TEST REPORT

FCC 2G3G Test for TM18FNROBM0
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2507-FC083

DATE OF ISSUE
July 22, 2025

Tested by
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Technical Manager
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Accredited by KOLAS, Republic of KOREA

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HCT-RF-2507-FC083

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Applicant	LG Electronics Inc. 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
Product Name Model Name	Telematics TM18FNROBM0
Date of Test	May 16, 2025 ~ July 22, 2025
Location of Test	■ Permanent Testing Lab ☐ On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)
FCC ID	2BO3LTM18FNROBM0
FCC Classification:	PCS Licensed Transmitter (PCB)
Test Standard Used	FCC Rule Part: § 22, § 24, § 27
Test Results	PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	July 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 ***. When confirmation of authenticity of this test report is required, please contact www.hct.co.kr This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA. (KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

CONTENTS

MEASUREMENT REPORT

1. GENERAL INFORMATION

Model(s):	TM18FNROBM0
Voltage:	4.2V
Tx Frequency:	824.20 - 848.80 MHz (GSM850) 826.40 - 846.60 MHz (WCDMA850) 1 850.20 - 1 909.80 MHz (GSM1900) 1 852.4 – 1 907.6 MHz (WCDMA1900) 1 712.4 – 1 752.6 MHz (WCDMA1700)
Rx Frequency:	869.20 - 893.80 MHz (GSM850) 871.40 - 891.60 MHz (WCDMA850) 1 930.20 - 1 989.80 MHz (GSM1900) 1 932.4 – 1 987.6 MHz (WCDMA1900) 2 112.4 – 2 152.6 MHz (WCDMA1700)
EUT Serial number:	Radiated : BMW ICON-25SF Radiated #7 (GSM850/WCDMA850), BMW ICON-25SF Radiated #5 (GSM1900/WCDMA1700&1900) Conducted : BMW ICON-25SF Conducted #18
Antenna Information	Please refer to the Antenna Specification document.

1.1. SUPPORTED BANDS PER ANTENNA PORT

Antenna Port	Supported bands
MIMO 1	- GSM850, 1900 - WCDMA: B2, 4, 5 - LTE: B4, 7, 12(17), 25(2), 26(5), 41(38), 42 - NR: n7, 41, 77(78) - ULCA: 7C
MIMO 2	- LTE: B42 - NR: n77(78)
MIMO 3	Only RX
MIMO 4	Only RX
Int. BUA (Back Up Antenna)	- GSM850, 1900 - WCDMA: B2, 4, 5 - LTE: B4, 7, 25(2), 26(5), 41(38) - NR: n7, 41 - ULCA: 7C

Note:

1. Since the Int. BUA uses the same antenna port as MIMO1, only radiated testing was performed.

1.2 MAXIMUM OUTPUT POWER

Mode	Tx Frequency (MHz)	Rx Frequency (MHz)	Emission Designator	Conducted Output Power	
				Max. Power (W)	Max. Power (dBm)
GSM850	824.2 – 848.8	869.2 – 893.8	248KGXW	2.443	33.88
GSM850 EDGE			246KG7W	0.485	26.86
WCDMA850	826.4 – 846.6	871.4 – 891.6	4M15F9W	0.239	23.78

Mode	Tx Frequency (MHz)	Rx Frequency (MHz)	Emission Designator	Conducted Output Power	
				Max. Power (W)	Max. Power (dBm)
GSM1900	1850.2 – 1909.8	1930.2 – 1989.8	246KGXW	1.406	31.48
GSM1900 EDGE			255KG7W	0.438	26.41
WCDMA1900	1852.4 – 1907.6	1932.4 – 1987.6	4M15F9W	0.250	23.98
WCDMA1700	1712.4 – 1752.6	2112.4 – 2152.6	4M16F9W	0.251	23.99

2. INTRODUCTION

2.1 DESCRIPTION OF EUT

The EUT was a Telematics with GSM/GPRS/EGPRS, UMTS, LTE and 5GNR(Sub 6).

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).

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- N/A (See SAR Report)
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Radiated Power	- ANSI C63.26-2015 – Section 5.2.4.4 - KDB 971168 D01 v03r01 – Section 5.8
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

3.2 RADIATED POWER

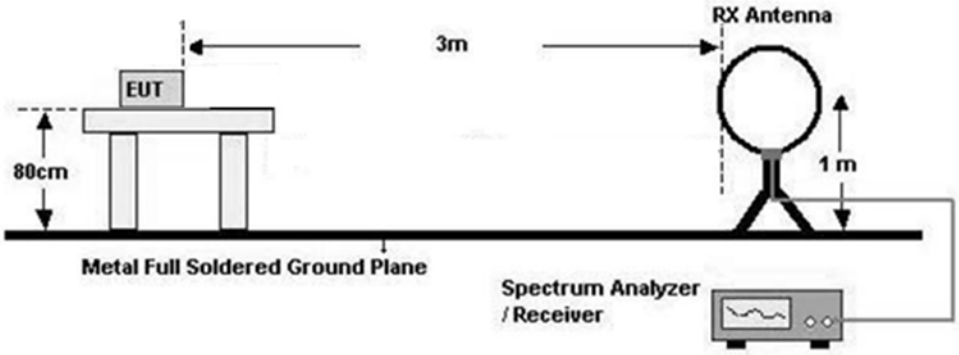
3.2.1 GSM850/WCDMA850

Test Overview

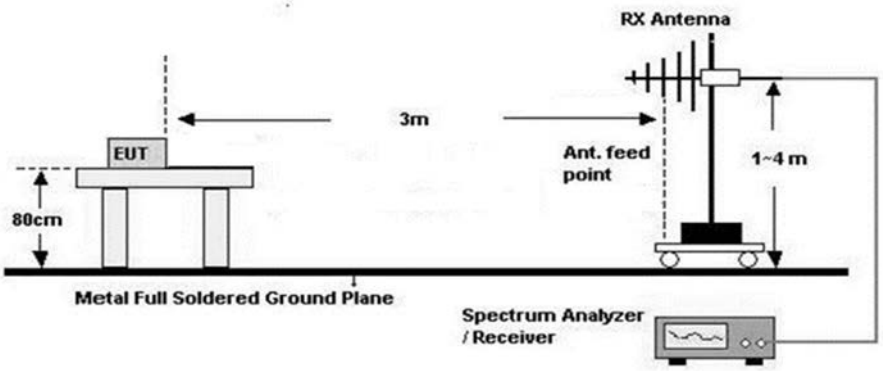
Radiated tests are performed in the semi-anechoic chamber. The equipment under test is placed on a non-conductive table on semi-anechoic chamber.

Test Configuration

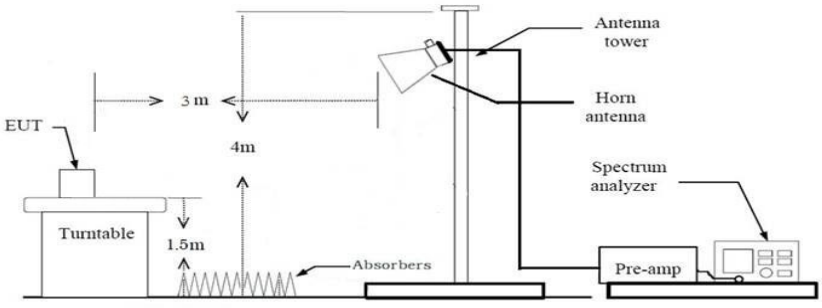
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



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 ≥ 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 EUT is placed on a turntable, which is 0.8 m above ground plane. (Below 1 GHz)
2. The EUT is placed on a turntable, which is 1.5 m above ground plane. (Above 1 GHz)
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
5. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
6. 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.
7. Total(dBμV/m) = Measured Value(dBμV) + Cable Loss(dB) + Antenna Factor(dB/m) + Distance Factor(D.F)
8. EIRP (dBm)
   = Total (dBμV/m) + 20 log D − 104.8 (where D is the measurement distance in meters. D=3)
   = Total (dBμV/m) - 95.2(dB)
9. ERP(dBm) = EIRP(dBm) - 2.15(dB)

3.2.2 GSM1900/WCDMA1700&1900

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 ≥ 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;

$$P_{d\,(dBm)} = P_{g\,(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dB)}$$

   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 ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to 10^{th} 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;

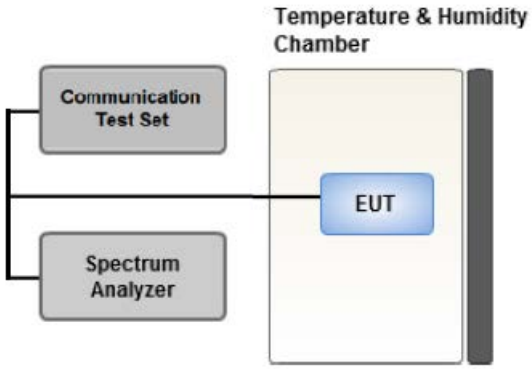
$$\text{Result}_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

$$EIRP_{(dBm)} = ERP_{(dBm)} + 2.15$$

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth ≥ 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 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)

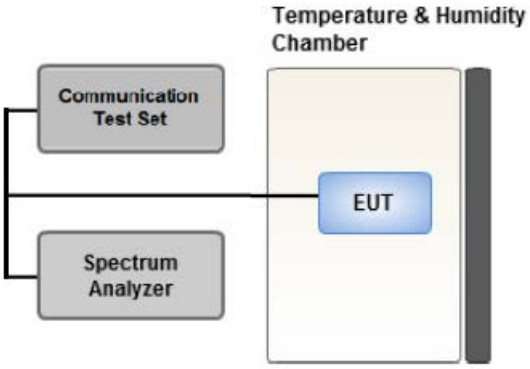
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 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 ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [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 x log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 x log (1/0.25)] = 6 dB if the duty cycle is a constant 25 %.

3.5 OCCUPIED BANDWIDTH.



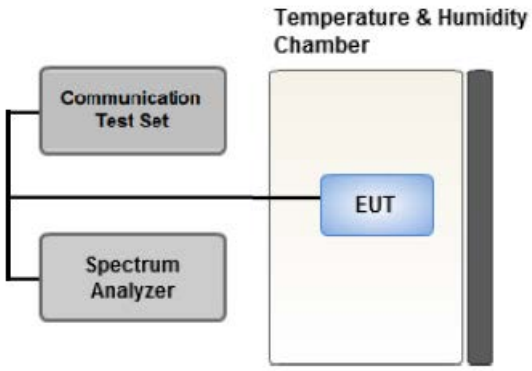
Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.
The EUT makes a call to the communication simulator.
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

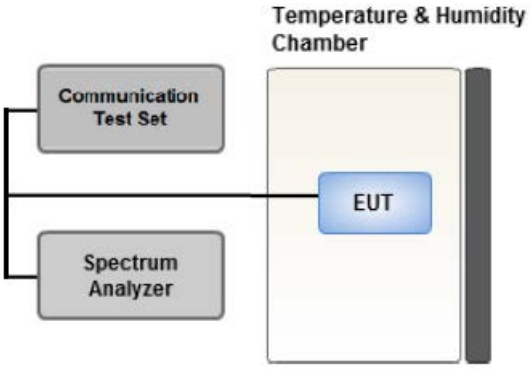
Test Overview

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 ≥ 3 MHz
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

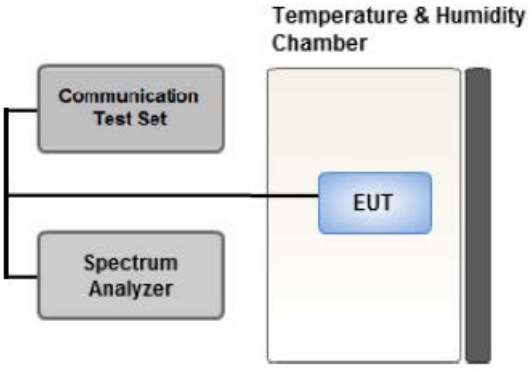
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time > Number of points in sweep × 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 x log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.
All measurements were done at 2 channels(low and high operational frequency range.)
The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

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

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(CONDUCTED TEST)

- All modes of operation were investigated and the worst case configuration results are reported.
- Both 85% and 115% conditions were measured for the Frequency Stability test, and results for the worst-case configuration (85%) were reported.
- In accordance with the customer's specification of 3.7V as the lowest operating voltage, testing was performed at 3.7V instead of 85% (3.57V).

[Worst case]

Test Description	Modulation	Test Channel
Occupied Bandwidth	GSM : Voice & EDGE(1 TX Slot) WCDMA : QPSK(RMC)	Low, Mid, High
Band Edge	GSM : Voice & EDGE(1 TX Slot) WCDMA : QPSK(RMC)	Low, High
Peak-To-Average Ratio	GSM : Voice & EDGE(1 TX Slot) WCDMA : QPSK(RMC)	Mid
Spurious and Harmonic Emissions at Antenna Terminal	GSM : Voice WCDMA : QPSK(RMC)	Low, Mid, High

[Test Channel]

	Uplink Channel				
	2G (GSM850)	2G (GSM1900)	3G (WCDMA B2)	3G (WCDMA B4)	3G (WCDMA B5)
Low	128	512	9262	1312	4132
Mid	190	661	9400	1412	4183
High	251	810	9538	1513	4233

3.10 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.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data. Please refer to the table below.
- MIMO3 and MIMO4 have three types of Rx antennas. Operating modes were investigated for all Rx antennas, and the worst-case configuration results were reported. (Worst-case: FSA antenna)

[MIMO1 Worst case_3G]

Test Description	Modulation	Paging Service	Axis	Test Channel
Effective Radiated Power, Effective Isotropic Radiated Power	QPSK (WCDMA)	12.2 kbps RMC	WCDMA B2 : Z WCDMA B4 : Z WCDMA B5 : Z	Low, Mid, High
Radiated Spurious and Harmonic Emissions	QPSK (WCDMA)	12.2 kbps RMC	WCDMA B2 : Z WCDMA B4 : Z WCDMA B5 : Z	Low, Mid, High

[MIMO1 Worst case_2G]

Test Description	Modulation	Axis	Test Channel
Effective Radiated Power, Effective Isotropic Radiated Power	Voice	GSM850 : Y GSM1900 : Z	Low, Mid, High
	EDGE (1 TX Slot)	GSM850 : Y GSM1900 : Z	GSM 850 : High GSM1900 : Low
Radiated Spurious and Harmonic Emissions	Voice	GSM850 : Y GSM1900 : Z	Low, Mid, High

[Internal(BUA) Worst case_3G]

Test Description	Modulation	Paging Service	Axis	Test Channel
Effective Radiated Power, Effective Isotropic Radiated Power	QPSK (WCDMA)	12.2 kbps RMC	WCDMA B2 : Y WCDMA B4 : Y WCDMA B5 : Z	Low, Mid, High
Radiated Spurious and Harmonic Emissions	QPSK (WCDMA)	12.2 kbps RMC	WCDMA B2 : Y WCDMA B4 : Y WCDMA B5 : Z	Low, Mid, High

[Internal(BUA) Worst case_2G]

Test Description	Modulation	Axis	Test Channel
Effective Radiated Power, Effective Isotropic Radiated Power	Voice	GSM850 : Z GSM1900 : Y	Low, Mid, High
	EDGE (1 TX Slot)	GSM850 : Z GSM1900 : Y	GSM 850 : High GSM1900 : Mid
Radiated Spurious and Harmonic Emissions	Voice	GSM850 : Z GSM1900 : Z	Low, Mid, High

[Test Channel]

	UplinkChannel				
	2G (GSM850)	2G (GSM1900)	3G (WCDMA B2)	3G (WCDMA B4)	3G (WCDMA B5)
Low	128	512	9262	1312	4132
Mid	190	661	9400	1412	4183
High	251	810	9538	1513	4233

4. LIST OF TEST EQUIPMENT

[Radiated]

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
RF Switch System	FBSR-04C(3G HPF+LNA)	TNM System	S4L1	03/12/2026	Annual
RF Switch System	FBSR-04C(7G HPF+LNA)	TNM System	S4L5	03/12/2026	Annual
RF Switch System	FBSR-04C(LNA)	TNM System	S4L4	03/12/2026	Annual
RF Switch System	FBSR-04C(Thru)	TNM System	S4L6	03/12/2026	Annual
Antenna Position Tower	MA4640	Innco systems	S4AM	08/07/2025	Annual
Turn Table	DS2000-S	Innco systems	N/A	N/A	-
Controller (Antenna mast & Turn Table)	CO3000	Innco systems	CO3000/1251/489 20320/P	N/A	-
Amp & Filter Bank Switch Controller	FBSM-01B	TNM system	TM20090002	N/A	-
RF Switching System	Switch box(1 G HPF+LNA)	HCT CO., LTD.,	F2L2	12/12/2025	Annual
RF Switching System	Switch box(3 G HPF+LNA)	HCT CO., LTD.,	F2L3	12/12/2025	Annual
RF Switching System	Switch box(LNA)	HCT CO., LTD.,	F2L5	12/12/2025	Annual
RF Switching System	Switch box(6 G HPF+LNA)	HCT CO., LTD.,	F2L14	12/12/2025	Annual
HIGHPASS FILTER	WHKX10-900-1000-15000-40SS	WAINWRIGHT INSTRUMENTS	16	07/24/2025	Annual
LOW NOISE AMPLIFIER	310N	SONOMA Instrument	186169	02/05/2026	Annual
LOW NOISE AMPLIFIER	TK-PA1840H	TESTEK	170011-L	10/11/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	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	08/06/2025	Annual
Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Dipole Antenna	UHAP	Schwarzbeck	01288	08/07/2026	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03197	11/28/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03201	11/28/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120	Schwarzbeck	937	02/07/2027	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	ROHDE & SCHWARZ	101733	09/19/2025	Annual
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/04/2026	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	05/27/2026	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	VULB 9168	Schwarzbeck	9168-0895	08/28/2026	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
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6272613402	08/28/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	Annual
Automation Software	FCC LTE Radiated	HCT CO., LTD	-	-	-
Automation Software	FCC NR Radiated	HCT CO., LTD	-	-	-

[Conducted]

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Power Splitter (DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/10/2026	Annual
DC Power Supply	E3632A	Agilent	MY40010147	08/06/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
ATTENUATOR (20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262094331	11/13/2025	Annual
UXM 5G Wireless Test Platform	E7515B	KEYSIGHT	MY60101126	02/10/2026	Annual
Signal Analyzer (2 Hz ~ 50.0 GHz)	N9030B	KEYSIGHT	MY56320554	02/03/2026	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.	-	-	-
Automation Software	FCC 2G/3G/4G Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC NR Conducted	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 %, k=2)
Frequency stability	28 (Confidence level about 95 %, k=2)

Parameter	Expanded Uncertainty (±dB)
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, § 22.917(a), § 24.238(a), § 27.53(h)	< 43 + 10 x log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	See Note1
Peak- to- Average Ratio	§ 22.913(d), § 24.232(d), § 27.50(d)(5)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 22.355	< 2.5 ppm	PASS
	§ 24.235, § 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	§ 22.913(a)(5)	< 7 Watts max. ERP	PASS
Equivalent Isotropic Radiated Power	§ 24.232(c), § 27.50(d)(4)	< 2 Watts max. EIRP < 1 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 22.917(a), § 24.238(a), § 27.53(h)	< 43 + 10 x log10 (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

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 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

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

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

7.3. Emission Designator

GSM Emission Designator

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

EDGE Emission Designator

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

WCDMA Emission Designator

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

QPSK Modulation

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

QAM Modulation

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

8. TEST DATA(MIMO1)

8.1 EFFECTIVE RADIATED POWER

Mode	Ch./ Freq.		Measured (dBμV/m)	Ant. Factor + Distance Factor (dB)	C.L + Thru(dB)	Total (dBμV/m)	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
GSM850	128	824.2	84.60	29.84	1.53	115.97	H	< 7.00	0.611	27.86
	190	836.6	83.65	29.74	1.55	114.94	H		0.482	26.83
	251	848.8	82.93	29.84	1.56	114.33	H		0.419	26.22
EDGE	128	824.2	79.51	29.84	1.56	110.91	H		0.190	22.80

Mode	Ch./ Freq.		Measured (dBμV/m)	Ant. Factor + Distance Factor (dB)	C.L + Thru(dB)	Total (dBμV/m)	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA850	4132	826.4	87.41	29.84	1.53	118.78	H	< 7.00	0.139	21.43
	4183	836.6	86.99	29.74	1.55	118.28	H		0.124	20.93
	4233	846.6	85.99	29.84	1.56	117.39	H		0.101	20.04

8.2 EQUIVALENT ISOTROPIC RADIATED POWER

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
GSM1900	512	1850.2	-23.00	21.14	10.15	2.07	H	< 2.00	0.836	29.22
	661	1880.0	-23.65	20.96	10.11	2.21	H		0.769	28.86
	810	1909.8	-26.55	18.17	10.03	2.17	H		0.401	26.03
EDGE	512	1850.2	-29.39	14.75	10.15	2.07	H		0.192	22.83

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1900	9262	1852.4	-17.47	17.43	10.15	2.07	H	< 2.00	0.356	25.51
	9400	1880.0	-18.86	16.51	10.11	2.21	H		0.276	24.41
	9538	1907.6	-20.56	14.92	10.03	2.17	H		0.190	22.78

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1700	1312	1712.4	-19.84	14.67	9.81	2.06	H	< 1.00	0.175	22.42
	1412	1732.4	-22.63	11.64	9.91	2.08	H		0.089	19.47
	1513	1752.6	-21.06	13.19	10.02	2.08	H		0.130	21.13

8.3 RADIATED SPURIOUS EMISSIONS

▣ MODULATION SIGNAL: GSM850

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
128 (824.2)	1,648.40	-44.95	9.44	-59.89	2.02	H	-52.47	-13.00
	2,472.60	-39.32	10.34	-50.49	2.57	H	-42.72	-13.00
	3,296.80	-54.77	11.06	-62.93	2.95	V	-54.82	-13.00
	4,121.00	-54.81	11.65	-61.17	3.31	H	-52.83	-13.00
	4,945.20	-56.02	11.28	-57.68	3.68	V	-50.08	-13.00
190 (836.6)	1,673.20	-44.01	9.60	-59.28	2.05	H	-51.73	-13.00
	2,509.80	-41.07	10.26	-52.35	2.51	V	-44.60	-13.00
	3,346.40	-54.71	11.10	-63.37	2.96	V	-55.23	-13.00
	4,183.00	-55.15	11.72	-60.81	3.40	V	-52.49	-13.00
	5,019.60	-55.35	11.15	-56.45	3.69	H	-48.99	-13.00
251 (848.8)	1,697.60	-41.35	9.76	-56.52	2.07	H	-48.83	-13.00
	2,546.40	-37.60	10.25	-48.64	2.53	V	-40.92	-13.00
	3,395.20	-53.39	11.20	-62.28	2.98	V	-54.06	-13.00
	4,244.00	-54.36	11.68	-60.23	3.35	V	-51.90	-13.00
	5,092.80	-54.52	11.16	-56.08	3.78	H	-48.70	-13.00

▣ MODULATION SIGNAL: GSM1900

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
512 (1850.2)	3,700.40	-54.98	11.83	-62.60	3.07	H	-53.84	-13.00
	5,550.60	-56.60	12.07	-58.30	3.89	V	-50.12	-13.00
	7,400.80	-55.98	11.04	-51.76	4.58	V	-45.30	-13.00
	9,251.00	-56.15	11.29	-45.06	5.17	H	-38.94	-13.00
	11,101.20	-54.98	12.32	-48.51	5.89	H	-42.08	-13.00
661 (1880.0)	3,760.00	-54.66	11.61	-61.15	3.12	V	-52.66	-13.00
	5,640.00	-56.06	12.03	-57.12	3.92	V	-49.01	-13.00
	7,520.00	-55.94	11.49	-52.25	4.61	H	-45.37	-13.00
	9,400.00	-56.90	11.28	-46.82	5.23	H	-40.77	-13.00
	11,280.00	-54.40	12.27	-47.16	5.89	V	-40.78	-13.00
810 (1909.8)	3,819.60	-53.08	11.32	-59.33	3.19	V	-51.20	-13.00
	5,729.40	-55.68	11.80	-56.40	4.00	V	-48.60	-13.00
	7,639.20	-55.35	11.56	-51.28	4.68	V	-44.40	-13.00
	9,549.00	-56.57	11.32	-47.52	5.27	H	-41.47	-13.00
	11,458.80	-53.84	12.35	-46.50	5.93	H	-40.08	-13.00

▣ MODULATION SIGNAL: WCDMA850

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
4132 (826.4)	1,652.80	-53.33	9.47	-68.36	2.02	H	-60.91	-13.00
	2,479.20	-52.97	10.32	-64.11	2.55	V	-56.34	-13.00
	3,305.60	-55.52	11.09	-63.78	2.97	V	-55.66	-13.00
	4,132.00	-53.87	11.68	-60.15	3.33	V	-51.80	-13.00
	4,958.40	-55.89	11.25	-57.49	3.69	V	-49.93	-13.00
4183 (836.6)	1,673.20	-52.10	9.60	-67.37	2.05	V	-59.82	-13.00
	2,509.80	-52.96	10.26	-64.24	2.51	V	-56.49	-13.00
	3,346.40	-54.93	11.10	-63.59	2.96	H	-55.45	-13.00
	4,183.00	-55.10	11.72	-60.76	3.40	H	-52.44	-13.00
	5,019.60	-55.83	11.15	-56.93	3.69	H	-49.47	-13.00
4233 (846.6)	1,693.20	-52.38	9.73	-67.60	2.07	H	-59.94	-13.00
	2,539.80	-53.33	10.25	-64.43	2.53	V	-56.71	-13.00
	3,386.40	-54.70	11.18	-63.65	2.99	V	-55.46	-13.00
	4,233.00	-54.82	11.69	-60.61	3.36	H	-52.28	-13.00
	5,079.60	-54.78	11.15	-56.16	3.81	V	-48.82	-13.00

▣ MODULATION SIGNAL: WCDMA1900

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
9262 (1852.4)	3 704.80	-55.23	11.82	-62.73	3.08	V	-53.99	-13.00
	5 557.20	-55.60	12.07	-57.26	3.88	V	-49.07	-13.00
	7 409.60	-55.36	11.09	-51.42	4.57	V	-44.90	-13.00
	9 262.00	-55.63	11.28	-44.66	5.20	H	-38.58	-13.00
	11 114.40	-55.17	12.32	-48.77	5.85	V	-42.30	-13.00
9400 (1880.0)	3 760.00	-55.12	11.61	-61.61	3.12	V	-53.12	-13.00
	5 640.00	-56.38	12.03	-57.44	3.92	H	-49.33	-13.00
	7 520.00	-56.03	11.49	-52.34	4.61	V	-45.46	-13.00
	9 400.00	-55.36	11.28	-45.28	5.23	H	-39.23	-13.00
	11 280.00	-55.45	12.27	-48.21	5.89	V	-41.83	-13.00
9538 (1907.6)	3 815.20	-54.32	11.34	-60.62	3.20	V	-52.48	-13.00
	5 722.80	-53.90	11.82	-54.69	4.00	V	-46.87	-13.00
	7 630.40	-54.07	11.56	-50.11	4.66	H	-43.21	-13.00
	9 538.00	-53.44	11.31	-44.17	5.27	V	-38.13	-13.00
	11 445.60	-55.02	12.32	-47.63	5.85	H	-41.16	-13.00

▣ MODULATION SIGNAL: WCDMA1700

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
1312 (1712.4)	3 424.80	-53.33	11.33	-60.91	2.99	H	-52.57	-13.00
	5 137.20	-55.19	11.25	-56.85	3.81	V	-49.41	-13.00
	6 849.60	-55.79	11.07	-51.94	4.36	H	-45.23	-13.00
	8 562.00	-56.13	11.13	-47.70	4.92	H	-41.49	-13.00
	10 274.40	-55.55	11.66	-47.65	5.58	V	-41.57	-13.00
1412 (1732.4)	3 464.80	-52.84	11.50	-60.88	3.02	V	-52.40	-13.00
	5 197.20	-53.29	11.41	-55.20	3.79	H	-47.58	-13.00
	6 929.60	-56.07	11.14	-52.43	4.40	V	-45.69	-13.00
	8 662.00	-56.59	11.16	-46.52	5.00	V	-40.36	-13.00
	10 394.40	-54.51	11.88	-46.96	5.56	V	-40.64	-13.00
1513 (1752.6)	3 505.20	-53.96	11.59	-62.10	3.05	H	-53.56	-13.00
	5 257.80	-54.04	11.60	-55.43	3.79	H	-47.62	-13.00
	7 010.40	-54.97	11.07	-51.77	4.42	H	-45.12	-13.00
	8 763.00	-54.81	11.15	-44.97	5.04	H	-38.86	-13.00
	10 515.60	-53.53	11.84	-46.81	5.65	H	-40.62	-13.00

8.4 PEAK-TO-AVERAGE RATIO

Band	Ch.	Measured P_{Pk} (dBm)	Measured P_{Avg} (dBm)	P_{Avg} (Duty Cycle)			P.A.R. = P_{Pk} - P_{Avg} (dB)	Limit (dB)	Pass / Fail
				Tx_{Total} (ms)	Tx_{On} (ms)	Factor (dB)			
GSM1900	661	30.205	20.55	4.6160	0.5475	9.26	0.40	13	Pass
GSM1900 EDGE	661	29.202	16.43	4.616	0.5475	9.26	3.51		
GSM850	190	33.36	22.69	4.6160	0.5475	9.26	1.40		
GSM850 EDGE	190	30.10	17.18	4.616	0.5475	9.26	3.65		
WCDMA850	4408	CCDF Procedure							
WCDMA1900	9400								
WCDMA1700	1412								

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 77 ~ 87.

8.5 OCCUPIED BANDWIDTH

Band	Channel	Frequency (MHz)	Data (GSM: kHz / WCDMA : MHz)
GSM850	128	824.20	244.94
	190	836.60	247.04
	251	848.80	248.05
GSM850 EDGE	128	824.20	243.12
	190	836.60	239.07
	251	848.80	245.37
GSM1900	512	1850.20	241.45
	661	1880.00	244.75
	810	1909.80	245.85
GSM1900 EDGE	512	1850.20	254.86
	661	1880.00	241.64
	810	1909.80	246.80
WCDMA850	4132	826.40	4.1482
	4183	836.60	4.1396
	4233	846.60	4.1319
WCDMA1900	9262	1852.40	4.1511
	9400	1880.00	4.1494
	9538	1907.60	4.1483
WCDMA1700	1312	1712.40	4.1630
	1412	1732.40	4.1531
	1513	1752.60	4.1545

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 60 ~ 76.

8.6 CONDUCTED SPURIOUS EMISSIONS

Band	Channel	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result	Limit (dBm)
GSM850	128	5.21440	29.190	-56.94	-27.746	-13.00
	190	8.73381	29.190	-56.08	-26.890	
	251	4.89536	28.590	-56.91	-28.320	
GSM1900	512	19.25	30.080	-54.25	-24.168	
	661	19.15	30.080	-52.80	-22.718	
	810	3.83854	28.590	-55.07	-26.479	
WCDMA850	4132	5.20443	29.190	-64.15	-34.960	
	4183	3.81860	28.590	-66.57	-37.979	
	4233	3.74881	28.590	-65.72	-37.131	
WCDMA1900	9262	19.93	30.080	-64.39	-34.311	
	9400	19.27	30.080	-64.92	-34.842	
	9538	18.84	30.080	-64.63	-34.550	
WCDMA1700	1312	18.32	30.080	-65.38	-35.298	
	1412	19.87	30.080	-64.71	-34.633	
	1513	19.96	30.080	-64.96	-34.876	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 125 ~ 147.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor (dB) = Cable Loss + Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.250
1 – 5	29.320
5 – 10	29.910
10 – 15	30.530
15 – 20	31.840
Above 20(26.5)	32.520

8.7 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 88 ~ 124.

8.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ MODE: GSM850

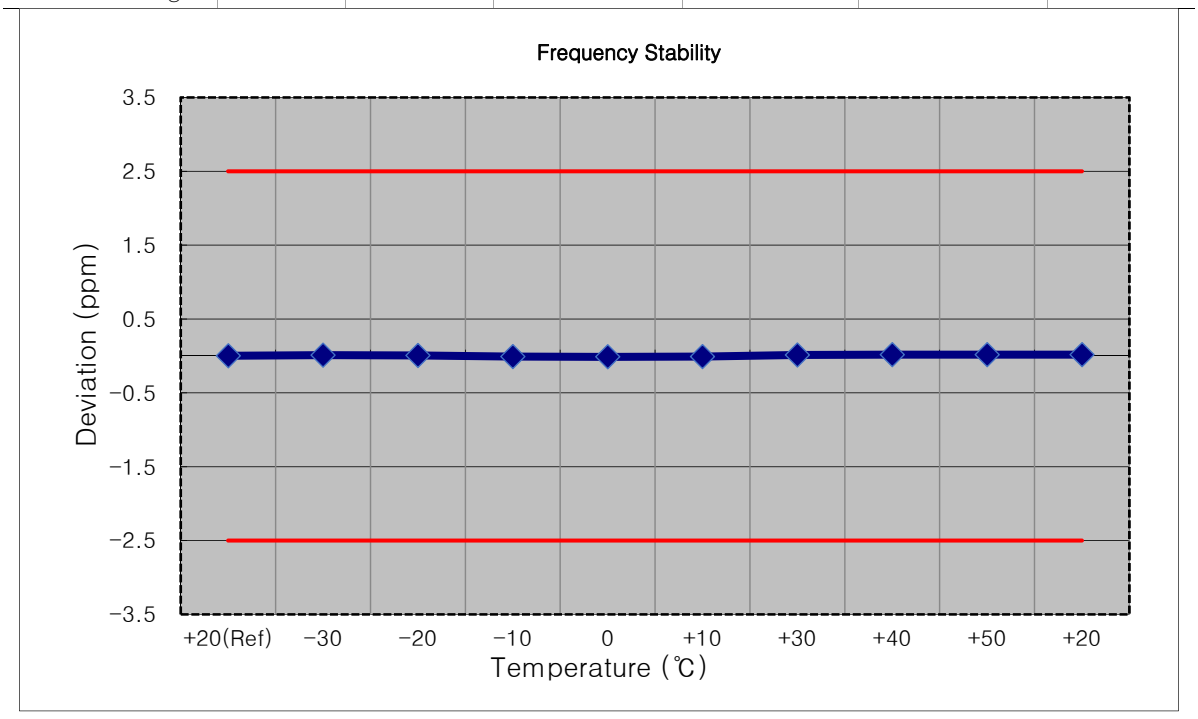
▣ OPERATING FREQUENCY: 836,600,000 Hz

▣ CHANNEL: 190

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(℃)	(Hz)	Error (Hz)	(%)	
100 %	4.200	+20(Ref)	836 600 009	0.0	0.000 000	0.0000
100 %		-30	836 600 017	7.4	0.000 001	0.0089
100 %		-20	836 600 015	5.4	0.000 001	0.0064
100 %		-10	836 600 001	-8.3	-0.000 001	-0.0100
100 %		0	836 599 999	-10.6	-0.000 001	-0.0127
100 %		+10	836 600 001	-8.7	-0.000 001	-0.0104
100 %		+30	836 600 019	9.9	0.000 001	0.0119
100 %		+40	836 600 023	13.7	0.000 002	0.0164
100 %		+50	836 600 022	12.8	0.000 002	0.0153
Lowest voltage	3.700	+20	836 600 022	13.1	0.000 002	0.0157



▣ Mode: GSM1900

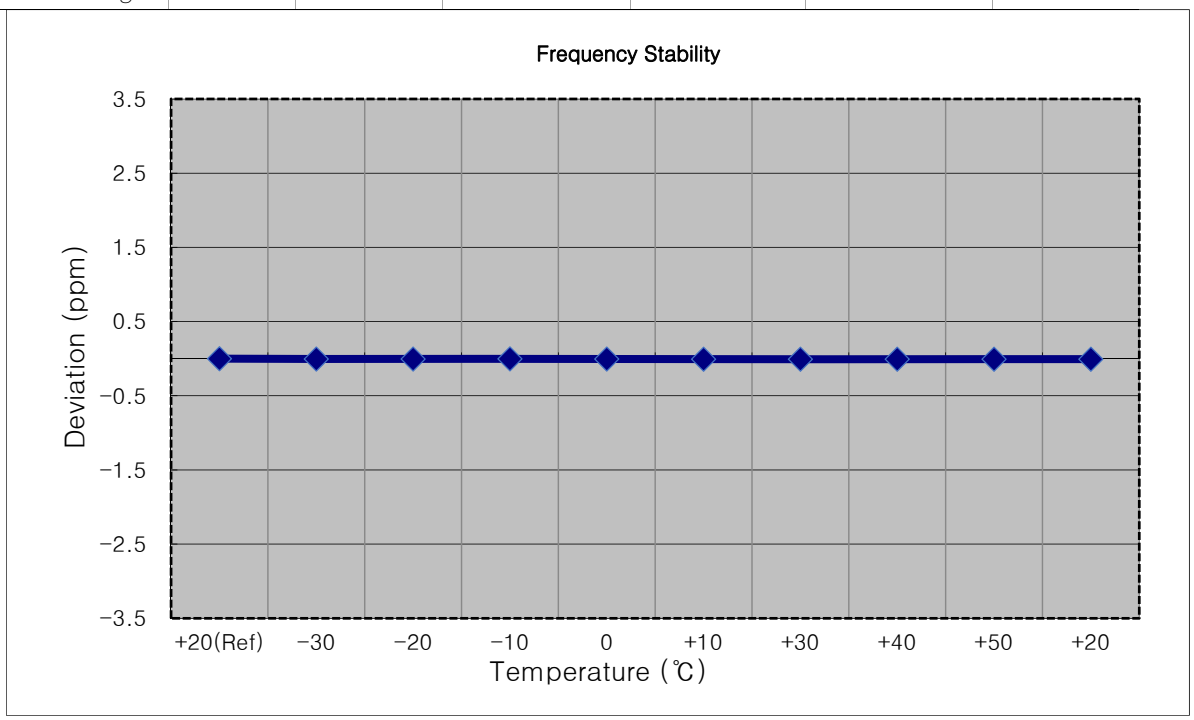
▣ OPERATING FREQUENCY: 1850,200,000 Hz

▣ CHANNEL: 512

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1850 199 991	0.0	0.000 000	0.0000
100 %		-30	1850 199 982	-9.1	0.000 000	-0.0049
100 %		-20	1850 199 983	-7.4	0.000 000	-0.0040
100 %		-10	1850 199 983	-7.3	0.000 000	-0.0039
100 %	4.200	0	1850 199 980	-10.6	-0.000 001	-0.0057
100 %		+10	1850 199 977	-13.8	-0.000 001	-0.0074
100 %		+30	1850 199 975	-15.2	-0.000 001	-0.0082
100 %		+40	1850 199 976	-14.7	-0.000 001	-0.0079
100 %		+50	1850 199 976	-14.4	-0.000 001	-0.0078
Lowest voltage	3.700	+20	1850 199 976	-14.5	-0.000 001	-0.0079



▣ Mode: GSM1900

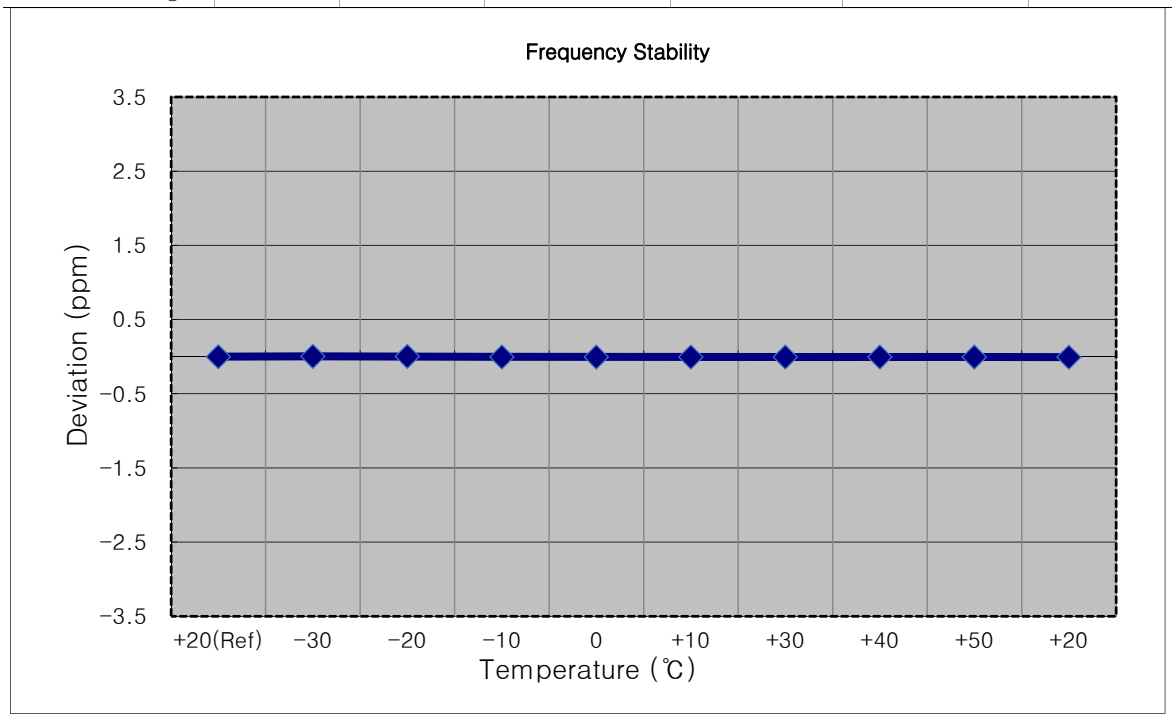
▣ OPERATING FREQUENCY: 1880,000,000 Hz

▣ CHANNEL: 661

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1880 000 014	0.0	0.000 000	0.000
100 %		-30	1880 000 023	8.7	0.000 000	0.005
100 %		-20	1880 000 020	5.3	0.000 000	0.003
100 %		-10	1880 000 004	-9.9	-0.000 001	-0.005
100 %	4.200	0	1880 000 004	-10.2	-0.000 001	-0.005
100 %		+10	1880 000 003	-11.1	-0.000 001	-0.006
100 %		+30	1880 000 004	-9.9	-0.000 001	-0.005
100 %		+40	1880 000 004	-10.3	-0.000 001	-0.005
100 %		+50	1880 000 004	-10.5	-0.000 001	-0.006
Lowest voltage	3.700	+20	1880 000 002	-12.7	-0.000 001	-0.007



▣ Mode: GSM1900

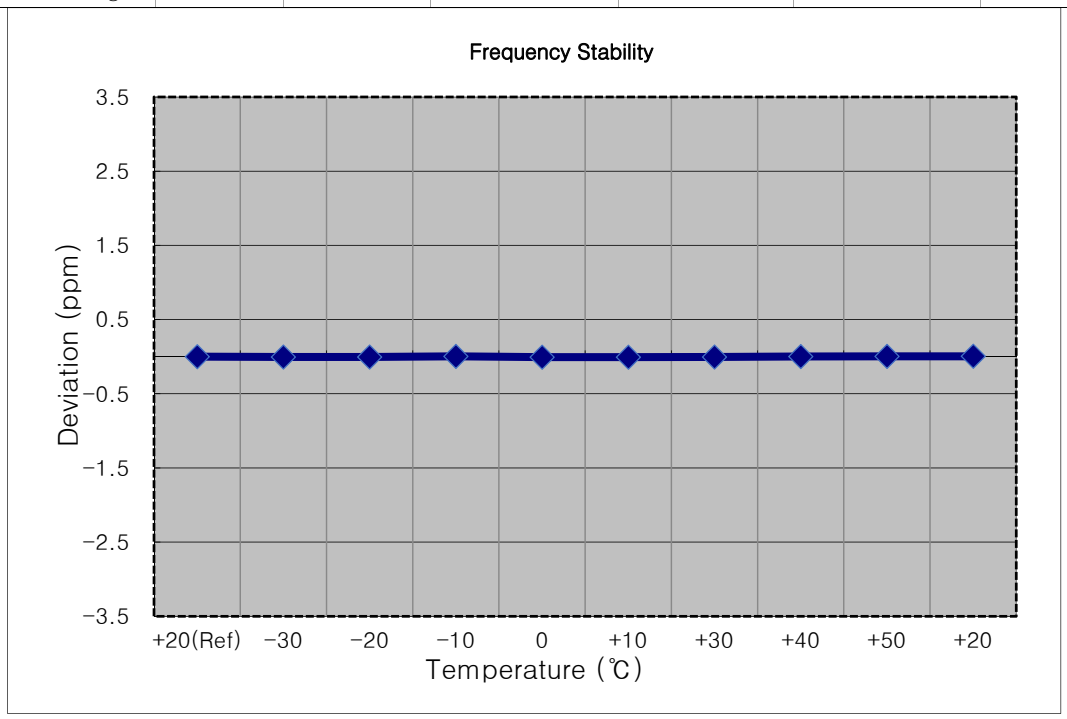
▣ OPERATING FREQUENCY: 1909,800,000 Hz

▣ CHANNEL: 810

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	4.200	+20(Ref)	1909 799 990	0.0	0.000 000	0.000
100 %		-30	1909 799 978	-11.3	-0.000 001	-0.006
100 %		-20	1909 799 980	-9.9	-0.000 001	-0.005
100 %		-10	1909 799 997	7.5	0.000 000	0.004
100 %		0	1909 799 977	-12.7	-0.000 001	-0.007
100 %		+10	1909 799 977	-13.0	-0.000 001	-0.007
100 %		+30	1909 799 981	-8.4	0.000 000	-0.004
100 %		+40	1909 799 994	4.8	0.000 000	0.002
100 %		+50	1909 799 998	8.2	0.000 000	0.004
Lowest voltage	3.700	+20	1909 800 000	10.0	0.000 001	0.005



▣ Mode: WCDMA850

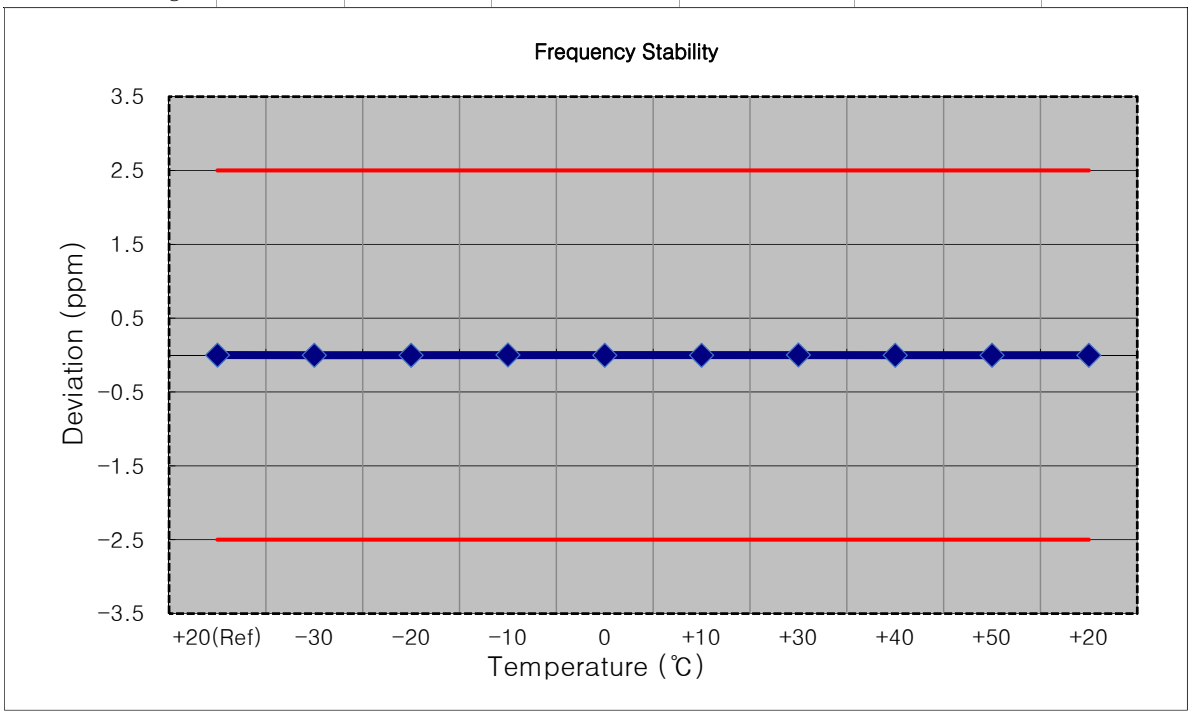
▣ OPERATING FREQUENCY: 836,600,000 Hz

▣ CHANNEL: 4183

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	4.200	+20(Ref)	836 600 003	0.0	0.000 000	0.0000
100 %		-30	836 600 000	-2.5	0.000 000	-0.0030
100 %		-20	836 600 000	-2.7	0.000 000	-0.0032
100 %		-10	836 600 004	1.7	0.000 000	0.0021
100 %		0	836 599 999	-3.1	0.000 000	-0.0037
100 %		+10	836 600 000	-2.3	0.000 000	-0.0028
100 %		+30	836 600 005	2.1	0.000 000	0.0025
100 %		+40	836 600 001	-1.8	0.000 000	-0.0021
100 %		+50	836 600 001	-1.3	0.000 000	-0.0016
Lowest voltage	3.700	+20	836 600 001	-1.4	0.000 000	-0.0017



▣ Mode: WCDMA1900

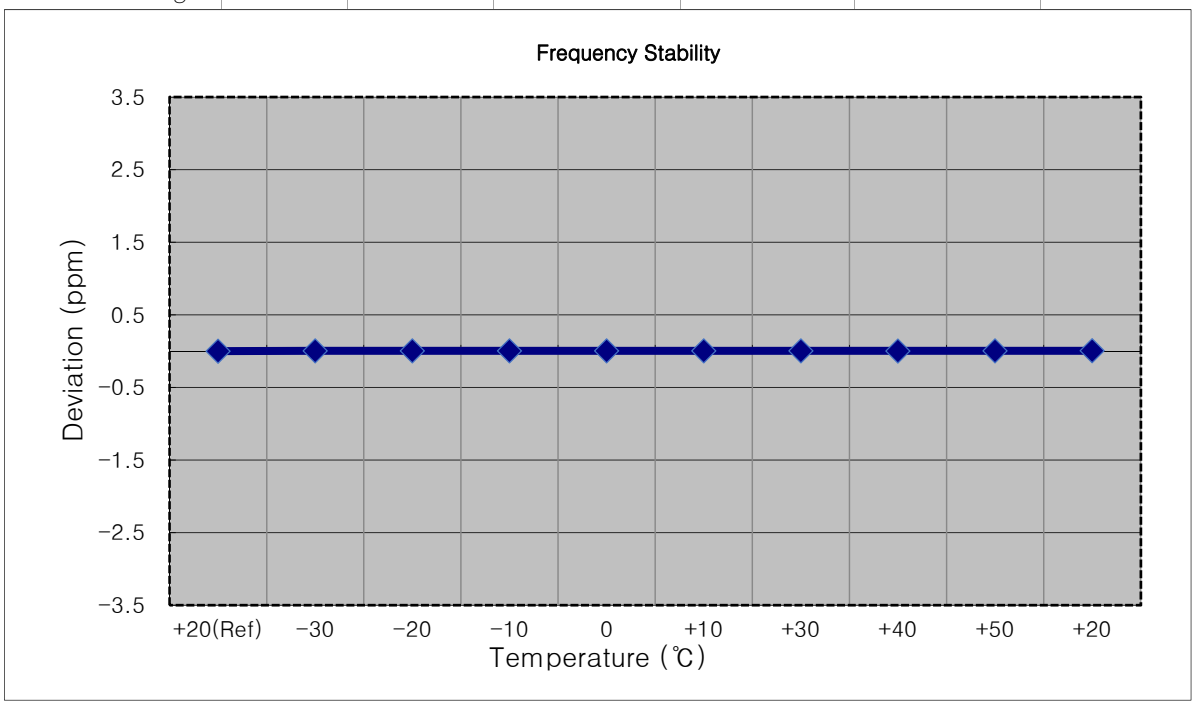
▣ OPERATING FREQUENCY: 1,852,400,000 Hz

▣ CHANNEL: 9262

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(℃)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1852 400 008	0.0	0.000 000	0.0000
100 %		-30	1852 400 015	7.5	0.000 000	0.0040
100 %		-20	1852 400 014	5.9	0.000 000	0.0032
100 %		-10	1852 400 015	7.1	0.000 000	0.0038
100 %	4.200	0	1852 400 015	7.2	0.000 000	0.0039
100 %		+10	1852 400 013	5.5	0.000 000	0.0030
100 %		+30	1852 400 015	7.1	0.000 000	0.0038
100 %		+40	1852 400 013	4.7	0.000 000	0.0026
100 %		+50	1852 400 014	6.6	0.000 000	0.0036
Lowest voltage	3.700	+20	1852 400 017	9.5	0.000 001	0.0051



▣ Mode: WCDMA1900

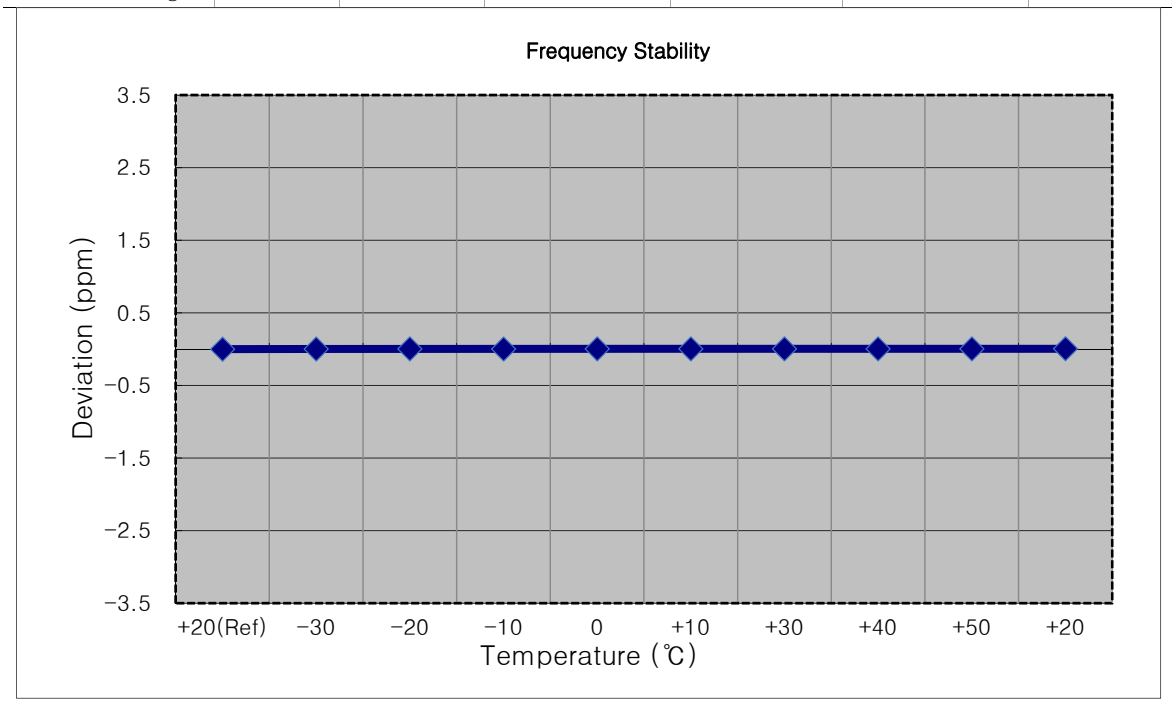
▣ OPERATING FREQUENCY: 1,880,000,000 Hz

▣ CHANNEL: 9400

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1880 000 008	0.0	0.000 000	0.0000
100 %		-30	1880 000 012	3.6	0.000 000	0.0019
100 %		-20	1880 000 014	6.2	0.000 000	0.0033
100 %		-10	1880 000 013	4.6	0.000 000	0.0024
100 %	4.200	0	1880 000 015	7.2	0.000 000	0.0038
100 %		+10	1880 000 017	8.8	0.000 000	0.0047
100 %		+30	1880 000 016	7.5	0.000 000	0.0040
100 %		+40	1880 000 014	6.4	0.000 000	0.0034
100 %		+50	1880 000 015	7.5	0.000 000	0.0040
Lowest voltage	3.700	+20	1880 000 017	9.4	0.000 000	0.0050



▣ Mode: WCDMA1900

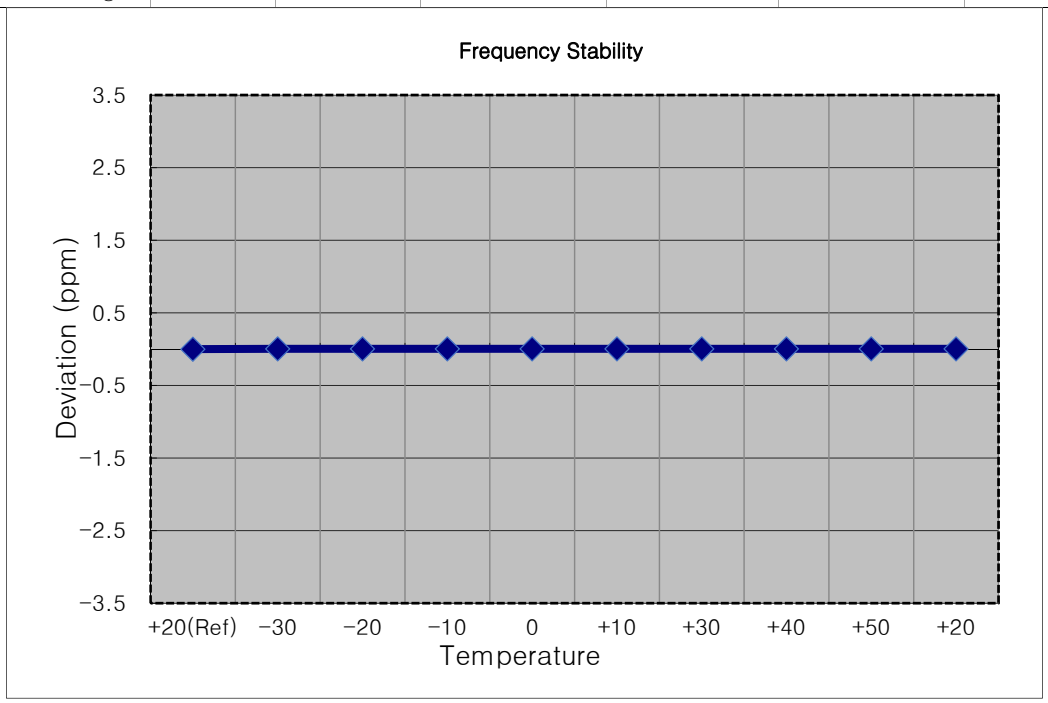
▣ OPERATING FREQUENCY: 1,907,600,000 Hz

▣ CHANNEL: 9538

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1907 600 004	0.0	0.000 000	0.0000
100 %		-30	1907 600 009	5.1	0.000 000	0.0027
100 %		-20	1907 600 011	7.3	0.000 000	0.0038
100 %		-10	1907 600 012	8.7	0.000 000	0.0046
100 %	4.200	0	1907 600 010	6.6	0.000 000	0.0035
100 %		+10	1907 600 009	5.5	0.000 000	0.0029
100 %		+30	1907 600 010	6.1	0.000 000	0.0032
100 %		+40	1907 600 010	6.0	0.000 000	0.0031
100 %		+50	1907 600 011	7.1	0.000 000	0.0037
Lowest voltage	3.700	+20	1907 600 010	6.3	0.000 000	0.0033



▣ Mode: WCDMA1700

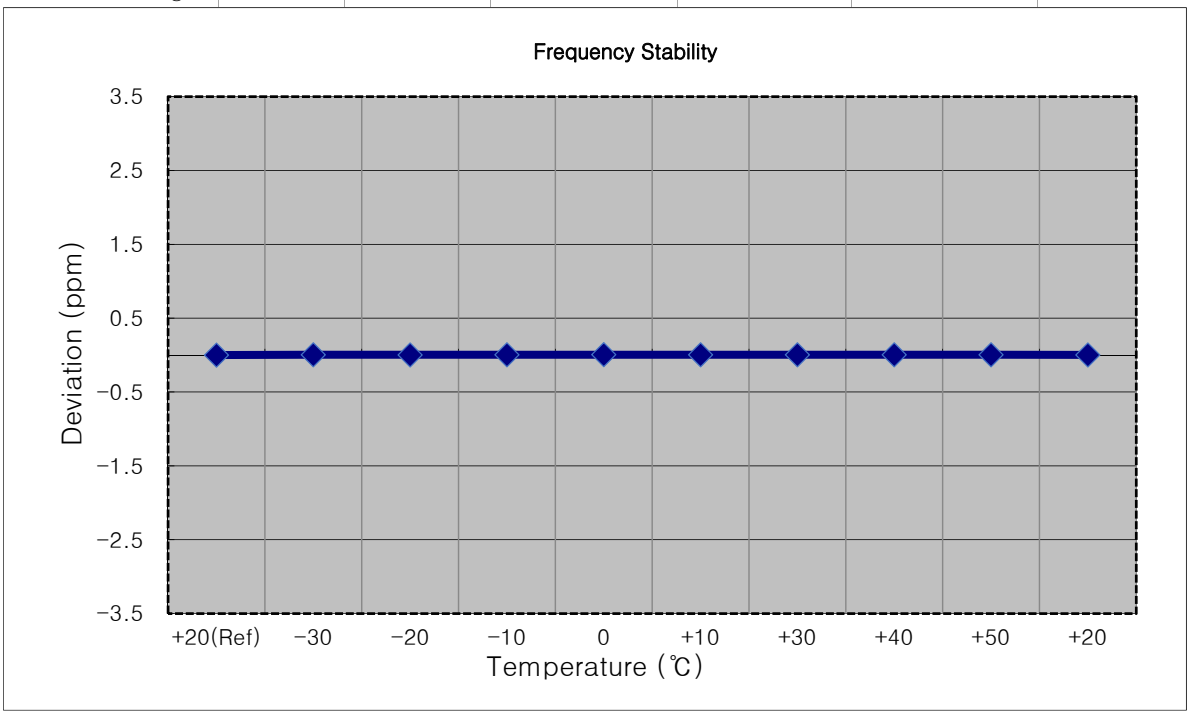
▣ OPERATING FREQUENCY: 1,712,400,000 Hz

▣ CHANNEL: 1312

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100 %	4.200	+20(Ref)	1712 400 006	0.0	0.000 000	0.0000
100 %		-30	1712 400 014	8.2	0.000 000	0.0048
100 %		-20	1712 400 010	4.0	0.000 000	0.0023
100 %		-10	1712 400 014	8.3	0.000 000	0.0049
100 %		0	1712 400 014	8.5	0.000 000	0.0050
100 %		+10	1712 400 013	6.8	0.000 000	0.0040
100 %		+30	1712 400 012	6.1	0.000 000	0.0035
100 %		+40	1712 400 011	5.1	0.000 000	0.0030
100 %		+50	1712 400 011	5.1	0.000 000	0.0030
Lowest voltage	3.700	+20	1712 400 010	4.1	0.000 000	0.0024



▣ Mode: WCDMA1700

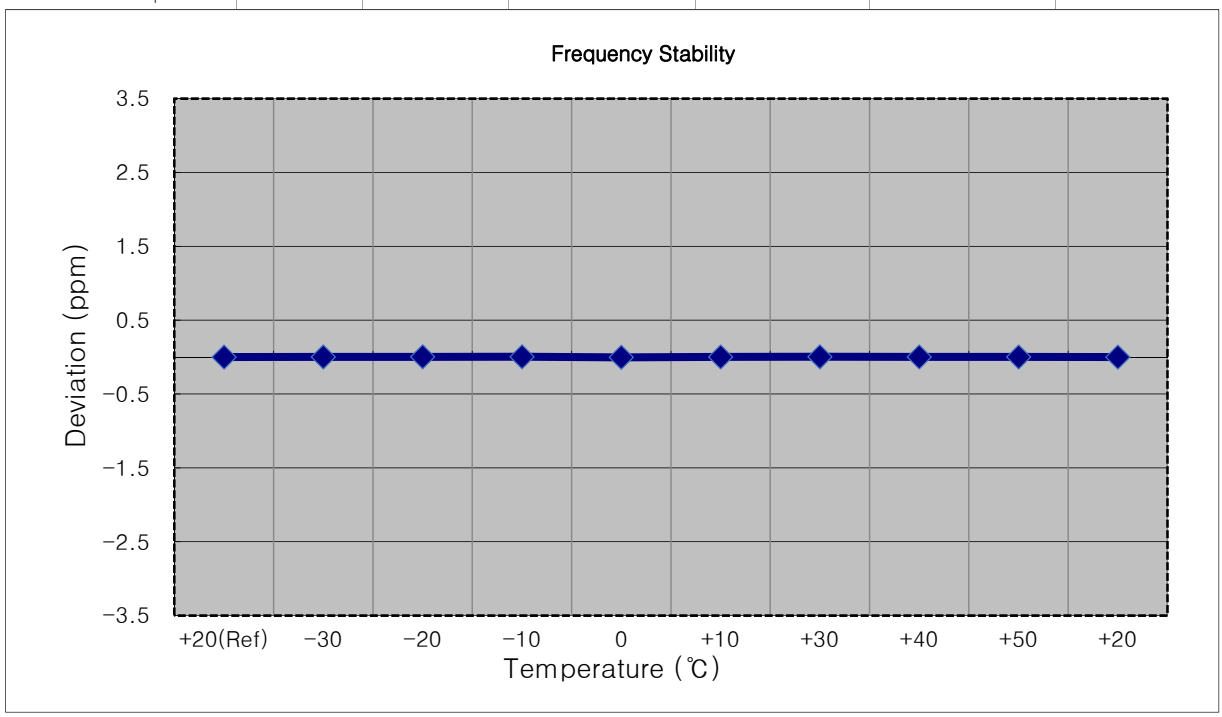
▣ OPERATING FREQUENCY: 1,732,400,000 Hz

▣ CHANNEL: 1412

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1732 400 004	0.0	0.000 000	0.0000
100 %		-30	1732 400 005	1.8	0.000 000	0.0010
100 %		-20	1732 400 009	5.6	0.000 000	0.0032
100 %		-10	1732 400 008	5.0	0.000 000	0.0029
100 %	4.200	0	1732 399 999	-4.7	0.000 000	-0.0027
100 %		+10	1732 400 008	4.5	0.000 000	0.0026
100 %		+30	1732 400 009	5.3	0.000 000	0.0031
100 %		+40	1732 400 008	4.1	0.000 000	0.0024
100 %		+50	1732 400 008	4.4	0.000 000	0.0025
Batt. Endpoint	3.700	+20	1732 400 002	-1.7	0.000 000	-0.0010



▣ Mode: WCDMA1700

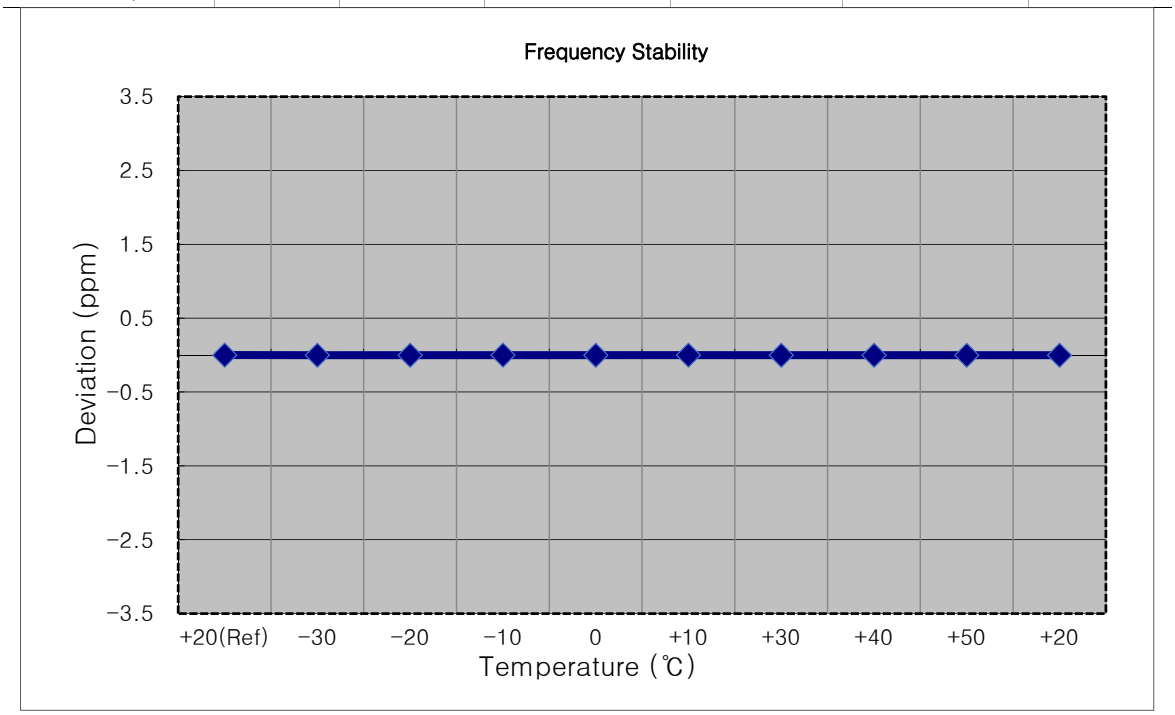
▣ OPERATING FREQUENCY: 1,752,600,000 Hz

▣ CHANNEL: 1513

▣ REFERENCE VOLTAGE: 4.200 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage	Power	Temp.	Frequency	Frequency	Deviation	ppm
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	
100 %		+20(Ref)	1752 599 995	0.0	0.000 000	0.0000
100 %		-30	1752 599 990	-4.7	0.000 000	-0.0027
100 %		-20	1752 599 992	-2.8	0.000 000	-0.0016
100 %		-10	1752 599 992	-2.5	0.000 000	-0.0014
100 %	4.200	0	1752 599 989	-5.0	0.000 000	-0.0029
100 %		+10	1752 599 992	-2.0	0.000 000	-0.0012
100 %		+30	1752 599 991	-3.8	0.000 000	-0.0022
100 %		+40	1752 599 990	-4.3	0.000 000	-0.0025
100 %		+50	1752 599 990	-4.4	0.000 000	-0.0025
Batt. Endpoint	3.700	+20	1752 599 991	-3.7	0.000 000	-0.0021



9. TEST DATA(Internal(BUA))

9.1 EFFECTIVE RADIATED POWER

Mode	Ch./ Freq.		Measured (dBμV/m)	Ant. Factor + Distance Factor (dB)	C.L + Thru(dB)	Total (dBμV/m)	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
GSM850	128	824.2	83.41	29.84	1.53	114.78	H	< 7.00	0.464	26.67
	190	836.6	83.51	29.74	1.55	114.80	H		0.467	26.69
	251	848.8	84.75	29.84	1.56	116.15	H		0.637	28.04
EDGE	251	848.8	79.04	29.84	1.56	110.44	H		0.171	22.33

Mode	Ch./ Freq.		Measured (dBμV/m)	Ant. Factor + Distance Factor (dB)	C.L + Thru(dB)	Total (dBμV/m)	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA850	4132	826.4	84.11	29.84	1.53	115.48	H	< 7.00	0.065	18.13
	4183	836.6	85.28	29.74	1.55	116.57	H		0.084	19.22
	4233	846.6	85.65	29.84	1.56	117.05	H		0.093	19.70

9.2 EQUIVALENT ISOTROPIC RADIATED POWER

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
GSM1900	512	1850.2	-23.68	20.46	10.15	2.07	V	< 2.00	0.714	28.54
	661	1880.0	-22.57	22.04	10.11	2.21	V		0.986	29.94
	810	1909.8	-23.28	21.44	10.03	2.17	V		0.851	29.30
EDGE	661	1880.0	-28.74	15.87	10.11	2.21	V		0.238	23.77

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1900	9262	1852.4	-19.31	15.59	10.15	2.07	H	< 2.00	0.233	23.67
	9400	1880.0	-19.93	15.44	10.11	2.21	H		0.216	23.34
	9538	1907.6	-20.82	14.66	10.03	2.17	H		0.179	22.52

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute LEVEL (dBm)	Ant. Gain (dBi)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1700	1312	1712.4	-22.70	11.81	9.81	2.06	H	< 1.00	0.090	19.56
	1412	1732.4	-22.33	11.94	9.91	2.08	H		0.095	19.77
	1513	1752.6	-22.54	11.71	10.02	2.08	H		0.092	19.65

9.3 RADIATED SPURIOUS EMISSIONS

▣ MODULATION SIGNAL: GSM850

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
128 (824.2)	1,648.40	-42.34	9.44	-57.28	2.02	H	-49.86	-13.00
	2,472.60	-42.69	10.34	-53.86	2.57	H	-46.09	-13.00
	3,296.80	-54.57	11.06	-62.73	2.95	H	-54.62	-13.00
	4,121.00	-54.59	11.65	-60.95	3.31	H	-52.61	-13.00
	4,945.20	-54.09	11.28	-55.75	3.68	H	-48.15	-13.00
190 (836.6)	1,673.20	-41.67	9.60	-56.94	2.05	H	-49.39	-13.00
	2,509.80	-43.42	10.26	-54.70	2.51	H	-46.95	-13.00
	3,346.40	-54.18	11.10	-62.84	2.96	V	-54.70	-13.00
	4,183.00	-54.63	11.72	-60.29	3.40	H	-51.97	-13.00
	5,019.60	-52.87	11.15	-53.97	3.69	H	-46.51	-13.00
251 (848.8)	1,697.60	-40.52	9.76	-55.69	2.07	H	-48.00	-13.00
	2,546.40	-46.65	10.25	-57.69	2.53	H	-49.97	-13.00
	3,395.20	-54.75	11.20	-63.64	2.98	H	-55.42	-13.00
	4,244.00	-52.42	11.68	-58.29	3.35	V	-49.96	-13.00
	5,092.80	-54.82	11.16	-56.38	3.78	H	-49.00	-13.00

▣ MODULATION SIGNAL: GSM1900

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
512 (1850.2)	3 700.40	-39.66	11.83	-47.28	3.07	V	-38.52	-13.00
	5 550.60	-44.37	12.07	-46.07	3.89	H	-37.89	-13.00
	7 400.80	-53.46	11.04	-49.24	4.58	V	-42.78	-13.00
	9 251.00	-56.06	11.29	-44.97	5.17	H	-38.85	-13.00
	11 101.20	-53.80	12.32	-47.33	5.89	H	-40.90	-13.00
661 (1880.0)	3 760.00	-41.72	11.61	-48.21	3.12	V	-39.72	-13.00
	5 640.00	-44.92	12.03	-45.98	3.92	H	-37.87	-13.00
	7 520.00	-55.06	11.49	-51.37	4.61	V	-44.49	-13.00
	9 400.00	-55.32	11.28	-45.24	5.23	V	-39.19	-13.00
	11 280.00	-54.63	12.27	-47.39	5.89	V	-41.01	-13.00
810 (1909.8)	3 819.60	-37.21	11.32	-43.46	3.19	V	-35.33	-13.00
	5 729.40	-46.92	11.80	-47.64	4.00	H	-39.84	-13.00
	7 639.20	-53.41	11.56	-49.34	4.68	V	-42.46	-13.00
	9 549.00	-54.63	11.32	-45.58	5.27	V	-39.53	-13.00
	11 458.80	-53.77	12.35	-46.43	5.93	V	-40.01	-13.00

▣ MODULATION SIGNAL: WCDMA850

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
4132 (826.4)	1,652.80	-52.47	9.47	-67.50	2.02	H	-60.05	-13.00
	2,479.20	-53.53	10.32	-64.67	2.55	V	-56.90	-13.00
	3,305.60	-54.89	11.09	-63.15	2.97	H	-55.03	-13.00
	4,132.00	-55.13	11.68	-61.41	3.33	H	-53.06	-13.00
	4,958.40	-55.99	11.25	-57.59	3.69	H	-50.03	-13.00
4183 (836.6)	1,673.20	-52.70	9.60	-67.97	2.05	H	-60.42	-13.00
	2,509.80	-52.97	10.26	-64.25	2.51	H	-56.50	-13.00
	3,346.40	-55.25	11.10	-63.91	2.96	H	-55.77	-13.00
	4,183.00	-55.08	11.72	-60.74	3.40	H	-52.42	-13.00
	5,019.60	-56.15	11.15	-57.25	3.69	H	-49.79	-13.00
4233 (846.6)	1,693.20	-51.89	9.73	-67.11	2.07	V	-59.45	-13.00
	2,539.80	-52.94	10.25	-64.04	2.53	V	-56.32	-13.00
	3,386.40	-55.03	11.18	-63.98	2.99	H	-55.79	-13.00
	4,233.00	-54.59	11.69	-60.38	3.36	V	-52.05	-13.00
	5,079.60	-54.55	11.15	-55.93	3.81	H	-48.59	-13.00

▣ MODULATION SIGNAL: WCDMA1900

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
9262 (1852.4)	3 704.80	-54.95	11.82	-62.45	3.08	H	-53.71	-13.00
	5 557.20	-55.56	12.07	-57.22	3.88	H	-49.03	-13.00
	7 409.60	-55.36	11.09	-51.42	4.57	V	-44.90	-13.00
	9 262.00	-56.11	11.28	-45.14	5.20	V	-39.06	-13.00
	11 114.40	-54.59	12.32	-48.19	5.85	H	-41.72	-13.00
9400 (1880.0)	3 760.00	-54.65	11.61	-61.14	3.12	V	-52.65	-13.00
	5 640.00	-55.10	12.03	-56.16	3.92	V	-48.05	-13.00
	7 520.00	-54.54	11.49	-50.85	4.61	V	-43.97	-13.00
	9 400.00	-55.99	11.28	-45.91	5.23	H	-39.86	-13.00
	11 280.00	-54.70	12.27	-47.46	5.89	H	-41.08	-13.00
9538 (1907.6)	3 815.20	-55.52	11.34	-61.82	3.20	H	-53.68	-13.00
	5 722.80	-55.97	11.82	-56.76	4.00	V	-48.94	-13.00
	7 630.40	-54.68	11.56	-50.72	4.66	H	-43.82	-13.00
	9 538.00	-55.37	11.31	-46.10	5.27	V	-40.06	-13.00
	11 445.60	-54.95	12.32	-47.56	5.85	V	-41.09	-13.00

▣ MODULATION SIGNAL: WCDMA1700

▣ DISTANCE: 3 meters

Ch.	Freq. (MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)	Limit
1312 (1712.4)	3 424.80	-55.58	11.33	-63.16	2.99	H	-54.82	-13.00
	5 137.20	-55.76	11.25	-57.42	3.81	V	-49.98	-13.00
	6 849.60	-55.11	11.07	-51.26	4.36	V	-44.55	-13.00
	8 562.00	-56.48	11.13	-48.05	4.92	H	-41.84	-13.00
	10 274.40	-54.61	11.66	-46.71	5.58	H	-40.63	-13.00
1412 (1732.4)	3 464.80	-55.32	11.50	-63.36	3.02	H	-54.88	-13.00
	5 197.20	-54.24	11.41	-56.15	3.79	H	-48.53	-13.00
	6 929.60	-55.31	11.14	-51.67	4.40	V	-44.93	-13.00
	8 662.00	-55.99	11.16	-45.92	5.00	V	-39.76	-13.00
	10 394.40	-53.20	11.88	-45.65	5.56	H	-39.33	-13.00
1513 (1752.6)	3 505.20	-54.97	11.59	-63.11	3.05	H	-54.57	-13.00
	5 257.80	-55.29	11.60	-56.68	3.79	V	-48.87	-13.00
	7 010.40	-54.77	11.07	-51.57	4.42	H	-44.92	-13.00
	8 763.00	-54.72	11.15	-44.88	5.04	H	-38.77	-13.00
	10 515.60	-53.44	11.84	-46.72	5.65	H	-40.53	-13.00

10. TEST PLOTS

■ GSM850 MODE (128 CH.) Occupied Bandwidth

■ GSM850 MODE (190 CH.) Occupied Bandwidth

■ GSM850 MODE (251 CH.) Occupied Bandwidth

■ GSM850 EDGE (190 CH.) Occupied Bandwidth

■ GSM1900 MODE (512 CH.) Occupied Bandwidth

■ GSM1900 MODE (661 CH.) Occupied Bandwidth

■ GSM1900 MODE (810 CH.) Occupied Bandwidth

■ GSM1900 EDGE (512 CH.) Occupied Bandwidth

■ WCDMA850 MODE (4132 CH.) Occupied Bandwidth

■ WCDMA850 MODE (4183 CH.) Occupied Bandwidth

■ WCDMA850MODE (4233 CH.) Occupied Bandwidth

■ WCDMA1900 MODE (9262 CH.) Occupied Bandwidth

■ WCDMA1900 MODE (9400 CH.) Occupied Bandwidth

■ WCDMA1900 MODE (9538 CH.) Occupied Bandwidth

■ WCDMA1700 MODE (1312 CH.) Occupied Bandwidth

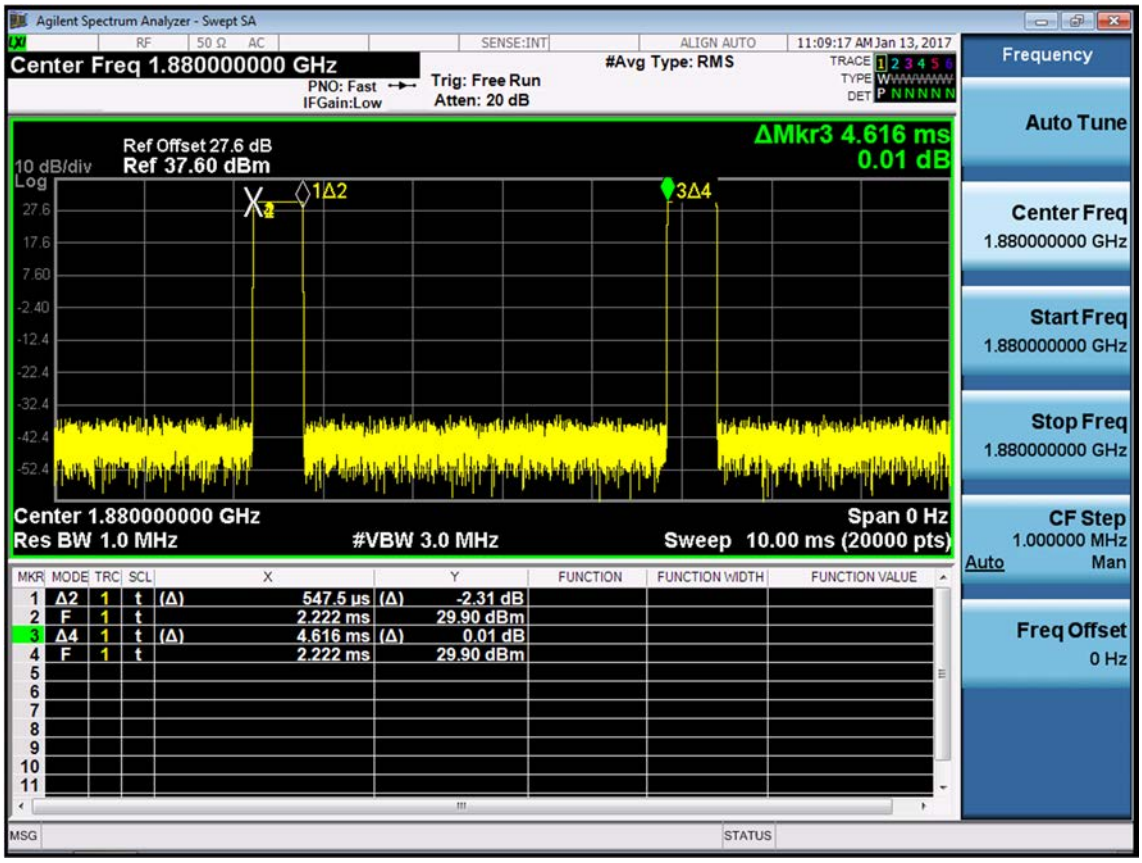
■ WCDMA1700 MODE (1412 CH.) Occupied Bandwidth

■ WCDMA1700 MODE (1513 CH.) Occupied Bandwidth

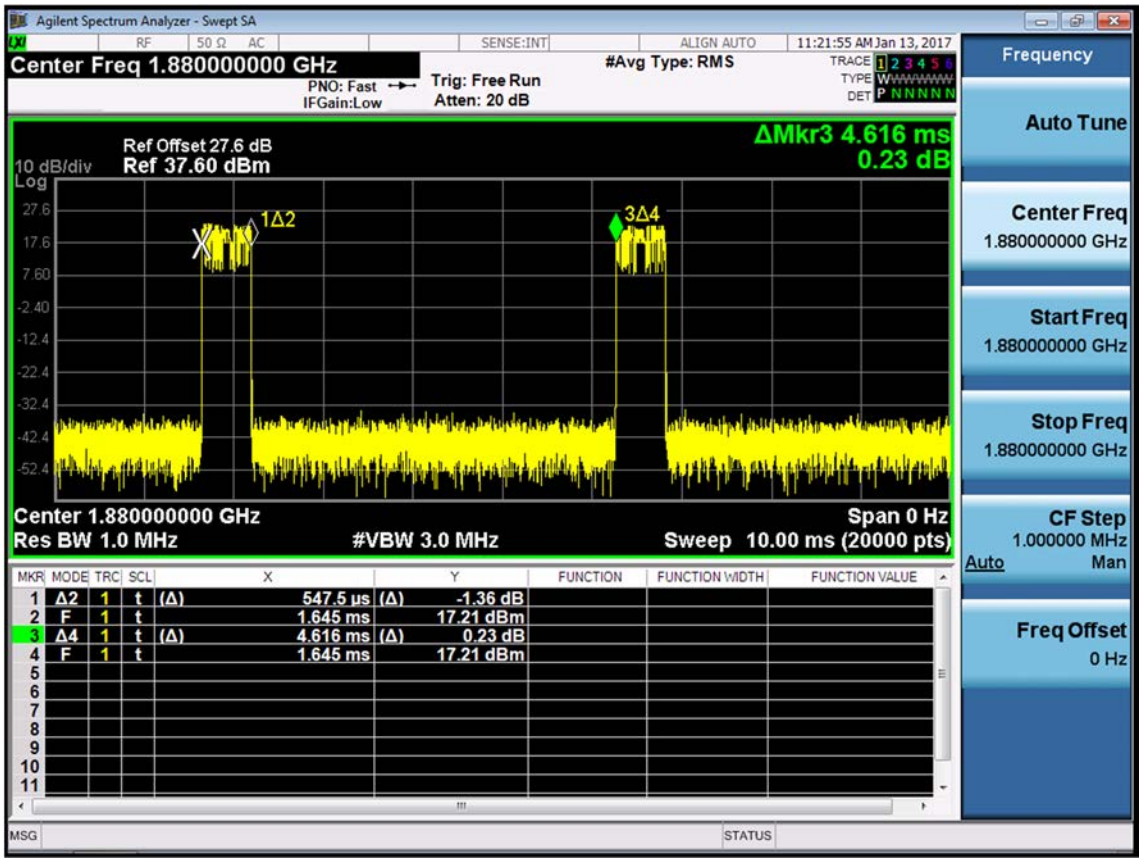
■ GSM1900 MODE (661 CH.) Peak-to-Average Ratio P_{Pk}

■ GSM1900 MODE (661 CH.) Peak-to-Average Ratio P_{Avg}

■ GSM1900 MODE (661 CH.) Peak-to-Average Ratio Duty



■ GSM1900 EDGE (661 CH.) Peak-to-Average Ratio Duty



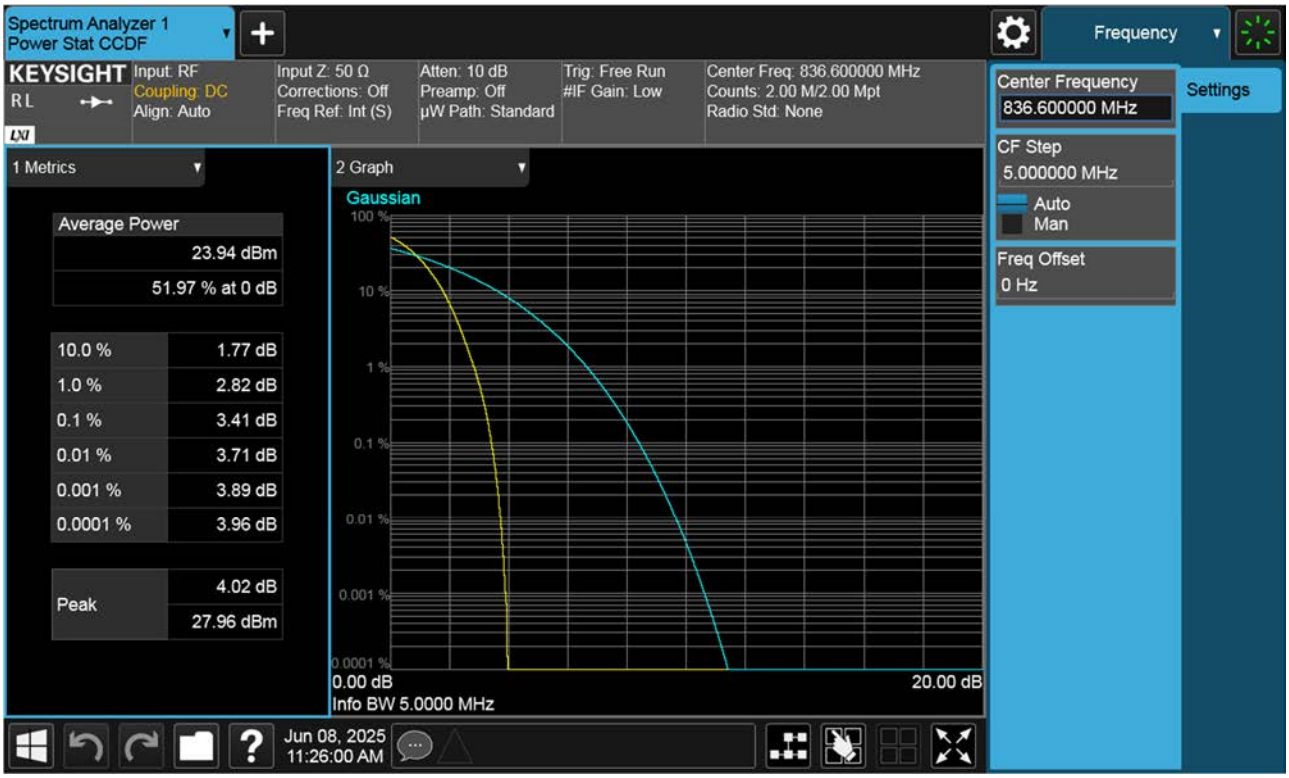
■ GSM1900 EDGE (661 CH.) Peak-to-Average Ratio P_{Pk}

■ GSM1900 EDGE (661 CH.) Peak-to-Average Ratio P_{Avg}

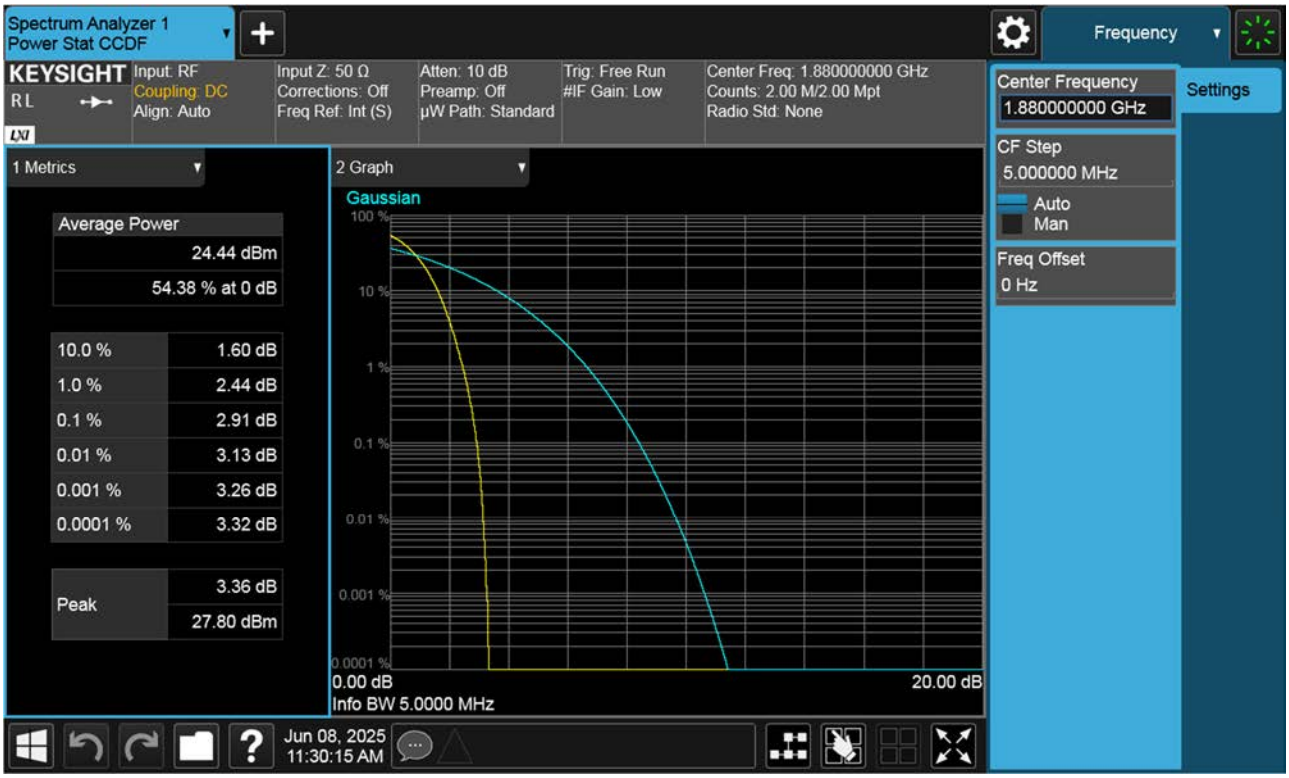
■ GSM850 MODE (190 CH.) Peak-to-Average Ratio

■ GSM850 EDGE (190 CH.) Peak-to-Average Ratio

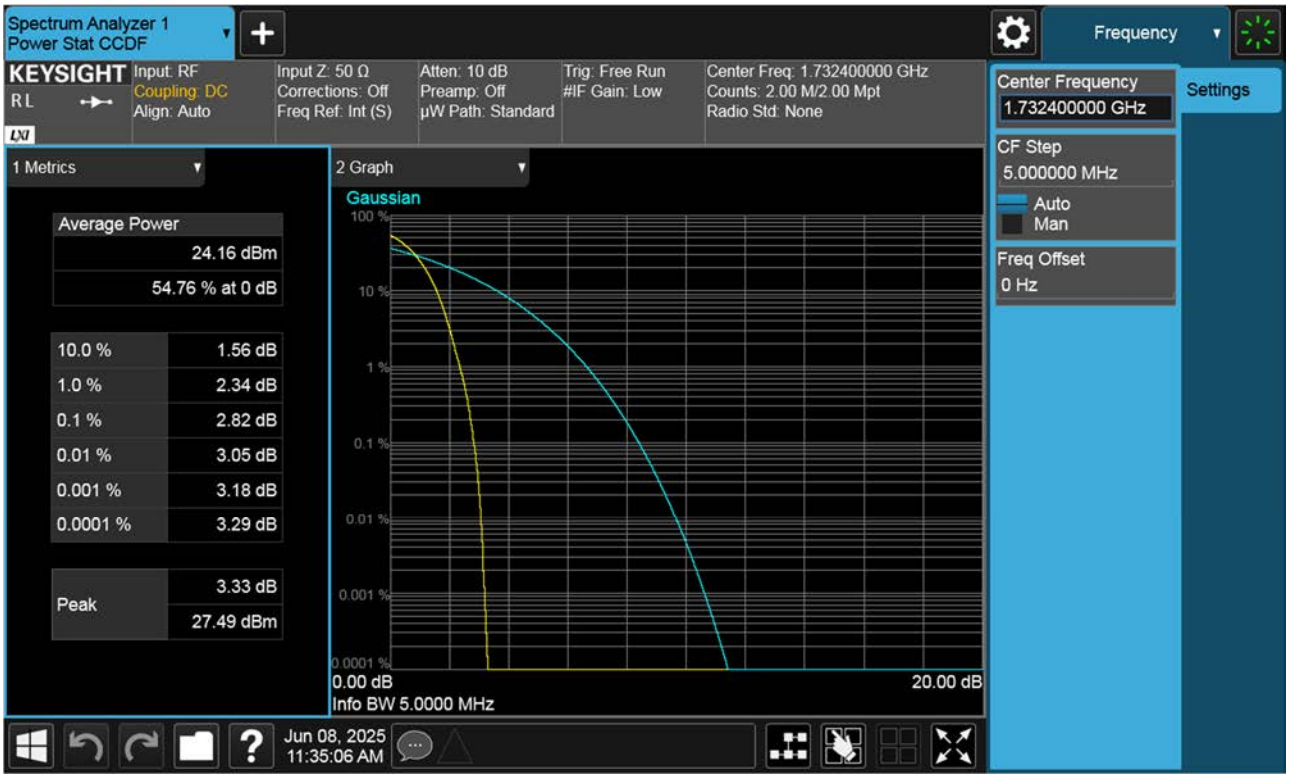
■ WCDMA850 MODE (4408 CH.) Peak-to-Average Ratio



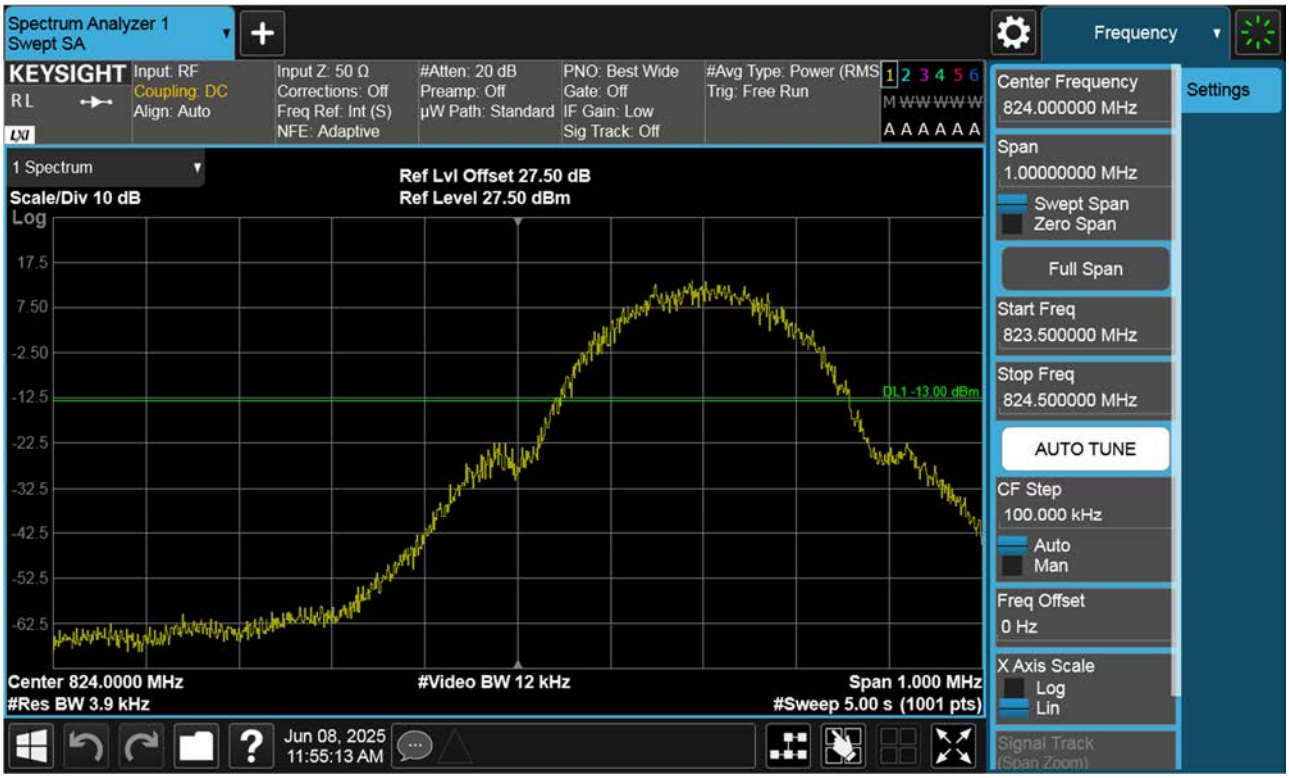
■ WCDMA1900 MODE (9400 CH.) Peak-to-Average Ratio



■ WCDMA1700 MODE (1412 CH.) Peak-to-Average Ratio



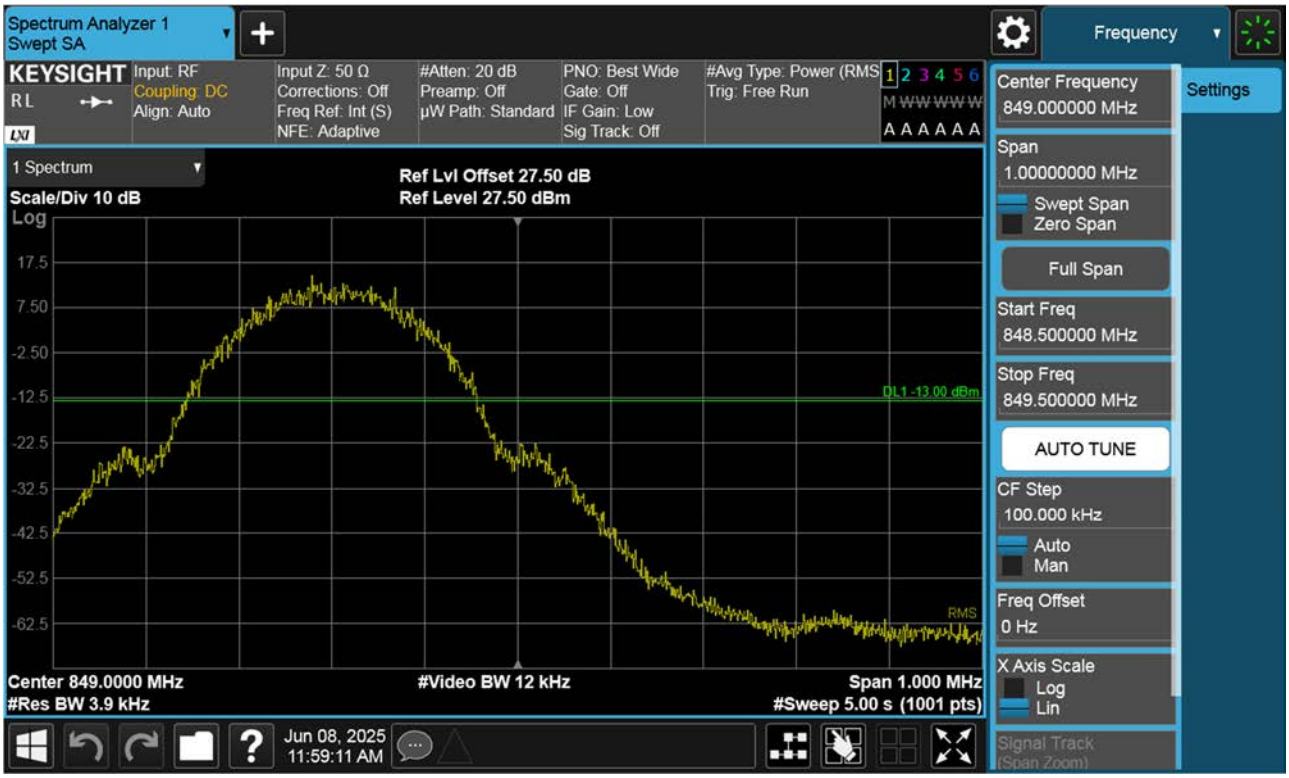
■ GSM850 MODE (128 CH.) Block Edge 1



■ GSM850 MODE (128 CH.) Block Edge 2

■ GSM850 MODE (128 CH.) Block Edge 3

■ GSM850 MODE (251 CH.) Block Edge 1



■ GSM850 MODE (251 CH.) Block Edge 2

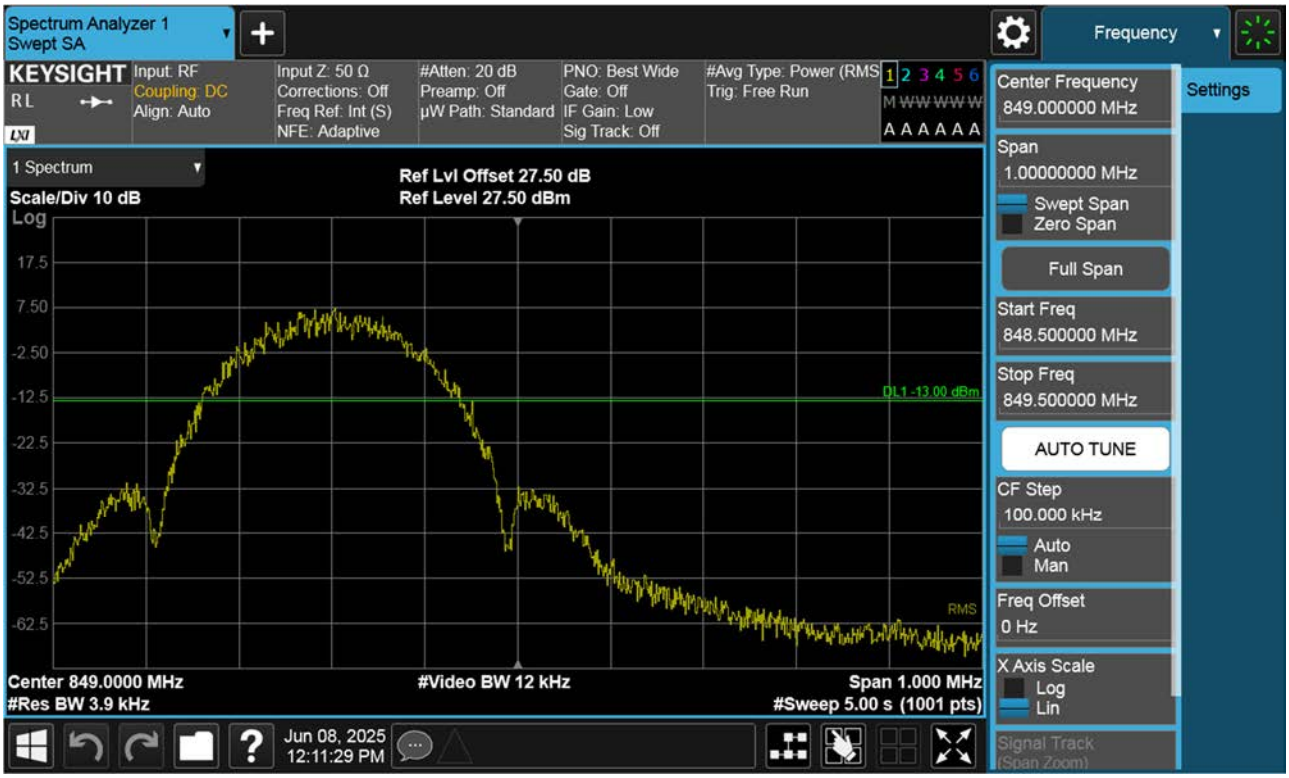
■ GSM850 MODE (251 CH.) Block Edge 3

■ EDGE MODE (128 CH.) Block Edge 1

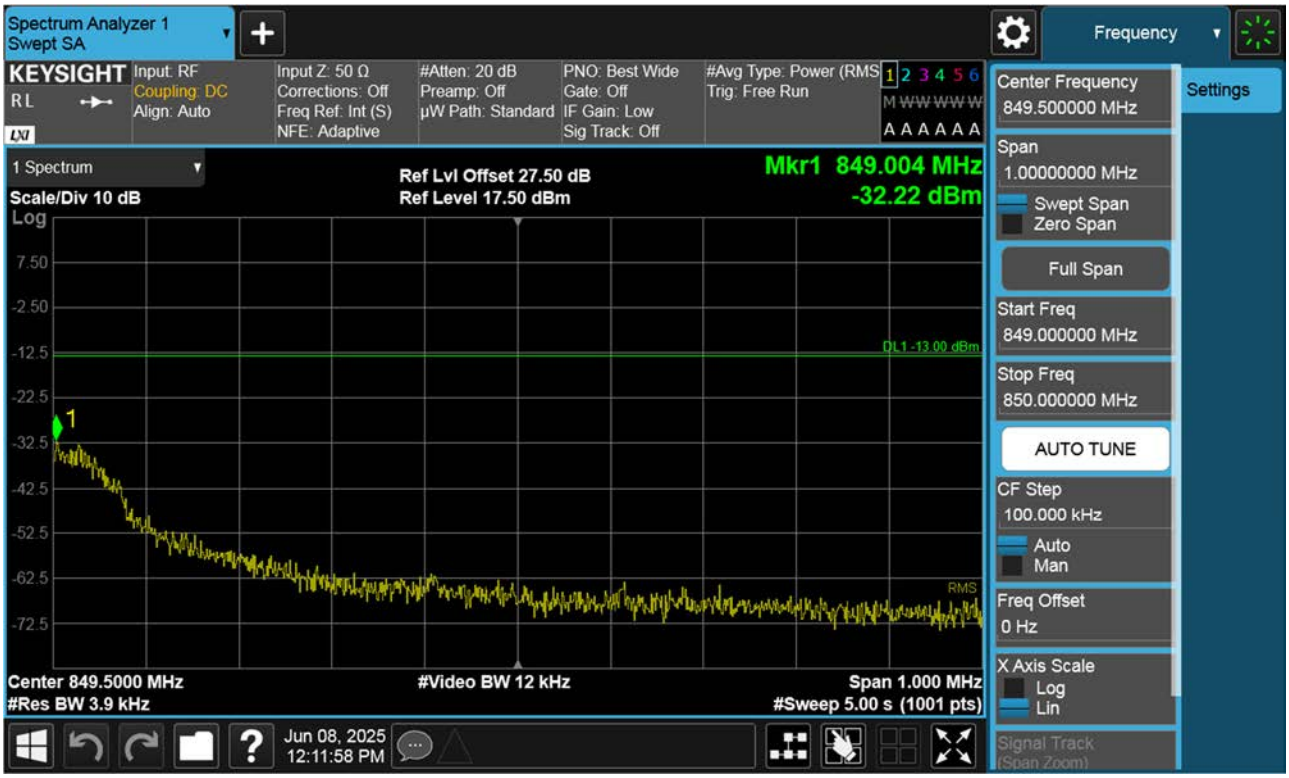
■ EDGE MODE (128 CH.) Block Edge 2

■ EDGE MODE (128 CH.) Block Edge 3

■ EDGE MODE (251 CH.) Block Edge 1

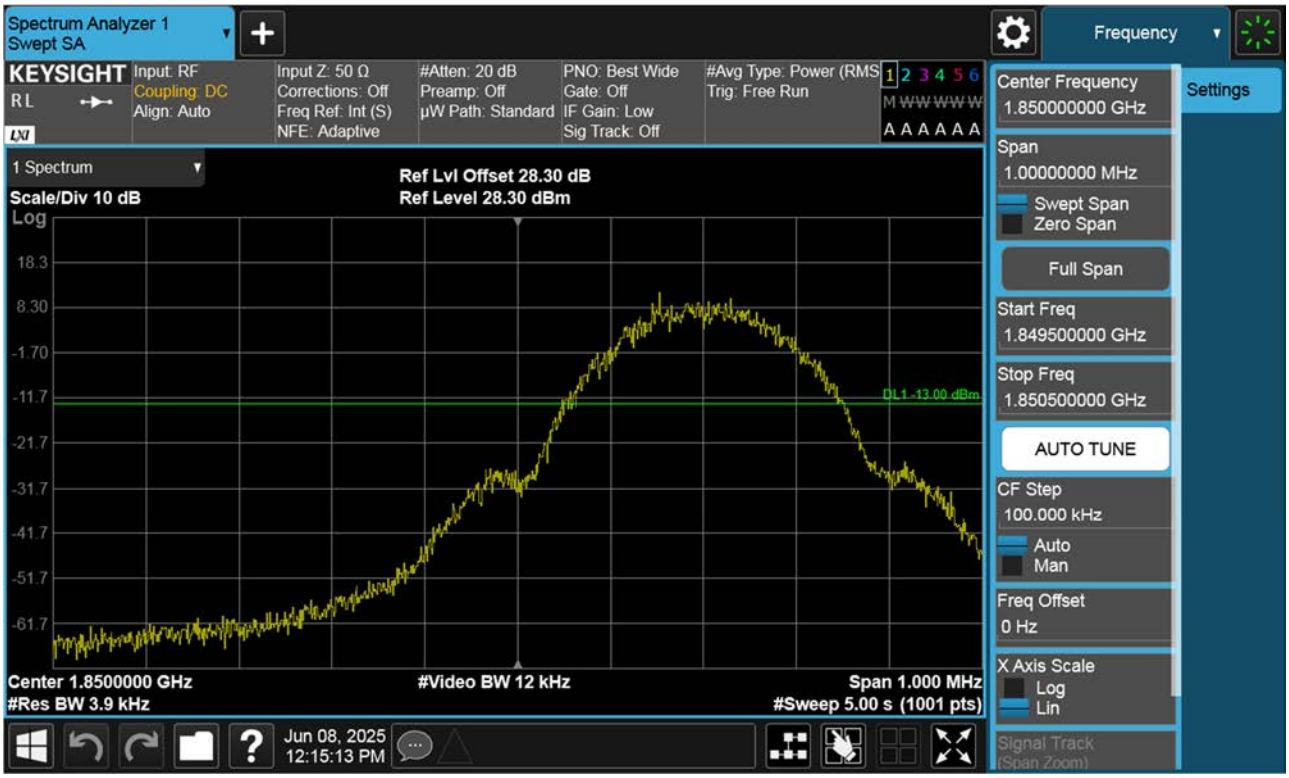


■ EDGE MODE (251 CH.) Block Edge 2

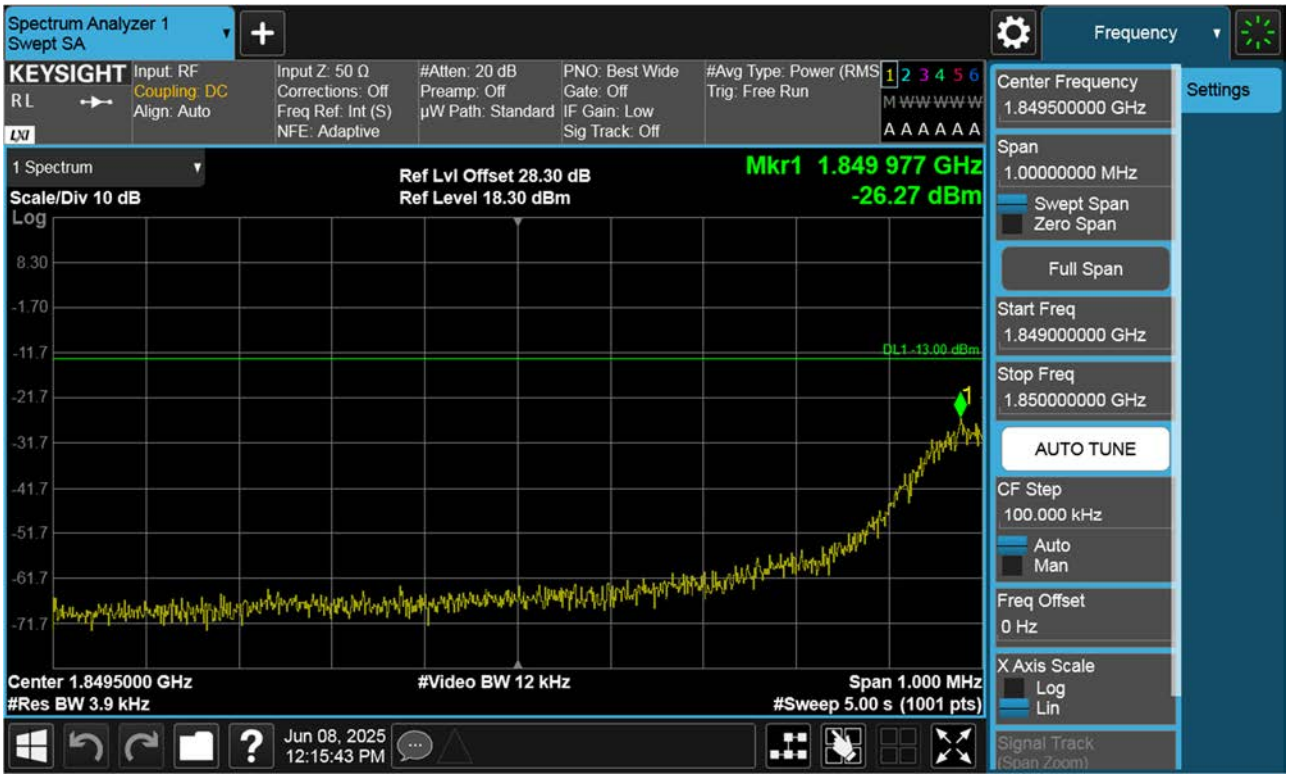


■ EDGE MODE (251 CH.) Block Edge 3

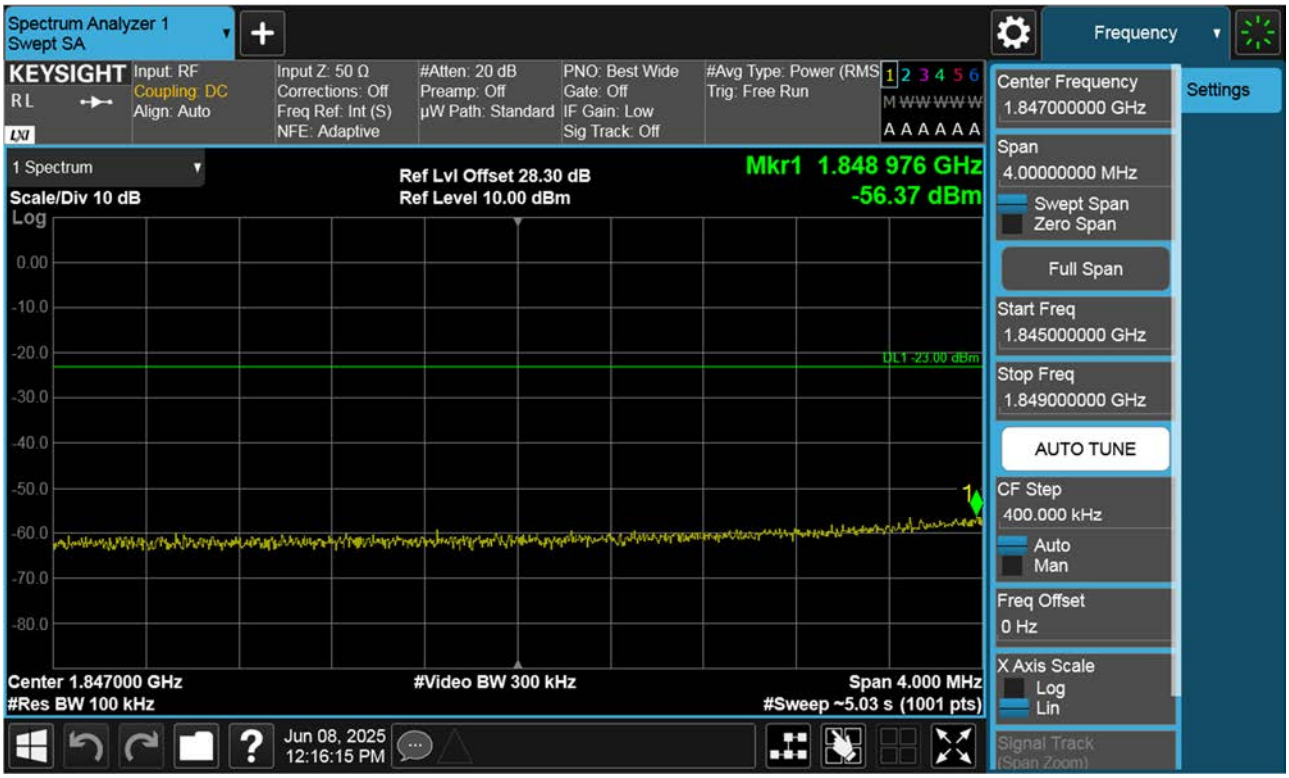
■ GSM1900 MODE (512 CH.) Block Edge 1



■ GSM1900 MODE (512 CH.) Block Edge 2



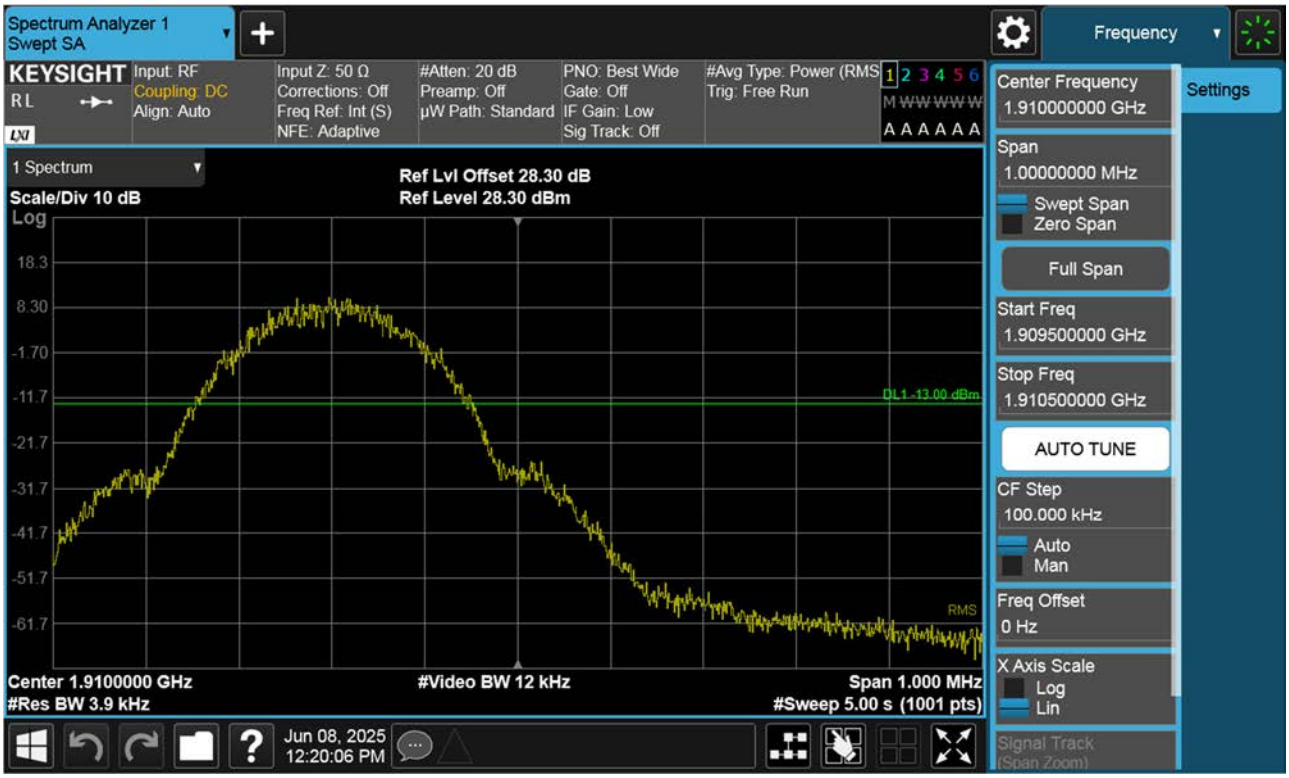
■ GSM1900 MODE (512 CH.) Block Edge 3



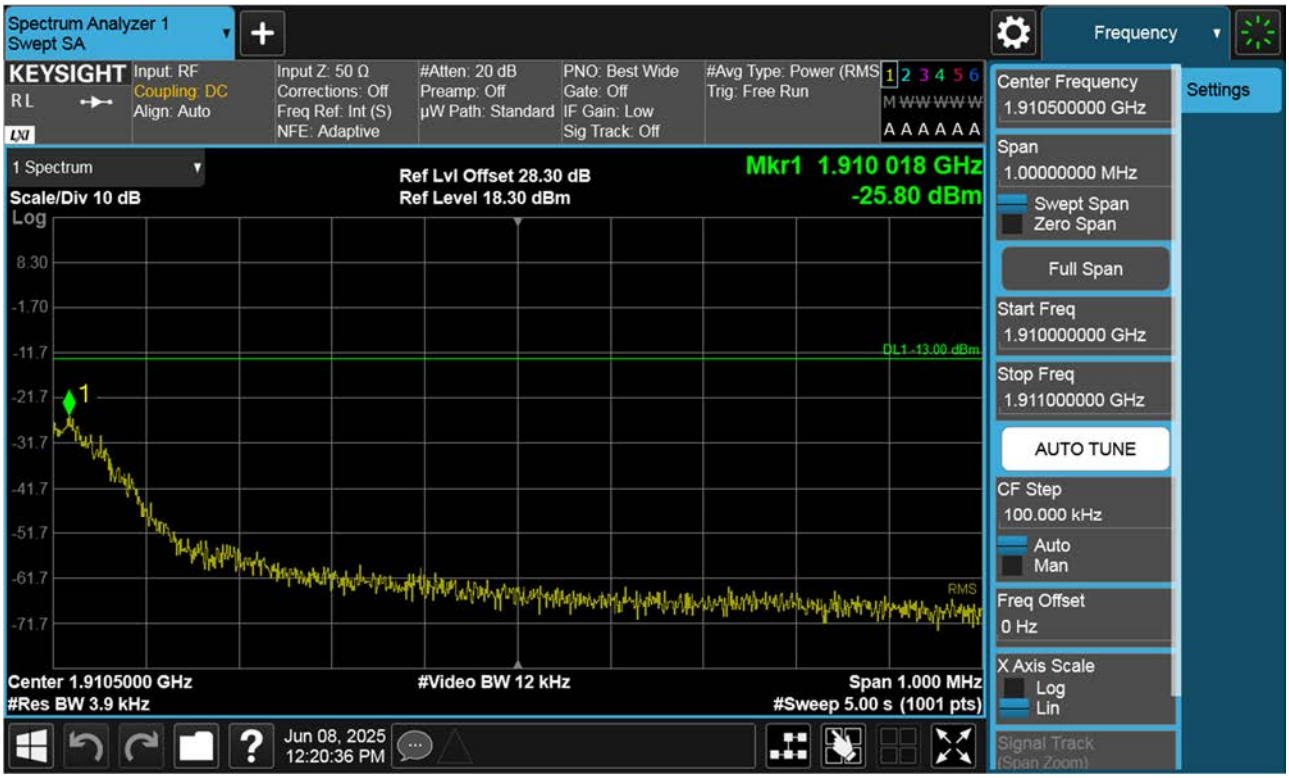
Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -56.37 dBm + 10 dB = -46.37 dBm

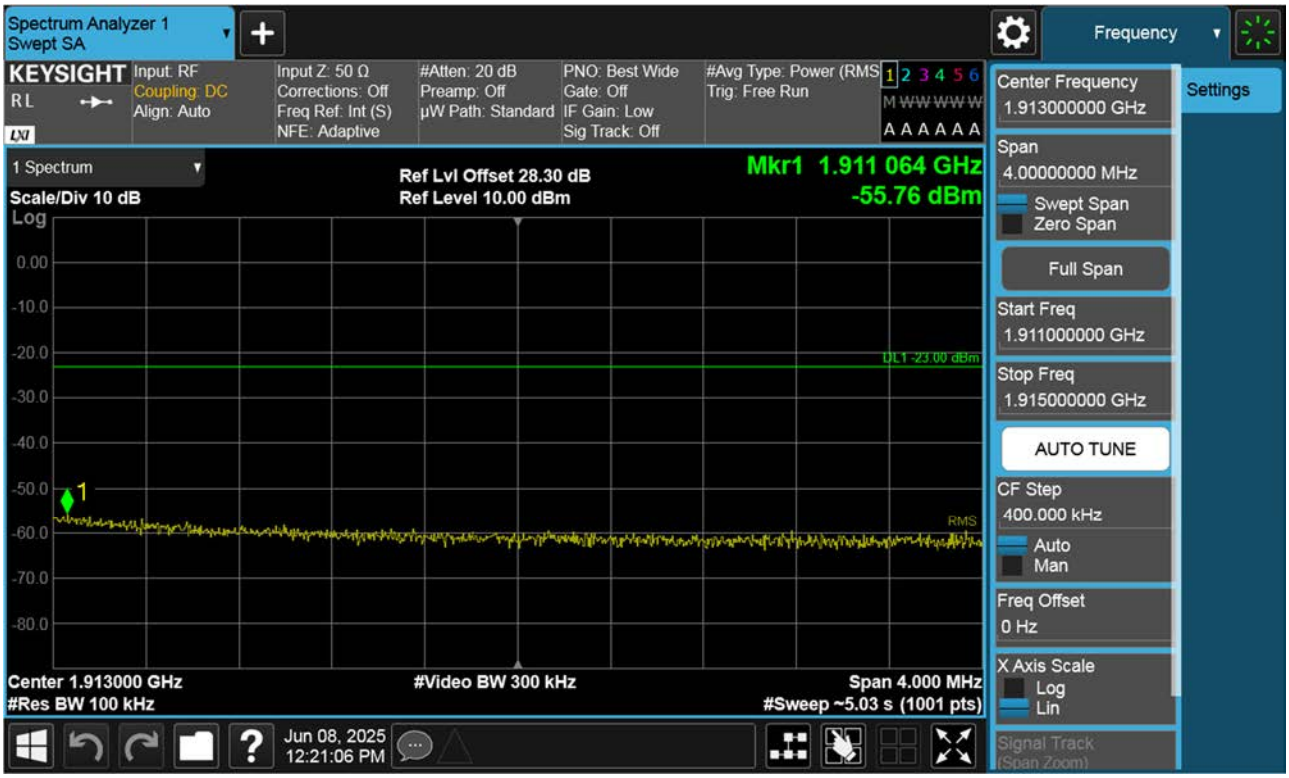
■ GSM1900 MODE (810 CH.) Block Edge 1



■ GSM1900 MODE (810 CH.) Block Edge 2



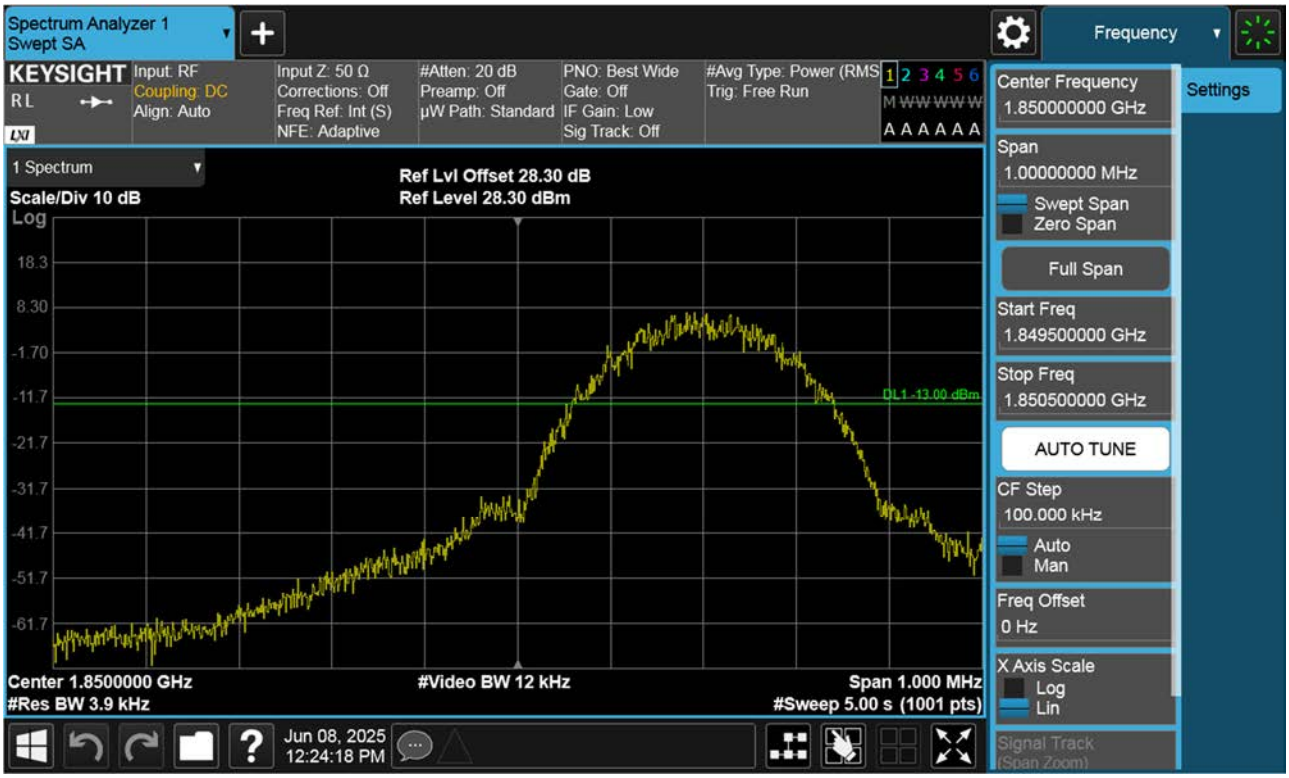
■ GSM1900 MODE (810 CH.) Block Edge 3



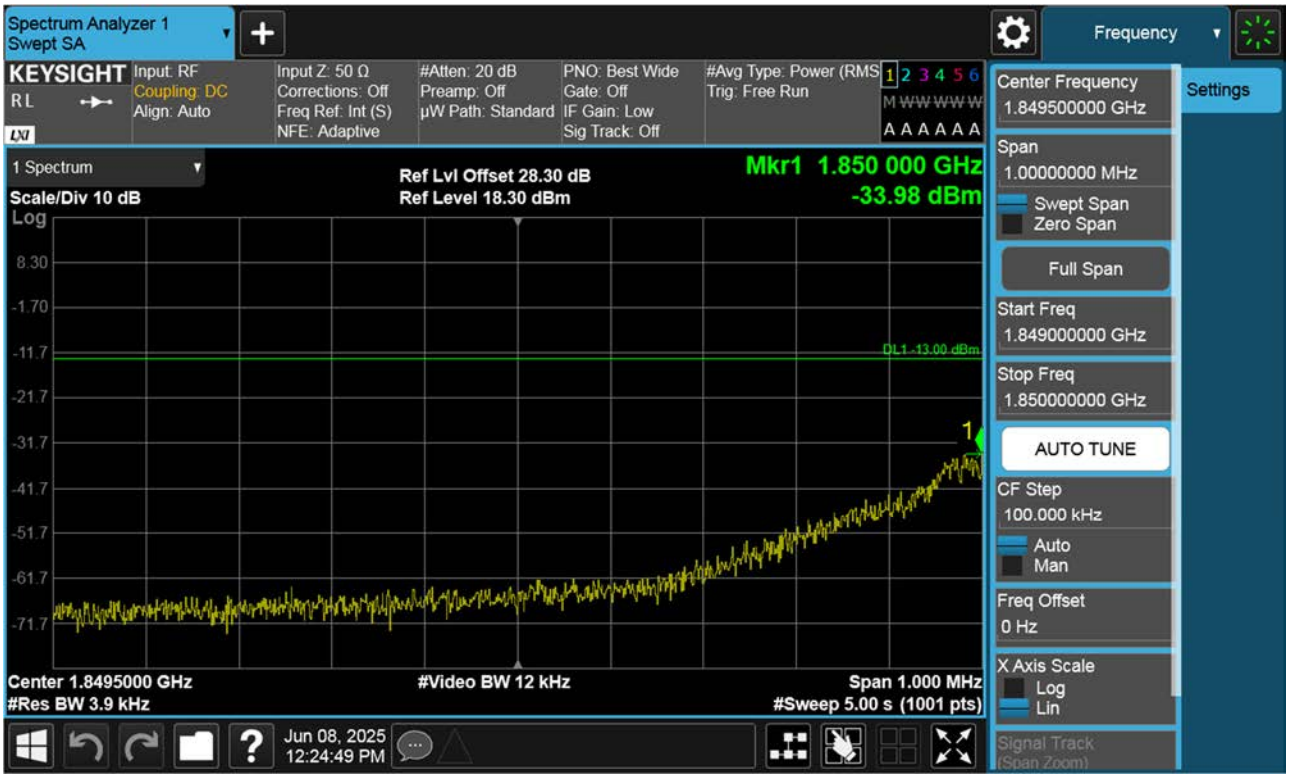
Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -55.76 dBm + 10 dB = -45.76 dBm

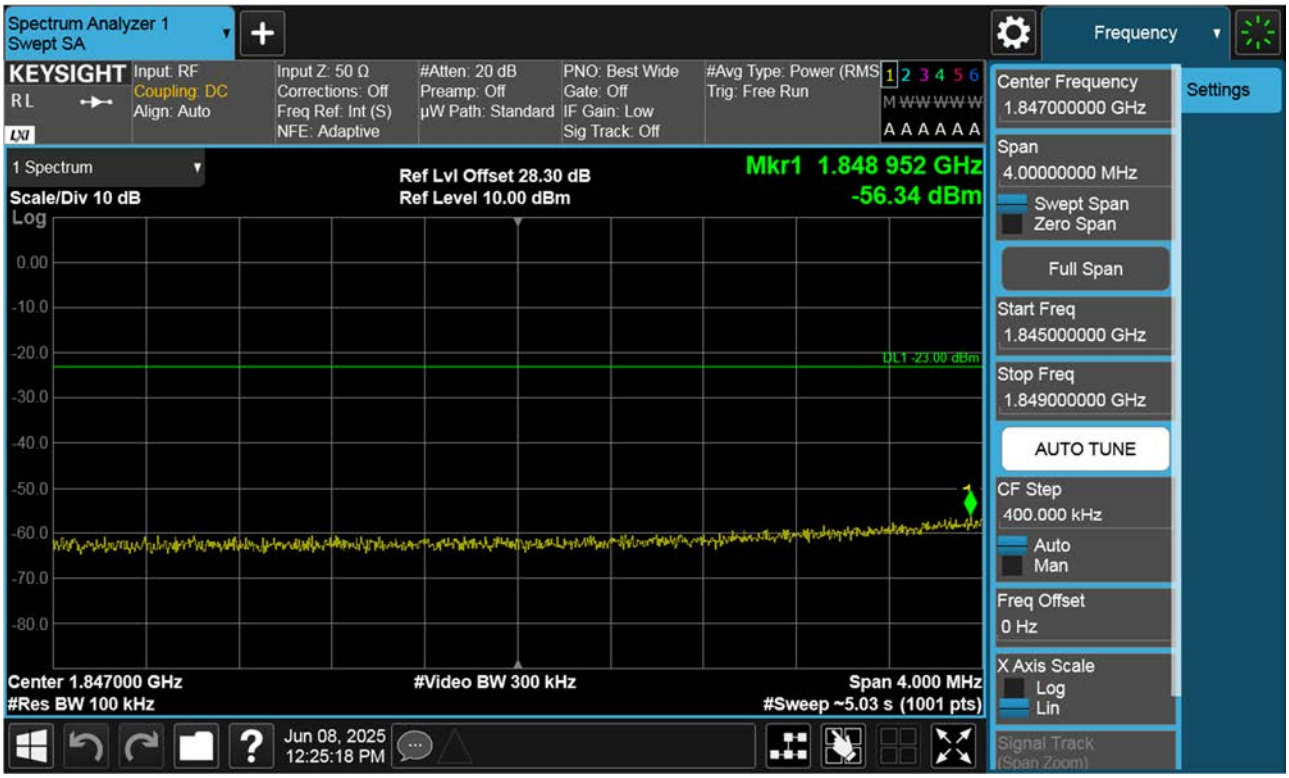
■ EDGE MODE (512 CH.) Block Edge 1



■ EDGE MODE (512 CH.) Block Edge 2



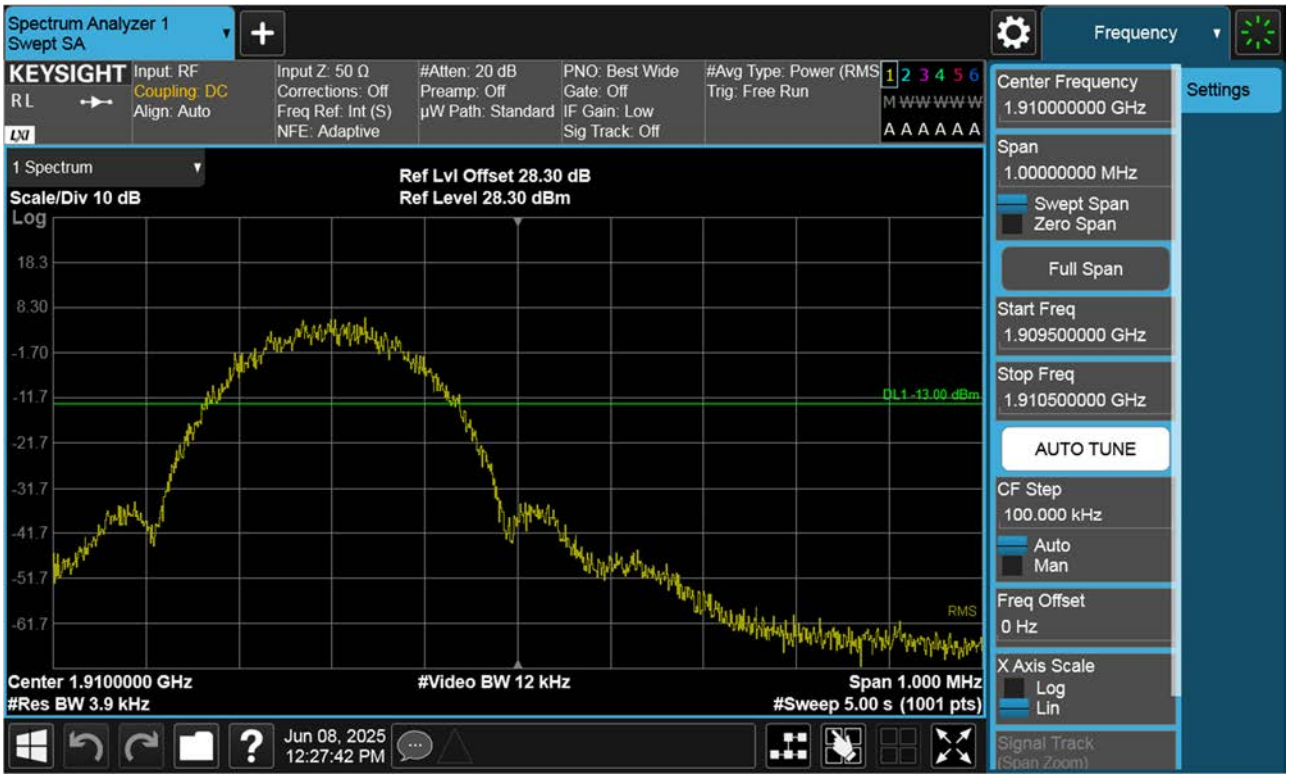
■ EDGE MODE (512 CH.) Block Edge 3



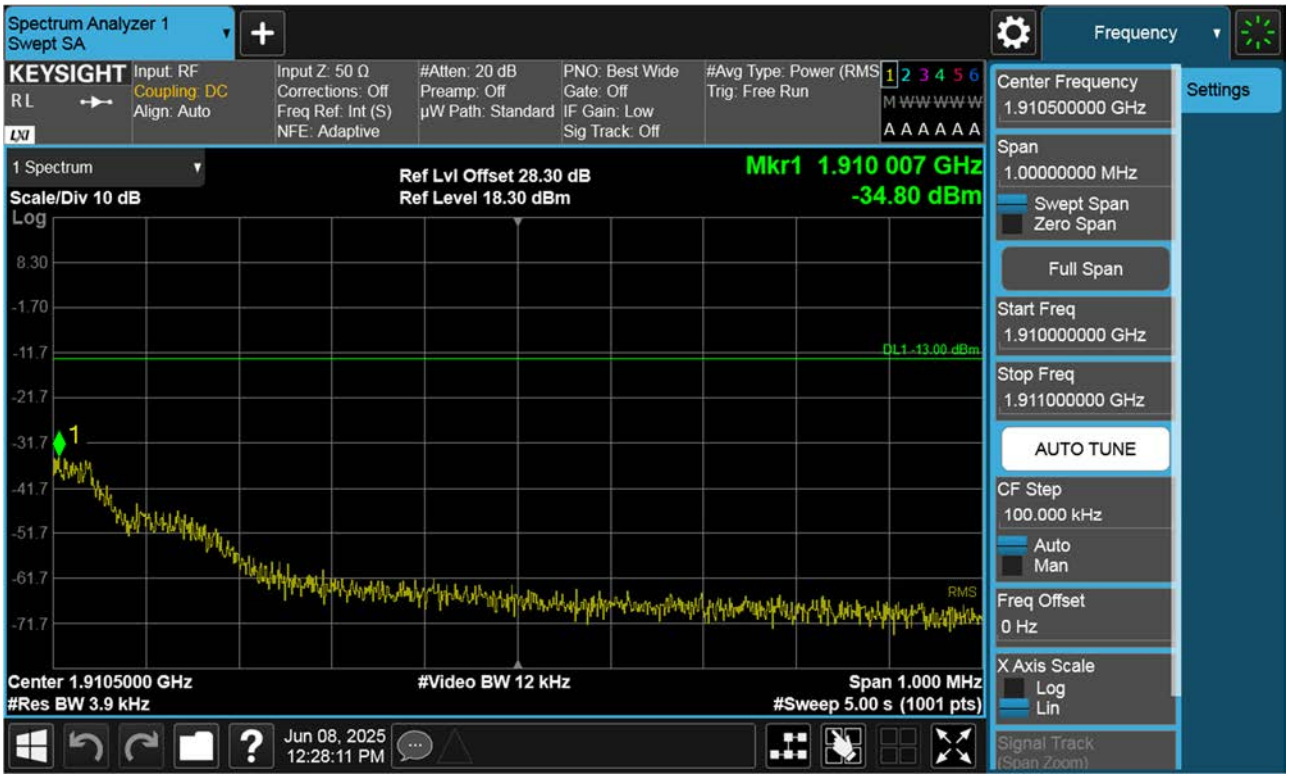
Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -56.34 dBm + 10 dB = -46.34 dBm

■ EDGE MODE (810 CH.) Block Edge 1



■ EDGE MODE (810 CH.) Block Edge 2



■ EDGE MODE (810 CH.) Block Edge 3

Note : We used a narrower RBW in order to increase accuracy.

Calculation = Reading Value + 10 x log(1 MHz/100 kHz) dB = -56.37 dBm + 10 dB = -46.37 dBm

■ WCDMA850 MODE (4132 CH.) Block Edge

■ WCDMA850 MODE (4132 CH.) – 4 MHz Span

■ WCDMA850MODE (4233 CH.) Block Edge

■ WCDMA850MODE (4233 CH.) – 4 MHz Span

■ WCDMA1900 MODE (9262 CH.) Block Edge

■ WCDMA1900 MODE (9262 CH.) – 4 MHz Span