

# **TEST REPORT**

FCC LTE B5 Test for SC-54E Certification

APPLICANT SAMSUNG Electronics Co., Ltd.

REPORT NO. HCT-RF-2405-FC034-R1

DATE OF ISSUE May 29, 2024

> **Tested by** Jae Mun Do

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F-TP22-03(Rev.06)

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T E S T R E P O R T	REPORT NO. HCT-RF-2405-FC034-R1 DATE OF ISSUE May 29, 2024 Additional Model SCG29
Applicant	<b>SAMSUNG Electronics Co., Ltd.</b> 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Product Name Model Name	Mobile phone SC-54E
Date of Test	May 07, 2024 ~ May 20, 2024
Location of Test	■ Permanent Testing Lab □ On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi- do, Republic of Korea)
FCC ID	A3LSMF741JPN
FCC Classification	PCS Licensed Transmitter Held to Ear (PCE)
Test Standard Used	FCC Rule Part(s): §22
Test Results	PASS

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## **REVISION HISTORY**

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	May 24, 2024	Initial Release
1	May 29, 2024	Deleted the 256QAM

## Notice

#### Content

The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked \*.

Information provided by the applicant is marked \*\*.

Test results provided by external providers are marked \*\*\*.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).



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## **MEASUREMENT REPORT**

## **1. GENERAL INFORMATION**

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMF741JPN
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 22
EUT Type:	Mobile phone
Model(s):	SC-54E
Additional Model(s)	SCG29
	824.7 MHz – 848.3 MHz (LTE – Band 5 (1.4 MHz))
	825.5 MHz – 847.5 MHz (LTE – Band 5 (3 MHz))
Tx Frequency:	826.5 MHz – 846.5 MHz (LTE – Band 5 (5 MHz))
	829.0 MHz – 844.0 MHz (LTE – Band 5 (10 MHz))
Date(s) of Tests:	May 07, 2024 ~ May 20, 2024
Carial number	Radiated : R3CX30L0NDB
Serial number:	Conducted : R3CX30L0KYR



#### **1.1. MAXIMUM OUTPUT POWER**

Mode	Ty Fraguanay	Emission		ERP	
(MHz)	Tx Frequency (MHz)	Designator	Modulation	Max. Power (W)	Max. Power (dBm)
		1M10G7D	QPSK	0.074	18.69
LTE – Band5 (1.4)	824.7 - 848.3	1M10W7D	16QAM	0.061	17.87
		1M10W7D	64QAM	0.048	16.82
	825.5 - 847.5	2M71G7D	QPSK	0.075	18.77
LTE – Band5 (3)		2M71W7D	16QAM	0.062	17.92
		2M71W7D	64QAM	0.049	16.91
LTE – Band5 (5)	826.5 – 846.5	4M51G7D	QPSK	0.074	18.71
		4M53W7D	16QAM	0.062	17.91
		4M53W7D	64QAM	0.049	16.89
LTE – Band5 (10)	829.0 - 844.0 -	9M00G7D	QPSK	0.071	18.54
		9M02W7D	16QAM	0.059	17.74





## **2. INTRODUCTION**

#### **2.1. DESCRIPTION OF EUT**

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6. It also supports IEEE 802.11 a/b/g/n/ac/ax (20/40/80/160 MHz), Bluetooth(iPA, ePA), BT LE(iPA, ePA), NFC, WPT, WIFI 6E.

#### 2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

#### 2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74**, **Seoicheon-ro 578beon-gil**, **Majang-myeon**, **Icheon-si**, **Gyeonggi-do**, **17383**, **Rep. of KOREA**.





## **3. DESCRIPTION OF TESTS**

#### **3.1 TEST PROCEDURE**

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- N/A (See SAR Report)
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12



#### **3.2 RADIATED POWER**

#### **Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

#### **Test Settings**

- 1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
- 2. RBW = 1 -5% of the expected OBW, not to exceed 1 MHz
- 3. VBW  $\geq$  3 x RBW
- 4. Span = 1.5 times the OBW
- 5. No. of sweep points > 2 x span / RBW
- 6. Detector = RMS

7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".

8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.

- 9. Trace mode = trace averaging (RMS) over 100 sweeps
- 10. The trace was allowed to stabilize

#### Test Note

- 1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
- 2. A half wave dipole is then substituted in place of the EUT. For emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The power is calculated by the following formula;

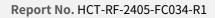
 $P_d (dBm) = Pg(dBm) - cable loss(dB) + antenna gain(dB)$ 

Where:  $P_d$  is the dipole equivalent power and  $P_g$  is the generator output power into the substitution antenna.

3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.

These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration

- 4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- 5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.





#### **3.3 RADIATED SPURIOUS EMISSIONS**

#### **Test Overview**

Radiated tests are performed in the Fully-anechoic chamber. Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

#### **Test Settings**

- 1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
- 2. VBW  $\geq$  3 x RBW
- 3. Span = 1.5 times the OBW
- 4. No. of sweep points > 2 x span / RBW
- 5. Detector = Peak
- 6. Trace mode = Max Hold
- 7. The trace was allowed to stabilize
- 8. Test channel : Low/ Middle/ High
- 9. Frequency range : We are performed all frequency to 10<sup>th</sup> harmonics from 9 kHz.

#### Test Note

- Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
- 2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.

The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data

3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The spurious emissions is calculated by the following formula;

Result  $_{(dBm)}$  = Pg  $_{(dBm)}$  - cable loss  $_{(dB)}$  + antenna gain  $_{(dBi)}$ 

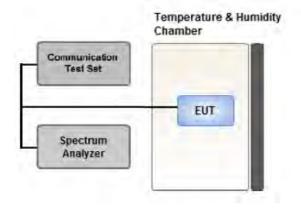
Where:  $\mathsf{P}_{\mathsf{g}}$  is the generator output power into the substitution antenna.

If the fundamental frequency is below 1 GHz, RF output power has been converted to EIRP.

EIRP (dBm) = ERP (dBm) + 2.15



#### 3.4 PEAK- TO- AVERAGE RATIO



#### Test setup

#### ① CCDF Procedure for PAPR

#### **Test Settings**

- 1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- 2. Set the number of counts to a value that stabilizes the measured CCDF curve;
- 3. Set the measurement interval as follows:
  - .- for continuous transmissions, set to 1 ms,
  - .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
- 4. Record the maximum PAPR level associated with a probability of 0.1 %.

#### ② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as as P  $_{\rm Pk}$ .

Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as P  $_{Avg}$ . Determine the P.A.R. from:

P.A.R  $_{(dB)} = P_{Pk(dBm)} - P_{Avg(dBm)}$  (P  $_{Avg} = Average Power + Duty cycle Factor)$ 





#### Test Settings(Peak Power)

The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW  $\geq 3 \times$  RBW.

- 1. Set the RBW  $\geq$  OBW.
- 2. Set VBW  $\geq$  3 × RBW.
- 3. Set span  $\geq 2 \times OBW$ .
- 4. Sweep time  $\geq 10 \times$  (number of points in sweep)  $\times$  (transmission symbol period).
- 5. Detector = peak.
- 6. Trace mode = max hold.
- 7. Allow trace to fully stabilize.
- 8. Use the peak marker function to determine the peak amplitude level.

#### Test Settings(Average Power)

- 1. Set span to  $2 \times to 3 \times the OBW$ .
- 2. Set RBW  $\geq$  OBW.
- 3. Set VBW  $\geq$  3 × RBW.
- 4. Set number of measurement points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ .
- 5. Sweep time:

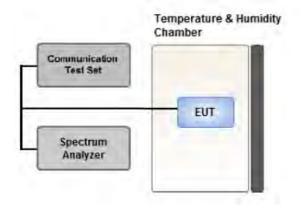
Set  $\geq$  [10 × (number of points in sweep) × (transmission period)] for single sweep

(automation-compatible) measurement. The transmission period is the (on + off) time.

- 6. Detector = power averaging (rms).
- 7. Set sweep trigger to "free run."
- 8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
- 9. Use the peak marker function to determine the maximum amplitude level.
- Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25 %.



## 3.5 OCCUPIED BANDWIDTH.



#### Test setup

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 power of a given emission.

The EUT makes a call to the communication simulator.

The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

#### **Test Settings**

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 %

occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.

- 2. RBW = 1 5% of the expected OBW
- 3. VBW  $\geq$  3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
  - 1 5% of the 99% occupied bandwidth observed in Step 7



## Communication Test Set EUT Spectrum Analyzer

#### 3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL

#### Test setup

#### **Test Overview**

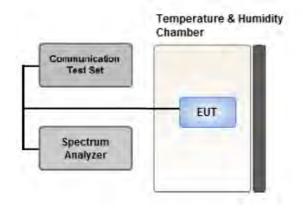
The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

#### **Test Settings**

- 1. RBW = 1 MHz
- 2. VBW  $\geq$  3 MHz
- 3. Detector = RMS
- 4. Trace Mode = trace average
- 5. Sweep time = auto
- 6. Number of points in sweep  $\geq 2 \times \text{Span} / \text{RBW}$



#### 3.7 BAND EDGE



#### Test setup

#### **Test Overview**

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

#### **Test Settings**

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot

- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW > 1 % of the emission bandwidth
- 4. VBW > 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points  $\geq 2 \times \text{Span/RBW}$
- 7. Trace mode = trace average
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize



#### **Test Notes**

According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of The authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

All measurements were done at 2 channels(low and high operational frequency range.) The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

Where Margin < 1 dB the emission level is either corrected by 10 log(1 MHz/ RB) or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.



## Communication Test Set EUT Spectrum Analyzer

## 3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

#### Test setup

#### **Test Overview**

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. The frequency stability of the transmitter is measured by:

- 1. Temperature:
  - The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.
- 2. Primary Supply Voltage:
  - .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
  - .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

#### **Test Settings**

- 1. The carrier frequency of the transmitter is measured at room temperature
- (20 °C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter.

Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.



## 3.9 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
   Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
   Worst case : Stand alone
- We were performed the RSE test in condition of co-location.
   Mode : Stand alone, Simultaneous transmission scenarios
   Worst case : Stand alone
- In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported. (Worst case : 3 MHz)
- The EUT was tested in three modes(Open, Half-folded, Closed), the worst case configuration results are reported.
- Worst case: Open mode.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.
- SC-54E & additional models were tested and the worst case results are reported.
- (Worst case : SC-54E)

[ Worst case ]						
Test Description	Modulation	RB size	RB offset	Axis		
Effective Radiated Power	QPSK, 16 QAM, 64 QAM,	See Section 8.1		х		
Radiated Spurious and Harmonic Emissions	QPSK	See See	ction 8.2	Х		



## 3.10 WORST CASE(CONDUCTED TEST)

- All modes of operation were investigated and the worst case configuration results are reported.

- SC-54E & additional models were tested and the worst case results are reported.
- (Worst case : SC-54E)

[ Worst case ]						
Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset	
	QPSK,		Mid	Full RB	0	
Occupied Bandwidth	16 QAM,	1.4, 3, 5, 10				
	64 QAM,					
	QPSK,					
Peak-To-Average Ratio	16 QAM,	1.4, 3, 5, 10	Mid	Full RB	0	
	64 QAM,					
	QPSK		Low	1	0	
		1.4	High	1	5	
		3	Low	1	0	
			High	1	14	
Band Edge		5	Low	1	0	
banu Euge			High	1	24	
		10	Low	1	0	
			High	1	49	
		1 4 2 5 10	Low,	Full RB	0	
		1.4, 3, 5, 10	High	FUILKB	U	
Spurious and Harmonic Emissions at			Low,			
Antenna Terminal	QPSK	1.4, 3, 5, 10	Mid,	1	0	
			High			



Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
RF Switching System	FBSR-02B(1.2G HPF+LNA)	T&M SYSTEM	F1L1	12/11/2024	Annual
RF Switching System	FBSR-02B(3.3G HPF+LNA)	T&M SYSTEM	F1L2	12/11/2024	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/17/2025	Annual
DC Power Supply	E3632A	Agilent	MY40010147	06/23/2024	Annual
Dipole Antenna	UHAP	Schwarzbeck	557	03/09/2025	Biennial
Dipole Antenna	UHAP	Schwarzbeck	558	03/09/2025	Biennial
Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	147	08/17/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1298	09/11/2025	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Signal Analyzer(10 Hz ~ 26.5 GHz)	N9020A	Agilent	MY52090906	04/19/2025	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/17/2025	Annual
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	REOHDE & SCHWARZ	100931	08/17/2024	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/10/2024	Annual
Loop Antenna(9 kHz ~ 30 MHz)	FMZB1513	Schwarzbeck	1513-333	03/07/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	895	09/16/2024	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	1135	09/16/2024	Biennial
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262094331	11/17/2024	Annual
Wideband Radio Communication Tester	MT8820C	Anritsu Corp.	6201026545	12/11/2024	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	06/22/2024	Annual
Signal Analyzer(5 Hz ~ 40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).



## **5. MEASUREMENT UNCERTAINTY**

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the  $U_{CISPR}$  measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.98 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.70 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.52 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.66 (Confidence level about 95 %, <i>k</i> =2)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, <i>k</i> =2)



## **6. SUMMARY OF TEST RESULTS**

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 22.917(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	See Note1
Peak- to- Average Ratio	§ 22.913(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 22.355	< 2.5 ppm	PASS

#### Note:

1. See SAR Report

#### 6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Effective Radiated Power	§ 22.913(a)(5)	< 7 Watts max. ERP	PASS
Radiated Spurious and	§ 2.1053,	<43 + 10log10 (P[Watts]) for	PASS
Harmonic Emissions	§ 22.917(a)	all out-of band emissions	PA33



## 7. SAMPLE CALCULATION

#### 7.1 ERP Sample Calculation

Ch./ Freq.		I. Measured Su		Substitute Ant. Gain		Pol.	ERP	
channel	Freq.(MHz)	Level (dBm)	Level (dBm)	(dBd)	C.L	POI.	w	dBm
128	824.20	-21.37	38.40	-10.61	0.95	Н	0.483	26.84

#### ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Substitut		Ant. Gain	<u> </u>	Pol.	EIRP		
channel	Freq.(MHz)	Level (dBm)	Level (dBm)	(dBi)	C.L	POI.	w	dBm	
20175	1,732.50	-15.75	18.45	9.90	1.76	Н	0.456	26.59	

EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

2) During the test, the turn table is rotated until the maximum signal is found.

3) Record the field strength meter's level.

- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.



7.3. Emission Designator

#### **GSM Emission Designator**

Emission Designator = 249KGXW GSM BW = 249 kHz G = Phase Modulation X = Cases not otherwise covered W = Combination (Audio/Data)

#### **EDGE Emission Designator**

Emission Designator = 249KG7W GSM BW = 249 kHz G = Phase Modulation 7 = Quantized/Digital Info W = Combination (Audio/Data)

#### WCDMA Emission Designator

Emission Designator = 4M17F9W WCDMA BW = 4.17 MHz F = Frequency Modulation 9 = Composite Digital Info W = Combination (Audio/Data)

#### **QPSK** Modulation

Emission Designator = 4M48G7D LTE BW = 4.48 MHz G = Phase Modulation 7 = Quantized/Digital Info D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand



## 8. TEST DATA

## **8.1 EFFECTIVE RADIATED POWER**

Freq	Mod/	Modulatio	Measured	Substit ute	Ant.			Limit	ERP		RB		
(MHz)	Bandwidth	n	Level (dBm)	Level (dBm)	Gain (dBd)	C.L	Pol	W	w	dBm	Size	Offset	
	QPSK	-32.29	28.61	-10.05	1.38	Н		0.052	17.18				
824.7		16-QAM	-33.20	27.70	-10.05	1.38	Н		0.042	16.27	1	3	
	64-QAM	-34.19	26.71	-10.05	1.38	Н				0.034	15.28		
		QPSK	-32.07	29.22	-10.05	1.40	Н	-	0.060	17.77			
836.5	LTE B5/ 1.4 MHz	16-QAM	-32.96	28.33	-10.05	1.40	Н	< 7.00	0.049	16.88	1	3	
		64-QAM	-33.98	27.31	-10.05	1.40	Н		0.039	15.86			
	-	QPSK	-31.47	30.15	-10.05	1.41	Н		0.074	18.69			
848.3		16-QAM	-32.29	29.33	-10.05	1.41	Н		0.061	17.87	1	0	
		64-QAM	-33.34	28.28	-10.05	1.41	Н		0.048	16.82			

Freq	Mod/	Modulatio	Measured	Substit ute	Ant.			Limit	EF	RP	RB	
(MHz)	Bandwidth	n	Level (dBm)	Level (dBm)	Gain (dBd)	C.L	Pol	W	w	dBm	Size	Offset
		QPSK	-32.35	28.56	-10.05	1.39	Н		0.052	17.12		
825.5		16-QAM	-33.16	27.75	-10.05	1.39	Н		0.043	16.31	1	0
	64-QAM	-34.11	26.80	-10.05	1.39	Н		0.034	15.36			
		QPSK	-32.08	29.21	-10.05	1.40	Н		0.060	17.76		
836.5	LTE B5/ 3 MHz	16-QAM	-32.91	28.38	-10.05	1.40	Н	< 7.00	0.049	16.93	1	14
	-	64-QAM	-33.89	27.40	-10.05	1.40	Н		0.039	15.95		
		QPSK	-31.40	30.23	-10.05	1.41	Н		0.075	18.77		
847.5		16-QAM	-32.25	29.38	-10.05	1.41	Н		17.92	1	0	
		64-QAM	-33.26	28.37	-10.05	1.41	Н		0.049	16.91		





Freq	Mod/	Modulatio	Measured	Substit ute	Ant.			Limit	EI	RP	RB	
(MHz)	Bandwidth	n	Level (dBm)	Level (dBm)	Gain (dBd)	C.L	Pol	w	w	dBm	Size	Offset
		QPSK	-32.30	28.60	-10.05	1.39	Н		0.052	17.16		
826.5		16-QAM	-33.00	27.90	-10.05	1.39	Н		0.044	16.46	1	0
		64-QAM	-34.12	26.78	-10.05	1.39	Н		0.034	15.34		
		QPSK	-32.04	29.25	-10.05	1.40	Н		0.060	17.80		
836.5	LTE B5/ 5 MHz	16-QAM	-32.90	28.39	-10.05	1.40	Н	< 7.00 0.049	0.049	16.94	1	13
	-	64-QAM	-33.85	27.44	-10.05	1.40	Н	-	0.040	15.99		
	-	QPSK	-31.51	30.17	-10.05	1.41	Н	-	0.074	18.71		
846.5		16-QAM	-32.31	29.37	-10.05	1.41	Н		17.91	1	24	
		64-QAM	-33.33	28.35	-10.05	1.41	Н		16.89			

Freq	Mod/	Modulatio	Measured	Substit ute	Ant.			Limit	ERP		RB	
(MHz)	Bandwidth	n	Level (dBm)	Level (dBm)	Gain (dBd)	C.L	Pol	W	w	dBm	Size	Offset
		QPSK	-32.34	28.68	-10.05	1.39	Н		0.053	17.24		
829.0		16-QAM	-33.14	27.88	-10.05	1.39	Н		0.044	16.44	1	0
	64-QAM	-34.16	26.86	-10.05	1.39	Н		0.035	15.42			
		QPSK	-31.91	29.38	-10.05	1.40	Н	0.062	17.93			
836.5	LTE B5/ 10 MHz	16-QAM	-32.72	28.57	-10.05	1.40	Н	< 7.00	0.052	17.12	1	49
		64-QAM	-33.78	27.51	-10.05	1.40	Н		0.040	16.06		
		QPSK	-31.48	30.00	-10.05	1.41	Н		0.071	18.54		
844.0		16-QAM	-32.28	29.20	-10.05	1.41	Н		17.74	1	25	
_		64-QAM	-33.35	28.13	-10.05	1.41	Н		0.046	16.67		



#### **8.2 RADIATED SPURIOUS EMISSIONS**

MODE:	LTE B5
MODULATION SIGNAL:	<u>3 MHz QPSK</u>
DISTANCE:	3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
	1 651.00	-57.55	9.20	-66.54	2.02	V	-59.36	-13.00
	2 476.50	-59.50	10.20	-63.19	2.47	V	-55.46	-13.00
20415 (825.5)	3 302.00	-61.24	10.90	-63.33	2.90	V	-55.33	-13.00
(020.0)	4 127.50	-60.01	11.30	-59.89	3.25	V	-51.84	-13.00
	4 953.00	-62.51	10.90	-57.86	3.59	V	-50.55	-13.00
	1 673.00	-59.26	9.20	-68.44	2.03	V	-61.27	-13.00
	2 509.50	-59.78	10.30	-64.31	2.50	V	-56.51	-13.00
20525 (836.5)	3 346.00	-61.50	10.95	-64.39	2.89	V	-56.33	-13.00
(030.3)	4 182.50	-62.35	11.30	-62.20	3.30	V	-54.20	-13.00
	5 019.00	-61.97	10.70	-56.91	3.55	V	-49.76	-13.00
	1 695.00	-58.18	9.40	-66.80	2.00	V	-59.40	-13.00
	2 542.50	-59.39	10.30	-64.22	2.52	V	-56.44	-13.00
20635 (847.5)	3 390.00	-61.80	11.00	-64.51	2.94	V	-56.45	-13.00
(011.0)	4 237.50	-61.89	11.20	-61.32	3.29	V	-53.41	-13.00
	5 085.00	-62.72	10.70	-57.65	3.63	V	-50.57	-13.00



## 8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	
				QPSK			4.77
	1.4 MHz		16-QAM	6		5.98	
			64-QAM 6.	_	6.49		
			QPSK	15		4.72	
	3 MHz		16-QAM			6.00	
-			64-QAM		6.47		
5		836.5	QPSK	25	0	4.83	
	5 MHz		16-QAM			5.81	
			64-QAM			6.42	
			QPSK			4.87	
	10 MHz		16-QAM	50		5.86	
			64-QAM			6.42	

#### Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 36 ~ 47.



## 8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)	
			QPSK			1.1002	
	1.4 MHz			16-QAM	6		1.0988
			64-QAM			1.1030	
		836.5	QPSK			2.7077	
	3 MHz		16-QAM	25		2.7064	
-			64-QAM			2.7076	
5			QPSK		0	4.5090	
	5 MHz		16-QAM			4.5311	
			64-QAM			4.5298	
			QPSK			8.9986	
	10 MHz		16-QAM	50		9.0227	
		_	64-QAM			9.0006	

## Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 48 ~ 59.



Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
		824.7	3.6810	27.976	-67.363	-39.387	
	1.4	836.5	3.7164	27.976	-67.148	-39.172	
		848.3	3.6830	27.976	-67.214	-39.238	
	3	825.5	3.6975	27.976	-67.167	-39.191	
		836.5	3.6850	27.976	-66.502	-38.526	
-		847.5	3.7039	27.976	-66.764	-38.788	12.00
5		826.5	3.6985	27.976	-66.896	-38.920	-13.00
	5	836.5	3.6955	27.976	-66.708	-38.732	
		846.5	3.7079	27.976	-67.135	-39.159	
		829.0	3.6975	27.976	-66.799	-38.823	
	10	836.5	3.6805	27.976	-66.703	-38.727	
		844.0	3.7164	27.976	-67.299	-39.323	

#### **8.5 CONDUCTED SPURIOUS EMISSIONS**

#### Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 60 ~ 71.

2. Conducted Spurious Emissions was Tested QPSK Modulation, Resource Block Size 1 and Resource Block Offset 0

3. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)

4. Factor (dB) = Cable Loss + Attenuator + Power Splitter

Factor [dB]
25.270
27.976
28.591
29.116
29.489
30.131

#### 8.6 BAND EDGE

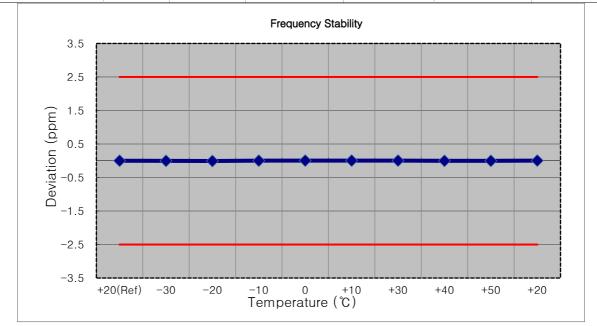
- Plots of the EUT's Band Edge are shown Page 72 ~ 95.



## 8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

MODE:	LTE B5
OPERATING FREQUENCY:	836,500,000 Hz
CHANNEL:	20525 (1.4 MHz)
REFERENCE VOLTAGE:	3.880 VDC
DEVIATION LIMIT:	$\pm$ 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100 %		+20(Ref)	836 500 003	0.0	0.000 000	0.000
100 %		-30	836 500 001	-2.6	0.000 000	-0.003
100 %	_	-20	836 499 997	-6.3	-0.000 001	-0.008
100 %		-10	836 500 006	2.3	0.000 000	0.003
100 %	3.880	0	836 500 007	3.3	0.000 000	0.004
100 %		+10	836 500 007	3.2	0.000 000	0.004
100 %		+30	836 500 007	3.3	0.000 000	0.004
100 %		+40	836 500 001	-2.1	0.000 000	-0.003
100 %		+50	836 500 001	-2.2	0.000 000	-0.003
Batt. Endpoint	3.300	+20	836 500 007	3.3	0.000 000	0.004

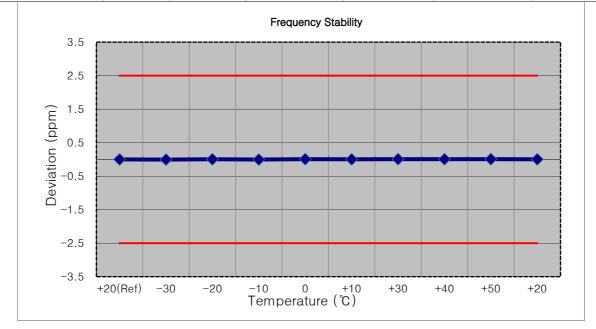


F-TP22-03 (Rev. 06)



MODE:	LTE B5
OPERATING FREQUENCY:	836,500,000 Hz
CHANNEL:	18900(3 MHz)
REFERENCE VOLTAGE:	3.880 VDC
DEVIATION LIMIT:	$\pm$ 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100 %		+20(Ref)	836 499 996	0.0	0.000 000	0.000
100 %		-30	836 499 992	-4.2	-0.000 001	-0.005
100 %	-	-20	836 500 000	3.8	0.000 000	0.005
100 %		-10	836 499 992	-3.3	0.000 000	-0.004
100 %	3.880	0	836 500 002	5.9	0.000 001	0.007
100 %	-	+10	836 499 998	2.4	0.000 000	0.003
100 %		+30	836 500 002	6.4	0.000 001	0.008
100 %		+40	836 500 001	5.1	0.000 001	0.006
100 %		+50	836 500 002	6.1	0.000 001	0.007
Batt. Endpoint	3.300	+20	836 499 998	2.7	0.000 000	0.003



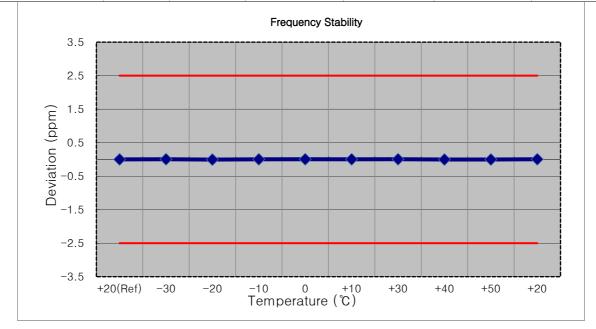
F-TP22-03 (Rev. 06)

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MODE:	LTE B5
OPERATING FREQUENCY:	836,500,000 Hz
CHANNEL:	18900(5 MHz)
REFERENCE VOLTAGE:	3.880 VDC
DEVIATION LIMIT:	$\pm$ 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	836 500 005	0.0	0.000 000	0.000
100 %		-30	836 500 010	4.4	0.000 001	0.005
100 %	-	-20	836 500 001	-4.2	-0.000 001	-0.005
100 %		-10	836 500 008	2.8	0.000 000	0.003
100 %	3.880	0	836 500 009	3.6	0.000 000	0.004
100 %	-	+10	836 500 008	2.3	0.000 000	0.003
100 %	-	+30	836 500 010	4.3	0.000 001	0.005
100 %		+40	836 500 003	-2.5	0.000 000	-0.003
100 %		+50	836 500 003	-2.8	0.000 000	-0.003
Batt. Endpoint	3.300	+20	836 500 009	4.0	0.000 000	0.005



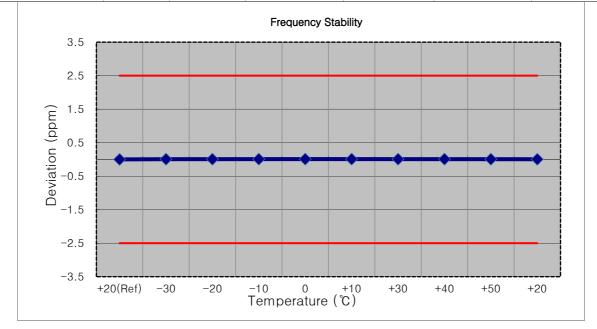
F-TP22-03 (Rev. 06)

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MODE:	LTE B5
OPERATING FREQUENCY:	836,500,000 Hz
CHANNEL:	18900(10 MHz)
REFERENCE VOLTAGE:	3.880 VDC
DEVIATION LIMIT:	$\pm$ 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	836 500 006	0.0	0.000 000	0.000
100 %		-30	836 500 012	5.4	0.000 001	0.006
100 %	3.880	-20	836 500 012	5.3	0.000 001	0.006
100 %		-10	836 500 013	6.9	0.000 001	0.008
100 %		0	836 500 014	7.4	0.000 001	0.009
100 %	-	+10	836 500 013	6.7	0.000 001	0.008
100 %		+30	836 500 013	6.4	0.000 001	0.008
100 %	-	+40	836 500 013	6.8	0.000 001	0.008
100 %		+50	836 500 012	5.4	0.000 001	0.006
Batt. Endpoint	3.300	+20	836 500 010	4.0	0.000 000	0.005

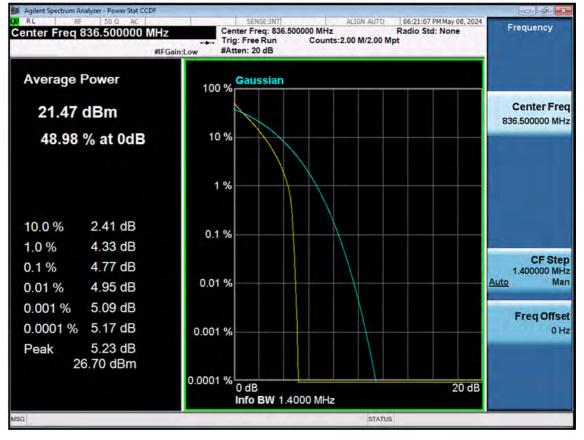




Report No. HCT-RF-2405-FC034-R1

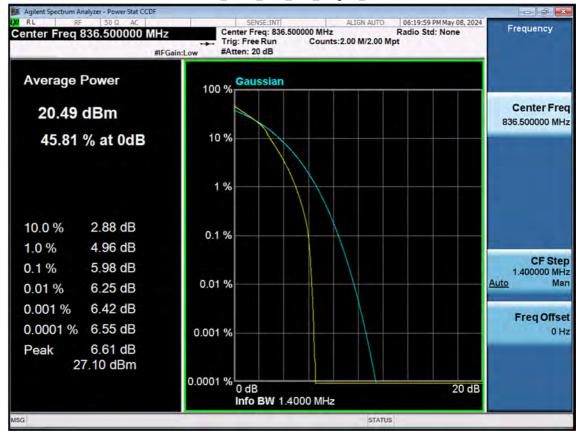
## 9. TEST PLOTS





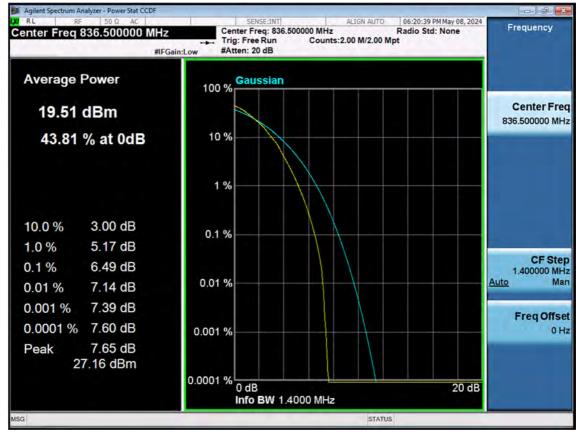
#### LTE B5\_1.4 M\_PAR\_Mid\_QPSK\_FullRB





#### LTE B5\_1.4 M\_PAR\_Mid\_16QAM\_FullRB





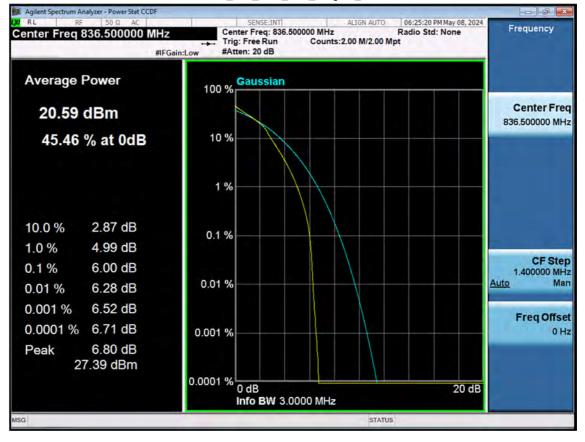
#### LTE B5\_1.4 M\_PAR\_Mid\_64QAM\_FullRB





#### LTE B5\_3 M\_PAR\_Mid\_QPSK\_FullRB





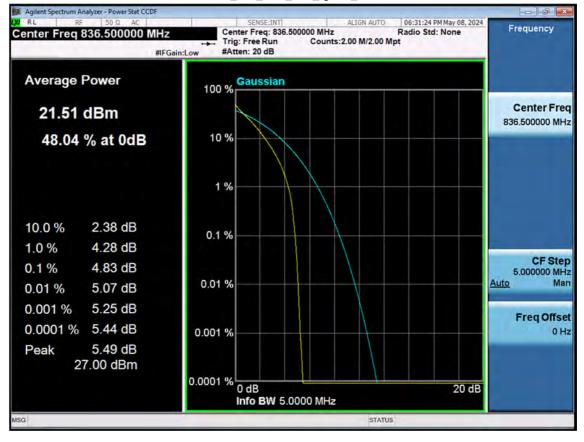
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#### LTE B5\_3 M\_PAR\_Mid\_64QAM\_FullRB





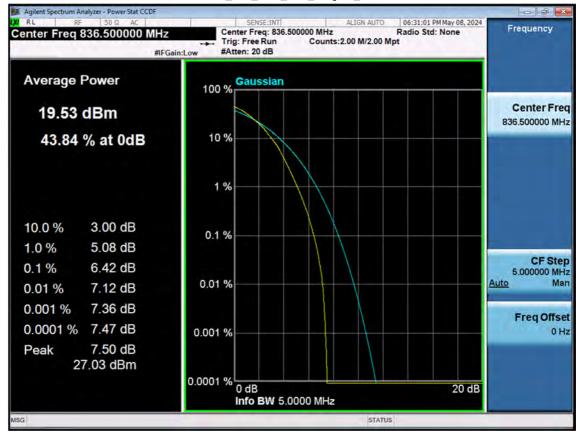
#### LTE B5\_5 M\_PAR\_Mid\_QPSK\_FullRB





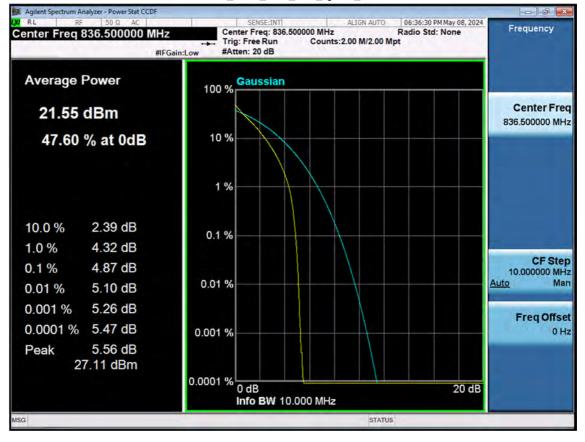
#### LTE B5\_5 M\_PAR\_Mid\_16QAM\_FullRB





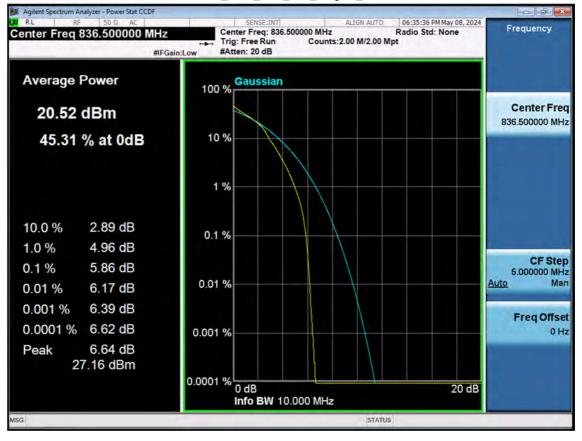
#### LTE B5\_5 M\_PAR\_Mid\_64QAM\_FullRB





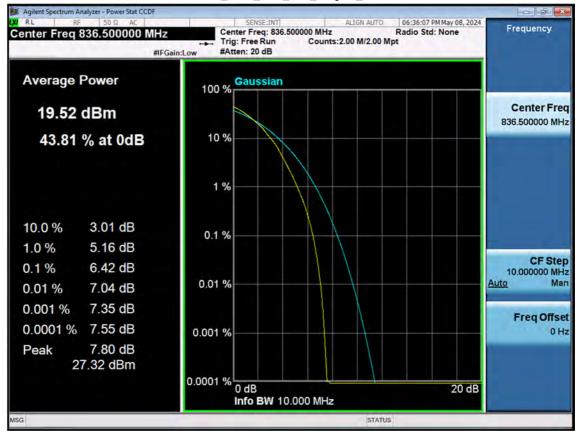
### LTE B5\_10 M\_PAR\_Mid\_QPSK\_FullRB





#### LTE B5\_10 M\_PAR\_Mid\_16QAM\_FullRB





#### LTE B5\_10 M\_PAR\_Mid\_64QAM\_FullRB



	um Analyzer - Occupied BW	(*************************************	I			1		
Center Fre	RF 50 Ω AC 2q 836.500000	MHz #IFGain:Low	SENSE:INT Center Freq: 836. Trig: Free Run #Atten: 20 dB	500000 MHz Avg Hold	ALIGN AUTO	Radio Std		Frequency
10 dB/div	Ref Offset 26.6 d Ref 40.00 dBr							
30.0 20.0								Center Fre 836.500000 MH
10.0		mm	man and a second	mary				
-10,0	and	×			Contra Martin			
20.0 30.0	mmm					mann	mon	
50.0 Center 836	6.5 MHz					Spa	n 2.8 MHz	CF Ste 280.000 kH Auto Ma
Res BW 27			#VBW 110	0 kHz			3.667 ms	
Occupi	ied Bandwidf 1.	<sup>th</sup> 1002 MH		Power	30.0	) dBm		Freq Offse 0 H
Transm	it Freq Error	3.051	Hz OBW	Power	99	9.00 %		
x dB Ba	ndwidth	1.363 N	IHz x dB		-26.	00 dB		
ISG					STATU	s		

### LTE B5\_1.4 M\_OBW\_Mid\_QPSK\_FullRB



Agilent Spectrum Analyzer - Occupied BW	1	I an actual		100.00		
RL         RF         50 Ω         AC           Center Freq 836.500000         PASS         PASS         PASS         PASS	-+- T	SENSE:INT enter Freq: 836.500000 M rig: Free Run Av Atten: 20 dB	ALIGN AUTO IHz g Hold: 500/500	Radio Std: I Radio Devic		Frequency
Ref Offset 26.6 d Ref 40.00 dBr						
.og 30,0 20,0						Center Free 836.500000 MH
10.0	forman	mmmmm	Mag			
0.00 10,0	no cat		hr wh			
20.0 30.0 40.0				nound	many	
Senter 836.5 MHz				Span	2.8 MHz	CF Stej 280.000 kH Auto Ma
tes BW 27 kHz		#VBW 110 kHz		Sweep 3		
Occupied Bandwid 1.	<sup>th</sup> 0988 MHz	Total Powe	er 29.3	2 dBm		Freq Offse 0 H
Transmit Freq Error x dB Bandwidth	530 Hz 1.359 MHz			9.00 % .00 dB		
SG			STATL	IS		

### LTE B5\_1.4 M\_OBW\_Mid\_16QAM\_FullRB



Agilent Spectrum Analyzer - C		I measure manual			Las parts		
RL RF 50 Center Freq 836.5 PASS	000000 MHz #IFGain:Low	Center Freq: 836.6 Trig: Free Run #Atten: 20 dB	500000 MHz Avg Hold	ALIGN AUTO	Radio Sto	C 94545	Frequency
	et 26.6 dB .00 dBm			·			
30.0 20.0							Center Free 836.500000 MH
10,0	, mmm	an warden and a second	mann				
10,0	and			No the contraction of the contra			
20.0 30.0 40.0					Marine	And marked	
50 0 Center 836.5 MHz					Spa	n 2.8 MHz	CF Stej 280.000 kH Auto Ma
Res BW 27 kHz		#VBW 110	) kHz			3.667 ms	
Occupied Ban	dwidth 1.1030 M		Power	28.1	dBm		Freq Offse 0 H
Transmit Freq E x dB Bandwidth			Power		0.00 % 00 dB		
	1.5051						
SG				STATU	S		

### LTE B5\_1.4 M\_OBW\_Mid\_64QAM\_FullRB



Agilent Spectrum Anal RL RF Center Freq 83	50 Q AC 36.500000 MI	HZ	SENSE:IN Center Freq: 8 Trig: Free Run #Atten: 20 dB	36.500000 MHz	ALIGN AUTO	Radio Sto	PM May 08, 2024 d: None vice: BTS	Frequency
10 dB/div Re	f Offset 26.6 dB f 40.00 dBm							
20.0								Center Fre 836.500000 MH
0.00	/	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm	and your and a second	1			
10,0 20,0 30,0 manh	name					www	Mang	
50.0 Center 836.5 M #Res BW 62 kH			#VBW 3	240 kHz			oan 6 MHz 1.533 ms	CF Ste 600.000 kH <u>Auto</u> Ma
	Bandwidth	077 MH	To	tal Power	30.	2 dBm		Freq Offse 0 H
Transmit Fre x dB Bandw		6.921 ki 3.051 Mi		W Power B		9.00 % .00 dB		
ISG					STATL	IS		

### LTE B5\_3 M\_OBW\_Mid\_QPSK\_FullRB



Agilent Spectrum Analyzer - Occupied BW	1		_		1			- 6 ×
X RL RF 50 Ω AC Center Freq 836.500000 M PASS	//Hz #IFGain:Low	SENSE:INT Center Freq: 83 Trig: Free Run #Atten: 20 dB		ALIGN AUTO	Radio Sto	PM May 08, 2024 d: None vice: BTS	Fre	quency
Ref Offset 26.6 dE 10 dB/div Ref 40.00 dBm Log								
30.0 20.0								enter Fred 500000 MH:
10.0	mm	mhnim	mmm	m				
0.00 -10,0				h				
20.0 30.0 porten marine					mon	mm		
40.0 50.0								CF Step
Center  836.5 MHz #Res BW  62 kHz		#VBW 2	40 kHz			oan 6 MHz 1.533 ms	Auto	Mar
Occupied Bandwidt	h 7064 MH		al Power	29.3	3 dBm		F	req Offsel 0 Hz
Transmit Freq Error	6.310 k		V Power		9.00 %			
x dB Bandwidth	3.071 M	Hz x dE	3	-26.	00 dB			
ISG				STATU	s			

### LTE B5\_3 M\_OBW\_Mid\_16QAM\_FullRB



Agilent Spectrum Analyzer - 0			e wel		Ter ar ar		
Center Freq 836.50	Ω AC DOOOOO MHz #IFGain:Low			ALIGN AU Iz Hold: 500/500	Radio St	PM May 08, 2024 d: None evice: BTS	Frequency
	et 26.6 dB 00 dBm						
30.0 20.0							Center Free 836.500000 MH
10.0	mm	mmm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm			
10,0	1			- \ \ \			
20.0 30.0 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	W				puteral	manna	
50.0							CF Step 600.000 kH
Center 836.5 MHz #Res BW 62 kHz		#VBV	V 240 kHz			pan 6 MHz 1.533 ms	
Occupied Ban	dwidth 2.7076 N		Total Power	2	8.2 dBm		Freq Offset 0 Ha
Transmit Freq E			OBW Power		99.00 %		
x dB Bandwidth	3.041	MHz	k dB	-2	26.00 dB		
ISG				ST	ATUS		

### LTE B5\_3 M\_OBW\_Mid\_64QAM\_FullRB



Agilent Spectrum Analyzer - Occu		SENSE	vaire		00001017.00	M May 08, 2024	
Center Freq 836.500	000 MHz		836.500000 MHz un Avg Hol	ALIGN AUTO	Radio Std: Radio Devi	None	Frequency
Ref Offset 10 dB/div Ref 40.0							
30.0 20.0							Center Free 836.500000 MH
10,0	- monon	mmm	mmmm				
-10,0				- h			
20.0 30.0 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	man	M	
40.0						mann	
SO 0 Center 836.5 MHz					Sna	n 10 MHz	CF Ster 1.000000 MH:
Res BW 100 kHz		#VBW	390 kHz			ep 1 ms	<u>Auto</u> Mar
Occupied Band	width 4.5090 M		otal Power	29.9	dBm		Freq Offset 0 Hz
Transmit Freq Err			BW Power	00	.00 %		
x dB Bandwidth	5.116		dB		00 dB		
ISG				STATUS	è		<u>.</u>

# LTE B5\_5 M\_OBW\_Mid\_QPSK\_FullRB



Agilent Spectrum Analyzer - Occupied		SENSE:INT	Y	ALIGN AUTO	06-20-22	DMM	
Center Freq 836.50000		Center Freq: 836	5.500000 MHz Avg Hold		Radio Sto	PM May 08, 2024 d: None vice: BTS	Frequency
Ref Offset 26. 0 dB/div Ref 40.00 d							
30.0 20.0							Center Fre 836.500000 MH
10.0			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m			
0.00	1			- to			
20.0 20.0 20.0 20.0					m	munanan	
Senter 836.5 MHz					Spa	an 10 MHz	CF Ste 1.000000 MH Auto Ma
Res BW 100 kHz		#VBW 39	90 kHz			eep 1 ms	-
Occupied Bandwi	idth 4.5311 MI		I Power	29.2	2 dBm		Freq Offse 0 H
Transmit Freq Error x dB Bandwidth	15.609   5.214 N		V Power		9.00 % .00 dB		
SG				STATU	s		

### LTE B5\_5 M\_OBW\_Mid\_16QAM\_FullRB



Agilent Spectrum Analyzer - Occupied BV	V	I second				
RL RF 50 Ω AC Center Freq 836.500000 PASS	MHz #IFGain:Low	SENSE:INT Center Freq: 836.50 Trig: Free Run #Atten: 20 dB		Radio Std:		Frequency
Ref Offset 26.6 d 10 dB/div Ref 40.00 dB						
20.0						Center Fred 836.500000 MHz
10.0	mm	mmm				
-10,0	<i>f</i>			A.		
-20.0 -30.0				Manne	mmm	
50.0 Center 836.5 MHz				Spar	n 10 MHz 🗚	CF Step 1.000000 MH:
Res BW 100 kHz		#VBW 3901	kHz		ep 1 ms	<u>iuto</u> war
Occupied Bandwid	<sup>th</sup> .5298 MI	Total F <b>HZ</b>	ower	28.4 dBm		Freq Offset 0 Hz
Transmit Freq Error	15.419	KHz OBW P	ower	99.00 %		
x dB Bandwidth	5.105 N	IHz x dB		-26.00 dB		
ISG				STATUS		

### LTE B5\_5 M\_OBW\_Mid\_64QAM\_FullRB



	um Analyzer - Occupied BV	V					1		- 0 ×
Center Fre	RF 50 Ω AC 2q 836.500000	MHz #IFGain:Low	Center Trig: F	SENSE:INT Freq: 836.500 Free Run 1: 20 dB	0000 MHz Avg Hold	ALIGN AUTO	Radio Std		Frequency
10 dB/div Log	Ref Offset 26.6 o Ref 40.00 dB								
30.0 20.0									Center Freq 836.500000 MHz
10,0		provisionant	Monion	mont	without	winner I			
-10,0		/				Y.			
	www.www.aw						www.	mahruna	
-40.0									CF Step 2.000000 MHz
Center 836 #Res BW 2			#	VBW 820 k	Hz		Spa Swe	n 20 MHz ep 1 ms	<u>Auto</u> Man
Occupi	ied Bandwid 8	<sup>th</sup> .9986 MI	Hz	Total P	ower	29.	9 dBm		Freq Offset 0 Hz
	it Freq Error	24.113		OBW P	ower		9.00 %		
x dB Ba	ndwidth	9.953 N	lHz	x dB		-26	.00 dB		
ISG						STAT	JS		

### LTE B5\_10 M\_OBW\_Mid\_QPSK\_FullRB



Agilent Spectr	um Analyzer - Occupied		-	SENSE:INT		ALIGN AUTO	06:25:201	PM May 08, 2024	
1.11	eq 836.50000		. Trig: F	Freq: 836.500 Free Run : 20 dB		d: 500/500	Radio Std	I: None	Frequency
10 dB/div Log	Ref Offset 26.6 Ref 40.00 di								
30,0 20.0									Center Free 836.500000 MH
10.0		mmm	mmelwh	- stub-hunn	Mar Mallow Low	my			
0.00 10,0		/							
20.0 30.0 <b>"///</b> w/ 40.0	wannonana					M	manna	Annon	
50.0									CF Ster 2.000000 MH
Res BW			#	VBW 820 H	kHz			an 20 MHz eep 1 ms	<u>Auto</u> Mar
Occup	ied Bandwig	dth 9.0227 MI	Ηz	Total P	ower	28.9	9 dBm		Freq Offse 0 H
Transm	it Freq Error	571	Hz	OBW P	ower	99	9.00 %		
x dB Ba	indwidth	10.02 N	IHz	x dB		-26	.00 dB		
SG						STATU	S		

### LTE B5\_10 M\_OBW\_Mid\_16QAM\_FullRB



Agilent Spectrum Analyzer - Occup					
RL RF 50Ω Center Freq 836.500 PASS	AC 000 MHz #IFGain:Low	SENSE:INT Center Freq: 836.500000 MH Trig: Free Run Avg #Atten: 20 dB	ALIGN AUTO Iz Hold: 500/500	06:35:52 PM May 08, 20 Radio Std: None Radio Device: BTS	Frequency
10 dB/div Ref 0ffset 2					
30.0 20.0					Center Freq 836.500000 MHz
10,0	Janen	Mannana	mmun		
-10.0 -20.0 -30.0 physeumon/pmon -40.0	part -		- And	anhtennessen	Me
50.0 Center 836.5 MHz #Res BW 200 kHz		#VBW 820 kHz		Span 20 Mł Sweep 1 m	
Occupied Bandy	width 9.0006 MI	Total Power	28.	0 dBm	Freq Offsel 0 Hz
Transmit Freq Erro x dB Bandwidth	or 14.714   9.980 N			9.00 % .00 dB	
MSG			STATL	IS	

### LTE B5\_10 M\_OBW\_Mid\_64QAM\_FullRB



Agilent Spectrum Analyzer - Swept SA					- 5 ×
RL RF 50 Ω AC Center Freq 5.01500000	0 GHz PNO: Fast → IFGain:Low	Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	06:19:31 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
0 dB/div Ref 10.00 dBm	I Gam. Low		MI	kr1 3.681 0 GHz -67.363 dBm	Auto Tun
-og 0.00 ↓0.0 20.0					Center Fre 5.015000000 GH
40.0 50.0					Start Fre 30.000000 MH
50.0 70.0 50.0			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	RMS	Stop Fre 10.000000000 GH
Res BW 1.0 MHz		V 3.0 MHz	Sweep 1	Stop 10.000 GHz 7.33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
	3.681 0 GHz 825.1 MHz	-67.363 dBm -5.011 dBm		E E	Freq Offse 0 H
3G		m	STATU	S	

# LTE B5\_1.4 M\_Conducted Spurious(30 M-10 G)\_Low\_QPSK\_1RB



Agilent Spec	ctrum Analyzer - Swept SA RF 50 Q AQ	1 1	SENSE:INT	ALIGN AUTO	06:21:29 PM May 08, 2024	
	req 5.0150000		and a state	#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
0 dB/div	Ref 10.00 dBn	n		M	r1 3.716 4 GHz -67.148 dBm	Auto Tun
0.00 10.0	2					Center Fre 5.015000000 GH
90.0 90.0 90.0						Start Fre 30.000000 MH
20.0 70.0 30.0					FMS	Stop Fre 10.000000000 GF
tart 30 M Res BW	1.0 MHz		/ 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
1 N 1 2 N 1 3 4 5 5 6 7 9 9 9 9	f	X 3.716 4 GHz 836.6 MHz	-67.148 dBm -4.832 dBm	FUNCTION WIDTH		Freq Offse 0 H
G			m	STATU	5	

# LTE B5\_1.4 M\_Conducted Spurious(30 M-10 G)\_Mid\_QPSK\_1RB



Agilent Spect	RF 50 Q AC		SENSE:INT	ALIGN AUTO	06:23:28 PM May 08, 2024	
	req 5.01500000	PNO: Fast H		#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
0 dB/div	Ref 10.00 dBm			M	r1 3.683 0 GHz -67.214 dBm	Auto Tun
0.00 10.0 20 0						Center Fre 5.015000000 GH
40.0 50.0						Start Fre 30.000000 MH
20.0 70.0 80.0					FMS	Stop Fre 10.000000000 GF
	1.0 MHz	#VBN	V 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
MKR MODE TR 1 N 1 2 N 1 3 4 5 6	f 3	.683 0 GHz 849.5 MHz	Y F -67.214 dBm -5.222 dBm		FUNCTION VALUE	Freq Offso 0 H
7 8 9 10 11			m			
SG				STATU	5	

# LTE B5\_1.4 M\_Conducted Spurious(30 M-10 G)\_High\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept SA					- 5 ×
enter Freq 5.01500000	0 GHz PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	ALIGN / #Avg Type: RM		Frequency
0 dB/div Ref 10.00 dBm	II Gain.Low			Mkr1 3.697 5 GHz -67.167 dBm	Auto Tune
• • 9 0.00 10.0 20.0					Center Fre 5.015000000 GH
40.0					Start Free 30.000000 MH
50.0 70.0 80.0				RMS	Stop Free 10.000000000 GH
Start 30 MHz Res BW 1.0 MHz		V 3.0 MHz		Stop 10.000 GHz 17.33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
	3.697 5 GHz 824.6 MHz	-67.167 dBm -4.577 dBm	Ponenton		Freq Offse 0 H
a		m		STATUS	

# LTE B5\_3 M\_Conducted Spurious(30 M-10 G)\_Low\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept S					
RL RF 50 Ω Center Freq 5.015000		Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	06:26:40 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
0 dB/div Ref 10.00 dB			MI	kr1 3.685 0 GHz -66.502 dBm	Auto Tune
					Center Free 5.015000000 GH
40.0					Start Free 30.000000 MH
60.0 70.0 80.0			~~~~~	RMS	Stop Free 10.000000000 GH
itart 30 MHz Res BW 1.0 MHz	#VB\	V 3.0 MHz	Sweep 1	Stop 10.000 GHz 7.33 ms (20001 pts)	CF Ste 997.000000 MH <u>Auto</u> Ma
N         1         N         1         F           2         N         1         f         3           3         1         f         5         5           6         6         6         7         6           9         9         1         1         1           10         1         1         1         1	3.685 0 GHz 836.1 MHz	-66.502 dBm -5.079 dBm		FUNCTION VALUE	Freq Offse 0 H
5G		-m-	STATU	S	

### LTE B5\_3 M\_Conducted Spurious(30 M-10 G)\_Mid\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept SA           RL         RF         50 Ω         AC		SENSE:INT	ALIGN AUTO	06:28:40 PM May 08, 2024	
enter Freq 5.01500000	PNO: Fast ↔ IFGain:Low	and a state	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWW DET A A A A A A	Frequency
dB/div Ref 10.00 dBm			M	(r1 3.703 9 GHz -66.764 dBm	Auto Tune
2 00 00 00 00					Center Fre 5.015000000 GH
0					Start Fre 30,000000 MH
0				RMS	Stop Fre 10.000000000 GH
art 30 MHz tes BW 1.0 MHz	#VBW	/ 3.0 MHz		Stop 10.000 GHz 7.33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
2 N 1 f 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	.703 9 GHz 849.5 MHz	Y FU -66.764 dBm -4.154 dBm	FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
1 I			STATU	s	

# LTE B5\_3 M\_Conducted Spurious(30 M-10 G)\_High\_QPSK\_1RB

F-TP22-03 (Rev. 06)



Agilent Spectrum Analyzer - Sv					- 6 🛛
RL RF 50 Center Freq 5.0150	Ω AC DOOOOO GHz PNO: Fast • IFGain:Low	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:30:07 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
10 dB/div Ref 10.00	) dBm		M	r1 3.698 5 GHz -66.896 dBm	Auto Tun
-og 0.00 22 10.0 20.0					Center Fre 5.015000000 GH
40.0					Start Fre 30,000000 MH
50.0 70.0 80.0		1		RMS	Stop Fre 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz	#VB	W 3.0 MHz	Sweep 17	Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH <u>Auto</u> Ma
1         N         1         f           2         N         1         f           3         -         -         -           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           9         -         -         -	3.698 5 GHz 825.1 MHz	-66.896 dBm -5.863 dBm			Freq Offse 0 H
5G			STATU	3	

# LTE B5\_5 M\_Conducted Spurious(30 M-10 G)\_Low\_QPSK\_1RB



RL RL	RF 50 Q AC		SENSE:INT	ALIGN AUTO	06:31:47 PM May 08, 2024	
	req 5.0150000			#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A A	Frequency
0 dB/div	Ref 10.00 dBr	n		M	(r1 3.695 5 GHz -66.708 dBm	Auto Tun
0.00 10.0	2					Center Fre 5.015000000 GH
90.0 90.0 90.0						Start Fre 30.000000 MH
0.0 0.0					RMS	Stop Fre 10.000000000 GF
	1.0 MHz		V 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
MKR MODE TF 1 N 1 2 N 1 3 4 4 5 5 5 6 7 8 9 9 9 10 1 1	f	X 3.695 5 GHz 835.1 MHz	Y FL -66.708 dBm -5.106 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
SG			III	STATU	s	

# LTE B5\_5 M\_Conducted Spurious(30 M-10 G)\_Mid\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept SA		SENSE:INT	ALIGN AUTO	06:33:47 PM May 08, 2024	
enter Freq 5.0150000			#Avg Type: RMS	TRACE 2 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	Frequency
0 dB/div Ref 10.00 dB	m		MI	(r1 3.707 9 GHz -67.135 dBm	Auto Tun
					Center Fre 5.015000000 GH
40.0					Start Fre 30.000000 MH
50.0 70.0 50.0				RMS	Stop Fre 10.000000000 GF
tart 30 MHz Res BW 1.0 MHz	#VB	W 3.0 MHz	Sweep 17	Stop 10.000 GHz 7.33 ms (20001 pts)	CF Ste 997.000000 Mi <u>Auto</u> Mi
Inc.         Inc. <th< td=""><td>3.707 9 GHz 849.5 MHz</td><td>-67.135 dBm -4.335 dBm</td><td></td><td></td><td>Freq Offs 0 F</td></th<>	3.707 9 GHz 849.5 MHz	-67.135 dBm -4.335 dBm			Freq Offs 0 F
		m		Y	
G			STATU	S	

# LTE B5\_5 M\_Conducted Spurious(30 M-10 G)\_High\_QPSK\_1RB



RL Agilent Spec	RF	50 Ω AC	1	SENSE:IN	UT I	ALIGN AUTO	06:35:15 PM Ma	08.2024	
enter F	req 5.0	1500000	PNO: Fast HIFGain:Low		#Avg	g Type: RMS	TRACE		Frequency
0 dB/div	Ref 1	0.00 dBm				M	kr1 3.697 5 -66.799	GHz dBm	Auto Tun
0.00 10.0 20.0	<b>∂</b> <sup>2</sup>								Center Fre 5.015000000 GH
90.0 90.0 90.0									Start Fre 30.000000 MH
80.0 70.0 80.0		ipakan ang kalang kala						RMS	Stop Fre 10.00000000 GF
tart 30 M Res BW	1.0 MH		#VBI	₩ 3.0 MHz			Stop 10.00 7.33 ms (2000	01 pts)	CF Ste 997.000000 MH Auto Ma
KKR MODE TF 1 N 1 2 N 1 3 4 4 5 5 6 7 8 9 9 10 11		X	8.697 5 GHz 825.1 MHz	Υ -66.799 dBm -4.724 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION V		Freq Offso 0 H
G				m		STATU	S	- F	

### LTE B5\_10 M\_Conducted Spurious(30 M-10 G)\_Low\_QPSK\_1RB



RL	RF 50 Ω	AC	-	1	SE:INT		ALIGN AUTO	00.00.01	M May 08, 2024	
	eq 5.01500	0000 G	IZ NO: Fast ↔ Gain:Low		Run	#Avg Ty		TRAC	DE 1 2 3 4 5 0 DE A WWWWW ET A A A A A A A	Frequency
0 dB/div	Ref 10.00 d	Bm					M	kr1 3.68 -66.7	0 5 GHz 03 dBm	Auto Tun
<b>9</b> 3.00 10.0 20.0	\$ <sup>2</sup>									Center Fre 5.015000000 GH
90.0 •0.0 50.0										Start Fre 30.000000 MH
20.0 70.0 80.0		age-interesting	, <sup>1</sup>		-		-		RMS	Stop Fre 10.000000000 GF
tart 30 M Res BW	1.0 MHz		#VB\	₩ 3.0 MHz		_		7.33 ms (2		CF Ste 997.000000 Mi Auto Mi
MKR MODE TR( 1 N 1 2 N 1 3 4 5 5 6 6 7 8 8 9	f	× 3.680 832	5 GHz .6 MHz	-66.703 dB -4.531 dB	m	NCTION FU	NCTION WIDTH	FUNCTI	E	Freq Offs 0 F
9 10 11				III						

# LTE B5\_10 M\_Conducted Spurious(30 M-10 G)\_Mid\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept S		I among and			
RL RF 50 Ω enter Freq 5.015000	AC 000 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:38:58 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WAYNEY DET A A A A A A A	Frequency
0 dB/div Ref 10.00 dE	3m		M	r1 3.716 4 GHz -67.299 dBm	Auto Tune
• • g 0.00 ↓0.0 20.0					Center Free 5.015000000 GH
40.0 50.0					Start Free 30,000000 MH
000 100 100				FMS	Stop Free 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz	#VBW	3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
MKR MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 5 6 6 7 8 8 9 9 5 10 11	X 3.716 4 GHz 849.0 MHz	Y FU -67.299 dBm -4.480 dBm	FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
5G		m	STATU	3	

# LTE B5\_10 M\_Conducted Spurious(30 M-10 G)\_High\_QPSK\_1RB



- 5 -				ctrum Analyzer - Swept SA	
Frequency	06:19:17 PM May 08, 2024 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A	#Avg Type: RMS		req 824.000000 MHz PNO: Wid	Center F
Auto Tune	IFGain:Low         #Atten: 20 dB         Mkr1 824.000 MHz           Ref Offset 26.6 dB         -22.723 dBm				
Center Free 824.000000 MH					15.6
Start Fre 822,000000 MH					6.60 3.40
Stop Free 826.000000 MH	-13.00 dem	h h	1		13.4
CF Stej 400.000 kH <u>Auto</u> Ma		Manager			33.4
Freq Offse 0 H	The shade was and the shade		www.and	wheeper and the fort of the second	53.4
z	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	BW 47 kHz	24.000 MHz	Center 82
	Transfer of the second s	z	BW 47 KH		Center 82 #Res BW

# LTE B5\_1.4 M\_Band Edge\_Low\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept SA								
Center Freq 824.000000	MHz PNO: Wide	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:18:34 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A A	Frequency			
Ref Offset 26.6 dB 10 dB/div Ref 26.60 dBm	Ref Offset 26.6 dB Mkr1 824.000 MHz							
15.6					Center Free 824.000000 MH			
3.40				<b>*</b>	Start Free 822,000000 MH			
13.4		1		-13.00 dBm	Stop Fre 826.000000 MH			
33.4	л	monormal		RMS	CF Step 400.000 kH <u>Auto</u> Mar			
53.4 martinetaria	- Contraction of the second				Freq Offse 0 H			
63.4 Center 824.000 MHz #Res BW 15 kHz	#VBW	47 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)				
ISG			STATUS					

## LTE B5\_1.4 M\_Band Edge\_Low\_QPSK\_FullRB



				trum Analyzer - Swept SA	
Frequency	06:18:52 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF 50 Ω AC req 821.000000 MHz PNO: Wide → IFGain:Low	Center Fre
Auto Tun	1 822.876 MHz -43.357 dBm	Mk	Ref Offset 26.6 dB Ref 26.60 dBm		
Center Free 821.000000 MH					16.6
Start Fre 819.000000 MH					6.60 3.40
Stop Fre 823.000000 MH	-13 00 dBm				13.4
CF Stej 400.000 kH Auto Ma	1 Ans				33.4
Freq Offset 0 Hz					53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz	1.000 MHz 100 kHz #VBW	Center 821
		STATUS			ISG

## LTE B5\_1.4 M\_Extended Band Edge\_Low\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC	1	SENSE:INT	ALIGN AUTO	06:23:15 PM May 08, 2024	
enter Freq 849.000000 I	PNO: Wide - Trig: I	Free Run 1: 20 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
Ref Offset 26.6 dB 0 dB/div Ref 26.60 dBm			Mk	r1 849.004 MHz -22.763 dBm	Auto Tun
16.6					Center Fre 849.000000 MF
3.60					Start Fre 847.000000 MH
3.4		1		-13 <u>0</u> 0 dBm	Stop Fre 851.000000 MH
13.4	Warm Wart				CF Ste 400.000 kF Auto Ma
53.4 Wildmar		and the second sec	ar a contraction of the second states	RIAS สามมีรายไม่ไม่เกิดไฟเกิดของการเลือง	Freq Offse 0 H
Center 849.000 MHz Res BW 15 kHz	#VBW 47 kH	_		Span 4.000 MHz 1.000 s (1001 pts)	

## LTE B5\_1.4 M\_Band Edge\_High\_QPSK\_1RB



Agilent Spectrum Analyzer - Swept SA	SENSE:INT	ALIGN AUTO	06:22:26 PM May 08, 2024		
enter Freq 849.000000		#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	Frequency	
Ref Offset 26.6 dB 0 dB/div Ref 26.60 dBm		Mkr1	849.000 MHz -27.023 dBm	Auto Tune	
15.6				Center Fre 849.000000 MH	
3.40	Museum and a second second			Start Fre 847.000000 MH	
23.4	1_		-13 ()0 dBm	Stop Fre 851.000000 MH	
13.4		~~~~		CF Ste 400.000 kH Auto Ma	
53.4		and the second second	RMS	Freq Offs 0 F	
63.4 Center 849.000 MHz #Res BW 15 kHz	#VBW 47 kHz	#Sweep 1.	Span 4.000 MHz 000 s (1001 pts)		

## LTE B5\_1.4 M\_Band Edge\_High\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA	-				- 5 ×
RL RF 50 Ω AC Center Freq 852.000000	MIHZ PNO: Wide	SENSE:INT Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	06:22:46 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
Ref Offset 26.6 dB 10 dB/div Ref 26.60 dBm	IFGain:Low	#Atten: 20 db	Auto Tune		
16.6					Center Freq 852.000000 MHz
3.40					Start Free 850,000000 MH:
13.4				-13.00 dBm	Stop Free 854.000000 MH;
33.4 43.4					CF Step 400.000 kH: Auto Mar
63.4		there and the second		RMS	Freq Offse 0 H
Center 852.000 MHz #Res BW 100 kHz	#VBW :	300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATU	S	

## LTE B5\_1.4 M\_Extended Band Edge\_High\_QPSK\_FullRB



@ X					-			m Analyzer - Swept		
Frequency	06:24:43 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	RMS	#Avg Typ		Trig: Free #Atten: 20	O: Wide +++	DOO MHZ	RF 50 Ω q 824.000		Cen
Auto Tune	824.000 MHz -23.410 dBm	ain:Low	6 dB	Ref Offset 26.6 Ref 26.60 d	B/div	10 dE				
Center Free 824.000000 MH				$\cap$						.og
Start Fre 822,000000 MH										6.60 3,40
Stop Fre 826.000000 MH	-13.00 dBm			1						13.4 23.4
CF Stej 400.000 kH Auto Ma	m. A	Hursdady tany the	" Lingure							33.4 43.4
Freq Offset 0 Hz	MARSHIN HISLAN AND					and the second	~	فالملط ومعارضه والمساري	and from the state	53.4
	Span 4.000 MHz .000 s (1001 pts)	#Sweep			91 kHz	#VBW		000 MHz ) KHz	ter 824 s BW 3	Cent FRes
		STATUS								ISG

## LTE B5\_3 M\_Band Edge\_Low\_QPSK\_1RB



0 0 ×			1		Magilent Spectrum Analyzer - Swept S
Frequency	06:23:59 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB		ଅ RL ଜ⊧ 50 ହ / Center Freq 824.00000
Auto Tune	1 824.000 MHz -26.697 dBm	Mk	26.6 dB	Ref Offset 26.6 d 0 dB/div Ref 26.60 dB	
Center Free 824.000000 MH					16.6
Start Fre 822,000000 MH	RMS	y ar yf fadar ffar yn fan yn fan yn far y			3.40
Stop Fre 826.000000 MH	-13.00 dBm		1		13.4
CF Stej 400.000 kH Auto Ma			and the second s		43.4
Freq Offse 0 H				and the second sec	53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	91 kHz	#VBW	63.4 Center 824.000 MHz #Res BW 30 kHz
		STATUS			ISG

## LTE B5\_3 M\_Band Edge\_Low\_QPSK\_FullRB



					er - Swept SA	Manufacture and State of State		
Frequency	06:24:17 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	ALIGN AUTO	sense:INT	PNO: Wide	50 Q AC 1.000000 MH	req 821		Cen
Auto Tune	Ref Offset 26.6 dB 4822.992 MHz dB/div Ref 26.60 dBm -41.822 dBm							
Center Free 821.000000 MH								.og
Start Free 819.000000 MH								6.60 3.40
Stop Free 823.000000 MH	-13.00 dBm							13,4 23,4
CF Ster 400.000 kH <u>Auto</u> Mar	Surger Street St							33.4 43.4
Freq Offse 0 H	anno-1920 an Alexandron ann an				**************************************			53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	0 kHz	#VBW 3		21.000 N 100 kH;		
		STATUS						ISG

## LTE B5\_3 M\_Extended Band Edge\_Low\_QPSK\_FullRB



	SEN Frig: Free Atten: 20		#Avg Tyr	Contra Co	TRACE TYPE DET	May 08, 2024 2 2 3 4 5 6 4 5 6 7 6 4 5 6 7 6 4 5 6 7 6 4 5 7 6	Cent 849.0000 Sta 847.0000	er Frec 000 MHz
ain:Low *		1		Mkr	1 849.0	00 MHz 96 dBm	Cent 849.0000 Sta 847.0000	er Free DOO MH: art Free
		1				-13 00 dBm	849.000 Sta 847.000	000 MH
		1				-13.00 dBm	847.000	
		1				-13.00 dBm	Sto	
5							851.000	DOD Fre
arat .		A .						CF Ste 000 kH Ma
		2	Korbanan	m	Andemonia	RINS	Freq Offset 0 Hz	
#VBW 91	1 kHz			#Sweep	Span 4. 1.000 s (1	.000 MHz 1001 pts)		
	#VBW 9	#VBW 91 kHz	#VBW 91 kHz	#VBW 91 kHz		#VBW 91 kHz #Sweep 1.000 s (	Span 4.000 MHz #VBW 91 kHz #Sweep 1.000 s (1001 pts)	Auto Auto Free WBW 91 kHz #Sweep 1.000 s (1001 pts)

## LTE B5\_3 M\_Band Edge\_High\_QPSK\_1RB



	06:27:38 PM May 08, 2024	ALIGN AUTO		SENSE:INT			RF 50 Ω AC	Agilent Spe
Frequency Auto Tun	TRACE 2 3 4 5 6 TYPE A WWWWW DET A A A A A A	pe: RMS	#Avg T	Free Run	Trig: Fr		req 849.000000	
	1 849.004 MHz -27.070 dBm	Mkr					Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 849.000000 MF								15.6
Start Fre 847.000000 MH							alburgan ang kang mang kang kang pang	9.60  9.40
Stop Fre 851.000000 MH	-13.00 dBm			1				23,4
CF Ste 400.000 kH Auto Ma			and we are the					13.4
Freq Offs 0 H	Watan daga and a she was a	and a star and a star a sta						53.4'
	Span 4.000 MHz 1.000 s (1001 pts)	#Sween		7	/BW 91 kHz	#\/B\	9.000 MHz	enter 8 Res BW
	in the second second	STATUS						SG

## LTE B5\_3 M\_Band Edge\_High\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA		the second se		
X RL RF 50Ω AC Center Freq 852.000000 Ι	NHZ PNO: Wide →→ IFGain:Low #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:27:59 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A A	Frequency
Ref Offset 26.6 dB 10 dB/div Ref 26.60 dBm	Auto Tune			
16.6				Center Freq 852.000000 MHz
3.40				Start Free 850,000000 MH:
23.4			×13.00 dBm	Stop Free 854.000000 MH:
33.4 - 1 43.4				CF Step 400.000 kH Auto Mar
53.4			RhtS	Freq Offse 0 H
-63.4 Center 852.000 MHz #Res BW 100 kHz	#VBW 300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG		STATUS	1	

## LTE B5\_3 M\_Extended Band Edge\_High\_QPSK\_FullRB



- 5 🗠					trum Analyzer - Swept SA	
Frequency	06:29:53 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO	sense:INT rig: Free Run Atten: 20 dB	PNO: Wide +++	RF 50Ω AC req 824.000000 M	Center F
Auto Tune	1 824.000 MHz -23.284 dBm	Mkr		I CUMEON	Ref Offset 26.6 dB Ref 26.60 dBm	10 dB/div
Center Fred 824.000000 MH;						15.6
Start Free 822.000000 MH						6,60 -3.40
Stop Free 826.000000 MH:	-13.00 dBm		<b>1</b>			-13,4
CF Step 400.000 kH Auto Mar	G . f	Ly all white	and the second s			-33.4
Freq Offse 0 H	allow way when the			and a start and a start	Jacentration	-53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	0 kHz	#VBW 1	4.000 MHz 51 kHz	Center 82 #Res BW
		STATUS				ISG

## LTE B5\_5 M\_Band Edge\_Low\_QPSK\_1RB



- 5 ×					ctrum Analyzer - Swept SA	
Frequency	06:29:11 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	PNO: Wide	RF 50 Ω AC Treq 824.000000 M	Center F
Auto Tune	1 823.996 MHz -27.927 dBm	Mki		IF Gall. LOW	Ref Offset 26.6 dB Ref 26.60 dBm	10 dB/div
Center Fred 824.000000 MHz						16.6
Start Free 822.000000 MH	RMS					6.60 3.40
Stop Free 826.000000 MH	-13.00 dBm		1			-13.4
CF Step 400.000 kH Auto Mar				and the second sec		-33.4
Freq Offse 0 H					and a state of the	53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	160 kHz	#VBW 1	24.000 MHz 51 kHz	Center 82 #Res BW
		STATUS				ISG

# LTE B5\_5 M\_Band Edge\_Low\_QPSK\_FullRB



- 5 🛛				m Analyzer - Swept SA	
Frequency	06:29:29 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF         50 Ω         AC           q         821.000000 MHz         PNO: Wide           PNO: Wide         →           IFGain:Low	Center Fr
Auto Tune	1 822.980 MHz -40.412 dBm	Mki	#Atten: 20 GB	Ref Offset 26.6 dB Ref 26.60 dBm	10 dB/div
Center Free 821.000000 MH:					15.6
Start Free 819.000000 MH					6,60 3,40
Stop Free 823.000000 MH:	-13.00 dBm				-13.4
CF Step 400.000 kH: Auto Mar	1 Rite				33.4
Freq Offse 0 H					-53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sween	300 kHz		Center 82*
		STATUS		**************************************	ISG

## LTE B5\_5 M\_Extended Band Edge\_Low\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA					- 3 ×
RL RF 50Ω AC Center Freq 849.000000 I	PNO: Wide	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:33:33 PM May 08, 2024 TRACE 2 3 4 5 6 TYPE A MAAAAAA DET A A A A A A A	Frequency
Ref Offset 26.6 dB 0 dB/div Ref 26.60 dBm			Mki	1 849.004 MHz -23.195 dBm	Auto Tune
15.6					Center Free 849.000000 MH
3.40					Start Fre 847.000000 MH
23.4		1		-13.00 dBm	Stop Fre 851.000000 MH
33.4	port -	L.			CF Ste 400.000 kH Auto Ma
43.4 53.4 53.4			March and a state of the state	HMS	Freq Offse 0 H
Center 849.000 MHz #Res BW 51 kHz	#VBW 1	60 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	

## LTE B5\_5 M\_Band Edge\_High\_QPSK\_1RB



	SENSE:INT Free Run n: 20 dB	Avg Type			May 08, 2024 <b>2 3 4 5</b> 0 A A A A A A A <b>0 MHz</b> 6 dBm	Frequen Auto	Tune
			Mkr	1 849.00	00 MHz	Auto	Tune
						Center 849.00000	
						Star 847.00000	
	1				-13.00 dBm	Stop 851.00000	
		Munerowana	-			400.00	Ste 00 kH Ma
					RMS	Freq	Offse 0 H
#VBW 160 k	Hz		#Sweep	Span 4.1 1.000 s (1	000 MHz 001 pts)		
	#VBW 160 k	#VBW 160 kHz			Span 4. #VBW 160 kHz #Sweep 1.000 s (1	1         FIG           1 <t< td=""><td>1300 667         847.0000           1300 667         Stop           1         1           1</td></t<>	1300 667         847.0000           1300 667         Stop           1         1           1

## LTE B5\_5 M\_Band Edge\_High\_QPSK\_FullRB



- 5 ×				lyzer - Swept SA	
Frequency	06:33:06 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	50 Ω AC 52.000000 MHz PNO: Wide	Center Fr
Auto Tune	1 850.004 MHz -40.318 dBm	Mk	#Atten: 20 db	IFGain:Low Offset 26.6 dB 26.60 dBm	10 dB/div
Center Freq 852.000000 MHz					15.6
Start Free 850.000000 MH2					6.60 3.40
Stop Fred 854.000000 MHz	-13.00 dBm				-13.4
CF Step 400.000 kHz Auto Mar					-33.4
Freq Offsel 0 Hz	RMS	ang tanang ang tang tang tang tang tang			-53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sween	300 kHz		Center 85
		STATUS			ISG

## LTE B5\_5 M\_Extended Band Edge\_High\_QPSK\_FullRB



0 0				unin muni	1 inter	-	trum Analyzer - Swept SA	Agilent Spee
Frequency	06:35:01 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A MANANA DET A A A A A A	ALIGN AUTO	#Avg Typ		Trig: Free #Atten: 20	PNO: Wide	RF 50 Ω AC req 824.000000 M	
Auto Tun	1 824.000 MHz -31.825 dBm	Mkr					Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 824.000000 MH			$\cap$					15.6
Start Fre 822,000000 MH								3.60 3.40
Stop Fre 826.000000 MH	313.00 dBm	1						13.4 23.4
CF Ste 400.000 kH Auto Ma	The advances of the RMS	4		1	-			33.4
Freq Offs 0 F	-captorney L.V.						ward and the second second	53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep			300 kHz	#VBW :	4.000 MHz 100 kHz	Center 82
		STATUS						SG

## LTE B5\_10 M\_Band Edge\_Low\_QPSK\_1RB



- 5 ×					Agilent Spectrum Analyzer - Swe
Frequency	06:34:18 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WAYNOW DET A A A A A A	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	50 Ω AC .0000000 MHz PNO: Wide → IFGain:Low	Center Freq 824.000
Auto Tune	1 824.000 MHz -30.898 dBm	Mki			Ref Offset 26 0 dB/div Ref 26.60
Center Free 824.000000 MH					15.6
Start Free 822,000000 MH	RMS				3.40
Stop Fre 826.000000 MH	-13.00 dBm				13,4
CF Ste 400.000 kH Auto Ma					43.4
Freq Offse 0 H					53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz		63.4 Center 824.000 MHz #Res BW 100 kHz
		STATUS			ISG

## LTE B5\_10 M\_Band Edge\_Low\_QPSK\_FullRB



- 5 ×	A la serie de la contration				analyzer - Swept SA	
Frequency	06:34:36 PM May 08, 2024 TRACE 2 3 4 5 6 TYPE A WWWWW DET A A A A A A	ALIGN AUTO	rig: Free Run Atten: 20 dB	PNO: Wide	50 Q AC 821.000000 MI	enter Fr
Auto Tune	1 822.976 MHz -36.573 dBm	Mki	Atten. 20 0B	IFGain:Low	f Offset 26.6 dB f 26.60 dBm	dB/div
Center Fred 821.000000 MHz						56
Start Free 819.000000 MH						40
Stop Free 823.000000 MHz	-13.00 dBm					3.4
CF Step 400.000 kH: Auto Mar	FR.		الم ال وسترج المراجع ومن ومن			3.4
Freq Offse 0 H						3.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	00 kHz	#VBW :		enter 82'
		STATUS				3

## LTE B5\_10 M\_Extended Band Edge\_Low\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA					- 5 - X
RL RF 50 Q AC Center Freq 849.000000 I	MHz PNO: Wide	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	06:38:44 PM May 08, 2024 TRACE 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	Frequency
Ref Offset 26.6 dB			Mk	r1 849.004 MHz -31.453 dBm	Auto Tun
15.6	$\square$				Center Fre 849.000000 MH
3.40					Start Fre 847.000000 MH
23.4	/	1		-13.00 dBm	Stop Fre 851.000000 MH
33.4			~~		CF Ste 400.000 kH Auto Ma
53.4				RMS	Freq Offse 0 H
63.4 Center 849.000 MHz #Res BW 100 kHz	#VBW	300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATU	5	-

## LTE B5\_10 M\_Band Edge\_High\_QPSK\_1RB



			I conversion		RF 50 Q AC	Agilent Spe
Frequency	06:37:56 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WARMAN DET A A A A A A	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	PNO: Wide	req 849.000000 M	
Auto Tun	1 849.004 MHz -31.950 dBm	Mki		- Guineon	Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 849.000000 MH						16.6
Start Fre 847.000000 MH						5.60 3.40
Stop Fre 851.000000 MF	-13.00 dBm		L			23,4
CF Ste 400.000 kH Auto Ma	RMS -	an anter an	Marine I Marrow			43:4
Freq Offse 0 H						53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz	#VBW 3	9.000 MHz 100 kHz	Center 84
		STATUS				SG

# LTE B5\_10 M\_Band Edge\_High\_QPSK\_FullRB



Agilent Spectrum Analyzer - Swept SA		the state of the second		
RL RF 50 Q AC Center Freq 852.000000	PNO: Wide Trig: Free Run	ALIGN AUTO #Avg Type: RMS	06:38:16 PM May 08, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
Ref Offset 26.6 dB 10 dB/div Ref 26.60 dBm	IFGain:Low #Atten: 20 dB	Mk	r1 850.012 MHz -39.989 dBm	Auto Tune
16.6				Center Fred 852.000000 MH;
3.40				Start Free 850,000000 MH
23.4			>13.00 dBm	Stop Free 854.000000 MH
33 4				CF Stej 400.000 kH Auto Ma
53.4			RMS	Freq Offse 0 H
63.4 Center 852.000 MHz #Res BW 100 kHz	#VBW 300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG		STATU		

## LTE B5\_10 M\_Extended Band Edge\_High\_QPSK\_FullRB



## **10. ANNEX A\_ TEST SETUP PHOTO**

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2405-FC034