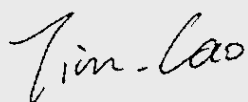


Test report No:
2640597R.701

TEST REPORT

Product Name	Nokia Industrial 5G fieldrouter FRRO505c
Trademark	Nokia
Model and /or type reference	FRRO505c
FCC ID	2AVO2FRRO505C
Applicant's name / address	Nokia of America Corp 3201 Olympus Blvd, Dallas, TX 75019, US
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) 47 CFR FCC Part 15 (Section 15.407) FCC CFR Title 47 Part 22 & 24 & 27 & 90 & 96 ANSI C63.10: 2020 ANSI C63.26: 2015 ANSI/TIA-603-E: 2016
Verdict Summary	IN COMPLIANCE
Tested By (name / position & signature)	Tim Cao/ Project Manager 
Approved by (name / position & signature)	Frank He/ Technical Manager 
Date of issue	2026-07-30
Report Version	V1.0
Report template No.	Template_FCC RSE-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

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

DEKRA 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 in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA 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.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Apr. 22, 2026
Date (start test)	May. 07, 2026
Date (finish test)	May. 14, 2026

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.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
PK	: Peak
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured
RMS	: Root Mean Squar
NT	: Normal Temperature
HT	: High Extreme Test Temperature
LT	: Low Extreme Test Temperature
NV	: Normal Voltage
HV	: High Extreme Test Voltage
LV	: Low Extreme Test Voltage

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2640597R.701	V1.0	Initial issue of report.	2026-07-30

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247), 47 CFR FCC Part 15 (Section 15.407), FCC CFR Title 47 Part 22 & 24 & 27 & 90 & 96.
3. This report is Based on DEKRA reports (Reports No.: 2560724R.701, 2560724R.702, 2560724R.703, 2560724R.704, 2560724R.705). The only change is addition of eSIM component to an existing PCB footprint and additional storage component options have been added. There are no other hardware change and no PCB change or design change. Technical evaluation determined that this had no impact on RF performance; only radiated spurious data was spot checking for verification.
4. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, it is not necessary to account the uncertainty associated with the measurement result.
5. The test results presented in this report relate only to the object tested.
6. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
7. This report will not be used for social proof function in China market.
8. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:

- Chapter 1 General Information.

USED EQUIPMENT

Radiated Emission(9kHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100176	2025.12.07	2026.12.06
Loop Antenna	R&S	HFH2-Z2E	101149	2026.03.16	2027.03.15
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2026.03.11	2027.03.10
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2025.04.30	2026.04.29
Wideband Radio Communication Tester	2026.01.24	2027.01.23	2026.01.24	2027.01.23	2026.01.24
Radio Communication Test Station	Anritsu	MT8000A	6272458317	2025.12.07	2026.12.06
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2025.08.16	2026.08.15
Dekra test software	Tonscend	JS36	N/A	N/A	N/A

Radiated Emission / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
MXA Signal Analyzer	Keysight	N9020B	MY60112218	2026.01.18	2027.01.17
Horn Antenna	ETS-Lindgren	3117	00167055	2025.08.14	2026.08.13
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2026.03.01	2027.02.28
Pre-amplifier	Tonscend	TAP01840048	806JSAP042906251036	2026.01.24	2027.01.23
Pre-amplifier	Tonscend	TAP9K3G40	806JSAP041305251020	2026.01.11	2027.01.10
Band Reject Filter Group	MVE	MSW-F196	C070001S	2026.01.24	2027.01.23
Cable	Rosenberger	LA1-C390-3000	0001	2025.05.17	2026.05.16
Cable	Rosenberger	LA1-C390-3000	0002	2026.03.26	2027.03.25
Cable	Lair Microwave	LA400-29M29M-5M-KJ	24082901001	2025.07.30	2026.07.29
Cable	Lair Microwave	LA400-29M29M-5M-KJ	24082901001	2025.07.30	2026.07.29
Cable	Lair Microwave	LA800-NMNWM-3M	502201002001	2026.01.11	2027.01.10
Cable	Lair Microwave	LA800-NMNWM-1.2M	202201003001	2026.01.11	2027.01.10
Wideband Radio Communication Tester	2026.01.24	2027.01.23	2026.01.24	2027.01.23	2026.01.24
Radio Communication Test Station	Anritsu	MT8000A	6272458317	2025.12.07	2026.12.06

Temperature/Humidity Meter	RTS	RTS-1909	THM-024	2025.04.30	2026.04.29
Test Software	Tonscend	JS36	N/A	N/A	N/A

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test item	Uncertainty
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.5 dB 300MHz~1GHz: 3.6 dB Vertical: 30MHz~200MHz: 3.6 dB 300MHz~1GHz: 3.5 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.0 dB Vertical: 1GHz~18GHz: 4.8 dB Horizontal: 18GHz~26.5GHz: 5.3 dB Vertical: 18GHz~26.5GHz: 4.9 dB

1 GENERAL INFORMATION

Product Name	Nokia Industrial 5G fieldrouter FRRO505c				
Model No.....	FRRO505c				
Trademark.....	Nokia				
FCC ID	2AVO2FRRO505C				
Manufacturer	Shanghai Smawave Technology Co., Ltd				
Manufacturer Address.....	2/F, Building 8, 1001 North Qinzhou Road, Xuhui District, Shanghai, China				
Power Supply	9~36Vdc				
Operating temperature	-40 ~ 70℃				
SN	RF Conducted	RO505A00252300047			
	RF Radiated	RO505A00252300029			
Wireless specifiction	802.11b/g/n/ac/ax/be				
Operating frequency range(s)	2.4GHz: 2400 ~ 2483.5MHz 5.2GHz: 5150 ~ 5250MHz 5.3GHz: 5250 ~ 5350MHz 5.6GHz: 5470 ~ 5725MHz 5.8Ghz: 5725 ~ 5850 MHz				
Type of Modulation	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11a/g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM 802.11ac/ax/be: OFDMA -BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024 QAM, 4096QAM Note: The device not support partial RU function.				
Channel Spacing.....	802.11b/g/n/ac/ax/be: 20MHz 802.11n/ac/ax/be: 40MHz 802.11ac/ax/be: 80MHz 802.11ac/ax/be: 160MHz				
Antenna Type.....	Dipole				
Antenna Gain	Ant 1&2&3&4: 2.4GHz 5.02 dBi 5GHz 5.06 dBi				
Wireless specification	Bluetooth (LE)				
Operating frequency range(s)	2402~2480MHz				
PHYs for LE	☒	LE 1M	☒	LE 2M	☒ LE Coded S=2/8
Data Rate for LE	☒	1Mbit/s	☒	2Mbit/s	☒ 500/125 Kbit/s
Channel Spacing.....	2MHz				
Antenna Type.....	Dipole				
Antenna Gain	Ant 1&2&3&4: 5.02 dBi				
GNSS Signal Designations	BDS, Gailieo, GLONASS, GPS				
Frequency Range (MHz)	BDS B1I: 1559~1609MHz BDS B1C: 1559~1609MHz Gailieo E1: 1559~1609MHz				

	Galileo E5a: 1166~1187MHz Galileo E5b: 1166~1187MHz GLONASS G1: 1559~1609MHz GLONASS G2: 1166~1187MHz GPS L1C/A: 1559~1609MHz GPS L1C: 1559~1609MHz GPS L5: 1166~1187MHz
Wireless Module	RM520N-GL
Wireless specification	LTE,NR
Support Band	LTE: FDD Band 2/4/5/7/12/13/14/17/25/26/30/66/71 TDD Band 38/41/48/42/43
	NR: FDD NR Band 2/5/7/12/13/14/25/26/30/66/70/71 TDD NR Band 38/41/48/77/78
Uplink	Band 2: 1850-1910 MHz Band 4: 1710-1755 MHz Band 5: 824-849 MHz Band 7: 2500-2570 MHz Band 12: 699-716 MHz Band 13: 777-787 MHz Band 14: 788-798 MHz Band 17: 704-716 MHz Band 25: 1850-1915 MHz Band 26: 814-849 MHz Band 30: 2305-2315 MHz Band 66: 1710-1780 MHz Band 70: 1695-1710 MHz Band 71: 663-698 MHz Band 38: 2570-2620 MHz Band 41: 2496-2690 MHz Band 42: 3450-3550 MHz Band 43: 3700-3800 MHz Band 48: 3550-3700 MHz Band 77: 3450-3550 MHz, 3700-3980 MHz Band 78: 3450-3550 MHz, 3700-3800 MHz
Downlink	Band 2: 1930-1990 MHz Band 4: 2110-2155 MHz Band 5: 869-894 MHz Band 7: 2620-2690 MHz Band 12: 729-746 MHz Band 13: 746-756 MHz Band 14: 758-768 MHz Band 17: 734-746 MHz Band 25: 1930-1995 MHz Band 26: 859-894 MHz Band 30: 2350-2360 MHz Band 66: 2110-2200 MHz Band 70: 1995-2020 MHz

	Band 71: 617-652 MHz Band 38: 2570-2620 MHz Band 41: 2496-2690 MHz Band 42: 3450-3550 MHz Band 43: 3700-3800 MHz Band 48: 3550-3700 MHz Band 77: 3450-3550 MHz, 3700-3980 MHz Band 78: 3450-3550 MHz, 3700-3800 MHz
Type of modulation	DFT-s-OFDM Pi/2 BPSK DFT-s-OFDM QPSK DFT-s-OFDM 16QAM DFT-s-OFDM 64QAM DFT-s-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM
Antenna Type.....	Dipole
Note 1: The product has two identical Wi-Fi chips built in, each chip is equipped with two antennas, and the product has a total of four Wi-Fi antennas. The circuits, antennas, and firmware of the two Wi-Fi chips are exactly the same, so except for EIRP, other test items only show the data of one chip. The two chips work independently, so they can not be combined in MIMO 4*4 mode. After evaluation, this report only presents test data of one chip. Note 2: The product has two identical WWAN modules built in. Each module is equipped with four antennas, for a total of eight WWAN antennas. The eight antennas are exactly the same, and the two modules work completely independently. After evaluation, this report only presents test data of one module.	

	Band NO.		Frequency (Uplink)	Antenna Usage				Antenna Gain(dBi)
Antenna port of WWAN module 1 (Shell silk screen)	LTE	NR		ANT1-1	ANT1-0	ANT1-3	ANT1-2	
Antenna port of WWAN module 2 (Shell silk screen)				ANT2-1	ANT2-0	ANT2-3	ANT2-2	
Module antenna interface screen printing				ANT0	ANT1	ANT2	ANT3	
WWAN FDD	2	2	1850-1910 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	4.9
	4		1710-1755 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	4.94
	5	5	824-849 MHz	TX0/PRX			TX1/DRX	1.63
	7	7	2500-2570 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	2.4
	12	12	699-716 MHz	TX0/PRX			TX1/DRX	1.36
	13	13	777-787 MHz	TX0/PRX			TX1/DRX	2.07
	14	14	788-798 MHz	TX0/PRX			TX1/DRX	1.76
	17		704-716 MHz	TX0/PRX			TX1/DRX	1.32
	25	25	1850-1915 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	4.92
	26	26	814-849 MHz	TX0/PRX			TX1/DRX	1.63
	30	30	2305-2315 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	-0.07
	66	66	1710-1780 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	4.94
		70	1695-1710MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	4.74
	71	71	663-698 MHz	TX0/PRX			TX1/DRX	1.36
WWAN TDD	38	38	2570-2620 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	2.4
	41	41	2496-2690 MHz	TX0/PRX	PRX MIMO	TX1/DRX MIMO	DRX	2.4
	42		3450-3550 MHz	TX1/DRX	PRX MIMO	TX0/PRX	DRX MIMO	-0.61
	43		3700-3800 MHz	TX1/DRX	PRX MIMO	TX0/PRX	DRX MIMO	-0.61
	48	48	3550-3700 MHz	TX1/DRX	PRX MIMO	TX0/PRX	DRX MIMO	-1.21
		77	3450-3550 MHz, 3700-3980 MHz	TX1/DRX	PRX MIMO	TX0/PRX	DRX MIMO	-0.61
		78	3450-3550 MHz, 3700-3800 MHz	TX1/DRX	PRX MIMO	TX0/PRX	DRX MIMO	-0.61

Remark:

As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2 DESCRIPTION OF TEST SETUP

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) Notebook	Think pad x220	Lenovo	Adapter
(2) Ethernet cable	N/A	N/A	N/A
(3) Ethernet cable	N/A	N/A	N/A
Software	Type / Version	Manufacturer	Supplied by
QRCT	N/A	N/A	N/A

Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2) Ethernet cable	1	☒	☒
(3) Ethernet cable	8	☒	☒

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2025	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
FCC CFR Title 47 Part 15 Subpart C Section 15.407	2025	Unlicensed National Information Infrastructure Devices-General technical requirements.
FCC CFR Title 47 Part 2	2024	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
FCC CFR Title 47 Part 22	2024	Public Mobile Services
FCC CFR Title 47 Part 24	2024	Personal Communications Services
FCC CFR Title 47 Part 27	2024	Miscellaneous Wireless Communications Services
FCC CFR Title 47 Part 90	2024	Private Land Mobile Radio Services
FCC CFR Title 47 Part 96	2024	Citizens Broadband Radio Service
ANSI C63.10	2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ANSI C63.26	2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
ANSI TIA-603-E	2016	Land Mobile FM or PM Communications Equipment Measurement and performance Standards
KDB 558074 D01V05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247
KDB 662911 D01V02r01	2020	Provision to Allow Measurement of Directional Gain of Multi-Antenna Systems for Compliance Verification
KDB971168 D01 v03r01	2018	Measurement Guidance for Certification of Licensed Digital Transmitters
KDB971168 D02 v02r01	2023	Miscellaneous and Basic Review and Approval Items for Transmitting Equipment Used in Licensed Radio Services

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Requirement – Test Item of FCC	Standard(s)	Verdict	Remark
Emissions in Restricted Bands	FCC 15.205 FCC 15.209	PASS	Test data please refer to appendix
Unwanted Emissions that fall Out of the Restricted Bands	FCC 15.209	PASS	
Field Strength of Spurious Radiation	Section 22.917 Section 24.238 Section 27.53 Section 90.543 Section 90.691 Section 96.41	PASS	
Note: This report is Based on DEKRA reports (Reports No.: 2560724R.701, 2560724R.702, 2560724R.703, 2560724R.704, 2560724R.705). The only change is addition of eSIM component to an existing PCB footprint and additional storage component options have been added. There are no other hardware change and no PCB change or design change. Technical evaluation determined that this had no impact on RF performance; only radiated spurious data was spot checking for verification. Other data please refer to original report.			

3.4 Test Facility

Tset Location : FCC Designation Number: CN1199

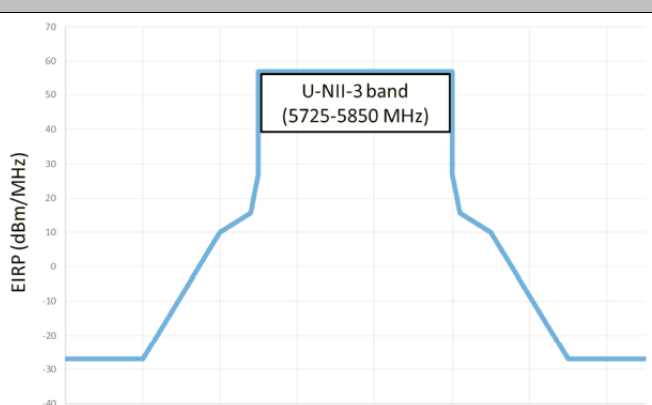
4 TEST RESULTS

4.1 Emissions in restricted frequency bands	VERDICT: PASS
--	----------------------

4.1.1 Limit			
Standard		FCC Part 15 Subpart C Paragraph 15.205; 15.209	
Restricted Bands of operation for FCC			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	Above 38.6
13.36 – 13.41	--	--	--
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 ^(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 ^(Note 1)
1.705 - 30	30	29.5	30 ^(Note 1)
30 - 88	100	40	3 ^(Note 2)
88 - 216	150	43.5	3 ^(Note 2)
216 - 960	200	46	3 ^(Note 2)
Above 960	500	54	3 ^(Note 2)
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).			
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal			

levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	
5725 - 5850		

Standard: FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

FCC § 22.917(a) & 24.238(a)

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. This is calculated to be -13 dBm.

FCC § 27.53(a) (4)

For mobile and portable stations operating in the 2305-2315MHz and 2350-2360MHz bands:

(1) By a factor of not less than: $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log(P)$ dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log(P)$ dB on all frequencies between 2324 and 2328MHz and on all frequencies between 2337 and 2341MHz, and not less than $67 + 10 \log(P)$ dB on all frequencies between 2328 and 2337MHz.

(2) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log(P)$ dB on all frequencies between 2296 and 2300MHz, $61 + 10 \log(P)$ dB on all frequencies between 2292 and 2296MHz, $67 + 10 \log(P)$ dB on all frequencies between 2288 and 2292MHz, and $70 + 10 \log(P)$ dB below 2288MHz.

(3) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log(P)$ dB above 2365MHz.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

Standard: FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. FCC § 27.53(f)

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC § 27.53(h) (1)

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180- 2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

FCC §27.53(l) (2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

FCC §27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40 + 10 \log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43 + 10 \log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

FCC §27.53(n) (2)

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

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 $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ 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 $43 + 10 \log_{10}(P)$ decibels or

Standard: FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(l) & 27.53(m) & 27.53(n) & 90.691 & 90.543 & 96.41(e)

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.

FCC §90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log(P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/ MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

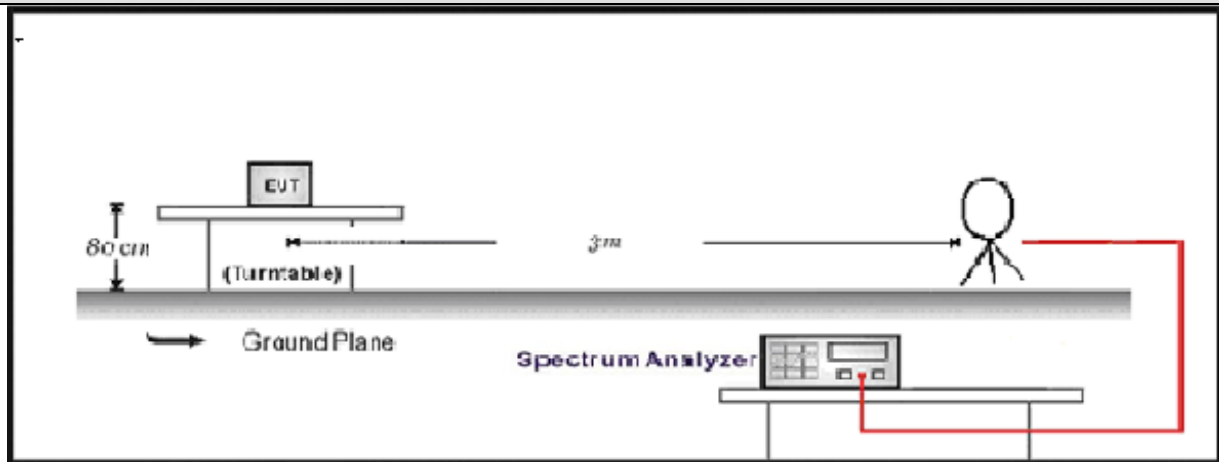
FCC §96.41(e)

The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

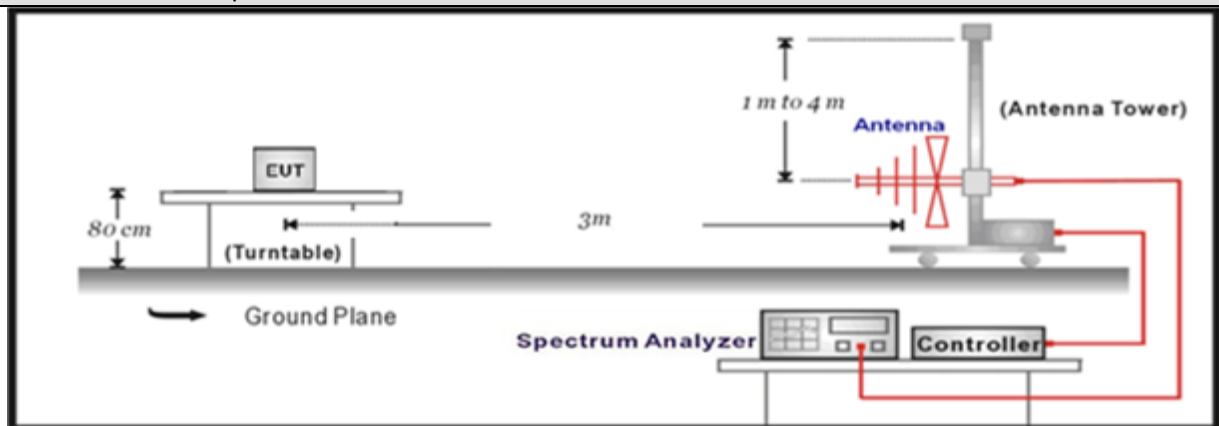
Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

4.1.2 Test Setup

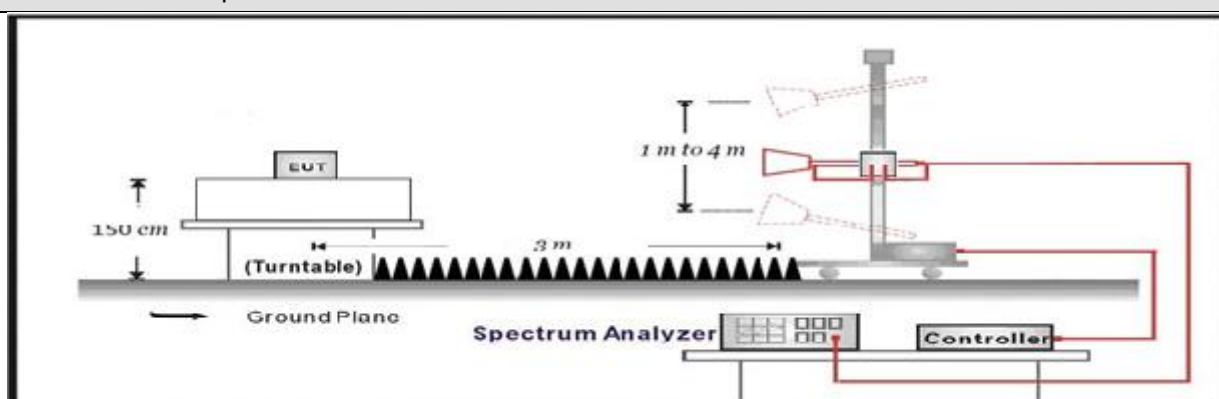
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

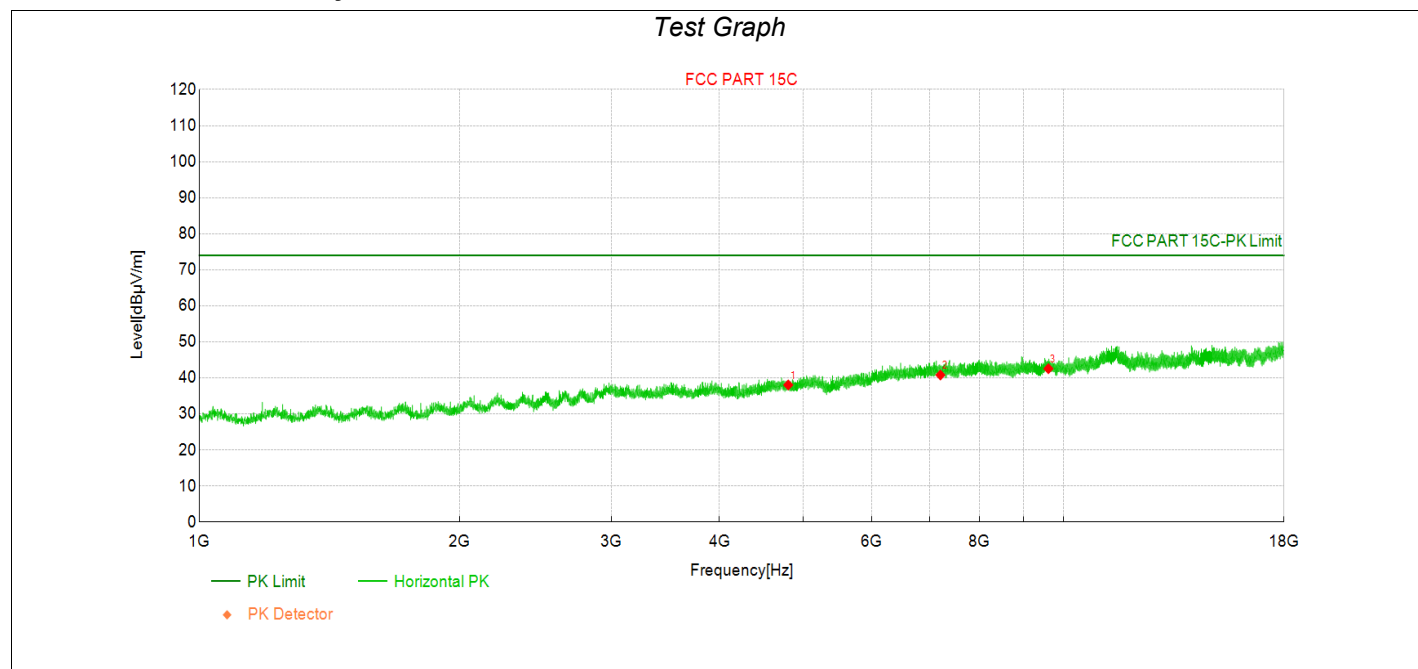


4.1.3 Test Procedure				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	6.3	Radiated spurious emission test
		☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10	11.12.2	Antenna-port conducted measurements
		☐ ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		☐ ANSI C63.10	11.12.2.4	Peak power measurement procedure
		☐ ANSI C63.10	11.12.2.5	Average power measurement procedures
		☐ ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		☐ ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		☐ ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☒	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
		☐ ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
		☒ ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
☒	ANSI C63.26		5.5	Radiated emissions testing

Appendix A: Test results of Emissions in Restricted Bands

1. Bluetooth BR/EDR

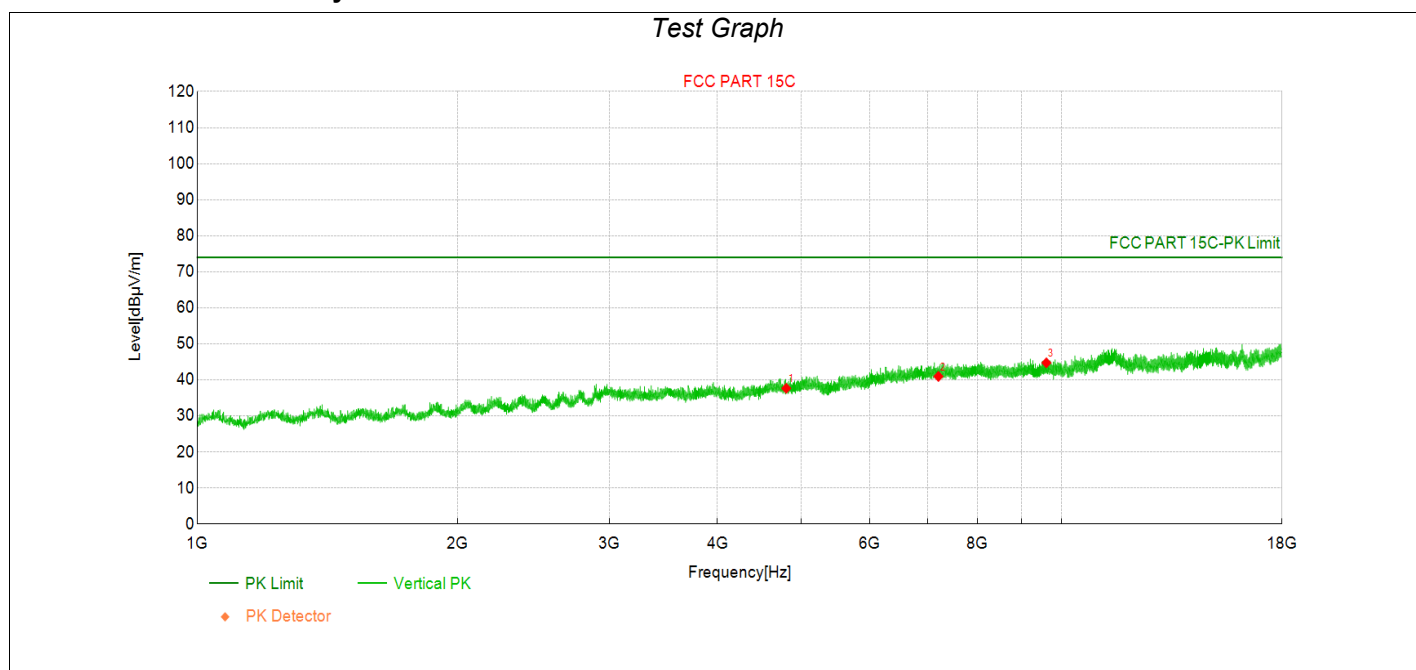
Transmit at 2402MHz by DH5



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4804.00	47.00	38.04	-8.96	74.00	35.96	PK	Horizo	PASS
	4804.00	-	13.25	-	54.00	40.75	AV	Horizo	PASS
2	7206.00	42.90	40.79	-2.13	74.00	33.21	PK	Horizo	PASS
	7206.00	-	16.00	-	54.00	38.00	AV	Horizo	PASS
3	9608.00	41.80	42.56	0.76	74.00	31.44	PK	Horizo	PASS
	9608.00	-	17.77	-	54.00	36.23	AV	Horizo	PASS

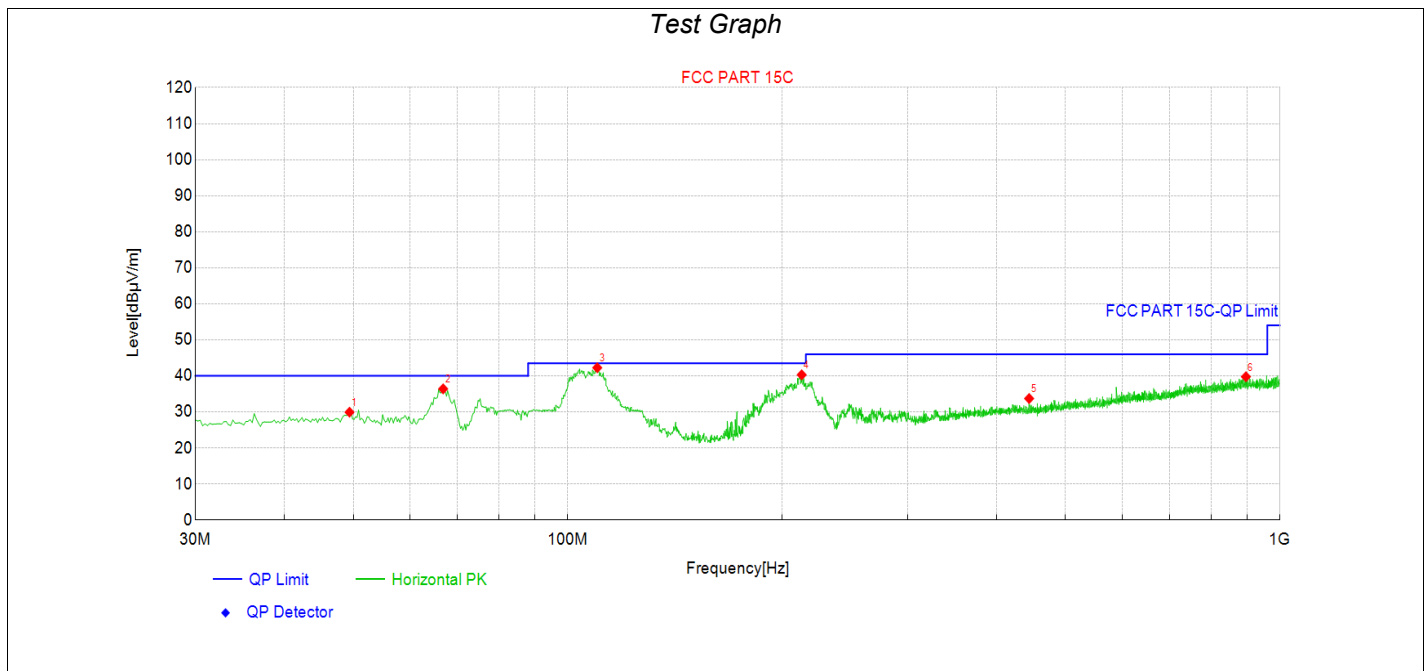
Transmit at 2402MHz by DH5



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4804.00	46.60	37.66	-8.96	74.00	36.34	PK	Vertic	PASS
	4804.00	-	12.87	-	54.00	41.13	AV	Vertic	PASS
2	7206.00	43.10	40.96	-2.13	74.00	33.04	PK	Vertic	PASS
	7206.00	-	16.17	-	54.00	37.83	AV	Vertic	PASS
3	9608.00	44.00	44.74	0.76	74.00	29.26	PK	Vertic	PASS
	9608.00	-	19.95	-	54.00	34.05	AV	Vertic	PASS

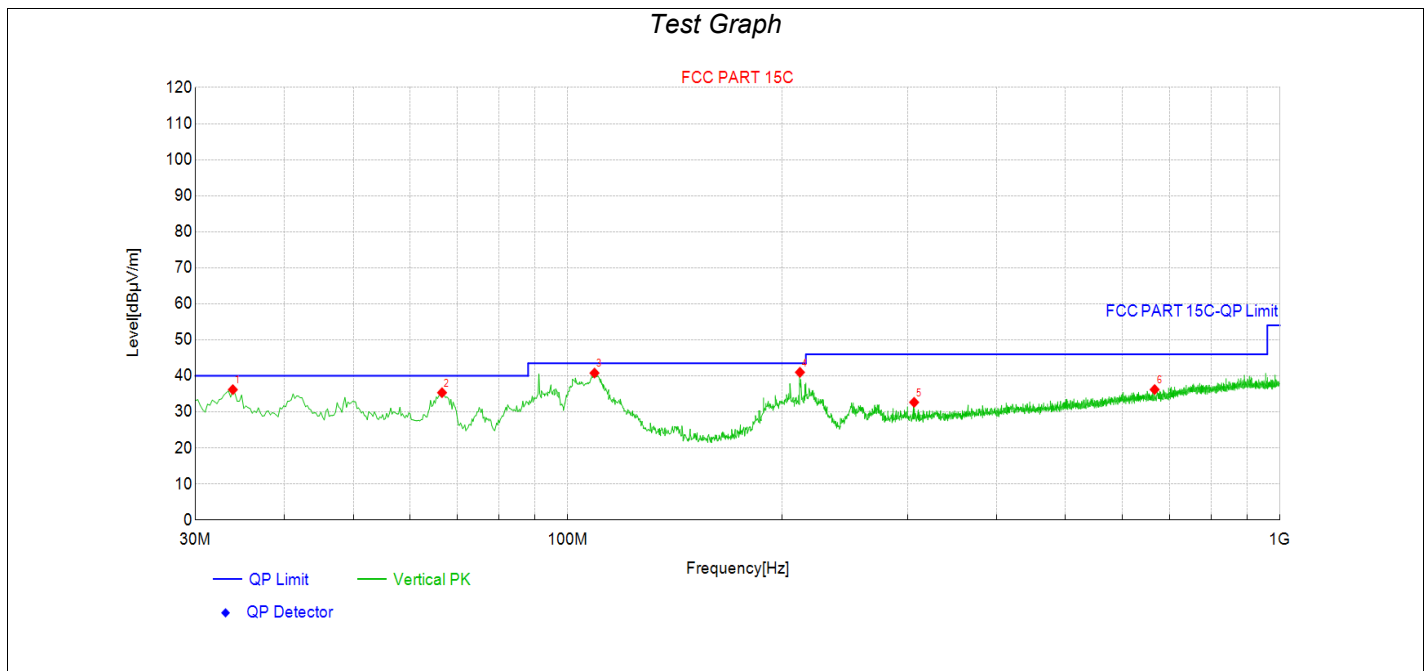
Transmit at 2402MHz by DH5



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	49.40	15.1	29.93	14.880	40.00	10.07	PK	Horizo	PASS
2	66.86	25.5	36.40	10.940	40.00	3.60	PK	Horizo	PASS
3	110.03	30.0	42.26	12.220	43.50	1.24	PK	Horizo	PASS
4	213.09	28.2	40.30	12.130	43.50	3.20	PK	Horizo	PASS
5	444.43	17.0	33.72	16.730	46.00	12.28	PK	Horizo	PASS
6	895.73	16.9	39.77	22.830	46.00	6.23	PK	Horizo	PASS

Transmit at 2402MHz by DH5

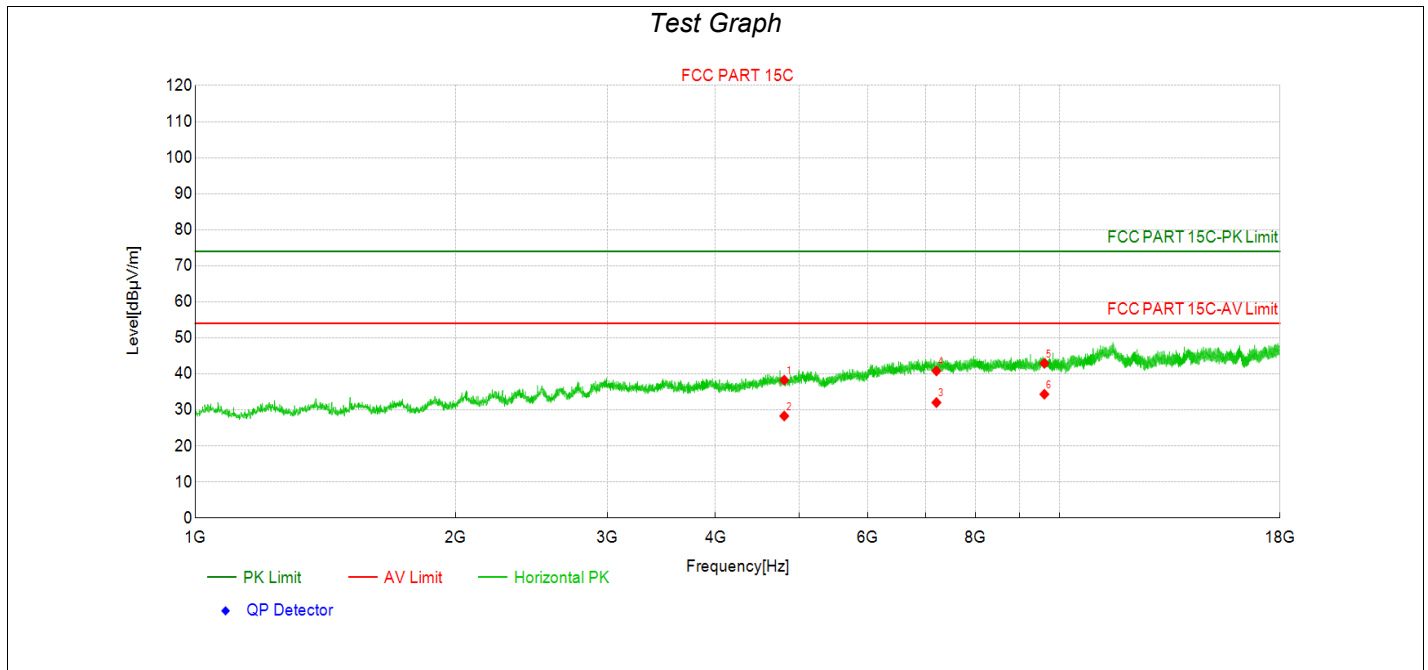


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	33.88	23.2	36.19	13.030	40.00	3.81	PK	Vertic	PASS
2	66.62	24.4	35.35	11.000	40.00	4.65	PK	Vertic	PASS
3	109.06	28.5	40.79	12.250	43.50	2.71	PK	Vertic	PASS
4	211.88	28.9	41.00	12.110	43.50	2.50	PK	Vertic	PASS
5	306.45	18.5	32.66	14.160	46.00	13.34	PK	Vertic	PASS
6	666.81	16.1	36.21	20.150	46.00	9.79	PK	Vertic	PASS

2. Bluetooth LE

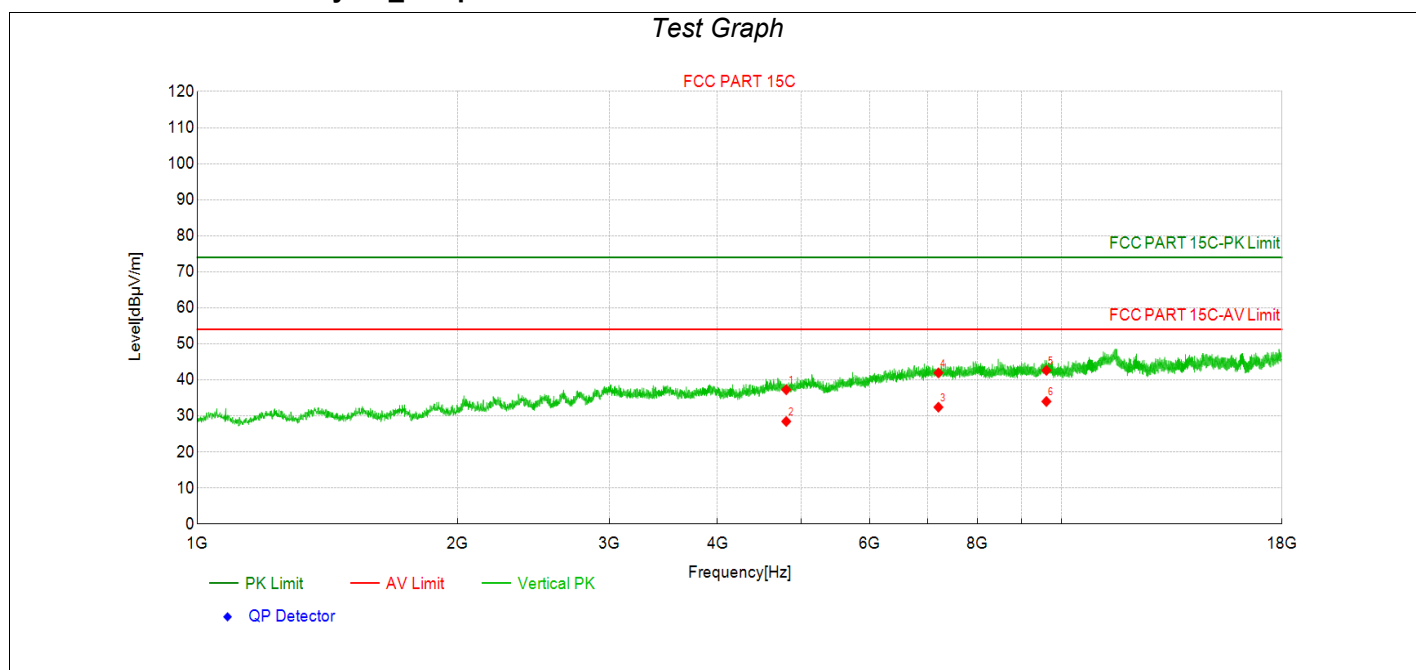
Transmit at 2402MHz by LE_1Mbps



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4804.00	47.2	38.27	-8.960	74.00	35.73	PK	Horizo	PASS
2	4804.00	37.3	28.31	-8.960	54.00	25.69	AV	Horizo	PASS
3	7206.00	34.2	32.04	-2.130	54.00	21.96	AV	Horizo	PASS
4	7206.00	43.0	40.82	-2.130	74.00	33.18	PK	Horizo	PASS
5	9608.00	42.2	42.92	0.760	74.00	31.08	PK	Horizo	PASS
6	9608.00	33.6	34.36	0.760	54.00	19.64	AV	Horizo	PASS

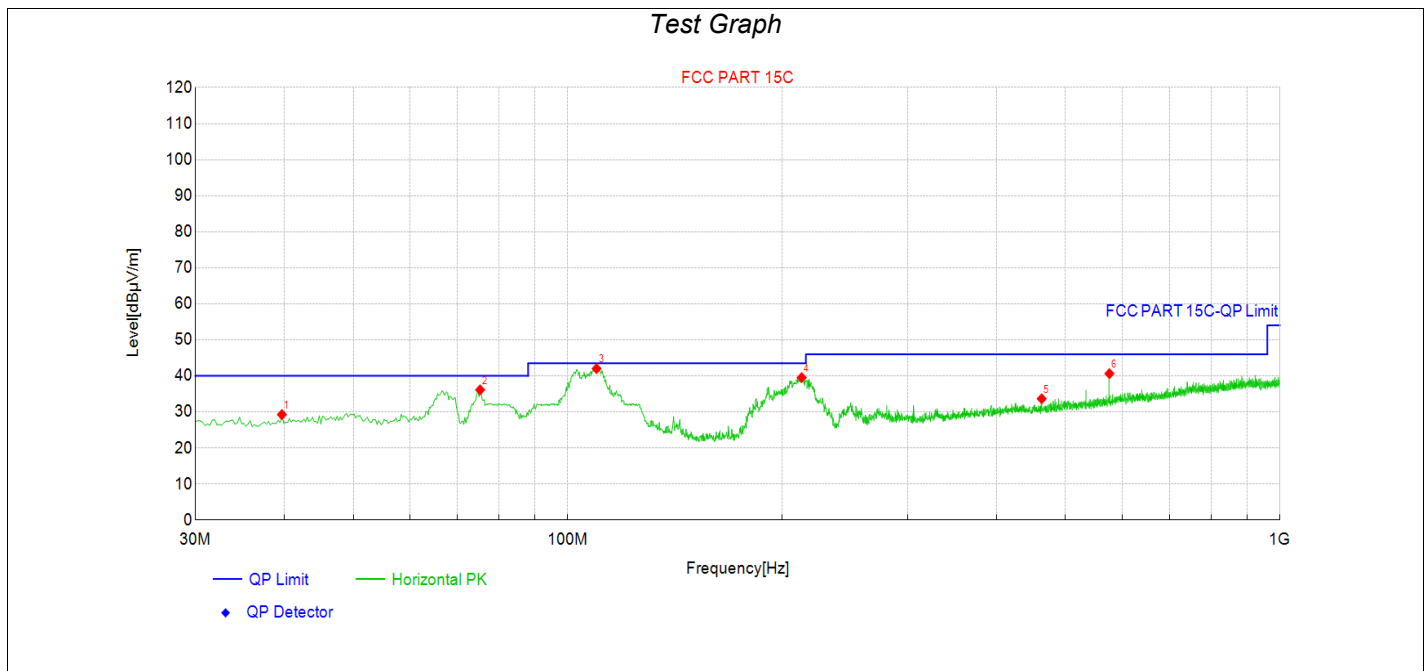
Transmit at 2402MHz by LE_1Mbps



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4804.00	46.2	37.28	-8.960	74.00	36.72	PK	Vertic	PASS
2	4804.00	37.4	28.47	-8.960	54.00	25.53	AV	Vertic	PASS
3	7206.00	34.6	32.43	-2.130	54.00	21.57	AV	Vertic	PASS
4	7206.00	44.1	41.95	-2.130	74.00	32.05	PK	Vertic	PASS
5	9608.00	41.9	42.64	0.760	74.00	31.36	PK	Vertic	PASS
6	9608.00	33.2	34.00	0.760	54.00	20.00	AV	Vertic	PASS

Transmit at 2402MHz by LE_1Mbps

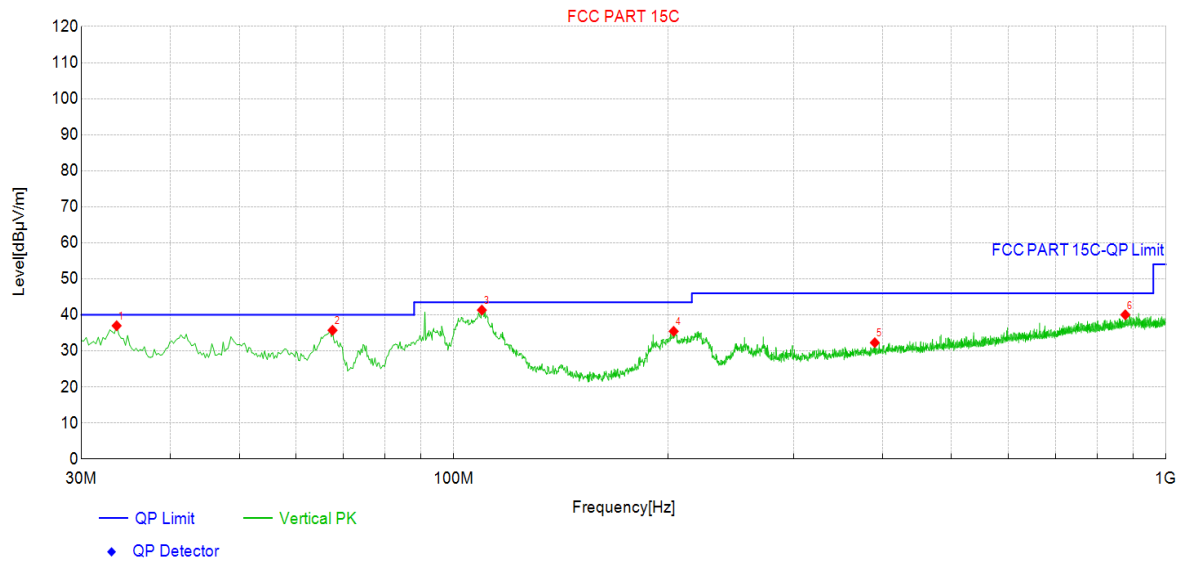


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	39.70	15.5	29.28	13.810	40.00	10.72	PK	Horizo	PASS
2	75.35	26.3	36.14	9.880	40.00	3.86	PK	Horizo	PASS
3	109.78	29.8	42.02	12.220	43.50	1.48	PK	Horizo	PASS
4	213.09	27.4	39.53	12.130	43.50	3.97	PK	Horizo	PASS
5	462.86	16.7	33.65	16.910	46.00	12.35	PK	Horizo	PASS
6	576.11	21.6	40.63	19.060	46.00	5.37	PK	Horizo	PASS

Transmit at 2402MHz by LE_1Mbps

Test Graph

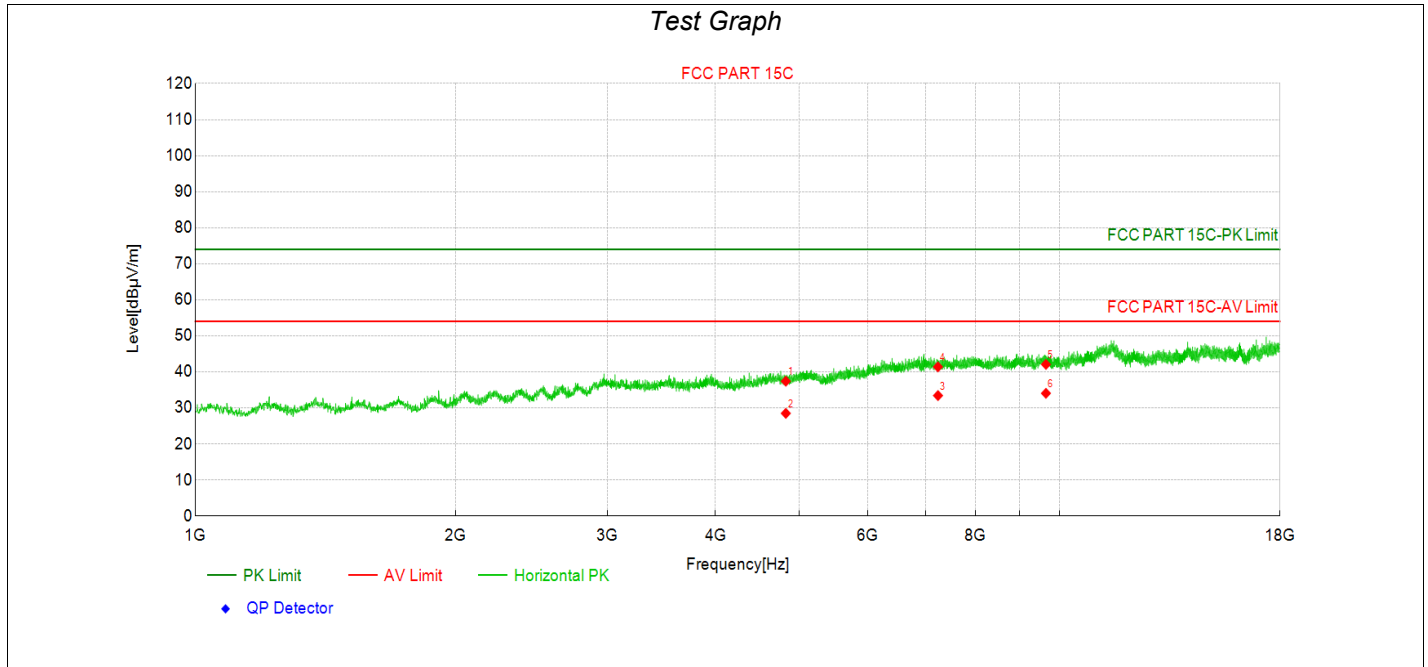


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	33.64	24.0	36.99	13.020	40.00	3.01	PK	Vertic	PASS
2	67.59	25.0	35.73	10.750	40.00	4.27	PK	Vertic	PASS
3	109.54	29.1	41.34	12.230	43.50	2.16	PK	Vertic	PASS
4	203.63	23.5	35.44	11.930	43.50	8.06	PK	Vertic	PASS
5	390.11	16.3	32.29	16.000	46.00	13.71	PK	Vertic	PASS
6	876.81	17.5	40.04	22.530	46.00	5.96	PK	Vertic	PASS

3. Wi-Fi 2.4G

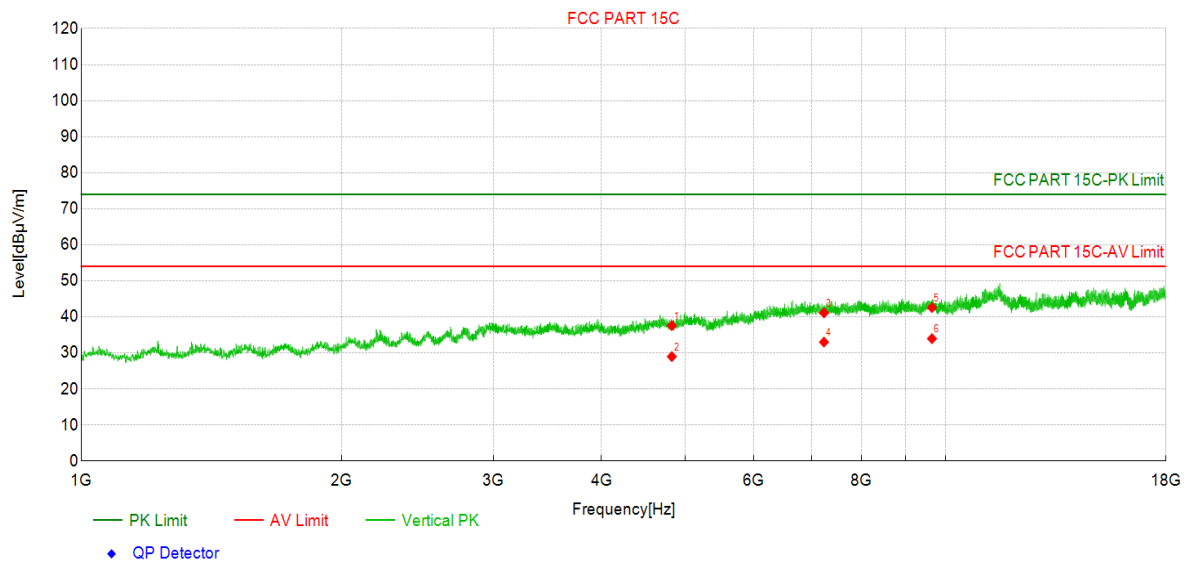
Transmit at 2412MHz by 802.11b with Ant1+2



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4824.00	46.3	37.42	-8.880	74.00	36.58	PK	Horizo	PASS
2	4824.00	37.4	28.50	-8.880	54.00	25.50	AV	Horizo	PASS
3	7236.00	35.5	33.43	-2.110	54.00	20.57	AV	Horizo	PASS
4	7236.00	43.5	41.39	-2.110	74.00	32.61	PK	Horizo	PASS
5	9648.00	41.3	42.08	0.810	74.00	31.92	PK	Horizo	PASS
6	9648.00	33.3	34.06	0.810	54.00	19.94	AV	Horizo	PASS

Transmit at 2412MHz by 802.11b with Ant1+2

Test Graph

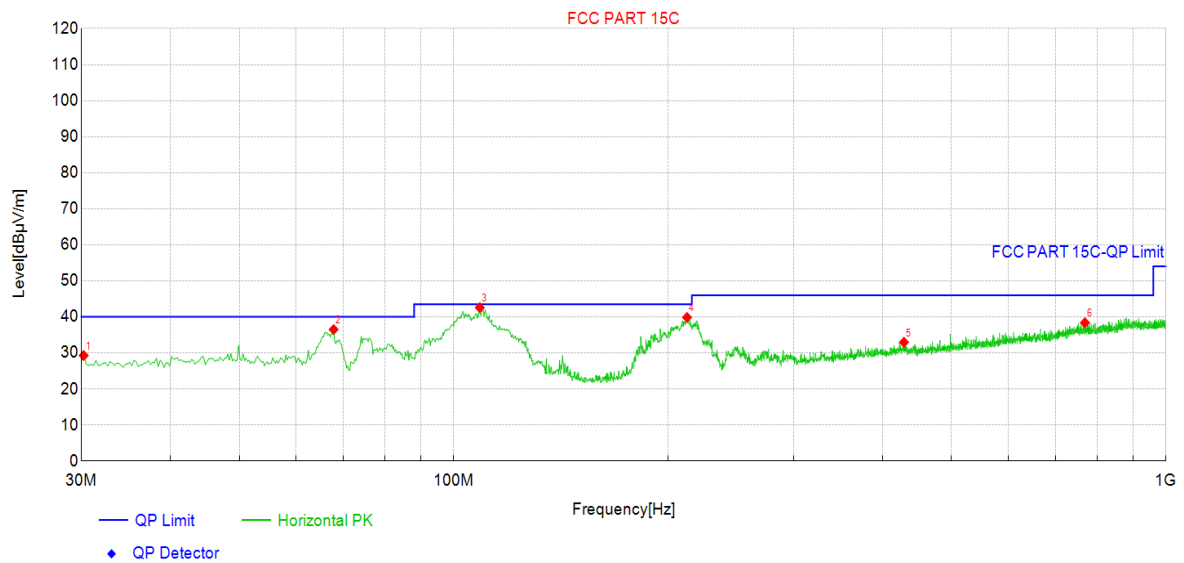


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	4824.00	46.5	37.58	-8.880	74.00	36.42	PK	Vertic	PASS
2	4824.00	37.9	28.99	-8.880	54.00	25.01	AV	Vertic	PASS
3	7236.00	43.2	41.13	-2.110	74.00	32.87	PK	Vertic	PASS
4	7236.00	35.1	33.01	-2.110	54.00	20.99	AV	Vertic	PASS
5	9648.00	41.8	42.58	0.810	74.00	31.42	PK	Vertic	PASS
6	9648.00	33.2	33.96	0.810	54.00	20.04	AV	Vertic	PASS

Transmit at 2412MHz by 802.11b with Ant1+2

Test Graph

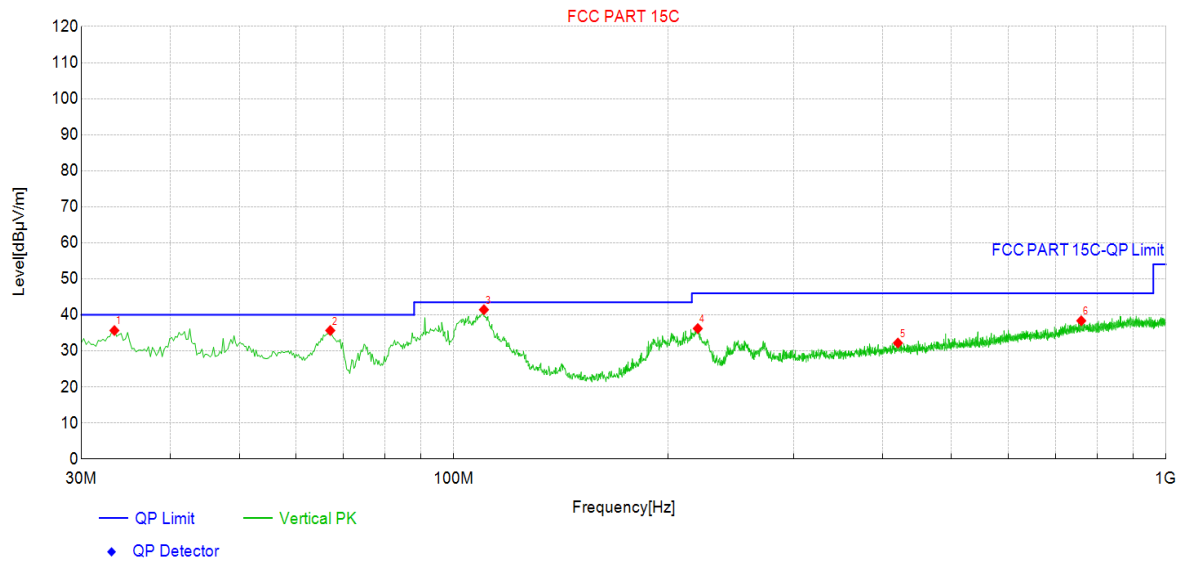


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	30.24	16.4	29.29	12.920	40.00	10.71	PK	Horizo	PASS
2	67.83	25.8	36.50	10.680	40.00	3.50	PK	Horizo	PASS
3	108.81	30.3	42.57	12.250	43.50	0.93	PK	Horizo	PASS
4	212.60	27.8	39.87	12.120	43.50	3.63	PK	Horizo	PASS
5	428.67	16.5	32.97	16.460	46.00	13.03	PK	Horizo	PASS
6	769.38	16.9	38.40	21.550	46.00	7.60	PK	Horizo	PASS

Transmit at 2412MHz by 802.11b with Ant1+2

Test Graph

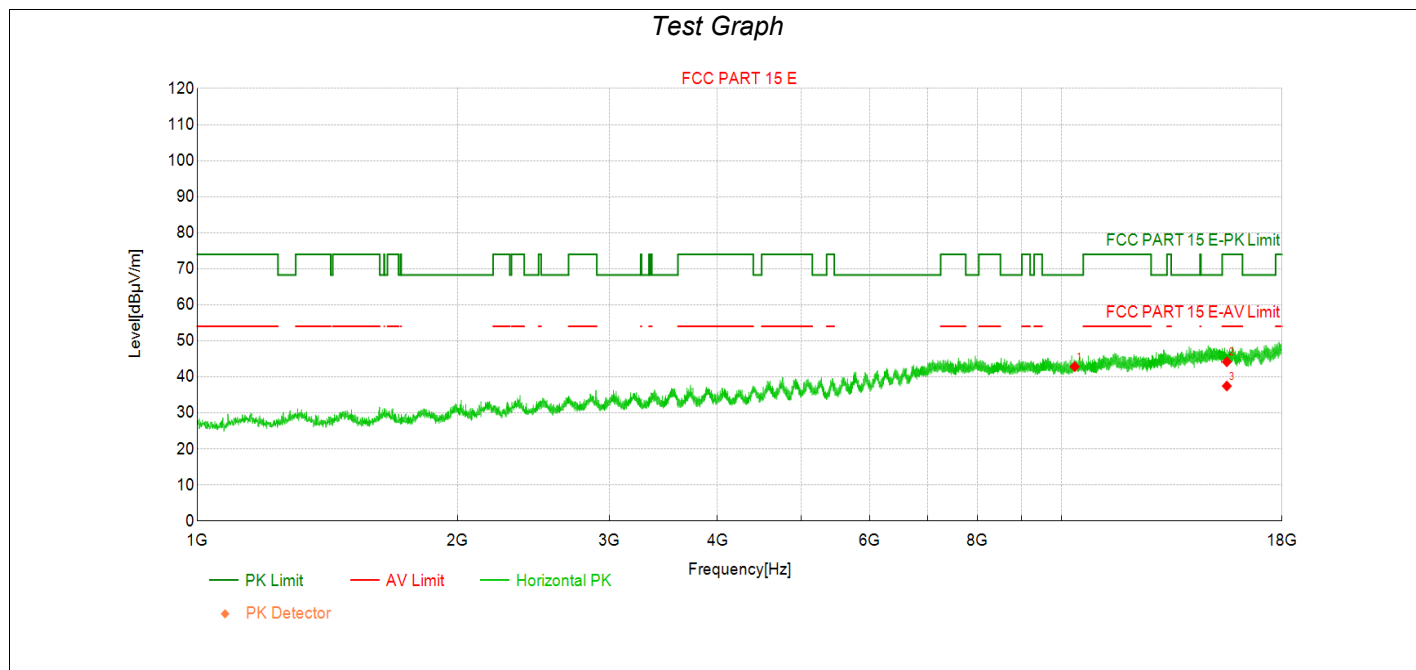


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	33.40	22.7	35.67	13.020	40.00	4.33	PK	Vertic	PASS
2	67.10	24.8	35.66	10.870	40.00	4.34	PK	Vertic	PASS
3	110.27	29.3	41.43	12.180	43.50	2.07	PK	Vertic	PASS
4	220.12	23.9	36.21	12.340	46.00	9.79	PK	Vertic	PASS
5	420.43	15.9	32.20	16.340	46.00	13.80	PK	Vertic	PASS
6	760.41	16.8	38.37	21.530	46.00	7.63	PK	Vertic	PASS

4. Wi-Fi 5G

Transmit at 5180MHz by 802.11a with Ant1+2

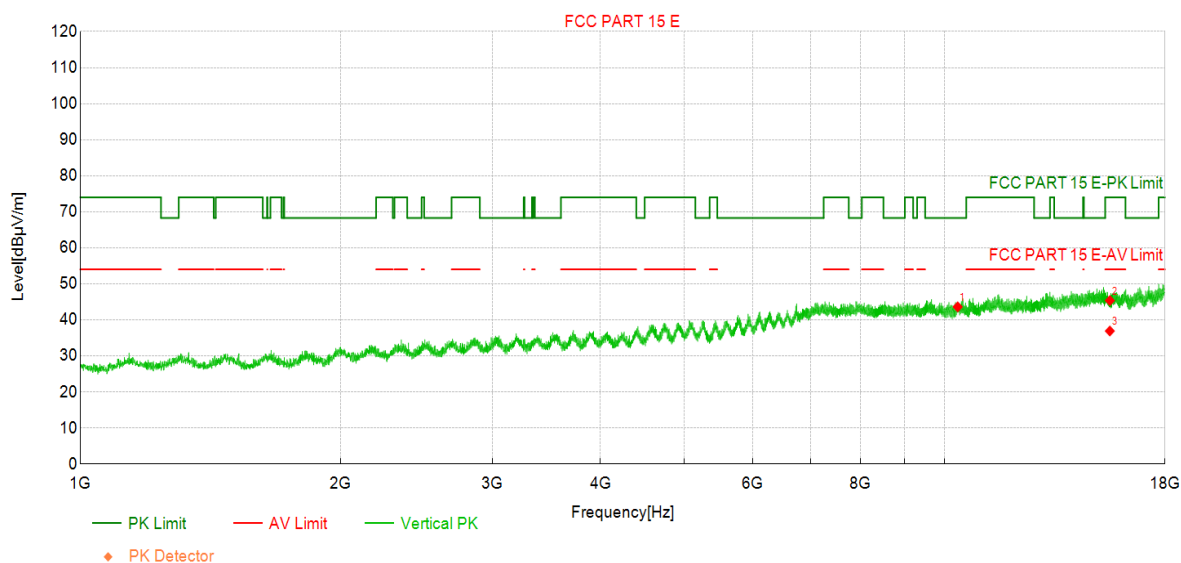


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10360.00	41.2	42.84	1.620	68.30	25.46	PK	Horizo	PASS
2	15540.00	35.1	44.19	9.110	74.00	29.81	PK	Horizo	PASS
3	15540.00	28.4	37.46	9.110	54.00	16.54	AV	Horizo	PASS

Transmit at 5180MHz by 802.11a with Ant1+2

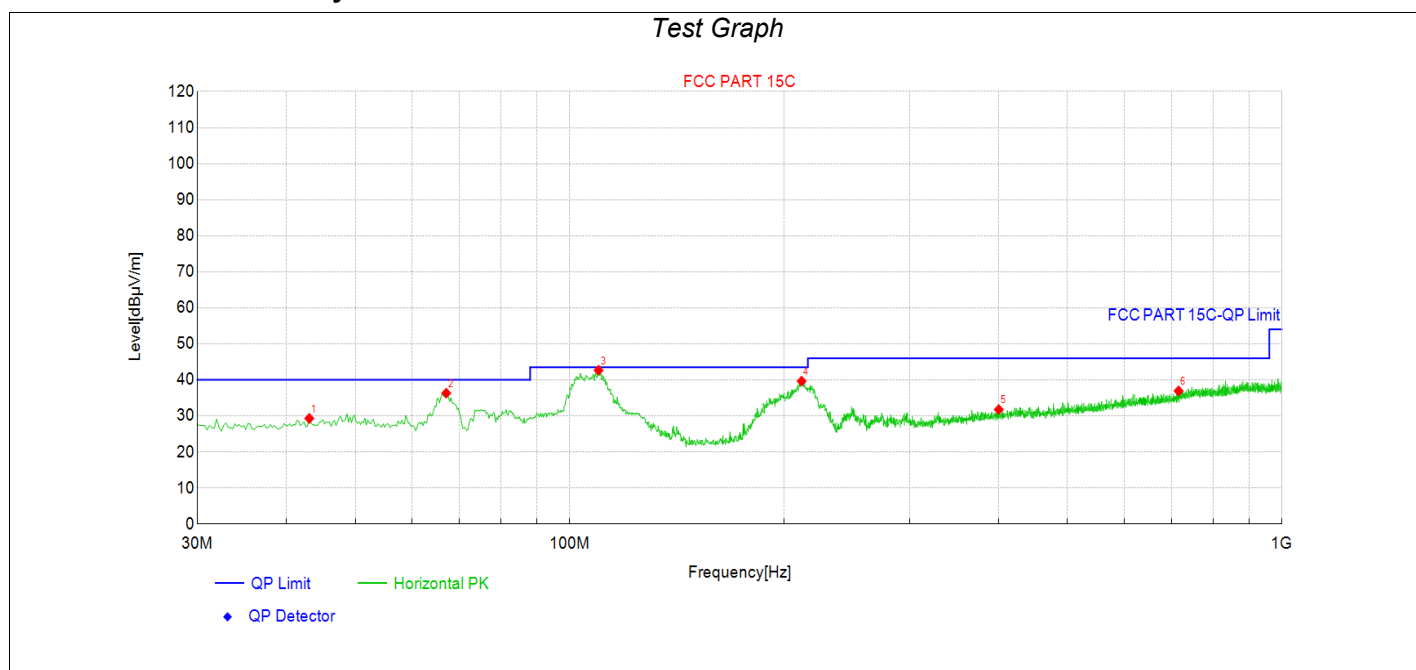
Test Graph



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10360.00	42.0	43.61	1.620	68.30	24.69	PK	Vertic	PASS
2	15540.00	36.3	45.37	9.110	74.00	28.63	PK	Vertic	PASS
3	15540.00	27.8	36.92	9.110	54.00	17.08	AV	Vertic	PASS

Transmit at 5180MHz by 802.11a with Ant1+2

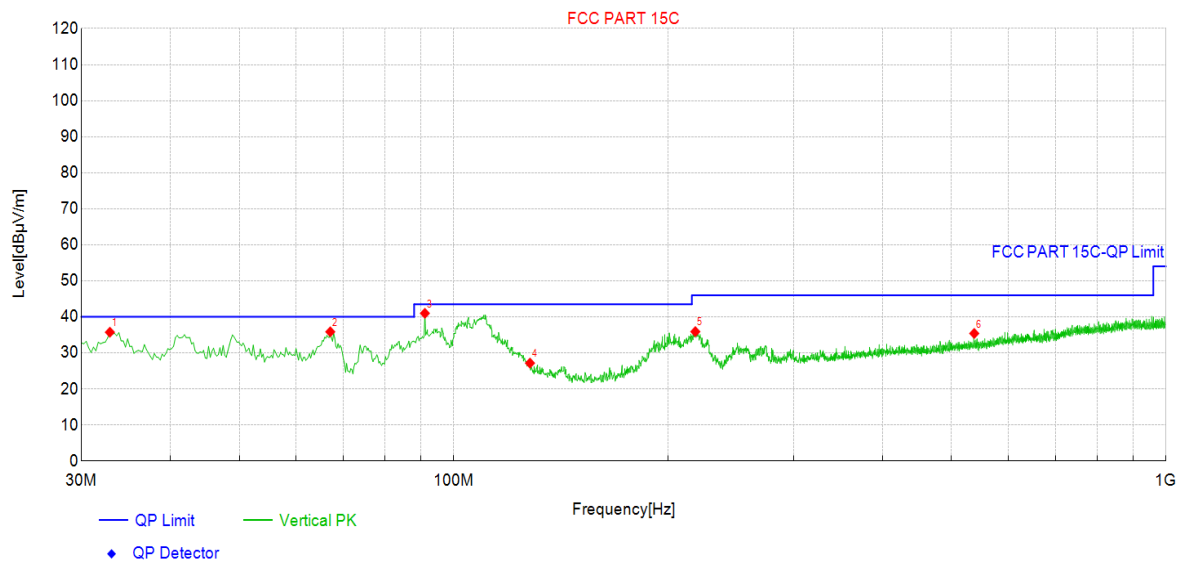


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	43.10	15.0	29.31	14.310	40.00	10.69	PK	Horizo	PASS
2	67.10	25.5	36.32	10.870	40.00	3.68	PK	Horizo	PASS
3	109.78	30.5	42.69	12.220	43.50	0.81	PK	Horizo	PASS
4	211.63	27.6	39.66	12.100	43.50	3.84	PK	Horizo	PASS
5	400.30	15.7	31.77	16.110	46.00	14.23	PK	Horizo	PASS
6	715.79	16.2	36.93	20.710	46.00	9.07	PK	Horizo	PASS

Transmit at 5180MHz by 802.11a with Ant1+2

Test Graph

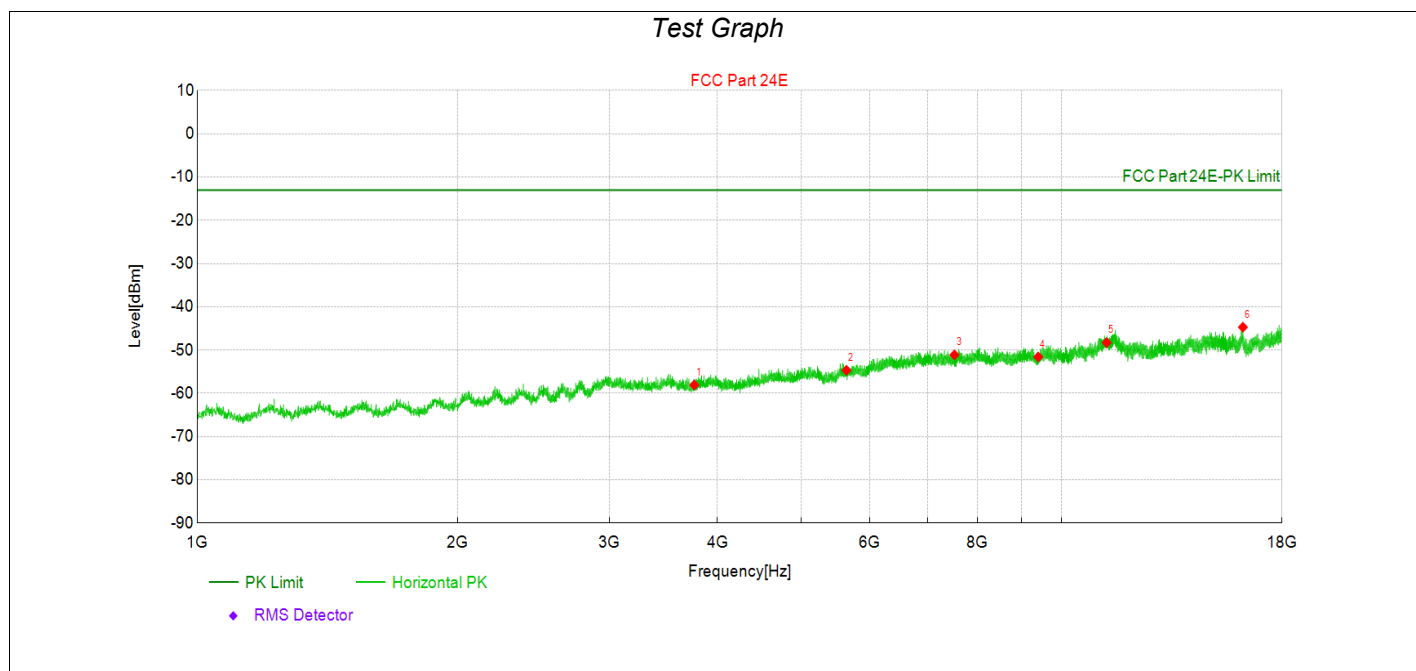


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	32.91	22.8	35.75	12.990	40.00	4.25	PK	Vertic	PASS
2	67.10	25.0	35.87	10.870	40.00	4.13	PK	Vertic	PASS
3	91.11	29.8	40.99	11.190	43.50	2.51	PK	Vertic	PASS
4	127.97	17.3	27.18	9.870	43.50	16.32	PK	Vertic	PASS
5	218.42	23.6	35.91	12.290	46.00	10.09	PK	Vertic	PASS
6	538.04	17.3	35.41	18.160	46.00	10.59	PK	Vertic	PASS

5. LTE

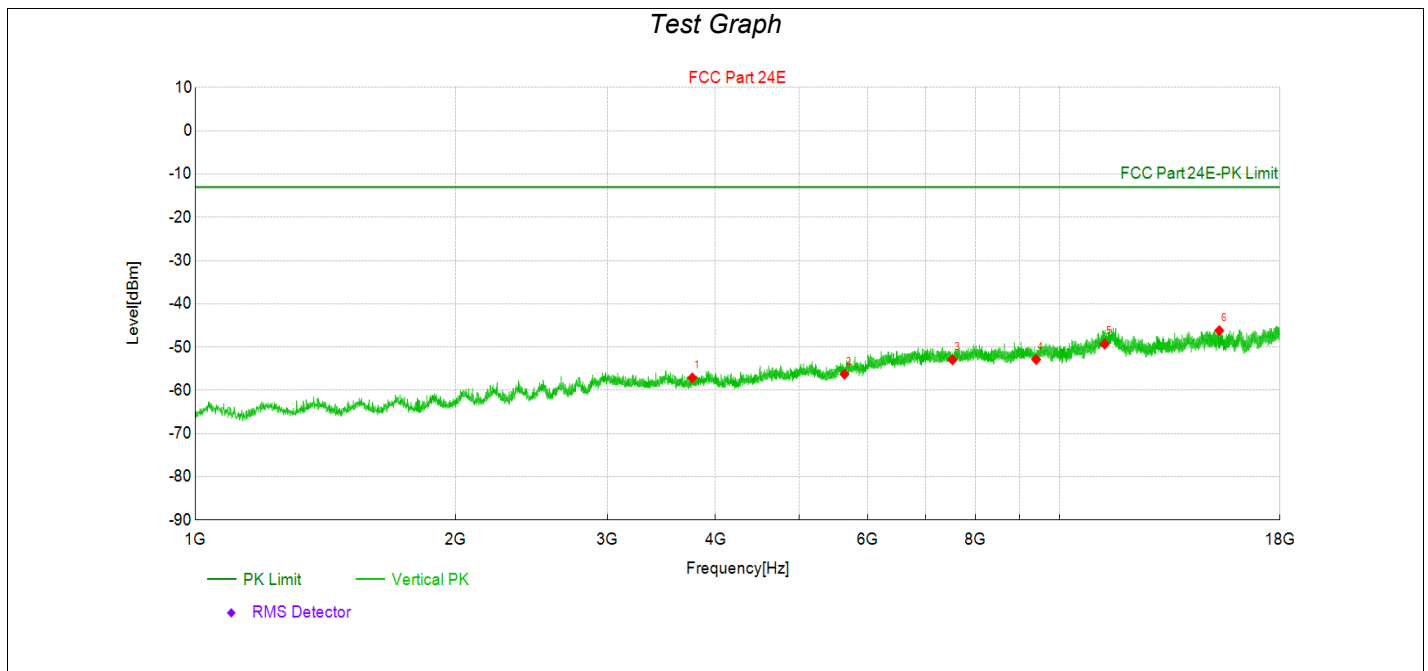
LTE band2 Traffic Mid Channel



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	3760.00	50.0	-58.08	-108.090	-13.00	45.08	PK	Horizo	PASS
2	5640.00	46.8	-54.68	-101.430	-13.00	41.68	PK	Horizo	PASS
3	7520.00	46.2	-51.11	-97.310	-13.00	38.11	PK	Horizo	PASS
4	9400.00	43.2	-51.59	-94.780	-13.00	38.59	PK	Horizo	PASS
5	11280.00	40.5	-48.28	-88.760	-13.00	35.28	PK	Horizo	PASS
6	16219.25	39.6	-44.72	-84.350	-13.00	31.72	PK	Horizo	PASS

LTE band2 Traffic Mid Channel

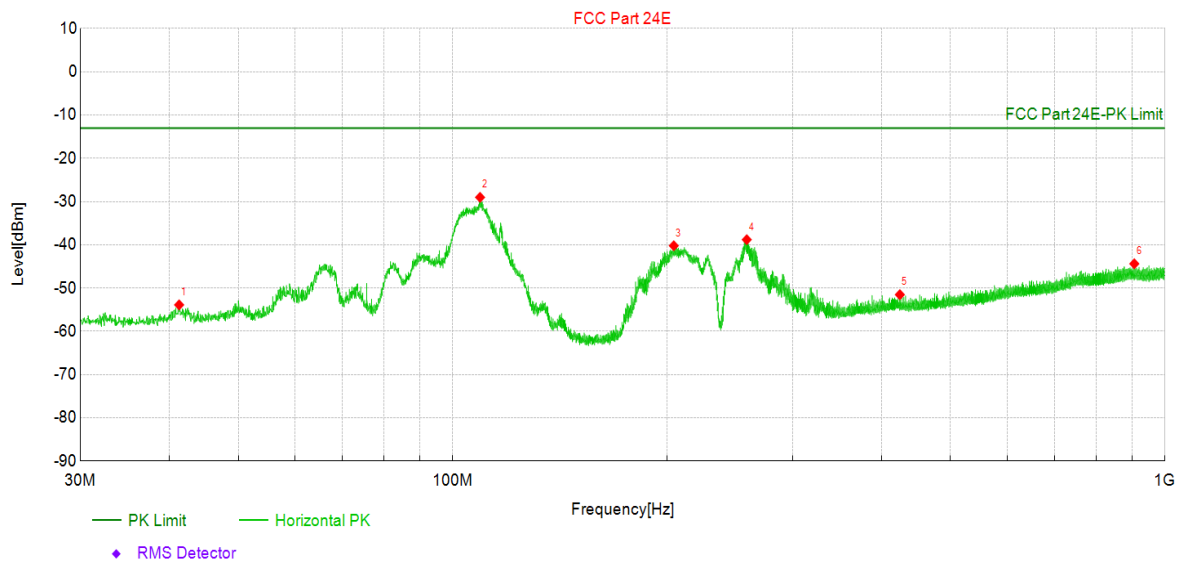


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	3760.00	51.0	-57.12	-108.090	-13.00	44.12	PK	Vertic	PASS
2	5640.00	45.1	-56.29	-101.430	-13.00	43.29	PK	Vertic	PASS
3	7520.00	44.4	-52.92	-97.310	-13.00	39.92	PK	Vertic	PASS
4	9400.00	41.9	-52.89	-94.780	-13.00	39.89	PK	Vertic	PASS
5	11280.00	39.4	-49.32	-88.760	-13.00	36.32	PK	Vertic	PASS
6	15313.15	39.7	-46.17	-85.870	-13.00	33.17	PK	Vertic	PASS

LTE band2 Traffic Mid Channel

Test Graph

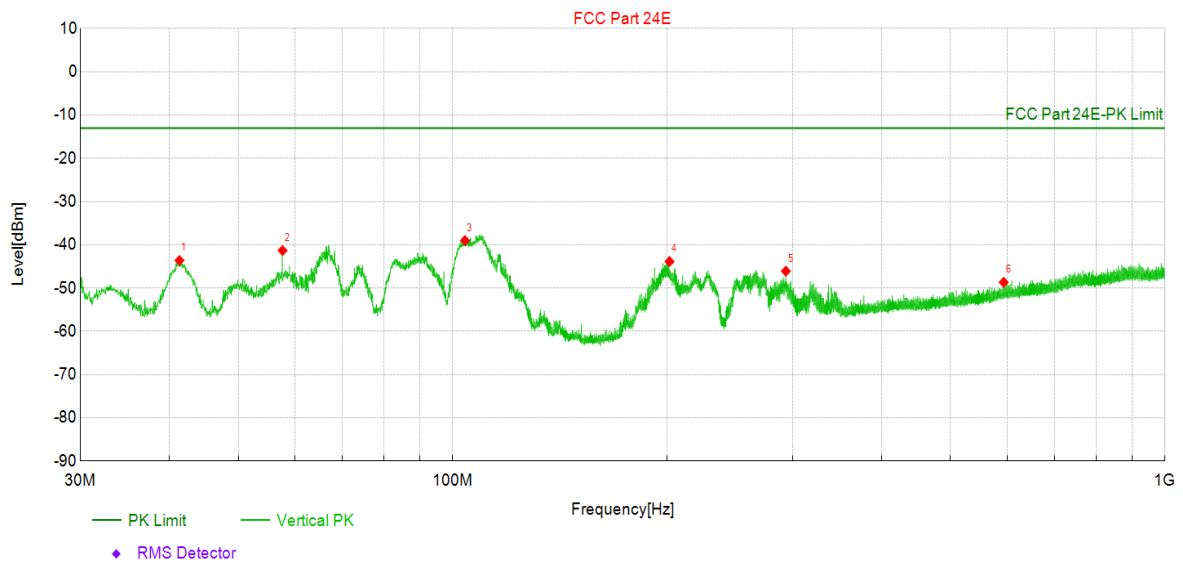


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	41.30	27.3	-53.89	-81.150	-13.00	40.89	PK	Horizo	PASS
2	109.25	53.9	-29.02	-82.960	-13.00	16.02	PK	Horizo	PASS
3	204.36	43.0	-40.21	-83.250	-13.00	27.21	PK	Horizo	PASS
4	258.73	43.0	-38.81	-81.850	-13.00	25.81	PK	Horizo	PASS
5	424.40	27.3	-51.53	-78.810	-13.00	38.53	PK	Horizo	PASS
6	905.52	27.9	-44.39	-72.280	-13.00	31.39	PK	Horizo	PASS

LTE band2 Traffic Mid Channel

Test Graph

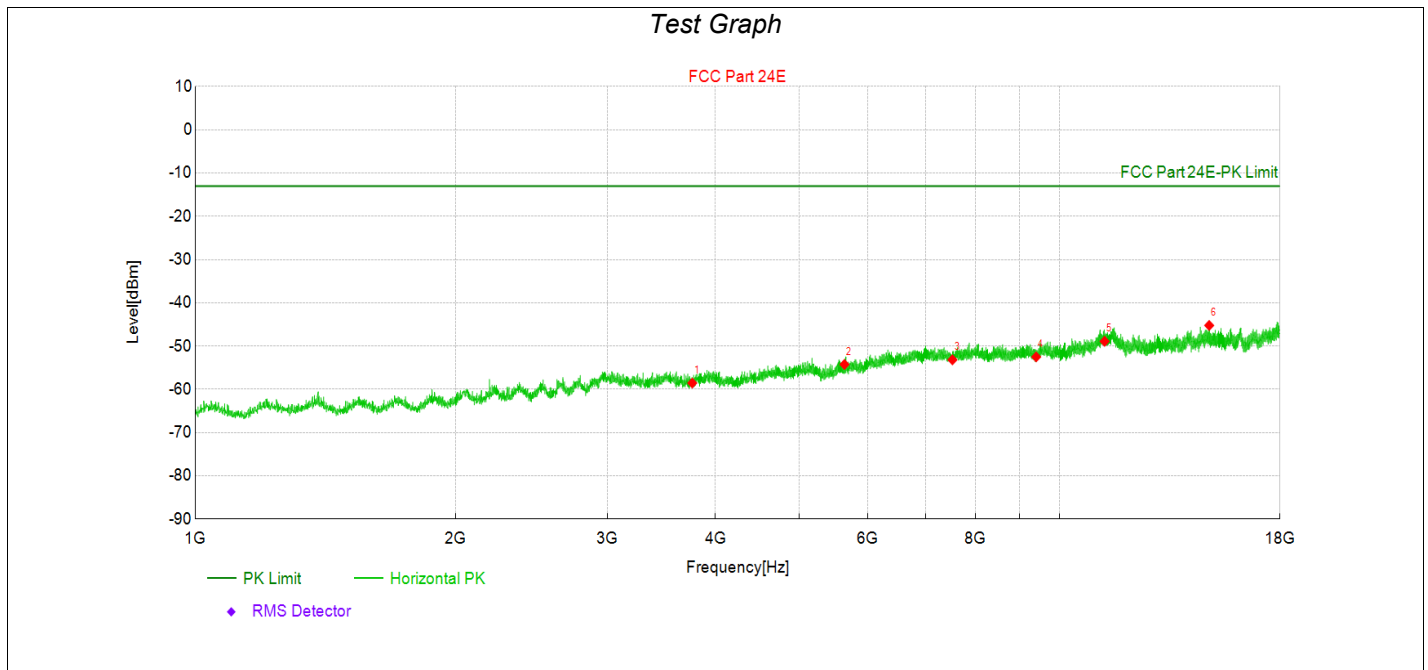


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	41.35	37.5	-43.61	-81.140	-13.00	30.61	PK	Vertic	PASS
2	57.69	40.6	-41.31	-81.900	-13.00	28.31	PK	Vertic	PASS
3	104.06	43.8	-39.01	-82.790	-13.00	26.01	PK	Vertic	PASS
4	201.54	39.5	-43.85	-83.340	-13.00	30.85	PK	Vertic	PASS
5	293.55	35.2	-46.10	-81.320	-13.00	33.10	PK	Vertic	PASS
6	593.67	27.0	-48.66	-75.640	-13.00	35.66	PK	Vertic	PASS

6. NR

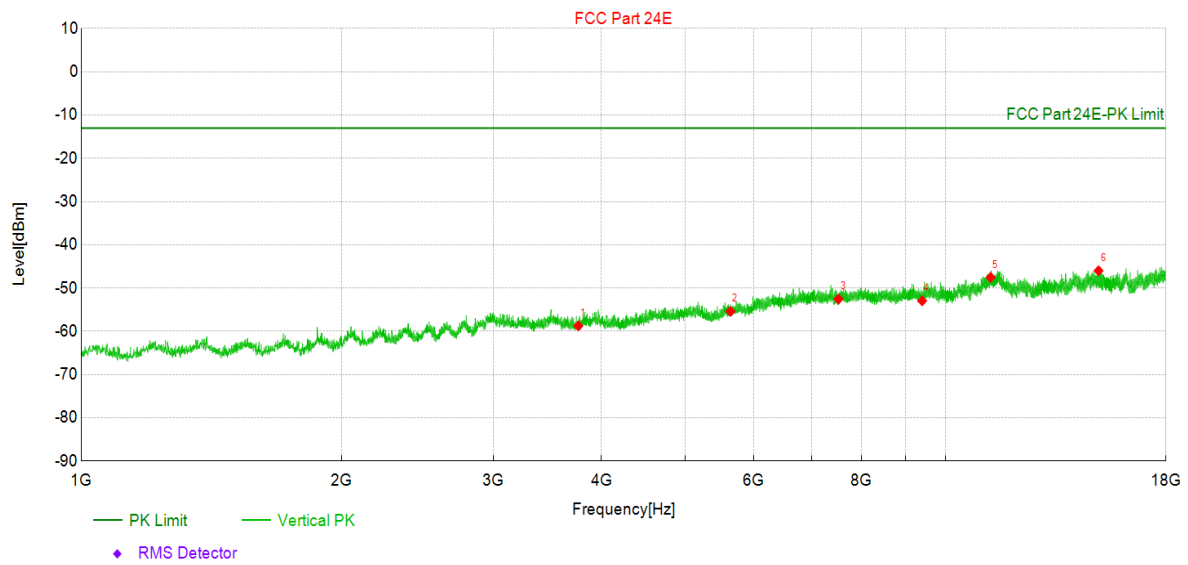
NR band n2 Traffic Mid Channel



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	3760.00	49.5	-58.55	-108.090	-13.00	45.55	PK	Horizo	PASS
2	5640.00	47.2	-54.26	-101.430	-13.00	41.26	PK	Horizo	PASS
3	7520.00	44.1	-53.17	-97.310	-13.00	40.17	PK	Horizo	PASS
4	9400.00	42.3	-52.50	-94.780	-13.00	39.50	PK	Horizo	PASS
5	11280.00	39.9	-48.90	-88.760	-13.00	35.90	PK	Horizo	PASS
6	14906.00	40.8	-45.23	-86.060	-13.00	32.23	PK	Horizo	PASS

NR band n2 Traffic Mid Channel

Test Graph

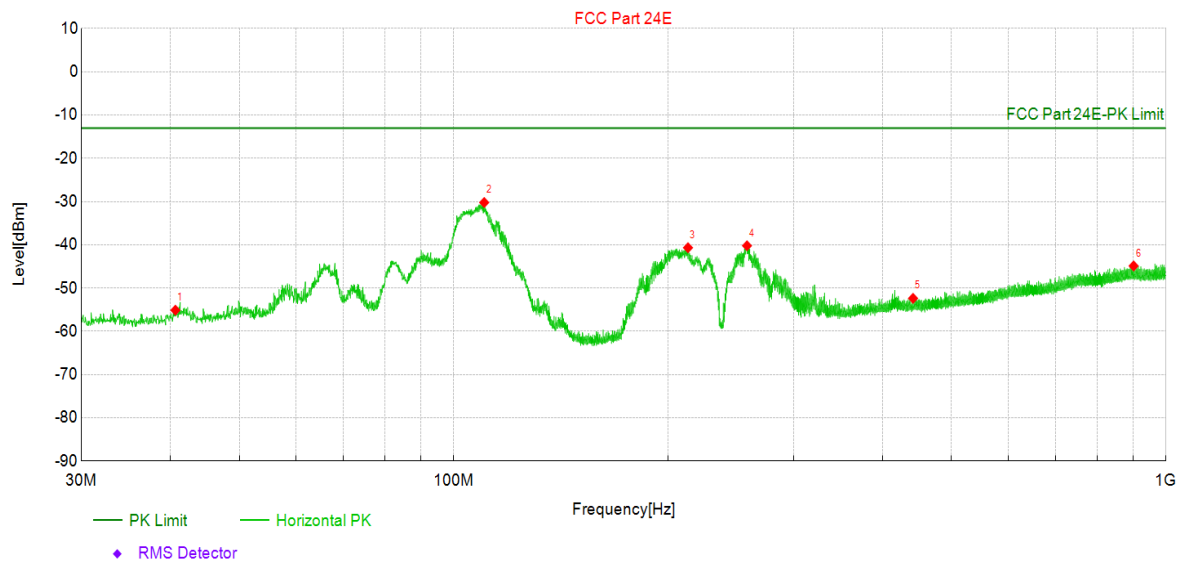


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	3760.00	49.4	-58.74	-108.090	-13.00	45.74	PK	Vertic	PASS
2	5640.00	46.0	-55.40	-101.430	-13.00	42.40	PK	Vertic	PASS
3	7520.00	44.8	-52.54	-97.310	-13.00	39.54	PK	Vertic	PASS
4	9400.00	41.8	-52.96	-94.780	-13.00	39.96	PK	Vertic	PASS
5	11280.00	41.2	-47.52	-88.760	-13.00	34.52	PK	Vertic	PASS
6	15038.60	39.6	-45.99	-85.590	-13.00	32.99	PK	Vertic	PASS

NR band n2 Traffic Mid Channel

Test Graph

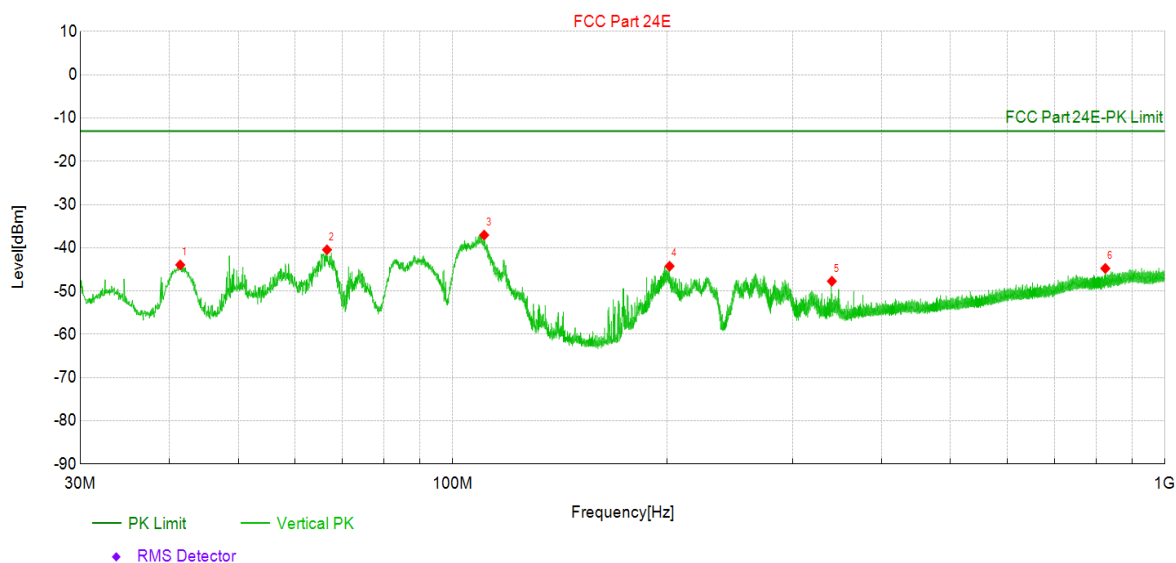


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	40.67	26.1	-55.11	-81.250	-13.00	42.11	PK	Horizo	PASS
2	110.36	52.8	-30.22	-83.030	-13.00	17.22	PK	Horizo	PASS
3	213.28	42.4	-40.67	-83.060	-13.00	27.67	PK	Horizo	PASS
4	258.10	41.6	-40.21	-81.850	-13.00	27.21	PK	Horizo	PASS
5	441.47	26.1	-52.38	-78.520	-13.00	39.38	PK	Horizo	PASS
6	900.72	27.4	-44.88	-72.290	-13.00	31.88	PK	Horizo	PASS

NR band n2 Traffic Mid Channel

Test Graph



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBm]	Factor [dB/m]	Limit [dBm]	Margin [dB]	Det	Pol	Verdict
1	41.45	37.2	-43.95	-81.130	-13.00	30.95	PK	Vertic	PASS
2	66.62	43.8	-40.45	-84.200	-13.00	27.45	PK	Vertic	PASS
3	110.70	46.0	-37.06	-83.080	-13.00	24.06	PK	Vertic	PASS
4	201.59	39.1	-44.25	-83.340	-13.00	31.25	PK	Vertic	PASS
5	340.69	32.3	-47.72	-80.040	-13.00	34.72	PK	Vertic	PASS
6	824.58	28.5	-44.77	-73.240	-13.00	31.77	PK	Vertic	PASS

Note:

1. Level = Reading + Factor

2. Margin = Limit - Level

3. Data below 30MHz and data above 18GHz are all background noise, so no data is recorded.

_____ The End _____