

TEST REPORT

FCC LTE B12(17) Test for SM-A266M/DS Certification

APPLICANT SAMSUNG Electronics Co., Ltd.

REPORT NO. HCT-RF-2501-FC041

DATE OF ISSUE January 22, 2025

> **Tested by** Jae Ryang Do

Technical Manager Jong Seok Lee



F-TP22-03(Rev.06)

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T E S T R E P O R T	REPORT NO. HCT-RF-2501-FC041 DATE OF ISSUE January 22, 2025 Additional Model SM-A266M
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-A266M/DS
Date of Test	December 09, 2024~ January 17, 2025
FCC ID	A3LSMA266M
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 Classification:	PCS Licensed Transmitter Held to Ear (PCE)
Test Standard Used	FCC Rule Part: §27
Test Results	PASS



REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	January 22, 2025	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 ***.

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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:	A3LSMA266M
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27
EUT Type:	Mobile phone
Model(s):	SM-A266M/DS
Additional Model(s)	SM-A266M
	699.7 MHz – 715.3 MHz (LTE – Band 12 (1.4 MHz))
T. F	700.5 MHz – 714.5 MHz (LTE – Band 12 (3 MHz))
Tx Frequency:	701.5 MHz – 713.5 MHz (LTE – Band 12(17) (5 MHz))
	704.0 MHz – 711.0 MHz (LTE – Band 12(17) (10 MHz))
Date(s) of Tests:	December 09, 2024~ January 17, 2025
	Radiated : R3CXB0V4KLT
Serial number:	Conducted : 855de5dce5297ece



1.1. MAXIMUM OUTPUT POWER

Mode		Emission		ERP		
Mode (MHz)	Tx Frequency (MHz)	Designator	Modulation		Max. Power (dBm)	
		1M10G7D	QPSK	0.066	18.17	
LTE D = 12(14)		1M09W7D	16QAM	0.055	17.40	
LTE – Band 12 (1.4)	699.7 – 715.3	1M10W7D	64QAM	0.044	16.45	
		1M10W7D	256QAM	0.022	13.35	
		2M71G7D	QPSK	0.063	18.00	
LTE Dand 12(2)	700.5 – 714.5	2M72W7D	16QAM	0.055	17.44	
LTE – Band 12 (3)		2M71W7D	64QAM	0.045	16.50	
		2M71W7D	256QAM	0.022	13.46	
		4M53G7D	QPSK	0.063	18.02	
LTE Dand 12/17\ /5\	701.5 - 713.5	4M52W7D	16QAM	0.054	17.36	
LTE – Band 12(17) (5)	101.5 - 113.5	4M52W7D	64QAM	0.042	16.26	
	-	4M52W7D	256QAM	0.021	13.28	
		8M98G7D	QPSK	0.064	18.06	
LTE Deved 12/17\ /10\	704.0 711.0	9M01W7D	16QAM	0.055	17.38	
LTE – Band 12(17) (10)	704.0 – 711.0	8M99W7D	64QAM	0.045	16.51	
		8M99W7D	256QAM	0.022	13.37	



2. INTRODUCTION

2.1. DESCRIPTION OF EUT

Please refer to the [2G3G] Test Report.

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**, **Republic 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	- KDB 971168 D01 v03r01 – Section 6.0
Antenna Terminal	- 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
Radiated Power	- ANSI C63.26-2015 – Section 5.2.4.4 - KDB 971168 D01 v03r01 – Section 5.8
Radiated Spurious and Harmonic Emissions	- ANSI C63.26-2015 – Section 5.5.3 - KDB 971168 D01 v03r01 – Section 5.8



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.

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.

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)

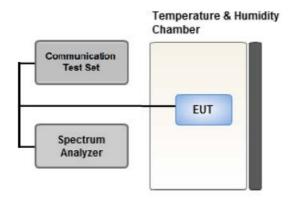
Where: Pg is the generator output power into the substitution antenna.

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

EIRP (dBm) = ERP (dBm) + 2.15



3.4 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

3.5 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test Overview

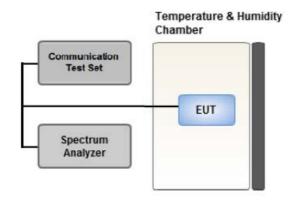
The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic.

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 = Peak
- 4. Trace Mode = Max Hold
- 5. Sweep time = auto
- 6. Number of points in sweep \geq 2 x Span / RBW



3.6 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



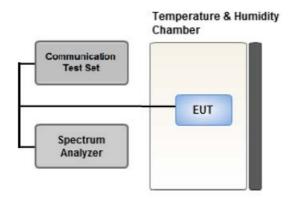
Test Notes

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.



3.7 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:

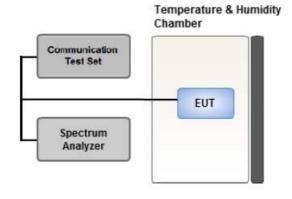
The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.

- 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.



3.8 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 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 × RBW.

- 1. Set the RBW \geq OBW.
- 2. Set VBW \geq 3 × RBW.
- 3. Set span \geq 2 × OBW.
- 4. Sweep time \geq 10 × (number of points in sweep) × (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 × to 3 × 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.
- 10. 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 %.



3.9 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
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
- Therefore, only the worst case(stand-alone) results were reported.
- 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)
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data
- LTE Band 12 (699 716 MHz, 5/10 MHz bandwidth) overlaps the entire frequency range of LTE Band 17 (704 716 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers Band 17 as well as Band 12.

- Please refer to the table below.
- SM-A266M/DS & additional models were tested and the worst case results are reported. (Worst case : SM-A266M/DS)

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



3.10 WORST CASE(CONDUCTED TEST)

- All modes of operation were investigated and the worst case configuration results are reported.
- LTE Band 12 (699 716 MHz, 5/10 MHz bandwidth) overlaps the entire frequency range of LTE Band 17 (704 716 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers Band 17 as well as Band 12.

- SM-A266M/DS & additional models were tested and the worst case results are reported. (Worst case : SM-A266M/DS)

	[Woi	rst case]			
Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
	QPSK,		Mid		
Occupied Bandwidth	16QAM,	1.4, 3, 5, 10		Full RB	0
	64QAM,				
	256QAM				
	QPSK,				
PEAK- TO- AVERAGE RATIO	16QAM,	1.4, 3, 5, 10	Mid	Full RB	0
	64QAM,	, _, _, _,	ind	T UNITE	
	256QAM				
	QPSK	1.4	Low	1	0
			High	1	5
			Low	1	0
			High	1	14
Band Edge		5	Low	1	0
Dana Lage	QUSIX		High	1	24
		10	Low	1	0
		10	High	1	49
		1 4 2 5 10	Low,	Full RB	0
		1.4, 3, 5, 10	High		0
Spurious and Harmonic Emissions at			Low,		
Antenna Terminal	QPSK	1.4, 3, 5, 10	Mid,	1	0
			High		



4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
RF Switching System	Switch box(1.2 G HPF+LNA)	HCT CO., LTD.,	F1L1	11/11/2025	Annual
RF Switching System	Switch box(3.3 G HPF+LNA)	HCT CO., LTD.,	F1L2	11/11/2025	Annual
RF Switching System	Switch box(LNA)	HCT CO., LTD.,	F1L4	11/11/2025	Annual
RF Switching System	Switch box(6 G HPF+LNA)	HCT CO., LTD.,	F1L7	11/11/2025	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/17/2025	Annual
DC Power Supply	E3632A	Agilent	MY40010147	08/06/2025	Annual
Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Dipole Antenna	UHAP	Schwarzbeck	01288	08/07/2026	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	09/20/2026	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	08/06/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Loop Antenna(9 kHz ~ 30 MHz)	FMZB1513	Schwarzbeck	1513-333	03/07/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	895	08/28/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	1135	08/19/2026	Biennial
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262094331	11/13/2025	Annual
Wideband Radio Communication Tester	MT8820C	Anritsu Corp.	6201026545	11/20/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	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 (±kHz)
Occupied Bandwidth	95 (Confidence level about 95 %, <i>k</i> =2)
Frequency stability	28 (Confidence level about 95 %, <i>k</i> =2)
Parameter	Expanded Uncertainty (±dB)
Block Edge	0.70 (Confidence level about 95 %, <i>k</i> =2)
Conducted Spurious Emissions	1.18 (Confidence level about 95 %, <i>k</i> =2)
Peak- to- Average Ratio	0.68 (Confidence level about 95 %, <i>k</i> =2)
Radiated Power	4.74 (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, § 27.53(g)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	See Note1
Frequency stability / variation of ambient temperature	§ 2.1055, § 27.54	Emission must remain in band	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	§ 27.50(c)(10)	< 3 Watts max. ERP	PASS
Radiated Spurious and Harmonic	§ 2.1053,	< 43 + 10log10 (P[Watts]) for	DACC
Emissions	§ 27.53(g)	all out-of band emissions	PASS



7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch.	/ Freq.	Measured	Substitute Ant. Gain		<u> </u>	C L Dol		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.

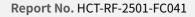
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's 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	C I	Pol.	EIRP	
channel	Freq.(MHz)	Level (dBm)	Level (dBm)	(dBi)	C.L	P01.	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

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8. TEST DATA

8.1 EFFECTIVE RADIATED POWER

Frog	Mod/		Measured	Substitute	Ant. Gain			Limit	El	RP		RB
Freq (MHz)	Mod/ Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBd)	C.L	Pol	w	w	dBm	Size	Offset
		QPSK	-32.20	27.80	-9.65	1.29	V		0.049	16.86		
C00 7		16-QAM	-33.03	26.97	-9.65	1.29	V		0.040	16.03	1	5
699.7		64-QAM	-33.89	26.11	-9.65	1.29	V		0.033	15.17	L	Э
		256-QAM	-36.96	23.04	-9.65	1.29	V		0.016	12.10		
		QPSK	-31.02	28.65	-9.65	1.30	V		0.059	17.70		
707 F	LTE B12	16-QAM	-31.85	27.82	-9.65	1.30	V	< 2.00	0.049	16.87	1	5
707.5	(1.4 MHz)	64-QAM	-32.71	26.96	-9.65	1.30	V	< 3.00	0.040	16.01	1	Э
		256-QAM	-35.82	23.85	-9.65	1.30	V		0.019	12.90		
		QPSK	-30.16	29.14	-9.65	1.32	V		0.066	18.17		
715.2	5.3	16-QAM	-30.93	28.37	-9.65	1.32	V		0.055	17.40		_
115.5		64-QAM	-31.88	27.42	-9.65	1.32	V		0.044	.044 16.45	1	5
		256-QAM	-34.98	24.32	-9.65	1.32	V		0.022	13.35		

	Mad/		Measured	Substitute				Limit	El	RP		RB
Freq (MHz)	Mod/ Bandwidth	Modulation	Level (dBm)	Level (dBm)	Ant. Gain (dBd)	C.L	Pol	w	w	dBm	Size	Offset
		QPSK	-32.18	27.82	-9.65	1.29	V		0.049	16.88		
700.5		16-QAM	-32.66	27.34	-9.65	1.29	V		0.044	16.40	1	14
100.5		64-QAM	-33.80	26.20	-9.65	1.29	V		0.034	15.26	1	14
		256-QAM	-36.65	23.35	-9.65	1.29	V		0.017	12.41		
		QPSK	-31.07	28.60	-9.65	1.30	V		0.058	17.65		
707.5	LTE B12	16-QAM	-31.62	28.05	-9.65	1.30	V	< 3.00	0.051	17.10	1	14
101.5	(3 MHz)	64-QAM	-32.52	27.15	-9.65	1.30	V	< 3.00	0.042	16.20		14
		256-QAM	-35.61	24.06	-9.65	1.30	V		0.020	13.11		
		QPSK	-30.31	28.96	-9.65	1.31	V		0.063	18.00		
714 5		16-QAM	-30.87	28.40	-9.65	1.31	V	0.055	17.44			
714.5		64-QAM	-31.81	27.46	-9.65	1.31	V		0.045	16.50	1	14
		256-QAM	-34.85	24.42	-9.65	1.31	V		0.022	13.46		



Freq	Mod/		Measured	Substitute	Ant. Gain			Limit	EF	RP	F	RB
•	Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBd)	C.L	Pol	W	W	dBm	Size	Offset
		QPSK	-31.83	28.08	-9.65	1.29	V		0.052	17.14		
701.5		16-QAM	-32.41	27.50	-9.65	1.29	V		0.045	16.56	1	24
701.5		64-QAM	-33.44	26.47	-9.65	1.29	V		0.036	15.53	1	24
		256-QAM	-36.42	23.49	-9.65	1.29	V		0.018	12.55		
		QPSK	-30.93	28.74	-9.65	1.30	V		0.060	17.79		
707 F	LTE B12/17	16-QAM	-31.52	28.15	-9.65	1.30	V	- 2 00	0.052	17.20	1	24
707.5	(5 MHz)	64-QAM	-32.50	27.17	-9.65	1.30	V	< 3.00	0.042	16.22	L	24
		256-QAM	-35.49	24.18	-9.65	1.30	V		0.021	13.23		
		QPSK	-30.28	28.98	-9.65	1.31	V		0.063	18.02		
712 5		16-QAM	-30.94	28.32	-9.65	1.31	V		0.054	17.36	1	24
713.5		64-QAM	-32.04	27.22	-9.65	1.31	V	0.04	0.042	16.26	1	
		256-QAM	-35.02	24.24	-9.65	1.31	V		0.021	13.28		

	Mod/		Measured	Substitute	Ant. Gain			Limit	EF	RP		RB
Freq (MHz)	Mod/ Bandwidth	Modulation	Level (dBm)	Level (dBm)	(dBd)	C.L	Pol	w	w	dBm	Size	Offset
		QPSK	-31.28	28.68	-9.65	1.29	V		0.059	17.74		
704.0		16-QAM	-31.81	28.15	-9.65	1.29	V		0.053	17.21	1	40
704.0		64-QAM	-32.85	27.11	-9.65	1.29	V		0.041	16.17	1	49
		256-QAM	-35.91	24.05	-9.65	1.29	V	_	0.020	13.11		
		QPSK	-30.77	28.90	-9.65	1.30	V		0.062	17.95		
707 5	LTE B12/17	16-QAM	-31.49	28.18	-9.65	1.30	V		0.053	17.23		40
707.5	(10 MHz)	64-QAM	-32.26	27.41	-9.65	1.30	V	< 3.00	0.044	16.46	1	49
		256-QAM	-35.55	24.12	-9.65	1.30	V		0.021	13.17		
		QPSK	-30.38	29.01	-9.65	1.30	V		0.064	18.06		
711.0		16-QAM	-31.06	28.33	-9.65	1.30	V		0.055	17.38		RB e Offset 49 49 49 49 49 49
711.0		64-QAM	-31.93	27.46	-9.65	1.30	V		0.045	16.51	1	49
		256-QAM	-35.07	24.32	-9.65	1.30	V		0.022	13.37		



8.2 RADIATED SPURIOUS EMISSIONS

MODE:	LTE B12
MODULATION SIGNAL:	1.4 MHz QPSK
DISTANCE:	3 meters

Ch	Freq	Measured	Ant.	Substitute	<u> </u>	Del	Result	Limit	F	RB
Ch	(MHz)	Level (dBm)	Gain (dBi)	Level (dBm)	C.L	Pol	(dBm)	(dBm)	Size	Offset
	1 399.40	-33.63	7.61	-55.74	1.85	Н	-49.98	-13.00		
23017 (699.7)	2 099.10	-39.38	9.49	-60.94	2.34	Н	-53.79	-13.00	1	5
х <i>У</i>	2 798.80	-41.24	10.80	-60.75	2.66	V	-52.61	-13.00		
	1 415.00	-34.75	7.71	-56.79	1.87	V	-50.95	-13.00		
23095 (707.5)	2 122.50	-38.59	9.38	-59.37	2.28	Н	-52.27	-13.00	1	5
· · ·	2 830.00	-41.24	10.79	-60.15	2.70	V	-52.06	-13.00		
	1 430.60	-28.05	7.81	-50.51	1.87	Н	-44.57	-13.00		
23173 (715.3)	2 145.90	-37.77	9.30	-57.85	2.27	Н	-50.82	-13.00	1	5
,,	2 861.20	-39.90	10.77	-59.21	2.76	V	-51.20	-13.00		





8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
			QPSK			5.75
	1 4 1411-		16-QAM			6.42
	1.4 MHz		64-QAM			6.67
10			256-QAM			6.74
12		-	QPSK			5.78
	2.141		16-QAM			6.41
	3 MHz		64-QAM			6.61
		707 5	256-QAM			6.61
		707.5	QPSK	Full	RB	5.68
			16-QAM			6.47
	5 MHz		64-QAM			6.58
			256-QAM			6.58
12(17)			QPSK			5.69
			16-QAM			6.31
	10 MHz		64-QAM			6.56
			256-QAM			6.57

Note:

1. Plots of the EUT's P.A.P.R are shown Page 44 ~ 59.

2. P.A.P.R is not required. These values are reported for information only.





8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)			
				QPSK			1.0955		
	1 4 141		16-QAM			1.0943			
	1.4 MHz		64-QAM	6		1.0988			
10			256-QAM	-		1.0945			
12		-	QPSK			2.7137			
	2.444		16-QAM	1-		2.7196			
	3 MHz		64-QAM	15	15		2.7066		
		707.5	256-QAM			2.7137 2.7196 2.7066 2.7129 4.5297 4.5160 4.5184			
		707.5	QPSK		0	4.5297			
			16-QAM			4.5160			
	5 MHz		64-QAM	25		4.5184			
			256-QAM			4.5165			
12(17)		-	QPSK			8.9751			
	10.441		16-QAM	50		9.0052			
	10 MHz		50		8.9926				
				8.9922					

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 60 ~ 75.



Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
		699.7	6.2812	28.591	-58.268	-29.677	
	1.4	707.5	3.1805	27.976	-57.495	-29.519	
10		715.3	2.7219	27.976	-57.970	-29.994	
12		700.5	6.5404	28.591	-57.531	-28.940	
	3	707.5	3.6890	27.976	-58.080	-30.104	
		714.5	9.6012	28.591	-58.741	-30.150	10.00
		701.5	2.3131	27.976	-57.244	-29.268	-13.00
	5	707.5	3.6990	27.976	-57.816	-29.840	
10(17)		713.5	6.3011	28.591	-57.336	-28.745	
12(17)	10	704.0	2.5424	27.976	-58.552	-30.576	
		707.5	3.7588	27.976	-57.774	-29.798	
		711.0	5.2742	28.591	-58.233	-29.642	

8.5 CONDUCTED SPURIOUS EMISSIONS

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 76 ~ 87.

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

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

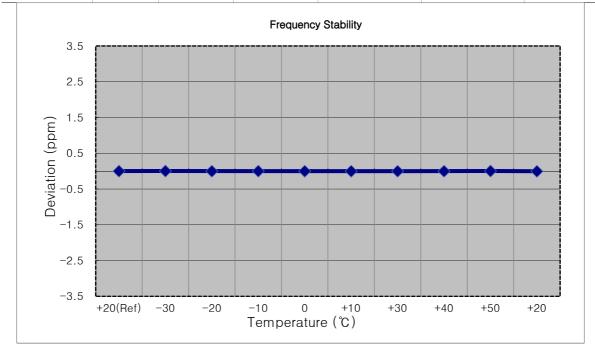
- Plots of the EUT's Band Edge are shown Page 88 ~ 115.



8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

MODE:	LTE B12
OPERATING FREQUENCY:	699,700,000 Hz
CHANNEL:	23017 (1.4 MHz)
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	– ppm
100 %		+20(Ref)	699 699 998	0.0	0.000 000	0.000
100 %		-30	699 700 000	2.0	0.000 000	0.003
100 %		-20	699 699 997	-1.3	0.000 000	-0.002
100 %		-10	699 699 999	0.9	0.000 000	0.001
100 %	4.200	0	699 699 997	-1.3	0.000 000	-0.002
100 %		+10	699 699 997	-1.2	0.000 000	-0.002
100 %		+30	699 699 997	-1.5	0.000 000	-0.002
100 %		+40	699 699 997	-1.5	0.000 000	-0.002
100 %		+50	699 700 000	1.6	0.000 000	0.002
Batt. Endpoint	3.400	+20	699 699 996	-2.2	0.000 000	-0.003

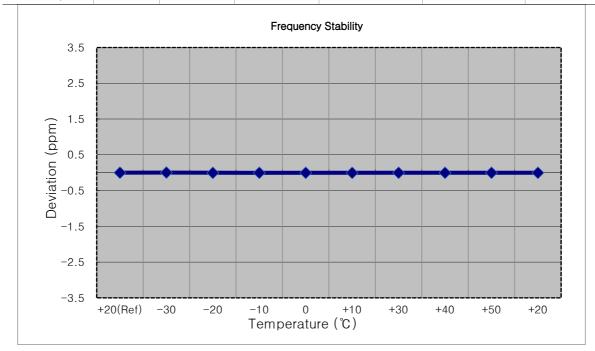


F-TP22-03 (Rev. 06)



MODE:	LTE B12
OPERATING FREQUENCY:	700,500,000 Hz
CHANNEL:	<u>23025 (3 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	700 499 998	0.0	0.000 000	0.000
100 %		-30	700 500 000	2.4	0.000 000	0.003
100 %		-20	700 499 995	-2.7	0.000 000	-0.004
100 %		-10	700 499 996	-2.0	0.000 000	-0.003
100 %	4.200	0	700 499 997	-1.1	0.000 000	-0.002
100 %		+10	700 499 995	-3.3	0.000 000	-0.005
100 %		+30	700 499 996	-1.9	0.000 000	-0.003
100 %		+40	700 499 997	-1.4	0.000 000	-0.002
100 %		+50	700 499 996	-1.5	0.000 000	-0.002
Batt. Endpoint	3.400	+20	700 499 996	-1.5	0.000 000	-0.002

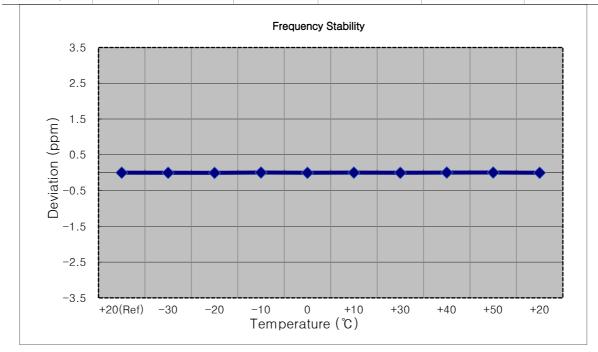


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MODE:	LTE B12(17)
OPERATING FREQUENCY:	701,500,000 Hz
CHANNEL:	23035 (5 MHz)
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

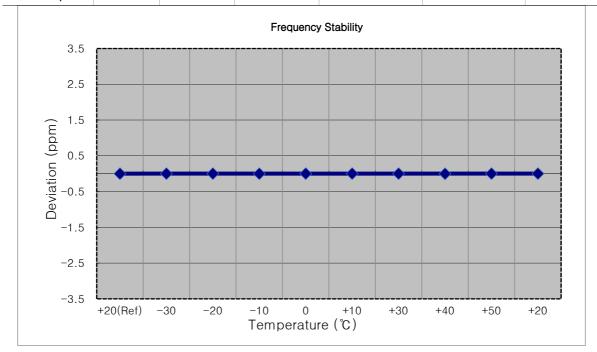
Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	ppm
100 %		+20(Ref)	701 499 998	0.0	0.000 000	0.000
100 %		-30	701 499 996	-2.2	0.000 000	-0.003
100 %		-20	701 499 995	-3.0	0.000 000	-0.004
100 %		-10	701 500 000	2.1	0.000 000	0.003
100 %	4.200	0	701 499 996	-1.8	0.000 000	-0.003
100 %		+10	701 500 000	1.9	0.000 000	0.003
100 %		+30	701 499 996	-1.8	0.000 000	-0.003
100 %		+40	701 500 001	2.6	0.000 000	0.004
100 %		+50	701 500 000	2.1	0.000 000	0.003
att. Endpoint	3.400	+20	701 499 996	-2.4	0.000 000	-0.003





MODE:	LTE B12(17)
OPERATING FREQUENCY:	704,000,000 Hz
CHANNEL:	<u>23060 (10 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	704 000 002	0.0	0.000 000	0.000
100 %		-30	704 000 003	1.0	0.000 000	0.001
100 %		-20	704 000 004	2.0	0.000 000	0.003
100 %		-10	704 000 001	-0.9	0.000 000	-0.001
100 %	4.200	0	704 000 003	1.5	0.000 000	0.002
100 %		+10	704 000 003	1.8	0.000 000	0.003
100 %		+30	704 000 003	1.1	0.000 000	0.002
100 %		+40	704 000 000	-1.7	0.000 000	-0.002
100 %		+50	704 000 003	1.0	0.000 000	0.001
att. Endpoint	3.400	+20	704 000 003	1.6	0.000 000	0.002

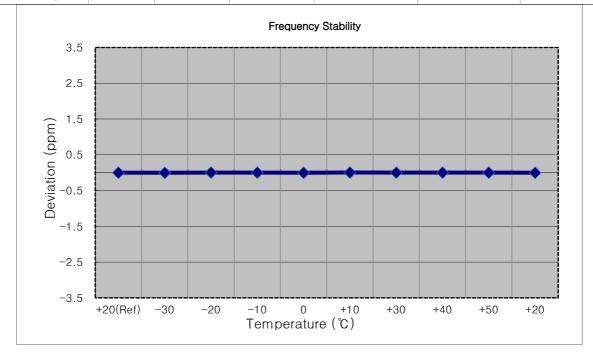


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MODE:	LTE B12
OPERATING FREQUENCY:	707,500,000 Hz
CHANNEL:	23095 (1.4 MHz)
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	707 500 002	0.0	0.000 000	0.000
100 %		-30	707 500 000	-1.6	0.000 000	-0.002
100 %		-20	707 500 004	2.8	0.000 000	0.004
100 %		-10	707 500 003	1.2	0.000 000	0.002
100 %	4.200	0	707 500 000	-1.4	0.000 000	-0.002
100 %		+10	707 500 004	2.5	0.000 000	0.004
100 %		+30	707 500 003	1.8	0.000 000	0.003
100 %		+40	707 500 003	1.8	0.000 000	0.003
100 %		+50	707 500 003	1.6	0.000 000	0.002
att. Endpoint	3.400	+20	707 500 000	-1.7	0.000 000	-0.002

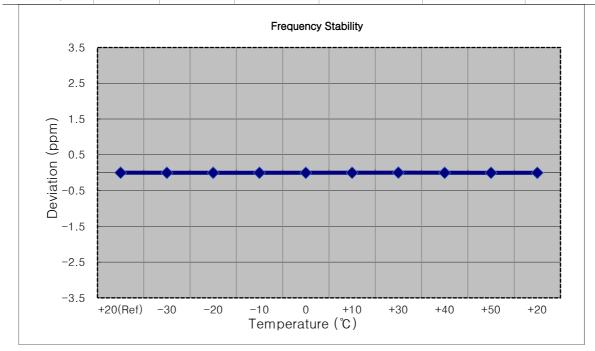


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MODE:	LTE B12
OPERATING FREQUENCY:	707,500,000 Hz
CHANNEL:	<u>23095 (3 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	707 500 003	0.0	0.000 000	0.000
100 %		-30	707 500 000	-2.4	0.000 000	-0.003
100 %		-20	707 500 001	-1.8	0.000 000	-0.003
100 %		-10	707 500 002	-1.3	0.000 000	-0.002
100 %	4.200	0	707 500 001	-2.2	0.000 000	-0.003
100 %		+10	707 500 001	-1.5	0.000 000	-0.002
100 %		+30	707 500 005	2.0	0.000 000	0.003
100 %		+40	707 500 002	-1.3	0.000 000	-0.002
100 %		+50	707 500 000	-2.5	0.000 000	-0.004
Batt. Endpoint	3.400	+20	707 500 001	-2.1	0.000 000	-0.003

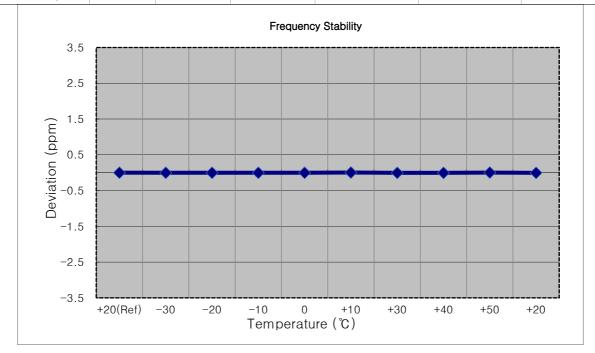


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MODE:	LTE B12(17)
OPERATING FREQUENCY:	707,500,000 Hz
CHANNEL:	<u>23095 (5 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	707 499 997	0.0	0.000 000	0.000
100 %		-30	707 499 996	-1.7	0.000 000	-0.002
100 %		-20	707 499 996	-1.8	0.000 000	-0.003
100 %		-10	707 499 995	-2.2	0.000 000	-0.003
100 %	4.200	0	707 499 995	-2.5	0.000 000	-0.004
100 %		+10	707 500 000	2.1	0.000 000	0.003
100 %		+30	707 499 995	-2.8	0.000 000	-0.004
100 %		+40	707 499 994	-3.1	0.000 000	-0.004
100 %		+50	707 500 000	2.4	0.000 000	0.003
att. Endpoint	3.400	+20	707 499 995	-2.9	0.000 000	-0.004



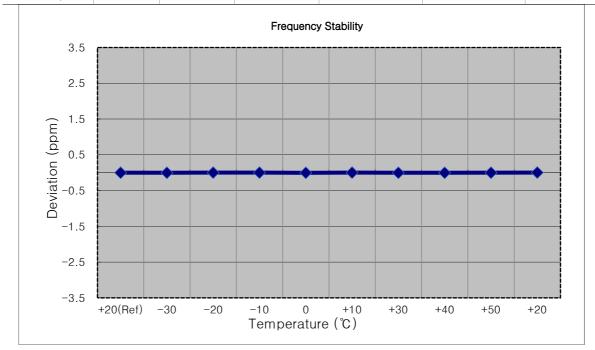
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MODE:	LTE B12(17)
OPERATING FREQUENCY:	707,500,000 Hz
CHANNEL:	23095 (10 MHz)
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

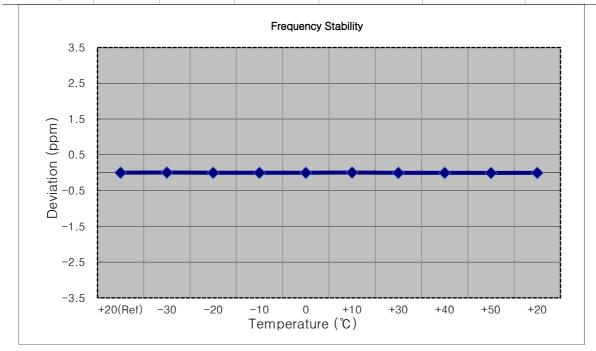
Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	707 499 998	0.0	0.000 000	0.000
100 %		-30	707 499 996	-1.7	0.000 000	-0.002
100 %		-20	707 499 999	1.4	0.000 000	0.002
100 %		-10	707 499 999	1.7	0.000 000	0.002
100 %	4.200	0	707 499 995	-2.6	0.000 000	-0.004
100 %		+10	707 499 999	1.0	0.000 000	0.001
100 %		+30	707 499 996	-1.4	0.000 000	-0.002
100 %		+40	707 499 995	-2.5	0.000 000	-0.004
100 %		+50	707 499 997	-1.0	0.000 000	-0.001
Batt. Endpoint	3.400	+20	707 500 000	2.2	0.000 000	0.003





MODE:	LTE B12
OPERATING FREQUENCY:	715,300,000 Hz
CHANNEL:	<u>23173 (1.4 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	715 299 998	0.0	0.000 000	0.000
100 %		-30	715 300 001	3.0	0.000 000	0.004
100 %		-20	715 299 995	-2.4	0.000 000	-0.003
100 %		-10	715 299 996	-1.8	0.000 000	-0.003
100 %	4.200	0	715 299 995	-2.4	0.000 000	-0.003
100 %		+10	715 300 000	2.8	0.000 000	0.004
100 %		+30	715 299 994	-3.7	-0.000 001	-0.005
100 %		+40	715 299 994	-3.3	0.000 000	-0.005
100 %		+50	715 299 993	-4.3	-0.000 001	-0.006
Batt. Endpoint	3.400	+20	715 299 993	-4.1	-0.000 001	-0.006

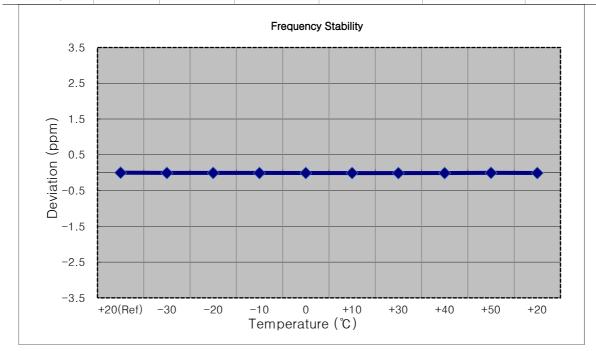


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MODE:	LTE B12
OPERATING FREQUENCY:	714,500,000 Hz
CHANNEL:	<u>23165 (3 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	714 499 991	0.0	0.000 000	0.000
100 %		-30	714 499 986	-5.5	-0.000 001	-0.008
100 %		-20	714 499 985	-5.7	-0.000 001	-0.008
100 %		-10	714 499 984	-6.6	-0.000 001	-0.009
100 %	4.200	0	714 499 984	-7.0	-0.000 001	-0.010
100 %		+10	714 499 985	-6.2	-0.000 001	-0.009
100 %		+30	714 499 983	-8.5	-0.000 001	-0.012
100 %		+40	714 499 983	-8.2	-0.000 001	-0.011
100 %		+50	714 499 987	-3.6	-0.000 001	-0.005
Batt. Endpoint	3.400	+20	714 499 985	-6.0	-0.000 001	-0.008

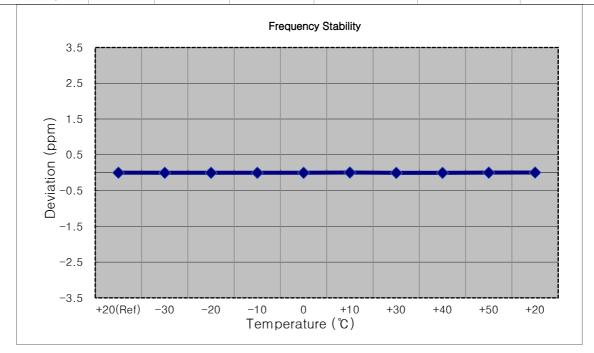


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MODE:	LTE B12(17)
OPERATING FREQUENCY:	713,500,000 Hz
CHANNEL:	<u>23155 (5 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	ppm
100 %		+20(Ref)	713 499 998	0.0	0.000 000	0.000
100 %		-30	713 499 996	-1.9	0.000 000	-0.003
100 %		-20	713 499 995	-2.3	0.000 000	-0.003
100 %		-10	713 499 996	-1.5	0.000 000	-0.002
100 %	4.200	0	713 499 995	-2.3	0.000 000	-0.003
100 %		+10	713 500 001	3.5	0.000 000	0.005
100 %		+30	713 499 995	-2.9	0.000 000	-0.004
100 %		+40	713 499 994	-3.5	0.000 000	-0.005
100 %		+50	713 500 000	2.0	0.000 000	0.003
att. Endpoint	3.400	+20	713 500 000	2.8	0.000 000	0.004



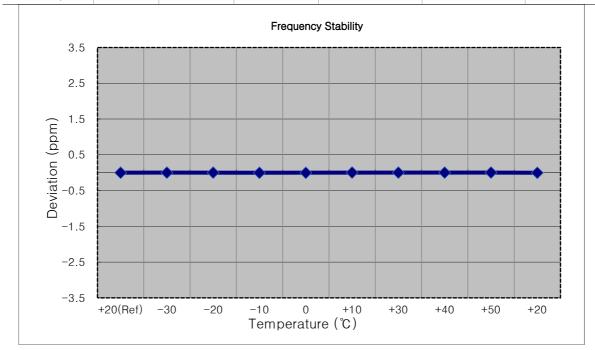
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MODE:	LTE B12(17)
OPERATING FREQUENCY:	<u>711,000,000 Hz</u>
CHANNEL:	<u>23130 (10 MHz)</u>
REFERENCE VOLTAGE:	4.200 VDC
DEVIATION LIMIT:	Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency Error	Deviation	
(%)	(VDC)	(°C)	(Hz)	(Hz)	(%)	- ppm
100 %		+20(Ref)	711 000 002	0.0	0.000 000	0.000
100 %		-30	711 000 003	1.4	0.000 000	0.002
100 %		-20	711 000 004	2.1	0.000 000	0.003
100 %		-10	711 000 000	-1.7	0.000 000	-0.002
100 %	4.200	0	711 000 000	-1.6	0.000 000	-0.002
100 %		+10	711 000 004	2.6	0.000 000	0.004
100 %		+30	711 000 003	1.4	0.000 000	0.002
100 %		+40	711 000 004	2.1	0.000 000	0.003
100 %		+50	711 000 004	2.6	0.000 000	0.004
att. Endpoint	3.400	+20	711 000 000	-1.5	0.000 000	-0.002

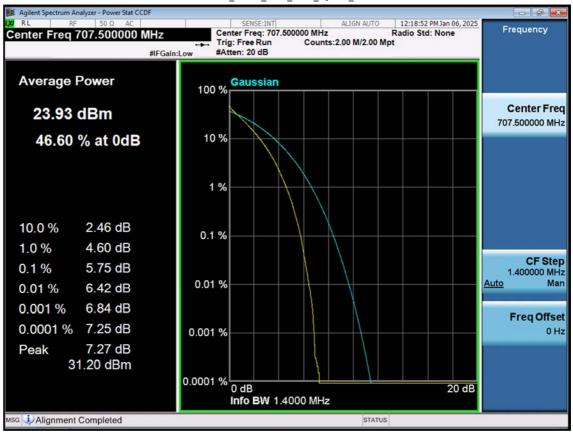




Report No. HCT-RF-2501-FC041

9. TEST PLOTS





LTE B12_1.4M_PAR_Mid_QPSK_FullRB



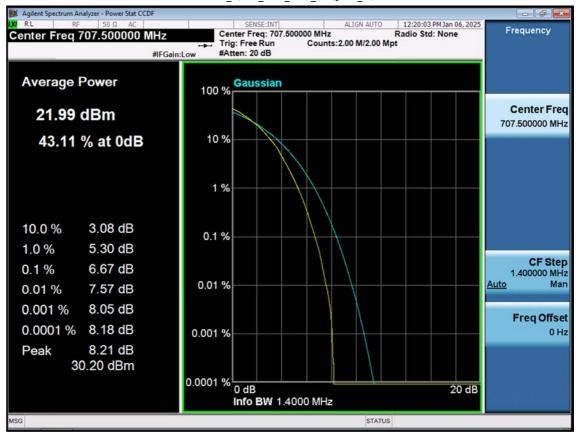




LTE B12_1.4M_PAR_Mid_16QAM_FullRB







LTE B12_1.4M_PAR_Mid_64QAM_FullRB

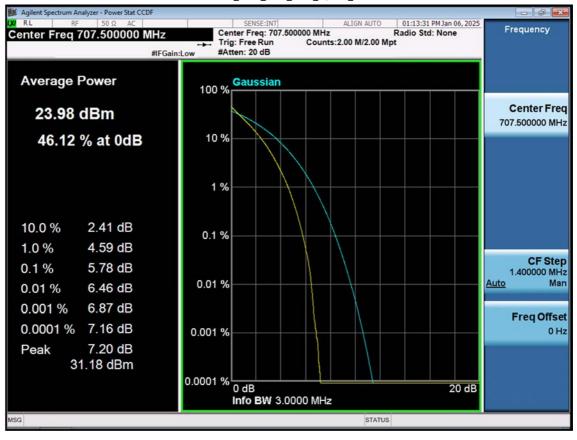




LTE B12_1.4M_PAR_Mid_256QAM_FullRB







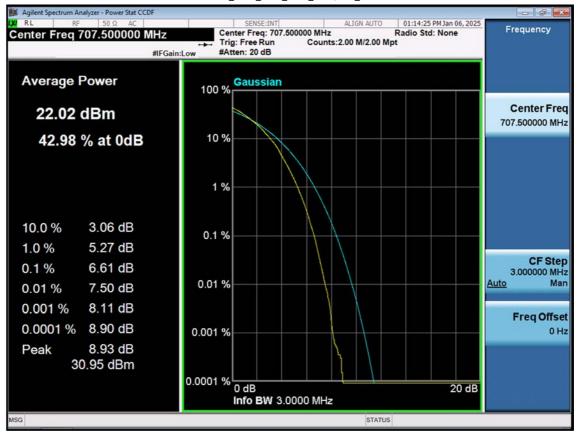
LTE B12_3 M_PAR_Mid_QPSK_FullRB





LTE B12_3 M_PAR_Mid_16QAM_FullRB



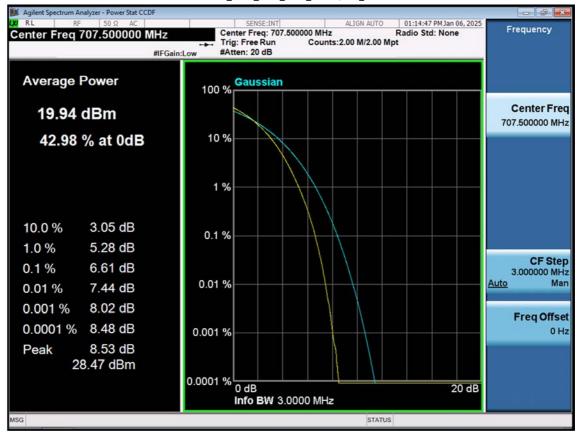


LTE B12_3 M_PAR_Mid_64QAM_FullRB

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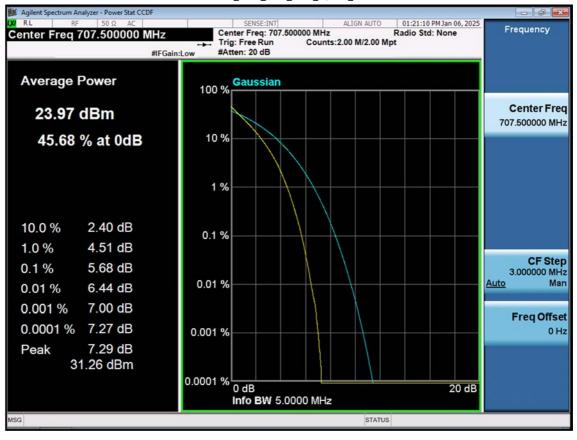




LTE B12_3 M_PAR_Mid_256QAM_FullRB







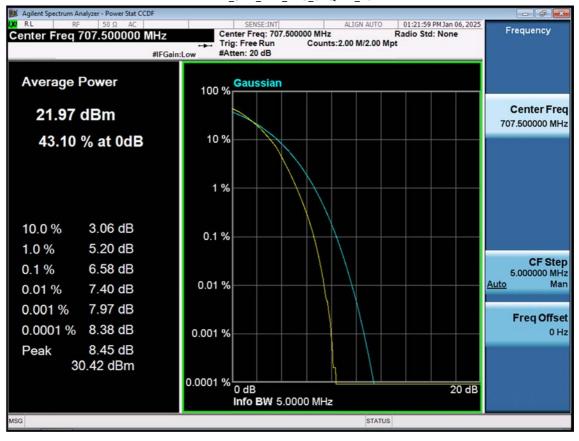
LTE B12_5 M_PAR_Mid_QPSK_FullRB





LTE B12_5 M_PAR_Mid_16QAM_FullRB

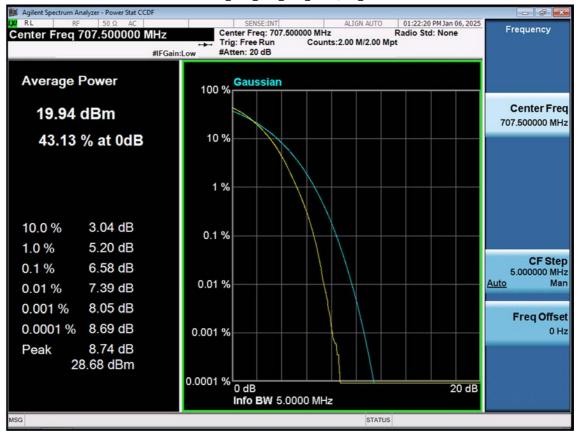




LTE B12_5 M_PAR_Mid_64QAM_FullRB



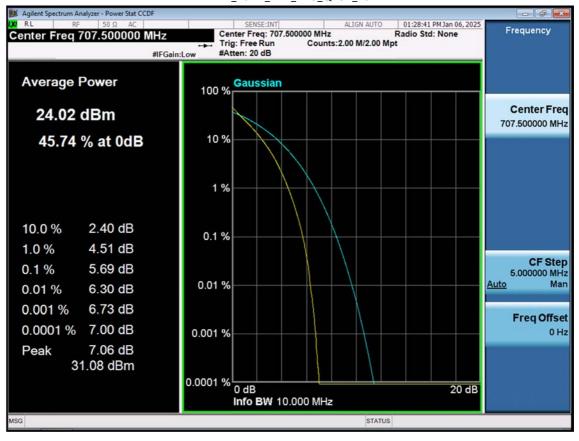




LTE B12_5 M_PAR_Mid_256QAM_FullRB







LTE B12_10 M_PAR_Mid_QPSK_FullRB







LTE B12_10 M_PAR_Mid_16QAM_FullRB

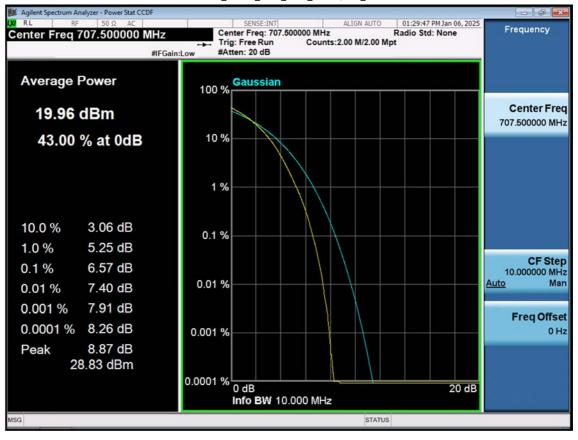






LTE B12_10 M_PAR_Mid_64QAM_FullRB





LTE B12_10 M_PAR_Mid_256QAM_FullRB





Je Agilent Spectrum Analyzer - Occupied E	W				
RL RF 50.0. AC Center Freq 707.500000 PASS Ref Offset 26.63 Ref Offset 26.63 10 dB/div Ref 40.00 dE	#IFGain:Low	SENSE:INT Center Freq: 707.500000 MHz Trig: Free Run Avg Hol #Atten: 20 dB	ALIGN AUTO 12:18:38 P Radio Std: Id: 700/700 Radio Devi		Frequency
20.0	Jour				Center Freq 707.500000 MHz
-10.0			h h h h h h h h h h h h h h h h h h h		
-20.0 -30.0			hunorbitun	monte	
Center 707.5 MHz Res BW 27 kHz		#VBW 110 kHz		1 2.8 MHz 3.667 ms	CF Step 280.000 kHz Auto Man
Occupied Bandwic	ith .0955 MH2	Total Power	32.7 dBm		Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	1.841 kH 1.320 MH		99.00 % -26.00 dB		
MSG			STATUS		

LTE B12_1.4M_OBW_Mid_QPSK_FullRB





Agilent Spectrum Analyzer - Occupied BW						
X RL RF 50 Ω AC Center Freq 707.500000 M PASS	Hz #IFGain:Low	SENSE:INT Center Freq: 707.50 Trig: Free Run #Atten: 20 dB	ALIGN A 00000 MHz Avg Hold: 700/7	Radio Std		Frequency
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log	3 					
30.0						Center Freq 707.500000 MHz
10.0	mm	man	m			
-10.0	,		h h			
-20.0				monom	MMM	
-40.0						
Center 707.5 MHz				Spa	n 2.8 MHz	CF Step 280.000 kHz Auto Man
Res BW 27 kHz		#VBW 110	kHz	Sweep	3.667 ms	
Occupied Bandwidth		Total F	Power	31.7 dBm		Freq Offset
1.0	943 MI	lz				0112
Transmit Freq Error	839	Hz OBW F	Power	99.00 %		
x dB Bandwidth	1.319 M	IHz x dB		-26.00 dB		
MSG			5	STATUS		

LTE B12_1.4M_OBW_Mid_16QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW RL RF 50.0 AC	1				
X RL RF 50 Ω AC Center Freq 707.5000000 N PASS	Hz #FGain:Low	SENSE:INT Center Freq: 707.500000 MH Trig: Free Run Avg #Atten: 20 dB			Frequency
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log					
20.0					Center Freq 707.500000 MHz
10.0	J		~~~ \		
-10.0	л ^{л Г}		- North -		
-30.0 mm M M mm mm				hrow many	
-50.0					CF Step 280.000 kHz
Center 707.5 MHz Res BW 27 kHz		#VBW 110 kHz		n 2.8 MHz 3.667 ms	<u>Auto</u> Man
Occupied Bandwidth	,)988 MH	Total Power	30.7 dBm		Freq Offset 0 Hz
Transmit Freq Error	2.216 kl		99.00 %		
x dB Bandwidth	1.296 MI		-26.00 dB		
MSG			STATUS		

LTE B12_1.4M_OBW_Mid_64QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW					
X RL RF 50 Ω AC Center Freq 707.500000 M PASS Ref Offset 26.69 dl 10 dB/div Ref 40.00 dBm	#IFGain:Low #Atter	SENSE:INT r Freq: 707.500000 MHz Free Run Avg Hol n: 20 dB	ALIGN AUTO 12:20:17 Radio Std d: 700/700 Radio Dev		Frequency
30.0					Center Freq 707.500000 MHz
10.0 0.00 -10.0		h-rommond			
-20.0 -30.0 -40.0			My Man Marine W	www.w	
Center 707.5 MHz Res BW 27 kHz	#	VBW 110 kHz		n 2.8 MHz 3.667 ms	CF Step 280.000 kHz Auto Man
Occupied Bandwidth	945 MHz	Total Power	28.7 dBm		Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	2.781 kHz 1.322 MHz	OBW Power x dB	99.00 % -26.00 dB		
MSG			STATUS		

LTE B12_1.4M_OBW_Mid_256QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW			Sector Se		
Ref Offset 26.69 dl	#IFGain:Low #	SENSE:INT Center Freq: 707.500000 MHz Frig: Free Run Avg Ho Atten: 20 dB	Radio Sto Id: 700/700	2 PM Jan 06, 2025 d: None vice: BTS	Frequency
10 dB/div Ref 40.00 dBm Log 30.0 20.0		www.			Center Freq 707.500000 MHz
10.0 0.00 -10.0 -20.0 -30.0				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
-40.0 -50.0 Center 707.5 MHz #Res BW 62 kHz		#VBW 240 kHz		pan 6 MHz 1.533 ms	CF Step 600.000 kHz <u>Auto</u> Man
Occupied Bandwidth 2.7	, 137 MHz	Total Power	32.6 dBm		Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	7.245 kH 3.103 MH		99.00 % -26.00 dB		
MSG			STATUS		

LTE B12_3 M_OBW_Mid_QPSK_FullRB





Agilent Spectrum Analyzer - Occupied BW				
XX RL RF 50 Ω AC Center Freq 707.500000 M PASS Ref Offset 26.69 dl	#IFGain:Low #	SENSE:INT Center Freq: 707.500000 MHz rig: Free Run Avg Hold Atten: 20 dB	ALIGN AUTO 01:13:48 PM Jan (Radio Std: None : 700/700 Radio Device: B	Frequency
10 dB/div Ref 40.00 dBm Log 30.0 20.0		-manufar and a second second	m m m m m m m m m m m m m m m m m m m	Center Freq 707.500000 MHz
10.0 0.00 -10.0 -20.0 -30.0			h h	Anna
-40.0 -50.0 Center 707.5 MHz #Res BW 62 kHz		#VBW 240 kHz	Span 6 Sweep 1.53	MHz 3 ms
Occupied Bandwidth 2.7	, 196 MHz	Total Power	31.8 dBm	Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	5.438 kHz 3.103 MHz		99.00 % -26.00 dB	
MSG			STATUS	

LTE B12_3 M_OBW_Mid_16QAM_FullRB





Magilent Spectrum Analyzer - Occupied BW				
X RL RF 50 Ω AC Center Freq 707.500000 M PASS 10 dB/div Ref Offset 26.69 dl 10 dB/div Ref 40.00 dBm	#IFGain:Low #A	SENSE:INT enter Freq: 707.500000 MHz fig: Free Run Avg Hold titen: 20 dB	ALIGN AUTO 01:14:14 PM Jan 06, Radio Std: None Radio Device: BTS	Frequency
20.0		Jan man and and and and and and and and and a	~~	Center Freq 707.500000 MHz
10.0 0.00 -10.0				
-20.0 -30.0			Muhanan	~~~
-50.0 Center 707.5 MHz #Res BW 62 kHz		#VBW 240 kHz	Span 6 N Sweep 1.533	
Occupied Bandwidth 2.7	, 7066 MHz	Total Power	30.7 dBm	Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	5.315 kHz 3.096 MHz		99.00 % -26.00 dB	
MSG			STATUS	

LTE B12_3 M_OBW_Mid_64QAM_FullRB



Je Agilent Spectrum Analyzer - Occupied BW									
XI RF 50 Q AC Center Freq 707.500000 M PASS Ref Offset 26.69 q	#IFGain:Low	Center Fre	Run	000 MHz Avg Hold	ALIGN AUTO	01:14:37 Radio Std Radio Dev		Fre	equency
10 dB/div Ref 40.00 dBm Log 30 0 20 0								100 C	enter Freq 500000 MHz
10.0	/		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	, marine and the second s					
-20.0 -30.0 -40.0						hormon	MANA		
-50.0 Center 707.5 MHz #Res BW 62 kHz		#VBI	№ 240 k	Hz		Sp Sweep	an 6 MHz 1.533 ms	Auto	CF Step 600.000 kHz Man
Occupied Bandwidt	^h 7129 MI		Total P		28.7	′ dBm		F	req Offset 0 Hz
Transmit Freq Error x dB Bandwidth	7.068 I 3.164 N		OBW Po x dB	ower		.00 % 00 dB			
MSG					STATUS	5			

LTE B12_3 M_OBW_Mid_256QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW					
OX RL RF 50 Ω AC Center Freq 707.500000 M PASS Ref Offset 26.69 d Ref Offset 26.69 d Ref 00 d Ref 00 d	#IFGain:Low #	sentse::INT ienter Freq: 707.500000 MHz rig: Free Run Avg Hol Atten: 20 dB	ALIGN AUTO 01:21:02 Radio Std Id: 700/700 Radio Dev	1000 C	Frequency
10 dB/div Ref 40.00 dBm Log 30.0 20.0	m	mmmmm	~h~		Center Freq 707.500000 MHz
10.0 0.00 -10.0 -20.0					
-30.0 mm/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m				Ymr yn yr yr yr yn yr yn	CF Step
Center 707.5 MHz #Res BW 100 kHz		#VBW 390 kHz	Spa Sw	n 10 MHz eep 1 ms	1.000000 MHz
Occupied Bandwidth	5297 MHz	Total Power	32.6 dBm		Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	11.273 kHz 5.355 MHz		99.00 % -26.00 dB		
MSG			STATUS		

LTE B12_5 M_OBW_Mid_QPSK_FullRB





Magilent Spectrum Analyzer - Occupied BW		0			- # *
X RL RF 50 Ω AC Center Freq 707.500000 M PASS	Hz #IFGain:Low	SENSE:INT Center Freq: 707.5000 Trig: Free Run #Atten: 20 dB	ALIGN AUTO 000 MHz Avg Hold: 700/700	01:21:26 PM Jan 06, 2 Radio Std: None Radio Device: BTS	Frequency
Ref Offset 26.69 dl 10 dB/div Ref 40.00 dBm Log	B 1				
30.0 20.0		~~m~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	manne		Center Freq 707.500000 MHz
0.00					
-10.0 -20.0				My	
-30.0 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm				Jacon from the start	
Center 707.5 MHz #Res BW 100 kHz		#VBW 390 k	Hz	Span 10 M Sweep 1 r	Hz Auto Man
Occupied Bandwidth	5160 MH	Total Po	ower 31	.7 dBm	Freq Offset 0 Hz
Transmit Freq Error	11.155 kł		ower 9	9.00 %	
x dB Bandwidth	5.217 MH	Hz xdB	-26	5.00 dB	
MSG			STAT	rus	

LTE B12_5 M_OBW_Mid_16QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW							
RL RF 50 Ω AC Center Freq 707.500000 M PASS	//Hz #IFGain:Low	SENSE:INT Center Freq: 707.5 → Trig: Free Run #Atten: 20 dB		ALIGN AUTO	Radio Std: Radio Dev		Frequency
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log							
30.0							Center Freq 707.500000 MHz
10.0	Jummer	mann	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m			
-10.0				- W			
-20.0 -30.0					Mr. Mr. Carlo	mmp	
Center 707.5 MHz					.		CF Step 1.000000 MHz
#Res BW 100 kHz		#VBW 390) kHz		Swe	n 10 MHz ep 1 ms	<u>Auto</u> Man
Occupied Bandwidt	^h 5184 MI		Power	30.8	dBm		Freq Offset 0 Hz
Transmit Freq Error	19.220		Power	99	.00 %		
x dB Bandwidth	5.240 N	MHz x dB		-26.0	00 dB		
MSG				STATUS			

LTE B12_5 M_OBW_Mid_64QAM_FullRB



Je Agilent Spectrum Analyzer - Occupied BW					
RL RF 50 Ω AC Center Freq 707.500000 Ν PASS	HZ #IFGain:Low	SENSE:INT Center Freq: 707.500000 Trig: Free Run #Atten: 20 dB	ALIGN AUTO	01:22:12 PM Jan 06, 2025 Radio Std: None Radio Device: BTS	Frequency
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log	B				
20.0					Center Freq 707.500000 MHz
10.0	mmm	mmmmm	my		
-10.0			- Andrew - A		
-20.0 -30.0 -40.0				m how	
-50.0 Center 707.5 MHz				Span 10 MHz	CF Step 1.000000 MHz Auto Man
#Res BW 100 kHz		#VBW 390 kHz	1	Sweep 1 ms	
Occupied Bandwidth	5165 MH	Total Pov	ver 28.8	3 dBm	Freq Offset 0 Hz
Transmit Freq Error	5.398 kł		ver 99	9.00 %	
x dB Bandwidth	5.279 Mł	Hz xdB	-26.	00 dB	
MSG			STATU	S	

LTE B12_5 M_OBW_Mid_256QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW RL RF 50 Q AC							
047 RL RF 50 Ω AC Center Freq 707.500000 N PASS	SENSE:INT ALIGN AU Center Freq: 707.500000 MHz Trig: Free Run Avg Hold: 700/700 #Atten: 20 dB			Radio Std: None		Frequency	
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log							
30.0 20.0							Center Freq 707.500000 MHz
10.0	ali do mora -	-hannandrahan	mahamma	han			
-10.0				A AN			
-20.0				<u> </u>	honder prover	a man	
-40.0							
Center 707.5 MHz					Spa	an 20 MHz	CF Step 2.000000 MHz Auto Man
#Res BW 200 kHz	#VBW 820	#VBW 820 kHz			eep 1 ms		
Occupied Bandwidt		Total Power		32.6 dBm		Freq Offset 0 Hz	
8.	9751 MI						
Transmit Freq Error 17.737 kl		Hz OBW	z OBW Power		99.00 %		
x dB Bandwidth 10.12 N		IHz x dB	z xdB		-26.00 dB		
MSG				STATUS	6		

LTE B12_10 M_OBW_Mid_QPSK_FullRB





Magilent Spectrum Analyzer - Occupied BW	r	-		-				
RL RF 50 Ω AC Center Freq 707.500000 PASS Ref Offset 26.69 Ref Offset 26.69	#IFGain:Low	Center Freq: Trig: Free Ru #Atten: 20 dl	707.500000 A		5N AUTO 0/700	Radio Sto		Frequency
10 dB/div Ref 40.00 dBr								
30.0 20.0								Center Freq 707.500000 MHz
10.0	marian	- man have been	mound	miniam				
0.00	A				2			
-10.0	(N.			
-20.0					NV N			
-30.0 AMMarkan Myr Markan						" Www.	Astronomy and	
-40.0								
								CF Step 2.000000 MHz
Center 707.5 MHz #Res BW 200 kHz		#VBW	820 kHz			Spa Sw	an 20 MHz eep 1 ms	<u>Auto</u> Man
Occupied Bandwid	th	т	otal Pow	er	31.7	dBm		Freq Offset
9.	0052 M	Hz						0 Hz
Transmit Freq Error	19.390	kHz O	BW Powe	er	99	.00 %		
x dB Bandwidth	10.42 M	/Hz x	dB		-26.0	00 dB		
MSG					STATUS			

LTE B12_10 M_OBW_Mid_16QAM_FullRB





Je Agilent Spectrum Analyzer - Occupied BW	-		_			
RL RF 50 Ω AC Center Freq 707.500000 M PASS Ref Offset 26.69 d	#IFGain:Low	SENSE:INT Center Freq: 707. Trig: Free Run #Atten: 20 dB	500000 MHz Avg Holo	1: 700/700	01:29:21 PM Jan 06, 202 adio Std: None adio Device: BTS	⁵ Frequency
10 dB/div Ref 40.00 dBm	<u> </u>					
30.0						Center Freq 707.500000 MHz
10.0	Norman	mannan	man	~~ ~		
0.00	<u> </u>					
-10.0				N.		
-20.0				34		
-30.0 mannamanal					and a stranger and a	
-40.0						
-50.0	+					CF Step
Center 707.5 MHz					Span 20 MH	2.000000 MHz Auto Man
#Res BW 200 kHz		#VBW 82) kHz		Sweep 1 ms	5
Occupied Bandwidt	h	Total	Power	30.6 d	Bm	Freq Offset
8.9	9926 MI	Ηz				0 Hz
Transmit Freq Error	6.362	Hz OBW	Power	99.0	0 %	
x dB Bandwidth	10.16 N	Hz x dB		-26.00	dB	
MSG				STATUS		

LTE B12_10 M_OBW_Mid_64QAM_FullRB





Agilent Spectrum Analyzer - Occupied BW			-			
RL RF 50 Ω AC Center Freq 707.500000 M PASS	/IHz #IFGain:Low		07.500000 MHz	Radio : 700/700	:40 PM Jan 06, 2025 Std: None Device: BTS	Frequency
Ref Offset 26.69 d 10 dB/div Ref 40.00 dBm Log						
20.0						Center Freq 707.500000 MHz
10.0	manna	mmmmm	mpanen	h		
-10.0						
-20.0 -30.0				Marry	monorant	
-40.0						CF Step
Center 707.5 MHz #Res BW 200 kHz		#VBW	820 kHz	S	pan 20 MHz weep 1 ms	2.000000 MHz <u>Auto</u> Man
Occupied Bandwidt			tal Power	28.6 dBm		Freq Offset 0 Hz
	9922 MI					
Transmit Freq Error	5.552		W Power	99.00 %		
x dB Bandwidth	10.25 N	lHz x d	В	-26.00 dB		
MSG				STATUS		

LTE B12_10 M_OBW_Mid_256QAM_FullRB



RL RF	50 Ω AC		SENSE:IN		ALIGN AUTO	12:17:28 PM Jan 06,	2025 Frequency
nter Freq 5.0	15000000	PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB		Type: RMS	TRACE 1 2 3 4 TYPE MWW DET P P P	P P
and the second s).00 dBm				Mkr	1 6.281 19 G -58.268 dB	Hz Auto Tur Sm
							Center Fro 5.015000000 G
				1			Start Fr 30.000000 M
D Antone and Strategy and Strat	and a state of the	and a grant of the second s	and an and a second	warmen and and	And I want to be a second of the second s	ร เขาให้ประการและปกประการเหติดไปไป 	Stop Fr 10.000000000 G
IT 30 MHZ S BW 1.0 MHZ	z X	#VB\	N 3.0 MHz	FUNCTION	Sweep 1	Stop 10.000 G 6.67 ms (1001 p	Hz CF Stores (ts) 997.000000 M Auto M
N 1 f N 1 f	6.28 69	1 19 GHz 7.99 MHz	-58.268 dBm 1.438 dBm				Freq Offs
			m				

LTE B12_1.4M_Conducted Spurious(30 M-10 G)_Low_QPSK_1RB



RL RF 50 Ω AC		SENSE:INT	ALIGN AUTO	12:20:47 PM Jan 06, 2025	Francisco
enter Freq 5.0150000	PNO: Fast	Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P P P P P P	Frequency
dB/div Ref 10.00 dBn	n		Mkr	1 3.180 52 GHz -57.495 dBm	Auto Tur
2 00 0.0					Center Fre 5.015000000 GF
1.0 1.0 1.0	1				Start Fro 30.000000 Mi
0.0 .0 0.0	and a contraction of the control of the second s	the strategy and the second	า เมริงที่รับระทั่ง - เมริงที่มี เมริงที่มี เมริงที่มี - เมริงที่มี	PEAK The share a state of the s	Stop Fre 10.000000000 GF
art 30 MHz Res BW 1.0 MHz	#VBW		Sweep 1	Stop 10.000 GHz 5.67 ms (1001 pts)	CF Ste 997.000000 M <u>Auto</u> M
1 N 1 f 2 2 N 1 f 3 3 4 4 4 4 5 5 5 5 5 6 6 7 7 7 8 8 8 8 8	3.180 52 GHz 707.96 MHz	-57.495 dBm 2.293 dBm		ш	Freq Offs 01

LTE B12_1.4M_Conducted Spurious(30 M-10 G)_Mid_QPSK_1RB



RL	RF		AC		SE	NSE:INT		ALIGN AUTO		PM Jan 06, 2025	F
enter F	req 5.	015000		PNO: Fast • IFGain:Low	Trig: Fre #Atten: 2		#Avg T	ype: RMS	TYP	23456 PE PF PF PF	Frequency
dB/div	Ref	10.00 dE	3m					Mkr	1 2.721 -57.9	90 GHz 70 dBm	Auto Tun
g 00 .0	⊘ 2										Center Fre 5.015000000 GH
0 0				1							Start Fre 30.000000 MH
	er frankriger fre	an a	man and a second	an a	a an	rtalunorg,-elu	antainstaint ag	uninetpersonalises and a second	-14-52-49494233	PEAK Life-Product Pilepower	Stop Fre 10.000000000 GH
nt 30 I es BW	1.0 M	Hz	X	#VB	W 3.0 MH2		NCTION	Sweep 1	6.67 ms (.000 GHz 1001 pts)	CF Ste 997.000000 MI <u>Auto</u> M
	1 f		2.721	90 GHz .93 MHz	<u>-57.970 d</u> 2.599 d	Bm					Freq Offs 01
					m						

LTE B12_1.4M_Conducted Spurious(30 M-10 G)_High_QPSK_1RB



RL	RF		AC			SENSE:INT		ALIGN AUTO		PM Jan 06, 2025	Frequency
nter	Freq 5.	015000	0000	GHZ PNO: Fast IFGain:Low		Free Run n: 20 dB	#Avg T	ype: RMS	TY	DE 1 2 3 4 5 6 PE M WWWW ET P P P P P P	
dB/div		10.00 dl	Bm					Mkr	1 6.540 -57.5	41 GHz 31 dBm	Auto Tur
	⊘ 2										Center Fre 5.015000000 GI
.0 .0 .0							1				Start Fr 30.000000 M
0.0 0.0 0.0	Langer and Land	normente og fære	yoluithi	trop to the south	mater	ek yesterlerineti	to determine of the seg	yet togge the opposite of the	n fan hensen skalander of starte an skalander of skalander of skalander of skalander of skalander of skalander	PEAK	Stop Fr 10.00000000 G
	MHZ V 1.0 M	Hz	X	#VI	3W 3.0 N	F		Sweep 1	6.67 ms (.000 GHz 1001 pts)	CF Sto 997.000000 M <u>Auto</u> M
2 N 3 4 5 5 7	1 f 1 f		<u>6.54</u> 69	0 41 GHz 7.99 MHz	<u>-57.53</u> 1.18	1 dBm 4 dBm					Freq Offs 01
B											
					m			STATU			

LTE B12_3 M_Conducted Spurious(30 M-10 G)_Low_QPSK_1RB



RL	RF 50 Ω AC		SENSE:INT	ALIGN AUTO	01:15:01 PM Jan 06, 2025	Frequency
nter Fred	q 5.0150000	OO GHZ PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 20 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET PPPPP	
dB/div R	Ref 10.00 dBn	1		Mk	r1 3.688 99 GHz -58.080 dBm	Auto Tur
g 22 00 1.0						Center Fr 5.015000000 GI
0 0 0		1				Start Fro 30.000000 Mi
.0 	water and the second second	and the second sec	And and a start a start and a start a star	the law from the second s	PEAK Parkeyan - Akologika and Aberland	Stop Fro 10.000000000 GI
es BW 1.0	0 MHz	#VBV		Sweep 7	Stop 10.000 GHz 16.67 ms (1001 pts)	CF St 997.000000 M <u>Auto</u> M
N 1		3.688 99 GHz 707.96 MHz	-58.080 dBm 3.133 dBm			FreqOffs
						and the second
						01

LTE B12_3 M_Conducted Spurious(30 M-10 G)_Mid_QPSK_1RB



RL	RF	50 \$				SEN	SE:INT		ALIGN AUTO		PM Jan 06, 2025	Frequency
enter F	req 5	.0150	00000	PNO: Fa	31 -	rig: Free Atten: 20		#Avg T	ype: RMS	TY	CE 1 2 3 4 5 6 PE MWWWW ET P P P P P P	
dB/div		10.00	dBm						Mkr	1 9.601 -58.7	20 GHz 41 dBm	Auto Tun
00).0).0	()2											Center Fre 5.015000000 GH
o o											1-	Start Fro 30.000000 Mi
10 10 10		المريعي والمريدين	per series and	unitapitumadak	****	al an	ngerhaufteik	enderse and the of	erendestationersternen	urmont yesterner	PCAP	Stop Fro 10.000000000 Gi
art 30 F les BW	1.0 №	1Hz	X	#	VBW 3.	0 MHz	EU	NCTION F	Sweep 1	6.67 ms	0.000 GHz (1001 pts)	CF Ste 997.000000 Mi <u>Auto</u> Mi
N 2 2 N 2 3 - - 4 - - 5 - - 6 - - 7 - -				01 20 GH; 17.93 MH;	z58 z	3.741 dB 2.182 dB	m					Freq Offs 0 F
B 200 200 200 200 200 200 200 200 200 20						m					-	

LTE B12_3 M_Conducted Spurious(30 M-10 G)_High_QPSK_1RB



RL	RF	50				SEI	NSE:INT		ALIGN AUTO		PM Jan 06, 2025	Frequency
nter F	Freq t	5.0150	00000	O GHz PNO: F IFGain:	ast 🔸 Low	Trig: Free #Atten: 2		#Avg	Type: RMS	TY	DE 123456 PE MWWWW ET P P P P P P	
dB/div	Ref	10.00	dBm						Mki	r1 2.313 -57.2	13 GHz 44 dBm	Auto Tur
g 20 .0 .0	()2											Center Fre 5.015000000 GH
o o			1									Start Fre 30.000000 Mi
.0 .0 .0	and and the set	pal-optic-hot		af way on you go by the series	and had	୍ୟାଧ୍ୟକଦ୍ଧକାମ	doogen-c-traces	anter over the second	untelanteration	m.blensheendre	PEAK A BUMAN MUNY	Stop Fre 10.000000000 Gi
art 30 es BW	1.0 1	/IHz	X		#VBW	3.0 MHz		NCTION	Sweep 1	16.67 ms (.000 GHz 1001 pts)	CF Ste 997.000000 M Auto M
				313 13 GH 697.99 MH		<u>-57.244 dl</u> 1.604 dl	3m				E	Freq Offs 01
						m					-	
									STATU			

LTE B12_5 M_Conducted Spurious(30 M-10 G)_Low_QPSK_1RB



Freedoment	01:22:33 PM Jan 06, 2025	ALIGN AUTO		SENSE:IN		50 Ω AC		L
Frequency	TRACE 1 2 3 4 5 5 TYPE M WWWWW DET P P P P P P	Type: RMS		Trig: Free Run #Atten: 20 dB	CHZ PNO: Fast ↔ IFGain:Low	5000000	req 5.01	nter Fr
Auto Tur	3.698 96 GHz -57.816 dBm	Mkr1				.00 dBm		lB/div
Center Fre 5.015000000 GH							⊘ 2	
Start Fro 30.000000 Mi					1			
Stop Fr 10.000000000 G	PEAK N-inghragheter N-inghragheter	**************************************	and the second	مريني مايين مريني مريني مريني مريني مريني مريني مي مريني مريني مريني مريني مريني مريني مريني مريني مريني مريني م	wedserway was the	ntorrowska	hannahan	And Mil
CF Sto 997.000000 M <u>Auto</u> M	Stop 10.000 GHz .67 ms (1001 pts)	Sweep 16	FUNCTION	3.0 MHz	#VBV	x	1.0 MHz	rt 30 N es BW
Freq Offs 01	E			-57.816 dBm 1.263 dBm	18 96 GHz 7.96 MHz	3.69	f	N 1 N 1
		1 1						
	· ·							

LTE B12_5 M_Conducted Spurious(30 M-10 G)_Mid_QPSK_1RB



RL	RF	50 Ω	AC			SENSE:IN		ALIGN AUT		2 PM Jan 06, 2025	Frequency
nter F	req 5.	.01500	0000	CHZ PNO: Fast IFGain:Low		: Free Run en: 20 dB		g Type: RMS	1	ACE 1 2 3 4 5 6 YPE M WWWWW DET P P P P P P	
dB/div		10.00 d	Bm					MI	(r1 6.30 -57.3	l 13 GHz 336 dBm	Auto Tur
	()2										Center Fr 5.015000000 G
							1				Start Fr 30.000000 M
0 0 0	and a state of the	lift og over det	gen aftern	harana haranga dalayo	and the second	and a construction of the second s	ngeren florræði regirreði _{freð}	free and faith the format	nterestant and a set	PEAK U	Stop Fr 10.000000000 G
nt 30 f es BW	1.0 M	Hz	X	#VI	BW 3.0 I	ИНz	FUNCTION	Sweep	16.67 ms	0.000 GHz (1001 pts)	CF St 997.000000 M <u>Auto</u> M
Ň	1 f 1 f			1 13 GHz 7.93 MHz		36 dBm 27 dBm				E	Freq Offs 0
					1	1					

LTE B12_5 M_Conducted Spurious(30 M-10 G)_High_QPSK_1RB



RL	RF	50 Ω AC		SENSE:II	NT	ALIGN AUTO	01:27:26 PM Jan 06, 2025	_
enter l	Freq 5.0	1500000	PNO: Fast - IFGain:Low	→ Trig: Free Ru #Atten: 20 dB	n	Type: RMS	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET PPPPP	Frequency
dB/div		0.00 dBm				Mkr	1 2.542 44 GHz -58.552 dBm	Auto Tur
	⊘ 2							Center Fre 5.015000000 Gł
.0 .0 .0			<u>1</u>					Start Fr 30.000000 M
1.0 1.0	walnesser	المرحلة المرحمة المراحمة المراحمة المراحمة المراحمة المراحمة المراحمة المراحمة المراحمة المراحمة الم	Windowshire and the	and a share the state of the st	1848***********************************	netran film for the foreigne	PEAK	Stop Fr 10.00000000 G
art 30 Res BV	V 1.0 MH	z		W 3.0 MHz	FUNCTION	Sweep 1	Stop 10.000 GHz 6.67 ms (1001 pts)	997.000000 MI
R MODE Res BV	V 1.0 MH	× 2.			FUNCTION		6.67 ms (1001 pts)	CF Ste 997.00000 Mi Auto Mi Freq Offs 0 I
tart 30 Res BV		× 2.	542 44 GHz	, -58.552 dBm	FUNCTION		6.67 ms (1001 pts)	997.000000 M Auto M Freq Offs

LTE B12_10 M_Conducted Spurious(30 M-10 G)_Low_QPSK_1RB



RL RI			SENSE:I		ALIGN AUTO	01:30:00 PM Jan 0	
enter Freq	5.015000000	PNO: Fast ↔ IFGain:Low	Trig: Free Ru #Atten: 20 dE	n	Type: RMS	TRACE 1 2 TYPE MW DET P P	ач 5 Мили Р Р Р Р
	ef 10.00 dBm				Mkr	1 3.758 78 (-57.774 d	GHz Auto Tur IBm
9 2 00 1.0							Center Fre 5.015000000 Gł
0 0 0			 				Start Fro 30.000000 M
).0 .0).0	ملية وي المراجع المراجع من المراجع الم المراجع المراجع	waatowellocation	AN WEARNING COM	nder/hverlanvarationaries	anggy hangy constant of the	Millimentersonetra	Stop Fre 10.000000000 Gi
art 30 MHz es BW 1.0	MHz	#VB\	V 3.0 MHz	FUNCTION	Sweep 1	Stop 10.000 6.67 ms (1001	pts) 997.000000 M
N 1 f N 1 f 3	3.7	58 78 GHz 07.96 MHz	-57.774 dBm 0.664 dBm				Freq Offs
7 A			m				

LTE B12_10 M_Conducted Spurious(30 M-10 G)_Mid_QPSK_1RB



RL	RF	50 Ω AC		SENS	E:INT	ALIGN AUTO	01:32:21 PM.	Jan 06, 2025	
enter F	req 5.01	5000000	PNO: Fast IFGain:Low	Trig: Free F #Atten: 20	Run	vg Type: RMS	TYPE	1 2 3 4 5 6 M WWWWW P P P P P P	Frequency
0 dB/div		.00 dBm				Mkr	1 5.274 2	2 GHz 3 dBm	Auto Tur
og 0.00 0.0	Ŷ2								Center Fre 5.015000000 GH
0.0 0.0 0.0									Start Fr 30.000000 M
0.0	and min comments	afin the state	North Contractor	handhandhandhandhandhandha	alasher the adjust spin	wounterroughtance	n when an interse	PEAK	Stop Fr
									10.000000000 G
tart 30 Res BW	/ 1.0 MHz		#VB	SW 3.0 MHz	FUNCTION	Sweep 1	Stop 10.0 6.67 ms (10	001 pts)	CF Ste 997.000000 M
tart 30 l Res BW	/ 1.0 MHz	× 5.2	#VE 274 22 GHz 117.93 MHz	W 3.0 MHz -58.233 dBr 3.417 dBr	n		6.67 ms (10	001 pts)	CF Str 997.000000 M <u>Auto</u> M Freq Offs
0.0 tart 30 Res BW Res BW R MODE T 1 N 2 N 3 4 5	I 1.0 MHZ	× 5.2	274 22 GHz	-58.233 dBr	n		6.67 ms (10	001 pts)	10.00000000 Gi CF Ste 997.000000 Mi <u>Auto</u> Mi Freq Offs 0 i

LTE B12_10 M_Conducted Spurious(30 M-10 G)_High_QPSK_1RB



- d x				pectrum Analyzer - Swept SA
Frequency	12:17:19 PM Jan 06, 2025 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A A	ALIGN AUTO	SENSE:INT	RF 50 Ω AC Freq 698.000000 MHz PNO: Wide ↔
Auto Tune	1 697.964 MHz -43.284 dBm	Mkı	#Atten: 20 dB	Ref Offset 26.69 dB Ref 26.69 dB
Center Fred 698.000000 MHz				
Start Fred 696.000000 MHz				
Stop Fred 700.000000 MHz	-13.00 dBm			
CF Step 400.000 kH: <u>Auto</u> Mar		american de la companya de la company	1	
Freq Offset 0 Hz				
	Span 4.000 MHz 2.000 s (1001 pts)	#Sween	300 kHz	698.000 MHz AV 100 KHz #VBW
4		STATUS		

LTE B12_1.4M_Band Edge_Low_QPSK_1RB



- 6 ×					_	ım Analyzer - Swept SA	
Frequency	12:16:38 PM Jan 06, 2025 TRACE 1 2 3 4 5 0 TYPE A WWWWW DET A A A A A A	ALIGN AUTO	#Avg Typ	SENSE:INT	PNO: Wide	RF 50 Ω AC CR 698.000000 M	Center F
Auto Tune	697.996 MHz -39.102 dBm	Mkr		#Atten: 20 dB	IFGain:Low	Ref Offset 26.69 dB Ref 26.69 dBm	10 dB/div
Center Freq 698.000000 MHz	RMS						16.7
Start Fred 696.000000 MHz							-3.31
Stop Fred 700.000000 MH:	-13.00 dBm						-13.3
CF Step 400.000 kH: Auto Mar				1	and the state of t		-33.3
Freq Offse 0 H							-53.3
	Span 4.000 MHz 000 s (1001 pts)	#Sween f		00 kHz	#VBW 3		-63.3 Center 69 #Res BW
	ooo o (roor proj	STATUS			# V BW 3	001112	MSG

LTE B12_1.4M_Band Edge_Low_QPSK_FullRB



#Res BW	100 KH2	#VBW 300	KHZ	#	sweep	2.000 5 (1	loo r pisj	
Start 688	.000 MHz 100 kHz	#VBW 300		-#1	Sween	Stop 696. 2.000 s (1	000 MHz	
-63.3								
-53.3	1444-14-14-14-14-14-14-14-14-14-14-14-14	and have been all the second designed and the second d						0 H
40.0						and a start of the	RMS	Freq Offse
-43.3							1	Auto Mar
-33.3								CF Ster 800.000 kH
-23.3								
-13.3								Stop Free 696.000000 MH
							-13.00 dBm	
-3.31								688.000000 MH
6.69								Start Free
16.7								692.000000 MH
								Center Free
10 dB/div Log	Ref Offset 26.69 dB Ref 26.69 dBm				WIKI	-46.5	50 dBm	
			en: 20 dB		Miler	DE		Auto Tune
	req 692.000000 I	VIHZ PNO: Wide Trig	: Free Run	#Avg Type:		TRACE	1 2 3 4 5 6 A 44 A A A A A A	Frequency
X RL	RF 50 Ω AC		SENSE:INT	AL 1	GN AUTO	12:16:58 P	4 Jan 06, 2025	

LTE B12_1.4M_Extended Band Edge_Low_QPSK_FullRB



							pt SA	trum Analyzer - Swej	
Frequency	M Jan 06, 2025	TRAC	ALIGN AUTO Type: RMS	#Ava	SENSE:INT			RF 50 Ω req 716.050	RL Center E
Auto Tune	0 2 MHz 57 dBm	TY DI 716.00			: Free Run en: 20 dB		PNO IFGa .69 dB	Ref Offset 26	10 dB/div
Center Free 716.050000 MH									16.7
Start Fre 716.000000 MH									6.69 3.31
Stop Free 716.100000 MH	-13.00 dBm					North and a strange and	1.000 TERESTOR	יינגענינינינינינייניינייניינייניינייניינייני	-13.3 1 -23.3
CF Ste 10.000 kH Auto Ma		vinnins (antiestie	5n-18n-18n-1850-1850-1860-1860-1860-1860-1860-1860-1860-186						43.3
Freq Offse 0 H									53.3
	0000 MHz 1001 pts)	op 716.10 2 000 s (Ste #Sween		kH7	#VBW 100		00000 MHz 30 kHz	Start 716
	leer proj	21000-3	STATUS				ed	ment Complete	and the second se

LTE B12_1.4M_Band Edge_High_QPSK_1RB(1)



ASG					STATUS				
	0.1000 MHz 100 kHz	#VBW 300 k	Hz	#	S Sweep	top 718.0 2.000 s (*	000 MHz 1001 pts)		
-63.3									
-53.3								Freq Of	0 H
-43.3			and the second second second		lana da ana ana da a		RMS	English	6
12.2	and the second second second	and the second						190.000 Auto	Ма
33.3	A A A A A A A A A A A A A A A A A A A							CFS	
23.3								718.000000	мн
-13.3							-13.00 dBm	Stop I	
-5.51									
-3.31								Start 716.100000	
6.69									
16.7								717.050000	
								Center	Fre
10 dB/div	Ref Offset 26.69 dB Ref 26.69 dBm				Mkr1	716.105	94 dBm	Auto Tune	
			Free Run n: 20 dB						
Center F	RF 50 Ω AC Freq 717.050000 N	1Hz	SENSE:INT	#Avg Type:	IGN AUTO RMS	TRAC	M Jan 06, 2025	Frequency	У
	ectrum Analyzer - Swept SA								×

LTE B12_1.4M_Band Edge_High_QPSK_1RB(2)



							trum Analyzer - Swept SA	
Frequency	M Jan 06, 2025 E 1 2 3 4 5 0 E A 444 A A A A	12:22:04 TRAC	ALIGN AUTO		200 200	Hz	RF 50 Ω AC req 716.000000 M	Center F
Auto Tune	00 MHz 94 dBm		Mki		#Atten: 20	PNO: Wide ++ IFGain:Low	Ref Offset 26.69 dB Ref 26.69 dBm	10 dB/div
Center Free 716.000000 MH					_	NT-00 0.01.00000.000 1.000		- og 16.7
Start Fre 714.000000 MH								6.69 3.31
Stop Fre 718.000000 MH	-13.00 dBm							13.3 23.3
CF Ste 400.000 kH Auto Ma	RMS 4	·····	tin many ang	a construction of				33.3
Freq Offse 0 H								i3.3
	.000 MHz 1001 pts)	Span 4 2.000 s	#Sweep		300 kHz	#VBW	6.000 MHz 100 kHz	enter 71
			STATUS					SG

LTE B12_1.4M_Band Edge_High_QPSK_FullRB



				Spectrum Analyzer - Swept SA	
Frequency	12:22:21 PM Jan 06, 2025 TRACE 2 3 4 5 F TYPE A MANA A A A DET A A A A A A A	ALIGN AUTO	SENSE:INT	RF 50 Ω AC Freq 722.000000 MHz PNO: Wide ↔	Center Fi
Auto Tune	DET AAAAAA 718.008 MHz -45.842 dBm	Mkı	#Atten: 20 dB	Ref Offset 26.69 dB	10 dB/div
Center Free 722.000000 MH					16.7
Start Free 718.000000 MH					6.69 3.31
Stop Free 726.000000 MH	-13.00 dBm				-13.3
CF Ste 800.000 kH <u>Auto</u> Ma					33.3 43.3) 1
Freq Offse 0 H	RMS		and the second day of		53.3
	top 726.000 MHz 2.000 s (1001 pts)	#Sweep	V 300 kHz	18.000 MHz W 100 KHz #VBV	
		STATUS			ISG

LTE B12_1.4M_Extended Band Edge_High_QPSK_FullRB



					ctrum Analyzer - Swept SA	
Frequency	01:12:03 PM Jan 06, 2025 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A	ALIGN AUTO	ENSE:INT		RF 50 Ω AC Treq 698.000000 M	Center F
Auto Tune	697.980 MHz -43.416 dBm	Mkr		Sain:Low #Atten: 2	Ref Offset 26.69 dB Ref 26.69 dBm	10 dB/div
Center Freq 698.000000 MHz						16.7
Start Freq 696.000000 MHz						-3:31
Stop Freq 700.000000 MHz	-13.00 dBm					-13.3
CF Step 400.000 kHz Auto Mar	- mar		1			-33.3
Freq Offset 0 Hz						-53.3
	Span 4.000 MHz .000 s (1001 pts)	#Sween	,	#VBW 300 kHz	98.000 MHz	Center 69
		STATUS		#1211 000 KHZ		MSG

LTE B12_3 M_Band Edge_Low_QPSK_1RB



			ALIGN AUTO					m Analyzer - Swept SA	
Frequency	01:11:28 PM Jan 06, 2025 TRACE 1 2 3 4 5 Frequence TYPE A WWWW			#Avg Typ		Trig: Fre	Hz PNO: Wide ↔	RF 50 Ω AC q 698.000000 N	Center F
Auto Tune	992 MHz 35 dBm	1 697.9	Mkr		: 20 dB	#Atten: 2	IFGain:Low	Ref Offset 26.69 dB Ref 26.69 dBm	10 dB/div
Center Freq 698.000000 MHz	RMS	و در ا							16.7
Start Freq 696.000000 MHz									-3.31
Stop Freq 700.000000 MHz	-13.00 dBm								-13.3
CF Step 400.000 kHz Auto Mar				and the second second	1		mar and a start of the start of	Ningala Mattern gay with the second	-33.3
Freq Offset 0 Hz									-53.3
	i.000 MHz (1001 pts)	Span 4	#Sween		17	300 kHz	#VBW		Center 69
	(noor pito)		STATUS				"UEN		MSG

LTE B12_3 M_Band Edge_Low_QPSK_FullRB



Agilent Spectrum Analyzer - Swept SA				
Center Freq 692.000000 Ν	PNO: Wide + Irig: Free Run	#Avg Type: RMS	01:11:43 PM Jan 06, 2025 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A A	Frequency
Ref Offset 26.69 dB Ref 26.69 dBm	IFGain:Low #Atten: 20 dB	Mk	r1 695.984 MHz -43.55 dBm	Auto Tune
16.7				Center Freq 692.000000 MHz
3.31				Start Free 688.000000 MH;
23.3			-13.00 dBm	Stop Fred 696.000000 MHz
43.3			1- RM	CF Step 800.000 kH Auto Mar
53.3	and the second secon	and the second		Freq Offse 0 Hz
63 3 Start 688.000 MHz ≉Res BW 100 kHz	#VBW 300 kHz	#Sween	Stop 696.000 MHz 2.000 s (1001 pts)	
ISG		STATUS		

LTE B12_3 M_Extended Band Edge_Low_QPSK_FullRB