



Product Service

RF - TEST REPORT

Report Number : **68.850.10.103.01** Date of Issue: 26 January 2011

Model : **Tablet PC**

Product Type : NI3421-A01

Applicant : Notion Ink Design Labs Pvt. Ltd.

Address : 6th Block, D tower, Subramanya Arcade, Bannerghatta Road,
Bangalore, Karnataka, India 560029

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result : **Positive** **Negative**

Total pages including
Appendices : 37

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

Test site2:

Company name: Telecommunication Metrology Center of MIIT
12 Building, Shangsha Innovation and Technology Park,
Futian District, Shenzhen,
Guangdong,
China

Telephone: 86 755 3332 2000

Fax: 86 755 3332 2000



3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product:	Tablet PC
Model no.:	NI3421-A01
Serial number:	NIL
Options and accessories:	NIL
Rating:	DC 19V, 2.1A Test with adaptor: Input: AC 100-240V, 50/60Hz, 1A Output: DC 19V, 2.1A
Antenna:	Integral antenna inside the EUT, NOT accessible by end user
RF Transmission Frequency:	GSM/E-GSM: 850M/1900MHz WCDMA: 850M/1900MHz
Description of the EUT:	A certified wireless module was installed in this Tablet PC NI3421-A01 The information of wireless module: Product Type: F3307 Ericsson Mobile Broadband Module- 850/900/1800/1900 GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Mini- PCIe Wireless WAN card Module No.: F3307 FCC ID: VV7-MBMF33071 Applicant: Ericsson AB Address: Lindholmospiren 11 Gothenburg, SE 417 56 Sweden.

Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Universal Radio Communication Tester	Agilent	5515C	GB47460389



4 Summary of Test Standards

Test Standards	
FCC CFR47 Part 22: Subpart H Oct. 1, 2009	PUBLIC MOBILE SERVICES
FCC CFR47 Part 24: Subpart E Oct. 1, 2009	PERSONAL COMMUNICATIONS SERVICES



5 Summary of Test Results

Technical Requirements					
FCC Part 22 Subpart H, FCC Part 24 Subpart E					
Test Condition	Pages	Test Result			Test Location
		Pass	Fail	N/A	
22.913 Conducted output power of transmitter 24.232 Conducted output power of transmitter	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
22.217 Spurious radiated emissions 24.238 Spurious radiated emissions	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2



6 General Remarks

Remarks

This submittal(s) (test report) is intended for the Class 2 permissive change of F3307 Ericsson Mobile Broadband Module-850/900/1800/1900 GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Mini-PCIE Wireless WAN card, Model No.: F3307
FCC ID: VV7-MBMF33071.

SUMMARY:

All tests according to the regulations cited on page 5 were

- Performed

- **Not** Performed

The Equipment Under Test

- **Fulfills** the general approval requirements.

- **Does not** fulfill the general approval requirements.

Sample Received Date: Dec 5 2010

Testing Start Date: Dec 13 2010

Testing End Date: Dec 31 2010

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By	<u>2011-01-26</u>	<u>Wangshanshan</u>	<u>Wang Shanshan</u>
	Test Lab Engineer	Date	Name Signature

Prepared By	<u>2011-01-26</u>	<u>Ken Li</u>	<u>[Signature]</u>
	Project Engineer	Date	Name Signature

Reviewed By	<u>2011-01-26</u>	<u>Paul Yu</u>	<u>[Signature]</u>
	Assistant EMC Manager	Date	Name Signature

7 Technical Requirement

7.1 Conducted output power of transmitter

Test Method

Connect the Mobile Phone to the wireless communication tester CMU200 via the antenna connector.

Limits for conducted output power measurements

FCC Rule	Limit W	Limit dBm
FCC Part 22H	≤7	≤38.45
FCC Part 24E	≤2	≤33.01

Conducted peak output power

Test result for rule Part 22H

Mode	Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)
GPRS	128	824.2	32.15	38.45
	190	836.6	32.25	38.45
	251	848.8	32.18	38.45
EDGE	128	824.2	32.10	38.45
	190	836.6	32.23	38.45
	251	848.8	32.10	38.45
WCDMA	4132	826.4	23.30	38.45
	4183	836.6	23.53	38.45
	4233	846.6	23.21	38.45
HSUPA*	4132	826.4	23.21	38.45
	4183	836.6	23.29	38.45
	4233	846.6	23.04	38.45

Test result for rule Part 24E

Mode	Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)
GPRS	512	1850.2	28.55	33.01
	661	1880.0	29.03	33.01
	810	1909.8	28.88	33.01
EDGE	512	1850.2	28.50	33.01
	661	1880.0	29.00	33.01
	810	1909.8	28.80	33.01
WCDMA	9262	1852.4	23.06	33.01
	9400	1880.0	23.04	33.01
	9538	1907.6	22.60	33.01
HSUPA*	9262	1852.4	22.55	33.01
	9400	1880.0	22.97	33.01
	9538	1907.6	22.40	33.01

*Note: HSDPA modulation mode has not been tested to prove USA FCC Part 22 and Part 24 compliance because it is an improved mode of operation only for Downlink (UE reception), but using the normal WCDMA mode for UL (Up Link, UE transmission). Therefore HSDPA has no associated a Power class or modulation scheme different than WCDMA mode for the UL transmission.

Taking into account the above comments, testing in HSDPA modulation mode is redundant for FCC Parts 22 and Part 24 as it is the same as WCDMA mode as long as UE transmission is concerned. WCDMA modulation mode has been tested as indicated on the present test report.



Test Equipment

Maximum transmit power Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DATE
Universal Radio Communication Tester	Agilent	5515C	GB47460389	2011-09-21

7.3 Spurious radiated emissions

Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

Frequency MHz	Limit Level dBm	Detector
30-20000	-13	Peak

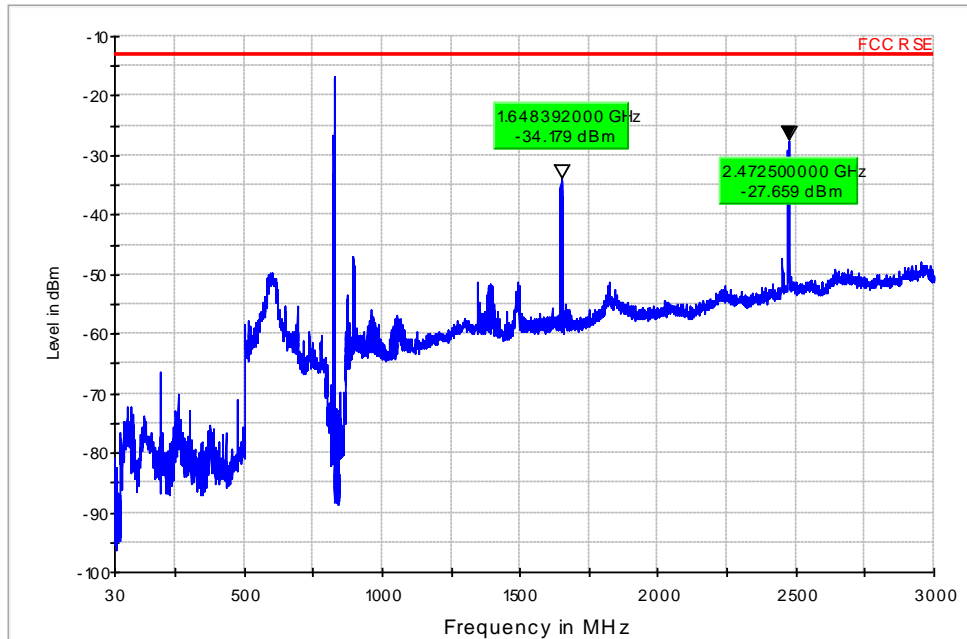
Spurious radiated emissions

GPRS850 Modulation test result:

Low channel:

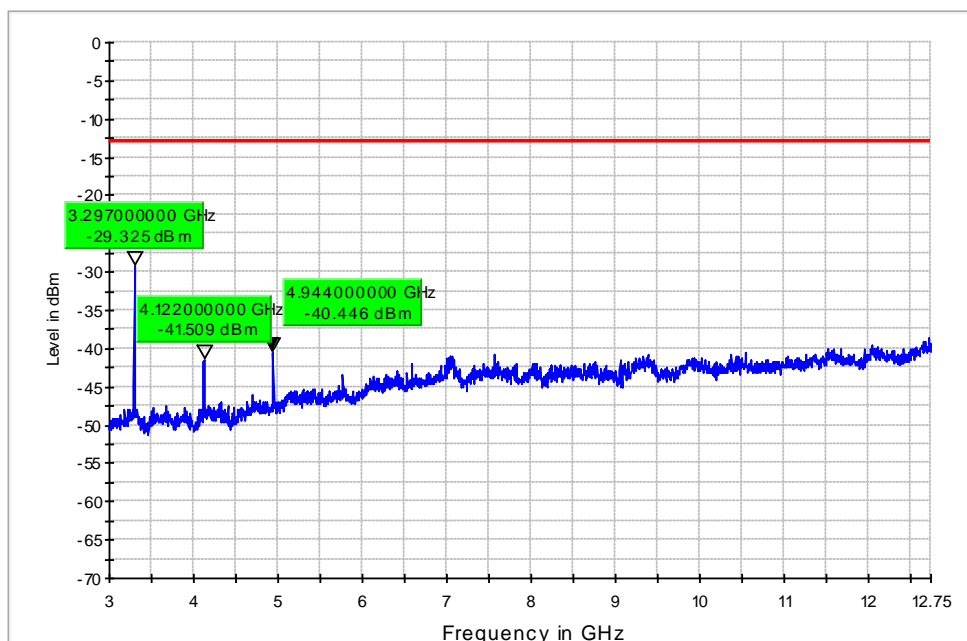
Note: The maximum peak in the plot is the carrier frequency.

GSM850 Tx 30-3GHz Test



— FCC RSE Limit Line — Preview Result 1

GSM850 Tx 3-12.75GHz Test



— FCC RSE Limit Line — Preview Result 1

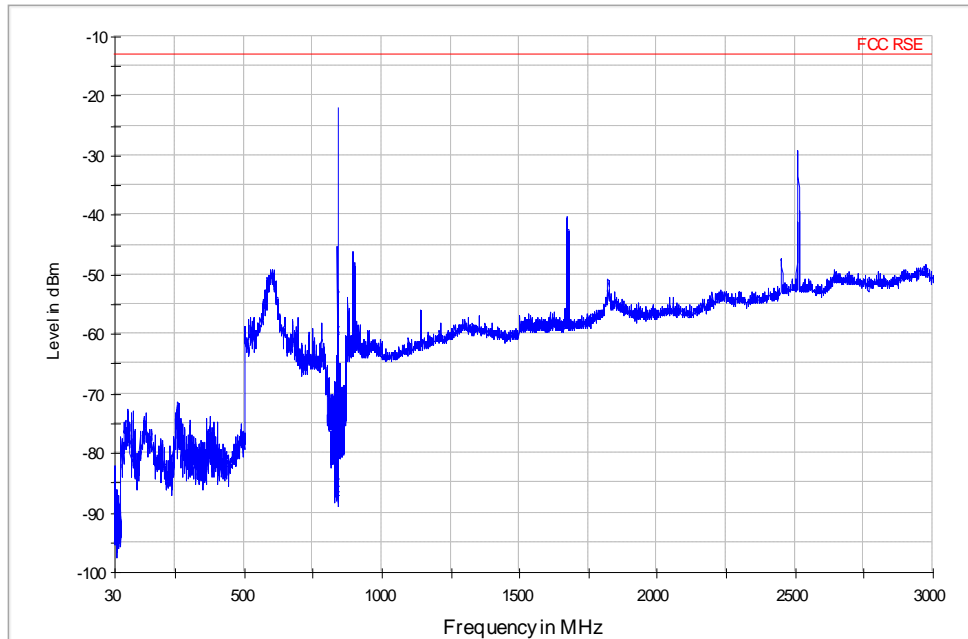
Spurious radiated emissions

GPRS850 Modulation test result:

Mid channel:

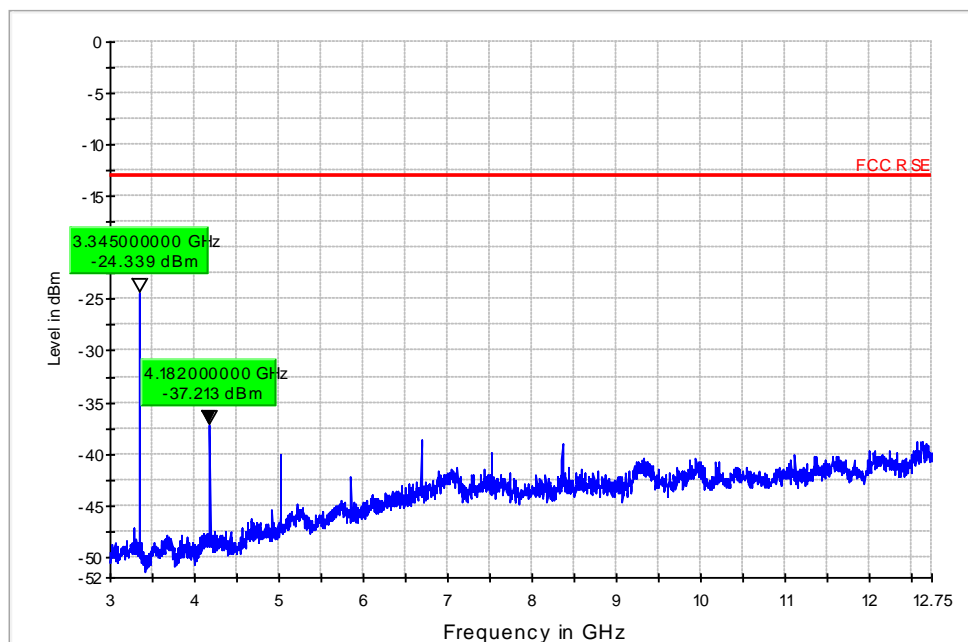
Note: The maximum peak in the plot is the carrier frequency.

GSM850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result1

GSM850 Tx 3-12.75GHz Test



— FCC RSE . Limit Line — Preview Result 1

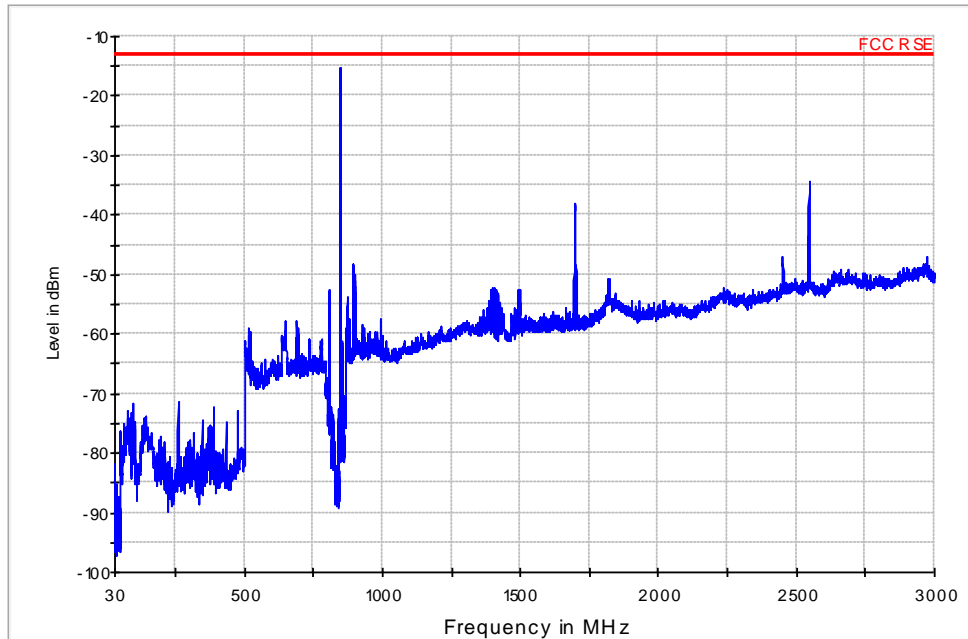
Spurious radiated emissions

GPRS850 Modulation test result:

High channel:

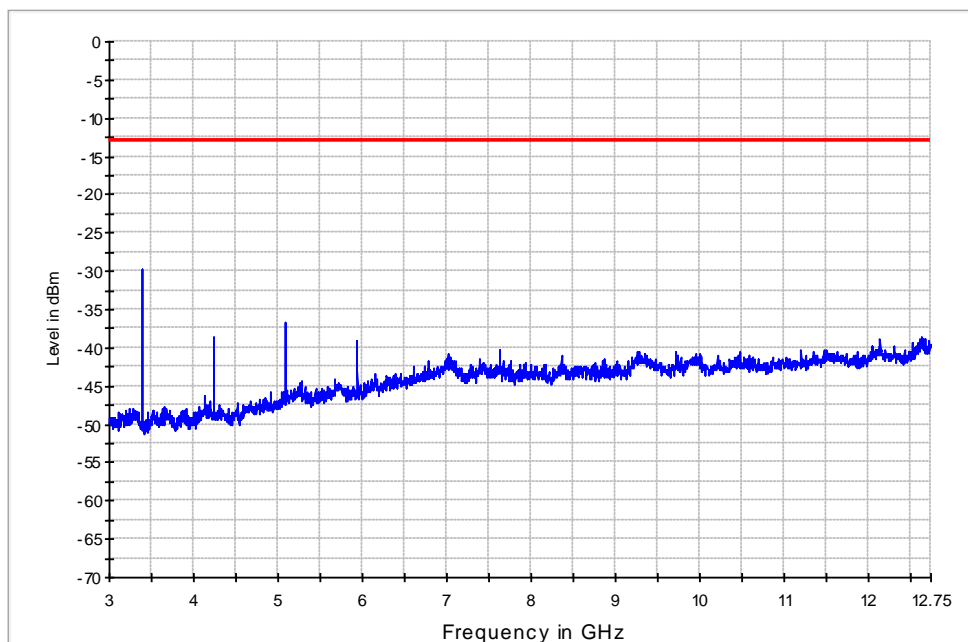
Note: The maximum peak in the plot is the carrier frequency.

GSM 850 Tx 30-3GHz Test



— FCC RSE Limit Line — Preview Result 1

GSM 850 Tx 3-12.75GHz Test



— FCC RSE Limit Line — Preview Result 1

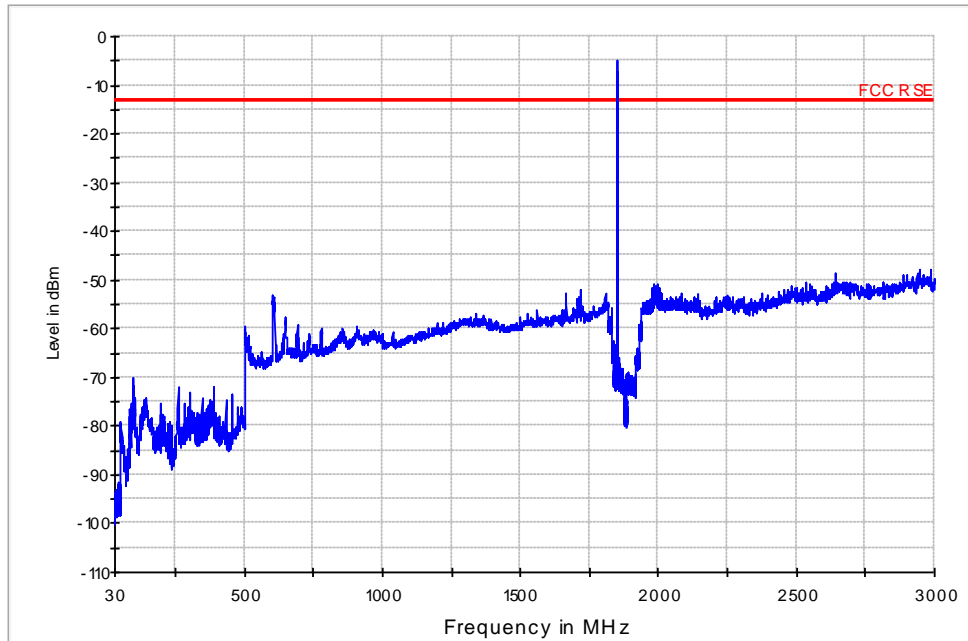
Spurious radiated emissions

GPRS1900 Modulation test result:

Low channel:

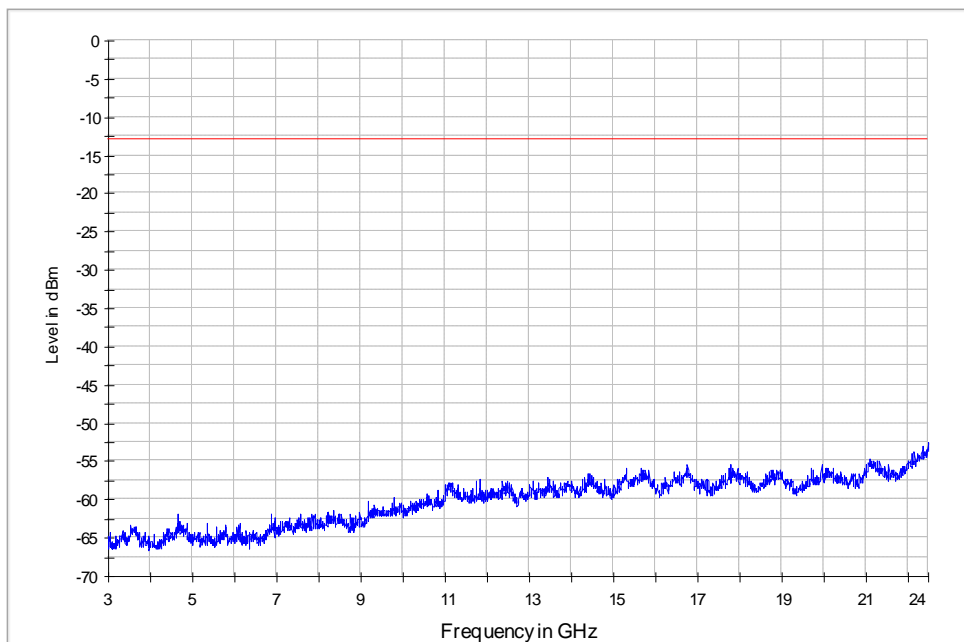
Note: The maximum peak in the plot is the carrier frequency.

GSM1900 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM1900 Tx 3-24GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

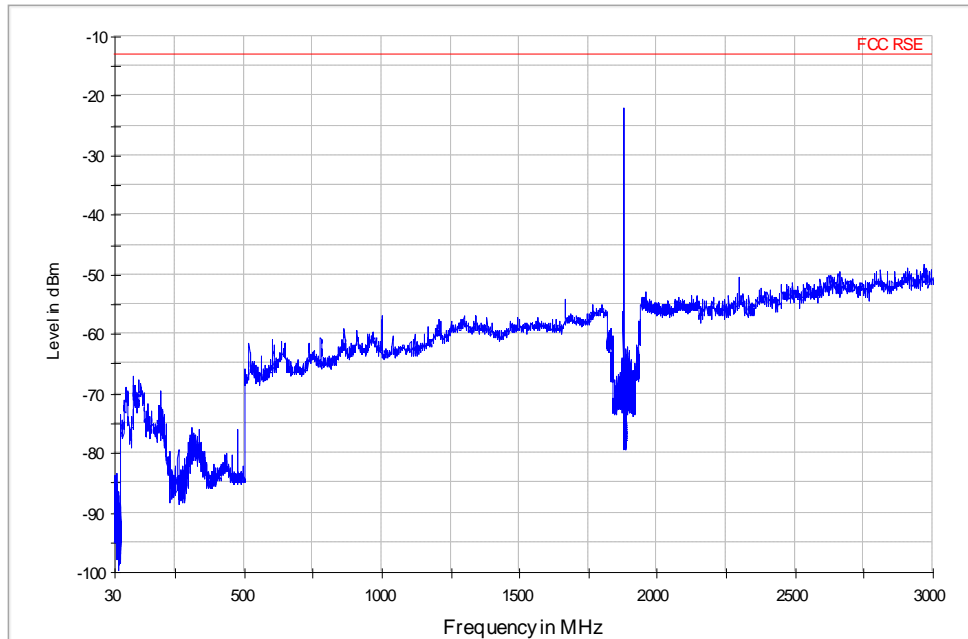
Spurious radiated emissions

GPRS1900 Modulation test result:

Mid channel:

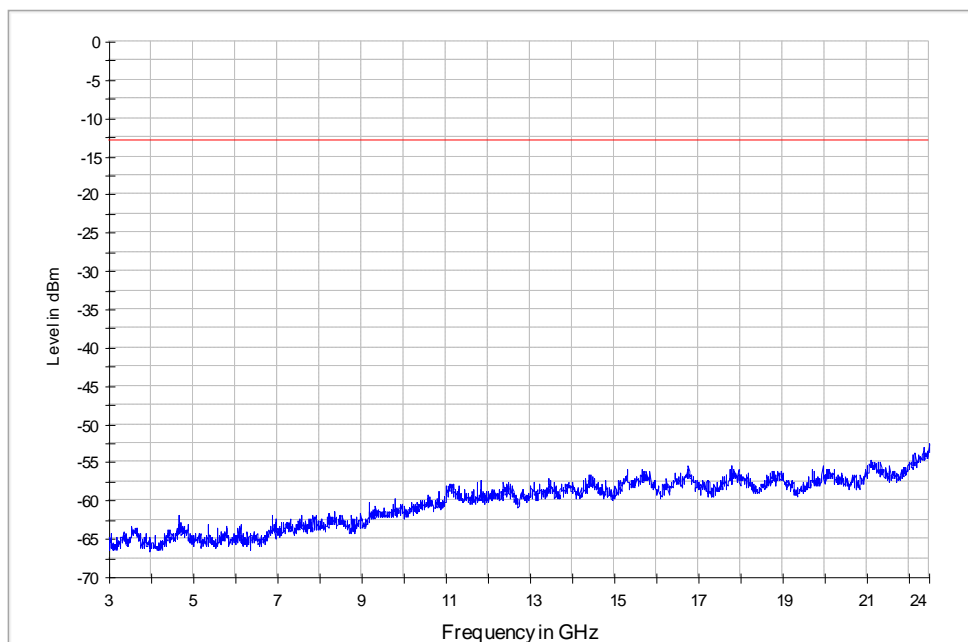
Note: The maximum peak in the plot is the carrier frequency.

GSM1900 Tx 30-3GHz-FCC Test



— FCC RSELimitLine — Preview Result 1

GSM1900 Tx 3-24GHz-FCC Test



— FCC RSELimitLine — Preview Result 1

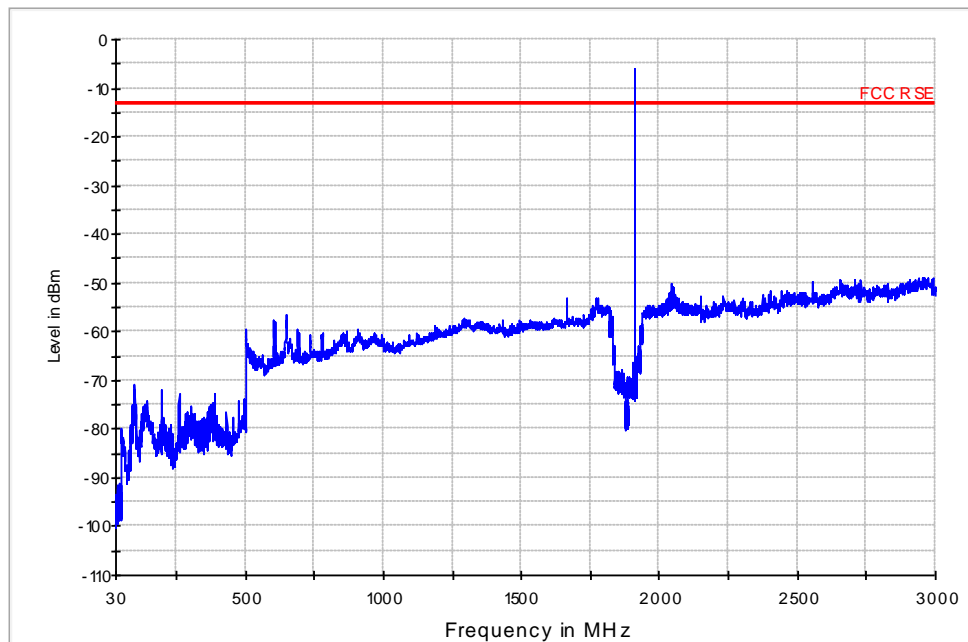
Spurious radiated emissions

GPRS1900 Modulation test result:

High channel:

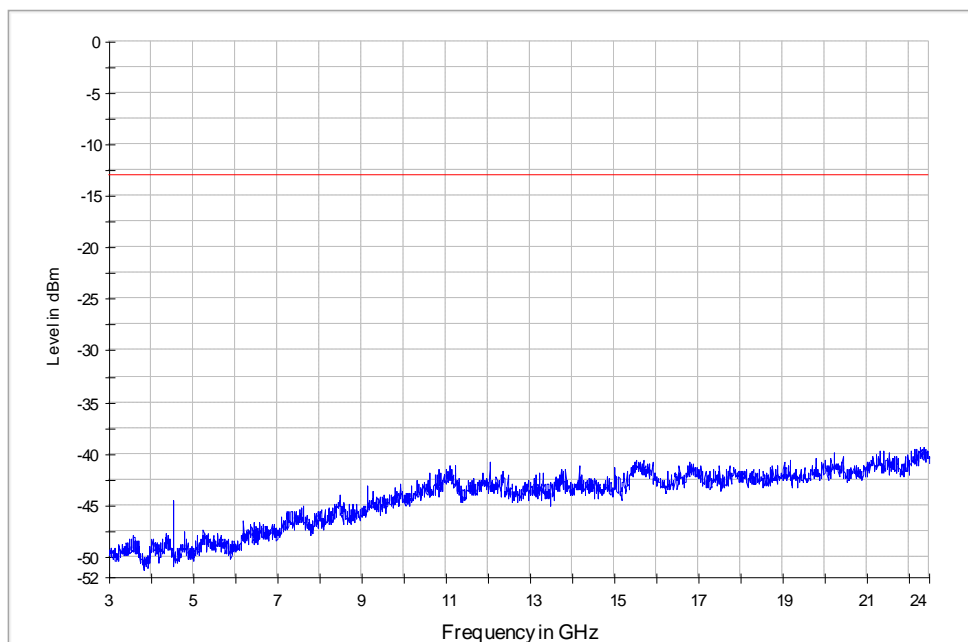
Note: The maximum peak in the plot is the carrier frequency.

GSM1900 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM1900 Tx 3-124GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

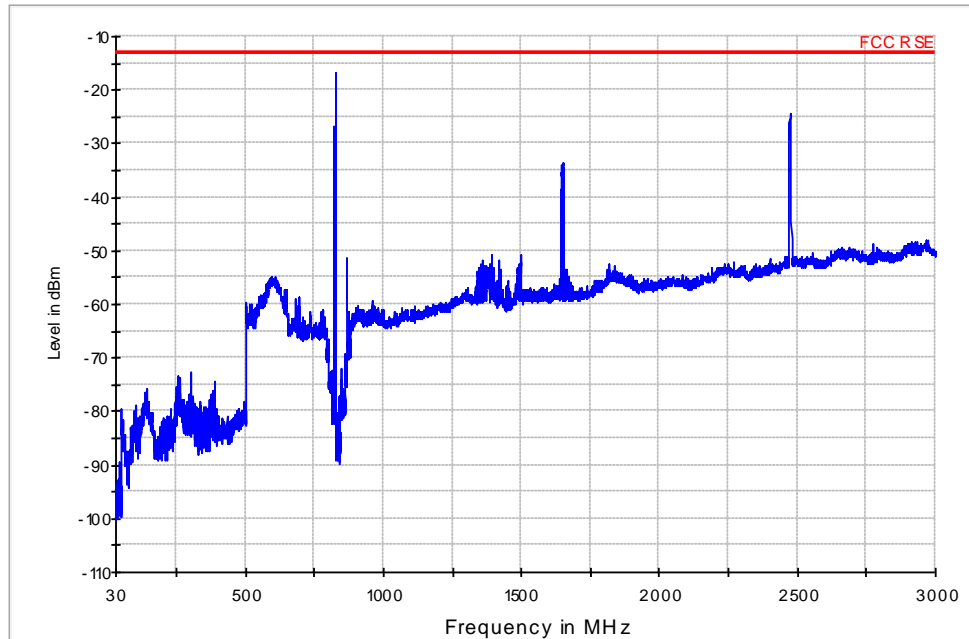
Spurious radiated emissions

EDGE850 Modulation test result:

Low channel:

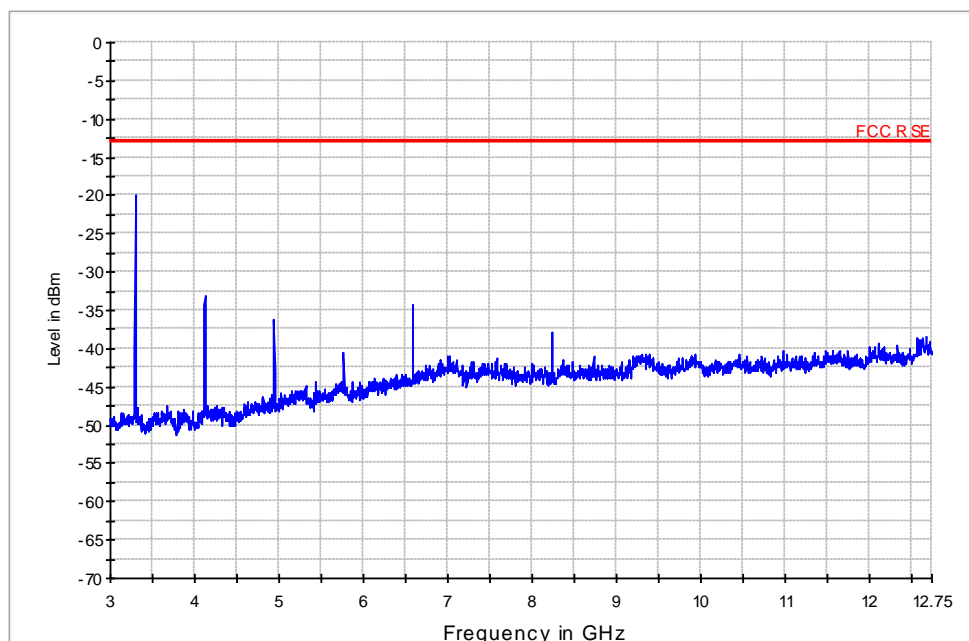
Note: The maximum peak in the plot is the carrier frequency.

GSM850 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM850 Tx 3-12.75GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

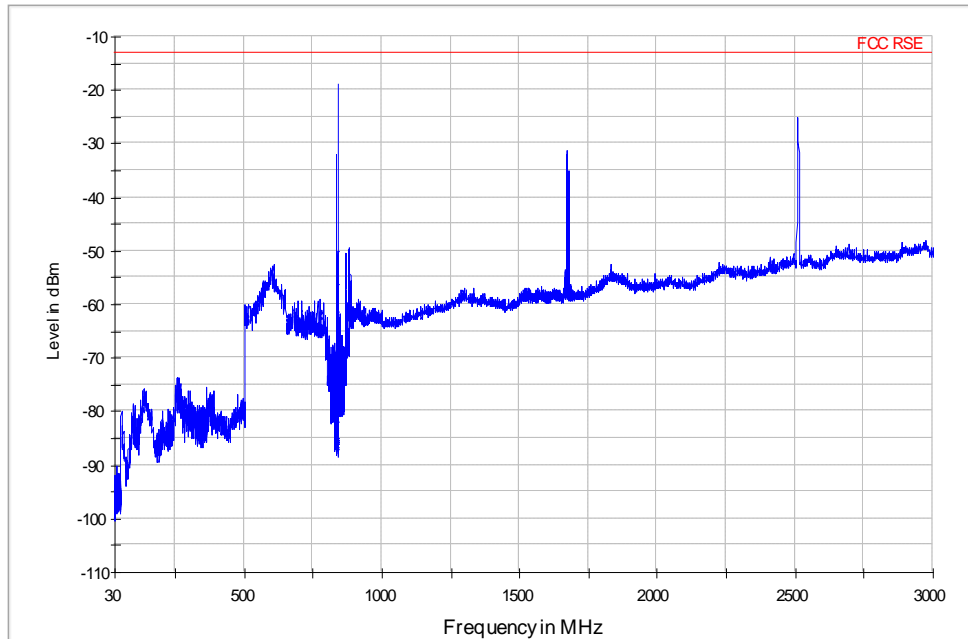
Spurious radiated emissions

EDGE850 Modulation test result:

Mid channel:

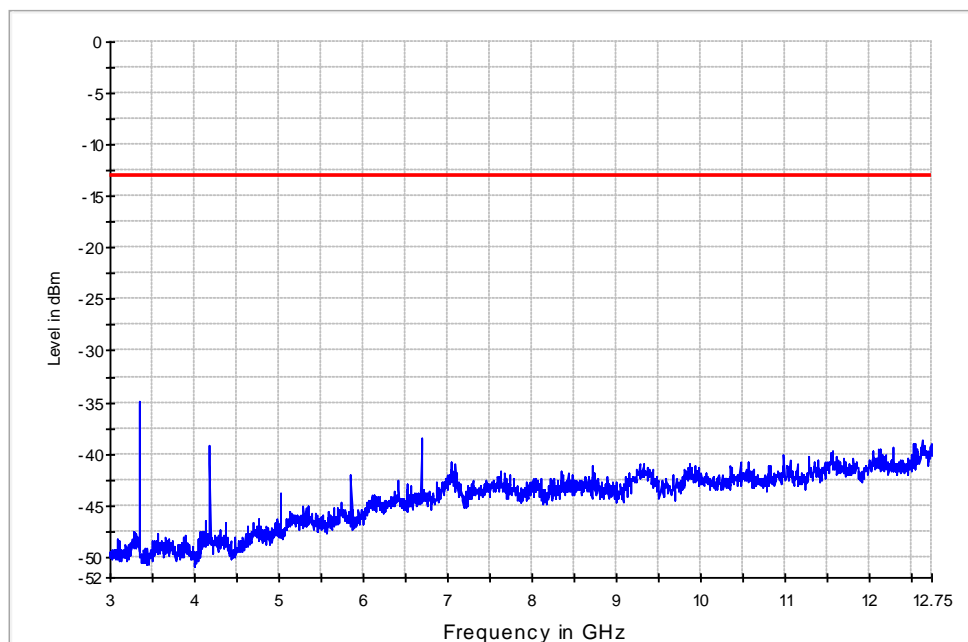
Note: The maximum peak in the plot is the carrier frequency.

GSM850 Tx 30-3GHz-FCC Test



— FCC RSELimitLine — Preview Result 1

GSM 850 Tx 3-12.75GHz-FCC Test



— FCC RSE . LimitLine — Preview Result 1

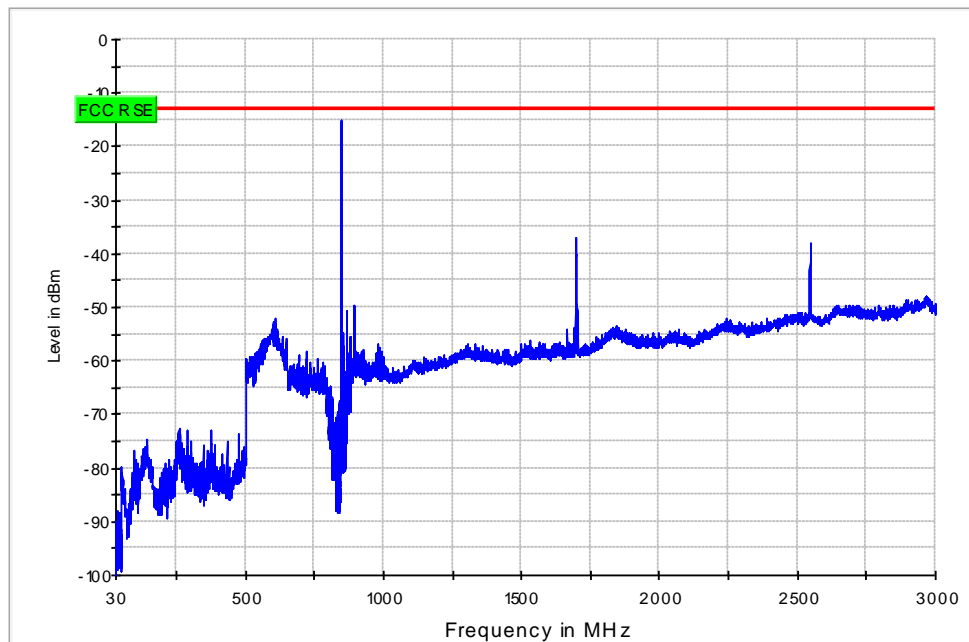
Spurious radiated emissions

EDGE850 Modulation test result:

High channel:

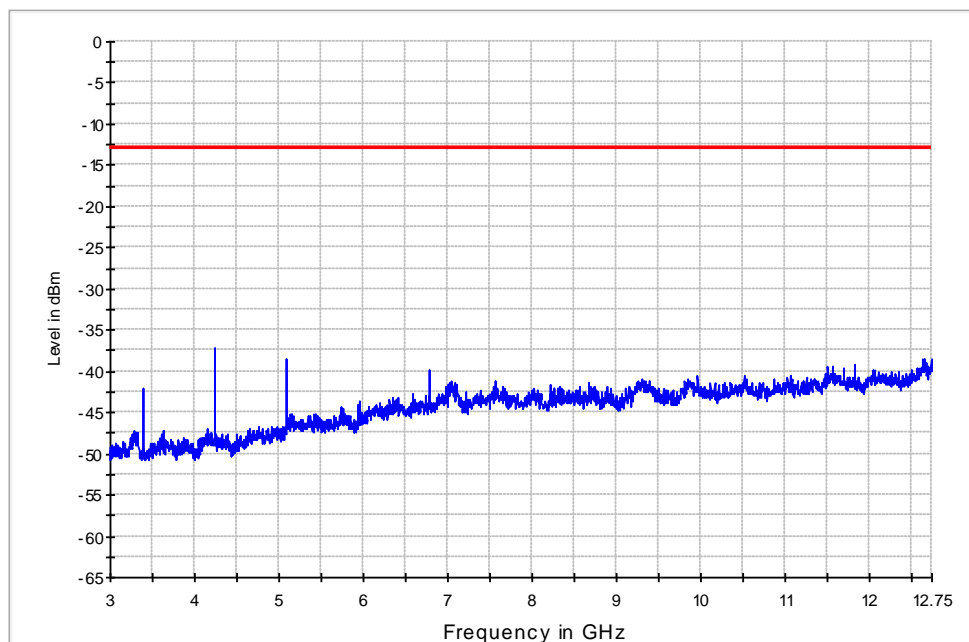
Note: The maximum peak in the plot is the carrier frequency.

GSM850 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM850 Tx 3-12.75GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

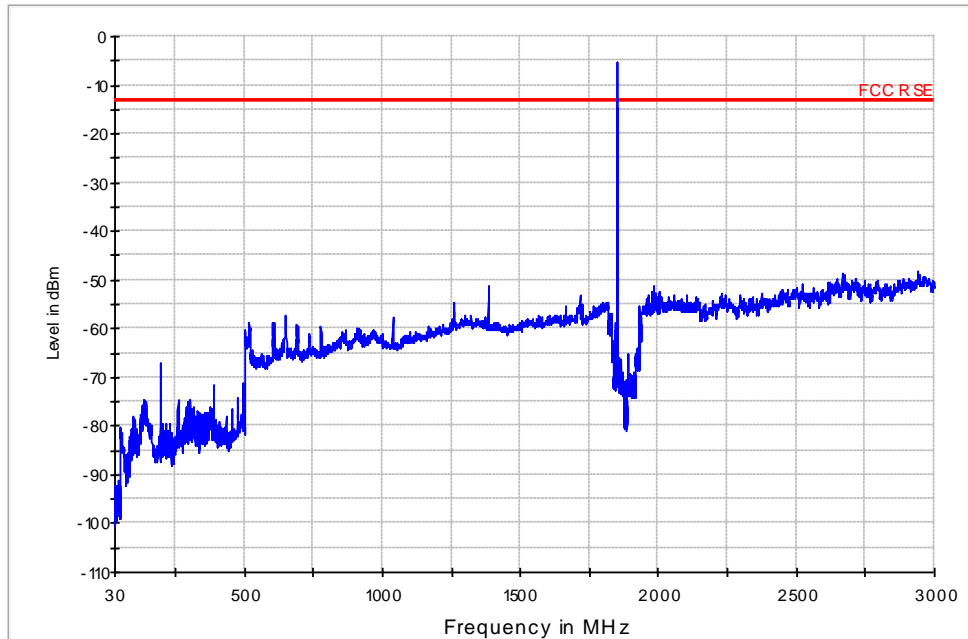
Spurious radiated emissions

EDGE1900 Modulation test result:

Low channel:

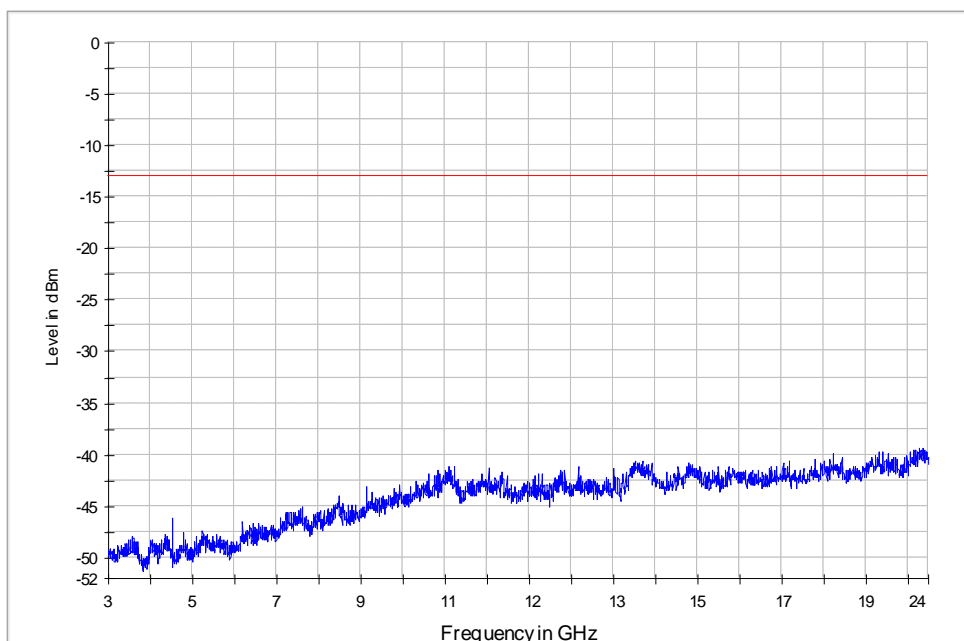
Note: The maximum peak in the plot is the carrier frequency.

GSM1900 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM1900 Tx 3-24GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

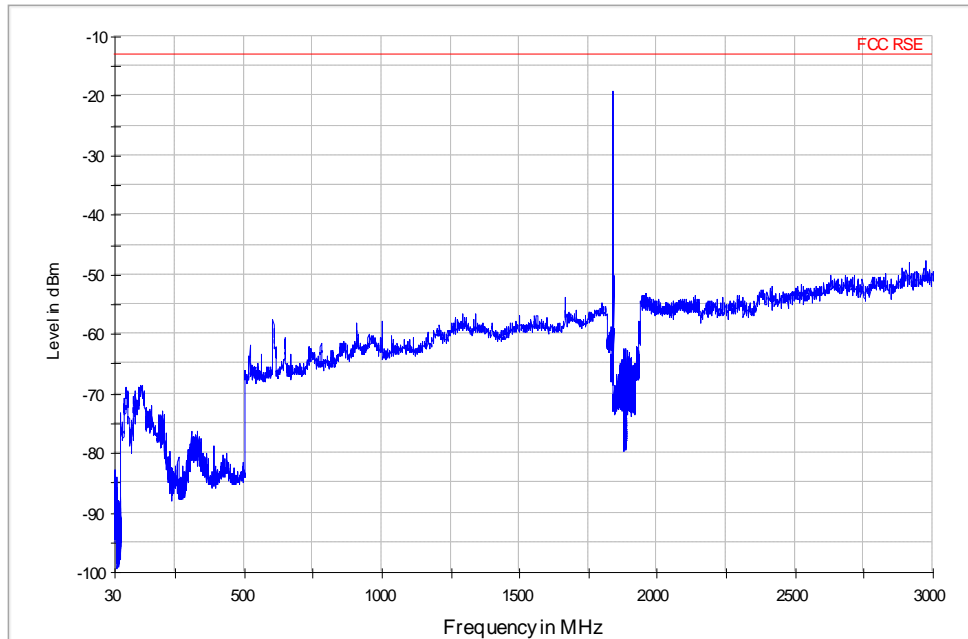
Spurious radiated emissions

EDGE1900 Modulation test result:

Mid channel:

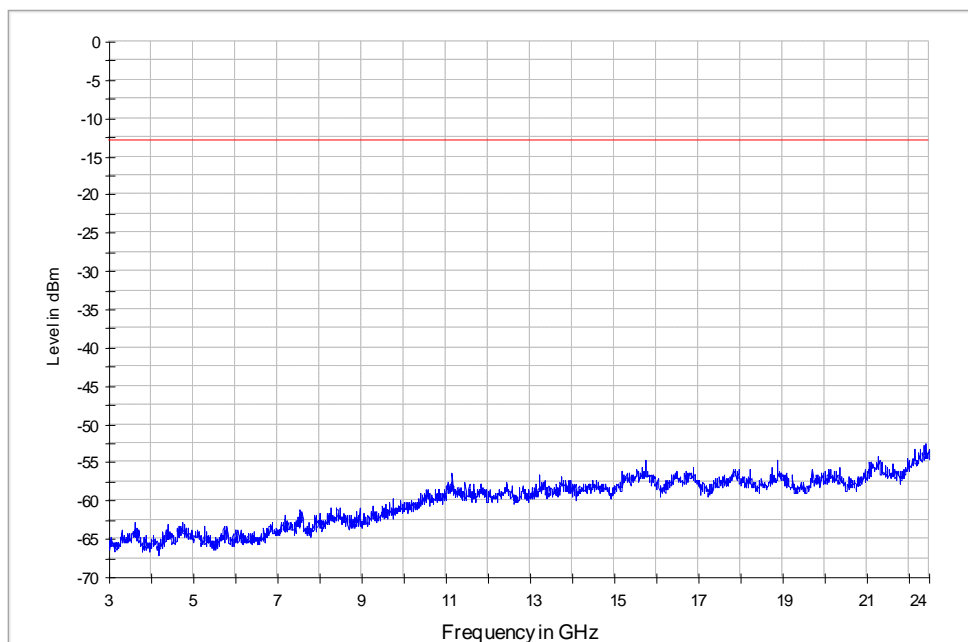
Note: The maximum peak in the plot is the carrier frequency.

GSM1900 Tx 30-3GHz-FCC Test



— FCC RSELimitLine — Preview Result 1

GSM1900 Tx 3-24GHz Test



— FCC RSE — Preview Result 1

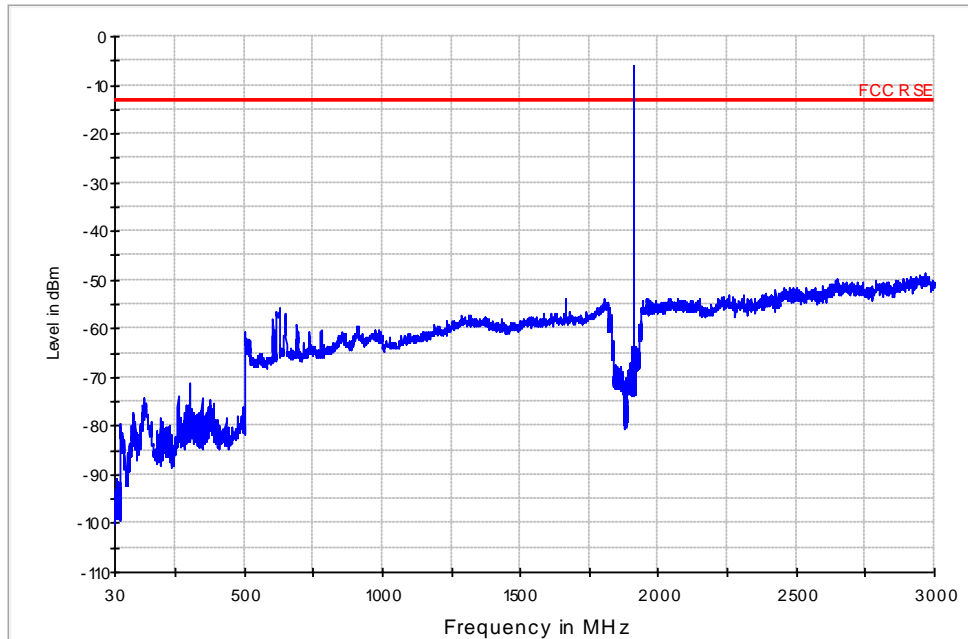
Spurious radiated emissions

EDGE1900 Modulation test result:

High channel:

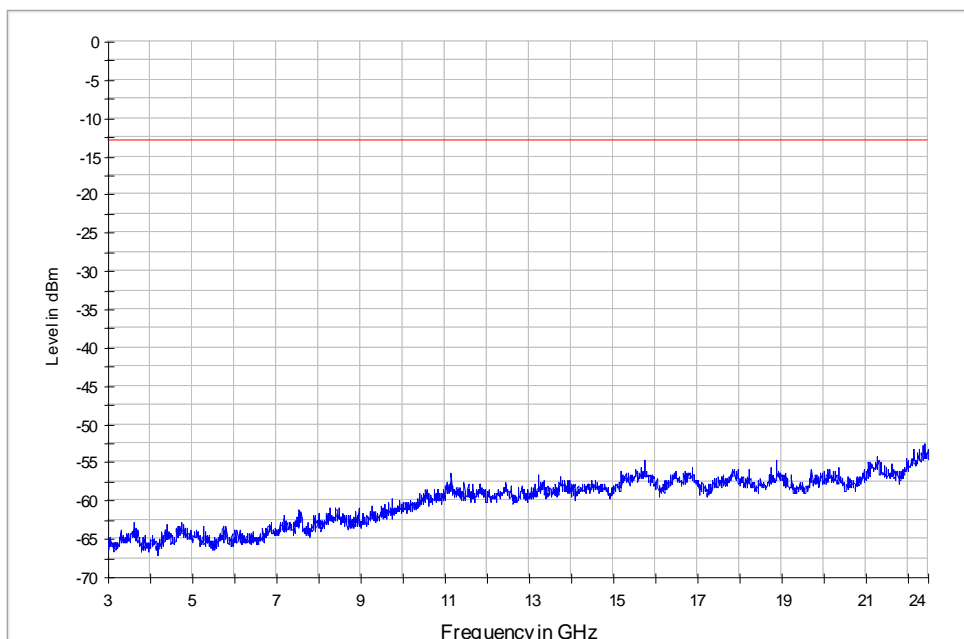
Note: The maximum peak in the plot is the carrier frequency.

GSM 1900 Tx 30-3GHz-FCC Test



— FCC RSE Limit Line — Preview Result 1

GSM1900 Tx 3-24GHz Test



— FCC RSE — Preview Result 1

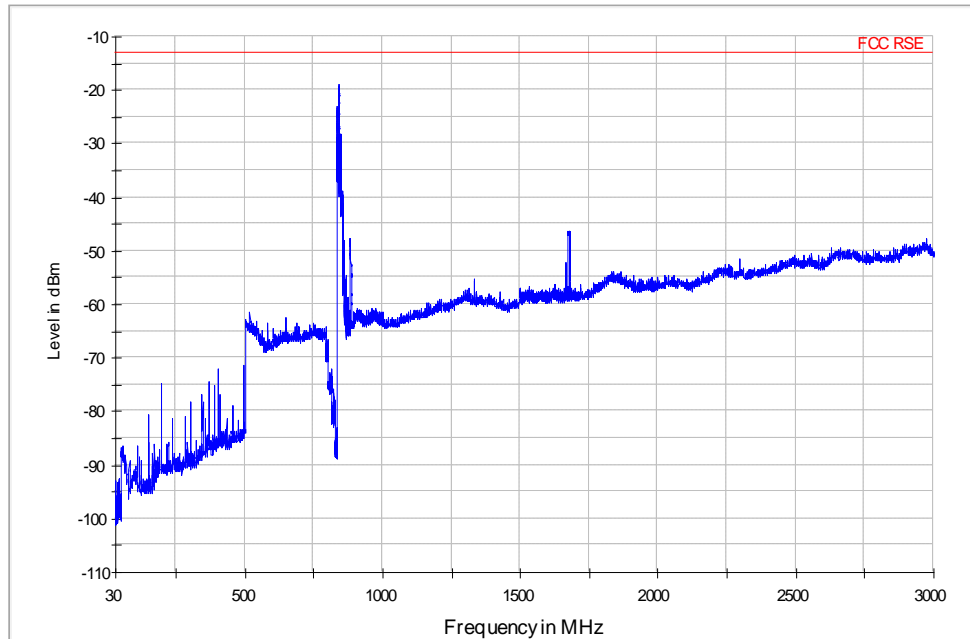
Spurious radiated emissions

WCDMA850 Modulation test result:

Low channel:

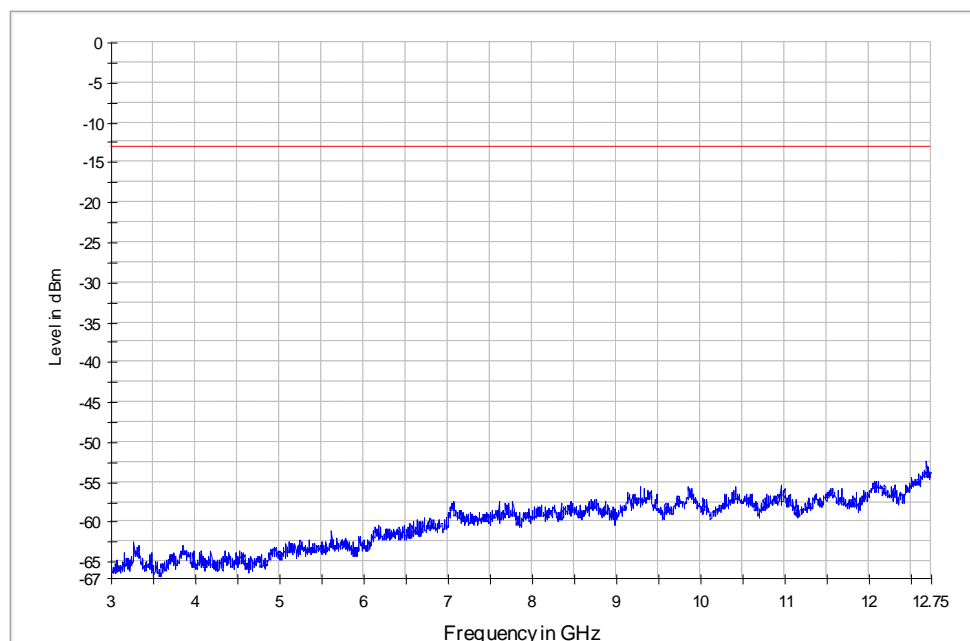
Note: The maximum peak in the plot is the carrier frequency.

WCDMA850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result 1

WCDMA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result 1

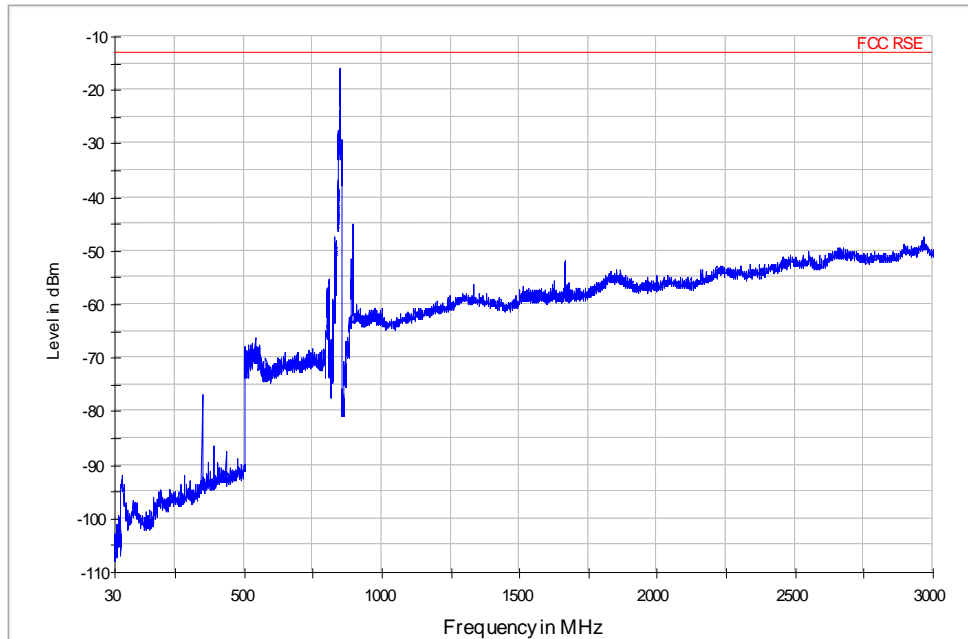
Spurious radiated emissions

WCDMA 850 Modulation test result:

Mid channel:

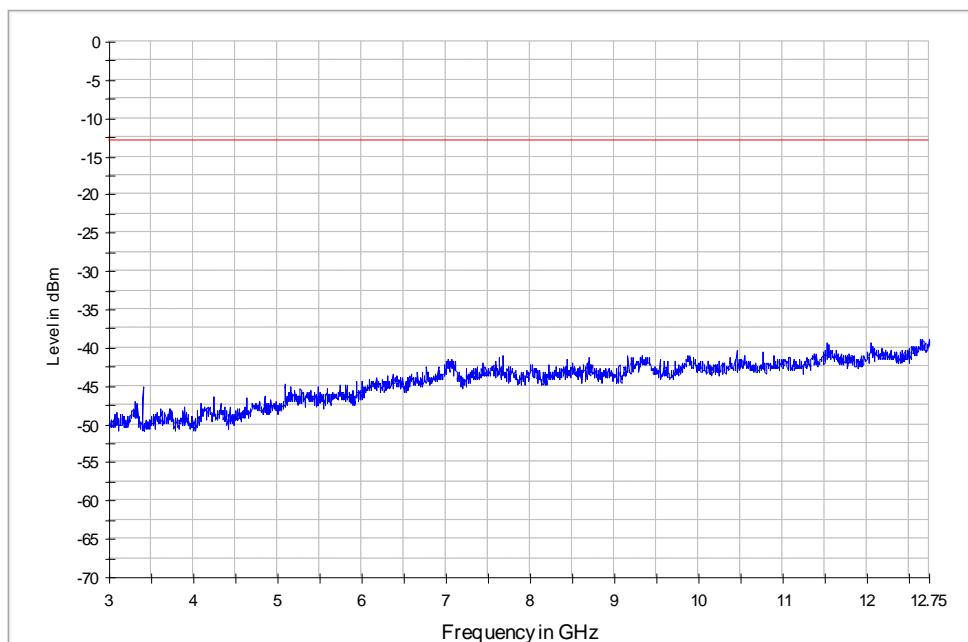
Note: The maximum peak in the plot is the carrier frequency.

WCDMA 850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result 1

WCDMA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result 1

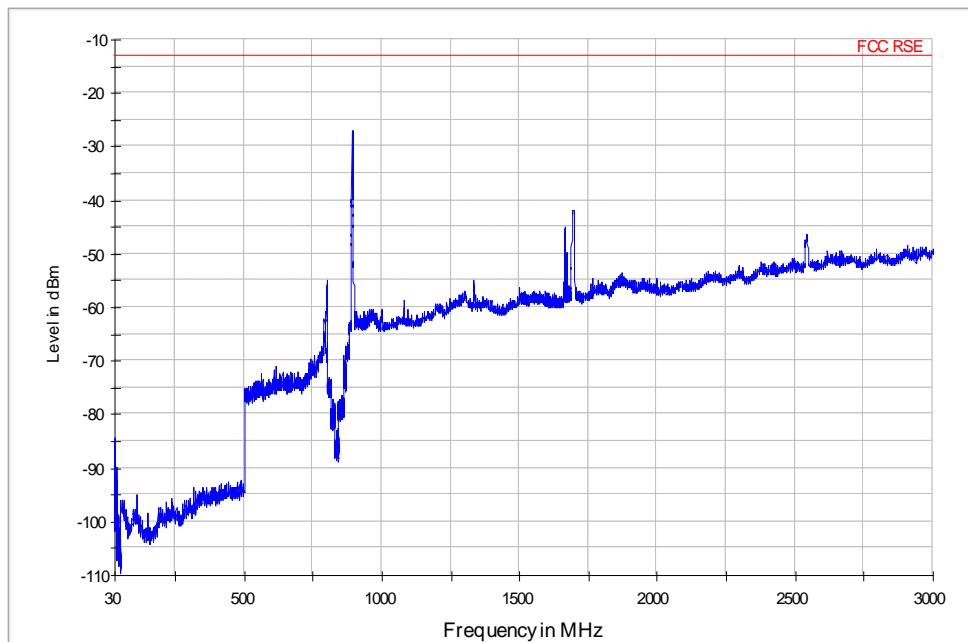
Spurious radiated emissions

WCDMA 850 Modulation test result:

High channel:

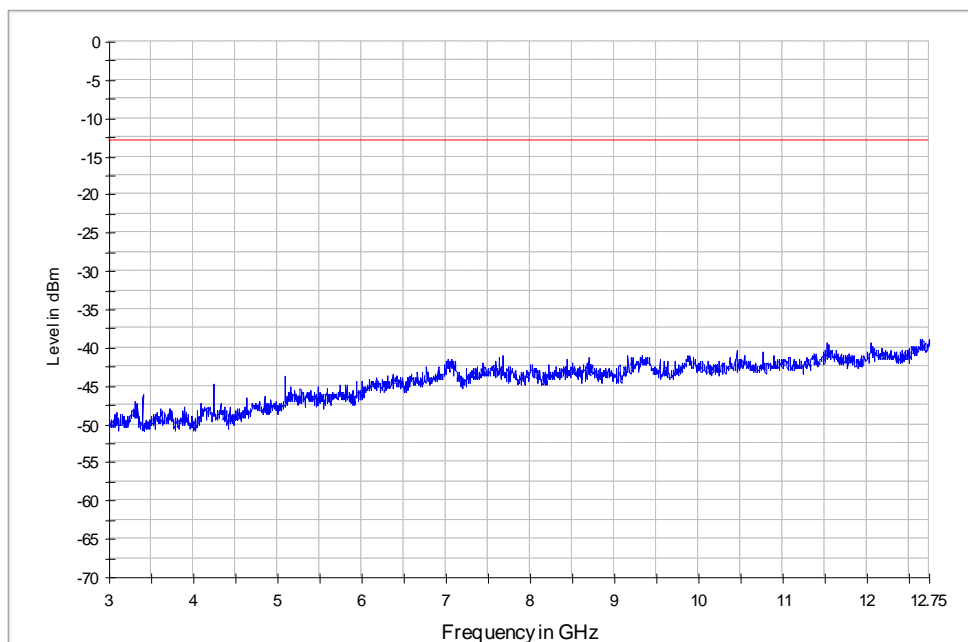
Note: The maximum peak in the plot is the carrier frequency.

WCDMA850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result 1

WCDMA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result 1

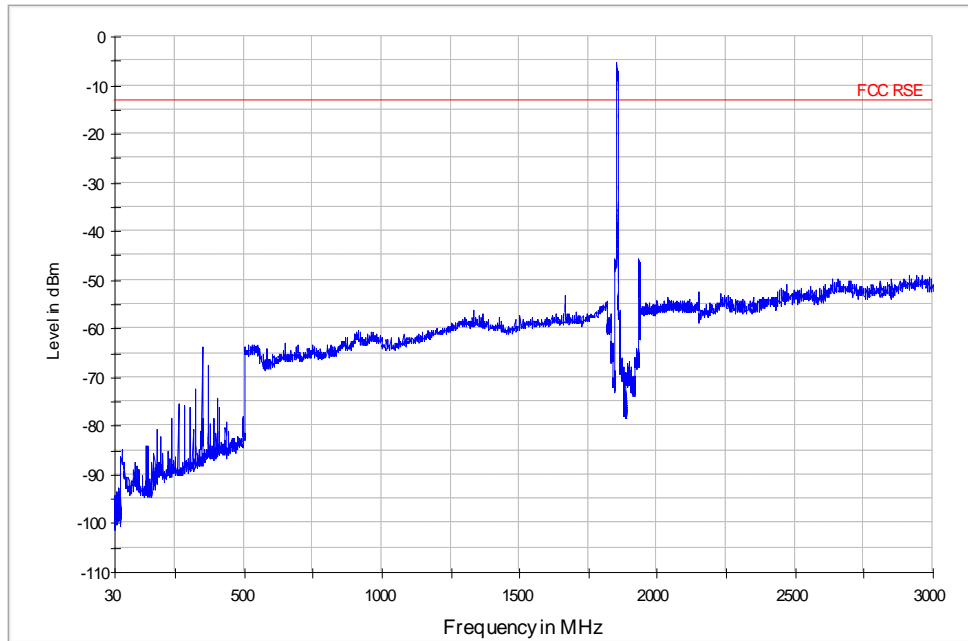
Spurious radiated emissions

WCDMA1900 Modulation test result:

Low channel:

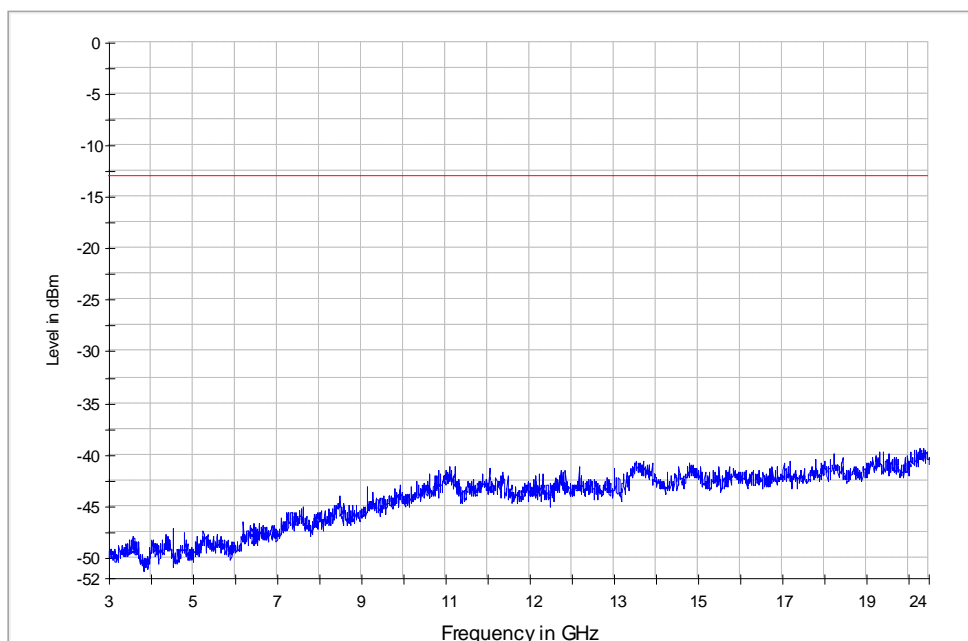
Note: The maximum peak in the plot is the carrier frequency.

WCDMA1900 Tx 30-3GHz Test



— FCC RSE — Preview Result 1

WCDMA1900 Tx 3-24GHz-FCC Test



— FCC RSELimitLine — Preview Result 1

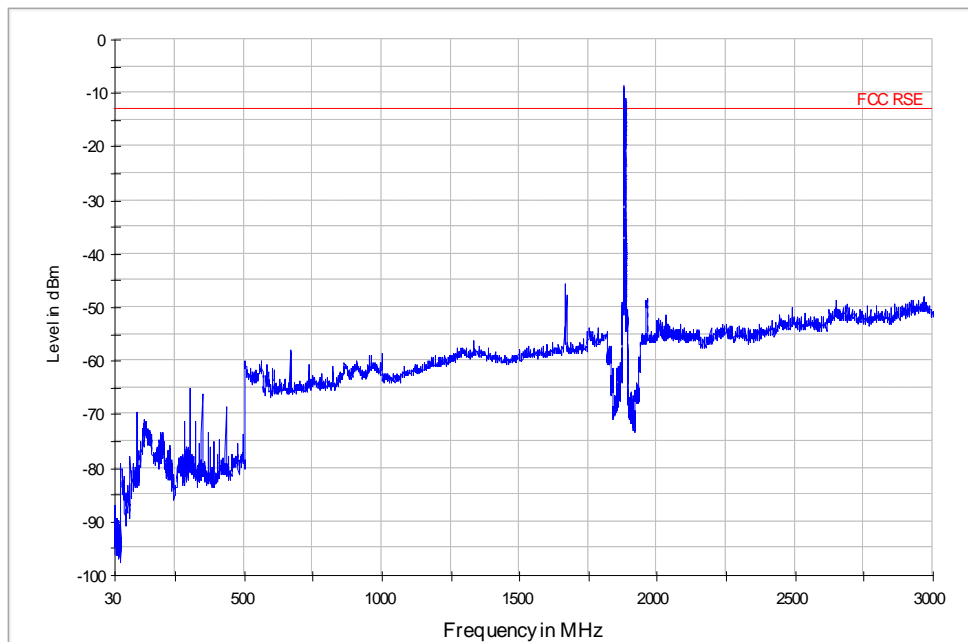
Spurious radiated emissions

WCDMA1900 Modulation test result:

Mid channel:

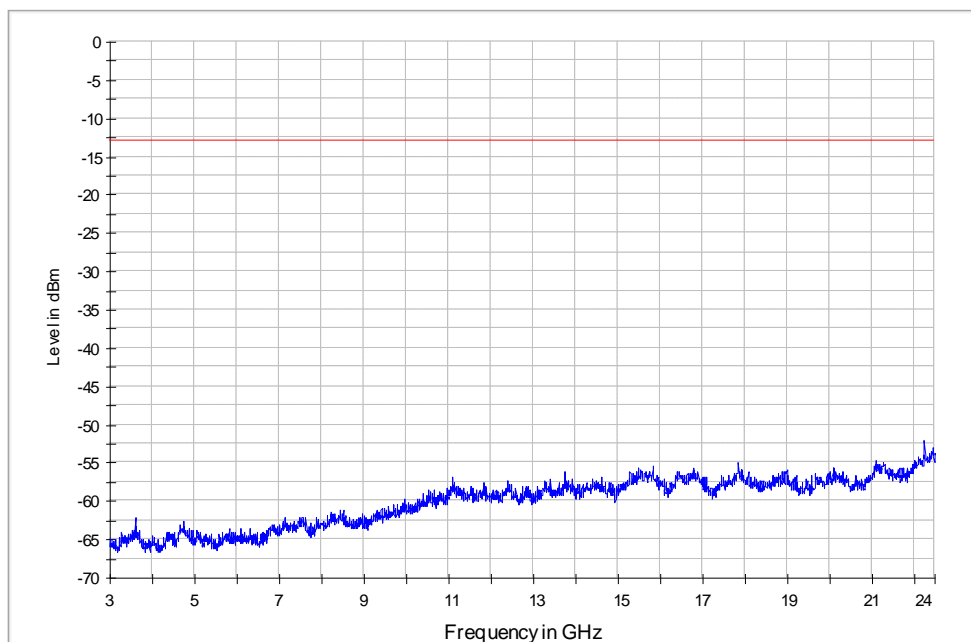
Note: The maximum peak in the plot is the carrier frequency.

WCDMA1900 Tx 30-3GHz Test



— FCC RSE — Preview Result 1

WCDMA1900 Tx 3-24GHz Test



— FCC RSELimitLine — Preview Result 1

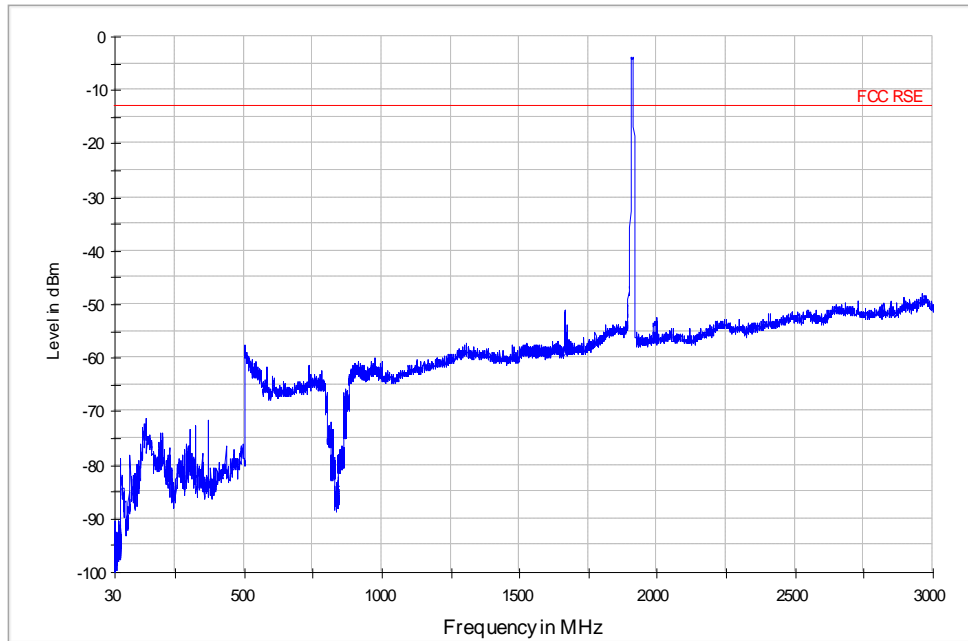
Spurious radiated emissions

WCDMA1900 Modulation test result:

High channel:

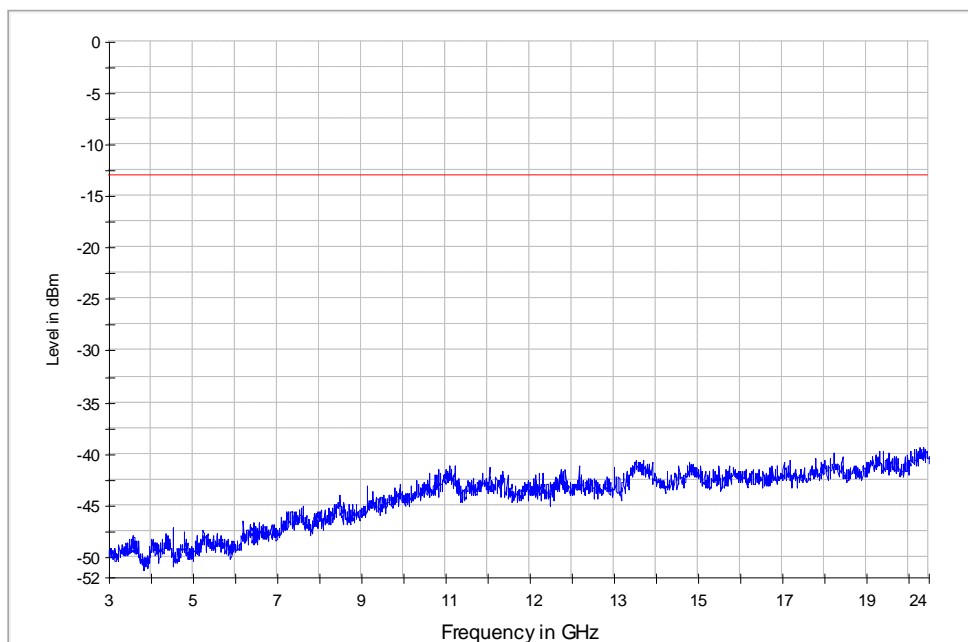
Note: The maximum peak in the plot is the carrier frequency.

WCDMA1900 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result1

WCDMA1900 Tx 3-24GHz-FCC Test



— FCC RSELimitLine — Preview Result1

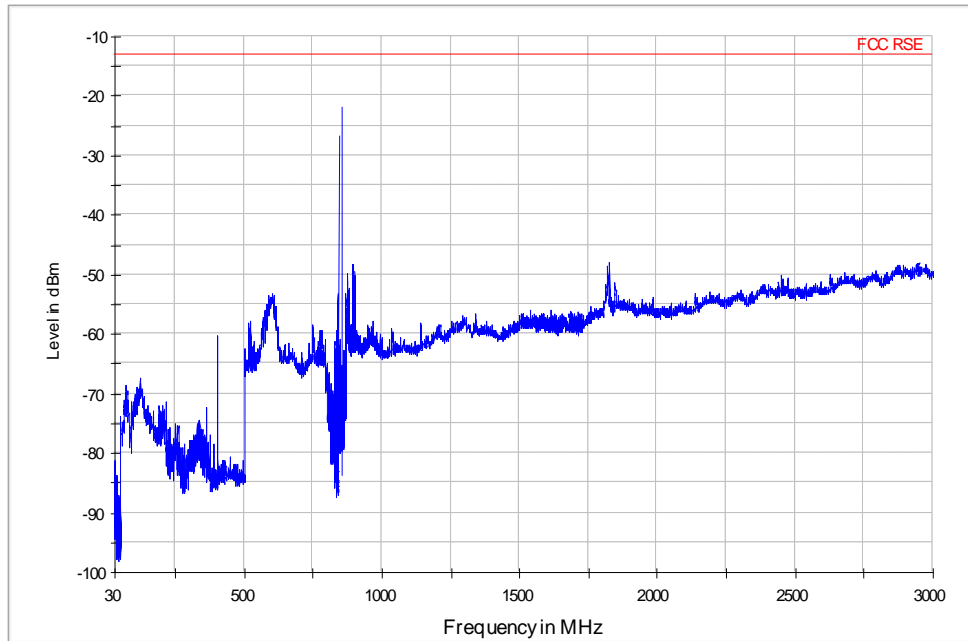
Spurious radiated emissions

HSPA850 Modulation test result:

Low channel:

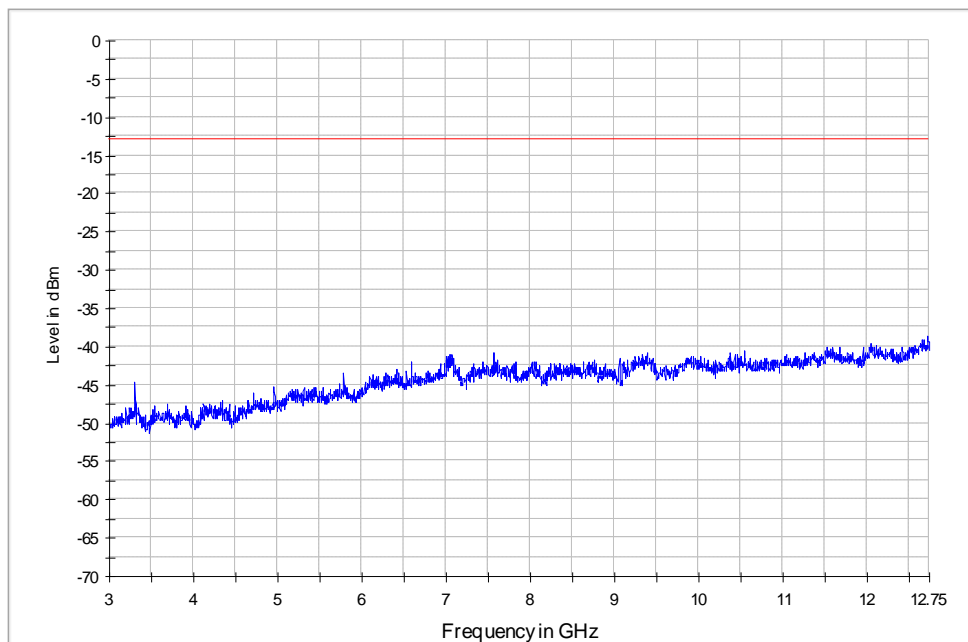
Note: The maximum peak in the plot is the carrier frequency.

HSPA850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result1

HSPA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result1

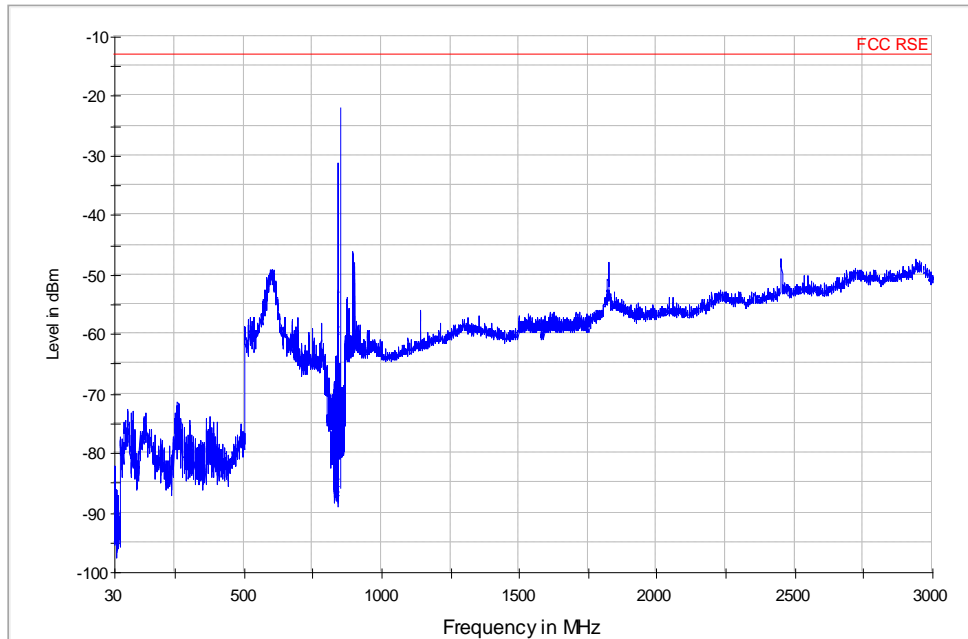
Spurious radiated emissions

HSPA850 Modulation test result:

Mid channel:

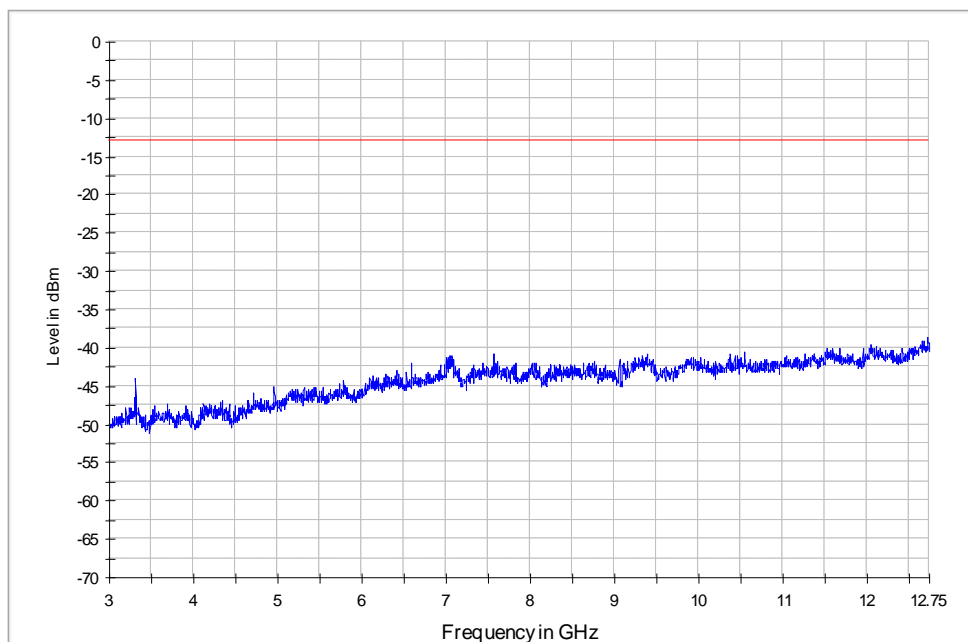
Note: The maximum peak in the plot is the carrier frequency.

HSPA850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result 1

HSPA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result 1

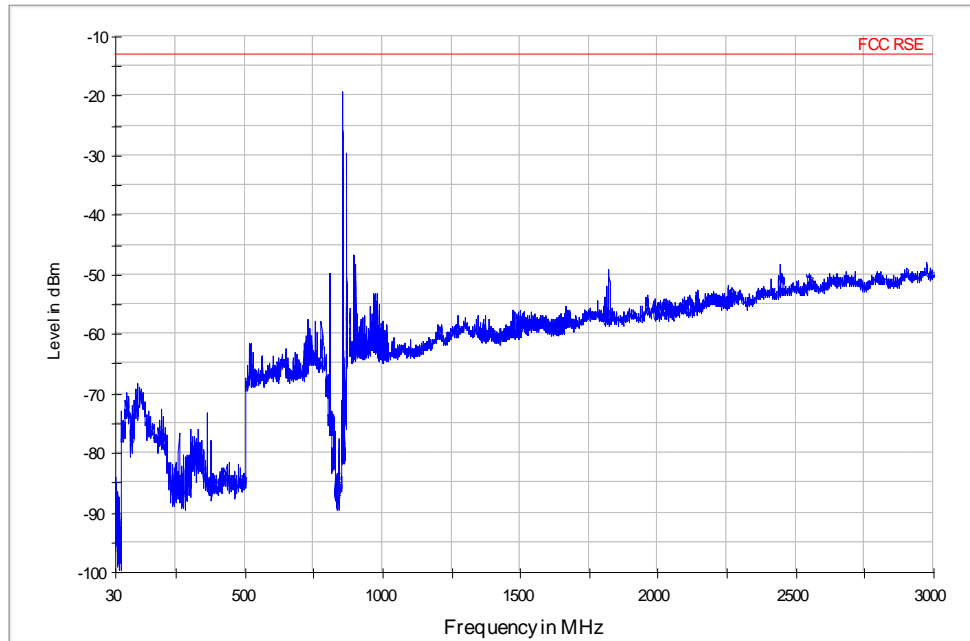
Spurious radiated emissions

HSPA850 Modulation test result:

High channel:

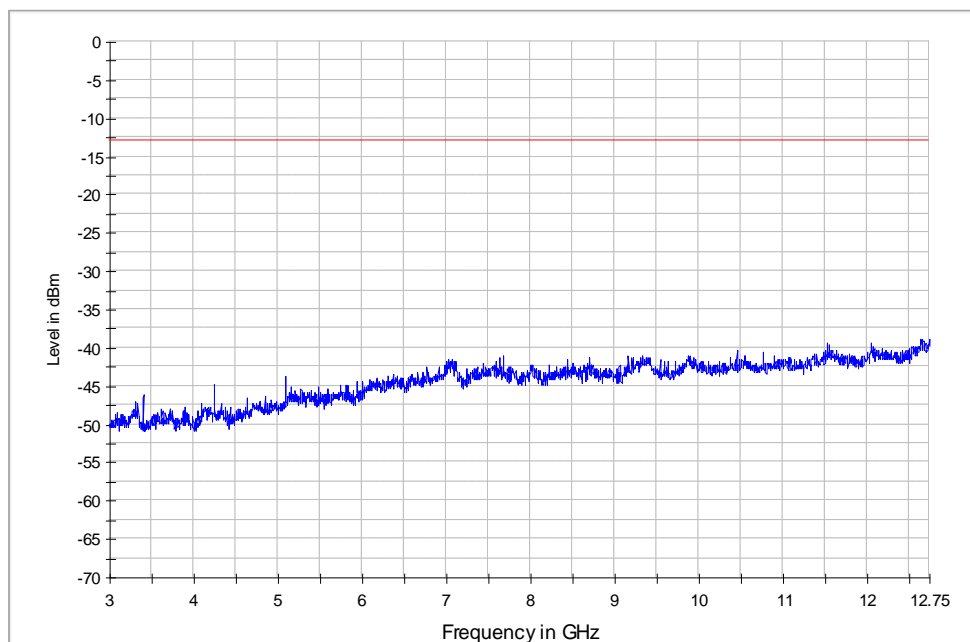
Note: The maximum peak in the plot is the carrier frequency.

HSPA 850 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result1

HSPA850 Tx 3-12.75GHz Test



— FCC RSELimitLine — Preview Result1

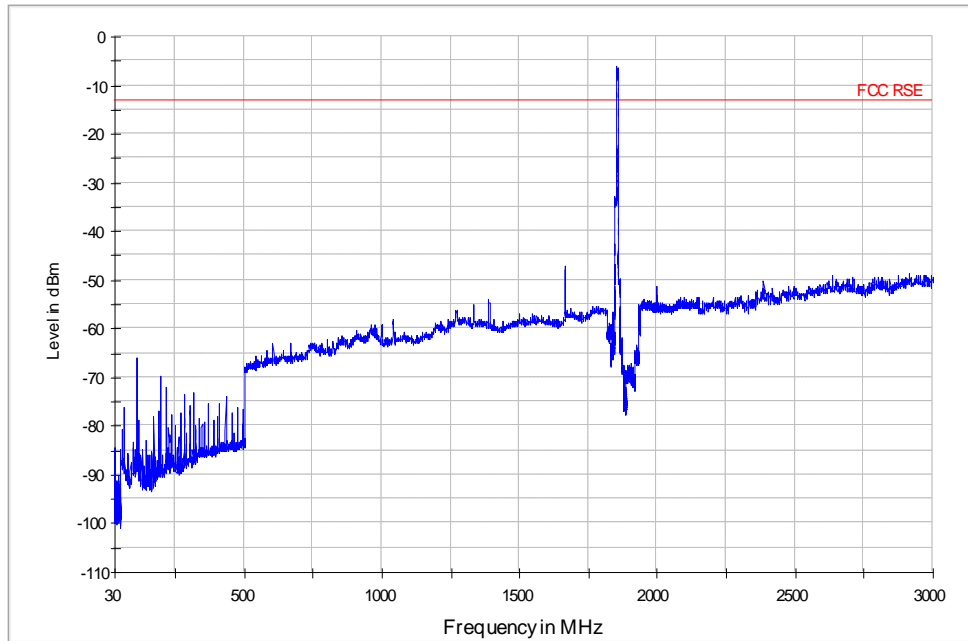
Spurious radiated emissions

HSPA1900 Modulation test result:

Low channel:

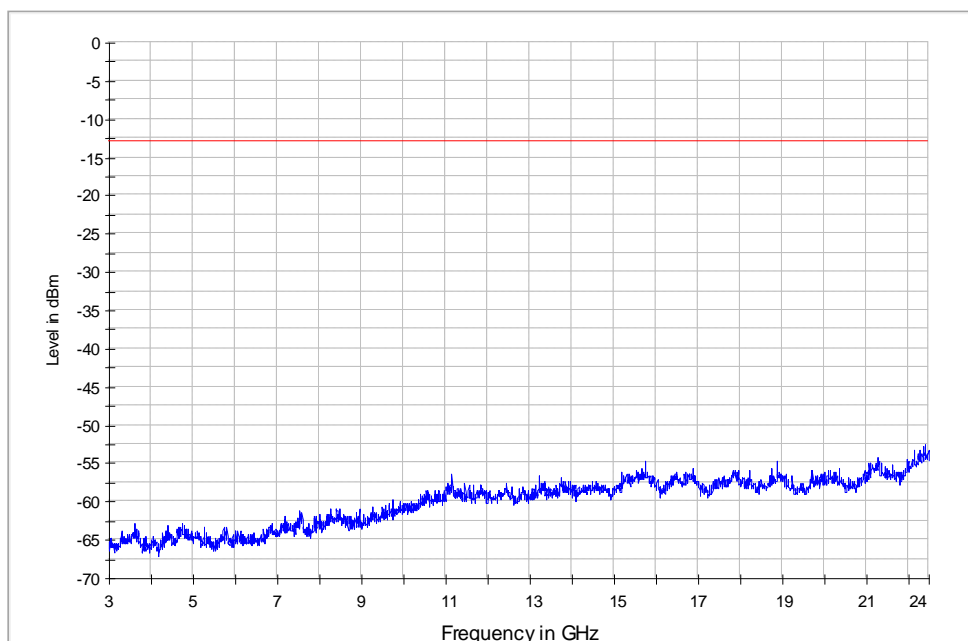
Note: The maximum peak in the plot is the carrier frequency.

HSPA1900 Tx 30-3GHz Test



— FCC RSE — Preview Result 1

HSPA1900 Tx 3-24GHz Test



— FCC RSE — Preview Result 1

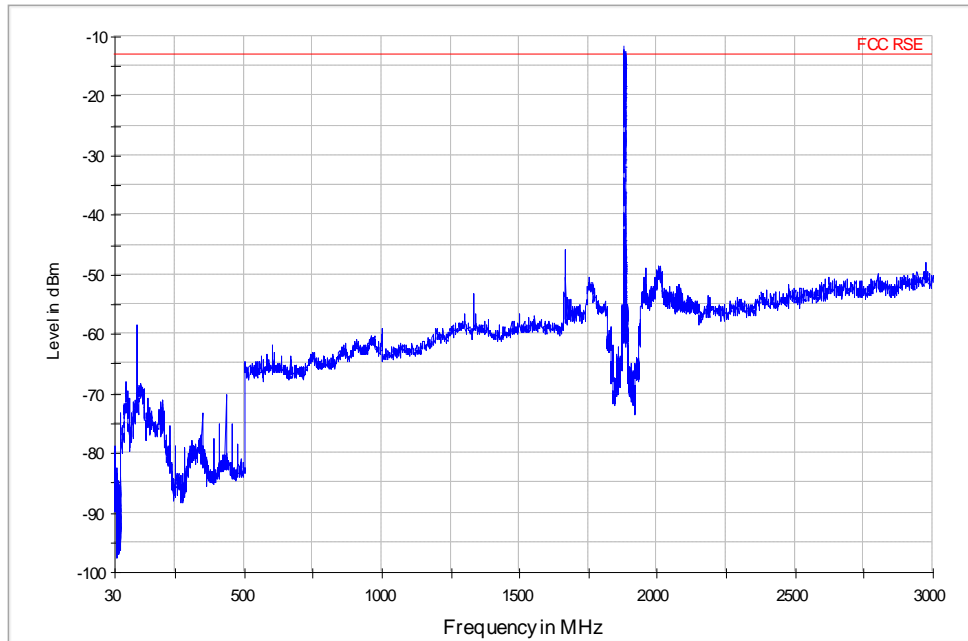
Spurious radiated emissions

HSPA1900 Modulation test result:

Mid channel:

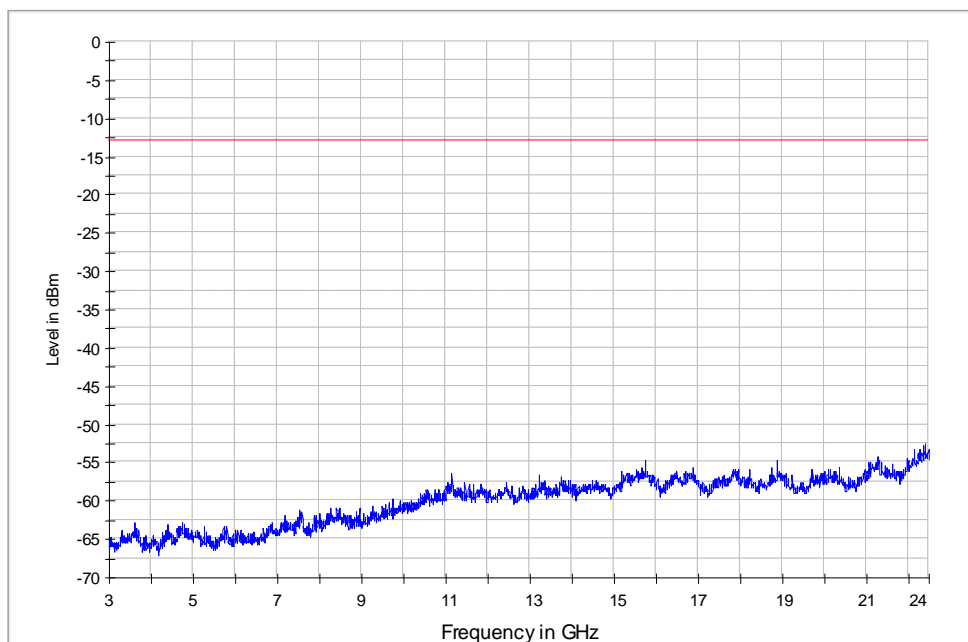
Note: The maximum peak in the plot is the carrier frequency.

HSPA1900 Tx 30-3GHz Test



— FCC RSE — Preview Result 1

HSPA1900 Tx 3-24GHz Test



— FCC RSE — Preview Result 1

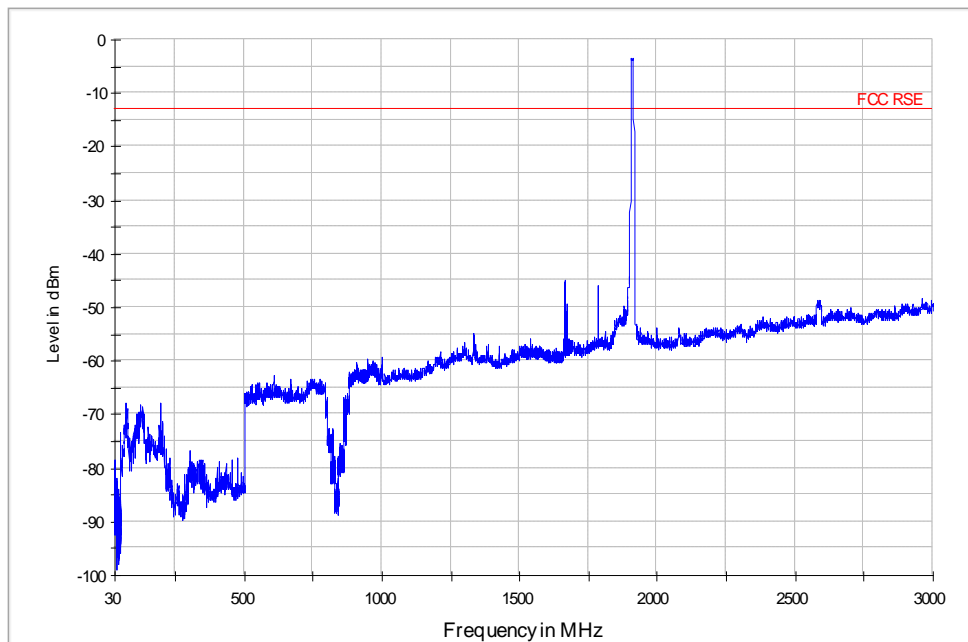
Spurious radiated emissions

HSPA1900 Modulation test result:

High channel:

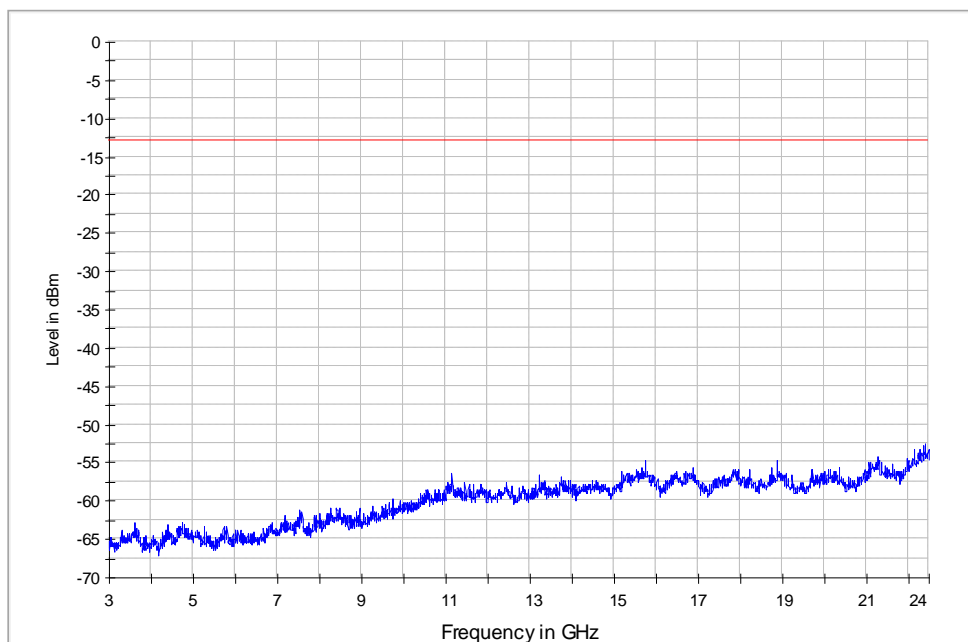
Note: The maximum peak in the plot is the carrier frequency.

HSPA1900 Tx 30-3GHz Test



— FCC RSELimitLine — Preview Result1

HSPA1900 Tx 3-24GHz Test



— FCC RSE — Preview Result1



Test Equipment List

Spurious radiated emissions Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DATE
Horn Antenna	ETS-Lindgren	3160-09	LM4214	2013-03-02
EMI Antenna	Schwarzbeck	VULB 9163	9163 301	2011-04-29
Dual-Ridge Waveguide Horn Antenna	ETS-Lindgren	3164-05	00085724	2011-02-18
Universal Radio Communication Tester	Agilent	5515C	GB47460389	2011-09-21



8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items	Extended Uncertainty
Conducted Transmit Power test	U=0.76dB(k=2)
Spurious Emission test	U=1.61dB(k=2)