FCC PART 22 / 24 TEST REPORT

for

Wireless Medical Alarm

Model No.: CTC-1052

FCC ID: GX9CTC10523G

of

Applicant: **CLIMAX TECHNOLOGY CO., LTD.**
Address: **No. 258, Sinhu 2nd Rd., Neihu District Taipei City 114 Taiwan (R.O.C.)**

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1

A2LA Accredited No.: 2732.01

Report No.: W6M21212-12939-P-2224

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G

Certification of Test Report

Applicant : CLIMAX TECHNOLOGY CO., LTD.
No. 258, Sinhu 2nd Rd., Neihu District Taipei City 114
Taiwan (R.O.C.)

Manufacturer : CLIMAX TECHNOLOGY CO., LTD.
No. 258, Sinhu 2nd Rd., Neihu District Taipei City 114
Taiwan (R.O.C.)

Tested Equipment :

Type Description	: Wireless Medical Alarm
Model Number	: CTC-1052
Brand Name	: ./.
Operation Frequency	: 824.2-848.8MHz / 1850.2 - 1909.8 MHz WCDMA BAND II: 1852.4 – 1907.6 MHz WCDMA BAND V : 826.4-846.6 MHz
RF Output Power:	1) Band 850 MHz : 27.34 dBm (ERP) 2) Band 1900 MHz : 32.67 dBm (EIRP) 3) BAND II : 28.75 dBm (EIRP) 4) BAND V : 18.68 dBm (ERP)
Power Supply	: Adaptor: (I/P: 100-240V / 50-60Hz / 0.5A; O/P: 12V / 1A) Battery: (NI-MH 1300mAh / AA 1.2V*6)

Regulation Applied : 47CFR Part 22 (2011-10) and Part 24 (2011-10)

Test Method : 47CFR Part 2 (2011), TIA/EIA-603C (2004) and ANSI C63.4 (2003)

I HEREBY CERTIFY THAT: The test results written in this report were derived conscientiously in accordance with the requirements and procedures of 47CFR Part 2(2011), TIA/EIA-603C (2004), and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22/24.

Note:

1. The result of this test report is valid only in connection to the sample has been tested at the laboratory of Worldwide Testing Services (Taiwan) Co. Ltd.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.

Test Engineer:

Date	WTS-Lab.	Name	Signature
January 08, 2013		Robert Ren	Robert Ren

Technical responsibility for area of testing:

Date	WTS	Name	Signature
January 08, 2013		Danny Sung	Danny Sung

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1. Summary

1.1 Description of tested equipment

This equipment under tested, CTC-1052, is a Wireless Medical Alarm with built-in GSM 850/PCS 1900 MHz and supporting HSDPA and WCDMA.

The operation frequency bands and rated RF output power are listed as follows:

824.2-848.8MHz (Cellular, Part 22), 27.34 dBm / 0.5420 W (ERP)
1850.2-1909.8MHz (Cellular, Part 24), 32.67 dBm / 1.8493 W (EIRP)
Band II (Cellular, Part 24), 28.75 dBm / 0.7499 W (EIRP)
Band V (Cellular, Part 22), 18.68 dBm / 0.0738 W (ERP)

This test report only contains test requirements specified in 47CFR Part 22 and Part 24 for GSM function and WCDMA function, for other functions; please refer to separate test report with respect to the relevant test standard and specification.

1.2 Date of testing processing

Test sample received: December 20, 2012

Test finished: January 08, 2013

Other Information: None

1.3 Modification Information

No modification was made during the all test items been performed.

1.4 Test standards

Technical standard: **FCC Part 2(2011), TIA/EIA-603C (2004), ANSI C63.4(2003) 47CFR Part 22 (2011-10), and Part 24 (2011-10)**

Deviation from test standard: None

1.5 Summary of test result

Band: 850 MHz & Band V

Section in this Report	Test Item	FCC relevant Section	Verdict
3.2	RF Power Output (Effective radiated power)	2.1046(a), 22.913(a)	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h)	Pass
6.2	Spurious emissions at antenna terminals	22.917(a), 2.1051	Pass
7.2	Field strength of spurious radiation	22.917(a), 2.1053	Pass
7.5	Band Edge emissions	22.917(a)	Pass
8.2	Frequency stability	2.1055 22.355	Pass

Band: 1900 MHz & Band II

Section in this Report	Test Item	FCC Relevant Section	Verdict
3.2	RF Power Output (Equivalent isotropically radiated power)	2.1046(a), 24.232	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h) 24.238(b)	Pass
6.2	Spurious emissions at antenna terminals	24.238(a), 2.1051	Pass
7.2	Field strength of spurious radiation	24.238(a), 2.1053	Pass
7.5	Band Edge emissions	24.238(b)	Pass
8.2	Frequency stability	2.1055 24.235	Pass

2. General Information

2.1 Testing laboratory

2.1.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)
Company
Worldwide Testing Services (Taiwan) Co., Ltd.
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

2.1.2 Details of accreditation status

Accredited testing laboratory
A2LA-registration number: 2732.01
FCC filed test laboratory Reg. No. 930600
Industry Canada filed test laboratory Reg. No. IC 5679A-1

2.1.3 Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.

Name:	**./.**
Accredited number:	**./.**
Street:	**./.**
Town:	**./.**
Country:	**./.**
Telephone:	**./.**
Fax:	**./.**

2.2 Details of approval holder

Name:	CLIMAX TECHNOLOGY CO., LTD.
Street:	No. 258, Sinhu 2nd Rd., Neihu District
Town:	Taipei City 114
Country:	Taiwan (R.O.C.)
Telephone:	+886-2-2794-0001
Fax:	+886-2-2792-6618

Manufacturer: (if different from applicant)

Name:	./.
Street:	./.
Town:	./.
Country:	./.

2.3 Description of Tested System

The EUT was tested alone without the Accessories or Peripherals.

Equipment	Model No.	Series No.	Software	Cable information	Note
No accessories were used with this EUT.					

Frequencies Selected to be investigated:

Band: 850 MHz
Low Frequency (ch 128): 824.2 MHz
Mid Frequency (ch 188): 836.2 MHz
High Frequency (ch 251): 848.8 MHz

Band: 1900 MHz
Low Frequency (ch 512): 1850.2 MHz
Mid Frequency (ch 661): 1880.0 MHz
High Frequency (ch 810): 1909.8 MHz

WCDMA Band II
Low Frequency (ch 9262): 1852.4 MHz
Mid Frequency (ch 9400): 1880.0 MHz
High Frequency (ch 9538): 1907.6 MHz

WCDMA Band V
Low Frequency (ch 4132): 826.4 MHz
Mid Frequency (ch 4183): 836.6 MHz
High Frequency (ch 4233): 846.6 MHz

Antenna Type:	PCB Antenna
Antenna Gain:	Band 850MHz & BAND V: -1.77 dBi Band 1900MHz & BAND II: 3.33 dBi
Power supply:	Adaptor: (I/P: 100-240V / 50-60Hz / 0.5A; O/P: 12V / 1A) Battery: (NI-MH 1300mAh / AA 1.2V*6)

2.4 Test environment

Temperature:	27 ^{o}C
Relative humidity content:	54 %
Air pressure:	86-103 Kpa

2.5 General Test Requirement

Radiated Emission: For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100 kHz respectively with an appropriate sweep speed.

For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

2.6 Test Equipment List

.No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2012/9/5	2013/9/4
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2012/12/21	2013/12/20
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2012/9/26	2013/9/25
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2012/3/5	2013/3/4
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use	
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2012/7/3	2013/7/2
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2012/9/6	2013/9/5
ETSTW-CE 024	IMPEDANCE STABILIZATION NETWORK	ISN T800	29454	TESEQ	2013/1/7	2014/1/6
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2012/8/10	2013/8/09
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function Test	
ETSTW-CS 010	6 dB Attenuator	SA3N1007-06	None	AISI	Function test	
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2012/8/10	2013/8/09
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2012/9/5	2013/9/4
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2012/9/5	2013/9/4
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2012/9/5	2013/9/4
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2012/10/12	2013/10/11
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2012/4/03	2013/4/02
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2012/8/01	2013/7/31
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	Function Test	
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	Function Test	
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2012/2/21	2013/2/20
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2012/10/5	2013/10/4
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	Function Test	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2012/10/5	2013/10/4
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2013/1/7	2014/1/6
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2012/4/13	2013/4/12
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2012/4/06	2013/4/05

ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2012/8/28	2013/8/27
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2012/3/23	2013/3/22
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2012/3/3	2013/3/2
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2012/3/3	2013/3/2
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2012/3/3	2013/3/2
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2012/5/29	2013/5/28
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2012/3/3	2013/3/2
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2012/5/17	2013/5/16
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2012/11/28	2013/11/27
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2012/4/6	2013/4/5
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	EMCO	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2012/10/5	2013/10/4
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2013/1/7	2014/1/6
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2013/1/7	2014/1/6
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2012/10/12	2013/10/11
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2012/3/5	2013/3/4
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2012/3/5	2013/3/4
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2012/12/4	2013/12/3
ETSTW-RE 111	TRILOG Super Broadband test Antenna	VULB 9160	9160-3309	Schwarz beck	2012/12/13	2013/12/12
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2012/1/12	2013/1/11
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2012/7/3	2013/7/2
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2012/8/18	2013/8/17
ETSTW-RE 126	5GHz Notch filter	5NSL11-5800/E221.3-O/O	1	K&L Microwave	2012/8/18	2013/8/17
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2012/3/3	2013/3/2
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2012/8/10	2013/8/09
ETSTW-EMS 001	BASELSTRASSE 160 CH-4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	Function Test	
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014	None	Function Test	
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2012/11/6	2013/11/5
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	Function Test	
ETSTW-EMS 010	Coupling De-coupling Network	CDN-UTP8	014	EMC-PARTNER	Function Test	
ETSTW-EMS 012	EM Injection Clamp	F-203I-23MM	476	FCC	2012/5/29	2013/5/28
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2012/10/5	2013/10/4

ETSTW-EMS 017	Multimeter	DM-1220	518614	HOLA	2012/8/10	2013/8/09
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2012/10/5	2013/10/4
ETSTW-EMS 020	Humidity Temperature Meter	TES-1366	091011116	TES	2012/12/24	2013/12/23
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	Function Test	
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	Function Test	
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2012/2/29	2013/2/28
ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function Test	
ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	HP	2012/2/20	2013/2/19
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2012/9/24	2013/9/23
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2012/10/5	2013/10/4
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2012/1/13	2013/1/12
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2012/1/13	2013/1/12
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2012/1/13	2013/1/12
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2012/1/13	2013/1/12
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2012/9/18	2013/9/17
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104（S_Cable 7）	238093	HUBER+SUHNER	2012/5/17	2013/5/16
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104（S_Cable 11）	209953	HUBER+SUHNER	2012/5/17	2013/5/16
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2012/3/5	2013/3/4
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test Use NCR	
ETSTW-Cable 012	N TYPE To SMA Cable	Cable 012	None	JYE BAO CO.,LTD.	2012/3/5	2013/3/4
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104（S_Cable 5）	232345	HUBER+SUHNER	Function Test	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2012/3/3	2013/3/2
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2012/10/12	2013/10/11
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2012/10/12	2013/10/11
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104（S_Cable 9）	279067	HUBER+SUHNER	2012/3/5	2013/3/4
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104（S_Cable 10）	238092	HUBER+SUHNER	2012/11/28	2013/11/27
ETSTW-Cable 032	Microwave Cable	SUCOFLEX 104（S_Cable 12）	237301	HUBER+SUHNER	Function Test	
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104（S_Cable 19）	316739	HUBER+SUHNER	2012/5/17	2013/5/16
ETSTW-Cable 040	Microwave Cable	SUCOFLEX 104（S_Cable 20）	316738	HUBER+SUHNER	Function Test	
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2012/11/28	2013/11/27

ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2012/11/28	2013/11/27
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO CO.,LTD.	2012/3/30	2013/3/29
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2012/3/30	2013/3/29
ETSTW-Cable 053	N TYPE To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 054	BNC To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2012/4/6	2013/4/5
ETSTW-Cable 055	NTYPE Cable	N30N30-JBY240-80CM	20110621-1.1	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 056	N TYPE Cable	N30N30-JBY240-80CM	20110621-1.0	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 057	N TYPE Cable	N30N30-JBY240-80CM	20110621-1.1	JYE BAO CO.,LTD.	Function Test	
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18	
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1	
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b	

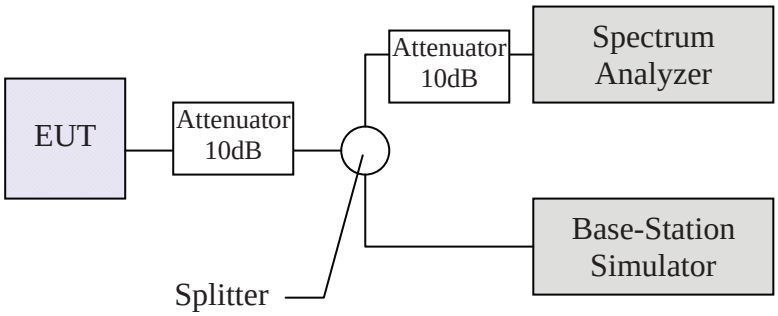
3. RF Power Output

3.1 Test procedure

3.1.1 Conducted Method

Per 47CFR Part 2.1046, the RF power output shall be measured at the RF output terminals and following procedure is employed:

The transmitter output was connected as the following figure:



The whole connection system is calibrated with a standard signal generator. Power on and make a link form simulator to EUT and then set the EUT to maximum output power.
Measure the RF power with the spectrum analyzer in accordance the following settings:

RBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.
VBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.
Span: 2MHz
Sweep: 3s

The power output at the transmitter antenna terminal is then determined by assign the value of the corrected factor to the spectrum analyzer reading.

Tests were performed at three frequencies (low, middle and high channels) and operation mode selected.

3.1.2 Radiated Method

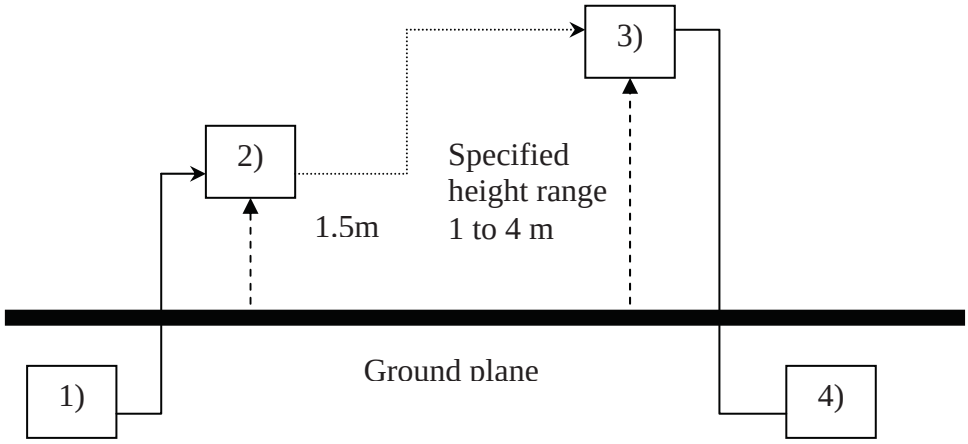
If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8mabove the ground on an open test site.
The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer.

Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

Substitution RF power Measurement at WTS Taiwan
General:

The applied substitution method follows ANSI/TIA/EIA-603,ANSI/TIA/EIA-102.CAAA or the appropriate ETSI rules respectively.
The actual signal generated by the EUT can be determined by means of a substitution measurement in which a known signal source replaces the device to be measured.



1) Signal generator;
2) Substitution antenna;
3) Test antenna;
4) Spectrum analyzer or selective voltmeter.

The substitution antenna replaces the transmitter antenna at the same position and in vertical polarization. The frequency of the signal generator shall be adjusted to the measurement frequency.
The test antenna shall be raised or lowered, if necessary, to ensure that the maximum signal is still received. The input signal to the substitution antenna shall be adjusted in level until an equal or a known related level to that detected from the transmitter is obtained in the measurement receiver.
If a fully anechoic chamber is used as test site in order to provide free space conditions there is no need to change the height of the antenna.
The measurement will be repeated in horizontal position.
Calibration:
In order to make this kind of measurement more effective and to avoid subjective measurement faults ETS has installed automatic computer controlled measurement procedures.
With the above described substitution method a test site is calibrated over the full frequency range which is used in suitable frequency steps. For a certain power level on the substitution antenna the received power over the whole frequency range is documented. All necessary antenna gains, cable losses, filter losses and amplifications of preamplifiers are taken in

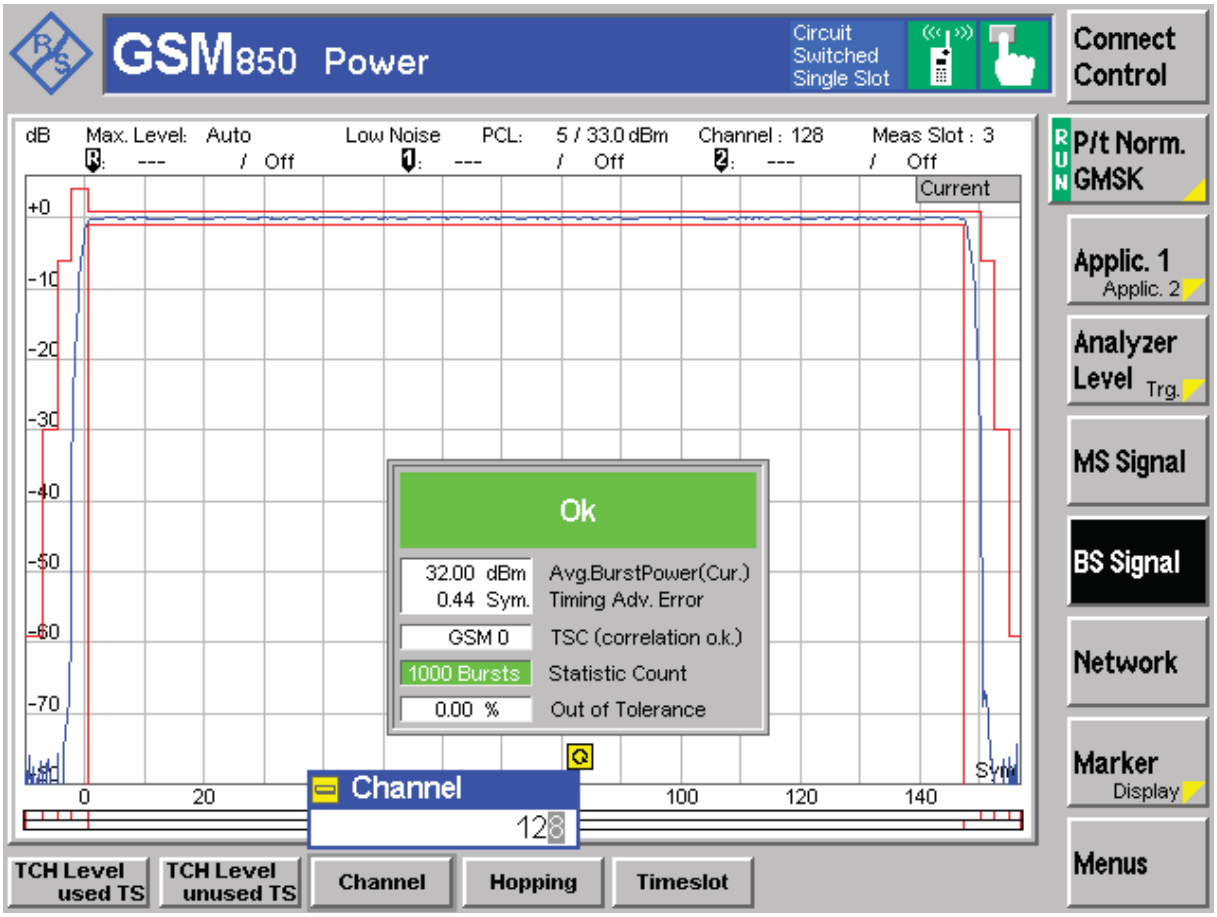
consideration. The summary of this calibration measurement performs a transducer factor that is related to the considered test site and a certain measurement distance. Differences of the radiated power levels of different test samples are determined by internal attenuation of measurement receiver. The proper function of such test site will be maintained by short term plausibility checks and periodical re-calibration.

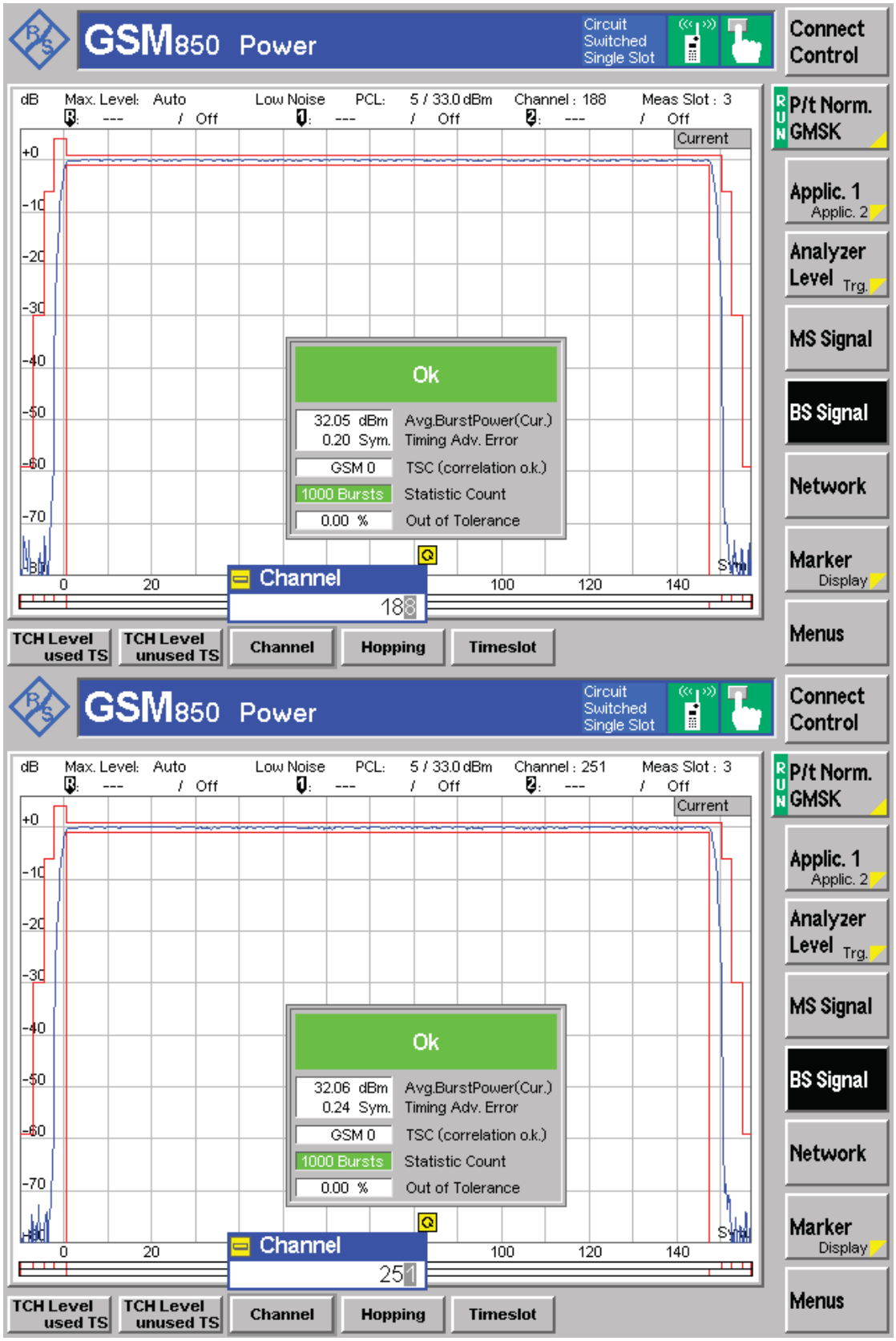
Testing:
The test sample will be putted on the table at the defined position and the radiated power will be receiver and documented by the measurement receiver.
On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

3.2 Test Results

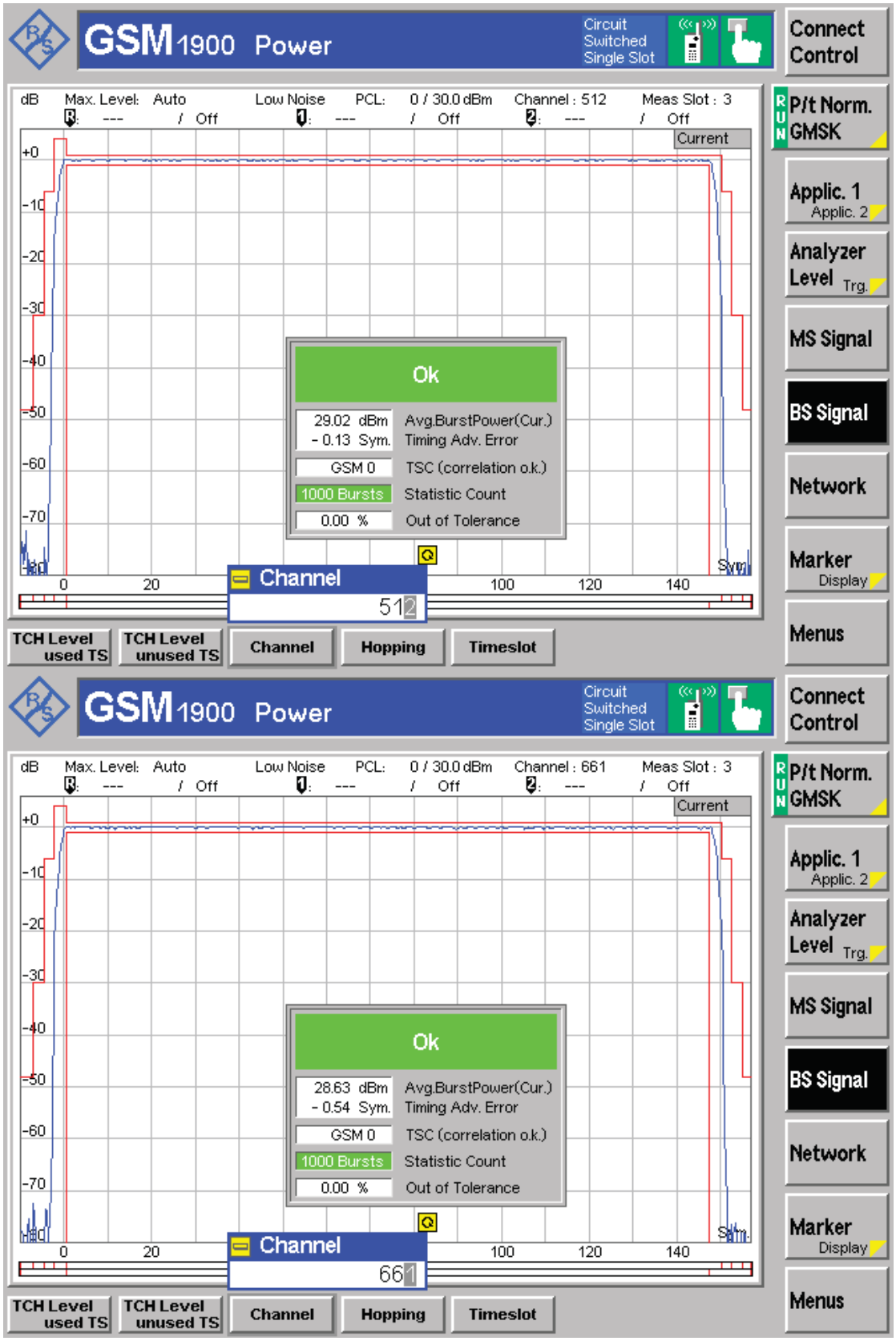
☑ Conducted Measurement
☐ Radiated Measurement

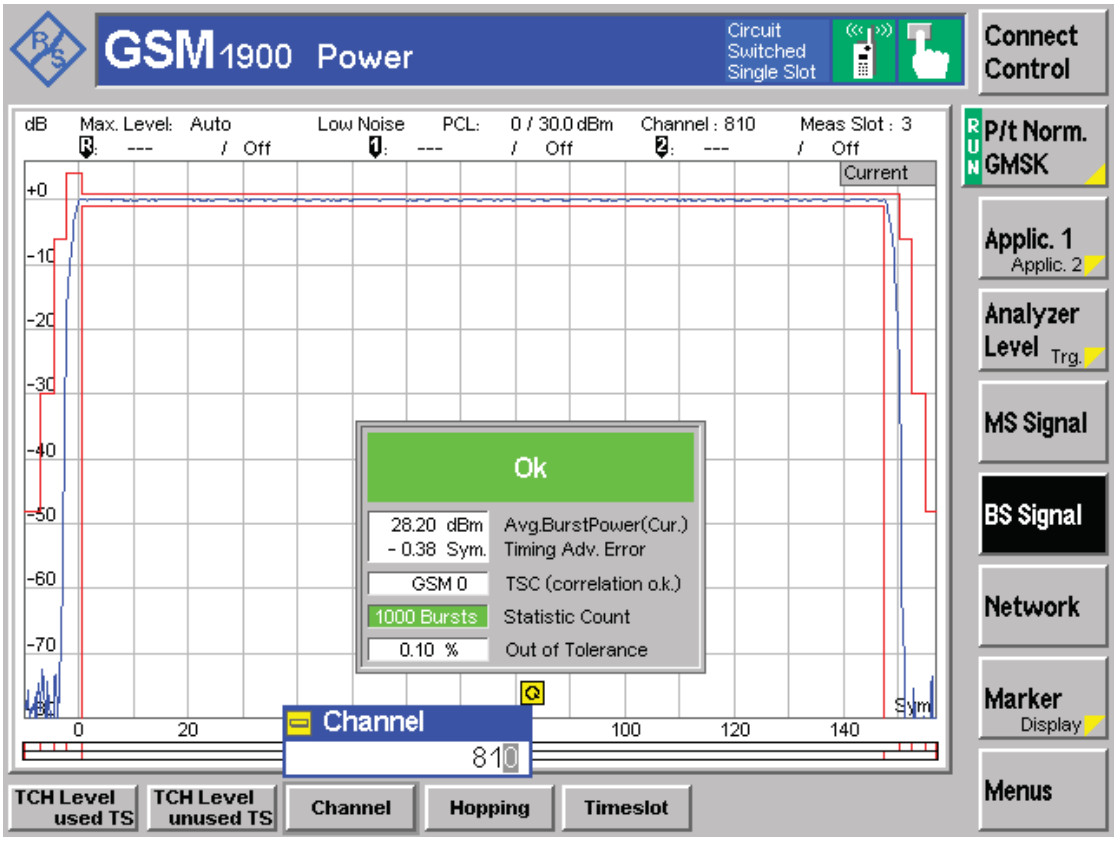
Band 850 MHz & 1900MHz
9 V



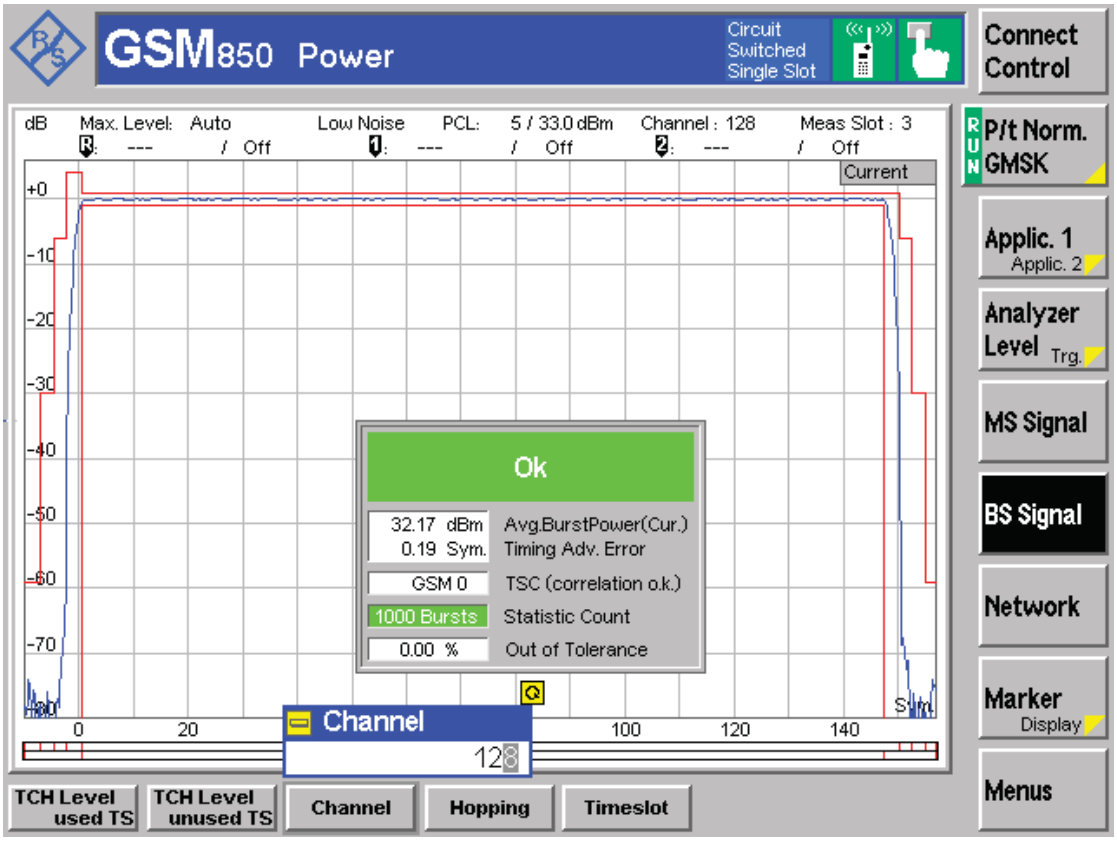

GSM850 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 5 / 33.0 dBm
Channel : 188
Meas Slot : 3
Current
+0
-10
-20
-30
-40
-50
-60
-70
0
20
100
120
140
Ok
32.05 dBm
Avg.BurstPower(Cur.)
0.20 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
188
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot
GSM850 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 5 / 33.0 dBm
Channel : 251
Meas Slot : 3
Current
Ok
32.06 dBm
Avg.BurstPower(Cur.)
0.24 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
251
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot

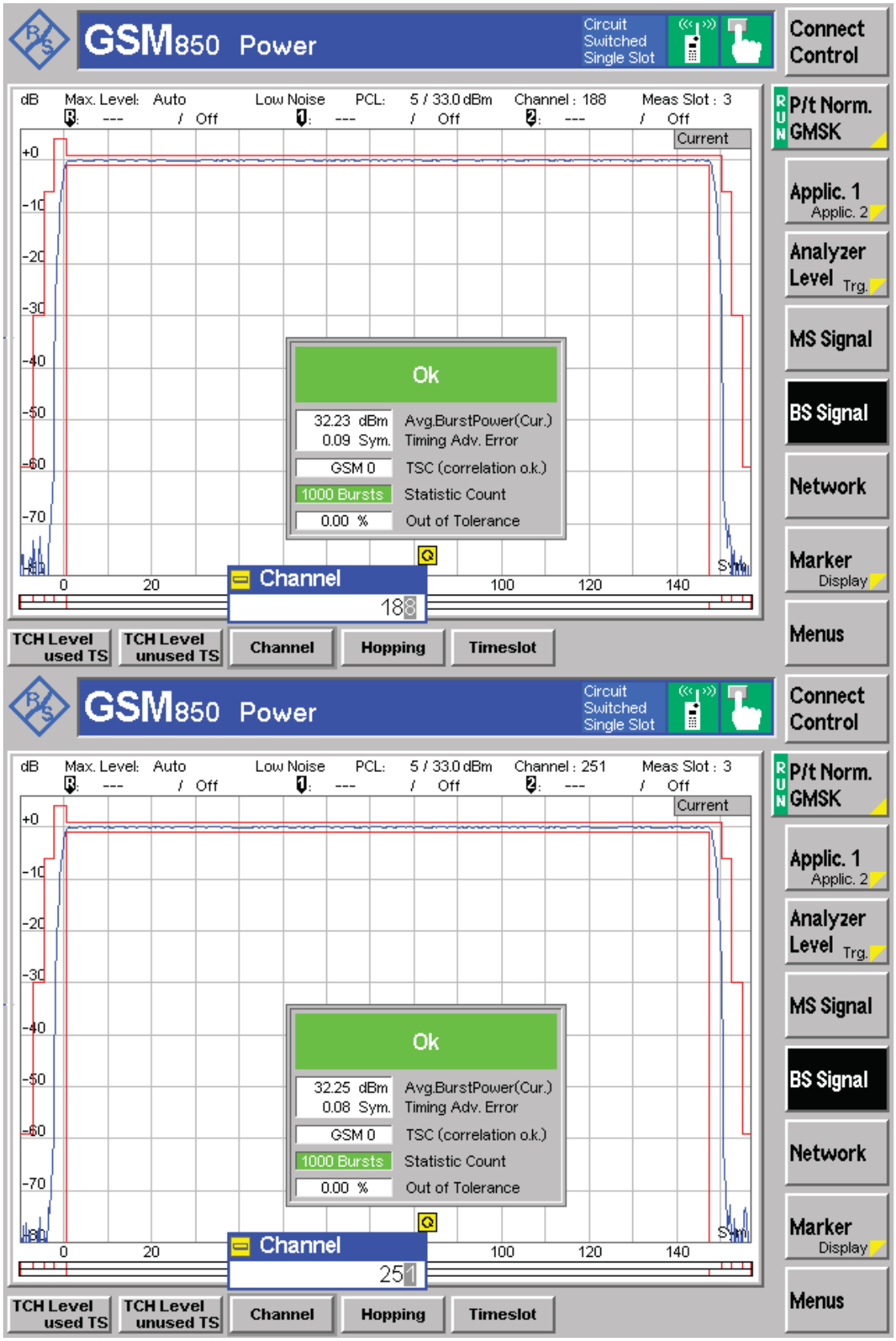
Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G

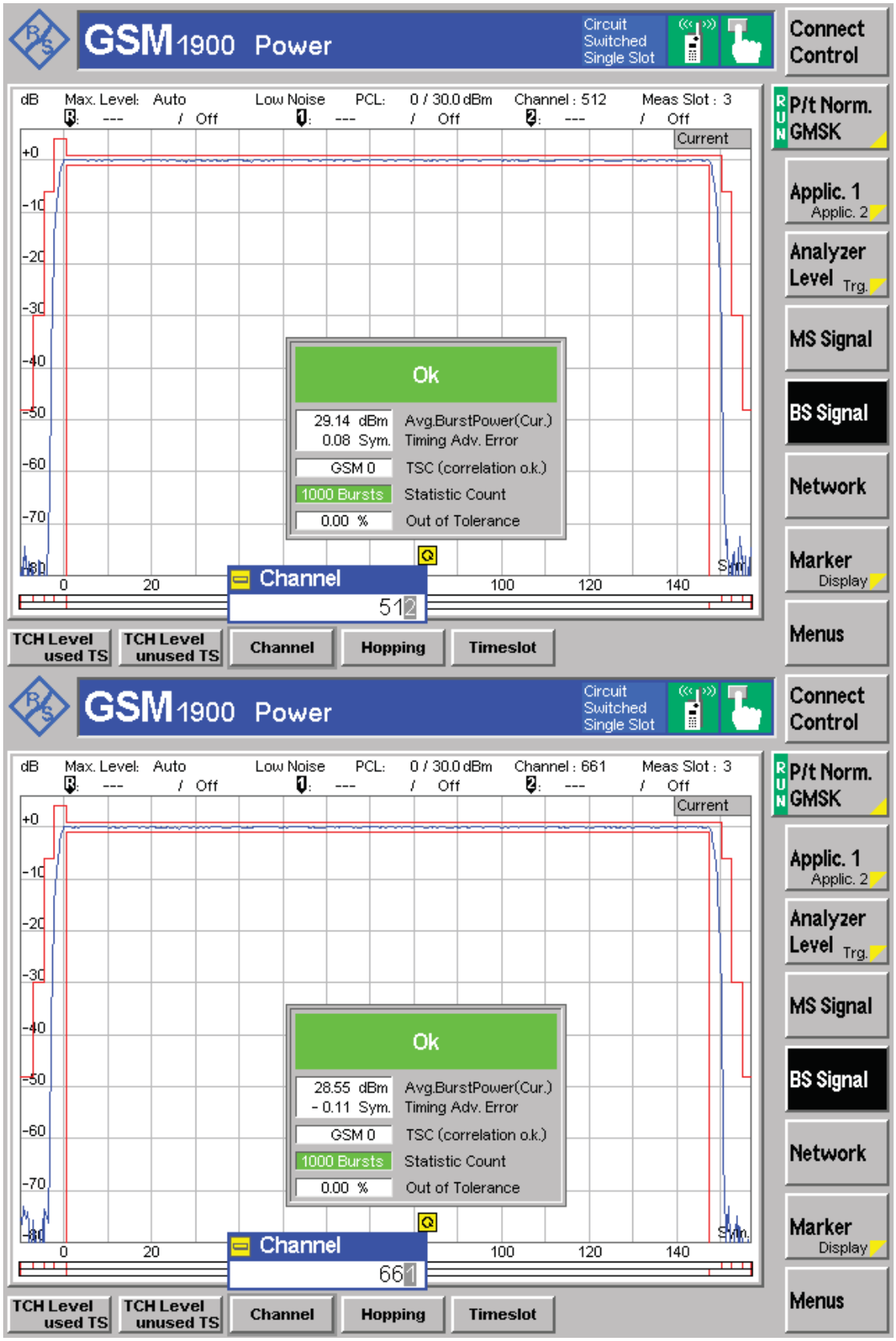


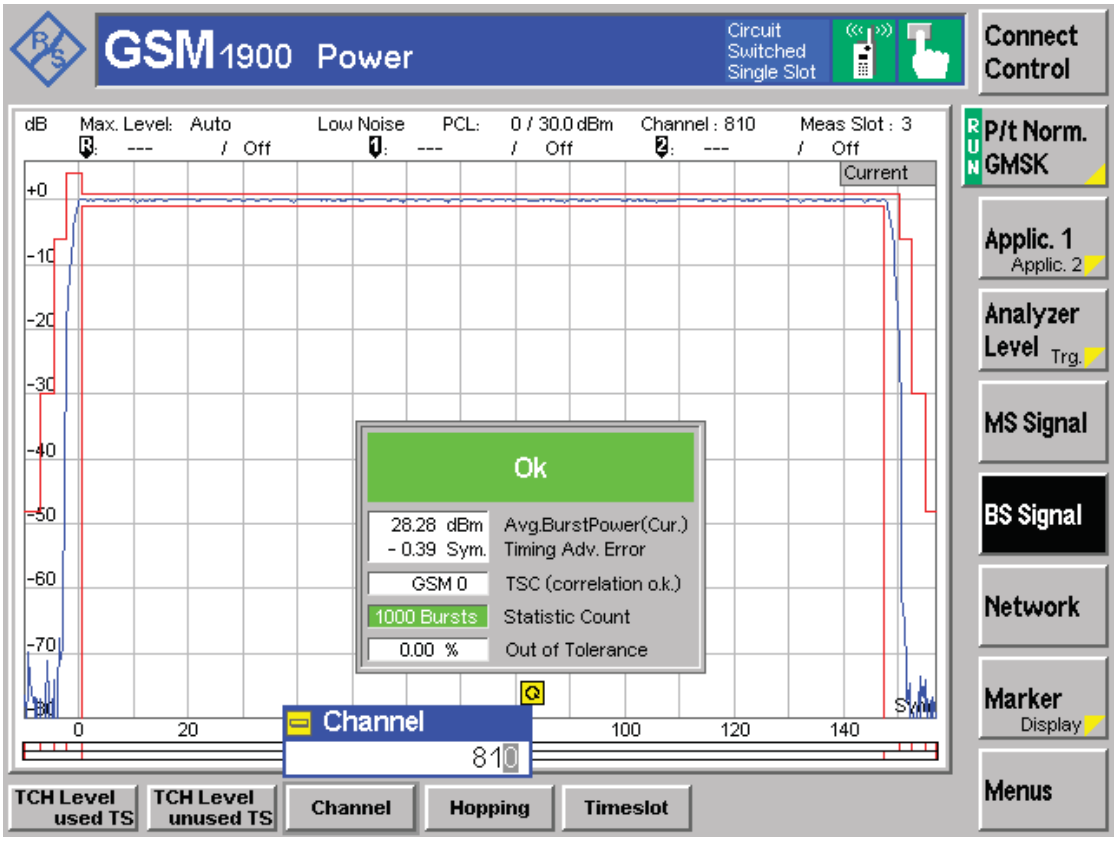

GSM1900 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 0 / 30.0 dBm
Channel : 810
Meas Slot : 3
Current
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
Ok
28.20 dBm
Avg.BurstPower(Cur.)
- 0.38 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.10 %
Out of Tolerance
Channel
810
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot

8.1 V

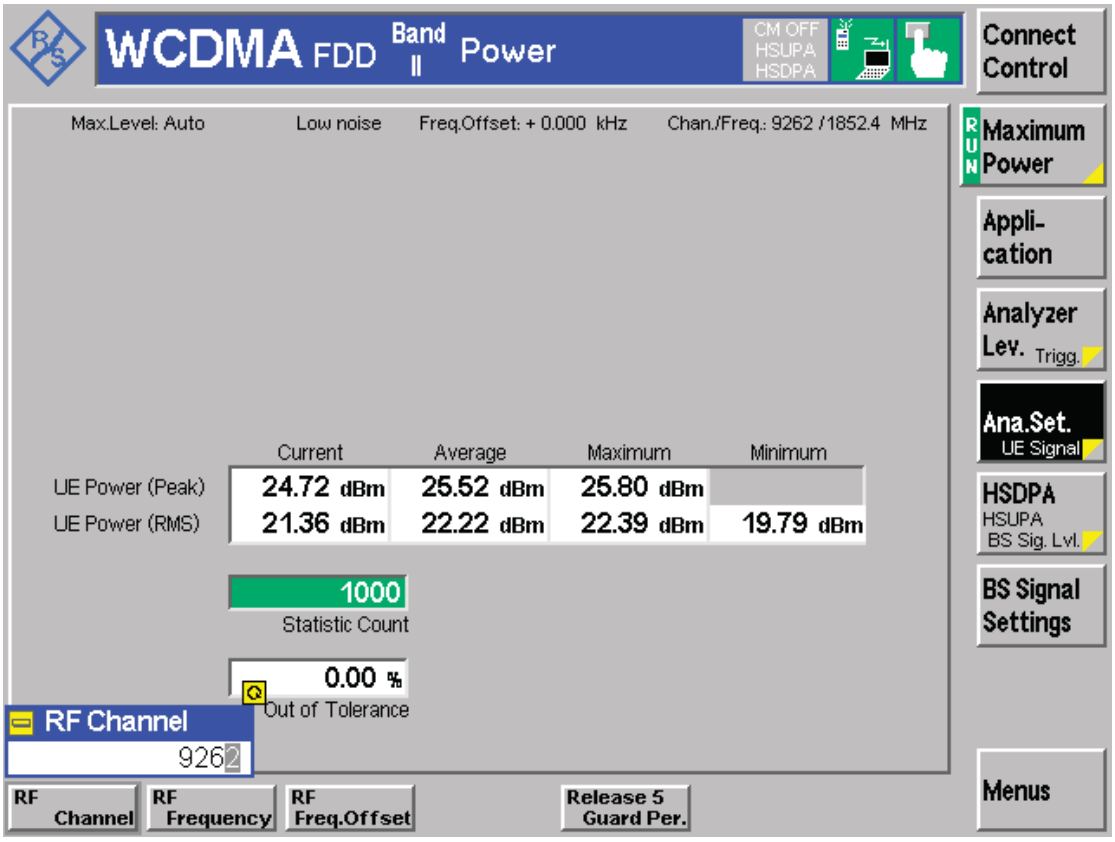

GSM850 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 5 / 33.0 dBm
Channel : 128
Meas Slot : 3
Current
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
Ok
32.17 dBm
Avg.BurstPower(Cur.)
0.19 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
128
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot

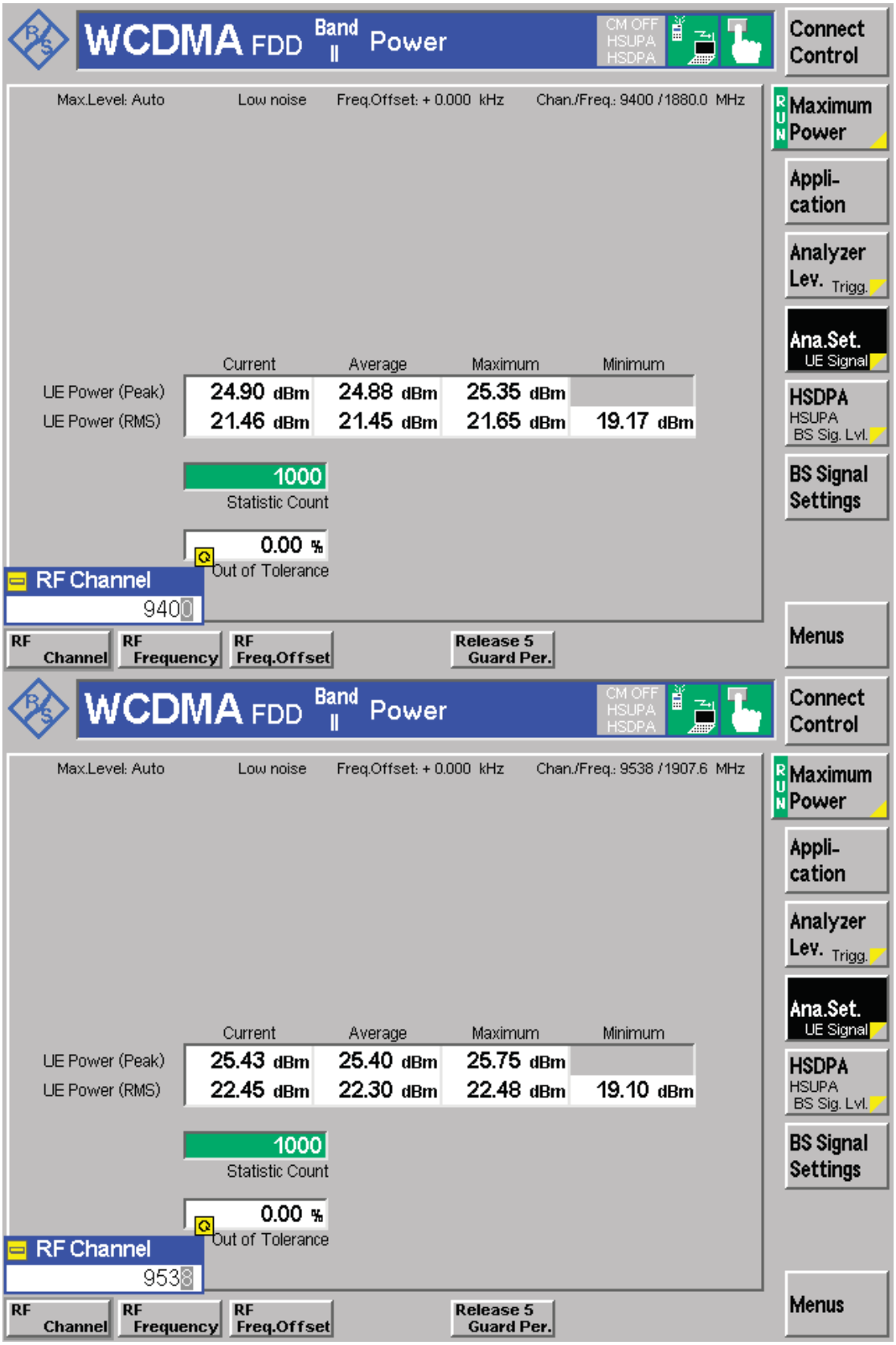

GSM850 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 5 / 33.0 dBm
Channel : 188
Meas Slot : 3
Current
+0
-10
-20
-30
-40
-50
-60
-70
0
20
100
120
140
Ok
32.23 dBm
Avg.BurstPower(Cur.)
0.09 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
188
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot
GSM850 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 5 / 33.0 dBm
Channel : 251
Meas Slot : 3
Current
Ok
32.25 dBm
Avg.BurstPower(Cur.)
0.08 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
251
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot


GSM1900 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 0 / 30.0 dBm
Channel : 512
Meas Slot : 3
Current
+0
-10
-20
-30
-40
-50
-60
-70
0
20
100
120
140
Ok
29.14 dBm
Avg.BurstPower(Cur.)
0.08 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
512
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot
GSM1900 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 0 / 30.0 dBm
Channel : 661
Meas Slot : 3
Current
Ok
28.55 dBm
Avg.BurstPower(Cur.)
- 0.11 Sym.
Timing Adv. Error
GSM 0
TSC (correlation o.k.)
1000 Bursts
Statistic Count
0.00 %
Out of Tolerance
Channel
661
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level
Trg.
MS Signal
BS Signal
Network
Marker
Display
Menus
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot

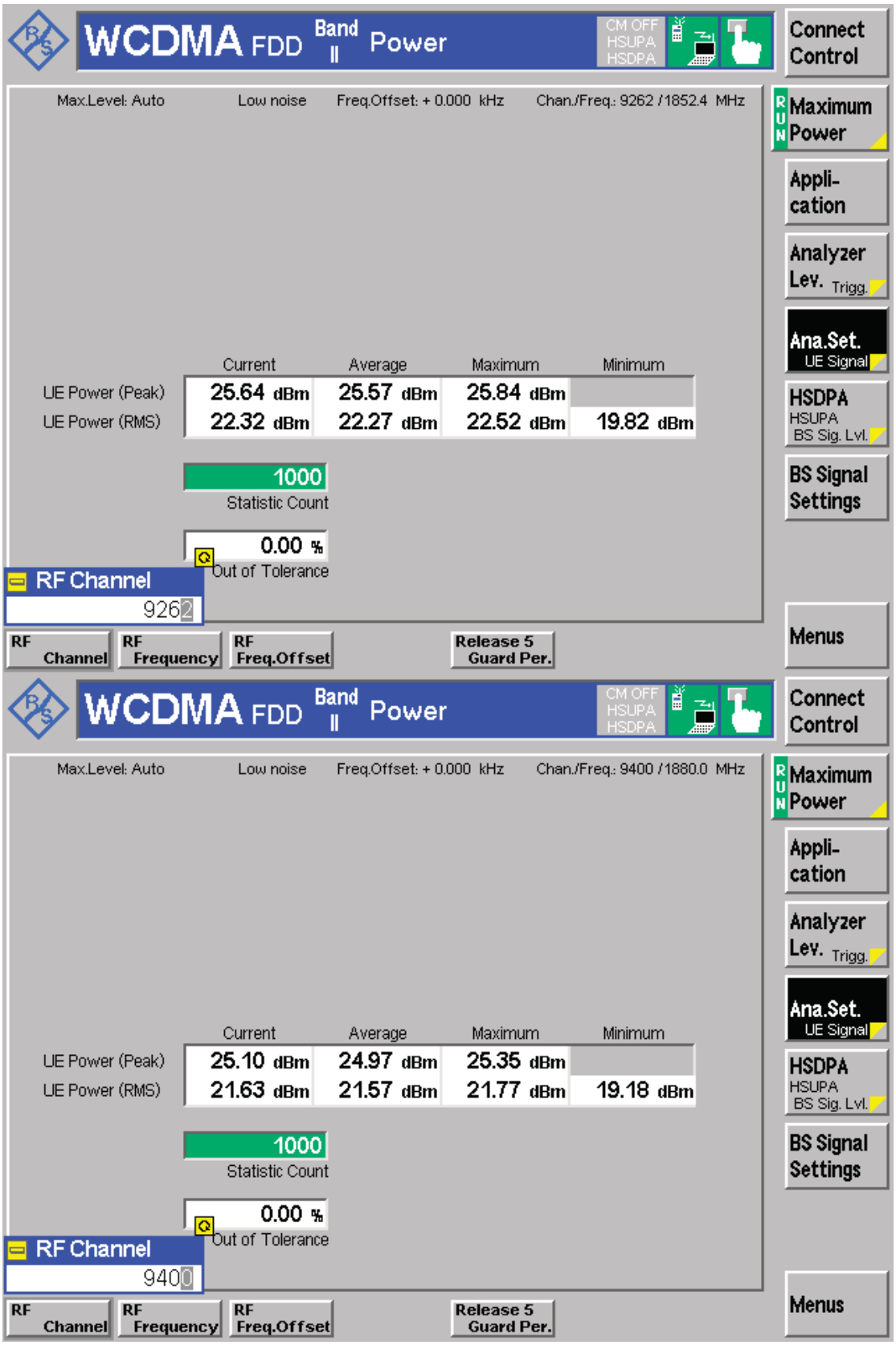

GSM 1900 Power
Circuit Switched Single Slot
Connect Control
dB
Max. Level: Auto
Low Noise
PCL: 0 / 30.0 dBm
Channel : 810
Meas Slot : 3
Current
P/t Norm. GMSK
Applic. 1
Applic. 2
Analyzer Level Trg.
MS Signal
BS Signal
Network
Marker Display
Menus
Ok
28.28 dBm Avg.BurstPower(Cur.)
- 0.39 Sym. Timing Adv. Error
GSM 0 TSC (correlation o.k.)
1000 Bursts Statistic Count
0.00 % Out of Tolerance
Channel
810
TCH Level used TS
TCH Level unused TS
Channel
Hopping
Timeslot

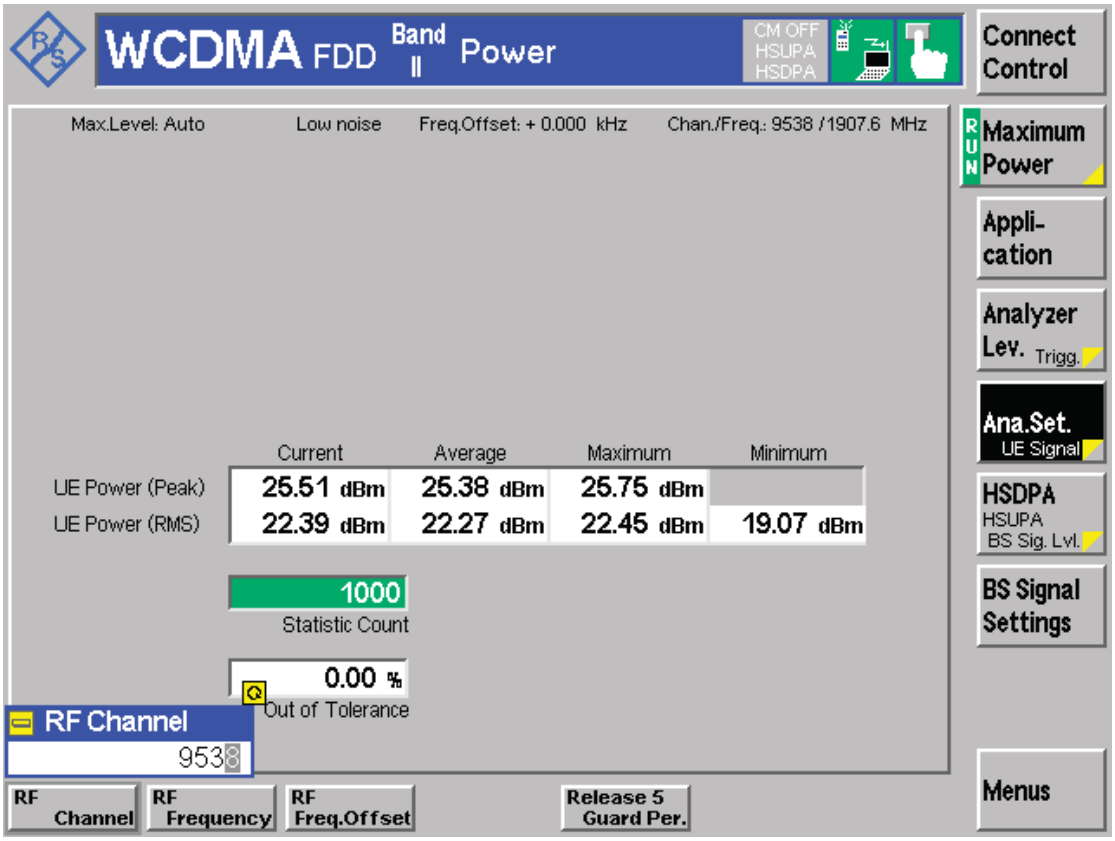
Band II
9 V


WCDMA FDD Band II Power
CM OFF HSUPA HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9262 / 1852.4 MHz
Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak) 24.72 dBm 25.52 dBm 25.80 dBm
UE Power (RMS) 21.36 dBm 22.22 dBm 22.39 dBm 19.79 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9262
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus

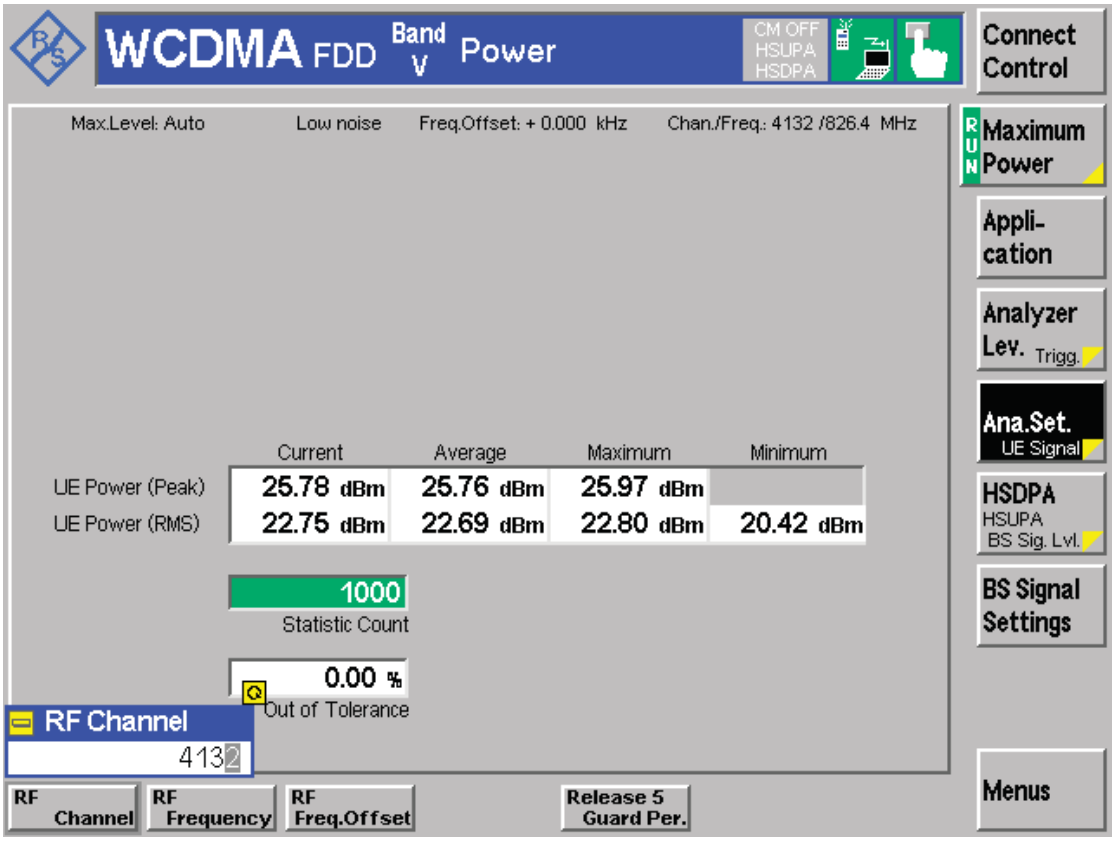

WCDMA FDD Band II Power
CM OFF
HSUPA
HSDPA
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9400 /1880.0 MHz
Current
Average
Maximum
Minimum
UE Power (Peak)
24.90 dBm
24.88 dBm
25.35 dBm
UE Power (RMS)
21.46 dBm
21.45 dBm
21.65 dBm
19.17 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9400
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Connect Control
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Menus
WCDMA FDD Band II Power
CM OFF
HSUPA
HSDPA
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9538 /1907.6 MHz
Current
Average
Maximum
Minimum
UE Power (Peak)
25.43 dBm
25.40 dBm
25.75 dBm
UE Power (RMS)
22.45 dBm
22.30 dBm
22.48 dBm
19.10 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9538
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Connect Control
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Menus

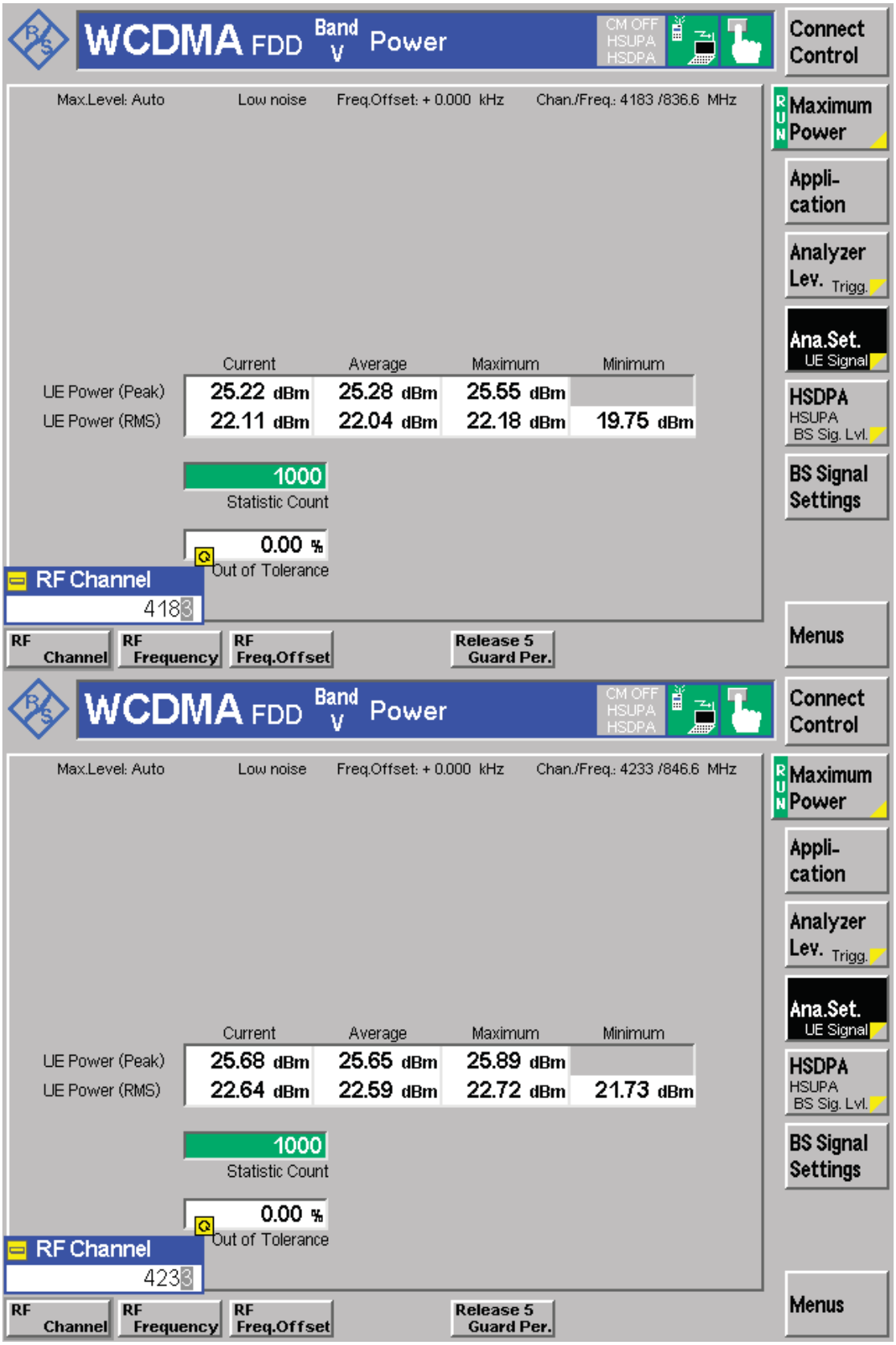
8.1 V


WCDMA FDD Band II Power
CM OFF
HSUPA
HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9262 /1852.4 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.64 dBm
25.57 dBm
25.84 dBm
UE Power (RMS)
22.32 dBm
22.27 dBm
22.52 dBm
19.82 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9262
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus
WCDMA FDD Band II Power
CM OFF
HSUPA
HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9400 /1880.0 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.10 dBm
24.97 dBm
25.35 dBm
UE Power (RMS)
21.63 dBm
21.57 dBm
21.77 dBm
19.18 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9400
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus

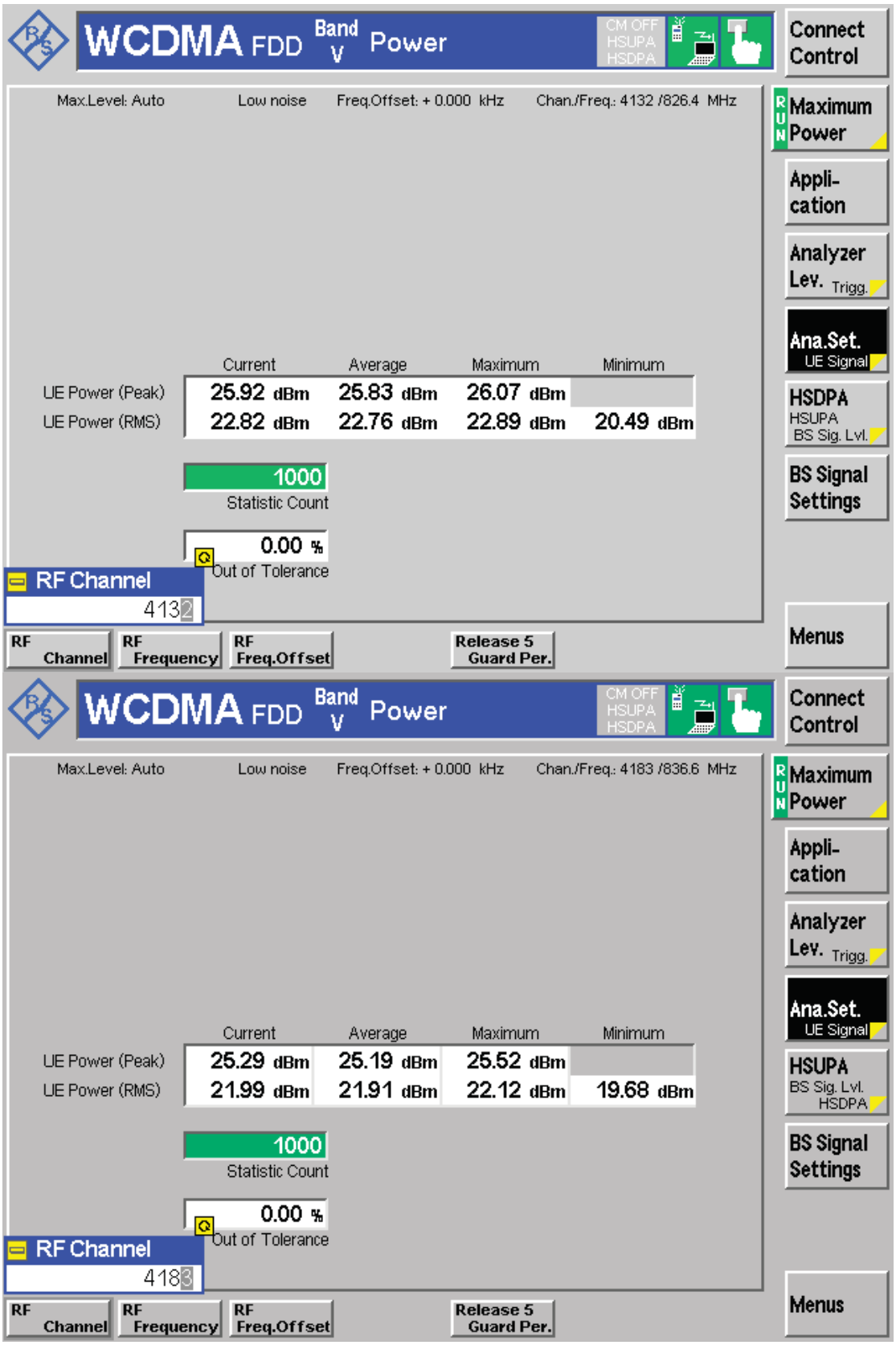

WCDMA FDD Band II Power
CM OFF
HSUPA
HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 9538 /1907.6 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.51 dBm
25.38 dBm
25.75 dBm
UE Power (RMS)
22.39 dBm
22.27 dBm
22.45 dBm
19.07 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
9538
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus

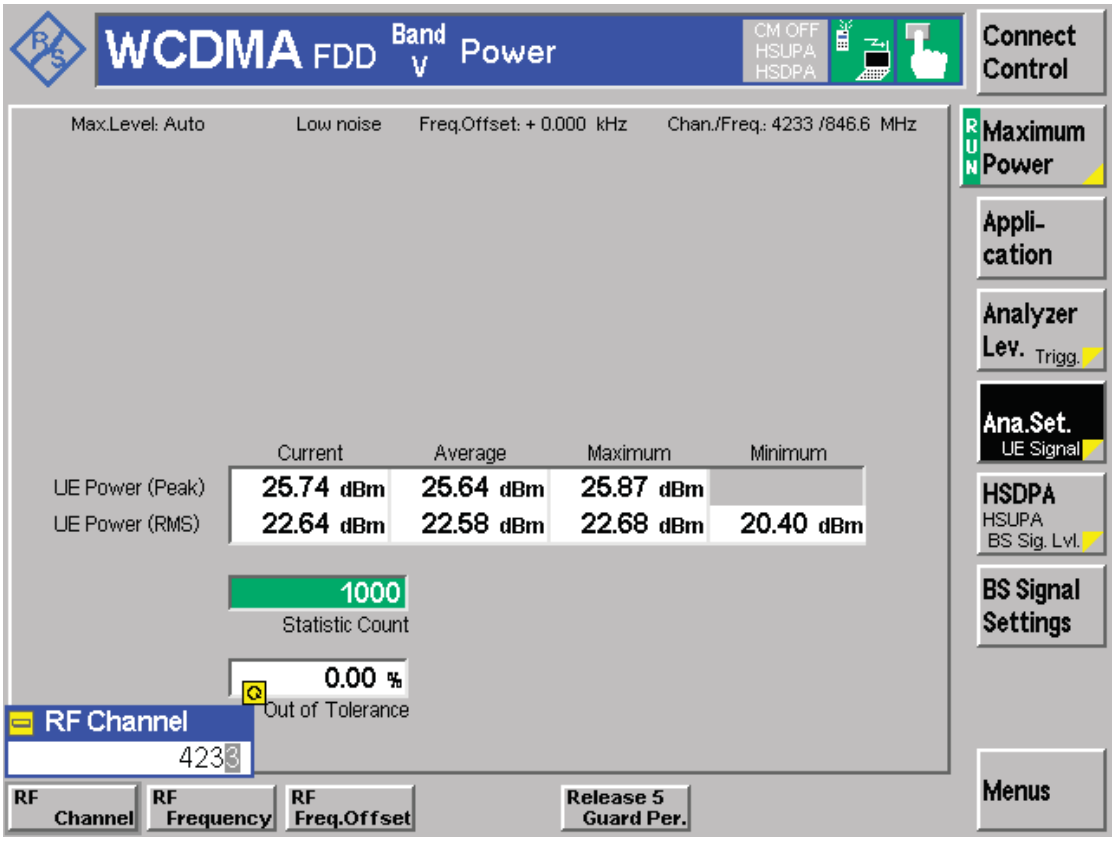
Band V
9 V


WCDMA FDD Band V Power
CM OFF
HSUPA
HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 4132 /826.4 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.78 dBm
25.76 dBm
25.97 dBm
UE Power (RMS)
22.75 dBm
22.69 dBm
22.80 dBm
20.42 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
4132
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus


WCDMA FDD Band V Power
CM OFF
HSUPA
HSDPA
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 4183 /836.6 MHz
Current
Average
Maximum
Minimum
UE Power (Peak)
25.22 dBm
25.28 dBm
25.55 dBm
UE Power (RMS)
22.11 dBm
22.04 dBm
22.18 dBm
19.75 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
4183
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Connect Control
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Menus
WCDMA FDD Band V Power
CM OFF
HSUPA
HSDPA
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 4233 /846.6 MHz
Current
Average
Maximum
Minimum
UE Power (Peak)
25.68 dBm
25.65 dBm
25.89 dBm
UE Power (RMS)
22.64 dBm
22.59 dBm
22.72 dBm
21.73 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
4233
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Connect Control
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Menus

8.1 V


WCDMA FDD Band V Power
CM OFF HSUPA HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 4132 /826.4 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSDPA HSUPA BS Sig. Lvl.
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.92 dBm
25.83 dBm
26.07 dBm
UE Power (RMS)
22.82 dBm
22.76 dBm
22.89 dBm
20.49 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
4132
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus
WCDMA FDD Band V Power
CM OFF HSUPA HSDPA
Connect Control
Max.Level: Auto
Low noise
Freq.Offset: + 0.000 kHz
Chan./Freq.: 4183 /836.6 MHz
RUN Maximum Power
Appli-cation
Analyzer Lev. Trigg.
Ana.Set. UE Signal
HSUPA BS Sig. Lvl. HSDPA
BS Signal Settings
Current
Average
Maximum
Minimum
UE Power (Peak)
25.29 dBm
25.19 dBm
25.52 dBm
UE Power (RMS)
21.99 dBm
21.91 dBm
22.12 dBm
19.68 dBm
1000
Statistic Count
0.00 %
Out of Tolerance
RF Channel
4183
RF Channel
RF Frequency
RF Freq.Offset
Release 5 Guard Per.
Menus



☐ Conducted Measurement
☑ Radiated Measurement

Band 850 MHz & 1900 MHz
9 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.1350	25.97	28.12	38.45	Pass
836.2691	27.21	29.36	38.45	Pass
848.8651	27.34	29.49	38.45	Pass
1850.1250	29.77	31.92	33	Pass
1879.9210	30.21	32.36	33	Pass
1909.8570	29.02	31.17	33	Pass

8.1 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.1330	25.93	28.08	38.45	Pass
836.1310	25.03	27.18	38.45	Pass
848.8631	27.22	29.37	38.45	Pass
1850.2510	30.52	32.67	33	Pass
1879.9150	30.02	32.17	33	Pass
1909.8570	29.01	31.16	33	Pass

Band II & Band V

9 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1851.2480	25.25	27.40	33	Pass
1879.0280	24.63	26.78	33	Pass
1906.3880	26.60	28.75	33	Pass
825.2126	17.56	19.71	38.45	Pass
837.9076	17.56	19.71	38.45	Pass
846.9758	18.46	20.61	38.45	Pass

8.1 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1853.4920	26.13	28.28	33	Pass
1879.0280	24.73	26.88	33	Pass
1906.3280	26.47	28.62	33	Pass
825.2126	17.86	20.01	38.45	Pass
837.7572	17.69	19.84	38.45	Pass
846.8555	18.68	20.83	38.45	Pass

Test equipment: ETSTW-RE 004, ETSTW-RE 028, ETSTW-RE 030, ETSTW-GSM 02

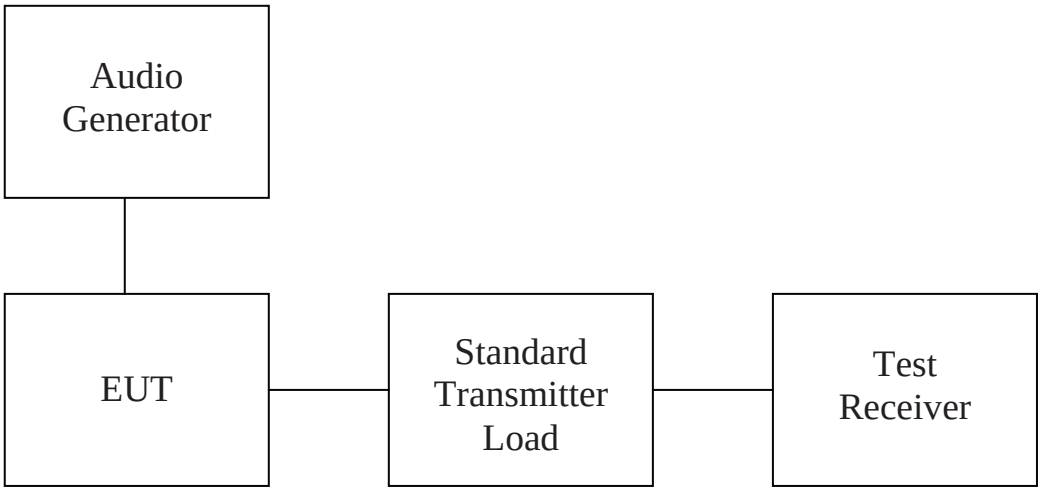
Note: Please refer to appendix for plot data.

4. Modulation Characteristics

4.1 Test procedure

☐ A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.
The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation response is measured at certain modulation frequencies, related to 1000Hz reference signal. Tests are performed for positive and negative modulation.

☐ Equipment which employs modulation Limiting: A curve or family of curves showing the percentage of modulation versus the modulation input voltage shall be supplied. The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation limiting is measured at certain modulation frequencies from 100Hz to 15kHz.



4.2 Test Results

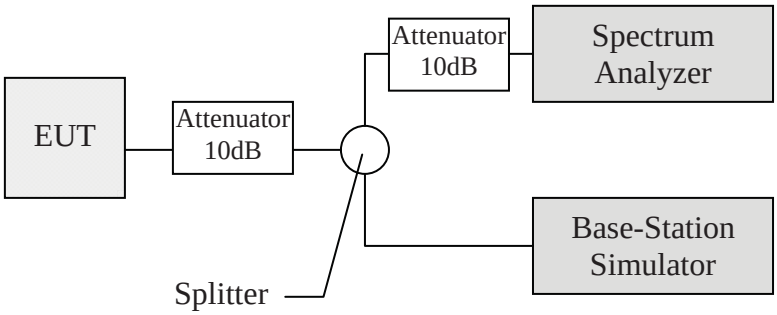
For digital modulation employed, this test item is not applicable.

5. Occupied Bandwidth

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power. Near the carrier an Emission Mask is defined by the standard.

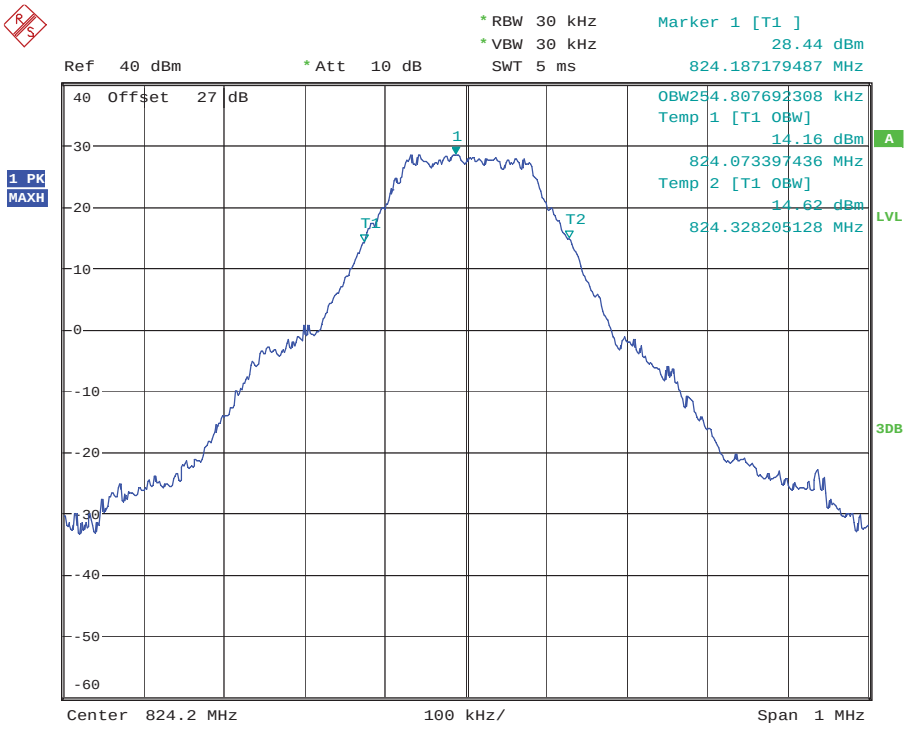
5.1 Test procedure

The RF output of the transceiver was connected as the following figure.
Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer at 99% power was occupied. Then set the spectrum analyzer to cover the upper and lower band edges to measure emission mask.

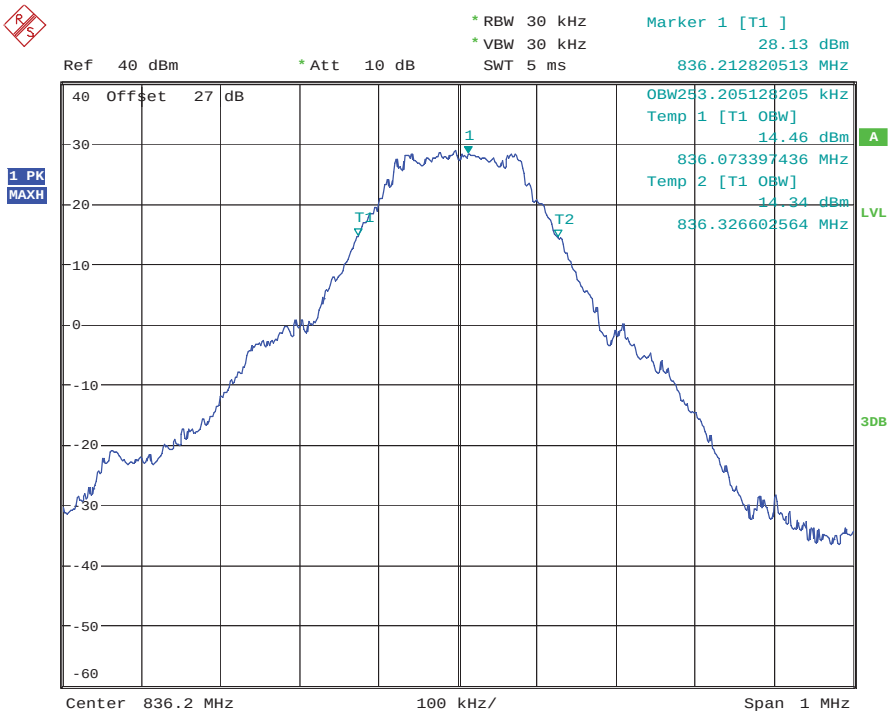


5.2 Test Results

Occupied Channel Bandwidth

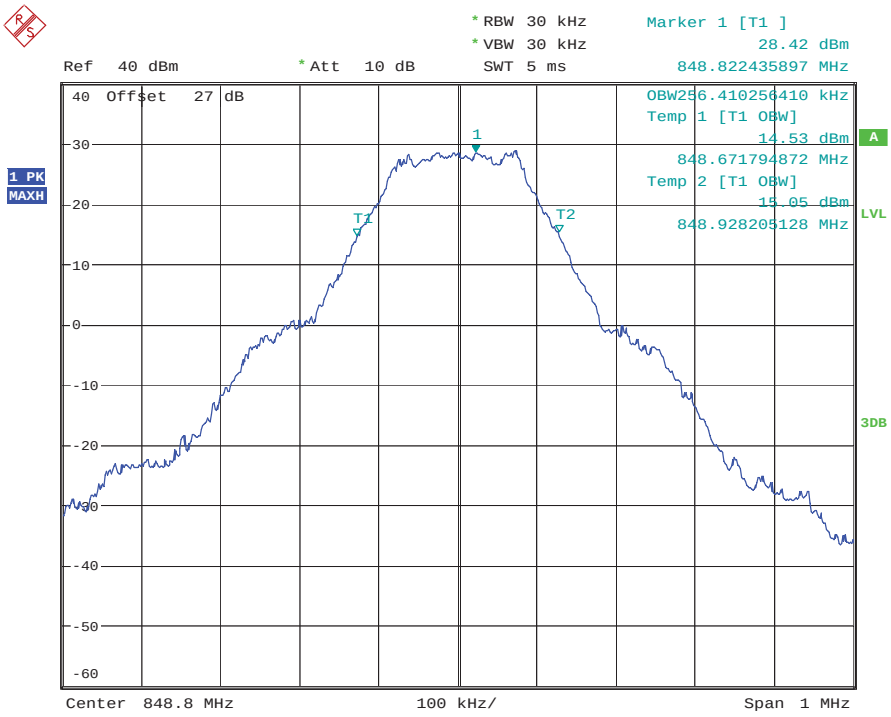


OCCUPIED BANDWIDTH GSM850 CH128
Date: 26.DEC.2012 19:34:36



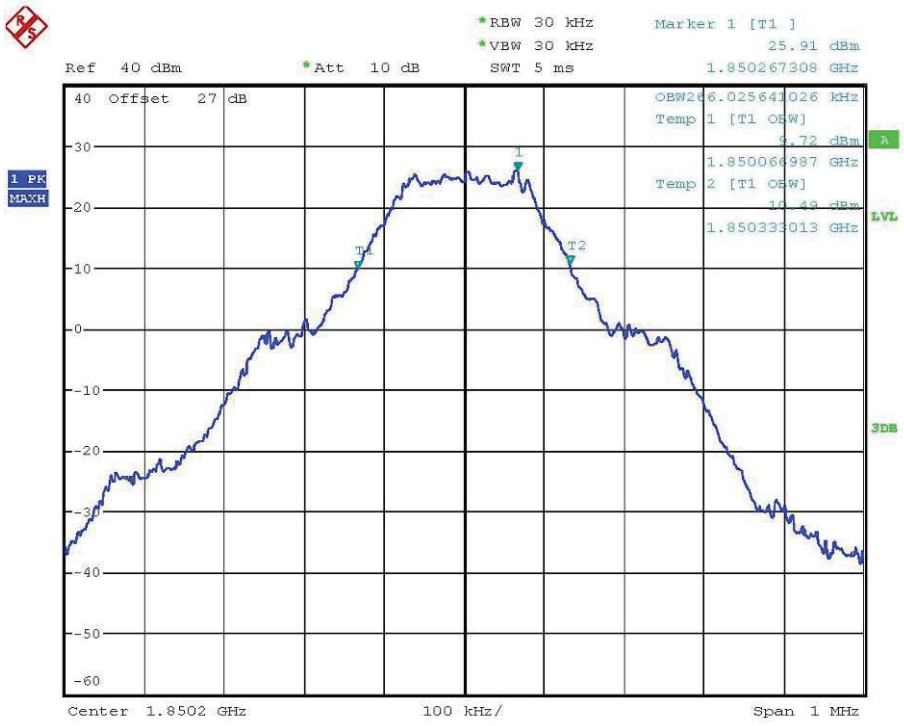
OCCUPIED BANDWIDTH GSM850 CH188

Date: 26.DEC.2012 19:34:04



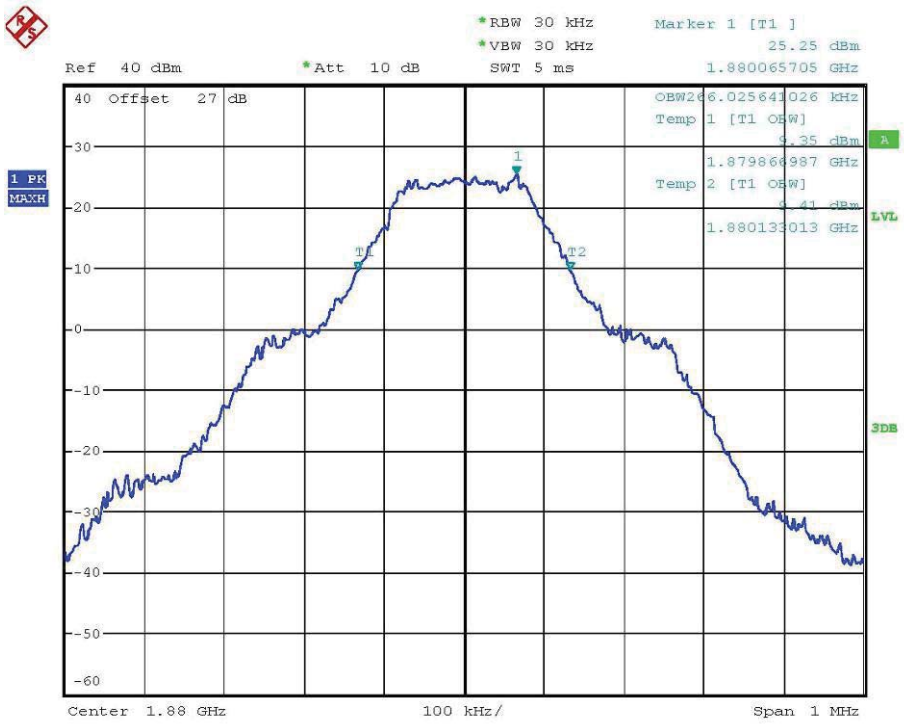
OCCUPIED BANDWIDTH GSM850 CH251

Date: 26.DEC.2012 19:33:43



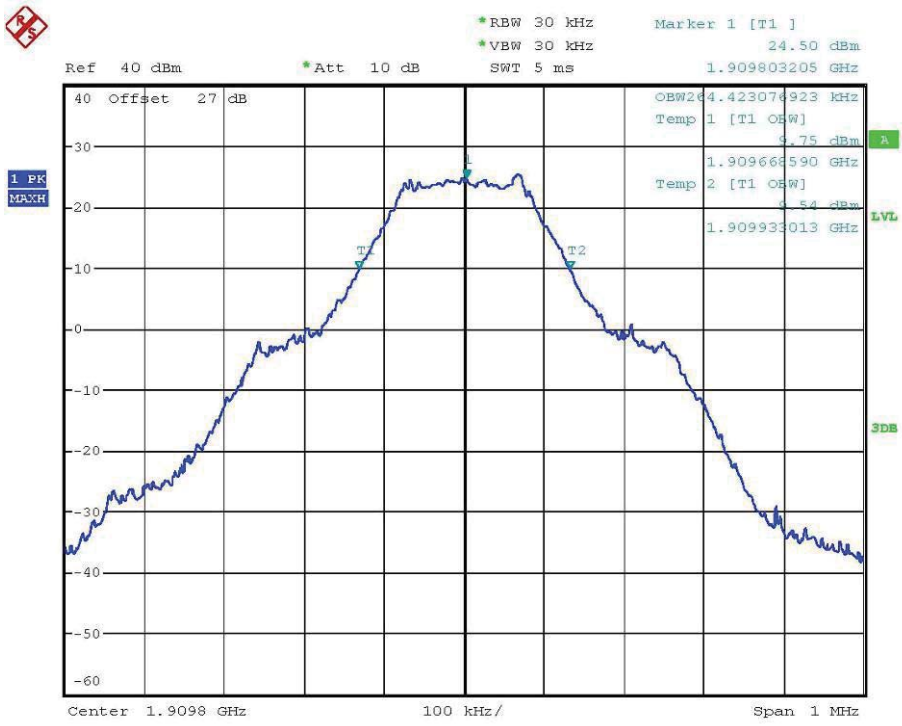
OCCUPIED BANDWIDTH PCS1900 CH512

Date: 26.DEC.2012 19:32:50



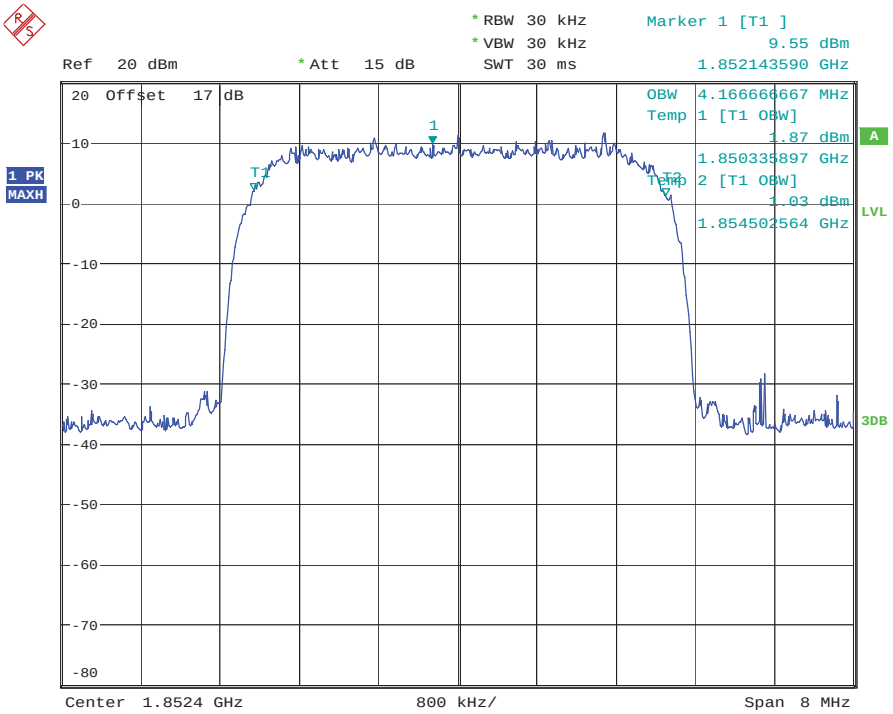
OCCUPIED BANDWIDTH PCS1900 CH661

Date: 26.DEC.2012 19:32:24



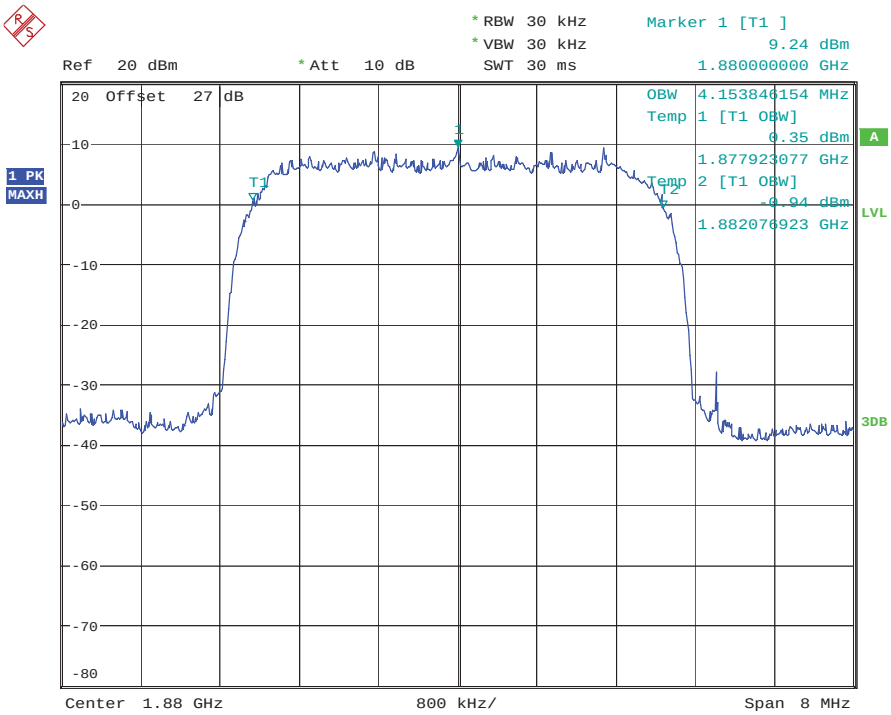
OCCUPIED BANDWIDTH PCS1900 CH810

Date: 26.DEC.2012 19:32:00



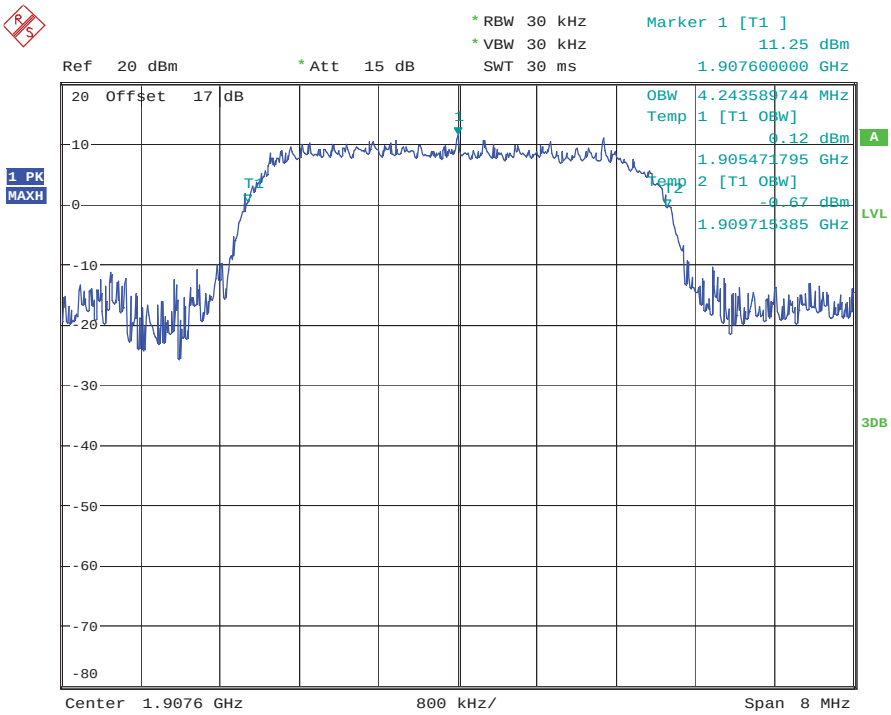
OCCUPIED BANDWIDTH WCDMA BAND II CH9262

Date: 8.JAN.2013 14:50:48



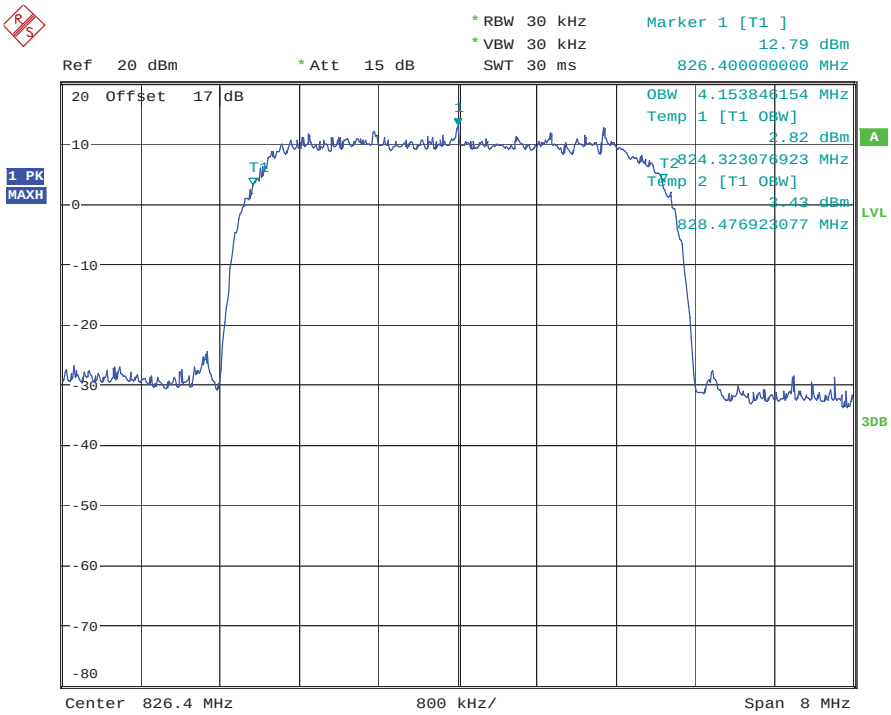
OCCUPIED BANDWIDTH WCDMA BAND II CH9400

Date: 26.DEC.2012 19:28:28



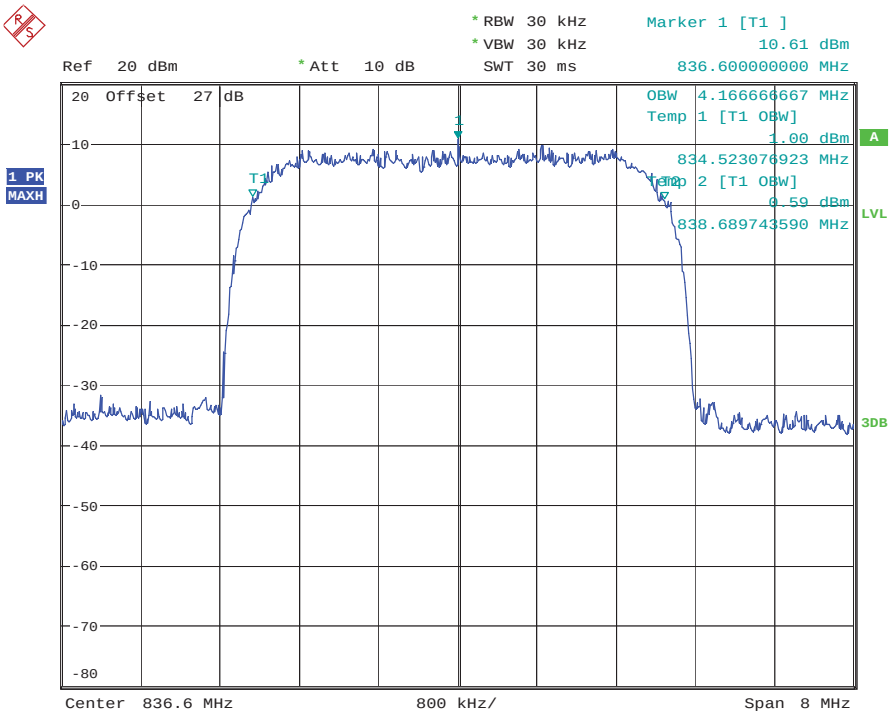
OCCUPIED BANDWIDTH WCDMA BAND II CH9538

Date: 8.JAN.2013 14:50:15



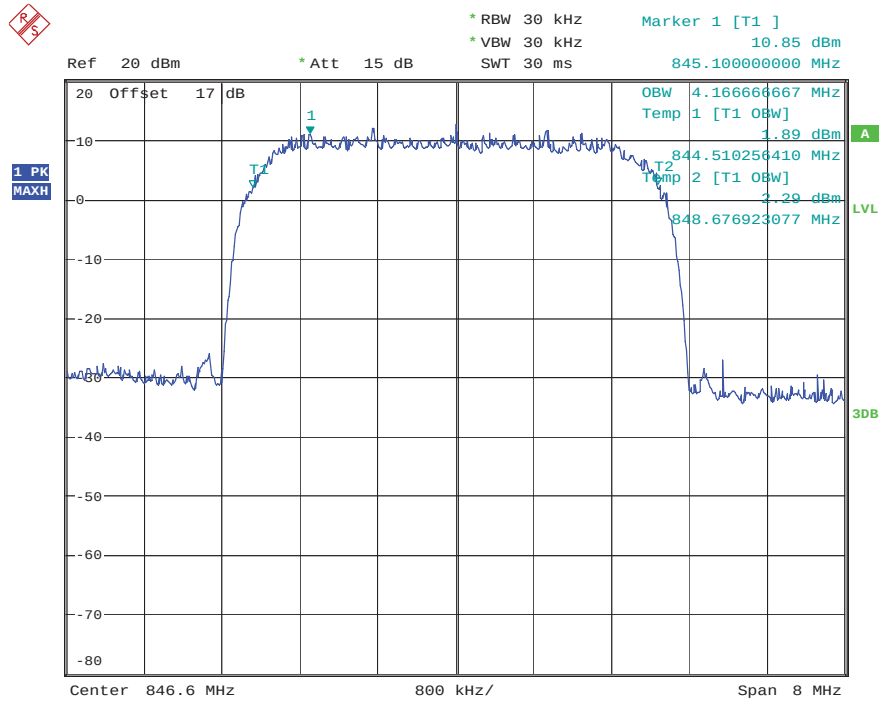
OCCUPIED BANDWIDTH WCDMA BAND V CH4132

Date: 8.JAN.2013 14:48:50



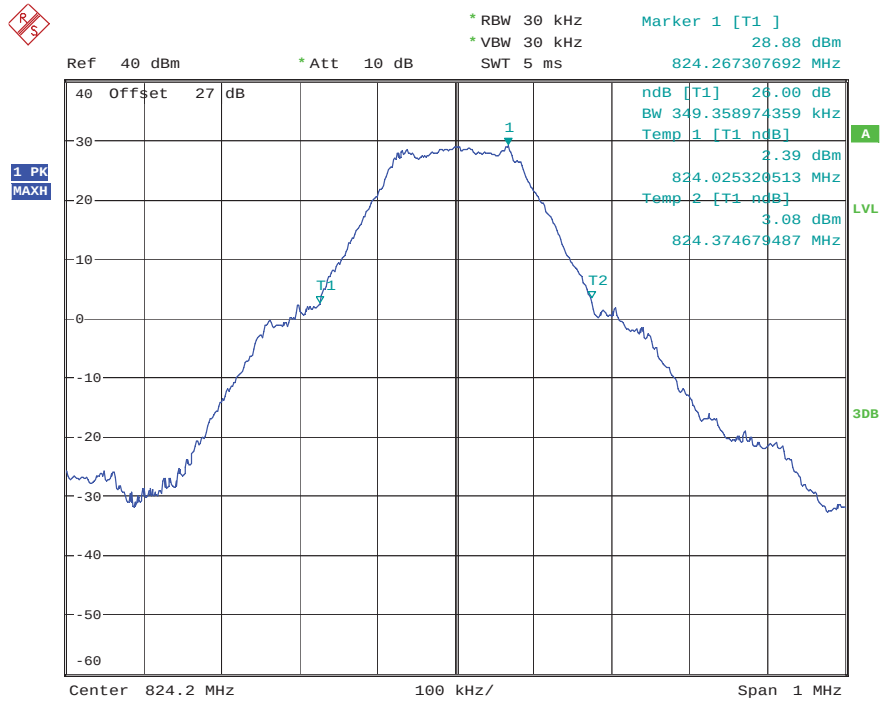
OCCUPIED BANDWIDTH WCDMA BAND V CH4183

Date: 26.DEC.2012 19:26:39

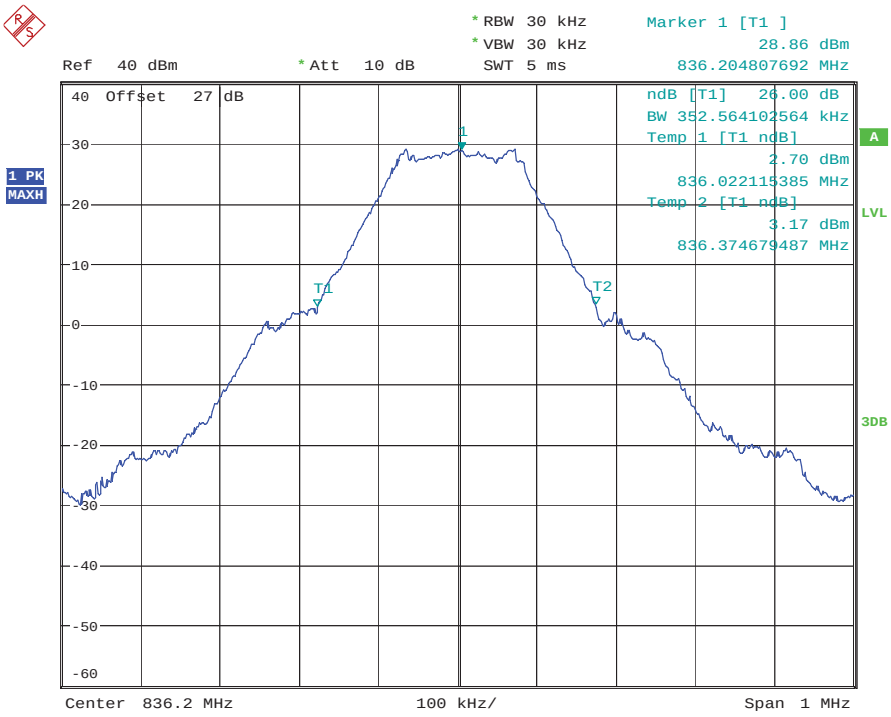


OCCUPIED BANDWIDTH WCDMA BAND V CH4233
Date: 8.JAN.2013 14:49:16

26dB Channel Bandwidth

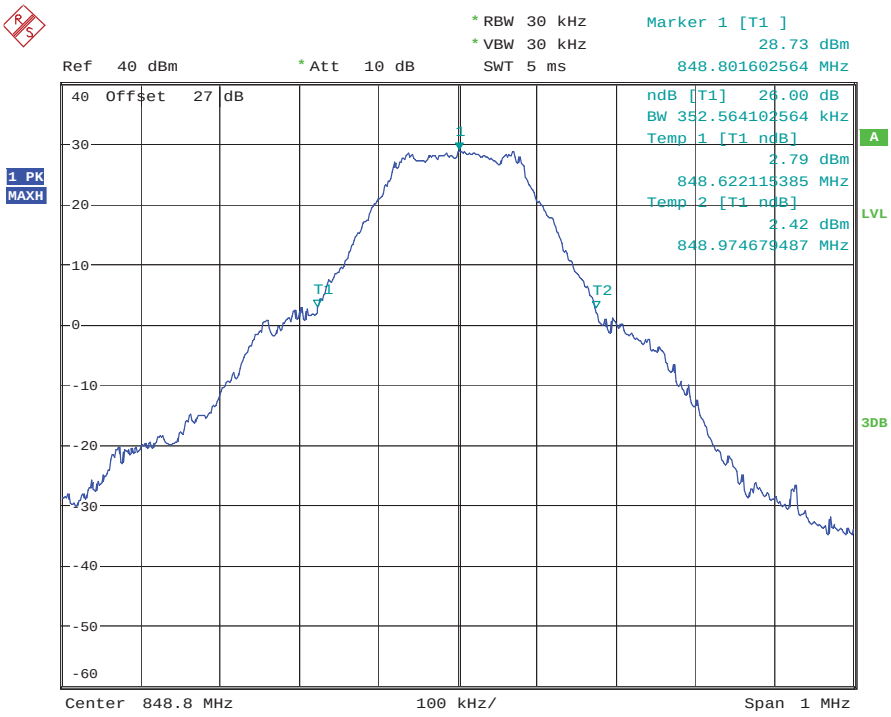


26DB BANDWIDTH GSM850 CH128
Date: 26.DEC.2012 17:58:22



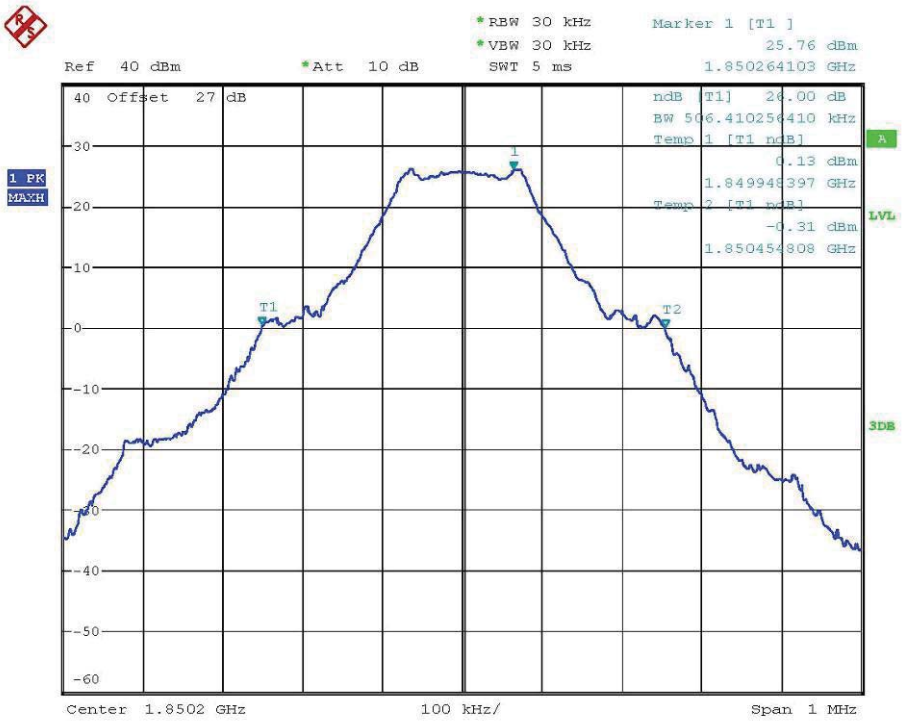
26DB BANDWIDTH GSM850 CH188

Date: 26.DEC.2012 17:59:16



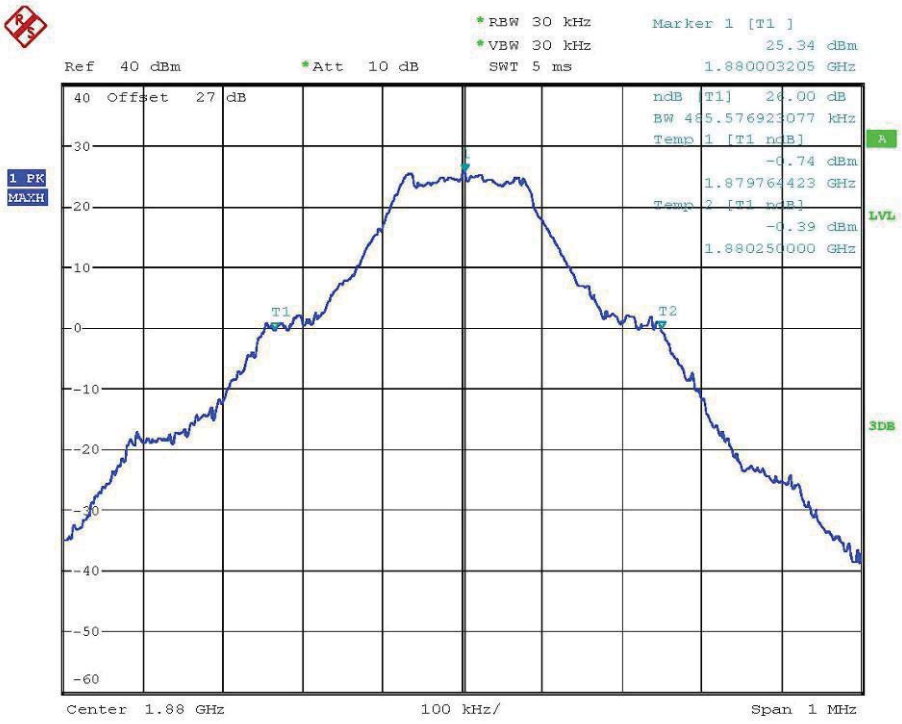
26DB BANDWIDTH GSM850 CH251

Date: 26.DEC.2012 17:59:48



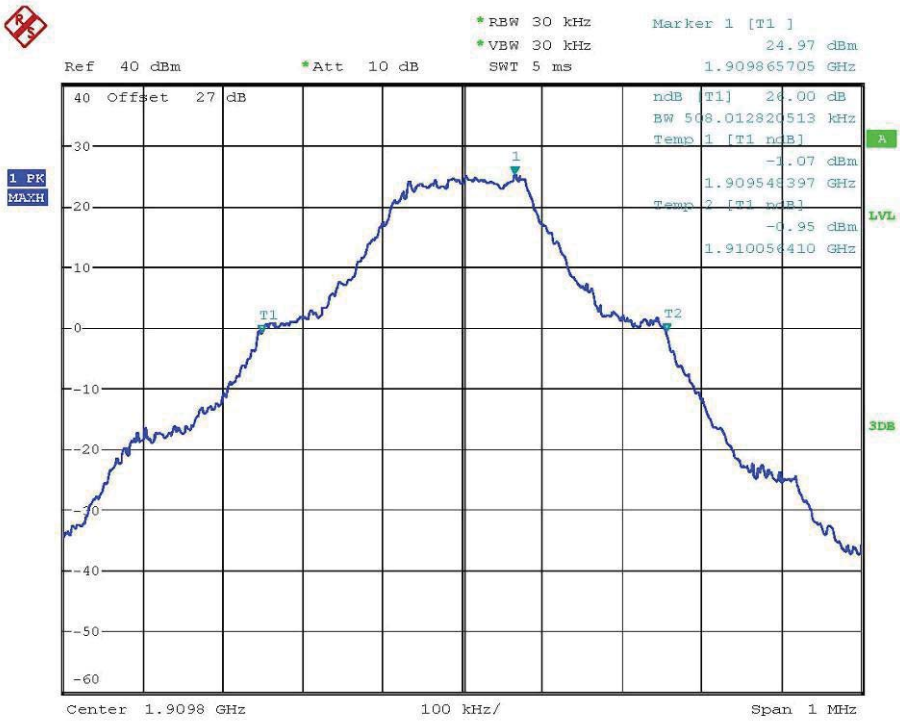
26DB BANDWIDTH PCS1900 CH512

Date: 26.DEC.2012 17:55:48

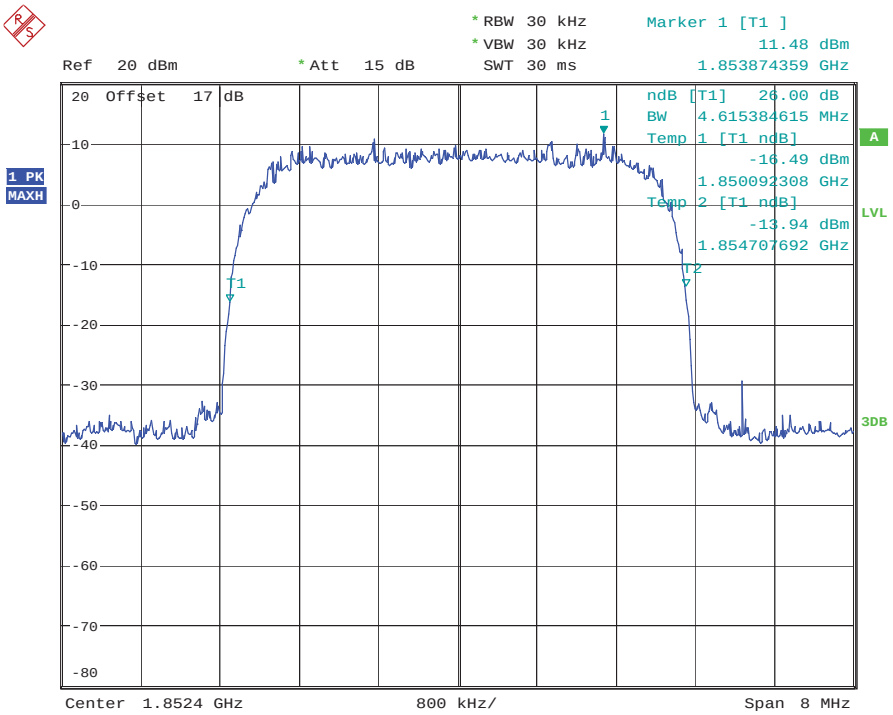


26DB BANDWIDTH PCS1900 CH661

Date: 26.DEC.2012 17:56:28



26DB BANDWIDTH PCS1900 CH810
Date: 26.DEC.2012 17:57:04



26DB BANDWIDTH WCDMA BAND II CH9262
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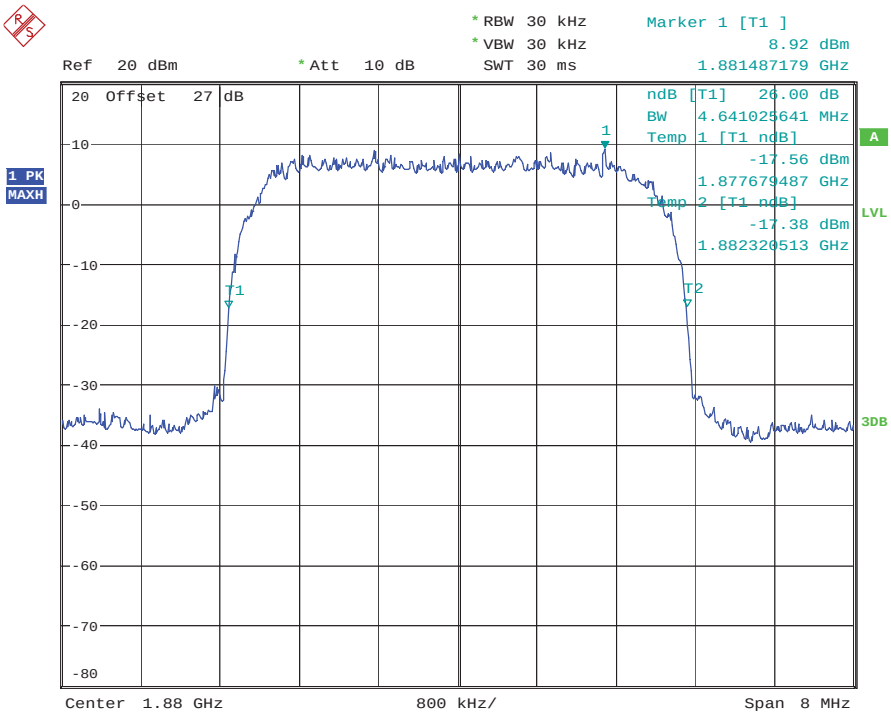
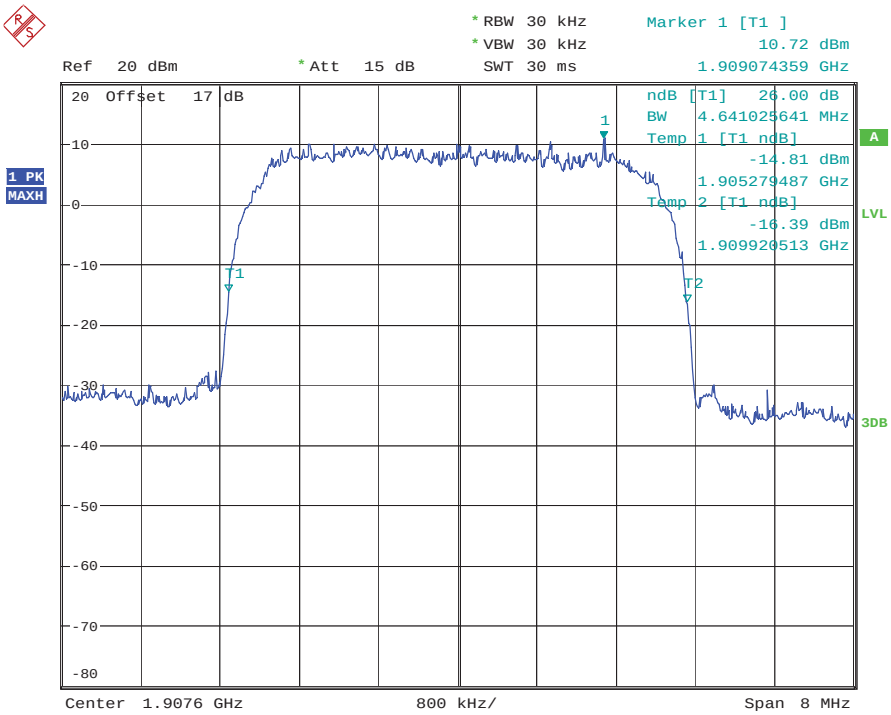


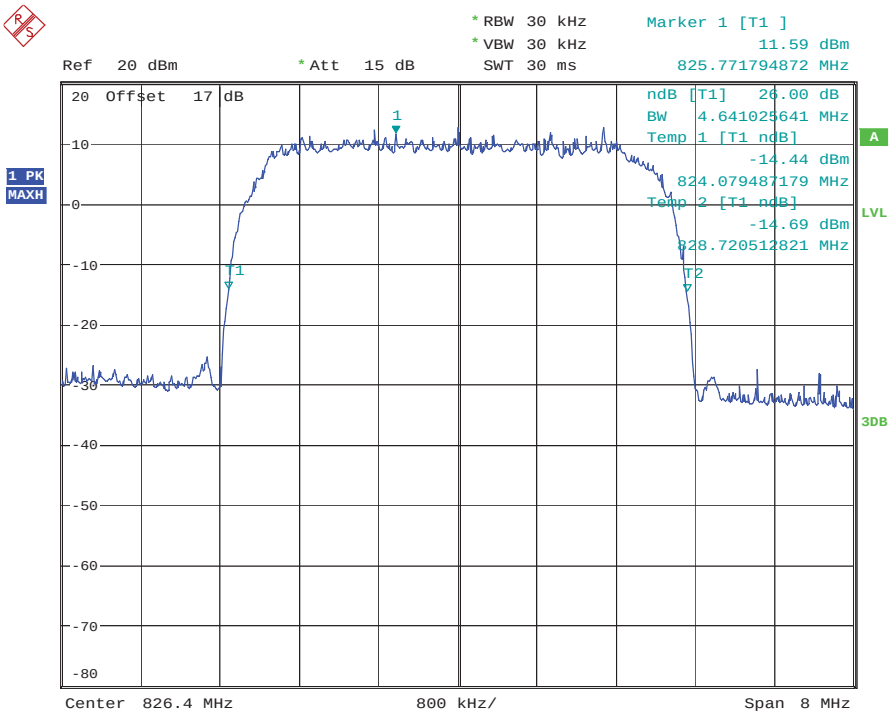
26DB BANDWIDTH WCDMA BAND II CH9400

Date: 26.DEC.2012 19:22:22



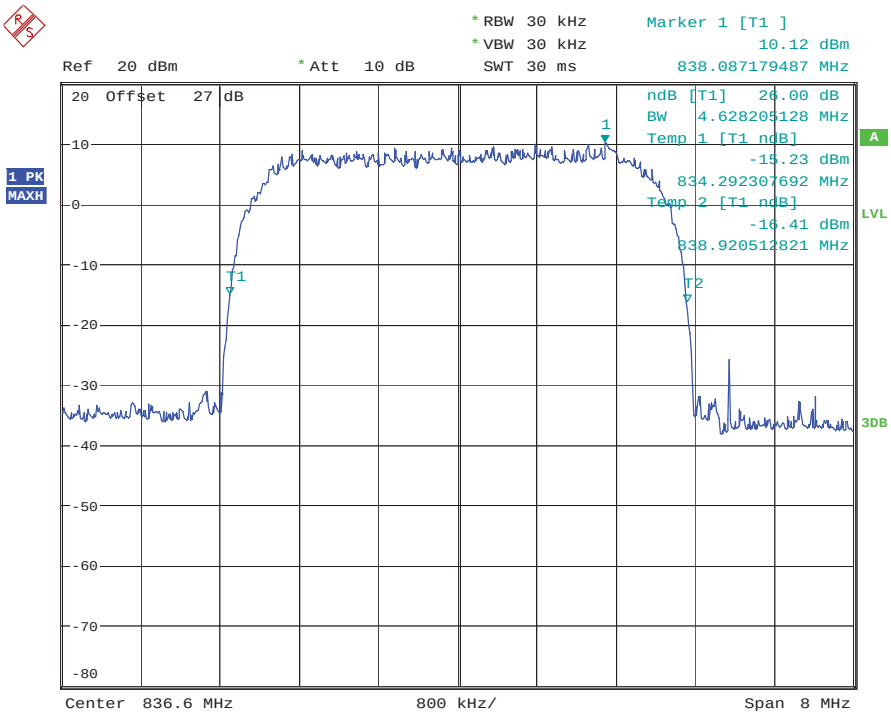
26DB BANDWIDTH WCDMA BAND II CH9538

Date: 8.JAN.2013 14:46:19



26DB BANDWIDTH WCDMA BAND V CH4132

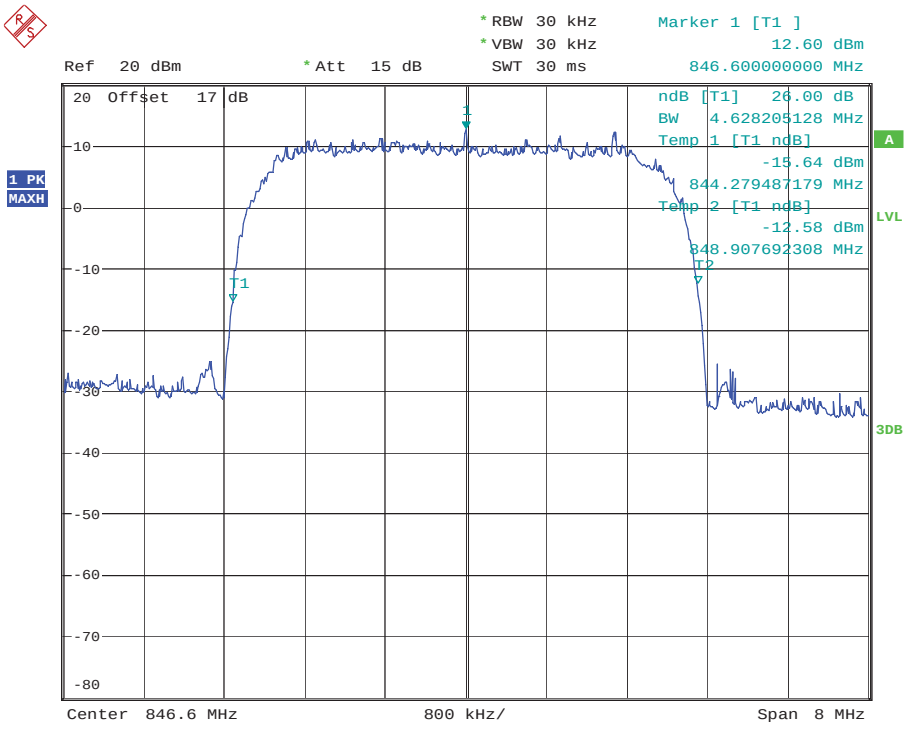
Date: 8.JAN.2013 14:47:49



26DB BANDWIDTH WCDMA BAND V CH4183

Date: 26.DEC.2012 19:24:21

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G



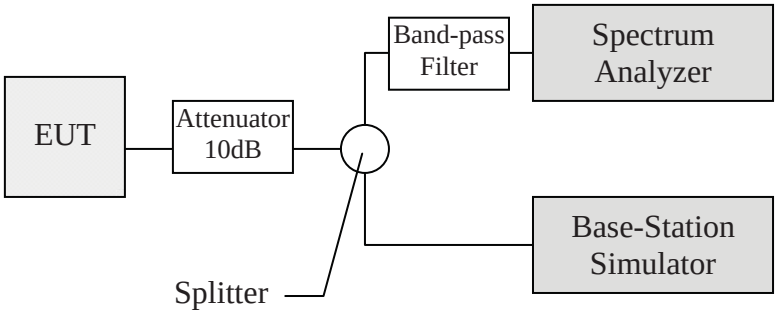
26DB BANDWIDTH WCDMA BAND V CH4233
Date: 8.JAN.2013 14:47:20

Test equipment: ETSTW-RE 055, ETSTW-GSM 02

6. Spurious Emissions at Antenna Terminals

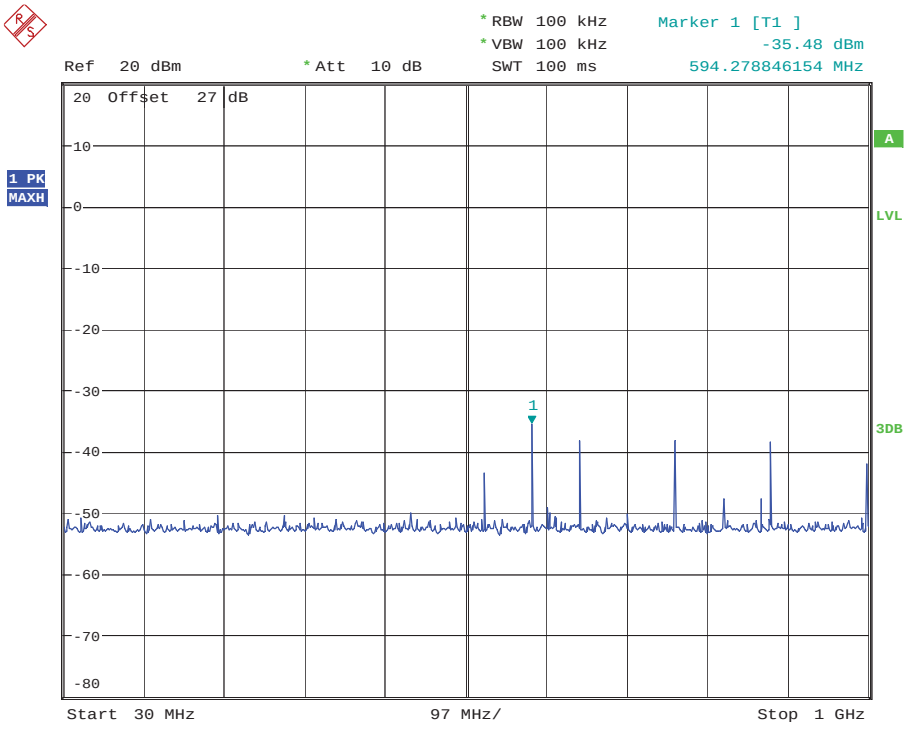
6.1 Test procedure

This transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer via a three-port splitter. Please refer to the following figure. Transmitter output was derived with the spectrum analyzer in dBm.
The Spurious Emissions at Antenna Terminals was measured by the spectrum analyzer with a suitable notch filter and/or Band-pass filter.
Tests were performed with an unmodulated carrier at three frequencies (low, middle and high channels) and on all power levels , which can be set-up on the transmitters.

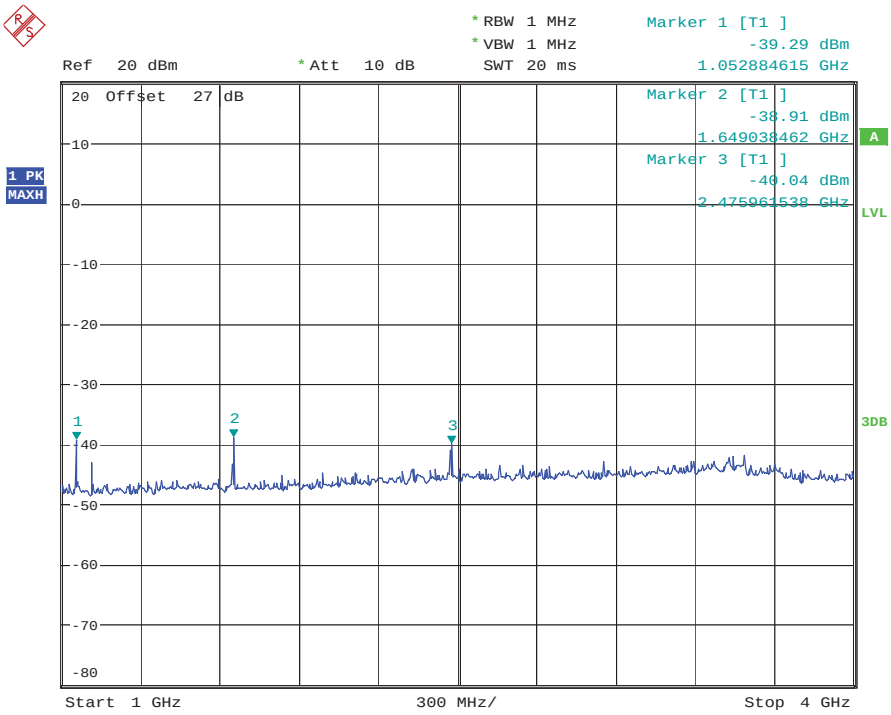


6.2 Test Results

CH128

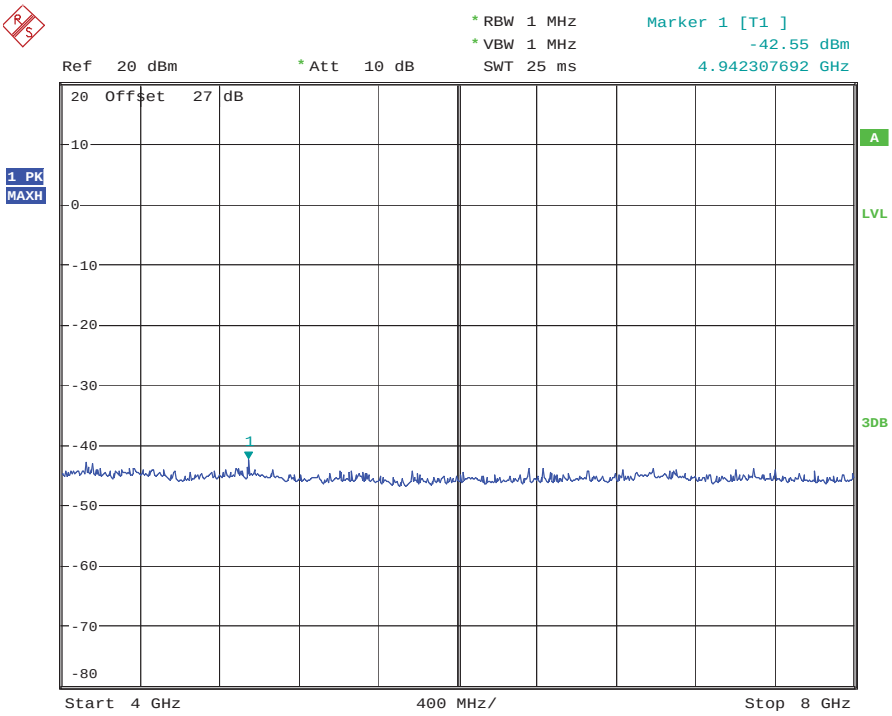


CONDUCTED SPURIOUS EMISSION GSM850 CH128
Date: 26.DEC.2012 14:58:31



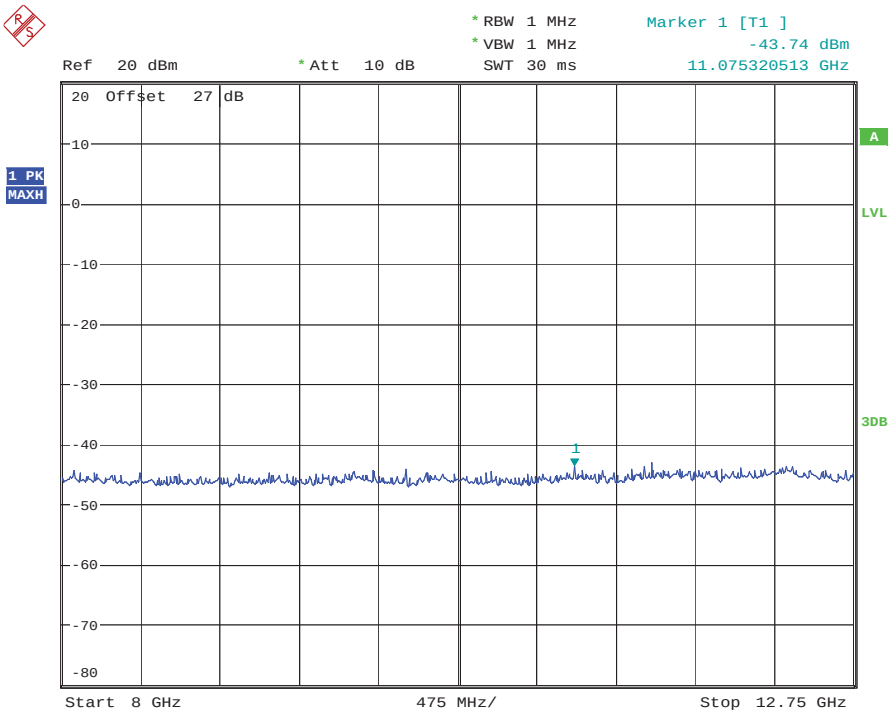
CONDUCTED SPURIOUS EMISSION GSM850 CH128

Date: 26.DEC.2012 15:16:57



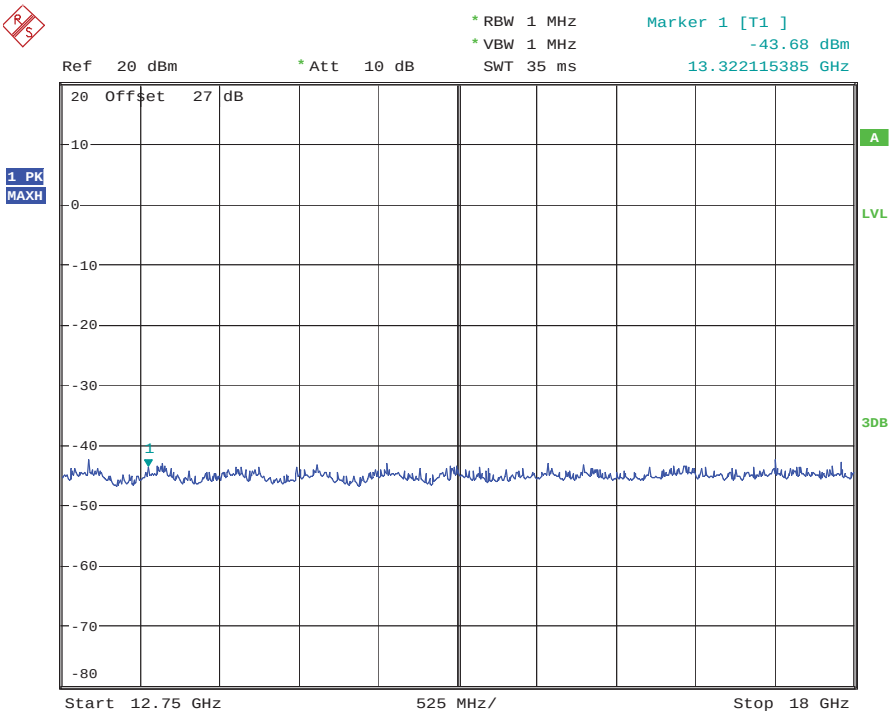
CONDUCTED SPURIOUS EMISSION GSM850 CH128

Date: 26.DEC.2012 15:21:29



CONDUCTED SPURIOUS EMISSION GSM850 CH128

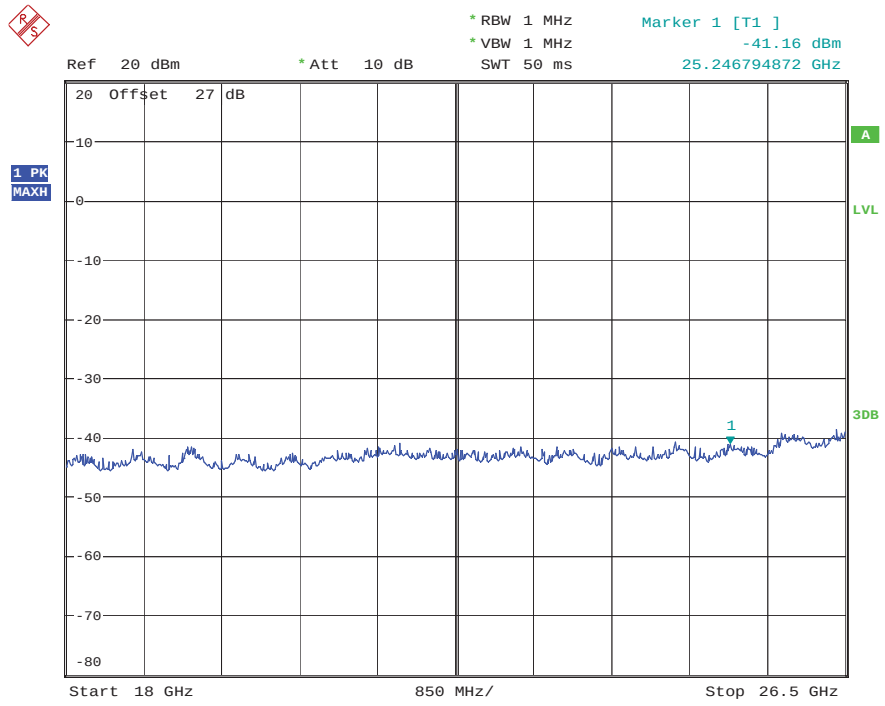
Date: 26.DEC.2012 15:24:00



CONDUCTED SPURIOUS EMISSION GSM850 CH128

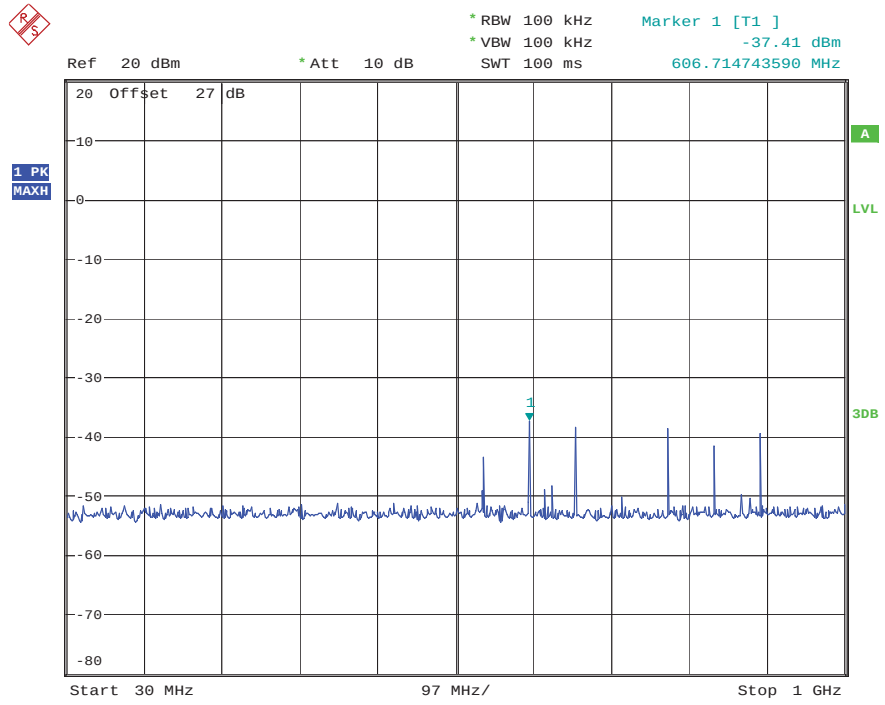
Date: 26.DEC.2012 15:25:42

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G

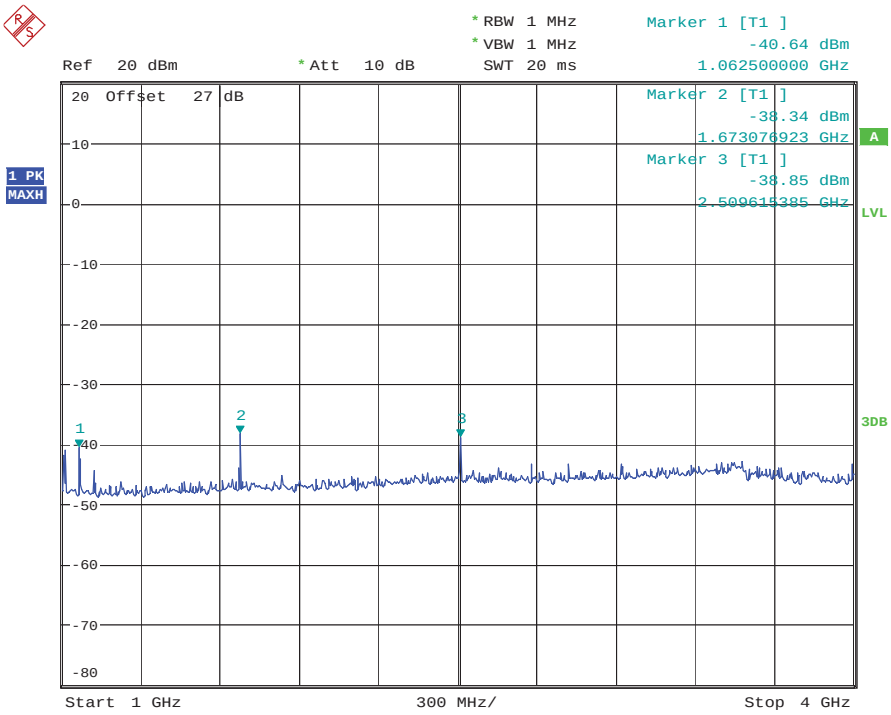


CONDUCTED SPURIOUS EMISSION GSM850 CH128
Date: 26.DEC.2012 15:31:23

CH188

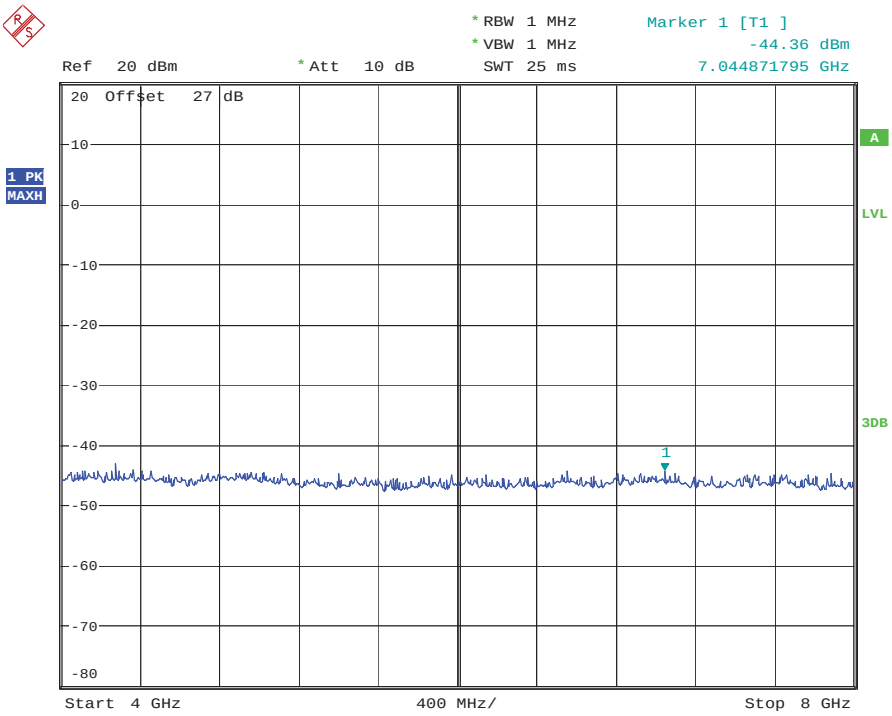


CONDUCTED SPURIOUS EMISSION GSM850 CH188
Date: 26.DEC.2012 14:59:47



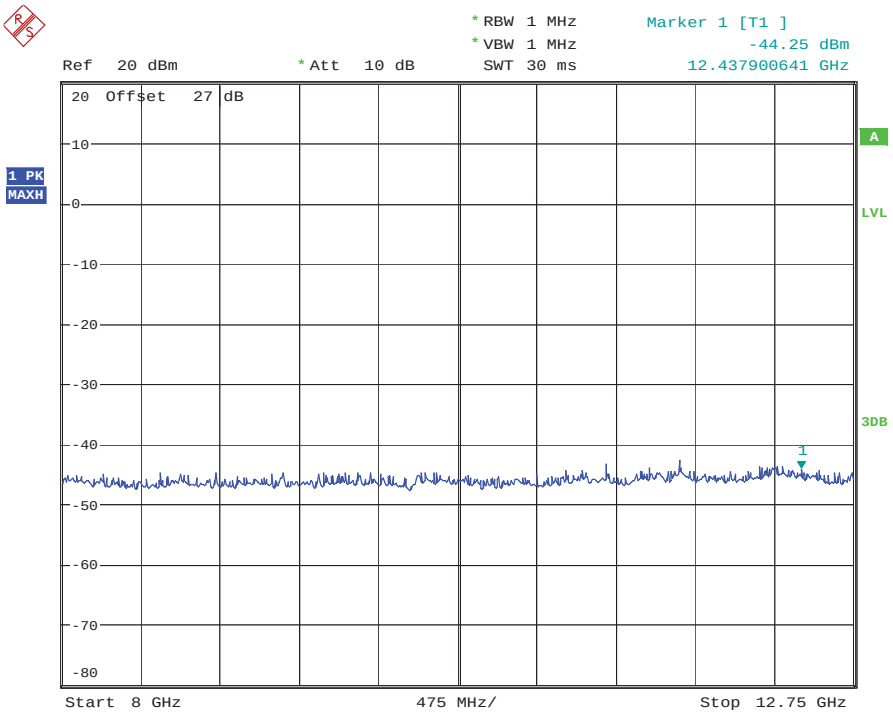
CONDUCTED SPURIOUS EMISSION GSM850 CH188

Date: 26.DEC.2012 15:17:23



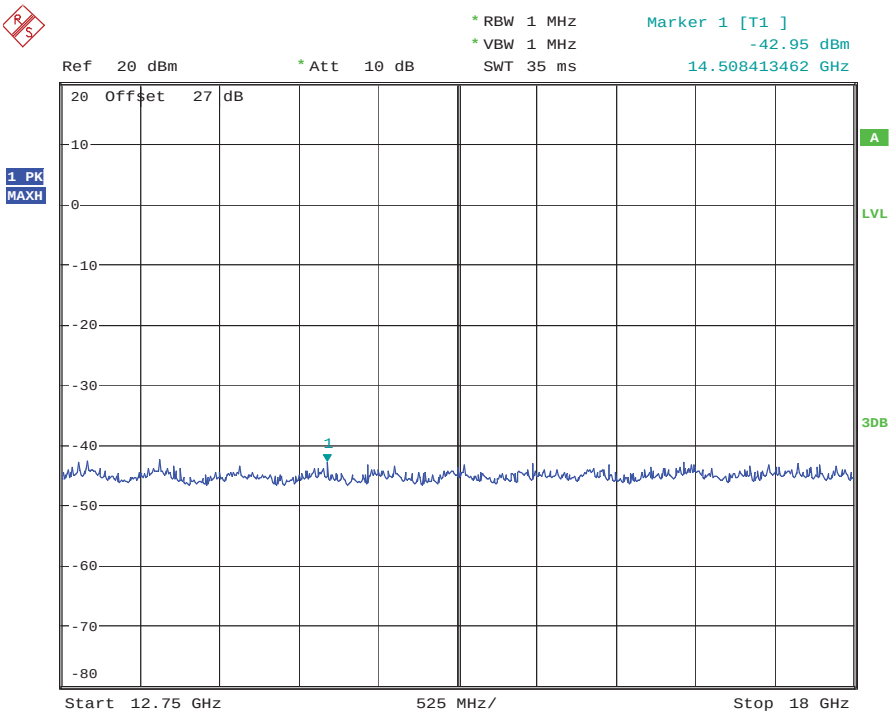
CONDUCTED SPURIOUS EMISSION GSM850 CH188

Date: 26.DEC.2012 15:21:52



CONDUCTED SPURIOUS EMISSION GSM850 CH188

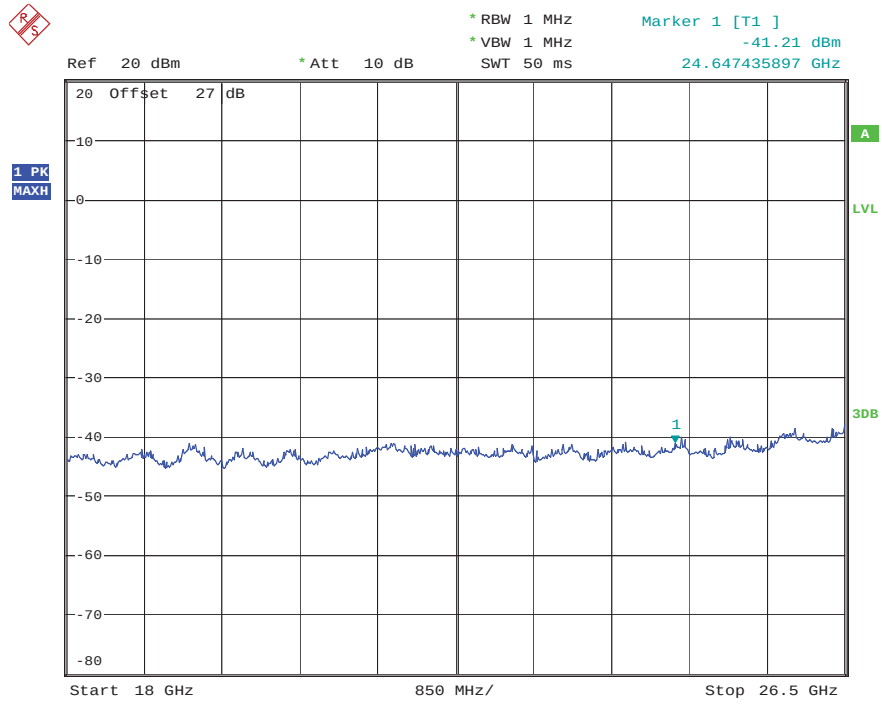
Date: 26.DEC.2012 15:24:16



CONDUCTED SPURIOUS EMISSION GSM850 CH188

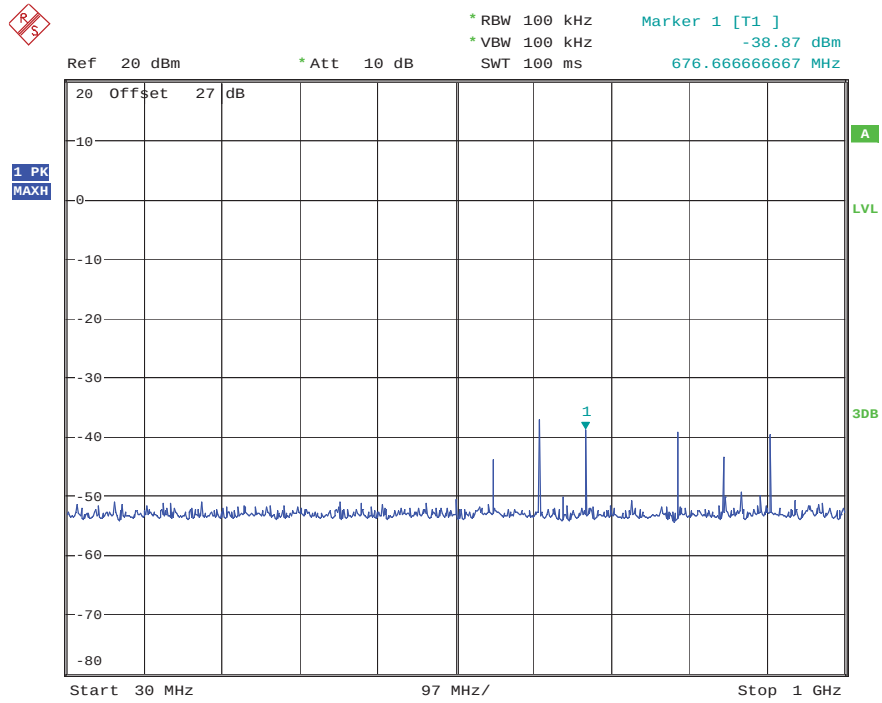
Date: 26.DEC.2012 15:25:24

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G

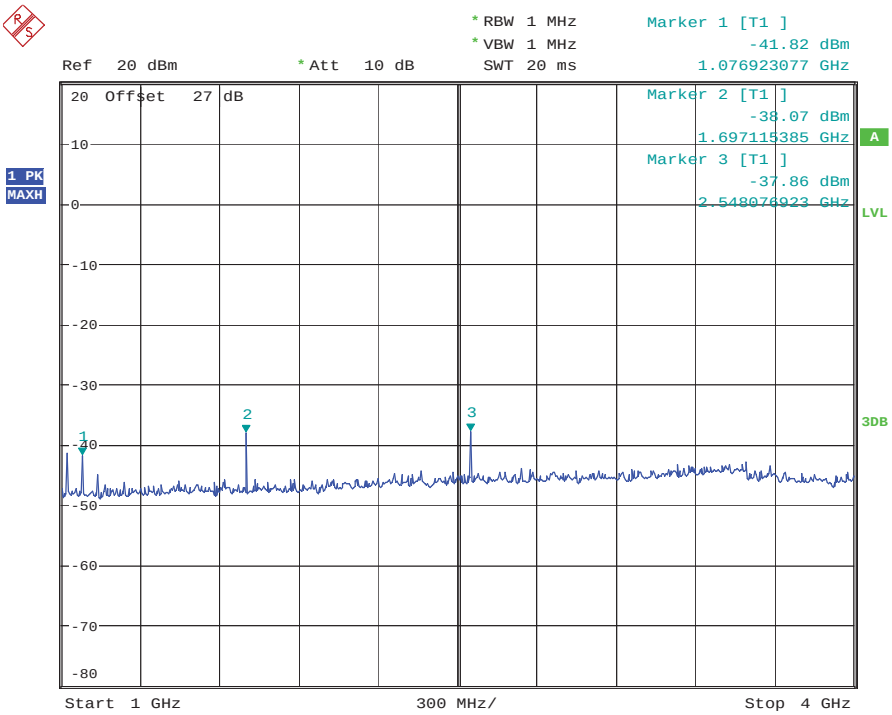


CONDUCTED SPURIOUS EMISSION GSM850 CH188
Date: 26.DEC.2012 15:32:10

CH251

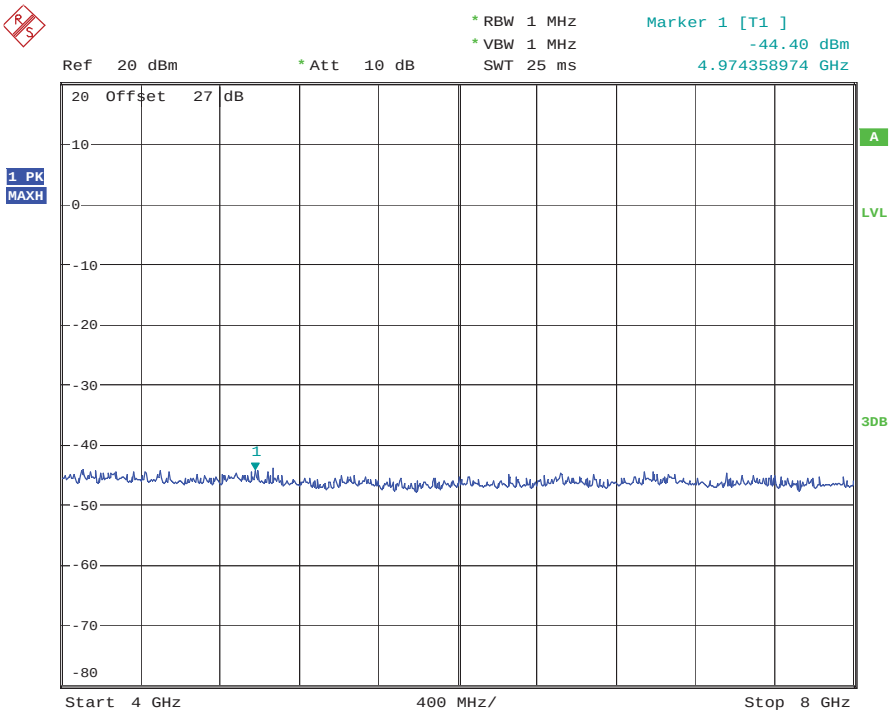


CONDUCTED SPURIOUS EMISSION GSM850 CH251
Date: 26.DEC.2012 15:00:33



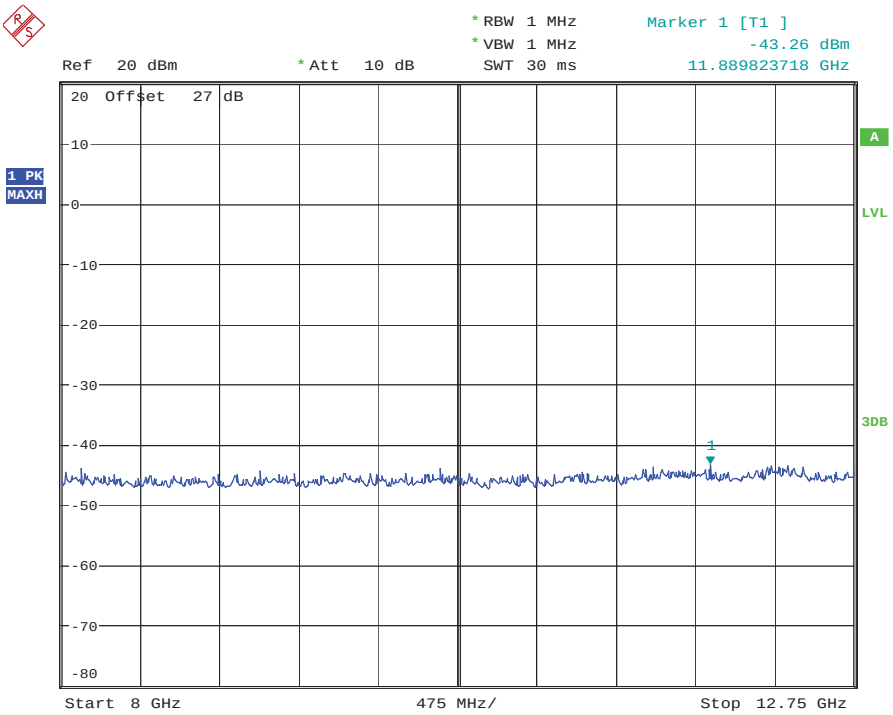
CONDUCTED SPURIOUS EMISSION GSM850 CH251

Date: 26.DEC.2012 15:17:49



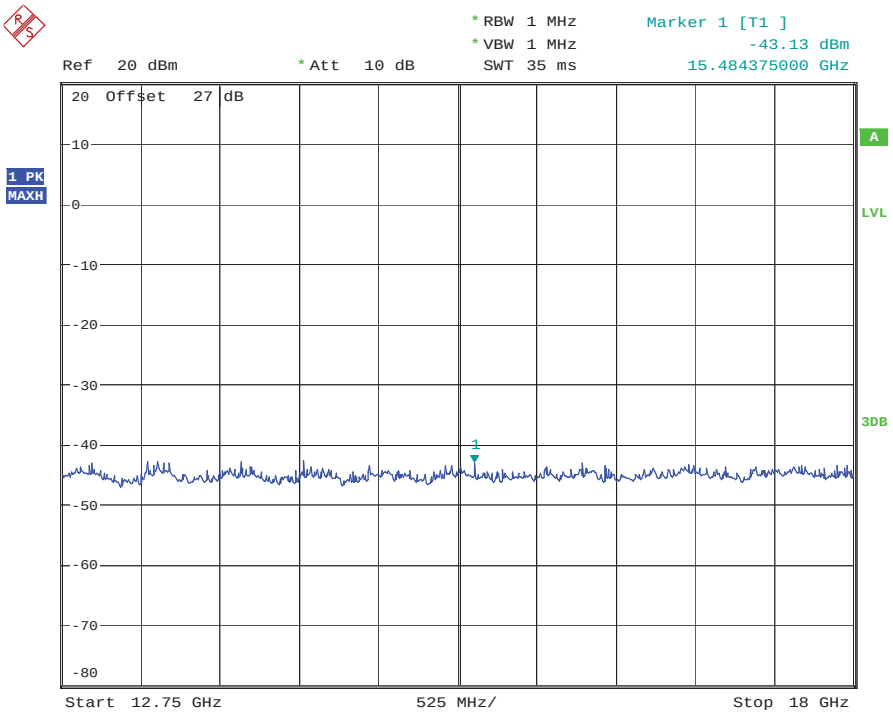
CONDUCTED SPURIOUS EMISSION GSM850 CH251

Date: 26.DEC.2012 15:22:09



CONDUCTED SPURIOUS EMISSION GSM850 CH251

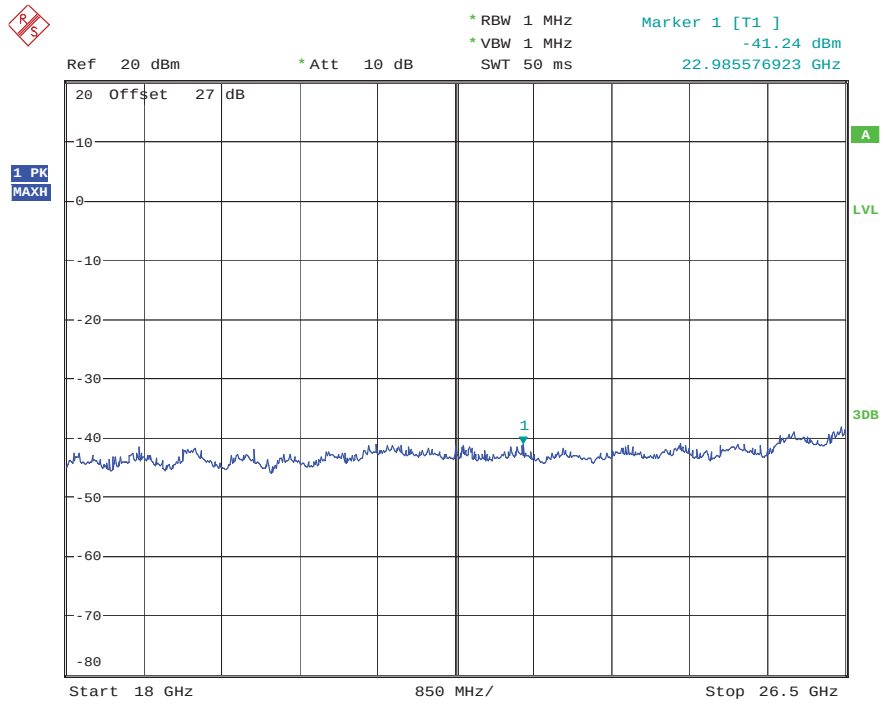
Date: 26.DEC.2012 15:24:40



CONDUCTED SPURIOUS EMISSION GSM850 CH251

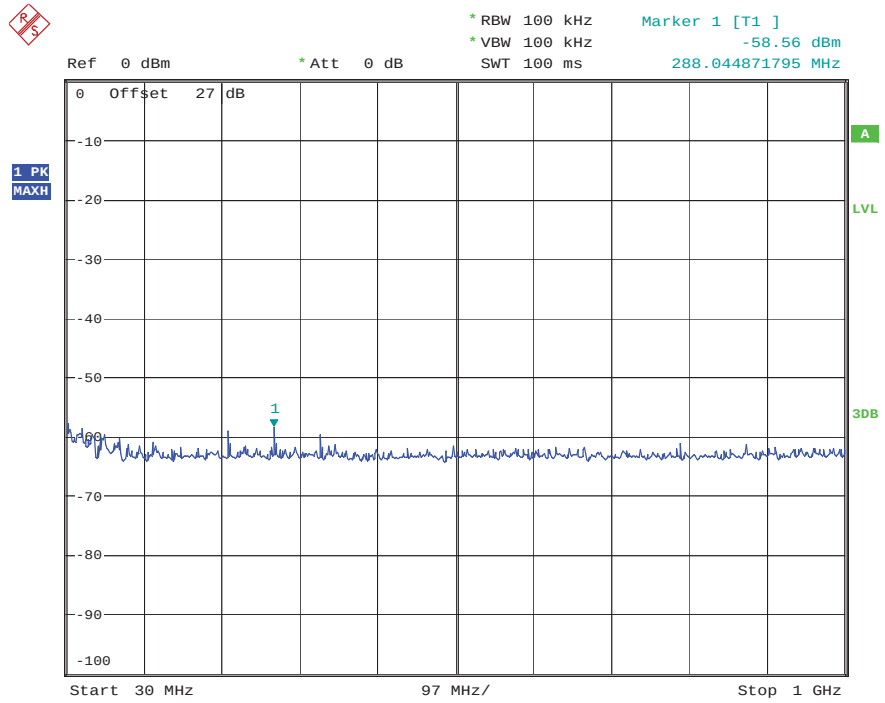
Date: 26.DEC.2012 15:25:07

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G

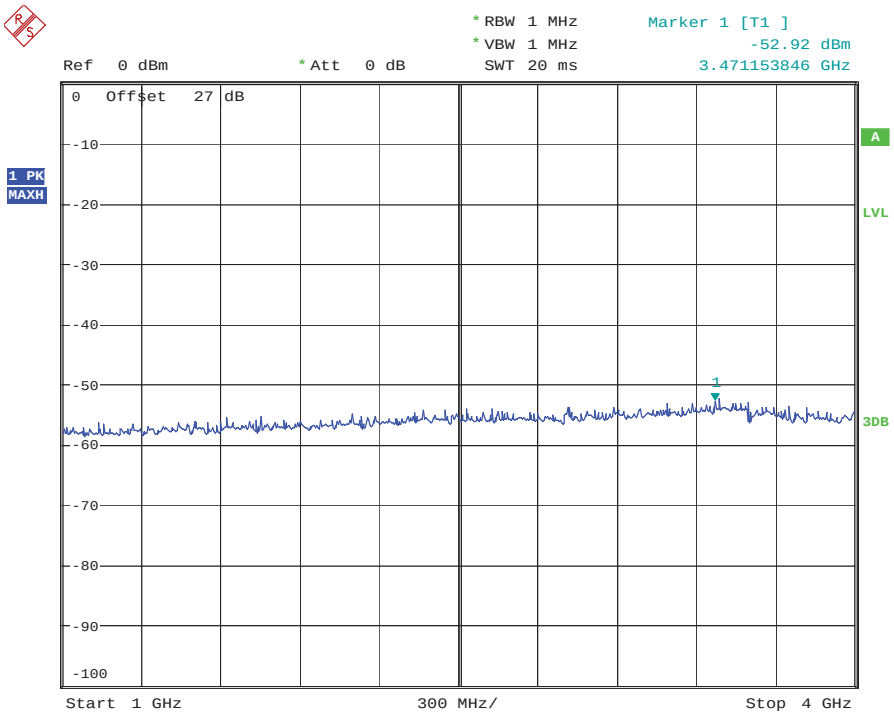


CONDUCTED SPURIOUS EMISSION GSM850 CH251
Date: 26.DEC.2012 15:32:53

850 Band Idle

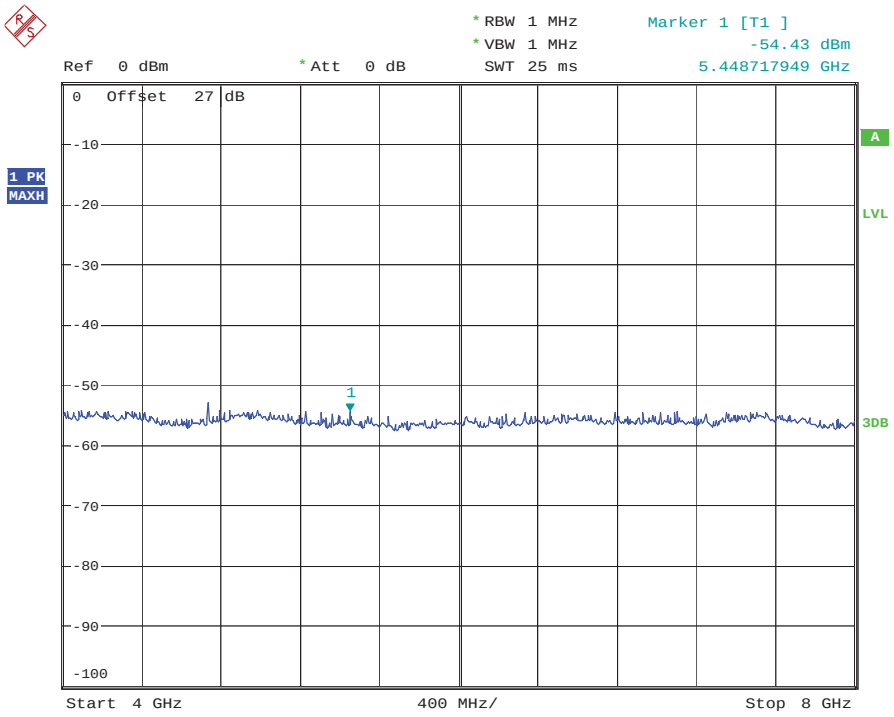


CONDUCTED SPURIOUS EMISSION GSM850 IDLE
Date: 26.DEC.2012 15:04:17



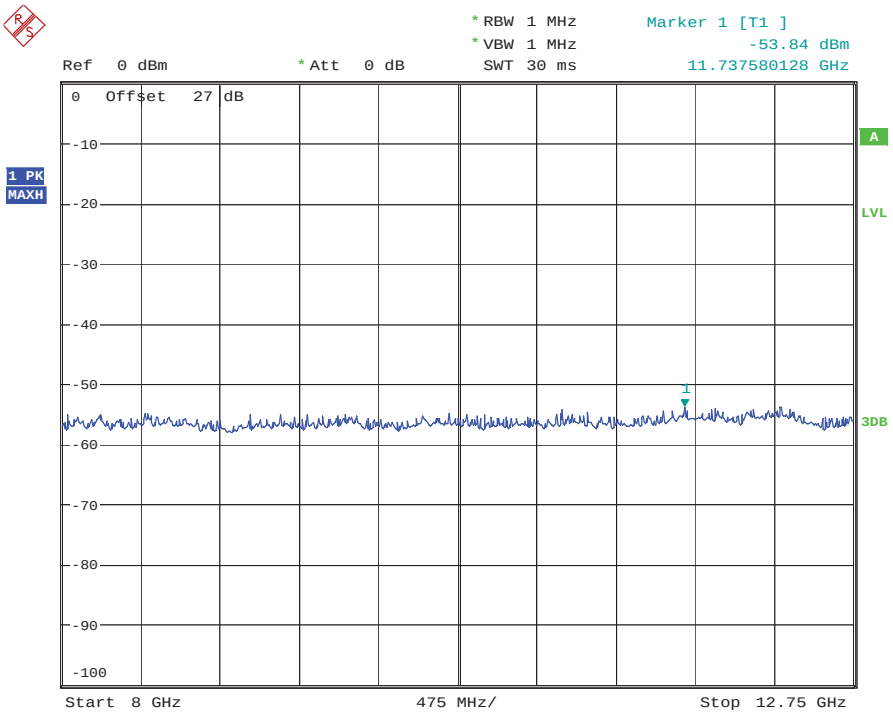
CONDUCTED SPURIOUS EMISSION GSM850 IDLE

Date: 26.DEC.2012 15:18:38



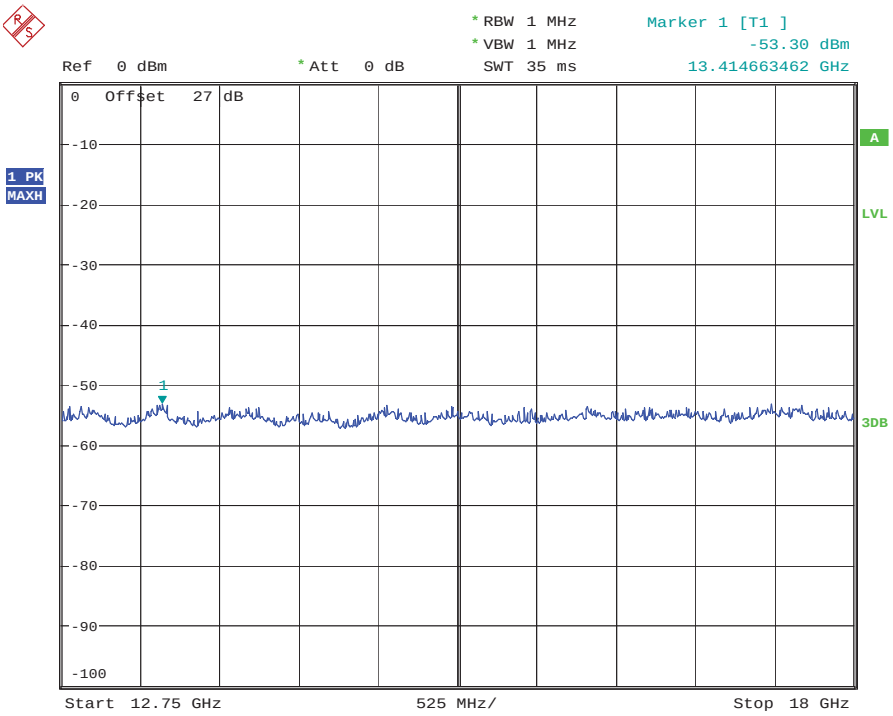
CONDUCTED SPURIOUS EMISSION GSM850 IDLE

Date: 26.DEC.2012 15:22:58



CONDUCTED SPURIOUS EMISSION GSM850 IDLE

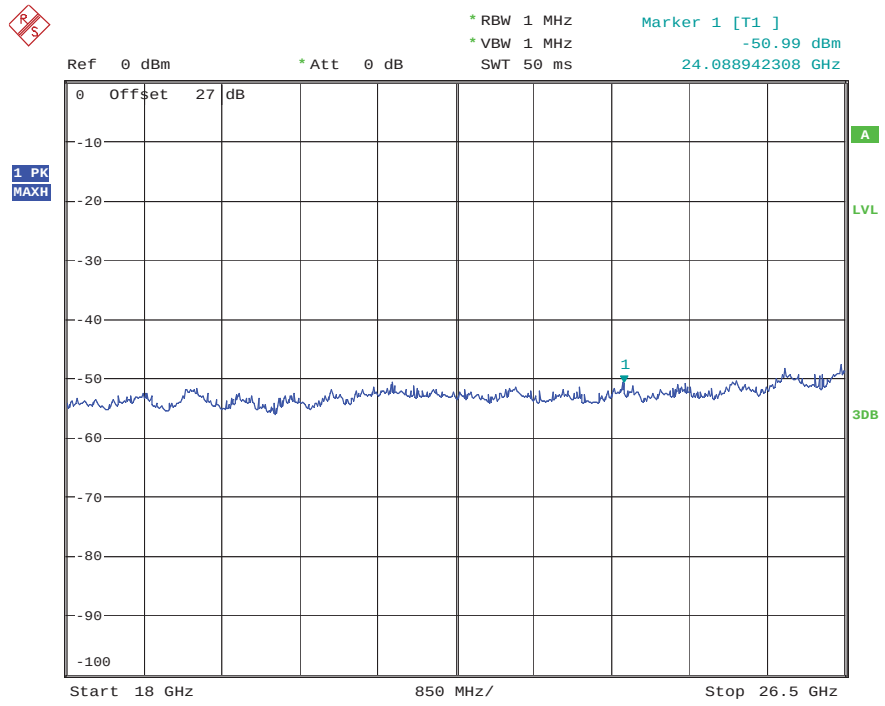
Date: 26.DEC.2012 15:23:20



CONDUCTED SPURIOUS EMISSION GSM850 IDLE

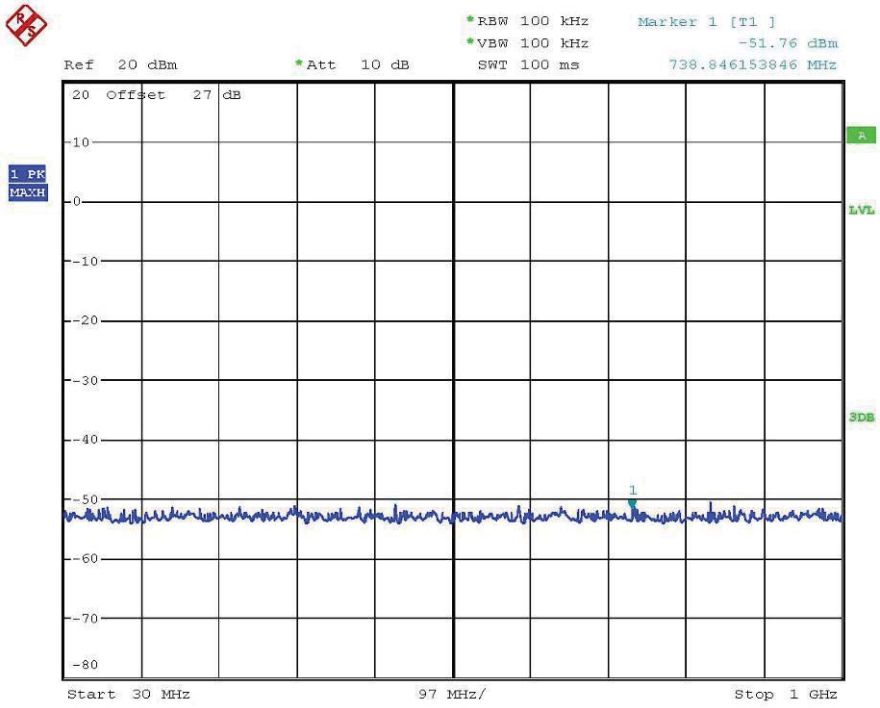
Date: 26.DEC.2012 15:27:51

Report Number: W6M21212-12939-P-2224
FCC ID: GX9CTC10523G



CONDUCTED SPURIOUS EMISSION GSM850 IDLE
Date: 26.DEC.2012 15:30:48

CH512



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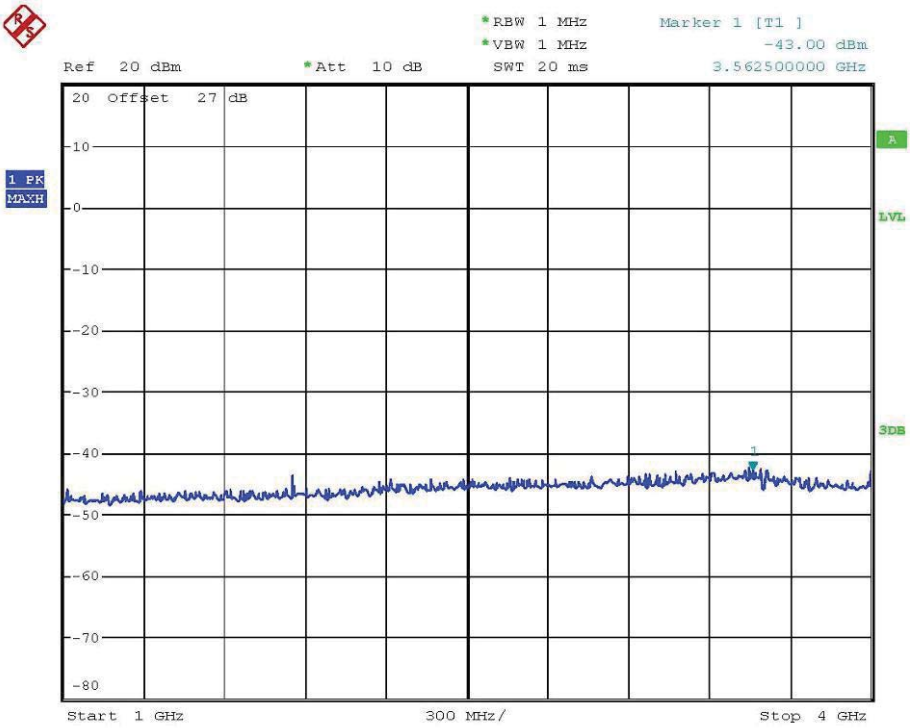
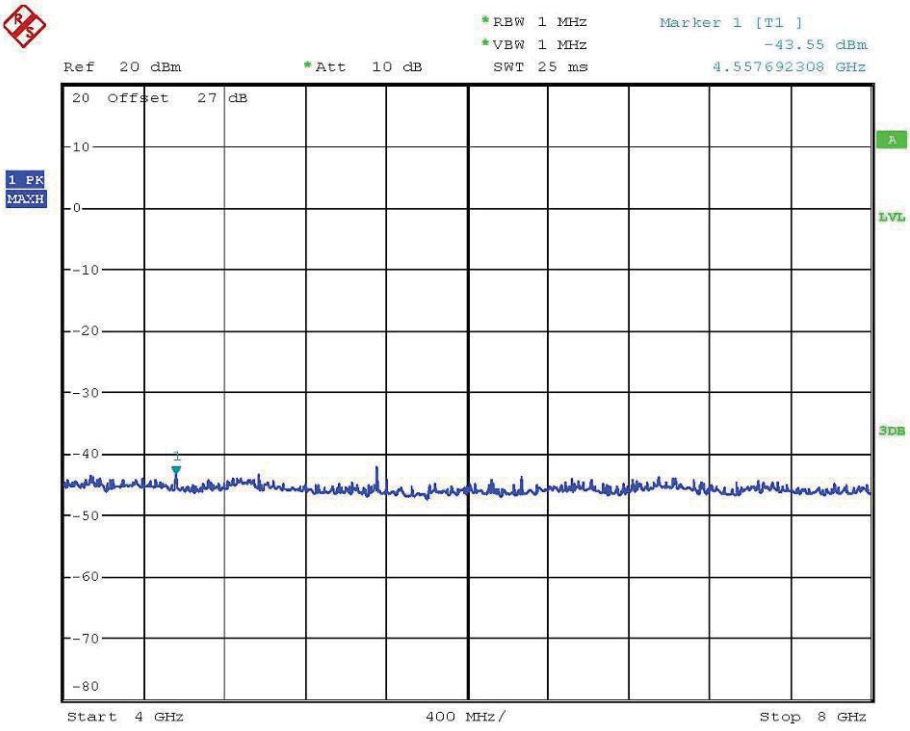
Date: 26.DEC.2012 15:08:31



CONDUCTED SPURIOUS EMISSION PCS1900 CH512

Date: 26.DEC.2012 16:41:35



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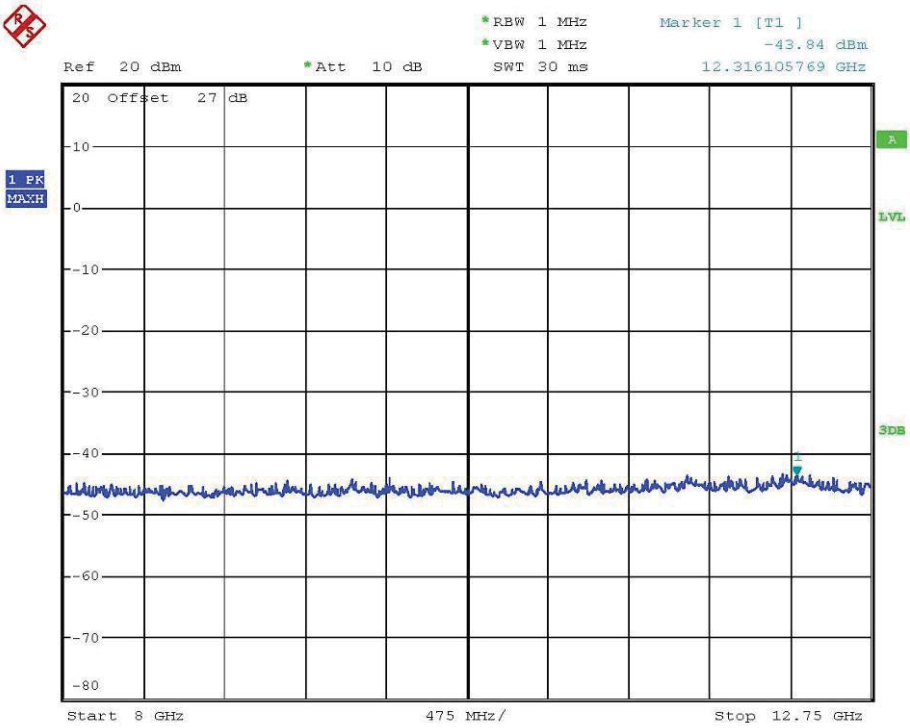
Date: 26.DEC.2012 17:30:45



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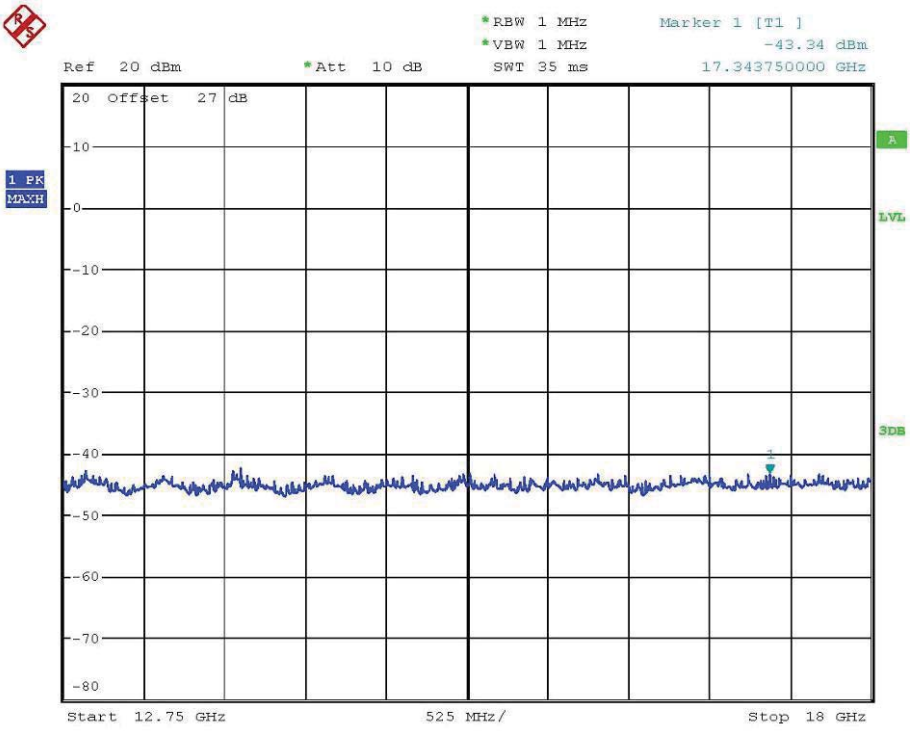
Date: 26.DEC.2012 17:41:37



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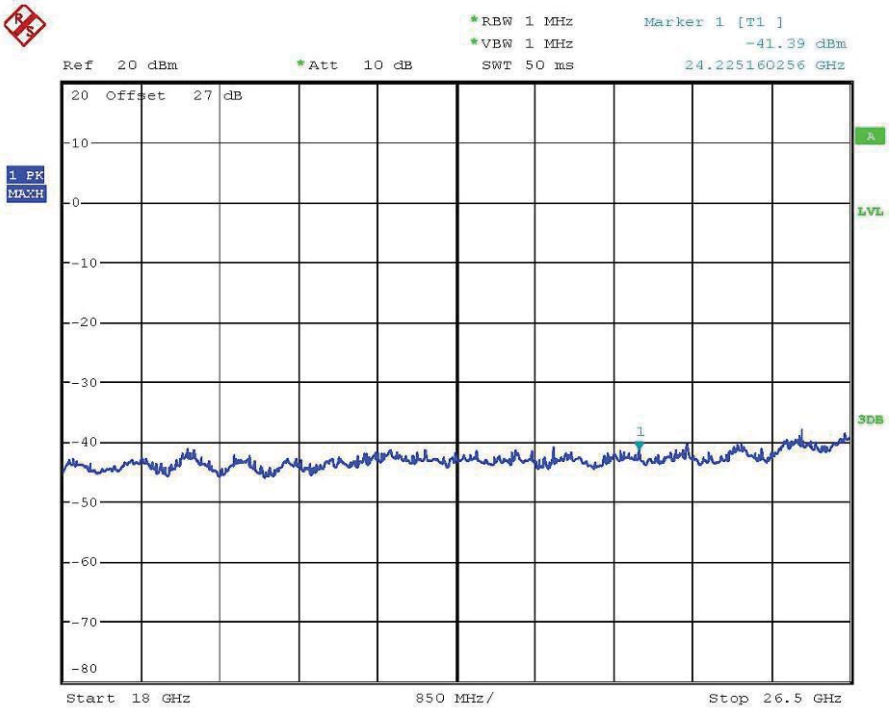
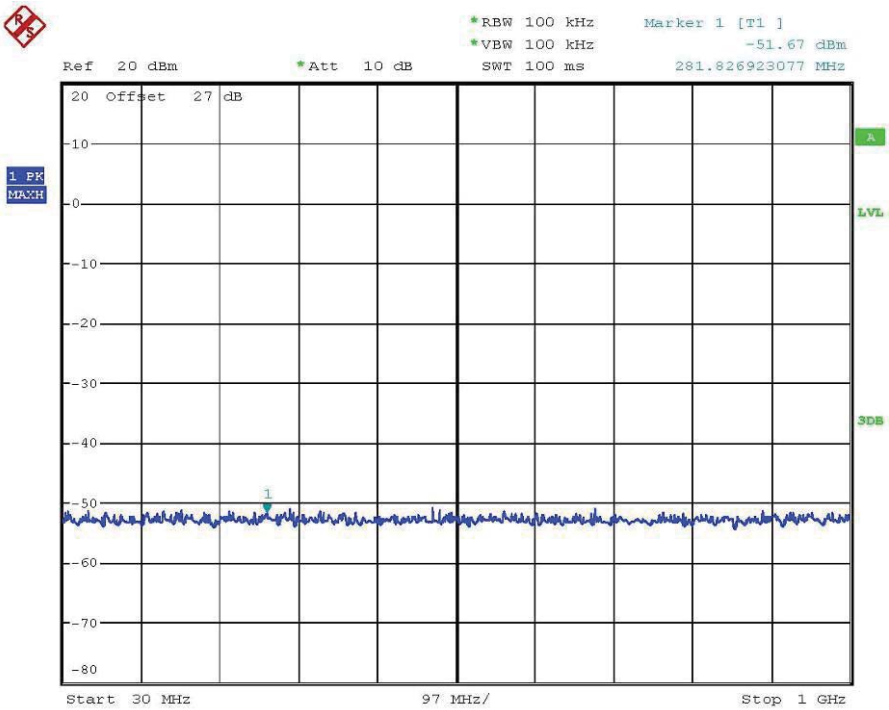
Date: 26.DEC.2012 17:41:54



CONDUCTED SPURIOUS EMISSION PCS1900 CH512
Date: 26.DEC.2012 17:43:37

CH661



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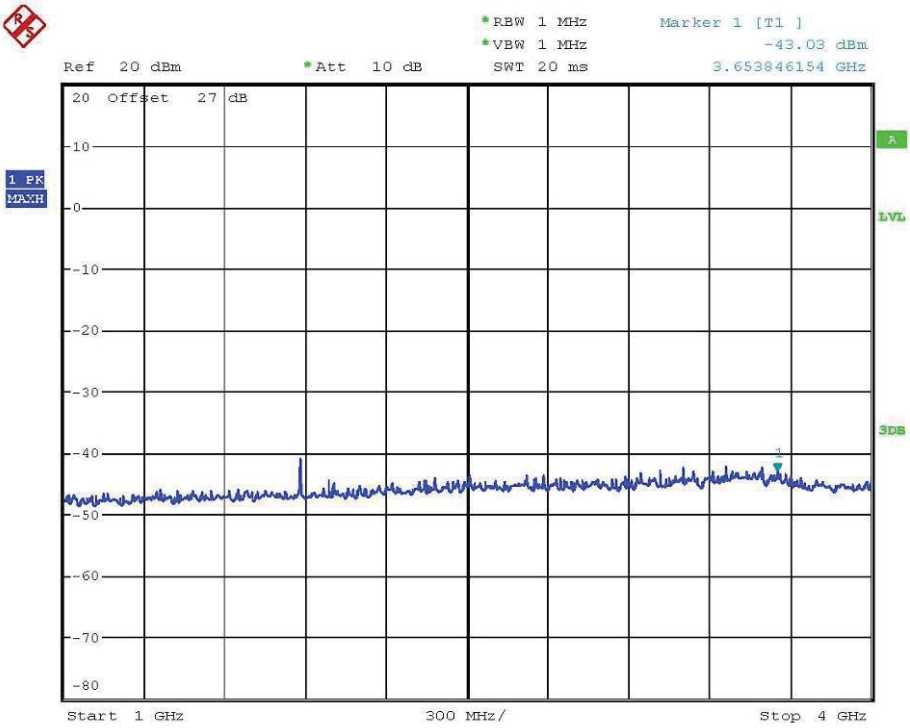
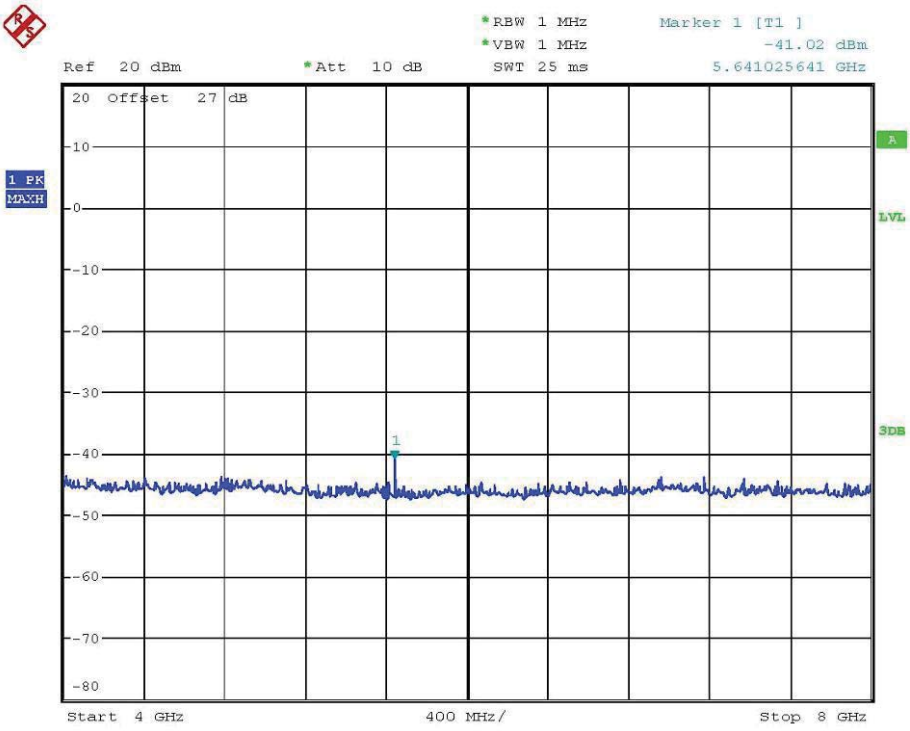
Date: 26.DEC.2012 15:08:11



CONDUCTED SPURIOUS EMISSION PCS1900 CH661

Date: 26.DEC.2012 16:42:09



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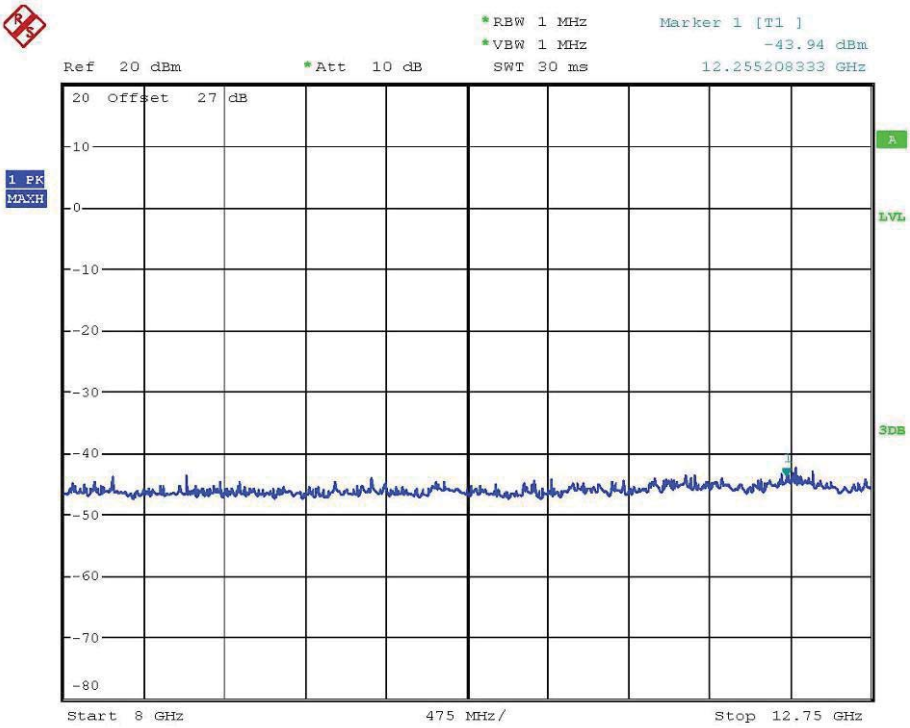

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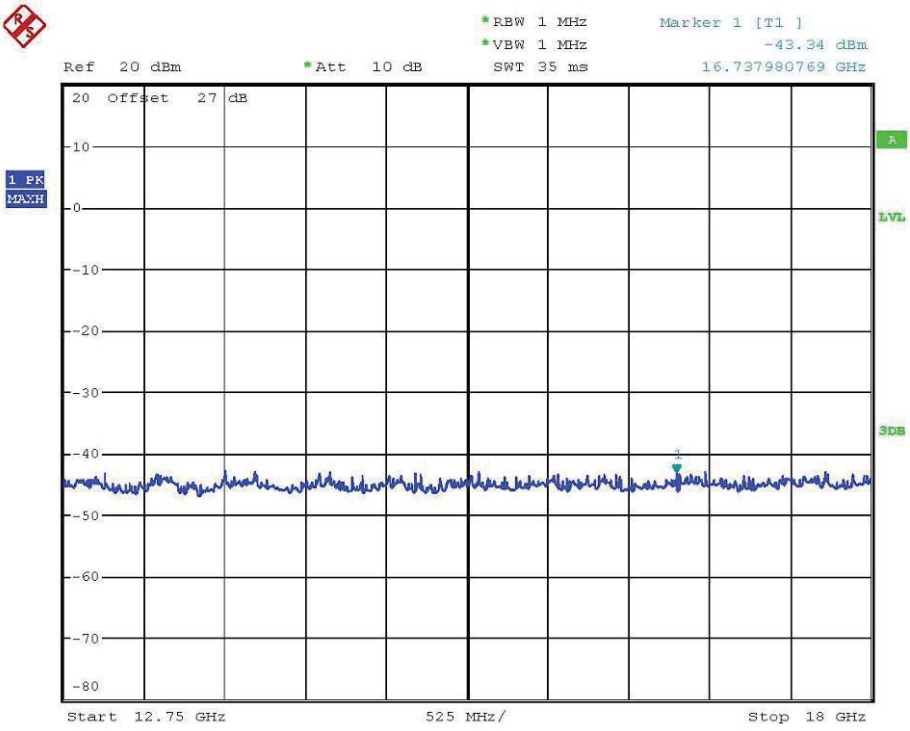
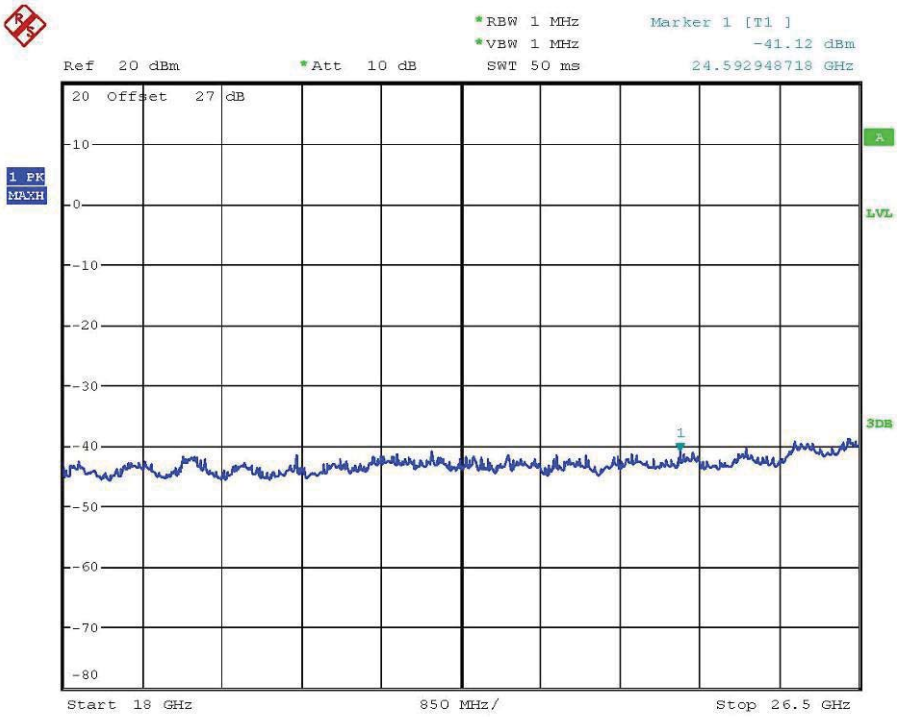


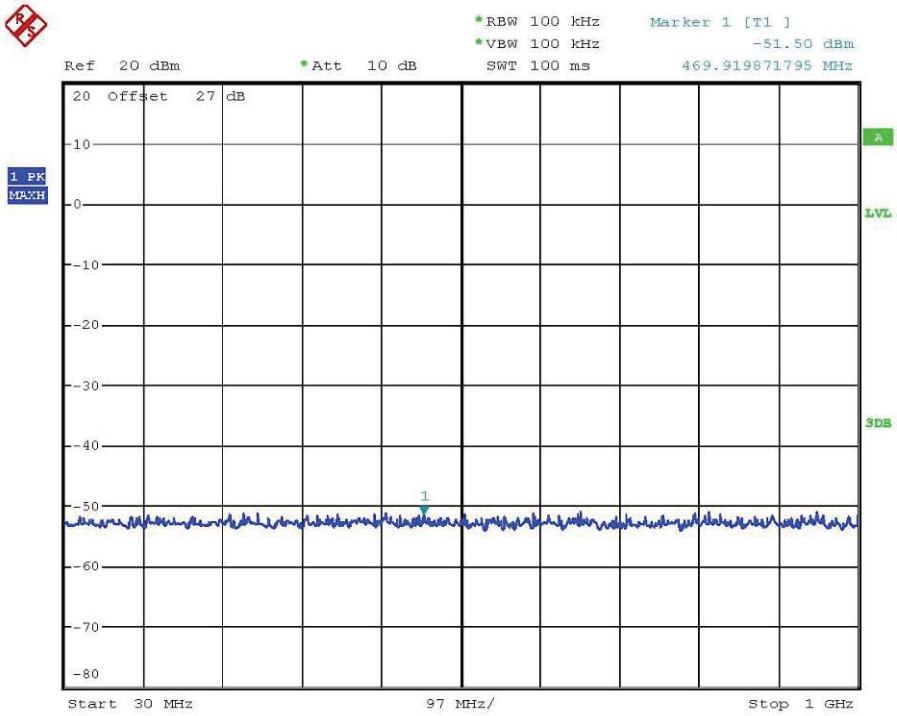
CONDUCTED SPURIOUS EMISSION PCS1900 CH661

Date: 26.DEC.2012 17:42:12



CONDUCTED SPURIOUS EMISSION PCS1900 CH661
Date: 26.DEC.2012 17:43:16

CH810



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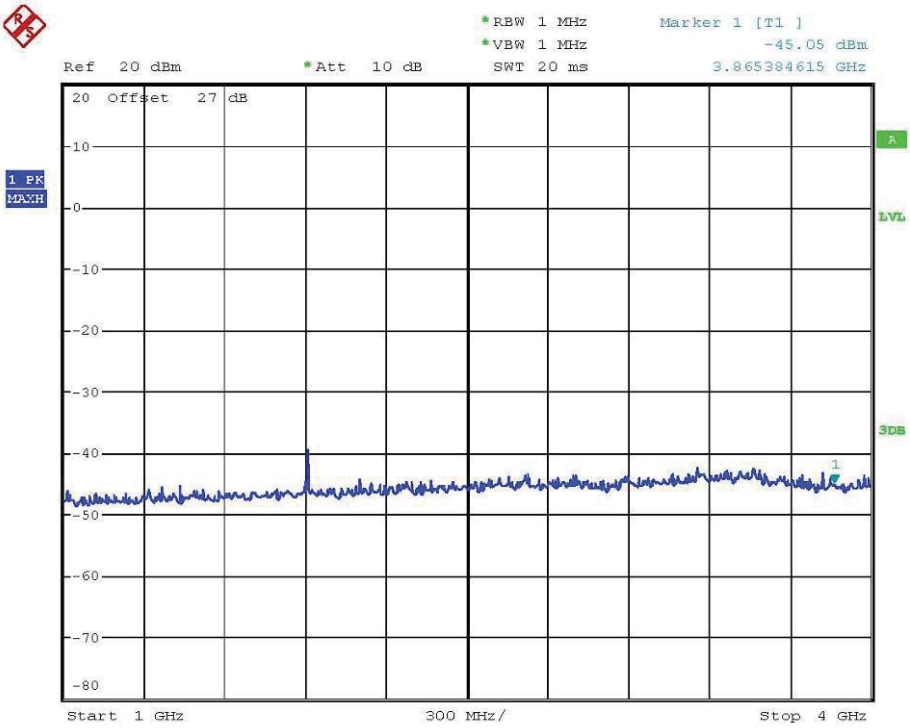

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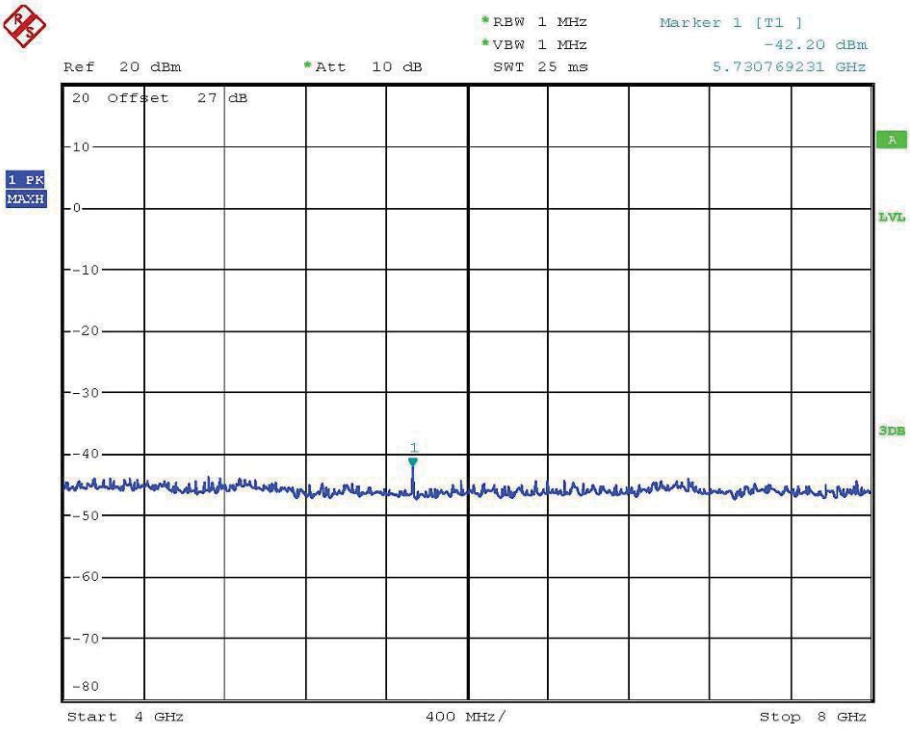
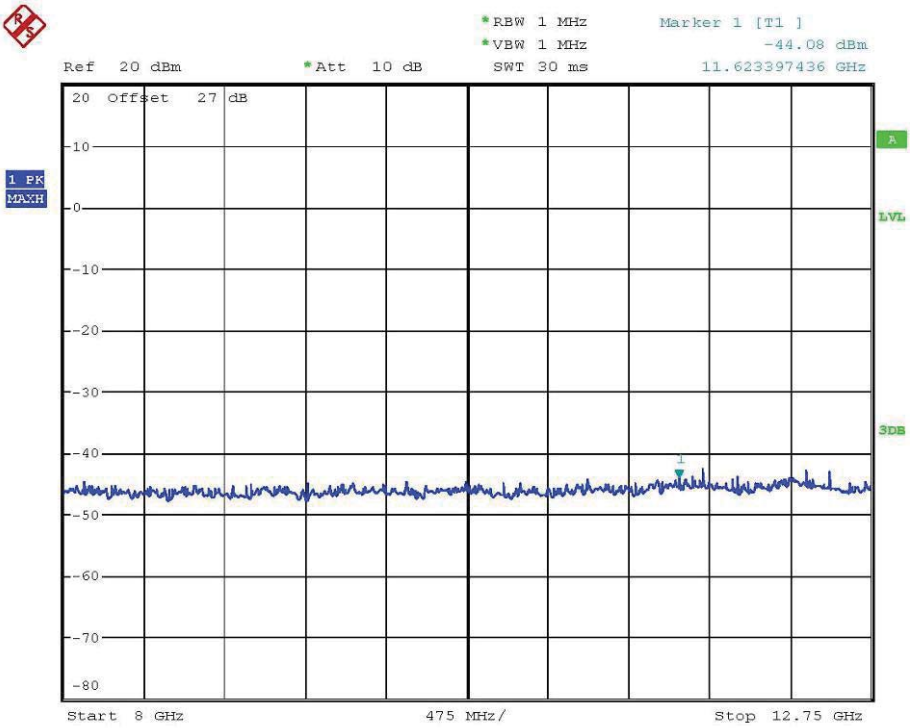
Date: 26.DEC.2012 16:42:47



CONDUCTED SPURIOUS EMISSION PCS1900 CH810

Date: 26.DEC.2012 17:40:44



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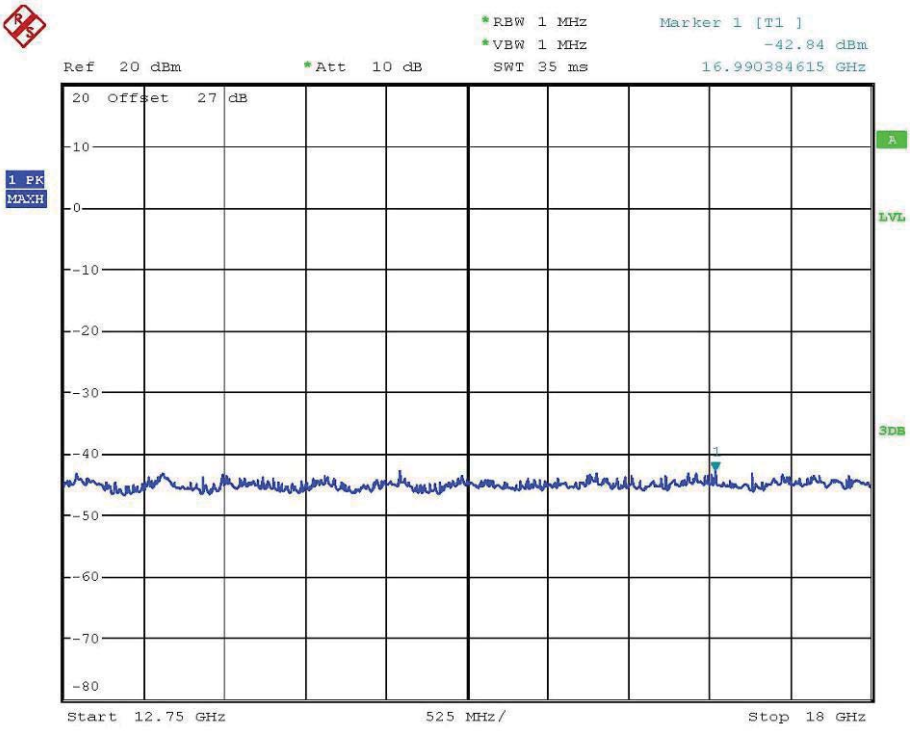
Date: 26.DEC.2012 17:41:06



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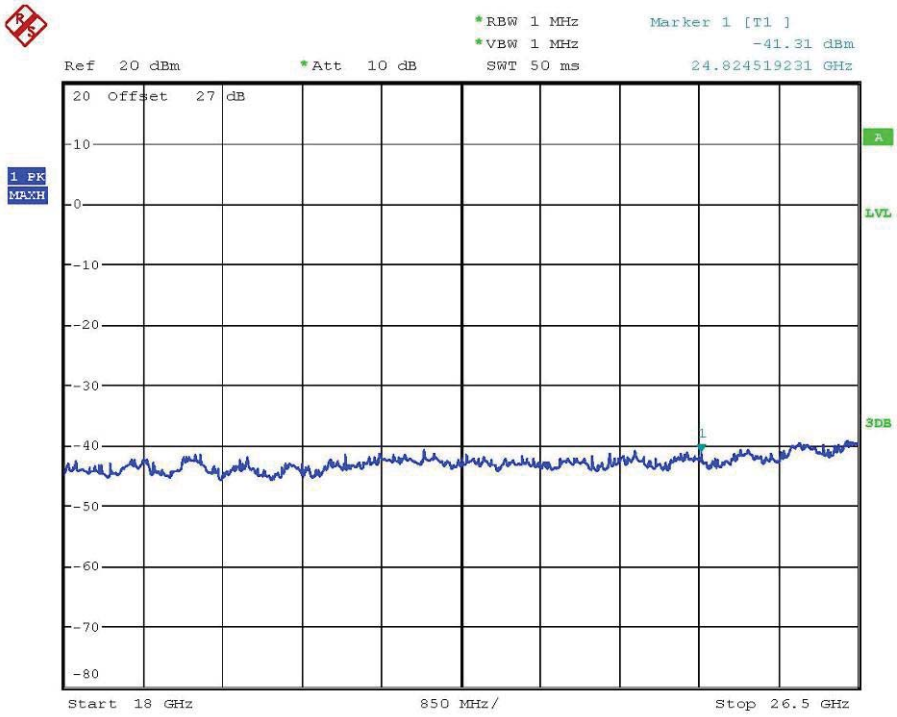
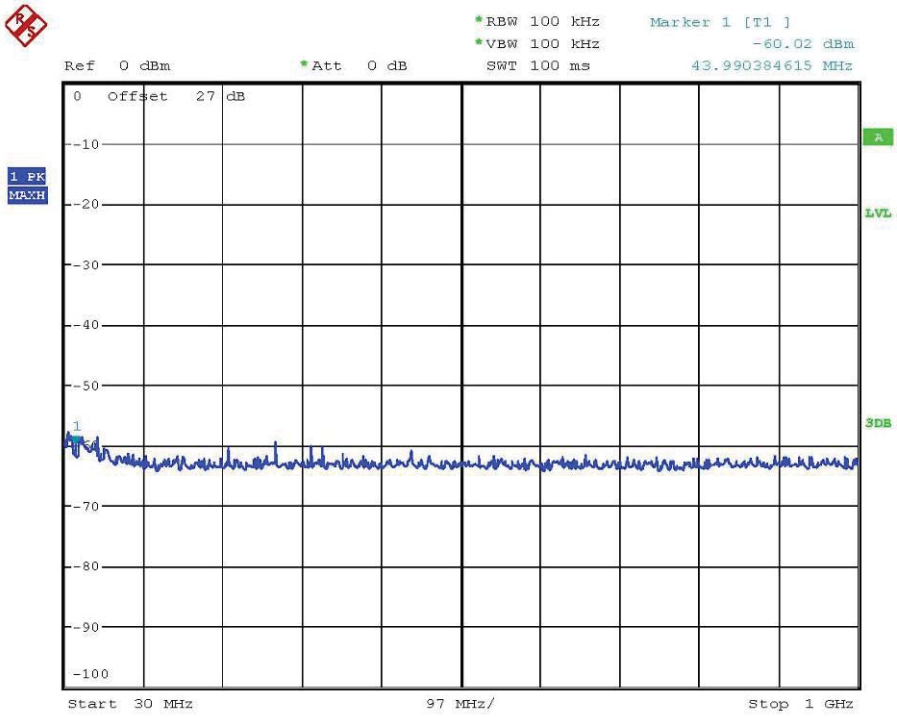
Date: 26.DEC.2012 17:42:27



CONDUCTED SPURIOUS EMISSION PCS1900 CH810
Date: 26.DEC.2012 17:42:56

1900 Band Idle



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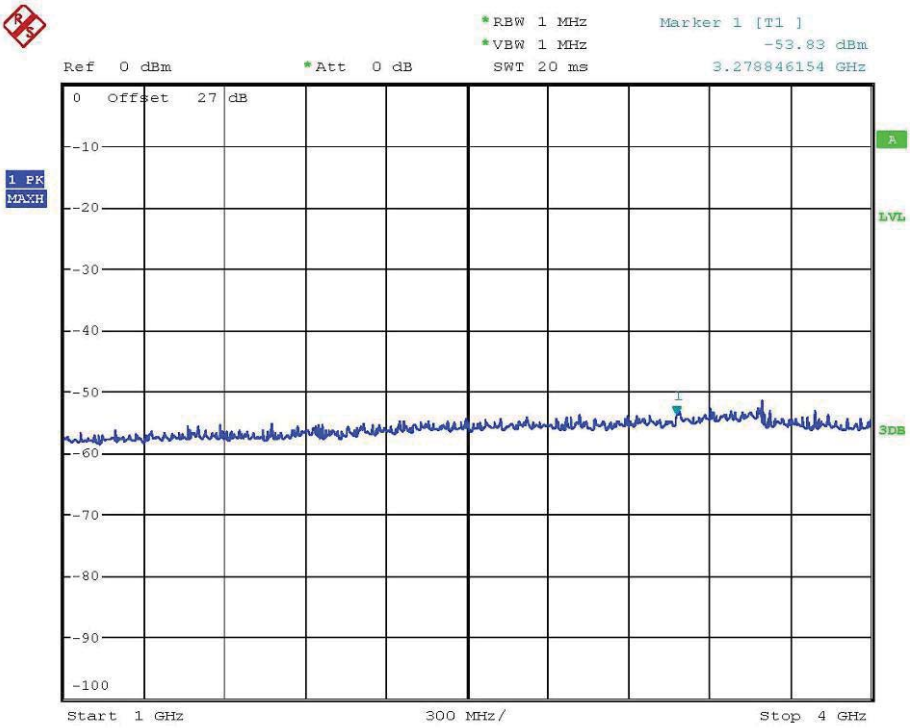
Date: 26.DEC.2012 15:09:10



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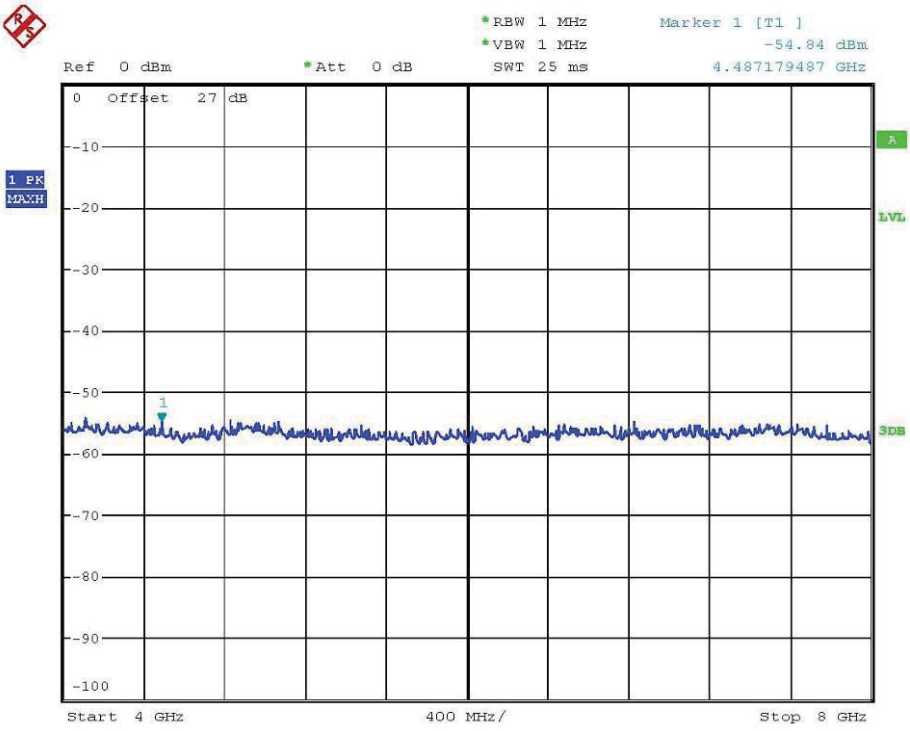
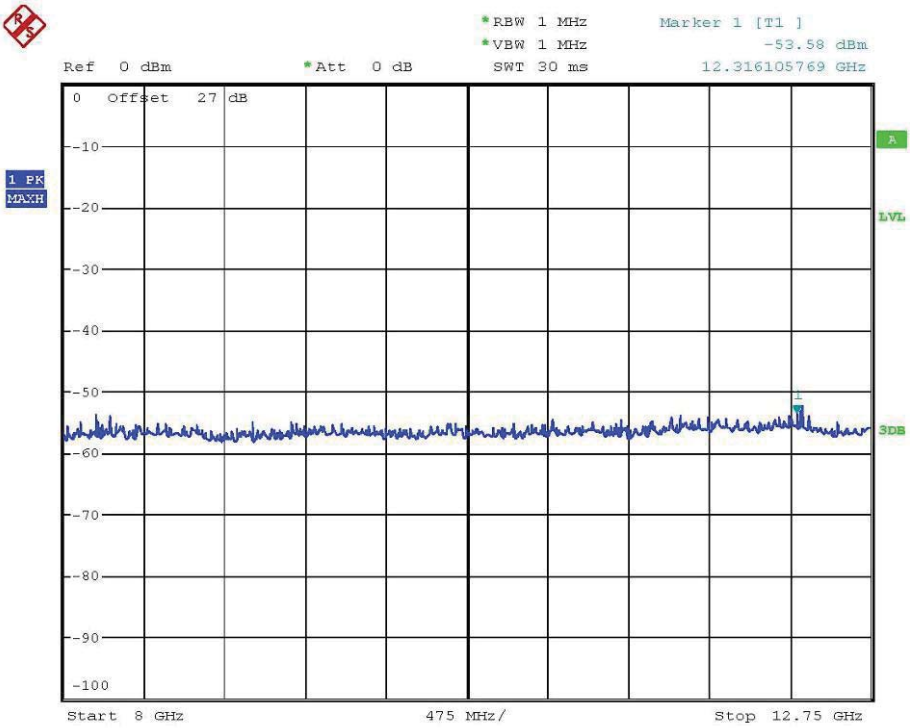
Date: 26.DEC.2012 16:45:29



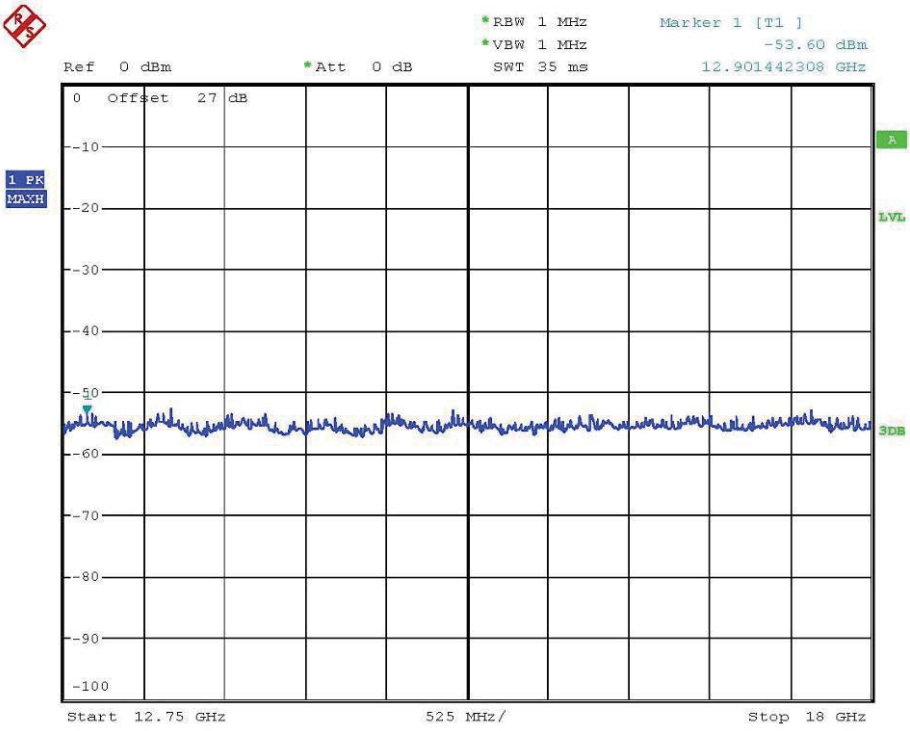
CONDUCTED SPURIOUS EMISSION PCS1900 IDLE

Date: 26.DEC.2012 16:45:41



CONDUCTED SPURIOUS EMISSION PCS1900 IDLE

Date: 26.DEC.2012 16:45:51



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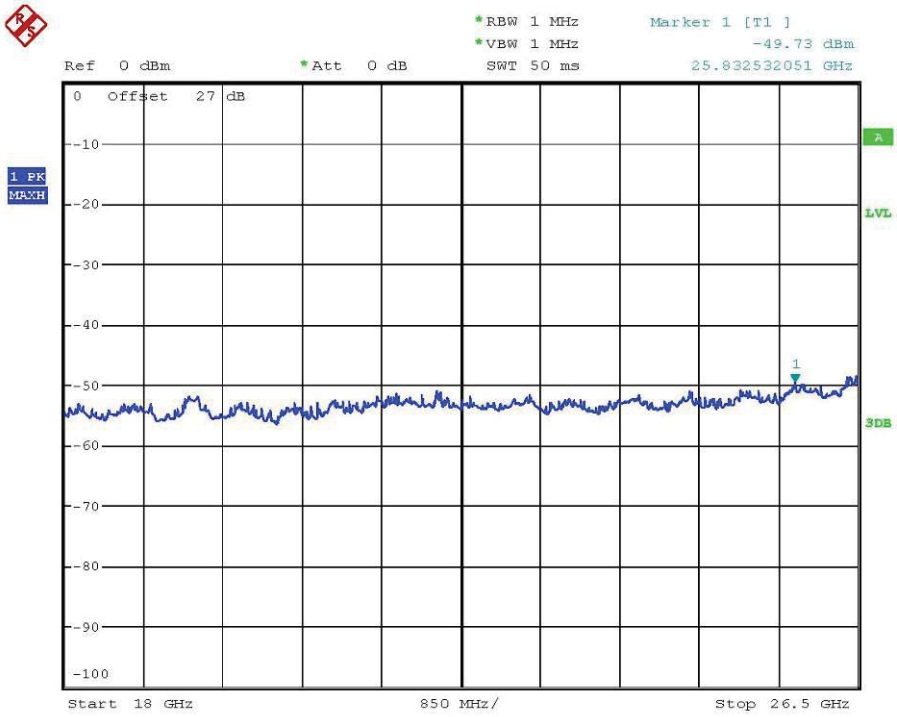
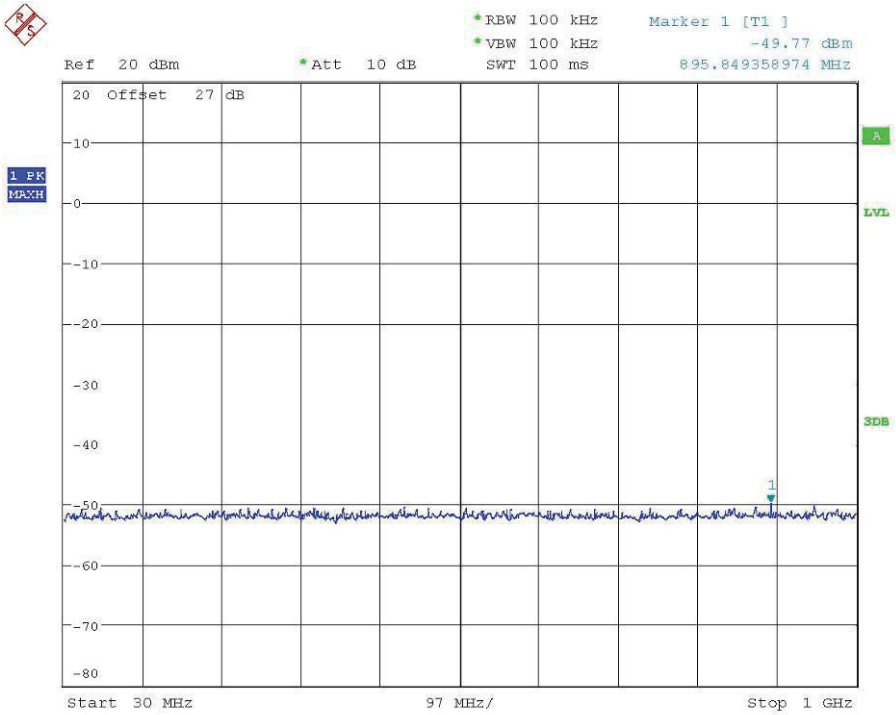
Date: 26.DEC.2012 16:46:02

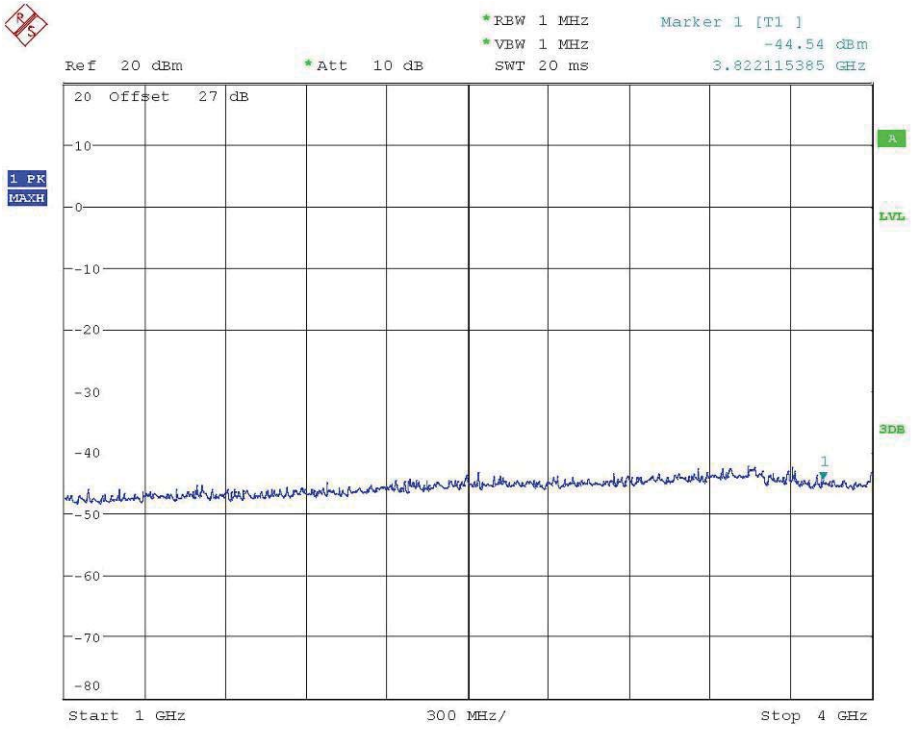


CONDUCTED SPURIOUS EMISSION PCS1900 IDLE
Date: 26.DEC.2012 16:46:17

CH9262



CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9262
Date: 26.DEC.2012 14:41:35



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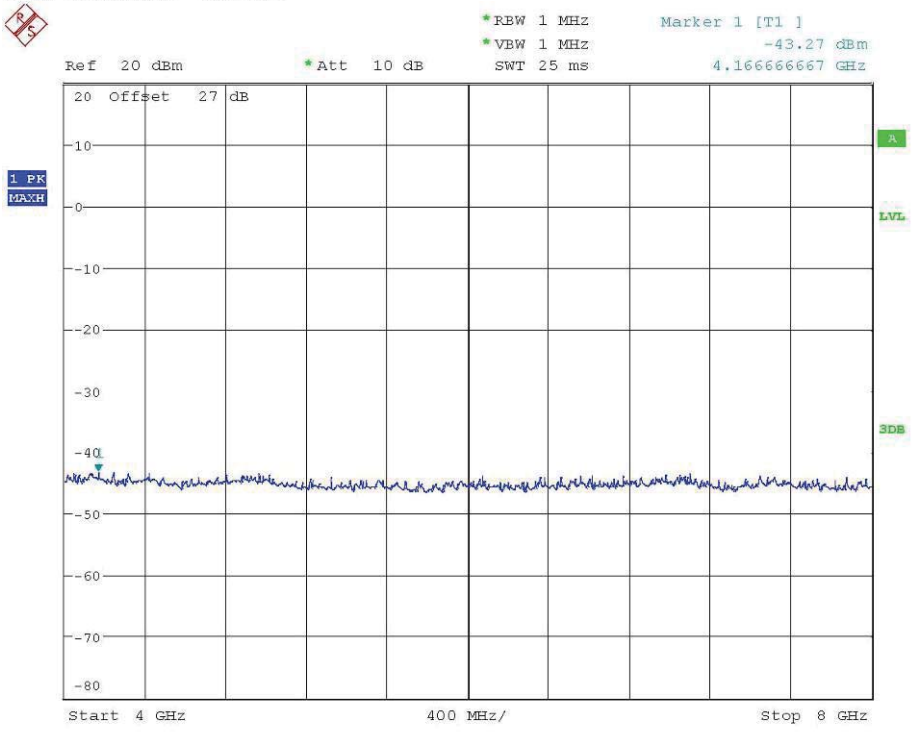
Date: 26.DEC.2012 16:37:39



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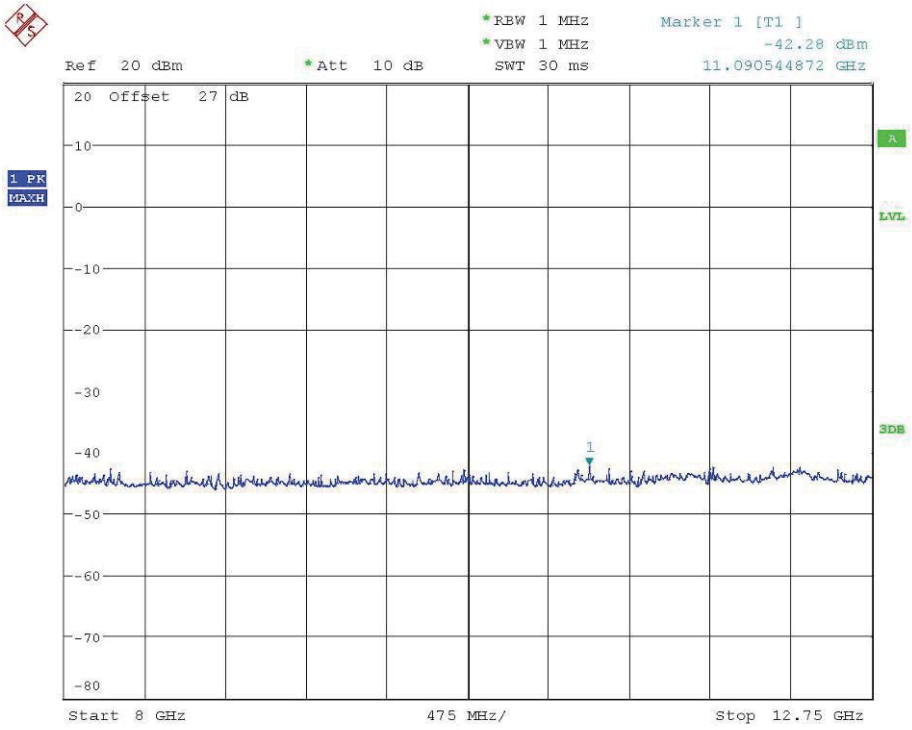
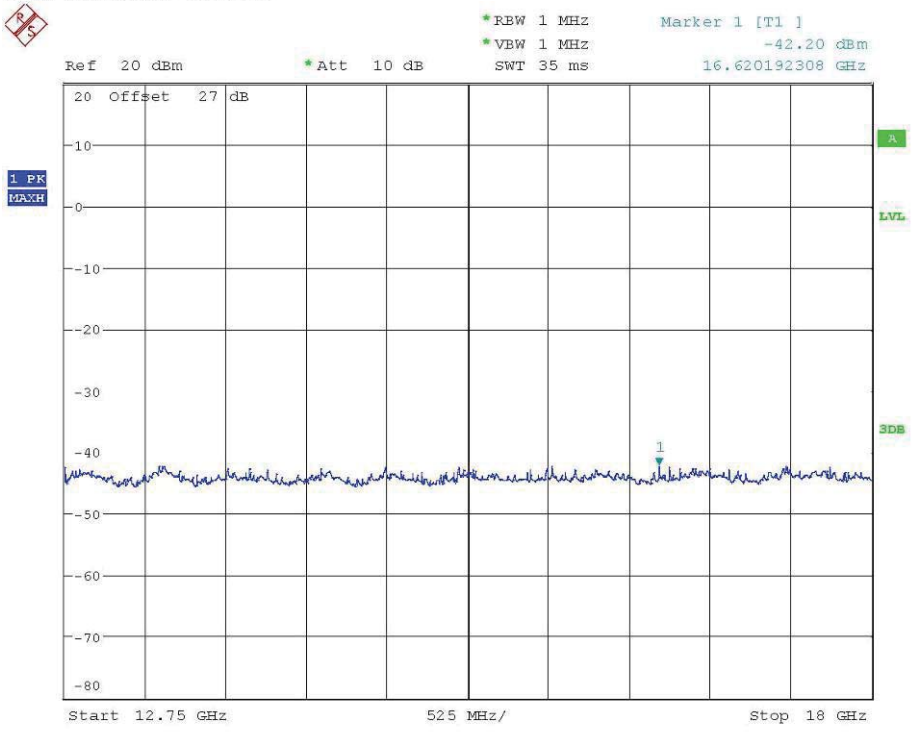
Date: 26.DEC.2012 16:56:40



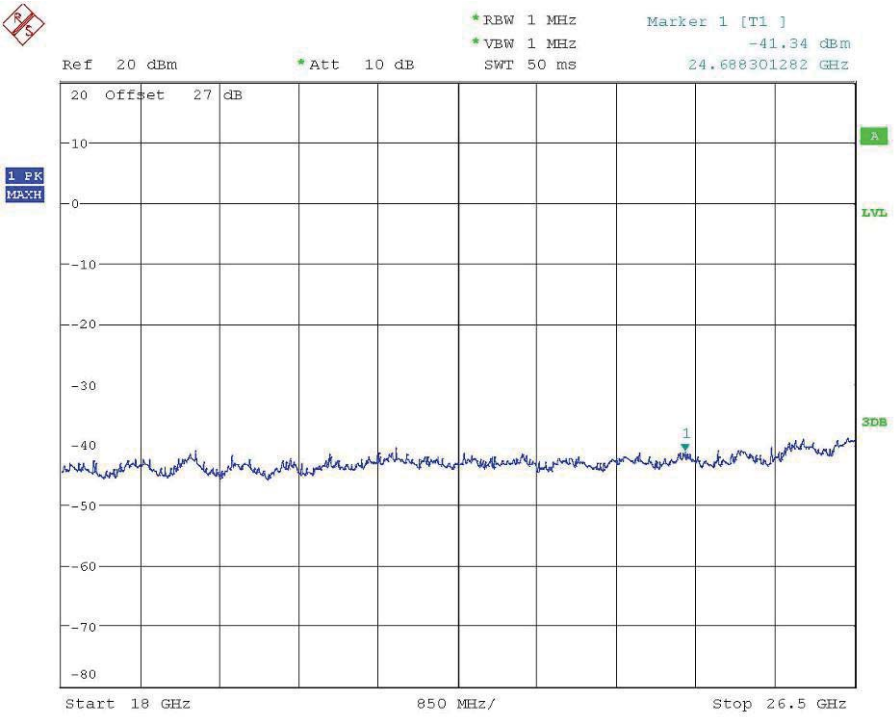
CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9262

Date: 8.JAN.2013 15:18:19



CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9262

Date: 26.DEC.2012 17:02:27



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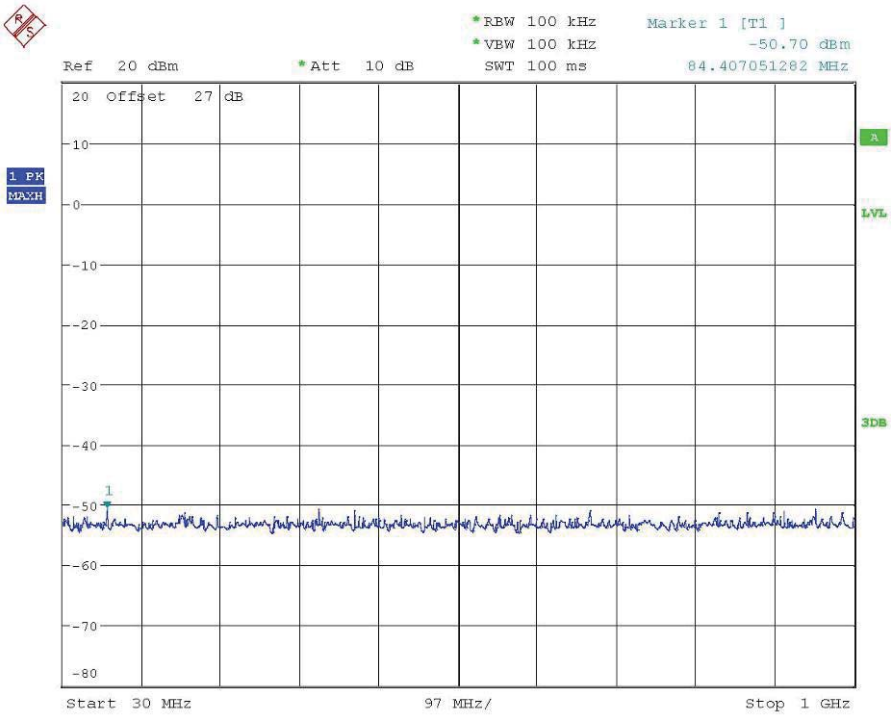
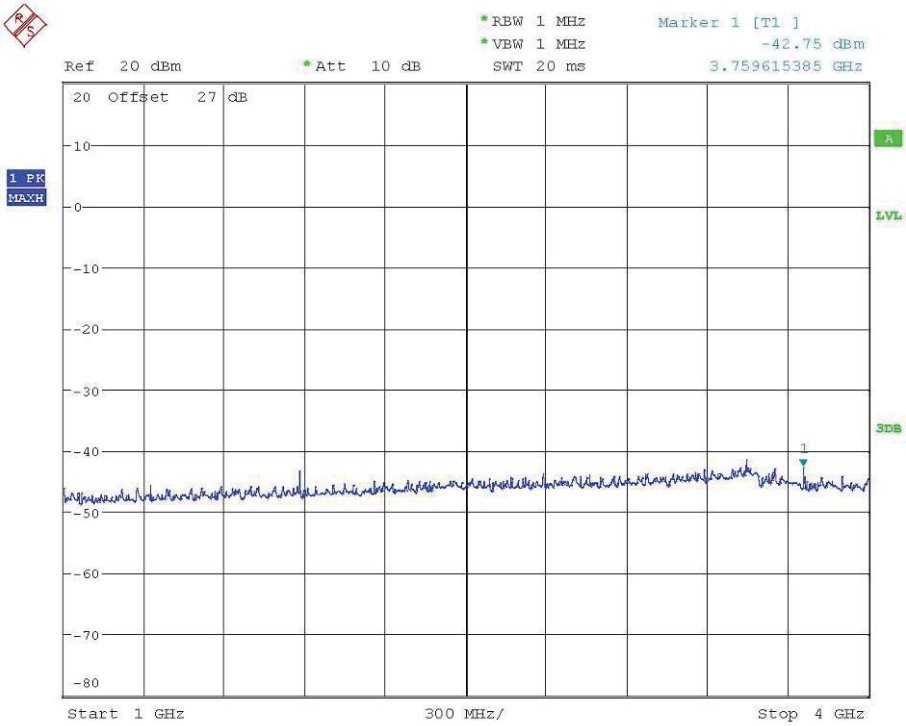
Date: 26.DEC.2012 17:04:14

CH9400



CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9400
Date: 26.DEC.2012 14:42:41



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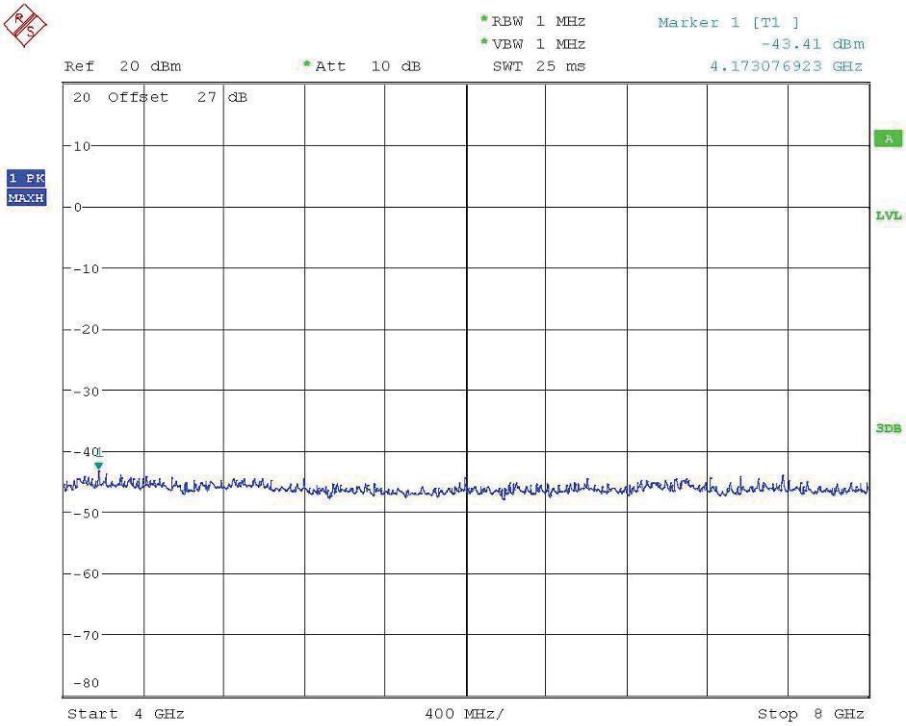
Date: 26.DEC.2012 16:38:15



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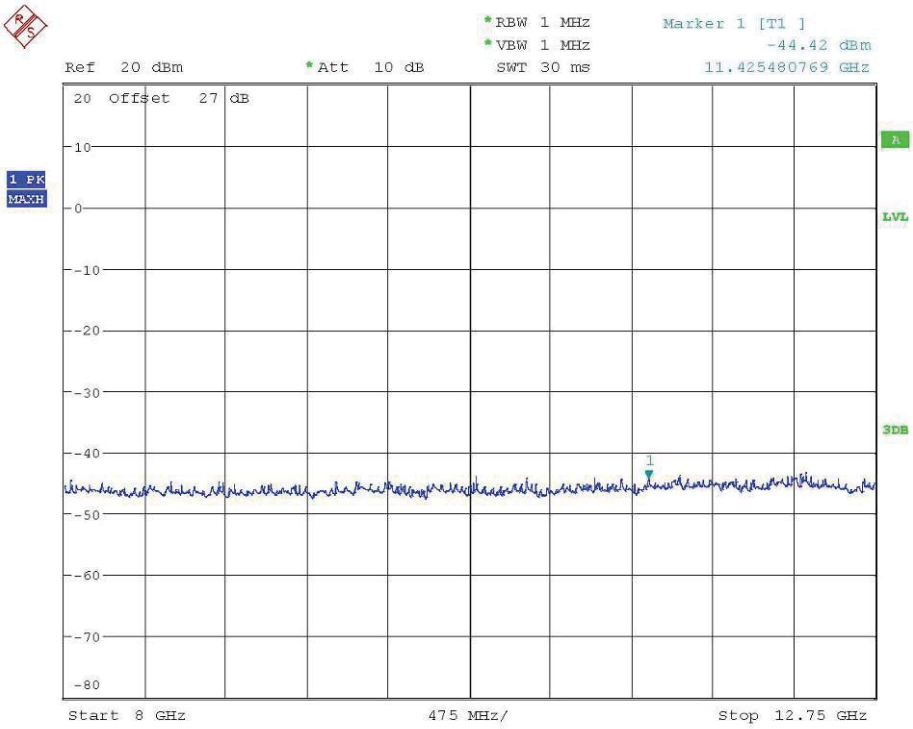
Date: 26.DEC.2012 16:57:56



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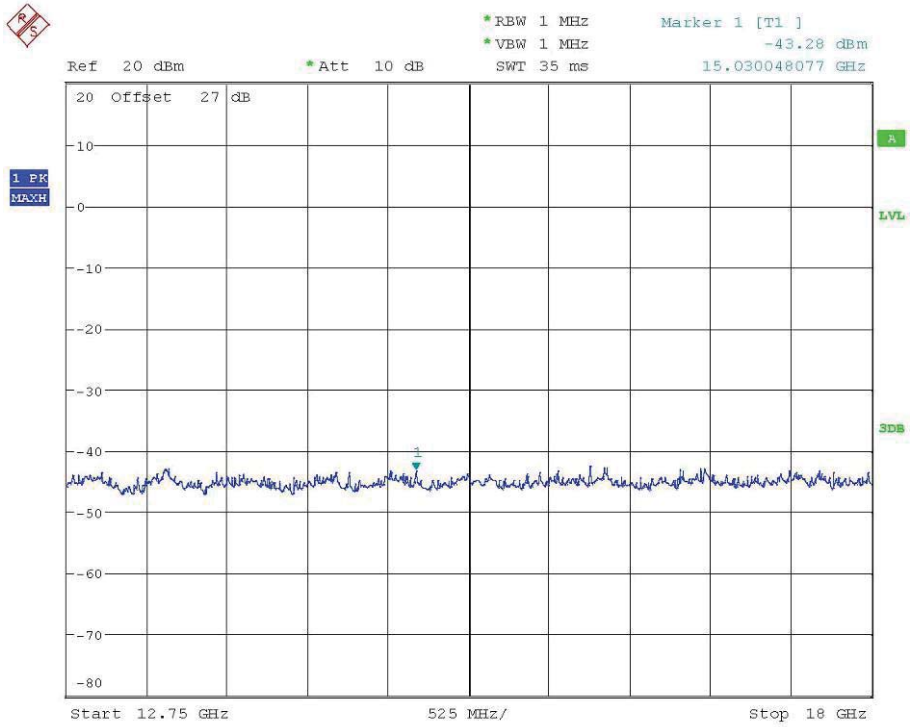
Date: 8.JAN.2013 15:18:34



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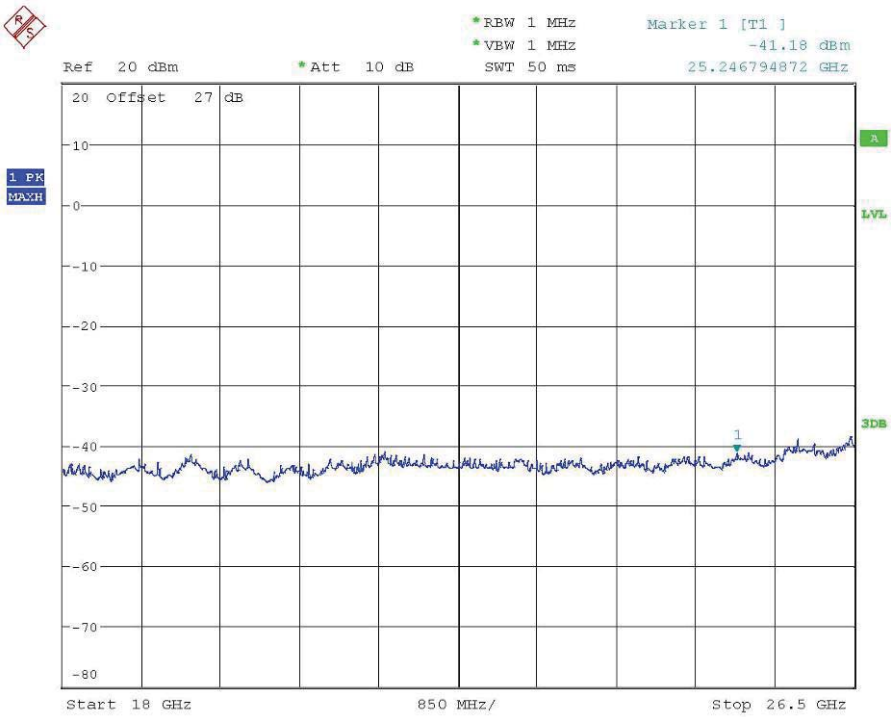
Date: 26.DEC.2012 17:02:44



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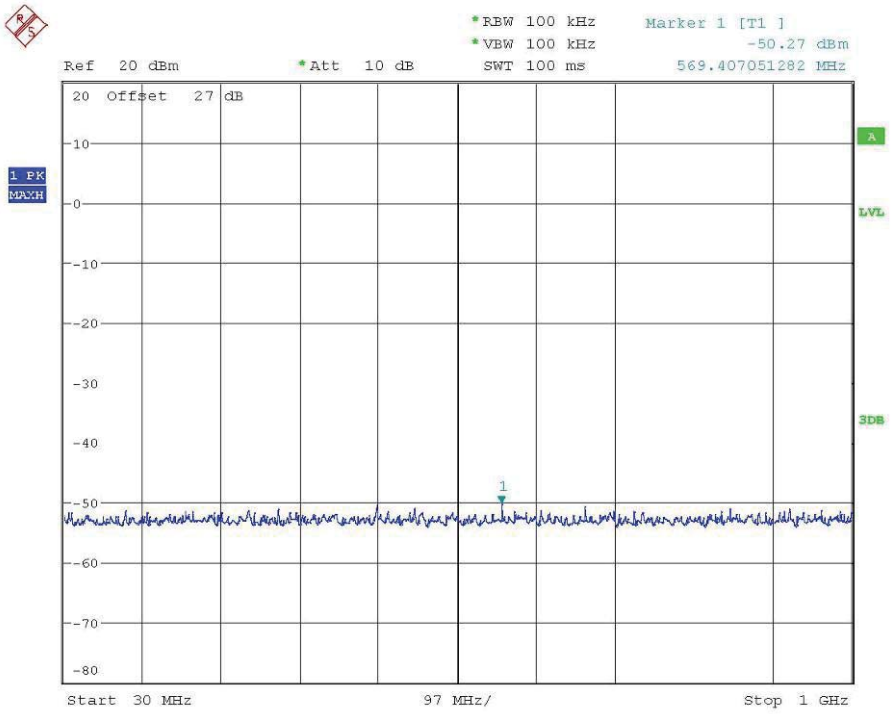
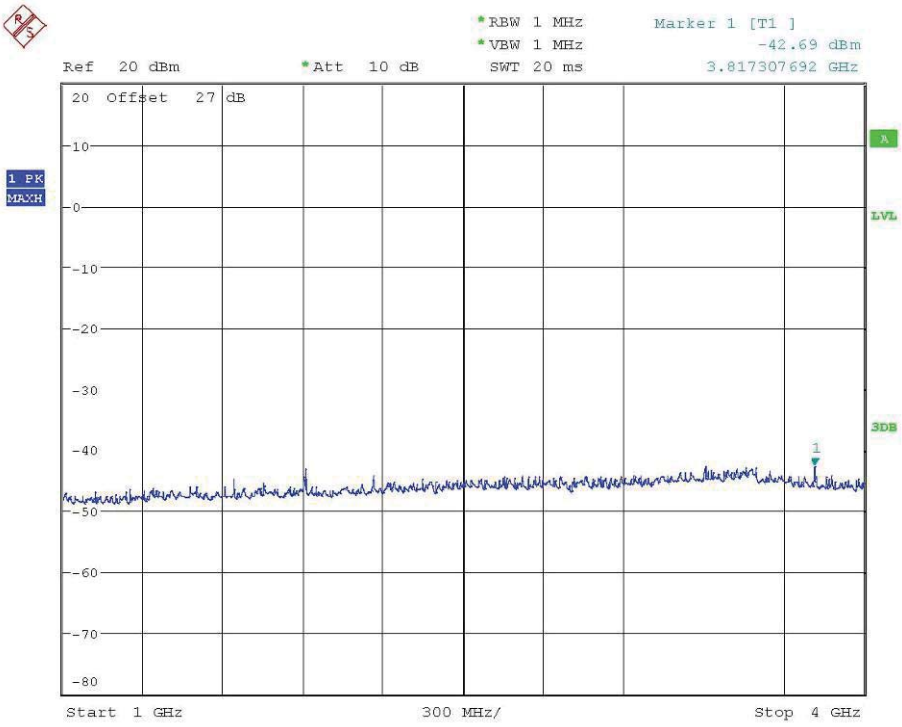
Date: 26.DEC.2012 17:03:43

CH9538

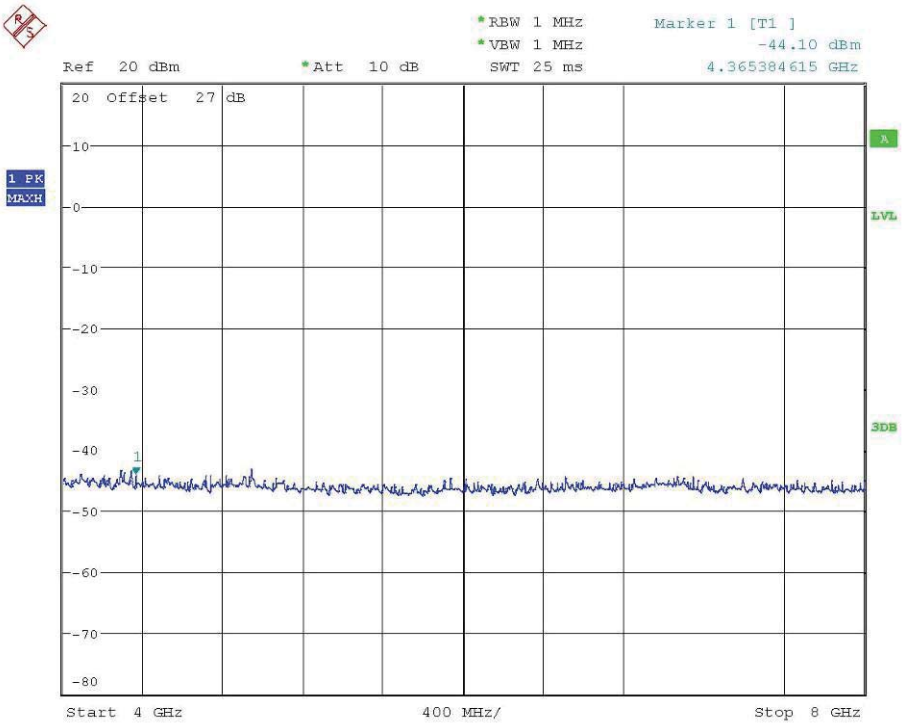


CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538
Date: 26.DEC.2012 14:43:11



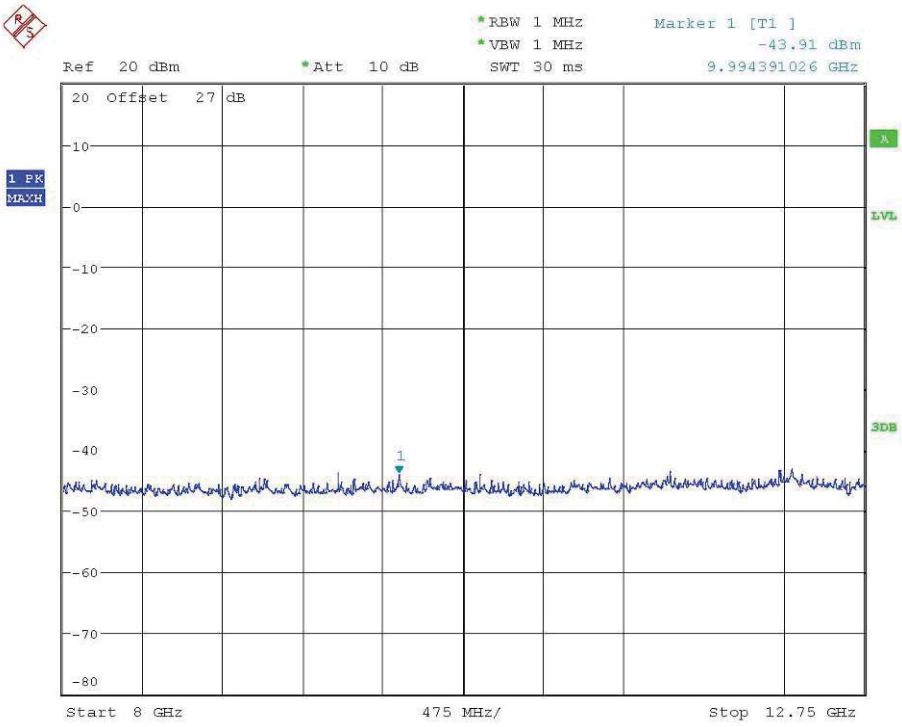
CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538

Date: 26.DEC.2012 16:38:45



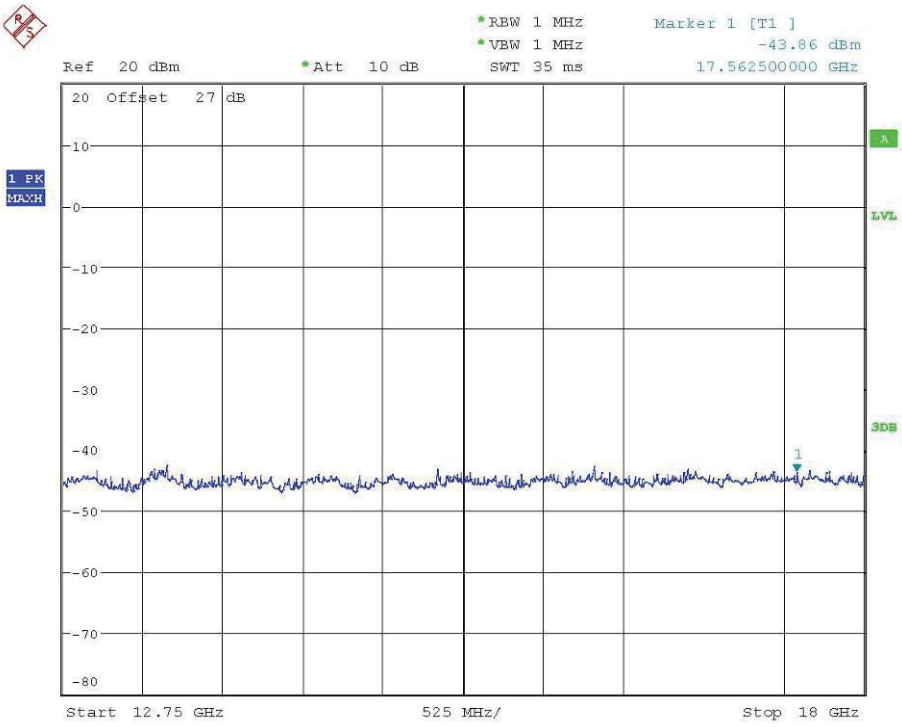
CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538

Date: 26.DEC.2012 16:58:22



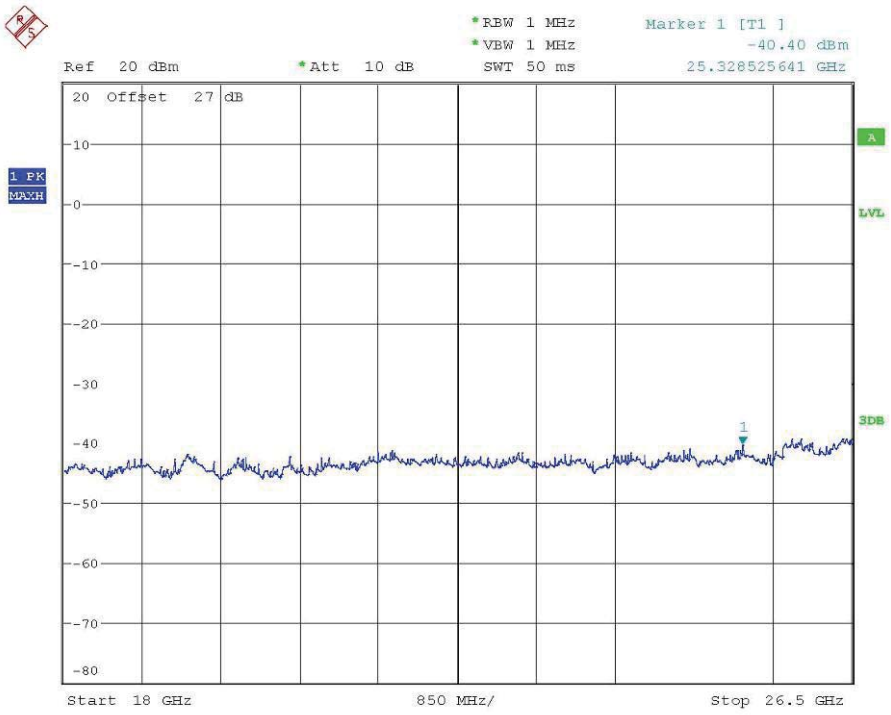
CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538

Date: 8.JAN.2013 15:18:52



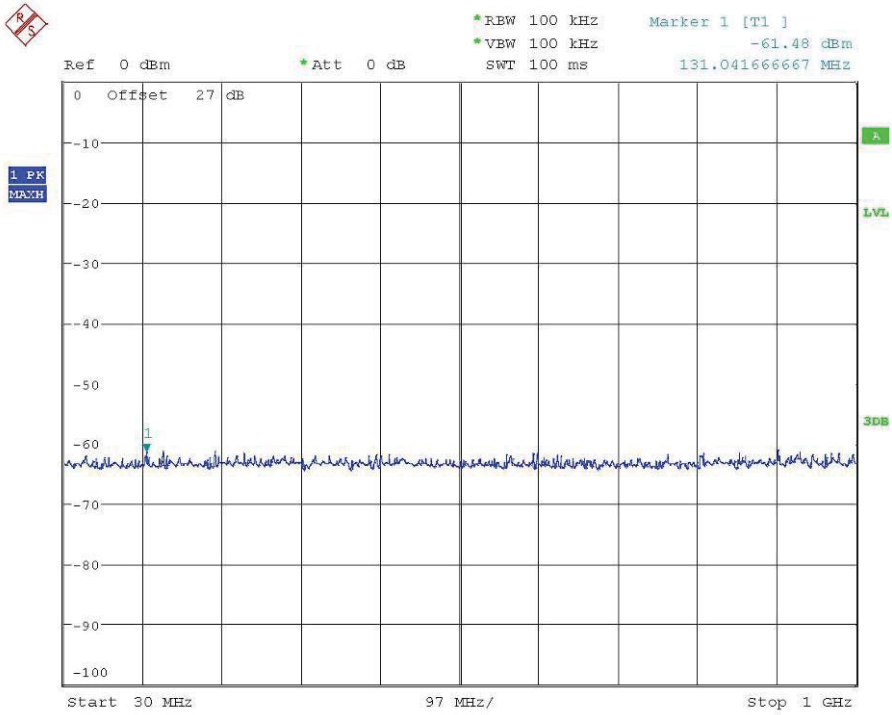
CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538

Date: 26.DEC.2012 17:03:03

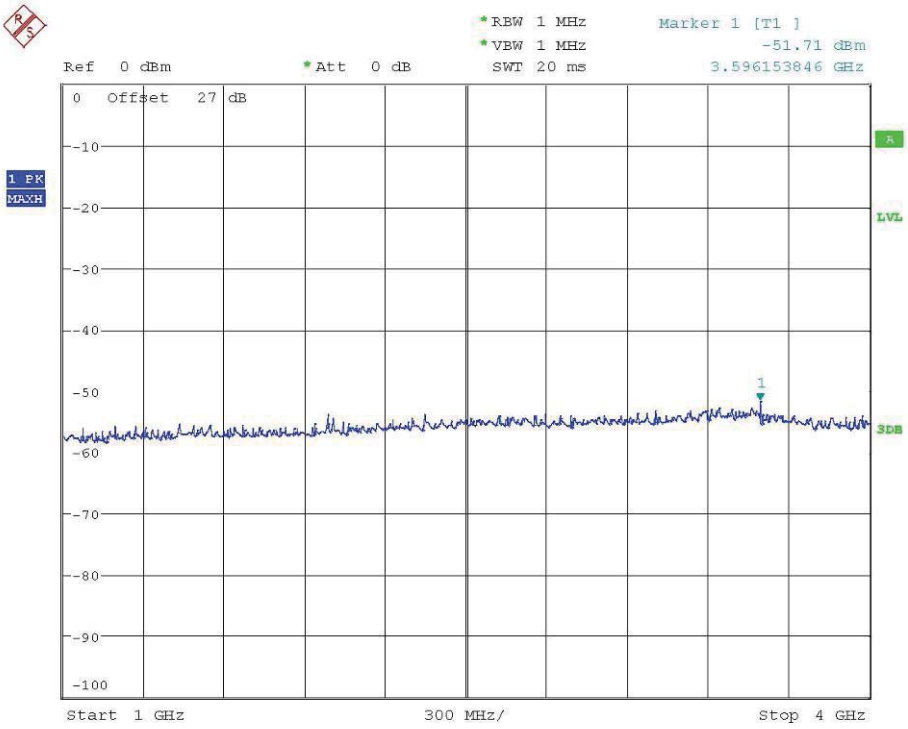


CONDUCTED SPURIOUS EMISSION WCDMA BAND II CH9538
Date: 26.DEC.2012 17:03:24

Band II Idle

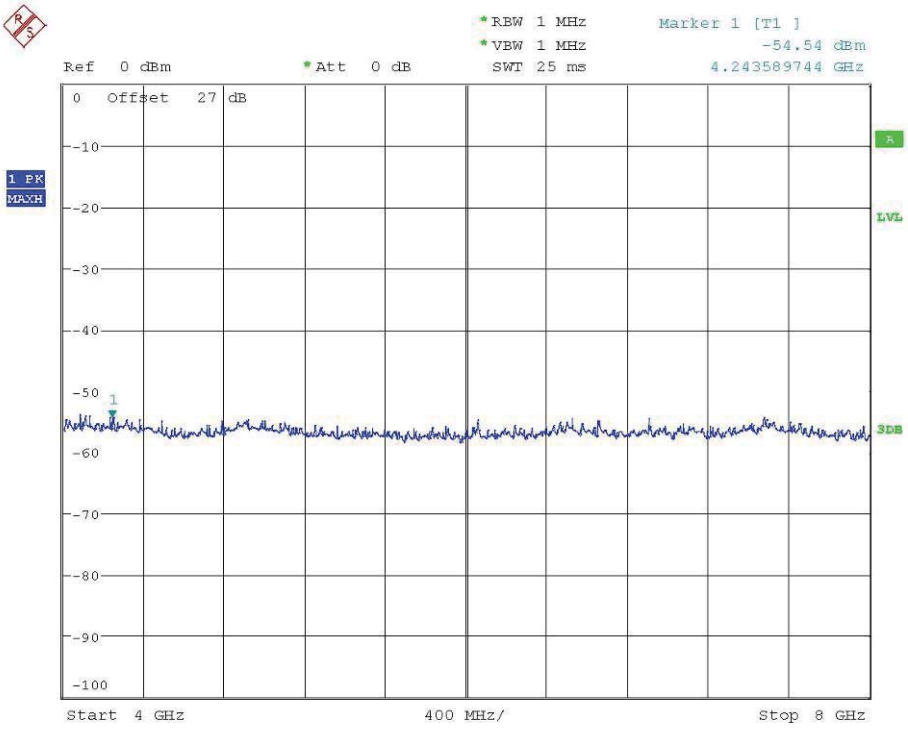


CONDUCTED SPURIOUS EMISSION WCDMA BAND II IDLE
Date: 26.DEC.2012 14:43:59



CONDUCTED SPURIOUS EMISSION WCDMA BAND II IDLE

Date: 26.DEC.2012 16:49:39



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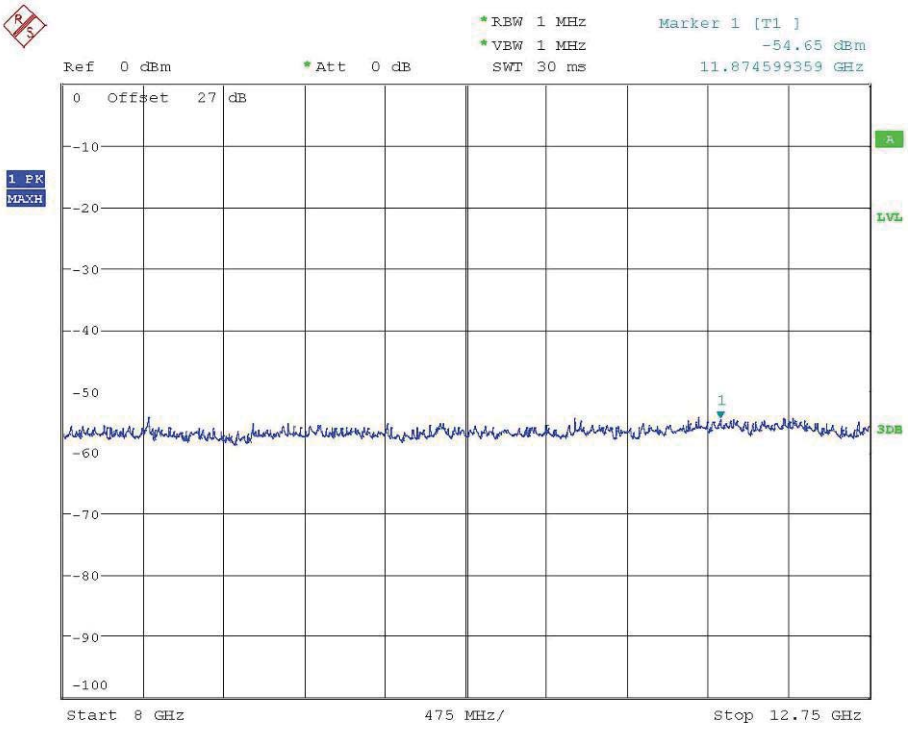
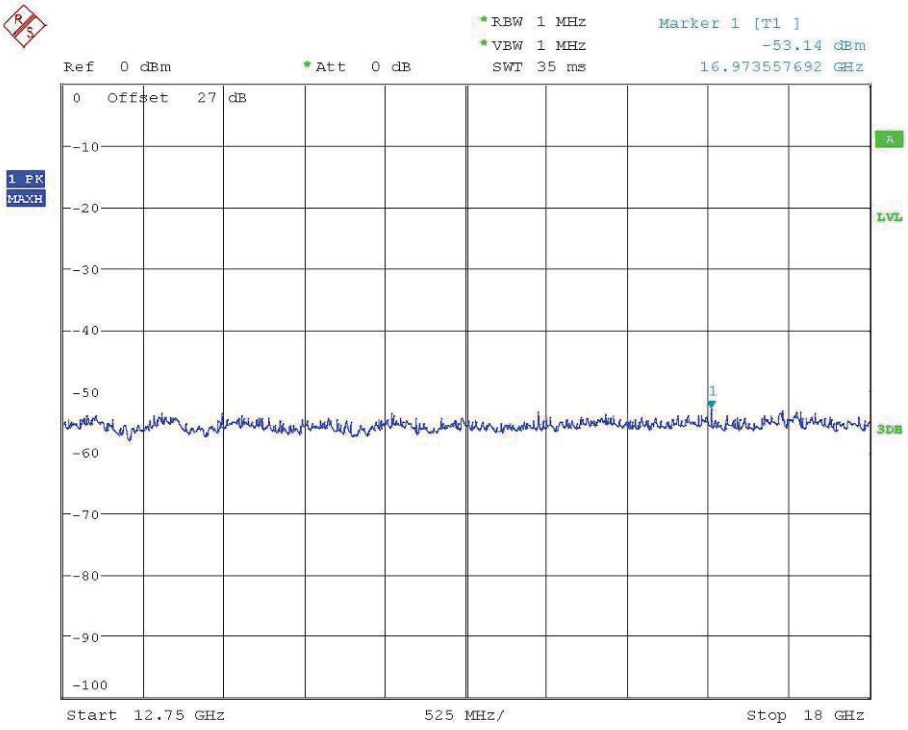
Date: 26.DEC.2012 16:49:50



CONDUCTED SPURIOUS EMISSION WCDMA BAND II IDLE

Date: 26.DEC.2012 16:50:00



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