

FCC Radio Test Report

FCC ID: 2A25M-PRE31G

This report concerns: Original Grant

Project No. : 2108C220
Equipment : Pre-install 3.1G
Brand Name : Clobotics
Test Model : Sloth pre3.1G
Series Model : N/A
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Date of Receipt : Sep. 09, 2021
Date of Test : Sep. 10, 2021 ~ Oct. 21, 2021
Issued Date : Oct. 26, 2021
Report Version : R01
Test Sample : Engineering Sample No.: DG2021090933 for conducted, DG2021090934 for radiated.
Standard(s) : 47 CFR FCC Part 24 Subpart E
47 CFR FCC Part 2
ANSI/TIA/EIA-603-E-2016
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and is not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Oct. 18, 2021
R01	Modified the comments of TCB.	Oct. 26, 2021

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 24 Subpart E & Part 2			
Standard(s) Section	Test Item	Judgment	Remark
2.1046 24.232(c)	Equivalent Isotropic Radiated Power	PASS	-----
2.1049	Occupied Bandwidth	PASS	-----
2.1051 24.238(a)	Conducted Spurious Emissions	PASS	-----
2.1053 24.238(a)	Radiated Spurious Emissions	PASS	-----
24.238(a)	Band Edge Measurements	PASS	-----
24.232(d)	Peak To Average Ratio	PASS	-----
2.1055 24.235	Frequency Stability	PASS	-----

Note:

(1) "N/A" denotes test is not applicable in this test report.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town, Dongguan City, Guangdong, People's Republic of China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The BTL measurement uncertainty as below table:

A. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03 (3m)	CISPR	9KHz ~ 30MHz	-	2.36
		30MHz ~ 200MHz	V	4.36
		30MHz ~ 200MHz	H	3.32
		200MHz ~ 1,000MHz	V	4.08
		200MHz ~ 1,000MHz	H	3.96
		1GHz ~ 6GHz	-	3.80
		6GHz ~ 18GHz	-	4.82

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m)	CISPR	18 GHz ~ 26.5 GHz	3.62

B. Other Measurement:

Parameter	Uncertainty
Spectrum Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Power Spectral Density	±0.86 dB
Frequency Stability	±0.16 dB
Temperature	±0.08 °C
Time	±0.58 %
Supply voltages	±0.3 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
Output Power & EIRP	22.2°C	53%	DC 12V	Tate Liu
Occupied Bandwidth	22.2°C	53%	DC 12V	Tate Liu
Conducted Spurious Emissions	22.2°C	53%	DC 12V	Tate Liu
Radiated Spurious Emissions	26°C	52%	DC 12V	Kwok Guo
Band Edge	22.2°C	53%	DC 12V	Tate Liu
Peak To Average Ratio	22.2°C	53%	DC 12V	Tate Liu
Frequency Stability	Normal & Extreme	53%	Normal & Extreme	Tate Liu

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Pre-install 3.1G			
Brand Name	Clobotics			
Test Model	Sloth pre3.1G			
Series Model	N/A			
Model Difference(s)	N/A			
Hardware Version	DH603_MB_V1.0			
Software Version	2.0.7			
Power Source	DC Voltage supplied from External Power Supply.			
Power Rating	DC 12V			
IEMI No.	Radiated	675646644564647		
	Conducted	664547655656558		
Modulation Type	LTE		QPSK,16QAM	
Max. EIRP	LTE	Channel Bandwidth (MHz)	QPSK (dBm)	16QAM (dBm)
	Band 25	1.4	25.19	24.24
		3	25.27	24.51
		5	25.24	25.16
		10	25.78	24.97
		15	25.56	24.95
		20	25.32	25.08

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

LTE Band 25					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	26047	1850.7	8047	1930.7
	3	26055	1851.5	8055	1931.5
	5	26065	1852.5	8065	1932.5
	10	26090	1855	8090	1935
	15	26115	1857.5	8115	1937.5
	20	26140	1860	8140	1940
Mid Range	1.4/3/5/10/15/20	26365	1882.5	8365	1962.5
High Range	1.4	26683	1914.3	8683	1994.3
	3	26675	1913.5	8675	1993.5
	5	26665	1912.5	8665	1992.5
	10	26640	1910	8640	1990
	15	26615	1907.5	8615	1987.5
	20	26590	1905	8590	1985

3. Table for Filed Antenna:

Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
N/A	N/A	FPC	N/A	2.85	LTE Band 25

Note: The antenna gain is provided by the manufacturer.

2.2 DESCRIPTION OF TEST MODES

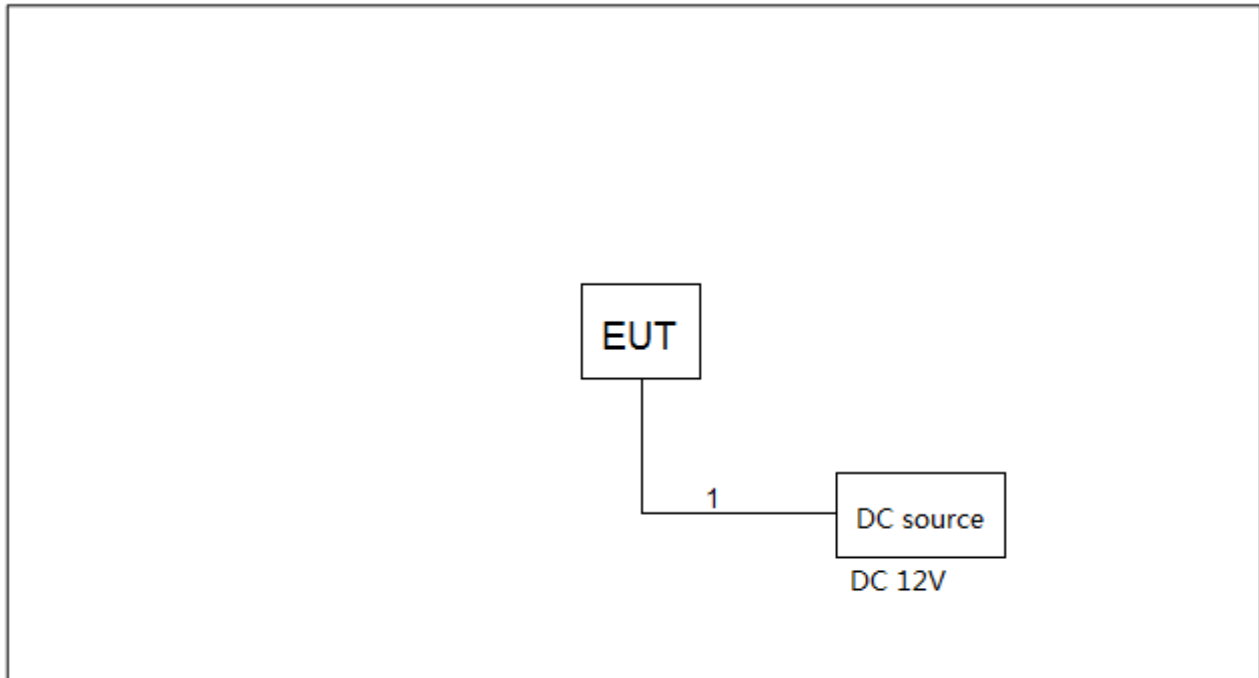
Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

LTE BAND 25 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	26047 to 26683	26047, 26365, 22683	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	26090 to 26640	26090, 26365, 26640	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	26047 to 26683	26047, 26365, 22683	1.4MHz	QPSK, 16QAM	6RB
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM	15RB
	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM	25RB
	26090 to 26640	26090, 26365, 26640	10MHz	QPSK, 16QAM	50RB
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM	75 RB
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	26047 to 26683	26365	1.4MHz	QPSK	1RB
	26065 to 26665	26365	5MHz	QPSK	1RB
	26140 to 26590	26365	20MHz	QPSK	1RB
Radiated Spurious Emissions	26047 to 26683	26365	1.4MHz	QPSK	1RB
	26065 to 26665	26365	5MHz	QPSK	1RB
	26140 to 26590	26365	20MHz	QPSK	1RB
Band Edge	26047 to 26683	26047, 26683	1.4MHz	QPSK	1RB/6RB
	26055 to 26675	26055, 26675	3MHz	QPSK	1RB/15RB
	26065 to 26665	26065, 26665	5MHz	QPSK, 16QAM	1RB/25RB
	26090 to 26640	26090, 26640	10MHz	QPSK	1RB/50RB
	26115 to 26615	26115, 26615	15MHz	QPSK	1RB/75RB
	26140 to 26590	26140, 26590	20MHz	QPSK	1RB/100RB
Peak To Average Ratio	26047 to 26683	26047, 26365, 22683	1.4MHz	QPSK, 16QAM	1RB
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM	1RB
	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM	1RB
	26090 to 26640	26090, 26365, 26640	10MHz	QPSK, 16QAM	1RB
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM	1RB
	26140 to 26590	26140, 26365,26590	20MHz	QPSK, 16QAM	1RB
Frequency Stability	26047 to 26683	26365	1.4MHz	QPSK	1RB
	26055 to 26675	26365	3MHz	QPSK	1RB
	26065 to 26665	26365	5MHz	QPSK	1RB
	26090 to 26640	26365	10MHz	QPSK	1RB
	26115 to 26615	26365	15MHz	QPSK	1RB
	26140 to 26590	26365	20MHz	QPSK	1RB

Note:

There is only one transmitting port in the sample, and the output power has MPR backoff mechanism. The output power of 16QAM will be 1dBm smaller than that of QPSK. All bands of band edge had been evaluated. It is found the Bandwidth 5MHz of LTE Band 25 is worst and recorded.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
-	DC Source	TRUE-POWER	GPC30300N	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1m

3. TEST RESULT

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMIT

Mobile / Portable station are limited to 2 watts e.i.r.p.

3.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.

EIRP:

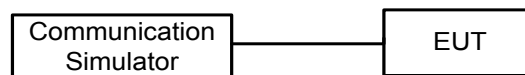
$EIRP = \text{Output Power} + \text{Antenan gain}$

Output Power:

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

3.1.3 TEST SETUP LAYOUT

Output Power Measurement



3.1.4 TEST DEVIATION

No deviation

3.1.5 TEST RESULTS

Please refer to the APPENDIX A.

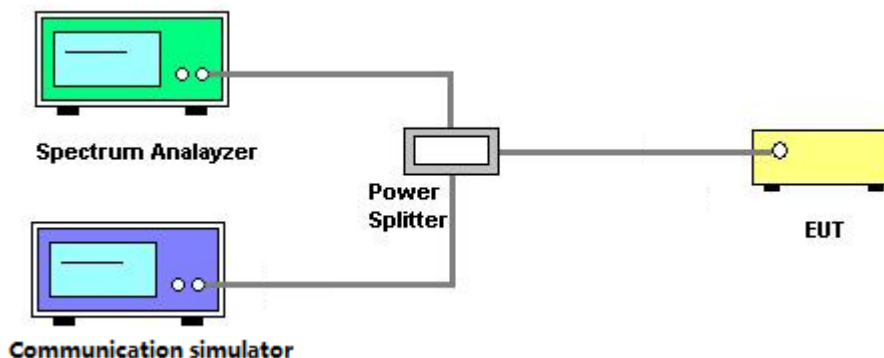
3.2 OCCUPIED BANDWIDTH MEASUREMENT

3.2.1 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 4.

1. The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. $RBW = (1\% \sim 5\%) * EBW$
 $VBW \geq 3 * RBW$
4. Set spectrum analyzer with Peak detector.

3.2.2 TEST SETUP LAYOUT



3.2.3 TEST DEVIATION

No deviation

3.2.4 TEST RESULTS

Please refer to the APPENDIX B.

3.3 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

3.3.1 LIMIT

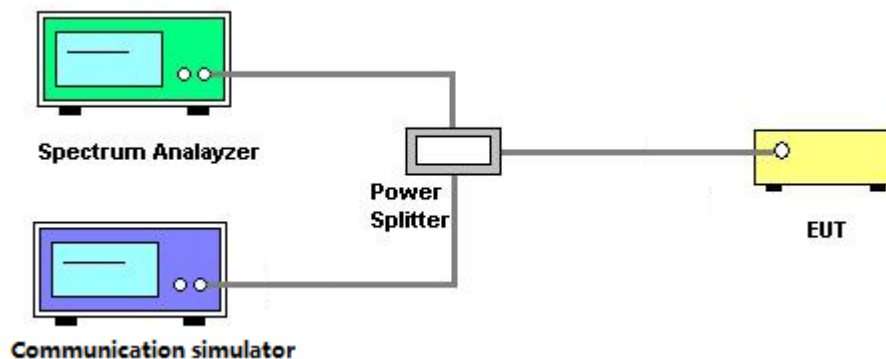
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

3.3.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with Peak detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.3.3 TEST SETUP LAYOUT



3.3.4 TEST DEVIATION

No deviation

3.3.5 TEST RESULTS

Please refer to the APPENDIX C.

3.4 RADIATED SPURIOUS EMISSIONS MEASUREMENT

3.4.1 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. The emission limit equal to -13dBm.

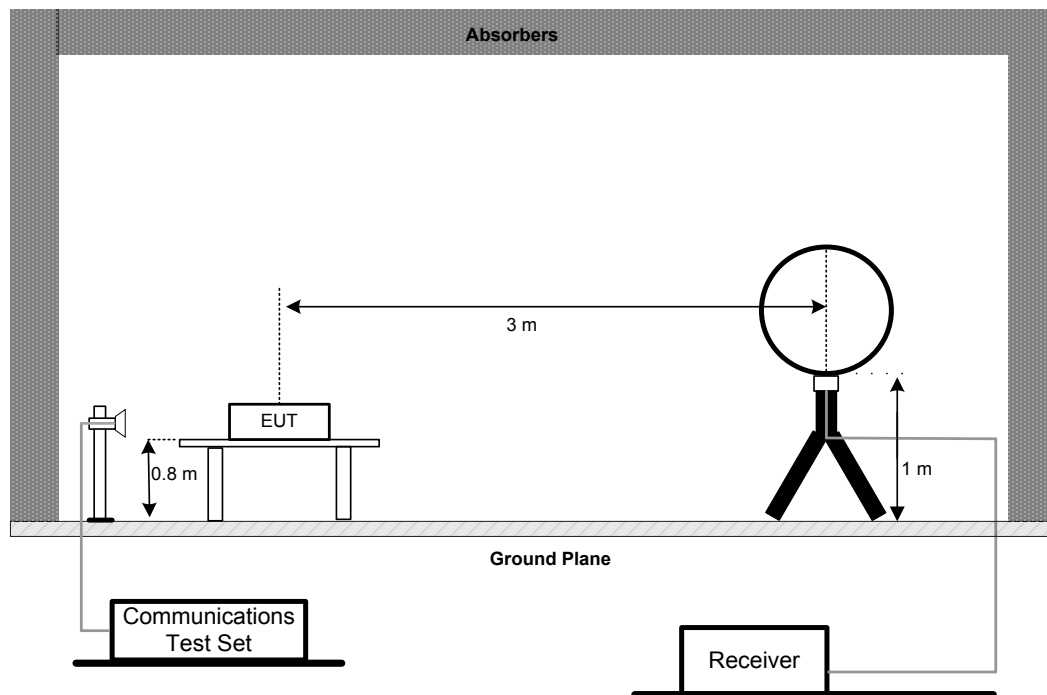
3.4.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.2.

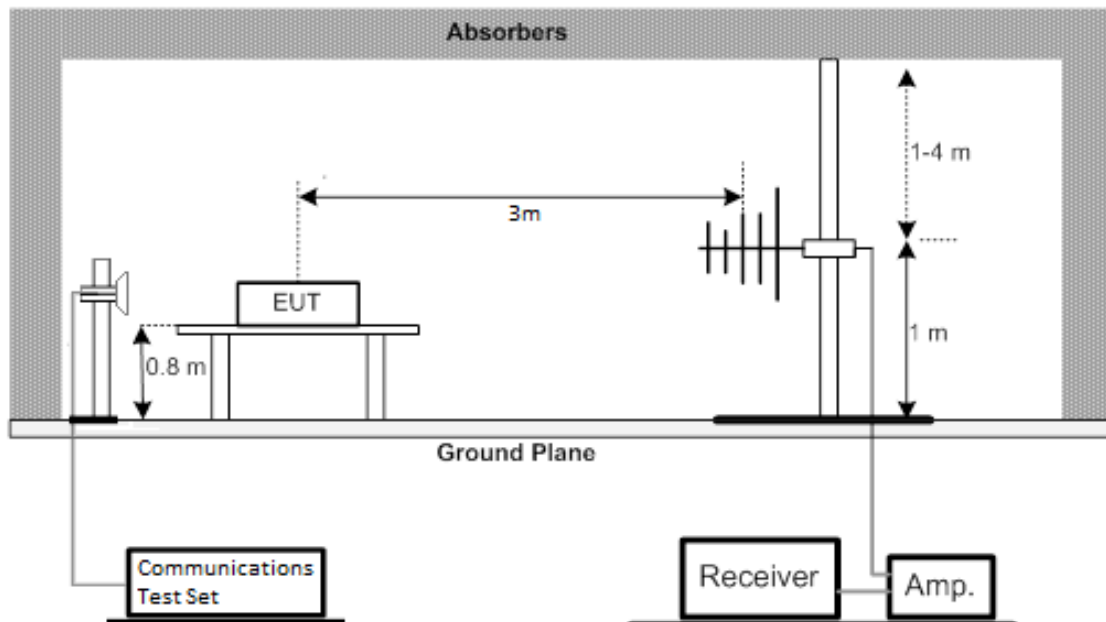
1. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
2. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G
3. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
4. ERP can be calculated form EIRP by subtracting the gain of dipole, $ERP = EIPR - 2.15\text{dBi}.$
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

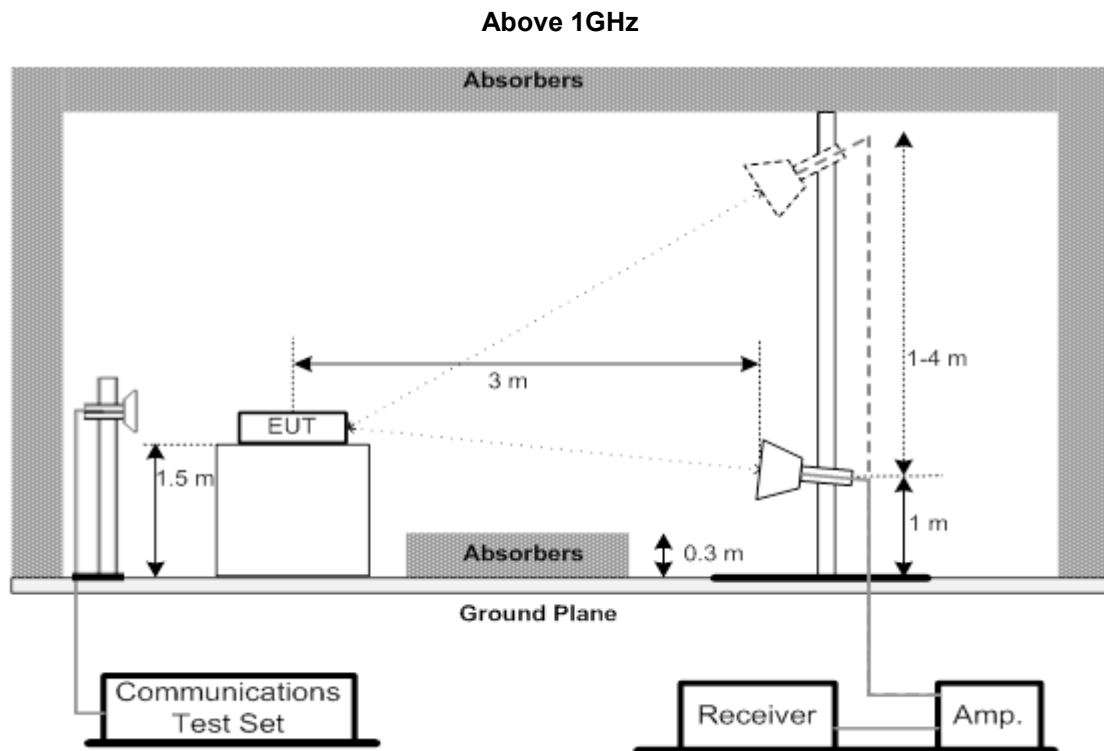
3.4.3 TEST SETUP LAYOUT

Below 30MHz



30MHz to 1000MHz





3.4.4 TEST DEVIATION

No deviation

3.4.5 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX D.

3.4.6 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX E.

3.4.7 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX F.

3.5 BAND EDGE MEASUREMENT

3.5.1 LIMIT

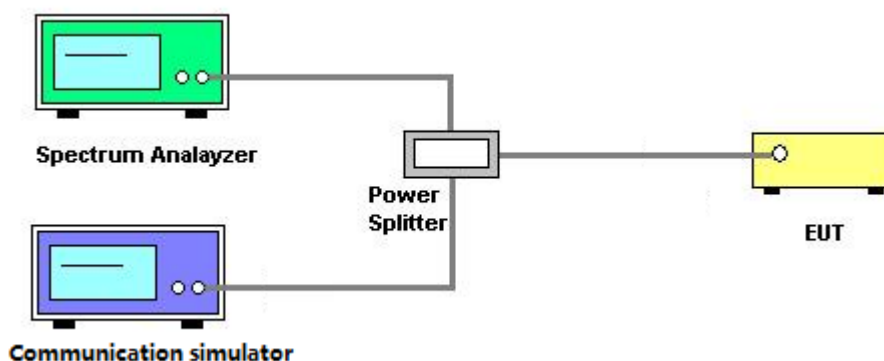
A Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.5.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. All measurements were done at low and high operational frequency range.
2. Record the max trace plot into the test report.

3.5.3 TEST SETUP LAYOUT



3.5.4 TEST DEVIATION

No deviation

3.5.5 TEST RESULTS

Please refer to the APPENDIX G.

3.6 PEAK TO AVERAGE RATIO MEASUREMENT

3.6.1 LIMIT

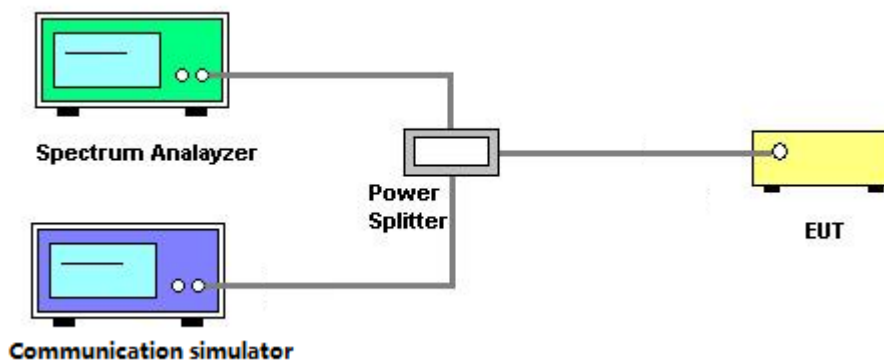
In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.6.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 5.7.

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.6.3 TEST SETUP LAYOUT



3.6.4 TEST DEVIATION

No deviation

3.6.5 TEST RESULTS

Please refer to the APPENDIX H.

3.7 FREQUENCY STABILITY MEASUREMENT

3.7.1 LIMIT

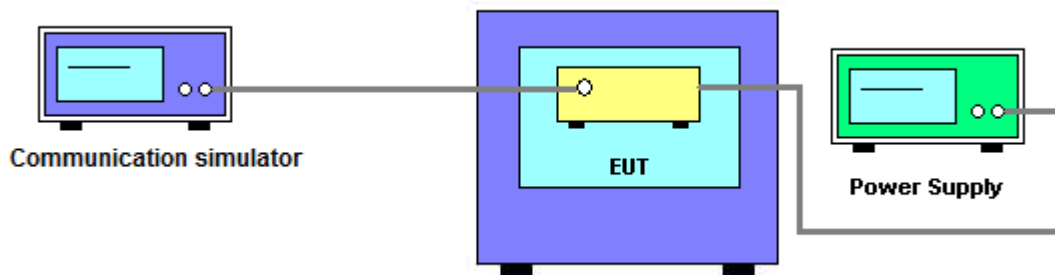
± 1.5 ppm is for base and fixed station. ± 2.5 ppm is for mobile station.

3.7.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 9.

1. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
2. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
4. The frequency error was recorded frequency error from the communication simulator.

3.7.3 TEST SETUP LAYOUT



3.7.4 TEST DEVIATION

No deviation

3.7.5 TEST RESULTS

Please refer to the APPENDIX I.

4. LIST OF MEASUREMENT EQUIPMENTS

Radiated Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3231	Apr. 14, 2022
2	Amplifier	Agilent	8449B	3008A02334	Feb. 27, 2022
3	HighPass Filter	Wairwright Instruments Gmbh	WHK 1.5/15G-10ST	11	Feb. 27, 2022
4	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 1710/1785-1690/1805-60/ 12SS	38	Feb. 27, 2022
5	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 824/849-810/863-60/9SS	7	Feb. 27, 2022
6	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 880/915-860/935-60/9SS	14	Feb. 27, 2022
7	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 1850/1910-1830/1930-60/ 10SS	17	Feb. 27, 2022
8	HighPass Filter	Wairwright Instruments Gmbh	WHK3.1/18G-10SS	24	Feb. 27, 2022
9	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Feb. 28, 2022
10	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 28, 2022
11	Receiver	Agilent	N9038A	MY52130039	Mar. 19, 2022
12	wideband radio communication tester	R&S	CMW500	152372	Feb. 27, 2022
13	High pass filter	KANGMAIWEI	ZHPF-M3-12.75G-3869	B2015073763	Feb. 07, 2022
14	High pass filter	KANGMAIWEI	ZHPF-M1000-4000-1	B2015073762	Feb. 07, 2022
15	High pass filter	KANGMAIWEI	ZHPF-M6-186-1727	B2015073764	Feb. 07, 2022
16	Cable	emci	LMR-400(30MHz-1GHz) (8m+5m)	N/A	May 20, 2022
17	Cable	mitron	B10-01-01-12M	18072744	Oct. 16, 2021
18	Controller	ETS-Lindgren	2090	N/A	N/A
19	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
20	Loop Antenna	EM	EM-6876-1	230	Oct. 16, 2021
21	Double Ridged Guide Antenna	ETS	3115	75846	Mar. 17, 2022
22	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2022

Conducted Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Feb. 28, 2022
2	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Feb. 28, 2022
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Feb. 27, 2022
4	wideband radio communication tester	R&S	CMW500	152372	Feb. 27, 2022

Frequency Stability Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Feb. 28, 2022
2*	Multi-output DC Power Supply	GW Instek	GPC-3030DN	EK880675	Jul. 25, 2023
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Feb. 27, 2022
4	wideband radio communication tester	R&S	CMW500	152372	Feb. 27, 2022
5	Const Temp,& Humidity Chamber	Bell	BTH-50C	20170306001	Feb. 27, 2022

Remark: "N/A" denotes no model name, serial no. or calibration specified.

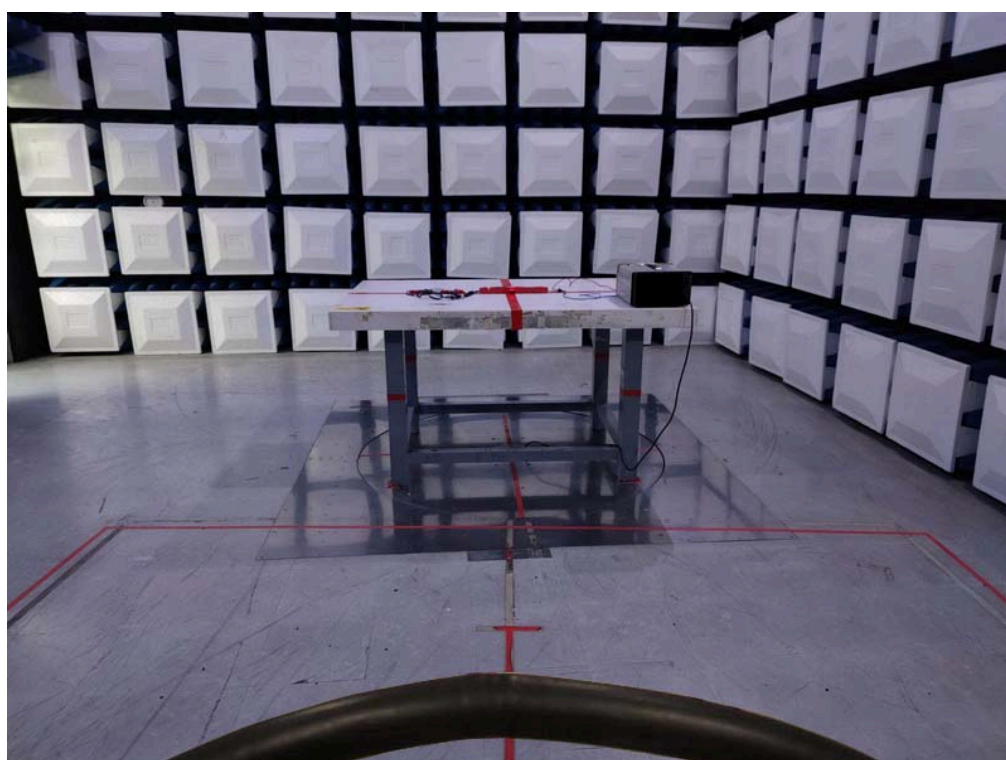
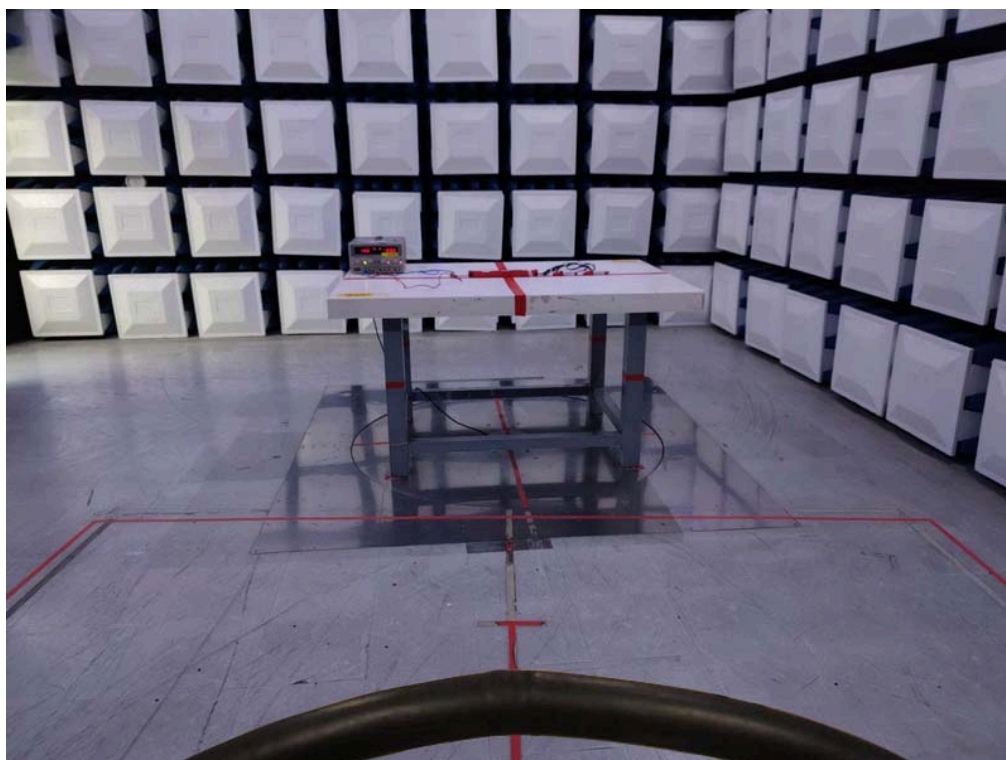
"*" calibration period of equipment list is three year.

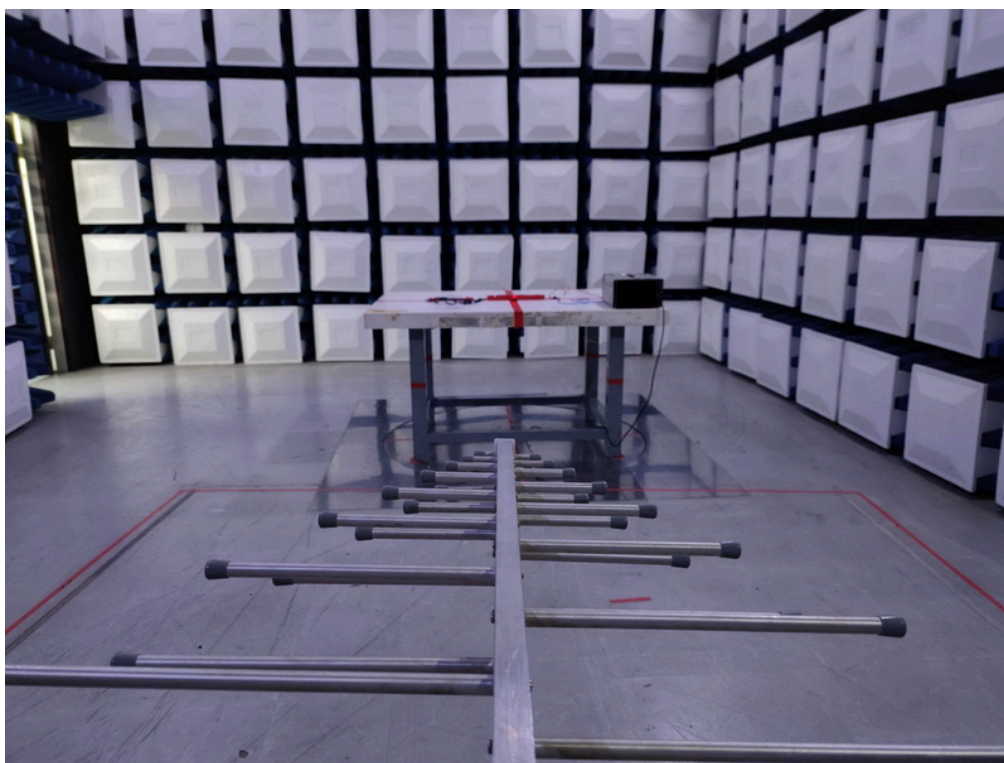
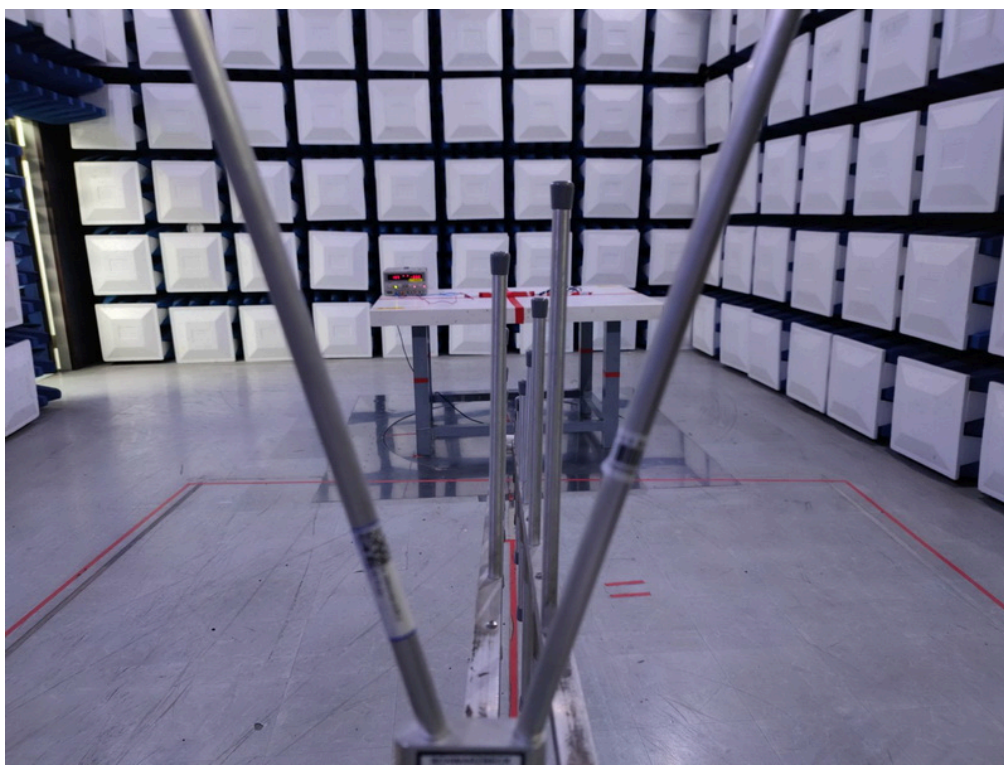
Except * item, all calibration period of equipment list is one year.

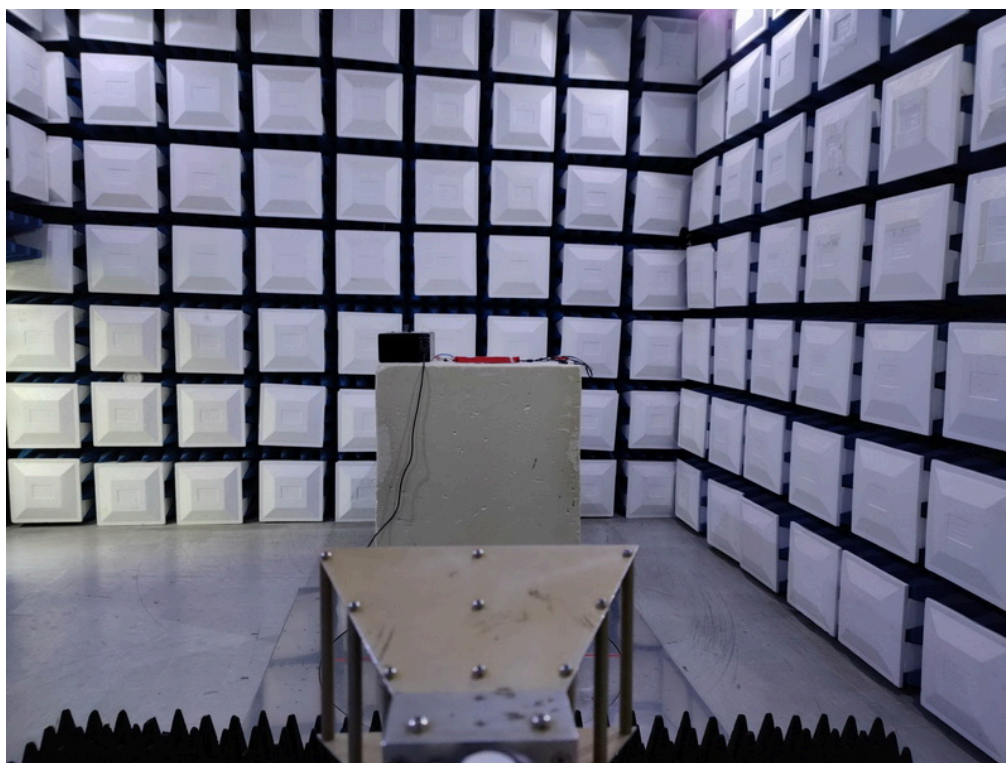
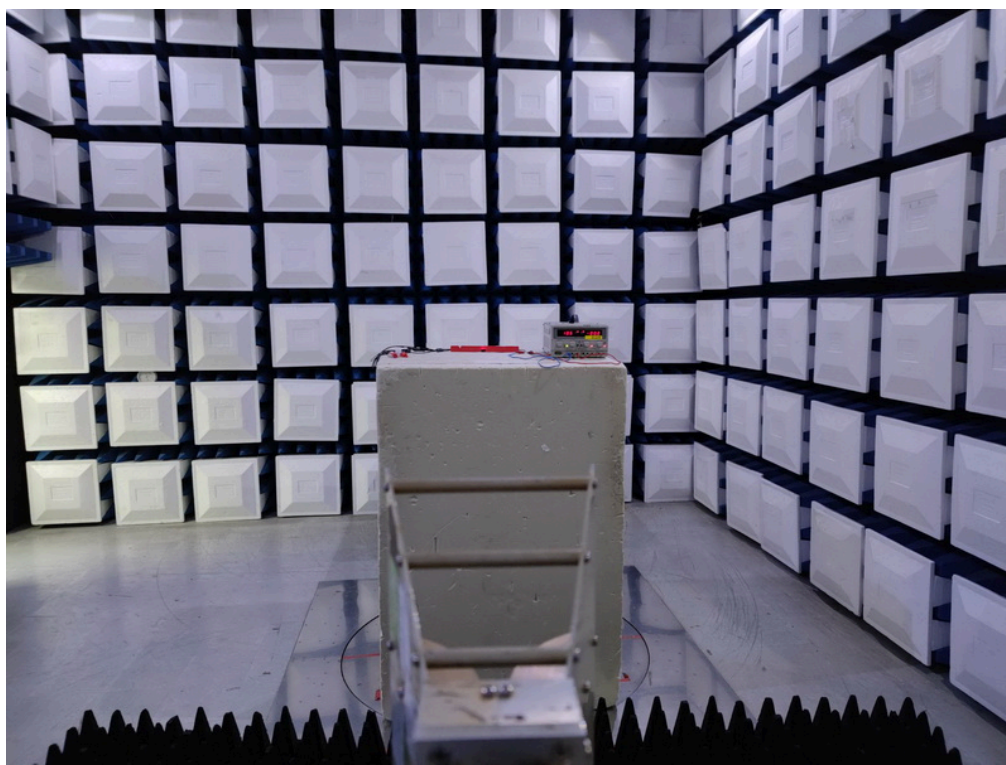
5. EUT TEST PHOTO

Radiated Emissions Test Photos

9 kHz to 30 MHz



Radiated Emissions Test Photos**30 MHz to 1 GHz**

Radiated Emissions Test Photos**Above 1 GHz**

APPENDIX A - OUTPUT POWER

Output Power (dBm):

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26047CH	26365CH	26683CH
				1850.7MHz	1882.5MHz	1914.3MHz
25 / 1.4M	QPSK	1	0	22.19	22.09	22.26
		1	2	22.13	22.16	22.34
		1	5	22.00	22.11	22.24
		3	0	22.04	22.14	22.24
		3	1	22.05	22.20	22.28
		3	2	22.02	22.18	22.25
		6	0	21.00	21.18	21.31
	16QAM	1	0	21.31	21.05	21.25
		1	2	21.39	21.17	21.35
		1	5	21.30	21.13	21.25
		3	0	21.16	21.27	21.22
		3	1	21.19	21.34	21.26
		3	2	21.18	21.29	21.20
		6	0	19.94	20.33	20.41

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26055CH	26365CH	26675CH
				1851.5MHz	1882.5MHz	1913.5MHz
25 / 3M	QPSK	1	0	22.00	22.28	22.33
		1	7	22.17	22.38	22.42
		1	14	22.08	22.28	22.26
		8	0	21.04	21.21	21.35
		8	4	21.07	21.27	21.35
		8	7	21.03	21.20	21.32
		15	0	21.03	21.17	21.32
	16QAM	1	0	20.97	21.49	21.34
		1	7	21.08	21.66	21.43
		1	14	20.95	21.51	21.22
		8	0	20.15	20.29	20.36
		8	4	20.19	20.33	20.38
		8	7	20.16	20.26	20.33
		15	0	20.08	20.21	20.29

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	26365CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 5M	QPSK	1	0	22.05	22.14	22.29
		1	13	22.19	22.23	22.39
		1	24	22.06	22.14	22.26
		12	0	20.98	21.19	21.35
		12	6	21.06	21.24	21.40
		12	11	21.08	21.20	21.39
		25	0	20.98	21.17	21.32
	16QAM	1	0	21.12	21.52	22.20
		1	13	21.26	21.69	22.31
		1	24	21.15	21.60	22.14
		12	0	20.09	20.29	20.89
		12	6	20.15	20.36	20.98
		12	11	20.17	20.30	20.95
		25	0	20.06	20.24	20.89

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26090CH	26365CH	26640CH
				1855MHz	1882.5MHz	1910MHz
25 / 10M	QPSK	1	0	22.01	22.67	22.72
		1	25	22.20	22.86	22.93
		1	49	22.05	22.70	22.69
		25	0	21.00	21.65	21.88
		25	13	21.08	21.72	21.80
		25	25	21.04	21.66	21.83
		50	0	21.03	21.65	21.88
	16QAM	1	0	21.43	21.96	21.72
		1	25	21.58	22.12	21.89
		1	49	21.46	21.97	21.69
		25	0	20.52	20.66	20.99
		25	13	20.62	20.77	20.90
		25	25	20.57	20.68	20.91
		50	0	20.56	20.66	20.90

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26115CH	26365CH	26615CH
				1857.5MHz	1882.5MHz	1907.5MHz
25 / 15M	QPSK	1	0	22.44	22.60	22.44
		1	38	22.60	22.71	22.39
		1	74	22.50	22.53	22.22
		36	0	21.59	21.77	21.45
		36	18	21.63	21.76	21.43
		36	39	21.65	21.70	21.40
		75	0	21.60	21.72	21.37
	16QAM	1	0	21.36	21.82	21.95
		1	38	21.50	21.98	22.10
		1	74	21.44	21.90	21.96
		36	0	20.53	20.75	20.89
		36	18	20.60	20.74	20.92
		36	39	20.60	20.72	20.92
		75	0	20.57	20.71	20.87

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26140CH	26365CH	26590CH
				1860MHz	1882.5MHz	1905MHz
25 / 20M	QPSK	1	0	21.79	21.92	21.98
		1	50	22.27	22.31	22.47
		1	99	21.88	21.92	22.02
		50	0	21.05	21.18	21.28
		50	25	21.10	21.19	21.30
		50	50	21.12	21.11	21.25
		100	0	21.07	21.17	21.28
	16QAM	1	0	21.77	21.80	21.80
		1	50	22.23	22.20	22.10
		1	99	21.86	21.84	21.38
		50	0	20.59	20.70	20.68
		50	25	20.65	20.71	20.74
		50	50	20.68	20.62	20.50
		100	0	20.62	20.67	20.69

EIRP (dBm):

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26047CH	26365CH	26683CH
				1850.7MHz	1882.5MHz	1914.3MHz
25 / 1.4M	QPSK	1	0	25.04	24.94	25.11
		1	2	24.98	25.01	25.19
		1	5	24.85	24.96	25.09
		3	0	24.89	24.99	25.09
		3	1	24.90	25.05	25.13
		3	2	24.87	25.03	25.10
		6	0	23.85	24.03	24.16
	16QAM	1	0	24.16	23.90	24.10
		1	2	24.24	24.02	24.20
		1	5	24.15	23.98	24.10
		3	0	24.01	24.12	24.07
		3	1	24.04	24.19	24.11
		3	2	24.03	24.14	24.05
		6	0	22.79	23.18	23.26

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26055CH	26365CH	26675CH
				1851.5MHz	1882.5MHz	1913.5MHz
25 / 3M	QPSK	1	0	24.85	25.13	25.18
		1	7	25.02	25.23	25.27
		1	14	24.93	25.13	25.11
		8	0	23.89	24.06	24.20
		8	4	23.92	24.12	24.20
		8	7	23.88	24.05	24.17
		15	0	23.88	24.02	24.17
	16QAM	1	0	23.82	24.34	24.19
		1	7	23.93	24.51	24.28
		1	14	23.80	24.36	24.07
		8	0	23.00	23.14	23.21
		8	4	23.04	23.18	23.23
		8	7	23.01	23.11	23.18
		15	0	22.93	23.06	23.14

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	26365CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 5M	QPSK	1	0	24.90	24.99	25.14
		1	13	25.04	25.08	25.24
		1	24	24.91	24.99	25.11
		12	0	23.83	24.04	24.20
		12	6	23.91	24.09	24.25
		12	11	23.93	24.05	24.24
		25	0	23.83	24.02	24.17
	16QAM	1	0	23.97	24.37	25.05
		1	13	24.11	24.54	25.16
		1	24	24.00	24.45	24.99
		12	0	22.94	23.14	23.74
		12	6	23.00	23.21	23.83
		12	11	23.02	23.15	23.80
		25	0	22.91	23.09	23.74

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26090CH	26365CH	26640CH
				1855MHz	1882.5MHz	1910MHz
25 / 10M	QPSK	1	0	24.86	25.52	25.57
		1	25	25.05	25.71	25.78
		1	49	24.90	25.55	25.54
		25	0	23.85	24.50	24.73
		25	13	23.93	24.57	24.65
		25	25	23.89	24.51	24.68
		50	0	23.88	24.50	24.73
	16QAM	1	0	24.28	24.81	24.57
		1	25	24.43	24.97	24.74
		1	49	24.31	24.82	24.54
		25	0	23.37	23.51	23.84
		25	13	23.47	23.62	23.75
		25	25	23.42	23.53	23.76
		50	0	23.41	23.51	23.75

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26115CH	26365CH	26615CH
				1857.5MHz	1882.5MHz	1907.5MHz
25 / 15M	QPSK	1	0	25.29	25.45	25.29
		1	38	25.45	25.56	25.24
		1	74	25.35	25.38	25.07
		36	0	24.44	24.62	24.30
		36	18	24.48	24.61	24.28
		36	39	24.50	24.55	24.25
		75	0	24.45	24.57	24.22
	16QAM	1	0	24.21	24.67	24.80
		1	38	24.35	24.83	24.95
		1	74	24.29	24.75	24.81
		36	0	23.38	23.60	23.74
		36	18	23.45	23.59	23.77
		36	39	23.45	23.57	23.77
		75	0	23.42	23.56	23.72

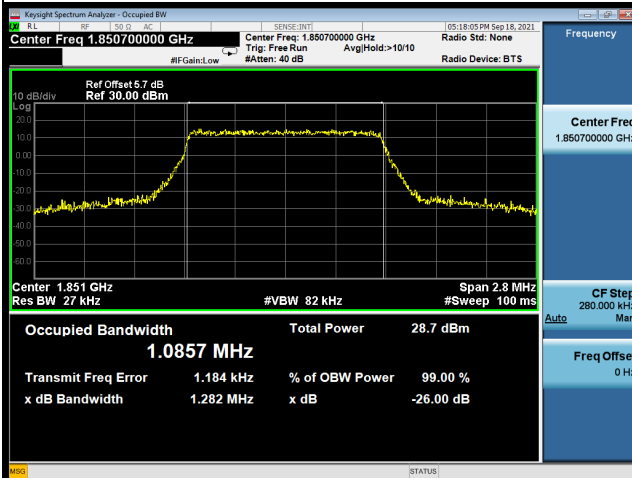
LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26140CH	26365CH	26590CH
				1860MHz	1882.5MHz	1905MHz
25 / 20M	QPSK	1	0	24.64	24.77	24.83
		1	50	25.12	25.16	25.32
		1	99	24.73	24.77	24.87
		50	0	23.90	24.03	24.13
		50	25	23.95	24.04	24.15
		50	50	23.97	23.96	24.10
		100	0	23.92	24.02	24.13
	16QAM	1	0	24.62	24.65	24.65
		1	50	25.08	25.05	24.95
		1	99	24.71	24.69	24.23
		50	0	23.44	23.55	23.53
		50	25	23.50	23.56	23.59
		50	50	23.53	23.47	23.35
		100	0	23.47	23.52	23.54

APPENDIX B - OCCUPIED BANDWIDTH

LTE Band 25_1.4M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26047	1850.7	1.0857	26047	1850.7	1.282
26365	1882.5	1.0932	26365	1882.5	1.270
26683	1914.3	1.0965	26683	1914.3	1.291
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26047	1850.7	1.0920	26047	1850.7	1.293
26365	1882.5	1.0909	26365	1882.5	1.295
26683	1914.3	1.0871	26683	1914.3	1.284

Spectrum Plot

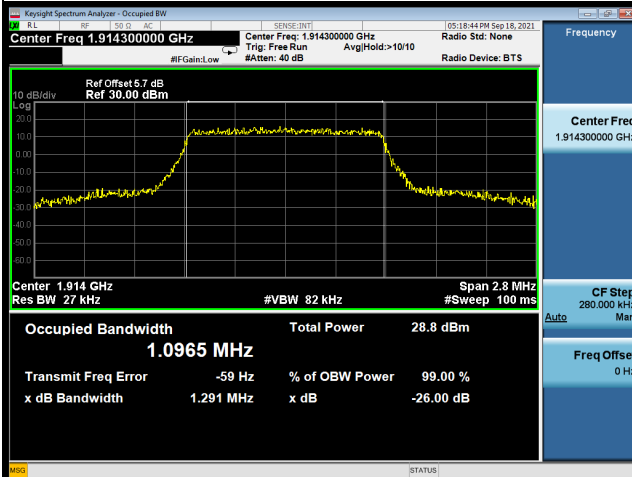
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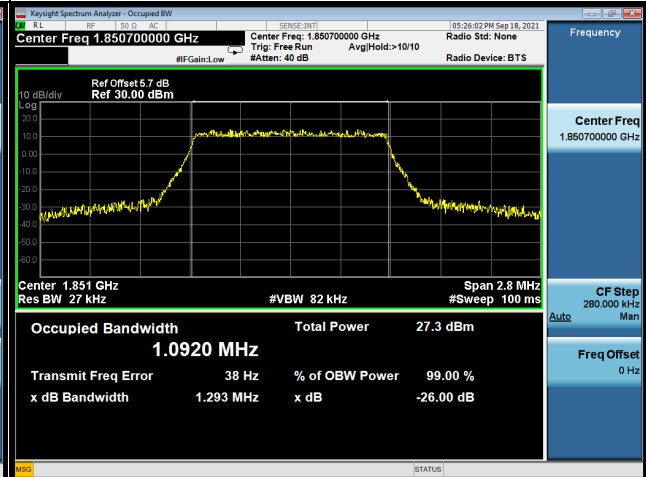
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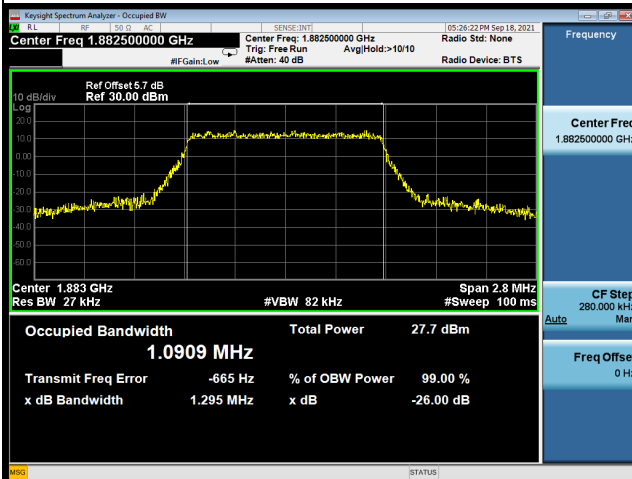
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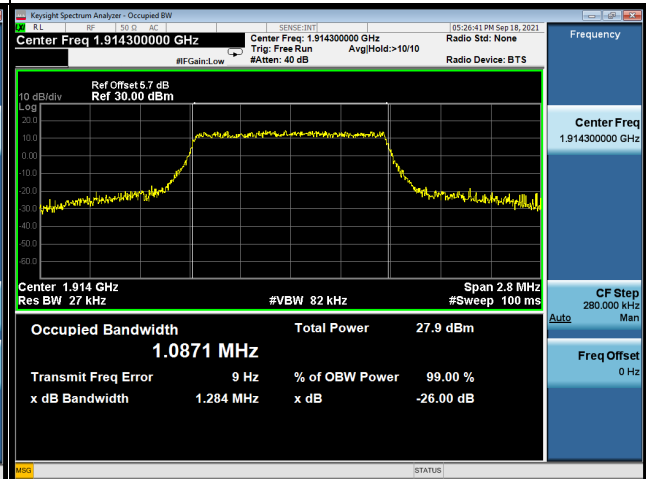
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16QAM-26365



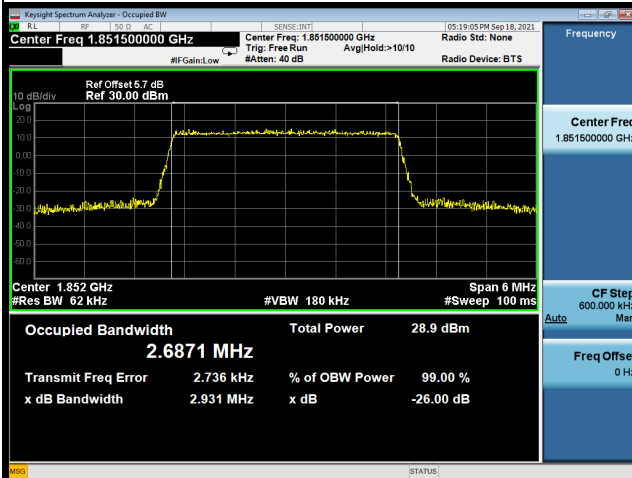
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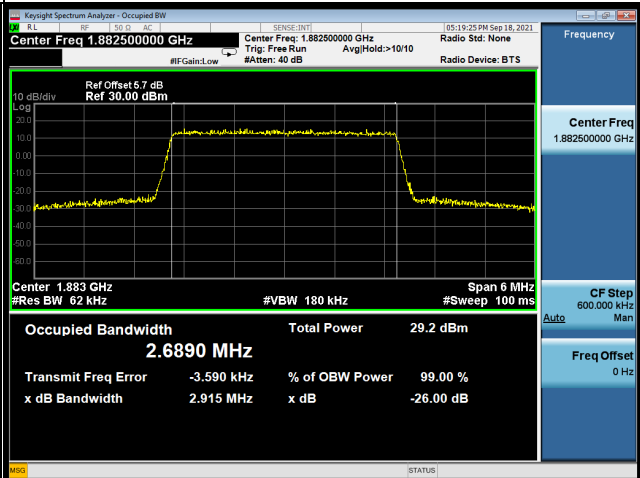
LTE Band 25_3M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26055	1851.5	2.6871	26055	1851.5	2.931
26365	1882.5	2.6890	26365	1882.5	2.915
26675	1913.5	2.6876	26675	1913.5	2.937
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26055	1851.5	2.6892	26055	1851.5	2.905
26365	1882.5	2.6895	26365	1882.5	2.905
26675	1913.5	2.6847	26675	1913.5	2.937

Spectrum Plot

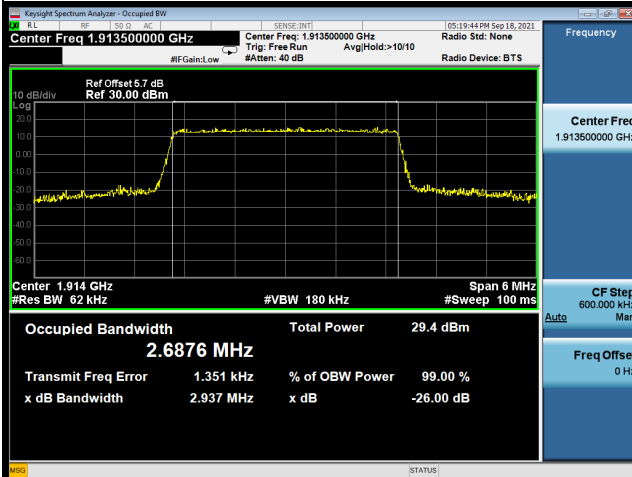
QPSK-26055



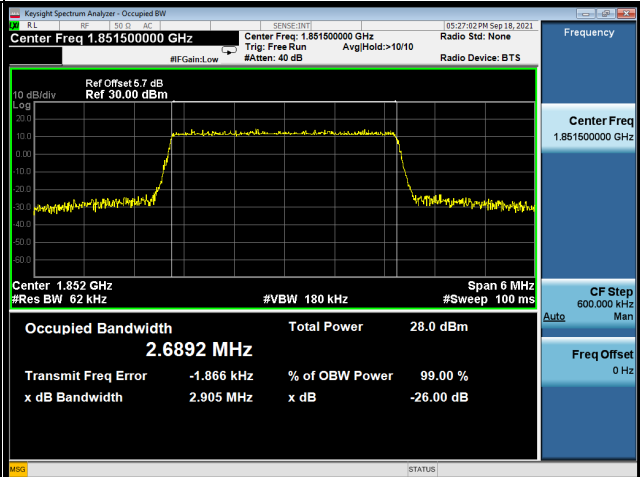
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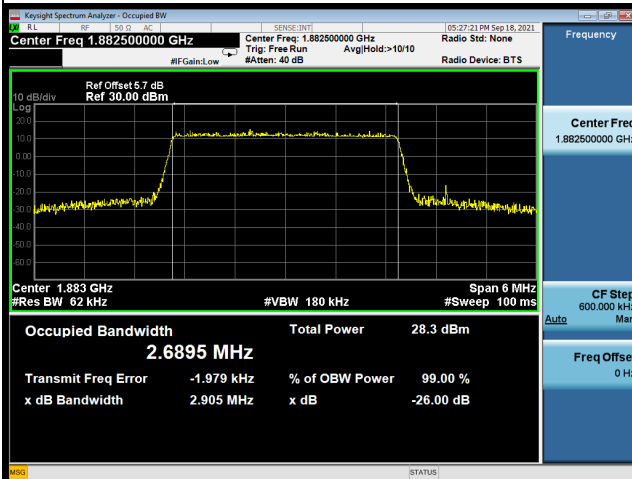
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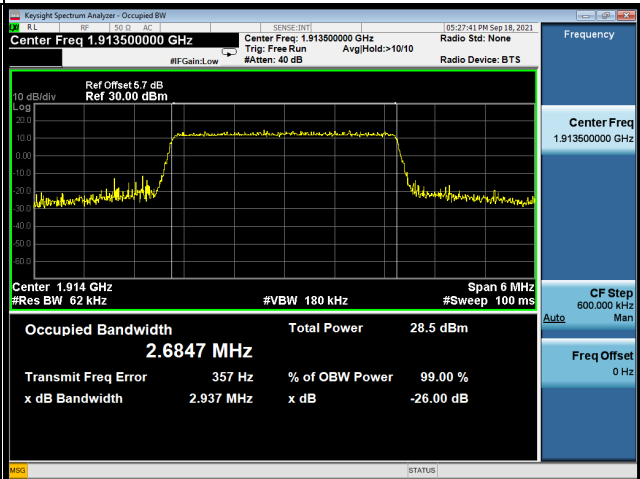
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16QAM-26365



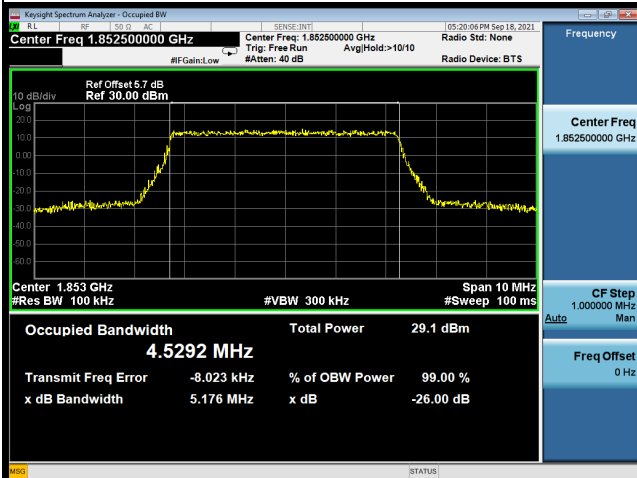
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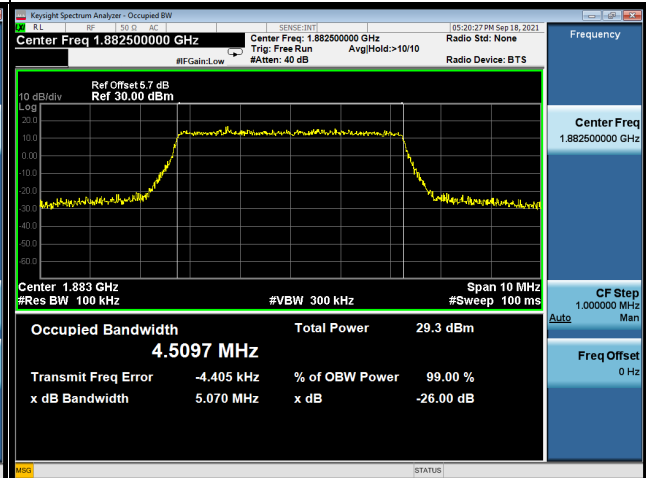
LTE Band 25_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26065	1852.5	4.5292	26065	1852.5	5.176
26365	1882.5	4.5097	26365	1882.5	5.070
26665	1912.5	4.5146	26665	1912.5	5.118
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26065	1852.5	4.5077	26065	1852.5	5.156
26365	1882.5	4.5116	26365	1882.5	5.094
26665	1912.5	4.5170	26665	1912.5	5.129

Spectrum Plot

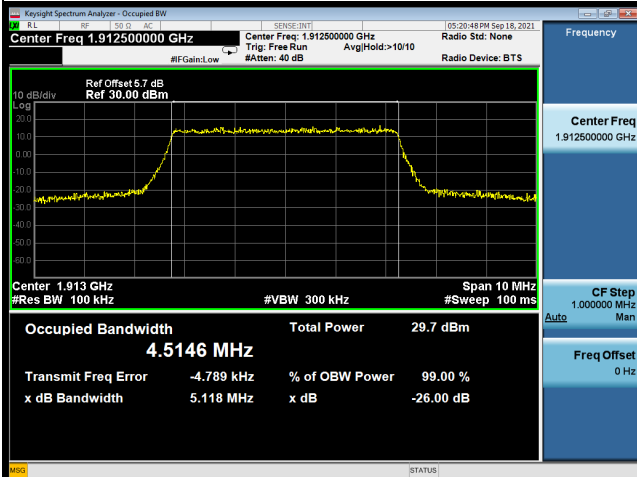
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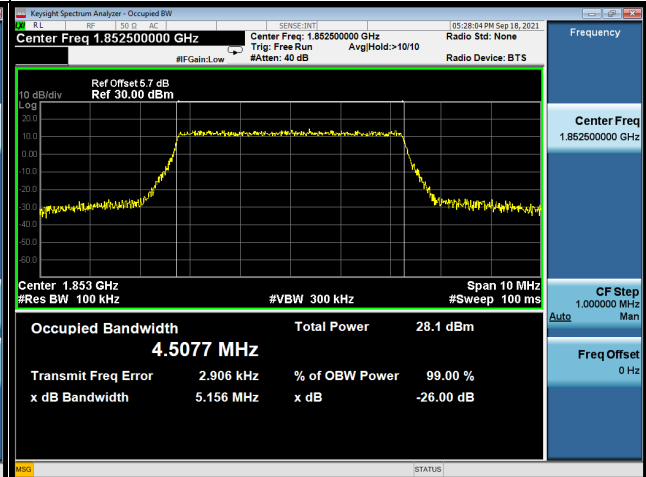
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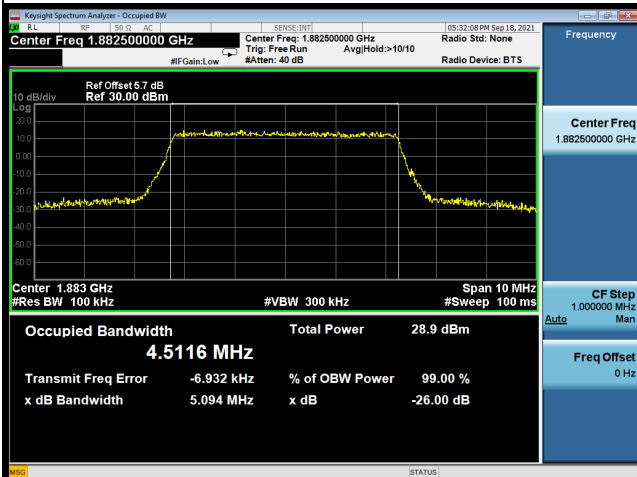
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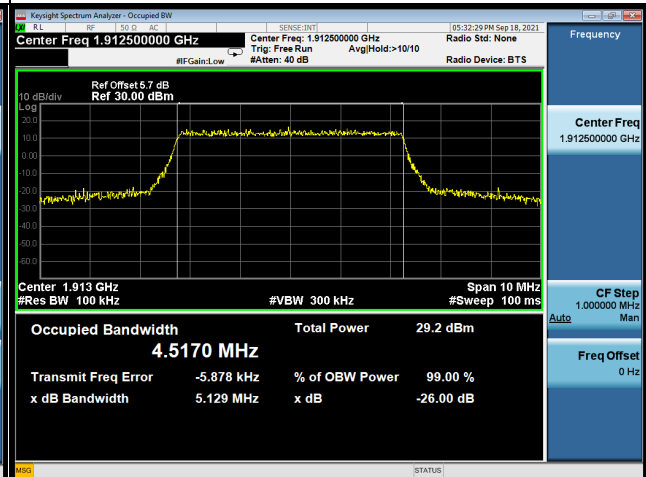
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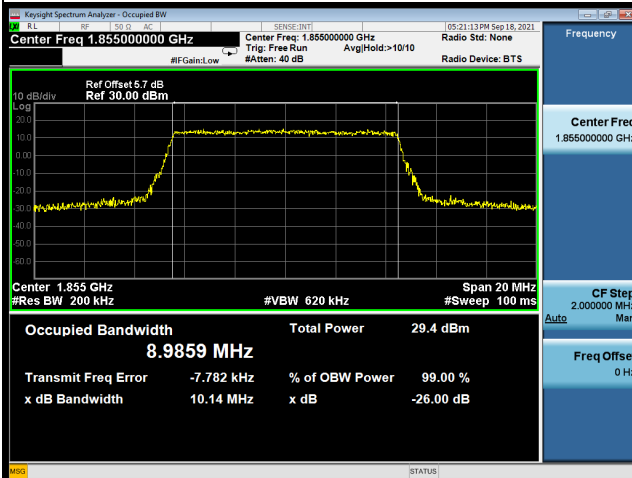
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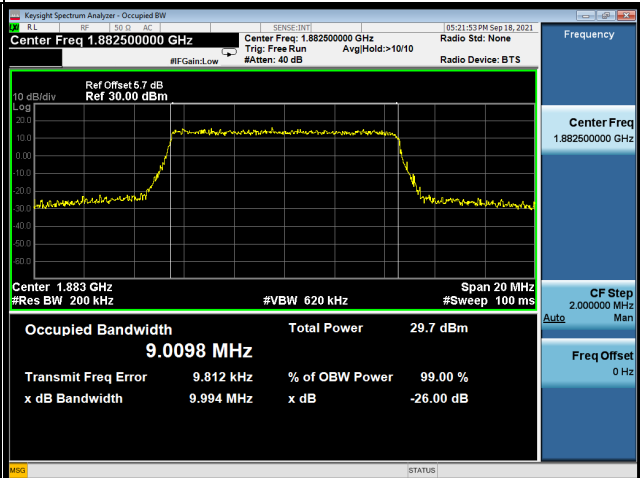
LTE Band 25_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26090	1855	8.9859	26090	1855	10.14
26365	1882.5	9.0098	26365	1882.5	9.994
26640	1910	9.0065	26640	1910	10.21
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26090	1855	8.9844	26090	1855	10.02
26365	1882.5	8.9779	26365	1882.5	10.08
26640	1910	9.0147	26640	1910	10.07

Spectrum Plot

QPSK-26090



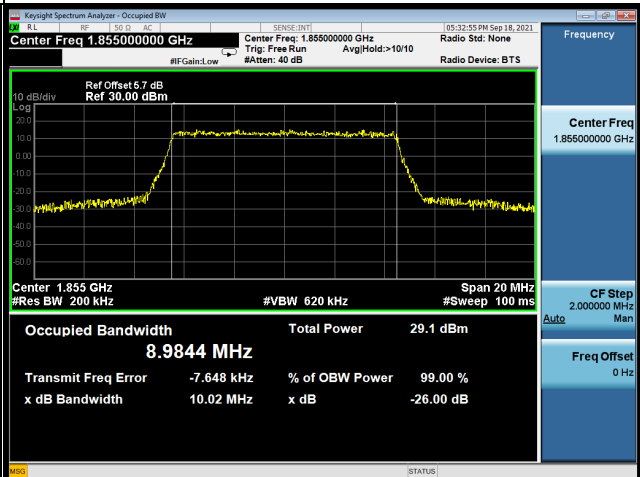
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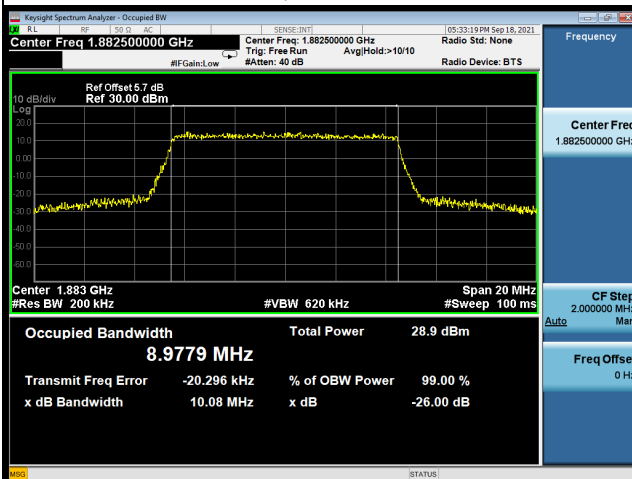
QPSK-26640



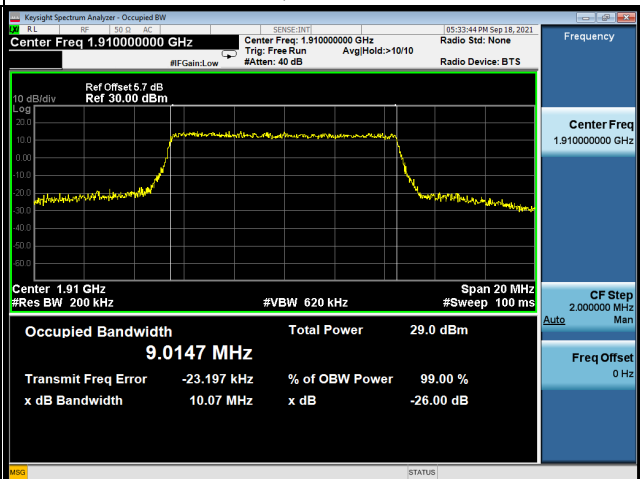
16QAM-26090



16QAM-26365



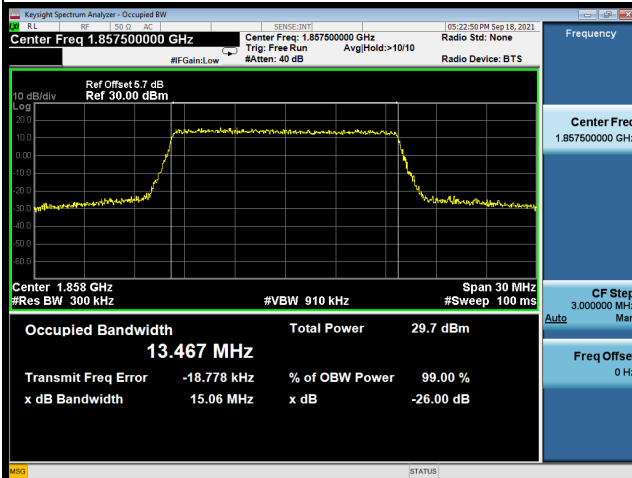
16QAM-26640



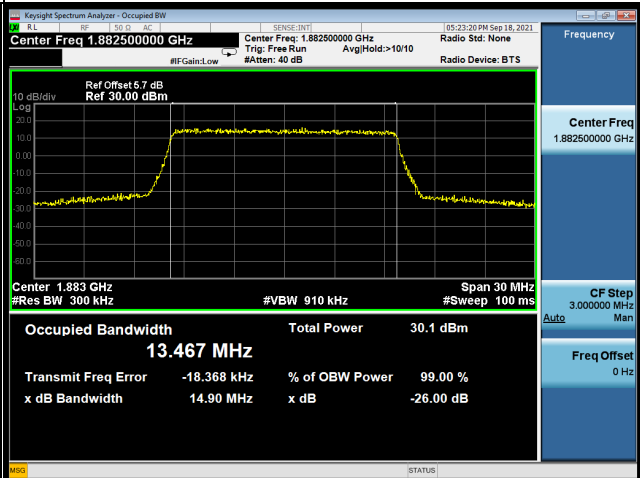
LTE Band 25_15M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26115	1857.5	13.467	26115	1857.5	15.06
26365	1882.5	13.467	26365	1882.5	14.90
26615	1907.5	13.468	26615	1907.5	15.26
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26115	1857.5	13.447	26115	1857.5	14.98
26365	1882.5	13.482	26365	1882.5	14.81
26615	1907.5	13.506	26615	1907.5	14.84

Spectrum Plot

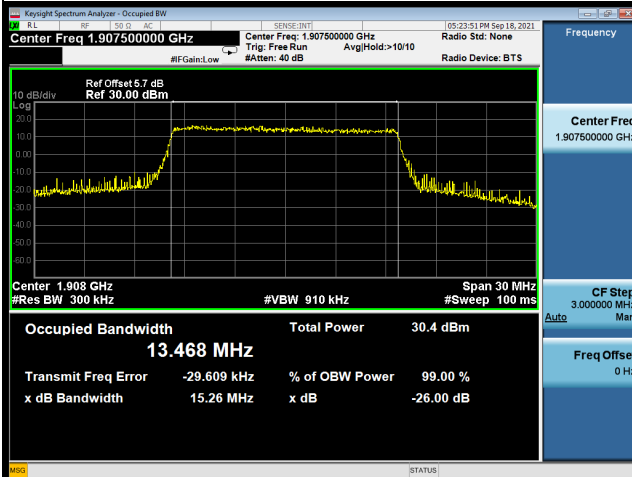
QPSK-26115



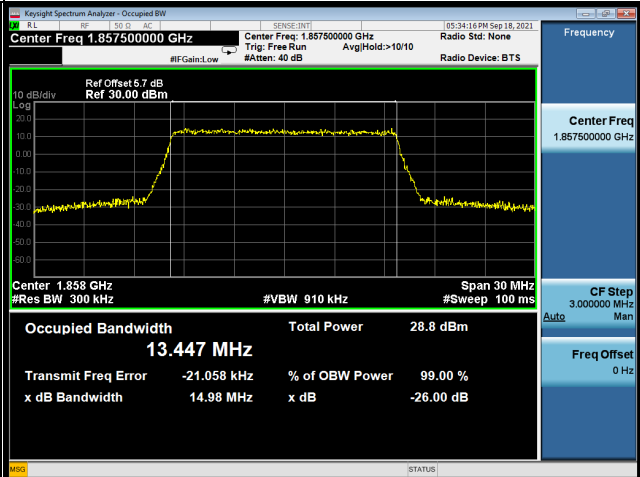
QPSK-26365



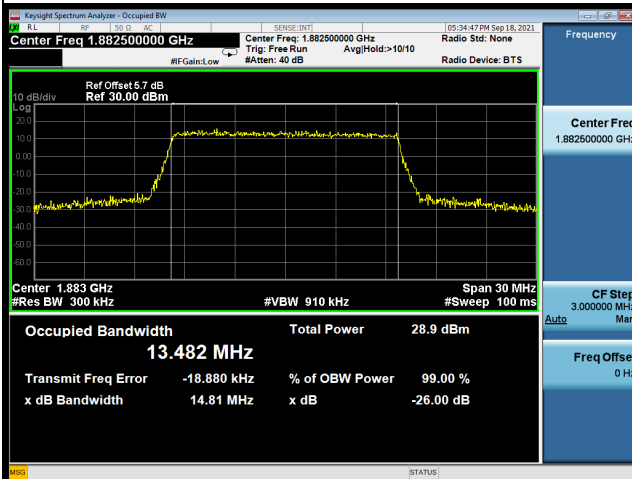
QPSK-26615



16QAM-26115



16QAM-26365



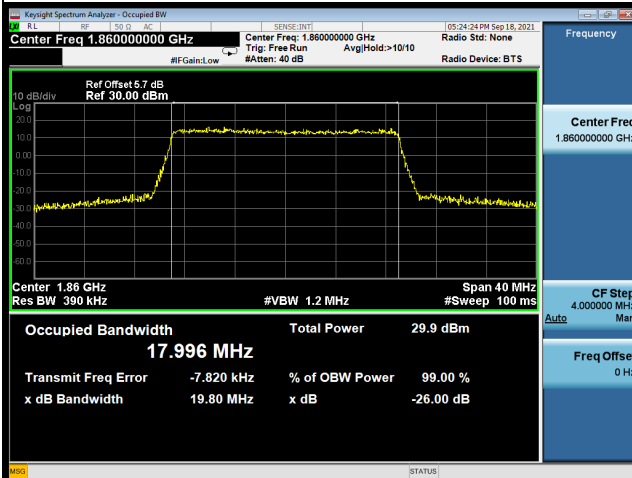
16QAM-26615



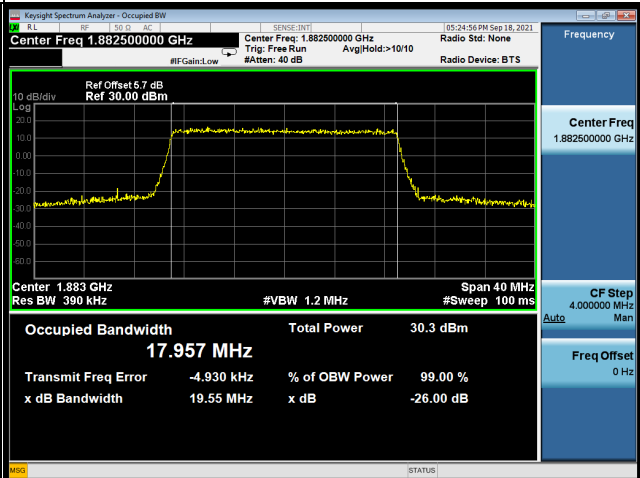
LTE Band 25_20M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26140	1860	17.996	26140	1860	19.80
26365	1882.5	17.957	26365	1882.5	19.55
26590	1905	17.920	26590	1905	19.65
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
26140	1860	17.951	26140	1860	19.50
26365	1882.5	17.934	26365	1882.5	19.69
26590	1905	17.933	26590	1905	19.77

Spectrum Plot

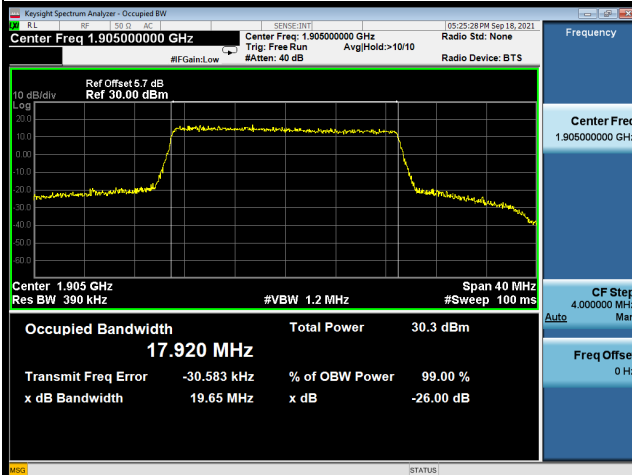
QPSK-26140



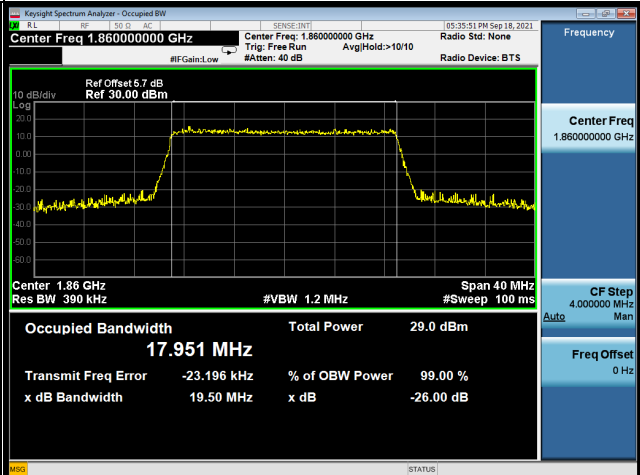
QPSK-26365



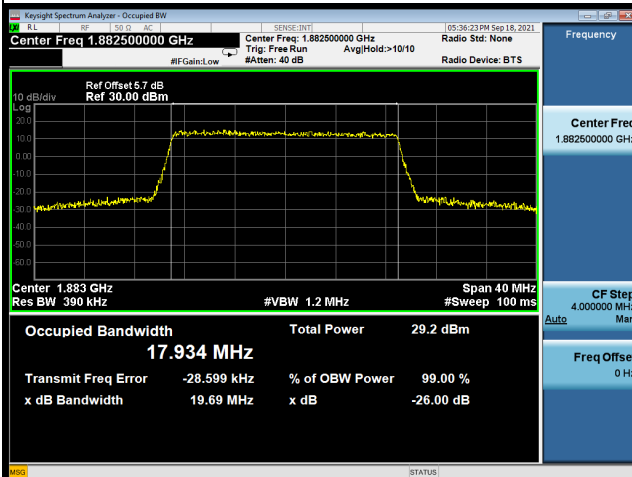
QPSK-26590



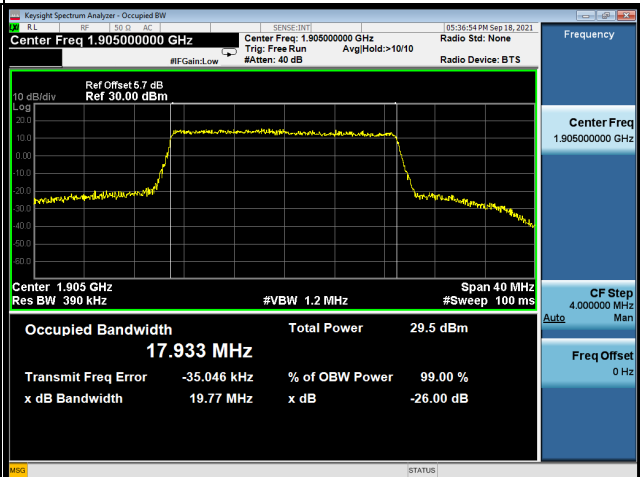
16QAM-26140



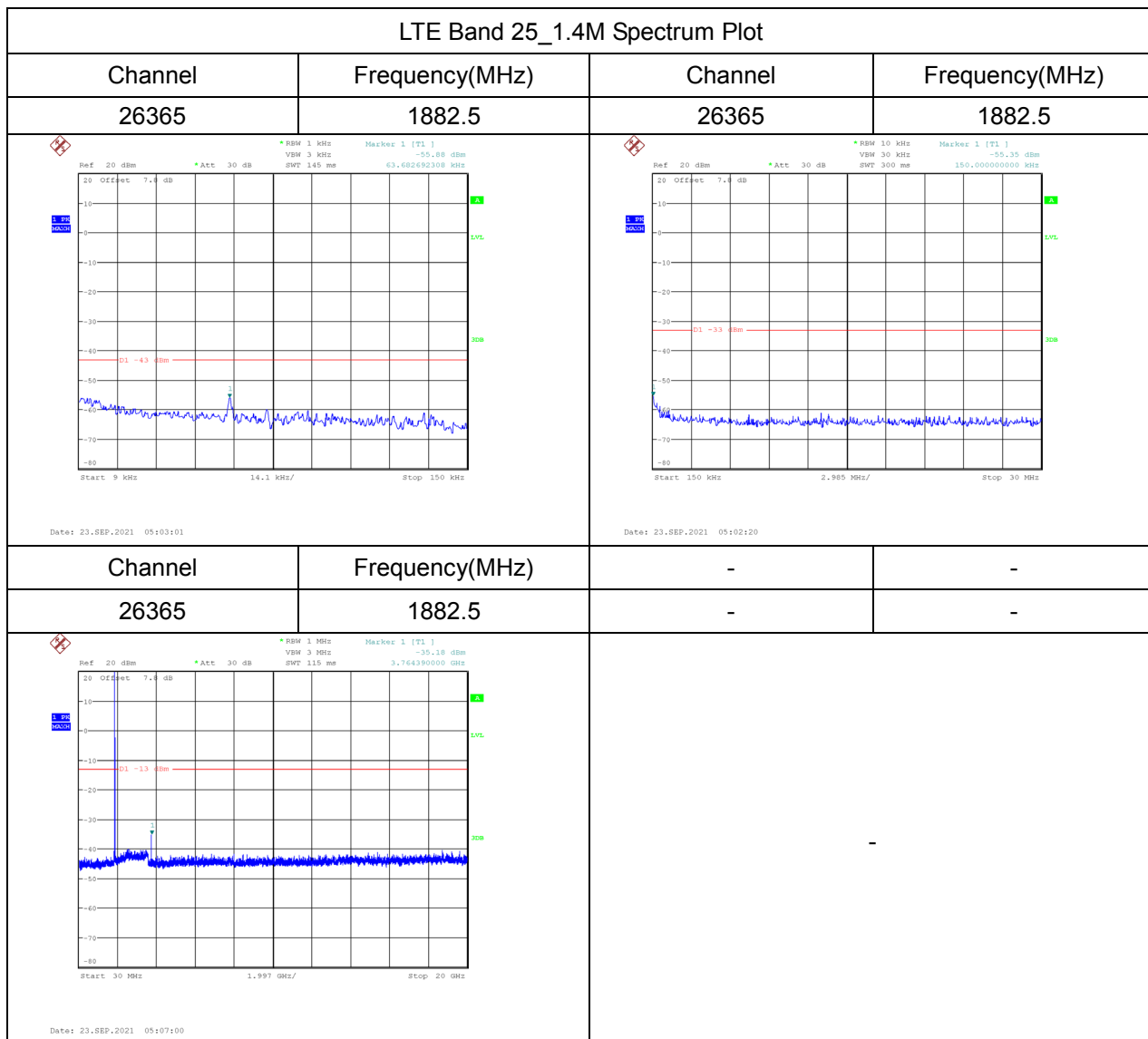
16QAM-26365

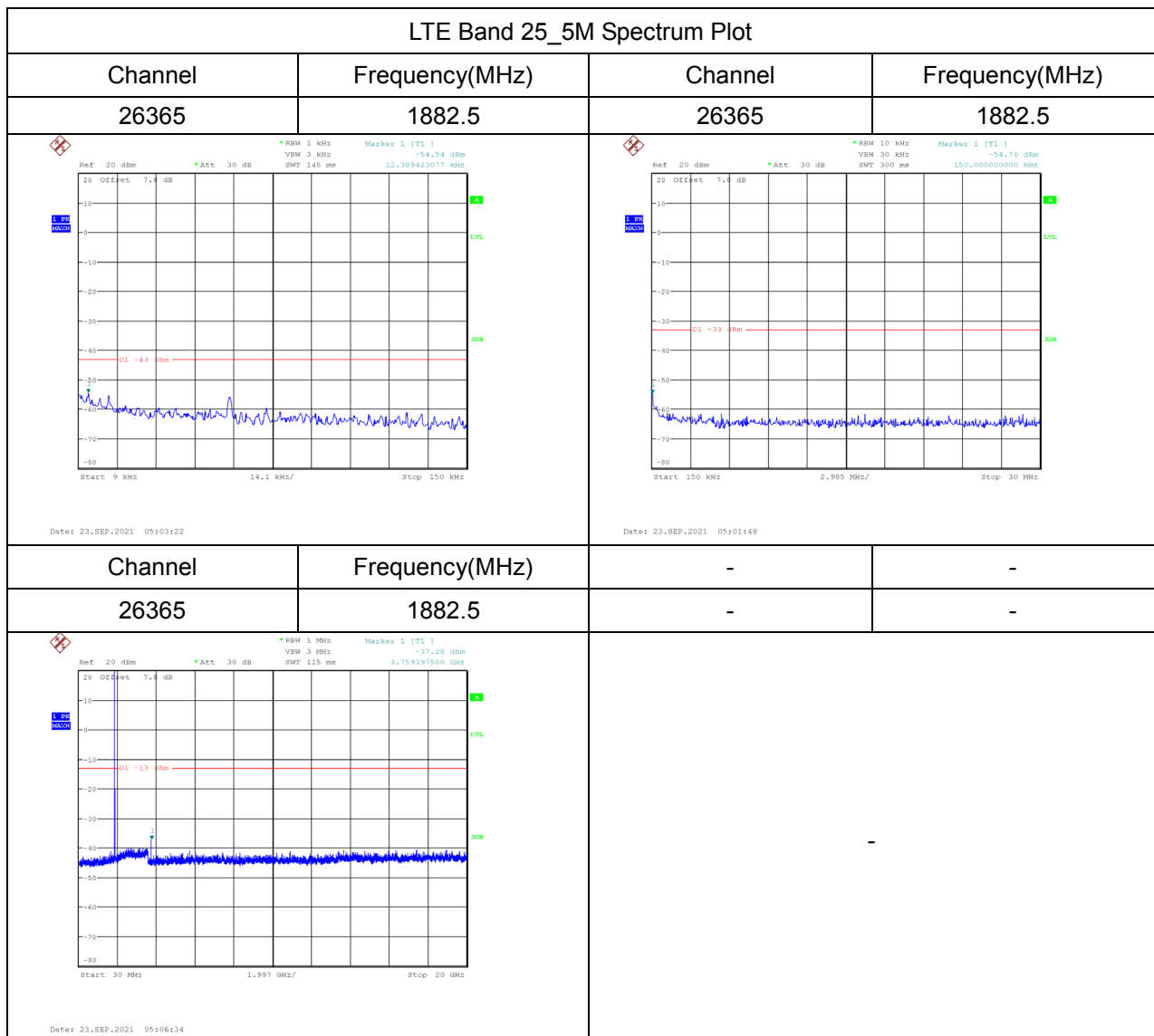


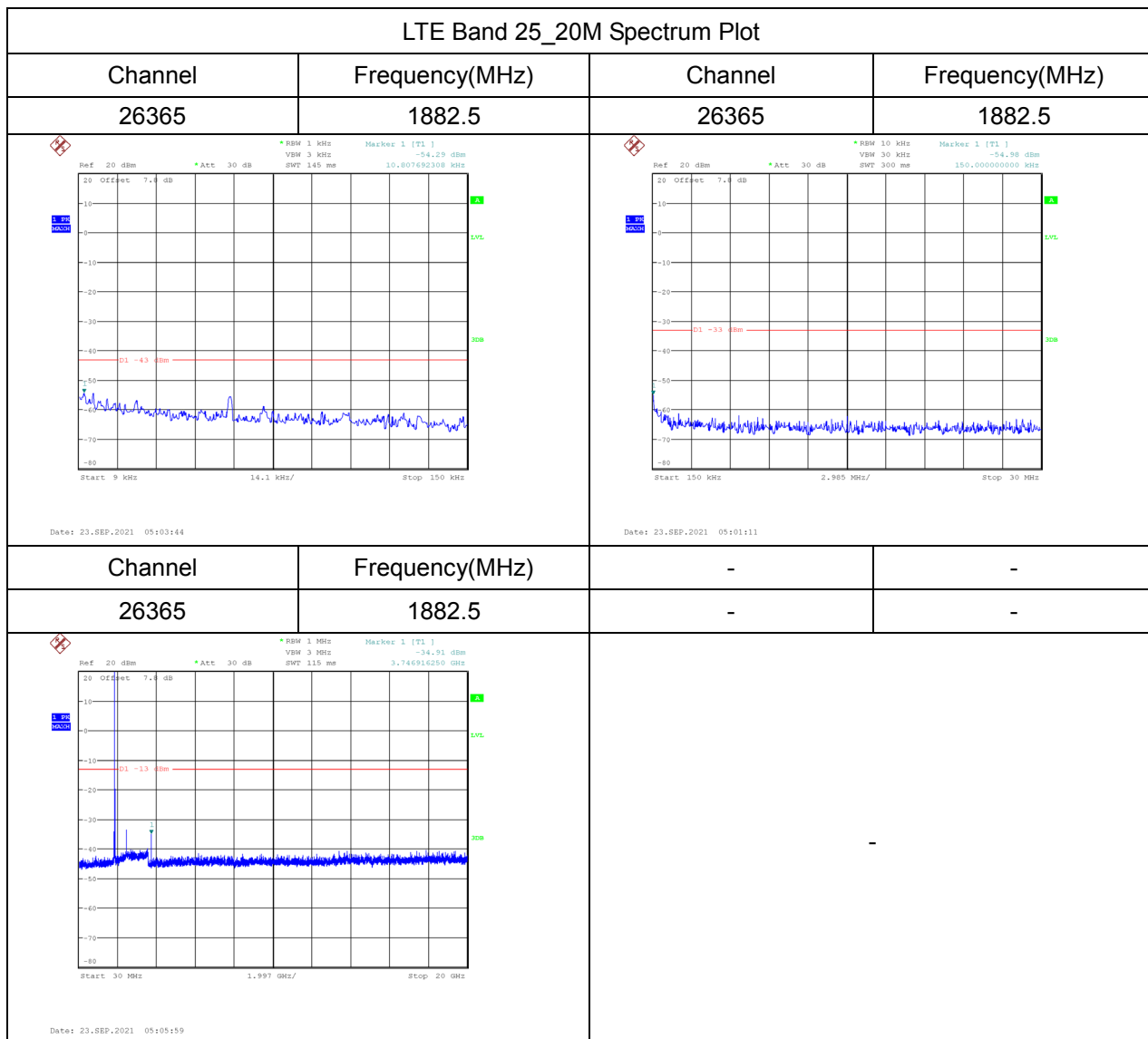
16QAM-26590



APPENDIX C - CONDUCTED SPURIOUS EMISSIONS



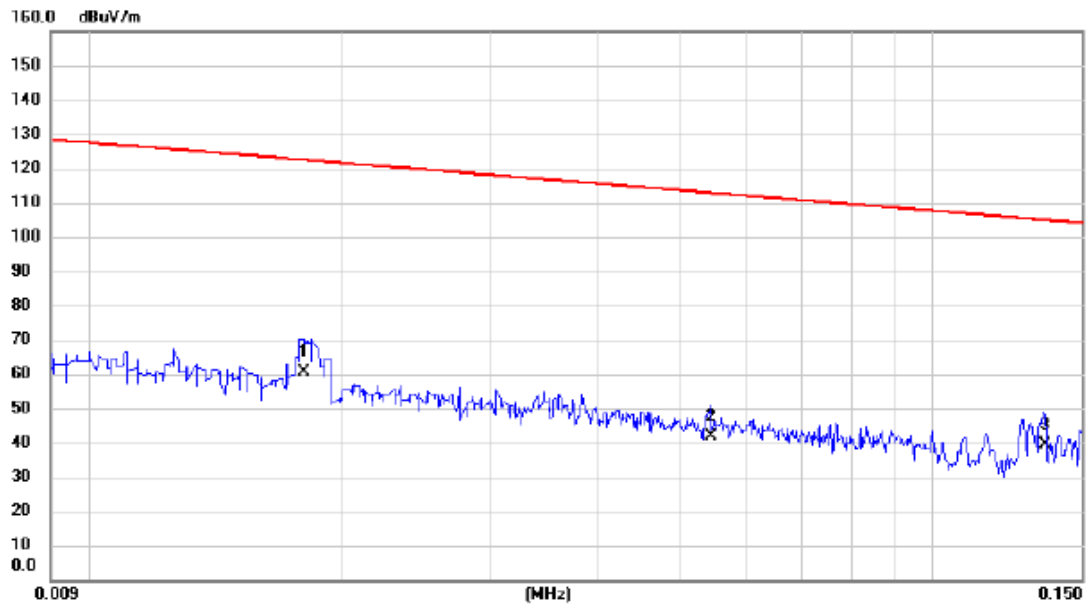




APPENDIX D - RADIATED SPURIOUS EMISSIONS (9KHZ TO 30MHZ)

Test Mode	TX Mode
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Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	0.0180	45.71	15.04	60.75	122.50	-61.75	AVG		
2		0.0545	27.95	13.72	41.67	112.88	-71.21	AVG		
3		0.1356	25.46	13.78	39.24	104.96	-65.72	AVG		

Test Mode	TX Mode
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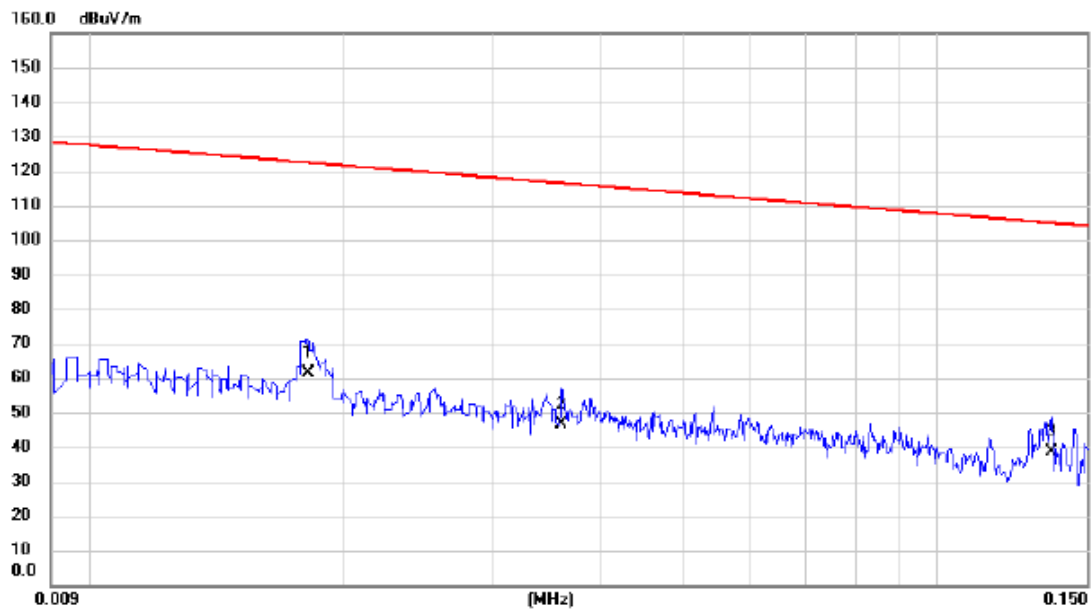
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.3852	37.67	13.64	51.31	95.89	-44.58	AVG		
2	*	2.1440	34.59	12.20	46.79	69.54	-22.75	QP		
3		3.1900	30.24	11.97	42.21	69.54	-27.33	QP		

Test Mode	TX Mode
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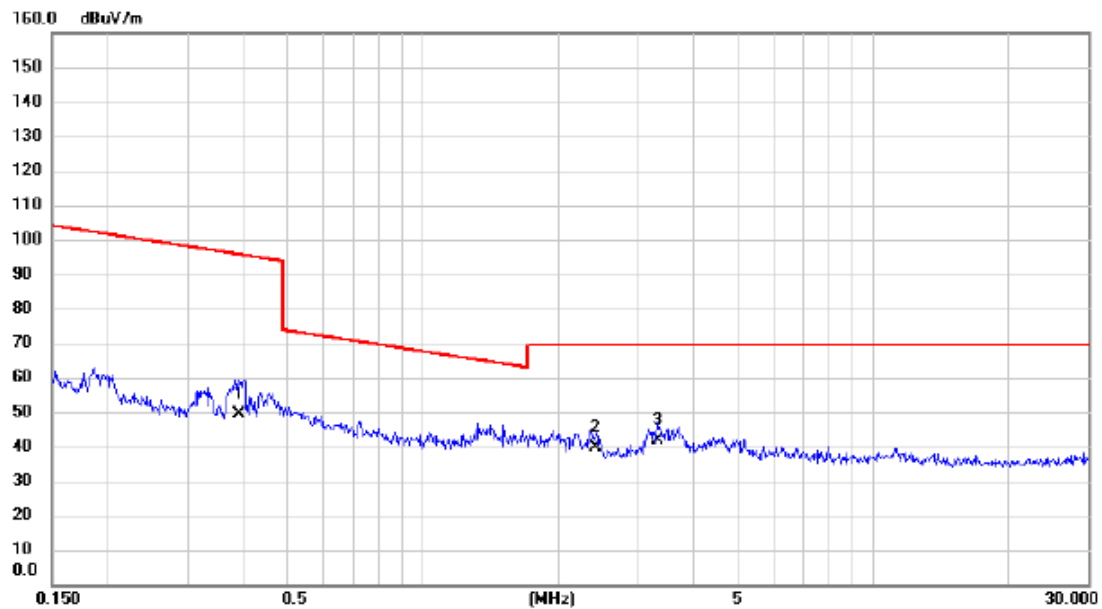
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	0.0181	46.32	15.01	61.33	122.45	-61.12	AVG		
2		0.0360	32.76	14.04	46.80	116.48	-69.68	AVG		
3		0.1363	24.85	13.77	38.62	104.92	-66.30	AVG		

Test Mode	TX Mode
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Ant 90°

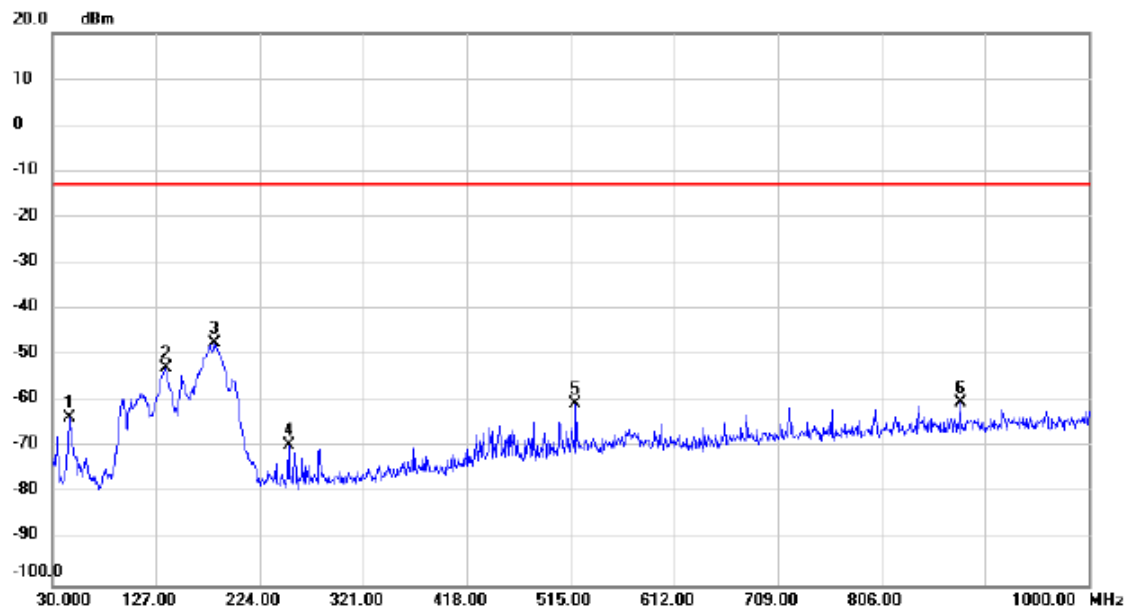


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.3914	35.68	13.64	49.32	95.75	-46.43	AVG		
2		2.4218	27.51	12.13	39.64	69.54	-29.90	QP		
3	*	3.3281	29.84	11.98	41.82	69.54	-27.72	QP		

APPENDIX E - RADIATED SPURIOUS EMISSIONS (30MHZ TO 1000MHZ)

Test Mode LTE Band 25_TX CH26365_1.4M

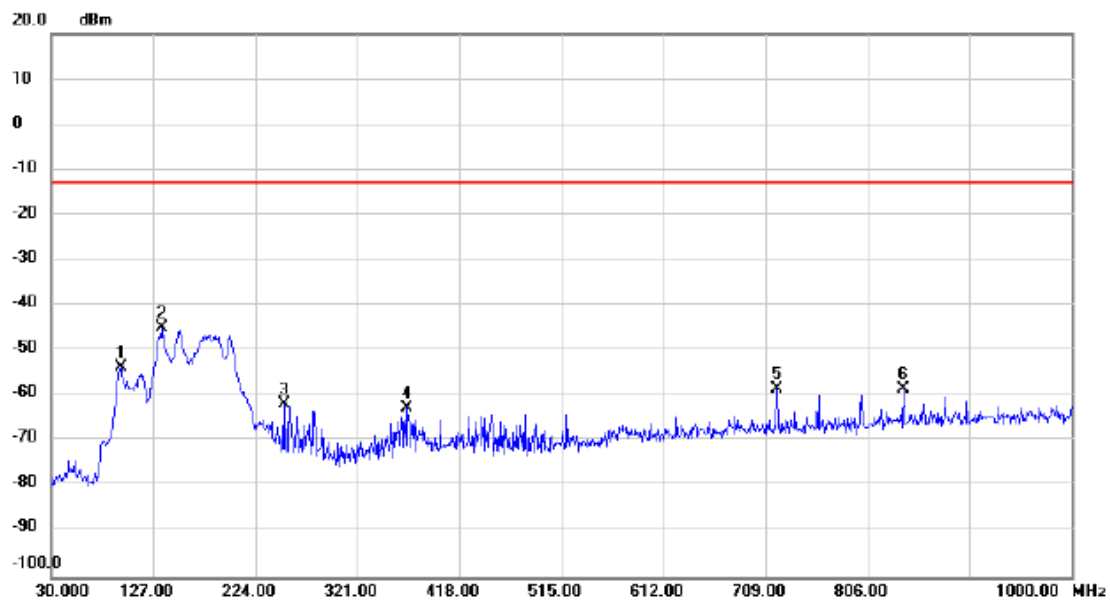
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		46.005	-49.67	-13.97	-63.64	-13.00	-50.64	peak	
2		136.215	-40.17	-12.63	-52.80	-13.00	-39.80	peak	
3	*	181.320	-34.38	-12.95	-47.33	-13.00	-34.33	peak	
4		251.645	-56.48	-13.13	-69.61	-13.00	-56.61	peak	
5		519.850	-53.58	-7.08	-60.66	-13.00	-47.66	peak	
6		880.205	-58.99	-1.39	-60.38	-13.00	-47.38	peak	

Test Mode	LTE Band 25_TX CH26365_1.4M
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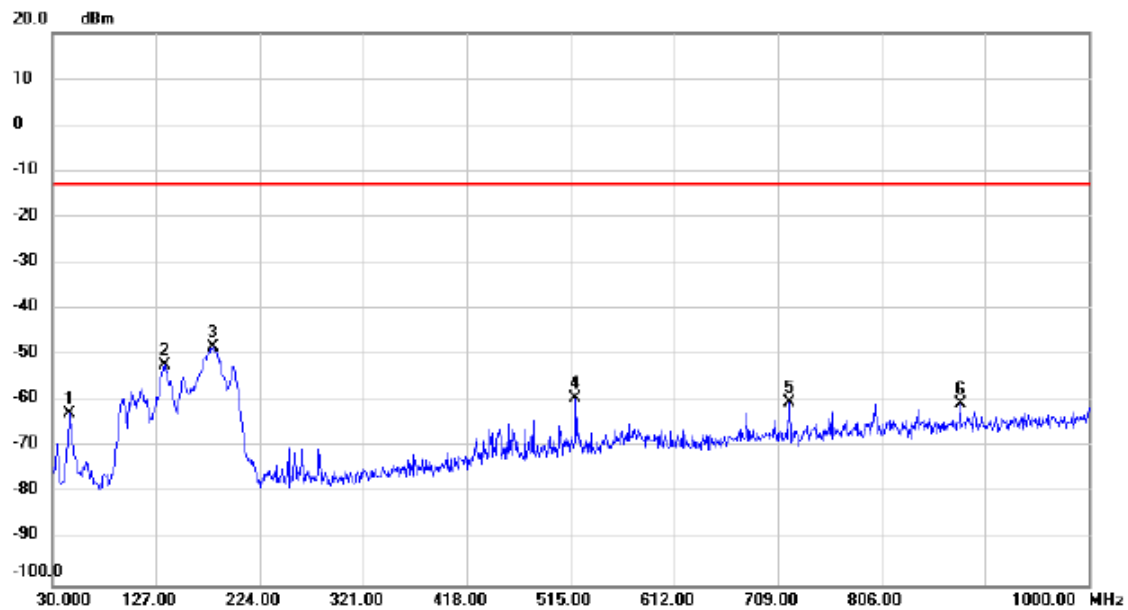
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
	MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	95.960	-38.44	-15.20	-53.64	-13.00	-40.64	peak	
2 *	135.245	-32.26	-12.65	-44.91	-13.00	-31.91	peak	
3	251.645	-48.67	-13.13	-61.80	-13.00	-48.80	peak	
4	368.530	-52.96	-9.76	-62.72	-13.00	-49.72	peak	
5	720.155	-54.92	-3.43	-58.35	-13.00	-45.35	peak	
6	839.950	-56.62	-1.90	-58.52	-13.00	-45.52	peak	

Test Mode LTE Band 25_TX CH26365_5M

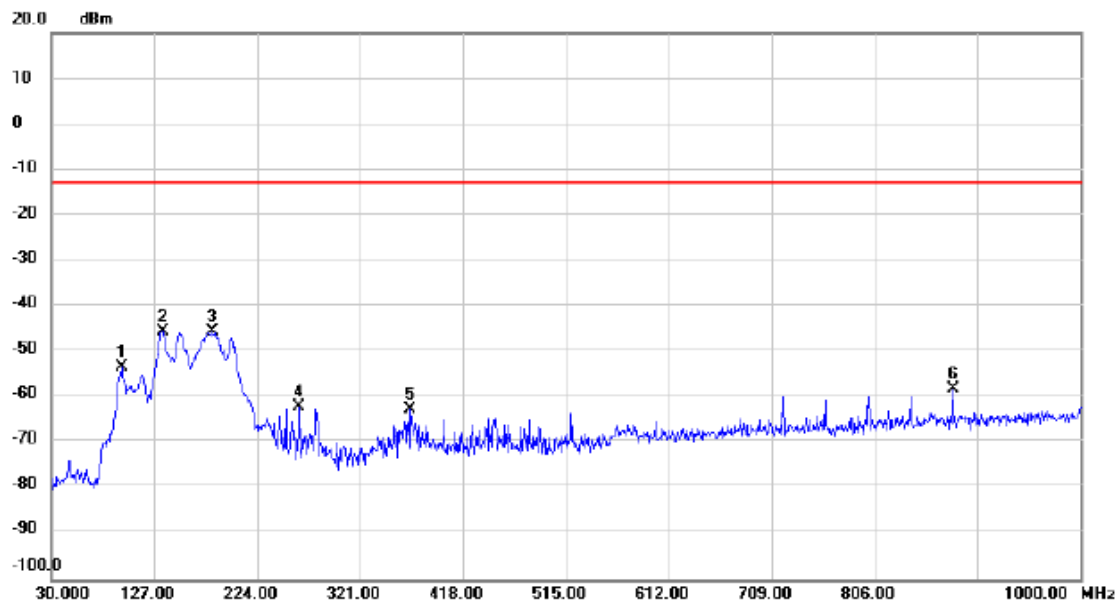
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		46.490	-48.75	-13.97	-62.72	-13.00	-49.72	peak	
2		134.760	-39.42	-12.65	-52.07	-13.00	-39.07	peak	
3	*	180.350	-35.48	-12.83	-48.31	-13.00	-35.31	peak	
4		519.850	-52.33	-7.08	-59.41	-13.00	-46.41	peak	
5		720.155	-56.86	-3.43	-60.29	-13.00	-47.29	peak	
6		880.205	-59.10	-1.39	-60.49	-13.00	-47.49	peak	

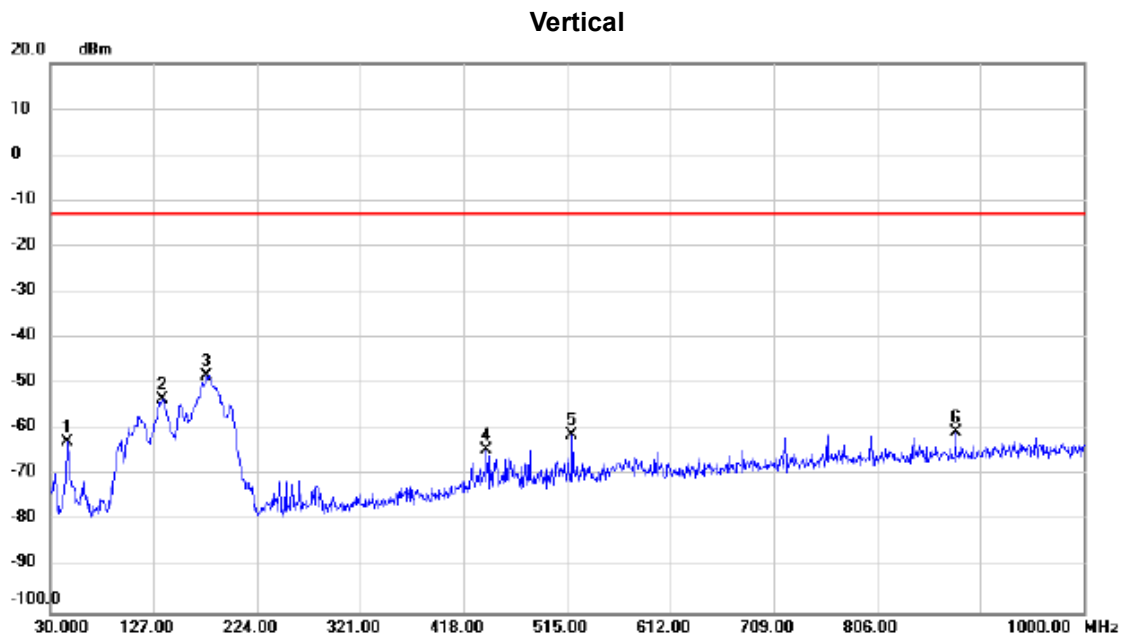
Test Mode LTE Band 25_TX CH26365_5M

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		95.960	-38.22	-15.20	-53.42	-13.00	-40.42	peak	
2	*	134.760	-32.84	-12.65	-45.49	-13.00	-32.49	peak	
3		182.290	-32.59	-13.09	-45.68	-13.00	-32.68	peak	
4		263.770	-49.79	-12.38	-62.17	-13.00	-49.17	peak	
5		368.530	-52.91	-9.76	-62.67	-13.00	-49.67	peak	
6		879.720	-56.65	-1.39	-58.04	-13.00	-45.04	peak	

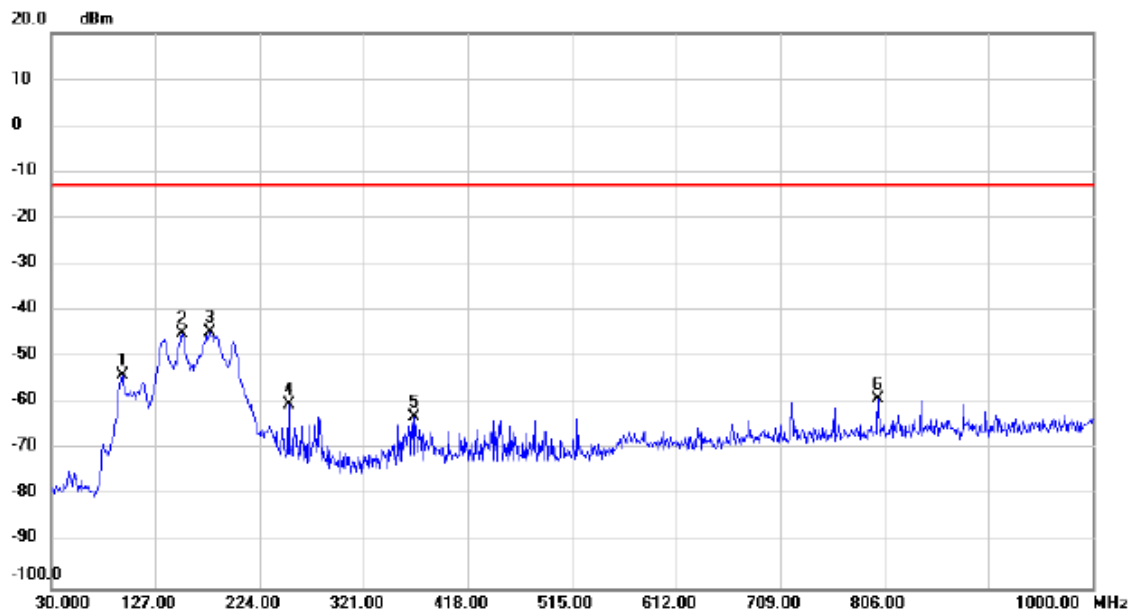
Test Mode LTE Band 25_TX CH26365_20M



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		46.490	-48.61	-13.97	-62.58	-13.00	-49.58	peak	
2		135.730	-40.63	-12.63	-53.26	-13.00	-40.26	peak	
3	*	176.955	-35.64	-12.58	-48.22	-13.00	-35.22	peak	
4		439.825	-56.69	-7.91	-64.60	-13.00	-51.60	peak	
5		519.850	-54.21	-7.08	-61.29	-13.00	-48.29	peak	
6		880.205	-59.14	-1.39	-60.53	-13.00	-47.53	peak	

Test Mode LTE Band 25_TX CH26365_20M

Horizontal

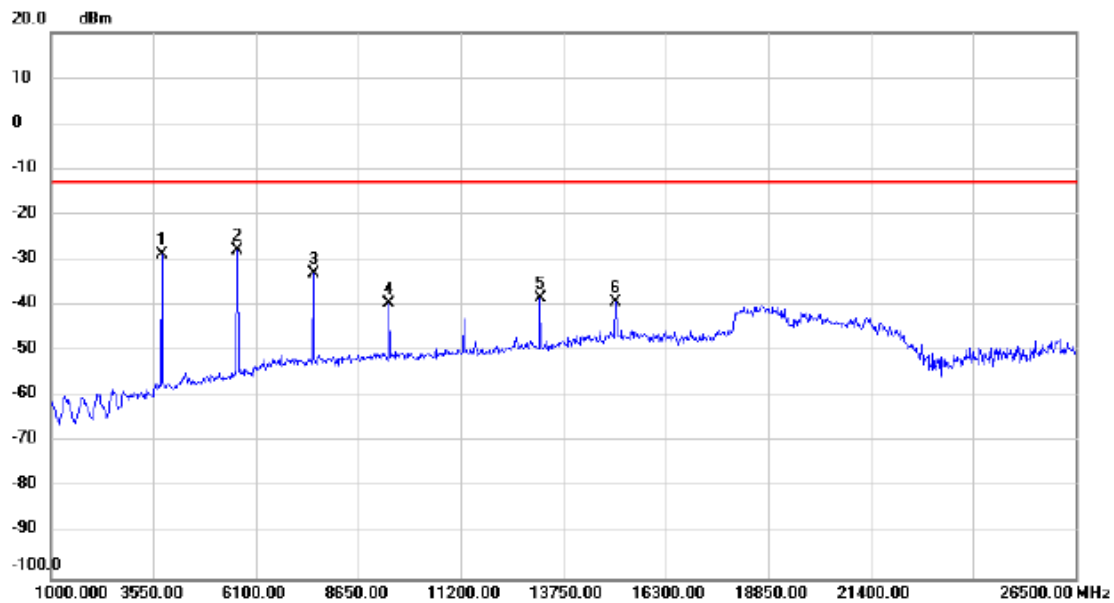


No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1	96.445	-38.78	-15.17	-53.95	-13.00	-40.95	peak	
2	152.220	-33.33	-11.67	-45.00	-13.00	-32.00	peak	
3 *	177.925	-32.12	-12.63	-44.75	-13.00	-31.75	peak	
4	251.645	-47.20	-13.13	-60.33	-13.00	-47.33	peak	
5	368.530	-53.33	-9.76	-63.09	-13.00	-50.09	peak	
6	800.180	-56.55	-2.53	-59.08	-13.00	-46.08	peak	

APPENDIX F - RADIATED SPURIOUS EMISSIONS (ABOVE 1000MHZ)

Test Mode	LTE Band 25_TX CH26365_1.4M
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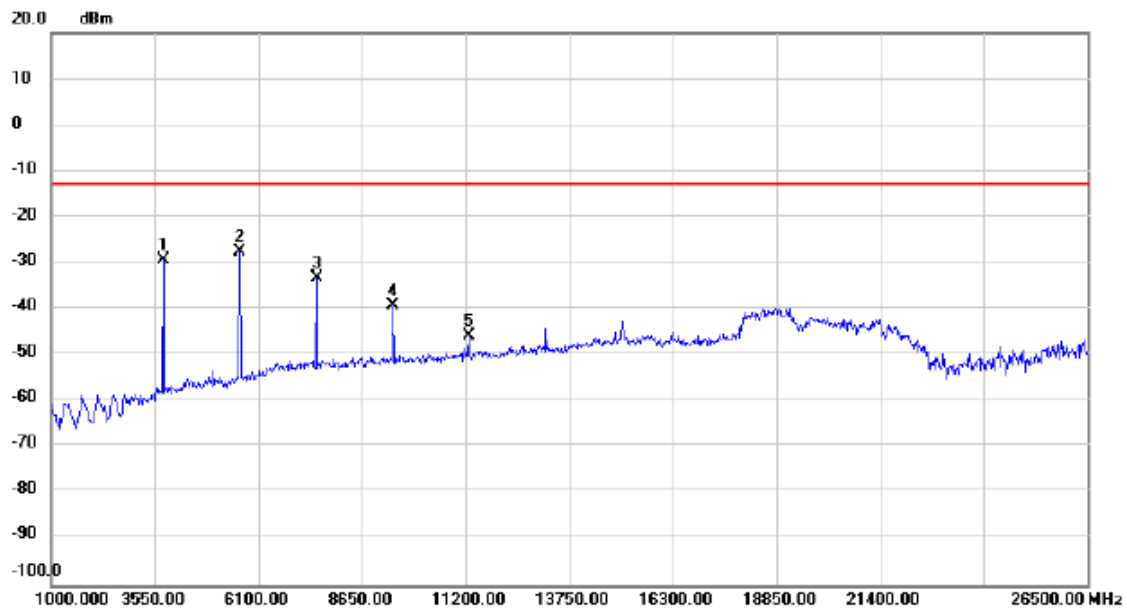
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3766.750	-31.03	2.33	-28.70	-13.00	-15.70	peak	
2	*	5641.000	-34.62	6.75	-27.87	-13.00	-14.87	peak	
3		7528.000	-43.99	10.93	-33.06	-13.00	-20.06	peak	
4		9415.000	-51.58	12.07	-39.51	-13.00	-26.51	peak	
5		13176.250	-55.22	16.93	-38.29	-13.00	-25.29	peak	
6		15050.500	-57.31	18.11	-39.20	-13.00	-26.20	peak	

Test Mode	LTE Band 25_TX CH26365_1.4M
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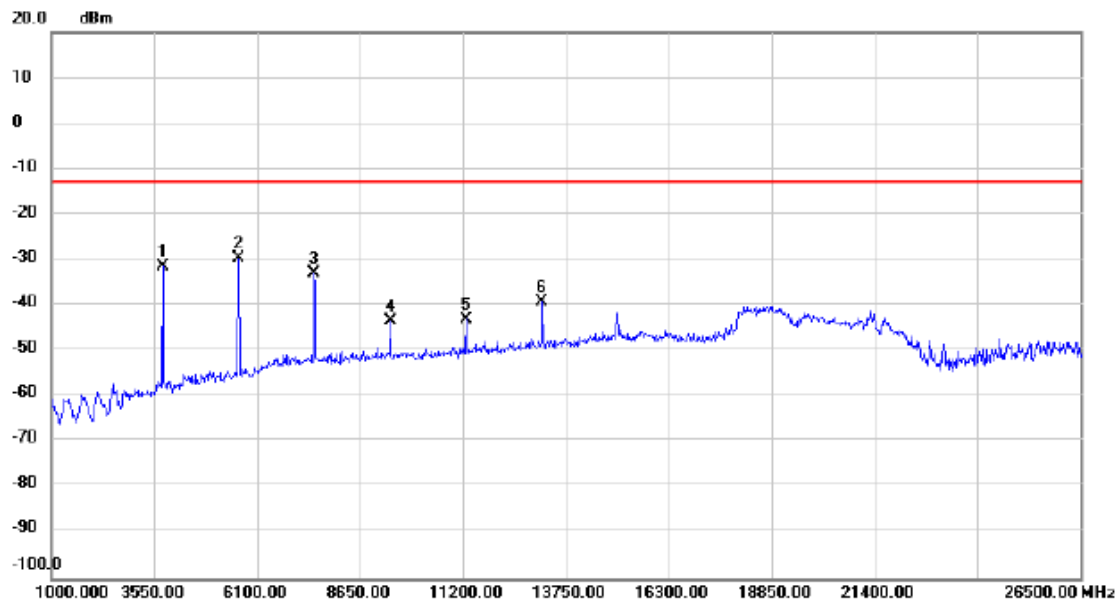
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3766.750	-31.71	2.33	-29.38	-13.00	-16.38	peak	
2	*	5641.000	-34.26	6.75	-27.51	-13.00	-14.51	peak	
3		7528.000	-44.17	10.93	-33.24	-13.00	-20.24	peak	
4		9415.000	-51.35	12.07	-39.28	-13.00	-26.28	peak	
5		11289.250	-60.12	14.28	-45.84	-13.00	-32.84	peak	

Test Mode LTE Band 25_TX CH26365_5M

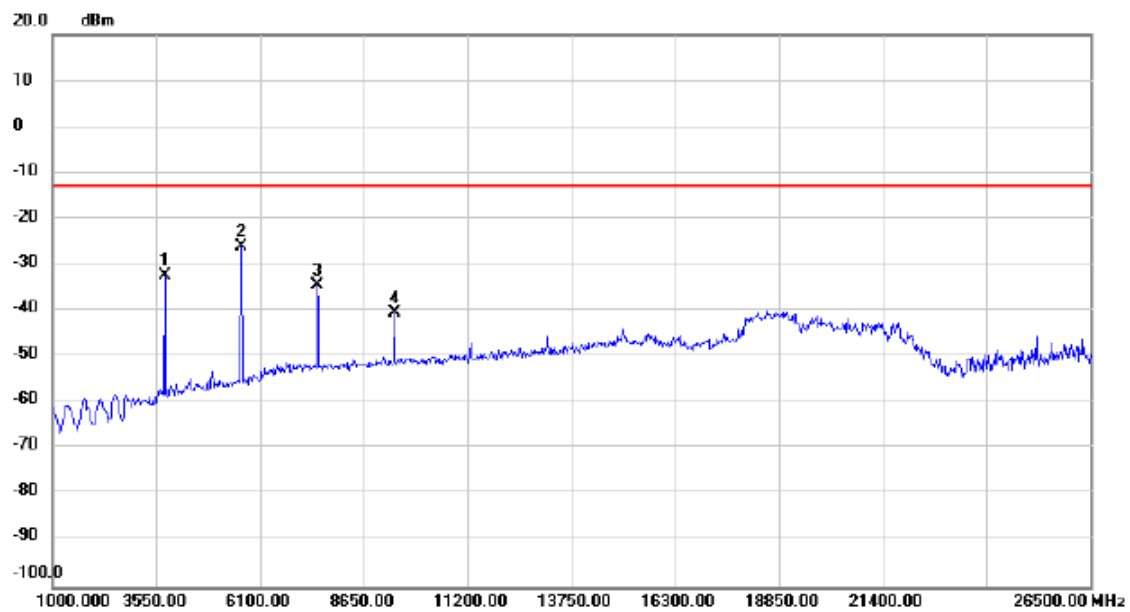
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3766.750	-33.91	2.33	-31.58	-13.00	-18.58	peak	
2	*	5641.000	-36.50	6.75	-29.75	-13.00	-16.75	peak	
3		7515.250	-43.78	10.94	-32.84	-13.00	-19.84	peak	
4		9402.250	-55.63	12.06	-43.57	-13.00	-30.57	peak	
5		11276.500	-57.26	14.26	-43.00	-13.00	-30.00	peak	
6		13163.500	-56.06	16.91	-39.15	-13.00	-26.15	peak	

Test Mode LTE Band 25_TX CH26365_5M

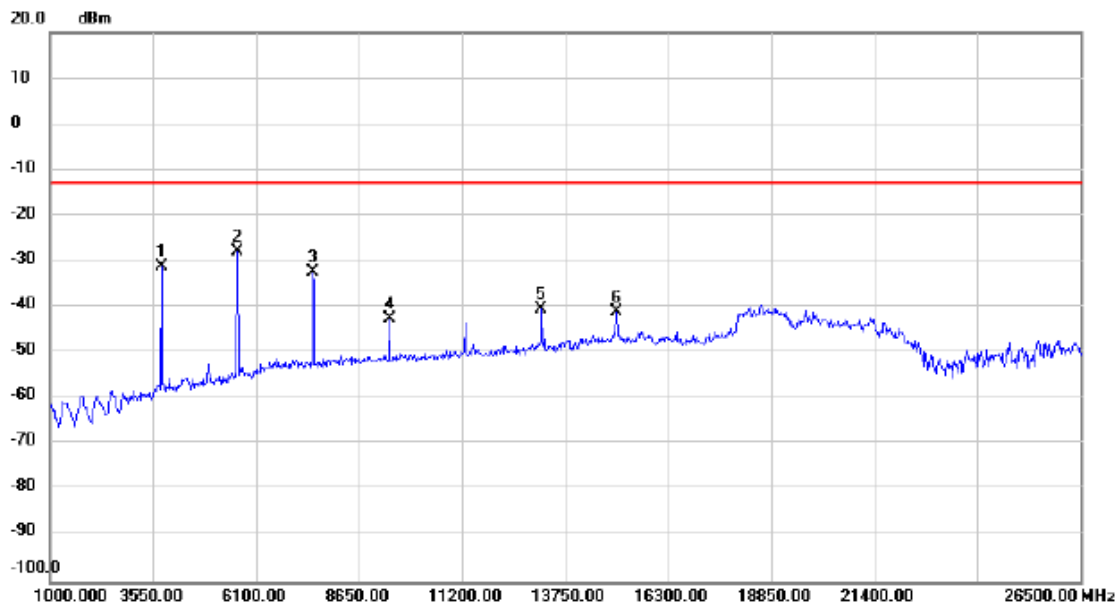
Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1	3766.750	-34.76	2.33	-32.43	-13.00	-19.43	peak	
2 *	5641.000	-32.76	6.75	-26.01	-13.00	-13.01	peak	
3	7515.250	-45.34	10.94	-34.40	-13.00	-21.40	peak	
4	9402.250	-52.42	12.06	-40.36	-13.00	-27.36	peak	

Test Mode LTE Band 25_TX CH26365_20M

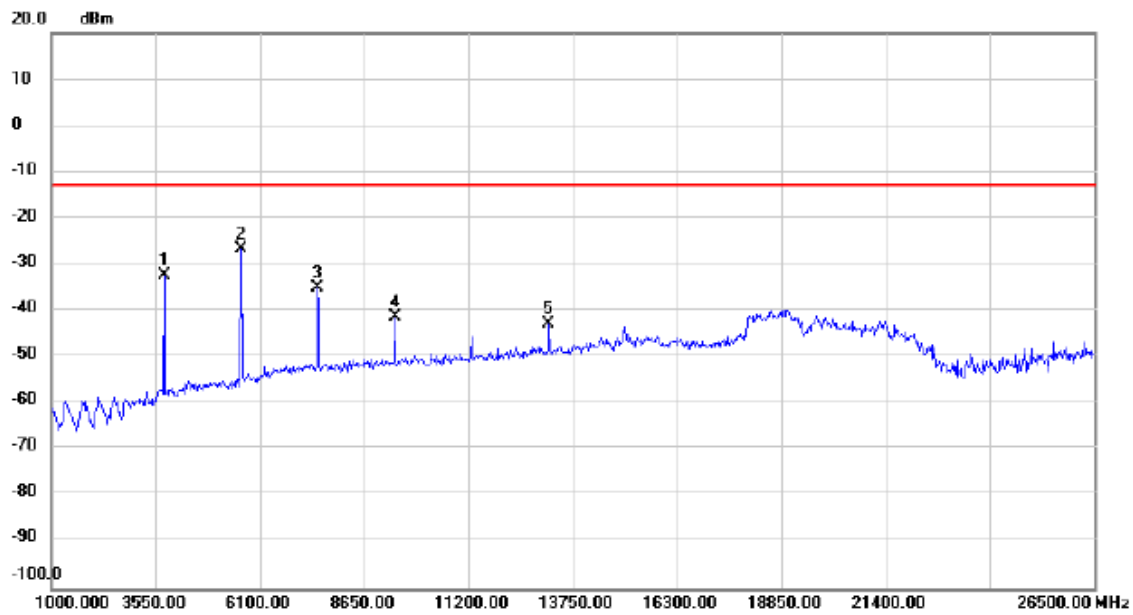
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3766.750	-33.59	2.33	-31.26	-13.00	-18.26	peak	
2	*	5641.000	-34.65	6.75	-27.90	-13.00	-14.90	peak	
3		7515.250	-43.30	10.94	-32.36	-13.00	-19.36	peak	
4		9402.250	-54.68	12.06	-42.62	-13.00	-29.62	peak	
5		13163.500	-57.45	16.91	-40.54	-13.00	-27.54	peak	
6		15037.750	-59.16	18.18	-40.98	-13.00	-27.98	peak	

Test Mode LTE Band 25_TX CH26365_20M

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3766.750	-34.57	2.33	-32.24	-13.00	-19.24	peak	
2	*	5641.000	-33.52	6.75	-26.77	-13.00	-13.77	peak	
3		7515.250	-46.05	10.94	-35.11	-13.00	-22.11	peak	
4		9402.250	-53.29	12.06	-41.23	-13.00	-28.23	peak	
5		13163.500	-59.67	16.91	-42.76	-13.00	-29.76	peak	

APPENDIX G - BAND EDGE

LTE Band 25_1.4M_QPSK Spectrum Plot

1RB#0

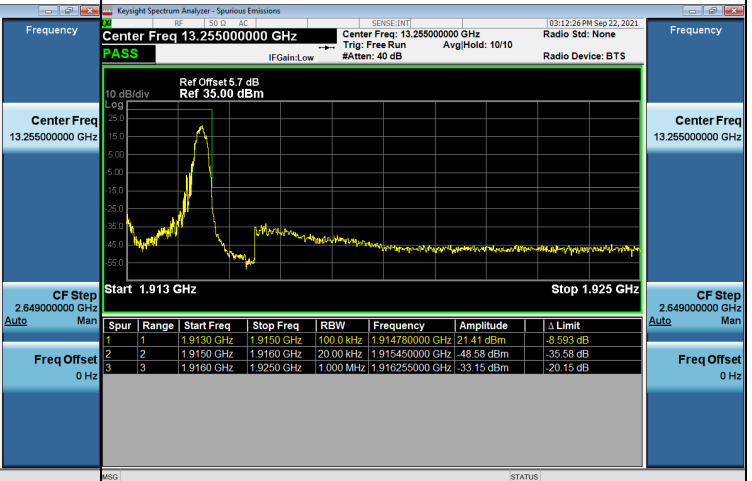
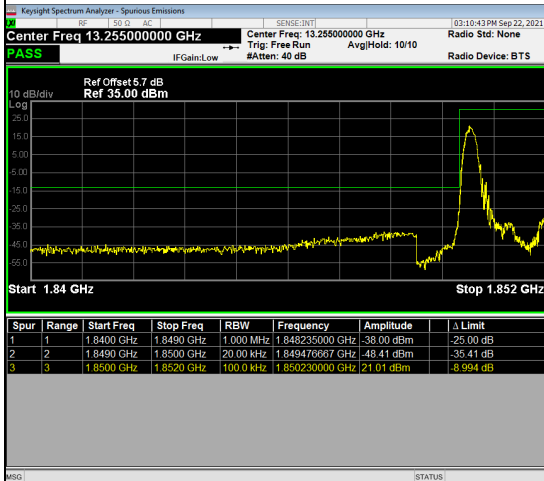
1RB#5

Channel

26047

Channel

26683



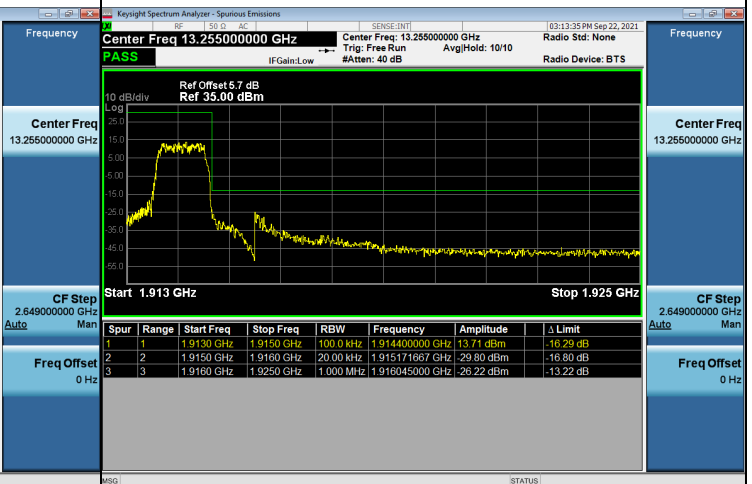
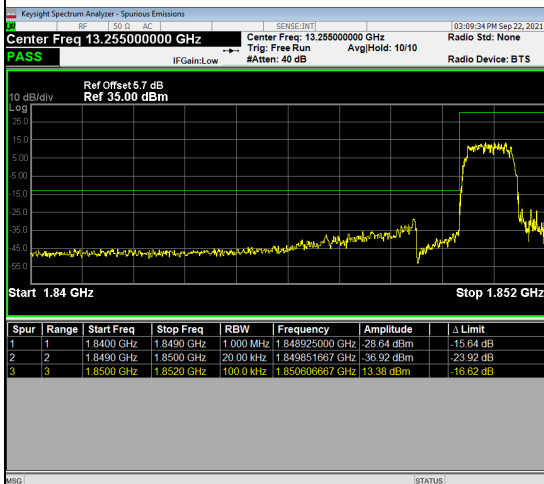
6RB#0

Channel

26047

Channel

26683



LTE Band 25_3M_QPSK Spectrum Plot

1RB#0

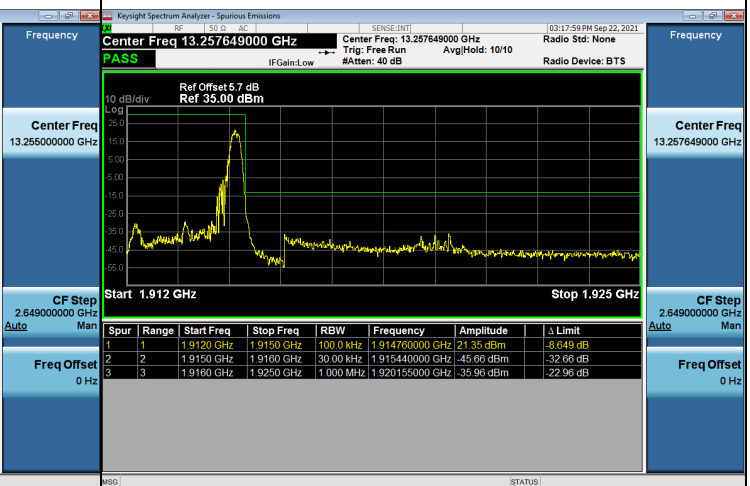
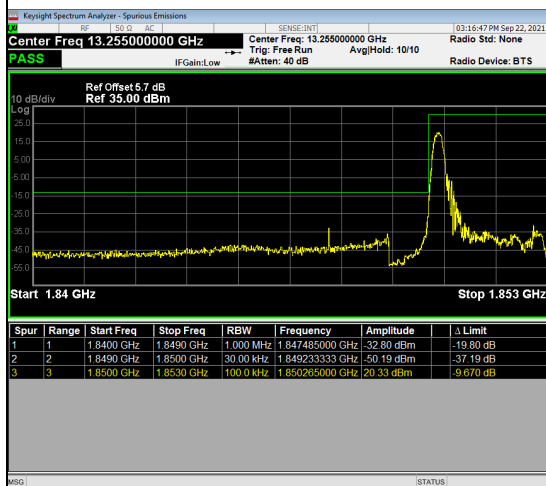
1RB#14

Channel

26055

Channel

26675



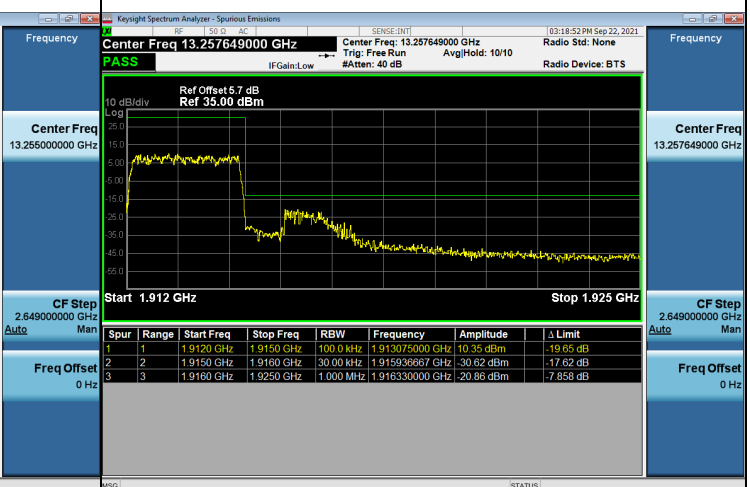
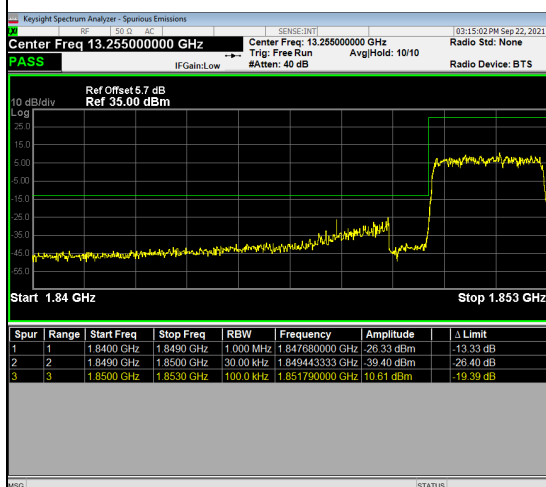
15RB#0

Channel

26055

Channel

26675



LTE Band 25_5M_QPSK Spectrum Plot

1RB#0

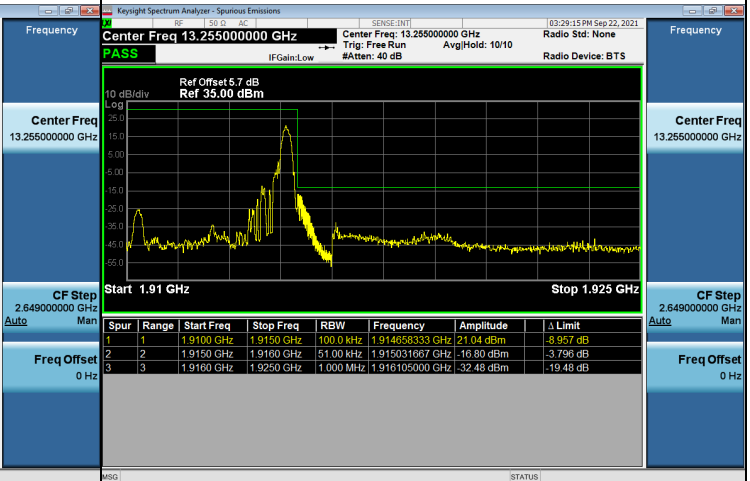
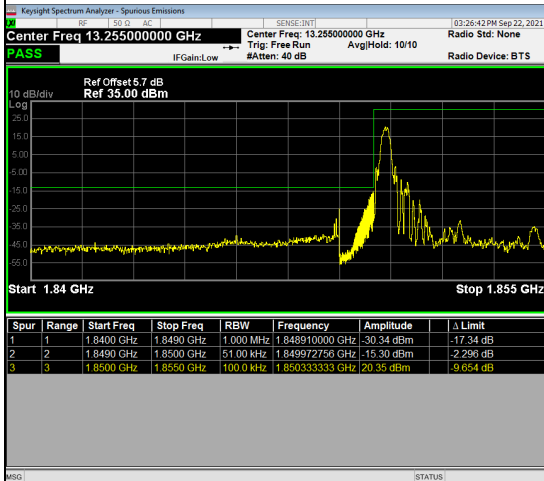
1RB#24

Channel

26065

Channel

26665



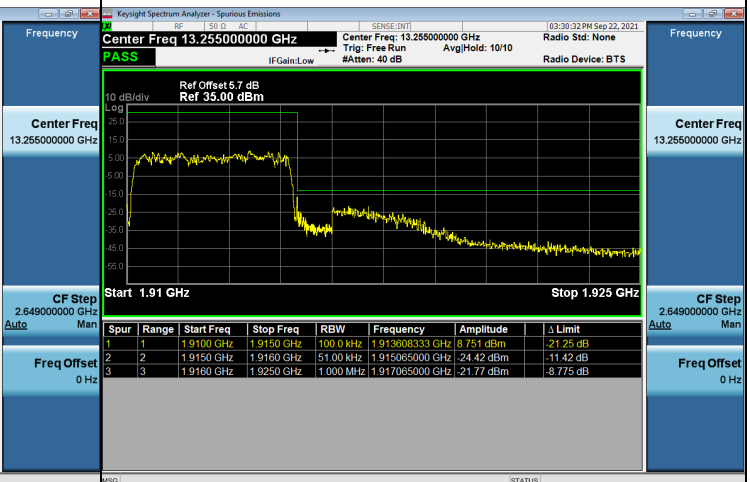
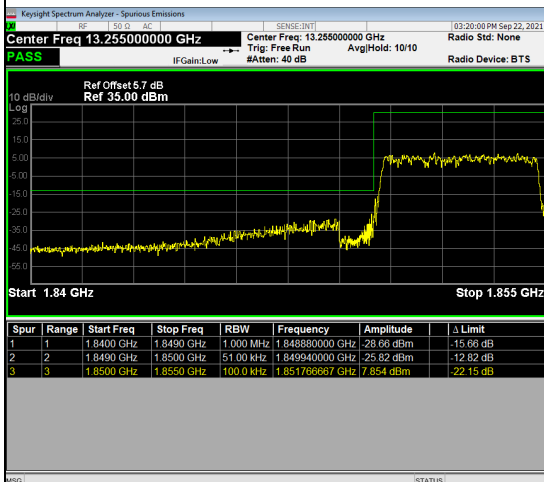
25RB#0

Channel

26065

Channel

26665



LTE Band 25_10M_QPSK Spectrum Plot

1RB#0

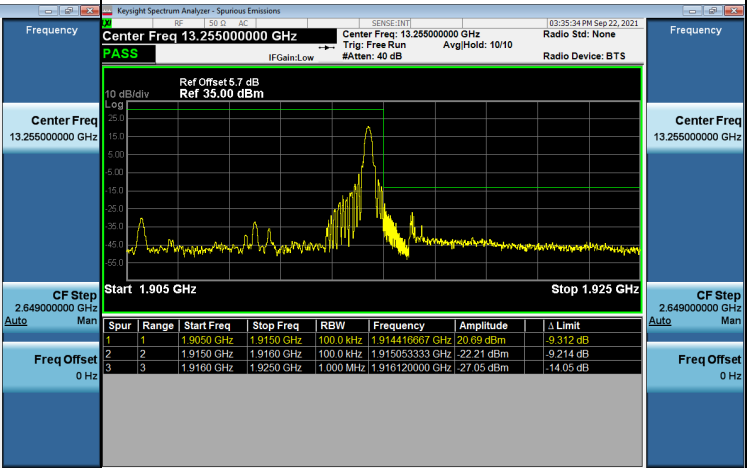
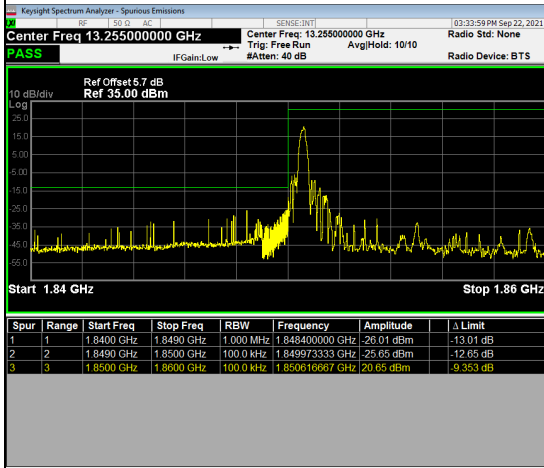
1RB#49

Channel

26090

Channel

26640



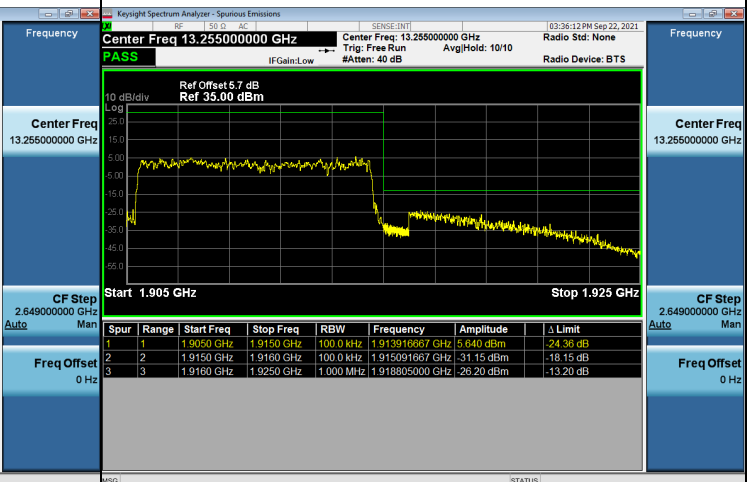
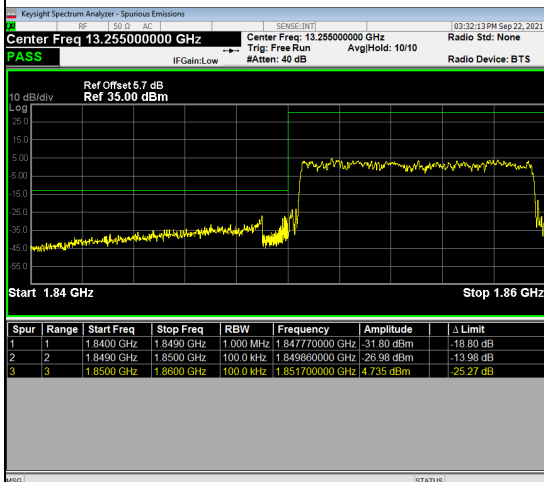
50RB#0

Channel

26090

Channel

26640



LTE Band 25_15M_QPSK Spectrum Plot

1RB#0

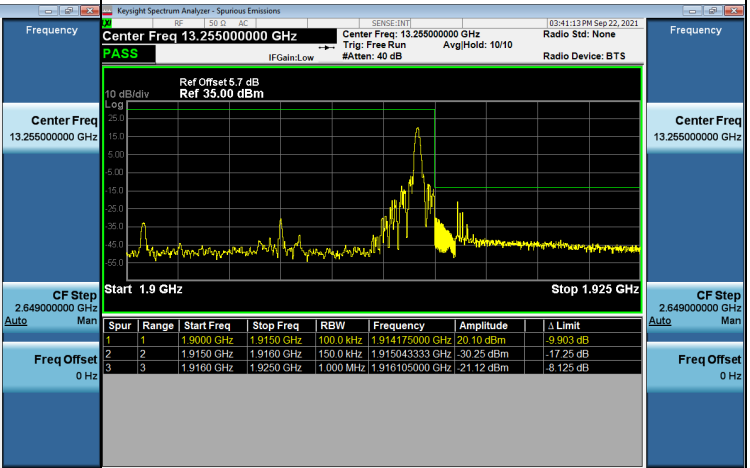
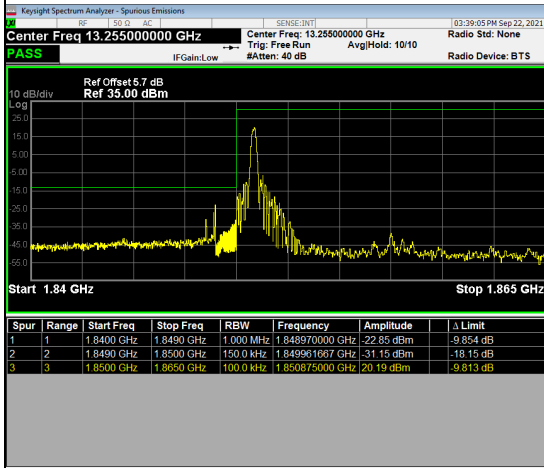
1RB#74

Channel

26115

Channel

26615



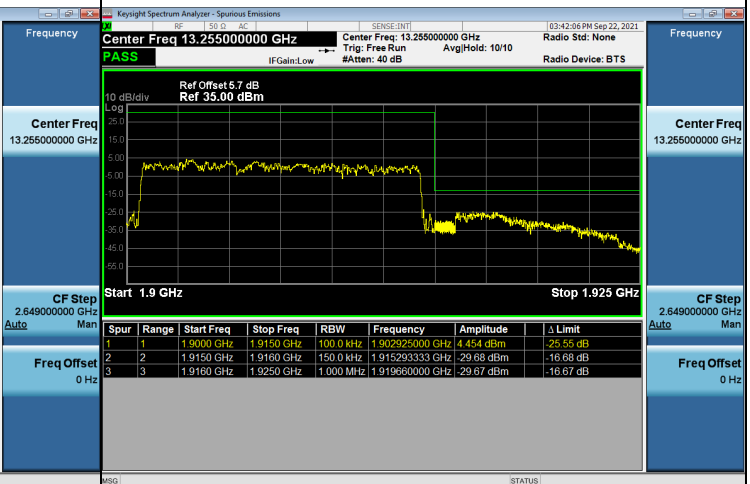
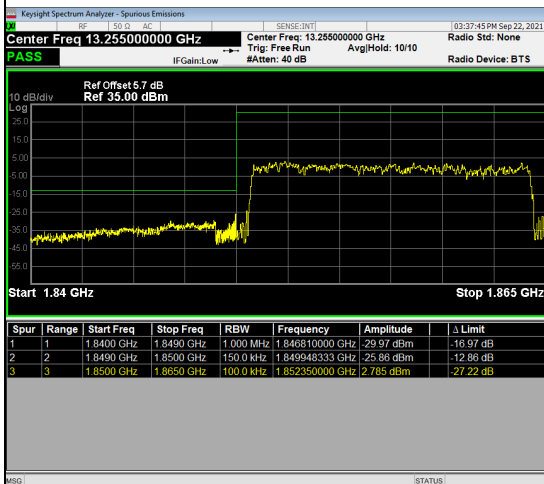
75RB#0

Channel

26115

Channel

26615



LTE Band 25_20M_QPSK Spectrum Plot

1RB#0

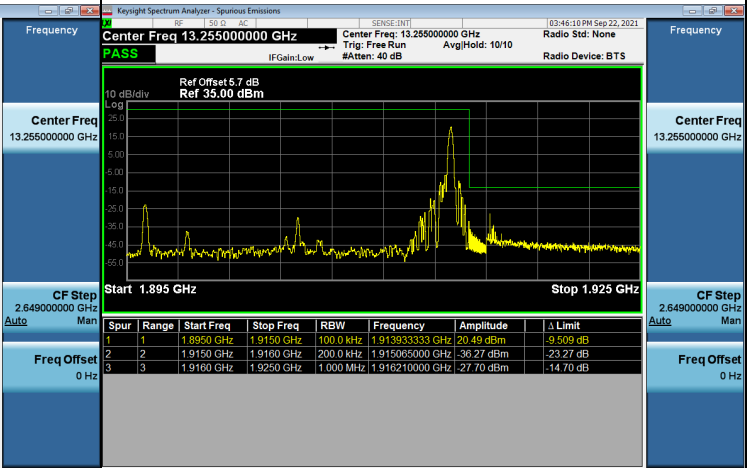
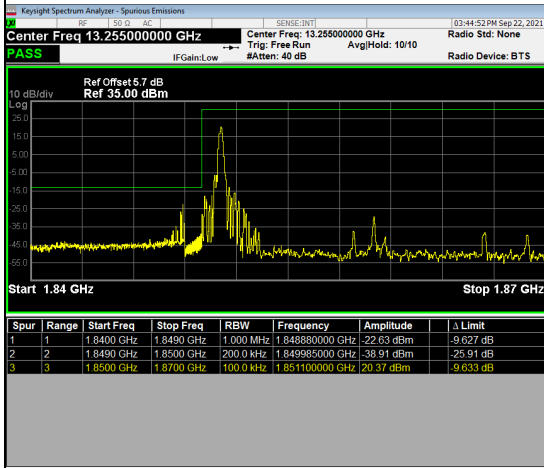
1RB#99

Channel

26140

Channel

26590



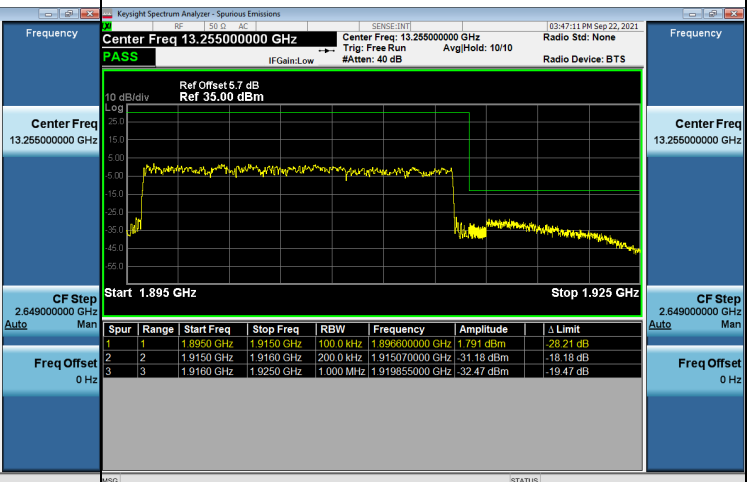
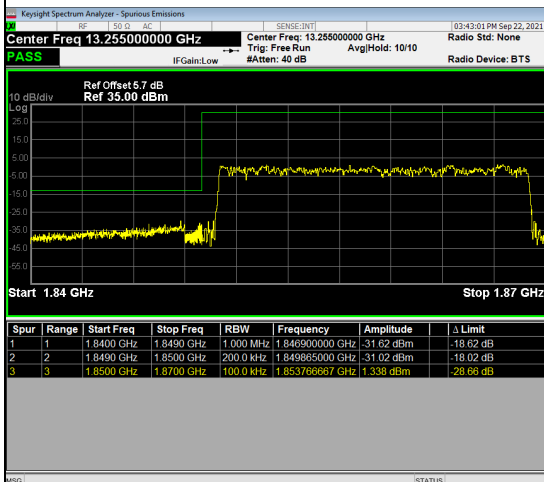
100RB#0

Channel

26140

Channel

26590



LTE Band 25_5M_16QAM Spectrum Plot

1RB#0

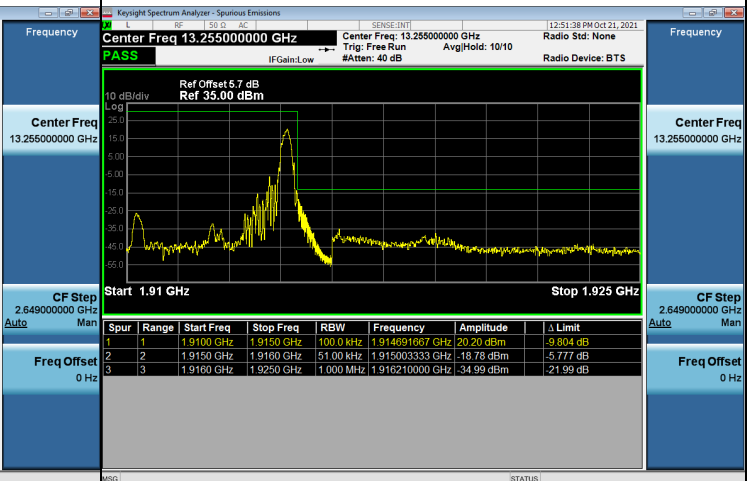
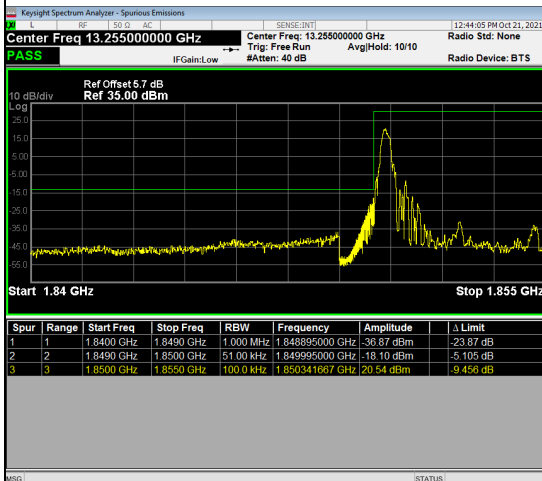
1RB#24

Channel

26065

Channel

26665



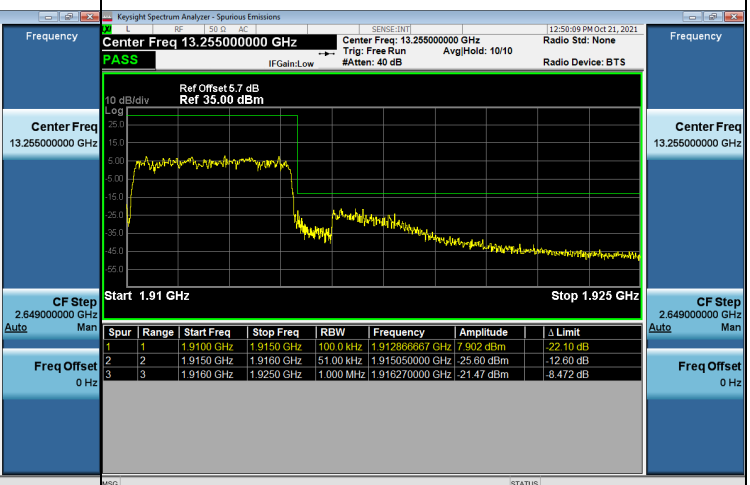
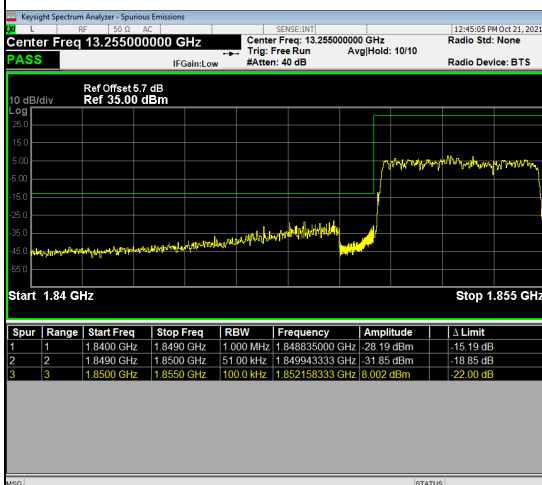
25RB#0

Channel

26065

Channel

26665

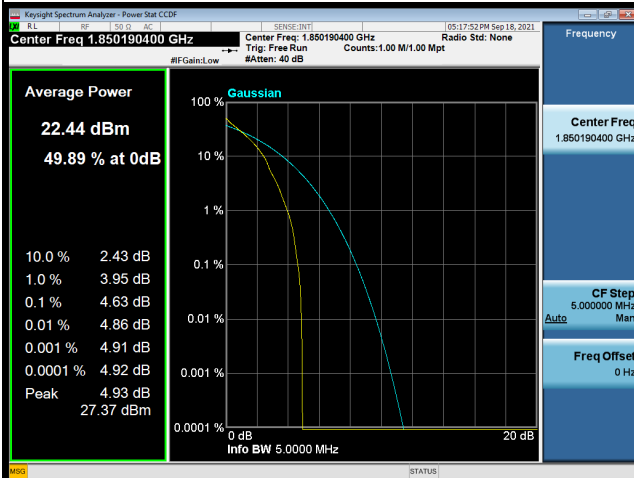


APPENDIX H - PEAK TO AVERAGE RATIO

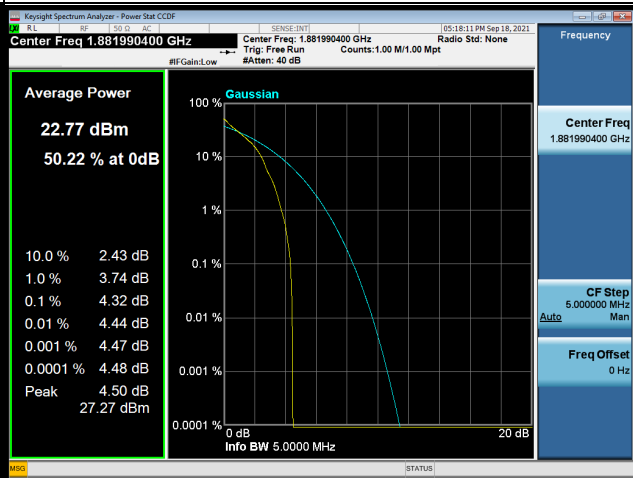
LTE Band 25_1.4M				
QPSK				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26047	1850.7	4.63	13	Pass
26365	1882.5	4.32	13	Pass
26683	1914.3	4.30	13	Pass
16QAM				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26047	1850.7	5.51	13	Pass
26365	1882.5	5.48	13	Pass
26683	1914.3	5.02	13	Pass

LTE Band 25_1.4M Spectrum Plot

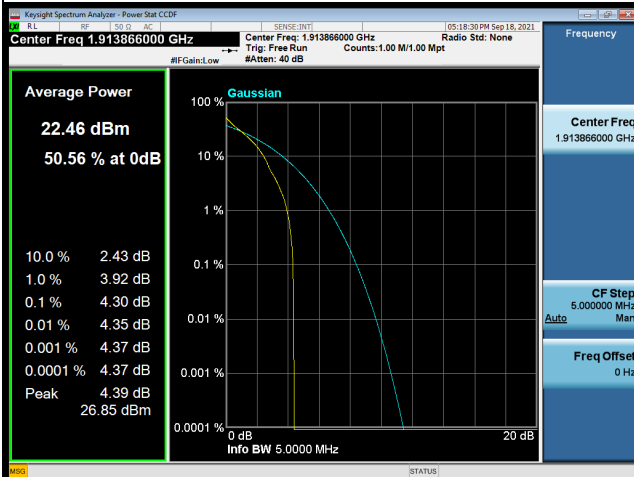
QPSK-26047



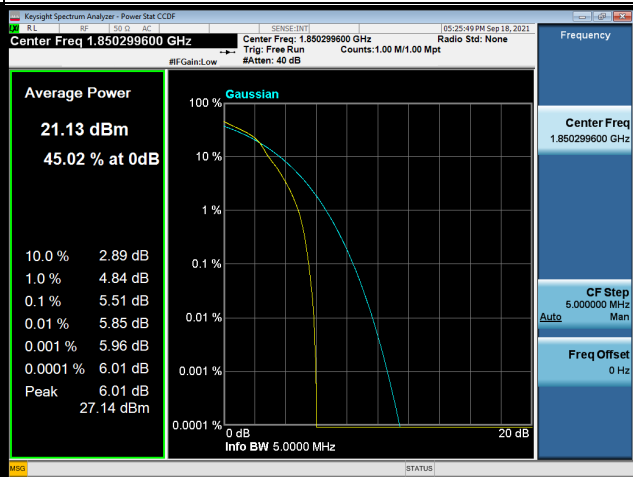
QPSK-26365



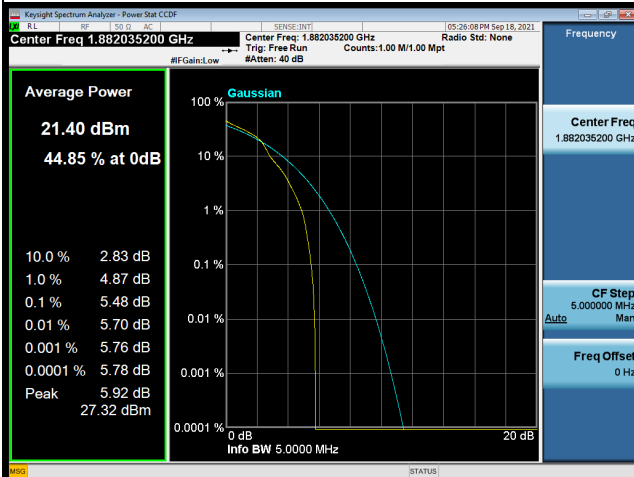
QPSK-26683



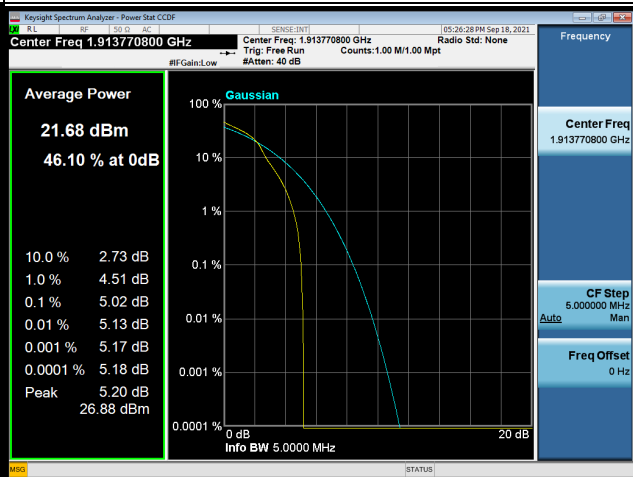
16QAM-26047



16QAM-26365



16QAM-26683



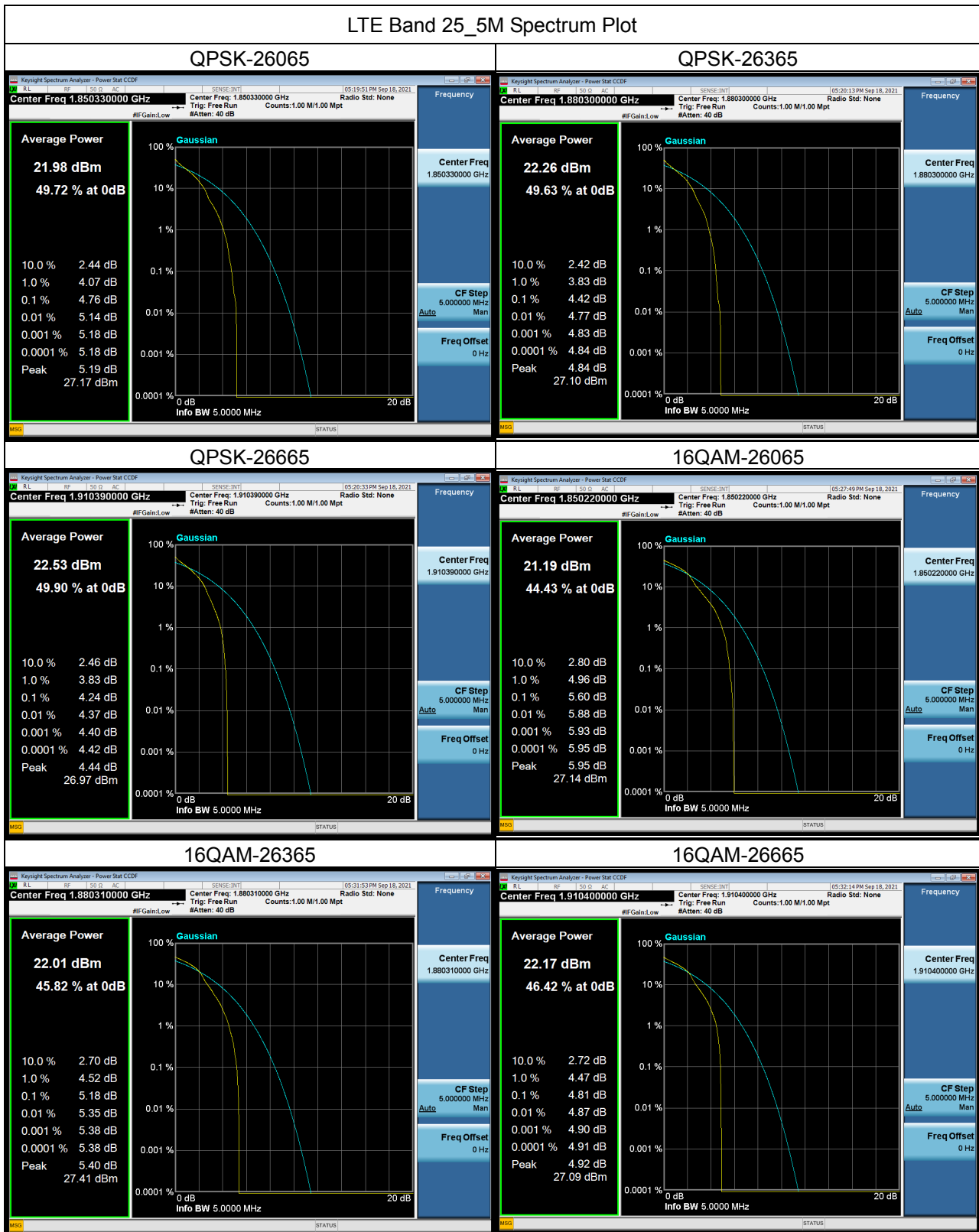
LTE Band 25_3M				
QPSK				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26055	1851.5	4.73	13	Pass
26365	1882.5	4.50	13	Pass
26675	1913.5	4.24	13	Pass
16QAM				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26055	1851.5	5.64	13	Pass
26365	1882.5	5.42	13	Pass
26675	1913.5	5.01	13	Pass

LTE Band 25_3M Spectrum Plot



LTE Band 25_5M				
QPSK				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26065	1852.5	4.76	13	Pass
26365	1882.5	4.42	13	Pass
26665	1912.5	4.24	13	Pass
16QAM				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26065	1852.5	5.60	13	Pass
26365	1882.5	5.18	13	Pass
26665	1912.5	4.81	13	Pass

LTE Band 25_5M Spectrum Plot



LTE Band 25_10M				
QPSK				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26090	1855	4.71	13	Pass
26365	1882.5	4.55	13	Pass
26640	1910	3.87	13	Pass
16QAM				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	Max. Limit (dB)	Result
26090	1855	5.43	13	Pass
26365	1882.5	5.09	13	Pass
26640	1910	4.82	13	Pass