

Report No.: FR422010A

FCC RADIO TEST REPORT

FCC ID : 2AEM4-5170111 Equipment : Wireless Router

Brand Name : eero

Model Name : SN10001 Applicant : eero LLC

660 3rd Street, 4th Floor, San Francisco, CA, USA

Manufacturer : eero LLC

660 3rd Street, 4th Floor, San Francisco, CA, USA

Standard : FCC Part 15 Subpart C §15.247

The product was received on Apr. 29, 2024 and testing was performed from May 07, 2024 to Jun. 06, 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.)

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History of This Test Report

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Report No.	Version	Description	Issue Date
FR422010A	01	Initial issue of report	Jun. 21, 2024
FR422010A	Revise Equipment This report is an updated version, replacing the report issued on Jun. 21, 2024.		Aug. 21, 2024

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Summary of Test Result

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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	0.68 dB under the limit at 2483.52 MHz
3.6	15.207	AC Conducted Emission	Pass	12.47 dB under the limit at 0.80 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: Rebecca Wu

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1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature

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General Specs

Bluetooth - LE, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, and IEEE 802.15.4.

Antenna Type

WLAN:

<5G_Ant. 0>: Dipole Antenna

<2.4G_Ant. 0 and 5G_Ant. 1>: Dipole Antenna

<2.4G_Ant. 1 >: Dipole Antenna Bluetooth - LE: Dipole Antenna IEEE 802.15.4: Dipole Antenna

Antenna information					
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	1.81			

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.

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1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory					
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978					
Test Site No.	Sporton Site No.					
rest site No.	CO05-HY (TAF Code: 1190)					
Remark	The AC Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.					

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

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, 03CH23-HY		

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

FCC designation No.: TW1190 and 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	2418	29	2460
	9	2420	30	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	2478
	18	2438	39	2480
	19	2440	-	-
	20	2442	-	-

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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).

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b. AC power line Conducted Emission was tested under maximum output power.

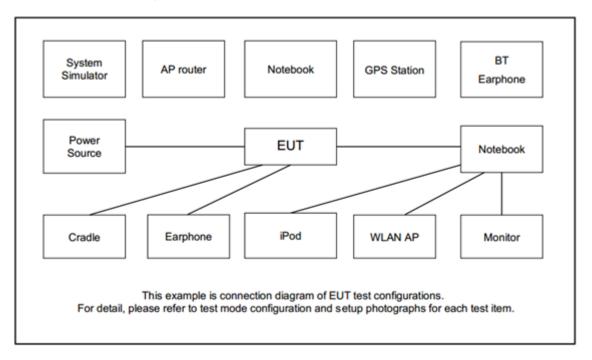
The following summary table is showing all test modes to demonstrate in compliance with the standard.

	Summary table of Test Cases					
Test Item	Data Rate / Modulation					
	Bluetooth – LE / GFSK					
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps					
	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps					
Conducted	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps					
Test Cases	Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps					
	Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps					
	Mode 6: Bluetooth Tx CH38_2478 MHz_2Mbps					
	Mode 7: Bluetooth Tx CH39_2480 MHz_2Mbps					
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps					
	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps					
Radiated	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps					
Test Cases	Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps					
rest Cases	Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps					
	Mode 6: Bluetooth Tx CH38_2478 MHz_2Mbps					
	Mode 7: Bluetooth Tx CH39_2480 MHz_2Mbps					
AC Conducted	Made 4. Physicath L.E. Link Dec. Dewer Injector (C510011)					
Emission	Mode 1: Bluetooth – LE Link + PoE Power Injector (C510011) Emission					
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are						

determined by the Max. RF conducted power.

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2.3 Connection Diagram of Test System



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2.4 Support Unit Used in Test Configuration and System

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Lenovo	IdeaPad Gaming 3 15IHU6	PD9AX201NG	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	DELL	Latitude 3420	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Button	SmartThings	IM6001-BTP01	2AF4S-IM6001 -BTP01	N/A	N/A
4.	Mobile Phone	Apple	A1586	BCG-E2816A	N/A	N/A
5.	PoE INJECTOR	eero	POE-PTTI-3055NDN	FCC DOC	N/A	N/A

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2.5 EUT Operation Test Setup

The RF test items, utility "RadioControlConsole version 4.0.0.0" 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.

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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)

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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.

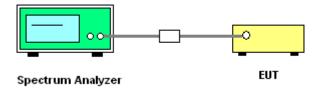
3.1.3 Test Procedures

- 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.

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- 3. Set the maximum power setting and enable the EUT to transmit continuously.
- 4. 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.
- 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) ≥ 3 * RBW.
- 6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

3.1.6 Test Result of 99% Occupied Bandwidth

Please refer to Appendix A.

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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.

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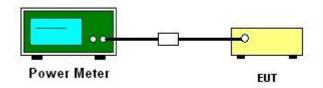
3.2.2 Measuring Instruments

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

Please refer to Appendix A.

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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.

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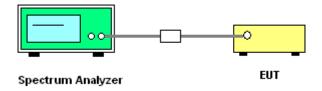
3.3.2 Measuring Instruments

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.
- 7. 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



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

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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.

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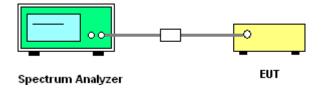
3.4.2 Measuring Instruments

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

Please refer to Appendix A.

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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 transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required 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.

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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.

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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.

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- 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW = 3 MHz for $f \ge 1$ GHz for peak measurement.

For average measurement:

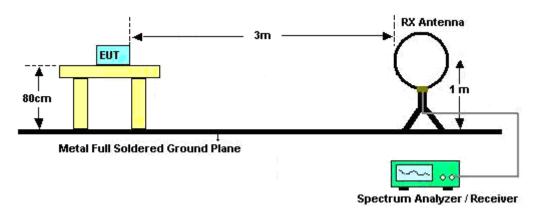
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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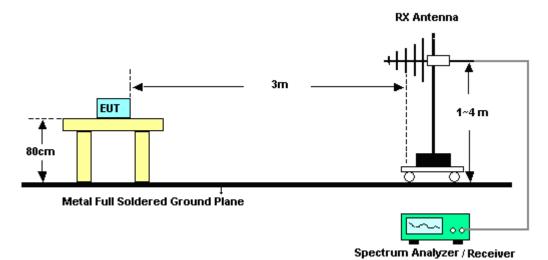
3.5.4 Test Setup

For radiated test below 30MHz

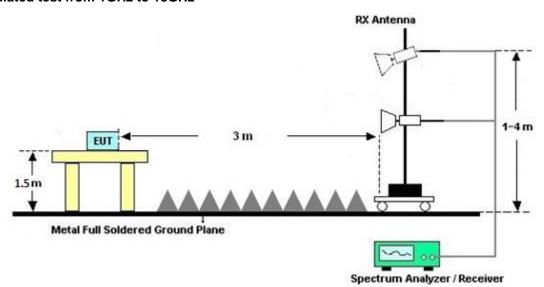


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For radiated test from 30MHz to 1GHz

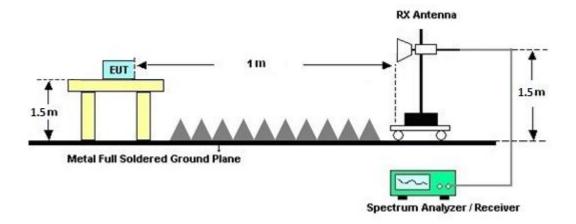


For radiated test from 1GHz to 18GHz



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For radiated test above 18GHz



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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)

Please refer to Appendix C.

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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.

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Eroquonov 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

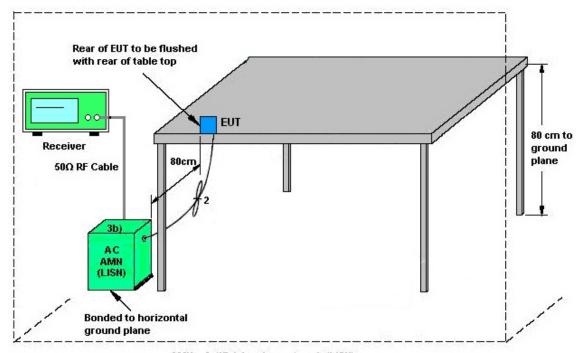
Please refer to the measuring equipment list in this test report.

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.

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3.6.4 Test Setup



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AMN = Artificial mains network (LISN)

AE = Associated equipment

EUT = Equipment under test

ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

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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.

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3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

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4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	May 07, 2024~ Jun. 06, 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	May 07, 2024~ Jun. 06, 2024	Oct. 14, 2024	Radiation (03CH23-HY)
Amplifier	SONOMA	310N	421582	N/A	Jul. 15, 2023	May 07, 2024~ Jun. 06, 2024	Jul. 14, 2024	Radiation (03CH23-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C05A18E N	1GHz~18GHz	Jul. 12, 2023	May 07, 2024~ Jun. 06, 2024	Jul. 11, 2024	Radiation (03CH23-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	1223	18GHz-40GHz	Jul. 10, 2023	May 07, 2024~ Jun. 06, 2024	Jul. 09, 2024	Radiation (03CH23-HY)
Amplifier	EMEC	EM01G18GA	060878	N/A	Sep. 28, 2023	May 07, 2024~ Jun. 06, 2024	Sep. 27, 2024	Radiation (03CH23-HY)
Preamplifier	EMEC	EM18G40G	060871	18-40GHz	Sep. 06, 2023	May 07, 2024~ Jun. 06, 2024	Sep. 05, 2024	Radiation (03CH23-HY)
Signal Analyzer	Keysight	N9010B	MY62170337	N/A	Aug. 17, 2023	May 07, 2024~ Jun. 06, 2024	Aug. 16, 2024	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303B	TP211542	N/A	Oct. 30, 2023	May 07, 2024~ Jun. 06, 2024	Oct. 29, 2024	Radiation (03CH23-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	May 07, 2024~ Jun. 06, 2024	N/A	Radiation (03CH23-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	May 07, 2024~ Jun. 06, 2024	N/A	Radiation (03CH23-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	May 07, 2024~ Jun. 06, 2024	N/A	Radiation (03CH23-HY)
Software	Audix	E3 6.09824_2019 122	RK-002348	N/A	N/A	May 07, 2024~ Jun. 06, 2024	N/A	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 06, 2024	May 07, 2024~ Jun. 06, 2024	Mar. 05, 2025	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804395/2	N/A	Nov. 27, 2023	May 07, 2024~ Jun. 06, 2024	Nov. 26, 2024	Radiation (03CH23-HY)
RF Cable	EMC	EMC101Y	231115/23111 9/231122	N/A	Nov. 27, 2023	May 07, 2024~ Jun. 06, 2024	Nov. 26, 2024	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	May 31, 2024~ Jun. 05, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 35 (NO:109)	10MHz~6GHz	Jan. 15, 2024	May 31, 2024~ Jun. 05, 2024	Jan. 14, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 23, 2023	May 31, 2024~ Jun. 05, 2024	Aug. 22, 2024	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 09, 2024	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 06, 2023	May 09, 2024	Dec. 05, 2024	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Oct. 26, 2023	May 09, 2024	Oct. 25, 2024	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 22, 2023	May 09, 2024	Nov. 21, 2024	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	May 09, 2024	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBE CK	VTSD 9561-F N	00691	N/A	Jul. 28, 2023	May 09, 2024	Jul. 27, 2024	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 28, 2023	May 09, 2024	Dec. 27, 2024	Conduction (CO05-HY)

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5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence	3.5 dB
of 95% (U = 2Uc(y))	3.3 ub

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

Measuring Uncertainty for a Level of Confidence	6.5 dB
of 95% (U = 2Uc(y))	0.5 dB

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

Measuring Uncertainty for a Level of Confidence	4.6 dB
of 95% (U = 2Uc(y))	4.0 UB

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

Measuring Uncertainty for a Level of Confidence	4.6 dB
of 95% (U = 2Uc(y))	4.0 UB

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

Measuring Uncertainty for a Level of Confidence	5.3 dB
of 95% (U = 2Uc(y))	3.3 ub

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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Eason Huang	Temperature:	21~25	ů
Test Date:	2024/05/31 ~ 2024/06/05	Relative Humidity:	51~54	%

TEST RESULTS DATA 6dB and 99% Occupied Bandwidth

Mod.	Data NTX C		CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	1Mbps	1	0	2402	1.045	0.698	0.50	Pass
BLE	1Mbps	1	19	2440	1.055	0.703	0.50	Pass
BLE	1Mbps	1	39	2480	1.045	0.698	0.50	Pass

TEST RESULTS DATA Average Power Table

Mod.	Data Rate	N TX	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	16.40	30.00	1.81	18.21	36.00	Pass
BLE	1Mbps	1	19	2440	19.30	30.00	1.81	21.11	36.00	Pass
BLE	1Mbps	1	39	2480	19.40	30.00	1.81	21.21	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	1Mbps	1	0	2402	16.47	3.99	1.81	8.00	Pass
BLE	1Mbps	1	19	2440	18.62	6.92	1.81	8.00	Pass
BLE	1Mbps	1	39	2480	18.79	6.56	1.81	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

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TEST RESULTS DATA 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	2.090	1.332	0.50	Pass
BLE	2Mbps	1	19	2440	2.102	1.318	0.50	Pass
BLE	2Mbps	1	38	2478	2.098	1.372	0.50	Pass
BLE	2Mbps	1	39	2480	2.094	1.394	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	2Mbps	1	0	2402	18.90	30.00	1.81	20.71	36.00	Pass
BLE	2Mbps	1	19	2440	19.30	30.00	1.81	21.11	36.00	Pass
BLE	2Mbps	1	38	2478	19.40	30.00	1.81	21.21	36.00	Pass
BLE	2Mbps	1	39	2480	13.80	30.00	1.81	15.61	36.00	Pass

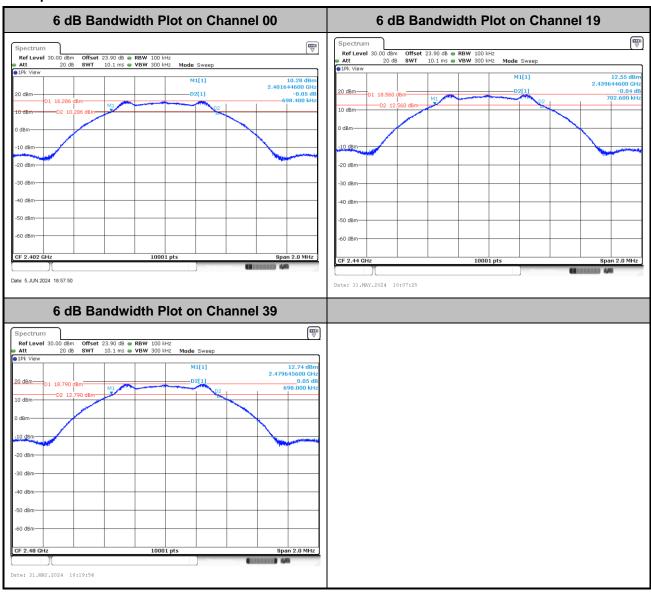
TEST RESULTS DATA Peak Power Density

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	2Mbps	1	0	2402	17.60	4.44	1.81	8.00	Pass
BLE	2Mbps	1	19	2440	17.83	3.74	1.81	8.00	Pass
BLE	2Mbps	1	38	2478	19.22	5.01	1.81	8.00	Pass
BLE	2Mbps	1	39	2480	12.63	-1.28	1.81	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 30dBc limit.

6dB Bandwidth

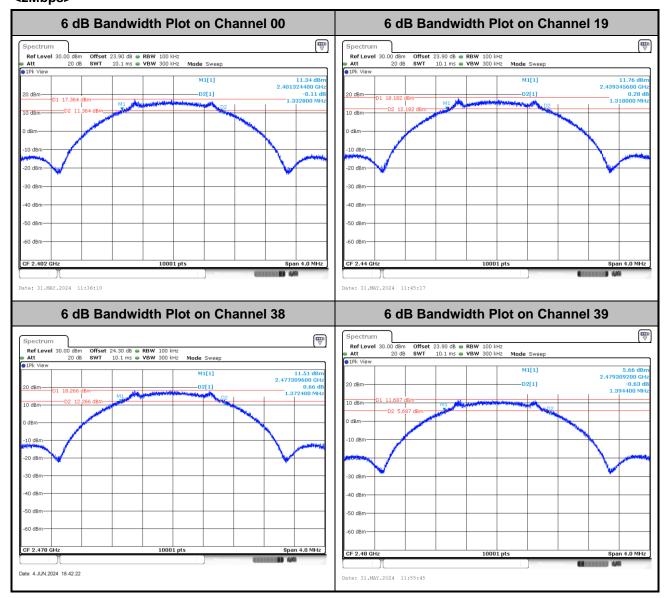
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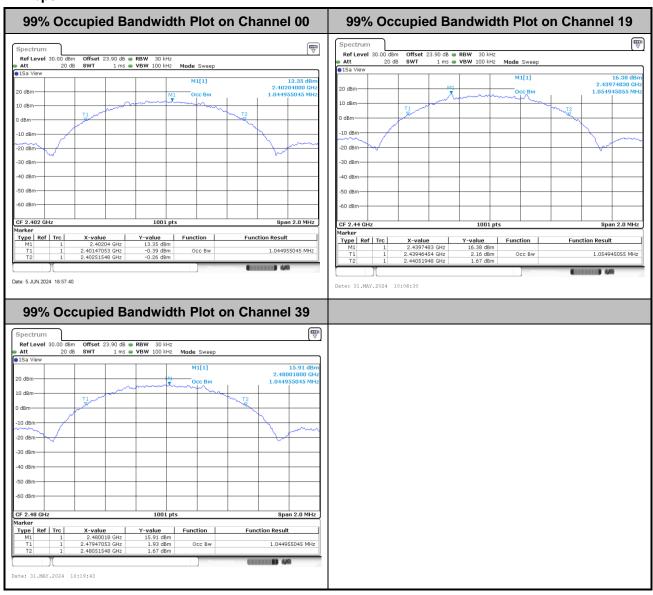


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99% Occupied Bandwidth

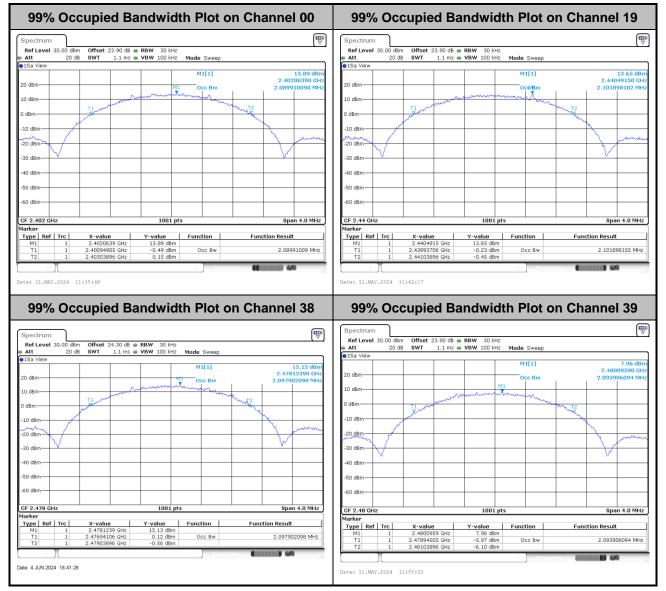
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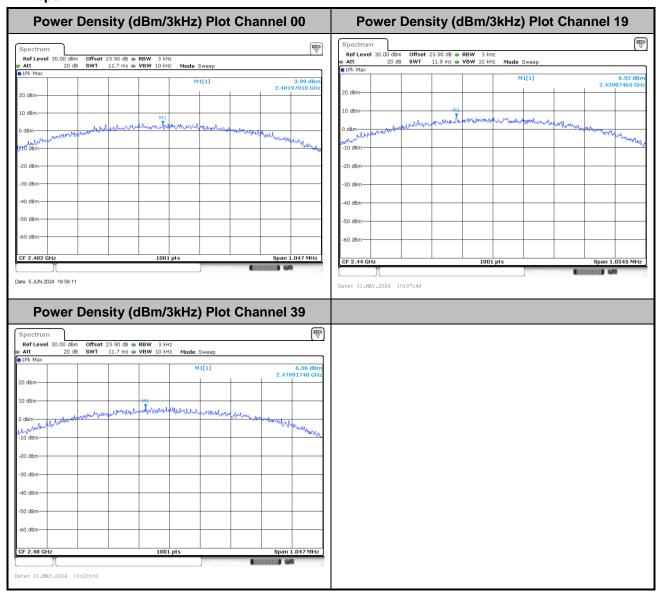


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Power Spectral Density (dBm/3kHz)

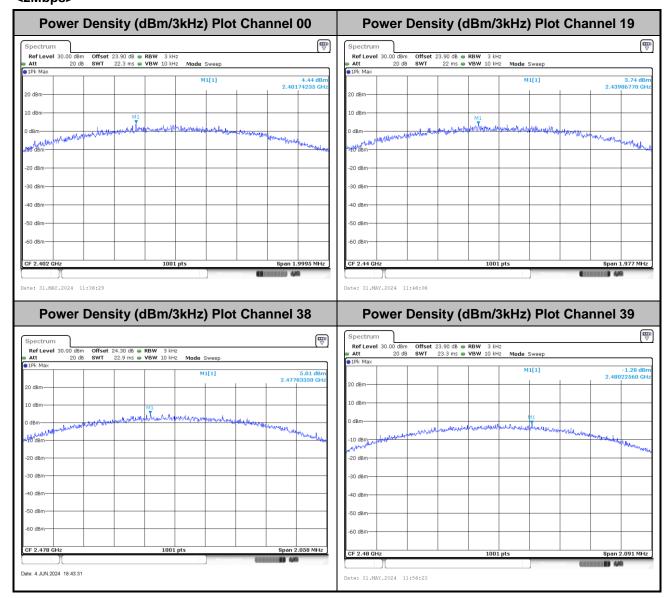
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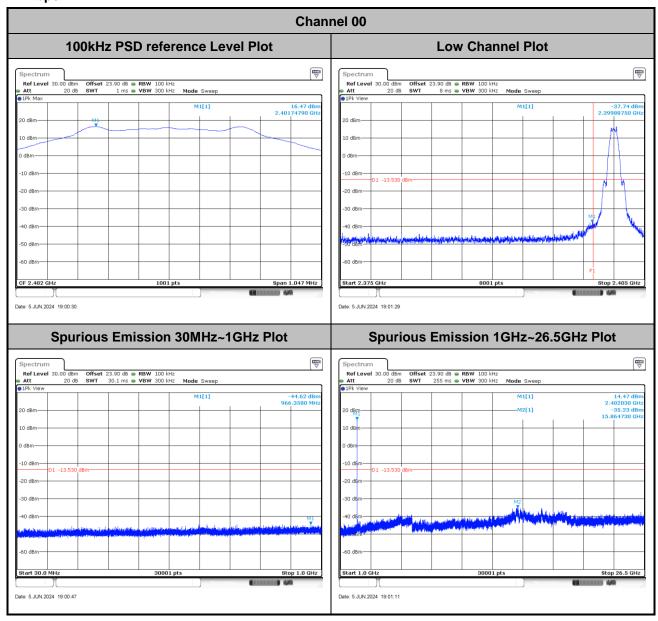


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Band Edge and Conducted Spurious Emission

<1Mbps>



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Channel 19 Mid Channel Plot 100kHz PSD reference Level Plot 20 dBm 10 dBm 10 dBn Spurious Emission 30MHz~1GHz Plot Spurious Emission 1GHz~26.5GHz Plot
 Ref Level
 30.00 dBm
 Offset
 23.90 dB • RBW
 100 kHz

 Att
 20 dB
 SWT
 255 ms • VBW
 300 kHz
 Mode
 Sweep

 • IPk View
 300 kHz
 Mode
 Sweep
 Mode
 Sweep
 Mode
 Sweep
 Ref Level 30.00 17.62 dBm 2.440280 GHz -36.40 dBm 19.421860 GHz 20 dBm 40 dBrr

Date: 31.MAY.2024 10:10:03

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FAX: 886-3-327-0855

Date: 31.MAY.2024 10:09:33

Channel 39 100kHz PSD reference Level Plot **High Channel Plot** Ref Level 30.00 -42.31 dBn 2.48379450 GH 10 dBm: 2.505 GHz Spurious Emission 30MHz~1GHz Plot Spurious Emission 1GHz~26.5GHz Plot Ref Level 30.00 Att -36.32 dBn 15.925930 GH: 20 dBm 40 dBrr

Date: 31.MAY.2024 10:22:11

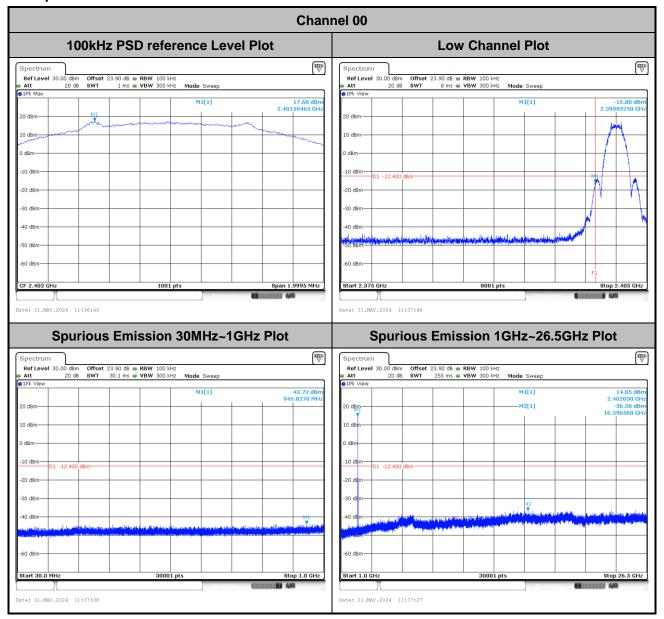
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FAX: 886-3-327-0855

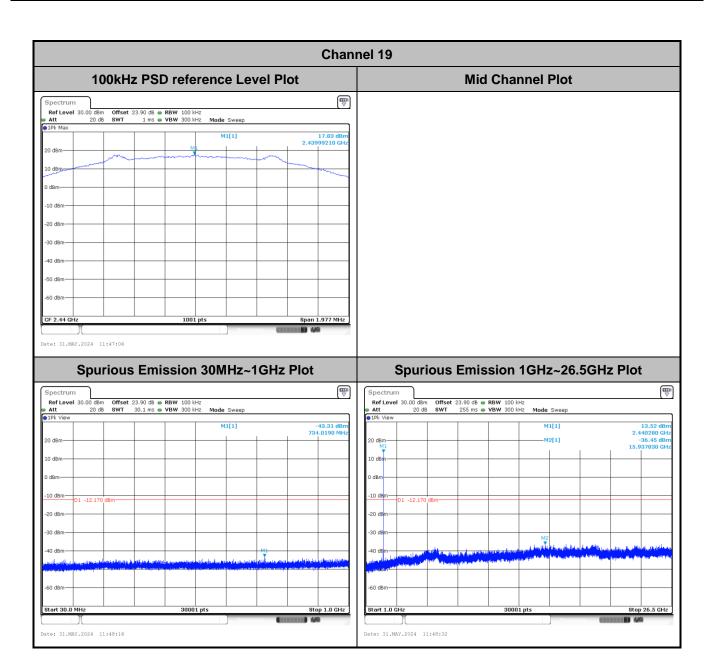
Date: 31.MAY.2024 10:21:55

<2Mbps>



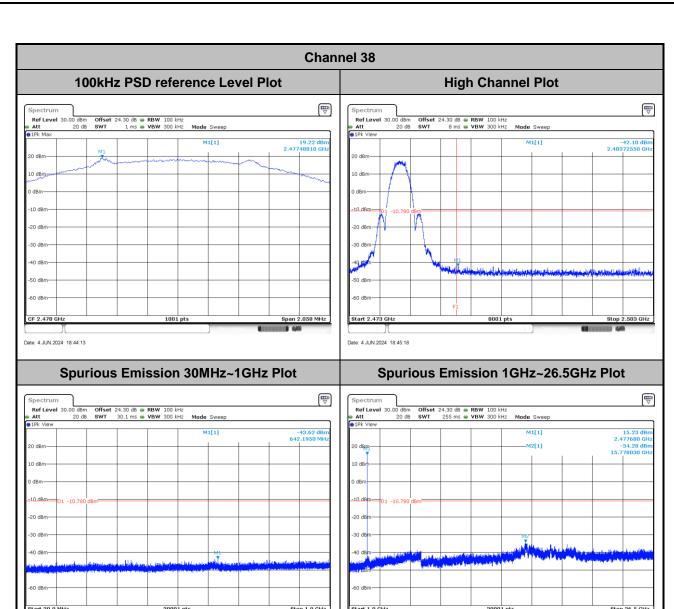
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Date: 4.JUN.2024 18:44:57

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FAX: 886-3-327-0855

Date: 4.JUN.2024 18:44:37

Channel 39 100kHz PSD reference Level Plot **High Channel Plot** 12.63 dBr 2.47949240 GH 20 dBn 10 dBm .505 GHz Spurious Emission 30MHz~1GHz Plot Spurious Emission 1GHz~26.5GHz Plot Ref Level 30.00 Att -35.57 dBn 19.919090 GH 10 dBm 20 dBm 40 dBrr Date: 31.MAY.2024 11:57:41 Date: 31.MAY.2024 11:57:57

Report No.: FR422010A

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Appendix B. AC Conducted Emission Test Results

Test Engineer :	Calvin Wong	Temperature :	23~26°C
	Calvin wang	Relative Humidity :	45~55%

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EUT Information

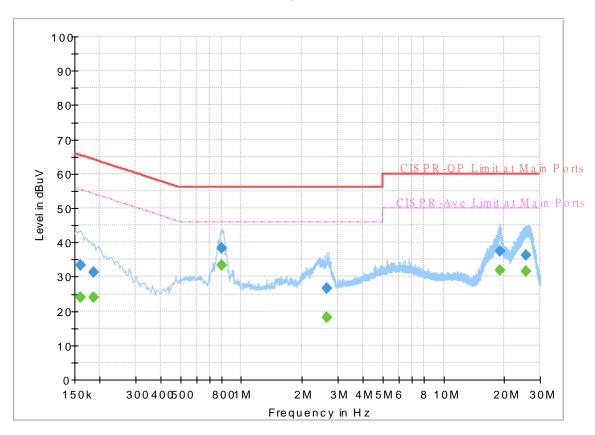
 Report NO :
 422010

 Test Mode :
 Mode 1

 Test Voltage :
 120Vac/60Hz

Phase: Line

Full Spectrum



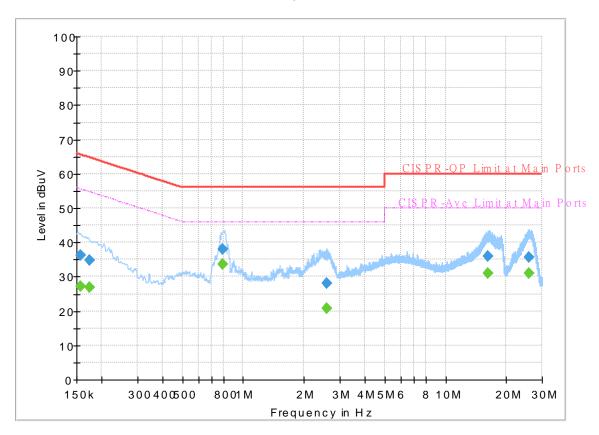
Final_Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dB)			(dB)
0.161250		23.86	55.40	31.54	L1	OFF	19.8
0.161250	33.33		65.40	32.07	L1	OFF	19.8
0.186000		23.91	54.21	30.30	L1	OFF	19.8
0.186000	31.40		64.21	32.81	L1	OFF	19.8
0.800250		33.28	46.00	12.72	L1	OFF	19.8
0.800250	38.28		56.00	17.72	L1	OFF	19.8
2.647500		18.12	46.00	27.88	L1	OFF	19.8
2.647500	26.54		56.00	29.46	L1	OFF	19.8
18.946500		31.98	50.00	18.02	L1	OFF	19.9
18.946500	37.45		60.00	22.55	L1	OFF	19.9
25.701000		31.54	50.00	18.46	L1	OFF	20.0
25.701000	36.28		60.00	23.72	L1	OFF	20.0

EUT Information

Report NO: 422010
Test Mode: Mode 1
Test Voltage: 120Vac/60Hz
Phase: Neutral

Full Spectrum



Final Result

Frequency	QuasiPeak	CAverage	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dB)			(dB)
0.156750		27.19	55.63	28.44	N	OFF	19.8
0.156750	36.39		65.63	29.24	N	OFF	19.8
0.174750	-	26.78	54.73	27.95	N	OFF	19.8
0.174750	34.87		64.73	29.86	N	OFF	19.8
0.795750		33.53	46.00	12.47	N	OFF	19.8
0.795750	38.02		56.00	17.98	N	OFF	19.8
2.575500		20.71	46.00	25.29	N	OFF	19.8
2.575500	28.04		56.00	27.96	N	OFF	19.8
16.233000		30.93	50.00	19.07	N	OFF	20.0
16.233000	35.84		60.00	24.16	N	OFF	20.0
25.845000		30.87	50.00	19.13	N	OFF	20.1
25.845000	35.59		60.00	24.41	N	OFF	20.1

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Leo Li and Lucifer Jiang	Relative Humidity :	21.7~22.5℃
	Leo Li and Luciler Jiang	Temperature :	51~57%

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C1. Radiated Spurious Emission Test Modes

<1Mbps>

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	IoT Ant 0	Bluetooth-LE	00	2402	1Mbps	-	-
Mode 2	2400-2483.5	IoT Ant 0	Bluetooth-LE	19	2440	1Mbps	-	-
Mode 3	2400-2483.5	IoT Ant 0	Bluetooth-LE	39	2480	1Mbps	-	-
Mode 7	2400-2483.5	IoT Ant 0	Bluetooth-LE	39	2480	1Mbps	-	LF
Mode 7	2400-2483.5	IoT Ant 0	Bluetooth-LE	39	2480	1Mbps	-	SHF

<2Mbps>

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 4	2400-2483.5	IoT Ant 0	Bluetooth-LE	00	2402	2Mbps	-	-
Mode 5	2400-2483.5	IoT Ant 0	Bluetooth-LE	19	2440	2Mbps	-	-
Mode 6	2400-2483.5	IoT Ant 0	Bluetooth-LE	39	2480	2Mbps	-	-
Mode 32	2400-2483.5	IoT Ant 0	Bluetooth-LE	38	2478	2Mbps	ı	-

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C2. Summary of each worse mode

<1Mbps>

Mode	Modulation	Ch.	Freq.	Level	Limit	Margin	Pol.	Peak	Result	RU	Remark
			(MHz)	(dBuV/m)	(dBuV/m)	(dB)		Avg.			
1	Bluetooth-LE	00	2369.98	47.68	54.00	-6.32	V	Avg.	Pass	•	Band Edge
!	Bluetooth-LE	00	4804.00	53.15	54.00	-0.85	V	Avg.	Pass	-	Harmonic
2	Bluetooth-LE	19	2375.91	36.30	54.00	-17.70	V	Avg.	Pass	1	Band Edge
2	Bluetooth-LE	19	4880.00	50.77	54.00	-3.23	V	Avg.	Pass	1	Harmonic
3	Bluetooth-LE	39	2483.52	53.26	54.00	-0.74	V	Avg.	Pass	1	Band Edge
3	Bluetooth-LE	39	4960.00	46.52	54.00	-7.48	V	Avg.	Pass	1	Harmonic
7	BLE Tx LF	39	451.95	39.44	46.00	-6.56	V	Peak	Pass	-	LF
	SHF	39	24754.00	41.90	74.00	-32.10	V	Peak	Pass	ı	SHF

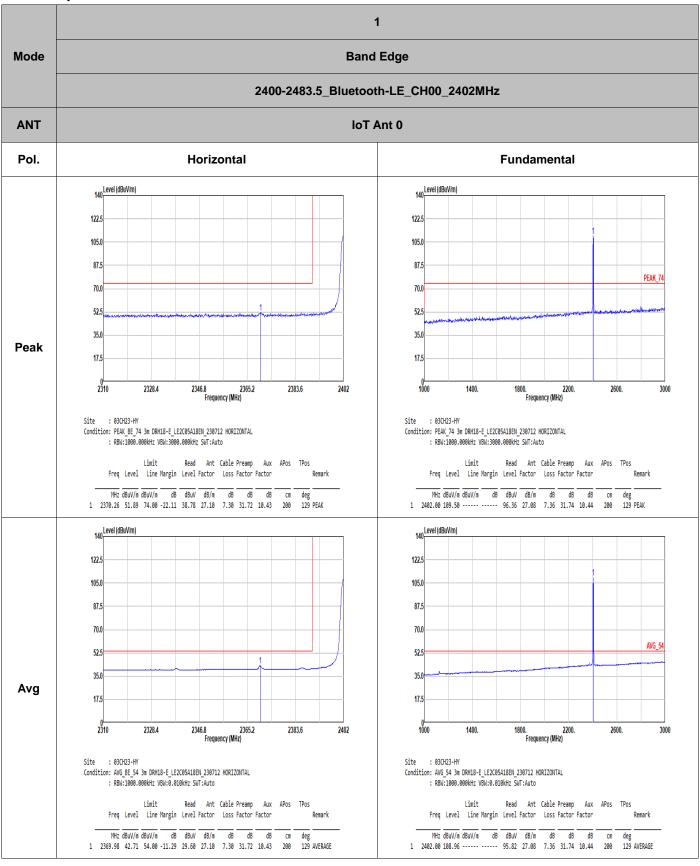
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<2Mbps>

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
4	Bluetooth-LE	00	2337.97	45.54	54.00	-8.46	V	Avg.	Pass	-	Band Edge
4	Bluetooth-LE	00	4804.00	51.39	54.00	-2.61	Н	Avg.	Pass	-	Harmonic
5	Bluetooth-LE	19	2375.91	35.72	54.00	-18.28	V	Avg.	Pass	-	Band Edge
Э	Bluetooth-LE	19	4880.00	48.86	54.00	-5.14	Н	Avg.	Pass	-	Harmonic
6	Bluetooth-LE	39	2483.52	53.32	54.00	-0.68	V	Avg.	Pass	-	Band Edge
6	Bluetooth-LE	39	4960.00	44.91	54.00	-9.09	V	Avg.	Pass	-	Harmonic
20	Bluetooth-LE	38	2483.52	41.50	54.00	-12.50	V	Avg.	Pass	-	Band Edge
32	Bluetooth-LE	38	-	-	-	-	-	-	-	-	Harmonic

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<1Mbps>



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Band Edge Mode 2400-2483.5_Bluetooth-LE_CH00_2402MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2310 5.8 2365.2 Frequency (MHz) 1000 2328.4 2383.6 1800. 2200. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL Condition: PEAK 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2386.27 55.94 74.00 -18.06 42.90 27.00 7.33 31.73 10.44 300 1 2402.00 115.71 ----- 102.57 27.08 7.36 31.74 10.44 300 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2310 1000 2346.8 2365.2 Frequency (MHz) 2383.6 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Limit Read Ant Cable Preamp Aux APos TPos Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg 1 2402.00 115.17 ------ 102.03 27.08 7.36 31.74 10.44 300 98 AVERAGE

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Mode Harmonic 2400-2483.5_Bluetooth-LE_CH00_2402MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 70.0 70.0 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 6000. 9000. 12000. Frequency (MHz) 15000. 18000 6000. 0. 12000. Frequency (MHz) 15000. 18000 : 03CH23-HY Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Read Ant Cable Preamp Aux APos TPos Read Ant Cable Preamp Aux APos TPos Limit Limit Freq Level Line Margin Level Factor Loss Factor Factor Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm | 1 4804.00 56.14 74.00 -17.86 44.42 32.32 10.56 32.98 1.82 193 | 2 4804.00 53.15 54.00 -0.85 41.43 32.32 10.56 32.98 1.82 193 | 3 12010.00 55.38 74.00 -18.62 38.36 38.52 16.11 40.22 2.61 400 | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB | 1 4804.00 56.02 74.00 -17.98 44.30 32.32 10.56 32.98 1.82 | 2 4804.00 52.97 54.00 -1.03 41.25 32.32 10.56 32.98 1.82 deg 38 Peak deg 352 Peak 386 386 352 Average 38 Average 12010.00 56.01 74.00 -17.99 38.99 38.52 16.11 40.22 2.61 4 12010.00 48.03 54.00 -5.97 31.01 38.52 16.11 40.22 2.61 4 12010.00 48.67 54.00 -5.33 31.65 38.52 16.11 40.22 2.61 7 Average 17 Average

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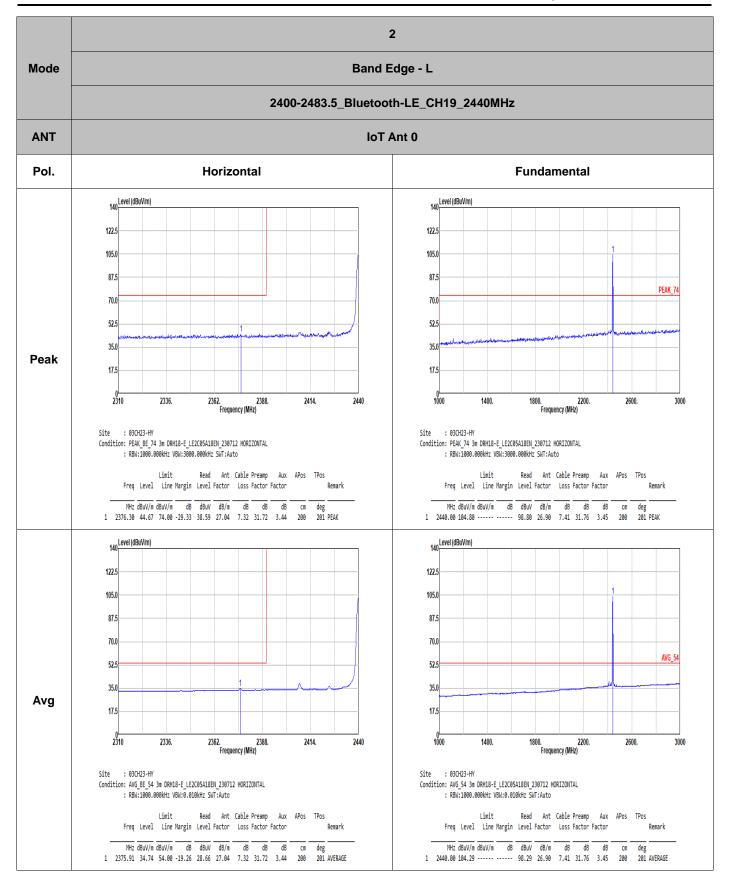
1 Mode **Harmonic** 2400-2483.5_Bluetooth-LE_CH00_2402MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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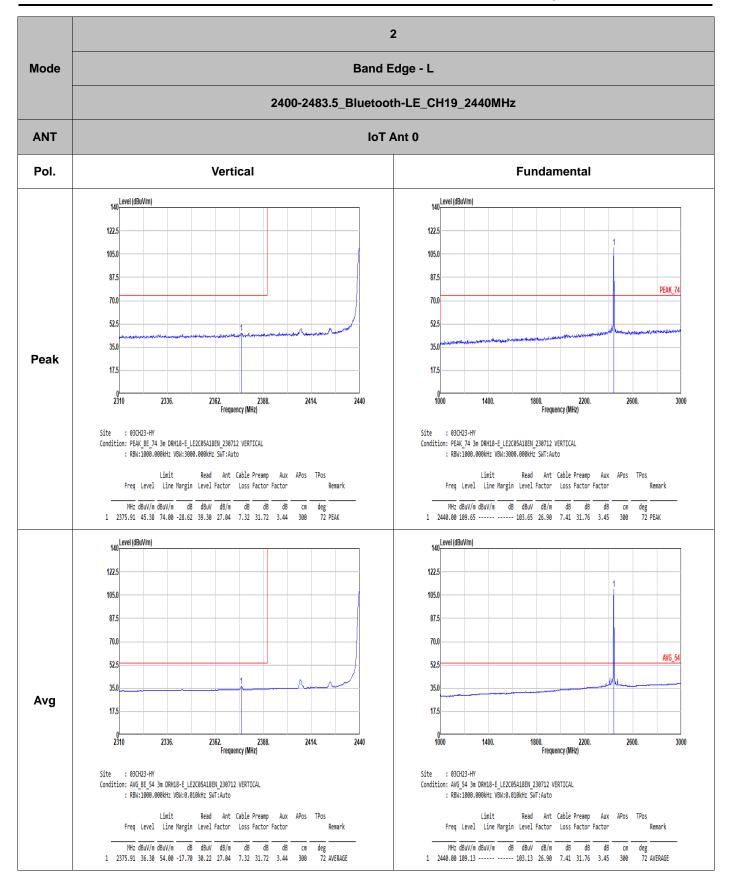
Mode Band Edge - R 2400-2483.5_Bluetooth-LE_CH19_2440MHz **ANT** IoT Ant 0 Pol. Horizontal **Fundamental** 140 Level (dBuV/m) 122.5 105.0 87.5 PEAK_BE_74 70.0 52.5 35.0 Peak **Blank** 17.5 2440 2464. 2476. Frequency (MHz) 2452. 2488. 2500 Site : 03CH23-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL
: RBN:1000.000kHz VBN:3000.000kHz SNT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2484.22 45.11 74.00 -28.89 39.13 26.84 7.47 31.79 3.46 200 201 PEAK 140 Level (dBuV/m) 122.5 105.0 87.5 70.0 AVG_BE_54 52.5 35.0 Avg **Blank** 17.5 2464. 2476. Frequency (MHz) 2440 Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 2487.76 33.35 54.00 -20.65 27.32 26.88 7.48 31.79 3.46 200 201 AVERAGE

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Mode Band Edge - R 2400-2483.5_Bluetooth-LE_CH19_2440MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 122.5 105.0 87.5 PEAK_BE_74 70.0 52.5 35.0 Peak **Blank** 17.5 2440 2464. 2476. Frequency (MHz) 2452. 2488. 2500 Site : 03CH23-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL
: RBN:1000.000kHz VBN:3000.000kHz SNT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg | 1 2491.30 45.54 74.00 -28.46 39.49 26.90 7.48 31.79 3.46 300 72 PEAK 140 Level (dBuV/m) 122.5 105.0 87.5 70.0 AVG_BE_54 52.5 35.0 Avg **Blank** 17.5 2440 2464. 2476. Frequency (MHz) Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 2487.88 34.90 54.00-19.10 28.87 26.88 7.48 31.79 3.46 300 72 AVERAGE

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2 Mode Harmonic 2400-2483.5_Bluetooth-LE_CH19_2440MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK 74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 6000. 9000. 12000. Frequency (MHz) 15000. 6000. 9000. 12000. Frequency (MHz) 15000. 18000 18000 Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dB dB dB dB dB dB 1.79 | MHz dBuV m dB m dB dB dB dB 1.79 | MHz dBuV m dB m dB dB 1.79 | MHz dBuV m dBuV deg 37 Peak deg 354 Peak cm 198 37 Average -- Peak -- Average 113 Peak 396 354 Average -- Peak -- Average 7320.00 40.94 54.00 -13.06 24.64 37.20 12.64 35.55 2.01 12200.00 55.19 74.00 -18.81 37.79 38.80 16.18 40.18 2.60 7320.00 38.52 54.00 -15.48 22.22 37.20 12.64 35.55 2.01 12200.00 54.30 74.00 -19.70 36.90 38.80 16.18 40.18 2.60 6 Peak 6 12200.00 48.74 54.00 -5.26 31.34 38.80 16.18 40.18 2.60 113 Average 6 12200.00 47.61 54.00 -6.39 30.21 38.80 16.18 40.18 2.60 6 Average

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2 Mode **Harmonic** 2400-2483.5_Bluetooth-LE_CH19_2440MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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3 Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Horizontal **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_BE_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2488. 2492. Frequency (MHz) 1000 2484. 2496. 1800. 2200. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 HORIZONTAL Condition: PEAK 74 3m DRH18-E LE2C05A18EN 230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.66 58.48 74.00 -15.52 45.48 26.84 7.47 31.79 10.48 313 318 PEAK 1 2480.00 113.00 ----- 100.04 26.80 7.47 31.79 10.48 313 318 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_BE_54 AVG_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2480 1000 2488. 2492. Frequency (MHz) 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Limit Read Ant Cable Preamp Aux APos TPos Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark
 MHz
 dBuV/m
 dB uV/m
 dB dBuV
 dB/m
 dB dB
 dB dB
 dB cm
 deg

 1
 2480.00 112.48 ·······
 99.52 26.80 7.47 31.79 10.48 313 318 AVERAGE

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FCC RADIO TEST REPORT Report No.: FR422010A 3 Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_BE_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2488. 2492. Frequency (MHz) 1000 2484. 2496. 1800. 2200. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL Condition: PEAK 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.66 62.85 74.00 -11.15 49.85 26.84 7.47 31.79 10.48 338 88 PEAK 1 2480.00 117.87 ----- 104.91 26.80 7.47 31.79 10.48 338 88 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_BE_54 AVG_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2480 1000 2488. 2492. Frequency (MHz) 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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: RBW:1000.000kHz VBW:0.010kHz SWT:Auto

Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor

FAX: 886-3-327-0855

: RBW:1000.000kHz VBW:0.010kHz SWT:Auto

Read Ant Cable Preamp Aux APos TPos

Limit



3 Mode Harmonic 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 70.0 70.0 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 6000. 9000. 12000. Frequency (MHz) 15000. 18000 6000. 0. 12000. Frequency (MHz) 15000. 18000 : 03CH23-HY Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Read Ant Cable Preamp Aux APos TPos Read Ant Cable Preamp Aux APos TPos Limit Limit Freq Level Line Margin Level Factor Loss Factor Factor Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark deg 40 Peak 40 Average MHz dBuV/m dBuV/m dB dBuV dB/m MHz dBuV/m dBuV/m dB dBuV dB/m dB CM 1 4960.00 51.72 74.00 -22.28 39.63 23.78 10.48 32.98 1.76 110 318 Peak 2 4960.00 46.52 54.00 -7.48 34.48 32.78 10.48 32.98 1.76 110 318 Average 4960.00 50.98 74.00 -23.02 38.94 32.78 10.48 32.98 1.76 4960.00 46.05 54.00 -7.95 34.01 32.78 10.48 32.98 1.76 400 -- Peak -- Average 7440.00 51.28 74.00 -22.72 35.02 37.10 12.82 35.65 1.99 7440.00 52.98 74.00 -21.02 36.72 37.10 12.82 35.65 1.99 7440.00 40.02 54.00 -13.98 23.76 37.10 12.82 35.65 1.99 -- Average 4 7440.00 41.50 54.00 -12.50 25.24 37.10 12.82 35.65 1.99

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3 Mode **Harmonic** 2400-2483.5_Bluetooth-LE_CH39_2480MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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7 Mode LF 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 80 Level (dBuV/m) 80 Level (dBuV/m) 70.0 70.0 50.0 50.0 40.0 30.0 30.0 20.0 QP/ 10.0 10.0 Peak 0 30 418. Frequency (MHz) 224. 806. 1000 224. 418. 612. Frequency (MHz) 806. 1000 : 03CH23-HY : 03CH23-HY Condition: QP 3m LF_63303&001_231015 HORIZONTAL Condition: QP 3m LF_63303&001_231015 VERTICAL Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Remark Remark
 MHz
 dBuV/m
 dB uV/m
 dB dBuV
 dB dBuV
 dB dBuV
 dB dB dB dB dB uV

 67.83
 27.92
 40.00 -12.00
 46.72
 12.41
 1.44
 32.72
 0.07

 92.08
 29.39
 43.50 -14.11
 45.14
 15.31
 1.55
 32.70
 0.09
 MHz dBuV/m dBuV/m dB dBuV dB/m cm deg -- Peak -- Peak cm deg -- Peak -- Peak 67.83 33.37 40.00 -6.63 52.17 12.41 1.44 32.72 0.07 90.14 34.02 43.50 -9.48 49.95 15.14 1.54 32.70 0.09
 261.83
 20.45
 46.00
 -6.56
 46.05
 23.04
 31.7
 32.90
 0.18

 451.95
 33.76
 46.00
 -6.56
 46.05
 23.04
 31.7
 32.90
 0.08

 574.17
 33.76
 46.00
 -12.24
 37.25
 25.89
 3.48
 33.02
 0.16

 956.35
 34.00
 46.00
 -12.00
 29.83
 31.17
 4.31
 31.57
 0.26
 259.89 18.75 46.00 -27.25 29.01 19.92 2.42 32.75 0.15 450.01 37.88 46.00 -8.12 44.51 23.02 3.17 32.90 0.08 -- Peak -- Peak -- Peak -- Peak 579,99 33.42 46.00 -12.58 36.96 25.82 3.50 33.03 0.17 957.32 32.82 46.00 -13.18 28.63 31.18 4.31 31.56 0.26 -- Peak -- Peak -- Peak

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8 Mode Harmonic SHF **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 6000. 9000. 12000. Frequency (MHz) 15000. 18000 6000. 0. 12000. Frequency (MHz) 15000. 18000 : 03CH23-HY Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Read Ant Cable Preamp Aux APos TPos Read Ant Cable Preamp Aux APos TPos Limit Limit Freq Level Line Margin Level Factor Loss Factor Factor Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm | 1 4810.00 57.56 74.00 -16.44 45.82 32.34 10.56 32.98 1.82 208 | 2 4810.00 52.22 54.00 -1.78 40.48 32.34 10.56 32.98 1.82 208 3 12025.00 55.64 74.00 -18.36 38.57 38.55 16.12 40.21 2.61 214 deg 36 Peak 36 Average deg 353 Peak 353 Average MHz dBuV/m dBuV/m dB dBuV dB/m 1 4810.00 51.81 54.00 -12.19 40.07 32.34 10.56 32.98 1.82 4810.00 51.81 54.00 -2.19 40.07 32.34 10.56 32.98 1.82 3 12025.00 56.64 74.00 -17.36 39.57 38.55 16.12 40.21 2.61 383 334 Peak 4 12025.00 47.47 54.00 -6.53 30.40 38.55 16.12 40.21 2.61 214 4 12025.00 48.43 54.00 -5.57 31.36 38.55 16.12 40.21 2.61 334 Average 351 Average

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8 Mode Harmonic SHF ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 13560. 15040. 16520. 18000 Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor

| MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg | 1 22958.00 41.04 74.00 -32.96 51.96 39.20 19.73 68.31 -9.54 -- -- Peak

Report No.: FR422010A 8 Mode **SHF** SHF ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 AVG_54 AVG_54 52.5 52.5 35.0 35.0 **Peak** 17.5 17.5 18000 18000 20800. 22200. Frequency (MHz) 19400. 23600. 25000 19400. 20800. 22200. Frequency (MHz) 23600. 25000 Site : 03CH23-HY Condition: PEAK_74 1m BBHA9170_1225_230710 HORIZONTAL Site : 03CH23-HY Condition: PEAK_74 1m BBHA9170_1225_230710 VERTICAL

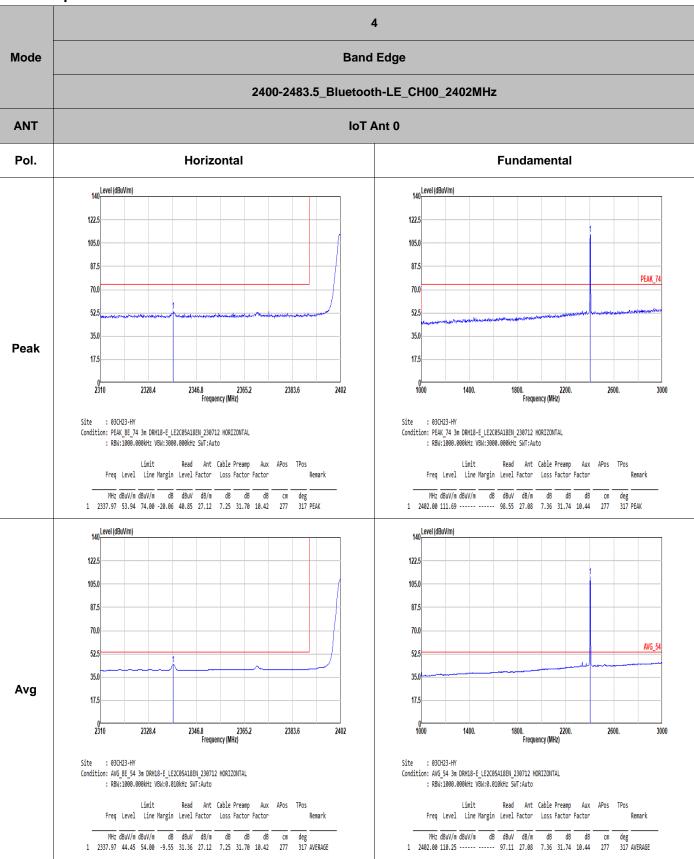
Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor

| MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 24754.00 41.90 74.00 -32.10 51.42 39.59 20.78 60.35 -9.54 -- -- Peak

Remark

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<2Mbps>



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Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH00_2402MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2310 5.8 2365.2 Frequency (MHz) 1000 2328.4 2383.6 2402 1800. 2200. Frequency (MHz) Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB 1 2337.88 54.43 74.00 -19.57 41.34 27.12 7.25 31.70 10.42 200 104 PEAK 1 2402.00 116.40 ----- 103.26 27.08 7.36 31.74 10.44 200 104 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2310 1000 2346.8 2365.2 Frequency (MHz) 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark Freq Level Line Margin Level Factor Loss Factor Factor

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12010.00 55.85 74.00 -18.15 38.83 38.52 16.11 40.22 2.61

4 12010.00 47.90 54.00 -6.10 30.88 38.52 16.11 40.22 2.61

Mode Harmonic 2400-2483.5_Bluetooth-LE_CH00_2402MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 9000. 12000. Frequency (MHz) 6000. 15000. 18000 6000. 0. 12000. Frequency (MHz) 15000. 18000 : 03CH23-HY Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Read Ant Cable Preamp Aux APos TPos Read Ant Cable Preamp Aux APos TPos Limit Limit Freq Level Line Margin Level Factor Loss Factor Factor Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark deg 324 Peak deg 34 Peak 34 Average MHz dBuV/m dBuV/m dB dBuV dB/m 1 4804.00 56.76 74.00 -17.24 45.04 32.32 10.56 32.98 1.82 2 4804.00 51.39 54.00 -2.61 39.67 32.32 10.56 32.98 1.82 324 Average 385

334 Peak

334 Average

302

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 3
 12010.00
 54.11
 74.00
 -19.89
 37.09
 38.52
 16.11
 40.22
 2.61

 4
 12010.00
 47.00
 54.00
 -7.00
 29.98
 38.52
 16.11
 40.22
 2.61

8 Average

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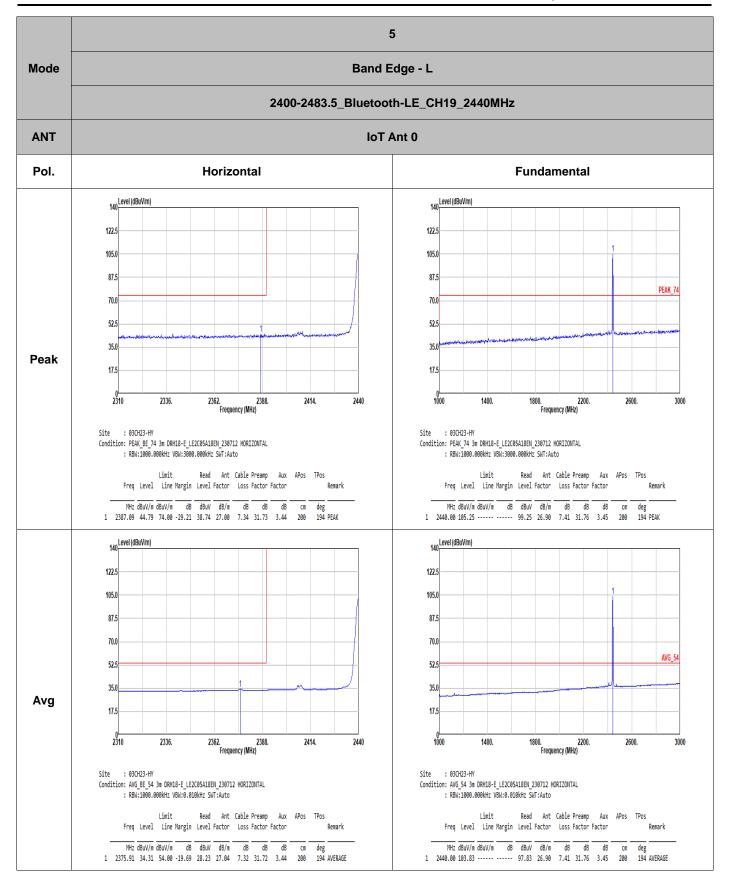
Mode Harmonic 2400-2483.5_Bluetooth-LE_CH00_2402MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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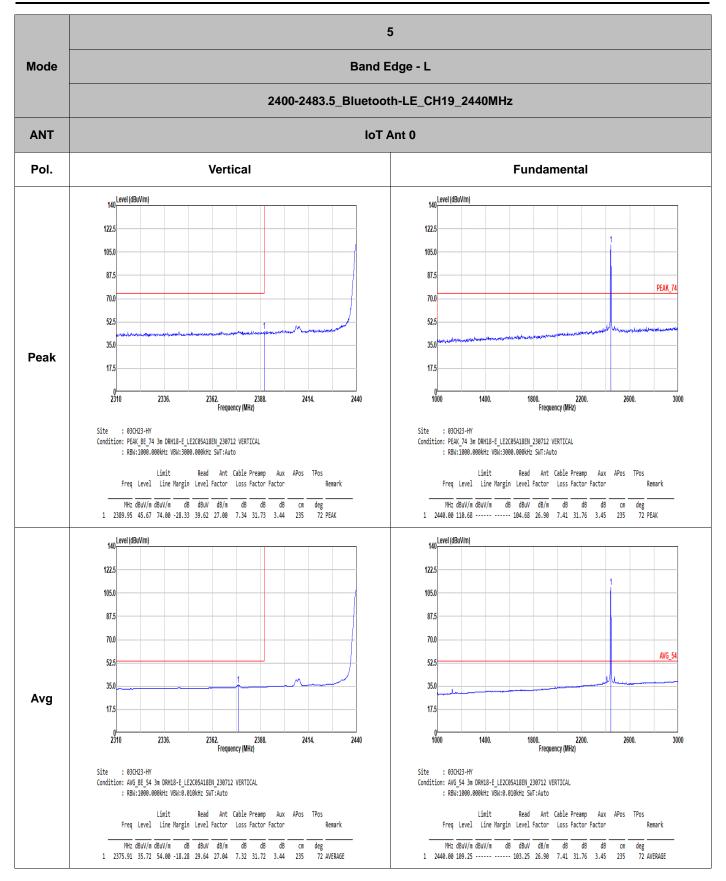
5 Mode Band Edge - R 2400-2483.5_Bluetooth-LE_CH19_2440MHz **ANT** IoT Ant 0 Pol. Horizontal **Fundamental** 140 Level (dBuV/m) 122.5 105.0 87.5 PEAK_BE_74 70.0 52.5 35.0 Peak **Blank** 17.5 2440 2464. 2476. Frequency (MHz) 2452. 2488. 2500 Site : 03CH23-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL
: RBN:1000.000kHz VBN:3000.000kHz SNT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2489.44 44.32 74.00 -29.68 38.28 26.89 7.48 31.79 3.46 200 194 PEAK 140 Level (dBuV/m) 122.5 105.0 87.5 70.0 AVG_BE_54 52.5 35.0 Avg **Blank** 17.5 2464. 2476. Frequency (MHz) 2440 Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 2486.26 33.28 54.00 -20.72 27.27 26.86 7.48 31.79 3.46 200 194 AVERAGE

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FCC RADIO TEST REPORT Report No.: FR422010A 5 Mode Band Edge - R 2400-2483.5_Bluetooth-LE_CH19_2440MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 122.5 105.0 87.5 PEAK_BE_74 70.0 52.5 35.0 Peak **Blank** 17.5 2440 2464. 2476. Frequency (MHz) 2452. 2488. 2500 Site : 03CH23-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL
: RBN:1000.000kHz VBN:3000.000kHz SNT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg | 1 2487.70 46.20 74.00 -27.80 40.17 26.88 7.48 31.79 3.46 235 72 PEAK 140 Level (dBuV/m) 122.5 105.0 87.5 70.0 AVG_BE_54 52.5 35.0 Avg **Blank** 17.5 2440 2464. 2476. Frequency (MHz) Site : 03CH23-HY

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Remark

FAX: 886-3-327-0855

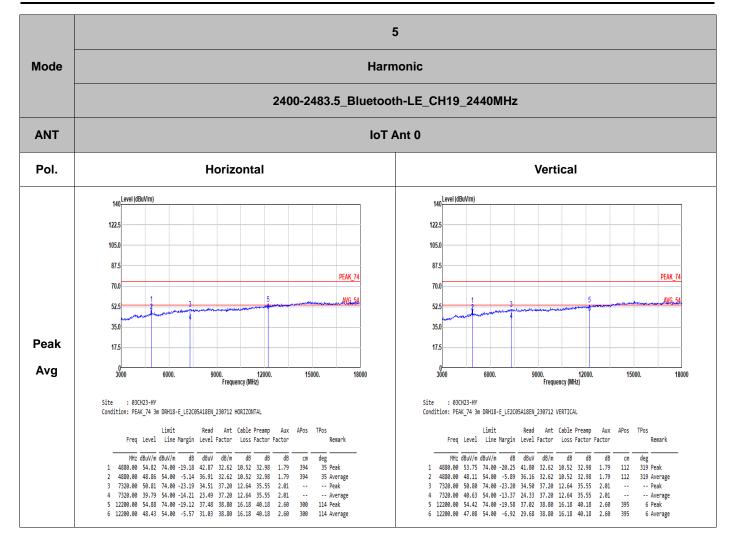
Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

Limit Read Ant Cable Preamp Aux APos TPos

| MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 2487.52 34.89 54.00 -19.11 28.86 26.88 7.48 31.79 3.46 235 72 AVERAGE



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5 Mode **Harmonic** 2400-2483.5_Bluetooth-LE_CH19_2440MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Horizontal **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_BE_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2488. 2492. Frequency (MHz) 1000 2484. 2496. 1800. 2200. Frequency (MHz) Site : 03CH23-HY
Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.56 55.65 74.00 -18.35 42.65 26.84 7.47 31.79 10.48 400 335 PEAK 1 2480.00 105.93 ----- 92.97 26.80 7.47 31.79 10.48 400 335 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 70.0 70.0 AVG_BE_54 AVG_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2480 1000 2488. 2492. Frequency (MHz) 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Limit Read Ant Cable Preamp Aux APos TPos Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark

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Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_BE_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2488. 2492. Frequency (MHz) 1000 2484. 2496. 2500 1800. 2200. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL Condition: PEAK 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB 1 2483.54 61.89 74.00 -12.11 48.89 26.84 7.47 31.79 10.48 335 89 PEAK 1 2480.00 112.54 ----- 99.58 26.80 7.47 31.79 10.48 335 89 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_54 AVG_BE_54 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2480 1000 8. 2492. Frequency (MHz) 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark

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: 03CH23-HY

Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL

MHz dBuV/m dBuV/m dB dBuV dB/m

Freq Level Line Margin Level Factor Loss Factor Factor

4960.00 51.59 74.00 -22.41 39.55 32.78 10.48 32.98 1.76 4960.00 44.12 54.00 -9.88 32.08 32.78 10.48 32.98 1.76

7440.00 51.20 74.00 -22.80 34.94 37.10 12.82 35.65 1.99

7440.00 40.51 54.00 -13.49 24.25 37.10 12.82 35.65 1.99

Limit

Read Ant Cable Preamp Aux APos TPos

Remark

deg 43 Peak 43 Average

-- Peak -- Average

400

6 Mode Harmonic 2400-2483.5_Bluetooth-LE_CH39_2480MHz **ANT** IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_74 PEAK_74 70.0 70.0 52.5 35.0 35.0 **Peak** 17.5 17.5 Avg 3000 3000 6000. 9000. 12000. Frequency (MHz) 15000. 18000 6000. 0. 12000. Frequency (MHz) 15000. 18000

Site : 03CH23-HY

Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

Freq Level Line Margin Level Factor Loss Factor Factor

dB dBuV dB/m

7440.00 51.93 74.00 -22.07 35.67 37.10 12.82 35.65 1.99

4 7440.00 41.58 54.00 -12.42 25.32 37.10 12.82 35.65 1.99

Limit

MHz dBuV/m dBuV/m

Read Ant Cable Preamp Aux APos TPos

dB

1 4960.00 53.04 74.00 -20.96 41.00 32.78 10.48 32.98 1.76 111 319 Peak 2 4960.00 44.91 54.00 -9.09 32.87 32.78 10.48 32.98 1.76 111 319 Average

Remark

-- Peak -- Average

deg

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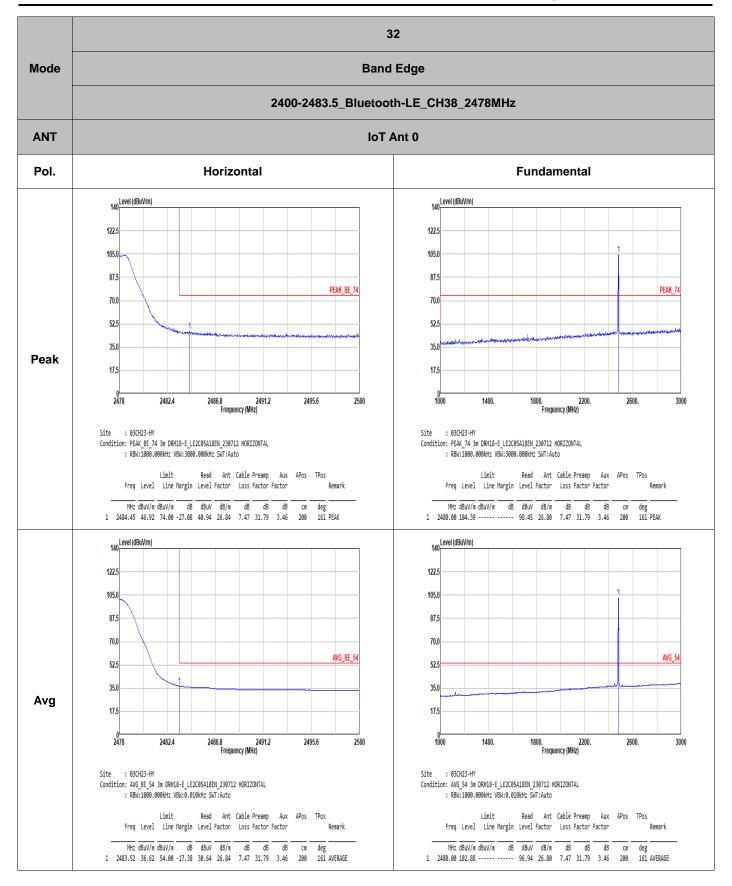
6 Mode Harmonic 2400-2483.5_Bluetooth-LE_CH39_2480MHz ANT IoT Ant 0 Pol. Horizontal Vertical 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 10.6G AVG_54 AVG_54 ~18G 52.5 52.5 Avg 35.0 35.0 17.5 17.5 13560. Frequency (MHz) 10600 10600 12080. 15040. 16520. 18000 12080. 15040. 16520. 18000 13560. Frequency (MHz) Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 HORIZONTAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL

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32 Mode **Band Edge** 2400-2483.5_Bluetooth-LE_CH38_2478MHz **ANT** IoT Ant 0 Pol. Vertical **Fundamental** 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 PEAK_BE_74 PEAK_74 70.0 70.0 52.5 52.5 35.0 35.0 Peak 17.5 17.5 2478 5.8 2491.2 Frequency (MHz) 1000 2482.4 2495.6 1400. 1800. 2200. Frequency (MHz) Site : 03CH23-HY Condition: PEAK_74 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Site : 03CH23-HY Condition: PEAK BE 74 3m DRH18-E LE2C05A18EN 230712 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg | MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB dB cm deg | 1 2488.00 111.43 ----- 105.49 26.80 7.47 31.79 3.46 192 75 PEAK 1 2483.52 51.70 74.00 -22.30 45.72 26.84 7.47 31.79 3.46 192 75 PEAK 140 Level (dBuV/m) 140 Level (dBuV/m) 122.5 122.5 105.0 105.0 87.5 87.5 70.0 70.0 AVG_BE_54 AVG 5 52.5 52.5 35.0 35.0 Avg 17.5 17.5 2478 1000 2482.4 2486.8 2491.2 Frequency (MHz) 2495.6 1800. 2200. Frequency (MHz) 3000 Site : 03CH23-HY Site : 03CH23-HY Condition: AVG_BE_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL Condition: AVG_54 3m DRH18-E_LE2C05A18EN_230712 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto : RBW:1000.000kHz VBW:0.010kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos
Freq Level Line Margin Level Factor Loss Factor Factor Limit Read Ant Cable Preamp Aux APos TPos Remark Freq Level Line Margin Level Factor Loss Factor Factor Remark
 MHz
 dBuV/m
 dB uV/m
 dB dBuV
 dB/m
 dB dB
 dB
 dB
 cm
 deg

 1
 2480.00 110.03 ············ 104.09 26.80 7.47 31.79 3.46 192 75 AVERAGE
 | MHz dBuV/m dBuV/m dB dB dB dB cm deg | 1 2483.52 41.50 54.00 -12.50 35.52 26.84 7.47 31.79 3.46 192 75 AVERAGE

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Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
Bluetooth - LE for 1Mbps	100.00	-	-	10Hz
Bluetooth - LE for 2Mbps	100.00	-	-	10Hz

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-----THE END-----

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