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Applicant: HORI Co., Ltd.

640 Saedo-Cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken 224-0054,

Japan

Supplier / Manufacturer: HORI Co., Ltd.

640 Saedo-Cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken 224-0054,

Japan

Description of Sample(s): Submitted sample(s) said to be

Product: Wireless Racing Wheel Overdrive for Xbox

Brand Name: HORI
Model No.: MBS-016
FCC ID: RQZMBS-2119

Date Samples Received: 2023-09-19

Date Tested : 2023-09-19 to 2023-09-27

Investigation Requested: Perform Electro Magnetic Interference measurement in accordance

with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI

C63.10:2013 for FCC Certification.

Conclusions: The submitted product <u>COMPLIED</u> with the requirements of Federal

Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described

above and on Section 2.2 in this Test Report.

Remarks : WIFI (802.11a/n20)

For additional model(s) details, see page 3

Test by Susu

Dr.CHAN Kwok Hung, Brian
Authorized Signatory



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No. : HMD23090001 **CONTENT:** Cover Page 1 of 50 Content Page 2 of 50 1.0 **General Details** 1.1 **Test Laboratory** Page 3 of 50 1.2 Equipment Under Test [EUT] Page 3 of 50 Description of EUT operation 1.3 Antenna Details Page 3 of 50 1.4 Date of Order Page 3 of 50 Page 3 of 50 1.5 Submitted Sample(s) Page 3 of 50 1.6 **Test Duration** 1.7 Country of Origin Page 3 of 50 1.8 Channel List Page 4 of 50 **2.0 Technical Details** 2.1 Investigations Requested Page 5-6 of 50 2.2 Page 7 of 50 Test Standards and Results Summary <u>3.0</u> **Test Results** 3.1 **Emission** Page 8-43 of 50 Appendix A List of Measurement Equipment Page 44 of 50 Appendix B Photograph(s) of Product Page 45-50 of 50



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1.0 General Details

1.1 Test Laboratory

The Hong Kong Standards and Testing Centre Ltd.

EMC Laboratory

10 Dai Wang Street, Taipo Industrial Estate, New Territories, Hong Kong

Telephone: 852 2666 1888 Fax: 852 2664 4353

1.2 Equipment Under Test [EUT]

Description of Sample(s)

Product: Wireless Racing Wheel Overdrive for Xbox

Manufacturer: HORI Co., Ltd.

640 Saedo-Cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken 224-

0054, Japan

Brand Name: HORI
Model Number: MBS-016

Additional Model Number: MBS-016U, MBS-016A, MBS-016C, MBS-016E

Rating: 3.7Vd.c.(Two lithium batteries in parallel)

5.0Vd.c. by Type C port

1.2.1 Description of EUT Operation

The Equipment Under Test (EUT) is a Wireless Racing Wheel Overdrive for Xbox. The transmission signal is digital modulated with channel frequency range 5150-5250MHz.

1.3 Antenna Details

Antenna Type: Ceramic Antenna

Antenna Gain: 1.0 dBi

1.4 Date of Order

2023-09-05

1.5 Submitted Sample(s):

1 Sample

1.6 Test Duration

2023-09-05 to 2023-09-27

1.7 Country of Origin

China



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1.8 Channel List

Wi-Fi 5 GHz 802.11a/n20 specification

Frequency Band	Channel No.	Frequency
	36	5180MHz
UNII-Low Band	40	5200MHz
UNII-LOW Band	44	5220MHz
	48	5240MHz
	-	-
UNII Middle Dand (DEC)	-	-
UNII-Middle Band (DFS)	-	-
	-	-
	-	-
	-	-
	-	-
	-	-
	-	-
UNII-High Band (DFS)	-	-
	-	-
	-	-
	-	-
	-	-
	-	-

Venice 6.5 is a DFS client(Slave) device without radar detection capability



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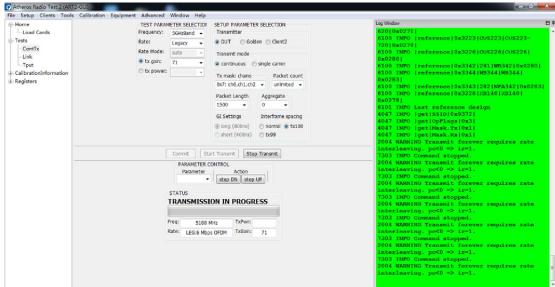
2.0 Technical Details

2.1 Investigations Requested

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 Regulations and ANSI C63.10:2013 for FCC Certification. According FCC KDB 789033D02 Measurement Guidance, Duty cycle ≥98%. The test mode sample is provided by manufacturer.

2.1.0 Operating conditions for the EUT

The sample went into test mode handled by the manufacturer using the software and no the RF power for select..



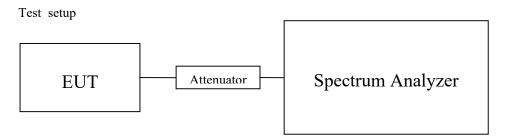


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2.1.1 EUT Duty cycle

The EUT shall be configured or modified to transmit continuously. The intent is to test at 100% duty cycle; however, a small reduction in duty cycle (to no lower than 98%) is permitted if required by the EUT for amplitude control purposes.

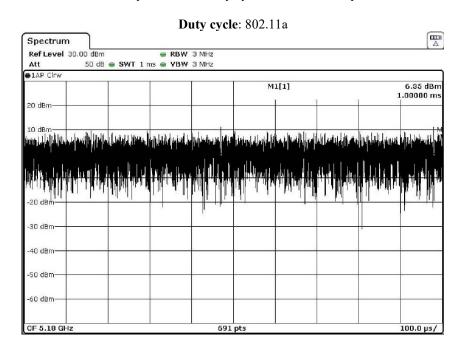
The test mode sample is provided by manufacturer.



Results

Mode	On Time	Period	Period Duty Cycle	
	(msec)	(msec)	X (Linear)	(%)*
802.11a	1	1	1	100
802.11n20	1	1	1	100

^{-*:} If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.





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2.2 Test Standards and Results Summary Tables

EMISSION Results Summary										
Test Condition	Test Requirement	Test Method	Class /	Т	est Result					
			Severity	Pass	Failed	N/A				
Maximum Peak Output Power	15.407(a)(1)	ANSI C63.10:2013	N/A	\boxtimes						
Radiated Emissions	15.205(a)	ANSI C63.10:2013	N/A	\boxtimes						
	15.209									
	15.407(b)									
Conducted Emissions	FCC 47CFR 15.207	ANSI C63.10:2013	N/A	\boxtimes						
Power Spectral Density	15.407(a)	ANSI C63.10:2013	N/A	\boxtimes						
26 dB Bandwidth and 99%Occupied Bandwidth	15.407(a)	ANSI C63.10:2013	N/A	\boxtimes						
Antenna requirement	FCC 47CFR 15.203	N/A	N/A	\boxtimes						
Frequency stability	15.407(g)	ANSI C63.10:2013	N/A	\boxtimes						

Note: N/A - Not Applicable



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3.0 Test Results

3.1 Emission

3.1.1 Maximum Peak Output Power

Test Requirement: FCC 47CFR 15.407(a)(1)

Test Method: ANSI C63.10: 2013/ KDB 789033D02

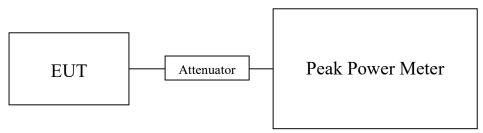
Test Date: 2023-09-20 Mode of Operation: WIFI Tx mode

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Test Method:

The RF output of the EUT was connected to the peak power meter. All the attenuation or cable loss will be added to the measured maximum output power. The results are recorded in Watt.

Test Setup:



Note: a temporary antenna connector was soldered to the RF output.



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Limits for Peak Output Power of Fundamental & Harmonics Emissions [FCC 47CFR 15.407]:

For Digital Transmission systems in 5150-5250 MHz Band: 0.25 Watt (24dBm)

	Results of WiFi mode 802.11 a, (5150MHz to 5250MHz) : Pass (TX Unit) Maximum conducted output power							
Channel	Frequency (MHz)	Conducted power(dBm)	Antenna Gain(dBi)	E.I.R.P(dBm)	E.I.R.P (Watt)			
Low	5180	4.159	1.0	5.159	0.031718			
Middle	5200	4.043	1.0	5.043	0.03147			
High	5240	2.595	1.0	3.595	0.03101			

Results of WiFi mode 802.11 n20, (5150MHz to 5250MHz) : Pass (TX Unit) Maximum conducted output power								
Channel	Frequency (MHz)	Conducted power(dBm)	Antenna Gain(dBi)	E.I.R.P(dBm)	E.I.R.P (Watt)			
Low	5180	3.526	1.0	4.526	0.016315			
Middle	5200	3.879	1.0	4.879	0.018231			
High	5240	2.447	1.0	3.447	0.018845			

Calculated measurement uncertainty : 30MHz to 1GHz 1.7dB 1GHz to 26GHz 1.7dB



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3.1.2 Radiated Emissions

Test Requirement: FCC 47CFR 15.209 & 15.407(b)
Test Method: ANSI C63.10:2013/ KDB 789033D02

Test Date: 2023-09-21
Mode of Operation: WIFI Tx mode

Ambient Temperature: 24°C Relative Humidity: 52% Atmospheric Pressure: 101 kPa

Test Method:

For emission measurements at or below 1 GHz, the sample was placed 0.8m above the ground plane of semi-anechoic Chamber*. For emission measurements above 1 GHz, the sample was placed 1.5m above the ground plane of semi-anechoic Chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

* Semi-Anechoic chamber located on the G/F of The Hong Kong Standards and Testing Centre Ltd. with Registration Number: HK0001

Test Firm Registration Number: 367672



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Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av) RBW: 10kHz

VBW: 30kHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

30MHz - 1GHz (QP) RBW: 120kHz

VBW: 120kHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

Above 1GHz (Pk) RBW: 1MHz

VBW: 1MHz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

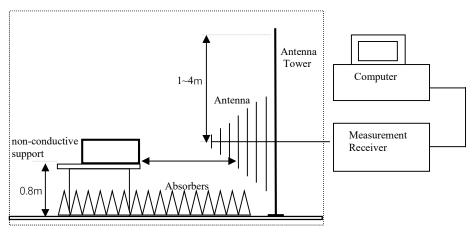
Above 1GHz (Av) RBW: 1MHz

VBW: 10Hz Sweep: Auto

Span: Fully capture the emissions being measured

Trace: Max. hold

Test Setup:



Ground Plane

- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used.



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Limits for Radiated Emissions FCC 47 CFR 15.407]:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further.
- (3) The provisions of §15.205 apply to intentional radiators operating under this section.

Frequency Range	Quasi-Peak Limits
[MHz]	$[\mu V/m]$
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Tx mode (5180.0 MHz) (802.11a) (9kHz - 30MHz): Pass

	Field Strength of Spurious Emissions								
			Peak Value						
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB				
5150.0	48.3	0.80	49.1	74.0	24.9	Vertical			
5150.0	47.4	0.50	47.9	74.0	26.1	Horizontal			

Field Strength of Spurious Emissions								
		A	verage Valu	e				
Frequency	Measured	Correction	Field	Limit	Margin	E-Field		
	Level @3m	Factor	Strength	@3m		Polarity		
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB			
5150.0	38.6	0.80	39.4	54.0	14.6	Vertical		
5150.0	37.4	0.50	37.9	54.0	16.1	Horizontal		

Result of Tx mode (5180.0 MHz) (802.11a) (9kHz - 30MHz): Pass

Field Strength of Spurious Emissions								
Peak Value								
Frequency	Measured	Correction	Field	Field	Limit	E-Field		
	Level	Factor	Strength	Strength		Polarity		
MHz	dBμV	dB/m	$dB\mu V/m$	μV/m	μV/m			
	Emissions detected are more than 20 dB below the FCC Limits							



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Result of Tx mode (5180.0 MHz) (802.11a) (1GHz-40GHz): Pass

IXESUIT OF TA IIIC	Result of 1x mode (5180.0 MHz) (802.11a) (1GHz-40GHz): Pass								
	Field Strength of Spurious Emissions								
			Peak Value						
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB				
10360.0	47.6	8.90	56.5	68.2	11.7	Vertical			
10360.0	47.0	8.70	55.7	68.2	12.6	Horizontal			
15540.0	43.3	11.80	55.1	68.2	13.2	Vertical			
15540.0	43.3	11.90	55.2	68.2	13.1	Horizontal			
20720.0	44.0	12.20	56.2	68.2	12.0	Vertical			
20720.0	43.7	12.40	56.1	68.2	12.1	Horizontal			
25900.0	43.2	13.10	56.3	68.2	11.9	Vertical			
25900.0	43.1	13.30	56.4	68.2	11.8	Horizontal			

	Field Strength of Spurious Emissions									
Frequency	Average Value Frequency Measured Correction Field Limit Margin E-Field									
rrequency	Level @3m	Factor	Strength	@3m	Margin	Polarity				
MHz	dBμV	dB/m	dBμV/m	dBμV/m	dB	1 Olarity				
10360.0	32.6	8.90	41.5	54.0	12.5	Vertical				
10360.0	32.4	8.70	41.1	54.0	12.9	Horizontal				
15540.0	30.0	11.80	41.8	54.0	12.2	Vertical				
15540.0	29.9	11.90	41.8	54.0	12.3	Horizontal				
20720.0	29.6	12.20	41.8	54.0	12.2	Vertical				
20720.0	29.4	12.40	41.8	54.0	12.2	Horizontal				
25900.0	29.2	13.10	42.3	54.0	11.7	Vertical				
25900.0	29.1	13.30	42.4	54.0	11.6	Horizontal				

Result of Tx mode (5200 MHz) (802.11a) (9kHz - 30MHz): Pass

Field Strength of Spurious Emissions								
Peak Value								
Frequency	Measured	Correction	Field	Field	Limit	E-Field		
	Level	Factor	Strength	Strength		Polarity		
MHz	dΒμV	dB/m	$dB\mu V/m$	$\mu V/m$	$\mu V/m$			
	Emissions	detected are 1	nore than 20	dB below the	FCC Limits	-		



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Result of Tx mo	Result of Tx mode (5200 MHz) (802.11a) (1GHz-40GHz): Pass									
	Field Strength of Spurious Emissions									
			Peak Value							
Frequency	Measured	Correction	Field	Limit	Margin	E-Field				
	Level @3m	Factor	Strength	@3m		Polarity				
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB					
10400.0	47.1	8.90	56.0	68.2	12.2	Vertical				
10400.0	47.2	8.70	55.9	68.2	12.3	Horizontal				
15600.0	44.1	11.80	55.9	68.2	12.3	Vertical				
15600.0	43.9	11.90	55.8	68.2	12.4	Horizontal				
20800.0	44.0	12.20	56.2	68.2	12.0	Vertical				
20800.0	43.1	12.40	55.5	68.2	12.7	Horizontal				
26000.0	42.2	13.10	55.3	68.2	12.9	Vertical				
26000.0	41.1	13.30	54.4	68.2	13.8	Horizontal				

	Field Strength of Spurious Emissions								
	Average Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB				
10400.0	32.8	8.90	41.7	54.0	12.3	Vertical			
10400.0	30.9	8.70	39.6	54.0	14.4	Horizontal			
15600.0	29.8	11.80	41.6	54.0	12.4	Vertical			
15600.0	29.5	11.90	41.4	54.0	12.6	Horizontal			
20800.0	29.3	12.20	41.5	54.0	12.5	Vertical			
20800.0	29.4	12.40	41.8	54.0	12.2	Horizontal			
26000.0	28.7	13.10	41.8	54.0	12.2	Vertical			
26000.0	28.3	13.30	41.6	54.0	12.4	Horizontal			

Result of Tx mode (5240 MHz) (802.11a) (9kHz - 30MHz): Pass

Field Strength of Spurious Emissions							
Peak Value							
Frequency	Measured	Correction	Field	Field	Limit	E-Field	
	Level	Factor	Strength	Strength		Polarity	
MHz	dΒμV	dB/m	$dB\mu V/m$	$\mu V/m$	$\mu V/m$		
	Emissions	detected are r	nore than 20	dB below the	FCC Limits		



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Result of Tx mo	Result of Tx mode (5240 MHz) (802.11a) (1GHz-25GHz): Pass									
	Field Strength of Spurious Emissions									
			Peak Value							
Frequency	Measured	Correction	Field	Limit	Margin	E-Field				
	Level @3m	Factor	Strength	@3m		Polarity				
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB					
10480.0	47.1	8.90	56.0	68.2	12.2	Vertical				
10480.0	47.5	8.70	56.2	68.2	12.0	Horizontal				
17520.0	44.8	11.80	56.6	68.2	11.6	Vertical				
17520.0	44.2	11.90	56.1	68.2	12.1	Horizontal				
20960.0	43.3	12.20	55.5	68.2	12.7	Vertical				
20960.0	44.0	12.40	56.4	68.2	11.8	Horizontal				
26200.0	42.9	13.10	56.0	68.2	12.2	Vertical				
26200.0	43.0	13.30	56.3	68.2	11.9	Horizontal				

	Field Strength of Spurious Emissions								
	Average Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB				
10480.0	31.2	8.90	40.1	54.0	13.9	Vertical			
10480.0	31.1	8.70	39.8	54.0	14.2	Horizontal			
17520.0	30.1	11.80	41.9	54.0	12.1	Vertical			
17520.0	30.0	11.90	41.9	54.0	12.1	Horizontal			
20960.0	29.2	12.20	41.4	54.0	12.6	Vertical			
20960.0	29.2	12.40	41.6	54.0	12.4	Horizontal			
26200.0	27.4	13.10	40.5	54.0	13.5	Vertical			
26200.0	27.6	13.30	40.9	54.0	13.1	Horizontal			



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Result of Ty mode (5180 0 MHz) (802 11n20) (0l/Hz 20MHz). Dass

Result of 1x mo	Result of 1x mode (5180.0 MHz) (802.11n20) (9kHz – 30MHz): Pass								
Field Strength of Spurious Emissions									
	Peak Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB				
5150.0	48.2	0.80	49.0	74.0	25.0	Vertical			
5150.0	47.9	0.50	48.4	74.0	25.6	Horizontal			

	Field Strength of Spurious Emissions							
		A	Average Valu	e				
Frequency	Measured	Correction	Field	Limit	Margin	E-Field		
	Level @3m	Factor	Strength	@3m		Polarity		
MHz	dΒμV	dB/m	dBμV/m	dBμV/m	dB			
5150.0	39.1	0.80	39.9	54.0	14.1	Vertical		
5150.0	38.3	0.50	38.8	54.0	15.2	Horizontal		

Result of Tx mode (5180 MHz) (802.11n20) (9kHz - 30MHz): Pass

Kesuit of Tx ino	Result of 1x mode (5100 Mills) (602.111120) (7KHz – 30Mills). 1 ass								
Field Strength of Spurious Emissions									
Peak Value									
Frequency	Measured	Correction	Field	Field	Limit	E-Field			
	Level	Factor	Strength	Strength		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	$\mu V/m$	μV/m				
	Emissions detected are more than 20 dB below the FCC Limits								

Result of Tx mode (5180 MHz) (802.11n20) (1GHz-40GHz): Pass

_	Field Strength of Spurious Emissions								
	Peak Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB				
10360.0	47.5	8.90	56.4	68.2	11.8	Vertical			
10360.0	47.1	8.70	55.8	68.2	12.4	Horizontal			
15540.0	43.4	11.80	55.2	68.2	13.0	Vertical			
15540.0	43.6	11.90	55.5	68.2	12.7	Horizontal			
20720.0	42.4	12.20	54.6	68.2	13.6	Vertical			
20720.0	43.2	12.40	55.6	68.2	12.6	Horizontal			
25900.0	42.0	13.10	55.1	68.2	13.1	Vertical			
25900.0	41.5	13.30	54.8	68.2	13.4	Horizontal			



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	Field Strength of Spurious Emissions Average Value									
Frequency	Measured	Correction	Field	Limit	Margin	E-Field				
	Level @3m	Factor	Strength	@3m		Polarity				
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB					
10360.0	32.4	8.90	41.3	54.0	12.7	Vertical				
10360.0	32.7	8.70	41.4	54.0	12.6	Horizontal				
15540.0	30.1	11.80	41.9	54.0	12.1	Vertical				
15540.0	30.0	11.90	41.9	54.0	12.1	Horizontal				
20720.0	29.5	12.20	41.7	54.0	12.3	Vertical				
20720.0	26.8	12.40	39.2	54.0	14.8	Horizontal				
25900.0	28.7	13.10	41.8	54.0	12.2	Vertical				
25900.0	28.2	13.30	41.5	54.0	12.5	Horizontal				

Result of Tx mode (5200 MHz) (802.11n20) (1GHz-40GHz): Pass

Field Strength of Spurious Emissions								
Peak Value								
Frequency	Measured	Correction	Field	Field	Limit	E-Field		
	Level	Factor	Strength	Strength		Polarity		
MHz	dΒμV	dB/m	$dB\mu V/m$	μV/m	μV/m			
	Emissions detected are more than 20 dB below the FCC Limits							

Result of Tx mode (5200 MHz) (802.11n20) (1GHz-40GHz): Pass

	Field Strength of Spurious Emissions								
	Peak Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field			
	Level @3m	Factor	Strength	@3m		Polarity			
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB				
10400.0	46.8	8.90	55.7	68.2	12.5	Vertical			
10400.0	47.5	8.70	56.2	68.2	12.0	Horizontal			
15600.0	43.4	11.80	55.2	68.2	13.0	Vertical			
15600.0	44.1	11.90	56.0	68.2	12.2	Horizontal			
20800.0	43.2	12.20	55.4	68.2	12.8	Vertical			
20800.0	43.4	12.40	55.8	68.2	12.4	Horizontal			
26000.0	42.3	13.10	55.4	68.2	12.8	Vertical			
26000.0	42.4	13.30	55.7	68.2	12.5	Horizontal			



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Field Strength of Spurious Emissions										
	Average Value									
Frequency	Measured	Correction	Field	Limit	Margin	E-Field				
	Level @3m	Factor	Strength	@3m		Polarity				
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB					
10400.0	33.1	8.90	42.0	54.0	12.0	Vertical				
10400.0	31.9	8.70	40.6	54.0	13.4	Horizontal				
15600.0	30.0	11.80	41.8	54.0	12.2	Vertical				
15600.0	29.7	11.90	41.6	54.0	12.4	Horizontal				
20800.0	28.2	12.20	40.4	54.0	13.6	Vertical				
20800.0	28.4	12.40	40.8	54.0	13.2	Horizontal				
26000.0	27.4	13.10	40.5	54.0	13.5	Vertical				
26000.0	27.7	13.10	40.8	54.0	13.2	Horizontal				

Result of Tx mode (5240 MHz) (802.11n20) (1GHz-40GHz): Pass

Field Strength of Spurious Emissions							
Peak Value							
Frequency	Measured	Correction	Field	Field	Limit	E-Field	
	Level	Factor	Strength	Strength		Polarity	
MHz	dΒμV	dB/m	$dB\mu V/m$	μV/m	μV/m		
Emissions detected are more than 20 dB below the FCC Limits							

Result of Tx mode (5240 MHz) (802.11n20) (1GHz-40GHz): Pass

Field Strength of Spurious Emissions								
			Peak Value					
Frequency	Measured	Correction	Field	Limit	Margin	E-Field		
	Level @3m	Factor	Strength	@3m		Polarity		
MHz	dΒμV	dB/m	$dB\mu V/m$	$dB\mu V/m$	dB			
10480.0	47.4	8.90	56.3	68.2	11.9	Vertical		
10480.0	47.1	8.70	55.8	68.2	12.4	Horizontal		
17520.0	44.0	11.80	55.8	68.2	12.4	Vertical		
17520.0	43.2	11.90	55.1	68.2	13.1	Horizontal		
20960.0	43.8	12.20	56.0	68.2	12.2	Vertical		
20960.0	43.1	12.40	55.5	68.2	12.7	Horizontal		
26200.0	43.6	13.10	56.7	68.2	11.5	Vertical		
26200.0	43.6	13.30	56.9	68.2	11.3	Horizontal		



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Field Strength of Spurious Emissions Average Value								
Frequency	Measured	Correction	Field	Limit	Margin	E-Field		
	Level @3m	Factor	Strength	@3m		Polarity		
MHz	dΒμV	dB/m	$dB\mu V/m$	dBμV/m	dB			
10480.0	32.6	8.90	41.5	54.0	12.5	Vertical		
10480.0	33.1	8.70	41.8	54.0	12.2	Horizontal		
17520.0	29.5	11.80	41.3	54.0	12.7	Vertical		
17520.0	30.0	11.90	41.9	54.0	12.1	Horizontal		
20960.0	29.1	12.40	41.5	54.0	12.5	Vertical		
20960.0	28.2	12.40	40.6	54.0	13.4	Horizontal		
26200.0	28.5	13.10	41.6	54.0	12.4	Vertical		
26200.0	28.0	13.30	41.3	54.0	12.7	Horizontal		

Remarks:

No additional spurious emissions found between lowest internal used/generated frequency and 30 MHz

* Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement (9kHz-30MHz): 2.0dB uncertainty (30MHz -1GHz): 4.9dB (1GHz -26GHz): 4.02dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.



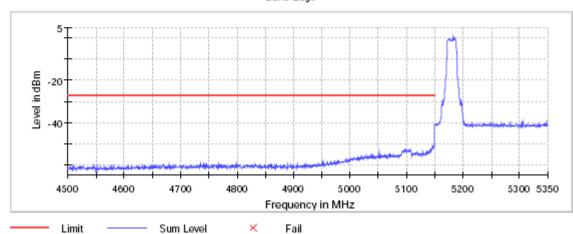
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Undesirable emission:

Result: (Lowest)-802.11a 5180MHz, Undesirable emission of Band-edge Compliance

Measurements

Frequency	Level	Margin	Limit	Result
(MHz)	(dBm)	(dB)	(dBm)	
5147.750000	-50.8	23.8	-27.0	PASS
5147.250000	-51.2	24.2	-27.0	PASS
5146.250000	-51.2	24.2	-27.0	PASS
5148.750000	-51.4	24.4	-27.0	PASS
5149.750000	-51.5	24.5	-27.0	PASS
5148.250000	-51.7	24.7	-27.0	PASS
5149.250000	-52.0	25.0	-27.0	PASS
5146.750000	-52.3	25.3	-27.0	PASS
5142.250000	-52.4	25.4	-27.0	PASS
5144.250000	-52.6	25.6	-27.0	PASS
5104.250000	-52.7	25.7	-27.0	PASS
5145.250000	-52.9	25.9	-27.0	PASS
5145.750000	-53.0	26.0	-27.0	PASS
5144.750000	-53.1	26.1	-27.0	PASS
5099.250000	-53.1	26.1	-27.0	PASS



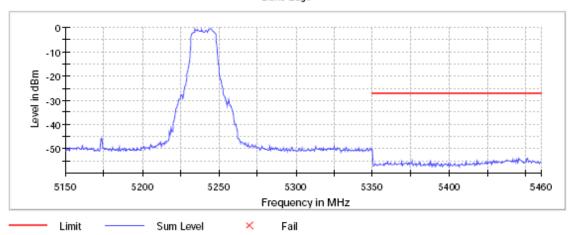


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Result: (High)-802.11a 5240MHz, Undesirable emission of Band-edge Compliance

Measurements

measarements							
Frequency	Level	Margin	Limit	Result			
(MHz)	(dBm)	(dB)	(dBm)				
5445.250000	-53.9	26.9	-27.0	PASS			
5451.250000	-54.2	27.2	-27.0	PASS			
5441.250000	-54.2	27.2	-27.0	PASS			
5444.250000	-54.3	27.3	-27.0	PASS			
5450.750000	-54.5	27.5	-27.0	PASS			
5442.750000	-54.8	27.8	-27.0	PASS			
5437.750000	-54.8	27.8	-27.0	PASS			
5446.750000	-54.8	27.8	-27.0	PASS			
5445.750000	-54.8	27.8	-27.0	PASS			
5446.250000	-54.9	27.9	-27.0	PASS			
5441.750000	-54.9	27.9	-27.0	PASS			
5454.750000	-54.9	27.9	-27.0	PASS			
5438.750000	-55.0	28.0	-27.0	PASS			
5439.750000	-55.0	28.0	-27.0	PASS			
5375.750000	-55.0	28.0	-27.0	PASS			



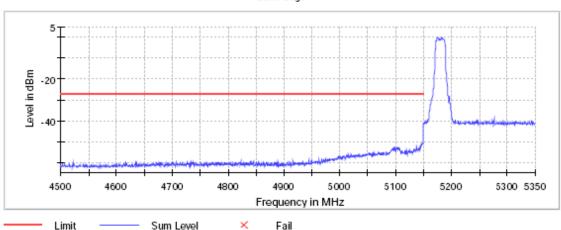


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Result: (Lowest)-802.11n20 5180MHz, Undesirable emission of Band-edge Compliance

Measurements

measarements							
Frequency	Level	Margin	Limit	Result			
(MHz)	(dBm)	(dB)	(dBm)				
5149.750000	-50.8	23.8	-27.0	PASS			
5147.750000	-50.8	23.8	-27.0	PASS			
5148.750000	-50.9	23.9	-27.0	PASS			
5147.250000	-51.1	24.1	-27.0	PASS			
5148.250000	-51.3	24.3	-27.0	PASS			
5146.750000	-51.4	24.4	-27.0	PASS			
5149.250000	-51.5	24.5	-27.0	PASS			
5143.750000	-51.8	24.8	-27.0	PASS			
5144.250000	-51.9	24.9	-27.0	PASS			
5145.250000	-51.9	24.9	-27.0	PASS			
5137.750000	-52.0	25.0	-27.0	PASS			
5145.750000	-52.1	25.1	-27.0	PASS			
5143.250000	-52.1	25.1	-27.0	PASS			
5146.250000	-52.3	25.3	-27.0	PASS			
5142.250000	-52.6	25.6	-27.0	PASS			





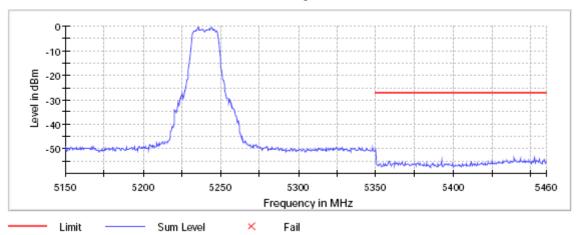
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Result: (High)-802.11n20 5240MHz, Undesirable emission of Band-edge Compliance

Measurements

Frequency	Level	Margin	Limit	Result
(MHz)	(dBm)	(dB)	(dBm)	
5452.250000	-53.6	26.6	-27.0	PASS
5439.250000	-53.6	26.6	-27.0	PASS
5443.250000	-54.1	27.1	-27.0	PASS
5455.250000	-54.5	27.5	-27.0	PASS
5458.750000	-54.5	27.5	-27.0	PASS
5455.750000	-54.6	27.6	-27.0	PASS
5439.750000	-54.6	27.6	-27.0	PASS
5453.750000	-54.7	27.7	-27.0	PASS
5440.250000	-54.8	27.8	-27.0	PASS
5434.750000	-54.8	27.8	-27.0	PASS
5392.250000	-54.8	27.8	-27.0	PASS
5446.250000	-54.9	27.9	-27.0	PASS
5448.750000	-54.9	27.9	-27.0	PASS
5433.250000	-55.0	28.0	-27.0	PASS
5358.750000	-55.0	28.0	-27.0	PASS





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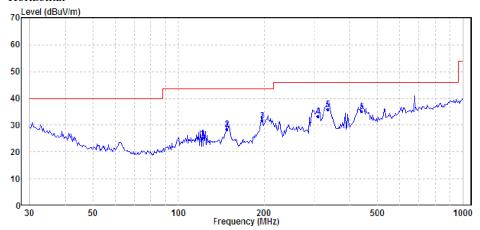
Limits for Radiated Emissions FCC 47 CFR 15.247]:

Elimits for Radiated Emissions Fee 17 CTR 13.217].					
Frequency Range	Quasi-Peak Limits				
[MHz]	$[\mu V/m]$				
0.009-0.490	2400/F (kHz)				
0.490-1.705	24000/F (kHz)				
1.705-30	30				
30-88	100				
88-216	150				
216-960	200				
Above960	500				

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of WIFI TX mode: Pass

Please refer to the following table for result details (The data is the worst cases) Horizontal



Ambient Temperature: 26.3C Relative Humidity : 54.7% Air Pressure : 100.9kPa

	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	$\overline{\text{dBuV/m}}$	$\overline{\text{dBuV/m}}$	dB		
1	121.123	25.22	43.50	-18.28	QP	Horizontal
2	148.441	28.59	43.50	-14.91	QP	Horizontal
3	196.510	31.59	43.50	-11.91	QP	Horizontal
4	309.998	33.33	46.00	-12.67	QP	Horizontal
5	334.859	35.95	46.00	-10.05	QP	Horizontal
6	440.196	35.19	46.00	-10.81	QP	Horizontal



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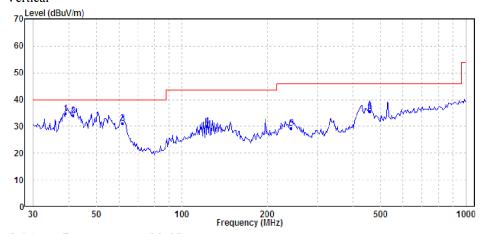
Limits for Radiated Emissions FCC 47 CFR 15.247 Class Bl:

Elimits for Radiated Emissions Fee 17 CTR 15:217 Class B					
Frequency Range	Quasi-Peak Limits				
[MHz]	$[\mu V/m]$				
0.009-0.490	2400/F (kHz)				
0.490-1.705	24000/F (kHz)				
1.705-30	30				
30-88	100				
88-216	150				
216-960	200				
Above960	500				

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of WIFI TX mode: Pass

Please refer to the following table for result details (The data is the worst cases) Vertical



Ambient Temperature: 26.3C Relative Humidity : 54.7% Air Pressure : 100.9kPa

	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	$\overline{\text{dBuV/m}}$	dBuV/m	dB		
1	38.888	34.90	40.00	-5.10	QP	Vertical
2	41.422	34.18	40.00	-5.82	QP	Vertical
3	61.778	31.12	40.00	-8.88	QP	Vertical
4	122.834	30.17	43.50	-13.33	QP	Vertical
5	242.525	29.43	46.00	-16.57	QP	Vertical
6	459.114	35.73	46.00	-10.27	QP	Vertical

Remarks: Calculated measurement uncertainty (30MHz - 1GHz): 4.9dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.



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3.1.3 AC Mains Conducted Emissions (0.15MHz to 30MHz)

Test Requirement: FCC 47CFR 15.207 Test Method: ANSI C63.10:2013

Test Date: 2023-09-25
Mode of Operation: WIFI TX mode
Test Voltage: 120Va.c. 60Hz

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Test Method:

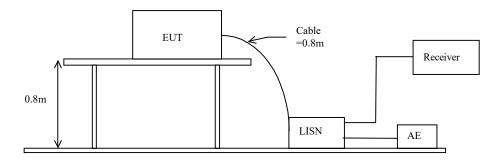
The test was performed in accordance with ANSI ANSI C63.10:2013, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Receiver Setting:

Bandw. = 9 kHz, Meas. Time= 10.0 ms, Step Width = 5.0kHz

Detector = MaxPeak and CISPR AV

Test Setup:



Limits for Conducted Emissions (FCC 47 CFR 15.207):

,	,	1
Frequency Range	Quasi-Peak Limits	Average
[MHz]	[dBµV]	[dBµV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

^{*} Decreases with the logarithm of the frequency.

Remarks:

Calculated measurement uncertainty (0.15MHz – 30MHz): 3.25dB

-*- Emission(s) that is far below the corresponding limit line.

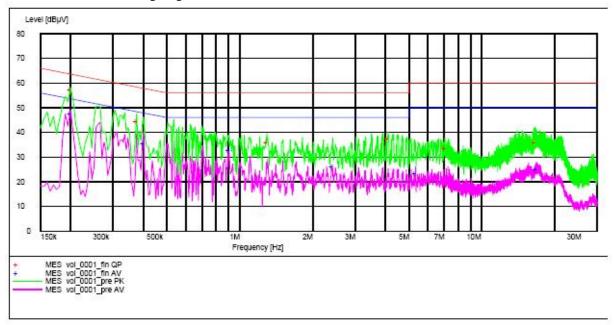


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Results of WIFI TX mode (L): PASS

Please refer to the following diagram for individual results.



Frequency	Level	Transd	Limit	Margin	Line	PE
MHZ	dBµV	đВ	đΒμV	đВ		
0.200000	57.20	9.7	63.60	6.40	Ll	GND
0.375000	44.60	9.7	58.40	13.80	L1	GND
1.295000	35.80	9.7	56.00	20.20	L1	GND
4.100000	37.50	9.8	56.00	18.50	L1	GND
7.065000	33.60	9.9	60.00	26.40	Ll	GND
16.575000	36.00	10.3	60.00	24.00	L1	GND
			110.0.0.0.00			
MEASUREMENT RE		13-2-3-2	11414-14-14-14-1			
MEASUREMENT RE Frequency		13-2-3-2	11414-14-14-14-1	Margin	Line	PE
	SULT: "V	rol_0001_f	in AV"			PE
Frequency	<i>SULT: "V</i> Level	ol_0001_f Transd	in AV" Limit	Margin		PE GND
Frequency MHz	ESULT: "V Level dΒμV	ol_0001_f Transd dB	in AV" Limit dBµV	Margin dB	Line	
Frequency MHz	esuLT: "v Level dΒμV 47.70	rol_0001_f Transd dB 9.7	in AV" Limit dBµV	Margin dB 5.90	Line	GND
Frequency MHz 0.200000 0.400000	ESULT: "v Level dBµV 47.70 35.40	ol_0001_f Transd dB 9.7 9.7	In AV" Limit dBµV 53.60 47.90	Margin dB 5.90 12.40	Line Ll Ll	GND GND
Frequency MHz 0.200000 0.400000 0.905000	ESULT: "V Level dBuV 47.70 35.40 32.50	ol_0001_f Transd dB 9.7 9.7 9.7	In AV" Limit dBµV 53.60 47.90 46.00	Margin dB 5.90 12.40 13.50	Line Ll Ll Ll	GND GND GND

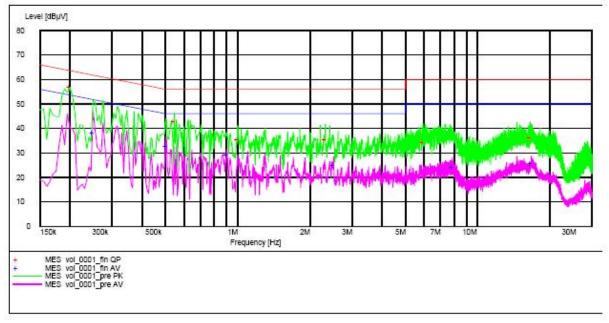


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Results of WIFI TX mode (N): PASS

Please refer to the following diagram for individual results.



Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dΒμV	đВ	dΒμV	dB	970185	655
0.200000	56.70	9.7	63.60	7.00	N	GND
0.545000	42.70	9.7	56.00	13.30	N	GND
1.000000	35.30	9.7	56.00	20.70	N	GND
2.320000	35.40	9.8	56.00	20.60	N	GND
5.915000	34.30	9.9	60.00	25.70	N	GND
16.605000	36.30	10.3	60.00	23.70	N	GND
MEASUREMENT RE	entra. "	-1 0001 4				
THE PERSON NAMED IN COLUMN	SOLI. V	01 0001 1	in Av"			
Frequency	Level	Transd	Limit	Margin	Line	PB
		Transd		Margin dB	Line	PE
Frequency	Level	Transd	Limit		Line N	PE
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	đВ		0.75.00
Frequency MHz	Level dBµV 38.00	Transd dB 9.7	Limit dBµV 51.80	dB 13.80	N	GND
Prequency MHz 0.250000 0.505000	Level dBµV 38.00 32.60	Transd dB 9.7 9.7	Limit dBµV 51.80 46.00	dB 13.80 13.40	N N	GND GND
Frequency MHz 0.250000 0.505000 0.905000	Level dBµV 38.00 32.60 29.30	Transd dB 9.7 9.7 9.7	Limit dBµV 51.80 46.00 46.00	dB 13.80 13.40 16.70	N N N	GND GND GND



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3.1.4 Power Spectral Density

Test Requirement: FCC 47CFR 15.407(a)

Test Method: ANSI C63.10:2013/ KDB 789033D02

Test Date: 2023-09-26 Mode of Operation: WIFI TX mode

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Test Method:

The RF output of the EUT was connected to the spectrum analyzer. Set the fundamental frequency as the center frequency of the spectral analyzer. Use RBW=1000kHz , VBW= 3000KHz , Set the span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal. Detector = rms, Sweep time = auto couple . Measure the Power Spectral Density (PSD) and record the results in dBm.

Test Setup:

As Test Setup of clause 3.1.1 in this test report.

Test Limit:

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi



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Results of WIFI TX Mode 802.11 a (Tx:5150MHz to 5250MHz): Pass (TX Unit) Maximum power spectral density

Transmitter Frequency (MHz)	Maximum Power spectral density level / 1MHz band (dBm)	Maximum Power spectral density / 1MHz band limit
5150.0	-7.777	11dBm
5220.0	-7.789	11dBm
5240.0	-9.038	11dBm

Results of WIFI TX Mode 802.11 n20 (Tx:5150MHz to 5250MHz): Pass (TX Unit) Maximum power spectral density

Transmitter Frequency	Maximum Power spectral density	Maximum Power spectral density /
(MHz)	level / 1MHz band	1MHz band limit
	(dBm)	
5150.0	-8.385	11dBm
5220.0	-7.978	11dBm
5240.0	-9.293	11dBm



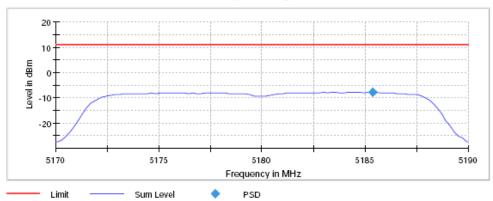
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WiFi mode 802.11 a **CH 36 (5180.0 MHz)**

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5180,000000	5185.346535	-7.770	11.0	PASS

Power Spectral Density

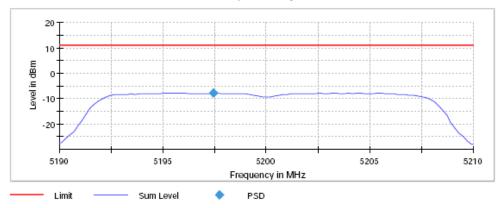


CH 40 (5200.0 MHz)

Result

Itoouit				
DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max	Result
			(dBm)	
5200.000000	5197.425743	-7.789	11.0	PASS

Power Spectral Density





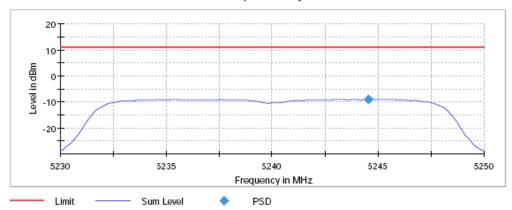
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CH 48 (5240.0 MHz)

Result

	· toouit				
	DUT Frequency	Frequency	PSD	Limit	Result
	(MHz)	(MHz)	(dBm)	Max	
ı				(dBm)	
	5240.000000	5244.554455	-9.038	11.0	PASS

Power Spectral Density

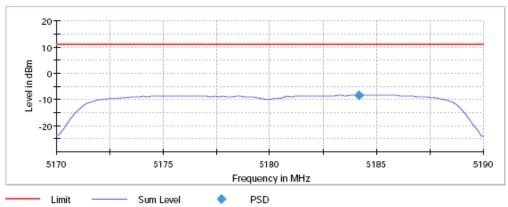


WiFi mode 802.11 n20 CH 36 (5180.0 MHz)

Result

DUT Frequency	Frequency	PSD	Limit	Result
(MHz)	(MHz)	(dBm)	Max	
			(dBm)	
5180.000000	5184.158416	-8.385	11.0	PASS

Power Spectral Density





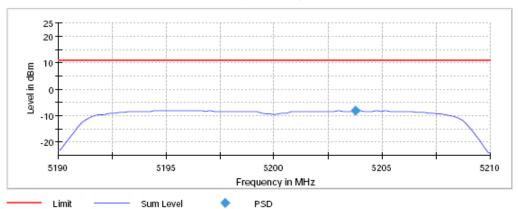
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CH 40 (5200.0 MHz)

Result

 \c3uit				
DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5200,000000	5203,762376	-7,978	11.0	PASS

Power Spectral Density

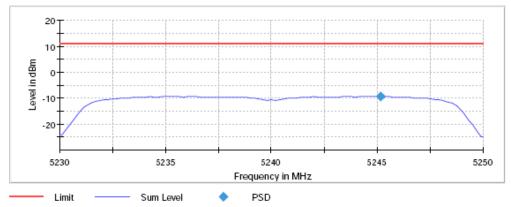


CH 48 (5240.0 MHz)

Result

· toouit				
DUT Frequency	Frequency	PSD	Limit	Result
(MHz)	(MHz)	(dBm)	Max	
			(dBm)	
5240,000000	5245,148515	-9.293	11.0	PASS

Power Spectral Density





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3.1.5 26 dB Bandwidth and 99%Occupied Bandwidth Measurement

Test Requirement: FCC 47CFR 15.407(a) / KDB 789033D02

Test Method: ANSI C63.10:2013

Test Date: 2023-09-27 Mode of Operation: WIFI TX mode

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Spectrum Analyzer Setting:

RBW = 1% to 5% of the OBW VBW $\geq 3*$ RBW, Sweep = Auto couple Detector = Peak, Trace = Max. hold

Test Setup:

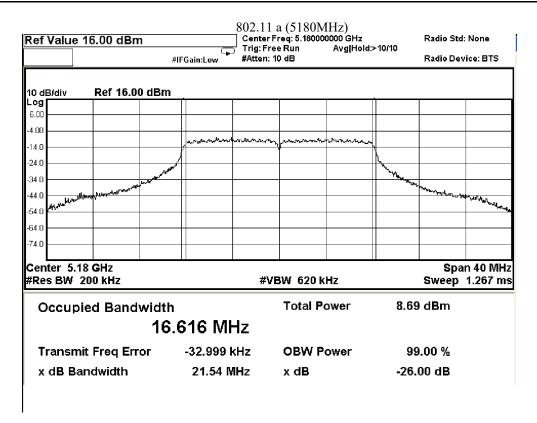
As Test Setup of clause 3.1.1 in this test report.



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26 dB Bandwidth and 99%Occupied Bandwidth Measurement:

Center Frequency	26dB Bandwidth	99% Bandwidth
[MHz]	[MHz]	[MHz]
5180.0	21.54	16.616

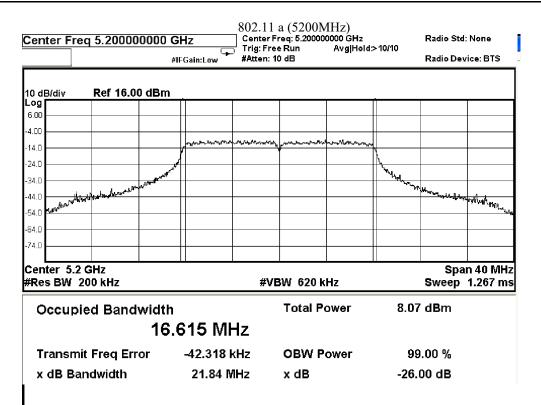




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26 dB Bandwidth and 99%Occupied Bandwidth Measurement:

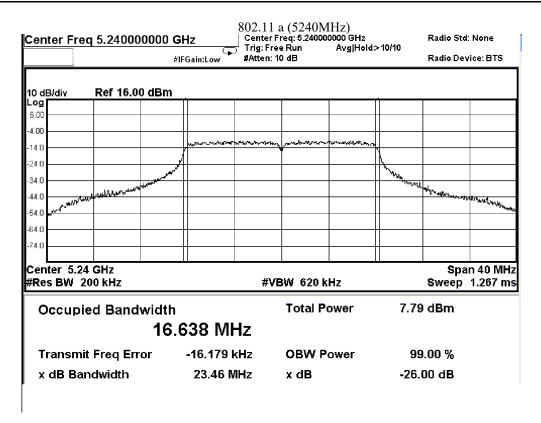
Center Frequency	26dB Bandwidth	99% Bandwidth
[MHz]	[MHz]	[MHz]
5200.0	21.84	16.615





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Center Frequency	26dB Bandwidth	99% Bandwidth
[MHz]	[MHz]	[MHz]
5240.0	23.46	16.638

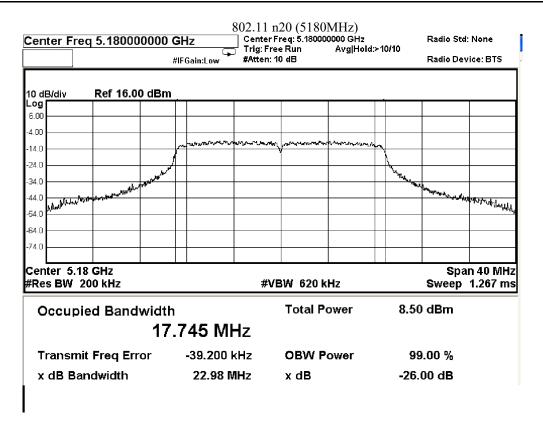




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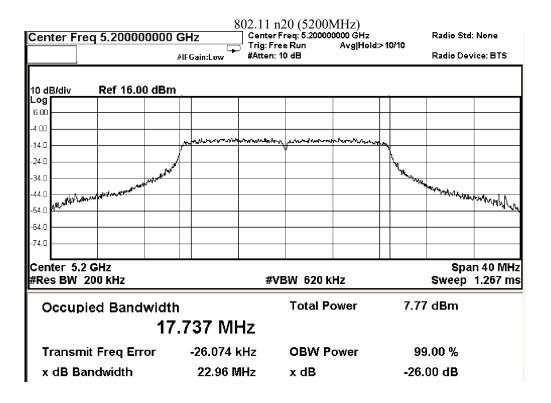
Center Frequency	26dB Bandwidth	99% Bandwidth		
[MHz]	[MHz]	[MHz]		
5180.0	22.98	17.745		





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Center Frequency	26dB Bandwidth	99% Bandwidth
[MHz]	[MHz]	[MHz]
5200.0	22.96	17.737

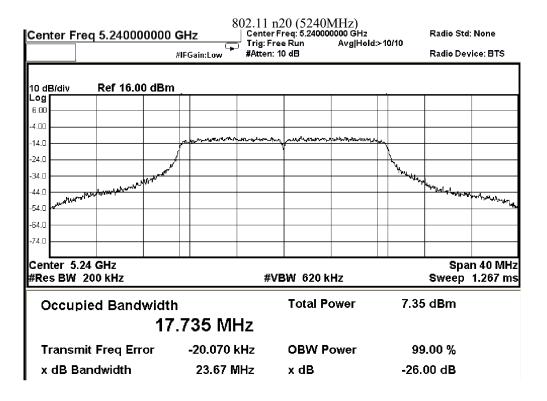




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Center Frequency	26dB Bandwidth	99% Bandwidth
[MHz]	[MHz]	[MHz]
5240.0	23.67	17.735





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3.1.6 Antenna Requirement

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Test Requirements: § 15.203

Test Specification:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Test Results:

This is Ceramic Antenna. There is no external antenna, the antenna gain = 1.0dBi. User is unable to remove or changed the Antenna.



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3.1.7 Frequency stability

Test Requirement: FCC 47CFR 15.407(g)
Test Method: ANSI C63.10:2013

Test Date: 2023-09-27 Mode of Operation: WIFI TX mode

Ambient Temperature: 25°C Relative Humidity: 51% Atmospheric Pressure: 101 kPa

Spectrum Analyzer Setting:

RBW = 1% to 5% of the OBW VBW ≥ 3*RBW, Sweep = Auto couple Detector = Peak, Trace = Max. hold

Test Setup:

As Test Setup of clause 3.1.1 in this test report.

Limit

frequency stability such that an emission is maintained within the band of operation.



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Test Results:

Operating	Temper Power		2 minutes		5 minutes		10 minutes			
Frequency (MHz)	iency ature	ature supply	supply (Vdc)	Measured Frequency (MHz)	Pass/ Fail	Measured Frequency (MHz)	Pass/ Fail	Measured Frequency (MHz)	Pass/ Fail	Limit
	0	3.7	5180.0042	P	5180.0042	P	5180.0043	P		
	10	3.7	5180.0035	P	5180.0032	P	5180.0034	P		
	20	3.7	5180.0034	P	5180.0031	P	5180.0030	P		
5180	30	3.7	5180.0036	P	5180.0035	P	5180.0035	P		
	40	3.7	5180.0044	P	5180.0044	P	5180.0045	P		
	20	3.1	5180.0043	P	5180.0047	P	5180.0044	P	Within	
	20	4.3	5180.0034	P	5180.0034	P	5180.0034	P	5150-	
5240	0	3.7	5240.0021	P	5240.0020	P	5240.0011	P	5250M	
	10	3.7	5240.0011	P	5240.0021	P	5240.0015	P	Hz	
	20	3.7	5240.0105	P	5240.0075	P	5240.0048	P		
	30	3.7	5240.0074	P	5240.0063	P	5240.0055	P		
	40	3.7	5240.0052	P	5240.0045	P	5240.0050	P		
	20	3.1	5240.0032	P	5240.0031	P	5240.0018	P		
	20	4.3	5240.0011	P	5240.0014	P	5240.0024	P		



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Appendix A

List of Measurement Equipment

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088 00029144		N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3		2019-04-16	2024-04-16
EM356	ANTENNA POSITIONING TOWER	ETS-LINDGREN	DGREN 2171B 00150346		N/A	N/A
EM293	SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	N9020A	MY50510152	MY50510152 2023-03-21	
EM363	SIGNAL ANALYZER(10HZ- 40GHZ)	R & S	FSV40	101231	101231 2024-01-17	
EM299	BROADBAND HORN ANTENNA	ETS-LINDGREN	3115	00114120 2023-01-2		2025-01-25
EM300	PYRAMIDAL STANDARD GAIN HORN ANTENNA	ETS-LINDGREN	3160-09	00130130	2023-01-16	2025-01-16
EM301	PYRAMIDAL STANDARD GAIN HORN ANTENNA	ETS-LINDGREN	3160-10	00130988	2023-02-15	2025-02-15
EM353	LOOP ANTENNA	ETS_LINDGREN	6502	00206533 2022		2024-09-26
EM355	BICONILOG ANTENNA	ETS-LINDGREN	3143B	00094856	2022-08-26	2024-08-26
EM200	DUAL CHANNEL POWER METER	R & S	NRVD	100592	2023-08-02	2025-08-02

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM232	LISN	SCHAFFNER	NNB41	04/100082	2023-05-30	2025-05-30
EM181	EMI TEST RECEIVER	R & S	ESIB7	100072	2023-05-22	2024-05-22
EM179	IMPULSE LIMITER	R & S	ESH3-Z2	357.8810.52/54	2023-03-17	2025-03-17
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057- 99A 2022-02-06		2027-02-06
N/A	MEASUREMENT AND EVALUATION SOFTWARE	ROHDE & SCHWARZ	BSIB-K1	V1.20	N/A	N/A

Remarks:-

CM Corrective Maintenance

N/A Not Applicable
TBD To Be Determined



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Appendix B

Photographs of EUT

View of the product



Inner circuit view



Inner circuit top view



View of the product



View of battery



Inner circuit bottom view





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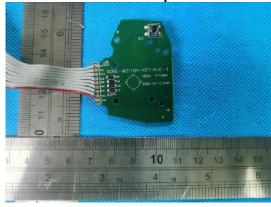
Photographs of EUT

Inner circuit top view





Inner circuit top view



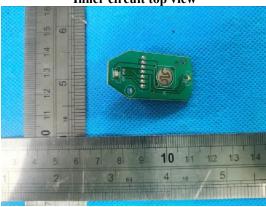
Inner circuit bottom view



Inner circuit bottom view



Inner circuit top view



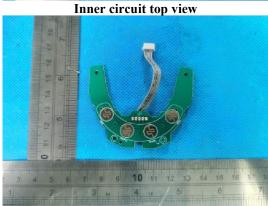


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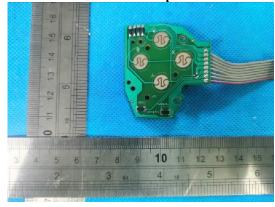
Photographs of EUT

Inner circuit top view





Inner circuit top view



Inner circuit bottom view



Inner circuit bottom view



Inner circuit top view

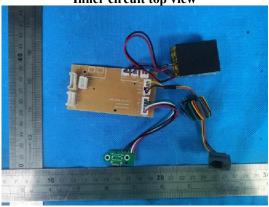




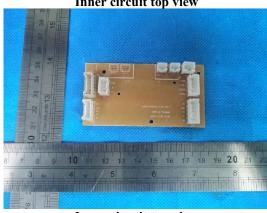
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Photographs of EUT

Inner circuit top view



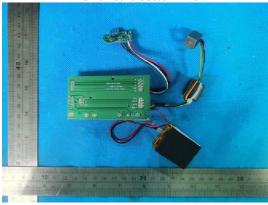
Inner circuit top view



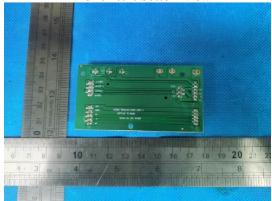
Inner circuit top view



Inner circuit bottom view



Inner circuit bottom view



Inner circuit bottom view

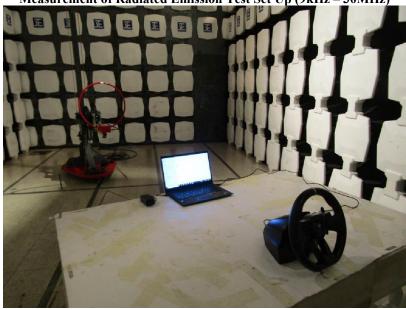


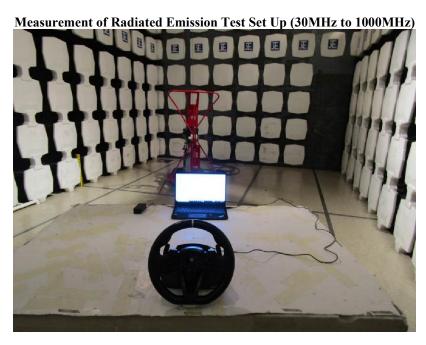


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Photographs of EUT

Measurement of Radiated Emission Test Set Up (9kHz - 30MHz)







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Photographs of EUT

Measurement of Radiated Emission Test Set Up (Above 1000MHz)



Measurement of Conducted Emission Test Set Up



***** End of Test Report *****

Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by the Company as a result of this application for testing service (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. Subject to clause 3, the Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall be at liberty to disclose the testing-related documents and/or files anytime to any third-party accreditation and/or recognition bodies for audit or other related purposes. No liabilities whatsoever shall attach to the Company's act of disclosure.
- 4. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 5. The results in Report apply only to the sample as received and do not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
- 6. When a statement of conformity to a specification or standard is provided, the ILAC-G8 Guidance document (and/or IEC Guide 115 in the electrotechnical sector) will be adopted as a decision rule for the determination of conformity unless it is inherent in the requested specification or standard, or otherwise specified in the Report.
- 7. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 8. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 9. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 10. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 11. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
- 12. Issuance records of the Report are available on the internet at www.stc.group. Further enquiry of validity or verification of the Reports should be addressed to the Company.