FCC RF Test Report

Applicant:	NoTraffic Ltd.
Address of Applicant:	126, Yigal Alon St. Tel Aviv Israel
Manufacturer:	NoTraffic Ltd.
Address of Manufacturer:	126, Yigal Alon St. Tel Aviv Israel

Equipment Under Test (EUT)

Product Name:	Control unit
Model No.:	Control unit rev1.1
Trade Mark:	NoTraffic
FCC ID:	2AS3G-CONT
Applicable standards:	FCC 47 CFR Part 2, 22(H), 24(E), 27
Date of sample receipt:	October 10, 2019
Date of Test:	October 10- 17, 2019
Date of report issued:	October 17, 2019
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

Testing Cert #381383

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Report Revise Record

Version No.	Date	Description
00	*October 17, 2019*	*Original*

Prepared By: Tiger. Chen ***Date:*** *October 17, 2019*

Project Engineer

Check By: Robinson Lo ***Date:*** *October 17, 2019*

Reviewer

TABLE OF CONTENTS

SUMMARY OF TEST RESULT 5

1 TEST LABORATORY 7

1.1 Test facility 7

2 GENERAL DESCRIPTION 8

2.1 Product Feature of Equipment Under Test 8
2.2 Product Specification of Equipment Under Test 9
2.3 Modification of EUT 10
2.4 Applicable Standards 10

3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 11

3.1 Test Mode 11
3.1 Frequency List of Low/Middle/High Channels 13
3.2 Connection Diagram of Test System 15
3.3 Support Unit used in test configuration 15
3.4 Measurement Results Explanation Example 16

4 CONDUCTED TEST RESULT 17

4.1 Measuring Instruments 17
4.2 Conducted Output Power and E.R.P./E.I.R.P. 17
4.3 Peak-to-Average Ratio 19
4.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement 20
4.5 Conducted Band Edge and Emission Mask 22
4.6 Conducted Spurious Emission 25
4.7 Frequency Stability 27

5 RADIATED TEST ITEMS 29

5.1 Measuring Instruments 29
5.2 Radiated Spurious Emission 29

6 LIST OF MEASURING EQUIPMENT 33

7 UNCERTAINTY OF EVALUATION 34

APPENDIXA: EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA 35

APPENDIX B:PEAK-TO-AVERAGE RATIO(CCDF) 56

APPENDIX C:26DB BANDWIDTH ANDOCCUPIED BANDWIDTH 149

APPENDIX D:BAND EDGE 197

APPENDIX E:CONDUCTED SPURIOUS EMISSION 290

APPENDIX F:FREQUENCY STABILITY 467

APPENDIX G: TEST RESULTS OF RADIATED TEST 504

APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B.TEST RESULTS OF RADIATED TEST

APPENDIX C.TEST SETUP PHOTOGRAPHS

Summary Of Test Result

Report Section	FCC Rule	Description	Limit	Result	Remark
4.2	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	
	§27.50(c)(10)	Effective Radiated Power (Band 17)	ERP < 3 Watt	PASS	
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt	PASS	
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt	PASS	
4.3	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	-
4.4	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
4.5	§2.1051 §22.359(a) §22.917(a) §24.238(a) §27.53(g)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log10(P[Watts])	PASS	-
4.6	§2.1051 §22.917(a) §24.238(a) §27.53(g)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log10(P[Watts])	PASS	-
4.7	§2.1055 §22.355	Frequency Stability for Temperature & Voltage	< 2.5 ppm	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		

Report Section	FCC Rule	Description	Limit	Result	Remark
5.2	§2.1053 §22.917(a) §24.238(a) §27.53(g)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log10(P[Watts])	PASS	Under limit dB at MHz

1 Test Laboratory

1.1 Test facility

FCC (Designation number: CN5029, Test Firm Registration Number: 381383)

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

ISED(CAB identifier: CN0012, ISED#: 9079A)

Global United Technology Services Co., Ltd. has been listed on the Wireless Device Testing Laboratories list of innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements.

NVLAP (LAB CODE:600179-0)

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

2 General Description

2.1 Product Feature of Equipment Under Test

Product Feature		
Equipment	Control unit	
Brand Name	NoTraffic	
Model Name	Control unit rev1.	
Additional Model	NA	
Nominal Voltage	AC 120V	
Extreme Voltage	AC 90V and DC 264V	
Extreme Temperature	-37-℃ and 74℃	
Modulation Type	**WCDMA**	BPSK
	LTE	QPSK,16QAM
Operating frequency	**WCDMA**	826.4 MHz ~ 846.6 MHz (FOR WCDMA 850) 1712.4 MHz ~ 1752.6 MHz (FOR WCDMA 1700) 1852.4 MHz ~ 1907.6 MHz (FOR WCDMA 1900)
	LTE	LTE Band 2:1850.7 MHz ~ 1909.3MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz
HW Version	1.1	
SW Version	N/A	
EUT Stage	Production Unit	
EUT supports Radios application	WCDMA/HSPA/LTE	

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. Tests were performed on the conducted test at Main antenna as worst case since it has higheroutput powers.

2.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2:1850.7 MHz ~ 1909.3MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
Rx Frequency	LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz
Maximum EIRP Power	LTE Band 2: 28.43dBm LTE Band 4: 28.21dBm LTE Band 5: 28.66dBm LTE Band 17: 29.07dBm
Antenna Type	Omni directional
Antenna Gain (Main)	LTE Band 2: 5.48dBi LTE Band 4: 5.48dBi LTE Band 5: 5.48dBi LTE Band 17: 5.48dBi
Antenna Gain (AUX -Only RX)	LTE Band 2: 5.48dBi LTE Band 4: 5.48dBi LTE Band 5: 5.48dBi LTE Band 17: 5.48dBi
Type of Modulation	QPSK/ 16QAM

2.3 Modification of EUT

No modifications are made to the EUT during all test items.

2.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 24(E), 27
- ANSI / TIA / EIA-603-E-2016
- ANSI C63.26-2015

  FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

3 Test Configuration of Equipment Under Test

3.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated from 30 MHz to 10th harmonic.

Test modes are chosen to be reported as the worst case configuration below:

Test Items	Band	Bandwidth(MHz)						Modulation			RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK		16QAM	1	Half	Full	L	M	H
Max. Output Power and E.R.P./ E.I.R.P.	2	●	●	●	●	●	●	●		●	●	●	●	●	●	●
	4	●	●	●	●	●	●	●		●	●	●	●	●	●	●
	5	●	●	●	●	-	-	●		●	●	●	●	●	●	●
	17	-	-	●	●	-	-	●		●	●	●	●	●	●	●
Peak-to-Average Ratio	2	●	●	●	●	●	●	●		●	●	-	●	●	●	●
	4	●	●	●	●	●	●	●		●	●	-	●	●	●	●
	5	●	●	●	●	-	-	●		●	●	-	●	●	●	●
	17	-	-	●	●	-	-	●		●	●	-	●	●	●	●

Test Items	Band	Bandwidth(MHz)						Modulation			RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK		16QAM	1	Half	Full	L	M	H
26dB and 99% Bandwidth	2	●	●	●	●	●	●	●		●	-	-	●	●	●	●
	4	●	●	●	●	●	●	●		●	-	-	●	●	●	●
	5	●	●	●	●	-	-	●		●	-	-	●	●	●	●
	17	-	-	●	●	-	-	●		●	-	-	●	●	●	●
Conducted Band Edge	2	●	●	●	●	●	●	●		●	●	-	●	●	●	●
	4	●	●	●	●	●	●	●		●	●	-	●	●	●	●
	5	●	●	●	●	-	-	●		●	●	-	●	●	●	●
	17	-	-	●	●	-	-	●		●	●	-	●	●	●	●
Conducted Spurious Emission	2	●	●	●	●	●	●	●		●	●	-	-	●	●	●
	4	●	●	●	●	●	●	●		●	●	-	-	●	●	●
	5	●	●	●	●	-	-	●		●	●	-	-	●	●	●
	17	-	-	●	●	-	-	●		●	●	-	-	●	●	●

Test Items	Band	Bandwidth(MHz)						Modulation			RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK		16QAM	1	Half	Full	L	M	H
Frequency Stability	2	●	●	●	●	●	●	●		●	●	-	-	●	●	●
	4	●	●	●	●	●	●	●		●	●	-	-	●	●	●
	5	●	●	●	●	-	-	●		●	●	-	-	●	●	●
	17	-	-	●	●	-	-	●		●	-	-	●	●	●	●
Radiated Spurious Emission	2	●	●	●	●	●	●	●		●	●	●	●	●	●	●
	4	●	●	●	●	●	●	●		●	●	●	●	●	●	●
	5	●	●	●	●	-	-	●		●	●	●	●	●	●	●
	17	-	-	●	●	-	-	●		●	●	●	●	●	●	●
Note	1. The mark " ●"means that this configuration is chosen for testing. 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case QPSK emissions are reported.															

3.1 Frequency List of Low/Middle/High Channels

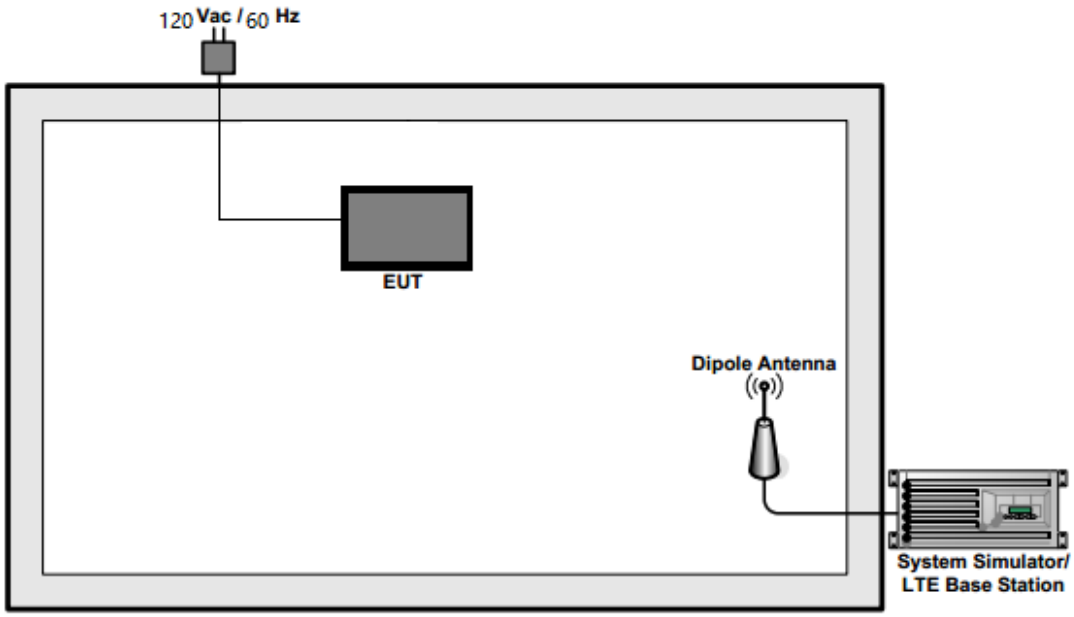
LTE Band 2Channel	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15	18675	1857.5	675	1937.5
	20	18700	1860	700	1940
Middle Range	1.4/3/5/10/15/20	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15	19125	1902.5	1125	1982.5
	20	19100	1900	1100	1980

LTE Band 4Channel	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Middle Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1745	2300	2145

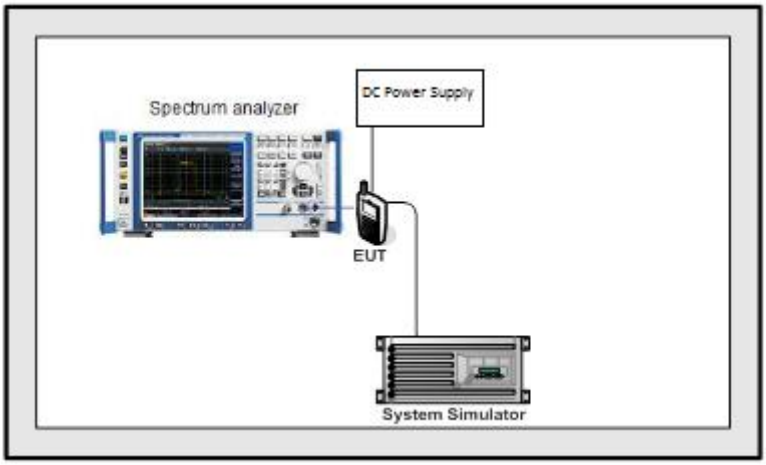
LTE Band 5 Channel	Bandwidth[MHz]	N_{UL}	Frequency ofUplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10	20450	829	2450	874
Middle Range	1.4/3/5/10	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10	20600	844	2600	889

LTE Band 17 Channel	Bandwidth[MHz]	N_{UL}	Frequency ofUplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5	23755	706.5	5755	736.5
	10	23780	709	5780	739
Middle Range	5/10/15/20	23790	710	5790	740
High Range	5	23825	713.5	5825	743.5
	10	23800	711	5800	741

3.2 Connection Diagram of Test System



Radiated Setup



Conducted Setup

3.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Station	R&S	CMW500	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	Keysight	E3642A	N/A	N/A	Unshielded, 1.8 m

3.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.5 dB and a 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.5 + 10 = 14.5 (dB)

4 Conducted Test Result

4.1 Measuring Instruments

See list of measuring instruments of this test report.

4.2 Conducted Output Power and E.R.P./E.I.R.P.

4.2.1 Description of the Conducted Output Power

All LTE bands conducted average power is obtained from the CMW500 telecommunication test set.

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

4.2.2 E.R.P. /E.I.R.P. Limit

FCC: §2.1046, §22.913, §24.232, §27.50

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications

27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.

27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

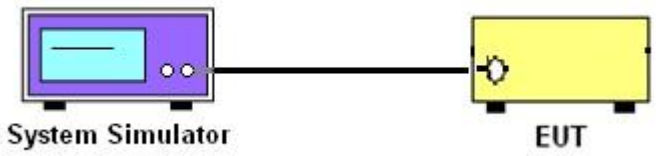
27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

90.541 (d)The transmitting power of a portable (hand-held) unit must not exceed 3 watts ERP.

4.2.3 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

4.2.4 Test Setup



4.2.5 Test Results

Refer to Appendix A of this test report.

4.3 Peak-to-Average Ratio

4.3.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth.

4.3.2 Limit

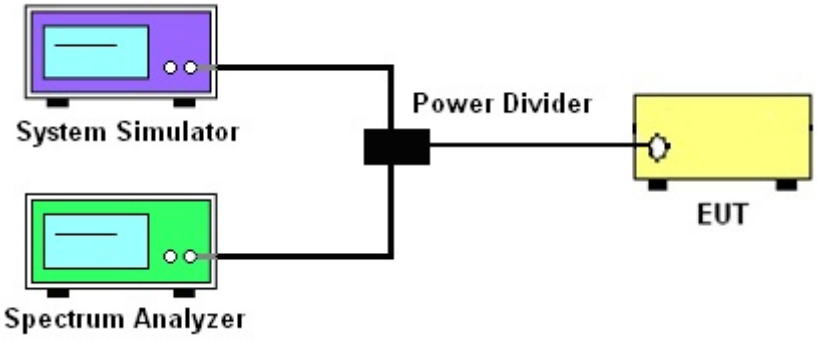
In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.3.3 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF)
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. Set EUT to transmit at maximum output power.
4. The signal analyzer's CCDF measurement profile is enabled
5. Frequency = carrier center frequency
6. Measurement BW > Emission bandwidth of signal
7. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
8. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.

Record the maximum PAPR level associated with a probability of 0.1%.

4.3.4 Test Setup



4.3.5 Test Results

Refer to Appendix B of this test report.

4.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

4.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

4.4.2 Limit

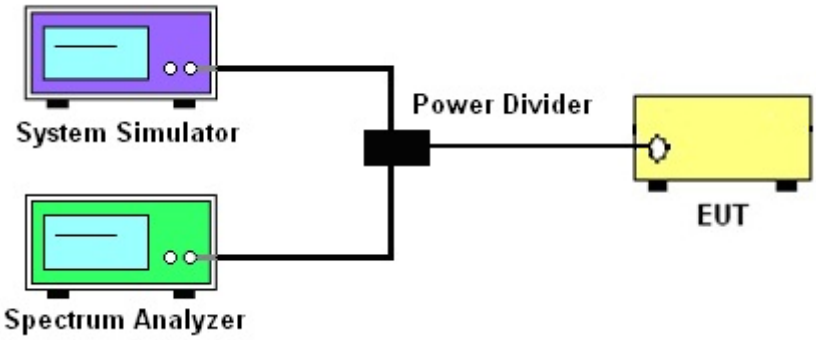
For reporting purposes only

4.4.3 Test Procedures

1. The testing follows Subclause 5.4.3 of ANSI C63.26-2015
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth the bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
4. RBW = 1~5% of the expected OBW, VBW ≥3 x RBW
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.(this is the reference value)
7. Determine the "-26 dB down amplitude" as equal to (Reference Value – X).
8. 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 "–X dB down amplitude" determined in step 6. If a marker is below this "-X dB down amplitude" value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

4.4.4 Test Setup



4.4.5 Test Results

Refer to Appendix C of this test report.

4.5 Conducted Band Edge and Emission Mask

4.5.1 Description of Conducted Band Edge and Emission Measurement

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to peak or peak hold power.

4.5.2 Limit

FCC: §22.359, §22.917, §24.238, §27.53

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.

FCC: §27.53

(c) For operations in 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: (2) On any frequency outside the 776-788 MHz band, the power of any emission shall beattenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;(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)(2) of this section is based on the use ofmeasurement instrumentation employing a resolution bandwidth of 100 kHz or greater.However, in the 100 kHz bands immediately outside and adjacent to the frequency block, aresolution bandwidth of at least 30 kHz may be employed;(6) Compliance with the provisions of paragraphs (c)(4) of this section is based on the use ofmeasurement instrumentation such that the reading taken with any resolution bandwidth settingshould be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC: §27.53

(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. 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 fundamentalemission of the transmitter may be employed; for mobile digital stations, in the 1 megahertzbands immediately outside and adjacent to the frequency block a resolution bandwidth of atleast two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, inwhich case a resolution bandwidth of at least one percent may be employed. A narrowerresolution bandwidth is permitted in all cases to improve measurement accuracy provided themeasured power is integrated over the full required measurement bandwidth (i.e. 1 megahertzor 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digitalstations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width ofthe signal between two points, one below the carrier center frequency and one above the carriercenter frequency, outside of which all emissions are attenuated at least 26 dB below thetransmitter power. With respect to television operations, measurements must be made of theseparate visual and aural operating powers at sufficiently frequent intervals to ensurecompliance with the rules.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P)dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 +10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge,and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, whereX is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6)of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on allfrequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may alsosubmit a documented interference complaint against BRS licensees operating on channel BRSChannel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.Showcitation box.

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 frequencyband(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, inaccordance with the following:

(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 bandsegment, for mobile and portable stations.

4.5.3 Test Procedures

1. The testing follows ANSI C63.26 Section 5.7.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. Start and stop frequency were set such that the band edge would be placed in the center of the plot
4. Span was set large enough so as to capture all out of band emissions near the band edge
5. RBW ≥1% of the emission bandwidth
6. VBW ≥ 3 x RBW
7. Detector = RMS
8. Number of sweep points ≥ 2 x Span/RBW
9. Trace mode = trace average for continuous emissions, max hold for pulse emissions
10. Sweep time = auto couple
11. The trace was allowed to stabilize
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. Checked that all the results comply with the emission limit line.

    Example:

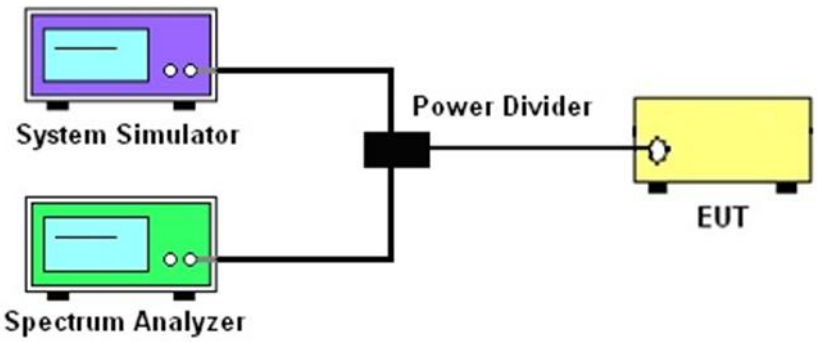
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

    = P(W) - [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

    = -13dBm.

4.5.4 Test Setup



4.5.5 Test Results

Refer to Appendix D of this test report.

4.6 Conducted Spurious Emission

4.6.1 Description of Conducted Spurious Emission Measurement

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyzer, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. 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.

4.6.2 Limit

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.

§27.53(a)(4) For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

§27.53(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 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.

4.6.3 Test Procedures

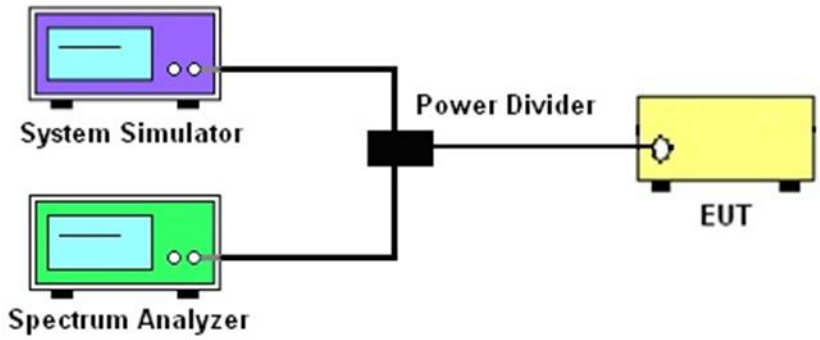
1. The testing follows ANSI C63.26 section 5.7.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB)

= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

= -13dBm.

4.6.4 Test Setup



4.6.5 Test Results

Refer to Appendix Eof this test report.

4.7 Frequency Stability

4.7.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

FCC §22.355

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm formobile stations.

FCC §24.235 & §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

FCC §90.539

Mobile, portable and control transmitters must normally use automatic frequency control (AFC) to lock on to the base stationsignal.

4.7.2 Test Condition

Temp. = −30° to +50°C

Voltage = (85% - 115%)

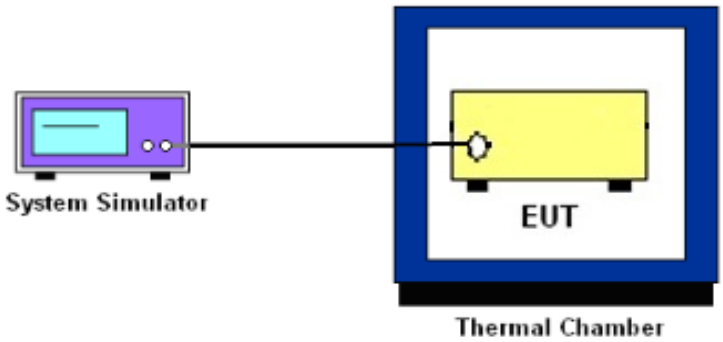
4.7.3 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

4.7.4 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5.
2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

4.7.5 Test Setup



4.7.6 Test Results

Refer to Appendix F of this test report.

5 Radiated Test Items

5.1 Measuring Instruments

See list of measuring instruments of this test report.

5.2 Radiated Spurious Emission

5.2.1 Description of the Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA /EIA-603-E-2016. The power of any emission outside of the authorized operating frequency rangesmust be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For LTE Band 13
For operations in the 746-756 MHz, 777-787 MHz, 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 LTE Band 14
For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHzshall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discreteemissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna thatis representative of the type that will be used with the equipment in normal operation.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

5.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI / TIA-603-E-2016 Section 2.2.12.

Below 1GHz test procedure as below:

1. The EUT was powered ON and placed on a 80cm high table in the chamber. The antenna of thetransmitter was extended to its maximum length.
2. Make the measurement with the spectrum analyzer's RBW = 100KHz, VBW = 100KHz, takingrecord of maximum spurious emission.
3. The disturbance of the transmitter was maximized on the test receiver display by raising and loweringfrom 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) thereceive antenna and by rotating through 360° the turntable. After the fundamental emission wasmaximized, a field strength measurement was made.
4. Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontalpolarization.
5. The transmitter was then removed and replaced with another antenna. The center of the antenna wasapproximately at the same location as the center of the transmitter.

6. A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. Withboth the substitution and the receive antennas horizontally polarized, the receive antenna was raised andlowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusteduntil the measured field strength level in step 2) is obtained for this set of conditions.
7. The output power into the substitution antenna was then measured.
8. Steps 5) and 6) were repeated with both antennas polarized.
9. Calculate power in dBm by the following formula:

   ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)-2.15

   Where:

   Pd is the dipole equivalent power, Pg is the generator output into the substitution antenna, and the antennagain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropicsource (dBi). The substitute level is equal to Pg [dBm] – cable loss [dB]. The calculated Pd levels are thencompared to the absolute spurious emission limit of -13dBm which is equivalent to the requiredminimumattenuation of 43 + 10log10(Power [Watts]).

Above 1GHz test procedure as below:

1. The EUT was powered ON and placed on a 150cm high table in the chamber. The antenna of the transmitter was extended to its maximum length.
2. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
3. The disturbance of the transmitter was maximized on the test receiver display by raising and loweringfrom 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) thereceive antenna and by rotating through 360° the turntable. After the fundamental emission wasmaximized, a field strength measurement was made.
4. Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontalpolarization.
5. The transmitter was then removed and replaced with another antenna. The center of the antenna wasapproximately at the same location as the center of the transmitter.
6. A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. Withboth the substitution and the receive antennas horizontally polarized, the receive antenna was raised andlowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusteduntil the measured field strength level in step 2) is obtained for this set of conditions.
7. The output power into the substitution antenna was then measured.
8. Steps 5) and 6) were repeated with both antennas polarized.
9. Calculate power in dBm by the following formula:

   EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)

Where:

Pd is the dipole equivalent power, Pg is the generator output into the substitution antenna, and the antennagain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropicsource (dBi). The substitute level is equal to Pg [dBm] – cable loss [dB]. The calculated Pd levels are thencompared to the absolute spurious emission limit of -13dBm which is equivalent to the requiredminimumattenuation of 43 + 10log10(Power [Watts]).EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

10. ERP (dBm) = EIRP - 2.15
11. The RF fundamental frequency should be excluded against the limit line in the operatingfrequency band.

    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

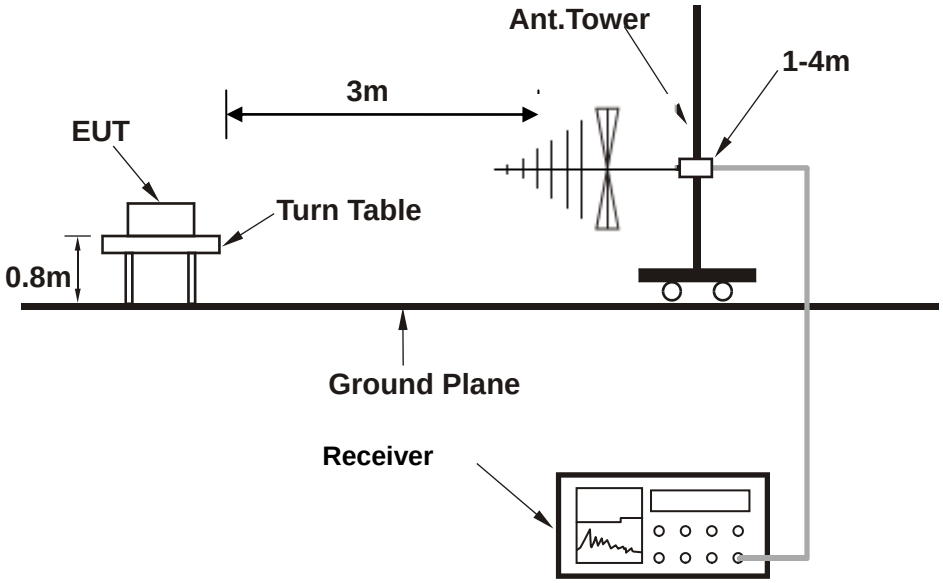
    = P(W)- [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

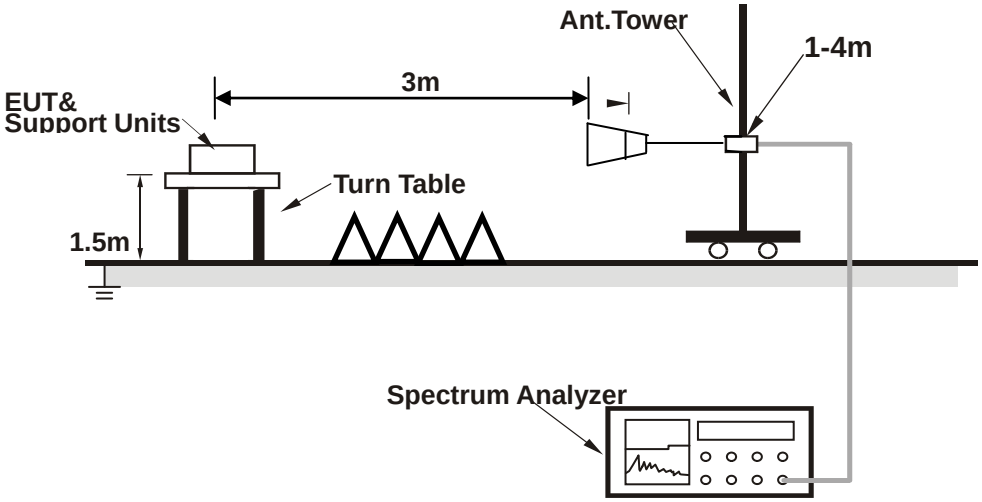
    = -13dBm.

5.2.3 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



5.2.4 Test Results

Refer to Appendix G of this test report.

6 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date	Remark
Spectrum Analyzer	Keysight	N9010A	MY56070788	2019-01-23	2020-01-22	Conducted
Base Station	R&S	CMW500	164998	2019-01-23	2020-01-22	Conducted
Thermal Chamber	Sanmtest	SMC-408-CD	2435	2019/05/09	2020/05/08	Conducted
Signal Generator (Interferer)	Keysight	N5182B	MY56200384	2019-05-19	2020-05-18	Conducted
Signal Generator (Blocker)	Keysight	N5171B	MY56200661	2019-01-23	2020-01-22	Conducted

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV 40	101433	2019-02-18	2020-02-17	Radiation
Amplifier	Sonoma	310	363917	2019-01-22	2020-01-21	Radiation
Amplifier	Schwarzbeck	BBV 9718	327	2019-01-22	2020-01-21	Radiation
Amplifier	Narda	TTA1840-35-HG	2034380	2019/05/15	2020/05/14	Radiation
Loop Antenna	Schwarzbeck	FMZB 1519 B	1519B-051	2017/3/3	2020/3/2	Radiation
Broadband Antenna	Schwarzbeck	VULB 9168	9168-757	2017/3/3	2020/3/2	Radiation
Horn Antenna	Schwarzbeck	BBHA 9120 D	1677	2017/3/3	2020/3/2	Radiation
Horn Antenna	COM-POWER	AH-1840	101117	2018-06-20	2021-06-19	Radiation
Signal Generator (Blocker)	R&S	SMB100A	180717	2019-01-23	2020-01-22	Radiation
Test Software	Audix	E3	6.111221a	N/A	N/A	Radiation

N/A: No Calibration Required

7 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.5 dB**

Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.51dB**

Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.96dB**

AppendixA: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	EIRP(dBm)	Verdict
Band2	1.4MHz	QPSK	18607	1RB#0	22.20	27.68	PASS
Band2	1.4MHz	QPSK	18607	1RB#2	22.19	27.67	PASS
Band2	1.4MHz	QPSK	18607	1RB#5	22.35	27.83	PASS
Band2	1.4MHz	QPSK	18607	3RB#3	22.20	27.68	PASS
Band2	1.4MHz	QPSK	18607	3RB#0	22.12	27.60	PASS
Band2	1.4MHz	QPSK	18607	3RB#1	22.01	27.49	PASS
Band2	1.4MHz	QPSK	18607	6RB#0	21.19	26.67	PASS
Band2	1.4MHz	QPSK	18900	1RB#5	22.60	28.08	PASS
Band2	1.4MHz	QPSK	18900	1RB#2	22.55	28.03	PASS
Band2	1.4MHz	QPSK	18900	1RB#0	22.55	28.03	PASS
Band2	1.4MHz	QPSK	18900	3RB#1	22.47	27.95	PASS
Band2	1.4MHz	QPSK	18900	3RB#3	22.58	28.06	PASS
Band2	1.4MHz	QPSK	18900	3RB#0	22.50	27.98	PASS
Band2	1.4MHz	QPSK	18900	6RB#0	21.54	27.02	PASS
Band2	1.4MHz	QPSK	19193	1RB#2	22.48	27.96	PASS
Band2	1.4MHz	QPSK	19193	1RB#5	22.49	27.97	PASS
Band2	1.4MHz	QPSK	19193	1RB#0	22.63	**28.11**	PASS
Band2	1.4MHz	QPSK	19193	3RB#0	22.55	28.03	PASS
Band2	1.4MHz	QPSK	19193	3RB#1	22.54	28.02	PASS
Band2	1.4MHz	QPSK	19193	3RB#3	22.53	28.01	PASS
Band2	1.4MHz	QPSK	19193	6RB#0	21.55	27.03	PASS
Band2	1.4MHz	16QAM	18607	1RB#0	21.18	26.66	PASS
Band2	1.4MHz	16QAM	18607	1RB#2	21.17	26.65	PASS
Band2	1.4MHz	16QAM	18607	1RB#5	21.13	26.61	PASS
Band2	1.4MHz	16QAM	18607	3RB#0	21.09	26.57	PASS
Band2	1.4MHz	16QAM	18607	3RB#1	21.09	26.57	PASS
Band2	1.4MHz	16QAM	18607	3RB#3	21.17	26.65	PASS
Band2	1.4MHz	16QAM	18607	6RB#0	21.25	26.73	PASS
Band2	1.4MHz	16QAM	18900	1RB#5	21.34	26.82	PASS
Band2	1.4MHz	16QAM	18900	1RB#0	21.35	26.83	PASS
Band2	1.4MHz	16QAM	18900	1RB#2	21.48	26.96	PASS
Band2	1.4MHz	16QAM	18900	3RB#1	21.64	27.12	PASS

Band2	1.4MHz	16QAM	18900	3RB#3	21.64	27.12	PASS
Band2	1.4MHz	16QAM	18900	3RB#0	21.69	27.17	PASS
Band2	1.4MHz	16QAM	18900	6RB#0	21.42	26.90	PASS
Band2	1.4MHz	16QAM	19193	1RB#0	21.58	27.06	PASS
Band2	1.4MHz	16QAM	19193	1RB#5	21.46	26.94	PASS
Band2	1.4MHz	16QAM	19193	1RB#2	21.49	26.97	PASS
Band2	1.4MHz	16QAM	19193	3RB#3	21.55	27.03	PASS
Band2	1.4MHz	16QAM	19193	3RB#1	21.49	26.97	PASS
Band2	1.4MHz	16QAM	19193	3RB#0	21.50	26.98	PASS
Band2	1.4MHz	16QAM	19193	6RB#0	21.65	27.13	PASS
Band2	3MHz	QPSK	18615	1RB#0	21.91	27.39	PASS
Band2	3MHz	QPSK	18615	1RB#14	22.13	27.61	PASS
Band2	3MHz	QPSK	18615	1RB#8	22.13	27.61	PASS
Band2	3MHz	QPSK	18615	8RB#0	21.13	26.61	PASS
Band2	3MHz	QPSK	18615	8RB#7	21.27	26.75	PASS
Band2	3MHz	QPSK	18615	8RB#4	21.14	26.62	PASS
Band2	3MHz	QPSK	18615	15RB#0	21.19	26.67	PASS
Band2	3MHz	QPSK	18900	1RB#14	22.68	**28.16**	PASS
Band2	3MHz	QPSK	18900	1RB#8	22.58	28.06	PASS
Band2	3MHz	QPSK	18900	1RB#0	22.65	28.13	PASS
Band2	3MHz	QPSK	18900	8RB#7	21.53	27.01	PASS
Band2	3MHz	QPSK	18900	8RB#0	21.57	27.05	PASS
Band2	3MHz	QPSK	18900	8RB#4	21.58	27.06	PASS
Band2	3MHz	QPSK	18900	15RB#0	21.47	26.95	PASS
Band2	3MHz	QPSK	19185	1RB#14	22.42	27.90	PASS
Band2	3MHz	QPSK	19185	1RB#8	22.55	28.03	PASS
Band2	3MHz	QPSK	19185	1RB#0	22.66	28.14	PASS
Band2	3MHz	QPSK	19185	8RB#7	21.55	27.03	PASS
Band2	3MHz	QPSK	19185	8RB#4	21.65	27.13	PASS
Band2	3MHz	QPSK	19185	8RB#0	21.58	27.06	PASS
Band2	3MHz	QPSK	19185	15RB#0	21.62	27.10	PASS
Band2	3MHz	16QAM	18615	1RB#14	21.95	27.43	PASS
Band2	3MHz	16QAM	18615	1RB#0	21.76	27.24	PASS
Band2	3MHz	16QAM	18615	1RB#8	21.03	26.51	PASS
Band2	3MHz	16QAM	18615	8RB#7	21.26	26.74	PASS
Band2	3MHz	16QAM	18615	8RB#4	21.17	26.65	PASS
Band2	3MHz	16QAM	18615	8RB#0	21.08	26.56	PASS

Band2	3MHz	16QAM	18615	15RB#0	21.11	26.59	PASS
Band2	3MHz	16QAM	18900	1RB#0	21.16	26.64	PASS
Band2	3MHz	16QAM	18900	1RB#8	21.08	26.56	PASS
Band2	3MHz	16QAM	18900	1RB#14	21.33	26.81	PASS
Band2	3MHz	16QAM	18900	8RB#4	21.45	26.93	PASS
Band2	3MHz	16QAM	18900	8RB#0	21.51	26.99	PASS
Band2	3MHz	16QAM	18900	8RB#7	21.45	26.93	PASS
Band2	3MHz	16QAM	18900	15RB#0	21.53	27.01	PASS
Band2	3MHz	16QAM	19185	1RB#0	21.83	27.31	PASS
Band2	3MHz	16QAM	19185	1RB#8	21.70	27.18	PASS
Band2	3MHz	16QAM	19185	1RB#14	21.61	27.09	PASS
Band2	3MHz	16QAM	19185	8RB#0	21.71	27.19	PASS
Band2	3MHz	16QAM	19185	8RB#4	21.72	27.20	PASS
Band2	3MHz	16QAM	19185	8RB#7	21.53	27.01	PASS
Band2	3MHz	16QAM	19185	15RB#0	21.72	27.20	PASS
Band2	5MHz	QPSK	18625	1RB#24	22.41	27.89	PASS
Band2	5MHz	QPSK	18625	1RB#12	22.37	27.85	PASS
Band2	5MHz	QPSK	18625	1RB#0	22.18	27.66	PASS
Band2	5MHz	QPSK	18625	12RB#13	21.34	26.82	PASS
Band2	5MHz	QPSK	18625	12RB#0	21.22	26.70	PASS
Band2	5MHz	QPSK	18625	12RB#6	21.14	26.62	PASS
Band2	5MHz	QPSK	18625	25RB#0	21.25	26.73	PASS
Band2	5MHz	QPSK	18900	1RB#0	22.67	28.15	PASS
Band2	5MHz	QPSK	18900	1RB#12	22.64	28.12	PASS
Band2	5MHz	QPSK	18900	1RB#24	22.63	28.11	PASS
Band2	5MHz	QPSK	18900	12RB#0	21.58	27.06	PASS
Band2	5MHz	QPSK	18900	12RB#13	21.54	27.02	PASS
Band2	5MHz	QPSK	18900	12RB#6	21.47	26.95	PASS
Band2	5MHz	QPSK	18900	25RB#0	21.47	26.95	PASS
Band2	5MHz	QPSK	19175	1RB#24	22.55	28.03	PASS
Band2	5MHz	QPSK	19175	1RB#0	22.95	**28.43**	PASS
Band2	5MHz	QPSK	19175	1RB#12	22.75	28.23	PASS
Band2	5MHz	QPSK	19175	12RB#0	21.67	27.15	PASS
Band2	5MHz	QPSK	19175	12RB#6	21.66	27.14	PASS
Band2	5MHz	QPSK	19175	12RB#13	21.65	27.13	PASS
Band2	5MHz	QPSK	19175	25RB#0	21.59	27.07	PASS
Band2	5MHz	16QAM	18625	1RB#24	21.27	26.75	PASS

Band2	5MHz	16QAM	18625	1RB#12	21.22	26.70	PASS
Band2	5MHz	16QAM	18625	1RB#0	21.09	26.57	PASS
Band2	5MHz	16QAM	18625	12RB#13	21.30	26.78	PASS
Band2	5MHz	16QAM	18625	12RB#0	21.28	26.76	PASS
Band2	5MHz	16QAM	18625	12RB#6	21.29	26.77	PASS
Band2	5MHz	16QAM	18625	25RB#0	21.33	26.81	PASS
Band2	5MHz	16QAM	18900	1RB#24	21.50	26.98	PASS
Band2	5MHz	16QAM	18900	1RB#12	21.42	26.90	PASS
Band2	5MHz	16QAM	18900	1RB#0	21.41	26.89	PASS
Band2	5MHz	16QAM	18900	12RB#6	21.61	27.09	PASS
Band2	5MHz	16QAM	18900	12RB#13	21.60	27.08	PASS
Band2	5MHz	16QAM	18900	12RB#0	21.55	27.03	PASS
Band2	5MHz	16QAM	18900	25RB#0	21.53	27.01	PASS
Band2	5MHz	16QAM	19175	1RB#24	21.51	26.99	PASS
Band2	5MHz	16QAM	19175	1RB#0	21.84	27.32	PASS
Band2	5MHz	16QAM	19175	1RB#12	21.60	27.08	PASS
Band2	5MHz	16QAM	19175	12RB#13	21.73	27.21	PASS
Band2	5MHz	16QAM	19175	12RB#0	21.81	27.29	PASS
Band2	5MHz	16QAM	19175	12RB#6	21.82	27.30	PASS
Band2	5MHz	16QAM	19175	25RB#0	21.63	27.11	PASS
Band2	10MHz	QPSK	18650	1RB#0	22.00	27.48	PASS
Band2	10MHz	QPSK	18650	1RB#24	22.13	27.61	PASS
Band2	10MHz	QPSK	18650	1RB#49	22.38	27.86	PASS
Band2	10MHz	QPSK	18650	25RB#25	21.23	26.71	PASS
Band2	10MHz	QPSK	18650	25RB#0	21.31	26.79	PASS
Band2	10MHz	QPSK	18650	25RB#12	21.23	26.71	PASS
Band2	10MHz	QPSK	18650	50RB#0	21.11	26.59	PASS
Band2	10MHz	QPSK	18900	1RB#49	22.71	28.19	PASS
Band2	10MHz	QPSK	18900	1RB#24	22.53	28.01	PASS
Band2	10MHz	QPSK	18900	1RB#0	22.67	28.15	PASS
Band2	10MHz	QPSK	18900	25RB#0	21.58	27.06	PASS
Band2	10MHz	QPSK	18900	25RB#25	21.49	26.97	PASS
Band2	10MHz	QPSK	18900	25RB#12	21.46	26.94	PASS
Band2	10MHz	QPSK	18900	50RB#0	21.56	27.04	PASS
Band2	10MHz	QPSK	19150	1RB#0	22.67	28.15	PASS
Band2	10MHz	QPSK	19150	1RB#24	22.83	**28.31**	PASS
Band2	10MHz	QPSK	19150	1RB#49	22.53	28.01	PASS

Band2	10MHz	QPSK	19150	25RB#0	21.80	27.28	PASS
Band2	10MHz	QPSK	19150	25RB#12	21.79	27.27	PASS
Band2	10MHz	QPSK	19150	25RB#25	21.72	27.20	PASS
Band2	10MHz	QPSK	19150	50RB#0	21.75	27.23	PASS
Band2	10MHz	16QAM	18650	1RB#0	21.93	27.41	PASS
Band2	10MHz	16QAM	18650	1RB#24	21.00	26.48	PASS
Band2	10MHz	16QAM	18650	1RB#49	21.25	27.73	PASS
Band2	10MHz	16QAM	18650	25RB#0	21.24	26.72	PASS
Band2	10MHz	16QAM	18650	25RB#12	21.24	26.72	PASS
Band2	10MHz	16QAM	18650	25RB#25	21.43	26.91	PASS
Band2	10MHz	16QAM	18650	50RB#0	21.21	26.96	PASS
Band2	10MHz	16QAM	18900	1RB#0	21.17	26.65	PASS
Band2	10MHz	16QAM	18900	1RB#24	21.20	26.68	PASS
Band2	10MHz	16QAM	18900	1RB#49	21.25	26.73	PASS
Band2	10MHz	16QAM	18900	25RB#25	21.66	27.14	PASS
Band2	10MHz	16QAM	18900	25RB#0	21.66	27.14	PASS
Band2	10MHz	16QAM	18900	25RB#12	21.58	27.06	PASS
Band2	10MHz	16QAM	18900	50RB#0	21.51	26.99	PASS
Band2	10MHz	16QAM	19150	1RB#24	21.97	27.45	PASS
Band2	10MHz	16QAM	19150	1RB#0	21.93	27.41	PASS
Band2	10MHz	16QAM	19150	1RB#49	21.67	27.15	PASS
Band2	10MHz	16QAM	19150	25RB#12	21.87	27.35	PASS
Band2	10MHz	16QAM	19150	25RB#25	21.70	27.18	PASS
Band2	10MHz	16QAM	19150	25RB#0	21.87	27.35	PASS
Band2	10MHz	16QAM	19150	50RB#0	21.70	27.18	PASS
Band2	15MHz	QPSK	18675	1RB#38	22.26	27.74	PASS
Band2	15MHz	QPSK	18675	1RB#74	22.39	27.87	PASS
Band2	15MHz	QPSK	18675	1RB#0	22.01	27.49	PASS
Band2	15MHz	QPSK	18675	38RB#0	21.13	26.61	PASS
Band2	15MHz	QPSK	18675	38RB#18	21.39	26.87	PASS
Band2	15MHz	QPSK	18675	38RB#37	21.48	26.96	PASS
Band2	15MHz	QPSK	18675	75RB#0	21.23	26.71	PASS
Band2	15MHz	QPSK	18900	1RB#74	22.78	28.26	PASS
Band2	15MHz	QPSK	18900	1RB#38	22.59	28.07	PASS
Band2	15MHz	QPSK	18900	1RB#0	22.67	28.15	PASS
Band2	15MHz	QPSK	18900	38RB#0	21.27	26.75	PASS
Band2	15MHz	QPSK	18900	38RB#18	21.11	26.59	PASS

Band2	15MHz	QPSK	18900	38RB#37	21.31	26.79	PASS
Band2	15MHz	QPSK	18900	75RB#0	21.46	26.94	PASS
Band2	15MHz	QPSK	19125	1RB#74	22.42	27.90	PASS
Band2	15MHz	QPSK	19125	1RB#0	22.82	**28.30**	PASS
Band2	15MHz	QPSK	19125	1RB#38	22.76	28.24	PASS
Band2	15MHz	QPSK	19125	38RB#37	21.81	27.29	PASS
Band2	15MHz	QPSK	19125	38RB#0	22.05	27.53	PASS
Band2	15MHz	QPSK	19125	38RB#18	22.01	27.49	PASS
Band2	15MHz	QPSK	19125	75RB#0	21.64	27.12	PASS
Band2	15MHz	16QAM	18675	1RB#74	21.47	26.95	PASS
Band2	15MHz	16QAM	18675	1RB#38	21.34	26.82	PASS
Band2	15MHz	16QAM	18675	1RB#0	21.11	26.59	PASS
Band2	15MHz	16QAM	18675	38RB#0	21.10	26.58	PASS
Band2	15MHz	16QAM	18675	38RB#18	21.32	26.80	PASS
Band2	15MHz	16QAM	18675	38RB#37	21.50	26.98	PASS
Band2	15MHz	16QAM	18675	75RB#0	21.22	26.70	PASS
Band2	15MHz	16QAM	18900	1RB#74	21.32	26.80	PASS
Band2	15MHz	16QAM	18900	1RB#38	21.12	26.60	PASS
Band2	15MHz	16QAM	18900	1RB#0	21.27	26.75	PASS
Band2	15MHz	16QAM	18900	38RB#0	21.25	26.73	PASS
Band2	15MHz	16QAM	18900	38RB#18	21.11	26.59	PASS
Band2	15MHz	16QAM	18900	38RB#37	21.32	26.80	PASS
Band2	15MHz	16QAM	18900	75RB#0	21.54	27.02	PASS
Band2	15MHz	16QAM	19125	1RB#0	21.94	27.42	PASS
Band2	15MHz	16QAM	19125	1RB#38	22.04	27.52	PASS
Band2	15MHz	16QAM	19125	1RB#74	21.79	27.27	PASS
Band2	15MHz	16QAM	19125	38RB#18	21.91	27.39	PASS
Band2	15MHz	16QAM	19125	38RB#37	21.77	27.25	PASS
Band2	15MHz	16QAM	19125	38RB#0	22.12	27.60	PASS
Band2	15MHz	16QAM	19125	75RB#0	21.68	27.16	PASS
Band2	20MHz	QPSK	18700	1RB#99	22.58	28.06	PASS
Band2	20MHz	QPSK	18700	1RB#0	22.19	27.67	PASS
Band2	20MHz	QPSK	18700	1RB#49	22.46	27.94	PASS
Band2	20MHz	QPSK	18700	50RB#50	21.29	26.77	PASS
Band2	20MHz	QPSK	18700	50RB#0	21.20	26.68	PASS
Band2	20MHz	QPSK	18700	50RB#25	21.15	26.63	PASS
Band2	20MHz	QPSK	18700	100RB#0	21.23	26.71	PASS

Band2	20MHz	QPSK	18900	1RB#0	22.53	28.01	PASS
Band2	20MHz	QPSK	18900	1RB#99	22.44	27.92	PASS
Band2	20MHz	QPSK	18900	1RB#49	22.33	27.81	PASS
Band2	20MHz	QPSK	18900	50RB#0	21.42	26.90	PASS
Band2	20MHz	QPSK	18900	50RB#50	21.40	26.88	PASS
Band2	20MHz	QPSK	18900	50RB#25	21.41	26.89	PASS
Band2	20MHz	QPSK	18900	100RB#0	21.47	26.95	PASS
Band2	20MHz	QPSK	19100	1RB#0	22.49	27.97	PASS
Band2	20MHz	QPSK	19100	1RB#99	22.40	27.88	PASS
Band2	20MHz	QPSK	19100	1RB#49	22.64	**28.12**	PASS
Band2	20MHz	QPSK	19100	50RB#50	21.41	26.89	PASS
Band2	20MHz	QPSK	19100	50RB#25	21.56	27.04	PASS
Band2	20MHz	QPSK	19100	50RB#0	21.65	27.13	PASS
Band2	20MHz	QPSK	19100	100RB#0	21.62	27.10	PASS
Band2	20MHz	16QAM	18700	1RB#49	21.72	27.20	PASS
Band2	20MHz	16QAM	18700	1RB#99	21.95	27.43	PASS
Band2	20MHz	16QAM	18700	1RB#0	21.37	26.85	PASS
Band2	20MHz	16QAM	18700	50RB#25	21.25	26.73	PASS
Band2	20MHz	16QAM	18700	50RB#0	21.24	26.72	PASS
Band2	20MHz	16QAM	18700	50RB#50	21.36	26.84	PASS
Band2	20MHz	16QAM	18700	100RB#0	21.21	26.69	PASS
Band2	20MHz	16QAM	18900	1RB#49	21.34	26.82	PASS
Band2	20MHz	16QAM	18900	1RB#0	21.48	26.96	PASS
Band2	20MHz	16QAM	18900	1RB#99	21.39	26.87	PASS
Band2	20MHz	16QAM	18900	50RB#50	21.50	26.98	PASS
Band2	20MHz	16QAM	18900	50RB#0	21.52	27.00	PASS
Band2	20MHz	16QAM	18900	50RB#25	21.57	27.05	PASS
Band2	20MHz	16QAM	18900	100RB#0	21.51	26.99	PASS
Band2	20MHz	16QAM	19100	1RB#49	21.38	26.86	PASS
Band2	20MHz	16QAM	19100	1RB#0	21.37	26.85	PASS
Band2	20MHz	16QAM	19100	1RB#99	21.40	26.88	PASS
Band2	20MHz	16QAM	19100	50RB#25	21.60	27.08	PASS
Band2	20MHz	16QAM	19100	50RB#50	21.45	26.93	PASS
Band2	20MHz	16QAM	19100	50RB#0	21.65	27.13	PASS
Band2	20MHz	16QAM	19100	100RB#0	21.57	27.05	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	22.31	27.79	PASS
Band4	1.4MHz	QPSK	19957	1RB#0	22.40	27.88	PASS

Band4	1.4MHz	QPSK	19957	1RB#2	22.24	27.72	PASS
Band4	1.4MHz	QPSK	19957	3RB#3	22.32	27.80	PASS
Band4	1.4MHz	QPSK	19957	3RB#1	22.44	27.92	PASS
Band4	1.4MHz	QPSK	19957	3RB#0	22.38	27.86	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	21.40	26.88	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	22.39	27.87	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	22.42	27.90	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	22.46	27.94	PASS
Band4	1.4MHz	QPSK	20175	3RB#3	22.46	27.94	PASS
Band4	1.4MHz	QPSK	20175	3RB#1	22.32	27.80	PASS
Band4	1.4MHz	QPSK	20175	3RB#0	22.45	27.93	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	21.40	26.88	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	22.57	28.05	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	22.65	**28.13**	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	22.60	28.08	PASS
Band4	1.4MHz	QPSK	20393	3RB#1	22.63	28.11	PASS
Band4	1.4MHz	QPSK	20393	3RB#0	22.62	28.10	PASS
Band4	1.4MHz	QPSK	20393	3RB#3	22.61	28.09	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	21.69	27.17	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	21.19	26.67	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	21.37	26.85	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	21.31	26.79	PASS
Band4	1.4MHz	16QAM	19957	3RB#1	21.32	26.80	PASS
Band4	1.4MHz	16QAM	19957	3RB#3	21.28	26.76	PASS
Band4	1.4MHz	16QAM	19957	3RB#0	21.29	26.77	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.44	26.92	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	21.30	26.78	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	21.30	26.78	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	21.24	26.72	PASS
Band4	1.4MHz	16QAM	20175	3RB#3	21.62	27.10	PASS
Band4	1.4MHz	16QAM	20175	3RB#1	21.61	27.09	PASS
Band4	1.4MHz	16QAM	20175	3RB#0	21.72	27.20	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.33	26.81	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	21.20	26.68	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	21.25	26.73	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	21.20	26.68	PASS
Band4	1.4MHz	16QAM	20393	3RB#1	21.45	26.93	PASS

Band4	1.4MHz	16QAM	20393	3RB#3	21.41	26.89	PASS
Band4	1.4MHz	16QAM	20393	3RB#0	21.41	26.89	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.54	27.02	PASS
Band4	3MHz	QPSK	19965	1RB#14	22.33	27.81	PASS
Band4	3MHz	QPSK	19965	1RB#8	22.31	27.79	PASS
Band4	3MHz	QPSK	19965	1RB#0	22.50	27.98	PASS
Band4	3MHz	QPSK	19965	8RB#0	21.41	26.89	PASS
Band4	3MHz	QPSK	19965	8RB#4	21.43	26.91	PASS
Band4	3MHz	QPSK	19965	8RB#7	21.39	26.87	PASS
Band4	3MHz	QPSK	19965	15RB#0	21.32	26.80	PASS
Band4	3MHz	QPSK	20175	1RB#14	22.66	**28.14**	PASS
Band4	3MHz	QPSK	20175	1RB#8	22.50	27.98	PASS
Band4	3MHz	QPSK	20175	1RB#0	22.49	27.97	PASS
Band4	3MHz	QPSK	20175	8RB#0	21.51	26.99	PASS
Band4	3MHz	QPSK	20175	8RB#7	21.50	26.98	PASS
Band4	3MHz	QPSK	20175	8RB#4	21.55	27.03	PASS
Band4	3MHz	QPSK	20175	15RB#0	21.48	26.96	PASS
Band4	3MHz	QPSK	20385	1RB#8	22.54	28.02	PASS
Band4	3MHz	QPSK	20385	1RB#0	22.53	28.01	PASS
Band4	3MHz	QPSK	20385	1RB#14	22.53	28.01	PASS
Band4	3MHz	QPSK	20385	8RB#7	21.68	27.16	PASS
Band4	3MHz	QPSK	20385	8RB#4	21.51	26.99	PASS
Band4	3MHz	QPSK	20385	8RB#0	21.51	26.99	PASS
Band4	3MHz	QPSK	20385	15RB#0	21.62	27.10	PASS
Band4	3MHz	16QAM	19965	1RB#14	21.10	26.58	PASS
Band4	3MHz	16QAM	19965	1RB#8	21.23	26.71	PASS
Band4	3MHz	16QAM	19965	1RB#0	21.27	26.75	PASS
Band4	3MHz	16QAM	19965	8RB#4	21.48	26.96	PASS
Band4	3MHz	16QAM	19965	8RB#0	21.50	26.98	PASS
Band4	3MHz	16QAM	19965	8RB#7	21.46	26.94	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.31	26.79	PASS
Band4	3MHz	16QAM	20175	1RB#8	21.06	26.54	PASS
Band4	3MHz	16QAM	20175	1RB#0	21.06	26.54	PASS
Band4	3MHz	16QAM	20175	1RB#14	21.26	26.74	PASS
Band4	3MHz	16QAM	20175	8RB#7	21.43	26.91	PASS
Band4	3MHz	16QAM	20175	8RB#0	21.37	26.85	PASS
Band4	3MHz	16QAM	20175	8RB#4	21.44	26.92	PASS

Band4	3MHz	16QAM	20175	15RB#0	21.47	26.95	PASS
Band4	3MHz	16QAM	20385	1RB#8	21.72	27.20	PASS
Band4	3MHz	16QAM	20385	1RB#0	21.69	27.17	PASS
Band4	3MHz	16QAM	20385	1RB#14	21.74	27.22	PASS
Band4	3MHz	16QAM	20385	8RB#0	21.62	27.10	PASS
Band4	3MHz	16QAM	20385	8RB#4	21.56	27.04	PASS
Band4	3MHz	16QAM	20385	8RB#7	21.66	27.14	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.57	27.05	PASS
Band4	5MHz	QPSK	19975	1RB#0	22.52	28.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	22.38	27.86	PASS
Band4	5MHz	QPSK	19975	1RB#24	22.47	27.95	PASS
Band4	5MHz	QPSK	19975	12RB#13	21.36	26.84	PASS
Band4	5MHz	QPSK	19975	12RB#6	21.29	26.77	PASS
Band4	5MHz	QPSK	19975	12RB#0	21.28	26.76	PASS
Band4	5MHz	QPSK	19975	25RB#0	21.36	26.84	PASS
Band4	5MHz	QPSK	20175	1RB#0	22.51	27.99	PASS
Band4	5MHz	QPSK	20175	1RB#24	22.59	28.07	PASS
Band4	5MHz	QPSK	20175	1RB#12	22.53	28.01	PASS
Band4	5MHz	QPSK	20175	12RB#13	21.58	27.06	PASS
Band4	5MHz	QPSK	20175	12RB#0	21.40	26.88	PASS
Band4	5MHz	QPSK	20175	12RB#6	21.30	26.78	PASS
Band4	5MHz	QPSK	20175	25RB#0	21.50	26.98	PASS
Band4	5MHz	QPSK	20375	1RB#12	22.59	28.07	PASS
Band4	5MHz	QPSK	20375	1RB#0	22.56	28.04	PASS
Band4	5MHz	QPSK	20375	1RB#24	22.73	**28.21**	PASS
Band4	5MHz	QPSK	20375	12RB#0	21.61	27.09	PASS
Band4	5MHz	QPSK	20375	12RB#6	21.51	26.99	PASS
Band4	5MHz	QPSK	20375	12RB#13	21.47	26.95	PASS
Band4	5MHz	QPSK	20375	25RB#0	21.50	26.98	PASS
Band4	5MHz	16QAM	19975	1RB#12	21.24	26.72	PASS
Band4	5MHz	16QAM	19975	1RB#0	21.45	26.93	PASS
Band4	5MHz	16QAM	19975	1RB#24	21.38	26.86	PASS
Band4	5MHz	16QAM	19975	12RB#0	21.45	26.93	PASS
Band4	5MHz	16QAM	19975	12RB#13	21.46	26.94	PASS
Band4	5MHz	16QAM	19975	12RB#6	21.39	26.87	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.37	26.85	PASS
Band4	5MHz	16QAM	20175	1RB#0	21.35	26.83	PASS

Band4	5MHz	16QAM	20175	1RB#12	21.28	26.76	PASS
Band4	5MHz	16QAM	20175	1RB#24	21.55	27.03	PASS
Band4	5MHz	16QAM	20175	12RB#6	21.40	26.88	PASS
Band4	5MHz	16QAM	20175	12RB#0	21.42	26.90	PASS
Band4	5MHz	16QAM	20175	12RB#13	21.63	27.11	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.54	27.02	PASS
Band4	5MHz	16QAM	20375	1RB#0	21.50	26.98	PASS
Band4	5MHz	16QAM	20375	1RB#12	21.56	27.04	PASS
Band4	5MHz	16QAM	20375	1RB#24	21.70	27.18	PASS
Band4	5MHz	16QAM	20375	12RB#0	21.72	27.20	PASS
Band4	5MHz	16QAM	20375	12RB#6	21.71	27.19	PASS
Band4	5MHz	16QAM	20375	12RB#13	21.72	27.20	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.58	27.06	PASS
Band4	10MHz	QPSK	20000	1RB#0	22.45	27.93	PASS
Band4	10MHz	QPSK	20000	1RB#24	22.34	27.82	PASS
Band4	10MHz	QPSK	20000	1RB#49	22.28	27.76	PASS
Band4	10MHz	QPSK	20000	25RB#25	21.39	26.87	PASS
Band4	10MHz	QPSK	20000	25RB#0	21.27	26.75	PASS
Band4	10MHz	QPSK	20000	25RB#12	21.26	26.74	PASS
Band4	10MHz	QPSK	20000	50RB#0	21.26	26.74	PASS
Band4	10MHz	QPSK	20175	1RB#49	22.32	27.80	PASS
Band4	10MHz	QPSK	20175	1RB#24	22.47	27.95	PASS
Band4	10MHz	QPSK	20175	1RB#0	22.57	**28.05**	PASS
Band4	10MHz	QPSK	20175	25RB#12	21.44	26.92	PASS
Band4	10MHz	QPSK	20175	25RB#25	21.61	27.09	PASS
Band4	10MHz	QPSK	20175	25RB#0	21.41	26.89	PASS
Band4	10MHz	QPSK	20175	50RB#0	21.44	26.92	PASS
Band4	10MHz	QPSK	20350	1RB#24	22.35	27.83	PASS
Band4	10MHz	QPSK	20350	1RB#49	22.50	27.98	PASS
Band4	10MHz	QPSK	20350	1RB#0	22.25	27.73	PASS
Band4	10MHz	QPSK	20350	25RB#0	21.31	26.79	PASS
Band4	10MHz	QPSK	20350	25RB#12	21.40	26.88	PASS
Band4	10MHz	QPSK	20350	25RB#25	21.55	27.03	PASS
Band4	10MHz	QPSK	20350	50RB#0	21.34	26.82	PASS
Band4	10MHz	16QAM	20000	1RB#0	21.35	26.83	PASS
Band4	10MHz	16QAM	20000	1RB#24	21.21	26.69	PASS
Band4	10MHz	16QAM	20000	1RB#49	21.28	26.76	PASS

Band4	10MHz	16QAM	20000	25RB#0	21.32	26.80	PASS
Band4	10MHz	16QAM	20000	25RB#12	21.19	26.67	PASS
Band4	10MHz	16QAM	20000	25RB#25	21.37	26.85	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.25	26.73	PASS
Band4	10MHz	16QAM	20175	1RB#49	21.87	27.35	PASS
Band4	10MHz	16QAM	20175	1RB#0	21.17	26.65	PASS
Band4	10MHz	16QAM	20175	1RB#24	21.05	26.53	PASS
Band4	10MHz	16QAM	20175	25RB#12	21.50	26.98	PASS
Band4	10MHz	16QAM	20175	25RB#25	21.69	27.17	PASS
Band4	10MHz	16QAM	20175	25RB#0	21.50	26.98	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.43	26.91	PASS
Band4	10MHz	16QAM	20350	1RB#0	21.55	27.03	PASS
Band4	10MHz	16QAM	20350	1RB#49	21.66	27.14	PASS
Band4	10MHz	16QAM	20350	1RB#24	21.58	27.06	PASS
Band4	10MHz	16QAM	20350	25RB#25	21.56	27.04	PASS
Band4	10MHz	16QAM	20350	25RB#12	21.45	26.93	PASS
Band4	10MHz	16QAM	20350	25RB#0	21.44	26.92	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.35	26.83	PASS
Band4	15MHz	QPSK	20025	1RB#0	22.28	27.76	PASS
Band4	15MHz	QPSK	20025	1RB#74	22.42	27.90	PASS
Band4	15MHz	QPSK	20025	1RB#38	22.21	27.69	PASS
Band4	15MHz	QPSK	20025	38RB#0	21.22	26.70	PASS
Band4	15MHz	QPSK	20025	38RB#37	21.54	27.02	PASS
Band4	15MHz	QPSK	20025	38RB#18	21.29	26.77	PASS
Band4	15MHz	QPSK	20025	75RB#0	21.21	26.69	PASS
Band4	15MHz	QPSK	20175	1RB#74	22.51	27.99	PASS
Band4	15MHz	QPSK	20175	1RB#38	22.51	27.99	PASS
Band4	15MHz	QPSK	20175	1RB#0	22.35	27.83	PASS
Band4	15MHz	QPSK	20175	38RB#37	21.08	26.56	PASS
Band4	15MHz	QPSK	20175	38RB#0	21.04	26.52	PASS
Band4	15MHz	QPSK	20175	38RB#18	21.03	26.51	PASS
Band4	15MHz	QPSK	20175	75RB#0	21.34	26.82	PASS
Band4	15MHz	QPSK	20325	1RB#74	22.56	**28.04**	PASS
Band4	15MHz	QPSK	20325	1RB#38	22.36	27.84	PASS
Band4	15MHz	QPSK	20325	1RB#0	22.38	27.86	PASS
Band4	15MHz	QPSK	20325	38RB#37	21.80	27.28	PASS
Band4	15MHz	QPSK	20325	38RB#18	21.55	27.03	PASS

Band4	15MHz	QPSK	20325	38RB#0	21.63	27.11	PASS
Band4	15MHz	QPSK	20325	75RB#0	21.42	26.90	PASS
Band4	15MHz	16QAM	20025	1RB#74	21.53	27.01	PASS
Band4	15MHz	16QAM	20025	1RB#0	21.27	26.75	PASS
Band4	15MHz	16QAM	20025	1RB#38	21.36	26.84	PASS
Band4	15MHz	16QAM	20025	38RB#37	21.52	27.00	PASS
Band4	15MHz	16QAM	20025	38RB#18	21.33	26.81	PASS
Band4	15MHz	16QAM	20025	38RB#0	21.28	26.76	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.27	26.75	PASS
Band4	15MHz	16QAM	20175	1RB#0	21.06	26.54	PASS
Band4	15MHz	16QAM	20175	1RB#38	21.06	26.54	PASS
Band4	15MHz	16QAM	20175	1RB#74	21.05	26.53	PASS
Band4	15MHz	16QAM	20175	38RB#18	21.06	26.54	PASS
Band4	15MHz	16QAM	20175	38RB#0	21.99	27.47	PASS
Band4	15MHz	16QAM	20175	38RB#37	21.12	26.60	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.37	26.85	PASS
Band4	15MHz	16QAM	20325	1RB#0	21.65	27.13	PASS
Band4	15MHz	16QAM	20325	1RB#38	21.54	27.02	PASS
Band4	15MHz	16QAM	20325	1RB#74	21.79	27.27	PASS
Band4	15MHz	16QAM	20325	38RB#0	21.62	27.10	PASS
Band4	15MHz	16QAM	20325	38RB#18	21.63	27.11	PASS
Band4	15MHz	16QAM	20325	38RB#37	21.83	27.31	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.31	26.79	PASS
Band4	20MHz	QPSK	20050	1RB#99	22.53	28.01	PASS
Band4	20MHz	QPSK	20050	1RB#49	22.36	27.84	PASS
Band4	20MHz	QPSK	20050	1RB#0	22.31	27.79	PASS
Band4	20MHz	QPSK	20050	50RB#50	21.35	26.83	PASS
Band4	20MHz	QPSK	20050	50RB#0	21.17	26.65	PASS
Band4	20MHz	QPSK	20050	50RB#25	21.13	26.61	PASS
Band4	20MHz	QPSK	20050	100RB#0	21.34	26.82	PASS
Band4	20MHz	QPSK	20175	1RB#0	22.29	27.77	PASS
Band4	20MHz	QPSK	20175	1RB#49	22.25	27.73	PASS
Band4	20MHz	QPSK	20175	1RB#99	22.41	27.89	PASS
Band4	20MHz	QPSK	20175	50RB#0	21.31	26.79	PASS
Band4	20MHz	QPSK	20175	50RB#50	21.36	26.84	PASS
Band4	20MHz	QPSK	20175	50RB#25	21.33	26.81	PASS
Band4	20MHz	QPSK	20175	100RB#0	21.34	26.82	PASS

Band4	20MHz	QPSK	20300	1RB#99	22.65	**28.13**	PASS
Band4	20MHz	QPSK	20300	1RB#0	22.53	28.01	PASS
Band4	20MHz	QPSK	20300	1RB#49	22.43	27.91	PASS
Band4	20MHz	QPSK	20300	50RB#0	21.34	26.82	PASS
Band4	20MHz	QPSK	20300	50RB#25	21.35	26.83	PASS
Band4	20MHz	QPSK	20300	50RB#50	21.35	26.83	PASS
Band4	20MHz	QPSK	20300	100RB#0	21.33	26.81	PASS
Band4	20MHz	16QAM	20050	1RB#99	21.88	27.36	PASS
Band4	20MHz	16QAM	20050	1RB#49	21.58	27.06	PASS
Band4	20MHz	16QAM	20050	1RB#0	21.56	27.04	PASS
Band4	20MHz	16QAM	20050	50RB#50	21.32	26.80	PASS
Band4	20MHz	16QAM	20050	50RB#0	21.29	26.77	PASS
Band4	20MHz	16QAM	20050	50RB#25	21.20	26.68	PASS
Band4	20MHz	16QAM	20050	100RB#0	21.31	26.79	PASS
Band4	20MHz	16QAM	20175	1RB#99	21.50	26.98	PASS
Band4	20MHz	16QAM	20175	1RB#49	21.42	26.90	PASS
Band4	20MHz	16QAM	20175	1RB#0	21.34	26.82	PASS
Band4	20MHz	16QAM	20175	50RB#25	21.41	26.89	PASS
Band4	20MHz	16QAM	20175	50RB#50	21.49	26.97	PASS
Band4	20MHz	16QAM	20175	50RB#0	21.42	26.90	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.39	26.87	PASS
Band4	20MHz	16QAM	20300	1RB#99	21.52	27.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	21.34	26.82	PASS
Band4	20MHz	16QAM	20300	1RB#49	21.30	26.78	PASS
Band4	20MHz	16QAM	20300	50RB#50	21.40	26.88	PASS
Band4	20MHz	16QAM	20300	50RB#0	21.38	26.86	PASS
Band4	20MHz	16QAM	20300	50RB#25	21.34	26.82	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.34	26.82	PASS
Band5	1.4MHz	QPSK	20407	1RB#0	22.52	28.00	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	22.51	27.99	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	22.45	27.93	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	22.40	27.88	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	22.53	28.01	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	22.53	28.01	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	21.50	26.98	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	22.94	28.42	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	22.93	28.41	PASS

Band5	1.4MHz	QPSK	20525	1RB#0	22.03	27.51	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.00	**28.48**	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	22.97	28.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.00	28.48	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	21.99	27.47	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	22.80	28.28	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	22.63	28.11	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	22.63	28.11	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	22.76	28.24	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	22.74	28.22	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	22.67	28.15	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.75	27.23	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.24	26.72	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	21.06	26.54	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	21.06	26.54	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	21.34	26.82	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	21.29	26.77	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	21.29	26.77	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.47	26.95	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.06	27.54	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	21.90	27.38	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.82	27.30	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	21.89	27.37	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	21.99	27.47	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	22.00	27.48	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.11	26.59	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	21.49	26.97	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	21.59	27.07	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.42	26.90	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	21.85	27.33	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	21.66	27.14	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	21.86	27.34	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.67	27.15	PASS
Band5	3MHz	QPSK	20415	1RB#8	22.32	27.80	PASS
Band5	3MHz	QPSK	20415	1RB#14	22.44	27.92	PASS
Band5	3MHz	QPSK	20415	1RB#0	22.52	28.00	PASS
Band5	3MHz	QPSK	20415	8RB#0	21.54	27.02	PASS

Band5	3MHz	QPSK	20415	8RB#4	21.47	26.95	PASS
Band5	3MHz	QPSK	20415	8RB#7	21.39	26.87	PASS
Band5	3MHz	QPSK	20415	15RB#0	21.49	26.97	PASS
Band5	3MHz	QPSK	20525	1RB#14	22.91	28.39	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.00	28.48	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.00	**28.48**	PASS
Band5	3MHz	QPSK	20525	8RB#7	22.03	27.51	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.17	27.65	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.18	27.66	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.04	27.52	PASS
Band5	3MHz	QPSK	20635	1RB#14	22.58	28.06	PASS
Band5	3MHz	QPSK	20635	1RB#0	22.79	28.27	PASS
Band5	3MHz	QPSK	20635	1RB#8	22.80	28.28	PASS
Band5	3MHz	QPSK	20635	8RB#7	21.76	27.24	PASS
Band5	3MHz	QPSK	20635	8RB#0	21.72	27.20	PASS
Band5	3MHz	QPSK	20635	8RB#4	21.73	27.21	PASS
Band5	3MHz	QPSK	20635	15RB#0	21.73	27.21	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.18	26.66	PASS
Band5	3MHz	16QAM	20415	1RB#0	21.33	26.81	PASS
Band5	3MHz	16QAM	20415	1RB#8	21.23	26.71	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.51	26.99	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.57	27.05	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.42	26.90	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.37	26.85	PASS
Band5	3MHz	16QAM	20525	1RB#14	21.55	27.03	PASS
Band5	3MHz	16QAM	20525	1RB#8	21.60	27.08	PASS
Band5	3MHz	16QAM	20525	1RB#0	21.72	27.20	PASS
Band5	3MHz	16QAM	20525	8RB#0	21.12	26.60	PASS
Band5	3MHz	16QAM	20525	8RB#4	21.06	26.54	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.93	27.41	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.96	27.44	PASS
Band5	3MHz	16QAM	20635	1RB#0	21.94	27.42	PASS
Band5	3MHz	16QAM	20635	1RB#8	21.96	27.44	PASS
Band5	3MHz	16QAM	20635	1RB#14	21.75	27.23	PASS
Band5	3MHz	16QAM	20635	8RB#4	21.71	27.19	PASS
Band5	3MHz	16QAM	20635	8RB#7	21.80	27.28	PASS
Band5	3MHz	16QAM	20635	8RB#0	21.75	27.23	PASS

Band5	3MHz	16QAM	20635	15RB#0	21.87	27.35	PASS
Band5	5MHz	QPSK	20425	1RB#24	22.68	28.16	PASS
Band5	5MHz	QPSK	20425	1RB#0	22.62	28.10	PASS
Band5	5MHz	QPSK	20425	1RB#12	22.54	28.02	PASS
Band5	5MHz	QPSK	20425	12RB#13	21.48	26.96	PASS
Band5	5MHz	QPSK	20425	12RB#0	21.44	26.92	PASS
Band5	5MHz	QPSK	20425	12RB#6	21.47	26.95	PASS
Band5	5MHz	QPSK	20425	25RB#0	21.38	26.86	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.00	**28.48**	PASS
Band5	5MHz	QPSK	20525	1RB#24	22.88	28.36	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.00	28.48	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.06	27.54	PASS
Band5	5MHz	QPSK	20525	12RB#13	21.90	27.38	PASS
Band5	5MHz	QPSK	20525	12RB#6	22.05	27.53	PASS
Band5	5MHz	QPSK	20525	25RB#0	21.95	27.43	PASS
Band5	5MHz	QPSK	20625	1RB#0	22.68	28.16	PASS
Band5	5MHz	QPSK	20625	1RB#24	22.80	28.28	PASS
Band5	5MHz	QPSK	20625	1RB#12	22.89	28.37	PASS
Band5	5MHz	QPSK	20625	12RB#13	21.91	27.39	PASS
Band5	5MHz	QPSK	20625	12RB#6	21.62	27.10	PASS
Band5	5MHz	QPSK	20625	12RB#0	21.65	27.13	PASS
Band5	5MHz	QPSK	20625	25RB#0	21.70	27.18	PASS
Band5	5MHz	16QAM	20425	1RB#12	21.46	26.94	PASS
Band5	5MHz	16QAM	20425	1RB#24	21.61	27.09	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.57	27.05	PASS
Band5	5MHz	16QAM	20425	12RB#6	21.48	26.96	PASS
Band5	5MHz	16QAM	20425	12RB#0	21.44	26.92	PASS
Band5	5MHz	16QAM	20425	12RB#13	21.46	26.94	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.51	26.99	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.84	27.32	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.97	27.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.68	27.16	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.95	27.43	PASS
Band5	5MHz	16QAM	20525	12RB#0	21.15	26.63	PASS
Band5	5MHz	16QAM	20525	12RB#6	21.08	26.56	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.07	26.55	PASS
Band5	5MHz	16QAM	20625	1RB#12	21.73	27.21	PASS

Band5	5MHz	16QAM	20625	1RB#0	21.53	27.01	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.73	27.21	PASS
Band5	5MHz	16QAM	20625	12RB#6	21.87	27.35	PASS
Band5	5MHz	16QAM	20625	12RB#13	21.2	26.68	PASS
Band5	5MHz	16QAM	20625	12RB#0	21.79	27.27	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.85	27.33	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.00	28.48	PASS
Band5	10MHz	QPSK	20450	1RB#0	22.41	27.89	PASS
Band5	10MHz	QPSK	20450	1RB#24	22.47	27.95	PASS
Band5	10MHz	QPSK	20450	25RB#25	21.73	27.21	PASS
Band5	10MHz	QPSK	20450	25RB#12	21.42	26.90	PASS
Band5	10MHz	QPSK	20450	25RB#0	21.30	26.78	PASS
Band5	10MHz	QPSK	20450	50RB#0	21.50	26.98	PASS
Band5	10MHz	QPSK	20525	1RB#24	23.00	**28.48**	PASS
Band5	10MHz	QPSK	20525	1RB#0	22.84	28.32	PASS
Band5	10MHz	QPSK	20525	1RB#49	22.69	28.17	PASS
Band5	10MHz	QPSK	20525	25RB#25	21.80	27.28	PASS
Band5	10MHz	QPSK	20525	25RB#12	21.90	27.38	PASS
Band5	10MHz	QPSK	20525	25RB#0	21.89	27.37	PASS
Band5	10MHz	QPSK	20525	50RB#0	21.88	27.36	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.69	28.17	PASS
Band5	10MHz	QPSK	20600	1RB#24	22.58	28.06	PASS
Band5	10MHz	QPSK	20600	1RB#0	22.64	28.12	PASS
Band5	10MHz	QPSK	20600	25RB#12	21.55	27.03	PASS
Band5	10MHz	QPSK	20600	25RB#0	21.54	27.02	PASS
Band5	10MHz	QPSK	20600	25RB#25	21.82	27.30	PASS
Band5	10MHz	QPSK	20600	50RB#0	21.55	27.03	PASS
Band5	10MHz	16QAM	20450	1RB#49	21.83	27.31	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.28	26.76	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.33	26.81	PASS
Band5	10MHz	16QAM	20450	25RB#12	21.38	26.86	PASS
Band5	10MHz	16QAM	20450	25RB#25	21.78	27.26	PASS
Band5	10MHz	16QAM	20450	25RB#0	21.37	26.85	PASS
Band5	10MHz	16QAM	20450	50RB#0	21.58	27.06	PASS
Band5	10MHz	16QAM	20525	1RB#24	21.55	27.03	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.34	26.82	PASS
Band5	10MHz	16QAM	20525	1RB#0	21.39	26.87	PASS

Band5	10MHz	16QAM	20525	25RB#25	21.83	27.31	PASS
Band5	10MHz	16QAM	20525	25RB#12	21.92	27.40	PASS
Band5	10MHz	16QAM	20525	25RB#0	21.92	27.40	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.83	27.31	PASS
Band5	10MHz	16QAM	20600	1RB#0	21.89	27.37	PASS
Band5	10MHz	16QAM	20600	1RB#24	21.74	27.22	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.83	27.31	PASS
Band5	10MHz	16QAM	20600	25RB#12	21.53	27.01	PASS
Band5	10MHz	16QAM	20600	25RB#25	21.83	27.31	PASS
Band5	10MHz	16QAM	20600	25RB#0	21.51	26.99	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.47	26.95	PASS
Band17	5MHz	QPSK	23755	1RB#24	23.00	28.5	PASS
Band17	5MHz	QPSK	23755	1RB#12	23.59	**29.07**	PASS
Band17	5MHz	QPSK	23755	1RB#0	23.45	28.93	PASS
Band17	5MHz	QPSK	23755	12RB#0	22.39	27.87	PASS
Band17	5MHz	QPSK	23755	12RB#6	22.39	27.87	PASS
Band17	5MHz	QPSK	23755	12RB#13	22.39	27.87	PASS
Band17	5MHz	QPSK	23755	25RB#0	22.32	27.80	PASS
Band17	5MHz	QPSK	23790	1RB#24	23.34	28.82	PASS
Band17	5MHz	QPSK	23790	1RB#12	23.37	28.85	PASS
Band17	5MHz	QPSK	23790	1RB#0	23.37	28.85	PASS
Band17	5MHz	QPSK	23790	12RB#0	22.35	27.83	PASS
Band17	5MHz	QPSK	23790	12RB#13	22.18	27.66	PASS
Band17	5MHz	QPSK	23790	12RB#6	22.31	27.79	PASS
Band17	5MHz	QPSK	23790	25RB#0	22.29	27.77	PASS
Band17	5MHz	QPSK	23825	1RB#12	23.21	28.69	PASS
Band17	5MHz	QPSK	23825	1RB#0	23.37	28.85	PASS
Band17	5MHz	QPSK	23825	1RB#24	22.83	28.31	PASS
Band17	5MHz	QPSK	23825	12RB#13	22.15	27.63	PASS
Band17	5MHz	QPSK	23825	12RB#6	22.19	27.67	PASS
Band17	5MHz	QPSK	23825	12RB#0	22.16	27.64	PASS
Band17	5MHz	QPSK	23825	25RB#0	22.11	27.59	PASS
Band17	5MHz	16QAM	23755	1RB#24	22.47	27.95	PASS
Band17	5MHz	16QAM	23755	1RB#12	22.47	27.95	PASS
Band17	5MHz	16QAM	23755	1RB#0	22.29	27.77	PASS
Band17	5MHz	16QAM	23755	12RB#6	22.50	27.98	PASS
Band17	5MHz	16QAM	23755	12RB#0	21.60	27.08	PASS

Band17	5MHz	16QAM	23755	12RB#13	22.49	27.97	PASS
Band17	5MHz	16QAM	23755	25RB#0	22.44	27.92	PASS
Band17	5MHz	16QAM	23790	1RB#12	22.26	27.74	PASS
Band17	5MHz	16QAM	23790	1RB#0	22.30	27.78	PASS
Band17	5MHz	16QAM	23790	1RB#24	22.25	27.73	PASS
Band17	5MHz	16QAM	23790	12RB#13	22.25	26.73	PASS
Band17	5MHz	16QAM	23790	12RB#0	22.42	27.90	PASS
Band17	5MHz	16QAM	23790	12RB#6	22.43	27.91	PASS
Band17	5MHz	16QAM	23790	25RB#0	22.37	27.85	PASS
Band17	5MHz	16QAM	23825	1RB#12	22.03	27.51	PASS
Band17	5MHz	16QAM	23825	1RB#0	22.17	27.65	PASS
Band17	5MHz	16QAM	23825	1RB#24	22.64	28.12	PASS
Band17	5MHz	16QAM	23825	12RB#0	22.21	27.69	PASS
Band17	5MHz	16QAM	23825	12RB#6	22.35	27.83	PASS
Band17	5MHz	16QAM	23825	12RB#13	22.22	27.70	PASS
Band17	5MHz	16QAM	23825	25RB#0	22.14	27.62	PASS
Band17	10MHz	QPSK	23780	1RB#0	23.27	28.75	PASS
Band17	10MHz	QPSK	23780	1RB#24	23.32	28.80	PASS
Band17	10MHz	QPSK	23780	1RB#49	23.14	28.62	PASS
Band17	10MHz	QPSK	23780	25RB#25	22.38	27.86	PASS
Band17	10MHz	QPSK	23780	25RB#12	22.39	27.87	PASS
Band17	10MHz	QPSK	23780	25RB#0	22.39	27.87	PASS
Band17	10MHz	QPSK	23780	50RB#0	22.26	27.74	PASS
Band17	10MHz	QPSK	23790	1RB#0	23.33	28.81	PASS
Band17	10MHz	QPSK	23790	1RB#49	23.26	28.74	PASS
Band17	10MHz	QPSK	23790	1RB#24	23.32	28.80	PASS
Band17	10MHz	QPSK	23790	25RB#25	22.24	27.72	PASS
Band17	10MHz	QPSK	23790	25RB#0	22.42	27.90	PASS
Band17	10MHz	QPSK	23790	25RB#12	22.34	27.82	PASS
Band17	10MHz	QPSK	23790	50RB#0	22.22	27.70	PASS
Band17	10MHz	QPSK	23800	1RB#24	23.32	28.80	PASS
Band17	10MHz	QPSK	23800	1RB#0	23.37	**28.85**	PASS
Band17	10MHz	QPSK	23800	1RB#49	22.92	28.40	PASS
Band17	10MHz	QPSK	23800	25RB#0	22.33	27.81	PASS
Band17	10MHz	QPSK	23800	25RB#12	22.31	27.79	PASS
Band17	10MHz	QPSK	23800	25RB#25	22.16	27.64	PASS
Band17	10MHz	QPSK	23800	50RB#0	22.20	27.68	PASS

Band17	10MHz	16QAM	23780	1RB#24	22.23	27.71	PASS
Band17	10MHz	16QAM	23780	1RB#0	22.12	27.60	PASS
Band17	10MHz	16QAM	23780	1RB#49	22.10	27.58	PASS
Band17	10MHz	16QAM	23780	25RB#0	22.40	27.88	PASS
Band17	10MHz	16QAM	23780	25RB#25	22.29	27.77	PASS
Band17	10MHz	16QAM	23780	25RB#12	22.40	27.88	PASS
Band17	10MHz	16QAM	23780	50RB#0	22.27	27.75	PASS
Band17	10MHz	16QAM	23790	1RB#0	22.92	28.40	PASS
Band17	10MHz	16QAM	23790	1RB#24	22.88	28.36	PASS
Band17	10MHz	16QAM	23790	1RB#49	22.88	28.36	PASS
Band17	10MHz	16QAM	23790	25RB#12	22.37	27.85	PASS
Band17	10MHz	16QAM	23790	25RB#0	22.36	27.84	PASS
Band17	10MHz	16QAM	23790	25RB#25	22.21	27.69	PASS
Band17	10MHz	16QAM	23790	50RB#0	22.15	27.63	PASS
Band17	10MHz	16QAM	23800	1RB#0	22.57	28.05	PASS
Band17	10MHz	16QAM	23800	1RB#24	22.37	27.85	PASS
Band17	10MHz	16QAM	23800	1RB#49	22.04	27.52	PASS
Band17	10MHz	16QAM	23800	25RB#0	22.27	27.75	PASS
Band17	10MHz	16QAM	23800	25RB#12	22.28	27.76	PASS
Band17	10MHz	16QAM	23800	25RB#25	22.15	27.63	PASS
Band17	10MHz	16QAM	23800	50RB#0	22.27	27.75	PASS

Appendix B:Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band2	1.4MHz	QPSK	18607	1RB#0	3.88	13	PASS
Band2	1.4MHz	QPSK	18607	6RB#0	4.49	13	PASS
Band2	1.4MHz	QPSK	18900	1RB#0	4.99	13	PASS
Band2	1.4MHz	QPSK	18900	6RB#0	5.83	13	PASS
Band2	1.4MHz	QPSK	19193	1RB#0	4.55	13	PASS
Band2	1.4MHz	QPSK	19193	6RB#0	5.45	13	PASS
Band2	1.4MHz	16QAM	18607	1RB#0	4.64	13	PASS
Band2	1.4MHz	16QAM	18607	6RB#0	5.33	13	PASS
Band2	1.4MHz	16QAM	18900	1RB#0	5.83	13	PASS
Band2	1.4MHz	16QAM	18900	6RB#0	6.46	13	PASS
Band2	1.4MHz	16QAM	19193	1RB#0	5.48	13	PASS
Band2	1.4MHz	16QAM	19193	6RB#0	6.06	13	PASS
Band2	3MHz	QPSK	18615	1RB#0	3.86	13	PASS
Band2	3MHz	QPSK	18615	15RB#0	4.43	13	PASS
Band2	3MHz	QPSK	18900	1RB#0	5.04	13	PASS
Band2	3MHz	QPSK	18900	15RB#0	5.45	13	PASS
Band2	3MHz	QPSK	19185	1RB#0	4.61	13	PASS
Band2	3MHz	QPSK	19185	15RB#0	5.28	13	PASS
Band2	3MHz	16QAM	18615	1RB#0	4.46	13	PASS
Band2	3MHz	16QAM	18615	15RB#0	5.39	13	PASS
Band2	3MHz	16QAM	18900	1RB#0	5.86	13	PASS
Band2	3MHz	16QAM	18900	15RB#0	6.35	13	PASS
Band2	3MHz	16QAM	19185	1RB#0	5.39	13	PASS
Band2	3MHz	16QAM	19185	15RB#0	6.20	13	PASS
Band2	5MHz	QPSK	18625	1RB#0	3.83	13	PASS
Band2	5MHz	QPSK	18625	25RB#0	3.94	13	PASS
Band2	5MHz	QPSK	18900	1RB#0	5.10	13	PASS
Band2	5MHz	QPSK	18900	25RB#0	4.78	13	PASS
Band2	5MHz	QPSK	19175	1RB#0	4.84	13	PASS
Band2	5MHz	QPSK	19175	25RB#0	4.75	13	PASS
Band2	5MHz	16QAM	18625	1RB#0	4.61	13	PASS
Band2	5MHz	16QAM	18625	25RB#0	5.42	13	PASS

Band2	5MHz	16QAM	18900	1RB#0	5.91	13	PASS
Band2	5MHz	16QAM	18900	25RB#0	6.09	13	PASS
Band2	5MHz	16QAM	19175	1RB#0	5.48	13	PASS
Band2	5MHz	16QAM	19175	25RB#0	6.03	13	PASS
Band2	10MHz	QPSK	18650	1RB#0	4.14	13	PASS
Band2	10MHz	QPSK	18650	50RB#0	4.84	13	PASS
Band2	10MHz	QPSK	18900	1RB#0	5.51	13	PASS
Band2	10MHz	QPSK	18900	50RB#0	4.72	13	PASS
Band2	10MHz	QPSK	19150	1RB#0	5.30	13	PASS
Band2	10MHz	QPSK	19150	50RB#0	4.75	13	PASS
Band2	10MHz	16QAM	18650	1RB#0	4.75	13	PASS
Band2	10MHz	16QAM	18650	50RB#0	6.49	13	PASS
Band2	10MHz	16QAM	18900	1RB#0	6.26	13	PASS
Band2	10MHz	16QAM	18900	50RB#0	6.46	13	PASS
Band2	10MHz	16QAM	19150	1RB#0	6.06	13	PASS
Band2	10MHz	16QAM	19150	50RB#0	6.61	13	PASS
Band2	15MHz	QPSK	18675	1RB#0	3.13	13	PASS
Band2	15MHz	QPSK	18675	75RB#0	6.23	13	PASS
Band2	15MHz	QPSK	18900	1RB#0	4.67	13	PASS
Band2	15MHz	QPSK	18900	75RB#0	6.14	13	PASS
Band2	15MHz	QPSK	19125	1RB#0	3.51	13	PASS
Band2	15MHz	QPSK	19125	75RB#0	6.17	13	PASS
Band2	15MHz	16QAM	18675	1RB#0	3.19	13	PASS
Band2	15MHz	16QAM	18675	75RB#0	7.04	13	PASS
Band2	15MHz	16QAM	18900	1RB#0	4.67	13	PASS
Band2	15MHz	16QAM	18900	75RB#0	7.19	13	PASS
Band2	15MHz	16QAM	19125	1RB#0	3.45	13	PASS
Band2	15MHz	16QAM	19125	75RB#0	7.13	13	PASS
Band2	20MHz	QPSK	18700	1RB#0	2.90	13	PASS
Band2	20MHz	QPSK	18700	100RB#0	6.93	13	PASS
Band2	20MHz	QPSK	18900	1RB#0	4.12	13	PASS
Band2	20MHz	QPSK	18900	100RB#0	6.90	13	PASS
Band2	20MHz	QPSK	19100	1RB#0	2.75	13	PASS
Band2	20MHz	QPSK	19100	100RB#0	6.81	13	PASS
Band2	20MHz	16QAM	18700	1RB#0	2.84	13	PASS
Band2	20MHz	16QAM	18700	100RB#0	7.45	13	PASS
Band2	20MHz	16QAM	18900	1RB#0	2.96	13	PASS

Band2	20MHz	16QAM	18900	100RB#0	7.42	13	PASS
Band2	20MHz	16QAM	19100	1RB#0	2.78	13	PASS
Band2	20MHz	16QAM	19100	100RB#0	7.45	13	PASS
Band4	1.4MHz	QPSK	19957	1RB#0	5.10	13	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	5.68	13	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	5.62	13	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	6.03	13	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	5.10	13	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	5.86	13	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	6.03	13	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	6.64	13	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	6.29	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	6.75	13	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	5.86	13	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	6.64	13	PASS
Band4	3MHz	QPSK	19965	1RB#0	5.13	13	PASS
Band4	3MHz	QPSK	19965	15RB#0	5.42	13	PASS
Band4	3MHz	QPSK	20175	1RB#0	5.65	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	5.65	13	PASS
Band4	3MHz	QPSK	20385	1RB#0	5.48	13	PASS
Band4	3MHz	QPSK	20385	15RB#0	5.51	13	PASS
Band4	3MHz	16QAM	19965	1RB#0	6.06	13	PASS
Band4	3MHz	16QAM	19965	15RB#0	6.41	13	PASS
Band4	3MHz	16QAM	20175	1RB#0	6.14	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	6.55	13	PASS
Band4	3MHz	16QAM	20385	1RB#0	6.29	13	PASS
Band4	3MHz	16QAM	20385	15RB#0	6.49	13	PASS
Band4	5MHz	QPSK	19975	1RB#0	5.33	13	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.81	13	PASS
Band4	5MHz	QPSK	20175	1RB#0	5.45	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.96	13	PASS
Band4	5MHz	QPSK	20375	1RB#0	5.54	13	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.87	13	PASS
Band4	5MHz	16QAM	19975	1RB#0	5.74	13	PASS
Band4	5MHz	16QAM	19975	25RB#0	6.12	13	PASS
Band4	5MHz	16QAM	20175	1RB#0	6.03	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	6.23	13	PASS

Band4	5MHz	16QAM	20375	1RB#0	6.06	13	PASS
Band4	5MHz	16QAM	20375	25RB#0	6.20	13	PASS
Band4	10MHz	QPSK	20000	1RB#0	5.45	13	PASS
Band4	10MHz	QPSK	20000	50RB#0	4.78	13	PASS
Band4	10MHz	QPSK	20175	1RB#0	5.65	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	4.75	13	PASS
Band4	10MHz	QPSK	20350	1RB#0	5.54	13	PASS
Band4	10MHz	QPSK	20350	50RB#0	4.78	13	PASS
Band4	10MHz	16QAM	20000	1RB#0	6.20	13	PASS
Band4	10MHz	16QAM	20000	50RB#0	6.46	13	PASS
Band4	10MHz	16QAM	20175	1RB#0	6.32	13	PASS
Band4	10MHz	16QAM	20175	50RB#0	6.64	13	PASS
Band4	10MHz	16QAM	20350	1RB#0	6.38	13	PASS
Band4	10MHz	16QAM	20350	50RB#0	6.49	13	PASS
Band4	15MHz	QPSK	20025	1RB#0	2.55	13	PASS
Band4	15MHz	QPSK	20025	75RB#0	6.20	13	PASS
Band4	15MHz	QPSK	20175	1RB#0	3.33	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	6.14	13	PASS
Band4	15MHz	QPSK	20325	1RB#0	2.61	13	PASS
Band4	15MHz	QPSK	20325	75RB#0	6.17	13	PASS
Band4	15MHz	16QAM	20025	1RB#0	2.55	13	PASS
Band4	15MHz	16QAM	20025	75RB#0	7.10	13	PASS
Band4	15MHz	16QAM	20175	1RB#0	3.36	13	PASS
Band4	15MHz	16QAM	20175	75RB#0	7.19	13	PASS
Band4	15MHz	16QAM	20325	1RB#0	2.61	13	PASS
Band4	15MHz	16QAM	20325	75RB#0	7.19	13	PASS
Band4	20MHz	QPSK	20050	1RB#0	2.17	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	6.90	13	PASS
Band4	20MHz	QPSK	20175	1RB#0	2.81	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	6.78	13	PASS
Band4	20MHz	QPSK	20300	1RB#0	2.20	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	6.87	13	PASS
Band4	20MHz	16QAM	20050	1RB#0	2.12	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	7.42	13	PASS
Band4	20MHz	16QAM	20175	1RB#0	2.84	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	7.45	13	PASS
Band4	20MHz	16QAM	20300	1RB#0	2.26	13	PASS

Band4	20MHz	16QAM	20300	100RB#0	7.45	13	PASS
Band5	1.4MHz	QPSK	20407	1RB#0	5.10	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	5.77	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	5.39	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.71	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	5.04	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.59	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	5.68	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	6.46	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	6.23	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.61	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	6.00	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	6.23	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	5.28	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.54	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	5.36	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.39	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	5.28	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.36	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	6.12	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	6.35	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	5.97	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.35	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	6.32	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.26	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	5.71	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.84	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	5.62	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.70	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	5.30	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.72	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	5.97	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	6.12	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	6.17	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.03	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	5.88	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	6.03	13	PASS

Band5	10MHz	QPSK	20450	1RB#0	5.74	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	4.67	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	5.94	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	4.72	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	5.48	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.64	13	PASS
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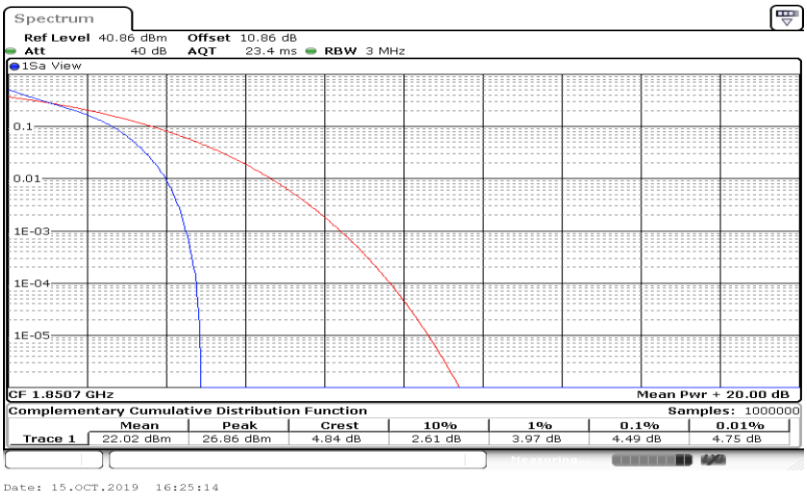
Band5	10MHz	16QAM	20450	50RB#0	6.52	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	6.46	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.41	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	6.06	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.35	13	PASS
Band17	5MHz	QPSK	23755	1RB#0	5.01	13	PASS
Band17	5MHz	QPSK	23755	25RB#0	4.70	13	PASS
Band17	5MHz	QPSK	23790	1RB#0	5.45	13	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.64	13	PASS
Band17	5MHz	QPSK	23825	1RB#0	5.33	13	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.72	13	PASS
Band17	5MHz	16QAM	23755	1RB#0	5.57	13	PASS
Band17	5MHz	16QAM	23755	25RB#0	5.97	13	PASS
Band17	5MHz	16QAM	23790	1RB#0	5.77	13	PASS
Band17	5MHz	16QAM	23790	25RB#0	5.94	13	PASS
Band17	5MHz	16QAM	23825	1RB#0	5.94	13	PASS
Band17	5MHz	16QAM	23825	25RB#0	6.00	13	PASS
Band17	10MHz	QPSK	23780	1RB#0	5.30	13	PASS
Band17	10MHz	QPSK	23780	50RB#0	4.78	13	PASS
Band17	10MHz	QPSK	23790	1RB#0	5.42	13	PASS
Band17	10MHz	QPSK	23790	50RB#0	4.81	13	PASS
Band17	10MHz	QPSK	23800	1RB#0	5.51	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	4.81	13	PASS
Band17	10MHz	16QAM	23780	1RB#0	5.94	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	6.52	13	PASS
Band17	10MHz	16QAM	23790	1RB#0	6.03	13	PASS
Band17	10MHz	16QAM	23790	50RB#0	6.43	13	PASS
Band17	10MHz	16QAM	23800	1RB#0	6.17	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	6.41	13	PASS

Test Graphs

Band2-1.4MHz-QPSK-18607-1RB#0

Band2-1.4MHz-QPSK-18607-6RB#0



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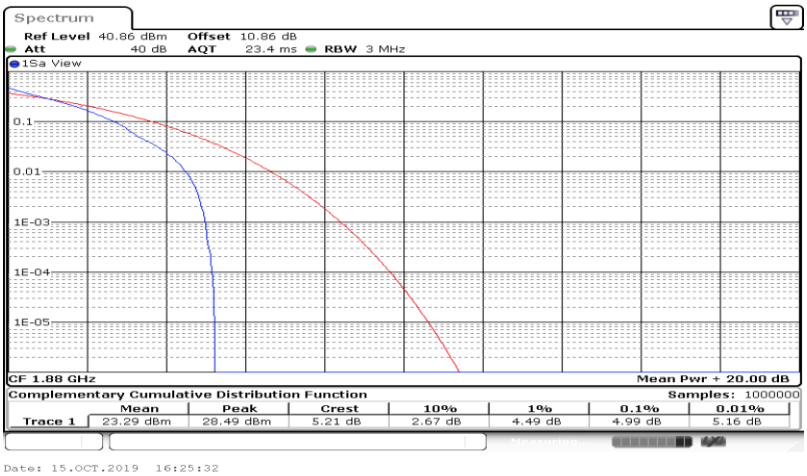

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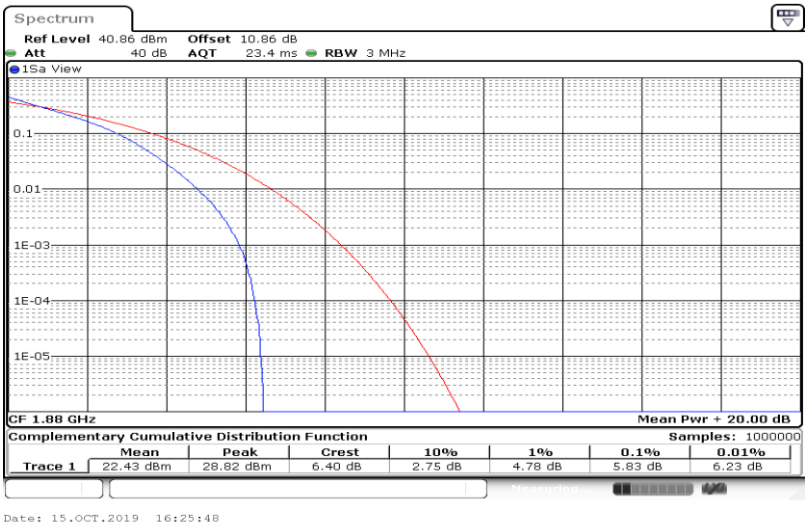

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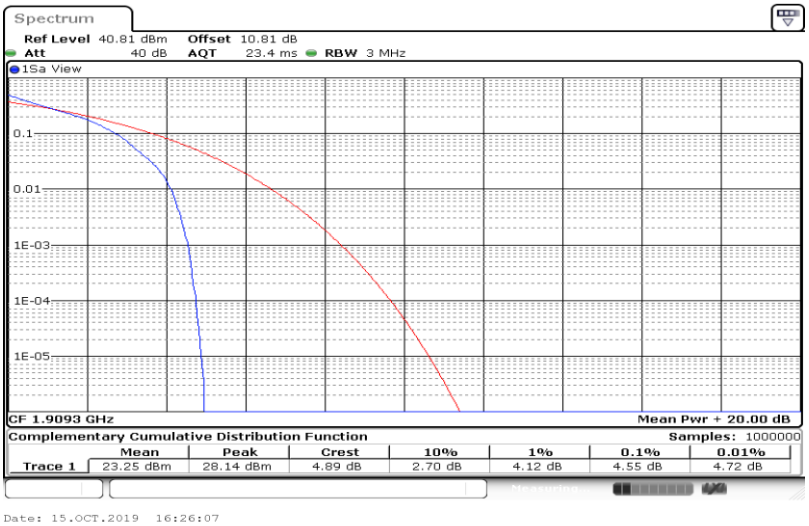

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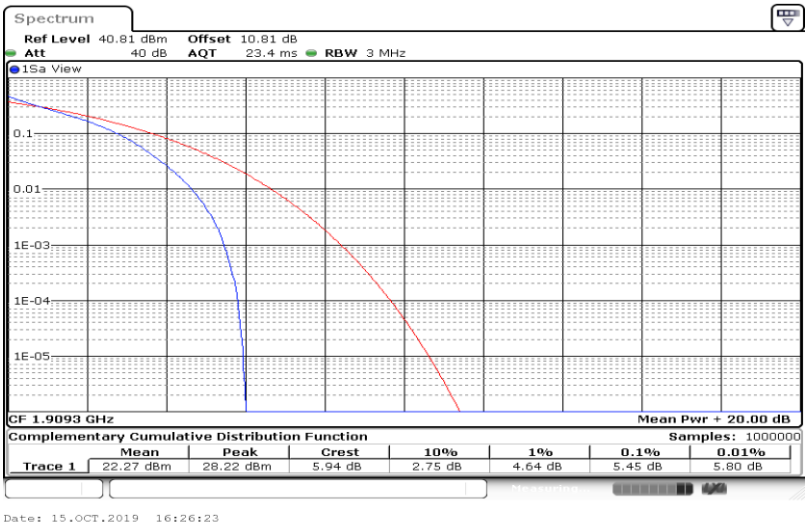

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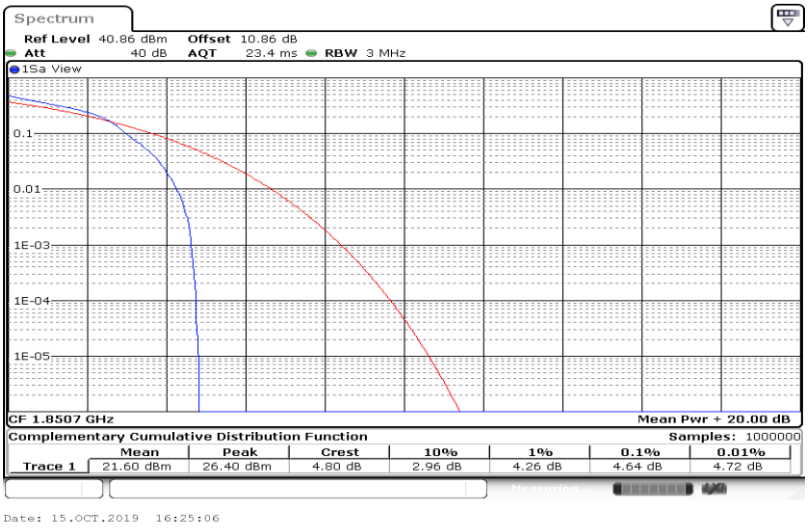

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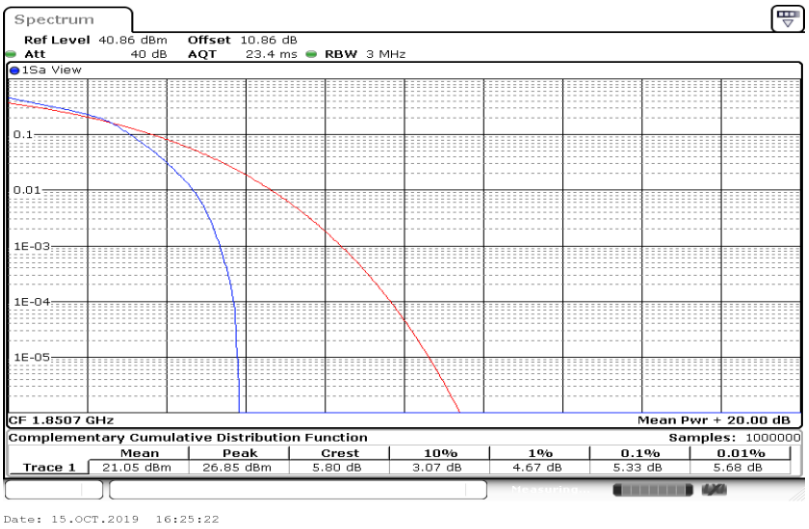

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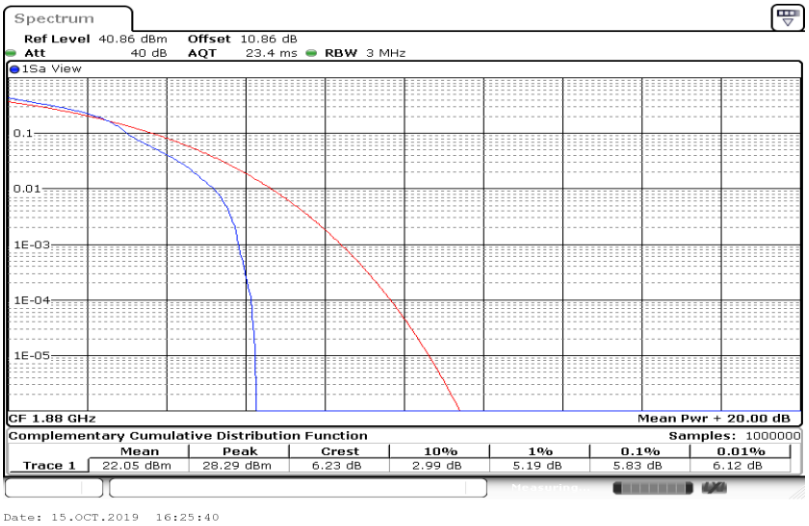

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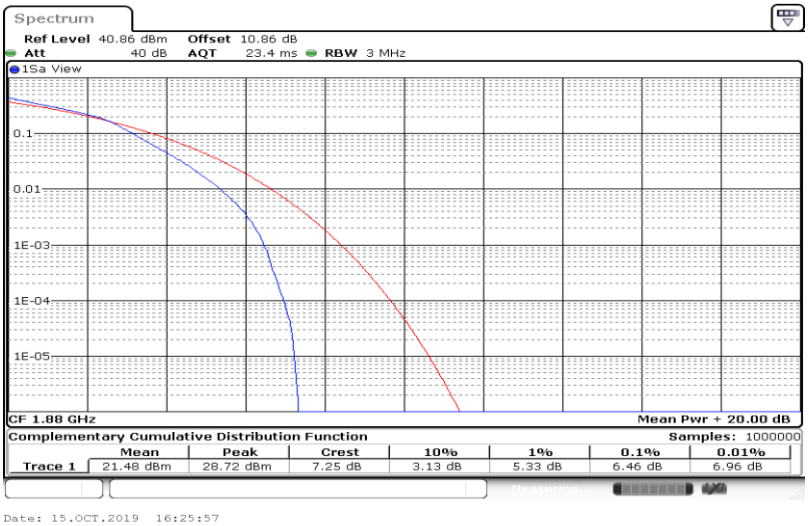

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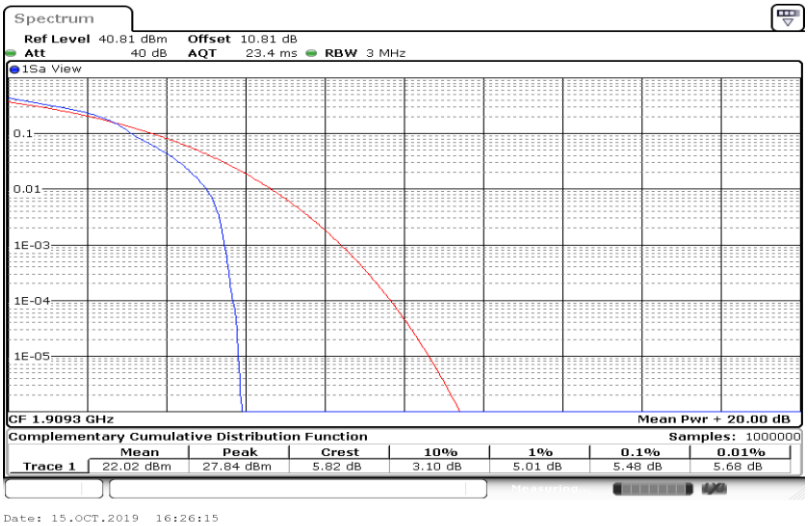

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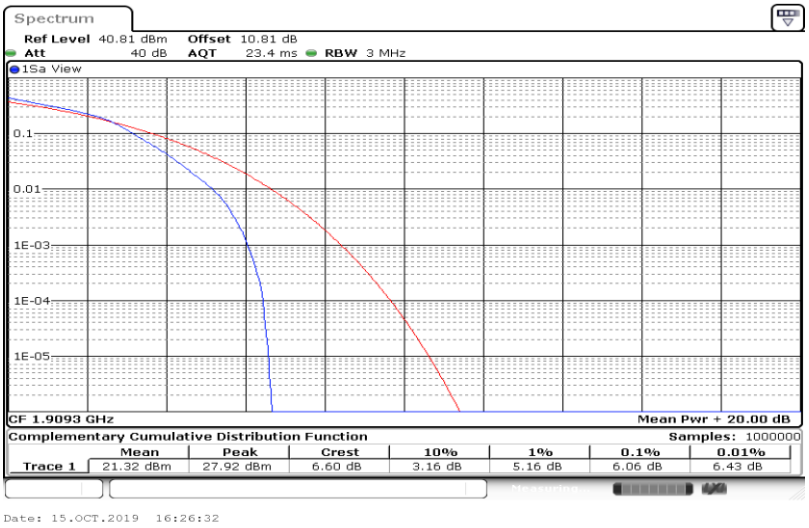
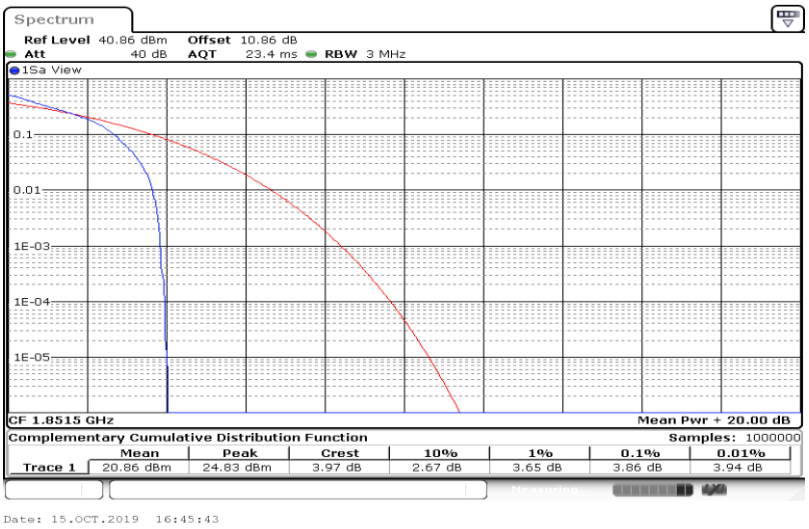


Band2-3MHz-QPSK-18615-1RB#0



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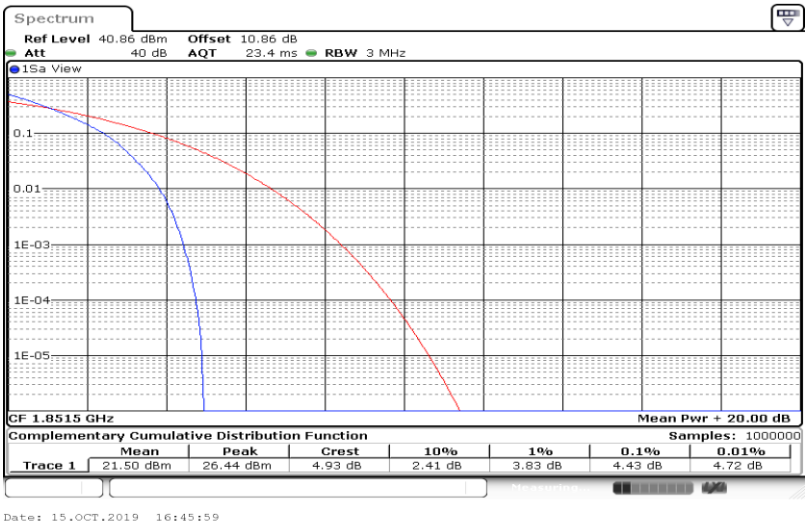

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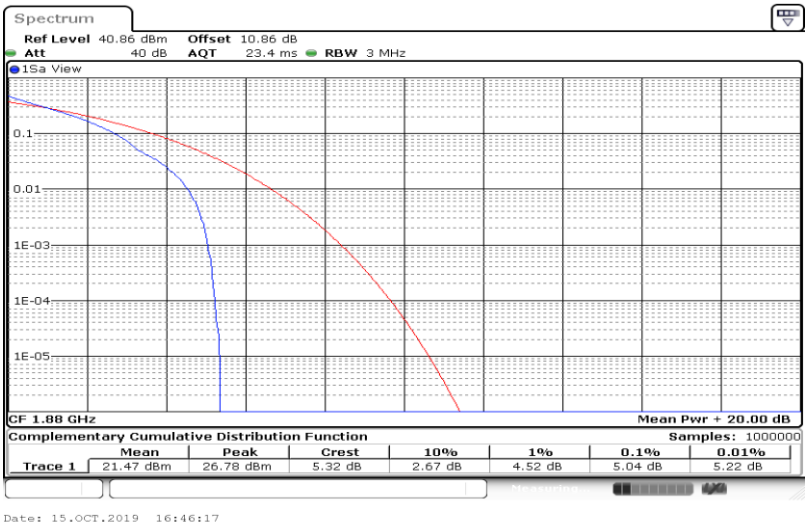

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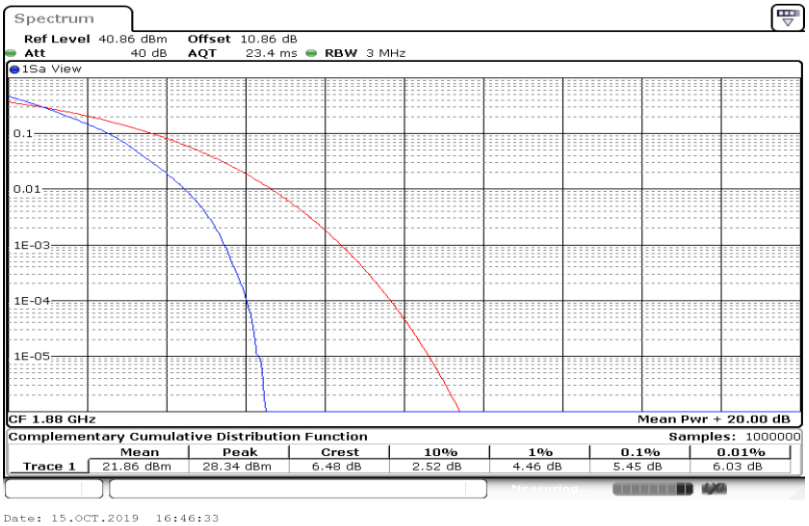

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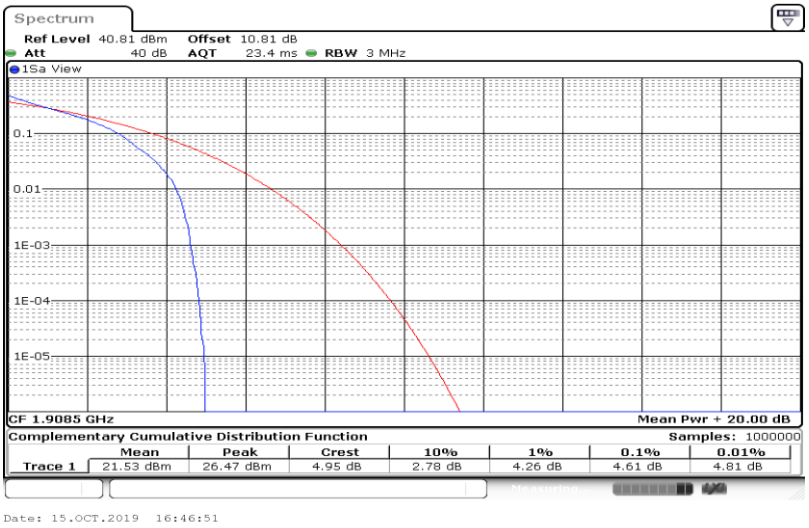

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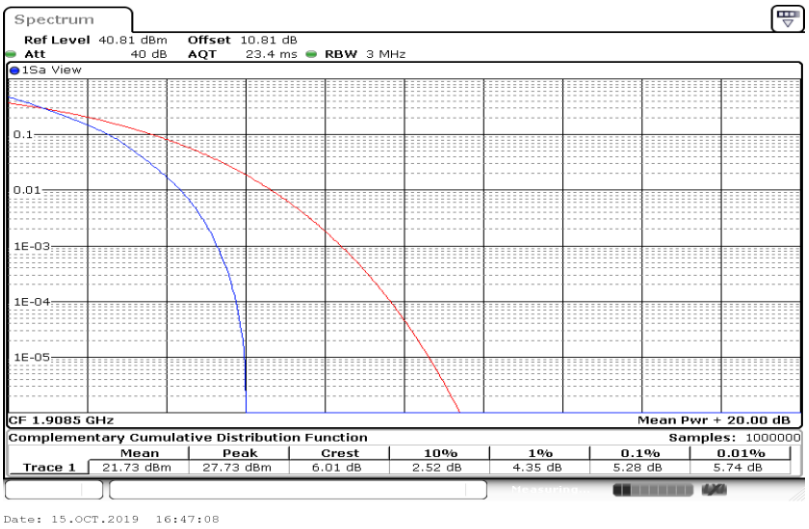

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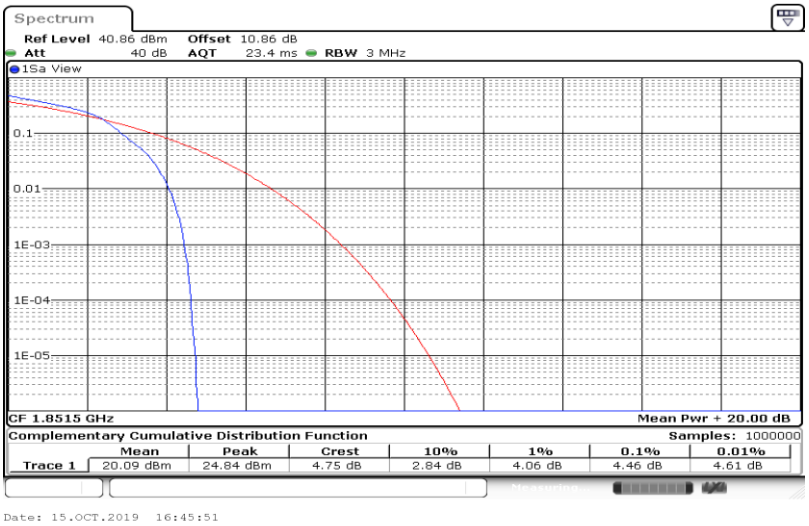

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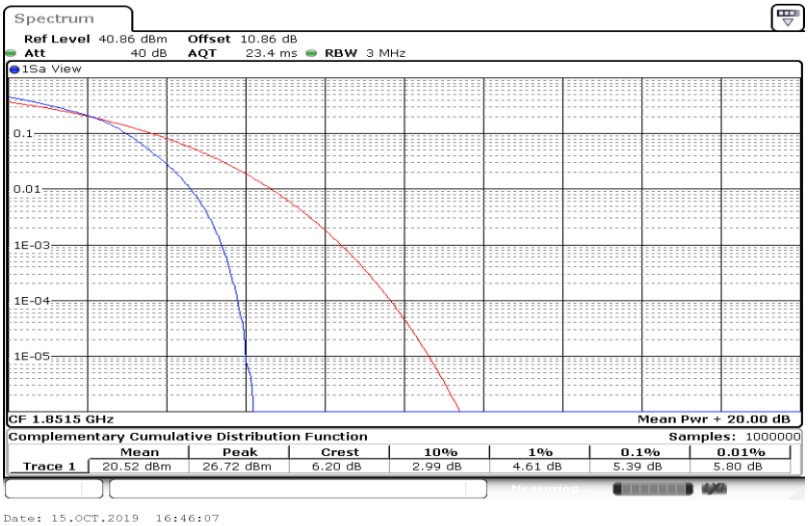

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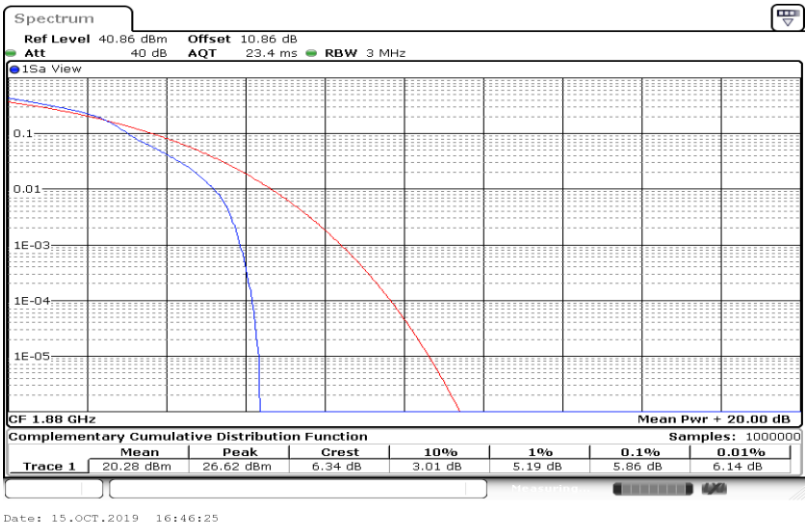

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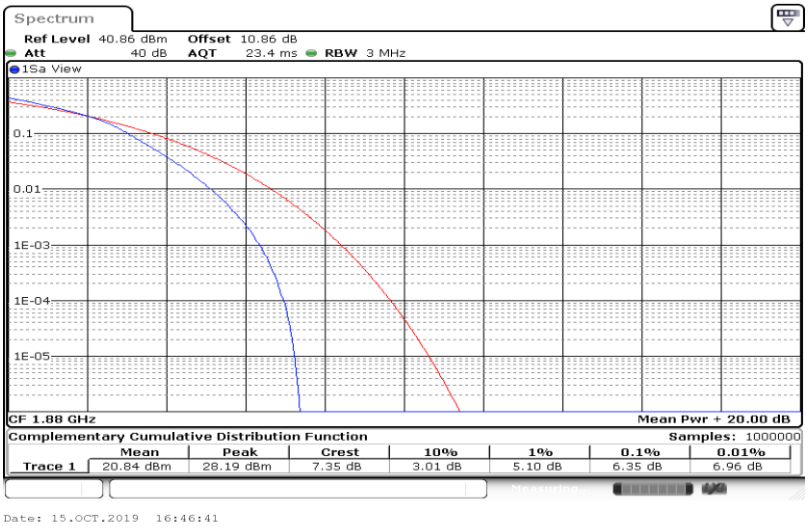

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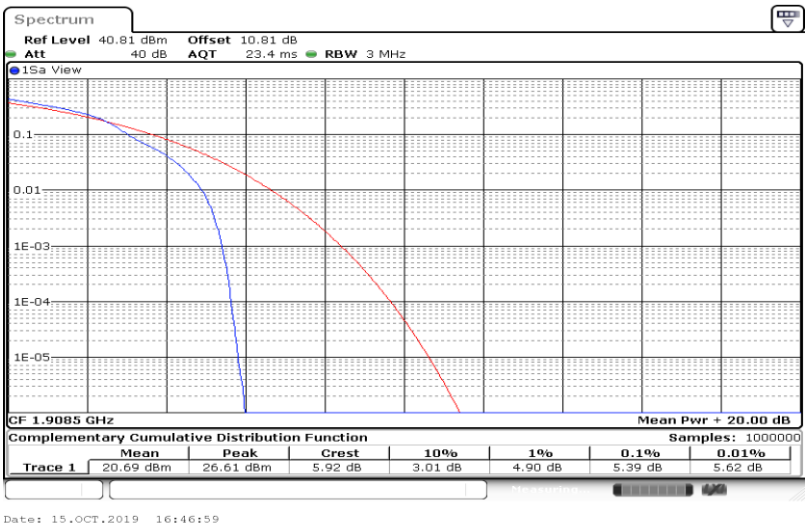

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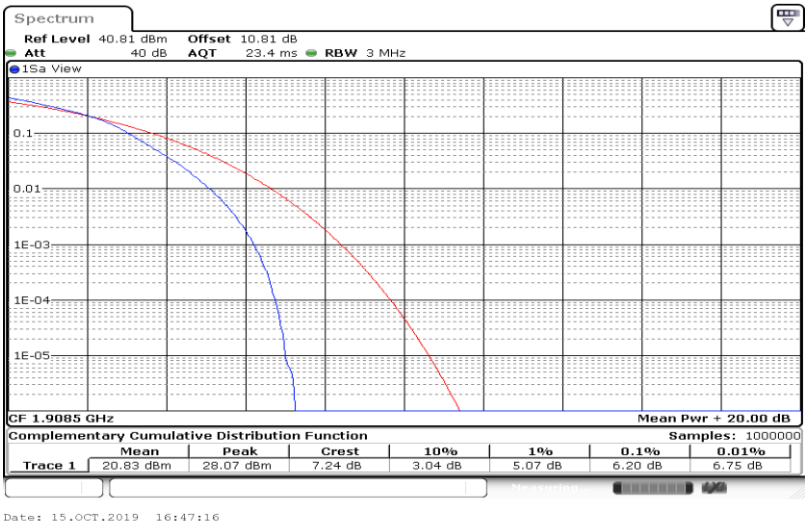

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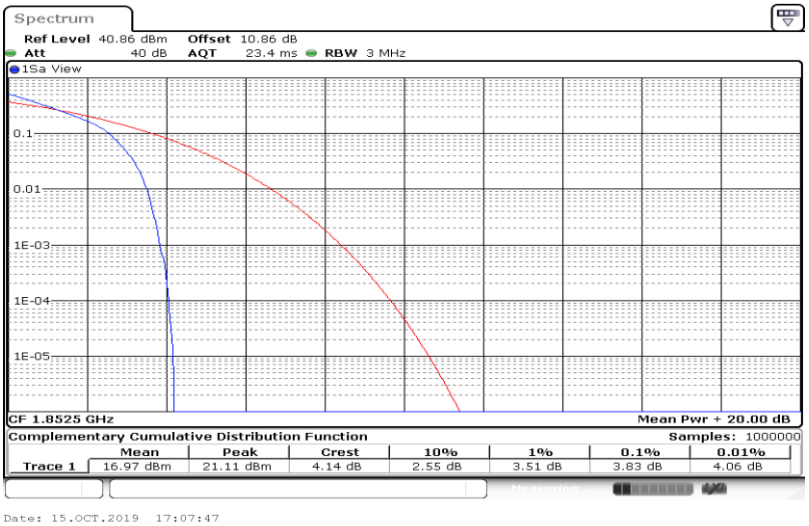

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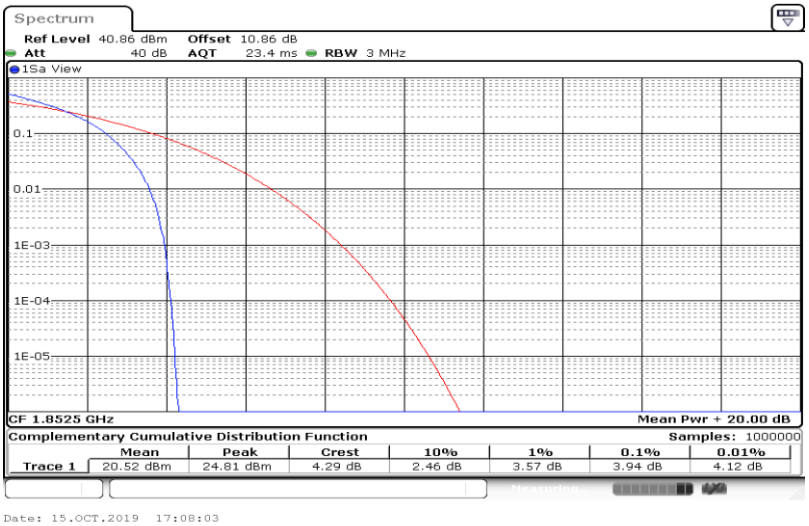

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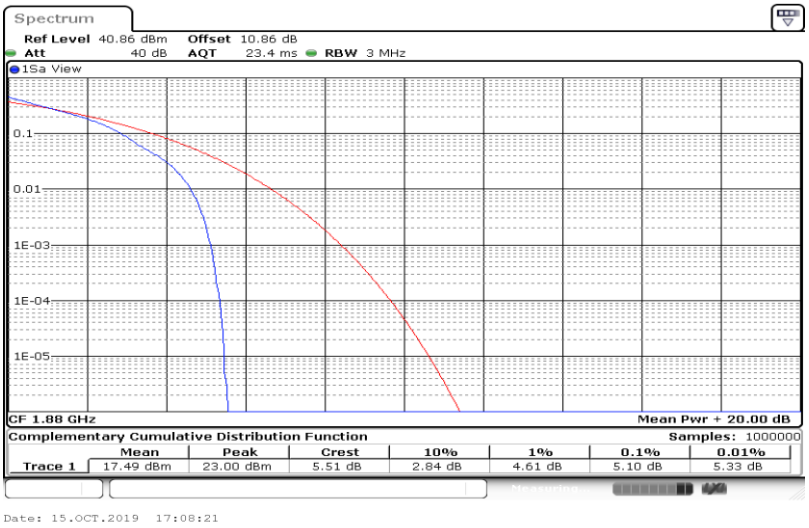

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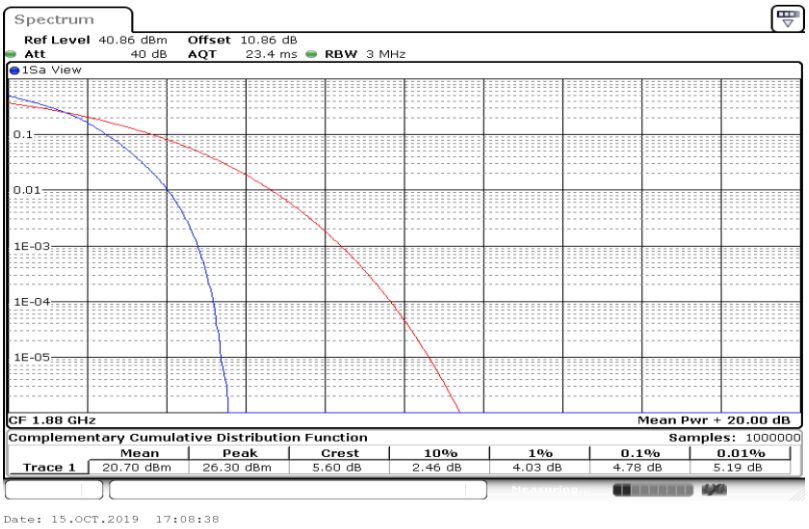

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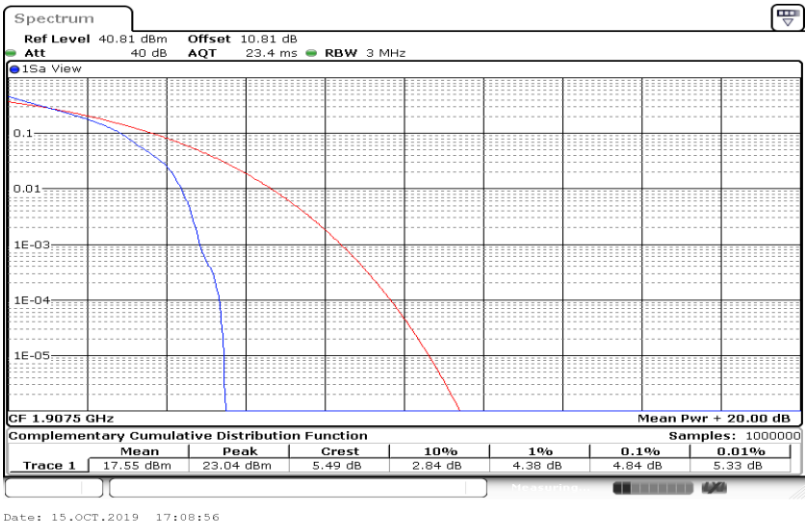

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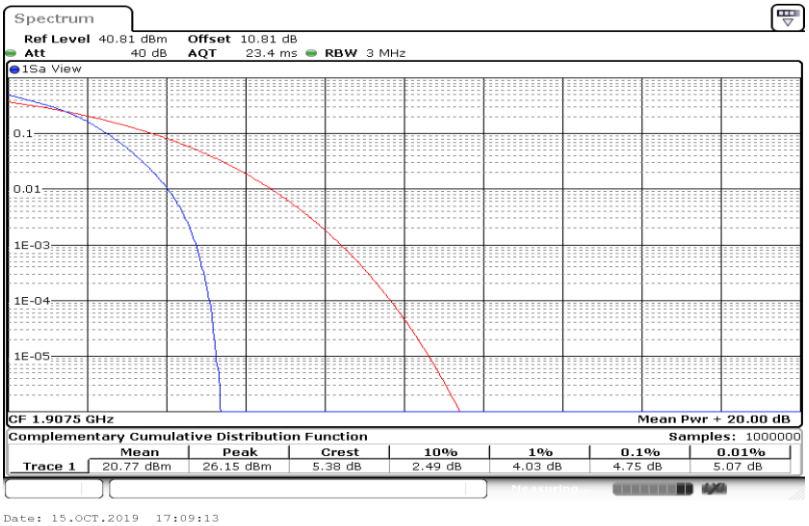

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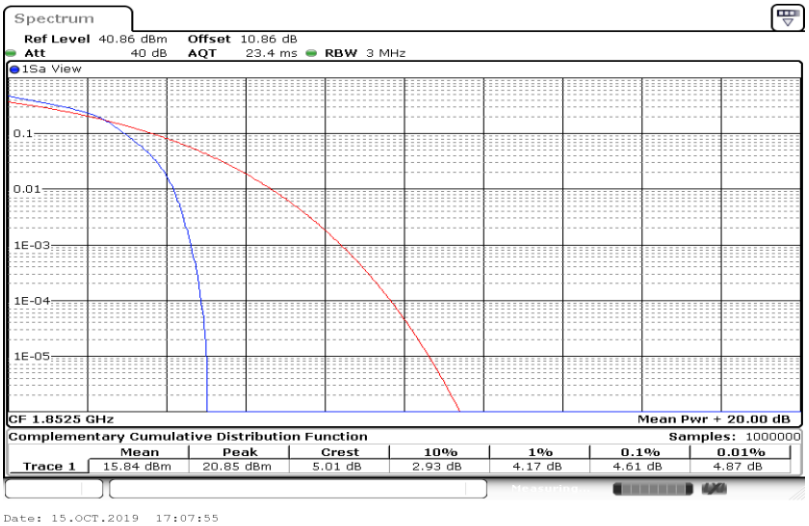

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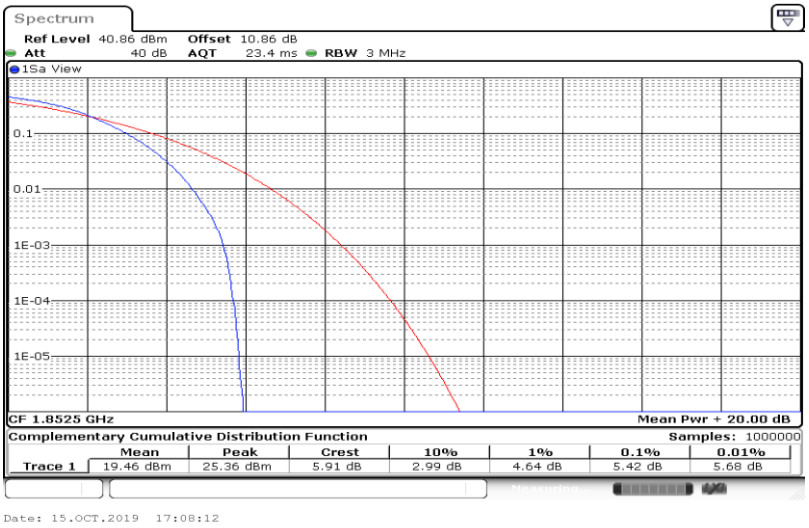

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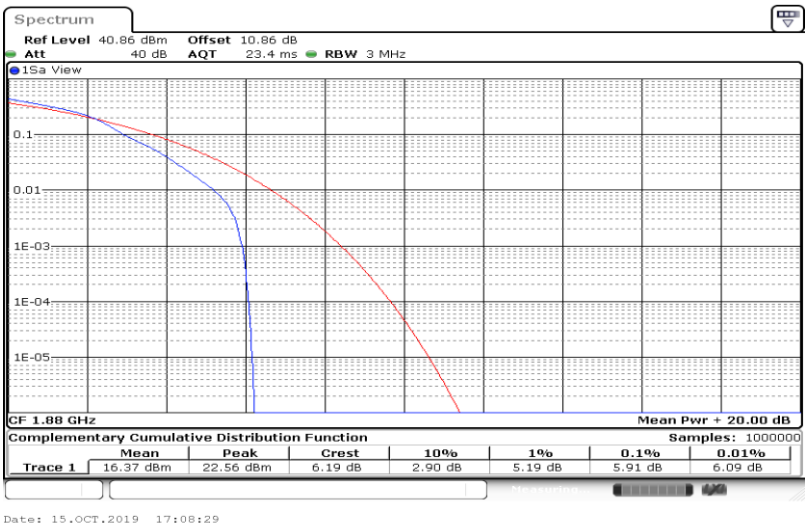

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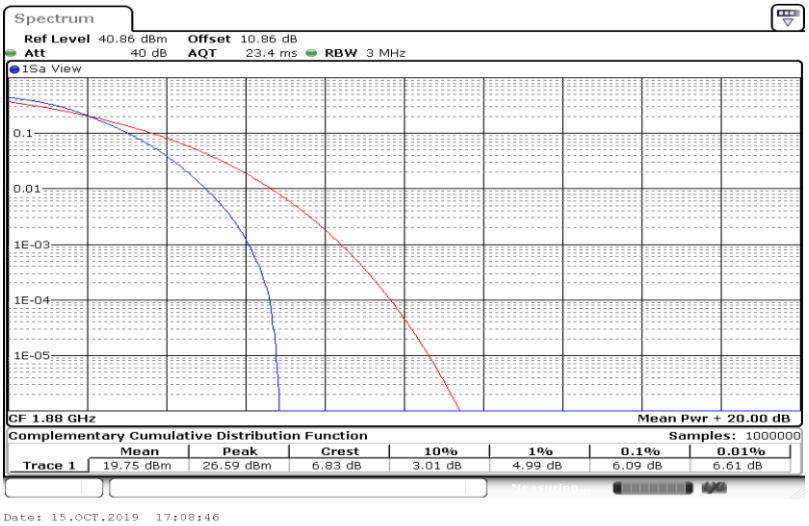

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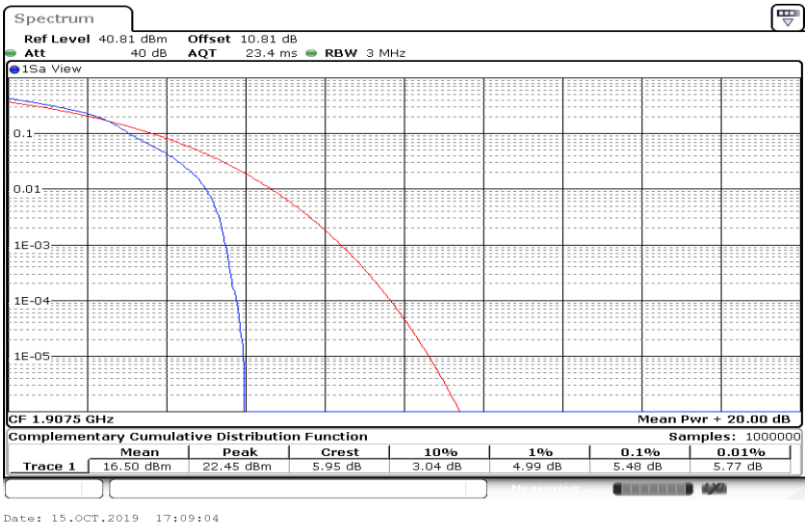

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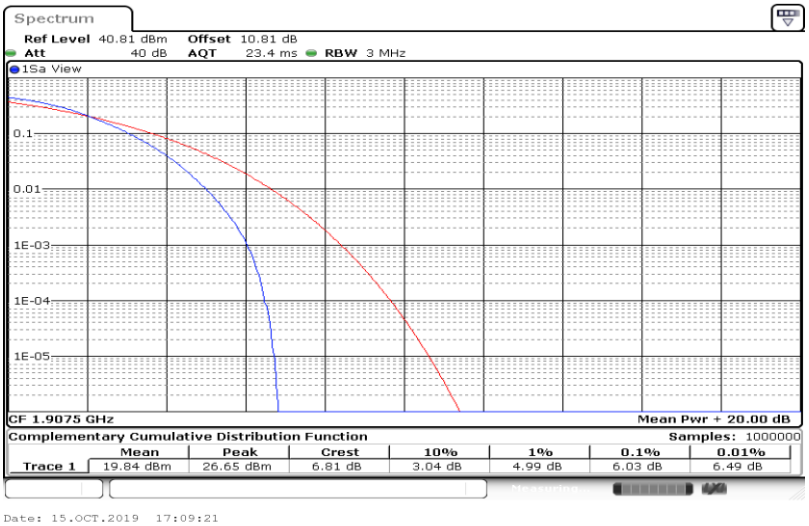

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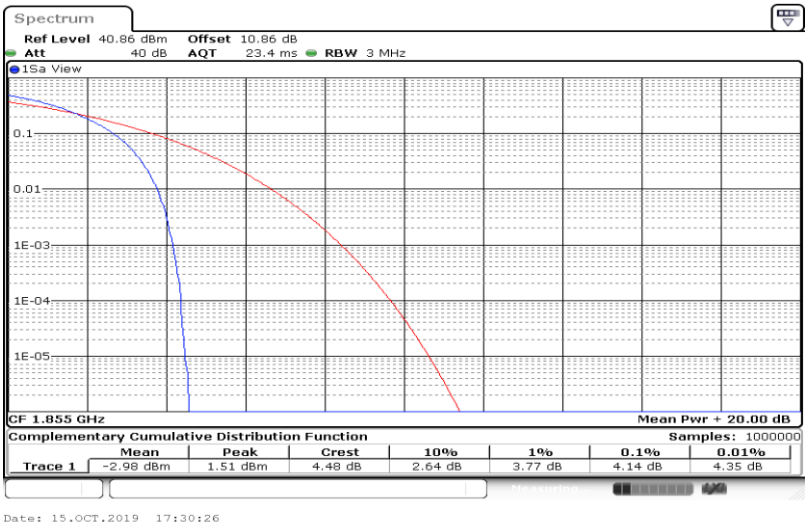

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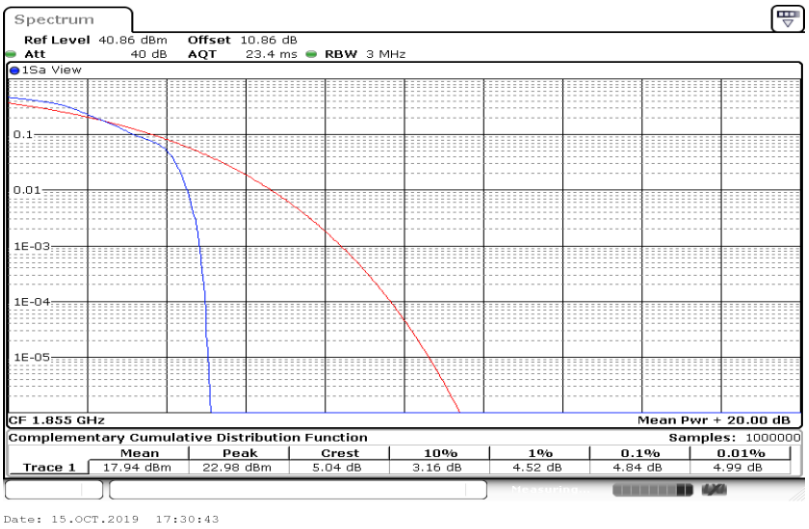

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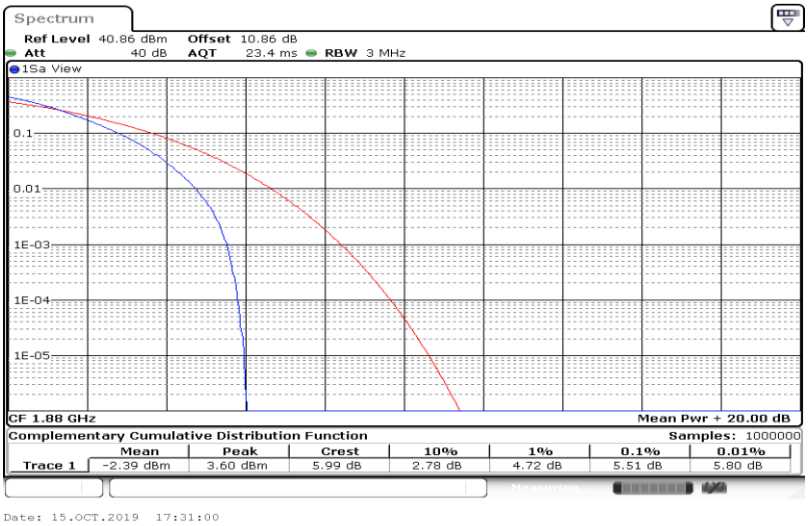

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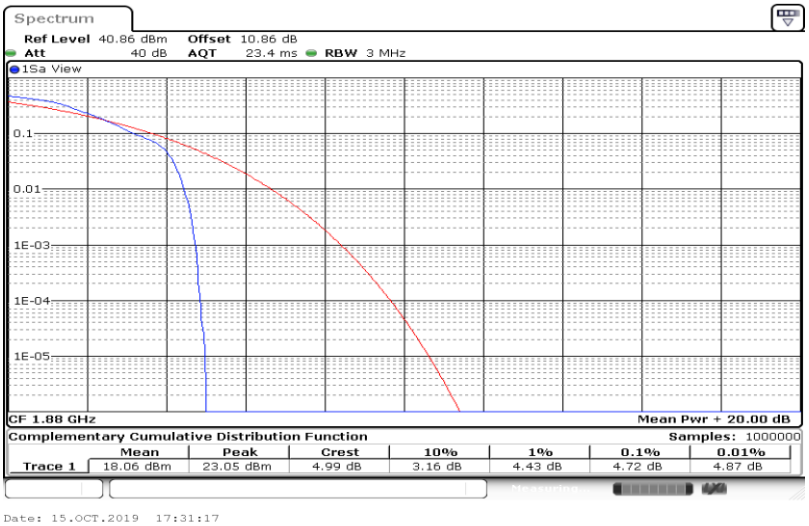

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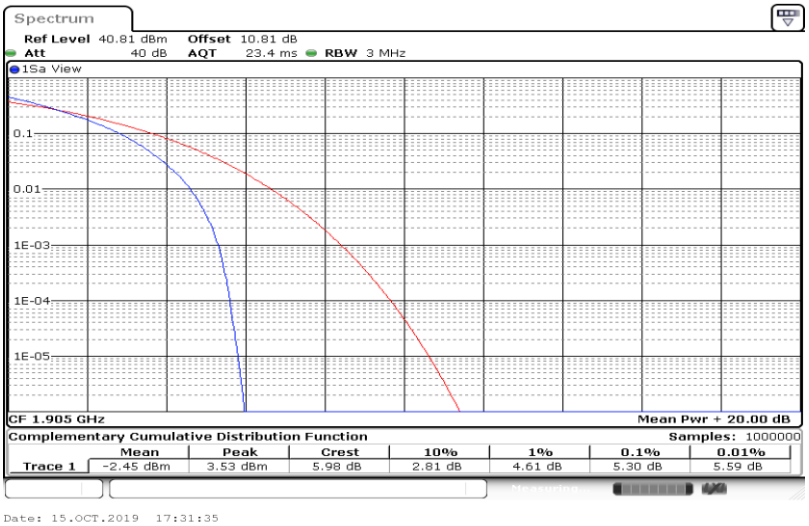

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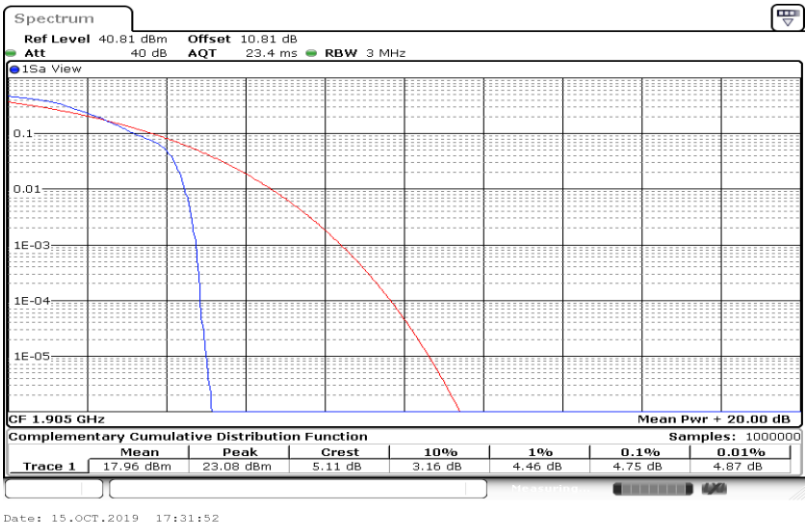
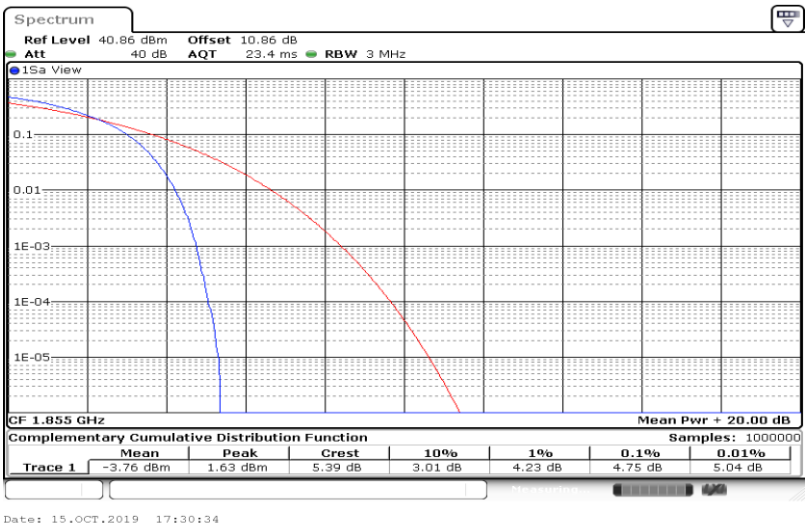
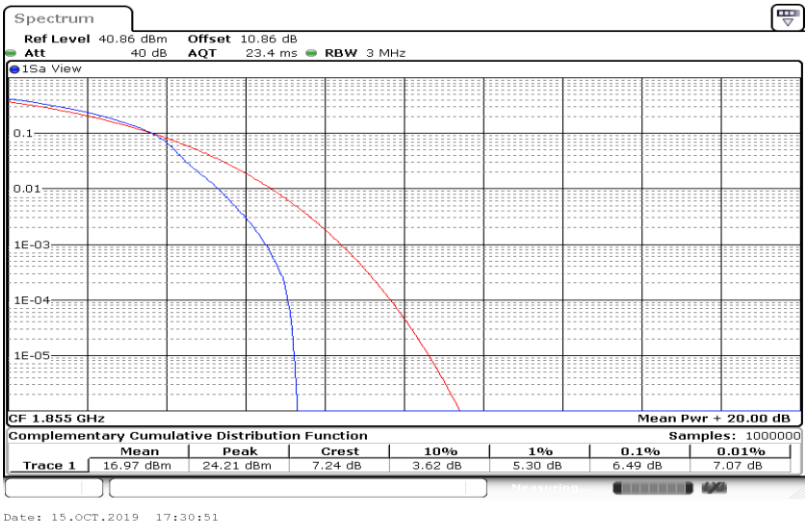


Band2-10MHz-16QAM-18650-1RB#0



Band2-10MHz-16QAM-18650-50RB#0



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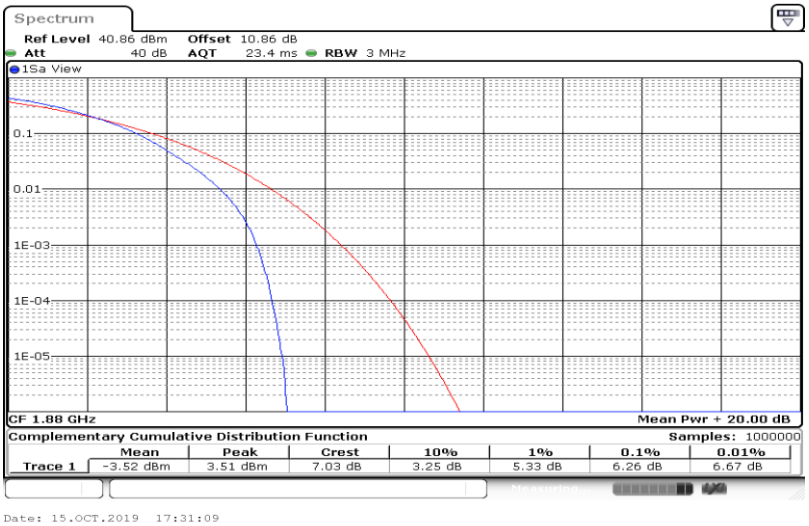

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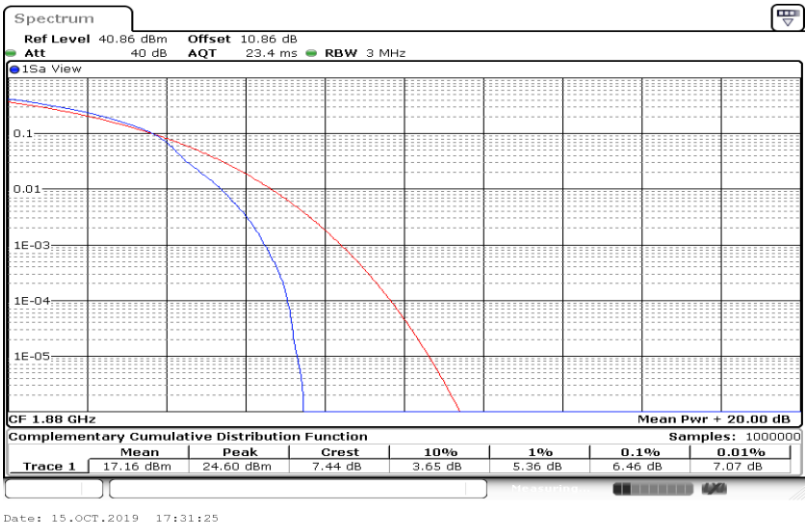

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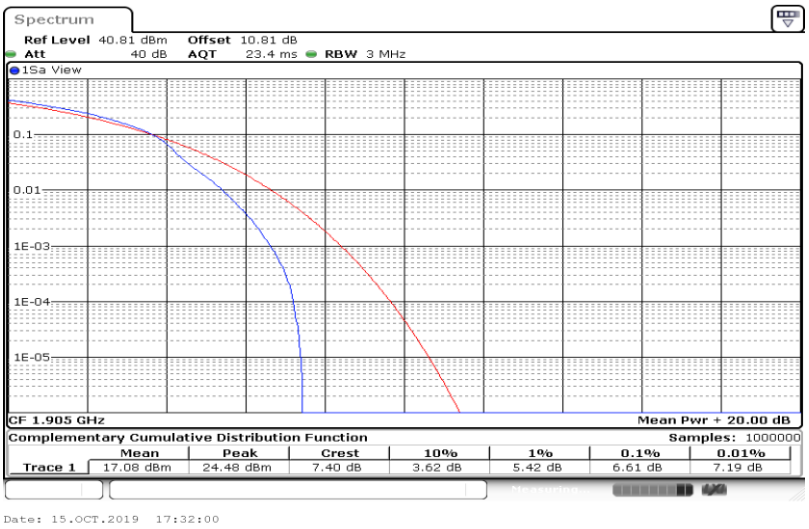
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