



RF TEST REPORT

Applicant	Xiaomi Communications Co., Ltd.
FCC ID	2AFZZRN54G
Product	Mobile Phone
Brand	Redmi
Model	23026RN54G
Report No.	R2211A1048-R6
Issue Date	January 6, 2023

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2022)/ FCC CFR 47 Part 22H (2022)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of Measurement Results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Radiated Power	2.1046 22.913(a)(5)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	2.1051 / 22.917(a)	PASS
4	Peak-to-Average Power Ratio	22.913(d) KDB 971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 22.355	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 22.917(a)	PASS
7	Radiated Spurious Emission	2.1053 / 22.917 (a)	PASS

Date of Testing: November 25, 2022 ~ December 4, 2022

Date of Sample Received: November 12, 2022

Note: PASS: The EUT complies with the essential requirements in the standard.

FAIL: The EUT does not comply with the essential requirements in the standard.

All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

23026RN54G (Variant) is a variant model of 23026RN54G (Original), Variant 2 Add 2nd supplier RF PA.

Tested band refer to the following table.

Test Case	Original (R2211A1048-R6)	Variant (R2211A1048-R6)
RF Power Output	Pass	Tested RF Power Output, and did not worsen, so they were not recorded in the report.

The detailed product change description please refers to the ***Difference Declaration Letter (Variant 2)***.



1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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City: Shanghai
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2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant	Xiaomi Communications Co., Ltd.
Applicant address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer	Xiaomi Communications Co., Ltd.
Manufacturer address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.2. General Information

EUT Description			
Model	23026RN54G		
IMEI	IMEI1: 863698060058689 IMEI2: 863698060058697		
Hardware Version	P1.1		
Software Version	Android 13		
Antenna Type	PIFA Antenna		
Antenna Gain	Low Antenna	Upper Antenna	
	-4.4 dBi	-3.2 dBi	
Test Mode(s)	LTE Band 26		
Test Modulation	(LTE) QPSK, 16QAM		
LTE Category	4		
Maximum E.R.P.	18.79 dBm		
Rated Power Supply Voltage	3.85 V		
Operating Voltage	Minimum: 3.6V Maximum: 4.4V		
Operating Temperature	Lowest: 0°C Highest: +40°C		
Testing Temperature	Lowest: -30°C Highest: +50°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	LTE Band 26	824 ~ 849	869 ~ 894
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.			

Item	Configure 1	Configure 2
WIFI test socket	support	remove
PL sensor	support	remove
Note: Configuration 2 only verifies Radiated Emission.		



3. Applied Standards

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

Test standards:

FCC CFR 47 Part 22H (2022)

FCC CFR47 Part 2 (2022)

Reference standard:

ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Y axis, horizontal polarization for Low Antenna; Z axis, horizontal polarization for Upper Antenna,) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in LTE is set based on the maximum RF Output Power.

Test modes are chosen as the worst case configuration below for LTE Band 26

Test items	Modes	Bandwidth (MHz)					Modulation		RB			Test Channel		
		1.4	3	5	10	15	QPSK	16QAM	1	50%	100%	L	M	H
RF power output and Effective Radiated power	LTE 26	O	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	LTE 26	O	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	LTE 26	O	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	LTE 26	O	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	LTE 26	O	O	O	O	O	O	O	O	-	-	-	O	-
Spurious Emissions at Antenna Terminals	LTE 26	O	O	O	O	O	O	-	O	-	-	O	O	O
Radiated Spurious Emission	LTE 26	O	-	O	-	O	O	-	O	-	-	-	O	-
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.													

5. Test Case

5.1. RF Power Output and Effective Radiated Power

Ambient Condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

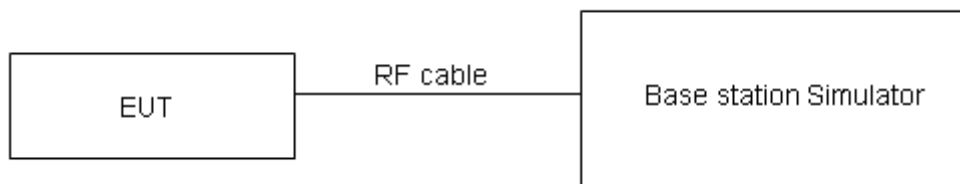
ERP can then be calculated as follows:

EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Where: dBd refers to gain relative to an ideal dipole.

EIRP (dBm) = ERP (dBm) + 2.15 (dB).

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 22.913(a)(5) specifies that "Mobile/portable stations are limited to 7 watts ERP".

Limit	$\leq 7 \text{ W}$ (38.45 dBm)
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4 \text{ dB}$ for RF power output, $k = 2$, $U = 1.19 \text{ dB}$ for ERP.

Test Results

Refer to the section 6.1 of this report for test data.

5.2. Occupied Bandwidth

Ambient Condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

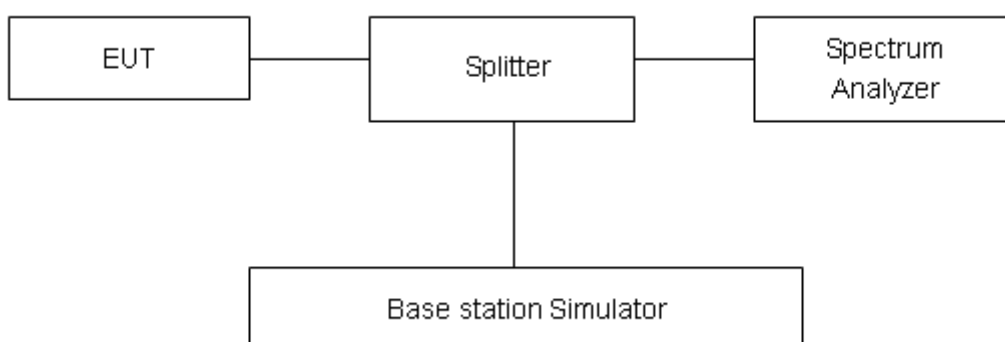
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 624\text{Hz}$.

Test Results

Refer to the section 6.2 of this report for test data.

5.3. Band Edge Compliance

Ambient Condition

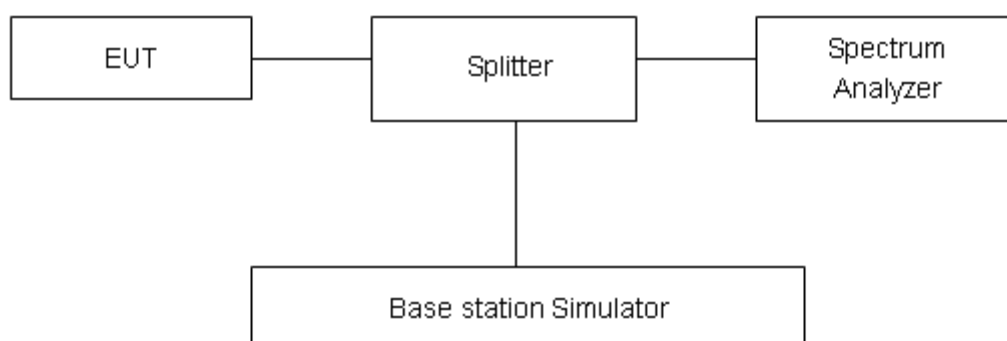
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The average detector is used. RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684dB$.

Test Results

Refer to the section 6.3 of this report for test data.

5.4. Peak-to-Average Power Ratio (PAPR)

Ambient Condition

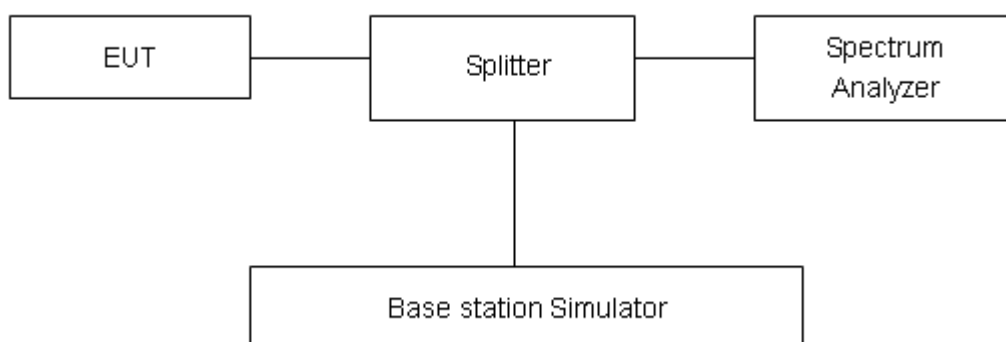
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

Measure the total peak power and record as P_{Pk} . And measure the total average power and record as P_{Avg} . Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm).$$

Test Setup



Limits

According to the Sec. 22.913(d), The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB.

Test Results

Refer to the section 6.4 of this report for test data.

5.5. Frequency Stability

Ambient Condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +50°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

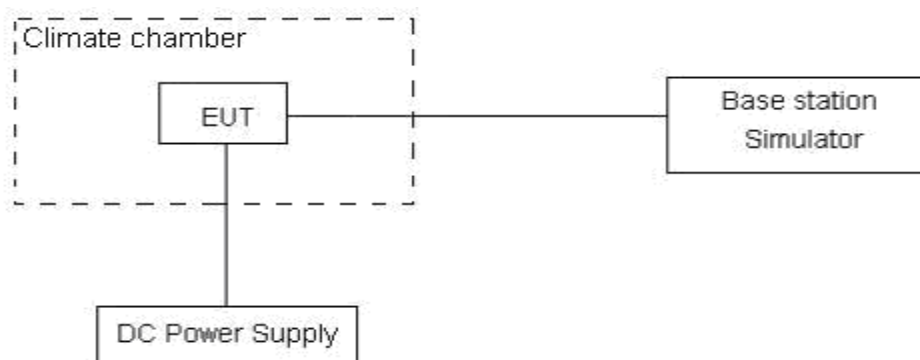
(3) Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements. Frequency Stability (Voltage Variation)

The frequency stability shall be measured with variation of primary supply voltage as follows:

Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.6 V and 4.4 V, with a nominal voltage of 3.85V.

Test Setup



Limits

According to the Sec. 22.355, the frequency stability of the carrier shall be accurate to within 2.5 ppm of the received frequency for mobile stations.

Limits	≤ 2.5 ppm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3$, $U = 0.01\text{ppm}$.



Test Results

Refer to the section 6.5 of this report for test data.

5.6. Spurious Emissions at Antenna Terminals

Ambient Condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier.

The peak detector is used.

RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),

RBW is set to 10 kHz (0.15 MHz~ 30 MHz)

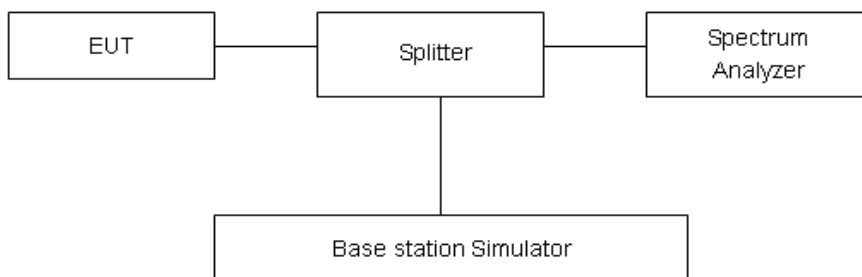
RBW is set to 100 kHz (30MHz~1000 MHz)

RBW is set to 1000 kHz (above 1000MHz)

Sweep is set to ATUO.

The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test Setup



Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-10GHz	1.407 dB

Test Results

Refer to the section 6.6 of this report for test data.

5.7. Radiated Spurious Emission

Ambient Condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

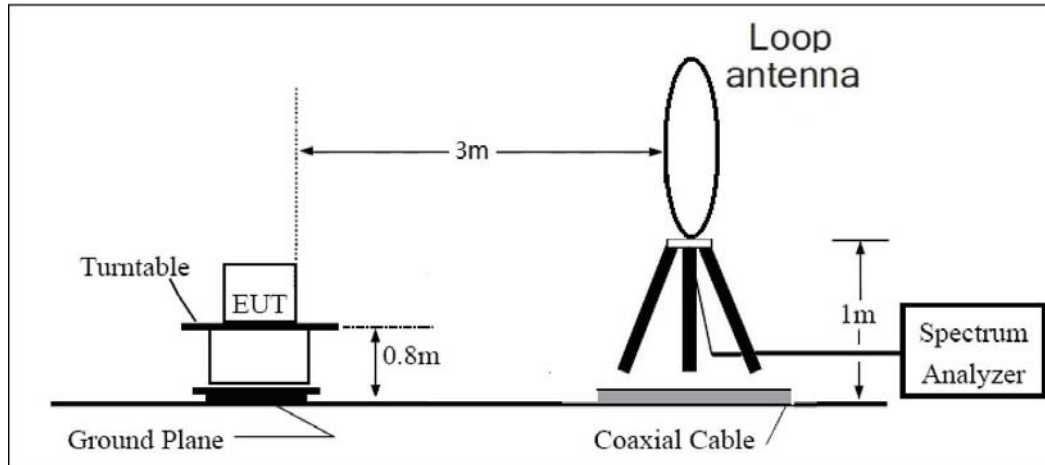
1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26-2015.
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=100kHz, VBW=300kHz, and the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power (EIRP) = PMea - PAg - Pcl + Ga
The measurement results are amend as described below:
Power (EIRP) = PMea - Pcl + Ga
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP

= EIRP-2.15dB.

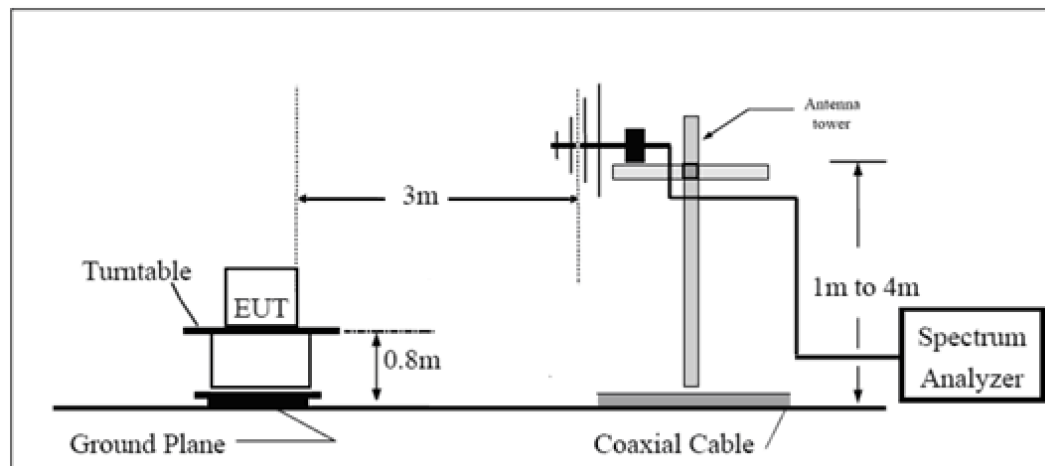
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test Setup

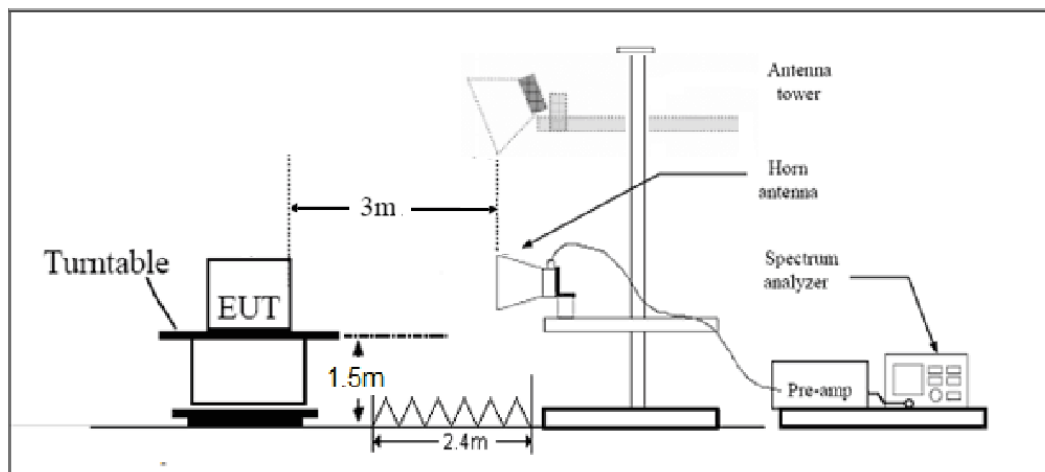
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side: 2.4mX3.6m

Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ Db.

Test Results

Refer to the section 6.7 of this report for test data.

6. Test Result

6.1. RF Power Output and Effective Radiated Power

LTE Band26 (Low Antenna)						
Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	ERP (dBm)
1.4	26797	1	#0	QPSK	23.92	17.37
1.4	26797	1	#Mid	QPSK	24.16	17.61
1.4	26797	1	#Max	QPSK	23.92	17.37
1.4	26797	3	#0	QPSK	24.06	17.51
1.4	26797	3	#Mid	QPSK	24.04	17.49
1.4	26797	3	#Max	QPSK	24.00	17.45
1.4	26797	6	#0	QPSK	23.02	16.47
1.4	26797	1	#0	16QAM	23.13	16.58
1.4	26797	1	#Mid	16QAM	23.33	16.78
1.4	26797	1	#Max	16QAM	23.13	16.58
1.4	26797	3	#0	16QAM	23.06	16.51
1.4	26797	3	#Mid	16QAM	23.03	16.48
1.4	26797	3	#Max	16QAM	23.05	16.50
1.4	26797	6	#0	16QAM	21.96	15.41
1.4	26915	1	#0	QPSK	23.99	17.44
1.4	26915	1	#Mid	QPSK	24.18	17.63
1.4	26915	1	#Max	QPSK	23.98	17.43
1.4	26915	3	#0	QPSK	24.04	17.49
1.4	26915	3	#Mid	QPSK	24.04	17.49
1.4	26915	3	#Max	QPSK	24.01	17.46
1.4	26915	6	#0	QPSK	22.95	16.40
1.4	26915	1	#0	16QAM	22.84	16.29
1.4	26915	1	#Mid	16QAM	23.01	16.46
1.4	26915	1	#Max	16QAM	22.84	16.29
1.4	26915	3	#0	16QAM	22.97	16.42
1.4	26915	3	#Mid	16QAM	22.98	16.43
1.4	26915	3	#Max	16QAM	22.95	16.40
1.4	26915	6	#0	16QAM	21.96	15.41
1.4	27033	1	#0	QPSK	24.08	17.53
1.4	27033	1	#Mid	QPSK	24.31	17.76
1.4	27033	1	#Max	QPSK	24.12	17.57
1.4	27033	3	#0	QPSK	24.08	17.53
1.4	27033	3	#Mid	QPSK	24.07	17.52
1.4	27033	3	#Max	QPSK	24.07	17.52
1.4	27033	6	#0	QPSK	23.11	16.56



1.4	27033	1	#0	16QAM	22.95	16.40
1.4	27033	1	#Mid	16QAM	23.17	16.62
1.4	27033	1	#Max	16QAM	22.96	16.41
1.4	27033	3	#0	16QAM	23.16	16.61
1.4	27033	3	#Mid	16QAM	23.17	16.62
1.4	27033	3	#Max	16QAM	23.17	16.62
1.4	27033	6	#0	16QAM	22.08	15.53
3	26805	1	#0	QPSK	23.94	17.39
3	26805	1	#Mid	QPSK	24.02	17.47
3	26805	1	#Max	QPSK	23.99	17.44
3	26805	8	#0	QPSK	23.01	16.46
3	26805	8	#Mid	QPSK	22.95	16.40
3	26805	8	#Max	QPSK	23.00	16.45
3	26805	15	#0	QPSK	22.96	16.41
3	26805	1	#0	16QAM	23.20	16.65
3	26805	1	#Mid	16QAM	23.11	16.56
3	26805	1	#Max	16QAM	23.12	16.57
3	26805	8	#0	16QAM	21.97	15.42
3	26805	8	#Mid	16QAM	21.97	15.42
3	26805	8	#Max	16QAM	22.01	15.46
3	26805	15	#0	16QAM	21.86	15.31
3	26915	1	#0	QPSK	24.01	17.46
3	26915	1	#Mid	QPSK	24.05	17.50
3	26915	1	#Max	QPSK	24.06	17.51
3	26915	8	#0	QPSK	22.95	16.40
3	26915	8	#Mid	QPSK	22.94	16.39
3	26915	8	#Max	QPSK	22.96	16.41
3	26915	15	#0	QPSK	22.99	16.44
3	26915	1	#0	16QAM	22.84	16.29
3	26915	1	#Mid	16QAM	22.85	16.30
3	26915	1	#Max	16QAM	22.87	16.32
3	26915	8	#0	16QAM	21.97	15.42
3	26915	8	#Mid	16QAM	21.97	15.42
3	26915	8	#Max	16QAM	21.99	15.44
3	26915	15	#0	16QAM	21.99	15.44
3	27025	1	#0	QPSK	23.96	17.41
3	27025	1	#Mid	QPSK	24.00	17.45
3	27025	1	#Max	QPSK	24.03	17.48
3	27025	8	#0	QPSK	23.01	16.46
3	27025	8	#Mid	QPSK	23.05	16.50
3	27025	8	#Max	QPSK	23.07	16.52
3	27025	15	#0	QPSK	23.01	16.46
3	27025	1	#0	16QAM	23.25	16.70



3	27025	1	#Mid	16QAM	23.21	16.66
3	27025	1	#Max	16QAM	23.20	16.65
3	27025	8	#0	16QAM	22.06	15.51
3	27025	8	#Mid	16QAM	22.01	15.46
3	27025	8	#Max	16QAM	22.02	15.47
3	27025	15	#0	16QAM	21.96	15.41
5	26815	1	#0	QPSK	23.83	17.28
5	26815	1	#Mid	QPSK	23.97	17.42
5	26815	1	#Max	QPSK	23.79	17.24
5	26815	12	#0	QPSK	22.93	16.38
5	26815	12	#Mid	QPSK	22.93	16.38
5	26815	12	#Max	QPSK	22.95	16.40
5	26815	25	#0	QPSK	22.97	16.42
5	26815	1	#0	16QAM	23.08	16.53
5	26815	1	#Mid	16QAM	23.24	16.69
5	26815	1	#Max	16QAM	23.10	16.55
5	26815	12	#0	16QAM	21.95	15.40
5	26815	12	#Mid	16QAM	21.96	15.41
5	26815	12	#Max	16QAM	21.99	15.44
5	26815	25	#0	16QAM	21.98	15.43
5	26915	1	#0	QPSK	23.86	17.31
5	26915	1	#Mid	QPSK	23.99	17.44
5	26915	1	#Max	QPSK	23.87	17.32
5	26915	12	#0	QPSK	22.98	16.43
5	26915	12	#Mid	QPSK	22.96	16.41
5	26915	12	#Max	QPSK	22.92	16.37
5	26915	25	#0	QPSK	23.01	16.46
5	26915	1	#0	16QAM	23.15	16.60
5	26915	1	#Mid	16QAM	23.30	16.75
5	26915	1	#Max	16QAM	23.15	16.60
5	26915	12	#0	16QAM	21.99	15.44
5	26915	12	#Mid	16QAM	21.96	15.41
5	26915	12	#Max	16QAM	21.97	15.42
5	26915	25	#0	16QAM	22.03	15.48
5	27015	1	#0	QPSK	23.90	17.35
5	27015	1	#Mid	QPSK	24.05	17.50
5	27015	1	#Max	QPSK	23.99	17.44
5	27015	12	#0	QPSK	23.09	16.54
5	27015	12	#Mid	QPSK	23.09	16.54
5	27015	12	#Max	QPSK	22.99	16.44
5	27015	25	#0	QPSK	23.06	16.51
5	27015	1	#0	16QAM	23.08	16.53
5	27015	1	#Mid	16QAM	23.20	16.65



5	27015	1	#Max	16QAM	23.07	16.52
5	27015	12	#0	16QAM	22.05	15.50
5	27015	12	#Mid	16QAM	22.02	15.47
5	27015	12	#Max	16QAM	21.91	15.36
5	27015	25	#0	16QAM	22.03	15.48
10	26840	1	#0	QPSK	24.01	17.46
10	26840	1	#Mid	QPSK	24.10	17.55
10	26840	1	#Max	QPSK	23.93	17.38
10	26840	25	#0	QPSK	23.05	16.50
10	26840	25	#Mid	QPSK	23.01	16.46
10	26840	25	#Max	QPSK	22.96	16.41
10	26840	50	#0	QPSK	23.00	16.45
10	26840	1	#0	16QAM	23.13	16.58
10	26840	1	#Mid	16QAM	23.23	16.68
10	26840	1	#Max	16QAM	23.06	16.51
10	26840	25	#0	16QAM	22.06	15.51
10	26840	25	#Mid	16QAM	22.09	15.54
10	26840	25	#Max	16QAM	21.99	15.44
10	26840	50	#0	16QAM	21.94	15.39
10	26915	1	#0	QPSK	24.08	17.53
10	26915	1	#Mid	QPSK	24.16	17.61
10	26915	1	#Max	QPSK	24.10	17.55
10	26915	25	#0	QPSK	23.06	16.51
10	26915	25	#Mid	QPSK	23.05	16.50
10	26915	25	#Max	QPSK	23.01	16.46
10	26915	50	#0	QPSK	23.03	16.48
10	26915	1	#0	16QAM	22.86	16.31
10	26915	1	#Mid	16QAM	22.89	16.34
10	26915	1	#Max	16QAM	22.90	16.35
10	26915	25	#0	16QAM	22.08	15.53
10	26915	25	#Mid	16QAM	22.06	15.51
10	26915	25	#Max	16QAM	21.99	15.44
10	26915	50	#0	16QAM	22.06	15.51
10	26990	1	#0	QPSK	24.01	17.46
10	26990	1	#Mid	QPSK	24.09	17.54
10	26990	1	#Max	QPSK	24.02	17.47
10	26990	25	#0	QPSK	23.11	16.56
10	26990	25	#Mid	QPSK	23.08	16.53
10	26990	25	#Max	QPSK	22.95	16.40
10	26990	50	#0	QPSK	23.02	16.47
10	26990	1	#0	16QAM	23.26	16.71
10	26990	1	#Mid	16QAM	23.45	16.90
10	26990	1	#Max	16QAM	23.20	16.65



10	26990	25	#0	16QAM	22.20	15.65
10	26990	25	#Mid	16QAM	22.21	15.66
10	26990	25	#Max	16QAM	22.04	15.49
10	26990	50	#0	16QAM	22.05	15.50
15	26865	1	#0	QPSK	23.90	17.35
15	26865	1	#Mid	QPSK	23.95	17.40
15	26865	1	#Max	QPSK	23.86	17.31
15	26865	36	#0	QPSK	23.03	16.48
15	26865	36	#Mid	QPSK	23.06	16.51
15	26865	36	#Max	QPSK	22.99	16.44
15	26865	75	#0	QPSK	23.04	16.49
15	26865	1	#0	16QAM	23.07	16.52
15	26865	1	#Mid	16QAM	23.15	16.60
15	26865	1	#Max	16QAM	23.01	16.46
15	26865	36	#0	16QAM	21.98	15.43
15	26865	36	#Mid	16QAM	21.98	15.43
15	26865	36	#Max	16QAM	21.96	15.41
15	26865	75	#0	16QAM	22.00	15.45
15	26915	1	#0	QPSK	23.96	17.41
15	26915	1	#Mid	QPSK	24.02	17.47
15	26915	1	#Max	QPSK	23.96	17.41
15	26915	36	#0	QPSK	23.05	16.50
15	26915	36	#Mid	QPSK	23.04	16.49
15	26915	36	#Max	QPSK	23.01	16.46
15	26915	75	#0	QPSK	23.07	16.52
15	26915	1	#0	16QAM	22.95	16.40
15	26915	1	#Mid	16QAM	23.01	16.46
15	26915	1	#Max	16QAM	22.94	16.39
15	26915	36	#0	16QAM	22.07	15.52
15	26915	36	#Mid	16QAM	21.99	15.44
15	26915	36	#Max	16QAM	21.98	15.43
15	26915	75	#0	16QAM	22.05	15.50
15	26965	1	#0	QPSK	23.86	17.31
15	26965	1	#Mid	QPSK	23.97	17.42
15	26965	1	#Max	QPSK	23.92	17.37
15	26965	36	#0	QPSK	23.08	16.53
15	26965	36	#Mid	QPSK	23.06	16.51
15	26965	36	#Max	QPSK	22.98	16.43
15	26965	75	#0	QPSK	23.05	16.50
15	26965	1	#0	16QAM	23.14	16.59
15	26965	1	#Mid	16QAM	23.27	16.72
15	26965	1	#Max	16QAM	23.08	16.53
15	26965	36	#0	16QAM	22.05	15.50



15	26965	36	#Mid	16QAM	21.99	15.44
15	26965	36	#Max	16QAM	21.95	15.40
15	26965	75	#0	16QAM	22.06	15.51

LTE Band26 (Upper Antenna)						
Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	ERP (dBm)
1.4	26797	1	#0	QPSK	23.81	18.46
1.4	26797	1	#Mid	QPSK	24.03	18.68
1.4	26797	1	#Max	QPSK	23.81	18.46
1.4	26797	3	#0	QPSK	23.94	18.59
1.4	26797	3	#Mid	QPSK	23.93	18.58
1.4	26797	3	#Max	QPSK	23.87	18.52
1.4	26797	6	#0	QPSK	22.82	17.47
1.4	26797	1	#0	16QAM	22.70	17.35
1.4	26797	1	#Mid	16QAM	22.77	17.42
1.4	26797	1	#Max	16QAM	22.69	17.34
1.4	26797	3	#0	16QAM	22.84	17.49
1.4	26797	3	#Mid	16QAM	22.82	17.47
1.4	26797	3	#Max	16QAM	22.83	17.48
1.4	26797	6	#0	16QAM	21.82	16.47
1.4	26915	1	#0	QPSK	23.93	18.58
1.4	26915	1	#Mid	QPSK	24.14	18.79
1.4	26915	1	#Max	QPSK	23.90	18.55
1.4	26915	3	#0	QPSK	23.93	18.58
1.4	26915	3	#Mid	QPSK	23.92	18.57
1.4	26915	3	#Max	QPSK	23.92	18.57
1.4	26915	6	#0	QPSK	22.83	17.48
1.4	26915	1	#0	16QAM	22.85	17.50
1.4	26915	1	#Mid	16QAM	23.01	17.66
1.4	26915	1	#Max	16QAM	22.87	17.52
1.4	26915	3	#0	16QAM	23.06	17.71
1.4	26915	3	#Mid	16QAM	23.06	17.71
1.4	26915	3	#Max	16QAM	23.06	17.71
1.4	26915	6	#0	16QAM	21.88	16.53
1.4	27033	1	#0	QPSK	23.77	18.42
1.4	27033	1	#Mid	QPSK	24.00	18.65
1.4	27033	1	#Max	QPSK	23.79	18.44
1.4	27033	3	#0	QPSK	23.89	18.54
1.4	27033	3	#Mid	QPSK	23.89	18.54
1.4	27033	3	#Max	QPSK	23.87	18.52
1.4	27033	6	#0	QPSK	22.91	17.56
1.4	27033	1	#0	16QAM	22.90	17.55



1.4	27033	1	#Mid	16QAM	23.13	17.78
1.4	27033	1	#Max	16QAM	23.00	17.65
1.4	27033	3	#0	16QAM	22.86	17.51
1.4	27033	3	#Mid	16QAM	22.85	17.50
1.4	27033	3	#Max	16QAM	22.88	17.53
1.4	27033	6	#0	16QAM	21.85	16.50
3	26805	1	#0	QPSK	23.88	18.53
3	26805	1	#Mid	QPSK	23.93	18.58
3	26805	1	#Max	QPSK	23.85	18.50
3	26805	8	#0	QPSK	22.79	17.44
3	26805	8	#Mid	QPSK	22.78	17.43
3	26805	8	#Max	QPSK	22.84	17.49
3	26805	15	#0	QPSK	22.81	17.46
3	26805	1	#0	16QAM	22.65	17.30
3	26805	1	#Mid	16QAM	22.78	17.43
3	26805	1	#Max	16QAM	22.67	17.32
3	26805	8	#0	16QAM	21.79	16.44
3	26805	8	#Mid	16QAM	21.80	16.45
3	26805	8	#Max	16QAM	21.84	16.49
3	26805	15	#0	16QAM	21.82	16.47
3	26915	1	#0	QPSK	23.80	18.45
3	26915	1	#Mid	QPSK	23.84	18.49
3	26915	1	#Max	QPSK	23.83	18.48
3	26915	8	#0	QPSK	22.84	17.49
3	26915	8	#Mid	QPSK	22.85	17.50
3	26915	8	#Max	QPSK	22.86	17.51
3	26915	15	#0	QPSK	22.85	17.50
3	26915	1	#0	16QAM	23.14	17.79
3	26915	1	#Mid	16QAM	23.10	17.75
3	26915	1	#Max	16QAM	23.10	17.75
3	26915	8	#0	16QAM	21.86	16.51
3	26915	8	#Mid	16QAM	21.84	16.49
3	26915	8	#Max	16QAM	21.90	16.55
3	26915	15	#0	16QAM	21.85	16.50
3	27025	1	#0	QPSK	23.82	18.47
3	27025	1	#Mid	QPSK	23.83	18.48
3	27025	1	#Max	QPSK	23.82	18.47
3	27025	8	#0	QPSK	22.87	17.52
3	27025	8	#Mid	QPSK	22.87	17.52
3	27025	8	#Max	QPSK	22.88	17.53
3	27025	15	#0	QPSK	22.84	17.49
3	27025	1	#0	16QAM	23.00	17.65
3	27025	1	#Mid	16QAM	22.98	17.63



3	27025	1	#Max	16QAM	22.98	17.63
3	27025	8	#0	16QAM	21.85	16.50
3	27025	8	#Mid	16QAM	21.85	16.50
3	27025	8	#Max	16QAM	21.86	16.51
3	27025	15	#0	16QAM	21.76	16.41
5	26815	1	#0	QPSK	23.66	18.31
5	26815	1	#Mid	QPSK	23.81	18.46
5	26815	1	#Max	QPSK	23.69	18.34
5	26815	12	#0	QPSK	22.76	17.41
5	26815	12	#Mid	QPSK	22.75	17.40
5	26815	12	#Max	QPSK	22.81	17.46
5	26815	25	#0	QPSK	22.79	17.44
5	26815	1	#0	16QAM	23.02	17.67
5	26815	1	#Mid	16QAM	23.09	17.74
5	26815	1	#Max	16QAM	22.94	17.59
5	26815	12	#0	16QAM	21.78	16.43
5	26815	12	#Mid	16QAM	21.76	16.41
5	26815	12	#Max	16QAM	21.80	16.45
5	26815	25	#0	16QAM	21.81	16.46
5	26915	1	#0	QPSK	23.75	18.40
5	26915	1	#Mid	QPSK	23.93	18.58
5	26915	1	#Max	QPSK	23.78	18.43
5	26915	12	#0	QPSK	22.89	17.54
5	26915	12	#Mid	QPSK	22.89	17.54
5	26915	12	#Max	QPSK	22.82	17.47
5	26915	25	#0	QPSK	22.89	17.54
5	26915	1	#0	16QAM	23.04	17.69
5	26915	1	#Mid	16QAM	23.22	17.87
5	26915	1	#Max	16QAM	23.06	17.71
5	26915	12	#0	16QAM	21.85	16.50
5	26915	12	#Mid	16QAM	21.84	16.49
5	26915	12	#Max	16QAM	21.81	16.46
5	26915	25	#0	16QAM	21.94	16.59
5	27015	1	#0	QPSK	23.75	18.40
5	27015	1	#Mid	QPSK	23.92	18.57
5	27015	1	#Max	QPSK	23.83	18.48
5	27015	12	#0	QPSK	22.91	17.56
5	27015	12	#Mid	QPSK	22.93	17.58
5	27015	12	#Max	QPSK	22.82	17.47
5	27015	25	#0	QPSK	22.94	17.59
5	27015	1	#0	16QAM	22.94	17.59
5	27015	1	#Mid	16QAM	23.07	17.72
5	27015	1	#Max	16QAM	22.94	17.59



5	27015	12	#0	16QAM	21.85	16.50
5	27015	12	#Mid	16QAM	21.84	16.49
5	27015	12	#Max	16QAM	21.77	16.42
5	27015	25	#0	16QAM	21.92	16.57
10	26840	1	#0	QPSK	23.81	18.46
10	26840	1	#Mid	QPSK	23.95	18.60
10	26840	1	#Max	QPSK	23.81	18.46
10	26840	25	#0	QPSK	22.88	17.53
10	26840	25	#Mid	QPSK	22.87	17.52
10	26840	25	#Max	QPSK	22.84	17.49
10	26840	50	#0	QPSK	22.85	17.50
10	26840	1	#0	16QAM	22.98	17.63
10	26840	1	#Mid	16QAM	23.11	17.76
10	26840	1	#Max	16QAM	22.97	17.62
10	26840	25	#0	16QAM	21.87	16.52
10	26840	25	#Mid	16QAM	21.89	16.54
10	26840	25	#Max	16QAM	21.85	16.50
10	26840	50	#0	16QAM	21.85	16.50
10	26915	1	#0	QPSK	23.93	18.58
10	26915	1	#Mid	QPSK	23.98	18.63
10	26915	1	#Max	QPSK	23.99	18.64
10	26915	25	#0	QPSK	22.95	17.60
10	26915	25	#Mid	QPSK	22.95	17.60
10	26915	25	#Max	QPSK	22.89	17.54
10	26915	50	#0	QPSK	22.91	17.56
10	26915	1	#0	16QAM	22.76	17.41
10	26915	1	#Mid	16QAM	22.85	17.50
10	26915	1	#Max	16QAM	22.79	17.44
10	26915	25	#0	16QAM	21.96	16.61
10	26915	25	#Mid	16QAM	21.97	16.62
10	26915	25	#Max	16QAM	21.92	16.57
10	26915	50	#0	16QAM	21.97	16.62
10	26990	1	#0	QPSK	23.87	18.52
10	26990	1	#Mid	QPSK	23.97	18.62
10	26990	1	#Max	QPSK	23.86	18.51
10	26990	25	#0	QPSK	22.99	17.64
10	26990	25	#Mid	QPSK	22.97	17.62
10	26990	25	#Max	QPSK	22.84	17.49
10	26990	50	#0	QPSK	22.90	17.55
10	26990	1	#0	16QAM	23.19	17.84
10	26990	1	#Mid	16QAM	23.25	17.90
10	26990	1	#Max	16QAM	23.09	17.74
10	26990	25	#0	16QAM	22.07	16.72



10	26990	25	#Mid	16QAM	22.07	16.72
10	26990	25	#Max	16QAM	21.90	16.55
10	26990	50	#0	16QAM	21.90	16.55
15	26865	1	#0	QPSK	23.69	18.34
15	26865	1	#Mid	QPSK	23.79	18.44
15	26865	1	#Max	QPSK	23.73	18.38
15	26865	36	#0	QPSK	22.88	17.53
15	26865	36	#Mid	QPSK	22.91	17.56
15	26865	36	#Max	QPSK	22.86	17.51
15	26865	75	#0	QPSK	22.88	17.53
15	26865	1	#0	16QAM	22.99	17.64
15	26865	1	#Mid	16QAM	23.11	17.76
15	26865	1	#Max	16QAM	23.03	17.68
15	26865	36	#0	16QAM	21.84	16.49
15	26865	36	#Mid	16QAM	21.88	16.53
15	26865	36	#Max	16QAM	21.85	16.50
15	26865	75	#0	16QAM	21.91	16.56
15	26915	1	#0	QPSK	23.72	18.37
15	26915	1	#Mid	QPSK	23.86	18.51
15	26915	1	#Max	QPSK	23.76	18.41
15	26915	36	#0	QPSK	22.95	17.60
15	26915	36	#Mid	QPSK	22.96	17.61
15	26915	36	#Max	QPSK	22.89	17.54
15	26915	75	#0	QPSK	22.94	17.59
15	26915	1	#0	16QAM	22.89	17.54
15	26915	1	#Mid	16QAM	23.04	17.69
15	26915	1	#Max	16QAM	22.96	17.61
15	26915	36	#0	16QAM	21.93	16.58
15	26915	36	#Mid	16QAM	21.91	16.56
15	26915	36	#Max	16QAM	21.88	16.53
15	26915	75	#0	16QAM	21.91	16.56
15	26965	1	#0	QPSK	23.77	18.42
15	26965	1	#Mid	QPSK	23.98	18.63
15	26965	1	#Max	QPSK	23.88	18.53
15	26965	36	#0	QPSK	22.92	17.57
15	26965	36	#Mid	QPSK	22.94	17.59
15	26965	36	#Max	QPSK	22.88	17.53
15	26965	75	#0	QPSK	22.94	17.59
15	26965	1	#0	16QAM	22.82	17.47
15	26965	1	#Mid	16QAM	22.98	17.63
15	26965	1	#Max	16QAM	22.80	17.45
15	26965	36	#0	16QAM	21.91	16.56
15	26965	36	#Mid	16QAM	21.92	16.57

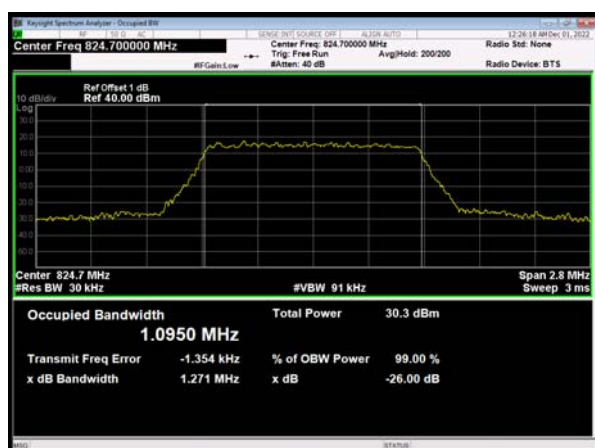


15	26965	36	#Max	16QAM	21.82	16.47
15	26965	75	#0	16QAM	21.95	16.60

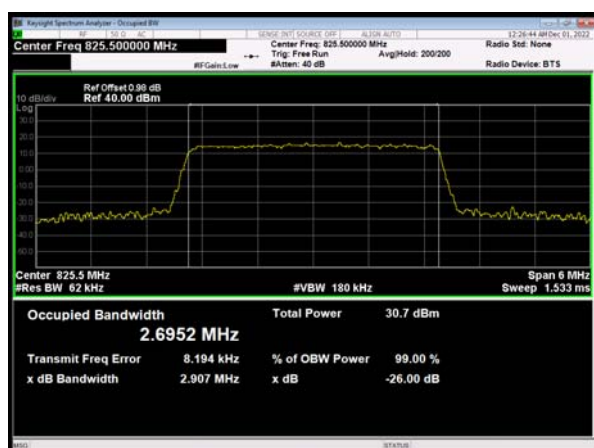
6.2. Occupied Bandwidth

LTE Band 26						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	26797	824.7	1.095	1.271
			26915	836.5	1.092	1.272
			27033	848.3	1.089	1.277
		3	26805	825.5	2.695	2.907
			26915	836.5	2.687	2.925
			27025	847.5	2.688	2.907
		5	26815	826.5	4.512	4.864
			26915	836.5	4.506	4.932
			27015	846.5	4.502	4.894
		10	26840	829	8.970	9.668
			26915	836.5	8.985	9.767
			26990	844	8.974	9.684
		15	26865	831.5	13.455	14.372
			26915	836.5	13.484	14.454
			26965	841.5	13.456	14.400
	16QAM	1.4	26797	824.7	1.094	1.279
			26915	836.5	1.095	1.308
			27033	848.3	1.098	1.289
		3	26805	825.5	2.683	2.924
			26915	836.5	2.683	2.914
			27025	847.5	2.683	2.926
		5	26815	826.5	4.508	4.907
			26915	836.5	4.527	4.901
			27015	846.5	4.517	4.925
		10	26840	829	8.978	9.700
			26915	836.5	8.979	9.677
			26990	844	8.962	9.684
		15	26865	831.5	13.462	14.613
			26915	836.5	13.460	14.461
			26965	841.5	13.503	14.356

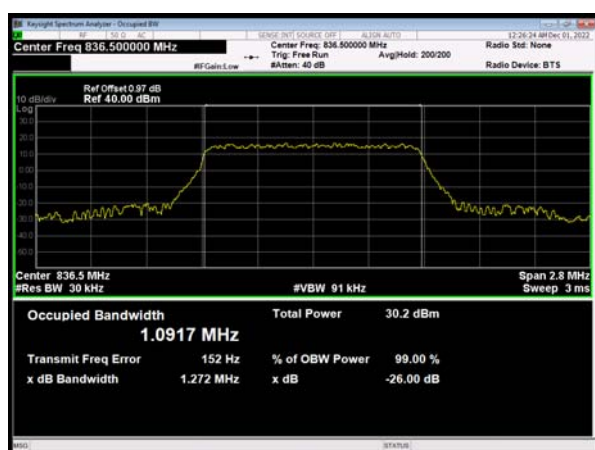
LTE Band 26 QPSK 1.4MHz CH-Low



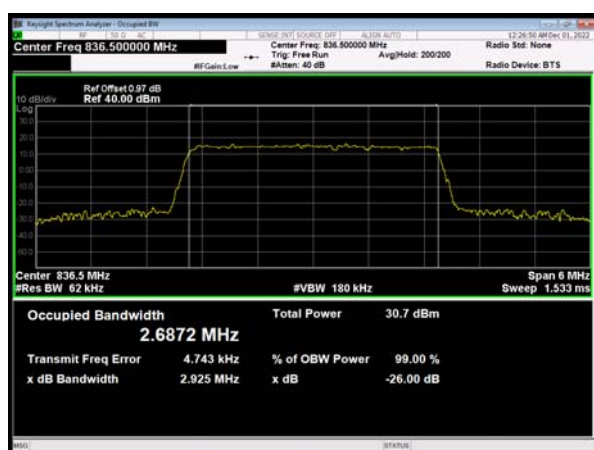
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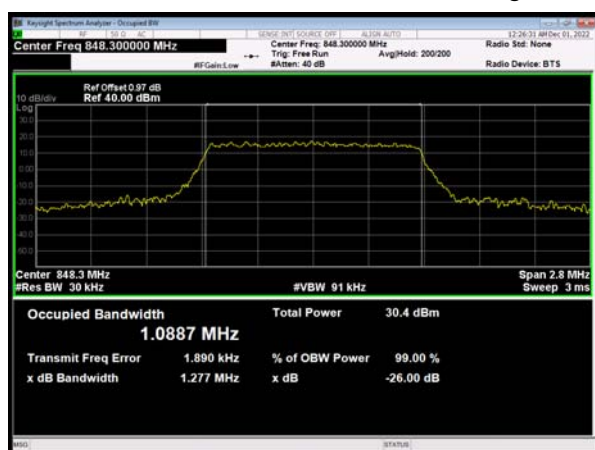
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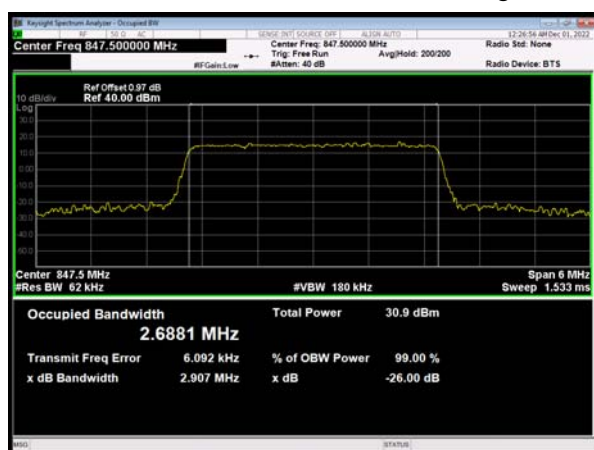
LTE Band 26 QPSK 3MHz CH-Middle



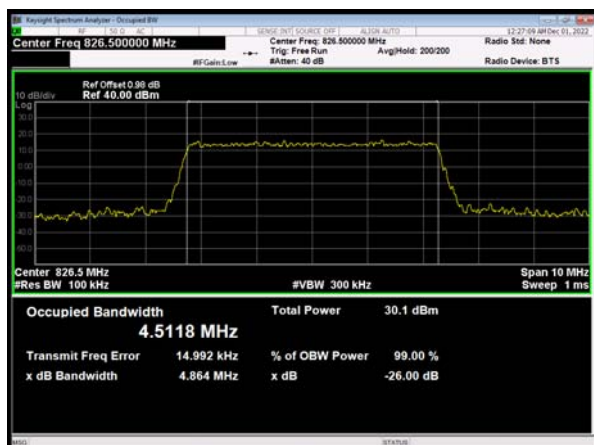
LTE Band 26 QPSK 1.4MHz CH-High



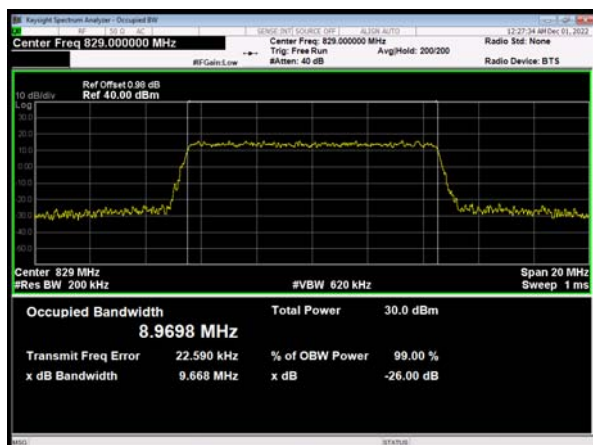
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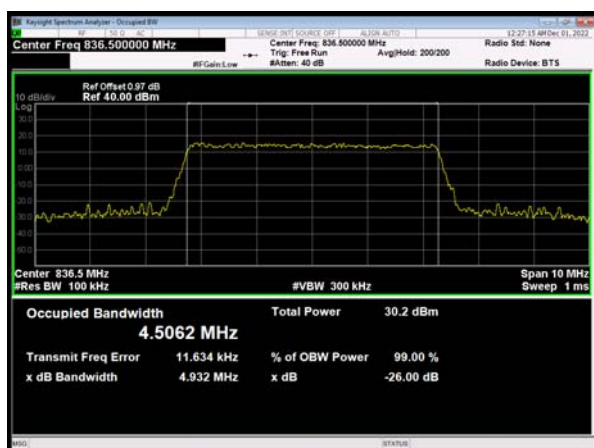
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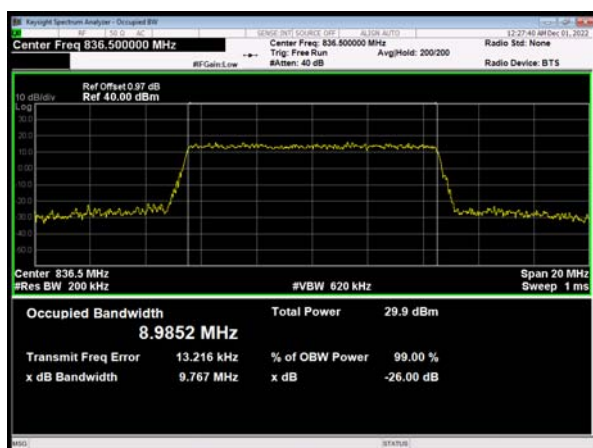
LTE Band 26 QPSK 10MHz CH-Low



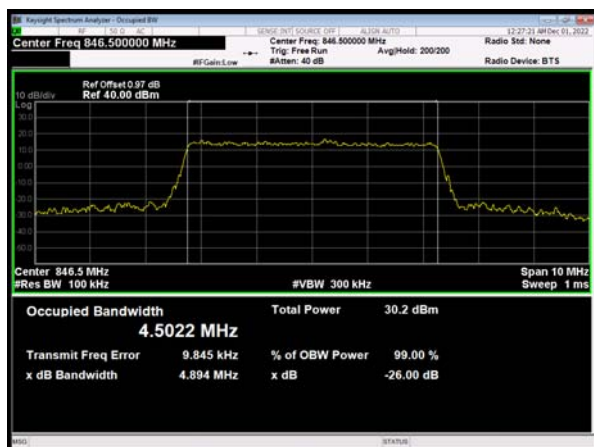
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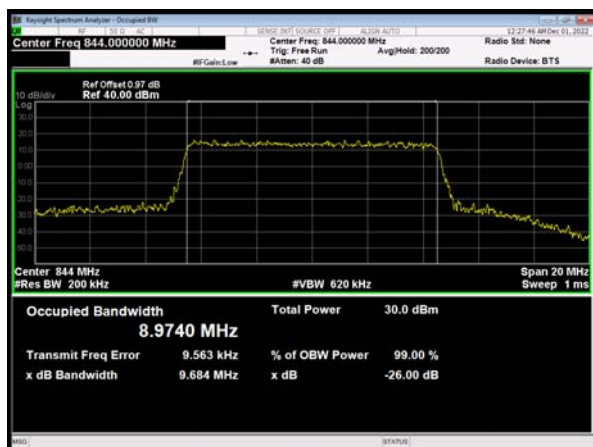
LTE Band 26 QPSK 10MHz CH-Middle



LTE Band 26 QPSK 5MHz CH-High

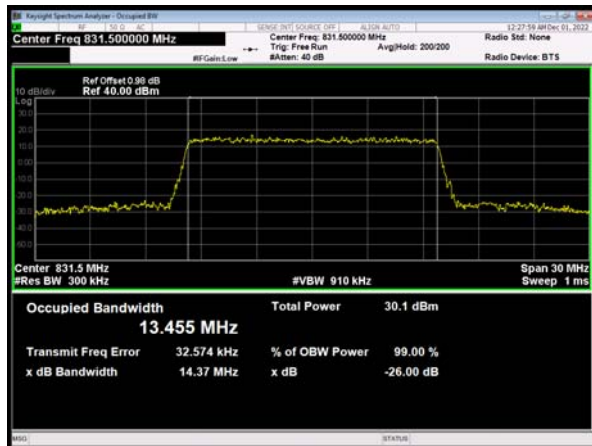


LTE Band 26 QPSK 10MHz CH-High





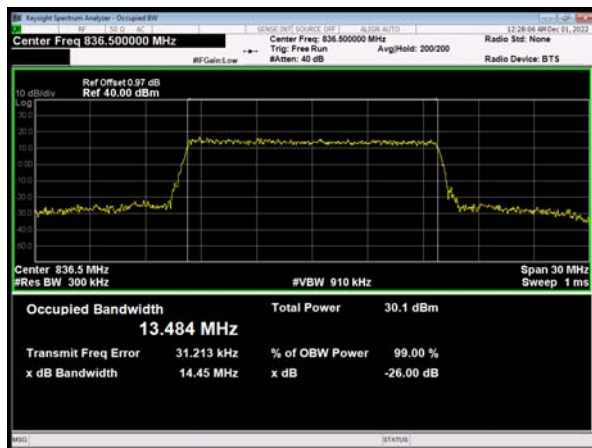
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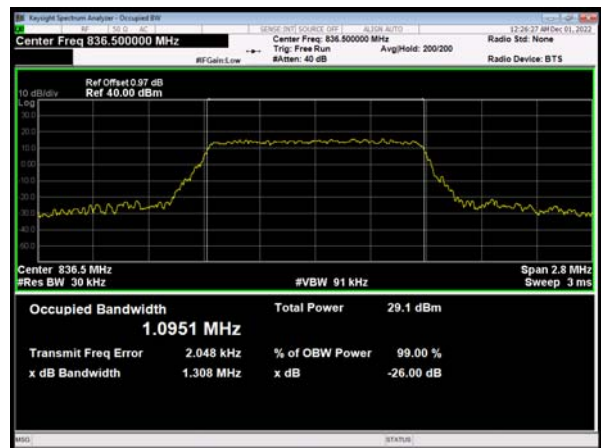
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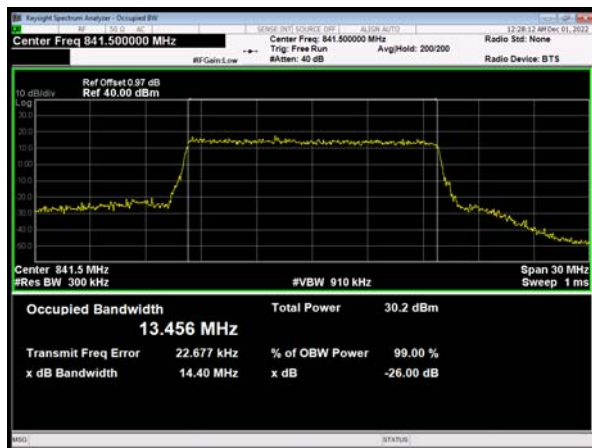
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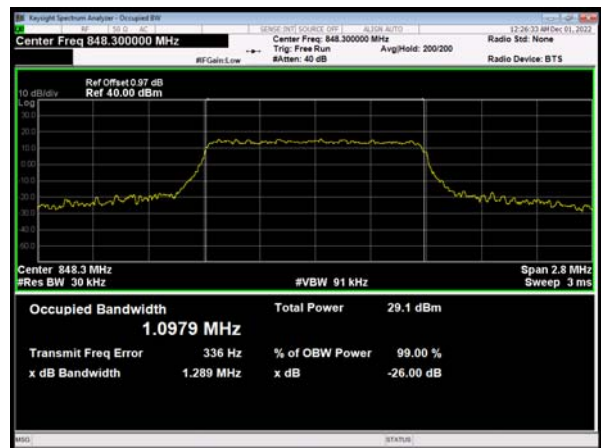
LTE Band 26 16QAM 1.4MHz CH-Middle



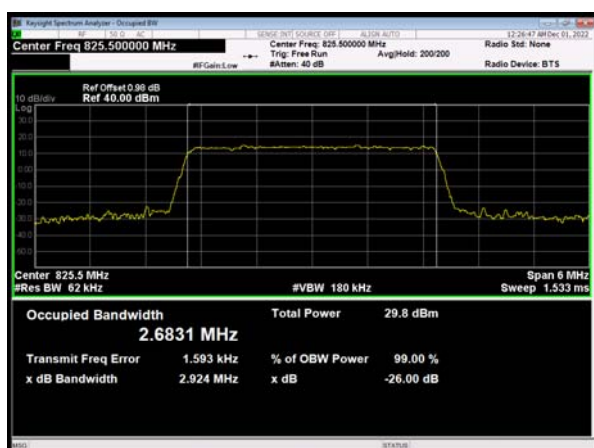
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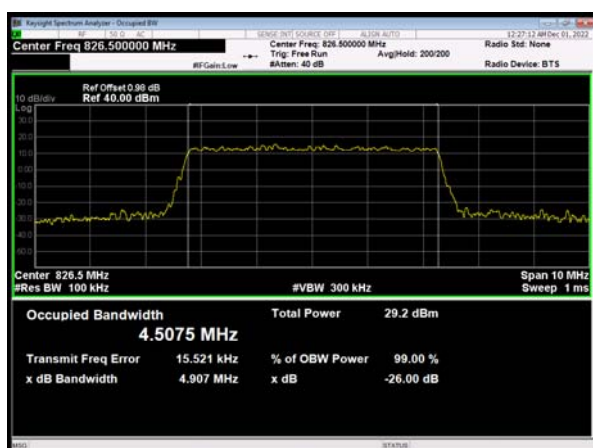
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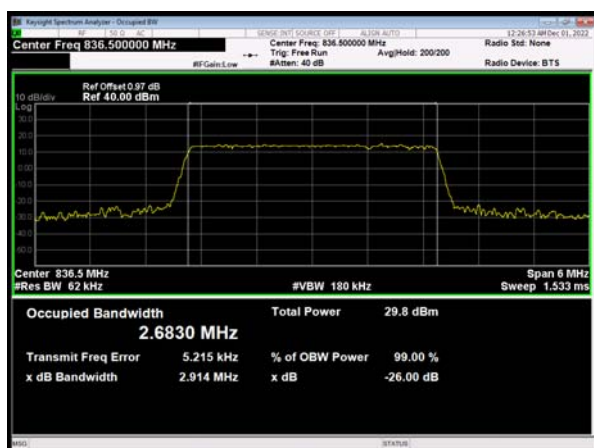
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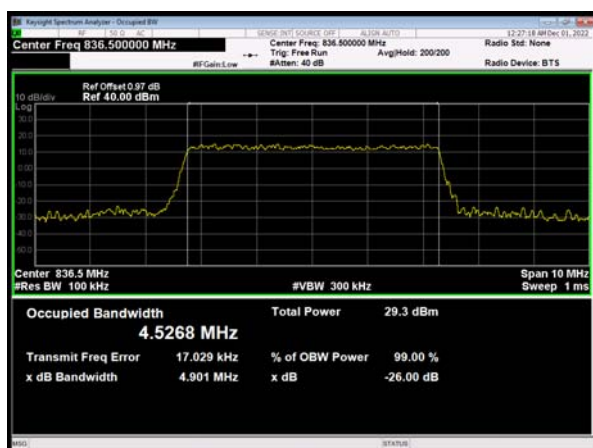
LTE Band 26 16QAM 5MHz CH-Low



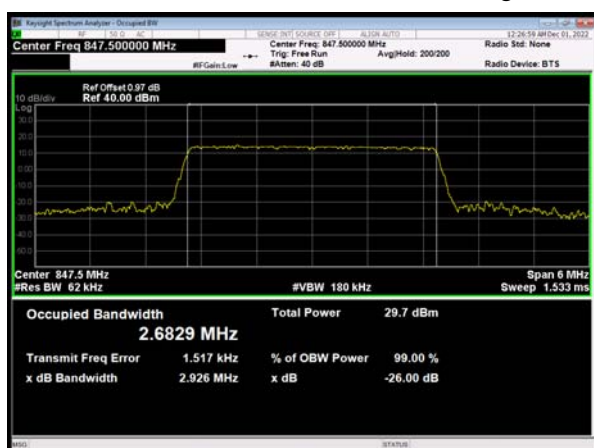
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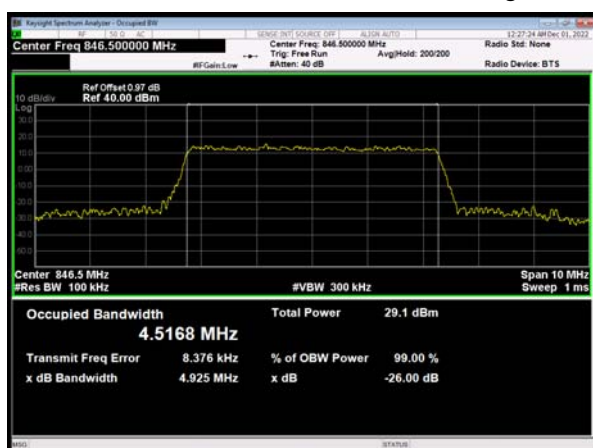
LTE Band 26 16QAM 5MHz CH-Middle



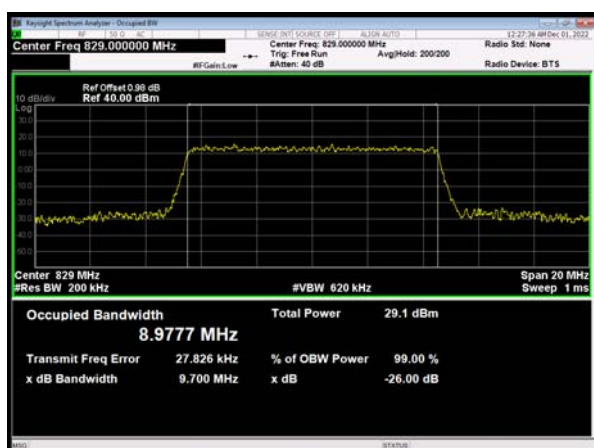
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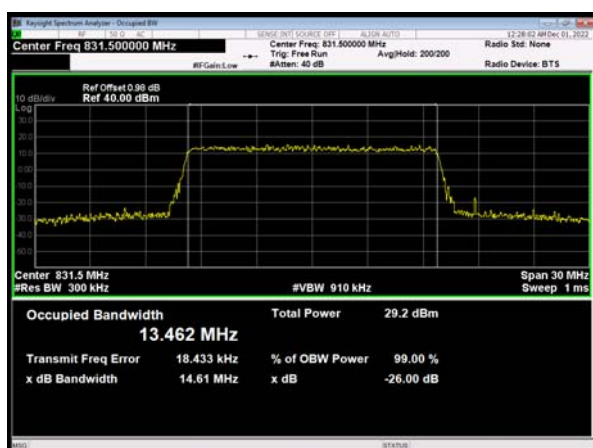
LTE Band 26 16QAM 5MHz CH-High



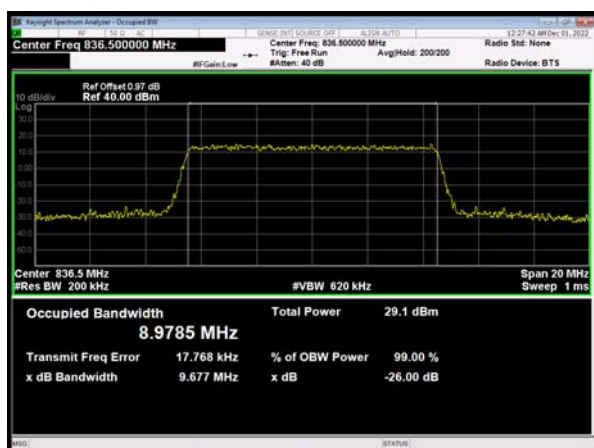
LTE Band 26 16QAM 10MHz CH-Low



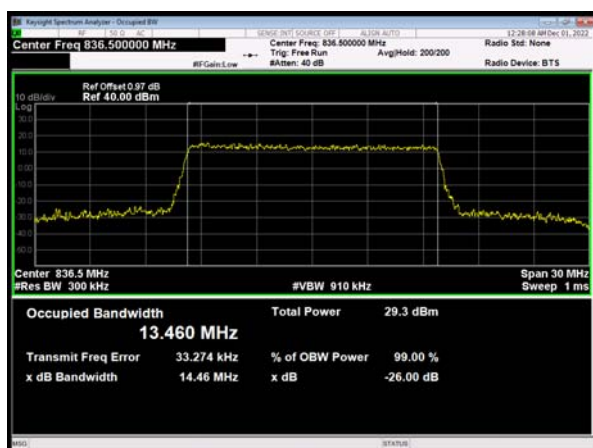
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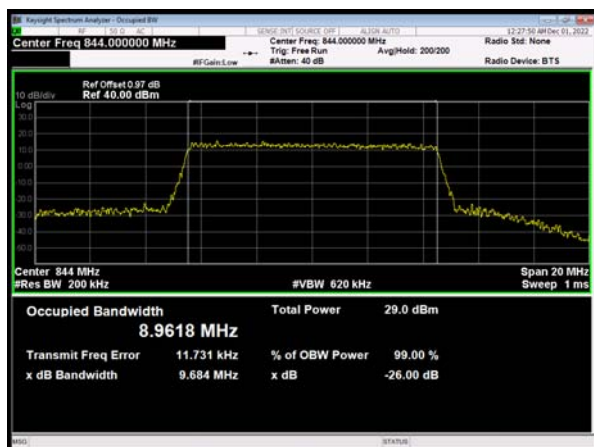
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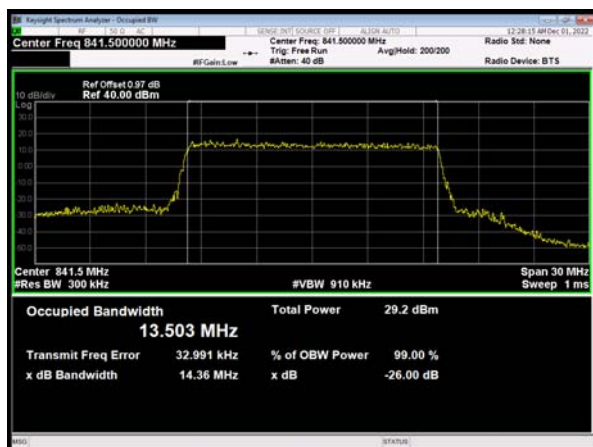
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LTE Band 26 16QAM 10MHz CH-High

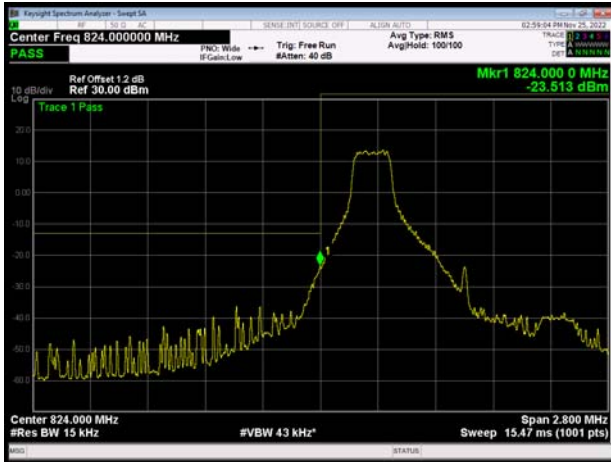


LTE Band 26 16QAM 15MHz CH-High



6.3. Band Edge Compliance

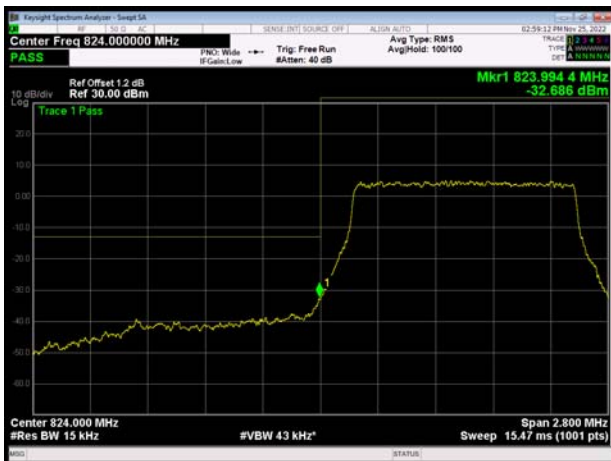
LTE Band 26 QPSK 1.4MHz CH-Low 1RB



LTE Band 26 QPSK 1.4MHz CH-High 1RB



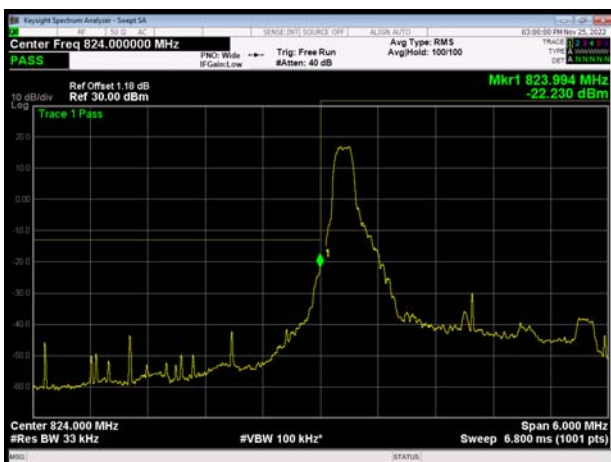
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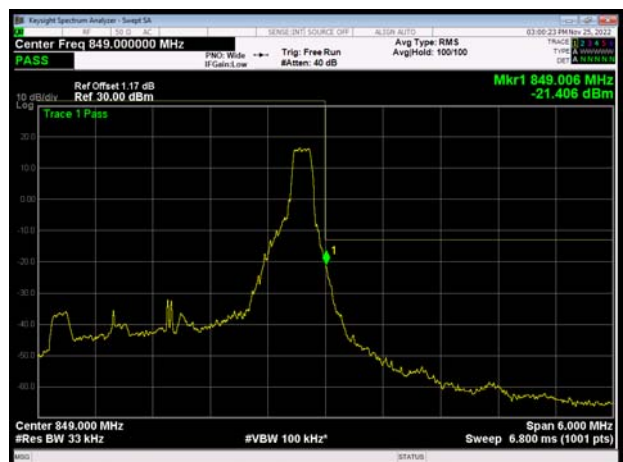
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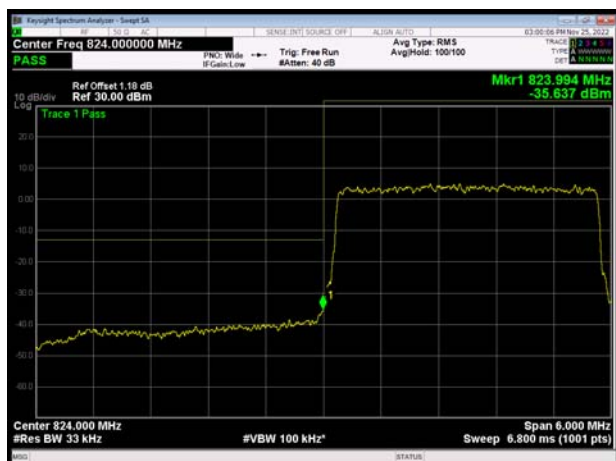
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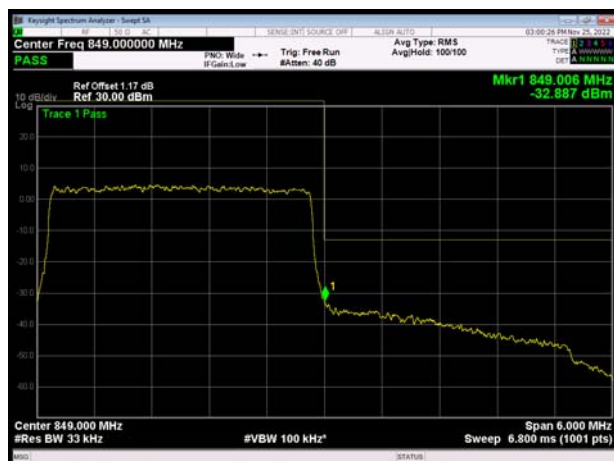
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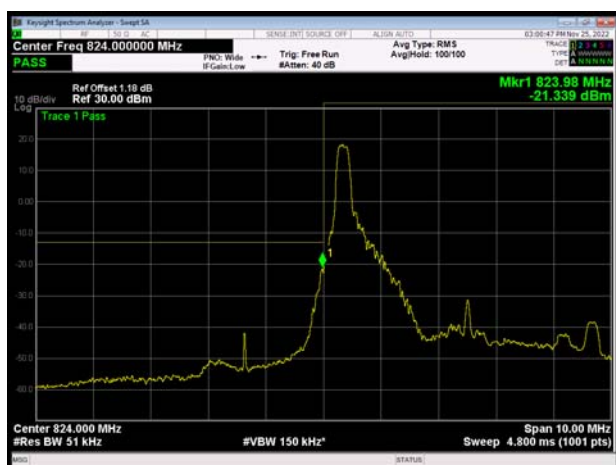
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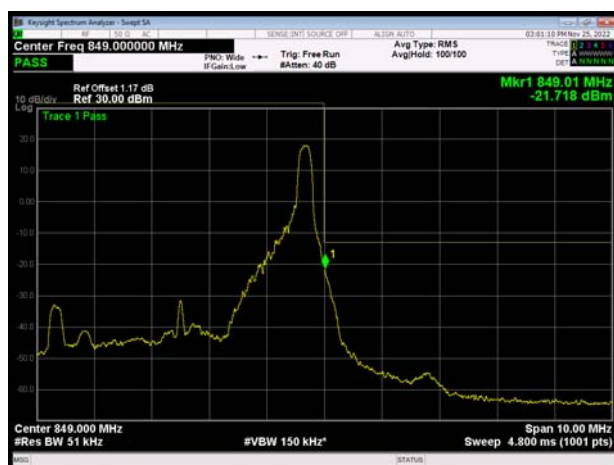
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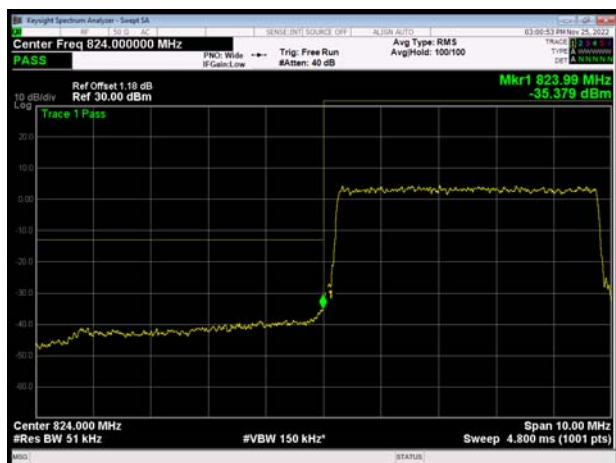
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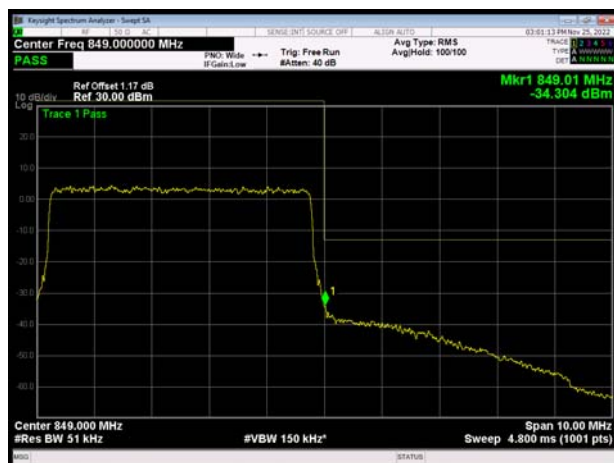
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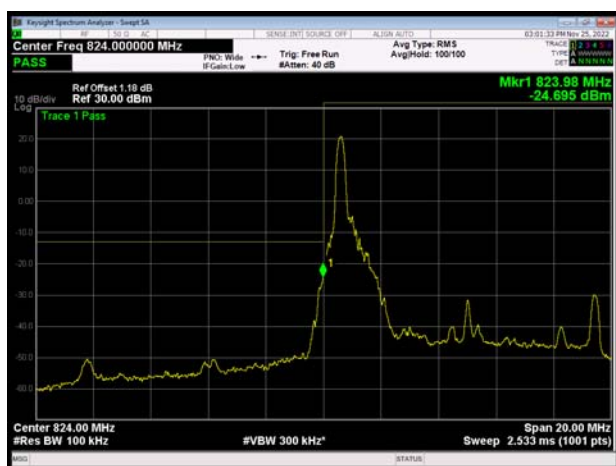
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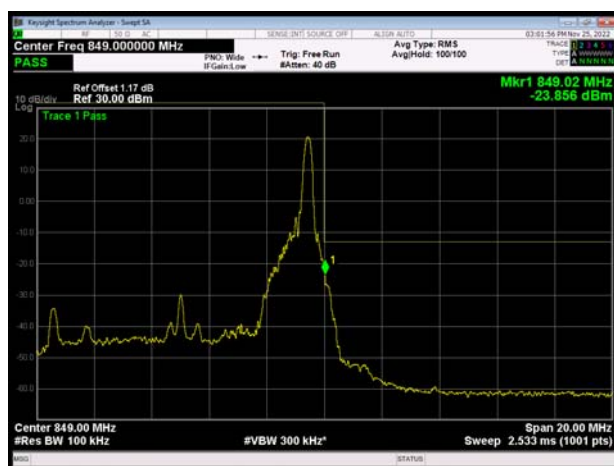
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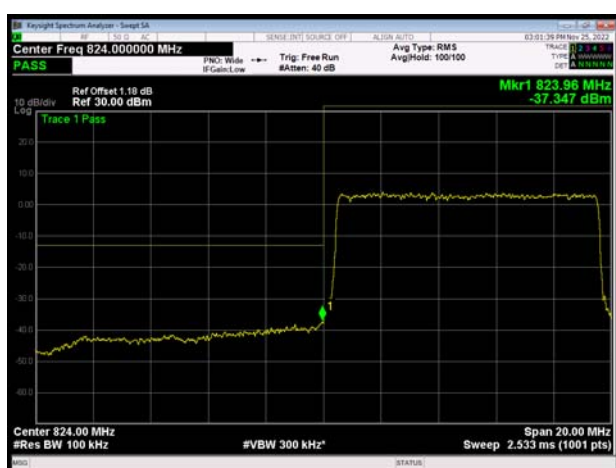
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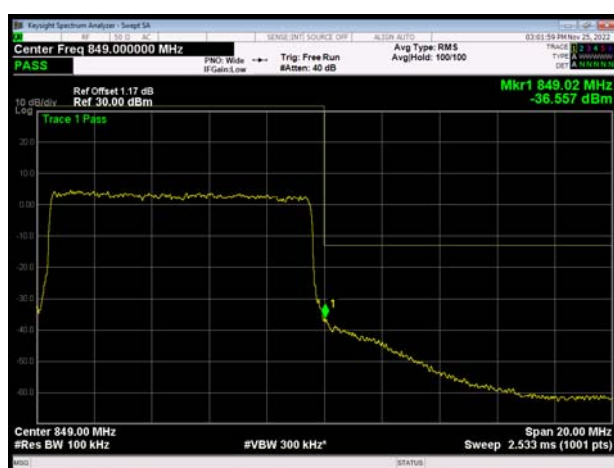
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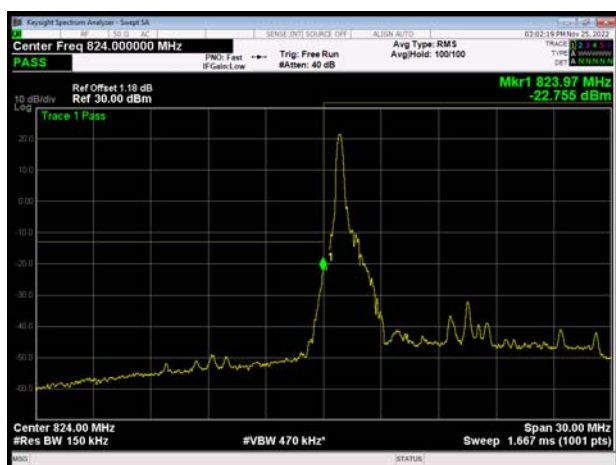
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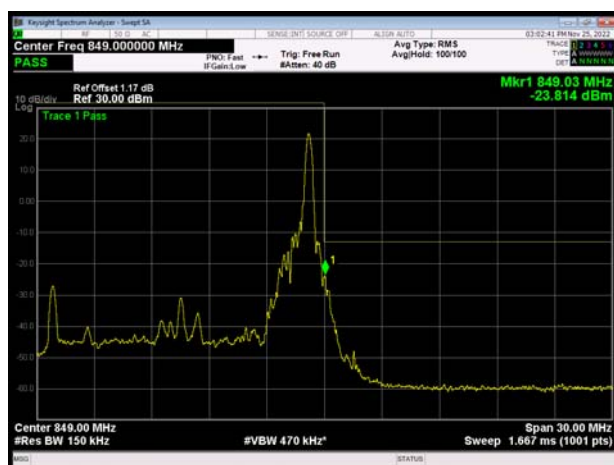
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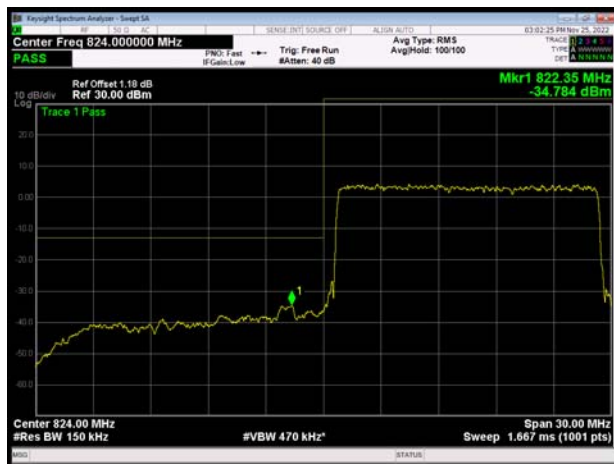
LTE Band 26 QPSK 15MHz CH-Low 1RB



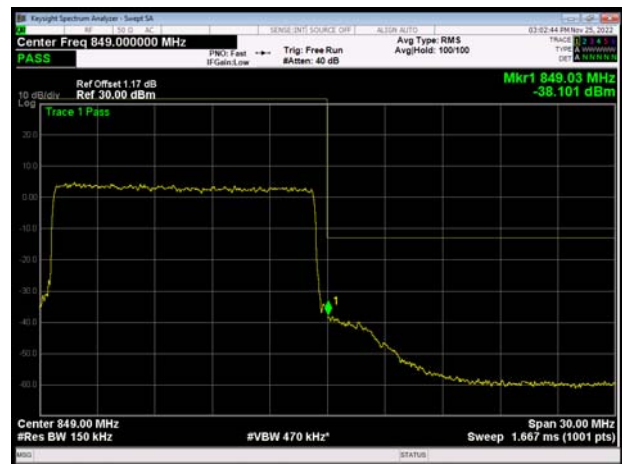
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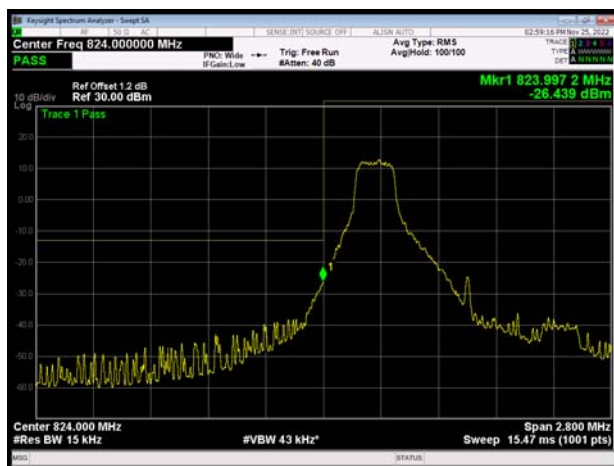
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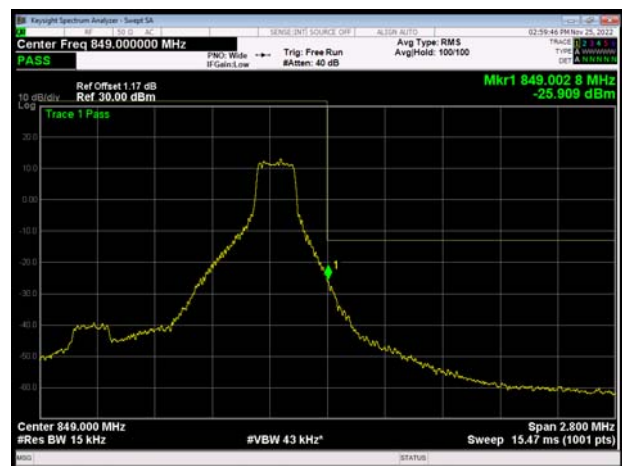
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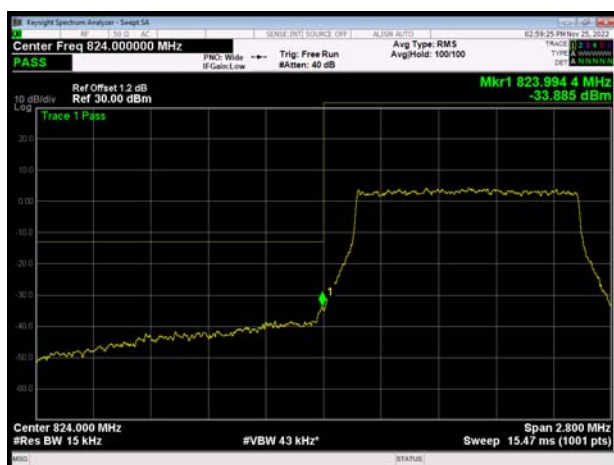
LTE Band 26 16QAM 1.4MHz CH-Low 1RB



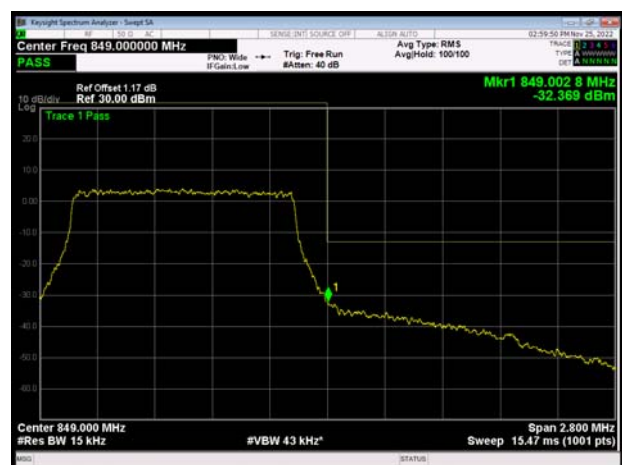
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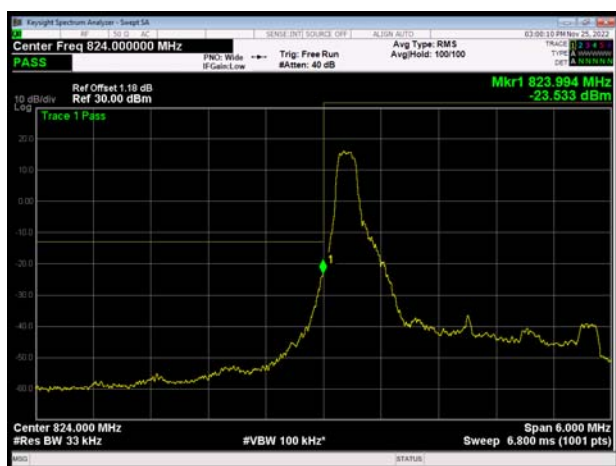
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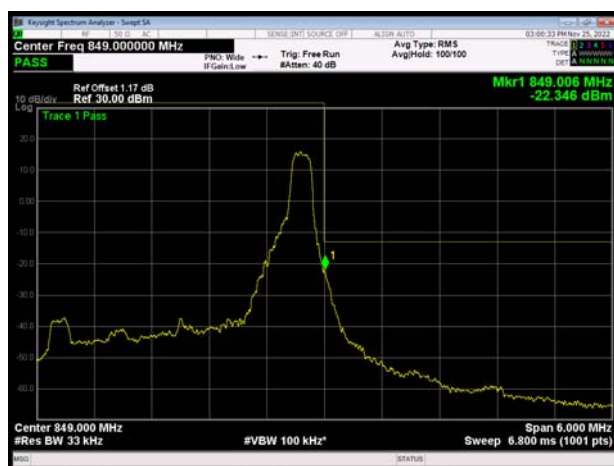
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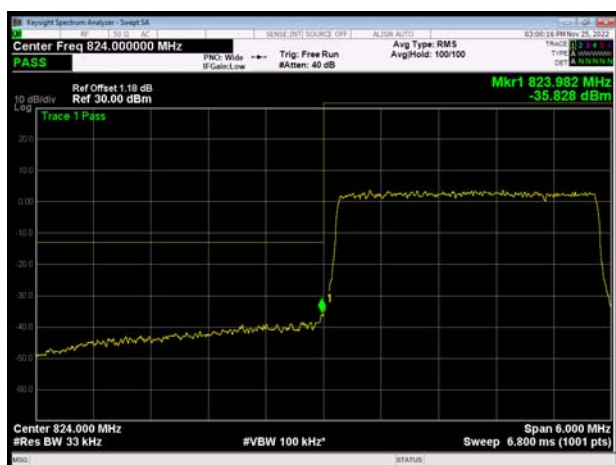
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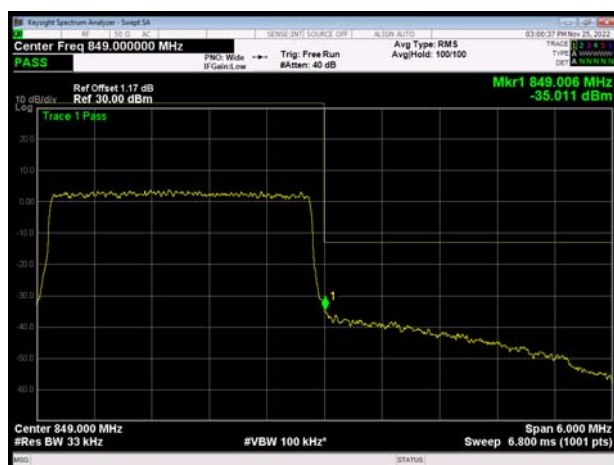
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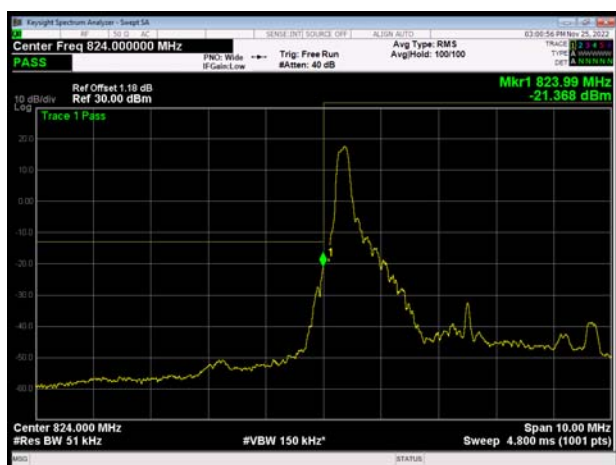
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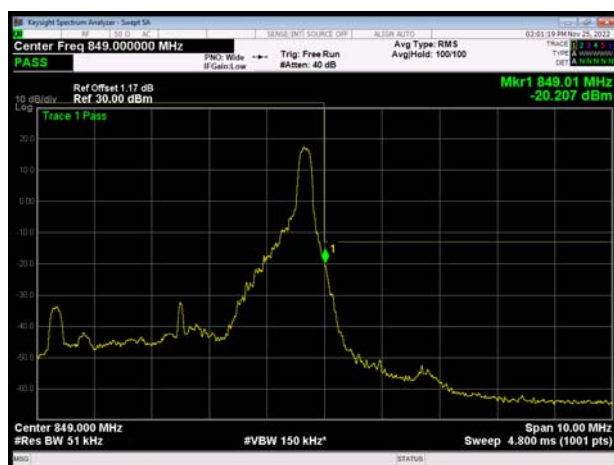
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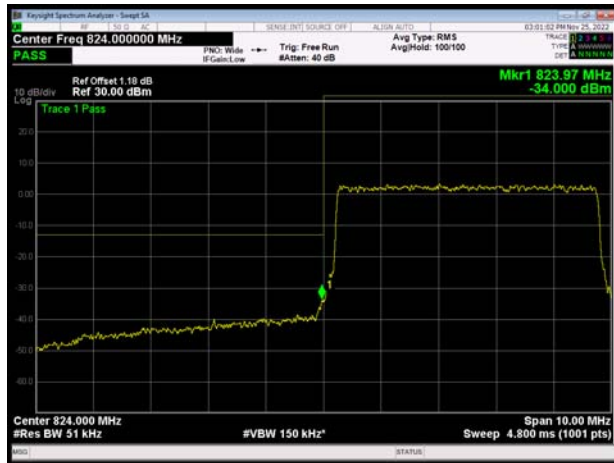
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LTE Band 26 16QAM 5MHz CH-High 1RB



LTE Band 26 16QAM 5MHz CH-Low 100%RB



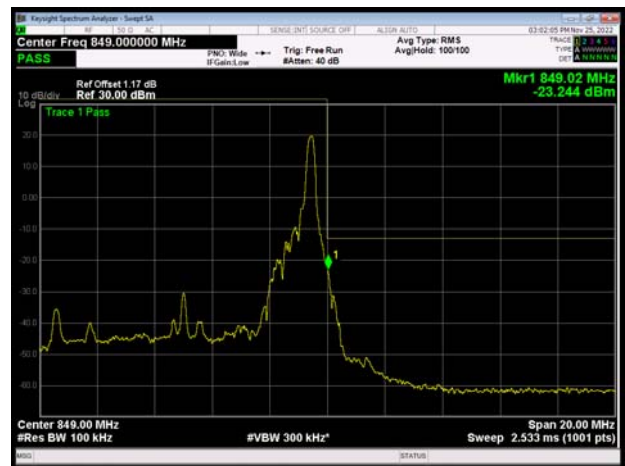
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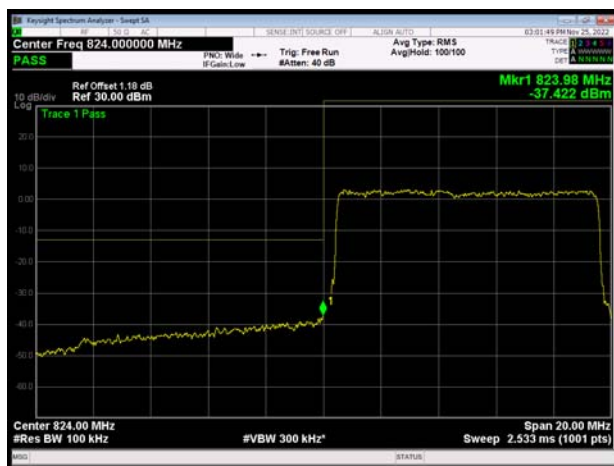
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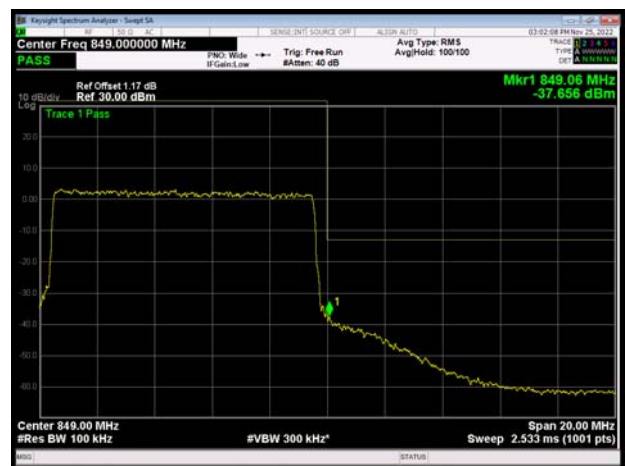
LTE Band 26 16QAM 10MHz CH-High 1RB



LTE Band 26 16QAM 10MHz CH-Low 100%RB

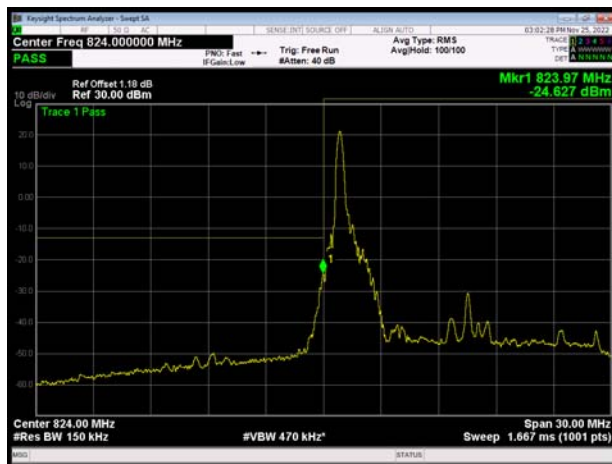


LTE Band 26 16QAM 10MHz CH-High 100%RB

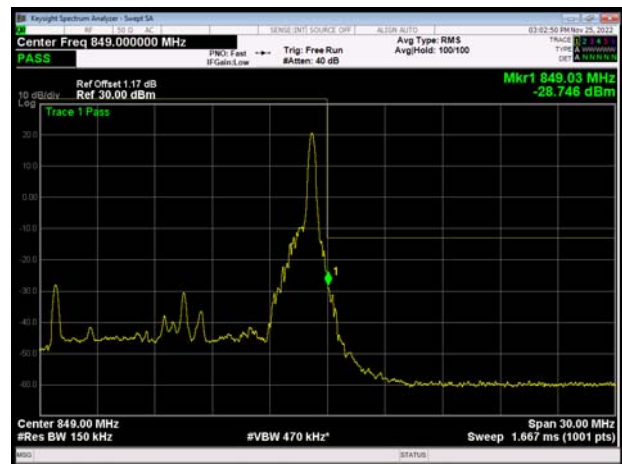




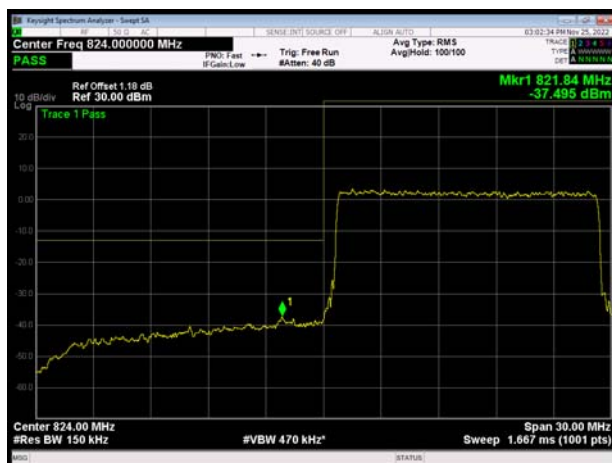
LTE Band 26 16QAM 15MHz CH-Low 1RB



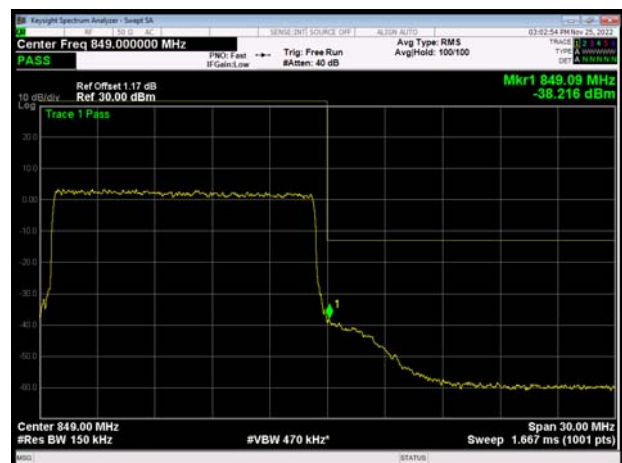
LTE Band 26 16QAM 15MHz CH-High 1RB



LTE Band 26 16QAM 15MHz CH-Low 100%RB



LTE Band 26 16QAM 15MHz CH-High 100%RB



6.4. Peak-to-Average Power Ratio (PAPR)

LTE Band 26								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	26797	824.7	27.39	22.29	5.10	≤13	PASS
		26915	836.5	27.36	22.18	5.18	≤13	PASS
		27033	848.3	26.79	22.30	4.49	≤13	PASS
	3	26805	825.5	27.43	22.17	5.26	≤13	PASS
		26915	836.5	27.40	22.17	5.23	≤13	PASS
		27025	847.5	26.96	22.18	4.78	≤13	PASS
	5	26815	826.5	27.50	22.17	5.33	≤13	PASS
		26915	836.5	27.54	22.21	5.33	≤13	PASS
		27015	846.5	27.30	22.22	5.08	≤13	PASS
	10	26840	829	27.51	22.20	5.31	≤13	PASS
		26915	836.5	27.53	22.22	5.31	≤13	PASS
		26990	844	27.52	22.20	5.32	≤13	PASS
	15	26865	831.5	27.91	22.24	5.67	≤13	PASS
		26915	836.5	27.94	22.25	5.69	≤13	PASS
		26965	841.5	27.88	22.26	5.62	≤13	PASS
16QAM	1.4	26797	824.7	27.59	21.35	6.24	≤13	PASS
		26915	836.5	27.15	21.15	6.00	≤13	PASS
		27033	848.3	26.60	21.27	5.33	≤13	PASS
	3	26805	825.5	27.39	21.26	6.13	≤13	PASS
		26915	836.5	27.30	21.19	6.11	≤13	PASS
		27025	847.5	26.89	21.20	5.69	≤13	PASS
	5	26815	826.5	27.22	21.19	6.03	≤13	PASS
		26915	836.5	27.30	21.24	6.06	≤13	PASS
		27015	846.5	27.14	21.25	5.89	≤13	PASS
	10	26840	829	27.31	21.21	6.10	≤13	PASS
		26915	836.5	27.34	21.26	6.08	≤13	PASS
		26990	844	27.30	21.22	6.08	≤13	PASS
	15	26865	831.5	27.46	21.22	6.24	≤13	PASS
		26915	836.5	27.52	21.26	6.26	≤13	PASS
		26965	841.5	27.51	21.27	6.24	≤13	PASS

6.5. Frequency Stability

LTE Band 26						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability(ppm)	Frequency Stability(ppm)	Verdict
BANDWIDTH	1.4MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	1.70	2.80	0.00203	0.00334	PASS
Extreme (50℃)		9.99	3.80	0.01194	0.00454	PASS
Extreme (40℃)		6.85	3.45	0.00819	0.00413	PASS
Extreme (30℃)		12.40	4.63	0.01483	0.00554	PASS
Extreme (20℃)		17.62	6.96	0.02106	0.00832	PASS
Extreme (10℃)		11.85	9.46	0.01417	0.01131	PASS
Extreme (0℃)		6.26	7.70	0.00748	0.00921	PASS
Extreme (-10℃)		6.83	17.37	0.00816	0.02076	PASS
Extreme (-20℃)		7.44	9.58	0.00889	0.01145	PASS
Extreme (-30℃)		9.66	2.56	0.01155	0.00306	PASS
25℃	LV	10.30	7.66	0.01231	0.00916	PASS
	HV	13.66	10.68	0.01633	0.01276	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability(ppm)	Frequency Stability(ppm)	Verdict
BANDWIDTH	3MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	8.01	6.34	0.00957	0.00758	PASS
Extreme (50℃)		10.34	4.95	0.01236	0.00592	PASS
Extreme (40℃)		11.58	4.76	0.01385	0.00569	PASS
Extreme (30℃)		1.47	3.43	0.00176	0.00411	PASS
Extreme (20℃)		12.13	10.60	0.01450	0.01268	PASS
Extreme (10℃)		9.31	3.98	0.01113	0.00475	PASS
Extreme (0℃)		9.72	7.50	0.01162	0.00897	PASS
Extreme (-10℃)		9.17	9.55	0.01096	0.01142	PASS
Extreme (-20℃)		4.98	6.97	0.00596	0.00833	PASS
Extreme (-30℃)		4.32	7.87	0.00517	0.00941	PASS
25℃	LV	9.51	9.05	0.01137	0.01082	PASS
	HV	3.21	7.20	0.00383	0.00861	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability(ppm)	Frequency Stability(ppm)	Verdict
BANDWIDTH	5MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	17.93	2.83	0.02143	0.00338	PASS
Extreme (50℃)		2.76	4.02	0.00330	0.00481	PASS
Extreme (40℃)		14.71	14.23	0.01758	0.01701	PASS



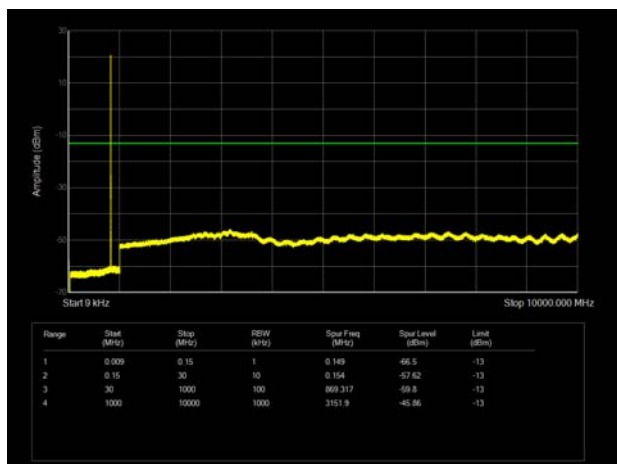
Extreme (30℃)		5.77	14.29	0.00690	0.01709	PASS
Extreme (20℃)		4.47	13.47	0.00534	0.01610	PASS
Extreme (10℃)		3.39	13.84	0.00406	0.01654	PASS
Extreme (0℃)		13.85	3.48	0.01656	0.00415	PASS
Extreme (-10℃)		9.69	8.30	0.01158	0.00993	PASS
Extreme (-20℃)		1.20	17.36	0.00144	0.02075	PASS
Extreme (-30℃)		8.78	1.36	0.01049	0.00162	PASS
25℃	LV	1.24	14.53	0.00148	0.01736	PASS
	HV	2.77	8.59	0.00332	0.01027	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability(ppm)	Frequency Stability(ppm)	Verdict
BANDWIDTH	10MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	14.86	13.64	0.01776	0.01630	PASS
Extreme (50℃)		1.21	4.47	0.00144	0.00534	PASS
Extreme (40℃)		5.33	2.81	0.00638	0.00336	PASS
Extreme (30℃)		6.60	14.01	0.00789	0.01674	PASS
Extreme (20℃)		17.49	10.38	0.02090	0.01241	PASS
Extreme (10℃)		4.16	6.90	0.00497	0.00825	PASS
Extreme (0℃)		17.04	9.35	0.02037	0.01118	PASS
Extreme (-10℃)		11.92	9.66	0.01425	0.01155	PASS
Extreme (-20℃)		11.69	15.03	0.01398	0.01797	PASS
Extreme (-30℃)		2.91	11.27	0.00348	0.01348	PASS
25℃	LV	6.99	2.65	0.00835	0.00316	PASS
	HV	5.14	16.63	0.00615	0.01988	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability(ppm)	Frequency Stability(ppm)	Verdict
BANDWIDTH	15MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	2.01	11.71	0.00241	0.01399	PASS
Extreme (50℃)		5.42	12.76	0.00648	0.01525	PASS
Extreme (40℃)		17.92	4.25	0.02142	0.00508	PASS
Extreme (30℃)		17.87	3.59	0.02136	0.00430	PASS
Extreme (20℃)		14.05	1.44	0.01680	0.00172	PASS
Extreme (10℃)		1.48	6.41	0.00177	0.00766	PASS
Extreme (0℃)		7.47	5.16	0.00893	0.00617	PASS
Extreme (-10℃)		4.04	3.03	0.00484	0.00363	PASS
Extreme (-20℃)		4.10	11.24	0.00490	0.01343	PASS
Extreme (-30℃)		7.79	14.60	0.00931	0.01746	PASS
25℃	LV	13.54	12.58	0.01619	0.01503	PASS
	HV	14.69	3.97	0.01756	0.00474	PASS

6.6. Spurious Emissions at Antenna Terminals

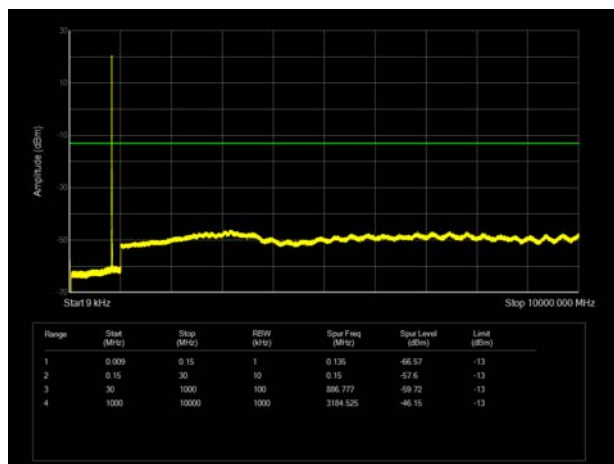
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

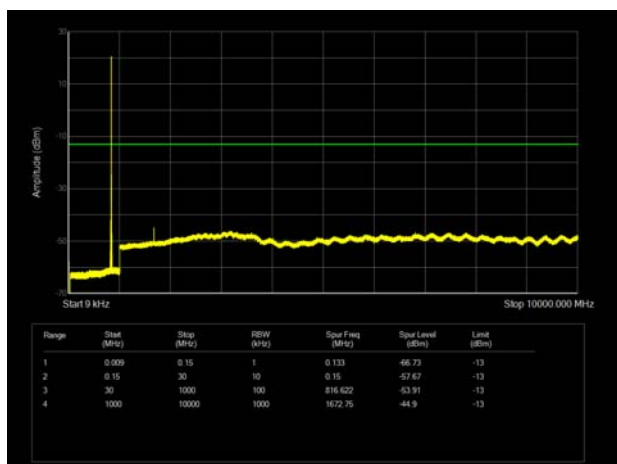
LTE Band 26 1.4MHz CH-Low 9kHz~10GHz



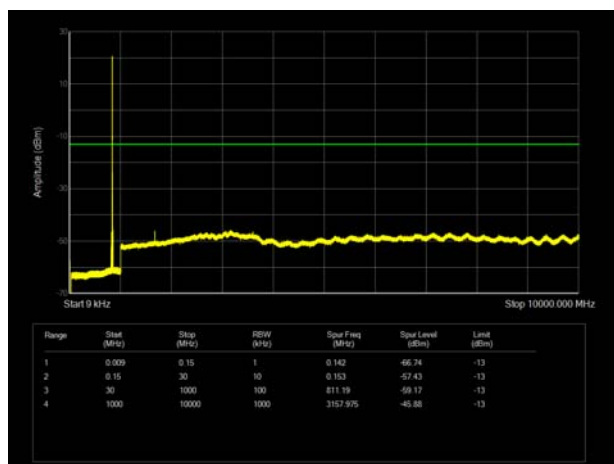
LTE Band 26 3MHz CH-Low 9kHz~10GHz



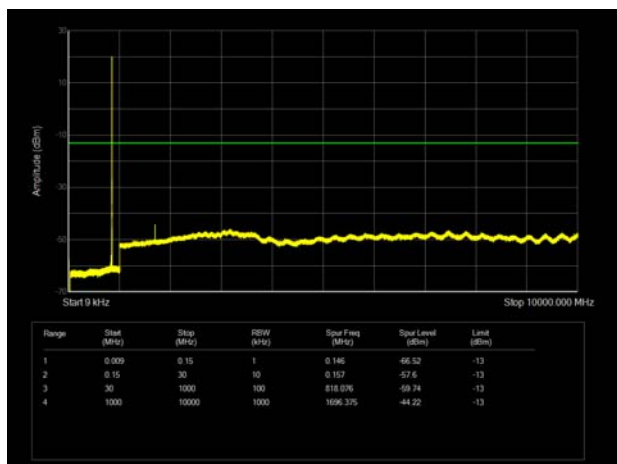
LTE Band 26 1.4MHz CH-Middle 9kHz~10GHz



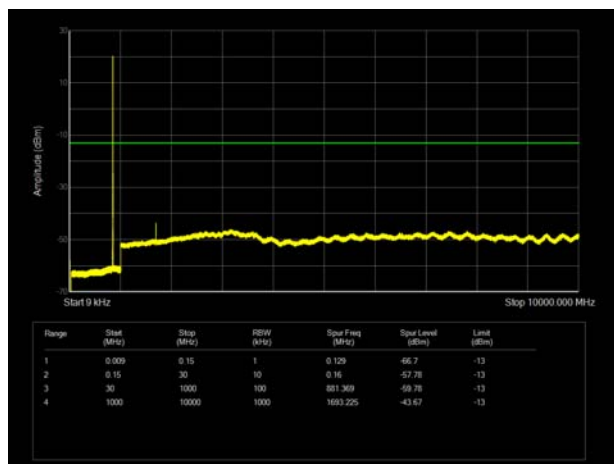
LTE Band 26 3MHz CH-Middle 9kHz~10GHz



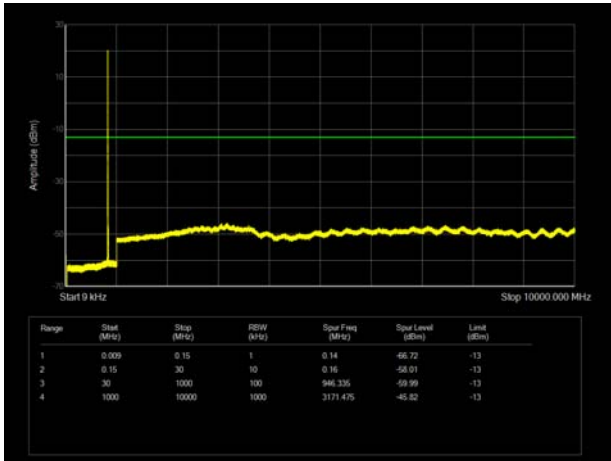
LTE Band 26 1.4MHz CH-High 9kHz~10GHz



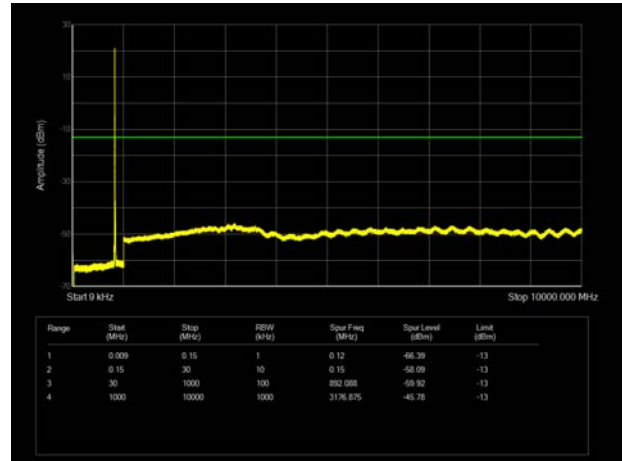
LTE Band 26 3MHz CH-High 9kHz~10GHz



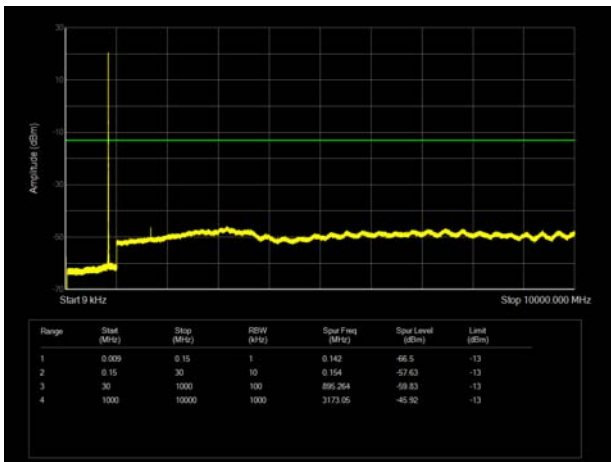
LTE Band 26 5MHz CH-Low 9kHz~10GHz



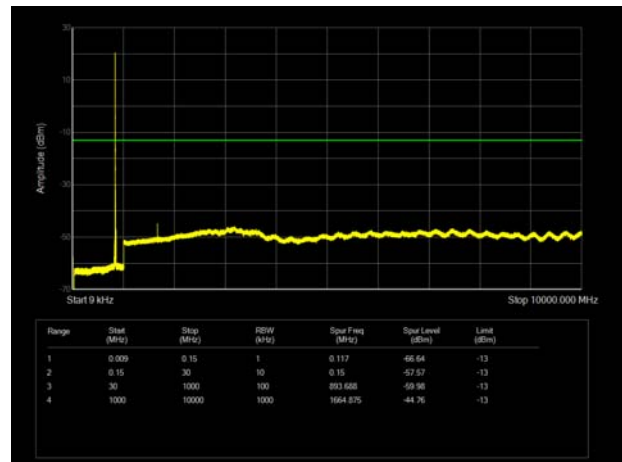
LTE Band 26 10MHz CH-Low 9kHz~10GHz



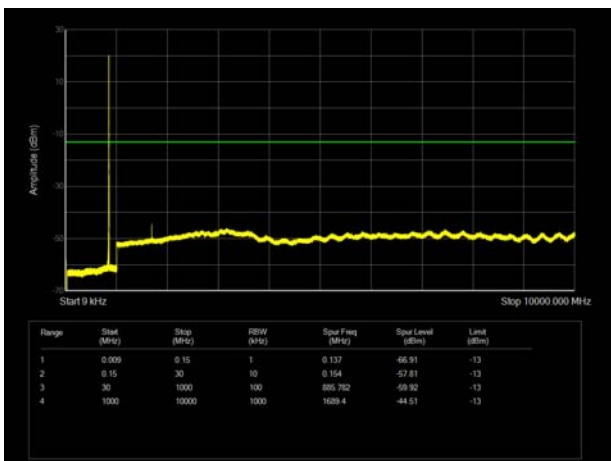
LTE Band 26 5MHz CH-Middle 9kHz~10GHz



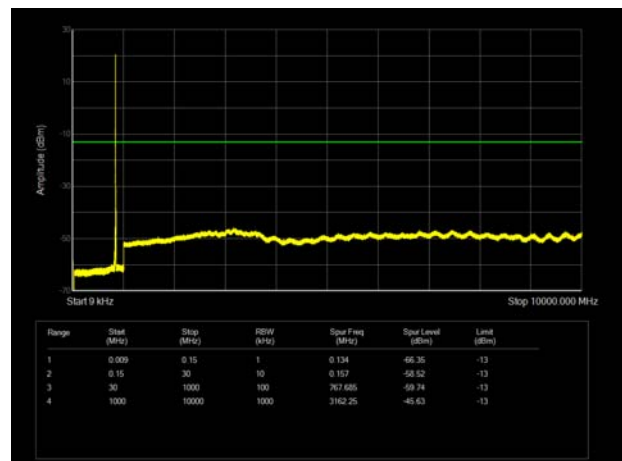
LTE Band 26 10MHz CH-Middle 9kHz~10GHz



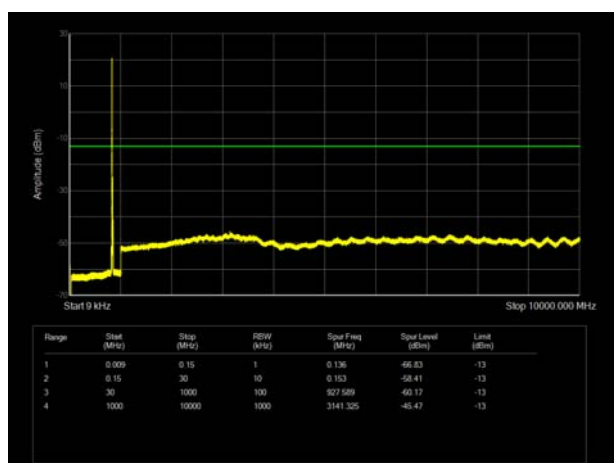
LTE Band 26 5MHz CH-High 9kHz~10GHz



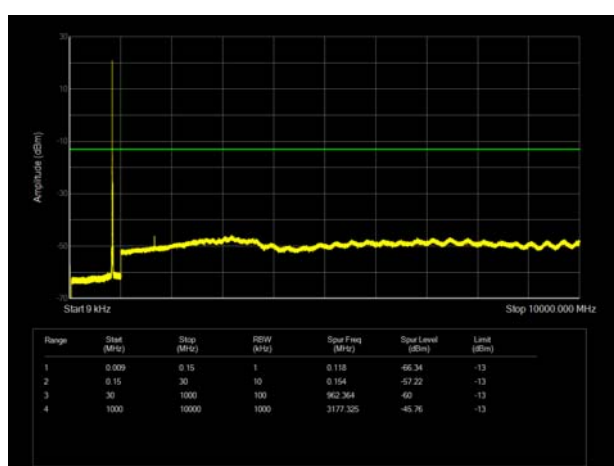
LTE Band 26 10MHz CH-High 9kHz~10GHz



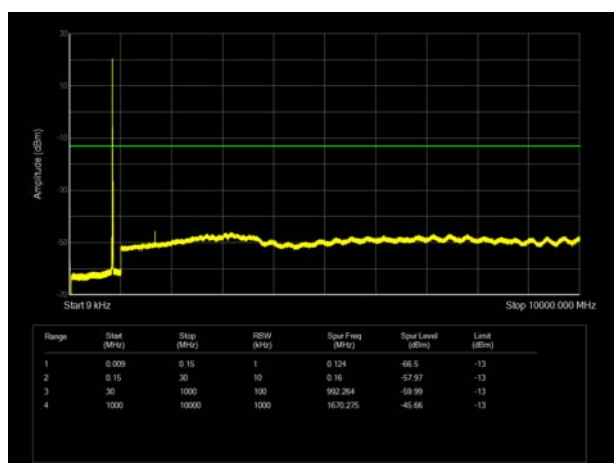
LTE Band 26 15MHz CH-Low 9kHz~10GHz



LTE Band 26 15MHz CH-Middle 9kHz~10GHz



LTE Band 26 15MHz CH-High 9kHz~10GHz



6.7. Radiated Spurious Emission

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

Low Antenna

LTE Band 26 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.00	-53.12	1.70	8.70	Horizontal	-48.27	-13.00	35.27	2
3	2509.50	-59.58	2.30	12.00	Horizontal	-52.03	-13.00	39.03	60
4	3346.00	-66.16	2.70	12.70	Horizontal	-58.31	-13.00	45.31	271
5	4182.50	-63.56	3.00	12.50	Horizontal	-56.21	-13.00	43.21	59
6	5019.00	-62.37	3.40	12.50	Horizontal	-55.42	-13.00	42.42	290
7	5855.50	-61.44	3.40	12.80	Horizontal	-54.19	-13.00	41.19	132
8	6692.00	-59.12	4.10	11.50	Horizontal	-53.87	-13.00	40.87	290
9	7528.50	-55.03	4.20	12.20	Horizontal	-49.18	-13.00	36.18	123
10	8365.00	-55.53	4.30	12.50	Horizontal	-49.48	-13.00	36.48	86

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 26 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.00	-54.15	1.70	8.70	Horizontal	-49.30	-13.00	36.30	0
3	2502.00	-61.56	2.30	12.00	Horizontal	-54.01	-13.00	41.01	48
4	3336.00	-66.45	2.70	12.70	Horizontal	-58.60	-13.00	45.60	301
5	4170.00	-62.88	3.00	12.50	Horizontal	-55.53	-13.00	42.53	192
6	5004.00	-60.82	3.40	12.50	Horizontal	-53.87	-13.00	40.87	85
7	5838.00	-60.70	3.40	12.80	Horizontal	-53.45	-13.00	40.45	202
8	6672.00	-58.79	4.10	11.50	Horizontal	-53.54	-13.00	40.54	139
9	7506.00	-55.74	4.20	12.20	Horizontal	-49.89	-13.00	36.89	156
10	8340.00	-55.36	4.30	12.50	Horizontal	-49.31	-13.00	36.31	130

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.



LTE Band 26 15MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1658.00	-55.98	1.70	8.70	Horizontal	-51.13	-13.00	38.13	7
3	2487.00	-58.27	2.30	12.00	Horizontal	-50.72	-13.00	37.72	53
4	3316.00	-66.49	2.70	12.70	Horizontal	-58.64	-13.00	45.64	0
5	4145.00	-63.29	3.00	12.50	Horizontal	-55.94	-13.00	42.94	315
6	4974.00	-61.87	3.40	12.50	Horizontal	-54.92	-13.00	41.92	117
7	5803.00	-60.97	3.40	12.80	Horizontal	-53.72	-13.00	40.72	30
8	6632.00	-58.92	4.10	11.50	Horizontal	-53.67	-13.00	40.67	162
9	7461.00	-55.71	4.20	12.20	Horizontal	-49.86	-13.00	36.86	135
10	8290.00	-55.75	4.30	12.50	Horizontal	-49.70	-13.00	36.70	58

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

**Upper Antenna**

LTE Band 26 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.00	-54.39	1.70	8.70	Horizontal	-49.54	-13.00	36.54	167
3	2509.50	-57.17	2.30	12.00	Horizontal	-49.62	-13.00	36.62	201
4	3346.00	-66.31	2.70	12.70	Horizontal	-58.46	-13.00	45.46	134
5	4182.50	-63.62	3.00	12.50	Horizontal	-56.27	-13.00	43.27	16
6	5019.00	-60.88	3.40	12.50	Horizontal	-53.93	-13.00	40.93	269
7	5855.50	-61.57	3.40	12.80	Horizontal	-54.32	-13.00	41.32	107
8	6692.00	-59.82	4.10	11.50	Horizontal	-54.57	-13.00	41.57	46
9	7528.50	-56.18	4.20	12.20	Horizontal	-50.33	-13.00	37.33	92
10	8365.00	-56.24	4.30	12.50	Horizontal	-50.19	-13.00	37.19	307

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 26 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.00	-52.23	1.70	8.70	Horizontal	-47.38	-13.00	34.38	139
3	2502.00	-60.18	2.30	12.00	Horizontal	-52.63	-13.00	39.63	94
4	3336.00	-65.60	2.70	12.70	Horizontal	-57.75	-13.00	44.75	24
5	4170.00	-62.64	3.00	12.50	Horizontal	-55.29	-13.00	42.29	314
6	5004.00	-60.65	3.40	12.50	Horizontal	-53.70	-13.00	40.70	263
7	5838.00	-61.08	3.40	12.80	Horizontal	-53.83	-13.00	40.83	158
8	6672.00	-59.14	4.10	11.50	Horizontal	-53.89	-13.00	40.89	94
9	7506.00	-54.97	4.20	12.20	Horizontal	-49.12	-13.00	36.12	53
10	8340.00	-55.02	4.30	12.50	Horizontal	-48.97	-13.00	35.97	141

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.



LTE Band 26 15MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1659.85	-57.51	1.70	8.70	Horizontal	-52.66	-13.00	39.66	209
3	2489.30	-60.81	2.30	12.00	Horizontal	-53.26	-13.00	40.26	128
4	3316.00	-65.99	2.70	12.70	Horizontal	-58.14	-13.00	45.14	194
5	4145.00	-63.46	3.00	12.50	Horizontal	-56.11	-13.00	43.11	18
6	4974.00	-61.43	3.40	12.50	Horizontal	-54.48	-13.00	41.48	62
7	5803.00	-60.92	3.40	12.80	Horizontal	-53.67	-13.00	40.67	209
8	6632.00	-60.49	4.10	11.50	Horizontal	-55.24	-13.00	42.24	138
9	7461.00	-56.06	4.20	12.20	Horizontal	-50.21	-13.00	37.21	51
10	8290.00	-55.61	4.30	12.50	Horizontal	-49.56	-13.00	36.56	34

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.



7. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Climatic Chamber	ESPEC	SU-242	93000506	2021-12-12	2022-12-11
Wireless Communication Tester	R&S	CMW500	150415	2022-05-14	2023-05-13
Spectrum Analyzer	Keysight	N9020A	MY50510203	2021-12-12	2022-12-11
Wireless communication tester	Agilent	E5515C	GB44400275	2021-12-12	2022-12-11
Spectrum Analyzer	R&S	FSV30	104028	2021-12-12	2022-12-11
Loop antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	1023	2020-05-05	2023-05-04
Horn Antenna	Schwarzbeck	BBHA 9120D	1594	2020-12-17	2023-12-16
Software	R&S	EMC32	10.35.10	/	/

*****END OF REPORT *****



ANNEX A: The EUT Appearance

The EUT Appearance is submitted separately.



ANNEX B: Test Setup Photos

The Test Setup Photos is submitted separately.



ANNEX C: Product Change Description (Variant 2)

The Product Change Description are submitted separately.