

TEST REPORT

FCC LTE B26(5) Test for SM-M356B/DS Certification

APPLICANT SAMSUNG Electronics Co., Ltd.

REPORT NO. HCT-RF-2403-FC006

DATE OF ISSUE March 21, 2024

> **Tested by** Seok Hyun Kim

Technical Manager Jong Seok Lee



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HCT CO., LTD. Bongjai Huh Bongjai Huh 7 CEO

F-TP22-03(Rev.06)

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HCT CO.,LTD.

2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA Tel. +82 31 645 6300 Fax. +82 31 645 6401

T E S T R E P O R T	REPORT NO. HCT-RF-2403-FC006 DATE OF ISSUE March 21, 2024 Additional Model -
Applicant	SAMSUNG Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Product Name Model Name	Mobile Phone SM-M356B/DS
Date of Test	February 07, 2024 ~ March 20, 2024
FCC ID	A3LSMM356B
Location of Test	■ Permanent Testing Lab □ On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi- do, 17383 Republic of Korea)
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 22





REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	March 21, 2024	Initial Release

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:	A3LSMM356B			
Application Type:	Certification			
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)			
FCC Rule Part(s):	§ 22			
EUT Type:	Mobile phone			
Model(s):	SM-M356B/DS			
Additional Model(s)) -			
	824.7 MHz – 848.3 MHz (LTE – Band 5 / 26 (1.4 MHz))			
	825.5 MHz – 847.5 MHz (LTE – Band 5 / 26 (3 MHz))			
Tx Frequency:	826.5 MHz – 846.5 MHz (LTE – Band 5 / 26 (5 MHz))			
	829.0 MHz – 844.0 MHz (LTE – Band 5 / 26 (10 MHz))			
	831.5 MHz – 841.5 MHz (LTE – Band 26 (15 MHz))			
Date(s) of Tests:	February 07, 2024 ~ March 20, 2024			
	Radiated : R3CX20423XJ			
Serial number:	Conducted : R3CX2042JMR			



1.1. MAXIMUM OUTPUT POWER

Mode		Emission	Modulation	ERP		
	Tx Frequency			Max. Power	Max. Power	
	Designator		(W)	(dBm)		
		1M10G7D	QPSK	0.081	19.08	
	824.7 - 848.3	1M10W7D	16QAM	0.062	17.94	
LTE – Band5/26 (1.4)	824.7 - 848.3	1M10W7D	64QAM	0.051	17.11	
		1M10W7D	256QAM	0.024	13.72	
		2M71G7D	QPSK	0.079	18.97	
LTE Dand (20) (2)		2M72W7D	16QAM	0.062	17.90	
LTE – Band5/26 (3)	825.5 – 847.5	2M70W7D	64QAM	0.050	17.01	
		2M71W7D	256QAM	0.025	13.90	
	826.5 - 846.5	4M52G7D	QPSK	0.080	19.03	
LTE Devide (20 (E)		4M54W7D	16QAM	0.063	17.99	
LTE – Band5/26 (5)		4M53W7D	64QAM	0.050	16.96	
		4M53W7D	256QAM	0.025	13.92	
		9M03G7D	QPSK	0.076	18.82	
ITE Data dE /2C (10)	829.0 - 844.0	9M01W7D	16QAM	0.062	17.94	
LTE – Band5/26 (10)		9M02W7D	64QAM	0.049	16.86	
		9M00W7D	256QAM	0.024	13.83	
		13M5G7D	QPSK	0.076	18.82	
LTE Dand2C(1E)	021 5 041 5	13M5W7D	16QAM	0.061	17.84	
LTE – Band26 (15)	831.5 - 841.5	13M5W7D	64QAM	0.049	16.88	
		13M4W7D	256QAM	0.024	13.87	





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 MHz), Bluetooth, BT LE, NFC.

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
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4
Conducted Output Power	- N/A (See SAR Report)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8
Effective Isotropic Radiated Power	- ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic	- KDB 971168 D01 v03r01 – Section 6.2
Emissions	- 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 10th 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)

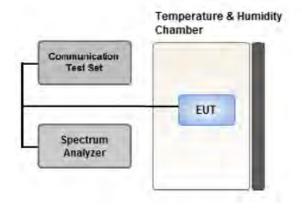
Where: P_{g} is the generator output power into the substitution antenna.

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



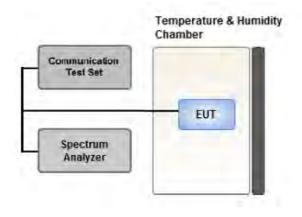
Test setup

① CCDF Procedure for PAPR

- 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 %.



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

- 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.

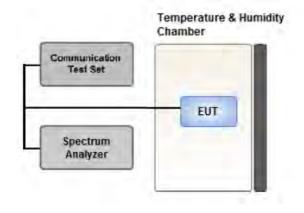
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

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.

- 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 x Span / 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.

- 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.

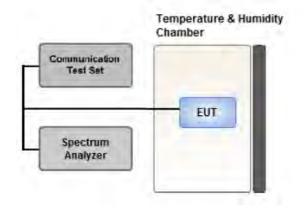
In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

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.



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.

- 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 : 1.4 MHz)
- LTE Band 26(1.4 M/3 M/5 M/10 M) overlaps the entire frequency range of LTE Band 5(1.4 M/3 M/5 M/10 M) and they have the same Tune-up power.
- Therefore, test data provided in this report covers Band 5 as well as Band 26.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data
- Please refer to the table below.

[Worst case]					
Test Description	Modulation	RB size	RB offset	Axis	
Effective Radiated Power	QPSK,	See Section 8.1 X		v	
	16QAM,				
	64QAM,			Χ	
	256QAM				
Radiated Spurious and Harmonic Emissions	QPSK	See See	ction 8.2	Х	

[Worst case]



3.10 WORST CASE(CONDUCTED TEST)

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

	[Wor	st case]			
Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	QPSK, 16QAM, 64QAM, 256QAM	1.4, 3, 5, 10, 15	Mid	Full RB	0
Peak-To-Average Ratio	QPSK, 16QAM, 64QAM, 256QAM	1.4, 3, 5, 10, 15	Mid	Full RB	0
	QPSK	1.4	Low High	1	0 5
		3	Low High	1	0
Dand Edge		5	Low High	1	0 24
Band Edge		10	Low High	1	0 49
		15	Low High	1	0 74
		1.4, 3, 5, 10, 15	Low, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	QPSK	1.4, 3, 5, 10, 15	Low, Mid, High	1	0



4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibratior 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	04/19/2024	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	04/20/2024	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/19/2024	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	08/16/2024	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	1135	03/21/2024	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	05/24/2024	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	DACC
Harmonic Emissions	§ 22.917(a)	all out-of band emissions	PASS



7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch.	/ Freq.	Measured	Substitute	Ant. Gain			El	RP
channel	Freq.(MHz)	Level (dBm)	Level (dBm)	(dBd)	C.L	Pol.	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	Substitute	Ant. Gain			EIRP		
channel	Freq.(MHz)	Level (dBm)	Level (dBm)	(dBi)	C.L	Pol.	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

<u>QAM Modulation</u> 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

	Med/		Measured	Substitute	Ant Cain			Limit	El	RP	I	RB
Freq (MHz)	Mod/ Bandwidth	Modulation	Level (dBm)	Level (dBm)	Ant. Gain (dBi)	C.L	Pol	w	w	dBm	Size	Offset
		QPSK	-31.60	29.30	-10.05	1.38	Н		0.061	17.87		
0247		16-QAM	-32.69	28.21	-10.05	1.38	Н		0.048	16.78		-
824.7		64-QAM	-33.52	27.38	-10.05	1.38	Н		0.039	15.95	1	5
		256-QAM	-36.65	24.25	-10.05	1.38	Н		0.019	12.82		
		QPSK	-31.20	30.09	-10.05	1.40	Н		0.073	18.64		
02C F	LTE 5/26	16-QAM	-32.28	29.01	-10.05	1.40	Н	~ 7 00	0.057	17.56	1	F
836.5	(1.4 MHz)	64-QAM	-33.21	28.08	-10.05	1.40	Н	< 7.00	0.046	16.63	1	5
		256-QAM	-36.35	24.94	-10.05	1.40	Н		0.022	13.49		
		QPSK	-31.08	30.54	-10.05	1.41	Н		0.081	19.08		
040.2		16-QAM	-32.22	29.40	-10.05	1.41	Н		0.062	17.94	1	0
848.3		64-QAM	-33.05	28.57	-10.05	1.41	Н		0.051		1	0
		256-QAM	-36.44	25.18	-10.05	1.41	Н		0.024	13.72		

Frog	Mod/		Measured	Substitute	Ant. Gain			Limit	El	RP	RB	
Freq (MHz)	Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBi)	C.L	Pol	w	W	dBm	Size	Offset
		QPSK	-31.56	29.35	-10.05	1.39	Н		0.062	17.91		
825.5		16-QAM	-32.50	28.41	-10.05	1.39	Н		0.050	16.97	1	14
825.5		64-QAM	-33.56	27.35	-10.05	1.39	Н		0.039	15.91	L	14
		256-QAM	-36.59	24.32	-10.05	1.39	Н		0.019	12.88		
		QPSK	-31.25	30.04	-10.05	1.40	Н		0.072	18.59		
02C E	LTE 5/26	16-QAM	-32.40	28.89	-10.05	1.40	Н	< 7.00	0.055	17.44	1	0
836.5	(3 MHz)	64-QAM	-33.29	28.00	-10.05	1.40	Н	< 7.00	0.045	16.55	1	0
		256-QAM	-36.44	24.85	-10.05	1.40	Н		0.022	13.40		
		QPSK	-31.20	30.43	-10.05	1.41	Н		0.079	18.97		
047 5		16-QAM	-32.27	29.36	-10.05	1.41	Н		0.062	17.90	1	0
847.5		64-QAM	-33.16	28.47	-10.05	1.41	Н		0.050	17.01	1	0
		256-QAM	-36.27	25.36	-10.05	1.41	Н		0.025	13.90		

F-TP22-03 (Rev. 06)



Freq	Mod/		Measured	Substitute	Ant. Gain			Limit	El	RP		RB
(MHz)	Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBi)	C.L	Pol	w	W	dBm	Size	Offset
		QPSK	-31.48	29.42	-10.05	1.39	Н		0.063	17.98		
00C F		16-QAM	-32.50	28.40	-10.05	1.39	Н		0.050	16.96	1	24
826.5		64-QAM	-33.43	27.47	-10.05	1.39	Н		0.040	16.03	1	24
		256-QAM	-36.59	24.31	-10.05	1.39	Н		0.019	12.87		
		QPSK	-31.22	30.07	-10.05	1.40	Н		0.073	18.62		
836.5	LTE 5/26	16-QAM	-32.10	29.19	-10.05	1.40	Н	< 7.00	0.059	17.74	1	24
830.5	(5 MHz)	64-QAM	-33.19	28.10	-10.05	1.40	Н	< 1.00	0.046	16.65	1	24
		256-QAM	-36.28	25.01	-10.05	1.40	Н		0.023	13.56		
		QPSK	-31.19	30.49	-10.05	1.41	Н		0.080	19.03		
046 5		16-QAM	-32.23	29.45	-10.05	1.41	Н		0.063	17.99		24
846.5		64-QAM	-33.26	28.42	-10.05	1.41	Н		0.050	1 16.96	L	24
		256-QAM	-36.30	25.38	-10.05	1.41	Н		0.025	13.92		

	Mod/		Measured	Substitute	Ant Coin			Limit	El	RP		RB
Freq (MHz)	Mod/ Bandwidth	Modulation	Level (dBm)	Level (dBm)	Ant. Gain (dBi)	C.L	Pol	w	W	dBm	Size	Offset
		QPSK	-31.42	29.60	-10.05	1.39	Н		0.065	18.16		
020.0		16-QAM	-32.40	28.62	-10.05	1.39	Н		0.052	17.18	1	40
829.0		64-QAM	-33.34	27.68	-10.05	1.39	Н		0.042	16.24	1	49
		256-QAM	-36.54	24.48	-10.05	1.39	Н		0.020	13.04		
		QPSK	-31.06	30.23	-10.05	1.40	Н		0.076	18.78		
02C E	LTE 5/26	16-QAM	-32.11	29.18	-10.05	1.40	Н	~ 7 00	0.059	17.73	1	40
836.5	(10 MHz)	64-QAM	-32.98	28.31	-10.05	1.40	Н	< 7.00	0.049	16.86	1	49
		256-QAM	-36.07	25.22	-10.05	1.40	Н		0.024	13.77		
		QPSK	-31.20	30.28	-10.05	1.41	Н		0.076	18.82		
044.0		16-QAM	-32.08	29.40	-10.05	1.41	Н		0.062	17.94		40
844.0		64-QAM	-33.20	28.28	-10.05	1.41	Н		0.048	16.82	1	49
		256-QAM	-36.19	25.29	-10.05	1.41	Н		0.024	13.83		



Freq	Mod/		Measured	Substitute	Ant. Gain			Limit	EF	RP		RB
(MHz)	Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBi)	C.L	Pol	w	W	dBm	Size	Offset
		QPSK	-31.20	29.93	-10.05	1.39	Н		0.071	18.49		
021 E		16-QAM	-32.18	28.95	-10.05	1.39	Н		0.056	17.51	1	74
831.5		64-QAM	-33.22	27.91	-10.05	1.39	Н		0.044	16.47	1	14
		256-QAM	-36.28	24.85	-10.05	1.39	Н		0.022	13.41		
		QPSK	-31.07	30.22	-10.05	1.40	Н		0.075	18.77		
836.5	LTE 26	16-QAM	-32.07	29.22	-10.05	1.40	Н	< 7.00	0.060	17.77	1	74
630.3	(15 MHz)	64-QAM	-32.96	28.33	-10.05	1.40	Н	< 1.00	0.049	16.88	L	14
		256-QAM	-36.09	25.20	-10.05	1.40	Н		0.024	13.75		
		QPSK	-31.14	30.28	-10.05	1.41	Н		0.076	18.82		
041 5		16-QAM	-32.12	29.30	-10.05	1.41	Н		0.061	17.84	1	74
841.5		64-QAM	-33.08	28.34	-10.05	1.41	Н		0.049	16.88	1	74
		256-QAM	-36.09	25.33	-10.05	1.41	Н		0.024	13.87		



8.2 RADIATED SPURIOUS EMISSIONS

MODE:

MODULATION SIGNAL:

DISTANCE:

LTE 26(5) 1.4 MHz QPSK 3 meters

Ch.		Measured	Ant.	Substitute	~ 1	D.I	Result		F	RB
Ch	Freq (MHz)	Level (dBm)	Gain (dBi)	Level (dBm)	C.L	Pol	(dBm)	Limit	Size	Offset
	1 649.40	-58.88	9.20	-67.87	2.02	Н	-60.69	-13.00		
	2 474.10	-55.05	10.20	-58.74	2.47	Н	-51.01	-13.00		
26797 (824.7)	3 298.80	-60.26	10.90	-62.48	2.92	Н	-54.50	-13.00	1	5
(024.1)	4 123.50	-58.74	11.30	-58.03	3.22	V	-49.95	-13.00		
	4 948.20	-62.82	10.90	-58.17	3.59	Н	-50.86	-13.00		
	1 673.00	-58.67	9.20	-67.85	2.03	V	-60.68	-13.00		
	2 509.50	-55.33	10.30	-59.86	2.50	Н	-52.06	-13.00		
26915 (836.5)	3 346.00	-54.25	10.95	-57.14	2.89	V	-49.08	-13.00	1	5
(000.0)	4 182.50	-62.39	11.30	-62.24	3.30	V	-54.24	-13.00		
	5 019.00	-61.88	10.70	-56.82	3.55	V	-49.67	-13.00		
	1 696.60	-57.57	9.40	-66.19	2.00	Н	-58.79	-13.00		
	2 544.90	-53.32	10.25	-58.04	2.54	Н	-50.33	-13.00		
27033 (848.3)	3 393.20	-60.89	11.00	-63.60	2.94	Н	-55.54	-13.00	1	0
(0.070)	4 241.50	-62.74	11.20	-62.17	3.29	Н	-54.26	-13.00		
	5 089.80	-61.45	10.70	-56.47	3.64	Н	-49.41	-13.00		



8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)		
			QPSK			5.65		
	1 4 141		16-QAM	<u> </u>		6.22		
	1.4 MHz		64-QAM	6		6.62		
			256-QAM			6.59		
			QPSK			5.61		
	2 1411-		16-QAM	15		6.27		
	3 MHz		64-QAM	15	15		6.44	
			256-QAM			6.50		
5/26			QPSK			5.56		
	5 M I	000 5	16-QAM	25	•	6.28		
	5 MHz	836.5	64-QAM	25	25	25	0	6.45
			256-QAM			6.45		
			QPSK			5.65		
	10 141		16-QAM	50		6.24		
	10 MHz		64-QAM	50		6.46		
			256-QAM			6.48		
		-	QPSK	75	5.54			
26	15 141		16-QAM			6.22		
26	15 MHz		64-QAM			6.44		
			256-QAM			6.47		

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 57 \sim 76.



8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)					
			QPSK			1.1012					
	1 4 141-		16-QAM	6		1.0976					
	1.4 MHz		64-QAM	6		1.0974					
			256-QAM			1.0956					
			QPSK			2.7109					
	2 MU-		16-QAM	2AM 15 2AM	15		2.7146				
	3 MHz		64-QAM			13	15	15	15	13	
Г/ <u>Э</u> С			256-QAM			2.7120					
5/26			QPSK			4.5179					
	5 MHz	836.5	16-QAM	25	0	4.5433					
	Э МН2	830.5	64-QAM	25	0	4.5261					
			256-QAM			4.5334					
			QPSK			9.0289					
	10 141		16-QAM	50		9.0102					
	10 MHz		64-QAM	50		9.0180					
			256-QAM			8.9970					
		-	QPSK	75			13.459				
20	15 1411-		16-QAM			13.477					
26	15 MHz		64-QAM			13.463					
			256-QAM			13.434					

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 37 ~ 56.



Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
		824.7	3.6940	27.976	-67.327	-39.351	
	1.4	836.5	3.7074	27.976	-67.389	-39.413	
		848.3	3.7054	27.976	-67.411	-39.435	
		825.5	3.6805	27.976	-67.131	-39.155	
	3	836.5	3.6975	27.976	-67.019	-39.043	
E /2C		847.5	3.6795	27.976	-67.203	-39.227	
5/26		826.5	3.7094	27.976	-67.241	-39.265	
	5	836.5	3.7010	27.976	-67.014	-39.038	-13.00
		846.5	3.7054	27.976	-67.199	-39.223	
		829.0	3.7089	27.976	-66.933	-38.957	
	10	836.5	3.7094	27.976	-67.385	-39.409	
		844.0	3.6995	27.976	-67.435	-39.459	
		831.5	3.7159	27.976	-67.109	-39.133	
26	15	836.5	3.6785	27.976	-67.183	-39.207	
		841.5	3.6880	27.976	-67.149	-39.173	

8.5 CONDUCTED SPURIOUS EMISSIONS

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 107 ~ 121.

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 + Ext. Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 - 1	25.270
1 – 5	27.976
5 - 10	28.591
10 - 15	29.116
15 – 20	29.489
Above 20(26.5)	30.131

8.6 BAND EDGE

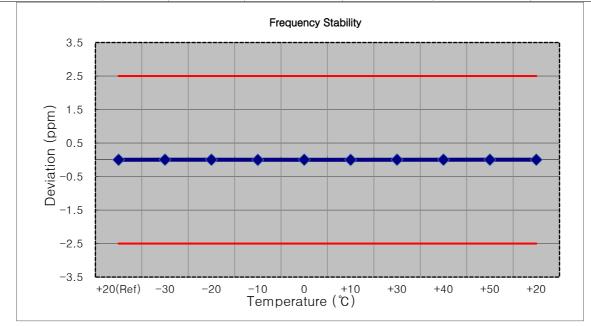
- Plots of the EUT's Band Edge are shown Page 77 ~ 106.



8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

MODE:	LTE 5/26
OPERATING FREQUENCY:	836,500,000 Hz
CHANNEL:	<u>26915 (1.4 MHz)</u>
REFERENCE VOLTAGE:	3.850 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)	836 500 002	0.0	0.000 000	0.000
100 %		-30	836 500 004	2.6	0.000 000	0.003
100 %		-20	836 500 004	2.1	0.000 000	0.003
100 %	-	-10	836 500 000	-1.9	0.000 000	-0.002
100 %	3.850	0	836 500 003	1.6	0.000 000	0.002
100 %	-	+10	836 500 000	-1.3	0.000 000	-0.002
100 %		+30	836 500 004	2.5	0.000 000	0.003
100 %	-	+40	836 500 004	2.0	0.000 000	0.002
100 %		+50	836 500 004	2.3	0.000 000	0.003
Batt. Endpoint	3.400	+20	836 500 004	2.3	0.000 000	0.003

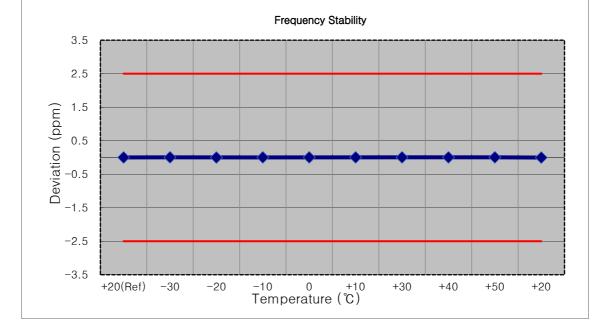


F-TP22-03 (Rev. 06)



MODE:	LTE 5/26
OPERATING FREQUENCY:	<u>836,500,000 Hz</u>
CHANNEL:	<u>26915 (3 MHz)</u>
REFERENCE VOLTAGE:	3.850 VDC
DEVIATION LIMIT:	\pm 0.000 25 % or 2.5 ppm

Voltage	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	836 500 007	3.5	0.000 000	0.004
100 %	-	-20	836 500 002	-1.7	0.000 000	-0.002
100 %		-10	836 500 006	2.3	0.000 000	0.003
100 %	3.850	0	836 500 006	2.3	0.000 000	0.003
100 %		+10	836 500 006	2.2	0.000 000	0.003
100 %		+30	836 500 006	2.4	0.000 000	0.003
100 %	-	+40	836 500 006	2.7	0.000 000	0.003
100 %		+50	836 500 006	2.9	0.000 000	0.003
Batt. Endpoint	3.400	+20	836 500 001	-2.7	0.000 000	-0.003

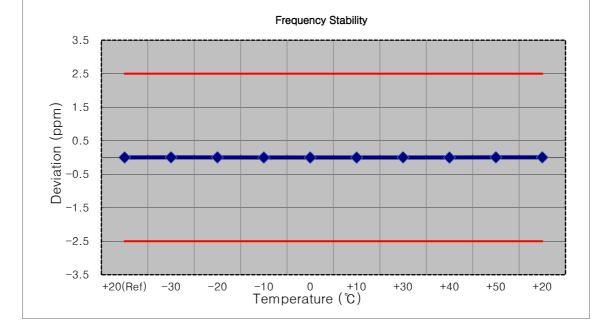


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MODE:	LTE 5/26
OPERATING FREQUENCY:	<u>836,500,000 Hz</u>
CHANNEL:	<u>26915 (5 MHz)</u>
REFERENCE VOLTAGE:	3.850 VDC
DEVIATION LIMIT:	\pm 0.000 25 % or 2.5 ppm

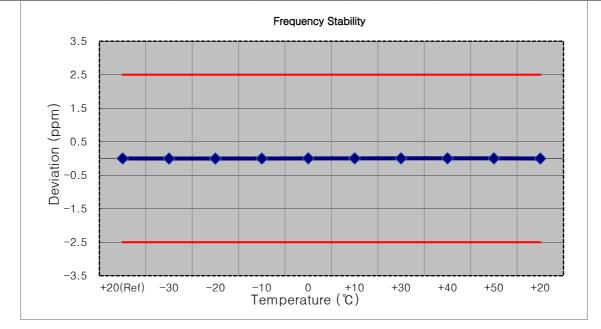
Voltage	Voltage Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100 %		+20(Ref)	836 500 002	0.0	0.000 000	0.000
100 %		-30	836 500 005	2.6	0.000 000	0.003
100 %	-	-20	836 500 005	2.6	0.000 000	0.003
100 %		-10	836 500 001	-1.3	0.000 000	-0.002
100 %	3.850	0	836 500 000	-2.4	0.000 000	-0.003
100 %		+10	836 499 999	-2.6	0.000 000	-0.003
100 %		+30	836 500 004	2.4	0.000 000	0.003
100 %	-	+40	836 500 000	-2.1	0.000 000	-0.003
100 %		+50	836 500 004	2.3	0.000 000	0.003
Batt. Endpoint	3.400	+20	836 500 005	2.6	0.000 000	0.003





MODE:	LTE 5/26
OPERATING FREQUENCY:	<u>836,500,000 Hz</u>
CHANNEL:	26915 (10 MHz)
REFERENCE VOLTAGE:	3.850 VDC
DEVIATION LIMIT:	\pm 0.000 25 % or 2.5 ppm

Voltage Power	Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100 %		+20(Ref)	836 500 005	0.0	0.000 000	0.000
100 %		-30	836 500 002	-2.5	0.000 000	-0.003
100 %	-	-20	836 500 002	-2.7	0.000 000	-0.003
100 %		-10	836 500 002	-2.9	0.000 000	-0.003
100 %	3.850	0	836 500 008	3.5	0.000 000	0.004
100 %		+10	836 500 007	2.4	0.000 000	0.003
100 %		+30	836 500 007	2.2	0.000 000	0.003
100 %	-	+40	836 500 008	3.3	0.000 000	0.004
100 %		+50	836 500 007	2.8	0.000 000	0.003
Batt. Endpoint	3.400	+20	836 500 003	-1.9	0.000 000	-0.002

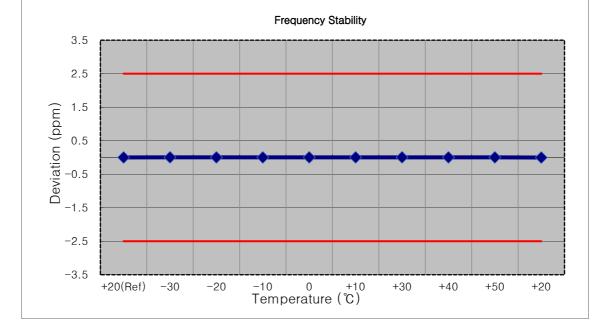


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MODE:	LTE 26
OPERATING FREQUENCY:	<u>836,500,000 Hz</u>
CHANNEL:	<u>26915 (15 MHz)</u>
REFERENCE VOLTAGE:	3.850 VDC
DEVIATION LIMIT:	\pm 0.000 25 % or 2.5 ppm

Voltage	/oltage Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100 %		+20(Ref)	836 500 002	0.0	0.000 000	0.000
100 %		-30	836 500 007	2.9	0.000 000	0.003
100 %		-20	836 500 006	1.7	0.000 000	0.002
100 %		-10	836 500 006	1.5	0.000 000	0.002
100 %	3.850	0	836 500 007	2.5	0.000 000	0.003
100 %		+10	836 500 007	2.0	0.000 000	0.002
100 %		+30	836 500 007	2.9	0.000 000	0.003
100 %	-	+40	836 500 007	2.4	0.000 000	0.003
100 %		+50	836 500 007	2.0	0.000 000	0.002
Batt. Endpoint	3.400	+20	836 500 003	-1.9	0.000 000	-0.002





Report No. HCT-RF-2403-FC006

9. TEST PLOTS

F-TP22-03 (Rev. 06)

The report shall not be (partly) reproduced except in full without approval of the laboratory.



Center Fre	RF 50Ω AC eq 836.500000 M	Tri	SENSE:INT nter Freq: 836.500000 MHz g: Free Run Avg Ho tten: 20 dB	ALIGN AUTO	08:21:01 PM Mar 18, 2024 Radio Std: None Radio Device: BTS	Frequency
10 dB/div	Ref Offset 26.6 dB Ref 40.00 dBm					
30.0 20.0			ware and the second	h		Center Freq 836.500000 MHz
10.0 0.00						
-30.0	mmmm			- W	Mannahar	
40.0 50.0 Center 836 Res BW 27			#VBW 110 kHz		Span 2.8 MHz Sweep 3.667 ms	CF Step 280.000 kH; <u>Auto</u> Mar
Occupi	ied Bandwidth 1.1	012 MHz	Total Power	31.8	dBm	Freq Offset 0 Hz
	it Freq Error ndwidth	2.256 kHz 1.337 MHz	OBW Power x dB		0.00 % 00 dB	
ISG				STATUS	5	

BAND5/26. Occupied Bandwidth Plot (1.4 M BW Ch.26915 QPSK_RB6_0)



Agilent Spectrum Analyzer - Occupie RL RF 50 Ω Center Freq 836.50000 PASS	AC	SENSE:INT Center Freq: 836.500000 MHz Trig: Free Run Avg Ho #Atten: 20 dB	ALIGN AUTO	08:19:47 PM Mar 18, 2024 Radio Std: None Radio Device: BTS	Frequency
Ref Offset 26 10 dB/div Ref 40.00 d					
- og 30.0 20.0					Center Freq 836.500000 MHz
10.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m V		
-10.0 -20.0 -20.0	pt		W. A.	mannan	
40.0				and with and	
Center 836.5 MHz Res BW 27 kHz		#VBW 110 kHz		Span 2.8 MHz Sweep 3.667 ms	CF Step 280.000 kHz Auto Man
Occupied Bandw	^{idth} 1.0976 MH	Total Power	30.8		Freq Offset 0 Hz
Transmit Freq Error	-101 H	Hz OBW Power	99.	00 %	
x dB Bandwidth	1.316 MH	lz x dB	-26.0	0 dB	
ISG			STATUS		

BAND5/26. Occupied Bandwidth Plot (1.4 M BW Ch.26915 16QAM_RB6_0)



	n Analyzer - Occupied BW		1	- T		-		- 6 -
Center Free PASS	R⊧ 50Ω AC q 836.500000 N	Hz #FGain:Low	SENSE:INT Center Freq: 83 Trig: Free Run #Atten: 20 dB	6.500000 MHz	ALIGN AUTO	Radio Sto	PMMar 18, 2024 d: None evice: BTS	Frequency
10 dB/div	Ref Offset 26.6 dB Ref 40.00 dBm							
30.0 20.0								Center Free 836.500000 MH
10.0		mm	man	mann				
10.0	لىرىمى	V ^m			1 Are			
	mon					man	mm	
50.0								CF Step 280.000 kH
Center 836. Res BW 27			#VBW 1	10 kHz			an 2.8 MHz 3.667 ms	<u>Auto</u> Mar
Occupie	ed Bandwidth			al Power	29.9	dBm		Freq Offse 0 H:
		974 MH						
	t Freq Error	-1.595 k		V Power		9.00 %		
x dB Ban	idwidth	1.328 M	Hz x di	3	-26.	00 dB		
ISG					STATU	s		

BAND5/26. Occupied Bandwidth Plot (1.4 M BW Ch.26915 64QAM_RB6_0)



Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC		SENSE:INT		ALIGN AUTO	02:29:32	PM Mar 19, 2024	-
Center Freq 836.500000 M PASS	#IFGain:Low	Center Freq: 836.50 Trig: Free Run #Atten: 20 dB		d: 500/500	Radio Sto Radio De	d: None vice: BTS	Frequency
Ref Offset 26.6 dE 10 dB/div Ref 40.00 dBm Log				1 0			
30.0							Center Fred 836.500000 MHz
10.0	form	mmmm	m	X			
10.0				1			
20.0				Non Non	mm		
40.0						and a second and	
50,0							CF Step 280.000 kH
Center 836.5 MHz Res BW 27 kHz		#VBW 110	kHz			an 2.8 MHz 3.667 ms	<u>Auto</u> Mar
Occupied Bandwidt			Power	27.8	3 dBm		Freq Offset
1.	0956 MH	Z					
Transmit Freq Error	2.291 ki	Hz OBW I	Power	99	0.00 %		
x dB Bandwidth	1.335 MI	Hz x dB		-26.	00 dB		
ASG				STATU	s		

BAND5/26. Occupied Bandwidth Plot (1.4 M BW Ch.26915 256QAM_RB6_0)



RL RF	50 Q AC	- 1	SENSE:INT		ALIGN AUTO	08:26:32	PM Mar 18, 2024	
enter Freq 8	336.500000 M	HZ #IFGain:Low	Center Freq: 836.5 Trig: Free Run #Atten: 20 dB	00000 MHz Avg Hold	1: 500/500	Radio Sto Radio De		Frequency
	Ref Offset 26.6 dB Ref 40.00 dBm							
30.0								Center Fre 836.500000 MH
0.0		harmon	www.www.	mont	m			-
0.00 0.0	r f				Ly h			
0.0	man				24	mm	1000000	
0.0								
0,0								CF Ste 600.000 kH
enter 836.5 Res BW 62 k			#VBW 240	kHz			oan 6 MHz 1.533 ms	
Occupied	Bandwidth			Power	31.	dBm		Freq Offse
T		109 MH			0	00.0/		
Transmit F		4.788 kH 3.120 MH		Power		9.00 % .00 dB		
G					STATU	S		

BAND5/26. Occupied Bandwidth Plot (3 M BW Ch.26915 QPSK_RB15_0)



RL RL	um Analyzer - Occupied BW RF 50 Ω AC	1	SENSE:INT	ALIC	IN AUTO 08:25:31	PM Mar 18, 2024	
Center Fre	eq 836.500000 N	/IHz #IFGain:Low	Center Freq: 836.50 Trig: Free Run #Atten: 20 dB	00000 MHz Avg Hold: 50		d: None vice: BTS	Frequency
0 dB/div	Ref Offset 26.6 dE Ref 40.00 dBm						
30.0 20.0							Center Free 836.500000 MH
10.0		mm	- Marine Marine	nom			
0.00 10.0	J.				h h		
0.0	mmmmm				home	humm	
0.0							CF Ste 600.000 kH
Res BW			#VBW 240	kHz		oan 6 MHz 1.533 ms	<u>ito</u> Ma
Occup	ied Bandwidt	h 7146 MH	Total F Z	Power	30.8 dBm		Freq Offse 0 H
Transm	it Freq Error	5.318 kH	z OBW F	Power	99.00 %		
x dB Ba	ndwidth	3.054 MH	lz xdB		-26.00 dB		
					STATUS		

BAND5/26. Occupied Bandwidth Plot (3 M BW Ch.26915 16QAM_RB15_0)



Agilent Spectr	um Analyzer - Occupied BV RF 50 Ω AC	V		SENSE:INT		ALIGN AUTO	08:25:57	PM Mar 18, 2024	- 0 ×
	eq 836.500000	MHZ #IFGain:Low	- Trig: F	r Freq: 836.5000			Radio Sto		Frequency
10 dB/div Log	Ref Offset 26.6 o Ref 40.00 dB								
30.0 20.0									Center Free 836.500000 MH
10.0		mmm	m	mm	ser and a series of the series	m			
0.00		1							
20.0	م م					- Vy			
	mmm						mm	mmmy	
40.0 50.0									CF Ster
Center 83	6 5 MHz							pan 6 MHz	600.000 kH
Res BW			#	VBW 240 kH	lz			1.533 ms	Auto Mar
Occup	ied Bandwid			Total Po	wer	30.0) dBm		Freq Offset
	2	.7005 M	ΗZ						
Transm	it Freq Error	3.950	kHz	OBW Po	wer	99	.00 %		
x dB Ba	indwidth	3.092	MHz	x dB		-26.	00 dB		
ISG						STATU	S		

BAND5/26. Occupied Bandwidth Plot (3 M BW Ch.26915 64QAM_RB15_0)



Agilent Spectrun	m Analyzer - Occupied BW RF 50 Q AC		1	SENSE:INT	Ť	ALIGN AUTO	03-23-19	PM Mar 19, 2024	0 6
	q 836.500000 l	MHZ #IFGain:Low	- Trig: I	r Freq: 836.500 Free Run h: 20 dB			Radio Std	I: None	Frequency
0 dB/dív	Ref Offset 26.6 d Ref 40.00 dBn								
30.0 20.0									Center Fre 836.500000 MH
10.0		Jamme Marine	mm	mmm	~~~~~	m l			
10.0	كمر					- Contraction -			
10.0 <mark>~^~^~~</mark>						4	man	mm	
50,0 									CF Ste 600.000 kH
enter 836. Res BW 62			#	VBW 240 k	Hz			oan 6 MHz 1.533 ms	
Occupie	ed Bandwidt 2.	th 7120 MI	Hz	Total P	ower	27.8	dBm		Freq Offse 0 H
	t Freq Error	1.267		OBW P	ower		.00 %		
x dB Ban	ndwidth	3.082 N	/Hz	x dB		-26.	00 dB		
3G						STATUS			

BAND5/26. Occupied Bandwidth Plot (3 M BW Ch.26915 256QAM_RB15_0)



Agilent Spectr	um Analyzer - Occupied RF 50 Ω Ad			INSEINT	ALIGN AL	08:21:52.0	M Mar 18, 2024	
	eq 836.50000		Center F	req: 836.500000 M e Run Avy		Radio Std:	None	Frequency
0 dB/div	Ref Offset 26.6 Ref 40.00 d							
0.0 								Center Fre 836.500000 MH
0.0 .00		J	M. M	man	m			
0.0	مر مر م	and the second sec			~	My -		
0.0 0.0 0.0	mm					an war	monny	
1.Ó								CF Ste 1.000000 MH
enter 83 Res BW			#V	BW 390 kHz		Spa Swe	n 10 MHz A ep 1 ms	<u>uto</u> Ma
Occup	ied Bandwi	_{dth} 4.5179 MI	Hz	Total Powe	r 3	2.0 dBm		Freq Offse 0 H
Transm	it Freq Error	10.905	kHz	OBW Powe	r	99.00 %		
x dB Ba	ndwidth	5.353 N	IHz	x dB		26.00 dB		
						TATUS		

BAND5/26. Occupied Bandwidth Plot (5 M BW Ch.26915 QPSK_RB25_0)



RL RF 50 Ω AC Center Freq 836.500000 PASS	MHz #IFGain:Low	SENSE:INT Center Freq: 83 Trig: Free Run #Atten: 20 dB	6.500000 MHz	ALIGN AUTO	08:30:55 PM Mar 18, 202 Radio Std: None Radio Device: BTS	Frequency
Ref Offset 26.6 C						
20.0						Center Freq 836.500000 MHz
10.0	man	······································	norman			
0.00 10.0	đ			- hull		
20 0					human	a .
50.0 Center 836.5 MHz					Span 10 MH	CF Step 1.000000 MHz Z <u>Auto</u> Mar
#Res BW 100 kHz		#VBW 3			Sweep 1 ms	and the second se
Occupied Bandwid 4	th .5433 MH		al Power	31.0	dBm	Freq Offsel 0 Hz
Transmit Freq Error	8.701 k	Hz OB	V Power	99	.00 %	
x dB Bandwidth	5.282 M	Hz x di	3	-26.	00 dB	
SG				STATUS	a.	

BAND5/26. Occupied Bandwidth Plot (5 M BW Ch.26915 16QAM_RB25_0)



RL	m Analyzer - Occupied f RF 50 Ω AC q 836.500000		Center Trig: F	SENSE:INT Freq: 836.500 Free Run :: 20 dB	000 MHz Avg Hold	ALIGN AUTO 1: 500/500	Radio Sto	PM Mar 18, 2024 d: None wice: BTS	Frequency
10 dB/div	Ref Offset 26.6 Ref 40.00 dE								
-og 30.0									Center Freq 836.500000 MHz
10.0		famme	m	When	m	~~ <u>\</u>			
0.00, 10,0	~	1				h	A		
20.0 30.0 50000000000000000000000000000000000							man	Aman Mayor	
50.0 Center 836	5 MHz						Sp	an 10 MHz	CF Step 1.000000 MH: Auto Mar
Res BW 1			#	VBW 390 k	Hz			eep 1 ms	Hato Mai
Occupi	ed Bandwid	dth .5261 MI	١z	Total P	ower	30.	1 dBm		Freq Offset 0 Hz
Transmi	t Freq Error	12.013	(Hz	OBW P	ower	9	9.00 %		
x dB Bar	ndwidth	5.289 N	IHz	x dB		-26	.00 dB		
SG			_		_	STATL	IS		

BAND5/26. Occupied Bandwidth Plot (5 M BW Ch.26915 64QAM_RB25_0)



Agilent Spectrum Analyzer	50 Ω AC	Cente	SENSE:INT	ALIGN AUTO	02:34:40 PM Mar 19, 2024 Radio Std: None	Frequency
PASS	#IFGain:Low	Trig: F	Free Run Avg Hold a: 20 dB	d: 500/500	Radio Device: BTS	
	fset 26.6 dB 0.00 dBm					
30.0 20.0						Center Fre 836.500000 MH
0.0	man	mmu	mmmmmm			
0.00	~~~~			In		
30.0 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	w				for the second s	
i0.0 50.0						CF Ste
Center 836.5 MHz Res BW 100 kHz		#	VBW 390 kHz		Span 10 MHz Sweep 1 ms	<u>Auto</u> Ma
Occupied Ba	ndwidth 4.5334 I	MHz	Total Power	27.9	dBm	Freq Offse 0 H
Transmit Freq	Error -2.77	7 kHz	OBW Power	99	.00 %	
x dB Bandwidt	h 5.40	6 MHz	x dB	-26.	00 dB	
SG				STATUS	5	

BAND5/26. Occupied Bandwidth Plot (5 M BW Ch.26915 256QAM_RB25_0)



Agilent Spectrum Analyzer - Occu RL RF 50 Ω Center Freq 836.500 PASS	AC	SENSE:INT Center Freq: 836.500 Trig: Free Run #Atten: 20 dB	ALIGN AUTO 0000 MHz Avg Hold: 500/500	08:37:12 PM Mar 18, 2024 Radio Std: None Radio Device: BTS	Frequency
Ref Offset 10 dB/div Ref 40.00					
- og 30.0 20.0		Martin Manager Langer			Center Free 836.500000 MH:
10.0		a ni agana saina kanapatrana daga	www.www.ww		
0.00	Jun -		- Arter		
20.0 30.0 40.0	м ^{ин}			14 manager	
50.0 Center 836.5 MHz				Span 20 MHz	CF Step 2.000000 MH Auto Mai
Res BW 200 kHz		#VBW 8201	(Hz	Sweep 1 ms	Auto
Occupied Band	width 9.0289 M	Total P HZ	'ower 31	.8 dBm	Freq Offse 0 Ha
Transmit Freq Err	or 7.004	kHz OBW P	ower g	9.00 %	
x dB Bandwidth	10.28	MHz x dB	-20	5.00 dB	
SG			STAT	US	

BAND5/26. Occupied Bandwidth Plot (10 M BW Ch.26915 QPSK_RB50_0)



RL	um Analyzer - Occupied E RF 50 Ω AC			SENSE:INT		ALIGN AUTO	08:36:17 P	4 Mar 18, 2024	×
enter Fre	eq 836.50000	D MHz #IFGain:Low	- Trig: F	Center Freq: 836.500000 MHz Trig: Free Run Avg Hold: 500/500 #Atten: 20 dB				None ce: BTS	Frequency
0 dB/div	Ref Offset 26.6 Ref 40.00 dE								
20.0									Center Free 836.500000 MH
0.0		Martin	mann	mahanna	monthemat	hun			
0.0		, d				- 1			
0.0	manna					M	A. A .		
10.0							mannon	water	
0,0									CF Ste
enter 830 Res BW			#\	/BW 8201	KHz		Spar Swe	n 20 MHz ep 1 ms	2.000000 MH Auto Ma
Occup	ied Bandwid	dth		Total P	ower	30.8	3 dBm		Freq Offse
	9	.0102 M	Hz						0 H
Transm	it Freq Error	13.014	kHz	OBW P	ower	99	.00 %		
x dB Ba	ndwidth	10.26 N	MHz	x dB		-26.	00 dB		

BAND5/26. Occupied Bandwidth Plot (10 M BW Ch.26915 16QAM_RB50_0)



RL	um Analyzer - Occupied RF 50 Ω AC	1	Conto	SENSE:INT	0000 MH-	ALIGN AUTO	08:36:40 I Radio Std	PM Mar 18, 2024	Frequency
PASS	er Freq 836.500000 MHz #FGain:Low			Trig: Free Run Avg Hold: 500/500				rice: BTS	
0 dB/div	Ref Offset 26.6 Ref 40.00 di								
30.0 20.0									Center Fre 836.500000 MH
0.0		mmmm	muhhan	mannon	mmus	~~~			
0.00 10,0		N				h			
1 A A	mannon						mun	automan	
10.0 50.0									CF Ste 2.000000 MH
Res BW			#	VBW 8201	kHz		Spa Swe	eep 1 ms	<u>Auto</u> Ma
Occup	ied Bandwid	dth 0.0180 MI	١z	Total P	ower	29.	8 dBm		Freq Offse 0 H
	it Freq Error	9.389		OBW P	ower	99	9.00 %		
x dB Ba	indwidth	10.38 N	IHz	x dB		-26	.00 dB		
SG						STATU	S		

BAND5/26. Occupied Bandwidth Plot (10 M BW Ch.26915 64QAM_RB50_0)



Agilent Spectrum Analy	yzer - Occupied BW		SE	NSE:INT		ALIGN AUTO	02:37:09 P	M Mar 19, 2024	
Center Freq 836.500000 MHz			Center Freq: 836.500000 MHz Trig: Free Run Avg Hold: 500/500 #Atten: 20 dB			Radio Std: None Radio Device: BTS		Frequency	
	f Offset 26.6 dB f 40.00 dBm						1		
20.0									Center Fre 836.500000 MH
0.0 .00		mhonortas	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm	- Marshamay-	ray			
10,0	port					AN			
10.0 www.ww	man					- <i>V</i>	Hennen	manitation	
50,0									CF Ste
enter 836.5 M Res BW 200 k			#VE	3W 8201	kHz		Spa Swe	n 20 MHz ep 1 ms	2.000000 MH Auto Ma
Occupied I		970 MH	lz	Total P	ower	27.8	3 dBm		Freq Offse 0 H
Transmit Fre	eq Error	4.382 k	Hz	OBW P	ower	99	9.00 %		
x dB Bandwi	idth	10.24 M	Hz	x dB		-26.	00 dB		
SG						STATU	s		

BAND5/26. Occupied Bandwidth Plot (10 M BW Ch.26915 256QAM_RB50_0)



RL		AC			SENSE:INT		ALIGN AUTO	08:42:14 Pt	4 Mar 18, 2024	
Center Freq 836.500000 MHz			- Trig: I	Center Freq: 836.500000 MHz Trig: Free Run Avg Hold: 500/500 #Atten: 20 dB			Radio Std: None Radio Device: BTS		Frequency	
0 dB/div	Ref Offset 26 Ref 40.00									
20.0			Mannoran							Center Fre 836.500000 MH
10.0		1	And and a second	and the facility	warder Vallage Constant		ww			
3.00 10,0		M					t.			
10.0	mannen	h.					- M	withharealy	ununen	
0.0										
enter 83								0.000	20 Mila	CF Ste 3.000000 MH
Res BW				#	VBW 1.2	MHz			n 30 MHz ep 1 ms	Auto Ma
Occup	ied Bandw		459 M	Hz	Total	Power	32.0) dBm		Freq Offse 0 H
Transm	it Freq Erro	r	6.857	kHz	OBW	Power	99	.00 %		
x dB Ba	indwidth		15.08 N	Hz	x dB		-26.	00 dB		

BAND 26. Occupied Bandwidth Plot (15 M BW Ch.26915 QPSK RB 75_0)



RL RL	RF 50 Q A	ic l		SENSE:INT		ALIGN AUTO	08:41:43	PM Mar 18, 2024		
	eq 836.50000		Trig: I	Center Freq: 836.500000 MHz Trig: Free Run Avg Hold: 500/500 #Atten: 20 dB			Radio Std: None Radio Device: BTS		Frequency	
0 dB/dív	Ref Offset 26. Ref 40.00 d									
30.0 20.0									Center Free 836.500000 MH	
10.0		months	man	markhan	mennenne	way				
3.00, 10,0		pt -				N.				
20.0 30.0	munamplat	<i>u</i>				- Ang	and a state of the	hourselful and the		
16.0 50.0									CF Ste	
enter 83 Res BW			#	VBW 1.2 M	1Hz		Spa Sw	an 30 MHz eep 1 ms	3.000000 MH Auto Ma	
Occup	ied Bandwi	idth 13.477 N	1Hz	Total P	ower	30.8	dBm		Freq Offse 0 H	
Transm	it Freq Error	-3.69	6 kHz	OBW P	ower	99	.00 %			
x dB Ba	ndwidth	15.22	MHz	x dB		-26.	00 dB			
						STATU				

BAND 26. Occupied Bandwidth Plot (15 M BW Ch.26915 16QAM RB 75_0)



X RL	um Analyzer - Occupied BW RF 50 Ω AC eq 836.500000 Γ	M Hz #IFGain:Low	Center Trig: F	SENSE:INT r Freq: 836.500 Free Run h: 20 dB	0000 MHz Avg Hold	ALIGN AUTO 1: 500/500	08:41:59 Radio Std		Frequency
10 dB/div	Ref Offset 26.6 dE Ref 40.00 dBm								
30.0 20.0									Center Fred 836.500000 MHz
10.0		Mar Mark	man	hurmon	murren	un			
0.00	h,					J.			
	anannanast					74	man	un and the	
40.0 50.0 Center 836	6.5 MHz						Cna	in 30 MHz	CF Step 3.000000 MH
Res BW			#	VBW 1.2 N	IHz			eep 1 ms	Auto Ma
Occup	ied Bandwidt 13	h 6.463 MI	Ηz	Total P	ower	29.9	dBm		Freq Offse 0 Ha
Transm	it Freq Error	4.225	Hz	OBW P	ower	99	.00 %		
x dB Ba	ndwidth	15.15 N	IHz	x dB		-26.	00 dB		
SG						STATU	5		

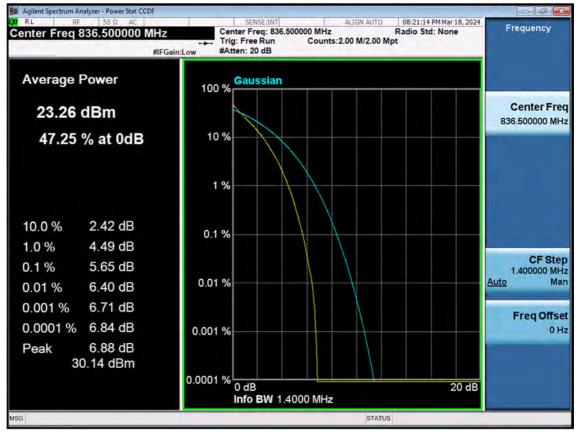
BAND 26. Occupied Bandwidth Plot (15 M BW Ch.26915 64QAM RB 75_0)



RL RL	m Analyzer - Occupied BW RF 50 Q AC		SENSE:INT	T	ALIGN AUTO	02:39:20 PM	Mar 19, 2024	
1100	q 836.500000 I	₩HZ #IFGain:Low	Center Freq: 836.500000 MHz Trig: Free Run Avg Hold: 500/500 #Atten: 20 dB			Radio Std: Radio Devic	None	Frequency
0 dB/div	Ref Offset 26.6 df Ref 40.00 dBm				_			
30.0 20.0								Center Free 836.500000 MH:
10.0		promonante	Man Manager	mannanna	••••			
10.01	de la casa d				- h			
0.0 0.0 mentenh	mannennen				M.		manner	
0.0 0.0								CF Ster
enter 836							30 MHz	3.000000 MH
Res BW 3	00 kHz		#VBW 1.2	MHz		Swee	ep 1 ms	and the second se
Occupi	ed Bandwidt	h 6.434 MH		Power	28.0) dBm		Freq Offse 0 H
	t Freq Error	-4.483		Power		.00 %		
x dB Bar	ndwidth	15.40 M	Hz x dB		-26.	00 dB		

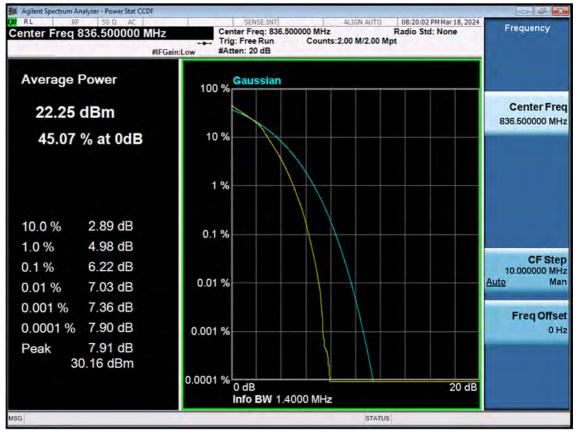
BAND 26. Occupied Bandwidth Plot (15 M BW Ch.26915 256QAM RB 75_0)





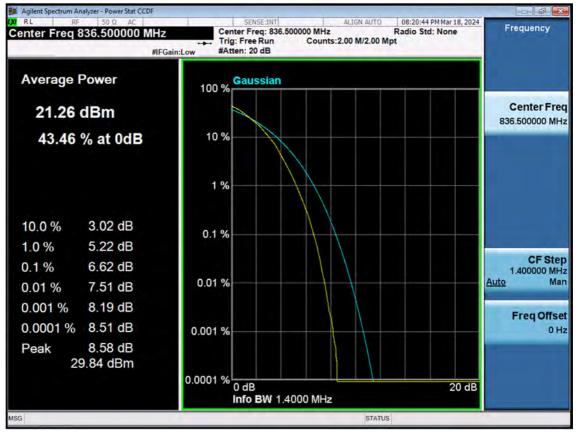
BAND5/26. PAR Plot (1.4 M BW Ch.26915 QPSK_RB6_0)





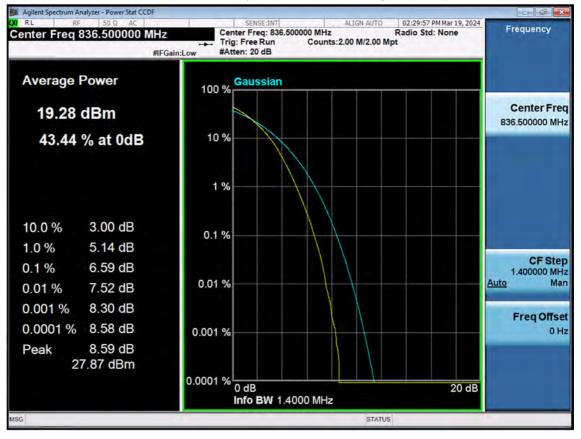
BAND5/26. PAR Plot (1.4 M BW Ch.26915 16QAM_RB6_0)





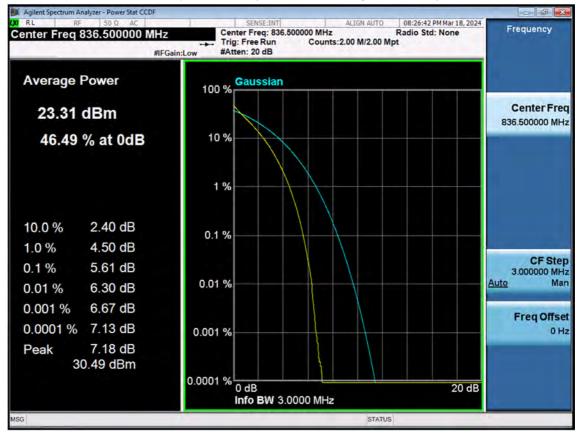
BAND5/26. PAR Plot (1.4 M BW Ch.26915 64QAM_RB6_0)





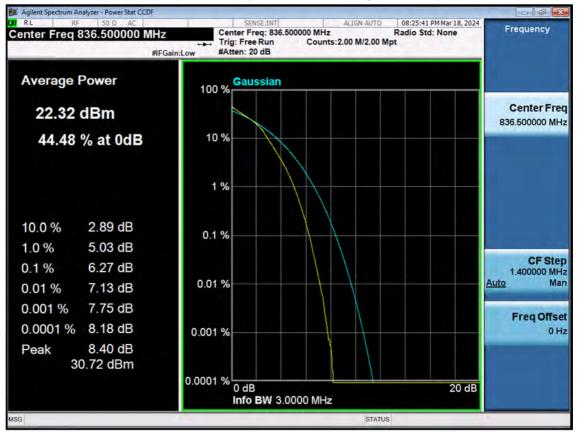
BAND5/26. PAR Plot (1.4 M BW Ch.26915 256QAM_RB6_0)





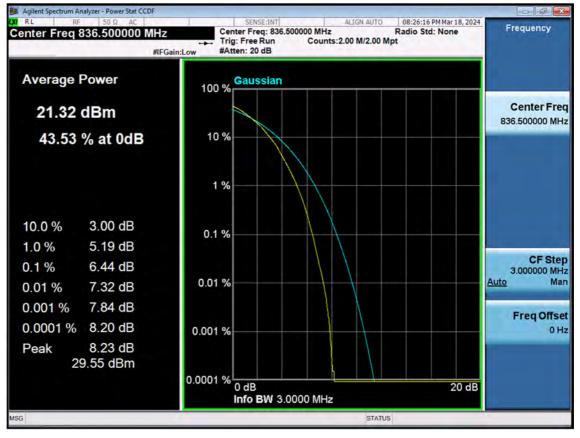
BAND5/26. PAR Plot (3 M BW Ch.26915 QPSK_RB15_0)





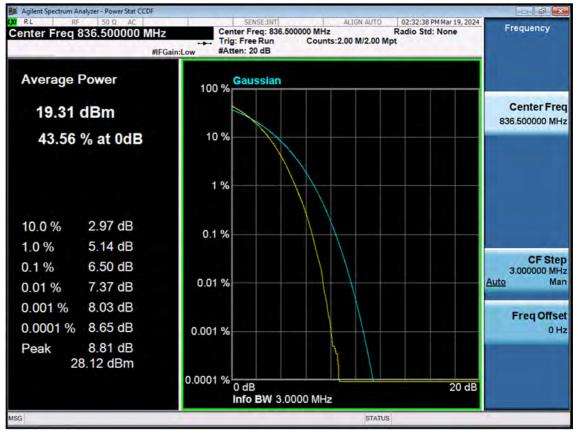
BAND5/26 PAR Plot (3 M BW Ch.26915 16QAM_RB15_0)





BAND5/26. PAR Plot (3 M BW Ch.26915 64QAM_RB15_0)





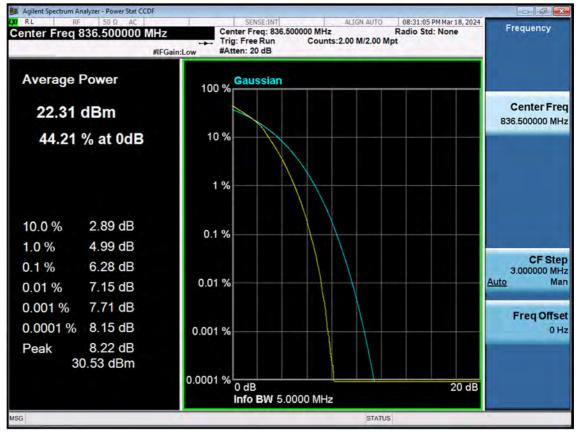
BAND5/26. PAR Plot (3 M BW Ch.26915 256QAM_RB15_0)





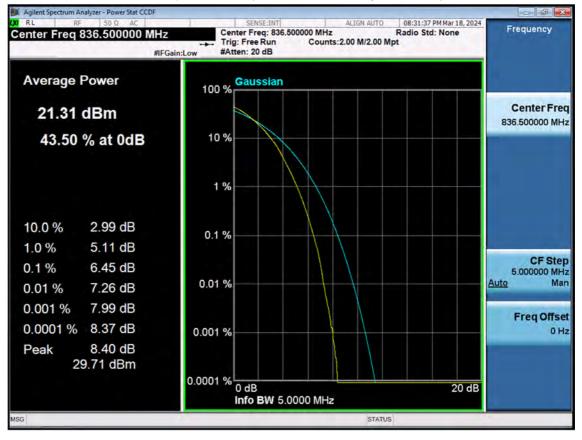
BAND5/26. PAR Plot (5 M BW Ch.26915 QPSK_RB25_0)





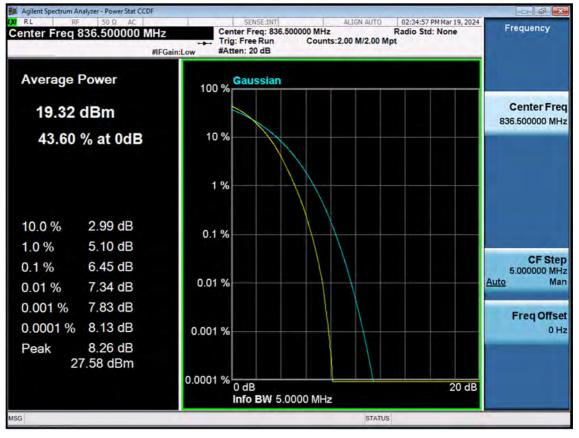
BAND5/26. PAR Plot (5 M BW Ch.26915 16QAM_RB25_0)





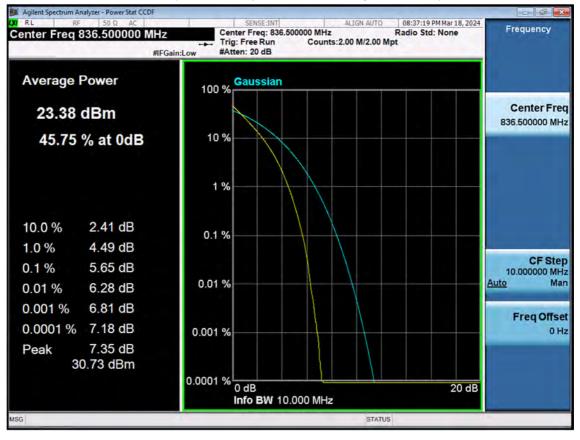
BAND5/26. PAR Plot (5 M BW Ch.26915 64QAM_RB25_0)





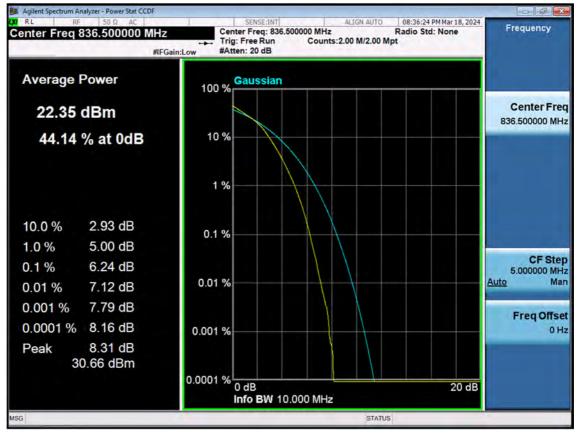
BAND5/26. PAR Plot (5 M BW Ch.26915 256QAM_RB25_0)





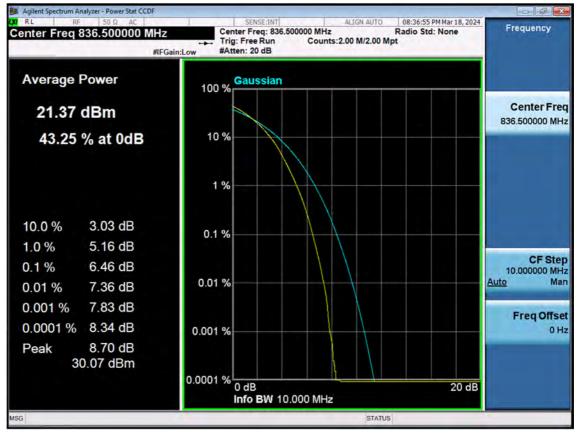
BAND5/26. PAR Plot (10 M BW Ch.26915 QPSK_RB50_0)





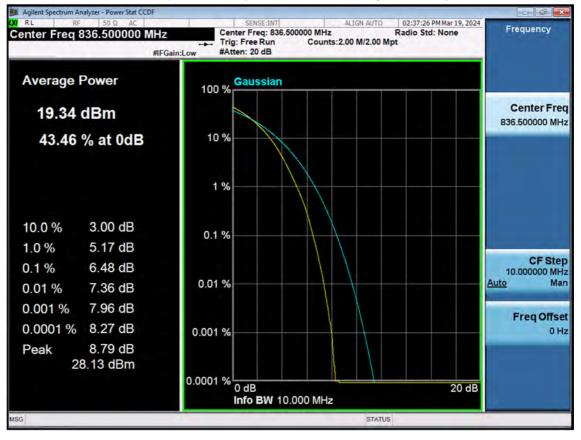
BAND5/26. PAR Plot (10 M BW Ch.26915 16QAM_RB50_0)





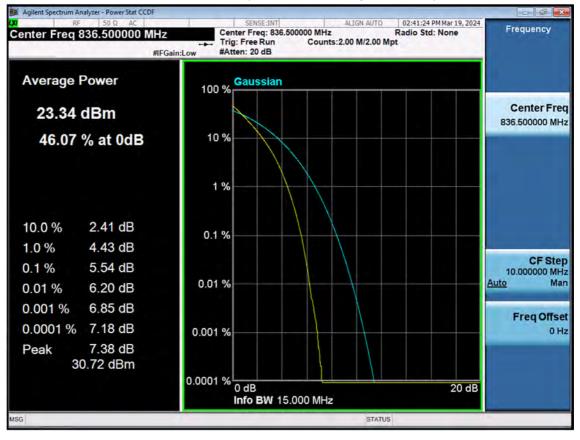
BAND5/26. PAR Plot (10 M BW Ch.26915 64QAM_RB50_0)





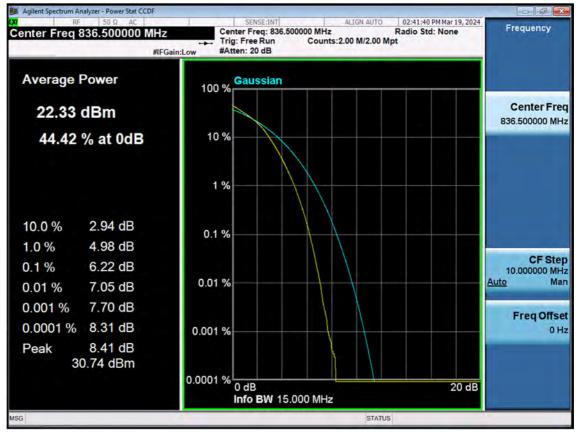
BAND5/26. PAR Plot (10 M BW Ch.26915 256QAM_RB50_0)





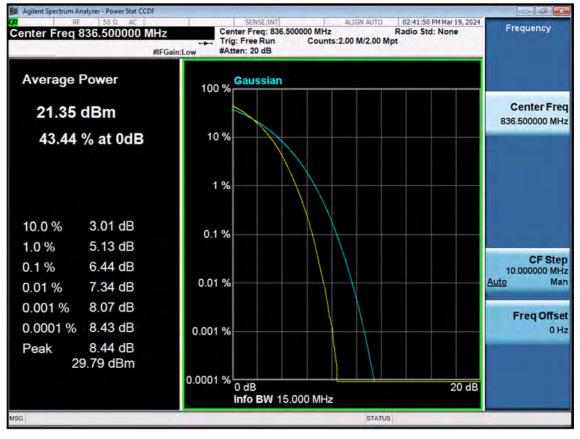
BAND 26. PAR Plot (15 M BW Ch.26915 QPSK RB 75_0)





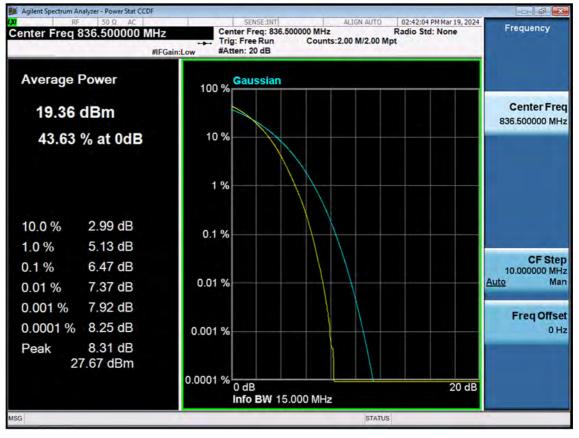
BAND 26. PAR Plot (15 M BW Ch.26915 16QAM RB 75_0)





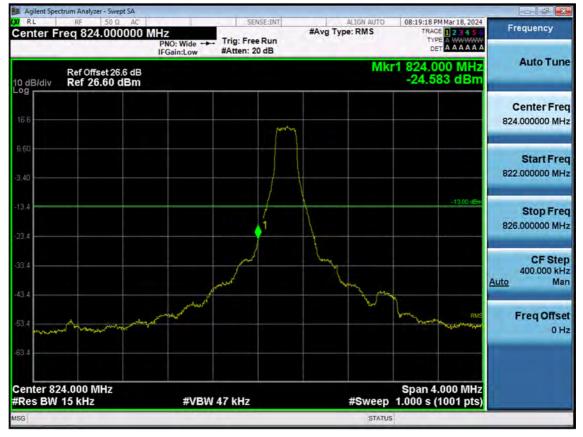
BAND 26. PAR Plot (15 M BW Ch.26915 64QAM RB 75_0)





BAND 26. PAR Plot (15 M BW Ch.26915 256QAM RB 75_0)





BAND5/26. Lower Band Edge Plot (1.4 M BW Ch.26797 QPSK_RB1_Offset 0)



Agilent Spectrum Analyzer - Swept SA					
RL RF 50 Q AC Center Freq 824.000000	PNO: Wide Irig: P	SENSE:INT	#Avg Type: RMS	08:18:34 PM Mar 18, 2024 TRACE 2 3 4 5 6 TYPE A WAYNE 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	M	Auto Tune	
15.6					Center Fred 824.000000 MHz
3,40			analayan analar ana ana ana ana ana ana ana ana ana a		Start Free 822.000000 MH:
-13.4		1		-13.00 dBm	Stop Freq 826.000000 MH2
-33.4	and the state of the	<u>}</u>		RUS	CF Step 400.000 kHz Auto Man
53.4 working the state of the second					Freq Offset 0 Hz
-63.4 Center 824.000 MHz #Res BW 15 kHz	#VBW 47 kH	2	#Sweep	Span 4.000 MHz 5 1.000 s (1001 pts)	
ISG			STATL		

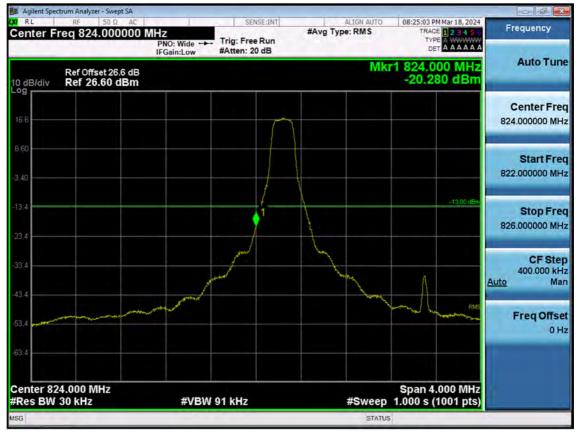
BAND5/26. Lower Band Edge Plot (1.4 M BW Ch.26797 QPSK_RB6_Offset 0)



				ctrum Analyzer - Swept SA		
Frequency Auto Tun Center Fre 821.000000 MH Start Fre 819.000000 MH Stop Fre 823.000000 MH	08:18:52 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT	RF 50 Ω AC req 821.000000 MHz PNO: Wide	Center Fr	
Auto Tuno	1 823.000 MHz -36.777 dBm	Mkr	#Atten: 20 dB	Ref Offset 26.6 dB		
Center Free 821.000000 MH					-og 16.6	
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	Tr RM.				33.4	
Freq Offse 0 H			and the second second second second		53.4	
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz	21.000 MHz 100 kHz #VBW	Center 821 #Res BW	
		STATUS			ASG	

BAND5/26. Lower Extended Band Edge Plot (1.4 M BW Ch.26797 QPSK_RB6_0)





BAND5/26. Lower Band Edge Plot (3 M BW Ch.26805 QPSK_RB1_Offset 0)



×				ctrum Analyzer - Swept SA	
Frequency	08:24:19 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A MARAAAA DET A A A A A A	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF 50 Ω AC req 824.000000 MHz PNO: Wide ↔ IFGain:Low IFGain:Low	Center Fre
24 Frequency 72 Auto Tun 73 Center Fre 824.000000 MF Start Fre 822.000000 MF Stop Fre 826.000000 MF CF Ste 400.000 kF 400.000 kF 4uto Ma Freq Offse 0 F	1 823.996 MHz -23.727 dBm	Mkr		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		<u>↓</u>		13.4
CF Step 400.000 kH: Auto Mar					-33.4
Freq Offse 0 H					53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	91 kHz	24.000 MHz 30 kHz #VBW	-63.4 Center 824. #Res BW 30
		STATUS			MSG

BAND5/26. Lower Band Edge Plot (3 M BW Ch.26805 QPSK_RB15_Offset 0)



- 0 ×					Agilent Spectrum Anal	
Frequency	08:24:37 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WARMAN	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF 50 Ω AC req 821.000000 MHz PNO: Wide ↔ IFGain:Low		
A Auto Tun Center Fre 821.000000 MH Start Fre 819.000000 MH Stop Fre 823.000000 MH CF Ste 400.000 kH Auto Ma	Ref Offset 26.6 dB Mkr1 822.784 MHz 0 dB/div Ref 26.60 dBm -34.373 dBm					
Center Free 821.000000 MH					16.6	
Start Free 819.000000 MH					3.40	
Stop Fre 823.000000 MH	-13.00 dBm				23,4	
CF Ste 400.000 kH Auto Ma	A RMS	and an analysis of the second s			43.4	
Freq Offse 0 H					53.4	
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz		63.4 Center 821.000 #Res BW 100 kł	
		STATUS			ISG	

BAND5/26. Lower Extended Band Edge Plot (3 M BW Ch.26805 QPSK_RB15_0)





BAND5/26. Lower Band Edge Plot (5 M BW Ch.26815 QPSK_RB1_Offset 0)



Agilent Spectrum Analyzer - Swept SA					
X RL RF 50 Ω AC Center Freq 824.000000		SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:29:44 PM Mar 18, 2024 TRACE 2 3 4 5 0 TYPE A MARA A A A DET A A A A A A A	
Ref Offset 26.6 dB			Mk	r1 823.992 MHz -24.346 dBm	Auto Tune
16.6					Center Free 824.000000 MH;
3,40				hMS	Start Free 822.000000 MH:
13.4		1		-13,00 dBm	Stop Free 826.000000 MH;
33.4					CF Step 400.000 kH Auto Mar
53.4					Freq Offse 0 H
63.4 Center 824.000 MHz #Res BW 51 kHz	#VBW	160 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATUS	5	

BAND5/26. Lower Band Edge Plot (5 M BW Ch.26815 QPSK_RB25_Offset 0)



- 5 🐱				trum Analyzer - Swept SA
Frequency	08:30:03 PM Mar 18, 2024 TRACE 2 3 4 5 0 TYPE A WARMAN A A A A A	#Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF 50 Ω AC req 821.000000 MHz PNO: Wide ↔ IFGain:Low
Сепter Free 821.000000 МН Start Free 819.000000 МН Stop Free 823.000000 МН CF Step 400.000 кН	1 822.968 MHz -35.374 dBm	Mki		Ref Offset 26.6 dB Ref 26.60 dBm
Center Free 821.000000 MH				
Start Free 819.000000 MH				
Stop Fred 823.000000 MH;	-13,00 dBm			
CF Step 400.000 kH Auto Mar	R			
Freq Offse 0 H				
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz	1.000 MHz 100 kHz #VBW
		STATUS		

BAND5/26. Lower Extended Band Edge Plot (5 M BW Ch.26815 QPSK_RB25_0)



Agilent Spectrum Analyzer - Swept SA							
RL RF 50 Ω AC Center Freq 824.000000	D MHz PNO: Wide Tri	g: Free Run	#Avg Type:	RMS	08:35:50 PI TRAC TYP	MMar 18, 2024 E 1 2 3 4 5 6 E A WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	Frequency
Ref Offset 26.6 dE	3	tten: 20 dB		Mkr		00 MHz 73 dBm	Auto Tune
15.6							Center Fred 824.000000 MH
3,40							Start Free 822.000000 MH
13.4				t		-13,00 dBm	Stop Free 826.000000 MH
43.4		1		}	m	RMS	CF Stej 400.000 kH Auto Ma
53.4							Freq Offse 0 H
63.4 Center 824.000 MHz #Res BW 100 kHz	#VBW 300) kHz	#	≠Sweep	Span 4. 1.000 s (.000 MHz 1001 pts)	
ISG				STATUS			

BAND5/26. Lower Band Edge Plot (10 M BW Ch.26840 QPSK_RB1_Offset 0)



Agilent Spectrum Analyzer - Swept SA					- 5 ×		
RL RF 50 Ω AC Center Freq 824.00000	0 MHz PNO: Wide	SENSE:INT	#Avg Type: RMS	08:35:06 PM Mar 18, 2024 TRACE 1 2 3 4 5 6 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	Mkr1 824.000 MHz -28.226 dBm				
16.6					Center Free 824.000000 MH		
3,40				RMS	Start Fre 822.000000 MH		
23,4		1		-13.00 dBm	Stop Fre 826.000000 MH		
33.4					CF Ste 400.000 kH Auto Ma		
53.4					Freq Offse 0 H		
63.4 Center 824.000 MHz #Res BW 100 kHz	#VBW	300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)			
ISG			STATU				

BAND5/26. Lower Band Edge Plot (10 M BW Ch.26840 QPSK_RB50_Offset 0)



	08:35:24 PM Mar 18, 2024	ALIGN AUTO	SENSE:INT	trum Analyzer - Swept SA RF 50 Ω AC	Agilent Spect
Frequency	TRACE 2 3 4 5 6 TYPE A WWWW DET A A A A A A	#Avg Type: RMS		req 821.000000 MHz PNO: Wide ↔ IFGain:Low	
Auto Tun	1 822.944 MHz -36.360 dBm	Mki		Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 821.000000 MH					16.6
Start Fre 819.000000 MH					3,40
Stop Fre 823.000000 MH	-13,00 dBm				13.4
CF Ste 400.000 kH Auto Ma	F.				43.4
Freq Offse 0 H					53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	(300 kHz	1.000 MHz 100 kHz #VBV	Center 82
		STATUS			ISG

BAND5/26. Lower Extended Band Edge Plot (10 M BW Ch.26840 QPSK_RB50_0)





BAND 26. Lower Band Edge Plot (15 M BW Ch.26865 QPSK_RB1_Offset 0)



Agilent Spectrum Analyzer - Swept SA					- 5 ×
RL RF 50 Q AC Center Freq 824.000000	0 MHz PNO: Wide +++ T	rig: Free Run	#Avg Type: RMS	08:40:31 PM Mar 18, 2024 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A	Frequency
Ref Offset 26.6 dE	3	Atten: 20 dB	Mk	r1 823.984 MHz -30.387 dBm	Auto Tune
16.6					Center Free 824.000000 MH
3,40				RMS	Start Free 822.000000 MH
23.4				-13,00 dBm	Stop Fre 826.000000 MH
43.4	ana	Alexandre and a second second			CF Ste 400.000 kH <u>Auto</u> Ma
53.4					Freq Offse 0 H
68.4 Center 824.000 MHz Res BW 150 kHz	#VBW 47	70 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
SG			STATU		

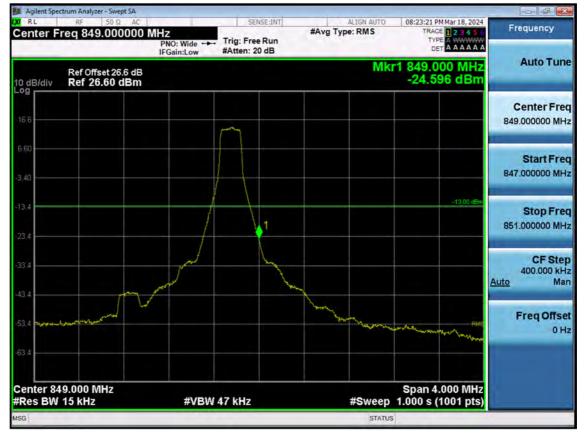
BAND 26. Lower Band Edge Plot (15 M BW Ch.26865 QPSK_RB75_Offset 0)



Agilent Spectrum Analyzer - Swept SA					
X RL RF 50 Ω AC Center Freq 821.000000	MHz PNO: Wide ↔ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	08:40:51 PM Mar 18, 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	IF Gam. Low	match. 20 ab	Mk	Auto Tun Center Fre 821.00000 MH Start Fre 819.000000 MH Stop Fre 823.000000 MH CF Ste 400.000 kH	
16.6					Center Freq 821.000000 MHz
3,40					Start Fred 819.000000 MH;
13.4				-13,00 dBm	Stop Fred 823.000000 MH2
-33.4				1. RM	CF Step 400.000 kHz Auto Mar
53.4					Freq Offse 0 H
-63.4 Center 821.000 MHz #Res BW 100 kHz	#VBW :	300 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATUS		

BAND 26. Lower Extended Band Edge Plot (15 M BW Ch.26865 QPSK_RB75_0)





BAND5/26. Upper Band Edge Plot (1.4 M BW Ch.27033 QPSK_RB1_Offset 5)



							the second se	trum Analyzer - S	
Frequency	08:22:33 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO	#Avg T		Trig: Fre	PNO: Wide			Center F
Auto Tun	1 849.000 MHz -28.238 dBm	Mkr		20 dB				0 dB/div	
Center Free 849.000000 MH									15.6
Start Fre 847.000000 MH						omlaaforigetrijserderij			6,60 3,40
Stop Fre 851.000000 MH	-13,00 dBm				1				13.4
CF Ste 400.000 kH Auto Ma		4.	en and a start of the start of	Jours				areast	33.4 43.4
Freq Offse 0 H	RMS	and and a second second second							53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep			47 kHz	#VBW	z	9.000 MHz 15 kHz	Center 84
		STATUS			_				SG

BAND5/26. Upper Band Edge Plot (1.4 M BW Ch.27033 QPSK_RB6_Offset 0)



Agilent Spectrum Analyzer - Swept SA				×
X RL RF 50 Ω AC Center Freq 852.000000	MHZ PNO: Wide +++ Trig: Free Run IFGain:Low #Atten: 20 dB	#Avg Type: RMS	08:22:54 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WHAT A A A A A	Frequency
Ref Offset 26.6 dB 0 dB/div Ref 26.60 dBm	I GUMEON	Mk	r1 850.000 MHz -37.787 dBm	Auto Tune
16.6				Center Free 852.000000 MH
3,40				Start Free 850.000000 MH
23.4			-13,00 dBm	Stop Fre 854.000000 MH
33.4 1				CF Ste 400.000 kH <u>Auto</u> Ma
53.4		and provide the second difference of the secon	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	5	

BAND5/26. Upper Extended Band Edge Plot (1.4 M BW Ch.27033 QPSK_RB6_0)



Agilent Spectrum Analyzer - S	and the second sec				
RL RF 50 Center Freq 849.0	0.0 AC 000000 MHz PNO: Wide ↔ IFGain:Low	. Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:28:50 PM Mar 18, 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		Mk	1 849.000 MHz -20.387 dBm	Auto Tune
15.6		\square			Center Free 849.000000 MH
3,40					Start Free 847.000000 MH
13.4				-13.00 dBm	Stop Free 851.000000 MH
33.4 43.4		- L			CF Step 400.000 kH Auto Mar
53.4				RMS	Freq Offse 0 H
Center 849.000 MHz #Res BW 30 kHz	#VBW	91 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATUS		

BAND5/26. Upper Band Edge Plot (3 M BW Ch.27025 QPSK_RB1_Offset 14)



							trum Analyzer - Swept SA	
Frequency	8:28:02 PM Mar 18, 2024 TRACE 1 2 3 4 5 6 TYPE A DET A A A A A A	ALIGN AUTO pe: RMS	#Avg T			PNO: Wide	RF 50 Ω AC req 849.000000 M	Center F
Auto Tun	849.004 MHz -24.487 dBm	Mkr					Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 849.000000 MH								16.6
Start Fre 847.000000 MH						traythe all year an array h	Magala ⁴ a	6,60 3,40
Stop Fre 851.000000 MH	-13,00 dBm			1				23,4
CF Ste 400.000 kH Auto Ma	RMS	-	man	- And				43.4
Freq Offse 0 H								53.4
	pan 4.000 MHz 000 s (1001 pts)	#Sweep			91 kHz	#VBW	9.000 MHz 30 kHz	Center 84
		STATUS						SG

BAND5/26. Upper Band Edge Plot (3 M BW Ch.27025 QPSK_RB15_Offset 0)



Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT	ALIGN AUTO	08:28:21 PM Mar 18, 2024	
Center Freq 852.00000		Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WWWWW DET A A A A A A	
Ref Offset 26.6 dE	3		Mk	r1 850.004 MHz -34.722 dBm	Auto Tun
15.6					Center Fre 852.000000 MH
3,40					Start Fre 850.000000 MH
23.4				-13,00 dBm	Stop Fre 854.000000 MH
43.4					CF Ste 400.000 kH <u>Auto</u> Ma
53.4			and the second	RMS	Freq Offso 0 F
63.4 Center 852.000 MHz #Res BW 100 kHz	#VBW	300 kHz	#Sween	Span 4.000 MHz 1.000 s (1001 pts)	
ISG			STATU		

BAND5/26. Upper Extended Band Edge Plot (3 M BW Ch.27025 QPSK_RB15_0)





BAND5/26. Upper Band Edge Plot (5 M BW Ch.27015 QPSK_RB1_Offset 24)



00							ctrum Analyzer - Swept SA	
Frequency	08:33:24 PM Mar 18, 2024 TRACE 2 3 4 5 0 TYPE A WARNER DET A A A A A A	ALIGN AUTO	#Avg			PNO: Wide	RF 50 Ω AC req 849.000000 M	Center F
Auto Tun	1 849.008 MHz -25.109 dBm	Mkr					Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Fre 849.000000 MH								16.6
Start Fre 847.000000 MH						6-9-99		3,40
Stop Fre 851.000000 MH	-13,00 dBm			1	-			13.4
CF Ste 400.000 kH <u>Auto</u> Ma	RMS	14		and the second				33.4
Freq Offse 0 H								53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep			160 kHz	#VBW	9.000 MHz 51 kHz	Center 84
		STATUS						ISG

BAND5/26. Upper Band Edge Plot (5 M BW Ch.27015 QPSK_RB25_Offset 0)



Agilent Spectrum Analyzer - Swept SA	1 1 2	SENSE:INT	ALIGN AUTO	08:33:44 PM Mar 18, 2024	
enter Freq 852.000000	PNO: Wide	Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	TYPE A WAAAAAA	Frequency
Ref Offset 26.6 dB 0 dB/div Ref 26.60 dBm			Mk	r1 850.012 MHz -36.501 dBm	Auto Tur
16.6					Center Fre 852.000000 MH
,40					Start Fre 850.000000 Mi
3.4				-13.00 dBm)	Stop Fre 854.000000 MH
3.4 1	verne and an and a second	1944	Vingenet of the last		CF Ste 400.000 kH Auto Ma
53.4				RMS	Freq Offs 01
53.4 Center 852.000 MHz Res BW 100 kHz	#VBW 3	00 kHz	#Sweep	Span 4.000 MHz 1.000 s (1001 pts)	
SG			STATU		

BAND5/26. Upper Extended Band Edge Plot (5 M BW Ch.27015 QPSK_RB25_0)



Agilent Spectrum Analyzer - Swept S				1	- 5 X		
RL RF 50 Q Center Freq 849.0000	PNO: Wide +++	SENSE:INT	ALIGN AUTO #Avg Type: RMS	08:39:34 PM Mar 18, 2024 TRACE 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency		
Ref Offset 26.6 dB Mkr1 849.004 MHz 10 dB/div Ref 26.60 dBm -32.068 dBm							
16.6					Center Fred 849.000000 MH;		
3,40					Start Free 847.000000 MH		
13.4				-13,00 dBm	Stop Fred 851.000000 MH;		
33.4		1 may			CF Step 400.000 kH Auto Mar		
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			STATUS				

BAND5/26. Upper Band Edge Plot (10 M BW Ch.26990 QPSK_RB1_Offset 49)



								ctrum Analyzer - Swept SA	
Frequency	PM Mar 18, 2024 ACE 1 2 3 4 5 0 VPE A A A A A A DET A A A A A A	08:38:46 F TRAC TVI DI	ALIGN AUTO	#A		Trig: Free #Atten: 2	Z PNO: Wide ↔ IFGain:Low	RF 50 Ω AC req 849.000000 M	Center F
Auto Tune	000 MHz 340 dBm	1 849.0 -28.3	Mki				Guinebw	Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Free 849.000000 MH:									15.6
Start Free 847.000000 MH									6,60 3,40
Stop Free 851.000000 MH:	-13,00 dBm				1—	J. J. J.			13.4
CF Stej 400.000 kH Auto Ma	RMS			Mary and South of the South of	and a start of the				33.4
Freq Offse 0 H					1				53.4
	4.000 MHz (1001 pts)	Span 4 1.000 s	#Sweep			300 kHz	#VBW	9.000 MHz 100 kHz	Center 84
			STATUS						ISG

BAND5/26. Upper Band Edge Plot (10 M BW Ch.26990 QPSK_RB50_Offset 0)



- 6 ×	1		1		Agilent Spectrum Analyzer - Swept S
Frequency	08:39:06 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A MARA A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB		RL RF 50 Ω enter Freq 852.0000
Auto Tun	1 850.000 MHz -38.624 dBm	Mkr		26.6 dB	Ref Offset 26.6 dB/div Ref 26.60 dB
Center Free 852.000000 MH					5.6
Start Fre 850.000000 MH					.40
Stop Fre 854.000000 MH	-13.00 dBm				3.4
CF Ste 400.000 kH Auto Ma					3.4
Freq Offse 0 H	RMS				3.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz		enter 852.000 MHz Res BW 100 kHz
		STATUS			G

BAND5/26. Upper Extended Band Edge Plot (10 M BW Ch.26990 QPSK_RB50_0)





BAND 26. Upper Band Edge Plot (15 M BW Ch.26965 QPSK_RB1_Offset 74)



							trum Analyzer - Swept SA	
Frequency	PM Mar 18, 2024 CE 1 2 3 4 5 0 PE A WAAAAA DET A A A A A A A	08:43:46 TRA TY D	ALIGN AUTO #Avg Type: RMS		Trig: Free #Atten: 20	IZ PNO: Wide ↔	RF 50Ω AC req 849.000000 M	Center F
Auto Tun	000 MHz 89 dBm	1 849.0 -31.3	Mki				Ref Offset 26.6 dB Ref 26.60 dBm	10 dB/div
Center Free 849.000000 MH								15.6
Start Fre 847.000000 MH								6,60 3,40
Stop Fre 851.000000 MH	-13,00 dBm							13.4
CF Ste 400.000 kH Auto Ma	RMS		Anton any inclusion and an inclusion	1 Automatications	and an a start of the start of			33.4
Freq Offse 0 H								53.4
	1.000 MHz (1001 pts)	Span 4 1.000 s	#Sweep		470 kHz	#VBW	9.000 MHz 150 kHz	Center 84
		_	STATUS					ISG

BAND 26. Upper Band Edge Plot (15 M BW Ch.26965 QPSK_RB75_Offset 0)



- 5 -	The second second			um Analyzer - Swept SA	
Frequency	08:44:06 PM Mar 18, 2024 TRACE 2 3 4 5 0 TYPE A WAYNEY DET A A A A A A	ALIGN AUTO #Avg Type: RMS	SENSE:INT Trig: Free Run #Atten: 20 dB	RF 50 Ω AC eq 852.000000 MHz PNO: Wide IFGain:Low	Center Fi
Auto Tune	1 850.004 MHz -40.212 dBm	Mki		Ref Offset 26.6 dB Ref 26.60 dBm	0 dB/div
Center Free 852.000000 MH					16.6
Start Fre 850.000000 MH					6.60 3,40
Stop Fre 854.000000 MH	13,00 dBm				13.4
CF Ste 400.000 kH Auto Ma					43.4
Freq Offse 0 F	RMS				53.4
	Span 4.000 MHz 1.000 s (1001 pts)	#Sweep	300 kHz	.000 MHz 00 kHz #VBW	63.4 Center 85 #Res BW
		STATUS			ISG

BAND 26. Upper Extended Band Edge Plot (15 M BW Ch.26965 QPSK_RB75_0)



Agilent Spectrum Analyzer - Swept SA				- 6 ×
Center Freq 5.015000000	CHz PNO: Fast	#Avg Type: RMS un	08:19:32 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WARNAW DET A A A A A A	Frequency
10 dB/div Ref 10.00 dBm		M	(r1 3.694 0 GHz -67.327 dBm	Auto Tune
0 00 0 ²				Center Fre 5.015000000 GH
40.0 				Start Fre 30.000000 MH
60 0 70.0 80.0			F///S	Stop Fre 10.000000000 GH
Start 30 MHz Res 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	694 0 GHz -67.327 dBm 825.1 MHz -4.207 dBm		FUNCTION VALUE	Freq Offse 0 H
11	m	STATU		

BAND5/26. Conducted Spurious Plot (26797ch_1.4 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					
enter Freq 5.015000000	PNO: Fast	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:21:36 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WARNEY DET A A A A A A A	Frequency
0 dB/div Ref 10.00 dBm			Mk	r1 3.707 4 GHz -67.389 dBm	Auto Tune
•g 0.00 10.0					Center Free 5.015000000 GH
40.0 50.0					Start Free 30.000000 MH
60 0 70.0				RMS	Stop Free 10.000000000 GH
Start 30 MHz Res BW 1.0 MHz	#VBW	3.0 MHz		Stop 10.000 GHz 33 ms (20001 pts)	CF Step 997.000000 MH <u>Auto</u> Ma
MKR MODE TRC SCL X 1 N 1 f 3 2 N 1 f 3 4 - - - - 5 - - - - 6 - - - - 7 - - - - 8 - - - - 10 - - - -	5.707 4 GHz 836.6 MHz	Y FU -67.389 dBm -2.580 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
		ttr -			

BAND5/26. Conducted Spurious Plot (26915ch_1.4 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA	1	SENSE:INT	ALIGN AUTO	08:23:35 PM Mar 18, 2024	×
Center Freq 5.01500000	PNO: Fast	rig: Free Run Atten: 20 dB	#Avg Type: RMS	18,2024 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A	Frequency
0 dB/div Ref 10.00 dBm			Mk	r1 3.705 4 GHz -67.411 dBm	Auto Tun
0.00 10.0 2					Center Fre 5.015000000 GH
40.0 					Start Fre 30.000000 MH
50 0 70 0 80 0				RMS	Stop Fre 10.000000000 GF
tart 30 MHz Res BW 1.0 MHz	#VBW 3.			Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
2 N 1 f 3 4 5 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3.705 4 GHz -6 849.5 MHz -	Y FUN 7.411 dBm 3.675 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 F
8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9				-	

BAND5/26. Conducted Spurious Plot (27033ch_1.4 MHz_QPSK_RB 1_0)



RL RL	trum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO	08:25:17 PM Mar 18, 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
) dB/div	Ref 10.00 dBn	n		M	r1 3.680 5 GHz -67.131 dBm	Auto Tune
0.00	♦2					Center Free 5.015000000 GH
i0.0 i0.0						Start Free 30.000000 MH
0.0 0.0 0.0					F/MS	Stop Fre 10.000000000 GH
tart 30 M Res BW	1.0 MHz		V 3.0 MHz		Stop 10.000 GHz 33 ms (20001 pts)	CF Ste 997.000000 MH <u>Auto</u> Ma
1 N 1 2 N 1 3 4 5 6 6 7 8 9 9 0	f	x 3.680 5 GHz 825.1 MHz	-67.131 dBm -3.278 dBm	FUNCTION FUNCTION WIDTH		Freq Offse 0 H
s			in .	STATU	5	-

BAND5/26. Conducted Spurious Plot (26805ch_3 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					- 6 ×
RL RF 50 Ω AC enter Freq 5.015000000	GHZ PNO: Fast ↔ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:27:03 PM Mar 18, 2024 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			Mk	r1 3.697 5 GHz -67.019 dBm	Auto Tune
					Center Fre 5.015000000 GH
40.0 					Start Free 30.000000 MH
60 0 70 0 80 0				FMS	Stop Fre 10.000000000 GH
start 30 MHz Res BW 1.0 MHz	#VBW	3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH <u>Auto</u> Ma
	697 5 GHz 835.6 MHz	-67.019 dBm -3.472 dBm	NCTION FUNCTION WIDTH		Freq Offse 0 H
G		m	STATUS		

BAND5/26. Conducted Spurious Plot (26915ch_3 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					- 6 ×
RL RF 50 Ω AC enter Freq 5.015000000	GHz PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:29:04 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A	Frequency
dB/div Ref 10.00 dBm			Mk	r1 3.679 5 GHz -67.203 dBm	Auto Tune
•g					Center Free 5.015000000 GH
0.0					Start Free 30.000000 MH
				FMS	Stop Free 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz	#VBV	/ 3.0 MHz	Sweep 17	Stop 10.000 GHz .33 ms (20001 pts)	CF Stej 997.000000 MH <u>Auto</u> Ma
1 N 1 f 3.	679 5 GHz 849.5 MHz	<u>-67.203 dBm</u> -3.950 dBm		E	Freq Offse 0 H
G		111	STATUS	,	-

BAND5/26. Conducted Spurious Plot (27025ch_3 MHz_QPSK_RB 1_0)



RL RL	trum Analyzer - Swept SA RF 50 Ω A		SENSE:INT	ALIGN AUTO	08:30:42 PM Mar 18, 2024	- 0 ×
	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 3.709 4 GHz -67.241 dBm	Auto Tun
0.00 113.0 20.0	\$ ²					Center Fre 5.015000000 GH
30.0 40.0 50.0						Start Fre 30.000000 MH
50.0 713.0 80,0					FMS	Stop Fre 10.000000000 GH
tart 30 N Res BW	1.0 MHz		N 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 2 N 1 3 4 5 6 7 8 9 9 10	f	X 3.709 4 GHz 825.1 MHz	-67.241 dBm -3.285 dBm			Freq Offse 0 H
sg			TH -	STATU	s	

BAND5/26. Conducted Spurious Plot (26815ch_5 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - S	and the second	_	antime at	-				
enter Freq 5.015	000000 G	Hz PNO: Fast ↔ FGain:Low	Trig: Free Rur #Atten: 20 dB	#Avg	ALIGN AUTO Type: RMS	08:32:24 PMI TRACE TYPE DET	1 2 3 4 5 6 A 4 4 A A A A A	Frequency
0 dB/div Ref 10.0	0 dBm				MI	kr1 3.701 -67.014	0 GHz 1 dBm	Auto Tune
.og 0.00 ↓2 10.0 ↓2								Center Free 5.015000000 GH
40.0 50.0								Start Free 30.000000 MH
50.0 70.0 80.0							RMS	Stop Fre 10.00000000 GH
Start 30 MHz Res BW 1.0 MHz		#VBV	V 3.0 MHz	FUNCTION	Sweep 17	Stop 10.0 7.33 ms (200	001 pts)	CF Stej 997.000000 MH <u>Auto</u> Ma
Inc Inc <td></td> <td>1 0 GHz 5.1 MHz</td> <td>-67.014 dBm -2.658 dBm</td> <td>POINCHON</td> <td></td> <td>PORCHON</td> <td>E</td> <td>Freq Offse 0 H</td>		1 0 GHz 5.1 MHz	-67.014 dBm -2.658 dBm	POINCHON		PORCHON	E	Freq Offse 0 H
SG			m		STATU	ie l		_

BAND5/26. Conducted Spurious Plot (26915ch_5 MHz_QPSK_RB 1_0)



Agilent Spec	trum Analyzer - Swe RF 50 Ω		-		SE:INT		ALIGN AUTO	00.24.25.0	MMar 18, 2024	- 6 ×
	req 5.01500	00000	PNO: Fast ↔ IFGain:Low		Run	#Avg Typ		TRAC TYP DE	E 1 2 3 4 5 6 E A MARINE T A A A A A A A	Frequency
0 dB/div	Ref 10.00	dBm					Mk	r1 3.705 -67.19	i 4 GHz 9 dBm	Auto Tun
0.00 113.0 20.0	2									Center Fre 5.015000000 GH
30.0 40.0 50.0										Start Fre 30.000000 MH
60.0 70.0 80.0									RMS	Stop Fre 10.000000000 GH
tart 30 N Res BW	1.0 MHz	X	#VB	W 3.0 MHz	_		weep 17	Stop 10. .33 ms (20		CF Ste 997.000000 M⊢ <u>Auto</u> Ma
1 N 1 2 N 1 3 4 5 6 7 8 9 9 10	f	3.70	05 4 GHz 49.0 MHz	-67.199 df -4.082 df	3m			PONCINC	E	Freq Offse 0 H
SG				m)	STATUS	5		

BAND5/26. Conducted Spurious Plot (27015ch_5 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					- # ×
Center Freq 5.015000000	GHz PNO: Fast → IFGain:Low	Trig: Free Run #Atten: 20 dB	ALIGN AUTO #Avg Type: RMS	08:36:03 PM Mar 18, 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	IFGain:Low	#Atten: 20 db	Mk	r1 3.708 9 GHz -66.933 dBm	Auto Tune
og 2 0.00 ↓2 10.0					Center Free 5.015000000 GH
40.0					Start Free 30.000000 MH
E0 0	~~~^1			FMS	Stop Fred 10.000000000 GH;
Start 30 MHz #Res BW 1.0 MHz	#VBV	V 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Step 997.000000 MH Auto Mar
	708 9 GHz 825.1 MHz	Y FU -66.933 dBm -2.682 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H;
* Isg		m	STATUS	,	

BAND5/26. Conducted Spurious Plot (26840ch_10 MHz_QPSK_RB 1_0)



WIKT 3.709 4 GHZ -67.385 dBm 0 dB/div Ref 10.00 dBm -67.385 dBm 0 00 -67.385 dBm -67.385 dBm 1 0 1 f 3.709 4 GHz -67.385 dBm 1 1 f 332.6 MHz -3.454 dBm	Agilent Spectrum Analyzer - Swept SA					- 6 ×
Mikri 3,709 4 GHz Center Fre -67.385 dBm -67.385 dBm -09 -67.385 dBm -010 <		PNO: Fast +	Trig: Free Run			Frequency
000 010 0	10 dB/div Ref 10.00 dBm			Mk	r1 3.709 4 GHz -67.385 dBm	Auto Tuno
30.0 40.0 50.0	0.00					Center Fre 5.015000000 GH
70.0 Find Stop Free 80.0 Start 30 MHz Stop 10.000 GHz Start 30 MHz #VBW 3.0 MHz Stop 10.000 GHz FRes BW 1.0 MHz #VBW 3.0 MHz Sweep 17.33 ms (20001 pts) MKR MODE TRC SCL X Y N 1 f 3.709 4 GHz -67.385 dBm 2 N 1 f 3.709 4 GHz -67.385 dBm 3 - - - - - 8 - - - - - 8 - - - - - - 9 - - - - - - - 10 -	40.0					Start Fre 30.000000 MH
KR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE 997.000000 MH MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE Auto Matter 1 N 1 f 3.709 4 GHz -67.385 dBm General Gener Gener Gener	70.0				FMS	Stop Fre 10.000000000 GH
1 N 1 f 3.709 4 GHz -67.385 dBm 2 N 1 f 832.6 MHz -3.454 dBm 3 - - - - - 4 - - - - 0 H 5 - - - - 0 H 6 - - - - 0 H 8 - - - - - 0 H 9 - - - - - - - 0 H 11 - - - - - - - - - - 0 H	Res BW 1.0 MHz	#VBW			.33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
	1 N 1 f 3.1 2 N 1 f 3.1 3 1 f 3.1 4 1 f 5.1 5 1 1 f 6 1 1 f 7 1 1 f 9 1 1 f f 10 1 1 f f f		-67.385 dBm			Freq Offse 0 H
SG STATUS	θÊ.		tti -			

BAND5/26. Conducted Spurious Plot (26915ch_10 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					- 6 ×
Center Freq 5.015000000	GHz PNO: Fast → IFGain:Low	Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	08:39:48 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWW DET A A A A A A A	Frequency
IO dB/div Ref 10.00 dBm	I Guilleow		Mk	r1 3.699 5 GHz -67.435 dBm	Auto Tune
og 2000					Center Free 5.015000000 GH
40.0					Start Free 30.000000 MH
E0 0 70.0	, ¹			F.MS	Stop Free 10.000000000 GH
Start 30 MHz #Res BW 1.0 MHz	#VBV	V 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Step 997.000000 MH Auto Mar
	699 5 GHz 849.0 MHz	<u>-67.435 dBm</u> -3.435 dBm	FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H:
		ŧ			

BAND5/26. Conducted Spurious Plot (26990ch_10 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA					
RL RF 50 Ω AC Center Freq 5.015000000	PNO: Fast	SENSE:INT Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	08:41:29 PM Mar 18, 2024 TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A A	Frequency
0 dB/div Ref 10.00 dBm			Mk	r1 3.715 9 GHz -67.109 dBm	Auto Tun
					Center Fre 5.015000000 GH
40.0 					Start Fre 30.000000 MH
50 0 70.0 30.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		FMS	Stop Fre 10.000000000 GH
tart 30 MHz Res BW 1.0 MHz	#VBW 3			Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
2 N 1 f 3 4 5 6 6 6 7	.715 9 GHz -6 825.6 MHz -	Y FUI 7.109 dBm 3.102 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		m		-	

BAND 26. Conducted Spurious (26865ch_15 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA	1 1 1	SENSE:INT AL	IGN AUTO 08:42:36 PM	Mar 18, 2024
Center Freq 5.01500000	O GHZ	#Avg Type: free Run : 20 dB	RMS TRACE	I 2 3 4 5 6 A MANAAAAA
0 dB/div Ref 10.00 dBm			Mkr1 3.678 -67.18	5 GHz Auto Tun 3 dBm
				Center Fre 5.015000000 GH
40.0 				Start Fre 30.000000 MH
50.0 70.0 80.0			~~~~	800 Stop Fre 10.000000000 GH
Start 30 MHz Res BW 1.0 MHz	#VBW 3.0 MI		Stop 10.0 eep 17.33 ms (20	001 pts) 997.000000 MH
2 N 1 f 3 4 5 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	3.678 5 GHz -67.183 830.6 MHz -2.902	dBm	TION WIDTH FUNCTION	Freq Offse
8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	111			-

BAND 26. Conducted Spurious (26915ch_15 MHz_QPSK_RB 1_0)



Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT	ALIGN AUTO	08:44:48 PM Mar 18, 2024	
enter Freq 5.01500000	CHZ PNO: Fast ↔ IFGain:Low		#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 dBm			Mk	r1 3.688 0 GHz -67.149 dBm	Auto Tun
0.00 ····· ··· ··· ··· ··· ··· ··· ··· ·					Center Fre 5.015000000 GH
40.0 50.0					Start Fre 30.000000 MH
50 0 70.0 30.0				RMS	Stop Fre 10.000000000 GF
tart 30 MHz Res BW 1.0 MHz	#VBV	V 3.0 MHz		Stop 10.000 GHz .33 ms (20001 pts)	CF Ste 997.000000 MH Auto Ma
	688 0 GHz 849.0 MHz	-67.149 dBm -3.573 dBm	PUNCTION UP FUNCTION WIDTH	FUNCTION VALUE	Freq Offs 0 H
sg		tti -	STATUS		

BAND 26. Conducted Spurious (26965ch_15 MHz_QPSK_RB 1_0)



10. ANNEX A_ TEST SETUP PHOTO

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

No.	Description		
1	HCT-RF-2403-FC006-P		