

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
Report No.: RFBHVI-WTW-P24080204B-5
FCC ID: N6C-PCEBE
Product: Wi-Fi 7/BT combo module
Brand: Silex Technology
Model No.: SX-PCEBE
Received Date: 2024/8/12
Test Date: 2025/3/31 ~ 2025/8/25
Issued Date: 2025/9/25
Applicant: Silex Technology, Inc.
Address: 2-3-1 Hikaridai, Seika-cho, Soraku-gun, Kyoto 619-0237, 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
FCC Registration / 723255 / TW2022
Designation Number:

Approved by: _____



Wen Yu / Assistant Manager

, Date: _____

2025/9/25

This test report consists of 68 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Phoenix Huang / Specialist



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended 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. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; 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.

Table of Contents

Release Control Record	3
1 Certificate.....	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty	5
2.2 Supplementary Information	5
3 General Information	6
3.1 General Description.....	6
3.2 Antenna Description of EUT	7
3.3 Channel List.....	8
3.4 Test Mode Applicability and Tested Channel Detail.....	9
3.5 Duty Cycle of Test Signal.....	10
3.6 Test Program Used and Operation Descriptions	11
3.7 Connection Diagram of EUT and Peripheral Devices	11
3.8 Configuration of Peripheral Devices and Cable Connections	12
4 Test Instruments	13
4.1 RF Output Power.....	13
4.2 AC Power Conducted Emissions	13
4.3 Unwanted Emissions below 1 GHz	14
4.4 Unwanted Emissions above 1 GHz.....	15
5 Limits of Test Items.....	16
5.1 RF Output Power.....	16
5.2 AC Power Conducted Emissions	16
5.3 Unwanted Emissions below 1 GHz	16
5.4 Unwanted Emissions above 1 GHz.....	17
6 Test Arrangements.....	18
6.1 RF Output Power.....	18
6.1.1 Test Setup	18
6.1.2 Test Procedure	18
6.2 AC Power Conducted Emissions	18
6.2.1 Test Setup	18
6.2.2 Test Procedure	18
6.3 Unwanted Emissions below 1 GHz	19
6.3.1 Test Setup	19
6.3.2 Test Procedure	20
6.4 Unwanted Emissions above 1 GHz.....	22
6.4.1 Test Setup	22
6.4.2 Test Procedure	22
7 Test Results of Test Item	24
7.1 RF Output Power.....	24
7.2 AC Power Conducted Emissions	26
7.3 Unwanted Emissions below 1 GHz	28
7.4 Unwanted Emissions above 1 GHz.....	31
8 Pictures of Test Arrangements	67
9 Information of the Testing Laboratories	68

Release Control Record

Issue No.	Description	Date Issued
RFBHVI-WTW-P24080204B-5	Original release.	2025/9/25

1 Certificate

Product: Wi-Fi 7/BT combo module

Brand: Silex Technology

Test Model: SX-PCEBE

Sample Status: Engineering sample

Applicant: Silex Technology, Inc.

Test Date: 2025/3/31 ~ 2025/8/25

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement procedure: ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01

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 RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	N/A	Refer to Note 1 below
15.247(a)(2)	6 dB Bandwidth	N/A	Refer to Note 1 below
15.247(d)	Conducted Out of Band Emissions	N/A	Refer to Note 1 below
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -11.07 dB at 25.14453 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -2.4 dB at 265.49 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.48 dB at 2483.52 MHz
15.203	Antenna Requirement	Pass	Antenna connector is MHF 4L not a standard connector.

Note:

- Only RF Output Power, AC Power Conducted Emissions and Unwanted Emissions test items were performed for this addendum. The others testing data refer to original test report (Report No.: RFBWIN-WTW-P23020421-3).
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Parameter	Specification	Uncertainty (±)
RF Output Power	-	1.1 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.5 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
	18 GHz ~ 40 GHz	5.3 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	Wi-Fi 7/BT combo module
Brand	Silex Technology
Test Model	SX-PCEBE
Status of EUT	Engineering sample
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	GFSK
Modulation Technology	DTS
Transfer Rate	Up to 2 Mbps
Operating Frequency	2.402 GHz ~ 2.48 GHz
Number of Channel	40
Output Power	1Tx: 24.66 mW (13.92 dBm) 2Tx: 16.501 mW (12.18 dBm)

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the original design is as the following:

◆ Add variant chip QCC2076.

Original	
SKU No.	Difference
1	Chip WCN7851
Newly	
2	Chip QCC2076
From the above SKUs, the SKUs 2 was selected as representative model for the test and its data was recorded in this report.	

2. According to above conditions, there are RF Output Power, AC Power Conducted Emissions and Unwanted Emissions test items need to be performed. All data for meeting the requirement is verified.

3. There are Bluetooth (EDR, BLE, QHS) and WLAN (2.4 GHz & 5 GHz & 6 GHz) technology used for the EUT.

4. Simultaneously transmission combination.

Combination	Technology	
1	WLAN(2.4 GHz)_Ant 0+1	WLAN(5 GHz)_Ant 0+1
2	WLAN(2.4 GHz)_Ant 0+1	WLAN(6 GHz)_Ant 0+1
3	WLAN(5 GHz)_Ant 0+1	Bluetooth_Ant 0
4	WLAN(5 GHz)_Ant 0+1	Bluetooth_Ant 1
5	WLAN(5 GHz)_Ant 0+1	Bluetooth_Ant 0+1
6	WLAN(6 GHz)_Ant 0+1	Bluetooth_Ant 0
7	WLAN(6 GHz)_Ant 0+1	Bluetooth_Ant 1
8	WLAN(6 GHz)_Ant 0+1	Bluetooth_Ant 0+1
9	WLAN(2.4 GHz)_Ant 0	Bluetooth_Ant 1
10	WLAN(2.4 GHz)_Ant 1	Bluetooth_Ant 0

5. 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 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Set	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Cable Loss (dB)	Antenna Type	Connector Type	Cable Length (mm)
1	Chain0/1	Hong-Bo	260-25094	3.53	2.4~2.4835	0.74	PIFA	MHF 4L	300
				3.06	5.15~5.25	1.16			
				3.07	5.25~5.35	1.18			
				4.81	5.47~5.725	1.26			
				4.2	5.725~5.850	1.28			
2	Chain0/1	Hong-Bo	260-25083	5.09	5.850~5.895	1.29	PIFA	MHF 4L	300
				5.14	5.925~6.425	1.35			
				5.09	6.425~6.525	1.38			
				5.16	6.525~6.875	1.45			
				5.12	6.875~7.125	1.50			
3	Chain0/1	Hong-Bo	260-25084	3.22	2.4~2.4835	0.49	Monopole	MHF 4L	200
				3.35	5.150~5.250	0.76			
				3.42	5.250~5.350	0.77			
				4.77	5.470~5.725	0.80			
				4.72	5.725~5.850	0.84			
				4.71	5.850~5.895	0.84			
				4.75	5.925~6.425	0.86			
				4.29	6.425~6.525	0.91			
				4.81	6.525~6.875	0.96			
				4.74	6.875~7.125	0.98			

Note:

- For 1TX diversity configuration, transmit chain 0 and chain 1 have been evaluated, the chain 0 will be used as representative test.
- Max. gain was selected for the final test.

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

3.3 Channel List

40 channels are provided for BT-LE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (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

3.4 Test Mode Applicability and Tested Channel Detail

Following channel(s) was (were) selected for the final test as listed below:

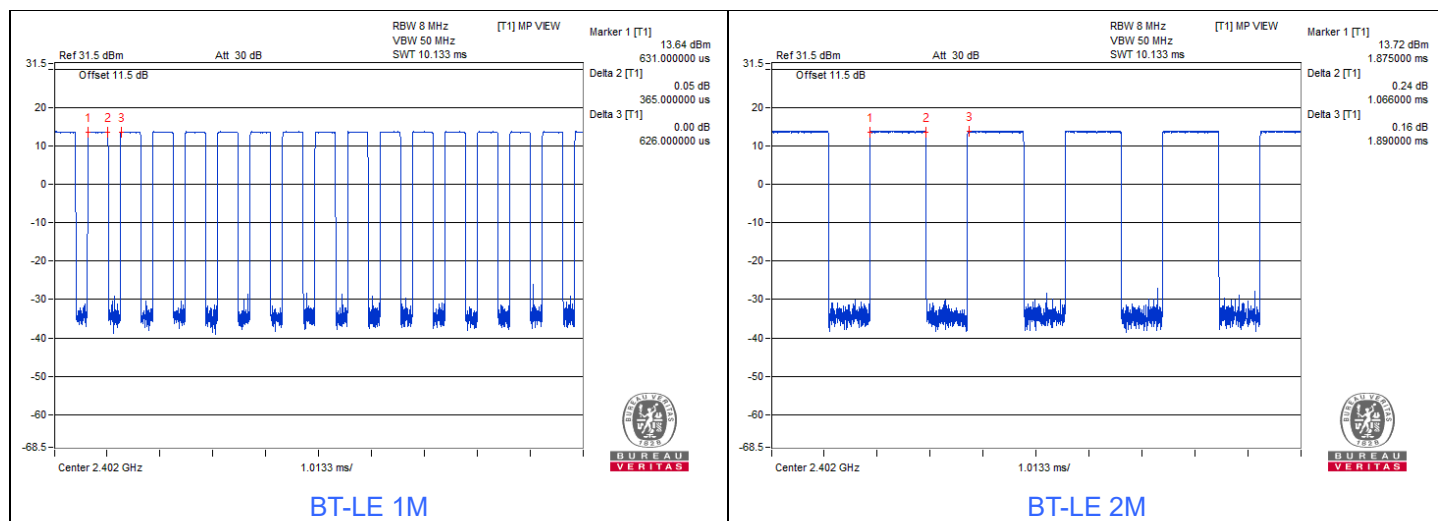
Test Item	EUT Configure Mode	Mode	Tested Channel	Tx Antenna	Modulation	Data Rate Parameter
RF Output Power	A	BT-LE 1M	0, 19, 39	1Tx, 2Tx	GFSK	1Mb/s
		BT-LE 2M	0, 19, 39	1Tx, 2Tx	GFSK	2Mb/s
AC Power Conducted Emissions	C	BT-LE 1M	19	1Tx	GFSK	1Mb/s
Unwanted Emissions below 1 GHz	A, B	BT-LE 1M	19	1Tx	GFSK	1Mb/s
Unwanted Emissions above 1 GHz	A, B	BT-LE 1M	0, 19, 39	1Tx, 2Tx	GFSK	1Mb/s
		BT-LE 2M	0, 19, 39	1Tx, 2Tx	GFSK	2Mb/s
EUT Configure Mode:	A	EUT only (remove 50 ohm terminator and Connect to the appropriate equipment)				
	B	EUT with 50 ohm terminator				
	C	EUT with antenna set 1 (Model: 260-25094)				

3.5 Duty Cycle of Test Signal

1Tx

BT-LE 1M: Duty cycle = $0.365 \text{ ms} / 0.626 \text{ ms} \times 100\% = 58.3\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 2.34 \text{ dB}$

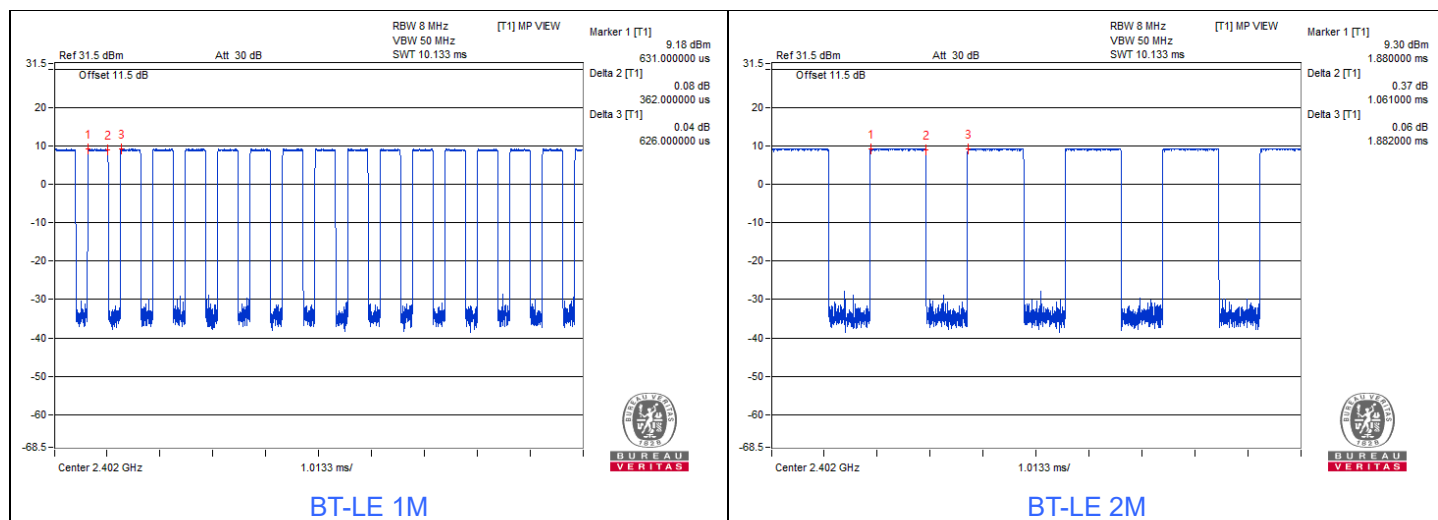
BT-LE 2M: Duty cycle = $1.066 \text{ ms} / 1.89 \text{ ms} \times 100\% = 56.4\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 2.49 \text{ dB}$



2Tx

BT-LE 1M: Duty cycle = $0.362 \text{ ms} / 0.626 \text{ ms} \times 100\% = 57.8\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 2.38 \text{ dB}$

BT-LE 2M: Duty cycle = $1.061 \text{ ms} / 1.882 \text{ ms} \times 100\% = 56.4\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 2.49 \text{ dB}$

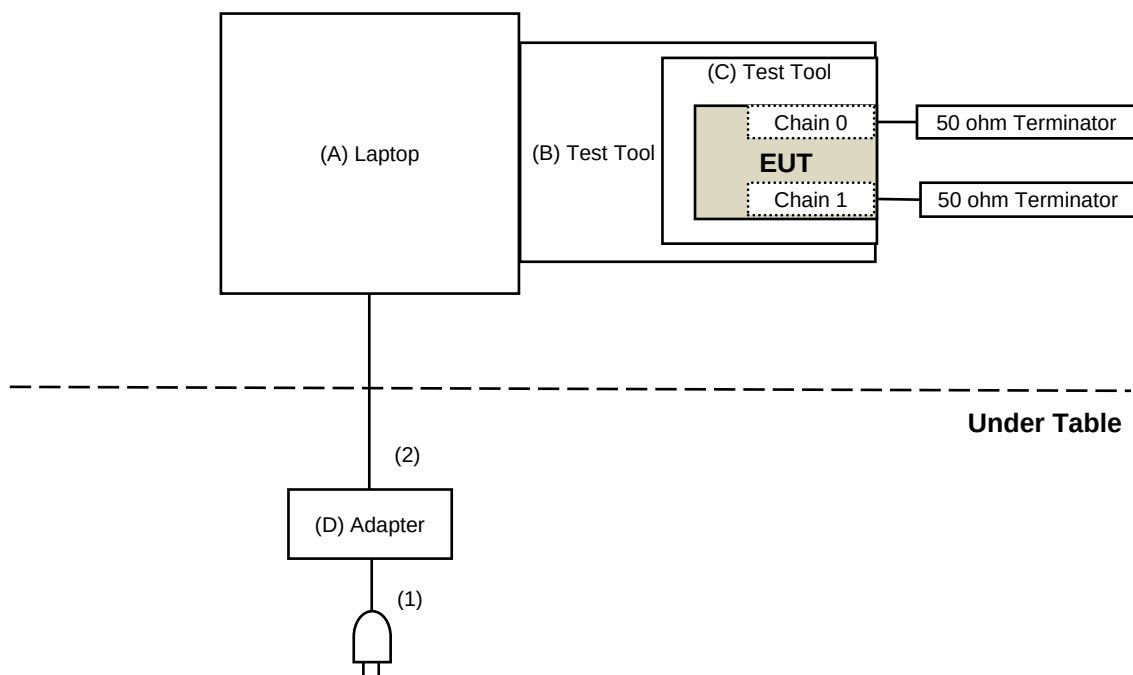


3.6 Test Program Used and Operation Descriptions

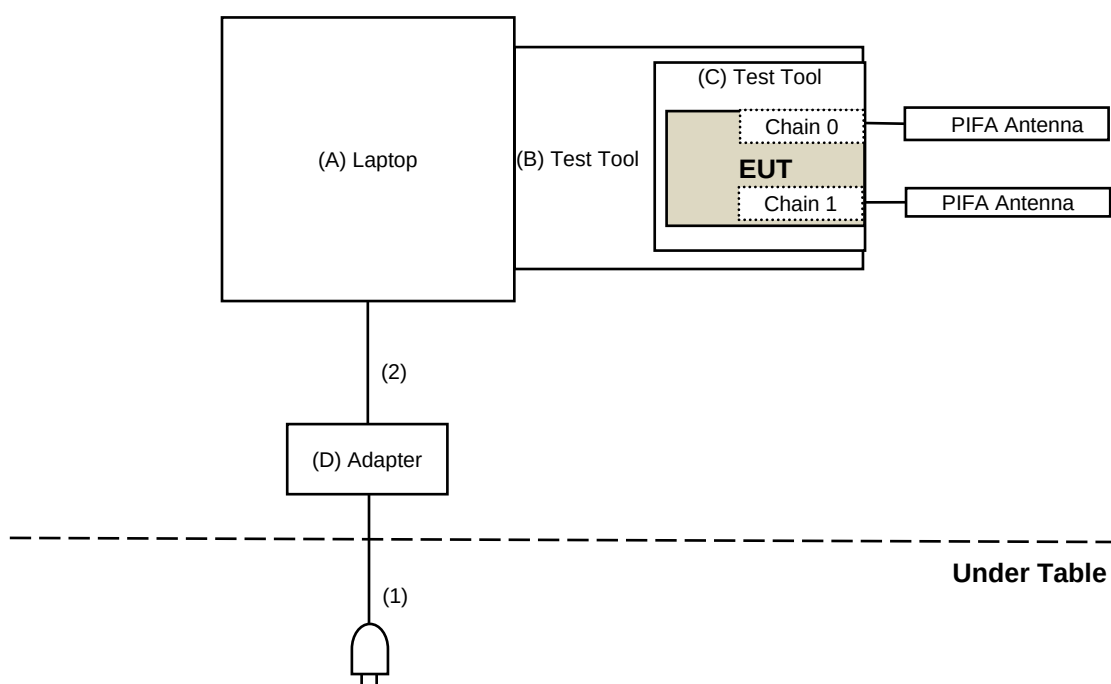
Controlling software (QRCT 1.0.00098) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emissions test:



For AC Power Conducted Emission test:



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	HP	HSN-Q32C-5	N/A	N/A	Supplied by applicant
B	Test Tool	Silex	NGFF(A+E) TO Mini PCI-E Adapter	N/A	N/A	Supplied by applicant
C	Test Tool	Silex	PW105500XX	N/A	N/A	Supplied by applicant
D	Adapter	HP	TPN-DA22	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	AC Cable	1	0.85	No	0	Supplied by applicant
2	DC Cable	1	1.6	No	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-20	00800A1K01A-20-02	2025/5/23	2026/5/22
Pulse Power Sensor Anritsu	MA2411B	1726434	2025/6/3	2026/6/2
RF Power Meter Anritsu	ML2495A	1529002	2025/6/3	2026/6/2

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/8/25

4.2 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2024/11/1	2025/10/31
EMI Test Receiver R&S	ESCS 30	100375	2024/5/20	2025/5/19
Fixed Attenuator STI	STI02-2200-10	005	2025/2/17	2026/2/16
LISN R&S	ESH3-Z5	835239/001	2025/3/27	2026/3/26
		848773/004	2024/10/7	2025/10/6
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2025/2/17	2026/2/16
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2025/5/19

4.3 Unwanted Emissions below 1 GHz

Mode A

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030A	MY55330160	2025/1/16	2026/1/15
Software	ADT_RF Test Software V8	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/8/25

Mode B

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-406	2024/10/8	2025/10/7
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2025/2/15	2026/2/14
Loop Antenna TESEQ	HLA 6121	63620	2024/10/17	2025/10/16
MXE EMI Receiver Agilent	N9038A	MY51210202	2024/7/29	2025/7/28
Preamplifier EMCI	EMC330N	980701	2025/2/15	2026/2/14
	EMC001340	980142	2025/2/17	2026/2/16
RF Coaxial Cable mTJ	100100-CFD400LW-200	CFD400-200	2025/2/15	2026/2/14
	100100-CFD400LW-400	CFD400-400	2025/2/15	2026/2/14
	100100-CFD400LW-800	CFD400-800	2025/2/15	2026/2/14
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2025/5/16

4.4 Unwanted Emissions above 1 GHz

Mode A

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2024/5/29	2025/5/28
PXA Signal Analyzer Keysight	N9030A	MY55330160	2025/1/16	2026/1/15
Software	ADT_RF Test Software V8	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/3/31

Mode B

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2024/11/10	2025/11/9
	BBHA 9170	9170-739	2024/11/10	2025/11/9
MXA Signal Analyzer Keysight	N9020B	MY60112410	2025/3/17	2026/3/16
Preamplifier EMCI	EMC12630SE	980688	2024/8/8	2025/8/7
	EMC184045SE	980387	2024/8/8	2025/8/7
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2025/1/24	2026/1/23
	EMC102-KM-KM-4000	200214	2025/1/24	2026/1/23
	EMC104-SM-SM-1200	160922	2025/1/14	2026/1/13
	EMC104-SM-SM-2000	180502	2025/1/14	2026/1/13
	EMC104-SM-SM-6000	210704	2024/10/30	2025/10/29
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2025/5/19

5 Limits of Test Items

5.1 RF Output Power

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30 dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

5.2 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.3 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = $20 \log$ Emission level (uV/m).

5.4 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

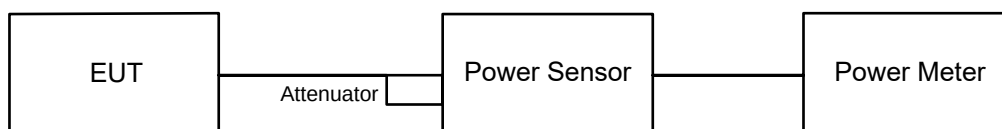
Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



6.1.2 Test Procedure

Peak Power:

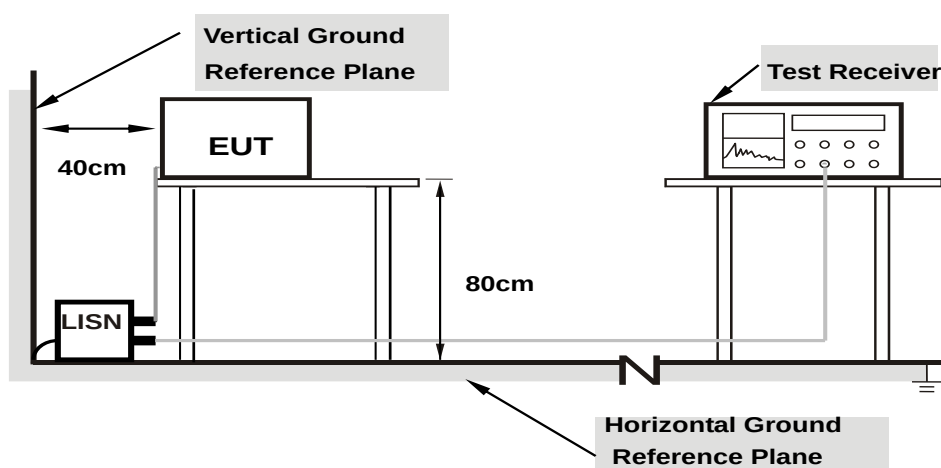
A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Average Power:

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

6.2 AC Power Conducted Emissions

6.2.1 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.2.2 Test Procedure

- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

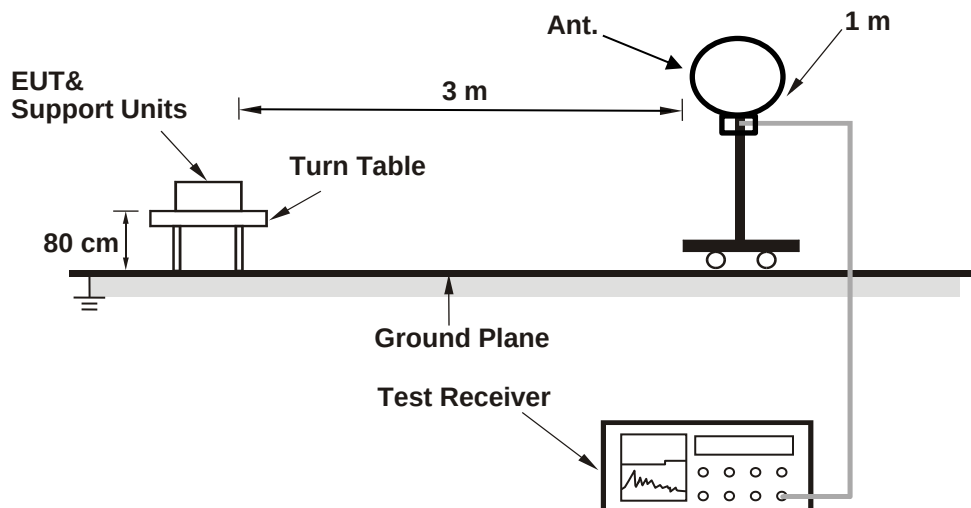
Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

6.3 Unwanted Emissions below 1 GHz

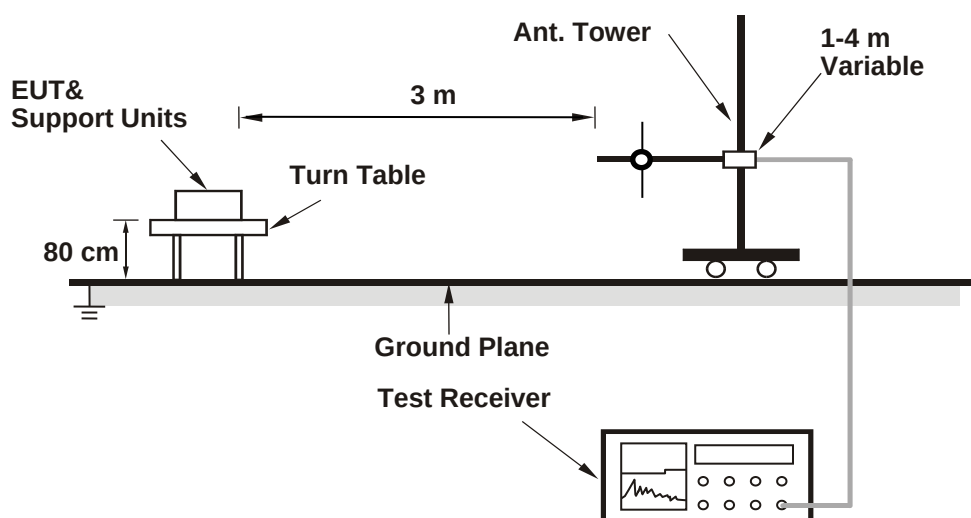
6.3.1 Test Setup

For Radiated Configuration:

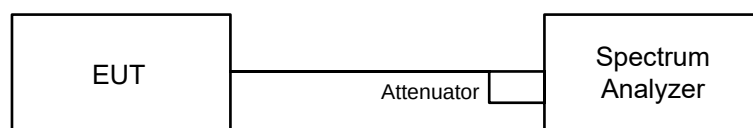
For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For Conducted Configuration:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.3.2 Test Procedure

Radiated versus Conducted Measurement.

The unwanted emission limits in both the restricted and non-restricted bands are based on antenna-port conducted measurements in conjunction with cabinet emissions tests are permitted to demonstrate compliance.

The following steps was performed:

- a. Cabinet emissions measurements. Radiated measurement was performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna was replaced by a termination matching the nominal impedance of the antenna.
- b. Conducted tests was performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT.
- c. EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater.
- d. EIRP adjustments for multiple outputs. (Follow the procedures specified in FCC KDB Publication 662911)
- e. For all of Radiation emission test

For Radiated emission below 30 MHz

- e-1.1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- e-1.2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- e-1.3. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- e-1.4. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e-1.5. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

- e-2.1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- e-2.2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- e-2.3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e-2.4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e-2.5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

Radiated versus Conducted Measurement

For Radiated measurement:

The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation).

For Conducted measurement:

The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).

Conducted Unwanted Emission Convert Formula

- a. Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.
- b. EIRP Level (dBm) = Raw Value(dBm) + Correction Factor(dB)
- c. Correction Factor is directional gain, and the composite gain will be used when signal support the correlated signal.
For the out of band spurious the gain for the specific band may have been used rather than the highest gain across all bands.
For the band edge the gain for the specific band may have been used.

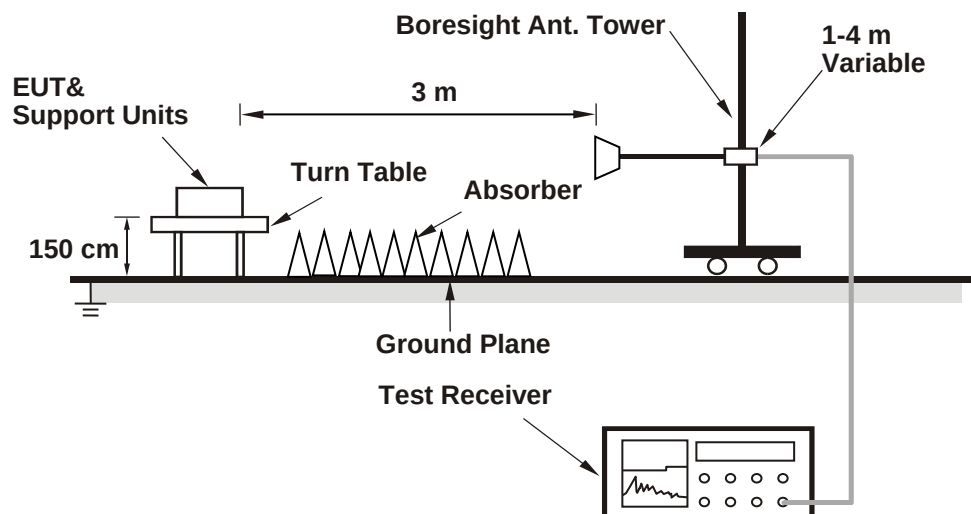
Notes:

1. In restricted bands below 1000 MHz, add upper bound on ground plane reflection:
For frequencies between 30 MHz and 1000 MHz, add 4.7 dB.
2. The conducted emission test was considered some factor to compute test result.

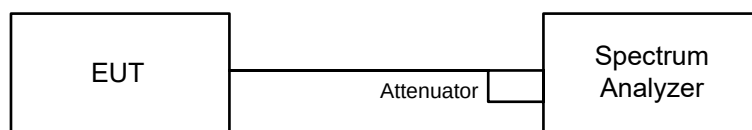
6.4 Unwanted Emissions above 1 GHz

6.4.1 Test Setup

For Radiated Configuration:



For Conducted Configuration:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.4.2 Test Procedure

Radiated versus Conducted Measurement.

The unwanted emission limits in both the restricted and non-restricted bands are based on antenna-port conducted measurements in conjunction with cabinet emissions tests are permitted to demonstrate compliance.

The following steps was performed:

- Cabinet emissions measurements. Radiated measurement was performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna was replaced by a termination matching the nominal impedance of the antenna.
- Conducted tests was performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT.
- EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater.
- EIRP adjustments for multiple outputs. (Follow the procedures specified in FCC KDB Publication 662911)
- For all of Radiation emission test
 - The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
 - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

- e-3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e-4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e-5. The test-receiver/spectrum analyzer was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

Radiated versus Conducted Measurement
<u>For Radiated measurement:</u> The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation). <u>For Conducted measurement:</u> The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions). <u>For Verified radiated measurement:</u> The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation).
Conducted Unwanted Emission Convert Formula
a. Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8 d = measurement distance in 3 meters. b. EIRP Level (dBm) = Raw Value(dBm) + Correction Factor(dB). c. Correction Factor is directional gain, and the composite gain will be used when signal support the correlated signal. For the out of band spurious the gain for the specific band may have been used rather than the highest gain across all bands. For the band edge the gain for the specific band may have been used. Note: The conducted emission test was considered some factor to compute test result.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	22°C, 64% RH	Tested By:	Katina Lu
--------------	---------	---------------------------	--------------	------------	-----------

1Tx

For Peak Power

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	23.014	13.62	30	Pass
19	2440	24.547	13.90	30	Pass
39	2480	20.091	13.03	30	Pass

Note: The antenna gain is 3.53 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	23.335	13.68	30	Pass
19	2440	24.66	13.92	30	Pass
39	2480	20.37	13.09	30	Pass

Note: The antenna gain is 3.53 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

For Average Power

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	21.928	13.41
19	2440	23.768	13.76
39	2480	19.275	12.85

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	22.029	13.43
19	2440	23.714	13.75
39	2480	19.588	12.92

Input Power:	3.3 Vdc	Environmental Conditions:	22°C, 64% RH	Tested By:	Katina Lu
--------------	---------	---------------------------	--------------	------------	-----------

2Tx

For Peak Power

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
0	2402	8.94	9.04	15.851	12.00	29.46	Pass
19	2440	8.53	9.67	16.397	12.15	29.46	Pass
39	2480	8.58	9.68	16.501	12.18	29.46	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 6.54 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (6.54 - 6) = 29.46$ dBm.

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
0	2402	8.92	9.02	15.778	11.98	29.46	Pass
19	2440	8.52	9.65	16.338	12.13	29.46	Pass
39	2480	8.55	9.67	16.43	12.16	29.46	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 6.54 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (6.54 - 6) = 29.46$ dBm.

For Average Power

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
0	2402	8.53	8.63	14.423	11.59
19	2440	8.20	9.23	14.982	11.76
39	2480	8.22	9.24	15.032	11.77

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
0	2402	8.52	8.62	14.39	11.58
19	2440	8.19	9.22	14.948	11.75
39	2480	8.22	9.24	15.032	11.77

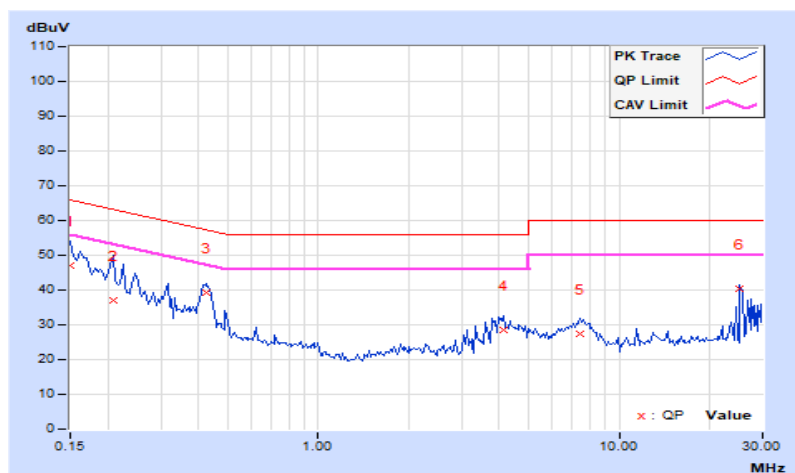
7.2 AC Power Conducted Emissions

RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15032	10.00	37.17	21.23	47.17	31.23	65.98	55.98	-18.81	-24.75
2	0.20859	10.03	26.91	15.99	36.94	26.02	63.26	53.26	-26.32	-27.24
3	0.42734	10.04	29.39	23.51	39.43	33.55	57.30	47.30	-17.87	-13.75
4	4.12891	10.31	18.23	5.96	28.54	16.27	56.00	46.00	-27.46	-29.73
5	7.39844	10.52	16.94	12.14	27.46	22.66	60.00	50.00	-32.54	-27.34
6	25.14453	11.20	29.21	27.73	40.41	38.93	60.00	50.00	-19.59	-11.07

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

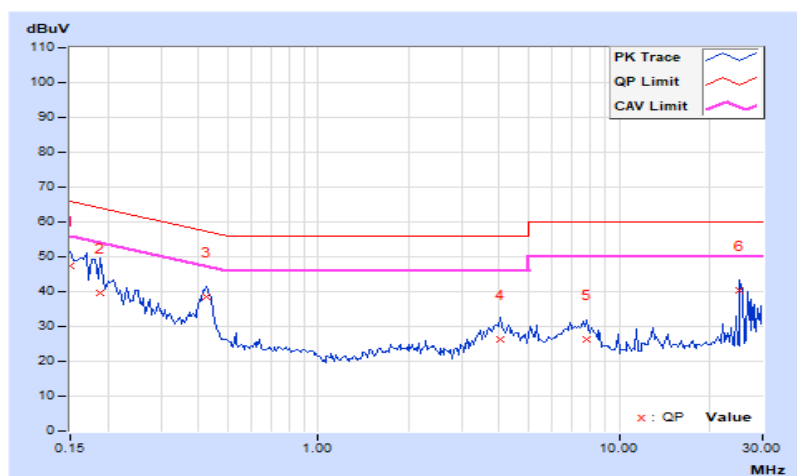


RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15026	10.02	37.31	20.66	47.33	30.68	65.99	55.99	-18.66	-25.31
2	0.18906	10.03	29.49	15.07	39.52	25.10	64.08	54.08	-24.56	-28.98
3	0.42344	10.02	28.45	21.46	38.47	31.48	57.38	47.38	-18.91	-15.90
4	4.01953	10.27	15.90	6.35	26.17	16.62	56.00	46.00	-29.83	-29.38
5	7.79297	10.49	15.76	11.09	26.25	21.58	60.00	50.00	-33.75	-28.42
6	25.15234	11.00	29.27	22.99	40.27	33.99	60.00	50.00	-19.73	-16.01

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



7.3 Unwanted Emissions below 1 GHz

Mode A

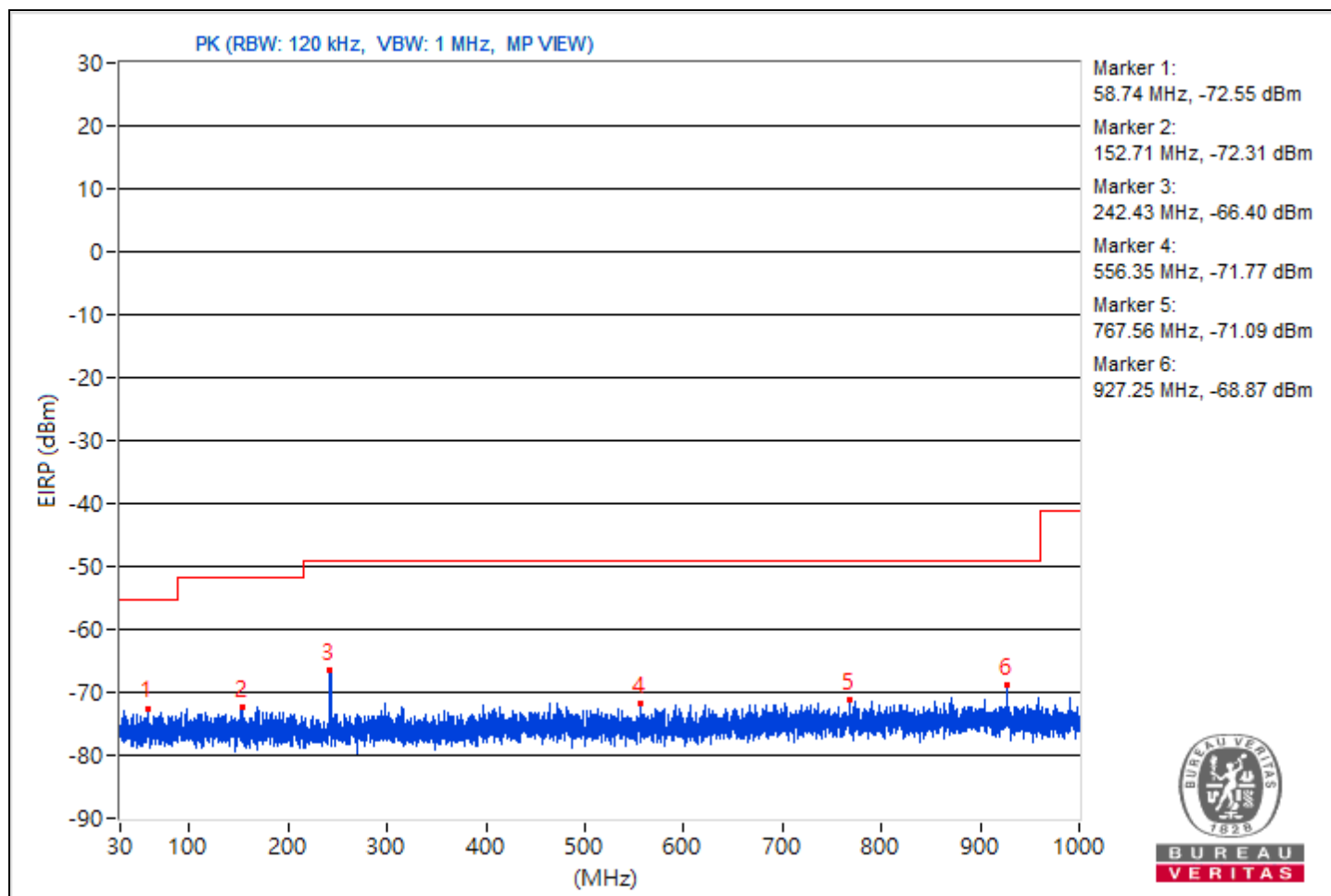
1Tx

RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Environmental Conditions	27°C, 63% RH
Tested By	Katina Lu		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	58.74	22.71 PK	40	-17.29	-82.41	9.86	-72.55
2	152.71	22.95 PK	43.5	-20.55	-82.17	9.86	-72.31
3	242.43	28.86 PK	46	-17.14	-76.26	9.86	-66.4
4	556.35	23.49 PK	46	-22.51	-81.63	9.86	-71.77
5	767.56	24.17 PK	46	-21.83	-80.95	9.86	-71.09
6	927.25	26.39 PK	46	-19.61	-78.73	9.86	-68.87

Notes:

1. Margin value = Emission Level - Limit value
2. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



Mode B

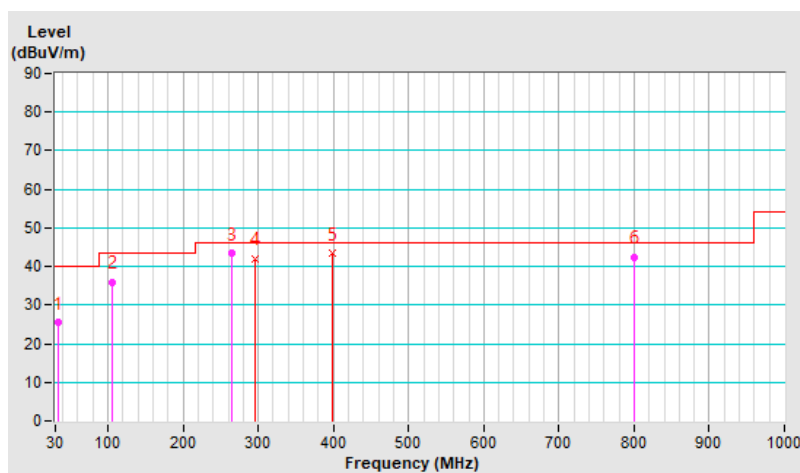
1Tx

RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	33.10	25.4 QP	40.0	-14.6	1.00 H	108	39.2	-13.8
2	105.78	36.0 QP	43.5	-7.5	3.00 H	122	52.2	-16.2
3	265.49	43.6 QP	46.0	-2.4	1.00 H	161	57.1	-13.5
4	296.73	42.1 QP	46.0	-3.9	1.00 H	303	54.5	-12.4
5	398.33	43.4 QP	46.0	-2.6	1.00 H	199	53.3	-9.9
6	799.82	42.5 QP	46.0	-3.5	2.00 H	294	43.8	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

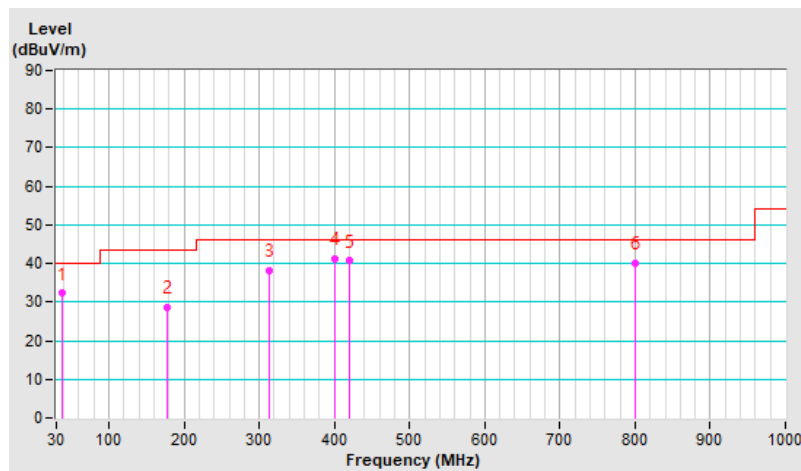


RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.83	32.4 QP	40.0	-7.6	1.00 V	96	45.8	-13.4
2	177.39	28.8 QP	43.5	-14.7	1.00 V	318	43.1	-14.3
3	313.46	38.3 QP	46.0	-7.7	1.10 V	238	50.1	-11.8
4	399.84	41.4 QP	46.0	-4.6	1.00 V	217	51.2	-9.8
5	419.53	40.9 QP	46.0	-5.1	1.50 V	198	50.0	-9.1
6	799.79	40.2 QP	46.0	-5.8	2.00 V	273	41.5	-1.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.4 Unwanted Emissions above 1 GHz

Mode A

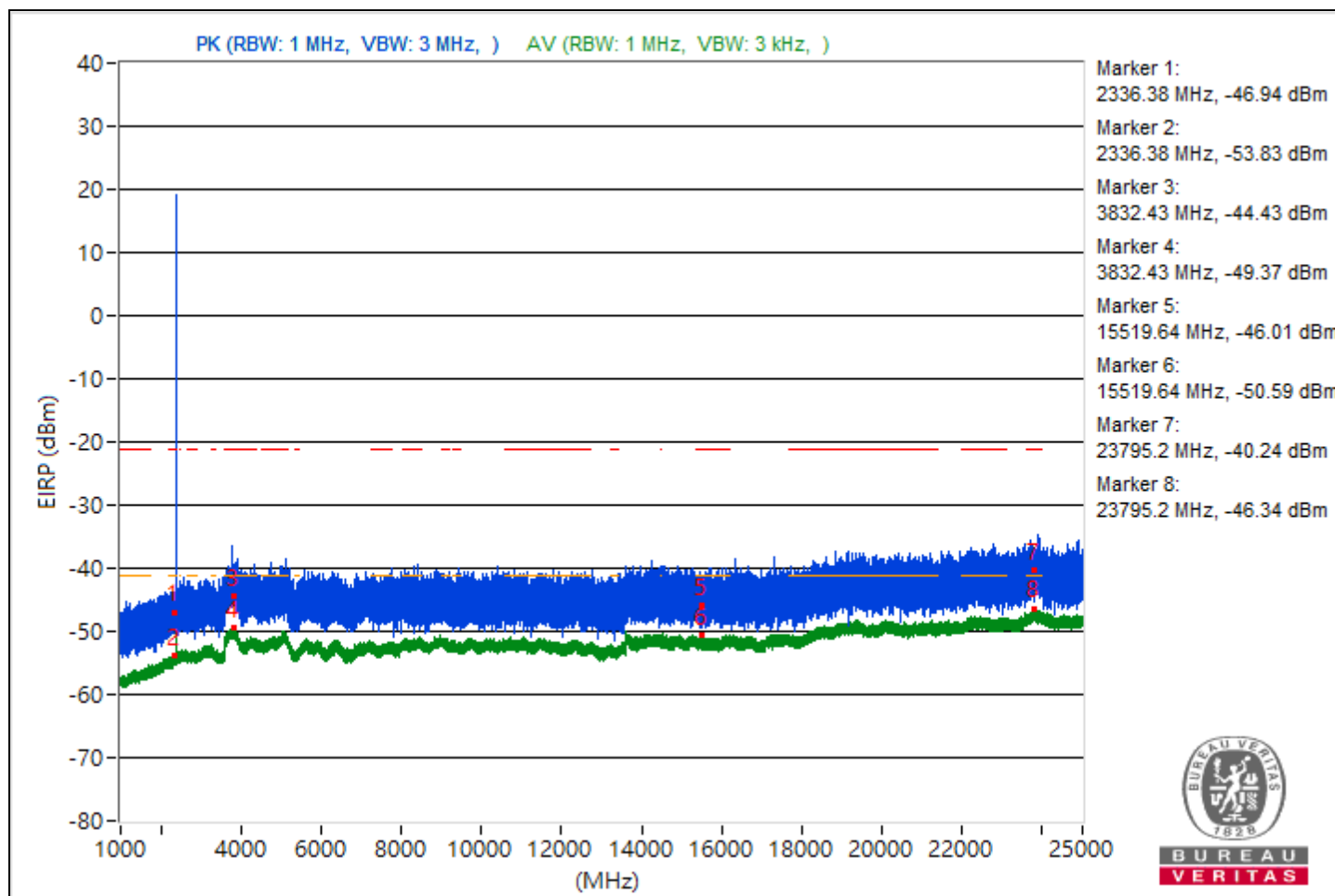
1Tx

Conducted Unwanted Emissions

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2336.38	48.32 PK	74	-25.68	-52.1	5.16	-46.94
2	2336.38	41.43 AV	54	-12.57	-58.99	5.16	-53.83
3	3832.43	50.83 PK	74	-23.17	-49.59	5.16	-44.43
4	3832.43	45.89 AV	54	-8.11	-54.53	5.16	-49.37
5	15519.64	49.25 PK	74	-24.75	-51.17	5.16	-46.01
6	15519.64	44.67 AV	54	-9.33	-55.75	5.16	-50.59
7	23795.2	55.02 PK	74	-18.98	-45.4	5.16	-40.24
8	23795.2	48.92 AV	54	-5.08	-51.5	5.16	-46.34

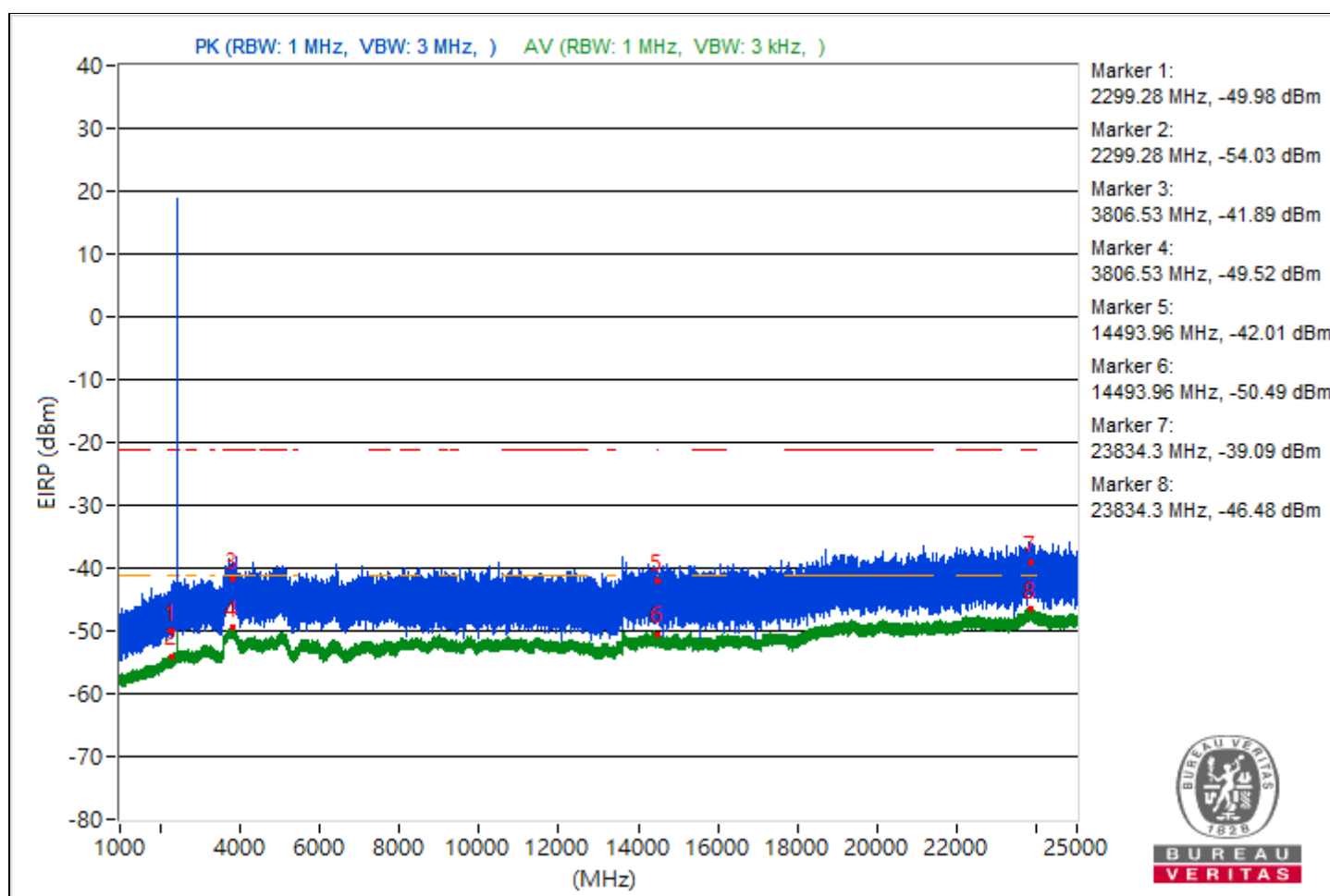
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2299.28	45.28 PK	74	-28.72	-55.14	5.16	-49.98
2	2299.28	41.23 AV	54	-12.77	-59.19	5.16	-54.03
3	3806.53	53.37 PK	74	-20.63	-47.05	5.16	-41.89
4	3806.53	45.74 AV	54	-8.26	-54.68	5.16	-49.52
5	14493.96	53.25 PK	74	-20.75	-47.17	5.16	-42.01
6	14493.96	44.77 AV	54	-9.23	-55.65	5.16	-50.49
7	23834.3	56.17 PK	74	-17.83	-44.25	5.16	-39.09
8	23834.3	48.78 AV	54	-5.22	-51.64	5.16	-46.48

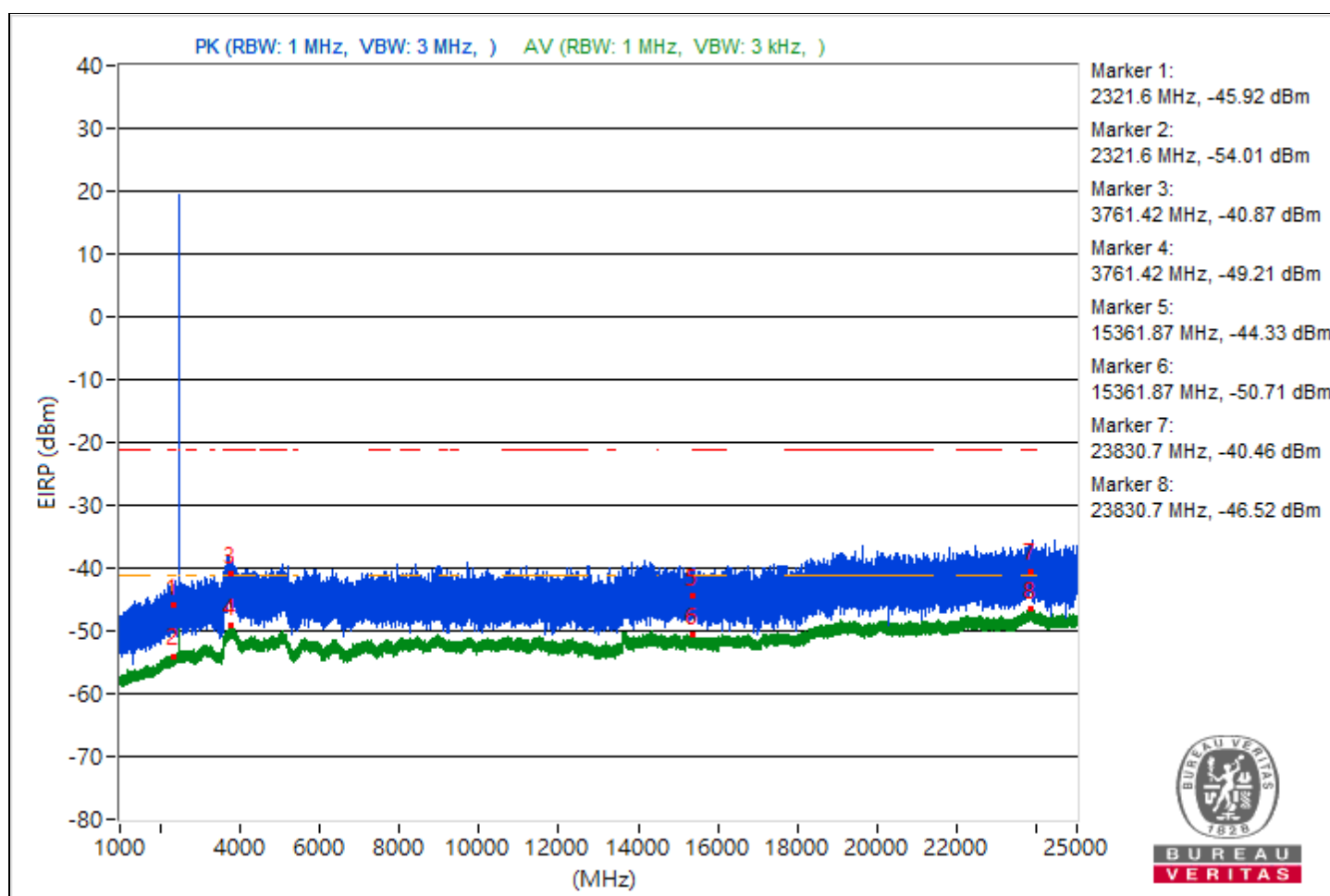
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2321.6	49.34 PK	74	-24.66	-51.08	5.16	-45.92
2	2321.6	41.25 AV	54	-12.75	-59.17	5.16	-54.01
3	3761.42	54.39 PK	74	-19.61	-46.03	5.16	-40.87
4	3761.42	46.05 AV	54	-7.95	-54.37	5.16	-49.21
5	15361.87	50.93 PK	74	-23.07	-49.49	5.16	-44.33
6	15361.87	44.55 AV	54	-9.45	-55.87	5.16	-50.71
7	23830.7	54.8 PK	74	-19.2	-45.62	5.16	-40.46
8	23830.7	48.74 AV	54	-5.26	-51.68	5.16	-46.52

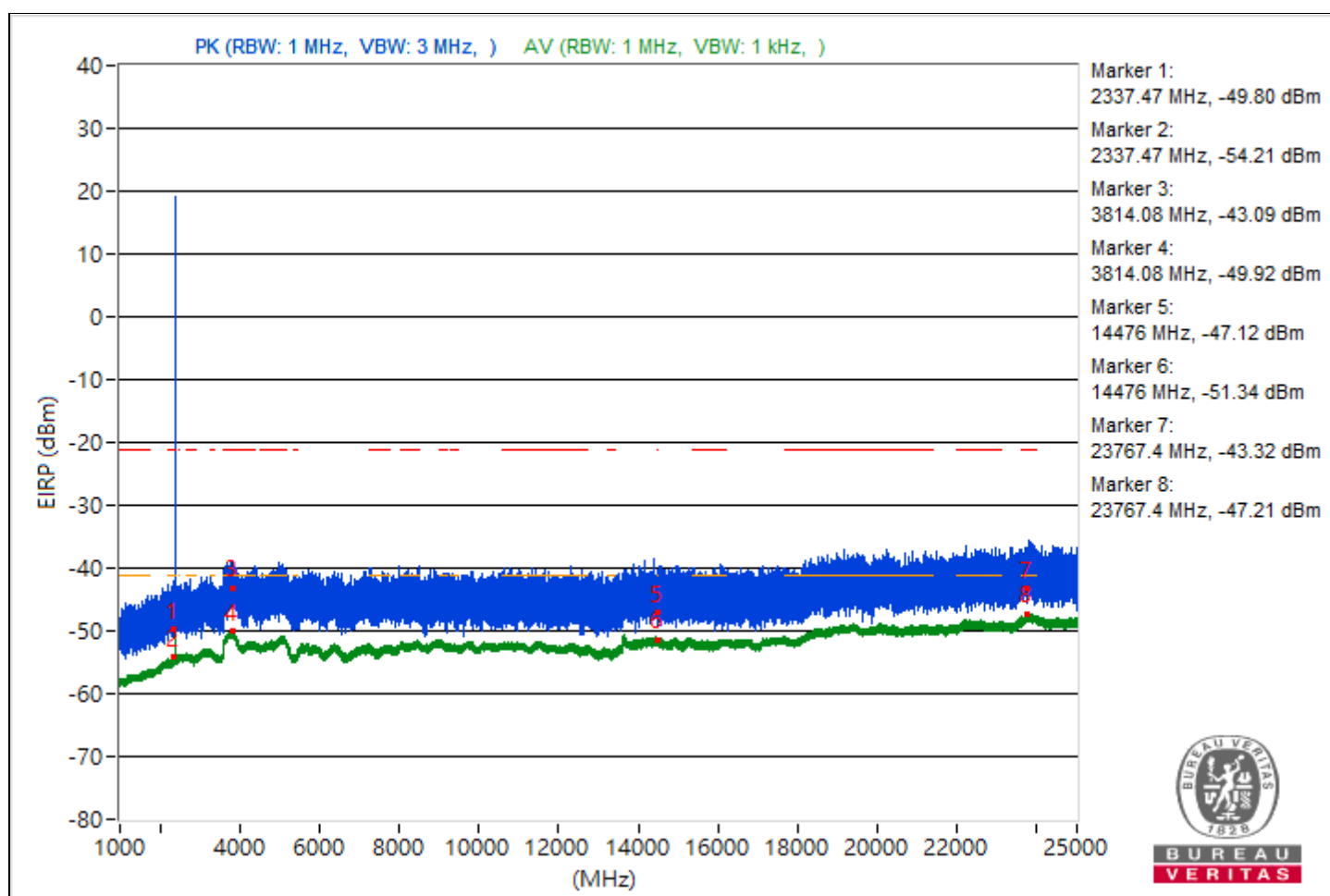
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2337.47	45.46 PK	74	-28.54	-54.96	5.16	-49.8
2	2337.47	41.05 AV	54	-12.95	-59.37	5.16	-54.21
3	3814.08	52.17 PK	74	-21.83	-48.25	5.16	-43.09
4	3814.08	45.34 AV	54	-8.66	-55.08	5.16	-49.92
5	14476	48.14 PK	74	-25.86	-52.28	5.16	-47.12
6	14476	43.92 AV	54	-10.08	-56.5	5.16	-51.34
7	23767.4	51.94 PK	74	-22.06	-48.48	5.16	-43.32
8	23767.4	48.05 AV	54	-5.95	-52.37	5.16	-47.21

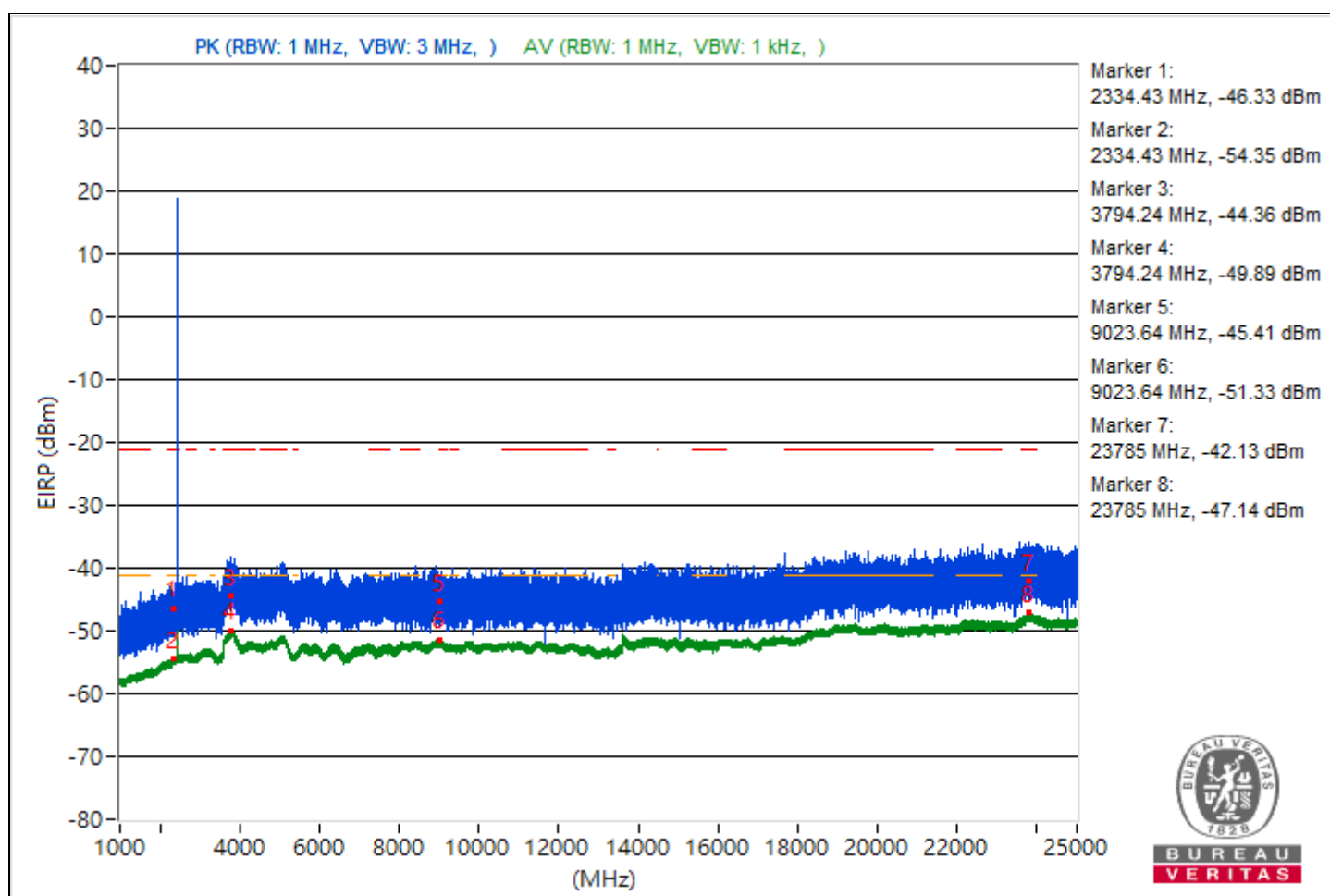
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2334.43	48.93 PK	74	-25.07	-51.49	5.16	-46.33
2	2334.43	40.91 AV	54	-13.09	-59.51	5.16	-54.35
3	3794.24	50.9 PK	74	-23.1	-49.52	5.16	-44.36
4	3794.24	45.37 AV	54	-8.63	-55.05	5.16	-49.89
5	9023.64	49.85 PK	74	-24.15	-50.57	5.16	-45.41
6	9023.64	43.93 AV	54	-10.07	-56.49	5.16	-51.33
7	23785	53.13 PK	74	-20.87	-47.29	5.16	-42.13
8	23785	48.12 AV	54	-5.88	-52.3	5.16	-47.14

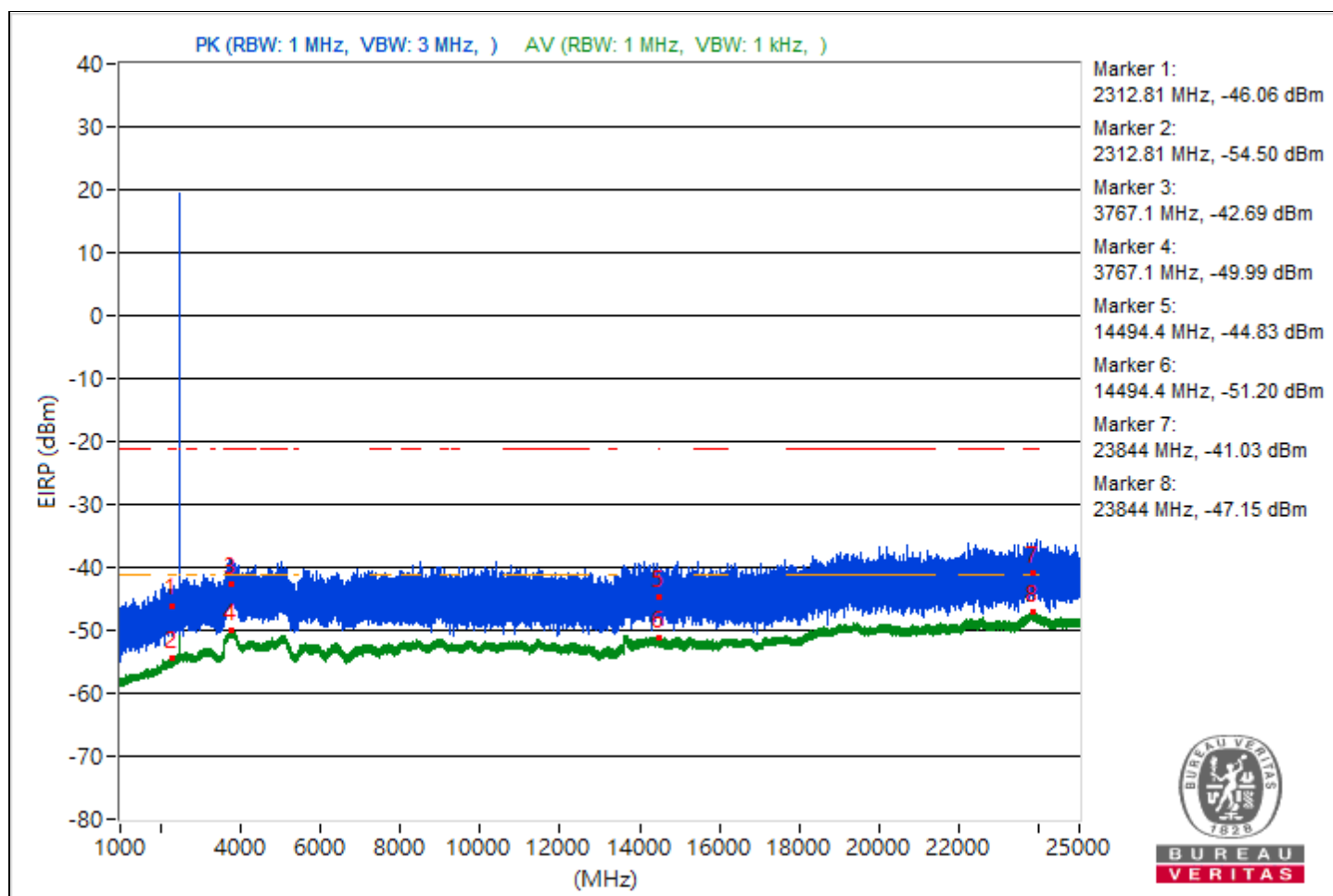
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2312.81	49.2 PK	74	-24.8	-51.22	5.16	-46.06
2	2312.81	40.76 AV	54	-13.24	-59.66	5.16	-54.5
3	3767.1	52.57 PK	74	-21.43	-47.85	5.16	-42.69
4	3767.1	45.27 AV	54	-8.73	-55.15	5.16	-49.99
5	14494.4	50.43 PK	74	-23.57	-49.99	5.16	-44.83
6	14494.4	44.06 AV	54	-9.94	-56.36	5.16	-51.2
7	23844	54.23 PK	74	-19.77	-46.19	5.16	-41.03
8	23844	48.11 AV	54	-5.89	-52.31	5.16	-47.15

Note: Margin value = Emission Level - Limit value



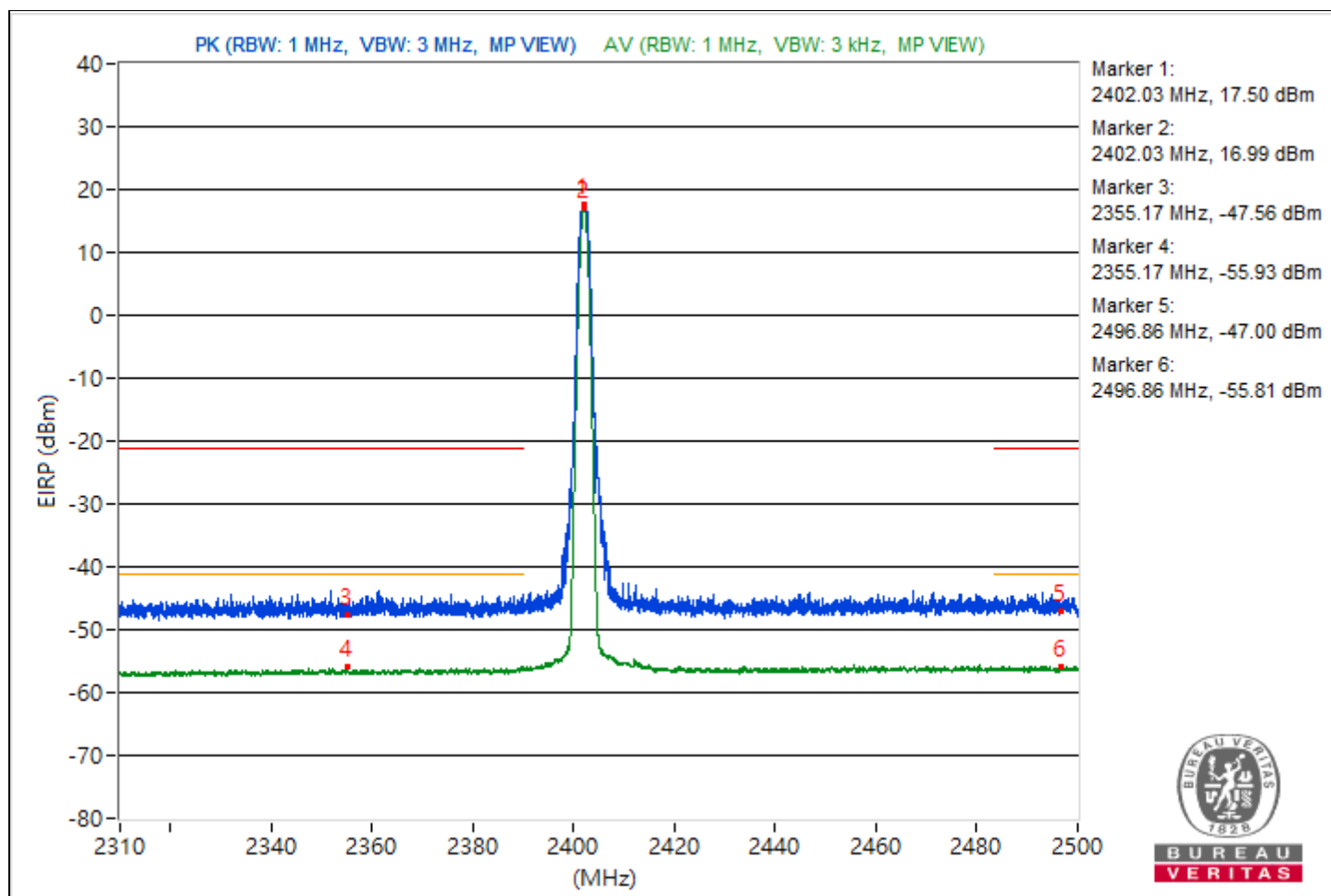
Conducted Band Edges

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2402.03	112.76 PK			13.97	3.53	17.5
2	*2402.03	112.25 AV			13.46	3.53	16.99
3	2355.17	47.7 PK	74	-26.3	-51.09	3.53	-47.56
4	2355.17	39.33 AV	54	-14.67	-59.46	3.53	-55.93
5	2496.86	48.26 PK	74	-25.74	-50.53	3.53	-47
6	2496.86	39.45 AV	54	-14.55	-59.34	3.53	-55.81

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

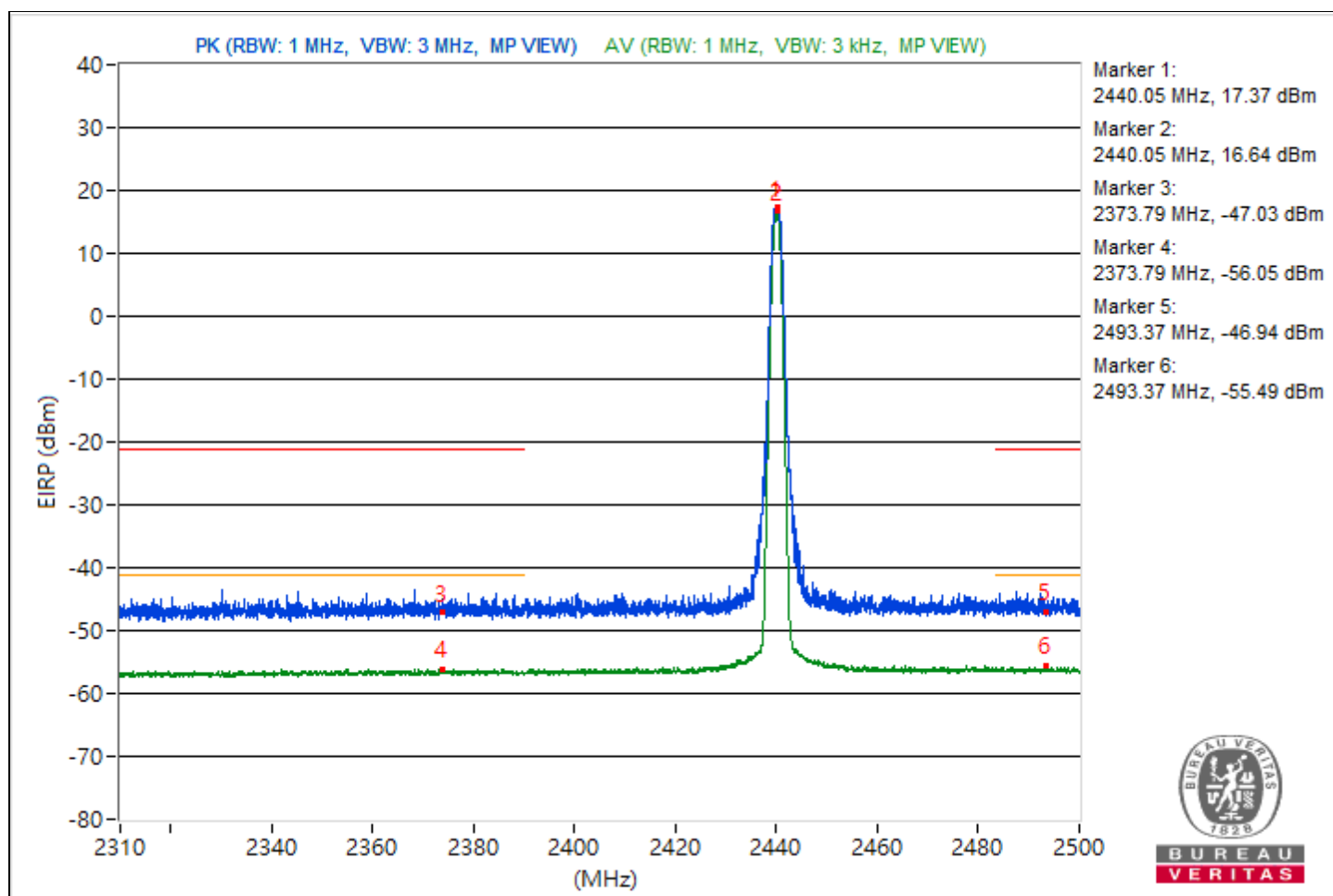


RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2440.05	112.63 PK			13.84	3.53	17.37
2	*2440.05	111.9 AV			13.11	3.53	16.64
3	2373.79	48.23 PK	74	-25.77	-50.56	3.53	-47.03
4	2373.79	39.21 AV	54	-14.79	-59.58	3.53	-56.05
5	2493.37	48.32 PK	74	-25.68	-50.47	3.53	-46.94
6	2493.37	39.77 AV	54	-14.23	-59.02	3.53	-55.49

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

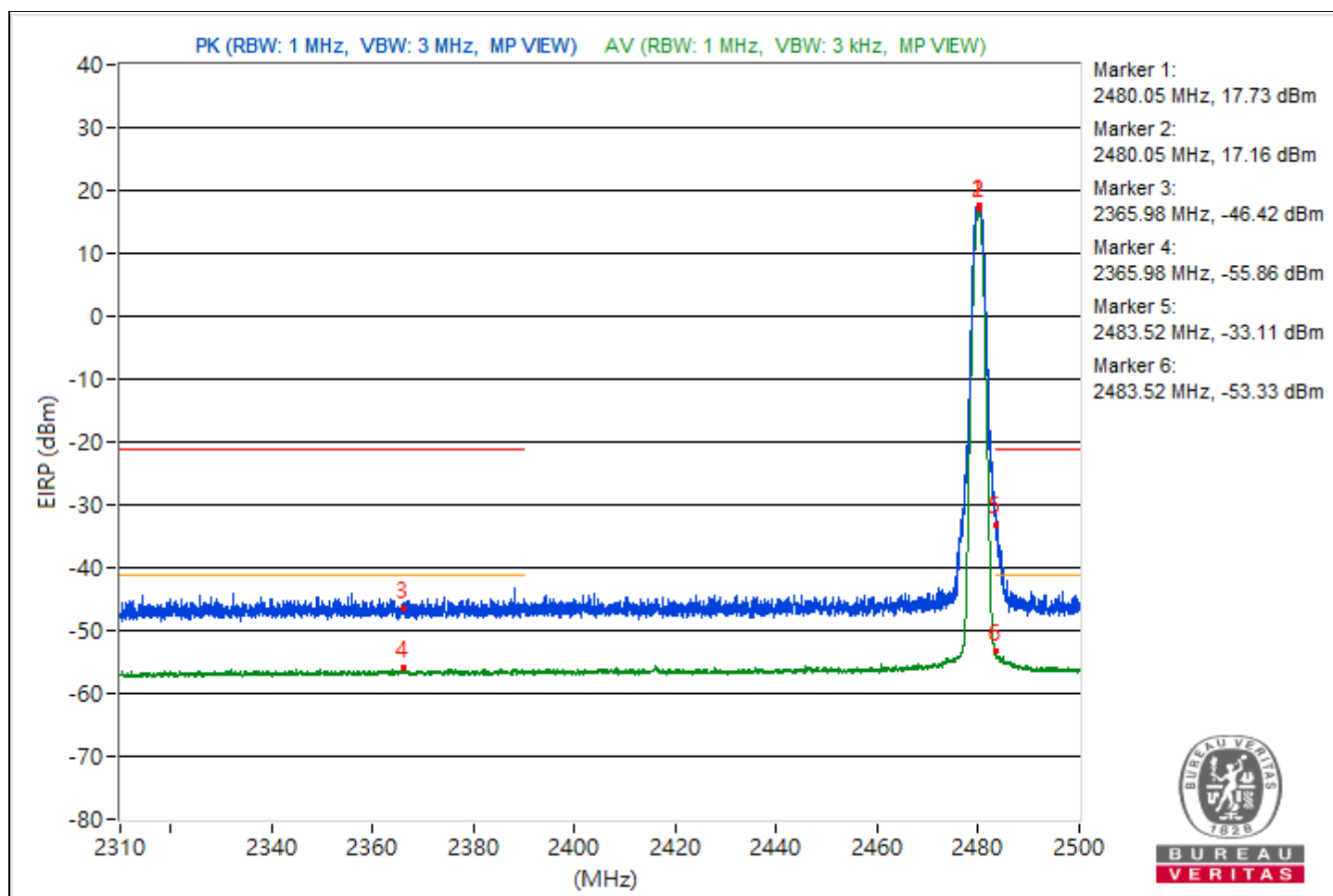


RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2480.05	112.99 PK			14.2	3.53	17.73
2	*2480.05	112.42 AV			13.63	3.53	17.16
3	2365.98	48.84 PK	74	-25.16	-49.95	3.53	-46.42
4	2365.98	39.4 AV	54	-14.6	-59.39	3.53	-55.86
5	2483.52	62.15 PK	74	-11.85	-36.64	3.53	-33.11
6	2483.52	41.93 AV	54	-12.07	-56.86	3.53	-53.33

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

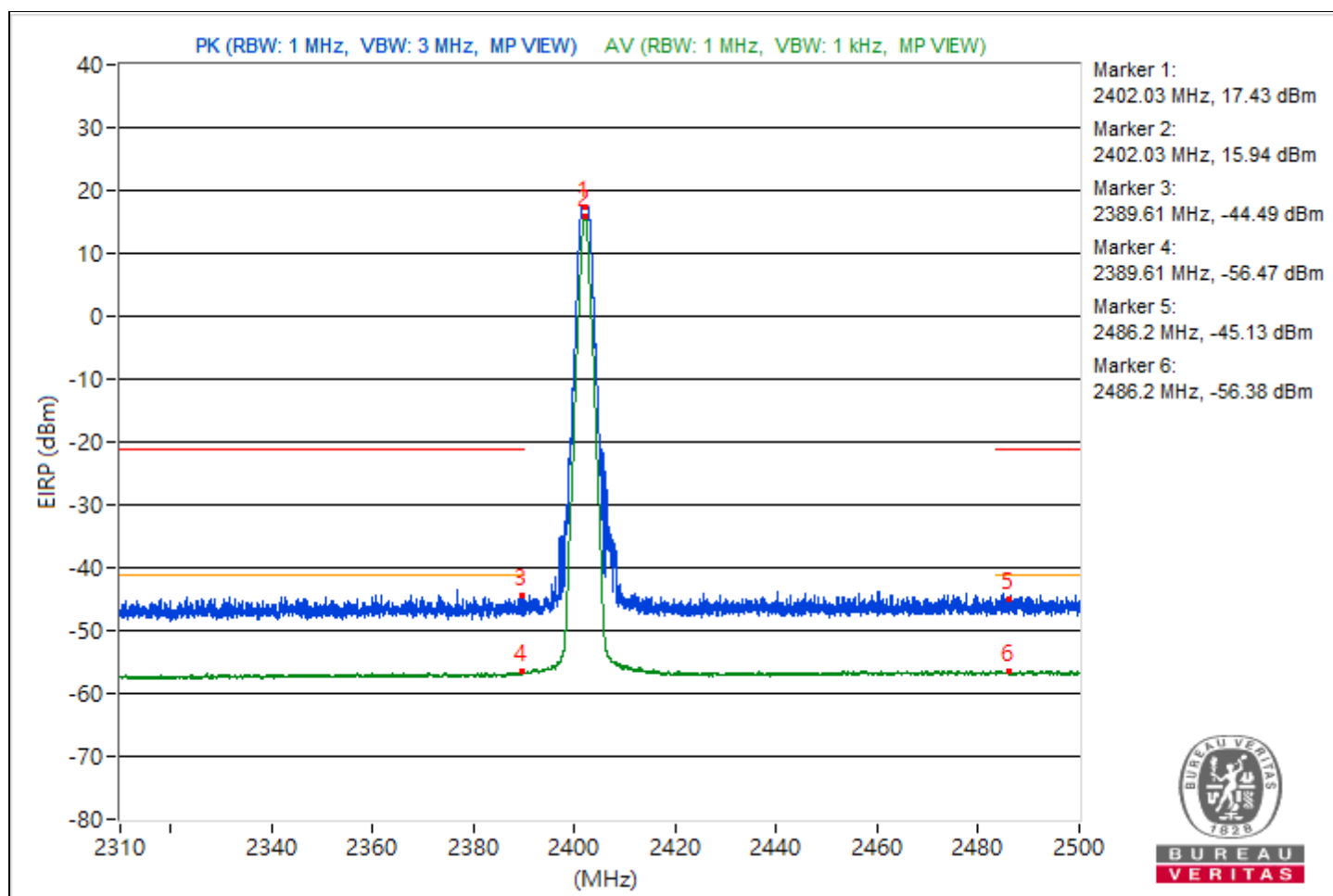


RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2402.03	112.69 PK			13.9	3.53	17.43
2	*2402.03	111.2 AV			12.41	3.53	15.94
3	2389.61	50.77 PK	74	-23.23	-48.02	3.53	-44.49
4	2389.61	38.79 AV	54	-15.21	-60	3.53	-56.47
5	2486.2	50.13 PK	74	-23.87	-48.66	3.53	-45.13
6	2486.2	38.88 AV	54	-15.12	-59.91	3.53	-56.38

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

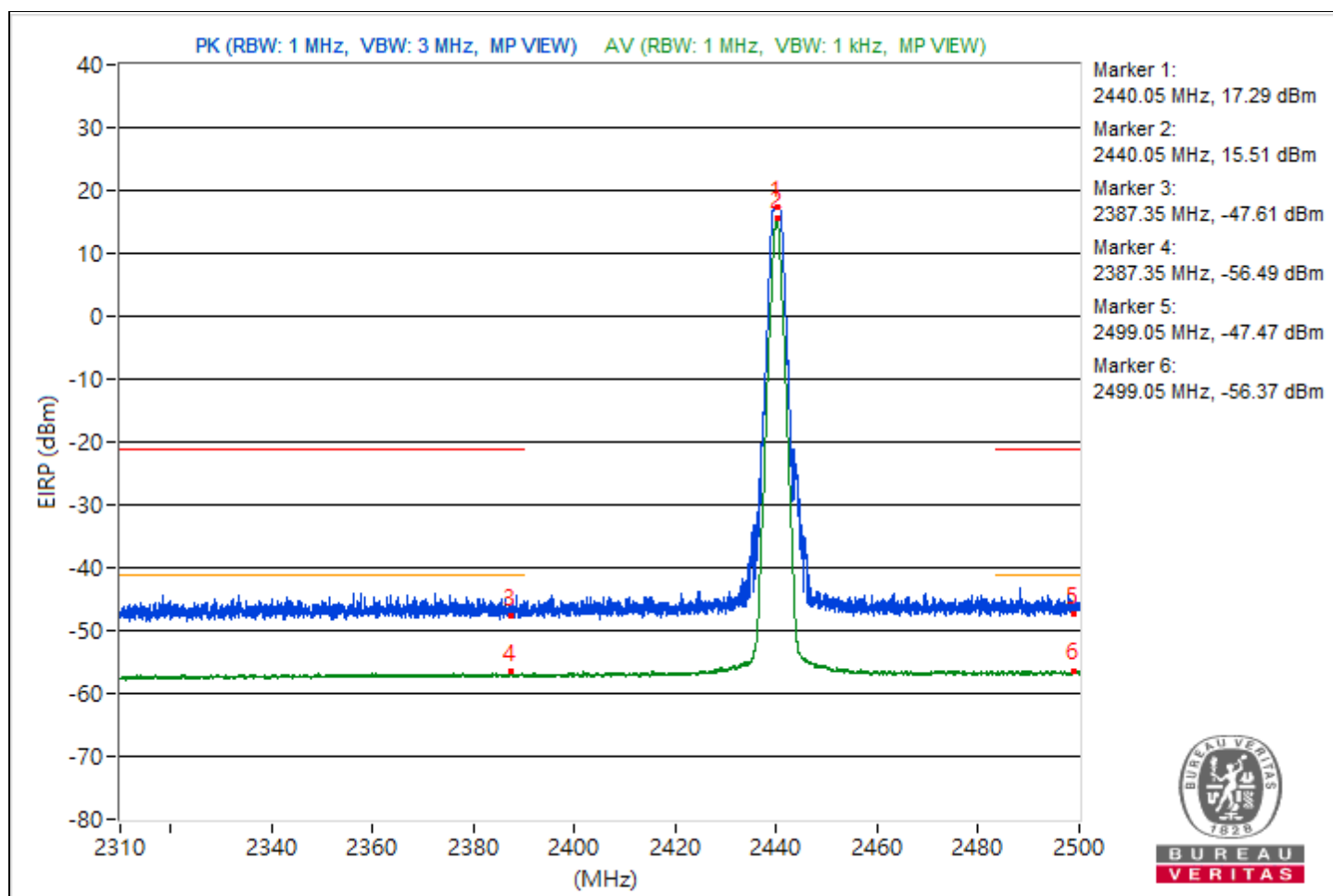


RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2440.05	112.55 PK			13.76	3.53	17.29
2	*2440.05	110.77 AV			11.98	3.53	15.51
3	2387.35	47.65 PK	74	-26.35	-51.14	3.53	-47.61
4	2387.35	38.77 AV	54	-15.23	-60.02	3.53	-56.49
5	2499.05	47.79 PK	74	-26.21	-51	3.53	-47.47
6	2499.05	38.89 AV	54	-15.11	-59.9	3.53	-56.37

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

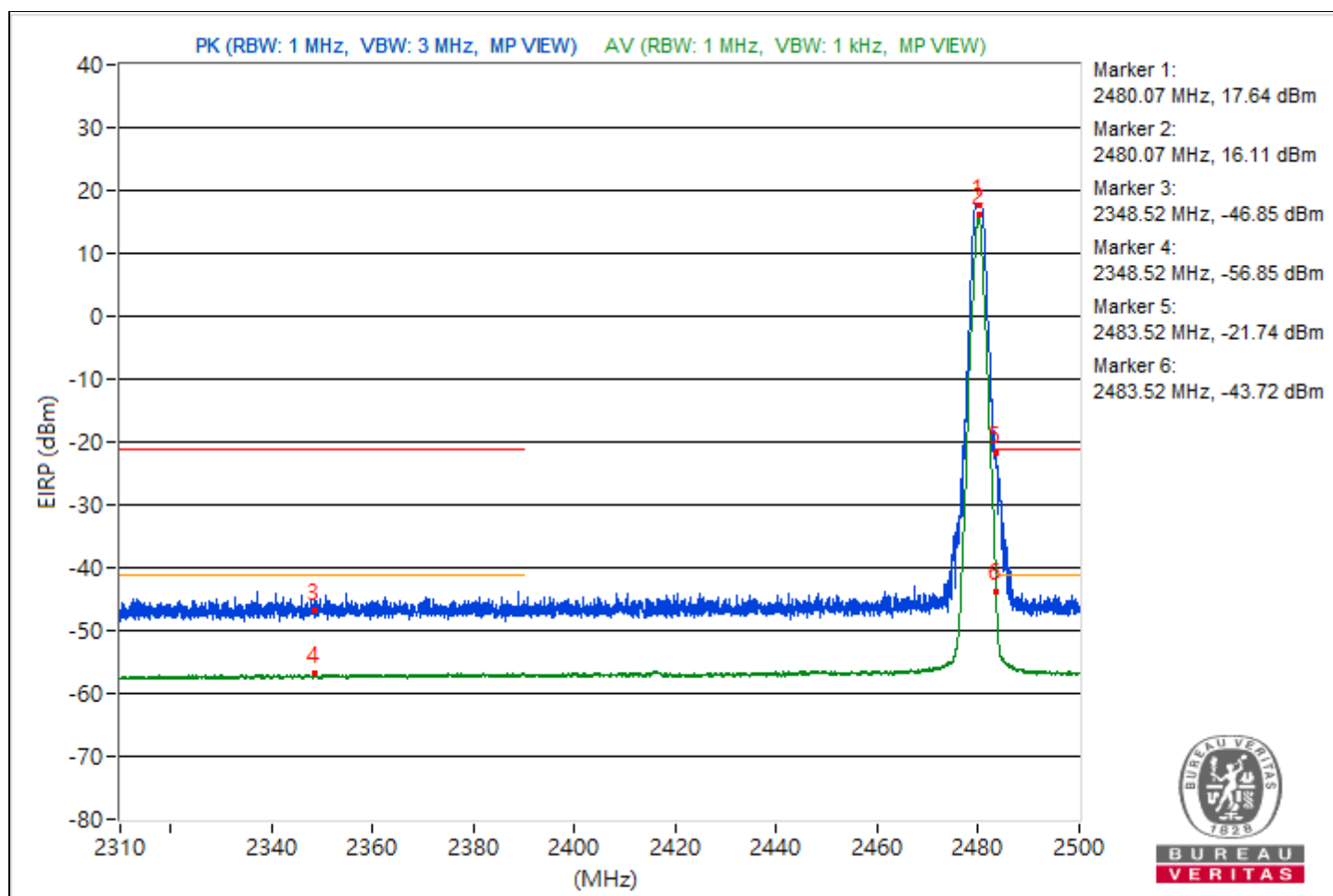


RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2480.07	112.9 PK			14.11	3.53	17.64
2	*2480.07	111.37 AV			12.58	3.53	16.11
3	2348.52	48.41 PK	74	-25.59	-50.38	3.53	-46.85
4	2348.52	38.41 AV	54	-15.59	-60.38	3.53	-56.85
5	2483.52	73.52 PK	74	-0.48	-25.27	3.53	-21.74
6	2483.52	51.54 AV	54	-2.46	-47.25	3.53	-43.72

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.



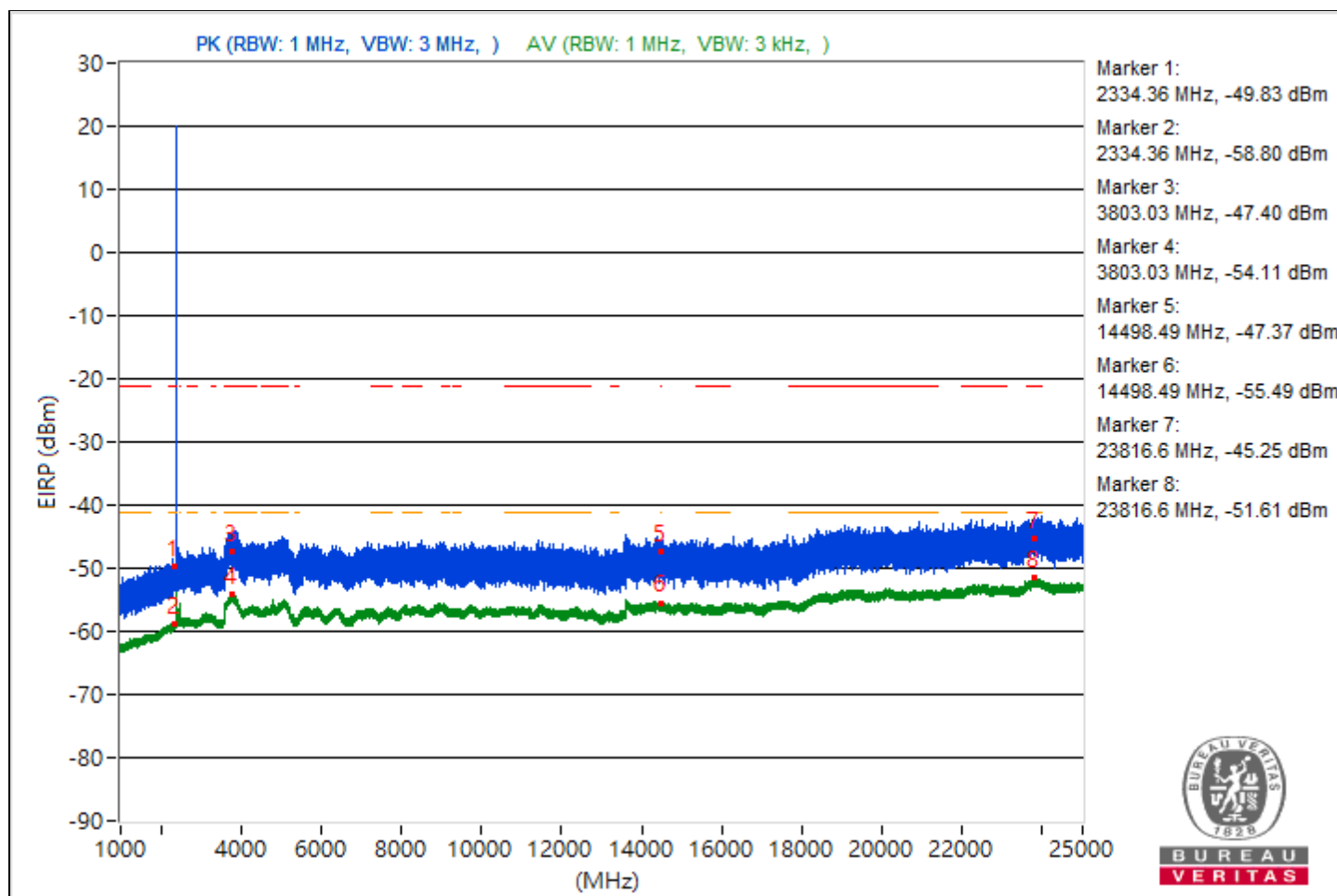
2Tx

Conducted Unwanted Emissions

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2334.36	45.43 PK	74	-28.57	-61.05	-60.97	8.17	-49.83
2	2334.36	36.46 AV	54	-17.54	-70.43	-69.58	8.17	-58.8
3	3803.03	47.86 PK	74	-26.14	-59.15	-58.07	8.17	-47.4
4	3803.03	41.15 AV	54	-12.85	-64.69	-65.98	8.17	-54.11
5	14498.49	47.89 PK	74	-26.11	-60.94	-57.02	8.17	-47.37
6	14498.49	39.77 AV	54	-14.23	-66.27	-67.11	8.17	-55.49
7	23816.6	50.01 PK	74	-23.99	-57.08	-55.87	8.17	-45.25
8	23816.6	43.65 AV	54	-10.35	-62.33	-63.31	8.17	-51.61

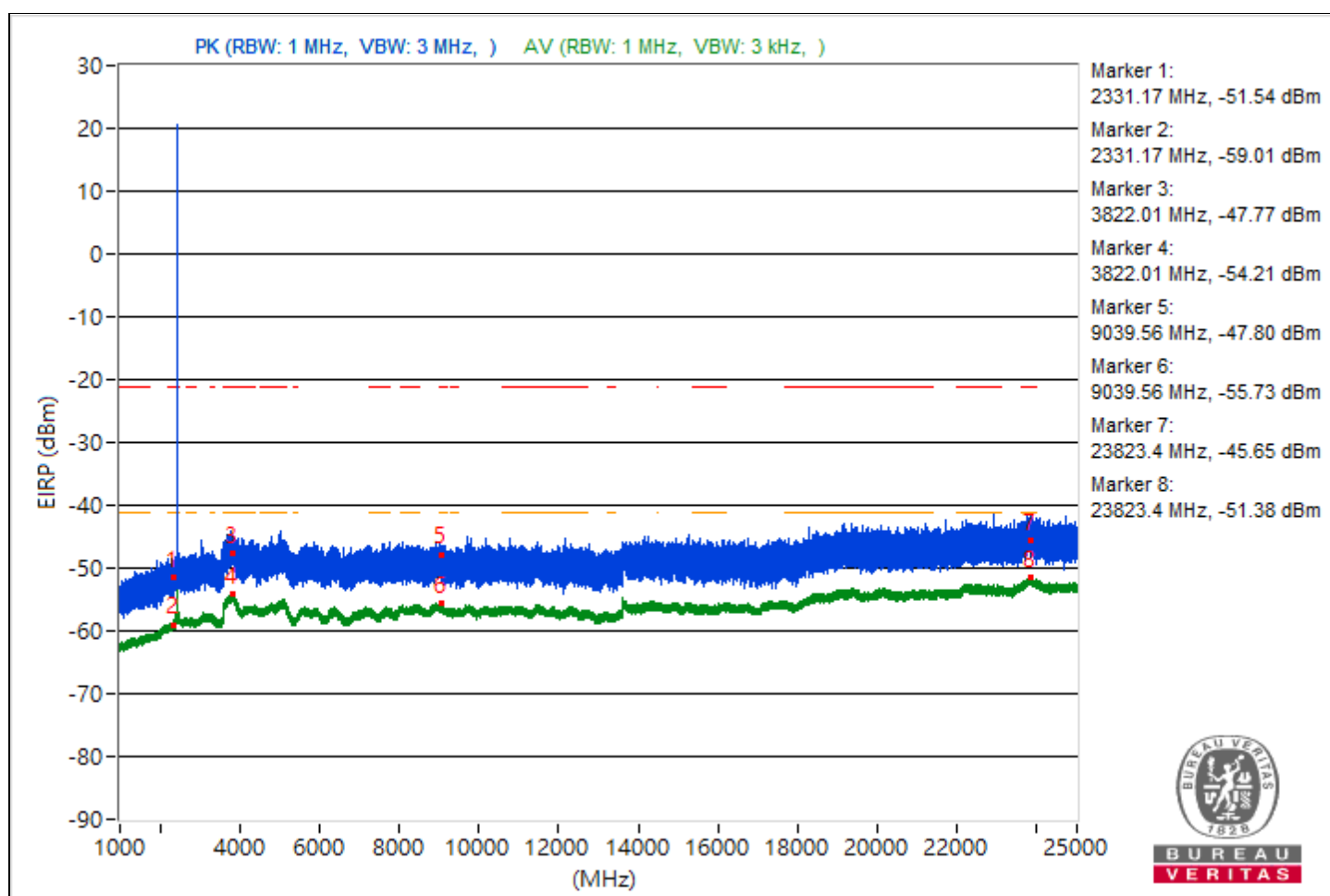
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2331.17	43.72 PK	74	-30.28	-62.89	-62.55	8.17	-51.54
2	2331.17	36.25 AV	54	-17.75	-69.76	-70.66	8.17	-59.01
3	3822.01	47.49 PK	74	-26.51	-57.95	-60.27	8.17	-47.77
4	3822.01	41.05 AV	54	-12.95	-65.92	-64.92	8.17	-54.21
5	9039.56	47.46 PK	74	-26.54	-58.25	-59.87	8.17	-47.8
6	9039.56	39.53 AV	54	-14.47	-67.55	-66.36	8.17	-55.73
7	23823.4	49.61 PK	74	-24.39	-56.88	-56.79	8.17	-45.65
8	23823.4	43.88 AV	54	-10.12	-62.96	-62.21	8.17	-51.38

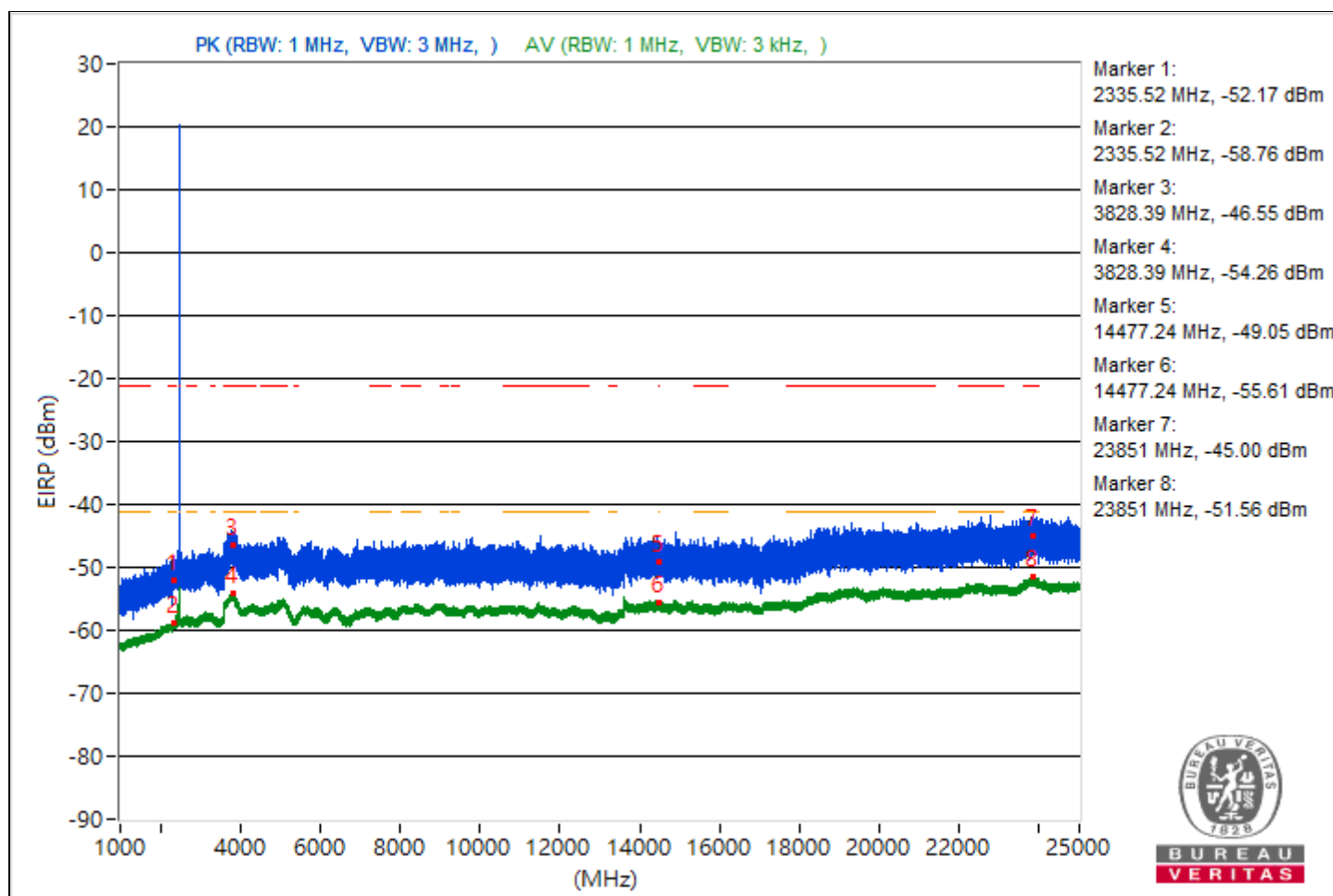
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2335.52	43.09 PK	74	-30.91	-63.32	-63.38	8.17	-52.17
2	2335.52	36.5 AV	54	-17.5	-69.68	-70.22	8.17	-58.76
3	3828.39	48.71 PK	74	-25.29	-58.09	-57.4	8.17	-46.55
4	3828.39	41 AV	54	-13	-65.89	-65.03	8.17	-54.26
5	14477.24	46.21 PK	74	-27.79	-59.64	-60.91	8.17	-49.05
6	14477.24	39.65 AV	54	-14.35	-67.25	-66.37	8.17	-55.61
7	23851	50.26 PK	74	-23.74	-55.11	-57.61	8.17	-45
8	23851	43.7 AV	54	-10.3	-62.31	-63.23	8.17	-51.56

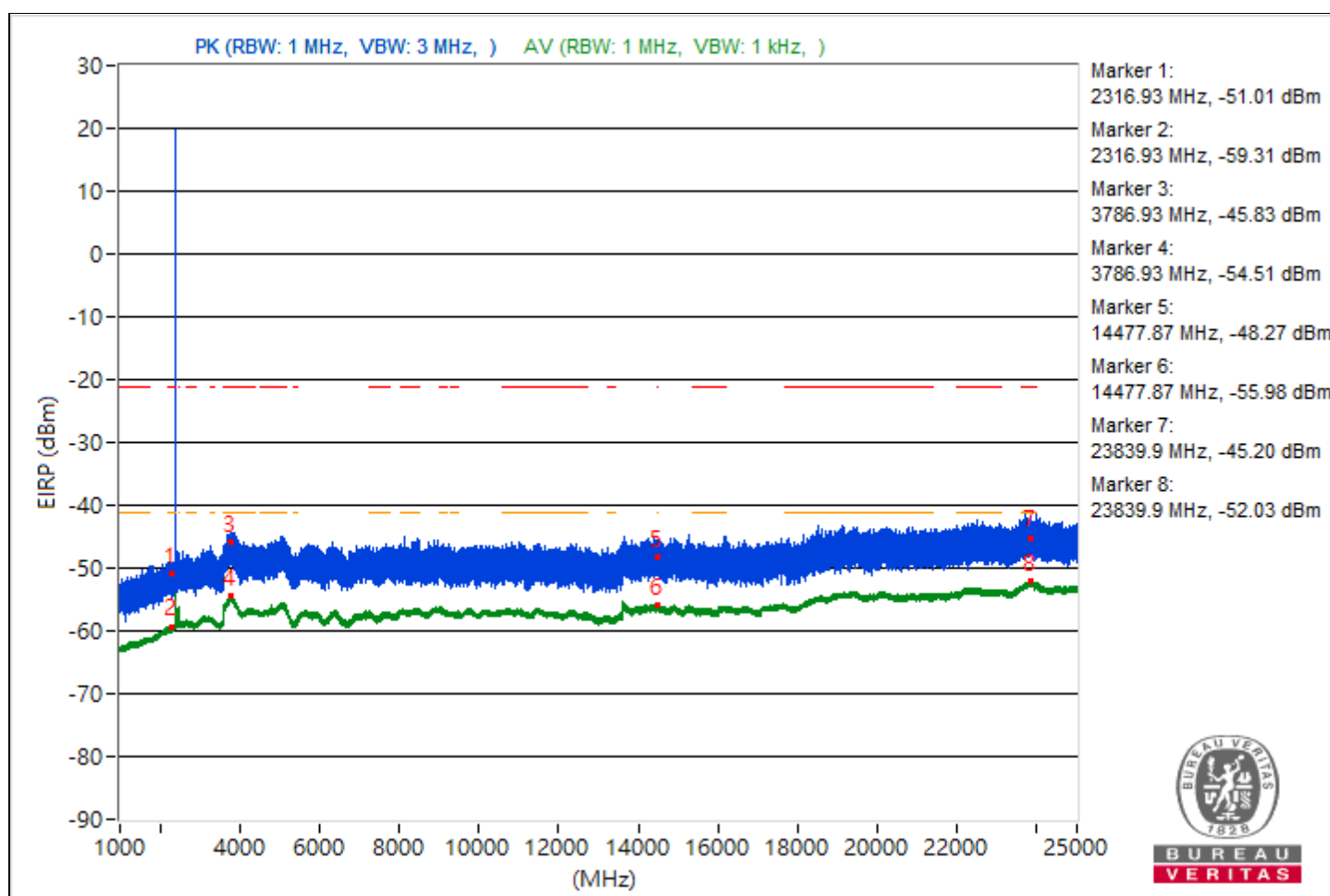
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2316.93	44.25 PK	74	-29.75	-63.09	-61.44	8.17	-51.01
2	2316.93	35.95 AV	54	-18.05	-70.18	-70.81	8.17	-59.31
3	3786.93	49.43 PK	74	-24.57	-55.73	-58.83	8.17	-45.83
4	3786.93	40.75 AV	54	-13.25	-65.76	-65.62	8.17	-54.51
5	14477.87	46.99 PK	74	-27.01	-59.14	-59.78	8.17	-48.27
6	14477.87	39.28 AV	54	-14.72	-66.91	-67.43	8.17	-55.98
7	23839.9	50.06 PK	74	-23.94	-57.1	-55.76	8.17	-45.2
8	23839.9	43.23 AV	54	-10.77	-63.49	-62.95	8.17	-52.03

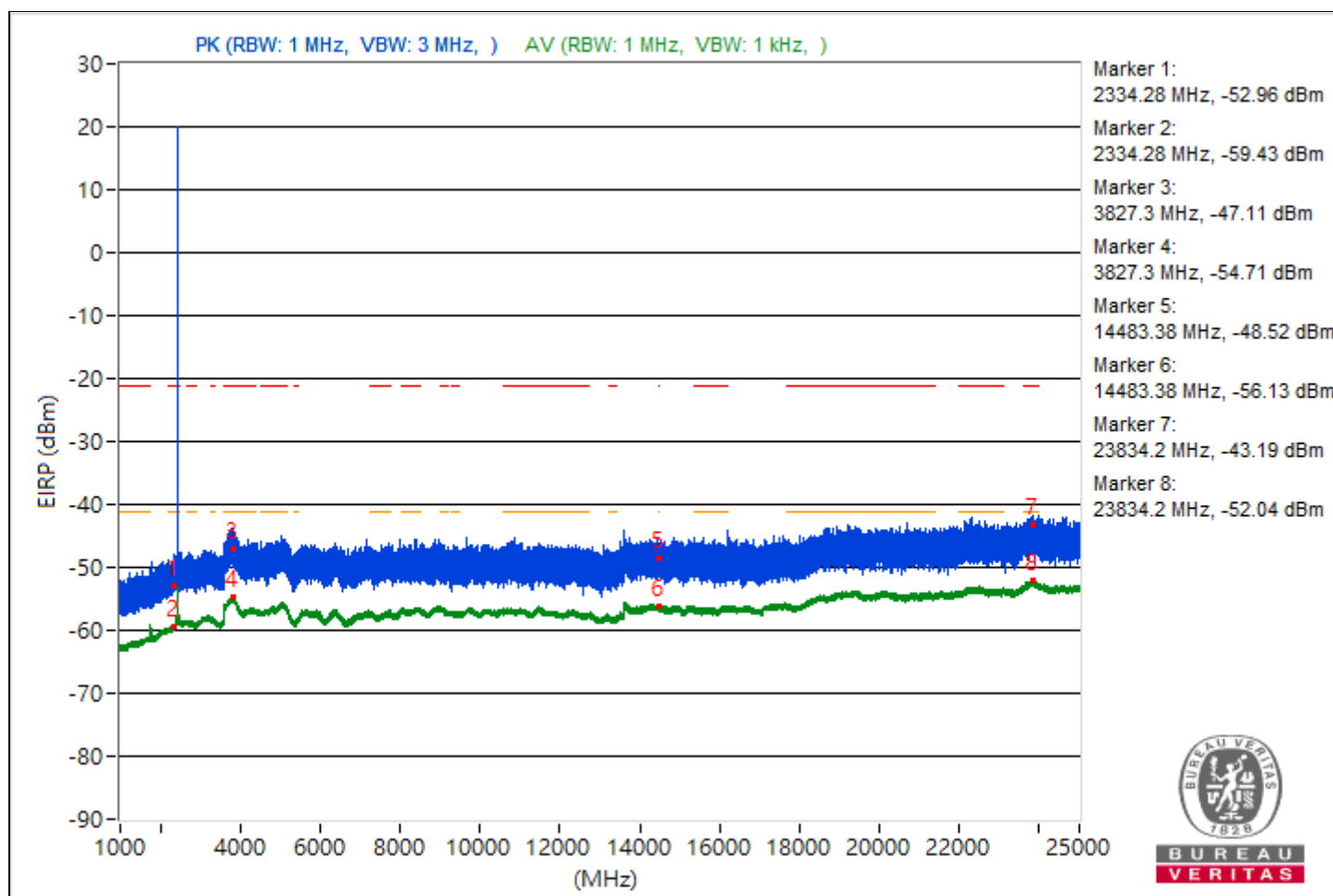
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2334.28	42.3 PK	74	-31.7	-64.74	-63.61	8.17	-52.96
2	2334.28	35.83 AV	54	-18.17	-70.3	-70.95	8.17	-59.43
3	3827.3	48.15 PK	74	-25.85	-57.39	-59.43	8.17	-47.11
4	3827.3	40.55 AV	54	-13.45	-66.2	-65.6	8.17	-54.71
5	14483.38	46.74 PK	74	-27.26	-60.01	-59.42	8.17	-48.52
6	14483.38	39.13 AV	54	-14.87	-67.62	-67.02	8.17	-56.13
7	23834.2	52.07 PK	74	-21.93	-52.73	-57.02	8.17	-43.19
8	23834.2	43.22 AV	54	-10.78	-63.37	-63.08	8.17	-52.04

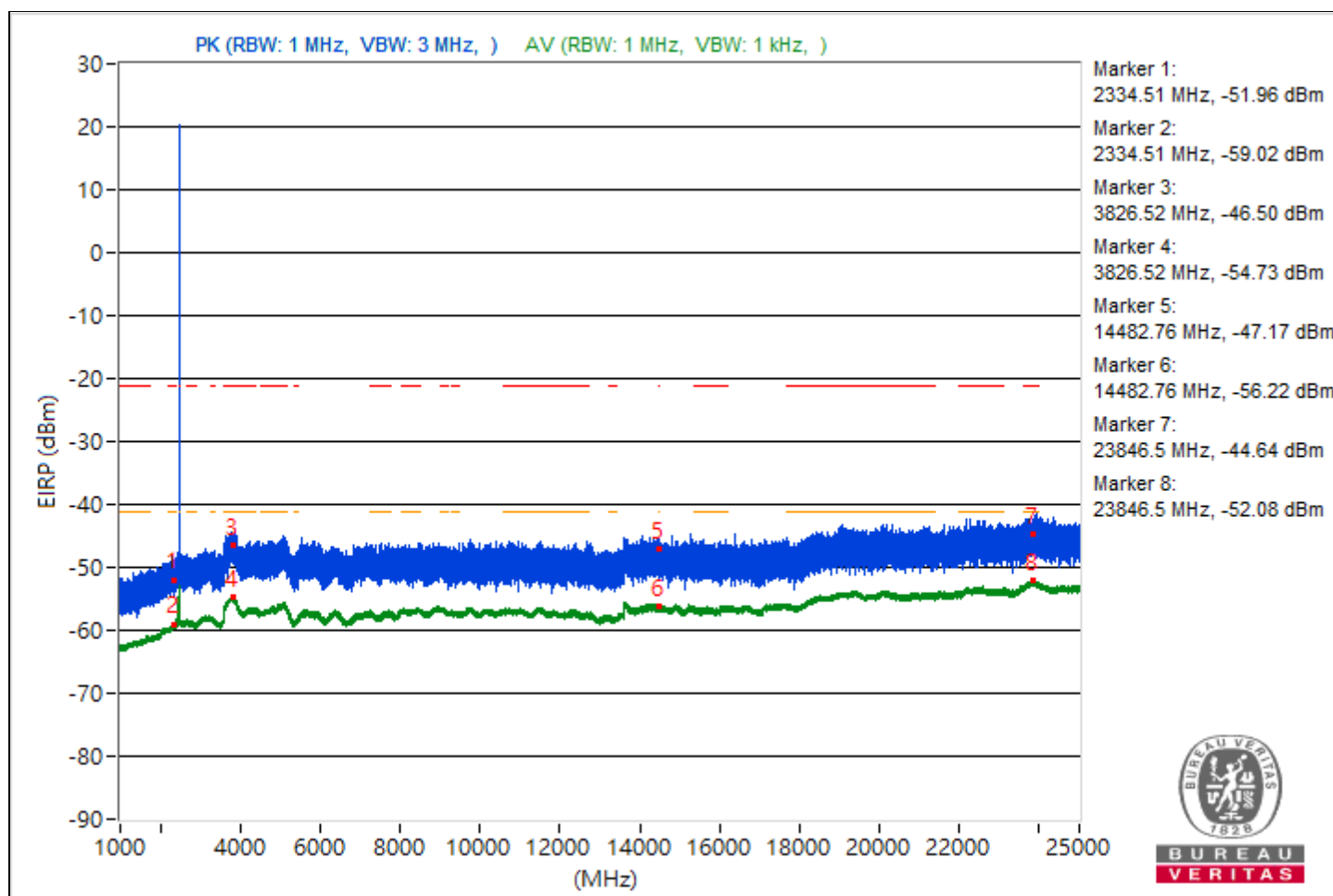
Note: Margin value = Emission Level - Limit value



RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Unwanted Emissions								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	2334.51	43.3 PK	74	-30.7	-63.4	-62.9	8.17	-51.96
2	2334.51	36.24 AV	54	-17.76	-70.34	-70.06	8.17	-59.02
3	3826.52	48.76 PK	74	-25.24	-56.47	-59.37	8.17	-46.5
4	3826.52	40.53 AV	54	-13.47	-66.28	-65.58	8.17	-54.73
5	14482.76	48.09 PK	74	-25.91	-56.81	-60.75	8.17	-47.17
6	14482.76	39.04 AV	54	-14.96	-67	-67.83	8.17	-56.22
7	23846.5	50.62 PK	74	-23.38	-54.77	-57.21	8.17	-44.64
8	23846.5	43.18 AV	54	-10.82	-63.62	-62.93	8.17	-52.08

Note: Margin value = Emission Level - Limit value



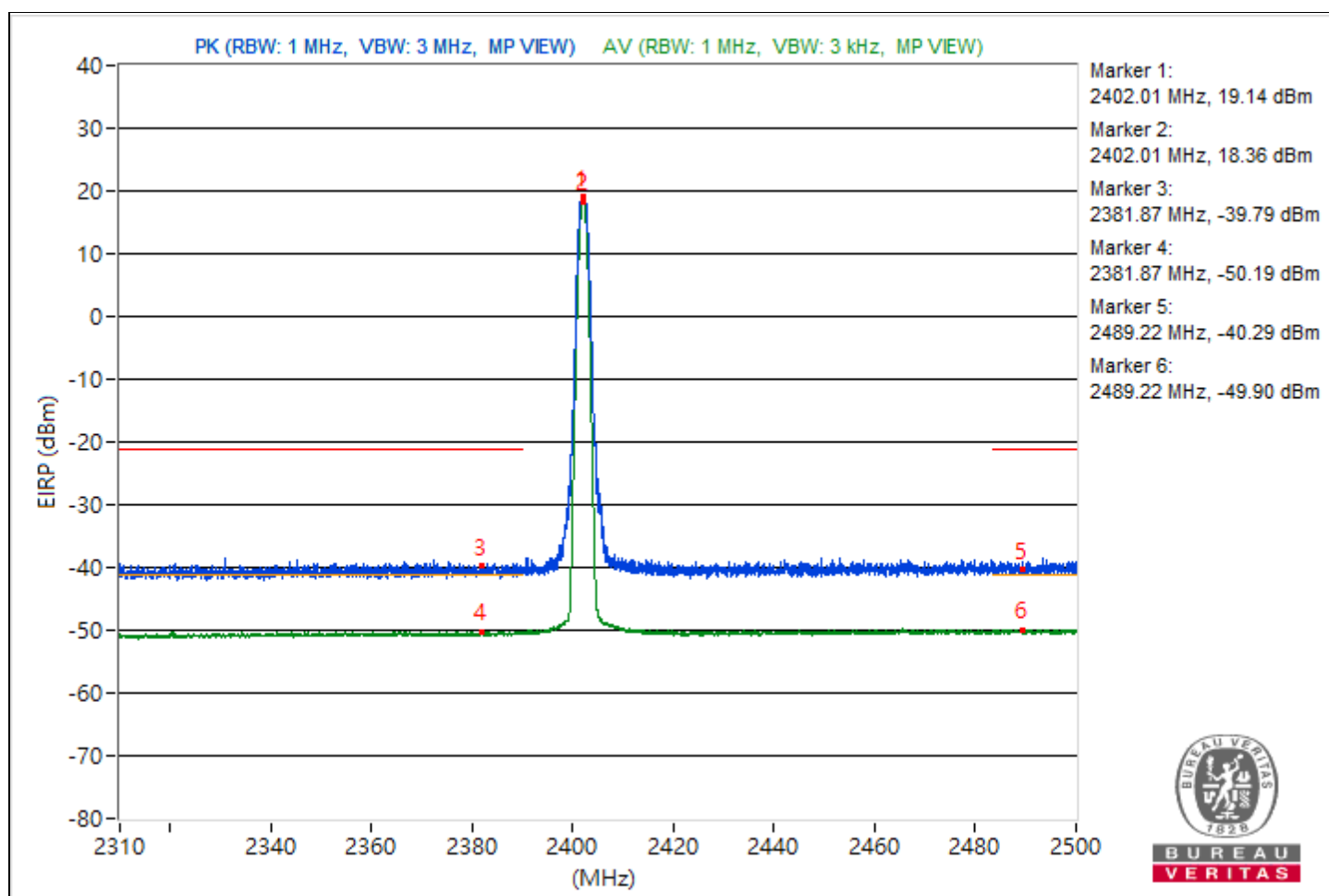
Conducted Band Edges

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2402.01	114.4 PK			9.66	9.51	6.54	19.14
2	*2402.01	113.62 AV			8.72	8.9	6.54	18.36
3	2381.87	55.47 PK	74	-18.53	-49.78	-48.94	6.54	-39.79
4	2381.87	45.07 AV	54	-8.93	-60.19	-59.33	6.54	-50.19
5	2489.22	54.97 PK	74	-19.03	-49.76	-49.92	6.54	-40.29
6	2489.22	45.36 AV	54	-8.64	-59.8	-59.13	6.54	-49.9

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

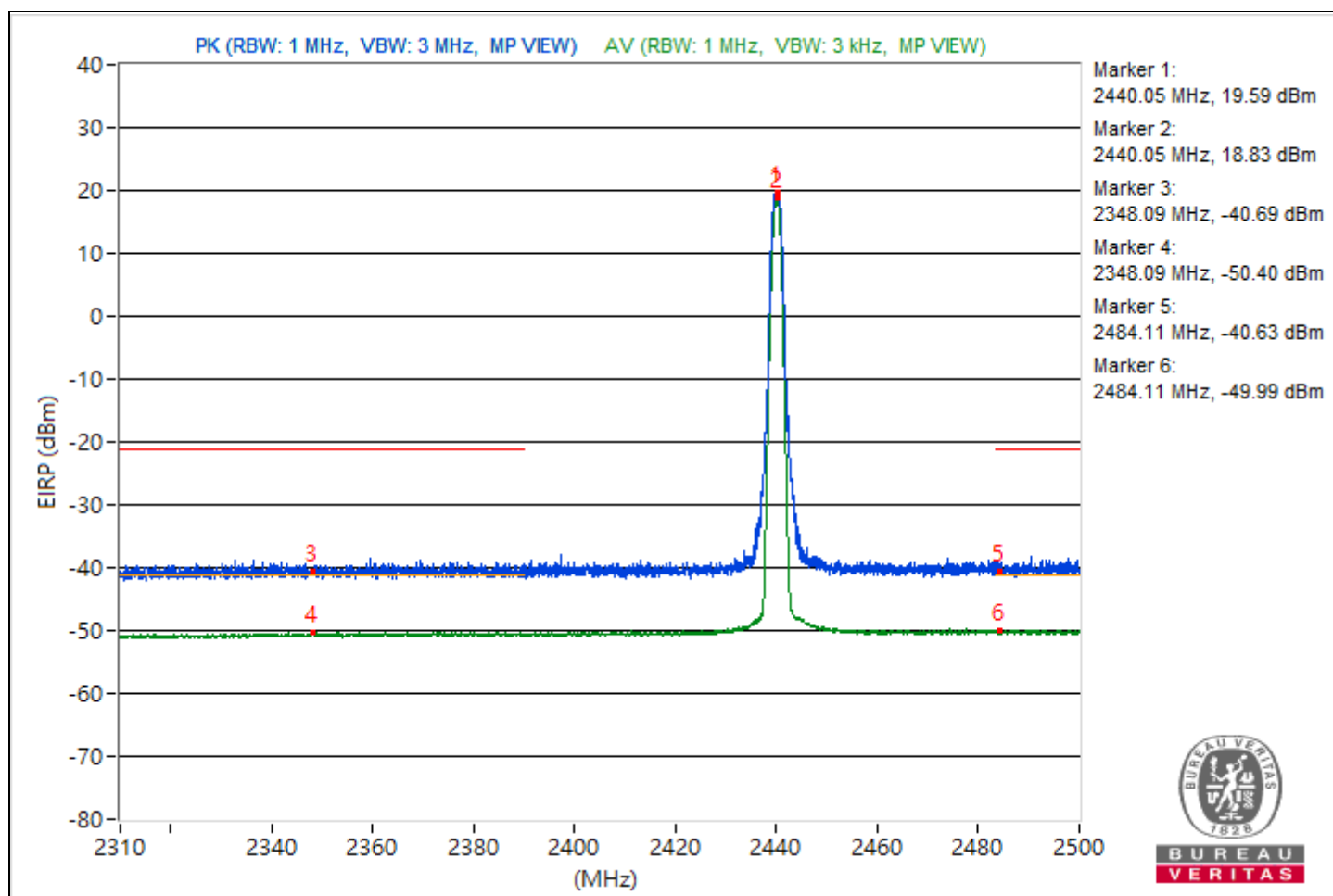


RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2440.05	114.85 PK			9.44	10.56	6.54	19.59
2	*2440.05	114.09 AV			8.55	9.9	6.54	18.83
3	2348.09	54.57 PK	74	-19.43	-49.54	-51.07	6.54	-40.69
4	2348.09	44.86 AV	54	-9.14	-59.55	-60.38	6.54	-50.4
5	2484.11	54.63 PK	74	-19.37	-49.87	-50.51	6.54	-40.63
6	2484.11	45.27 AV	54	-8.73	-60.04	-59.09	6.54	-49.99

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

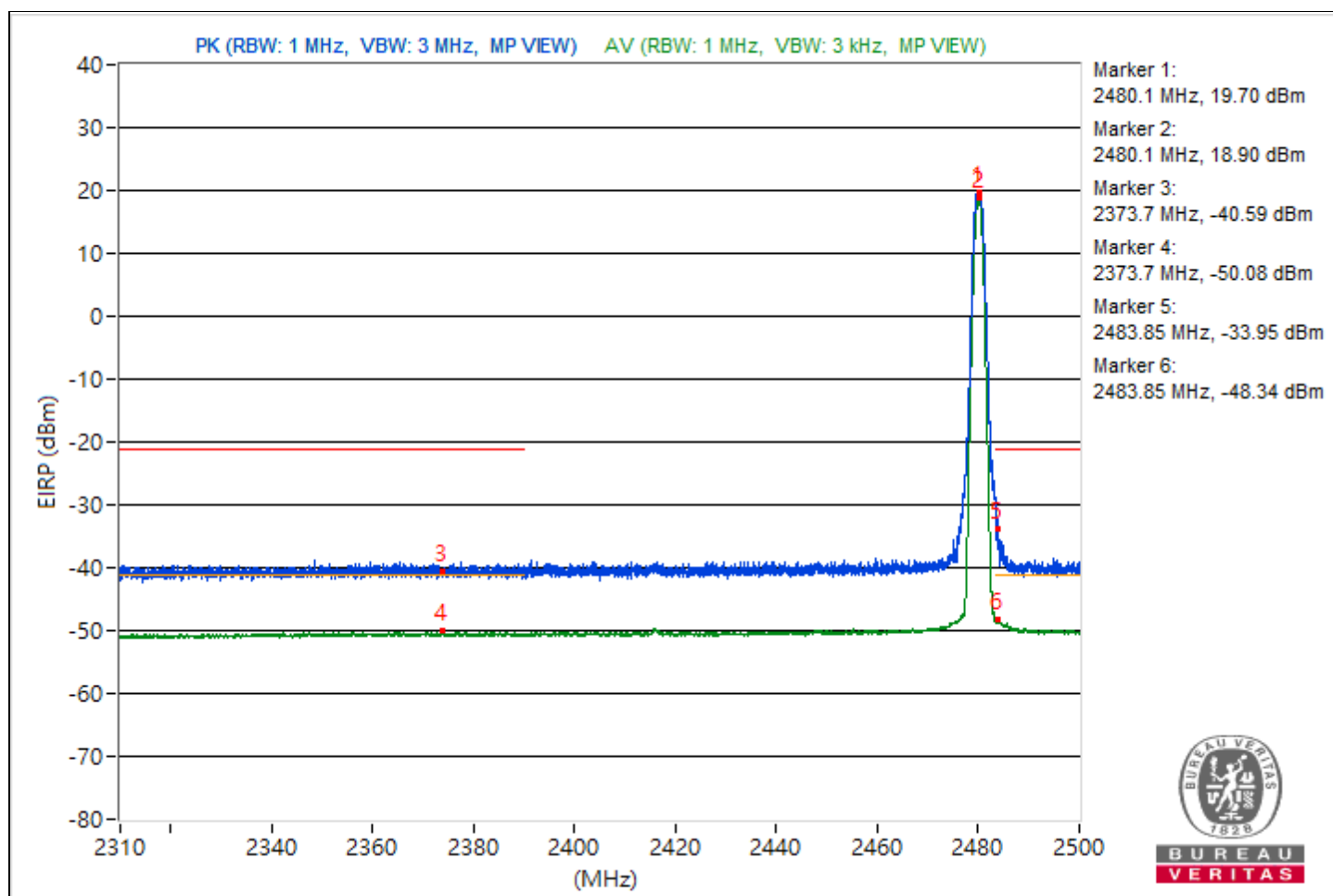


RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2480.1	114.96 PK			9.65	10.59	6.54	19.7
2	*2480.1	114.16 AV			8.94	9.72	6.54	18.9
3	2373.7	54.67 PK	74	-19.33	-49.62	-50.73	6.54	-40.59
4	2373.7	45.18 AV	54	-8.82	-59.49	-59.76	6.54	-50.08
5	2483.85	61.31 PK	74	-12.69	-42.41	-44.97	6.54	-33.95
6	2483.85	46.92 AV	54	-7.08	-58.03	-57.75	6.54	-48.34

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

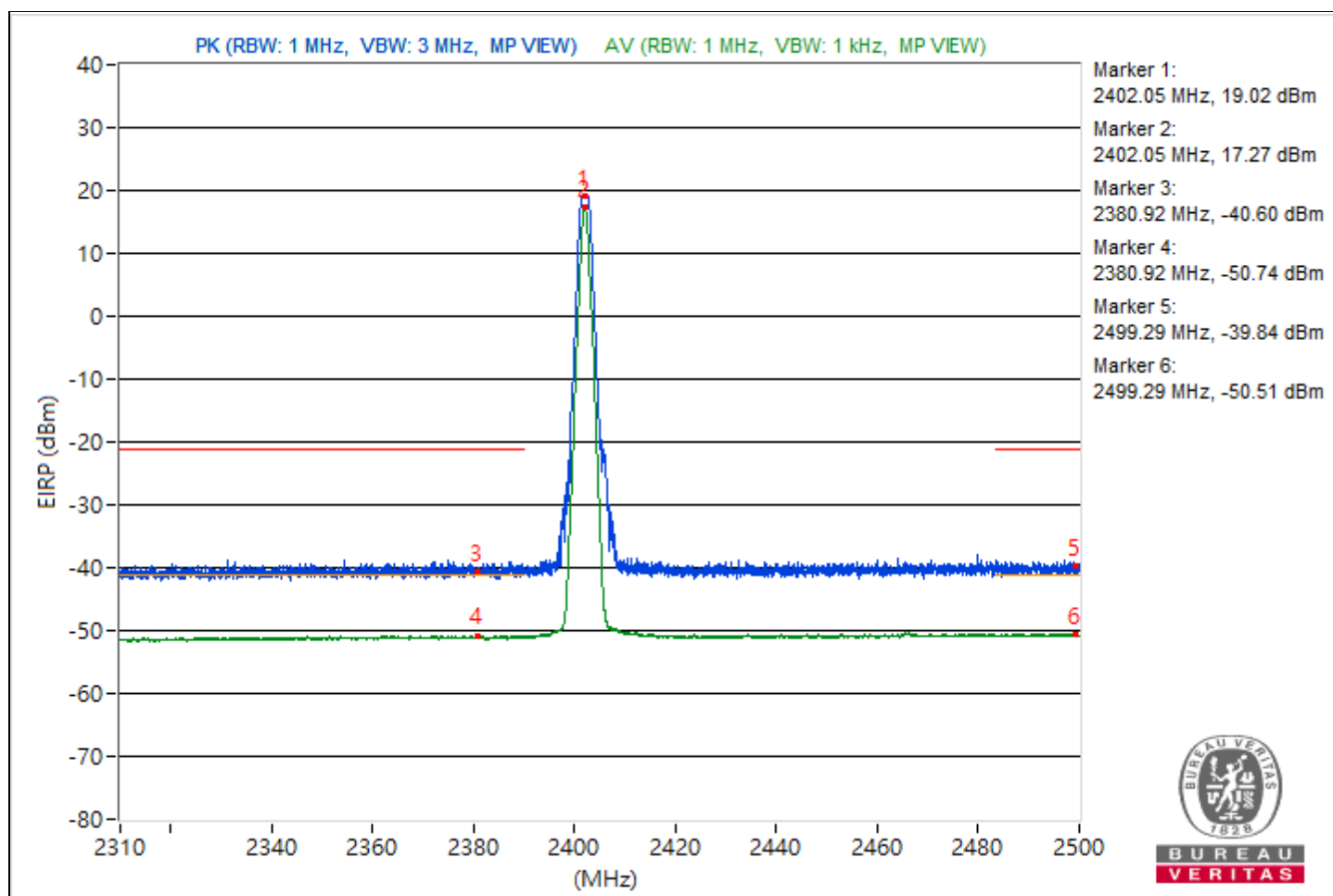


RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2402.05	114.28 PK			9.47	9.47	6.54	19.02
2	*2402.05	112.53 AV			7.72	7.71	6.54	17.27
3	2380.92	54.66 PK	74	-19.34	-49.88	-50.45	6.54	-40.6
4	2380.92	44.52 AV	54	-9.48	-60.36	-60.22	6.54	-50.74
5	2499.29	55.42 PK	74	-18.58	-49.16	-49.62	6.54	-39.84
6	2499.29	44.75 AV	54	-9.25	-59.71	-60.44	6.54	-50.51

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

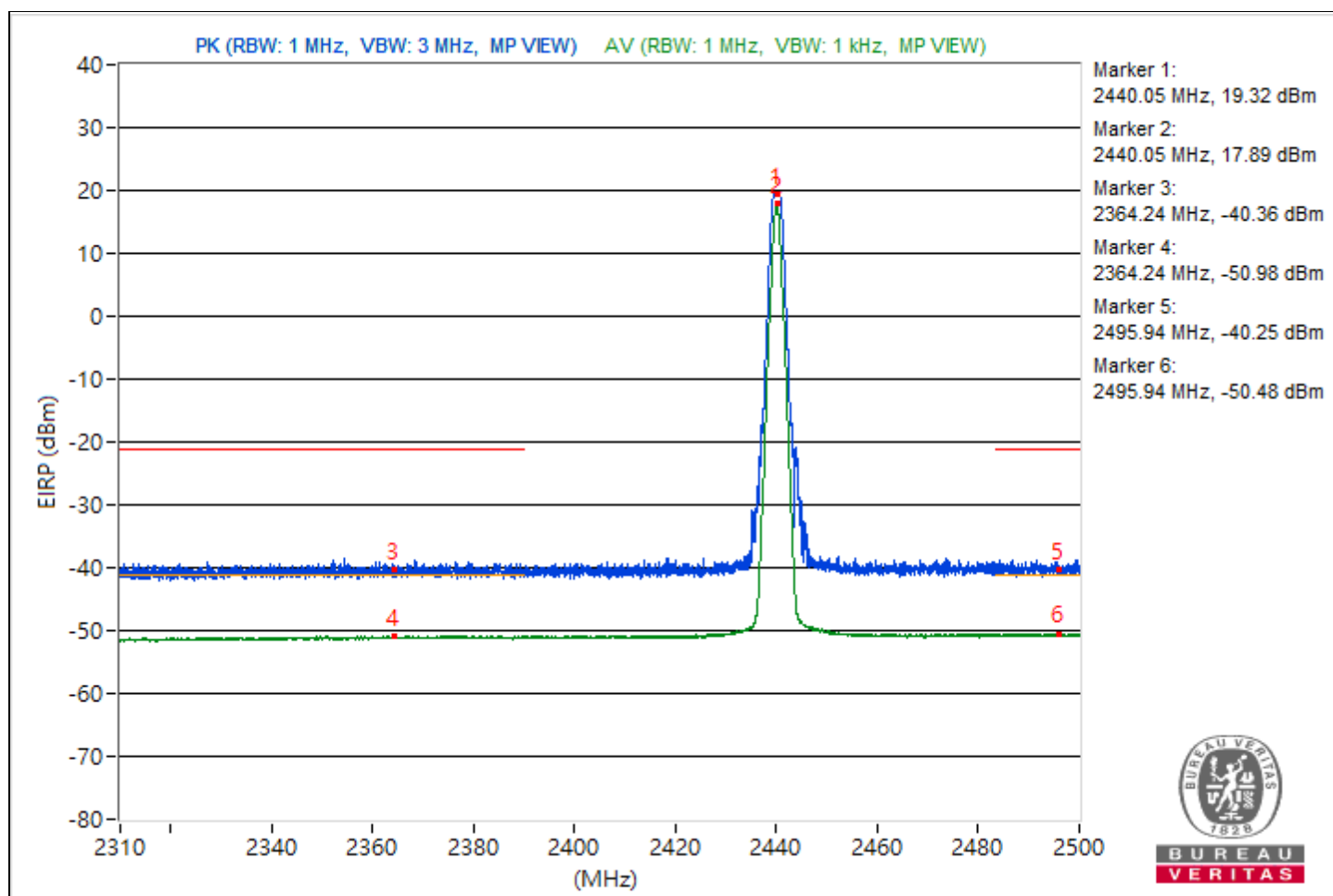


RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2440.05	114.58 PK			9.04	10.39	6.54	19.32
2	*2440.05	113.15 AV			7.79	8.82	6.54	17.89
3	2364.24	54.9 PK	74	-19.1	-49.07	-50.96	6.54	-40.36
4	2364.24	44.28 AV	54	-9.72	-60.24	-60.83	6.54	-50.98
5	2495.94	55.01 PK	74	-18.99	-49.79	-49.81	6.54	-40.25
6	2495.94	44.78 AV	54	-9.22	-59.82	-60.26	6.54	-50.48

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

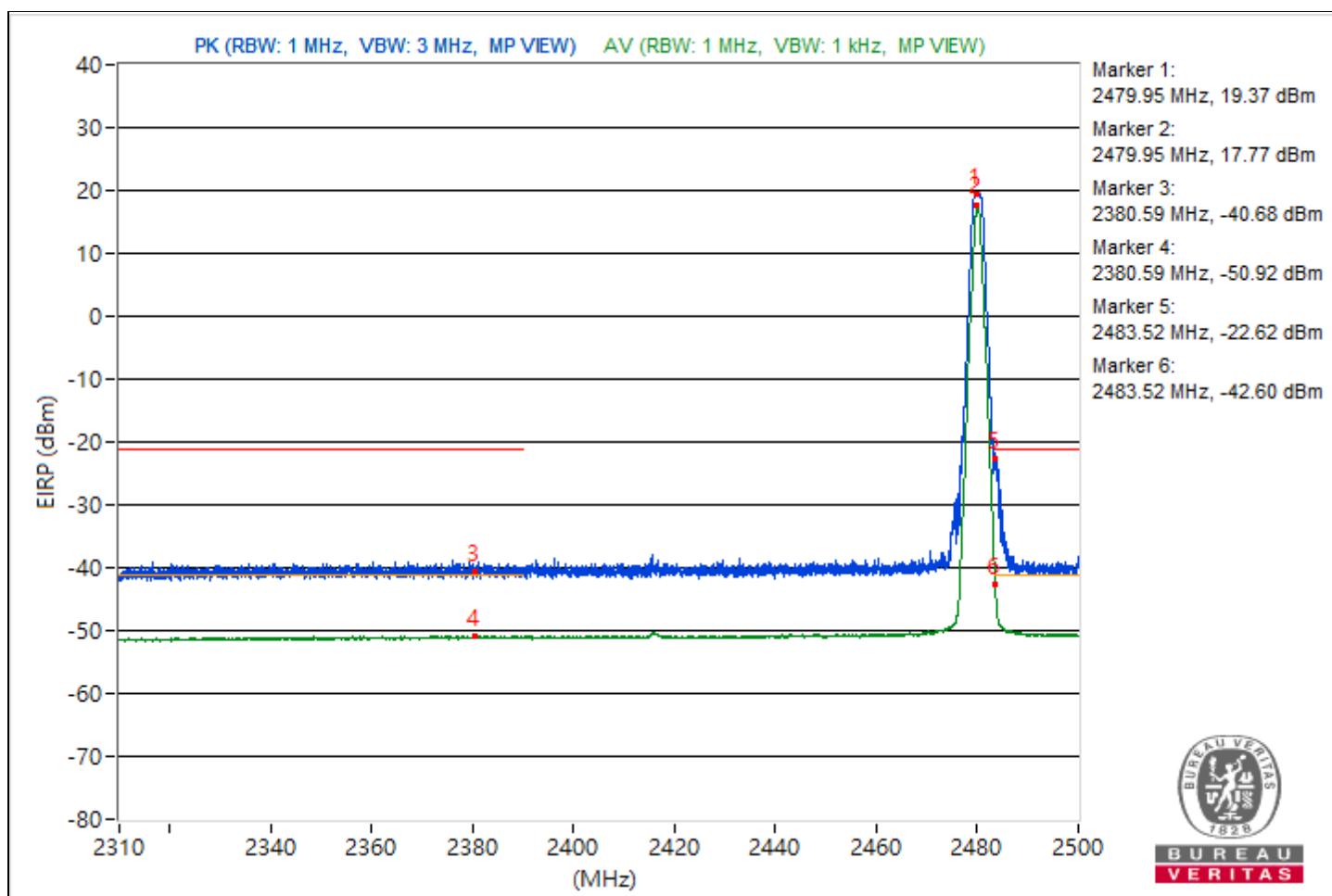


RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	2.31 GHz ~ 2.5 GHz	Environmental Conditions	20°C, 60% RH
Tested By	Henry		

Conducted Band Edge								
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value Chain 0 (dBm)	Raw Value Chain 1 (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	*2479.95	114.63 PK			9.41	10.2	6.54	19.37
2	*2479.95	113.03 AV			7.83	8.57	6.54	17.77
3	2380.59	54.58 PK	74	-19.42	-50.15	-50.31	6.54	-40.68
4	2380.59	44.34 AV	54	-9.66	-60.21	-60.75	6.54	-50.92
5	2483.52	72.64 PK	74	-1.36	-31.41	-33.1	6.54	-22.62
6	2483.52	52.66 AV	54	-1.34	-52.44	-51.89	6.54	-42.6

Notes:

1. Margin value = Emission Level - Limit value
2. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.



Mode B

1Tx

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	42.2 PK	74.0	-31.8	1.31 H	215	38.0	4.2
2	4804.00	31.2 AV	54.0	-22.8	1.31 H	215	27.0	4.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	42.9 PK	74.0	-31.1	1.83 V	159	38.7	4.2
2	4804.00	31.7 AV	54.0	-22.3	1.83 V	159	27.5	4.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.3 PK	74.0	-31.7	1.26 H	217	37.9	4.4
2	4880.00	31.1 AV	54.0	-22.9	1.26 H	217	26.7	4.4
3	7320.00	46.9 PK	74.0	-27.1	1.41 H	162	36.0	10.9
4	7320.00	34.9 AV	54.0	-19.1	1.41 H	162	24.0	10.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.9 PK	74.0	-31.1	1.87 V	160	38.5	4.4
2	4880.00	31.8 AV	54.0	-22.2	1.87 V	160	27.4	4.4
3	7320.00	47.5 PK	74.0	-26.5	1.71 V	238	36.6	10.9
4	7320.00	35.6 AV	54.0	-18.4	1.71 V	238	24.7	10.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.5 PK	74.0	-31.5	1.26 H	210	37.9	4.6
2	4960.00	31.4 AV	54.0	-22.6	1.26 H	210	26.8	4.6
3	7440.00	46.8 PK	74.0	-27.2	1.42 H	169	35.4	11.4
4	7440.00	34.7 AV	54.0	-19.3	1.42 H	169	23.3	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.8 PK	74.0	-31.2	1.89 V	150	38.2	4.6
2	4960.00	31.5 AV	54.0	-22.5	1.89 V	150	26.9	4.6
3	7440.00	47.8 PK	74.0	-26.2	1.72 V	250	36.4	11.4
4	7440.00	35.9 AV	54.0	-18.1	1.72 V	250	24.5	11.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	41.7 PK	74.0	-32.3	1.29 H	227	37.5	4.2
2	4804.00	30.8 AV	54.0	-23.2	1.29 H	227	26.6	4.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	42.4 PK	74.0	-31.6	1.88 V	135	38.2	4.2
2	4804.00	31.3 AV	54.0	-22.7	1.88 V	135	27.1	4.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.1 PK	74.0	-31.9	1.31 H	205	37.7	4.4
2	4880.00	31.1 AV	54.0	-22.9	1.31 H	205	26.7	4.4
3	7320.00	46.7 PK	74.0	-27.3	1.44 H	173	35.8	10.9
4	7320.00	34.4 AV	54.0	-19.6	1.44 H	173	23.5	10.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.2 PK	74.0	-31.8	1.89 V	146	37.8	4.4
2	4880.00	31.2 AV	54.0	-22.8	1.89 V	146	26.8	4.4
3	7320.00	48.2 PK	74.0	-25.8	1.73 V	244	37.3	10.9
4	7320.00	36.1 AV	54.0	-17.9	1.73 V	244	25.2	10.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.5 PK	74.0	-31.5	1.23 H	196	37.9	4.6
2	4960.00	31.2 AV	54.0	-22.8	1.23 H	196	26.6	4.6
3	7440.00	47.1 PK	74.0	-26.9	1.46 H	158	35.7	11.4
4	7440.00	34.9 AV	54.0	-19.1	1.46 H	158	23.5	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.7 PK	74.0	-31.3	1.92 V	165	38.1	4.6
2	4960.00	31.7 AV	54.0	-22.3	1.92 V	165	27.1	4.6
3	7440.00	47.1 PK	74.0	-26.9	1.74 V	231	35.7	11.4
4	7440.00	35.4 AV	54.0	-18.6	1.74 V	231	24.0	11.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

2Tx

RF Mode	BT-LE 1M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	42.6 PK	74.0	-31.4	1.34 H	179	38.4	4.2
2	4804.00	31.5 AV	54.0	-22.5	1.34 H	179	27.3	4.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	44.4 PK	74.0	-29.6	1.69 V	223	40.2	4.2
2	4804.00	33.2 AV	54.0	-20.8	1.69 V	223	29.0	4.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 1M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.9 PK	74.0	-31.1	1.31 H	189	38.5	4.4
2	4880.00	31.8 AV	54.0	-22.2	1.31 H	189	27.4	4.4
3	7320.00	47.2 PK	74.0	-26.8	1.62 H	121	36.3	10.9
4	7320.00	35.3 AV	54.0	-18.7	1.62 H	121	24.4	10.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	43.9 PK	74.0	-30.1	1.73 V	212	39.5	4.4
2	4880.00	32.7 AV	54.0	-21.3	1.73 V	212	28.3	4.4
3	7320.00	48.3 PK	74.0	-25.7	1.62 V	271	37.4	10.9
4	7320.00	36.5 AV	54.0	-17.5	1.62 V	271	25.6	10.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 1M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.4 PK	74.0	-31.6	1.30 H	178	37.8	4.6
2	4960.00	31.4 AV	54.0	-22.6	1.30 H	178	26.8	4.6
3	7440.00	47.3 PK	74.0	-26.7	1.61 H	130	35.9	11.4
4	7440.00	35.6 AV	54.0	-18.4	1.61 H	130	24.2	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	43.8 PK	74.0	-30.2	1.71 V	205	39.2	4.6
2	4960.00	32.9 AV	54.0	-21.1	1.71 V	205	28.3	4.6
3	7440.00	48.4 PK	74.0	-25.6	1.60 V	256	37.0	11.4
4	7440.00	36.3 AV	54.0	-17.7	1.60 V	256	24.9	11.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	42.3 PK	74.0	-31.7	1.31 H	195	38.1	4.2
2	4804.00	31.1 AV	54.0	-22.9	1.31 H	195	26.9	4.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4804.00	43.8 PK	74.0	-30.2	1.66 V	210	39.6	4.2
2	4804.00	32.7 AV	54.0	-21.3	1.66 V	210	28.5	4.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 19 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	42.4 PK	74.0	-31.6	1.32 H	201	38.0	4.4
2	4880.00	31.4 AV	54.0	-22.6	1.32 H	201	27.0	4.4
3	7320.00	47.3 PK	74.0	-26.7	1.57 H	144	36.4	10.9
4	7320.00	35.3 AV	54.0	-18.7	1.57 H	144	24.4	10.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4880.00	43.3 PK	74.0	-30.7	1.67 V	217	38.9	4.4
2	4880.00	32.4 AV	54.0	-21.6	1.67 V	217	28.0	4.4
3	7320.00	47.9 PK	74.0	-26.1	1.58 V	259	37.0	10.9
4	7320.00	35.9 AV	54.0	-18.1	1.58 V	259	25.0	10.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

RF Mode	BT-LE 2M	Channel	CH 39 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	42.5 PK	74.0	-31.5	1.25 H	169	37.9	4.6
2	4960.00	31.3 AV	54.0	-22.7	1.25 H	169	26.7	4.6
3	7440.00	47.4 PK	74.0	-26.6	1.64 H	130	36.0	11.4
4	7440.00	35.7 AV	54.0	-18.3	1.64 H	130	24.3	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4960.00	43.8 PK	74.0	-30.2	1.73 V	216	39.2	4.6
2	4960.00	33.1 AV	54.0	-20.9	1.73 V	216	28.5	4.6
3	7440.00	48.3 PK	74.0	-25.7	1.63 V	255	36.9	11.4
4	7440.00	36.7 AV	54.0	-17.3	1.63 V	255	25.3	11.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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 FCC recognized accredited test firms and accredited 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@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

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

--- END ---