TEST REPORT

FCC Test for N2RDU_2500_100TDD

Certification

APPLICANT SOLiD, Inc.

REPORT NO. HCT-RF-1910-FC008

DATE OF ISSUE October 30, 2019

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HCT Co., Ltd.



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REPORT NO. HCT-RF-1910-FC008 TEST REPORT DATE OF ISSUE October 30, 2019 FCC Test for N 2 R D U _ 2 5 0 0 _ 1 0 0 T D D FCC ID W6UL25G100TDD SOLiD, Inc. Applicant 10, 9th Floor, SOLiD Space, Pangyoyeok-ro 220, Bundang-gu, Seongnam-si, Gyeonggi-do, 463-400, South Korea Eut Type ALLIANCE_N2ROU Model Name N2RDU_2500_100TDD **Output Power** 33 dBm (2 W) October 17, 2019 ~ October 28, 2019 Date of Test FCC Rule Parts: CFR 47 Part 2, Part 27 This test results were applied only to the test methods required by the standard.

> Tested by Kwang Il Yoon

Technical Manager Jong Seok Lee

HCT CO., LTD. Soo Chan Lee

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REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	October 30, 2019	Initial Release

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.



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1. GENERAL INFORMATION

1.1. APPLICANT INFORMATION

Company Name	SOLiD, Inc.
Company Addross	10, 9th Floor, SOLiD Space, Pangyoyeok-ro 220, Bundang-gu,
Company Address	Seongnam-si, Gyeonggi-do, 463-400, South Korea

1.2. PRODUCT INFORMATION

ЕИТ Туре	ALLIANCE_N2ROU		
Power Supply	100 ~ 240 V AC, -48 V DC		
Frequency Range	Band Name Broadband PCS	Downlink (MHz) 2 496 ~ 2 690	
Tx Output Power	33 dBm (2 W)		
Antenna Peak Gain	Manufacturer does not provide an Antenna.		

1.3. TEST INFORMATION

FCC Rule Parts	CFR 47 Part 2, Part 27
Measurement Standards	KDB 935210 D05 v01r03, ANSI C63.26-2015
Test Location	HCT CO., LTD.
	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do,
	17383, Rep. of KOREA



2. FACILITIES AND ACCREDITATIONS

2.1. FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 (Version: 2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

2.2. EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."



3. TEST SPECIFICATIONS

3.1. STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 2 and Par 27.

Description	Reference	Results	
AGC threshold	KDB 935210 D05 v01r03 3.2	Compliant	
Out-of-band rejection	KDB 935210 D05 v01r03 3.3	Compliant	
Input-versus-output signal comparison	§ 2.1049	Compliant	
Input/output power and amplifier/booster gain	§2.1046, §27.50(h)	Compliant	
Out-of-band/out-of-block emissions and spurious emissions	§2.1051, §27.53(m)	Compliant	
Spurious emissions radiated	§ 2.1053	Compliant	



3.2. ADDITIONAL DESCRIPTIONS ABOUT TEST

Except for the following cases, EUT was tested under normal operating conditions. : Out-of-band rejection test requires maximum gain condition without AGC

This EUT is supported power supply both of AC and DC. Test results are only attached worst cases.

The test was generally based on the method of KDB 935210 D05 v01r03 and only followed ANSI C63.26-2015 if there was no test method in KDB standard.

EUT was tested with following modulated signals provide by applicant.

Band Name	Tested signals	
Broadband PCS	LTE 20 MHz (TDD)	
	5G NR 40M, 60M (TDD)	

The frequency stability measurement has been omitted in accordance with section 3.7 of KDB 935210 D05 v01r03.

: It can be confirmed through input-versus-output spectrum test that EUT does not alter the input signal.

The tests results included actual loss value for attenuator and cable combination as shown in the table below. : Input Path

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
2300	1.078	2600	1.093
2350	1.085	2650	1.127
2400	1.113	2700	1.105
2450	1.162	2750	0.995
2500	1.151	2800	0.977
2550	1.193		



: Output Path

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
2	31.060	6 000	38.669
10	30.153	6 500	38.414
30	29.924	7 000	37.847
50	30.021	7 500	37.864
100	30.186	8 000	37.571
200	30.709	8 500	36.882
300	31.003	9 000	36.807
400	31.206	9 500	36.639
500	31.441	10 000	37.826
600	31.548	11 000	37.216
700	31.908	12 000	37.441
800	32.127	13 000	36.915
900	32.408	14 000	37.354
1 000	32.558	15 000	37.877
1 500	33.993	16 000	38.384
2 000	35.743	17 000	37.809
2 400	37.268	18 000	38.446
2 500	37.577	19 000	38.624
2 600	37.890	20 000	37.418
2 700	38.250	21 000	37.067
3 000	39.050	22 000	35.775
3 500	39.772	23 000	38.208
4 000	39.902	24 000	40.744
4 500	39.409	25 000	36.665
5 000	39.061	26 000	40.127
5 500	38.673	26 500	40.832



3.3. MEASUREMENTUNCERTAINTY

Description	Reference	Results	
AGC threshold	-	±0.87 dB	
Out-of-band rejection	-	\pm 0.58 MHz	
Input-versus-output signal comparison	OBW > 5 MHz	\pm 0.58 MHz	
Input/output power and amplifier/booster gain	-	±0.87 dB	
Out-of-band/out-of-block emissions and spurious emissions	-	±1.08 dB	
	$f \le 1 GHz$	±4.80 dB	
Spurious emissions radiated	f > 1 GHz	±6.07 dB	

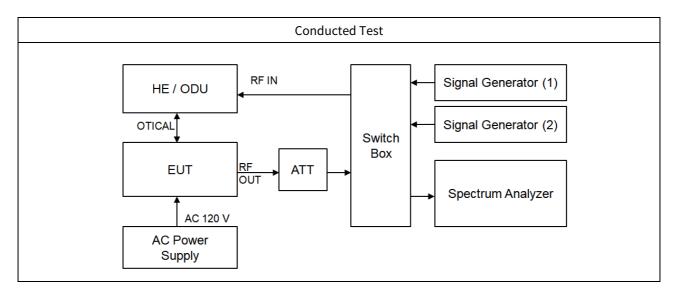
* Coverage factor k = 2, Confidence levels of 95 %

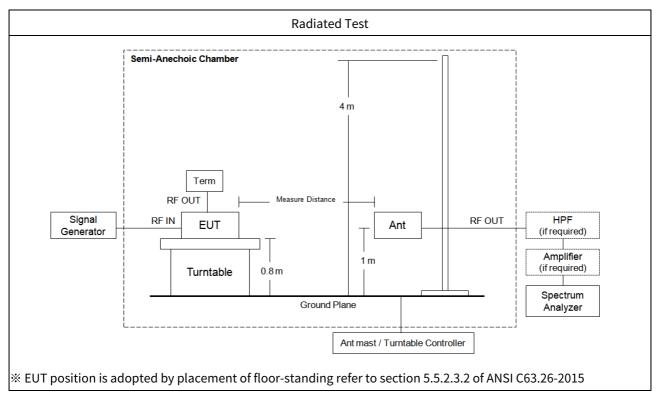
3.4. STANDARDS ENVIRONMENTAL TEST CONDITIONS

Temperature	+15 °C to +35 °C
Relative humidity	30 % to 60 %
Air pressure	860 mbar to 1 060 mbar



3.5. TEST DIAGRAMS







4. TEST EQUIPMENTS

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Agilent	N9020A / MXA Signal Analyzer	05/08/2019	Annual	MY51110063
Agilent	N5182A / MXG Vector Signal Generator	03/06/2019	Annual	MY50141649
Agilent	N5182A / MXG Vector Signal Generator	01/18/2019	Annual	MY47070406
Agilent	8498A / 30 dB Attenuator	02/18/2019	Annual	51161
KEITHLEY	S46 / Switch	N/A	N/A	1088024
Deayoung ENT	DFSS60 / AC Power Supply	04/04/2019	Annual	1003030-1
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	- / Turn Table	N/A	N/A	N/A
Rohde&Schwarz	- / Loop Antenna	04/26/2019	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	08/31/2018	Biennial	00895
Schwarzbeck	BBHA 9120D / Horn Antenna	06/28/2018	Biennial	1300
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde&Schwarz	FSP (10 Hz ~ 40 GHz) / Spectrum Analyzer	03/21/2019	Annual	101436
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	01/03/2019	Annual	F6
CERNEX	CBLU1183540B-01 / Power Amplifier	12/21/2018	Annual	25540
CERNEX	CBL06185030 / Power Amplifier	03/26/2019	Annual	28550
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/18/2019	Annual	25956

5. TEST RESULT

5.1. AGC THRESHOLD

Test Requirement:

KDB 935210 D05 v01r03

Testing at and above the AGC threshold is required.

Test Procedures:

Measurements were in accordance with the test methods section 3.2 of KDB 935210 D05 v01r03.

In the case of fiber-optic distribution systems, the RF input port of the equipment under test (EUT) refers to the RF input of the supporting equipment RF to optical convertor; see also descriptions and diagrams for typical DAS booster systems in KDB Publication 935210 D02

Devices intended to be directly connected to an RF source (donor port) only need to be evaluated for any over-theair transmit paths.

- a) Connect a signal generator to the input of the EUT.
- b) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
- c) The signal generator should initially be configured to produce either of the required test signals.
- d) Set the signal generator frequency to the center frequency of the EUT operating band.
- e) While monitoring the output power of the EUT, measured using the methods of ANSI C63.26-2015 subclause 5.2.4.4.1, increase the input level until a 1 dB increase in the input signal power no longer causes a 1 dB increase in the output signal power.
- f) Record this level as the AGC threshold level.
- g) Repeat the procedure with the remaining test signal.

Output power measurement in subclause 5.2.4.4.1 of ANSI C63.26

- a) Set span to 2 × to 3 × the OBW.
- b) Set RBW = 1% to 5% of the OBW.
- c) Set VBW \geq 3 × RBW.
- d) Set number of measurement points in sweep $\geq 2 \times \text{span} / \text{RBW}$.
- e) Sweep time: auto-couple
- f) Detector = power averaging (rms).
- g) If the EUT can be configured to transmit continuously, then set the trigger to free run.

h) Omit

i) Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately



determine the average power over multiple symbols, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.

j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Test Results:

Test Band	Link	Signal	Center Frequency (MHz)	AGC Threshold Level (dBm)	Output Level (dBm)
Broadband PCS LTE 20M	Downlink	LTE 20 MHz	2 593.00	-20.00	33.08
Broadband PCS		NR 40M	2 593.00	-20.00	33.06
5G NR	Downlink	NR 60M	2 593.00	-20.00	32.90



5.2. OUT-OF-BAND REJECTION

Test Requirement:

KDB 935210 D05 v01r03

Out-of-band rejection required.

Test Procedures:

Measurements were in accordance with the test methods section 3.3 of KDB 935210 D05 v01r03.

Adjust the internal gain control of the EUT to the maximum gain for which equipment certification is sought.

- a) Connect a signal generator to the input of the EUT.
- b) Configure a swept CW signal with the following parameters:

1) Frequency range = ± 250 % of the passband, for each applicable CMRS band.

2) Level = a sufficient level to affirm that the out-of-band rejection is > 20 dB above the noise floor and will not engage the AGC during the entire sweep.

- 3) Dwell time = approximately 10 ms.
- 4) Number of points = SPAN/(RBW/2).
- c) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation.
- d) Set the span of the spectrum analyzer to the same as the frequency range of the signal generator.
- e) Set the resolution bandwidth (RBW) of the spectrum analyzer to be 1 % to 5 % of the EUT passband, and the video bandwidth (VBW) shall be set to \geq 3 × RBW.
- f) Set the detector to Peak Max-Hold and wait for the spectrum analyzer's spectral display to fill.
- g) Place a marker to the peak of the frequency response and record this frequency as f_0 .

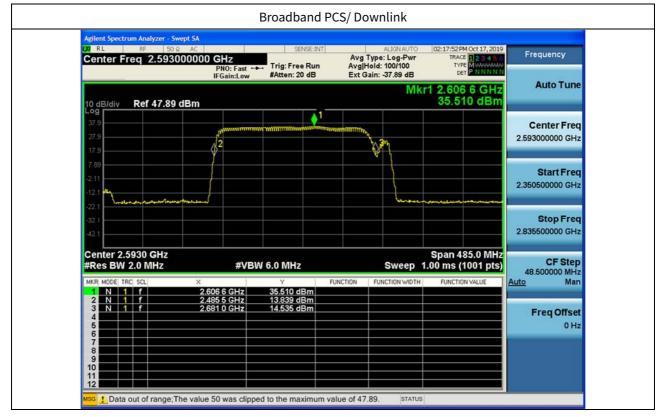
h) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the -20 dB down amplitude, to determine the 20 dB bandwidth.

i) Capture the frequency response of the EUT.

j) Repeat for all frequency bands applicable for use by the EUT.



Test Results:





5.3. INPUT-VERSUS-OUTPUT SIGNAL COMPARISON

Test Requirement:

§ 2.1049 Measurements required: Occupied bandwidth.

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the specified conditions of § 2.1049 (a) through (i) as applicable.

Test Procedures:

Measurements were in accordance with the test methods section 3.4 of KDB 935210 D05 v01r03.

a) Connect a signal generator to the input of the EUT.

b) Configure the signal generator to transmit the AWGN signal.

c) Configure the signal amplitude to be just below the AGC threshold level (see 3.2), but not more than 0.5 dB below.

d) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation.

e) Set the spectrum analyzer center frequency to the center frequency of the operational band under test. The span range of the spectrum analyzer shall be between 2 times to 5 times the emission bandwidth (EBW) or alternatively, the OBW.

f) The nominal RBW shall be in the range of 1 % to 5 % of the anticipated OBW, and the VBW shall be \geq 3 × RBW. g) Set the reference level of the instrument as required to preclude the signal from exceeding the maximum spectrum analyzer input mixer level for linear operation. In general, the peak of the spectral envelope must be more than [10 log (OBW / RBW)] below the reference level.

Steps f) and g) may require iteration to enable adjustments within the specified tolerances.

h) The noise floor of the spectrum analyzer at the selected RBW shall be at least 36 dB below the reference level.

i) Set spectrum analyzer detection function to positive peak.

j) Set the trace mode to max hold.

k) Determine the reference value: Allow the trace to stabilize. Set the spectrum analyzer marker to the highest amplitude level of the displayed trace (this is the reference value) and record the associated frequency as f_0 . l) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the -26 dB down amplitude. The 26 dB EBW (alternatively OBW) is the positive frequency difference between the two markers. If the spectral envelope crosses the -26 dB down amplitude at multiple points, the lowest or highest frequency shall be selected as the frequencies that are the furthest removed from the center frequency at which the spectral envelope crosses the -26 dB down amplitude point.

m) Repeat steps e) to l) with the input signal connected directly to the spectrum analyzer (i.e., input signal measurement).

n) Compare the spectral plot of the input signal (determined from step m) to the output signal (determined from step l) to affirm that they are similar (in passband and rolloff characteristic features and relative spectral locations), and include plot(s) and descriptions in test report.

o) Repeat the procedure [steps e) to n)] with the input signal amplitude set to 3 dB above the AGC threshold.

p) Repeat steps e) to o) with the signal generator set to the narrowband signal.

q) Repeat steps e) to p) for all frequency bands authorized for use by the EUT.



Test Results:

Tabular data of Output Occupied Bandwidth

Test Band	Link	Signal	Center Frequency (MHz)	99 % OBW (MHz)	26 dB OBW (MHz)
Broadband PCS LTE 20M		LTE 20M	2 593.00	18.022	19.89
Broadband PCS	Broadband PCS Downlink		2 593.00	37.983	40.00
5G NR		NR 60M	2 593.00	57.958	60.96

Tabular data of Input Occupied Bandwidth

Test Band	Link	Signal	Center Frequency (MHz)	99 % OBW (MHz)	26 dB OBW (MHz)
Broadband PCS LTE 20M		LTE 20M	2 593.00	18.026	20.00
Broadband PCS	S Downlink	NR 40M	2 593.00	37.938	40.05
5G NR		NR 60M	2 593.00	57.906	60.95

Tabular data of 3 dB above the AGC threshold Output Occupied Bandwidth

Test Band	Link	Signal	Center Frequency (MHz)	99 % OBW (MHz)	26 dB OBW (MHz)
Broadband PCS LTE 20M		LTE 20M	2 593.00	18.005	19.95
Broadband PCS 5G NR	Downlink	NR 40M	2 593.00	38.027	40.02
		NR 60M	2 593.00	58.000	61.11

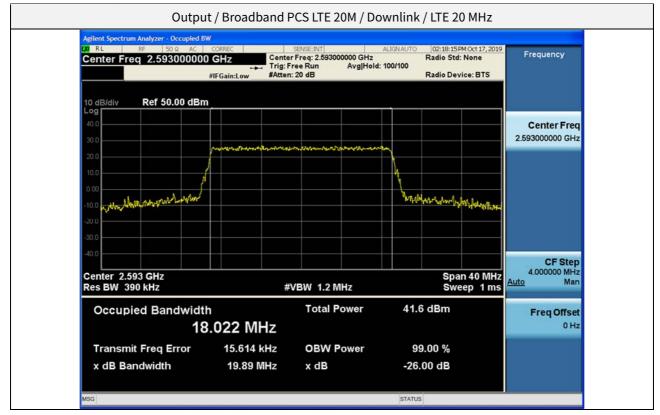
Measured Occupied Bandwidth Comparison

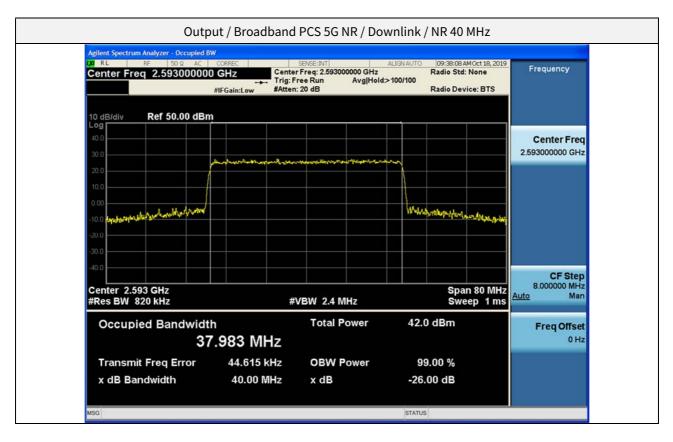
Test Band	Link	Signal	Variant of Input and output Occupied Bandwidth (%)	Variant of Input and 3 dB above the AGC threshold output Occupied Bandwidth (%)
Broadband PCS LTE 20M		LTE 20M	-0.251	0.050
Broadband PCS	Downlink	NR 40M	-0.125	-0.075
5G NR		NR 60M	0.010	0.269

* Change in input-output OBW is less than ± 5 %.

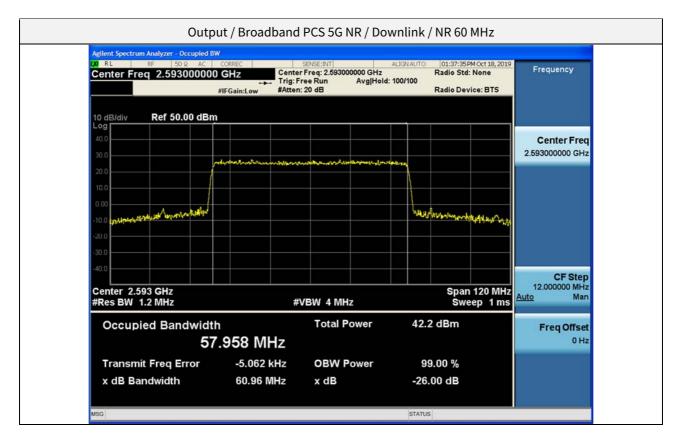


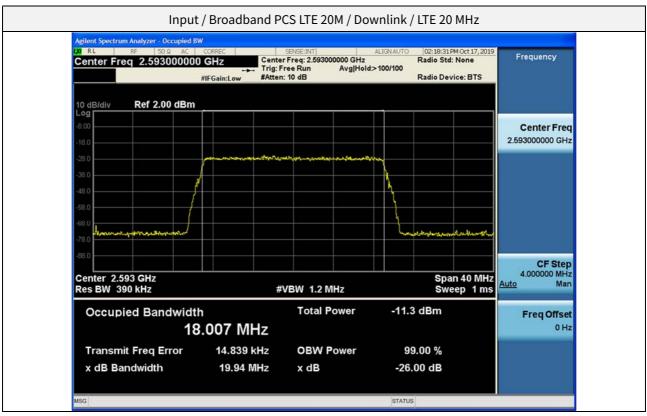
Plot data of Occupied Bandwidth





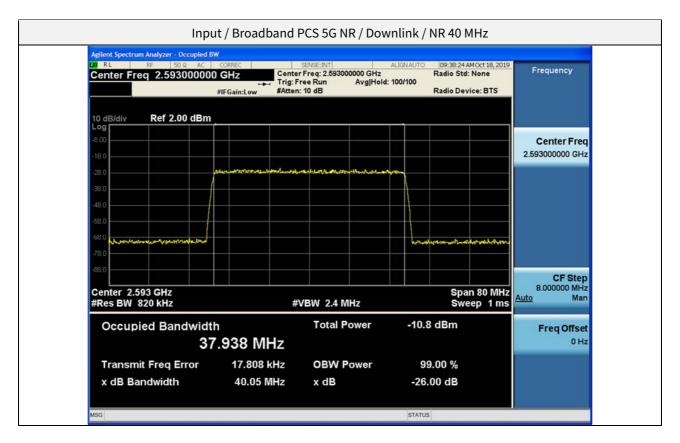


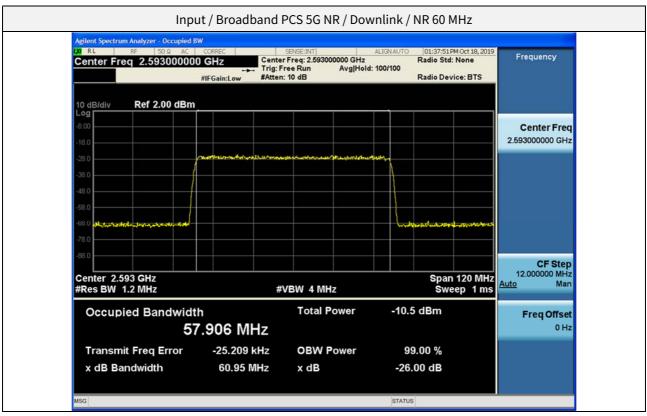




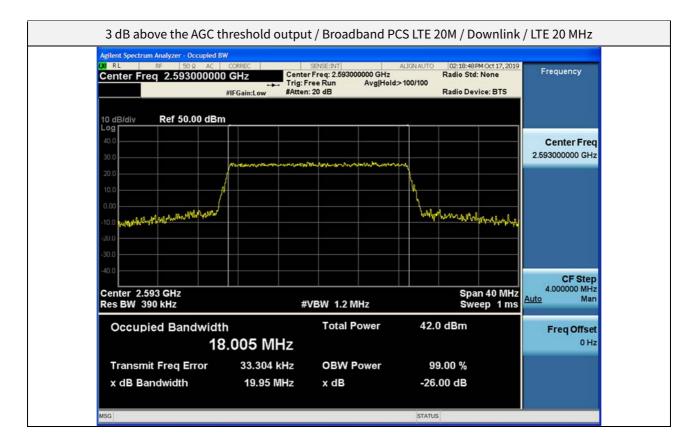


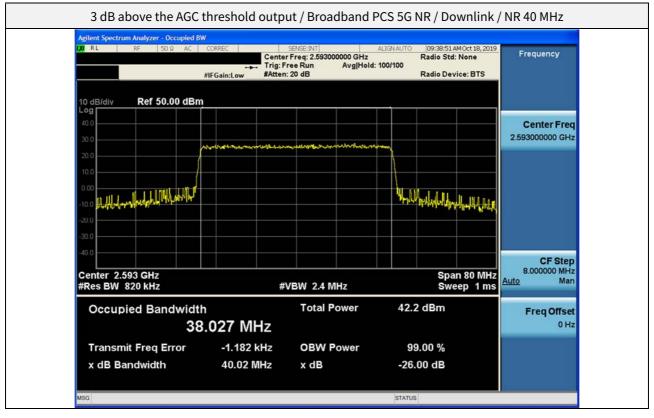




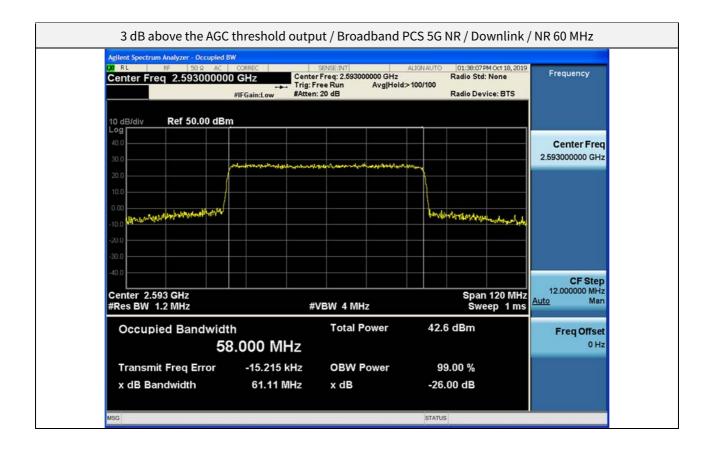














5.4. INPUT/OUTPUT POWER AND AMPLIFIER/BOOSTER GAIN

Test Requirement:

§ 2.1046 Measurements required: RF power output.

(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

(b) For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in paragraph (a) of this section shall be employed and, in addition, the transmitter shall be modulated during the test as specified and applicable in § 2.1046 (b) (1-5). In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.

(c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

§ 27.50 Power limits and duty cycle.

(h) The following power limits shall apply in the BRS and EBS:

(1) Main, booster and base stations.

(i) The maximum EIRP of a main, booster or base station shall not exceed 33 dBW + 10log(X/Y) dBW, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

(ii) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a nonomnidirectional horizontal plane radiation pattern, the maximum EIRP in dBW in a given direction shall be determined by the following formula: EIRP = 33 dBW + 10 log(X/Y) dBW + 10 log(360/beamwidth) dBW, where X is the actual channel width in MHz, Y is either (i) 6 MHz if prior to transition or the station is in the MBS following transition or (ii) 5.5 MHz if the station is in the LBS and UBS following transition, and beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.



Test Procedures:

Measurements were in accordance with the test methods section 3.5 of KDB 935210 D05 v01r03.

Adjust the internal gain control of the EUT to the maximum gain for which the equipment certification is being sought. Any EUT attenuation settings shall be set to their minimum value.

Input power levels (uplink and downlink) should be set to maximum input ratings while confirming that the device is not capable of operating in saturation (non-linear mode) at the rated input levels, including during the performance of the input/output power measurements.

3.5.2 Measuring the EUT mean input and output power

a) Connect a signal generator to the input of the EUT.

- b) Configure to generate the test signal.
- c) The frequency of the signal generator shall be set to the frequency f_0 as determined from out-of-band rejection test.

d) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.

e) Set the signal generator output power to a level that produces an EUT output level that is just below the AGC threshold, but not more than 0.5 dB below.

f) Measure and record the output power of the EUT; use ANSI C63.26-2015 subclause 5.2.4.4.1, for power measurement.

g) Remove the EUT from the measurement setup. Using the same signal generator settings, repeat the power measurement at the signal generator port, which was used as the input signal to the EUT, and record as the input power. EUT gain may be calculated as described in 3.5.5.

h) Repeat steps f) and g) with input signal amplitude set to 3 dB above the AGC threshold level.

i) Repeat steps e) to h) with the narrowband test signal.

j) Repeat steps e) to i) for all frequency bands authorized for use by the EUT.

3.5.5 Calculating amplifier, repeater, or industrial booster gain

After the input and output power levels have been measured as described in the preceding subclauses, the gain of the EUT can be determined from:

Gain (dB) = output power (dBm) - input power (dBm).

Report the gain for each authorized operating frequency band, and each test signal stimulus.

Note1. If f_0 that determined from out-of-band test is smaller or greater than difference of test signal's center frequency and operation band block, test is performed at the lowest or the highest frequency that test signals can be passed



Test Results:

Tabular data of Input / Output Power and Gain

Test Dand	باندار	Cignal	f ₀ Frequency	Input Power	Output Power	Gain
Test Band	Link	Signal	(MHz)	(dBm)	(dBm)	(dB)
Broadband PCS LTE 20M		LTE 20 MHz	2606.58	-20.10	33.24	53.34
Broadband	Downlink	NR 40M	2606.58	-19.99	32.75	52.74
PCS 5G NR	NR 60M	2606.58	-19.87	32.69	52.56	

Tabular data of Input / 3 dB above AGC threshold Output Power and Gain

Test Dand	Link	Cignal	f ₀ Frequency	Input Power	Output Power	Gain
Test Band	LINK	Signal	(MHz)	(dBm)	(dBm)	(dB)
Broadband PCS LTE 20M		LTE 20 MHz	2606.58	-20.10	33.09	53.19
Broadband	Downlink	NR 40M	2606.58	-19.99	33.07	53.06
PCS 5G NR	NR 60M	2606.58	-19.87	33.07	52.94	



5.5. OUT-OF-BAND/OUT-OF-BLOCK EMISSIONS AND SPURIOUS EMISSIONS

Test Requirements:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 27.53 Emission limits.

(m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.

(2) For digital base stations, the attenuation shall be not less than 43 + 10 log (P) dB, unless a documented interference complaint is received from an adjacent channel licensee with an overlapping Geographic Service Area. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS No. 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Provided that a documented interference complaint cannot be mutually resolved between the parties prior to the applicable deadline, then the following additional attenuation requirements shall apply:

(i) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block and shall immediately notify the complaining licensee upon implementation of the additional attenuation. No later than 60 days after the implementation of such additional attenuation, the licensee of the complaining base station must attenuate its base station emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block or below, from the channel edge of its frequency block or below, from the channel edge of its frequency block or below, from the channel edge of its frequency block or below, from the channel edge of its frequency block or below, from the channel edge of its frequency block of the new or modified base station.

(ii) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located less than 1.5 km away, within 24 hours of receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least 67 +10 log (P)–20 log (Dkm/1.5) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the complaining licensee, or if both base stations are co-located, limit its undesired signal level at the pre-existing base station receiver(s) to no more than -107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level. No later than 60 days after such reduction in the undesired signal level, the complaining licensee must attenuate its base station emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or blog (P) dB measured at 3 megahertz, above or below, from the channel edge of its base station emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(iii) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of each base station must attenuate its base station emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the other licensee.

(iv) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint: (a) The licensee of the new or modified base station must attenuate its OOBE by at least 67 +10 log (P)-20 log



(Dkm/1.5) measured 3 megahertz above or below, from the channel edge of its frequency block of the other licensee, or if the base stations are co-located, limit its undesired signal level at the other base station receiver(s) to no more than -107 dBm measured in a 5.5-megahertz bandwidth; and (b) the licensee causing the interference must attenuate its emissions by at least 67 +10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station. (v) For all fixed digital user stations, the attenuation factor shall be not less than 43 +10 log (P) dB at the channel

(v) For all fixed digital user stations, the attenuation factor shall be not less than 43 +10 log (P) dB at the channel edge.

Test Procedures:

Measurements were in accordance with the test methods section 3.6 of KDB 935210 D05 v01r03.

Spurious emissions shall be measured using a single test signal sequentially tuned to the low, middle, and high channels or frequencies within each authorized frequency band of operation.

Out-of-band/out-of-block emissions (including intermodulation products) shall be measured under each of the following two stimulus conditions:

a) two adjacent test signals sequentially tuned to the lower and upper frequency band/block edges;

b) a single test signal, sequentially tuned to the lowest and highest frequencies or channels within the frequency band/block under examination.

NOTE—Single-channel boosters that cannot accommodate two simultaneous signals within the passband may be excluded from the test stipulated in step a).

3.6.2 Out-of-band/out-of-block emissions conducted measurements

a) Connect a signal generator to the input of the EUT.

If the signal generator is not capable of generating two modulated carriers simultaneously, then two discrete signal generators can be connected with an appropriate combining network to support this two-signal test.

b) Set the signal generator to produce two AWGN signals as previously described.

c) Set the center frequencies such that the AWGN signals occupy adjacent channels, as defined by industry standards such as 3GPP or 3GPP2, at the upper edge of the frequency band or block under test.

d) Set the composite power levels such that the input signal is just below the AGC threshold, but not more than 0.5 dB below. The composite power can be measured using the procedures provided in KDB Publication 971168, but it will be necessary to expand the power integration bandwidth so as to include both of the transmit channels.

e) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation as necessary.

f) Set the RBW = reference bandwidth in the applicable rule section for the supported frequency band.g) Set the VBW = 3 × RBW.

h) Set the detector to power averaging (rms) detector.

i) Set the Sweep time = auto-couple.

j) Set the spectrum analyzer start frequency to the upper block edge frequency, and the stop frequency to the upper block edge frequency plus 300 kHz or 3 MHz, for frequencies below and above 1 GHz, respectively.

k) Trace average at least 100 traces in power averaging (rms) mode.

l) Use the marker function to find the maximum power level.

m) Capture the spectrum analyzer trace of the power level for inclusion in the test report.

n) Repeat steps k) to m) with the composite input power level set to 3 dB above the AGC threshold.

o) Reset the frequencies of the input signals to the lower edge of the frequency block or band under test.

p) Reset the spectrum analyzer start frequency to the lower block edge frequency minus 300 kHz or 3 MHz, for frequencies below and above 1 GHz, respectively, and the stop frequency to the lower band or block edge frequency.



q) Repeat steps k) to n).

r) Repeat steps a) to q) with the signal generator configured for a single test signal tuned as close as possible to the block edges.

s) Repeat steps a) to r) with the narrowband test signal.

t) Repeat steps a) to s) for all authorized frequency bands or blocks used by the EUT.

- 3.6.3 Spurious emissions conducted measurements
 - a) Connect a signal generator to the input of the EUT.

b) Set the signal generator to produce the broadband test signal as previously described.

c) Set the center frequency of the test signal to the lowest available channel within the frequency band or block.

d) Set the EUT input power to a level that is just below the AGC threshold, but not more than 0.5 dB below.

e) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation as necessary.

f) Set the RBW = reference bandwidth in the applicable rule section for the supported frequency band of operation.

g) Set the VBW \geq 3 × RBW.

h) Set the Sweep time = auto-couple.

i) Set the spectrum analyzer start frequency to the lowest RF signal generated in the equipment, without going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz or 1 MHz, as specified in the applicable rule part.

The number of measurement points in each sweep must be $\geq (2 \times \text{span/RBW})$, which may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.

j) Select the power averaging (rms) detector function.

k) Trace average at least 10 traces in power averaging (rms) mode.

l) Use the peak marker function to identify the highest amplitude level over each measured frequency range. Record the frequency and amplitude and capture a plot for inclusion in the test report.

m) Reset the spectrum analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 MHz, as specified in the applicable rule part, and the spectrum analyzer stop frequency to 10 times the highest frequency of the fundamental emission. The number of measurement points in each sweep must be \geq (2 × span/RBW), which may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the available number of measurement points provided by the spectrum analyzer. n) Trace average at least 10 traces in power averaging (rms) mode.

o) Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test report; also provide

tabular data, if required.

p) Repeat steps i) to o) with the input test signals firstly tuned to a middle band/block frequency/channel, and then tuned to a high band/block frequency/channel.

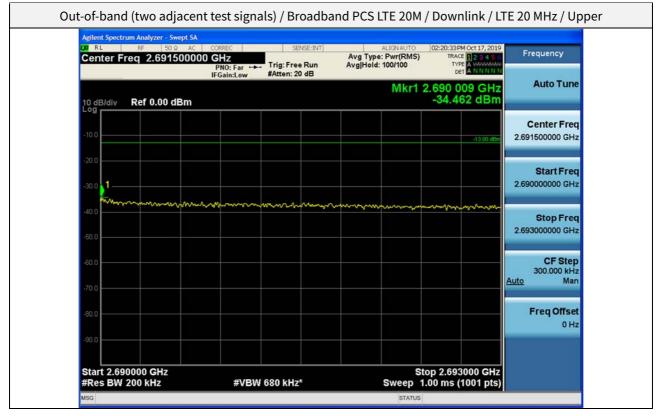
q) Repeat steps b) to p) with the narrowband test signal.

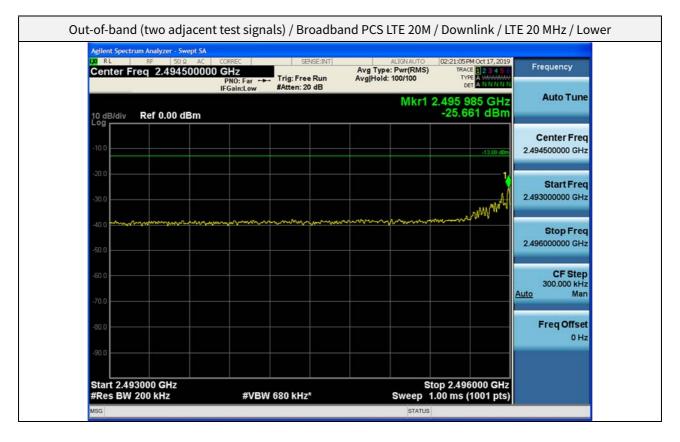
r) Repeat steps b) to q) for all authorized frequency bands/blocks used by the EUT.

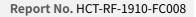
Note1. In 9 kHz-150 kHz and 150 kHz-30 MHz bands, RBW was reduced to 0.1 % and 1 % of the reference bandwidth for measuring unwanted emission level (typically, 1 MHz if the authorized frequency band is above 1 GHz) and power was integrated.(1% = +30 dB, 10% = +20 dB)



Test Results: Plot data of Out-of-band/out-of-block emissions

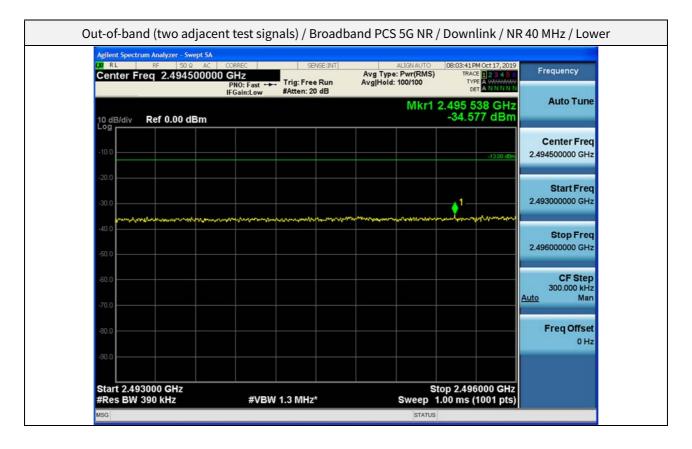








M RL RF 50 Ω AC Center Freq 2.69150000	DO GHz PNO: Fast ↔	SENSE:INT	ALIGN Avg Type: Pwr(Avg Hold: 100/10	(RMS) TRAC	Moct 17, 2019 E 1 2 3 4 5 6 E A WWWWWW T A N N N N N	iency
10 dB/div Ref 0.00 dBm	IFGain:Low	#Atten: 20 dB	M	kr1 2.690 4		ito Tune
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-40.0					A REAL PROPERTY AND A REAL	top Fred
-60.0						CF Step
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-90.0					000 GHz	







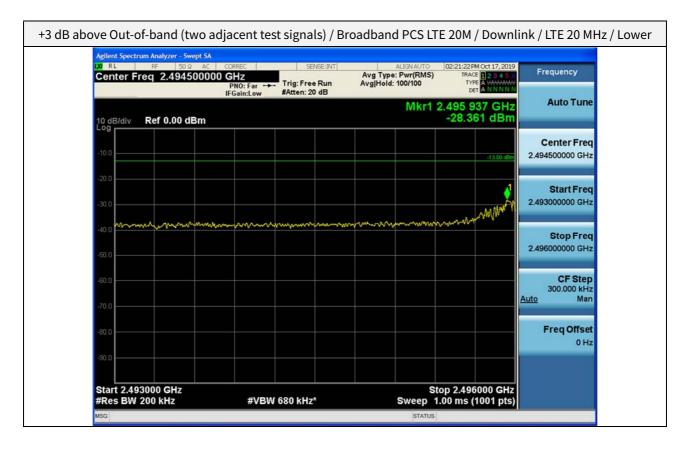
Agilent Spectrum Analyzer - Swept S 00 RL RF 50 Ω Au Center Freq 2.6915000	C CORREC	SENSE:INT	ALIGN AUTO	01:39:53PM Oct 18, 2019 TRACE 1 2 3 4 5 0	Frequency
	PNO: Fast Trig:	Free Run Av n: 20 dB	g Hold: 100/100	TYPE A WHITHIN OF A N N N N N	
10 dB/div Ref 0.00 dBm			Mkr1	2.690 009 GHz -24.946 dBm	Auto Tune
-10.0				-13.00 dBm	Center Freq 2.691500000 GHz
-20.0 1	and the state and second				Start Freq
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-50.0					Stop Freq 2.693000000 GHz
-60.0					CF Step 300.000 kHz
-70.0					Auto Man
-90.0					Freq Offset 0 Hz
Start 2.690000 GHz				top 2.693000 GHz	

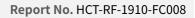
Out-of-band (two adj	acent test signals) / Broad	band PCS 5G NR / Downlink / N	R 60 MHz / Lowe
Center Freq 2.49450	AC CORREC SENSE:INT 0000 GHz PN0: Fast +++ IFGain:Low #Atten: 20 dB	ALIGNAUTO 01:40:26PM Oct 18, 201 Avg Type: Pwr(RMS) Avg Hold: 100/100 Mkr1 2.496 000 GH2 -21.546 dBrr	Auto Tune
10 dB/div Ref 0.00 dB		-13.00 dB	Center Freq 2.494500000 GHz
-20.0		mensor and a second and a second	Start Freq 2.493000000 GHz
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-60.0			CF Step 300.000 kHz <u>Auto</u> Man
-80.0			Freq Offset 0 Hz
Start 2.493000 GHz #Res BW 620 kHz	#VBW 2.0 MHz*	Stop 2.496000 GHz Sweep 1.00 ms (1001 pts	
MSG		STATUS	





+3 dB above Out-of-band (two ad	jacent test signals) / Br	oadband PCS LTE 20M	/ Downlink / LTE 20 MHz / Upper
Agilent Spectrum Analyzer - Swept SA VX RL RE 50.0 AC Center Freq 2,691500000		Avg Type: Pwr(RMS) TRA Avg Held: 100/100 Tv Mkr1 2.690 7	
10 dB/div Ref 0.00 dBm		-34.0	Center Freq 2.691500000 GHz
-20.0 -30.0			Start Freq 2.690000000 GHz
-50.0	mmmmmm hanna		2.693000000 GHz
-60.0			CF Step 300.000 kHz Auto Man
-80.0			Freq Offset 0 Hz
Start 2.690000 GHz #Res BW 200 kHz Msg	#VBW 680 kHz*	Stop 2.69 Sweep 1.00 ms	





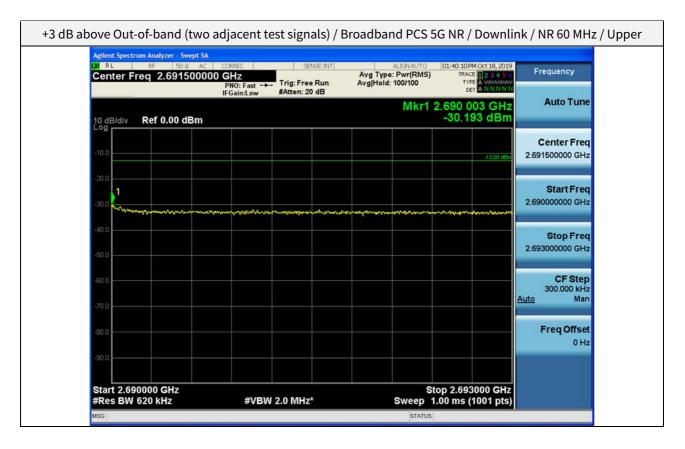


+3 dB above Out-of-band (two	adjacent test signals) / B	roadband PCS 5G NR / Down	ink / NR 40 MHz / Upper
Agilent Spectrum Analyzer - Swept SA	CORREC SENSE:INT	ALIGNAUTO 08:03:25 PM oct 17, 201 Avg Type: Pwr(RMS) Avg Hold: 100/100 Mkr1 2.692 115 GH: -30.001 dBn	Auto Tune
-10.0		-13.00 dB	Center Freq 2.691500000 GHz
-20.0	and the second	1 	Start Freq 2.690000000 GHz
-40.0			Stop Freq 2.693000000 GHz
-60.0			CF Step 300.000 kHz <u>Auto</u> Man
-80.0			Freq Offset 0 Hz
Start 2.690000 GHz #Res BW 390 kHz ^{MSG}	#VBW 1.3 MHz*	Stop 2.693000 GH Sweep 1.00 ms (1001 pts status	

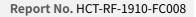
	PNO: Fast Trig: Fr IFGain:Low #Atten:	ee Run Avg Hol 20 dB		DET A NNNNN	_
10 dB/div Ref 0.00 dBm			Mkr1 2.495 -29.	616 GHz Auto 466 dBm	Tune
-10.0				-13.00 dEm 2.4945000	
-20.0	Louis Michael a right de	Jun the of the of the of the	n - submethile and all as no sub	2 4020000	t Freq 00 GHz
+40.0	and a strange of the second	esa ana na naha, unandon, mbou	APP of any solution of the second solution is for a fi		p Freq 00 GHz
-60.0					F Step
-70.0				Auto	Man Offset
-30.0					0 Hz





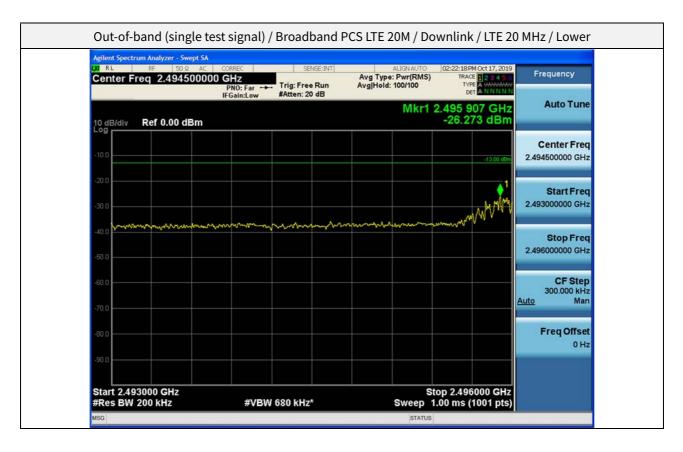


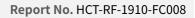
Agilent Spectrum Analyzer - Swept SA	CORREC SENSE:IN	T ALIGNAUTO 01:40:43 PM Oct 19, 2	019
Center Freq 2.49450000		Avg Type: Pwr(RMS) TRACE 12 3 4 Avg Hold: 100/100 TYPE A	Frequency
10 dB/div Ref 0.00 dBm	I Game Cov	Mkr1 2.495 991 GF -20.746 dB	
		-13.00	Center Freq
-200	uduukanahantuudumuuntaannee	and a part of the standard and a part of the standard and the standard and the standard and the standard and the	Start Freq 2.493000000 GHz
-40.0			Stop Freq 2.496000000 GHz
-60.0			CF Step 300.000 kHz
-70.0			Auto Man
-80.0			Freq Offset 0 Hz
Start 2.493000 GHz		Stop 2.496000 G	Hz





		rig: Free Run Atten: 20 dB	Avg Type: Pwr(RMS) Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE A WWWWWW DET A N N N N N	Frequency
10 dB/div Ref 0.00 dBm	. comeon	atten: 20 dB	Mkr1	2.690 027 GHz -32.063 dBm	Auto Tune
-10.0				-13.00 dBm	Center Fred 2.691500000 GH;
-20.0 -30.0					Start Freq 2.690000000 GHz
	. manun m	whenne	mmmmmmm	mmann	Stop Freq 2,693000000 GHz
-50.0					CF Step 300.000 kHz
-70.0					Auto Man Freq Offset
-90.0					0 Hz







02 RL RF 50.Ω A Center Freq 2.691500	PNO: Fast T	rig: Free Run Atten: 20 dB	ALIGN AUTO Avg Type: Pwr(RMS) Avg Hold: 100/100	08:04:21 PM Oct 17, 2019 TRACE 2 2 3 4 5 6 TYPE A VINNIN DET A N N N N N	Frequency
10 dB/div Ref 0.00 dBm			Mkr1	2.690 024 GHz -31.266 dBm	Auto Tune
-10.0				-13.00 dBm	Center Free 2.691500000 GH
-20.0 -30.0	Mg/w/mmahabmakhamyong	North Providence Products	Marina Maria		Start Free 2.690000000 GH
-40.0					Stop Free 2.693000000 GH:
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Center Freq 2.49450000		ALIGNAUTO 08:04:54 PM Oct 17, 201 Avg Type: Pwr(RMS) TRACE 2 2 4 Avg Hold: 100/100 Type A DET A	Frequency
10 dB/div Ref 0.00 dBm		Mkr1 2.495 835 GHz -34.308 dBm	
-10.0		-13.00 dBe	Center Free 2.494500000 GH
-20.0			Start Fred 2.493000000 GHz
-40.0	han an a		Stop Freq 2.496000000 GHz
-60.0			CF Step 300.000 kHz Auto Man
-70.0			Freq Offset
-90.0 Start 2.493000 GHz		Stop 2.496000 GHz	





00 RL RF 50 Q AC Center Freq 2.6915000		SENSE:INT . Trig: Free Run #Atten: 20 dB	Avg Type: Pwr(RMS Avg Hold: 100/100	01:41:06 PM Oct 18, 2019 TRACE 2 3 4 5 0 TYPE A WWWWW DET A N N N N N	Frequency
10 dB/div Ref 0.00 dBm			Mkr1	2.690 003 GHz -25.272 dBm	Auto Tun
-10.0				-13.00 dBm	Center Free 2.691500000 GH
-20.0 1	s	Marine Carlos (Say Cardy Sand Say	Jonan Malaman Jaka Langa La	- Mumuluhaya Jachar Jackar Jac	Start Free 2.690000000 GH:
-40.0					Stop Free 2.693000000 GH
-60.0					CF Step 300.000 kH: Auto Mar
-70.0					Freq Offse
-90.0					0 H:

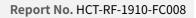
Agilent Spectrum Analyzer - Swept SA	CORREC	SENSE:INT	ALIGNAUTO	01:41:39PM Oct 18, 2019	
Center Freq 2.4945000			Avg Type: Pwr(RMS) Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	Frequency
10 dB/div Ref 0.00 dBm	IFGam.LUW		Mkr1 2	.495 994 GHz -19.042 dBm	Auto Tune
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-40.0					Stop Free 2.496000000 GH
-60.0					CF Step 300.000 kHz Auto Mar
-80.0					Freq Offset 0 Hz
Start 2.493000 GHz #Res BW 620 kHz		/ 2.0 MHz*	Sto	op 2.496000 GHz 00 ms (1001 pts)	





+3 dB above Out-of-band (si	ngle test signal) / Broad	band PCS LTE 20M / Dowr	link / LTE 20 MHz / Uppe
Agilent Spectrum Analyzer - Swept SA Of RL RF 50.9 AC Center Freq 2.69150000		Mkr1 2.690 009	GHz Auto Tune
10 dB/div Ref 0.00 dBm		-28.644	Center Freq 2.691500000 GHz
-20.0 -30.0 -30.0			Start Freq 2.69000000 GHz
-40.0			Stop Freq 2.69300000 GHz CF Step
-70.0			Auto Man
-90.0			0 Hz
Start 2.690000 GHz #Res BW 200 kHz	#VBW 680 kHz*	Stop 2.69300 Sweep 1.00 ms (100 STATUS	

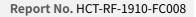
-3 dB above Out-of-band (s	ingle test signal) / Broad	band PCS LTE 20M	/ Downlink /	/ LTE 20 MHz / Lov
Aglient Spectrum Analyzer - Swept SA RL RF 50.0 AC Center Freq 2.4945000 10 dB/div Ref 0.00 dBm		Avg Type: Pwr(RMS) Avg Hold: 100/100 Mkr1 2.4	2:22:34 PM Oct 17, 2019 TRACE 12:3:4:5:5 TYPE A WWWWW DET A NNNNN 196 000 GHz 23.951 dBm	Frequency Auto Tune
-10.0			-13.00 dBm	Center Freq 2.494500000 GHz
-20.0			1 AND PHUN	Start Freq 2.49300000 GHz
-40.0 humming management	m war	www.what.org.	Same and a second s	Stop Freq 2.49600000 GHz
-60.0				CF Step 300.000 kHz Auto Man
-80.0				Freq Offset 0 Hz
Start 2.493000 GHz #Res BW 200 kHz	#VBW 680 kHz*	Stop Sweep 1.00	2.496000 GHz) ms (1001 pts)	
MSG		STATUS		



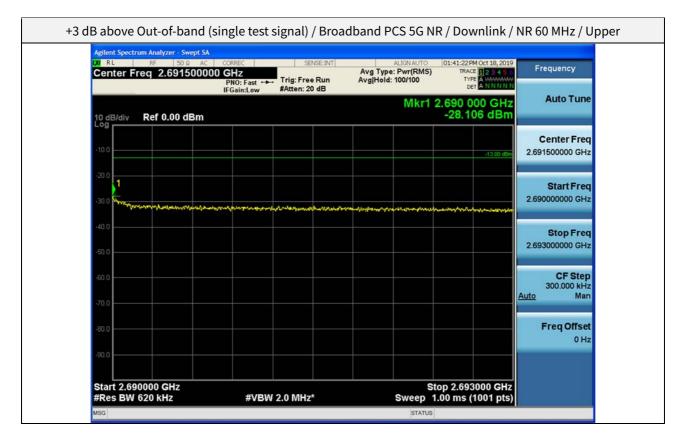


*	(single test signal) / Broa	dband PCS 5G	NR / Downlink /	NR 40 MHz / Up
Agilent Spectrum Analyzer - Swept S W RL RF 50 Q A Center Freq 2.6915000	C CORREC SENSE:INT	ALIGNAUTO Avg Type: Pwr(RMS Avg Hold: 100/100		Frequency
10 dB/div Ref 0.00 dBm		Mkr	2.690 024 GHz -34.795 dBm	
-10.0			-13.00 dEm	Center Freq 2.691500000 GHz
-20.0				Start Freq 2.69000000 GHz
-40.0 -50.0		Mayon Maran		Stop Freq 2.693000000 GHz
+60.0				CF Step 300.000 kHz <u>Auto</u> Man
-80.0				Freq Offset 0 Hz
Start 2.690000 GHz #Res BW 390 kHz	#VBW 1.3 MHz*		Stop 2.693000 GHz 1.00 ms (1001 pts)	
MSG		STATU		

3 dB above Out-of-band		roadband PCS 5G NI	R / Downlink /	NR 40 MHz / Lo
00 RL RF 50 Ω AC Center Freq 2.4945000		Avg Type: Pwr(RMS)	08:05:10 PM Oct 17, 2019 TRACE 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	Frequency
10 dB/div Ref 0.00 dBm		Mkr1 2	2.494 710 GHz -20.623 dBm	Auto Tune
-10.0			-13.00 dBm	Center Freq 2.494500000 GHz
-20.0 144 / July	MANNAMANA MANAMANANA MAN	งาในกันเอออสไปเกลย์ให้ปองกับปกลม	hy marital providence	Start Freq 2.49300000 GHz
-40.0				Stop Freq
-50.0				2.496000000 GHz CF Step
-70.0				300.000 kHz <u>Auto</u> Man
-80.0				Freq Offset 0 Hz
Start 2.493000 GHz	40/DW/ 4.0 Milit		op 2.496000 GHz	
#Res BW 390 kHz	#VBW 1.3 MHz*	Sweep 1	.00 ms (1001 pts)	



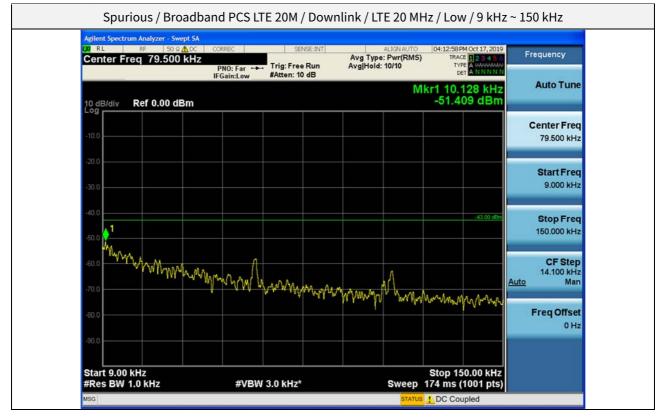




+3 dB above Out-of-band	(single test signal) / Broa	dband PCS 5G NR / Downlink	/ NR 60 MHz / Low
Agilent Spectrum Analyzer - Swept SA OV RL RF 50 0 AC Center Freq 2.4945000	CORREC SENSE:INT	ALIGNAUTO 01:41:55PM Oct 18, 20 Avg Type: Pwr(RMS) TRACE 23.4 5 Avg Hold: 100/100 Type OFF ANNNN Mkr1 2.495 985 GH -18.685 dBn	Auto Tune
10 dB/div Ref 0.00 dBm		-13.000	Center Freq 2.494500000 GHz
-20.0 -30.0 NAWAN (A DAVID A	atelyn Mannen maar Mar Neithe	managerlane, for add polyton, which are not a specific and	Start Freq 2.493000000 GHz
-40.0			Stop Freq 2.496000000 GHz
-60.0			CF Step 300.000 kHz <u>Auto</u> Man
-80.0			Freq Offset 0 Hz
Start 2.493000 GHz #Res BW 620 kHz	#VBW 2.0 MHz*	Stop 2.496000 GH Sweep 1.00 ms (1001 pts	z s)
MSG		STATUS	

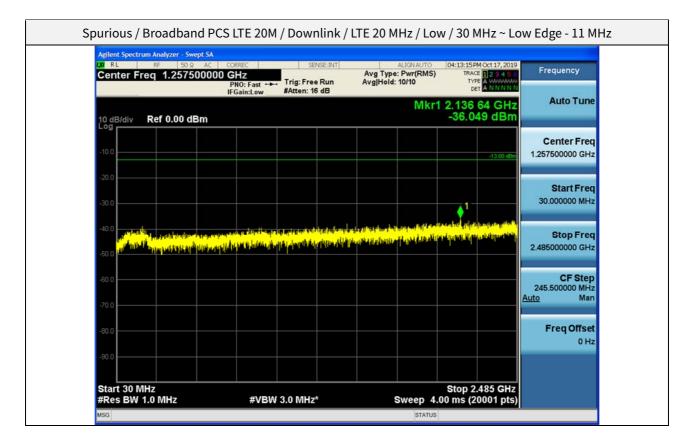


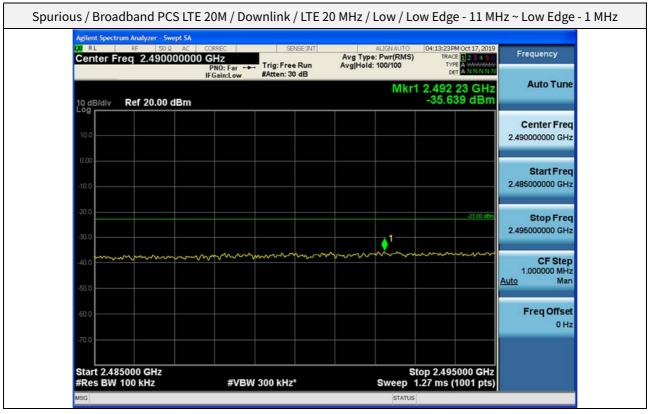
Plot data of Spurious Emissions

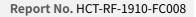


Center Freq 15.075000	MHz PNO: Fast +++ Trig: Free		TYPE A WAANAAAA	Frequency
10 dB/div Ref 0.00 dBm	IFGain:Low #Atten: 10	dB	Mkr1 150 kHz -53.869 dBm	Auto Tune
				Center Freq 15.075000 MHz
-20.0			-33.00 dBm	Start Freq 150.000 kHz
-40.0				Stop Freq 30.000000 MHz
-60.0	e i v angla disilati sa sina ini u na a diselikinan a	angat, mangatan Indonesia ang manakan kana ang mangang ang mangang ang mangang ang mangang ang mangang ang mang	in a male of the second se	CF Step 2.985000 MHz Auto Man
-80.0	en nel della presa mili fa admandia e	ana katalogi	ter and and from an any form back of	Freq Offset 0 Hz
Start 150 kHz #Res BW 10 kHz	#VBW 30 kHz*		Stop 30.00 MHz 368 ms (6001 pts)	

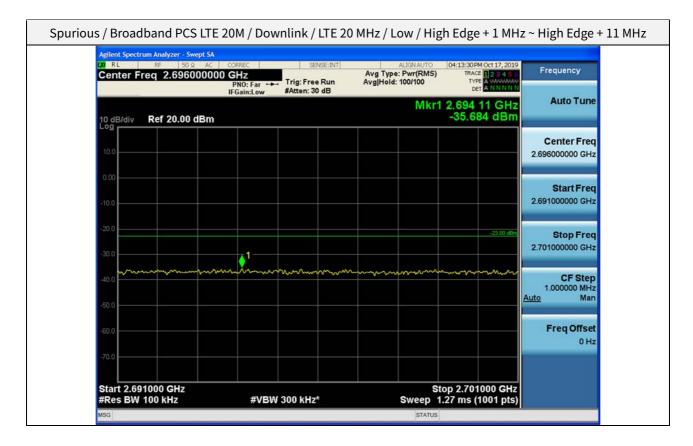


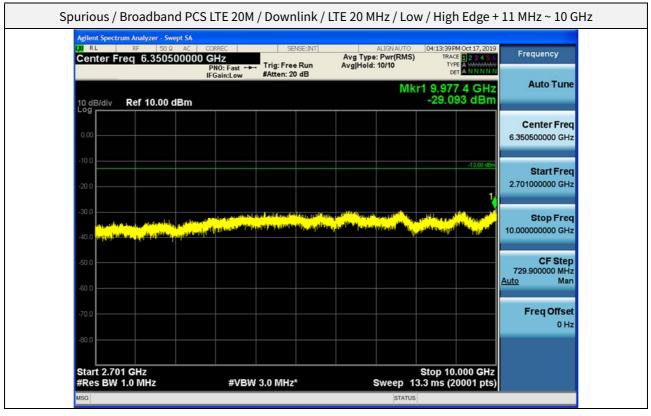






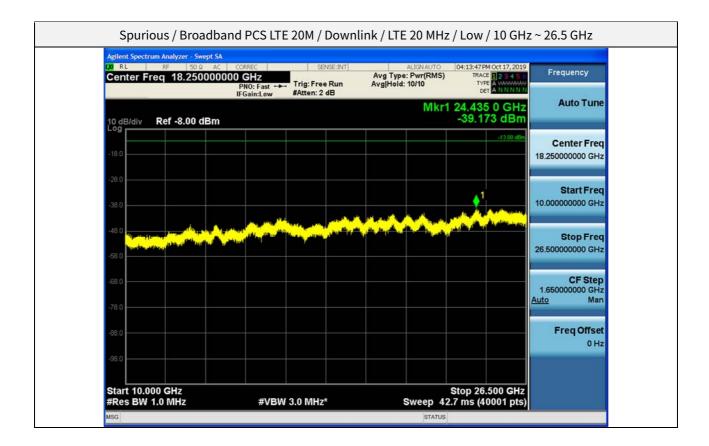




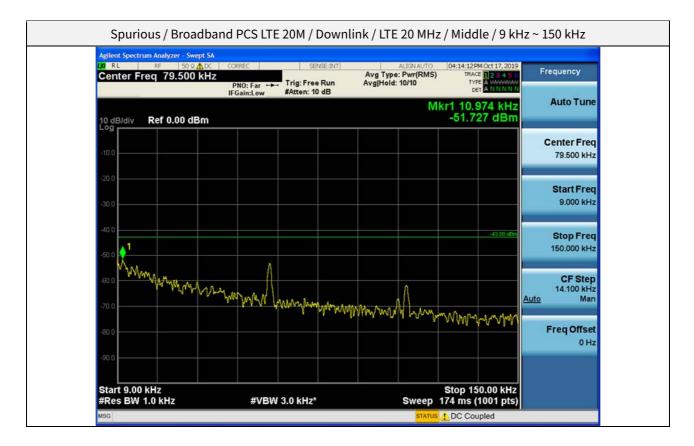






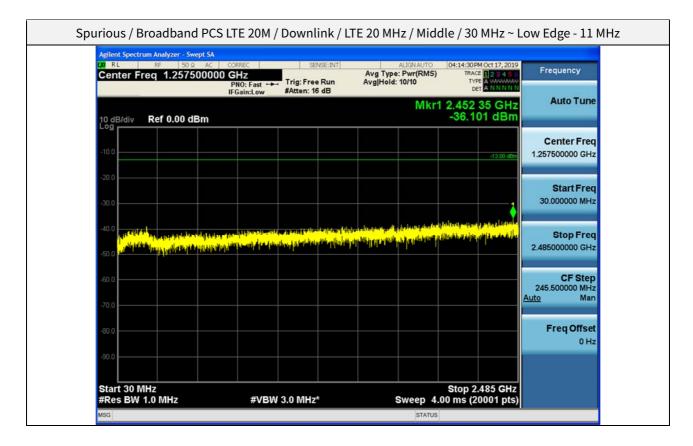


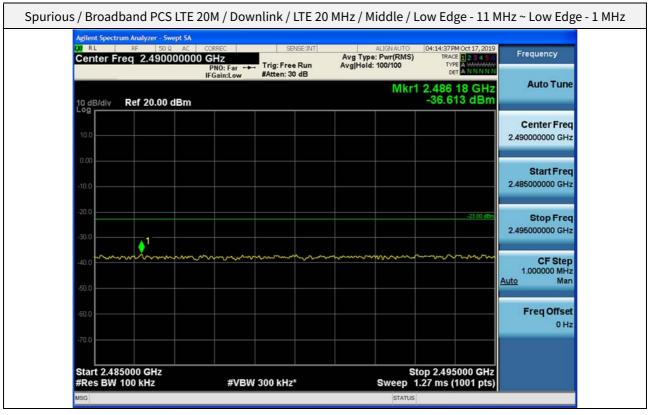


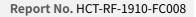


Agilent Spectrum Analyzer - Swept W RL RF 50 Q C Center Freq 15.07500		SENSE:INT	ALIGN AUTO Avg Type: Pwr(RMS) Avg Hold: 10/10	TYPE A WAAAAAAAA	Frequency
	IFGain:Low #A	tten: 10 dB		Mkr1 150 kHz -54.962 dBm	Auto Tune
10 dB/div Ref 0.00 dBm -10.0					Center Freq 15.075000 MHz
-20.0				-33.00 dBm	Start Freq 150.000 kHz
-40.0					Stop Freq 30.000000 MHz
-60.0	Verbrander all keep weber on the	at cutos, the later of the set	l di karakan di analih di	nan tarihan takan dalam datar datar	CF Step 2.985000 MHz <u>Auto</u> Man
-70 0 <mark>Manual Para Indone (1997) (199</mark>	hin istiin daa jira, alaat oo pilas Loopi	and the party of the party of	a ta na ina ita ita ita a na ita ita ita ita ita ita ita ita ita it	nin i cina di kandi kandini ku	Freq Offset 0 Hz
Start 150 kHz #Res BW 10 kHz	#VBW 30	Lillet		Stop 30.00 MHz 368 ms (6001 pts)	

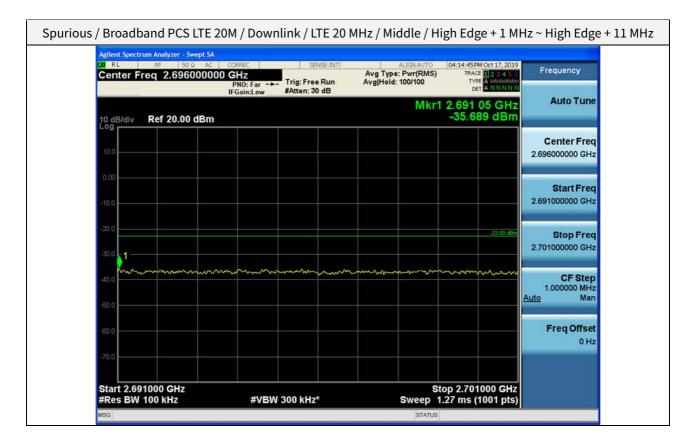


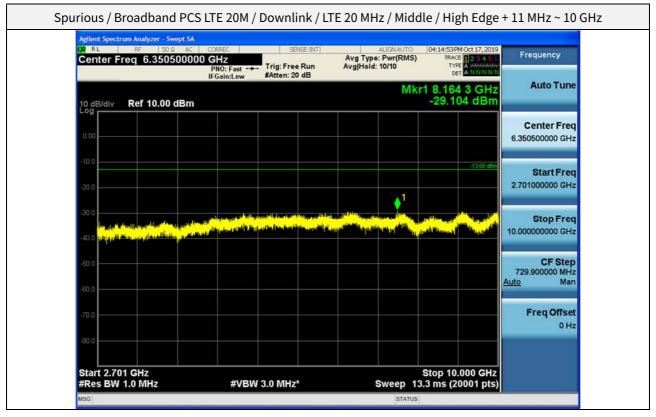






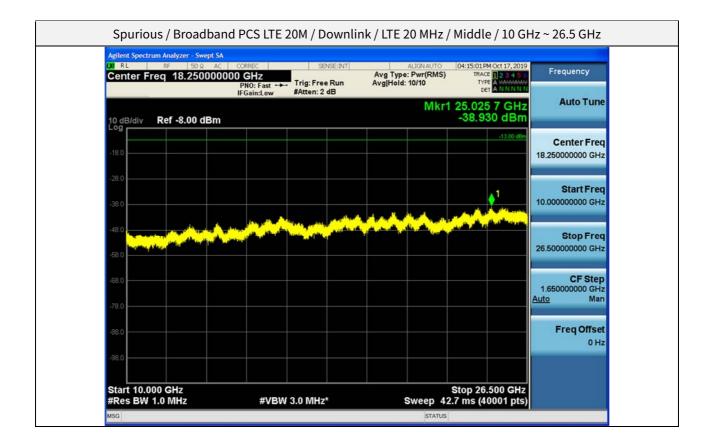




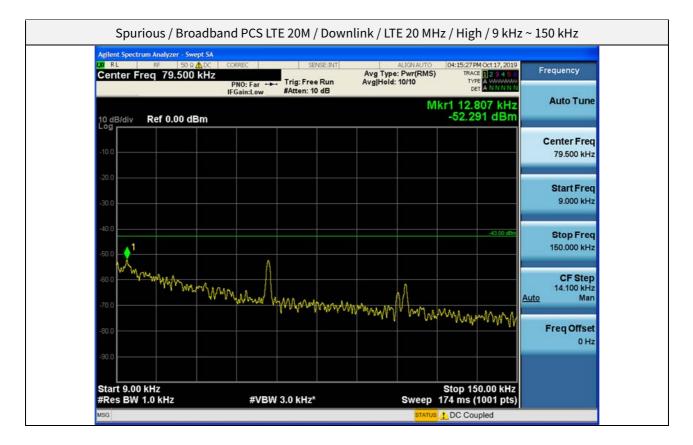






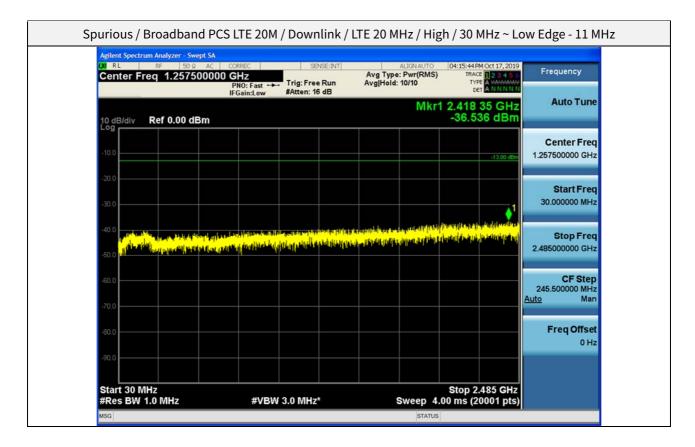


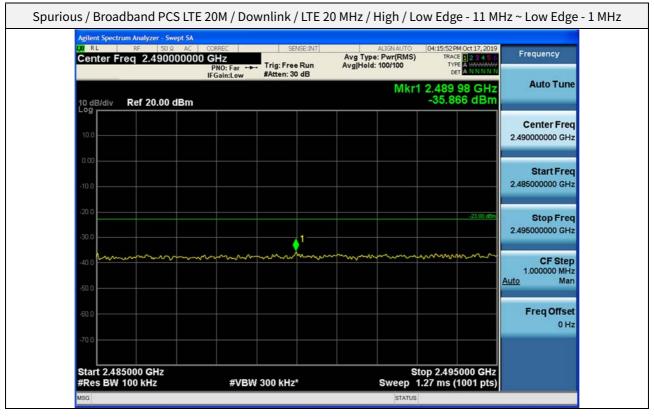


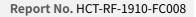


Agilent Spectrum Analyzer - Swept So W RL RF 50 2 A DO Center Freq 15.075000	CORREC SENSE	Avg Type: Pwr(RMS	5) TRACE 1 2 3 4 5 6 TYPE A WWWWW	Frequency
10 dB/div Ref 0.00 dBm	IFGain:Low #Atten: 10 dl	3	Mkr1 150 kHz -54.966 dBm	Auto Tune
-10.0				Center Freq 15.075000 MHz
-20.0			-33.00 dBm	Start Freq 150.000 kHz
-40.0 -50.0 <mark>v1</mark>				Stop Freq 30.000000 MHz
-60.0	t pois an ann a fan dd. Ani (on 16 or a abh a llan ár bhailte			CF Step 2.985000 MHz uto Man
-80.0	a na ana ana ana ana ana ana ana ana an	and any direct or explanation of the birright	alah mutang sa kana pananan ang panah	Freq Offset 0 Hz
Start 150 kHz #Res BW 10 kHz	#VBW 30 kHz*		Stop 30.00 MHz 368 ms (6001 pts)	

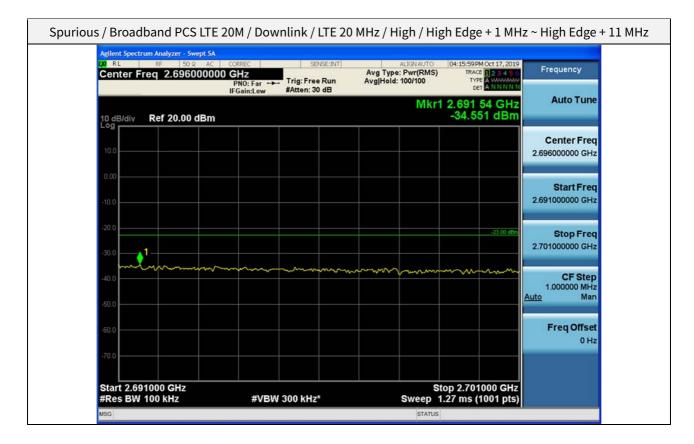


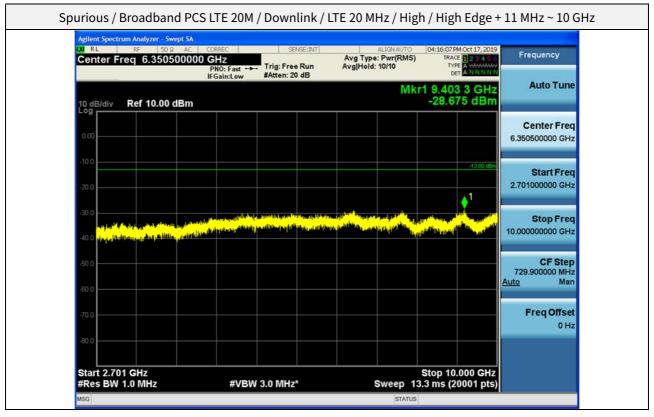






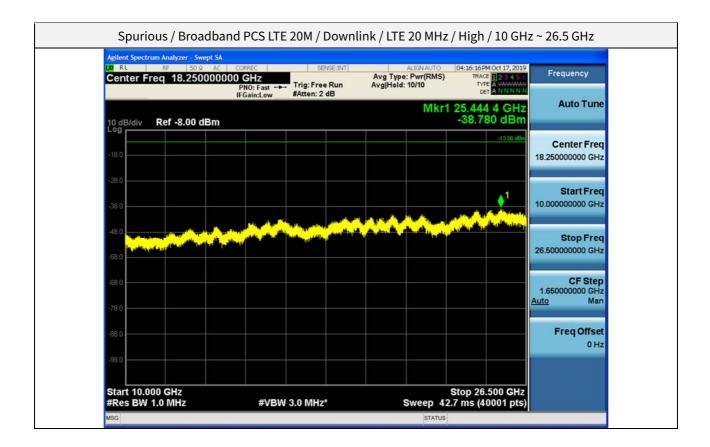






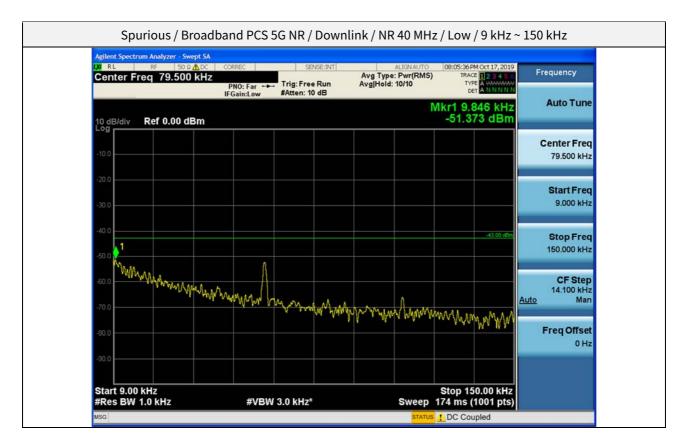




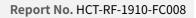








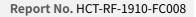
07 RL RF 50 Ω ADC Center Freq 15.075000		Avg Type: Pwr(RMS	08:05:46 PM Oct 17, 2019 TRACE 2 3 4 5 6	Frequency
Contraction of the Contraction o	IFGain:Low #Atten: 10 dl		TYPE A WANNAMA DET A N N N N N	
10 dB/div Ref 0.00 dBm	i odineov		Mkr1 155 kHz -52.920 dBm	Auto Tune
-10.0				Center Freq 15.075000 MHz
-20.0			-33.00 dBm	Start Freq 150.000 kHz
-40.0				Stop Freq 30.000000 MHz
-60.0				CF Step 2.985000 MHz <u>Auto</u> Man
-70.0 Automation and an additional and the second sec	an ng Pangana ang Ang Pang Pang na Pang Pang Pang Pang Pang	a ha sa ka sa Na mana sa ka s Na mana sa ka s	a fin den som signa fin den som signa fin den som	Freq Offset
-90.0				



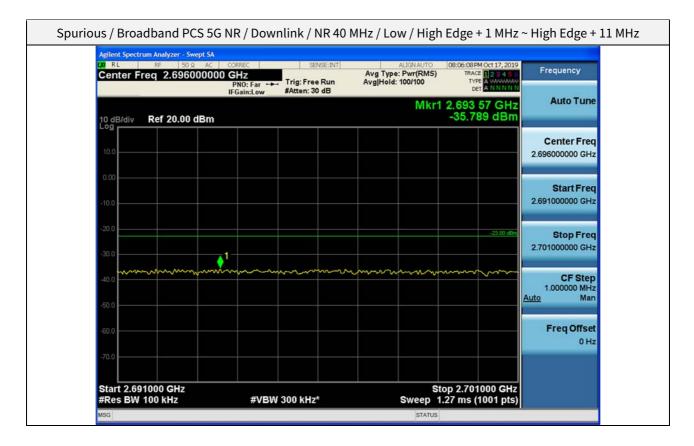


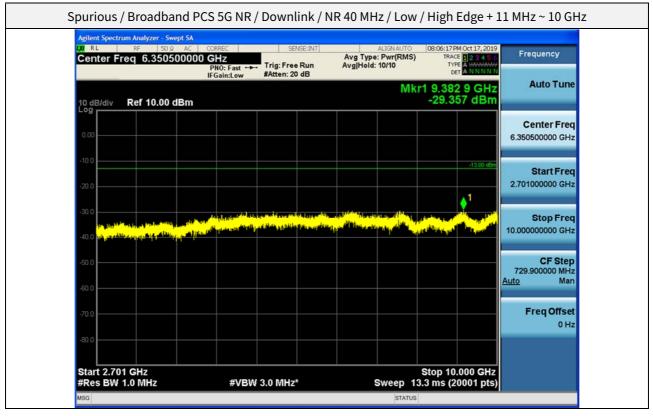
	AC CORREC	SENSE:INT	ALIGN AUTO Avg Type: Pwr(RMS)	08:05:54 PM Oct 17, 2019 TRACE 1 2 3 4 5	Frequency
Center Freq 1.257500	PNO: Fast ++ IFGain:Low	. Trig: Free Run #Atten: 16 dB	Avg Hold: 10/10	TYPE A WWWWWW DET A N N N N N	
	Il Gain.Low		Mkr	1 2.137 37 GHz	Auto Tune
10 dB/div Ref 0.00 dBn	n			-36.727 dBm	
					Center Freq
-10.0				-13.03 dBm	1.257500000 GHz
-20.0					Otort Eron
-30.0					Start Freq 30.000000 MHz
				aria dalla - dala analia da da bastana silika dal	
-40.0		en staat die deele gebeerde staat die staat te staat die teenste findeling worden s	n promission and the second	and which of participanties	Stop Freq
-50.0	Man der and	delle se re date de con			2.485000000 GHz
-60.0					CF Step
					245.500000 MHz Auto Man
-70.0					
-80.0					Freq Offset
-90.0					0 Hz
Start 30 MHz				Stop 2.485 GHz	

Agilent Spectrum Analyzer - Swept SA			
Center Freq 2.49000000		ALIGNAUTO 08:06:01PM Oct 17, 2019 Avg Type: Pwr(RMS) TRACE 234 Avg Hold: 100/100 Type	Frequency
10 dB/div Ref 20.00 dBm		Mkr1 2.494 79 GHz -35.780 dBm	
10.0			Center Freq 2.490000000 GHz
-10.0			Start Freq 2.48500000 GHz
-20.0		22 00 #BH	Stop Freq 2.495000000 GHz
-40.0	m	menning mennin	CF Step 1.000000 MHz <u>Auto</u> Man
-60.0			Freq Offset 0 Hz
-70.0 Start 2.485000 GHz		Stop 2.495000 GHz	



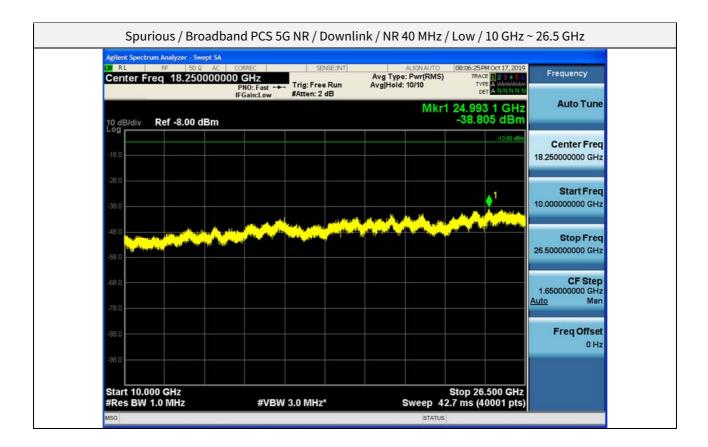






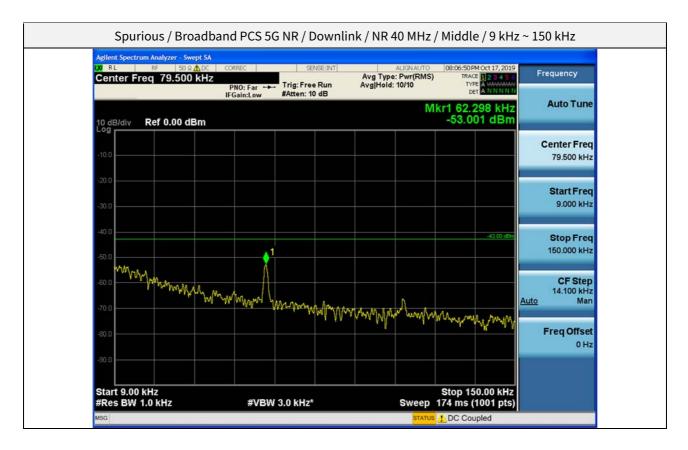




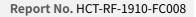




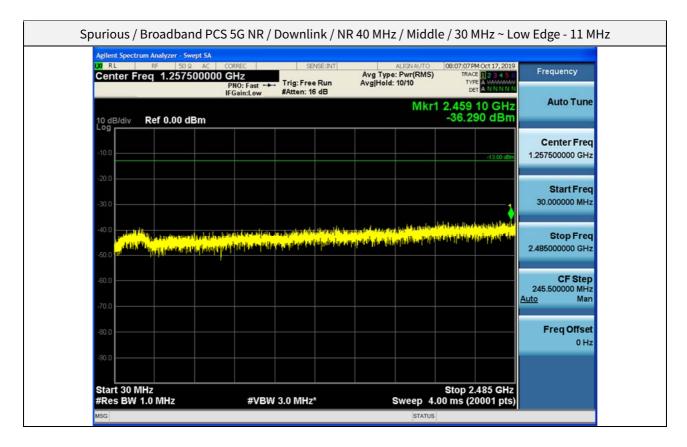


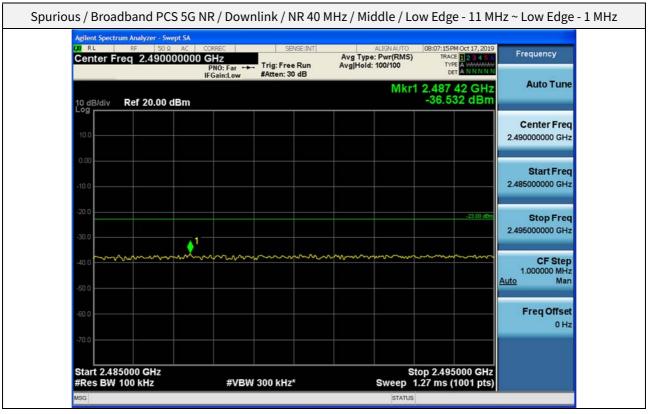


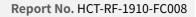
Agilent Spectrum Analyzer - Swept SA	CORREC	SENSE:INT	ALIGN AUTO	08:07:00 PM Oct 17, 2019	
Center Freq 15.075000	MHz PNO: Fast +++ Trig: F	ree Run	Avg Type: Pwr(RMS) Avg Hold: 10/10	TYPE A WAANAAAAA	Frequency
		n: 10 dB		DET ANNNNN	Auto Tune
10 dB/div Ref 0.00 dBm				Mkr1 150 kHz -53.046 dBm	Auto Turic
Log					
-10.0					Center Freq
					15.075000 MHz
-20.0					Ctort Eron
-30.0					Start Freq 150.000 kHz
				-33.00 dBm	
-40.0					Stop Freq
-50.0 1					30.000000 MHz
-60.0					CF Step 2.985000 MHz
-70.0			to a share a trut of	ana ha dhuhatat a addana a ta ta ta	Auto Man
-70.0 Addition date providential tendents Addition date providential tendents			a alger de traitéer de la	and the state of the	
-80.0					Freq Offset
-90.0					0 Hz
Start 150 kHz				Stop 30.00 MHz	



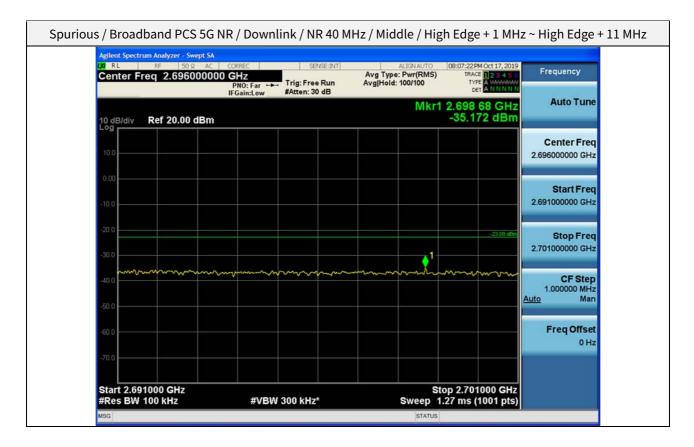


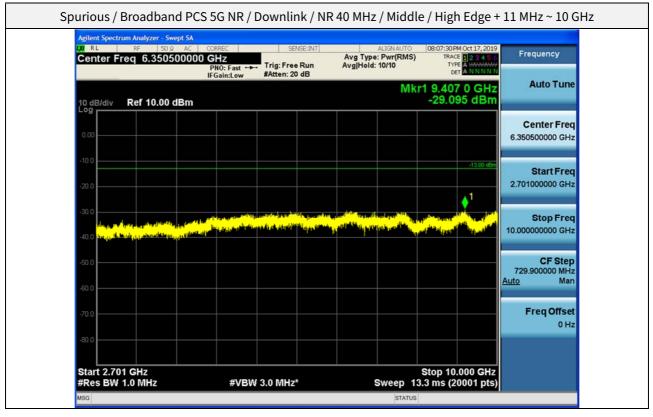






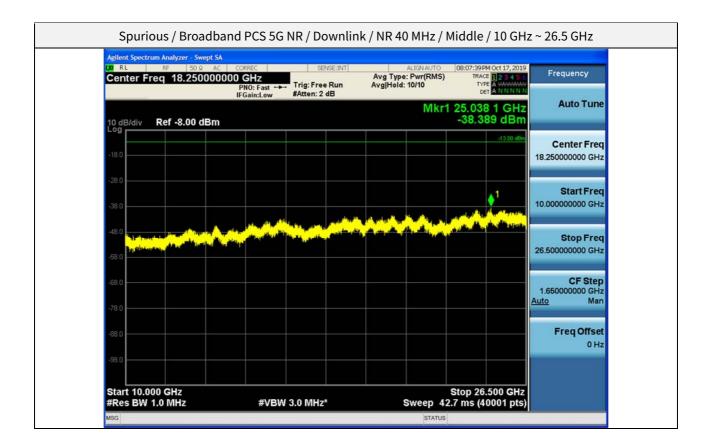


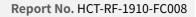




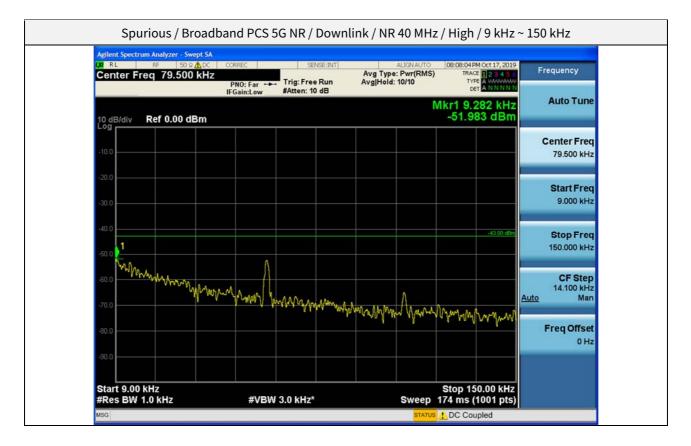












Agilent Spectrum An	and the second		REC	SE	NSE:INT		ALIGN AUTO	08:08:14	PM Oct 17, 2019	
Center Freq		00 MHz	IO: Fast ↔			Avg Type Avg Hold:	: Pwr(RMS)	TRA TY		Frequency
		IFG	ain:Low	#Atten: 1					ET ANNNNN	Auto Tune
	f 0.00 dBr								170 kHz 53 dBm	Auto Tune
10 dB/div Re	г 0.00 аВг									
-10.0										Center Freq
.10.0										15.075000 MHz
-20.0										
										Start Freq 150.000 kHz
-30.0									-33.00 dBm	100.000 R112
+40.0										Stop Freq
-50.0 1										30.000000 MHz
-50.0										
-60.0										CF Step 2.985000 MHz
70.0										Auto Man
-70.0							i distanta Mariti Menyi ya sejara			
-80.0										Freq Offset
										0 Hz
-90.0										
								0 4		
Start 150 kHz #Res BW 10 k	H7		#V/BM	30 kHz*			Sween	368 ms	0.00 MHz (6001 pts)	