

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: EN 300 328 V2.2.2 (2019-07)

Report No.: REBARR-WTW-P23110067A-4

Product: 2TX 11be (WiFi7) BW160 + BT/BLE Combo Card

Brand: MediaTek

Model No.: MT7925B14L

Received Date: 2023/12/6

Test Date: 2024/2/29 ~ 2024/4/10

Issued Date: 2024/4/26

Applicant: MediaTek Inc.

Address: No. 1, Dusing 1st Rd., Hsinchu Science Park, Hsinchu City, 30078 Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan

Approved by: Jeremy Lin, **Date:** 2024/4/26
Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist



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Release Control Record

Issue No.	Description	Date Issued
REBARR-WTW-P23110067A-4	Original release.	2024/4/26

1 Certificate

Product: 2TX 11be (WiFi7) BW160 + BT/BLE Combo Card

Brand: MediaTek

Test Model: MT7925B14L

Sample Status: Engineering sample

Applicant: MediaTek Inc.

Test Date: 2024/2/29 ~ 2024/4/10

Standard: EN 300 328 V2.2.2 (2019-07)

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

EN 300 328 V2.2.2		
Clause	Test Item	Result
4.3.1.2	RF Output Power	Pass
4.3.1.3	Duty cycle, Tx-sequence, Tx-gap	Not Applicable
4.3.1.4	Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	Pass
4.3.1.5	Hopping Frequency Separation	Pass
4.3.1.6	Medium Utilization (MU) Factor	Not Applicable
4.3.1.7	Adaptivity	Refer to Note 2
4.3.1.8	Occupied Channel Bandwidth	Pass
4.3.1.9	Transmitter Unwanted Emissions in the out-of-band Domain	Pass
4.3.1.10	Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz	Pass
4.3.1.10	Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz	Pass
4.3.1.11	Receiver Spurious Emissions up to 1 GHz	Pass
4.3.1.11	Receiver Spurious Emissions above 1 GHz	Pass
4.3.1.12	Receiver Blocking	Refer to Note 1
4.3.1.13	Geo-location capability	Not Applicable

Notes:

1. Receiver blocking testing data please refer to BV CPS report no.: REBARR-WTW-P23110067-5.
2. These requirements do not apply for equipment with a maximum declared RF Output power of less than 10 dBm EIRP or for equipment when operating in a mode where the RF Output power is less than 10 dBm EIRP.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in ETSI TR 100 028-1 and ETSI TR 100 028-2:

Parameter	Uncertainty (±)
Occupied Channel Bandwidth	$1.132 \times 10^{-4} \%$
RF output power, conducted	1.371 dB
Power Spectral Density, conducted	1.371 dB
Unwanted Emissions, conducted	1.34 dB
All emissions, radiated	2.855 dB
Temperature	0.59 °C
Supply voltages	0.3%
Time	2.53%

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	2TX 11be (WiFi7) BW160 + BT/BLE Combo Card
Brand	MediaTek
Test Model	MT7925B14L
Status of EUT	Engineering sample
Power Supply Rating	3.3Vdc from host equipment
Temperature Operating Range	-10 °C ~ 70 °C
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8DPSK
Modulation Technology	FHSS
Transfer Rate	Up to 3 Mbps
Operating Frequency	2.402 GHz ~ 2.48 GHz
Number of Channel	79
Output Power (e.i.r.p.)	3.35 dBm
EUT Category	Adaptive Equipment without the possibility to switch to a non-adaptive mode

Note:

1. This report is issued as a supplementary report to the original BV CPS report no.: REBARR-WTW-P23110067-5. The difference is increasing conducted power for dynamic mode. Therefore, all tests test had been re-tested except receiver blocking test. Other testing data refer to original report.
2. There are Bluetooth and WLAN (2.4GHz & 5GHz & 6GHz) technology used for the EUT.
3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 5GHz (2TX)	Bluetooth
2	WLAN 6GHz (2TX)	Bluetooth
3	WLAN 2.4GHz (1TX)	WLAN 5GHz (1TX)
4	WLAN 2.4GHz (1TX)	WLAN 6GHz (1TX)
5	WLAN 5GHz (1TX)	WLAN 6GHz (1TX)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	Chain 0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)
2	Chain 0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
3	Chain 0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
4 Dynamic Gain	Chain 0	Declared antenna	-	-10.00 -9.92 -10.02 -16.52	2.4~2.4835 5.15~5.725 5.725~5.85 5.925~7.125	PIFA	i-pex(MHF)
	Chain 1	Declared antenna	-	-10.00 -9.92 -10.02 -16.52	2.4~2.4835 5.15~5.725 5.725~5.85 5.925~7.125	PIFA	i-pex(MHF)

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

3.3 Channel List

79 channels are provided for BT-EDR:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

3.4 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. 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: X-axis

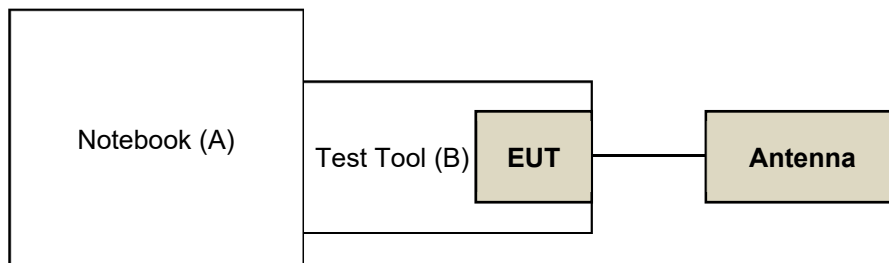
Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	B	Hopping mode	GFSK	DH5
			8DPSK	3DH5
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	A	Hopping mode	GFSK	DH5
			8DPSK	3DH5
Hopping Frequency Separation	A	Hopping mode	GFSK	DH5
			8DPSK	3DH5
Occupied Channel Bandwidth / Transmitter Unwanted Emissions in the out-of-band Domain	A	0, 78	GFSK	DH5
			8DPSK	3DH5
Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz	A	0	GFSK	DH5
Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz	A	0, 78	GFSK	DH5
			8DPSK	3DH5
Receiver Spurious Emissions up to 1 GHz	A	0	-	-
Receiver Spurious Emissions above 1 GHz	A	0, 78	-	-
EUT Configure Mode:	A	Dynamic mode (EUT Maximum Conducted Power + Ant. 1)		
	B	Dynamic mode (EUT Maximum Conducted Power + Ant. 4)		

3.5 Test Program Used and Operation Descriptions

Controlling software Media Tek BT Tool.W2310 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.6 Connection Diagram of EUT and Peripheral Devices



3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Notebook	DELL	E5410	1HC2XM1	N/A	Provided by Lab
B	Test Tool	Mediatek	MTK1849	NA	NA	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
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2023/12/19	2024/12/18
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: 2024/2/29

4.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
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: 2024/2/29

4.3 Hopping Frequency Separation

Refer to section 4.2 to get information of the instruments.

4.4 Occupied Channel Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 Transmitter Unwanted Emissions in the out-of-band Domain

Refer to section 4.2 to get information of the instruments.

4.6 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-161	2023/10/17	2024/10/16
Preamplifier Agilent	8447D	2944A10634	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable Woken	8D-FB	Cable-RF2-01	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/10

4.7 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Horn Antenna ETS-Lindgren	3117	00034130	2023/11/12	2024/11/11
Preamplifier Agilent	8449B	3008A01976	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-RF2-03(246272/4)	2023/7/8	2024/7/7
RF Coaxial Cable INFINET	CA3501-3501- G.90(3m)&CA3501- 3501-F.90(2m)	INF090(3m)*2&TCF427S(2m)*1	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/10

4.8 Receiver Spurious Emissions up to 1 GHz

Refer to section 4.6 to get information of the instruments.

4.9 Receiver Spurious Emissions above 1 GHz

Refer to section 4.7 to get information of the instruments.

5 Limits of Test Items

5.1 RF Output Power

Condition	Frequency Band	Limit (e.i.r.p.)
Under all test conditions	2400 ~ 2483.5 MHz	20 dBm

5.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Accumulated Transmit Time	
Condition	Limit
Adaptive frequency hopping systems	≤ 400 ms

Frequency Occupation	
Condition	Limit
Adaptive frequency hopping systems	Option 1: Each hopping frequency of the hopping sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use.

Hopping Sequence(s)	
Condition	Limit
Adaptive frequency hopping systems	Operating frequency band ≥ 58.45 MHz. (Operating over a minimum of 70 % of the operating in the band 2400 MHz to 2483.5 MHz)
	≥ 15 hopping frequencies or 15 MHz/minimum Hopping Frequency Separation in MHz, whichever is the greater.

5.3 Hopping Frequency Separation

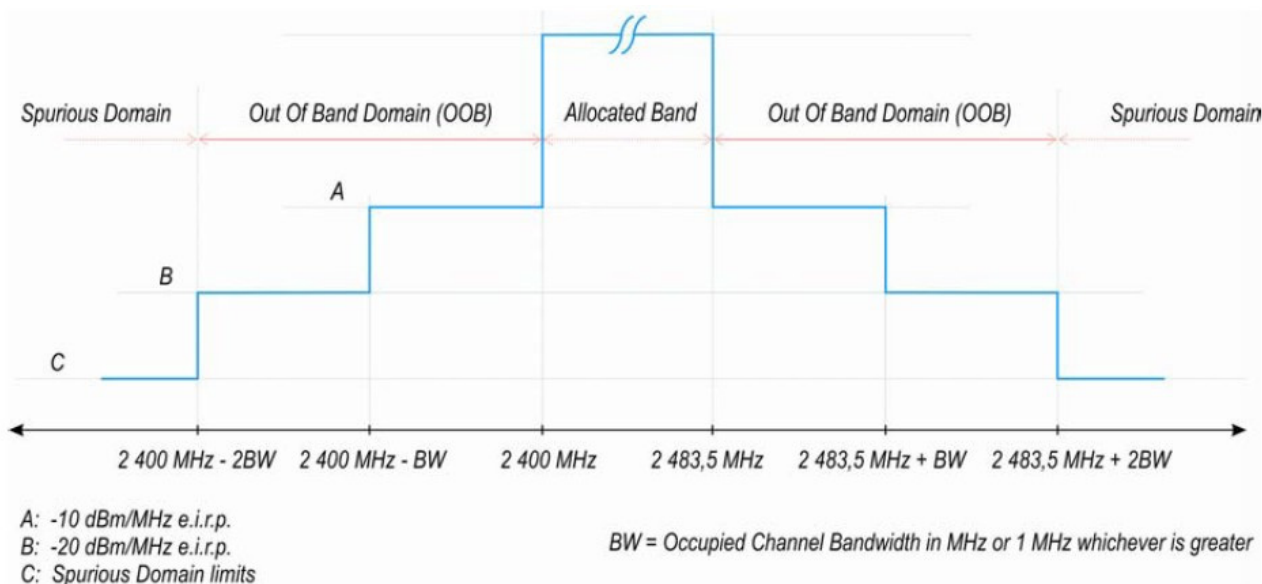
Condition	Limit
Adaptive frequency hopping systems	The minimum Hopping Frequency Separation shall be 100 kHz.

5.4 Occupied Channel Bandwidth

Condition		Limit
All types of equipment		Shall fall completely within the band 2400 to 2483.5 MHz.
Additional requirement	For non-adaptive non-FHSS system and e.i.r.p >10 dBm.	Less than 20 MHz
	For non-adaptive Frequency Hopping system and e.i.r.p >10 dBm.	Less than 5 MHz

5.5 Transmitter Unwanted Emissions in the out-of-band Domain

Condition	Limit
Under normal conditions	The transmitter unwanted emissions in the out-of-band domain shall not exceed the values provided by the mask in below figure.



5.6 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87.5 MHz	-36 dBm	100 kHz
87.5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 694 MHz	-54 dBm	100 kHz
694 MHz to 1 GHz	-36 dBm	100 kHz

Note: These limits are e.i.r.p. for emissions up to 1 GHz.

5.7 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
1 GHz to 12.75 GHz	-30 dBm	1 MHz

Note: These limits are e.i.r.p. for emissions above 1 GHz.

5.8 Receiver Spurious Emissions up to 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz

Note: These limits are e.i.r.p. for emissions up to 1 GHz.

5.9 Receiver Spurious Emissions above 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
1 GHz to 12.75 GHz	-47 dBm	1 MHz

Note: These limits are e.i.r.p. for emissions above 1 GHz.

6 Test Arrangements

6.1 RF Output Power

Test procedure refer to chapter 5.4.2 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Test procedure refer to chapter 5.4.4 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.3 Hopping Frequency Separation

Test procedure refer to chapter 5.4.5 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.4 Occupied Channel Bandwidth

Test procedure refer to chapter 5.4.7 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
---------------------------	-----------------------

6.5 Transmitter Unwanted Emissions in the out-of-band Domain

Test procedure refer to chapter 5.4.8 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.6 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Test procedure refer to chapter 5.4.9 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.7 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Test procedure refer to chapter 5.4.9 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.8 Receiver Spurious Emissions up to 1 GHz

Test procedure refer to chapter 5.4.10 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.9 Receiver Spurious Emissions above 1 GHz

Test procedure refer to chapter 5.4.10 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode B

GFSK

EIRP (dBm)			Limit (dBm)	Test Result
Extreme test conditions				
25 °C	-10 °C	70 °C		
3.12	3.35	2.84	20	Pass

8DPSK

EIRP (dBm)			Limit (dBm)	Test Result
Extreme test conditions				
25 °C	-10 °C	70 °C		
3.00	3.24	2.71	20	Pass

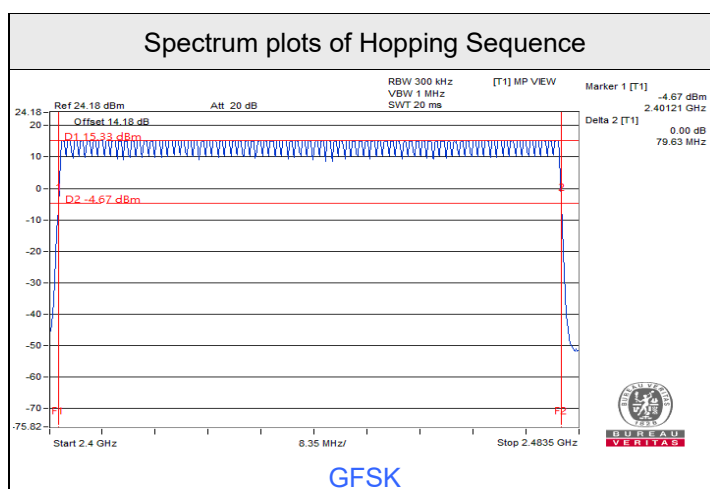
7.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyoung Wang
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Test Mode A

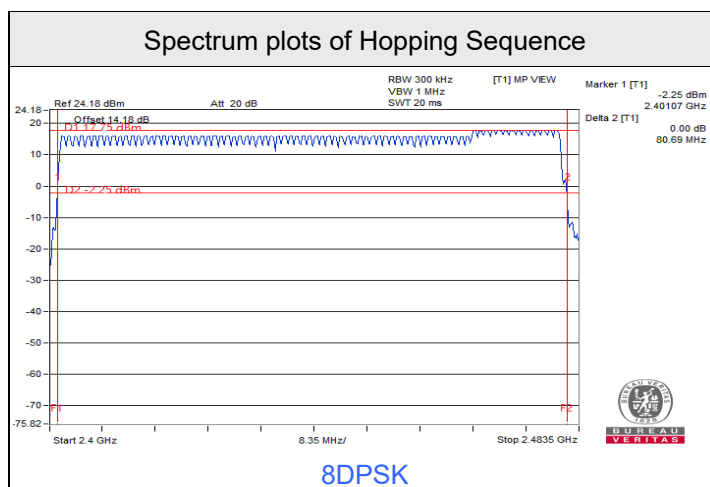
GFSK

Hopping Sequence				
Amount of Hopping frequency	Limit	Operating Frequency Band	Limit	Test Result
79	≥ 15 Hopping frequencies	79.63 MHz	≥ 58.45 MHz	Pass



8DPSK

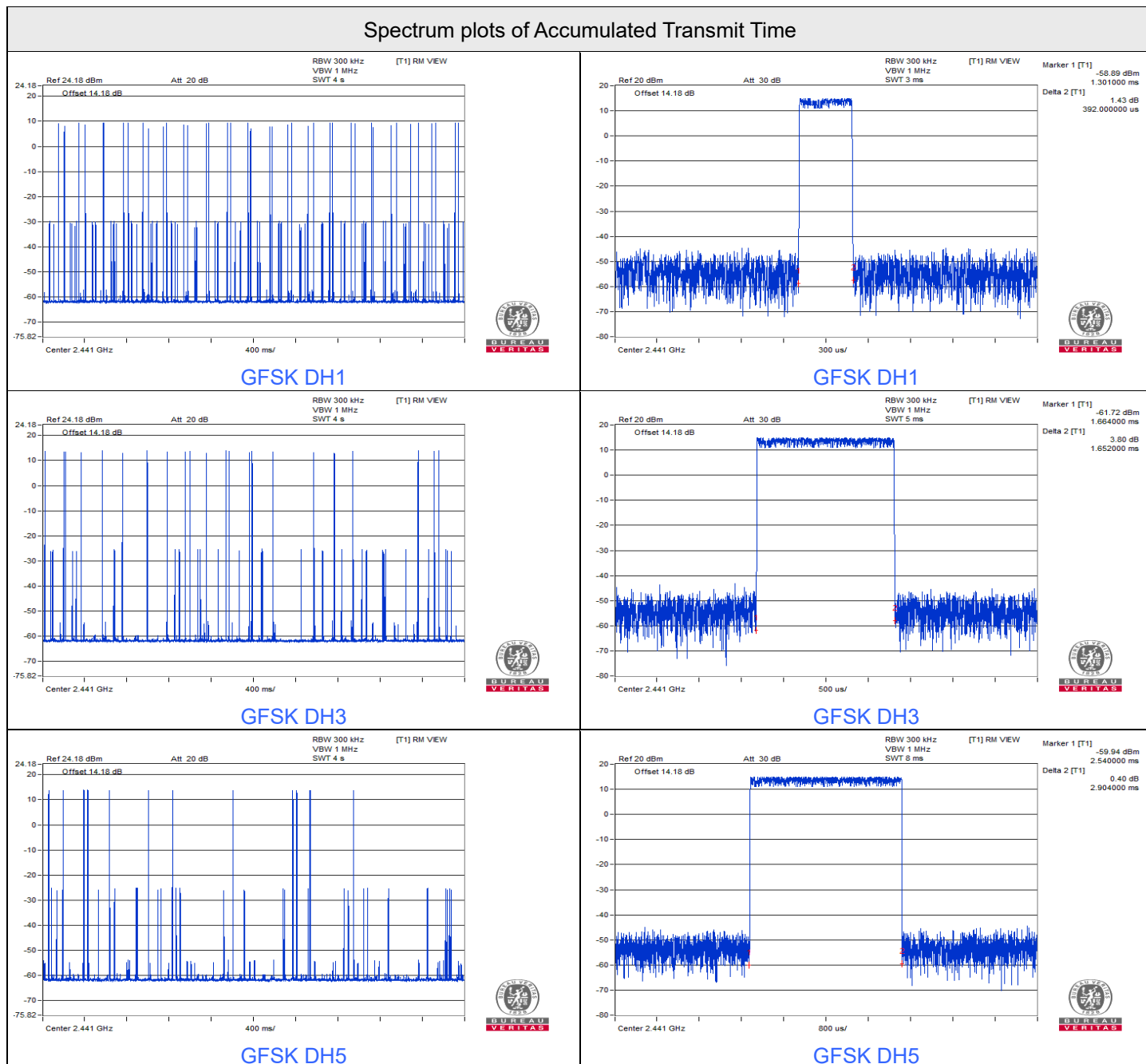
Hopping Sequence				
Amount of Hopping frequency	Limit	Operating Frequency Band	Limit	Test Result
79	≥ 15 Hopping frequencies	80.69 MHz	≥ 58.45 MHz	Pass



GFSK

Accumulated Transmit Time							
Mode	Minimum Number of Hopping Channel	NTP* (Sec)	Number of Hop in NTP*	Dwell Time per Hop (msec)	Dwell Time in NTP* (msec)	Limit (msec)	Test Result
DH1	79	31.6	316.0	0.392	123.8720	400	Pass
DH3	79	31.6	173.8	1.652	287.1176	400	Pass
DH5	79	31.6	94.8	2.904	275.2992	400	Pass

Note: NTP* is Number of transmission in a period (channel number x 0.4 sec)



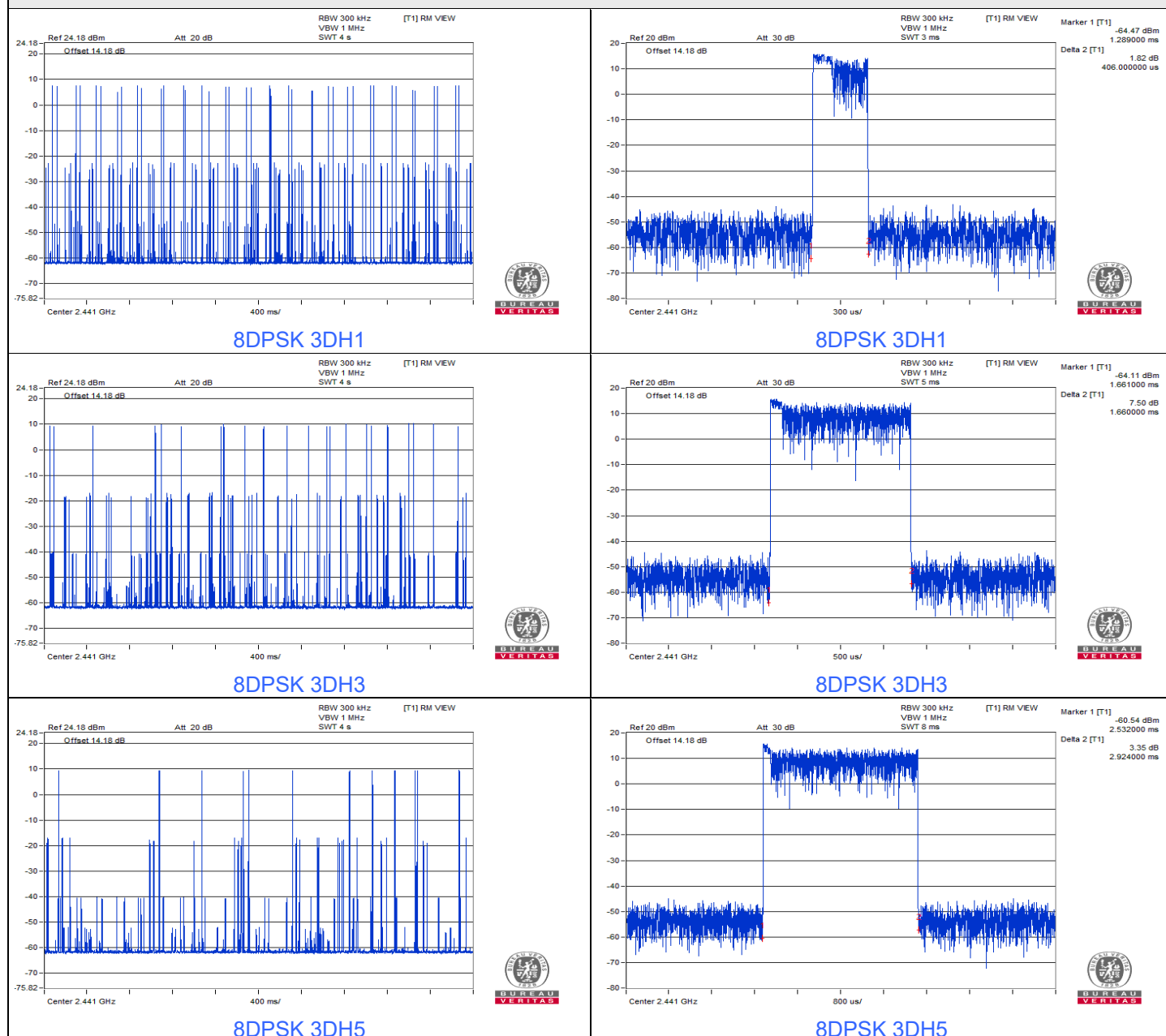
8DPSK

Accumulated Transmit Time

Mode	Minimum Number of Hopping Channel	NTP* (Sec)	Number of Hop in NTP*	Dwell Time per Hop (msec)	Dwell Time in NTP* (msec)	Limit (msec)	Test Result
3DH1	79	31.6	316.0	0.406	128.2960	400	Pass
3DH3	79	31.6	173.8	1.660	288.5080	400	Pass
3DH5	79	31.6	94.8	2.924	277.1952	400	Pass

Note: NTP* is Number of transmission in a period (channel number x 0.4 sec)

Spectrum plots of Accumulated Transmit Time

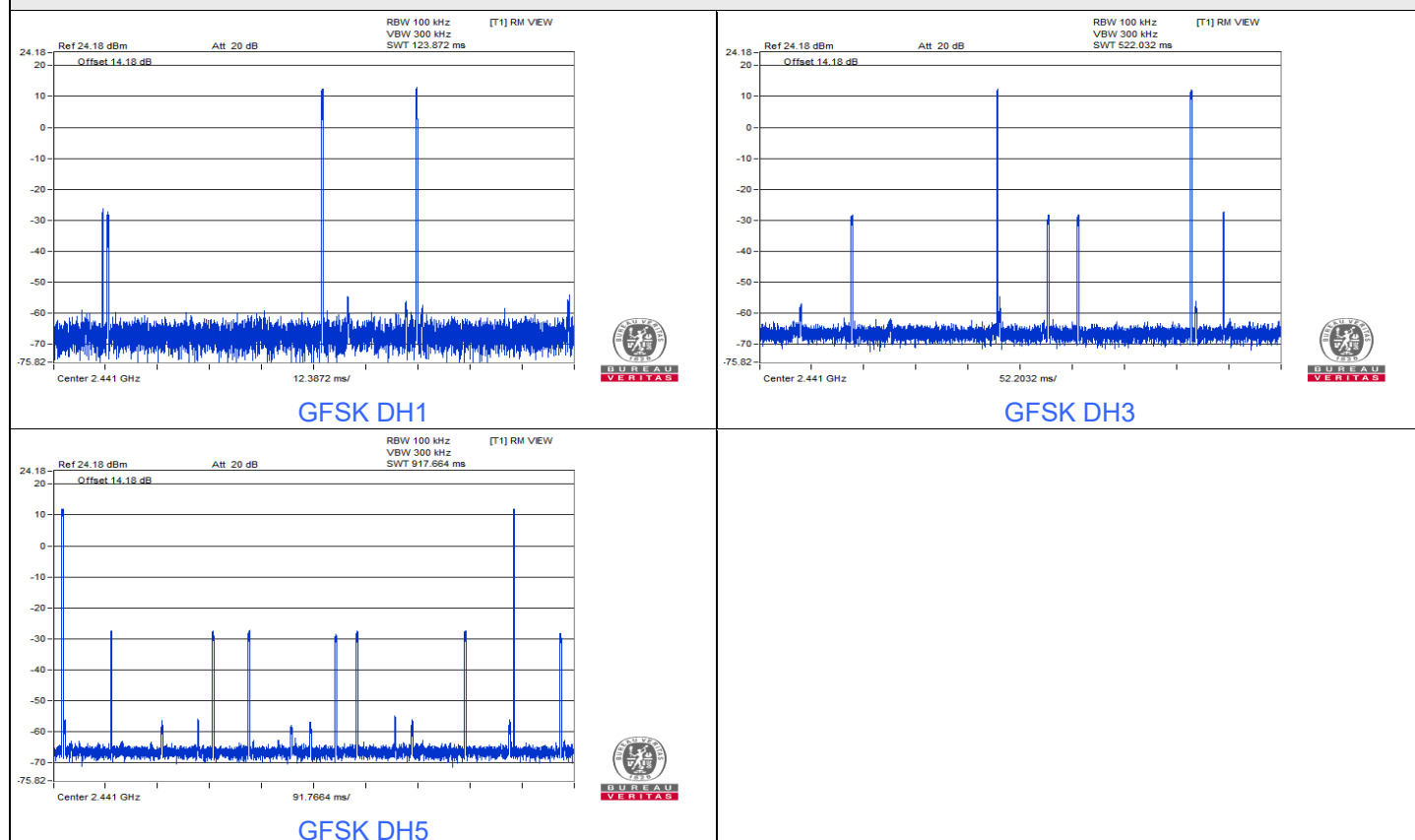


GFSK

Frequency Occupation							
Mode	Actual Number of Hopping Channel	Dwell Time per Hop (msec)	T_{FO}^* (msec)	Number of Hop in T_{FO}^*	Dwell Time in T_{FO}^*	Limit-Minimum number of Hopping in T_{FO}^*	Test Result
DH1	79	0.392	123.872	2	0.784	1	Pass
DH3	79	1.652	522.032	2	3.304	1	Pass
DH5	79	2.904	917.664	2	5.808	1	Pass

Note: T_{FO}^* is $4 \times \text{Dwell Time} \times \text{Actual number of hopping frequencies in use}$

Spectrum plots of Frequency Occupation

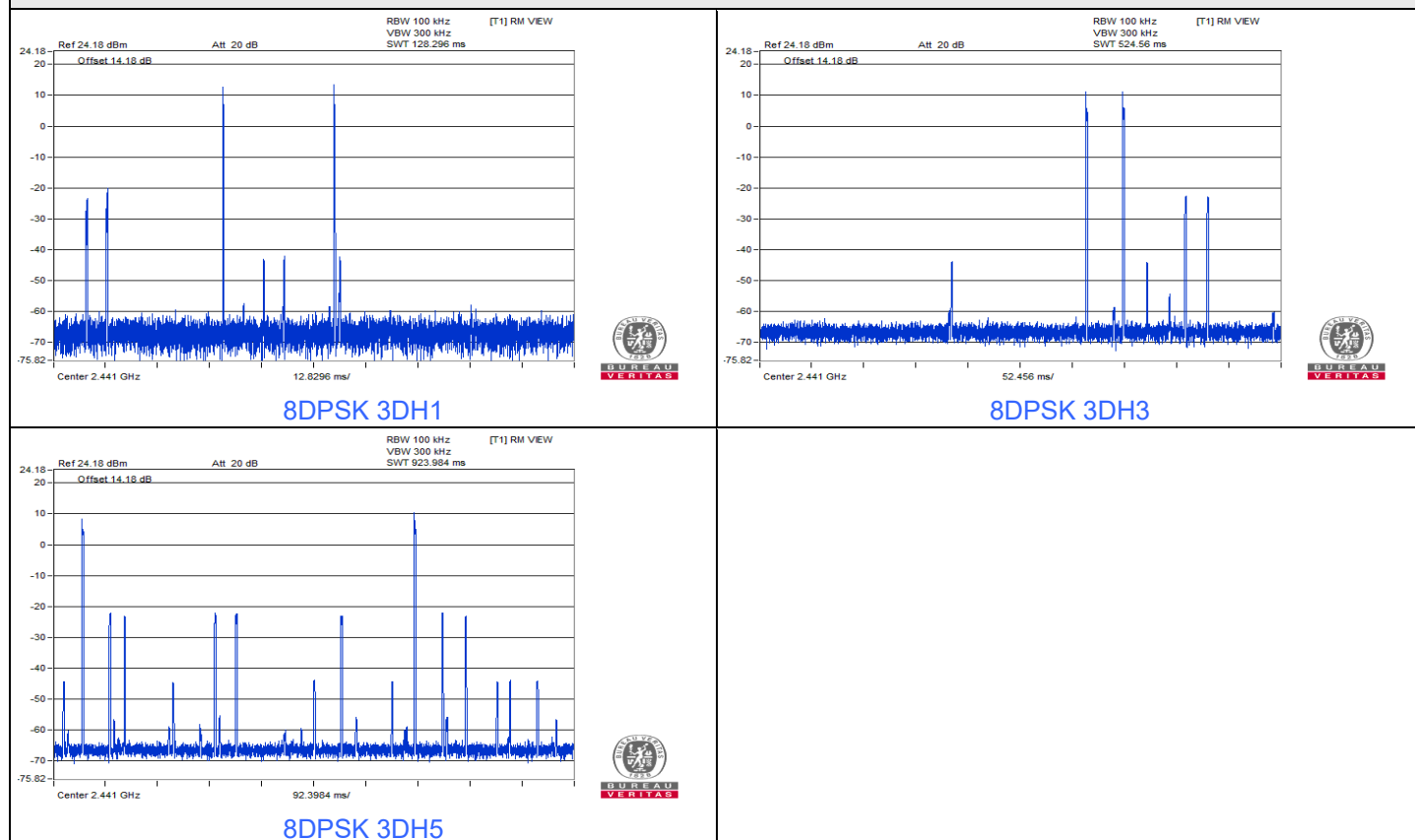


8DPSK

Frequency Occupation							
Mode	Actual Number of Hopping Channel	Dwell Time per Hop (msec)	T_{FO}^* (msec)	Number of Hop in T_{FO}^*	Dwell Time in T_{FO}^*	Limit-Minimum number of Hopping in T_{FO}^*	Test Result
3DH1	79	0.406	128.296	2	0.812	1	Pass
3DH3	79	1.660	524.560	2	3.320	1	Pass
3DH5	79	2.924	923.984	2	5.848	1	Pass

Note: T_{FO}^* is $4 \times \text{Dwell Time} \times \text{Actual number of hopping frequencies in use}$

Spectrum plots of Frequency Occupation



7.3 Hopping Frequency Separation

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyoung Wang
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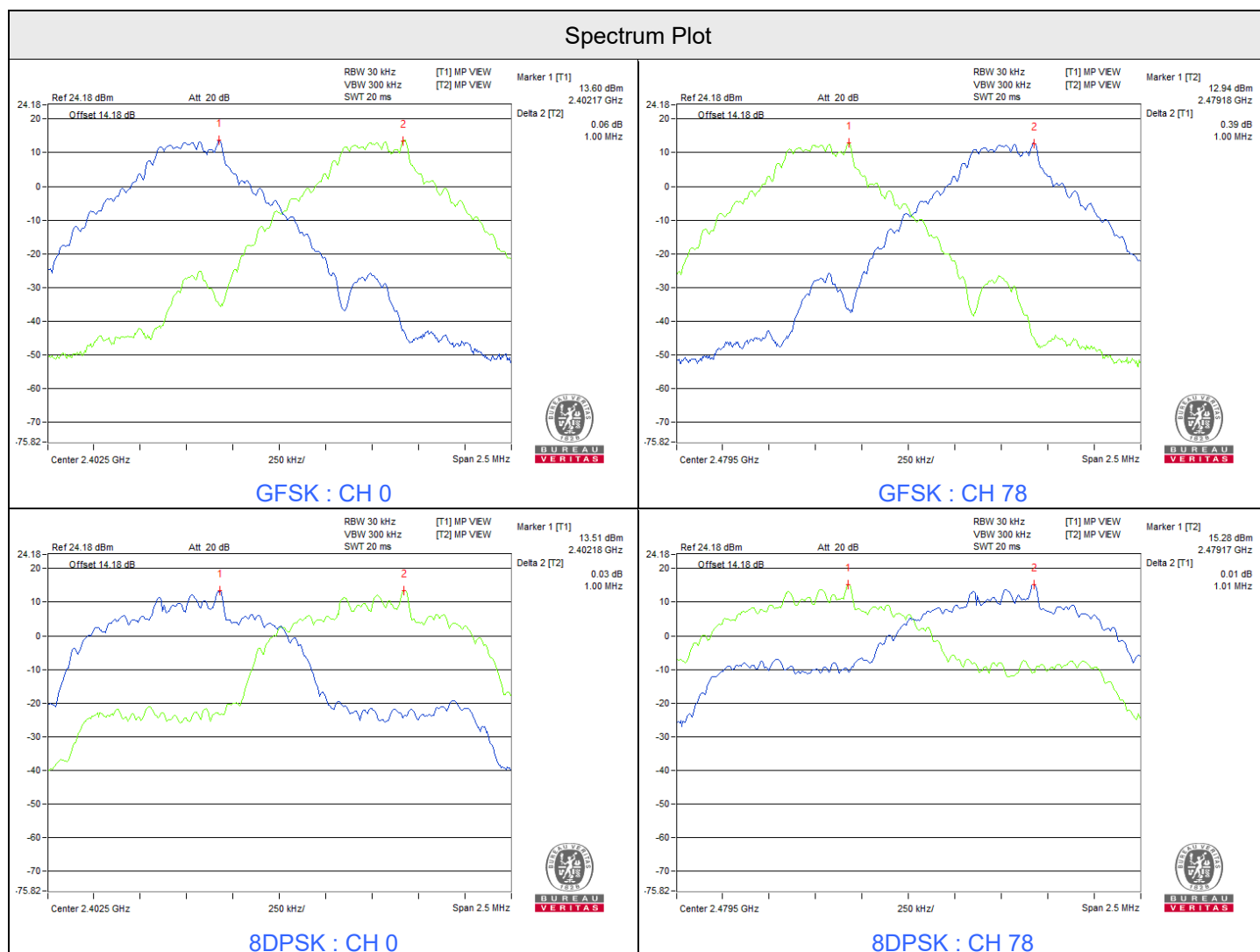
Test Mode A

GFSK

Channel	Channel Frequency (MHz)	Hopping Frequency Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.1	Pass
78	2480	1.00	0.1	Pass

8DPSK

Channel	Channel Frequency (MHz)	Hopping Frequency Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.1	Pass
78	2480	1.01	0.1	Pass



7.4 Occupied Channel Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode A

GFSK

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
0	2402	0.89	2401.57	2402.46	2400 to 2483.5	Pass
78	2480	0.89	2479.57	2480.46		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

8DPSK

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
0	2402	1.22	2401.40	2402.62	2400 to 2483.5	Pass
78	2480	2.43	2478.78	2481.21		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

7.5 Transmitter Unwanted Emissions in the out-of-band Domain

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode A

GFSK

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
0	2402	2398 ~ 2399	2398.50	-52.29	-20	Pass
		2399 ~ 2400	2399.50	-33.94	-10	Pass
78	2480	2483.5 ~ 2484.5	2483.50	-53.96	-10	Pass
		2484.5 ~ 2485.5	2484.50	-55.27	-20	Pass

8DPSK

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
0	2402	2397.56 ~ 2398.78	2398.50	-41.00	-20	Pass
		2398.78 ~ 2400	2399.50	-20.81	-10	Pass
78	2480	2483.5 ~ 2485.93	2484.50	-17.11	-10	Pass
		2485.93 ~ 2488.36	2486.50	-33.19	-20	Pass

7.6 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Test Mode A

BT GFSK

Spurious Emission Frequency Range	30 MHz ~ 1 GHz	Operating Channel	0
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
49.85	V	-63.05	-54.00	-9.05
56.42	H	-63.12	-54.00	-9.12
101.39	H	-66.49	-54.00	-12.49
101.85	V	-73.49	-54.00	-19.49
195.42	H	-77.97	-54.00	-23.97
195.84	V	-77.74	-54.00	-23.74
481.39	H	-73.17	-54.00	-19.17
492.09	V	-68.04	-54.00	-14.04
558.57	V	-70.81	-54.00	-16.81
595.50	H	-69.79	-54.00	-15.79
656.71	H	-70.40	-54.00	-16.40
658.19	V	-69.35	-54.00	-15.35

7.7 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Test Mode A

BT GFSK

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	0, 78
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
0	4804.00	H	-54.48	-30.00	-24.48
	4804.00	V	-52.93	-30.00	-22.93
78	4960.00	H	-55.05	-30.00	-25.05
	4960.00	V	-53.83	-30.00	-23.83

BT 8DPSK

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	0, 78
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
0	4804.00	H	-54.20	-30.00	-24.20
	4804.00	V	-51.56	-30.00	-21.56
78	4960.00	H	-52.19	-30.00	-22.19
	4960.00	V	-52.93	-30.00	-22.93

7.8 Receiver Spurious Emissions up to 1 GHz

Test Mode A

Spurious Emission Frequency Range	30 MHz ~ 1 GHz	Operating Channel	0
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
39.96	V	-65.61	-57.00	-8.61
44.58	H	-70.24	-57.00	-13.24
125.84	H	-66.29	-57.00	-9.29
159.73	V	-70.92	-57.00	-13.92
249.74	V	-75.70	-57.00	-18.70
255.44	H	-70.34	-57.00	-13.34
382.06	V	-74.47	-57.00	-17.47
409.12	H	-74.52	-57.00	-17.52
582.05	V	-70.30	-57.00	-13.30
595.46	H	-70.21	-57.00	-13.21
808.94	V	-67.89	-57.00	-10.89
823.84	H	-66.95	-57.00	-9.95

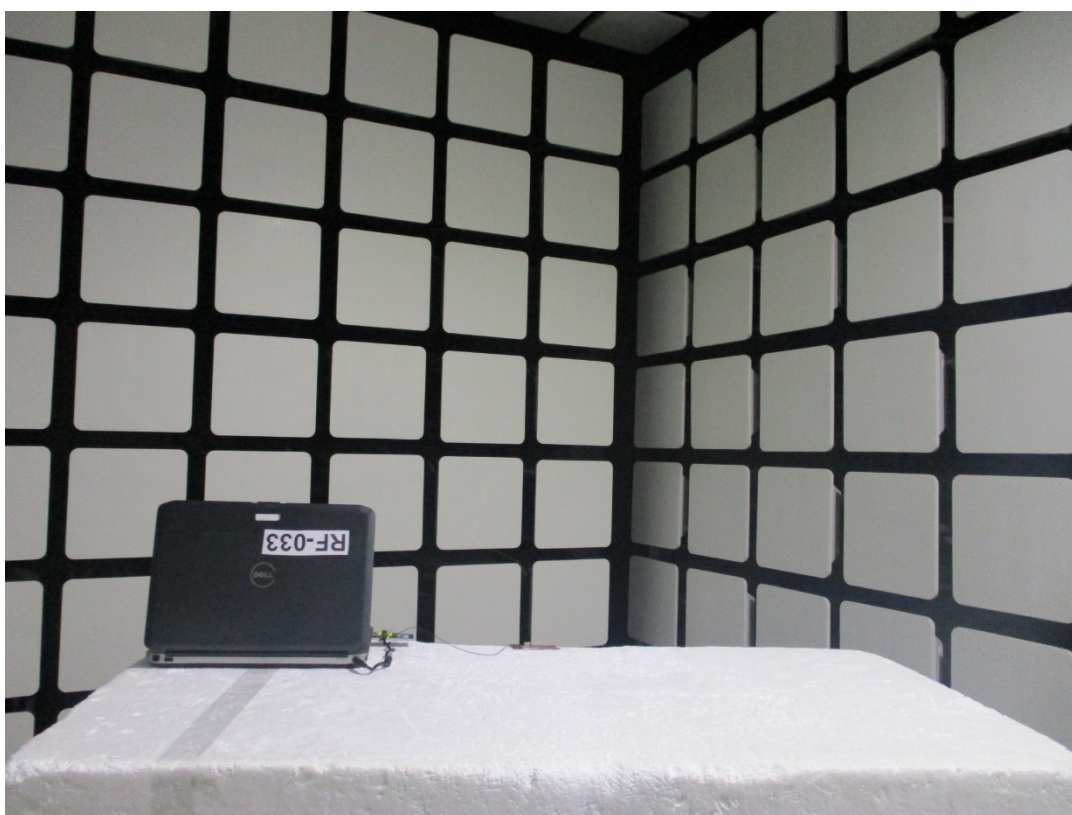
7.9 Receiver Spurious Emissions above 1 GHz

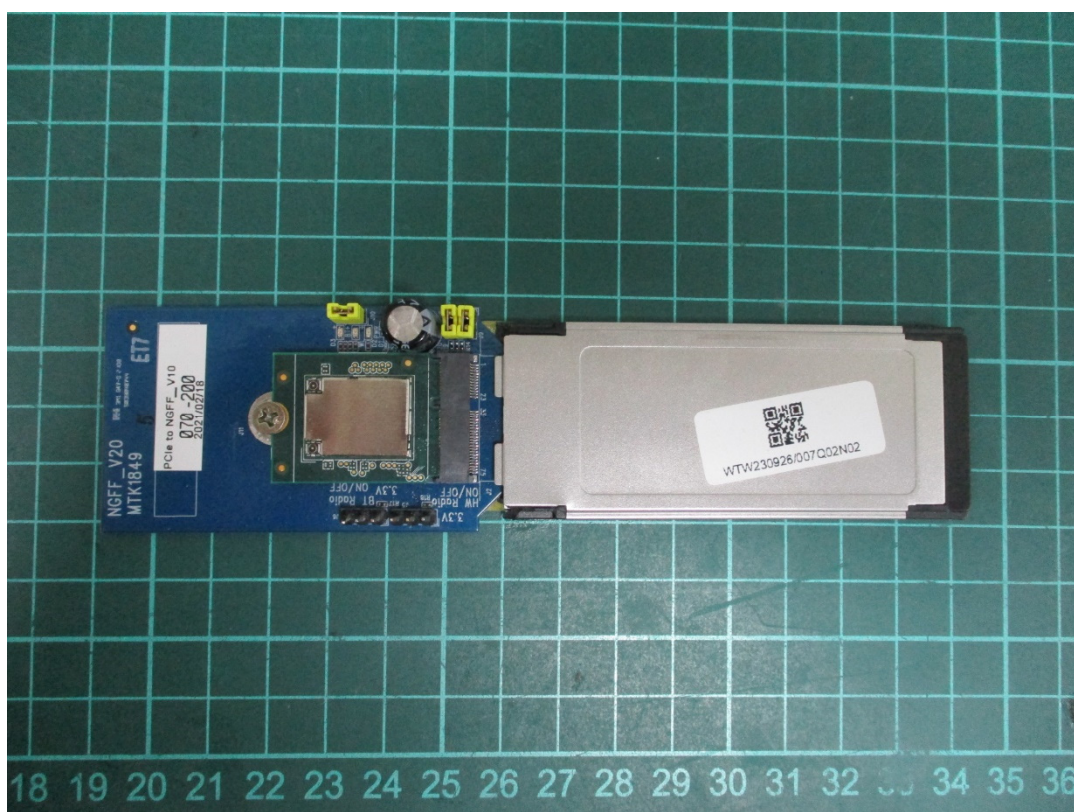
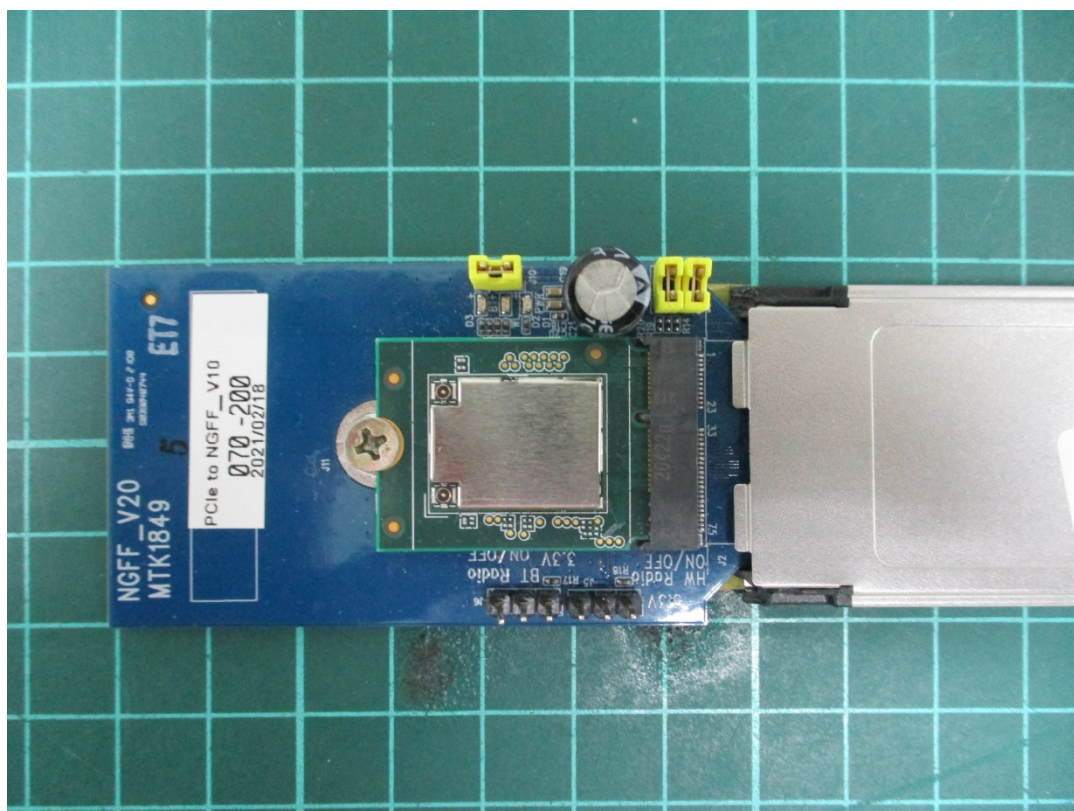
Test Mode A

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	0, 78
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
0	4804.00	H	-54.60	-47.00	-7.60
	4804.00	V	-53.90	-47.00	-6.90
78	4960.00	H	-54.78	-47.00	-7.78
	4960.00	V	-53.74	-47.00	-6.74

8 Pictures of Test Arrangements





Annex A-Conducted Output Power

Test Mode B

Mode	Channel	Conducted Average (dBm)
BT GFSK	Hopping mode	13.12
BT 8DPSK	Hopping mode	13.00

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.

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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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