TEST REPORT

(BLUETOOTH LOW ENERGY – FHSS MODE)

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart C (Section 15.247)**
Report No.:	RFCDBM-WTW-P24100096
FCC ID:	QOQ-GM260P
Product:	Bluetooth Low Energy and 802.15.4 wireless radio module, Bluetooth Low Energy wireless radio modules (refer to item 3.1 for more details)
Brand:	SILICON LABS
Model No.:	MGM260P32A, MGM260P32N
Series Model:	BGM260P32A, BGM260P32N (refer to item 3.1 for more details)
Received Date:	2024/10/7
Test Date:	2024/11/13 ~ 2025/1/15
Issued Date:	2025/2/6
Applicant:	Silicon Laboratories Finland Oy
Address:	Alberga Business Park, Bertel Jungin aukio 3, FI-02600 Espoo, Finland
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Approved by: Jeremy . Lin , **Date:** 2025/2/6

Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFCDBM-WTW-P24100096	Original release.	2025/2/6

1 Certificate

Product:	Bluetooth Low Energy and 802.15.4 wireless radio module, Bluetooth Low Energy wireless radio modules (refer to item 3.1 for more details)
Brand:	SILICON LABS
Test Model:	MGM260P32A, MGM260P32N
Series Model:	BGM260P32A, BGM260P32N (refer to item 3.1 for more details)
Sample Status:	Engineering samples fully representing the production models
Applicant:	Silicon Laboratories Finland Oy
Test Date:	2024/11/13 ~ 2025/1/15
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

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 (a)(1)	RF Output Power	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Number of Hopping Frequency Used	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Dwell Time on Each Channel	Pass	Meet the requirement of limit.
15.247(a)(1)	Hopping Channel Separation	Pass	Meet the requirement of limit.
15.247(a)(1)	20 dB Bandwidth	-	Refer to Note 1
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -15.30 dB at 7.27400 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.4 dB at 62.01 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	MGM260P32A: these modules use an integral antenna, therefore comply with the requirement of 15.203 (see section 3.2 for details). MGM260P32N: this module comes with a RF pin only, no own RF connector, and no external antenna is sold with it.

Notes:

1. If the Frequency Hopping System operating in 2400-2483.5 MHz band and the output power less than 125 mW. The hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of hopping channel whichever is greater.
2. 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:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.371 dB
Dwell Time on Each Channel	-	0.0218
Hopping Channel Separation	-	390 Hz
20 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.6 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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	Bluetooth Low Energy and 802.15.4 wireless radio module (for MGM260P32A, MGM260P32N), Bluetooth Low Energy wireless radio modules (for BGM260P32A, BGM260P32N)
Brand	SILICON LABS
Test Model	MGM260P32A, MGM260P32N
Series Model	BGM260P32A, BGM260P32N
Model Difference	Refer to Note as below
Status of EUT	Engineering samples fully representing the production models
Power Supply Rating	Range: 1.8V – 3.8Vdc (from host equipment) Nominal: 3.3Vdc
Modulation Type	GFSK
Modulation Technology	FHSS
Transfer Rate	1MBaud with 1Mbps transfer rate 1MBaud with Coded 125kbps transfer rate 1MBaud with Coded 500kbps 2MBaud with 2Mbps transfer rate
Operating Frequency	2402 ~ 2480 MHz
Number of Channel	1MBaud: 40 2MBaud: 37
Output Power	MGM260P32A: 1MBaud: 89.331mW (19.51 dBm) 1MBaud: 89.536mW (19.52 dBm) (125kbps) 1MBaud: 89.125mW (19.50 dBm) (500kbps) 2MBaud: 89.536mW (19.52 dBm) MGM260P32N 1MBaud: 93.111mW (19.69 dBm) 1MBaud: 93.111mW (19.69 dBm) (125kbps) 1MBaud: 92.897mW (19.68 dBm) (500kbps) 2MBaud: 92.045mW (19.64 dBm)

Note:

1. The models difference are as below.

	Model	
Product Spec.	MGM260P32A (covers BGM260P32A)	MGM260P32N (covers BGM260P32N)
	High-Power Bluetooth Low Energy and 802.15.4 (802.15.4 being disabled for BGM260P32A)	High-Power Bluetooth Low Energy and 802.15.4 (802.15.4 being disabled for BGM260P32N)
Max nominal RF TX power, as declared by manufacturer	20dBm	20dBm
Antenna type	integral antenna	RF pin
Hardware	MGM260P32A (and BGM260P32A) --> hardware variants with integral antenna and 20dBm max power, to be tested as DTS for 802.15.4 and DTS + FHSS for Bluetooth Low Energy MGM260P32N (and BGM260P32N) --> hardware variants with RF pin and 20dBm max power, to be tested as DTS for 802.15.4 and DTS + FHSS for Bluetooth Low Energy MGM modules are the supersets under testing as they support both 802.15.4 and Bluetooth Low Energy, whereas the BGM modules are the series models because they are exactly the same except for the 802.15.4 being disabled for marketing differentiation.	

2. BT LE (DTS/FHSS) and 802.15.4 modes technology cannot transmit at same time.
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 Antenna Description of EUT

1. The antenna information is listed as below.

No.	Type	Connector	Gain (dBi)	Remark
1	Integral antenna	NA	2.87	For model: MGM260P32A, BGM260P32A
2	External reference dipole antenna**	RP-SMA	2.80	For model: MGM260P32N, BGM260P32N

*Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.
**The dipole antenna is not sold with the EUT, but is used during testing as a reference antenna for radiated measurements of the parts with the RF pin.

3.3 Channel List

1MBaud PHY

40 channels are provided to this EUT:

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: 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.

2MBaud PHY

37 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
1	**2404**	11	2424	21	2444	31	2464
2	2406	-	-	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		
10	2422	20	2442	30	2462		

Note: 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.

3.4 Power setting is as below:

1MBaud PHY with 125kbps

Mode A (MGM260P32A)		Mode B (MGM260P32N)	
Channel	Power Setting	Channel	Power Setting
0	195	0	195
1	195	1	195
19	195	19	195
38	195	38	195
39	195	39	195

1MBaud PHY with 500kbps

Mode A (MGM260P32A)		Mode B (MGM260P32N)	
Channel	Power Setting	Channel	Power Setting
0	195	0	195
1	195	1	195
19	195	19	195
38	195	38	195
39	195	39	195

1MBaud PHY with 1Mbps

Mode A (MGM260P32A)		Mode B (MGM260P32N)	
Channel	Power Setting	Channel	Power Setting
0	195	0	195
1	195	1	195
19	195	19	195
38	195	38	195
39	195	39	195

2MBaud PHY

Mode A (MGM260P32A)		Mode B (MGM260P32N)	
Channel	Power Setting	Channel	Power Setting
1	195	1	195
19	195	19	195
38	195	38	195

3.5 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: Mode A: Y-axis, Mode B: X-axis

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

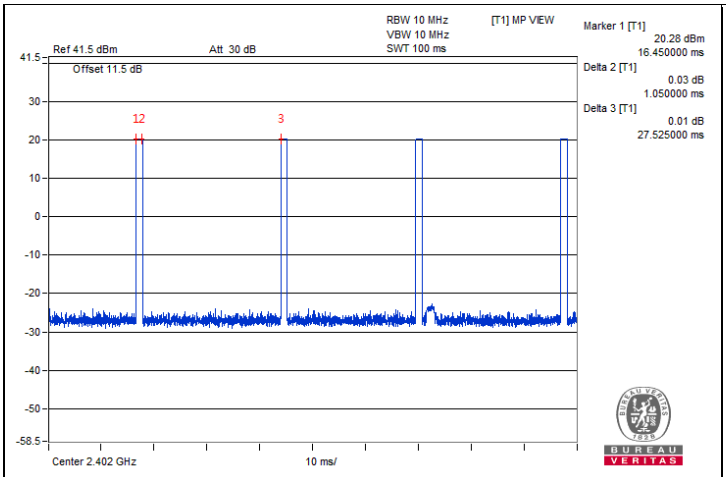
Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A, B	1MBaud PHY	0, 1, 19, 38, 39	GFSK	1Mb/s
					125kb/s
					500kb/s
		2MBaud PHY	1, 19, 38		2Mb/s
Number of Hopping Frequency Used	A, B	1MBaud PHY	Hopping Mode	GFSK	1Mb/s
		2MBaud PHY	Hopping Mode	GFSK	2Mb/s
Dwell Time on Each Channel	A, B	1MBaud PHY	Hopping Mode	GFSK	1Mb/s
		2MBaud PHY	Hopping Mode	GFSK	2Mb/s
Hopping Channel Separation / 20 dB Bandwidth	A, B	1MBaud PHY	0, 1, 19, 38, 39	GFSK	1Mb/s
		2MBaud PHY	1, 19, 38	GFSK	2Mb/s
Conducted Out of Band Emissions	A, B	1MBaud PHY	0, 1, 19, 38, 39	GFSK	1Mb/s
					125kb/s
		2MBaud PHY	1, 19, 38		2Mb/s
AC Power Conducted Emissions	A	2MBaud PHY	1	GFSK	2Mb/s
	B	1MBaud PHY	1	GFSK	1Mb/s
Unwanted Emissions below 1 GHz	A	2MBaud PHY	1	GFSK	2Mb/s
	B	1MBaud PHY	1	GFSK	1Mb/s
Unwanted Emissions above 1 GHz	A, B	1MBaud PHY	0, 1, 19, 38, 39	GFSK	1Mb/s
					125kb/s
		2MBaud PHY	1, 19, 38		2Mb/s
EUT Configure Mode:	A	Model: MGM260P32A + Integral Antenna			
	B	Model: MGM260P32N + External Antenna			

Note:
1. MGM modules are the supersets ones under testing as they support both 802.15.4 and Bluetooth Low Energy, whereas the BGM modules are the series models because they are exactly the same except for the 802.15.4 being disabled for marketing differentiation.
2. About 1MBaud(125kbps & 500kbps). After pre-tested, 1MBaud with 125kbps transfer rate was the worst case and chosen for the final test.

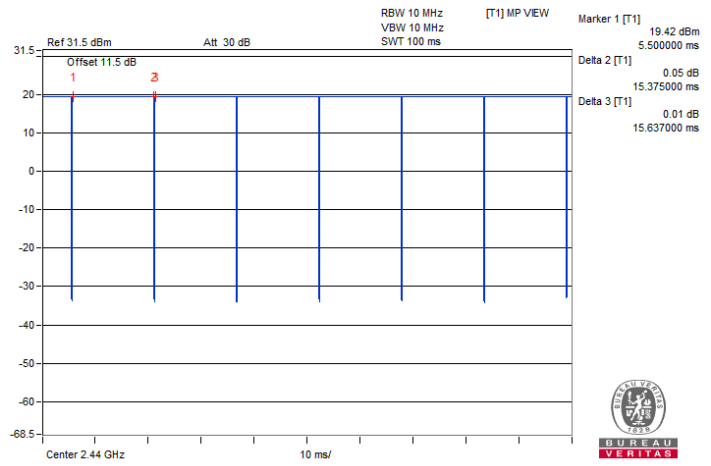
3.6 Duty Cycle of Test Signal

Mode A & Mode B

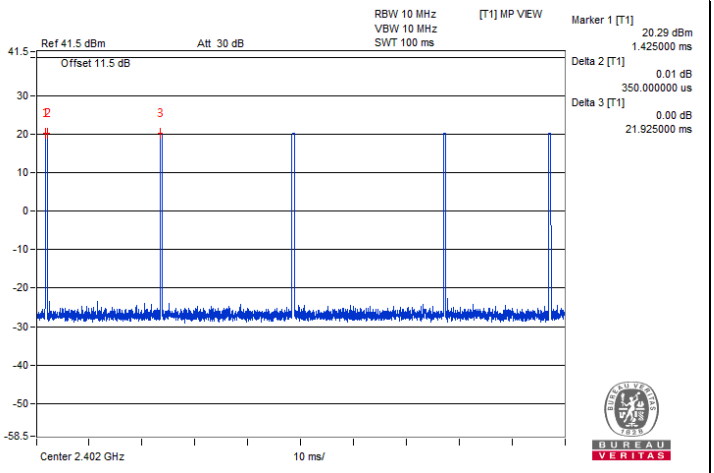
1MBaud PHY with 125kbps for 2402/2480MHz: Duty cycle = (1.05*4)/100=0.042ms, duty cycle correction factor = 20 * log (1/Duty cycle) = -27.5 dB
1MBaud PHY with 125kbps for 2404/2440/2478MHz: Duty cycle = 15.375 ms / 15.637 ms x 100% = 98.3%
1MBaud PHY with 1Mbps for 2402/2480MHz: Duty cycle = (0.35*5)/100=0.0175ms, duty cycle correction factor = 20 * log (1/Duty cycle) = -35.1 dB
1MBaud PHY with 1Mbps for 2404/2440/2478MHz: Duty cycle = 2.238 ms / 2.5 ms x 100% = 89.5%, duty factor = 10 * log (1/Duty cycle) = 0.48 dB
2MBaud PHY: Duty cycle = 1 ms / 1.262 ms x 100% = 79.2%, duty factor = 10 * log (1/Duty cycle) = 1.01 dB



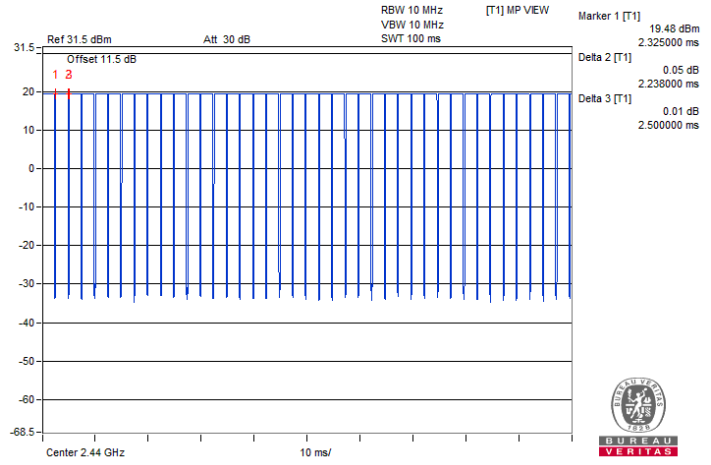
1MBaud PHY with 125kbps for 2402/2480MHz



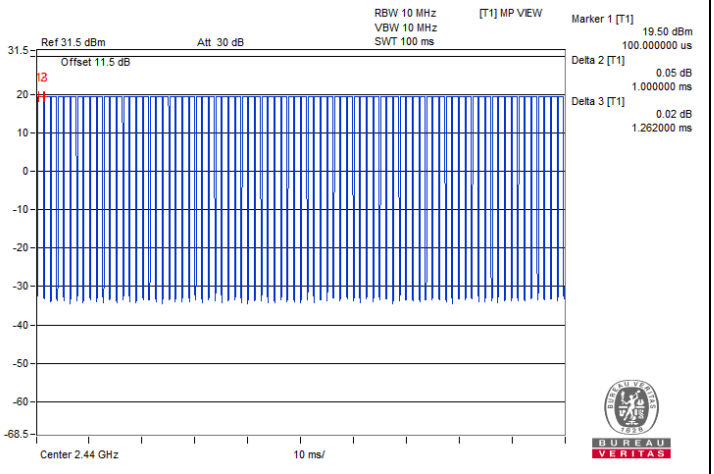
1MBaud PHY with 125kbps for 2404/2440/2478MHz



1MBaud PHY with 1Mbps for 2402/2480MHz



1MBaud PHY with 1Mbps for 2404/2440/2478MHz



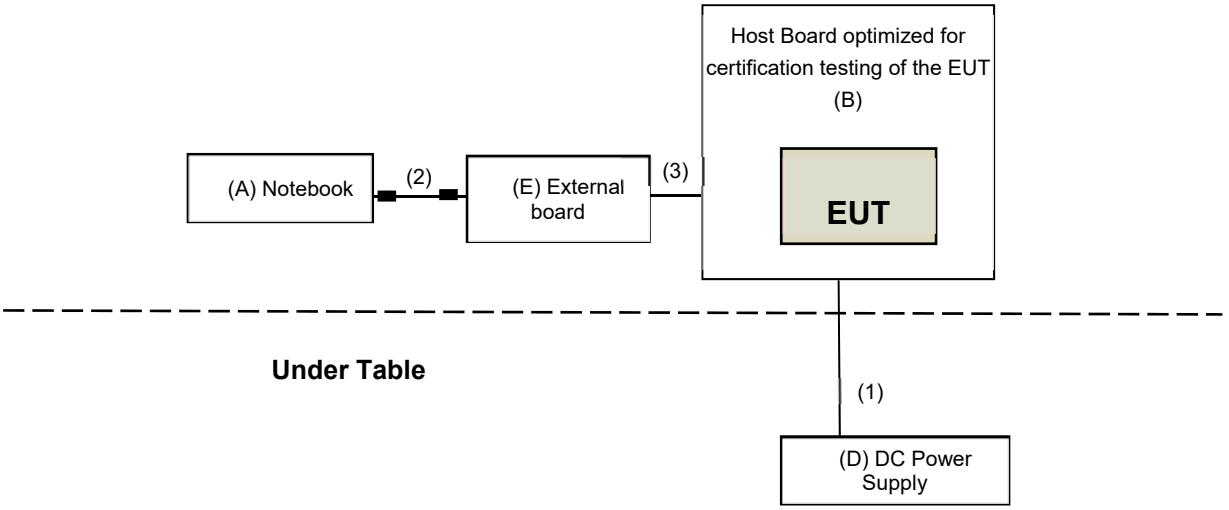
2MBaud PHY

3.7 Test Program Used and Operation Descriptions

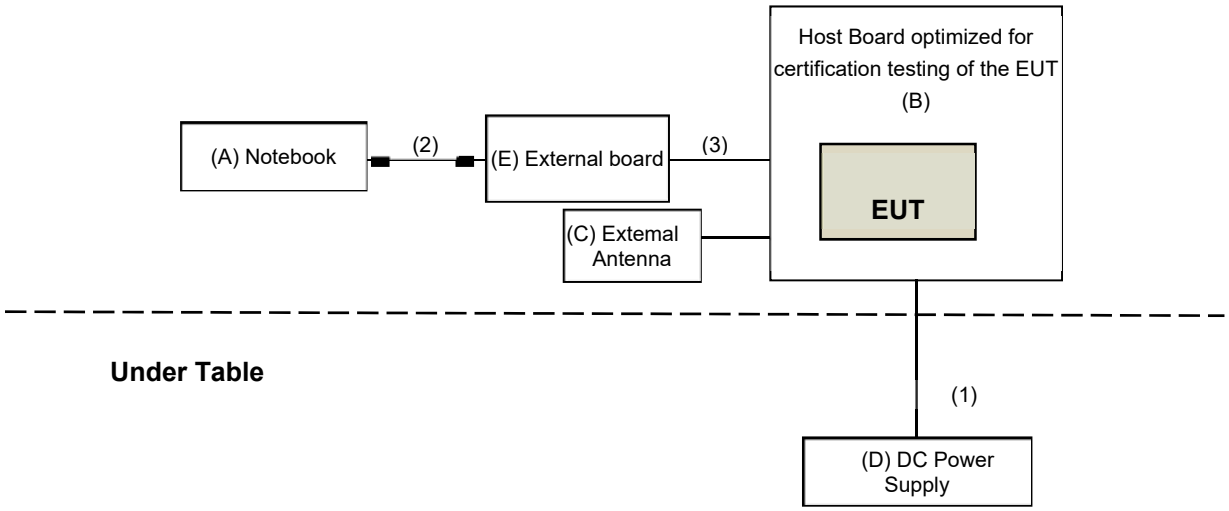
Controlling software Python File has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.8 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B



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3.9 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Notebook	Lenovo	X250	PC04UZN1	N/A	Provided by Lab
B	Host Board optimized for certification testing of the EUT	SILICON LABS	xGM260P val_board_V2	N/A	N/A	Supplied by applicant
C	External Antenna	TE Connectivity	ANT-2.4-CW-CT-RPS	N/A	N/A	Supplied by applicant
D	DC Power Supply	Topward	33010D	N/A	N/A	Provided by Lab
E	External board	SILICON LABS	BRD4001A Rev. A01	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	2	N	N	Provided by Lab
2	USB Mini Cable	1	2	Y	2	Supplied by applicant
3	10-wire flat ribbon data Cable	1	0.15	N	N	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
Peak Power Analyzer Keysight	8990B	MY51000485	2024/1/21	2025/1/20
Wideband Power Sensor Keysight	N1923A	MY58020002	2024/1/18	2025/1/17
		MY58140009	2024/1/18	2025/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/11/13 ~ 2024/11/28

4.2 Number of Hopping Frequency Used

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101105	2024/2/27	2025/2/26
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/11/13 ~ 2024/11/28

4.3 Dwell Time on Each Channel

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Hopping Channel Separation

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 20 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.6 Conducted Out of Band Emissions

Refer to section 4.2 to get the tested date and information of the instruments.

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2024/11/5	2025/11/4
EMI Test Receiver R&S	ESR3	102783	2023/12/13	2024/12/12
Fixed Attenuator STI	BNC5W10dB	PAD-COND2-01	2024/8/25	2025/8/24
LISN R&S	ESH2-Z5	100100	2024/3/6	2025/3/5
	ESH3-Z5	100312	2024/9/9	2025/9/8
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2024/8/25	2025/8/24
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2024/8/28	2025/8/27

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2024/11/22

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-160	2024/10/9	2025/10/8
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Keysight	N9038B	MY60180018	2024/3/13	2025/3/12
Preamplifier Agilent	8447D	2944A10638	2024/5/1	2025/4/30
Preamplifier EMCI	EMC001340	980201	2024/9/24	2025/9/23
RF Coaxial Cable Woken	8D-FB	Cable-CH9-01	2024/5/1	2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101867	2023/12/29	2024/12/28
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2024/11/27

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1169	2024/11/10	2025/11/9
	BBHA 9170	9170-480	2024/11/10	2025/11/9
		BBHA9170243	2024/11/10	2025/11/9
MXE EMI Receiver Keysight	N9038B	MY60180018	2024/3/13	2025/3/12
Preamplifier Agilent	8449B	3008A02367	2024/1/6	2025/1/5
			2025/1/5	2026/1/4
Preamplifier EMCI	EMC 184045	980116	2024/9/24	2025/9/23
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2024/1/6	2025/1/5
			2025/1/5	2026/1/4
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2024/1/6	2025/1/5
			2025/1/5	2026/1/4
Signal & Spectrum Analyzer R&S	FSW43	101866	2024/3/26	2025/3/25
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2024/11/19 ~ 2025/1/15

5 Limits of Test Items

5.1 RF Output Power

The Maximum Output Power Measurement is 125 mW (21 dBm).

5.2 Number of Hopping Frequency Used

At least 15 channels frequencies, and should be equally spaced.

5.3 Dwell Time on Each Channel

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

5.4 Hopping Channel Separation

At least 25 kHz or two-third of 20 dB hopping channel bandwidth (whichever is greater).

5.5 20 dB Bandwidth

Maximum bandwidth is not specified.

5.6 Conducted Out of Band Emissions

Below 20 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.7 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.

5.8 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).

5.9 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

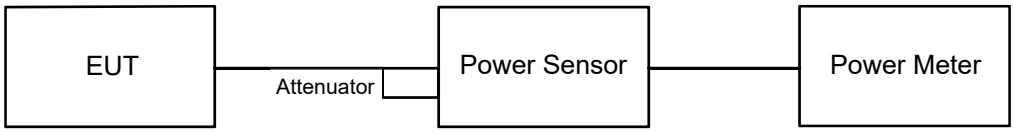
Notes:

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



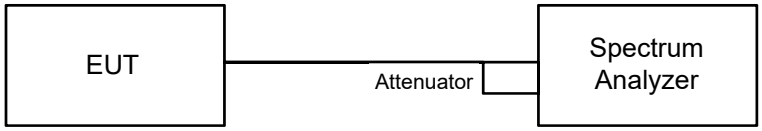
6.1.2 Test Procedure

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 Number of Hopping Frequency Used

6.2.1 Test Setup

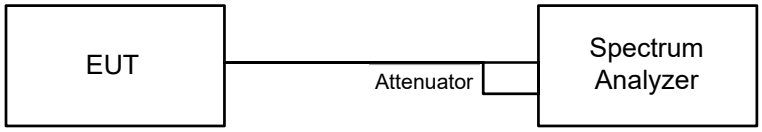


6.2.2 Test Procedure

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
c. Set the SA Sweep time = Auto, Detector function = Peak.
d. Set the SA trace on Max hold mode and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been recorded.
e. Set the SA on View mode and then plot the result on SA screen.
f. Repeat above procedures until all frequencies measured were complete.

6.3 Dwell Time on Each Channel

6.3.1 Test Setup

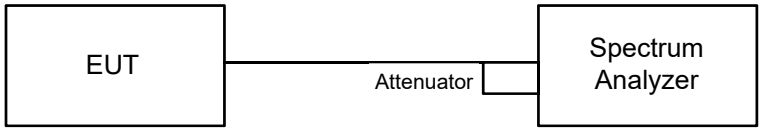


6.3.2 Test Procedure

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
c. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
d. Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.
e. Repeat above procedures until all different time-slot modes have been completed.

6.4 Hopping Channel Separation

6.4.1 Test Setup

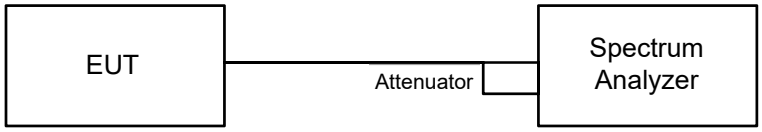


6.4.2 Test Procedure

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
c. Set the SA Sweep time = Auto, Detector function = Peak.
d. Set the SA trace on Max hold mode and record the separation of two adjacent channels.
e. Measure the frequency difference of these two adjacent channels by SA marker-delta function. And then plot the result on SA screen.
f. Repeat above procedures until all frequencies measured were complete.

6.5 20 dB Bandwidth

6.5.1 Test Setup

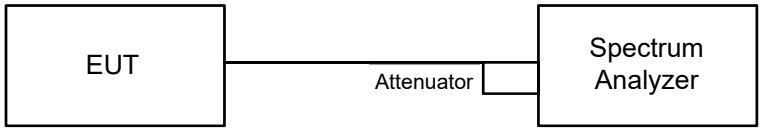


6.5.2 Test Procedure

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
c. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
d. Repeat above procedures until all frequencies measured were complete.

6.6 Conducted Out of Band Emissions

6.6.1 Test Setup



6.6.2 Test Procedure

MEASUREMENT PROCEDURE REF

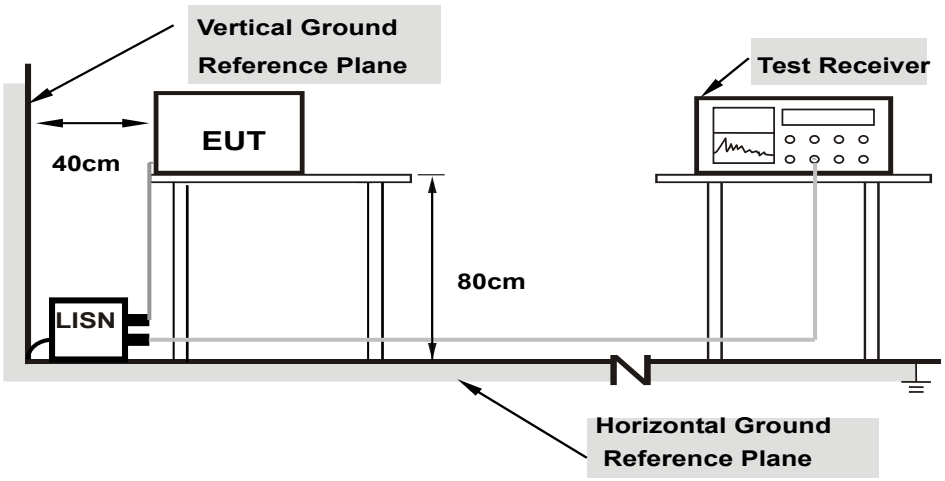
a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum amplitude level.

6.7 AC Power Conducted Emissions

6.7.1 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).

6.7.2 Test Procedure

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

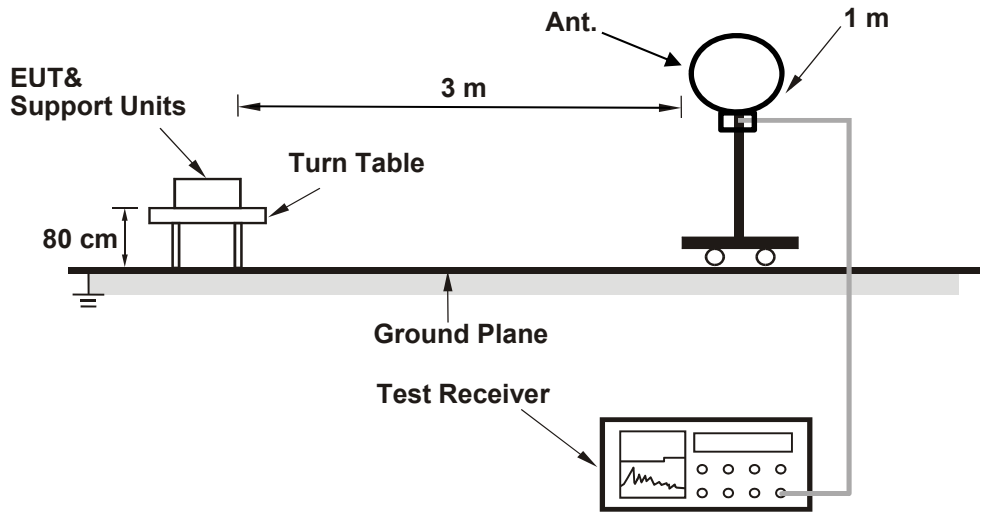
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

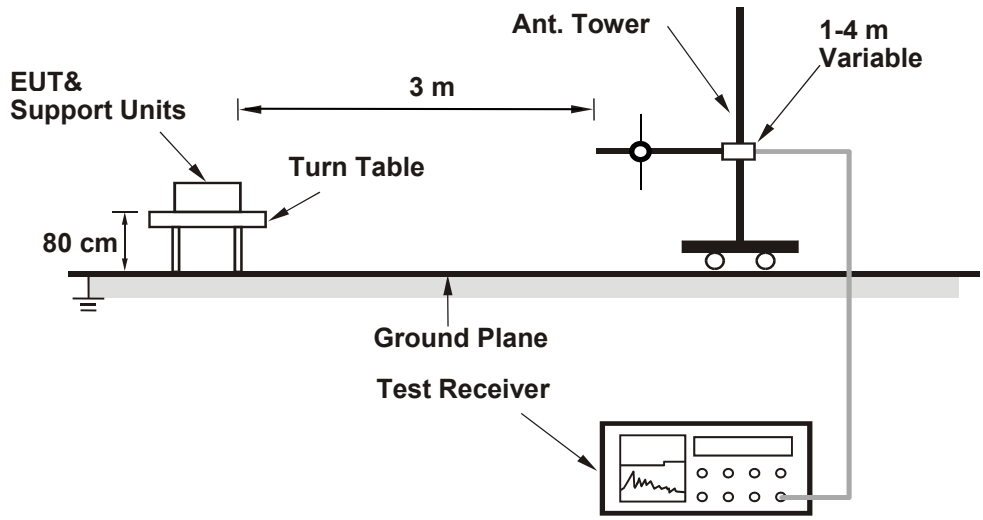
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

a. 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. 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. 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

a. 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. 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.

d. 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.

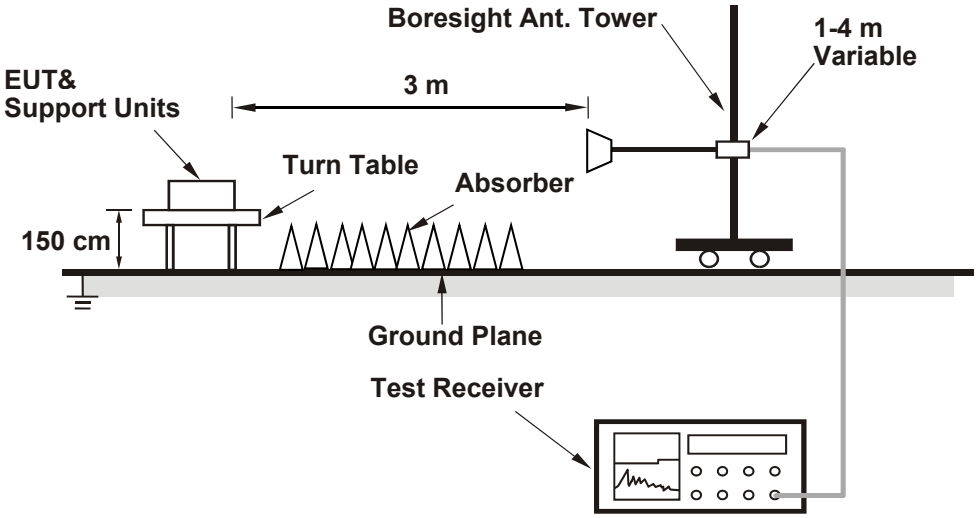
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

a. 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. 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.

d. 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. The test-receiver system 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. (For 1MBaud PHY with 125kbps, 1MB and 2MBaud PHY 2404 MHz/2440 MHz/2478MHz).
2. According to ANSI C63.10 section 6.6.4 and 4.1.4.2.2. For fundamental and harmonic signal measurement, according to ANSI C63.10 section 7.5, the average value = peak value + duty cycle correction factor. For duty cycle correction factor values, see the Test Signal Duty Cycle section in this report. (For 1MBaud PHY with 125kbps and 1MB 2402MHz/2480MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

For Peak Power

1MBaud PHY with 1Mbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	89.331	19.51	21	Pass
1	2404	89.125	19.50	21	Pass
19	2440	85.507	19.32	21	Pass
38	2478	84.14	19.25	21	Pass
39	2480	83.368	19.21	21	Pass

Note: The antenna gain is 2.87 dBi < 6 dBi, so the output power limit shall not be reduced.

1MBaud PHY with 125kbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	89.536	19.52	21	Pass
1	2404	89.331	19.51	21	Pass
19	2440	86.099	19.35	21	Pass
38	2478	84.14	19.25	21	Pass
39	2480	83.946	19.24	21	Pass

Note: The antenna gain is 2.87 dBi < 6 dBi, so the output power limit shall not be reduced.

1MBaud PHY with 500kbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	89.125	19.50	21	Pass
1	2404	89.125	19.50	21	Pass
19	2440	85.901	19.34	21	Pass
38	2478	83.946	19.24	21	Pass
39	2480	83.753	19.23	21	Pass

Note: The antenna gain is 2.87 dBi < 6 dBi, so the output power limit shall not be reduced.

2MBaud PHY

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
1	2404	89.536	19.52	21	Pass
19	2440	86.298	19.36	21	Pass
38	2478	83.946	19.24	21	Pass

Note: The antenna gain is 2.87 dBi < 6 dBi, so the output power limit shall not be reduced.

For Average Power

1MBaud PHY with 1Mbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	88.105	19.45
1	2404	87.902	19.44
19	2440	84.333	19.26
38	2478	82.985	19.19
39	2480	82.414	19.16

1MBaud PHY with 125kbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	88.105	19.45
1	2404	87.902	19.44
19	2440	84.918	19.29
38	2478	83.176	19.20
39	2480	82.985	19.19

1MBaud PHY with 500kbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	87.902	19.44
1	2404	87.7	19.43
19	2440	84.723	19.28
38	2478	82.985	19.19
39	2480	82.794	19.18

2MBaud PHY

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2404	87.902	19.44
19	2440	85.31	19.31
38	2478	82.794	19.18

Mode B

For Peak Power

1MBaud PHY with 1Mbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	92.897	19.68	21	Pass
1	2404	93.111	19.69	21	Pass
19	2440	90.573	19.57	21	Pass
38	2478	88.92	19.49	21	Pass
39	2480	87.498	19.42	21	Pass

Note: The antenna gain is 2.8 dBi < 6 dBi, so the output power limit shall not be reduced.

1MBaud PHY with 125kbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	92.897	19.68	21	Pass
1	2404	93.111	19.69	21	Pass
19	2440	90.573	19.57	21	Pass
38	2478	88.92	19.49	21	Pass
39	2480	87.902	19.44	21	Pass

Note: The antenna gain is 2.8 dBi < 6 dBi, so the output power limit shall not be reduced.

1MBaud PHY with 500kbps

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	92.683	19.67	21	Pass
1	2404	92.897	19.68	21	Pass
19	2440	90.365	19.56	21	Pass
38	2478	88.512	19.47	21	Pass
39	2480	87.7	19.43	21	Pass

Note: The antenna gain is 2.8 dBi < 6 dBi, so the output power limit shall not be reduced.

2MBaud PHY

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
1	2404	92.045	19.64	21	Pass
19	2440	90.991	19.59	21	Pass
38	2478	87.297	19.41	21	Pass

Note: The antenna gain is 2.8 dBi < 6 dBi, so the output power limit shall not be reduced.

For Average Power

1MBaud PHY with 1Mbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	91.201	19.60
1	2404	91.201	19.60
19	2440	88.92	19.49
38	2478	87.096	19.40
39	2480	86.099	19.35

1MBaud PHY with 125kbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	91.201	19.60
1	2404	91.411	19.61
19	2440	88.92	19.49
38	2478	87.096	19.40
39	2480	86.298	19.36

1MBaud PHY with 500kbps

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	90.991	19.59
1	2404	91.201	19.60
19	2440	88.716	19.48
38	2478	86.696	19.38
39	2480	86.099	19.35

2MBaud PHY

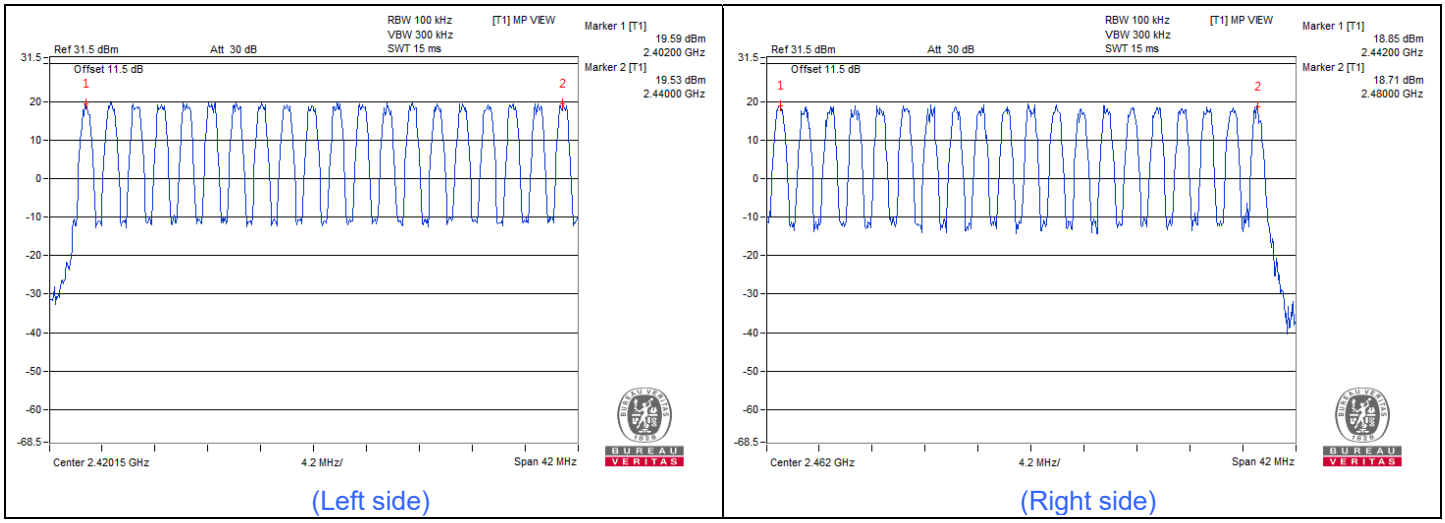
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
1	2404	90.991	19.59
19	2440	89.125	19.50
38	2478	86.298	19.36

7.2 Number of Hopping Frequency Used

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

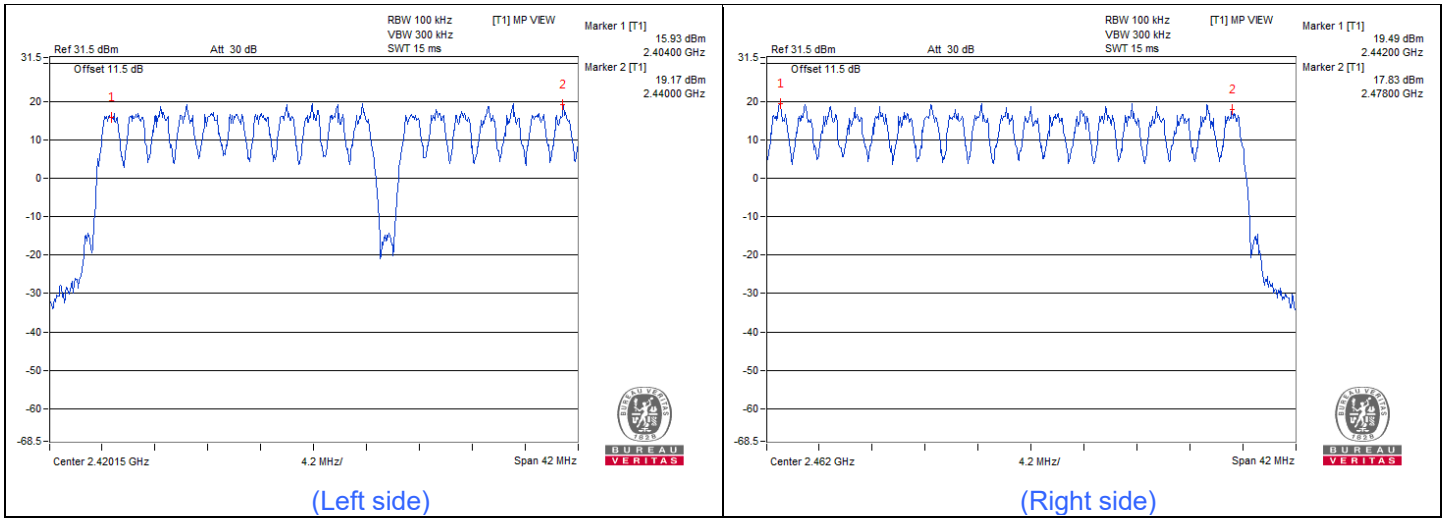
1MBaud PHY with 1Mbps



(Left side) (Right side)

Note: There are 40 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

2MBaud PHY



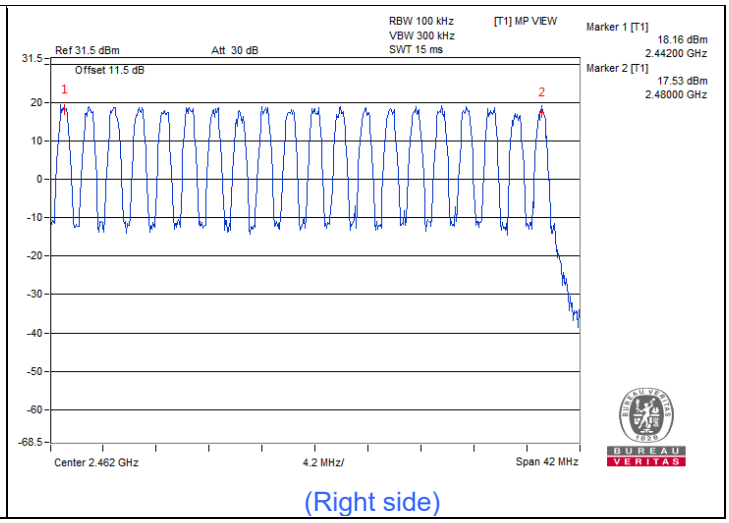
(Left side) (Right side)

Note: There are 37 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

Mode B

1MBaud PHY with 1Mbps

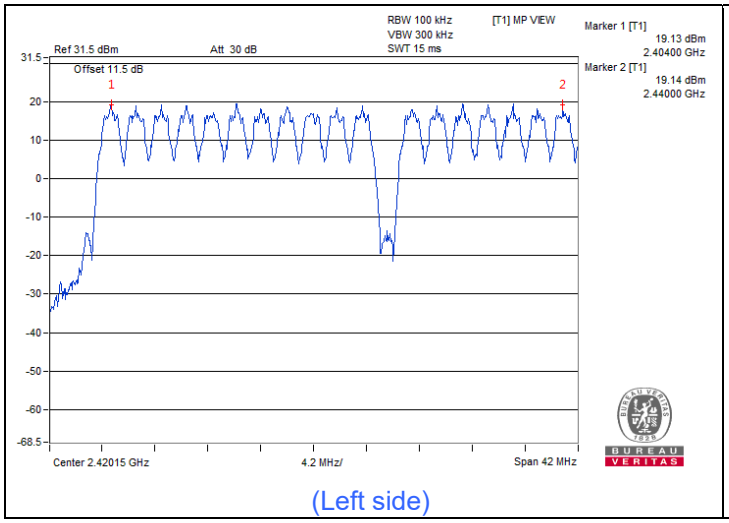
(Left side)



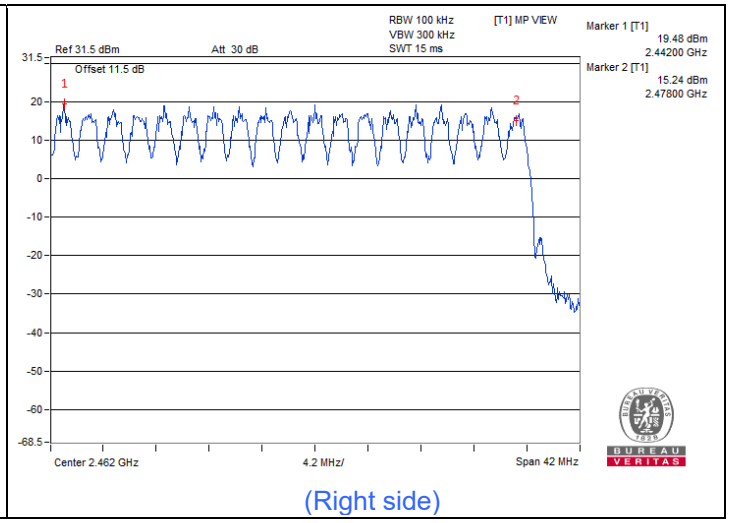
(Right side)

Note: There are 40 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

2MBaud PHY



(Left side)



(Right side)

Note: There are 37 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

7.3 Dwell Time on Each Channel

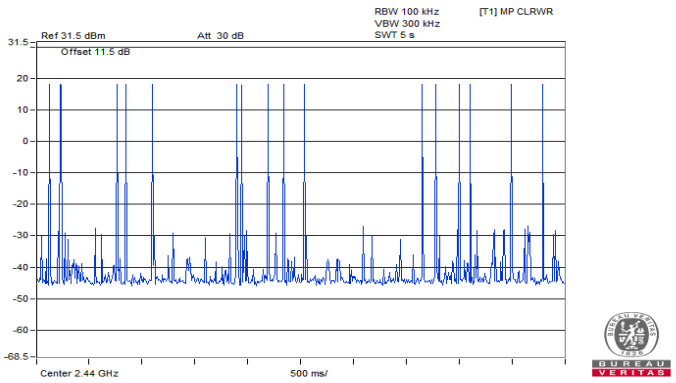
Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

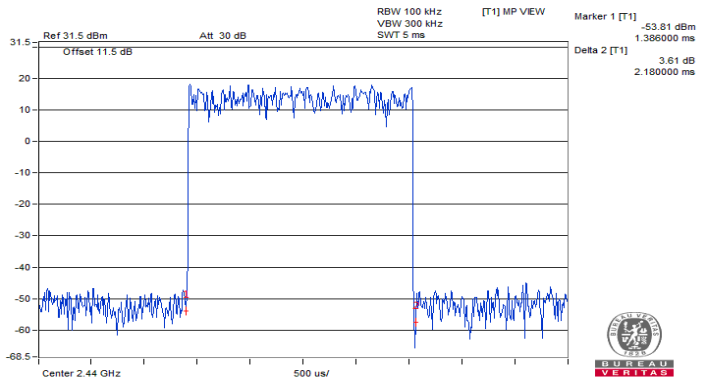
1MBaud PHY with 1Mbps

Mode	Number of transmission in 16 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	16 (times / 5 sec) * 3.2 = 52 times	2.18	113.36	400	Pass

Spectrum plots of Dwell Time



1MBaud PHY with 1Mbps DH1

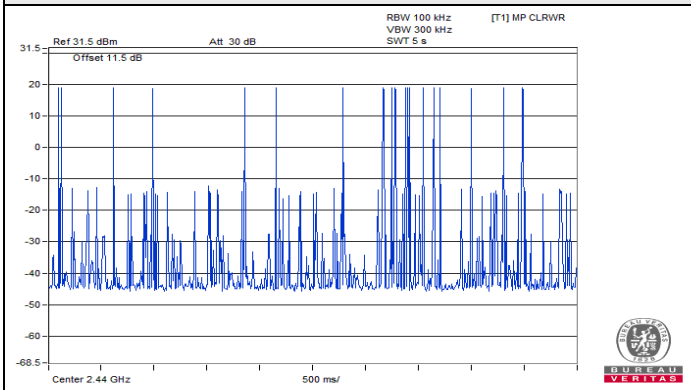


1MBaud PHY with 1Mbps DH1

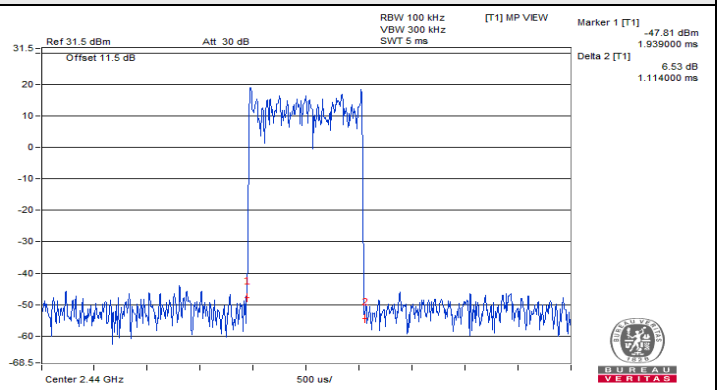
2MBaud PHY

Mode	Number of transmission in 14.8 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	19 (times / 5 sec) * 2.96 = 57 times	1.114	63.498	400	Pass

Spectrum plots of Dwell Time



2MBaud PHY DH1



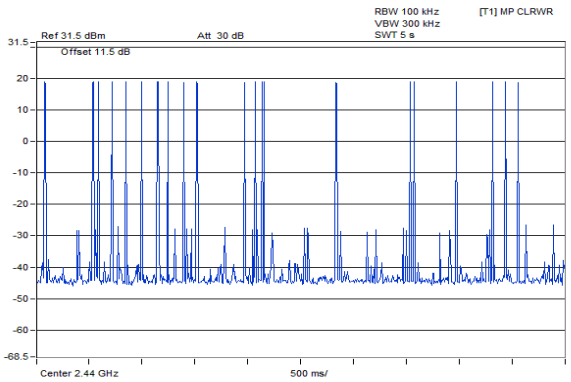
2MBaud PHY DH1

Mode B

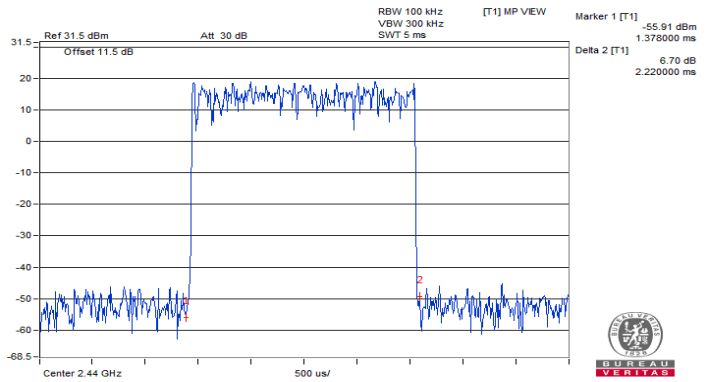
1MBaud PHY with 1Mbps

Mode	Number of transmission in 16 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	21 (times / 5 sec) * 3.2 = 68 times	2.22	150.96	400	Pass

Spectrum plots of Dwell Time



1MBaud PHY with 1Mbps DH1

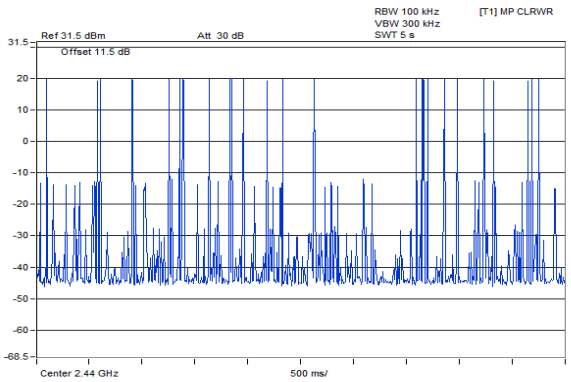


1MBaud PHY with 1Mbps DH1

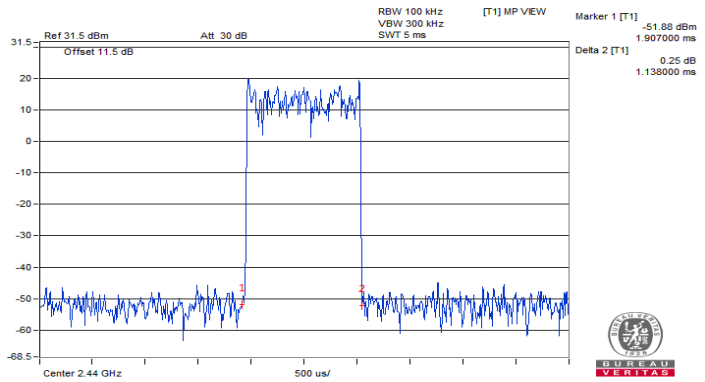
2MBaud PHY

Mode	Number of transmission in 14.8 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	25 (times / 5 sec) * 2.96 = 74 times	1.138	84.212	400	Pass

Spectrum plots of Dwell Time



2MBaud PHY DH1



2MBaud PHY DH1

7.4 Hopping Channel Separation

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

1MBaud PHY with 1Mbps

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	2.00	0.8	Pass
1	2404	2.00	0.8	Pass
19	2440	2.00	0.82	Pass
38	2478	2.00	0.81	Pass
39	2480	2.00	0.81	Pass

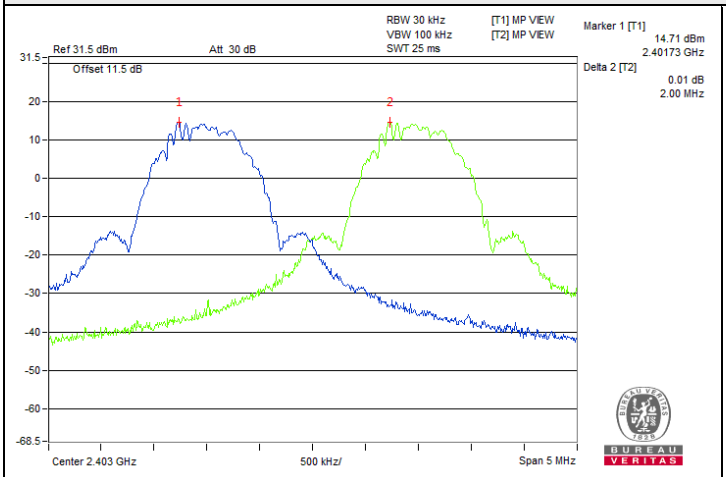
Note: The minimum limit is two-third 20dB bandwidth.

2MBaud PHY

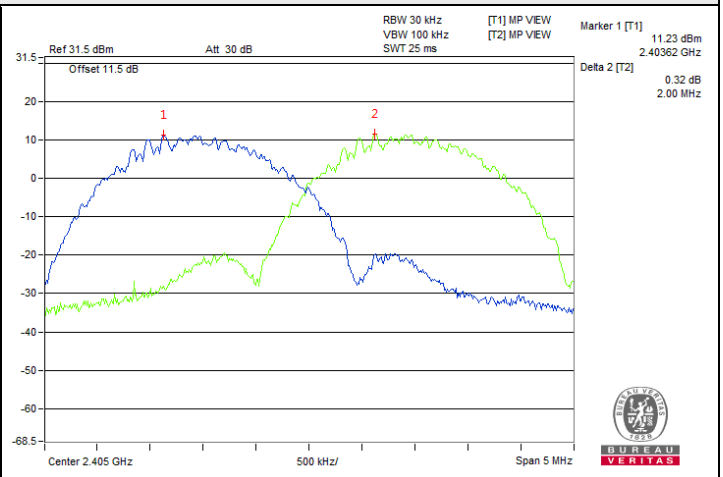
Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
1	2404	2.00	1.55	Pass
19	2440	2.00	1.56	Pass
38	2478	2.00	1.56	Pass

Note: The minimum limit is two-third 20dB bandwidth.

Spectrum Plot of Minimum Value



1MBaud PHY with 1Mbps : CH 0



2MBaud PHY : CH 1

Mode B

1MBaud PHY with 1Mbps

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	2.00	0.82	Pass
1	2404	2.00	0.8	Pass
19	2440	2.00	0.81	Pass
38	2478	2.00	0.8	Pass
39	2480	2.00	0.8	Pass

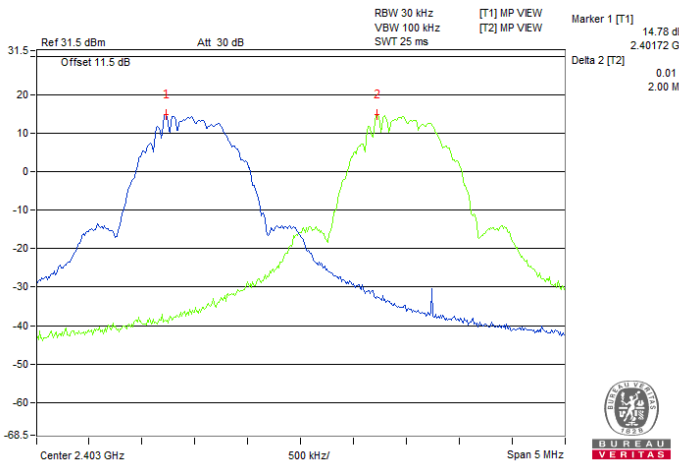
Note: The minimum limit is two-third 20dB bandwidth.

2MBaud PHY

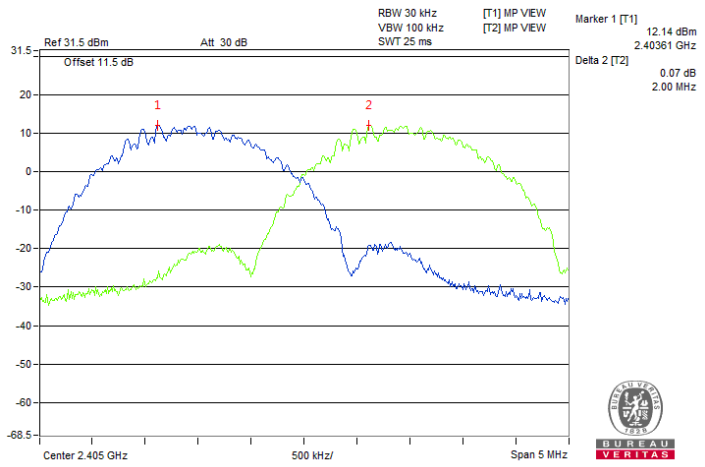
Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
1	2404	2.00	1.55	Pass
19	2440	2.01	1.56	Pass
38	2478	2.01	1.55	Pass

Note: The minimum limit is two-third 20dB bandwidth.

Spectrum Plot of Minimum Value



1MBaud PHY with 1Mbps : CH 0



2MBaud PHY : CH 1

7.5 20 dB Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

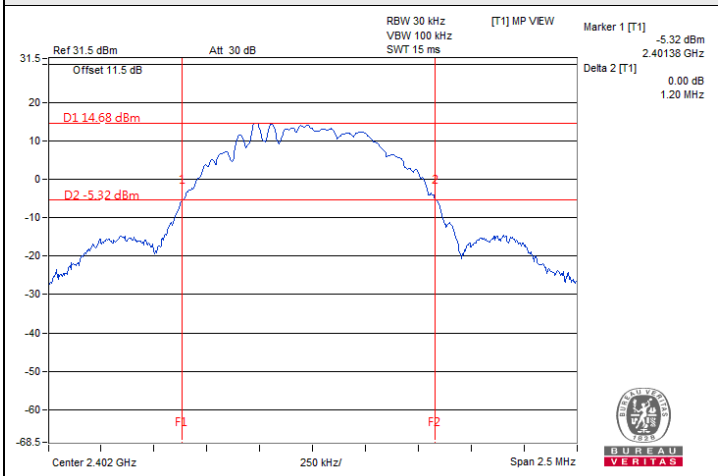
1MBaud PHY with 1Mbps

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	1.2
1	2404	1.2
19	2440	1.22
38	2478	1.21
39	2480	1.21

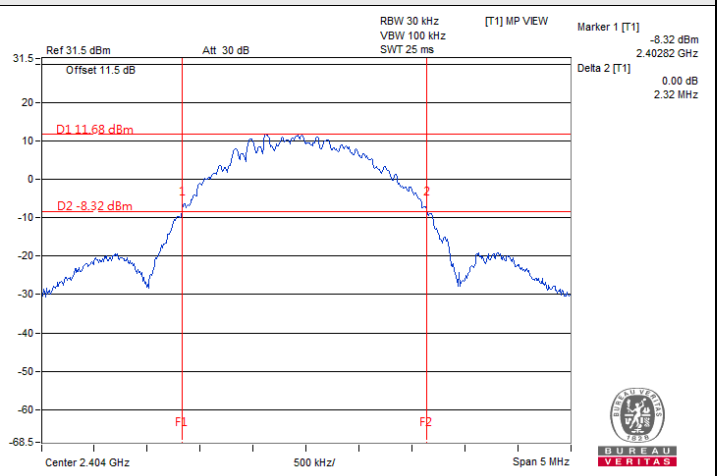
2MBaud PHY

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
1	2404	2.32
19	2440	2.33
38	2478	2.33

Spectrum Plot of Minimum Value



1MBaud PHY with 1Mbps : CH 0



2MBaud PHY : CH 1

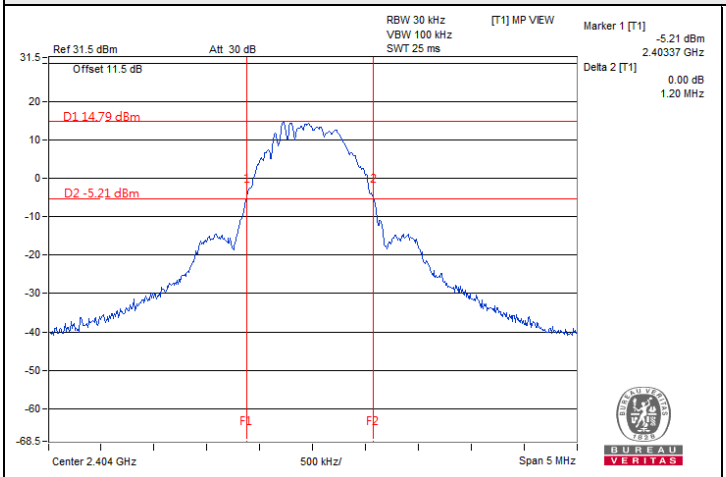
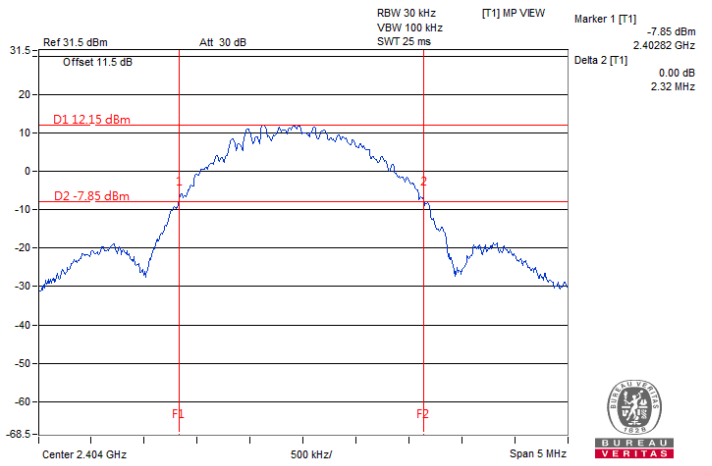
Mode B

1MBaud PHY with 1Mbps

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	1.22
1	2404	1.2
19	2440	1.21
38	2478	1.2
39	2480	1.2

2MBaud PHY

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
1	2404	2.32
19	2440	2.33
38	2478	2.32

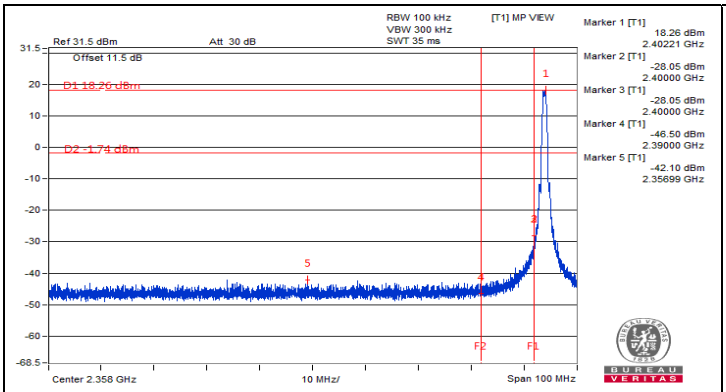
Spectrum Plot of Minimum Value	
	
1MBaud PHY with 1Mbps : CH 1	2MBaud PHY : CH 1

7.6 Conducted Out of Band Emissions

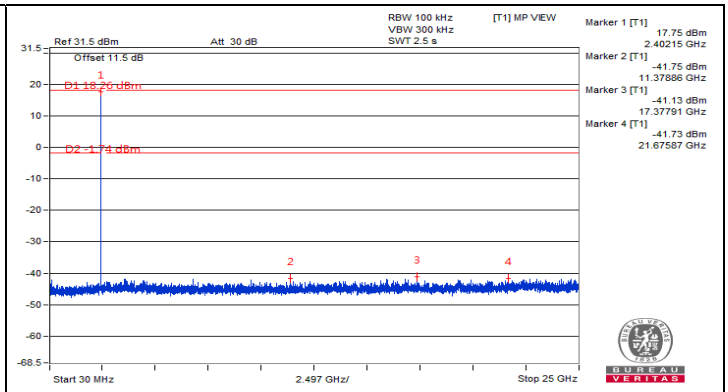
Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin

Mode A

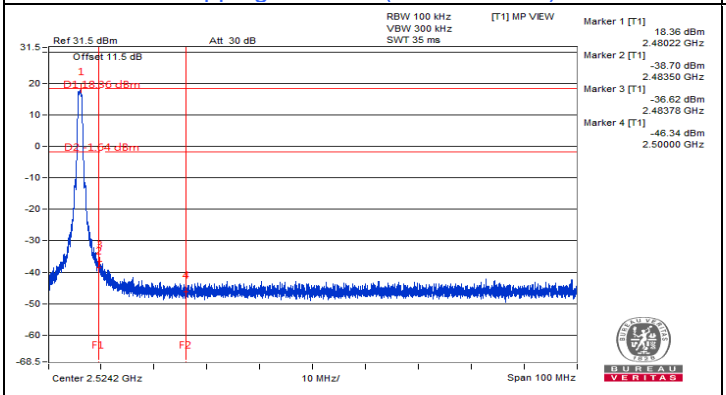
1MBaud PHY with 1Mbps



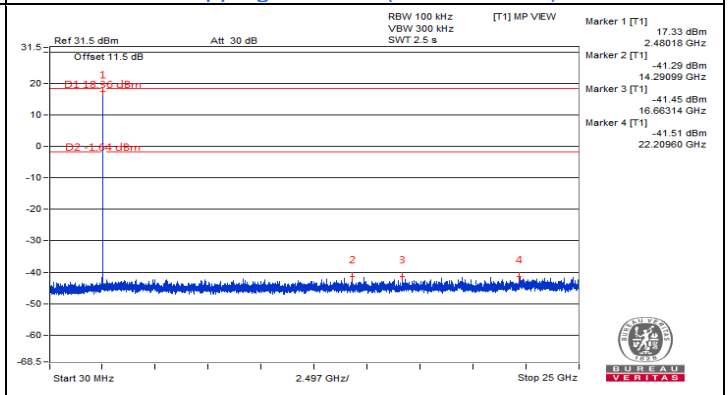
Hopping disabled (Low Channel)



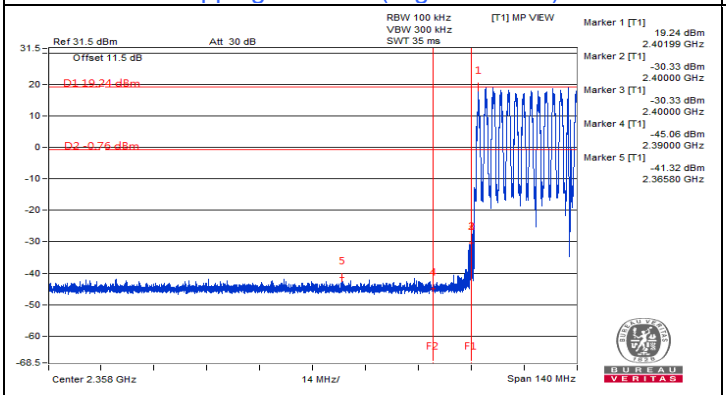
Hopping disabled (Low Channel)



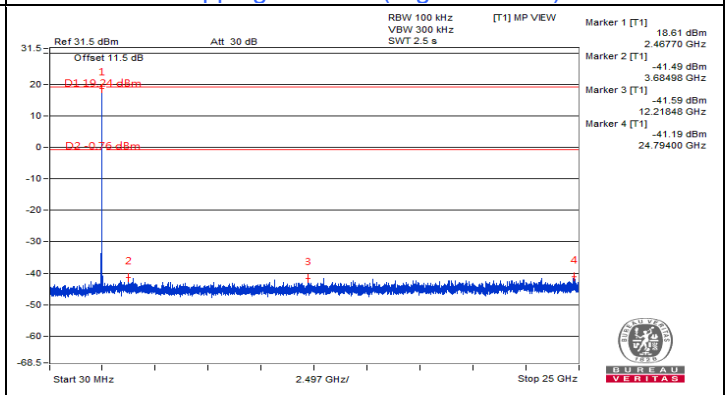
Hopping disabled (High Channel)



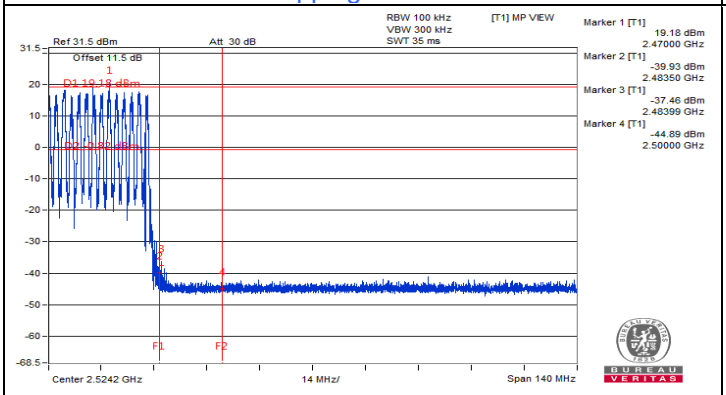
Hopping disabled (High Channel)



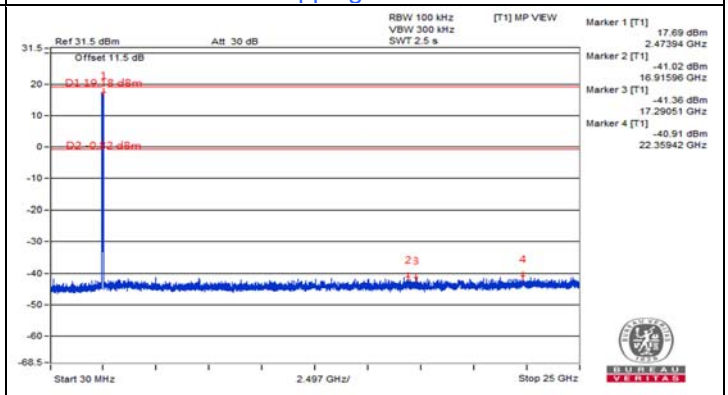
Hopping enabled



Hopping enabled

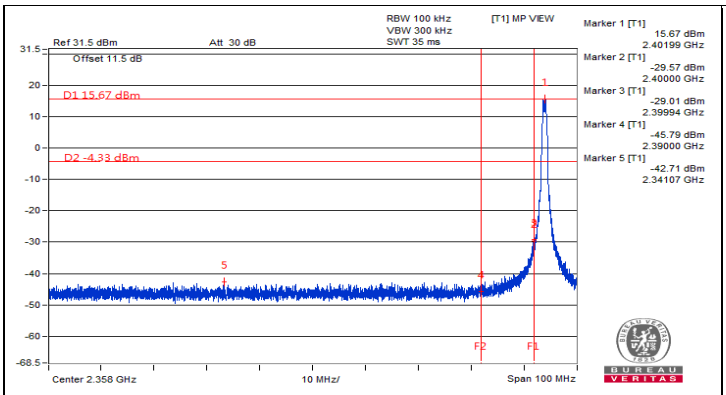


Hopping enabled

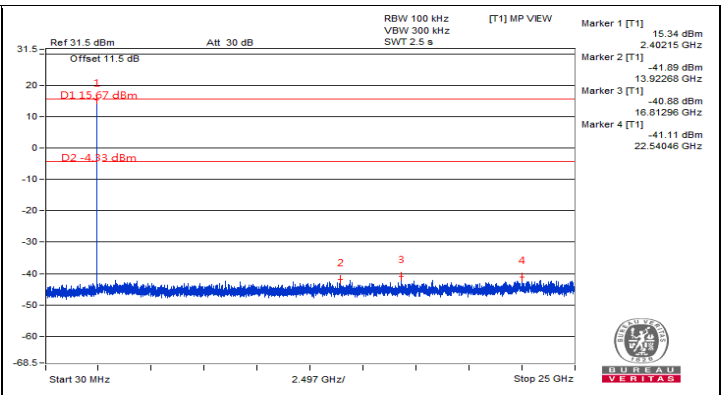


Hopping enabled

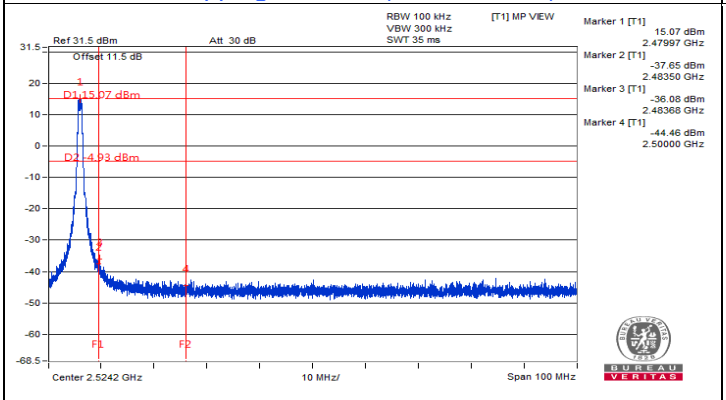
1MBaud PHY with 125kbps



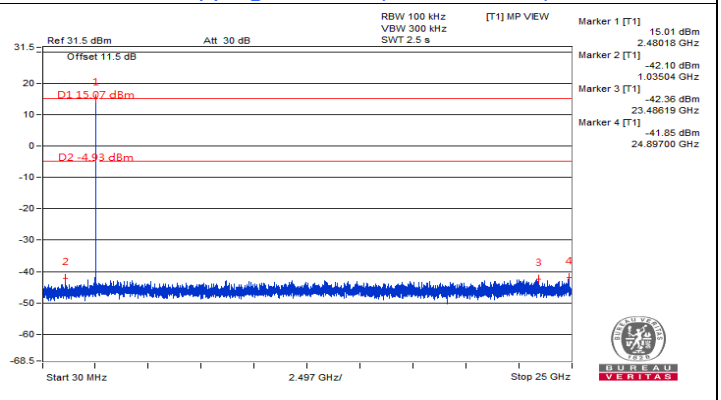
Hopping disabled (Low Channel)



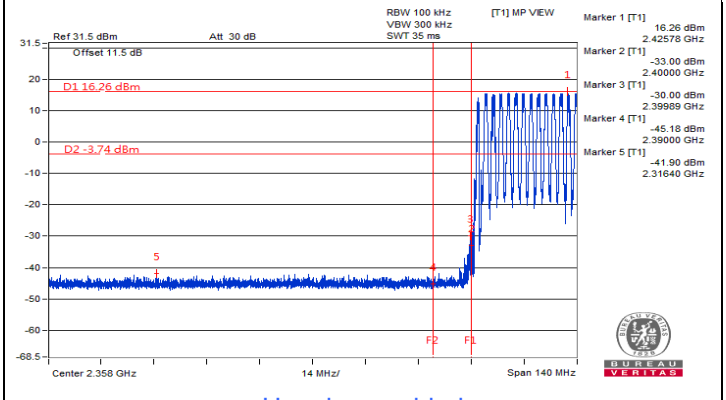
Hopping disabled (Low Channel)



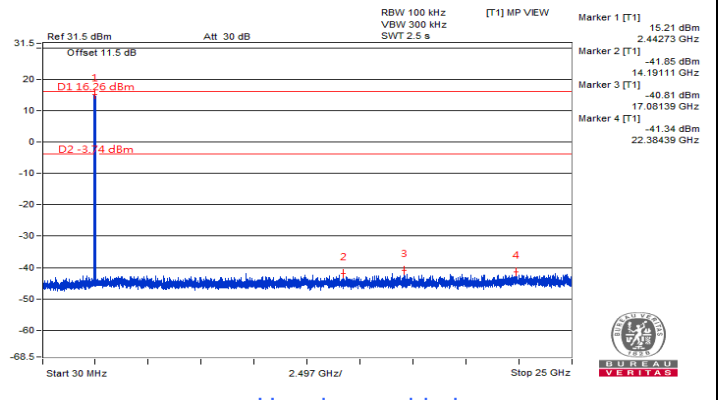
Hopping disabled (High Channel)



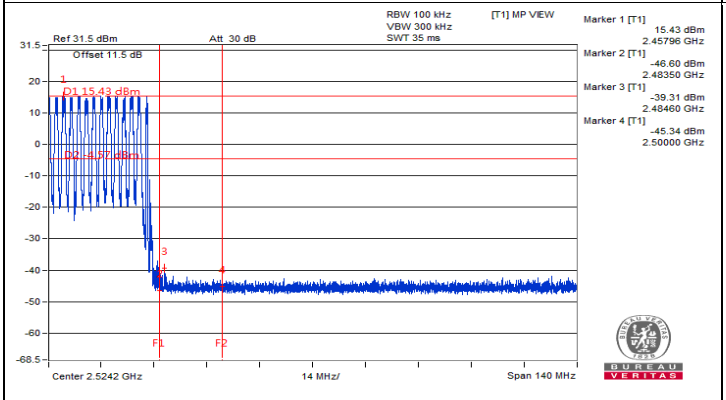
Hopping disabled (High Channel)



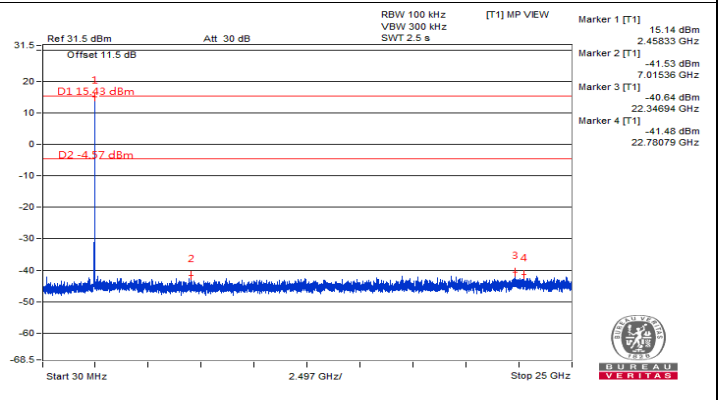
Hopping enabled



Hopping enabled

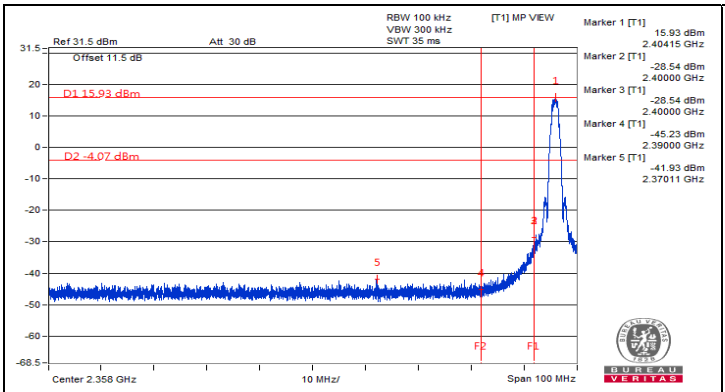


Hopping enabled

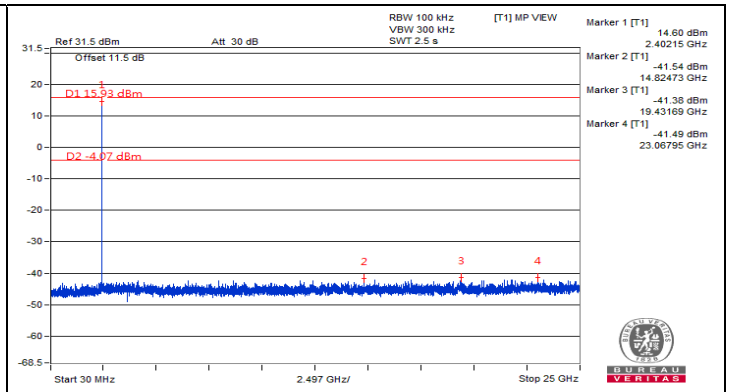


Hopping enabled

2MBaud PHY



Hopping disabled (Low Channel)



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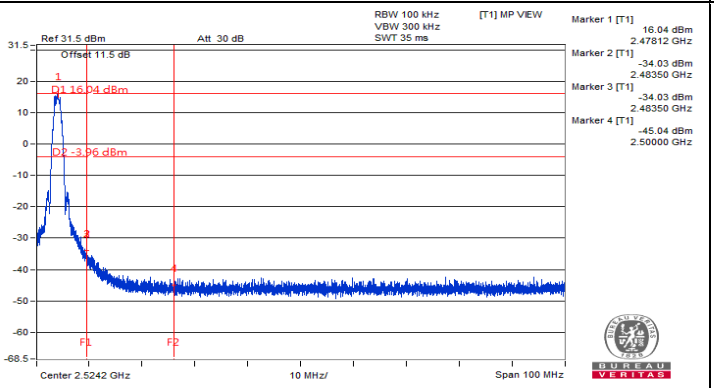

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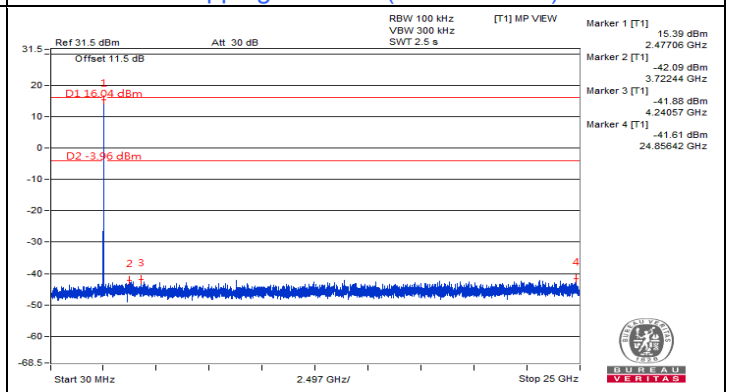

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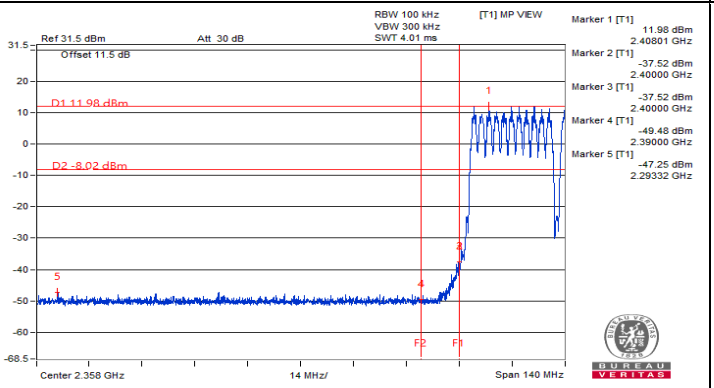
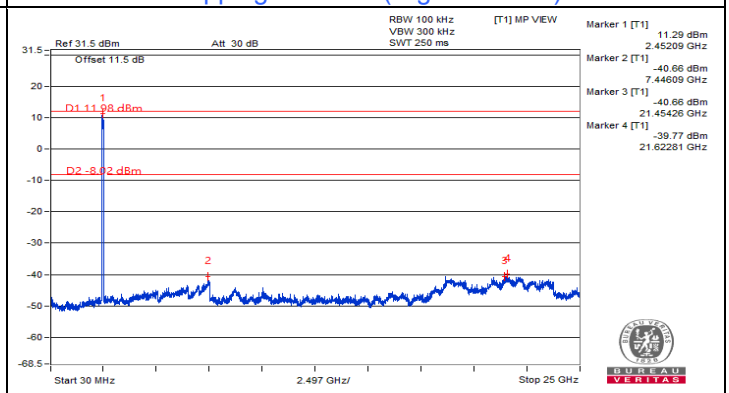


Hopping enabled



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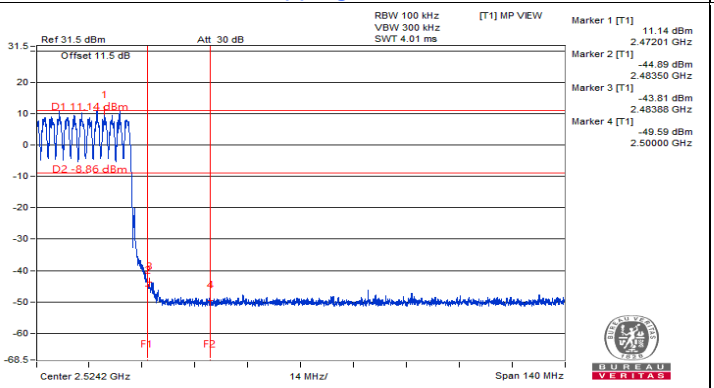
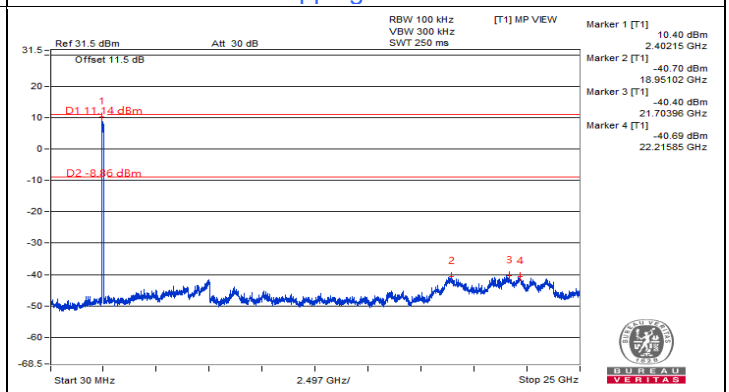


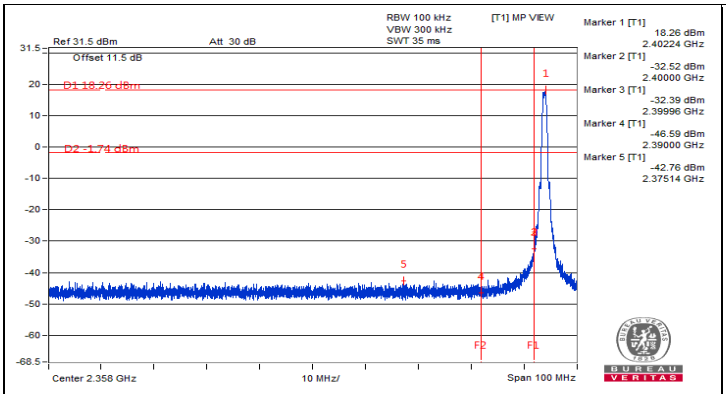
Hopping enabled



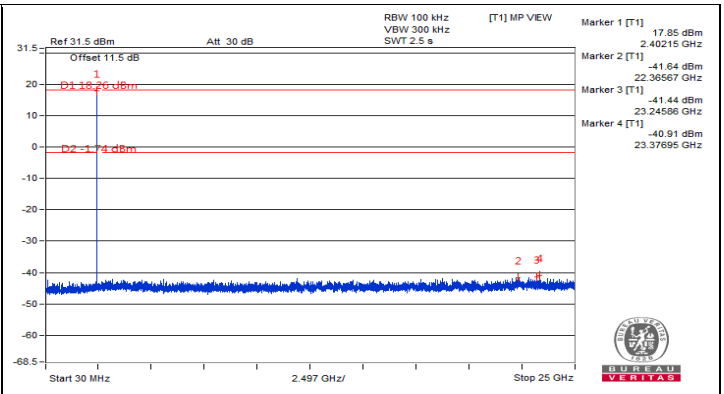
Hopping enabled

Mode B

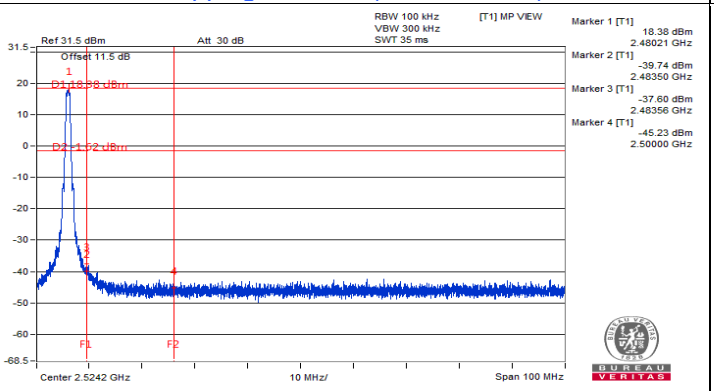
1MBaud PHY with 1Mbps



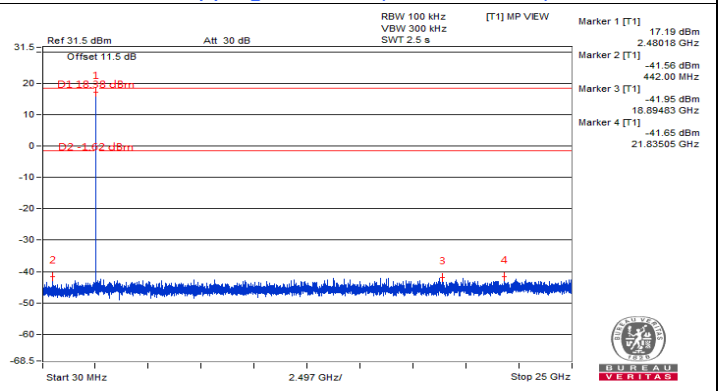
Hopping disabled (Low Channel)



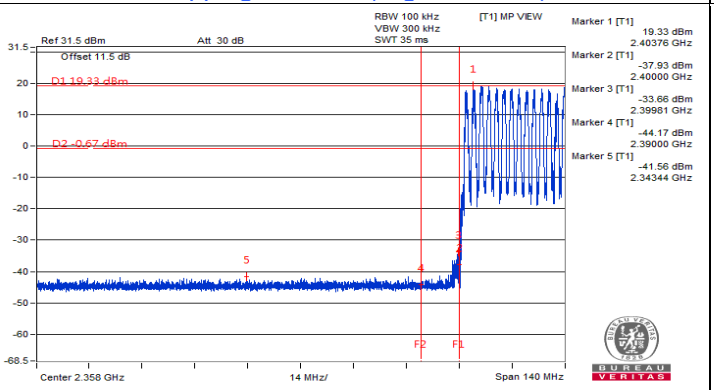
Hopping disabled (Low Channel)



Hopping disabled (High Channel)



Hopping disabled (High Channel)



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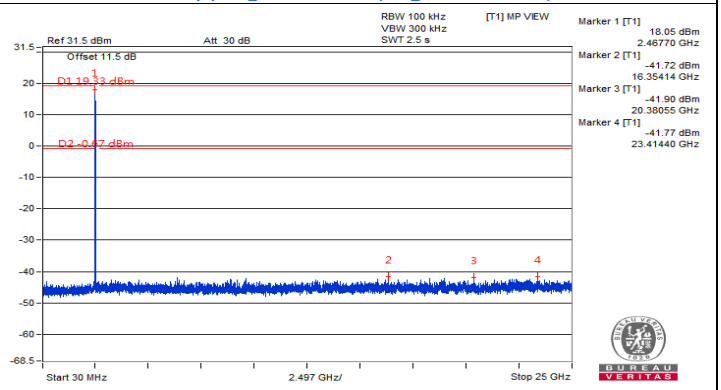
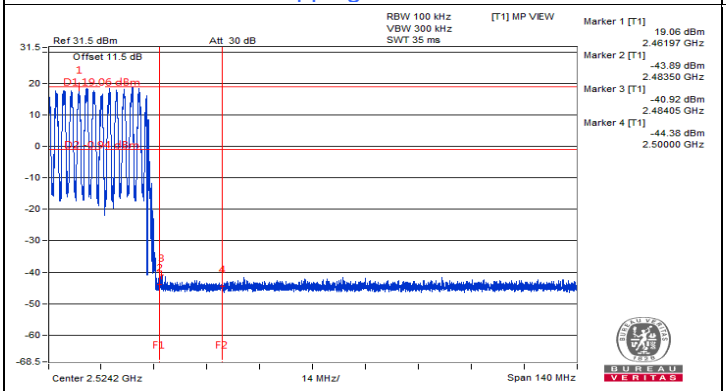
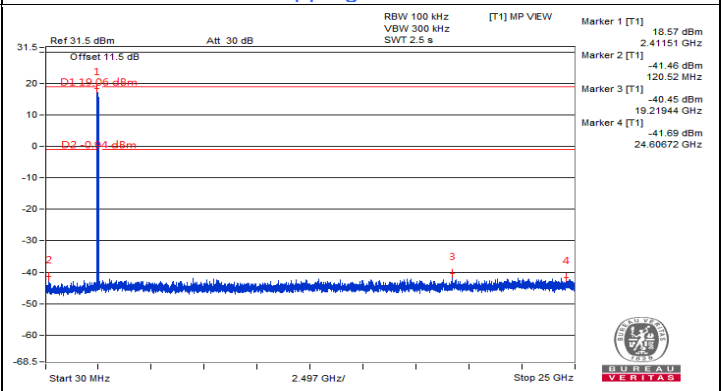


Hopping enabled

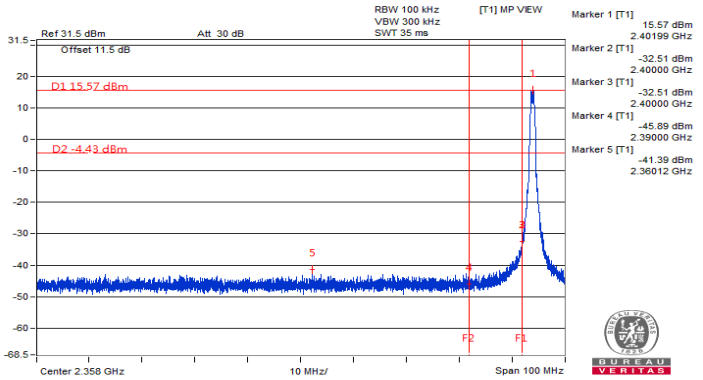


Hopping enabled

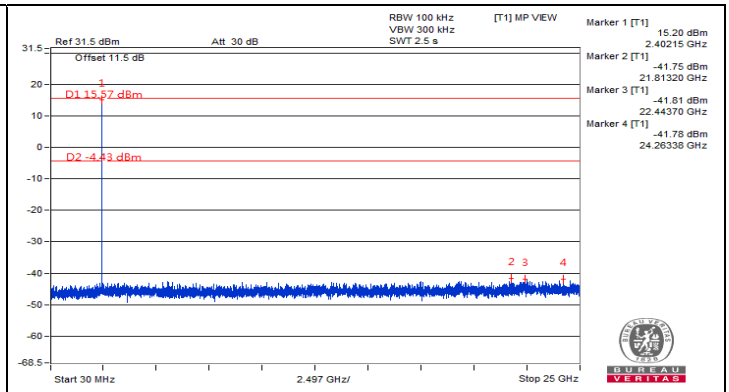


Hopping enabled

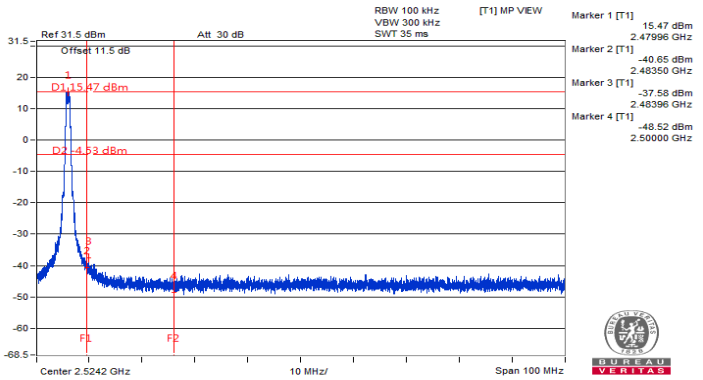
1MBaud PHY with 125kbps



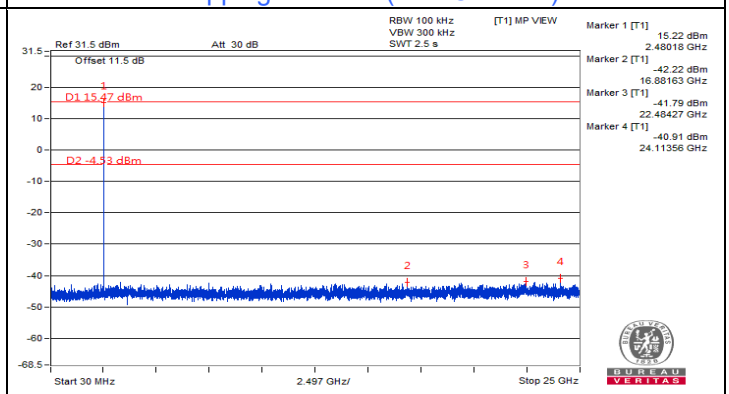
Hopping disabled (Low Channel)



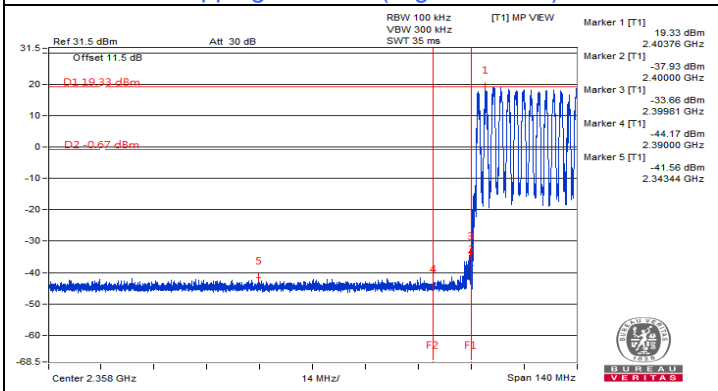
Hopping disabled (Low Channel)



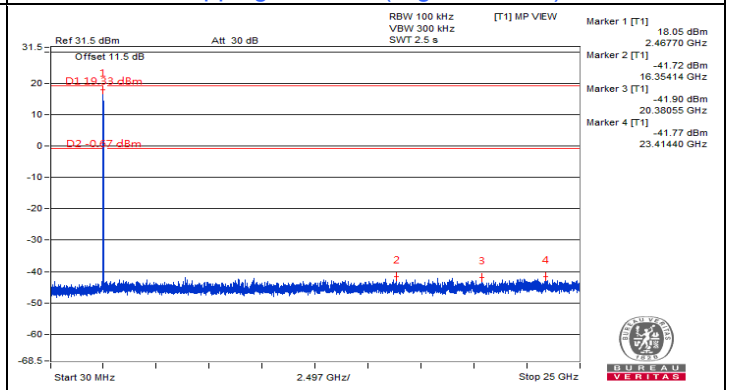
Hopping disabled (High Channel)



Hopping disabled (High Channel)



Hopping enabled



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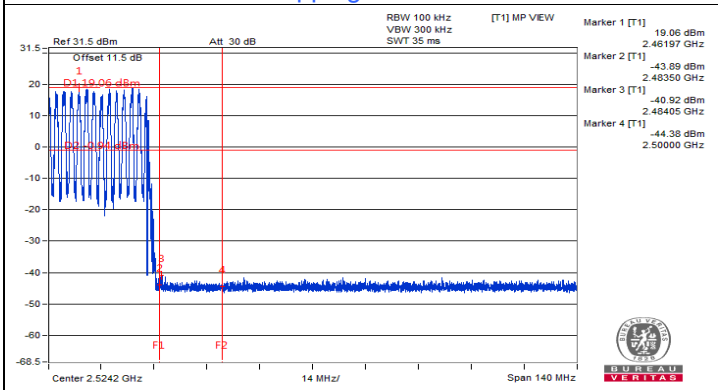
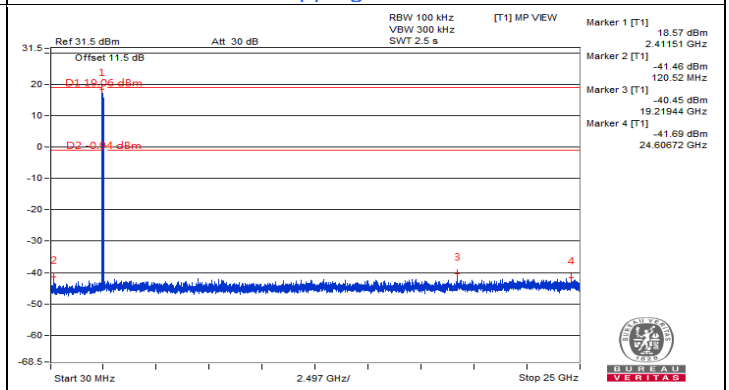
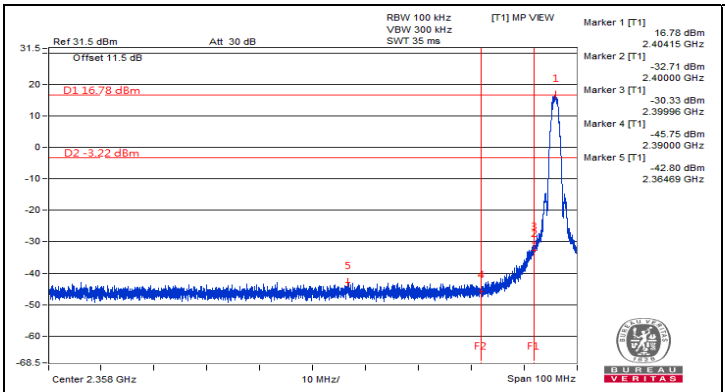


Hopping enabled

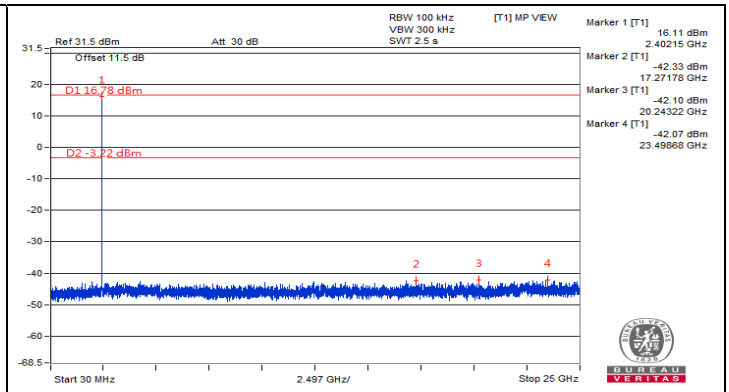


Hopping enabled

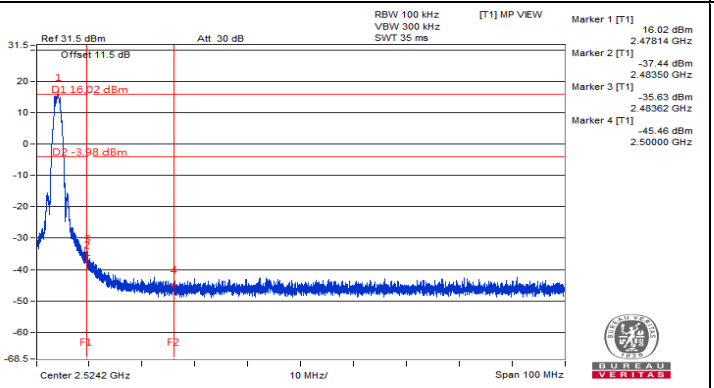
2MBaud PHY



Hopping disabled (Low Channel)



Hopping disabled (Low Channel)



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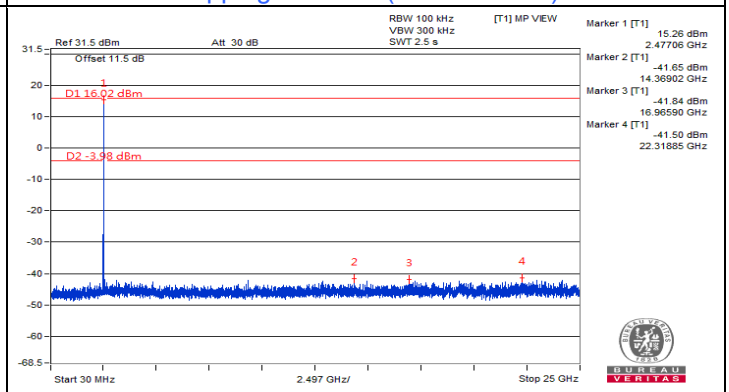

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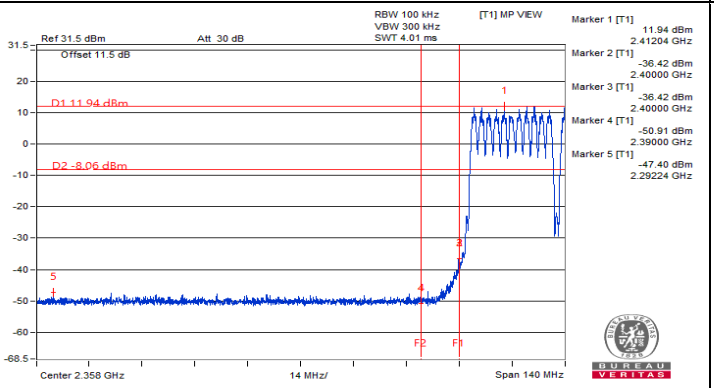

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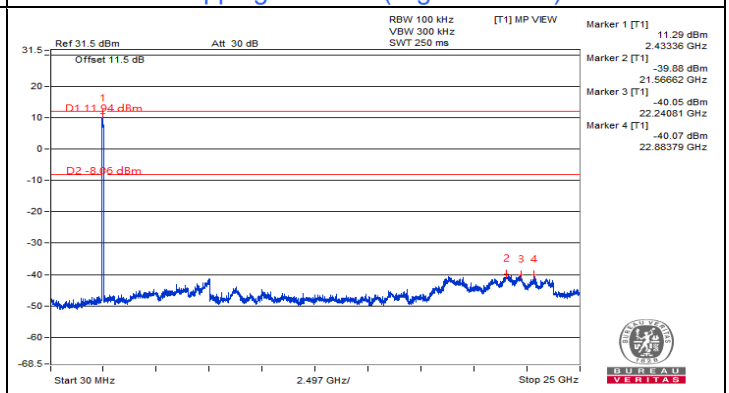

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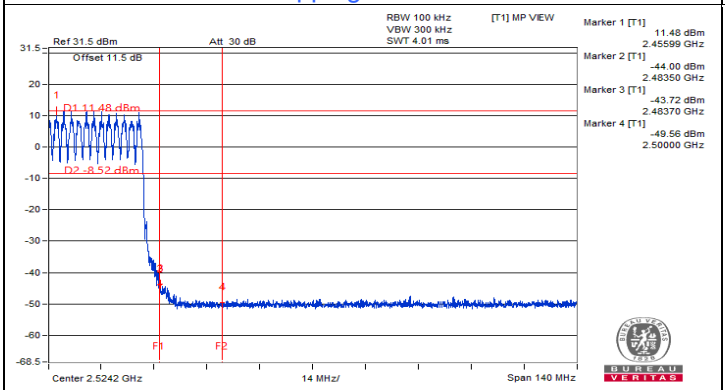

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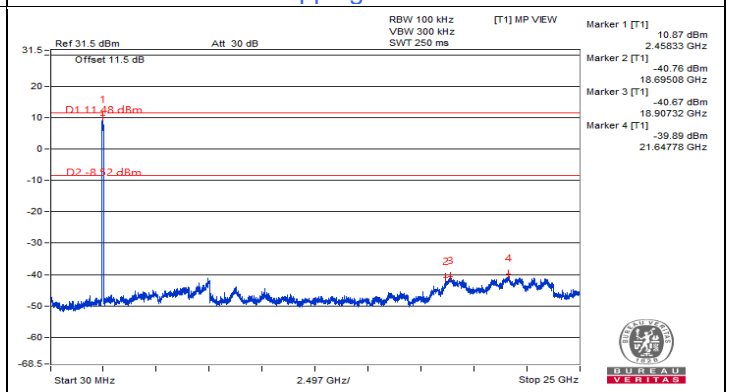


Hopping enabled

7.7 AC Power Conducted Emissions

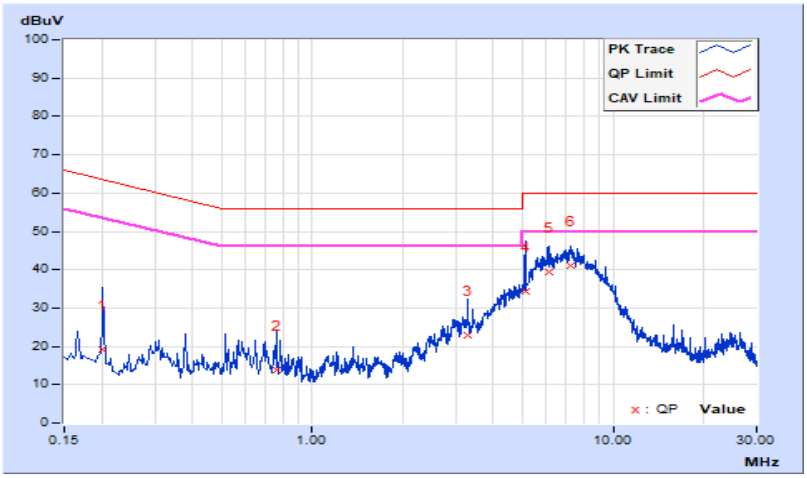
Mode A

RF Mode	2MBaud PHY	**Channel**	CH 1：2404 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25 °C, 75 % RH
Tested By	Rex Wang		

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	0.20200	10.11	9.18	5.56	19.29	15.67	63.53	53.53	-44.24	-37.86
2	0.76200	10.13	3.79	1.43	13.92	11.56	56.00	46.00	-42.08	-34.44
3	3.29400	10.23	12.51	4.79	22.74	15.02	56.00	46.00	-33.26	-30.98
4	5.10200	10.26	24.02	16.43	34.28	26.69	60.00	50.00	-25.72	-23.31
5	6.09400	10.27	29.26	22.17	39.53	32.44	60.00	50.00	-20.47	-17.56
6	**7.27400**	**10.28**	**30.71**	**24.42**	**40.99**	**34.70**	**60.00**	**50.00**	**-19.01**	**-15.30**

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

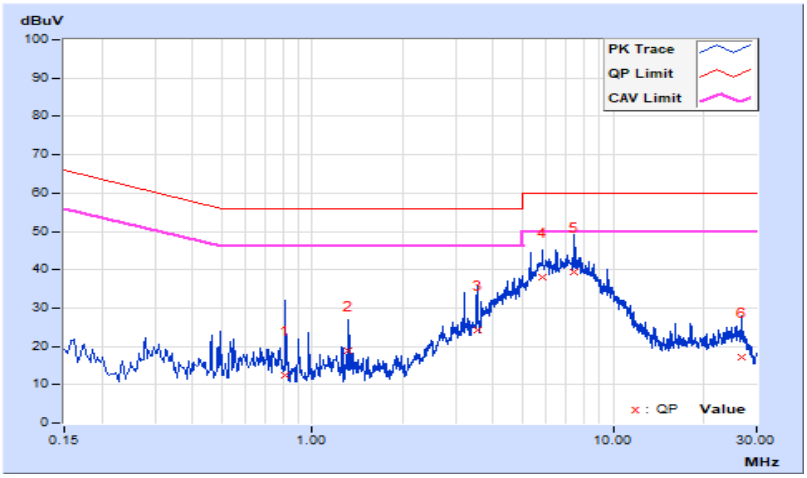


RF Mode	2MBaud PHY	**Channel**	CH 1：2404 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25 °C, 75 % RH
Tested By	Rex Wang		

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	0.81400	10.16	2.19	1.23	12.35	11.39	56.00	46.00	-43.65	-34.61
2	1.32200	10.19	8.56	6.23	18.75	16.42	56.00	46.00	-37.25	-29.58
3	3.53800	10.27	14.06	6.37	24.33	16.64	56.00	46.00	-31.67	-29.36
4	5.82200	10.31	27.73	21.42	38.04	31.73	60.00	50.00	-21.96	-18.27
5	7.44200	10.34	29.03	22.50	39.37	32.84	60.00	50.00	-20.63	-17.16
6	26.78200	10.74	6.46	0.44	17.20	11.18	60.00	50.00	-42.80	-38.82

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



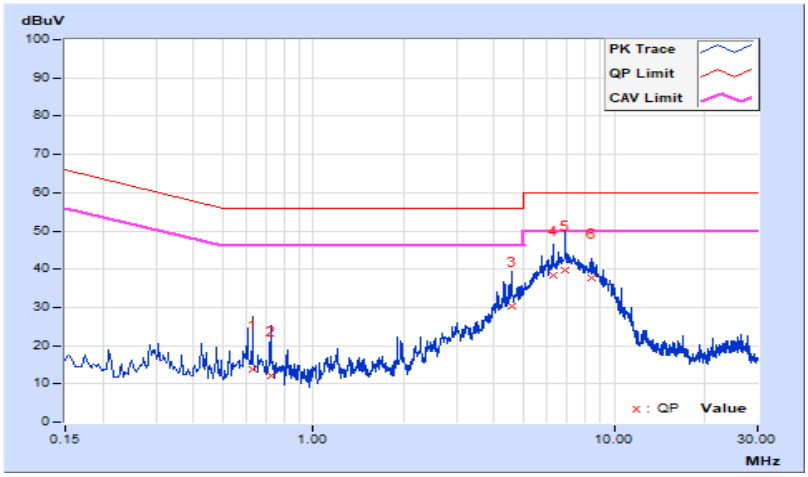
Mode B

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 1：2404 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Rex Wang		

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	0.63000	10.12	3.58	1.56	13.70	11.68	56.00	46.00	-42.30	-34.32
2	0.72200	10.13	2.08	0.56	12.21	10.69	56.00	46.00	-43.79	-35.31
3	4.58600	10.26	20.11	13.36	30.37	23.62	56.00	46.00	-25.63	-22.38
4	6.25800	10.27	28.06	21.29	38.33	31.56	60.00	50.00	-21.67	-18.44
5	6.88600	10.28	29.36	22.99	39.64	33.27	60.00	50.00	-20.36	-16.73
6	8.37800	10.29	27.30	20.62	37.59	30.91	60.00	50.00	-22.41	-19.09

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

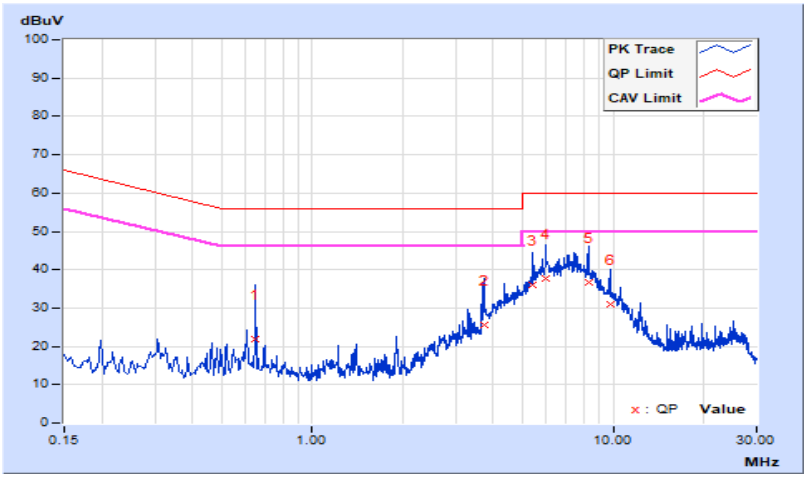


RF Mode	1MBaud PHY with 1Mbps	Channel	CH 1：2404 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Rex Wang		

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	0.65000	10.15	11.87	6.32	22.02	16.47	56.00	46.00	-33.98	-29.53
2	3.74600	10.28	15.41	8.70	25.69	18.98	56.00	46.00	-30.31	-27.02
3	5.42600	10.31	25.55	18.38	35.86	28.69	60.00	50.00	-24.14	-21.31
4	5.99400	10.32	27.30	20.44	37.62	30.76	60.00	50.00	-22.38	-19.24
5	8.26200	10.35	26.28	19.54	36.63	29.89	60.00	50.00	-23.37	-20.11
6	9.76200	10.37	20.54	13.65	30.91	24.02	60.00	50.00	-29.09	-25.98

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



7.8 Unwanted Emissions below 1 GHz

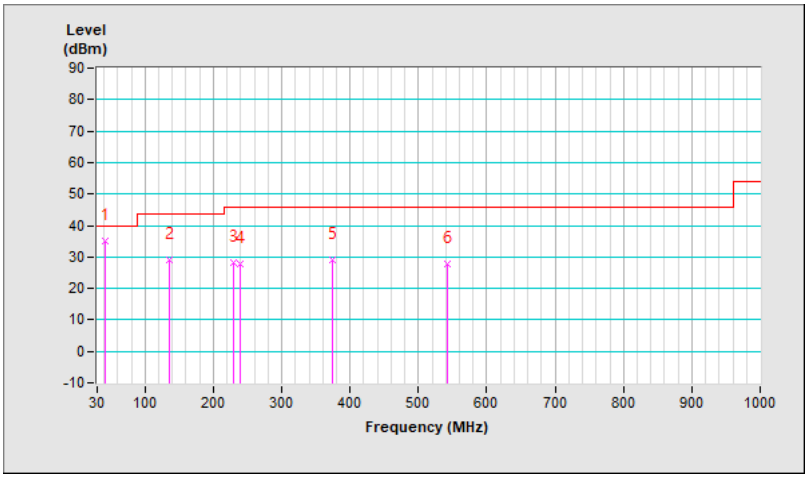
Mode A

RF Mode	2MBaud PHY	Channel	CH 1：2404 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9 °C, 76.3 % RH
Tested By	Rex Wang		

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	41.64	34.9 QP	40.0	-5.1	1.01 H	305	44.3	-9.4
2	135.73	29.2 QP	43.5	-14.3	2.00 H	133	38.3	-9.1
3	228.85	28.3 QP	46.0	-17.7	1.50 H	45	38.8	-10.5
4	239.52	27.8 QP	46.0	-18.2	1.50 H	45	37.1	-9.3
5	373.38	28.9 QP	46.0	-17.1	2.00 H	147	34.2	-5.3
6	543.13	27.8 QP	46.0	-18.2	1.01 H	358	30.1	-2.3

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.

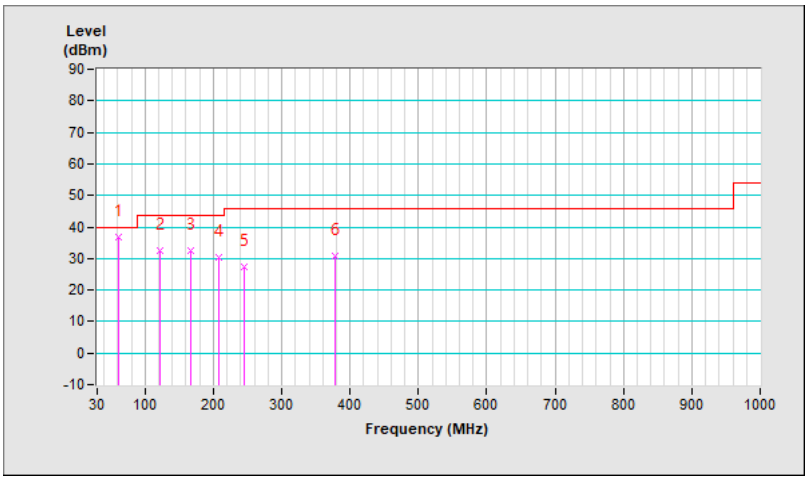


RF Mode	2MBaud PHY	**Channel**	CH 1：2404 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	20.9 °C, 76.3 % RH
Tested By	Rex Wang		

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	**62.01**	**36.6 QP**	**40.0**	**-3.4**	**1.99 V**	**35**	**46.4**	**-9.8**
2	122.15	32.3 QP	43.5	-11.2	1.49 V	220	42.7	-10.4
3	166.77	32.3 QP	43.5	-11.2	1.49 V	9	40.6	-8.3
4	208.48	30.4 QP	43.5	-13.1	1.49 V	171	41.3	-10.9
5	244.37	27.5 QP	46.0	-18.5	1.49 V	194	36.3	-8.8
6	377.26	30.7 QP	46.0	-15.3	1.49 V	59	36.0	-5.3

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.



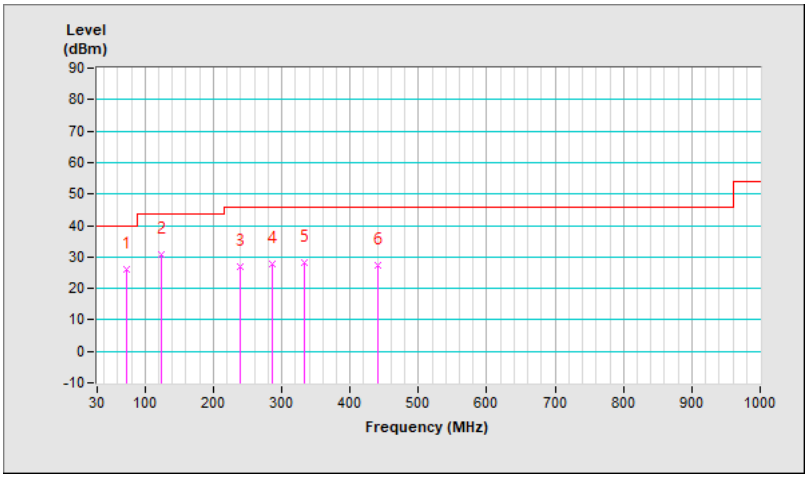
Mode B

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 1：2404 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9 °C, 76.3 % RH
Tested By	Rex Wang		

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	73.65	26.2 QP	40.0	-13.8	2.00 H	154	37.9	-11.7
2	123.12	30.7 QP	43.5	-12.8	1.49 H	193	41.1	-10.4
3	238.55	26.8 QP	46.0	-19.2	1.49 H	55	36.2	-9.4
4	286.08	27.8 QP	46.0	-18.2	1.00 H	134	34.7	-6.9
5	332.64	28.4 QP	46.0	-17.6	1.00 H	217	34.3	-5.9
6	440.31	27.5 QP	46.0	-18.5	2.00 H	68	31.4	-3.9

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 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.

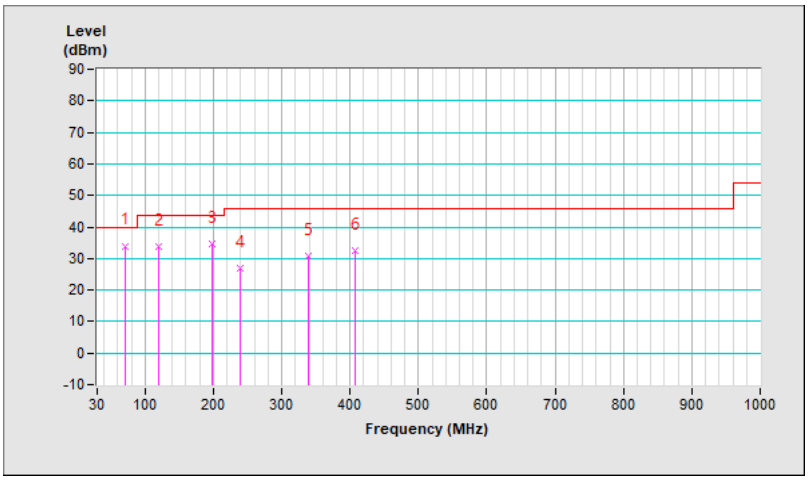


RF Mode	1MBaud PHY with 1Mbps	**Channel**	CH 1：2404 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	20.9 °C, 76.3 % RH
Tested By	Rex Wang		

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	70.74	34.0 QP	40.0	-6.0	1.00 V	194	44.9	-10.9
2	119.24	33.9 QP	43.5	-9.6	1.49 V	211	44.6	-10.7
3	198.78	34.7 QP	43.5	-8.8	1.00 V	157	45.8	-11.1
4	238.55	26.9 QP	46.0	-19.1	1.00 V	179	36.3	-9.4
5	339.43	30.8 QP	46.0	-15.2	1.00 V	128	36.6	-5.8
6	408.30	32.7 QP	46.0	-13.3	1.00 V	181	37.4	-4.7

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.



7.9 Unwanted Emissions above 1 GHz

Mode A

RF Mode	1MBaud PHY with 1Mbps	**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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	59.3 PK	74.0	-14.7	2.47 H	13	25.2	34.1
2	2390.00	48.5 AV	54.0	-5.5	2.47 H	13	14.4	34.1
3	*2402.00	118.9 PK			2.47 H	13	84.8	34.1
4	*2402.00	83.8 AV			2.47 H	13	49.7	34.1
5	4804.00	51.1 PK	74.0	-22.9	2.45 H	208	41.0	10.1
6	4804.00	16.0 AV	54.0	-38.0	2.45 H	208	5.9	10.1
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	2390.00	59.1 PK	74.0	-14.9	2.40 V	92	25.0	34.1
2	2390.00	48.3 AV	54.0	-5.7	2.40 V	92	14.2	34.1
3	*2402.00	115.7 PK			2.40 V	92	81.6	34.1
4	*2402.00	80.6 AV			2.40 V	92	46.5	34.1
5	4804.00	50.6 PK	74.0	-23.4	2.20 V	262	40.5	10.1
6	4804.00	15.5 AV	54.0	-38.5	2.20 V	262	5.4	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(1.75 ms / 100 ms) = -35.1 dB

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	60.8 PK	74.0	-13.2	2.67 H	332	26.7	34.1
2	2390.00	49.3 AV	54.0	-4.7	2.67 H	332	15.2	34.1
3	*2404.00	118.3 PK			2.67 H	332	84.2	34.1
4	*2404.00	117.3 AV			2.67 H	332	83.2	34.1
5	4808.00	51.9 PK	74.0	-22.1	2.41 H	206	41.8	10.1
6	4808.00	32.9 AV	54.0	-21.1	2.41 H	206	22.8	10.1
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	2390.00	60.4 PK	74.0	-13.6	2.52 V	107	26.3	34.1
2	2390.00	48.9 AV	54.0	-5.1	2.52 V	107	14.8	34.1
3	*2404.00	114.9 PK			2.52 V	107	80.8	34.1
4	*2404.00	114.2 AV			2.52 V	107	80.1	34.1
5	4808.00	51.4 PK	74.0	-22.6	2.09 V	255	41.3	10.1
6	4808.00	32.4 AV	54.0	-21.6	2.09 V	255	22.3	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	**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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2440.00	119.7 PK			2.61 H	196	85.7	34.0
2	*2440.00	118.7 AV			2.61 H	196	84.7	34.0
3	4880.00	52.0 PK	74.0	-22.0	2.37 H	198	41.5	10.5
4	4880.00	33.1 AV	54.0	-20.9	2.37 H	198	22.6	10.5
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	*2440.00	116.3 PK			2.29 V	98	82.3	34.0
2	*2440.00	115.3 AV			2.29 V	98	81.3	34.0
3	4880.00	51.6 PK	74.0	-22.4	2.31 V	262	41.1	10.5
4	4880.00	32.7 AV	54.0	-21.3	2.31 V	262	22.2	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2478.00	119.2 PK			2.65 H	213	85.1	34.1
2	*2478.00	118.2 AV			2.65 H	213	84.1	34.1
3	2483.50	67.7 PK	74.0	-6.3	2.65 H	213	33.6	34.1
4	2483.50	53.7 AV	54.0	-0.3	2.65 H	213	19.6	34.1
5	4956.00	52.7 PK	74.0	-21.3	2.38 H	212	41.6	11.1
6	4956.00	33.7 AV	54.0	-20.3	2.38 H	212	22.6	11.1
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	*2478.00	115.9 PK			2.12 V	89	81.8	34.1
2	*2478.00	114.7 AV			2.12 V	89	80.6	34.1
3	2483.50	66.5 PK	74.0	-7.5	2.12 V	89	32.4	34.1
4	2483.50	52.3 AV	54.0	-1.7	2.12 V	89	18.2	34.1
5	4956.00	52.4 PK	74.0	-21.6	2.33 V	266	41.3	11.1
6	4956.00	33.3 AV	54.0	-20.7	2.33 V	266	22.2	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2480.00	117.4 PK			2.33 H	1	83.3	34.1
2	*2480.00	82.3 AV			2.33 H	1	48.2	34.1
3	2483.50	67.7 PK	74.0	-6.3	2.33 H	1	55.5	12.2
4	2483.50	32.6 AV	54.0	-21.4	2.33 H	1	20.4	12.2
5	4960.00	51.9 PK	74.0	-22.1	2.42 H	205	40.8	11.1
6	4960.00	16.8 AV	54.0	-37.2	2.42 H	205	5.7	11.1
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	*2480.00	115.0 PK			2.01 V	78	80.9	34.1
2	*2480.00	79.9 AV			2.01 V	78	45.8	34.1
3	2483.50	65.9 PK	74.0	-8.1	2.01 V	78	53.7	12.2
4	2483.50	30.8 AV	54.0	-23.2	2.01 V	78	18.6	12.2
5	4960.00	51.4 PK	74.0	-22.6	2.23 V	264	40.3	11.1
6	4960.00	16.3 AV	54.0	-37.7	2.23 V	264	5.2	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(1.75 ms / 100 ms) = -35.1 dB

RF Mode	1MBaud PHY with 125kbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	59.5 PK	74.0	-14.5	2.46 H	11	25.4	34.1
2	2390.00	48.5 AV	54.0	-5.5	2.46 H	11	14.4	34.1
3	*2402.00	118.5 PK			2.46 H	11	84.4	34.1
4	*2402.00	91.0 AV			2.46 H	11	56.9	34.1
5	4804.00	51.1 PK	74.0	-22.9	2.45 H	207	41.0	10.1
6	4804.00	23.6 AV	54.0	-30.4	2.45 H	207	13.5	10.1
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	2390.00	59.1 PK	74.0	-14.9	2.14 V	91	25.0	34.1
2	2390.00	48.3 AV	54.0	-5.7	2.14 V	91	14.2	34.1
3	*2402.00	115.3 PK			2.14 V	91	81.2	34.1
4	*2402.00	87.8 AV			2.14 V	91	53.7	34.1
5	4804.00	50.8 PK	74.0	-23.2	2.24 V	256	40.7	10.1
6	4804.00	23.3 AV	54.0	-30.7	2.24 V	256	13.2	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(4.2 ms / 100 ms) = -27.5 dB

RF Mode	1MBaud PHY with 125kbps	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	60.5 PK	74.0	-13.5	2.21 H	9	26.4	34.1
2	2390.00	49.5 AV	54.0	-4.5	2.21 H	9	15.4	34.1
3	*2404.00	118.2 PK			2.21 H	9	84.1	34.1
4	*2404.00	117.1 AV			2.21 H	9	83.0	34.1
5	4808.00	51.2 PK	74.0	-22.8	2.41 H	201	41.1	10.1
6	4808.00	32.9 AV	54.0	-21.1	2.41 H	201	22.8	10.1
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	2390.00	60.3 PK	74.0	-13.7	2.42 V	110	26.2	34.1
2	2390.00	49.2 AV	54.0	-4.8	2.42 V	110	15.1	34.1
3	*2404.00	114.7 PK			2.42 V	110	80.6	34.1
4	*2404.00	113.5 AV			2.42 V	110	79.4	34.1
5	4808.00	51.0 PK	74.0	-23.0	2.06 V	261	40.9	10.1
6	4808.00	32.4 AV	54.0	-21.6	2.06 V	261	22.3	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	**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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2440.00	119.5 PK			2.62 H	196	85.5	34.0
2	*2440.00	118.4 AV			2.62 H	196	84.4	34.0
3	4880.00	52.1 PK	74.0	-21.9	2.37 H	205	41.6	10.5
4	4880.00	33.3 AV	54.0	-20.7	2.37 H	205	22.8	10.5
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	*2440.00	116.2 PK			2.66 V	111	82.2	34.0
2	*2440.00	115.1 AV			2.66 V	111	81.1	34.0
3	4880.00	51.8 PK	74.0	-22.2	2.31 V	252	41.3	10.5
4	4880.00	32.7 AV	54.0	-21.3	2.31 V	252	22.2	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2478.00	119.0 PK			2.46 H	214	84.9	34.1
2	*2478.00	117.8 AV			2.46 H	214	83.7	34.1
3	2483.50	66.5 PK	74.0	-7.5	2.64 H	214	32.4	34.1
4	2483.50	53.8 AV	54.0	-0.2	2.64 H	214	19.7	34.1
5	4956.00	52.7 PK	74.0	-21.3	2.45 H	209	41.6	11.1
6	4956.00	33.8 AV	54.0	-20.2	2.45 H	209	22.7	11.1
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	*2478.00	115.7 PK			2.66 V	107	81.6	34.1
2	*2478.00	114.5 AV			2.66 V	107	80.4	34.1
3	2483.50	64.3 PK	74.0	-9.7	2.66 V	107	30.2	34.1
4	2483.50	52.6 AV	54.0	-1.4	2.66 V	107	18.5	34.1
5	4956.00	52.4 PK	74.0	-21.6	2.29 V	257	41.3	11.1
6	4956.00	33.2 AV	54.0	-20.8	2.29 V	257	22.1	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2480.00	117.4 PK			2.35 H	6	83.3	34.1
2	*2480.00	89.9 AV			2.35 H	6	55.8	34.1
3	2483.50	69.5 PK	74.0	-4.5	2.35 H	6	35.4	34.1
4	2483.50	42.0 AV	54.0	-12.0	2.35 H	6	7.9	34.1
5	4960.00	52.3 PK	74.0	-21.7	2.44 H	206	41.2	11.1
6	4960.00	24.8 AV	54.0	-29.2	2.44 H	206	13.7	11.1
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	*2480.00	114.3 PK			2.26 V	88	80.2	34.1
2	*2480.00	86.8 AV			2.26 V	88	52.7	34.1
3	2483.50	66.7 PK	74.0	-7.3	2.26 V	88	32.6	34.1
4	2483.50	39.2 AV	54.0	-14.8	2.26 V	88	5.1	34.1
5	4960.00	52.3 PK	74.0	-21.7	2.20 V	257	41.2	11.1
6	4960.00	24.8 AV	54.0	-29.2	2.20 V	257	13.7	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(4.2 ms / 100 ms) = -27.5 dB

RF Mode	2MBaud PHY	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	61.0 PK	74.0	-13.0	2.62 H	332	26.9	34.1
2	2390.00	49.4 AV	54.0	-4.6	2.62 H	332	15.3	34.1
3	*2404.00	118.2 PK			2.62 H	332	84.1	34.1
4	*2404.00	115.2 AV			2.62 H	332	81.1	34.1
5	4808.00	51.4 PK	74.0	-22.6	2.38 H	211	41.3	10.1
6	4808.00	32.9 AV	54.0	-21.1	2.38 H	211	22.8	10.1
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	2390.00	60.4 PK	74.0	-13.6	2.27 V	100	26.3	34.1
2	2390.00	49.1 AV	54.0	-4.9	2.27 V	100	15.0	34.1
3	*2404.00	114.7 PK			2.27 V	100	80.6	34.1
4	*2404.00	111.7 AV			2.27 V	100	77.6	34.1
5	4808.00	51.1 PK	74.0	-22.9	2.34 V	252	41.0	10.1
6	4808.00	32.5 AV	54.0	-21.5	2.34 V	252	22.4	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	2MBaud PHY	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2440.00	119.2 PK			2.63 H	197	85.2	34.0
2	*2440.00	116.3 AV			2.63 H	197	82.3	34.0
3	4880.00	52.0 PK	74.0	-22.0	2.42 H	205	41.5	10.5
4	4880.00	33.4 AV	54.0	-20.6	2.42 H	205	22.9	10.5
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	*2440.00	115.8 PK			2.19 V	97	81.8	34.0
2	*2440.00	112.9 AV			2.19 V	97	78.9	34.0
3	4880.00	51.7 PK	74.0	-22.3	2.26 V	263	41.2	10.5
4	4880.00	33.1 AV	54.0	-20.9	2.26 V	263	22.6	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	2MBaud PHY	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2478.00	117.2 PK			2.75 H	201	83.1	34.1
2	*2478.00	114.5 AV			2.75 H	201	80.4	34.1
3	2483.50	70.2 PK	74.0	-3.8	2.75 H	201	36.1	34.1
4	2483.50	53.8 AV	54.0	-0.2	2.75 H	201	19.7	34.1
5	4956.00	52.4 PK	74.0	-21.6	2.52 H	212	41.3	11.1
6	4956.00	33.9 AV	54.0	-20.1	2.52 H	212	22.8	11.1
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	*2478.00	114.0 PK			2.89 V	89	79.9	34.1
2	*2478.00	111.2 AV			2.89 V	89	77.1	34.1
3	2483.50	68.4 PK	74.0	-5.6	2.89 V	89	34.3	34.1
4	2483.50	52.2 AV	54.0	-1.8	2.89 V	89	18.1	34.1
5	4956.00	52.1 PK	74.0	-21.9	2.37 V	252	41.0	11.1
6	4956.00	33.7 AV	54.0	-20.3	2.37 V	252	22.6	11.1

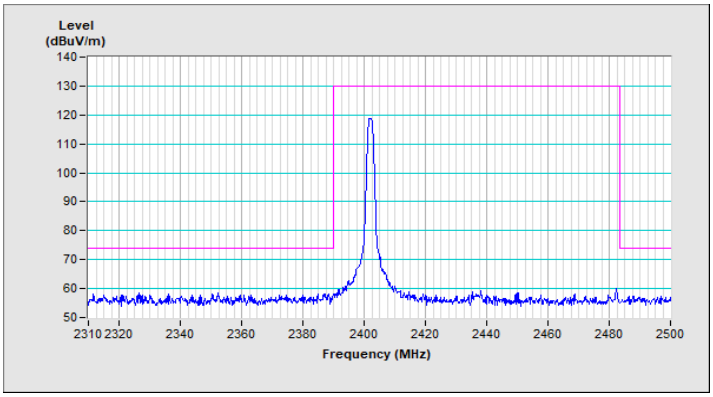
Remarks:

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

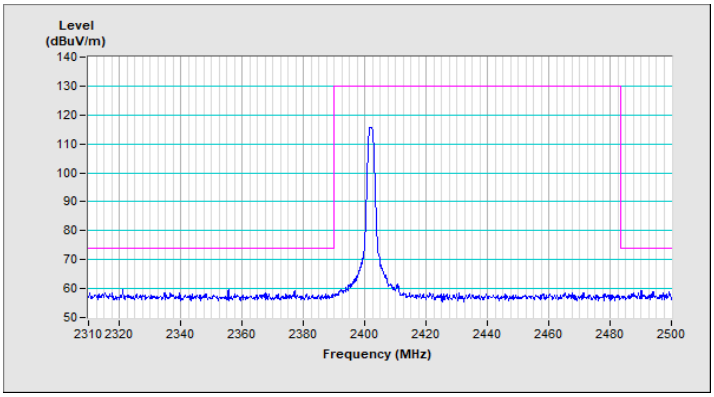
Mode A_Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

1MBaud PHY with 1Mbps Channel 0

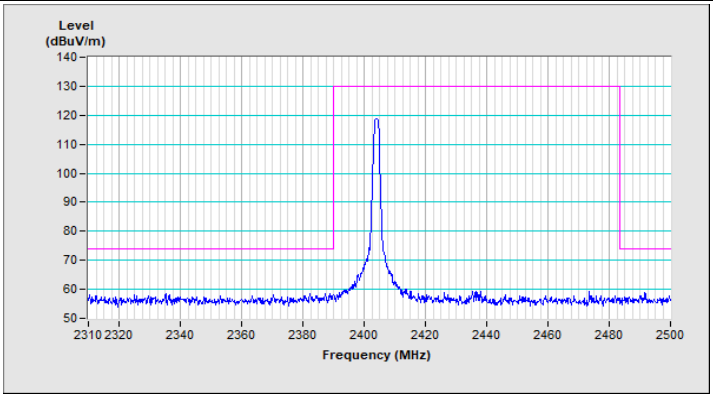


Horizontal (Peak)

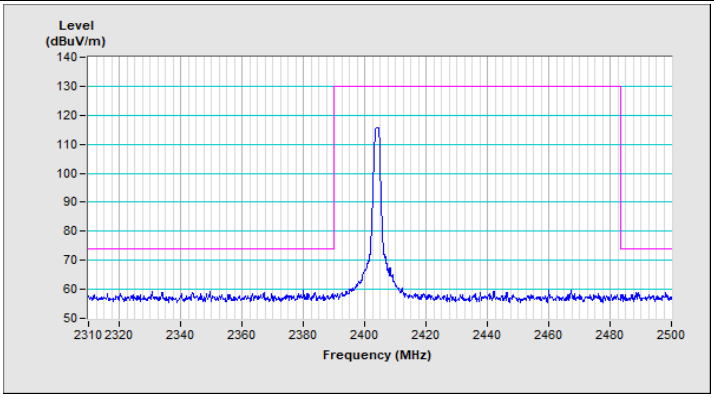


Vertical (Peak)

1MBaud PHY with 1Mbps Channel 1

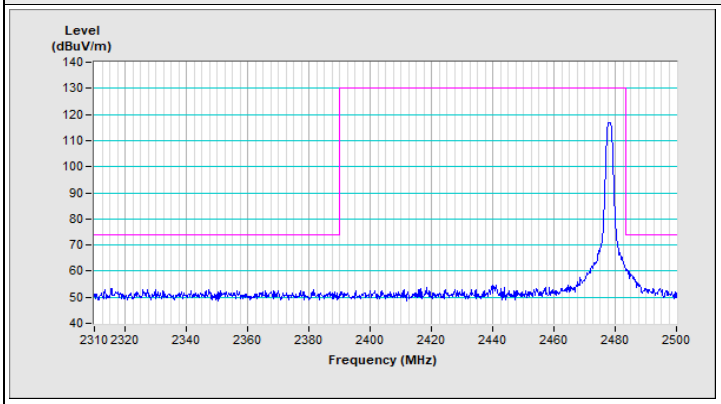


Horizontal (Peak)

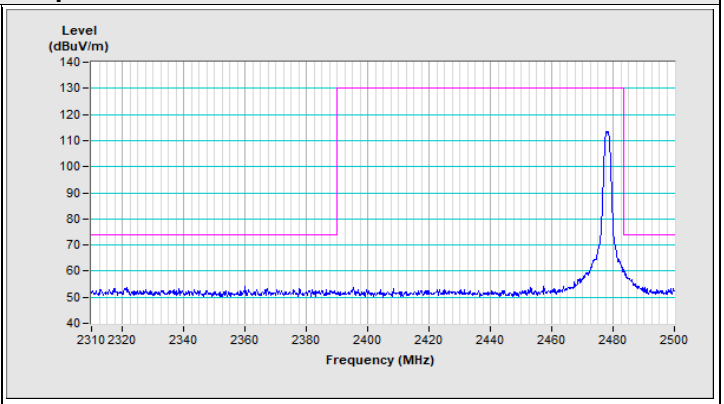


Vertical (Peak)

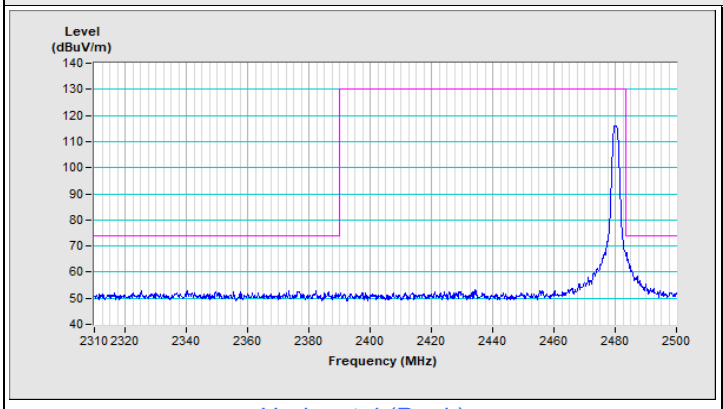
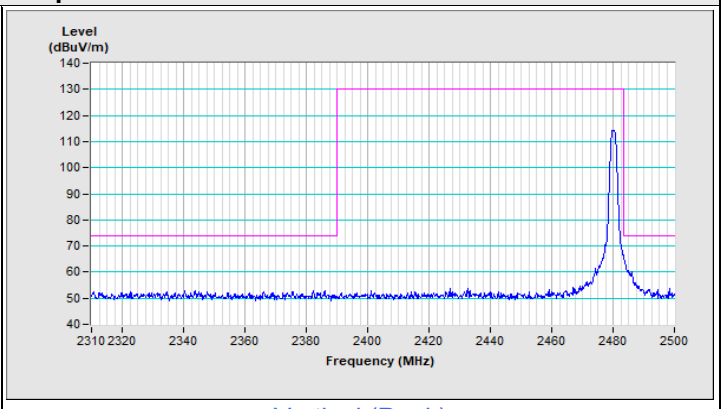
1MBaud PHY with 1Mbps Channel 38



Horizontal (Peak)

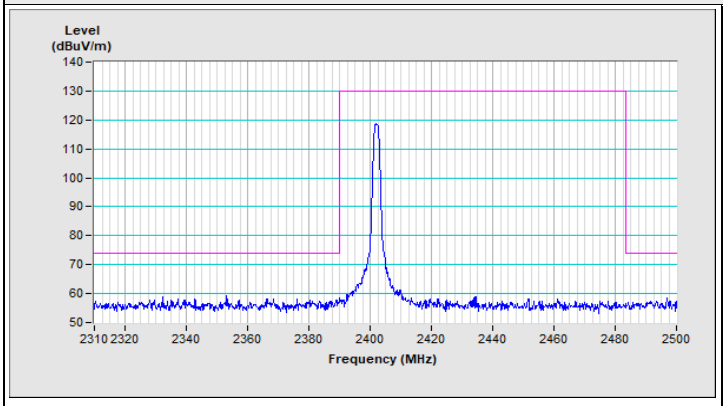


Vertical (Peak)

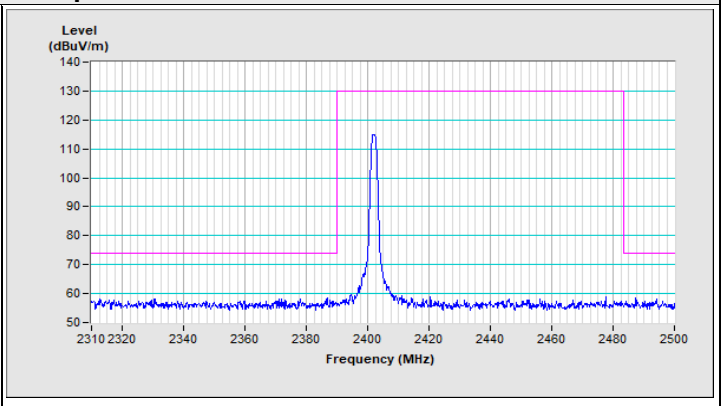
1MBaud PHY with 1Mbps Channel 39	
	
Horizontal (Peak)	Vertical (Peak)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

1MBaud PHY with 125kbps Channel 0

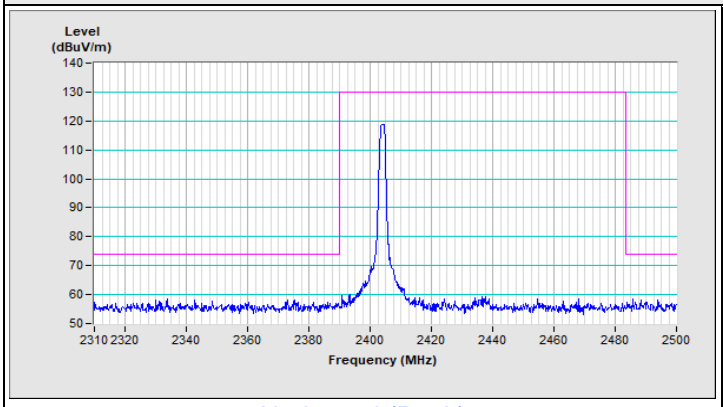


Horizontal (Peak)

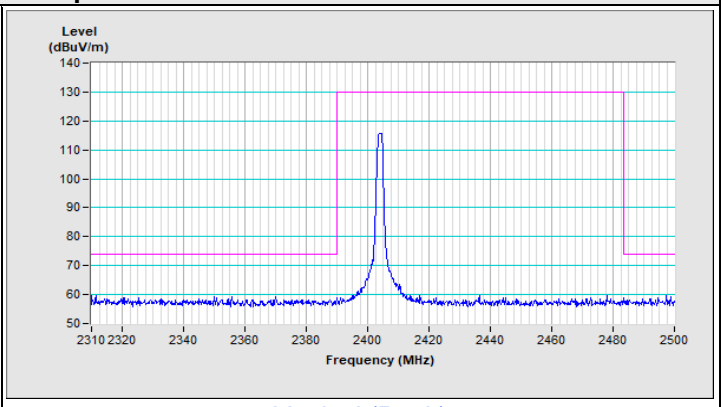


Vertical (Peak)

1MBaud PHY with 125kbps Channel 1

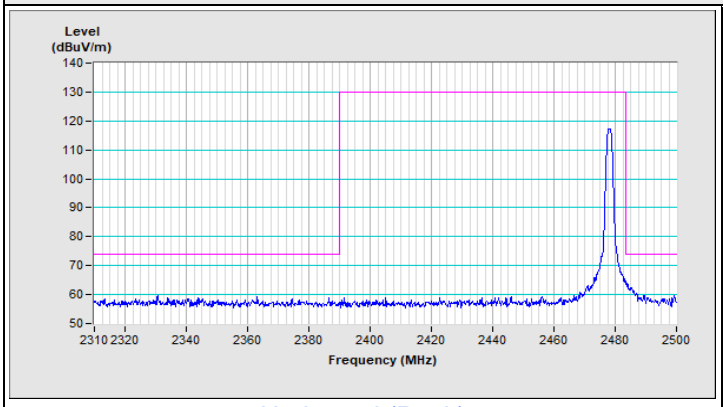


Horizontal (Peak)

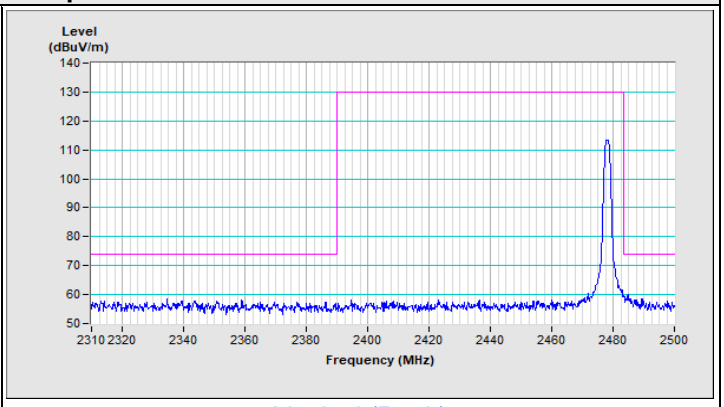


Vertical (Peak)

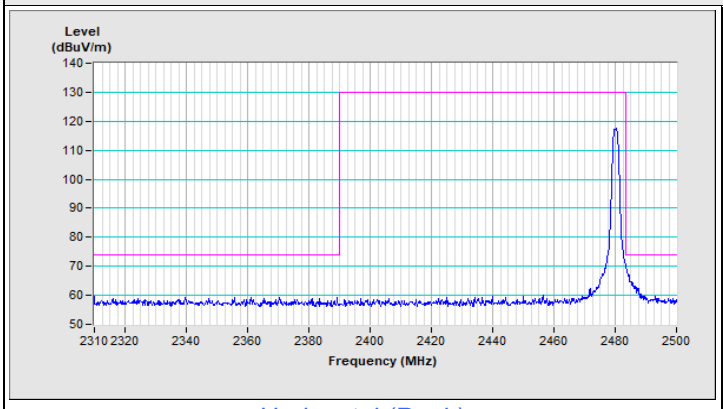
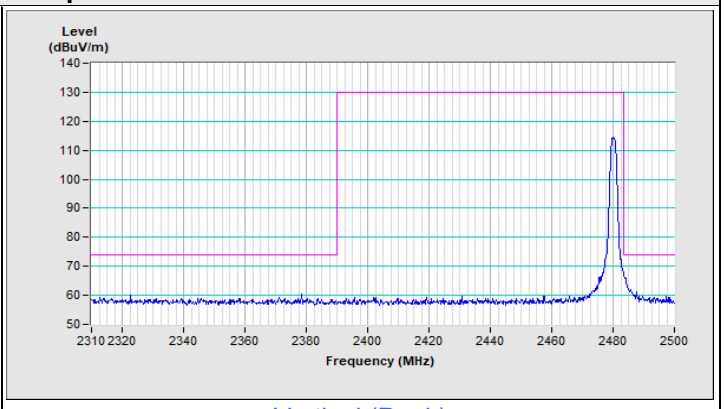
1MBaud PHY with 125kbps Channel 38



Horizontal (Peak)

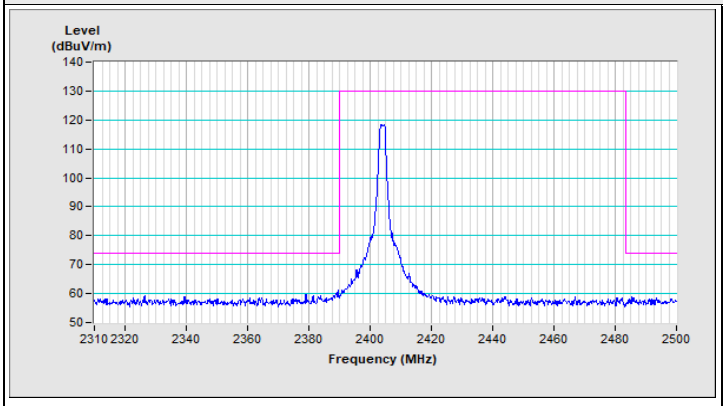


Vertical (Peak)

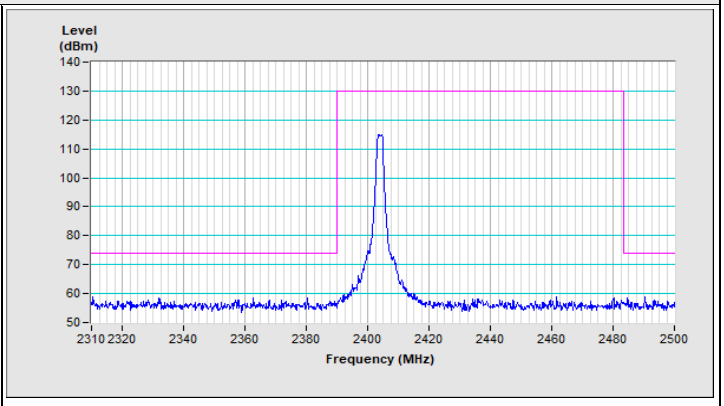
1MBaud PHY with 125kbps Channel 39	
	
Horizontal (Peak)	Vertical (Peak)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

2MBaud PHY Channel 1

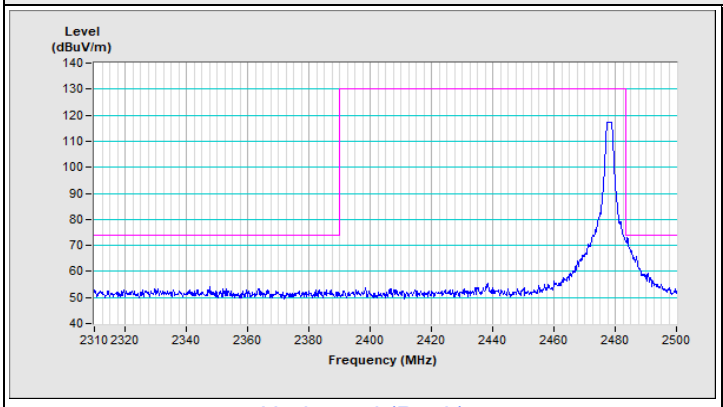


Horizontal (Peak)

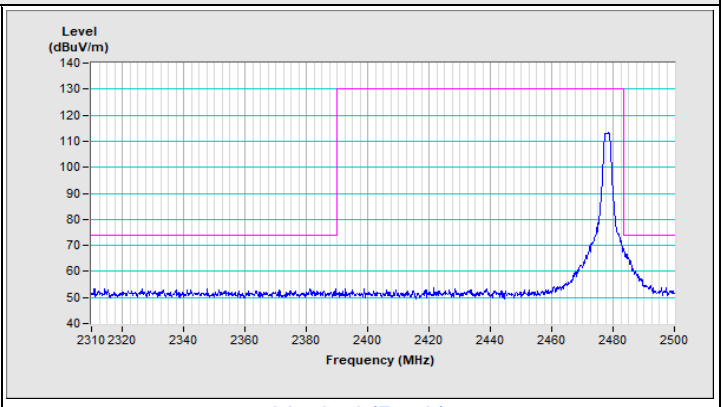


Vertical (Peak)

2MBaud PHY Channel 38



Horizontal (Peak)



Vertical (Peak)

Mode B

RF Mode	1MBaud PHY with 1Mbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	59.3 PK	74.0	-14.7	2.75 H	289	25.2	34.1
2	2390.00	48.4 AV	54.0	-5.6	2.75 H	289	14.3	34.1
3	*2402.00	116.2 PK			2.75 H	289	82.1	34.1
4	*2402.00	81.1 AV			2.75 H	289	47.0	34.1
5	4804.00	53.3 PK	74.0	-20.7	2.51 H	273	43.2	10.1
6	4804.00	18.2 AV	54.0	-35.8	2.51 H	273	8.1	10.1
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	2390.00	59.1 PK	74.0	-14.9	3.80 V	187	25.0	34.1
2	2390.00	47.5 AV	54.0	-6.5	3.80 V	187	13.4	34.1
3	*2402.00	113.3 PK			3.80 V	187	79.2	34.1
4	*2402.00	78.2 AV			3.80 V	187	44.1	34.1
5	4804.00	52.3 PK	74.0	-21.7	2.83 V	90	42.2	10.1
6	4804.00	17.2 AV	54.0	-36.8	2.83 V	90	7.1	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(1.75 ms / 100 ms) = -35.1 dB

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	2390.00	59.7 PK	74.0	-14.3	2.52 H	53	25.6	34.1
2	2390.00	49.2 AV	54.0	-4.8	2.52 H	53	15.1	34.1
3	*2404.00	116.1 PK			2.52 H	53	82.0	34.1
4	*2404.00	115.1 AV			2.52 H	53	81.0	34.1
5	4808.00	50.9 PK	74.0	-23.1	2.42 H	273	40.8	10.1
6	4808.00	39.4 AV	54.0	-14.6	2.42 H	273	29.3	10.1
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	2390.00	59.6 PK	74.0	-14.4	3.53 V	207	25.5	34.1
2	2390.00	48.9 AV	54.0	-5.1	3.53 V	207	14.8	34.1
3	*2404.00	114.2 PK			3.53 V	207	80.1	34.1
4	*2404.00	113.2 AV			3.53 V	207	79.1	34.1
5	4808.00	50.8 PK	74.0	-23.2	2.88 V	96	40.7	10.1
6	4808.00	39.3 AV	54.0	-14.7	2.88 V	96	29.2	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	**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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2440.00	115.0 PK			2.47 H	89	81.0	34.0
2	*2440.00	114.0 AV			2.47 H	89	80.0	34.0
3	4880.00	51.6 PK	74.0	-22.4	2.46 H	276	41.1	10.5
4	4880.00	39.7 AV	54.0	-14.3	2.46 H	276	29.2	10.5
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	*2440.00	114.3 PK			3.42 V	209	80.3	34.0
2	*2440.00	113.0 AV			3.42 V	209	79.0	34.0
3	4880.00	51.3 PK	74.0	-22.7	2.88 V	96	40.8	10.5
4	4880.00	39.5 AV	54.0	-14.5	2.88 V	96	29.0	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2478.00	117.0 PK			2.35 H	91	82.9	34.1
2	*2478.00	116.0 AV			2.35 H	91	81.9	34.1
3	2483.50	63.7 PK	74.0	-10.3	2.35 H	91	29.6	34.1
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**2.35 H**	**91**	**19.8**	**34.1**
5	4956.00	52.0 PK	74.0	-22.0	2.43 H	272	40.9	11.1
6	4956.00	40.3 AV	54.0	-13.7	2.43 H	272	29.2	11.1
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	*2478.00	112.7 PK			3.33 V	213	78.6	34.1
2	*2478.00	111.2 AV			3.33 V	213	77.1	34.1
3	2483.50	62.8 PK	74.0	-11.2	3.33 V	213	28.7	34.1
4	2483.50	51.7 AV	54.0	-2.3	3.33 V	213	17.6	34.1
5	4956.00	51.8 PK	74.0	-22.2	2.84 V	88	40.7	11.1
6	4956.00	40.1 AV	54.0	-13.9	2.84 V	88	29.0	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 1Mbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2480.00	118.6 PK			2.92 H	276	84.5	34.1
2	*2480.00	83.5 AV			2.92 H	276	49.4	34.1
3	2483.50	69.7 PK	74.0	-4.3	2.92 H	276	57.5	12.2
4	2483.50	34.6 AV	54.0	-19.4	2.92 H	276	22.4	12.2
5	4960.00	53.8 PK	74.0	-20.2	2.67 H	277	42.7	11.1
6	4960.00	18.7 AV	54.0	-35.3	2.67 H	277	7.6	11.1
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	*2480.00	116.0 PK			3.76 V	185	81.9	34.1
2	*2480.00	80.9 AV			3.76 V	185	46.8	34.1
3	2483.50	68.5 PK	74.0	-5.5	3.76 V	185	56.3	12.2
4	2483.50	33.4 AV	54.0	-20.6	3.76 V	185	21.2	12.2
5	4960.00	52.9 PK	74.0	-21.1	2.92 V	93	41.8	11.1
6	4960.00	17.8 AV	54.0	-36.2	2.92 V	93	6.7	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(1.75 ms / 100 ms) = -35.1 dB

RF Mode	1MBaud PHY with 125kbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	2390.00	58.8 PK	74.0	-15.2	3.95 H	179	24.7	34.1
2	2390.00	47.4 AV	54.0	-6.6	3.95 H	179	13.3	34.1
3	*2402.00	113.1 PK			3.95 H	179	79.0	34.1
4	*2402.00	85.6 AV			3.95 H	179	51.5	34.1
5	4804.00	52.1 PK	74.0	-21.9	2.77 H	72	42.0	10.1
6	4804.00	24.6 AV	54.0	-29.4	2.77 H	72	14.5	10.1
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	2390.00	58.8 PK	74.0	-15.2	3.95 V	179	24.7	34.1
2	2390.00	47.4 AV	54.0	-6.6	3.95 V	179	13.3	34.1
3	*2402.00	113.1 PK			3.95 V	179	79.0	34.1
4	*2402.00	85.6 AV			3.95 V	179	51.5	34.1
5	4804.00	52.1 PK	74.0	-21.9	2.77 V	72	42.0	10.1
6	4804.00	24.6 AV	54.0	-29.4	2.77 V	72	14.5	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(4.2 ms / 100 ms) = -27.5 dB

RF Mode	1MBaud PHY with 125kbps	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	2390.00	59.9 PK	74.0	-14.1	2.52 H	51	25.8	34.1
2	2390.00	49.1 AV	54.0	-4.9	2.52 H	51	15.0	34.1
3	*2404.00	115.9 PK			2.52 H	51	81.8	34.1
4	*2404.00	114.9 AV			2.52 H	51	80.8	34.1
5	4824.00	51.1 PK	74.0	-22.9	2.44 H	275	40.8	10.3
6	4824.00	39.5 AV	54.0	-14.5	2.44 H	275	29.2	10.3
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	2390.00	59.7 PK	74.0	-14.3	3.55 V	213	25.6	34.1
2	2390.00	49.0 AV	54.0	-5.0	3.55 V	213	14.9	34.1
3	*2404.00	113.9 PK			3.55 V	213	79.8	34.1
4	*2404.00	112.7 AV			3.55 V	213	78.6	34.1
5	4824.00	50.9 PK	74.0	-23.1	2.92 V	95	40.6	10.3
6	4824.00	39.3 AV	54.0	-14.7	2.92 V	95	29.0	10.3

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2440.00	115.0 PK			2.46 H	54	81.0	34.0
2	*2440.00	113.8 AV			2.46 H	54	79.8	34.0
3	4880.00	52.3 PK	74.0	-21.7	2.50 H	274	41.8	10.5
4	4880.00	39.7 AV	54.0	-14.3	2.50 H	274	29.2	10.5
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	*2440.00	114.1 PK			3.35 V	210	80.1	34.0
2	*2440.00	113.0 AV			3.35 V	210	79.0	34.0
3	4880.00	52.0 PK	74.0	-22.0	2.84 V	96	41.5	10.5
4	4880.00	39.5 AV	54.0	-14.5	2.84 V	96	29.0	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2478.00	116.8 PK			2.37 H	94	82.7	34.1
2	*2478.00	115.7 AV			2.37 H	94	81.6	34.1
3	2483.50	64.1 PK	74.0	-9.9	2.37 H	94	30.0	34.1
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**2.37 H**	**94**	**19.8**	**34.1**
5	4956.00	52.3 PK	74.0	-21.7	2.47 H	277	41.2	11.1
6	4956.00	40.3 AV	54.0	-13.7	2.47 H	277	29.2	11.1
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	*2478.00	112.7 PK			3.28 V	215	78.6	34.1
2	*2478.00	111.6 AV			3.28 V	215	77.5	34.1
3	2483.50	61.9 PK	74.0	-12.1	3.28 V	215	27.8	34.1
4	2483.50	52.1 AV	54.0	-1.9	3.28 V	215	18.0	34.1
5	4956.00	51.9 PK	74.0	-22.1	2.87 V	94	40.8	11.1
6	4956.00	40.2 AV	54.0	-13.8	2.87 V	94	29.1	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	1MBaud PHY with 125kbps	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Adair Peng		

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	*2480.00	118.7 PK			2.91 H	275	84.6	34.1
2	*2480.00	91.2 AV			2.91 H	275	57.1	34.1
3	2483.50	71.5 PK	74.0	-2.5	2.91 H	275	59.3	12.2
4	2483.50	44.0 AV	54.0	-10.0	2.91 H	275	31.8	12.2
5	4960.00	53.3 PK	74.0	-20.7	2.47 H	279	42.2	11.1
6	4960.00	25.8 AV	54.0	-28.2	2.47 H	279	14.7	11.1
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	*2480.00	116.1 PK			3.90 V	190	82.0	34.1
2	*2480.00	88.6 AV			3.90 V	190	54.5	34.1
3	2483.50	69.7 PK	74.0	-4.3	3.90 V	190	57.5	12.2
4	2483.50	42.2 AV	54.0	-11.8	3.90 V	190	30.0	12.2
5	4960.00	52.1 PK	74.0	-21.9	2.82 V	88	41.0	11.1
6	4960.00	24.6 AV	54.0	-29.4	2.82 V	88	13.5	11.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
   20 log(Duty cycle) = 20 log(4.2 ms / 100 ms) = -27.5 dB

RF Mode	2MBaud PHY	Channel	CH 1：2404 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	2390.00	60.0 PK	74.0	-14.0	2.56 H	49	25.9	34.1
2	2390.00	49.0 AV	54.0	-5.0	2.56 H	49	14.9	34.1
3	*2404.00	115.7 PK			2.56 H	49	81.6	34.1
4	*2404.00	112.9 AV			2.56 H	49	78.8	34.1
5	4808.00	50.9 PK	74.0	-23.1	2.45 H	279	40.8	10.1
6	4808.00	39.3 AV	54.0	-14.7	2.45 H	279	29.2	10.1
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	2390.00	59.7 PK	74.0	-14.3	3.12 V	212	25.6	34.1
2	2390.00	48.9 AV	54.0	-5.1	3.12 V	212	14.8	34.1
3	*2404.00	112.5 PK			3.12 V	212	78.4	34.1
4	*2404.00	109.6 AV			3.12 V	212	75.5	34.1
5	4808.00	50.7 PK	74.0	-23.3	2.88 V	96	40.6	10.1
6	4808.00	39.2 AV	54.0	-14.8	2.88 V	96	29.1	10.1

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	2MBaud PHY	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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2440.00	114.6 PK			2.44 H	55	80.6	34.0
2	*2440.00	112.2 AV			2.44 H	55	78.2	34.0
3	4880.00	51.7 PK	74.0	-22.3	2.47 H	276	41.2	10.5
4	4880.00	39.8 AV	54.0	-14.2	2.47 H	276	29.3	10.5
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	*2440.00	114.2 PK			3.37 V	209	80.2	34.0
2	*2440.00	111.5 AV			3.37 V	209	77.5	34.0
3	4880.00	51.3 PK	74.0	-22.7	2.89 V	92	40.8	10.5
4	4880.00	39.7 AV	54.0	-14.3	2.89 V	92	29.2	10.5

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	2MBaud PHY	Channel	CH 38：2478 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 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67 % RH
Tested By	Rex Wang		

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	*2478.00	115.1 PK			2.45 H	58	81.0	34.1
2	*2478.00	112.2 AV			2.45 H	58	78.1	34.1
3	2483.50	64.0 PK	74.0	-10.0	2.45 H	58	29.9	34.1
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**2.45 H**	**58**	**19.8**	**34.1**
5	4956.00	52.0 PK	74.0	-22.0	2.43 H	274	40.9	11.1
6	4956.00	40.4 AV	54.0	-13.6	2.43 H	274	29.3	11.1
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	*2478.00	112.6 PK			3.35 V	214	78.5	34.1
2	*2478.00	109.9 AV			3.35 V	214	75.8	34.1
3	2483.50	62.9 PK	74.0	-11.1	3.35 V	214	28.8	34.1
4	2483.50	53.1 AV	54.0	-0.9	3.35 V	214	19.0	34.1
5	4956.00	51.9 PK	74.0	-22.1	2.84 V	99	40.8	11.1
6	4956.00	40.3 AV	54.0	-13.7	2.84 V	99	29.2	11.1

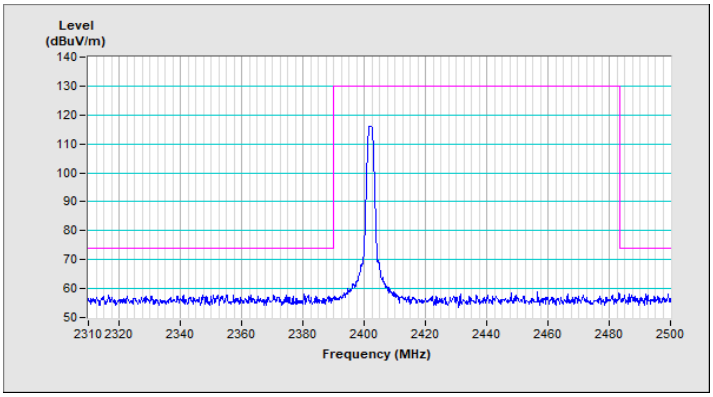
Remarks:

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

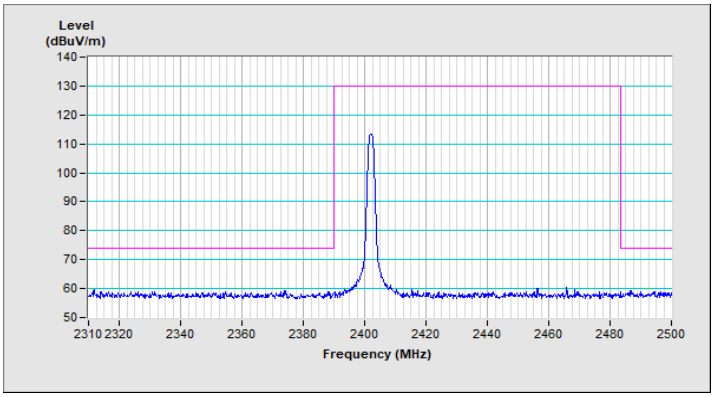
Mode B_Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

1MBaud PHY with 1Mbps Channel 0

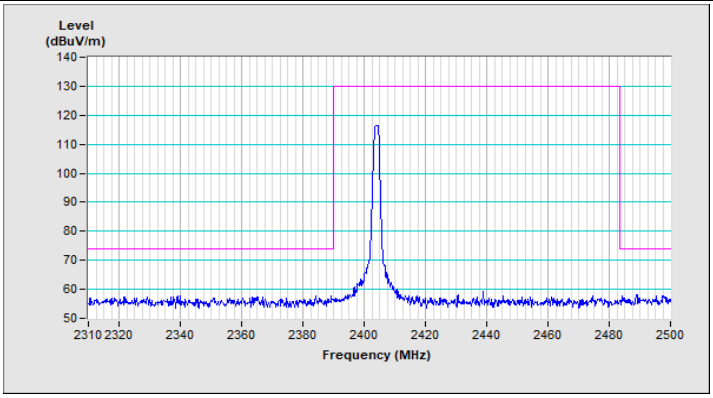


Horizontal (Peak)

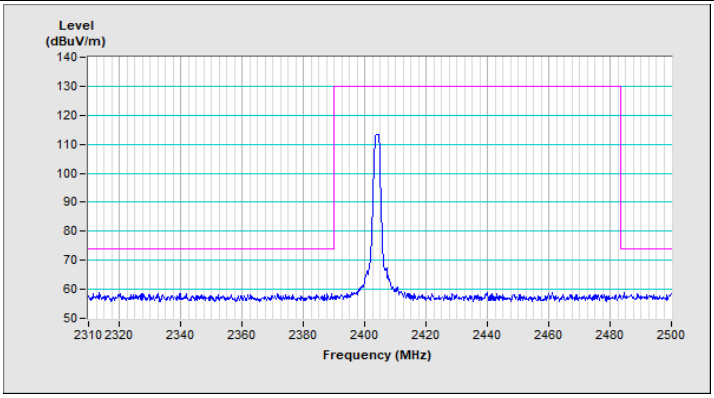


Vertical (Peak)

1MBaud PHY with 1Mbps Channel 1

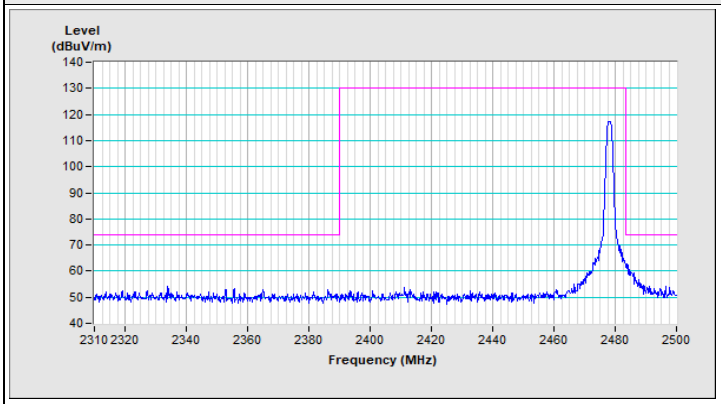


Horizontal (Peak)

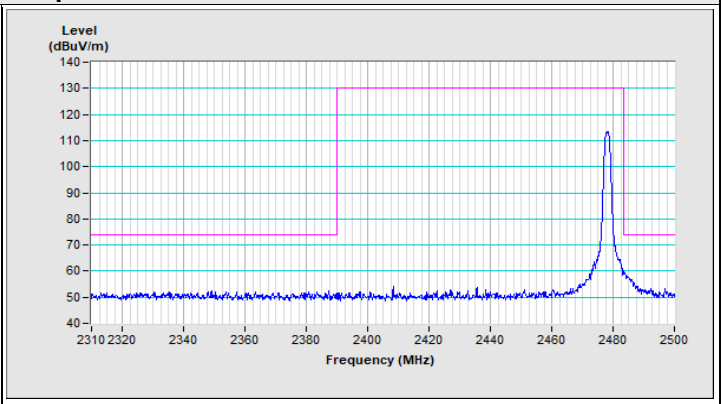


Vertical (Peak)

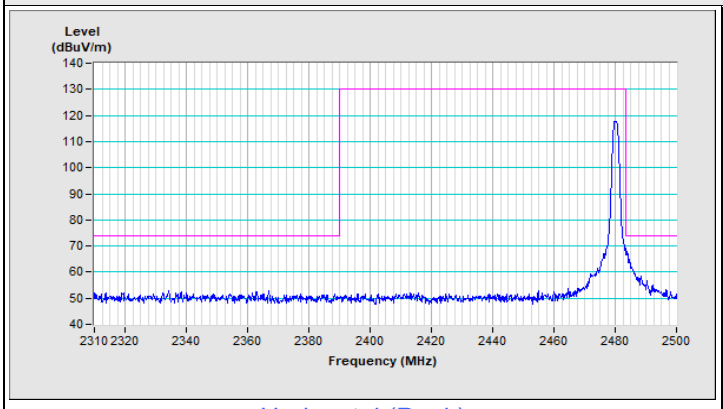
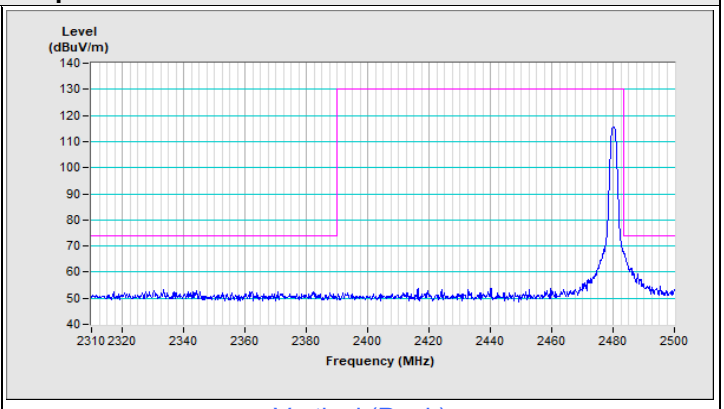
1MBaud PHY with 1Mbps Channel 38



Horizontal (Peak)

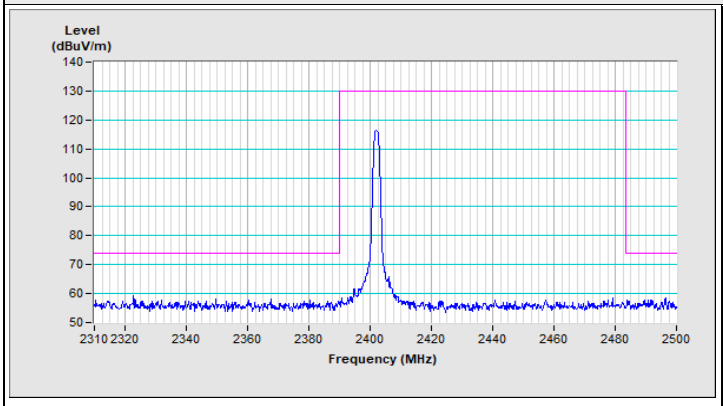


Vertical (Peak)

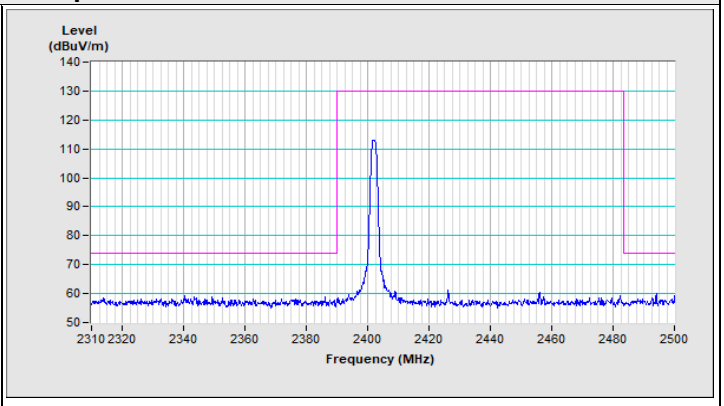
1MBaud PHY with 1Mbps Channel 39	
	
Horizontal (Peak)	Vertical (Peak)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

1MBaud PHY with 125kbps Channel 0

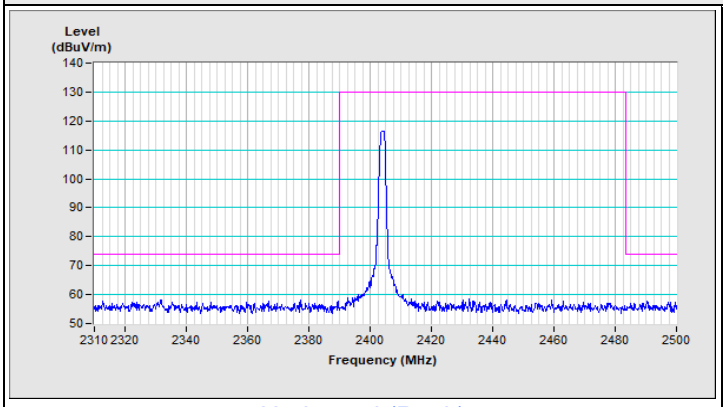


Horizontal (Peak)

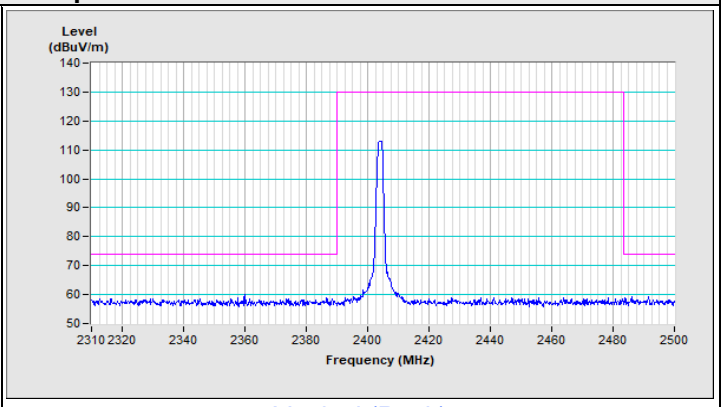


Vertical (Peak)

1MBaud PHY with 125kbps Channel 1

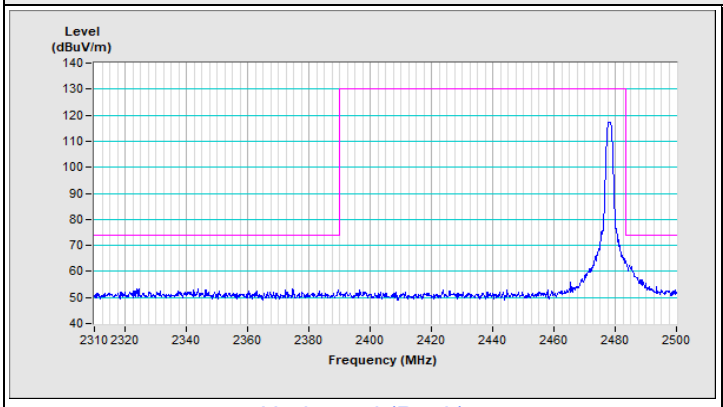


Horizontal (Peak)

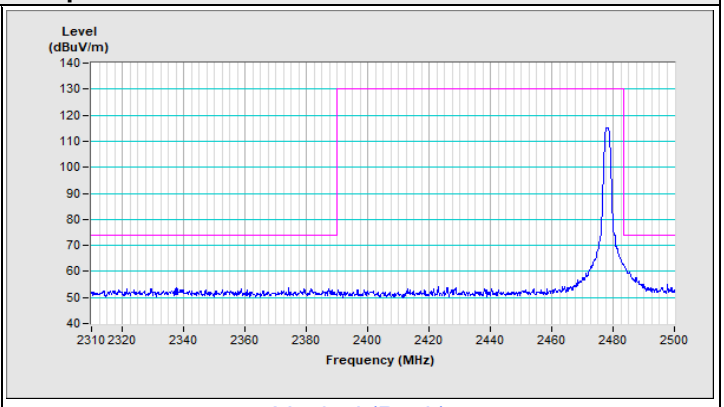


Vertical (Peak)

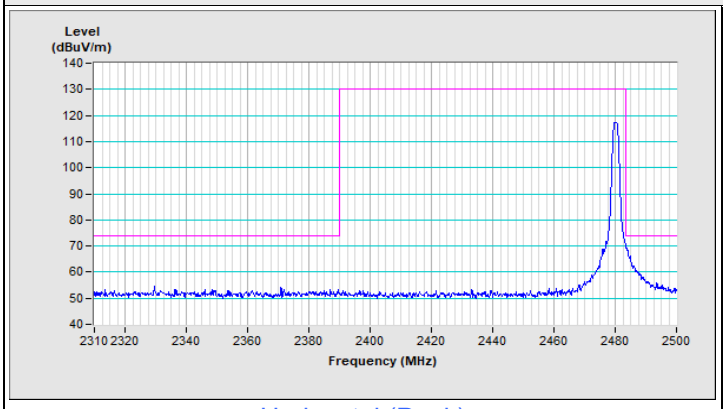
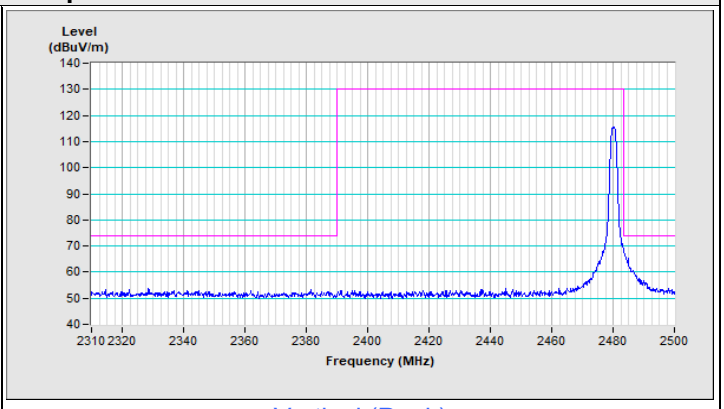
1MBaud PHY with 125kbps Channel 38



Horizontal (Peak)

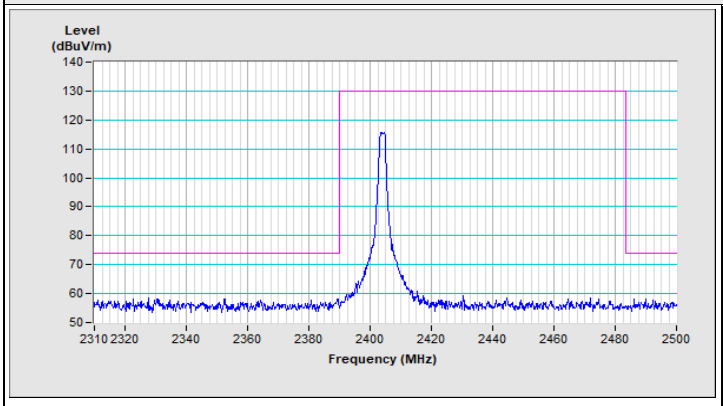


Vertical (Peak)

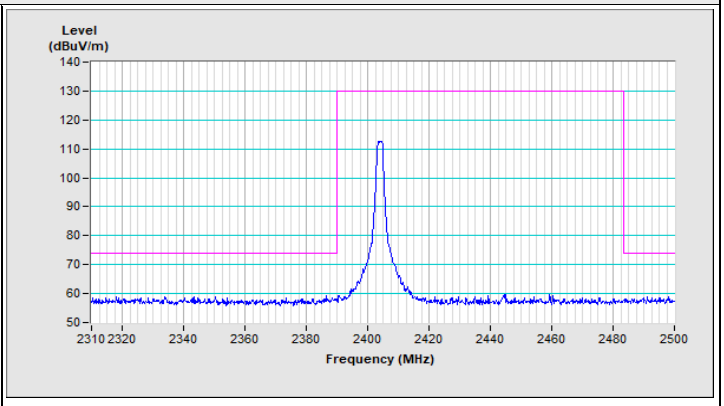
1MBaud PHY with 125kbps Channel 39	
	
Horizontal (Peak)	Vertical (Peak)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

2MBaud PHY Channel 1

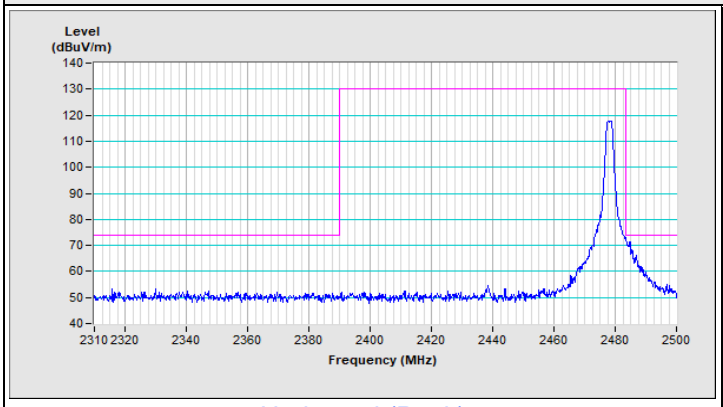


Horizontal (Peak)

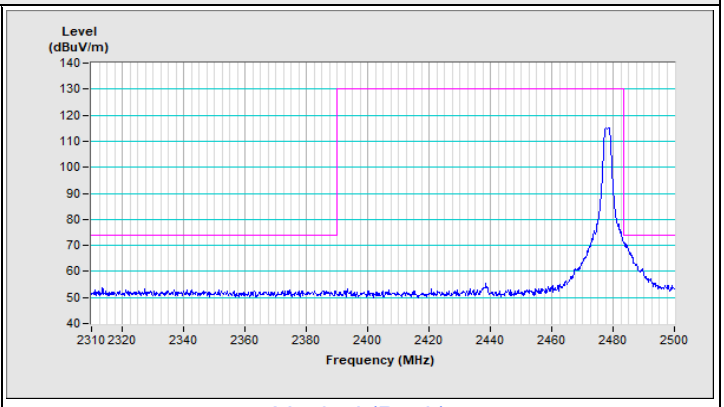


Vertical (Peak)

2MBaud PHY Channel 38



Horizontal (Peak)



Vertical (Peak)

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:

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

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