

Project No.: TM-2207000110P
Report No.: TMWK2207002764KR

FCC ID: 2AQ8A-EKSD7X1A

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RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C

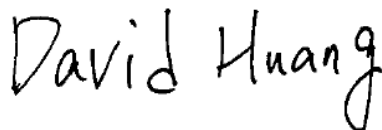
Test Standard	FCC Part 15.247
Product name	Enkore Smart Auto Electronic Deadbolt
Brand Name	Pamex
Model No.	EKS-D7P1A, EKS-D791A
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory)

Approved by:



David Huang
Supervisor

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 22, 2022	Initial Issue	ALL	Allison Chen

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Pamex Inc. 4680 Vinita Court, Chino, CA, 91710, United States							
Manufacturer	ALZK Co., Ltd. 9F., No. 36, Sec. 3, Bade Rd., Songshan Dist., Taipei City, Taiwan							
Equipment	Enkore Smart Auto Electronic Deadbolt							
Model Name	EKS-D7P1A, EKS-D791A							
Model Discrepancy	Different from color and shell material of the two model numbers (list on this report) are just for marketing purpose only and please see as below: <table border="1"><thead><tr><th>Model:</th><th>Electroplating material</th></tr></thead><tbody><tr><td>EKS-D7P1A</td><td>nickel plating</td></tr><tr><td>EKS-D791A</td><td>black paint</td></tr></tbody></table>		Model:	Electroplating material	EKS-D7P1A	nickel plating	EKS-D791A	black paint
Model:	Electroplating material							
EKS-D7P1A	nickel plating							
EKS-D791A	black paint							
Brand Name	Pamex							
Received Date	July 12, 2022							
Date of Test	July 21~August 4, 2022							
Power Supply	Power from Battery. (DC 6V, AA*4, Rating: 1.5Vdc)							

Remark:

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer: The variant model numbers are assessed as identical in hardware and software to each other, hence all variants are fully covered by the test results in this test report without further verification test.

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1.2 EUT CHANNEL INFORMATION

Frequency Range	802.11b/g/n HT 20: 2412MHz ~ 2462MHz
Modulation Type	1. IEEE 802.11b mode: CCK 2. IEEE 802.11g mode: OFDM 3. IEEE 802.11n HT 20 Mode: OFDM
Number of channel	1. IEEE 802.11b mode: 11 Channels 2. IEEE 802.11g mode: 11 Channels 3. IEEE 802.11n HT 20 Mode : 11 Channels

Remark:

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Specification	<input type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input checked="" type="checkbox"/> Chip <input type="checkbox"/> Coils
Antenna Gain	Gain: 1.16 dBi
Antenna connector	N/A

Notes:

1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

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1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.1183
Channel Bandwidth	± 2.1863
RF output power (Power Meter + Power sensor)	± 1.2688
Power Spectral density	± 2.1855
Conducted Bandedge	± 2.1866
Conducted Spurious Emission	± 2.1859
Radiated Emission_9kHz-30MHz	± 3.814
Radiated Emission_30MHz-200MHz	± 4.272
Radiated Emission_200MHz-1GHz	± 4.619
Radiated Emission_1GHz-6GHz	± 5.522
Radiated Emission_6GHz-18GHz	± 5.228
Radiated Emission_18GHz-26GHz	± 4.089
Radiated Emission_26GHz-40GHz	± 4.019

Remark:

- 1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

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1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	-	Not applicable, because EUT doesn't connect to AC Main Source direct.
Radiation	Ray Li, Tony Chao	-
RF Conducted	David Li	-

Remark: The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309.

1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2021	09/06/2022
Power Meter	Anritsu	ML2496A	2136002	12/06/2021	12/05/2022
Power Seneor	Anritsu	MA2411B	1911386	08/19/2021	08/18/2022
Power Seneor	Anritsu	MA2411B	1911387	08/19/2021	08/18/2022
Software	Radio Test Software Ver. 21				

966A Chamber					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Band Reject Filters	MICRO TRONICS	BRM 50702	112	11/23/2021	11/22/2022
Bilog Antenna	Sunol Sciences	JB1	A052609	02/15/2022	02/14/2023
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/23/2022	02/22/2023
Coaxial Cable	EMCI&	EMC105	190914+33953	06/15/2022	06/14/2023
Coaxial Cable	Woken	J-1099	201709090004	12/23/2021	12/22/2022
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	12/28/2021	12/27/2022
Horn Antenna	ETS LINDGREN	3116	00026370	11/30/2021	11/29/2022
Horn Antenna	MCTD	1209	DRH13M02003	01/25/2022	01/24/2023
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/05/2021	12/04/2022
Pre-Amplifier	EMEC	EM330	060609	02/23/2022	02/22/2023
Pre-Amplifier	HP	8449B	3008A00965	12/24/2021	12/23/2022
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	12/06/2021	12/05/2022
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 210616				

Remark:

1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Required.



1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
	N/A					

Support Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(G)	Lenovo	IBM 1951	R33B65	CJ6UPA3489WL	N/A
2	NB(E)	Lenovo	IBM 7663	N/A	N/A	N/A

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247.



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2. TEST SUMMARY

FCC Standard Section	Report Section	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207(a)	4.1	AC Conducted Emission	N/A
15.247(a)(2)	4.2	6 dB Bandwidth	Pass
-	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)	4.3	Output Power Measurement	Pass
15.247(e)	4.4	Power Spectral Density	Pass
15.247(d)	4.5	Conducted Band Edge	Pass
15.247(d)	4.5	Conducted Spurious Emission	Pass
15.247(d)	4.6	Radiation Band Edge	Pass
15.247(d)	4.6	Radiation Spurious Emission	Pass

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3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	IEEE 802.11b mode :1Mbps IEEE 802.11g mode :6Mbps IEEE 802.11n HT20 mode :MCS0
Test Channel Frequencies	IEEE 802.11b mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11g mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11n HT20 mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz
Operation Transmitter	IEEE 802.11b mode : 1T1R IEEE 802.11g mode : 1T1R IEEE 802.11n HT20 mode : 1T1R

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The RF and electrical characteristics of the EKS-D7P1A and EKS-D791A test samples are identical. The only difference is the shell material and color, both EKS-D7P1A and EKS-D791A have been verified test, EKS-D791A sample has the worst spurious emissions, so EKS-D791A test sample is full tested, EKS-D7P1A sample verified EKS-D791A Worst case.

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3.2 THE WORST MODE OF MEASUREMENT

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Battery(EKS-D791A) Mode 2: EUT power by Battery(EKS-D7P1A)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input checked="" type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Battery(EKS-D791A) Mode 2: EUT power by Battery(EKS-D7P1A)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Z-Plane) were recorded in this report

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3.3 EUT DUTY CYCLE

Temperature: 25.6~26.6°C
Humidity: 49~53% RH

Test date: July 21~August 2, 2022
Tested by: David Li

Duty Cycle				
Configuration	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11b	96.87	0.14	0.09	1.00
802.11g	92.61	0.33	0.53	1.00
802.11n_20	89.59	0.48	0.57	1.00



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4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a)(2)

Frequency Range (MHz)	Limits(dBµV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

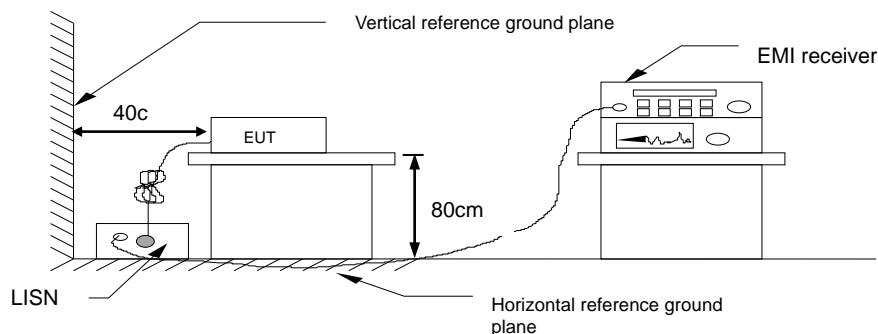
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

4.1.3 Test Setup



4.1.4 Test Result

Not applicable, because EUT doesn't connect to AC Main Source direct.

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4.2 6dB BANDWIDTH AND OCCUPIED BANDWIDTH (99%)

4.2.1 Test Limit

According to §15.247(a)(2)

6 dB Bandwidth :

Limit	Shall be at least 500kHz
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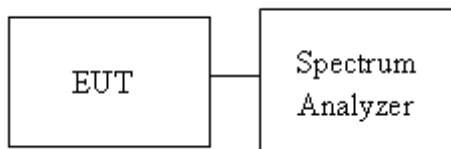
Occupied Bandwidth(99%) : For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as ANSI C63.10: 2013,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 100kHz, VBW = 300kHz and Detector = Peak, to measurement 6 dB Bandwidth.
4. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
5. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup



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4.2.4 Test Result

Temperature: 25.6~26.6°C

Test date: July 21~August 2, 2022

Humidity: 49~53% RH

Tested by: David Li

Test mode: IEEE 802.11b mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	14.004	-	9118.00	-	≥500
Mid	2437	14.041	-	9117.00	-	
High	2462	14.171	-	9132.00	-	

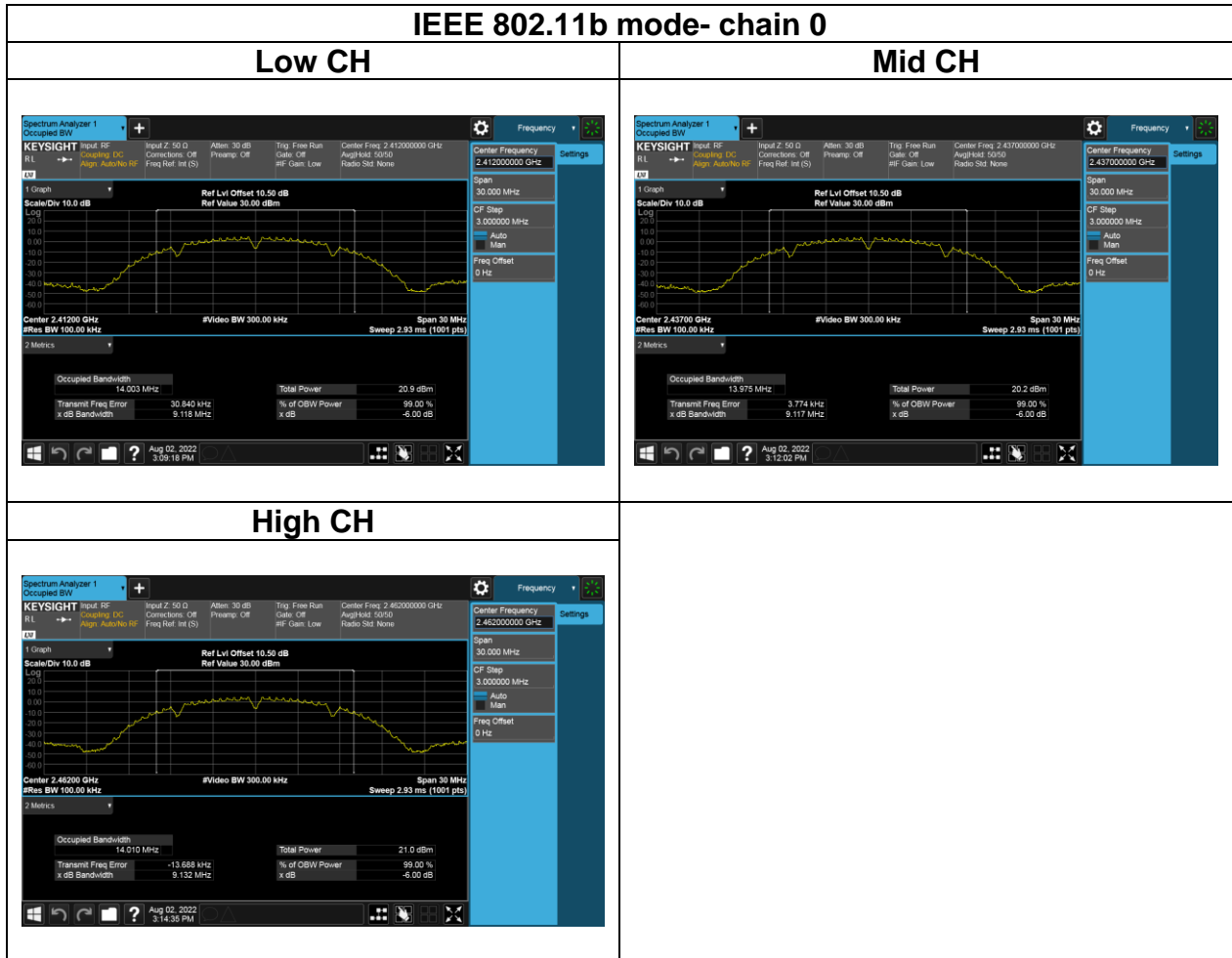
Test mode: IEEE 802.11g mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	16.599	-	15130.00	-	≥500
Mid	2437	16.831	-	15130.00	-	
High	2462	16.585	-	15130.00	-	

Test mode: IEEE 802.11n HT 20 mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	17.566	-	15140.00	-	≥500
Mid	2437	17.887	-	15130.00	-	
High	2462	17.561	-	15130.00	-	

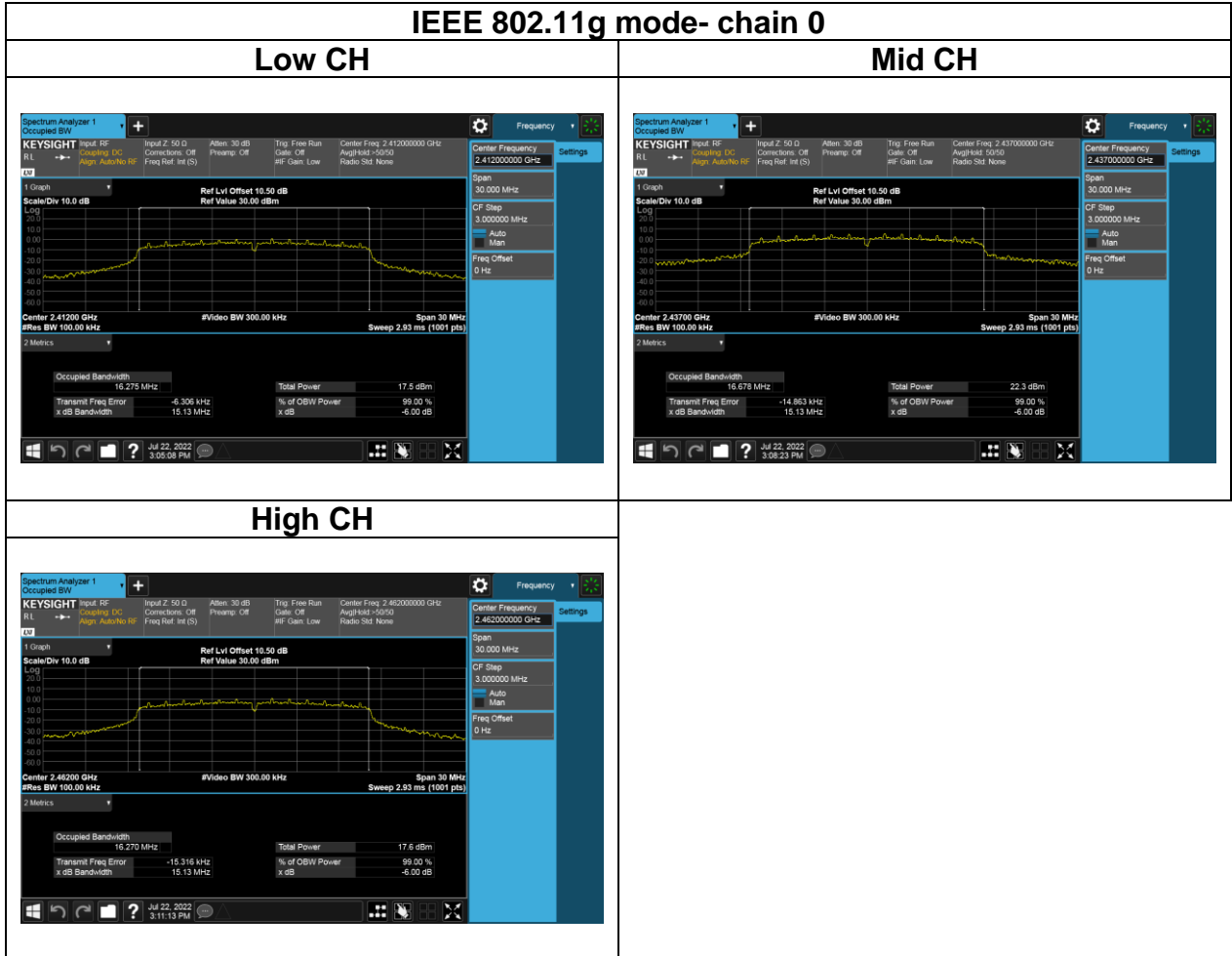
Report No.: TMWK2207002764KR

Test Data

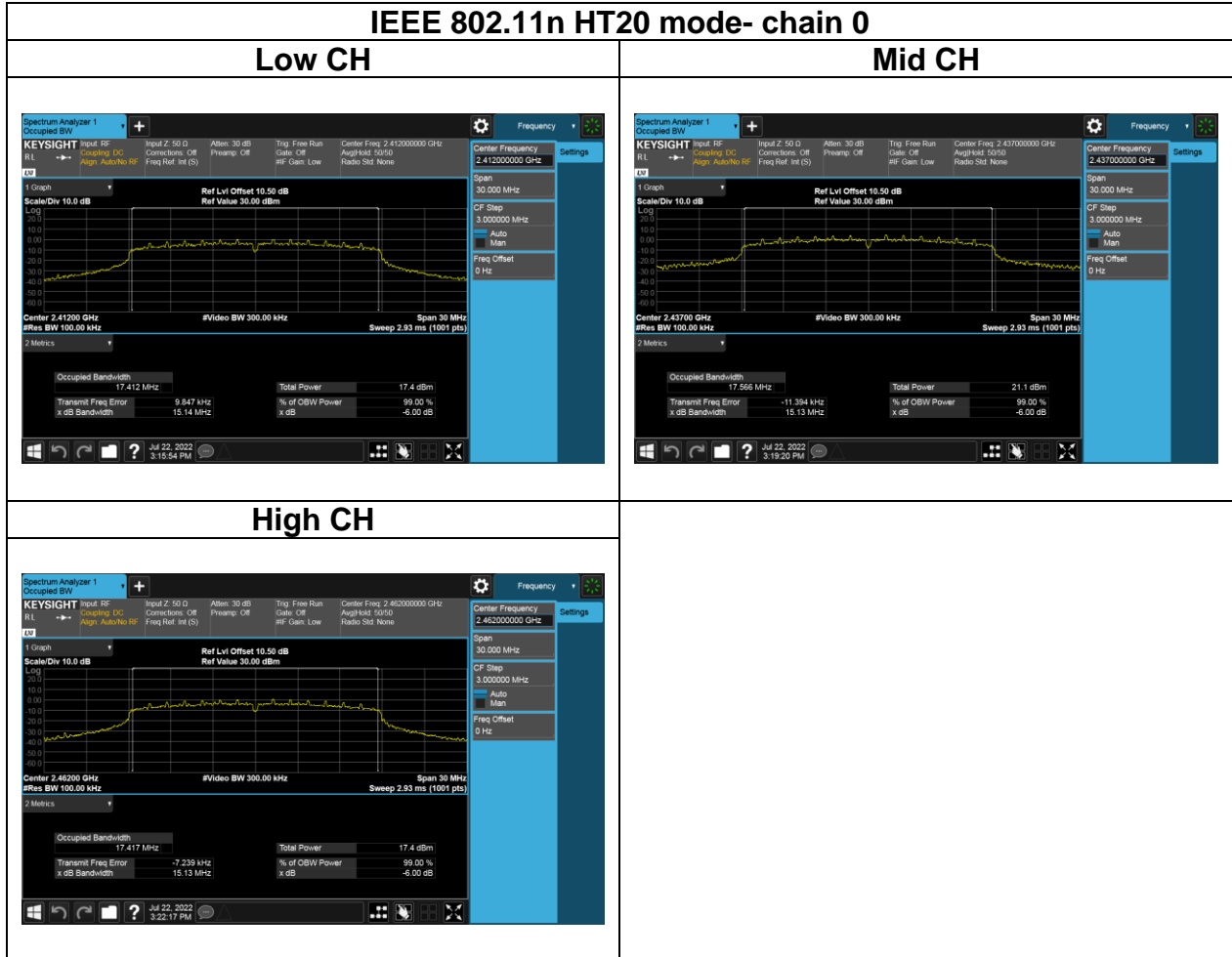
6dB BANDWIDTH



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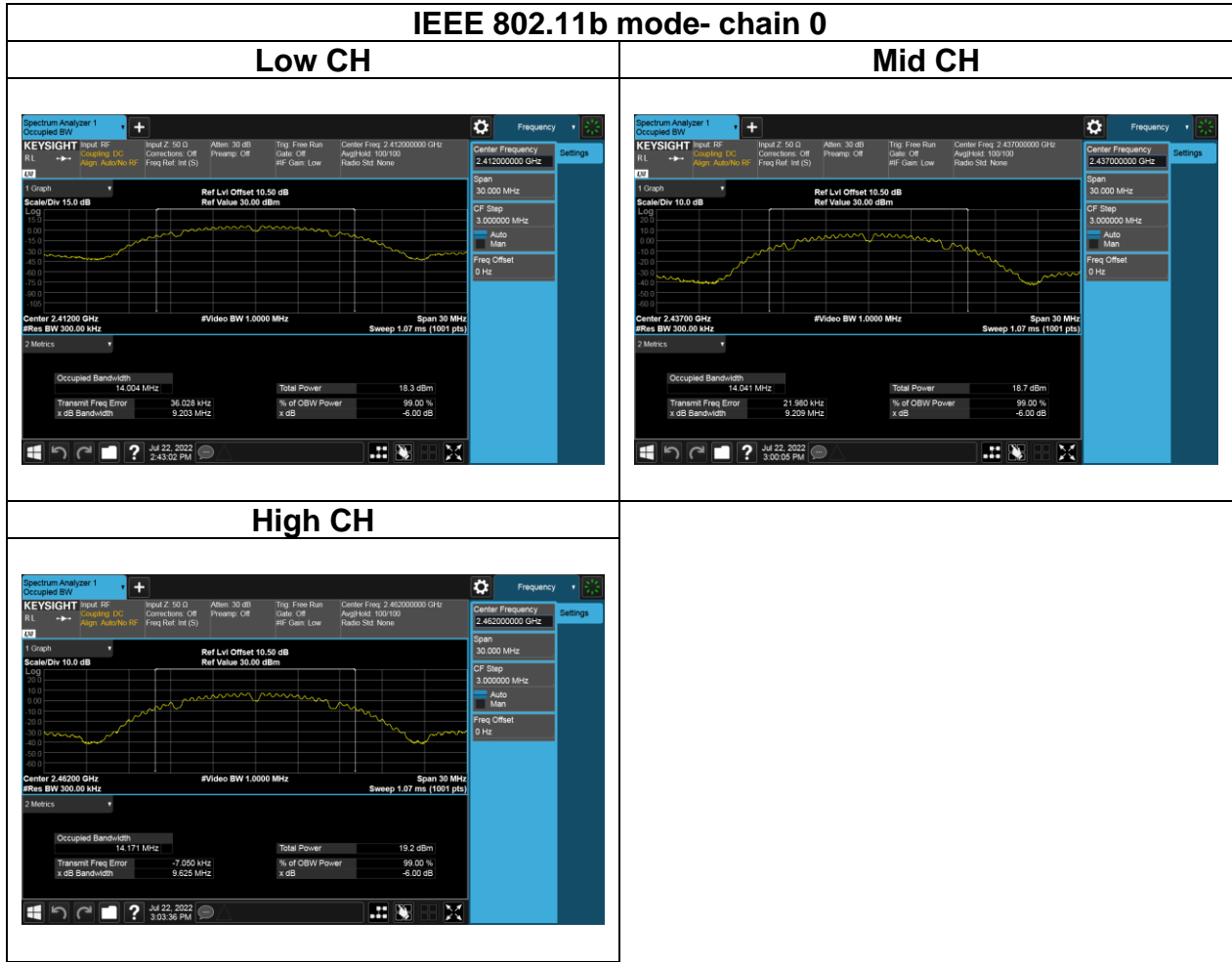
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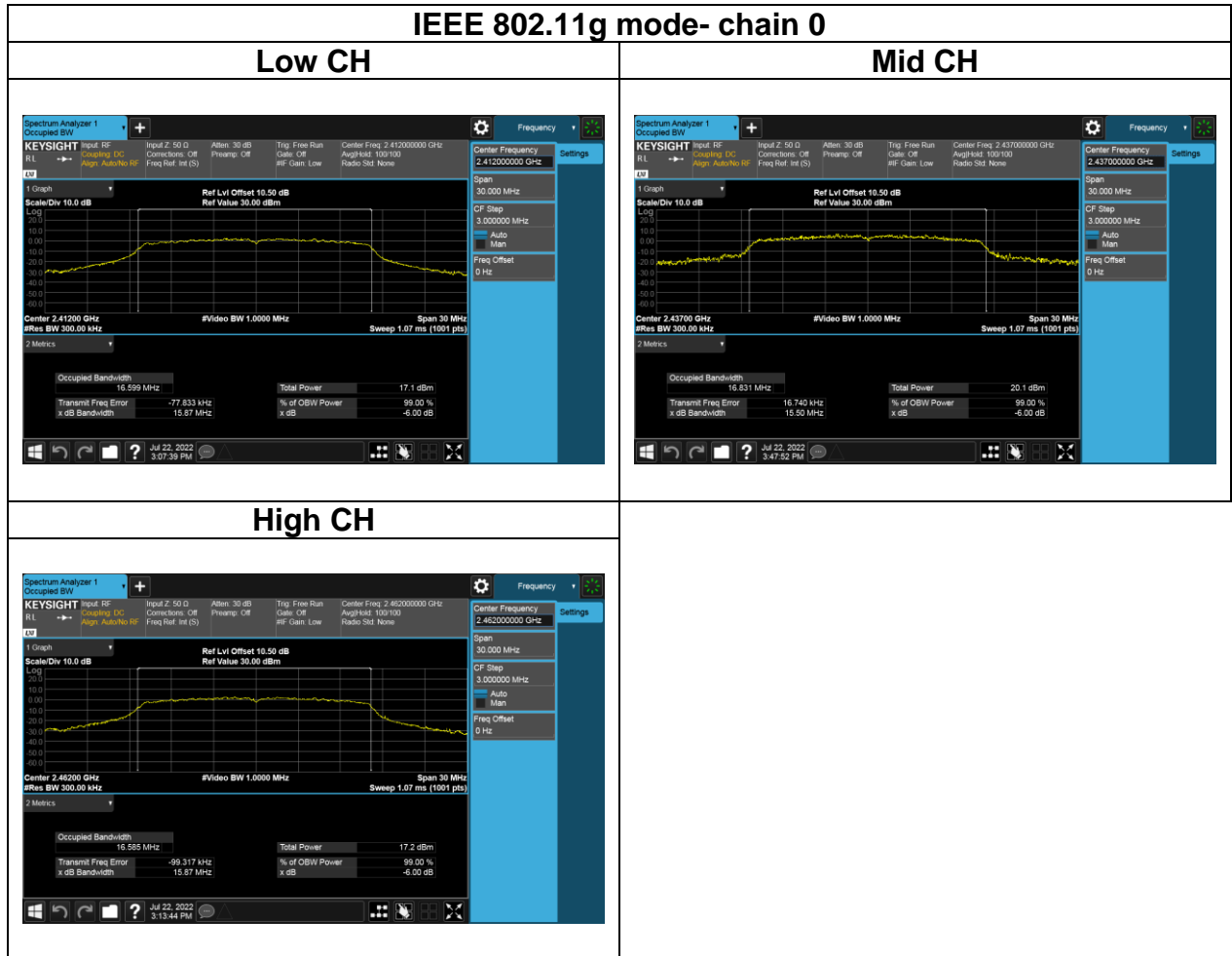
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Test Data

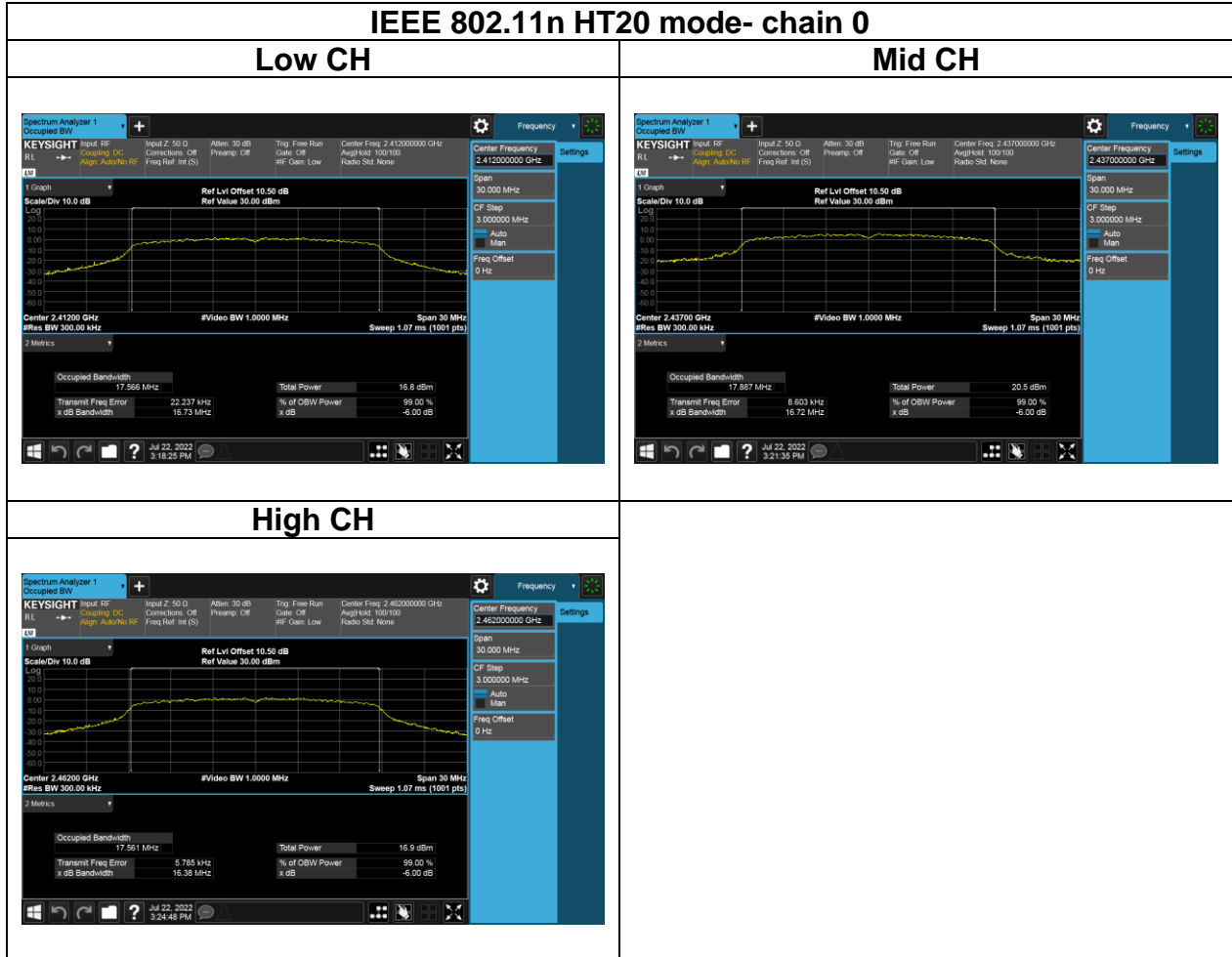
BANDWIDTH 99%



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4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to §15.247(b)

Peak output power :

For systems using digital modulation in the 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt(30 dBm) and the e.i.r.p. shall not exceed 4Watt(36 dBm), base on the use of antennas with directional gain not exceed 6 dBi If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 30dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
-------	---

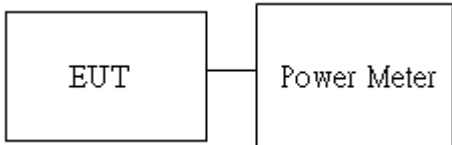
Average output power : For reporting purposes only.

4.3.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

4.3.3 Test Setup



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4.3.4 Test Result

Temperature: 25.6~26.6°C

Test date: July 21~August 2, 2022

Humidity: 49~53% RH

Tested by: David Li

Peak output power :

Test Mode: IEEE 802.11b Mode

802.11b Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	2	16.30	30.00	PASS
6	2437	1	3	15.78	30.00	PASS
11	2462	1	2	16.55	30.00	PASS

Test Mode: IEEE 802.11g Mode

802.11g Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	0	18.72	30.00	PASS
6	2437	6	0	19.23	30.00	PASS
11	2462	6	0	18.55	30.00	PASS

Test Mode: IEEE 802.11n HT20 Mode

802.11nHT_20M Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	0	18.46	30.00	PASS
6	2437	MCS0	0	18.95	30.00	PASS
11	2462	MCS0	0	18.31	30.00	PASS

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Average output power :

Test Mode: IEEE 802.11b Mode

802.11b Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	2	12.70	30.00	PASS
6	2437	1	3	12.52	30.00	PASS
11	2462	1	2	12.98	30.00	PASS

Test Mode: IEEE 802.11g Mode

802.11g Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	0	9.30	30.00	PASS
6	2437	6	0	13.90	30.00	PASS
11	2462	6	0	9.11	30.00	PASS

Test Mode: IEEE 802.11n HT20 Mode

802.11nHT_20M Ch0						
CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	0	9.14	30.00	PASS
6	2437	MCS0	0	12.53	30.00	PASS
11	2462	MCS0	0	8.93	30.00	PASS

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4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to §15.247(e)

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

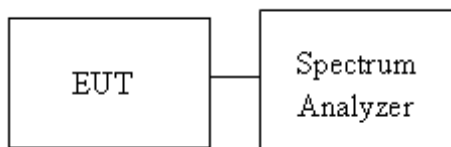
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 8dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 8 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
-------	---

4.4.2 Test Procedure

Test method Refer as ANSI C63.10:2013,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 10kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss and Duty Factor were compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

4.4.3 Test Setup



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4.4.4 Test Result

Temperature: 25.6~26.6°C
Humidity: 49~53% RH

Test date: July 21~August 2, 2022
Tested by: David Li

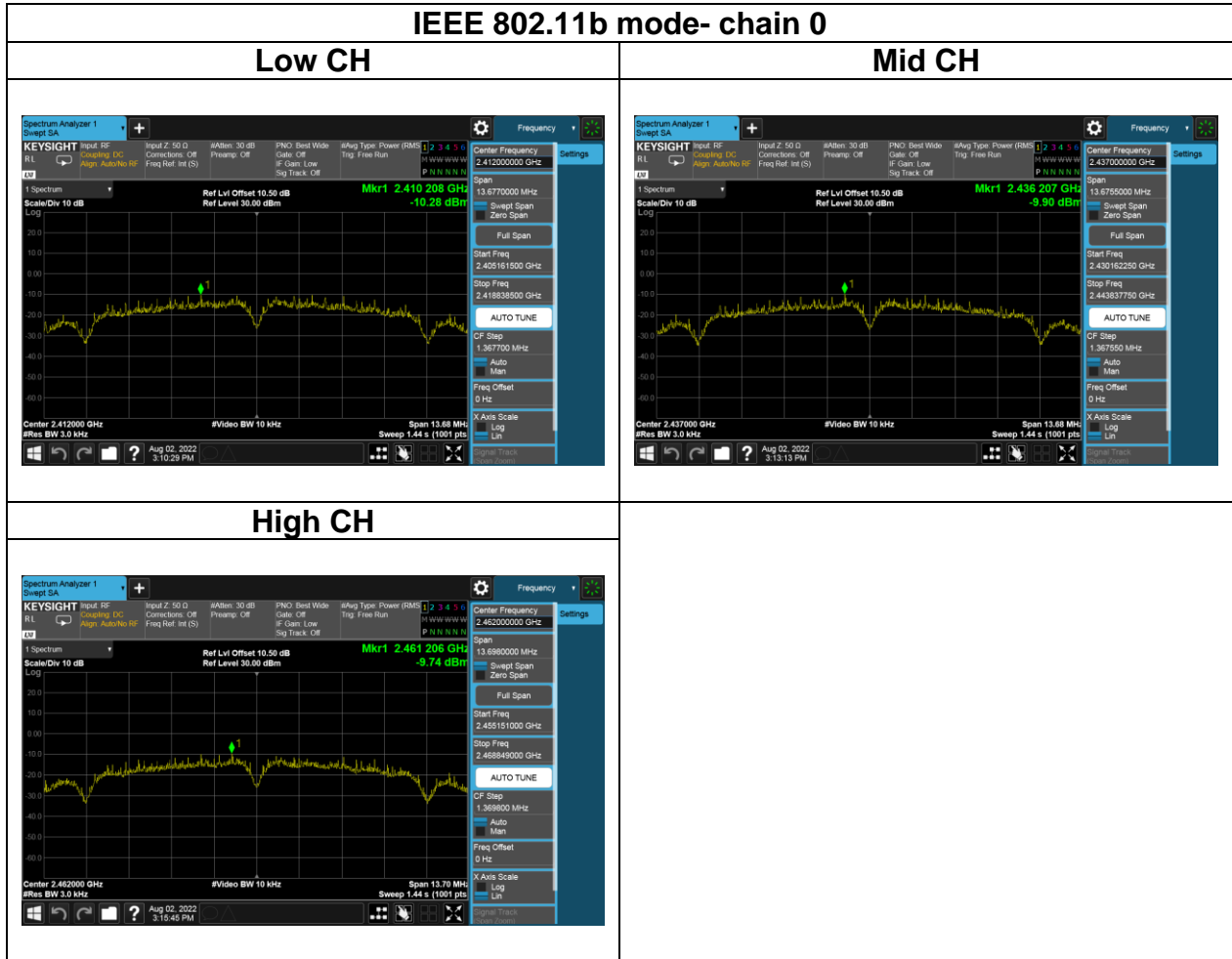
Test mode: IEEE 802.11b mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PPSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-10.28	-	-10.28	8.00
Mid	2437	-9.90	-	-9.90	
High	2462	-9.74	-	-9.74	

Test mode: IEEE 802.11g mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PPSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-16.87	-	-16.87	8.00
Mid	2437	-12.08	-	-12.08	
High	2462	-15.72	-	-15.72	

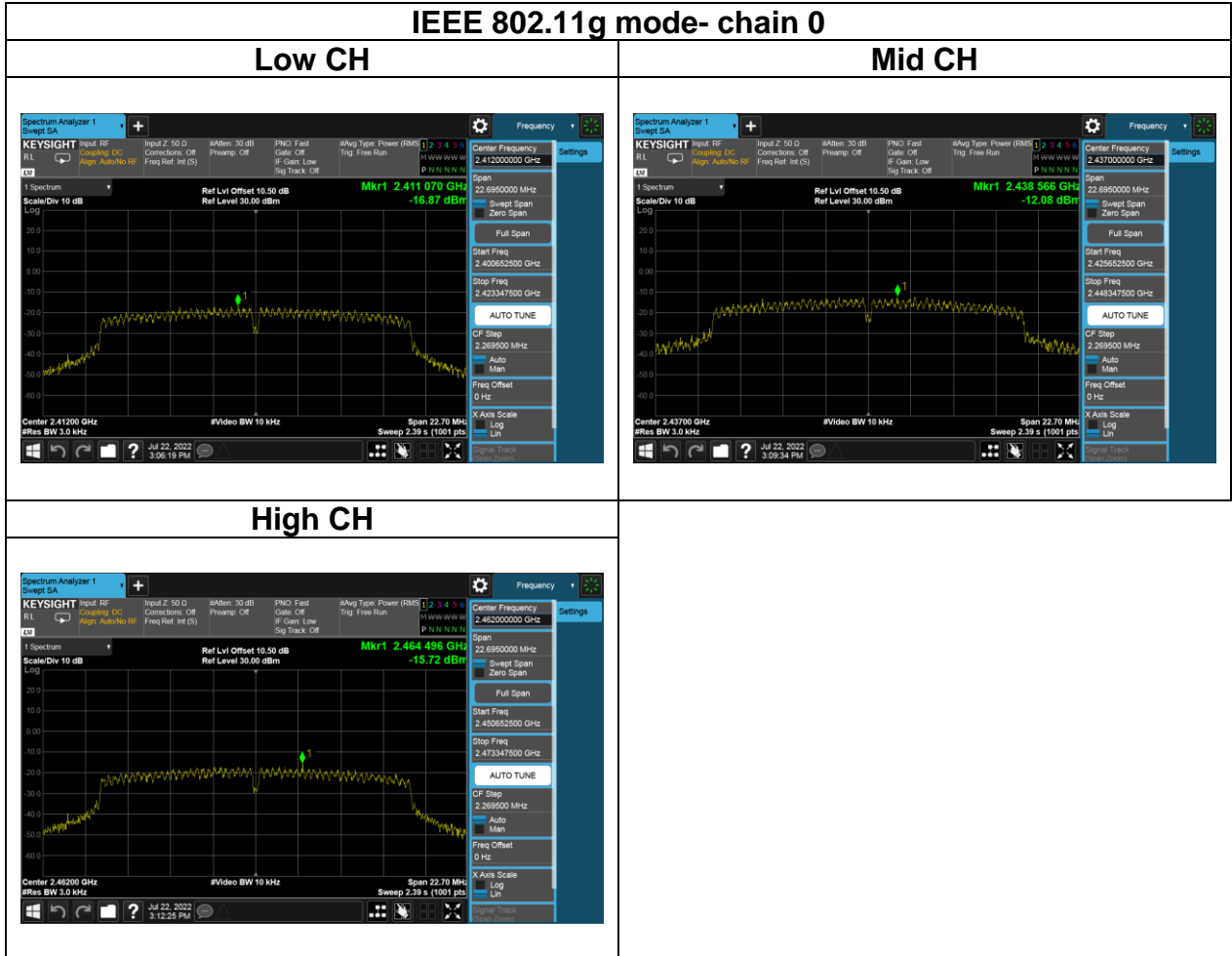
Test mode: IEEE 802.11n HT20 mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PPSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-16.55	-	-16.55	8.00
Mid	2437	-12.06	-	-12.06	
High	2462	-16.63	-	-16.63	

Report No.: TMWK2207002764KR

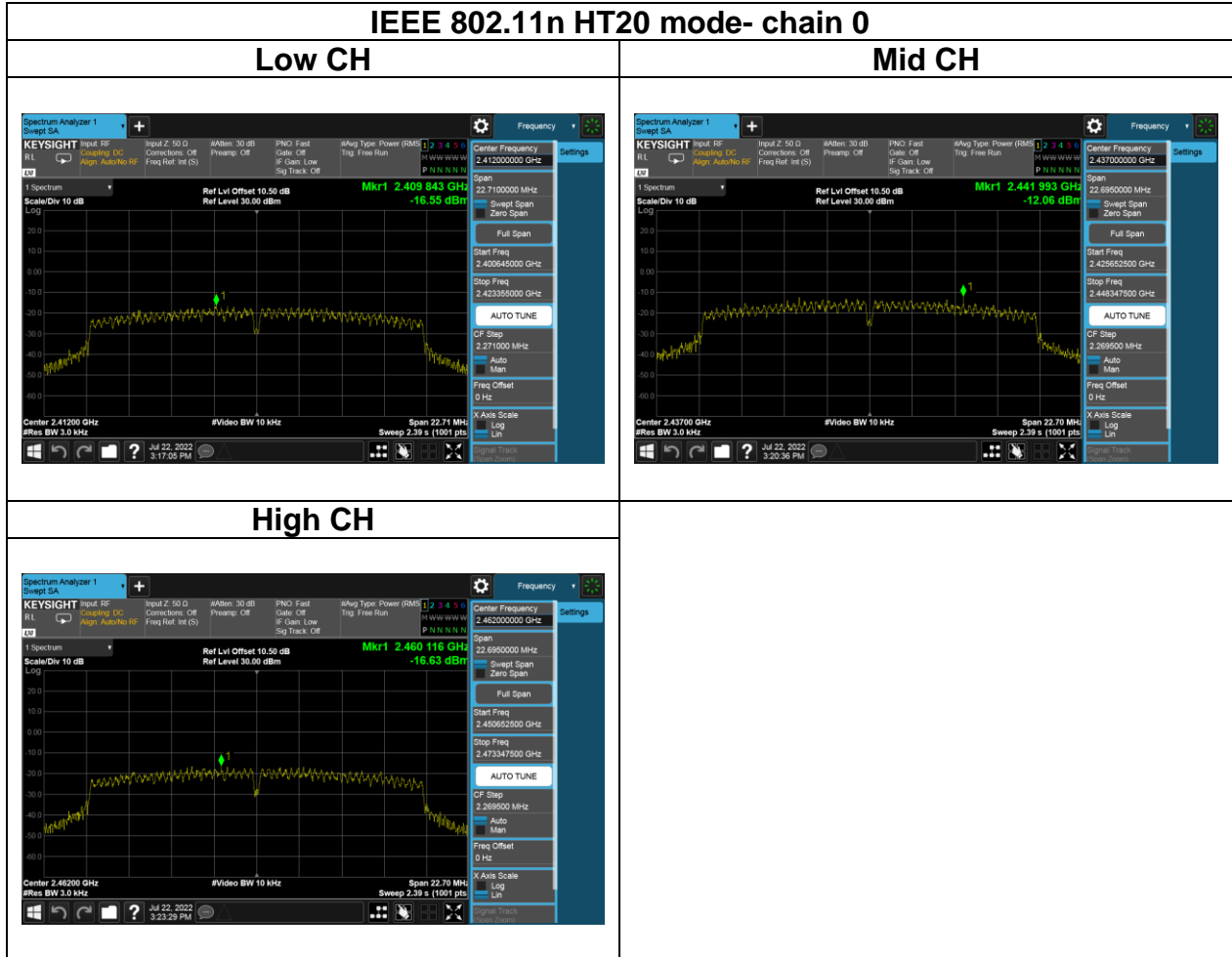
Test Data



Report No.: TMWK2207002764KR



Report No.: TMWK2207002764KR



4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

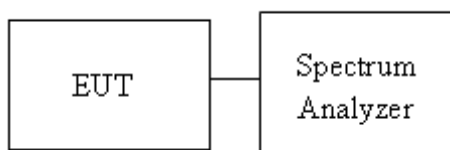
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

4.5.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

4.5.3 Test Setup



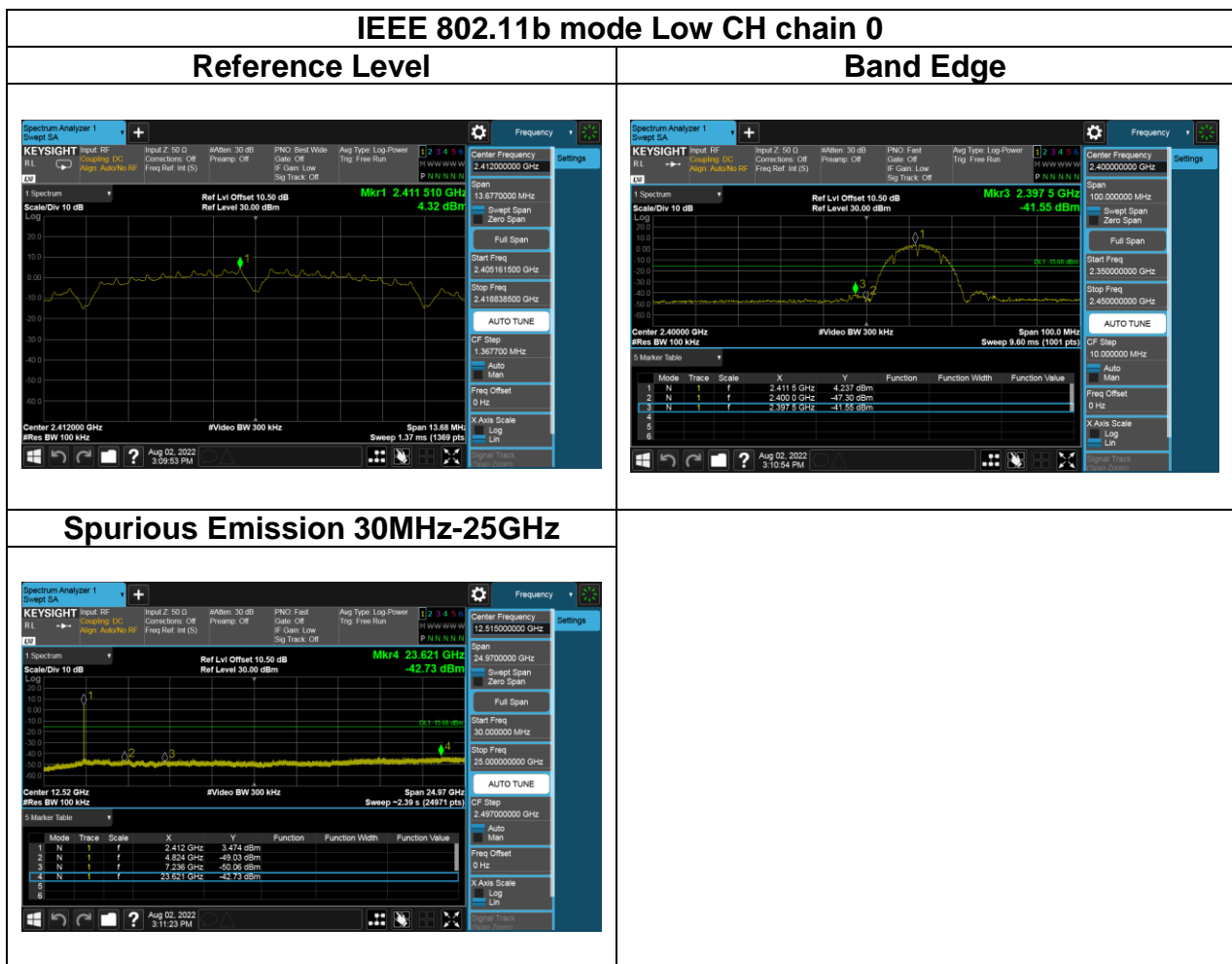
Report No.: TMWK2207002764KR

4.5.4 Test Result

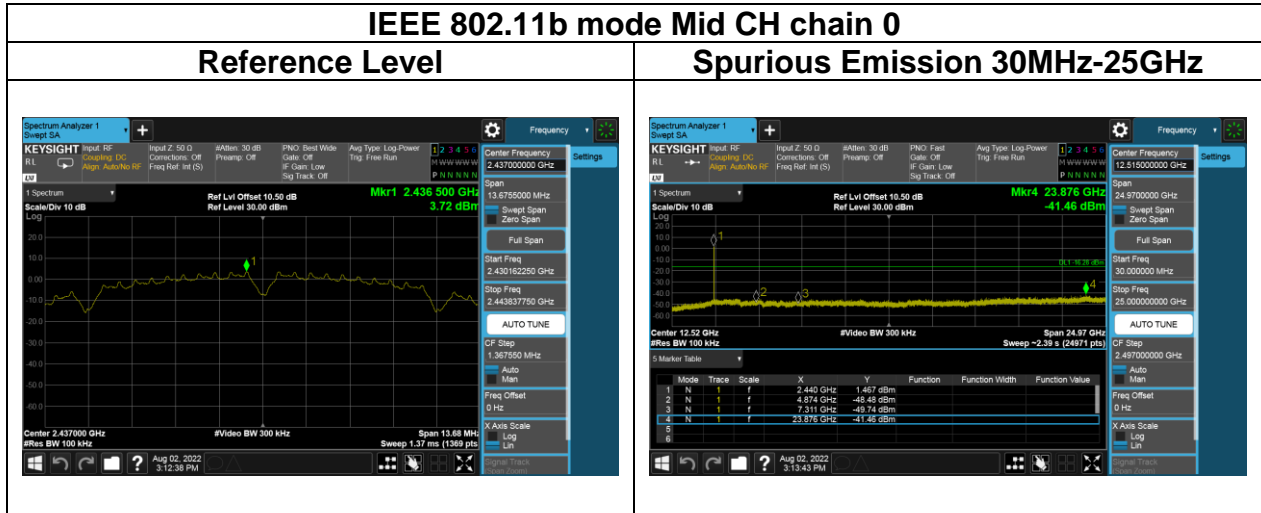
Temperature: 25.6~26.6°C
Humidity: 49~53% RH

Test date: July 21~August 2, 2022
Tested by: David Li

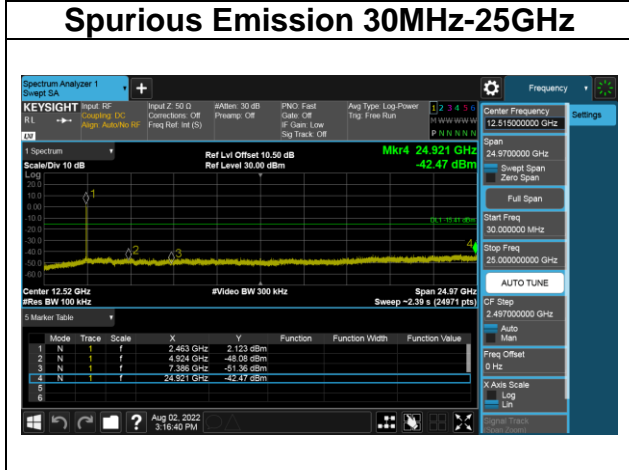
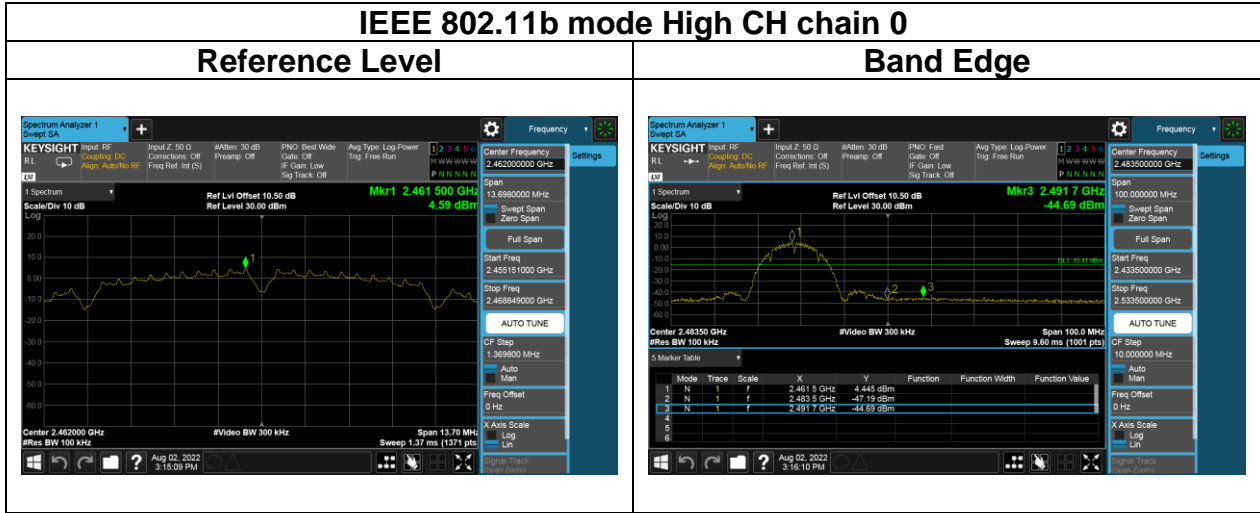
Test Data

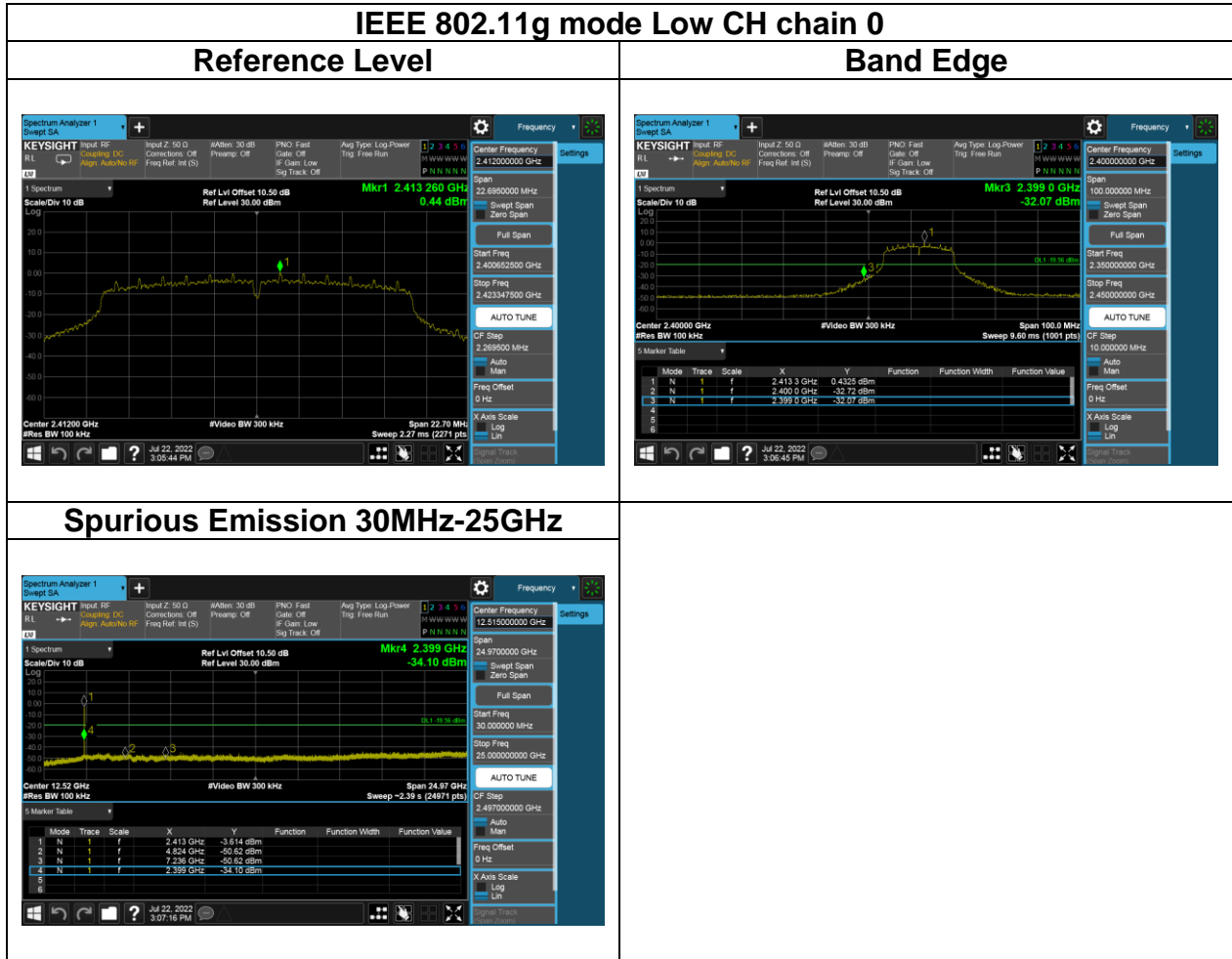


Report No.: TMWK2207002764KR

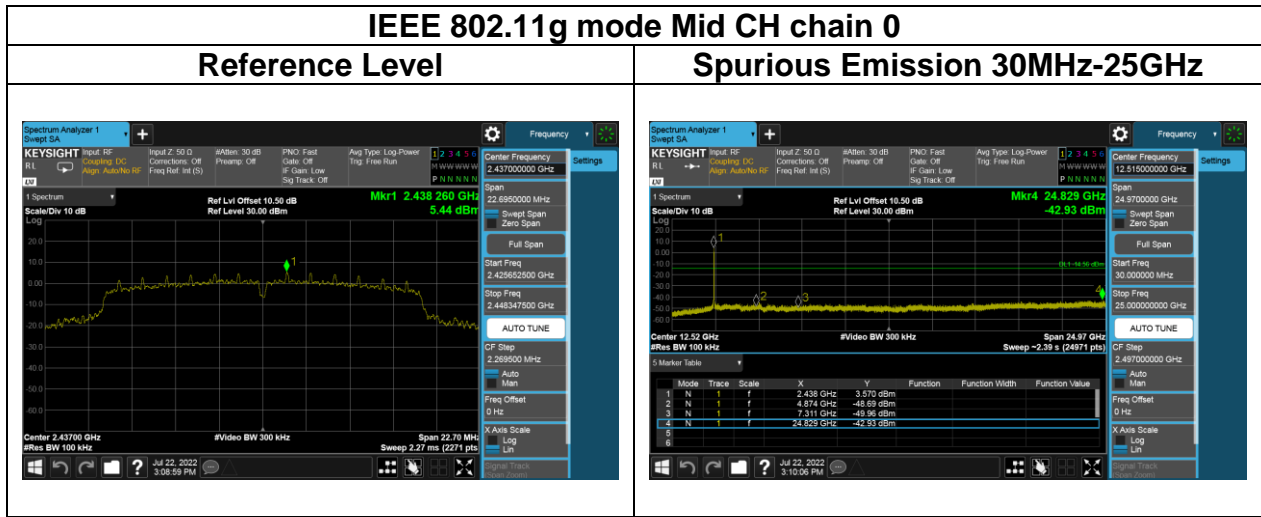


Report No.: TMWK2207002764KR

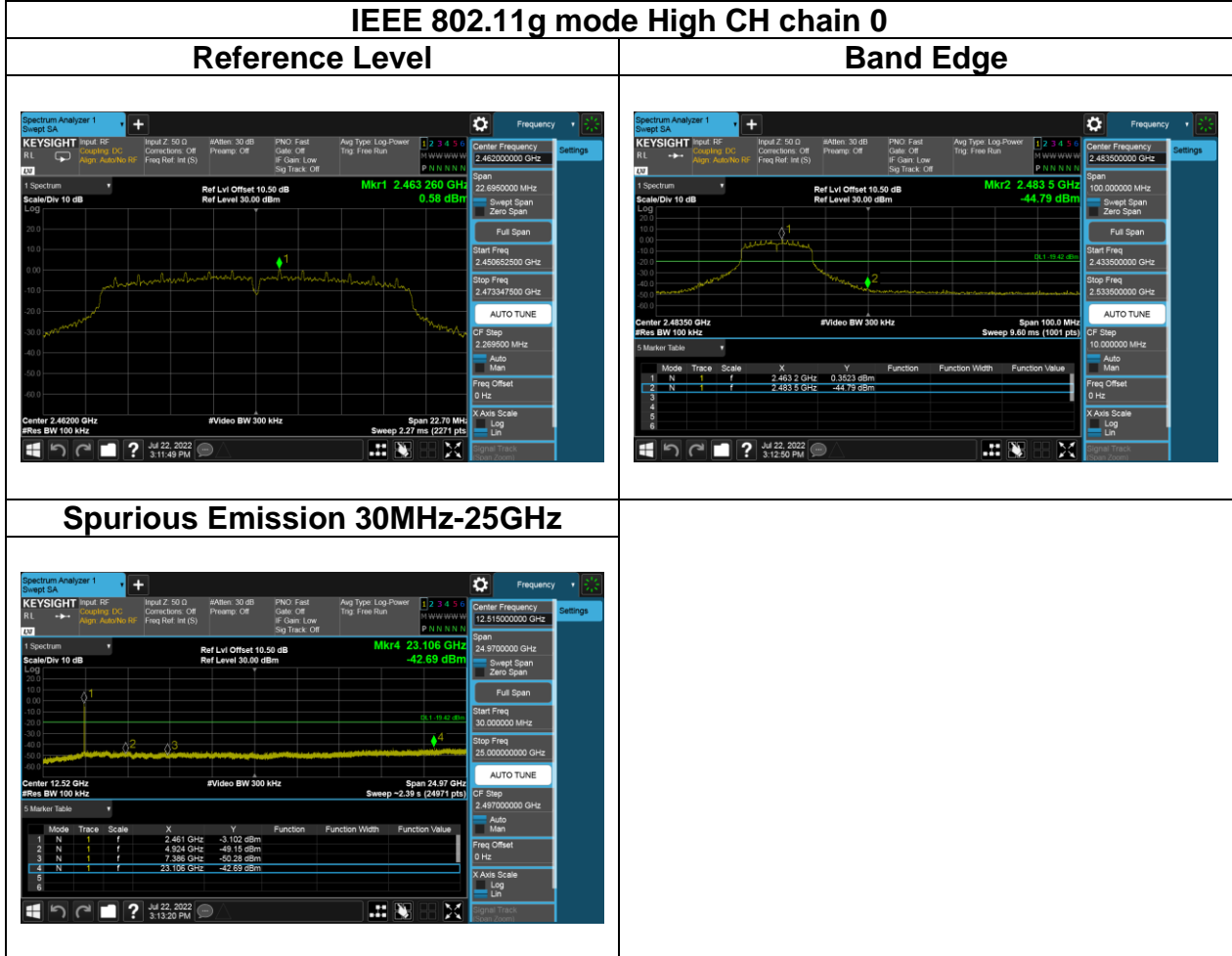




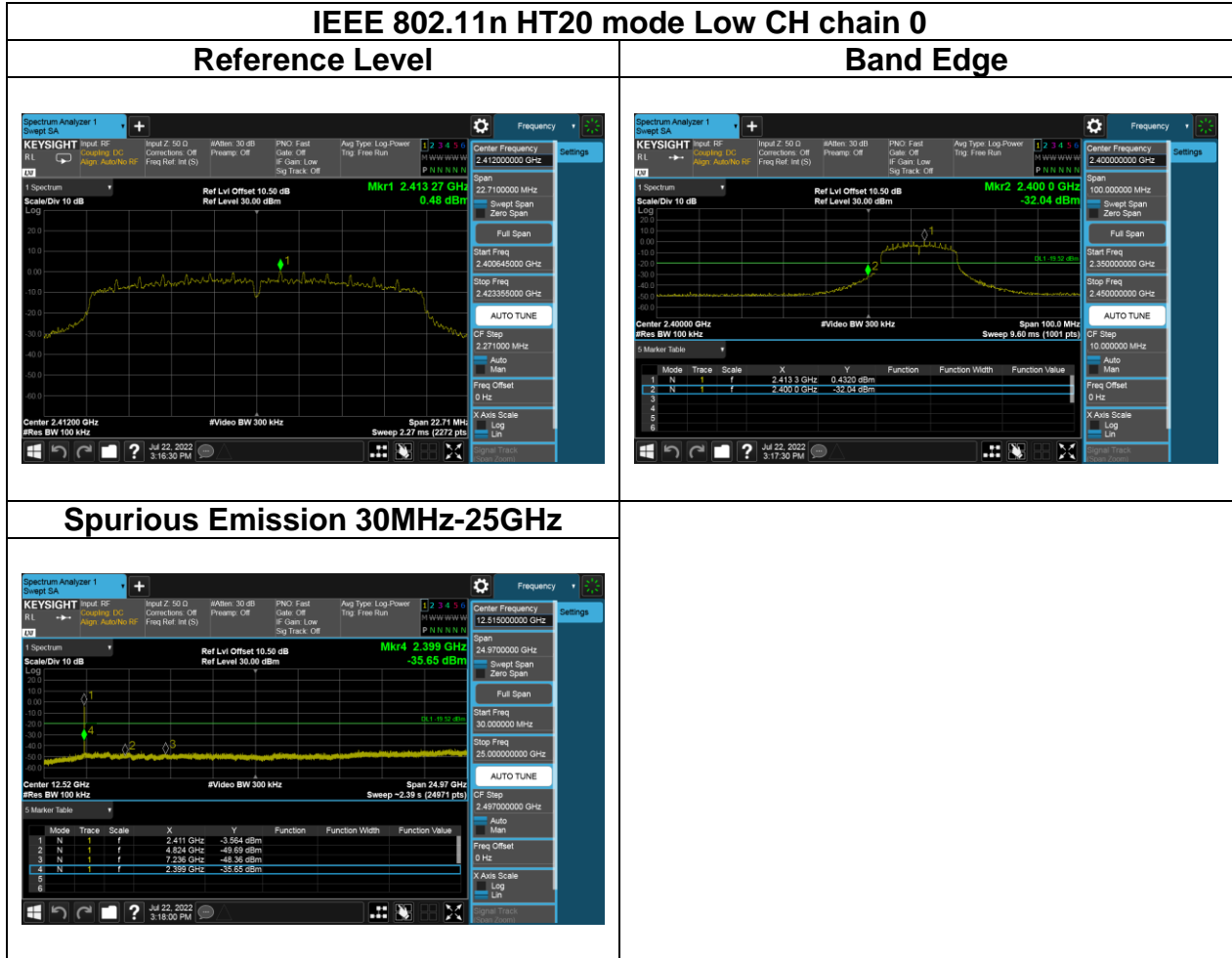
Report No.: TMWK2207002764KR



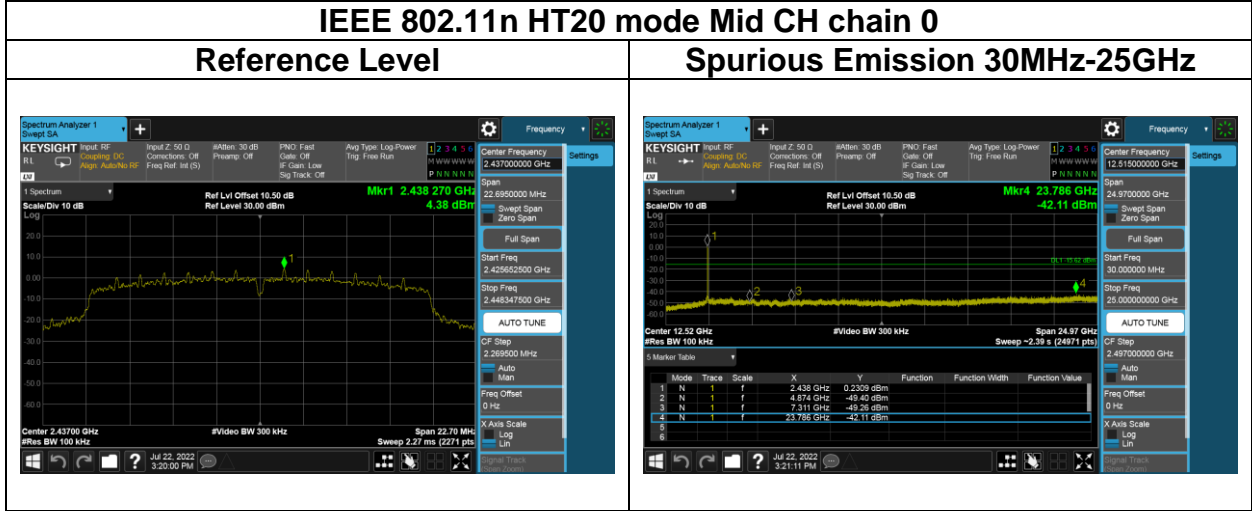
Report No.: TMWK2207002764KR



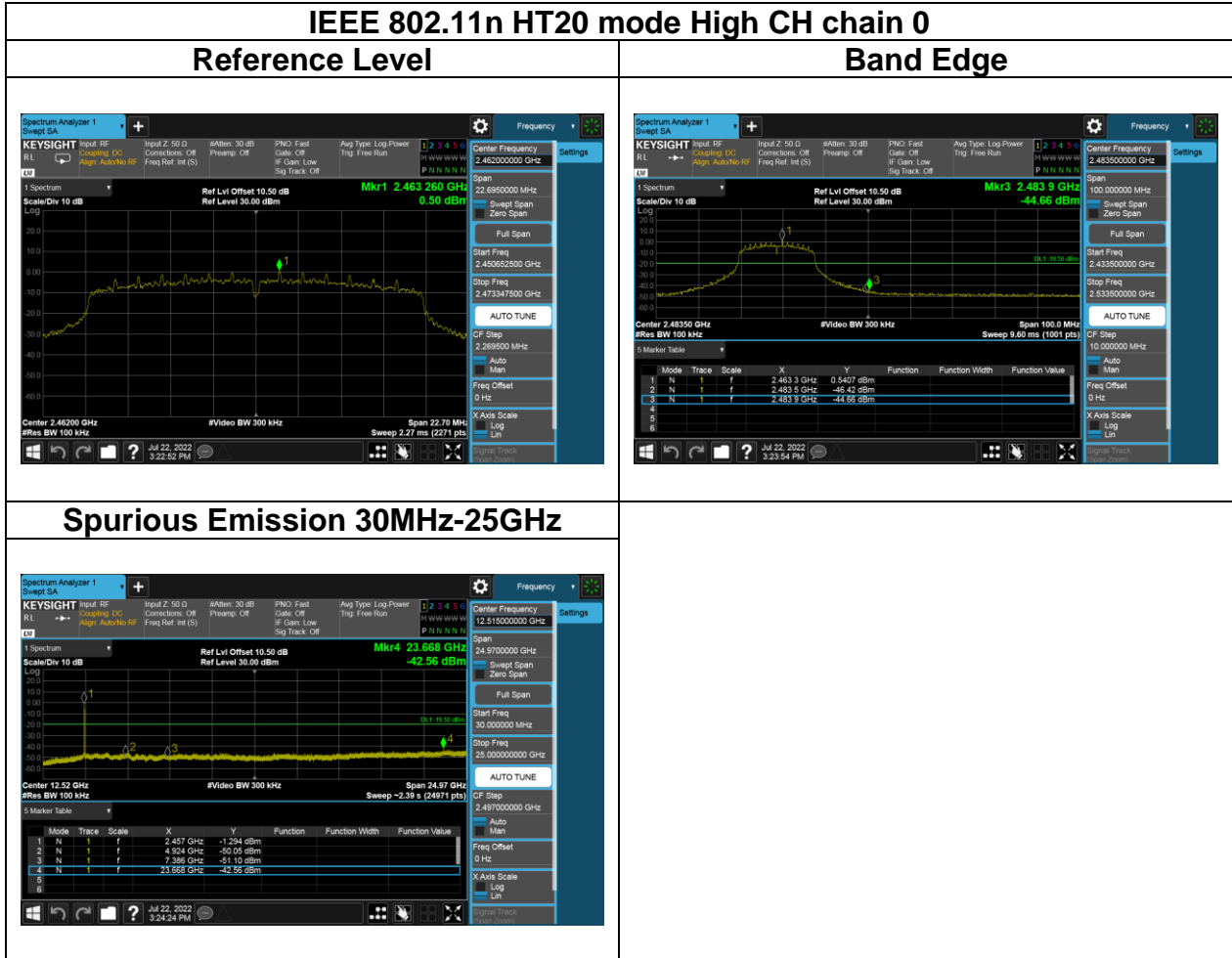
Report No.: TMWK2207002764KR



Report No.: TMWK2207002764KR



Report No.: TMWK2207002764KR



4.6 RADIATION BANDEGE AND SPURIOUS EMISSION

4.6.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency	Field Strength (microvolts/m)	Measurement Distance (metres)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Report No.: TMWK2207002764KR

4.6.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Note: No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4. The SA setting following :

(1) Below 1G : RBW = 100kHz, VBW \geq 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G :

(2.1) For Peak measurement : RBW = 1MHz, VBW \geq 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2.2) For Average measurement : RBW = 1MHz, VBW

·If Duty Cycle \geq 98%, VBW=10Hz.

·If Duty Cycle < 98%, VBW=1/T.

5. Data result :

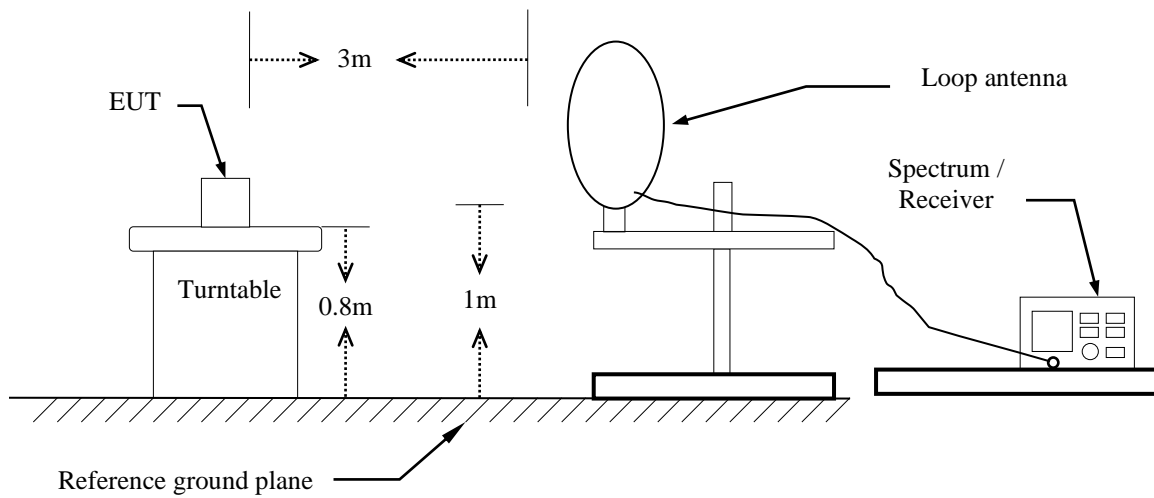
Actual FS=Spectrum Reading Level + Factor

Margin=Actual FS- Limit

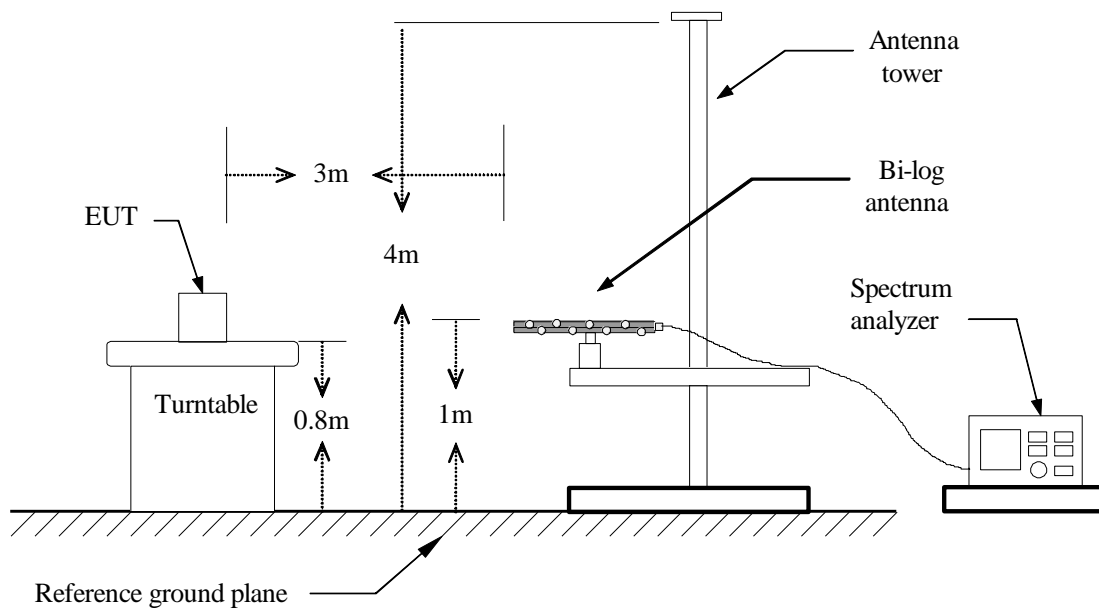
Report No.: TMWK2207002764KR

4.6.3 Test Setup

9kHz ~ 30MHz

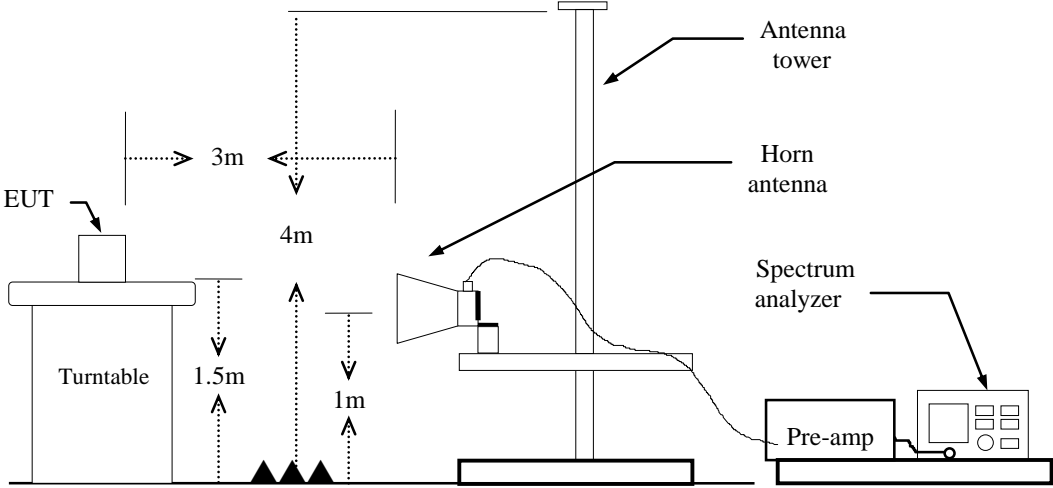


30MHz ~ 1GHz



Report No.: TMWK2207002764KR

Above 1 GHz



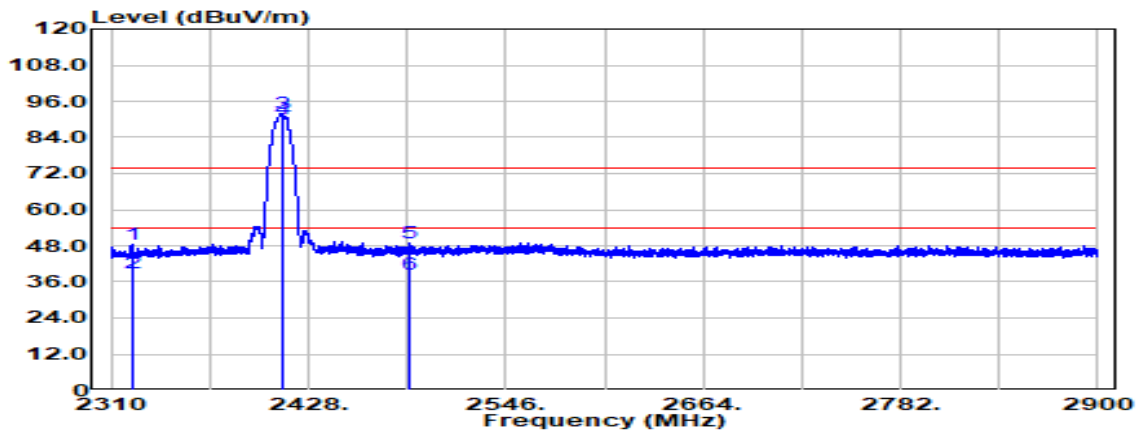
Report No.: TMWK2207002764KR

4.6.4 Test Result

Band Edge Test Data

Model: EKS-D791A

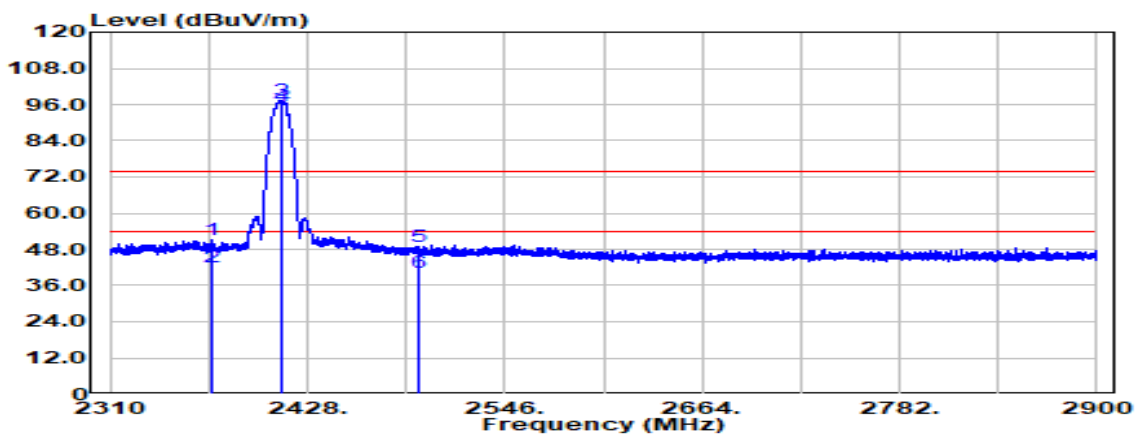
Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2322.626	Peak	41.06	7.60	48.66	74.00	-25.34
2322.626	Average	31.32	7.60	38.91	54.00	-15.09
2412.000	Peak	84.04	7.86	91.90	--	--
2412.000	Average	82.24	7.86	90.09	--	--
2487.826	Peak	40.68	8.28	48.96	74.00	-25.04
2487.826	Average	30.32	8.28	38.60	54.00	-15.40

Report No.: TMWK2207002764KR

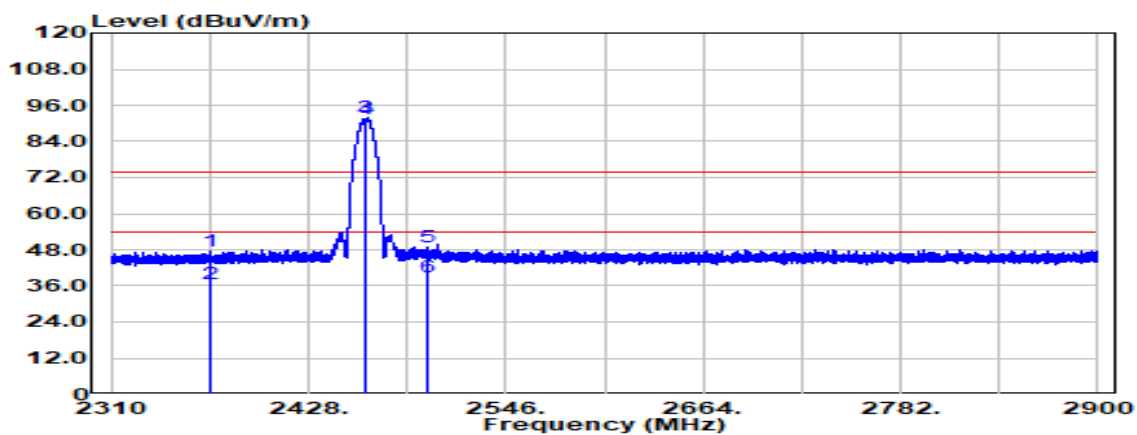
Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2371.360	Peak	43.64	7.70	51.34	74.00	-22.66
2371.360	Average	34.54	7.70	42.24	54.00	-11.76
2412.000	Peak	89.69	7.86	97.55	--	--
2412.000	Average	87.88	7.86	95.73	--	--
2494.670	Peak	40.75	8.31	49.06	74.00	-24.94
2494.670	Average	31.80	8.31	40.12	54.00	-13.88

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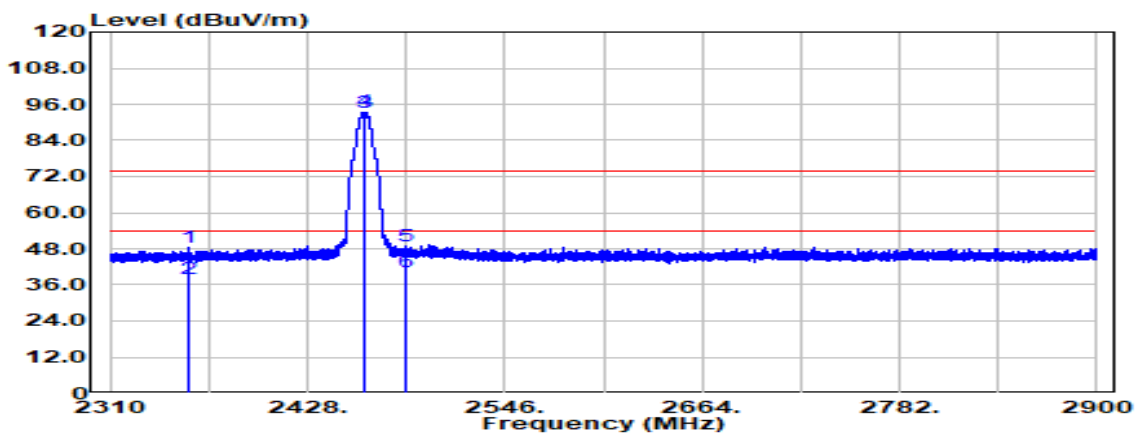
Test Mode	IEEE 802.11b High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2368.777	Peak	39.75	7.69	47.44	74.00	-26.56
2368.777	Average	28.85	7.69	36.54	54.00	-17.46
2462.000	Peak	83.59	8.16	91.75	--	--
2462.000	Average	83.14	8.16	91.30	--	--
2498.431	Peak	40.46	8.33	48.79	74.00	-25.21
2498.431	Average	30.59	8.33	38.92	54.00	-15.08

Report No.: TMWK2207002764KR

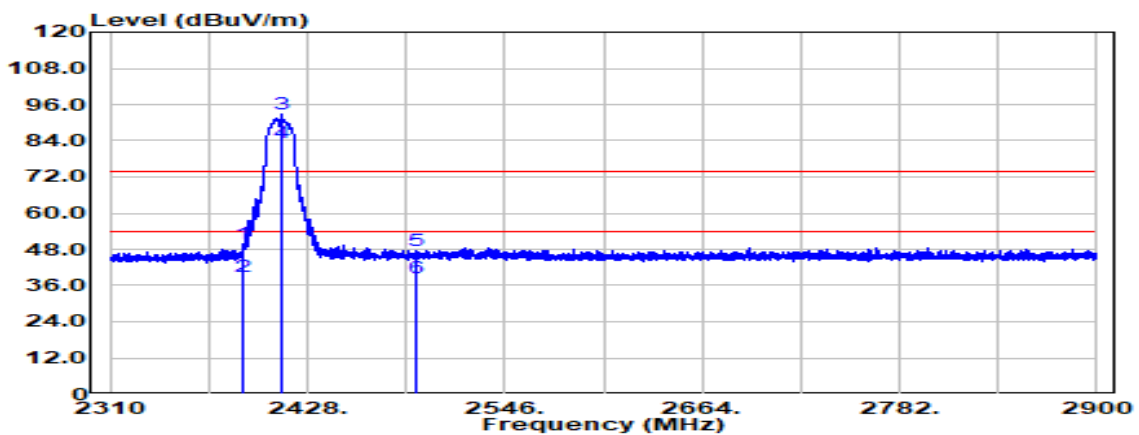
Test Mode	IEEE 802.11b High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2356.892	Peak	40.59	7.66	48.25	74.00	-25.75
2356.892	Average	30.23	7.66	37.88	54.00	-16.12
2462.000	Peak	85.22	8.16	93.38	--	--
2462.000	Average	85.49	8.16	93.64	--	--
2486.330	Peak	40.84	8.27	49.11	74.00	-24.89
2486.330	Average	32.08	8.27	40.35	54.00	-13.65

Report No.: TMWK2207002764KR

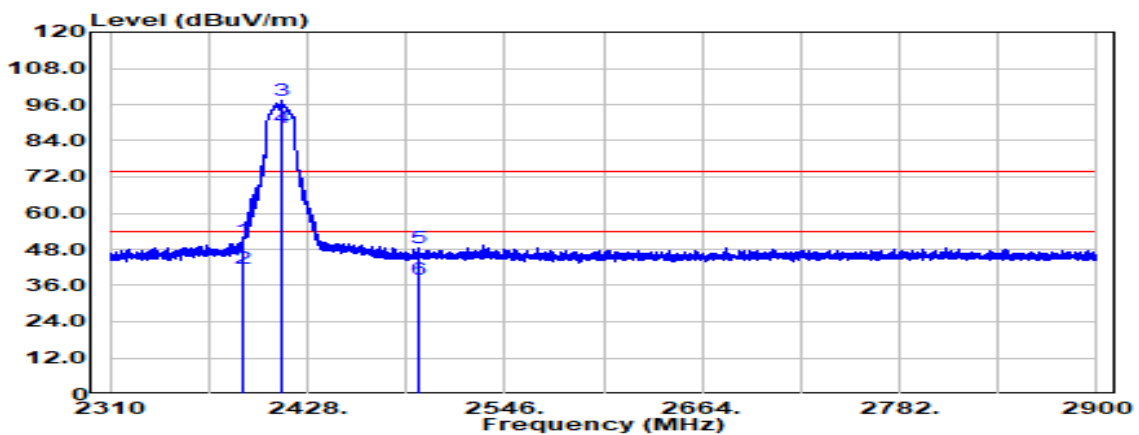
Test Mode	IEEE 802.11g Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2390.004	Peak	41.85	7.75	49.60	74.00	-24.40
2390.004	Average	30.98	7.75	38.73	54.00	-15.27
2412.000	Peak	84.81	7.86	92.67	--	--
2412.000	Average	75.64	7.86	83.50	--	--
2492.664	Peak	39.27	8.30	47.57	74.00	-26.43
2492.664	Average	29.99	8.30	38.29	54.00	-15.71

Report No.: TMWK2207002764KR

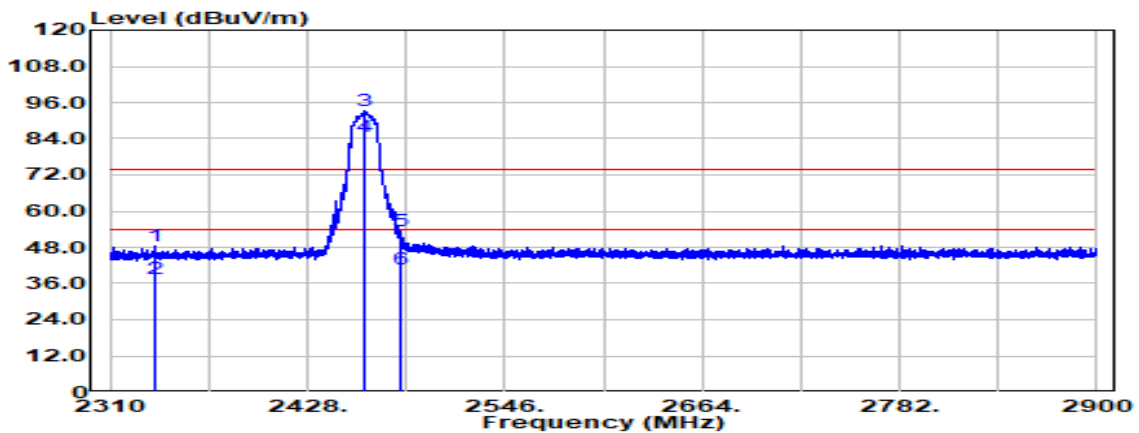
Test Mode	IEEE 802.11g Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2389.650	Peak	43.41	7.75	51.16	74.00	-22.84
2389.650	Average	33.71	7.75	41.46	54.00	-12.54
2412.000	Peak	89.59	7.86	97.45	--	--
2412.000	Average	80.46	7.86	88.32	--	--
2493.844	Peak	40.24	8.31	48.55	74.00	-25.45
2493.844	Average	29.77	8.31	38.08	54.00	-15.92

Report No.: TMWK2207002764KR

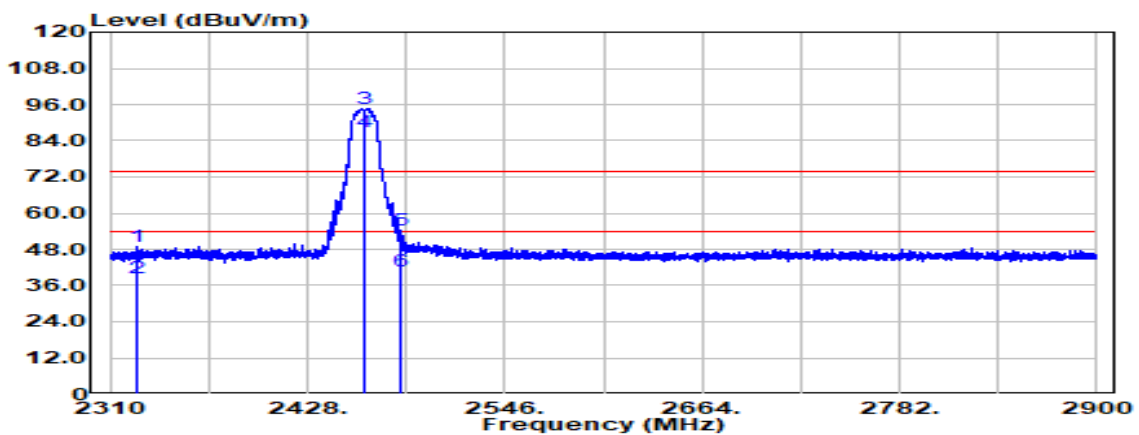
Test Mode	IEEE 802.11g High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2336.904	Peak	40.84	7.62	48.46	74.00	-25.54
2336.904	Average	29.94	7.62	37.56	54.00	-16.44
2462.000	Peak	85.00	8.16	93.16	--	--
2462.000	Average	76.35	8.16	84.51	--	--
2483.500	Peak	45.34	8.26	53.60	74.00	-20.40
2483.500	Average	32.64	8.26	40.90	54.00	-13.10

Report No.: TMWK2207002764KR

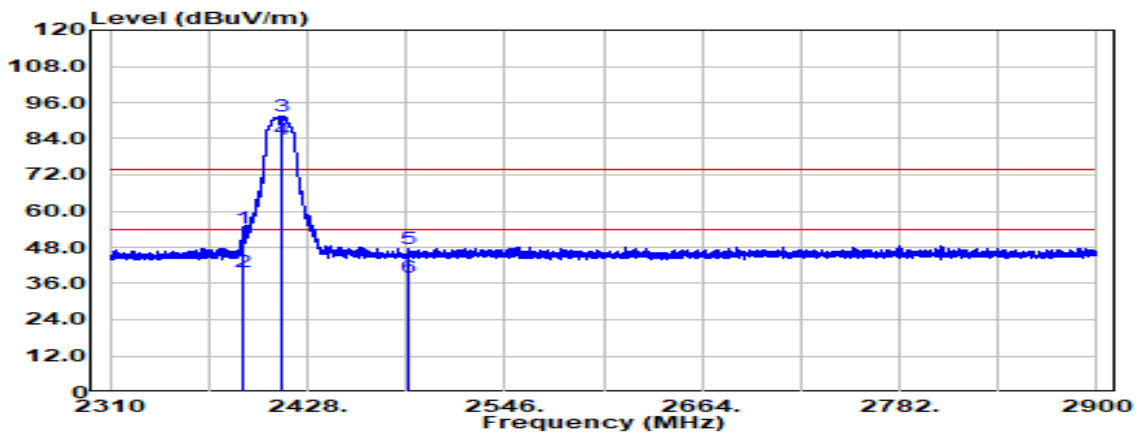
Test Mode	IEEE 802.11g High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak & Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2326.402	Peak	41.46	7.60	49.06	74.00	-24.94
2326.402	Average	30.73	7.60	38.33	54.00	-15.67
2462.000	Peak	86.55	8.16	94.71	--	--
2462.000	Average	78.88	8.16	87.03	--	--
2483.814	Peak	46.25	8.26	54.52	74.00	-19.48
2483.814	Average	32.63	8.26	40.89	54.00	-13.11

Report No.: TMWK2207002764KR

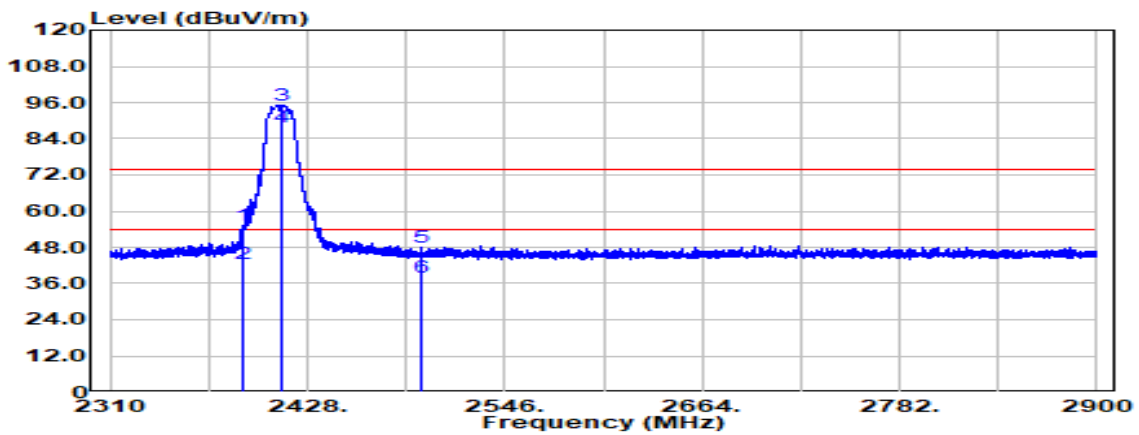
Test Mode	IEEE 802.11n HT20 Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2390.004	Peak	46.64	7.75	54.40	74.00	-19.60
2390.004	Average	31.87	7.75	39.62	54.00	-14.38
2412.000	Peak	83.53	7.86	91.38	--	--
2412.000	Average	75.88	7.86	83.74	--	--
2488.416	Peak	39.41	8.28	47.70	74.00	-26.30
2488.416	Average	29.62	8.28	37.91	54.00	-16.09

Report No.: TMWK2207002764KR

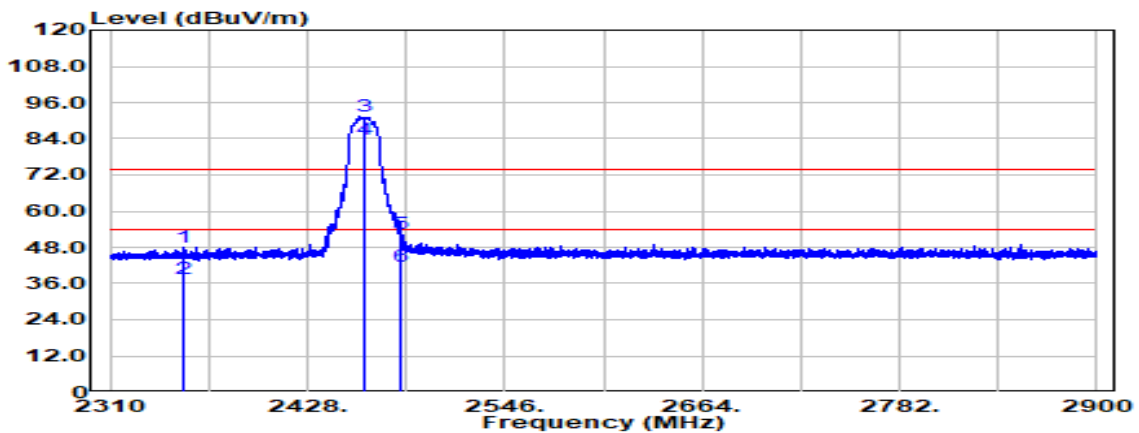
Test Mode	IEEE 802.11 n20 Low CH 2412MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2388.706	Peak	47.43	7.75	55.18	74.00	-18.82
2388.706	Average	34.62	7.75	42.36	54.00	-11.64
2412.000	Peak	87.23	7.86	95.08	--	--
2412.000	Average	79.80	7.86	87.66	--	--
2495.968	Peak	39.71	8.32	48.03	74.00	-25.97
2495.968	Average	29.92	8.32	38.24	54.00	-15.76

Report No.: TMWK2207002764KR

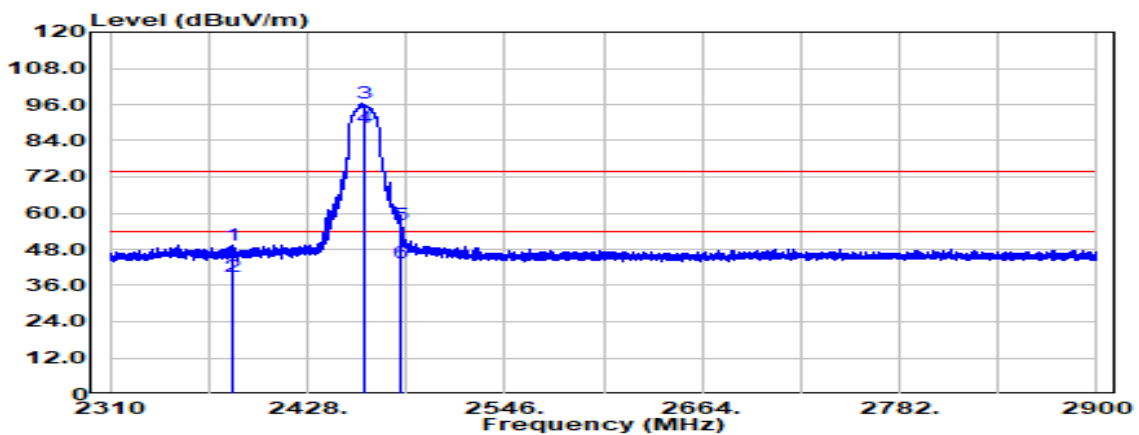
Test Mode	IEEE 802.11n HT20 High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2353.660	Peak	40.25	7.65	47.90	74.00	-26.10
2353.660	Average	29.98	7.65	37.63	54.00	-16.37
2462.000	Peak	83.30	8.16	91.45	--	--
2462.000	Average	75.58	8.16	83.73	--	--
2483.500	Peak	44.12	8.26	52.38	74.00	-21.62
2483.500	Average	33.46	8.26	41.72	54.00	-12.28

Report No.: TMWK2207002764KR

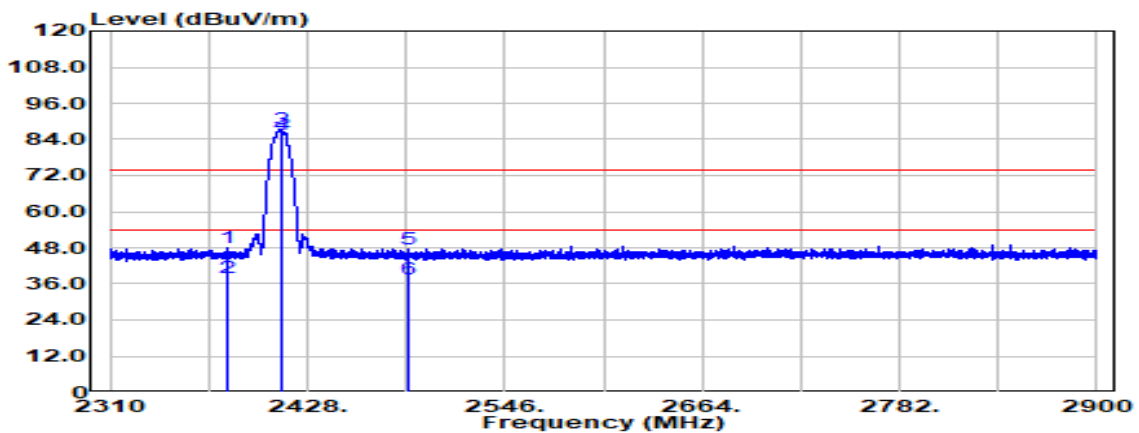
Test Mode	IEEE 802.11n20 High CH 2462MHz	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Band Edge	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2383.514	Peak	41.53	7.73	49.27	74.00	-24.73
2383.514	Average	31.00	7.73	38.73	54.00	-15.27
2462.000	Peak	88.24	8.16	96.40	--	--
2462.000	Average	80.10	8.16	88.26	--	--
2483.578	Peak	47.87	8.26	56.13	74.00	-17.87
2483.578	Average	35.15	8.26	43.41	54.00	-10.59

Model: EKS-D7P1A

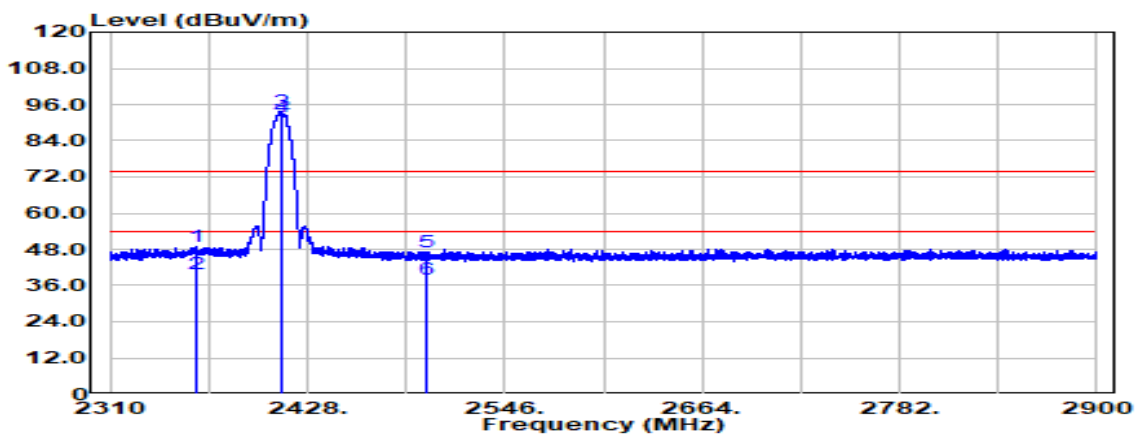
Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	24.9(°C)/ 64%RH
Test Item	Band Edge	Test Date	August 1, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2380.446	Peak	40.22	7.73	47.94	74.00	-26.06
2380.446	Average	30.13	7.73	37.85	54.00	-16.15
2412.000	Peak	79.54	7.86	87.40	--	--
2412.000	Average	77.75	7.86	85.61	--	--
2488.770	Peak	39.21	8.29	47.50	74.00	-26.50
2488.770	Average	29.50	8.29	37.79	54.00	-16.21

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b Low CH 2412MHz	Temp/Hum	24.9(°C)/ 64%RH
Test Item	Band Edge	Test Date	August 1, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



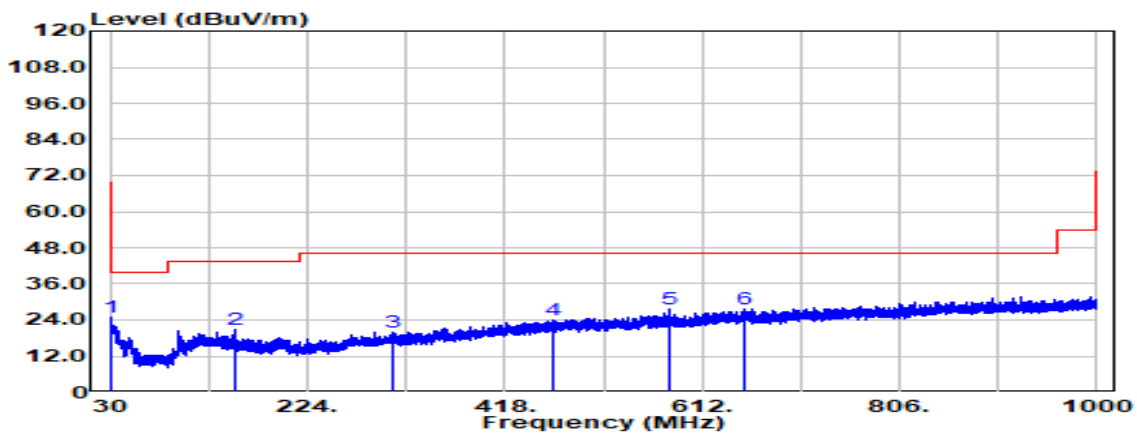
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2362.038	Peak	41.11	7.67	48.78	74.00	-25.22
2362.038	Average	32.33	7.67	40.01	54.00	-13.99
2412.000	Peak	85.75	7.86	93.61	--	--
2412.000	Average	83.88	7.86	91.74	--	--
2499.154	Peak	38.91	8.34	47.25	74.00	-26.75
2499.154	Average	29.51	8.34	37.84	54.00	-16.16

Report No.: TMWK2207002764KR

Below 1G Test Data

Model: EKS-D791A

Test Mode	IEEE 802.11b mode CH Low	Temp/Hum	24.9(°C)/ 64%RH
Test Item	30MHz-1GHz	Test Date	August 1, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak		

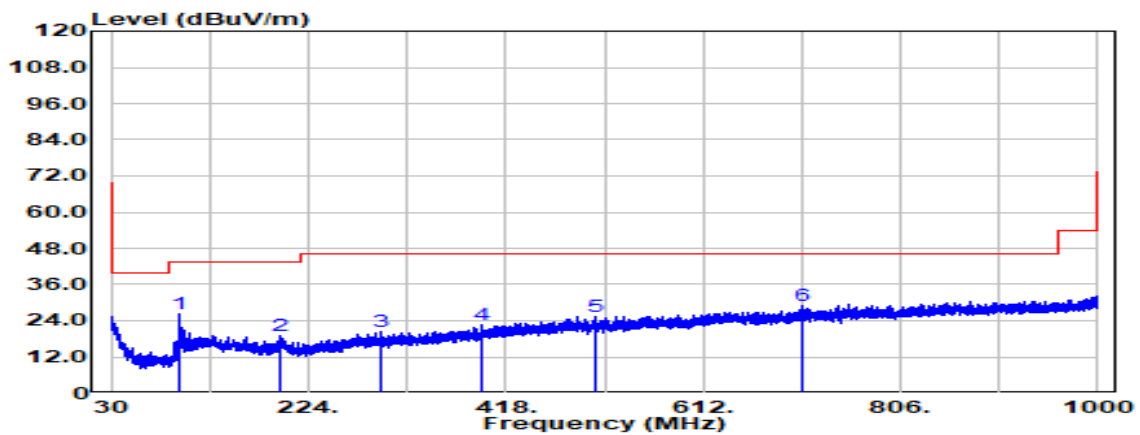


Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.364	Peak	27.69	-2.94	24.75	40.00	-15.25
152.341	Peak	31.45	-10.73	20.72	43.50	-22.78
308.511	Peak	28.75	-8.88	19.87	46.00	-26.13
466.136	Peak	28.39	-4.38	24.01	46.00	-21.99
579.869	Peak	30.34	-2.66	27.69	46.00	-18.31
654.559	Peak	28.86	-1.09	27.77	46.00	-18.23

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b mode CH Low	Temp/Hum	24.9(°C)/ 64%RH
Test Item	30MHz-1GHz	Test Date	August 1, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak		



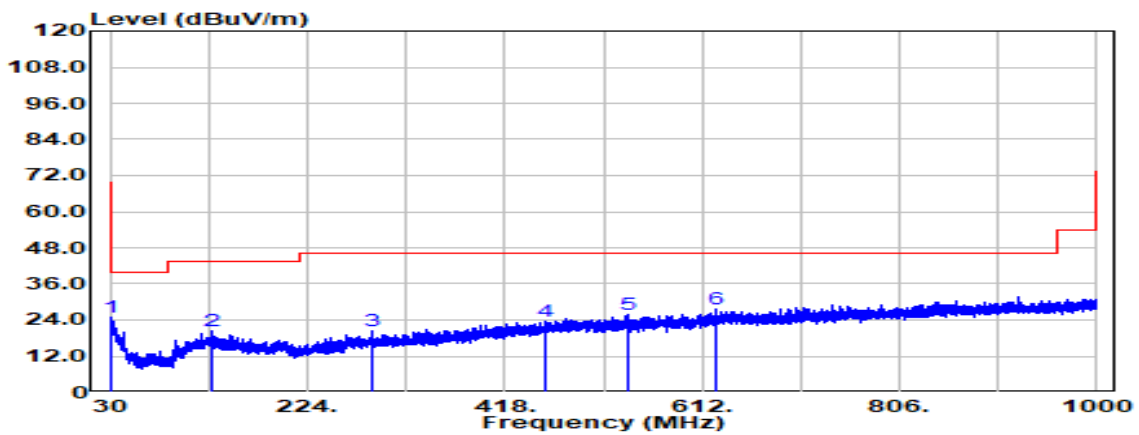
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
97.658	Peak	40.06	-13.66	26.39	43.50	-17.11
196.719	Peak	29.55	-10.50	19.06	43.50	-24.44
295.780	Peak	29.44	-9.13	20.31	46.00	-25.69
393.508	Peak	29.37	-6.66	22.72	46.00	-23.28
505.543	Peak	29.39	-3.83	25.56	46.00	-20.44
708.273	Peak	29.29	-0.30	28.99	46.00	-17.01

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: TMWK2207002764KR

Model: EKS-D7P1A

Test Mode	IEEE 802.11b mode CH Low	Temp/Hum	24.8(°C)/ 63%RH
Test Item	30MHz-1GHz	Test Date	August 4, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak		

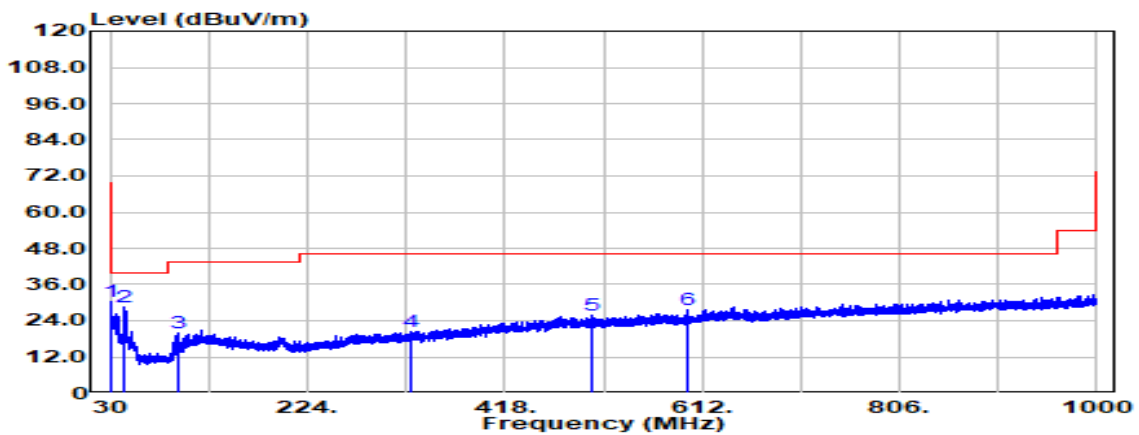


Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.243	Peak	27.83	-2.87	24.96	40.00	-15.04
130.395	Peak	29.56	-9.38	20.18	43.50	-23.32
288.263	Peak	29.69	-9.17	20.51	46.00	-25.49
458.255	Peak	28.09	-4.69	23.41	46.00	-22.59
538.765	Peak	28.81	-3.20	25.61	46.00	-20.39
624.610	Peak	29.29	-1.55	27.74	46.00	-18.26

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b mode CH Low	Temp/Hum	24.8(°C)/ 63%RH
Test Item	30MHz-1GHz	Test Date	August 4, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
30.364	Peak	33.40	-2.94	30.46	40.00	-9.54
44.065	Peak	41.39	-12.99	28.40	40.00	-11.60
97.658	Peak	33.66	-13.66	20.00	43.50	-23.50
325.971	Peak	28.91	-8.49	20.42	46.00	-25.58
503.603	Peak	29.44	-3.84	25.61	46.00	-20.39
597.086	Peak	30.41	-2.79	27.61	46.00	-18.39

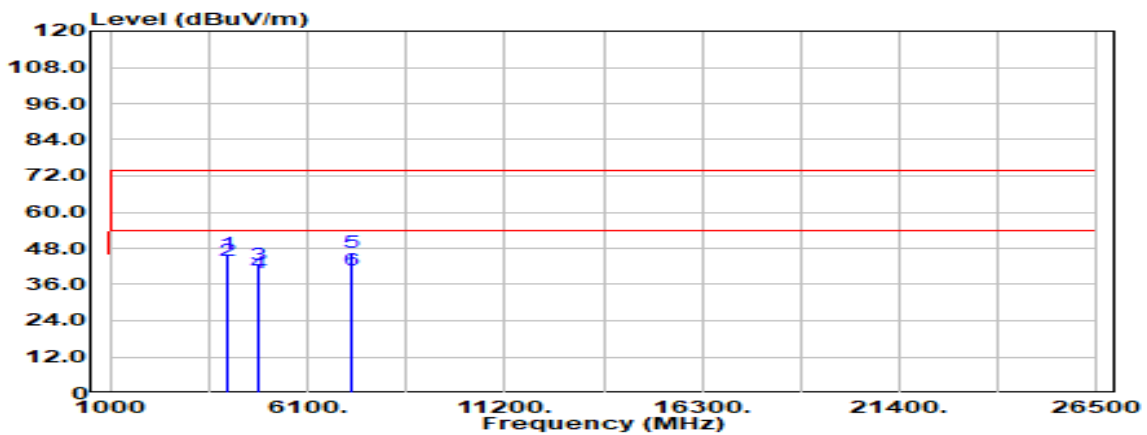
Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: TMWK2207002764KR

Above 1G Test Data

Model: EKS-D791A

Test Mode	IEEE 802.11b Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



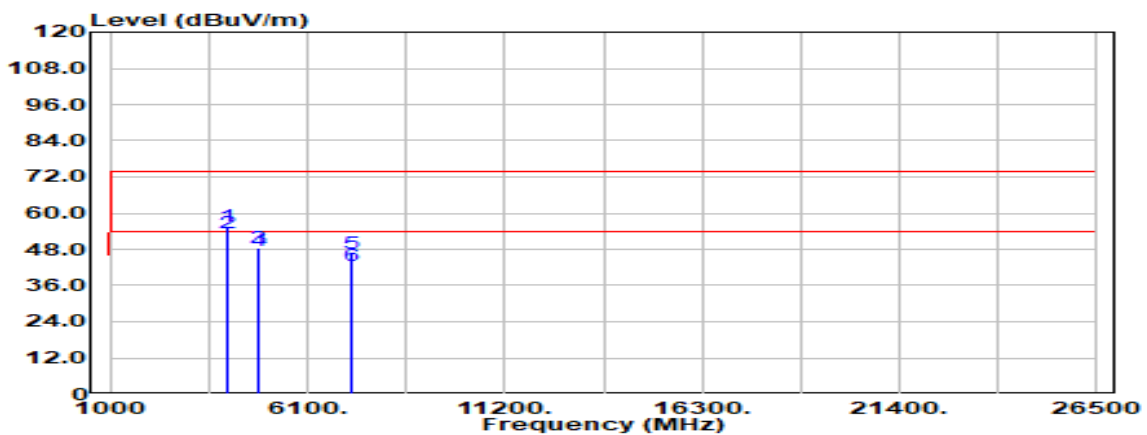
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBUV/m)	Limit @3m (dBUV/m)	Margin (dB)
4021.000	Peak	42.14	4.01	46.15	74.00	-27.85
4021.000	Average	39.91	4.01	43.93	54.00	-10.07
4824.000	Peak	36.67	5.90	42.57	74.00	-31.43
4824.000	Average	33.80	5.90	39.70	54.00	-14.30
7236.000	Peak	33.47	13.31	46.78	74.00	-27.22
7236.000	Average	27.64	13.31	40.95	54.00	-13.05

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



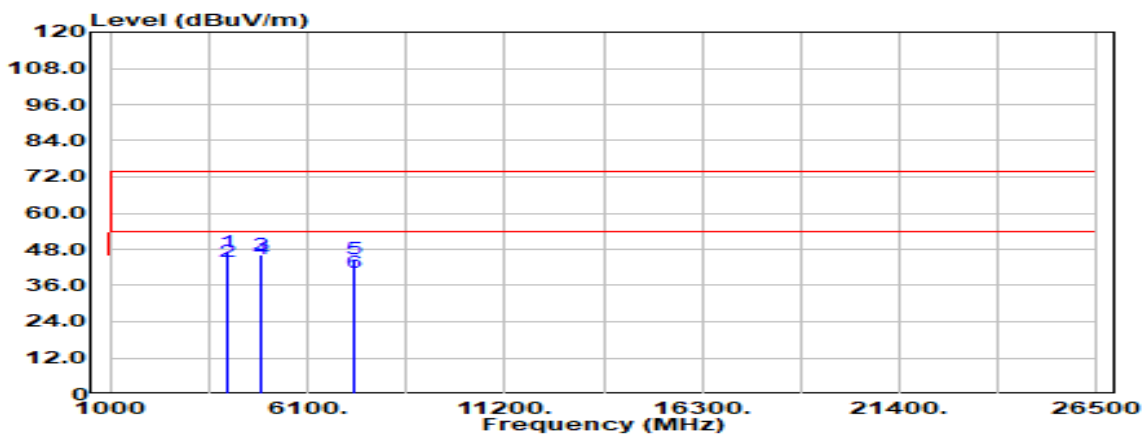
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4020.000	Peak	51.74	4.01	55.75	74.00	-18.25
4020.000	Average	49.38	4.01	53.39	54.00	-0.61
4824.000	Peak	42.50	5.90	48.39	74.00	-25.61
4824.000	Average	41.85	5.90	47.75	54.00	-6.25
7236.000	Peak	33.48	13.31	46.79	74.00	-27.21
7236.000	Average	29.11	13.31	42.42	54.00	-11.58

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



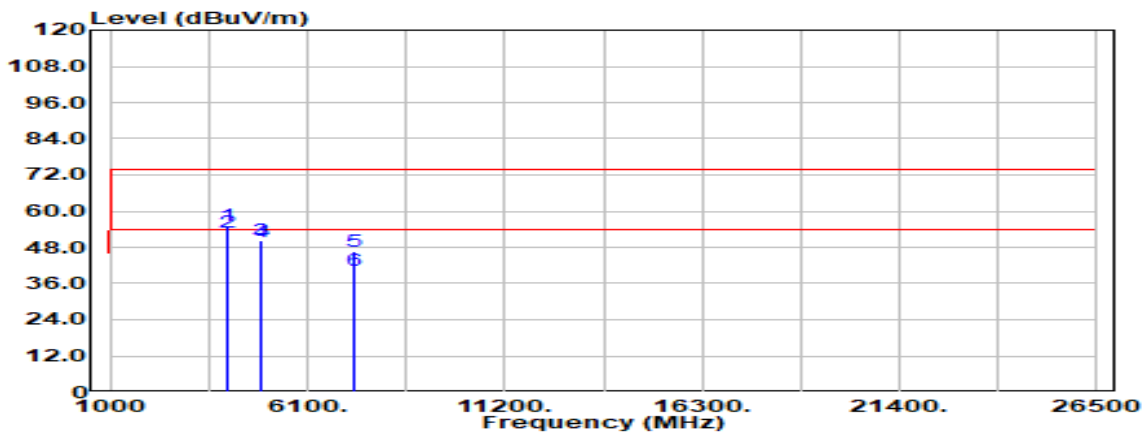
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4061.000	Peak	43.15	4.10	47.25	74.00	-26.75
4061.000	Average	39.81	4.10	43.91	54.00	-10.09
4874.000	Peak	40.06	6.09	46.15	74.00	-27.85
4874.000	Average	38.56	6.09	44.64	54.00	-9.36
7311.000	Peak	31.58	13.33	44.91	74.00	-29.09
7311.000	Average	26.76	13.33	40.09	54.00	-13.91

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



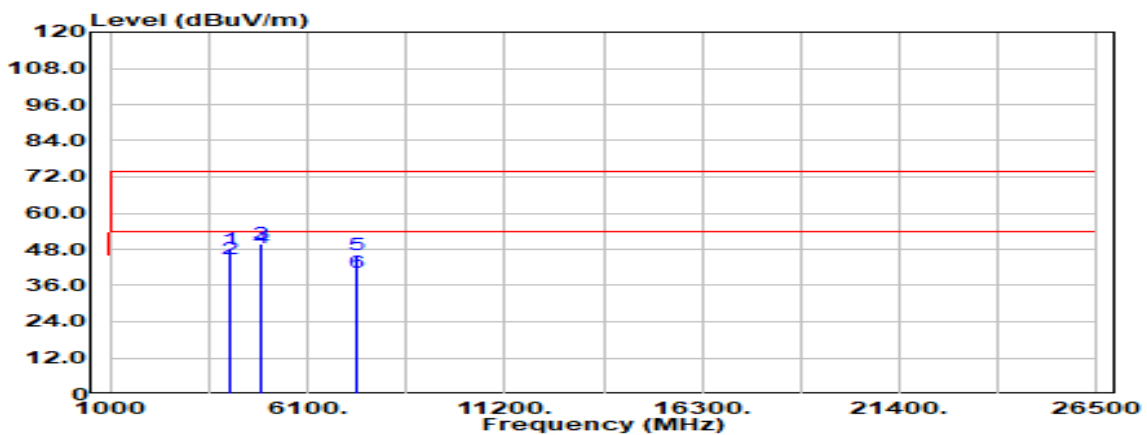
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dB μ V)	Factor (dB)	Actual FS (dB μ V/m)	Limit @3m (dB μ V/m)	Margin (dB)
4063.000	Peak	51.28	4.10	55.38	74.00	-18.62
4063.000	Average	48.95	4.10	53.05	54.00	-0.95
4874.000	Peak	44.00	6.09	50.09	74.00	-23.91
4874.000	Average	43.85	6.09	49.94	54.00	-4.06
7311.000	Peak	33.25	13.33	46.59	74.00	-27.41
7311.000	Average	26.82	13.33	40.15	54.00	-13.85

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

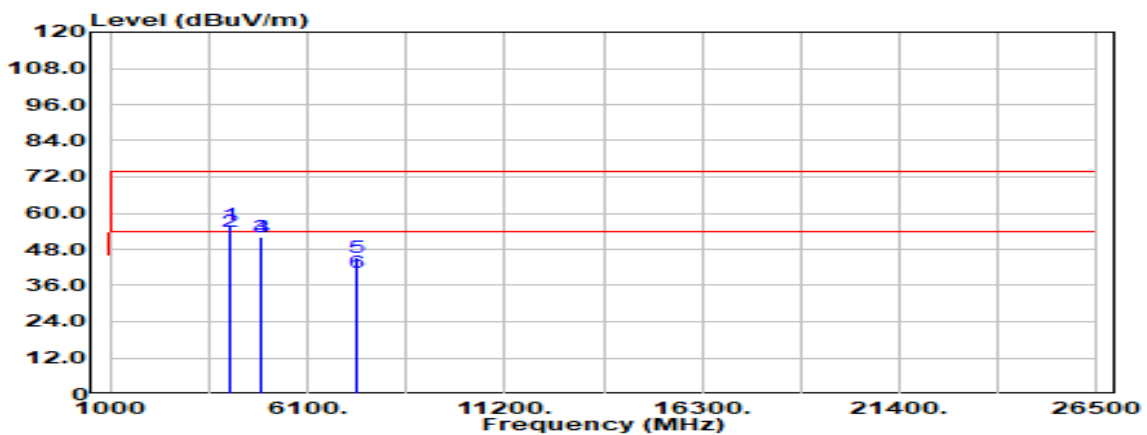


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4104.000	Peak	43.68	4.11	47.79	74.00	-26.21
4104.000	Average	40.89	4.11	45.00	54.00	-9.00
4924.000	Peak	43.37	6.53	49.90	74.00	-24.10
4924.000	Average	41.97	6.53	48.50	54.00	-5.50
7386.000	Peak	33.08	13.33	46.41	74.00	-27.59
7386.000	Average	26.95	13.33	40.28	54.00	-13.72

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11b High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



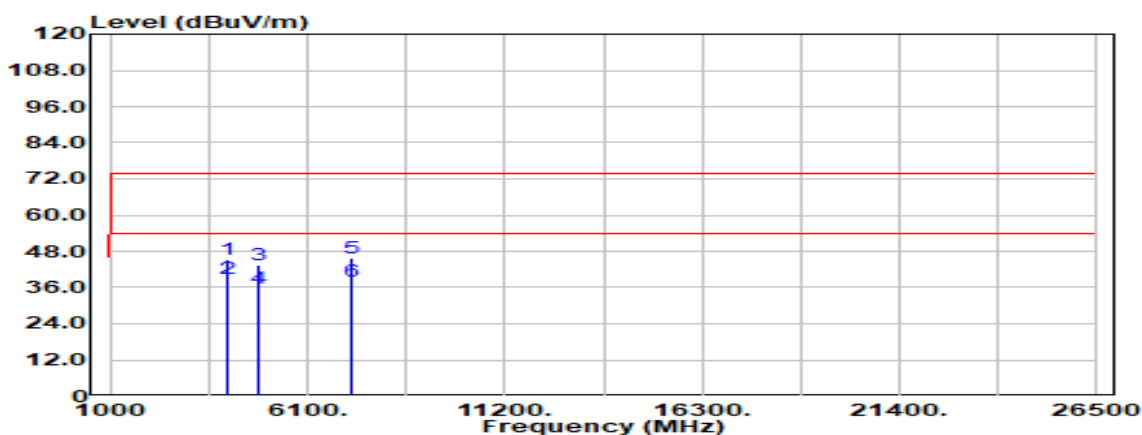
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4103.000	Peak	51.90	4.11	56.01	74.00	-17.99
4103.000	Average	49.64	4.11	53.75	54.00	-0.25
4924.000	Peak	45.66	6.53	52.18	74.00	-21.82
4924.000	Average	45.38	6.53	51.91	54.00	-2.09
7386.000	Peak	31.98	13.33	45.31	74.00	-28.69
7386.000	Average	26.95	13.33	40.28	54.00	-13.72

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



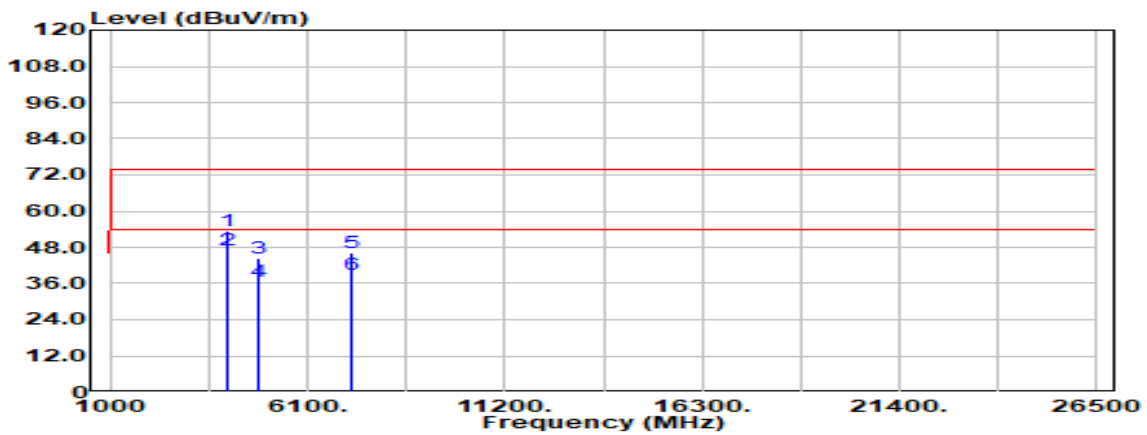
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4019.000	Peak	41.05	4.01	45.06	74.00	-28.94
4019.000	Average	34.73	4.01	38.74	54.00	-15.26
4824.000	Peak	37.63	5.90	43.52	74.00	-30.48
4824.000	Average	30.01	5.90	35.91	54.00	-18.09
7236.000	Peak	32.47	13.31	45.78	74.00	-28.22
7236.000	Average	24.91	13.31	38.22	54.00	-15.78

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

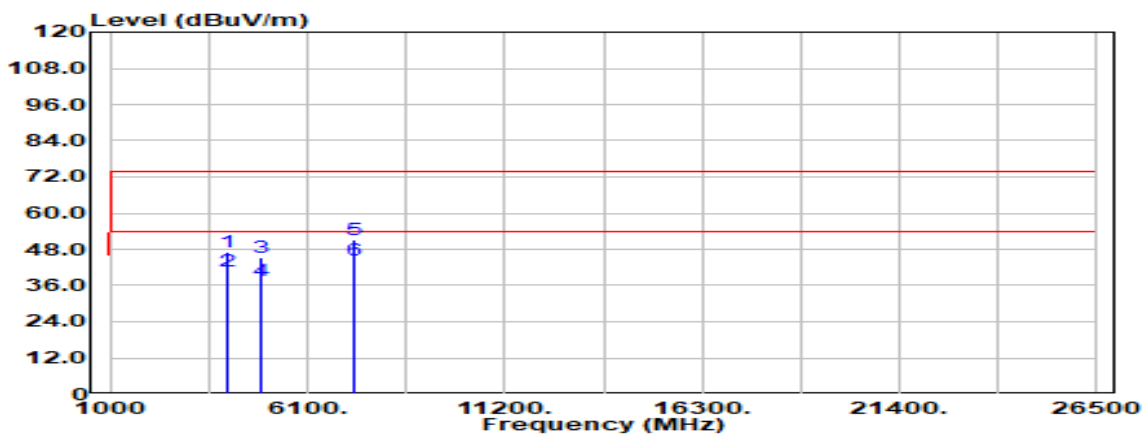


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4022.000	Peak	49.52	4.02	53.54	74.00	-20.46
4022.000	Average	43.03	4.02	47.04	54.00	-6.96
4824.000	Peak	38.35	5.90	44.24	74.00	-29.76
4824.000	Average	30.66	5.90	36.56	54.00	-17.44
7236.000	Peak	32.96	13.31	46.27	74.00	-27.73
7236.000	Average	25.63	13.31	38.95	54.00	-15.05

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



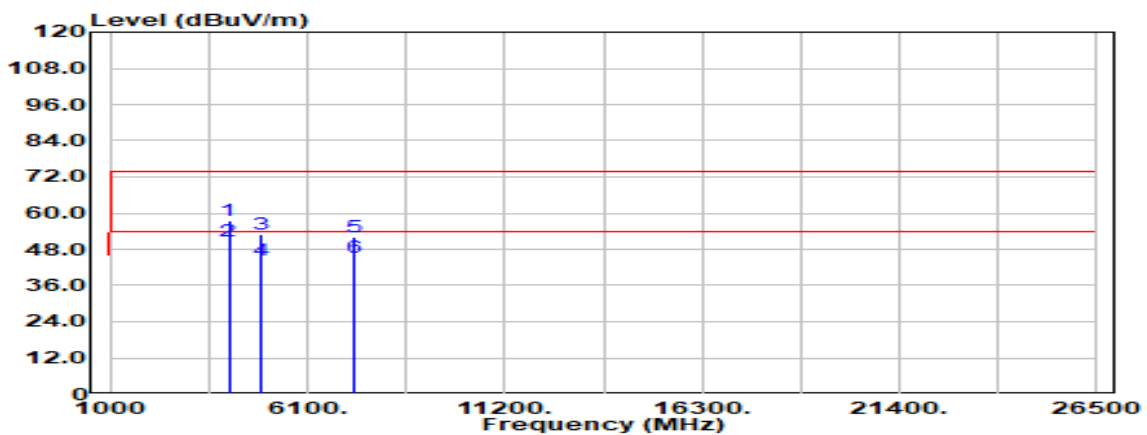
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4058.000	Peak	42.97	4.10	47.08	74.00	-26.92
4058.000	Average	36.71	4.10	40.81	54.00	-13.19
4874.000	Peak	39.40	6.09	45.49	74.00	-28.51
4874.000	Average	31.65	6.09	37.74	54.00	-16.26
7311.000	Peak	38.00	13.33	51.34	74.00	-22.66
7311.000	Average	31.00	13.33	44.33	54.00	-9.67

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		

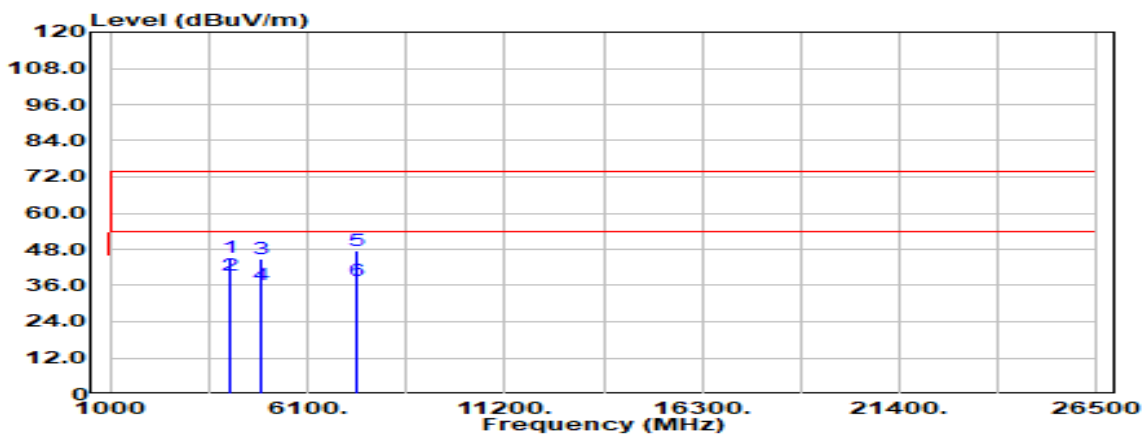


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4065.000	Peak	53.57	4.10	57.68	74.00	-16.32
4065.000	Average	46.64	4.10	50.74	54.00	-3.26
4874.000	Peak	46.77	6.09	52.85	74.00	-21.15
4874.000	Average	38.37	6.09	44.46	54.00	-9.54
7311.000	Peak	38.86	13.33	52.19	74.00	-21.81
7311.000	Average	31.84	13.33	45.17	54.00	-8.83

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11g High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



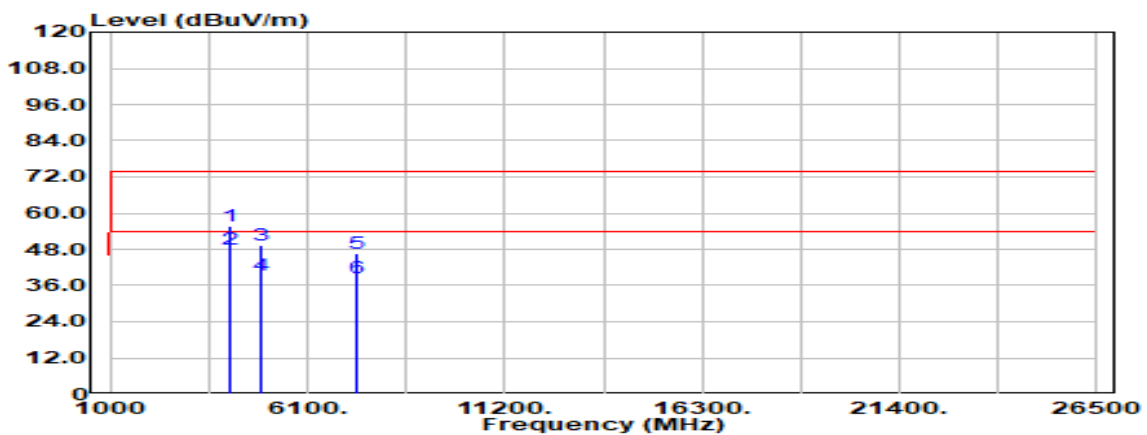
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4106.000	Peak	41.04	4.11	45.15	74.00	-28.85
4106.000	Average	35.26	4.11	39.37	54.00	-14.63
4924.000	Peak	38.11	6.53	44.64	74.00	-29.36
4924.000	Average	29.51	6.53	36.04	54.00	-17.96
7386.000	Peak	34.07	13.33	47.40	74.00	-26.60
7386.000	Average	24.45	13.33	37.78	54.00	-16.22

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



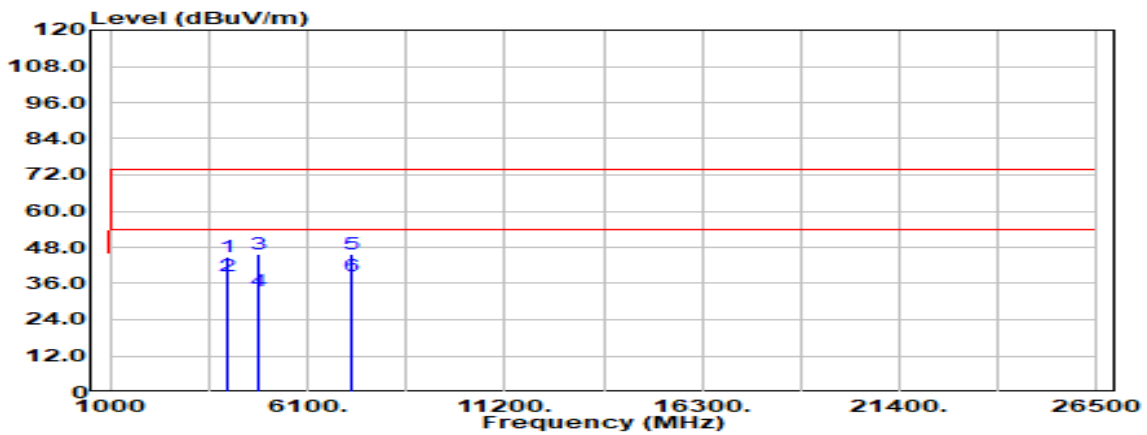
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4101.000	Peak	51.64	4.11	55.75	74.00	-18.25
4101.000	Average	43.82	4.11	47.93	54.00	-6.07
4924.000	Peak	42.88	6.53	49.41	74.00	-24.59
4924.000	Average	32.85	6.53	39.38	54.00	-14.62
7386.000	Peak	33.27	13.33	46.60	74.00	-27.40
7386.000	Average	25.20	13.33	38.53	54.00	-15.47

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



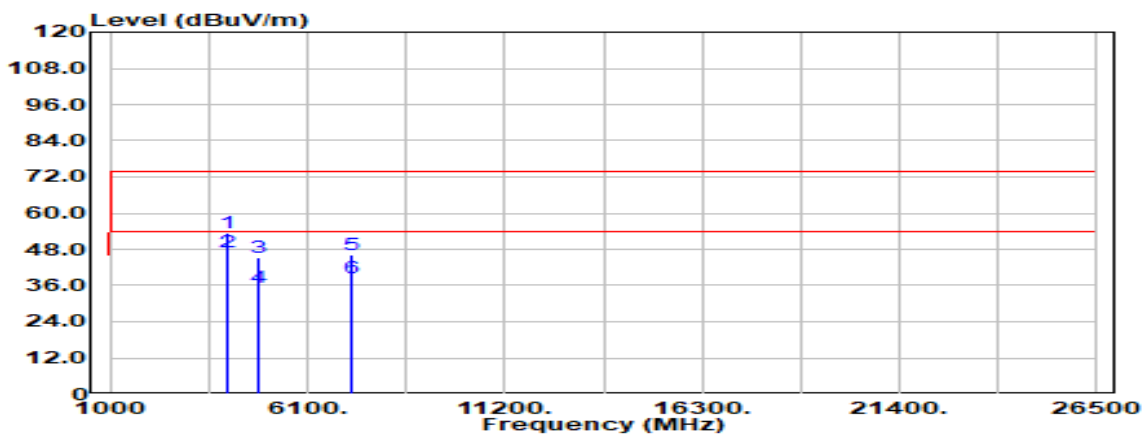
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4017.000	Peak	40.72	4.00	44.72	74.00	-29.28
4017.000	Average	34.38	4.00	38.38	54.00	-15.62
4824.000	Peak	39.71	5.90	45.61	74.00	-28.39
4824.000	Average	27.78	5.90	33.68	54.00	-20.32
7236.000	Peak	32.25	13.31	45.56	74.00	-28.44
7236.000	Average	25.19	13.31	38.50	54.00	-15.50

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



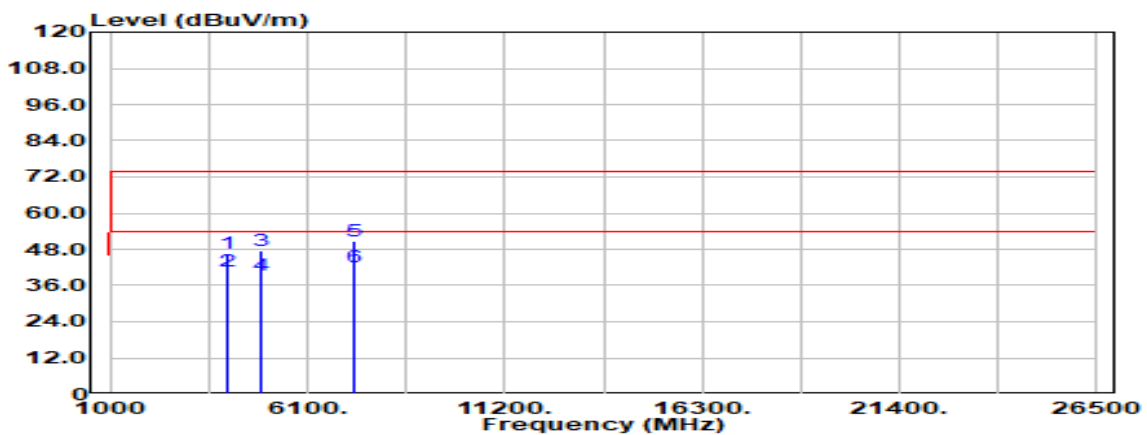
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4021.000	Peak	49.37	4.01	53.38	74.00	-20.62
4021.000	Average	42.88	4.01	46.89	54.00	-7.11
4824.000	Peak	39.19	5.90	45.09	74.00	-28.91
4824.000	Average	29.45	5.90	35.35	54.00	-18.65
7236.000	Peak	32.73	13.31	46.04	74.00	-27.96
7236.000	Average	25.17	13.31	38.48	54.00	-15.52

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		

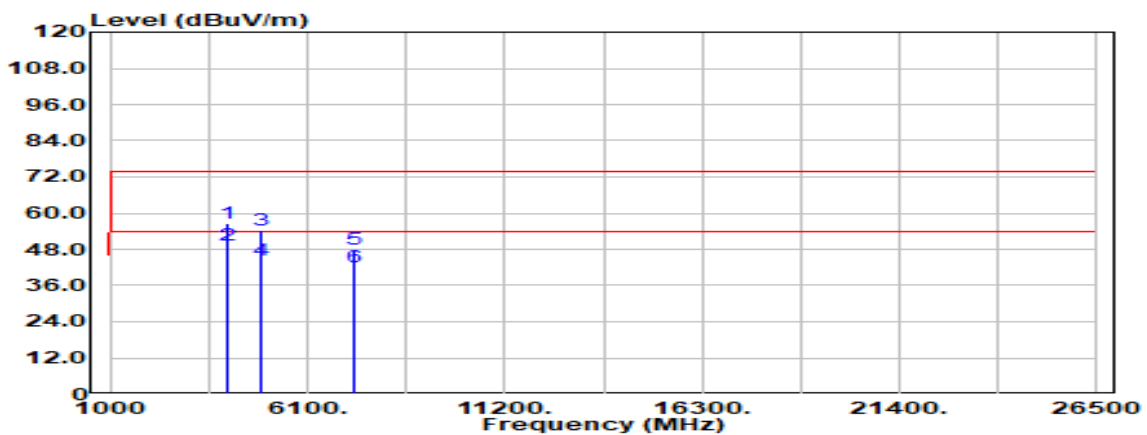


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4061.000	Peak	42.76	4.10	46.86	74.00	-27.14
4061.000	Average	36.50	4.10	40.61	54.00	-13.39
4874.000	Peak	41.30	6.09	47.39	74.00	-26.61
4874.000	Average	33.26	6.09	39.35	54.00	-14.65
7311.000	Peak	37.31	13.33	50.64	74.00	-23.36
7311.000	Average	28.88	13.33	42.21	54.00	-11.79

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



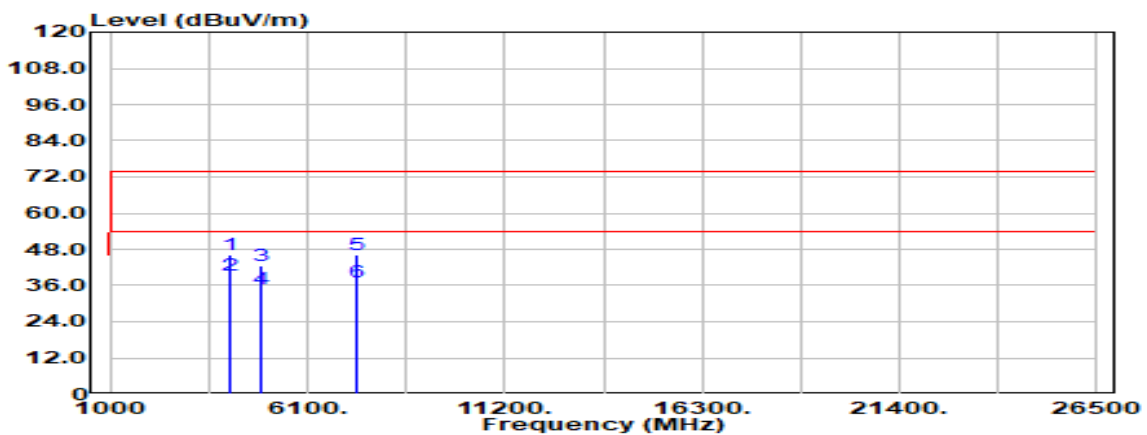
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4062.000	Peak	52.42	4.10	56.52	74.00	-17.48
4062.000	Average	45.23	4.10	49.34	54.00	-4.66
4874.000	Peak	48.06	6.09	54.15	74.00	-19.85
4874.000	Average	38.24	6.09	44.33	54.00	-9.67
7311.000	Peak	34.74	13.33	48.07	74.00	-25.93
7311.000	Average	28.66	13.33	41.99	54.00	-12.01

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



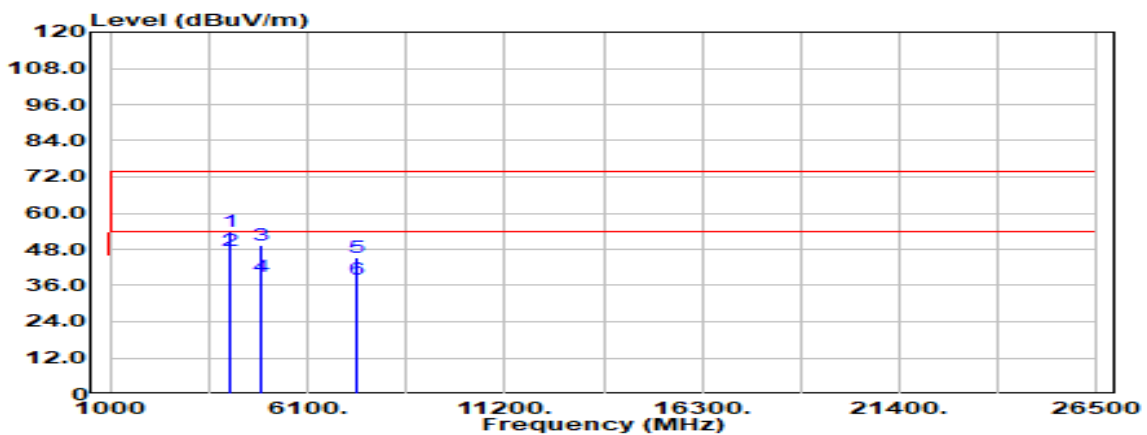
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4105.000	Peak	42.29	4.11	46.39	74.00	-27.61
4105.000	Average	35.31	4.11	39.41	54.00	-14.59
4924.000	Peak	36.22	6.53	42.74	74.00	-31.26
4924.000	Average	28.48	6.53	35.01	54.00	-18.99
7386.000	Peak	32.75	13.33	46.09	74.00	-27.91
7386.000	Average	23.71	13.33	37.04	54.00	-16.96

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4104.000	Peak	49.84	4.11	53.95	74.00	-20.05
4104.000	Average	43.55	4.11	47.66	54.00	-6.34
4924.000	Peak	42.61	6.53	49.14	74.00	-24.86
4924.000	Average	32.20	6.53	38.73	54.00	-15.27
7386.000	Peak	31.97	13.33	45.30	74.00	-28.70
7386.000	Average	24.56	13.33	37.90	54.00	-16.10

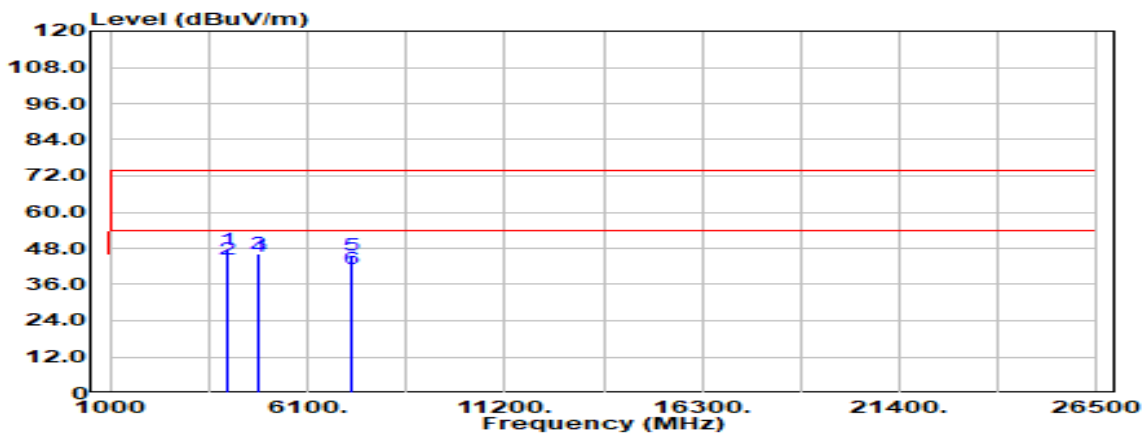
Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Model: EKS-D7P1A

Test Mode	IEEE 802.11b Low CH	Temp/Hum	24.9(°C)/ 64%RH
Test Item	Harmonic	Test Date	August 1, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



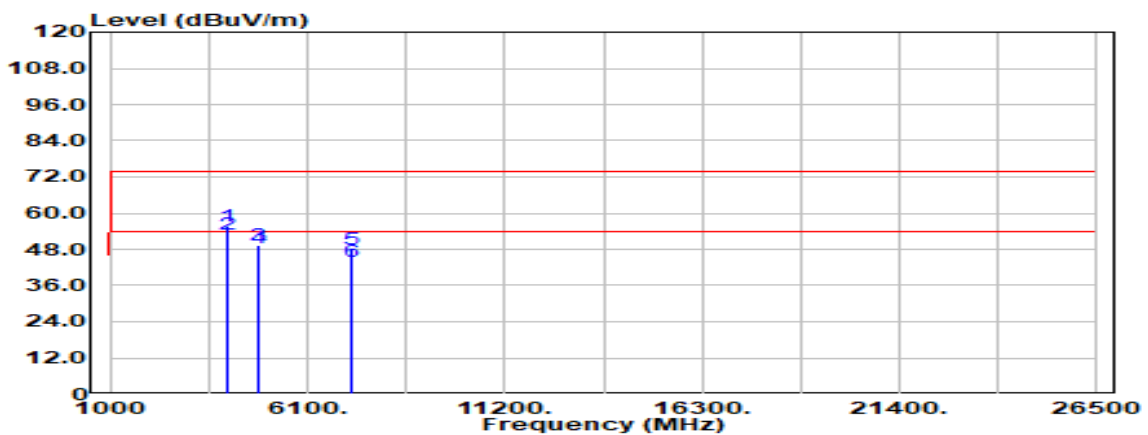
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBUV/m)	Limit @3m (dBUV/m)	Margin (dB)
4020.000	Peak	43.45	4.01	47.46	74.00	-26.54
4020.000	Average	40.17	4.01	44.18	54.00	-9.82
4824.000	Peak	40.46	5.90	46.36	74.00	-27.64
4824.000	Average	39.26	5.90	45.15	54.00	-8.85
7236.000	Peak	32.35	13.31	45.66	74.00	-28.34
7236.000	Average	28.05	13.31	41.36	54.00	-12.64

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11b Low CH	Temp/Hum	24.9(°C)/ 64%RH
Test Item	Harmonic	Test Date	August 1, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



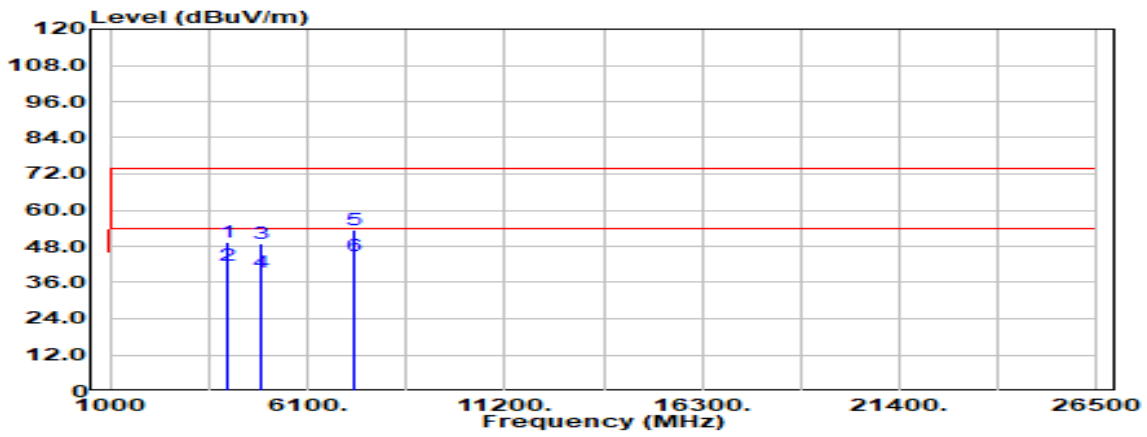
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4019.000	Peak	51.63	4.01	55.63	74.00	-18.37
4019.000	Average	48.95	4.01	52.95	54.00	-1.05
4824.000	Peak	43.23	5.90	49.13	74.00	-24.87
4824.000	Average	42.41	5.90	48.31	54.00	-5.69
7236.000	Peak	34.73	13.31	48.05	74.00	-25.95
7236.000	Average	30.83	13.31	44.14	54.00	-9.86

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak / Average		



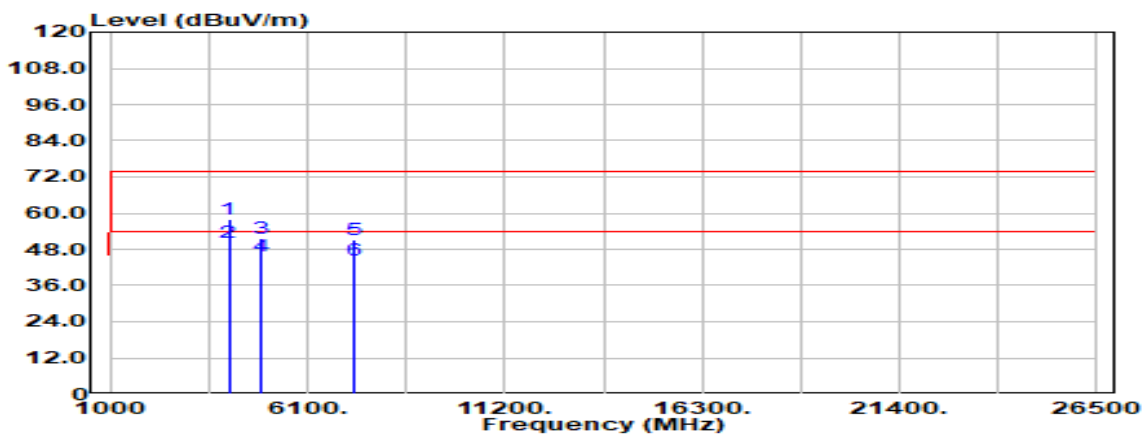
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4060.000	Peak	45.40	4.10	49.50	74.00	-24.50
4060.000	Average	37.74	4.10	41.84	54.00	-12.16
4874.000	Peak	42.95	6.09	49.03	74.00	-24.97
4874.000	Average	33.51	6.09	39.60	54.00	-14.40
7311.000	Peak	40.10	13.33	53.43	74.00	-20.57
7311.000	Average	31.57	13.33	44.90	54.00	-9.10

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: TMWK2207002764KR

Test Mode	IEEE 802.11g Mid CH	Temp/Hum	23.7(°C)/ 64%RH
Test Item	Harmonic	Test Date	July 29, 2022
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4064.000	Peak	53.90	4.10	58.00	74.00	-16.00
4064.000	Average	45.97	4.10	50.08	54.00	-3.92
4874.000	Peak	45.69	6.09	51.78	74.00	-22.22
4874.000	Average	39.51	6.09	45.59	54.00	-8.41
7311.000	Peak	37.85	13.33	51.18	74.00	-22.82
7311.000	Average	31.06	13.33	44.40	54.00	-9.60

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

- End of Test Report -