DEKRA Certification, Inc.
405 Glenn Dr. Suite 12,
Sterling, VA 20164
United States of America

FCC LISTED, REGISTRATION NUMBER: 2764.01

ISED LISTED REGISTRATION NUMBER: 23595-1

Test report No:
4316ERM.005

Test report

USA FCC Part 15.247, 22,24 & 27, 15.209, 15.207, 15.31(h), CANADA RSS-247, RSS-132, RSS-133, RSS-139, RSS-Gen

(*) Identification of item tested	Gateway for Tractian's industrial sensors
(*) Trademark	Tractian
(*) Model and /or type reference tested	Smart Receiver Pro
Other identification of the product	FCC ID: 2BCIS-SR-PRO IC ID: IC ID: 31644-SRPRO HVIN: Smart Receiver Pro
(*) Features	LTE; Wi-fi and 915 MHz ISM
Manufacturer	Tractian Tecnologia Ltda. Av. dos Imares, 437 - Indianápolis São Paulo - SP - Brazil 04085-000
Test method requested, standard	USA FCC Part 15.247 (10-1-20 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz. USA FCC Part 22,24 & 27 10-1-18 Edition. USA FCC Part 15.209 (10-1-20 Edition): Radiated emission limits; general requirements. CANADA RSS-247 Issue 3, August 2023 CANADA RSS-132 Issue 3, January 2013 CANADA RSS-133 Issue 6, Amendment 1, January 2018 CANADA RSS-139 Issue 4, September 2022 CANADA RSS-Gen Issue 5 amendment 1 (March 2019). 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.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager Digitally signed by Domingo Galvez DN: cn=Domingo Galvez, o=Dekra Certification Inc., ou=Regulatory Lab Manager, email=domingo.galvez@dekra.com, c=US
Date of issue	02-06-2024
Report template No	FDT08_23 (*) "Data provided by the client"

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Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01

DEKRA Certification Inc. 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 Certification Inc. has a calibration and maintenance program for its measurement equipment.

DEKRA Certification Inc. 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 Certification at the time of performance of the test.

DEKRA Certification Inc. 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.

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

Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA Certification internal document PODT000.

Test case	Frequency (MHz)	U (k=2)	Units
Radiated Spurious Emission	30-180	4.27	dB
	180-1000	3.14	dB
	1000-18000	3.30	dB
	18000-40000	3.49	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 consists of a Gateway for Tractian's industrial sensors.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples used for test have been selected by: The client.

Sample S/01 is composed of the following elements:

Id	Control Number	Description	Manufacturer / Model	Serial Nº	Date of Reception	Application
S/01	4316/02	Sensor + Antennas (x2) + AC Adapter	Tractian / Smart Receiver Pro	EZH2H85	2023-11-13	Element Under Test
S/01	4316/08	Serial-USB converter	--	--	2023-11-13	Accessory
S/01	4316/10	USB 2.0 Cable A Male to Mini B Male 6.00' (1.83m) Shielded	--	--	2023-11-13	Accessory
S/01	1484	Laptop	Lenovo / V14 G2 ITL	PF3Q2NKL	--	Auxiliary

Sample S/01 was used for the test(s): All test indicated in appendix A.

Test sample description

Ports……:	Port name and description		Cable				
			Specified length [m]	Attached during test	Shielded	Coupled to patient	
	PSU Cable		2	☒	☐	N/A	
	N/A			☐	☐	N/A	
	N/A			☐	☐	N/A	
	N/A			☐	☐	N/A	
	N/A			☐	☐	N/A	
Supplementary information to the ports……:	No Data Provided						
Rated power supply .....:	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☒	AC: 127 V/220V 50/60Hz	☐	☐	☐	☐	☐
	☐	AC: N/A	☐	☐	☐	☐	☐
	☐	DC: N/A					
	☐	DC: N/A					
Rated Power .....:	No Data Provided						
Clock frequencies.....:	No Data Provided						
Other parameters .....:	No Data Provided						
Software version .....:	1.0.2						
Hardware version .....:	Smart Receiver Pro						
Dimensions in cm (W x H x D) ....:	No Data Provided						
Mounting position .....:	☐	Table top equipment					
	☒	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☐	Hand-held equipment					
	☐	Other: Bed rail or IV pole mounting					

Modules/parts.....:	Module/parts of test item	Type	Manufacturer
	2AC7Z-ESP32WROVERE		Espressif
	2AJYU-8PYA00x		SIMCOM
Accessories (not part of the test item) .....:	Description	Type	Manufacturer
	USB – SERIAL converter FTDI		
Documents as provided by the applicant.....:	Description	File name	Issue date
	FDT30_18 Declaration Equipment Data	Smart Receiver Pro - FDT30_18 Declaration Equipment Data	20/11/2023
Copy of marking plate:			

Identification of the client

Tractian Technologies Inc.
201 17th St. NW,
2nd Floor
Atlanta, GA 30309,
USA

Testing period and place

Test Location	DEKRA Certification Inc.
Date (start)	11-26-2023
Date (finish)	02-02-2024

Document history

Report number	Date	Description
4316ERM.005	02-06-2024	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. = 30 % Max. = 75 %
Air pressure	Min. = 860mbar Max. = 1060mbar

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

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860mbar Max. = 1060mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860mbar Max. = 1060mbar

Remarks and comments

1. The tests have been performed by the technical personnel: Qi Zhang, Juliana Cherry, Ivy Yousuf Moutushi and Koji Nishimoto.

Testing verdicts

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

Summary

Requirement – Test case FCC PART 15 PARAGRAPH / RSS-247	Verdict	Remark
RSS-GEN 8.8 / FCC 15.207 - Conducted Emission limits.	N/M	Refer 1
RSS-247 5.2 (a) / FCC 15.247 (a) (2) 6 dB Bandwidth	N/M	Refer 1
RSS-247 5.2 (b) / FCC 15.247 (e) Power spectral density	N/M	Refer 1
RSS-247 5.4 (d) / FCC 15.247 (b) (3) Maximum Peak Conducted output power	N/M	Refer 1
RSS-247 5.5 / FCC 15.247 (d) Band-edge emissions compliance (Transmitter) - Conducted	N/M	Refer 1
FCC 2.1049 / 99dBw Occupied Channel Bandwidth 99%	N/M	Refer 1
RSS-247 5.5 / FCC 15.247 (d) Emissions compliance (Transmitter) - Conducted	N/M	Refer 1
RSS-247 5.5 / FCC 15.247 (d) Emissions compliance (Transmitter) - Radiated	P	N/A
Supplementary information and remarks: 1) Only multi-transmitter radiated spurious emission test was requested.		

FCC PART 22/ IC RSS-132 PARAGRAPH - Public Mobile Services Requirement – Test case	Verdict	Remark
FCC 2.1046 & 22.913/ RSS-132 Clause 5.4 RF Output power	N/M	Refer 1
FCC 2.1047 /RSS-132 Clause 5.2 Modulation characteristics	N/M	Refer 1
FCC 2.1055 & 22.355/ RSS-132 Clause 5.3 Frequency stability	N/M	Refer 1
FCC 2.1049 Occupied Bandwidth	N/M	Refer 1
FCC 2.1051 & 22.917/ RSS-132 Clause 5.5 Spurious emissions at antenna terminals	N/M	Refer 1
FCC 22.917/ RSS-132 Clause 5.5 Radiated Emissions	Pass	N/A
Supplementary information and remarks: 1. Test not performed. Only multi-transmitter radiated spurious emission test was requested.		

FCC PART 24/ IC RSS-133 PARAGRAPH - Personal Communications Services Requirement – Test case	Verdict	Remark
FCC 24.232/ RSS-133 Clause 6.4 RF Output power	N/M	Refer 1
FCC 2.1047/ RSS-133 Clause 6.2 Modulation characteristics	N/M	Refer 1
FCC 24.235/ RSS-133 Clause 6.3 Frequency stability	N/M	Refer 1
FCC 2.1049 Occupied Bandwidth	N/M	Refer 1
FCC 24.238/ RSS-133 Clause 6.5 Spurious emissions at antenna terminals	N/M	Refer 1
FCC 24.238/ RSS-133 Clause 6.5 Radiated Emissions	Pass	N/A

Supplementary information and remarks:

1. Test not performed. Only multi-transmitter radiated spurious emission test was requested.

FCC PART 27/ IC RSS-139/ IC RSS-130 PARAGRAPH – Miscellaneous Wireless Communications Services Requirement – Test case	Verdict	Remark
FCC 27.50/ RSS-139 Clause 6.5/ RSS-130 Clause 4.4 RF Output power	N/M	Refer 1
FCC 2.1047/ RSS-139 Clause 6.2/ RSS-130 Clause 4.1 Modulation characteristics	N/M	Refer 1
FCC 27.54/ RSS-139 Clause 6.4/ RSS-130 Clause 4.3 Frequency stability	N/M	Refer 1
FCC 2.1049 Occupied Bandwidth	N/M	Refer 1
FCC 27.53/ RSS-139 Clause 6.6/ RSS-130 Clause 4.6 Spurious emissions at antenna terminals	N/M	Refer 1
FCC 27.53/ RSS-139 Clause 6.6/ RSS-130 Clause 4.6 Radiated Emissions	Pass	N/A

Supplementary information and remarks:

1. Test not performed. Only multi-transmitter radiated spurious emission test was requested.

List of equipment used during the test

CONTROL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	LAST CALIBRATION	NEXT CALIBRATION
1012	EMI Test Receiver	Rohde & Schwarz	ESR26	2022/04	2024/04
1014	FSV40 Signal Analyzer 40GHz	Rohde & Schwarz	FSV40	2022/08	2024/08
1056	DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA (18-40GHz)	Rohde & Schwarz	3116C	2023-02-23	2026/02
1057	DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA (750 MHz-18 GHz)	Rohde & Schwarz	3115	2023/07	2026/07
1064	Biconical Log antenna	ETS Lindgren	3142E	2021-12-13	2024/12
1108	Ethernet SNMP Thermometer- CR Room	HW Group	HWg-STE Plain	2022/10	2024/10
1111	Ethernet SNMP T Thermometer	HW Group	HWg-STE Plain	2022/10	2024/10
1179	Semi anechoic Absorber Lined Chamber	Frankonia	SAC 3 plus “L”	N/A	N/A
1314	Wireless Measurement Software R&S EMC32	Rohde & Schwarz	N/A	N/A	N/A
1461	Low Noise Preamplifier	Bonn Elektronik	BLMA0118-4A	2022/06	2024/06
1498	Radio Communication Tester	Rohde & Schwarz	CMW500	2019-09-23	N/A

Appendix A: Test results (Multi-transmitter)

Appendix A Content

PRODUCT INFORMATION

Information	Description
Modulation	ZigBee: OQPSK, DSSS Wi-Fi 2.4 GHz: DSSS, OFDM, MIMO-OFDM LTE: QPSK, 16QAM
Operation mode 1:	
- Operating Frequency Range	ZigBee: 915-925 MHz Wi-Fi 2.4 GHz: 2.402 - 2.483.5 GHz LTE: B4: 1710 - 1755MHz LTE B5: 824 - 849MHz LTE B41: 2496 - 2690MHz
- Nominal Channel Bandwidth	ZigBee: 2 MHz Wi-Fi 2.4 GHz: 20MHz LTE: 20 MHz
- RF Output Power	ZigBee: 18 dBm Wi-Fi 2.4 GHz: 26.62 dBm LTE B4: 24.30 dBm LTE B5: 25.16 dBm LTE B41: 22.57 dBm
Antenna type	External Antenna
Antenna gain	ZigBee: +3.4 dBi Wi-Fi 2.4 GHz: +1.1 dBi LTE: +5.9 dBi
Nominal Voltage	
- Supply Voltage	127 V / 220V AC
- Type of power source	DC Power supply
Equipment type	ZigBee, Wi-Fi 2.4 GHz, and LTE

DESCRIPTION OF TEST CONDITIONS

<table>
<tr><th>TEST CONDITIONS</th><th>DESCRIPTION</th></tr>
<tr><td>TC#01(1)</td><td>Power supply (V):
120V AC
Test Frequencies for Radiated tests:
<table>
<tr><th>Technology</th><th>Tested Frequency (MHz)</th><th>BW (MHz)</th><th>Modulation</th><th>Mode</th></tr>
<tr><td>ZigBee</td><td>915</td><td>2</td><td>DSSS, OQPSK</td><td>-</td></tr>
<tr><td>Wi-Fi 2.4 GHz SISO</td><td>2437</td><td>20</td><td>DSSS, OFDM</td><td>b mode</td></tr>
</table></td></tr>
<tr><td>TC#02(1)</td><td>Power supply (V):
120V AC
Test Frequencies for Radiated tests:
<table>
<tr><th>Technology</th><th>Tested Frequency (MHz)</th><th>BW (MHz)</th><th>Modulation</th><th>Mode</th></tr>
<tr><td>ZigBee</td><td>915</td><td>2</td><td>DSSS, OQPSK</td><td>-</td></tr>
<tr><td>LTE</td><td>836.5</td><td>10</td><td>QPSK</td><td>Band 5</td></tr>
</table></td></tr>
<tr><td>TC#03(1)</td><td>Power supply (V):
120V AC
Test Frequencies for Radiated tests:
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<tr><th>Technology</th><th>Tested Frequency (MHz)</th><th>BW (MHz)</th><th>Modulation</th><th>Mode</th></tr>
<tr><td>ZigBee</td><td>915</td><td>2</td><td>DSSS, OQPSK</td><td>-</td></tr>
<tr><td>LTE</td><td>1732.5</td><td>20</td><td>QPSK</td><td>Band 4</td></tr>
</table></td></tr>
</table>

<table>
<tr>
<td>TC#04(1)</td>
<td>Power supply (V):
120V AC
Test Frequencies for Radiated tests:
<table>
<tr><th>Technology</th><th>Tested Frequency (MHz)</th><th>BW (MHz)</th><th>Modulation</th><th>Mode</th></tr>
<tr><td>ZigBee</td><td>915</td><td>2</td><td>DSSS, OQPSK</td><td>-</td></tr>
<tr><td>LTE</td><td>2593.0</td><td>20</td><td>QPSK</td><td>Band 41</td></tr>
</table>
</td>
</tr>
<tr>
<td colspan="2">Each test was performed with the equipment transmitting with Zigbee and Wi-Fi 2.4 GHz, and Zigbee and LTE radios simultaneously. These measurements have been performed in order to check the impact of the multi-transmitter of all radio interfaces that can be transmitting simultaneously.</td>
</tr>
</table>

Note (1): The following tables and plots show the results for the worst case in Zigbee and Wi-Fi 2.4 GHz, and Zigbee and LTE worst case (technology and band).

TEST A.1: EMISSION LIMITATIONS RADIATED (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.247, 22, 24 & 27, Part 15.31(h), and RSS-247, RSS-132, RSS-133, RSS-139
	Test standard:	Part 15 Subpart C §15.247 (d), 22, 24 & 27, FCC §2.1053 and §22.917, FCC §2.1046 and §24.232, FCC §2.1046 and §27.50 and RSS-Gen 8.9 and 8.10, RSS-132 Clause 5.5, RSS-133 Clause 6.4, RSS-130 Clause 4.6.

LIMITS

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), 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 - 25000	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.

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts. The peak-to-average ratio (PAR) of the transmission shall not exceed 13 dB.

Fixed. mobile. and portable (hand-held) stations are limited to 2-watt EIRP (30 dBm). Fixed stations are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications. The peak-to-average ratio (PAR) of the transmission shall not exceed 13 dB.

Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands and fixed stations transmitting in the 787-788 MHz and 805-806 MHz bands are limited to 30 watts ERP (44.77 dBm).

TEST SETUP	

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and 1-18 GHz (Double ridge horn antenna), and 1m for the frequency range 18 GHz- 40 GHz (Double ridge horn antenna).

For radiated emissions in the range 18 -26 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

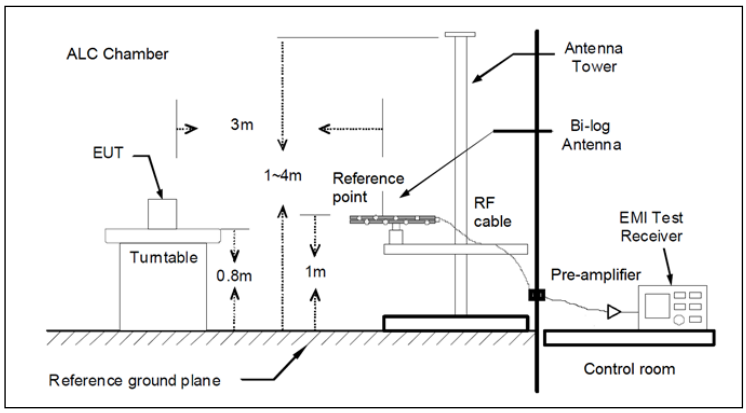
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

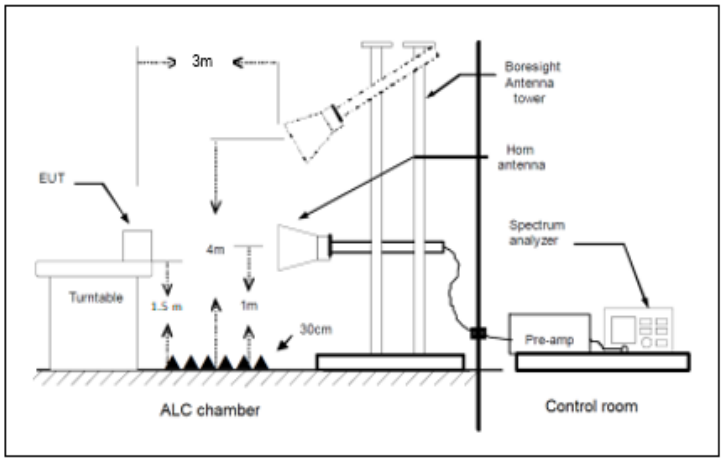
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

TEST SETUP (CONT.)

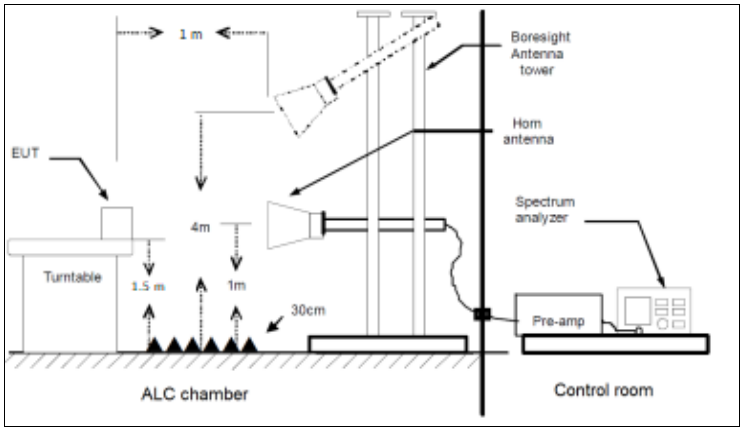
Radiated measurements Setup f < 1 GHz



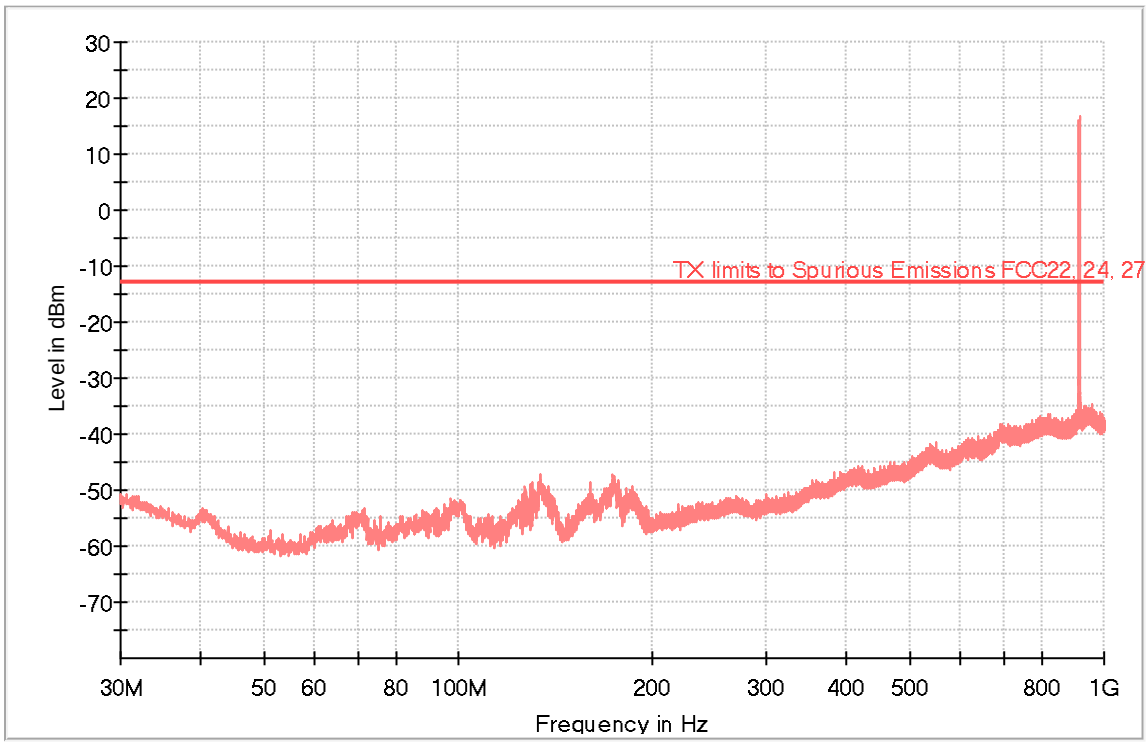
Radiated measurements setup f > 1-18 GHz



Radiated measurements setup f > 18 GHz



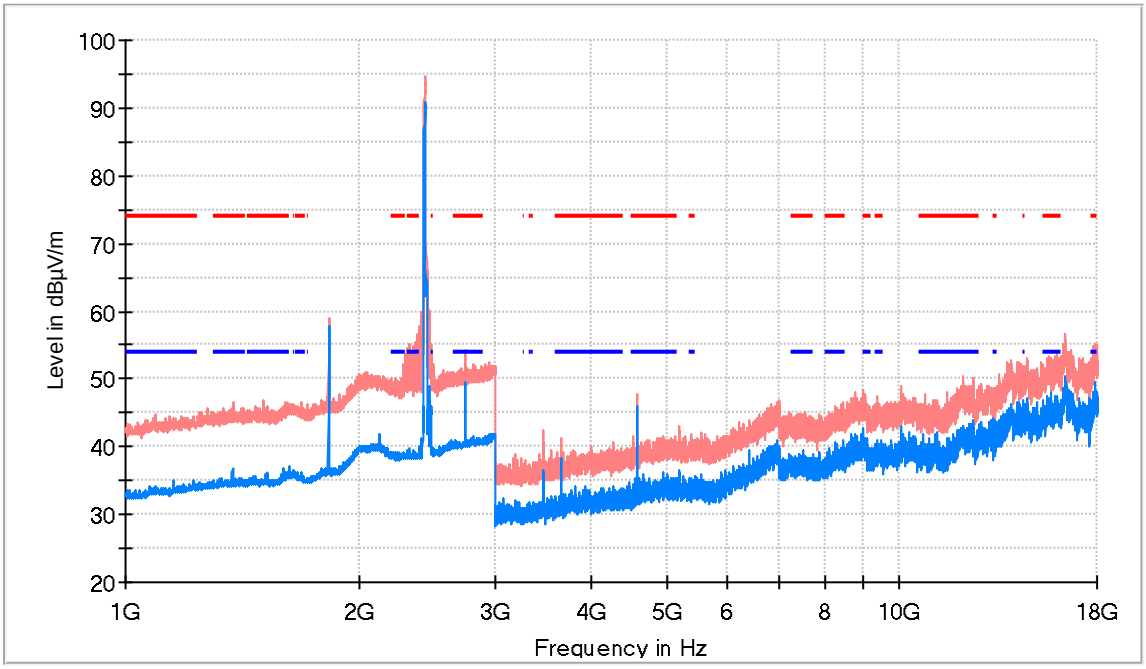
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01
TEST RESULTS :	30-1000 MHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+ (dB)	Limit - PK+ (dBm)	Comment
40.217333	-53.2	V	40.2	-13.0	
133.790000	-47.2	V	34.2	-13.0	
173.818667	-47.1	V	34.1	-13.0	
915.028000	16.9	V	---	---	Zigbee Fundamental

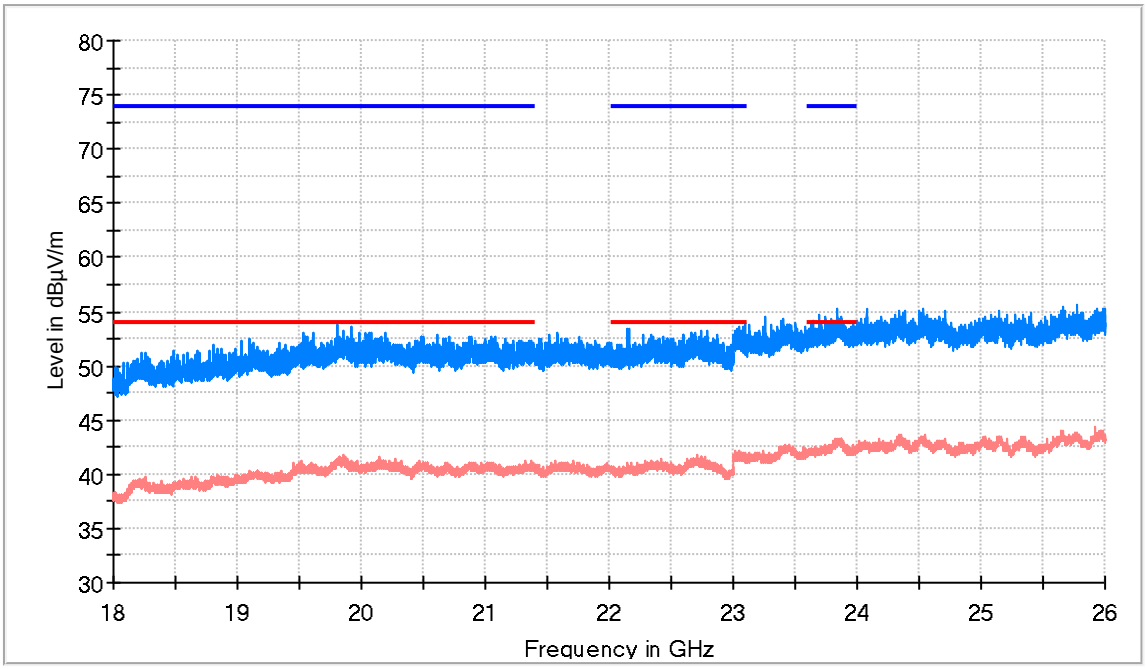
TEST RESULTS (Cont.):	1-18 GHz



Final Result

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin (dB)	Limit (dBµV/m)	Comment
1830.000000	58.9	57.7	V	33.1	92.0	2nd Harmonic
2436.000000	94.8	90.9	H	---	---	WiFi Fundamental
2745.000000	54.4	49.6	V	4.4	54.0	3rd Harmonic
4575.000000	47.7	45.8	V	8.2	54.0	5th Harmonic
15658.000000	52.0	48.0	V	6.0	54.0	
17857.500000	53.2	49.5	V	4.5	54.0	

TEST RESULTS (Cont.):	18 – 26 GHz

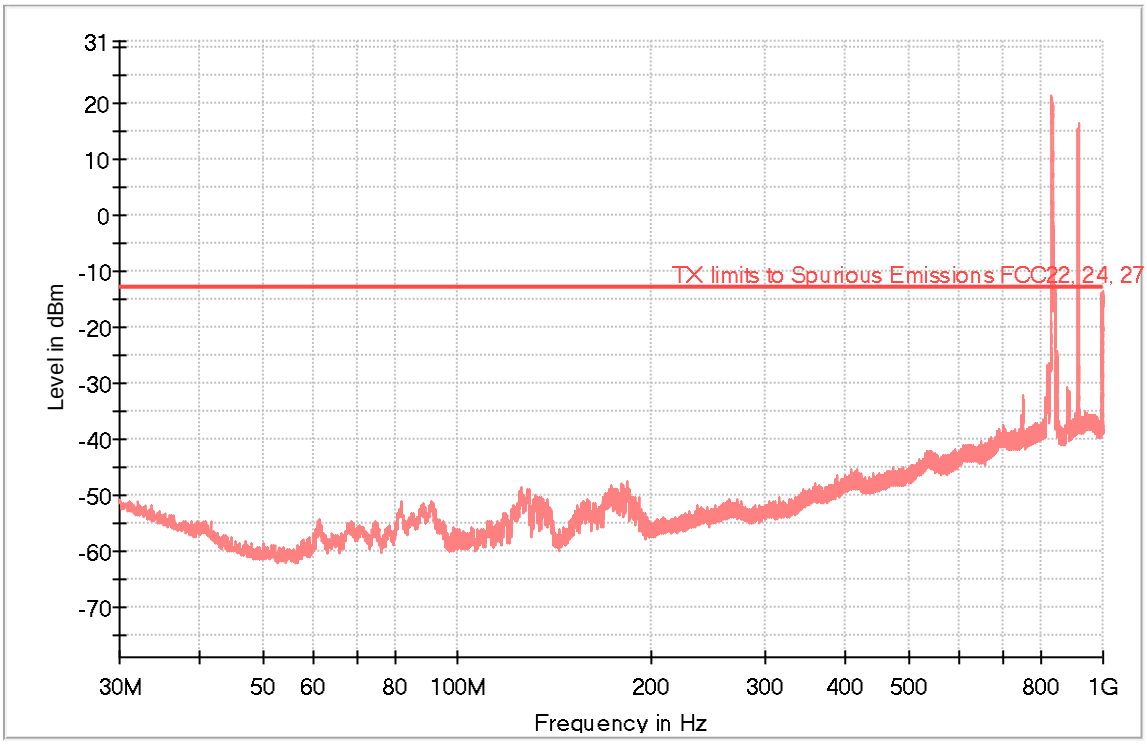


AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.247 Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.247(1-26G) Restricted Bands AVG Limit

Final Result

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
19807.500000	53.8	41.2	V	12.8	54.0
23097.500000	54.1	41.4	H	12.6	54.0
23835.000000	55.3	42.9	V	11.1	54.0

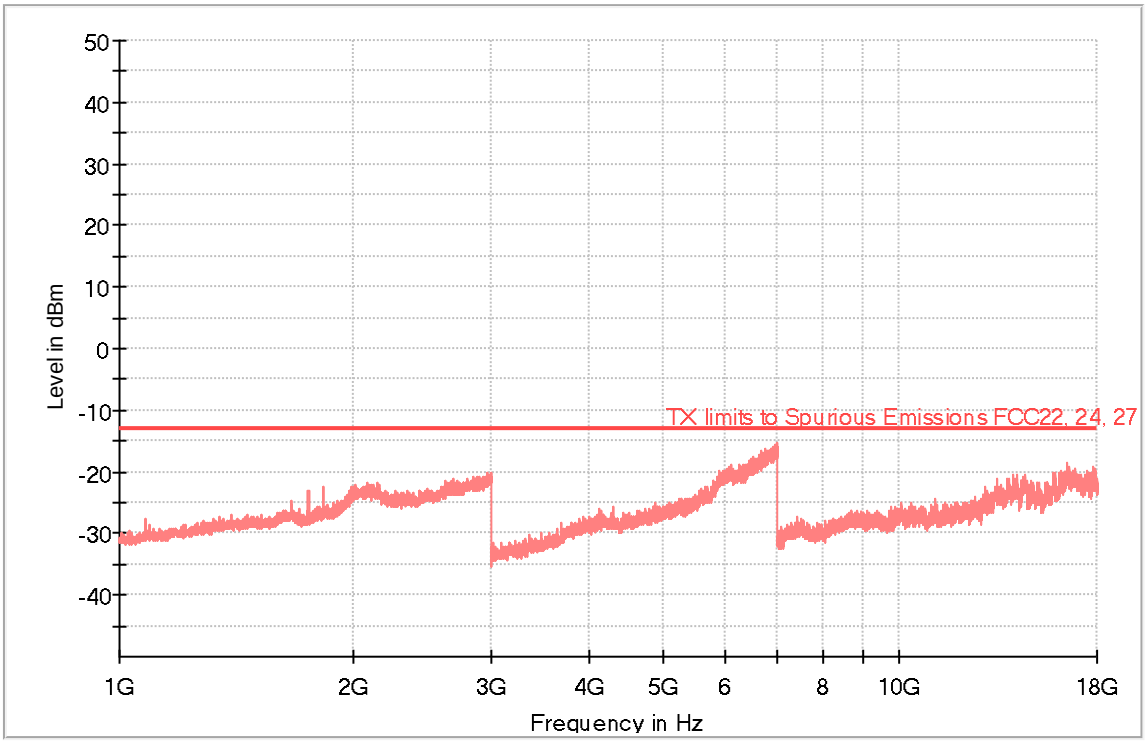
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02
TEST RESULTS :	30-1000 MHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+ (dB)	Limit - PK+ (dBm)	Comment
183.454000	-47.4	V	34.4	-13.0	
750.807000	-32.1	H	19.1	-13.0	
833.806667	21.3	H	---	---	LTE Uplink
880.948667	-30.9	V	17.9	-13.0	LTE Downlink
914.995667	16.3	V	---	---	Zigbee Fundamental
996.637333	-13.8	V	0.8	-13.0	

TEST RESULTS (Cont.):	1-18 GHz

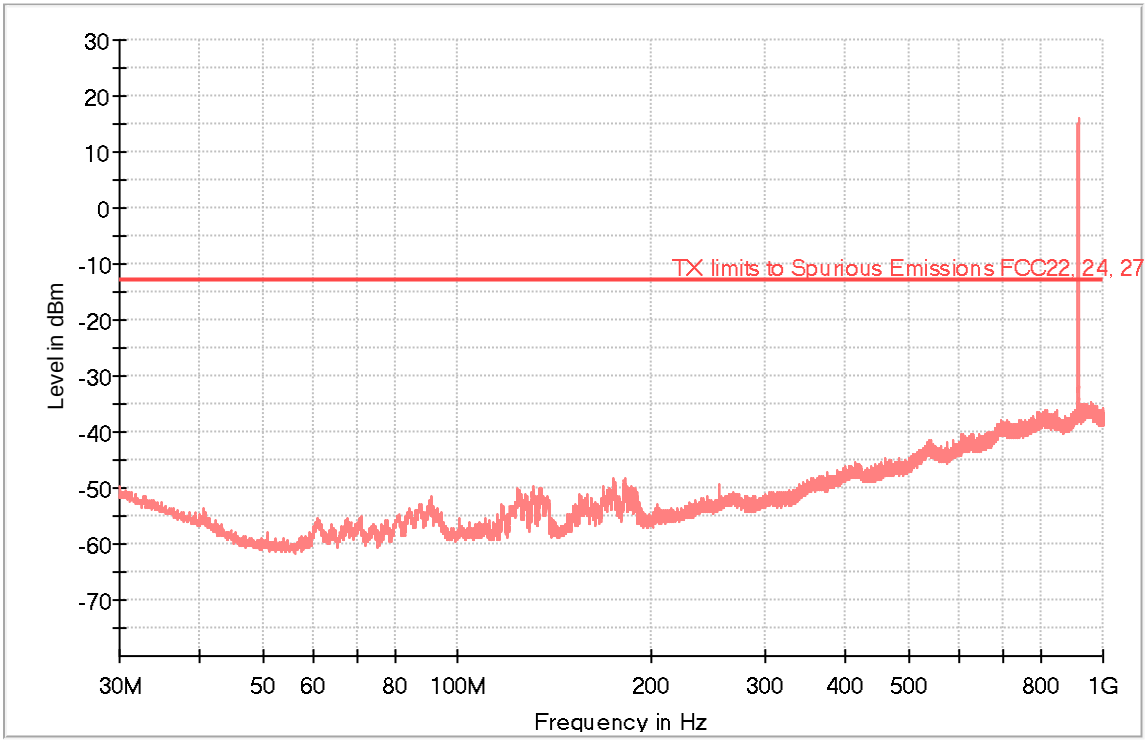


PK+_MAXH TX limits to Spurious Emissions FCC22, 24, 27

Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+	Limit - PK+ (dBm)	Comment
1748.000000	-23.1	H	10.1	-13.0	
1830.000000	-22.6	V	9.6	-13.0	2nd Harmonic
6975.000000	-15.4	H	2.4	-13.0	
16431.750000	-18.4	V	5.4	-13.0	

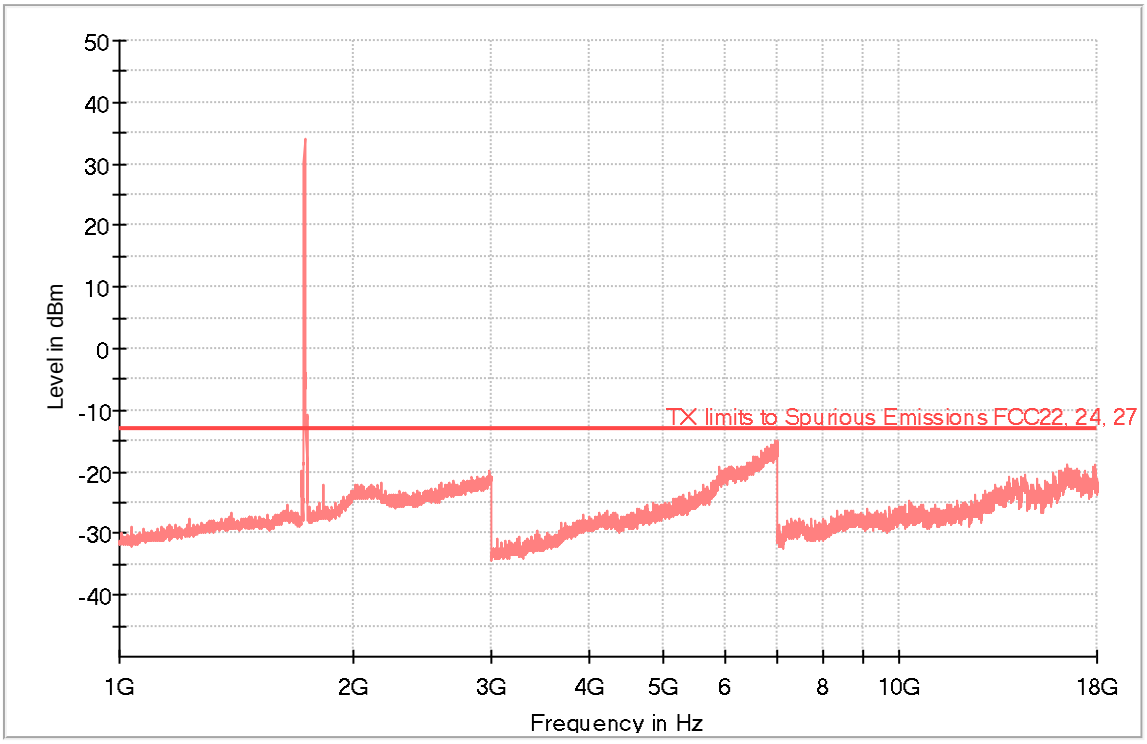
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03
TEST RESULTS :	30-1000 MHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+	Limit - PK+ (dBm)	Comment
91.271667	-51.5	V	38.5	-13.0	
174.885667	-48.1	V	35.1	-13.0	
915.028000	16.0	V	---	---	Zigbee Fundamental

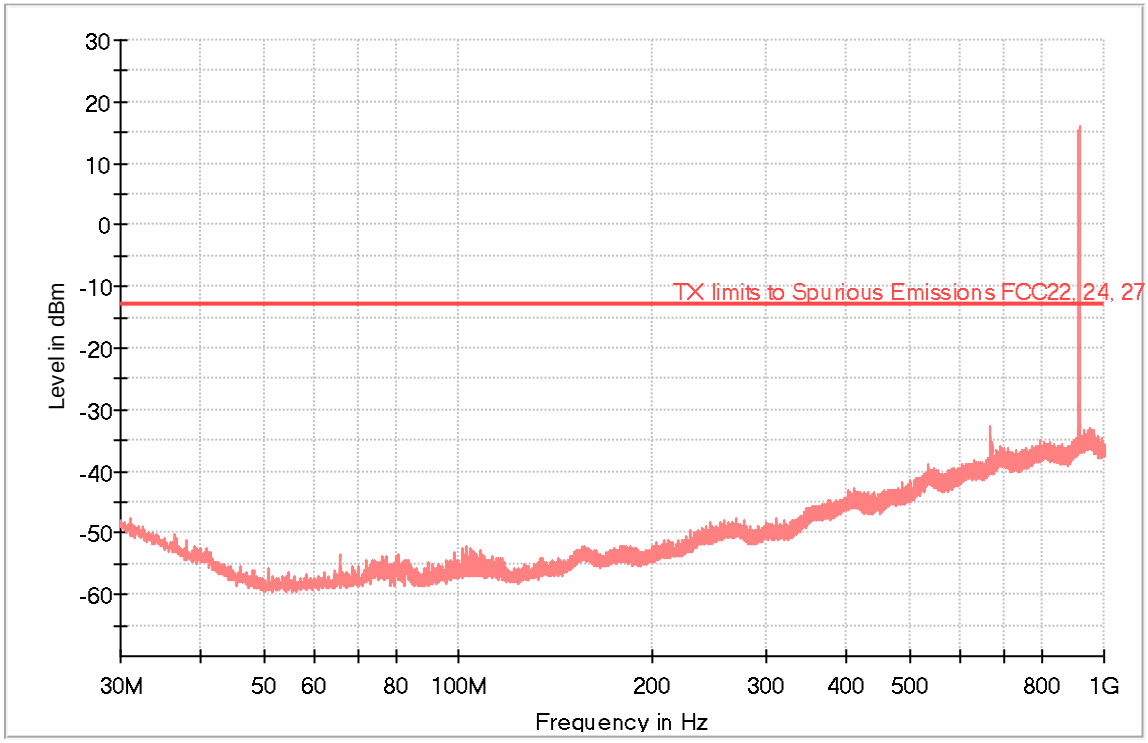
TEST RESULTS (Cont.):	1-18 GHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+ (dB)	Limit - PK+ (dBm)	Comment
1728.000000	34.2	V	---	---	LTE Fundamental
1830.000000	-22.1	V	9.1	-13.0	2nd Harmonic
6972.000000	-14.8	H	1.8	-13.0	
17850.000000	-18.9	H	5.9	-13.0	

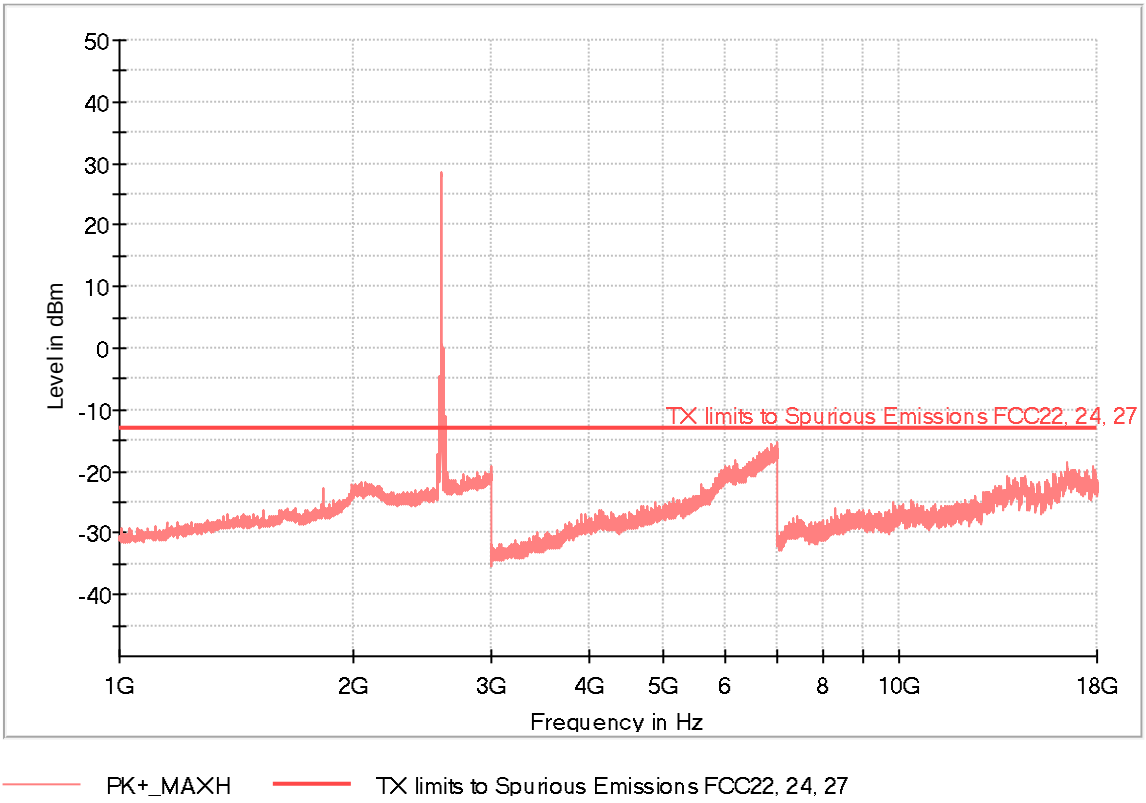
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04
TEST RESULTS :	30-1000 MHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+ (dB)	Limit - PK+ (dBm)	Comment
31.067000	-47.6	V	34.6	-13.0	
535.758000	-39.0	V	26.0	-13.0	
668.066000	-32.6	V	19.6	-13.0	
914.995667	16.1	V	---	---	Zigbee Fundamental

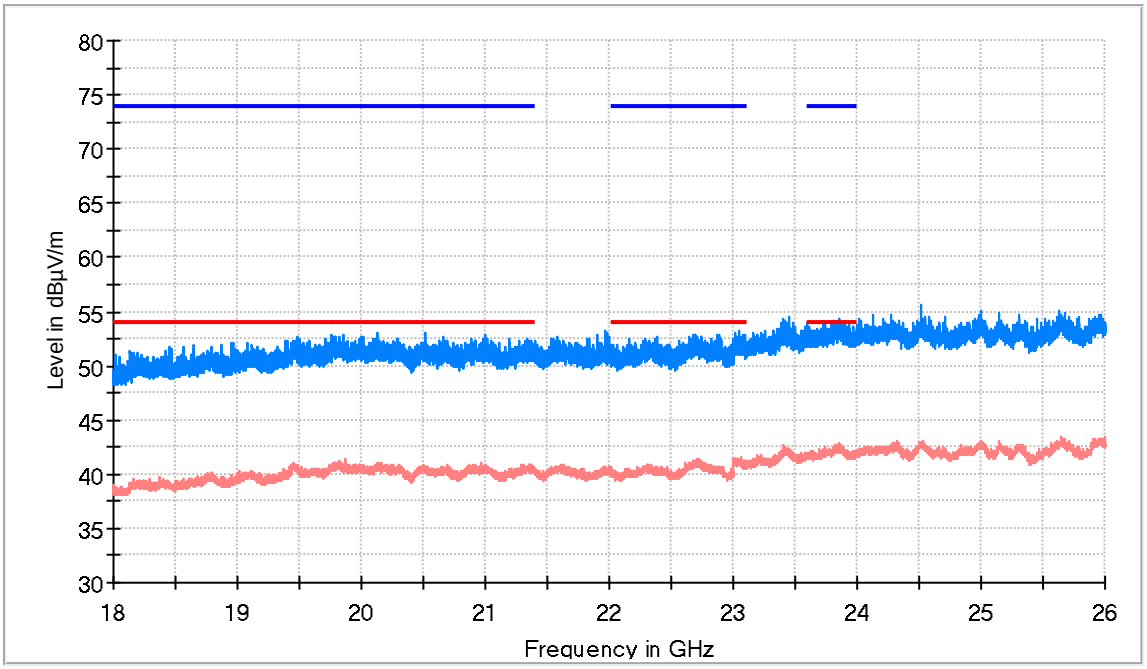
TEST RESULTS (Cont.):	1-18 GHz



Final Result

Frequency (MHz)	PK+_MAXH (dBm)	Pol	Margin - PK+ (dB)	Limit - PK+ (dBm)	Comment
1830.000000	-22.7	V	9.7	-13.0	2nd Harmonic
2590.500000	28.6	V	---	---	LTE
6975.750000	-15.3	V	2.3	-13.0	
16452.000000	-18.5	H	5.5	-13.0	

TEST RESULTS (Cont.):	18 – 26 GHz



AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.247 Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.247(1-26G) Restricted Bands AVG Limit

Final Result

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG (dB)	Limit - AVG (dBµV/m)
19875.000000	51.3	41.4	H	12.6	54.0
23056.500000	52.3	41.5	H	12.5	54.0
23862.500000	52.9	42.8	H	11.2	54.0