



FCC RADIO TEST REPORT

FCC ID Equipment	: TVE-21001T57 : Network Security Gateway
Brand Name	
	F :: RTINET,
Model Name	: FortiGateRugged 70G-5G-DUALxxxxxxxxx, FORTIGATERUGGED-70G-5G-DUALxxxxxxxxxx, FGR-70G-5G-DUALxxxxxxxxx
	(where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)
Applicant	: Fortinet, Inc. 899 KIFER RD SUNNYVALE CA 94086 UNITED STATES
Manufacturer	: Fortinet, Inc. 899 KIFER RD SUNNYVALE CA 94086 UNITED STATES
Standard	: FCC Part 15 Subpart C §15.247

The product was received on Jan. 04, 2024 and testing was performed from Jan. 11, 2024 to Feb. 05, 2024. 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.)

TEL: 886-3-327-0868
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Report Template No.: BU5-FR15CBT4.0 Version 2.4

Page Number: 2 of 24Issue Date: Mar. 15, 2024Report Version: 01



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History of this test report

Report No.	Version	Description	Issue Date
FR410407	01	Initial issue of report	Mar. 15, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)(3) 15.247(b)(4)	Output Power	Pass	-
3.3	15.247(e)	Power Spectral Density Pass		-
3.4	15.247(d)	Conducted Band Edges and Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Spurious Emission	Pass	0.93 dB under the limit at 398.60 MHz
3.6	15.207	AC Conducted Emission Pass		9.40 dB under the limit at 0.51 MHz
3.7	15.203	Antenna Requirement 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/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.

2. 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: Mila Chen



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature		
General Specs		
WCDMA/LTE/5G NR, Bluetooth-LE, and GNSS.		
Antenna Type		
WWAN: Dipole Antenna		
Bluetooth: Monopole Antenna		
GPS / Glonass / BDS / Galileo: Dipole Antenna		
Antenna information		

2400 MHz ~ 2483.5 MHz Peak Gain (dBi) 1.53

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

1.2 Modification of EUT

No modifications made to the EUT during the testing.

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. TH05-HY, CO07-HY, 03CH23-HY		

Note: The test site complies with ANSI C63.4 2014 requirement. FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

Remark:

- 1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
- 2. The TAF code is not including all the FCC KDB listed without accreditation.
- 3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
	0	2402	21	2444
	1	2404	22	2446
	2	2406	23	2448
	3	2408	24	2450
	4	2410	25	2452
	5	2412	26	2454
	6	2414	27	2456
	7	2416	28	2458
	8	8 2418 29 9 2420 30		2460
	9			2462
2400-2483.5 MHz	10	2422	31	2464
	11	2424	32	2466
	12	2426	33	2468
	13	2428	34	2470
	14	2430	35	2472
	15	2432	36	2474
	16	2434	37	2476
	17 2436 38 18 2438 39 19 2440 -		38	2478
			39	2480
			-	-
	20	2442	-	-



2.2 Test Mode

- 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: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).
- b. AC power line Conducted Emission was tested under maximum output power.

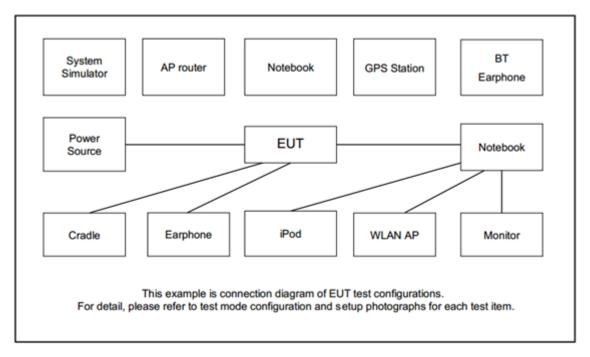
Mode	Power Setting
Bluetooth – LE (1Mbps)	-
2402MHz	8.00
2440MHz	8.00
2480MHz	8.00
Bluetooth – LE (2Mbps)	-
2402MHz	8.00
2440MHz	8.00
2480MHz	8.00
Bluetooth – LE (125kbps)	-
2402MHz	8.00
2440MHz	8.00
2480MHz	8.00
Bluetooth – LE (500kbps)	-
2402MHz	8.00
2440MHz	8.00
2480MHz	8.00

	The following summary table is showing all test modes to demonstrate in compliance with the standard Summary table of Test Cases				
Test Item					
Test item	Bluetooth – LE / GFSK				
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps				
	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps				
	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps				
	Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps				
Conducted	Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps				
Test Cases	Mode 6: Bluetooth Tx CH39_2480 MHz_2Mbps				
	Mode 7: Bluetooth Tx CH00_2402 MHz_125Kbps				
	Mode 8: Bluetooth Tx CH19_2440 MHz_125Kbps				
	Mode 9: Bluetooth Tx CH39_2480 MHz_125Kbps				
	Mode 10: Bluetooth Tx CH00_2402 MHz_500Kbps				
	Mode 11: Bluetooth Tx CH19_2440 MHz_500Kbps				
	Mode 12: Bluetooth Tx CH39_2480 MHz_500Kbps				
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps				
	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps				
	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps				
	Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps				
	Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps				
Radiated	Mode 6: Bluetooth Tx CH39_2480 MHz_2Mbps				
Test Cases	Mode 7: Bluetooth Tx CH00_2402 MHz_125Kbps				
	Mode 8: Bluetooth Tx CH19_2440 MHz_125Kbps				
	Mode 9: Bluetooth Tx CH39_2480 MHz_125Kbps				
	Mode 10: Bluetooth Tx CH00_2402 MHz_500Kbps				
	Mode 11: Bluetooth Tx CH19_2440 MHz_500Kbps				
	Mode 12: Bluetooth Tx CH39_2480 MHz_500Kbps				
AC Conducted Emission	Mode 1: Bluetooth-LE Link + Adpater				

The following summary table is showing all test modes to demonstrate in compliance with the standard.



2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Mobile Phone	Asus	Zenfone5	MSQX00QSA	N/A	N/A
2.	Notebook	Lenovo	ideaPad Gaming	PD9AX201NG	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Adapter	FSP	FSP036-RHBN3	N/A	N/A	Unshielded, 1.74 m

2.5 EUT Operation Test Setup

The RF test items, utility "Tera Term Version 4.106" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.



2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)



3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

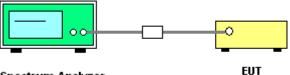
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

- 1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
- 2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
- 3. Set the maximum power setting and enable the EUT to transmit continuously.
- Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz.
- 5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) \ge 3 * RBW.
- 6. Measure and record the results in the test report.

3.1.4 Test Setup



Spectrum Analyzer

3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

3.1.6 Test Result of 99% Occupied Bandwidth



3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna of directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value 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 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

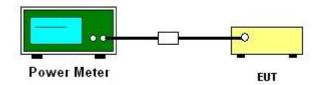
3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

- 1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
- 2. The RF output of EUT is connected to the power meter by RF cable and attenuator.
- 3. The path loss is compensated to the results for each measurement.
- 4. Set the maximum power setting and enable the EUT to transmit continuously.
- 5. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band at any time interval of continuous transmission.

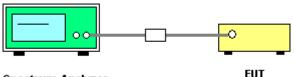
3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

- 1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
- 2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
- 3. Set the maximum power setting and enable the EUT to transmit continuously.
- Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz.
 Video bandwidth (VBW) = 10 kHz. In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6 dB BW)
- 5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
- 6. Measure and record the results in the test report.
- The Measured power density (dBm)/ 100 kHz is a reference level and is used as 20 dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

3.3.4 Test Setup



Spectrum Analyzer

3.3.5 Test Result of Power Spectral Density



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission

All harmonics/spurious must be at least 30 dB down from the highest emission level within the authorized band.

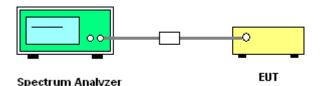
3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.4.3 Test Procedure

- 1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
- 2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
- 3. Set the maximum power setting and enable the EUT to transmit continuously.
- 4. Set RBW = 100 kHz, VBW = 300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output 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.
- 5. Measure and record the results in the test report.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edges Plots

Please refer to Appendix A.

3.4.6 Test Result of Conducted Spurious Emission Plots

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device is measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
0.009 - 0.490	2400/F(kHz)	300		
0.490 – 1.705	24000/F(kHz)	30		
1.705 – 30.0	30	30		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

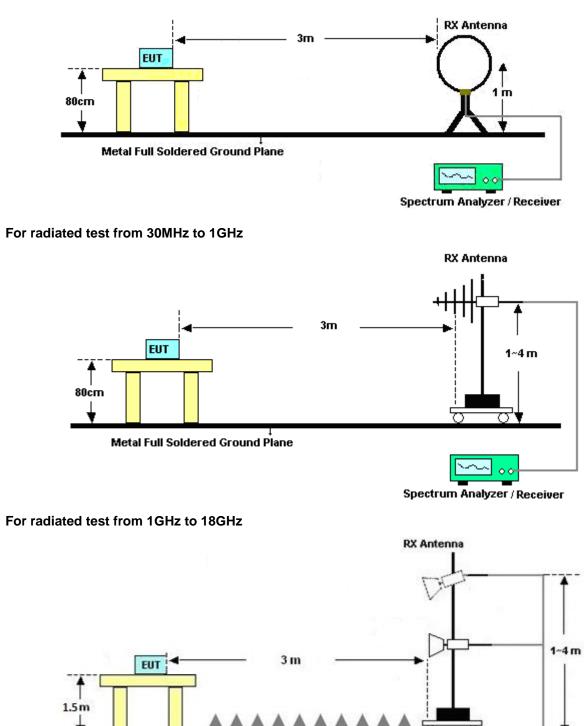
3.5.3 Test Procedures

- 1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
- 2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
- 3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
- 4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
- 5. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level
- 6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
- 7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".
- 8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for f < 1 GHz; VBW \ge RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW = 3 MHz for f \geq 1 GHz for peak measurement. For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



3.5.4 Test Setup

For radiated test below 30MHz

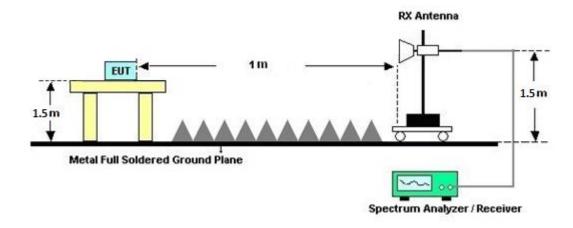


Metal Full Soldered Ground Plane

Spectrum Analyzer / Receiver



For radiated test above 18GHz



3.5.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is 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 comes out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.5.7 Duty Cycle

Please refer to Appendix D.

3.5.8 Test Result of Radiated Spurious Emission (30 MHz ~ 10th Harmonic)



3.6 AC Conducted Emission Measurement

3.6.1 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.

Eroquency of omission (MHz)	Conducted limit (dBµV)					
Frequency of emission (MHz)	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.

3.6.2 Measuring Instruments

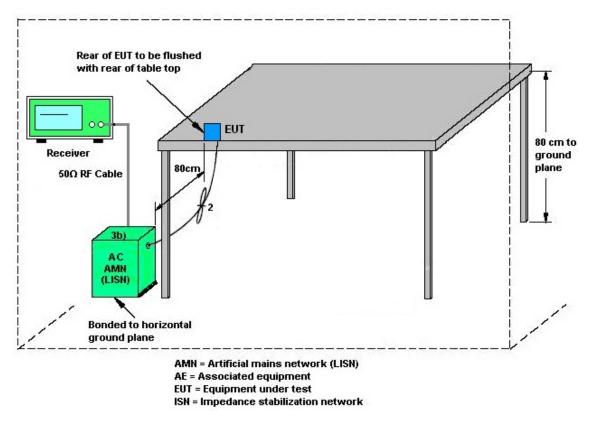
Please refer to the measuring equipment list in this test report.

3.6.3 Test Procedures

- 1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is 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 shall be used.
- 6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
- 7. The frequency range from 150 kHz to 30 MHz is scanned.
- Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.



3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission



3.7 Antenna Requirements

3.7.1 Standard Applicable

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 rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



List of Measuring Equipment 4

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	Jan. 11, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jan. 11, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBE CK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 20, 2023	Jan. 11, 2024	Oct. 19, 2024	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 15, 2023	Jan. 11, 2024	Mar. 14, 2024	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 05, 2023	Jan. 11, 2024	Mar. 04, 2024	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 13, 2023	Jan. 11, 2024	Mar. 12, 2024	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 20, 2023	Jan. 11, 2024	Sep. 19, 2024	Conduction (CO07-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	Jan. 12, 2024~ Jan. 23, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 36 (NO:35)	10MHz~6GHz	Aug. 23, 2023	Jan. 12, 2024~ Jan. 23, 2024	Aug. 22, 2024	Conducted (TH05-HY)
Signal Analyzer	0		101566	10Hz~40GHz	Aug. 23, 2023	Jan. 12, 2024~ Jan. 23, 2024	Aug. 22, 2024	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	Jan. 29, 2024~ Feb. 05, 2024	Sep. 11, 2024	Radiation (03CH23-HY)
Bilog Antenna with 6dB pad	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	62028 & 003	N/A	Oct. 15, 2023	Jan. 29, 2024~ Feb. 05, 2024	Oct. 14, 2024	Radiation (03CH23-HY)
Amplifier	SONOMA	310N	421582	N/A	Jul. 15, 2023	Jan. 29, 2024~ Feb. 05, 2024	Jul. 14, 2024	Radiation (03CH23-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C05A18E N	1GHz~18GHz	Jul. 12, 2023	Jan. 29, 2024~ Feb. 05, 2024	Jul. 11, 2024	Radiation (03CH23-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	1225	18GHz-40GHz	Jul. 10, 2023	Jan. 29, 2024~ Feb. 05, 2024	Jul. 09, 2024	Radiation (03CH23-HY)
Amplifier	EMEC	EM01G18GA	060877	N/A	Sep. 28, 2023	Jan. 29, 2024~ Feb. 05, 2024	Sep. 27, 2024	Radiation (03CH23-HY)
Preamplifier	EMEC	EM18G40G	060871	18-40GHz	Aug. 30, 2023	Jan. 29, 2024~ Feb. 05, 2024	Aug. 29, 2024	Radiation (03CH23-HY)
Signal Analyzer	Keysight	N9010B	MY62170337	N/A	Aug. 17, 2023	Jan. 29, 2024~ Feb. 05, 2024	Aug. 16, 2024	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303B	TP211542	N/A	Oct. 30, 2023	Jan. 29, 2024~ Feb. 05, 2024	Oct. 29, 2024	Radiation (03CH23-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 29, 2024~ Feb. 05, 2024	N/A	Radiation (03CH23-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jan. 29, 2024~ Feb. 05, 2024	N/A	Radiation (03CH23-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jan. 29, 2024~ Feb. 05, 2024	N/A	Radiation (03CH23-HY)
Software	Audix	E3 6.09824_2019 122	RK-002348	N/A	N/A	Jan. 29, 2024~ Feb. 05, 2024	N/A	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Jan. 29, 2024~ Feb. 05, 2024	Mar. 06, 2024	Radiation (03CH23-HY)
RF Cable	EMC	EMC101Y	231115/23111 9/231122	N/A	Nov. 27, 2023	Jan. 29, 2024~ Feb. 05, 2024	Nov. 26, 2024	Radiation (03CH23-HY)

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: 01



5 Measurement Uncertainty

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence	3.44 dB
of 95% (U = 2Uc(y))	3.44 UB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence	5.8 dB
of 95% (U = 2Uc(y))	5.0 UB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence	
of 95% (U = 2Uc(y))	4.4 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence	4.3 dB
of 95% (U = 2Uc(y))	4:3 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence	5.2 dB
of 95% (U = 2Uc(y))	5.2 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Willy Chang	Temperature:	21~25	°C
Test Date:	2024/1/12~2024/1/23	Relative Humidity:	51~54	%

<u>TEST RESULTS DATA</u> 6dB and 99% Occupied Bandwidth								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	1Mbps	1	0	2402	1.071	0.701	0.50	Pass
BLE	1Mbps	1	19	2440	1.069	0.695	0.50	Pass
BLE	1Mbps	1	39	2480	1.071	0.698	0.50	Pass

TEST RESULTS DATA Average Power Table											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	
BLE	1Mbps	1	0	2402	7.50	30.00	1.53	9.03	36.00	Pass	
BLE	1Mbps	1	19	2440	7.40	30.00	1.53	8.93	36.00	Pass	
BLE	1Mbps	1	39	2480	7.40	30.00	1.53	8.93	36.00	Pass	

<u>TEST RESULTS DATA</u>	
<u>Peak Power Density</u>	

od. Data Rate	INTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail	
LE 1Mbp	s 1	0	2402	7.70	-3.23	1.53	8.00	Pass	Ì
LE 1Mbp	s 1	19	2440	7.35	-2.48	1.53	8.00	Pass	Ĩ
LE 1Mbp	s 1	39	2480	7.53	-2.16	1.53	8.00	Pass	Ĩ

<u>TEST RESULTS DATA</u> 6dB and 99% Occupied Bandwidth												
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail				
BLE	2Mbps	1	0	2402	2.062	1.364	0.50	Pass				
BLE	2Mbps	1	19	2440	2.074	1.393	0.50	Pass				
BLE	2Mbps	1	39	2480	2.078	1.352	0.50	Pass				

TEST RESULTS DATA Average Power Table

Mod.	Data Rate	Ντx	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	0	2402	7.60	30.00	1.53	9.13	36.00	Pass
BLE	2Mbps	1	19	2440	7.50	30.00	1.53	9.03	36.00	Pass
BLE	2Mbps	1	39	2480	7.40	30.00	1.53	8.93	36.00	Pass

<u>TEST RESULTS DATA</u>
Peak Power Density

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	1	0	2402	6.39	-5.44	1.53	8.00	Pass
BLE	2Mbps	1	19	2440	6.03	-7.05	1.53	8.00	Pass
BLE	2Mbps	1	39	2480	6.14	-5.48	1.53	8.00	Pass

<u>TEST RESULTS DATA</u> 6dB and 99% Occupied Bandwidth												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail				
BLE	125kbps	1	0	2402	1.085	0.716	0.50	Pass				
BLE	125kbps	1	19	2440	1.091	0.723	0.50	Pass				
BLE	125kbps	1	39	2480	1.089	0.728	0.50	Pass				

TEST RESULTS DATA Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	125kbps	1	0	2402	7.50	30.00	1.53	9.03	36.00	Pass
BLE	125kbps	1	19	2440	7.40	30.00	1.53	8.93	36.00	Pass
BLE	125kbps	1	39	2480	7.40	30.00	1.53	8.93	36.00	Pass

							RESULTS Power De			
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail	
BLE 1	125kbps	1	0	2402	4.39	1.76	1.53	8.00	Pass	
BLE 1	125kbps	1	19	2440	4.07	1.47	1.53	8.00	Pass	
BLE 1	125kbps	1	39	2480	4.25	1.59	1.53	8.00	Pass	

			<u>TEST RESULTS DATA</u> <u>6dB and 99% Occupied Bandwidth</u>												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail							
BLE	500kbps	1	0	2402	1.053	0.677	0.50	Pass							
BLE	500kbps	1	19	2440	1.051	0.688	0.50	Pass							
BLE	500kbps	1	39	2480	1.055	0.684	0.50	Pass							

TEST RESULTS DATA Average Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	500kbps	1	0	2402	7.50	30.00	1.53	9.03	36.00	Pass
BLE	500kbps	1	19	2440	7.40	30.00	1.53	8.93	36.00	Pass
BLE	500kbps	1	39	2480	7.40	30.00	1.53	8.93	36.00	Pass

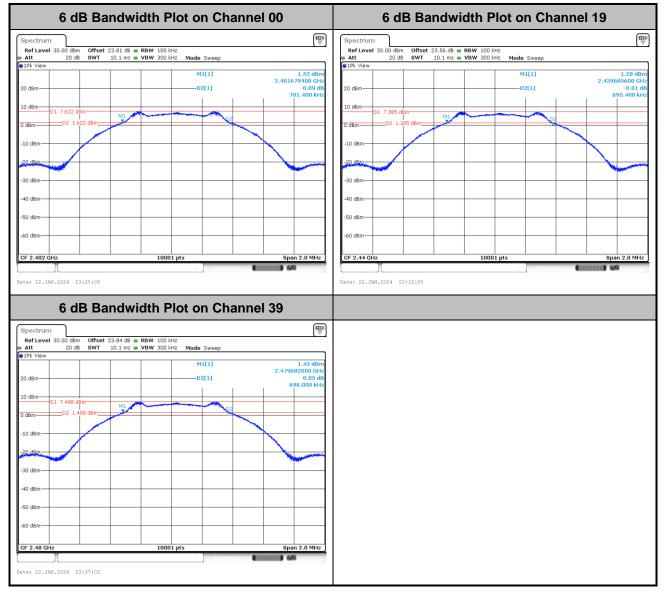
TEST RESULTS DATA	
Peak Power Density	

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail	
BLE	500kbps	1	0	2402	7.71	-0.67	1.53	8.00	Pass	
BLE	500kbps	1	19	2440	7.42	-1.14	1.53	8.00	Pass	
BLE	500kbps	1	39	2480	7.55	-3.82	1.53	8.00	Pass	



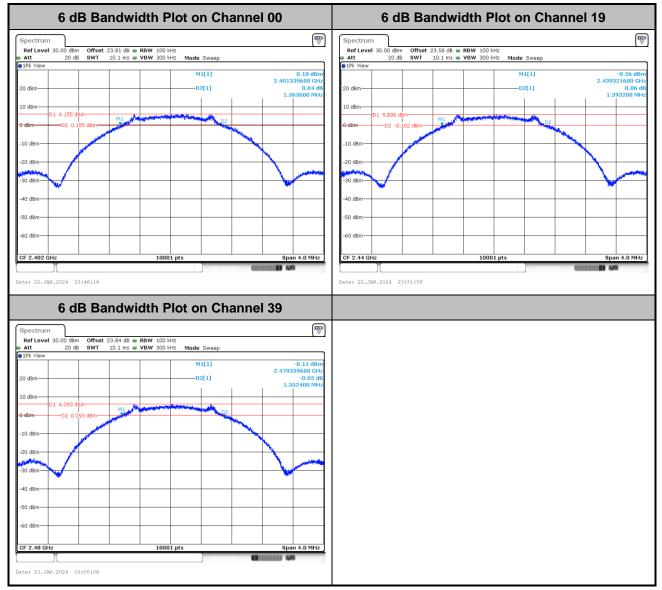
6dB Bandwidth

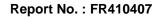
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<2Mbps>

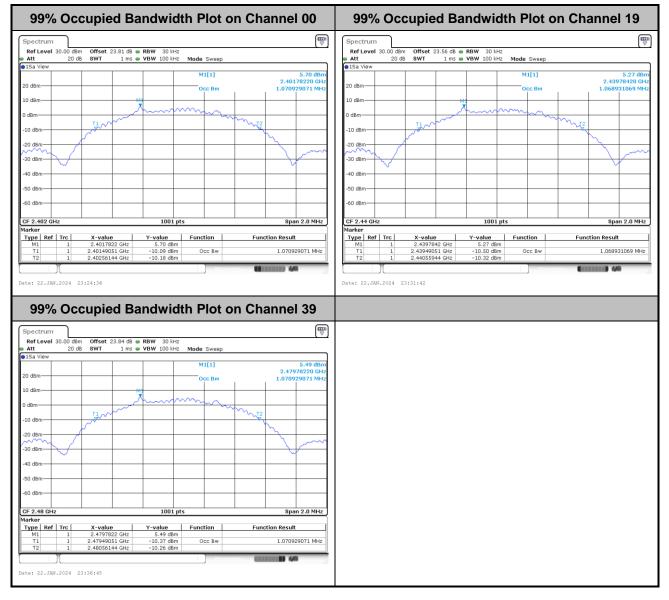






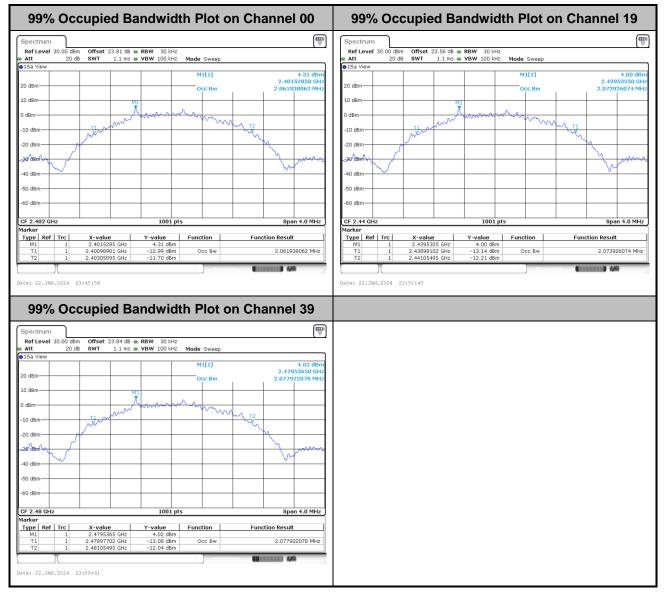
99% Occupied Bandwidth

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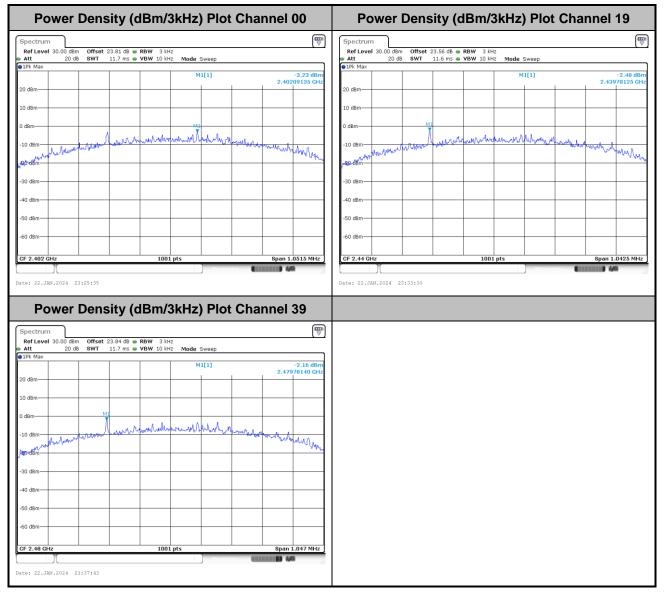
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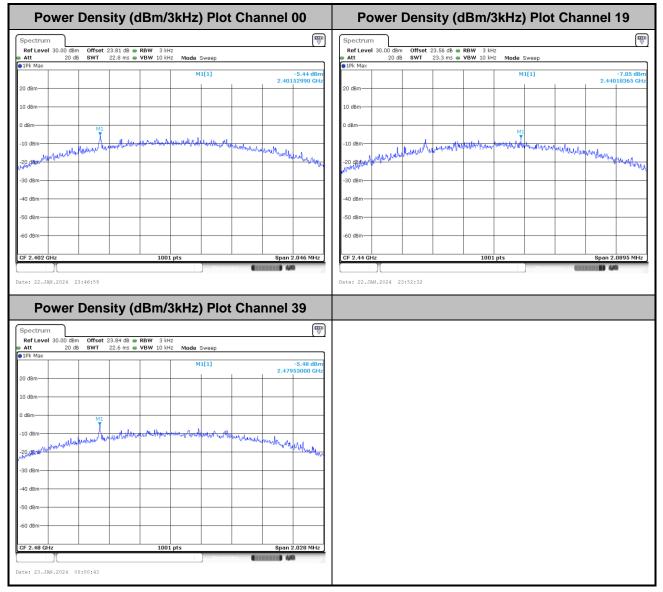
Power Spectral Density (dBm/3kHz)

<1Mbps>





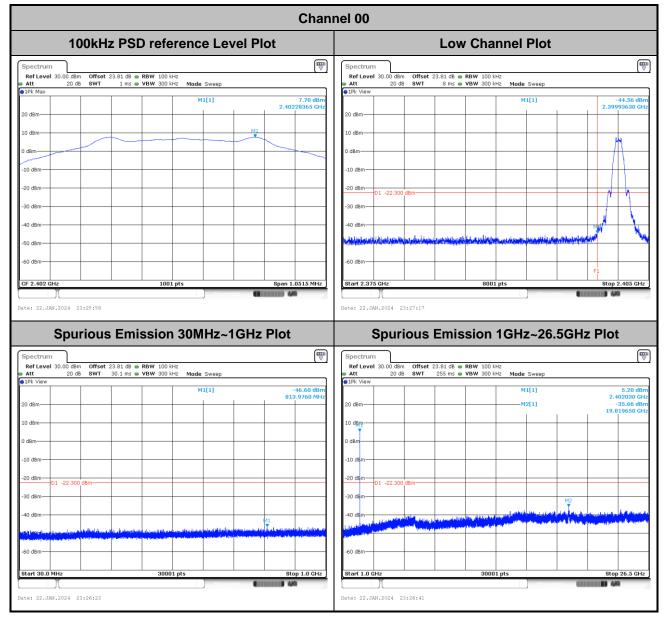
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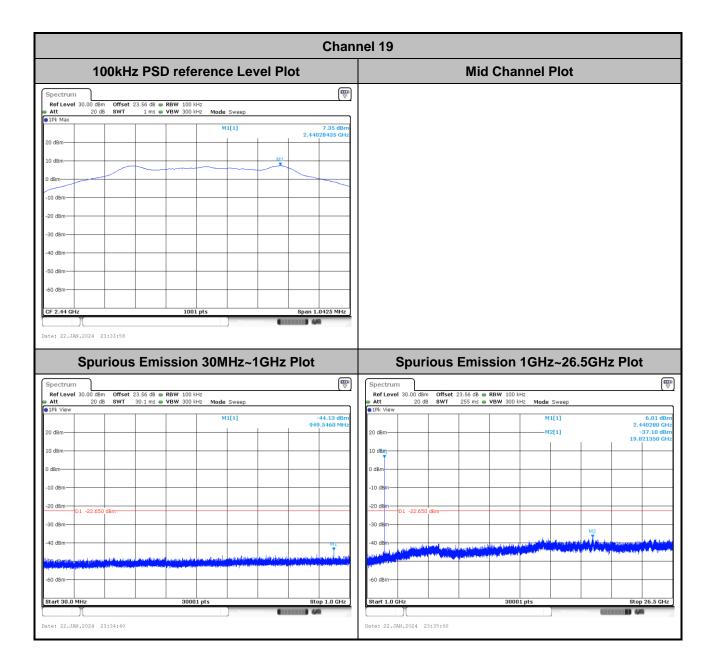


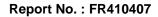
Band Edge and Conducted Spurious Emission

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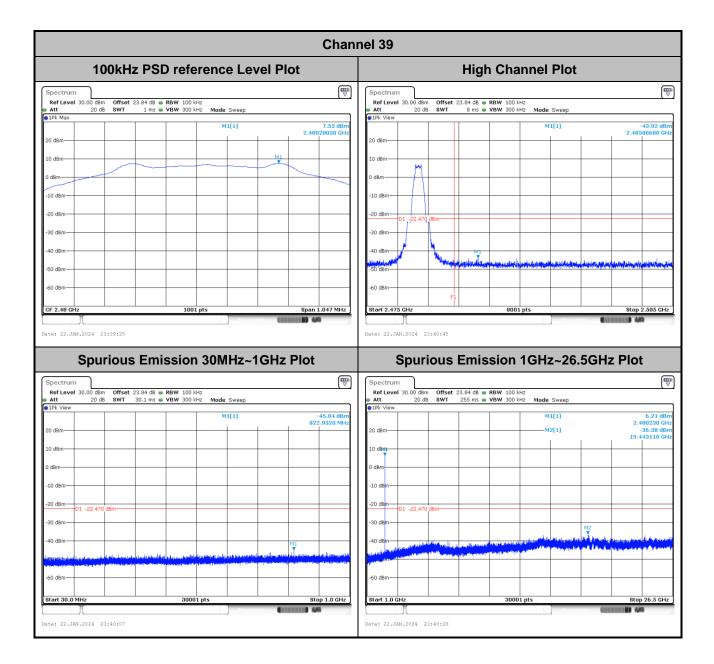






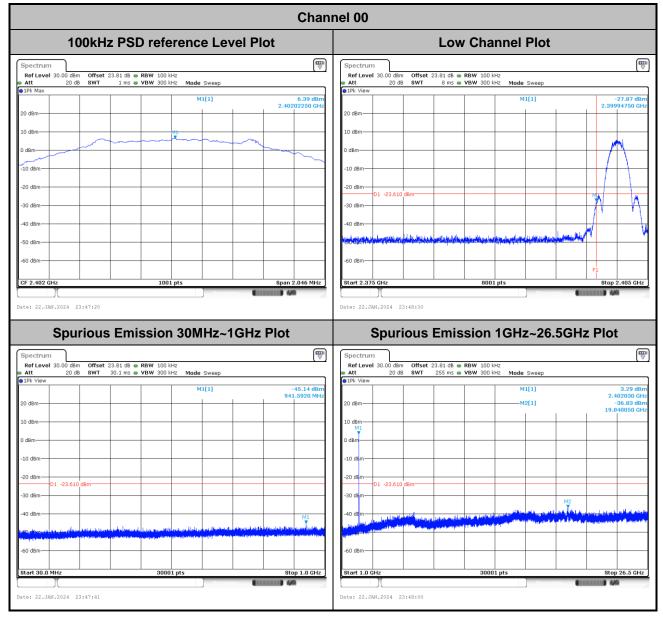




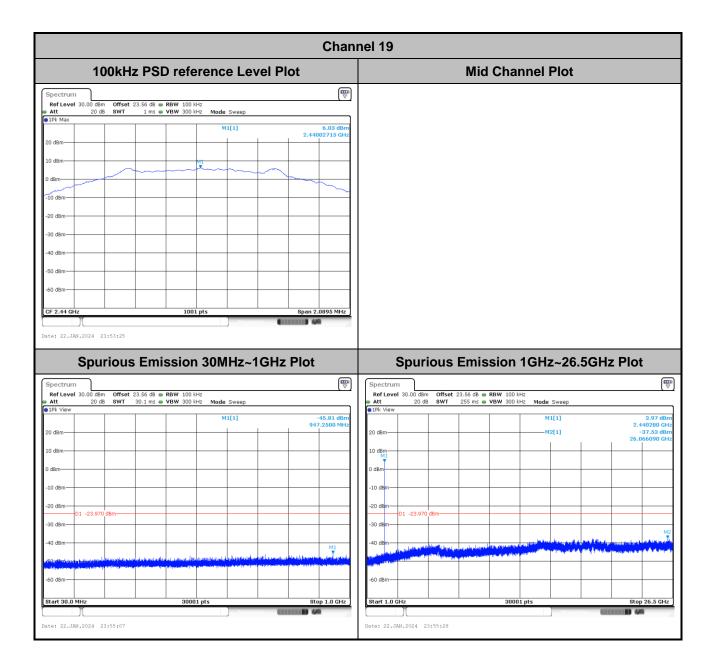


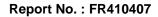


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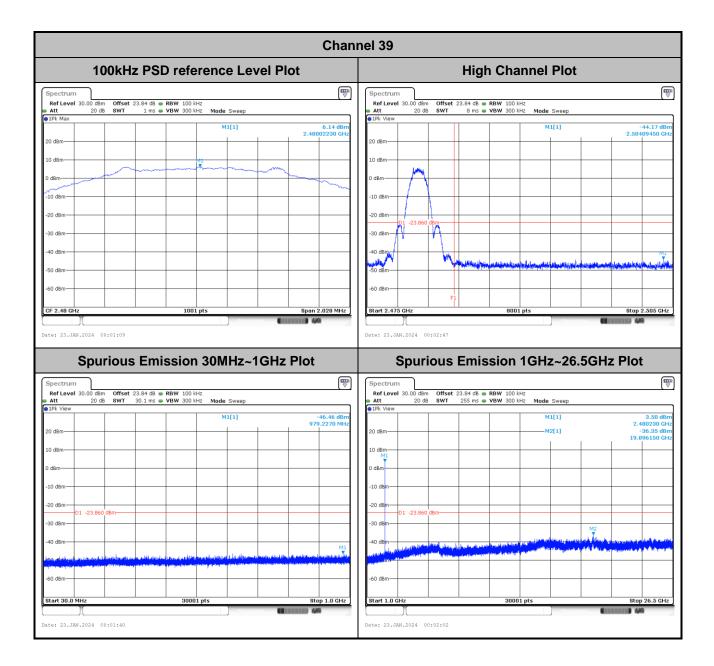






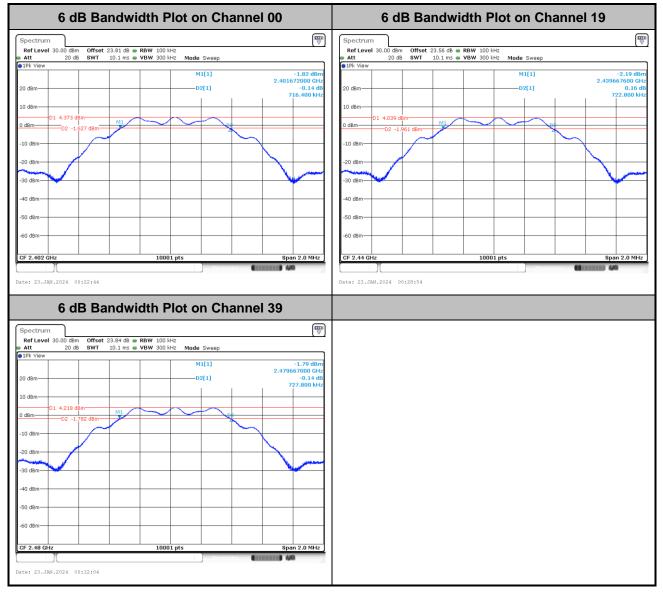




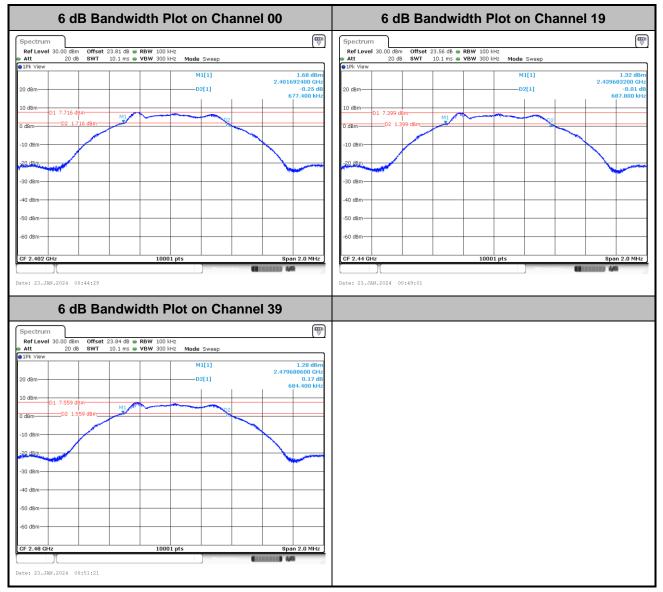


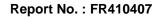


6dB Bandwidth



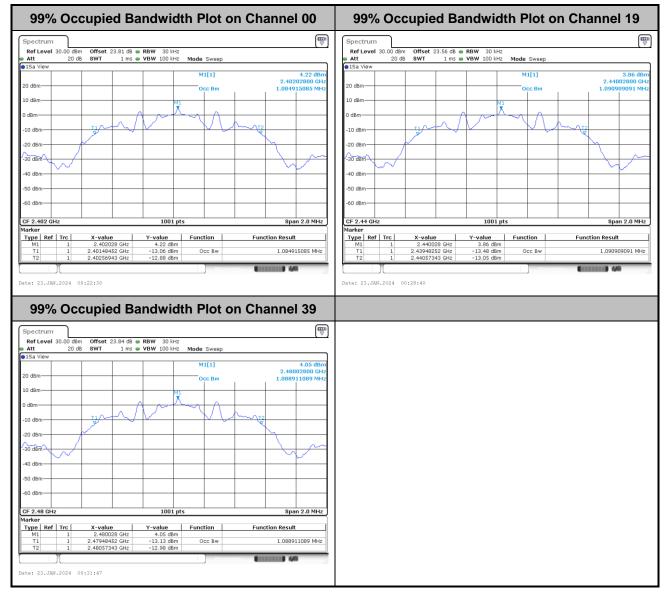




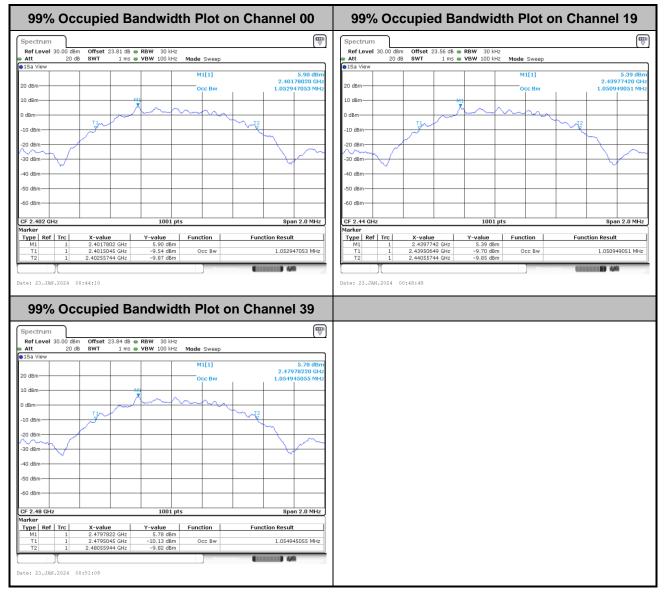




99% Occupied Bandwidth

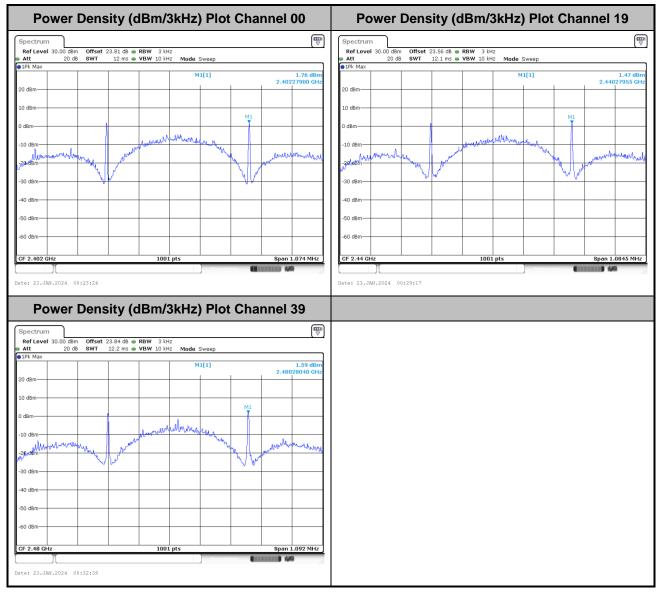








Power Spectral Density (dBm/3kHz)

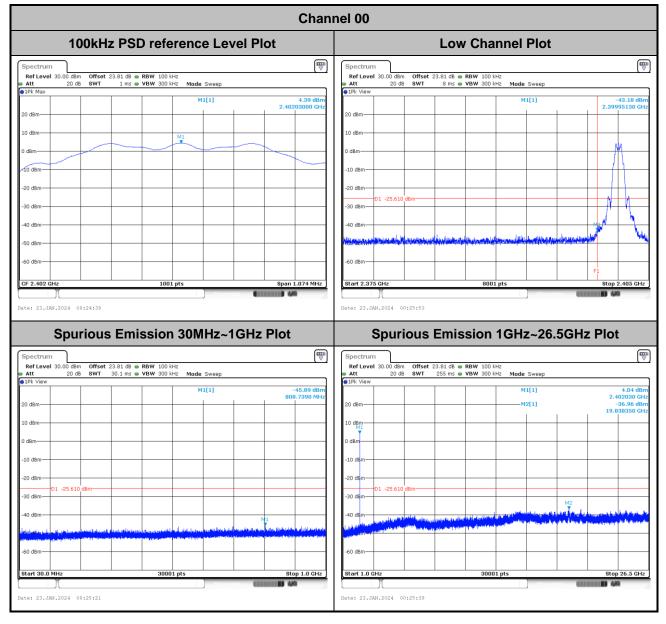




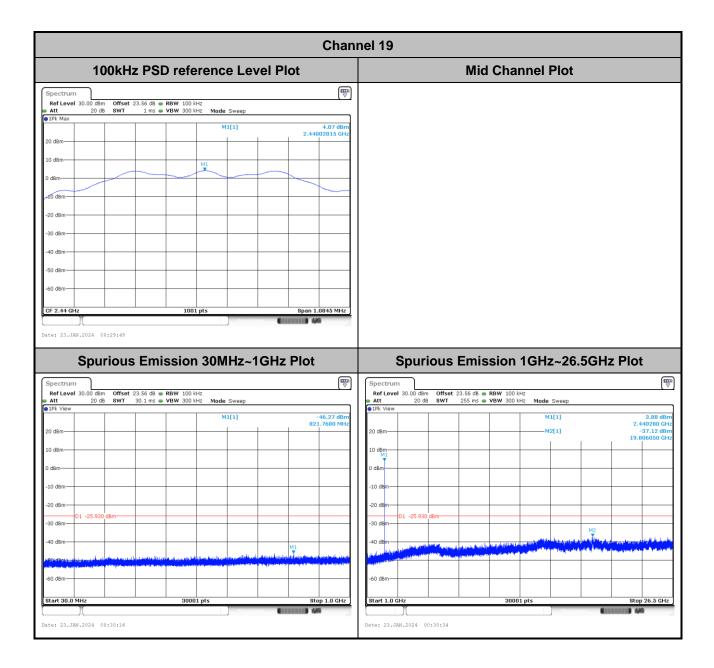
Power Den	sity (dBm/3	SkHz) Plot	Channel	00	Power	Density (KI 12	Plot (Chann	el 19
Spectrum					Spectrum						
	23.81 dB • RBW 3 kHz 11.3 ms • VBW 10 kHz				Ref Level 30.00 dB				veen		
1Pk Max		M1[1]		-0.67 dBm	●1Pk Max			M1[-1.14 dBm
:0 dBm		MILI	2.401	-0.87 uBm 77885 GHz	20 dBm			MIL	1	I	2.43977940 GHz
U UBIII											
.0 dBm					10 dBm						
I dBm					0 dBm	M1					
10 dBm	Mar Munkawar	surliment to Myor day	Murry Murry	1.1	-10 dBm	markelund	endersha	when been	Munun	appeller for	Aliancia I
20 dBm				Munn	-10 dBm						manufally
					ř I						
) dBm					-30 dBm						
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dBm					-50 dBm						
dBm					-60 dBm						
					CO UDIN						
							1001	nts			Span 1.032 MHz
2.402 GHz	1001	pts	Span 1.	0155 MHz	CF 2.44 GHz			110			
	1001	pts Neasurin	Span 1.	0155 MHz					Measuring		1 4/4
	1001	pts Neasonin	Span 1.	0155 MHz	CF 2.44 GHz	00:49:23			Measuring	•	
		Measurin	(11111) 44			00:49:23			Measuring	•	
Power Den		Measurin	(11111) 44			00:49:23)	Measuring		8 4/0
Power Den	sity (dBm/3	skHz) Plot	(11111) 44	39		00:49:23					
Power Den rectrum ret evel 30.00 dBm Offse we observed 30.00 dBm Offse ret evel 30.00 dBm Offse	sity (dBm/3	SkHz) Plot	Channel	39 		00:49:23					
Contract of the second se	sity (dBm/3	skHz) Plot	Channel :	39		00:49:23			M		
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Contract Contrect Contract Contract Contract Contract Contract Contract Contrac	sity (dBm/3	SkHz) Plot	Channel :	39 ♥		00:49:23			Measurise		
ectrum of Level 30.00 dBm offset tk Max dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 ♥		00:49:23			Measuria		
Power Den Power Den of Level 30.00 dBm offse t 20 dB swr k Max	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	SkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 ♥		00:49:23					
ectrum of Level 30.00 dBm offset tt 20 dB swr k Max dBm dBm dBm dBm offset dBm dBm dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
ectrum ectrum of Level 30.00 dBm offset 20 dB swr % Max dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
ectrum ef Level 30.00 dBm Offse tk Max dBm dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
ectrum ectrum ef Level 30.00 dBm offse 20 dB swr h: Max dBm dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
ectrum of Level 30.00 dBm offset tt 20 dB swr k Max dBm dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
ectrum of Level 30.00 dBm offset tt 20 dB swr k Max dBm dBm dBm dBm dBm	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					
Pectrum Certoum Certou	23.84 dB @ RBW 3 Hds 11.4 ms @ VBW 10 Hds	BkHz) Plot	2.479	39 (₩) -3.82 dBm -3.82 dBm -3.82 dBm		00:49:23					

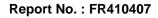


Band Edge and Conducted Spurious Emission

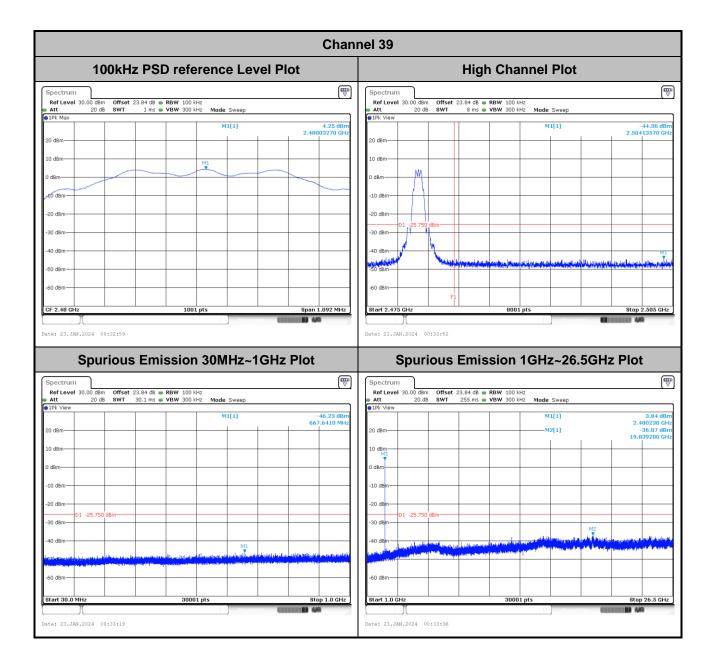




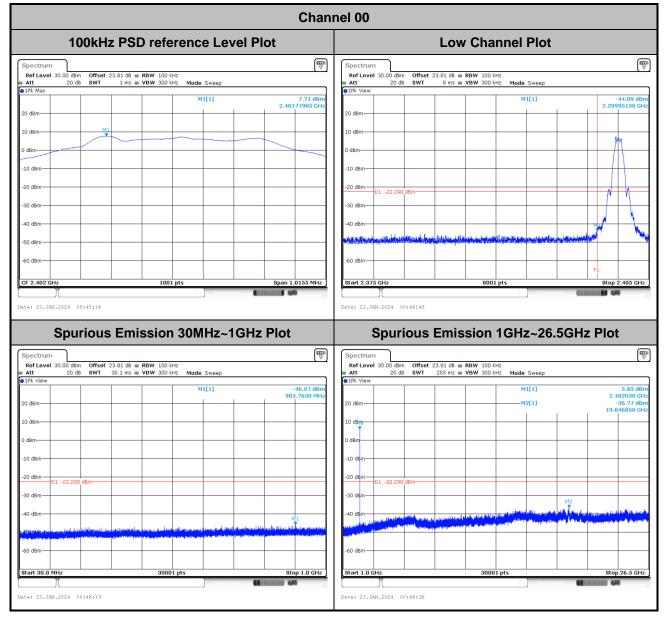




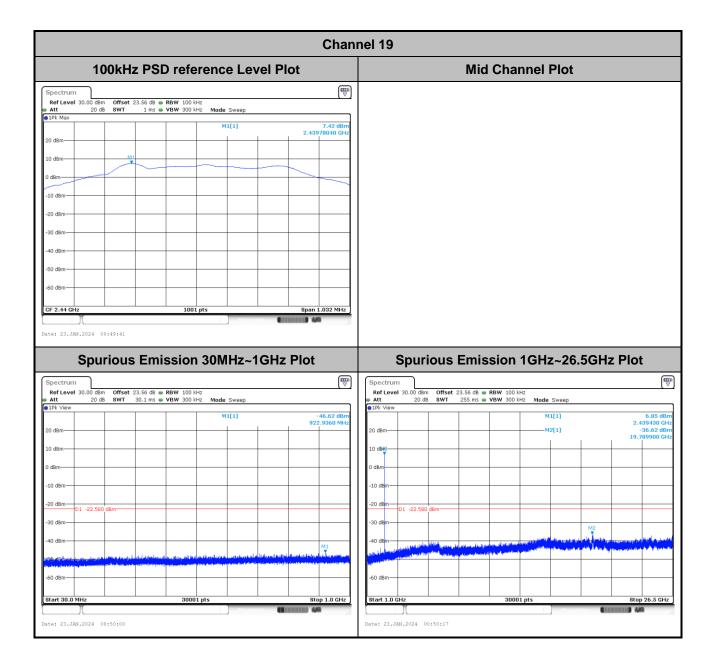


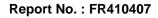




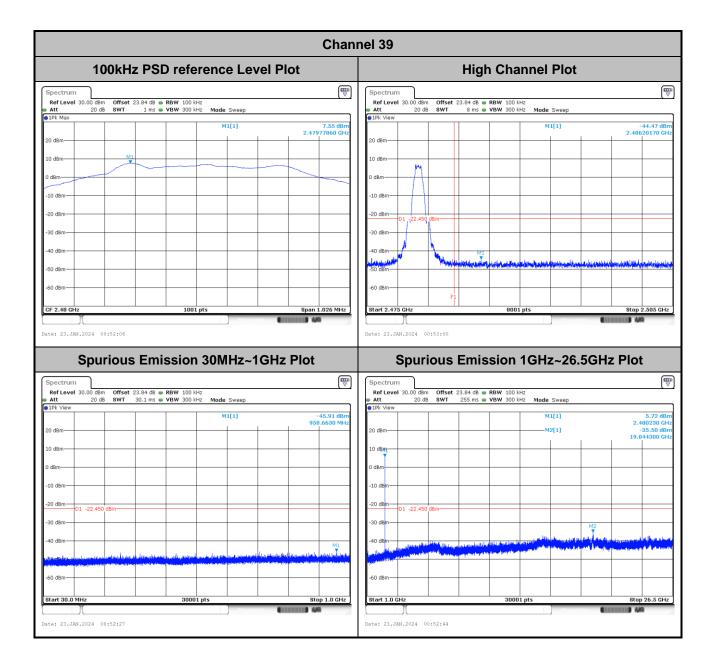












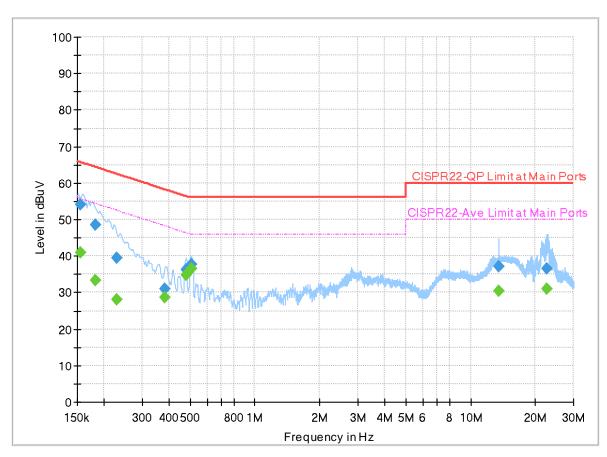


Appendix B. AC Conducted Emission Test Results

Toot Engineer	·	Temperature :	19.8~22.3°C
Test Engineer :		Relative Humidity :	48.2~53.7%

EUT Information

Report NO : Test Mode : Test Voltage : Phase : 410407 Mode 1 120Vac/60Hz Line



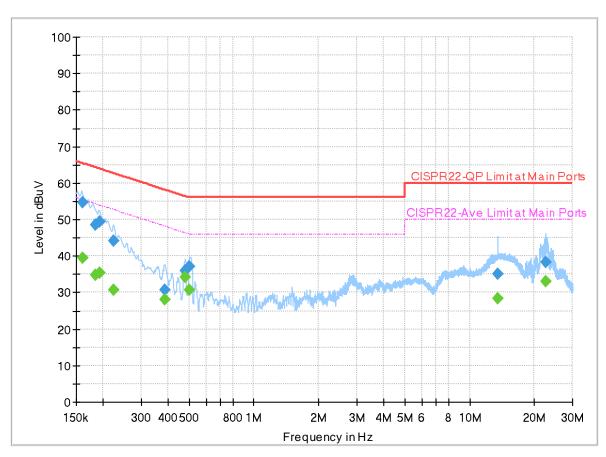
FullSpectrum

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500		40.89	55.75	14.86	L1	OFF	19.9
0.154500	54.00		65.75	11.75	L1	OFF	19.9
0.181500		33.38	54.42	21.04	L1	OFF	19.9
0.181500	48.57		64.42	15.85	L1	OFF	19.9
0.228750		28.06	52.50	24.44	L1	OFF	19.9
0.228750	39.46		62.50	23.04	L1	OFF	19.9
0.384000		28.65	48.19	19.54	L1	OFF	19.9
0.384000	31.06		58.19	27.13	L1	OFF	19.9
0.477780		34.85	46.38	11.53	L1	OFF	19.9
0.477780	36.28		56.38	20.10	L1	OFF	19.9
0.510000		36.60	46.00	9.40	L1	OFF	19.9
0.510000	37.71		56.00	18.29	L1	OFF	19.9
13.559550		30.41	50.00	19.59	L1	OFF	20.1
13.559550	37.19		60.00	22.81	L1	OFF	20.1
22.611750		30.86	50.00	19.14	L1	OFF	20.2
22.611750	36.56		60.00	23.44	L1	OFF	20.2

EUT Information

Report NO : Test Mode : Test Voltage : Phase : 410407 Mode 1 120Vac/60Hz Neutral



Full Spectrum

Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159810		39.59	55.47	15.88	Ν	OFF	19.9
0.159810	54.76		65.47	10.71	Ν	OFF	19.9
0.183750		34.76	54.31	19.55	Ν	OFF	19.9
0.183750	48.47		64.31	15.84	Ν	OFF	19.9
0.191850		35.36	53.96	18.60	Ν	OFF	19.9
0.191850	49.44		63.96	14.52	Ν	OFF	19.9
0.222720		30.58	52.72	22.14	Ν	OFF	19.9
0.222720	44.27		62.72	18.45	Ν	OFF	19.9
0.385170		27.94	48.17	20.23	Ν	OFF	19.9
0.385170	30.64		58.17	27.53	Ν	OFF	19.9
0.479040		34.27	46.36	12.09	Ν	OFF	19.9
0.479040	36.04		56.36	20.32	Ν	OFF	19.9
0.503970		30.80	46.00	15.20	Ν	OFF	19.9
0.503970	37.26		56.00	18.74	Ν	OFF	19.9
13.563870		28.33	50.00	21.67	Ν	OFF	20.1
13.563870	34.95		60.00	25.05	Ν	OFF	20.1
22.583310		32.93	50.00	17.07	Ν	OFF	20.2
22.583310	38.27		60.00	21.73	Ν	OFF	20.2



Appendix C Radiated Spurious Emission Test Data

Test Engineer :	Ken Kuo and Karl Hou	Relative Humidity :	52 ~ 62 %
rest Engineer .		Temperature :	22.1 ~ 23.5 ℃

Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	SISO	Bluetooth-LE_GSFK	00	2402	1Mbps	-	-
Mode 2	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2440	1Mbps	-	-
Mode 3	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	1Mbps	-	-
Mode 4	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	1Mbps	-	SHF
Mode 5	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	1Mbps	-	LF
Mode 6	2400-2483.5	SISO	Bluetooth-LE_GSFK	00	2402	2Mbps	-	-
Mode 7	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2440	2Mbps	-	-
Mode 8	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	2Mbps	-	-
Mode 9	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2480	2Mbps	-	SHF



Mode 10	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2480	2Mbps	-	LF
Mode 11	2400-2483.5	SISO	Bluetooth-LE_GSFK	00	2402	125kbps	-	-

Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 12	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2440	125kbps	-	-
Mode 13	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	125kbps	-	-
Mode 14	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2480	125kbps	-	SHF
Mode 15	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2480	125kbps	-	LF
Mode 16	2400-2483.5	SISO	Bluetooth-LE_GSFK	00	2402	500kbps	-	-
Mode 17	2400-2483.5	SISO	Bluetooth-LE_GSFK	19	2440	500kbps	-	-
Mode 18	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	500kbps	-	-
Mode 19	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	500kbps	-	SHF
Mode 20	2400-2483.5	SISO	Bluetooth-LE_GSFK	39	2480	500kbps	-	LF



Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
	Bluetooth-LE_GSFK (1Mbps)	00	2389.58	40.69	54.00	-13.31	н	Avg.	Pass	-	Band Edge
1	1 Bluetooth-LE_GSFK (1Mbps)	00	4804.00	45.61	74.00	-28.39	V	Peak	Pass	-	Harmonic
2	Bluetooth-LE_GSFK (1Mbps)	19	2491.68	40.26	54.00	-13.74	н	Avg.	Pass	-	Band Edge
2	Bluetooth-LE_GSFK (1Mbps)	19	7320.00	46.49	54.00	-7.51	Н	Avg.	Pass	-	Harmonic
3	Bluetooth-LE_GSFK (1Mbps)	39	2483.52	44.01	54.00	-9.99	Н	Avg.	Pass	-	Band Edge
5	Bluetooth-LE_GSFK (1Mbps)	39	7440.00	47.38	54.00	-6.62	Н	Avg.	Pass	-	Harmonic
4	Bluetooth-LE_GSFK (1Mbps)	39	25909.00	41.93	74.00	-32.07	V	Peak	Pass	-	SHF
5	Bluetooth-LE_GSFK (1Mbps)	39	190.05	42.21	43.50	-1.29	н	Peak	Pass	-	LF
6	Bluetooth-LE_GSFK (2Mbps)	00	2389.12	40.76	54.00	-13.24	Н	Avg.	Pass	-	Band Edge



Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
6	Bluetooth-LE_GSFK (2Mbps)	00	4804.00	46.48	74.00	-27.52	V	Peak	Pass	-	Harmonic
7	Bluetooth-LE_GSFK (2Mbps)	19	2489.68	40.15	54.00	-13.85	Н	Avg.	Pass	-	Band Edge
	Bluetooth-LE_GSFK (2Mbps)	19	7320.00	45.62	54.00	-8.38	Н	Avg.	Pass	-	Harmonic
8	Bluetooth-LE_GSFK (2Mbps)	39	2483.52	49.58	54.00	-4.42	Н	Avg.	Pass	-	Band Edge
0	Bluetooth-LE_GSFK (2Mbps)	39	7440.00	45.10	54.00	-8.90	V	Avg.	Pass	-	Harmonic
9	Bluetooth-LE_GSFK (2Mbps)	39	25909.00	41.98	74.00	-32.02	V	Peak	Pass	-	SHF
10	Bluetooth-LE_GSFK (2Mbps)	39	398.60	45.07	46.00	-0.93	Н	Peak	Pass	-	LF
11	Bluetooth-LE_GSFK (125kbps)	00	2389.95	40.75	54.00	-13.25	Н	Avg.	Pass	-	Band Edge
	Bluetooth-LE_GSFK (125kbps)	00	4804.00	46.40	74.00	-27.60	V	Peak	Pass	-	Harmonic

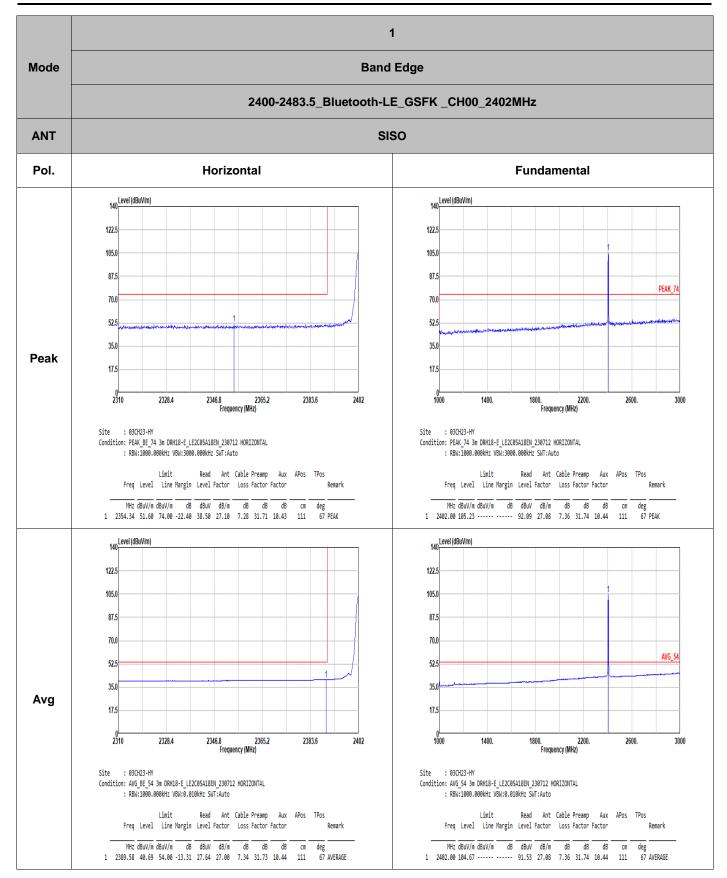


Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
	Bluetooth-LE_GSFK (125kbps)	19	2499.82	40.18	54.00	-13.82	V	Avg.	Pass	-	Band Edge
12	Bluetooth-LE_GSFK (125kbps)	19	7320.00	46.89	54.00	-7.11	н	Avg.	Pass	-	Harmonic
13	Bluetooth-LE_GSFK (125kbps)	39	2483.52	44.08	54.00	-9.92	Н	Avg.	Pass	-	Band Edge
15	Bluetooth-LE_GSFK (125kbps)	39	7440.00	46.77	54.00	-7.23	Н	Avg.	Pass	-	Harmonic
14	Bluetooth-LE_GSFK (125kbps)	39	25788.00	41.75	74.00	-32.25	Н	Peak	Pass	-	SHF
15	Bluetooth-LE_GSFK (125kbps)	39	382.11	43.77	46.00	-2.23	Н	Peak	Pass	-	LF
16	Bluetooth-LE_GSFK (500kbps)	00	2389.86	40.60	54.00	-13.40	н	Avg.	Pass	-	Band Edge
10	Bluetooth-LE_GSFK (500kbps)	00	4804.00	46.49	74.00	-27.51	V	Peak	Pass	-	Harmonic
17	Bluetooth-LE_GSFK (500kbps)	19	2389.91	40.61	54.00	-13.39	V	Avg.	Pass	-	Band Edge

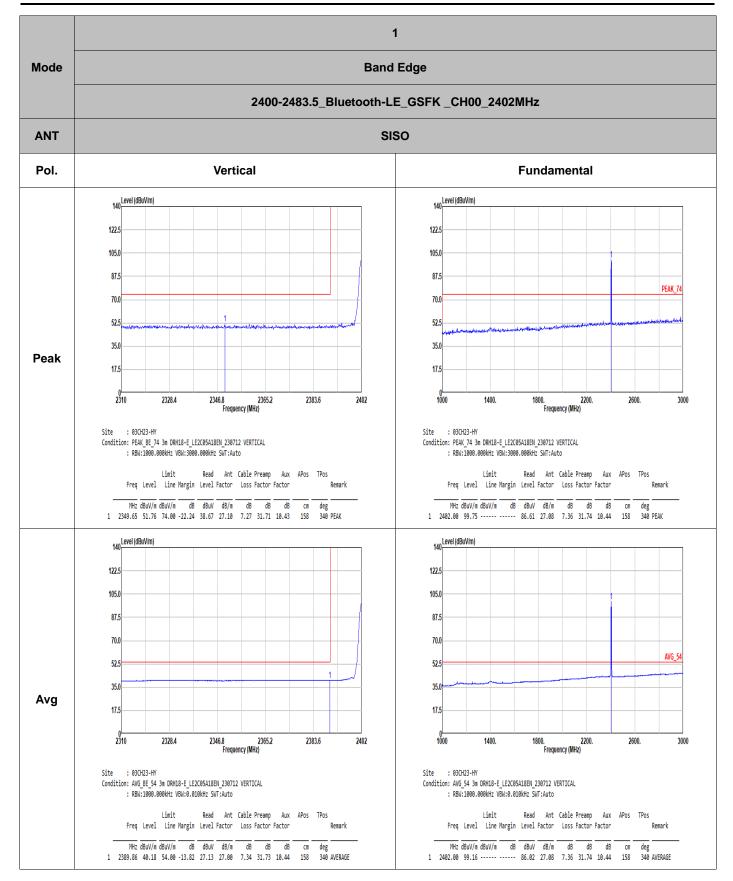


Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
17	Bluetooth-LE_GSFK (500kbps)	19	7320.00	46.24	54.00	-7.76	н	Avg.	Pass	-	Harmonic
18	Bluetooth-LE_GSFK (500kbps)	39	2483.52	43.99	54.00	-10.01	Н	Avg.	Pass	-	Band Edge
10	Bluetooth-LE_GSFK (500kbps)	39	7440.00	47.15	54.00	-6.85	Н	Avg.	Pass	-	Harmonic
19	Bluetooth-LE_GSFK (500kbps)	39	24754.00	41.62	74.00	-32.38	V	Peak	Pass	-	SHF
20	Bluetooth-LE_GSFK (500kbps)	39	235.64	44.44	46.00	-1.56	Н	Peak	Pass	-	LF

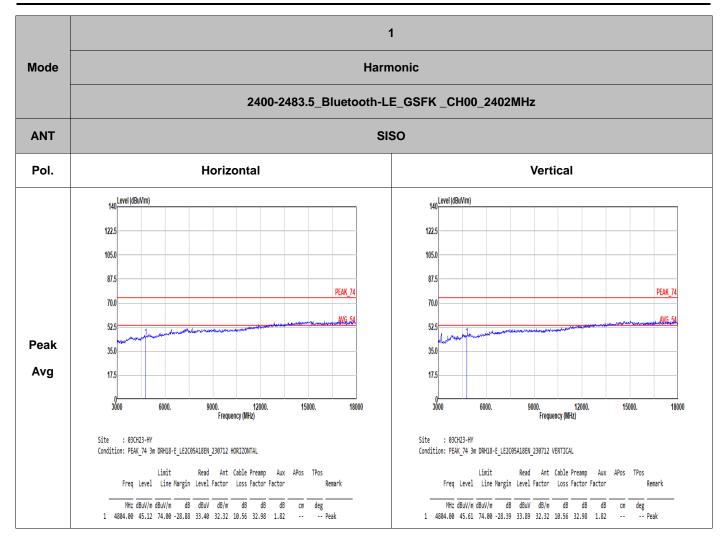




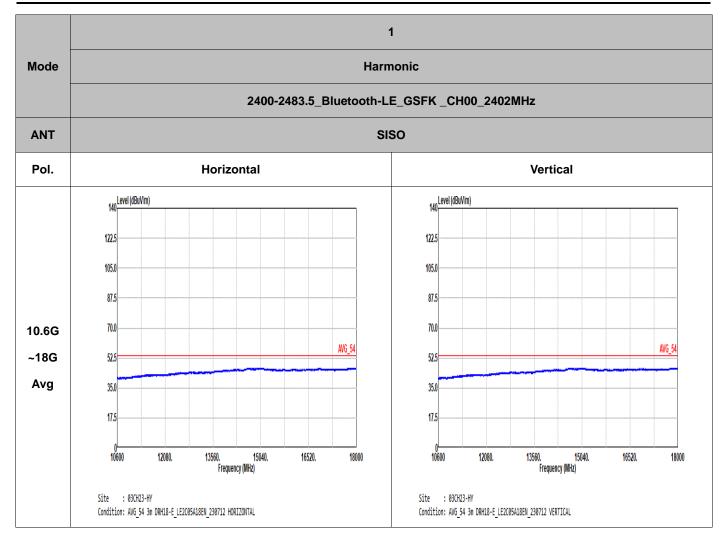






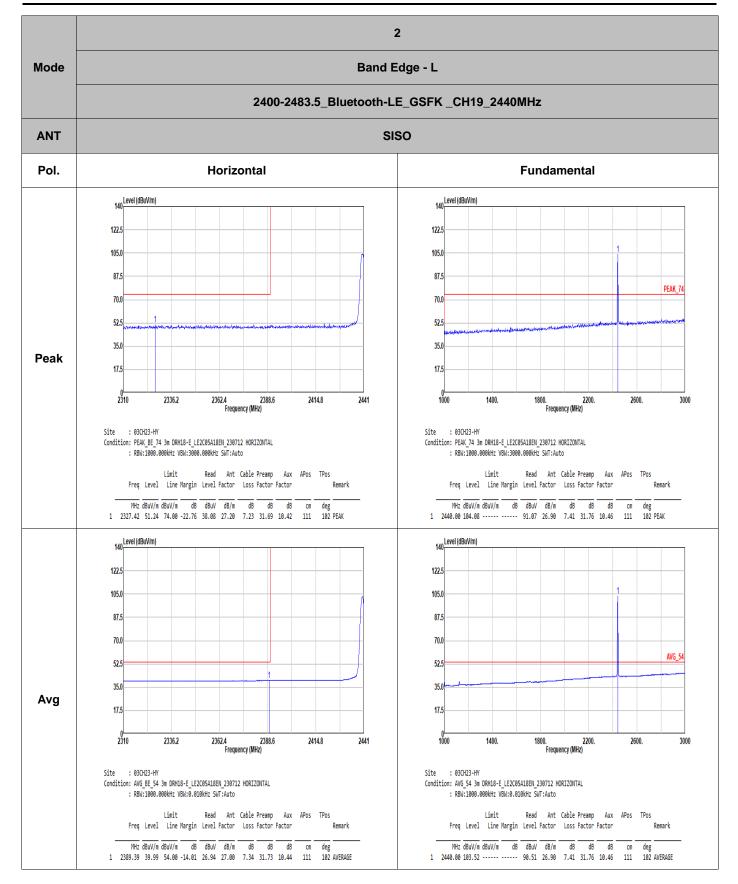




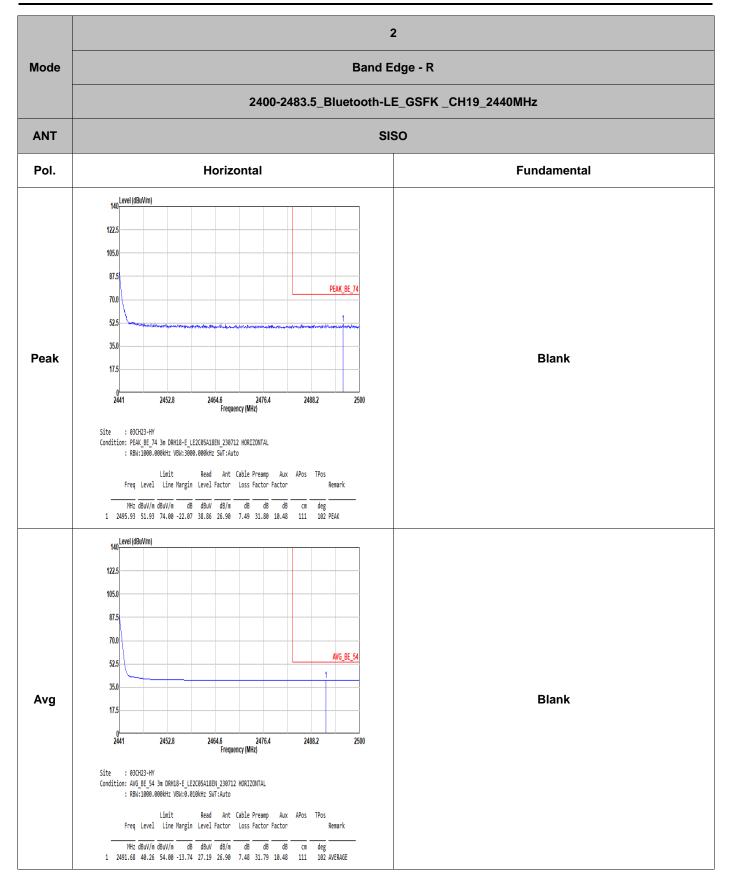




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