FCC RADIO TEST REPORT

FCC ID	:	**APYHRO00335**
Equipment	:	**Smart phone**
Brand Name	:	**SHARP**
Model Name	:	**APYHRO00335**
Applicant	:	**SHARP CORPORATION** **1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan**
Manufacturer	:	**SHARP CORPORATION** **1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E)**

The product was received on Feb. 20, 2025 and testing was performed from Mar. 06, 2025 to Apr. 10, 2025. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issue Date
FG4D0637A	01	Initial issue of report	Apr. 22, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
	§22.913 (a)(5)	Effective Radiated Power (GSM850) (WCDMA Band V)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (GSM1900)		
3.3	§24.232 (d)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049 §22.917 (b) §24.238 (b)	Occupied Bandwidth (GSM850) (WCDMA Band V) (GSM1900)	Pass	-
3.5	§2.1051 §22.917 (a) §24.238 (a)	Band Edge Measurement (GSM850) (WCDMA Band V) (GSM1900)	Pass	-
3.6	§2.1051 §22.917 (a) §24.238 (a)	Conducted Emission (GSM850) (WCDMA Band V) (GSM1900)	Pass	-
3.7	§2.1055 §22.355 §24.235	Frequency Stability Temperature & Voltage	Pass	-
4.4	§2.1053 §22.917 (a) §24.238 (a)	Field Strength of Spurious Radiation (GSM850) (WCDMA Band V) (GSM1900)	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Keven Cheng

Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac, Wi-Fi 5GHz 802.11a/n/ac, GNSS and NFC. **Antenna Type** WWAN: <Ant. 0>: Monopole Antenna <Ant. 1>: PIFA Antenna

Antenna information(dBi)			
Band	**Ant0**	**Ant1**	**Main Ant. #**
GSM850	**-4.15**		**0**
GSM1900		**-1.12**	**1**
WCDMA B5	**-4.15**		**0**

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

Item	Sample 1		Sample 2		Sample 3	
	Vendor	Model Number	Vendor	Model Number	Vendor	Model Number
DDR	LONGSYS	SA0FLXC2012	Samsung	SA04UBE3010	LONGSYS	SA0FLXC2012
UFS2.2	LONGSYS	SA0N128G010	Samsung	SA02U1DC010	LONGSYS	SA064GC2010
Display	DJN	SLX3M066X00	CPT	SLX065WRX00	DJN	SLX3M066X00
Rear camera	Shinetech	S0CNN72B000	Union Image	S0C50A350A0	Union Image	S0C50A350A0
Front camera	Shinetech	S0CM8G1B060	Union Image	S0C50A350A0	Union Image	S0C50A350A0
Battery	SCUD	BPSX400001S	EVE	BPSX400002S	EVE	BPSX400002S
PCB	Tripod	SB0SX51BG0C	Compeq	SB0SX51BJ0C	Compeq	SB0SX51BJ0C
Accelerometer /Gyroscope	TDK	SA042670020	ST	SA0OETR3020	ST	SA0OETR3020
E-compass	QST	SA0C6308130	MEMSIC	SA0C56030A0	MEMSIC	SA0C56030A0
ALS/PS sensor	Sensortek	SA033562020	EMINENT	SA079911020	EMINENT	SA079911020
FPC_Side_Key	Sunflex	MESX514021A	PBH	MESX514001A	PBH	MESX514001A
FPC_USB	Sunflex	MESX114012A	PBH	MESX314004A	PBH	MESX314004A
FPC_AJ	Sunflex	MESX114013A	PBH	MESX314003A	PBH	MESX314003A
FPC_Main	Sunflex	MESX514002A	PBH	MESX514022A	PBH	MESX514022A
FPC_SPK	Sunflex	MESX514004A	AKM	MESX514024A	AKM	MESX514024A
FPC_flashlight	Sunflex	MESX514023A	PBH	MESX514003A	PBH	MESX514003A
Rear housing	LF	MESX561041A	DY	MESX561040A	LF	MESX561041A

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	TH02-HY
Test Engineer	Eric Wu
Temperature (℃)	19.0~21.0
Relative Humidity (%)	47.5~49.5

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH23-HY (TAF Code: 3786)
Test Engineer	Leo Li, Karl Hou and Lucifer Jiang
Temperature (℃)	20.4~21.5
Relative Humidity (%)	47.9~63.1
Remark	The Radiated Spurious Emission Test Item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- FCC 47 CFR Part 2, 22(H), 24(E)
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V
2. 30 MHz to 19100 MHz for GSM1900

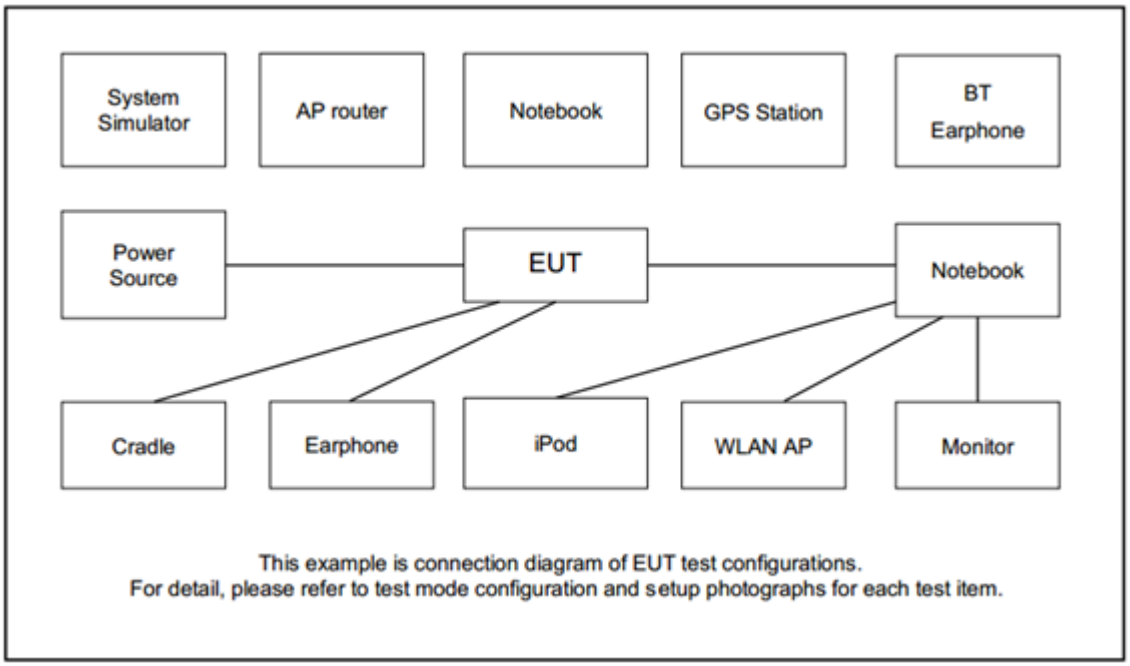
All modes, data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM850	■ GPRS Class 8 Link	■ GPRS Class 8 Link
GSM1900	■ GPRS Class 8 Link	■ GPRS Class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link

Remark: All the radiated test cases were performed with Sample 3.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	Earphone	NOKIA	WH-108	N/A	Unshielded, 1.5 m	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.2 dB and a 10 dB attenuator.

Example:

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

Frequency List				
Band	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
GSM850	Channel	128	189	251
	Frequency	824.2	836.4	848.8
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
GSM1900	Channel	512	661	810
	Frequency	1850.2	1880.0	1909.8

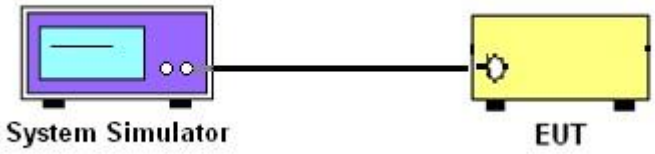
3 Conducted Test Result

3.1 Measuring Instruments

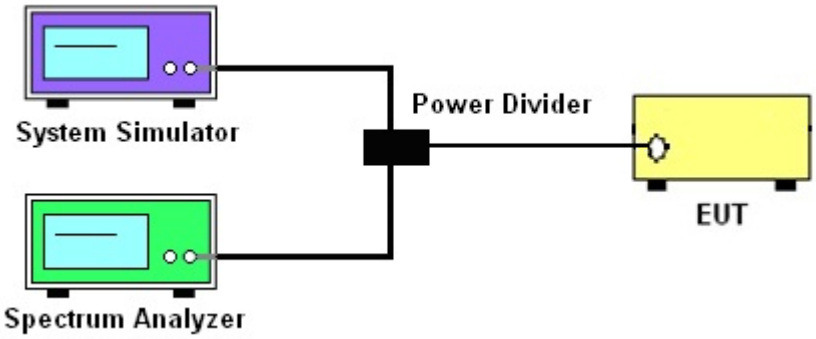
Please refer to the measuring equipment list in this test report.

3.1.1 Test Setup

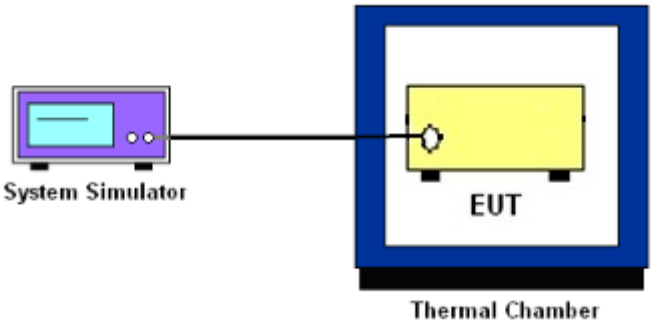
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power and ERP/EIRP

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2.2 Test Procedures

1. The transmitter output port is connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select the lowest, middle, and the highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT is connected to spectrum analyzer and system simulator via a power divider.
2. Set EUT to transmit at maximum output power.
3. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.
5. Record the maximum PAPR level associated with a probability of 0.1%.

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is 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 transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT is connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (This is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT is connected to the spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT is connected to the spectrum analyzer by an RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. The band edges of low and high channels for the highest RF powers are measured.
4. The RF fundamental frequency shall be excluded against the limit line in the operating frequency band.
5. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT is connected to the spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT is connected to the spectrum analyzer by an RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency is measured.
4. The conducted spurious emission for the whole frequency range is taken.
5. The RF fundamental frequency shall be excluded against the limit line in the operating frequency band.
6. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

22.355

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT is set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature is decreased to -30°C and the EUT is stabilized before testing. Power is applied and the maximum change in frequency is recorded within one minute.
3. With power OFF, the temperature is raised in 10°C steps up to 50°C. The EUT is stabilized at each step for at least half an hour. Power is applied and the maximum frequency change is recorded within one minute.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT is placed in a temperature chamber at 20±5° C and connected with the system simulator.
2. The power supply voltage to the EUT is varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency is measured for the worst case.

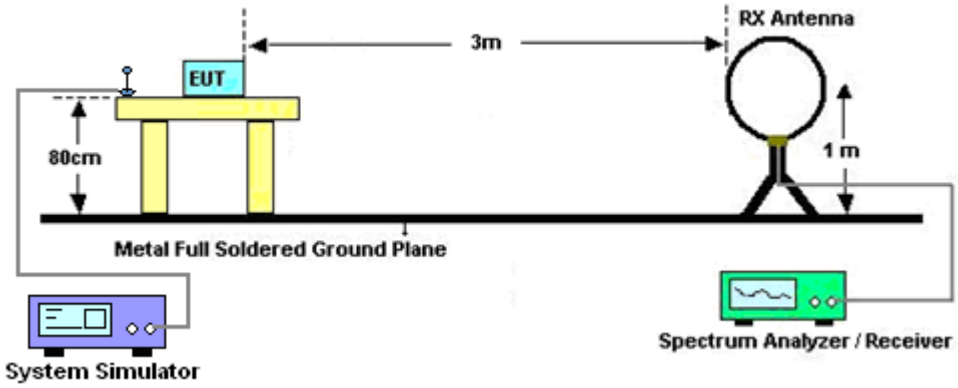
4 Radiated Test Items

4.1 Measuring Instruments

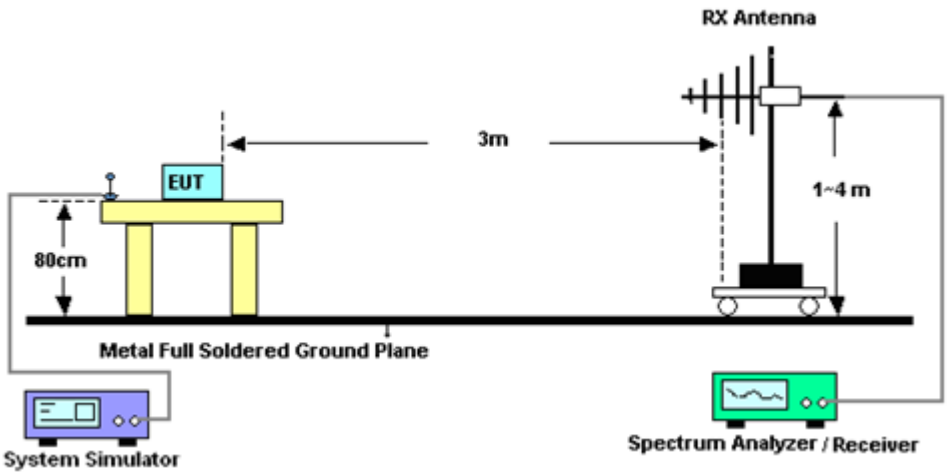
Please refer to the measuring equipment list in this test report.

4.2 Test Setup

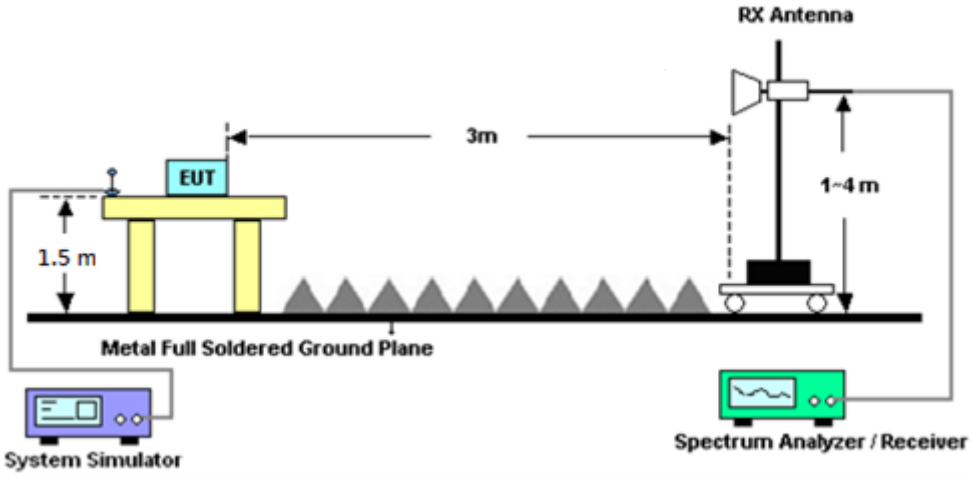
For radiated test below 30MHz



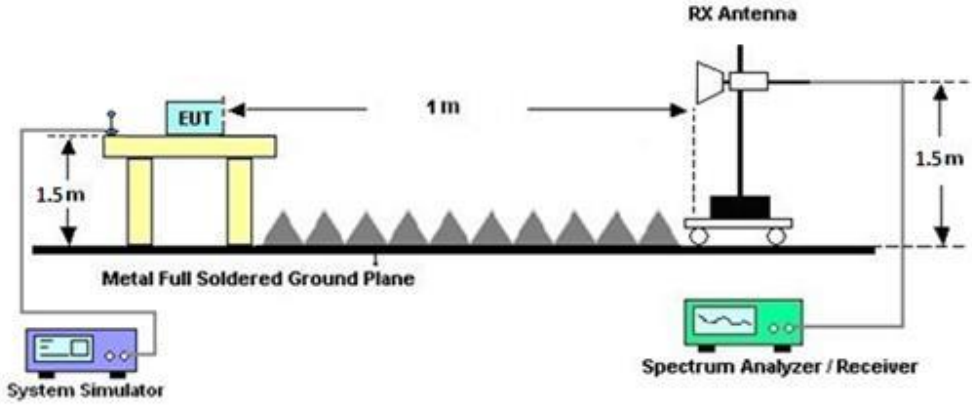
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

4.4 Field Strength of Spurious Radiation Measurement

4.4.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

1. The EUT is placed on a rotatable wooden table 0.8 meters for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz above the ground.
2. The EUT is set 3 meters away from the receiving antenna, which is mounted on the antenna tower.
3. The table is rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1 MHz, VBW = 3 MHz, taking record of maximum spurious emission.
6. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
   EIRP(dBm) = Level (dBuV/m) + 20log(d) -104.77,
   where d is the distance at which filed strength limit is specified in the rules
7. Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
8. ERP (dBm) = EIRP (dBm) - 2.15
9. The RF fundamental frequency shall be excluded against the limit line in the operating frequency band.

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 25, 2024	Mar. 06, 2025~ Mar. 13, 2025	Sep. 24, 2025	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPE-2323	GEU871221	0V~64V ; 0A~6A	Apr. 09, 2024	Mar. 06, 2025~ Mar. 13, 2025	Apr. 08, 2025	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 08, 2024	Mar. 06, 2025~ Mar. 13, 2025	Aug. 07, 2025	Conducted (TH03-HY)
Temperature & Humidity Cabinet Chamber	ESPEC	SH-641	92013720	-40℃~90℃	Sep. 06, 2024	Mar. 06, 2025~ Mar. 13, 2025	Sep. 05, 2025	Conducted (TH03-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Mar. 06, 2025~ Mar. 13, 2025	Oct. 31, 2025	Conducted (TH03-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Apr. 08, 2025~ Apr. 10, 2025	Aug. 28, 2025	Radiation (03CH23-HY)
Bilog Antenna	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	62028 & 003	30MHz~1GHz	Nov. 27, 2024	Apr. 08, 2025~ Apr. 10, 2025	Nov. 26, 2025	Radiation (03CH23-HY)
Amplifier	SONOMA	310N	421582	9kHz~1GHz	Jul. 14, 2024	Apr. 08, 2025~ Apr. 10, 2025	Jul. 13, 2025	Radiation (03CH23-HY)
Amplifier	EMEC	EM01G18GA	060878	N/A	Sep. 27, 2024	Apr. 08, 2025~ Apr. 10, 2025	Sep. 26, 2025	Radiation (03CH23-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C05A18EN	1GHz~18GHz	Jun. 20, 2024	Apr. 08, 2025~ Apr. 10, 2025	Jun. 19, 2025	Radiation (03CH23-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz-40GHz	Jun. 24, 2024	Apr. 08, 2025~ Apr. 10, 2025	Jun. 23, 2025	Radiation (03CH23-HY)
Preamplifier	EMEC	EM18G40G	060873	18GHz~40GHz	Sep. 02, 2024	Apr. 08, 2025~ Apr. 10, 2025	Sep. 01, 2025	Radiation (03CH23-HY)
Signal Analyzer	Keysight	N9010B	MY62170337	N/A	Aug. 21, 2024	Apr. 08, 2025~ Apr. 10, 2025	Aug. 20, 2025	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303B	TP211542	N/A	Oct. 21, 2024	Apr. 08, 2025~ Apr. 10, 2025	Oct. 20, 2025	Radiation (03CH23-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Apr. 08, 2025~ Apr. 10, 2025	N/A	Radiation (03CH23-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 08, 2025~ Apr. 10, 2025	N/A	Radiation (03CH23-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 08, 2025~ Apr. 10, 2025	N/A	Radiation (03CH23-HY)
Software	Audix	E3 6.09824_2019122	RK-002348	N/A	N/A	Apr. 08, 2025~ Apr. 10, 2025	N/A	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 05, 2025	Apr. 08, 2025~ Apr. 10, 2025	Mar. 04, 2026	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804395/2	N/A	Nov. 26, 2024	Apr. 08, 2025~ Apr. 10, 2025	Nov. 25, 2025	Radiation (03CH23-HY)
RF Cablejavascript: void(0)	EMC	EMC101Y	231115/231119/231122	N/A	Nov. 26, 2024	Apr. 08, 2025~ Apr. 10, 2025	Nov. 25, 2025	Radiation (03CH23-HY)

6 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.6 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 6 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.4 dB

Uncertainty of Radiated Emission Measurement (6 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.7 dB

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) & ERP / EIRP

GSM850 Maximum Average Power [dBm] (GT - LC = -4.15 dB)					
Channel	128	189	251	ERP (dBm)	ERP (W)
Frequency	824.2	836.4	848.8		
GSM	32.01	32.17	32.19	25.94	0.3926
GPRS class 8	32.01	32.21	32.24		
GPRS class 10	28.87	29.06	29.07		
GPRS class 11	27.46	27.66	27.67		
GPRS class 12	26.01	26.19	26.22		
Limit	ERP < 7W			Result	Pass

GSM1900 Maximum Average Power [dBm] (GT - LC = -1.12 dB)					
Channel	512	661	810	EIRP (dBm)	EIRP (W)
Frequency	1850.2	1880	1909.8		
GSM	29.01	29.02	29.08	28.00	0.6310
GPRS class 8	29.01	29.04	29.12		
GPRS class 10	26.04	26.22	26.33		
GPRS class 11	24.56	24.72	24.87		
GPRS class 12	23.06	23.21	23.33		
Limit	EIRP < 2W			Result	Pass

WCDMA Band V Maximum Average Power [dBm] (GT - LC = -4.15 dB)					
Channel	4132	4182	4233	ERP (dBm)	ERP (W)
Frequency	826.4	836.4	846.6		
RMC 12.2K	22.02	21.95	21.88	15.72	0.0373
HSDPA Subtest-1	21.03	20.96	20.96		
HSDPA Subtest-2	21.02	20.97	20.98		
HSDPA Subtest-3	20.56	20.50	20.57		
HSDPA Subtest-4	20.52	20.47	20.54		
HSUPA Subtest-1	19.53	19.04	19.00		
HSUPA Subtest-2	19.02	18.97	18.94		
HSUPA Subtest-3	20.04	19.96	19.91		
HSUPA Subtest-4	18.59	18.54	18.52		
HSUPA Subtest-5	20.00	19.90	19.90		
Limit	ERP < 7W			Result	Pass

A1. GSM

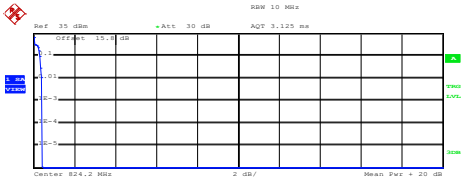
Peak-to-Average Ratio

Mode	GSM850	Limit: 13dB
Mod.	GPRS class 8	Result
Lowest CH	0.44	PASS
Middle CH	0.40	
Highest CH	0.44	

Mode	GSM1900	Limit: 13dB
Mod.	GPRS class 8	Result
Lowest CH	0.24	PASS
Middle CH	0.20	
Highest CH	0.24	

GSM850 (GPRS class 8)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	32.56	dBm
Peak	32.99	dBm
Crest	0.43	dB
10 %	0.32	dB
1 %	0.40	dB
.1 %	0.44	dB
.01 %	0.44	dB

Date: 6.MAR.2025 17:24:57

Middle Channel

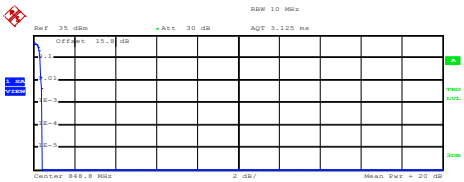
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	32.80	dBm
Peak	33.20	dBm
Crest	0.40	dB
10 %	0.28	dB
1 %	0.36	dB
.1 %	0.40	dB
.01 %	0.40	dB

Date: 6.MAR.2025 17:25:36

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

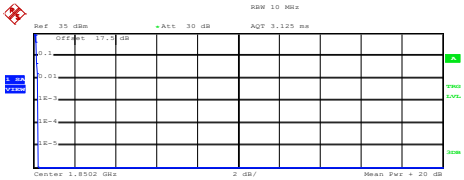
Trace 1

Mean	32.77	dBm
Peak	33.20	dBm
Crest	0.43	dB
10 %	0.32	dB
1 %	0.36	dB
.1 %	0.44	dB
.01 %	0.44	dB

Date: 6.MAR.2025 17:26:18

GSM1900 (GPRS class 8)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	30.16 dBm
Peak	30.38 dBm
Crest	0.22 dB
10 %	0.16 dB
1 %	0.20 dB
.1 %	0.24 dB
.01 %	0.24 dB

Date: 6.MAR.2025 17:45:07

Middle Channel

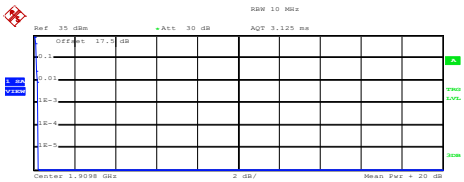
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	30.20 dBm
Peak	30.45 dBm
Crest	0.25 dB
10 %	0.16 dB
1 %	0.20 dB
.1 %	0.20 dB
.01 %	0.20 dB

Date: 6.MAR.2025 17:45:24

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	30.22 dBm
Peak	30.45 dBm
Crest	0.23 dB
10 %	0.16 dB
1 %	0.20 dB
.1 %	0.24 dB
.01 %	0.24 dB

Date: 6.MAR.2025 17:45:42

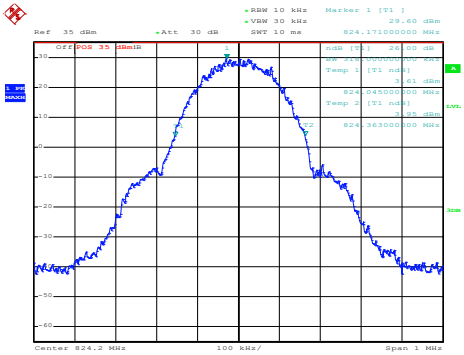
26dB Bandwidth

Mode	GSM850 : 26dB BW(MHz)
Mod.	GPRS class 8
Lowest CH	0.318
Middle CH	0.318
Highest CH	0.313

Mode	GSM1900 : 26dB BW(MHz)
Mod.	GPRS class 8
Lowest CH	0.316
Middle CH	0.311
Highest CH	0.320

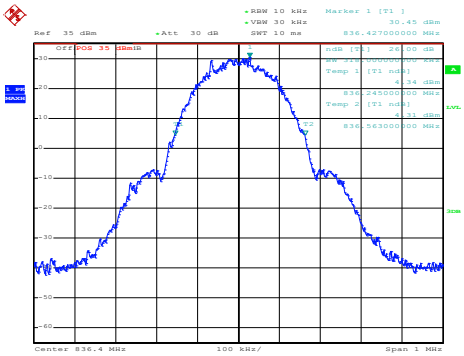
GSM850 (GPRS class 8)

Lowest Channel



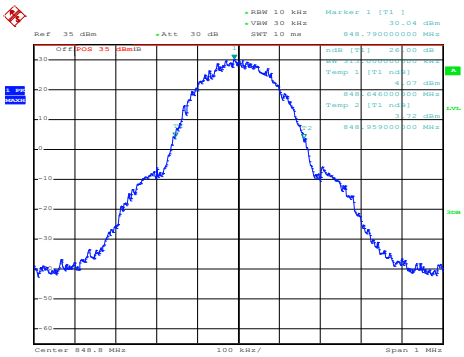
Date: 6.MAR.2025 17:13:43

Middle Channel



Date: 6.MAR.2025 17:14:18

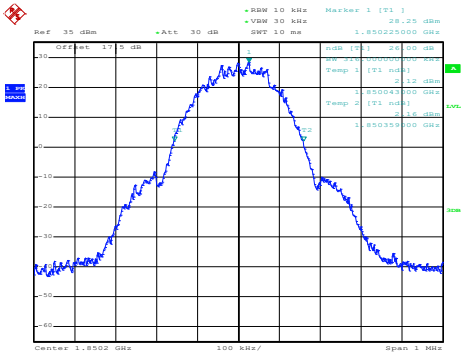
Highest Channel



Date: 6.MAR.2025 17:14:53

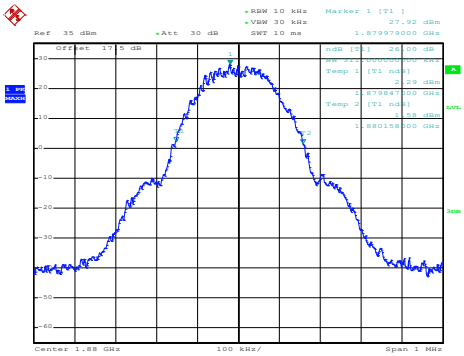
GSM1900 (GPRS class 8)

Lowest Channel



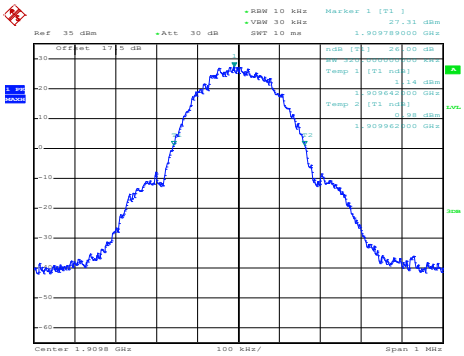
Date: 6.MAR.2025 17:31:51

Middle Channel



Date: 6.MAR.2025 17:32:53

Highest Channel



Date: 6.MAR.2025 17:33:40

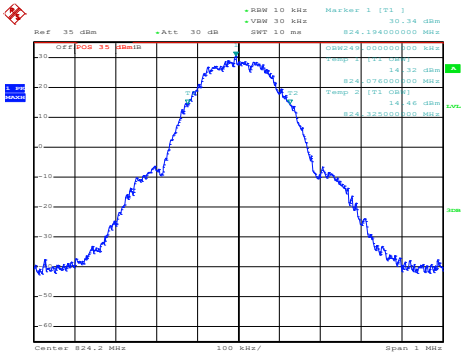
Occupied Bandwidth

Mode	GSM850 : 99%OBW(MHz)
Mod.	GPRS class 8
Lowest CH	0.249
Middle CH	0.247
Highest CH	0.244

Mode	GSM1900 : 99%OBW(MHz)
Mod.	GPRS class 8
Lowest CH	0.251
Middle CH	0.244
Highest CH	0.246

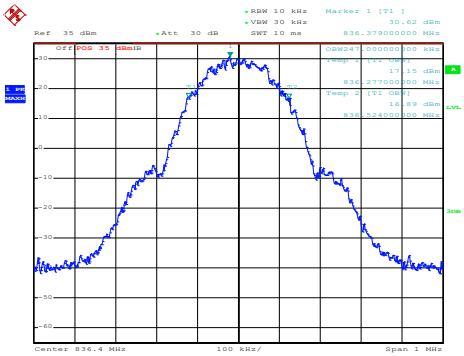
GSM850 (GPRS class 8)

Lowest Channel



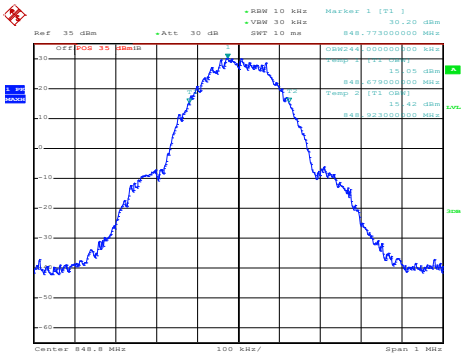
Date: 6.MAR.2025 17:15:56

Middle Channel



Date: 6.MAR.2025 17:16:32

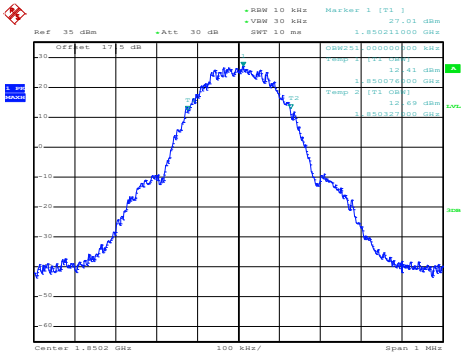
Highest Channel



Date: 6.MAR.2025 17:17:07

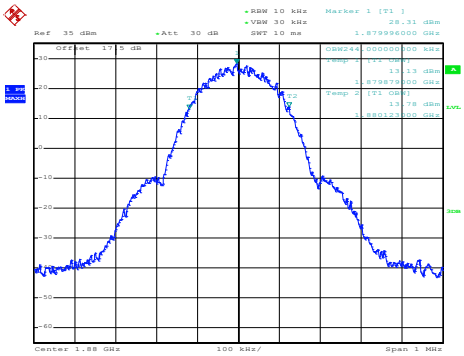
GSM1900 (GPRS class 8)

Lowest Channel



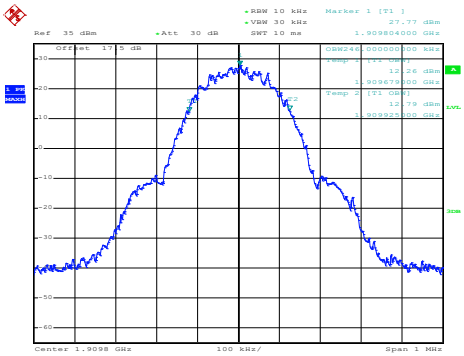
Date: 6.MAR.2025 17:34:51

Middle Channel



Date: 6.MAR.2025 17:35:57

Highest Channel

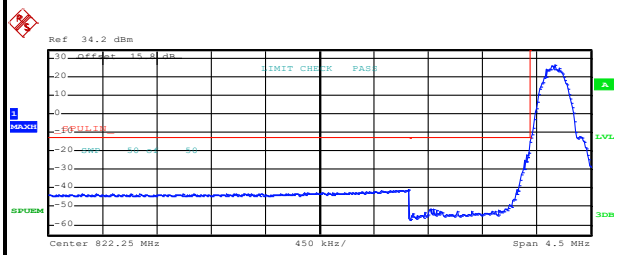


Date: 6.MAR.2025 17:36:44

Conducted Band Edge

GSM850 (GPRS class 8)

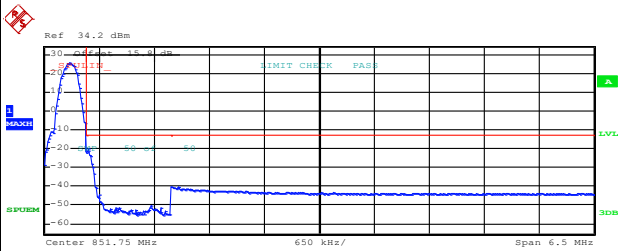
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.985000 M	-41.02	-28.02
823.000 M	824.000 M	3.00 k	823.980000 M	-20.86	-7.86
824.000 M	824.500 M	10.00 k	824.205000 M	26.04	-8.96

Date: 6.MAR.2025 17:19:03

Highest Band Edge

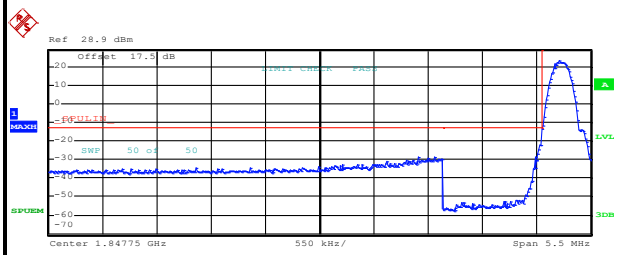


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.794500 M	25.81	-9.19
849.000 M	850.000 M	3.00 k	849.020000 M	-20.05	-7.05
850.000 M	855.000 M	100.00 k	850.080000 M	-40.26	-27.26

Date: 6.MAR.2025 17:20:39

GSM1900 (GPRS class 8)

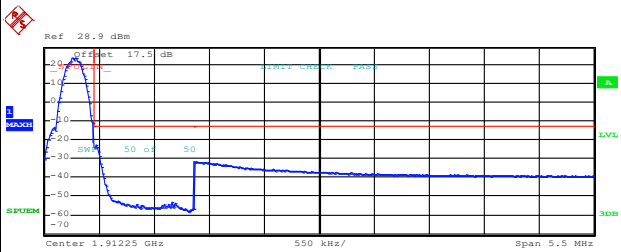
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.845 G	1.849 G	1.00 M	1.848744 G	-28.75	-15.75
1.849 G	1.850 G	3.00 k	1.849996 G	-22.02	-9.02
1.850 G	1.851 G	10.00 k	1.850181 G	23.33	-11.67

Date: 6.MAR.2025 17:39:03

Highest Band Edge



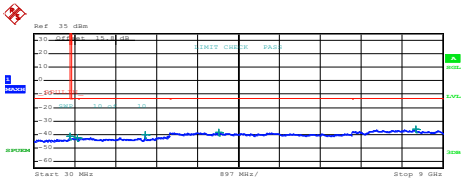
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.910 G	1.910 G	10.00 k	1.909782 G	23.28	-11.72
1.910 G	1.911 G	3.00 k	1.910012 G	-22.94	-9.94
1.911 G	1.915 G	1.00 M	1.911016 G	-31.70	-18.70

Date: 6.MAR.2025 17:40:50

Conducted Spurious Emission

GSM850 (GPRS class 8)

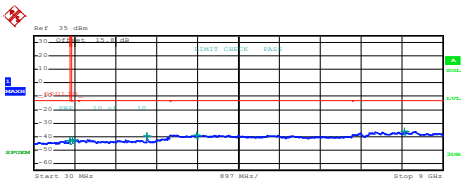
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	817.235000 M	-41.40	-28.40
855.000 M	1.000 G	1.00 M	982.201259 M	-42.74	-29.74
1.000 G	3.000 G	1.00 M	2.473000 G	-39.92	-26.92
3.000 G	7.000 G	1.00 M	4.085000 G	-38.65	-25.65
7.000 G	9.000 G	1.00 M	8.404500 G	-36.22	-23.22

Date: 6.MAR.2025 17:21:55

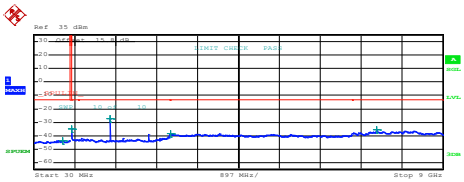
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	812.890000 M	-43.01	-30.01
855.000 M	1.000 G	1.00 M	875.046251 M	-42.24	-29.24
1.000 G	3.000 G	1.00 M	2.509000 G	-39.56	-26.56
3.000 G	7.000 G	1.00 M	3.597000 G	-38.76	-25.76
7.000 G	9.000 G	1.00 M	8.165000 G	-35.96	-22.96

Date: 6.MAR.2025 17:23:11

Highest Channel

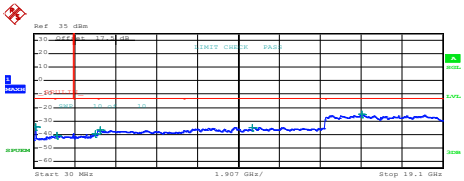


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	653.112500 M	-43.45	-30.45
855.000 M	1.000 G	1.00 M	855.036250 M	-34.69	-21.69
1.000 G	3.000 G	1.00 M	1.697500 G	-27.30	-14.30
3.000 G	7.000 G	1.00 M	3.025000 G	-38.57	-25.57
7.000 G	9.000 G	1.00 M	7.539500 G	-35.72	-22.72

Date: 6.MAR.2025 17:24:16

GSM1900 (GPRS class 8)

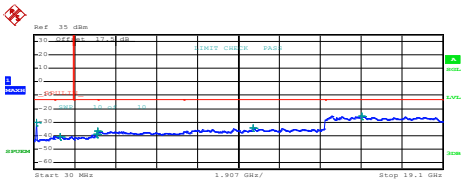
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	111.965000 M	-34.20	-21.20
1.000 G	1.845 G	1.00 M	1.112807 G	-40.61	-27.61
1.915 G	3.000 G	1.00 M	2.875767 G	-39.45	-26.45
3.000 G	7.000 G	1.00 M	3.124000 G	-36.88	-23.88
7.000 G	13.600 G	1.00 M	10.215025 G	-34.63	-21.63
13.600 G	19.100 G	1.00 M	15.338688 G	-25.20	-12.20

Date: 6.MAR.2025 17:42:12

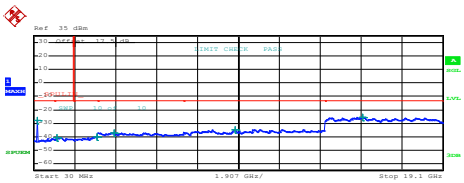
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	141.792500 M	-30.42	-17.42
1.000 G	1.845 G	1.00 M	1.250542 G	-40.49	-27.49
1.915 G	3.000 G	1.00 M	2.968806 G	-38.79	-25.79
3.000 G	7.000 G	1.00 M	3.003000 G	-36.43	-23.43
7.000 G	13.600 G	1.00 M	10.238950 G	-34.42	-21.42
13.600 G	19.100 G	1.00 M	15.340063 G	-25.29	-12.29

Date: 6.MAR.2025 17:43:25

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	171.620000 M	-27.73	-14.73
1.000 G	1.845 G	1.00 M	1.091894 G	-40.62	-27.62
1.915 G	3.000 G	1.00 M	2.960126 G	-39.99	-26.99
3.000 G	7.000 G	1.00 M	3.753000 G	-37.06	-24.06
7.000 G	13.600 G	1.00 M	9.402400 G	-34.74	-21.74
13.600 G	19.100 G	1.00 M	15.351062 G	-25.34	-12.34

Date: 6.MAR.2025 17:44:29

Frequency Stability

Test Conditions	Middle Channel	GSM850 (GSM)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0179	PASS
40	Normal Voltage	0.0132	
30	Normal Voltage	0.0060	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0239	
-10	Normal Voltage	0.0036	
-20	Normal Voltage	0.0096	
-30	Normal Voltage	0.0072	
20	Maximum Voltage	0.0167	
20	Normal Voltage	0.0239	
20	Minimum Voltage	0.0179	

Test Conditions	Middle Channel	GSM1900 (GPRS class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0191	
-10	Normal Voltage	0.0324	
-20	Normal Voltage	0.0330	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0356	
20	Normal Voltage	0.0394	
20	Minimum Voltage	0.0351	

Note:

1. Normal Voltage = 3.87V. ；Minimum Voltage = 3.6 V.；Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.

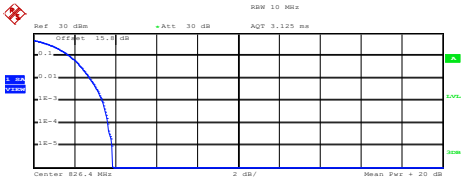
A2. WCDMA

Peak-to-Average Ratio

Mode	WCDMA Band V	Limit: 13dB
Mod.	RMC 12.2Kbps	Result
Lowest CH	3.36	PASS
Middle CH	3.80	
Highest CH	3.68	

WCDMA Band V (RMC 12.2Kbps)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	21.94 dBm
Peak	25.81 dBm
Crest	3.87 dB
10 %	1.76 dB
1 %	2.76 dB
.1 %	3.36 dB
.01 %	3.64 dB

Date: 6.MAR.2025 17:07:34

Middle Channel

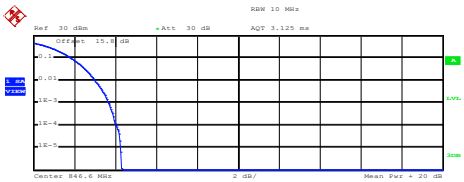
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	21.91 dBm
Peak	26.72 dBm
Crest	4.81 dB
10 %	1.84 dB
1 %	3.04 dB
.1 %	3.80 dB
.01 %	4.36 dB

Date: 6.MAR.2025 17:07:52

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	21.77 dBm
Peak	26.09 dBm
Crest	4.32 dB
10 %	1.88 dB
1 %	3.00 dB
.1 %	3.68 dB
.01 %	4.04 dB

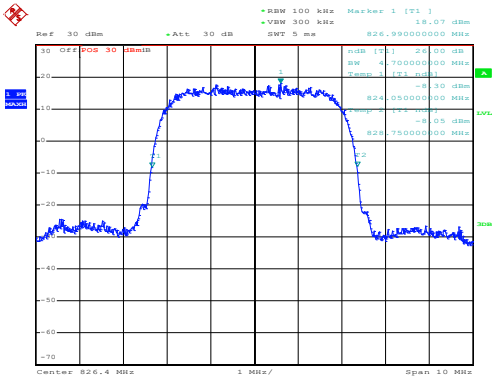
Date: 6.MAR.2025 17:08:09

26dB Bandwidth

Mode	WCDMA Band V 26dB BW(MHz)
Mod.	RMC 12.2Kbps
Lowest CH	4.70
Middle CH	4.69
Highest CH	4.70

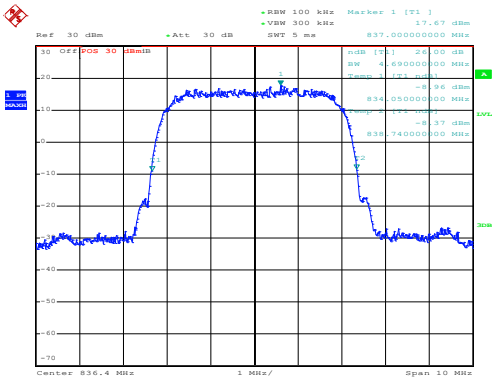
WCDMA Band V (RMC 12.2Kbps)

Lowest Channel



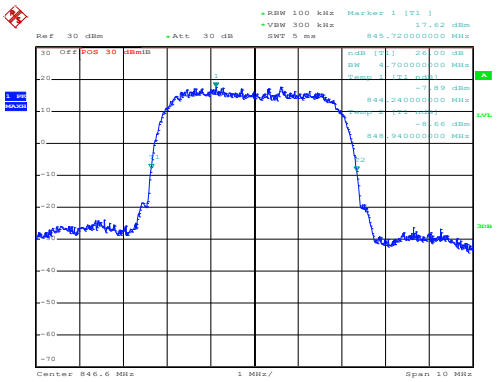
Date: 6.MAR.2025 16:54:12

Middle Channel



Date: 6.MAR.2025 16:54:48

Highest Channel



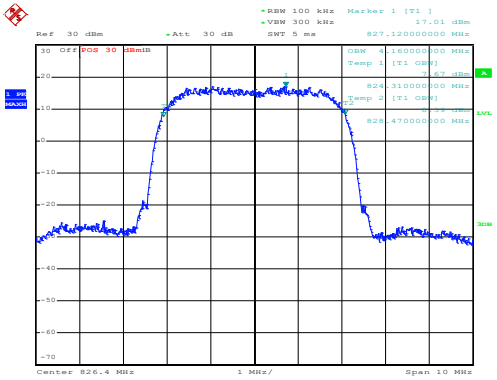
Date: 6.MAR.2025 16:55:25

Occupied Bandwidth

Mode	WCDMA Band V 99%OBW(MHz)
Mod.	RMC 12.2Kbps
Lowest CH	4.16
Middle CH	4.16
Highest CH	4.15

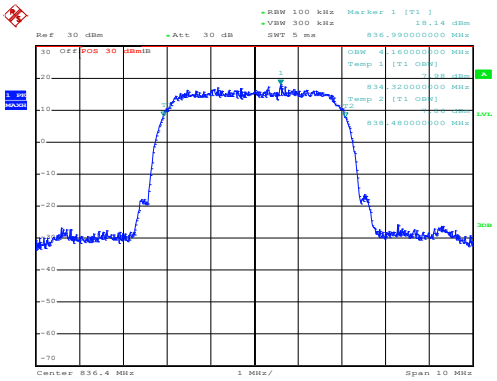
WCDMA Band V (RMC 12.2Kbps)

Lowest Channel



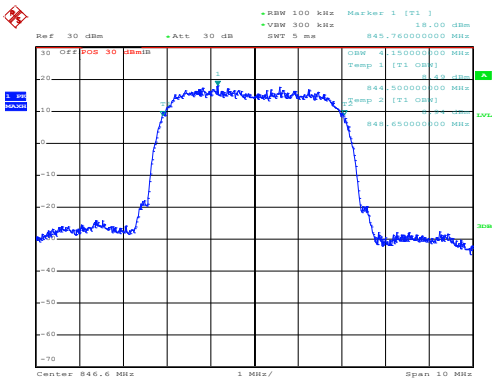
Date: 6.MAR.2025 16:56:24

Middle Channel



Date: 6.MAR.2025 16:57:01

Highest Channel

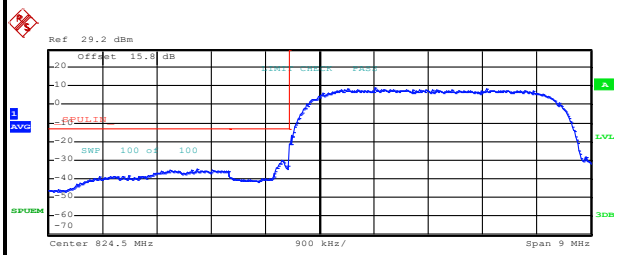


Date: 6.MAR.2025 16:57:37

Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

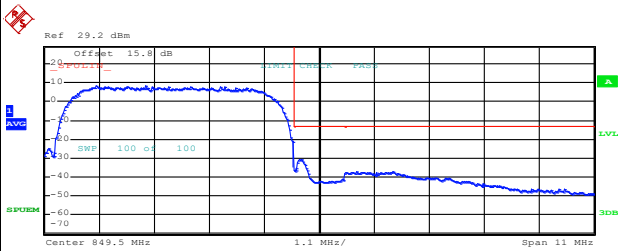
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.466000 M	-34.83	-21.83
823.000 M	824.000 M	50.00 k	823.868000 M	-30.09	-17.09
824.000 M	829.000 M	100.00 k	825.420000 M	8.98	-26.02

Date: 6.MAR.2025 17:00:51

Highest Band Edge



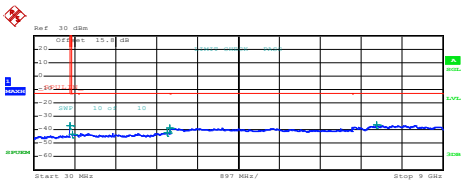
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	846.030000 M	8.41	-26.59
849.000 M	850.000 M	50.00 k	849.140000 M	-30.88	-17.88
850.000 M	855.000 M	100.00 k	850.235000 M	-37.02	-24.02

Date: 6.MAR.2025 17:03:47

Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

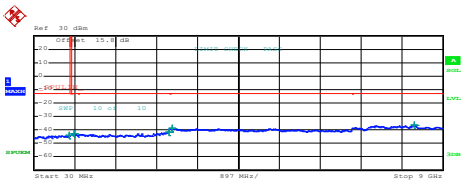
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.605000 M	-37.09	-24.09
855.000 M	1.000 G	1.00 M	871.675001 M	-43.61	-30.61
1.000 G	3.000 G	1.00 M	2.949000 G	-41.98	-28.98
3.000 G	7.000 G	1.00 M	3.005000 G	-38.62	-25.62
7.000 G	9.000 G	1.00 M	7.554000 G	-36.20	-23.20

Date: 6.MAR.2025 17:04:57

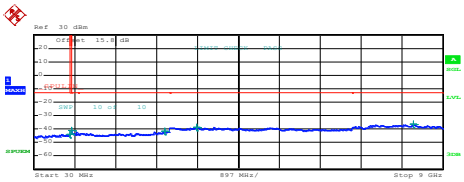
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	795.707500 M	-43.99	-30.99
855.000 M	1.000 G	1.00 M	903.285003 M	-42.63	-29.63
1.000 G	3.000 G	1.00 M	2.984500 G	-41.60	-28.60
3.000 G	7.000 G	1.00 M	3.060000 G	-38.43	-25.43
7.000 G	9.000 G	1.00 M	8.372000 G	-36.41	-23.41

Date: 6.MAR.2025 17:05:52

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	816.445000 M	-43.69	-30.69
855.000 M	1.000 G	1.00 M	855.036250 M	-41.02	-28.02
1.000 G	3.000 G	1.00 M	2.899500 G	-41.50	-28.50
3.000 G	7.000 G	1.00 M	3.600000 G	-38.73	-25.73
7.000 G	9.000 G	1.00 M	8.361000 G	-36.39	-23.39

Date: 6.MAR.2025 17:06:47

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0251	PASS
40	Normal Voltage	0.0120	
30	Normal Voltage	0.0132	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0167	
-10	Normal Voltage	0.0048	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0060	
20	Maximum Voltage	0.0155	
20	Normal Voltage	0.0143	
20	Minimum Voltage	0.0024	

Note: Normal Voltage = 3.87V. ；Minimum Voltage = 3.6 V.；Maximum Voltage =4.2 V

Appendix B. Test Results of Radiated Test

B1. Summary of each worse mode

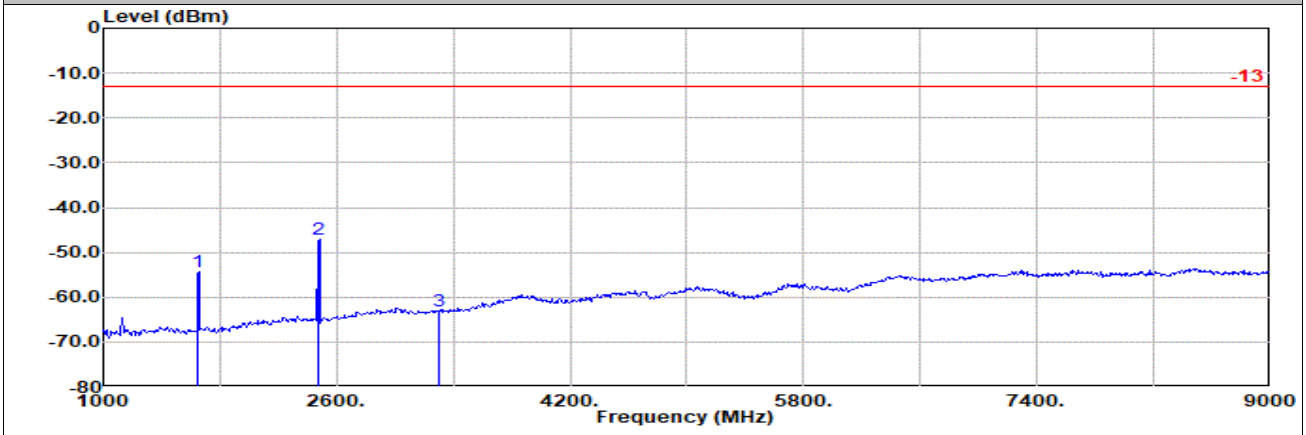
Mode	Part	Band	Ch	Freq (MHz)	Level (dBm)	Det	Ant Factor (dB)	Amp\Cbl (dB)	Filter (dB)	EIRPCF (dB)	Reading (dBuV)	Limit (dBm)	Margin (dB)	Pol	Ant
1	Part 22H	GSM 850	M	2509	-41.14	RMS	26.90	-24.67	1.34	-95.23	50.52	-13.00	-28.14	V	0
2	Part 22H	WCDMA B5	H	2539	-60.84	RMS	26.99	-24.63	1.35	-95.23	30.68	-13.00	-47.84	H	0
1	Part 24E	GSM 1900	M	5640	-33.91	RMS	33.44	-23.27	2.04	-95.23	49.11	-13.00	-20.91	V	1

Ant. 0

Part 22H Mode 1

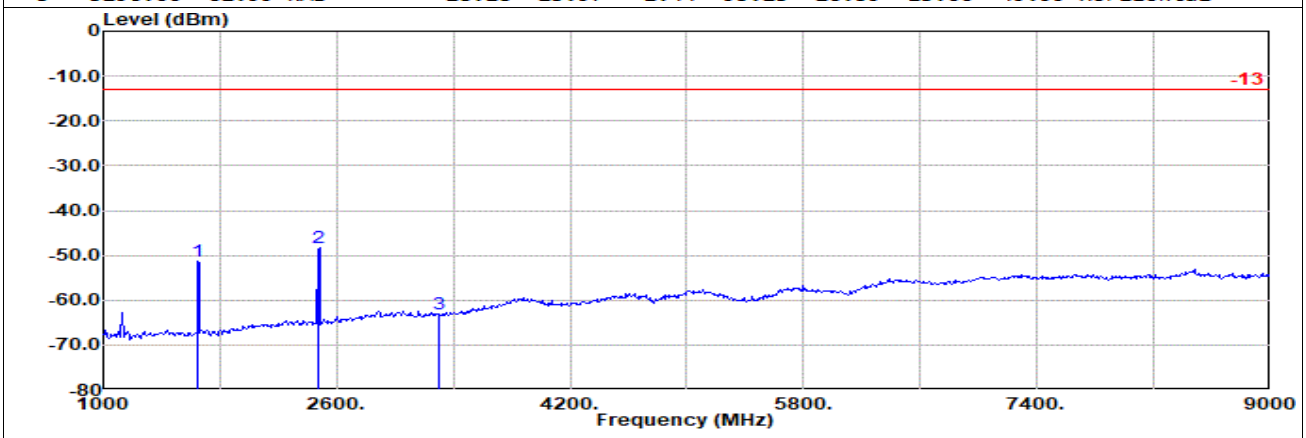
GSM 850 Ch128

L



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM Ch128

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1648.00	-54.32	RMS	24.82	-25.29	1.30	-95.23	40.08	-13.00	-41.32	Horizontal
2	2472.00	-47.03	RMS	26.80	-24.70	1.32	-95.23	44.78	-13.00	-34.03	Horizontal
3	3296.00	-62.99	RMS	28.18	-23.97	1.44	-95.23	26.59	-13.00	-49.99	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM Ch128

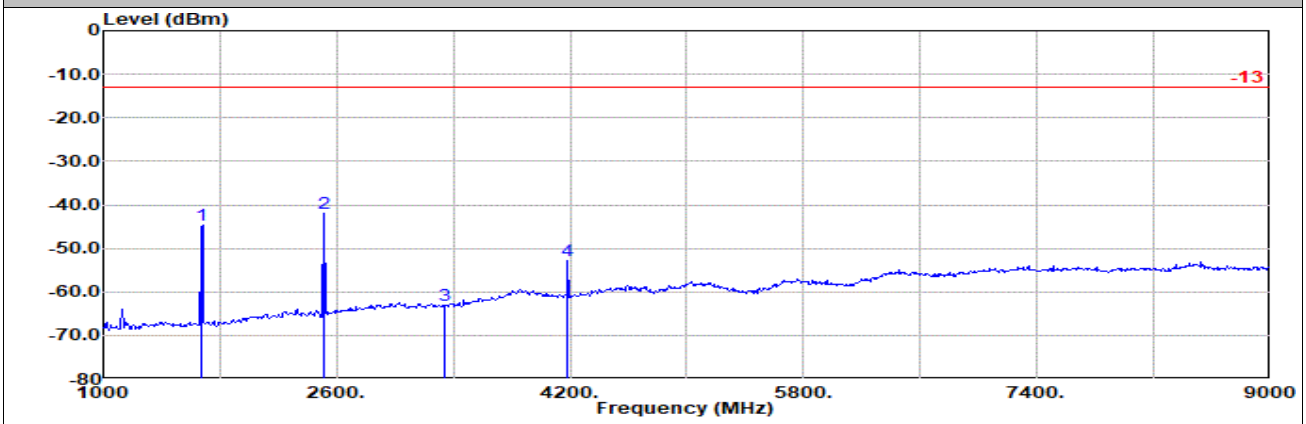
	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1648.00	-51.42	RMS	24.82	-25.29	1.30	-95.23	42.98	-13.00	-38.42	Vertical
2	2472.00	-48.18	RMS	26.80	-24.70	1.32	-95.23	43.63	-13.00	-35.18	Vertical
3	3296.00	-62.99	RMS	28.18	-23.97	1.44	-95.23	26.59	-13.00	-49.99	Vertical

Ant. 0

Part 22H Mode 1

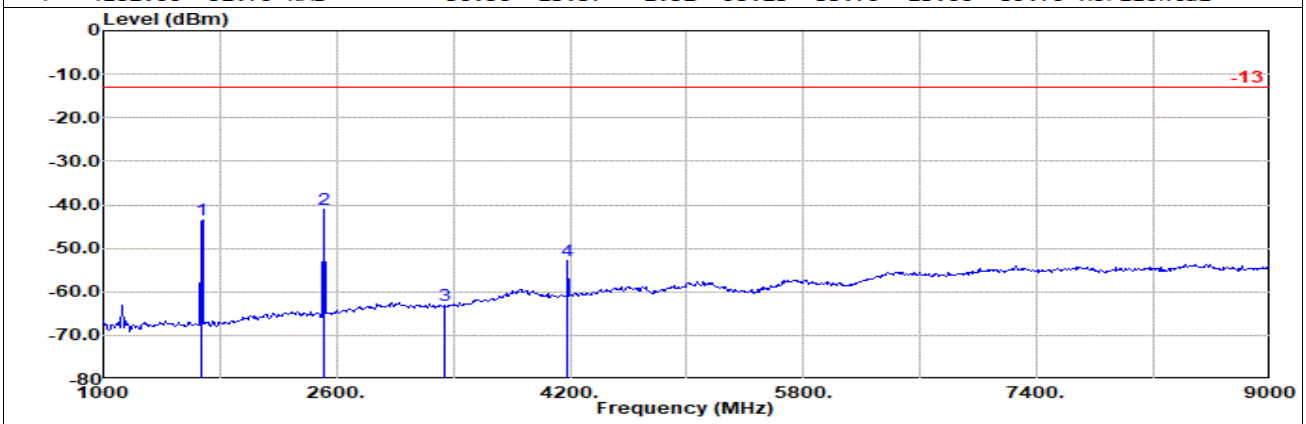
GSM 850 Ch189

M



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM Ch189

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1672.00	-44.63	RMS	24.84	-25.27	1.29	-95.23	49.74	-13.00	-31.63	Horizontal
2	2509.00	-42.08	RMS	26.90	-24.67	1.34	-95.23	49.58	-13.00	-29.08	Horizontal
3	3345.00	-63.11	RMS	28.29	-23.99	1.42	-95.23	26.40	-13.00	-50.11	Horizontal
4	4182.00	-52.79	RMS	30.50	-23.37	1.52	-95.23	33.79	-13.00	-39.79	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM Ch189

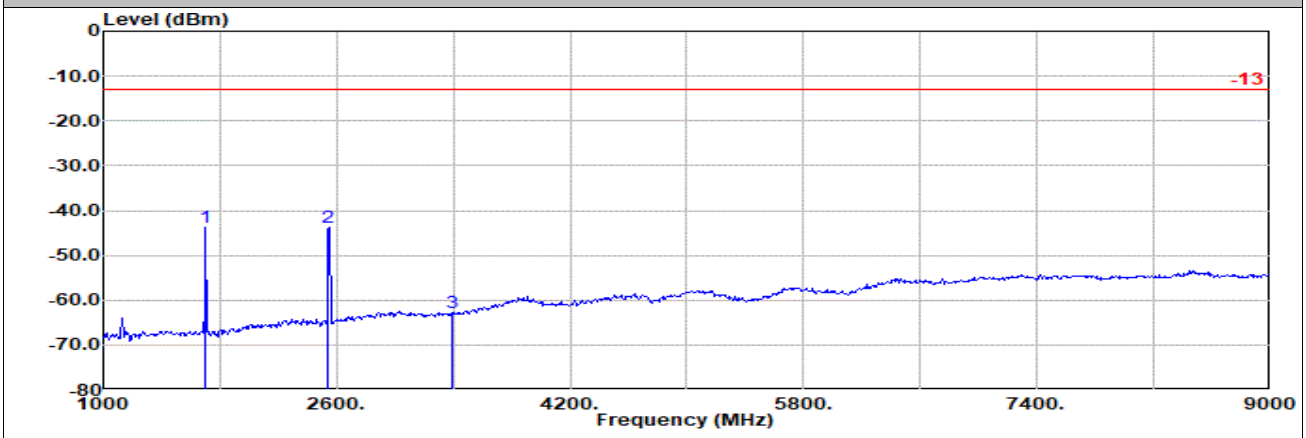
	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1672.00	-43.61	RMS	24.84	-25.27	1.29	-95.23	50.76	-13.00	-30.61	Vertical
2	2509.00	-41.14	RMS	26.90	-24.67	1.34	-95.23	50.52	-13.00	-28.14	Vertical
3	3345.00	-63.13	RMS	28.29	-23.99	1.42	-95.23	26.38	-13.00	-50.13	Vertical
4	4182.00	-52.70	RMS	30.50	-23.37	1.52	-95.23	33.88	-13.00	-39.70	Vertical

Ant. 0

Part 22H Mode 1

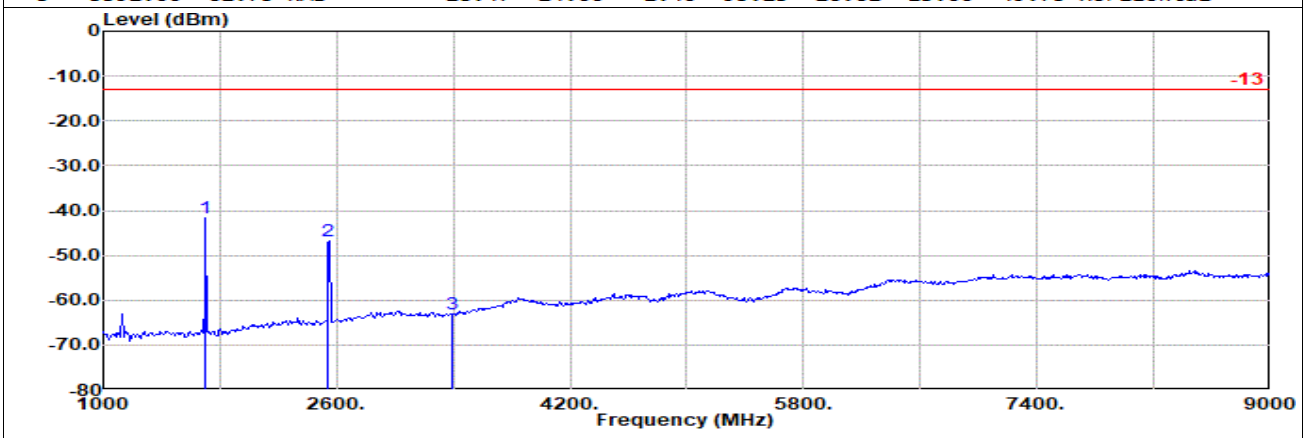
GSM 850 Ch251

H



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM Ch251

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1697.00	-43.87	RMS	24.86	-25.26	1.29	-95.23	50.47	-13.00	-30.87	Horizontal
2	2544.00	-43.70	RMS	27.00	-24.62	1.35	-95.23	47.80	-13.00	-30.70	Horizontal
3	3392.00	-62.75	RMS	28.47	-24.00	1.40	-95.23	26.61	-13.00	-49.75	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM Ch251

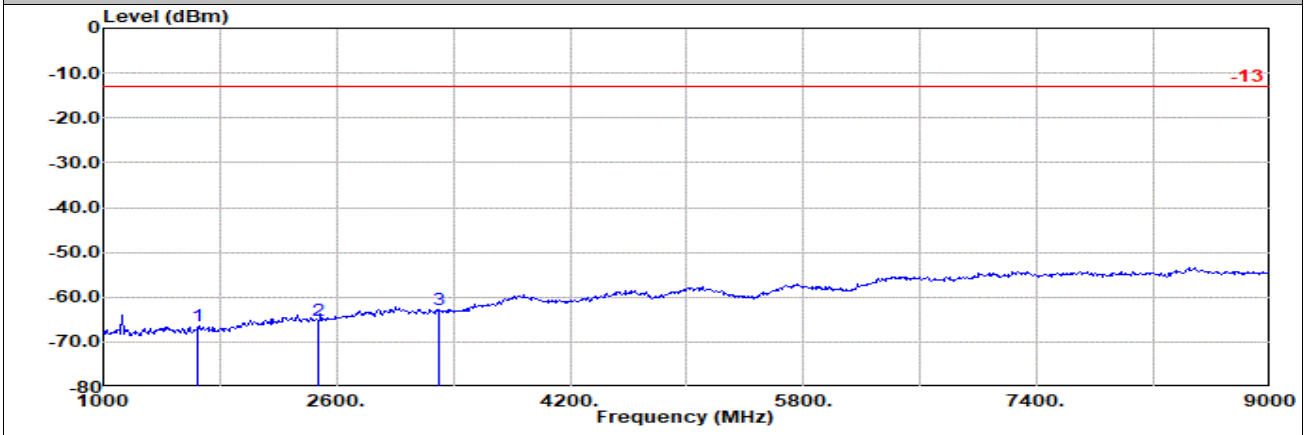
	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1697.00	-41.69	RMS	24.86	-25.26	1.29	-95.23	52.65	-13.00	-28.69	Vertical
2	2544.00	-46.75	RMS	27.00	-24.62	1.35	-95.23	44.75	-13.00	-33.75	Vertical
3	3392.00	-63.02	RMS	28.47	-24.00	1.40	-95.23	26.34	-13.00	-50.02	Vertical

Ant. 0

Part 22H Mode 2

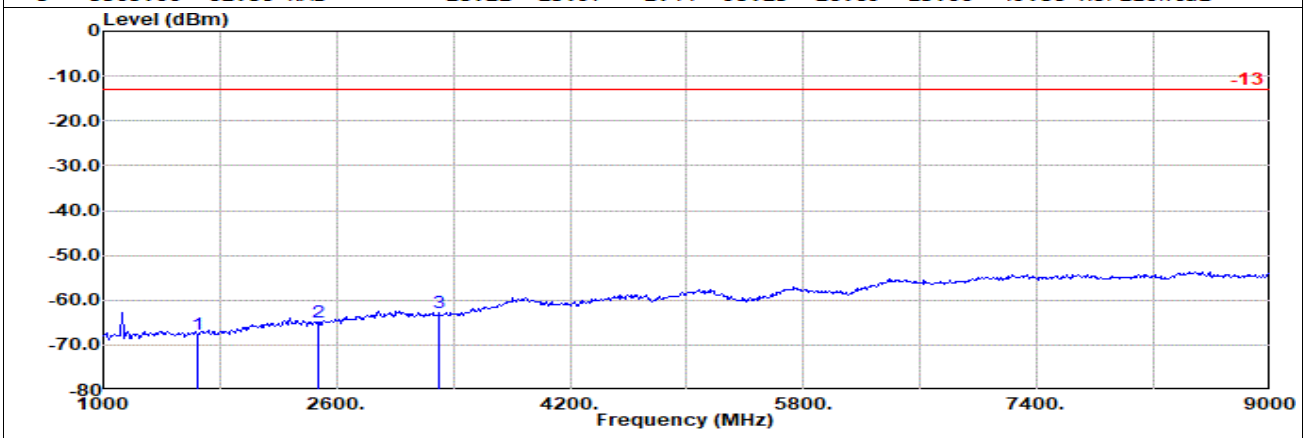
WCDMA B5 10M Ch4132

L



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: WCDMA 850 Ch4132

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1652.00	-66.48	RMS	24.78	-25.28	1.29	-95.23	0.00	-13.00	-53.48	Horizontal
2	2479.00	-65.06	RMS	26.80	-24.69	1.33	-95.23	26.73	-13.00	-52.06	Horizontal
3	3305.00	-62.86	RMS	28.21	-23.97	1.44	-95.23	26.69	-13.00	-49.86	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: WCDMA 850 Ch4132

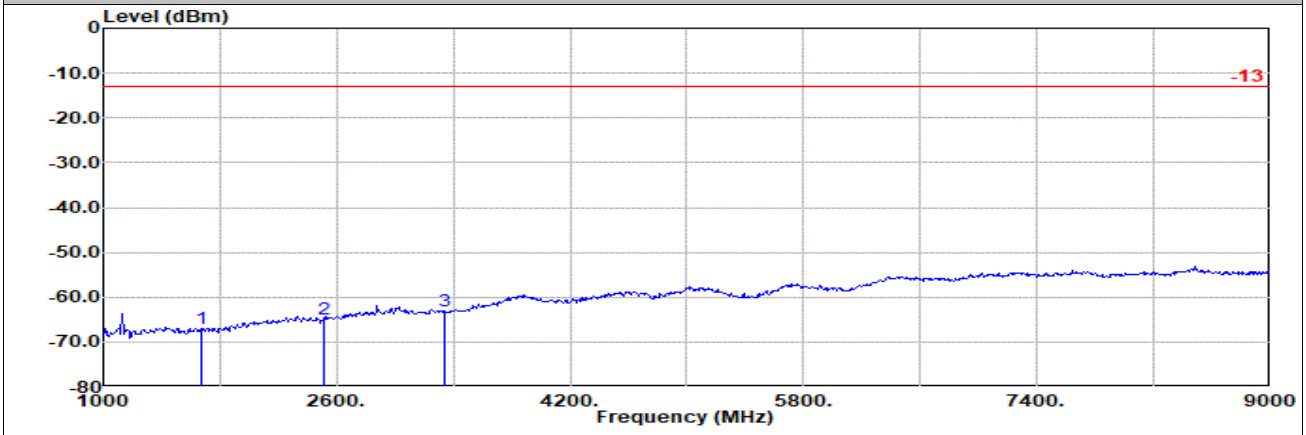
	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1652.00	-67.76	RMS	24.78	-25.28	1.29	-95.23	26.68	-13.00	-54.76	Vertical
2	2479.00	-65.05	RMS	26.80	-24.69	1.33	-95.23	26.74	-13.00	-52.05	Vertical
3	3305.00	-62.88	RMS	28.21	-23.97	1.44	-95.23	26.67	-13.00	-49.88	Vertical

Ant. 0

Part 22H Mode 2

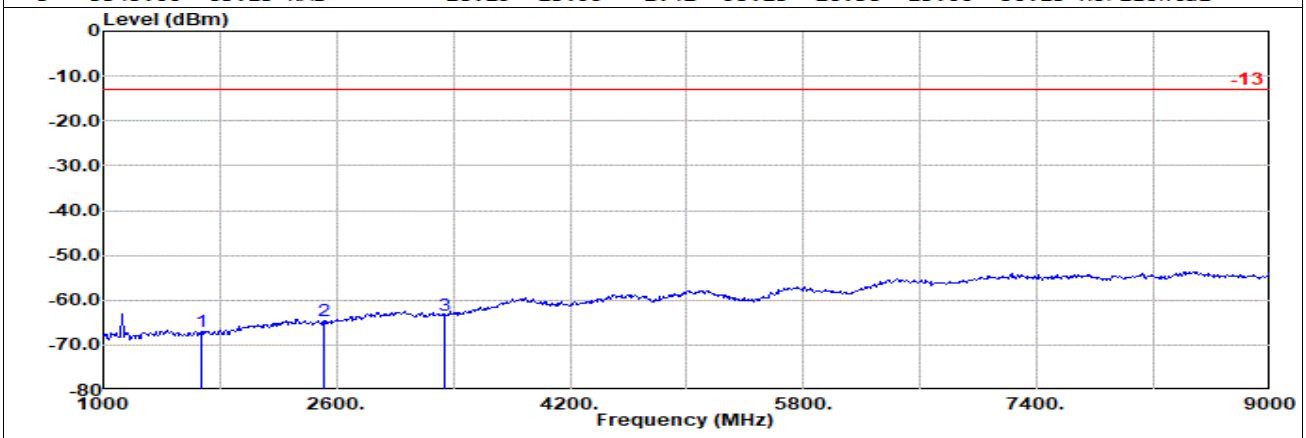
WCDMA B5 10M Ch4182

M



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: WCDMA 850 Ch4182

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1672.00	-67.00	RMS	24.84	-25.27	1.29	-95.23	27.37	-13.00	-54.00	Horizontal
2	2509.00	-64.83	RMS	26.90	-24.67	1.34	-95.23	26.83	-13.00	-51.83	Horizontal
3	3345.00	-63.13	RMS	28.29	-23.99	1.42	-95.23	26.38	-13.00	-50.13	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: WCDMA 850 Ch4182

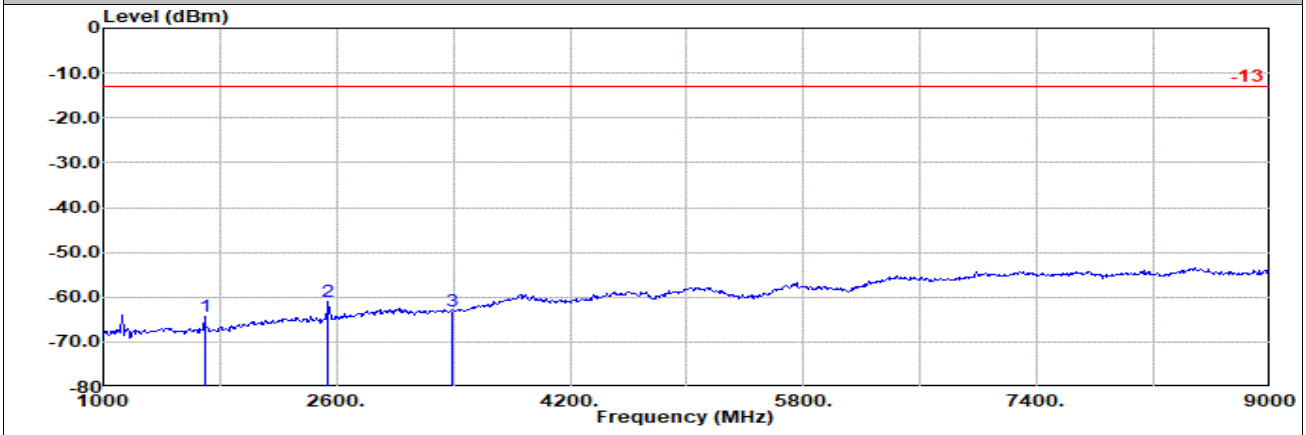
	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1672.00	-67.07	RMS	24.84	-25.27	1.29	-95.23	27.30	-13.00	-54.07	Vertical
2	2509.00	-64.49	RMS	26.90	-24.67	1.34	-95.23	27.17	-13.00	-51.49	Vertical
3	3345.00	-63.46	RMS	28.29	-23.99	1.42	-95.23	26.05	-13.00	-50.46	Vertical

Ant. 0

Part 22H Mode 2

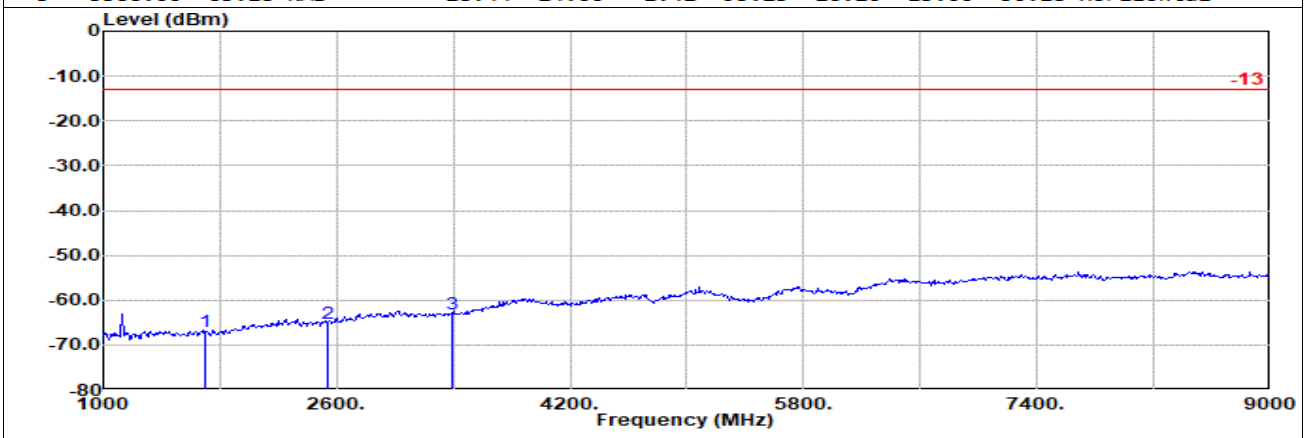
WCDMA B5 10M Ch4233

H



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: WCDMA 850 Ch4233

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1693.00	-64.33	RMS	24.94	-25.26	1.29	-95.23	29.93	-13.00	-51.33	Horizontal
2	2539.00	-60.84	RMS	26.99	-24.63	1.35	-95.23	30.68	-13.00	-47.84	Horizontal
3	3386.00	-63.18	RMS	28.44	-24.00	1.41	-95.23	26.20	-13.00	-50.18	Horizontal

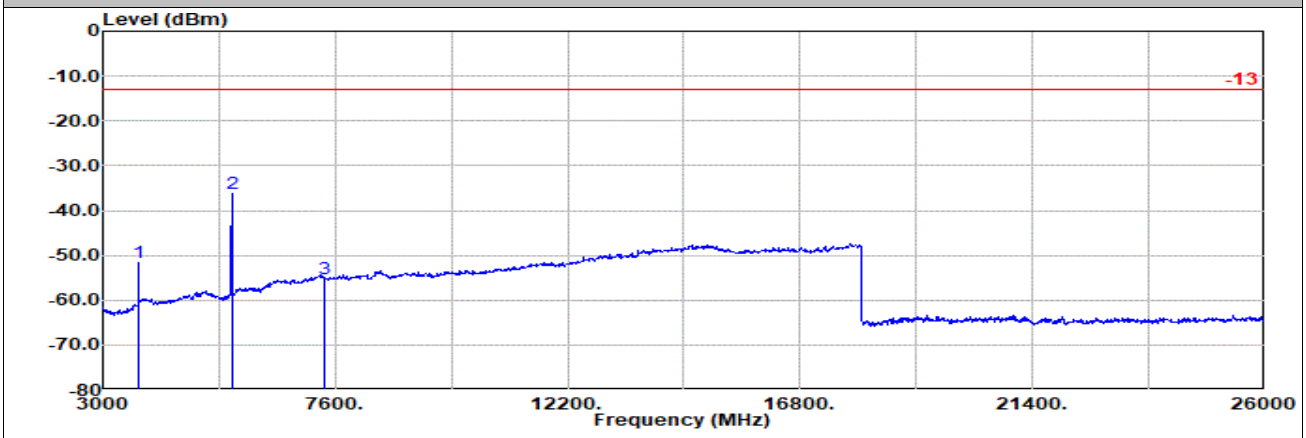


Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: WCDMA 850 Ch4233

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1693.00	-67.02	RMS	24.94	-25.26	1.29	-95.23	27.24	-13.00	-54.02	Vertical
2	2539.00	-65.31	RMS	26.99	-24.63	1.35	-95.23	26.21	-13.00	-52.31	Vertical
3	3386.00	-63.12	RMS	28.44	-24.00	1.41	-95.23	26.26	-13.00	-50.12	Vertical

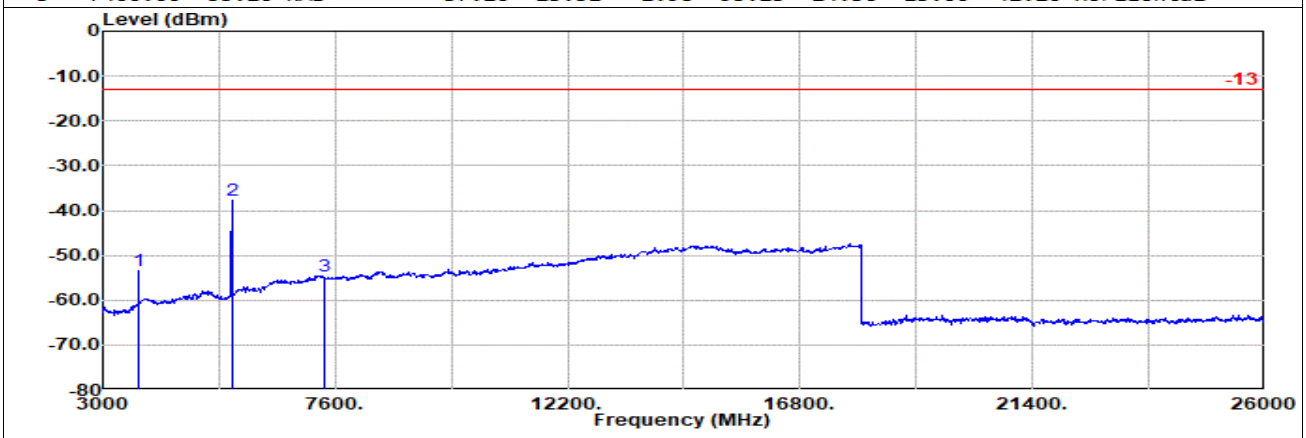
Ant. 1

Part 24E Mode 1
GSM 1900 Ch512
L



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM 1900 Ch512

	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3700.00	-51.65	RMS	29.90	-23.80	1.68	-95.23	35.80	-13.00	-38.65	Horizontal
2	5550.00	-36.33	RMS	33.00	-23.37	1.99	-95.23	47.29	-13.00	-23.33	Horizontal
3	7400.00	-55.20	RMS	37.20	-23.51	1.98	-95.23	24.36	-13.00	-42.20	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM 1900 Ch512

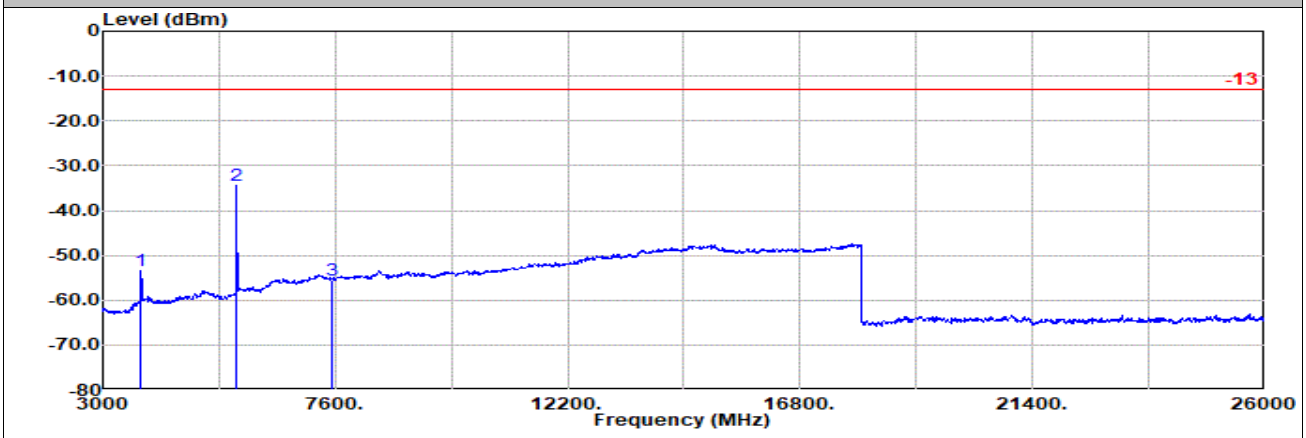
	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3700.00	-53.33	RMS	29.90	-23.80	1.68	-95.23	34.12	-13.00	-40.33	Vertical
2	5550.00	-37.74	RMS	33.00	-23.37	1.99	-95.23	45.88	-13.00	-24.74	Vertical
3	7400.00	-54.52	RMS	37.20	-23.51	1.98	-95.23	25.04	-13.00	-41.52	Vertical

Ant. 1

Part 24E Mode 1

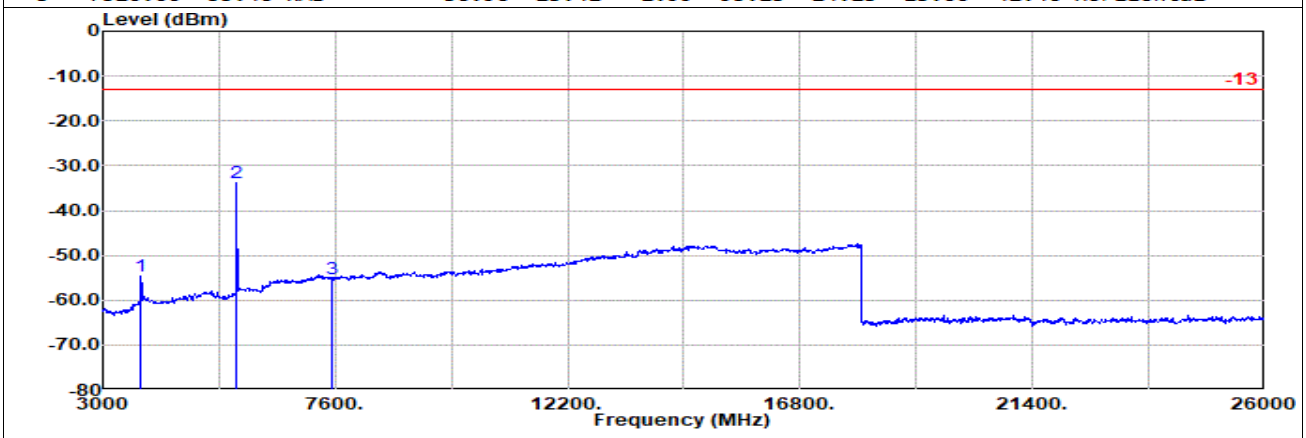
GSM 1900 Ch661

M



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM 1900 Ch661

	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3760.00	-53.30	RMS	30.42	-23.73	1.67	-95.23	33.57	-13.00	-40.30	Horizontal
2	5640.00	-34.56	RMS	33.44	-23.27	2.04	-95.23	48.46	-13.00	-21.56	Horizontal
3	7520.00	-55.46	RMS	36.96	-23.41	1.99	-95.23	24.23	-13.00	-42.46	Horizontal



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM 1900 Ch661

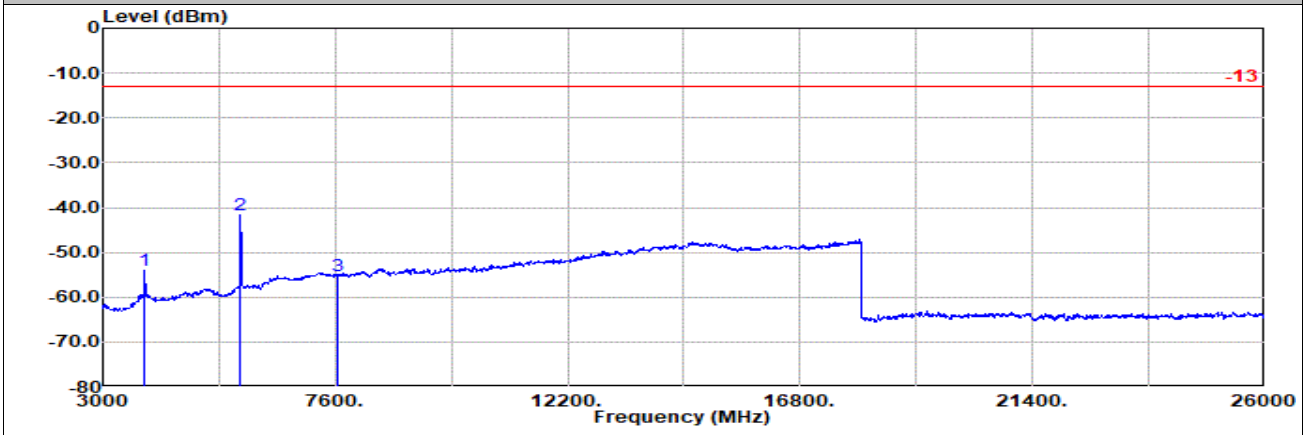
	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3760.00	-54.58	RMS	30.42	-23.73	1.67	-95.23	32.29	-13.00	-41.58	Vertical
2	5640.00	-33.91	RMS	33.44	-23.27	2.04	-95.23	49.11	-13.00	-20.91	Vertical
3	7520.00	-55.22	RMS	36.96	-23.41	1.99	-95.23	24.47	-13.00	-42.22	Vertical

Ant. 1

Part 24E Mode 1

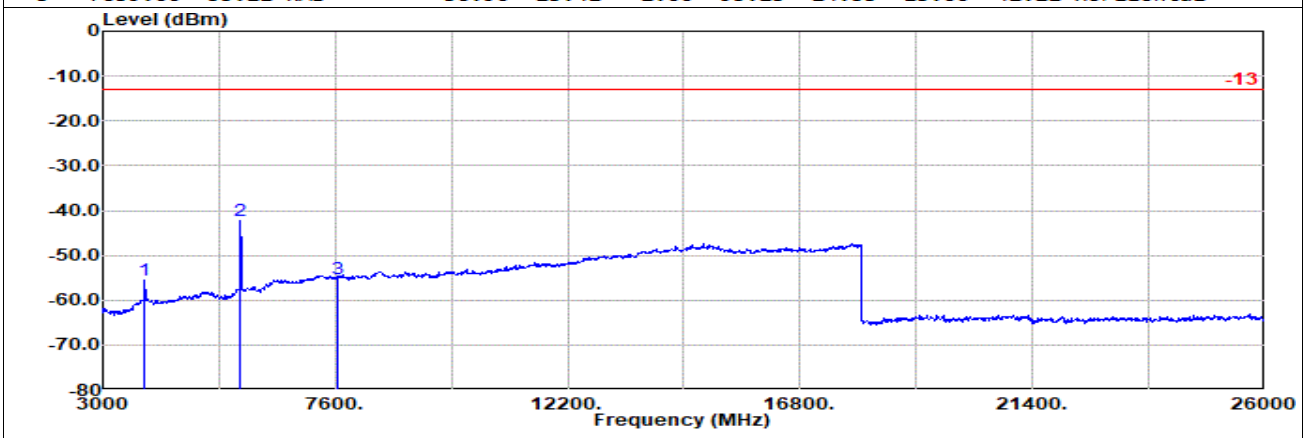
GSM 1900 Ch810

H



Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
: GSM 1900 Ch810

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3819.00	-54.16	RMS	30.65	-23.67	1.67	-95.23	32.42	-13.00	-41.16	Horizontal
2	5729.00	-41.63	RMS	33.86	-23.25	2.18	-95.23	40.81	-13.00	-28.63	Horizontal
3	7639.00	-55.21	RMS	36.90	-23.41	2.00	-95.23	24.53	-13.00	-42.21	Horizontal

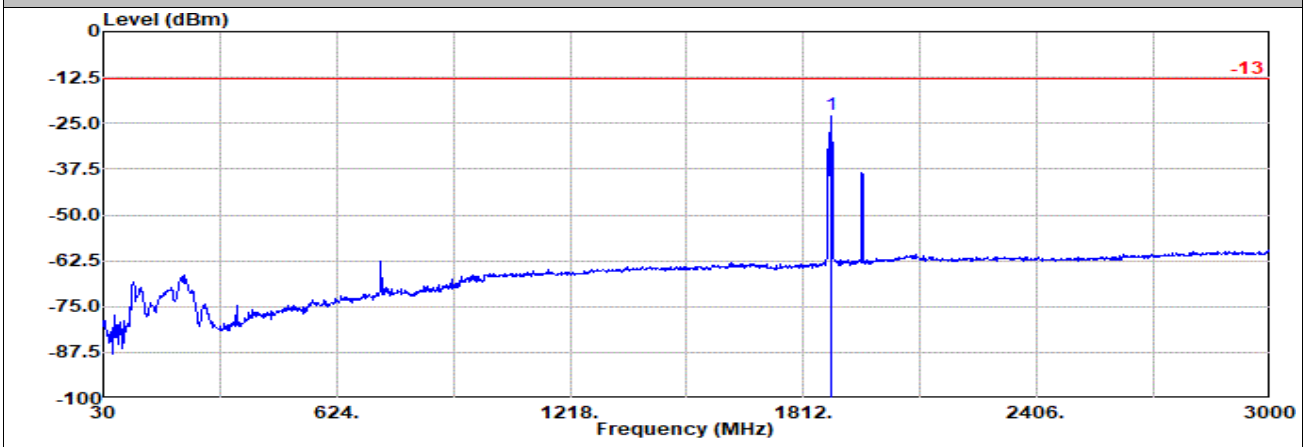


Site : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
: GSM 1900 Ch810

	Freq	Level	Detector	Ant Factor	Amp\Cbl	Filter	EIRPCF	Reading	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	3819.00	-55.69	RMS	30.65	-23.67	1.67	-95.23	30.89	-13.00	-42.69	Vertical
2	5729.00	-42.31	RMS	33.86	-23.25	2.18	-95.23	40.13	-13.00	-29.31	Vertical
3	7639.00	-55.19	RMS	36.90	-23.41	2.00	-95.23	24.55	-13.00	-42.19	Vertical

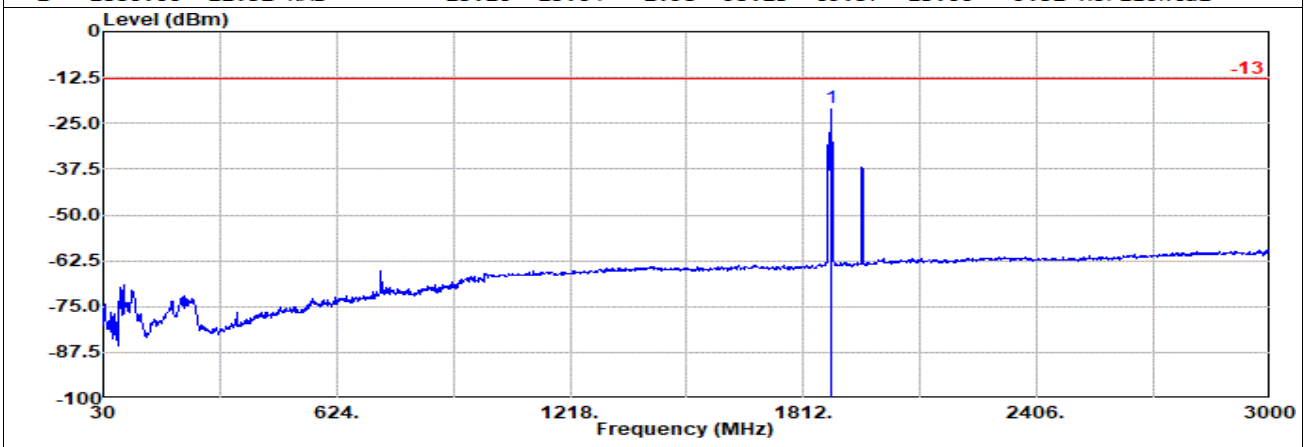
Ant. 1

Part 24E Mode 1
GSM 1900 Ch661
M




```
Site      : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Horizontal
          : GSM 1900 Ch661
          : #1 is fundamental signal which can be ignored.
```

	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1880.00	-22.52	RMS	25.20	-25.04	2.98	-95.23	69.57	-13.00	-9.52	Horizontal




```
Site      : 03CH23-HY
Condition: -13 3m DRH18-E_LE2C05A18EN_240620 Vertical
          : GSM 1900 Ch661
          : #1 is fundamental signal which can be ignored.
```

	Freq	Level	Detector	Ant Factor	Amp\Cb l	Filter	EIRPCF	Readin g	Limit	Margin	Pol
	MHz	dBm		dB/m	dB	dB	dB	dBuV	dBm	dB	
1	1880.00	-20.78	RMS	25.20	-25.04	2.98	-95.23	71.31	-13.00	-7.78	Vertical

Remark: #1 is fundamental signal which can be ignored.