RF TEST REPORT

Report No.:	SET2022-05994
Product Name:	M300z
Model No. :	M300z
FCC ID:	SRQ-M300Z
Applicant:	ZTE CORPORATION.
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Dates of Testing:	2022.04.22-2022.05.09
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 ..... :	M300z
Brand Name..... :	ZTE
Trade Name ..... :	ZTE
Applicant ..... :	ZTE CORPORATION
Applicant Address ..... :	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Manufacturer ..... :	ZTE CORPORATION
Manufacturer Address..... :	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Test Standards ..... :	47 CFR Part 27
Test Result……..:	PASS

Tested by ..……..: Sun 2022.05.17

Sun, Test Engineer

Reviewed by...……: Chris You 2022.05.17

Chris You, Senior Engineer

Approved by……..: Shuangwen Zhang 2022.05.17

Shuangwen Zhang, Manager

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Change History		
Issue	Date	Reason for change
1.0	2022.05.17	First edition

1. GENERAL INFORMATION

1.1 EUT Description

Model No.	M300z
EUT supports Radios application	LTE Band 7
Test Band	LTE Band 7: 2500MHz~2570MHz
Maximum Output Power to Antenna	LTE Band 7: 22.70dBm
Bandwidth	LTE Band 7: 5MHz/10MHz/15MHz/20MHz
Modulation Type	QPSK/16QAM/64QAM(downlink only)
Antenna Type	Internal Antenna
Antenna Gain(Max)	LTE Band 7: 2.7dBi
Power supply	DC 5V from Adapter

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

Band	Type of Modulation	BW (MHz)	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP(W)
LTE Band 7	QPSK	5	4M49G7D	—	0.336
LTE Band 7	16QAM	5	4M49W7D	—	0.266
LTE Band 7	QPSK	10	8M93G7D	0.006	0.310
LTE Band 7	16QAM	10	8M92W7D	—	0.321
LTE Band 7	QPSK	15	13M4G7D	—	0.286
LTE Band 7	16QAM	15	13M4W7D	—	0.283
LTE Band 7	QPSK	20	17M9G7D	—	0.342
LTE Band 7	16QAM	20	17M9W7D	—	0.252

1.3 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2/27:

1.47 CFR Part 2/27

2. ANSI/TIA/EIA-603-D-2010

3. FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01

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

No.	Section	Description	Limit	Result
1	2.1046	Conducted RF Output Power	Reporting Only	PASS
2	27.50 (d)(5)	Peak to Average Radio	＜13dB	PASS
3	27.50 (h)(2)	Equivalent Isotropic Radiated Power	EIRP < 2Watt	PASS
4	2.1049	Occupied Bandwidth	Reporting Only	PASS
5	2.1051 27.53 (m)(4)	Conducted Spurious Emission and Conducted Band Edge Measurement	Refer to 27.53(m)(4)	PASS
6	2.1051 27.53 (m)(4)	Radiated Spurious Emission	＜55+10log10(P[watt])	PASS
7	2.1055 27.54	Frequency Stability	＜2.5ppm	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#			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	7			√	√	√	√	√	√	√	√	√	√	√	√
Peak-to-Average Ratio	7						√		√	√		√	√	√	√
26dB and 99% Bandwidth	7			√	√	√	√	√	√			√	√	√	√
Conducted Band Edge	7			√	√	√	√	√	√	√		√	√		√
Conducted Spurious Emission	7			√	√	√	√	√		√			√	√	√
Frequency Stability	7				√			√				√		√	
ERP/EIRP	7			√	√	√	√	√	√	√			√	√	√
Radiated Spurious Emission	7	Worst case												√	
Note	1. The mark “√” means that this configuration is chosen for testing. 2.The mark “-” means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. For E.R.P/E.I.R.P. measurement, the widest bandwidth and the bandwidth with the highest conducted power of each band is chosen for testing. Besides, the lowest bandwidth of each band is also measured for reporting only.														

1.5 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between 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 Facilities and Accreditations

1.6.1 Test Facilities

CNAS-Lab Code: L1659

CCIC-SET is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report f iled with the FCC (Federal Communications Commission). The acceptance letter from the FCC is ma intained in our files. Designation Number: CN1283, valid time is until April 19th, 2023.

ISED Registration: 11185A-1

CAB identifier: CN0064

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineeri ng Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11 185A-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.

1.6.2 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 RF Output Power

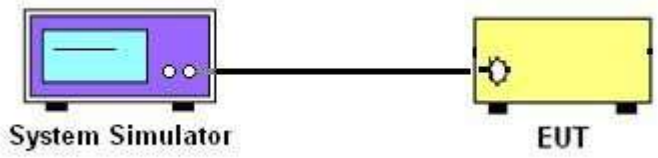
2.1.1 Requirement

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).

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

Please refer to Appendix A for detail

2.2 Peak to Average Radio

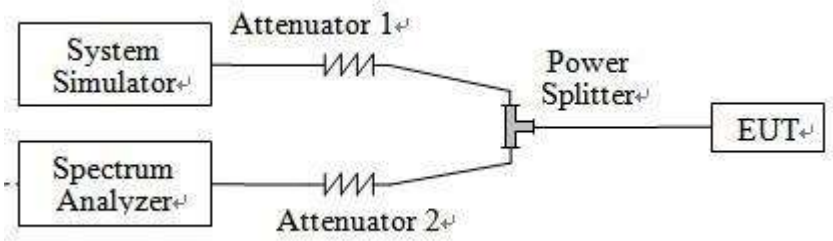
2.2.1 Definition

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 ratio (PAR) of the transmission may not exceed 13 dB.

2.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

2.2.3 Test Description



2.2.4 Test Procedures

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

2.2.5 Test Results of Peak-to-Average Ratio

Please refer to Appendix A for detail

2.3 99% Occupied Bandwidth and 26dB Bandwidth

2.3.1 Definition

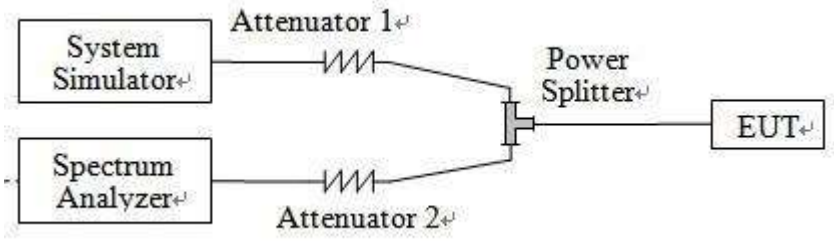
According to FCC section 2.1049, the occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

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

2.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

2.3.3 Test Setup



2.3.4 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

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

Please refer to Appendix A for detail

2.4 Frequency Stability

2.4.1 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:

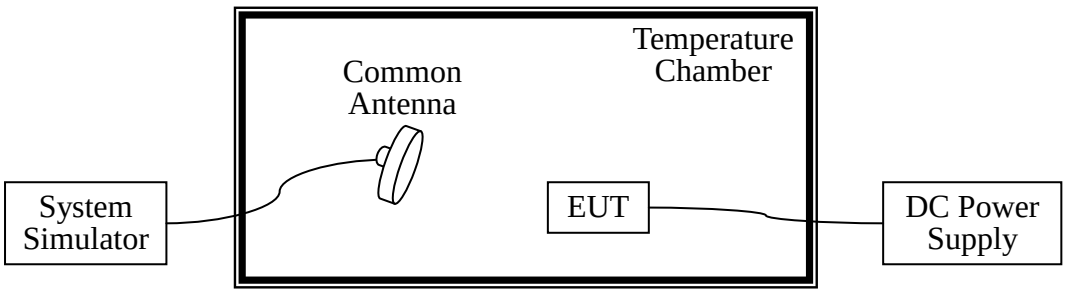
(a) The temperature is varied from -30 ℃ to +50 ℃ at intervals of not more than 10 ℃.

(b) 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.

2.4.2 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 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 25 ℃.
5. The variation in frequency was measured for the worst case.

2.4.5 Test Result of Frequency Stability

Please refer to Appendix A for detail

2.5 Conducted Out of Band Emissions

2.5.1 Requirement

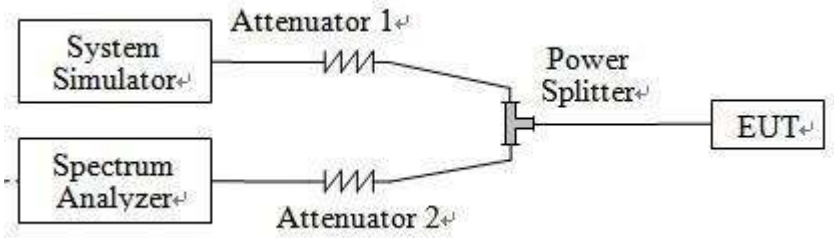
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

2.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

2.5.3 Test Setup



2.5.4 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

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

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

= -13dBm.

8. For 9KHz to 30MHz: the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

2.5.5 Test Result of Conducted Spurious Emission

Please refer to Appendix A for detail

2.6 Conducted Band Edge

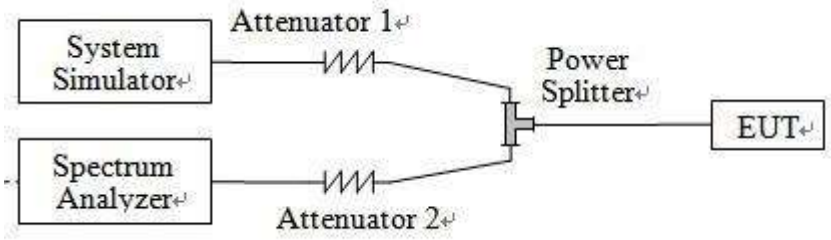
2.6.1 Description of Conducted Band Edge Measurement

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.

2.6.2 Measuring Instruments

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

2.6.3 Test Setup



2.6.4 Test Procedures

1. The testing follows FCC KDB 971168 v03r01 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
9. For LTE Band 7 the other 40 dB, and 55 dB have additionally applied same calculation above.

2.6.5 Test Result of Conducted Band Edge

Please refer to Appendix A for detail

2.7 Transmitter Radiated Power (EIRP/ERP)

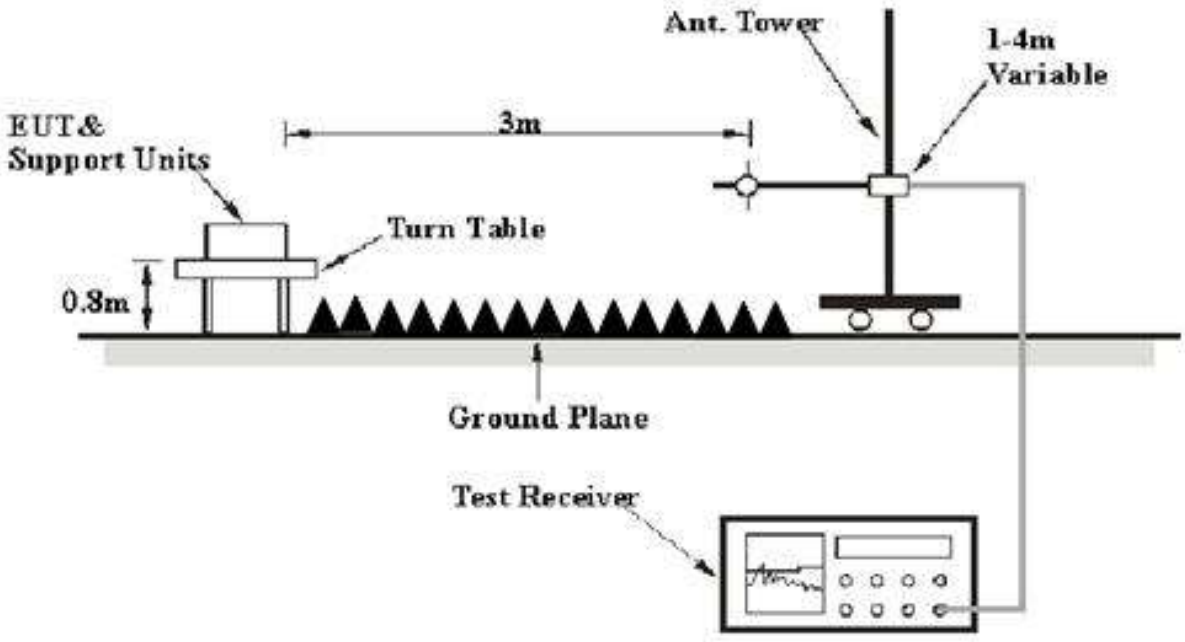
2.7.1 Requirement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-D-2010, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v03r01. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5 Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-D-2010, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v03r01.

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 placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01v03r01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10. ERP/EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs

    Ps (dBm)：Input power to substitution antenna.

    Gs (dBi or dBd)：Substitution antenna Gain.

    Et = Rt + AF

    Es = Rs + AF

    AF (dB/m)：Receive antenna factor

    Rt：The highest received signal in spectrum analyzer for EUT.

    Rs：The highest received signal in spectrum analyzer for substitution antenna.

2.7.5 Test Result of ERP/EIRP

LTE Band 7 Test Verdict:

LTE Band	BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	Verdict
			RB Size	RB Offset			
7	5	QPSK	1	0	2502.5	24.71	PASS
7	5	QPSK	1	0	2535.0	25.26	PASS
7	5	QPSK	1	0	2567.5	24.81	PASS
7	5	16QAM	1	12	2502.5	23.26	PASS
7	5	16QAM	1	12	2535.0	23.71	PASS
7	5	16QAM	1	12	2567.5	24.25	PASS
7	10	QPSK	1	49	2505.0	24.34	PASS
7	10	QPSK	1	49	2535.0	24.91	PASS
7	10	QPSK	1	49	2565.0	24.45	PASS
7	10	16QAM	1	0	2505.0	25.07	PASS
7	10	16QAM	1	0	2535.0	24.48	PASS
7	10	16QAM	1	0	2565.0	24.24	PASS
7	15	QPSK	1	0	2507.5	24.39	PASS
7	15	QPSK	1	0	2535.0	24.41	PASS
7	15	QPSK	1	0	2562.5	24.57	PASS
7	15	16QAM	1	0	2507.5	24.33	PASS
7	15	16QAM	1	0	2535.0	24.52	PASS
7	15	16QAM	1	0	2562.5	24.16	PASS
7	20	QPSK	1	0	2510.0	24.68	PASS
7	20	QPSK	1	0	2535.0	24.72	PASS
7	20	QPSK	1	0	2560.0	25.34	PASS
7	20	16QAM	1	49	2510.0	24.02	PASS
7	20	16QAM	1	49	2535.0	23.94	PASS
7	20	16QAM	1	49	2560.0	23.57	PASS

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

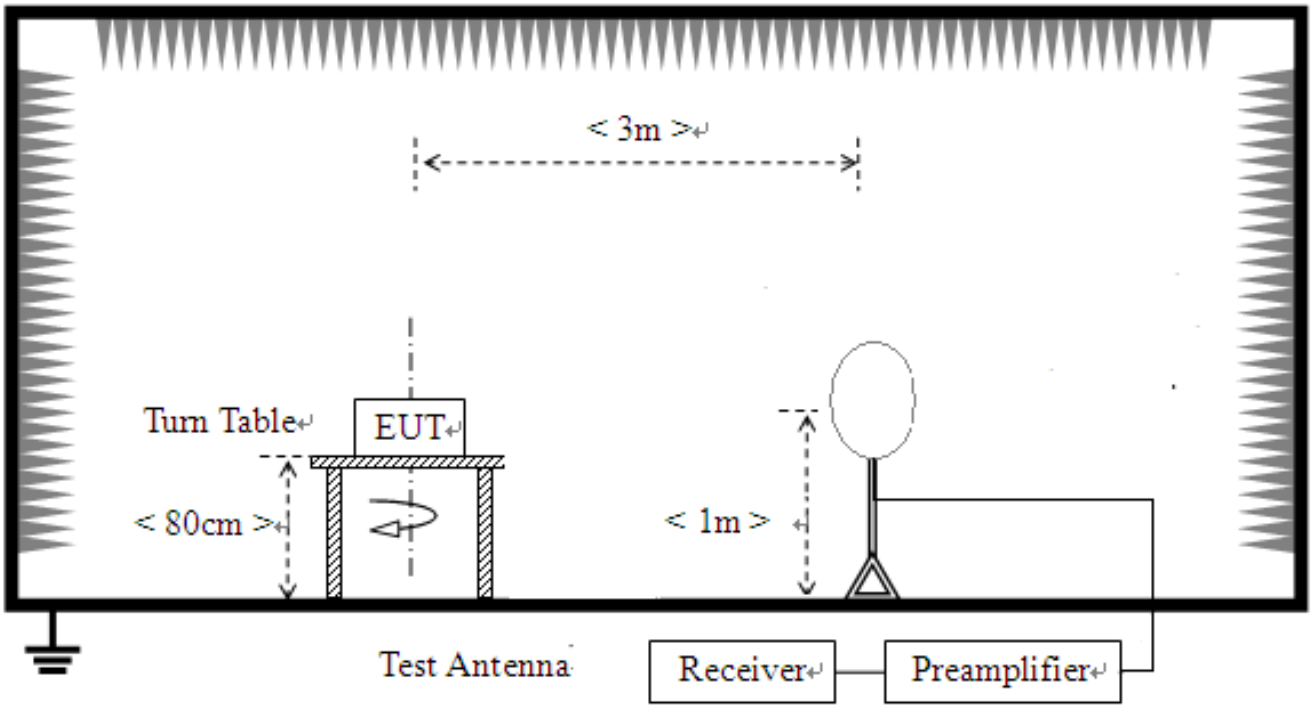
The radiated spurious emission was measured by substitution method according to ANSI / TIA /EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

2.8.2 Measuring Instruments

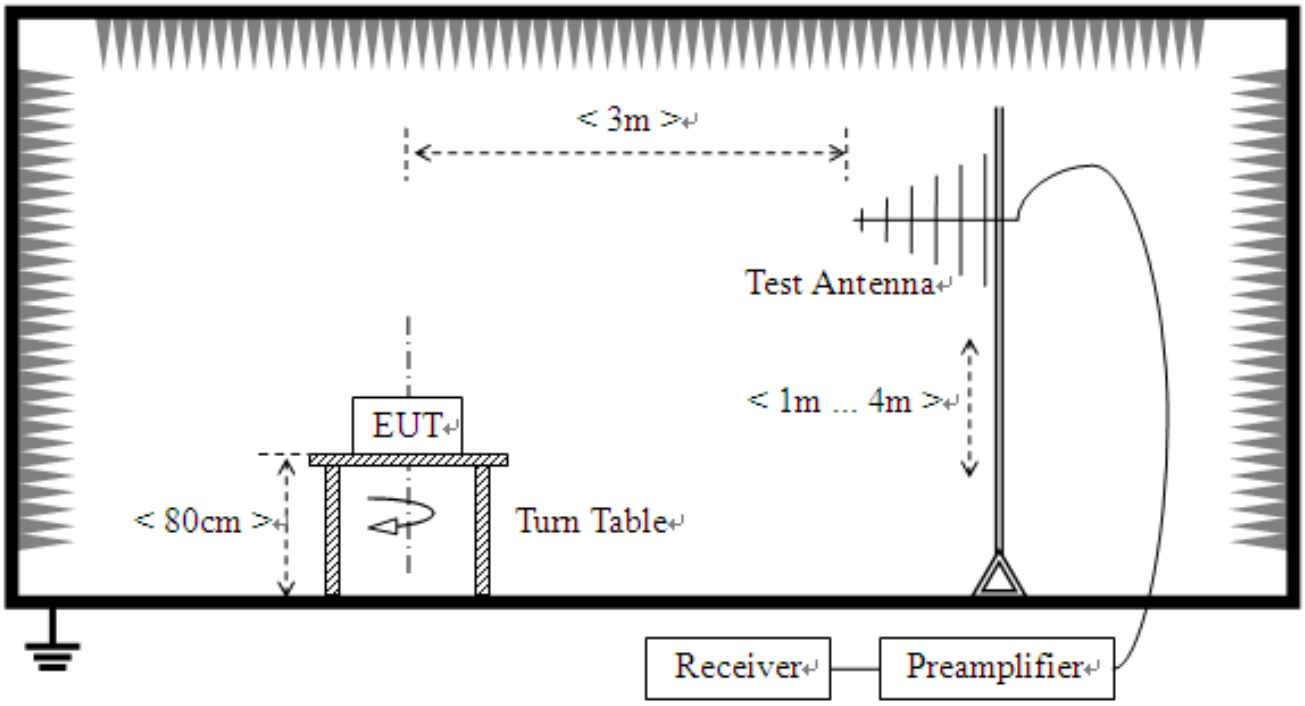
The measuring equipment is listed in the section 3 of this test report.

2.8.3 Test Setup

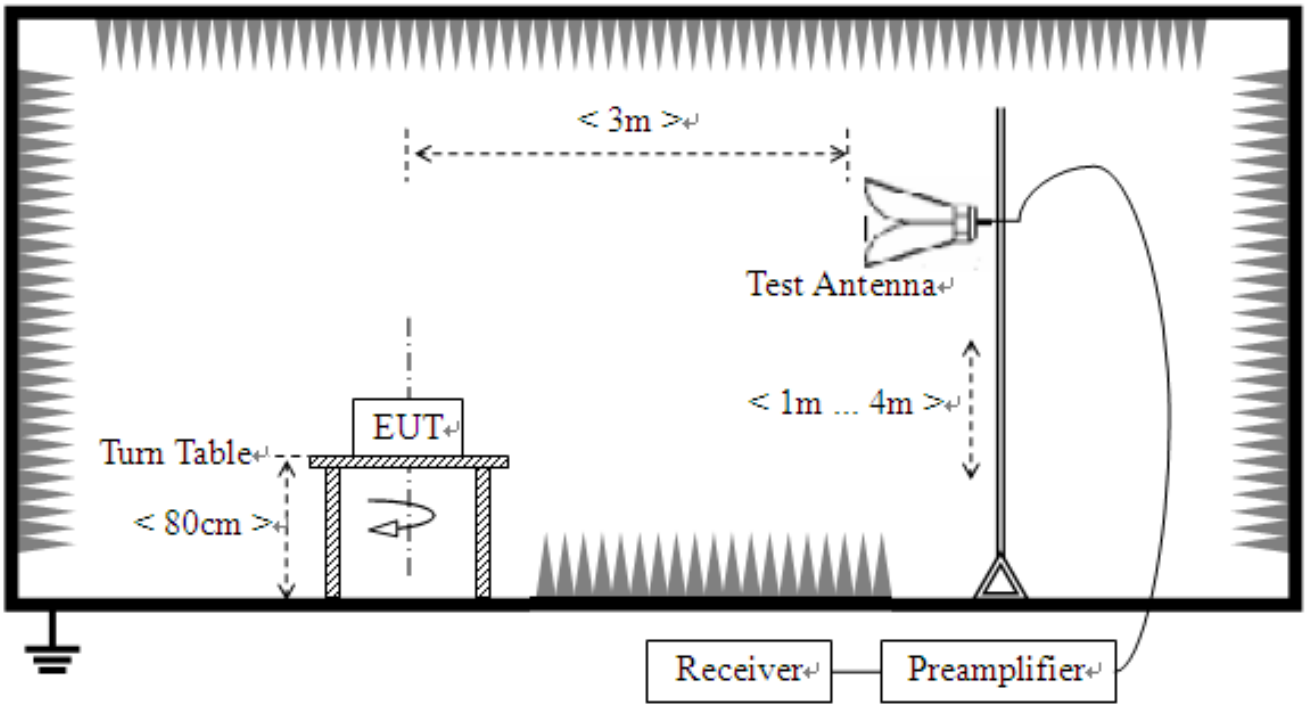
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.8.4 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter 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.

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

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

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

    = -13dBm.
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 1, RB Offset 0.

2.8.5 Test Result (Plots) of Radiated Spurious Emission

Note: 1. within 30MHz-1GHz were found more than 20dB below limit line

Note: 2. Absolute Level=Reading Level + Factor

LTE Band 7 QPSK 20MHz BW Middle Channel

Suspected List							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	39.7097	-98.65	-77.00	-25.00	52.00	21.65	Horizontal
2	78.5485	-97.65	-78.50	-25.00	53.50	19.15	Horizontal
3	1999.49	-68.39	-63.96	-25.00	38.96	4.43	Horizontal
4	4926.58	-59.94	-45.34	-25.00	20.34	14.60	Horizontal
5	7487.24	-60.71	-40.68	-25.00	15.68	20.03	Horizontal
6	11681.8	-62.08	-38.24	-25.00	13.24	23.84	Horizontal

Suspected List							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	78.5485	-98.23	-76.27	-25.00	51.27	21.96	Vertical
2	907.757	-103.19	-65.84	-25.00	40.84	37.35	Vertical
3	3629.18	-58.03	-50.56	-25.00	25.56	7.47	Vertical
4	5219.23	-59.16	-44.91	-25.00	19.91	14.25	Vertical
5	7487.24	-60.67	-40.64	-25.00	15.64	20.03	Vertical
6	10925.8	-61.15	-37.42	-25.00	12.42	23.73	Vertical

Note:other spurious emissions are 20dB below limit line and no need to report

3. LIST OF MEASURING EQUIPMENT

NO.	Description	Manufacturer	Model	Serial No.	Cal. Date	Due Date
1	EMI Test Receiver	R&S	ESU8	A0805559	2022.02.21	2023.02.20
2	Passive Loop Antenna	SCHWARZBECK	FMZB 1519B	A180903206	2020.07.22	2023.07.21
3	Broadband antenna (30MHz~1GHz)	Schwarbeck	BBHA 9120 J	A190503537	2020.12.29	2022.12.28
4	Broadband antenna (30MHz~1GHz)	R&S	VULB9160	A0805560	2019.05.24	2022.05.23
5	Horn Antenna (1GHz~18GHz)	R&S	ESIB7	A0501375	2020.06.24	2022.06.22
6	Horn antenna (18GHz~26.5GHz)	AR	AT4003A	A0329293	2021.09.05	2022.09.04
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-1000	A140101634	2021.12.24	2022.12.23
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2021.12.24	2022.12.23
9	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2022.03.25	2023.03.24
10	Test Receiver	R&S	ESIB26	A0304218	2021.12.27	2022.12.26
11	Temperature chamber	Yamato	DNF810C	A170702700	2022.03.31	2023.03.30
12	Wideband Radio Communication tester	R&S	CMW500	A130101034	2021.01.26	2023.01.25
13	Power Supply	R&S	WYJ-60100	A141102031	2021.11.01	2022.10.31

APPENDIX A

Conducted RF (Average) Output Power

Test Result and Data

LTE Band 7 Conducted Power Test Verdict:

Conducted Output Power NormalTC_NormalVol							
Band	Range	BandWidth	RB size/offset	Frequency (MHz)	Modulation	Power (dBm)	Result
FDD07	LowRange	5	OneRB_high	2502.5	QPSK	22.46	Pass
FDD07	LowRange	5	OneRB_high	2502.5	Q16	21.42	Pass
FDD07	LowRange	5	OneRB_low	2502.5	QPSK	22.40	Pass
FDD07	LowRange	5	OneRB_low	2502.5	Q16	21.32	Pass
FDD07	LowRange	5	OneRB_middle	2502.5	QPSK	22.50	Pass
FDD07	LowRange	5	OneRB_middle	2502.5	Q16	21.47	Pass
FDD07	LowRange	5	HalfRB_low	2502.5	QPSK	21.56	Pass
FDD07	LowRange	5	HalfRB_low	2502.5	Q16	20.60	Pass
FDD07	LowRange	5	HalfRB_middle	2502.5	QPSK	21.59	Pass
FDD07	LowRange	5	HalfRB_middle	2502.5	Q16	20.61	Pass
FDD07	LowRange	5	HalfRB_high	2502.5	QPSK	21.61	Pass
FDD07	LowRange	5	HalfRB_high	2502.5	Q16	20.64	Pass
FDD07	LowRange	5	fullRB	2502.5	QPSK	21.61	Pass
FDD07	LowRange	5	fullRB	2502.5	Q16	20.66	Pass
FDD07	LowRange	10	OneRB_high	2505	QPSK	22.53	Pass
FDD07	LowRange	10	OneRB_high	2505	Q16	22.11	Pass
FDD07	LowRange	10	OneRB_low	2505	QPSK	22.48	Pass
FDD07	LowRange	10	OneRB_low	2505	Q16	21.93	Pass
FDD07	LowRange	10	OneRB_middle	2505	QPSK	22.45	Pass
FDD07	LowRange	10	OneRB_middle	2505	Q16	22.52	Pass
FDD07	LowRange	10	HalfRB_low	2505	QPSK	21.61	Pass
FDD07	LowRange	10	HalfRB_low	2505	Q16	20.66	Pass
FDD07	LowRange	10	HalfRB_middle	2505	QPSK	21.62	Pass

FDD07	LowRange	10	HalfRB_middle	2505	Q16	20.65	Pass
FDD07	LowRange	10	HalfRB_high	2505	QPSK	21.65	Pass
FDD07	LowRange	10	HalfRB_high	2505	Q16	20.73	Pass
FDD07	LowRange	10	fullRB	2505	QPSK	21.66	Pass
FDD07	LowRange	10	fullRB	2505	Q16	20.64	Pass
FDD07	LowRange	15	OneRB_high	2507.5	QPSK	22.57	Pass
FDD07	LowRange	15	OneRB_high	2507.5	Q16	22.12	Pass
FDD07	LowRange	15	OneRB_low	2507.5	QPSK	22.46	Pass
FDD07	LowRange	15	OneRB_low	2507.5	Q16	21.97	Pass
FDD07	LowRange	15	OneRB_middle	2507.5	QPSK	22.51	Pass
FDD07	LowRange	15	OneRB_middle	2507.5	Q16	21.95	Pass
FDD07	LowRange	15	HalfRB_low	2507.5	QPSK	21.96	Pass
FDD07	LowRange	15	HalfRB_low	2507.5	Q16	21.97	Pass
FDD07	LowRange	15	HalfRB_middle	2507.5	QPSK	22.03	Pass
FDD07	LowRange	15	HalfRB_middle	2507.5	Q16	21.97	Pass
FDD07	LowRange	15	HalfRB_high	2507.5	QPSK	22.07	Pass
FDD07	LowRange	15	HalfRB_high	2507.5	Q16	22.07	Pass
FDD07	LowRange	15	fullRB	2507.5	QPSK	21.60	Pass
FDD07	LowRange	15	fullRB	2507.5	Q16	20.61	Pass
FDD07	LowRange	20	OneRB_high	2510	QPSK	22.52	Pass
FDD07	LowRange	20	OneRB_high	2510	Q16	21.97	Pass
FDD07	LowRange	20	OneRB_low	2510	QPSK	22.41	Pass
FDD07	LowRange	20	OneRB_low	2510	Q16	21.72	Pass
FDD07	LowRange	20	OneRB_middle	2510	QPSK	22.48	Pass
FDD07	LowRange	20	OneRB_middle	2510	Q16	21.84	Pass
FDD07	LowRange	20	HalfRB_low	2510	QPSK	21.58	Pass
FDD07	LowRange	20	HalfRB_low	2510	Q16	20.58	Pass
FDD07	LowRange	20	HalfRB_middle	2510	QPSK	21.60	Pass
FDD07	LowRange	20	HalfRB_middle	2510	Q16	20.59	Pass
FDD07	LowRange	20	HalfRB_high	2510	QPSK	21.68	Pass
FDD07	LowRange	20	HalfRB_high	2510	Q16	20.67	Pass
FDD07	LowRange	20	fullRB	2510	QPSK	21.62	Pass

FDD07	LowRange	20	fullRB	2510	Q16	20.67	Pass
FDD07	MidRange	5	OneRB_high	2535	QPSK	22.66	Pass
FDD07	MidRange	5	OneRB_high	2535	Q16	21.98	Pass
FDD07	MidRange	5	OneRB_low	2535	QPSK	22.62	Pass
FDD07	MidRange	5	OneRB_low	2535	Q16	21.96	Pass
FDD07	MidRange	5	OneRB_middle	2535	QPSK	22.70	Pass
FDD07	MidRange	5	OneRB_middle	2535	Q16	22.09	Pass
FDD07	MidRange	5	HalfRB_low	2535	QPSK	21.71	Pass
FDD07	MidRange	5	HalfRB_low	2535	Q16	20.77	Pass
FDD07	MidRange	5	HalfRB_middle	2535	QPSK	21.70	Pass
FDD07	MidRange	5	HalfRB_middle	2535	Q16	20.79	Pass
FDD07	MidRange	5	HalfRB_high	2535	QPSK	21.73	Pass
FDD07	MidRange	5	HalfRB_high	2535	Q16	20.79	Pass
FDD07	MidRange	5	fullRB	2535	QPSK	21.74	Pass
FDD07	MidRange	5	fullRB	2535	Q16	20.73	Pass
FDD07	MidRange	10	OneRB_high	2535	QPSK	22.60	Pass
FDD07	MidRange	10	OneRB_high	2535	Q16	22.04	Pass
FDD07	MidRange	10	OneRB_low	2535	QPSK	22.57	Pass
FDD07	MidRange	10	OneRB_low	2535	Q16	22.20	Pass
FDD07	MidRange	10	OneRB_middle	2535	QPSK	22.60	Pass
FDD07	MidRange	10	OneRB_middle	2535	Q16	22.17	Pass
FDD07	MidRange	10	HalfRB_low	2535	QPSK	21.72	Pass
FDD07	MidRange	10	HalfRB_low	2535	Q16	20.80	Pass
FDD07	MidRange	10	HalfRB_middle	2535	QPSK	21.74	Pass
FDD07	MidRange	10	HalfRB_middle	2535	Q16	20.80	Pass
FDD07	MidRange	10	HalfRB_high	2535	QPSK	21.76	Pass
FDD07	MidRange	10	HalfRB_high	2535	Q16	20.82	Pass
FDD07	MidRange	10	fullRB	2535	QPSK	21.76	Pass
FDD07	MidRange	10	fullRB	2535	Q16	20.77	Pass
FDD07	MidRange	15	OneRB_high	2535	QPSK	22.62	Pass
FDD07	MidRange	15	OneRB_high	2535	Q16	22.09	Pass
FDD07	MidRange	15	OneRB_low	2535	QPSK	22.63	Pass

FDD07	MidRange	15	OneRB_low	2535	Q16	22.22	Pass
FDD07	MidRange	15	OneRB_middle	2535	QPSK	22.59	Pass
FDD07	MidRange	15	OneRB_middle	2535	Q16	22.11	Pass
FDD07	MidRange	15	HalfRB_low	2535	QPSK	22.16	Pass
FDD07	MidRange	15	HalfRB_low	2535	Q16	22.13	Pass
FDD07	MidRange	15	HalfRB_middle	2535	QPSK	22.19	Pass
FDD07	MidRange	15	HalfRB_middle	2535	Q16	22.12	Pass
FDD07	MidRange	15	HalfRB_high	2535	QPSK	22.04	Pass
FDD07	MidRange	15	HalfRB_high	2535	Q16	21.70	Pass
FDD07	MidRange	15	fullRB	2535	QPSK	21.74	Pass
FDD07	MidRange	15	fullRB	2535	Q16	20.76	Pass
FDD07	MidRange	20	OneRB_high	2535	QPSK	22.53	Pass
FDD07	MidRange	20	OneRB_high	2535	Q16	21.75	Pass
FDD07	MidRange	20	OneRB_low	2535	QPSK	22.69	Pass
FDD07	MidRange	20	OneRB_low	2535	Q16	21.72	Pass
FDD07	MidRange	20	OneRB_middle	2535	QPSK	22.59	Pass
FDD07	MidRange	20	OneRB_middle	2535	Q16	22.13	Pass
FDD07	MidRange	20	HalfRB_low	2535	QPSK	21.82	Pass
FDD07	MidRange	20	HalfRB_low	2535	Q16	20.78	Pass
FDD07	MidRange	20	HalfRB_middle	2535	QPSK	21.79	Pass
FDD07	MidRange	20	HalfRB_middle	2535	Q16	20.81	Pass
FDD07	MidRange	20	HalfRB_high	2535	QPSK	21.77	Pass
FDD07	MidRange	20	HalfRB_high	2535	Q16	20.79	Pass
FDD07	MidRange	20	fullRB	2535	QPSK	21.74	Pass
FDD07	MidRange	20	fullRB	2535	Q16	20.80	Pass
FDD07	HighRange	5	OneRB_high	2567.5	QPSK	22.30	Pass
FDD07	HighRange	5	OneRB_high	2567.5	Q16	21.60	Pass
FDD07	HighRange	5	OneRB_low	2567.5	QPSK	22.39	Pass
FDD07	HighRange	5	OneRB_low	2567.5	Q16	21.55	Pass
FDD07	HighRange	5	OneRB_middle	2567.5	QPSK	22.35	Pass
FDD07	HighRange	5	OneRB_middle	2567.5	Q16	21.78	Pass
FDD07	HighRange	5	HalfRB_low	2567.5	QPSK	21.40	Pass

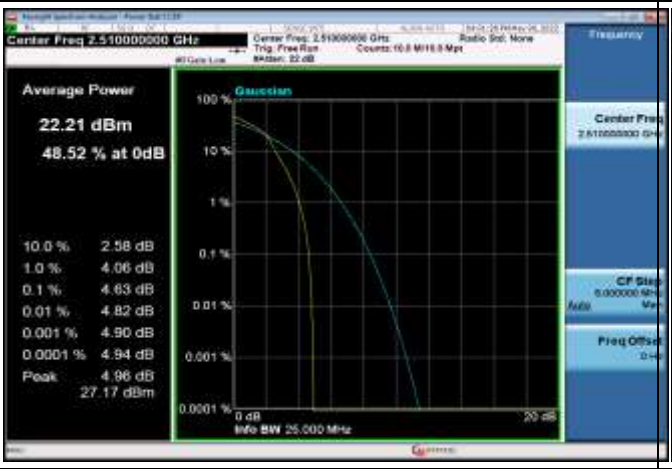
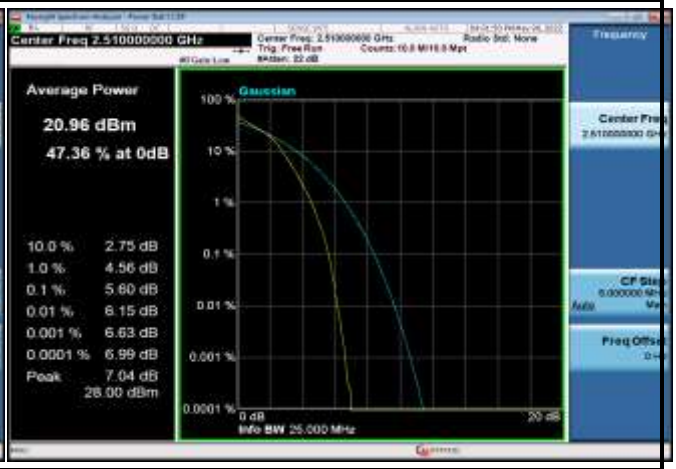
FDD07	HighRange	5	HalfRB_low	2567.5	Q16	20.47	Pass
FDD07	HighRange	5	HalfRB_middle	2567.5	QPSK	21.37	Pass
FDD07	HighRange	5	HalfRB_middle	2567.5	Q16	20.48	Pass
FDD07	HighRange	5	HalfRB_high	2567.5	QPSK	21.40	Pass
FDD07	HighRange	5	HalfRB_high	2567.5	Q16	20.47	Pass
FDD07	HighRange	5	fullRB	2567.5	QPSK	21.43	Pass
FDD07	HighRange	5	fullRB	2567.5	Q16	20.45	Pass
FDD07	HighRange	10	OneRB_high	2565	QPSK	22.37	Pass
FDD07	HighRange	10	OneRB_high	2565	Q16	21.84	Pass
FDD07	HighRange	10	OneRB_low	2565	QPSK	22.53	Pass
FDD07	HighRange	10	OneRB_low	2565	Q16	21.91	Pass
FDD07	HighRange	10	OneRB_middle	2565	QPSK	22.29	Pass
FDD07	HighRange	10	OneRB_middle	2565	Q16	21.73	Pass
FDD07	HighRange	10	HalfRB_low	2565	QPSK	21.54	Pass
FDD07	HighRange	10	HalfRB_low	2565	Q16	20.63	Pass
FDD07	HighRange	10	HalfRB_middle	2565	QPSK	21.57	Pass
FDD07	HighRange	10	HalfRB_middle	2565	Q16	20.62	Pass
FDD07	HighRange	10	HalfRB_high	2565	QPSK	21.46	Pass
FDD07	HighRange	10	HalfRB_high	2565	Q16	20.52	Pass
FDD07	HighRange	10	fullRB	2565	QPSK	21.59	Pass
FDD07	HighRange	10	fullRB	2565	Q16	20.57	Pass
FDD07	HighRange	15	OneRB_high	2562.5	QPSK	22.38	Pass
FDD07	HighRange	15	OneRB_high	2562.5	Q16	21.83	Pass
FDD07	HighRange	15	OneRB_low	2562.5	QPSK	22.54	Pass
FDD07	HighRange	15	OneRB_low	2562.5	Q16	22.14	Pass
FDD07	HighRange	15	OneRB_middle	2562.5	QPSK	22.39	Pass
FDD07	HighRange	15	OneRB_middle	2562.5	Q16	21.88	Pass
FDD07	HighRange	15	HalfRB_low	2562.5	QPSK	22.07	Pass
FDD07	HighRange	15	HalfRB_low	2562.5	Q16	22.03	Pass
FDD07	HighRange	15	HalfRB_middle	2562.5	QPSK	22.09	Pass
FDD07	HighRange	15	HalfRB_middle	2562.5	Q16	22.12	Pass
FDD07	HighRange	15	HalfRB_high	2562.5	QPSK	21.87	Pass

FDD07	HighRange	15	HalfRB_high	2562.5	Q16	21.89	Pass
FDD07	HighRange	15	fullRB	2562.5	QPSK	21.52	Pass
FDD07	HighRange	15	fullRB	2562.5	Q16	20.58	Pass
FDD07	HighRange	20	OneRB_high	2560	QPSK	22.34	Pass
FDD07	HighRange	20	OneRB_high	2560	Q16	21.85	Pass
FDD07	HighRange	20	OneRB_low	2560	QPSK	22.54	Pass
FDD07	HighRange	20	OneRB_low	2560	Q16	21.95	Pass
FDD07	HighRange	20	OneRB_middle	2560	QPSK	22.50	Pass
FDD07	HighRange	20	OneRB_middle	2560	Q16	21.84	Pass
FDD07	HighRange	20	HalfRB_low	2560	QPSK	21.66	Pass
FDD07	HighRange	20	HalfRB_low	2560	Q16	20.64	Pass
FDD07	HighRange	20	HalfRB_middle	2560	QPSK	21.67	Pass
FDD07	HighRange	20	HalfRB_middle	2560	Q16	20.63	Pass
FDD07	HighRange	20	HalfRB_high	2560	QPSK	21.56	Pass
FDD07	HighRange	20	HalfRB_high	2560	Q16	20.57	Pass
FDD07	HighRange	20	fullRB	2560	QPSK	21.62	Pass
FDD07	HighRange	20	fullRB	2560	Q16	20.60	Pass

Peak To Average Ratio

Test Result and Data

PeakToAveragePowerRatio NormalTC_NormalVol							
Band	Range	BandWidth	RbMode	Modulation	PAPR (dBm)	Limit (dBm)	Result
FDD07	LowRange	20	OneRB_high	QPSK	4.63	13.00	Pass
FDD07	LowRange	20	fullRB	Q16	5.60	13.00	Pass
FDD07	MidRange	20	OneRB_high	QPSK	4.90	13.00	Pass
FDD07	MidRange	20	fullRB	Q16	5.61	13.00	Pass
FDD07	HighRange	20	OneRB_high	QPSK	4.31	13.00	Pass
FDD07	HighRange	20	fullRB	Q16	5.55	13.00	Pass

FDD07_LowRange_20MHz_2510_OneRB_high_Q16	FDD07_LowRange_20MHz_2510_fullRB_Q16
	
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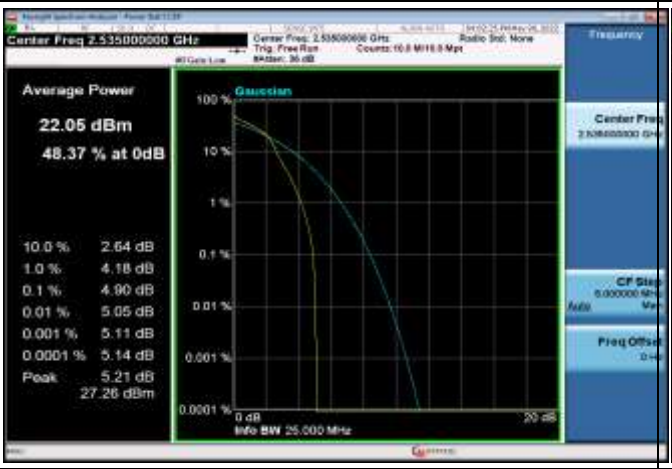
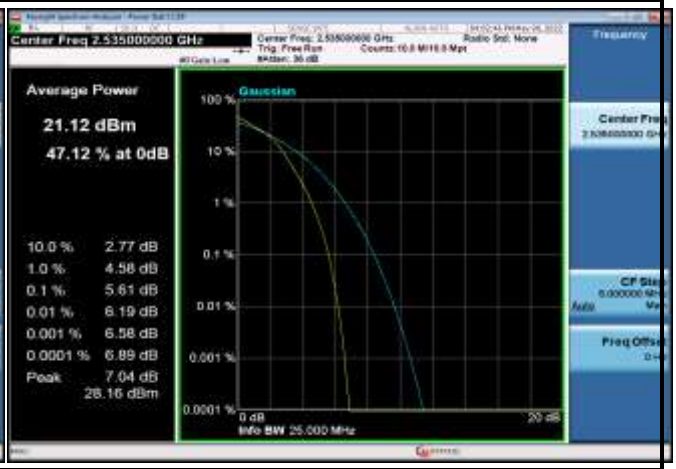
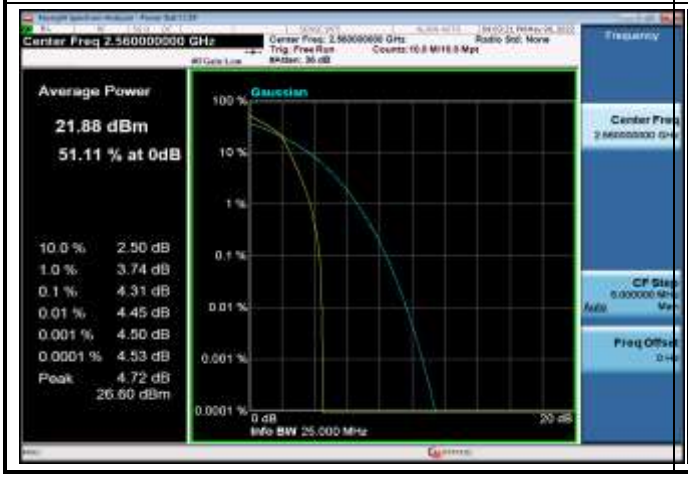
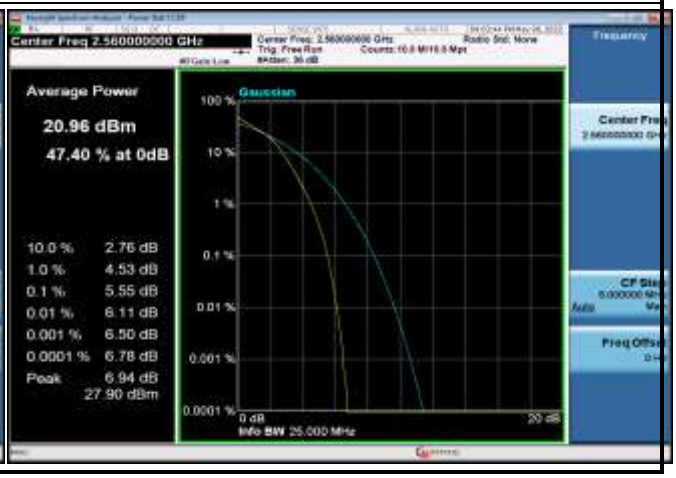
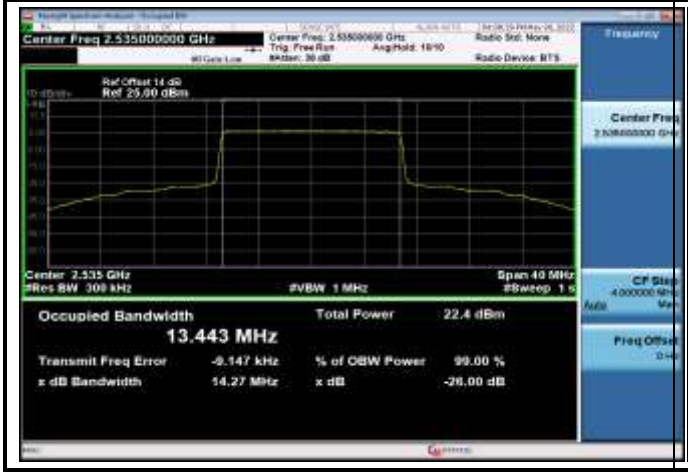
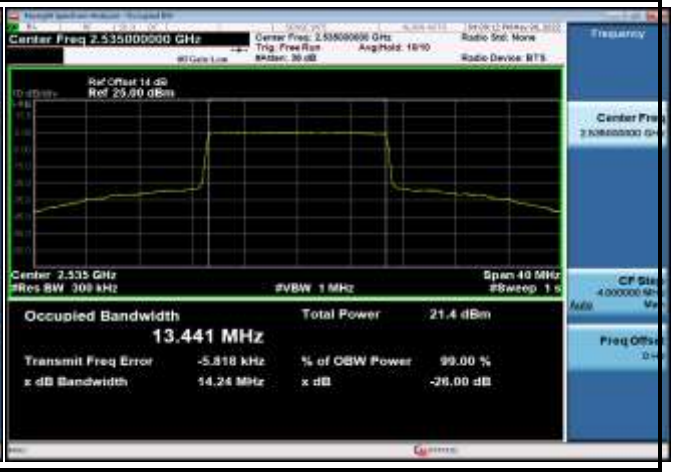
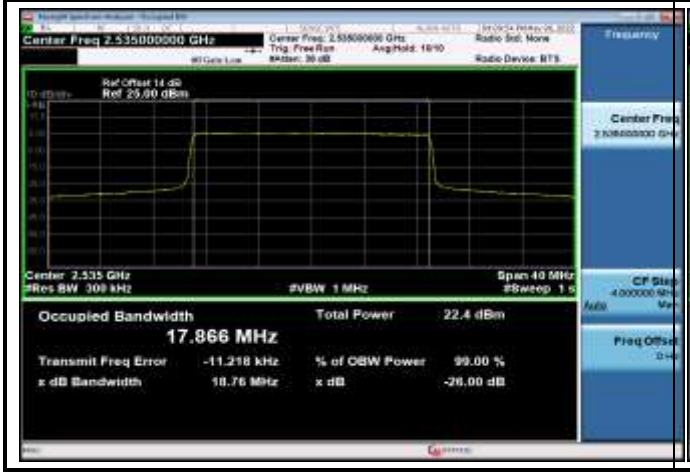
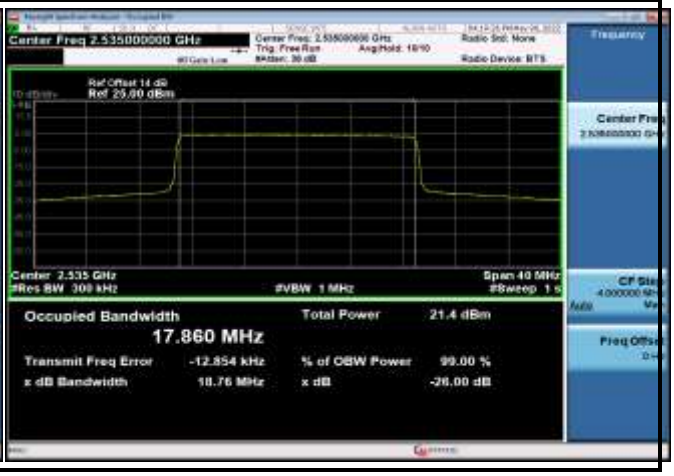
	
FDD07_HighRange_20MHz_2560_OneRB_high_Q16	FDD07_HighRange_20MHz_2560_fullRB_Q16
	

99% Occupied Bandwidth and 26dB Bandwidth

Test Result and Data

99% Occupied Bandwidth and 26dB Bandwidth NormalTC_NormalVol						
Band	Range	BandWidth	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26dB bandwidth (MHz)
FDD07	MidRange	5	2535	QPSK	4.486	4.83
FDD07	MidRange	5	2535	Q16	4.489	4.83
FDD07	MidRange	10	2535	QPSK	8.927	9.40
FDD07	MidRange	10	2535	Q16	8.922	9.39
FDD07	MidRange	15	2535	QPSK	13.443	14.27
FDD07	MidRange	15	2535	Q16	13.441	14.24
FDD07	MidRange	20	2535	QPSK	17.866	18.76
FDD07	MidRange	20	2535	Q16	17.86	18.76

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
	

Frequency Stability

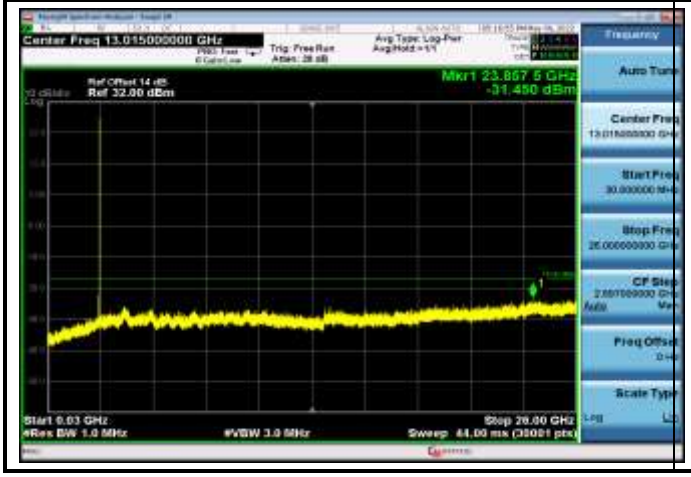
Test Result and Data

Frequency Stability NormalTC_NormalVol									
Temperature	Voltage	Band	BandWidth (MHz)	RbMode	Modulation	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
Normal	Low	FDD07	10	fullRB	QPSK	-15.578	0.006	0.10	Pass
Normal	Normal	FDD07	10	fullRB	QPSK	-11.401	0.004	0.10	Pass
Normal	High	FDD07	10	fullRB	QPSK	-10.829	0.004	0.10	Pass
50	Normal	FDD07	10	fullRB	QPSK	10.915	0.004	0.10	Pass
40	Normal	FDD07	10	fullRB	QPSK	13.762	0.005	0.10	Pass
30	Normal	FDD07	10	fullRB	QPSK	-8.168	0.003	0.10	Pass
20	Normal	FDD07	10	fullRB	QPSK	-10.414	0.004	0.10	Pass
10	Normal	FDD07	10	fullRB	QPSK	-11.430	0.005	0.10	Pass
0	Normal	FDD07	10	fullRB	QPSK	11.315	0.004	0.10	Pass
-10	Normal	FDD07	10	fullRB	QPSK	13.719	0.005	0.10	Pass
-20	Normal	FDD07	10	fullRB	QPSK	9.470	0.004	0.10	Pass
-30	Normal	FDD07	10	fullRB	QPSK	-13.146	0.005	0.10	Pass

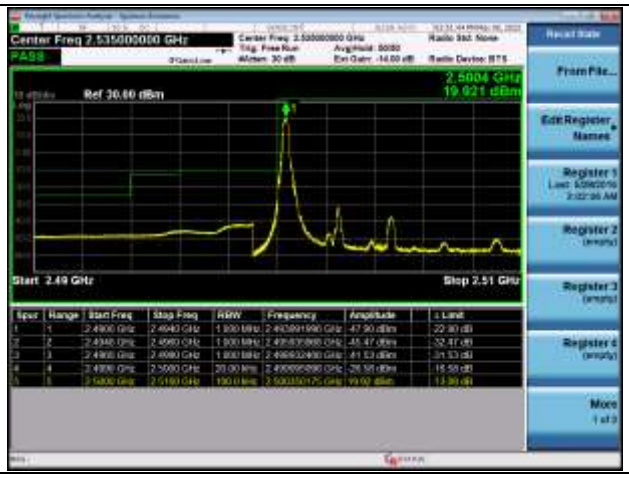
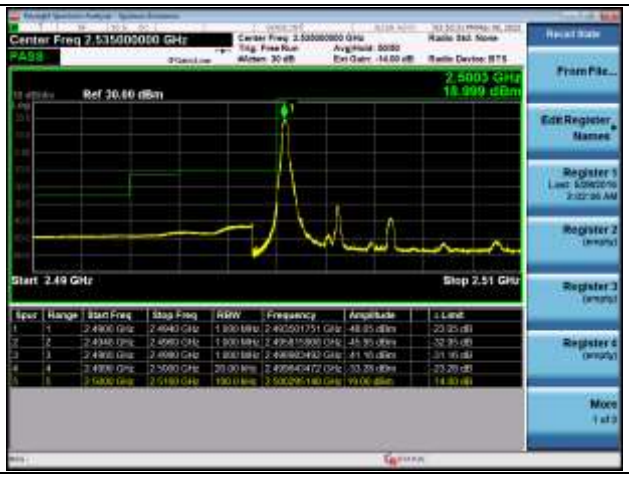
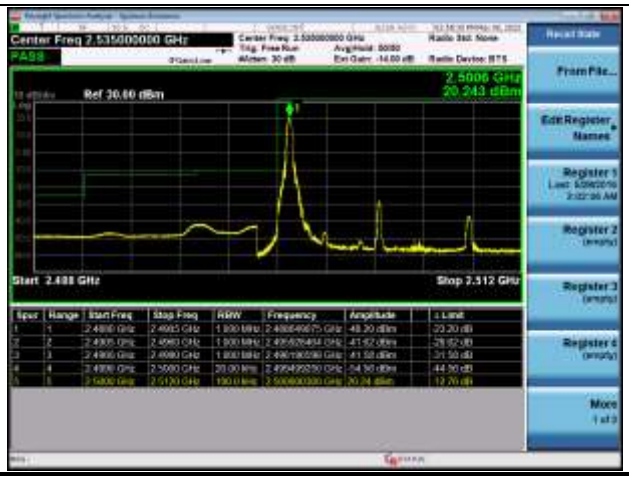
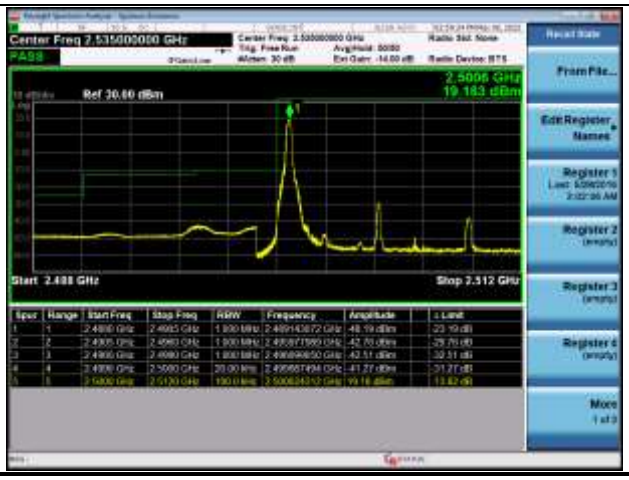
Note：Normal=5V, Low=4.5V, High=5.5V

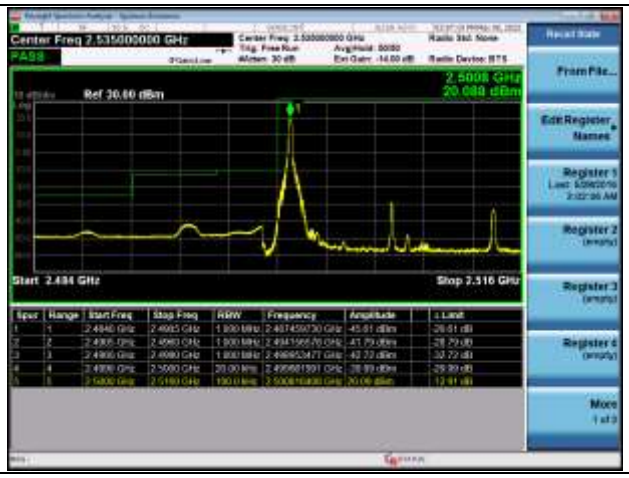
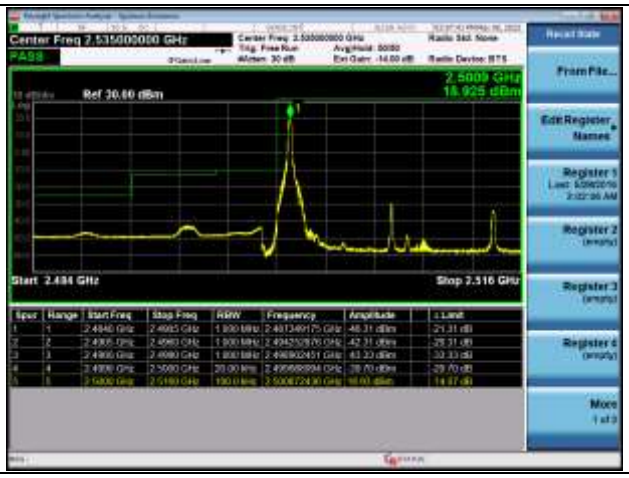
Conducted Out of Band Emissions

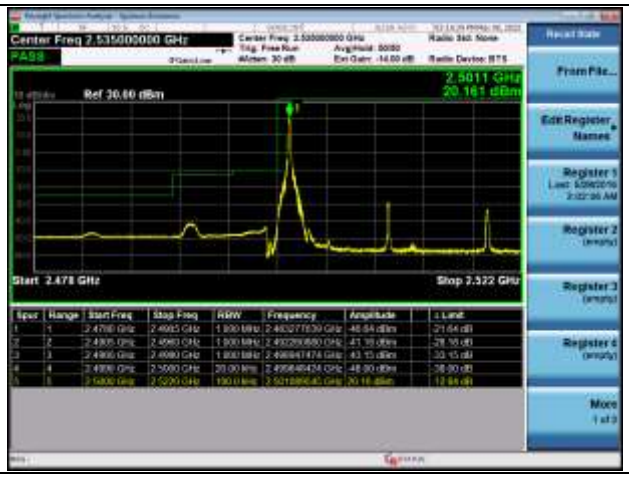
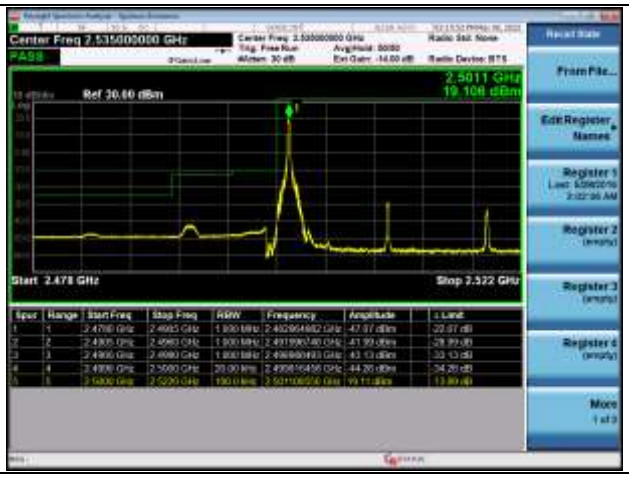
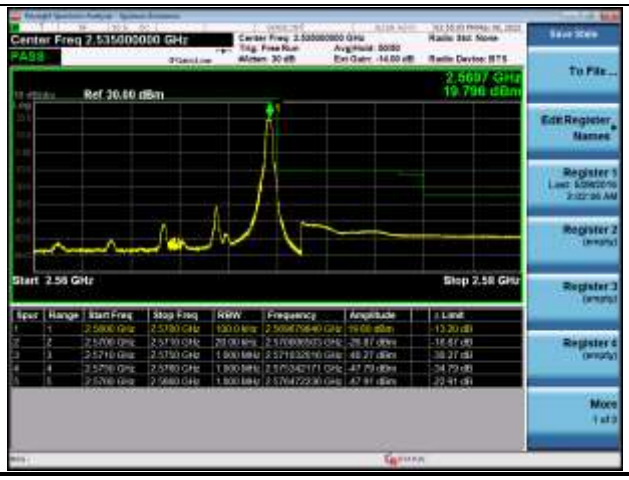
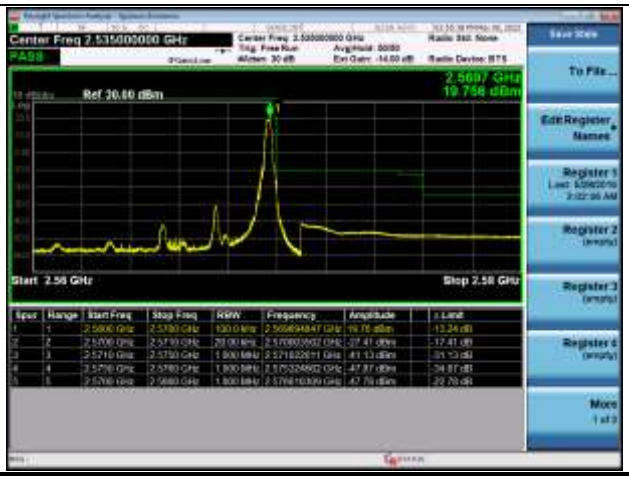
Test Result and Data

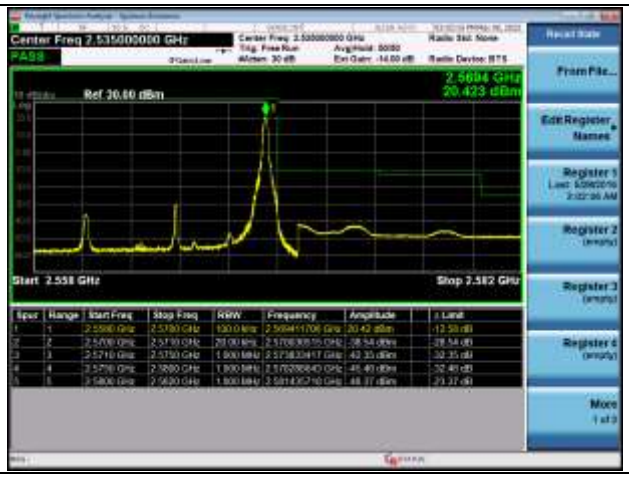
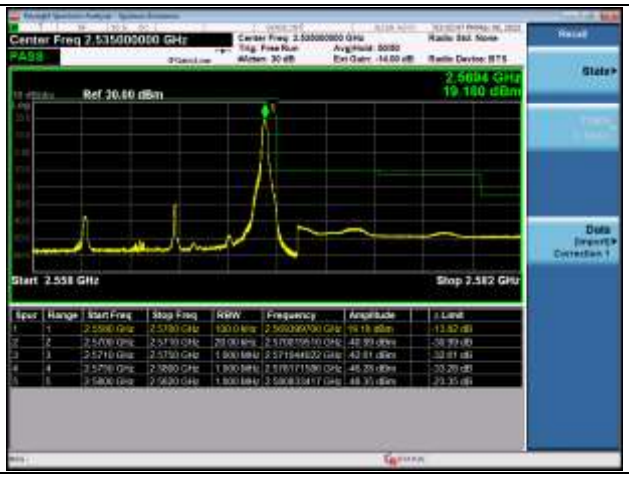
FDD07_LowRange_20MHz_30MHz~26GHz	FDD07_MidRange_20MHz_30MHz~26GHz
	
FDD07_HighRange_20MHz_30MHz~26GHz	
	

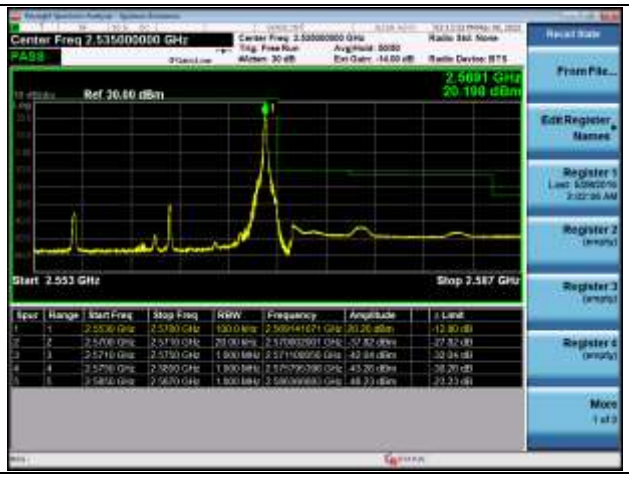
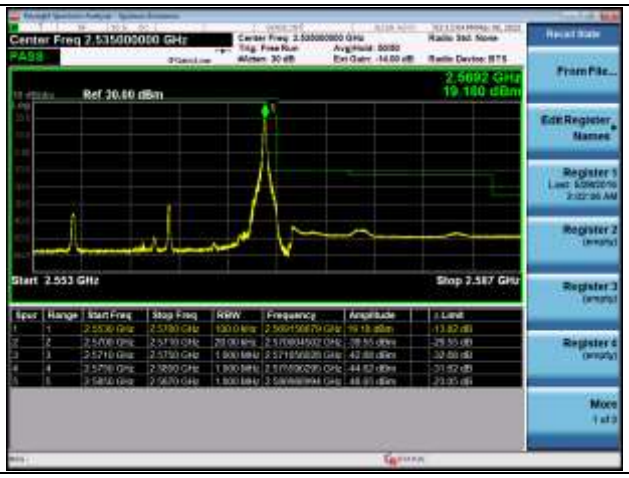
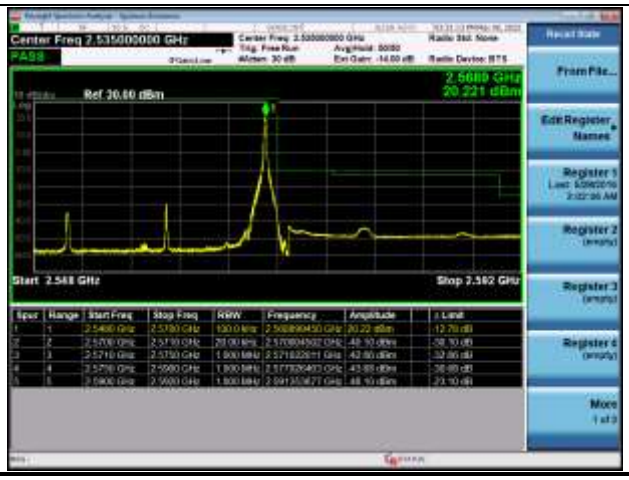
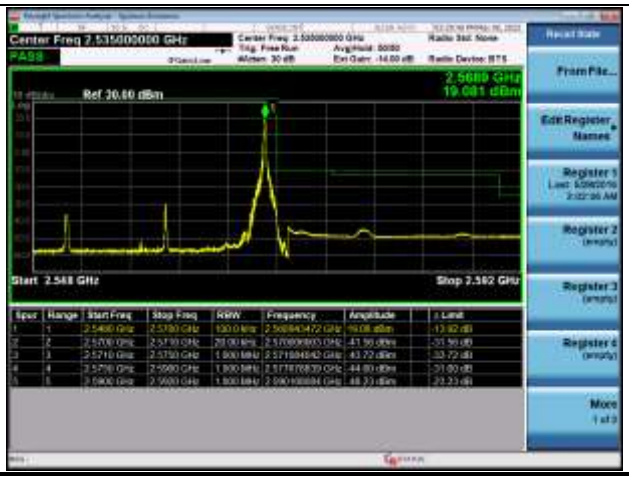
Conducted Band Edge

LowRange_FDD07_5MHz_2502.5_OneRB _low_QPSK	LowRange_FDD07_5MHz_2502.5_OneRB _low_Q16
	
LowRange_FDD07_5MHz_2502.5_ fullRB _low_QPSK	LowRange_FDD07_5MHz_2502.5_ fullRB _low_Q16
	
LowRange_FDD07_10MHz_2505_OneRB _low_QPSK	LowRange_FDD07_10MHz_2505_OneRB _low_Q16
	

LowRange_FDD07_10MHz_2505_ fullRB _low_QPSK	LowRange_FDD07_10MHz_2505_ fullRB _low_Q16
	
LowRange_FDD07_15MHz_2507.5_OneRB _low_QPSK	LowRange_FDD07_15MHz_2507.5_OneRB _low_Q16
	
LowRange_FDD07_15MHz_2507.5_ fullRB _low_QPSK	LowRange_FDD07_15MHz_2507.5_ fullRB _low_Q16
	

LowRange_FDD07_20MHz_2510_OneRB _low_QPSK	LowRange_FDD07_20MHz_2510_OneRB _low_Q16
	
LowRange_FDD07_20MHz_2510_ fullRB _low_QPSK	LowRange_FDD07_20MHz_2510_ fullRB _low_Q16
	
HighRange_FDD07_5MHz_2567.5_OneRB _low_QPSK	HighRange_FDD07_5MHz_2567.5_OneRB _low_Q16
	

HighRange_FDD07_5MHz_2567.5_ fullRB _low_QPSK	HighRange_FDD07_5MHz_2567.5_ fullRB _low_Q16
	
HighRange_FDD07_10MHz_2565_OneRB _low_QPSK	HighRange_FDD07_10MHz_2565_OneRB _low_Q16
	
HighRange_FDD07_10MHz_2565_ fullRB _low_QPSK	HighRange_FDD07_10MHz_2565_ fullRB _low_Q16
	

HighRange_FDD07_15MHz_2562.5_OneRB _low_QPSK	HighRange_FDD07_15MHz_2562.5_OneRB _low_Q16
	
HighRange_FDD07_15MHz_2562.5_ fullRB _low_QPSK	HighRange_FDD07_15MHz_2562.5_ fullRB _low_Q16
	
HighRange_FDD07_20MHz_2560_OneRB _low_QPSK	HighRange_FDD07_20MHz_2560_OneRB _low_Q16
	

HighRange_FDD07_20MHz_2560_ fullRB _low_QPSK	HighRange_FDD07_20MHz_2560_ fullRB _low_Q16
	

** END OF REPORT **