



FCC RADIO TEST REPORT

FCC ID : A4RG0F3Y
Equipment : Wireless Device
Model Name : G0F3Y
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, CA, 94043 USA
Standard : FCC 47 CFR Part 15.255

The product was received on Jan. 26, 2026 and testing was performed from Feb. 24, 2026 to Apr 15, 2026. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR5O3007D	01	Initial issue of report	Mar. 27, 2026
FR5O3007D	02	Revised Feature of Equipment Under Test, Emission Bandwidth, Transmit Spurious Emission, Frequency Stability, and List of Measuring Equipment. This report is an updated version, replacing the report issued on Mar. 27, 2026.	Apr. 16, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Limit	Result (PASS/FAIL)
3.4	§15.215(c) §15.255(e)(2)	Emission Bandwidth	Within 57 ~ 71 GHz	Pass
3.5	§15.255(c)(1)(i) §15.255(e)(1)	EIRP Power & Conducted Output Power	EIRP : - 43 dBm @ Peak Power - 40 dBm @ Average Power Conducted Power : - 500 mW @ Peak	Pass
3.6	§15.255(d)	Transmitter Spurious Emissions	Below 40GHz refer to 15.209 Above 40GHz: 90 pW/cm ² @ 3 m	Pass
3.7	§15.255(f)	Frequency Stability for Temperature & Voltage	Within 57 ~ 71 GHz	Pass
4	§15.207	AC Power Conducted Emission	§15.207	Pass

Conformity Assessment Condition:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Yuri Huang



1 General Description

1.1 Feature of Equipment Under Test

Product Feature	
General Specs LTE/NTN, Bluetooth, Bluetooth-LE, Bluetooth-LE ASK, Bluetooth-LE GFSK, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, NFC, UWB, 60GHz and GNSS.	
Antenna Type 60GHz: Integrated Antenna	

Antenna Information				
Antenna	Brand Name	STMicroelectronics	Peak Gain	4 dBi
	Model Name	LP AIP antenna	Type	PAR

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

EUT Information List	
S/N	Performed Test Item
5C251WRDQL13JN 5C251WRDQL13JJ	Radiated Spurious Emission
5C261WRDQL13RY	AC Conducted Emission

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH11-HY, 03CH18-HY, CO07-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW3786



1.4 Applied Standards

- ♦ FCC 47 CFR Part 2, 15.255
- ♦ KDB 364244 D01
- ♦ ANSI C63.10-2020 + Cor.1-2023

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

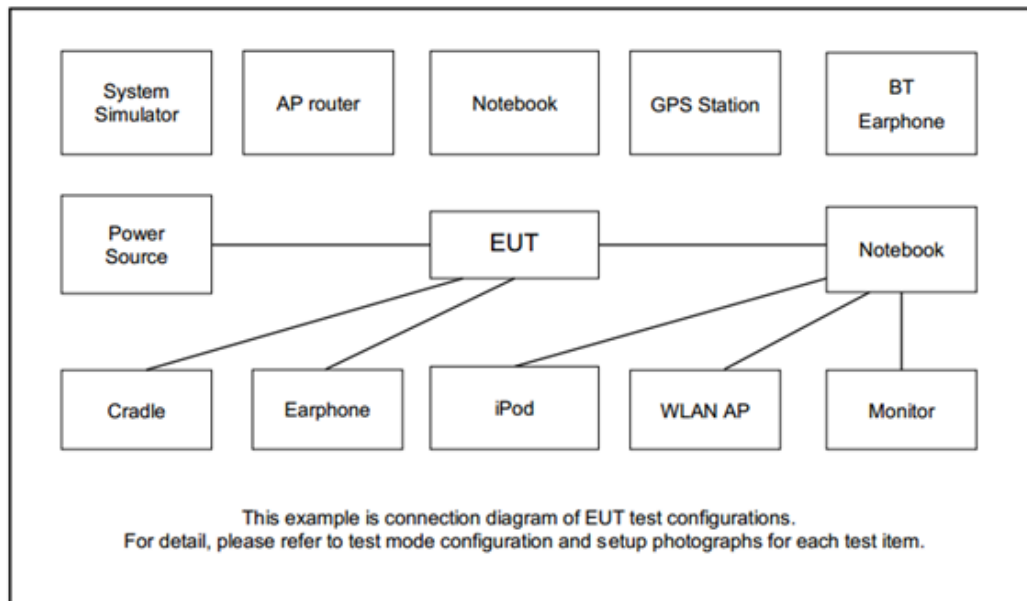
- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Z plane as worst plane.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Test Mode

Frequency (GHz)	Modulation	Data Rate (Mbps)
60.5	2ASK	480

Test Cases	
AC Conducted Emission	Mode 1 : 60.5 GHz Tx + Adapter

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Adapter	N/A	N/A	N/A	N/A	N/A

2.4 Far Field Condition for Frequency above 18GHz

Horn Antenna	Frequency (GHz)	Antenna Dimension A (mm)	Wavelength (λ) (m)	Far field R (m) $\geq 2A^2 / \lambda$	Measurement Distance (D) (m)
BBHA 9170	18	60	0.0167	0.43	1
	40	60	0.0075	0.96	
QWH-UPRR00	40	48	0.0075	0.61	0.87
	57	48	0.0053	0.87	
QWH-VPRR00	57	38	0.0053	0.54	0.62
	65	38	0.0046	0.62	
QWH-EPRR00	60	31	0.0050	0.38	0.6
	90	31	0.0033	0.60	
QWH-FPRR00	90	21	0.0033	0.26	0.43
	140	21	0.0021	0.42	
QWH-GPRR00	140	14	0.0021	0.18	0.27
	200	14	0.0015	0.26	

Note:

1. The measurement distance may be far than the measurement distance above.
2. $\lambda = [300/f \text{ MHz}]$, in m ; This table only keeps the rounding to four decimal places to reference.

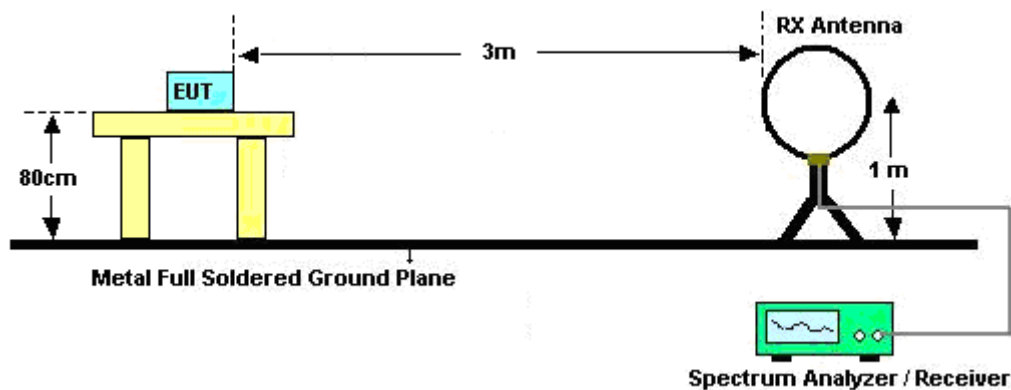
3 Radiated Test Items

3.1 Measuring Instruments

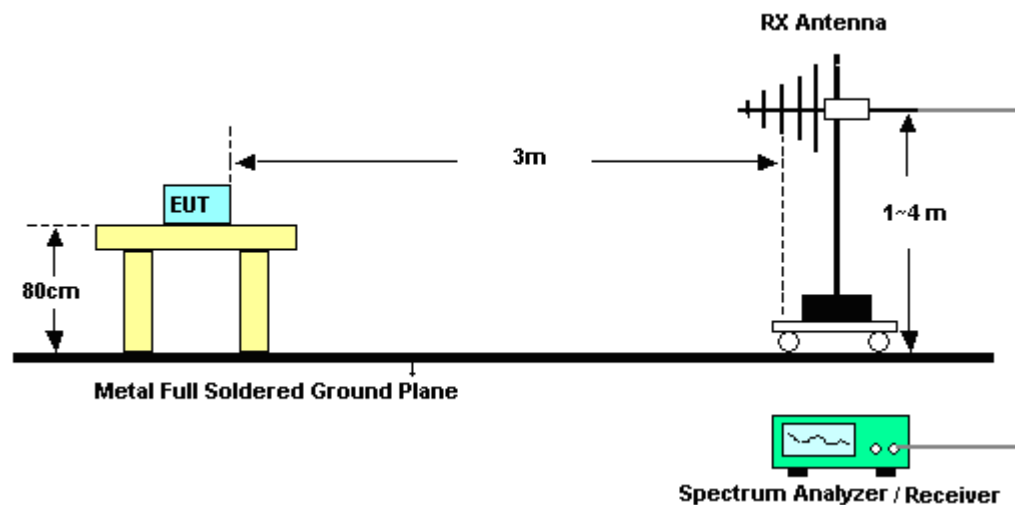
See list of measuring instruments of this test report.

3.2 Test Setup

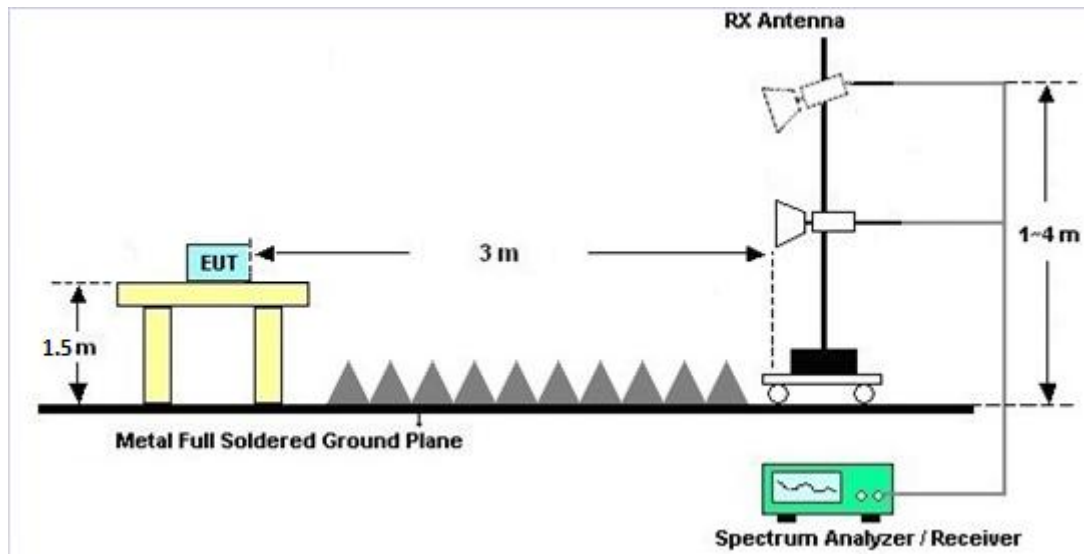
For radiated emissions from 9kHz to 30MHz



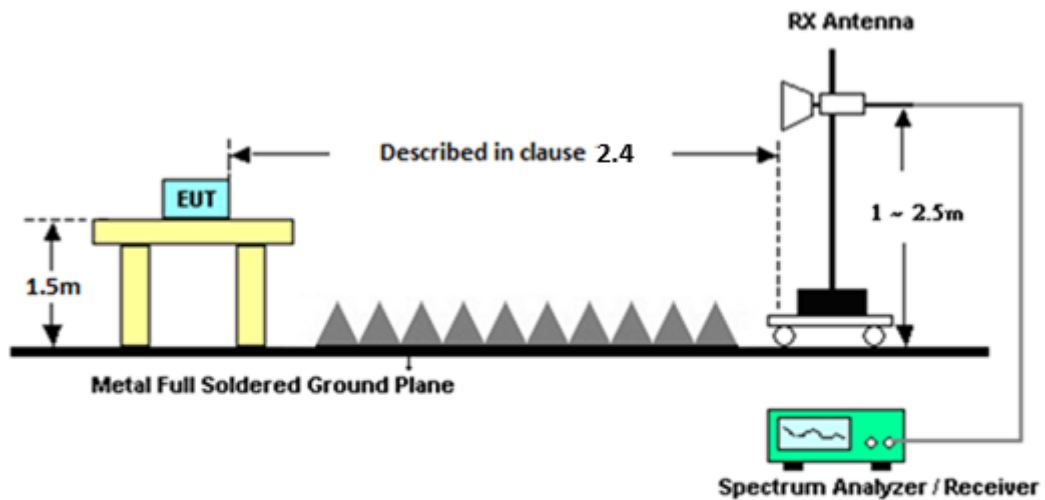
For radiated emissions from 30MHz to 1GHz



For radiated emissions 1GHz to 18GHz



For radiated emissions above 18GHz



3.3 Test Result of Radiated Test

Please refer to Clause 3.6.



3.4 Emission Bandwidth

3.4.1 Limit of Emission Bandwidth Measurement

99% Occupied Bandwidth & 6 dB Bandwidth is for reporting only.

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows ANSI C63.10 Section 9.3 and 9.4.
2. Set the maximum power setting.
3. The EUT is placed on a turntable with 1.6 meter respectively above ground.
4. The EUT is set 0.62 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Use 50-75 GHz receiver antenna, mixer and spectrum analyzer.
6. The EUT is arranged to its worst case and then tune the antenna tower and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. For 6dB Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1 MHz and Video bandwidth (VBW) is set 3 MHz.
8. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 20 MHz and Video bandwidth (VBW) is set 80 MHz.
9. Measure and record the results in the test report.

**3.4.4 Test Results**

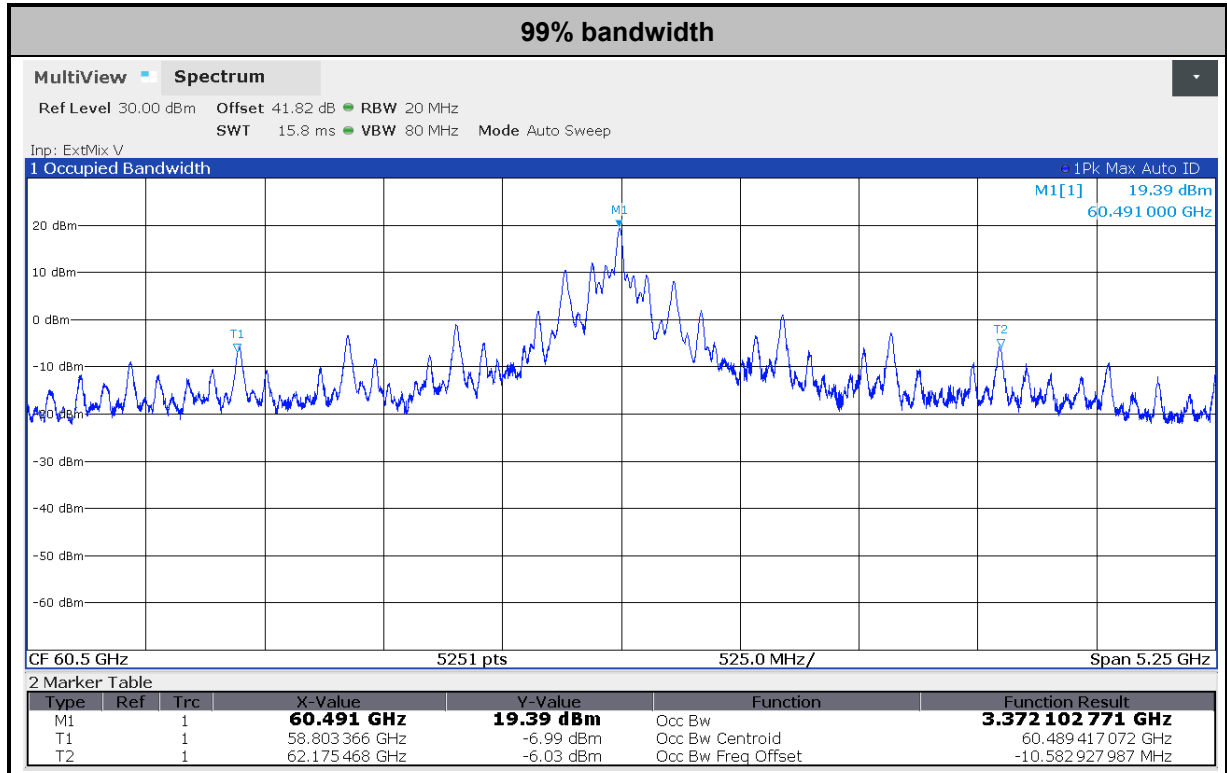
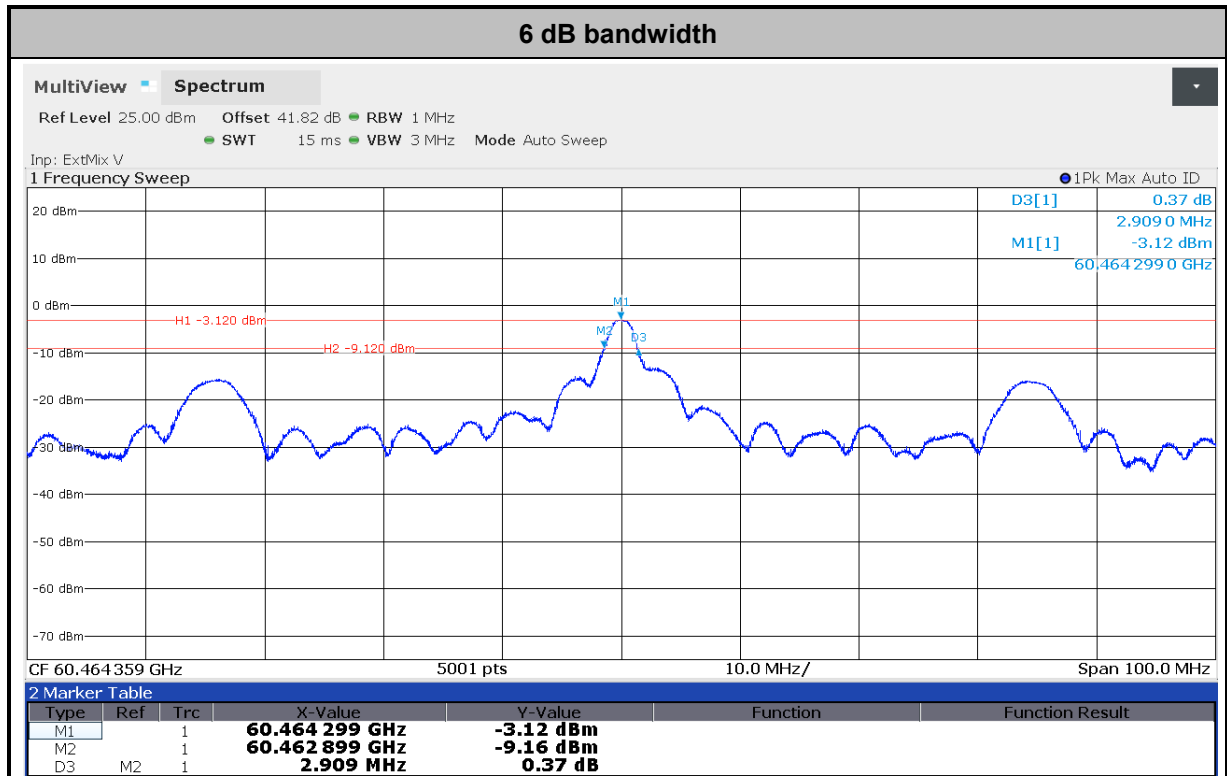
Temperature	22.3~24.6℃	Relative Humidity	55.7~60.2%
Test Engineer	Eric Jeng		

99% Occupied Bandwidth (GHz)	Limit (GHz)
3.3721	Report Only

6 dB Bandwidth (GHz)	Limit (GHz)
0.00291	Report Only



3.4.5 Test Plots





3.5 EIRP Power Measurement

3.5.1 Limit of EIRP Power Measurement

Devices other than field disturbance sensors shall comply with one of the following power limits, as measured during the transmit interval: The average power of any emission shall not exceed 40 dBm and the peak power of any emission shall not exceed 43 dBm;

The peak transmitter conducted output power of devices other than field disturbance sensors/radars shall not exceed 500 mW.

3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

1. The testing follows ANSI C63.10 Section 9.8.
2. Set the maximum power setting.
3. The EUT is placed on a turntable with 1.6 meter respectively above ground.
4. The EUT is set 0.62 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Use 50-75 GHz receiver antenna, mixer and spectrum analyzer.
6. The EUT is arranged to its worst case and then tune the antenna tower and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. The spectrum analyzer's resolution bandwidth (RBW) is set 50 MHz and Video bandwidth (VBW) is set 80 MHz.
8. Use mark Peak function to check result.
9. Measure and record the results in the test report.

**3.5.4 Test Results**

Temperature	22.3~24.6℃		Relative Humidity	55.7~60.2%	
Test Engineer	Eric Jeng				
EIRP Power					
Measurement	Measure Dist. (m)	Measure Ant Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
Peak EIRP	0.62	22.6	3.17	43	PASS

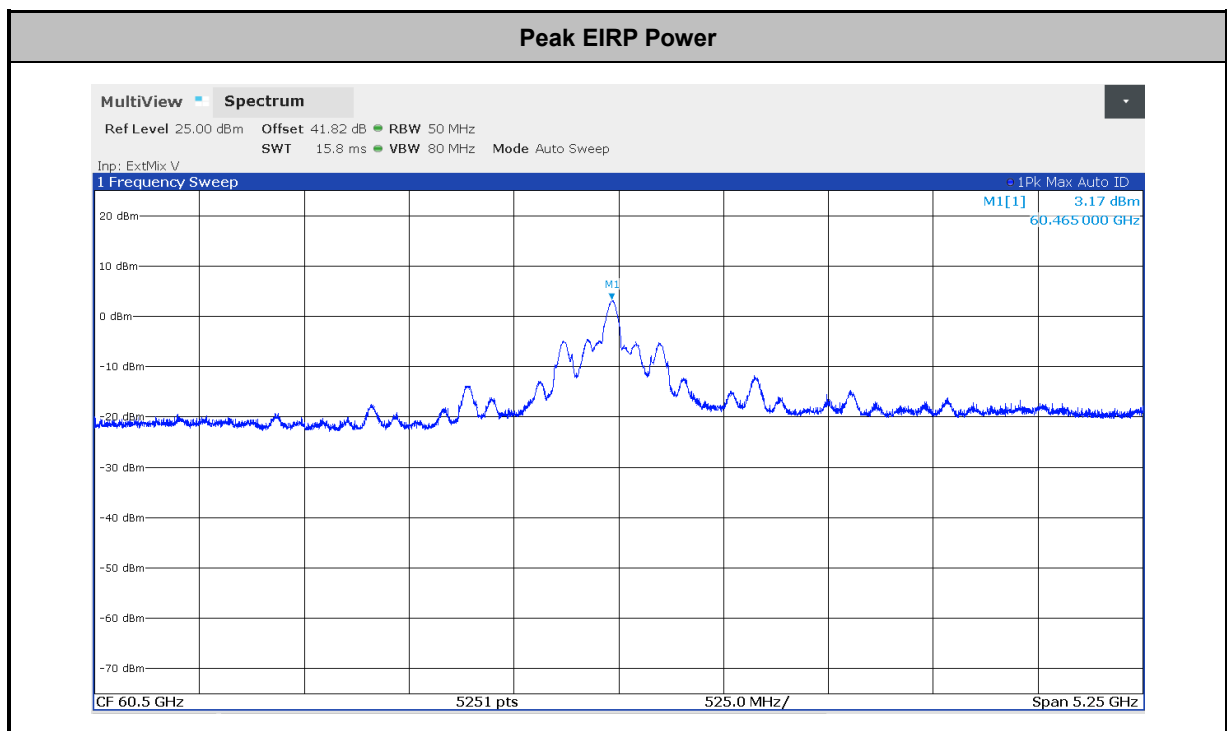
Note:

- Total path loss (dB) = Air loss - Measure Ant Gain (dBi) + Cable loss(dB)
Ex: Total path loss (dB) = 63.92 (dB) - 22.6 (dBi) + 0.5 (dB) = 41.82 (dB)
- No additional measurements for the Average EIRP as the Peak EIRP is less than 40 dBm.

Peak Conducted Power					
Peak EIRP (dBm)	Ant Gain (dBi)	Conducted Power (dBm)	Conducted Power (mW)	Limit (mW)	Result
3.17	4.00	-0.83	0.826	500	PASS

Note:

- Peak conducted power (dBm) = Peak EIRP Power - Ant Gain (dBi)

3.5.5 Test Plots

3.6 Transmit Spurious Emission

3.6.1 Limit of Radiated Spurious Emission

Frequency Range	Limit
Below 40GHz	Follow 15.209
Above 40GHz	90 pW/cm ² @ 3m (equivalent EIRP 102μW, -10dBm)
Note 1: For the applicable limit, see FCC 15.255 (d) Note 2: Spurious emissions shall not exceed the level of fundamental emission. Note 3: Per Part 15.215(c), the provisions in Part 15.35(b) and (c) that require emissions to be averaged over a 100 millisecond period and that limits the peak power to 20 dB above the average limit do not apply to devices operating under paragraphs Part 15.255(c)(2) and (3) of this section.	

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

The testing follows ANSI C63.10 Section 9.10 and 9.11 and ANSI C63.10 clause 4.1.5.2.8 and Annex L.

For above 40GHz emission:

$$\text{EIRP} = \text{Prx} - \text{Grx} + \text{Free space loss} = \text{Prx} - \text{Grx} + 20 \cdot \log(4 \pi d / \lambda) + \text{Cable Loss}$$

Which

Prx = Read Level

Grx = Rx Antenna Gain

A distance factor is offset and formula is $20 \cdot \log(D1/D2)$

Which

$D1$ = Specification distance = 3m

$D2$ = Measurement distance

$$\text{Power Density (W/m}^2\text{)} = 10^{[(\text{EIRP}-30)/10]} / 4 \pi d$$

$$\text{Power Density (pW/cm}^2\text{)} = \text{Power Density (W/m}^2\text{)} \cdot 10^{(-8)}$$



3.6.4 Test Result

<9 kHz ~ 30 MHz >

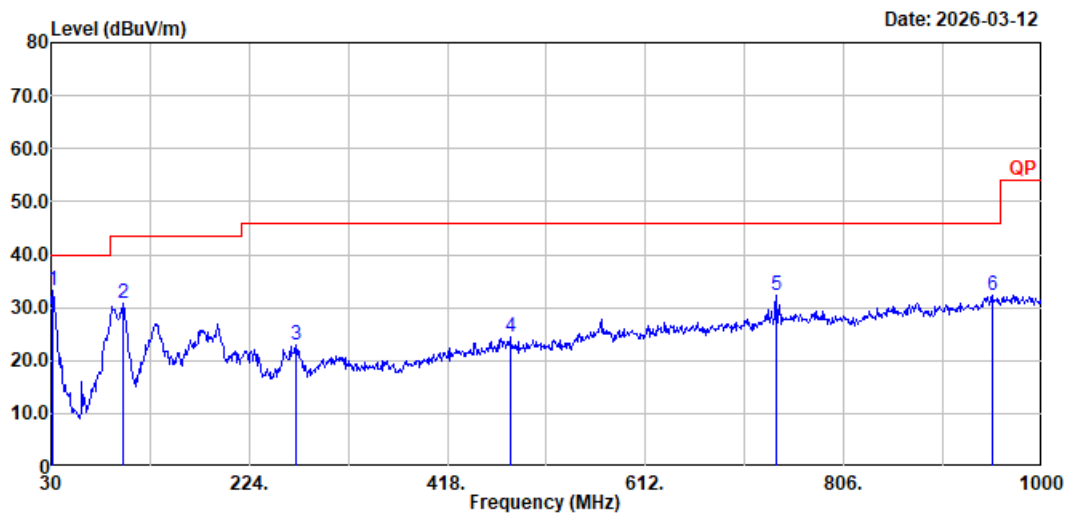
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



<30MHz to 1GHz>

Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	30MHz to 1GHz	Test Polarization	Horizontal
Remark	1. Level (dBμV/m) = Read Level (dBμV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Filter loss 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		

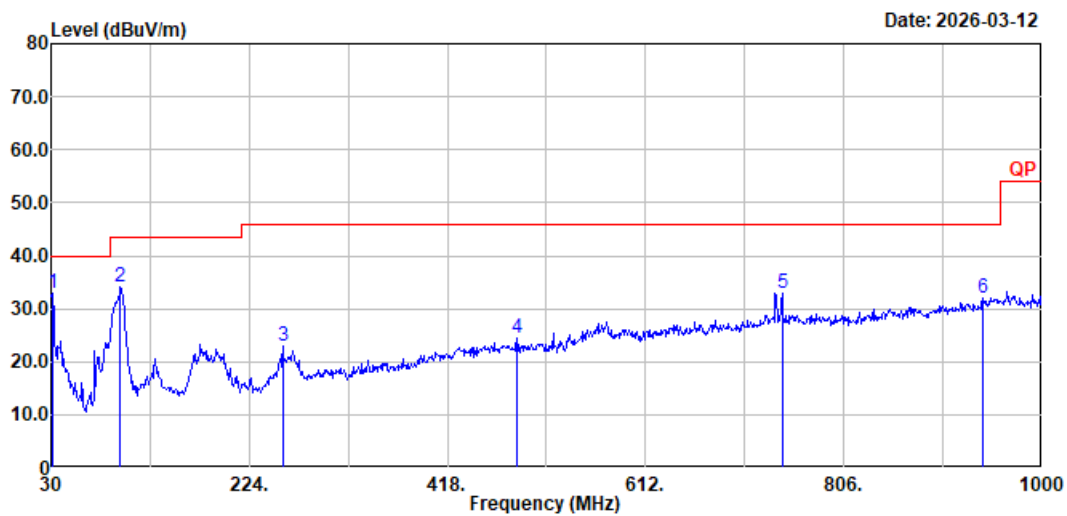


Site : 03CH11-HY
 Condition: QP 3m Bilog_37059 & 01_251126 HORIZONTAL
 Mode : 1
 Setting :

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	30.97	33.29	40.00	-6.71		40.78	23.58	0.73	31.88	0.08	--	--	Peak
2	99.84	30.85	43.50	-12.65		45.41	16.15	1.35	32.09	0.03	--	--	Peak
3	269.59	23.03	46.00	-22.97		33.56	19.14	2.19	31.93	0.07	--	--	Peak
4	479.11	24.55	46.00	-21.45		29.85	23.66	2.96	32.00	0.08	--	--	Peak
5	740.04	32.41	46.00	-13.59		31.86	28.15	3.71	31.89	0.58	--	--	Peak
6	951.50	32.20	46.00	-13.80		27.35	31.00	4.14	30.69	0.40	--	--	Peak



Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	30MHz to 1GHz	Test Polarization	Vertical
Remark	1. Level (dBuV/m) = Read Level (dBuV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Filter loss 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		



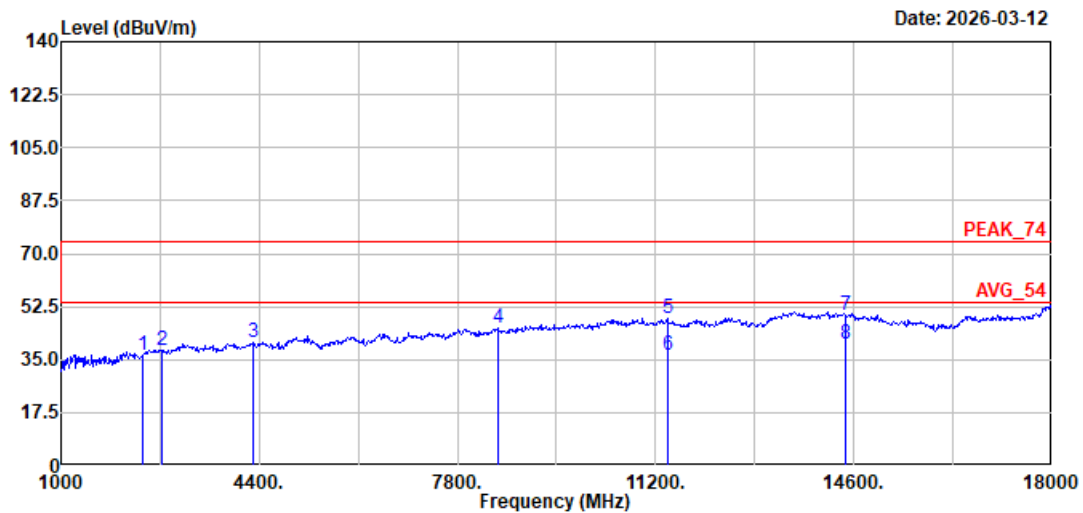
Site : 03CH11-HY
Condition: QP 3m Bilog_37059 & 01_251126 VERTICAL
Mode : 1
Setting :

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	30.97	33.04	40.00	-6.96		40.53	23.58	0.73	31.88	0.08	--	--	Peak
2	97.90	34.19	43.50	-9.31		48.97	15.96	1.32	32.09	0.03	--	--	Peak
3	256.98	22.99	46.00	-23.01		33.05	19.67	2.14	31.93	0.06	--	--	Peak
4	485.90	24.44	46.00	-21.56		29.59	23.80	2.98	32.01	0.08	--	--	Peak
5	745.86	32.87	46.00	-13.13		32.27	28.20	3.73	31.89	0.56	--	--	Peak
6	942.77	32.05	46.00	-13.95		27.82	30.47	4.13	30.78	0.41	--	--	Peak



<1GHz to 18GHz>

Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	1GHz to 18GHz	Test Polarization	Horizontal
Remark	1. Level (dBμV/m) = Read Level (dBμV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Filter loss 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		

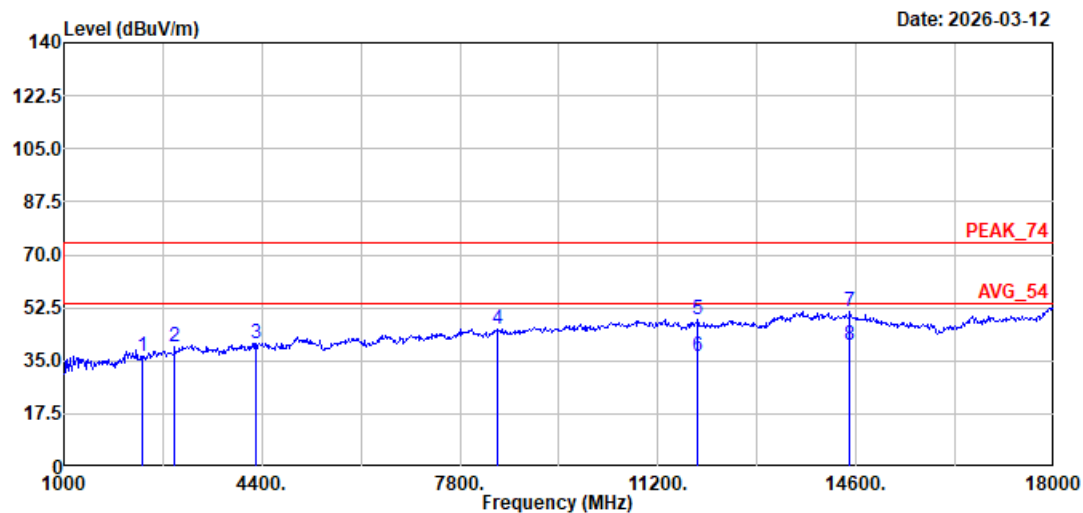


Site : 03CH11-HY
Condition: PEAK_74 3m 9120D_01620_250915 HORIZONTAL
Mode : 1
Setting :

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2394.00	36.32	74.00		-37.68	68.55	27.30	7.63	67.16	0.00	--	--	Peak
2	2734.00	38.00	74.00		-36.00	68.52	28.16	8.18	66.86	0.00	--	--	Peak
3	4298.00	40.57	74.00		-33.43	66.14	31.39	10.38	67.34	0.00	--	--	Peak
4	8497.00	45.38	74.00		-28.62	60.30	37.29	14.78	66.99	0.00	--	--	Peak
5	11404.00	48.71	74.00		-25.29	59.28	38.99	17.27	66.83	0.00	--	--	Peak
6	11404.00	36.33	54.00		-17.67	46.90	38.99	17.27	66.83	0.00	--	--	Average
7	14464.00	49.59	74.00		-24.41	55.76	40.23	19.95	66.35	0.00	--	--	Peak
8	14464.00	39.92	54.00		-14.08	46.09	40.23	19.95	66.35	0.00	--	--	Average



Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	1GHz to 18GHz	Test Polarization	Vertical
Remark	1. Level (dBμV/m) = Read Level (dBμV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Filter loss 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		

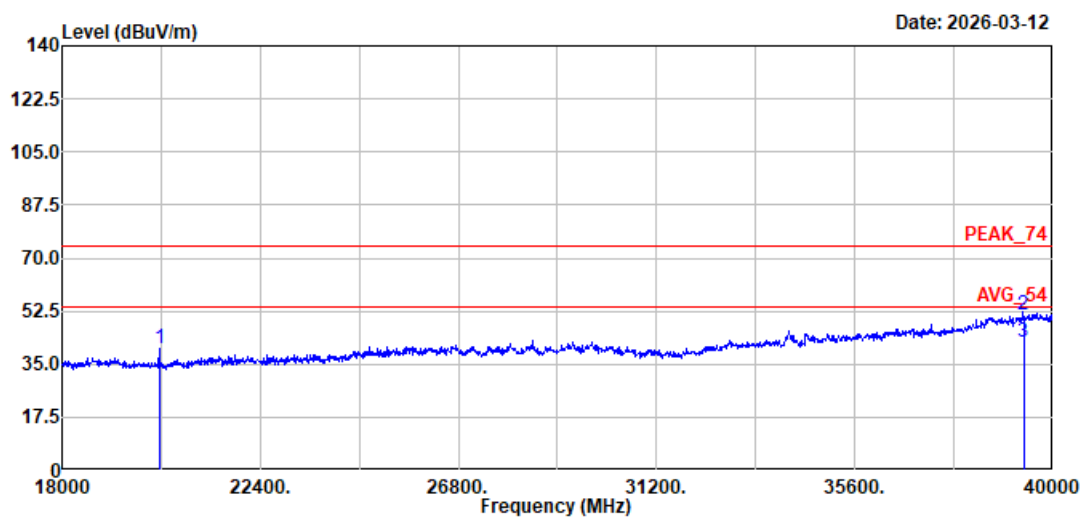


Site : 03CH11-HY
Condition: PEAK_74 3m 9120D_01620_250915 VERTICAL
Mode : 1
Setting :

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2343.00	36.48	74.00	-37.52	68.90	27.20	7.55	67.17	0.00	--	--	--	Peak
2	2904.00	39.38	74.00	-34.62	68.78	28.80	8.46	66.66	0.00	--	--	--	Peak
3	4298.00	40.84	74.00	-33.16	66.41	31.39	10.38	67.34	0.00	--	--	--	Peak
4	8446.00	45.23	74.00	-28.77	60.38	37.18	14.60	66.93	0.00	--	--	--	Peak
5	11880.00	48.47	74.00	-25.53	58.93	38.52	17.53	66.51	0.00	--	--	--	Peak
6	11880.00	36.46	54.00	-17.54	46.92	38.52	17.53	66.51	0.00	--	--	--	Average
7	14498.00	51.13	74.00	-22.87	57.18	40.30	19.95	66.30	0.00	--	--	--	Peak
8	14498.00	40.06	54.00	-13.94	46.11	40.30	19.95	66.30	0.00	--	--	--	Average

**<18GHz to 40GHz>**

Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	18GHz to 40GHz	Test Polarization	Horizontal
Remark	1. Level (dBμV/m) = Read Level (dBμV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Distance extrapolation factor (dB) = 20 log(1/3) = -9.54 (dB) 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		

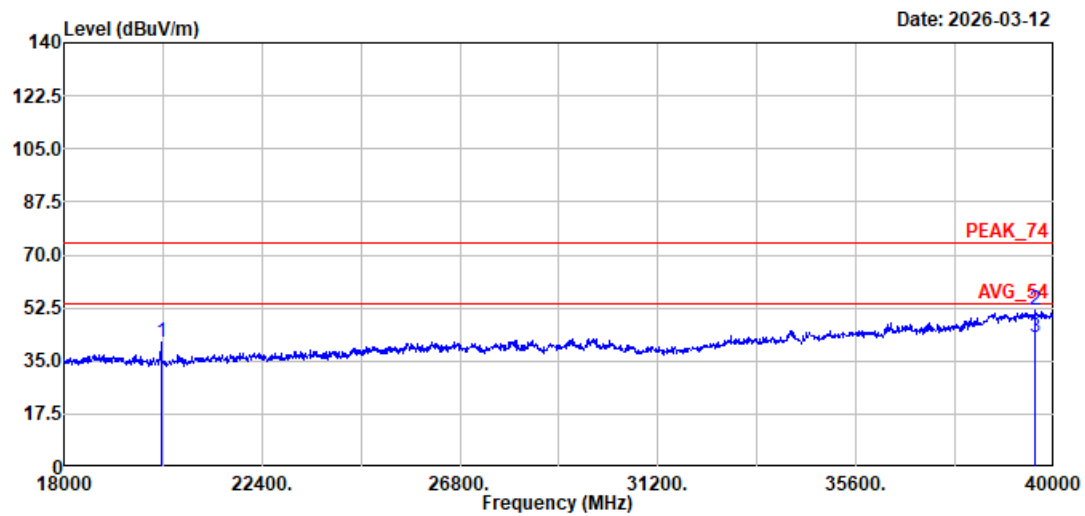


Site : 03CH11-HY
Condition: PEAK_74 1m SHF_1224_250702 HORIZONTAL
Mode : 1
Setting :

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	20159.00	40.23	74.00	-33.77		43.89	37.82	23.02	54.96	-9.54	100	159	Peak
2	39342.56	51.20	74.00	-22.80		38.64	45.24	33.49	56.63	-9.54	100	88	PEAK
3	39342.56	42.27	54.00	-11.73		29.71	45.24	33.49	56.63	-9.54	100	88	Average



Temperature	20.1 ~ 21.9℃	Relative Humidity	50.1 ~ 65.9%
Test Engineer	Daniel Lee, Fu Chen, Troye Hsieh	Test Distance	3m
Test Range	18GHz to 40GHz	Test Polarization	Vertical
Remark	1. Level (dBμV/m) = Read Level (dBμV) + Antenna Factor (dB) + Cable loss(dB) + Aux Factor - Preamp Factor (dB) 2. Aux Factor = Distance extrapolation factor (dB) = 20 log(1/3) = -9.54 (dB) 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.		



Site : 03CH11-HY
Condition: PEAK_74 1m SHF_1224_250702 VERTICAL
Mode : 1
Setting :

	Freq	Level	Limit		Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
			Line	Margin								
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	20159.00	41.29	74.00	-32.71	44.95	37.82	23.02	54.96	-9.54	100	100	Peak
2	39576.71	51.85	74.00	-22.15	39.05	45.01	33.72	56.39	-9.54	100	22	PEAK
3	39576.71	42.84	54.00	-11.16	30.04	45.01	33.72	56.39	-9.54	100	22	Average

**<40GHz to 200GHz>**

Temperature	22.3~24.6°C	Relative Humidity	55.7~60.2%
Test Engineer	Eric Jeng	Test Range	40GHz to 200GHz

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
40 - 57	22.70	0.87	40.3125	-87.73
EIRP (dBm)	Specification Distance (m)	Power Density (pW/cm ²)	Limit (pW/cm ²)	Test Result
-43.58	3	0.038775	90	PASS

Note: Cable Loss = 0.5 dB; the calculate of λ using 57GHz as f.

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
71 - 90	23.10	0.60	89.9325	-80.68
EIRP (dBm)	Specification Distance (m)	Power Density (pW/cm ²)	Limit (pW/cm ²)	Test Result
-36.19	3	0.212592	90	PASS

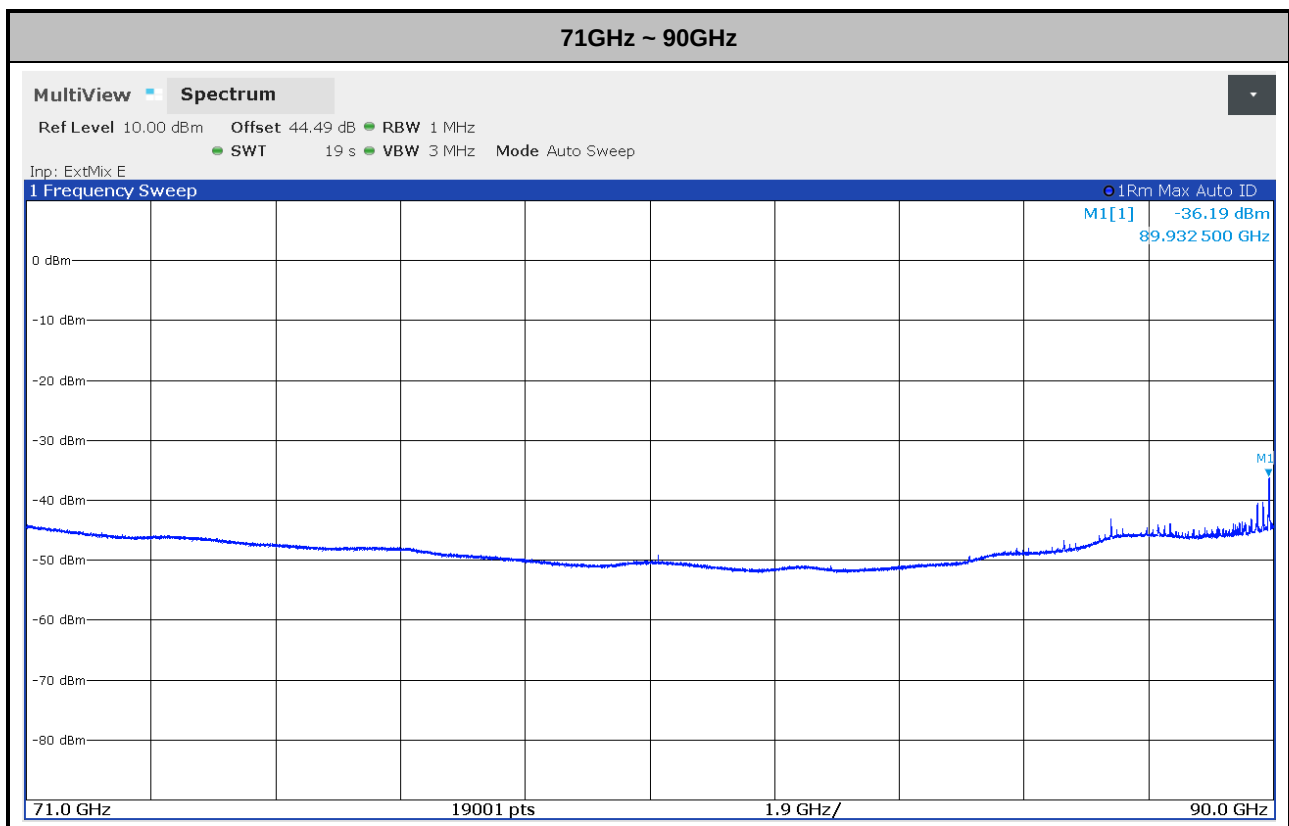
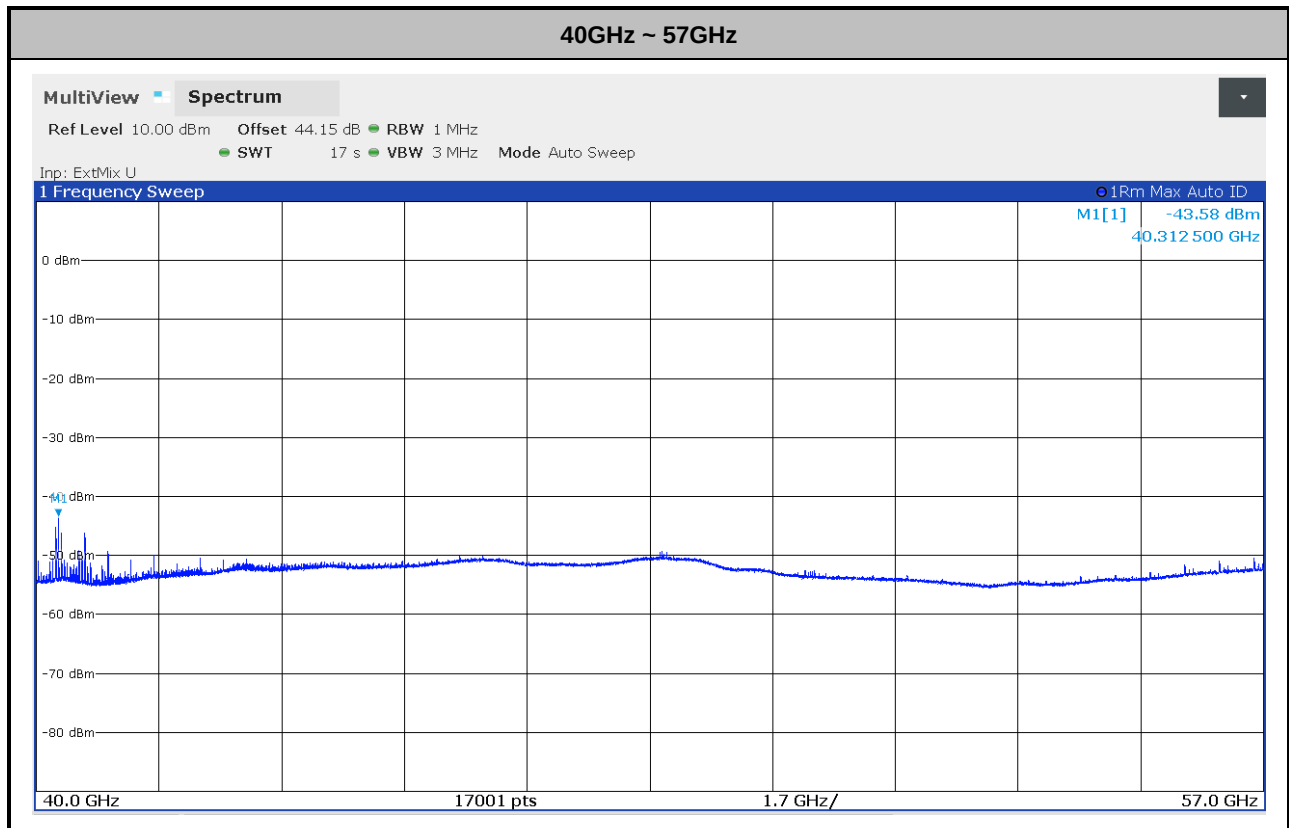
Note: Cable Loss = 0.5 dB; the calculate of λ using 90GHz as f.

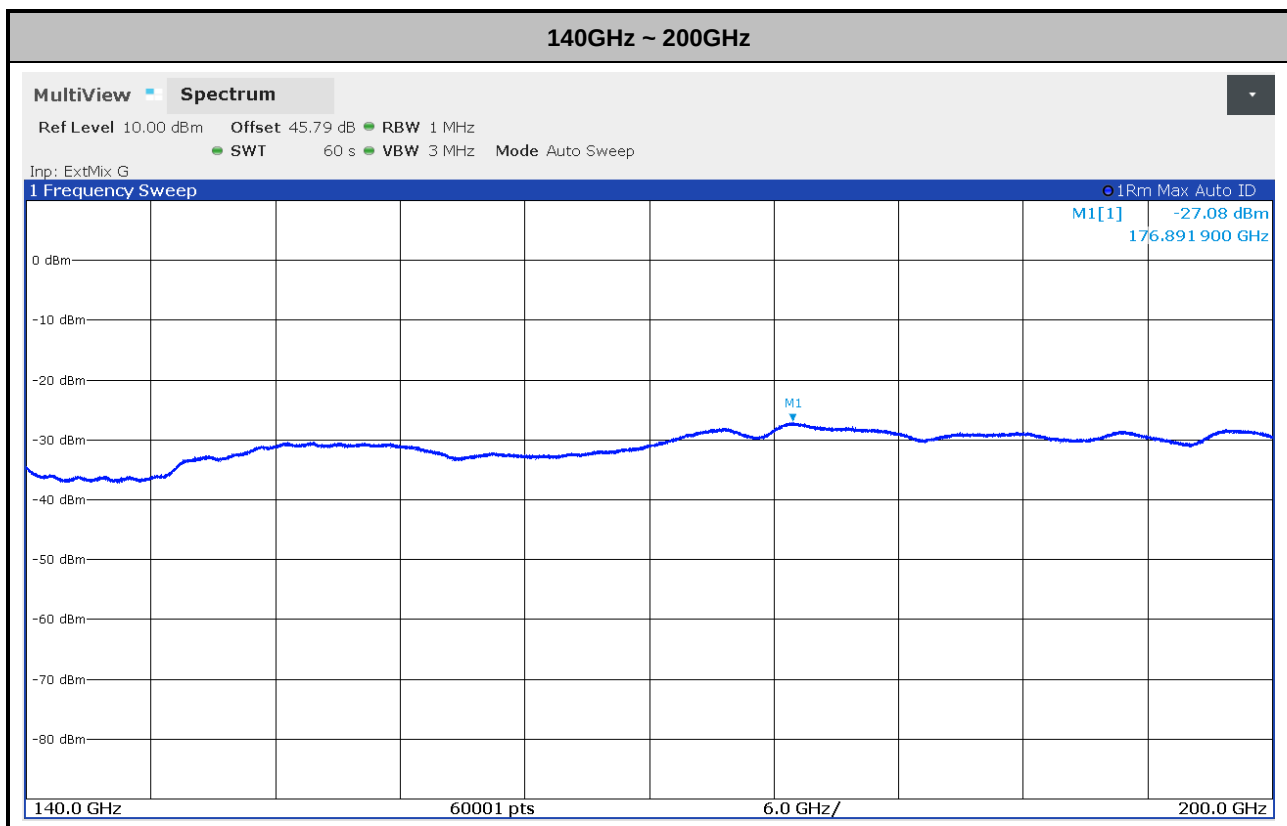
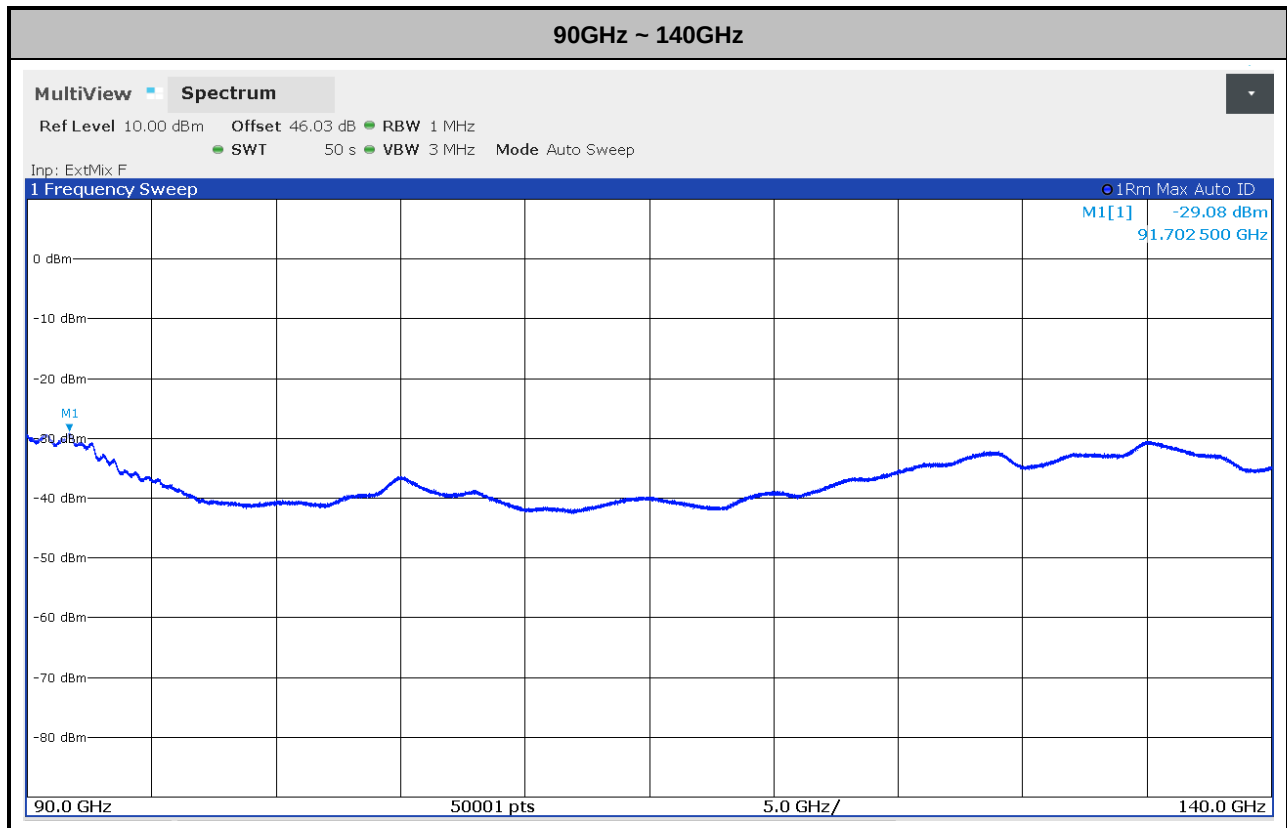
Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
90 - 140	21.80	0.43	91.7025	-75.11
EIRP (dBm)	Specification Distance (m)	Power Density (pW/cm ²)	Limit (pW/cm ²)	Test Result
-29.08	3	1.092817	90	PASS

Note: Cable Loss = 0.5 dB; the calculate of λ using 140GHz as f.

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
140 - 200	21.80	0.27	176.8919	-72.87
EIRP (dBm)	Specification Distance (m)	Power Density (pW/cm ²)	Limit (pW/cm ²)	Test Result
-27.08	3	1.731999	90	PASS

Note: Cable Loss = 0.5 dB; the calculate of λ using 200GHz as f.





3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency range, 57 GHz – 71 GHz.

3.7.2 Measuring Instruments

See list of measuring equipment of this test report.

3.7.3 Test Procedures

The testing follows ANSI C63.10 Section 9.5.

3.7.4 Test Result

Test Engineer	Eric Jeng				
Test Temperature (°C)	Voltage (Volt)	Low Frequency (GHz)	High Frequency (GHz)	Limit	Result
50	3.90	58.9312	62.1749	Within 57 ~ 71 GHz	pass
40	3.90	58.7438	62.1912		
30	3.90	58.8080	62.2305		
20	3.90	58.8033	62.1755		
10	3.90	58.8228	62.2428		
0	3.90	58.8268	62.1593		
-10	3.90	58.8234	62.1874		
-20	3.90	58.8123	62.1253		
20	3.65	58.9278	62.2878		
20	4.50	58.9276	62.1544		

Note:

1. Normal Voltage = 3.90 Vdc. ; Low Voltage = 3.65 Vdc. ; Maximum Voltage = 4.50 Vdc.
2. The frequency fundamental emissions stay within the operation band.

4 AC conducted Emission Measurement

4.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

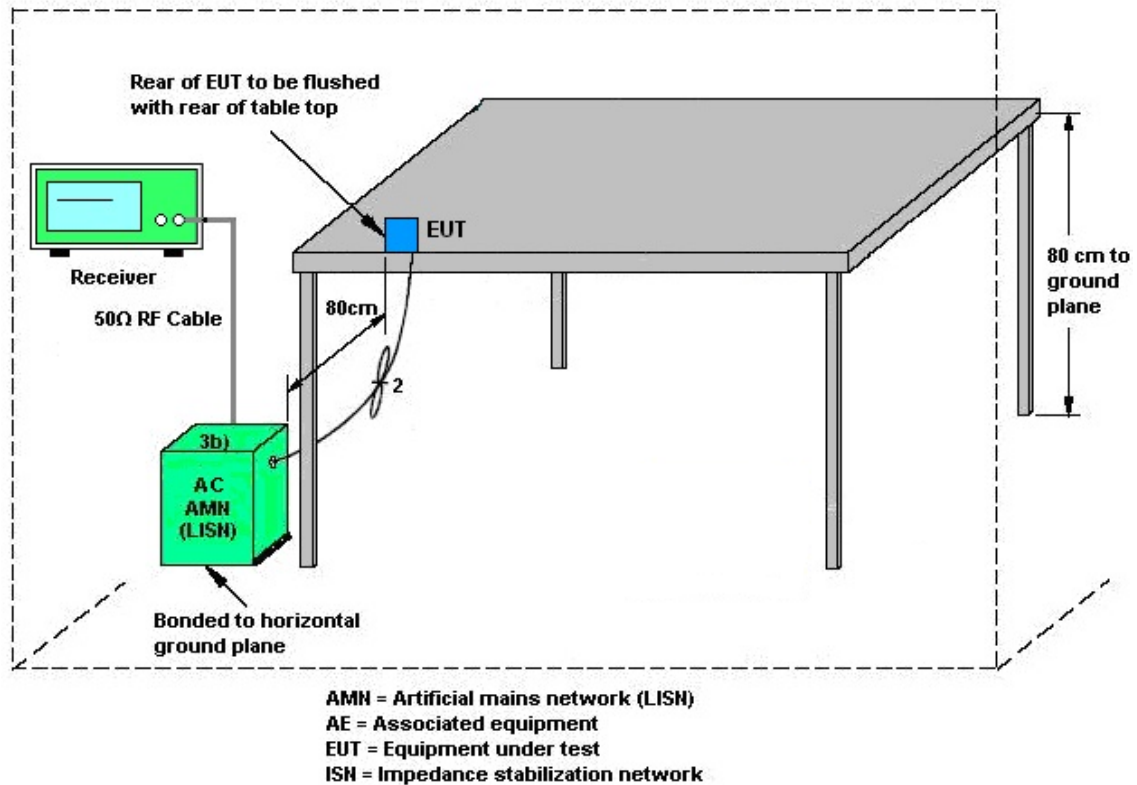
4.2 Measuring Instruments

See list of measuring equipment of this test report.

4.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

4.4 Test Setup



4.5 Test Result of AC Conducted Emission

Please refer to Appendix A.



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Mar. 13, 2026	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Mar. 13, 2026	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 20, 2025	Mar. 13, 2026	Oct. 19, 2026	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 02, 2026	Mar. 13, 2026	Mar. 01, 2027	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 24, 2025	Mar. 13, 2026	Mar. 23, 2026	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 26, 2025	Mar. 13, 2026	Mar. 25, 2026	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Oct. 21, 2025	Mar. 13, 2026	Oct. 20, 2026	Conduction (CO07-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Nov. 26, 2025	Mar. 11, 2026~ Mar. 13, 2026	Nov. 25, 2026	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 11, 2025	Mar. 11, 2026~ Mar. 13, 2026	Dec. 10, 2026	Radiation (03CH11-HY)
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Sep. 15, 2025	Mar. 11, 2026~ Mar. 13, 2026	Sep. 14, 2026	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz~40GHz	Jul. 02, 2025	Mar. 11, 2026~ Mar. 13, 2026	Jul. 01, 2026	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 06, 2025	Mar. 11, 2026~ Mar. 13, 2026	Dec. 05, 2026	Radiation (03CH11-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz~18GHz	Jan. 20, 2026	Mar. 11, 2026~ Mar. 13, 2026	Jan. 19, 2027	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 26, 2025	Mar. 11, 2026~ Mar. 13, 2026	May 25, 2026	Radiation (03CH11-HY)
Signal Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 23, 2025	Mar. 11, 2026~ Mar. 13, 2026	Oct. 22, 2026	Radiation (03CH11-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20Hz~8.4GHz	Apr. 21, 2025	Mar. 11, 2026~ Mar. 13, 2026	Apr. 20, 2026	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 11, 2026~ Mar. 13, 2026	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Mar. 11, 2026~ Mar. 13, 2026	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Mar. 11, 2026~ Mar. 13, 2026	N/A	Radiation (03CH11-HY)
Software	Audix	E3	RK-002391	N/A	N/A	Mar. 11, 2026~ Mar. 13, 2026	N/A	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP210117	N/A	Oct. 02, 2025	Mar. 11, 2026~ Mar. 13, 2026	Oct. 01, 2026	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP200880	N/A	Aug. 26, 2025	Mar. 11, 2026~ Mar. 13, 2026	Aug. 25, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	Mar. 04, 2026	Mar. 11, 2026~ Mar. 13, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 04, 2026	Mar. 11, 2026~ Mar. 13, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 04, 2026	Mar. 11, 2026~ Mar. 13, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	9K~30M	Mar. 04, 2026	Mar. 11, 2026~ Mar. 13, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	30M~40G	Mar. 04, 2026	Mar. 11, 2026~ Mar. 13, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53GHz Low Pass Filter	Sep. 09, 2025	Mar. 11, 2026~ Mar. 13, 2026	Sep. 08, 2026	Radiation (03CH11-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSW43	101456	2Hz to 43.5GHz	Feb 04, 2026	Feb 24, 2026 ~ Apr 15, 2026	Feb 03, 2027	Radiation (03CH18-HY)
Harmonic Mixer	Rohde & Schwarz	RPG FS-Z75	102042	50 GHz to 75 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	RPG FS-Z60	101033	40GHz to 60GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	FSZ-90	101867	60GHz to 90GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Harmonic Mixer*	Rohde & Schwarz	RPG FS-Z140	101130	90GHz to 140GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Harmonic Mixer	Rohde & Schwarz	RPG FS-Z220	101042	140GHz to 220GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-VPRR00	1371800008	50-75 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-UPRR00	1410300003	40-60 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-EPRR00	1372000000	60-90 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-FPRR00	1011500008	90-140 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
Antenna	Quinstar	QWH-GPRR00	QWH-GPR R00-01	140-220 GHz	Jun 27, 2024	Feb 24, 2026 ~ Apr 15, 2026	Jun 26, 2027	Radiation (03CH18-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801607/2	N/A	Dec 24, 2025	Feb 24, 2026 ~ Apr 15, 2026	Dec 23, 2026	Radiation (03CH18-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519231/2	N/A	Dec 24, 2025	Feb 24, 2026 ~ Apr 15, 2026	Dec 23, 2026	Radiation (03CH18-HY)
Detector	Quinstars	QEA-FBFBVP	2672009	50 ~ 75 GHz	July 09, 2024	Feb 24, 2026 ~ Apr 15, 2026	July 08, 2027	Radiation (03CH18-HY)
Oscilloscope	Rohde & Schwarz	RTO 1002	400025	600MHz, 10GSa/sec	Aug 29, 2025	Feb 24, 2026 ~ Apr 15, 2026	Aug 28, 2026	Radiation (03CH18-HY)
Temperature Chamber	ESPEC	SU-641	92013720	-40℃ ~90℃	Sep. 10, 2025	Feb 24, 2026 ~ Apr 15, 2026	Sep. 09, 2026	Radiation (03CH18-HY)
AC Power Source	AC POWER	AFC-500W	F104070011	50Hz~60Hz	May 12, 2025	Feb 24, 2026 ~ Apr 15, 2026	N/A	Radiation (03CH18-HY)

Note: (*) Equipment manufacturer's Calibration Certificate.

6 Measurement Uncertainty

Test Item	Uncertainty
AC Power Conducted Emission Measurement (150 kHz ~ 30 MHz)	±3.7 dB
Radiated Emission Measurement (9 kHz ~ 30 MHz)	±3.40 dB
Radiated Emission Measurement (30 MHz ~ 1000 MHz)	±6.50 dB
Radiated Emission Measurement (1 GHz ~ 6 GHz)	±4.90 dB
Radiated Emission Measurement (6 GHz ~ 18 GHz)	±5.70 dB
Radiated Emission Measurement (18 GHz ~ 40 GHz)	±4.90 dB
Radiated Emission Measurement (40 GHz ~ 140 GHz)	±5.24 dB
Radiated Emission Measurement (140 GHz ~ 200 GHz)	±5.40 dB

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)



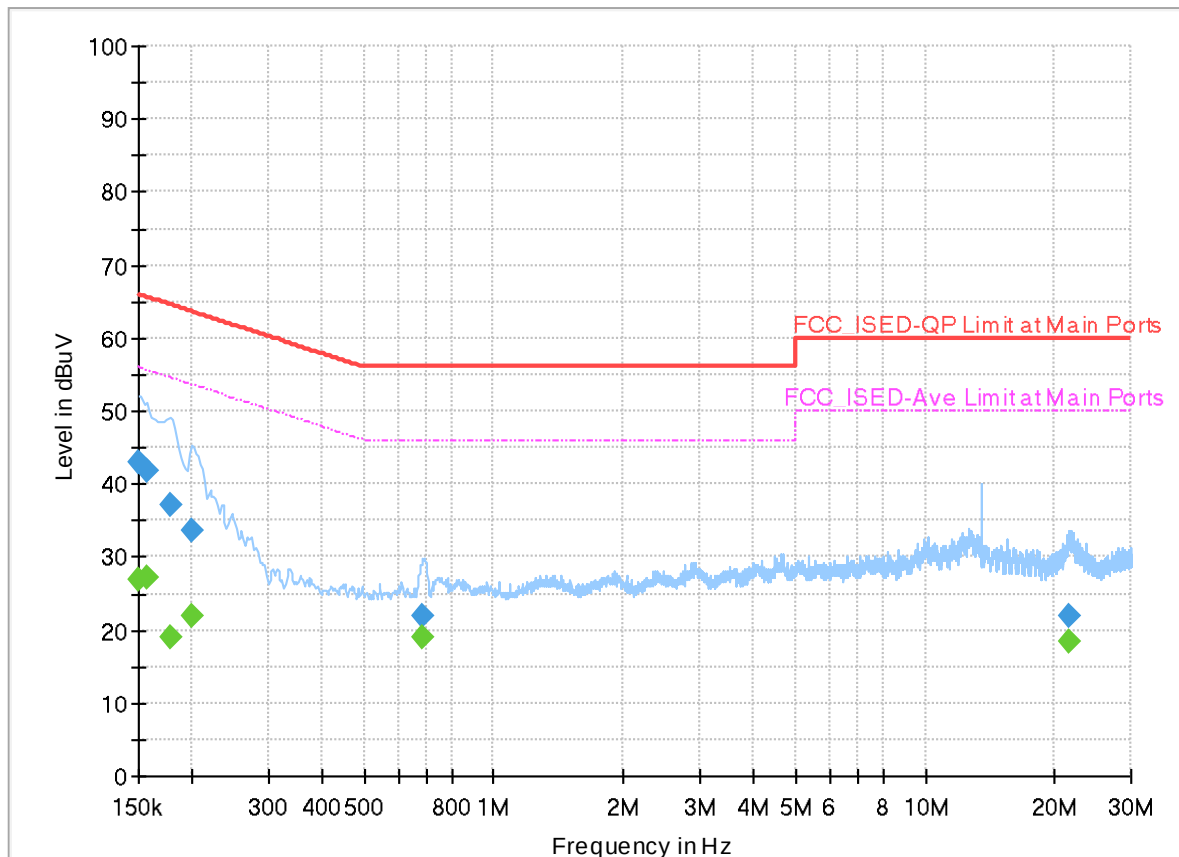
Appendix A. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	Temperature :	17.2~23.6°C
		Relative Humidity :	46.7~49.9%

EUT Information

Report NO : 5O3007
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



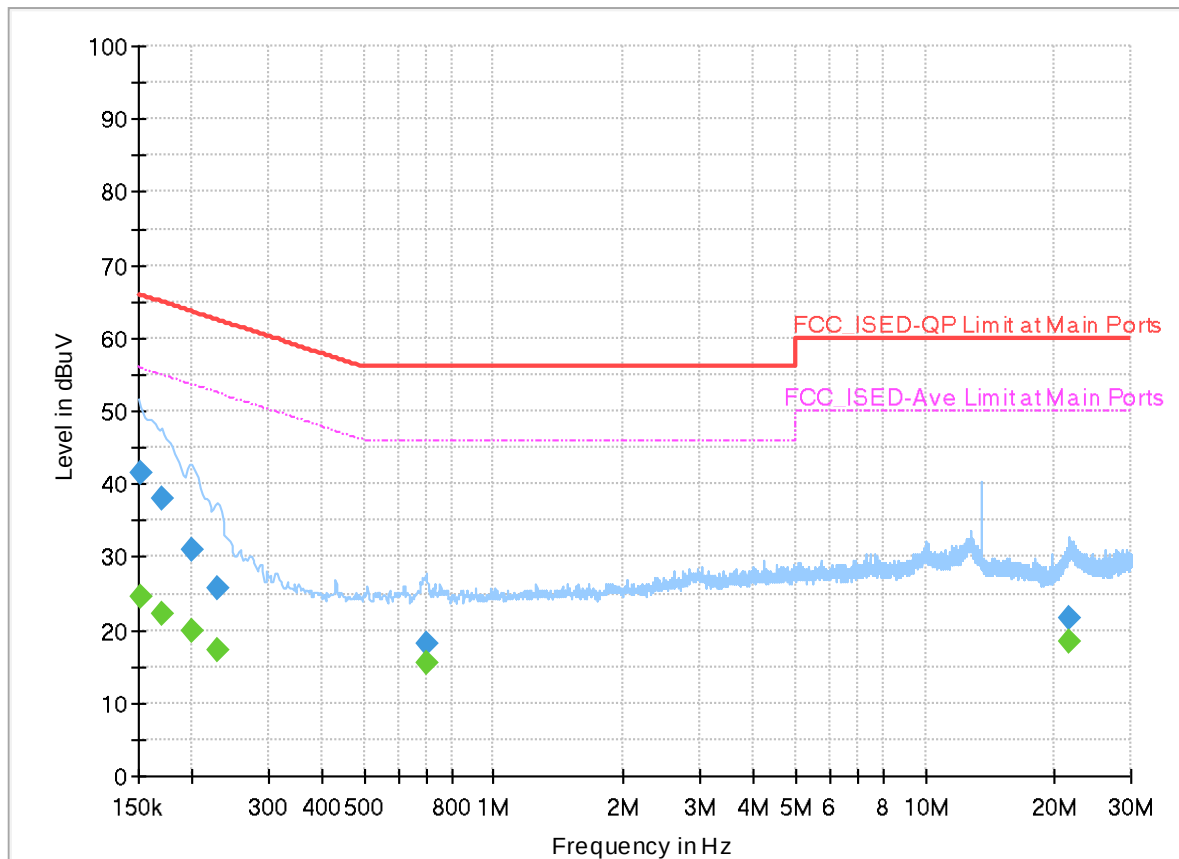
Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	26.89	56.00	29.11	L1	ON	20.0
0.150000	43.13	---	66.00	22.87	L1	ON	20.0
0.156750	---	27.08	55.63	28.55	L1	ON	20.0
0.156750	41.92	---	65.63	23.71	L1	ON	20.0
0.177000	---	19.14	54.63	35.49	L1	ON	20.0
0.177000	37.05	---	64.63	27.58	L1	ON	20.0
0.199500	---	21.99	53.63	31.64	L1	ON	20.0
0.199500	33.63	---	63.63	30.00	L1	ON	20.0
0.685500	---	18.87	46.00	27.13	L1	ON	20.0
0.685500	22.07	---	56.00	33.93	L1	ON	20.0
21.644250	---	18.56	50.00	31.44	L1	ON	20.9
21.644250	22.07	---	60.00	37.93	L1	ON	20.9

EUT Information

Report NO : 5O3007
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	24.69	55.88	31.19	N	ON	20.0
0.152250	41.44	---	65.88	24.44	N	ON	20.0
0.170250	---	22.15	54.95	32.80	N	ON	20.0
0.170250	38.03	---	64.95	26.92	N	ON	20.0
0.199500	---	19.84	53.63	33.79	N	ON	20.0
0.199500	30.91	---	63.63	32.72	N	ON	20.0
0.228750	---	17.15	52.50	35.35	N	ON	20.0
0.228750	25.79	---	62.50	36.71	N	ON	20.0
0.699000	---	15.58	46.00	30.42	N	ON	20.0
0.699000	18.12	---	56.00	37.88	N	ON	20.0
21.646500	---	18.34	50.00	31.66	N	ON	20.9
21.646500	21.63	---	60.00	38.37	N	ON	20.9