DEKRA Testing and Certification, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España
C.I.F. A29 507 456

ISED CABid: ES1909

Test report No:
NIE: 68649RRF.001

Partial Test Report
Reference Standard:
USA FCC Part 22, Part 24, Part 27, Part 90
CANADA IC RSS-130 RSS-132, RSS-133, RSS-139, RSS-Gen

(*) Identification of item tested	Continuous Positive Airway Pressure (CPAP) Device
(*) Trademark	ResMed
(*) Model and /or type reference	39001
(*) Derived model not tested	USA variants: 39485, 39486, 39487 Canada variants: 39488, 39489, 39490
Other identification of the product	HW version: 1.0 SW version: SW04600 FCC ID: 2ACHL-AIR11M1 IC: 9103A-AIR11M1
(*) Features	LTE Cat-M1, BLE
Applicant	ResMed Pty Ltd 1 Elizabeth Macarthur Drive, Bella Vista, NSW, 2153
Test method requested, standard	USA FCC Part 22 (10-1-20 Edition): Public Mobile Services. USA FCC Part 24 (10-1-20 Edition): Personal Communications Services. USA FCC Part 27 (10-1-20 Edition): Miscellaneous Wireless Communications Services. USA FCC Part 90 (10-1-20 Edition): Private Land Mobile Radio Services. CANADA IC RSS-130 Issue 2, Feb 2019. CANADA IC RSS-132 Issue 3, Jan. 2013. CANADA IC RSS-133 Issue 6 Amendment 1, Jan. 2018. CANADA IC RSS-139 Issue 3, Jul. 2015. CANADA IC RSS-Gen Issue 5 (March 2019). ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.
Approved by (name / position & signature)	Rafael López Martín EMC Consumer & RF Lab. Manager  2021.11.09 16:54:29 +01'00'
Date of issue	2021-11-0917
Report template No	FDT08_23 (*) "Data provided by the client"

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Competences and guarantees

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

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

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Uncertainty

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

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 of the model 39001 is a CPAP device with integrated cellular and Bluetooth connectivity.

3. Derived models not tested. These models have been declared by the supplier of the sample as being the same as the model under test.

ResMed
Changing lives with every breath

Date: 24 Aug 2021

DECLARATION OF EQUIVALENCE

This document declares that the following designated products are equivalent to the units under test **39001** and **39002**.

USA Variants:

Model Name / Product Code	Marketing Name
39485	AirSense 11 AutoSet
39486	AirSense 11 CPAP
39487	AirSense 11 Elite

Canada Variants:

Model Name / Product Code	Marketing Name
39488	AirSense 11 AutoSet
39489	AirSense 11 CPAP
39490	AirSense 11 Elite

All the above stated products have the same hardware, cellular firmware and Bluetooth firmware.

Applicant:
Company Name: ResMed Pty Ltd
Address: 1 Elizabeth Macarthur Drive,
Bella Vista NSW 2153
Australia

By,

Christopher Jenkins
Title: Associate Manager – Systems Engineering
Company: ResMed Pty Ltd
Telephone: +61 2 8884 1517
e-mail: Christopher.jenkins@resmed.com.au

ResMed Pty Ltd 1 Elizabeth Macarthur Drive, Bella Vista NSW 2153, Australia
T +61 2 8884 1000 E Christopher.jenkins@ResMed.com.au ResMed.com

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.

Sample S/01 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
68649/003	Continuous Positive Airway Pressure (CPAP) Device	39001	22201142551	2021/07/29
68649/007	AC/DC Adapter	--	00003D00	2021/07/29
63467B/015	Climate Line	--	--	2020/10/14

Sample S/01 has undergone the following test(s): The Radiated tests indicated in the Appendixes A, B & C.

Test sample description

Ports…… :	Port name and description	Cable				
		Specified max length [m]	Attached during test	Shielded	Coupled to patient(3)	
	Power		☒	☐	☐	
Supplementary information to the ports…… :	--					
Rated power supply .....:	Voltage and Frequency		Reference poles			
			L1	L2	L3	N	PE
	☒	AC: 100-240V~50-60 Hz 2.0A	☒	☐	☐	☒	☐
Rated Power .....:	24 VDC ± 1 VDC, 2.71A					
Clock frequencies.....:	N/A					
Other parameters .....:	390000 (PSU Model Number)					
Software version .....:	SW04600 (DUT)					
Hardware version .....:	1.0 (DUT)					
Dimensions in cm (W x H x D) ....:	138.5 mm x 259.4 mm x 94.5 mm					
Mounting position .....:	☒	Table top equipment				
Modules/parts.....:	Module/parts of test item		Type		Manufacturer	
	Wireless Module		EXS62-W		Thales	
	Bluetooth LE		EFR32BG1		SiLabs	
Accessories (not part of the test item) .....:	Description		Type		Manufacturer	
	--					
Documents as provided by the applicant.....:	Description		File name		Issue date	
	--					

(3) Only for Medical Equipment

Identification of the client

ResMed Pty Ltd
1 Elizabeth Macarthur Drive,
Bella Vista, NSW, 2153

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2021-08-31
Date (finish)	2021-09-02

Document history

Report number	Date	Description
68649RRF.001	2021-11-09	First release

Environmental conditions

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

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

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

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

Remarks and comments

The tests have been performed by the technical personnel: José Manuel Jiménez.

Used instrumentation:

Radiated Measurements:

		Last Calibration	Due Calibration
1.	Semianechoic Absorber Lined Chamber ETS LINDGREN FACT 3 200 STP	N.A.	N.A.
2.	Shielded Room ETS LINDGREN S101	N.A.	N.A.
3.	Hybrid Bilog Antenna 30 MHz - 6 GHz ETS LINDGREN 3142E	2020/10	2023/10
4.	Pre-amplifier G>40dB 10MHz-6GHz Bonn Elektronik BLNA 0160-01N	2021/03	2022/03
5.	EMI Test Receiver 7 GHz ROHDE AND SCHWARZ ESR7	2019/10	2021/10
6.	Horn antenna 1-18 GHz SCHWARZBECK BBHA 9120 D	2020/08	2023/08
7.	Pre-amplifier, G>30 dB ,1-18 GHz BONN ELEKTRONIK BLMA 0118-3A	2020/10	2021/10
8.	Signal and spectrum analyzer 10Hz-40GHz Rhode and Schwarz FSV40	2019/10	2021/10
9.	Broadband Horn antenna 18 - 40 GHz SCHWARZBECK MESS-ELEKTRONIK BBHA 9170	2020/05	2023/05
10.	Pre-amplifier G>30dB 18-40 GHz BONN ELEKTRONIK BLMA 1840-3G	2019/11	2021/11
11.	AC Power Supply 135/270 V, 5/10/20/40 A ELGAR CS-AC35(351SL)	2019/09	2022/09
12.	Digital Multimeter FLUKE 175	2020/11	2021/11

Testing verdicts

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

Summary

LTE Cat M1 Band FDD 5, LTE Cat M1 Band FDD 26

FCC PART 22 / IC RSS-132 PARAGRAPH		
Requirement – Test case	**Verdict**	**Remark**
FCC 22.913 / RSS-132 5.4: RF output power	N/M	(1)
FCC 2.1047 / RSS-132 5.2: Modulation characteristics	N/M	(1)
FCC 22.355 / RSS-132 5.3: Frequency stability	N/M	(1)
FCC 2.1049: Occupied Bandwidth	N/M	(1)
FCC 22.917 / RSS-132 5.5: Spurious emissions at antenna terminals	N/M	(1)
FCC 22.917 / RSS-132 5.5: Radiated emissions	P	
Supplementary information and remarks: (1) Test not requested.		

LTE Cat M1 Band FDD 2, LTE Cat M1 Band FDD 25

FCC PART 24 / IC RSS-133 PARAGRAPH		
Requirement – Test case	**Verdict**	**Remark**
FCC 24.232 / RSS-133 6.4: RF Output Power	N/M	(1)
FCC 2.1047 / RSS-133 6.2: Modulation Characteristics	N/M	(1)
FCC 24.235 / RSS-133 6.3: Frequency Stability	N/M	(1)
FCC 2.1049: Occupied Bandwidth	N/M	(1)
FCC 24.238 / RSS-133 6.5: Spurious Emissions at Antenna Terminals	N/M	(1)
FCC 24.238 / RSS-133 6.5: Radiated Emissions	P	
Supplementary information and remarks: (1) Test not requested.		

LTE Cat M1 Band FDD 4, LTE Cat M1 Band FDD 12, LTE Cat M1 Band FDD 13, LTE Cat M1 Band FDD 66

FCC PART 27 / IC RSS-130, IC RSS-139 PARAGRAPH		
Requirement – Test case	**Verdict**	**Remark**
FCC 27.50 / RSS-130 4.6., RSS-139 6.5.: RF Output Power	N/M	(1)
FCC 2.1047 / RSS-130 4.1., RSS-139 6.2.: Modulation Characteristics	N/M	(1)
FCC 27.54 / RSS-130 4.5., RSS-139 6.4.: Frequency Stability	N/M	(1)
FCC 2.1049: Occupied Bandwidth	N/M	(1)
FCC 27.53 / RSS-130 4.7., RSS-139 6.6.: Spurious Emissions at Antenna Terminals	N/M	(1)
FCC 27.53 / RSS-130 4.7., RSS-139 6.6.: Radiated Emissions	P	
Supplementary information and remarks: (1) Test not requested.		

LTE Cat M1 Band FDD 26

FCC PART 90 PARAGRAPH		
Requirement – Test case	**Verdict**	**Remark**
Clause 90.635 (b): RF output power	N/M	(1)
Clause 2.1047: Modulation characteristics	N/M	(1)
Clause 90.213: Frequency stability	N/M	(1)
Clause 2.1049: Occupied Bandwidth	N/M	(1)
Clause 90.691: Spurious emissions at antenna terminals	N/M	(1)
Clause 90.691: Radiated emissions	P	
Supplementary information and remarks: (1) Test not requested.		

Appendix A: Test results for FCC Part 22 & 90 / IC RSS-132.

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TEST CONDITIONS

POWER SUPPLY (V):

Vn: 120 Vac

Type of Power Supply: AC Voltage mains.

The subscript 'n' indicates nominal voltage test conditions.

ANTENNA:

Declared Gain for antennas:

Band	Gain (dBi)	Antenna type
LTE Band 5	+2.2	External
LTE Band 26	+2.2	External

TEST FREQUENCIES:

LTE Band 5. QPSK AND 16QAM MODULATIONS:

	Channel per Nominal Bandwidth (Frequency, MHz)			
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz
Lowest	20407 (824.7)	20415 (825.5)	20425 (826.5)	20450 (829.0)
Middle	20525 (836.5)	20525 (836.5)	20525 (836.5)	20525 (836.5)
Highest	20643 (848.3)	20635 (847.5)	20625 (846.5)	20600 (844.0)

LTE Band 26. QPSK AND 16QAM MODULATIONS:

- 814-824 MHz

	Channel per Nominal Bandwidth (Frequency, MHz)			
	BW = 1.4 MHz	BW = 3 MHz	BW=5 MHz	BW=10 MHz
Lowest	26697 (814.7)	26705 (815.5)	26715 (816.5)	N/A
Middle	26740 (819.0)	26740 (819.0)	26740 (819.0)	26740 (819.0)
Highest	26783 (823.3)	26775 (822.5)	26765 (821.5)	N/A

- 824-849 MHz

	Channel per Nominal Bandwidth (Frequency, MHz)				
	BW = 1.4 MHz	BW = 3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
Lowest	26797 (824.7)	26805 (825.5)	26815 (826.5)	26840 (829.0)	26865 (831.5)
Middle	26915 (836.5)	26915 (836.5)	26915 (836.5)	26915 (836.5)	26915 (836.5)
Highest	27033 (848.3)	27025 (847.5)	27015 (846.5)	26990 (844.0)	26965 (841.5)

Radiated emissions

SPECIFICATION:

FCC §2.1051 and §22.917. RSS-132 Clause 5.5.

> The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.
>
> In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz.

At Po transmitting power, the specified minimum attenuation becomes 43+10 log (Po), and the level in dBm relative to Po becomes:

Po (dBm) – [43 + 10 log (Po in mW) - 30] = -13 dBm

FCC §90.691:

> (a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
>
> > (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
> >
> > (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section

METHOD:

The measurement was performed with the EUT inside an anechoic chamber. The spectrum was scanned from 30 MHz to at least the 10th harmonic of the highest frequency generated within the equipment.

Detected emissions were maximized at each frequency by rotating the EUT and adjusting the height and polarization of the measuring antenna. The maximum meter reading was recorded.

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

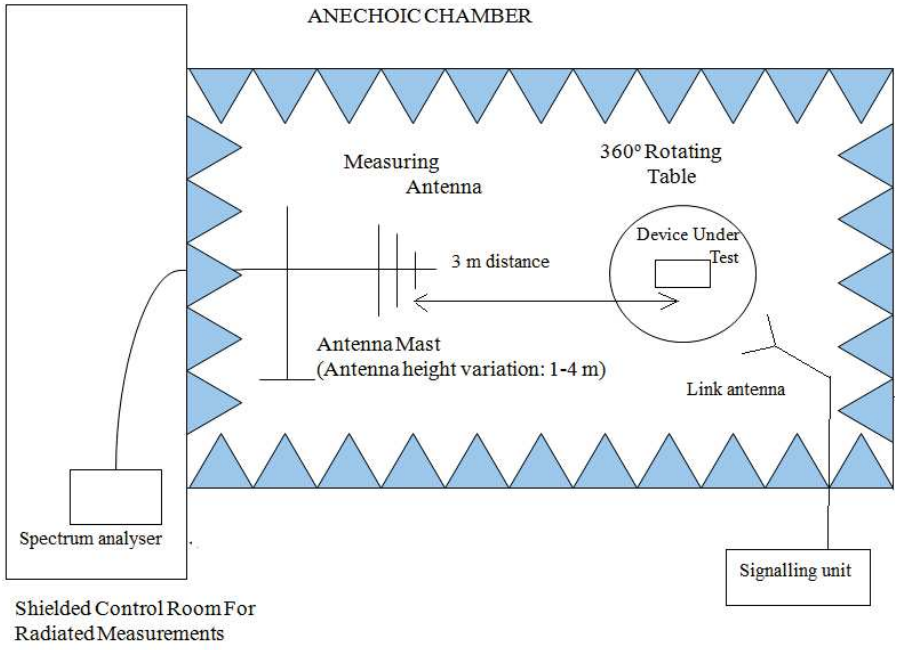
Measurement Limit:

According to specification. the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. P in watts.
At Po transmitting power. the specified minimum attenuation becomes 43+10log (Po) and the level in dBm relative Po becomes:

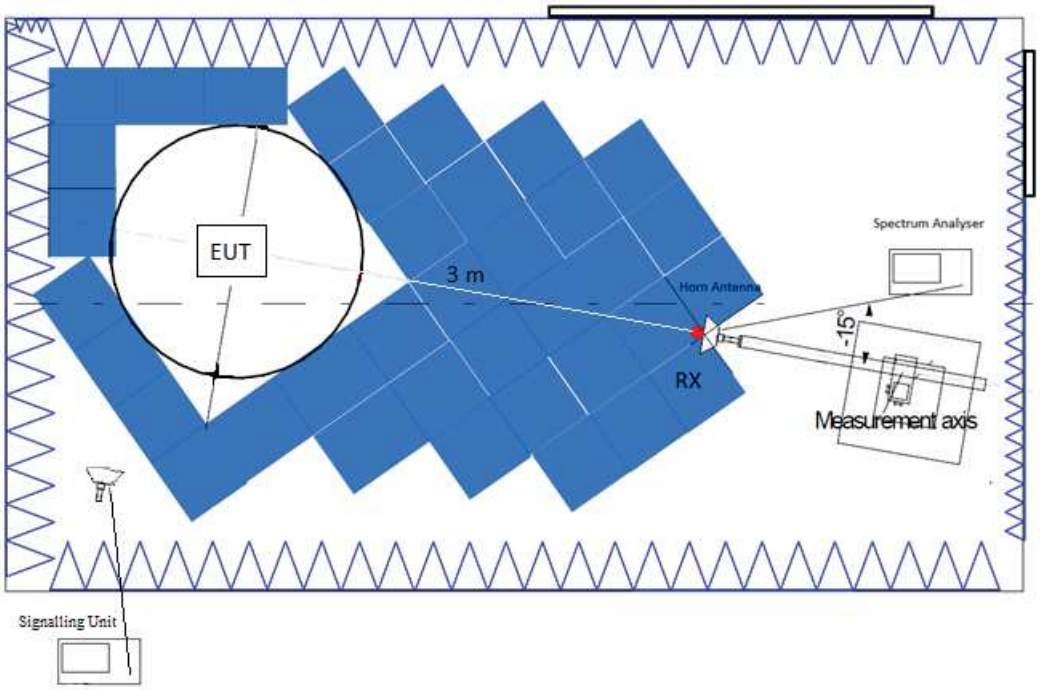
Po (dBm) – [43 + 10 log (Po in mwatts) - 30] = - 13 dBm

TEST SETUP:

Radiated measurements below 1 GHz.



Radiated measurements above 1 GHz.



RESULTS:

LTE Band 5:

QPSK and 16QAM Modulations:

A preliminary scan determined the 16QAM modulation, BW = 10 MHz, RB Size = 5, RB Offset = 0, Narrowband = 0 as the worst case. The following tables and plots show the results for this worst-case configuration.

- Low Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

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

- Middle Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

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

- High Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

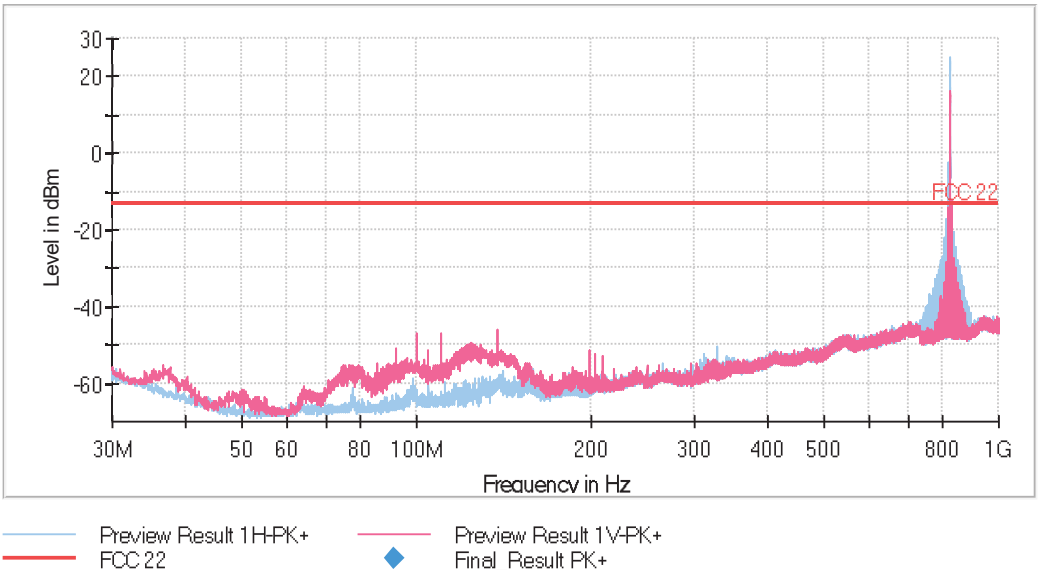
No spurious frequencies at less than 20 dB below the limit.

Measurement uncertainty (dB)	<± 4.89 for f < 1 GHz <± 5.13 for f ≥ 1 GHz up to 8.5 GHz

Verdict: PASS

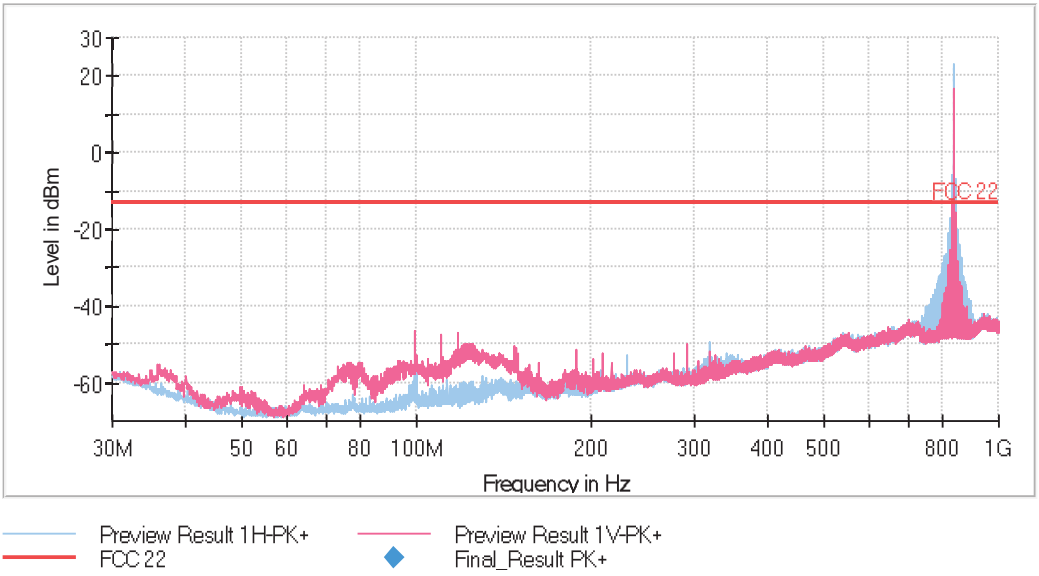
FREQUENCY RANGE 30 MHz - 1 GHz (worst case):

- Low Channel:



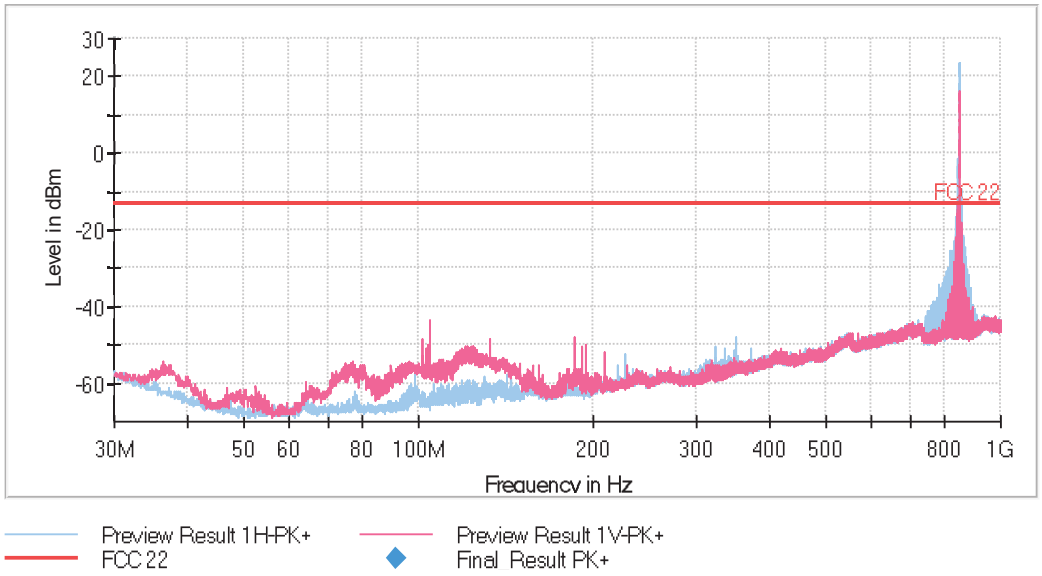
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

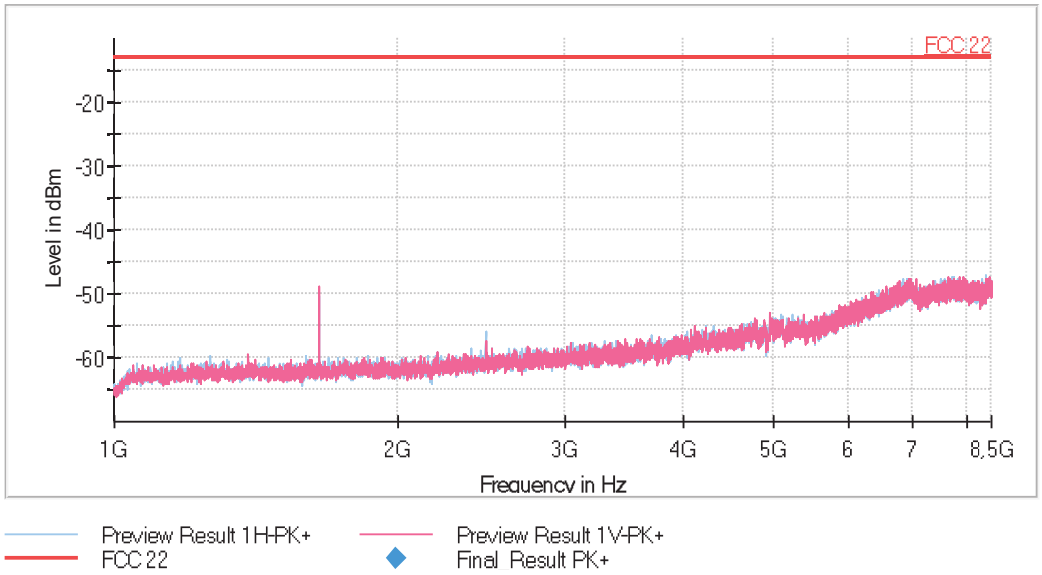
- High Channel:



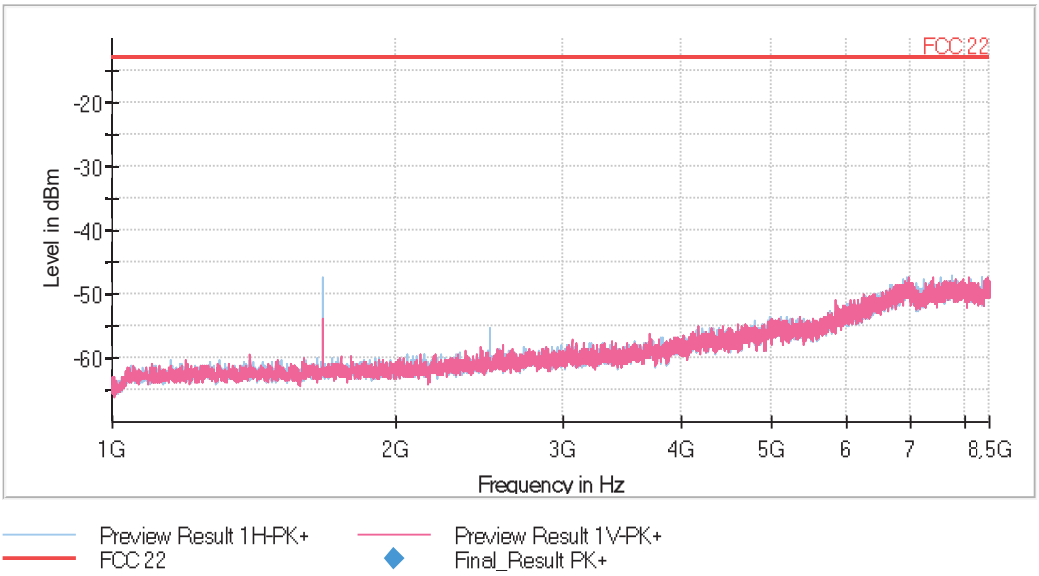
The peak above the limit is the carrier frequency.

FREQUENCY RANGE 1 - 8.5 GHz (worst case):

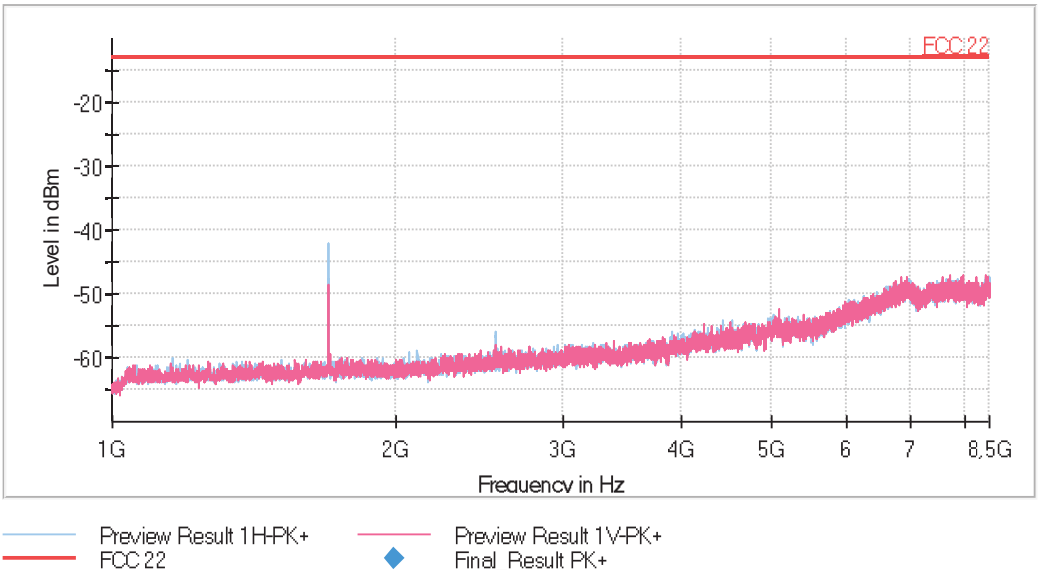
- Low Channel:



- Middle Channel:



- High Channel:



LTE Band 26:

814-824 MHz

QPSK and 16QAM Modulations:

A preliminary scan determined the 16QAM modulation, BW = 10 MHz, RB Size = 1, RB Offset = 0, Narrowband = 0 as the worst case. The following tables and plots show the results for this worst-case configuration.

- Low Channel:

  Frequency range 30 MHz - 1 GHz:

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

  Frequency range 1 - 10 GHz:

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

- Middle Channel:

  Frequency range 30 MHz - 1 GHz:

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

  Frequency range 1 - 10 GHz:

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

- High Channel:

  Frequency range 30 MHz - 1 GHz:

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

  Frequency range 1 - 10 GHz:

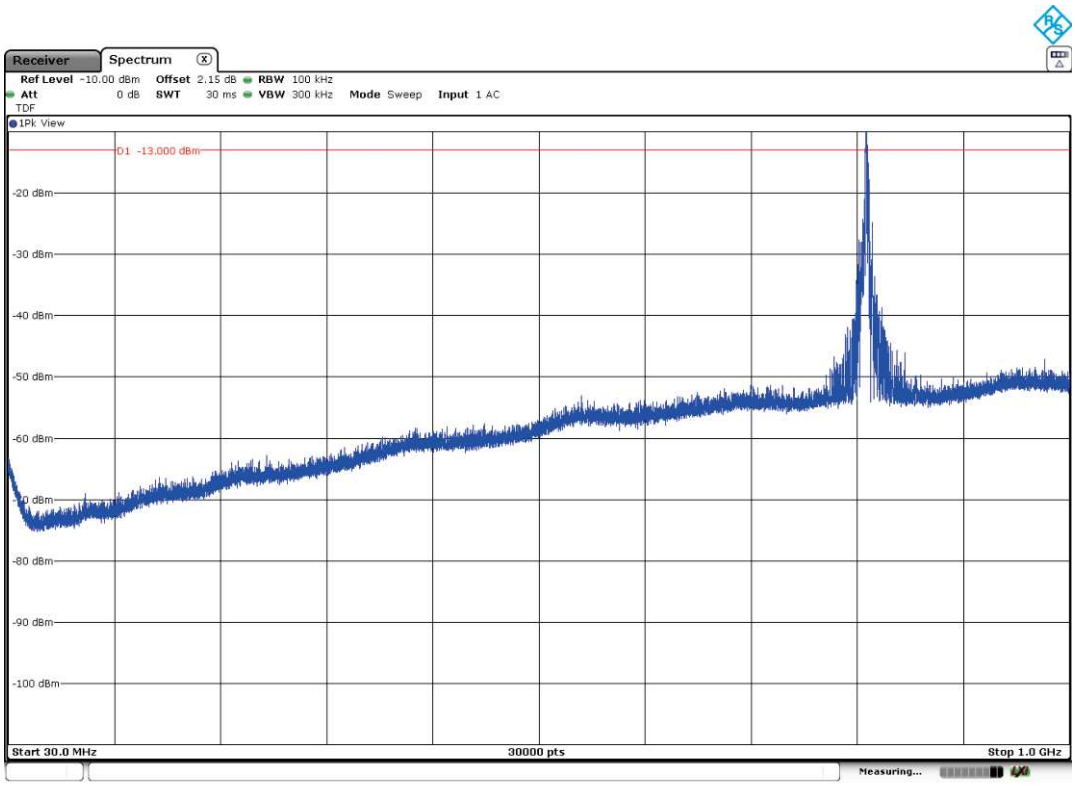
  No spurious frequencies at less than 20 dB below the limit.

Measurement uncertainty (dB)	<± 4.89 for f < 1 GHz <± 5.13 for f ≥ 1 GHz up to 10 GHz

Verdict: PASS

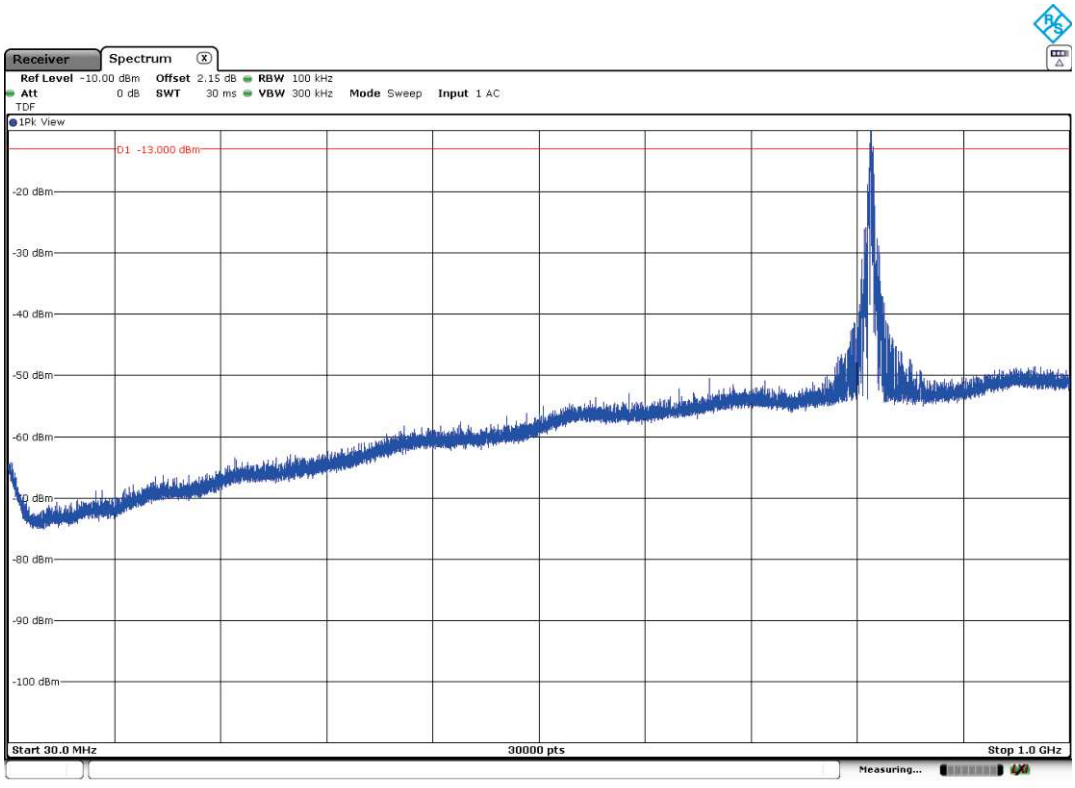
FREQUENCY RANGE 30 MHz - 1 GHz (worst case):

- Low Channel:



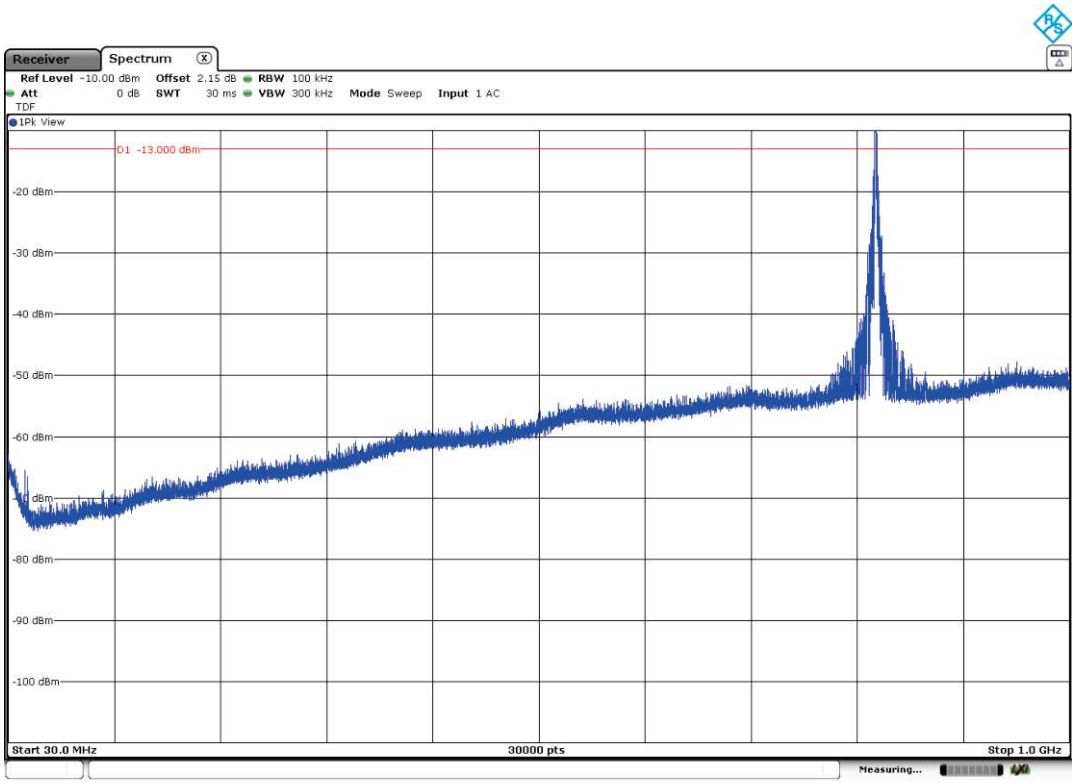
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

- High Channel:

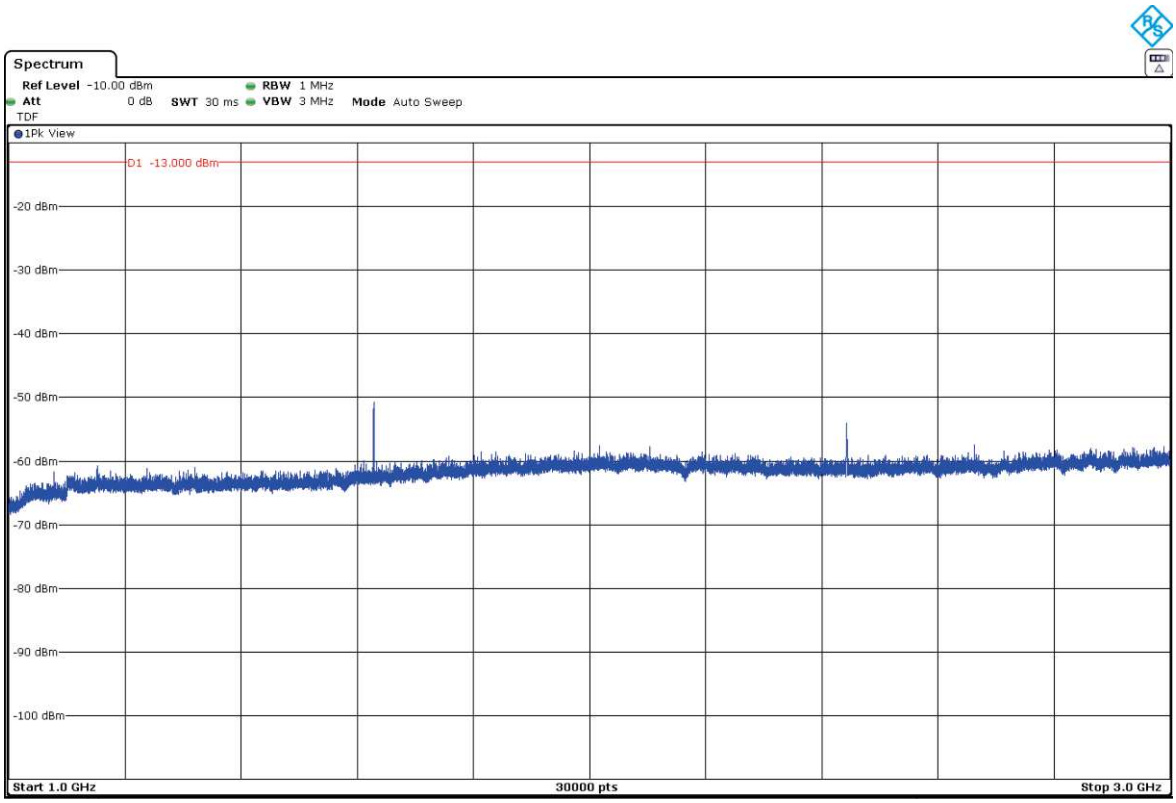


The peak above the limit is the carrier frequency.

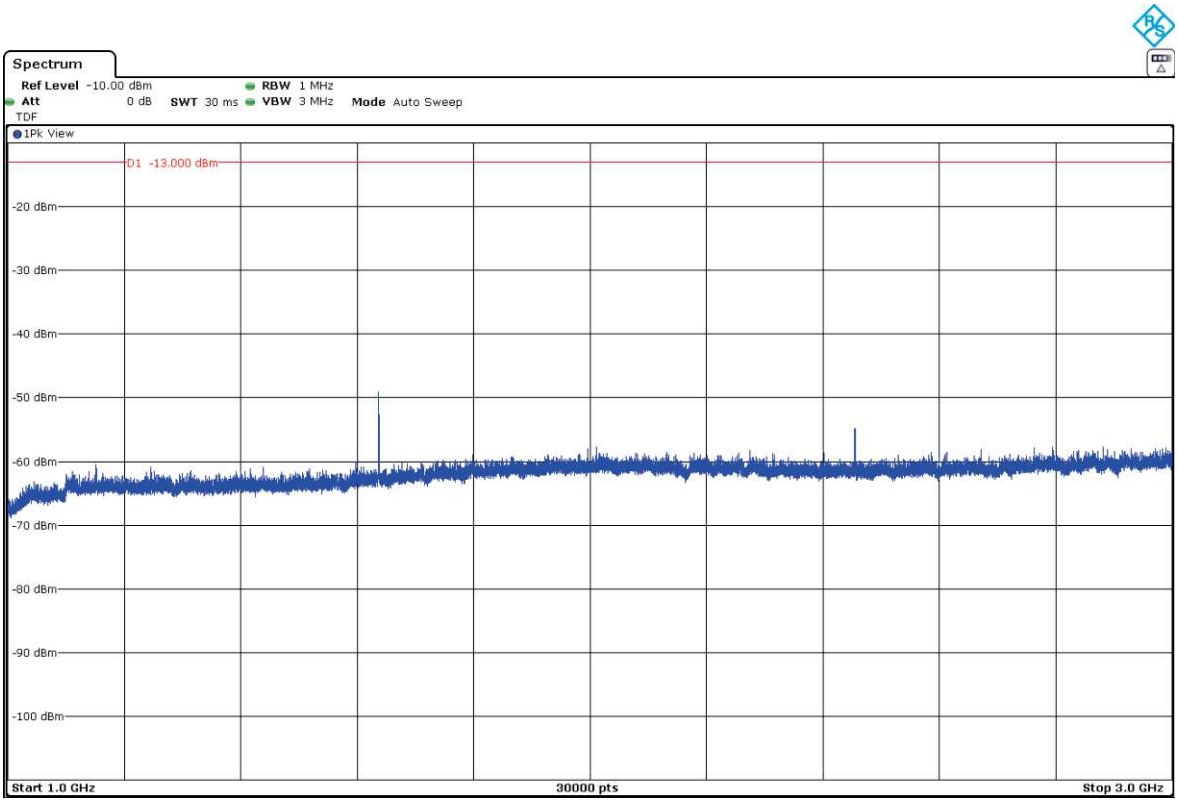
FREQUENCY RANGE 1 - 10 GHz (worst case):

FRECUENCY RANGE 1 - 3 GHz

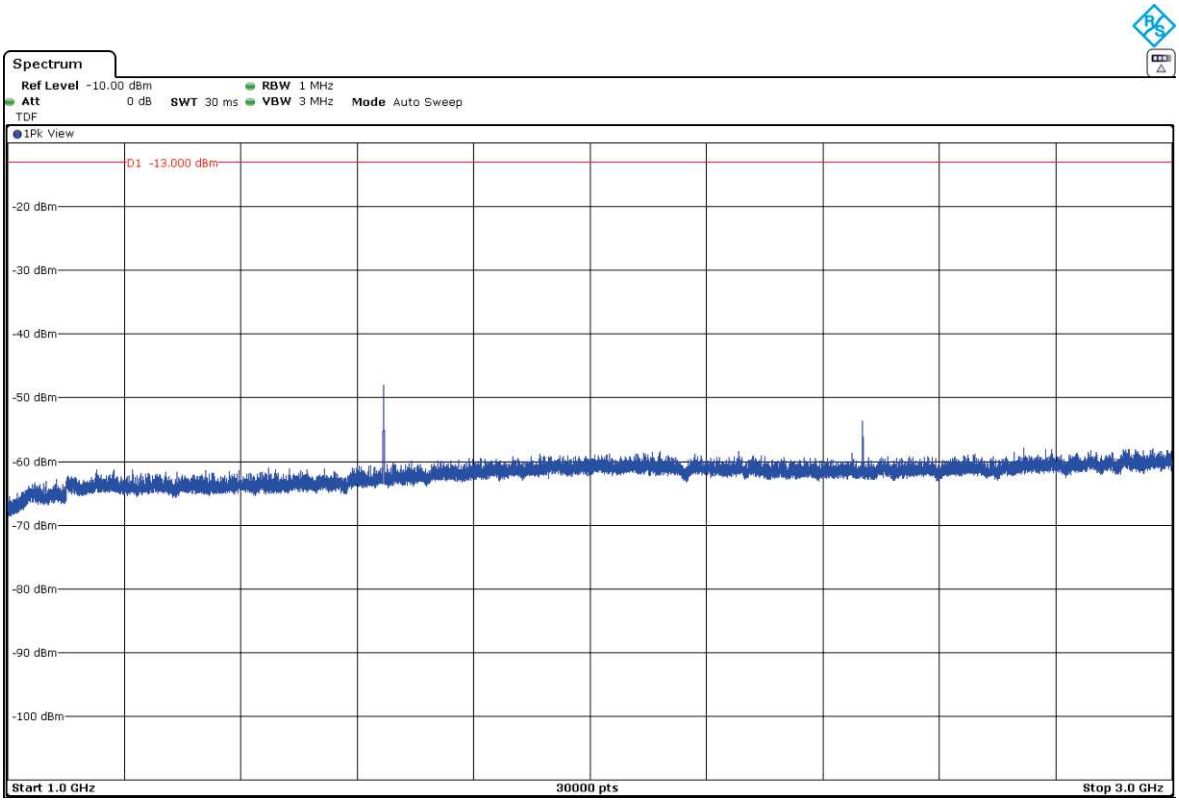
- Low Channel:



- Middle Channel:

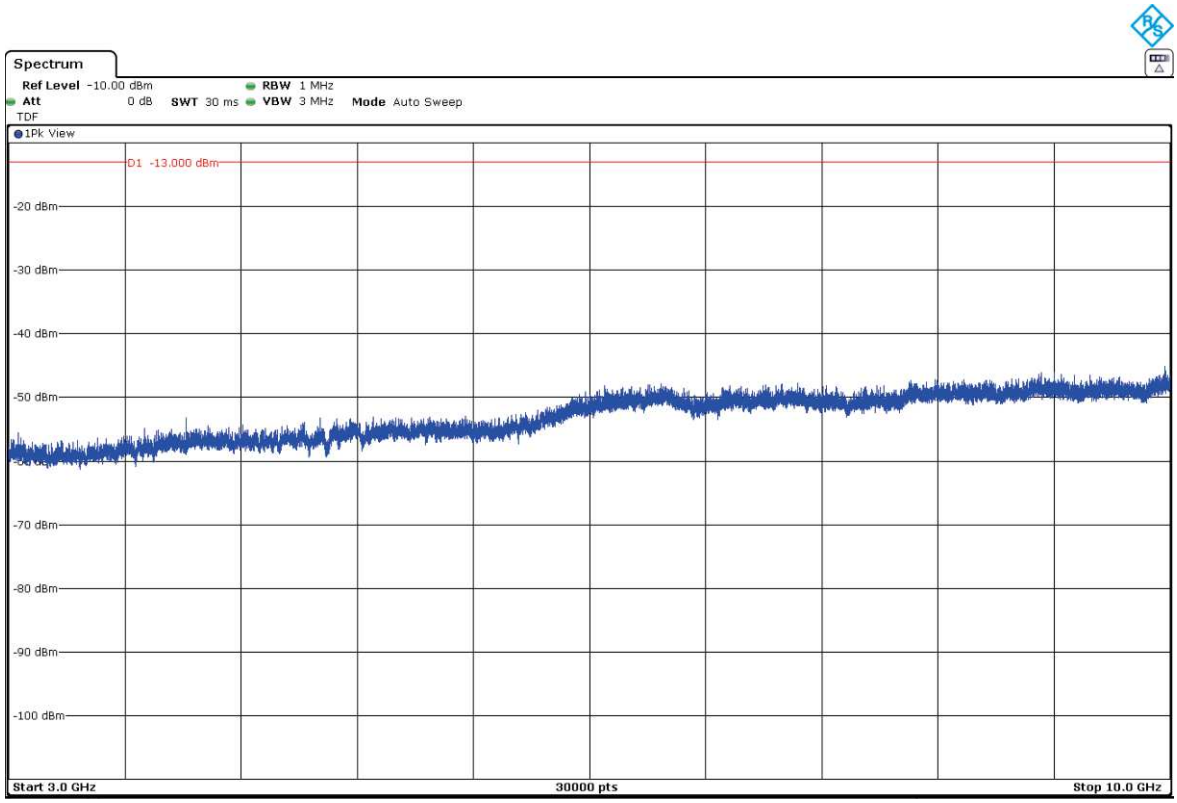


- High Channel:

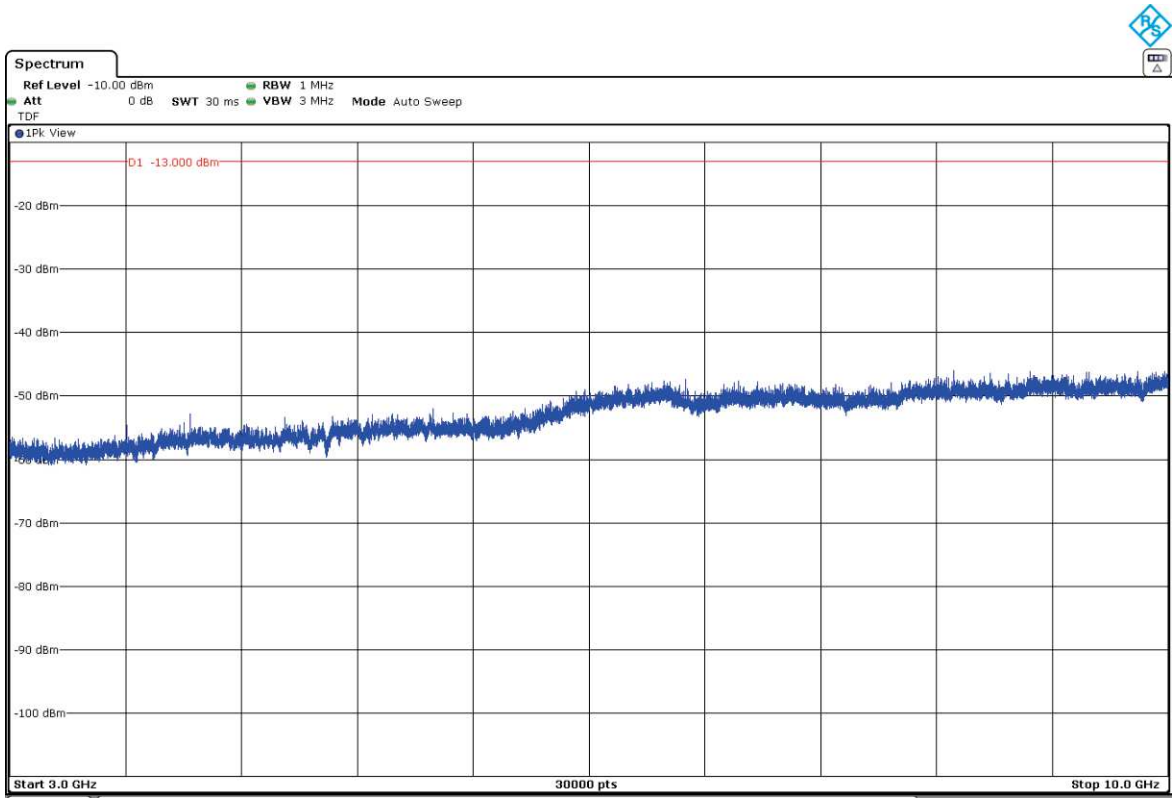


FRECUENCY RANGE 3 - 10 GHz

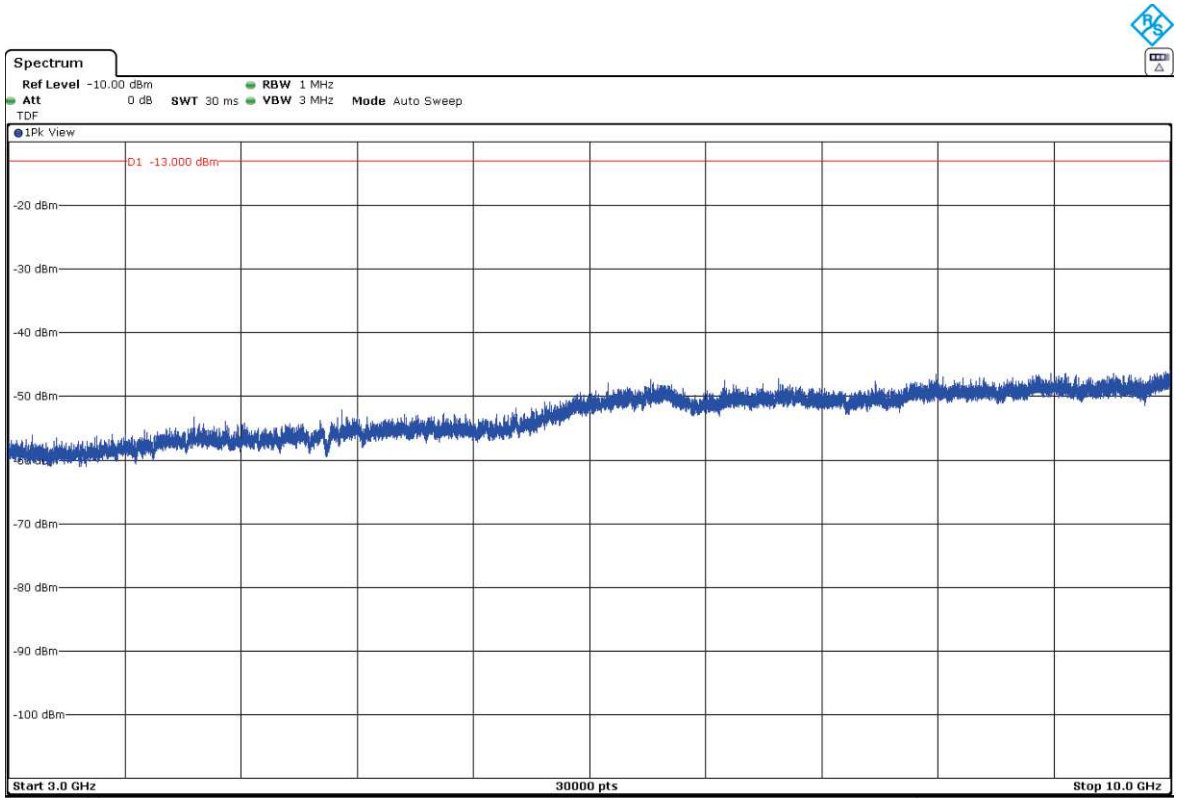
- Low Channel:



- Middle Channel:



- High Channel:



LTE Band 26:

824-849 MHz

QPSK and 16QAM Modulations:

A preliminary scan determined the 16QAM modulation, BW = 15 MHz, RB Size = 6, RB Offset = 0, Narrowband = 0 as the worst case. The following tables and plots show the results for this worst-case configuration.

- Low Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

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

- Middle Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

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

- High Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

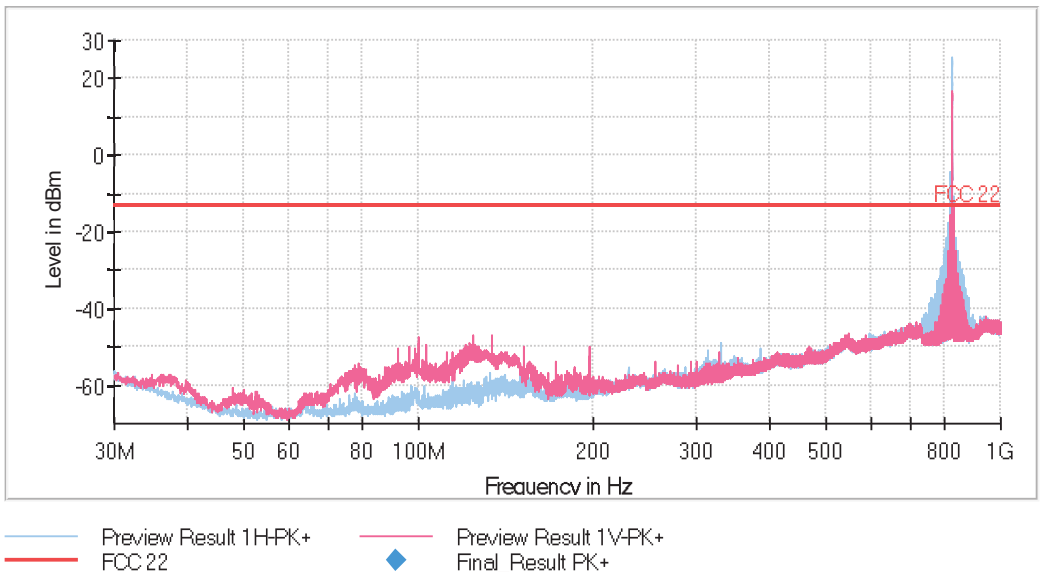
No spurious frequencies at less than 20 dB below the limit.

Measurement uncertainty (dB)	<± 4.89 for f < 1 GHz <± 5.13 for f ≥ 1 GHz up to 8.5 GHz

Verdict: PASS

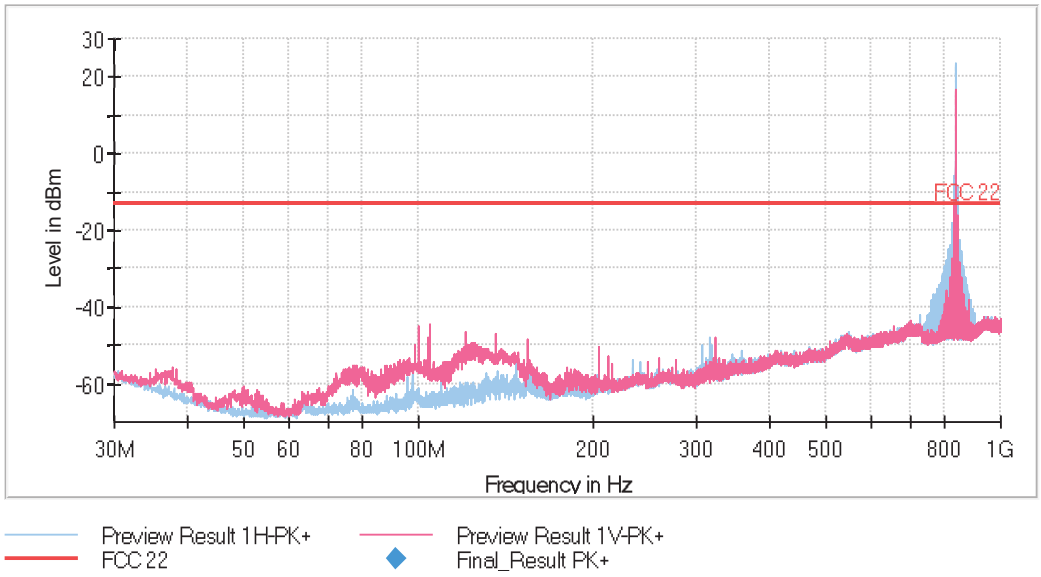
FREQUENCY RANGE 30 MHz - 1 GHz (worst case):

- Low Channel:



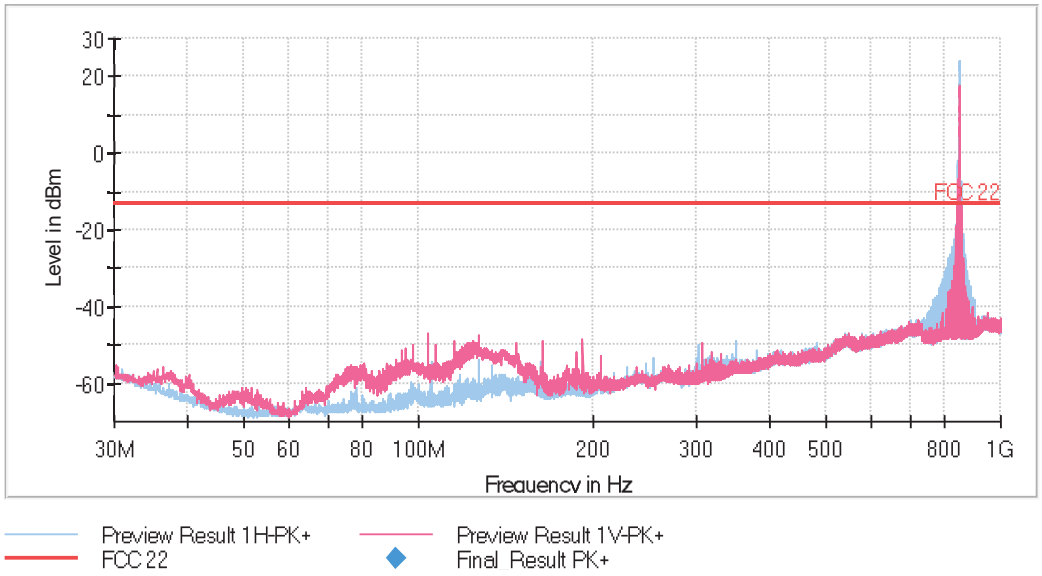
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

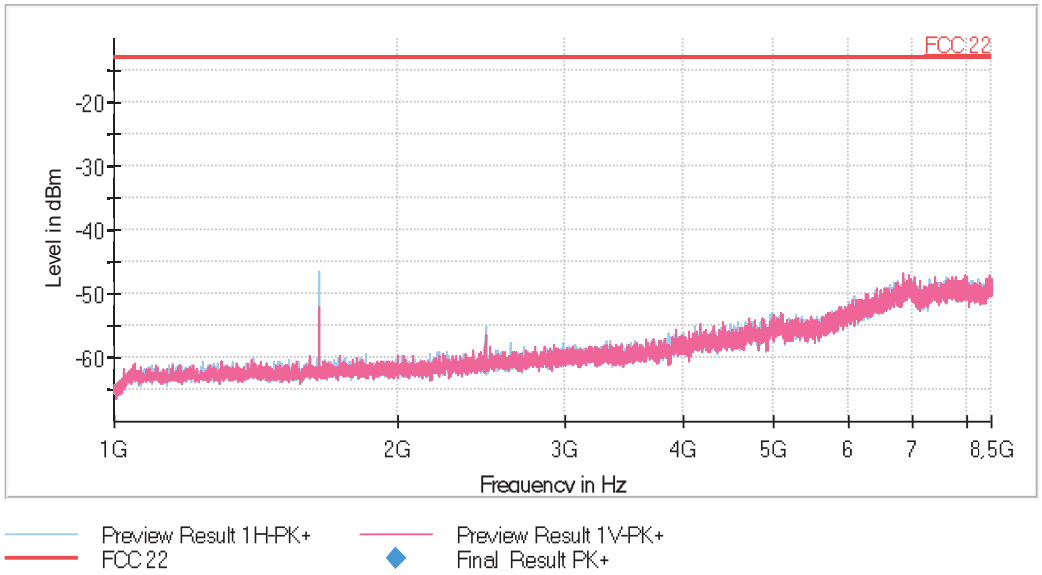
- High Channel:



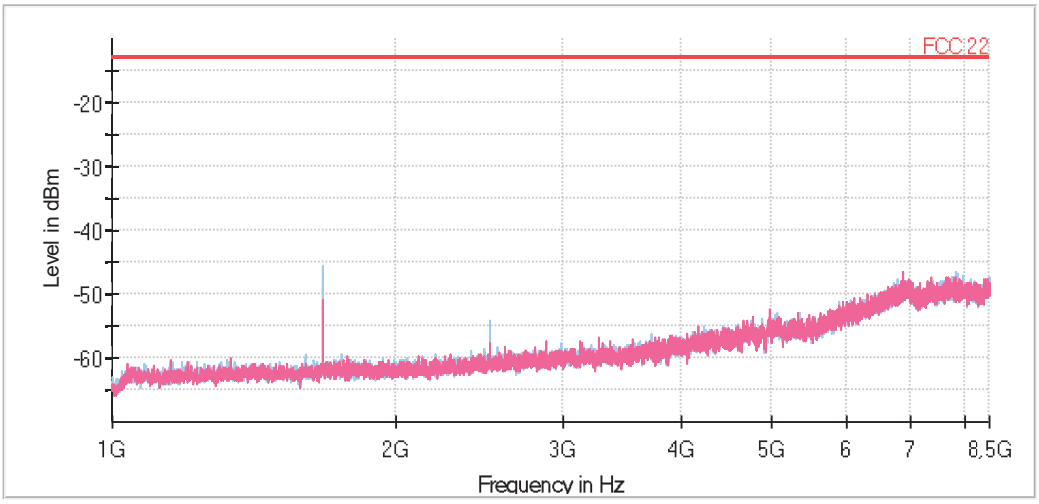
The peak above the limit is the carrier frequency.

FREQUENCY RANGE 1 - 8.5 GHz (worst case):

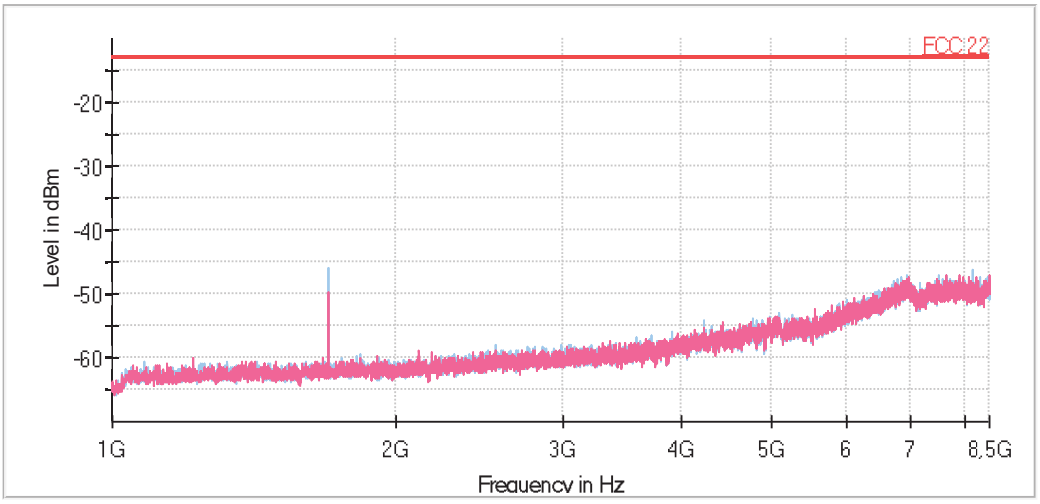
- Low Channel:



- Middle Channel:



- High Channel:



Appendix B: Test results for FCC Part 24 / IC RSS-133.

INDEX

TEST CONDITIONS

POWER SUPPLY (V):

Vn: 120 Vac

Type of Power Supply: AC Voltage mains.

The subscript 'n' indicates nominal voltage test conditions.

ANTENNA:

Declared Gain for antennas:

Band	Gain (dBi)	Antenna type
LTE Band 2	+2.5	External
LTE Band 25	+2.5	External

TEST FREQUENCIES:

LTE Band 2. QPSK AND 16QAM MODULATIONS:

	Channel per Nominal Bandwidth (Frequency, MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	18607 (1850.7)	18615 (1851.5)	18625 (1852.5)	18650 (1855)	18675 (1857.5)	18700 (1860)
Middle	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)
Highest	19193 (1909.3)	19185 (1908.5)	19175 (1907.5)	19150 (1905)	19125 (1902.5)	19100 (1900)

LTE Band 25. QPSK AND 16QAM MODULATIONS:

	Channel per Nominal Bandwidth (Frequency, MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	26047 (1850.7)	26055 (1851.5)	26065 (1852.5)	26090 (1855)	26115 (1857.5)	26140 (1860)
Middle	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)
Highest	26683 (1914.3)	26675 (1913.5)	26665 (1912.5)	26640 (1910)	26615 (1907.5)	26590 (1905)

Radiated Emissions

SPECIFICATION:

FCC §24.238. RSS-133 Clause 6.5.

> The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

At Po transmitting power, the specified minimum attenuation becomes 43+10 log (Po), and the level in dBm relative to Po becomes:

$$Po\ (dBm) – [43 + 10 \log (Po\ in\ mW) - 30] = -13\ dBm$$

METHOD:

The measurement was performed with the EUT inside an anechoic chamber. The spectrum was scanned from 30 MHz to at least the 10th harmonic of the highest frequency generated within the equipment.

Detected emissions were maximized at each frequency by rotating the EUT and adjusting the height and polarization of the measuring antenna. The maximum meter reading was recorded.

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

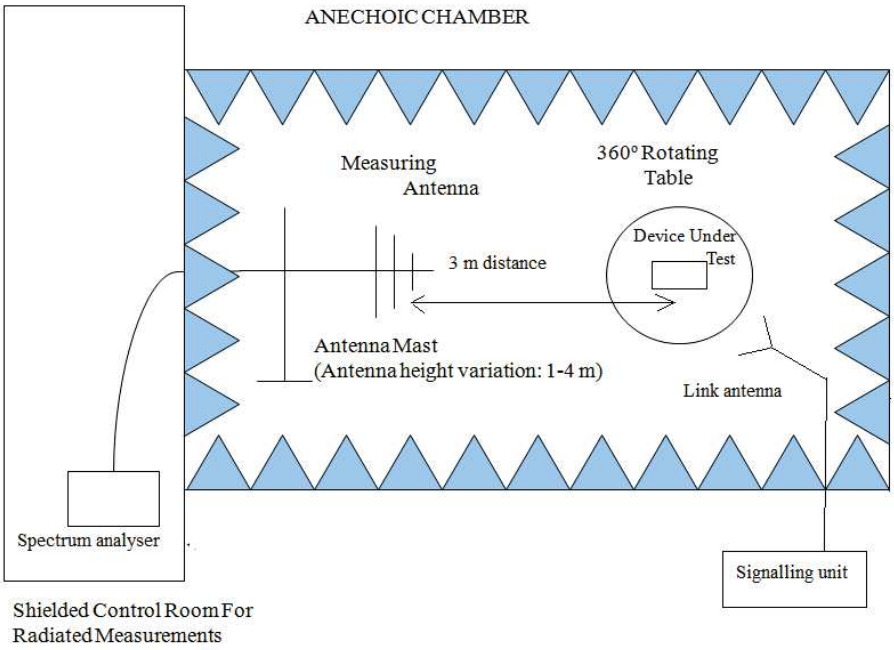
Measurement Limit:

According to specification. the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. P in watts.
At Po transmitting power. the specified minimum attenuation becomes 43+10log (Po). and the level in dBm relative Po becomes:

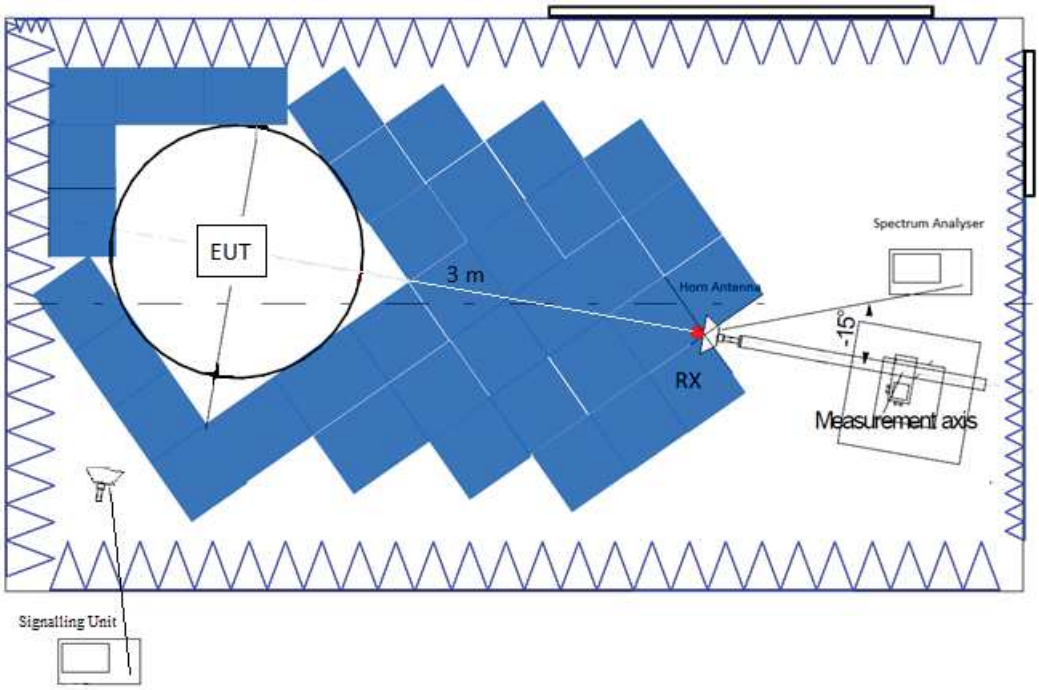
$$Po\ (dBm) – [43 + 10 \log (Po\ in\ mwatts) - 30] = - 13\ dBm$$

TEST SETUP:

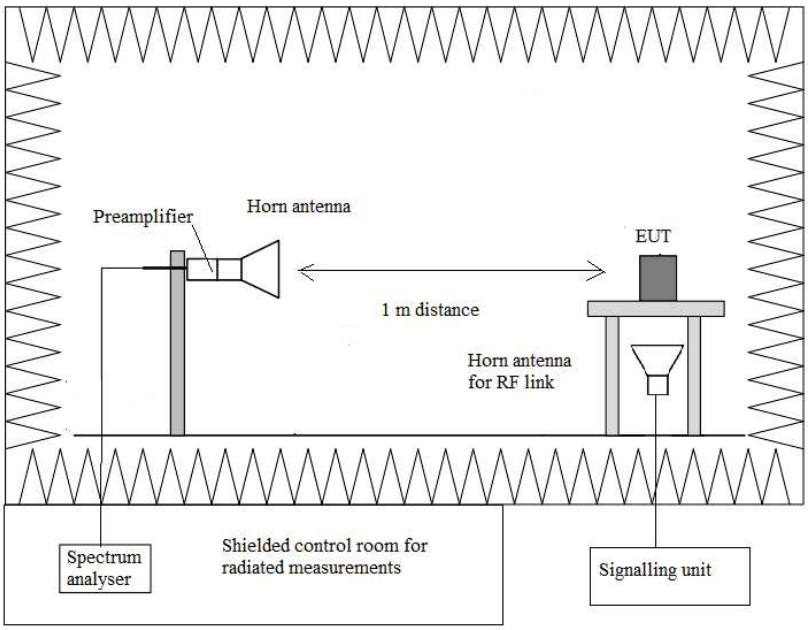
Radiated measurements below 1 GHz:



Radiated measurements in the range 1 to 18 GHz:



Radiated measurements above 18 GHz:



RESULTS:

LTE Band 2:

QPSK and 16QAM Modulations:

A preliminary scan determined the 16QAM modulation, BW = 5 MHz, RB Size = 1, RB Offset = 0, Narrowband = 0 as the worst case. The following tables and plots show the results for this worst-case configuration.

- Low Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 20 GHz:

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

- Middle Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 20 GHz:

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

- High Channel:

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 20 GHz:

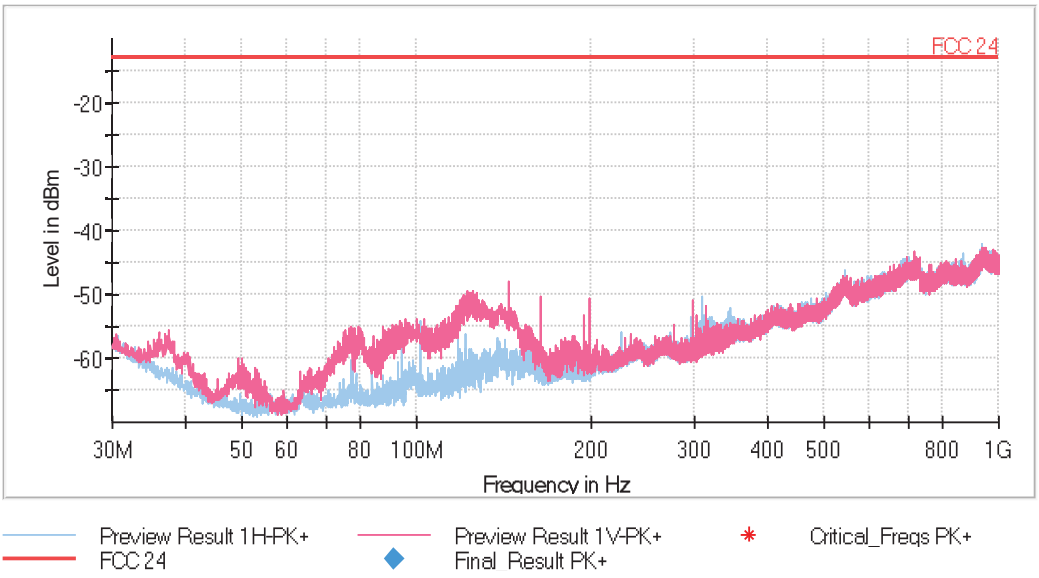
No spurious frequencies at less than 20 dB below the limit.

Measurement Uncertainty (dB):	<± 4.89 for f ≥ 30 MHz up to 1 GHz <± 4.11 for f ≥ 1 GHz up to 3 GHz <± 5.13 for f ≥ 3 GHz up to 18 GHz <± 4.81 for f ≥ 18 GHz up to 20 GHz

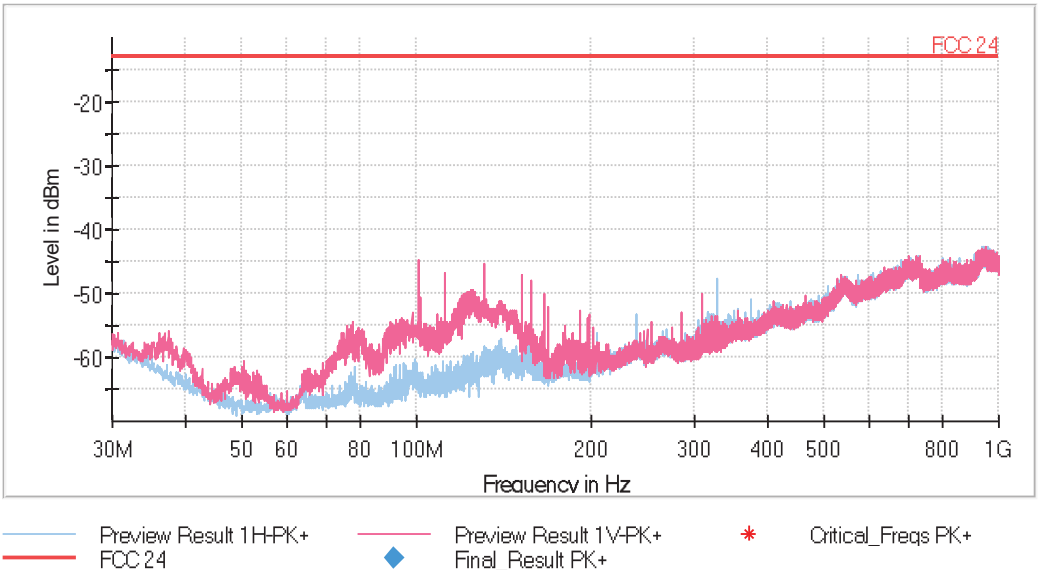
Verdict: PASS

FREQUENCY RANGE 30 MHz - 1 GHz (worst case):

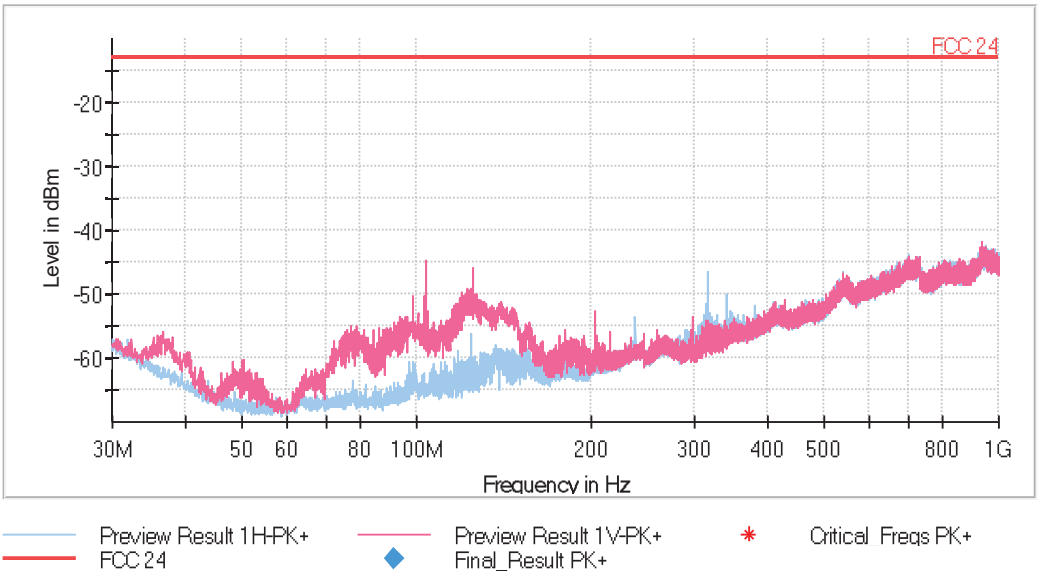
- Low Channel:



- Middle Channel:

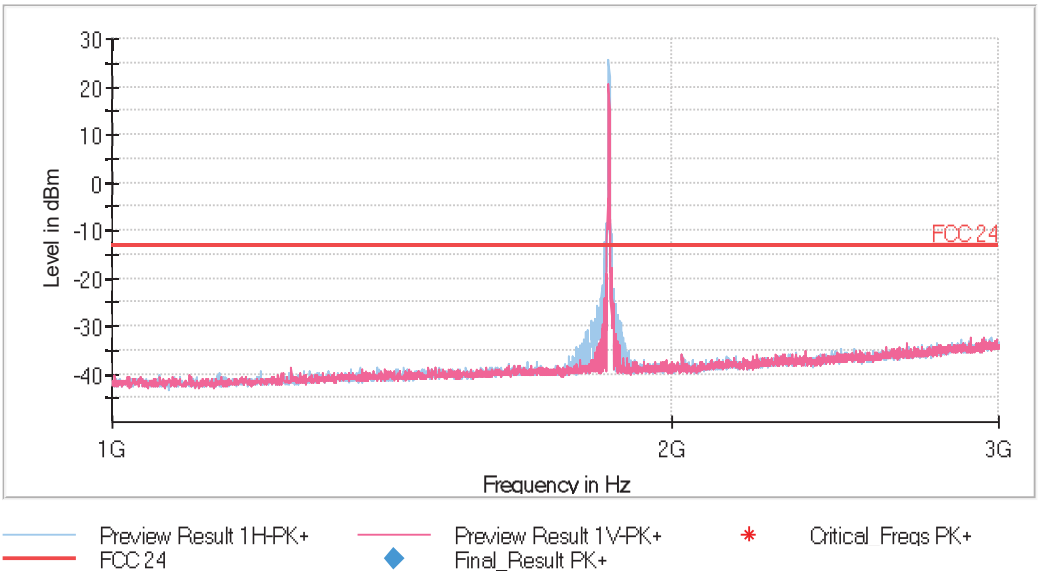


- High Channel:



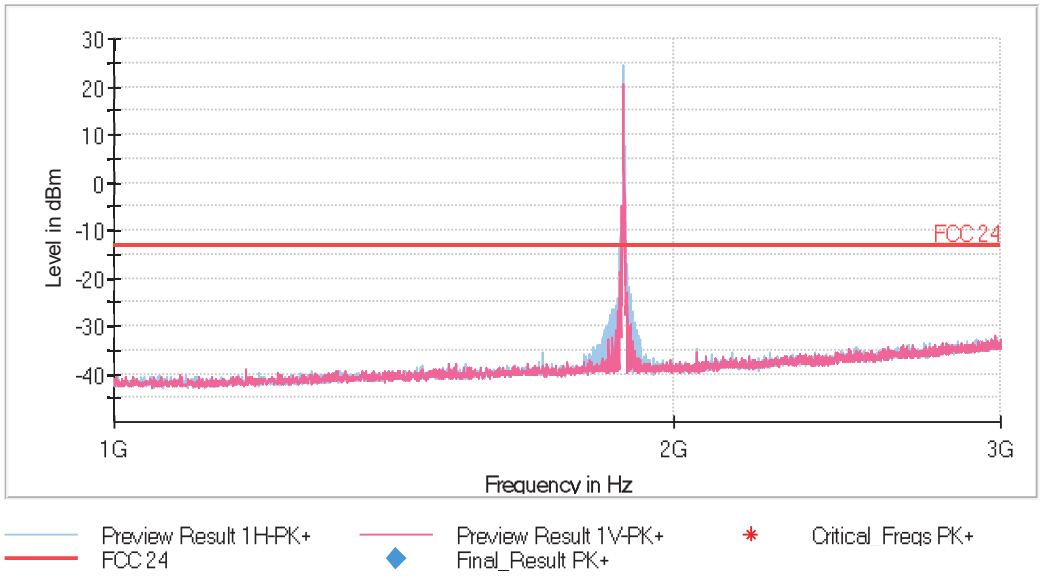
FREQUENCY RANGE 1 - 3 GHz (worst case):

- Low Channel:



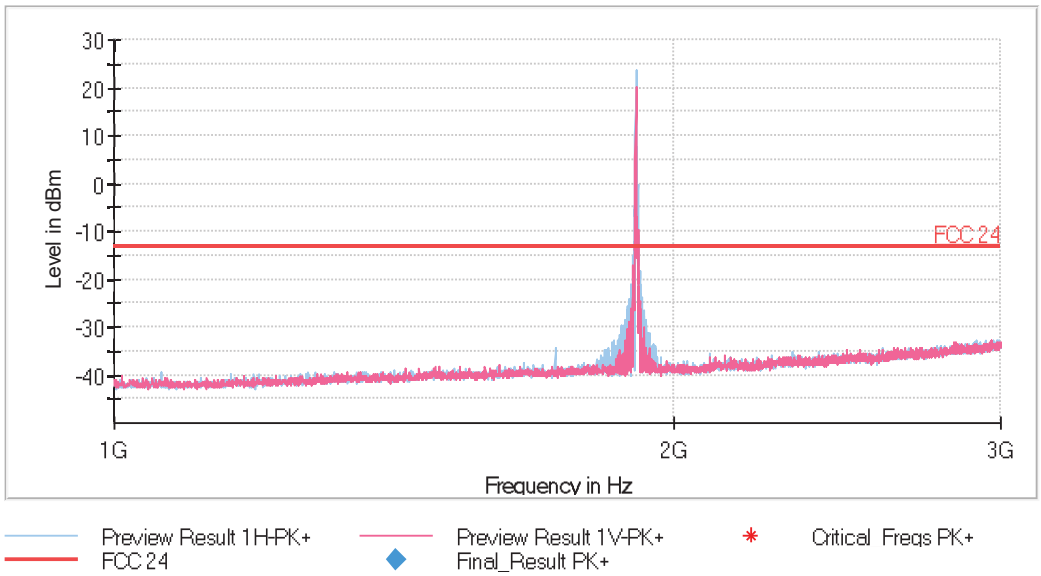
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

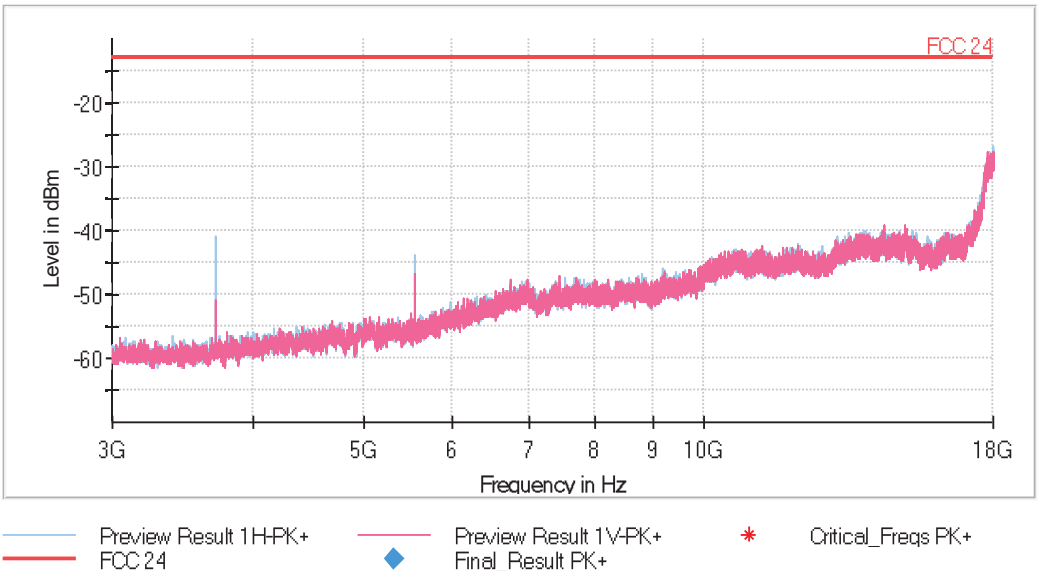
- High Channel:



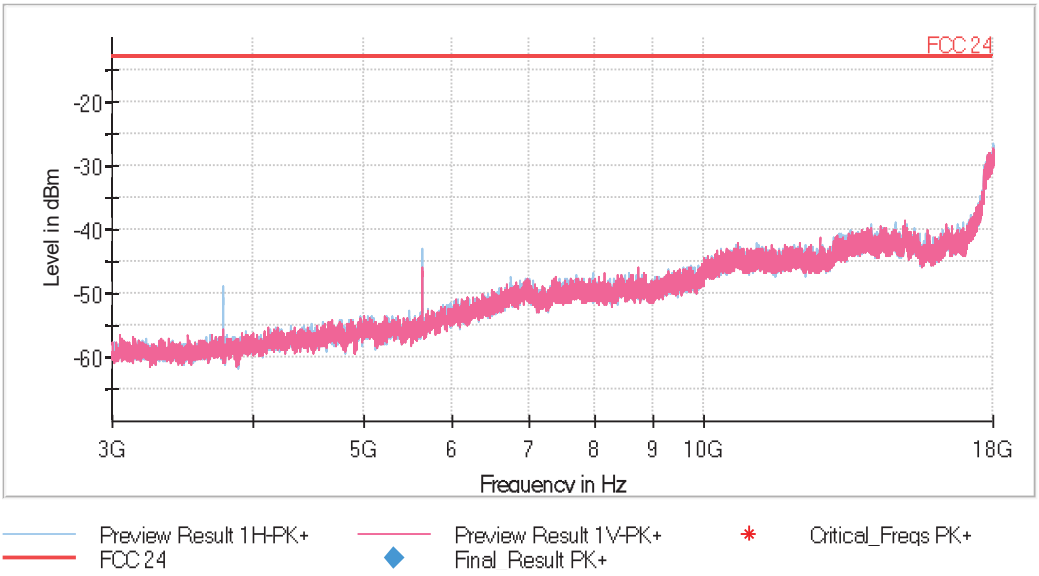
The peak above the limit is the carrier frequency.

FREQUENCY RANGE 3 - 18 GHz (worst case):

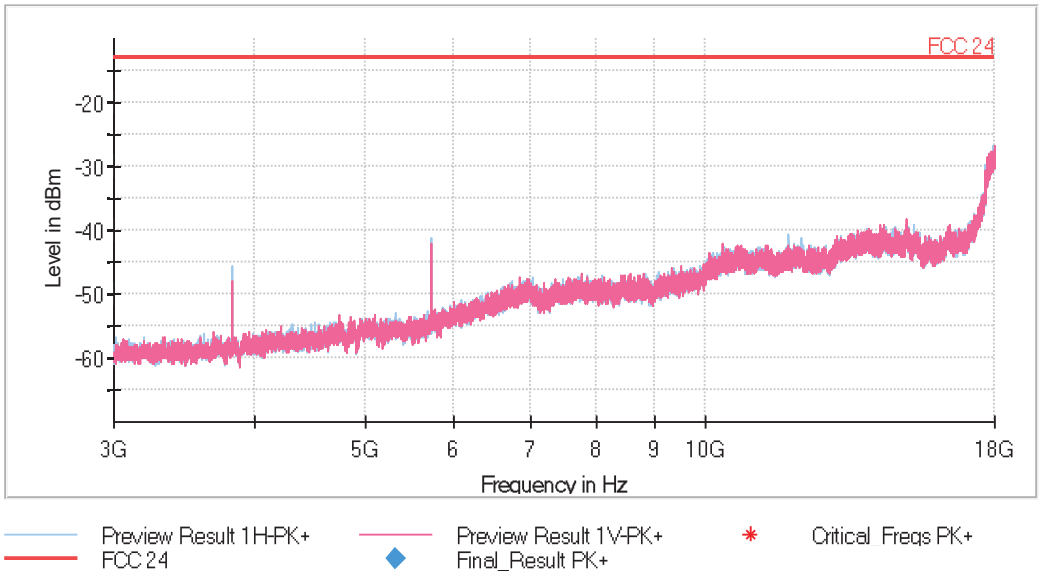
- Low Channel:



- Middle Channel:

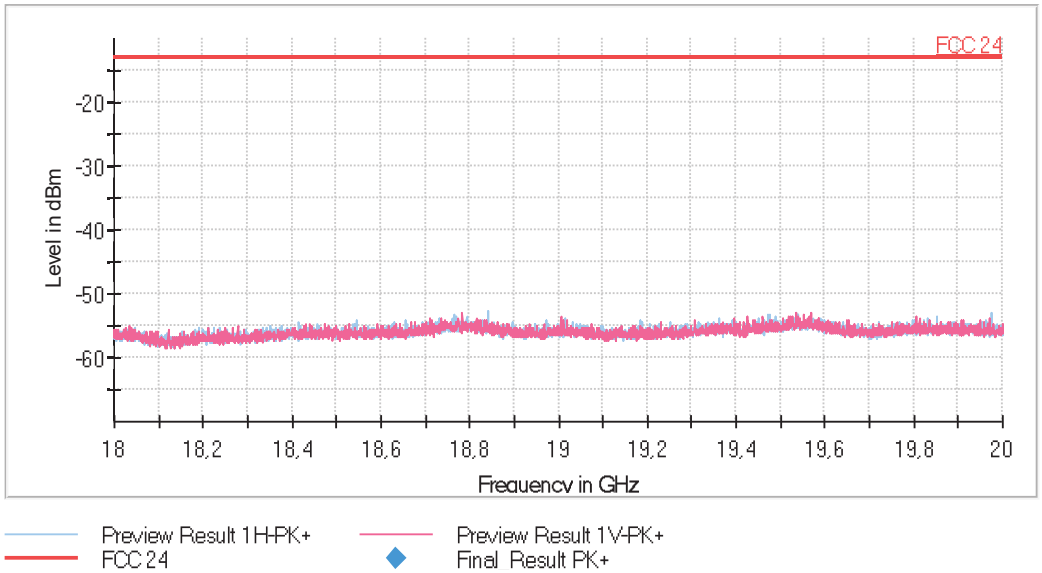


- High Channel:

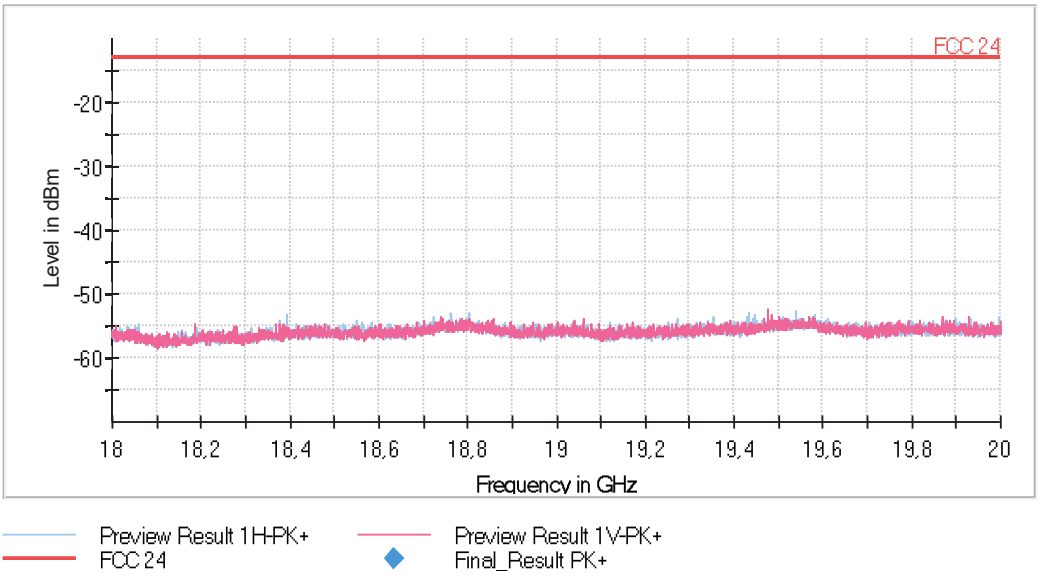


FREQUENCY RANGE 18 - 20 GHz (worst case):

- Low Channel:



- Middle Channel:



- High Channel: