequencies (MHz)	Limit
Operating frequency 2400 to 2483.5MHz	
30.0MHz to 1000.0MHz	$\leq 0.25 \mu\text{W}/100\text{kHz}$
1000.0MHz to 2387MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$
2387.0MHz to 2400.0MHz	$\leq 25 \mu\text{W}/\text{MHz}$
2483.5MHz to 2496.5MHz	$\leq 25 \mu\text{W}/\text{MHz}$
2496.5MHz to 12500.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$

4.3.2 Test Setup



4.3.3 Test Results

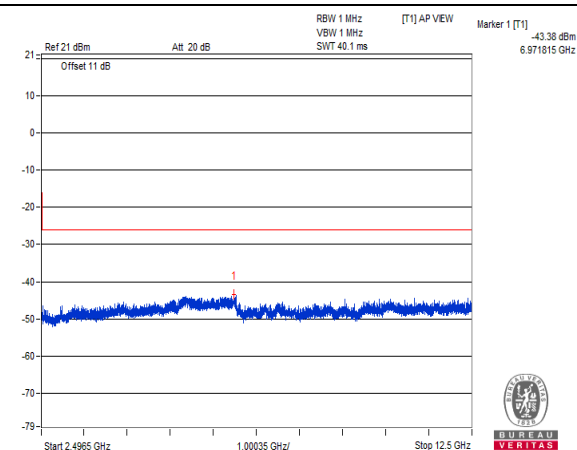
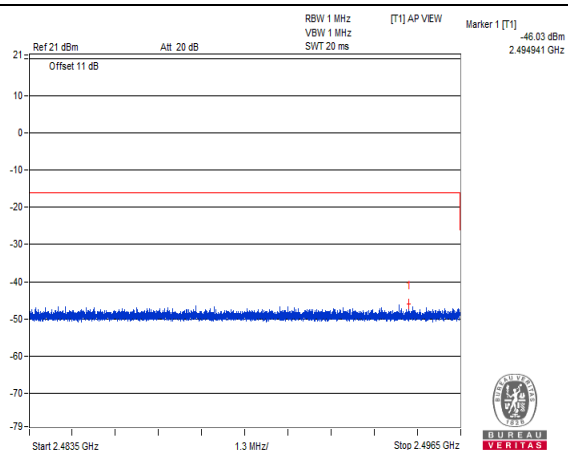
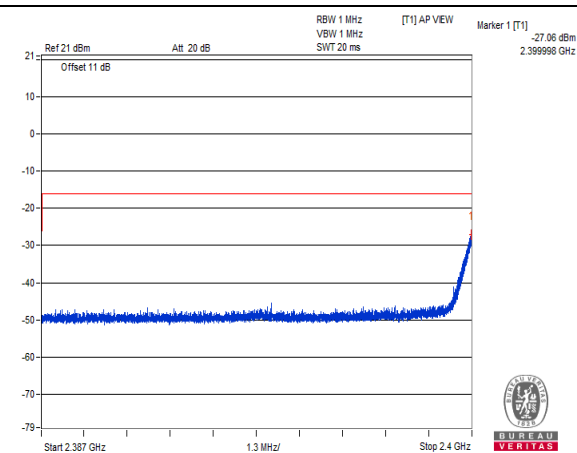
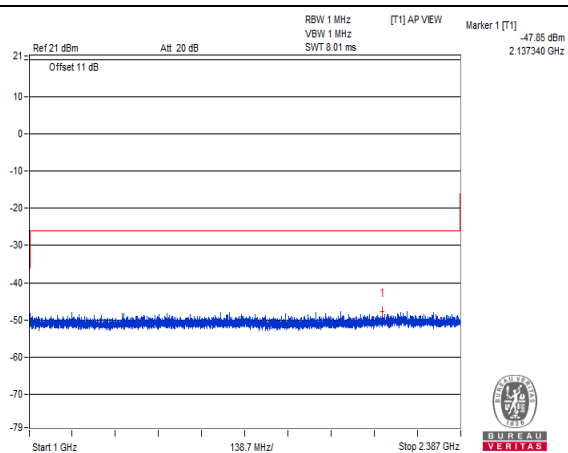
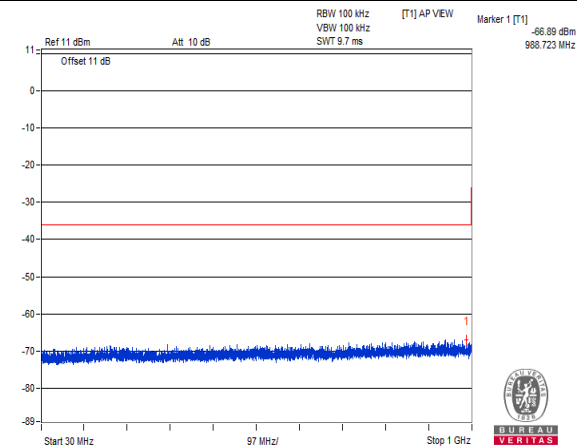
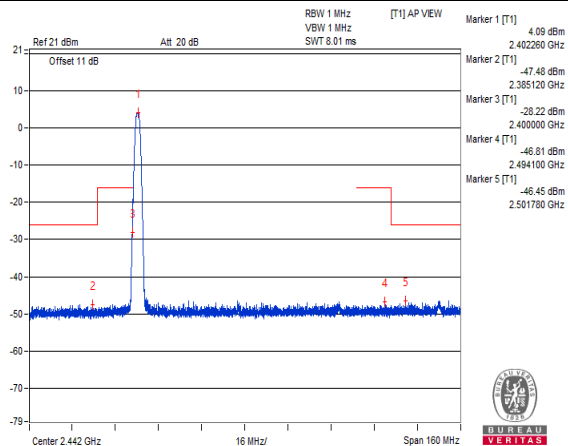
BT-LE 1M

TEST CHANNEL		CH 0 (2402MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30MHz to 1000MHz	988.723	0.000205	0.25	PASS
	1000MHz to 2387MHz	2137.340	0.016406	2.5	PASS
	2387MHz to 2400MHz	2399.998	1.967886	25	PASS
	2483.5MHz to 2496.5MHz	2494.941	0.024946	25	PASS
	2496.5MHz to 12500MHz	6971.815	0.045920	2.5	PASS
V_{max.}	30MHz to 1000MHz	995.513	0.000187	0.25	PASS
	1000MHz to 2387MHz	1696.100	0.019770	2.5	PASS
	2387MHz to 2400MHz	2399.983	1.927525	25	PASS
	2483.5MHz to 2496.5MHz	2492.141	0.023281	25	PASS
	2496.5MHz to 12500MHz	6928.050	0.047643	2.5	PASS
V_{min.}	30MHz to 1000MHz	727.066	0.000200	0.25	PASS
	1000MHz to 2387MHz	1705.116	0.017660	2.5	PASS
	2387MHz to 2400MHz	2400.000	1.870682	25	PASS
	2483.5MHz to 2496.5MHz	2483.579	0.026002	25	PASS
	2496.5MHz to 12500MHz	5886.436	0.050350	2.5	PASS
TEST CHANNEL		CH 19 (2440MHz)			
V_{normal}	30MHz to 1000MHz	917.186	0.000194	0.25	PASS
	1000MHz to 2387MHz	1464.471	0.020749	2.5	PASS
	2387MHz to 2400MHz	2392.919	0.026792	25	PASS
	2483.5MHz to 2496.5MHz	2488.142	0.022646	25	PASS
	2496.5MHz to 12500MHz	6451.633	0.047534	2.5	PASS
V_{max.}	30MHz to 1000MHz	845.042	0.000213	0.25	PASS
	1000MHz to 2387MHz	2383.705	0.017179	2.5	PASS
	2387MHz to 2400MHz	2394.423	0.020893	25	PASS
	2483.5MHz to 2496.5MHz	2486.252	0.022542	25	PASS
	2496.5MHz to 12500MHz	6712.975	0.046345	2.5	PASS
V_{min.}	30MHz to 1000MHz	936.586	0.000211	0.25	PASS
	1000MHz to 2387MHz	2205.649	0.017906	2.5	PASS
	2387MHz to 2400MHz	2393.568	0.020749	25	PASS
	2483.5MHz to 2496.5MHz	2492.921	0.025586	25	PASS
	2496.5MHz to 12500MHz	5915.196	0.068707	2.5	PASS

TEST CHANNEL		CH 39 (2480MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30MHz to 1000MHz	845.285	0.000204	0.25	PASS
	1000MHz to 2387MHz	1729.562	0.018072	2.5	PASS
	2387MHz to 2400MHz	2396.712	0.023878	25	PASS
	2483.5MHz to 2496.5MHz	2484.010	0.025468	25	PASS
	2496.5MHz to 12500MHz	6016.481	0.047534	2.5	PASS
V_{max.}	30MHz to 1000MHz	958.168	0.000264	0.25	PASS
	1000MHz to 2387MHz	2336.027	0.019907	2.5	PASS
	2387MHz to 2400MHz	2392.073	0.022751	25	PASS
	2483.5MHz to 2496.5MHz	2483.859	0.030832	25	PASS
	2496.5MHz to 12500MHz	5961.462	0.054576	2.5	PASS
V_{min.}	30MHz to 1000MHz	947.256	0.000198	0.25	PASS
	1000MHz to 2387MHz	1961.017	0.017620	2.5	PASS
	2387MHz to 2400MHz	2393.883	0.021232	25	PASS
	2483.5MHz to 2496.5MHz	2484.330	0.026062	25	PASS
	2496.5MHz to 12500MHz	5860.176	0.047424	2.5	PASS

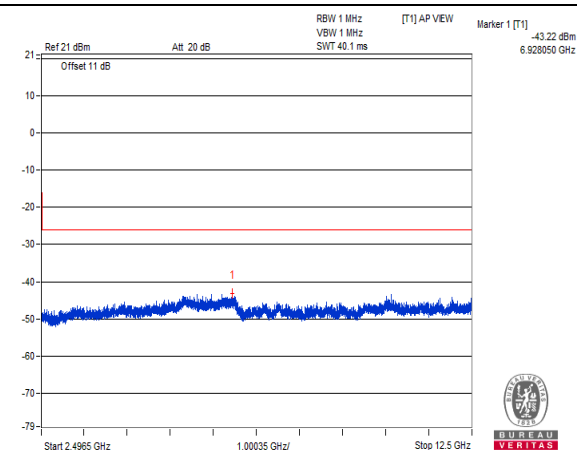
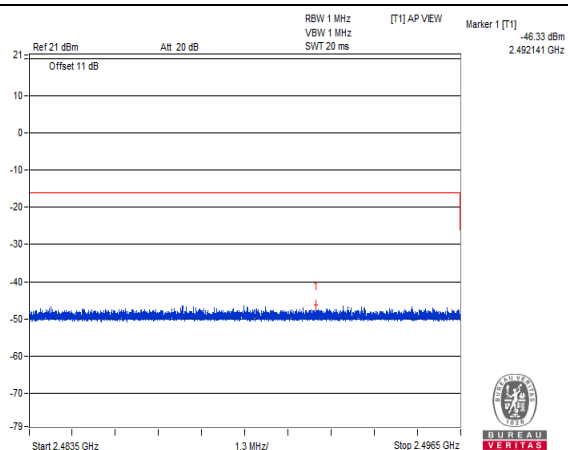
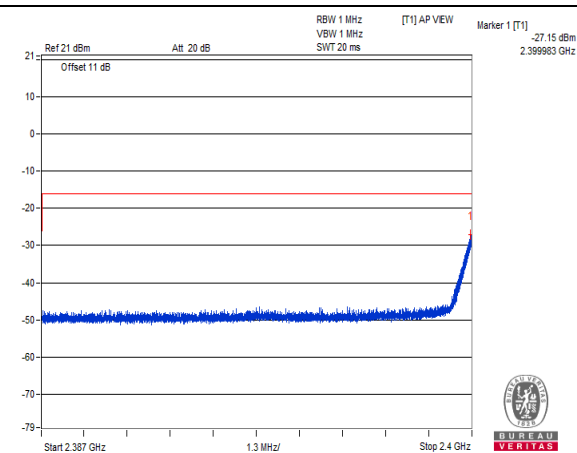
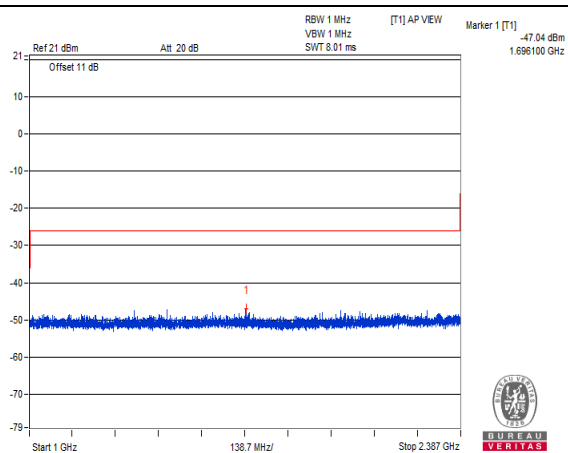
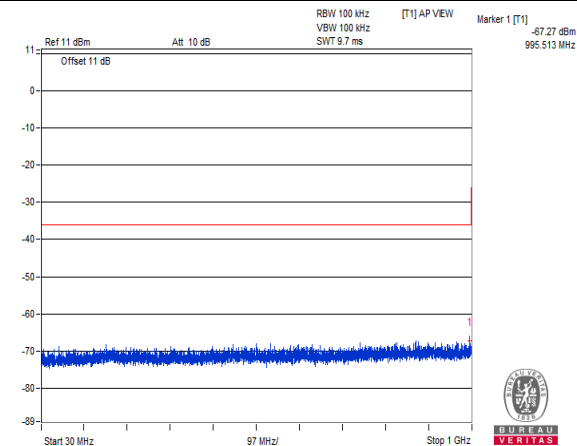
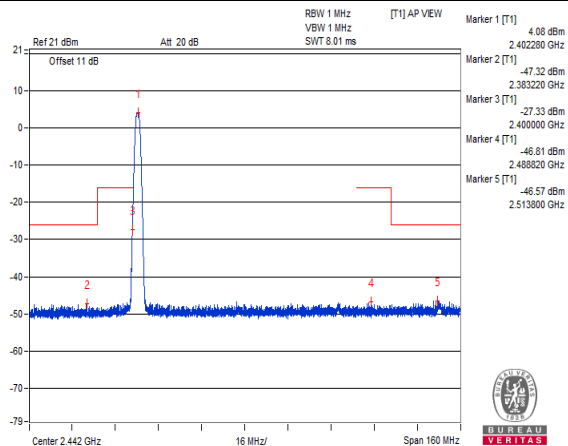
NOTE: 1. The spectrum plots are attached on the following pages.

Vnormal



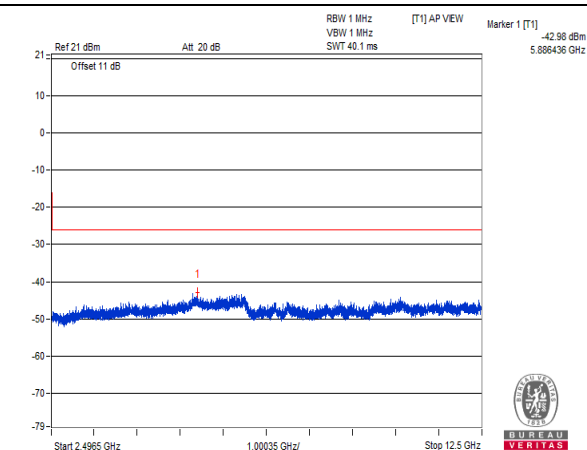
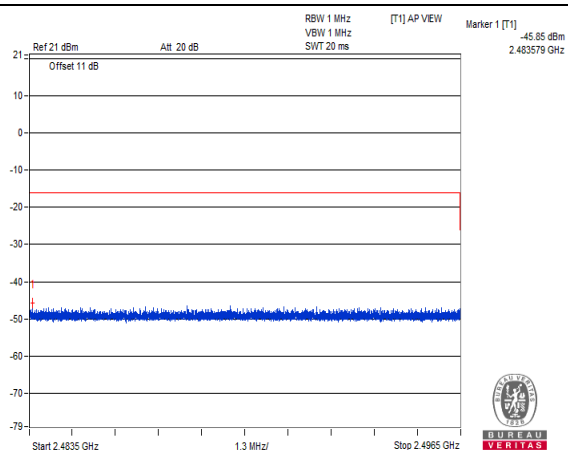
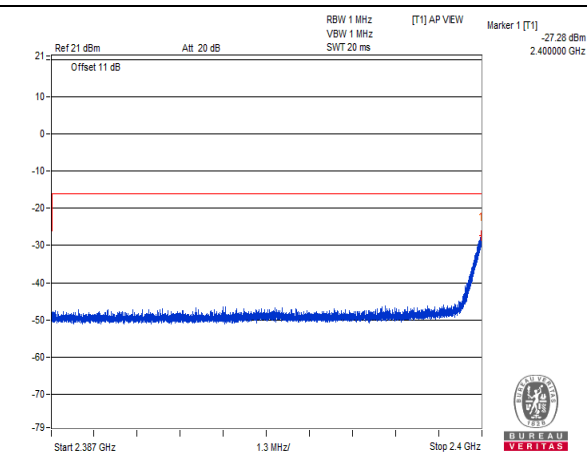
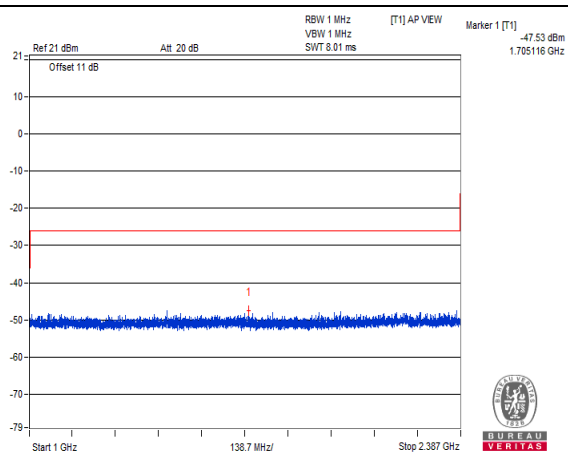
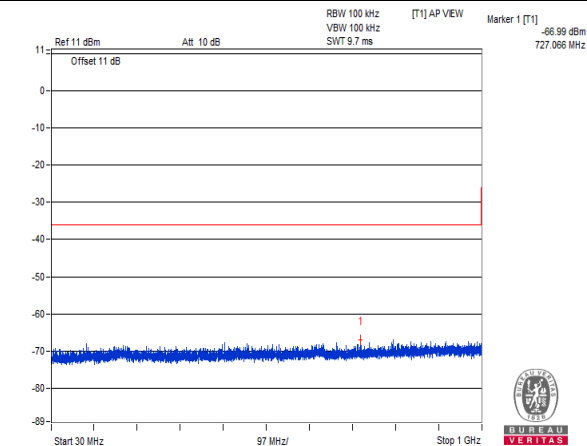
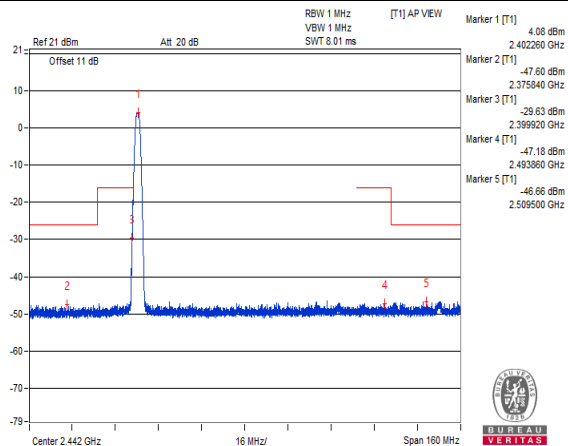
CH 0 (2402MHz)

V_{max}.



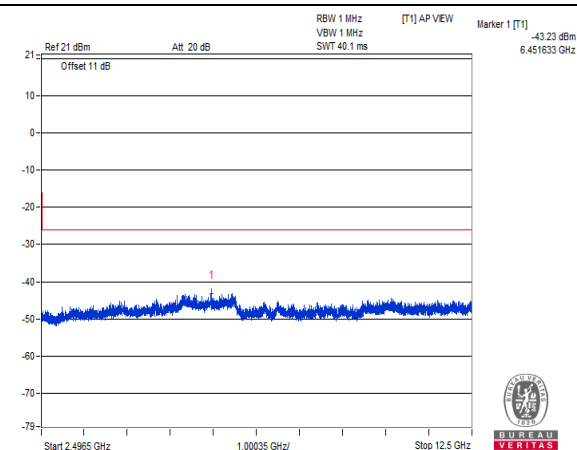
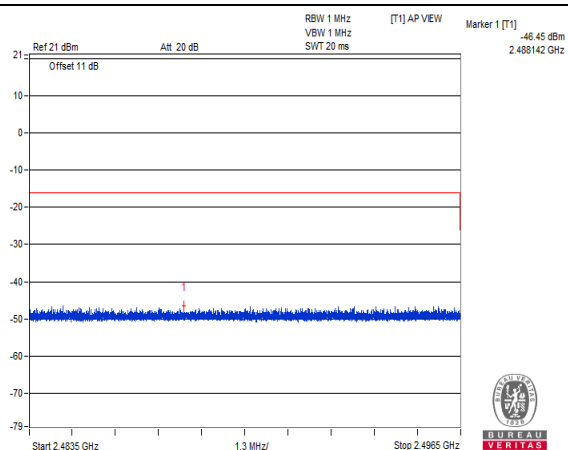
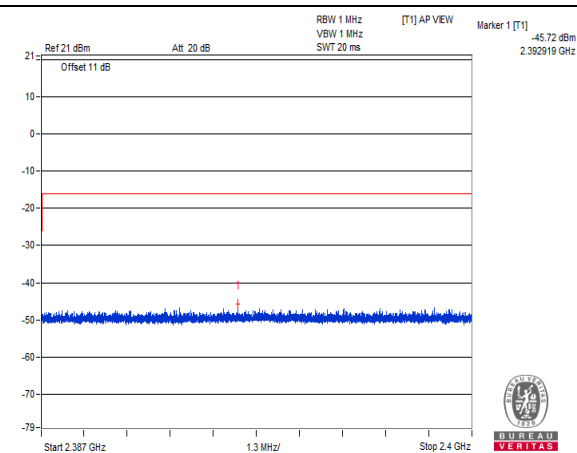
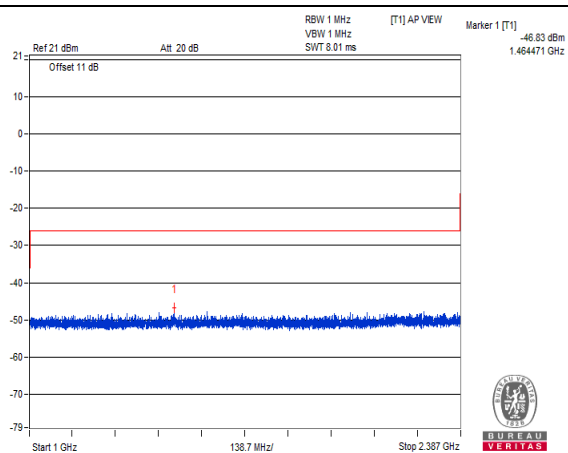
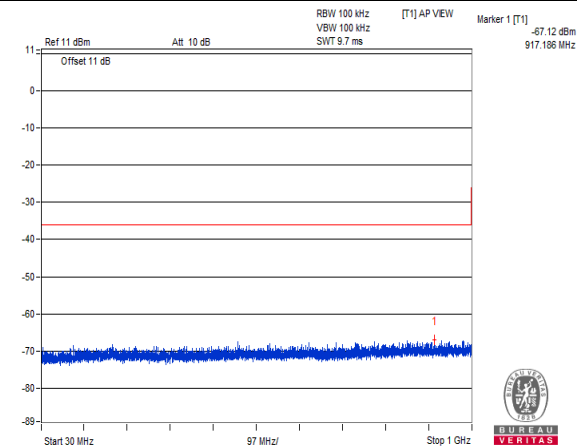
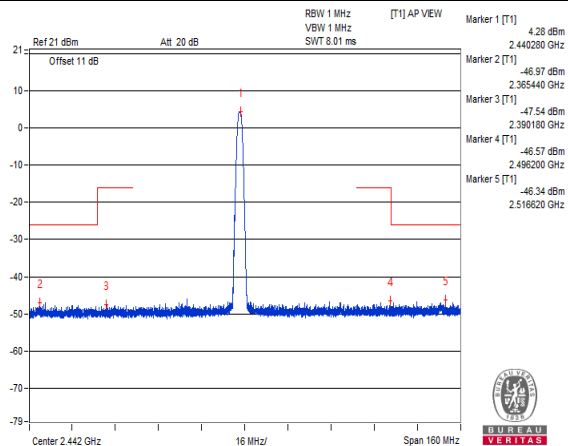
CH 0 (2402MHz)

V_{min}.



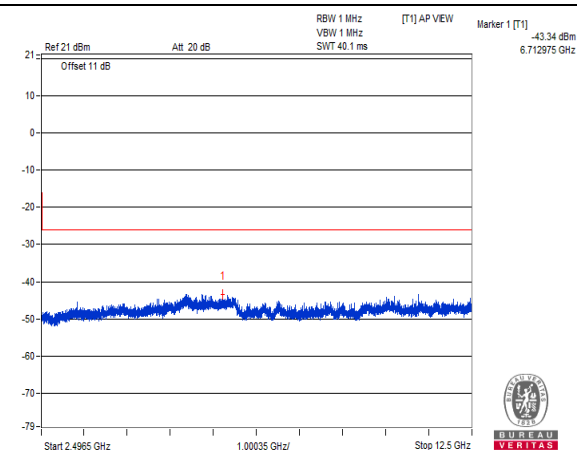
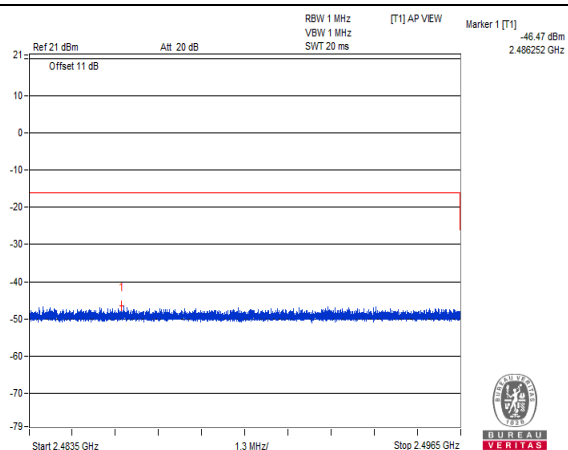
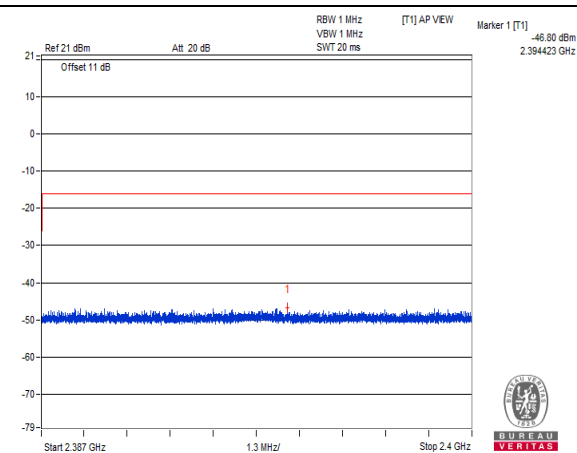
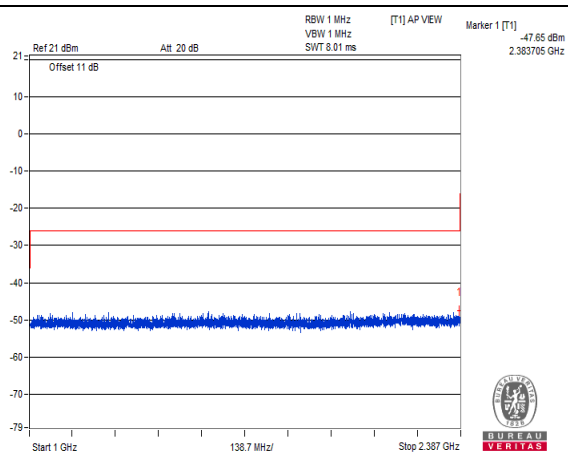
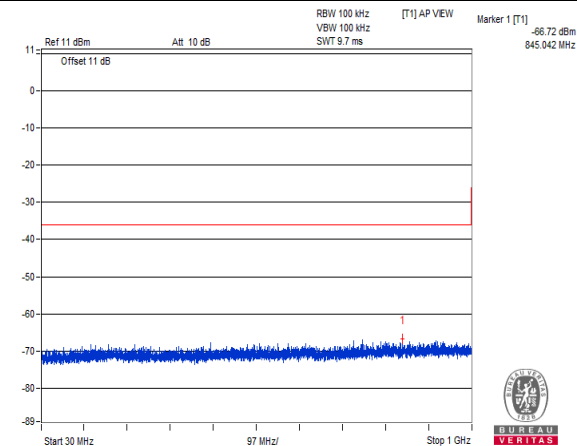
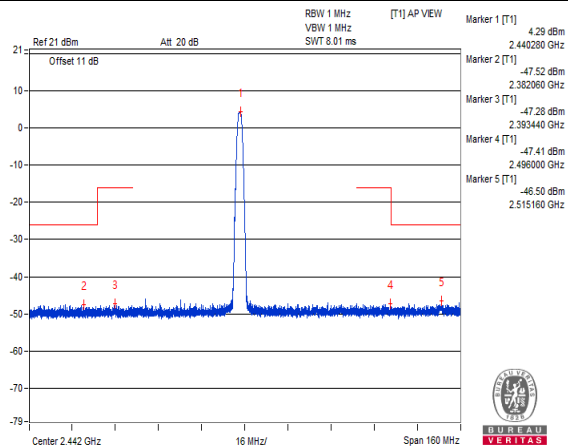
CH 0 (2402MHz)

Vnormal



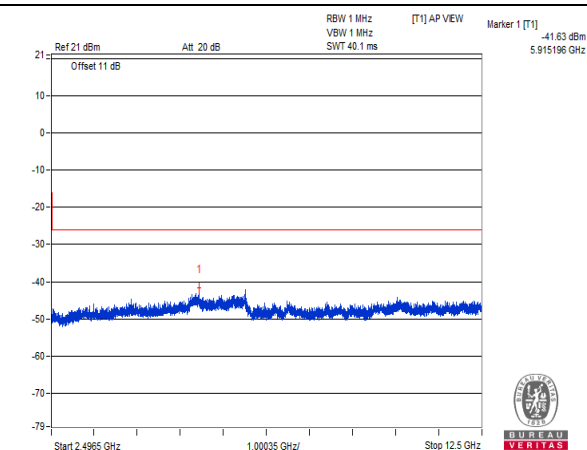
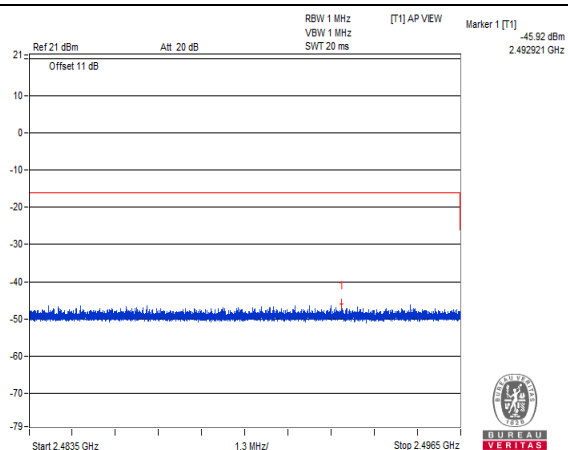
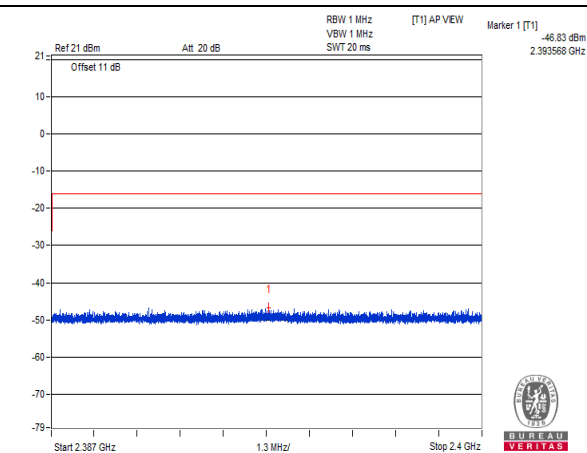
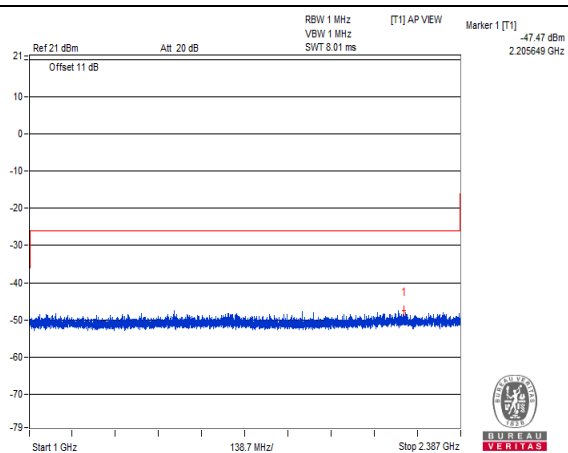
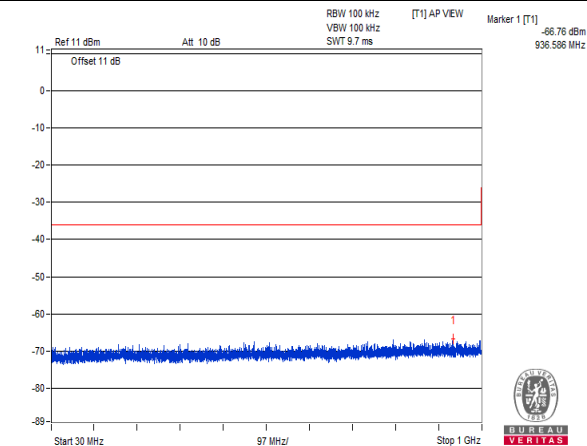
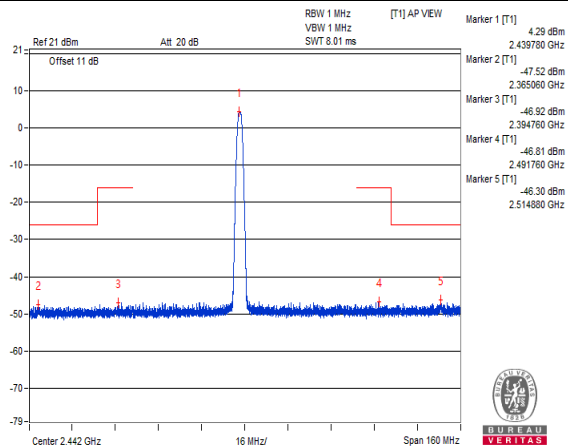
CH 19 (2440MHz)

V_{max}.



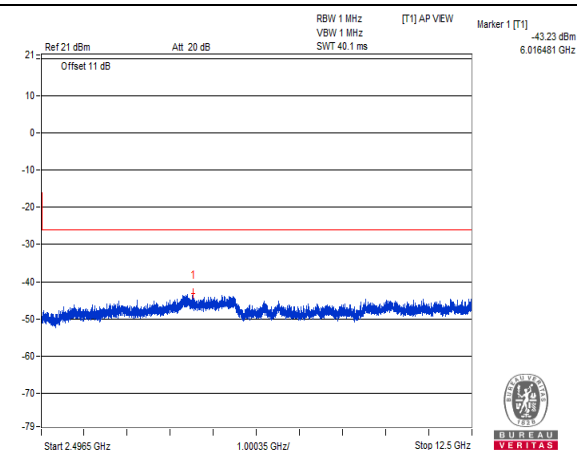
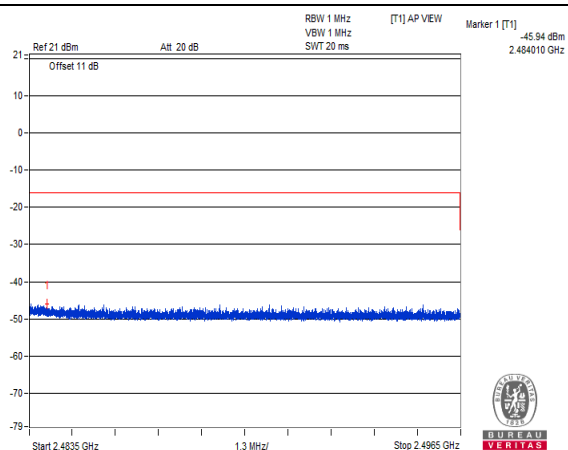
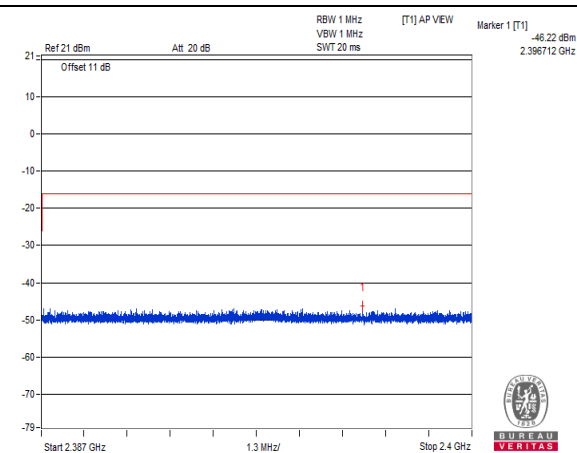
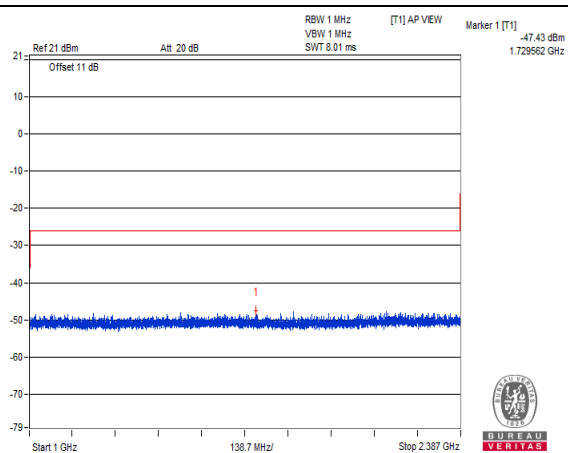
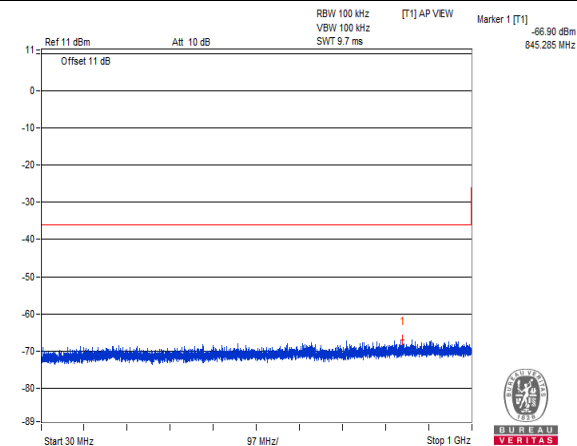
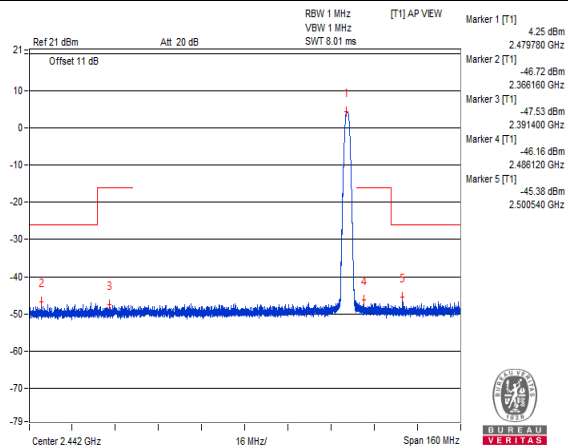
CH 19 (2440MHz)

V_{min}.



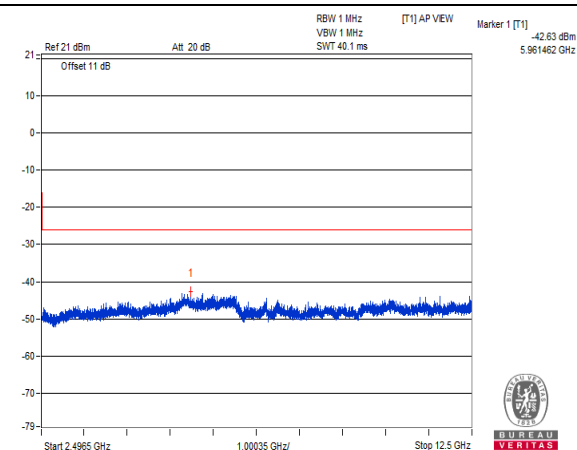
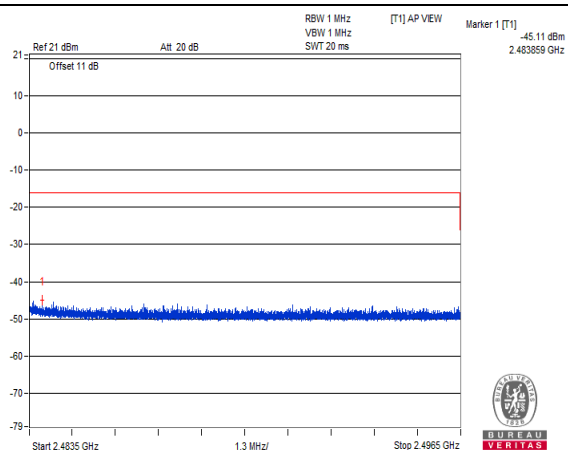
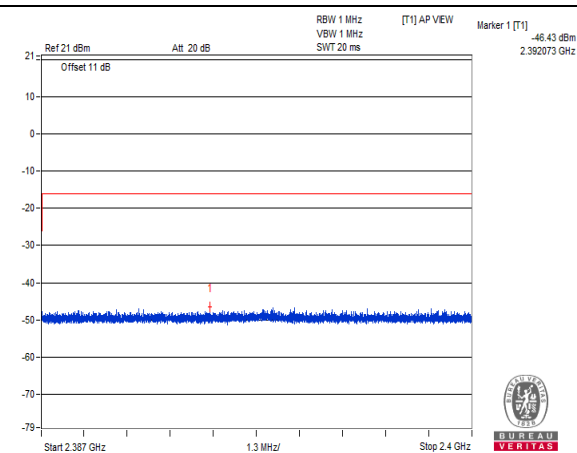
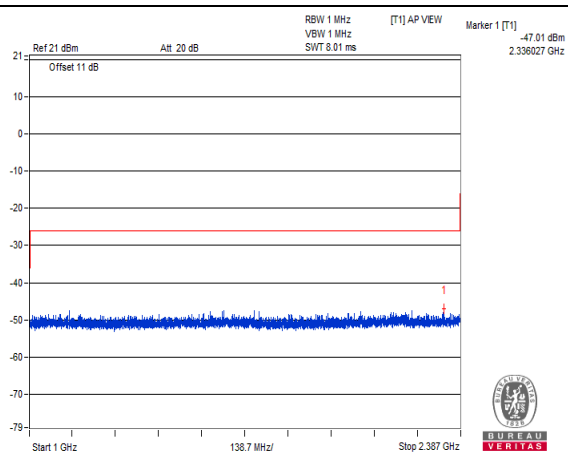
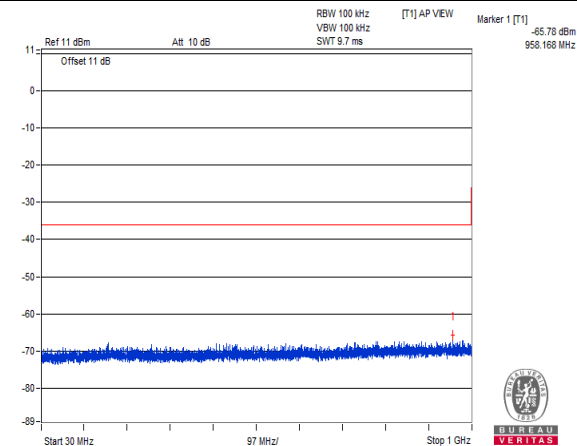
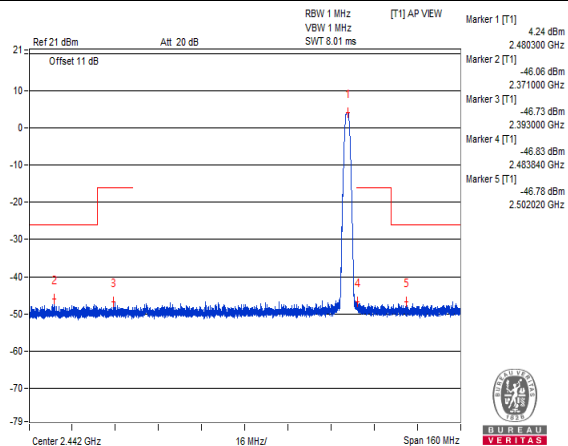
CH 19 (2440MHz)

Vnormal



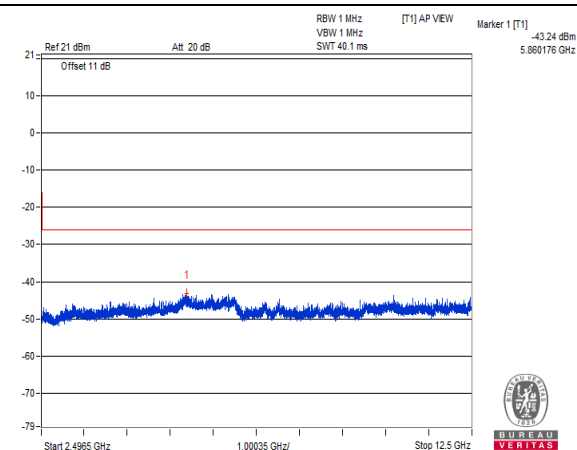
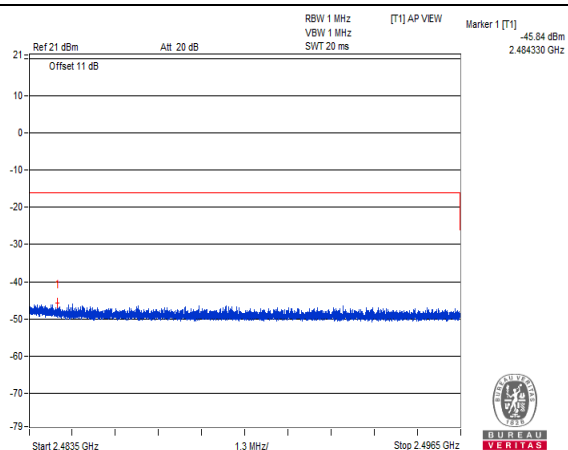
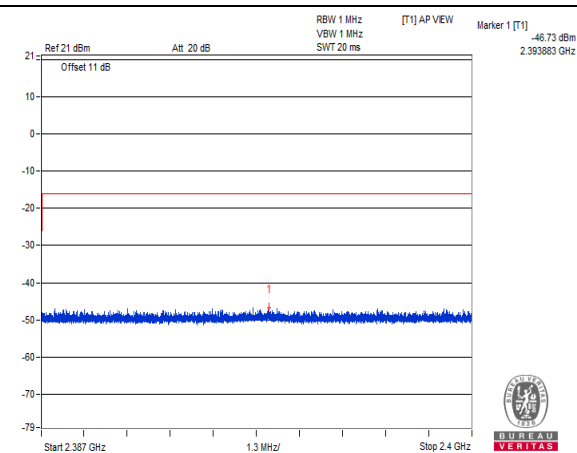
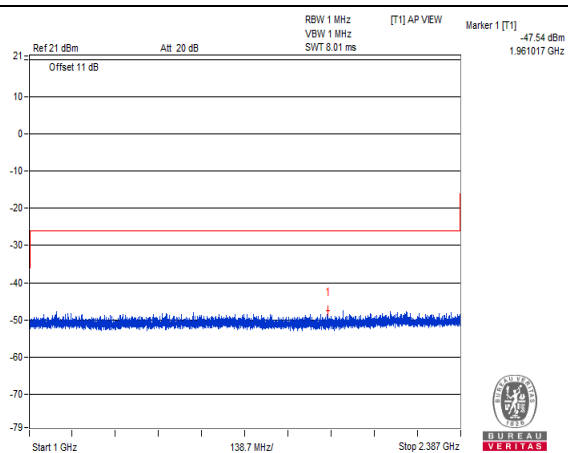
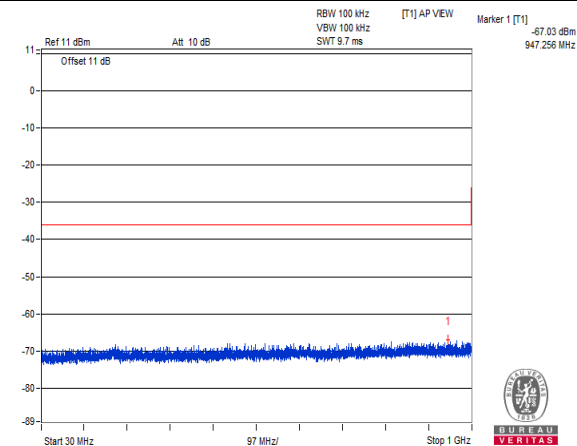
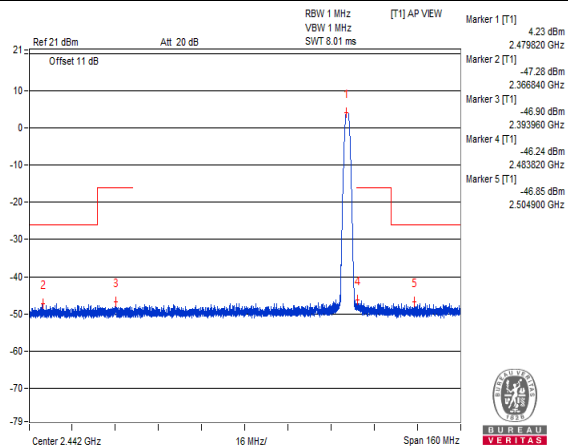
CH 39 (2480MHz)

V_{max}.



CH 39 (2480MHz)

V_{min}.



CH 39 (2480MHz)

4.4 Antenna Power Measurement

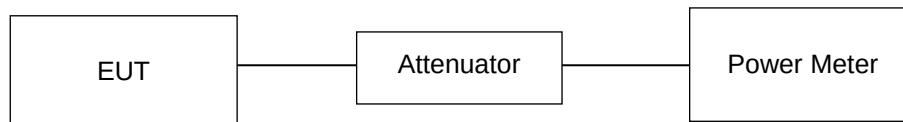
4.4.1 Limits of Antenna Power

Modulation System	Frequency Band Used	Antenna Power (Max.)	EIRP Limit (Note 3)
DS	2400 – 2483.5 MHz	10 mW/MHz	12.14 dBm/MHz ~ 22.14 dBm/MHz (16.368 mW/MHz ~ 163.68 mW/MHz)
OFDM (Note 1)	2400 – 2483.5 MHz	10 mW/MHz	12.14 dBm/MHz ~ 22.14 dBm/MHz (16.368 mW/MHz ~ 163.68 mW/MHz)
OFDM (Note 2)	2400 – 2483.5 MHz	5 mW/MHz	9.13 dBm/MHz ~ 19.13 dBm/MHz (8.184 mW/MHz ~ 81.84 mW/MHz)
Other than the above	2400 – 2483.5 MHz	10 mW	12.14 dBm ~ 22.14 dBm (16.368 mW ~ 163.68 mW)

Note:

1. Occupied bandwidth is less than 26MHz
2. Occupied bandwidth is more than 26MHz and less than 38MHz
3. EIRP limit is variable by the HPBA, the HPBA (half-power beam width) of the antenna shall be $360/A$ degrees or less, where $A = \text{EIRP}/(2.14 \text{ dBi} + \text{Antenna Power (limit)})$.
4. Tolerance of antenna power shall be +20% (upper value) and -80% (lower value).

4.4.2 Test Setup



4.4.3 Test Results

BT-LE 1M

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power (mW)	Radiated RF Output Power (mW)
3.3	0	2402	2.466	5.715
	19	2440	2.529	5.861
	39	2480	2.518	5.835
3.63	0	2402	2.432	5.636
	19	2440	2.472	5.729
	39	2480	2.404	5.571
2.97	0	2402	2.541	5.888
	19	2440	2.466	5.715
	39	2480	2.432	5.636
Max. Limit (mW):			10	-
Rated Power (mW):			3	-
Tolerance of Antenna Power (mW):			0.6 ~ 3.6	-
Max. EIRP Limit (mW):			-	16.368

Note: 1. Antenna gain is 3.65 dBi.

2. The radiated RF output power is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power = Conducted RF output power + Antenna gain

4.5 Spurious Emissions for Receiver

4.5.1 Limits of Spurious Emissions for Receiver

Frequencies (MHz)	Limit
Below 1GHz	$\leq 4\text{nW}/100\text{kHz}$ (-54dBm)
Above 1GHz	$\leq 20\text{nW}/\text{MHz}$ (-47dBm)

4.5.2 Test Setup

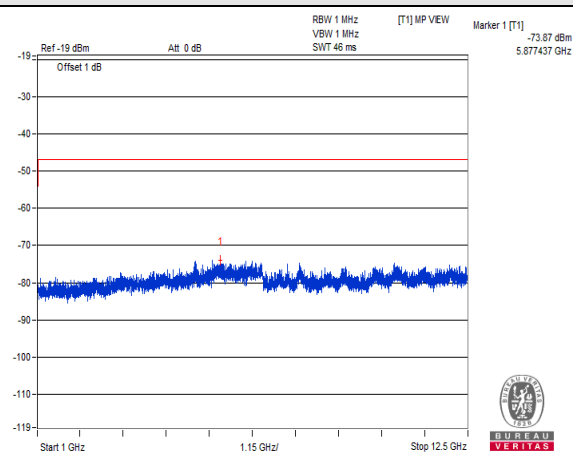
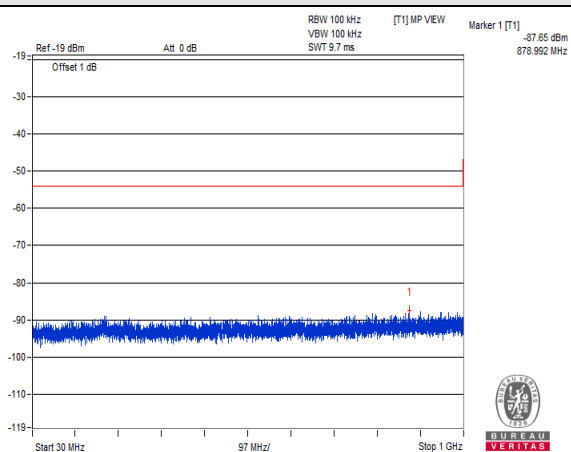


4.5.3 Test Result

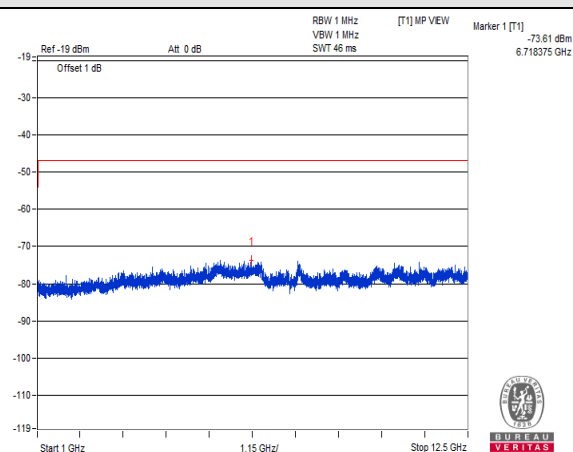
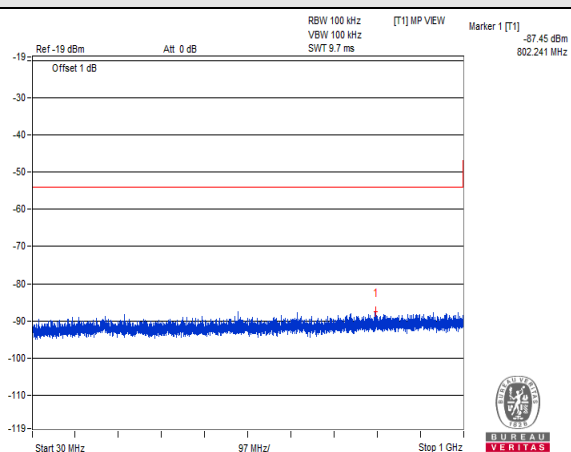
BT-LE 1M

TEST CHANNEL		CH 0 (2402MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30MHz to 1000MHz	878.992	0.001718	4.0	PASS
	1000MHz to 12500MHz	5877.437	0.041020	20.0	PASS
V_{max.}	30MHz to 1000MHz	802.241	0.001799	4.0	PASS
	1000MHz to 12500MHz	6718.375	0.043551	20.0	PASS
V_{min.}	30MHz to 1000MHz	976.235	0.001919	4.0	PASS
	1000MHz to 12500MHz	6662.312	0.047098	20.0	PASS
TEST CHANNEL		CH 19 (2440MHz)			
V_{normal}	30MHz to 1000MHz	757.015	0.002065	4.0	PASS
	1000MHz to 12500MHz	5766.750	0.045709	20.0	PASS
V_{max.}	30MHz to 1000MHz	847.831	0.001954	4.0	PASS
	1000MHz to 12500MHz	6727.000	0.043551	20.0	PASS
V_{min.}	30MHz to 1000MHz	976.235	0.001671	4.0	PASS
	1000MHz to 12500MHz	5861.625	0.044668	20.0	PASS
TEST CHANNEL		CH 39 (2480MHz)			
V_{normal}	30MHz to 1000MHz	951.015	0.002328	4.0	PASS
	1000MHz to 12500MHz	5899.000	0.050466	20.0	PASS
V_{max.}	30MHz to 1000MHz	851.711	0.001782	4.0	PASS
	1000MHz to 12500MHz	6990.062	0.047753	20.0	PASS
V_{min.}	30MHz to 1000MHz	901.181	0.001746	4.0	PASS
	1000MHz to 12500MHz	6765.812	0.047753	20.0	PASS

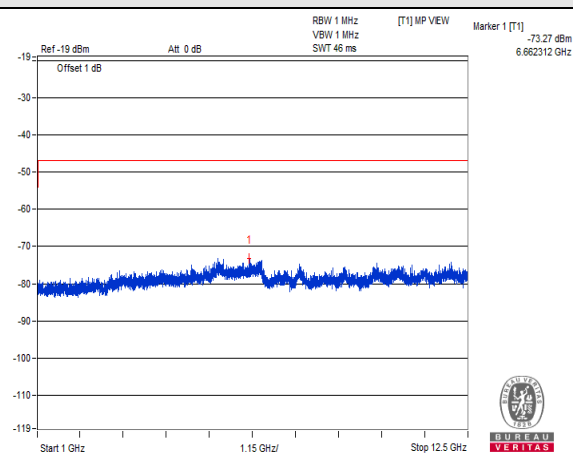
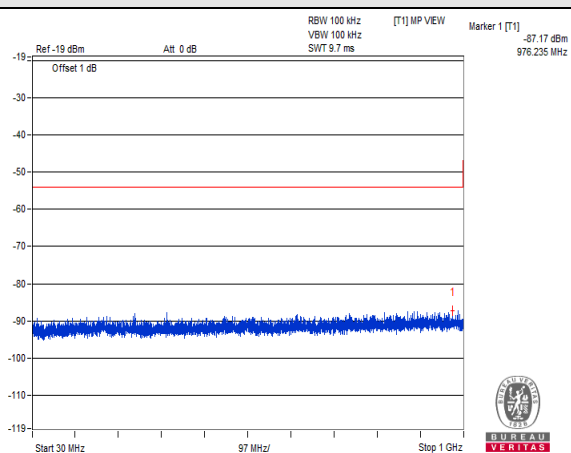
V_{normal}



V_{max.}

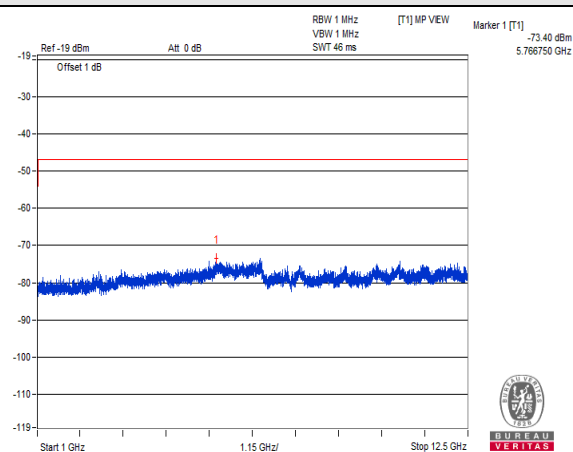
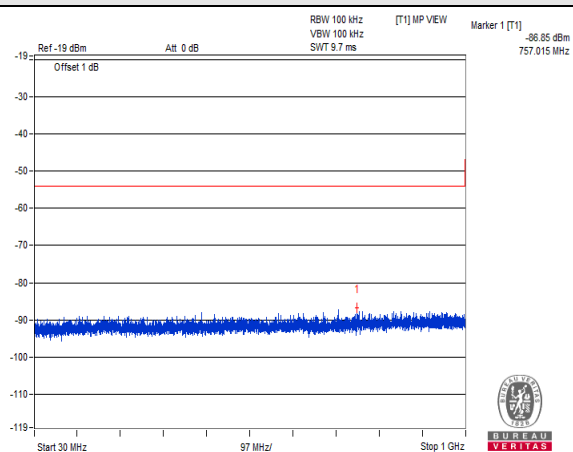


V_{min.}

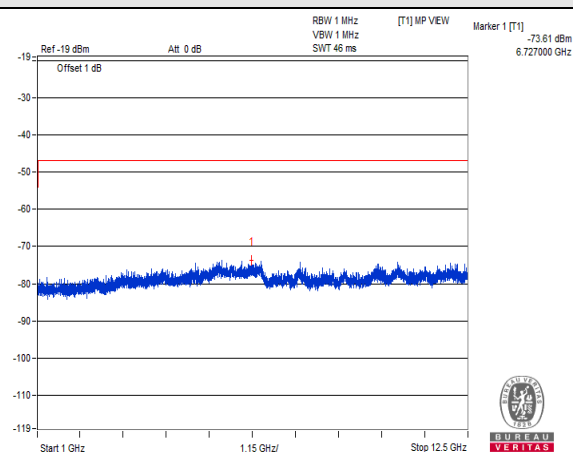
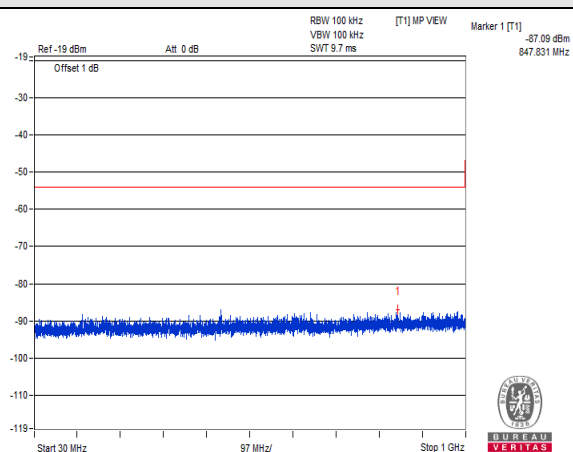


CH 0 (2402MHz)

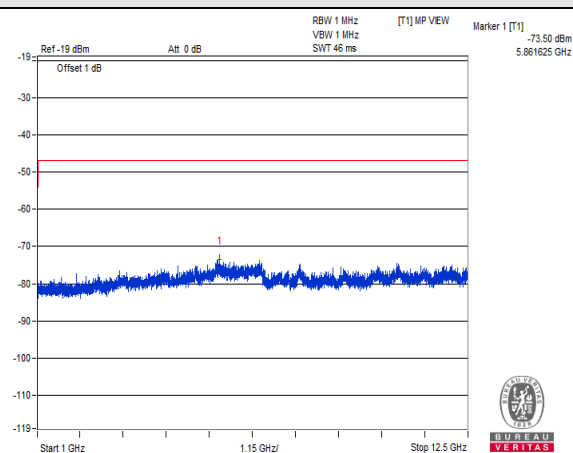
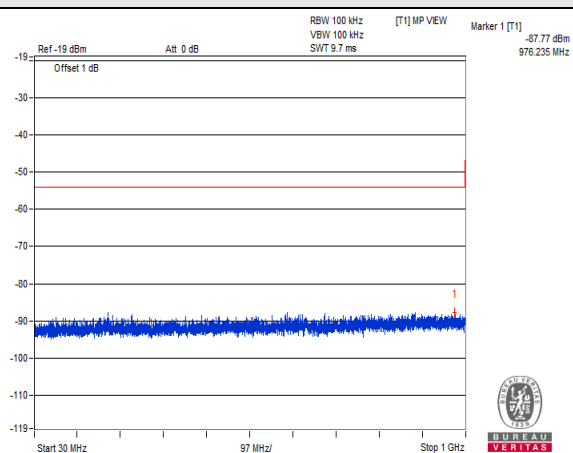
V_{normal}



V_{max}

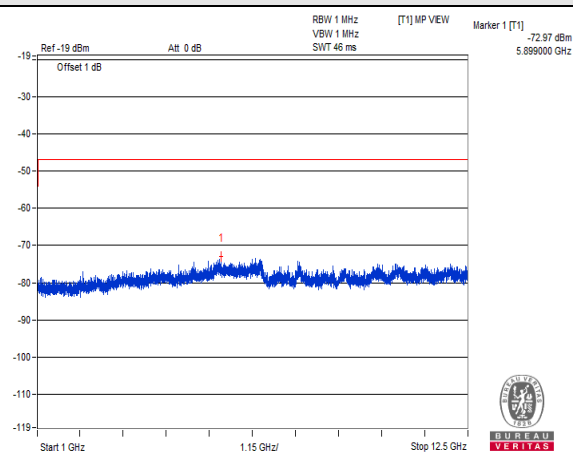
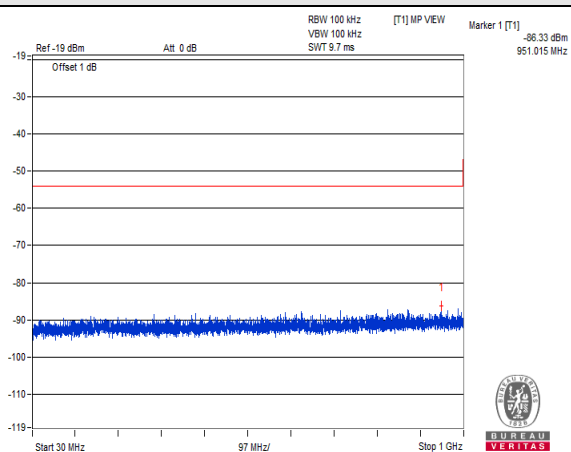


V_{min}

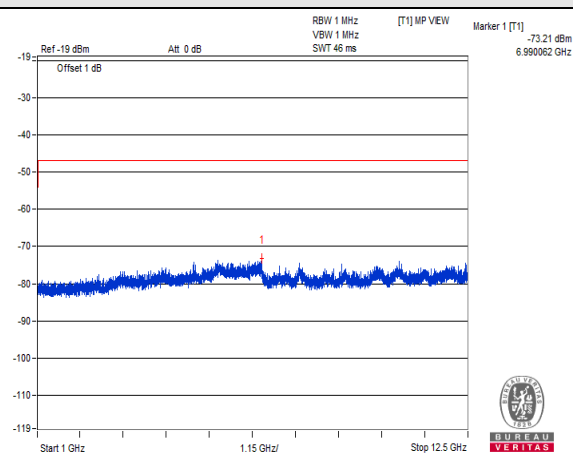
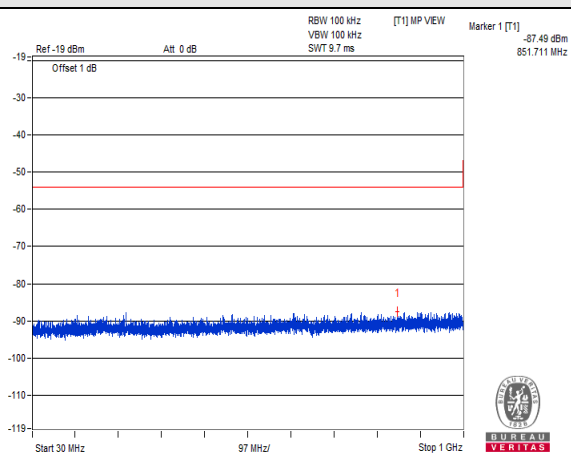


CH 19 (2440MHz)

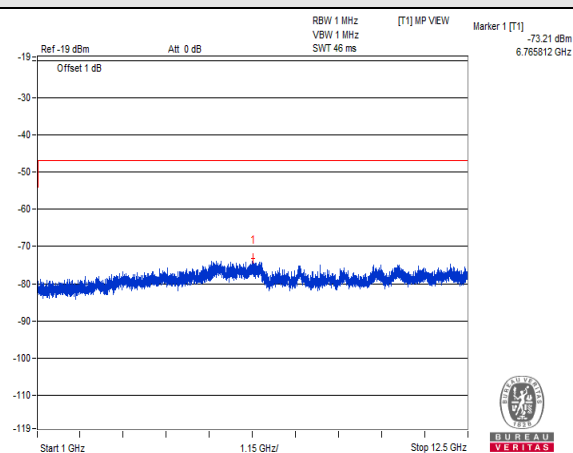
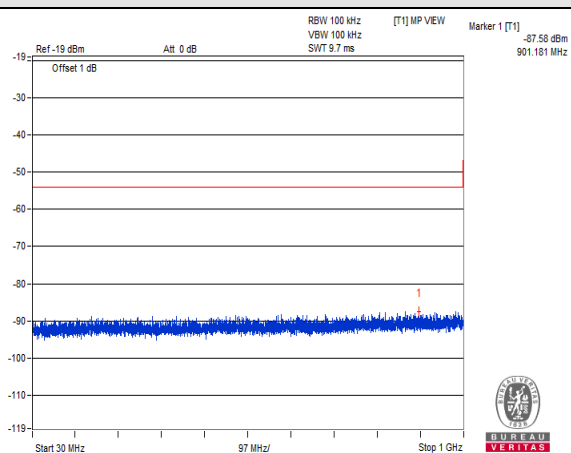
V_{normal}



V_{max.}



V_{min.}



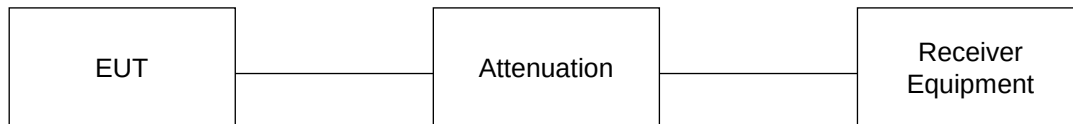
CH 39 (2480MHz)

4.6 Interference Prevention Function

4.6.1 Limits of Interference Prevention Function

Radio equipment used mainly on the same premises and automatically transmits or receives identification code.

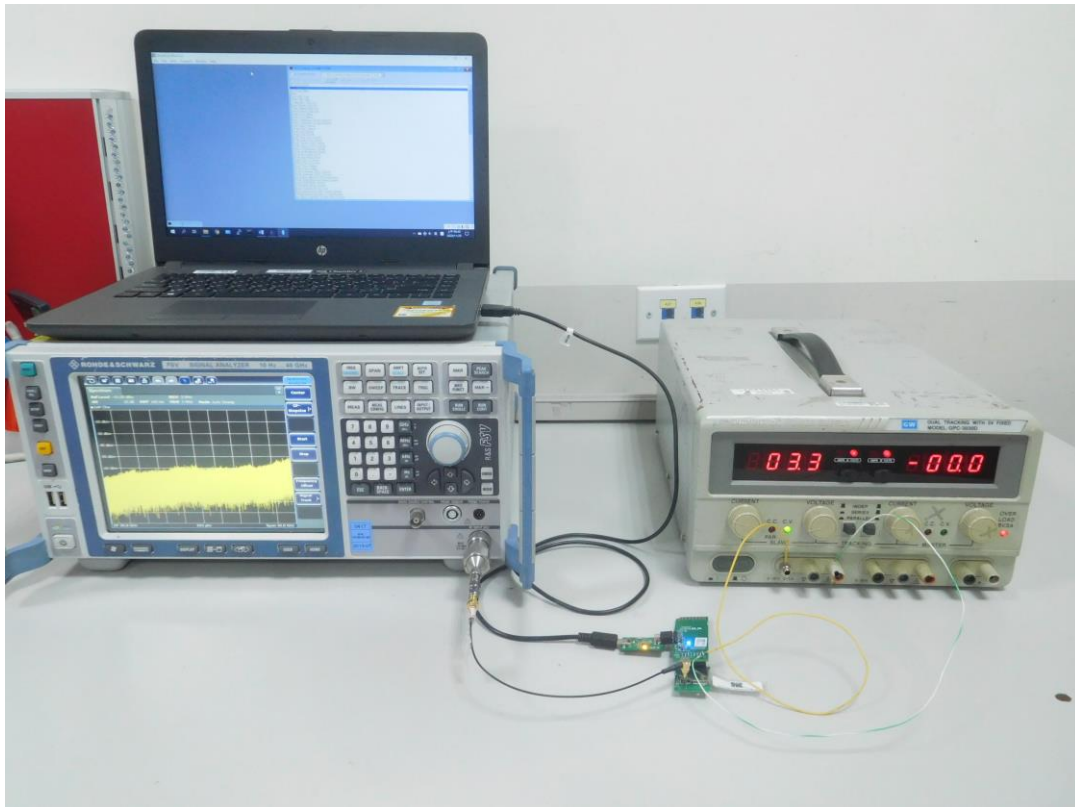
4.6.2 Test Setup



4.6.3 Test Results

Link Mode	Test Result
BT-LE	Pass

5 Photographs of the Test Configuration



Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

--- END ---