



RF TEST REPORT

Report No.: 20231017G14173X-W9

Product Name: Mobile Data terminal

Main Model No.: DT50

Serial Model No.:

DT50A, DT50B, DT50C, DT50D, DT50E/DT50F, DT50G, DT50H,
DT50K, DT50M, DT50MT, DT50P, DT50Q, DT50R, DT50S, DT50T,
DT50U, DT50W, DT50Z, DT50X, DT5X(X: 1~9), HS600, HB660,
DT50 Pro

FCC ID: SWSDT50S

Applicant: UROVO TECHNOLOGY CO., LTD.

Address: 36F,High-Tech Zone Union Tower,No.63,Xuefu Road, Nanshan
District, Shenzhen, Guangdong, China

Dates of Testing: 10/25/2023 - 11/28/2023

Issued by: CCIC Southern Testing Co., Ltd.

Lab Location: Electronic Testing Building, No. 43 Shahe Road, Xili Street,
Nanshan District, Shenzhen, Guangdong, China.

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Test Report

Product: Mobile Data terminal

Brand Name: UROVO

Trade Name: UROVO

Applicant.....: UROVO TECHNOLOGY CO., LTD.

Applicant Address.....: 36F,High-Tech Zone Union Tower,No.63,Xuefu Road,
Nanshan District, Shenzhen, Guangdong, China

Manufacturer: UROVO TECHNOLOGY CO., LTD.

Manufacturer Address: 36F,High-Tech Zone Union Tower,No.63,Xuefu Road,
Nanshan District, Shenzhen, Guangdong, China

Test Standards: 47 CFR Part 2/22/24/27/90

Test Result.....: Pass

Tested by: Chuiwang Zhang 2023.11.29
Chuiwang Zhang, Test Engineer

Reviewed by: Chris You 2023.11.29
Chris You, Senior Engineer

Approved by: Yang Fan 2023.11.29
Yang Fan, Manager



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Change History		
Issue	Date	Reason for change
1.0	2023.11.29	First edition



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Mobile Data terminal	
EUT supports Radios application	LTE Band 2/4/5/7/12/13/17/38/41	
Frequency Range(Tx)	LTE Band 2: 1850MHz~1910MHz LTE Band 4: 1710MHz~1755MHz LTE Band 5: 824MHz~849MHz LTE Band 7: 2500MHz~2570MHz LTE Band 12: 699MHz~716MHz LTE Band 13: 777MHz~787MHz LTE Band 17: 704MHz~716MHz LTE Band 38: 2570MHz~2620MHz LTE Band 41: 2496MHz~2690MHz	
Channel Bandwidth	LTE Band 2/4: 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz LTE Band 5/12: 1.4MHz/3MHz/5MHz/10MHz LTE Band 7/38/41: 5MHz/10MHz/15MHz/20MHz LTE Band 13/17: 5MHz/10MHz	
Modulation Type	QPSK/16QAM/64QAM(downlink only)	
Maximum ERP/EIRP	LTE Band 2: 25.02dBm LTE Band 4: 21.87dBm LTE Band 5: 18.19dBm LTE Band 7: 26.77dBm LTE Band 12: 15.42dBm	LTE Band 13: 17.82dBm LTE Band 17: 15.39dBm LTE Band 38: 26.65dBm LTE Band 41: 26.68dBm
Antenna Type	Internal Antenna	
Antenna gain	LTE Band 2: 1.28dBi LTE Band 4: -1.90dBi LTE Band 5: -3.37dBi	LTE Band 7/38/41: 2.94dBi LTE Band 12/17: -8.32dBi LTE Band 13: -5.85dBi
Power supply	Rechargeable Li-ion Battery DC3.85V/4300mAh	

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

Note 2: DT50A, DT50B, DT50C, DT50D, DT50E/DT50F, DT50G, DT50H, DT50K, DT50M, DT50MT, DT50P, DT50Q, DT50R, DT50S, DT50T, DT50U, DT50W, DT50Z, DT50X, DT5X(X: 1~9), HS600, HB660, DT50 Pro compared with DT50, only have different model name. All of the model's circuit theory, electrical design and Critical Components are the same.

1.2. Maximum ERP/EIRP, Frequency Tolerance and Emission Designator

Band	Type of Modulation	BW (MHz)	Emission Designator	Frequency Tolerance (ppm)	Maximum EIRP(W)
LTE Band 2	QPSK	1.4	1M09G7D	—	0.318
LTE Band 2	16QAM	1.4	1M09W7D	—	0.245
LTE Band 2	QPSK	3	2M68G7D	—	0.303
LTE Band 2	16QAM	3	2M68W7D	—	0.245
LTE Band 2	QPSK	5	4M49G7D	—	0.297
LTE Band 2	16QAM	5	4M49W7D	—	0.240
LTE Band 2	QPSK	10	8M92G7D	0.009	0.313
LTE Band 2	16QAM	10	8M91W7D	—	0.245
LTE Band 2	QPSK	15	13M4G7D	—	0.316
LTE Band 2	16QAM	15	13M4W7D	—	0.238
LTE Band 2	QPSK	20	17M9G7D	—	0.317
LTE Band 2	16QAM	20	17M8W7D	—	0.249
LTE Band 4	QPSK	1.4	1M09G7D	—	0.153
LTE Band 4	16QAM	1.4	1M09W7D	—	0.118
LTE Band 4	QPSK	3	2M68G7D	—	0.150
LTE Band 4	16QAM	3	2M68W7D	—	0.117
LTE Band 4	QPSK	5	4M49G7D	—	0.150
LTE Band 4	16QAM	5	4M49W7D	—	0.116
LTE Band 4	QPSK	10	8M93G7D	0.006	0.151
LTE Band 4	16QAM	10	8M91W7D	—	0.119
LTE Band 4	QPSK	15	13M4G7D	—	0.148
LTE Band 4	16QAM	15	13M4W7D	—	0.119
LTE Band 4	QPSK	20	17M9G7D	—	0.151
LTE Band 4	16QAM	20	17M8W7D	—	0.119
LTE Band 7	QPSK	5	4M49G7D	—	0.454
LTE Band 7	16QAM	5	4M49W7D	—	0.420
LTE Band 7	QPSK	10	8M93G7D	0.006	0.462
LTE Band 7	16QAM	10	8M92W7D	—	0.413
LTE Band 7	QPSK	15	13M4G7D	—	0.475



LTE Band 7	16QAM	15	13M4W7D	—	0.409
LTE Band 7	QPSK	20	17M9G7D	—	0.468
LTE Band 7	16QAM	20	17M9W7D	—	0.426
LTE Band 38	QPSK	5	4M48G7D	—	0.442
LTE Band 38	16QAM	5	4M49W7D	—	0.355
LTE Band 38	QPSK	10	8M92G7D	0.006	0.461
LTE Band 38	16QAM	10	8M92W7D	—	0.363
LTE Band 38	QPSK	15	13M4G7D	—	0.462
LTE Band 38	16QAM	15	13M4W7D	—	0.359
LTE Band 38	QPSK	20	17M8G7D	—	0.447
LTE Band 38	16QAM	20	17M8W7D	—	0.365
LTE Band 41	QPSK	5	4M49G7D	—	0.451
LTE Band 41	16QAM	5	4M48W7D	—	0.367
LTE Band 41	QPSK	10	8M91G7D	0.012	0.459
LTE Band 41	16QAM	10	8M90W7D	—	0.362
LTE Band 41	QPSK	15	13M4G7D	—	0.466
LTE Band 41	16QAM	15	13M4W7D	—	0.356
LTE Band 41	QPSK	20	17M8G7D	—	0.442
LTE Band 41	16QAM	20	17M8W7D	—	0.365



Band	Type of Modulation	BW (MHz)	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP(W)
LTE Band 5	QPSK	1.4	1M10G7D	—	0.066
LTE Band 5	16QAM	1.4	1M09W7D	—	0.050
LTE Band 5	QPSK	3	2M68G7D	—	0.065
LTE Band 5	16QAM	3	2M68W7D	—	0.059
LTE Band 5	QPSK	5	4M49G7D	—	0.064
LTE Band 5	16QAM	5	4M49W7D	—	0.052
LTE Band 5	QPSK	10	8M93G7D	0.005	0.066
LTE Band 5	16QAM	10	8M91W7D	—	0.052
LTE Band 12	QPSK	1.4	1M09G7D	—	0.036
LTE Band 12	16QAM	1.4	1M09W7D	—	0.032
LTE Band 12	QPSK	3	2M68G7D	—	0.034
LTE Band 12	16QAM	3	2M68W7D	—	0.028
LTE Band 12	QPSK	5	4M49G7D	—	0.034
LTE Band 12	16QAM	5	4M49W7D	—	0.026
LTE Band 12	QPSK	10	8M92G7D	0.006	0.035
LTE Band 12	16QAM	10	8M90W7D	—	0.028
LTE Band 13	QPSK	5	4M48G7D	—	0.061
LTE Band 13	16QAM	5	4M49W7D	—	0.050
LTE Band 13	QPSK	10	8M91G7D	0.004	0.061
LTE Band 13	16QAM	10	8M90W7D	—	0.048
LTE Band 17	QPSK	5	4M49G7D	—	0.035
LTE Band 17	16QAM	5	4M49W7D	—	0.030
LTE Band 17	QPSK	10	8M93G7D	0.017	0.035
LTE Band 17	16QAM	10	8M91W7D	—	0.031



1.3. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC certification standards:

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22	Public Mobile Services
3	47 CFR Part 24	Personal Communications Services
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
5	KDB 971168 D01 Power Meas License Digital Systems v03r01	Measurement Guidance For Certification of Licensed Digital Transmitters
6	KDB 412172 D01 Determining ERP and EIRP v01r01	Guidelines for Determining the Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) of an RF Transmitting Systems
7	ANSI/TIA-603-E-2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
8	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services



Test detailed items/section required by FCC rules and results are as below:

No.	FCC Rule	Description	Limit	Result
1	2.1046	Conducted Output Power	Reporting Only	PASS
2	22.913 (d) 24.232 (d) 27.50 (d)(5)	Peak to Average Ratio	< 13dB	PASS
3	24.232 (c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2W	PASS
	27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1W	PASS
	22.913 (a)(5)	Effective Radiated Power (Band 5)	ERP < 7W	PASS
	27.50 (h)(2)	Equivalent Isotropic Radiated Power (Band 7/38/41)	EIRP < 2W	PASS
	27.50 (c)(10)	Effective Radiated Power (Band 12/17)	ERP < 3W	PASS
	27.50 (b)(10)	Effective Radiated Power (Band 13)	ERP < 3W	PASS
4	2.1049	Occupied Bandwidth	Reporting Only	PASS
5	2.1051 22.917 (a) 24.238 (a)	Conducted Spurious Emission and Conducted Band Edge (Band 2/4/5/12/13/17)	< 43+10log ₁₀ (P[watt])	PASS
	27.53 (c) 27.53 (h) 27.53 (g) 27.53 (m)(4)	Conducted Spurious Emission and Conducted Band Edge (Band 7/38/41)	Refer to 27.53(m)(4)	PASS
6	2.1053 22.917 (a) 24.238 (a)	Radiated Spurious Emission (Band 2/4/5/12/13/17)	< 43+10log ₁₀ (P[Watts])	PASS
	27.53 (c) 27.53 (h) 27.53 (g) 27.53 (m)(4)	Radiated Spurious Emission (Band 7/38/41)	< 55+10log ₁₀ (P[watt])	PASS
7	2.1055 22.355	Frequency Stability (Band 5)	< ±2.5ppm	PASS
	24.235 27.54	Frequency Stability (Band 2/4/7/12/13/17/38/41)	Within the Authorized Band	PASS

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.



1.4. Test Configuration of Equipment Under Test

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

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

Test Items	Band	Bandwidth(MHz)						Modulation		RB Configuration			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Output Power and ERP/EIRP	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	5/12	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	7/38/41			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	13/17			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Peak-to-Average Ratio	2						✓		✓	✓		✓	✓	✓	✓
	4						✓		✓	✓		✓	✓	✓	✓
	5/12				✓				✓	✓		✓	✓	✓	✓
	7/38/41						✓		✓	✓		✓	✓	✓	✓
	13/17			✓	✓				✓	✓		✓	✓	✓	✓
99% OBW and 26dB EBW	2	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	
	4	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	
	5/12	✓	✓	✓	✓			✓	✓			✓		✓	
	7/38/41			✓	✓	✓	✓	✓	✓			✓		✓	
	13/17			✓	✓			✓	✓			✓		✓	
Conducted Band Edge	2	✓					✓	✓	✓	✓		✓	✓		✓
	4	✓					✓	✓	✓	✓		✓	✓		✓
	5/12	✓			✓			✓	✓	✓		✓	✓		✓
	7/38/41			✓			✓	✓	✓	✓		✓	✓		✓
	13/17			✓	✓			✓	✓	✓		✓	✓		✓
Conducted Spurious Emission	2						✓	✓		✓			✓	✓	✓
	4						✓	✓		✓			✓	✓	✓
	5/12				✓			✓		✓			✓	✓	✓
	7/38/41						✓	✓		✓			✓	✓	✓
	13/17			✓	✓			✓		✓			✓	✓	✓
Frequency Stability	2				✓			✓				✓		✓	
	4				✓			✓				✓		✓	
	5/12				✓			✓				✓		✓	
	7/38/41				✓			✓				✓		✓	
	13/17				✓			✓				✓		✓	
Radiated Spurious Emission	2	Worst case												✓	
	4	Worst case												✓	
	5	Worst case												✓	
	7	Worst case												✓	



	12	Worst case		✓	
	13	Worst case		✓	
	17	Worst case		✓	
	38	Worst case		✓	
	41	Worst case		✓	
Note 1: The mark “ ✓ ” means that this configuration is chosen for testing.					

1.5. Measurement Results Explanation Example

For all conduction test items:

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

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

Offset = RF cable loss + Power Splitter + attenuator factor.

Following shows an offset computation example with cable loss 1dB, 3dB Power Splitter, 10dB attenuator.

Example: Offset (dB) = RF cable loss(dB) + Power Splitter(dB) + attenuator factor(dB).

$$= 1 + 3 + 10 = 14 \text{ (dB)}$$

1.6. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd 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 our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

CAB number: CN0064

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.7. Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15°C - 35°C
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86kPa-106kPa

2. 47 CFR Part 2 Requirements

2.1. Conducted Output Power and ERP/EIRP

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2/7/41.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12/13/17.

According to KDB 412172 D01 Determining ERP and EIRP v01r01.

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm;

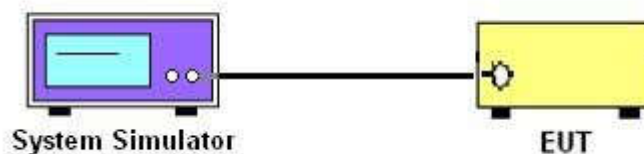
G_T = gain of the transmitting antenna in dBi;

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB.

2.1.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.1.3. Test Setup



2.1.4. Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through 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.



2.1.5. Test Results of Conducted Output Power and ERP/EIRP

Please refer to Appendix A for detail

2.2. Peak-to-average power ratio (PAPR)

2.2.1. Requirement

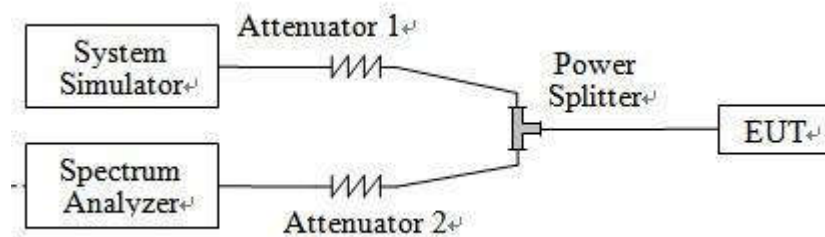
Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement 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.

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

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Description



2.2.4. Test Procedures

1. The testing follows the of KDB 971168 D01 v03r01 Section 5.7.2 and ANSI C63.26-2015 Section 5.2.3.4.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. Set resolution/measurement bandwidth \geq OBW or specified reference bandwidth.
5. Set the number of counts to a value that stabilizes the measured CCDF curve.
6. Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level.
7. Repeat step 3~6 at other frequency and modulations.



2.2.5. Test Results of Peak-to-average power ratio (PAPR)

Please refer to Appendix A for detail

2.3. 99% Occupied Bandwidth and 26dB Emission Bandwidth

2.3.1. Requirement

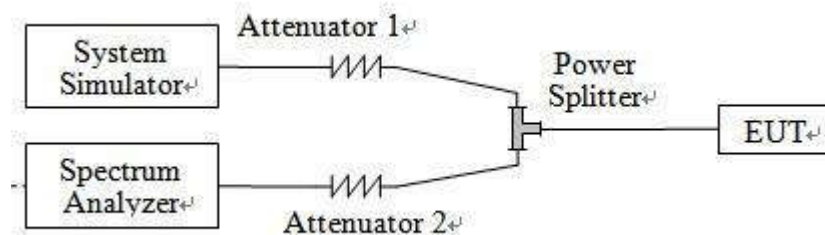
The Occupied Bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

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.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the of KDB 971168 D01 v03r01 Section 4 and ANSI C63.26-2015 Section 5.4.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
4. Set span to be approximately 1.5 to 5 times the OBW.
5. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW.
6. Set $VBW \geq 3 \times RBW$.
7. Set Detection mode = peak.
8. Set Trace mode = max hold.
9. Allow trace to stabilize.
10. Repeat step 3~9 at other frequency and modulations.



2.3.5. Test Result of 99% Occupied Bandwidth and 26dB Emission Bandwidth

Please refer to Appendix A for detail



2.4. Conducted Band Edge

2.4.1. Requirement

For Band 2 [Part 24.238 (a)]:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB.

For Band 4 [Part 27.53 (h)]:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB.

For Band 5 [Part 22.917(a)]:

Out of band emissions. 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. In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified).

For Band 7&38&41 [Part 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 than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

For Band 12&17 [Part 27.53 (g)]:

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

a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

For Band 13 [Part 27.53 (c)]:

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

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

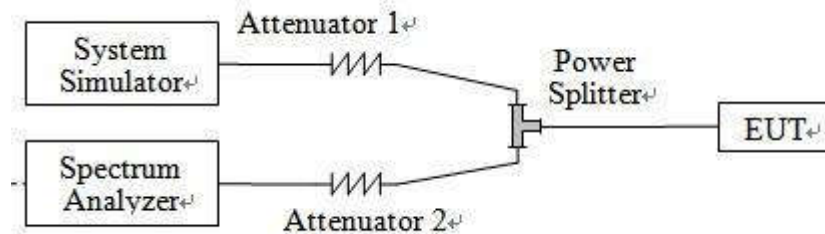
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedures

1. The testing follows the of KDB 971168 D01 v03r01 Section 6 and ANSI C63.26-2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
3. Span was set large enough so as to capture all out of band emissions near the Channel Edge.
4. Use $RBW \geq 1\%$ EBW in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, and use $RBW = 1$ MHz outside 1 MHz of the authorized frequency channel.
5. Set $VBW \geq 3 \times RBW$
6. Set Detector = power averaging (rms).



7. Set the number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$.
8. Set sweep trigger to “free run.”
9. Set the Sweep time $> (\text{number of points in sweep}) \times (\text{transmitter period})$ (i.e., the transmit on-time + the off-time).
10. Perform a trace average of at least 100 traces.
11. Repeat step 3~10 at other frequency and modulations.

2.4.5. Test Result of Conducted Band Edge

Please refer to Appendix A for detail

2.5. Conducted Spurious Emission

2.5.1. Requirement

For Band 2 & 4 & 5 & 12 & 13 & 17:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

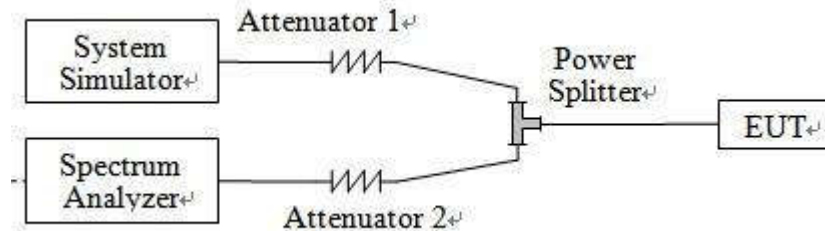
For Band 7 & 38 & 41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

1. The testing follows the of KDB 971168 D01 v03r01 Section 6 and ANSI C63.26-2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
3. Set the spectrum analyzer start frequency to 9kHz and stop frequency to the tenth harmonic of the highest fundamental frequency.
4. Set RBW = 1MHz, VBW $\geq 3 \times$ RBW
5. Set Detector = peak.
6. Set Trace mode = max hold.
7. Set Sweep time = auto-couple.



8. Identify and measure the highest spurious emission levels in each frequency range.
9. Compare the results with the corresponding limit in the applicable regulation.
10. Repeat step 3~9 at other frequency and modulations.

2.5.5. Test Result of Conducted Spurious Emission

Please refer to Appendix A for detail

2.6. Radiated Spurious Emission

2.6.1. Requirement

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E-2016.

For Band 2 & 4 & 5 & 12 & 13 & 17:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7 & 38 & 41:

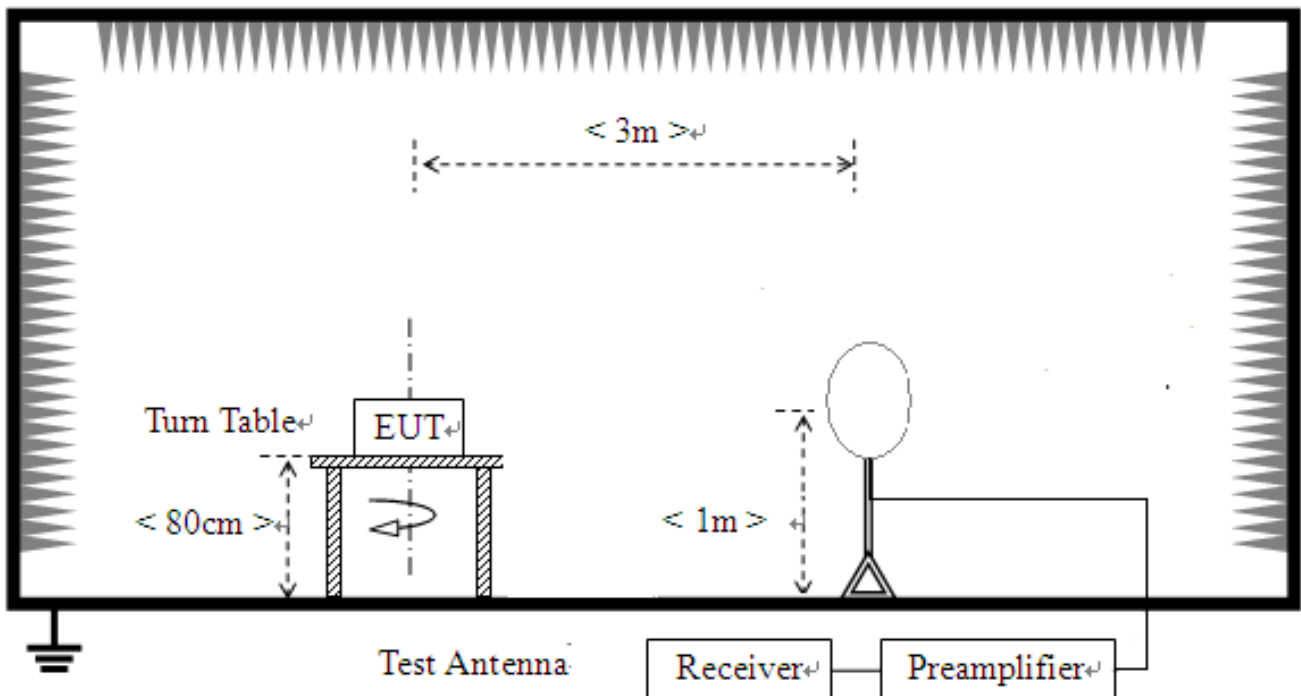
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

2.6.2. Measuring Instruments

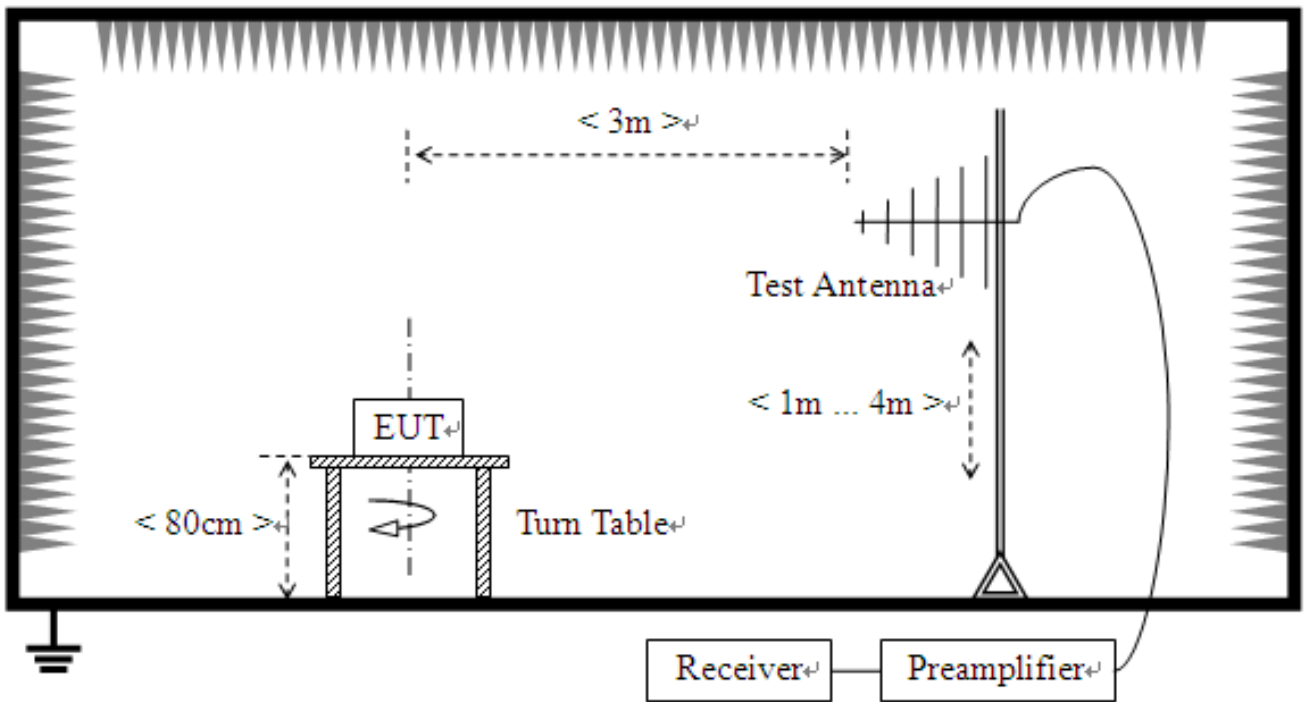
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

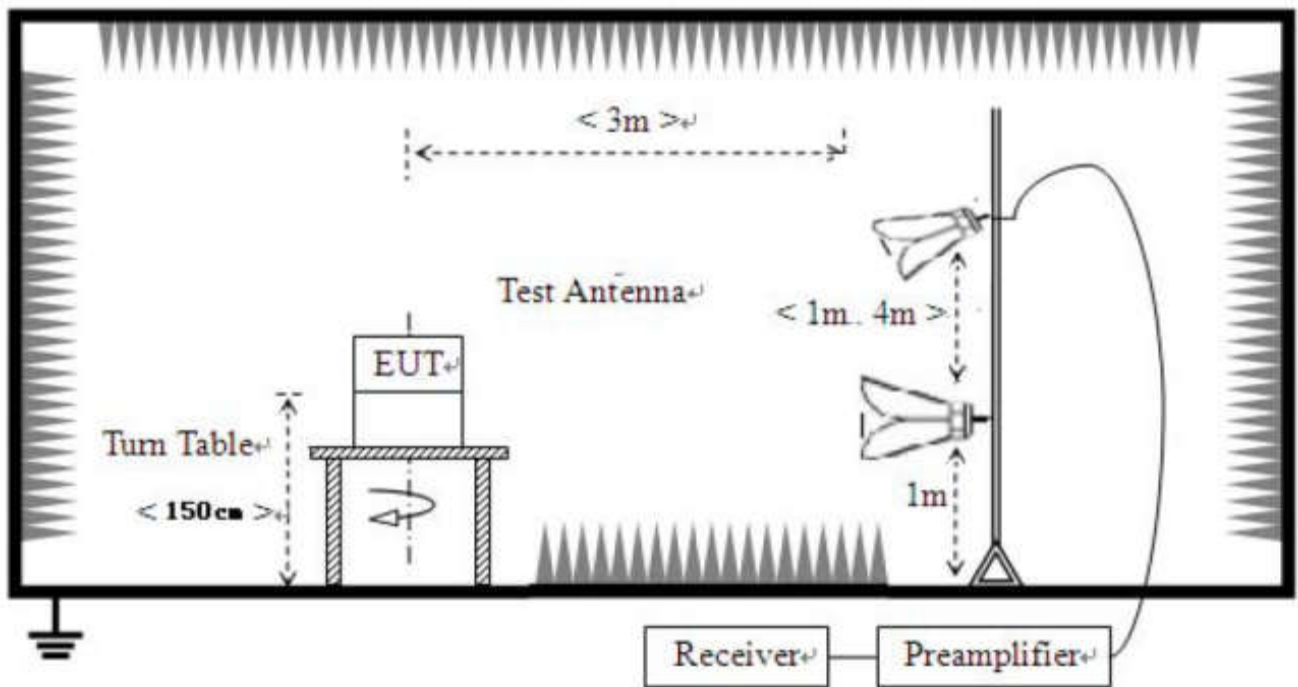
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter (for below 1GHz) / 1.5 meters (for above 1GHz) above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. All Spurious Emission tests were performed in X, Y, Z axis direction and low, middle, high channel. And only the worst axis test condition was recorded in this test report.
12. The spectrum is measured from 9 kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. The worst case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
13. The maximum RB configurations of the Radiated Spurious Emissions as RB Size full, RB Offset 0.

2.6.5. Test Result of Radiated Spurious Emission

Note: 1. The emission levels of above 18GHz are lower than the limit 20dB and not show in test report.

Note: 2. Absolute Level = Reading Level + Factor



LTE Band 2 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	845.692	-104.68	-67.54	-13.00	54.54	37.14	Horizontal
2	2001.05	-59.06	-57.54	-13.00	44.54	1.52	Horizontal
3	3044.97	-57.06	-49.79	-13.00	36.79	7.27	Horizontal
4	5113.40	-58.63	-44.05	-13.00	31.05	14.58	Horizontal
5	7629.93	-59.94	-40.41	-13.00	27.41	19.53	Horizontal
6	17431.2	-65.10	-36.24	-13.00	23.24	28.86	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	754.952	-103.08	-67.19	-13.00	54.19	35.89	Vertical
2	1382.91	-57.72	-60.04	-13.00	47.04	-2.32	Vertical
3	3031.32	-57.75	-50.45	-13.00	37.45	7.30	Vertical
4	5123.20	-58.88	-44.32	-13.00	31.32	14.56	Vertical
5	7352.19	-59.59	-40.35	-13.00	27.35	19.24	Vertical
6	17349.0	-65.23	-36.16	-13.00	23.16	29.07	Vertical

LTE Band 4 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	837.929	-105.38	-68.27	-13.00	55.27	37.11	Horizontal
2	1014.60	-57.50	-58.80	-13.00	45.80	-1.30	Horizontal
3	1864.04	-55.98	-55.49	-13.00	42.49	0.49	Horizontal
4	3009.45	-57.35	-50.00	-13.00	37.00	7.35	Horizontal
5	4892.89	-59.30	-44.56	-13.00	31.56	14.74	Horizontal
6	17147.2	-63.18	-35.15	-13.00	22.15	28.03	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	471.570	-103.38	-73.57	-13.00	60.57	29.81	Vertical
2	766.113	-105.04	-69.13	-13.00	56.13	35.91	Vertical
3	1578.32	-57.53	-58.91	-13.00	45.91	-1.38	Vertical
4	3018.20	-58.05	-50.71	-13.00	37.71	7.34	Vertical
5	5275.11	-57.63	-43.66	-13.00	30.66	13.97	Vertical
6	7562.07	-59.70	-40.06	-13.00	27.06	19.64	Vertical



LTE Band 5 QPSK 10MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	661.300	-104.15	-69.34	-13.00	56.34	34.81	Horizontal
2	1820.84	-56.53	-56.30	-13.00	43.30	0.23	Horizontal
3	3238.01	-57.80	-50.63	-13.00	37.63	7.17	Horizontal
4	4803.81	-58.93	-44.21	-13.00	31.21	14.72	Horizontal
5	7877.19	-60.18	-40.70	-13.00	27.70	19.48	Horizontal
6	17379.5	-65.48	-36.23	-13.00	23.23	29.25	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	599.674	-105.20	-72.23	-13.00	59.23	32.97	Vertical
2	1634.23	-57.67	-58.69	-13.00	45.69	-1.02	Vertical
3	2923.29	-56.89	-50.80	-13.00	37.80	6.09	Vertical
4	4862.09	-58.61	-43.87	-13.00	30.87	14.74	Vertical
5	7459.72	-60.00	-40.31	-13.00	27.31	19.69	Vertical
6	17376.0	-63.93	-34.70	-13.00	21.70	29.23	Vertical

LTE Band 7 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	506.746	-104.58	-71.97	-25.00	46.97	32.61	Horizontal
2	665.986	-104.86	-70.11	-25.00	45.11	34.75	Horizontal
3	945.625	-103.44	-66.04	-25.00	41.04	37.40	Horizontal
4	4965.60	-58.40	-44.03	-25.00	19.03	14.37	Horizontal
5	7614.05	-60.47	-40.83	-25.00	15.83	19.64	Horizontal
6	12515.8	-61.79	-35.33	-25.00	10.33	26.46	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	630.060	-104.39	-71.34	-25.00	46.34	33.05	Vertical
2	957.277	-105.26	-67.20	-25.00	42.20	38.06	Vertical
3	3517.00	-58.75	-51.76	-25.00	26.76	6.99	Vertical
4	4868.05	-58.72	-43.98	-25.00	18.98	14.74	Vertical
5	7550.65	-60.29	-40.38	-25.00	15.38	19.91	Vertical
6	12657.3	-62.30	-36.19	-25.00	11.19	26.11	Vertical



LTE Band 12 QPSK 10MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	813.181	-105.18	-68.02	-13.00	55.02	37.16	Horizontal
2	1251.81	-58.11	-60.42	-13.00	47.42	-2.31	Horizontal
3	2310.66	-57.61	-54.65	-13.00	41.65	2.96	Horizontal
4	5218.93	-56.98	-42.73	-13.00	29.73	14.25	Horizontal
5	7445.92	-59.58	-39.90	-13.00	26.90	19.68	Horizontal
6	17431.2	-64.10	-35.24	-13.00	22.24	28.86	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	507.478	-104.34	-73.59	-13.00	60.59	30.75	Vertical
2	1380.01	-57.54	-59.86	-13.00	46.86	-2.32	Vertical
3	3185.33	-57.30	-50.05	-13.00	37.05	7.25	Vertical
4	5019.42	-58.81	-44.54	-13.00	31.54	14.27	Vertical
5	7533.90	-60.02	-40.37	-13.00	27.37	19.65	Vertical
6	17204.1	-64.25	-35.98	-13.00	22.98	28.27	Vertical

LTE Band 13 QPSK 10MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	671.490	-104.25	-69.57	-13.00	56.57	34.68	Horizontal
2	1367.81	-57.33	-59.64	-13.00	46.64	-2.31	Horizontal
3	2974.59	-56.54	-50.23	-13.00	37.23	6.31	Horizontal
4	4750.61	-57.47	-43.43	-13.00	30.43	14.04	Horizontal
5	10608.0	-60.57	-37.88	-13.00	24.88	22.69	Horizontal
6	17331.8	-64.94	-35.97	-13.00	22.97	28.97	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	613.746	-103.72	-70.82	-13.00	57.82	32.90	Vertical
2	1569.42	-56.80	-58.24	-13.00	45.24	-1.44	Vertical
3	3080.15	-57.05	-49.83	-13.00	36.83	7.22	Vertical
4	5099.23	-58.43	-43.81	-13.00	30.81	14.62	Vertical
5	7496.52	-60.21	-40.55	-13.00	27.55	19.66	Vertical
6	17330.0	-63.39	-34.43	-13.00	21.43	28.96	Vertical



LTE Band 17 QPSK 10MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	803.476	-104.93	-67.83	-13.00	54.83	37.10	Horizontal
2	1844.34	-55.91	-55.54	-13.00	42.54	0.37	Horizontal
3	3007.00	-57.84	-50.49	-13.00	37.49	7.35	Horizontal
4	4967.62	-58.69	-44.33	-13.00	31.33	14.36	Horizontal
5	7889.26	-59.69	-40.17	-13.00	27.17	19.52	Horizontal
6	17400.2	-65.49	-36.12	-13.00	23.12	29.37	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	620.540	-103.96	-70.94	-13.00	57.94	33.02	Vertical
2	1668.53	-57.74	-58.55	-13.00	45.55	-0.81	Vertical
3	3007.87	-57.12	-49.77	-13.00	36.77	7.35	Vertical
4	4859.81	-59.37	-44.63	-13.00	31.63	14.74	Vertical
5	7720.78	-59.68	-40.39	-13.00	27.39	19.29	Vertical
6	17394.4	-65.54	-36.20	-13.00	23.20	29.34	Vertical

LTE Band 38 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	500.920	-104.68	-72.03	-25.00	47.03	32.65	Horizontal
2	666.957	-104.06	-69.32	-25.00	44.32	34.74	Horizontal
3	844.644	-104.95	-67.82	-25.00	42.82	37.13	Horizontal
4	4872.93	-58.20	-43.46	-25.00	18.46	14.74	Horizontal
5	7696.97	-60.02	-40.57	-25.00	15.57	19.45	Horizontal
6	12257.3	-60.02	-34.70	-25.00	9.70	25.32	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	473.733	-104.50	-74.62	-25.00	49.62	29.88	Vertical
2	728.128	-105.25	-70.33	-25.00	45.33	34.92	Vertical
3	948.538	-103.64	-65.56	-25.00	40.56	38.08	Vertical
4	4902.20	-59.40	-44.66	-25.00	19.66	14.74	Vertical
5	7340.92	-59.96	-40.75	-25.00	15.75	19.21	Vertical
6	12535.3	-60.78	-34.46	-25.00	9.46	26.32	Vertical



LTE Band 41 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	654.334	-104.15	-69.32	-25.00	44.32	34.83	Horizontal
2	948.538	-102.79	-65.35	-25.00	40.35	37.44	Horizontal
3	3092.67	-58.31	-51.12	-25.00	26.12	7.19	Horizontal
4	5087.54	-59.26	-44.70	-25.00	19.70	14.56	Horizontal
5	7692.09	-59.92	-40.47	-25.00	15.47	19.45	Horizontal
6	12501.2	-61.29	-34.73	-25.00	9.73	26.56	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	523.253	-104.32	-73.33	-25.00	48.33	30.99	Vertical
2	815.515	-103.47	-67.55	-25.00	42.55	35.92	Vertical
3	3185.34	-58.35	-51.10	-25.00	26.10	7.25	Vertical
4	4887.56	-58.75	-44.01	-25.00	19.01	14.74	Vertical
5	7848.17	-59.92	-40.76	-25.00	15.76	19.16	Vertical
6	12598.7	-60.90	-35.04	-25.00	10.04	25.86	Vertical

2.7. Frequency Stability

2.7.1. Requirement

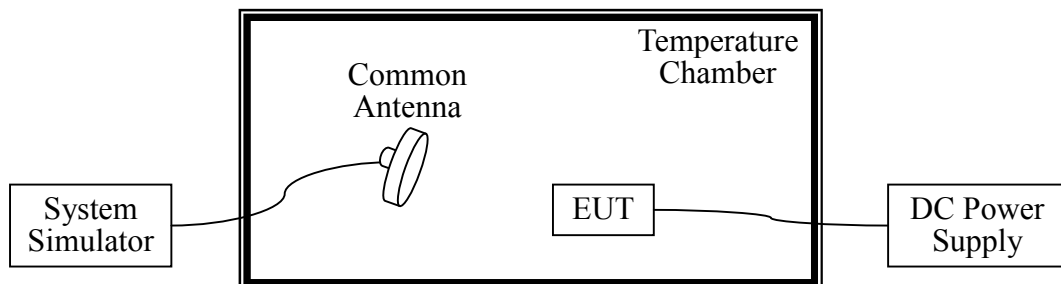
According to FCC requirement, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency. According to FCC section 2.1055, the test conditions are:

- (1) The temperature is varied from -30°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°C .
- (2) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup



2.7.4. Test Procedures

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. With power OFF, the temperature was raised in 10°C step 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. The nominal, highest and lowest extreme voltages were tested, which are specified by the applicant; the normal temperature here used is 20°C .
5. The variation in frequency was measured for the worst case.



2.7.5. Test Result of Frequency Stability

Please refer to Appendix A for detail

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2023.06.08	2024.06.07
2	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.06.09	2026.06.08
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2024.06.07
5	EMI Horn Ant. (1-18G)	ETC	1209	A150402241	2021.01.02	2024.01.01
6	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2024.05.31
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-10004	A140101634	2022.12.13	2023.12.12
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2022.12.13	2023.12.12
9	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2023.02.20	2024.02.19
10	Test Receiver	R&S	ESIB7	A0501375	2023.03.16	2024.03.15
11	Broadband Ant.	2786	ETC	A150402240	2021.09.16	2024.03.03
12	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2019.03.26	2024.03.25
13	Temperature chamber	ESPEC	SU-642	A150802409	2023.03.18	2024.03.17
14	Wideband Radio Communication tester	R&S	CMW500	A141001983	2022.12.13	2023.12.12
15	Wideband Radio Communication tester	R&S	CMW500	A150802214	2023.06.01	2024.05.31
16	Test Receiver	KEYSIGHT	N9038A	A141202036	2023.06.12	2024.06.11
17	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2023.06.08	2024.06.07



4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence . The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	2.8dB
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Uncertainty of Radiated Emission Measurement (9kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	3.5dB
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Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	3.91dB
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Uncertainty of Radiated Emission Measurement (1GHz~18GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	4.5dB
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Uncertainty of Radiated Emission Measurement (18GHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	4.9dB
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Uncertainty of RF Conducted Measurement (9kHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	1.2dB
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APPENDIX A

Conducted Output Power and ERP/EIRP

LTE Band 2 - 1.4MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18607	18900	19193			
			1850.7MHz	1880.0MHz	1909.3MHz			
QPSK	1	0	23.21	23.74	23.60	1.28	25.02	33.00
	1	2	23.53	23.73	23.57			
	1	5	23.40	23.57	23.66			
	3	0	22.52	22.47	22.54			
	3	1	22.52	22.47	22.55			
	3	2	22.43	22.46	22.50			
16QAM	6	0	22.27	22.44	22.45	1.28	23.9	33.00
	1	0	22.35	22.53	22.36			
	1	2	22.62	22.21	22.44			
	1	5	22.48	22.61	22.47			
	3	0	21.56	21.42	21.29			
	3	1	21.48	21.35	21.30			
	3	2	21.28	21.23	21.39			
6	0	21.39	21.25	21.48				
LTE Band 2 - 3MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18615	18900	19185			
			1851.5MHz	1880.0MHz	1908.5MHz			
QPSK	1	0	23.33	23.51	23.36	1.28	24.82	33.00
	1	7	23.35	23.54	23.41			
	1	14	23.29	23.44	23.30			
	8	0	22.45	22.52	22.38			
	8	4	22.34	22.53	22.42			
	8	7	22.40	22.52	22.38			
16QAM	15	0	22.36	22.53	22.48	1.28	23.89	33.00
	1	0	22.47	22.61	22.51			
	1	7	22.51	22.50	22.37			
	1	14	22.57	22.54	22.46			
	8	0	21.50	21.45	21.50			
	8	4	21.50	21.43	21.50			
	8	7	21.46	21.37	21.68			
15	0	21.30	21.26	21.32				



LTE Band 2 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18625	18900	19175			
			1852.5MHz	1880.0MHz	1907.5MHz			
QPSK	1	0	23.42	23.35	23.23	1.28	24.73	33.00
	1	12	23.35	23.36	23.09			
	1	24	23.45	23.41	23.00			
	12	0	22.34	22.50	22.34			
	12	6	22.34	22.51	22.34			
	12	11	22.36	22.45	22.31			
	25	0	22.38	22.48	22.31			
16QAM	1	0	22.53	22.44	22.35	1.28	23.81	33.00
	1	12	22.45	22.30	22.21			
	1	24	22.42	22.36	22.32			
	12	0	21.26	21.36	21.23			
	12	6	21.39	21.47	21.41			
	12	11	21.27	21.32	21.21			
	25	0	21.39	21.42	21.46			
LTE Band 2 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18650	18900	19150			
			1855.0MHz	1880.0MHz	1905.0MHz			
QPSK	1	0	23.53	23.38	23.34	1.28	24.95	33.00
	1	24	23.38	23.52	23.31			
	1	49	23.44	23.67	23.36			
	25	0	22.36	22.64	22.32			
	25	12	22.37	22.63	22.33			
	25	24	22.42	22.61	22.33			
	50	0	22.38	22.59	22.36			
16QAM	1	0	22.32	22.49	22.62	1.28	23.90	33.00
	1	24	22.35	22.58	22.49			
	1	49	22.51	22.61	22.45			
	25	0	21.19	21.55	21.35			
	25	12	21.45	21.60	21.43			
	25	24	21.44	21.58	21.35			
	50	0	21.17	21.45	21.20			



LTE Band 2 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18675	18900	19125			
			1857.5MHz	1880.0MHz	1902.5MHz			
QPSK	1	0	23.36	23.32	23.26	1.28	24.99	33.00
	1	37	23.32	23.54	23.32			
	1	74	23.53	23.71	23.27			
	36	0	22.59	22.69	22.62			
	36	16	22.53	22.64	22.61			
	36	35	22.65	22.57	22.49			
	75	0	22.43	22.54	22.36			
16QAM	1	0	22.33	22.49	22.36	1.28	23.77	33.00
	1	37	22.27	22.43	22.49			
	1	74	22.38	22.45	22.43			
	36	0	21.33	21.55	21.42			
	36	16	21.32	21.60	21.41			
	36	35	21.49	21.38	21.36			
	75	0	21.34	21.51	21.38			
LTE Band 2 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			18700	18900	19100			
			1860.0MHz	1880.0MHz	1900.0MHz			
QPSK	1	0	23.35	23.33	23.10	1.28	25.01	33.00
	1	49	23.31	23.68	23.27			
	1	99	23.73	23.62	23.60			
	50	0	22.45	22.63	22.38			
	50	24	22.46	22.58	22.37			
	50	49	22.54	22.50	22.38			
	100	0	22.51	22.49	22.45			
16QAM	1	0	22.53	22.38	22.55	1.28	23.96	33.00
	1	49	22.39	22.41	22.51			
	1	99	22.66	22.64	22.68			
	50	0	21.40	21.60	21.32			
	50	24	21.40	21.63	21.31			
	50	49	21.38	21.45	21.52			
	100	0	21.25	21.32	21.23			



LTE Band 4 - 1.4MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			19957	20175	20393			
			1710.7MHz	1732.5MHz	1754.3MHz			
QPSK	1	0	23.60	23.61	23.50	-1.90	21.86	30.00
	1	2	23.62	23.76	23.55			
	1	5	23.45	23.74	23.54			
	3	0	22.52	22.69	22.32			
	3	1	22.53	22.69	22.41			
	3	2	22.39	22.47	22.25			
	6	0	22.43	22.55	22.29			
16QAM	1	0	22.45	22.41	22.61	-1.90	20.71	30.00
	1	2	22.39	22.53	22.42			
	1	5	22.58	22.52	22.57			
	3	0	21.33	21.49	21.36			
	3	1	21.27	21.43	21.39			
	3	2	21.38	21.45	21.43			
	6	0	21.34	21.48	21.38			
LTE Band 4 - 3MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			19965	20175	20385			
			1711.5MHz	1732.5MHz	1753.5MHz			
QPSK	1	0	23.43	23.31	23.50	-1.90	21.77	30.00
	1	7	23.31	23.67	23.44			
	1	14	23.24	23.33	23.37			
	8	0	22.45	22.59	22.22			
	8	4	22.46	22.60	22.20			
	8	7	22.42	22.54	22.36			
	15	0	22.30	22.64	22.29			
16QAM	1	0	22.57	22.37	22.39	-1.90	20.67	30.00
	1	7	22.48	22.43	22.32			
	1	14	22.37	22.50	22.40			
	8	0	21.30	21.65	21.24			
	8	4	21.39	21.66	21.26			
	8	7	21.24	21.60	21.32			
	15	0	21.23	21.46	21.21			



LTE Band 4 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			19975	20175	20375			
			1712.5MHz	1732.5MHz	1752.5MHz			
QPSK	1	0	23.43	23.59	23.37	-1.90	21.75	30.00
	1	12	23.57	23.65	23.48			
	1	24	23.41	23.50	23.39			
	12	0	22.39	22.64	22.31			
	12	6	22.43	22.64	22.43			
	12	11	22.29	22.41	22.32			
	25	0	22.26	22.49	22.35			
16QAM	1	0	22.53	22.34	22.39	-1.90	20.63	30.00
	1	12	22.35	22.53	22.20			
	1	24	22.40	22.40	22.28			
	12	0	21.39	21.52	21.28			
	12	6	21.36	21.56	21.35			
	12	11	21.45	21.47	21.32			
	25	0	21.41	21.42	21.26			
LTE Band 4 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20000	20175	20350			
			1715.0MHz	1732.5MHz	1750.0MHz			
QPSK	1	0	23.41	23.38	23.49	-1.90	21.79	30.00
	1	24	23.36	23.65	23.27			
	1	49	23.69	23.62	23.57			
	25	0	22.37	22.61	22.29			
	25	12	22.33	22.54	22.29			
	25	24	22.47	22.33	22.35			
	50	0	22.39	22.53	22.42			
16QAM	1	0	22.36	22.42	22.49	-1.90	20.74	30.00
	1	24	22.53	22.61	22.57			
	1	49	22.64	22.59	22.35			
	25	0	21.39	21.54	21.41			
	25	12	21.41	21.66	21.51			
	25	24	21.49	21.47	21.48			
	50	0	21.36	21.40	21.38			



LTE Band 4 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20025	20175	20325			
			1717.5MHz	1732.5MHz	1747.5MHz			
QPSK	1	0	23.49	23.40	23.38	-1.90	21.71	30.00
	1	37	23.39	23.61	23.26			
	1	74	23.42	23.44	23.38			
	36	0	22.40	22.55	22.38			
	36	16	22.37	22.51	22.43			
	36	35	22.51	22.39	22.56			
	75	0	22.42	22.53	22.34			
16QAM	1	0	22.54	22.43	22.47	-1.90	20.76	30.00
	1	37	22.43	22.66	22.44			
	1	74	22.36	22.51	22.35			
	36	0	21.49	21.45	21.33			
	36	16	21.56	21.55	21.41			
	36	35	21.57	21.38	21.55			
	75	0	21.30	21.41	21.21			
LTE Band 4 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20050	20175	20300			
			1720.0MHz	1732.5MHz	1745.0MHz			
QPSK	1	0	23.58	23.42	23.35	-1.90	21.79	30.00
	1	49	23.38	23.56	23.47			
	1	99	23.59	23.69	23.60			
	50	0	22.35	22.51	22.48			
	50	24	22.46	22.54	22.39			
	50	49	22.55	22.49	22.42			
	100	0	22.47	22.54	22.35			
16QAM	1	0	22.66	22.44	22.34	-1.90	20.76	30.00
	1	49	22.31	22.51	22.48			
	1	99	22.44	22.48	22.37			
	50	0	21.30	21.58	21.33			
	50	24	21.30	21.59	21.44			
	50	49	21.51	21.27	21.27			
	100	0	21.32	21.47	21.43			



LTE Band 5 - 1.4MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			20407	20525	20643			
			824.7MHz	836.5MHz	848.3MHz			
QPSK	1	0	23.57	23.60	23.48	-3.37	18.17	38.45
	1	2	23.65	23.59	23.56			
	1	5	23.69	23.63	23.58			
	3	0	22.66	22.57	22.59			
	3	1	22.56	22.49	22.52			
	3	2	22.56	22.49	22.63			
	6	0	22.60	22.46	22.57			
16QAM	1	0	22.39	22.35	22.34	-3.37	17.02	38.45
	1	2	22.41	22.54	22.47			
	1	5	22.36	22.45	22.52			
	3	0	21.32	21.38	21.62			
	3	1	21.51	21.41	21.57			
	3	2	21.41	21.53	21.59			
	6	0	21.43	21.35	21.54			
LTE Band 5 - 3MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			20415	20525	20635			
			825.5MHz	836.5MHz	847.5MHz			
QPSK	1	0	23.64	23.68	23.45	-3.37	18.16	38.45
	1	7	23.61	23.59	23.45			
	1	14	23.66	23.55	23.47			
	8	0	22.77	22.62	22.54			
	8	4	22.78	22.72	22.55			
	8	7	22.77	22.68	22.64			
	15	0	22.85	22.66	22.44			
16QAM	1	0	22.96	22.85	22.88	-3.37	17.74	38.45
	1	7	23.07	23.04	22.73			
	1	14	23.00	22.87	23.26			
	8	0	21.54	21.82	21.42			
	8	4	21.46	21.82	21.42			
	8	7	22.01	21.79	21.51			
	15	0	21.74	21.64	21.32			



LTE Band 5 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			20425	20525	20625			
			826.5MHz	836.5MHz	846.5MHz			
QPSK	1	0	23.52	23.48	23.49	-3.37	18.04	38.45
	1	12	23.39	23.56	23.39			
	1	24	23.49	23.56	23.32			
	12	0	22.71	22.58	22.39			
	12	6	22.66	22.59	22.40			
	12	11	22.67	22.59	22.53			
	25	0	22.69	22.60	22.46			
16QAM	1	0	22.56	22.39	22.47	-3.37	17.12	38.45
	1	12	22.55	22.52	22.56			
	1	24	22.64	22.63	22.49			
	12	0	21.60	21.56	21.32			
	12	6	21.59	21.54	21.32			
	12	11	21.67	21.53	21.49			
	25	0	21.63	21.58	21.58			
LTE Band 5 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			20450	20525	20600			
			829.0MHz	836.5MHz	844.0MHz			
QPSK	1	0	23.60	23.42	23.38	-3.37	18.19	38.45
	1	24	23.62	23.65	23.42			
	1	49	23.71	23.44	23.32			
	25	0	22.73	22.62	22.66			
	25	12	22.74	22.62	22.66			
	25	24	22.69	22.64	22.49			
	50	0	22.66	22.68	22.55			
16QAM	1	0	22.46	22.55	22.61	-3.37	17.16	38.45
	1	24	22.66	22.61	22.67			
	1	49	22.68	22.59	22.59			
	25	0	21.78	21.69	21.67			
	25	12	21.78	21.67	21.72			
	25	24	21.73	21.71	21.54			
	50	0	21.53	21.61	21.49			



LTE Band 7 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20775	21100	21425			
			2502.5MHz	2535.0MHz	2567.5MHz			
QPSK	1	0	22.69	23.33	23.32	2.94	26.57	33.00
	1	12	22.8	23.63	23.33			
	1	24	22.92	23.41	23.56			
	12	0	22.08	22.56	22.65			
	12	6	22.06	22.46	22.76			
	12	11	22.11	22.55	22.68			
	25	0	22.15	22.55	22.69			
16QAM	1	0	22.53	22.75	23.29	2.94	26.23	33.00
	1	12	22.24	22.82	22.77			
	1	24	22.33	22.75	22.91			
	12	0	20.97	21.26	21.5			
	12	6	21.06	21.31	21.52			
	12	11	21.11	21.41	21.49			
	25	0	20.97	21.57	21.8			
LTE Band 7 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20800	21100	21400			
			2505.0MHz	2535.0MHz	2565.0MHz			
QPSK	1	0	23.3	23.46	23.64	2.94	26.65	33.00
	1	24	23.18	23.61	23.59			
	1	49	23.14	23.71	23.45			
	25	0	22.16	22.64	22.7			
	25	12	22.17	22.74	22.66			
	25	24	22.33	22.59	22.73			
	50	0	22.31	22.58	22.62			
16QAM	1	0	22.9	23.12	23.22	2.94	26.16	33.00
	1	24	22.62	23	23.17			
	1	49	22.63	23.02	23.16			
	25	0	21.09	21.61	21.4			
	25	12	21.09	21.52	21.51			
	25	24	21.28	21.34	21.51			
	50	0	21.18	21.32	21.53			



LTE Band 7 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20825	21100	21375			
			2507.5MHz	2535.0MHz	2562.5MHz			
QPSK	1	0	23.23	23.4	23.57	2.94	26.77	33.00
	1	37	23.15	23.83	23.67			
	1	74	23.13	23.38	23.39			
	36	0	22.72	22.76	23.02			
	36	16	22.72	22.76	23.01			
	36	35	22.84	22.35	22.78			
	75	0	22.32	22.48	22.59			
16QAM	1	0	22.89	22.53	23.18	2.94	26.12	33.00
	1	37	22.72	22.79	23.01			
	1	74	22.73	23.05	22.99			
	36	0	22.71	22.77	23.01			
	36	16	22.71	22.7	23			
	36	35	22.86	22.35	22.79			
	75	0	21.25	21.51	21.41			
LTE Band 7 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			20850	21100	21350			
			2510.0MHz	2535.0MHz	2560.0MHz			
QPSK	1	0	23.37	23.22	23.45	2.94	26.70	33.00
	1	49	22.92	23.61	23.39			
	1	99	23.36	23.76	23.43			
	50	0	22.34	22.6	22.62			
	50	24	22.35	22.61	22.55			
	50	49	22.43	22.52	22.61			
	100	0	22.34	22.53	22.59			
16QAM	1	0	23.17	22.72	22.82	2.94	26.29	33.00
	1	49	22.42	22.85	23.29			
	1	99	23.08	23.1	23.35			
	50	0	21.34	21.51	21.56			
	50	24	21.34	21.52	21.56			
	50	49	21.33	21.53	21.58			
	100	0	21.16	21.56	21.62			



LTE Band 12 - 1.4MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23017	23095	23173			
			699.7MHz	707.5MHz	715.3MHz			
QPSK	1	0	23.33	23.71	23.68	-8.32	15.42	33.77
	1	2	23.57	23.58	23.74			
	1	5	23.51	23.67	23.62			
	3	0	22.29	22.30	22.38			
	3	1	22.28	22.20	22.35			
	3	2	22.22	22.29	22.19			
	6	0	22.20	22.26	22.23			
16QAM	1	0	22.32	22.44	22.26	-8.32	14.21	33.77
	1	2	22.45	22.32	22.53			
	1	5	22.51	22.39	22.35			
	3	0	21.32	21.45	21.45			
	3	1	21.30	21.29	21.56			
	3	2	21.36	21.37	21.39			
	6	0	21.15	21.22	21.29			
LTE Band 12 - 3MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23025	23095	23165			
			700.5MHz	707.5MHz	714.5MHz			
QPSK	1	0	23.45	23.48	23.56	-8.32	15.35	33.77
	1	7	23.33	23.40	23.62			
	1	14	23.49	23.67	23.65			
	8	0	22.50	22.45	22.68			
	8	4	22.49	22.46	22.69			
	8	7	22.40	22.63	22.71			
	15	0	22.43	22.58	22.67			
16QAM	1	0	22.50	22.42	22.58	-8.32	14.47	33.77
	1	7	22.67	22.47	22.67			
	1	14	22.52	22.62	22.79			
	8	0	21.45	21.61	21.69			
	8	4	21.44	21.63	21.71			
	8	7	21.35	21.54	21.62			
	15	0	21.30	21.48	21.62			



LTE Band 12 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23035	23095	23155			
			701.5MHz	707.5MHz	713.5MHz			
QPSK	1	0	23.41	23.45	23.63	-8.32	15.37	33.77
	1	12	23.45	23.36	23.47			
	1	24	23.34	23.30	23.69			
	12	0	22.45	22.49	22.65			
	12	6	22.41	22.50	22.65			
	12	11	22.38	22.51	22.71			
	25	0	22.31	22.50	22.68			
16QAM	1	0	22.38	22.44	22.32	-8.32	14.16	33.77
	1	12	21.41	22.37	22.27			
	1	24	21.27	22.48	22.42			
	12	0	21.32	21.37	21.43			
	12	6	21.22	21.38	21.42			
	12	11	21.40	21.36	21.59			
	25	0	21.24	21.43	21.48			
LTE Band 12 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23060	23095	23130			
			704.0MHz	707.5MHz	711.0MHz			
QPSK	1	0	23.52	23.48	23.49	-8.32	15.40	33.77
	1	24	23.41	23.42	23.57			
	1	49	23.39	23.64	23.72			
	25	0	22.51	22.37	22.54			
	25	12	22.41	22.38	22.55			
	25	24	22.58	22.57	22.70			
	50	0	22.43	22.44	22.59			
16QAM	1	0	22.55	22.62	22.71	-8.32	14.40	33.77
	1	24	22.37	22.43	22.66			
	1	49	22.41	22.51	22.72			
	25	0	21.49	21.43	21.66			
	25	12	21.53	21.59	21.67			
	25	24	21.60	21.53	21.57			
	50	0	21.46	21.48	21.57			



LTE Band 13 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23205	23230	23255			
			779.5MHz	782.0MHz	784.5MHz			
QPSK	1	0	23.36	23.37	23.32	-5.85	17.82	33.77
	1	12	23.41	23.58	23.61			
	1	24	23.67	23.49	23.47			
	12	0	22.60	22.63	22.56			
	12	6	22.68	22.63	22.47			
	12	11	22.65	22.49	22.54			
	25	0	22.57	22.58	22.60			
16QAM	1	0	22.49	22.59	22.73	-5.85	16.98	33.77
	1	12	22.47	22.62	22.83			
	1	24	22.65	22.71	22.52			
	12	0	21.52	21.42	21.28			
	12	6	21.49	21.52	21.29			
	12	11	21.39	21.39	21.45			
	25	0	21.55	21.47	21.57			
LTE Band 13 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			/	23230	/			
			/	782.0MHz	/			
QPSK	1	0	/	23.44	/	-5.85	17.82	33.77
	1	24	/	23.37	/			
	1	49	/	23.65	/			
	25	0	/	22.61	/			
	25	12	/	22.63	/			
	25	24	/	22.59	/			
	50	0	/	22.63	/			
16QAM	1	0	/	22.58	/	-5.85	16.81	33.77
	1	24	/	22.45	/			
	1	49	/	22.63	/			
	25	0	/	21.56	/			
	25	12	/	21.59	/			
	25	24	/	21.53	/			
	50	0	/	21.49	/			



LTE Band 17 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23755	23790	23825			
			706.5MHz	710.0MHz	713.5MHz			
QPSK	1	0	23.47	23.69	23.64	-8.32	15.39	33.77
	1	12	23.63	23.62	23.45			
	1	24	23.54	23.47	23.71			
	12	0	22.43	22.65	22.61			
	12	6	22.45	22.67	22.67			
	12	11	22.58	22.56	22.70			
	25	0	22.51	22.56	22.57			
16QAM	1	0	21.81	22.95	23.08	-8.32	14.77	33.77
	1	12	21.79	23.09	22.70			
	1	24	21.80	22.95	23.01			
	12	0	21.40	21.52	21.41			
	12	6	21.54	21.55	21.52			
	12	11	21.47	21.53	21.46			
	25	0	21.51	21.40	21.48			
LTE Band 17 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			23780	23790	23800			
			709.0MHz	710.0MHz	711.0MHz			
QPSK	1	0	23.69	23.65	23.64	-8.32	15.39	33.77
	1	24	23.41	23.46	23.53			
	1	49	23.60	23.71	23.61			
	25	0	22.57	22.66	22.62			
	25	12	22.58	22.67	22.63			
	25	24	22.68	22.70	22.84			
	50	0	22.68	22.63	22.79			
16QAM	1	0	23.15	22.58	22.67	-8.32	14.85	33.77
	1	24	22.98	22.44	22.71			
	1	49	23.17	22.57	22.60			
	25	0	21.60	21.59	21.64			
	25	12	21.60	21.57	21.43			
	25	24	21.66	21.63	21.59			
	50	0	21.54	21.37	21.55			



LTE Band 38 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			37775	38000	38225			
			2572.5MHz	2595.0MHz	2617.5MHz			
QPSK	1	0	23.24	23.32	23.45	2.94	26.45	33.00
	1	12	23.43	23.51	23.38			
	1	24	23.32	23.44	23.44			
	12	0	22.55	22.53	22.44			
	12	6	22.54	22.45	22.46			
	12	11	22.44	22.46	22.57			
	25	0	22.49	22.52	22.53			
16QAM	1	0	22.37	22.32	22.34	2.94	25.50	33.00
	1	12	22.45	22.43	22.54			
	1	24	22.52	22.33	22.56			
	12	0	21.51	21.23	21.24			
	12	6	21.51	21.45	21.44			
	12	11	21.41	21.38	21.37			
	25	0	21.46	21.44	21.46			
LTE Band 38 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			37800	38000	38200			
			2575.0MHz	2595.0MHz	2615.0MHz			
QPSK	1	0	23.57	23.37	23.70	2.94	26.64	33.00
	1	24	23.66	23.57	23.41			
	1	49	23.45	23.51	23.53			
	25	0	22.62	22.58	22.66			
	25	12	22.60	22.59	22.67			
	25	24	22.52	22.47	22.61			
	50	0	22.55	22.59	22.49			
16QAM	1	0	22.31	22.47	22.48	2.94	25.60	33.00
	1	24	22.47	22.56	22.35			
	1	49	22.66	22.63	22.39			
	25	0	21.40	21.45	21.53			
	25	12	21.49	21.44	21.53			
	25	24	21.36	21.34	21.48			
	50	0	21.44	21.34	21.39			



LTE Band 38 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			37825	38000	38175			
			2577.5MHz	2595.0MHz	2612.5MHz			
QPSK	1	0	23.61	23.32	23.68	2.94	26.65	33.00
	1	37	23.70	23.56	23.50			
	1	74	23.50	23.58	23.71			
	36	0	22.48	22.54	22.58			
	36	16	22.53	22.55	22.55			
	36	35	22.55	22.34	22.48			
	75	0	22.58	22.40	22.45			
16QAM	1	0	22.41	22.34	22.61	2.94	25.55	33.00
	1	37	22.33	22.53	22.59			
	1	74	22.44	22.57	22.43			
	36	0	21.49	22.55	22.47			
	36	16	21.43	22.55	22.38			
	36	35	21.55	22.43	22.51			
	75	0	21.43	21.45	21.41			
LTE Band 38 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			37850	38000	38150			
			2580.0MHz	2595.0MHz	2610.0MHz			
QPSK	1	0	23.48	23.37	23.52	2.94	26.50	33.00
	1	49	23.37	23.42	23.44			
	1	99	23.56	23.38	23.49			
	50	0	22.53	22.50	22.39			
	50	24	22.54	22.51	22.40			
	50	49	22.49	22.45	22.52			
	100	0	22.50	22.41	22.41			
16QAM	1	0	22.47	22.42	22.42	2.94	25.62	33.00
	1	49	22.53	22.68	22.35			
	1	99	22.50	22.64	22.47			
	50	0	21.50	21.58	21.37			
	50	24	21.55	21.45	21.43			
	50	49	21.57	21.49	21.51			
	100	0	21.56	21.39	21.38			



LTE Band 41 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			39675	40620	41565			
			2498.5MHz	2593.0MHz	2687.5MHz			
QPSK	1	0	23.31	23.35	23.48	2.94	26.54	33.00
	1	12	23.38	23.32	23.57			
	1	24	23.42	23.20	23.60			
	12	0	22.44	22.54	22.66			
	12	6	22.49	22.51	22.67			
	12	11	22.37	22.58	22.70			
	25	0	22.46	22.53	22.59			
16QAM	1	0	22.38	22.53	22.65	2.94	25.65	33.00
	1	12	22.58	22.62	22.71			
	1	24	22.46	22.65	22.53			
	12	0	21.46	21.63	21.67			
	12	6	21.51	21.55	21.68			
	12	11	21.40	21.50	21.70			
	25	0	21.45	21.65	21.58			
LTE Band 41 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			39700	40620	41540			
			2501.0MHz	2593.0MHz	2685.0MHz			
QPSK	1	0	23.49	23.56	23.65	2.94	26.62	33.00
	1	24	23.57	23.61	23.68			
	1	49	23.45	23.51	23.59			
	25	0	22.51	22.69	22.71			
	25	12	22.52	22.69	22.69			
	25	24	22.49	22.64	22.77			
	50	0	22.47	22.60	22.68			
16QAM	1	0	22.36	22.42	22.54	2.94	25.59	33.00
	1	24	22.41	22.53	22.50			
	1	49	22.56	22.61	22.65			
	25	0	21.42	21.53	21.74			
	25	12	21.35	21.58	21.67			
	25	24	21.34	21.45	21.74			
	50	0	21.40	21.51	21.70			



LTE Band 41 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			39725	40620	41515			
			2503.5MHz	2593.0MHz	2682.5MHz			
QPSK	1	0	23.49	23.53	23.70	2.94	26.68	33.00
	1	37	23.44	23.68	23.74			
	1	74	23.37	23.56	23.68			
	36	0	22.37	22.49	22.52			
	36	16	22.46	22.46	22.51			
	36	35	22.29	22.17	22.41			
	75	0	22.30	22.54	22.49			
16QAM	1	0	22.49	22.32	22.41	2.94	25.52	33.00
	1	37	22.58	22.46	22.51			
	1	74	22.45	22.35	22.11			
	36	0	21.39	21.49	21.51			
	36	16	21.48	21.46	21.45			
	36	35	21.47	21.33	21.42			
	75	0	21.30	21.35	21.38			
LTE Band 41 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. EIRP (dBm)	EIRP Limit (dBm)
			39750	40620	41490			
			2506.0MHz	2593.0MHz	2680.0MHz			
QPSK	1	0	23.32	23.29	23.51	2.94	26.45	33.00
	1	49	23.36	23.41	23.46			
	1	99	23.48	23.34	23.39			
	50	0	22.53	22.55	22.55			
	50	24	22.47	22.64	22.46			
	50	49	22.35	22.53	22.69			
	100	0	22.32	22.56	22.49			
16QAM	1	0	22.41	22.38	22.52	2.94	25.62	33.00
	1	49	22.33	22.57	22.49			
	1	99	22.57	22.40	22.68			
	50	0	21.52	21.70	21.55			
	50	24	21.56	21.70	21.61			
	50	49	21.39	21.65	21.59			
	100	0	21.42	21.73	21.55			

**Peak To Average Ratio**

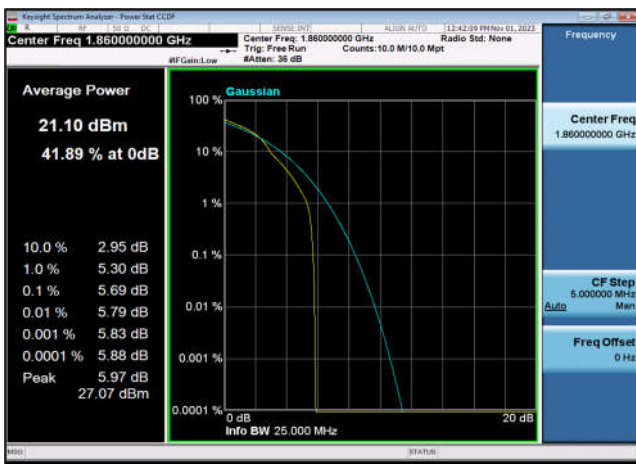
PeakToAveragePowerRatio NormalTC_NormalVol							
Band	Range	BandWidth	RbMode	Modulation	PAPR (dBm)	Limit (dBm)	Result
FDD02	LowRange	20	OneRB_high	Q16	5.69	13.00	Pass
FDD02	LowRange	20	fullRB	Q16	6.29	13.00	Pass
FDD02	MidRange	20	OneRB_high	Q16	5.57	13.00	Pass
FDD02	MidRange	20	fullRB	Q16	6.26	13.00	Pass
FDD02	HighRange	20	OneRB_high	Q16	5.60	13.00	Pass
FDD02	HighRange	20	fullRB	Q16	6.26	13.00	Pass
FDD04	LowRange	20	OneRB_high	Q16	5.29	13.00	Pass
FDD04	LowRange	20	fullRB	Q16	6.23	13.00	Pass
FDD04	MidRange	20	OneRB_high	Q16	5.68	13.00	Pass
FDD04	MidRange	20	fullRB	Q16	6.09	13.00	Pass
FDD04	HighRange	20	OneRB_high	Q16	5.46	13.00	Pass
FDD04	HighRange	20	fullRB	Q16	6.22	13.00	Pass
FDD05	LowRange	10	OneRB_high	Q16	4.40	13.00	Pass
FDD05	LowRange	10	fullRB	Q16	5.75	13.00	Pass
FDD05	MidRange	10	OneRB_high	Q16	3.87	13.00	Pass
FDD05	MidRange	10	fullRB	Q16	5.67	13.00	Pass
FDD05	HighRange	10	OneRB_high	Q16	4.40	13.00	Pass
FDD05	HighRange	10	fullRB	Q16	5.61	13.00	Pass
FDD07	LowRange	20	OneRB_high	Q16	5.33	13.00	Pass
FDD07	LowRange	20	fullRB	Q16	5.96	13.00	Pass
FDD07	MidRange	20	OneRB_high	Q16	5.16	13.00	Pass
FDD07	MidRange	20	fullRB	Q16	5.95	13.00	Pass
FDD07	HighRange	20	OneRB_high	Q16	4.75	13.00	Pass
FDD07	HighRange	20	fullRB	Q16	5.99	13.00	Pass
FDD12	LowRange	10	OneRB_high	Q16	5.19	13.00	Pass
FDD12	LowRange	10	fullRB	Q16	6.06	13.00	Pass
FDD12	MidRange	10	OneRB_high	Q16	4.89	13.00	Pass
FDD12	MidRange	10	fullRB	Q16	6.06	13.00	Pass
FDD12	HighRange	10	OneRB_high	Q16	4.61	13.00	Pass
FDD12	HighRange	10	fullRB	Q16	6.00	13.00	Pass



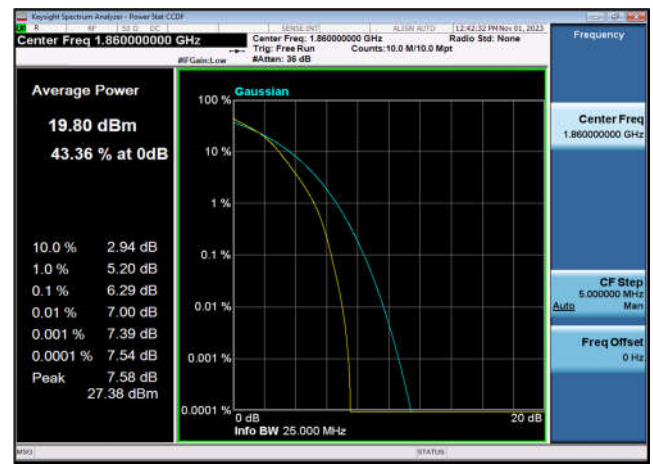
FDD13	LowRange	10	OneRB_high	Q16	4.92	13.00	Pass
FDD13	LowRange	10	fullRB	Q16	5.94	13.00	Pass
FDD13	MidRange	10	OneRB_high	Q16	4.87	13.00	Pass
FDD13	MidRange	10	fullRB	Q16	5.90	13.00	Pass
FDD13	HighRange	10	OneRB_high	Q16	4.87	13.00	Pass
FDD13	HighRange	10	fullRB	Q16	5.94	13.00	Pass
FDD17	LowRange	10	OneRB_high	Q16	4.84	13.00	Pass
FDD17	LowRange	10	fullRB	Q16	5.99	13.00	Pass
FDD17	MidRange	10	OneRB_high	Q16	4.42	13.00	Pass
FDD17	MidRange	10	fullRB	Q16	6.02	13.00	Pass
FDD17	HighRange	10	OneRB_high	Q16	4.55	13.00	Pass
FDD17	HighRange	10	fullRB	Q16	5.97	13.00	Pass
TDD38	LowRange	20	OneRB_high	Q16	5.63	13.00	Pass
TDD38	LowRange	20	fullRB	Q16	6.11	13.00	Pass
TDD38	MidRange	20	OneRB_high	Q16	6.30	13.00	Pass
TDD38	MidRange	20	fullRB	Q16	6.11	13.00	Pass
TDD38	HighRange	20	OneRB_high	Q16	5.57	13.00	Pass
TDD38	HighRange	20	fullRB	Q16	6.19	13.00	Pass
TDD41	LowRange	20	OneRB_high	Q16	5.74	13.00	Pass
TDD41	LowRange	20	fullRB	Q16	6.00	13.00	Pass
TDD41	MidRange	20	OneRB_high	Q16	5.56	13.00	Pass
TDD41	MidRange	20	fullRB	Q16	6.05	13.00	Pass
TDD41	HighRange	20	OneRB_high	Q16	5.10	13.00	Pass
TDD41	HighRange	20	fullRB	Q16	5.93	13.00	Pass



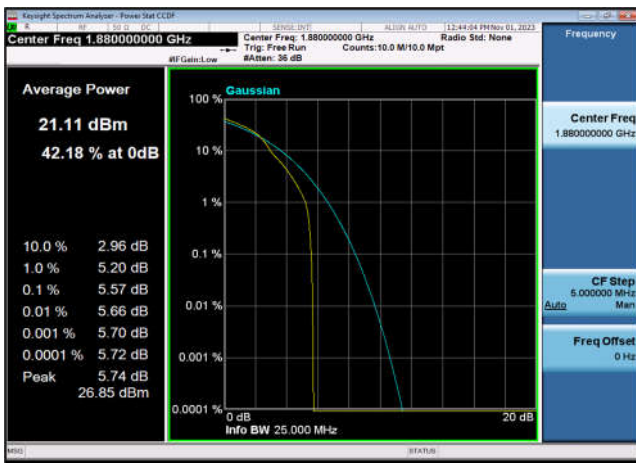
FDD02_LowRange_20MHz_1860_OneRB_high_Q16



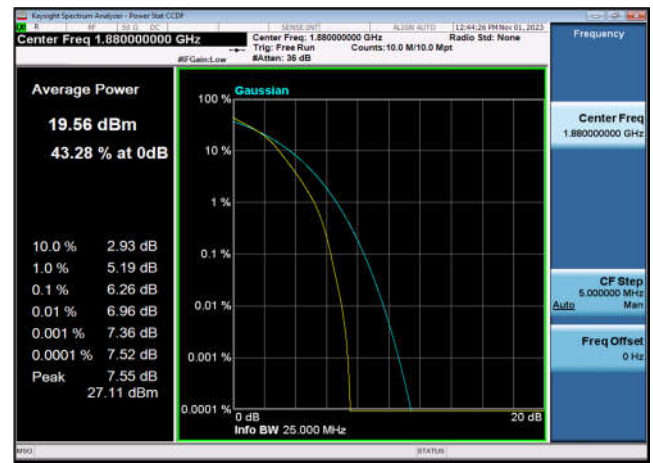
FDD02_LowRange_20MHz_1860_fullIRB_Q16



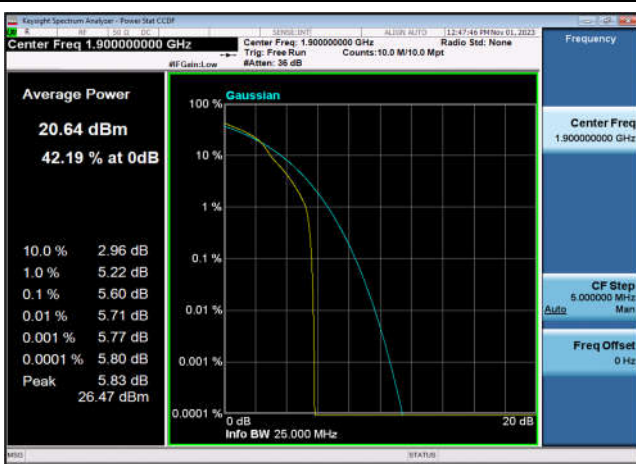
FDD02_MidRange_20MHz_1880_OneRB_high_Q16



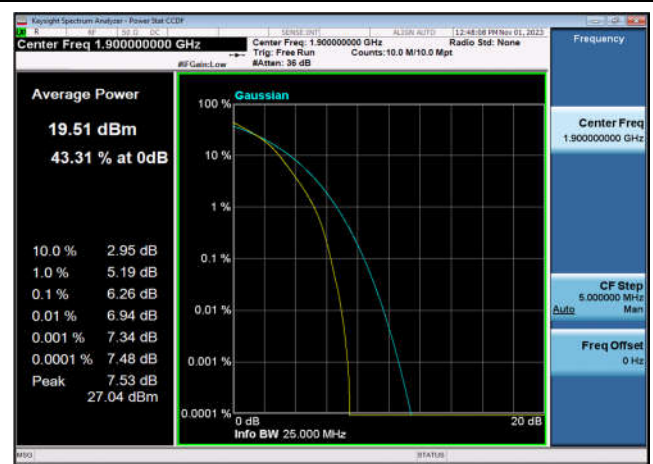
FDD02_MidRange_20MHz_1880_fullIRB_Q16



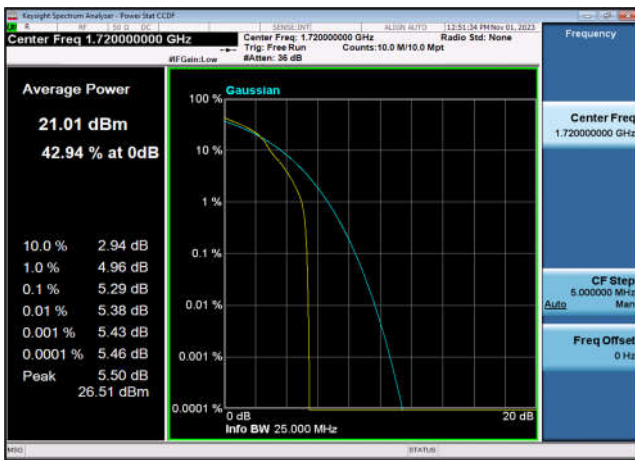
FDD02_HighRange_20MHz_1900_OneRB_high_Q16



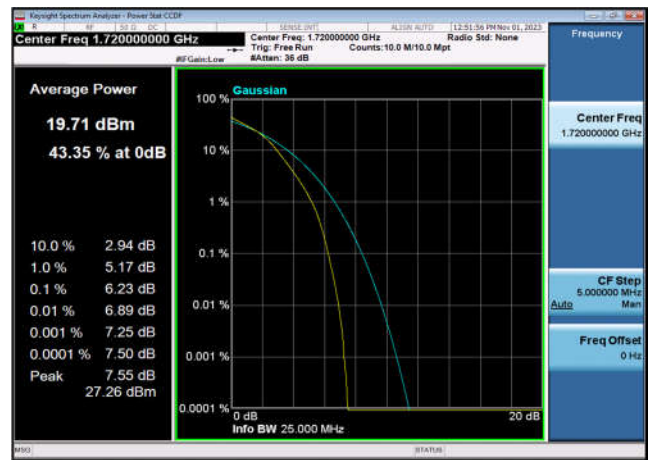
FDD02_HighRange_20MHz_1900_fullIRB_Q16



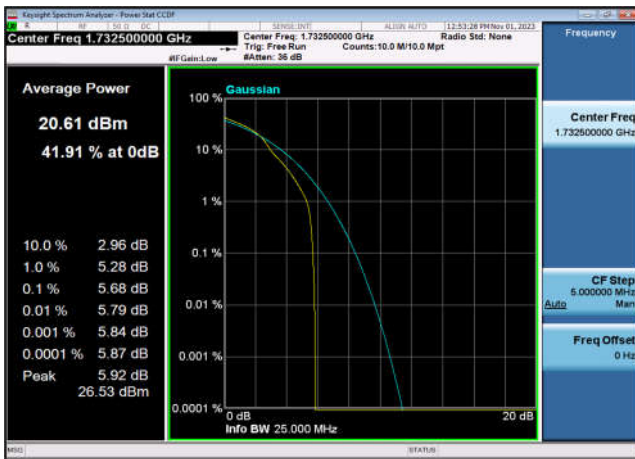
FDD04_LowRange_20MHz_1720_OneRB
_high_Q16



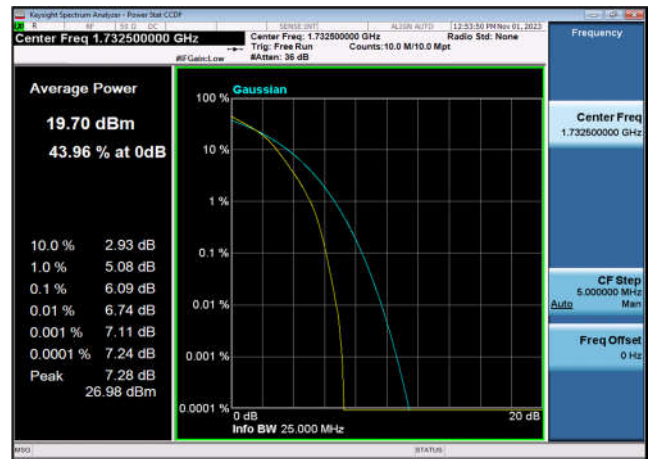
FDD04_LowRange_20MHz_1720_fullRB
_Q16



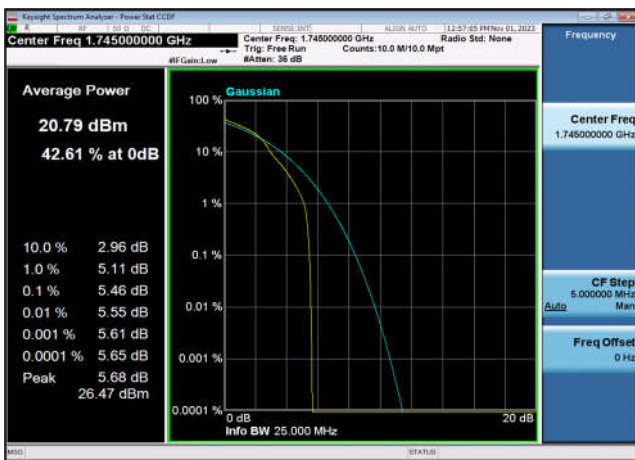
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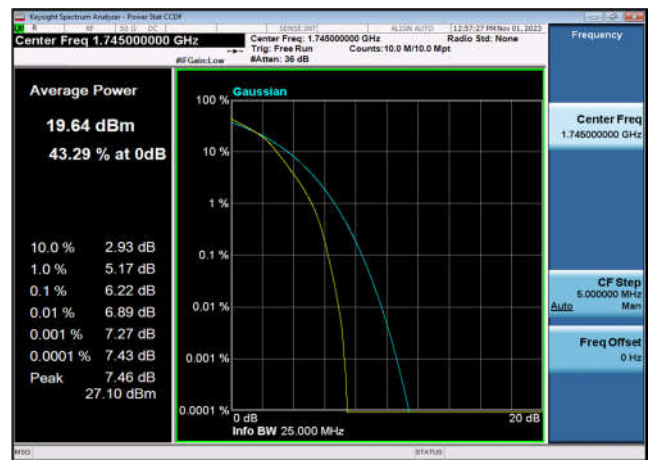
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_Q16



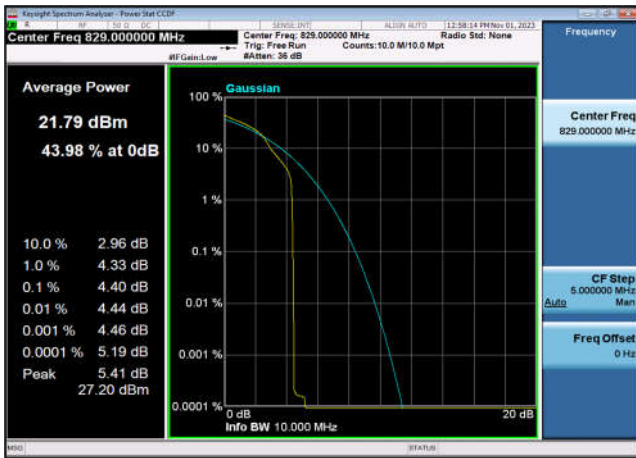
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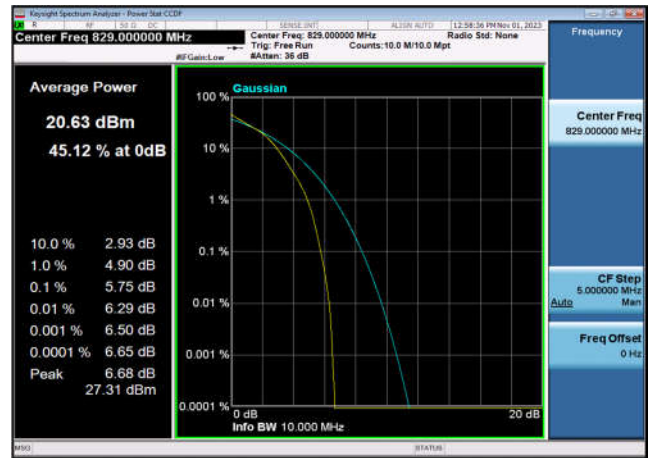
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_Q16



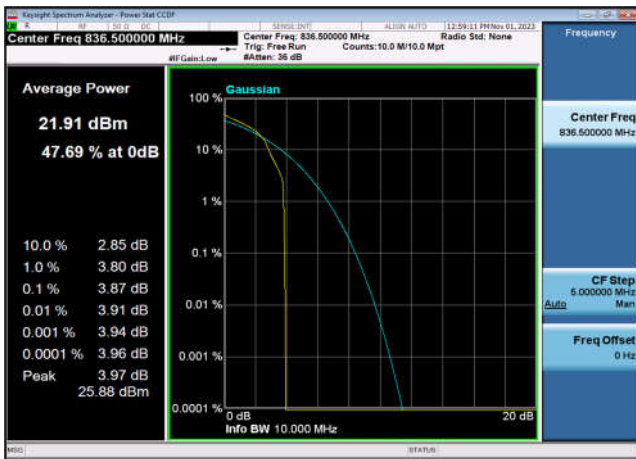
FDD05_LowRange_10MHz_829_OneRB_high_Q16



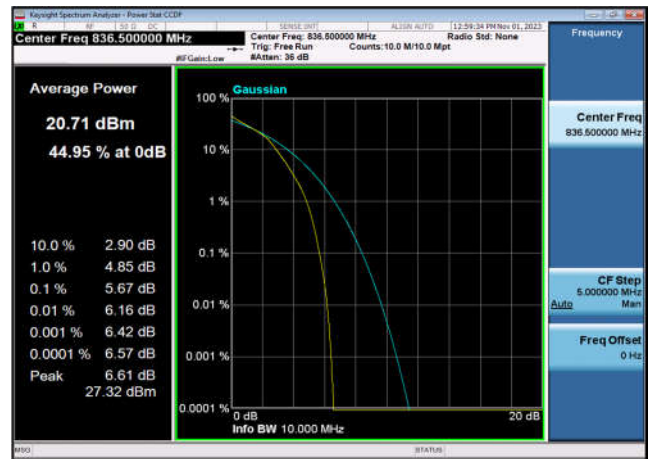
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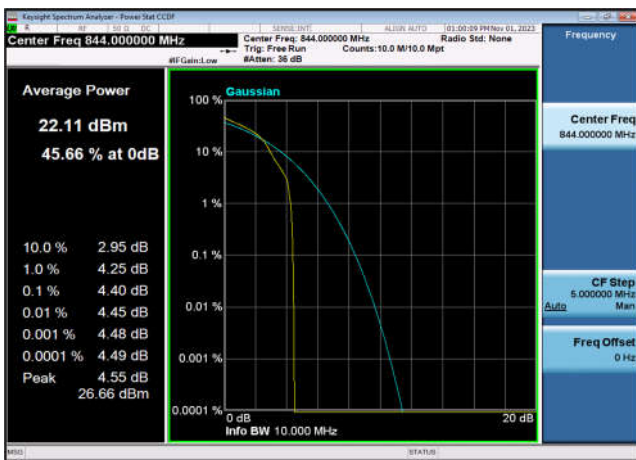
FDD05_MidRange_10MHz_836.5_OneRB_high_Q16



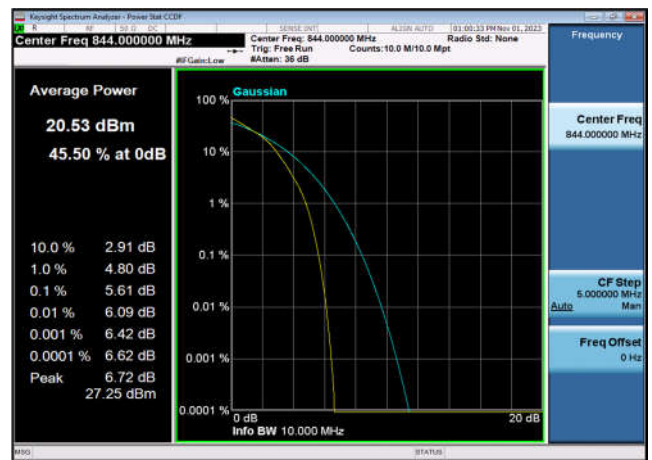
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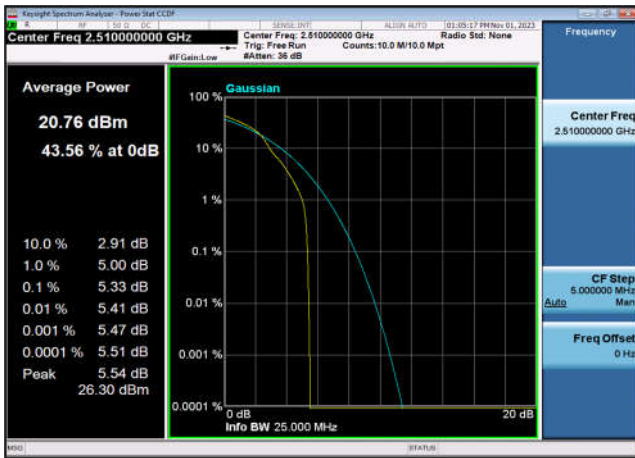
FDD05_HighRange_10MHz_844_OneRB_high_Q16



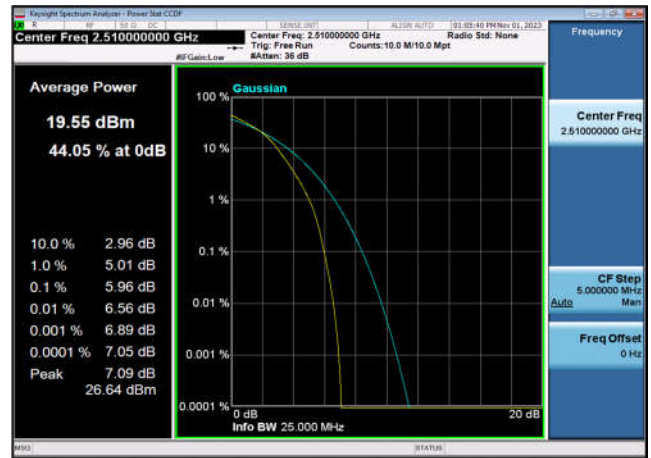
FDD05_HighRange_10MHz_844_fullIRB_Q16



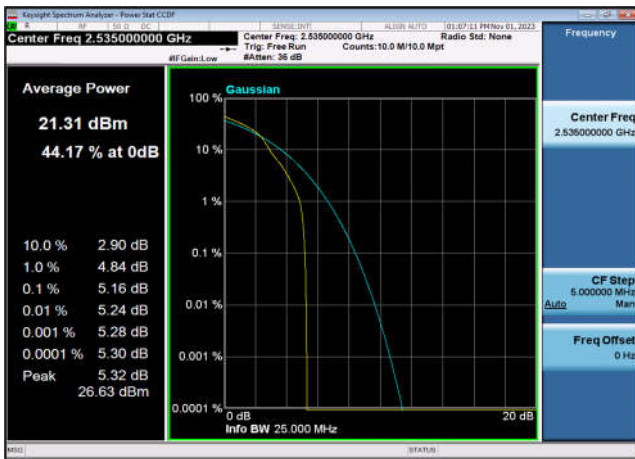
FDD07_LowRange_20MHz_2510_OneRB_high_Q16



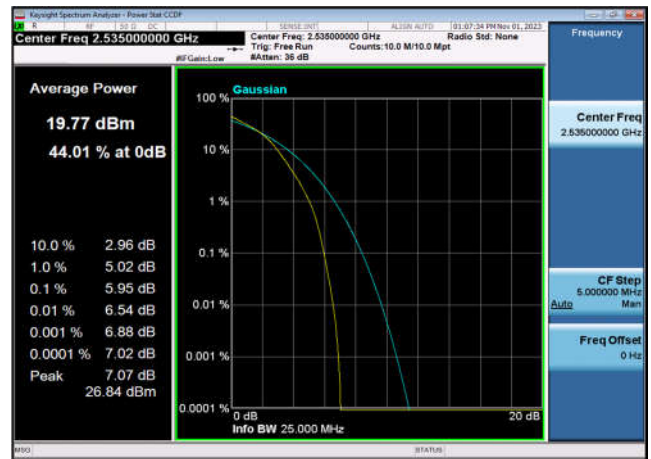
FDD07_LowRange_20MHz_2510_fullIRB_Q16



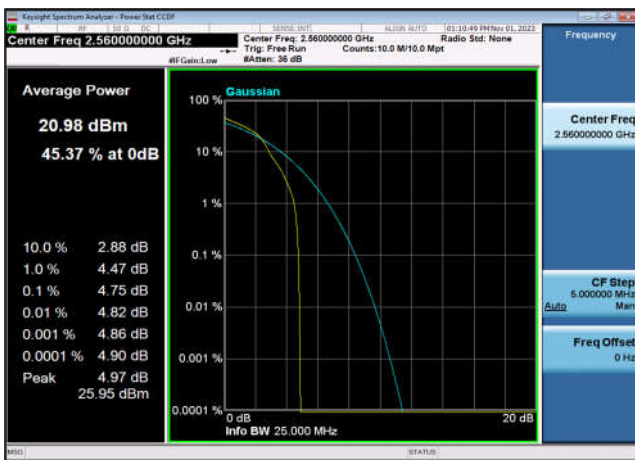
FDD07_MidRange_20MHz_2535_OneRB_high_Q16



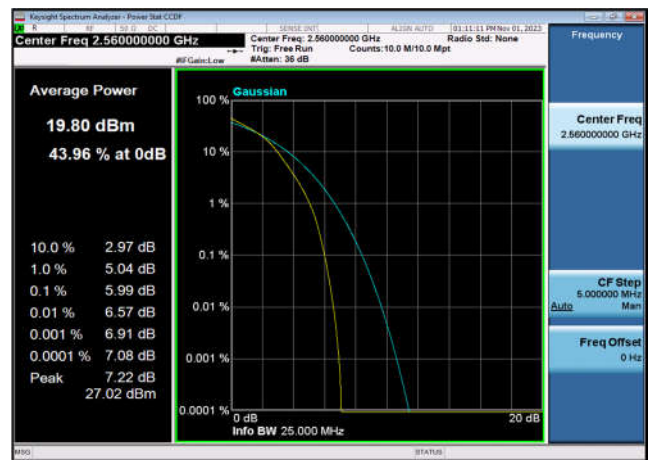
FDD07_MidRange_20MHz_2535_fullIRB_Q16



FDD07_HighRange_20MHz_2560_OneRB_high_Q16

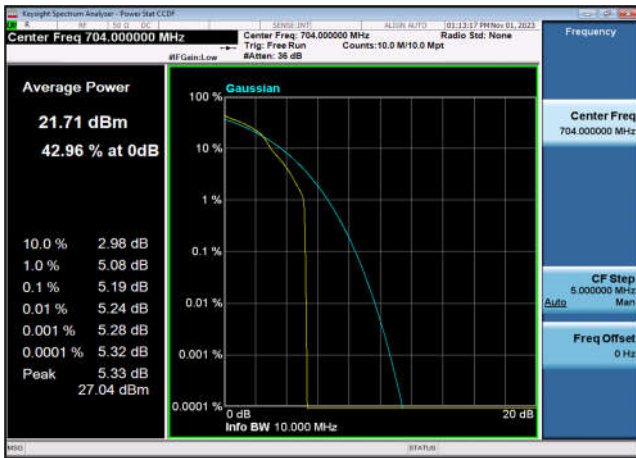


FDD07_HighRange_20MHz_2560_fullIRB_Q16

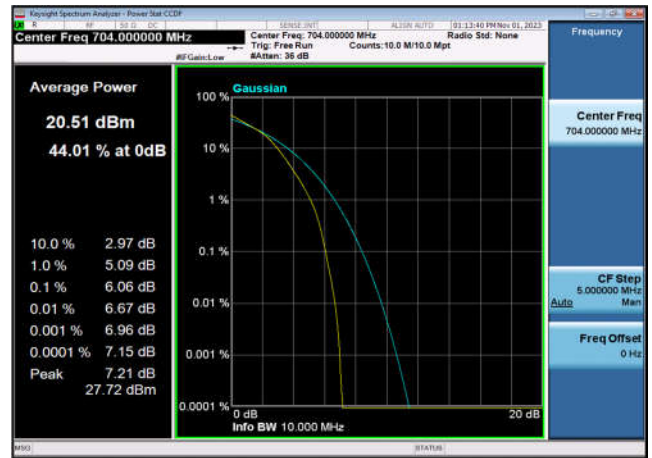




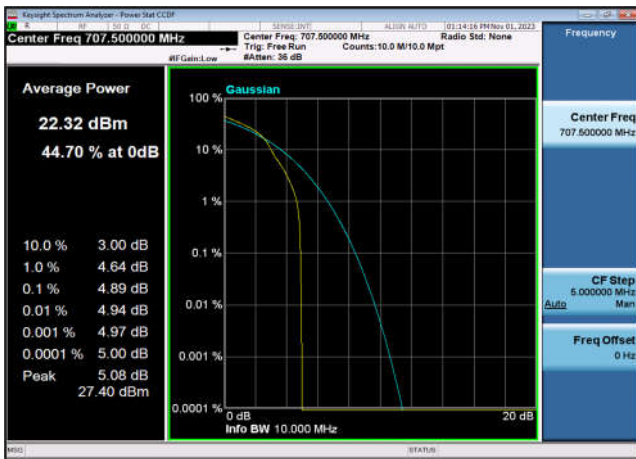
FDD12_LowRange_10MHz_704_OneRB_high_Q16



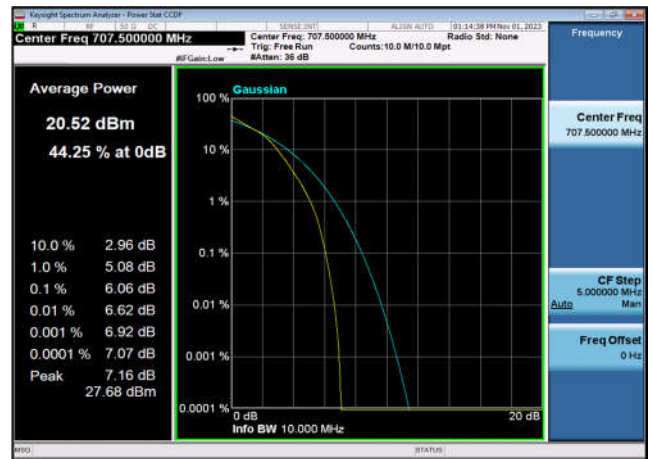
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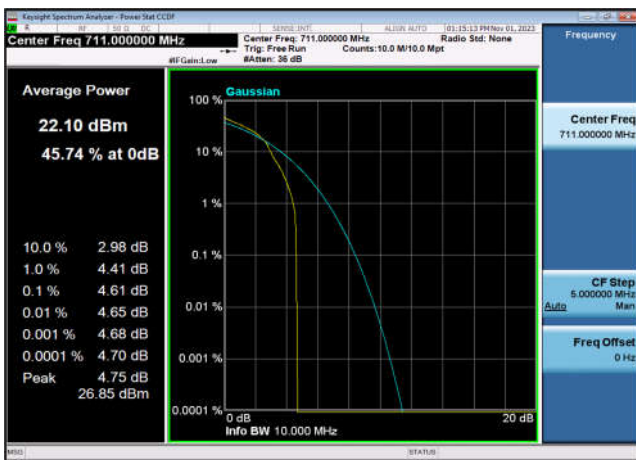
FDD12_MidRange_10MHz_707.5_OneRB_high_Q16



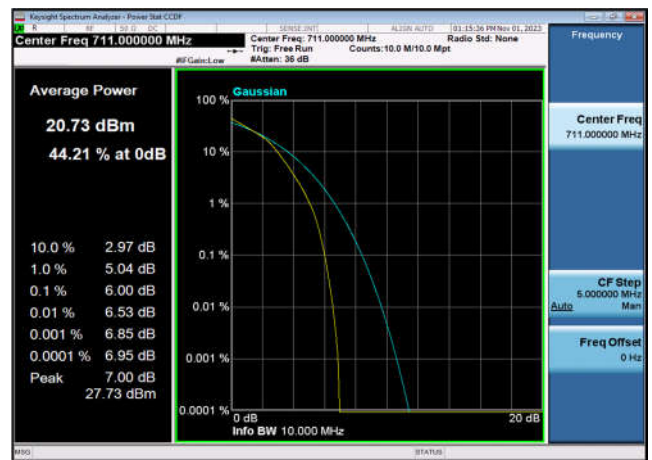
FDD12_MidRange_10MHz_707.5_fullIRB_Q16



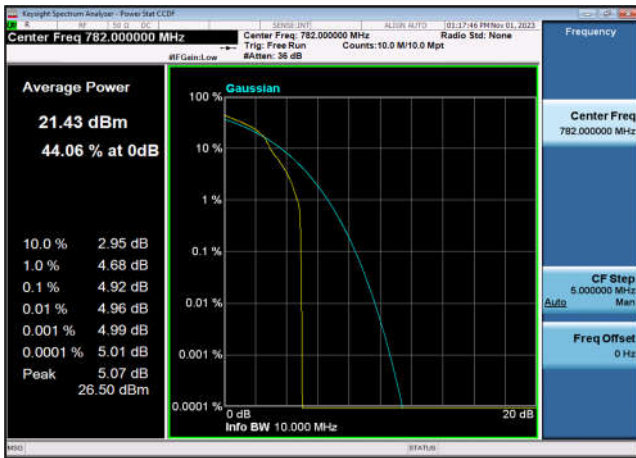
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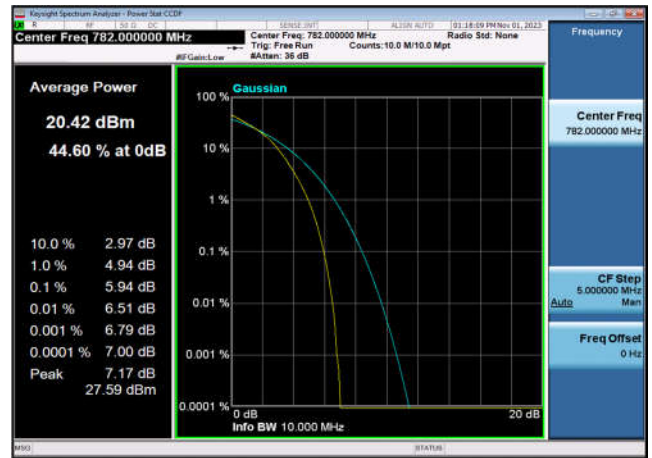
FDD12_HighRange_10MHz_711_fullIRB_Q16



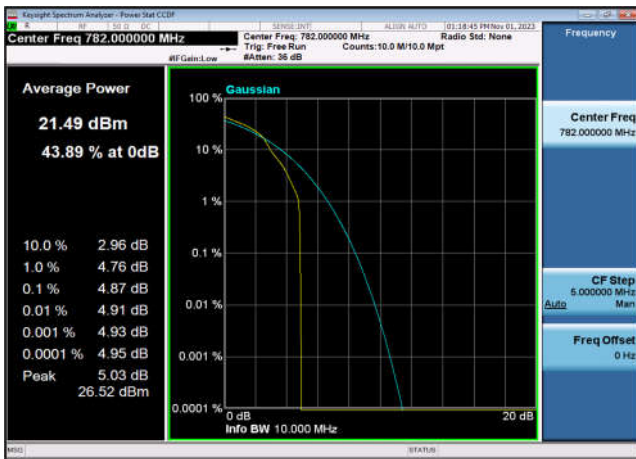
FDD13_LowRange_10MHz_782_OneRB_high_Q16



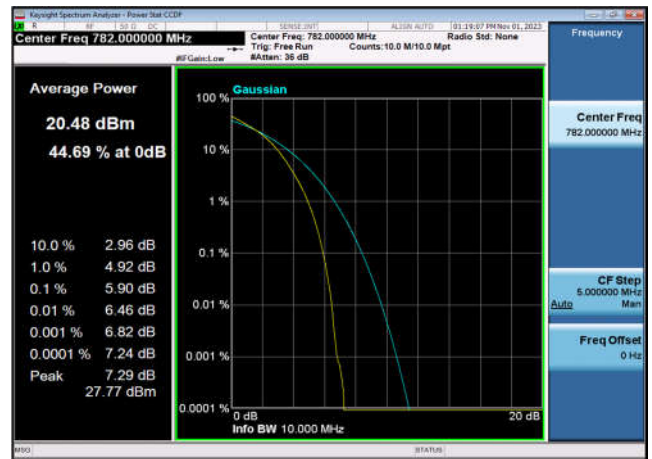
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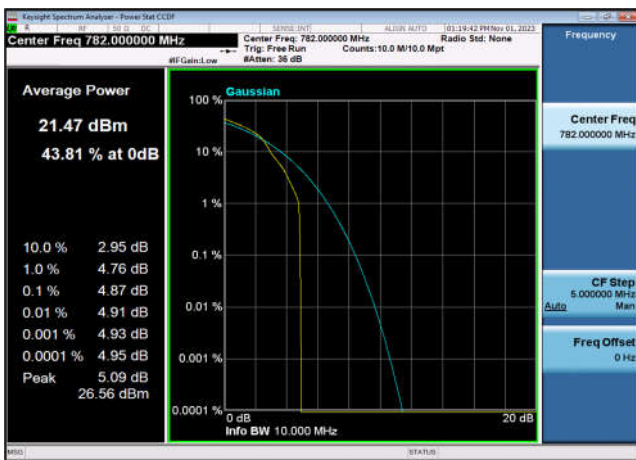
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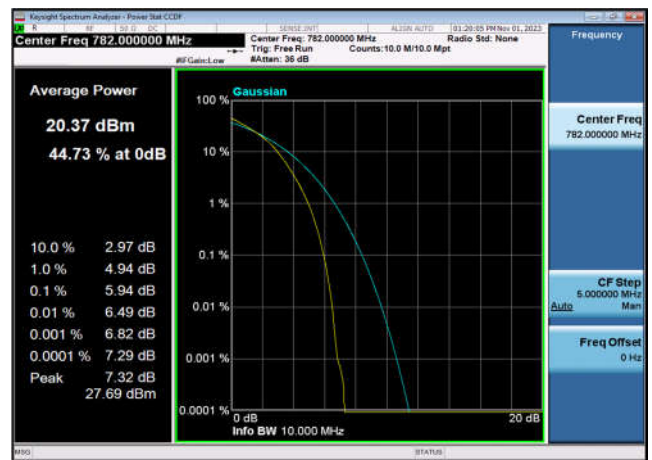
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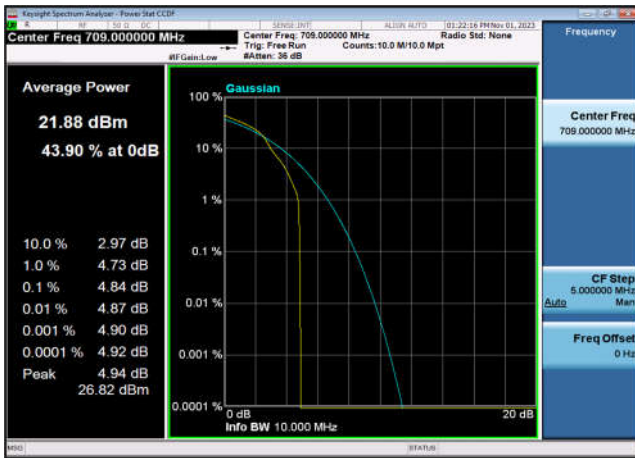
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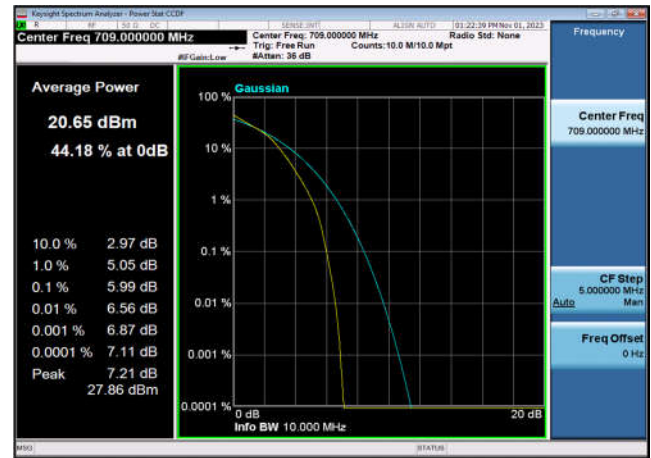
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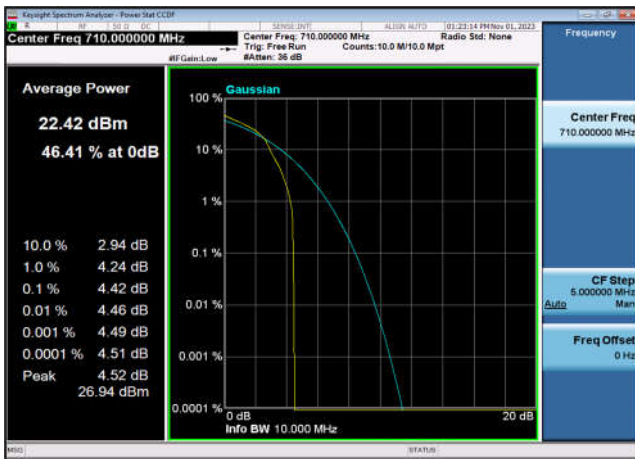
FDD17_LowRange_10MHz_709_OneRB_high_Q16



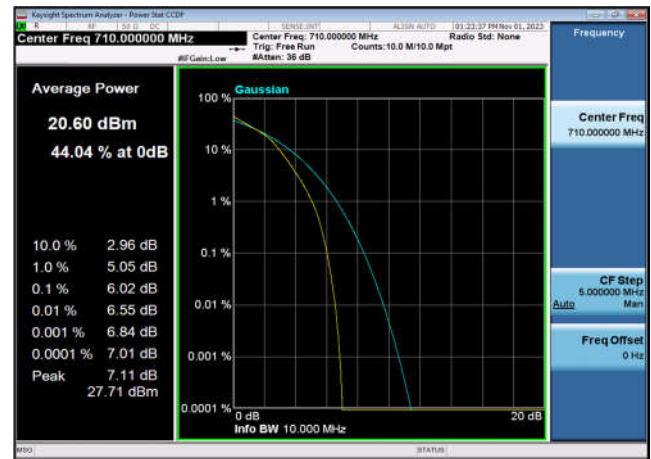
FDD17_LowRange_10MHz_709_fullIRB_Q16



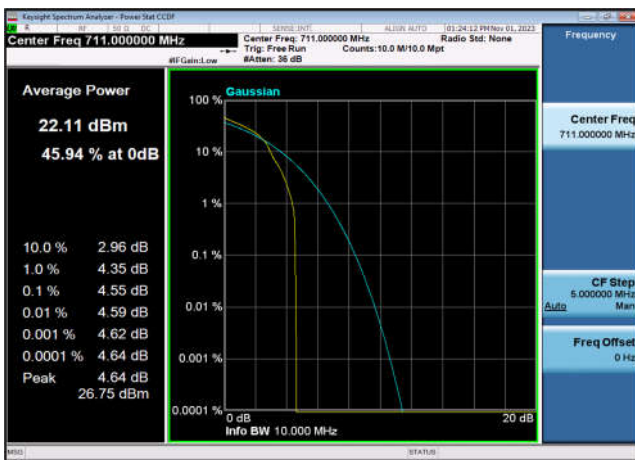
FDD17_MidRange_10MHz_710_OneRB_high_Q16



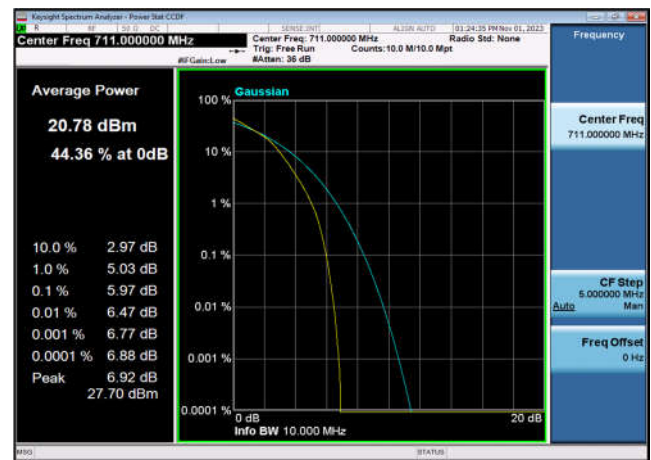
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FDD17_HighRange_10MHz_711_OneRB_high_Q16

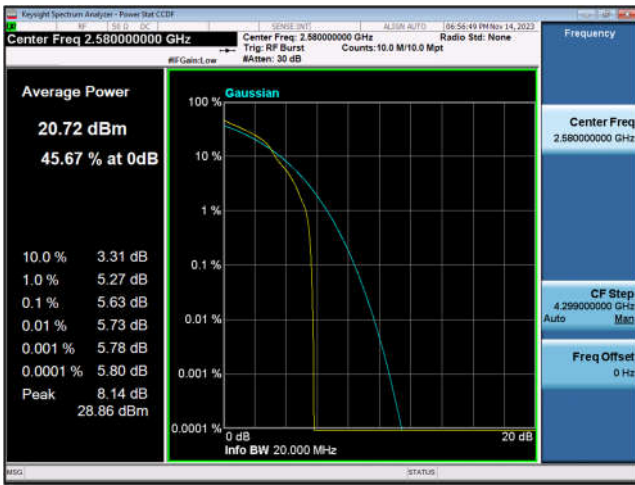


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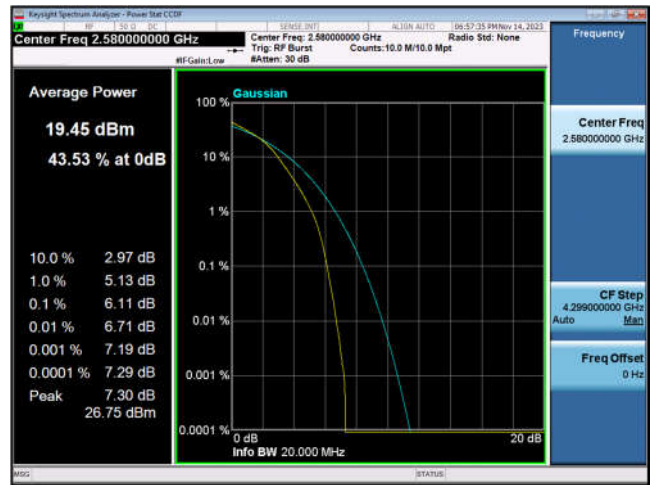




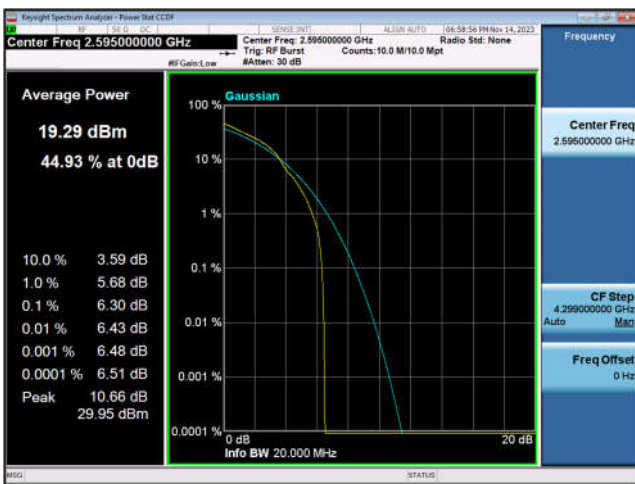
TDD38_LowRange_20MHz_2580_OneRB_high_Q16



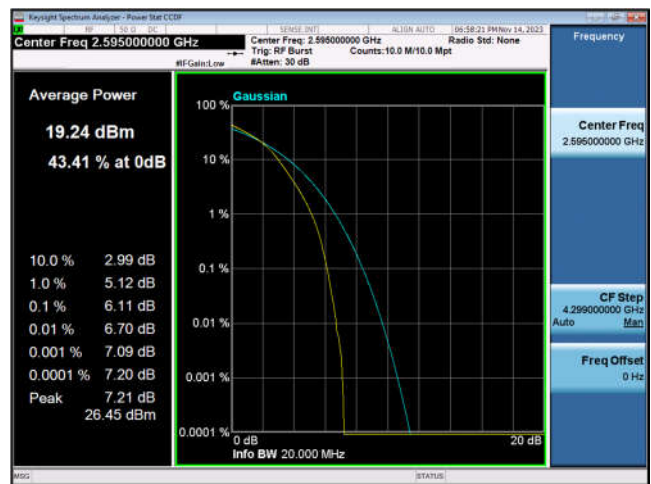
TDD38_LowRange_20MHz_2580_fullIRB_Q16



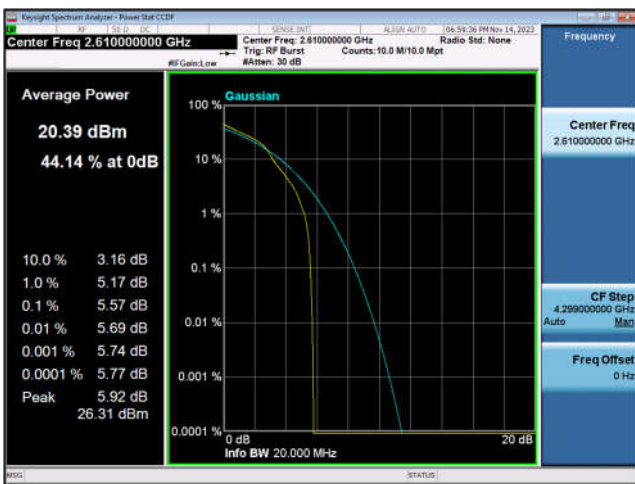
TDD38_MidRange_20MHz_2595_OneRB_high_Q16



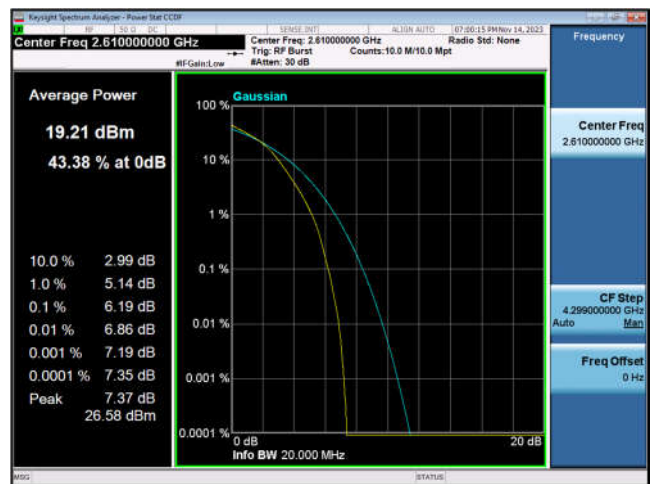
TDD38_MidRange_20MHz_2595_fullIRB_Q16



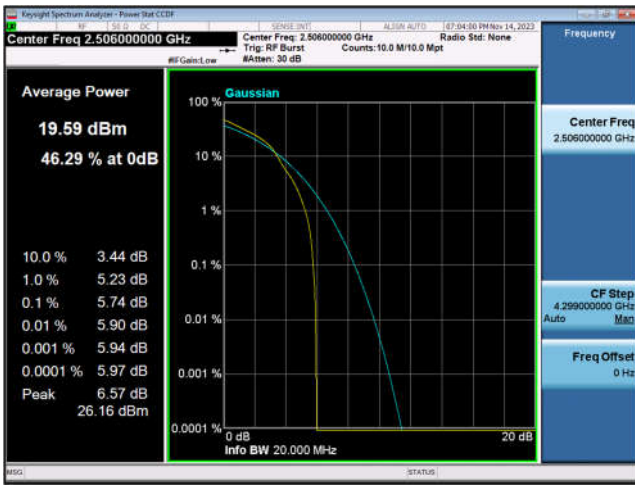
TDD38_HighRange_20MHz_2610_OneRB_high_Q16



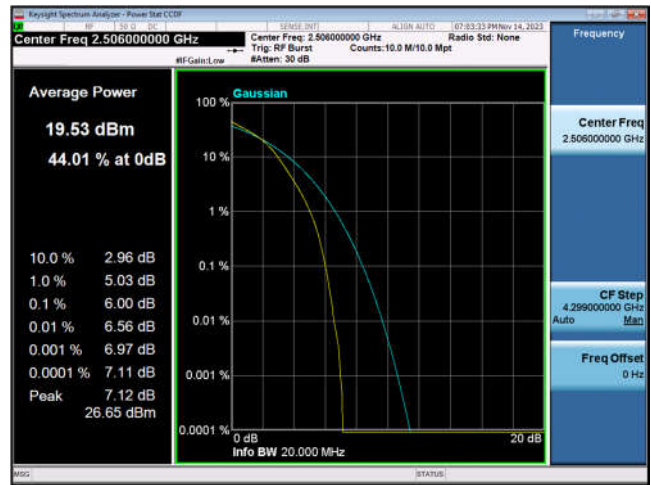
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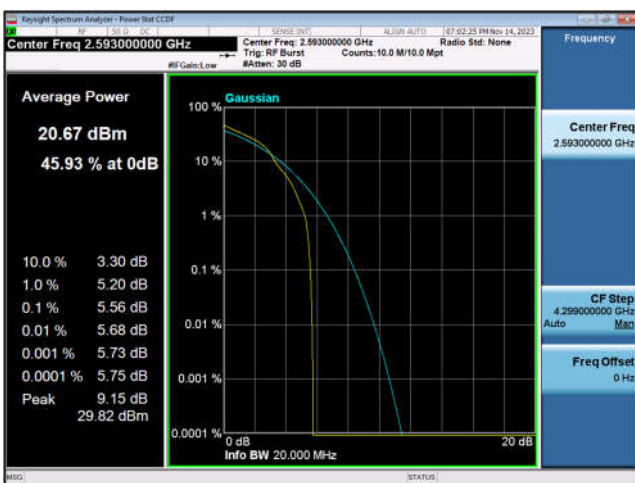
TDD41_LowRange_20MHz_2506_OneRB_high_Q16



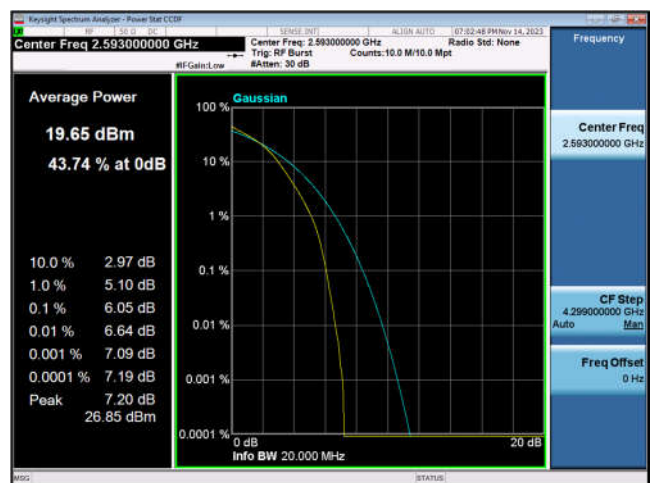
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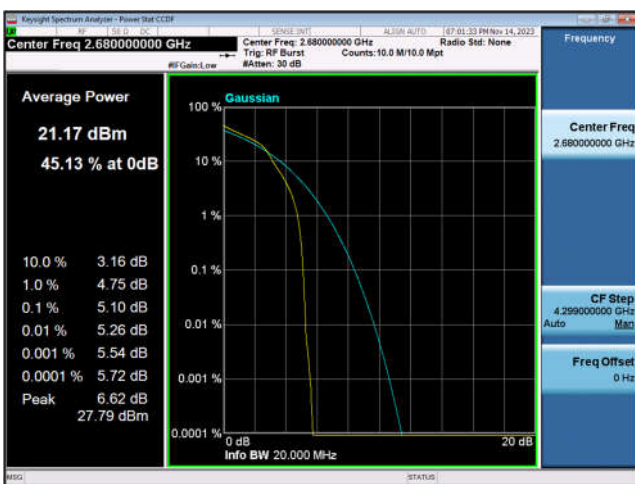
TDD41_MidRange_20MHz_2593_OneRB_high_Q16



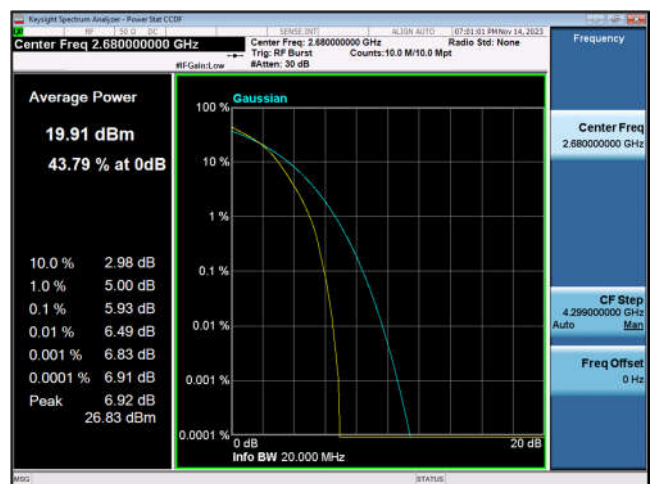
TDD41_MidRange_20MHz_2593_fullIRB_Q16



TDD41_HighRange_20MHz_2680_OneRB_high_Q16



TDD41_HighRange_20MHz_2680_fullIRB_Q16





99% Occupied Bandwidth and 26dB Emission Bandwidth

Occupied Bandwidth NormalTC_NormalVol						
Band	Range	BandWidth	Frequency (MHz)	Modulation	99% OBW (MHz)	26dB EBW (MHz)
FDD02	MidRange	1.4	1880	QPSK	1.09	1.259
FDD02	MidRange	1.4	1880	Q16	1.092	1.258
FDD02	MidRange	3	1880	QPSK	2.684	2.866
FDD02	MidRange	3	1880	Q16	2.684	2.911
FDD02	MidRange	5	1880	QPSK	4.492	4.855
FDD02	MidRange	5	1880	Q16	4.494	4.815
FDD02	MidRange	10	1880	QPSK	8.917	9.369
FDD02	MidRange	10	1880	Q16	8.908	9.400
FDD02	MidRange	15	1880	QPSK	13.407	14.28
FDD02	MidRange	15	1880	Q16	13.408	14.23
FDD02	MidRange	20	1880	QPSK	17.858	18.74
FDD02	MidRange	20	1880	Q16	17.837	18.74
FDD04	MidRange	1.4	1732.5	QPSK	1.092	1.263
FDD04	MidRange	1.4	1732.5	Q16	1.089	1.263
FDD04	MidRange	3	1732.5	QPSK	2.679	2.875
FDD04	MidRange	3	1732.5	Q16	2.676	2.896
FDD04	MidRange	5	1732.5	QPSK	4.494	4.872
FDD04	MidRange	5	1732.5	Q16	4.49	4.857
FDD04	MidRange	10	1732.5	QPSK	8.926	9.434
FDD04	MidRange	10	1732.5	Q16	8.913	9.401
FDD04	MidRange	15	1732.5	QPSK	13.425	14.29
FDD04	MidRange	15	1732.5	Q16	13.422	14.26
FDD04	MidRange	20	1732.5	QPSK	17.858	18.72
FDD04	MidRange	20	1732.5	Q16	17.836	18.71
FDD05	MidRange	1.4	836.5	QPSK	1.095	1.247
FDD05	MidRange	1.4	836.5	Q16	1.091	1.271
FDD05	MidRange	3	836.5	QPSK	2.679	2.897
FDD05	MidRange	3	836.5	Q16	2.68	2.889
FDD05	MidRange	5	836.5	QPSK	4.49	4.872
FDD05	MidRange	5	836.5	Q16	4.494	4.825



FDD05	MidRange	10	836.5	QPSK	8.928	9.454
FDD05	MidRange	10	836.5	Q16	8.913	9.504
FDD07	MidRange	5	2535	QPSK	4.486	4.804
FDD07	MidRange	5	2535	Q16	4.492	4.855
FDD07	MidRange	10	2535	QPSK	8.922	9.424
FDD07	MidRange	10	2535	Q16	8.916	9.420
FDD07	MidRange	15	2535	QPSK	13.428	14.26
FDD07	MidRange	15	2535	Q16	13.435	14.21
FDD07	MidRange	20	2535	QPSK	17.863	18.72
FDD07	MidRange	20	2535	Q16	17.85	18.75
FDD12	MidRange	1.4	707.5	QPSK	1.093	1.245
FDD12	MidRange	1.4	707.5	Q16	1.09	1.265
FDD12	MidRange	3	707.5	QPSK	2.68	2.877
FDD12	MidRange	3	707.5	Q16	2.68	2.878
FDD12	MidRange	5	707.5	QPSK	4.489	4.872
FDD12	MidRange	5	707.5	Q16	4.488	4.807
FDD12	MidRange	10	707.5	QPSK	8.915	9.401
FDD12	MidRange	10	707.5	Q16	8.895	9.344
FDD13	MidRange	5	782	QPSK	4.481	4.857
FDD13	MidRange	5	782	Q16	4.488	4.842
FDD13	MidRange	10	782	QPSK	8.914	9.388
FDD13	MidRange	10	782	Q16	8.897	9.371
FDD17	MidRange	5	710	QPSK	4.492	4.817
FDD17	MidRange	5	710	Q16	4.494	4.877
FDD17	MidRange	10	710	QPSK	8.933	9.429
FDD17	MidRange	10	710	Q16	8.91	9.491
TDD38	MidRange	5	2595	QPSK	4.482	4.768
TDD38	MidRange	5	2595	Q16	4.493	4.954
TDD38	MidRange	10	2595	QPSK	8.916	9.437
TDD38	MidRange	10	2595	Q16	8.919	9.351
TDD38	MidRange	15	2595	QPSK	13.427	14.21
TDD38	MidRange	15	2595	Q16	13.425	14.23
TDD38	MidRange	20	2595	QPSK	17.822	18.75
TDD38	MidRange	20	2595	Q16	17.835	18.72
TDD41	MidRange	5	2593	QPSK	4.486	4.849



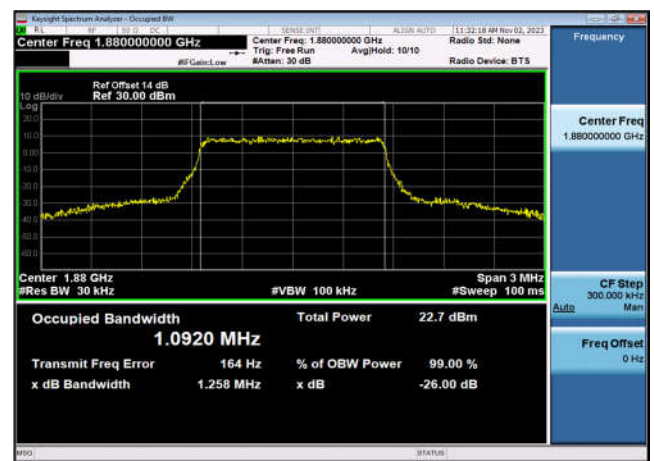
TDD41	MidRange	5	2593	Q16	4.484	4.934
TDD41	MidRange	10	2593	QPSK	8.908	9.429
TDD41	MidRange	10	2593	Q16	8.904	9.407
TDD41	MidRange	15	2593	QPSK	13.416	14.21
TDD41	MidRange	15	2593	Q16	13.431	14.22
TDD41	MidRange	20	2593	QPSK	17.849	18.73
TDD41	MidRange	20	2593	Q16	17.834	18.74



FDD02_MidRange_1.4_1880_QPSK



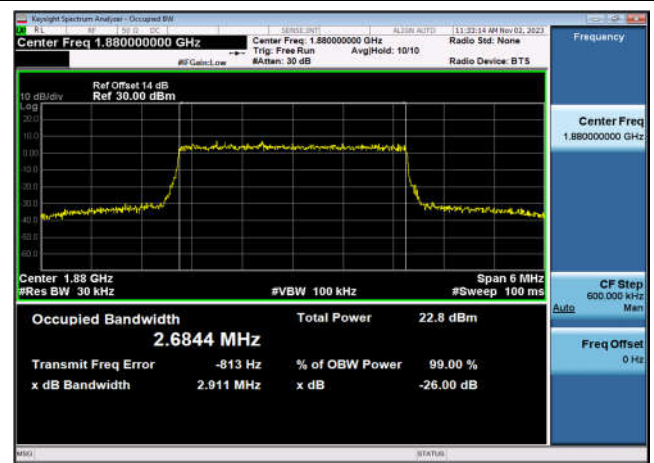
FDD02_MidRange_1.4_1880_Q16



FDD02_MidRange_3_1880_QPSK



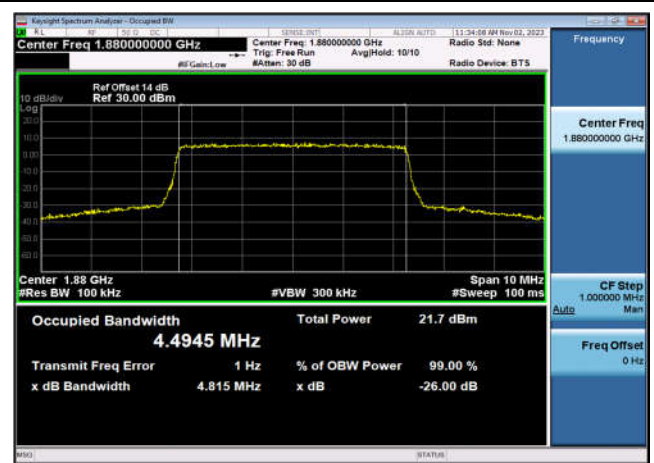
FDD02_MidRange_3_1880_Q16



FDD02_MidRange_5_1880_QPSK

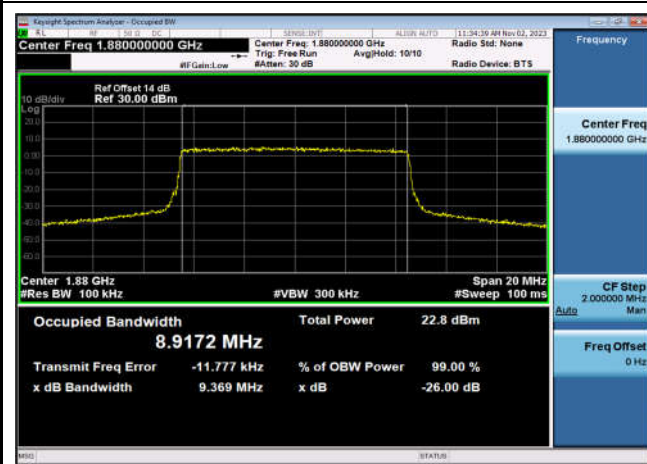


FDD02_MidRange_5_1880_Q16

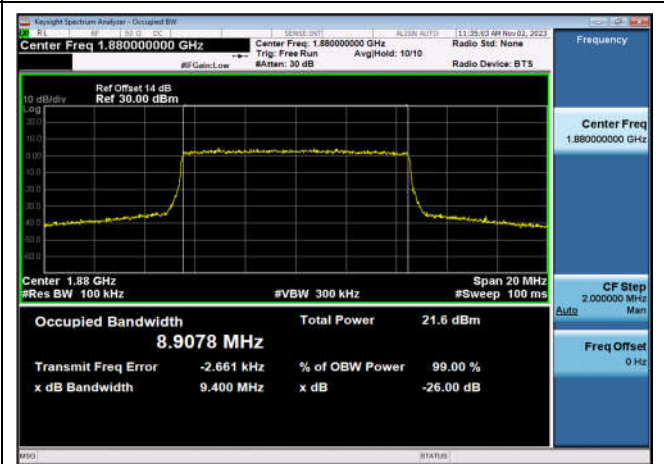




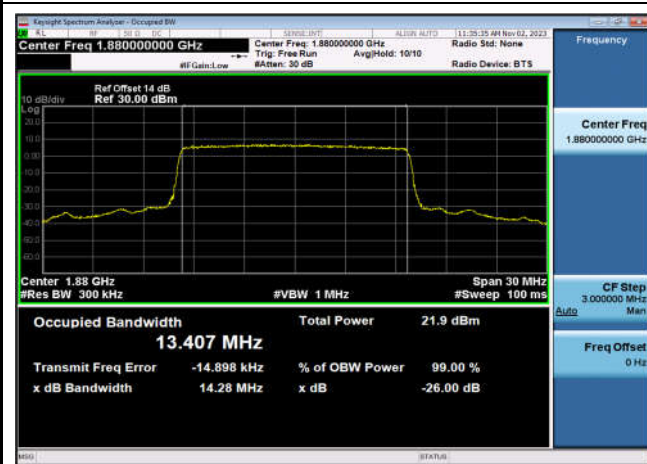
FDD02_MidRange_10_1880_QPSK



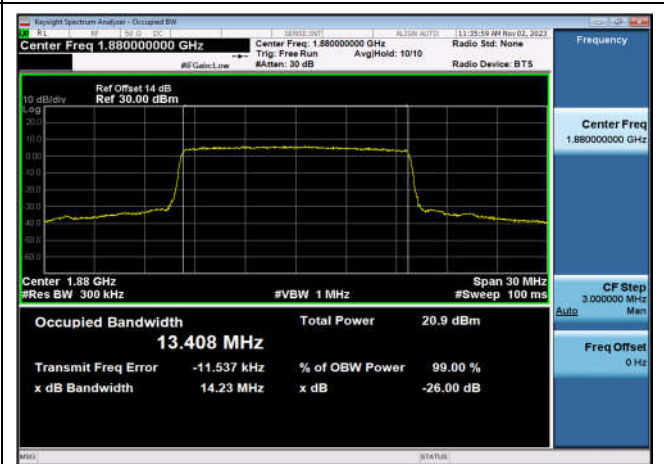
FDD02_MidRange_10_1880_Q16



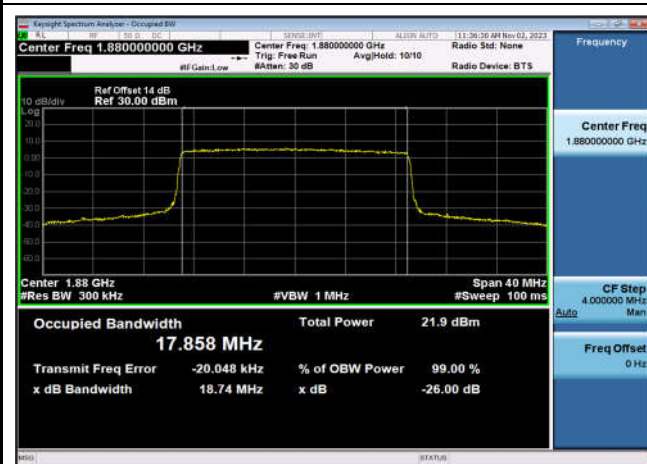
FDD02_MidRange_15_1880_QPSK



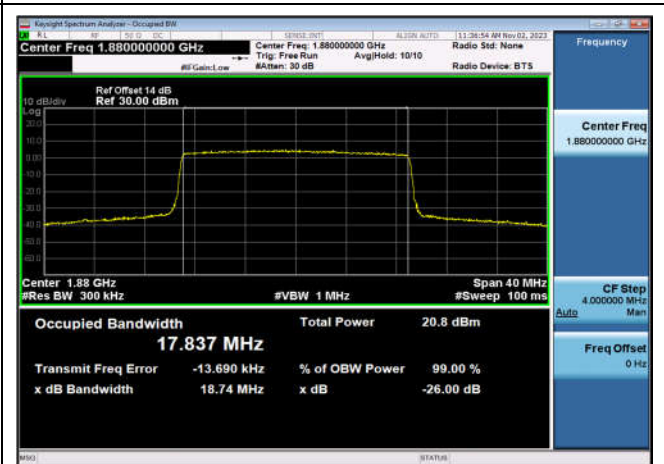
FDD02_MidRange_15_1880_Q16



FDD02_MidRange_20_1880_QPSK

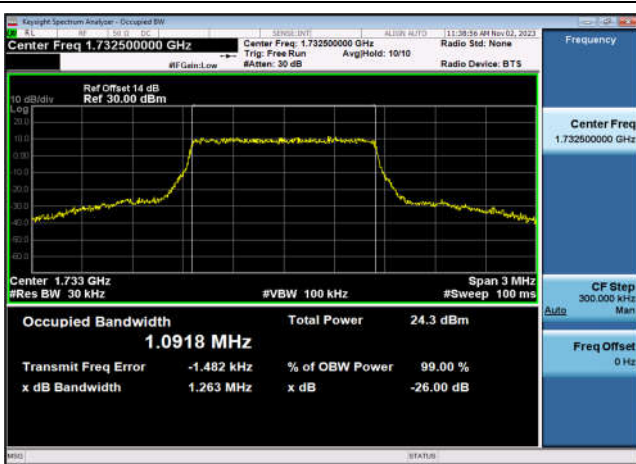


FDD02_MidRange_20_1880_Q16





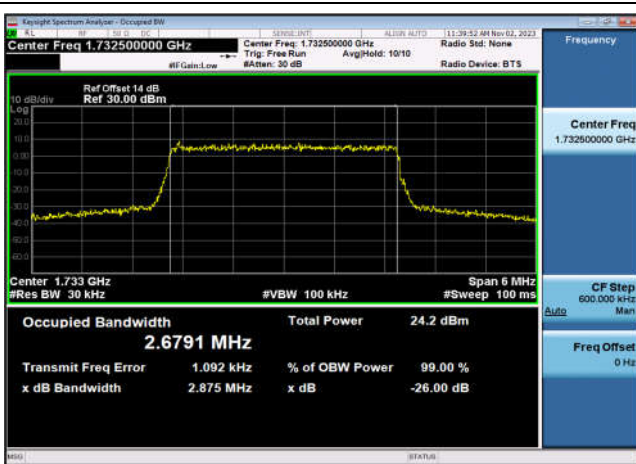
FDD04_MidRange_1.4_1732.5_QPSK



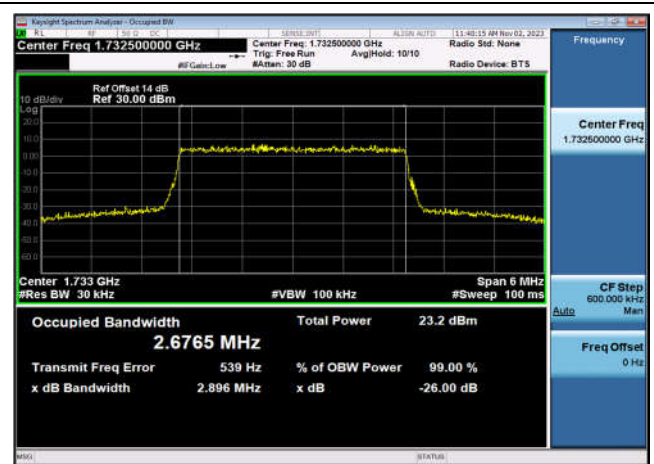
FDD04_MidRange_1.4_1732.5_Q16



FDD04_MidRange_3_1732.5_QPSK



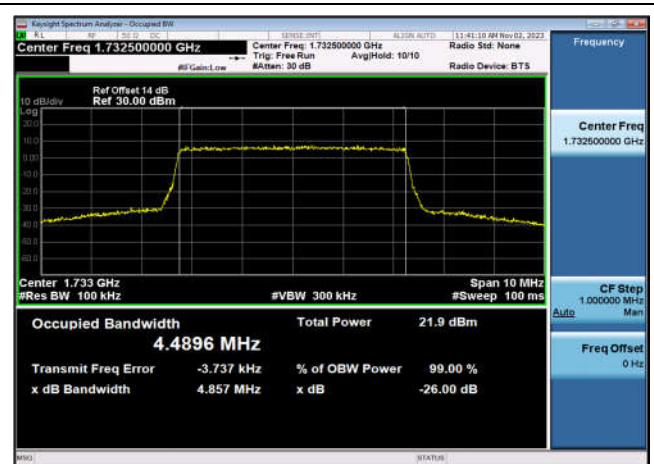
FDD04_MidRange_3_1732.5_Q16

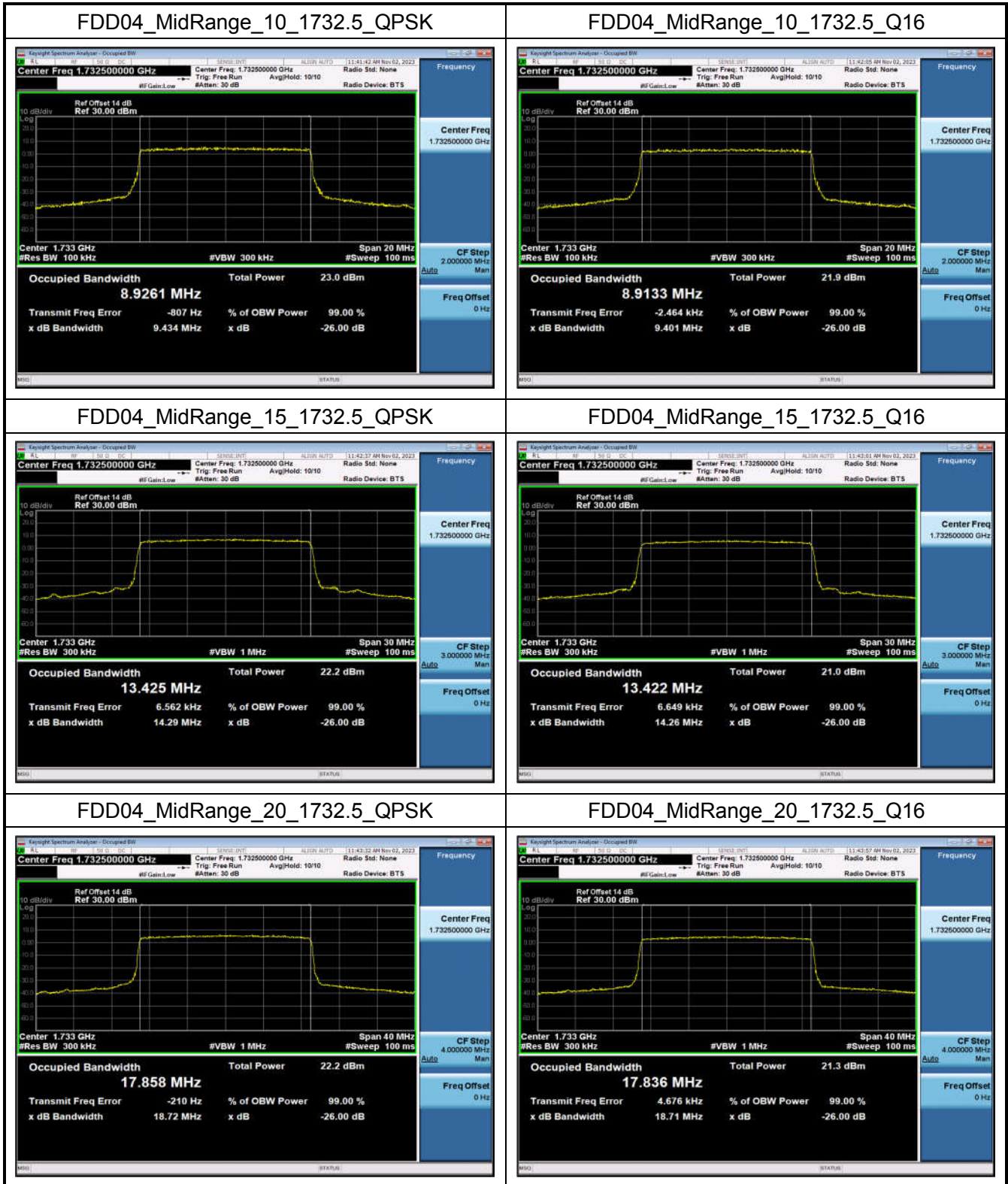


FDD04_MidRange_5_1732.5_QPSK



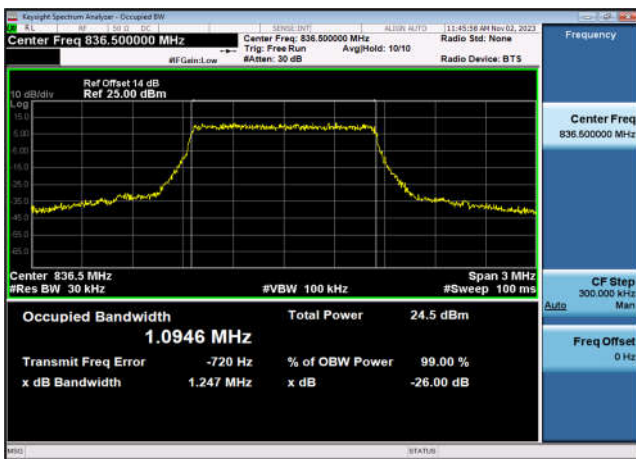
FDD04_MidRange_5_1732.5_Q16



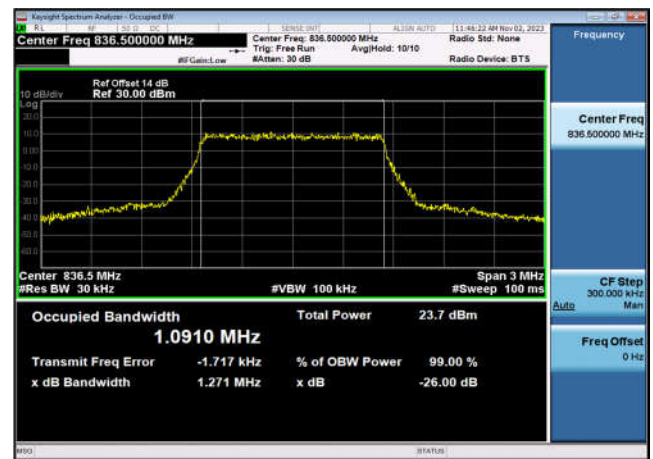




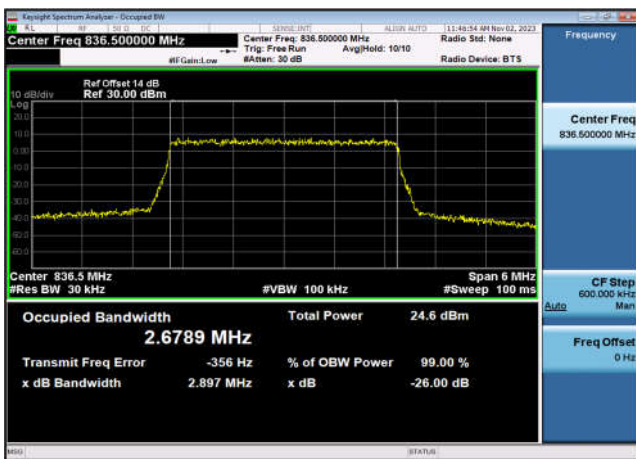
FDD05_MidRange_1.4_836.5_QPSK



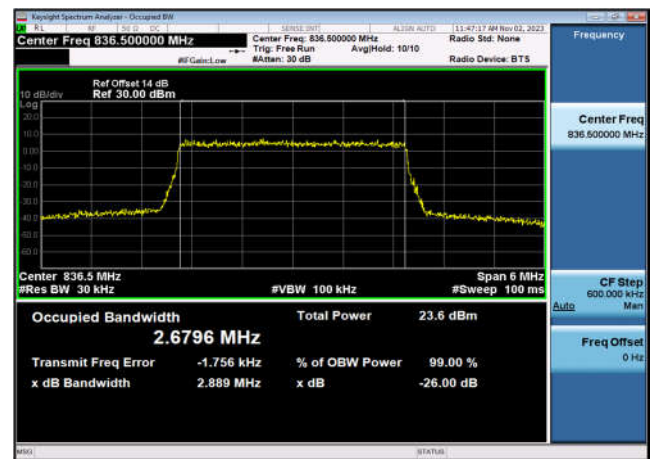
FDD05_MidRange_1.4_836.5_Q16



FDD05_MidRange_3_836.5_QPSK



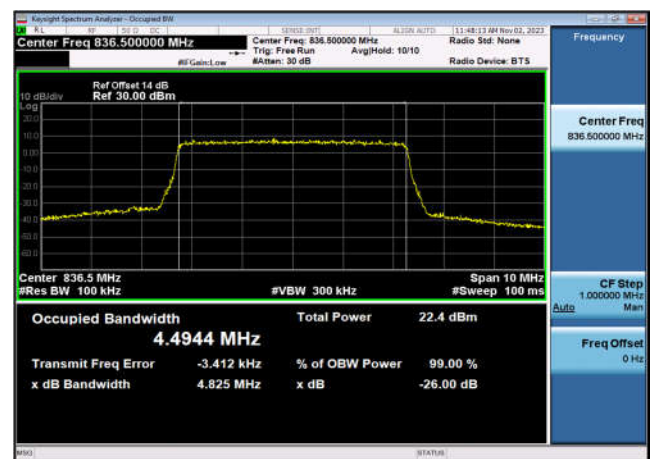
FDD05_MidRange_3_836.5_Q16



FDD05_MidRange_5_836.5_QPSK

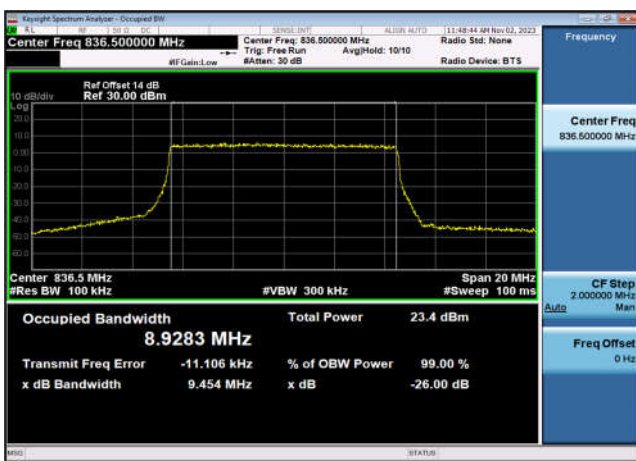


FDD05_MidRange_5_836.5_Q16

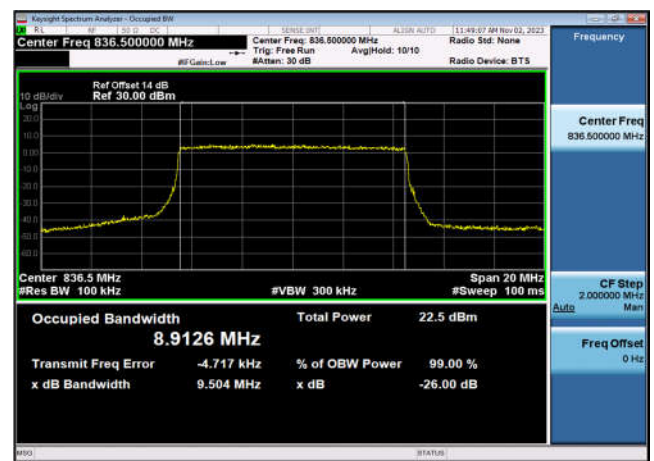




FDD05_MidRange_10_836.5_QPSK



FDD05_MidRange_10_836.5_Q16



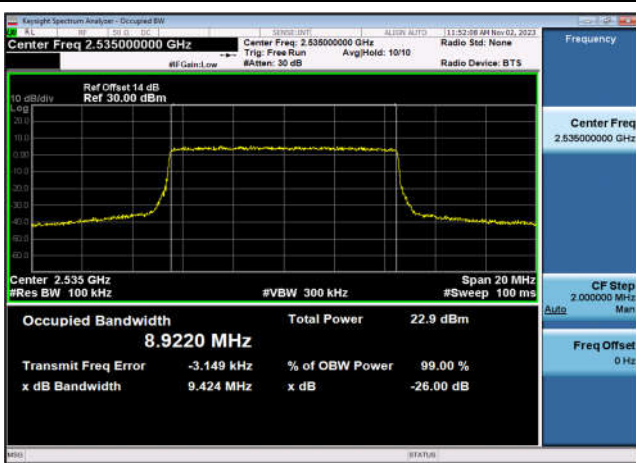
FDD07_MidRange_5_2535_QPSK



FDD07_MidRange_5_2535_Q16



FDD07_MidRange_10_2535_QPSK

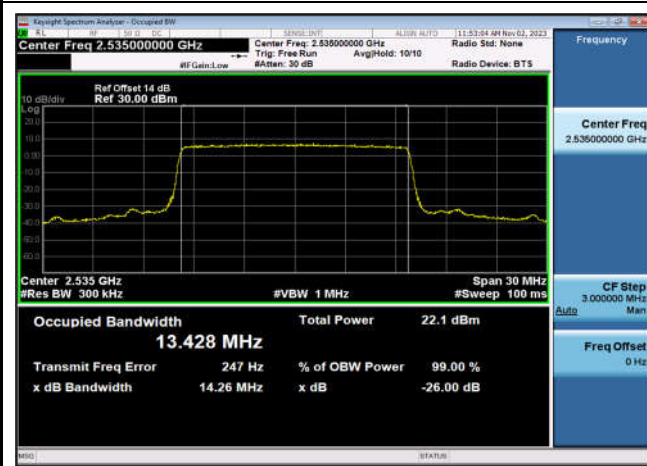


FDD07_MidRange_10_2535_Q16





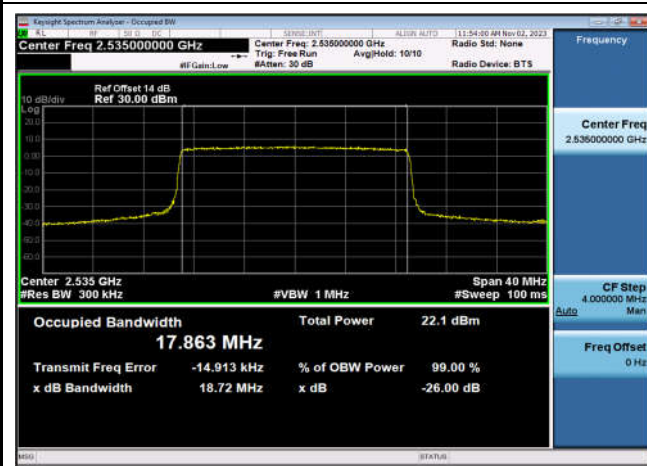
FDD07_MidRange_15_2535_QPSK



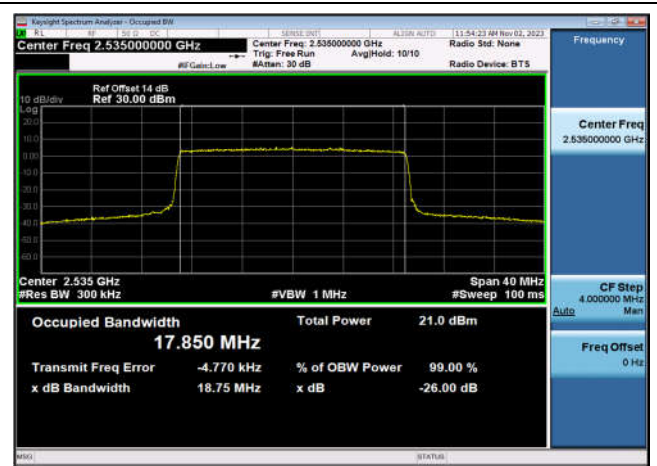
FDD07_MidRange_15_2535_Q16



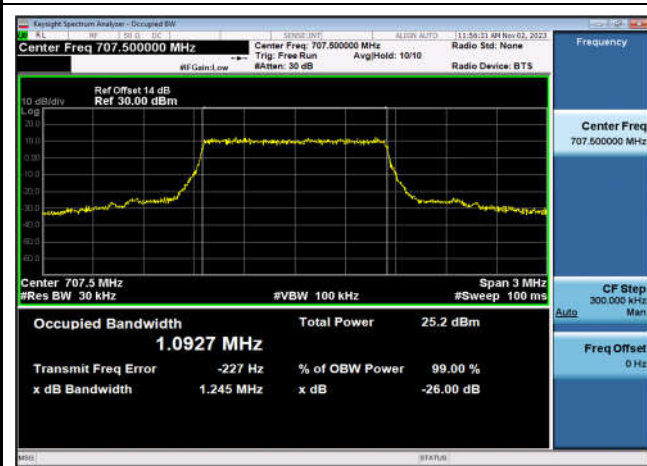
FDD07_MidRange_20_2535_QPSK



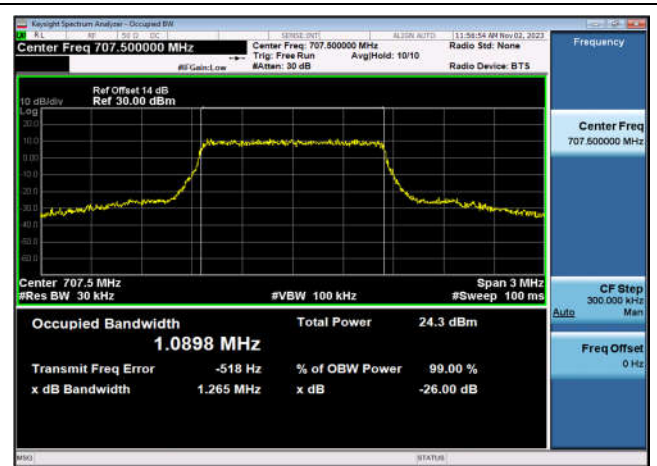
FDD07_MidRange_20_2535_Q16



FDD12_MidRange_1.4_707.5_QPSK

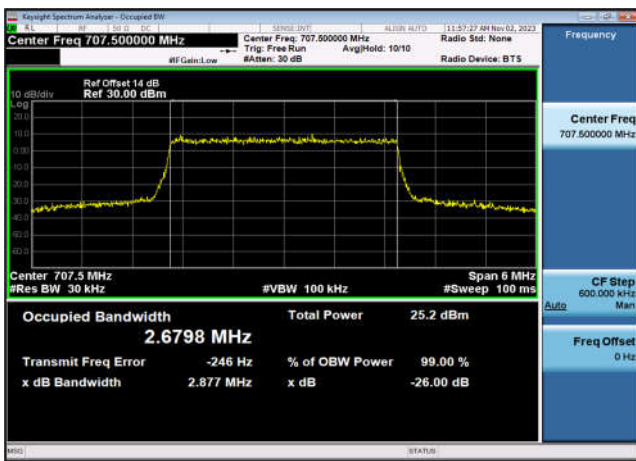


FDD12_MidRange_1.4_707.5_Q16

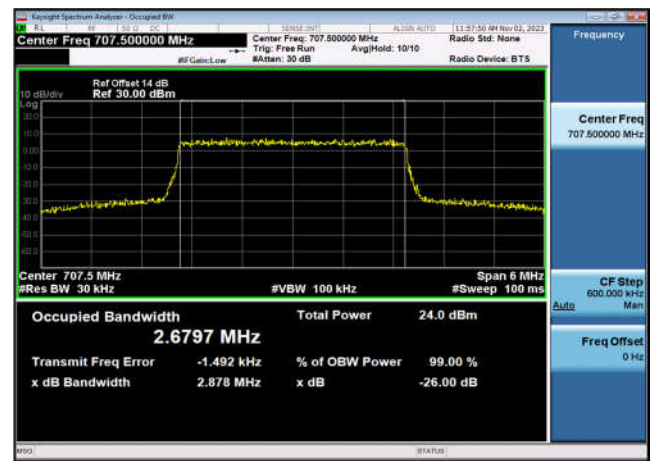




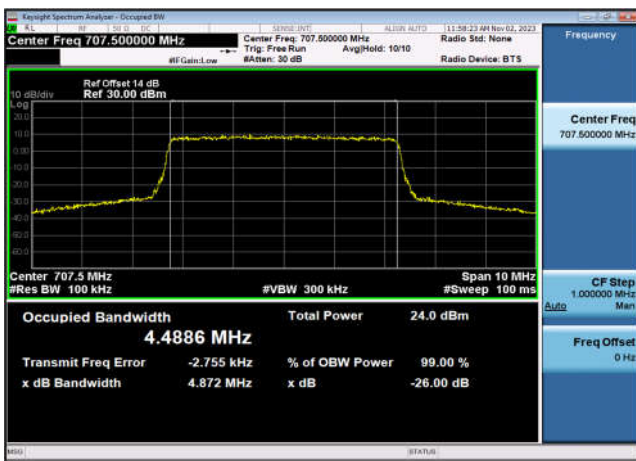
FDD12_MidRange_3_707.5_QPSK



FDD12_MidRange_3_707.5_Q16



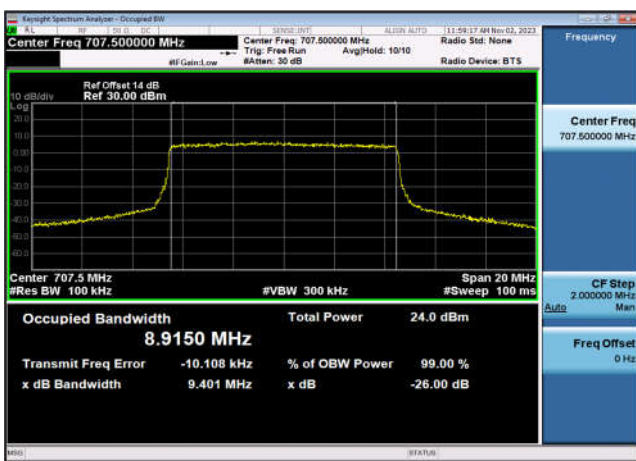
FDD12_MidRange_5_707.5_QPSK



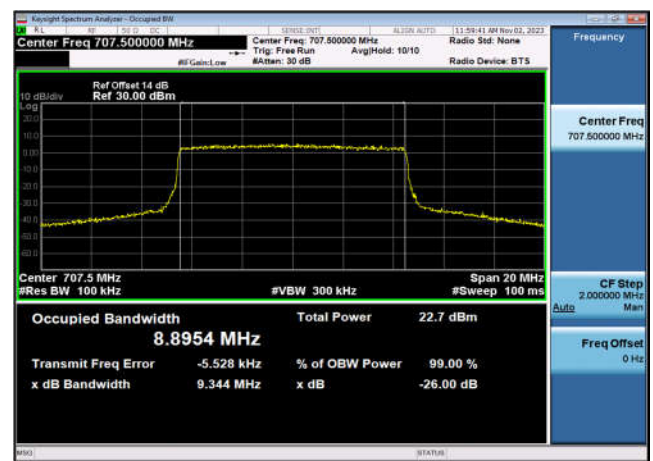
FDD12_MidRange_5_707.5_Q16



FDD12_MidRange_10_707.5_QPSK



FDD12_MidRange_10_707.5_Q16

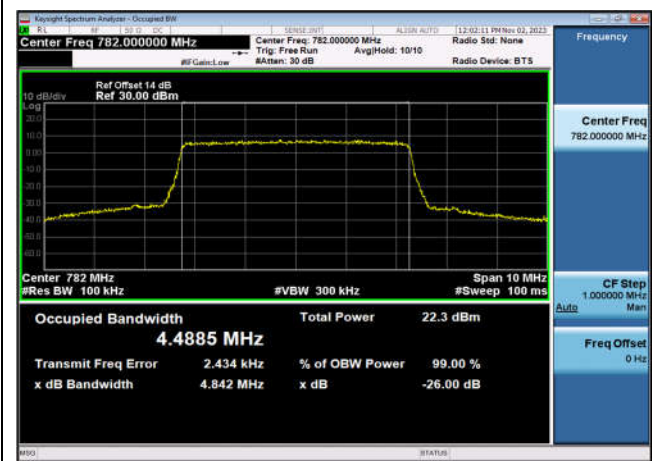




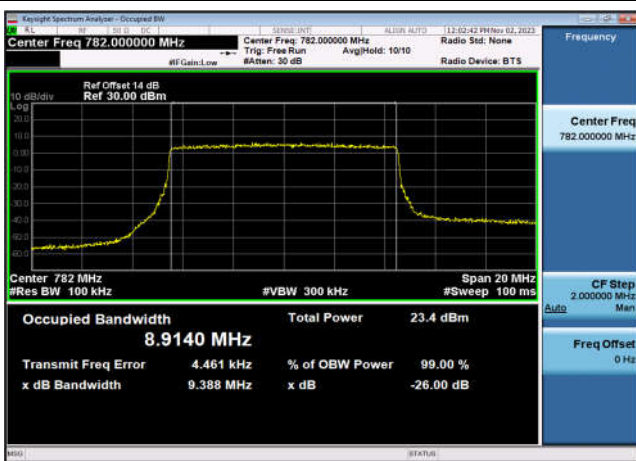
FDD13_MidRange_5_782_QPSK



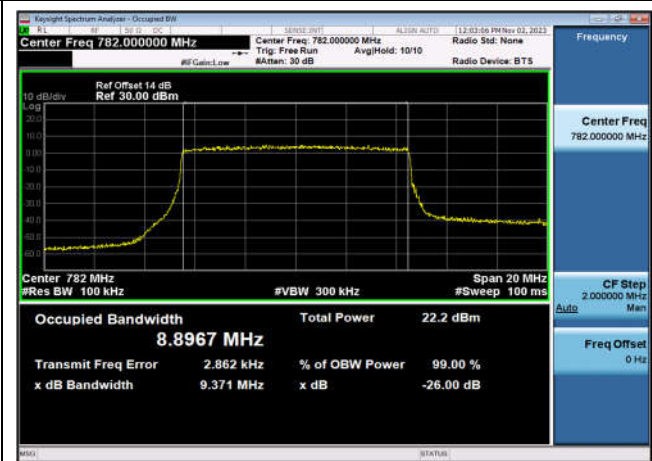
FDD13_MidRange_5_782_Q16



FDD13_MidRange_10_782_QPSK



FDD13_MidRange_10_782_Q16



FDD17_MidRange_5_710_QPSK

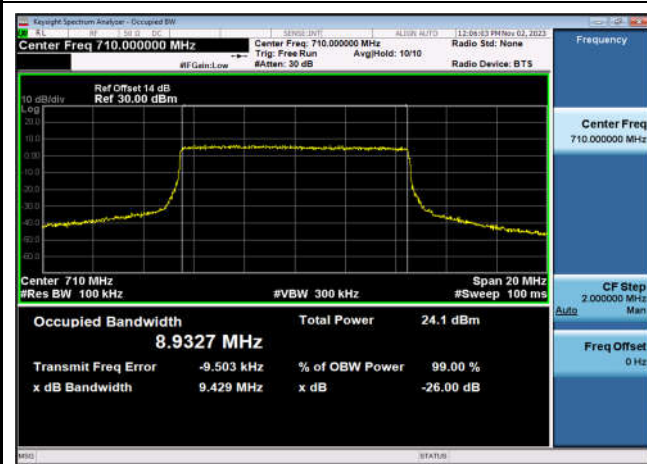


FDD17_MidRange_5_710_Q16

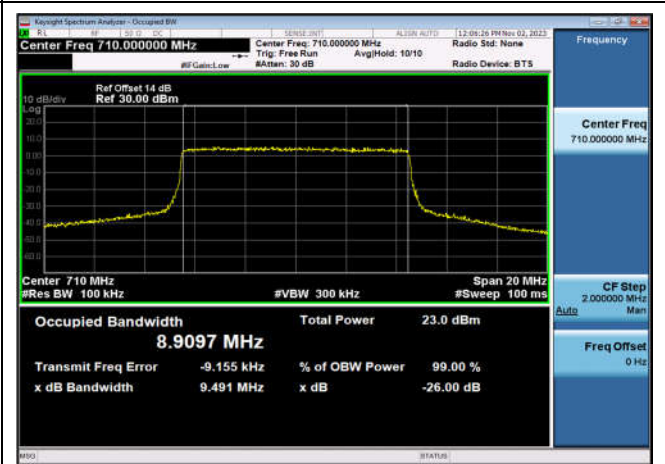




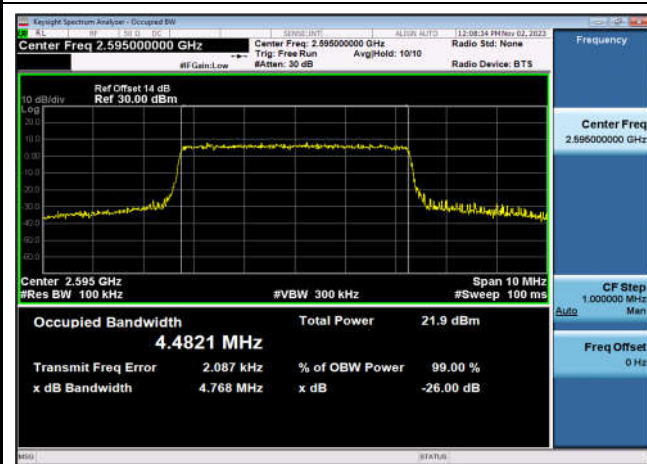
FDD17_MidRange_10_710_QPSK



FDD17_MidRange_10_710_Q16



TDD38_MidRange_5_2595_QPSK



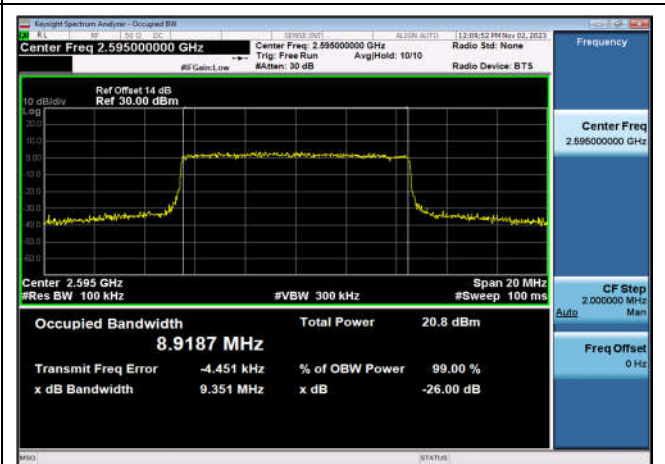
TDD38_MidRange_5_2595_Q16



TDD38_MidRange_10_2595_QPSK



TDD38_MidRange_10_2595_Q16





TDD38_MidRange_15_2595_QPSK



TDD38_MidRange_15_2595_Q16



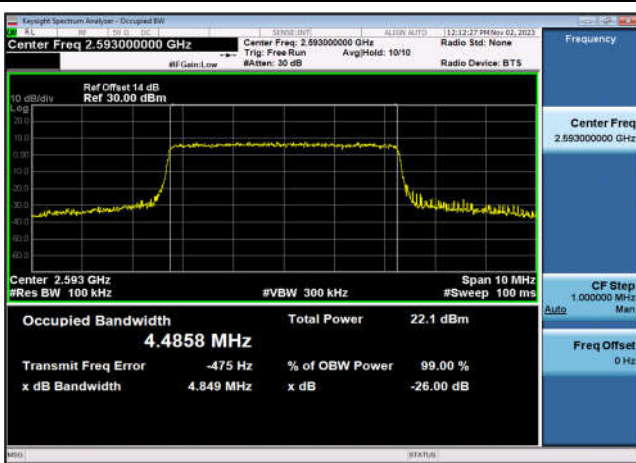
TDD38_MidRange_20_2595_QPSK



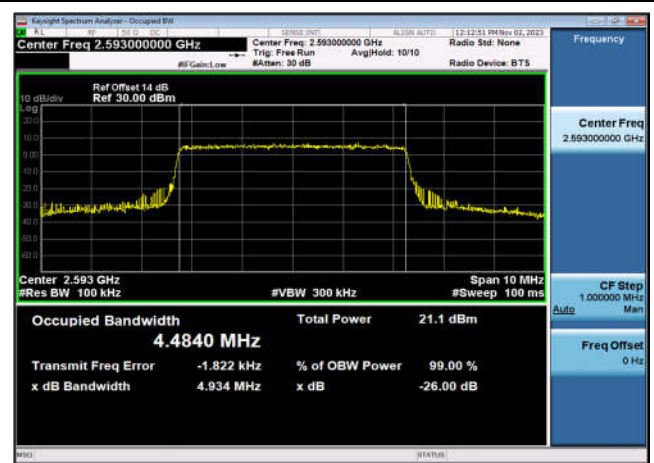
TDD38_MidRange_20_2595_Q16



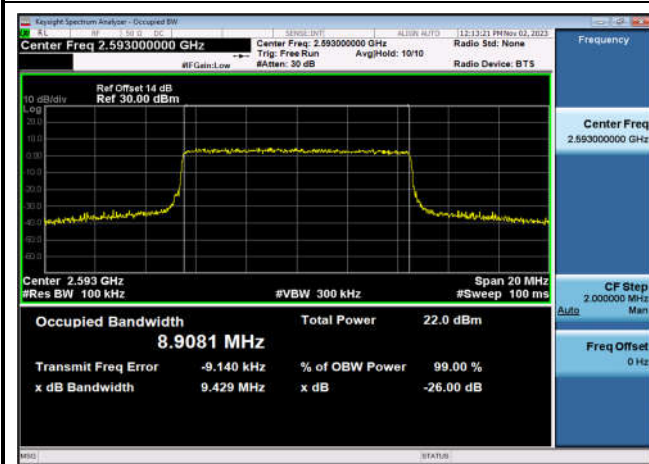
TDD41_MidRange_5_2593_QPSK



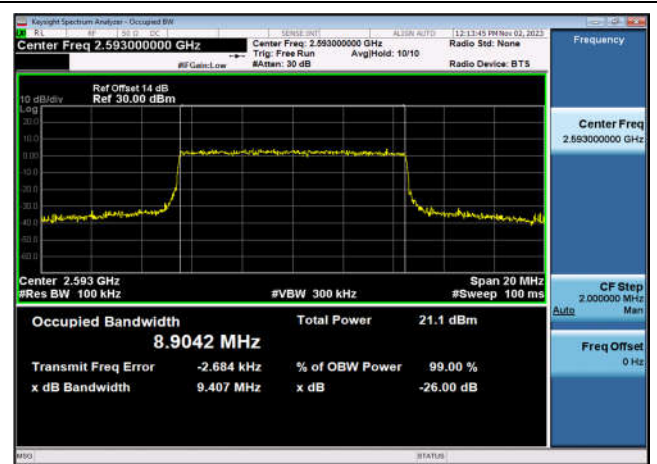
TDD41_MidRange_5_2593_Q16



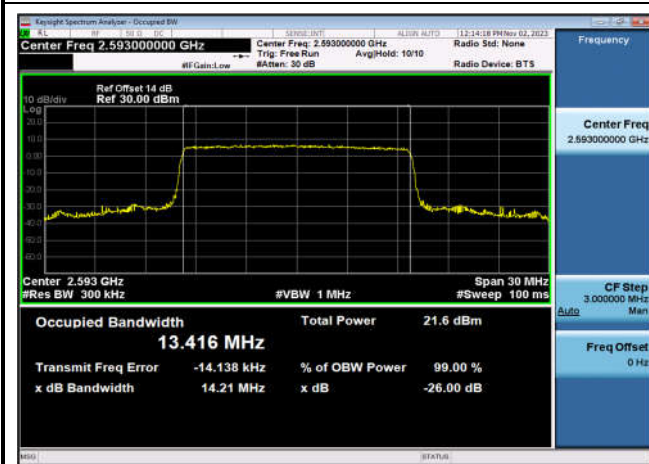
TDD41_MidRange_10_2593_QPSK



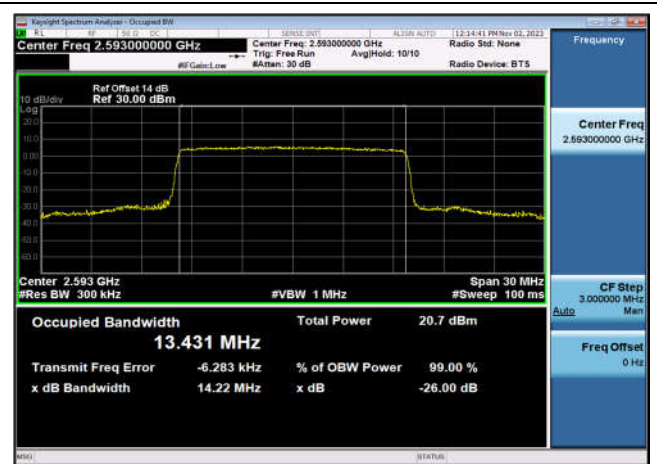
TDD41_MidRange_10_2593_Q16



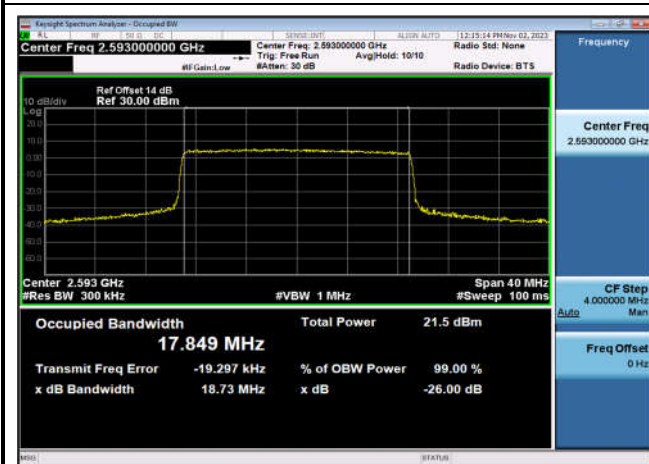
TDD41_MidRange_15_2593_QPSK



TDD41_MidRange_15_2593_Q16



TDD41_MidRange_20_2593_QPSK



TDD41_MidRange_20_2593_Q16





Frequency Stability

Frequency Stability NormalTC_NormalVol									
Temperature	Voltage	Band	BandWidth (MHz)	RbMode	Modulation	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
Normal	Low	FDD02	10	fullRB	QPSK	-17.152	0.009	/	Pass
Normal	Normal	FDD02	10	fullRB	QPSK	-11.945	0.006	/	Pass
Normal	High	FDD02	10	fullRB	QPSK	-8.068	0.004	/	Pass
50	Normal	FDD02	10	fullRB	QPSK	-12.074	0.006	/	Pass
40	Normal	FDD02	10	fullRB	QPSK	-12.989	0.007	/	Pass
30	Normal	FDD02	10	fullRB	QPSK	-13.318	0.007	/	Pass
20	Normal	FDD02	10	fullRB	QPSK	-13.890	0.007	/	Pass
10	Normal	FDD02	10	fullRB	QPSK	-14.691	0.008	/	Pass
0	Normal	FDD02	10	fullRB	QPSK	-15.693	0.008	/	Pass
-10	Normal	FDD02	10	fullRB	QPSK	-15.521	0.008	/	Pass
-20	Normal	FDD02	10	fullRB	QPSK	-11.301	0.006	/	Pass
-30	Normal	FDD02	10	fullRB	QPSK	-10.743	0.006	/	Pass
Normal	Low	FDD04	10	fullRB	QPSK	4.663	0.003	/	Pass
Normal	Normal	FDD04	10	fullRB	QPSK	3.347	0.002	/	Pass
Normal	High	FDD04	10	fullRB	QPSK	-4.249	0.002	/	Pass
50	Normal	FDD04	10	fullRB	QPSK	2.518	0.001	/	Pass
40	Normal	FDD04	10	fullRB	QPSK	5.965	0.003	/	Pass
30	Normal	FDD04	10	fullRB	QPSK	3.376	0.002	/	Pass
20	Normal	FDD04	10	fullRB	QPSK	-3.977	0.002	/	Pass
10	Normal	FDD04	10	fullRB	QPSK	-4.234	0.002	/	Pass
0	Normal	FDD04	10	fullRB	QPSK	5.207	0.003	/	Pass
-10	Normal	FDD04	10	fullRB	QPSK	-3.147	0.002	/	Pass
-20	Normal	FDD04	10	fullRB	QPSK	4.020	0.002	/	Pass
-30	Normal	FDD04	10	fullRB	QPSK	4.148	0.002	/	Pass
Normal	Low	FDD05	10	fullRB	QPSK	3.476	0.004	±2.5	Pass
Normal	Normal	FDD05	10	fullRB	QPSK	3.247	0.004	±2.5	Pass
Normal	High	FDD05	10	fullRB	QPSK	2.346	0.003	±2.5	Pass
50	Normal	FDD05	10	fullRB	QPSK	4.120	0.005	±2.5	Pass
40	Normal	FDD05	10	fullRB	QPSK	3.734	0.004	±2.5	Pass



30	Normal	FDD05	10	fullRB	QPSK	1.845	0.002	±2.5	Pass
20	Normal	FDD05	10	fullRB	QPSK	-3.533	0.004	±2.5	Pass
10	Normal	FDD05	10	fullRB	QPSK	2.260	0.003	±2.5	Pass
0	Normal	FDD05	10	fullRB	QPSK	2.804	0.003	±2.5	Pass
-10	Normal	FDD05	10	fullRB	QPSK	-2.217	0.003	±2.5	Pass
-20	Normal	FDD05	10	fullRB	QPSK	-2.575	0.003	±2.5	Pass
-30	Normal	FDD05	10	fullRB	QPSK	-2.460	0.003	±2.5	Pass
Normal	Low	FDD07	10	fullRB	QPSK	-7.825	0.003	/	Pass
Normal	Normal	FDD07	10	fullRB	QPSK	-6.881	0.003	/	Pass
Normal	High	FDD07	10	fullRB	QPSK	-8.998	0.004	/	Pass
50	Normal	FDD07	10	fullRB	QPSK	-14.920	0.006	/	Pass
40	Normal	FDD07	10	fullRB	QPSK	-9.112	0.004	/	Pass
30	Normal	FDD07	10	fullRB	QPSK	-4.377	0.002	/	Pass
20	Normal	FDD07	10	fullRB	QPSK	-7.353	0.003	/	Pass
10	Normal	FDD07	10	fullRB	QPSK	5.836	0.002	/	Pass
0	Normal	FDD07	10	fullRB	QPSK	-6.409	0.003	/	Pass
-10	Normal	FDD07	10	fullRB	QPSK	-6.337	0.002	/	Pass
-20	Normal	FDD07	10	fullRB	QPSK	-5.965	0.002	/	Pass
-30	Normal	FDD07	10	fullRB	QPSK	-5.550	0.002	/	Pass
Normal	Low	FDD12	10	fullRB	QPSK	3.591	0.005	/	Pass
Normal	Normal	FDD12	10	fullRB	QPSK	2.632	0.004	/	Pass
Normal	High	FDD12	10	fullRB	QPSK	2.532	0.004	/	Pass
50	Normal	FDD12	10	fullRB	QPSK	2.346	0.003	/	Pass
40	Normal	FDD12	10	fullRB	QPSK	3.233	0.005	/	Pass
30	Normal	FDD12	10	fullRB	QPSK	2.146	0.003	/	Pass
20	Normal	FDD12	10	fullRB	QPSK	3.963	0.006	/	Pass
10	Normal	FDD12	10	fullRB	QPSK	3.333	0.005	/	Pass
0	Normal	FDD12	10	fullRB	QPSK	3.548	0.005	/	Pass
-10	Normal	FDD12	10	fullRB	QPSK	3.419	0.005	/	Pass
-20	Normal	FDD12	10	fullRB	QPSK	2.174	0.003	/	Pass
-30	Normal	FDD12	10	fullRB	QPSK	-3.347	0.005	/	Pass
Normal	Low	FDD13	10	fullRB	QPSK	2.704	0.003	/	Pass
Normal	Normal	FDD13	10	fullRB	QPSK	-2.575	0.003	/	Pass
Normal	High	FDD13	10	fullRB	QPSK	2.146	0.003	/	Pass
50	Normal	FDD13	10	fullRB	QPSK	3.033	0.004	/	Pass



40	Normal	FDD13	10	fullRB	QPSK	2.346	0.003	/	Pass
30	Normal	FDD13	10	fullRB	QPSK	-2.031	0.003	/	Pass
20	Normal	FDD13	10	fullRB	QPSK	-2.360	0.003	/	Pass
10	Normal	FDD13	10	fullRB	QPSK	-2.503	0.003	/	Pass
0	Normal	FDD13	10	fullRB	QPSK	-2.346	0.003	/	Pass
-10	Normal	FDD13	10	fullRB	QPSK	-3.176	0.004	/	Pass
-20	Normal	FDD13	10	fullRB	QPSK	3.390	0.004	/	Pass
-30	Normal	FDD13	10	fullRB	QPSK	-3.805	0.005	/	Pass
Normal	Low	FDD17	10	fullRB	QPSK	3.133	0.004	/	Pass
Normal	Normal	FDD17	10	fullRB	QPSK	2.890	0.004	/	Pass
Normal	High	FDD17	10	fullRB	QPSK	2.604	0.004	/	Pass
50	Normal	FDD17	10	fullRB	QPSK	12.174	0.017	/	Pass
40	Normal	FDD17	10	fullRB	QPSK	3.777	0.005	/	Pass
30	Normal	FDD17	10	fullRB	QPSK	2.418	0.003	/	Pass
20	Normal	FDD17	10	fullRB	QPSK	3.276	0.005	/	Pass
10	Normal	FDD17	10	fullRB	QPSK	3.176	0.004	/	Pass
0	Normal	FDD17	10	fullRB	QPSK	8.969	0.013	/	Pass
-10	Normal	FDD17	10	fullRB	QPSK	2.961	0.004	/	Pass
-20	Normal	FDD17	10	fullRB	QPSK	2.789	0.004	/	Pass
-30	Normal	FDD17	10	fullRB	QPSK	-2.160	0.003	/	Pass
Normal	Low	TDD38	10	fullRB	QPSK	10.457	0.004	/	Pass
Normal	Normal	TDD38	10	fullRB	QPSK	8.483	0.003	/	Pass
Normal	High	TDD38	10	fullRB	QPSK	16.007	0.006	/	Pass
50	Normal	TDD38	10	fullRB	QPSK	11.358	0.004	/	Pass
40	Normal	TDD38	10	fullRB	QPSK	15.450	0.006	/	Pass
30	Normal	TDD38	10	fullRB	QPSK	11.859	0.005	/	Pass
20	Normal	TDD38	10	fullRB	QPSK	12.417	0.005	/	Pass
10	Normal	TDD38	10	fullRB	QPSK	13.561	0.005	/	Pass
0	Normal	TDD38	10	fullRB	QPSK	11.029	0.004	/	Pass
-10	Normal	TDD38	10	fullRB	QPSK	10.800	0.004	/	Pass
-20	Normal	TDD38	10	fullRB	QPSK	-8.426	0.003	/	Pass
-30	Normal	TDD38	10	fullRB	QPSK	11.058	0.004	/	Pass
Normal	Low	TDD41	10	fullRB	QPSK	19.369	0.007	/	Pass
Normal	Normal	TDD41	10	fullRB	QPSK	13.547	0.005	/	Pass
Normal	High	TDD41	10	fullRB	QPSK	17.066	0.007	/	Pass



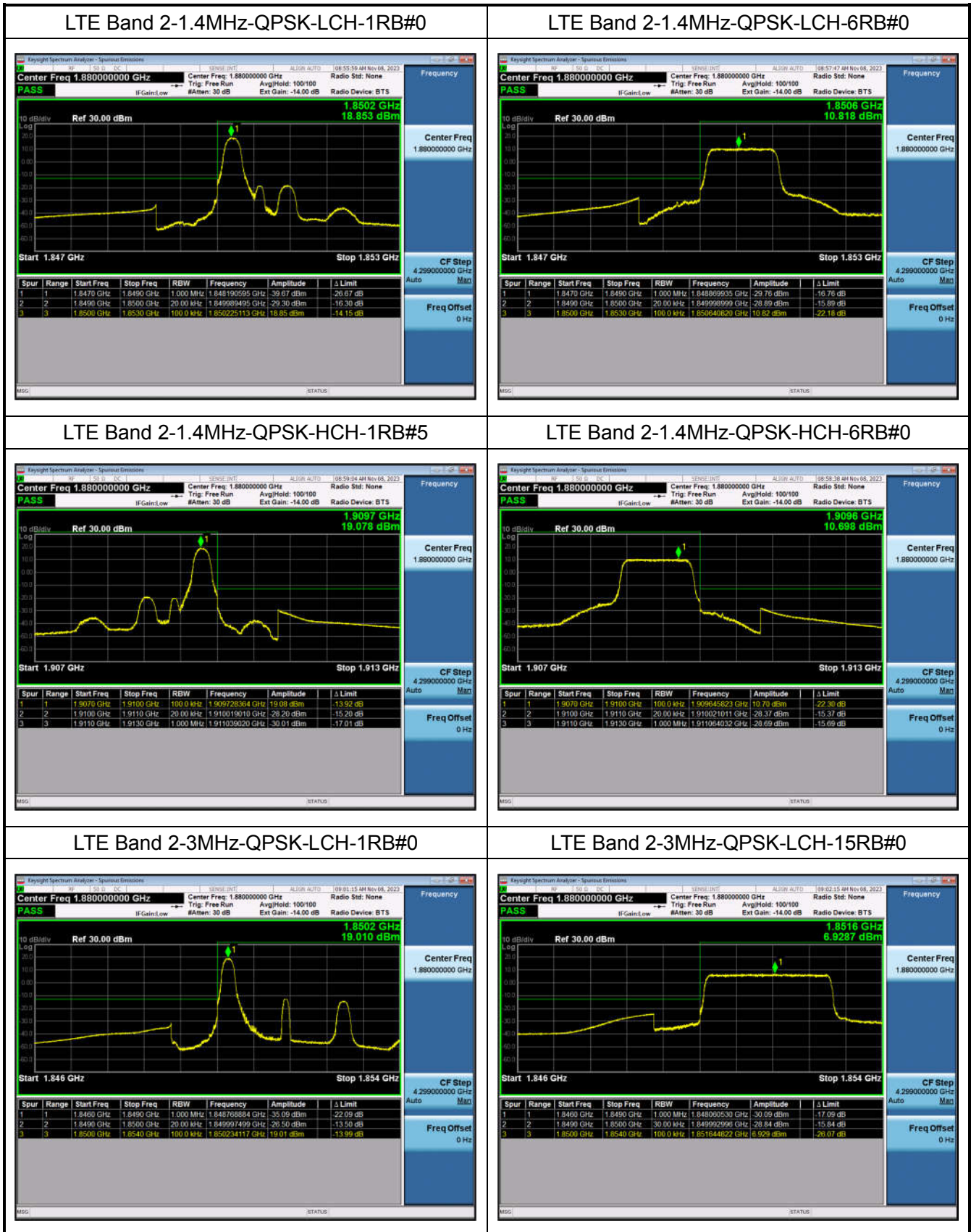
50	Normal	TDD41	10	fullRB	QPSK	15.249	0.006	/	Pass
40	Normal	TDD41	10	fullRB	QPSK	30.212	0.012	/	Pass
30	Normal	TDD41	10	fullRB	QPSK	18.110	0.007	/	Pass
20	Normal	TDD41	10	fullRB	QPSK	17.996	0.007	/	Pass
10	Normal	TDD41	10	fullRB	QPSK	18.840	0.007	/	Pass
0	Normal	TDD41	10	fullRB	QPSK	18.210	0.007	/	Pass
-10	Normal	TDD41	10	fullRB	QPSK	16.708	0.006	/	Pass
-20	Normal	TDD41	10	fullRB	QPSK	18.239	0.007	/	Pass
-30	Normal	TDD41	10	fullRB	QPSK	15.306	0.006	/	Pass

Note:

- 1. Normal Voltage = 3.85V, Low Voltage = 3.5V, High Voltage = 4.4V, Normal Temperature = 20 °C.*
- 2. Judge based on the measured frequency error result, the fundamental wave emission of Band 2/4/7/12/13/17/38/41 is kept within the authorized frequency band.*

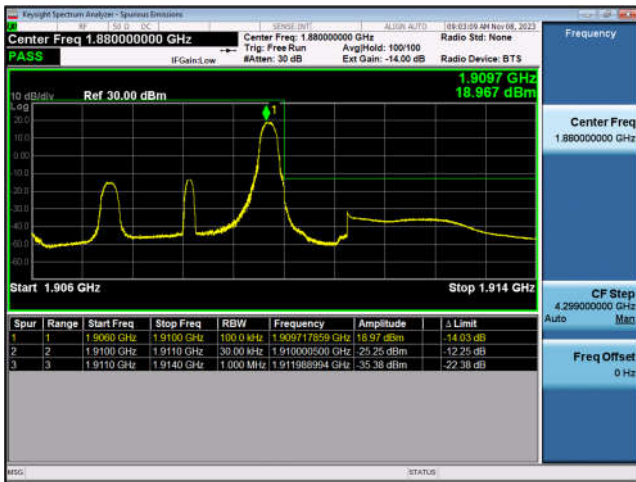
Conducted Band Edge

LTE Band 2:

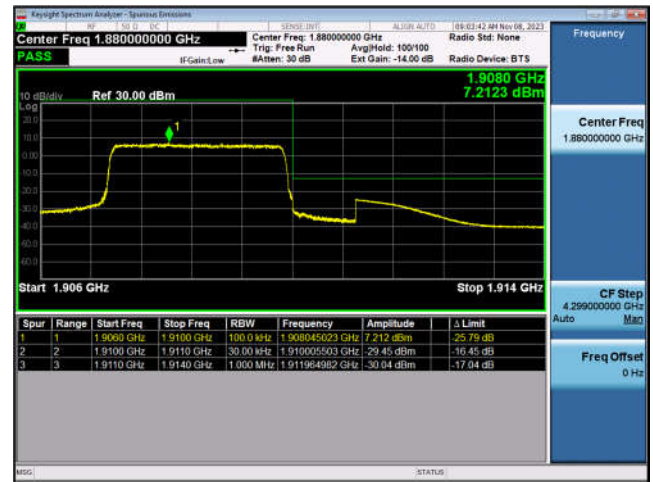




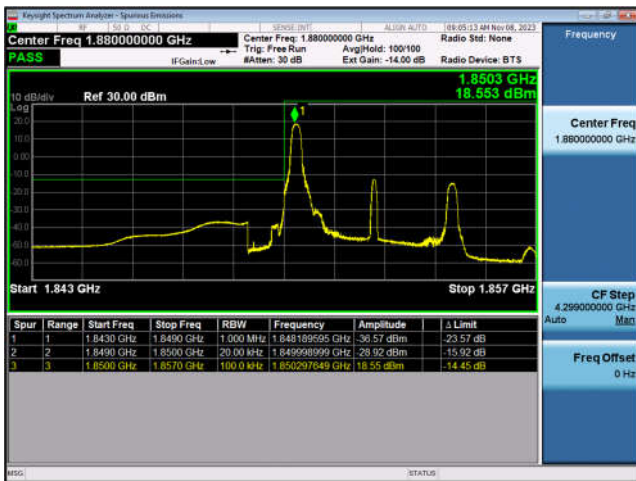
LTE Band 2-3MHz-QPSK-HCH-1RB#14



LTE Band 2-3MHz-QPSK-HCH-15RB#0



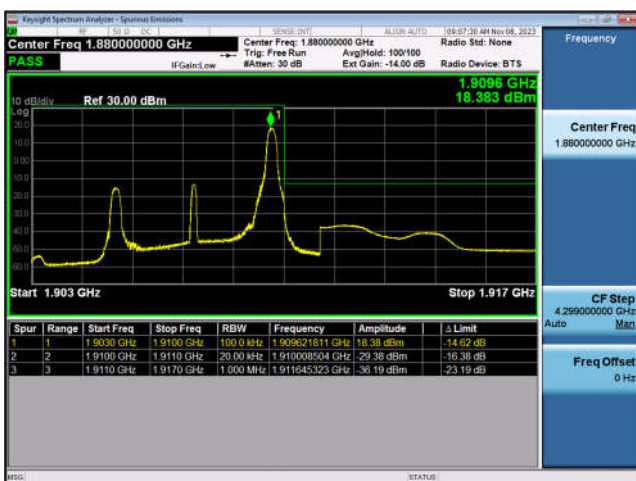
LTE Band 2-5MHz-QPSK-LCH-1RB#0



LTE Band 2-5MHz-QPSK-LCH-25RB#0



LTE Band 2-5MHz-QPSK-HCH-1RB#24



LTE Band 2-5MHz-QPSK-HCH-25RB#0

