

TEST REPORT

FCC LTE B25(2) Test for SM-A376U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2512-FC014

DATE OF ISSUE
December 15, 2025

Tested by
Jung Ki Lim



Technical Manager
Jong Seok Lee



HCT CO., LTD.
BongJai Huh
BongJai Huh / CEO



HCT CO.,LTD.

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

TEST REPORT

REPORT NO.

HCT-RF-2512-FC014

DATE OF ISSUE

December 15, 2025

Additional Model

SM-A376U1, SM-S376V

Applicant

SAMSUNG Electronics Co., Ltd.

129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Product Name

Mobile Phone

Model Name

SM-A376U

Date of Test

October 29, 2025 ~ December 15, 2025

FCC ID

A3LSMA376U

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: § 24

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	December 15, 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 ***.

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

Model(s):	SM-A376U
Additional Model(s)	SM-A376U1, SM-S376V
Tx Frequency:	1850.7 MHz – 1914.3 MHz (LTE – Band25/2 (1.4 MHz)) 1851.5 MHz – 1913.5 MHz (LTE – Band25/2 (3 MHz)) 1852.5 MHz – 1912.5 MHz (LTE – Band25/2 (5 MHz)) 1855.0 MHz – 1910.0 MHz (LTE – Band25/2 (10 MHz)) 1857.5 MHz – 1907.5 MHz (LTE – Band25/2 (15 MHz)) 1860.0 MHz – 1905.0 MHz (LTE – Band25/2 (20 MHz))
Serial number:	Radiated : R3Y90Z83KM Conducted : R3CY90Z7ZQA
Antenna Information	Please refer to the Antenna Specification document.

1.1. MAXIMUM OUTPUT POWER

Ant B

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
LTE – Band25/2 (1.4)	1850.7 - 1914.3	1M10G7D	QPSK	0.172	22.35
		1M10W7D	16QAM	0.145	21.60
		1M10W7D	64QAM	0.111	20.47
		1M10W7D	256QAM	0.055	17.38
LTE – Band25/2 (3)	1851.5 - 1913.5	2M71G7D	QPSK	0.161	22.07
		2M71W7D	16QAM	0.136	21.34
		2M70W7D	64QAM	0.111	20.45
		2M72W7D	256QAM	0.053	17.24
LTE – Band25/2 (5)	1852.5 - 1912.5	4M53G7D	QPSK	0.170	22.30
		4M50W7D	16QAM	0.144	21.58
		4M51W7D	64QAM	0.109	20.36
		4M53W7D	256QAM	0.060	17.78
LTE – Band25/2 (10)	1855.0 - 1910.0	9M00G7D	QPSK	0.179	22.52
		9M02W7D	16QAM	0.149	21.72
		8M98W7D	64QAM	0.116	20.63
		9M00W7D	256QAM	0.058	17.67
LTE – Band25/2 (15)	1857.5 - 1907.5	13M5G7D	QPSK	0.173	22.39
		13M5W7D	16QAM	0.142	21.51
		13M5W7D	64QAM	0.114	20.55
		13M5W7D	256QAM	0.056	17.50
LTE – Band25/2 (20)	1860.0 - 1905.0	18M0G7D	QPSK	0.177	22.48
		17M9W7D	16QAM	0.138	21.41
		17M9W7D	64QAM	0.113	20.53
		17M9W7D	256QAM	0.056	17.52

Ant F

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
LTE – Band25/2 (1.4)	1850.7 - 1914.3	1M10G7D	QPSK	0.237	23.74
		1M09W7D	16QAM	0.195	22.90
		1M10W7D	64QAM	0.156	21.94
		1M09W7D	256QAM	0.077	18.84
LTE – Band25/2 (3)	1851.5 - 1913.5	2M71G7D	QPSK	0.209	23.20
		2M70W7D	16QAM	0.182	22.61
		2M70W7D	64QAM	0.145	21.60
		2M71W7D	256QAM	0.069	18.36
LTE – Band25/2 (5)	1852.5 - 1912.5	4M52G7D	QPSK	0.212	23.26
		4M50W7D	16QAM	0.183	22.62
		4M52W7D	64QAM	0.138	21.40
		4M55W7D	256QAM	0.070	18.45
LTE – Band25/2 (10)	1855.0 - 1910.0	9M01G7D	QPSK	0.209	23.21
		9M01W7D	16QAM	0.169	22.29
		9M01W7D	64QAM	0.141	21.50
		9M03W7D	256QAM	0.069	18.36
LTE – Band25/2 (15)	1857.5 - 1907.5	13M5G7D	QPSK	0.215	23.33
		13M5W7D	16QAM	0.181	22.57
		13M5W7D	64QAM	0.144	21.58
		13M5W7D	256QAM	0.071	18.51
LTE – Band25/2 (20)	1860.0 - 1905.0	18M0G7D	QPSK	0.212	23.27
		17M9W7D	16QAM	0.179	22.52
		17M9W7D	64QAM	0.147	21.66
		17M9W7D	256QAM	0.070	18.42

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.

Detailed description of test facility was submitted to the Commission and accepted dated March 11, 2024 (Registration Number: KR0032).

2.4. EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to ANSI/USEMCSC C63.2-2023, "American National Standard for Specifications of Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz".

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2
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;

$$P_d \text{ (dBm)} = P_g \text{ (dBm)} - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

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 $\geq 3 \times$ RBW
3. No. of sweep points $> 2 \times$ span / RBW
4. Detector = Peak
5. Trace mode = Max Hold
6. The trace was allowed to stabilize
7. Test channel : Low/ Middle/ High
8. Frequency range : We are performed all frequency to 10th harmonics from 9 kHz.

Test Note

1. 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;

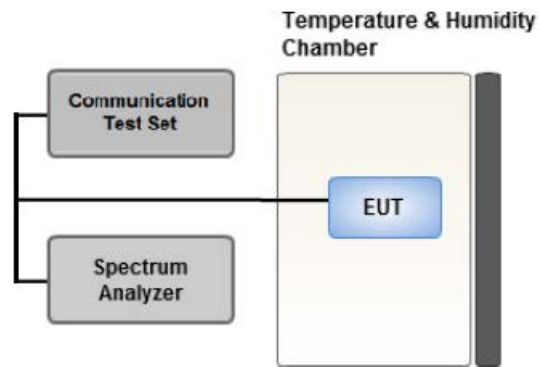
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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.

$$\text{EIRP}_{(\text{dBm})} = \text{ERP}_{(\text{dBm})} + 2.15$$

3.4 PEAK- TO- AVERAGE RATIO

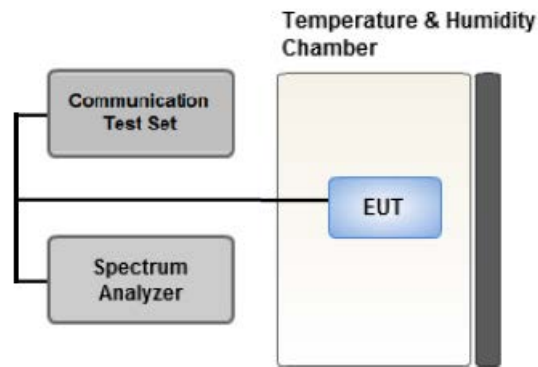


Test setup

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 %.

3.5 OCCUPIED BANDWIDTH.



Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

The EUT makes a call to the communication simulator.

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

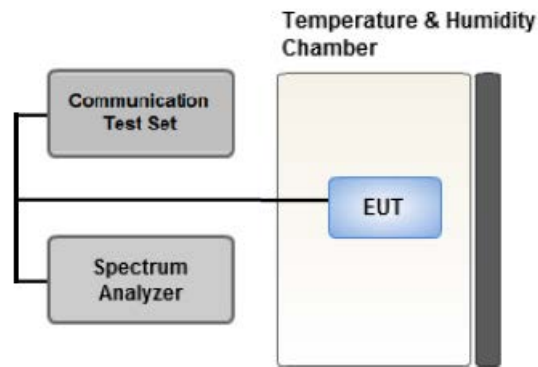
The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

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

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5 % of the expected OBW
3. VBW $\geq 3 \times$ 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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

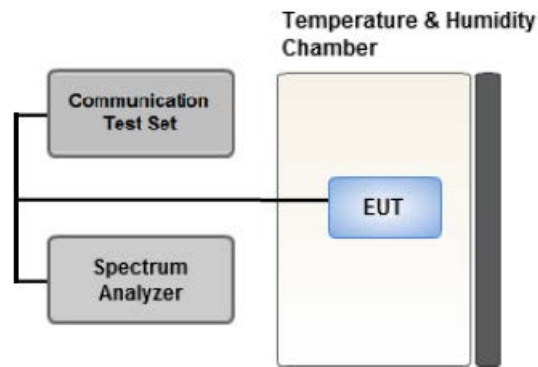
Test Overview

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

Test Settings

1. RBW = 1 MHz
2. VBW $\geq$ 3 MHz
3. Detector = Peak
4. Trace Mode = max hold
5. Sweep time = auto
6. Number of points in sweep = 1001

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
7. Trace mode = trace average
8. Sweep time > (Number of Points) $\times$ (Symbol Period)
9. The trace was allowed to stabilize

Test Notes

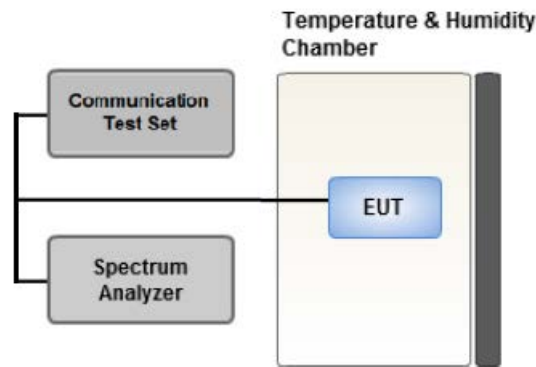
According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of The authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block 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 $\text{Margin} < 1$ dB the emission level is either corrected by $10 \log(1 \text{ MHz} / \text{RB})$ 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.

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20 °C to provide a reference).

2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter.

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

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

3.9 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported. (Worst case : 10 MHz(Ant B), 1.4 MHz(Ant F))
- The worst case is reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data.
- Please refer to the table below.
- LTE BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of LTE BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power.
Therefore, test data provided in this report covers BAND 2 as well as BAND 25.
- 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.
- SM-A376U & additional models were tested and the worst case results are reported.
(Worst case : SM-A376U)

[Ant B Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	QPSK, 16QAM, 64QAM, 256QAM	See Section 8.1		X
Radiated Spurious and Harmonic Emissions	QPSK	See Section 8.2		X

[Ant F Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	QPSK, 16QAM, 64QAM, 256QAM	See Section 9.1		Y
Radiated Spurious and Harmonic Emissions	QPSK	See Section 9.2		Z

3.10 WORST CASE(CONDUCTED TEST)

- All modes of operation were investigated and the worst case configuration results are reported.
- LTE BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of LTE BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power.
Therefore, test data provided in this report covers BAND 2 as well as BAND 25.
- SM-A376U & additional models were tested and the worst case results are reported.
(Worst case : SM-A376U)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	QPSK, 16QAM, 64QAM, 256QAM	1.4, 3, 5, 10, 15, 20	Mid	Full RB	0
Peak-To-Average Ratio	QPSK, 16QAM, 64QAM, 256QAM	1.4, 3, 5, 10, 15, 20	Mid	Full RB	0
Band Edge	QPSK	1.4	Low	1	0
			High	1	5
		3	Low	1	0
			High	1	14
		5	Low	1	0
			High	1	24
		10	Low	1	0
			High	1	49
		15	Low	1	0
			High	1	74
		20	Low	1	0
			High	1	99
		1.4, 3, 5, 10, 15, 20	Low, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	QPSK	1.4, 3, 5, 10, 15, 20	Low, Mid, High	1	0

4. LIST OF TEST EQUIPMENT 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	12/18/2025	Annual
RF Switching System	Switch box(3.3 G HPF+LNA)	HCT CO., LTD.	F1L2	12/18/2025	Annual
RF Switching System	Switch box(LNA)	HCT CO., LTD.	F1L4	12/18/2025	Annual
RF Switching System	Switch box(6 G HPF+LNA)	HCT CO., LTD.	F1L7	12/18/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	10/21/2026	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/10/2026	Annual
DC Power Supply	E3632A	Agilent	MY40010147	07/29/2026	Annual
Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Dipole Antenna	UHAP	Schwarzbeck	01288	08/07/2026	Biennial
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	147	08/07/2026	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1298	08/27/2026	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Signal Analyzer(10 Hz ~ 26.5 GHz)	N9020A	Agilent	MY52090906	04/14/2026	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	REOHDE & SCHWARZ	100931	07/28/2026	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	07/29/2026	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.	6262287701	05/14/2026	Annual
Radio Communication Test Station	MT8000A	Anritsu Corp.	6272613402	08/18/2026	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/22/2026	Annual
Signal Analyzer(5 Hz ~ 40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/14/2026	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	05/27/2026	Annual
Automation Software	FCC 2G/3G/4G Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC NR Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC LTE Radiated	HCT CO., LTD	-	-	-
Automation Software	FCC NR Radiated	HCT CO., LTD	-	-	-

Note:

- Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
- Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5-2017.

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 ($\pm$ kHz)
Occupied Bandwidth	95 (Confidence level about 95 %, $k=2$)
Frequency stability	28 (Confidence level about 95 %, $k=2$)

Parameter	Expanded Uncertainty ($\pm$ kHz)
Block Edge	0.70 (Confidence level about 95 %, $k=2$)
Conducted Spurious Emissions	1.18 (Confidence level about 95 %, $k=2$)
Peak- to- Average Ratio	0.68 (Confidence level about 95 %, $k=2$)
Radiated Power	4.74 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.68 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.75 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.82 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

-. The decision rule applies 'simple acceptance'

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, § 24.238(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	PASS <u>Note1</u>
Peak- to- Average Ratio	§ 24.232(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 24.235	Emission must remain in band	PASS

Note:

1. Refer to the SAR report.

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 24.232(c)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 24.238(a)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	PASS

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

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

$$\text{ERP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 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 Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
20175	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

$$\text{EIRP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

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

EDGE Emission Designator

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

WCDMA Emission Designator

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

QPSK Modulation

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

QAM Modulation

Emission Designator = 4M48W7D
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

8. TEST DATA(Ant B)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1850.7	LTE B25/B2 1.4 MHz	QPSK	-21.02	13.50	10.40	2.07	H	< 2.00	0.153	21.83	1	5
		16-QAM	-21.74	12.78	10.40	2.07	H		0.129	21.11		
		64-QAM	-22.77	11.75	10.40	2.07	H		0.102	20.08		
		256-QAM	-25.92	8.60	10.40	2.07	H		0.049	16.93		
1882.5		QPSK	-20.82	14.16	10.40	2.21	H		0.172	22.35	1	0
		16-QAM	-21.57	13.41	10.40	2.21	H		0.145	21.60		
		64-QAM	-22.70	12.28	10.40	2.21	H		0.111	20.47		
		256-QAM	-25.79	9.19	10.40	2.21	H		0.055	17.38		
1914.3		QPSK	-21.26	13.75	10.40	2.17	H		0.158	21.98	1	5
		16-QAM	-22.16	12.85	10.40	2.17	H		0.128	21.08		
		64-QAM	-23.06	11.95	10.40	2.17	H		0.104	20.18		
		256-QAM	-26.22	8.79	10.40	2.17	H		0.050	17.02		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1851.5	LTE B25/B2 3 MHz	QPSK	-21.04	13.48	10.40	2.07	H	< 2.00	0.152	21.81	1	14
		16-QAM	-21.59	12.93	10.40	2.07	H		0.134	21.26		
		64-QAM	-22.67	11.85	10.40	2.07	H		0.104	20.18		
		256-QAM	-25.96	8.56	10.40	2.07	H		0.049	16.89		
1882.5		QPSK	-21.11	13.87	10.40	2.21	H		0.161	22.06	1	8
		16-QAM	-21.83	13.15	10.40	2.21	H		0.136	21.34		
		64-QAM	-22.83	12.15	10.40	2.21	H		0.108	20.34		
		256-QAM	-25.93	9.05	10.40	2.21	H		0.053	17.24		
1913.5		QPSK	-21.17	13.84	10.40	2.17	H		0.161	22.07	1	14
		16-QAM	-21.91	13.10	10.40	2.17	H		0.136	21.33		
		64-QAM	-22.79	12.22	10.40	2.17	H		0.111	20.45		
		256-QAM	-26.01	9.00	10.40	2.17	H		0.053	17.23		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1852.5	LTE B25/B2 5 MHz	QPSK	-21.14	13.43	10.40	2.08	H	< 2.00	0.150	21.75	1	24
		16-QAM	-21.80	12.77	10.40	2.08	H		0.128	21.09		
		64-QAM	-22.94	11.63	10.40	2.08	H		0.099	19.95		
		256-QAM	-25.90	8.67	10.40	2.08	H		0.050	16.99		
1882.5		QPSK	-20.87	14.11	10.40	2.21	H		0.170	22.30	1	24
		16-QAM	-21.59	13.39	10.40	2.21	H		0.144	21.58		
		64-QAM	-22.81	12.17	10.40	2.21	H		0.109	20.36		
		256-QAM	-25.90	9.08	10.40	2.21	H		0.053	17.27		
1912.5		QPSK	-21.00	14.01	10.40	2.17	H		0.167	22.24	1	0
		16-QAM	-21.80	13.21	10.40	2.17	H		0.139	21.44		
		64-QAM	-22.96	12.05	10.40	2.17	H		0.107	20.28		
		256-QAM	-25.46	9.55	10.40	2.17	H		0.060	17.78		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1855.0	LTE B25/B2 10 MHz	QPSK	-20.96	13.61	10.40	2.08	H	< 2.00	0.156	21.93	1	49
		16-QAM	-21.79	12.78	10.40	2.08	H		0.129	21.10		
		64-QAM	-23.01	11.56	10.40	2.08	H		0.097	19.88		
		256-QAM	-26.03	8.54	10.40	2.08	H		0.049	16.86		
1882.5		QPSK	-20.65	14.33	10.40	2.21	H		0.179	22.52	1	49
		16-QAM	-21.45	13.53	10.40	2.21	H		0.149	21.72		
		64-QAM	-22.54	12.44	10.40	2.21	H		0.116	20.63		
		256-QAM	-25.50	9.48	10.40	2.21	H		0.058	17.67		
1910.0		QPSK	-20.91	14.03	10.40	2.17	H		0.168	22.26	1	0
		16-QAM	-21.83	13.11	10.40	2.17	H		0.136	21.34		
		64-QAM	-22.79	12.15	10.40	2.17	H		0.109	20.38		
		256-QAM	-25.72	9.22	10.40	2.17	H		0.056	17.45		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1857.5	LTE B25/B2 15 MHz	QPSK	-20.91	13.73	10.40	2.10	H	< 2.00	0.160	22.03	1	74
		16-QAM	-21.69	12.95	10.40	2.10	H		0.133	21.25		
		64-QAM	-22.80	11.84	10.40	2.10	H		0.103	20.14		
		256-QAM	-25.76	8.88	10.40	2.10	H		0.052	17.18		
1882.5		QPSK	-20.78	14.20	10.40	2.21	H		0.173	22.39	1	0
		16-QAM	-21.75	13.23	10.40	2.21	H		0.139	21.42		
		64-QAM	-22.62	12.36	10.40	2.21	H		0.114	20.55		
		256-QAM	-25.67	9.31	10.40	2.21	H		0.056	17.50		
1907.5		QPSK	-20.84	14.10	10.40	2.17	H		0.171	22.33	1	0
		16-QAM	-21.66	13.28	10.40	2.17	H		0.142	21.51		
		64-QAM	-22.88	12.06	10.40	2.17	H		0.107	20.29		
		256-QAM	-25.71	9.23	10.40	2.17	H		0.056	17.46		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1860.0	LTE B25/B2 20 MHz	QPSK	-20.89	13.75	10.40	2.10	H	< 2.00	0.160	22.05	1	99
		16-QAM	-21.77	12.87	10.40	2.10	H		0.131	21.17		
		64-QAM	-22.88	11.76	10.40	2.10	H		0.101	20.06		
		256-QAM	-25.94	8.70	10.40	2.10	H		0.050	17.00		
1882.5		QPSK	-20.69	14.29	10.40	2.21	H		0.177	22.48	1	99
		16-QAM	-21.76	13.22	10.40	2.21	H		0.138	21.41		
		64-QAM	-22.64	12.34	10.40	2.21	H		0.113	20.53		
		256-QAM	-25.65	9.33	10.40	2.21	H		0.057	17.52		
1905.0		QPSK	-20.80	14.12	10.40	2.19	H		0.171	22.33	1	50
		16-QAM	-21.82	13.10	10.40	2.19	H		0.135	21.31		
		64-QAM	-22.76	12.16	10.40	2.19	H		0.109	20.37		
		256-QAM	-25.80	9.12	10.40	2.19	H		0.054	17.33		

8.2 RADIATED SPURIOUS EMISSIONS

☐ MOD: LTE B25/B2
☐ MODULATION SIGNAL: 10 MHz QPSK
☐ DISTANCE: 3 meters
☐ LIMIT: -13 dBm

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	RB	
								Size	Offset
26090 (1855.0)	3 710.00	-42.66	12.28	-59.84	3.08	H	-50.64	1	49
	5 565.00	-38.82	13.05	-50.82	3.88	V	-41.65		
	7 420.00	-44.80	10.78	-47.75	4.55	H	-41.52		
26365 (1882.5)	3 765.00	-43.09	12.22	-58.93	3.11	V	-49.82	1	49
	5 647.50	-39.98	13.12	-52.15	3.96	H	-42.99		
	7 530.00	-44.17	10.85	-46.81	4.60	V	-40.56		
26640 (1910.0)	3 820.00	-43.51	12.16	-60.16	3.19	H	-51.19	1	0
	5 730.00	-40.77	13.04	-53.04	4.00	V	-44.00		
	7 640.00	-45.18	11.21	-48.01	4.68	H	-41.48		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	Limit (dB)
25/2	1.4 MHz	1882.5	QPSK	6	0	5.59	13.00
			16-QAM			6.31	
			64-QAM			6.55	
			256-QAM			6.63	
	3 MHz		QPSK	15		5.65	
			16-QAM			6.28	
			64-QAM			6.50	
			256-QAM			6.68	
	5 MHz		QPSK	25		5.64	
			16-QAM			6.34	
			64-QAM			6.54	
			256-QAM			6.72	
	10 MHz		QPSK	50		5.67	
			16-QAM			6.31	
			64-QAM			6.55	
			256-QAM			6.68	
	15 MHz		QPSK	75		5.50	
			16-QAM			6.24	
			64-QAM			6.40	
			256-QAM			6.66	
	20 MHz		QPSK	100		5.45	
			16-QAM			6.23	
			64-QAM			6.47	
			256-QAM			6.69	

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 76 ~ 99.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
25/2	1.4 MHz	1882.5	QPSK	6	0	1.0949
			16-QAM			1.0968
			64-QAM			1.0968
			256-QAM			1.0971
	3 MHz		QPSK	15		2.7139
			16-QAM			2.7066
			64-QAM			2.7041
			256-QAM			2.7158
	5 MHz		QPSK	25		4.5290
			16-QAM			4.5020
			64-QAM			4.5121
			256-QAM			4.5342
	10 MHz		QPSK	50		8.9972
			16-QAM			9.0220
			64-QAM			8.9843
			256-QAM			9.0009
	15 MHz		QPSK	75		13.454
			16-QAM			13.470
			64-QAM			13.473
			256-QAM			13.460
	20 MHz		QPSK	100		17.964
			16-QAM			17.915
			64-QAM			17.914
			256-QAM			17.920

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 100 ~ 123.

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
25/2	1.4	1850.7	3.0509	27.976	-68.006	-40.030	-13.00
		1882.5	2.9512	27.976	-67.167	-39.191	
		1914.3	2.3530	27.976	-68.641	-40.665	
	3	1851.5	3.1905	27.976	-67.641	-39.665	
		1882.5	3.6990	27.976	-67.721	-39.745	
		1913.5	3.0709	27.976	-67.663	-39.687	
	5	1852.5	3.6990	27.976	-67.801	-39.825	
		1882.5	6.9292	28.591	-67.095	-38.504	
		1912.5	2.6023	27.976	-67.211	-39.235	
	10	1855.0	3.4098	27.976	-68.201	-40.225	
		1882.5	3.1606	27.976	-68.127	-40.151	
		1910.0	3.6591	27.976	-67.976	-40.000	
	15	1857.5	3.0908	27.976	-68.537	-40.561	
		1882.5	2.1038	27.976	-67.633	-39.657	
		1907.5	3.7289	27.976	-67.480	-39.504	
	20	1860.0	2.3630	27.976	-68.441	-40.465	
		1882.5	3.1606	27.976	-66.783	-38.807	
		1905.0	3.6990	27.976	-67.605	-39.629	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 124 ~ 159.
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

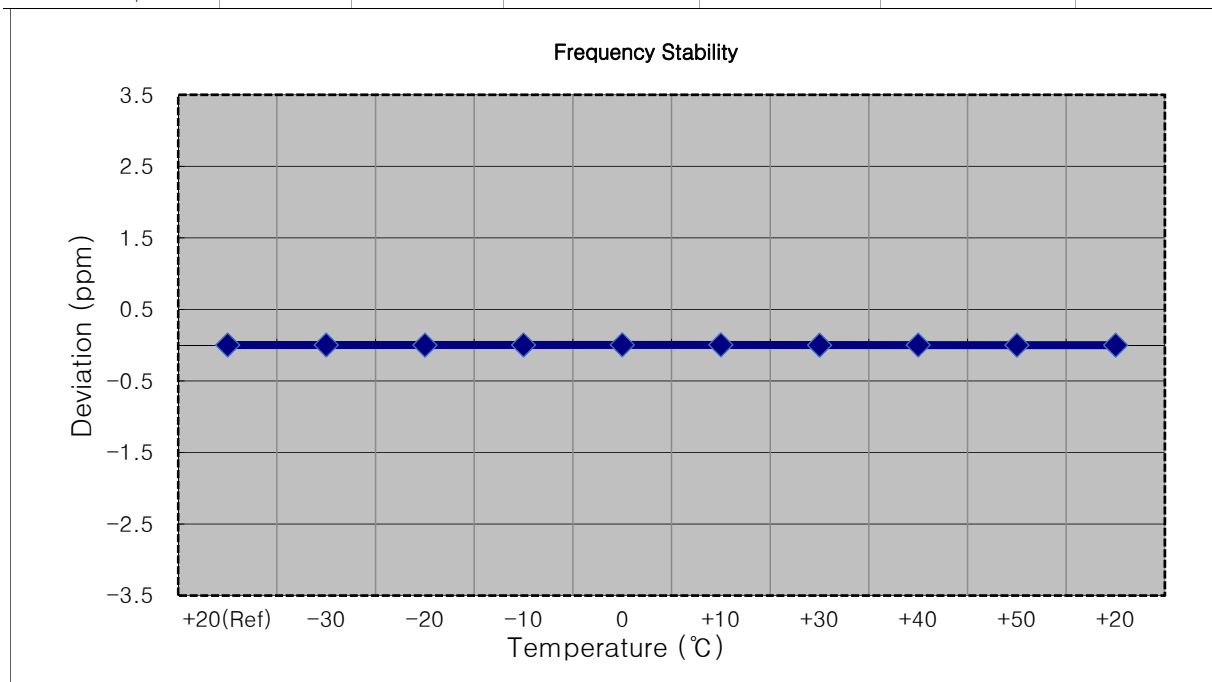
8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 160 ~ 195.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

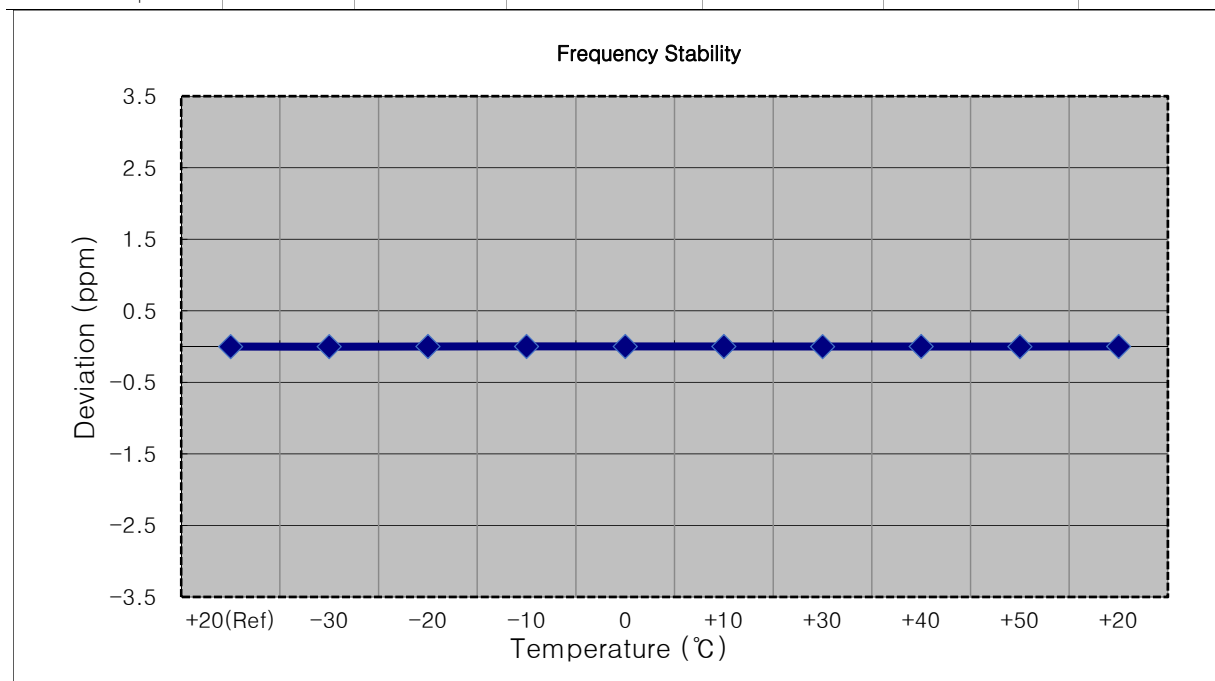
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1850,700,000 Hz</u>
CHANNEL:	<u>26047 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1850 700 003	0.0	0.000 000	0.000
100 %		-30	1850 700 007	3.3	0.000 000	0.002
100 %		-20	1850 700 001	-1.9	0.000 000	-0.001
100 %		-10	1850 700 006	2.6	0.000 000	0.001
100 %		0	1850 700 010	6.4	0.000 000	0.003
100 %		+10	1850 700 010	6.2	0.000 000	0.003
100 %		+30	1850 700 002	-1.4	0.000 000	-0.001
100 %		+40	1850 700 006	2.9	0.000 000	0.002
100 %		+50	1850 700 001	-1.9	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1850 700 001	-2.5	0.000 000	-0.001



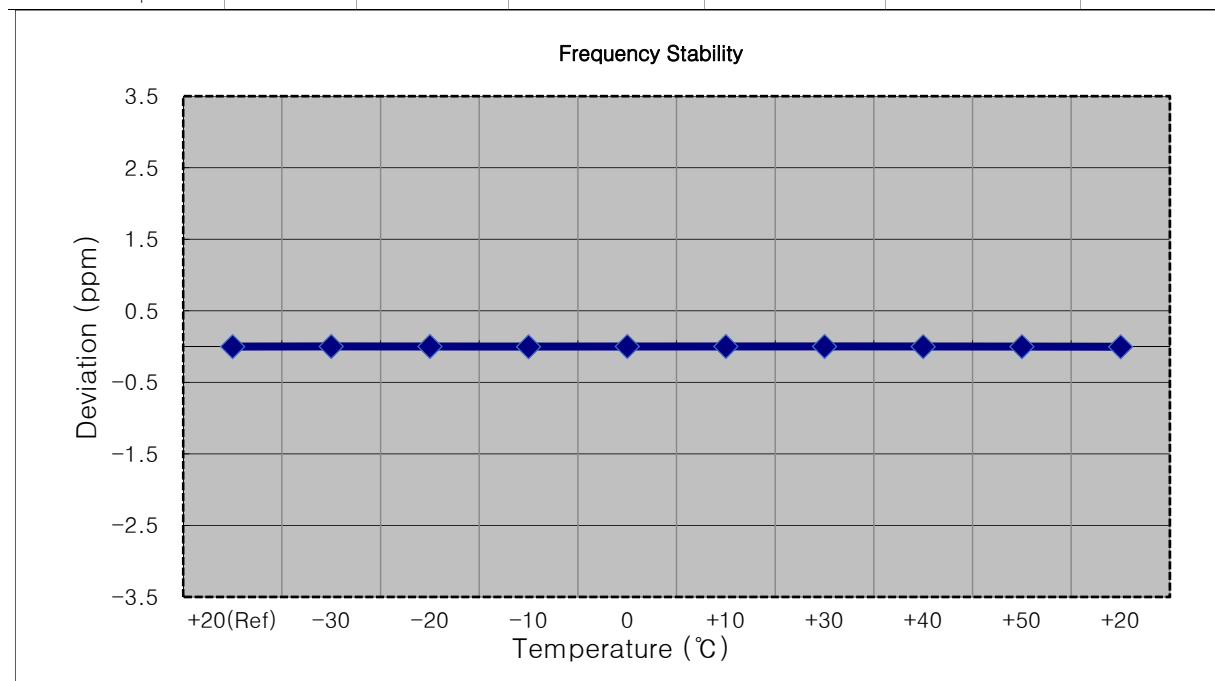
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1851,500,000 Hz</u>
CHANNEL:	<u>26055 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1851 500 003	0.0	0.000 000	0.000
100 %		-30	1851 500 001	-2.1	0.000 000	-0.001
100 %		-20	1851 500 008	4.3	0.000 000	0.002
100 %		-10	1851 500 008	4.2	0.000 000	0.002
100 %		0	1851 500 006	2.4	0.000 000	0.001
100 %		+10	1851 500 005	2.0	0.000 000	0.001
100 %		+30	1851 500 003	-0.9	0.000 000	0.000
100 %		+40	1851 500 005	1.5	0.000 000	0.001
100 %		+50	1851 500 001	-2.0	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1851 500 005	1.8	0.000 000	0.001



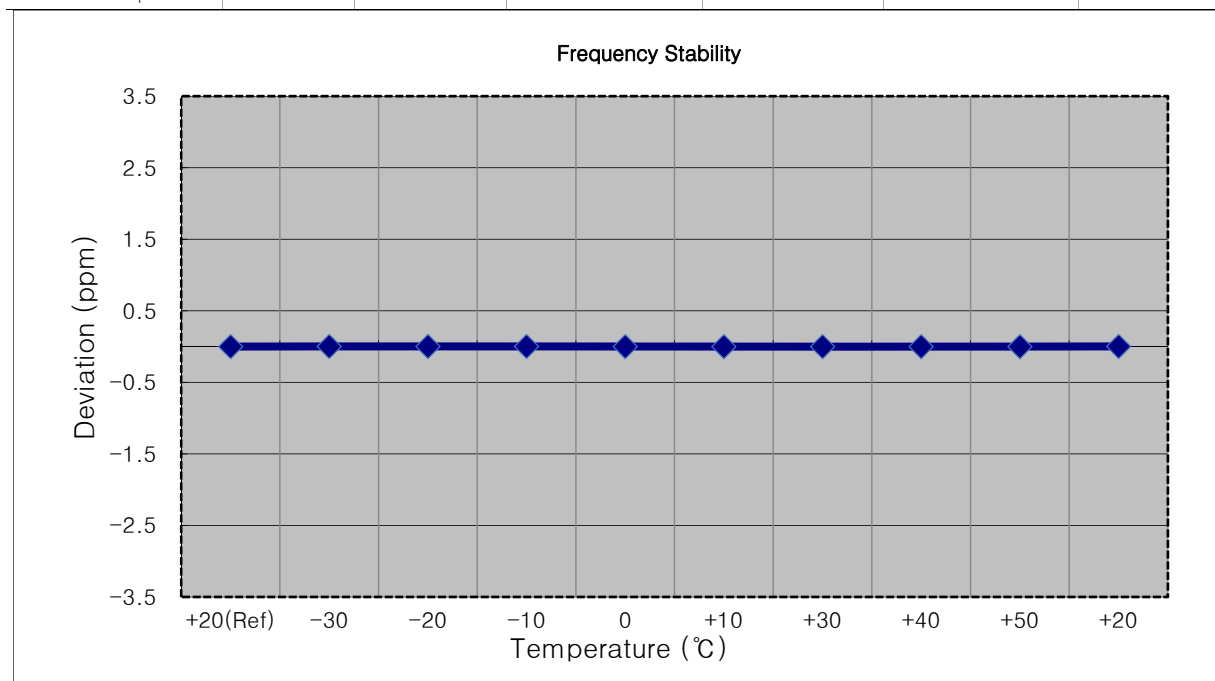
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1852,500,000 Hz</u>
CHANNEL:	<u>26065 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1852 499 998	0.0	0.000 000	0.000
100 %		-30	1852 500 001	2.9	0.000 000	0.002
100 %		-20	1852 500 001	2.7	0.000 000	0.001
100 %		-10	1852 499 995	-3.7	0.000 000	-0.002
100 %		0	1852 500 001	3.2	0.000 000	0.002
100 %		+10	1852 500 000	1.3	0.000 000	0.001
100 %		+30	1852 500 001	2.5	0.000 000	0.001
100 %		+40	1852 499 996	-2.3	0.000 000	-0.001
100 %		+50	1852 499 996	-1.9	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1852 499 994	-4.0	0.000 000	-0.002



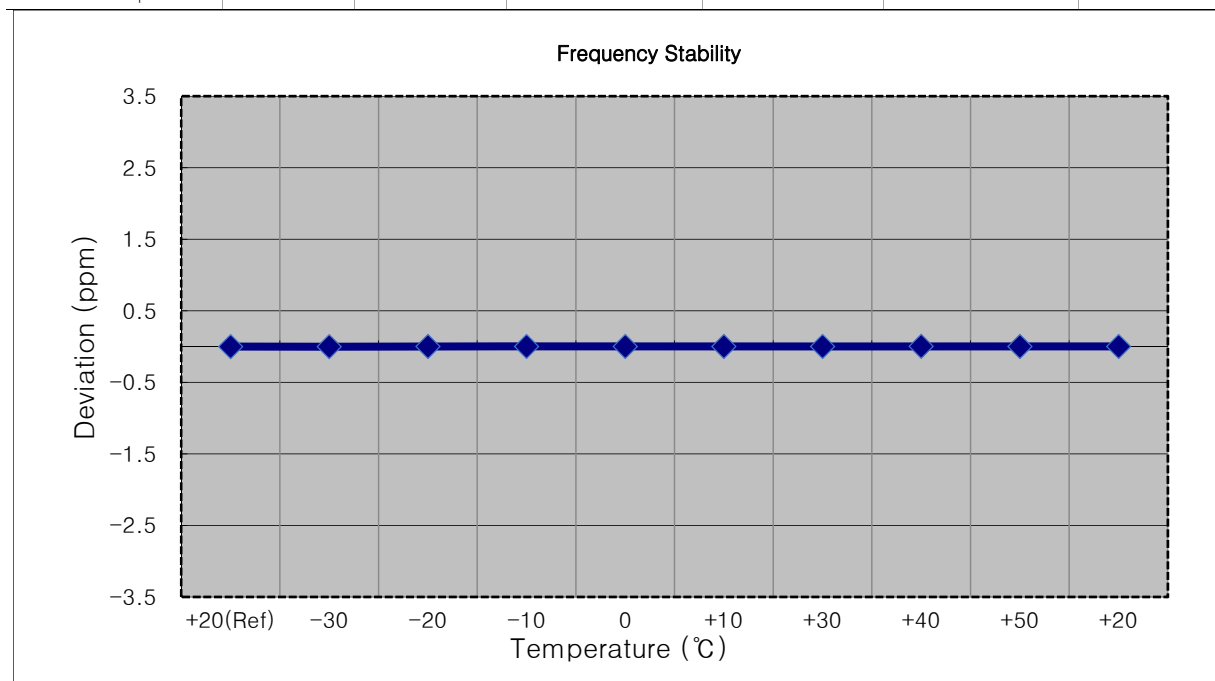
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1855,000,000 Hz</u>
CHANNEL:	<u>26090 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1855 000 004	0.0	0.000 000	0.000
100 %		-30	1855 000 007	3.3	0.000 000	0.002
100 %		-20	1855 000 006	2.7	0.000 000	0.001
100 %		-10	1855 000 007	3.1	0.000 000	0.002
100 %		0	1855 000 001	-2.2	0.000 000	-0.001
100 %		+10	1855 000 002	-1.8	0.000 000	-0.001
100 %		+30	1855 000 002	-1.8	0.000 000	-0.001
100 %		+40	1855 000 001	-2.8	0.000 000	-0.002
100 %		+50	1855 000 002	-1.8	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1855 000 007	3.4	0.000 000	0.002



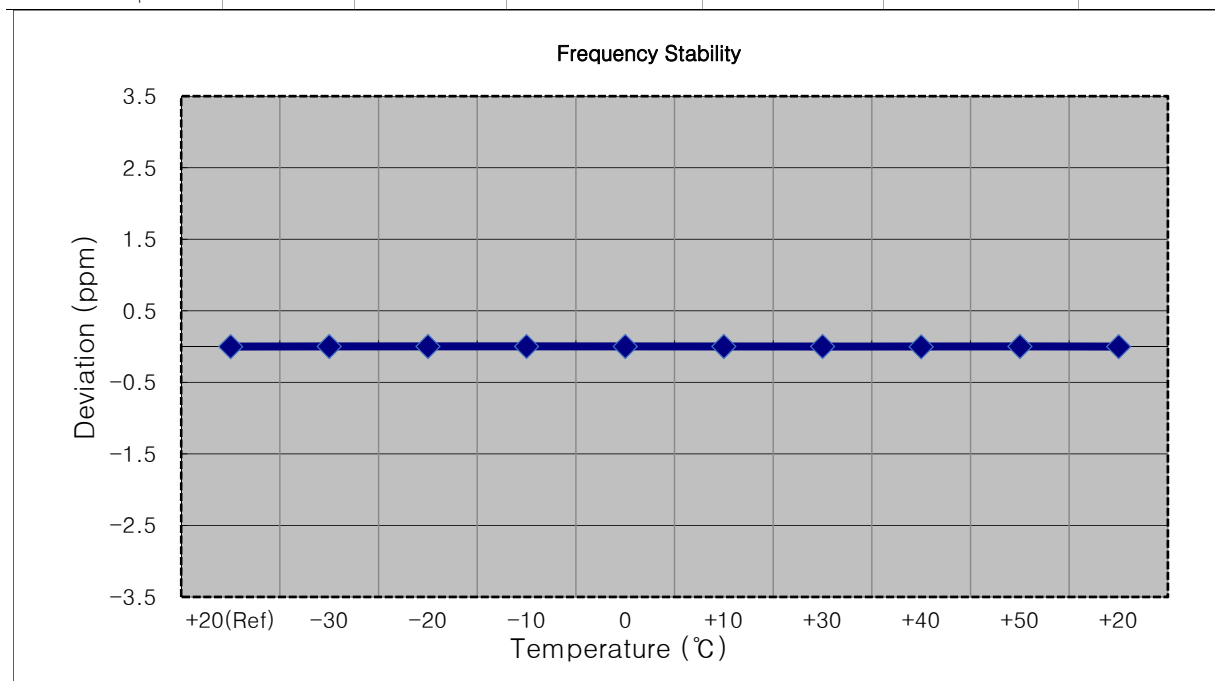
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1857,500,000 Hz</u>
CHANNEL:	<u>26115 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1857 500 004	0.0	0.000 000	0.000
100 %		-30	1857 500 001	-2.7	0.000 000	-0.001
100 %		-20	1857 500 006	1.9	0.000 000	0.001
100 %		-10	1857 500 006	2.4	0.000 000	0.001
100 %		0	1857 500 005	1.7	0.000 000	0.001
100 %		+10	1857 500 006	2.7	0.000 000	0.001
100 %		+30	1857 500 006	2.2	0.000 000	0.001
100 %		+40	1857 500 009	5.3	0.000 000	0.003
100 %		+50	1857 500 006	2.6	0.000 000	0.001
Batt. Endpoint	3.400	+20	1857 500 007	3.3	0.000 000	0.002



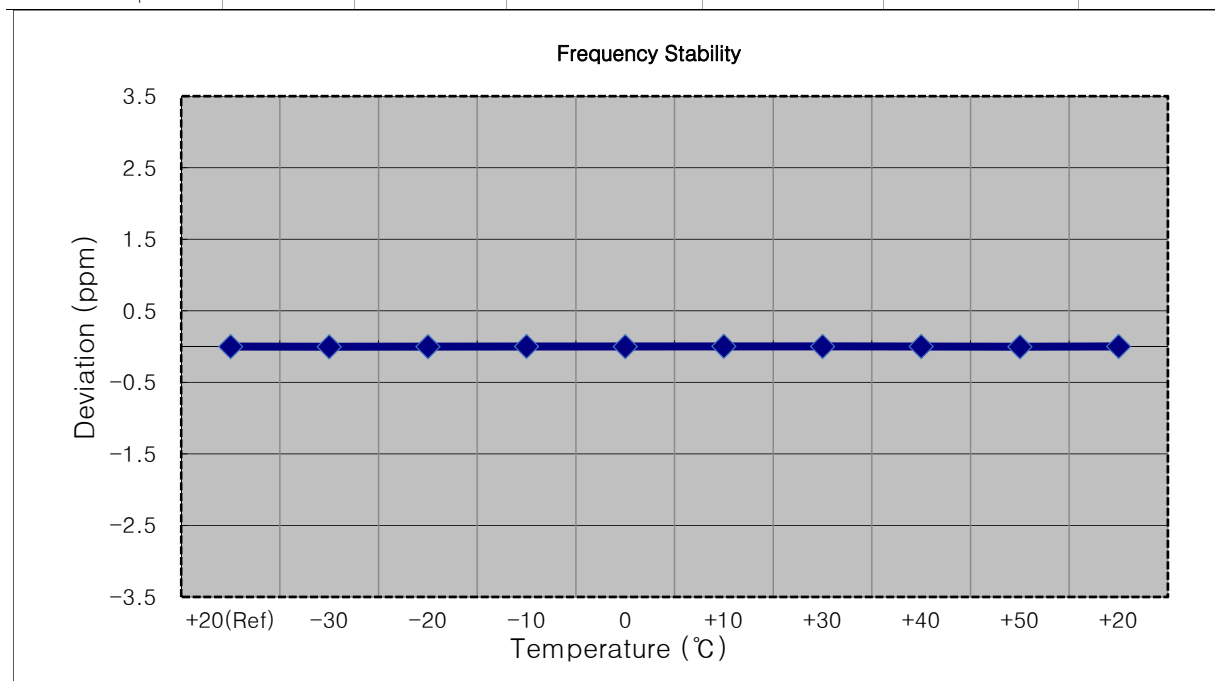
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1860,000,000 Hz</u>
CHANNEL:	<u>26140 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1860 000 003	0.0	0.000 000	0.000
100 %		-30	1860 000 005	2.2	0.000 000	0.001
100 %		-20	1860 000 004	1.3	0.000 000	0.001
100 %		-10	1860 000 007	4.0	0.000 000	0.002
100 %		0	1860 000 006	3.4	0.000 000	0.002
100 %		+10	1860 000 007	4.2	0.000 000	0.002
100 %		+30	1860 000 007	4.2	0.000 000	0.002
100 %		+40	1859 999 999	-3.4	0.000 000	-0.002
100 %		+50	1860 000 006	3.4	0.000 000	0.002
Batt. Endpoint	3.400	+20	1860 000 000	-2.5	0.000 000	-0.001



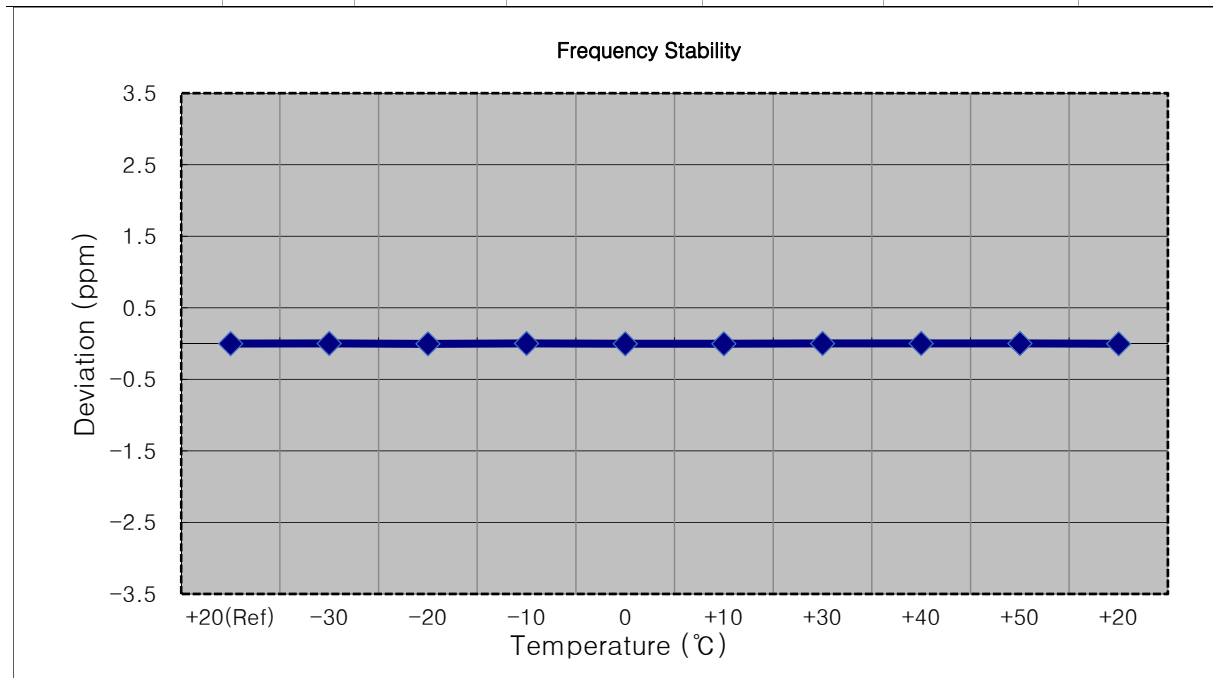
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100 %		-30	1882 499 999	-3.5	0.000 000	-0.002
100 %		-20	1882 500 001	-2.0	0.000 000	-0.001
100 %		-10	1882 500 006	3.9	0.000 000	0.002
100 %		0	1882 500 000	-2.8	0.000 000	-0.001
100 %		+10	1882 500 008	5.9	0.000 000	0.003
100 %		+30	1882 500 007	4.9	0.000 000	0.003
100 %		+40	1882 500 005	2.9	0.000 000	0.002
100 %		+50	1882 499 999	-3.1	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1882 500 005	2.2	0.000 000	0.001



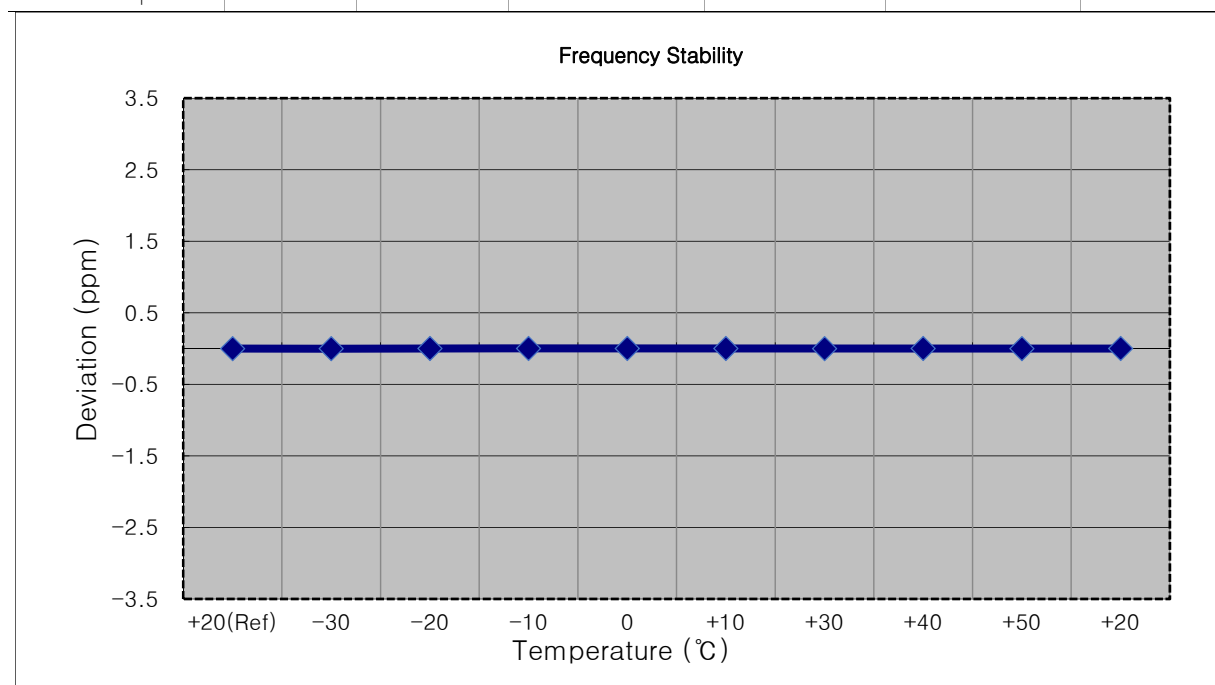
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 499 997	0.0	0.000 000	0.000
100 %		-30	1882 499 999	1.9	0.000 000	0.001
100 %		-20	1882 499 990	-6.2	0.000 000	-0.003
100 %		-10	1882 499 999	2.7	0.000 000	0.001
100 %		0	1882 499 993	-3.2	0.000 000	-0.002
100 %		+10	1882 499 993	-3.5	0.000 000	-0.002
100 %		+30	1882 499 998	1.7	0.000 000	0.001
100 %		+40	1882 499 999	2.2	0.000 000	0.001
100 %		+50	1882 500 000	3.2	0.000 000	0.002
Batt. Endpoint	3.400	+20	1882 499 991	-5.5	0.000 000	-0.003



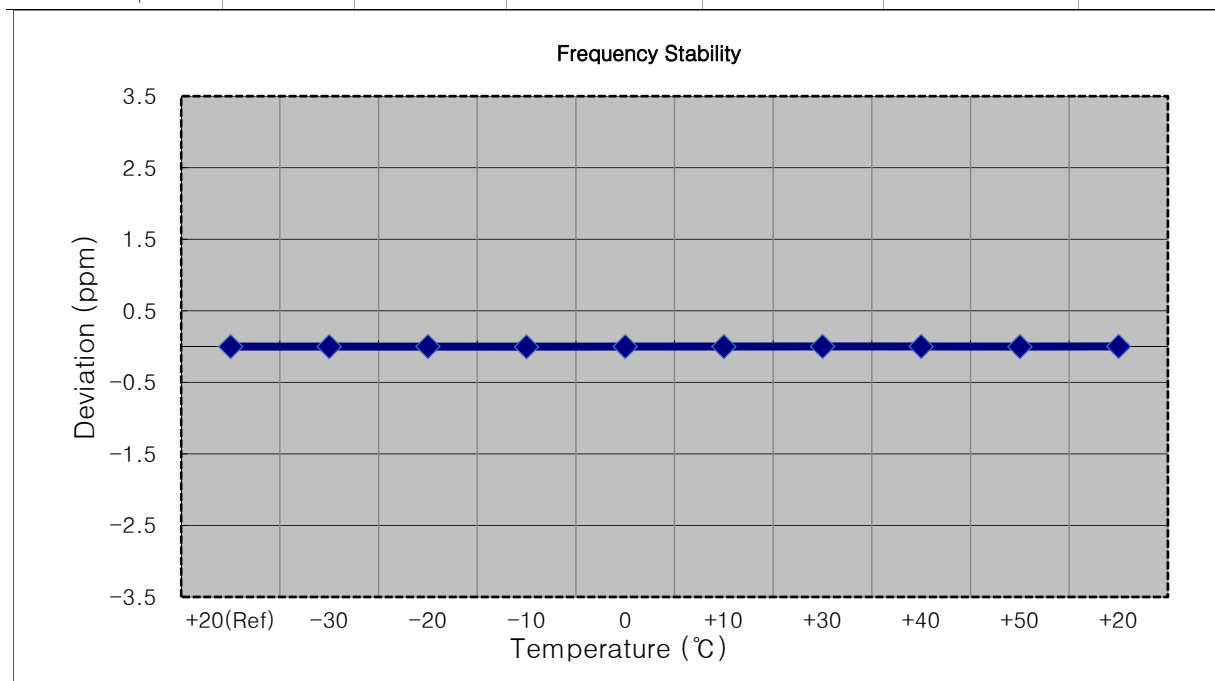
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100 %		-30	1882 500 000	-2.4	0.000 000	-0.001
100 %		-20	1882 500 005	2.7	0.000 000	0.001
100 %		-10	1882 500 005	2.8	0.000 000	0.001
100 %		0	1882 500 006	2.9	0.000 000	0.002
100 %		+10	1882 500 005	2.6	0.000 000	0.001
100 %		+30	1882 500 000	-2.3	0.000 000	-0.001
100 %		+40	1882 500 005	2.5	0.000 000	0.001
100 %		+50	1882 500 001	-1.4	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1882 500 006	3.1	0.000 000	0.002



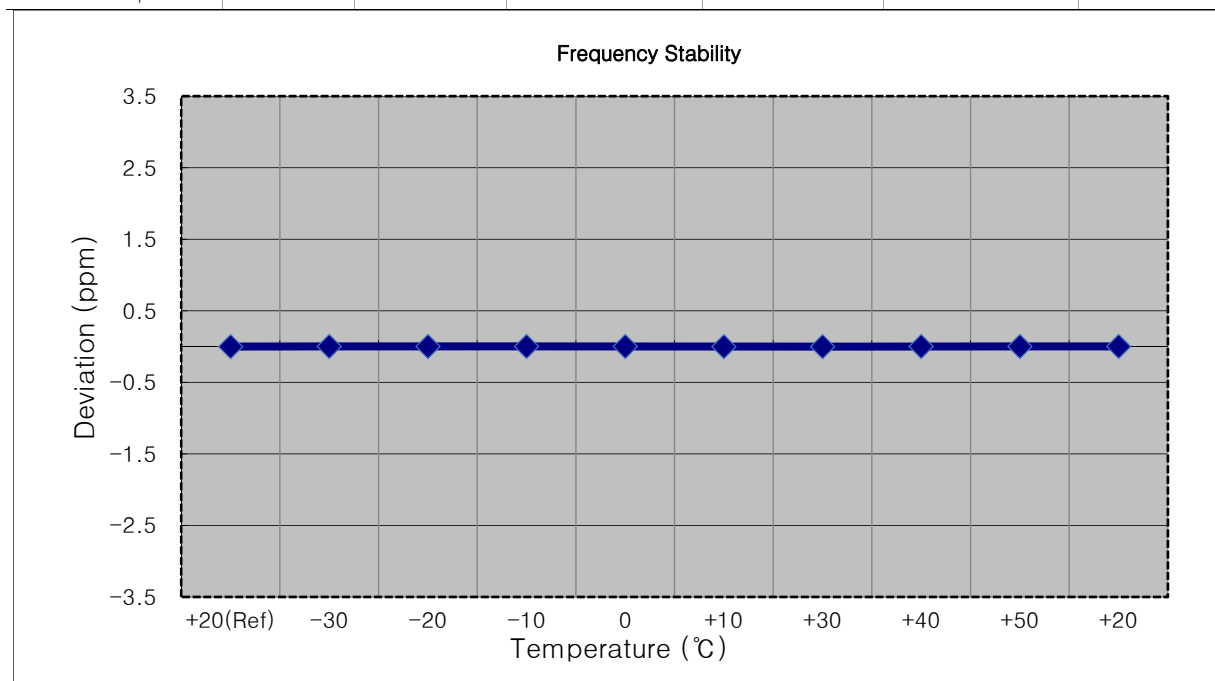
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 499 997	0.0	0.000 000	0.000
100 %		-30	1882 499 995	-1.8	0.000 000	-0.001
100 %		-20	1882 499 999	2.8	0.000 000	0.001
100 %		-10	1882 499 993	-3.9	0.000 000	-0.002
100 %		0	1882 499 995	-1.9	0.000 000	-0.001
100 %		+10	1882 499 994	-2.2	0.000 000	-0.001
100 %		+30	1882 499 999	2.5	0.000 000	0.001
100 %		+40	1882 499 999	2.4	0.000 000	0.001
100 %		+50	1882 499 994	-3.0	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1882 500 001	4.0	0.000 000	0.002



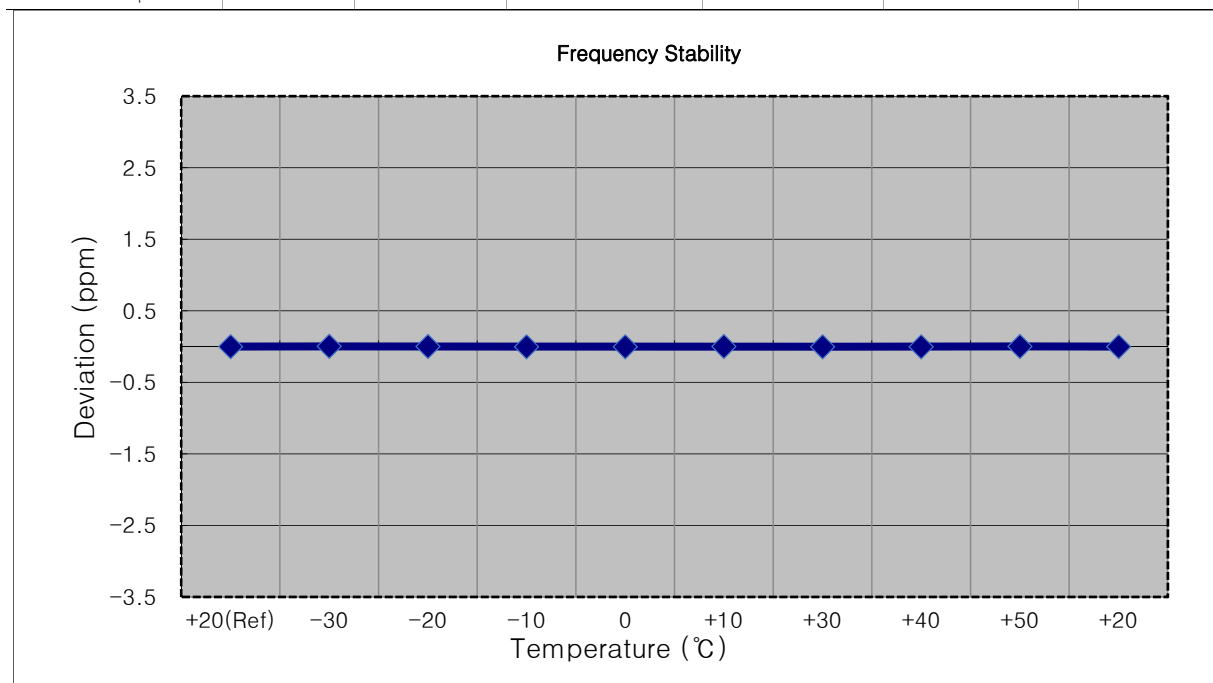
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1882 499 998	0.0	0.000 000	0.000
100 %		-30	1882 500 002	3.5	0.000 000	0.002
100 %		-20	1882 500 001	2.8	0.000 000	0.001
100 %		-10	1882 500 001	2.6	0.000 000	0.001
100 %		0	1882 500 001	2.4	0.000 000	0.001
100 %		+10	1882 499 996	-2.4	0.000 000	-0.001
100 %		+30	1882 499 996	-2.5	0.000 000	-0.001
100 %		+40	1882 500 002	3.9	0.000 000	0.002
100 %		+50	1882 500 002	3.6	0.000 000	0.002
Batt. Endpoint	3.400	+20	1882 500 000	2.0	0.000 000	0.001



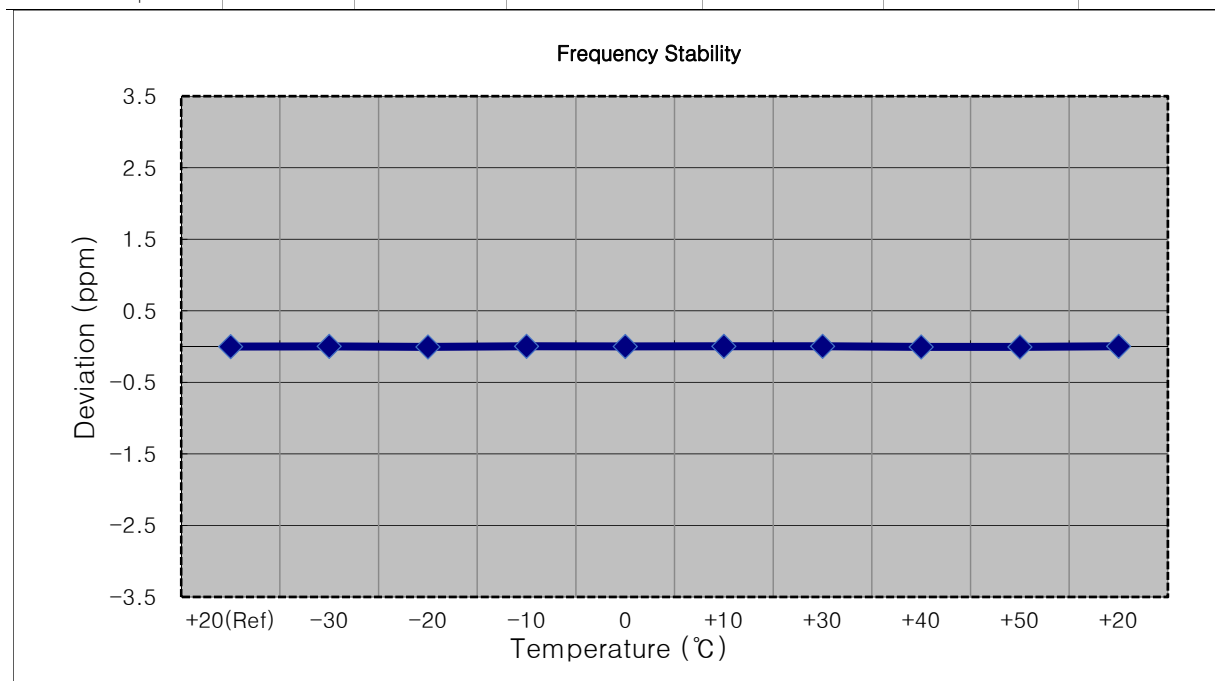
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 499 997	0.0	0.000 000	0.000
100 %		-30	1882 500 004	6.5	0.000 000	0.003
100 %		-20	1882 500 001	4.0	0.000 000	0.002
100 %		-10	1882 499 994	-3.4	0.000 000	-0.002
100 %		0	1882 499 993	-3.8	0.000 000	-0.002
100 %		+10	1882 500 002	5.1	0.000 000	0.003
100 %		+30	1882 499 993	-3.6	0.000 000	-0.002
100 %		+40	1882 499 994	-3.3	0.000 000	-0.002
100 %		+50	1882 500 002	5.1	0.000 000	0.003
Batt. Endpoint	3.400	+20	1882 499 994	-2.6	0.000 000	-0.001



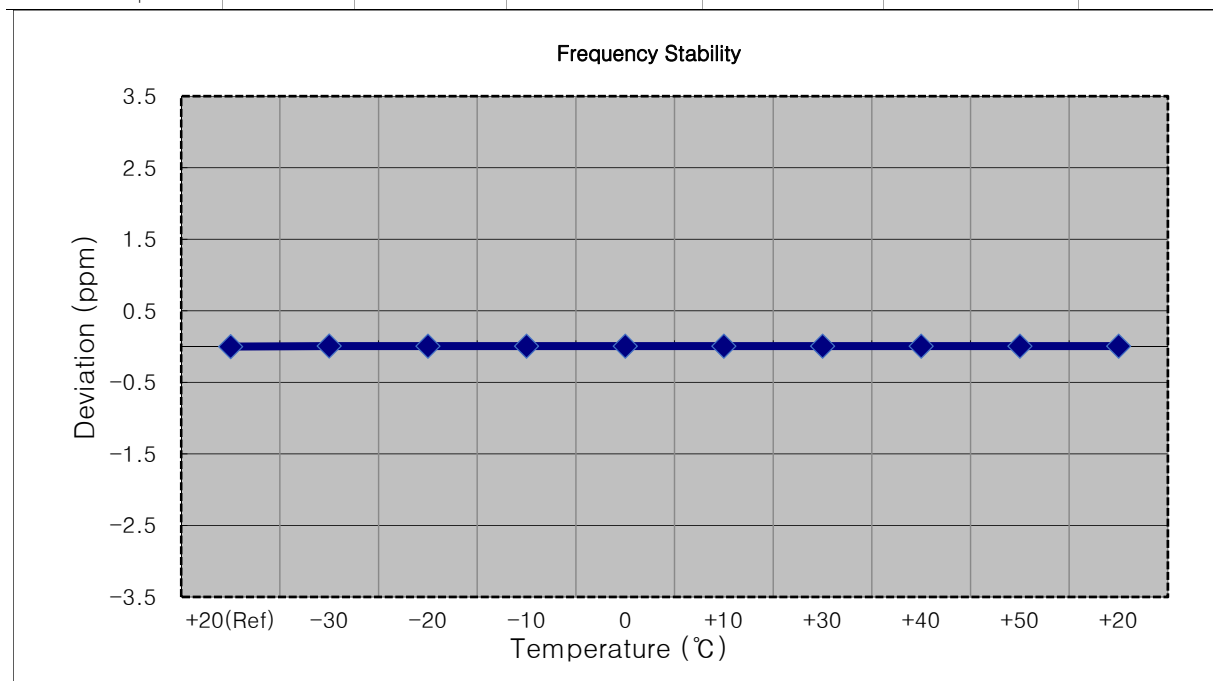
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1914,300,000 Hz</u>
CHANNEL:	<u>26683 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1914 300 008	0.0	0.000 000	0.000
100 %		-30	1914 300 015	7.0	0.000 000	0.004
100 %		-20	1914 300 000	-7.9	0.000 000	-0.004
100 %		-10	1914 300 015	6.9	0.000 000	0.004
100 %		0	1914 300 013	5.3	0.000 000	0.003
100 %		+10	1914 300 013	5.7	0.000 000	0.003
100 %		+30	1914 300 014	6.6	0.000 000	0.003
100 %		+40	1914 299 998	-9.2	0.000 000	-0.005
100 %		+50	1914 299 999	-8.8	0.000 000	-0.005
Batt. Endpoint	3.400	+20	1914 300 014	6.6	0.000 000	0.003



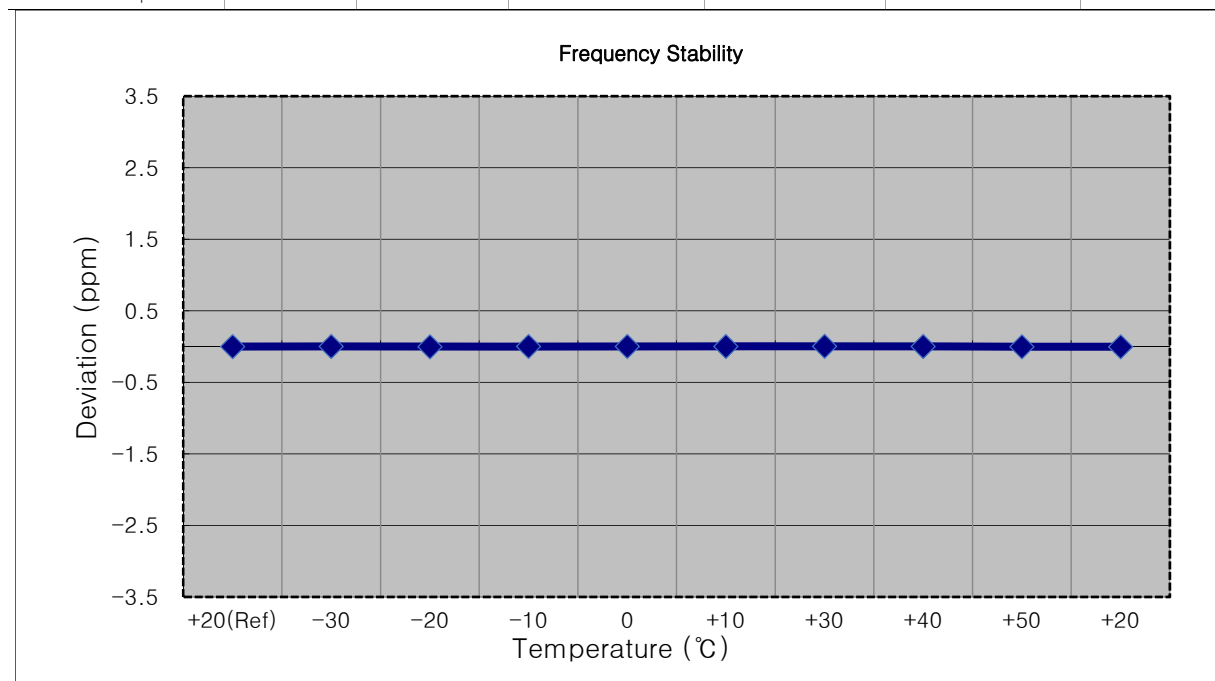
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1913,500,000 Hz</u>
CHANNEL:	<u>26675 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1913 500 013	0.0	0.000 000	0.000
100 %		-30	1913 500 027	14.7	0.000 001	0.008
100 %		-20	1913 500 024	11.7	0.000 001	0.006
100 %		-10	1913 500 022	9.9	0.000 001	0.005
100 %		0	1913 500 026	13.7	0.000 001	0.007
100 %		+10	1913 500 024	11.8	0.000 001	0.006
100 %		+30	1913 500 025	12.6	0.000 001	0.007
100 %		+40	1913 500 024	11.0	0.000 001	0.006
100 %		+50	1913 500 023	10.3	0.000 001	0.005
Batt. Endpoint	3.400	+20	1913 500 026	13.9	0.000 001	0.007



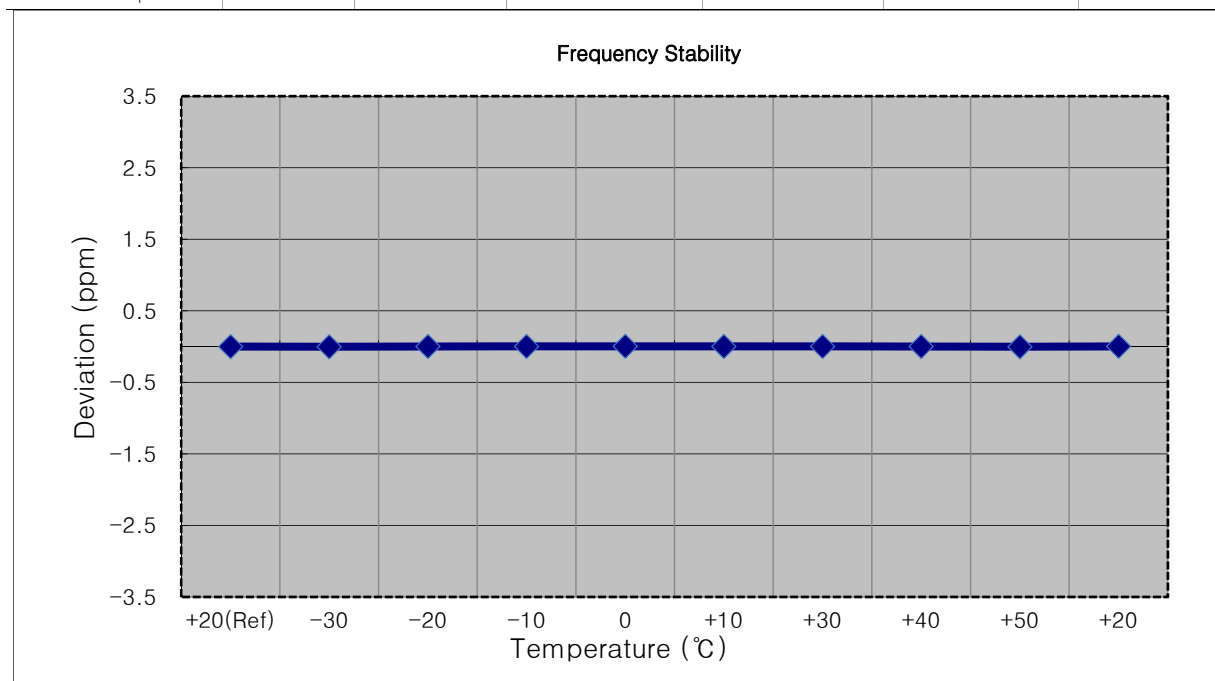
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1912,500,000 Hz</u>
CHANNEL:	<u>26665 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1912 499 996	0.0	0.000 000	0.000
100 %		-30	1912 500 000	4.5	0.000 000	0.002
100 %		-20	1912 499 991	-4.8	0.000 000	-0.003
100 %		-10	1912 500 001	5.3	0.000 000	0.003
100 %		0	1912 500 000	4.0	0.000 000	0.002
100 %		+10	1912 500 000	4.4	0.000 000	0.002
100 %		+30	1912 500 003	7.5	0.000 000	0.004
100 %		+40	1912 500 001	5.2	0.000 000	0.003
100 %		+50	1912 499 992	-3.9	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1912 499 991	-4.4	0.000 000	-0.002



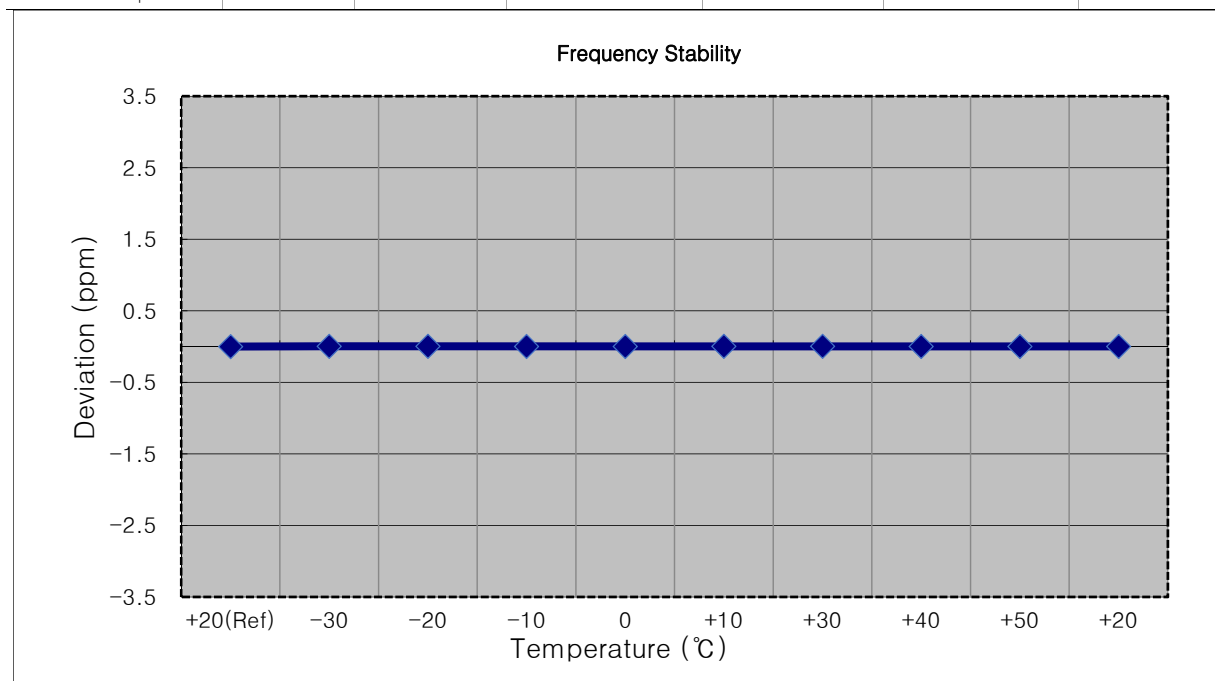
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1910,000,000 Hz</u>
CHANNEL:	<u>26640 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1910 000 004	0.0	0.000 000	0.000
100 %		-30	1910 000 001	-3.5	0.000 000	-0.002
100 %		-20	1910 000 009	5.2	0.000 000	0.003
100 %		-10	1910 000 009	4.6	0.000 000	0.002
100 %		0	1910 000 010	5.9	0.000 000	0.003
100 %		+10	1910 000 008	3.8	0.000 000	0.002
100 %		+30	1910 000 009	5.0	0.000 000	0.003
100 %		+40	1910 000 009	4.8	0.000 000	0.003
100 %		+50	1910 000 000	-4.4	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1910 000 011	6.9	0.000 000	0.004



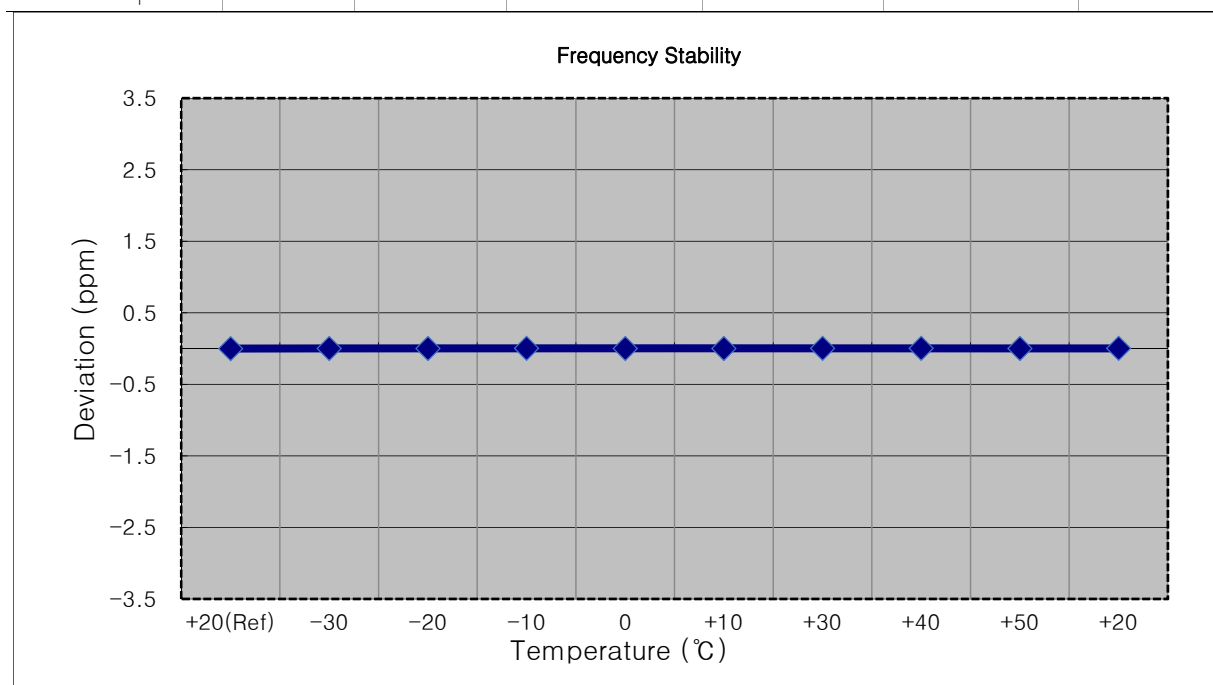
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1907,500,000 Hz</u>
CHANNEL:	<u>26615 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1907 499 995	0.0	0.000 000	0.000
100 %		-30	1907 500 002	6.3	0.000 000	0.003
100 %		-20	1907 500 002	6.5	0.000 000	0.003
100 %		-10	1907 500 000	4.3	0.000 000	0.002
100 %		0	1907 500 000	4.2	0.000 000	0.002
100 %		+10	1907 500 002	6.7	0.000 000	0.004
100 %		+30	1907 500 002	7.1	0.000 000	0.004
100 %		+40	1907 500 000	4.9	0.000 000	0.003
100 %		+50	1907 500 000	4.8	0.000 000	0.003
Batt. Endpoint	3.400	+20	1907 500 000	4.7	0.000 000	0.002



MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1905,000,000 Hz</u>
CHANNEL:	<u>26590 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1905 000 003	0.0	0.000 000	0.000
100 %		-30	1905 000 008	5.2	0.000 000	0.003
100 %		-20	1905 000 008	4.8	0.000 000	0.003
100 %		-10	1905 000 009	5.5	0.000 000	0.003
100 %		0	1905 000 008	4.9	0.000 000	0.003
100 %		+10	1905 000 008	4.8	0.000 000	0.003
100 %		+30	1905 000 009	6.0	0.000 000	0.003
100 %		+40	1905 000 009	6.0	0.000 000	0.003
100 %		+50	1905 000 008	4.4	0.000 000	0.002
Batt. Endpoint	3.400	+20	1905 000 010	6.7	0.000 000	0.004



9. TEST DATA(Ant F)

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
1850.7	LTE B25/B2 1.4 MHz	QPSK	-19.30	15.22	10.40	2.07	H	< 2.00	0.227	23.55	1	5
		16-QAM	-19.97	14.55	10.40	2.07	H		0.194	22.88		
		64-QAM	-20.97	13.55	10.40	2.07	H		0.154	21.88		
		256-QAM	-24.04	10.48	10.40	2.07	H		0.076	18.81		
1882.5		QPSK	-19.53	15.45	10.40	2.21	H		0.231	23.64	1	0
		16-QAM	-20.27	14.71	10.40	2.21	H		0.195	22.90		
		64-QAM	-21.23	13.75	10.40	2.21	H		0.156	21.94		
		256-QAM	-24.55	10.43	10.40	2.21	H		0.073	18.62		
1914.3		QPSK	-19.50	15.51	10.40	2.17	H		0.237	23.74	1	3
		16-QAM	-20.55	14.46	10.40	2.17	H		0.186	22.69		
		64-QAM	-21.46	13.55	10.40	2.17	H		0.151	21.78		
		256-QAM	-24.40	10.61	10.40	2.17	H		0.077	18.84		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1851.5	LTE B25/B2 3 MHz	QPSK	-19.65	14.87	10.40	2.07	H	< 2.00	0.209	23.20	1	14
		16-QAM	-20.24	14.28	10.40	2.07	H		0.182	22.61		
		64-QAM	-21.25	13.27	10.40	2.07	H		0.145	21.60		
		256-QAM	-24.57	9.95	10.40	2.07	H		0.067	18.28		
1882.5		QPSK	-19.98	15.00	10.40	2.21	H		0.209	23.19	1	0
		16-QAM	-20.62	14.36	10.40	2.21	H		0.180	22.55		
		64-QAM	-21.76	13.22	10.40	2.21	H		0.138	21.41		
		256-QAM	-24.81	10.17	10.40	2.21	H		0.069	18.36		
1913.5		QPSK	-20.32	14.69	10.40	2.17	H		0.196	22.92	1	0
		16-QAM	-21.07	13.94	10.40	2.17	H		0.165	22.17		
		64-QAM	-22.02	12.99	10.40	2.17	H		0.132	21.22		
		256-QAM	-25.23	9.78	10.40	2.17	H		0.063	18.01		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1852.5	LTE B25/B2 5 MHz	QPSK	-19.63	14.94	10.40	2.08	H	< 2.00	0.212	23.26	1	24
		16-QAM	-20.27	14.30	10.40	2.08	H		0.183	22.62		
		64-QAM	-21.49	13.08	10.40	2.08	H		0.138	21.40		
		256-QAM	-24.44	10.13	10.40	2.08	H		0.070	18.45		
1882.5		QPSK	-20.00	14.98	10.40	2.21	H		0.208	23.17	1	0
		16-QAM	-20.75	14.23	10.40	2.21	H		0.174	22.42		
		64-QAM	-21.85	13.13	10.40	2.21	H		0.135	21.32		
		256-QAM	-24.87	10.11	10.40	2.21	H		0.068	18.30		
1912.5		QPSK	-20.31	14.70	10.40	2.17	H		0.196	22.93	1	0
		16-QAM	-21.14	13.87	10.40	2.17	H		0.162	22.10		
		64-QAM	-21.96	13.05	10.40	2.17	H		0.134	21.28		
		256-QAM	-25.14	9.87	10.40	2.17	H		0.065	18.10		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1855.0	LTE B25/B2 10 MHz	QPSK	-19.71	14.86	10.40	2.08	H	< 2.00	0.208	23.18	1	0
		16-QAM	-20.67	13.90	10.40	2.08	H		0.167	22.22		
		64-QAM	-21.39	13.18	10.40	2.08	H		0.141	21.50		
		256-QAM	-24.61	9.96	10.40	2.08	H		0.067	18.28		
1882.5		QPSK	-19.96	15.02	10.40	2.21	H		0.209	23.21	1	0
		16-QAM	-20.88	14.10	10.40	2.21	H		0.169	22.29		
		64-QAM	-21.81	13.17	10.40	2.21	H		0.137	21.36		
		256-QAM	-24.81	10.17	10.40	2.21	H		0.069	18.36		
1910.0		QPSK	-20.18	14.76	10.40	2.17	H		0.199	22.99	1	0
		16-QAM	-21.12	13.82	10.40	2.17	H		0.160	22.05		
		64-QAM	-22.19	12.75	10.40	2.17	H		0.125	20.98		
		256-QAM	-25.24	9.70	10.40	2.17	H		0.062	17.93		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1857.5	LTE B25/B2 15 MHz	QPSK	-19.71	14.93	10.40	2.10	H	< 2.00	0.210	23.23	1	0
		16-QAM	-20.49	14.15	10.40	2.10	H		0.176	22.45		
		64-QAM	-21.57	13.07	10.40	2.10	H		0.137	21.37		
		256-QAM	-24.43	10.21	10.40	2.10	H		0.071	18.51		
1882.5		QPSK	-19.84	15.14	10.40	2.21	H		0.215	23.33	1	0
		16-QAM	-20.60	14.38	10.40	2.21	H		0.181	22.57		
		64-QAM	-21.59	13.39	10.40	2.21	H		0.144	21.58		
		256-QAM	-24.83	10.15	10.40	2.21	H		0.068	18.34		
1907.5		QPSK	-20.46	14.48	10.40	2.17	H		0.187	22.71	1	38
		16-QAM	-21.43	13.51	10.40	2.17	H		0.149	21.74		
		64-QAM	-22.36	12.58	10.40	2.17	H		0.120	20.81		
		256-QAM	-25.58	9.36	10.40	2.17	H		0.057	17.59		

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured	Substitute	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
1860.0	LTE B25/B2 20 MHz	QPSK	-19.71	14.93	10.40	2.10	H	< 2.00	0.210	23.23	1	0
		16-QAM	-20.42	14.22	10.40	2.10	H		0.179	22.52		
		64-QAM	-21.76	12.88	10.40	2.10	H		0.131	21.18		
		256-QAM	-24.60	10.04	10.40	2.10	H		0.068	18.34		
1882.5		QPSK	-19.90	15.08	10.40	2.21	H		0.212	23.27	1	0
		16-QAM	-20.67	14.31	10.40	2.21	H		0.178	22.50		
		64-QAM	-21.51	13.47	10.40	2.21	H		0.147	21.66		
		256-QAM	-24.75	10.23	10.40	2.21	H		0.069	18.42		
1905.0		QPSK	-20.28	14.64	10.40	2.19	H		0.193	22.85	1	99
		16-QAM	-21.19	13.73	10.40	2.19	H		0.156	21.94		
		64-QAM	-22.33	12.59	10.40	2.19	H		0.120	20.80		
		256-QAM	-25.33	9.59	10.40	2.19	H		0.060	17.80		

9.2 RADIATED SPURIOUS EMISSIONS

☐ MOD: LTE B25/B2
☐ MODULATION SIGNAL: 1.4 MHz QPSK
☐ DISTANCE: 3 meters
☐ LIMIT: -13 dBm

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	RB	
								Size	Offset
26047 (1850.7)	3 701.40	-44.22	12.29	-61.33	3.07	V	-52.11	1	5
	5 552.10	-39.66	13.03	-51.88	3.89	H	-42.74		
	7 402.80	-46.34	10.79	-49.19	4.57	V	-42.97		
26365 (1882.5)	3 765.00	-44.67	12.22	-60.51	3.11	V	-51.40	1	0
	5 647.50	-39.06	13.12	-51.23	3.96	H	-42.07		
	7 530.00	-46.29	10.85	-48.93	4.60	V	-42.68		
26683 (1914.3)	3 828.60	-43.32	12.17	-60.03	3.17	V	-51.03	1	3
	5 742.90	-40.65	13.00	-52.71	3.99	H	-43.70		
	7 657.20	-45.34	11.25	-48.47	4.69	V	-41.91		

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	Limit (dB)
25/2	1.4 MHz	1882.5	QPSK	6	0	5.58	13.00
			16-QAM			6.25	
			64-QAM			6.79	
			256-QAM			6.66	
	3 MHz		QPSK	15		5.70	
			16-QAM			6.34	
			64-QAM			6.58	
			256-QAM			6.76	
	5 MHz		QPSK	25		5.58	
			16-QAM			6.35	
			64-QAM			6.70	
			256-QAM			6.79	
	10 MHz		QPSK	50		5.70	
			16-QAM			6.37	
			64-QAM			6.59	
			256-QAM			6.74	
	15 MHz		QPSK	75		5.55	
			16-QAM			6.31	
			64-QAM			6.54	
			256-QAM			6.77	
	20 MHz		QPSK	100		5.58	
			16-QAM			6.37	
			64-QAM			6.56	
			256-QAM			6.80	

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 197 ~ 220.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
25/2	1.4 MHz	1882.5	QPSK	6	0	1.0961
			16-QAM			1.0923
			64-QAM			1.0945
			256-QAM			1.0932
	3 MHz		QPSK	15		2.7137
			16-QAM			2.6992
			64-QAM			2.7041
			256-QAM			2.7128
	5 MHz		QPSK	25		4.5195
			16-QAM			4.4998
			64-QAM			4.5208
			256-QAM			4.5507
	10 MHz		QPSK	50		9.0069
			16-QAM			9.0101
			64-QAM			9.0085
			256-QAM			9.0301
	15 MHz		QPSK	75		13.467
			16-QAM			13.484
			64-QAM			13.486
			256-QAM			13.479
	20 MHz		QPSK	100		17.998
			16-QAM			17.934
			64-QAM			17.928
			256-QAM			17.931

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 221 ~ 244.

9.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
25/2	1.4	1850.7	7.9960	28.591	-67.873	-39.282	-13.00
		1882.5	4.0080	27.976	-67.422	-39.446	
		1914.3	4.8555	27.976	-67.407	-39.431	
	3	1851.5	4.9652	27.976	-66.428	-38.452	
		1882.5	3.9981	27.976	-67.703	-39.727	
		1913.5	8.6341	28.591	-67.197	-38.606	
	5	1852.5	5.1745	28.591	-67.935	-39.344	
		1882.5	5.2842	28.591	-67.963	-39.372	
		1912.5	7.4876	28.591	-67.509	-38.918	
	10	1855.0	3.8086	27.976	-67.572	-39.596	
		1882.5	8.2553	28.591	-66.996	-38.405	
		1910.0	5.1745	28.591	-68.101	-39.510	
	15	1857.5	5.4637	28.591	-66.998	-38.407	
		1882.5	9.9701	28.591	-67.201	-38.610	
		1907.5	4.0778	27.976	-68.367	-40.391	
	20	1860.0	4.9352	27.976	-67.254	-39.278	
		1882.5	9.6610	28.591	-67.676	-39.085	
		1905.0	3.7289	27.976	-67.497	-39.521	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 245 ~ 280.
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

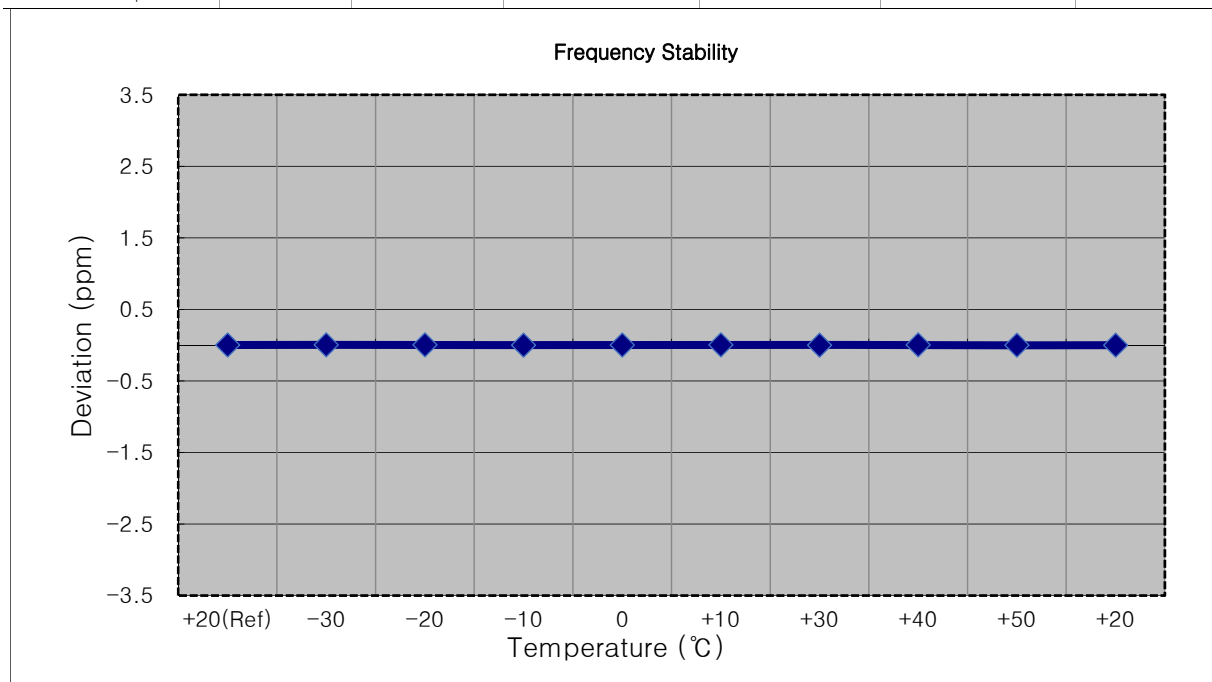
9.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 281 ~ 316.

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

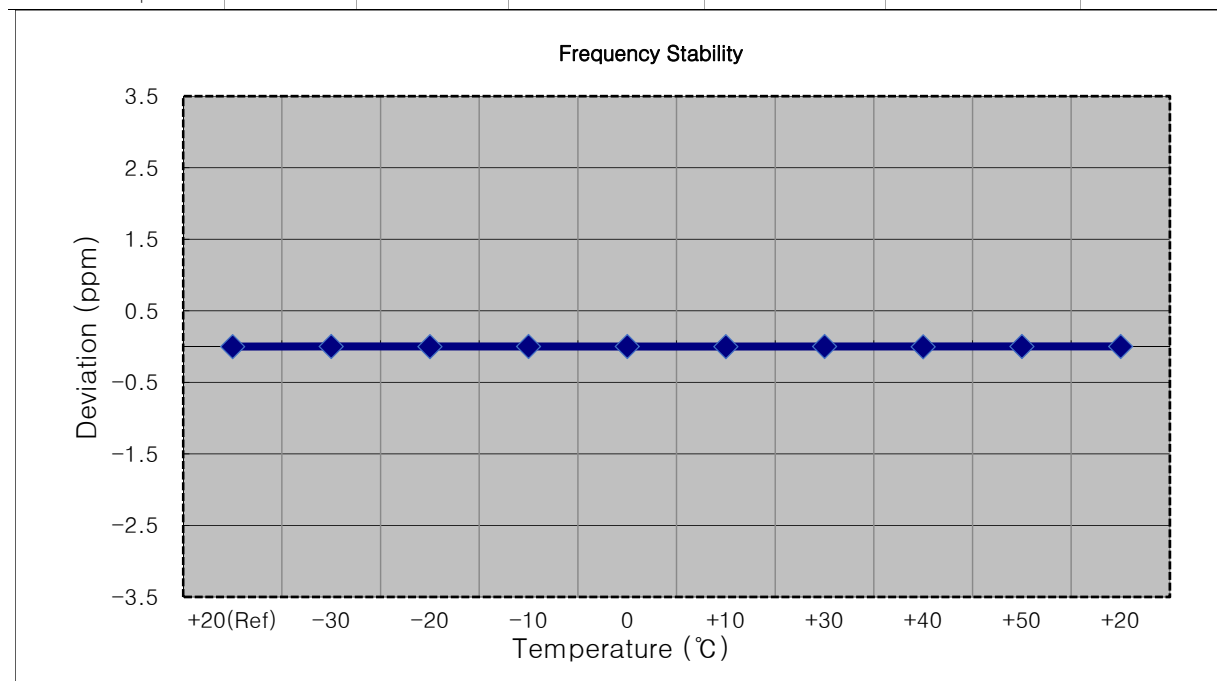
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1850,700,000 Hz</u>
CHANNEL:	<u>26047 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1850 699 997	0.0	0.000 000	0.000
100 %		-30	1850 700 001	3.7	0.000 000	0.002
100 %		-20	1850 700 001	3.8	0.000 000	0.002
100 %		-10	1850 699 995	-2.2	0.000 000	-0.001
100 %		0	1850 699 998	1.3	0.000 000	0.001
100 %		+10	1850 700 001	3.7	0.000 000	0.002
100 %		+30	1850 699 995	-2.4	0.000 000	-0.001
100 %		+40	1850 700 004	6.6	0.000 000	0.004
100 %		+50	1850 699 993	-3.7	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1850 699 994	-3.5	0.000 000	-0.002



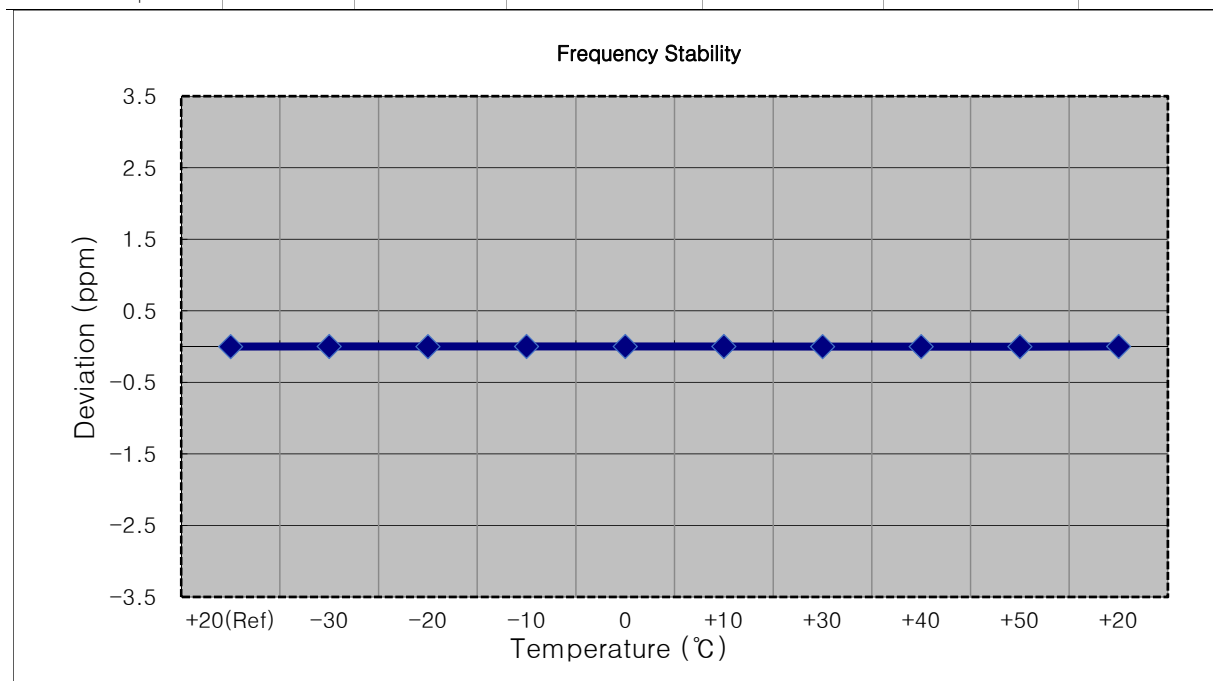
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1851,500,000 Hz</u>
CHANNEL:	<u>26055 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1851 500 003	0.0	0.000 000	0.000
100 %		-30	1851 500 007	4.5	0.000 000	0.002
100 %		-20	1851 500 001	-1.9	0.000 000	-0.001
100 %		-10	1851 500 005	2.1	0.000 000	0.001
100 %		0	1851 500 005	2.3	0.000 000	0.001
100 %		+10	1851 500 000	-2.2	0.000 000	-0.001
100 %		+30	1851 500 005	2.6	0.000 000	0.001
100 %		+40	1851 499 999	-3.5	0.000 000	-0.002
100 %		+50	1851 500 006	3.3	0.000 000	0.002
Batt. Endpoint	3.400	+20	1851 500 006	3.3	0.000 000	0.002



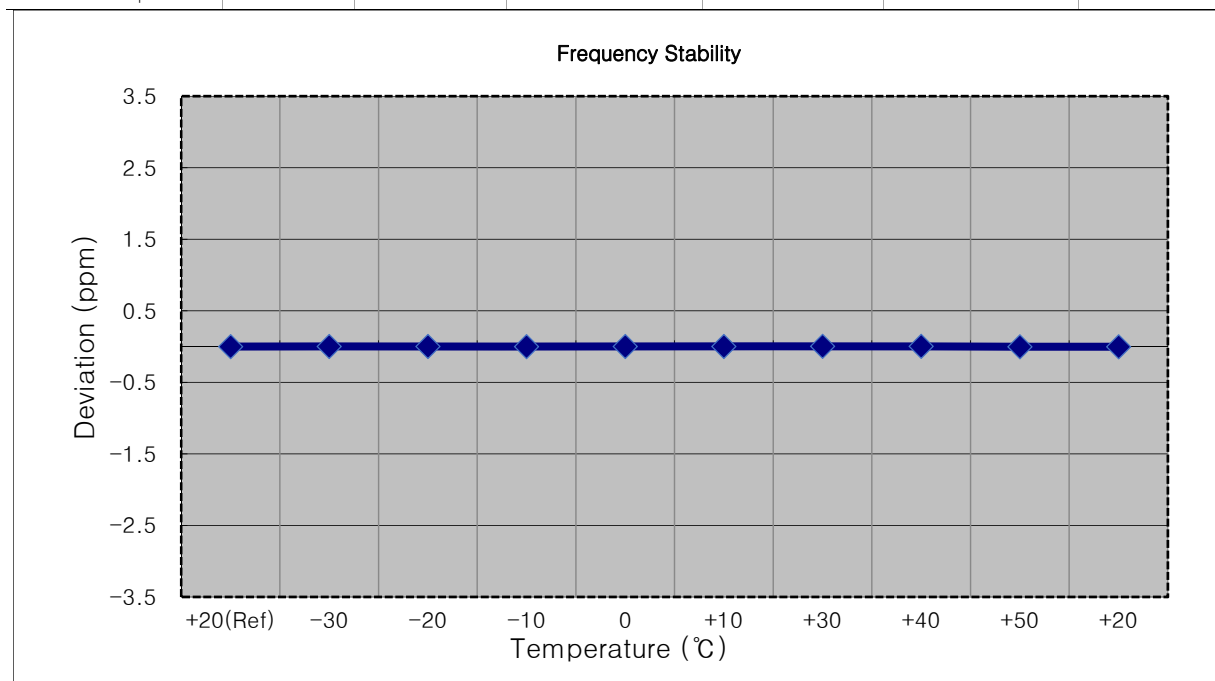
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1852,500,000 Hz</u>
CHANNEL:	<u>26065 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1852 500 003	0.0	0.000 000	0.000
100 %		-30	1852 500 007	3.2	0.000 000	0.002
100 %		-20	1852 500 001	-2.3	0.000 000	-0.001
100 %		-10	1852 500 008	4.9	0.000 000	0.003
100 %		0	1852 500 007	3.1	0.000 000	0.002
100 %		+10	1852 500 006	2.8	0.000 000	0.002
100 %		+30	1852 500 001	-2.9	0.000 000	-0.002
100 %		+40	1852 500 001	-2.2	0.000 000	-0.001
100 %		+50	1852 500 001	-2.9	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1852 500 006	2.6	0.000 000	0.001



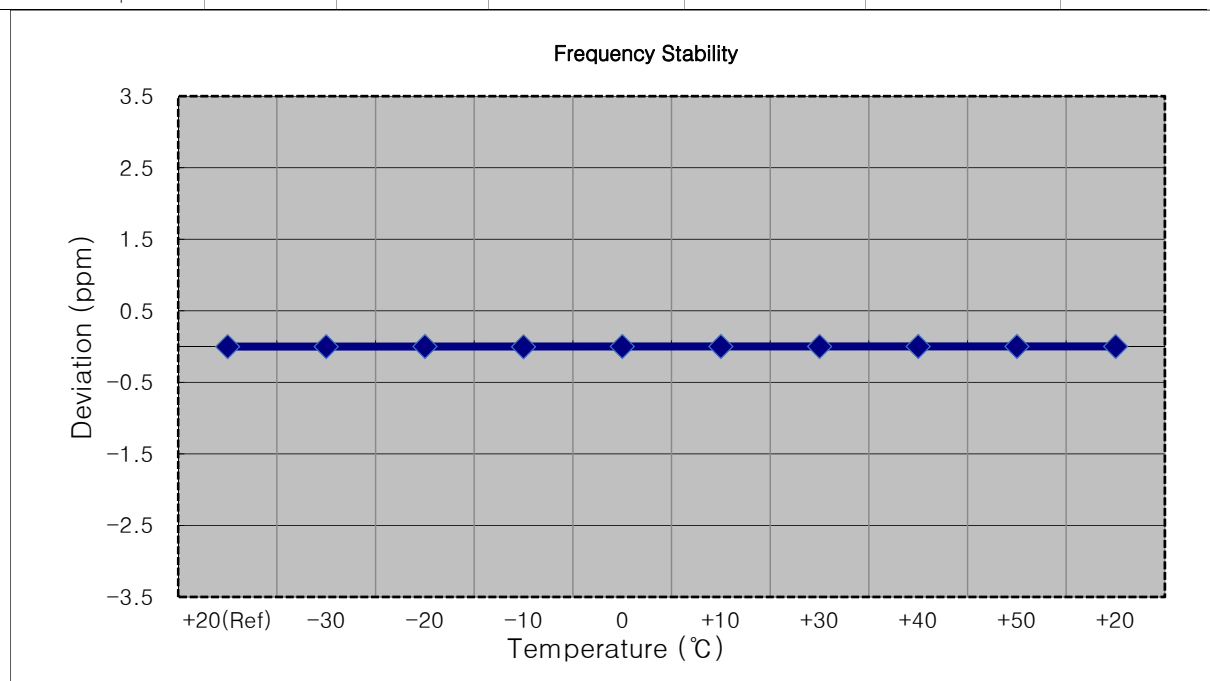
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1855,000,000 Hz</u>
CHANNEL:	<u>26090 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1855 000 005	0.0	0.000 000	0.000
100 %		-30	1855 000 008	3.5	0.000 000	0.002
100 %		-20	1855 000 009	4.1	0.000 000	0.002
100 %		-10	1855 000 002	-3.0	0.000 000	-0.002
100 %		0	1855 000 008	3.0	0.000 000	0.002
100 %		+10	1855 000 008	3.2	0.000 000	0.002
100 %		+30	1855 000 010	5.3	0.000 000	0.003
100 %		+40	1855 000 010	5.6	0.000 000	0.003
100 %		+50	1855 000 002	-3.1	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1855 000 001	-3.8	0.000 000	-0.002



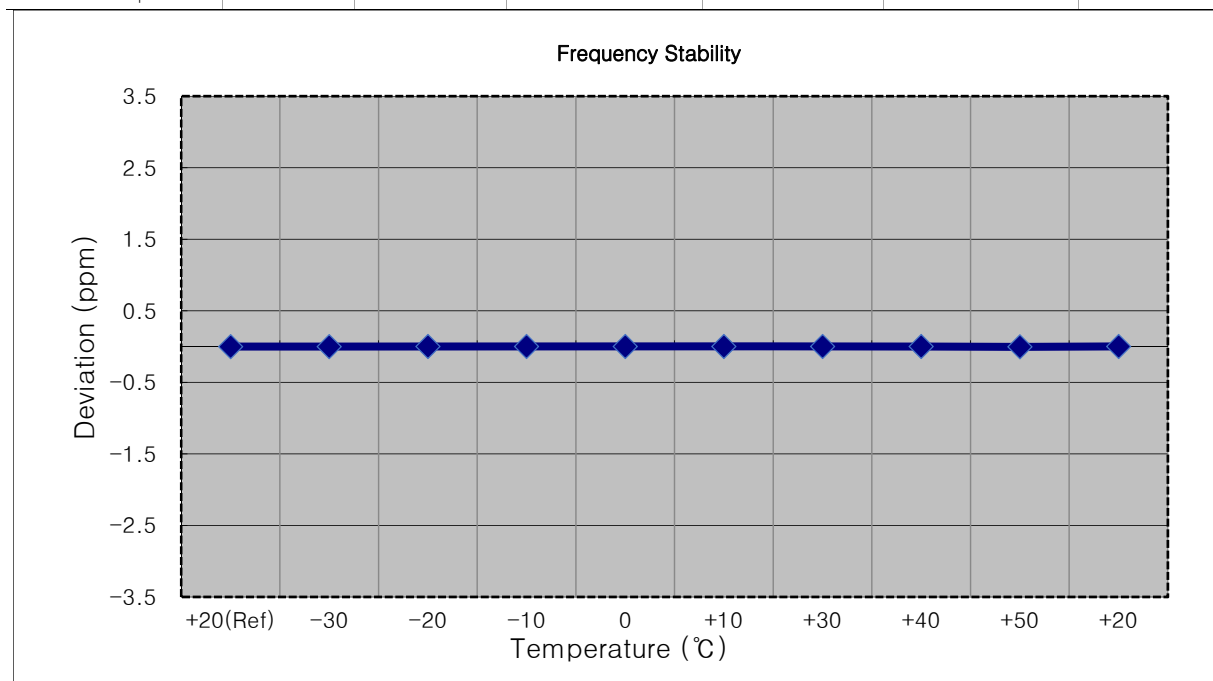
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1857,500,000 Hz</u>
CHANNEL:	<u>26115 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1857 500 002	0.0	0.000 000	0.000
100 %		-30	1857 499 999	-2.1	0.000 000	-0.001
100 %		-20	1857 500 004	2.8	0.000 000	0.002
100 %		-10	1857 499 998	-3.3	0.000 000	-0.002
100 %		0	1857 500 004	2.8	0.000 000	0.002
100 %		+10	1857 500 005	3.3	0.000 000	0.002
100 %		+30	1857 500 005	3.3	0.000 000	0.002
100 %		+40	1857 500 005	3.1	0.000 000	0.002
100 %		+50	1857 500 006	4.1	0.000 000	0.002
Batt. Endpoint	3.400	+20	1857 500 005	3.6	0.000 000	0.002



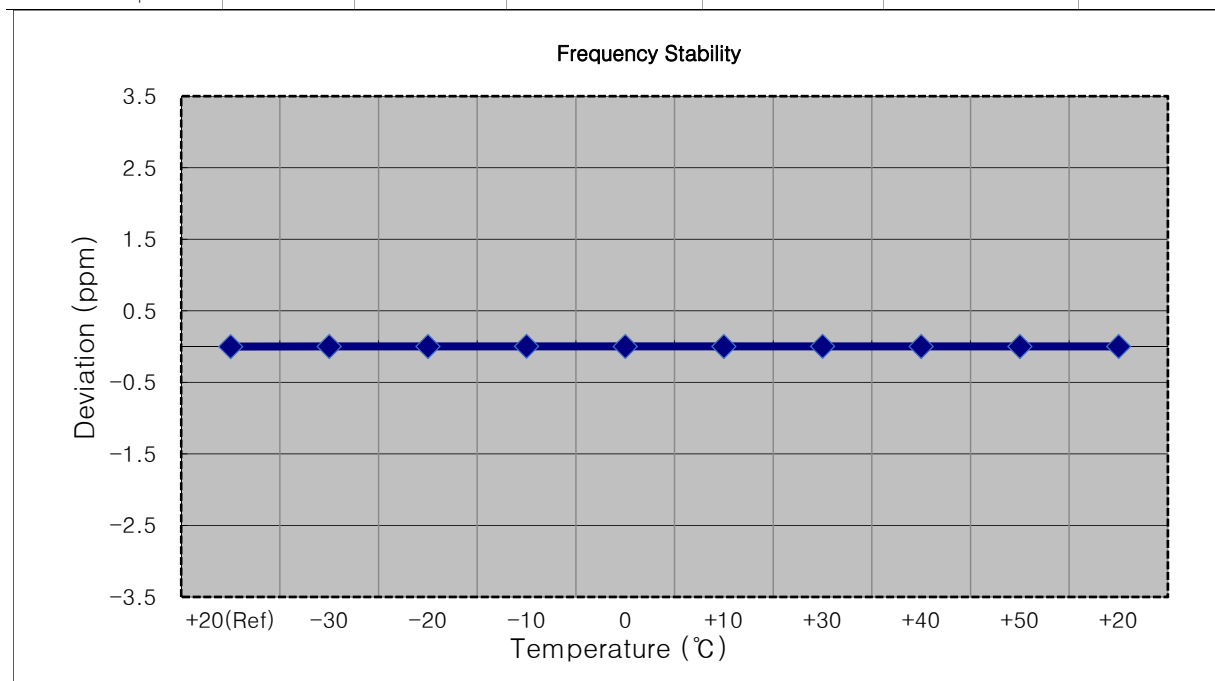
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1860,000,000 Hz</u>
CHANNEL:	<u>26140 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1860 000 004	0.0	0.000 000	0.000
100 %		-30	1860 000 002	-2.0	0.000 000	-0.001
100 %		-20	1860 000 008	4.1	0.000 000	0.002
100 %		-10	1860 000 009	4.8	0.000 000	0.003
100 %		0	1860 000 007	2.7	0.000 000	0.001
100 %		+10	1860 000 007	3.1	0.000 000	0.002
100 %		+30	1860 000 007	3.3	0.000 000	0.002
100 %		+40	1860 000 008	3.6	0.000 000	0.002
100 %		+50	1859 999 998	-6.0	0.000 000	-0.003
Batt. Endpoint	3.400	+20	1860 000 007	3.1	0.000 000	0.002



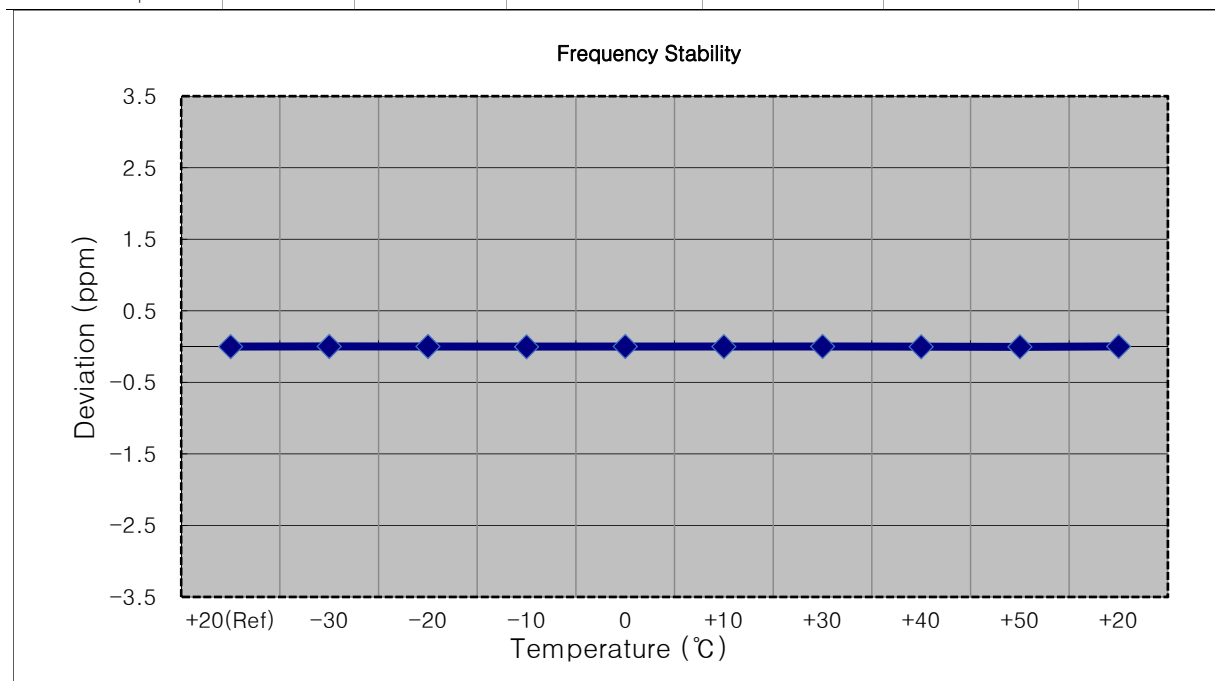
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 500 005	0.0	0.000 000	0.000
100 %		-30	1882 500 007	2.7	0.000 000	0.001
100 %		-20	1882 500 007	2.7	0.000 000	0.001
100 %		-10	1882 500 010	5.4	0.000 000	0.003
100 %		0	1882 500 008	3.0	0.000 000	0.002
100 %		+10	1882 500 007	1.8	0.000 000	0.001
100 %		+30	1882 500 011	6.3	0.000 000	0.003
100 %		+40	1882 500 009	4.2	0.000 000	0.002
100 %		+50	1882 500 007	2.6	0.000 000	0.001
Batt. Endpoint	3.400	+20	1882 500 007	2.1	0.000 000	0.001



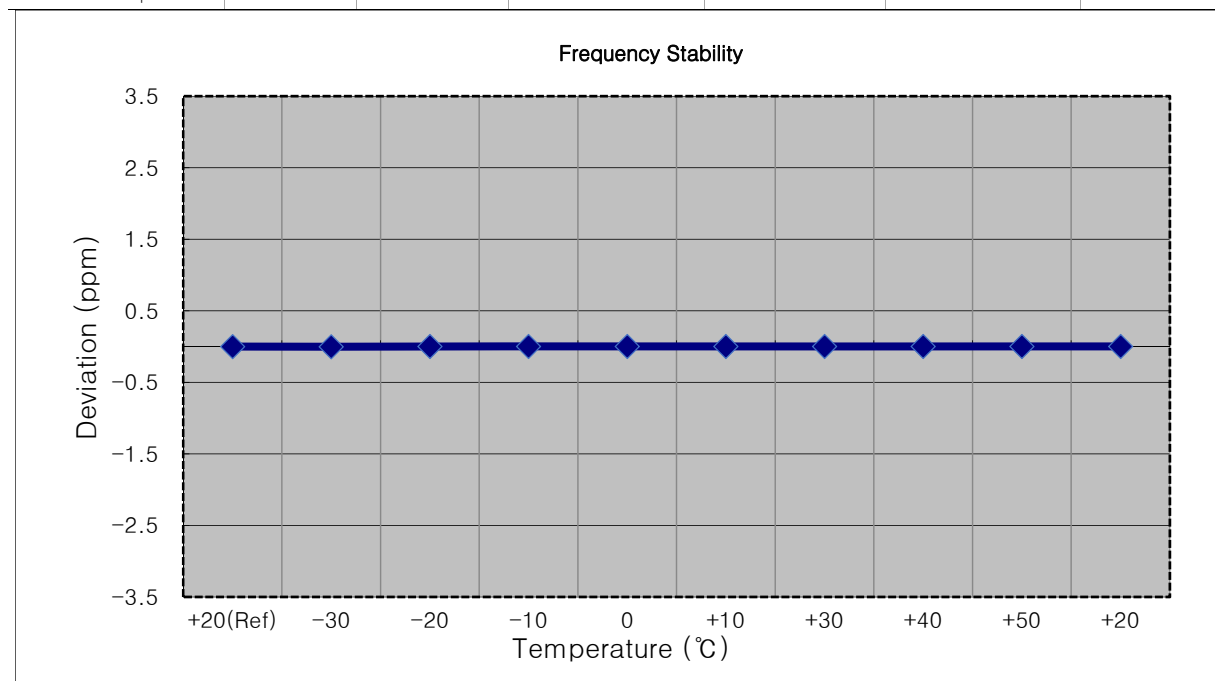
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100 %		-30	1882 500 007	3.8	0.000 000	0.002
100 %		-20	1882 500 006	2.6	0.000 000	0.001
100 %		-10	1882 499 998	-5.0	0.000 000	-0.003
100 %		0	1882 500 005	1.8	0.000 000	0.001
100 %		+10	1882 500 001	-2.7	0.000 000	-0.001
100 %		+30	1882 500 007	3.2	0.000 000	0.002
100 %		+40	1882 500 000	-3.6	0.000 000	-0.002
100 %		+50	1882 499 998	-5.8	0.000 000	-0.003
Batt. Endpoint	3.400	+20	1882 500 007	3.8	0.000 000	0.002



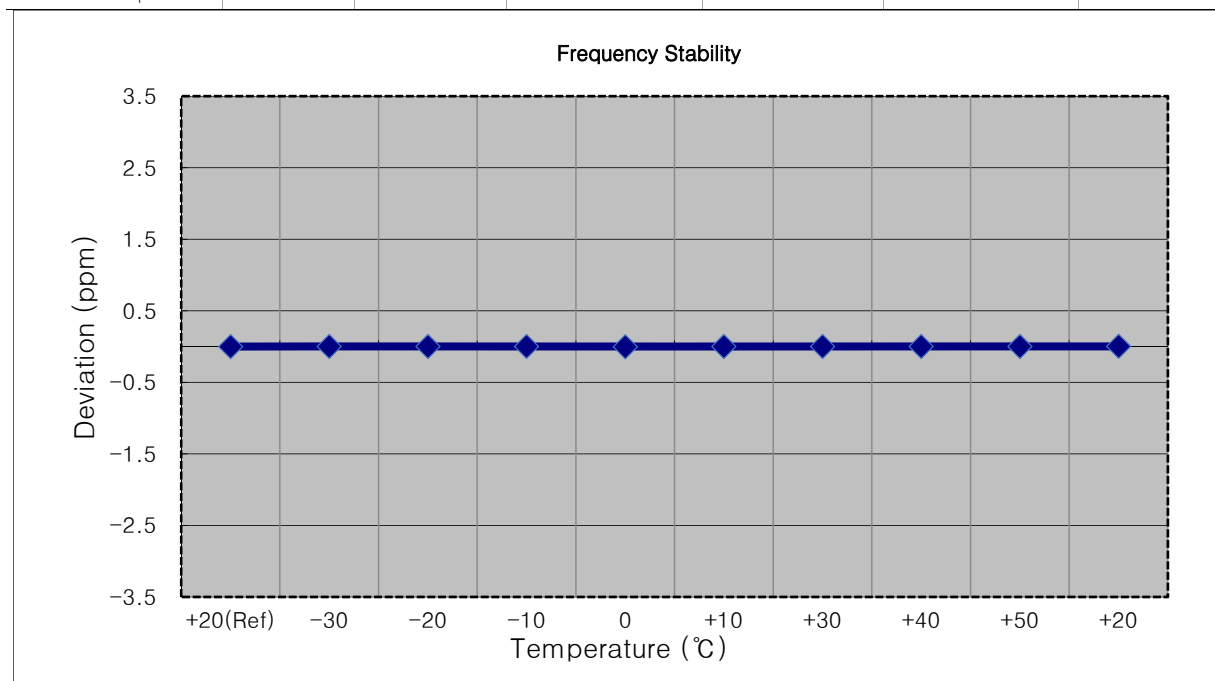
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1882 499 998	0.0	0.000 000	0.000
100 %		-30	1882 499 994	-3.7	0.000 000	-0.002
100 %		-20	1882 500 002	4.3	0.000 000	0.002
100 %		-10	1882 500 000	2.1	0.000 000	0.001
100 %		0	1882 500 001	3.0	0.000 000	0.002
100 %		+10	1882 500 000	2.4	0.000 000	0.001
100 %		+30	1882 500 001	3.3	0.000 000	0.002
100 %		+40	1882 500 001	3.3	0.000 000	0.002
100 %		+50	1882 500 001	3.4	0.000 000	0.002
Batt. Endpoint	3.400	+20	1882 500 002	3.6	0.000 000	0.002



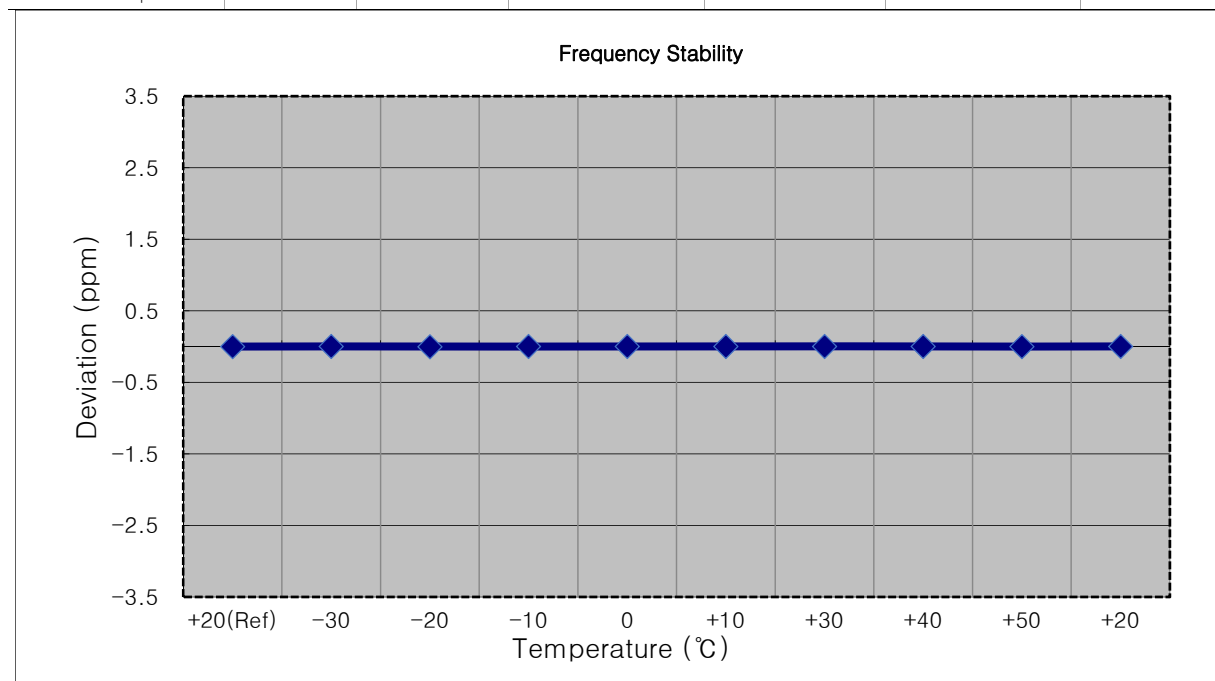
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1882 499 997	0.0	0.000 000	0.000
100 %		-30	1882 500 001	4.1	0.000 000	0.002
100 %		-20	1882 500 000	2.6	0.000 000	0.001
100 %		-10	1882 500 002	5.2	0.000 000	0.003
100 %		0	1882 499 993	-3.6	0.000 000	-0.002
100 %		+10	1882 500 002	5.1	0.000 000	0.003
100 %		+30	1882 500 000	3.3	0.000 000	0.002
100 %		+40	1882 499 999	2.1	0.000 000	0.001
100 %		+50	1882 500 002	5.0	0.000 000	0.003
Batt. Endpoint	3.400	+20	1882 500 003	5.5	0.000 000	0.003



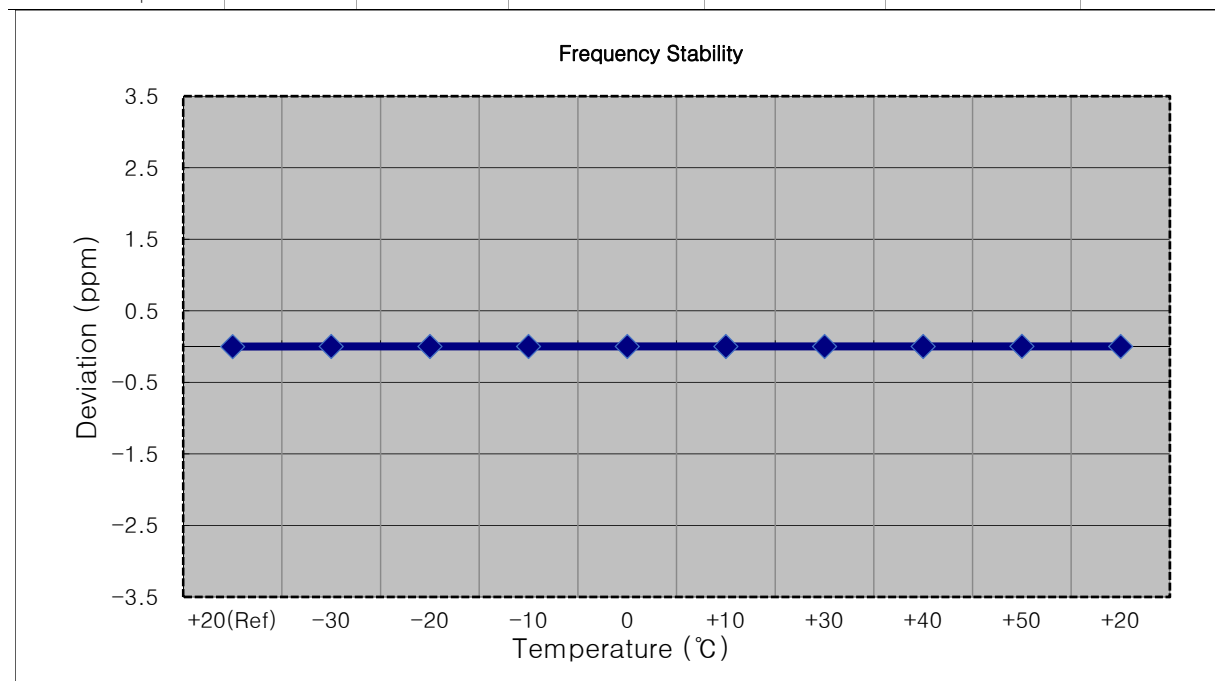
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100 %		-30	1882 500 006	3.1	0.000 000	0.002
100 %		-20	1882 500 000	-3.1	0.000 000	-0.002
100 %		-10	1882 500 007	3.8	0.000 000	0.002
100 %		0	1882 500 007	3.9	0.000 000	0.002
100 %		+10	1882 500 006	2.7	0.000 000	0.001
100 %		+30	1882 500 005	1.9	0.000 000	0.001
100 %		+40	1882 500 005	2.2	0.000 000	0.001
100 %		+50	1882 500 001	-2.6	0.000 000	-0.001
Batt. Endpoint	3.400	+20	1882 500 006	2.6	0.000 000	0.001



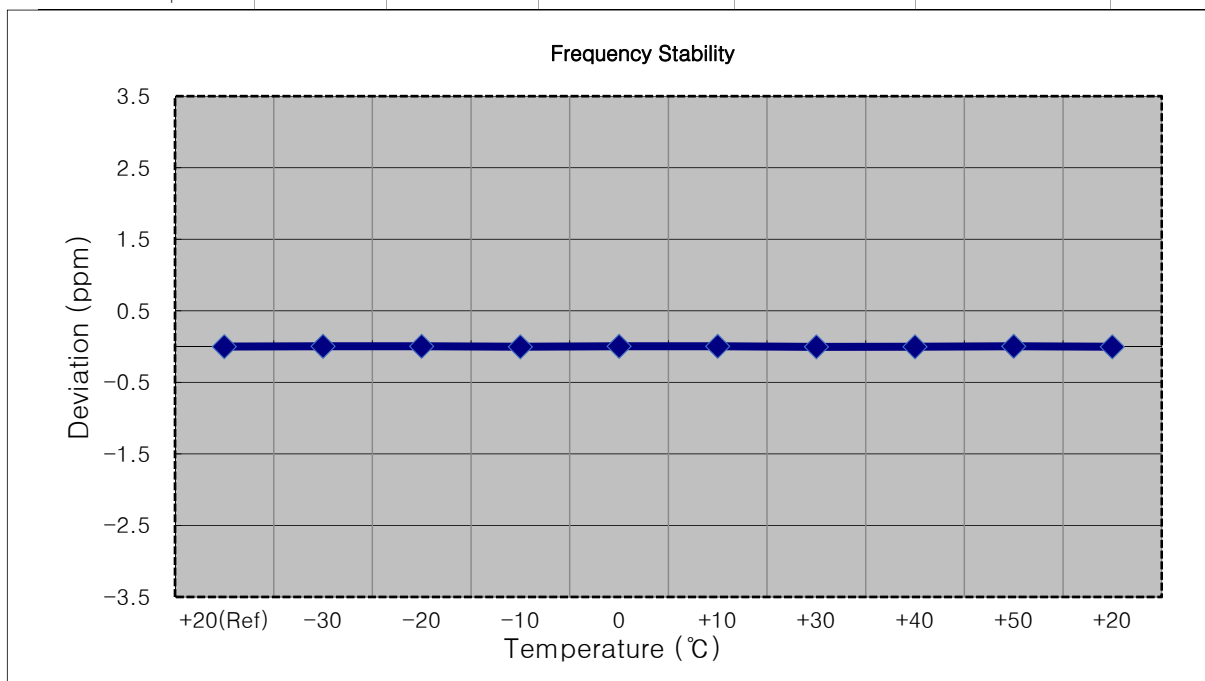
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1882,500,000 Hz</u>
CHANNEL:	<u>26365 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100 %		-30	1882 500 006	3.2	0.000 000	0.002
100 %		-20	1882 500 007	4.2	0.000 000	0.002
100 %		-10	1882 500 006	2.8	0.000 000	0.001
100 %		0	1882 500 008	4.7	0.000 000	0.002
100 %		+10	1882 500 008	4.5	0.000 000	0.002
100 %		+30	1882 500 007	4.1	0.000 000	0.002
100 %		+40	1882 500 005	2.2	0.000 000	0.001
100 %		+50	1882 500 010	6.4	0.000 000	0.003
Batt. Endpoint	3.400	+20	1882 500 007	3.4	0.000 000	0.002



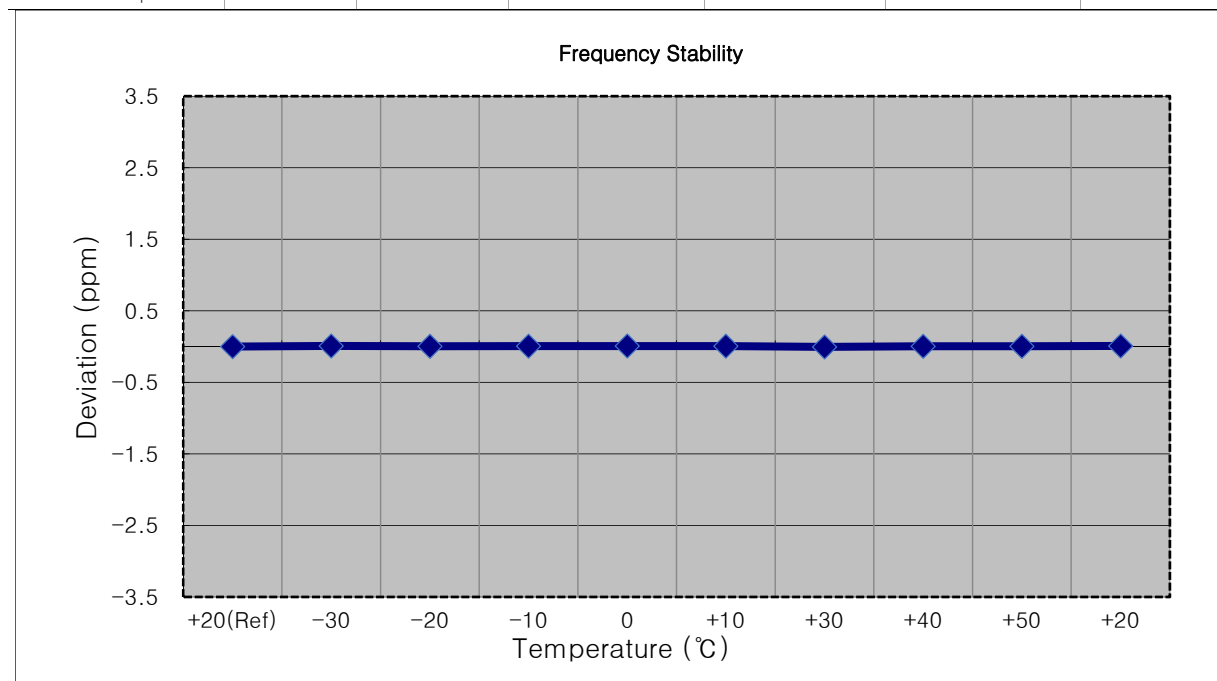
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1914,300,000 Hz</u>
CHANNEL:	<u>26683 (1.4 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	3.900	+20(Ref)	1914 300 010	0.0	0.000 000	0.000
100 %		-30	1914 300 016	6.6	0.000 000	0.003
100 %		-20	1914 300 017	7.2	0.000 000	0.004
100 %		-10	1914 300 003	-6.8	0.000 000	-0.004
100 %		0	1914 300 018	8.2	0.000 000	0.004
100 %		+10	1914 300 018	8.0	0.000 000	0.004
100 %		+30	1914 300 002	-7.2	0.000 000	-0.004
100 %		+40	1914 300 003	-7.0	0.000 000	-0.004
100 %		+50	1914 300 016	6.6	0.000 000	0.003
Batt. Endpoint	3.400	+20	1914 300 003	-6.6	0.000 000	-0.003



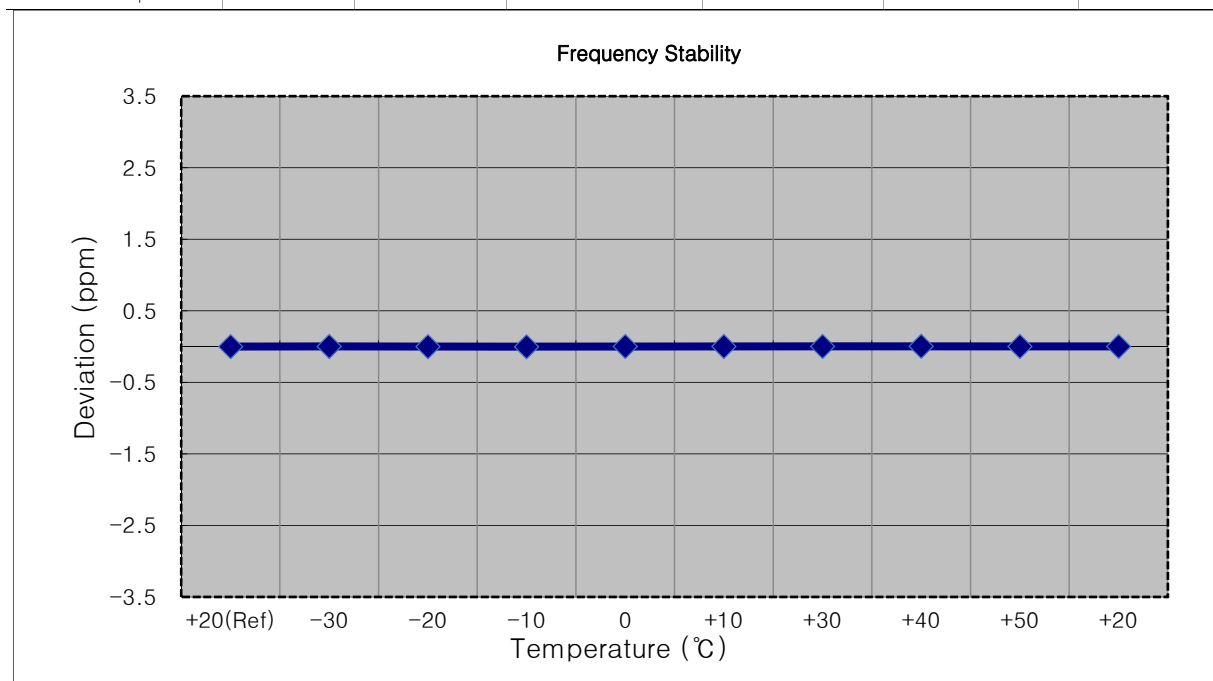
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1913,500,000 Hz</u>
CHANNEL:	<u>26675 (3 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1913 500 011	0.0	0.000 000	0.000
100 %		-30	1913 500 025	14.5	0.000 001	0.008
100 %		-20	1913 500 020	9.0	0.000 000	0.005
100 %		-10	1913 500 021	10.6	0.000 001	0.006
100 %		0	1913 500 026	14.7	0.000 001	0.008
100 %		+10	1913 500 022	11.6	0.000 001	0.006
100 %		+30	1913 500 002	-8.4	0.000 000	-0.004
100 %		+40	1913 500 018	6.9	0.000 000	0.004
100 %		+50	1913 500 019	8.3	0.000 000	0.004
Batt. Endpoint	3.400	+20	1913 500 025	14.1	0.000 001	0.007



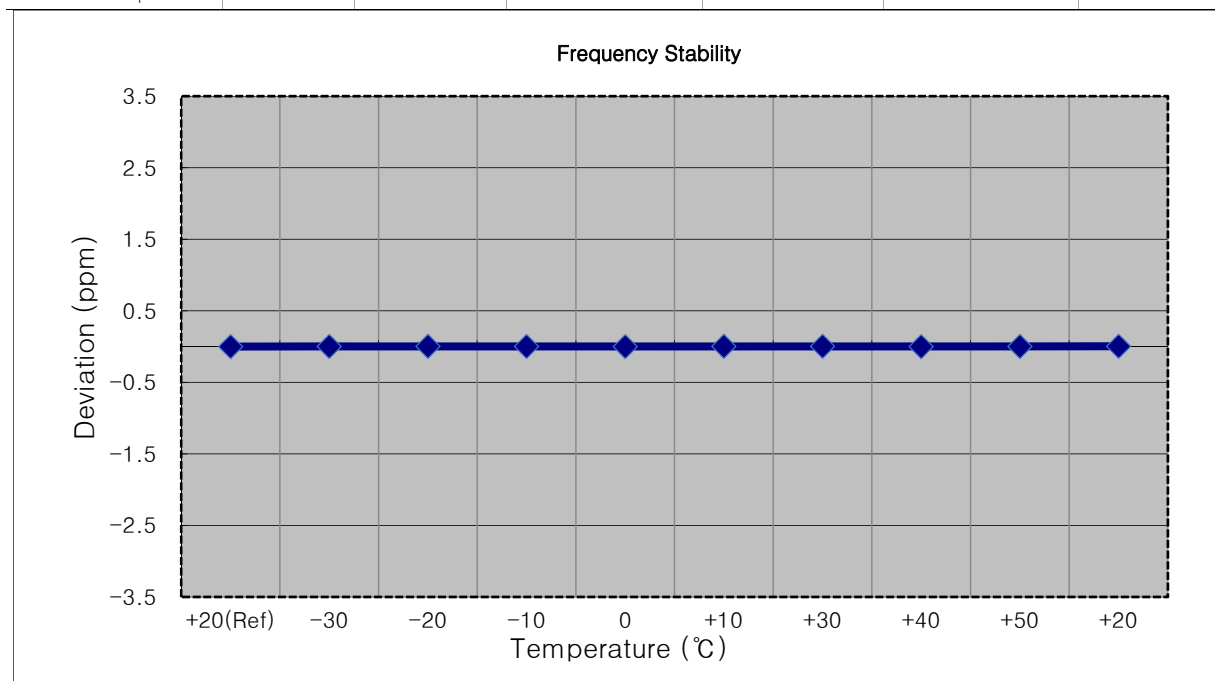
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1912,500,000 Hz</u>
CHANNEL:	<u>26665 (5 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1912 500 005	0.0	0.000 000	0.000
100 %		-30	1912 500 010	5.3	0.000 000	0.003
100 %		-20	1912 500 002	-3.0	0.000 000	-0.002
100 %		-10	1912 500 000	-4.2	0.000 000	-0.002
100 %		0	1912 500 008	2.9	0.000 000	0.002
100 %		+10	1912 500 008	3.8	0.000 000	0.002
100 %		+30	1912 500 009	4.3	0.000 000	0.002
100 %		+40	1912 500 011	6.1	0.000 000	0.003
100 %		+50	1912 500 008	3.8	0.000 000	0.002
Batt. Endpoint	3.400	+20	1912 500 007	2.6	0.000 000	0.001



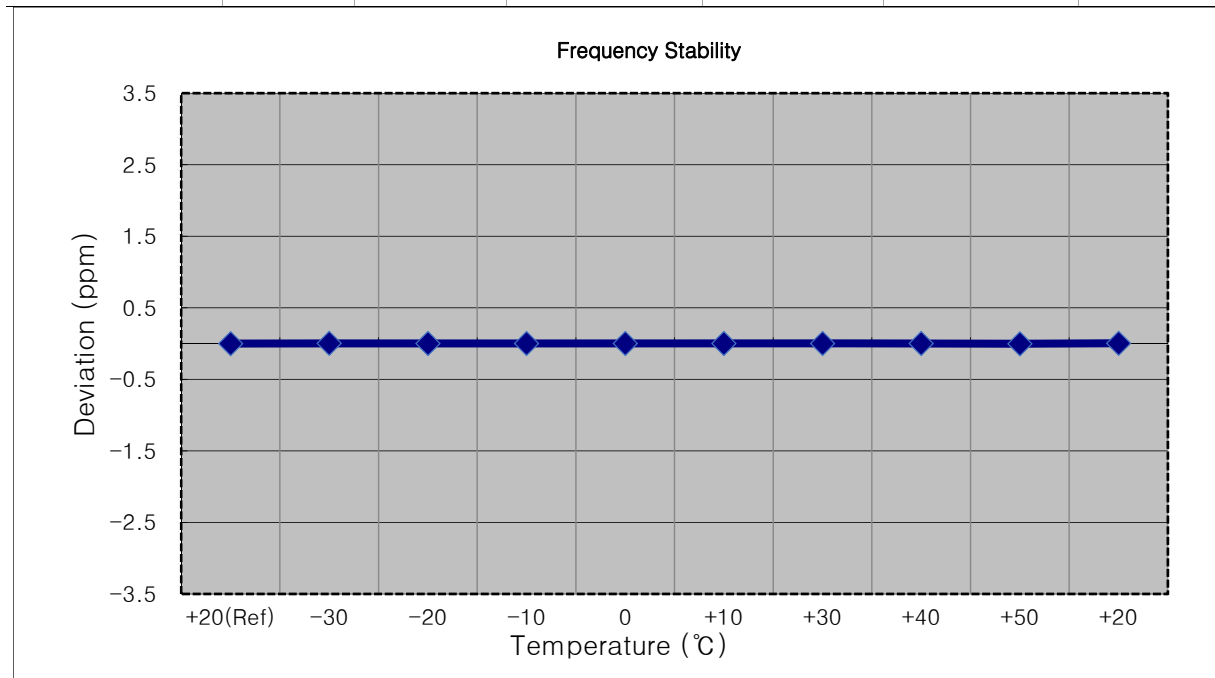
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1910,000,000 Hz</u>
CHANNEL:	<u>26640 (10 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1910 000 005	0.0	0.000 000	0.000
100 %		-30	1910 000 010	4.5	0.000 000	0.002
100 %		-20	1910 000 012	6.4	0.000 000	0.003
100 %		-10	1910 000 010	5.0	0.000 000	0.003
100 %		0	1910 000 003	-2.5	0.000 000	-0.001
100 %		+10	1910 000 011	5.5	0.000 000	0.003
100 %		+30	1910 000 012	6.4	0.000 000	0.003
100 %		+40	1910 000 003	-2.6	0.000 000	-0.001
100 %		+50	1910 000 009	3.9	0.000 000	0.002
Batt. Endpoint	3.400	+20	1910 000 011	5.9	0.000 000	0.003



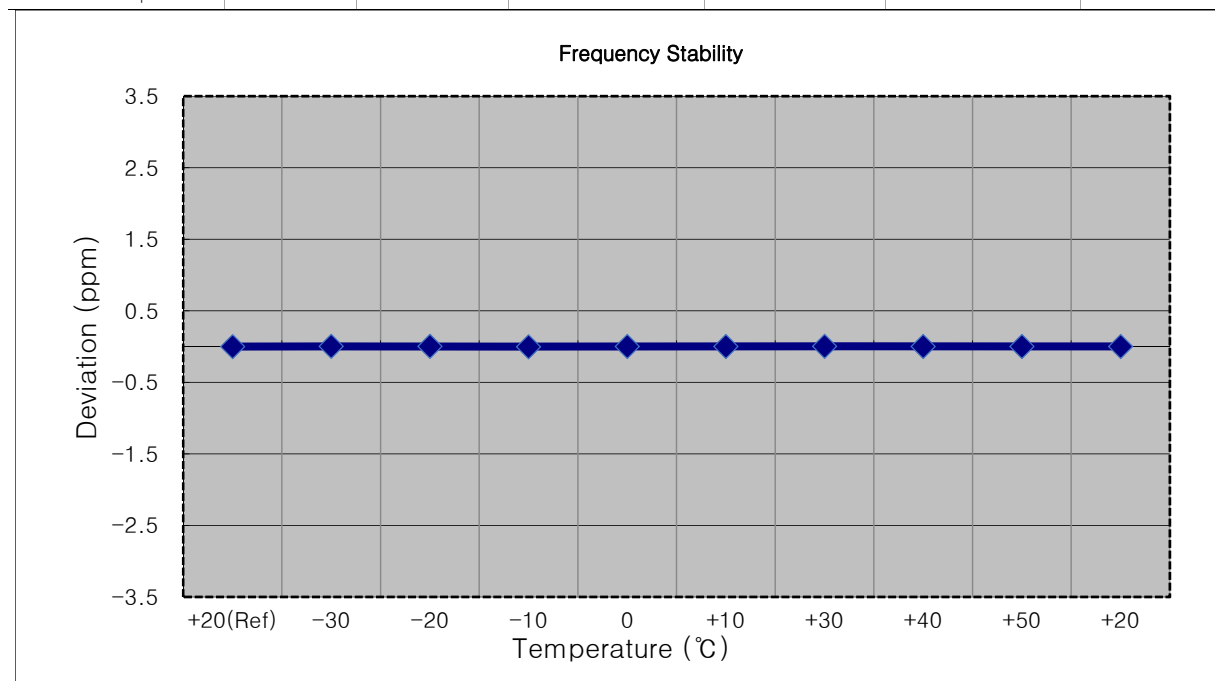
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1907,500,000 Hz</u>
CHANNEL:	<u>26615 (15 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1907 500 004	0.0	0.000 000	0.000
100 %		-30	1907 500 011	6.7	0.000 000	0.004
100 %		-20	1907 500 009	5.0	0.000 000	0.003
100 %		-10	1907 500 008	3.9	0.000 000	0.002
100 %		0	1907 500 008	3.9	0.000 000	0.002
100 %		+10	1907 500 009	5.1	0.000 000	0.003
100 %		+30	1907 500 008	4.3	0.000 000	0.002
100 %		+40	1907 500 008	4.1	0.000 000	0.002
100 %		+50	1907 499 999	-4.6	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1907 500 009	5.5	0.000 000	0.003



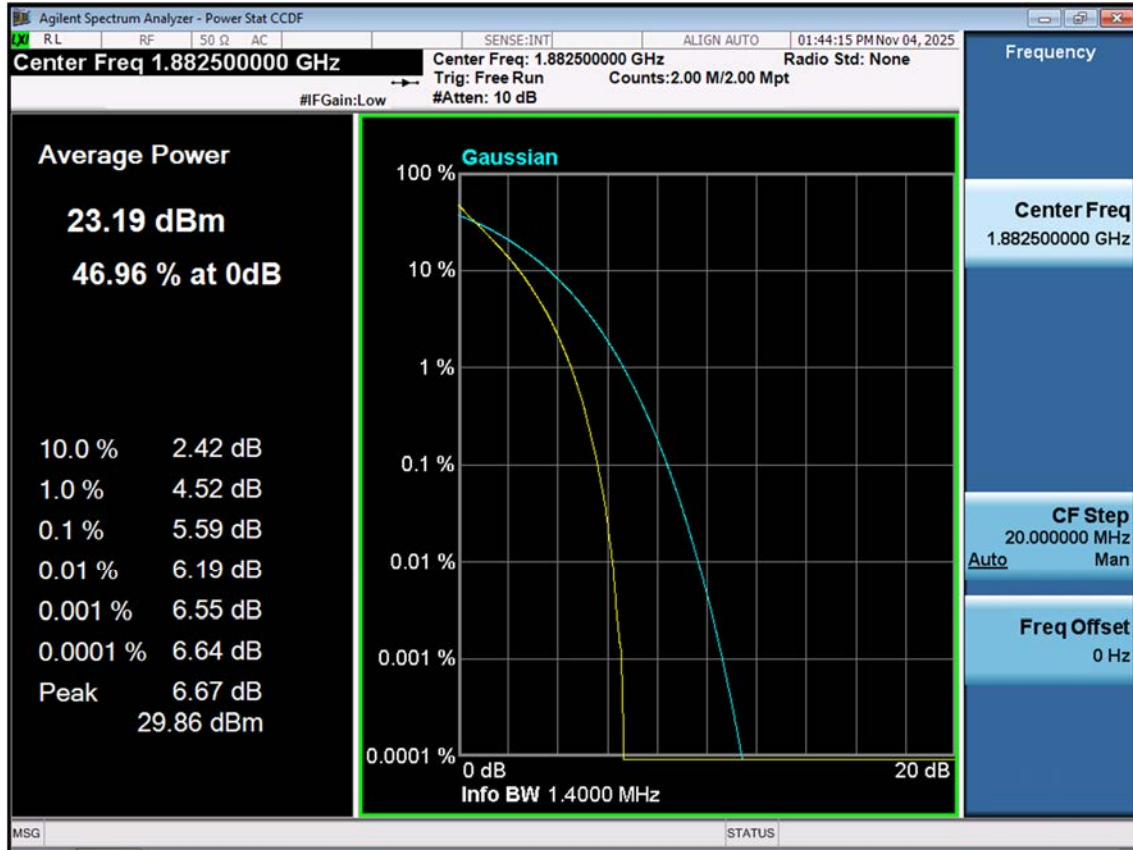
MODE:	<u>LTE B25/B2</u>
OPERATING FREQUENCY:	<u>1905,000,000 Hz</u>
CHANNEL:	<u>26590 (20 MHz)</u>
REFERENCE VOLTAGE:	<u>3.900 VDC</u>
DEVIATION LIMIT:	<u>Emission must remain in band</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %	3.900	+20(Ref)	1905 000 005	0.0	0.000 000	0.000
100 %		-30	1905 000 011	5.9	0.000 000	0.003
100 %		-20	1905 000 011	5.9	0.000 000	0.003
100 %		-10	1905 000 000	-4.7	0.000 000	-0.002
100 %		0	1905 000 008	3.2	0.000 000	0.002
100 %		+10	1905 000 009	3.8	0.000 000	0.002
100 %		+30	1905 000 011	5.5	0.000 000	0.003
100 %		+40	1905 000 008	2.5	0.000 000	0.001
100 %		+50	1905 000 008	3.1	0.000 000	0.002
Batt. Endpoint	3.400	+20	1905 000 008	3.0	0.000 000	0.002

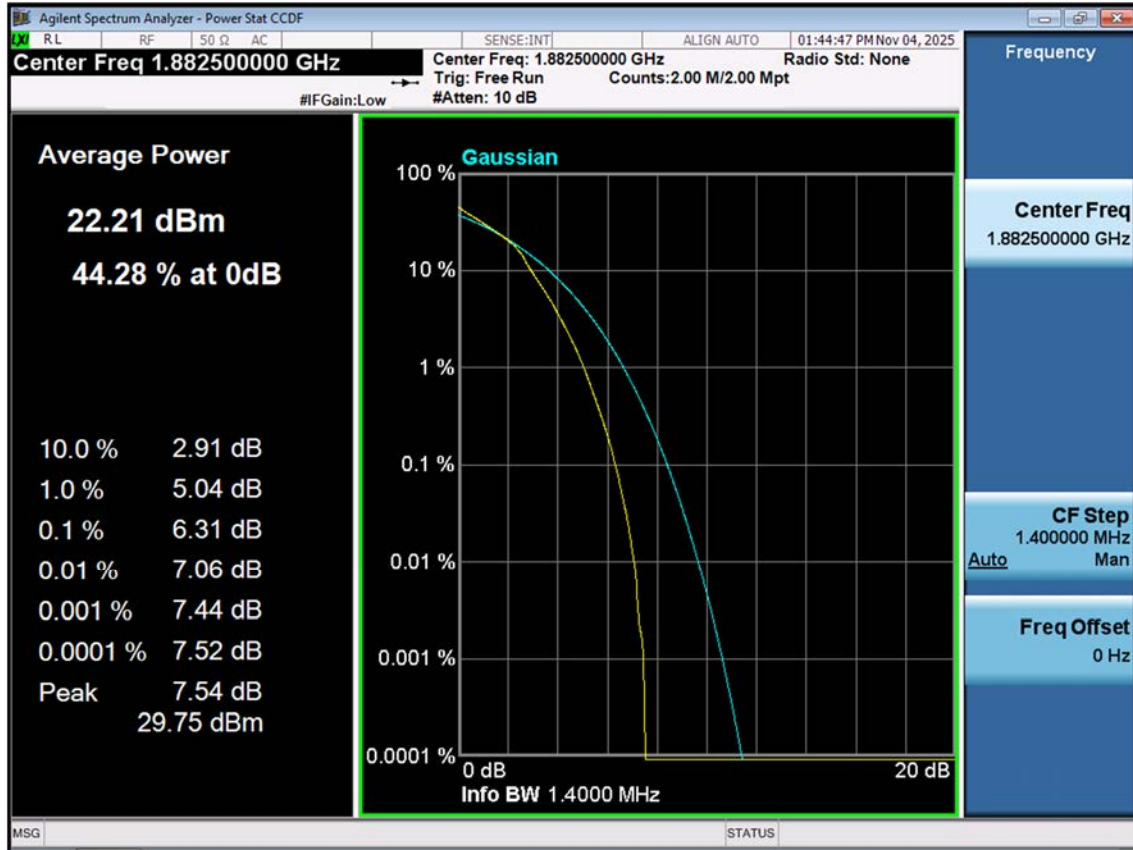


10. TEST PLOTS(Ant B)

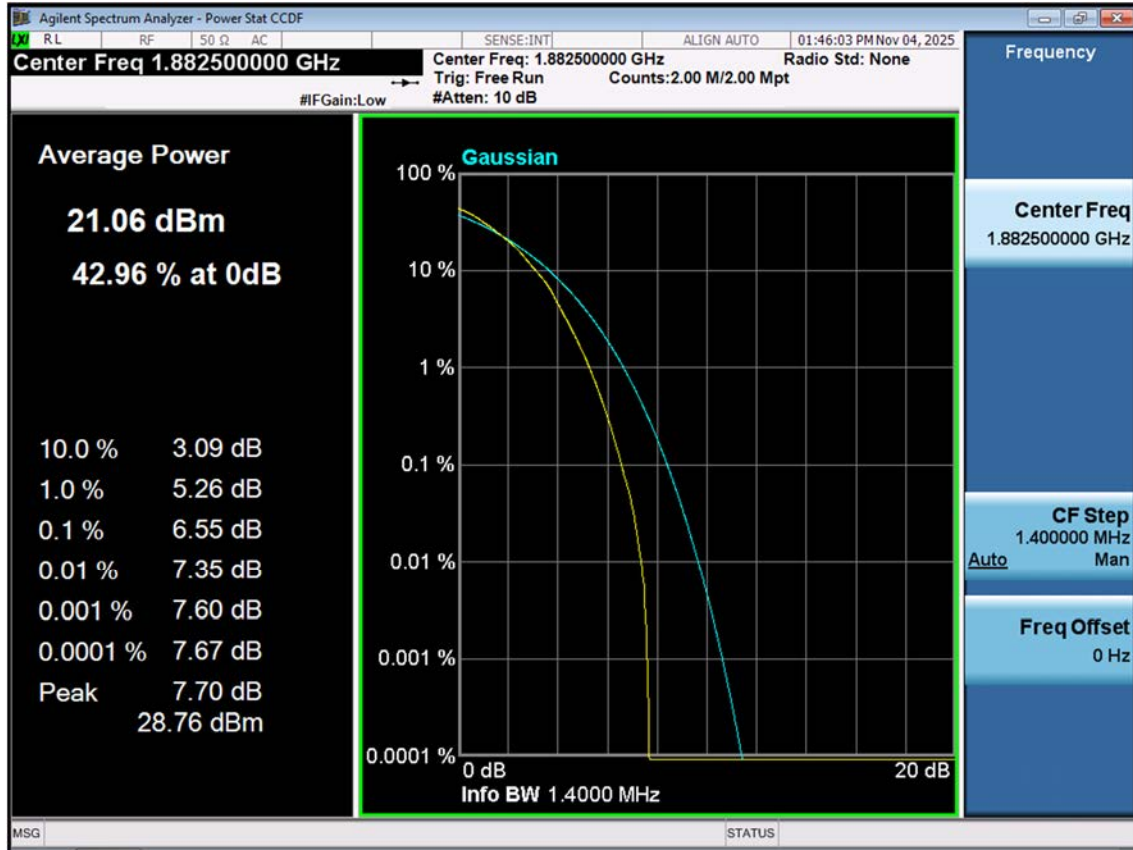
LTE B25(2)_1.4 M_PAR_Mid_QPSK_FullRB



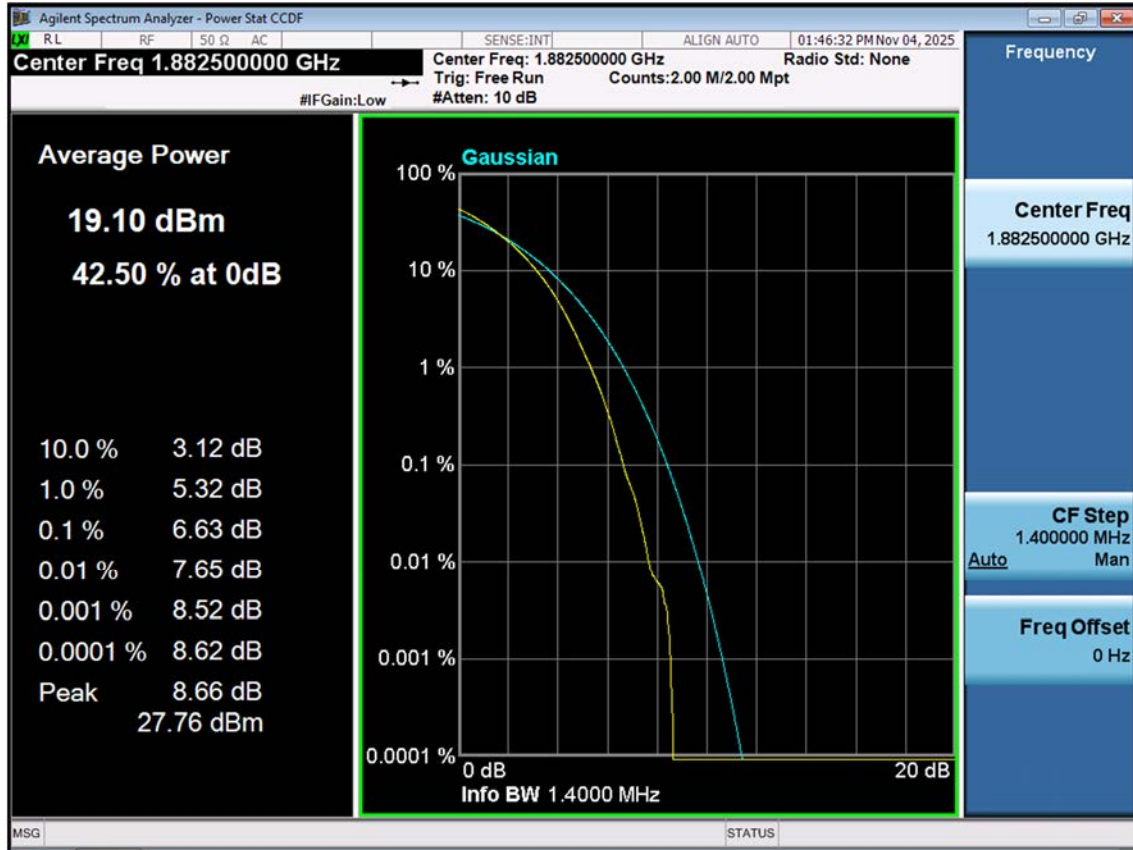
LTE B25(2)_1.4 M_PAR_Mid_16QAM_FullRB



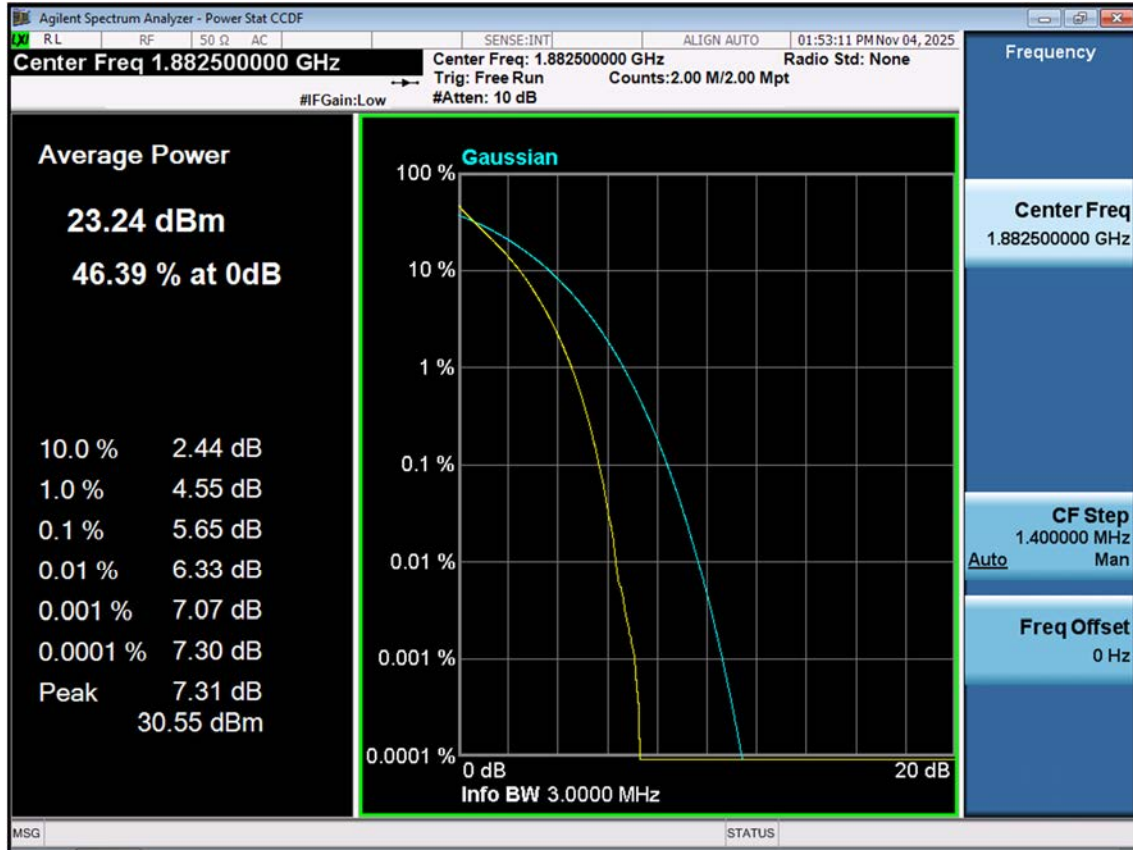
LTE B25(2)_1.4 M_PAR_Mid_64QAM_FullRB



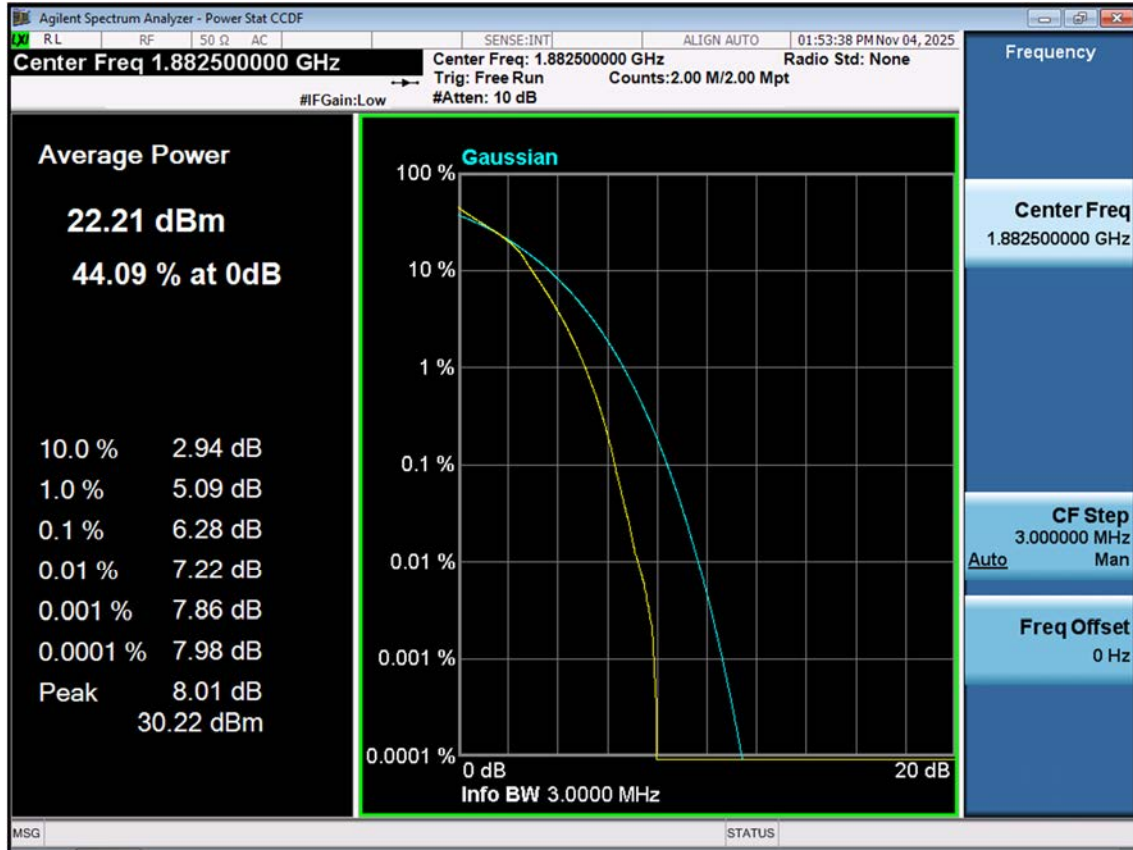
LTE B25(2)_1.4 M_PAR_Mid_256QAM_FullRB



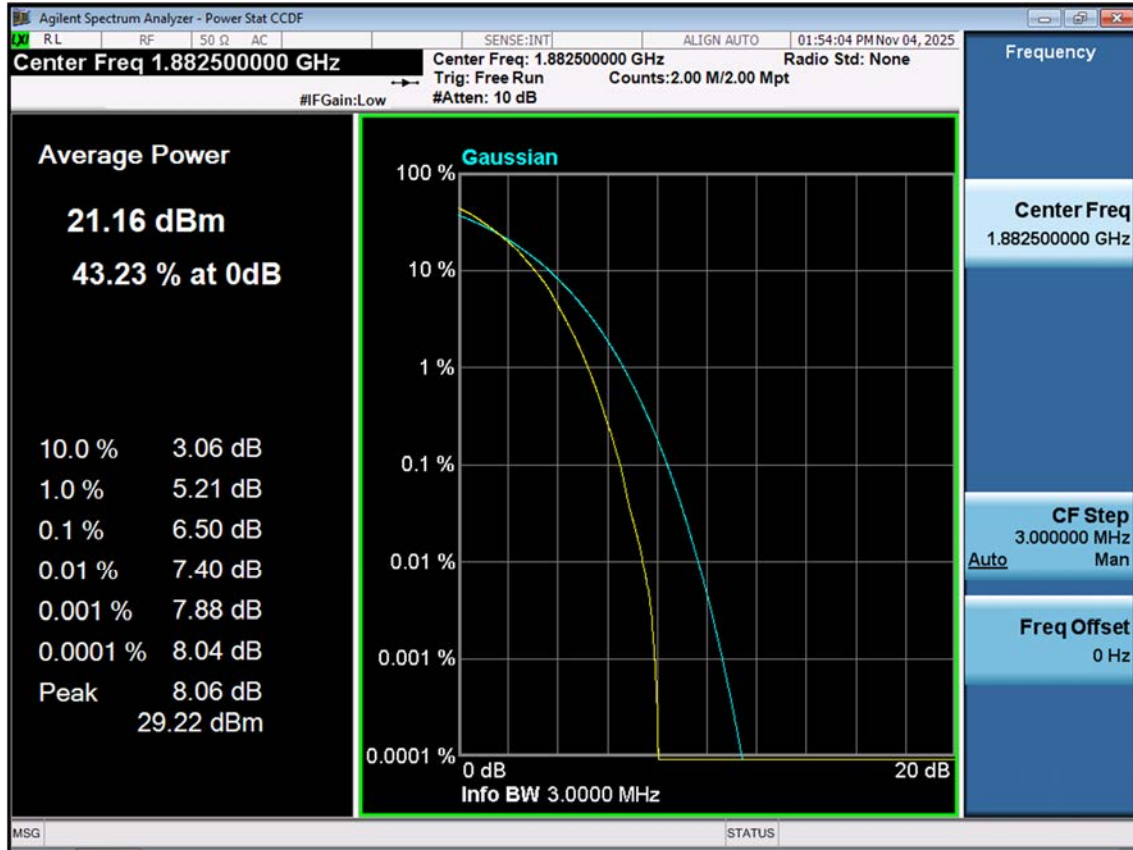
LTE B25(2)_3 M_PAR_Mid_QPSK_FullRB



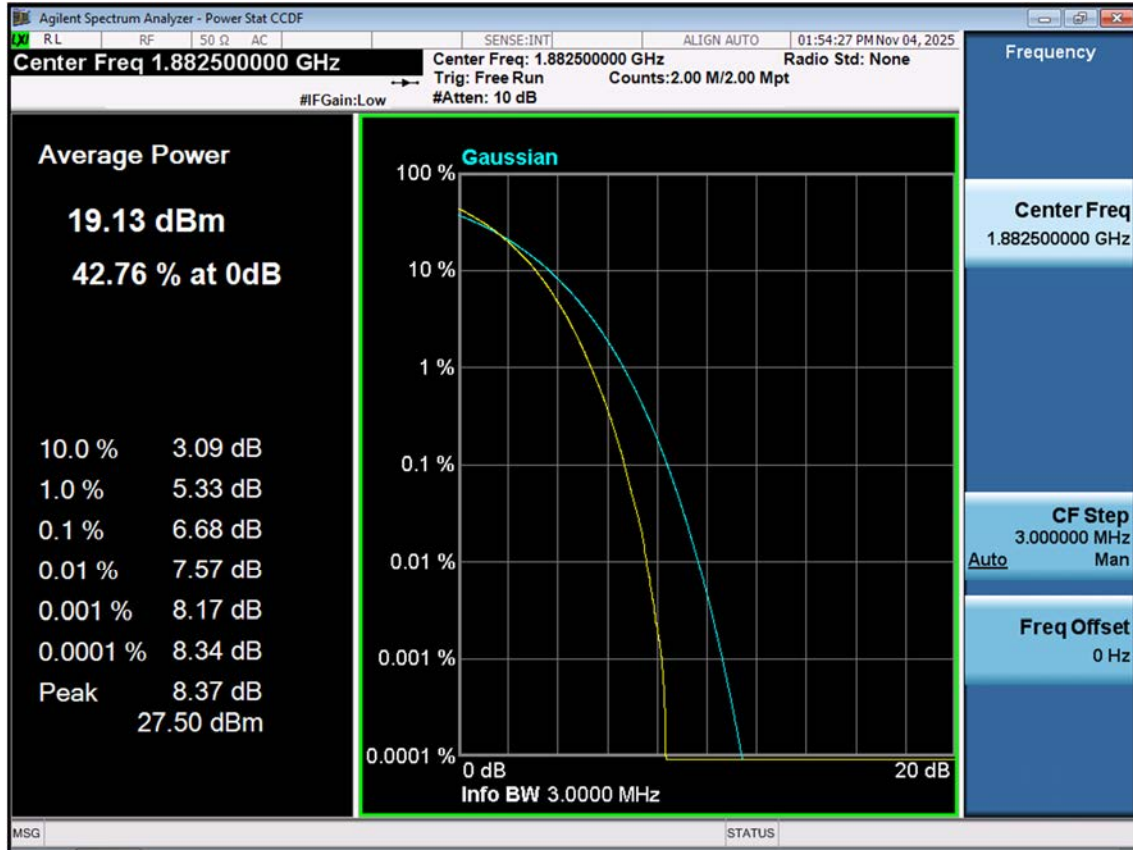
LTE B25(2)_3 M_PAR_Mid_16QAM_FullRB



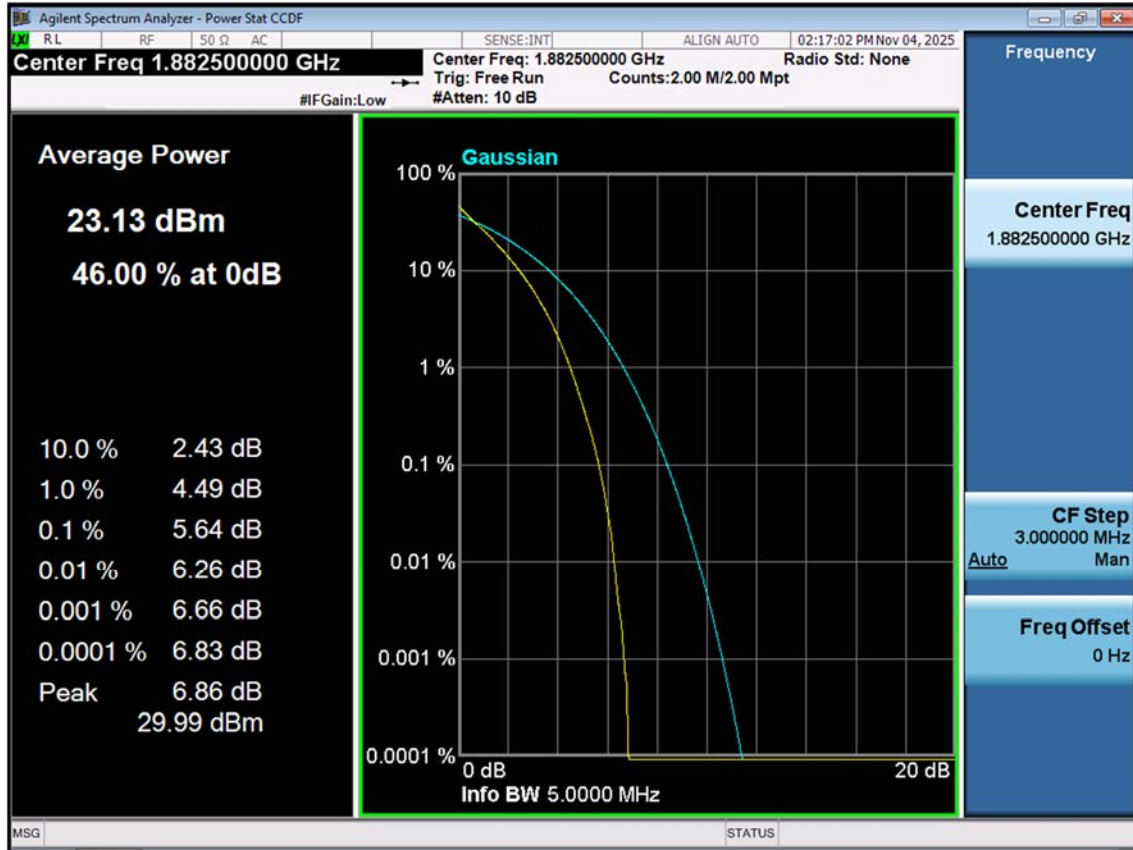
LTE B25(2)_3 M_PAR_Mid_64QAM_FullRB



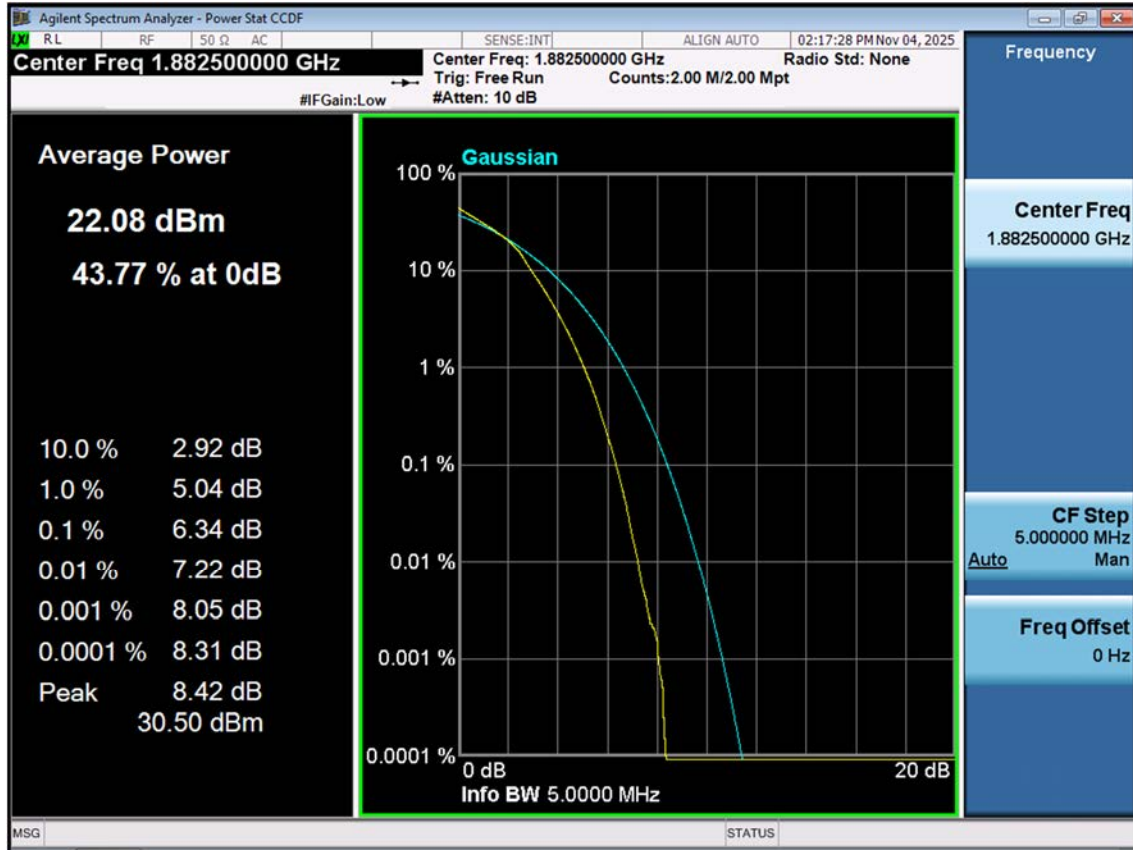
LTE B25(2)_3 M_PAR_Mid_256QAM_FullRB



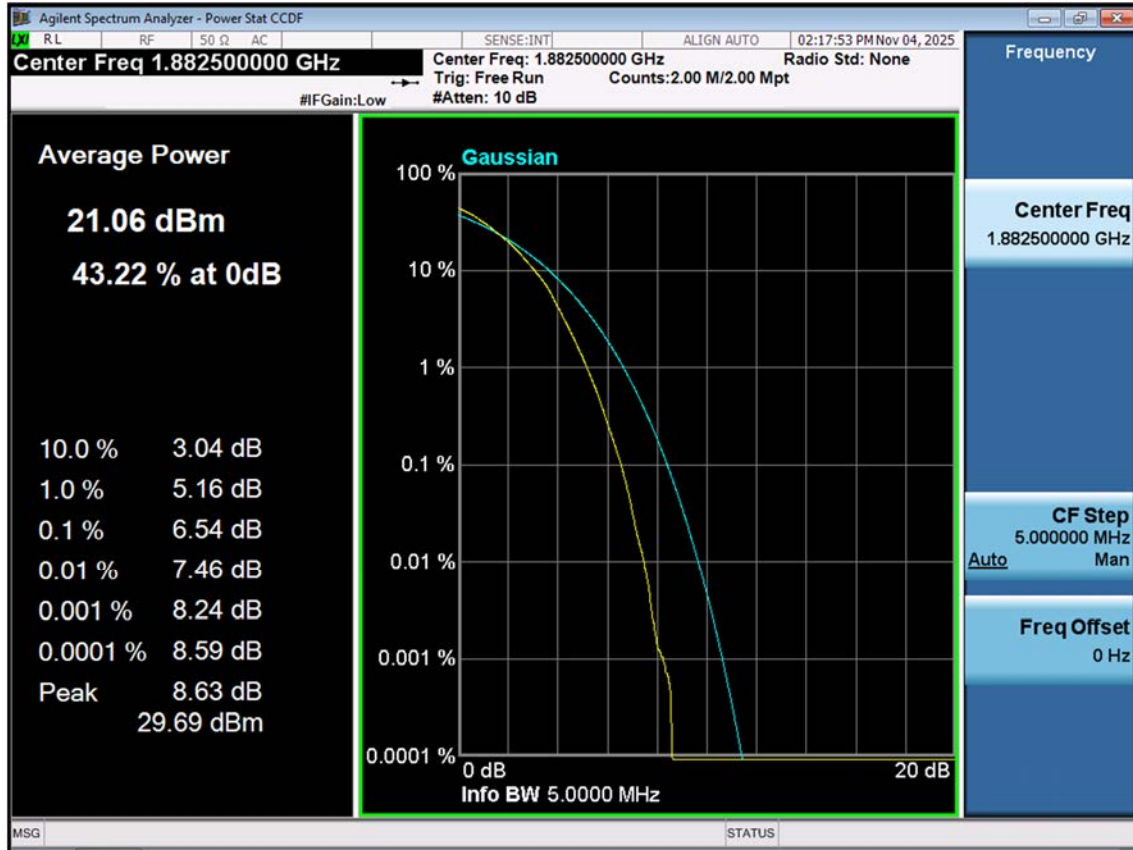
LTE B25(2)_5 M_PAR_Mid_QPSK_FullRB



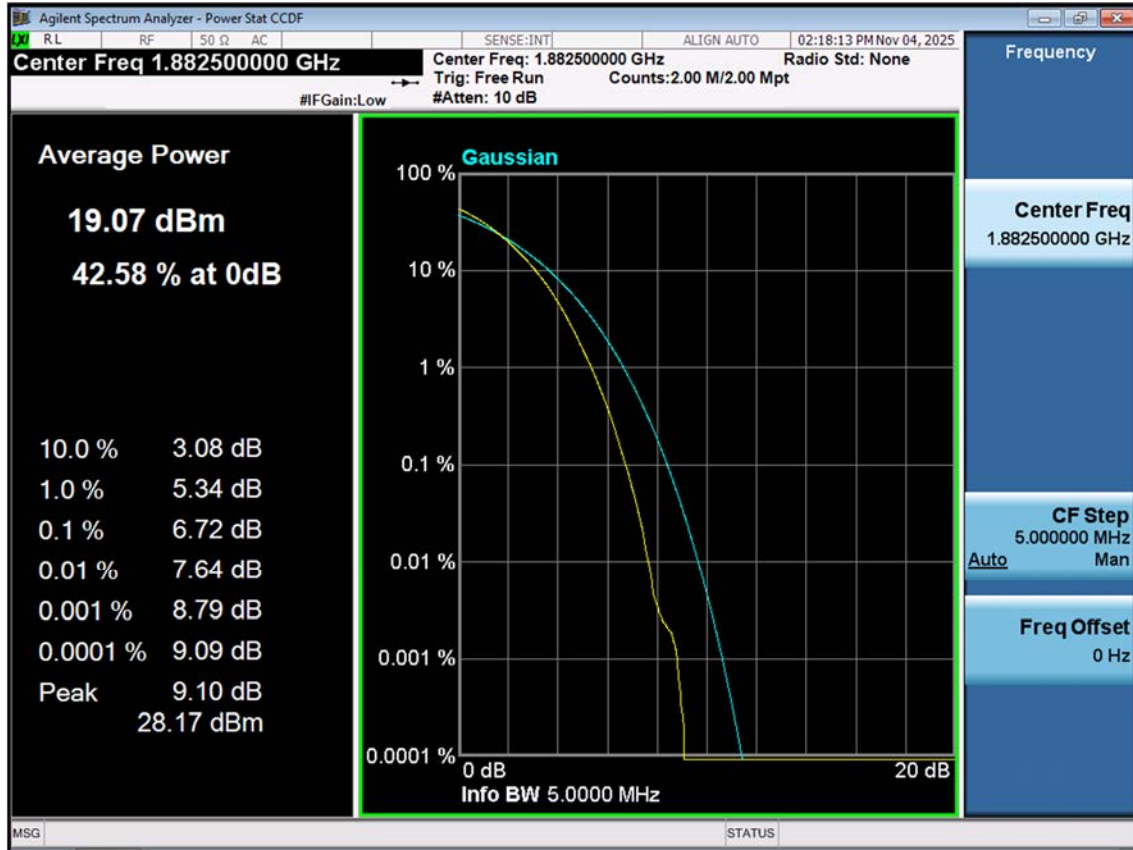
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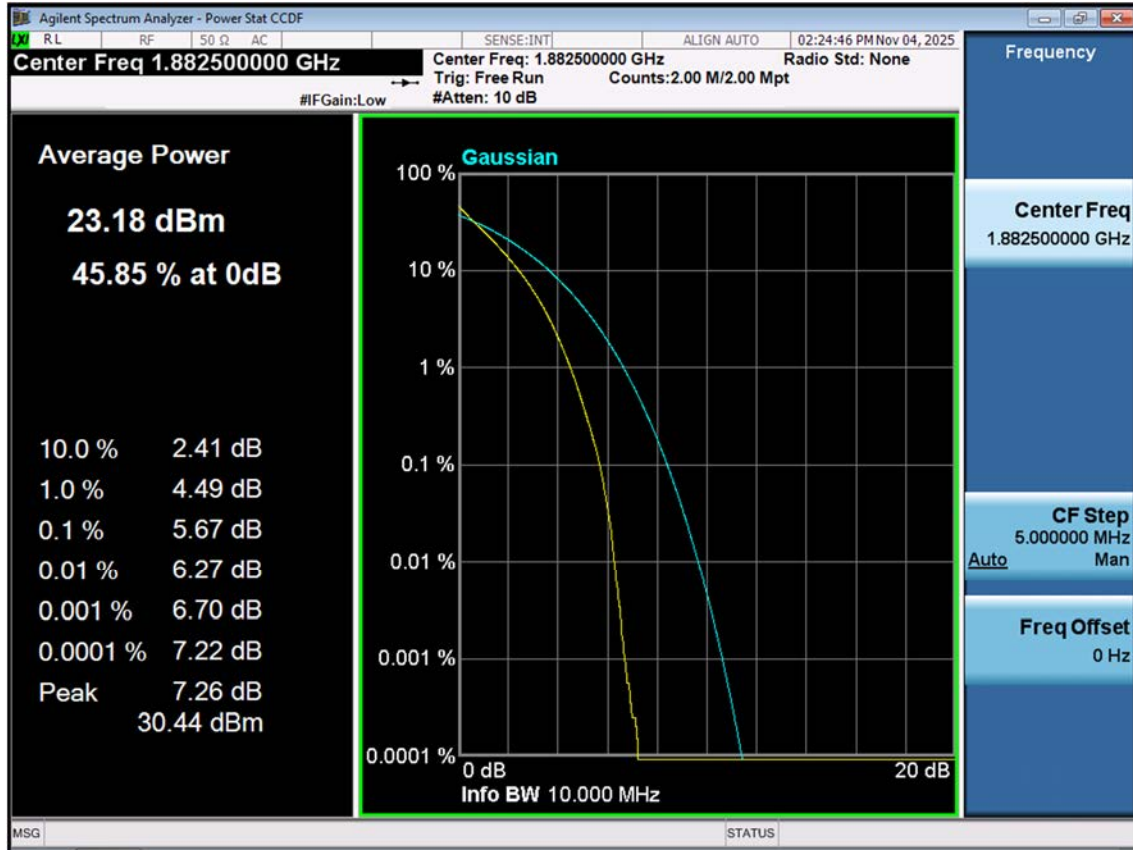
LTE B25(2)_5 M_PAR_Mid_64QAM_FullRB



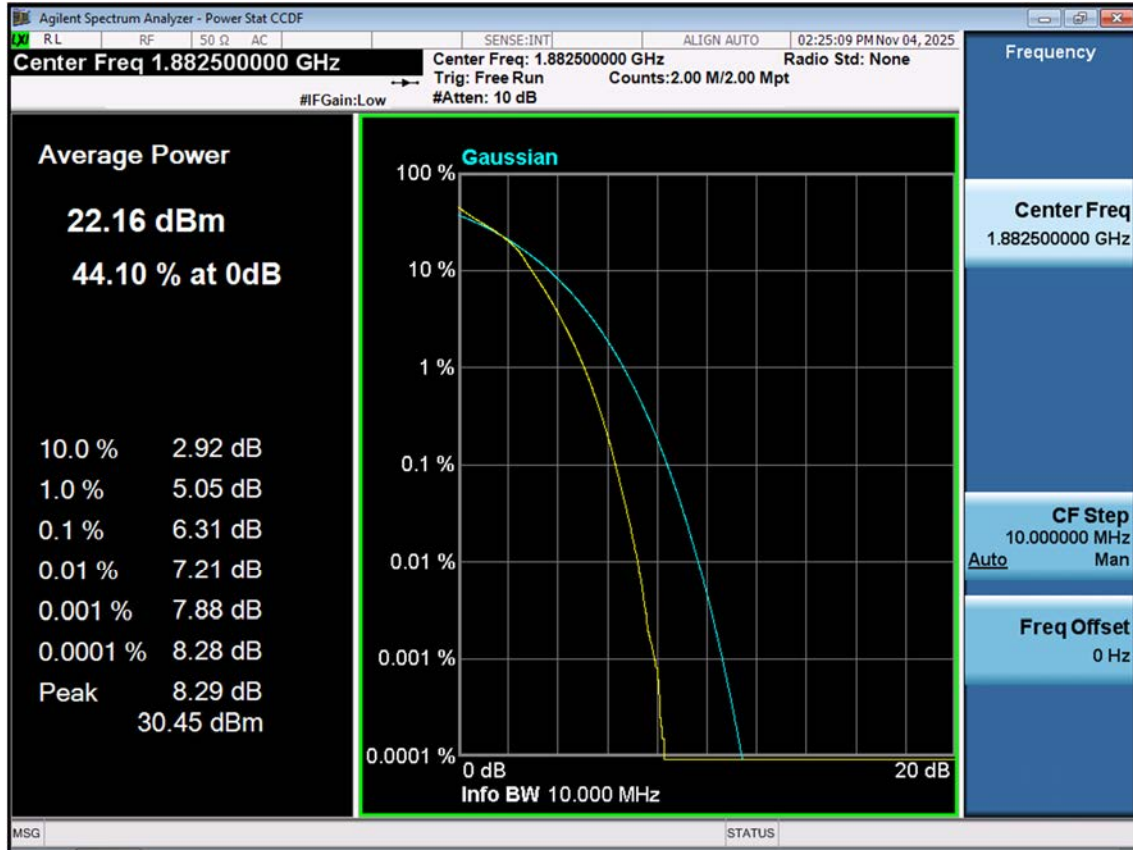
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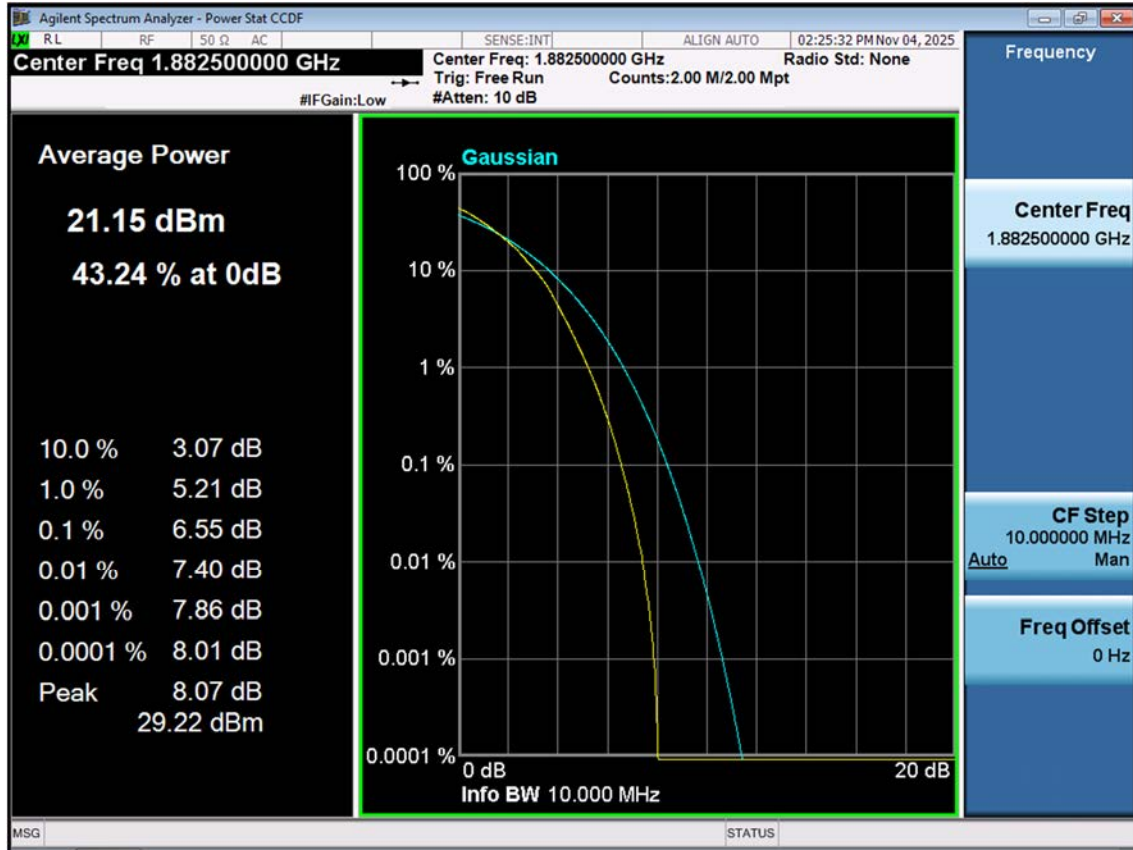
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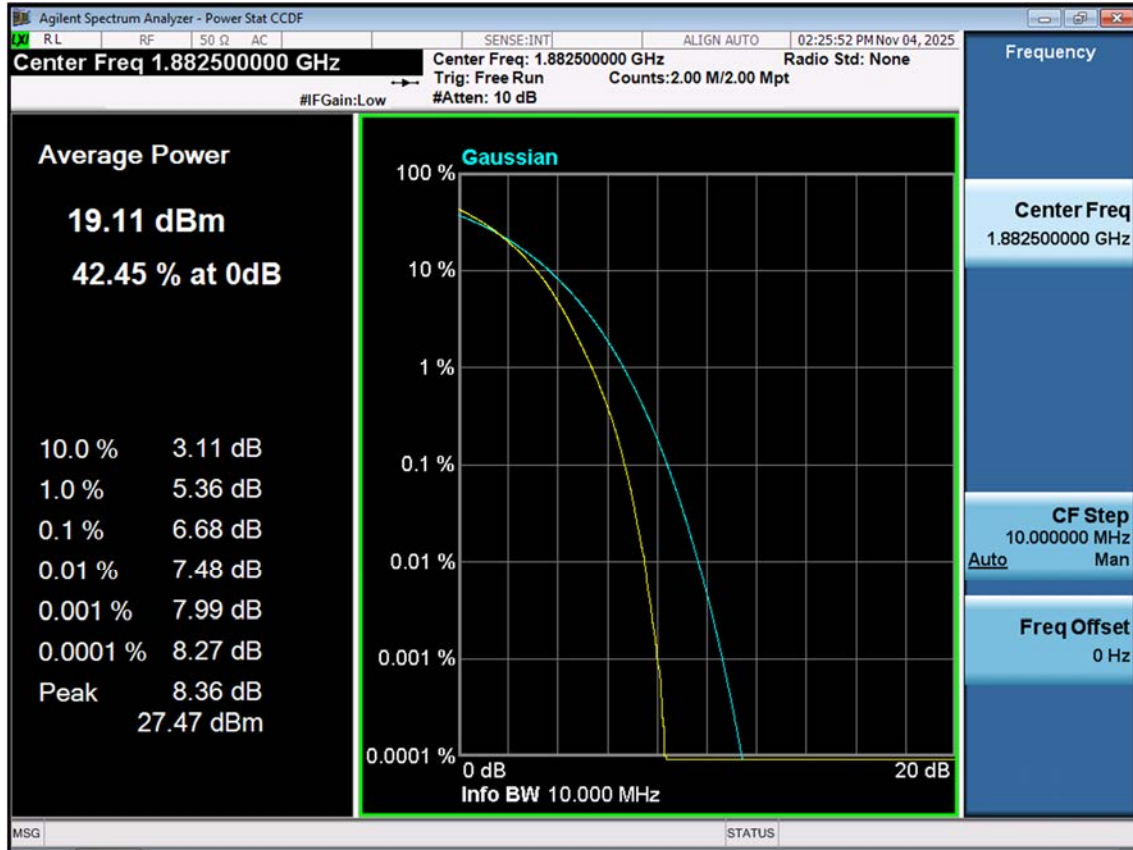
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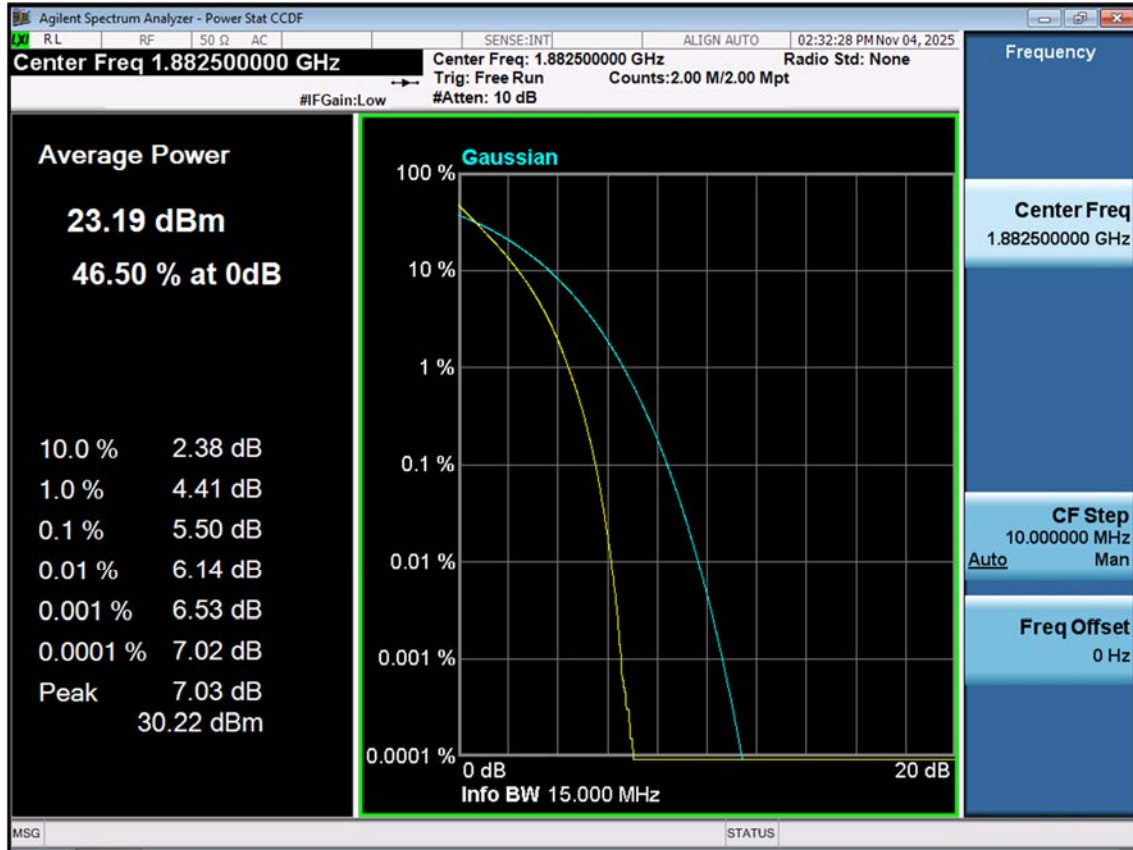
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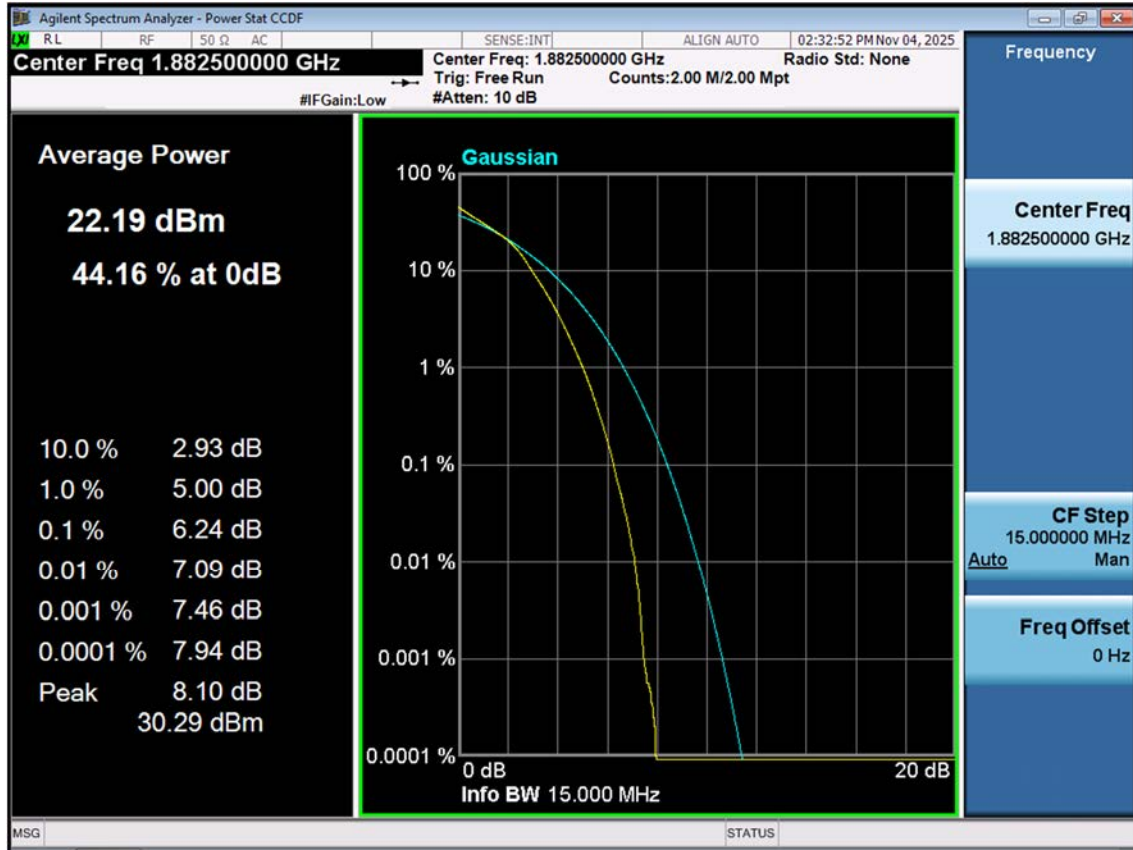
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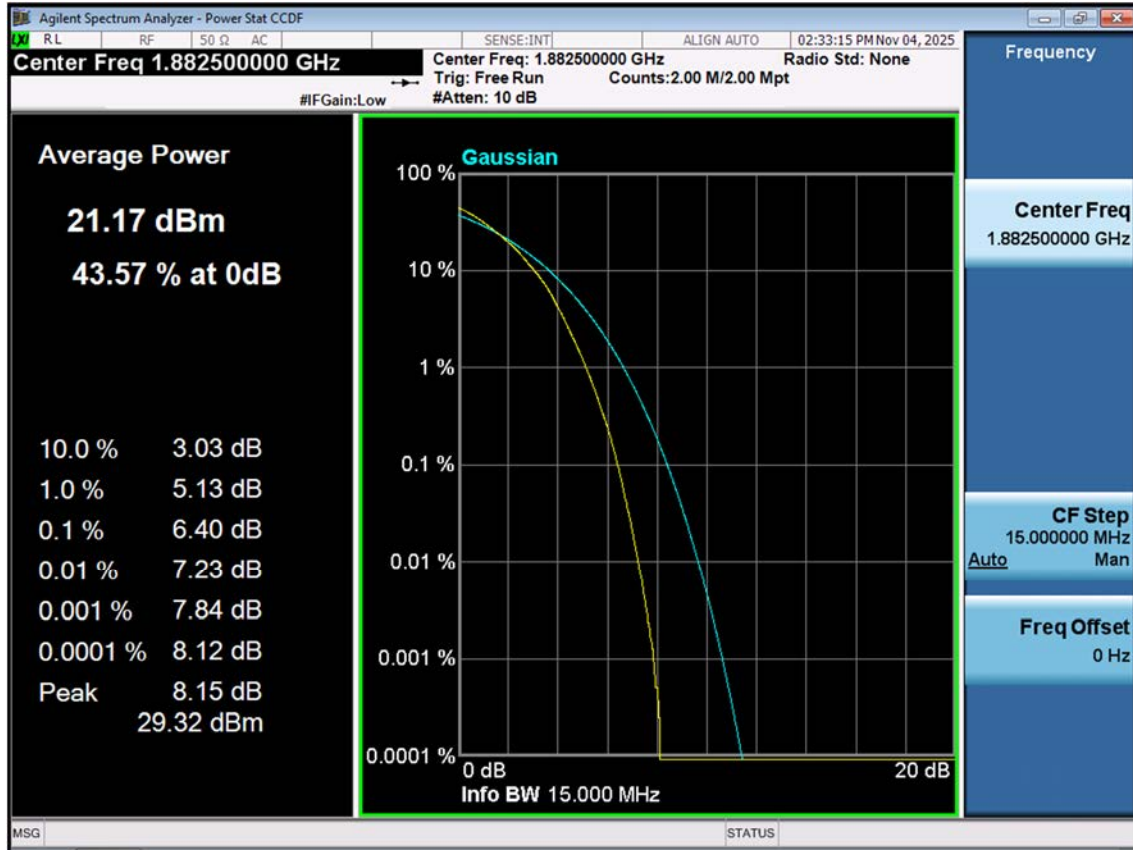
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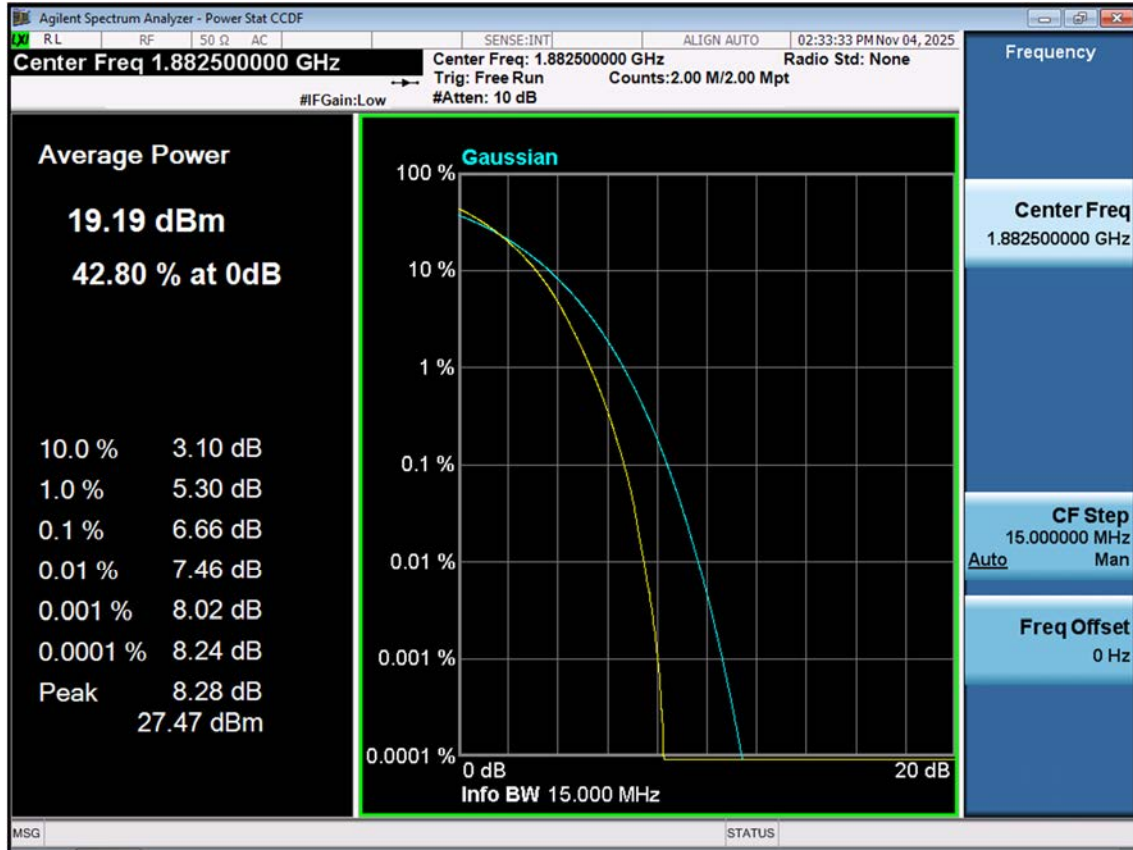
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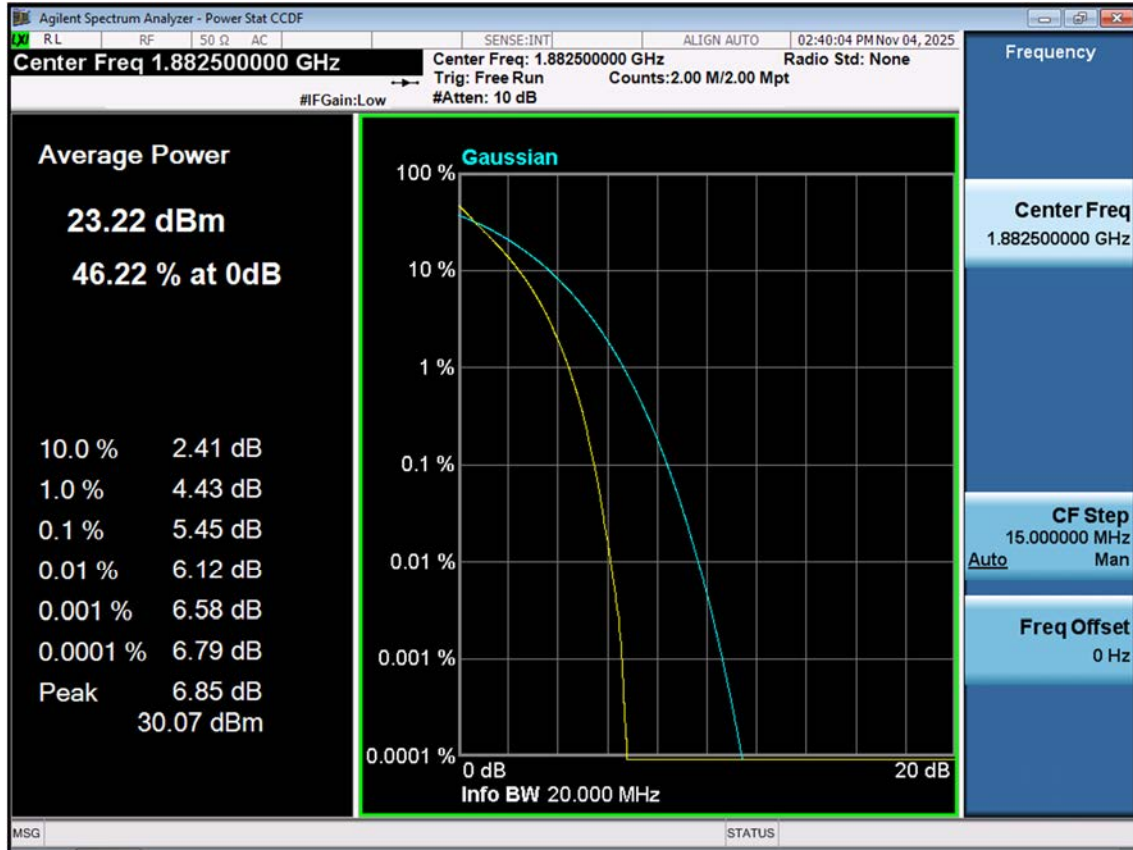
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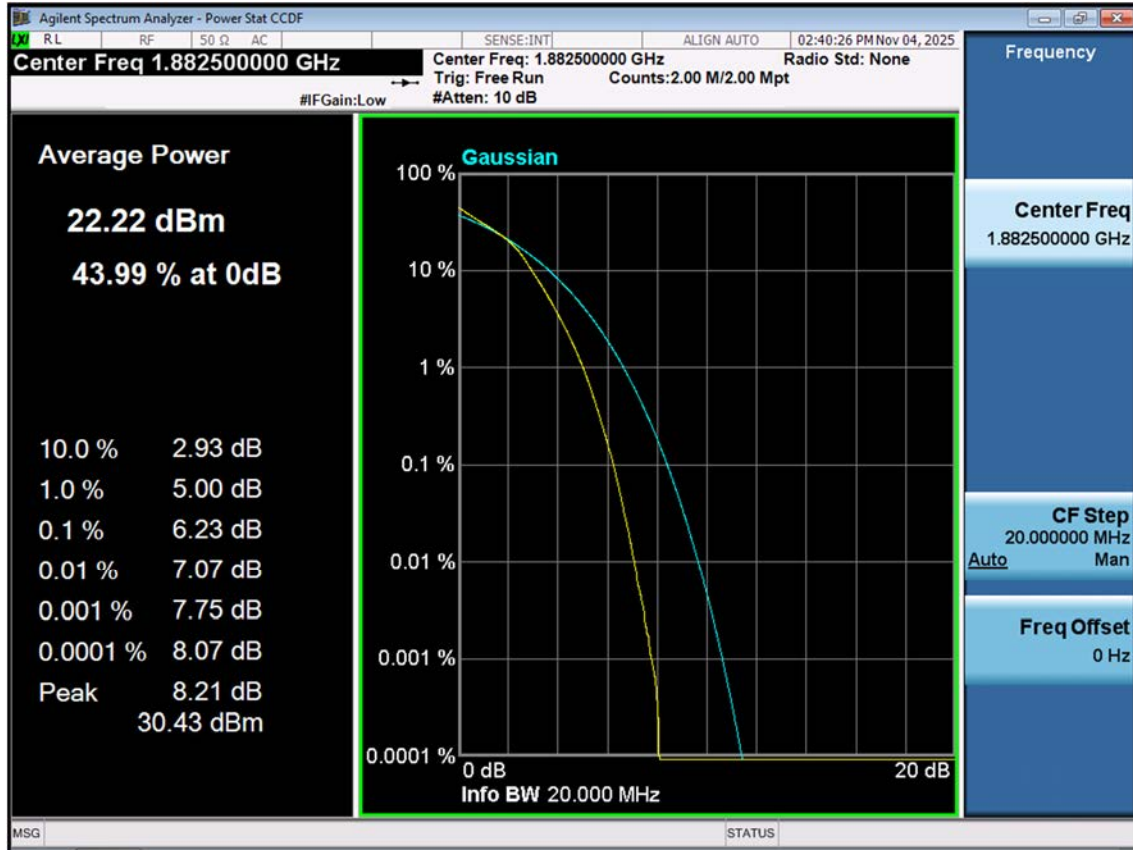
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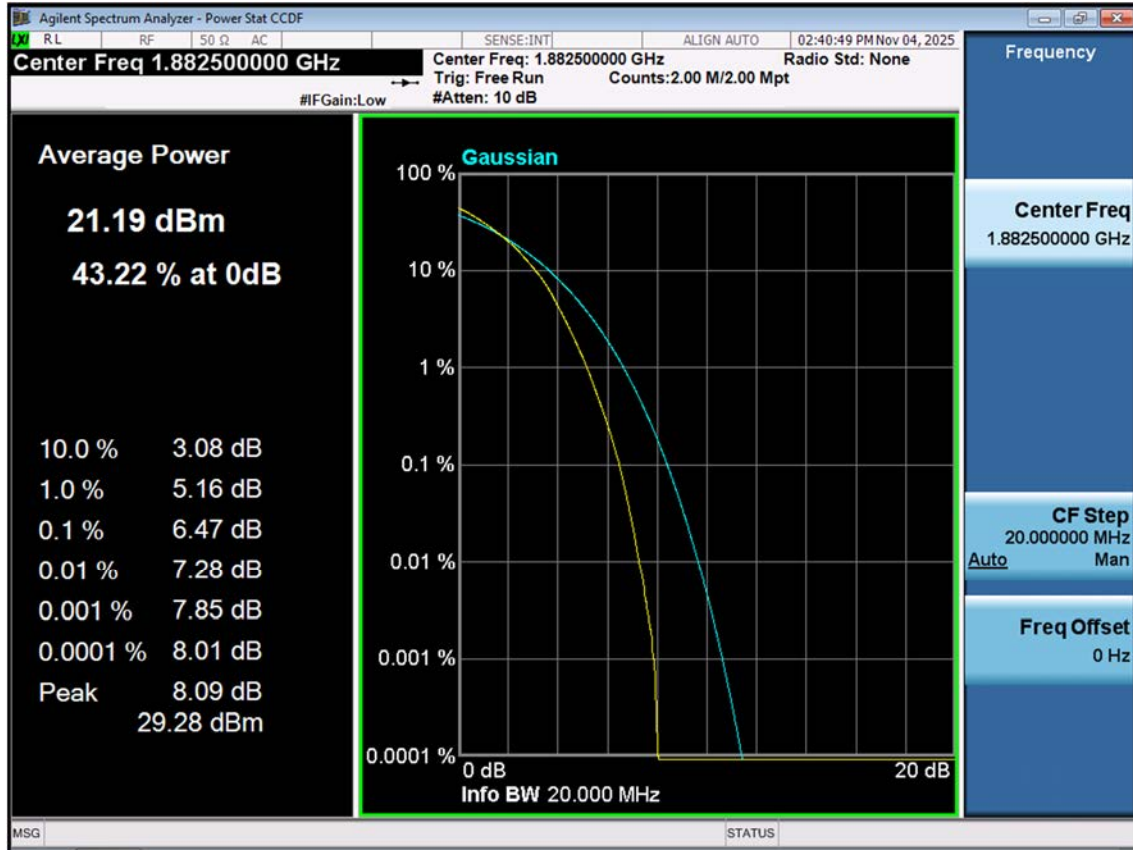
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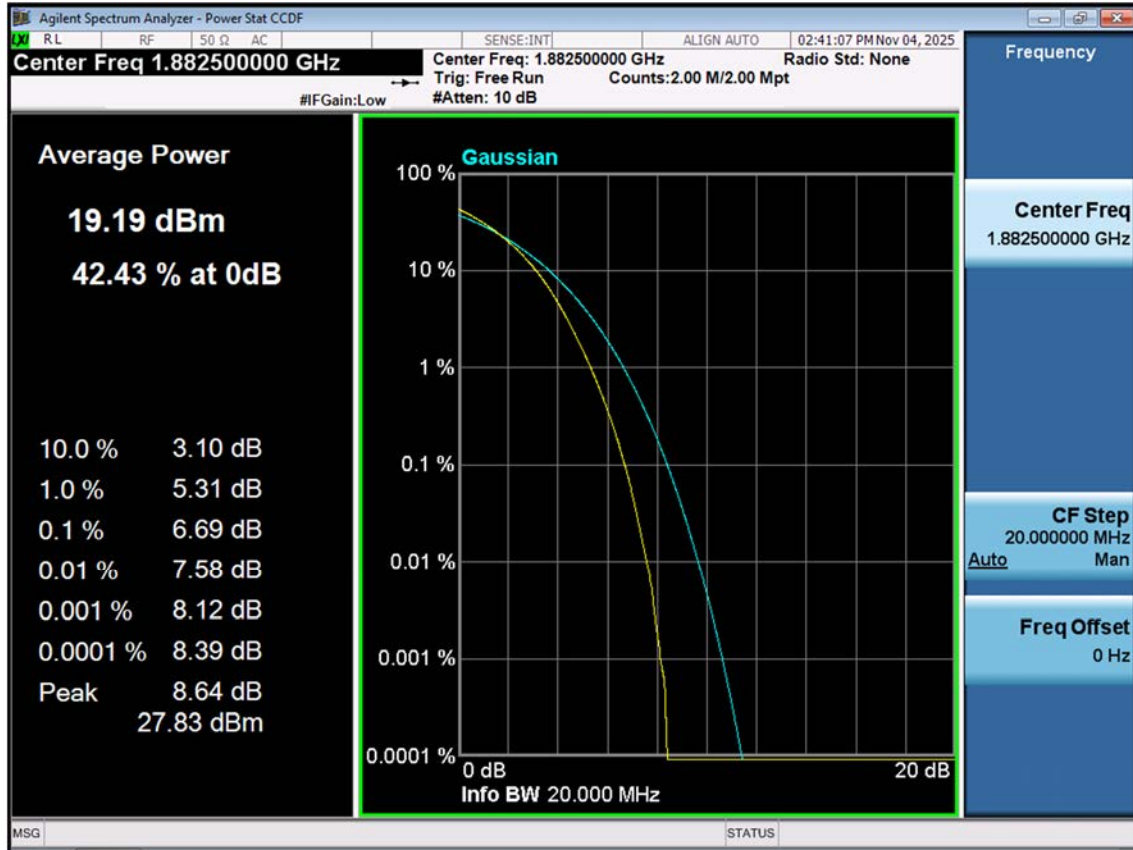
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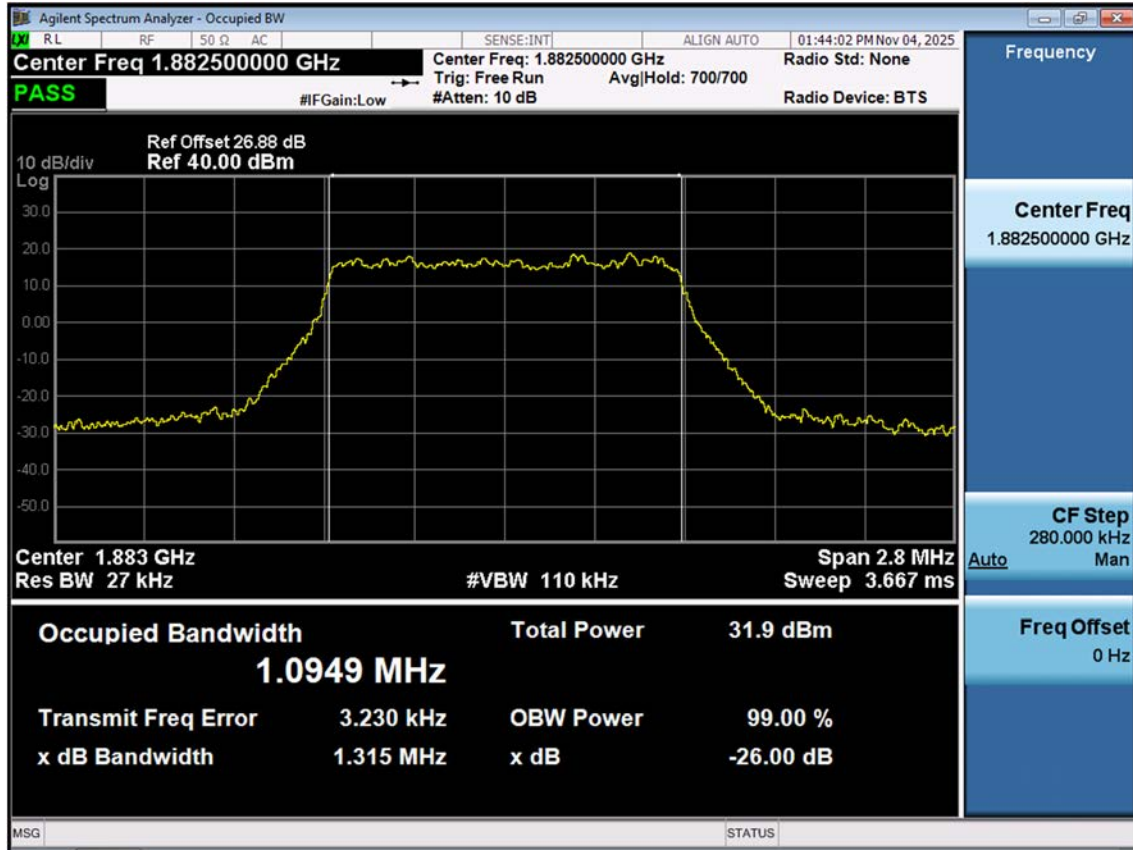
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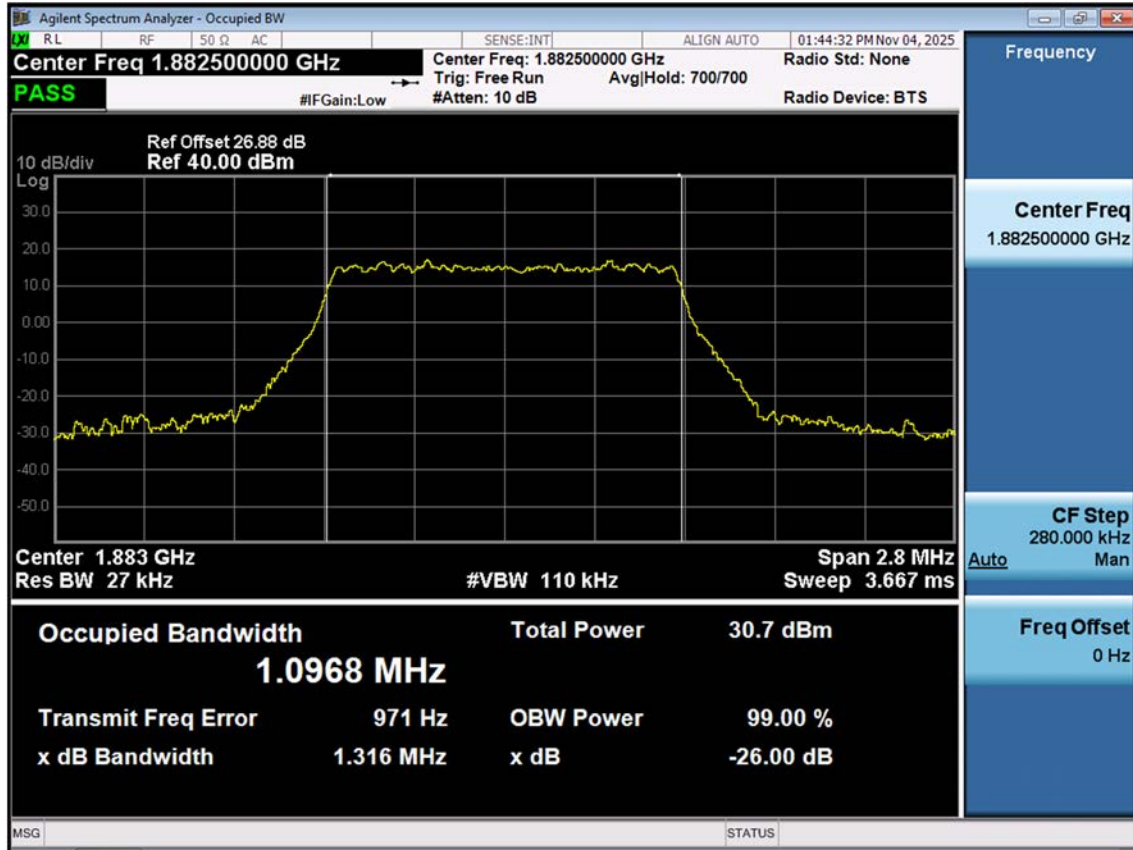
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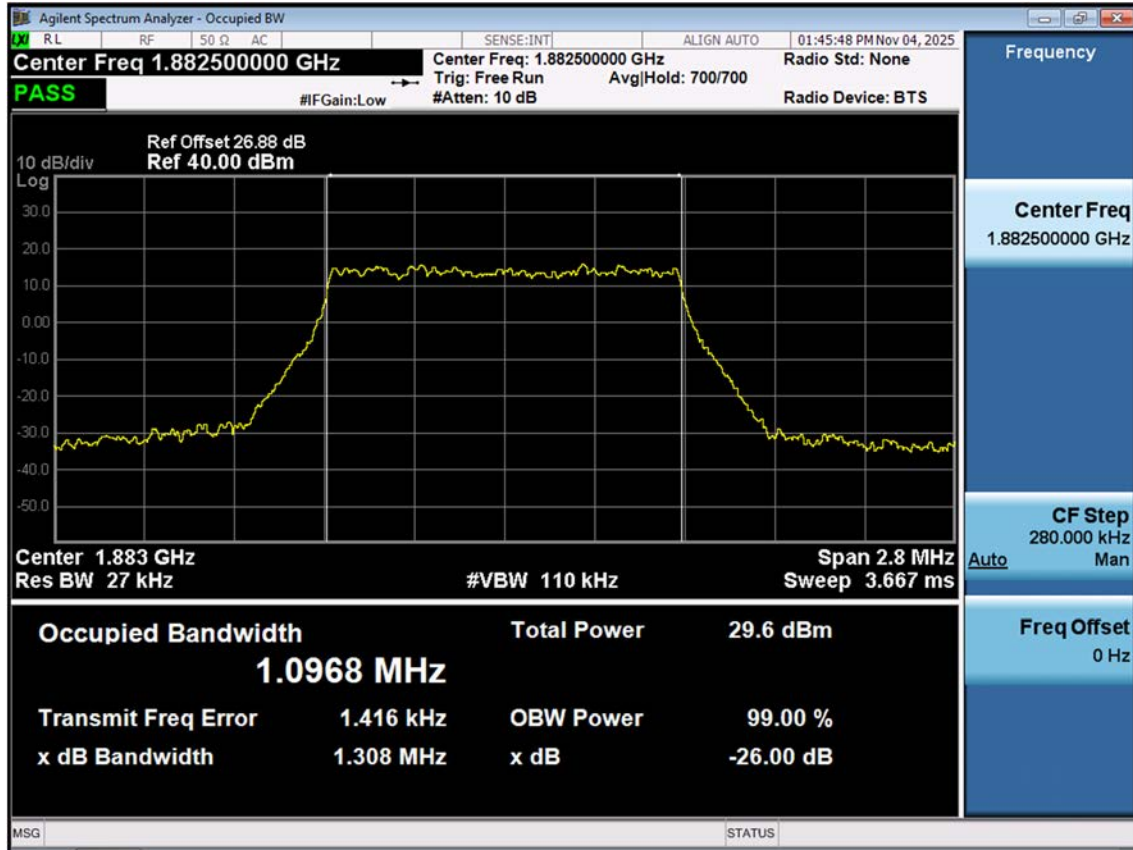
LTE B25(2)_1.4 M_OBW_Mid_QPSK_FullRB



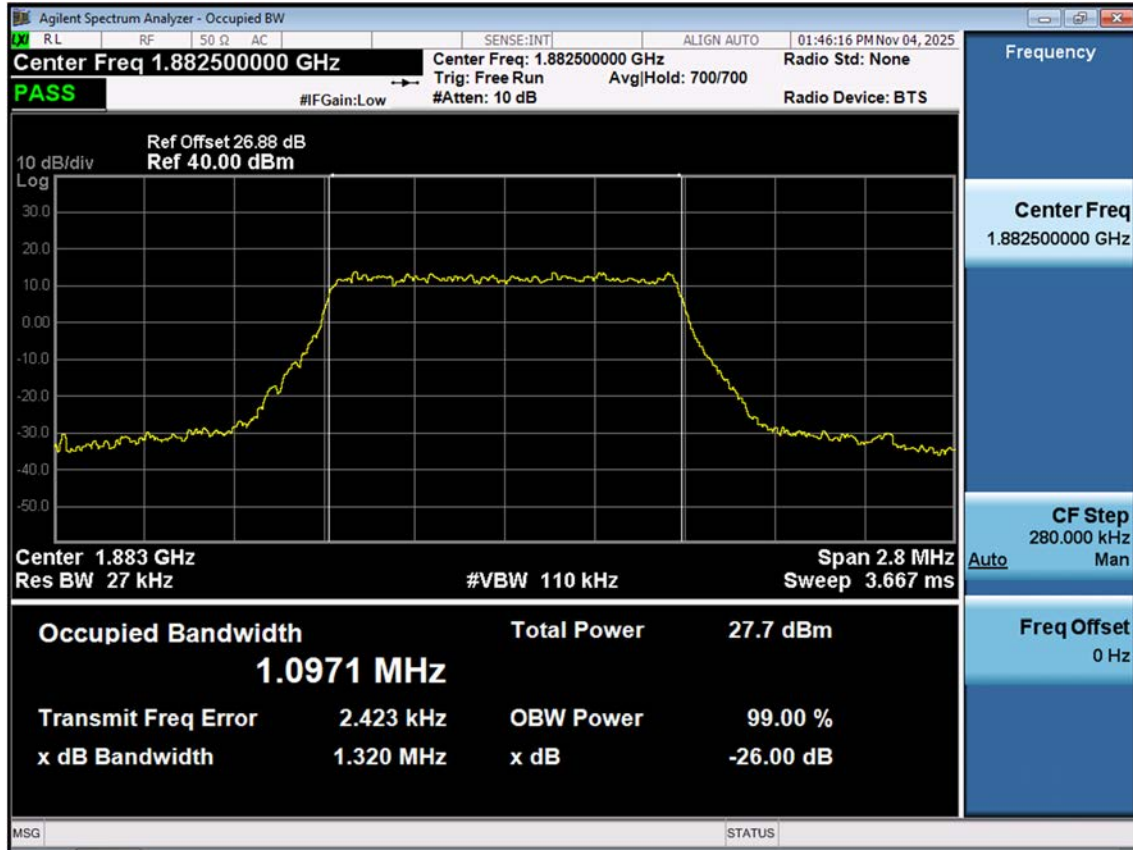
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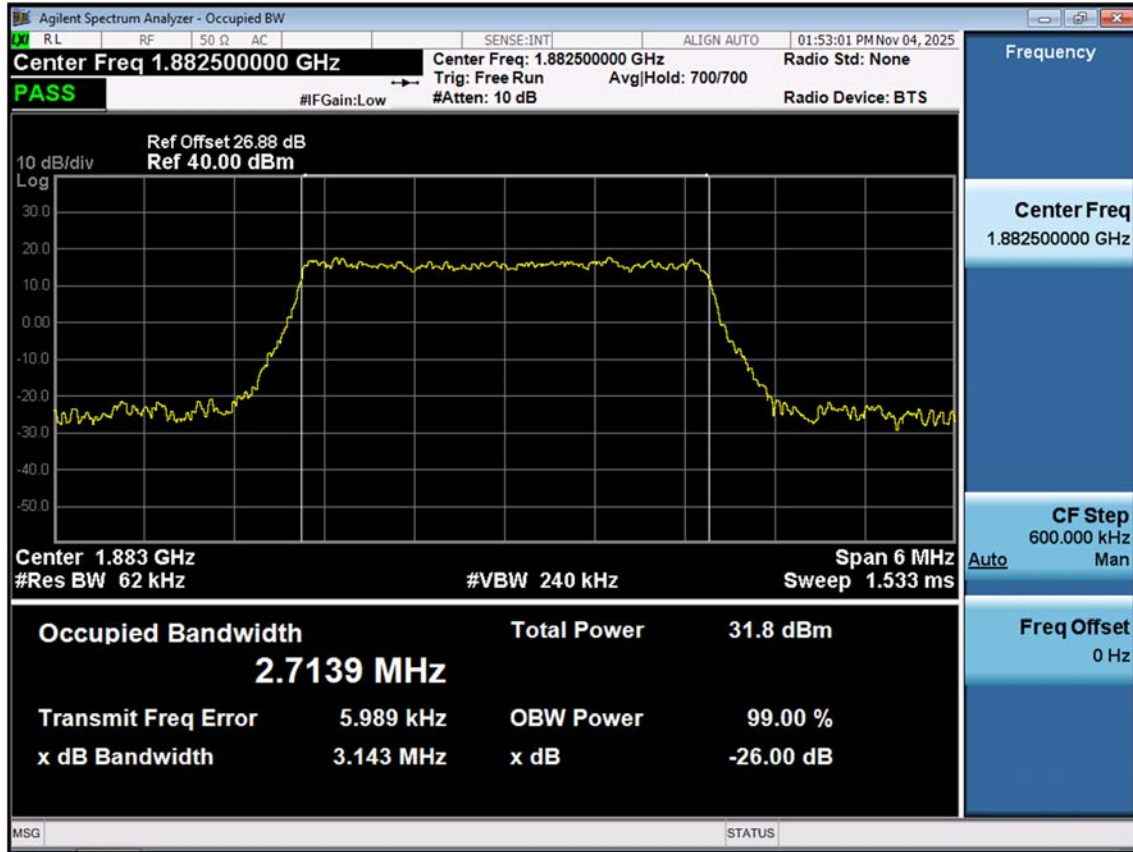
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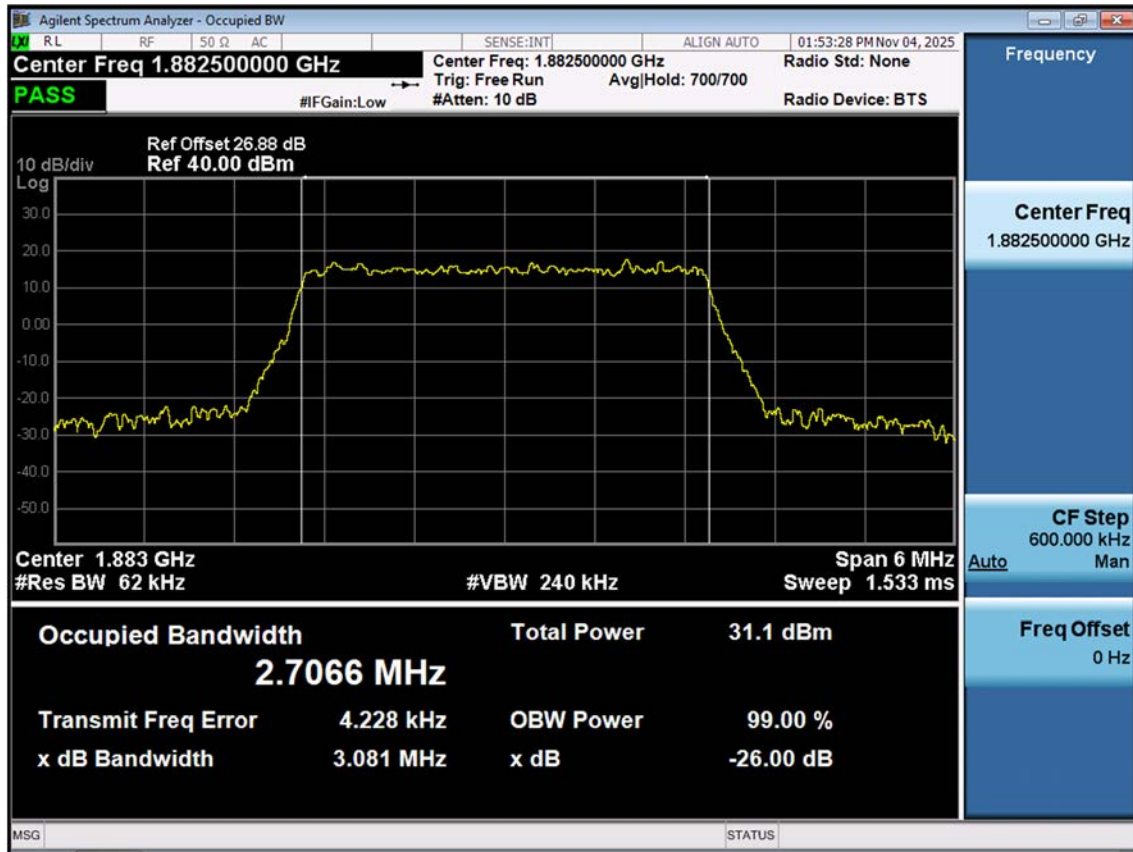
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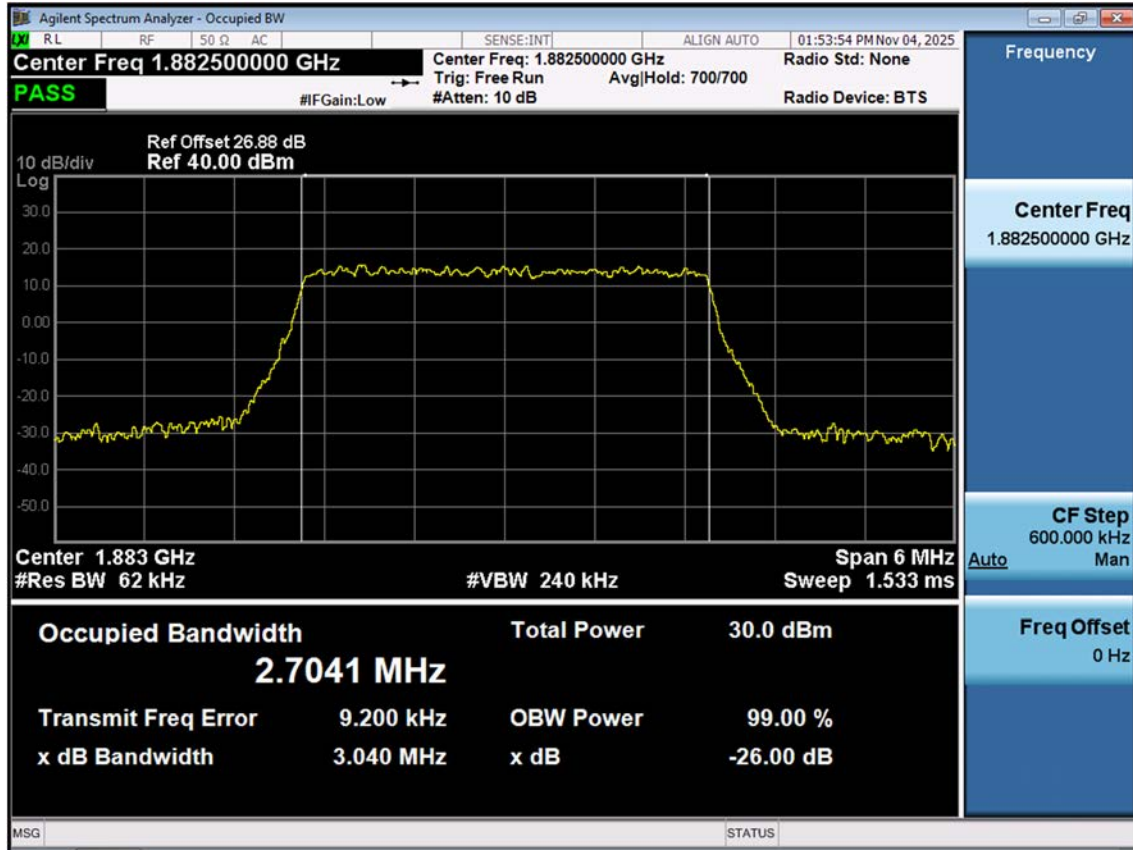
LTE B25(2)_3 M_OBW_Mid_QPSK_FullRB



LTE B25(2)_3 M_OBW_Mid_16QAM_FullRB



LTE B25(2)_3 M_OBW_Mid_64QAM_FullRB



Agilent Spectrum Analyzer - Occupied BW

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:54:16 PM Nov 04, 2025

Center Freq 1.882500000 GHz Center Freq: 1.882500000 GHz Radio Std: None
PASS Trg: Free Run Avg/Hold: 700/700
#IFGain: Low #Atten: 10 dB Radio Device: BTS

Ref Offset 26.88 dB
Ref 40.00 dBm

10 dB/div
Log

Center 1.883 GHz Span 6 MHz
#Res BW 62 kHz #VBW 240 kHz Sweep 1.533 ms

Occupied Bandwidth		Total Power	27.9 dBm
2.7158 MHz			
Transmit Freq Error	7.870 kHz	OBW Power	99.00 %
x dB Bandwidth	3.150 MHz	x dB	-26.00 dB

MSG STATUS

Frequency

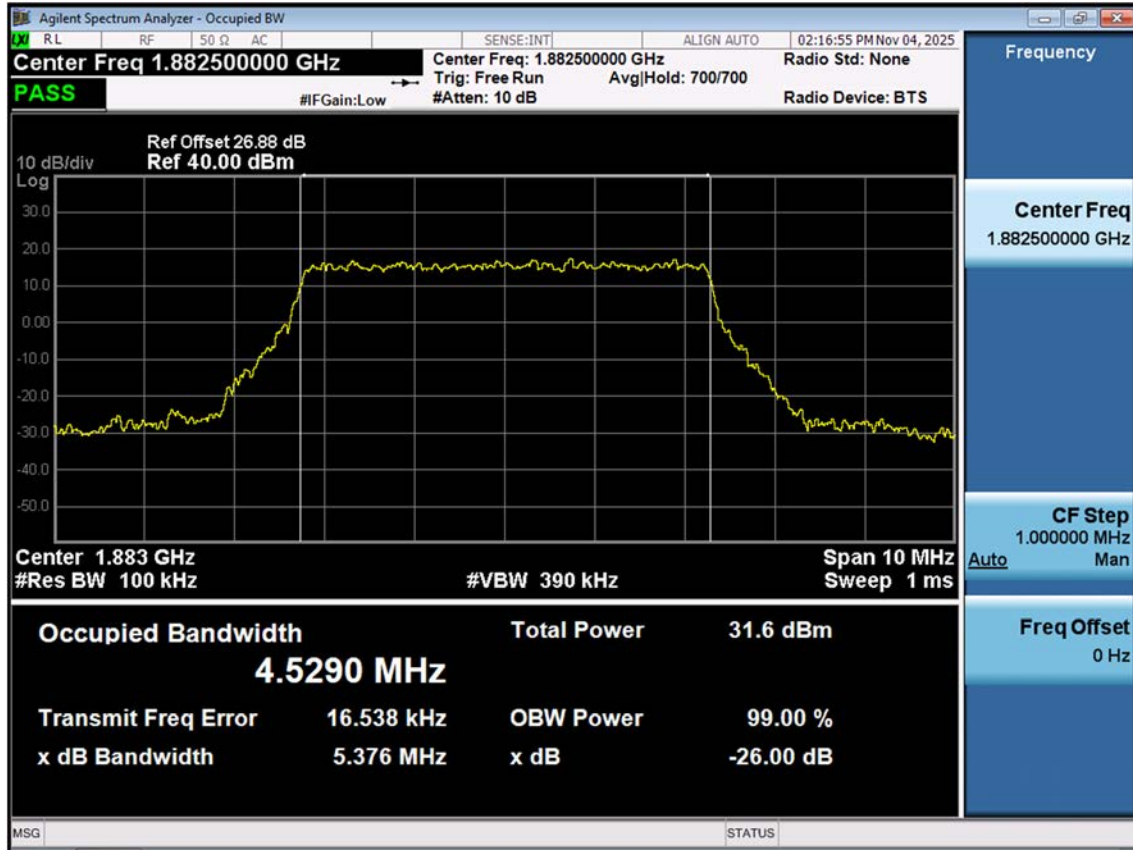
Center Freq
1.882500000 GHz

CF Step
600.000 kHz
Man

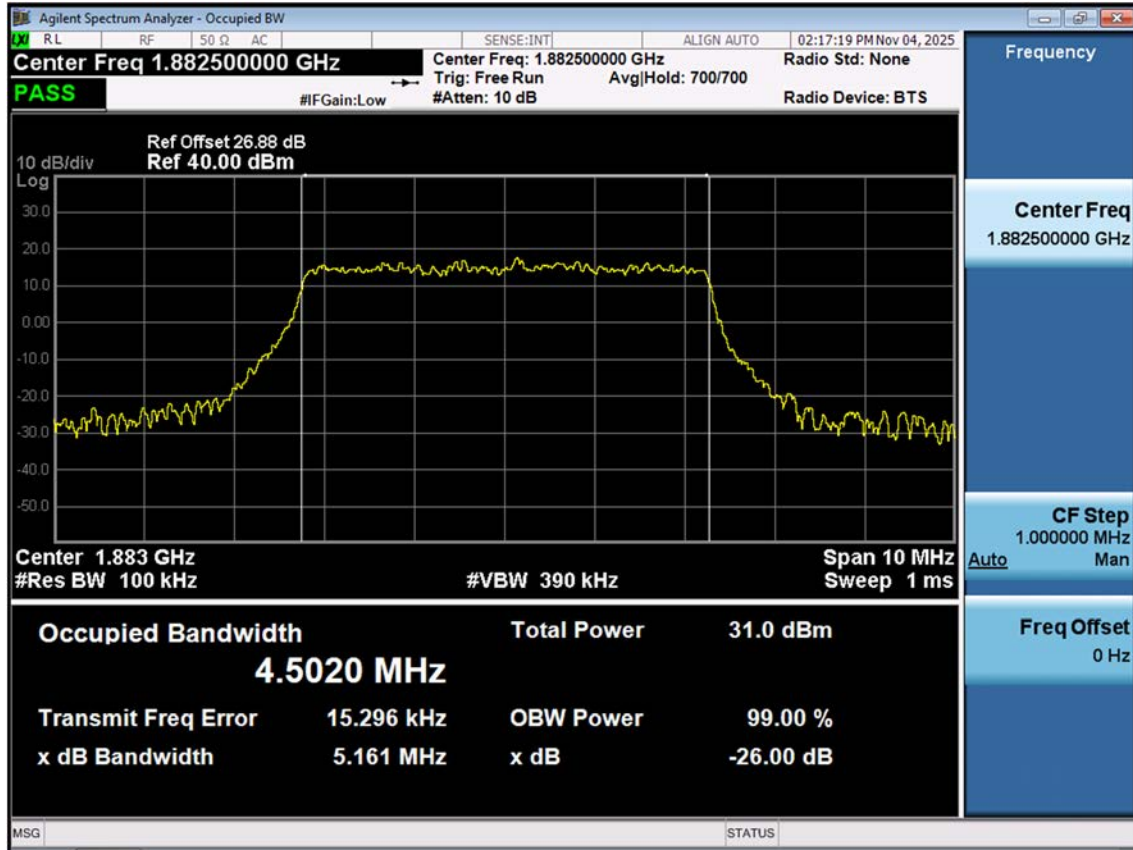
Auto

Freq Offset
0 Hz

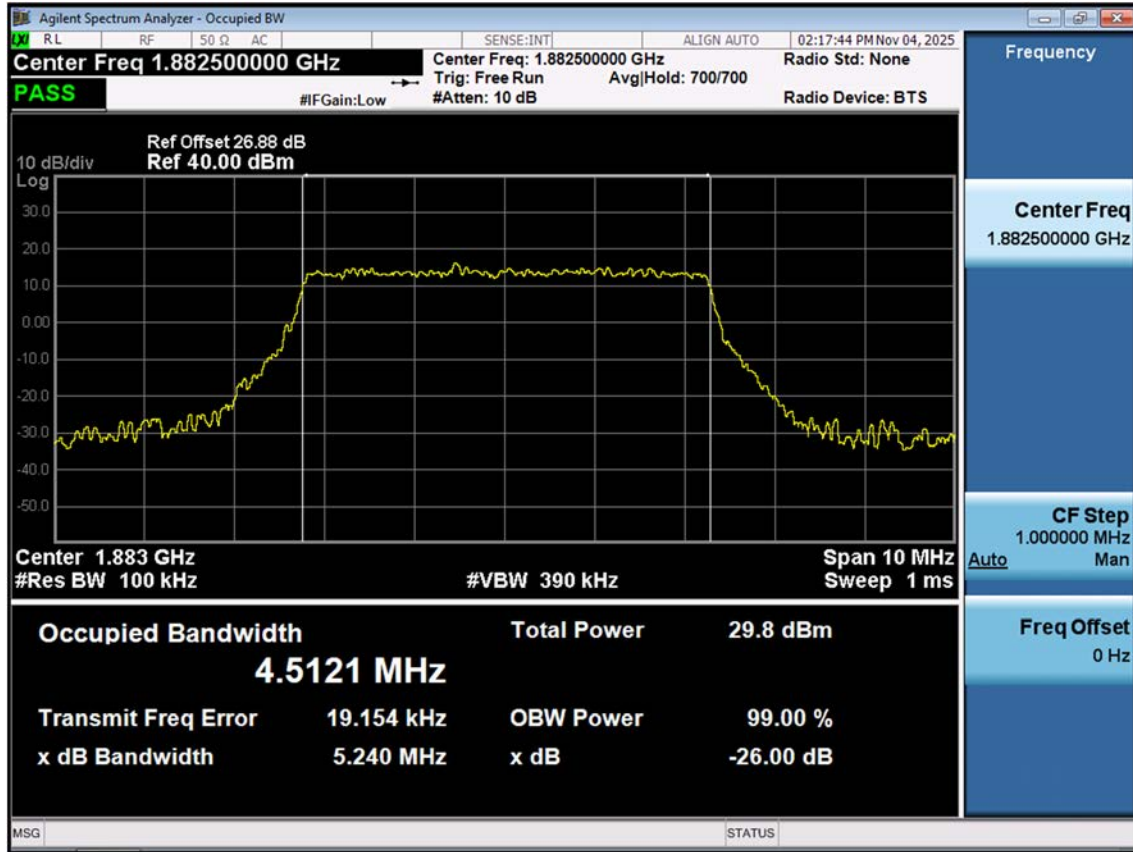
LTE B25(2)_5 M_OBW_Mid_QPSK_FullRB



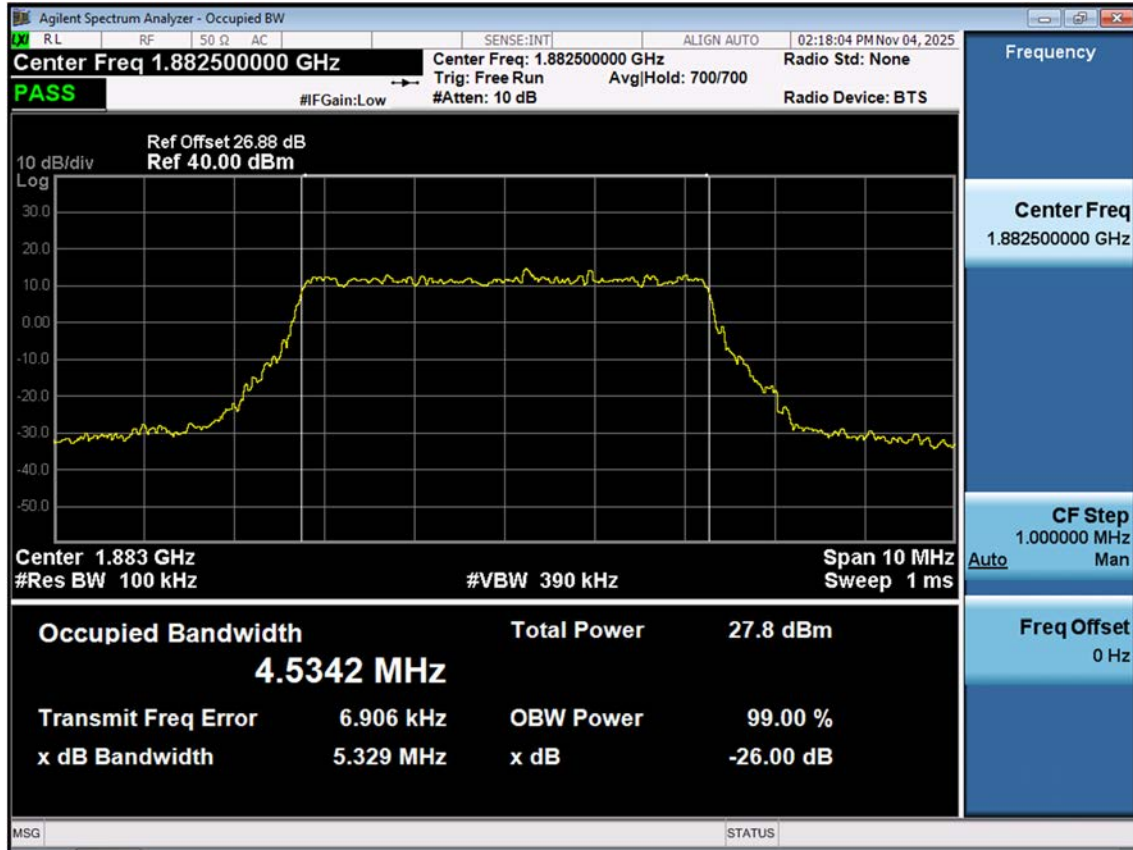
LTE B25(2)_5 M_OBW_Mid_16QAM_FullRB



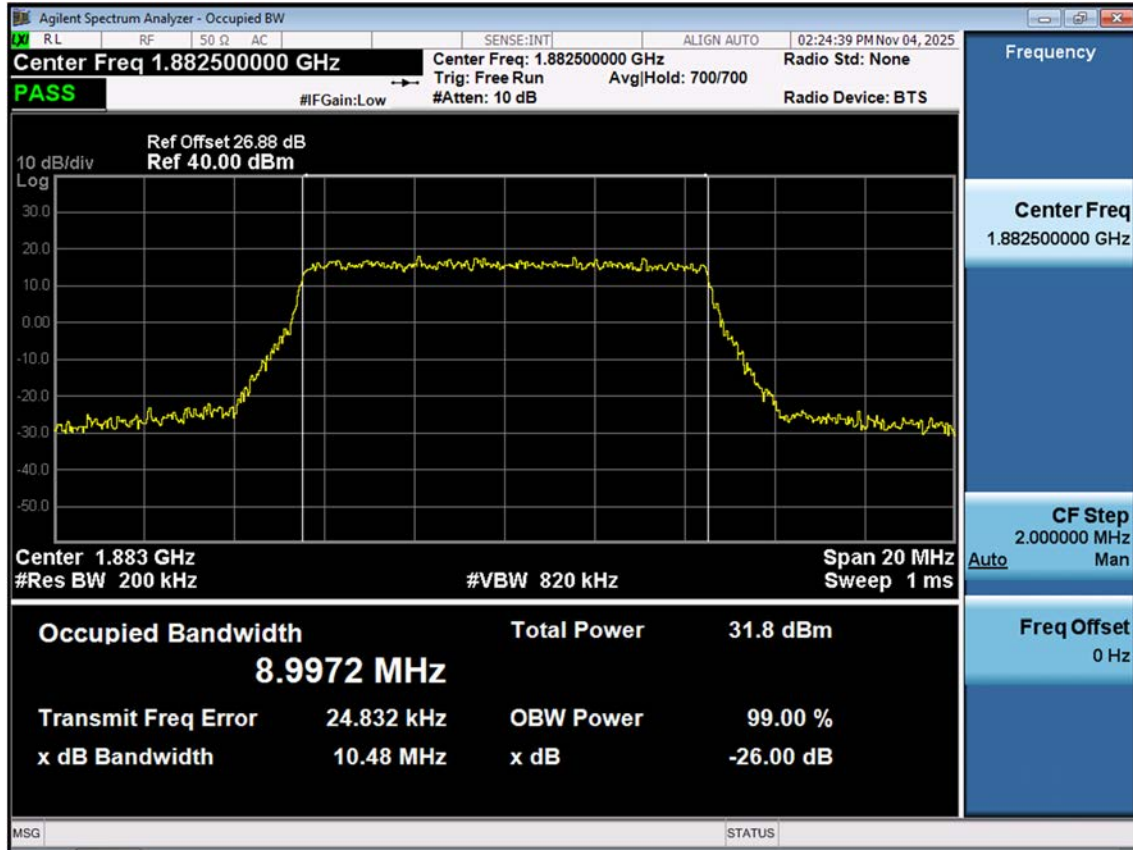
LTE B25(2)_5 M_OBW_Mid_64QAM_FullRB



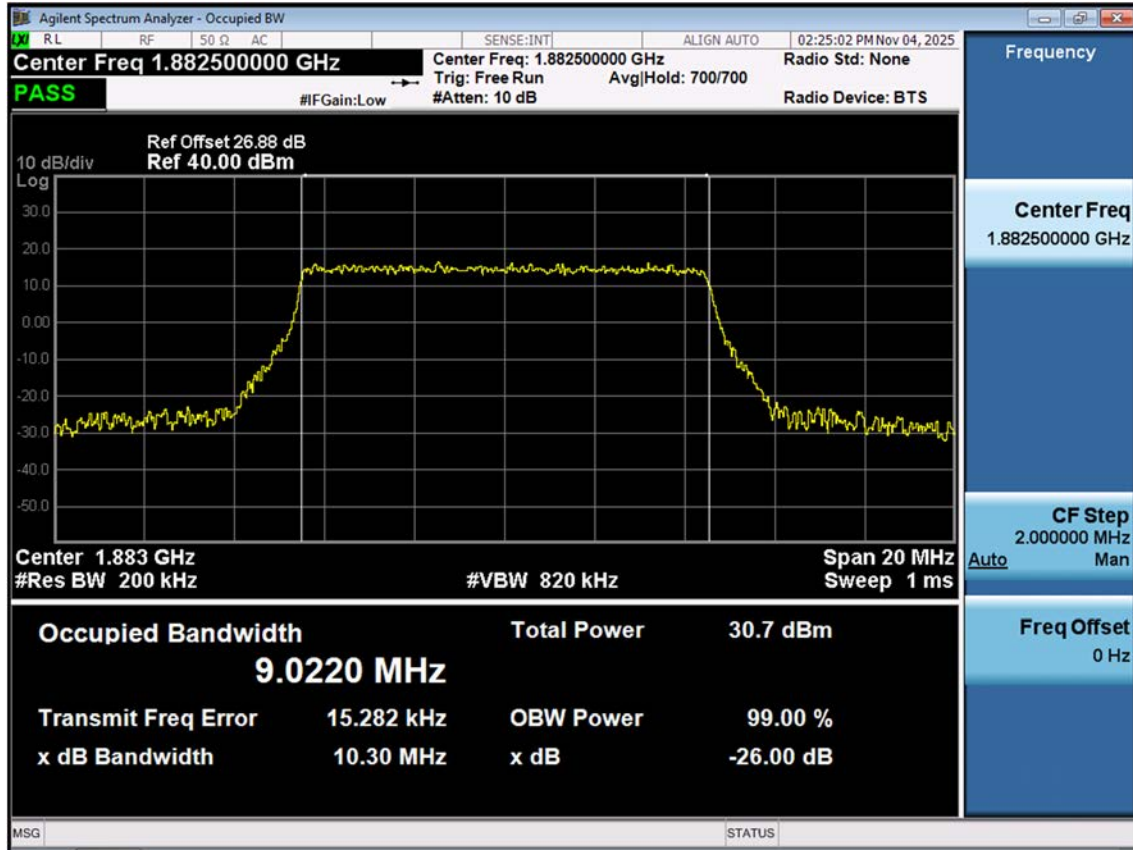
LTE B25(2)_5 M_OBW_Mid_256QAM_FullRB



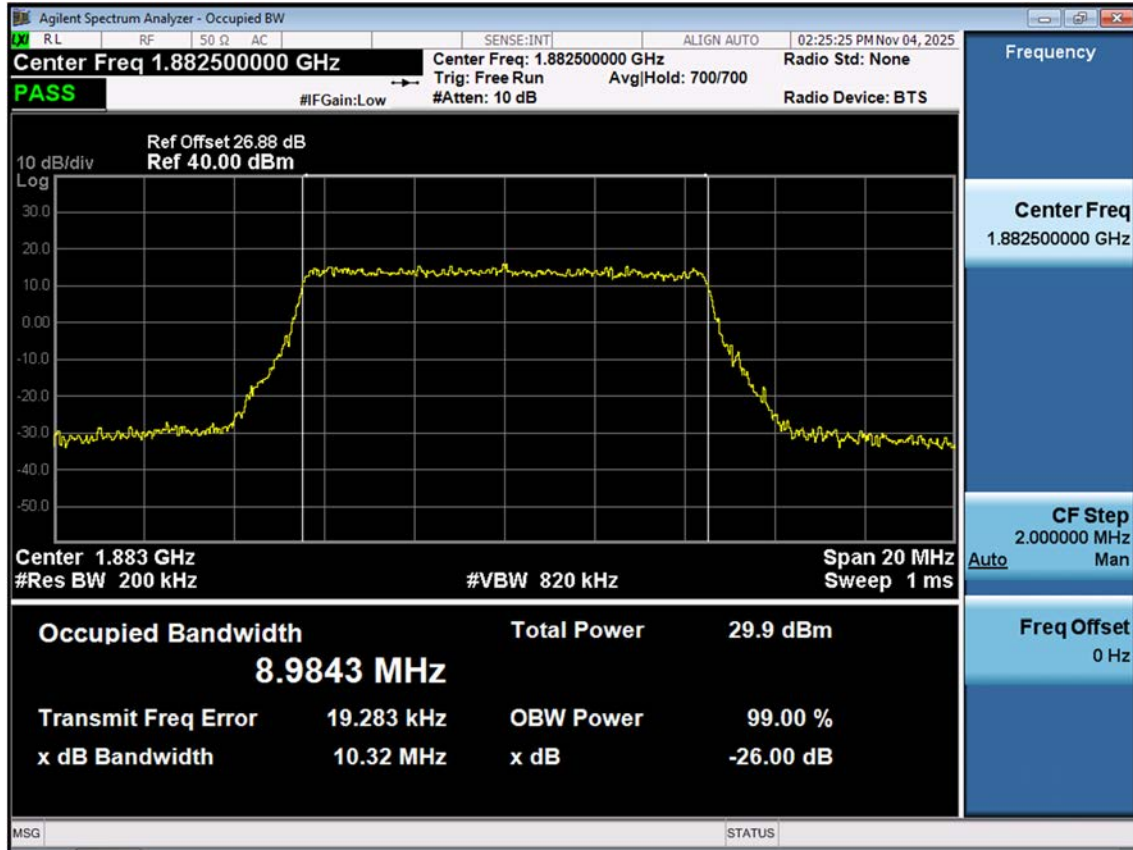
LTE B25(2)_10 M_OBW_Mid_QPSK_FullRB



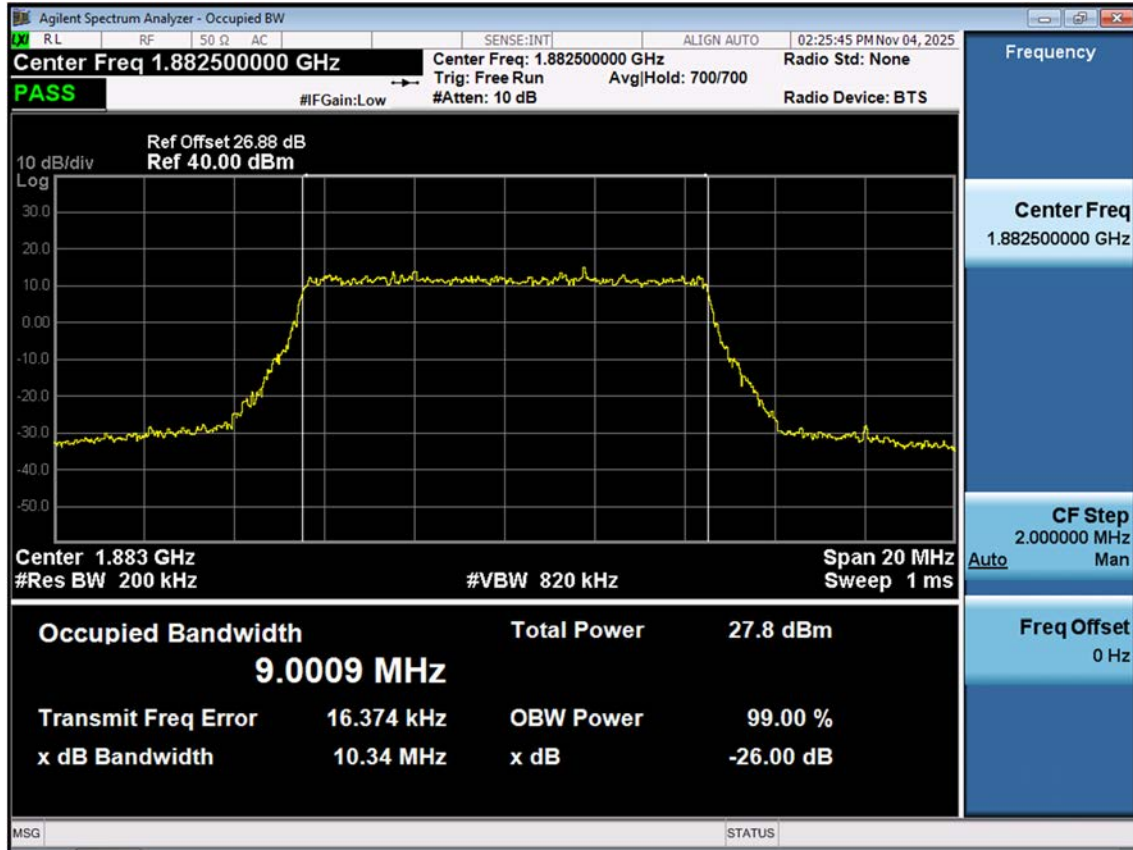
LTE B25(2)_10 M_OBW_Mid_16QAM_FullRB



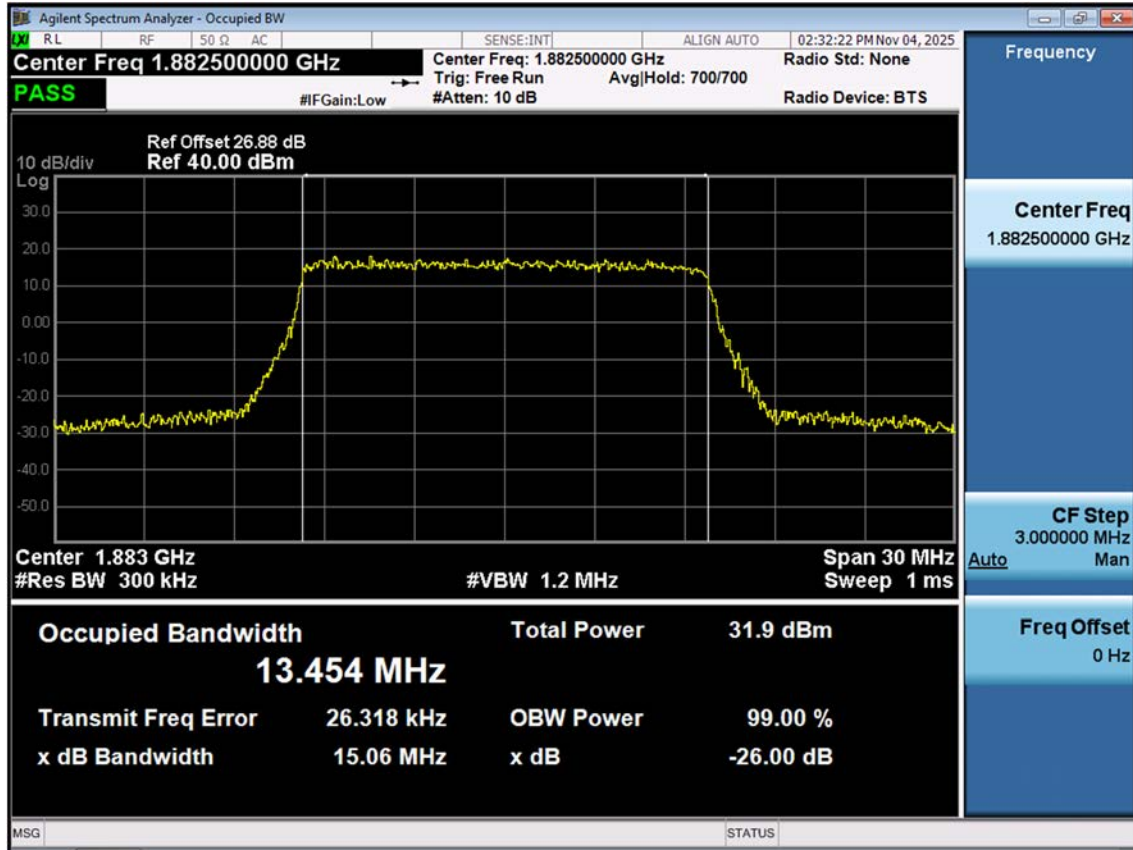
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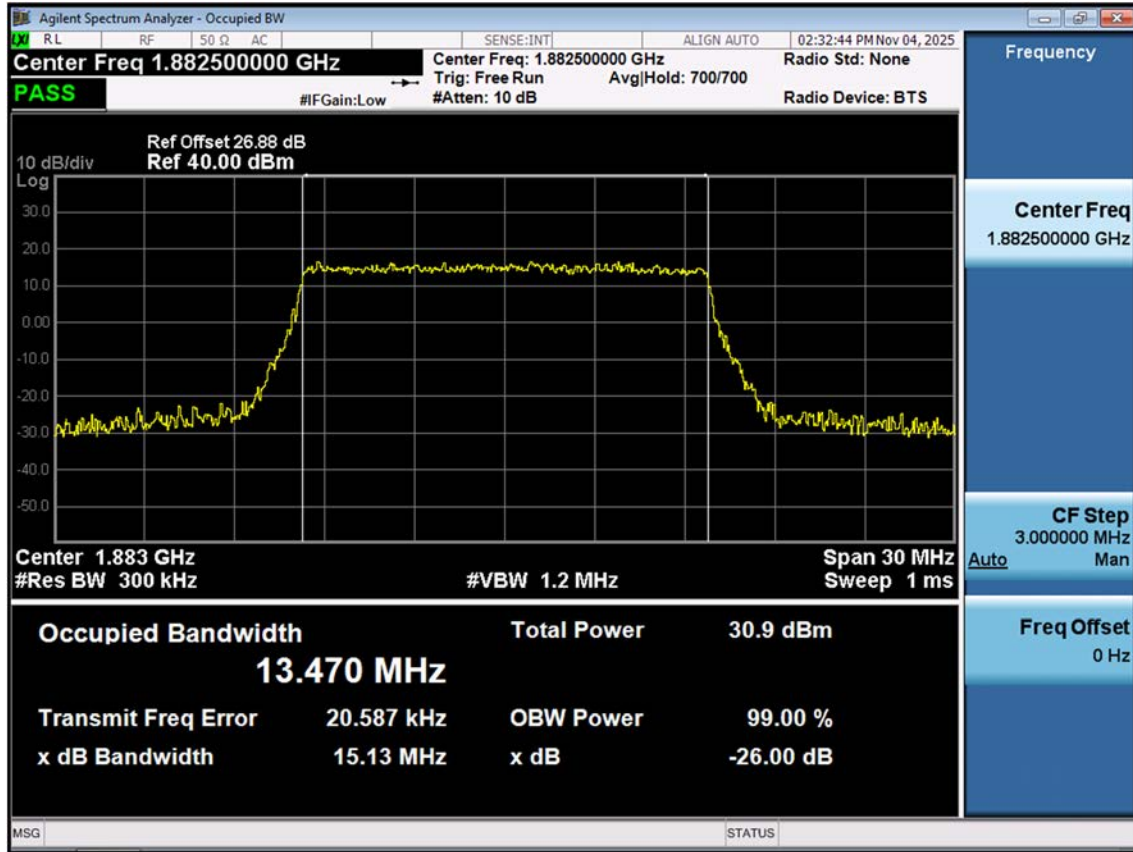
LTE B25(2)_10 M_OBW_Mid_256QAM_FullRB



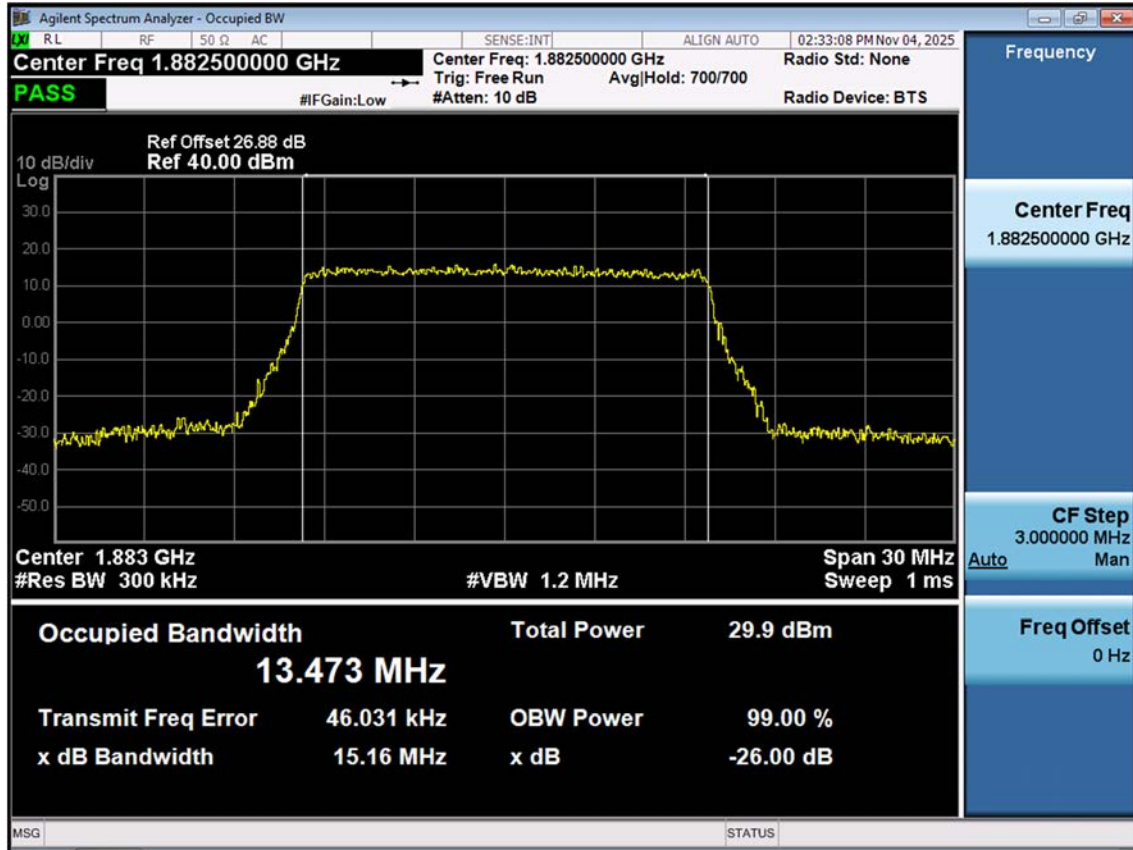
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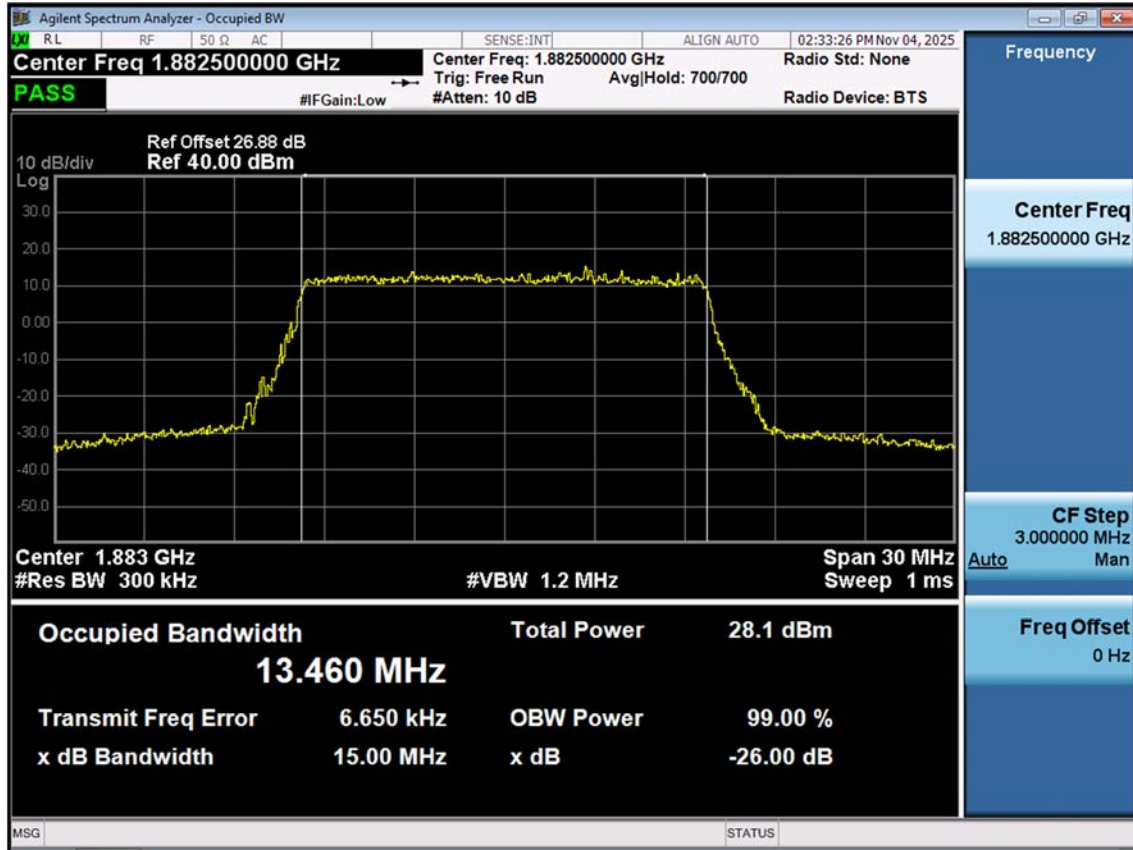
LTE B25(2)_15 M_OBW_Mid_16QAM_FullRB



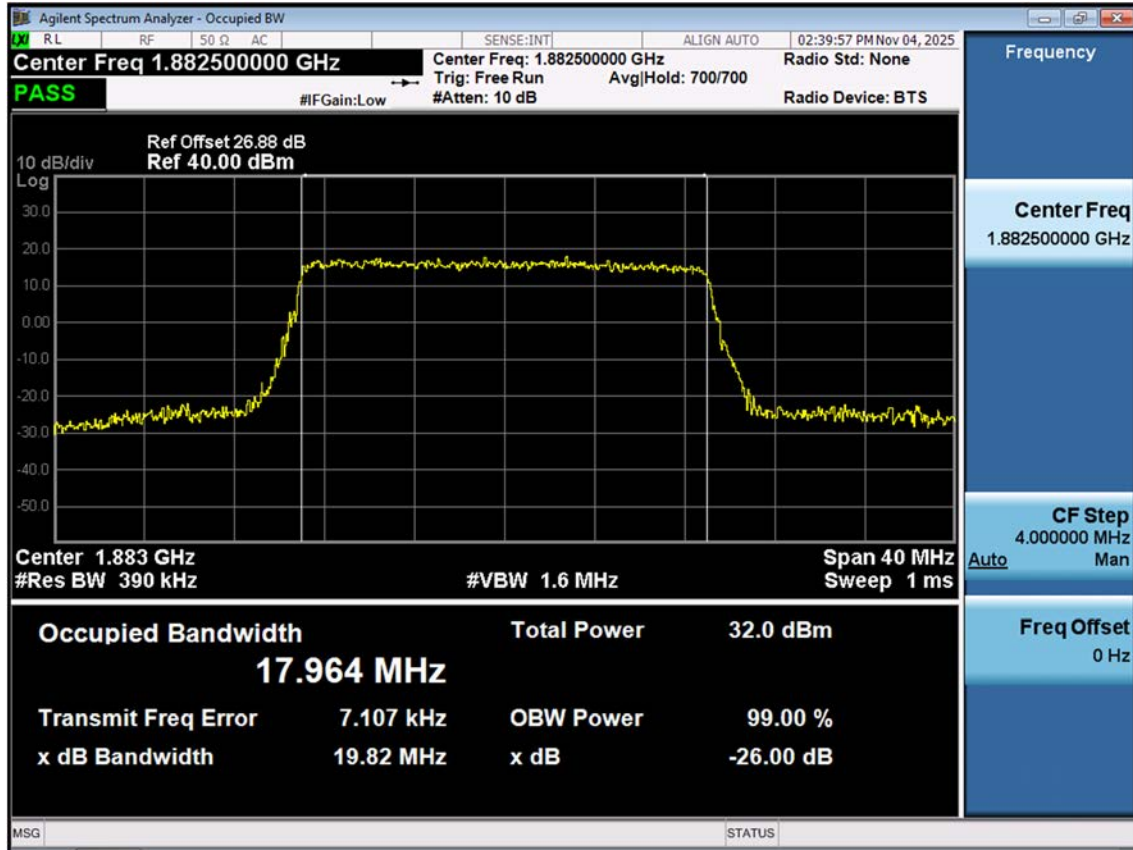
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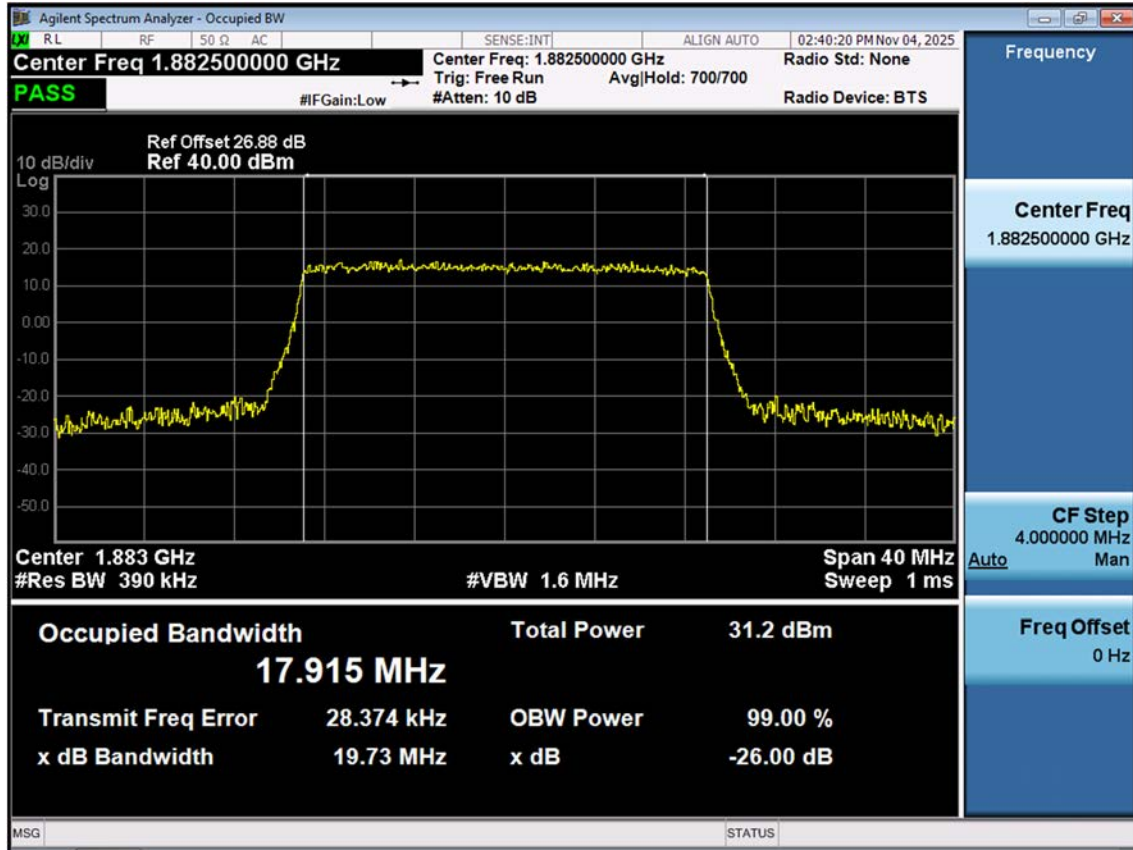
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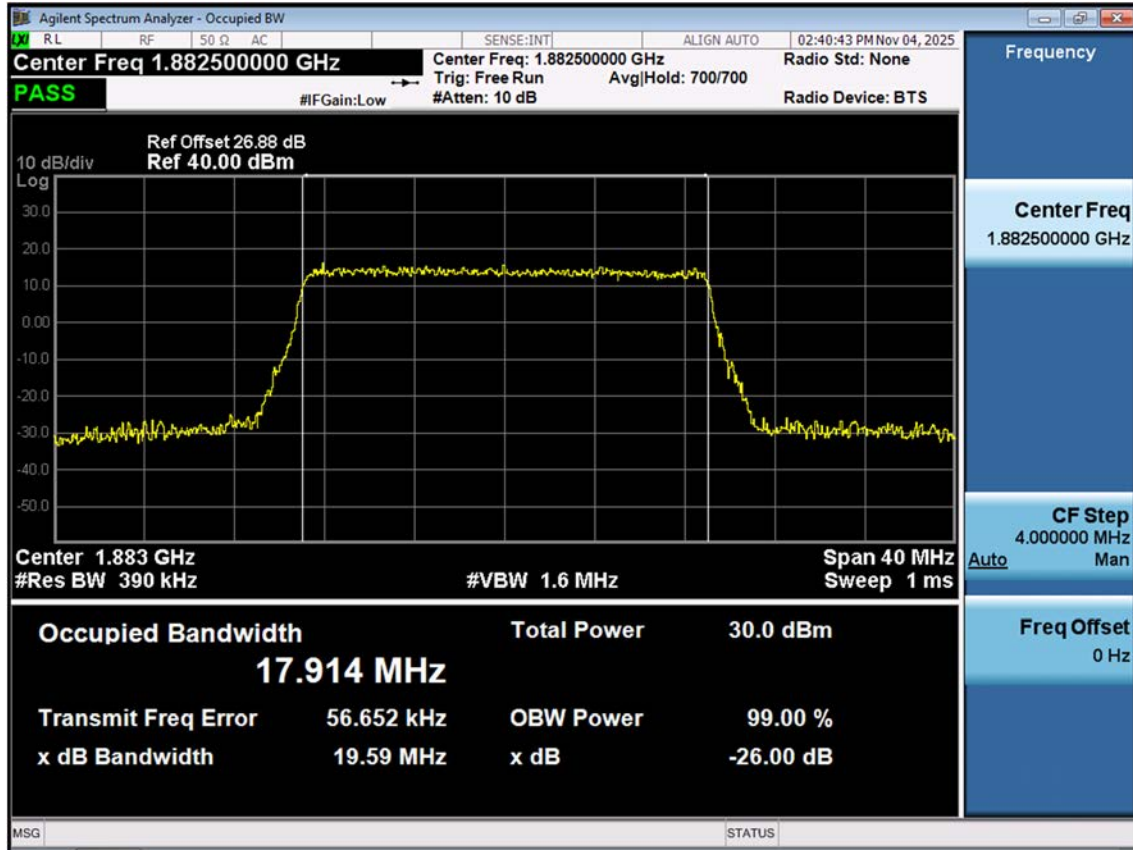
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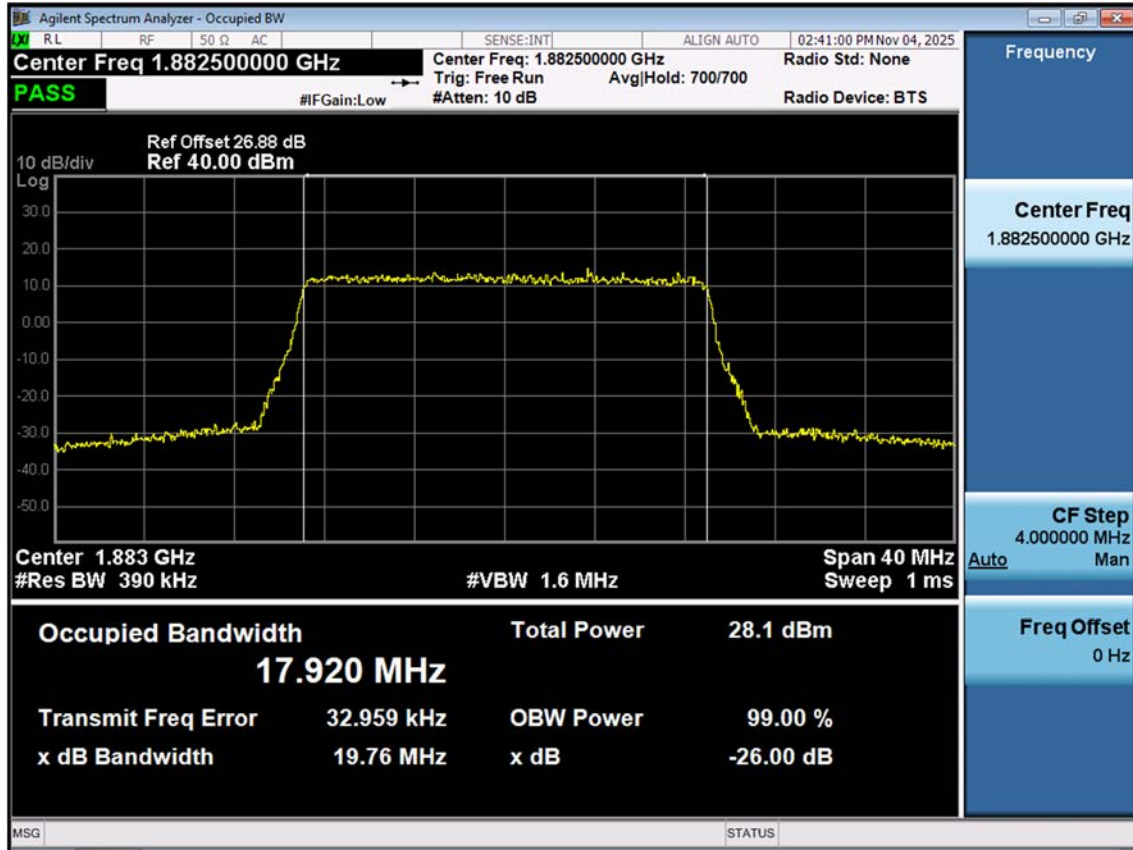
LTE B25(2)_20 M_OBW_Mid_16QAM_FullRB



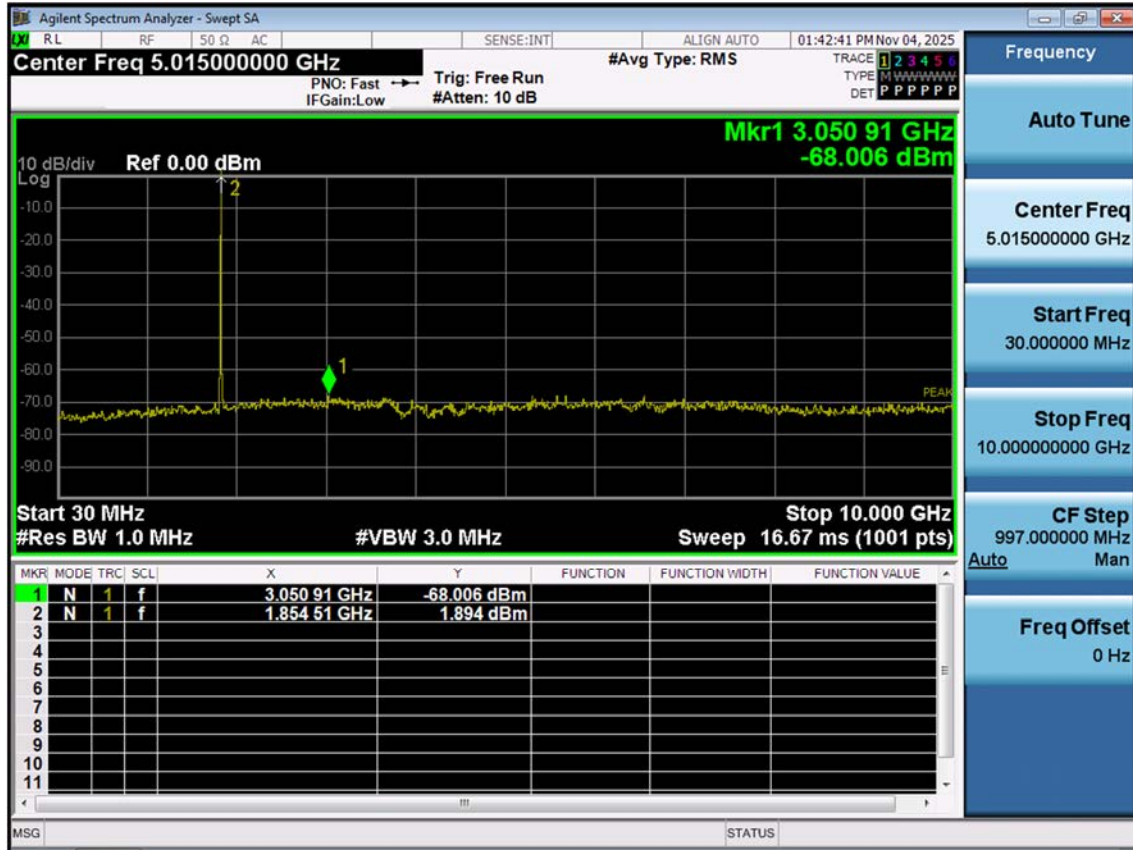
LTE B25(2)_20 M_OBW_Mid_64QAM_FullRB



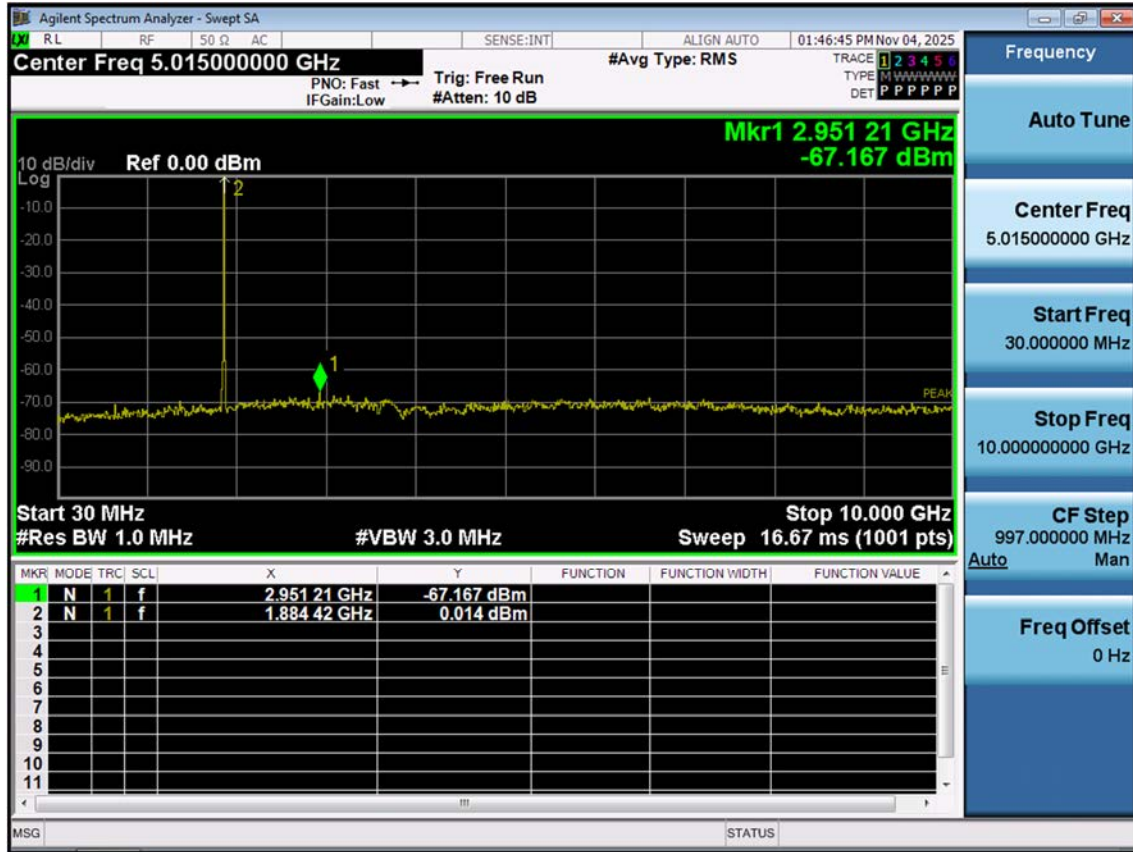
LTE B25(2)_20 M_OBW_Mid_256QAM_FullRB



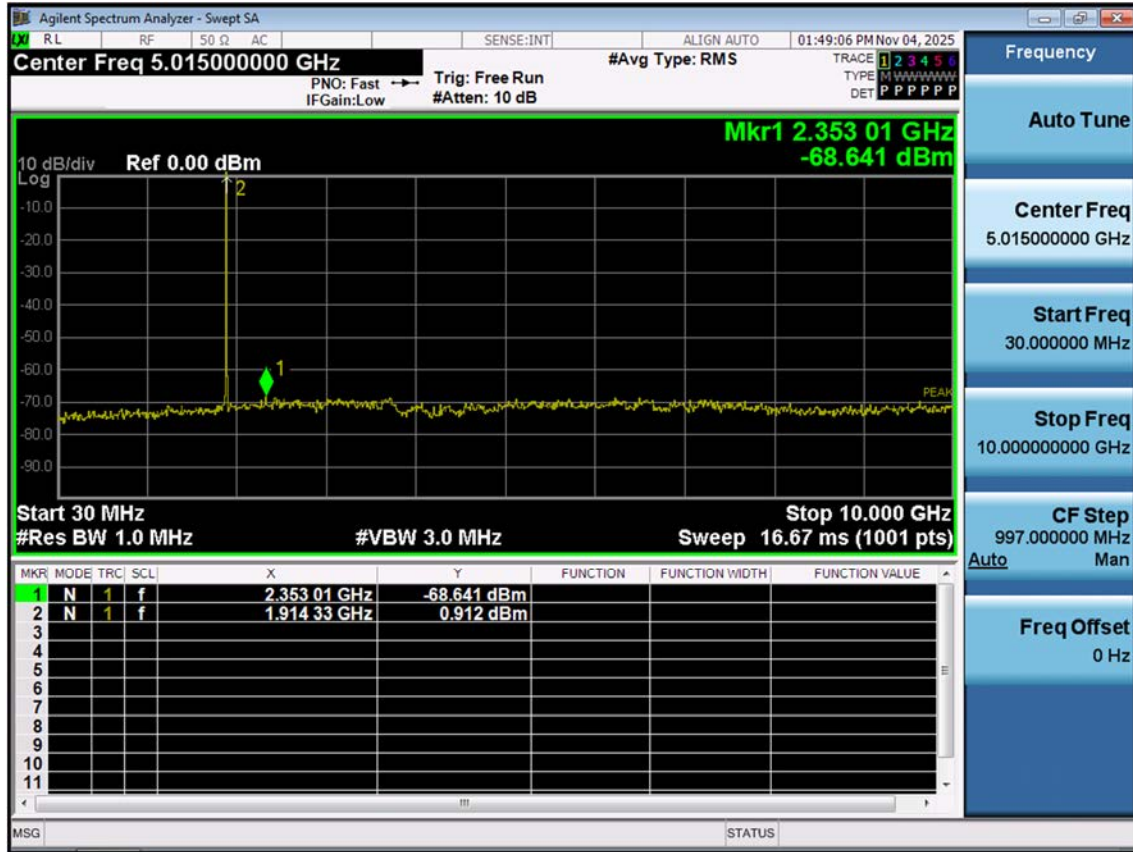
LTE B25(2)_1.4 M_Conducted Spurious Emissions(30 M-10 G)_Low_QPSK_1RB



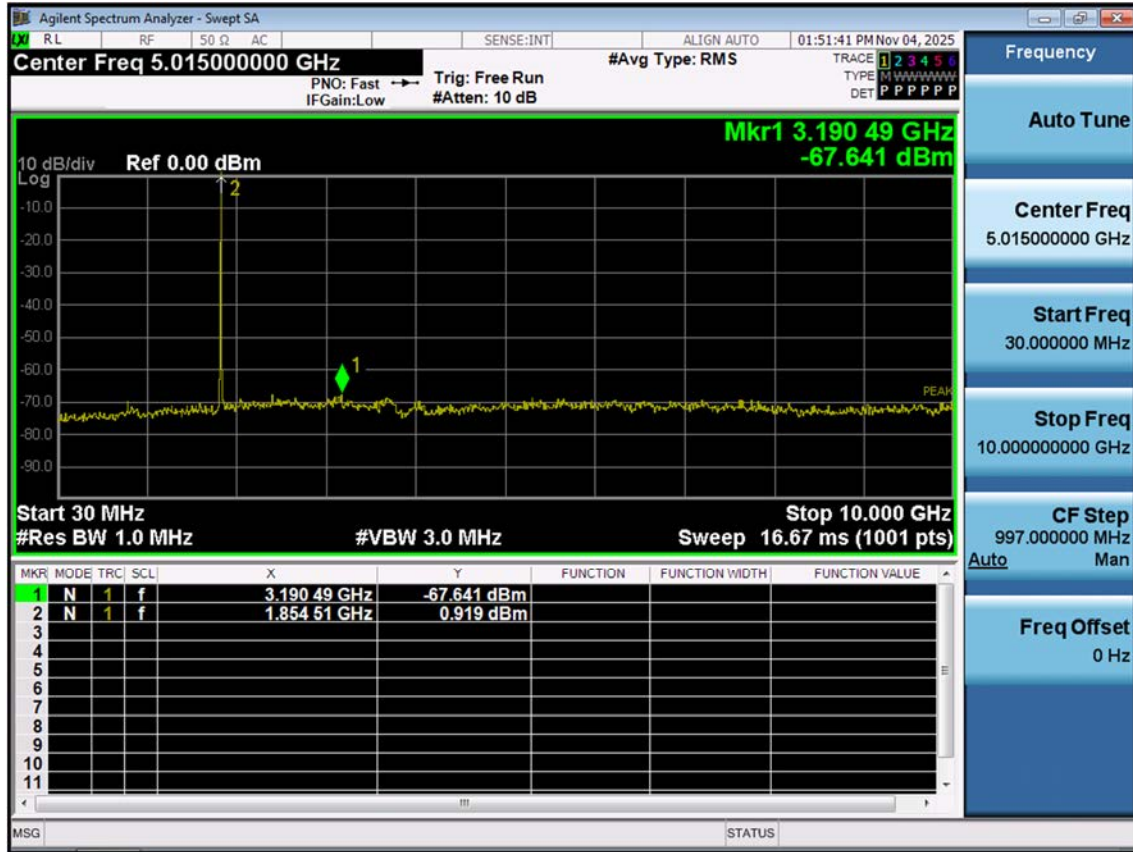
LTE B25(2)_1.4 M_Conducted Spurious Emissions(30 M-10 G)_Mid_QPSK_1RB



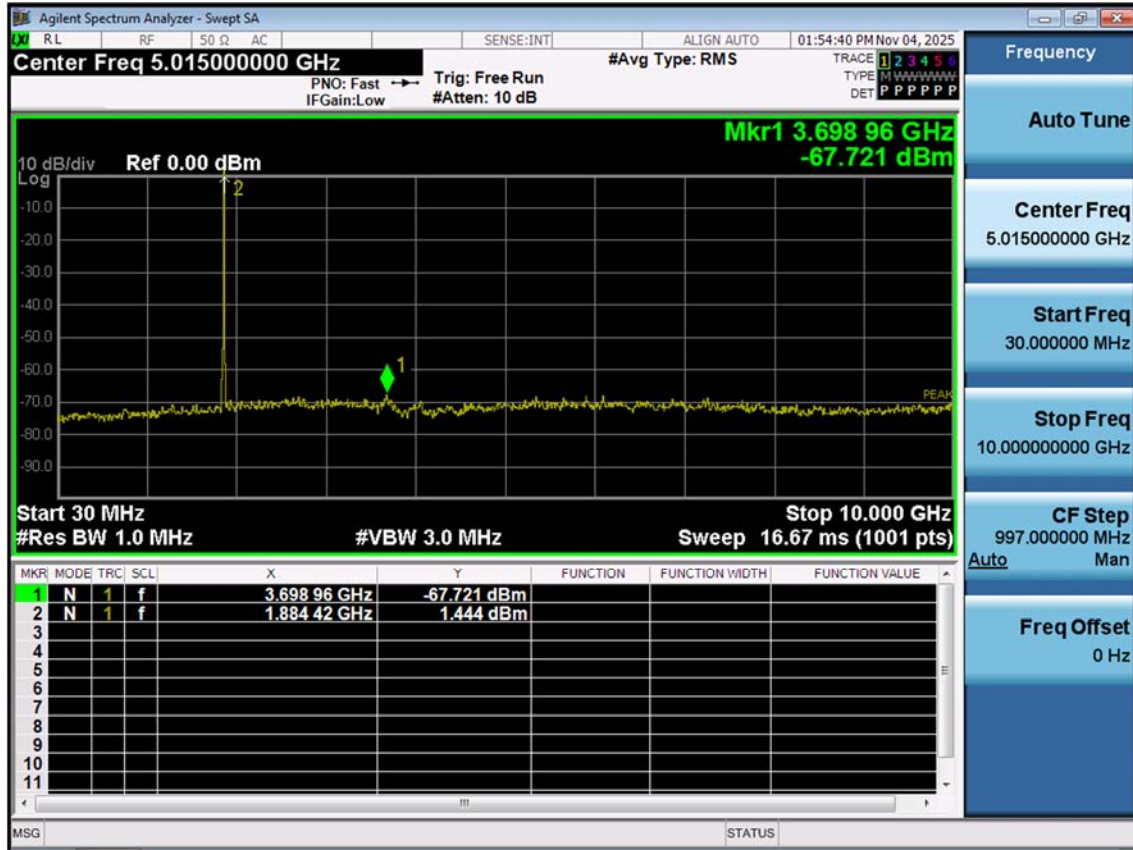
LTE B25(2)_1.4 M_Conducted Spurious Emissions(30 M-10 G)_High_QPSK_1RB



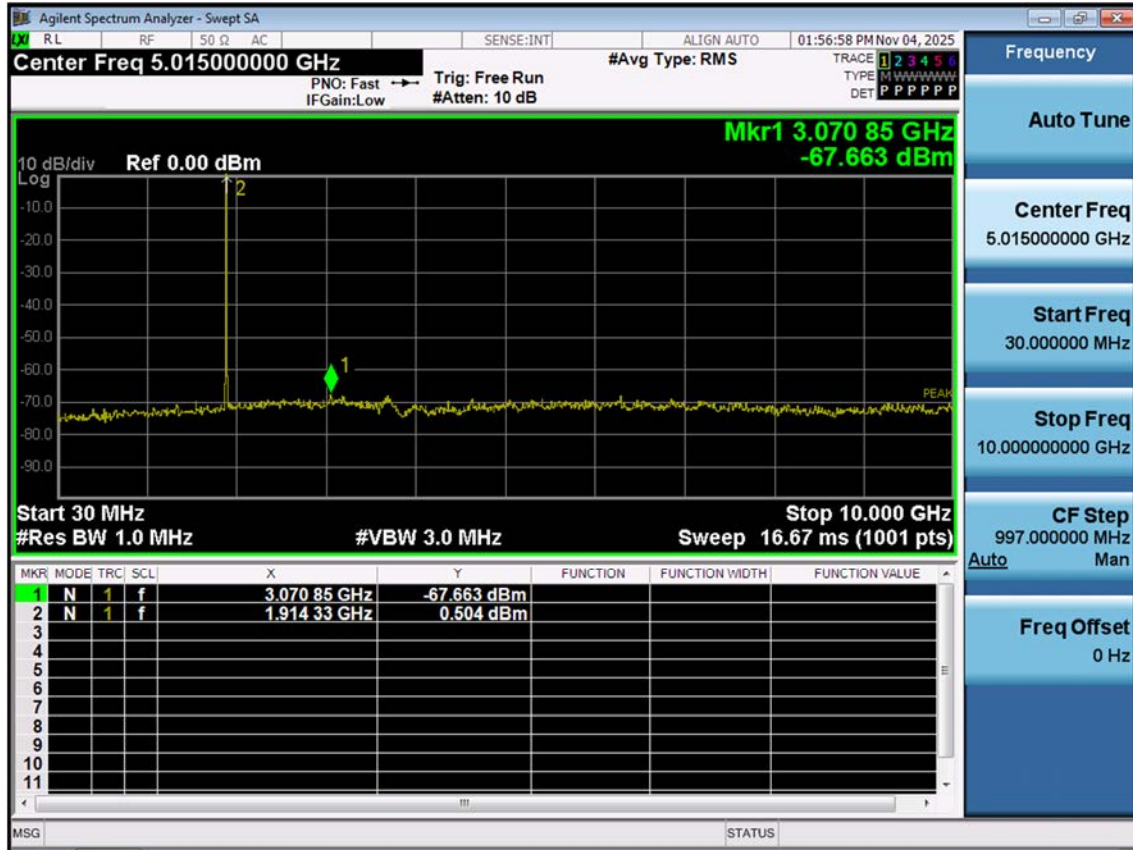
LTE B25(2)_3 M_Conducted Spurious Emissions(30 M-10 G)_Low_QPSK_1RB



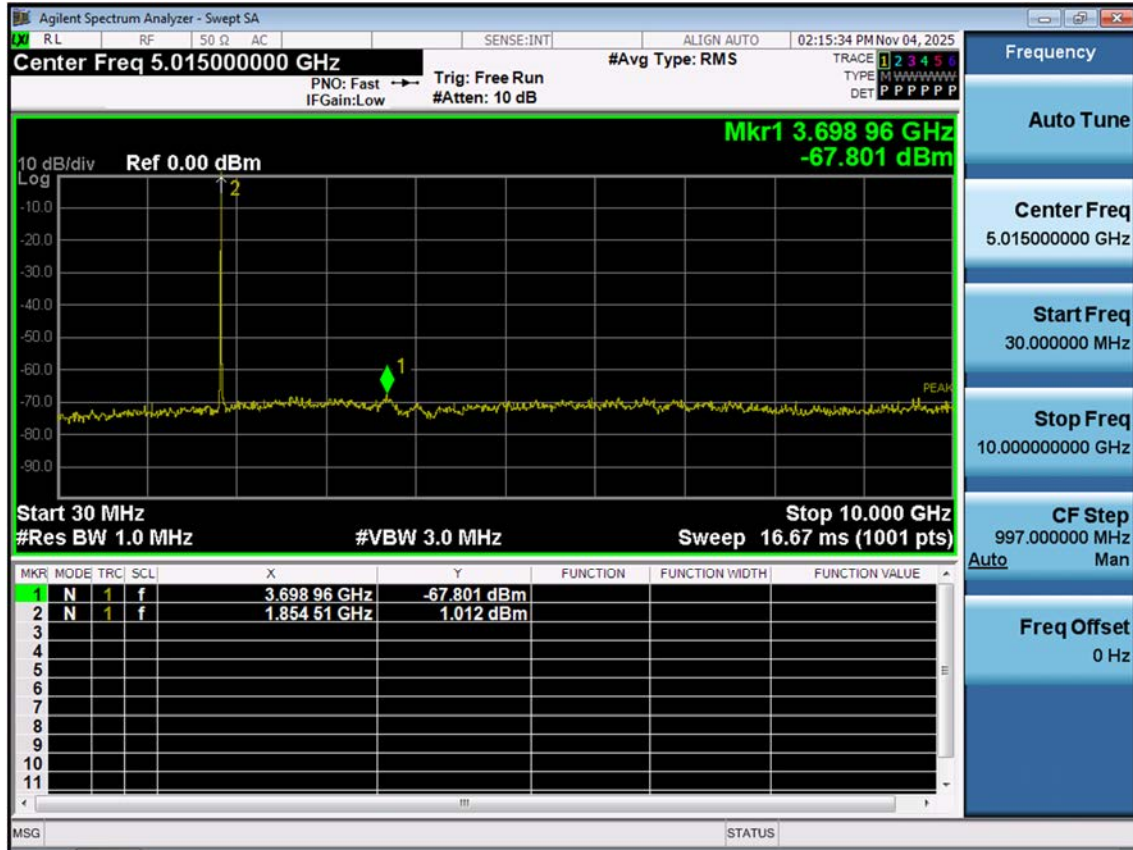
LTE B25(2)_3 M_Conducted Spurious Emissions(30 M-10 G)_Mid_QPSK_1RB



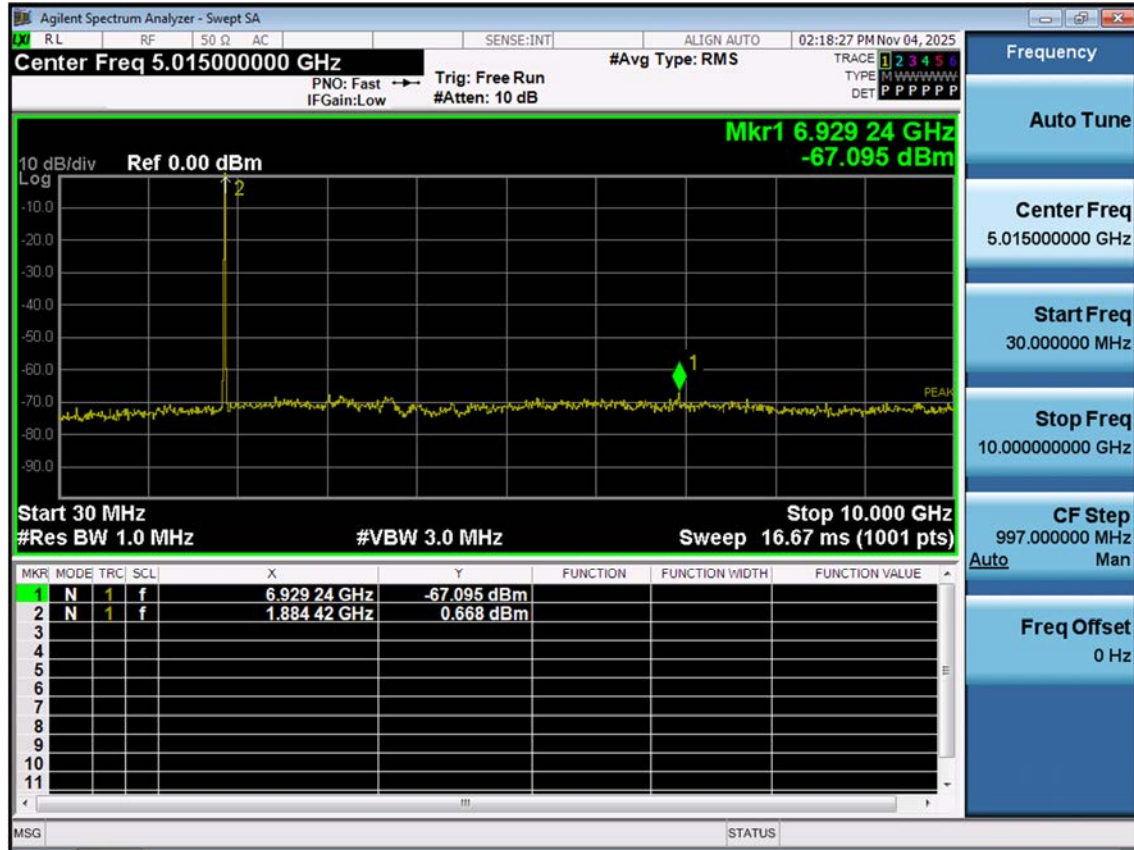
LTE B25(2)_3 M_Conducted Spurious Emissions(30 M-10 G)_High_QPSK_1RB



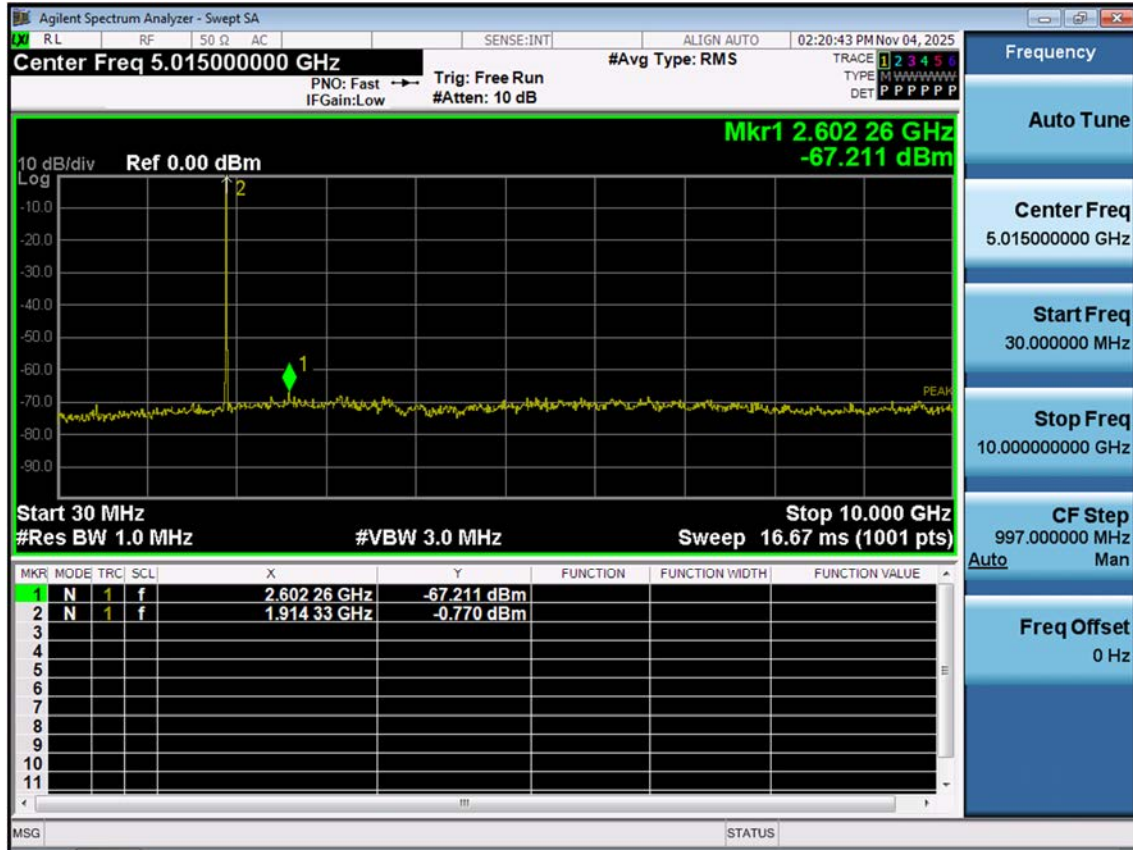
LTE B25(2)_5 M_Conducted Spurious Emissions(30 M-10 G)_Low_QPSK_1RB



LTE B25(2)_5 M_Conducted Spurious Emissions(30 M-10 G)_Mid_QPSK_1RB



LTE B25(2)_5 M_Conducted Spurious Emissions(30 M-10 G)_High_QPSK_1RB



LTE B25(2)_10 M_Conducted Spurious Emissions(30 M-10 G)_Low_QPSK_1RB

