RF TEST REPORT

Report No.:	SET2022-11838
Product Name:	Mobile phone
Model No.:	D450C1
FCC ID:	2AJZP-D450C1
IC:	24360-D450C1
Applicant:	Mason America, Inc.
Address:	2101 4TH AVE STE 1550 SEATTLE, WA 98121-2316 , United States
Dates of Testing:	08/23/2022 - 08/26/2022
Issued by:	CCIC Southern Testing Co., Ltd.
Lab Location:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China. **Tel**：86 755 26627338 **Fax**：86 755 26627238

Test Report

Product .....:	Mobile phone
Brand Name.....:	MASON
Trade Name .....:	MASON
Applicant.....:	Mason America, Inc.
Applicant Address .....:	2101 4TH AVE STE 1550 SEATTLE, WA 98121-2316 , United States
Manufacturer .....:	Mason America, Inc.
Manufacturer Address .....:	2101 4TH AVE STE 1550 SEATTLE, WA 98121-2316 , United States
Test Standards .....:	47 CFR Part 2/27 RSS-Gen, Issue 5: Feb 2021 RSS-130, issue 2: Feb 2019
Test Result.....:	Pass
Tested by .....:	2022.08.26 Chuiwang Zhang, Test Engineer
Reviewed by .....:	2022.08.26 Chris You, Senior Engineer
Approved by .....:	2022.08.26 Shuangwen Zhang, Manager

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Change History		
Issue	Date	Reason for change
1.0	2022.08.26	First edition

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Mobile phone
Model No.	D450C1
Hardware Version	H01
Software Version	S009
EUT supports Radios application	LTE Band 71
Frequency Range(Tx)	LTE Band 71: 663MHz~698MHz
Channel Bandwidth	LTE Band 71: 5MHz/10MHz/15MHz/20MHz
Modulation Type	QPSK/16QAM/64QAM(downlink only)
Maximum ERP	LTE Band 71: 20.07dBm
Antenna Type	Internal Antenna
Antenna gain	LTE Band 71: 1.5 dBi
Power supply	Rechargeable Li-ion Polymer Battery DC3.85V/4000mAh

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

Band	Type of Modulation	BW (MHz)	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP(W)
LTE Band 71	QPSK	5	4M51G7D	—	0.096
LTE Band 71	16QAM	5	4M50W7D	—	0.077
LTE Band 71	QPSK	10	8M93G7D	0.011	0.099
LTE Band 71	16QAM	10	8M95W7D	—	0.080
LTE Band 71	QPSK	15	13M4G7D	—	0.096
LTE Band 71	16QAM	15	13M4W7D	—	0.079
LTE Band 71	QPSK	20	17M9G7D	—	0.102
LTE Band 71	16QAM	20	17M7W7D	—	0.080

1.3. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC/IC 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 27	Miscellaneous Wireless Communications Services
3	RSS-Gen-Issue 5: Feb 2021	General Requirements for Compliance of Radio Apparatus
4	RSS-130-Issue 2: Feb 2019	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
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/IC rules and results are as below:

No.	FCC Rule	IC Rule	Description	Limit	Result
1	2.1046	N/A	Conducted Output Power	Reporting Only	PASS
2	24.232 (d) 27.50 (c)(10)	RSS-130, 4.6.1	Peak to Average Radio	< 13dB	PASS
3	/	RSS-130,4.6.2	Effective Radiated Power	< 3W ERP	PASS
4	2.1049	RSS-GEN,6.7	Occupied Bandwidth	Reporting Only	PASS
5	2.1051 27.53 (g)	RSS-GEN, 6.13 RSS-130,4.7	Conducted Spurious Emission and Conducted Band Edge	< $43+10\log_{10}$(P[watt])	PASS
6	2.1053 27.53 (g)	RSS-GEN, 6.13 RSS-130,4.7.1	Radiated Spurious Emission	< $43+10\log_{10}$ (P[Watts])	PASS
7	2.1055 27.54	RSS-GEN,6.11 RSS-130,4.5	Frequency Stability	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 and ICES-003 Issue 7 October 2020, 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	71			√	√	√	√	√	√	√	√	√	√	√	√
Peak-to-Average Ratio	71						√		√	√		√	√	√	√
99% OBW and 26dB EBW	71			√	√	√	√	√	√			√		√	
Conducted Band Edge	71			√	√	√	√	√	√	√		√	√		√
Conducted Spurious Emission	71						√	√		√			√	√	√
Frequency Stability	71				√			√				√		√	
Radiated Spurious Emission	71	Worst case												√	
Note: 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 (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 April 19th, 2023.

ISED Registration: 11185A-1

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-1 on Aug. 04, 2016, valid time is until Jun. 30th, 2023.

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 (℃):	15℃- 35℃
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86KPa-106KPa

2. 47 CFR Part 2 Requirements

2.1. Conducted Output Power and ERP

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 ERP of mobile transmitters must not exceed 3 Watts for LTE Band 71.

According to KDB 412172 D01 Determining ERP and EIRP v01r01.

EIRP = P_T + $_{GT}$ - L_C, ERP = EIRP - 2.15, where

P_T = transmitter output power in dBm;

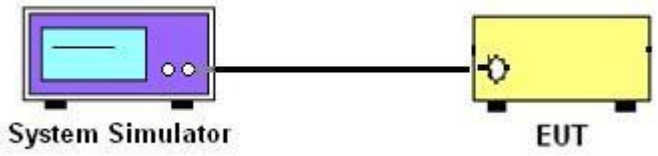
G_T = gain of the transmitting antenna in dBi;

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

Please refer to Appendix A for detail

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

2.2.1. Requirement

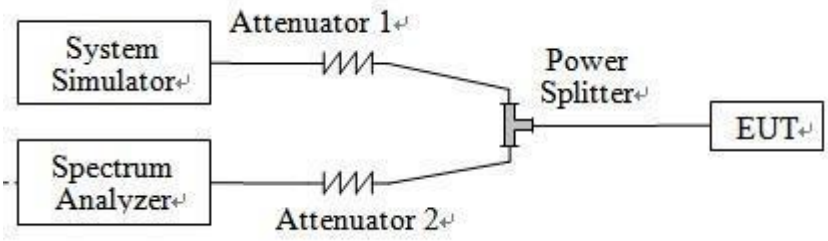
Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement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

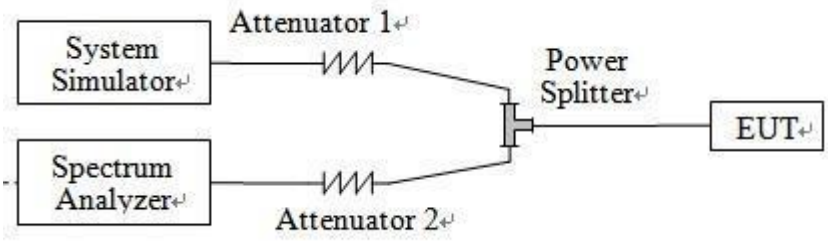
The Occupied Bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

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 ≥ 3 × 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

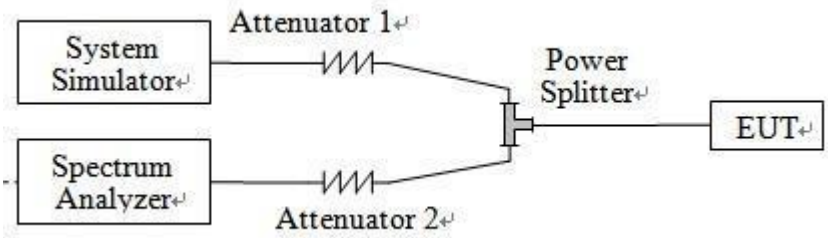
For Band 71 [Part 27.53 (g) and RSS-130, 4.7.1]:

For operations in the 698 - 746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100kHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least 30kHz 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 ≥ 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 ≥ 3 × RBW
6. Set Detector = power averaging (rms).
7. Set the number of points in sweep ≥ 2 × span / RBW.
8. Set sweep trigger to “free run.”
9. Set the Sweep time > (number of points in sweep) × (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

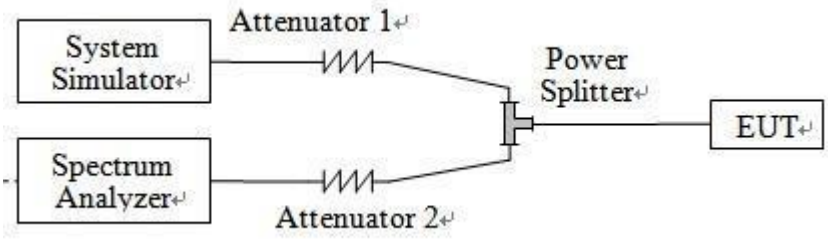
For Band 71:

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.

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 ≥ 3 × 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 71:

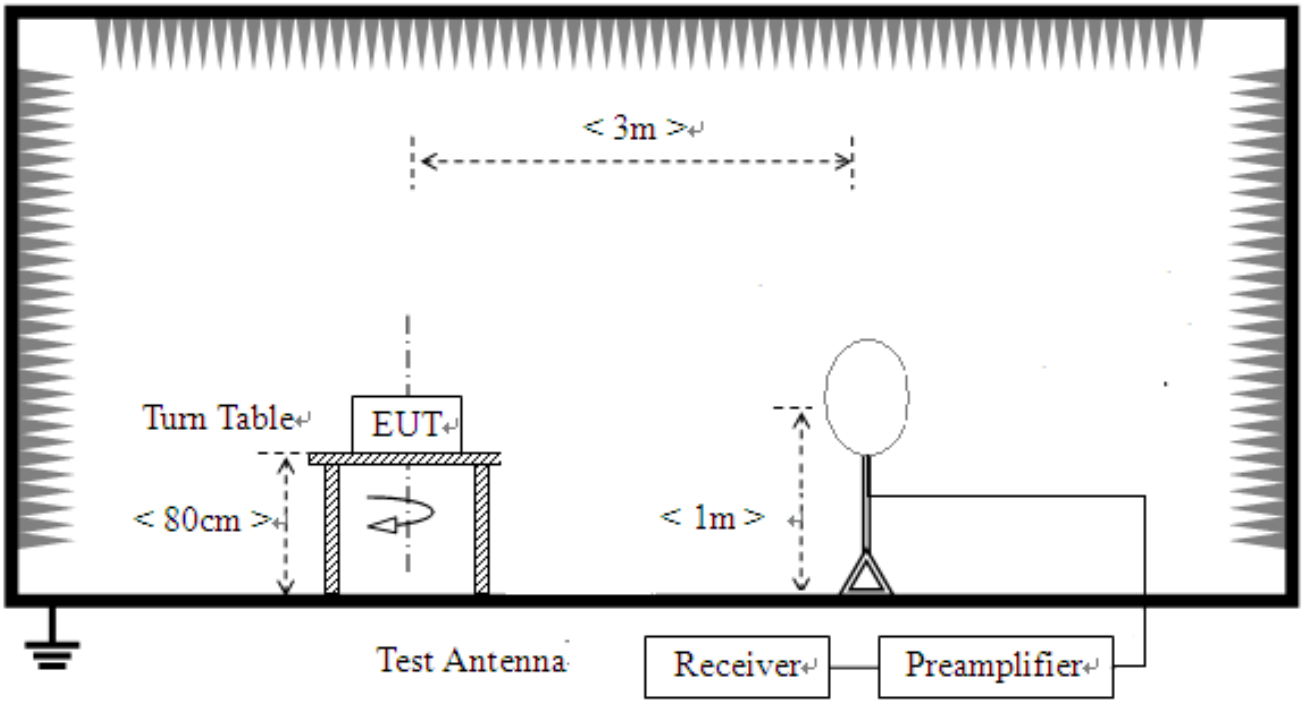
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

2.6.2. Measuring Instruments

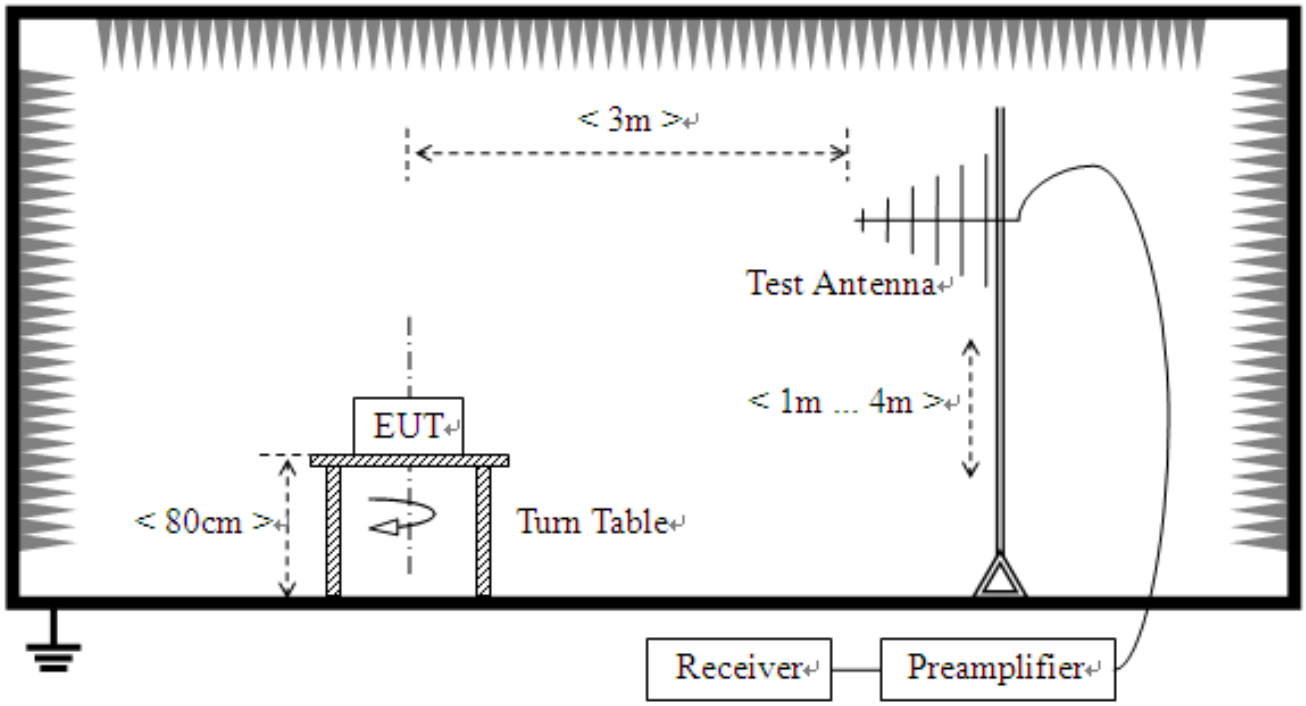
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

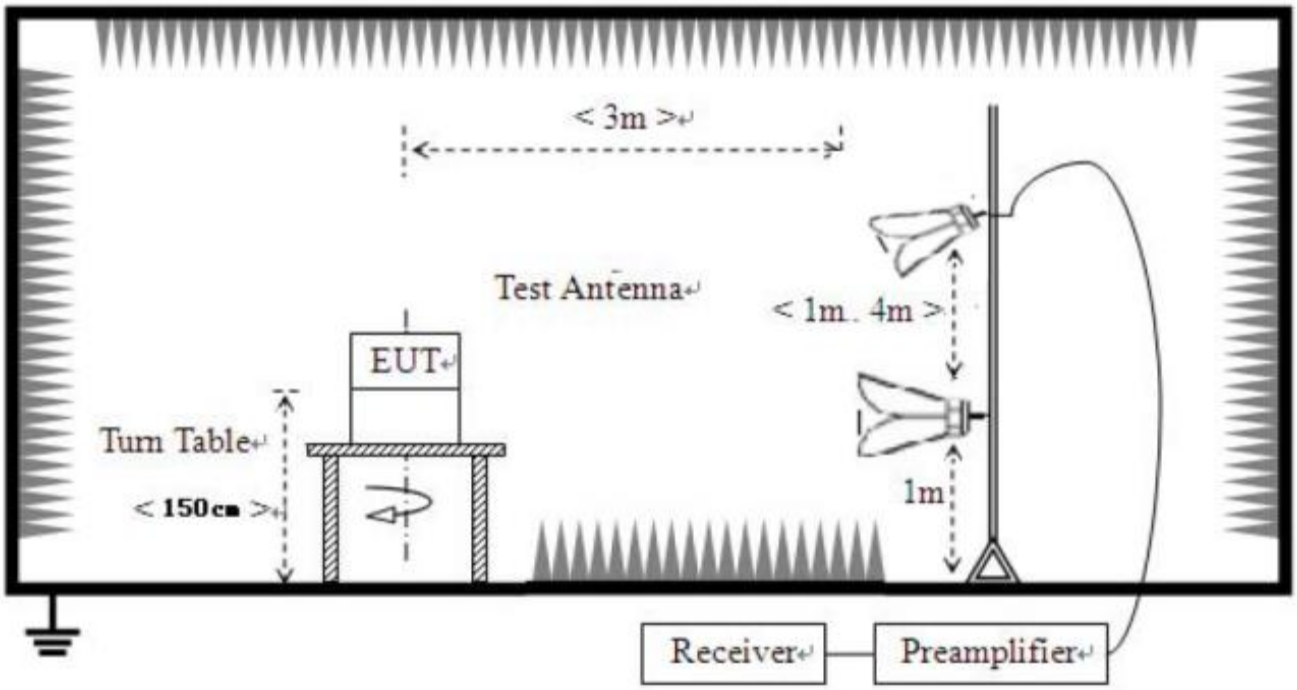
For radiated emissions from 9kHz to 30MHz



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 10^{th} 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 71 QPSK 20MHz BW Middle Channel							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	74.1571	-89.84	-70.58	-13.00	57.58	19.26	Horizontal
2	157.133	-100.18	-78.84	-13.00	65.84	21.34	Horizontal
3	912.171	-87.17	-50.12	-13.00	37.12	37.05	Horizontal
4	1761.83	-34.19	-34.37	-13.00	21.37	-0.18	Horizontal
5	4789.88	-53.56	-38.97	-13.00	25.97	14.59	Horizontal
6	7453.69	-53.79	-34.11	-13.00	21.11	19.68	Horizontal
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	74.1571	-82.38	-60.80	-13.00	47.80	21.58	Vertical
2	111.035	-89.81	-66.39	-13.00	53.39	23.42	Vertical
3	152.281	-92.90	-73.02	-13.00	60.02	19.88	Vertical
4	1748.03	-28.61	-28.89	-13.00	15.89	-0.28	Vertical
5	4949.89	-53.73	-39.27	-13.00	26.27	14.46	Vertical
6	7862.54	-53.01	-33.58	-13.00	20.58	19.43	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 ±0.00025% (±2.5ppm) of the center frequency. According to FCC section 2.1055, the test conditions are:

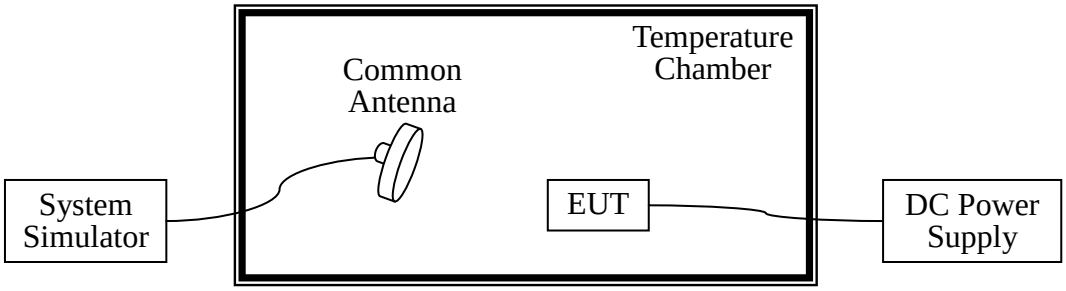
(1) The temperature is varied from -30° C to +50 ℃ at intervals of not more than 10 ℃.

(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 ℃ 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 ℃ step up to 50 ℃. 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 ℃.
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	2022.07.21	2023.07.20
2	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2019.03.25	2023.03.24
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2020.06.19	2023.06.18
5	EMI Horn Ant. (1-18G)	ETC	1209	A150402241	2021.01.02	2024.01.01
6	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2020.06.19	2023.06.18
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-10004	A140101634	2020.09.22	2023.09.21
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2021.12.23	2022.12.22
9	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2022.03.25	2023.03.24
10	Test Receiver	R&S	ESIB7	A0501375	2022.04.18	2023.04.17
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	2023.03.25
13	Temperature chamber	TABAI	PS-232	A8708054	2021.09.24	2022.09.23
14	Wideband Radio Communication tester	R&S	CMW500	A130101034	2021.01.26	2023.01.25
15	Wideband Radio Communication tester	R&S	CMW500	A150802214	2022.06.17	2023.06.16
16	Test Receiver	KEYSIGHT	N9038A	A141202036	2022.07.21	2023.07.20
17	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2022.07.21	2023.07.20
18	Cable	MATCHING PAD	W7	/	2022.07.21	2023.07.20

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=2Uc(y))	2.8dB

Uncertainty of Radiated Emission Measurement (9kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB

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

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB

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

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.9dB

Uncertainty of RF Conducted Measurement (9kHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.2dB

APPENDIX A

Conducted Output Power and ERP

LTE Band 71 - 5MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			133147	133297	133447			
			665.5MHz	680.5MHz	695.5MHz			
QPSK	1	0	23.42	23.38	23.35	-1.50	19.84	33.77
	1	12	23.49	23.39	23.34			
	1	24	23.33	23.39	23.41			
	12	0	22.37	22.47	22.38			
	12	6	22.35	22.36	22.39			
	12	11	22.46	22.41	22.38			
	25	0	22.35	22.48	22.36			
16QAM	1	0	22.43	22.39	22.47	-1.50	18.86	33.77
	1	12	22.38	22.51	22.35			
	1	24	22.30	22.36	22.33			
	12	0	21.31	21.36	21.37			
	12	6	21.29	21.47	21.38			
	12	11	21.34	21.53	21.28			
	25	0	21.32	21.42	21.24			
LTE Band 71 - 10MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			133172	133297	133422			
			668.0MHz	680.5MHz	693.0MHz			
QPSK	1	0	23.47	23.44	23.59	-1.50	19.94	33.77
	1	24	23.32	23.40	23.41			
	1	49	23.37	23.50	23.36			
	25	0	22.42	22.38	22.46			
	25	12	22.39	22.37	22.47			
	25	24	22.40	22.39	22.45			
	50	0	22.38	22.33	22.41			
16QAM	1	0	22.68	22.49	22.52	-1.50	19.03	33.77
	1	24	22.47	22.51	22.47			
	1	49	22.55	22.50	22.44			
	25	0	21.48	21.51	21.56			
	25	12	21.47	21.52	21.58			
	25	24	21.45	21.50	21.57			
	50	0	21.43	21.49	21.43			

LTE Band 71 - 15MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			133197	133297	133397			
			670.5MHz	680.5MHz	690.5MHz			
QPSK	1	0	23.46	23.42	23.38	-1.50	19.84	33.77
	1	37	23.49	23.32	23.43			
	1	74	23.34	23.36	23.27			
	36	0	22.45	22.41	22.31			
	36	16	22.44	22.39	22.32			
	36	35	22.32	22.48	22.33			
	75	0	22.39	22.28	22.31			
16QAM	1	0	22.53	22.42	22.49	-1.50	18.96	33.77
	1	37	22.61	22.31	22.42			
	1	74	22.49	22.35	22.55			
	36	0	21.37	21.45	21.33			
	36	16	21.36	21.34	21.33			
	36	35	21.35	21.44	21.33			
	75	0	21.34	21.34	21.32			
LTE Band 71 - 20MHz Bandwidth								
Modulation	RB Size	RB Offset	Average Power (dBm)			Ant. Gain (dBi)	Max. ERP (dBm)	ERP Limit (dBm)
			133222	133322	133372			
			673.0MHz	683.0MHz	688.0MHz			
QPSK	1	0	23.72	23.69	23.60	-1.50	20.07	33.77
	1	49	23.43	23.41	23.31			
	1	99	23.38	23.55	23.40			
	50	0	22.64	22.45	22.43			
	50	24	22.60	22.44	22.44			
	50	49	22.44	22.26	22.25			
	100	0	22.54	22.39	22.34			
16QAM	1	0	22.70	22.60	22.65	-1.50	19.05	33.77
	1	49	22.45	22.19	22.46			
	1	99	22.44	22.57	22.52			
	50	0	21.55	21.29	21.45			
	50	24	21.55	21.29	21.33			
	50	49	21.29	21.20	21.27			
	100	0	21.45	21.28	21.27			

Peak To Average Ratio

PeakToAveragePowerRatio NormalTC_NormalVol							
Band	Range	BandWidth	RbMode	Modulation	PAPR (dBm)	Limit (dBm)	Result
FDD71	LowRange	20	OneRB_high	16QAM	5.73	13.00	Pass
FDD71	LowRange	20	fullRB	16QAM	6.36	13.00	Pass
FDD71	MidRange	20	OneRB_high	16QAM	6.60	13.00	Pass
FDD71	MidRange	20	fullRB	16QAM	6.35	13.00	Pass
FDD71	HighRange	20	OneRB_high	16QAM	6.20	13.00	Pass
FDD71	HighRange	20	fullRB	16QAM	6.40	13.00	Pass

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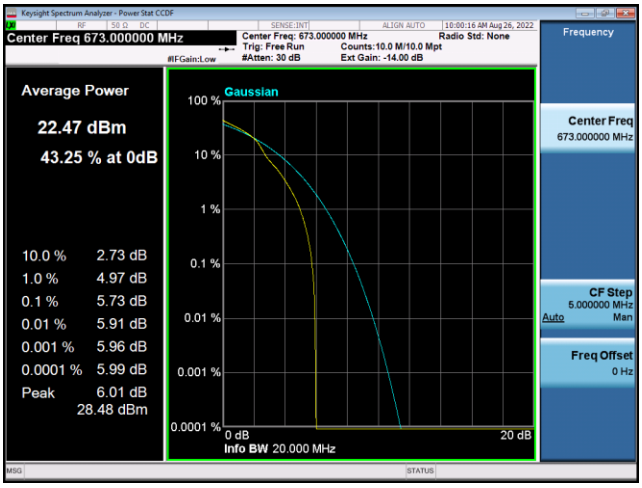
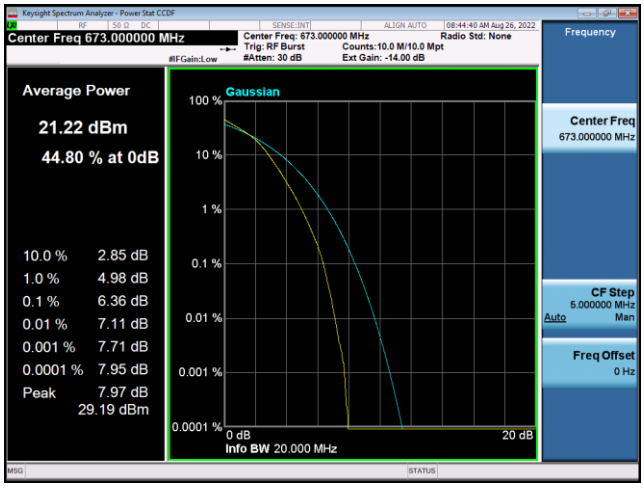
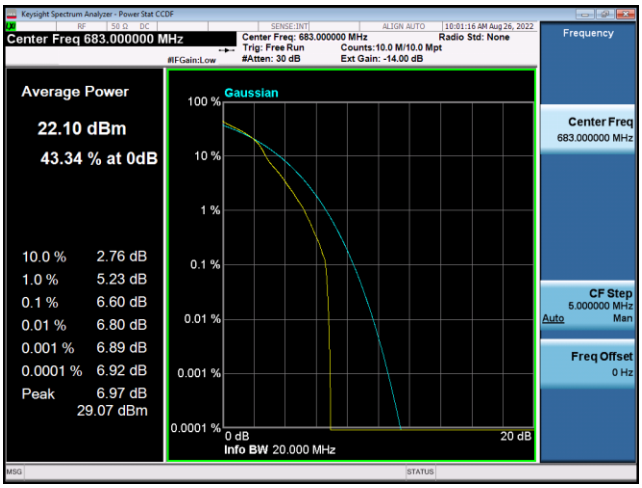
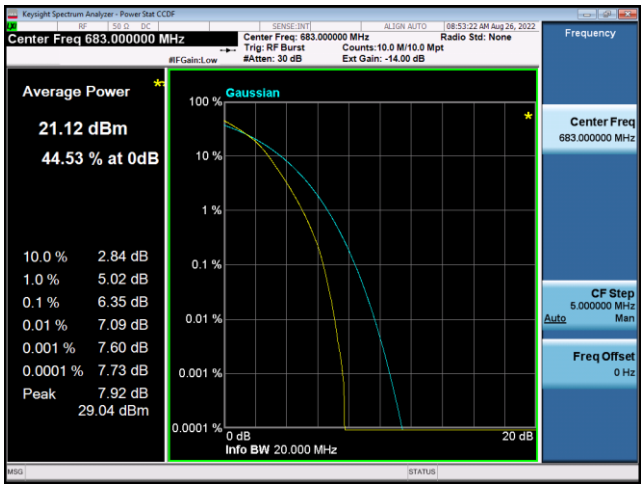
	
FDD71_MidRange_20MHz_1732.5_OneRB_high_16QAM	FDD71_MidRange_20MHz_1732.5_fullRB_16QAM
	
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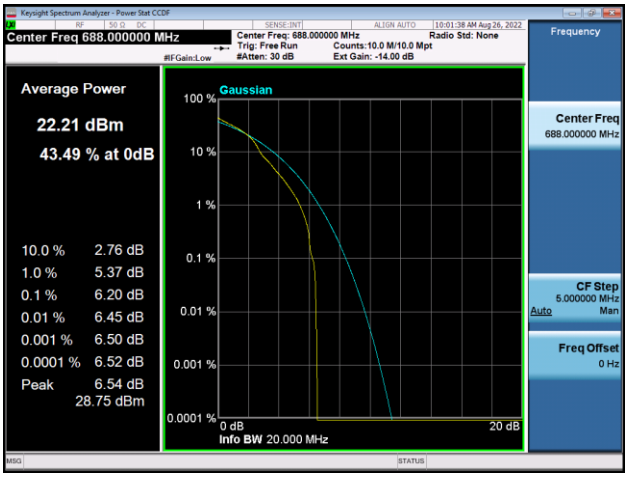
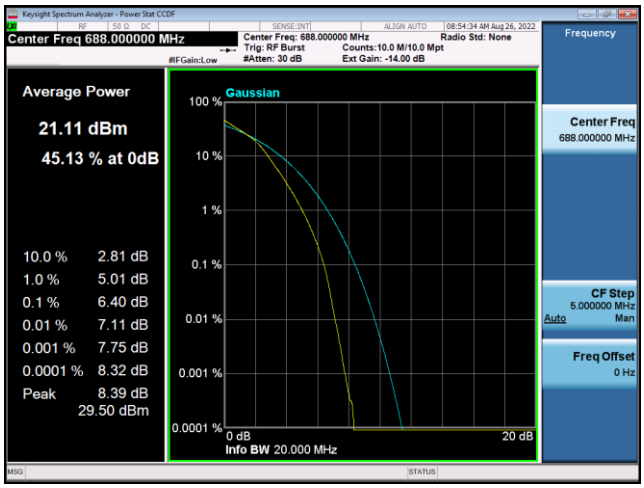
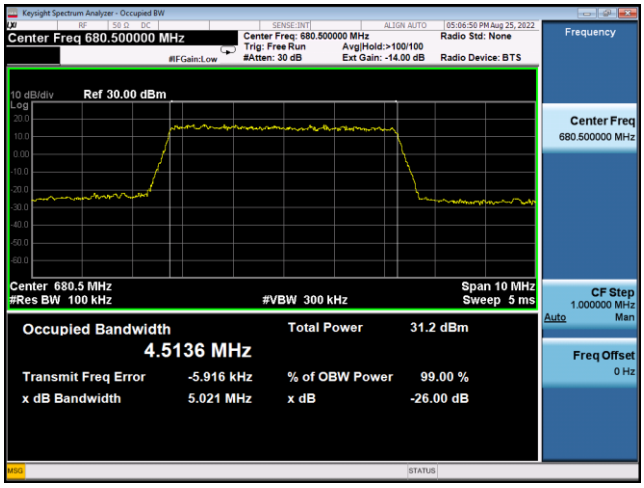
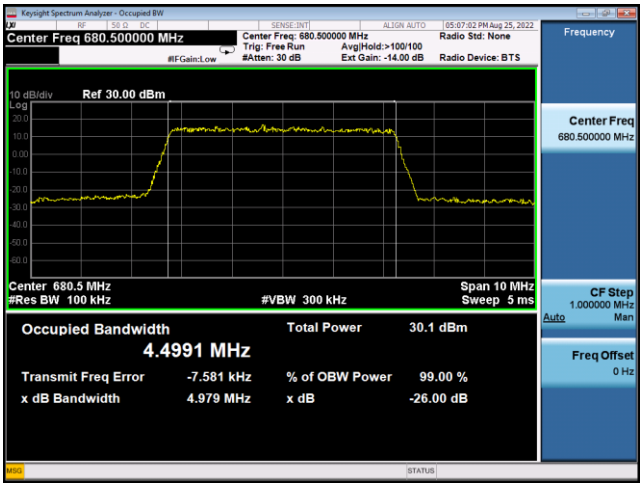
	

99% Occupied Bandwidth and 26dB Emission Bandwidth

Occupied Bandwidth NormalTC_NormalVol						
Band	Range	BandWidth	Frequency (MHz)	Modulation	OBW(99%) (MHz)	26dB EBW (MHz)
FDD071	MidRange	5	2535	QPSK	4.51	5.021
FDD071	MidRange	5	2535	Q16	4.50	4.979
FDD071	MidRange	10	2535	QPSK	8.933	9.661
FDD071	MidRange	10	2535	Q16	8.945	9.709
FDD071	MidRange	15	2535	QPSK	13.388	14.35
FDD071	MidRange	15	2535	Q16	13.416	14.28
FDD071	MidRange	20	2535	QPSK	17.864	18.95
FDD071	MidRange	20	2535	Q16	17.682	18.82

FDD71_MidRange_5_1732.5_QPSK	FDD71_MidRange_5_1732.5_16QAM
	
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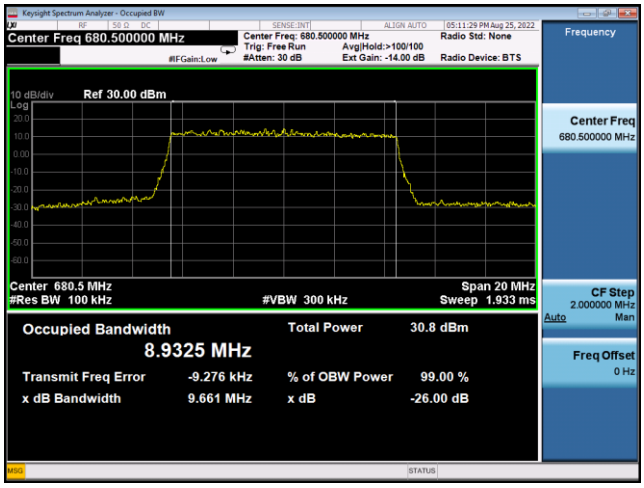
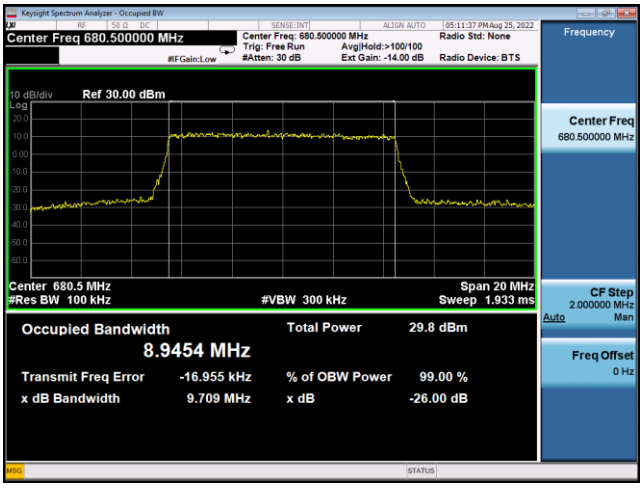
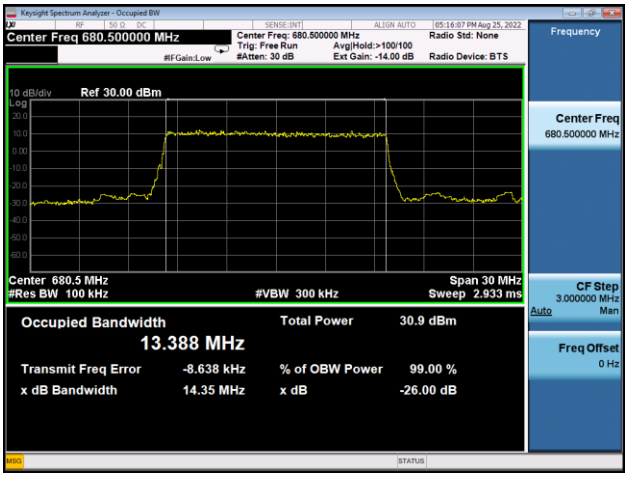
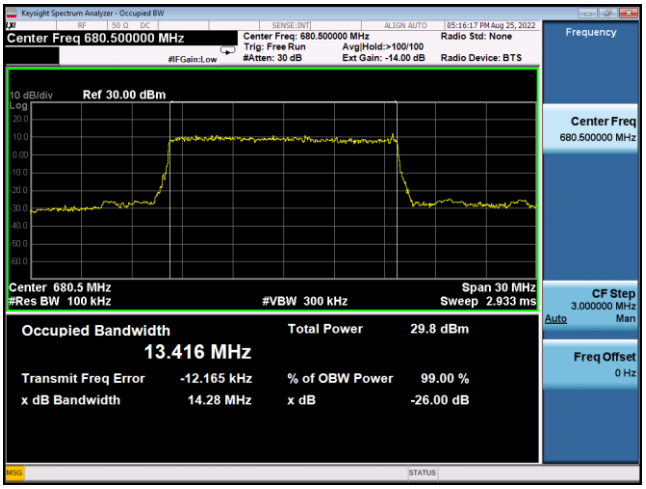
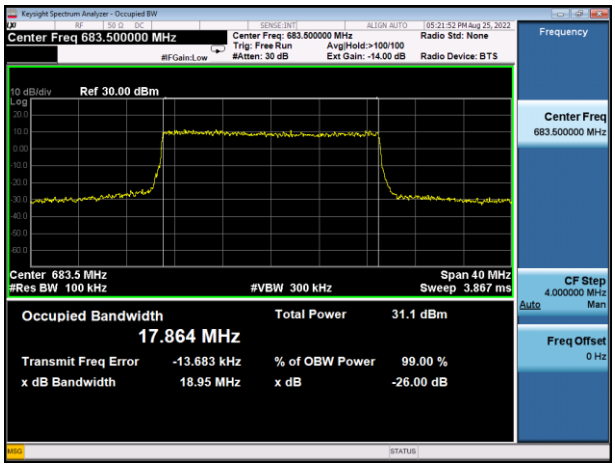
	
FDD71_MidRange_15_1732.5_QPSK	FDD71_MidRange_15_1732.5_16QAM
	

FDD71_MidRange_20_1732.5_QPSK	FDD71_MidRange_20_1732.5_16QAM
	

Frequency Stability

Frequency Stability NormalTC_NormalVol									
Temperature	Voltage	Band	BandWidth (MHz)	RbMode	Modulation	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
Normal	Low	FDD71	10	fullRB	QPSK	4.463	0.007	/	Pass
Normal	Normal	FDD71	10	fullRB	QPSK	4.063	0.006	/	Pass
Normal	High	FDD71	10	fullRB	QPSK	5.608	0.008	/	Pass
50	Normal	FDD71	10	fullRB	QPSK	4.020	0.006	/	Pass
40	Normal	FDD71	10	fullRB	QPSK	5.393	0.008	/	Pass
30	Normal	FDD71	10	fullRB	QPSK	5.293	0.008	/	Pass
20	Normal	FDD71	10	fullRB	QPSK	-3.819	-0.006	/	Pass
10	Normal	FDD71	10	fullRB	QPSK	4.663	0.007	/	Pass
0	Normal	FDD71	10	fullRB	QPSK	4.463	0.007	/	Pass
-10	Normal	FDD71	10	fullRB	QPSK	7.696	0.011	/	Pass
-20	Normal	FDD71	10	fullRB	QPSK	-3.748	-0.006	/	Pass
-30	Normal	FDD71	10	fullRB	QPSK	4.692	0.007	/	Pass

Note:

1. Normal Voltage = 3.85V, Low Voltage = 3.50V, High Voltage = 4.4 V, Normal Temperature = 20 ℃.

2. Judge based on the measured frequency error result, the fundamental wave emission of Band 71 is kept within the authorized frequency band.

Conducted Band Edge

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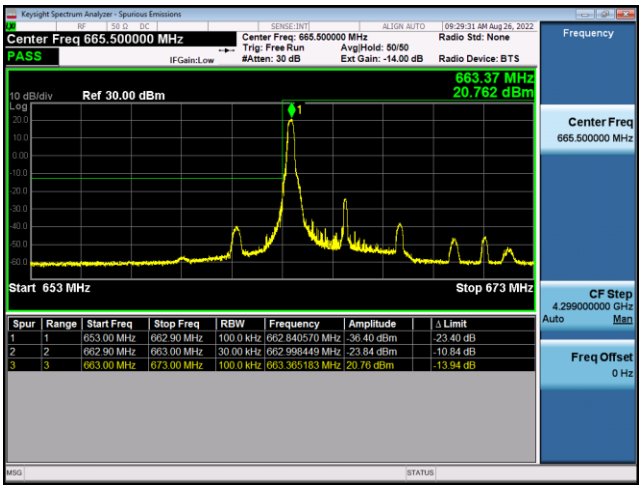	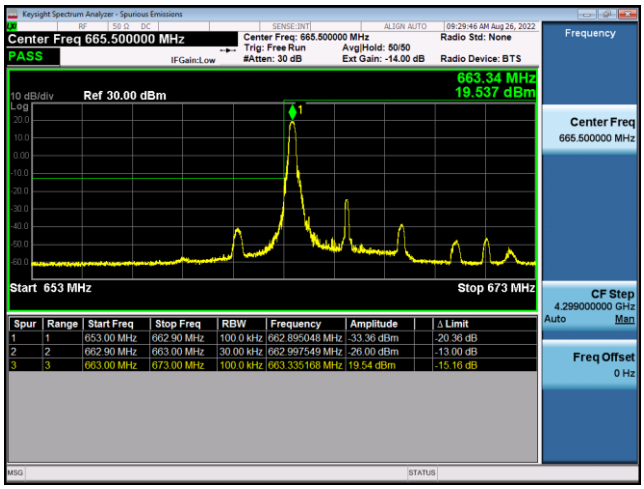
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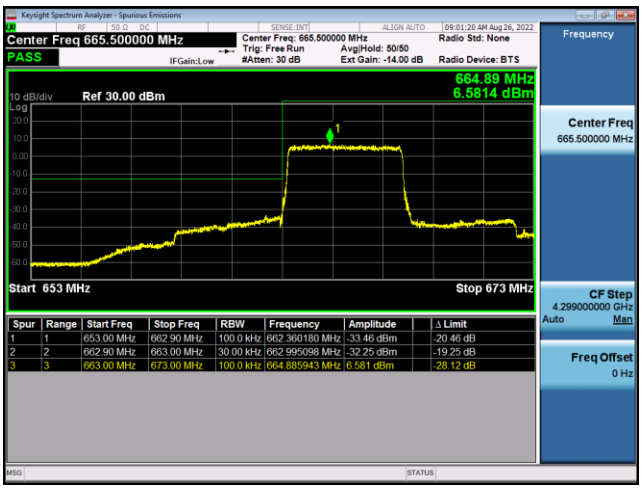	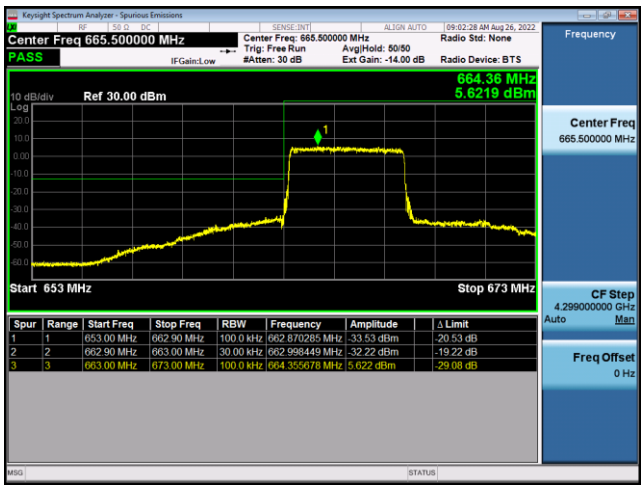
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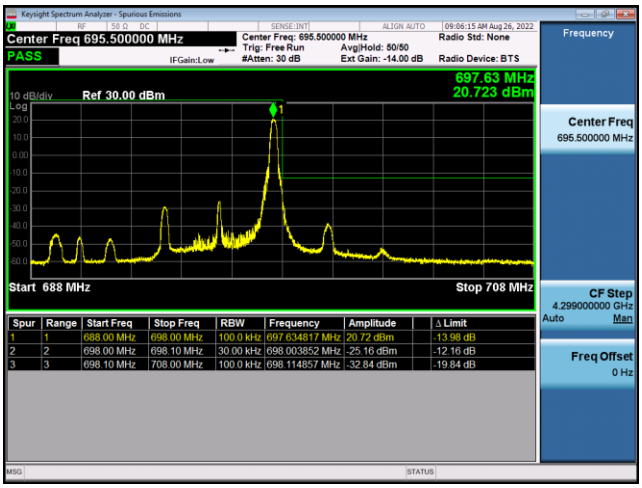	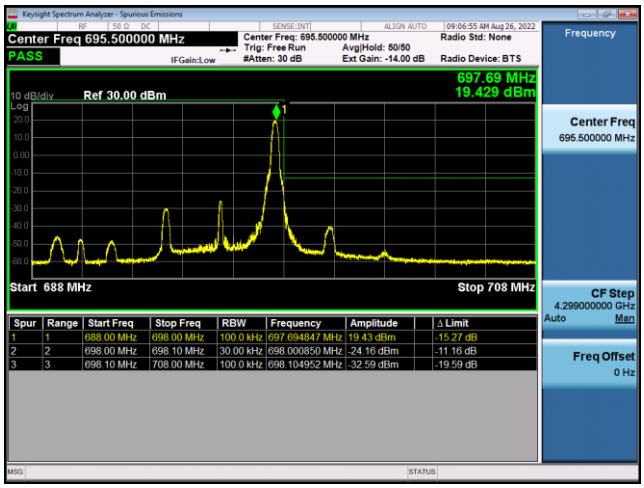

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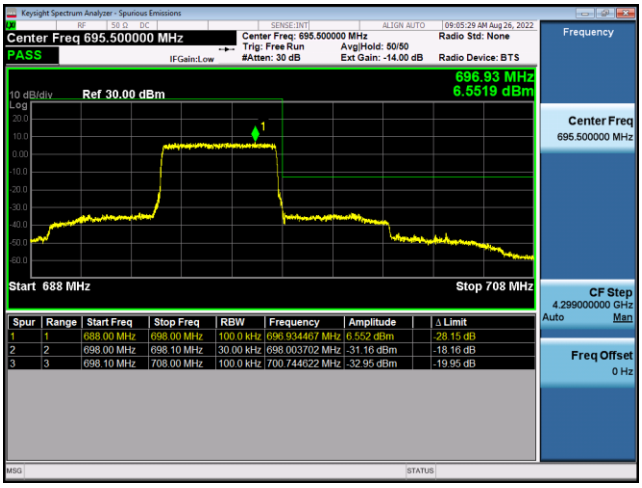	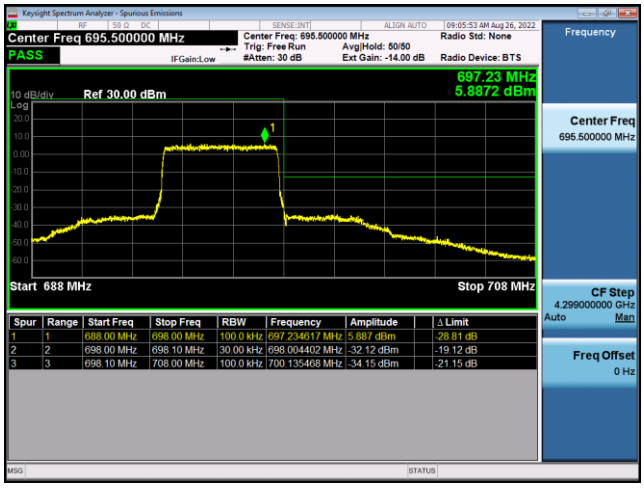
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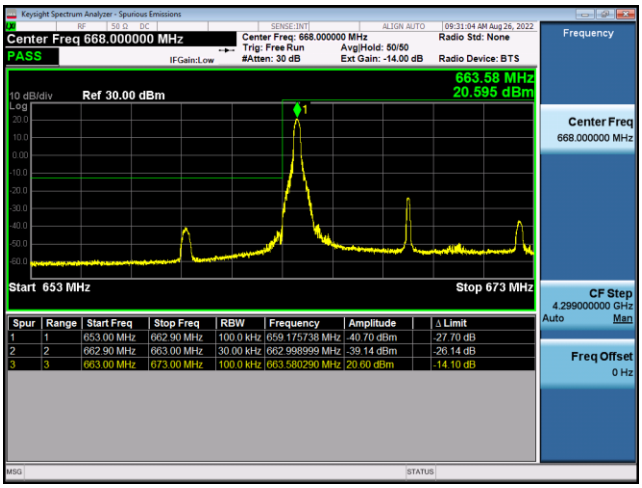	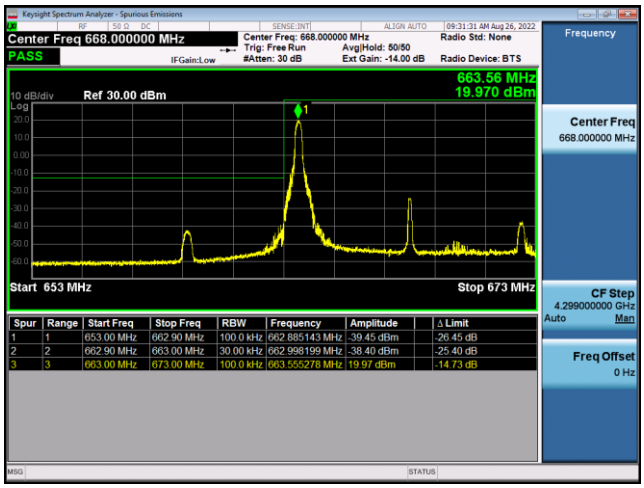
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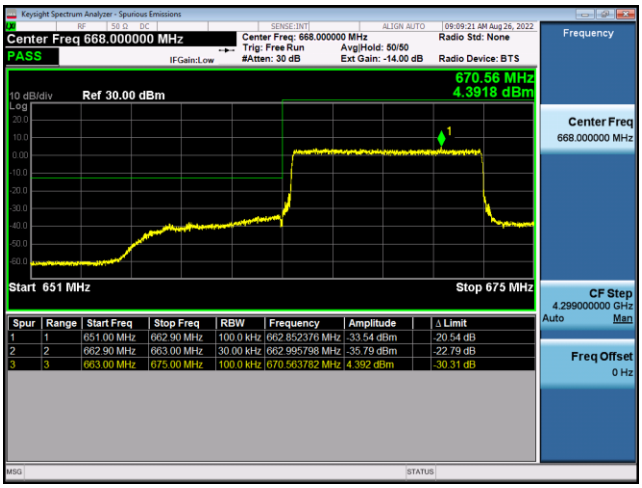	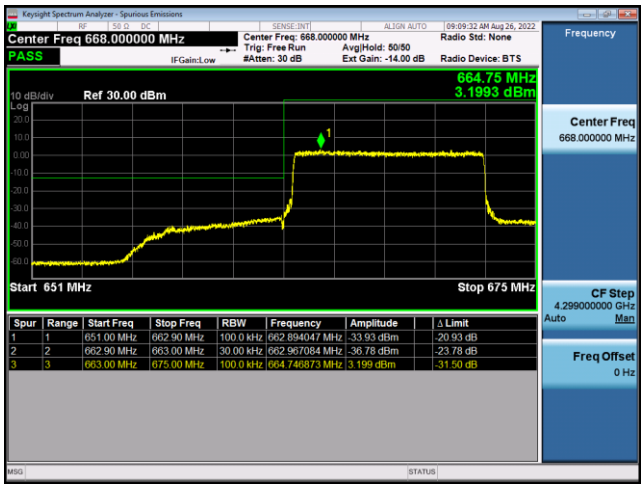

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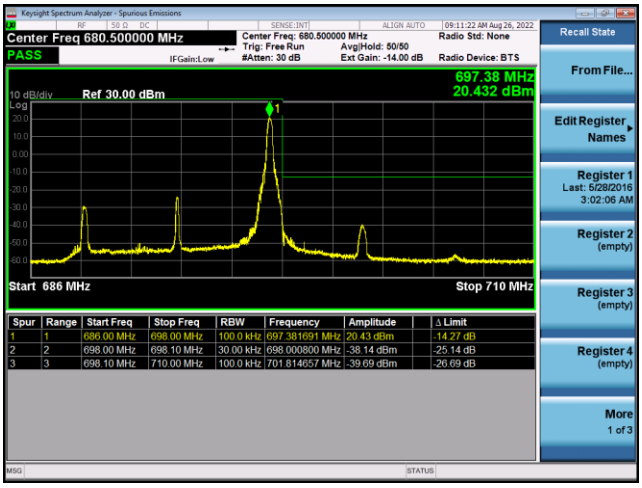	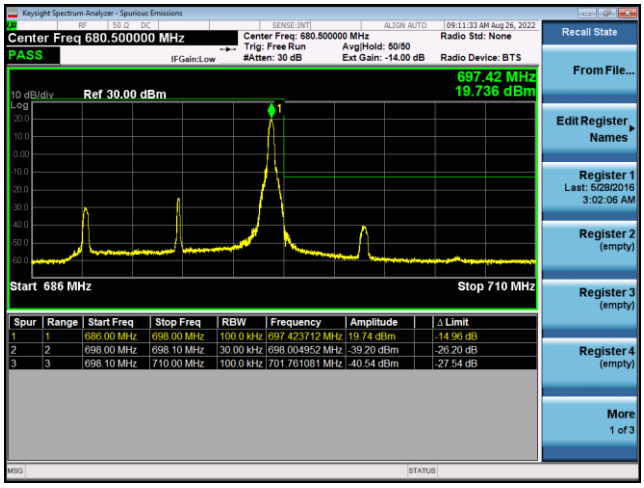
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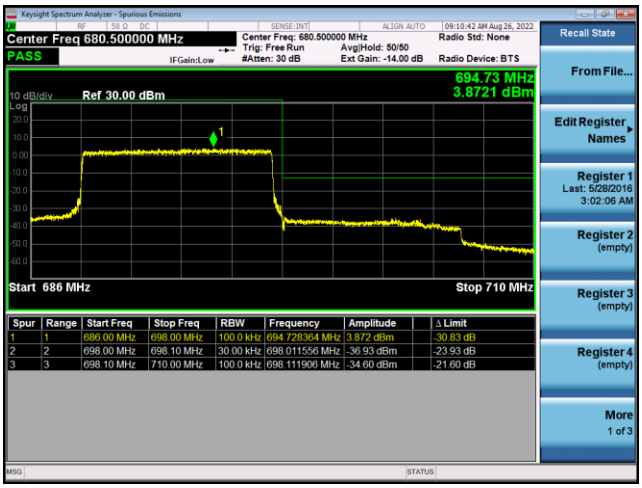	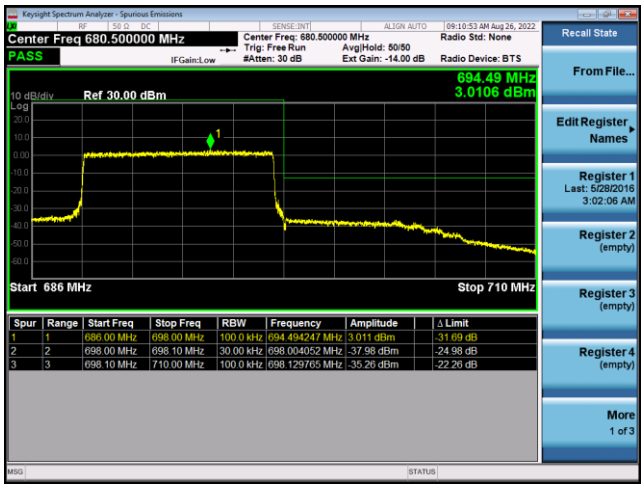
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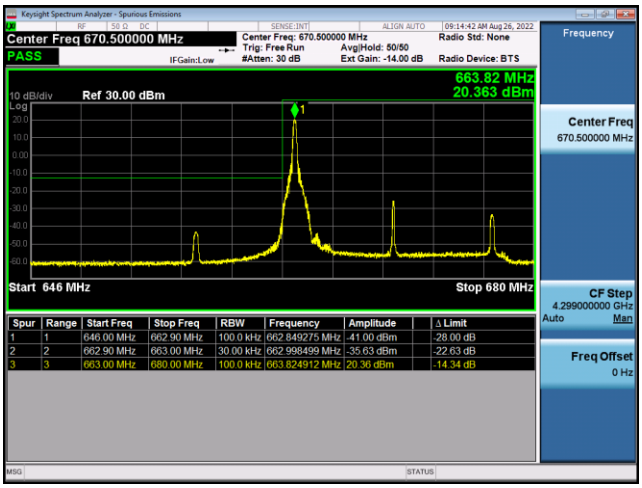	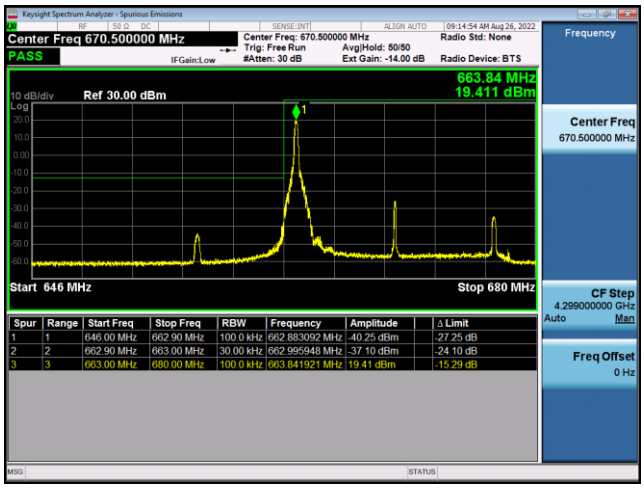

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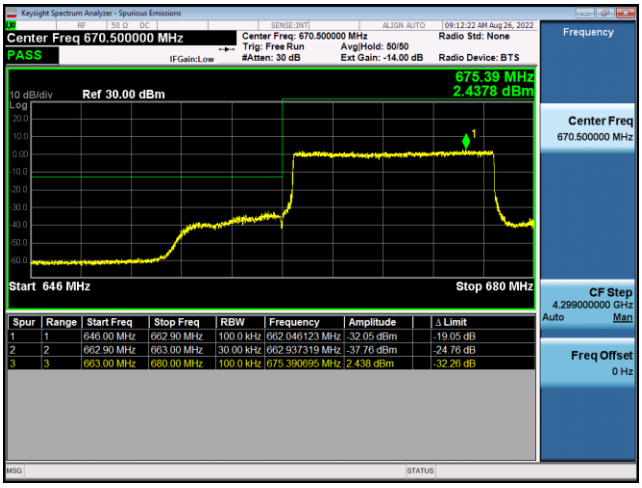	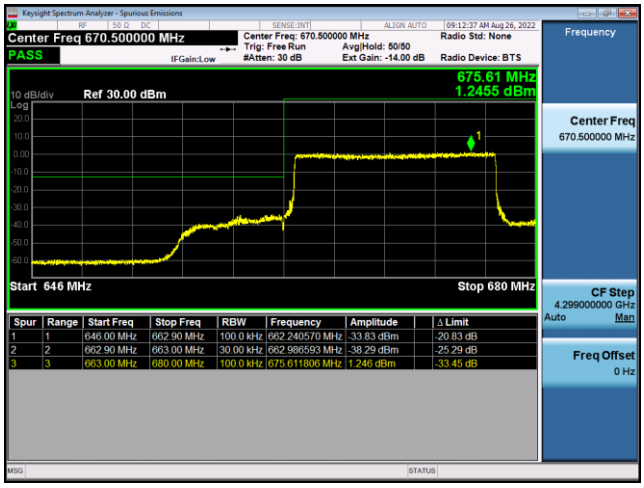
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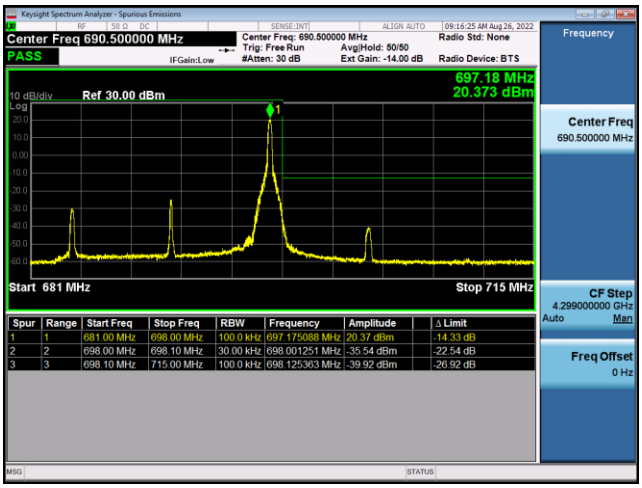	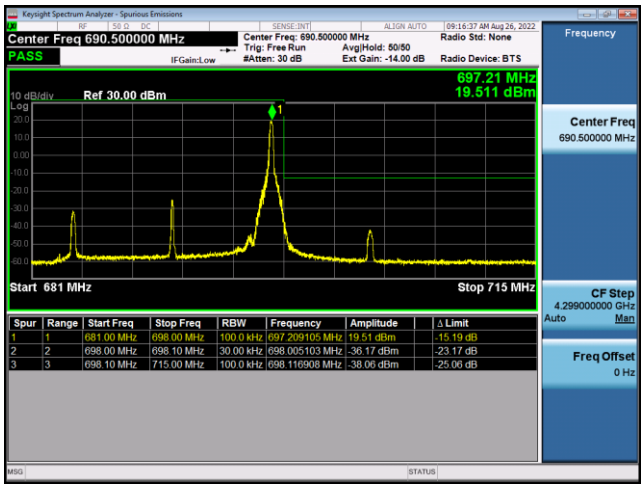
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	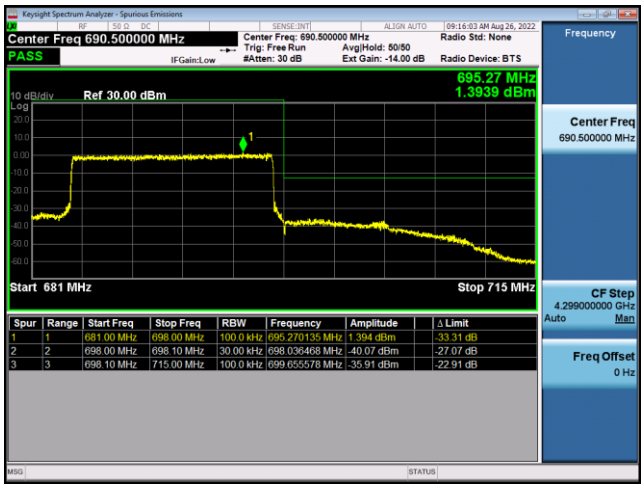

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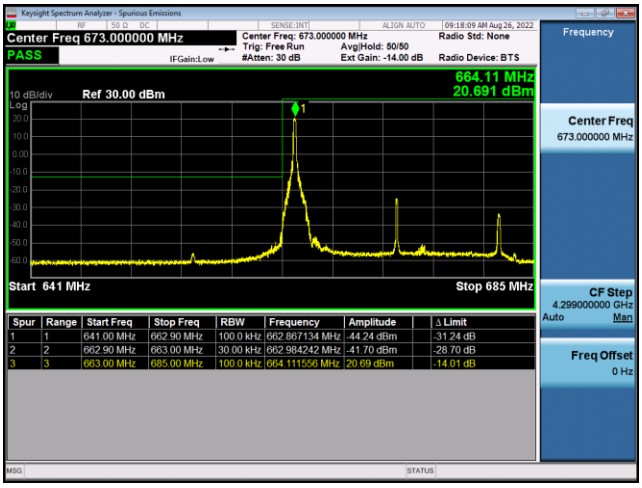	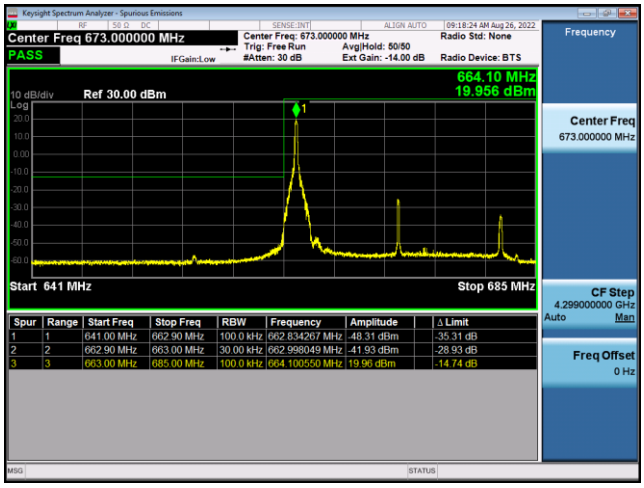
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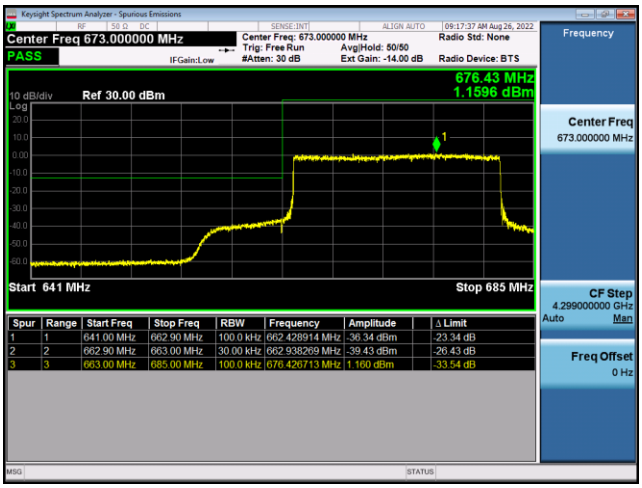	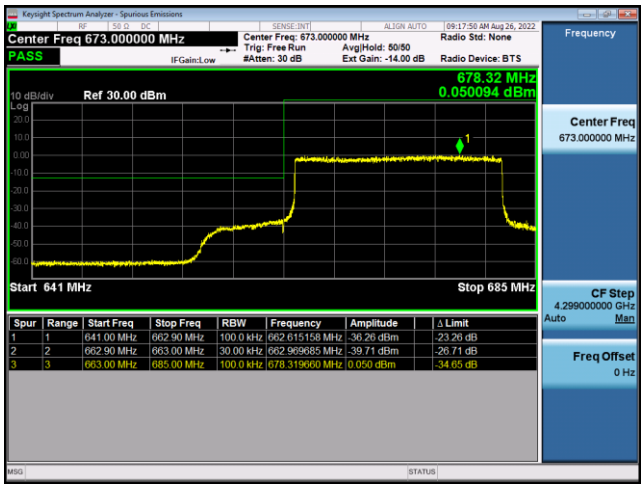
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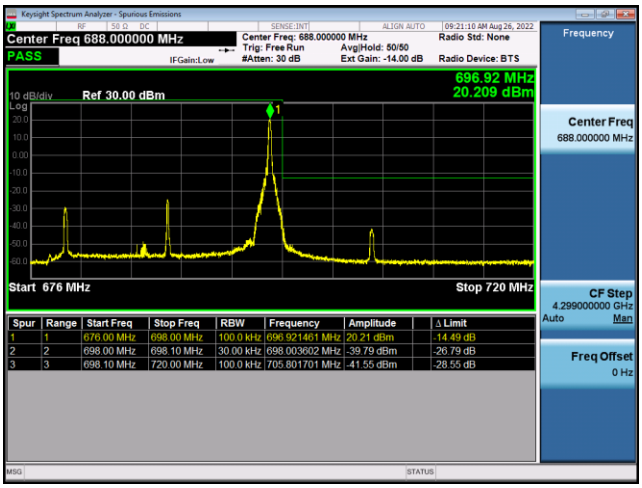	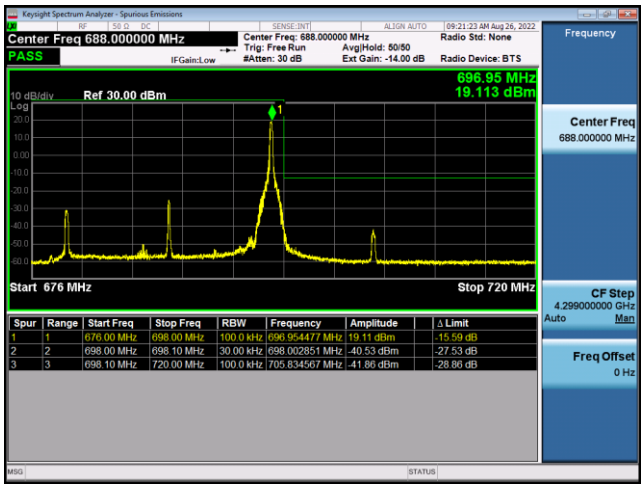

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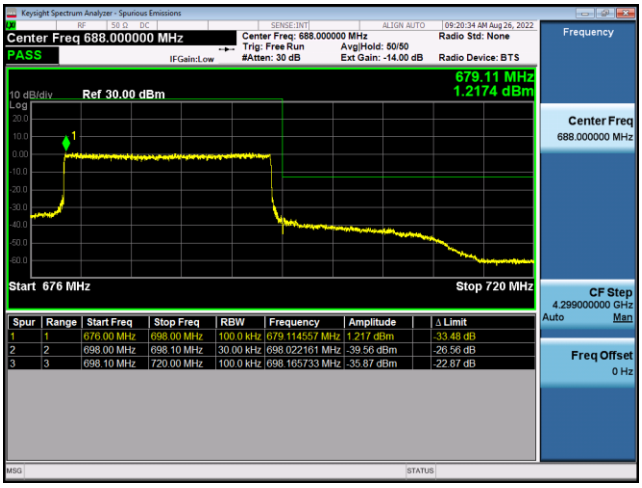
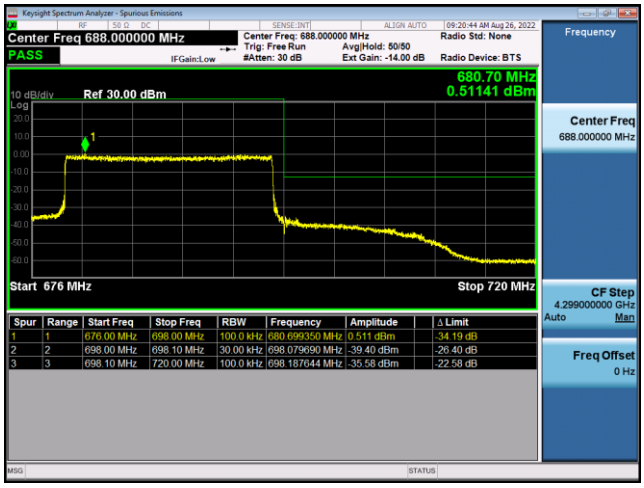
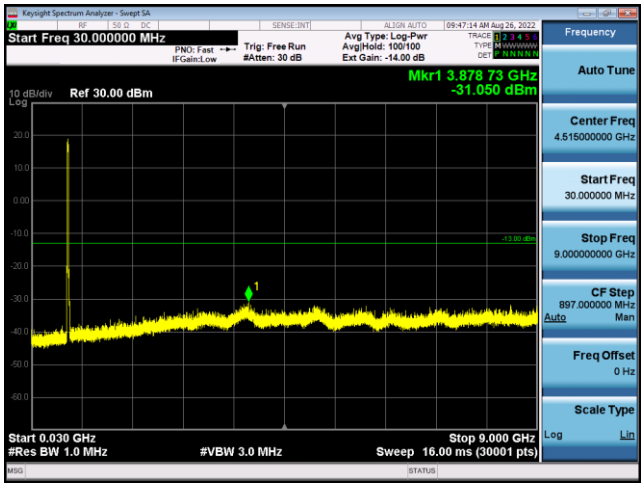
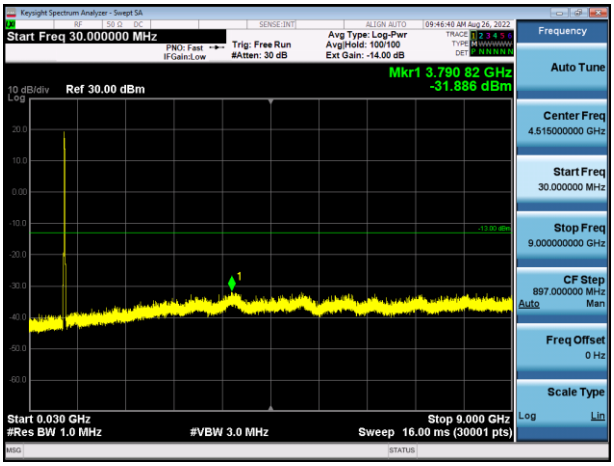
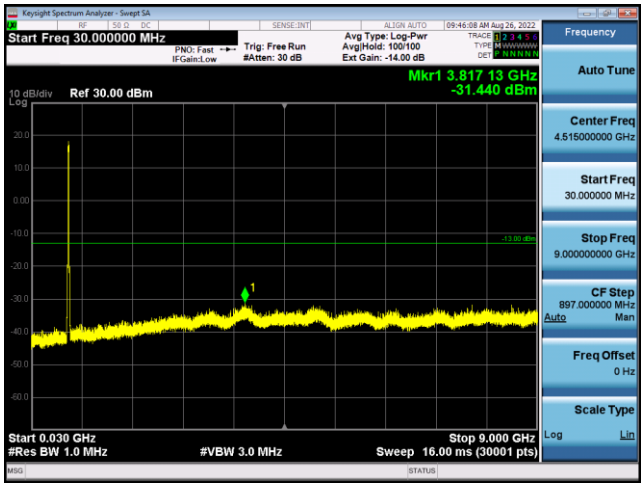
	

Conducted Spurious Emissions

Conducted Spurious Emission NormalTC_NormalVol						
Band	Range	BandWidth	Modulation	TestValue (dBm)	Limit (dBm)	Result
FDD71	LowRange	20	QPSK	-31.05	-13.00	Pass
FDD71	MidRange	20	QPSK	-31.89	-13.00	Pass
FDD71	HighRange	20	QPSK	-31.44	-13.00	Pass

FDD71_LowRange_20MHz_30MHz~9GHz	FDD71_MidRange_20MHz_30MHz~9GHz
	
FDD71_HighRange_20MHz_30MHz~9GHz	
	

** END OF REPORT **