

ISED CABid: ES1909
Lab. Company Number: 4621A

Test Report No:
73315RRF.003A1

Partial Test Report

USA FCC Part 15.31 (h), 15.247, 15.209, 90.210
CANADA RSS-119, RSS-247, RSS-Gen

(*) Identification of item tested	SCG2229
(*) Trademark	SEPURA
(*) Model and /or type reference	SCG2229
Other identification of the product	FCC ID: XX6SCG2229M IC: 8739A-SCG2229ME
(*) Features	TETRA (380-470 MHz), BT, BLE, GNSS, 802.11 b,g,n (20 MHz, 2.4 GHz) HW version: PLX-890155A0-01 (H/W mod state 7) SW version: 1810 002 10138
Applicant	Sepura Limited 9000 Cambridge Research Park, Beach Drive, Waterbeach, Cambridge CB25 9TL, United Kingdom
Test method requested, standard	USA FCC Part 15.31 (10-1-23 Edition): Measurement standard. USA FCC Part 15.247 (10-1-23 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz. USA FCC Part 15.209 (10-1-23 Edition): Radiated emission limits; general requirements. USA FCC Part 90.210 (10-1-23 Edition): Emission masks. CANADA RSS-119 Issue 12 (May 2015), Amendment (April 2022). CANADA RSS-247 Issue 3 (August 2023). CANADA RSS-Gen Issue 5 (April 2018), Amendment 2 (February 2021). Guidance for Performing Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid Systems Devices Operating Under Section 15.247 of the FCC Rules. 558074 D01 Meas Guidance v05r02 dated April 2, 2019. ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices. ANSI C63.26-2015: Compliance Testing of Transmitters Used in Licensed Radio Services.
Approved by (name / position & signature)	José Manuel Gómez Galván EMC Consumer & RF Lab. Manager
Date of issue	2024-08-08
Report template No	FDT08_24 (*) "Data provided by the client"

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Competences and guarantees

DEKRA Testing and Certification S.A.U. is an FCC-recognized accredited testing laboratory with appropriate scope of accreditation that include testing performed in this test report.

DEKRA Testing and Certification S.A.U. is an ISED-recognized accredited testing laboratory, CABid: ES1909, Company Number: 4621A, with the appropriate scope of accreditation that covers the performed tests in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification S.A.U. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.A.U. at the time of performance of the test.

DEKRA Testing and Certification S.A.U. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.A.U.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.A.U. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

The total uncertainty of the measurement system for the radiated emissions of the EUT is:

From 30 MHz to 1 GHz:	Measurement uncertainty $\leq \pm 5.01$ dB.
From 1 to 17 GHz:	Measurement uncertainty $\leq \pm 4.22$ dB.
From 17 to 26 GHz:	Measurement uncertainty $\leq \pm 4.71$ dB.

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The sample model SCG2229 is a TETRA mobile radio in frequency range 380-470MHz with BT, Wi-Fi and GNSS option.
3. Derived variants not tested. These variants have been declared by the supplier of the sample as being the same as the model under test.

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06 February 2023

sepura

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Declaration of different variants of SCG2229

Defining all different variants of SCG2229

The units will all be marketed under the Product Marketing Name (PMN) of SCG2229.

There are 4 hardware variants under the family application, these relate to Sepura's commercial part numbers:

1-89*A0-0****, 1-89*60-0****, 1-89*50-0****, 1-89*00-0****

where * may be any digit or character.

Commercial part number 1-89*A0-0**** is the variant currently tested.

The following table summarises the differences between the variants:

Hardware Variant	RF Interfaces	Non-RF Interfaces
1-89*A0-0****	TETRA Bluetooth WLAN GNSS	Ethernet GPIO Front Console Port Rear Console Port Power Input USB/GPIO SD Card
1-89*60-0****	TETRA Bluetooth WLAN GNSS	Rear Console Port Power Input USB/GPIO SD Card
1-89*50-0****	TETRA GNSS	Rear Console Port Power Input USB/GPIO SD Card
1-89*00-0****	TETRA GNSS	Rear Console Port Power Input USB/GPIO

Port Identification – Front Panel



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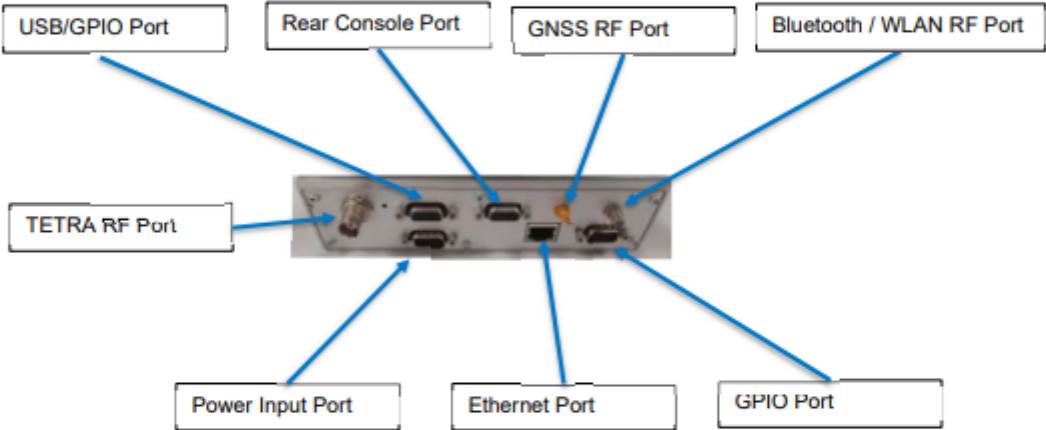
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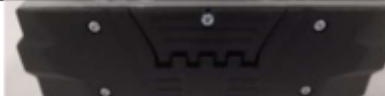
07 February 2023



Port Identification – Rear Panel



The following table shows the difference between the front and rear panels on the variants:

Hardware Variant	Front Panel	Rear Panel
1-89*A0-0****		
1-89*60-0****		
1-89*50-0****		

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Hardware Variant	Front Panel	Rear Panel
1-89*00-0****		

Differences in radio frequency and RF output power: Where the RF interface is provided it has the same RF interface, with the same RF performance and same RF output power, as other variants.

Hardware Variant	TETRA	Bluetooth	WLAN	GNSS
1-89*A0-0****	40 dBm ±0.5dB	4.2	802.11 b, g, n	GPS, Galileo etc
1-89*60-0****	40 dBm ±0.5dB	4.2	802.11 b, g, n	GPS, Galileo etc
1-89*50-0****	40 dBm ±0.5dB	No Bluetooth	No WLAN	GPS, Galileo etc
1-89*00-0****	40 dBm ±0.5dB	No Bluetooth	No WLAN	GPS, Galileo etc

Differences in radio frequency circuitry: There is no difference between the RF circuitry of any of the variants. The only difference is whether the Bluetooth / WLAN module is included. All variants have TETRA and GNSS capability.

Differences in functional characteristics

Hardware Variant	Description
1-89*A0-0****	This is a fully populated variant with Ethernet port, GPIO port, front and rear console ports, USB/GPIO port, power input port and SD card. This fully populated unit has been Certified under ISED ID 8739A-SCG2229
1-89*60-0****	This variant is based on the fully populated 1-89*A0-0**** variant but has the Ethernet port, GPIO port and front console port removed. Other than the removal of this functionality there are no changes made to the circuitry or RF performance of this variant compared with the 1-89*A0-0**** variant
1-89*50-0****	This variant is based on the 1-89*60-0**** variant. It has the Bluetooth/WLAN module removed, but other than that is the same. There are no other changes to the circuitry or RF performance of this variant compared with the 1-89*60-0**** variant.
1-89*00-0****	This variant is based on the 1-89*50-0**** variant. It has the SD card removed, but other than that is the same. There are no other changes to the circuitry or RF performance of this variant compared with the 1-89*50-0**** variant.

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As can be seen by the information provided in this letter and exhibits in this application, all variants are subsets of the main variant tested and the test results are applicable to all variants. No changes have been made to the circuitry, PCB layouts, RF performance or functionality between the variants, other than removal of functions.

Sincerely,

Company Officer: Prakriti Gupta
Telephone Number: +44 (0)1223) 876000
Email: prakriti.gupta@sepura.com
Position: Conformance Team Leader

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DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of result.

Usage of samples

Samples undergoing test have been selected by: The client.

Id		Control Number	Description	Model	Serial Nº	Date of Reception	Application
S/01		73315C/045	SCG2229	SCG2229	1PR002238GP76NE	2022-10-06	Element Under Test
S/01		73315C/043	Antenna BT-WiFi	IXXAT stubby omni 1dBi	-	2022-10-06	Element Under Test
S/01		73315C/038	Connecting Cable	-	-	2022-10-06	Element Under Test
S/01		73315C/018	Antenna (400-430 MHz)	320-00008	-	2022-10-03	Element Under Test
S/01		73315C/001	Laptop (EMC)	Latitude 7280	95PVNH2	2022-10-03	Auxiliary Element
S/01		73315C/008	AC/DC Adapter	LA65NS2-01	-	2022-10-03	Auxiliary Element
S/01		73315C/023	USB to RS232 Cable	-	-	2022-10-03	Auxiliary Element
S/01		73315C/048	Remote Control	-	1PS602110CCW6MQ	2022-10-06	Auxiliary Element
S/01		73315C/050	Loudspeaker	300-00719	-	2022-10-06	Auxiliary Element
S/02		73315C/051	SCG2229	SCG2229	1PR002238GP76NH	2022-10-06	Element Under Test
S/02		73315C/081	RS232 - USB Cable	260240	-	2024-04-09	Element Under Test
S/02		73315C/052	Handset Base	HBC3	4P102131B7000Y	2022-10-06	Element Under Test
S/02		73315C/046	Handset Base	HBC3	4P102131B700009	2022-10-06	Element Under Test
S/02		75691/043	Laptop	LATITUDE E7240	99RKP12	2024-01-17	Auxiliary Element
S/02		73315C/074	Speaker Mic	CC VAC RSM	3PS2021949BK	2024-01-17	Auxiliary Element
S/02		73315C/075	Radio Unit	SCC3	1PS702149CCZ9VQ	2024-04-09	Auxiliary Element
S/02		73315C/084	Antenna (430 – 472 MHz)	330-00010	-	2024-04-09	Element Under Test
S/02		73315C/076	GPS Antenna	300-00063	-	2024-04-09	Auxiliary Element
S/02		73315C/080	RS232 Cable	260240	-	2024-04-09	Auxiliary Element
S/02		73315C/077	Loudspeaker	300-00719	-	2024-04-09	Auxiliary Element

Notes referenced to samples during the project:

Id		Type
S/01		Samples used for radiated tests in operation modes 1 and 2.
S/02		Samples used for radiated tests in operation modes 3 and 4.

Test sample description

Ports..... :	Port name and description	Cable					
		Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾		
		TETRA ant port	5m	[X]	[X]	[]	
		BT and Wi-Fi port		[X]	[]	[]	
		GNSS port	5m	[X]	[]	[]	
		Ethernet	5m	[X]	[]	[]	
		Power (way D sub male)	5m	[X]	[]	[]	
Console 1 (15 way D sub female)	5m	[X]	[X]	[]			
Supplementary information to the ports..... :							
Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
[X]	DC: 10.8-15.6V						
Rated Power	12V DC rated 90W						
Clock frequencies.....							
Other parameters							
Software version	1810 002 10138						
Hardware version	PLX-890155A0-01 (H/W mod state 7)						
Dimensions in cm (W x H x D)							
Mounting position	[]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					
	[X]	Other: vehicle installation					
Modules/parts..... :	Module/parts of test item		Type		Manufacturer		
	BT/WiFi module		1LV		Murata		
	GNSS module		M-10		U-Blox		
Accessories (not part of the test item)	Description		Type		Manufacturer		
	SCC3		-		Sepura		
	HBC3		-		Sepura		
	Loudspeaker		-		Sepura		
Documents as provided by the applicant..... :	Description		File name		Issue date		
	safety guide		DOC-00170		-		
	quick ref guide		DOC-03196		-		
	SCG2229 full installation guide		DOC-04384		-		

⁽³⁾ Only for Medical Equipment

Identification of the client

Sepura Limited
9000 Cambridge Research Park, Beach Drive, Waterbeach, Cambridge CB25 9TL, United Kingdom

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2022-11-15
Date (finish)	2024-04-17

Document history

Report number	Date	Description
73315RRF.003	2023-02-07	First release.
73315RRF.003A1	2024-08-08	Second release. New operation modes are added in Appendix A. This modification test report cancels and replaces the test report 73315RRF.003.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %

Remarks and comments

The tests have been performed by the technical personnel: Rafael Fernández, Pablo Redondo, Álvaro Gutierrez and Valentín Andarias.

Used instrumentation for Operation Modes 1 and 2:

Control No.	Equipment	Model	Manufacturer	Next Calibration
04825	SEMIANECHOIC ABSORBER LINED CHAMBER	FACT 3 200 STP	ETS LINDGREN	N/A
04826	SHIELDED ROOM	S101	ETS LINDGREN	N/A
04578	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2024-09-01
06165	EMI TEST RECEIVER 9kHz-7GHz	ESR7	ROHDE AND SCHWARZ	2023-11-27
04611	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2023-08-16
05705	PRE-AMPLIFIER G>40dB 1GHz-18GHz	BLMA 0118-1M	BONN ELEKTRONIK	2023-12-26
04657	HORN ANTENNA 18-40GHz	BBHA 9170	SCHWARZBECK MESS-ELEKTRONIK	2023-06-12
08856	PRE-AMPLIFIER G>30dB 18-40GHz	BLMA 1840-4A	BONN ELEKTRONIK	2024-02-27
09555	TWO-CHANNEL POWER SUPPLY, 32V, 10/5A, 188W	HMP2020	ROHDE AND SCHWARZ	N/A
07758	DIGITAL MULTIMETER	175	FLUKE	2023-11-08

Used instrumentation for Operation Modes 3 and 4:

Control No.	Equipment	Model	Manufacturer	Next Calibration
06791	SEMIANECHOIC ABSORBER LINED CHAMBER	FACT 3 200 STP	ETS LINDGREN	N/A
06792	SHIELDED ROOM	S101	ETS LINDGREN	N/A
06609	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2025-04-22
06615	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2025-04-04
06143	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2027-01-22
06496	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2026-12-01
03783	PRE-AMPLIFIER G>30dB 1GHz-18GHz	BLMA 0118-3A	BONN ELEKTRONIK	2025-03-15
04716	SIGNAL AND SPECTRUM ANALYZER 2Hz-50GHz	FSW50	ROHDE AND SCHWARZ	2024-08-12
05880	DC POWER SUPPLY 30V/5A	U8002A	KEYSIGHT TECHNOLOGIES	N/A
07760	DIGITAL MULTIMETER	175	FLUKE	2024-11-08
04848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	N/A

Testing verdicts

Not applicable:	N/A
Pass:	P
Fail:	F
Not measured:	N/M

Summary

FCC PART 15, 90 PARAGRAPH / RSS-119, RSS-247, RSS-Gen			
Requirement – Test case		Verdict	Remark
FCC 15.31 (h), FCC 15.209 (a), 15.247 (d), 90.210 (b) / RSS-119 5.8, RSS-247 5.5, RSS-Gen 8.9	Transmitter out of band radiated emissions with simultaneous transmissions	P	(1)
<u>Supplementary information and remarks:</u> (1) Only Simultaneous transmission radiated spurious emission test was requested.			

Appendix A: Test results

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Radiated emissions.....20

TEST CONDITIONS

(*) Declared by the Applicant

POWER SUPPLY (*):

Vnominal: 12 Vdc
Type of Power Supply: DC (Vehicle Battery).

ANTENNA (*):

Type of Antenna for IEEE 802.11 b / BT EDR: External (Antenna with SMA Connector).
Maximum Declared Antenna Gain for IEEE 802.11 b / BT EDR: +1 dBi

Type of Antenna for TETRA: 5/8 wave M8 Standard Mount.
Maximum Declared Antenna Gain for TETRA: +7 dBi

RADIOS AND CHANNELS TESTED:

	Bluetooth EDR / FHSS	
Mode:	Basic Rate (GFSK - 1-DH5)	
Channel Spacing:	1 MHz	
Frequency Range:	2400 MHz to 2483.5 MHz	
Transmit Channels	Channel	Channel Frequency (MHz)
	High	2480

	WLAN 2.4 GHz (IEEE 802.11 bgn20) / DTS	
Mode:	802.11 n20: index MSC0 (SISO)	
Channel Bandwidth:	20 MHz	
Frequency Range:	2400 MHz to 2483.5 MHz	
Transmit Channel:	Channel	Channel Frequency (MHz)
	High	2462

	TETRA	
Mode:	Single Channel (only one channel at a time)	
Channel Spacing:	25 kHz	
Frequency Range:	380 MHz to 470 MHz	
Transmit Channel:	Channels Frequency (MHz)	
	429.9875	
	450.0250	

The EUT was tested in the following operating mode:

- Continuous transmission with a modulated carrier at maximum power in all required channels selecting the supported data rates/modulations types.

During transmitter test the EUT was being controlled by the SW tool to operate in a continuous transmit mode on the test channel as required and in each of the different modulation modes.

TESTED SIMULTANEOUS TRANSMISSION MODES:

- **Operation Mode 1:**

Simultaneous transmission mode Bluetooth EDR, TETRA, with the EUT configured to simultaneously transmit the following signals at maximum output power:

Bluetooth EDR in the High Channel (2480 MHz), TETRA in Channel Frequency 429.9875 MHz.

- **Operation Model 2:**

Simultaneous transmission mode WLAN 2.4 GHz, TETRA, with the EUT configured to simultaneously transmit the following signals at maximum output power:

WLAN 2.4 GHz in the High Channel (2462 MHz), TETRA in Channel Frequency 429.9875 MHz.

- **Operation Mode 3:**

Simultaneous transmission mode Bluetooth EDR, TETRA, with the EUT configured to simultaneously transmit the following signals at maximum output power:

Bluetooth EDR in the High Channel (2480 MHz), TETRA in Channel Frequency 450.025 MHz.

- **Operation Mode 4:**

Simultaneous transmission mode WLAN 2.4 GHz, TETRA, with the EUT configured to simultaneously transmit the following signals at maximum output power:

WLAN 2.4 GHz in the High Channel (2462 MHz), TETRA in Channel Frequency 450.025 MHz.

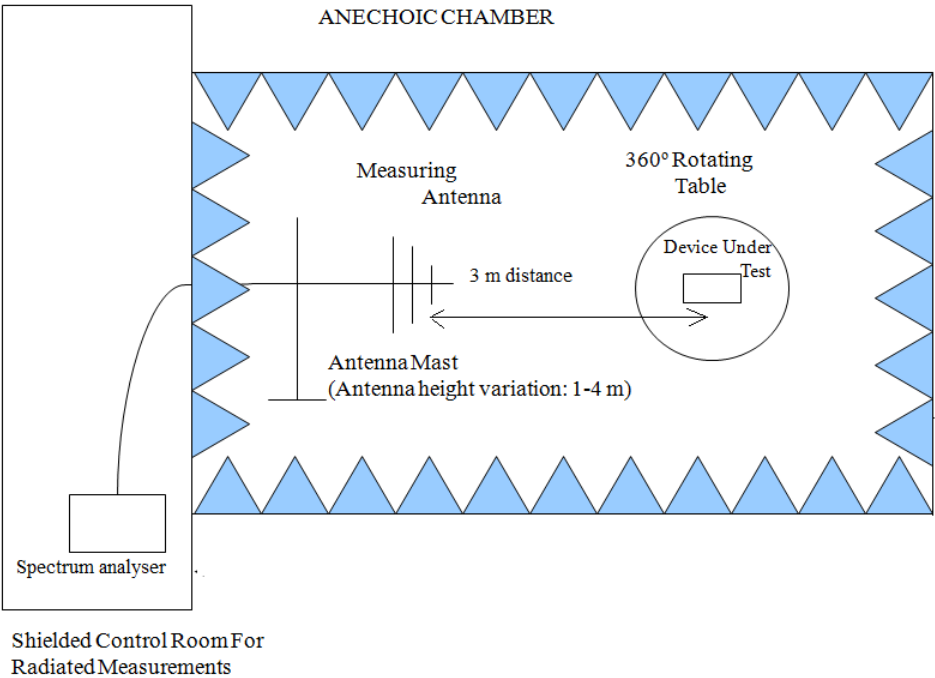
RADIATED MEASUREMENTS:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at a distance of 3 m (Bilog antenna for 30 MHz to 1000 MHz, Double ridge horn antenna 1 GHz-17 GHz and horn antenna 17 GHz-26 GHz), at distance of 1.5 m for the frequency range 17 GHz-26 GHz.

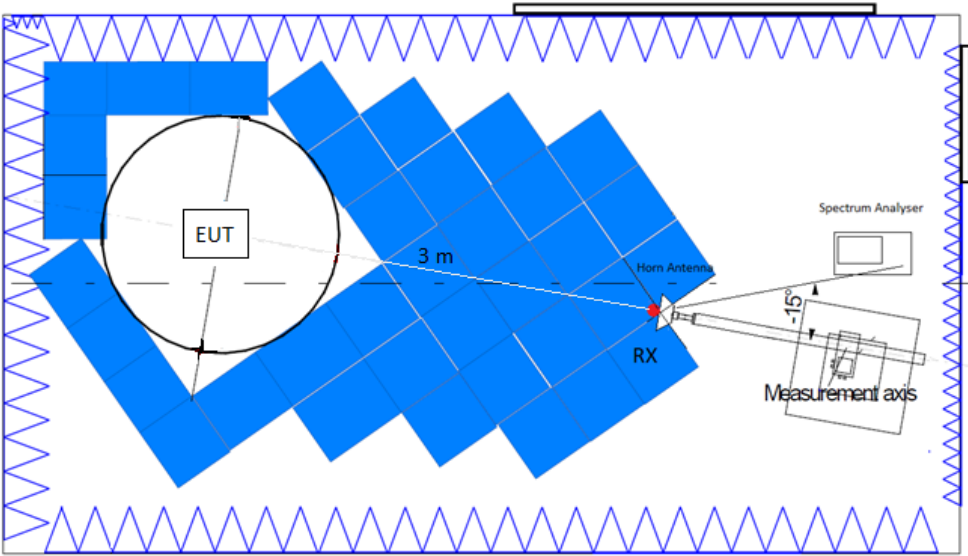
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

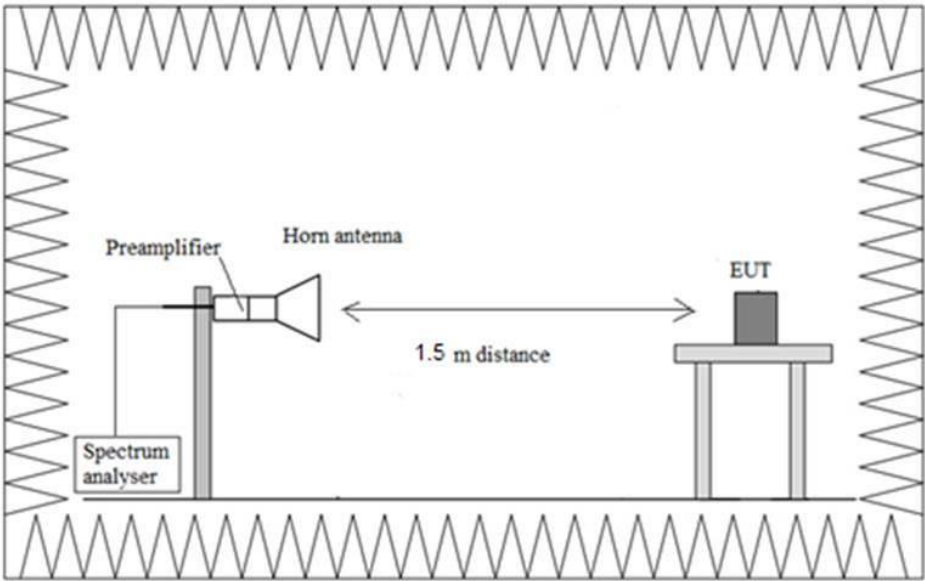
Radiated measurements setup $30\text{ MHz} < f < 1\text{ GHz}$:



Radiated measurements setup $f > 1\text{ GHz}$ up to 17 GHz :



Radiated measurements setup $f > 17\text{ GHz}$:



Radiated emissions

Limits:

FCC §15.247: Radiated emissions which fall in the restricted bands, as defined in §15.205 (a), appearing outside of the band 13.110 MHz - 14.010 MHz band must also comply with the radiated emission limits specified in §15.209 (a) (see §15.205 (c) / RSS-Gen):

Frequency Range (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
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	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 40000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

RSS-247: Attenuation below the general field strength limits specified in RSS-Gen is not required.

FCC §2.1053, §90.210 (b) (3) (421-512 MHz band):

(b) Emission Mask B. For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log(P)$ dB.

RSS-119 5.5, 5.8:

Table 17 - Emission Mask Y

Displacement Frequency. f_d (kHz)	Minimum Attenuation (dB)	Resolution Bandwidth (Hz)
$12.375 < f_d \leq 13.975$	whichever is the lesser attenuation: $30 + 16.67(f_d - 12.375)$ or $55 + 10 \log_{10}(p)$	Specified in Section 4.2.2
$f_d > 13.975$	whichever is the lesser attenuation: 57 or $55 + 10 \log_{10}(p)$	Specified in Section 4.2.2

Results:

The situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

All tests were performed in a semi-anechoic chamber at a distance of 3 m for the frequency range 30 MHz-17 GHz and at distance of 1.5 m for the frequency range 17 GHz-26 GHz.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

A resolution bandwidth / video bandwidth of 100 kHz / 300 kHz was used for frequencies between 30 MHz up to 1 GHz and 1 MHz / 3 MHz for frequencies above 1 GHz.

Test performed on the following worst-cases in all relevant tests channels.

- **Operation Mode 1:**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies detected at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

Spurious frequencies with peak levels above the average limit (54 dB μ V/m at 3 m) are measured with average detector for checking compliance with the average limit.

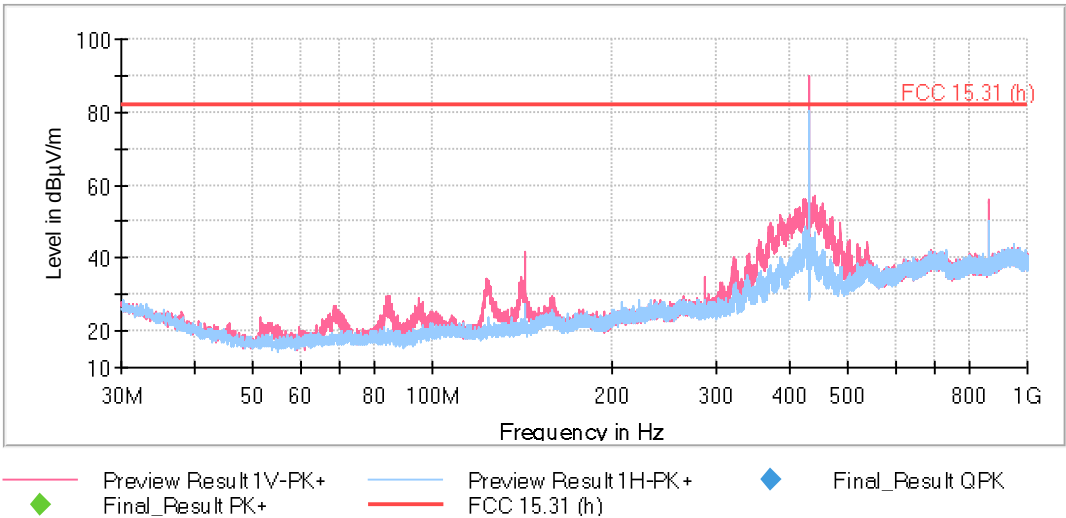
No spurious frequencies detected at less than 20 dB below the limit.

Verdict:

PASS

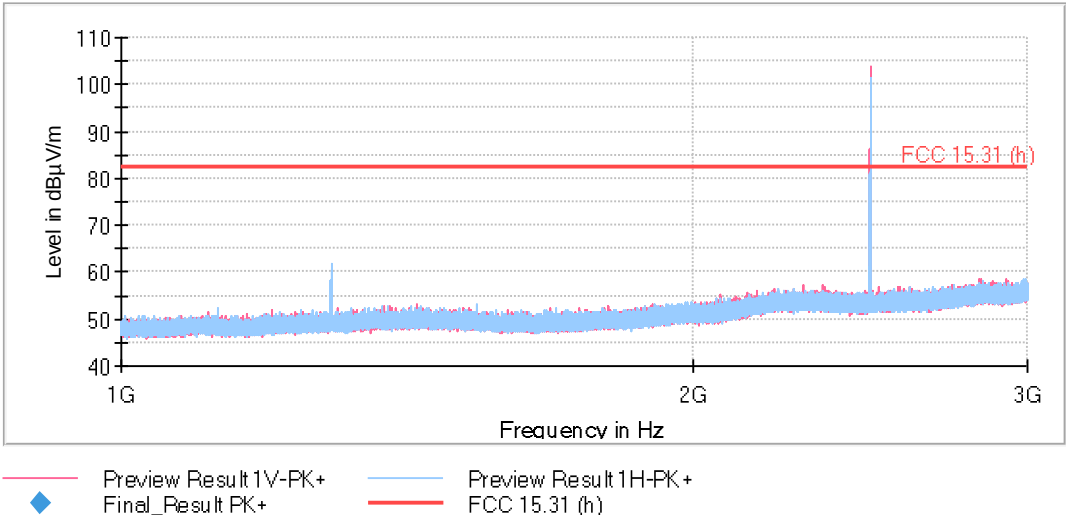
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz:

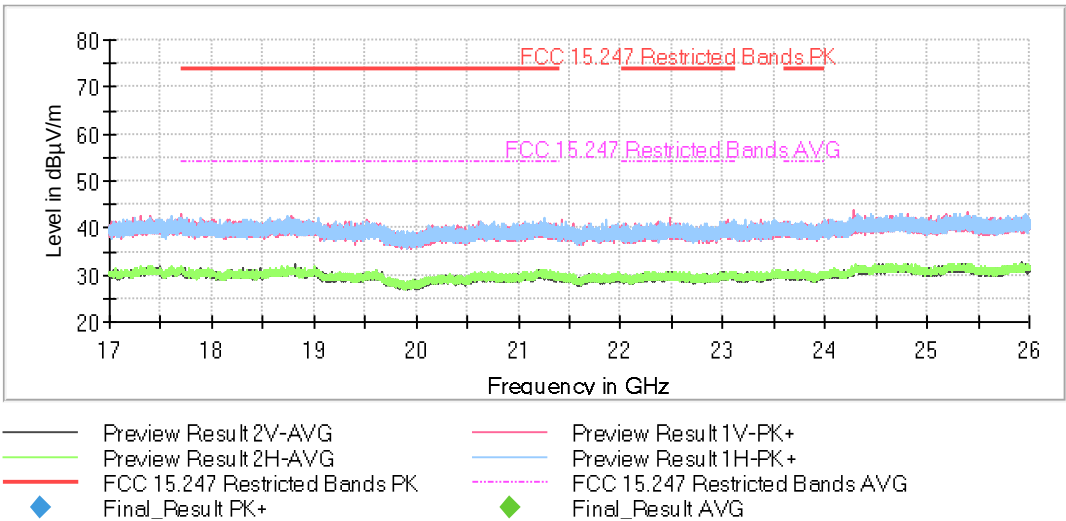
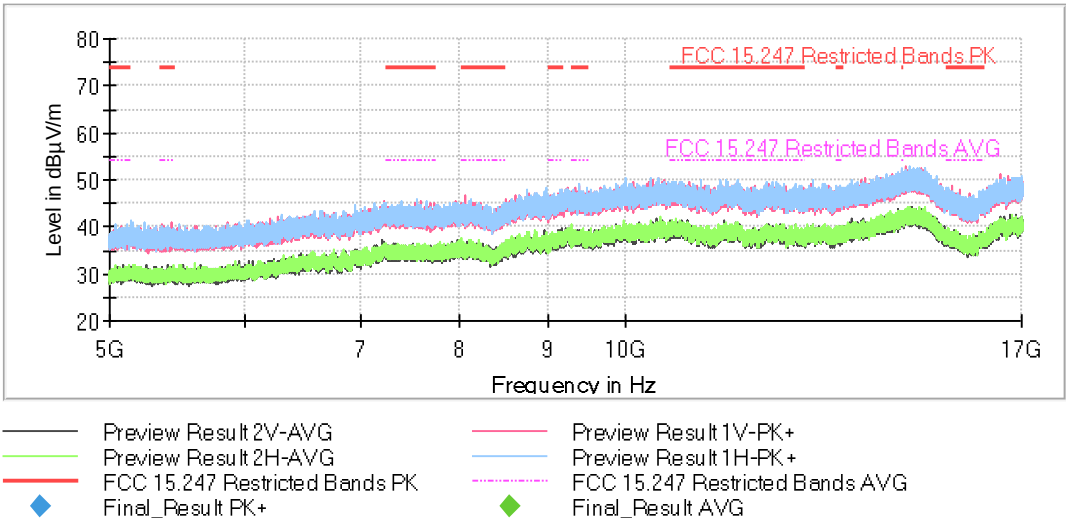
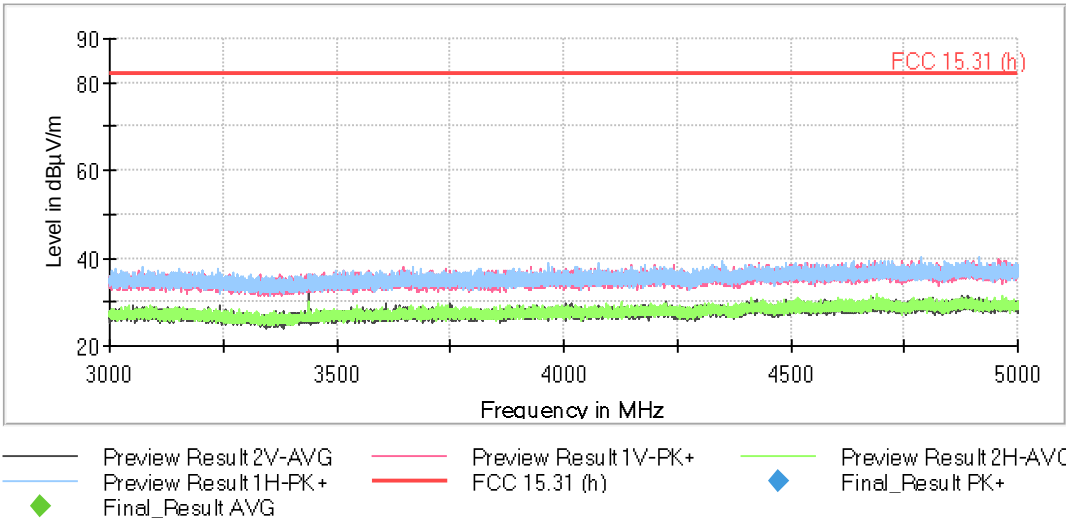


The peak above the limit is the TETRA carrier frequency.

FREQUENCY RANGE 1 - 26 GHz:



The peak above the limit is the Bluetooth EDR carrier frequency.



- **Operation Mode 2:**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies detected at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

Spurious frequencies with peak levels above the average limit (54 dBµV/m at 3 m) are measured with average detector for checking compliance with the average limit.

Spurious frequencies detected at less than 20 dB below the limit:

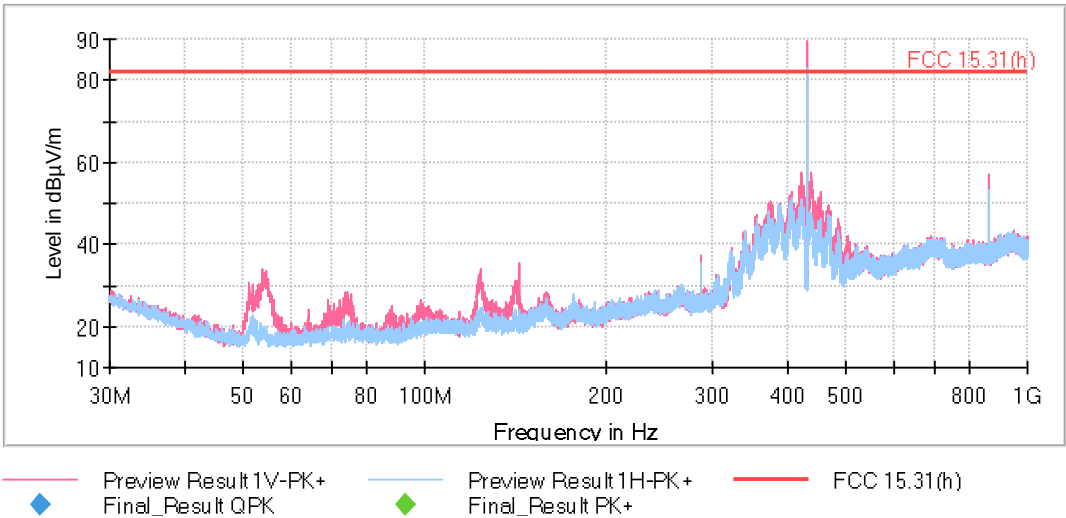
Spurious Frequency (GHz)	Emission Level (dBµV/m)	Polarization	Detector
1.29024	64.27	V	Peak

Verdict:

PASS

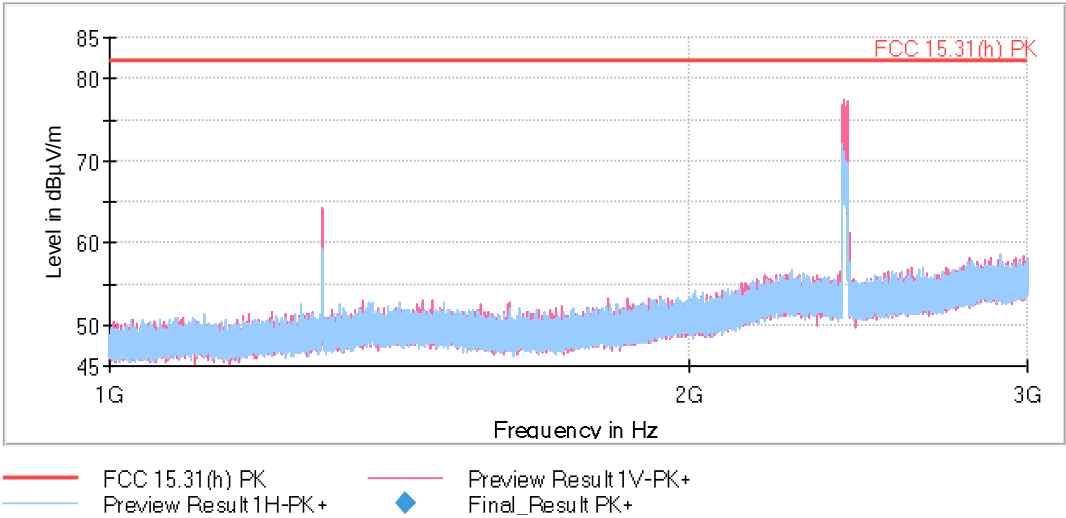
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz:

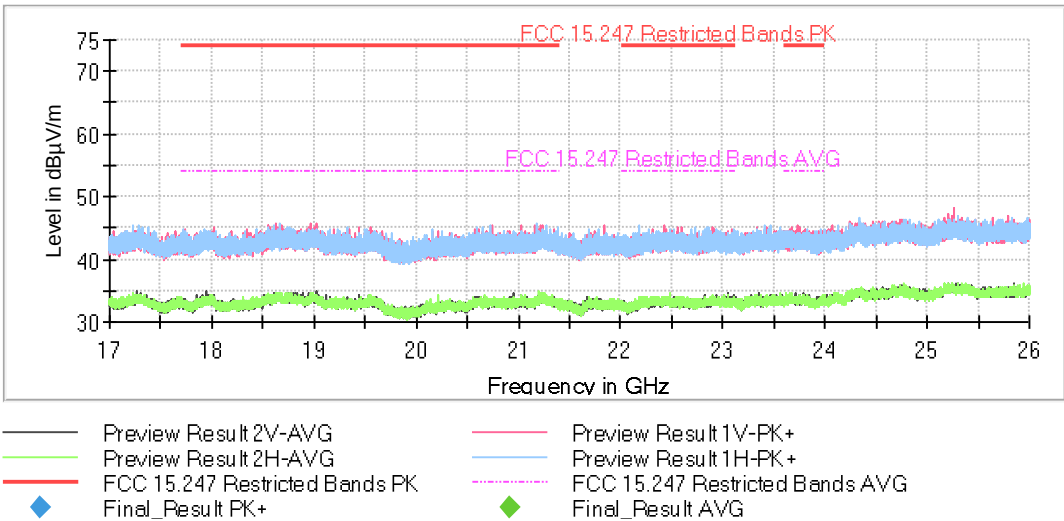
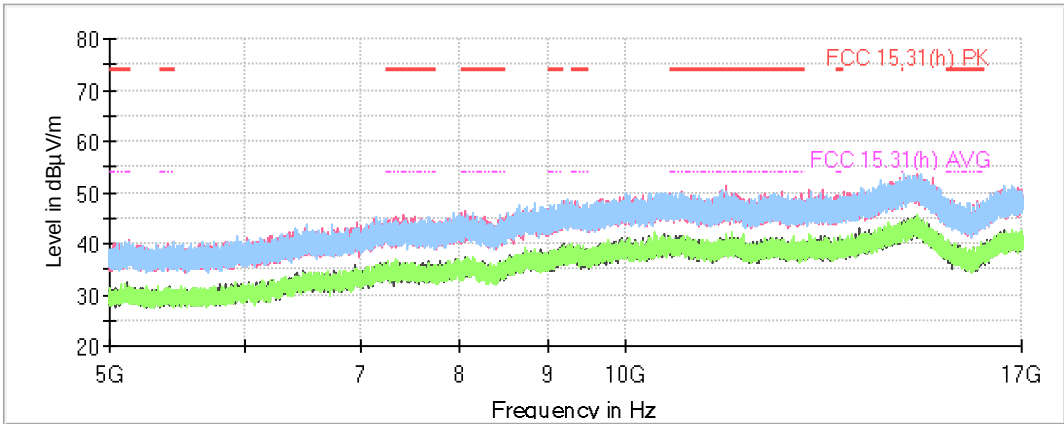
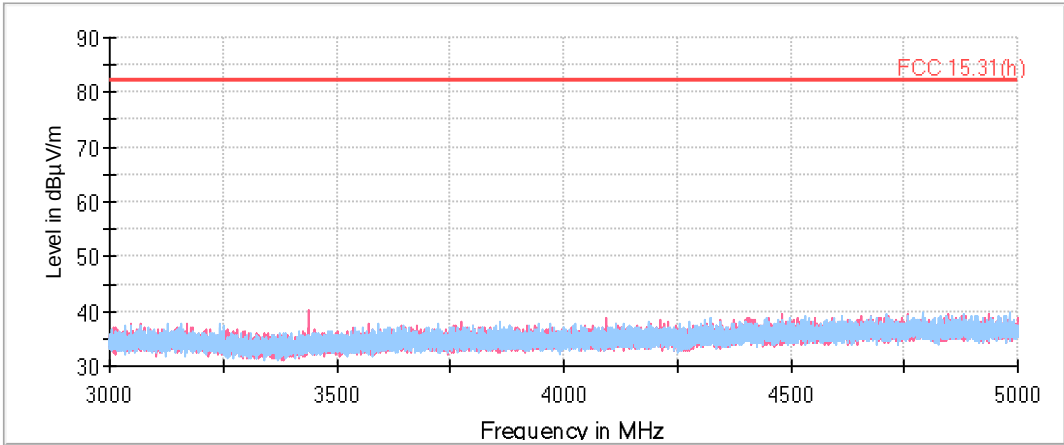


The peak above the limit is the TETRA carrier frequency.

FREQUENCY RANGE 1 - 26 GHz:



The highest peak is the WLAN 2.4 GHz carrier frequency.



- **Operation Mode 3:**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies detected at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

Spurious frequencies with peak levels above the average limit (54 dBµV/m at 3 m) are measured with average detector for checking compliance with the average limit.

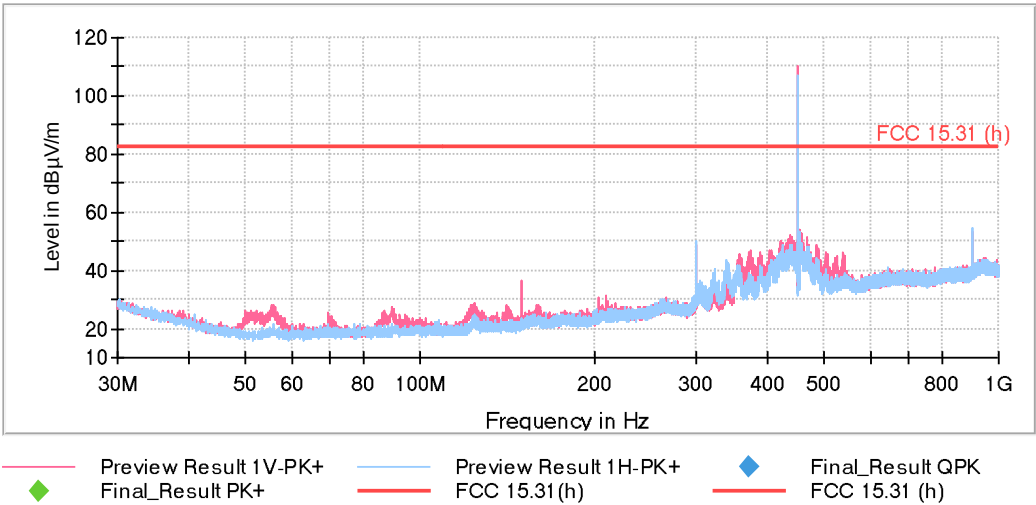
No spurious frequencies detected at less than 20 dB below the limit.

Verdict:

PASS

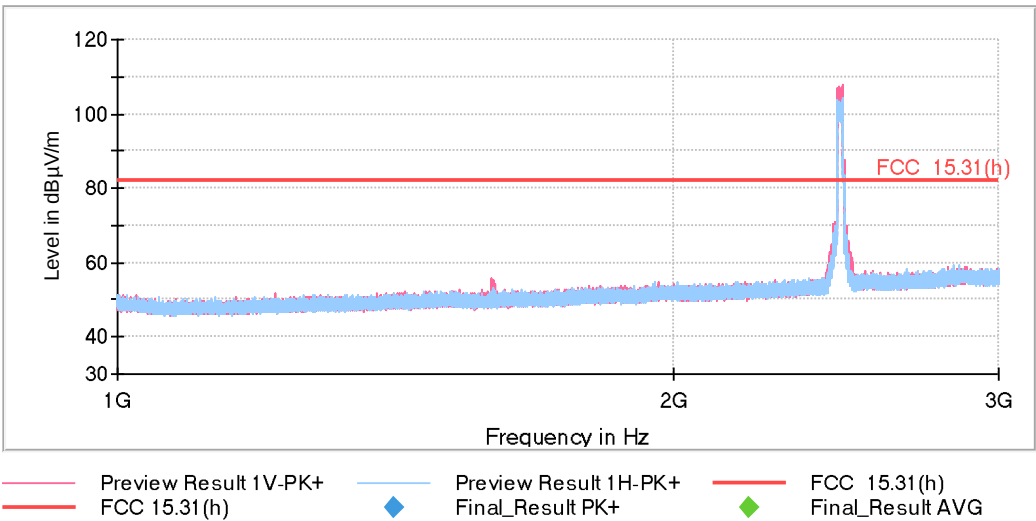
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz:

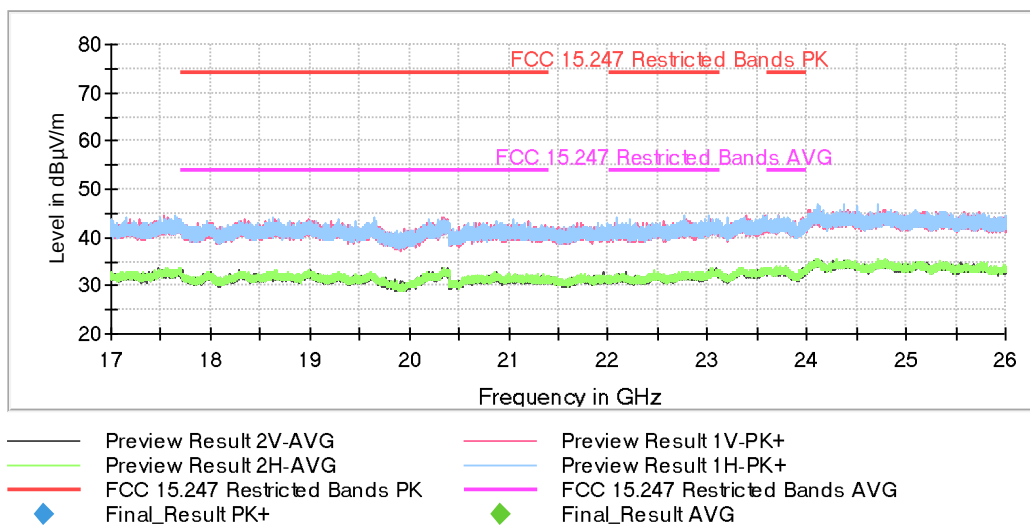
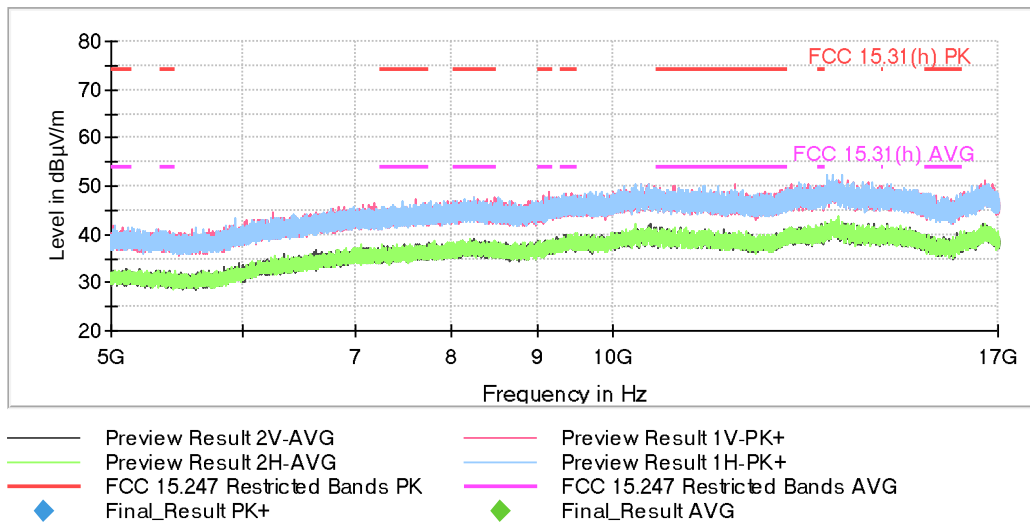
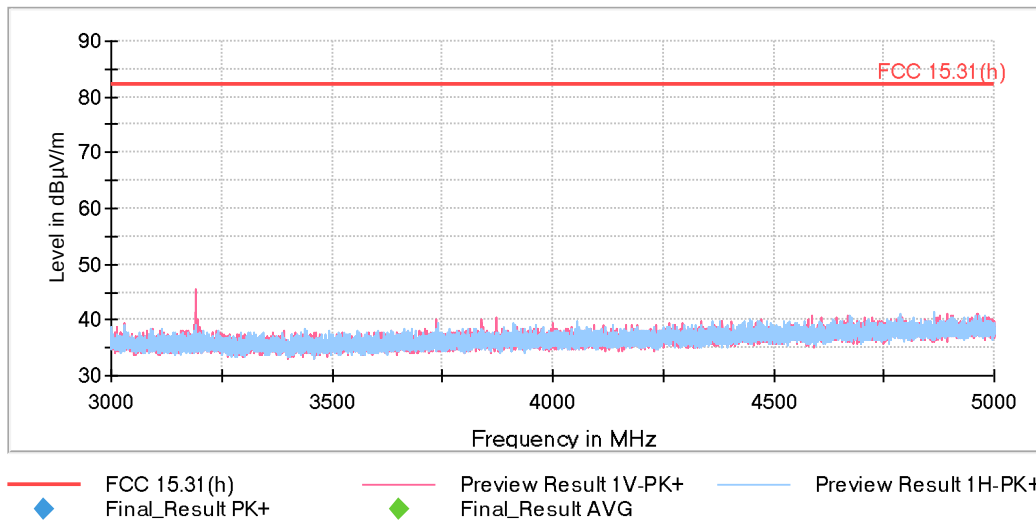


The peak above the limit is the TETRA carrier frequency.

FREQUENCY RANGE 1 - 26 GHz:



The peak above the limit is the Bluetooth EDR carrier frequency.



- **Operation Mode 4:**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies detected at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

Spurious frequencies with peak levels above the average limit (54 dB μ V/m at 3 m) are measured with average detector for checking compliance with the average limit.

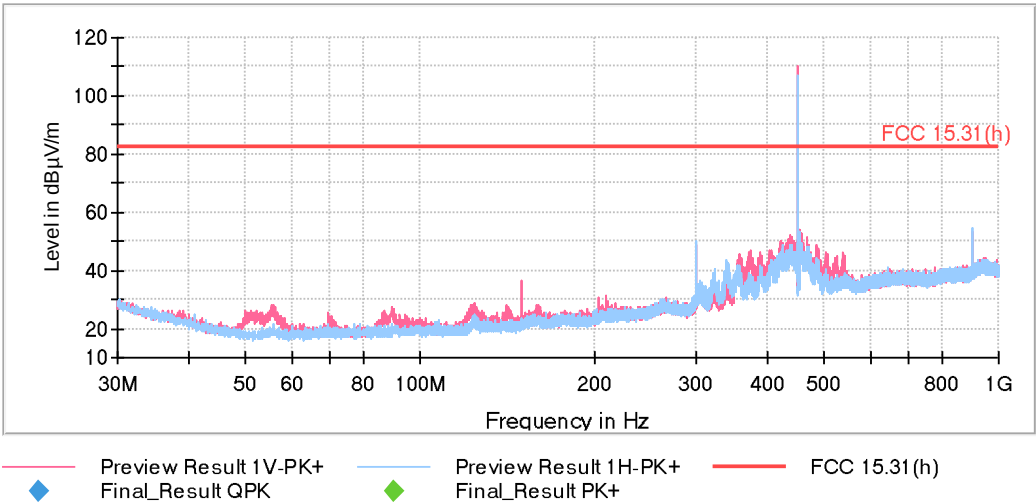
No spurious frequencies detected at less than 20 dB below the limit.

Verdict:

PASS

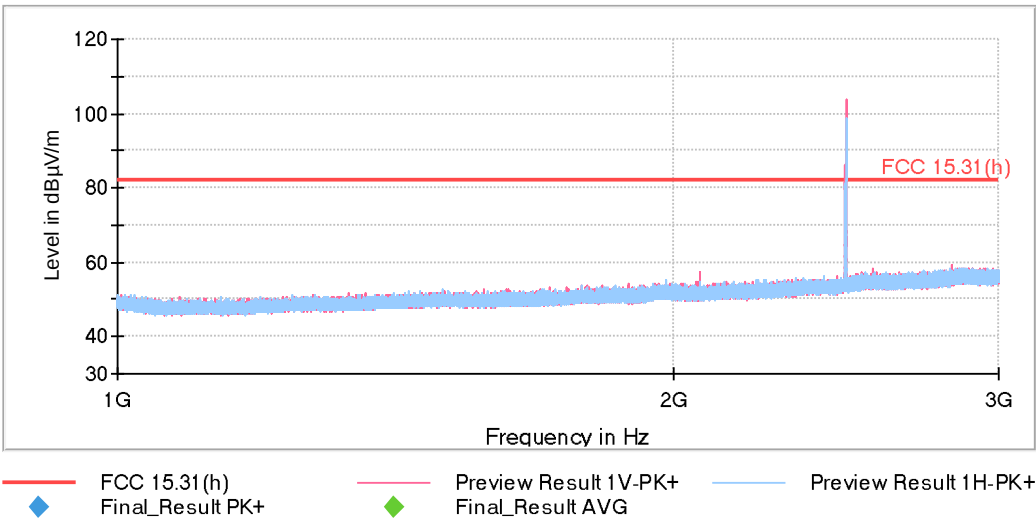
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz:

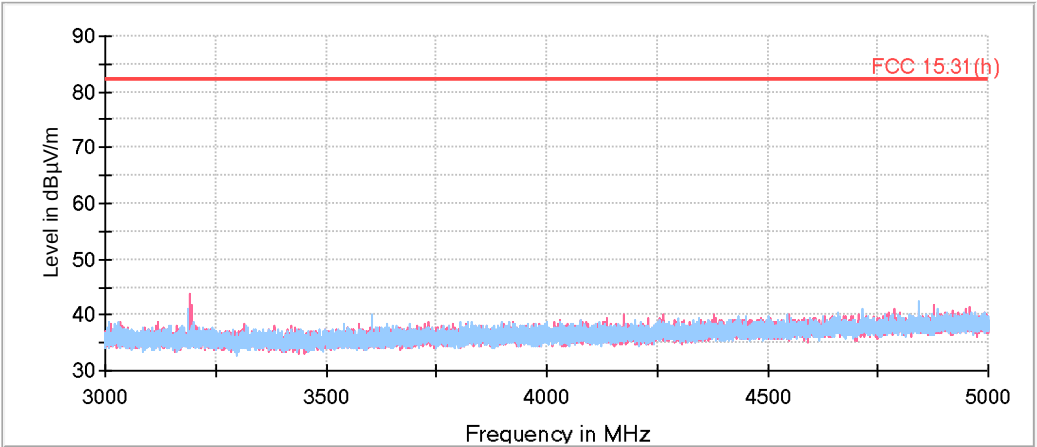


The peak above the limit is the TETRA carrier frequency.

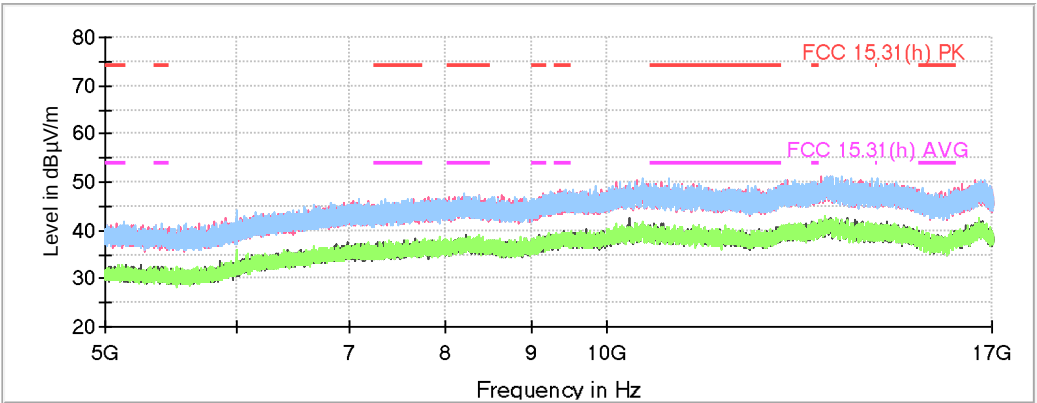
FREQUENCY RANGE 1 - 26 GHz:



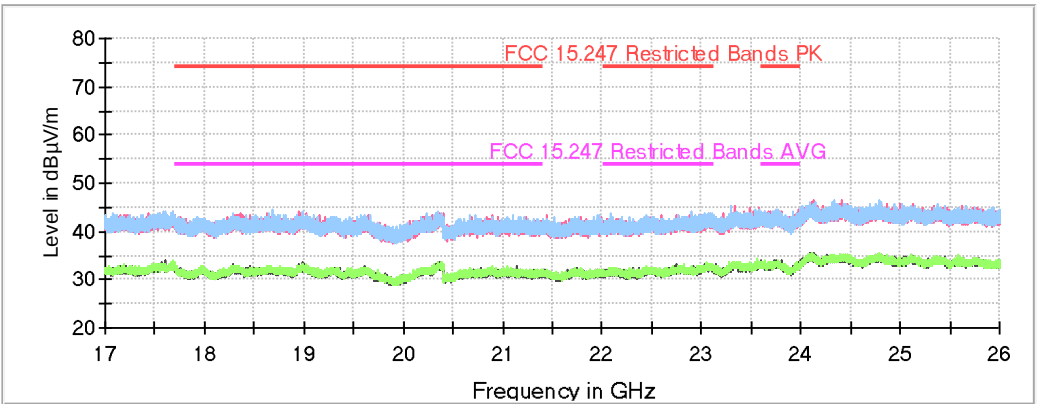
The peak above the limit is the WLAN 2.4 GHz carrier frequency.



— FCC 15.31(h) — Preview Result 1V-PK+ — Preview Result 1H-PK+
◆ Final_Result PK+ ◆ Final_Result AVG



— Preview Result 2V-AVG — Preview Result 1V-PK+
— Preview Result 2H-AVG — Preview Result 1H-PK+
— FCC 15.247 Restricted Bands PK — FCC 15.247 Restricted Bands AVG
◆ Final_Result PK+ ◆ Final_Result AVG



— Preview Result 2V-AVG — Preview Result 1V-PK+
— Preview Result 2H-AVG — Preview Result 1H-PK+
— FCC 15.247 Restricted Bands PK — FCC 15.247 Restricted Bands AVG
◆ Final_Result PK+ ◆ Final_Result AVG