

FCC PART 22 / 24 TEST REPORT

for

GPS Vehicle Tracker

Model No.: VT300

FCC ID: SRKVT300

of

Applicant: Wonde Proud Technology Co., Ltd.

**Address: 11F, NO.90, Sec. 1, Sintai 5th Rd., Sijhih City,
Taipei County 221, Taiwan**

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.: W6M21106-11577-P-2224

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wts@wts-lab.com



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21106-11577-P-2224
FCC ID: SRKVT300

Certification of Test Report

Applicant : Wonde Proud Technology Co., Ltd.
11F, NO.90, Sec. 1, Sintai 5th Rd., Sijhih City,
Taipei County 221, Taiwan
Manufacturer : Wonde Proud Technology Co., Ltd.
11F, NO.90, Sec. 1, Sintai 5th Rd., Sijhih City,
Taipei County 221, Taiwan

Tested Equipment :
Type Description : GPS Vehicle Tracker
Model Number : VT300
Brand Name : WondeProud
Operation Frequency : Band 850MHz: 824.2-848.8MHz
Band 1900MHz: 1850.2-1909.8MHz
BAND V: 826.4-846.6 MHz
RF Output Power : 1) BAND 850MHz: 23.21dBm (ERP)
2) Band 1900MHz: 31.27dBm (EIRP)
3) BAND V: 20.90dBm (ERP)
Power Supply : 12Vdc

Regulation Applied : 47CFR Part 22 (2010-10) and Part 24 (2010-10)

Test Method : 47CFR Part 2 (2010-10), TIA-603-D(2010) and
ANSI C63.4 (2009)

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(2010), TIA-603-D(2010) (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:

July 15, 2011

Robert Ren

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

July 15, 2011

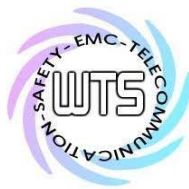
Chang Tse-Ming

Date

WTS

Name

Signature

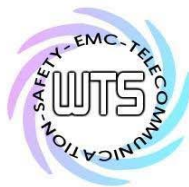


Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

TABLE OF CONTENTS

1. SUMMARY	3
1.1 DESCRIPTION OF TESTED EQUIPMENT	3
1.2 DATE OF TESTING PROCESSING	3
1.3 MODIFICATION INFORMATION	3
1.4 TEST STANDARDS.....	3
1.5 SUMMARY OF TEST RESULT.....	4
2. GENERAL INFORMATION	5
2.1 TESTING LABORATORY	5
2.1.1 Location	5
2.1.2 Details of accreditation status	5
2.1.3 Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.	5
2.2 DETAILS OF APPROVAL HOLDER.....	6
2.3 DESCRIPTION OF TESTED SYSTEM.....	6
2.4 TEST ENVIRONMENT	7
2.5 GENERAL TEST REQUIREMENT	7
2.6 TEST EQUIPMENT LIST	8
3. RF POWER OUTPUT	12
3.1 TEST PROCEDURE.....	12
3.1.1 Conducted Method.....	12
3.1.2 Radiated Method.....	12
3.2 TEST RESULTS	14
4. MODULATION CHARACTERISTICS	25
4.1 TEST PROCEDURE.....	25
4.2 TEST RESULTS	25
5. OCCUPIED BANDWIDTH.....	26
5.1 TEST PROCEDURE.....	26
5.2 TEST RESULTS	26
6. SPURIOUS EMISSIONS AT ANTENNA TERMINALS	36
6.1 TEST PROCEDURE.....	36
6.2 TEST RESULTS	36
6.3 EXPLANATION OF TEST RESULT.....	63
6.4 CALCULATION OF LIMIT FOR SPURIOUS AT ANTENNA TERMINALS.....	63
7. FIELD STRENGTH OF SPURIOUS RADIATION	64
7.1 TEST PROCEDURE.....	64
7.2 TEST RESULTS	64
7.3 EXPLANATION OF TEST RESULT.....	91
7.4 CALCULATION OF LIMIT FOR FIELD STRENGTH OF SPURIOUS	91
7.5 TEST RESULT OF BAND EDGE EMISSIONS	92
8. FREQUENCY STABILITY	96
8.1 TEST PROCEDURE.....	96
8.2 TEST RESULTS	97
8.2.1 Frequency Stability vs. Temperature	97
8.2.2 Frequency Stability vs. Voltage	100
APPENDIX.....	103



Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

1. Summary

1.1 Description of tested equipment

This equipment under tested, VT300, is a GPS Vehicle Tracker. There are GSM, WCDMA, and GPS.

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

824.2-848.8MHz (Part 22), 0.2094 W (ERP)
1850.2-1909.8MHz (Part 24), 1.3396 W (EIRP)
Band V (Part 22), 0.1230 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: June 17, 2011

Test finished: July 12, 2011

Other Information: None

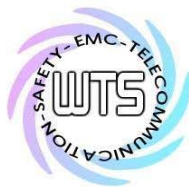
1.3 Modification Information

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

1.4 Test standards

Technical standard: **FCC Part 2(2010-10), TIA-603-D (2010), ANSI C63.4(2009)
47CFR Part 22 (2010-10), and Part 24 (2010-10)**

Deviation from test standard: None



Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

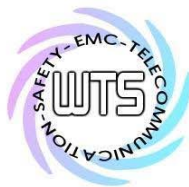
1.5 Summary of test result

Band 850MHz & Band V

Section in this Report	Test Item	FCC relevant Section	Verdict
3.2	RF power output	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(a), 2.1055(d)	Pass

Band 1900MHz

Section in this Report	Test Item	FCC Relevant Section	Verdict
3.2	RF power output	2.1046(a), 24.232(b)	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h)	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(a),	Pass
8.2	Frequency stability	2.1055(a), 2.1055(d)	Pass



Report Number: W6M21106-11577-P-2224

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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

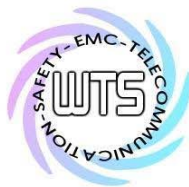
2.1.2 Details of accreditation status

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:	./.



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2.2 Details of approval holder

Name: Wonde Proud Technology Co., Ltd.
Street: 11F, NO.90, Sec. 1, Sintai 5th Rd.,
Town: Sijhih City, Taipei County 221,
Country: Taiwan
Telephone: +886-2-2696-8498
Fax: +886-2-2696-8499

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.					

Frequency Range: Band 850MHz / Band 1900MHz / Band V

Frequencies Selected to be investigated:

Band 850MHz

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

Band V

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

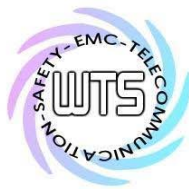
Band 1900 MHz

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

Antenna Type: Dipole antenna and PIFA antenna(with reverse SMA connector))

Antenna Gain: Dipole antenna: 0 dBi
PIFA antenna: -2 dBi

Power supply: 12Vdc



Report Number: W6M21106-11577-P-2224
FCC ID: SRKVT300

2.4 Test environment

Temperature:	27 °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.

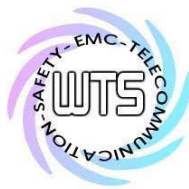
For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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.



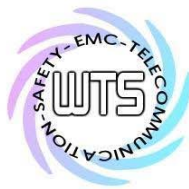
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

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	2010/9/2	2011/9/1
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	2011/3/10	2012/3/9
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2010/9/8	2011/9/7
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2011/3/8	2012/3/7
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use NCR	
ETSTW-CE 008	HF-EICHELUNG 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	2011/7/4	2012/7/3
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2010/10/21	2011/10/20
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2010/9/6	2011/9/5
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2011/2/21	2012/2/20
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2010/8/20	2011/8/19
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function Test	
ETSTW-CS 009	6 dB Attenuator	75-A-FFN-06	70998	BIRD	2011/5/20	2012/5/19
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2010/8/10	2011/8/9
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2010/9/14	2011/9/13
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2010/9/2	2011/9/1
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2010/9/6	2011/9/5
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 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2011/4/25	2012/4/24
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2010/8/20	2011/8/19
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	2011/7/4	2012/7/3
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2011/2/25	2012/2/24
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2010/10/4	2011/10/3
ETSTW-RE 033	WaveRunner 6000A Serie Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	Function Test	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2010/10/4	2011/10/3
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2011/1/14	2012/1/13
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2011/4/26	2012/4/25
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2011/4/25	2012/4/24
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use NCR	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2010/8/30	2011/8/29

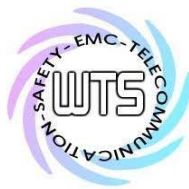


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Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2011/4/8	2012/4/7
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2011/3/4	2012/3/3
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2011/5/30	2012/5/29
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2011/3/4	2012/3/3
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2011/5/18	2012/5/17
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2010/11/30	2011/11/29
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2011/4/8	2012/4/7
ETSTW-RE 066	Highpass Filter	H1G013G1	206015	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2010/10/7	2011/10/6
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2011/1/10	2012/1/9
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2011/1/10	2012/1/9
ETSTW-RE 081	Highpass Filter	H03G13G1	4260-02 DC0428	MICROWAVE CIRCUITS, INC.	2011/3/4	2012/3/3
ETSTW-RE 096	SIGNAL GENERATOR	SMIQ 03B	102274	R&S	2011/5/31	2012/5/30
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2011/3/10	2012/3/9
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2011/3/11	2012/3/10
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2011/3/24	2012/3/23
ETSTW-RE 111	Log-Periodic Dipole Array Antenna	VULB 9160	9160-3309	Schwarz beck	2010/12/17	2011/12/16
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	None	T-Power	Function test	
ETSTW-RE 114	2.4GHz Notch Filter	N0124411	473873	MICROWAVE CIRCUITS	2011/1/13	2012/1/12
ETSTW-RE 121	SPECTRUM ANALYZER	FSU43	100013	R&S	2011/6/23	2012/6/22
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2010/8/27	2011/8/26
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	2010/11/3	2011/11/2
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	Function Test	
ETSTW-EMS 012	EM Injection Clamp	F-203I-23MM	476	FCC	2011/6/1	2012/5/31
ETSTW-EMS 015	HVAC Trms Power Clamp Meter	3079K	070800649	TES	2010/10/5	2011/10/4
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2010/10/5	2011/10/4
ETSTW-EMS 017	Multimeter	DM-1220	518614	HOLA	2010/8/18	2011/8/17
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2010/11/25	2011/11/24
ETSTW-EMS 020	Humidity Temperature Meter	TES-1366	091011116	TES	2011/3/24	2012/3/23
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	2011/3/7	2012/3/6

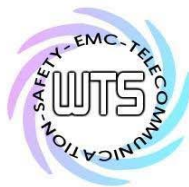


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FCC ID: SRKVT300

ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function Test	
ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	HP	2011/2/23	2012/2/22
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2010/10/12	2011/10/11
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2010/10/7	2011/10/6
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2011/1/14	2012/1/13
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2011/1/14	2012/1/13
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2010/9/20	2011/9/19
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104 (S_Cable 7)	238093	HUBER+SUHNER	2011/5/18	2012/5/17
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104 (S_Cable 11)	209953	HUBER+SUHNER	2011/5/18	2012/5/17
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test Use NCR	
ETSTW-Cable 012	BNC Cable	BNC Cable 2	None	JYE BAO CO.,LTD.	2011/3/8	2012/3/7
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	2011/3/4	2012/3/3
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2011/3/4	2012/3/3
ETSTW-Cable 022	N TYPE Cable	OATS Cable 3	0002	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2011/3/10	2012/3/9
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2011/4/26	2012/4/25
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	SPECTRUM	2011/3/10	2012/3/9
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104 (S_Cable 19)	316739	HUBER+SUHNER	2011/5/18	2012/5/17
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	2010/11/30	2011/11/29
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2010/11/30	2011/11/29
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO CO.,LTD.	2011/3/31	2012/3/30
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2011/3/31	2012/3/30
ETSTW-Cable 053	N TYPE To SMA Cable	OATS Cable 4	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 054	BNC To SMA Cable	OATS Cable 5	None	JYE BAO CO.,LTD.	2011/3/4	2012/3/3
ETSTW-Cable 055	Microwave Cable	SUCOFLEX 104	None	HUBER+SUHNER	Function Test	



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

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
WTSTW-SW 005	GSM Fading Level Correction	GSMFadLevCor	None	R&S	Version 1.66

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

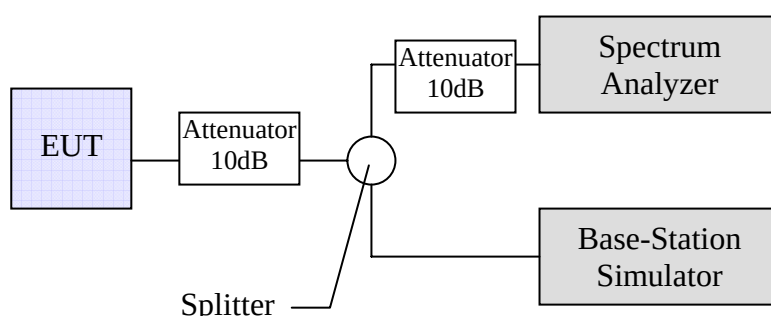
3. RF Power Output

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 from 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, 0.8m above 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.

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

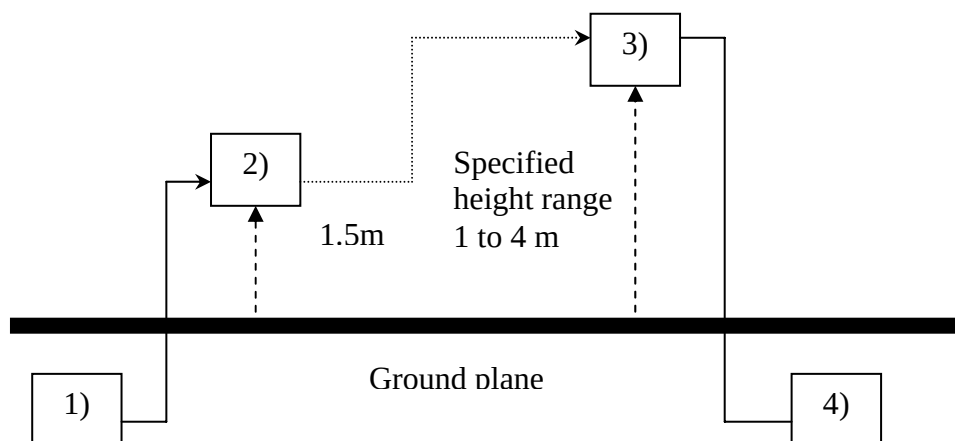
Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

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 WTS 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.

Report Number: W6M21106-11577-P-2224
FCC ID: SRKVT300

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.

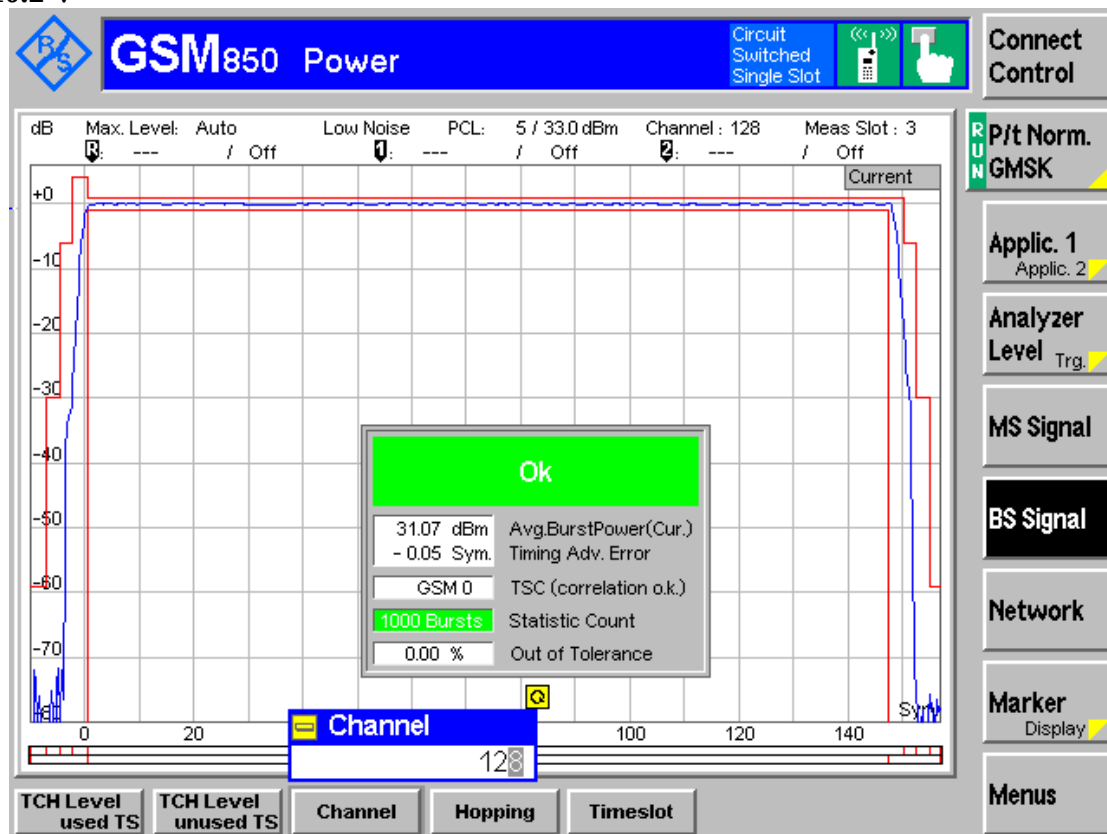
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

3.2 Test Results

- ☒ Conducted Measurement
- ☐ Radiated Measurement

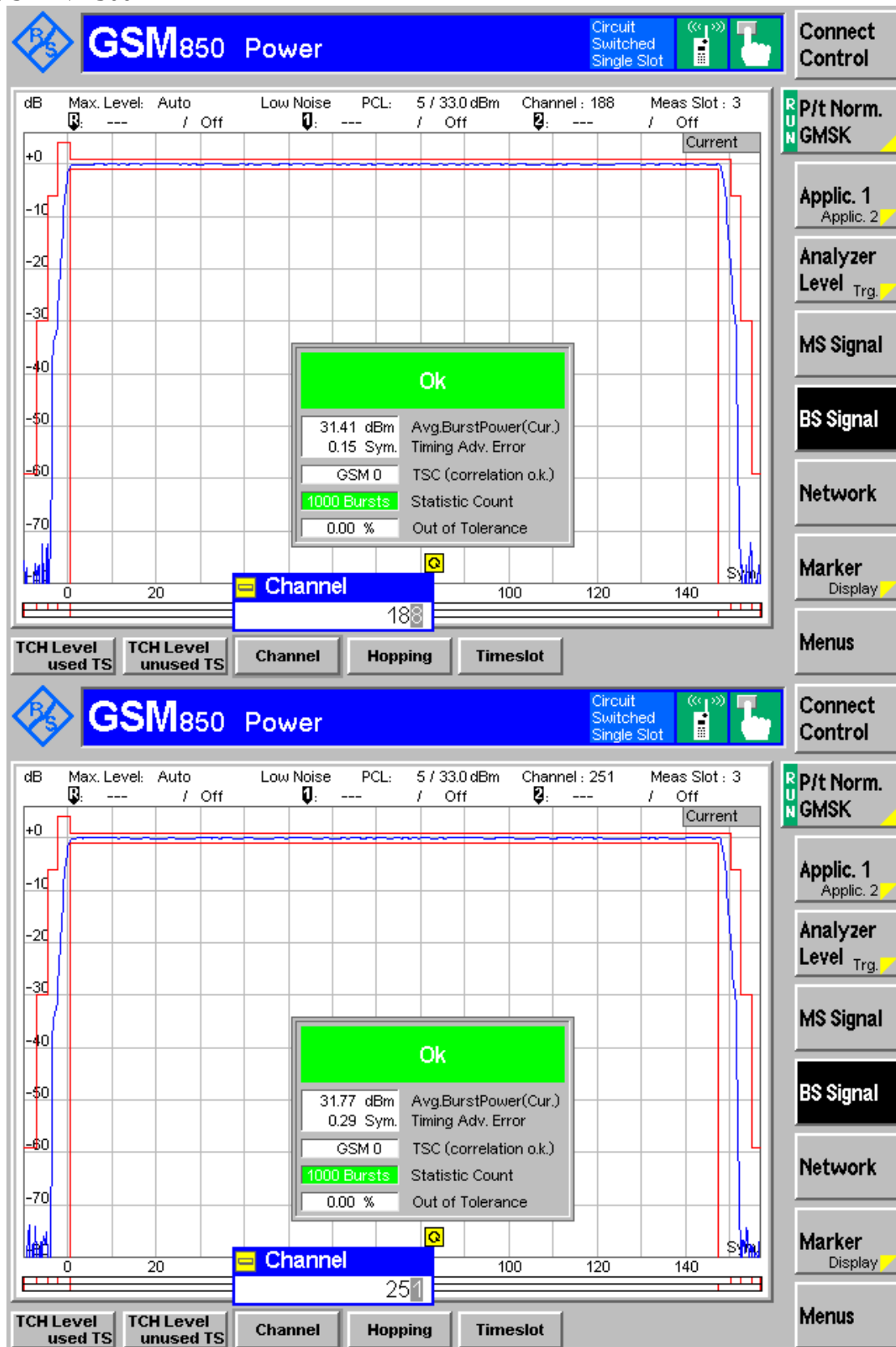
Band 850MHz & 1900MHz

10.2 V



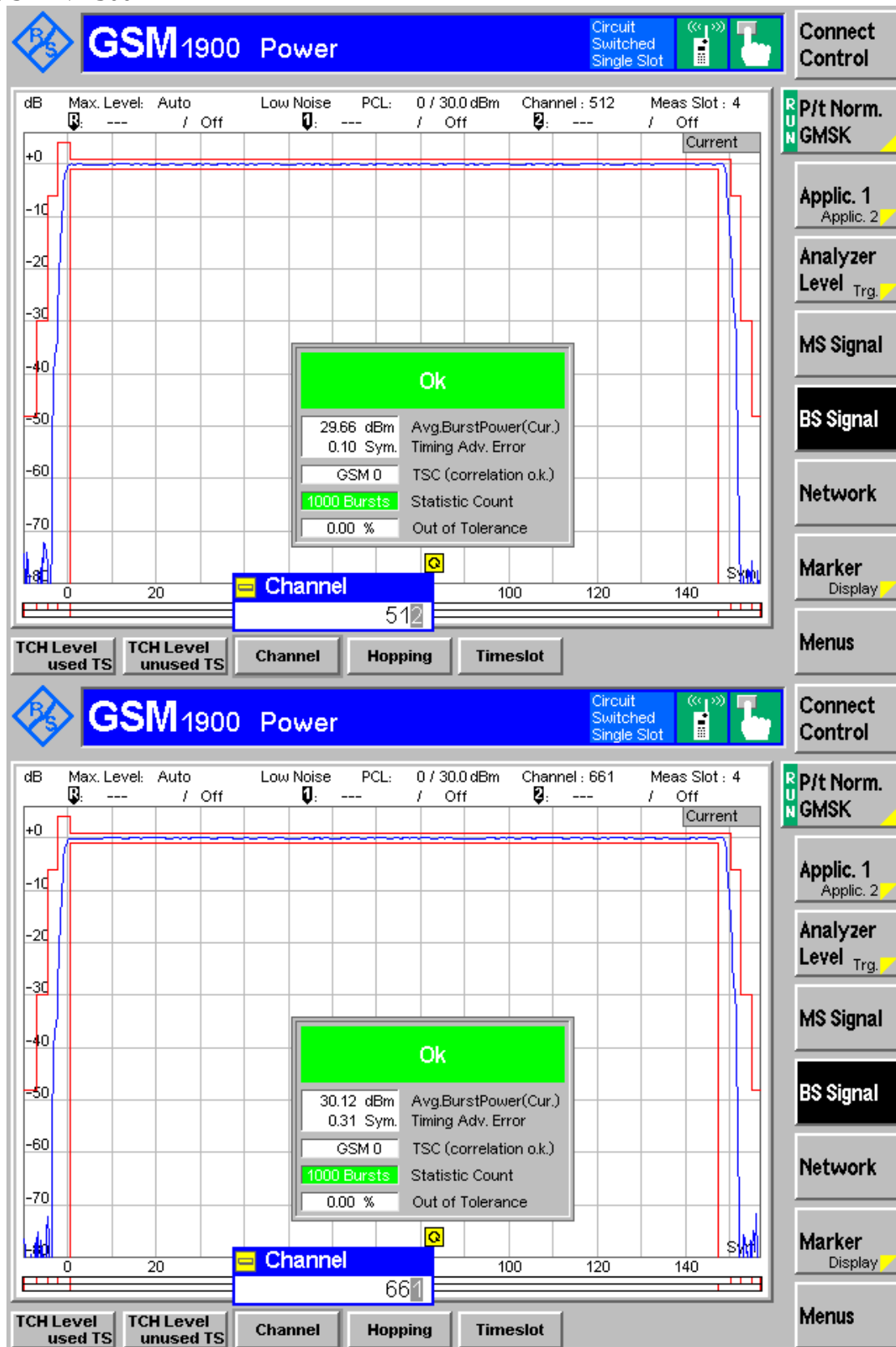
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FCC ID: SRKVT300



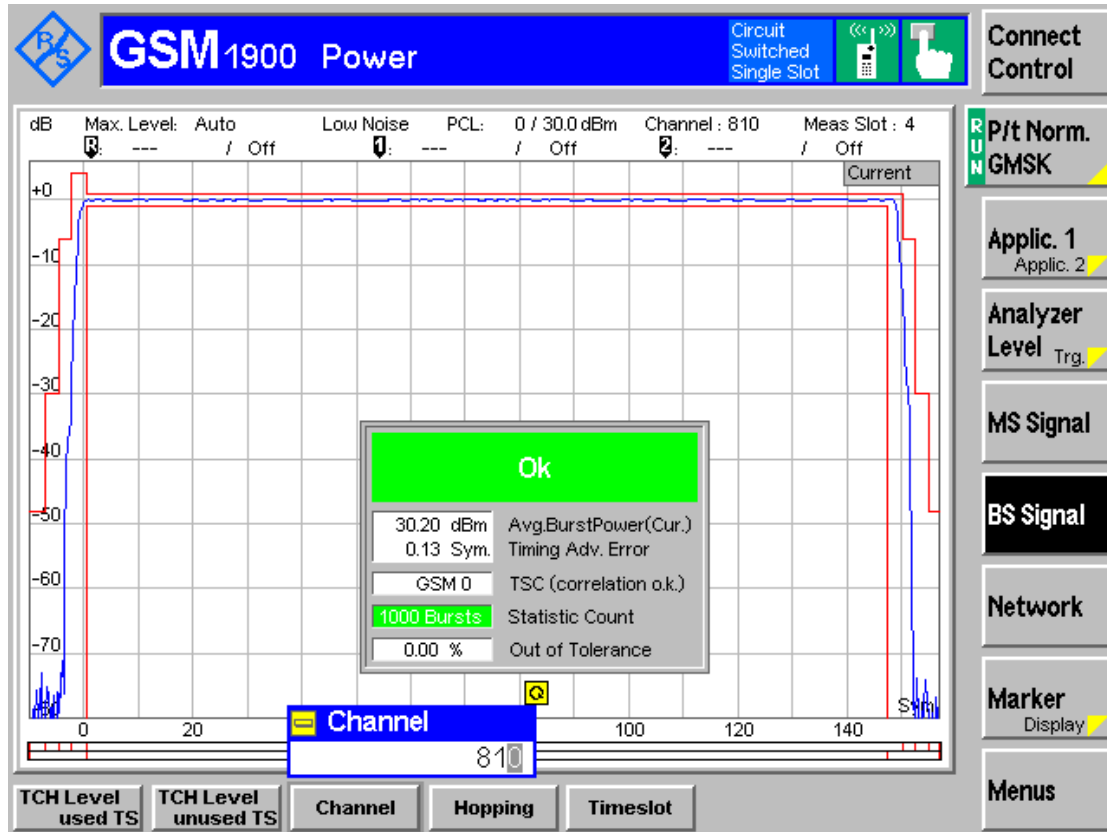
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FCC ID: SRKVT300

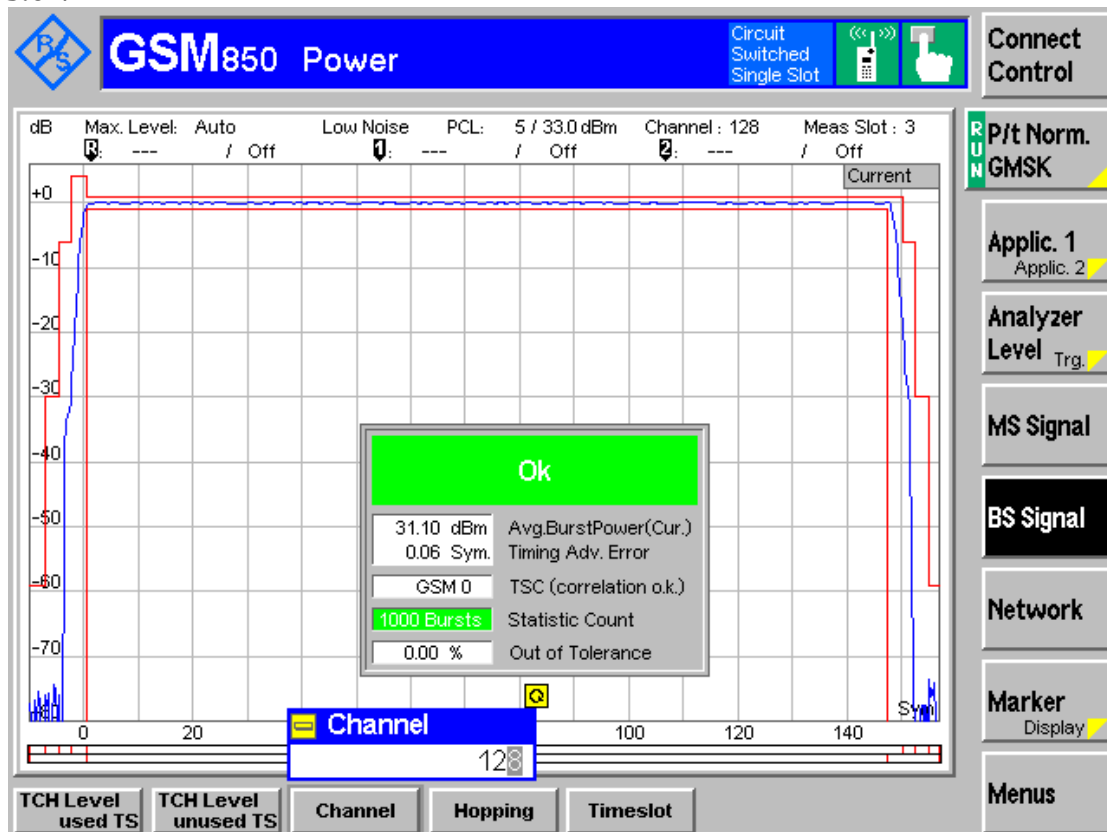


Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

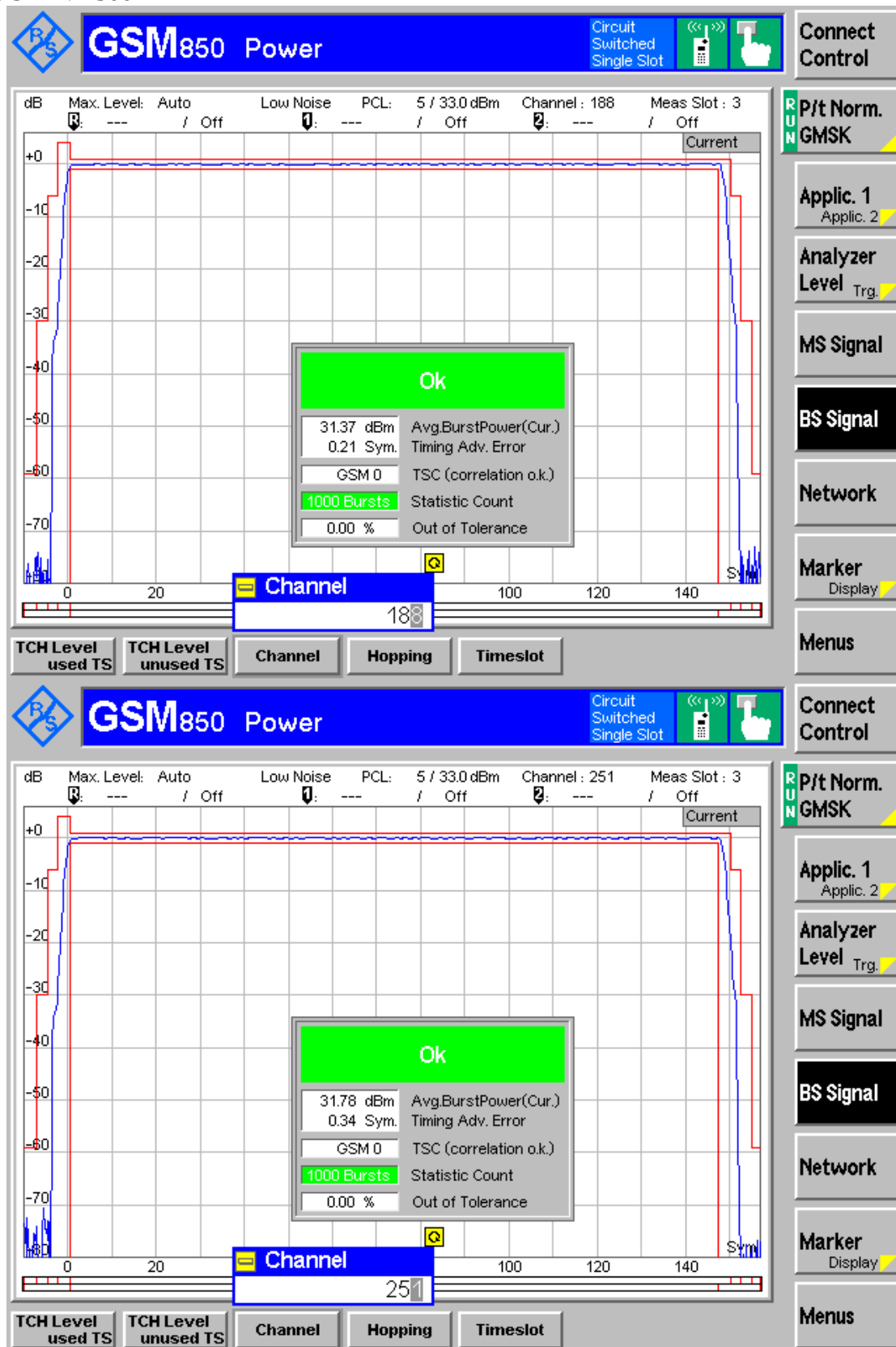


15.6 V



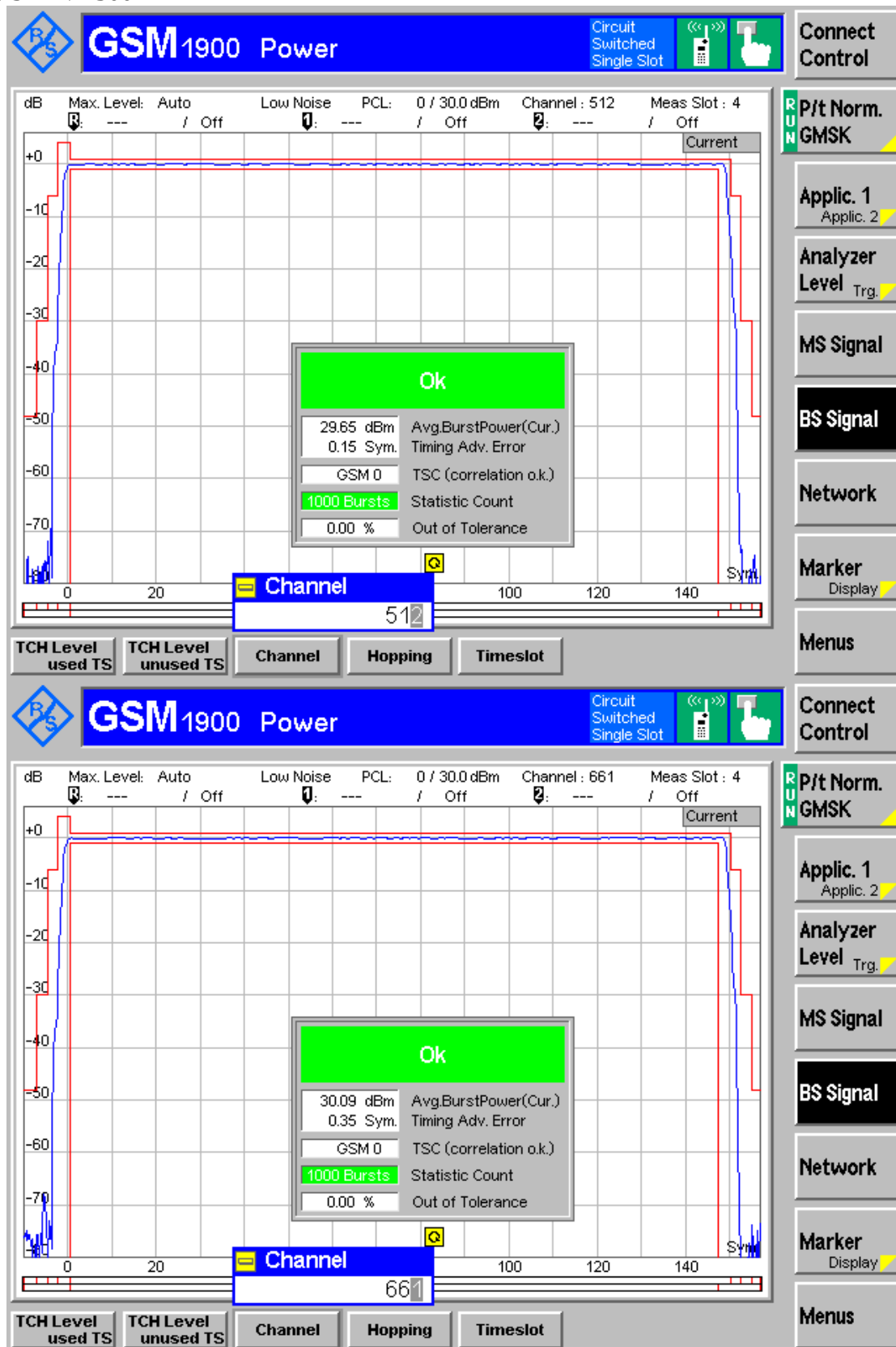
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FCC ID: SRKVT300



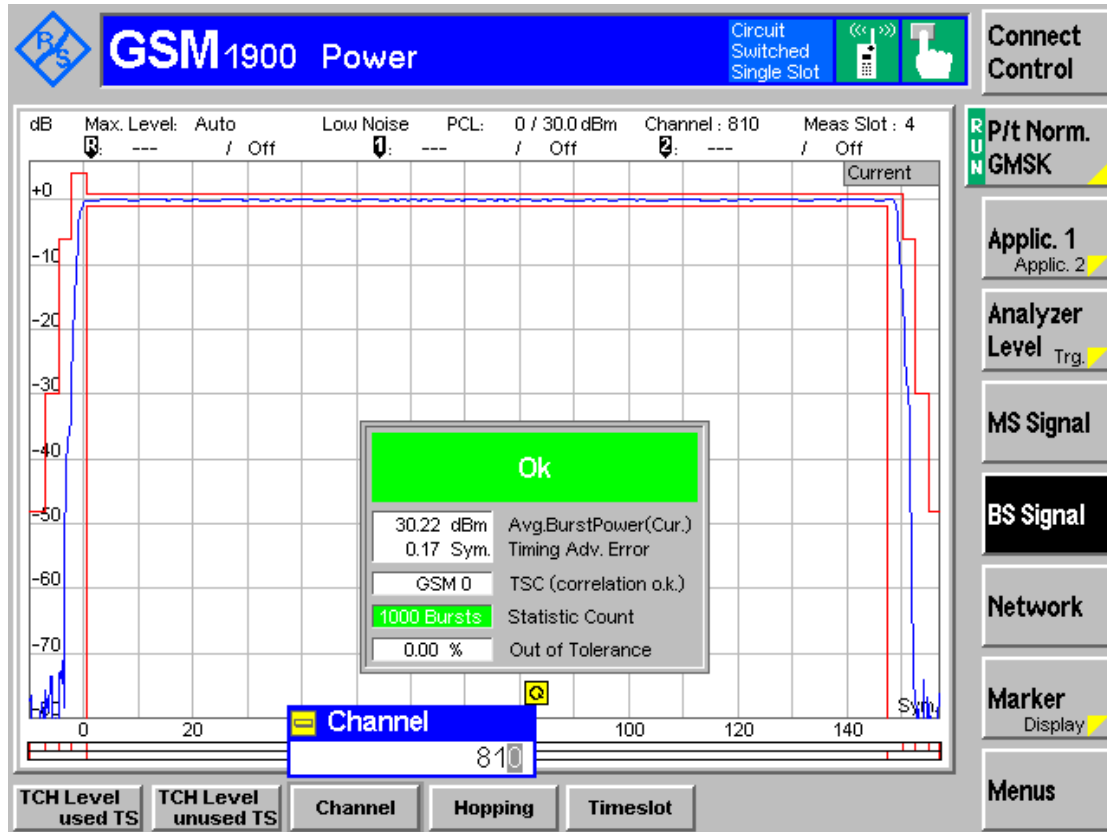
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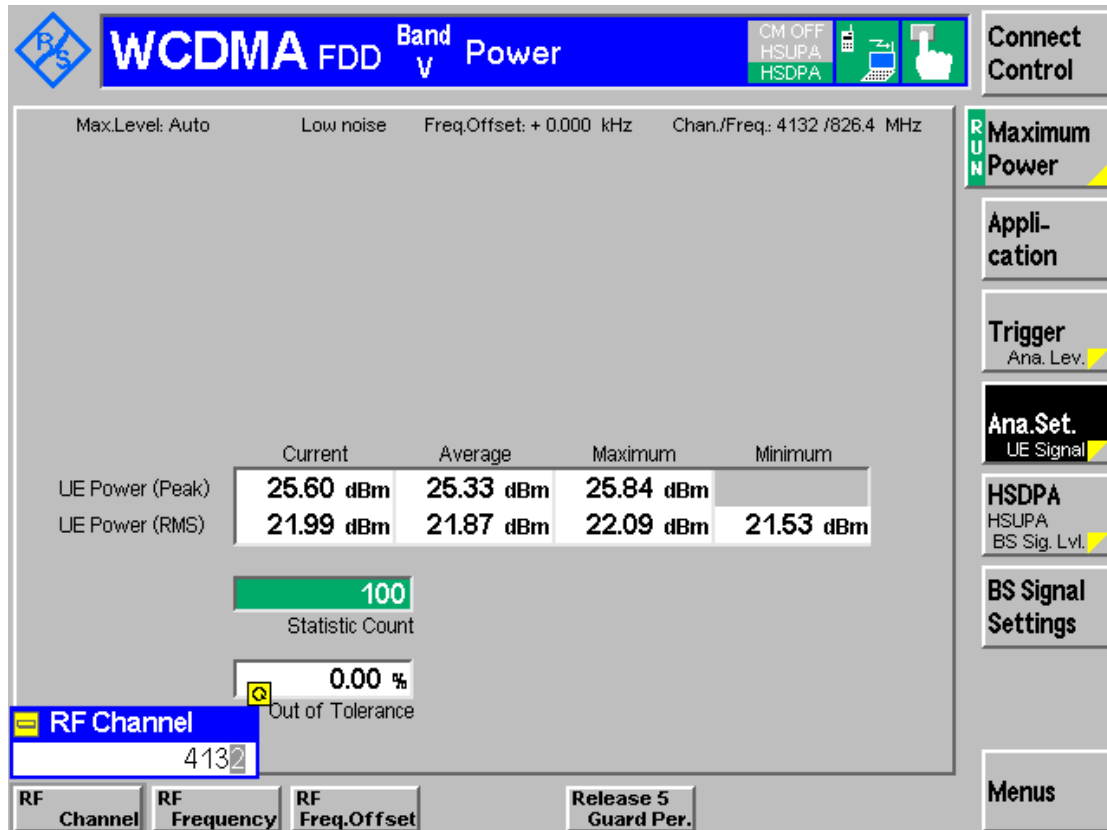
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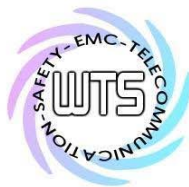
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Band V

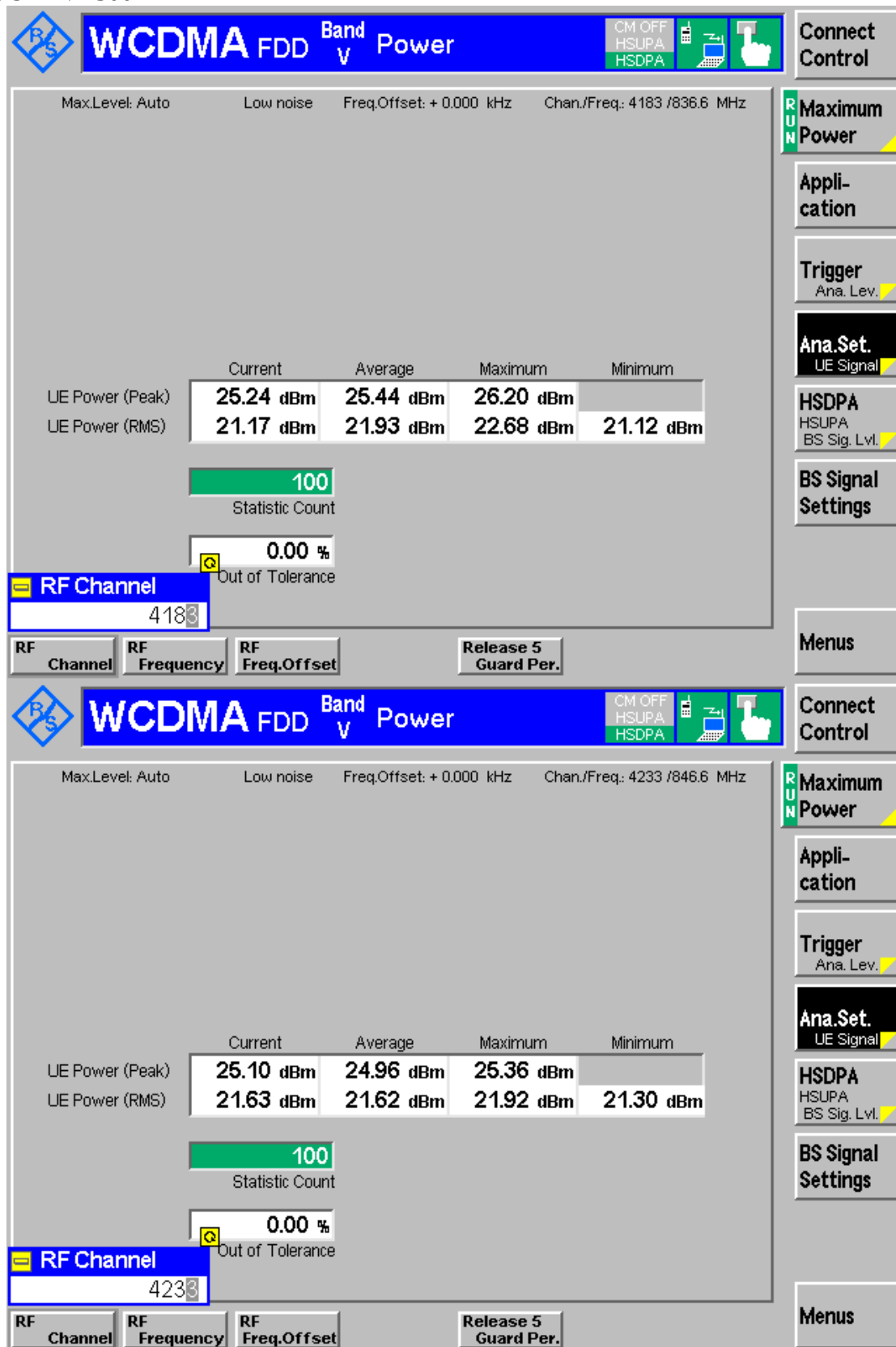
10.2 V

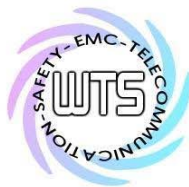




Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

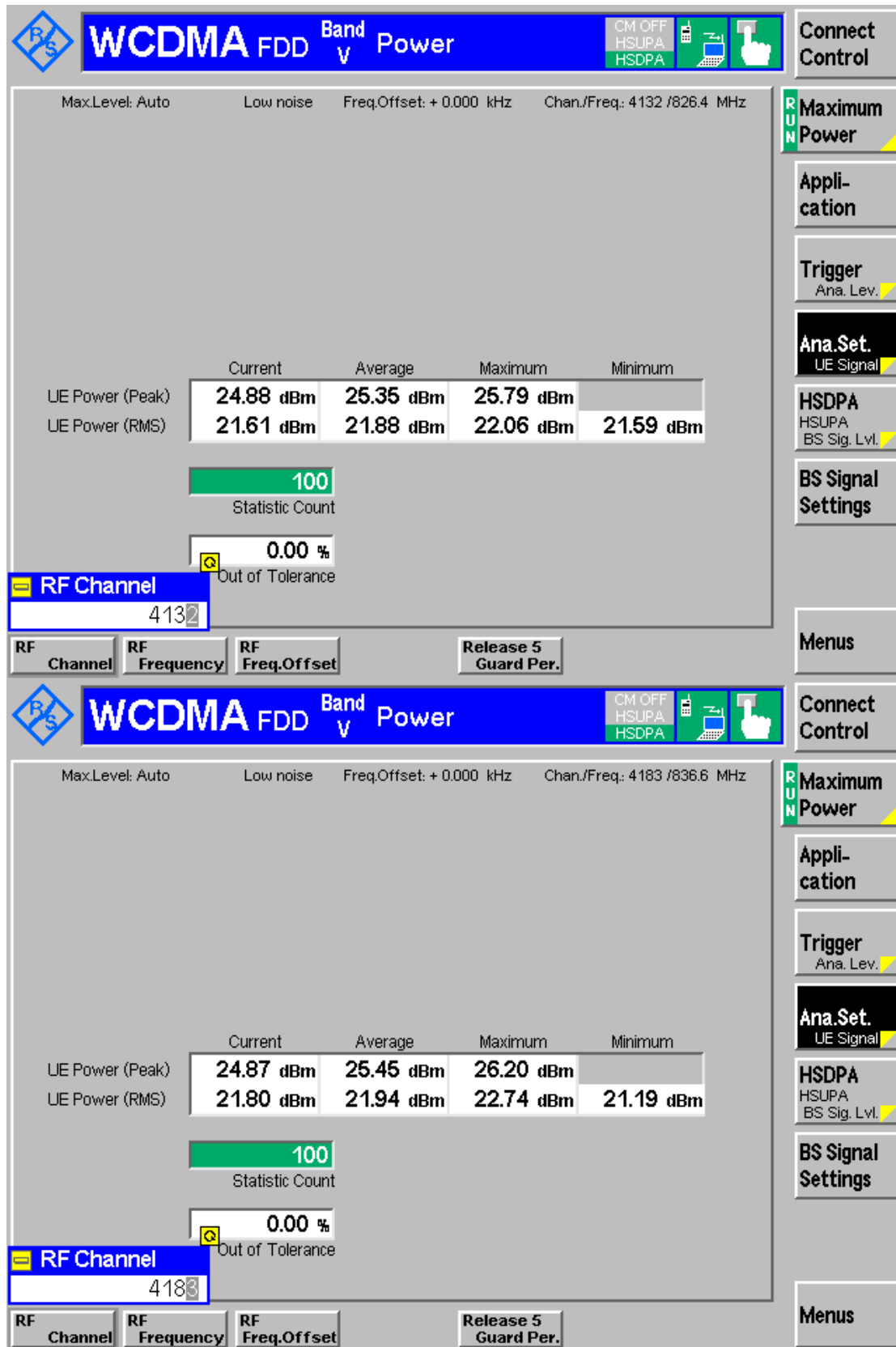




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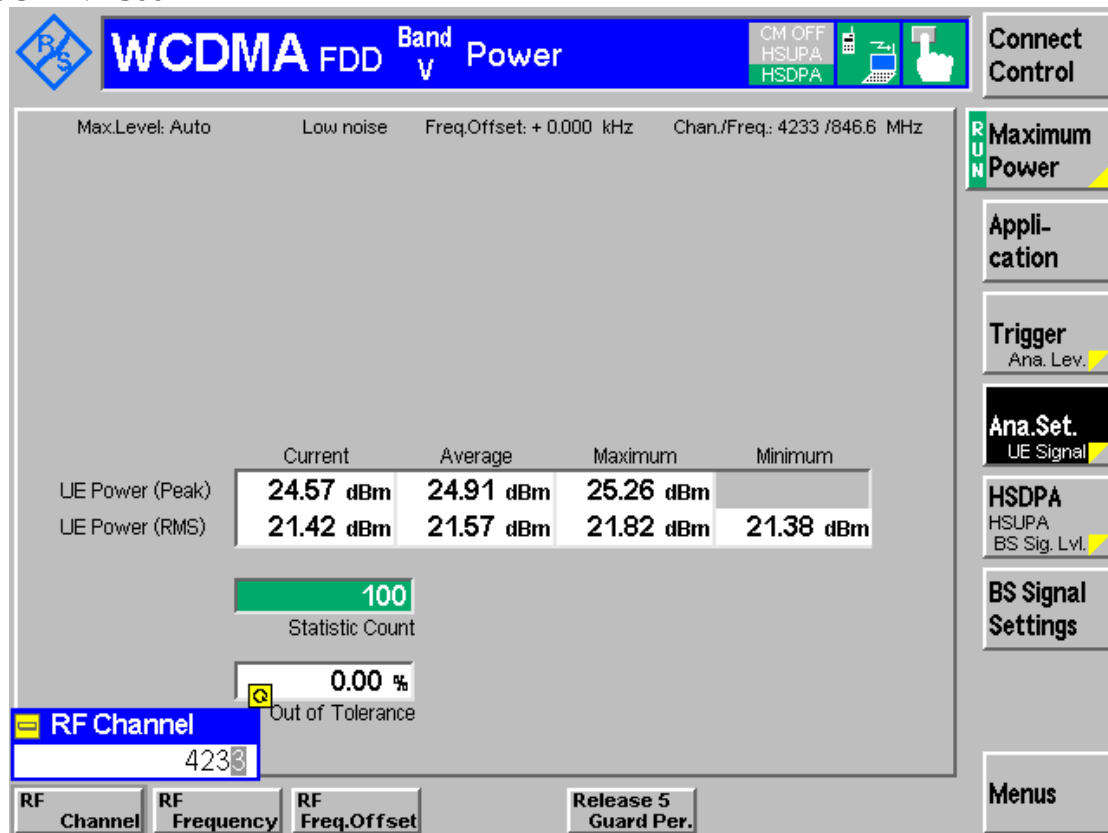
FCC ID: SRKVT300

15.6 V



Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



☐ Conducted Measurement

☒ Radiated Measurement

Band 850 MHz & 1900 MHz

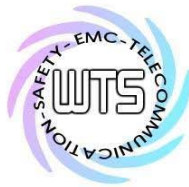
Dipole antenna

10.2 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.4505	23.15	25.30	38.45	Pass
836.0898	20.51	22.66	38.45	Pass
849.0104	22.12	24.27	38.45	Pass
1850.1900	24.31	26.46	33	Pass
1879.9900	29.12	31.27	33	Pass
1909.6700	22.10	24.25	33	Pass

15.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.2100	23.21	25.36	38.45	Pass
836.1700	20.45	22.60	38.45	Pass
848.9503	22.12	24.27	38.45	Pass
1850.2900	25.49	27.64	33	Pass
1879.8900	29.12	31.27	33	Pass
1909.9500	22.46	24.61	33	Pass



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

PIFA antenna

10.2 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.2501	13.55	15.70	38.45	Pass
836.1098	17.48	19.63	38.45	Pass
848.9703	21.72	23.87	38.45	Pass
1850.2900	25.43	27.58	33	Pass
1879.9700	27.90	30.05	33	Pass
1909.8300	28.00	30.15	33	Pass

15.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.0697	13.60	15.75	38.45	Pass
836.1300	17.48	19.63	38.45	Pass
848.7900	21.76	23.91	38.45	Pass
1850.2100	25.43	27.58	33	Pass
1879.9300	27.89	30.04	33	Pass
1909.7500	27.94	30.09	33	Pass

Band V

Dipole antenna

10.2 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.3920	18.39	20.54	38.45	Pass
835.7884	20.90	23.05	38.45	Pass
845.2473	19.32	21.47	38.45	Pass

15.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.4521	18.47	20.62	38.45	Pass
835.5880	20.05	22.20	38.45	Pass
846.0890	18.61	20.76	38.45	Pass

PIFA antenna

10.2 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.5722	14.08	16.23	38.45	Pass
835.4477	14.87	17.02	38.45	Pass
847.2914	14.91	17.06	38.45	Pass

15.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.6325	12.65	14.80	38.45	Pass
835.7884	13.95	16.10	38.45	Pass
847.3715	14.88	17.03	38.45	Pass

Test equipment: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043,
ETSTW-GSM 02

Note: Please refer to appendix for plot data.

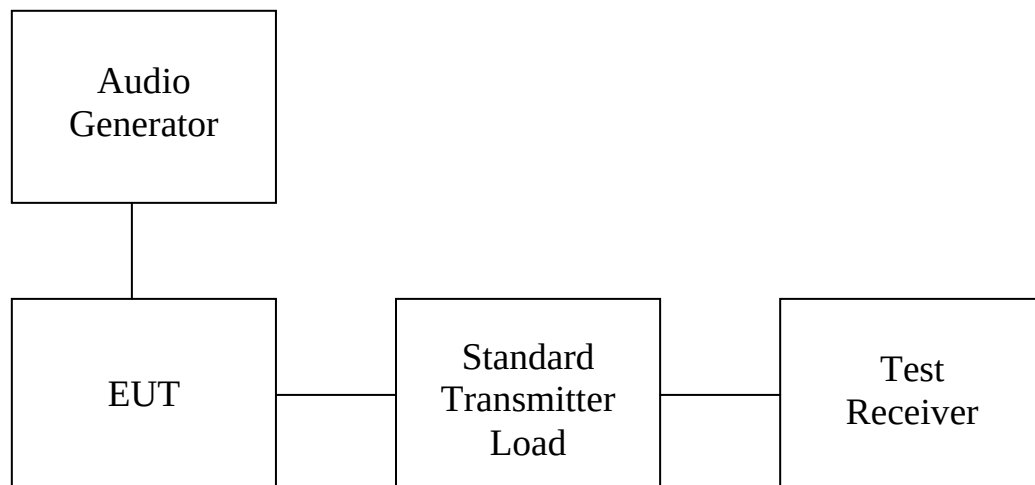
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

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

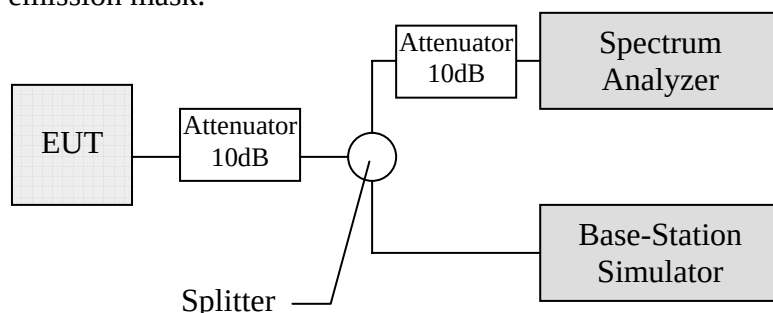
For digital modulation employed, this test item is not applicable.

FCC ID: SRKVT300

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.

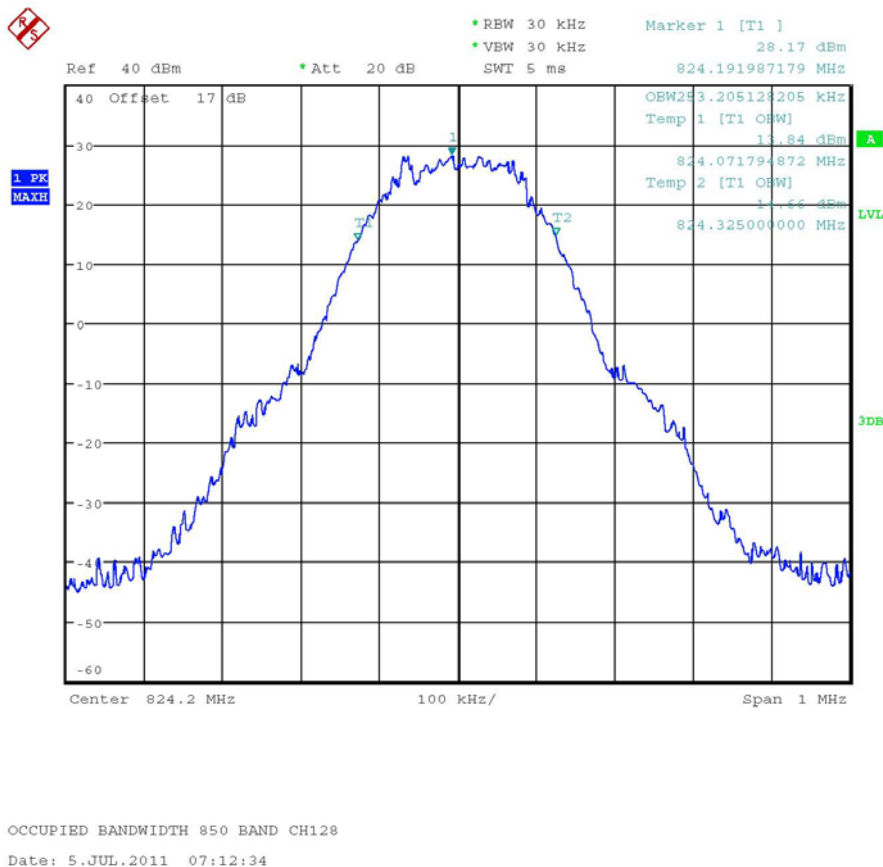
The RF output of the transceiver was connected as the following figure.

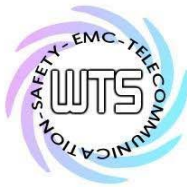
Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer at 99% power was occupied. Then set the spectrum analyzer to cover the upper and lower band edges to measure emission mask.



5.2 Test Results

Occupied Channel Bandwidth

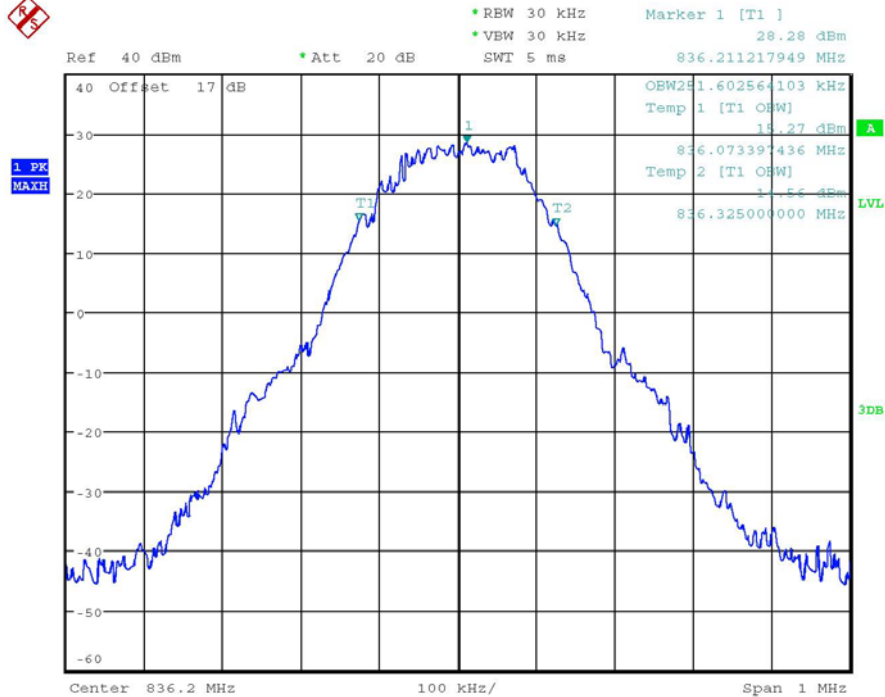




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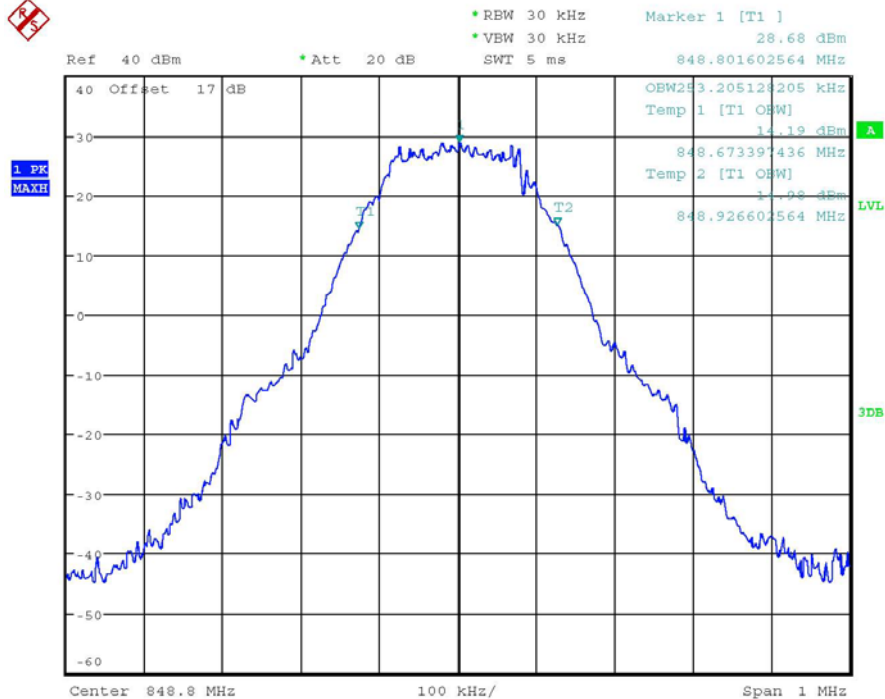
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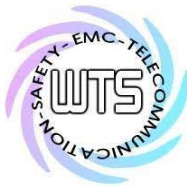
OCCUPIED BANDWIDTH 850 BAND CH188

Date: 5.JUL.2011 07:15:14



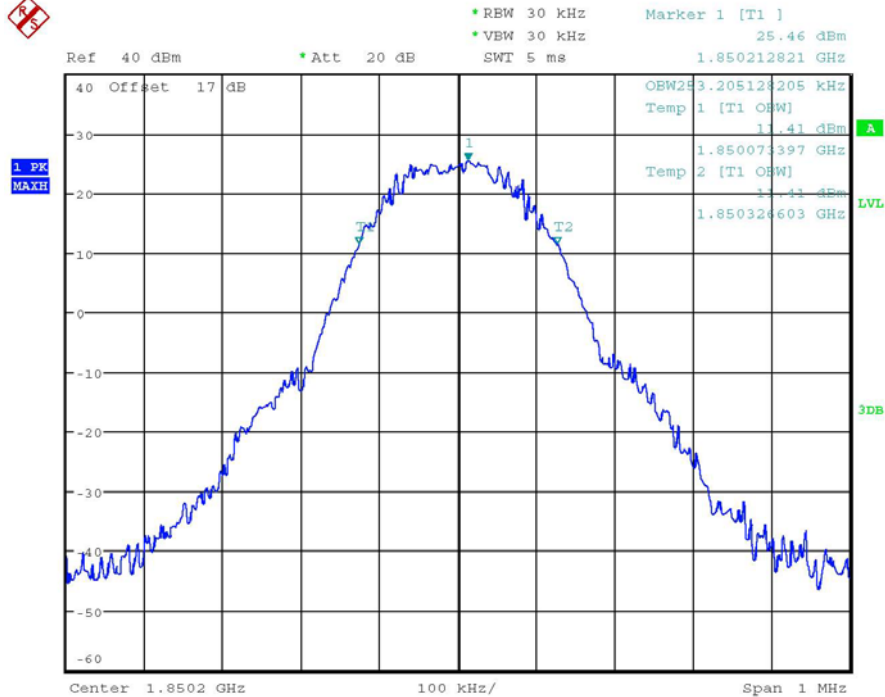
OCCUPIED BANDWIDTH 850 BAND CH251

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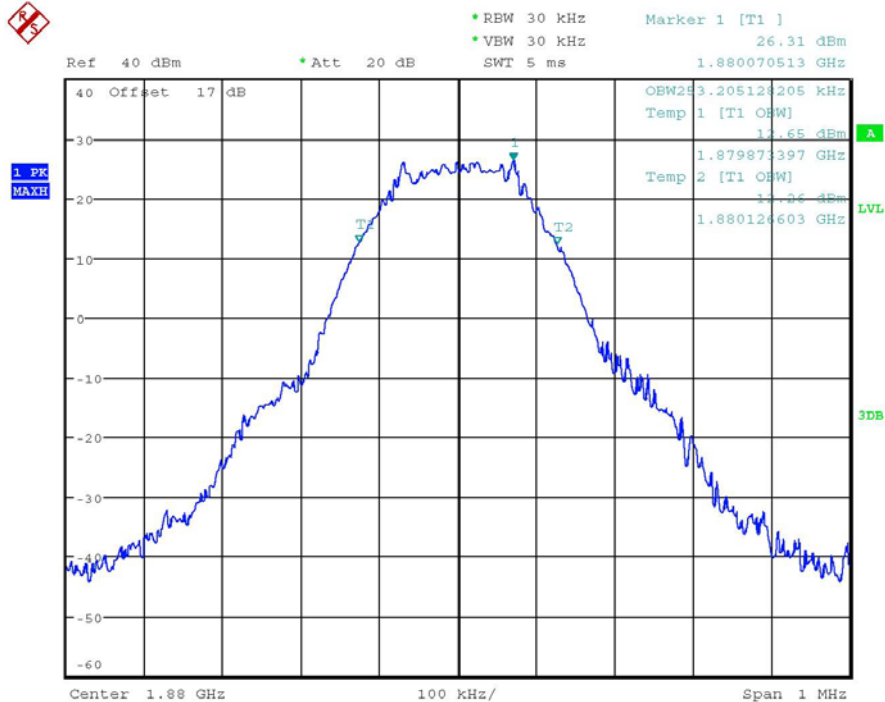
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



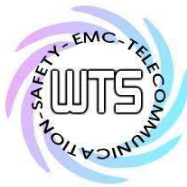
OCCUPIED BANDWIDTH 1900 BAND CH512

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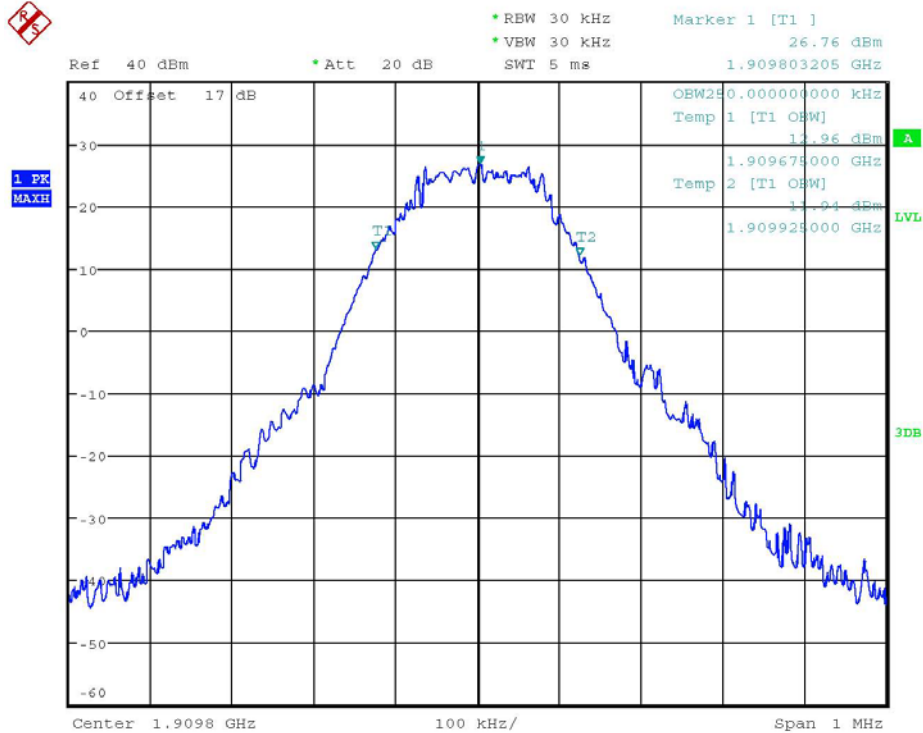
OCCUPIED BANDWIDTH 1900 BAND CH661

Date: 5.JUL.2011 07:07:31



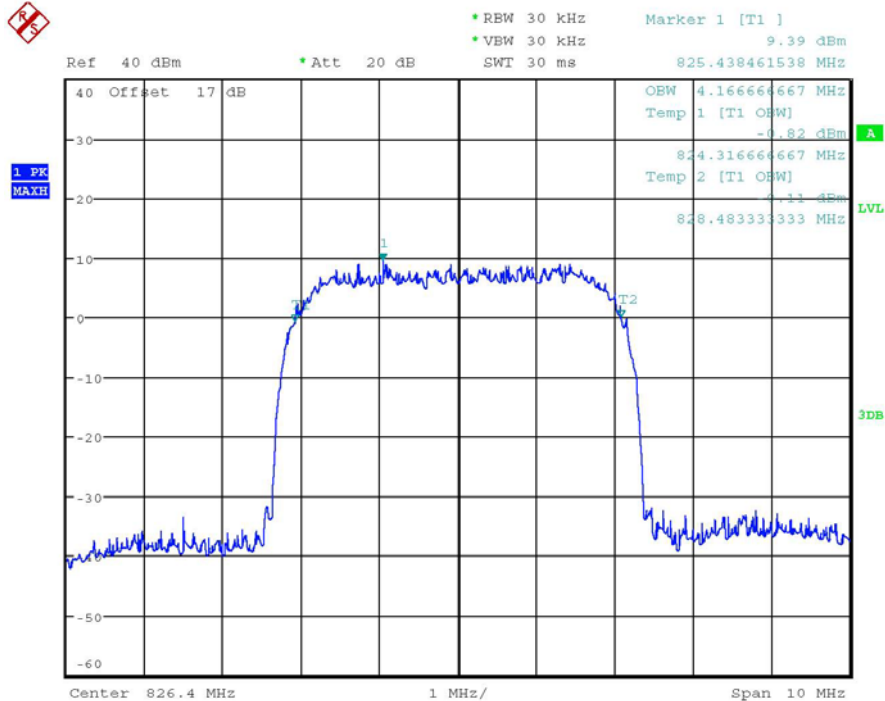
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



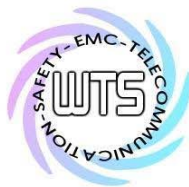
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Date: 5.JUL.2011 07:09:30



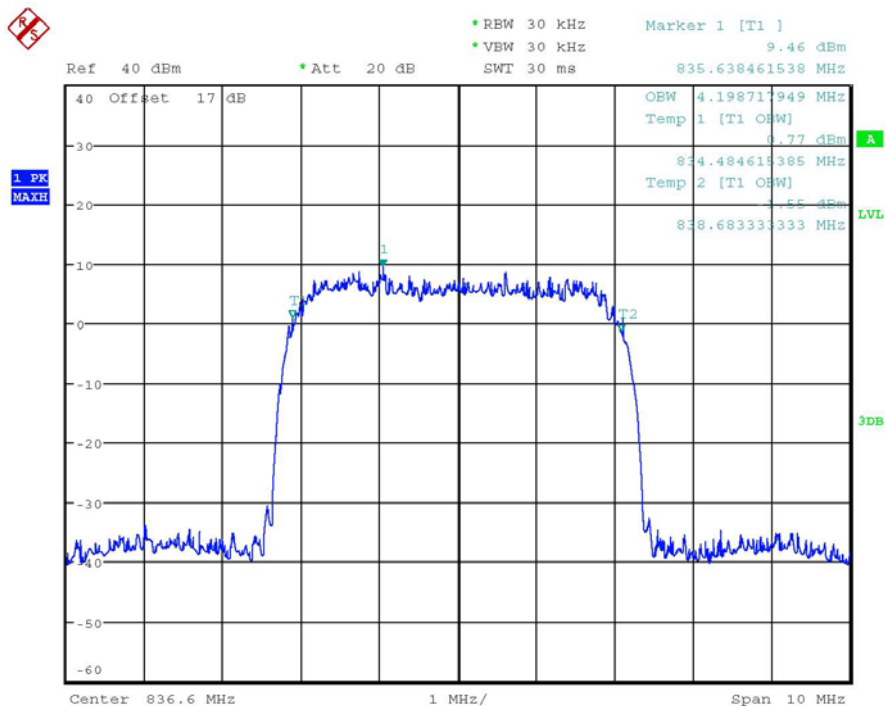
OCCUPIED BANDWIDTH WCDMA BAND V CH4132

Date: 5.JUL.2011 07:56:30



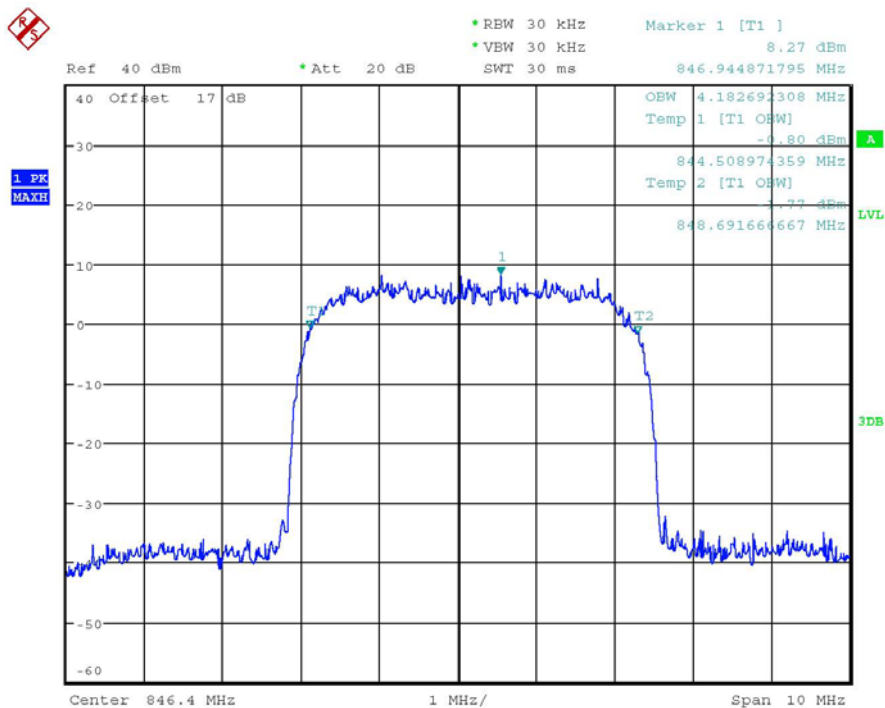
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FCC ID: SRKVT300



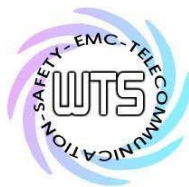
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Date: 5.JUL.2011 08:00:22



OCCUPIED BANDWIDTH WCDMA BAND V CH4233

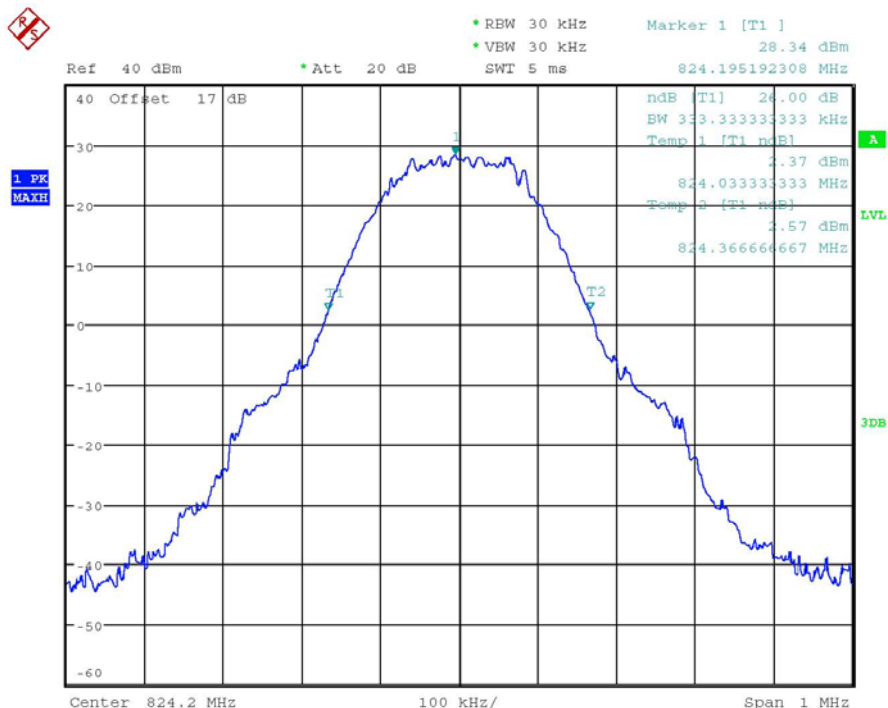
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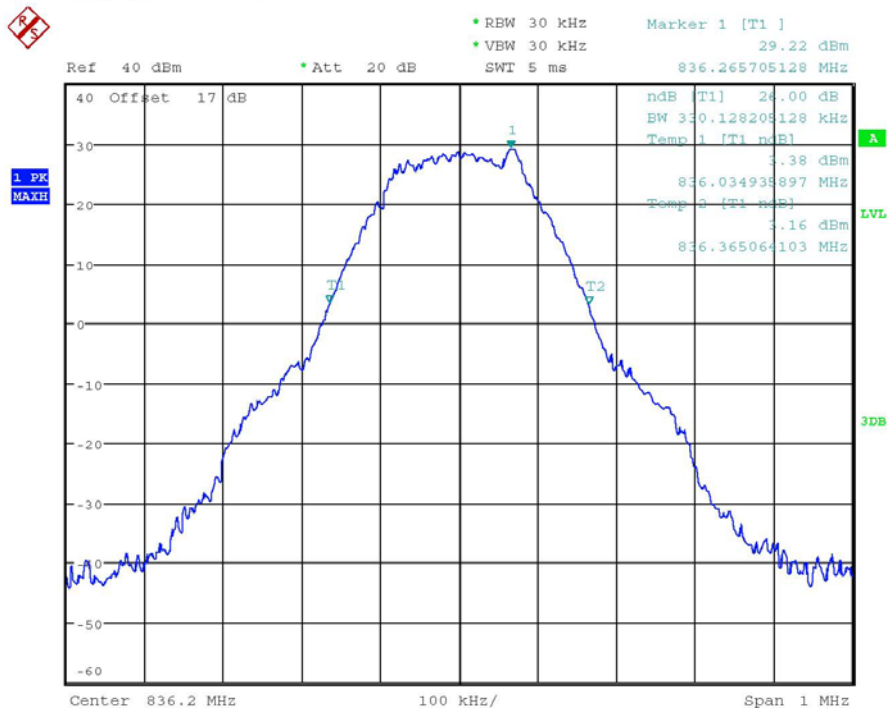
FCC ID: SRKVT300

-26dB Channel Bandwidth



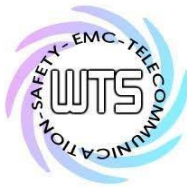
26DB BANDWIDTH 850 BAND CH128

Date: 5.JUL.2011 07:12:46



26DB BANDWIDTH 850 BAND CH188

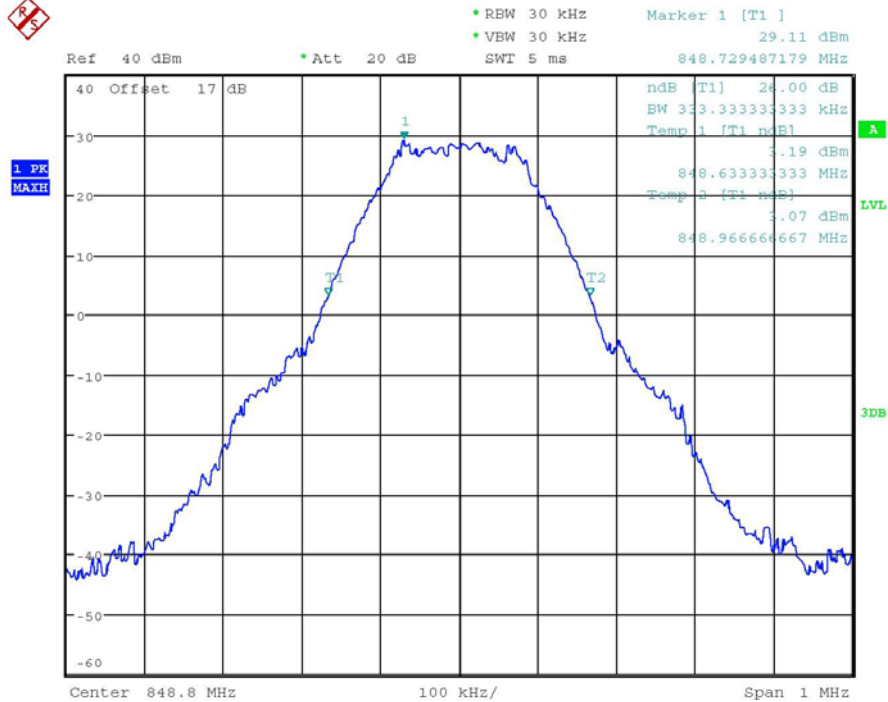
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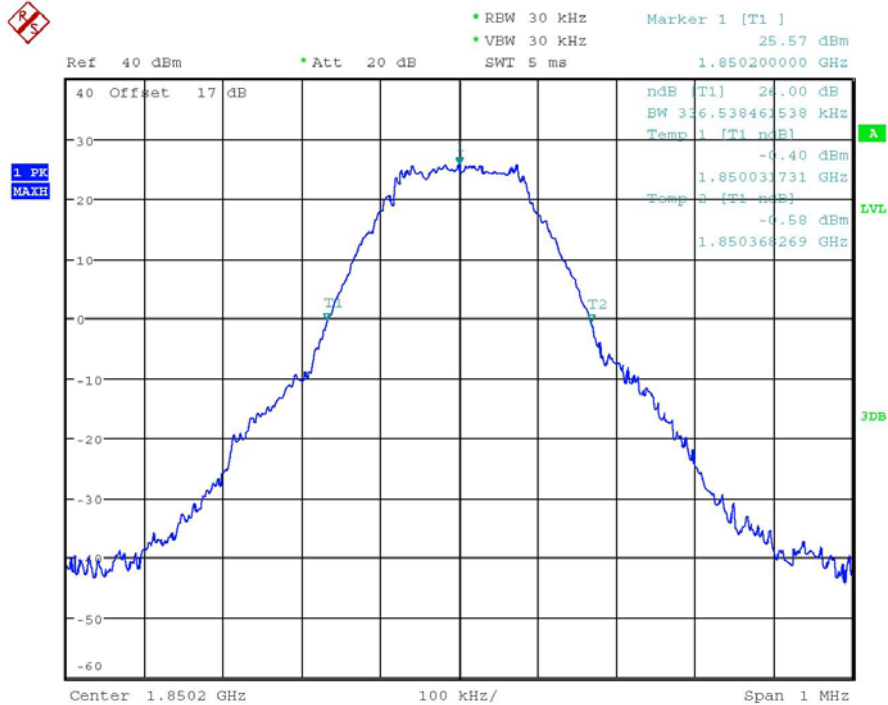
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FCC ID: SRKVT300



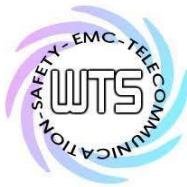
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Date: 5.JUL.2011 07:19:06



26DB BANDWIDTH 1900 BAND CH512

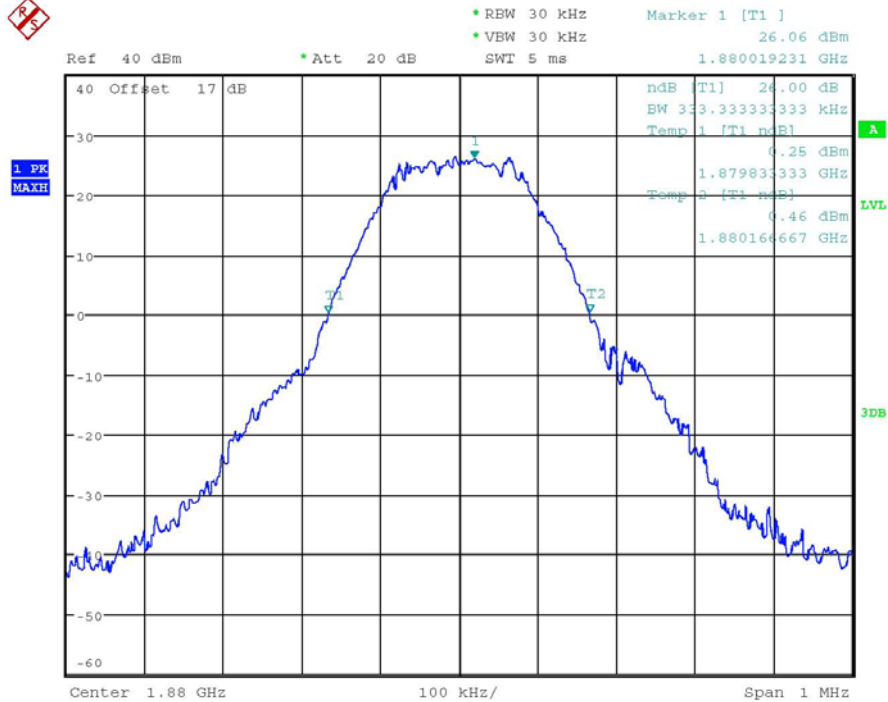
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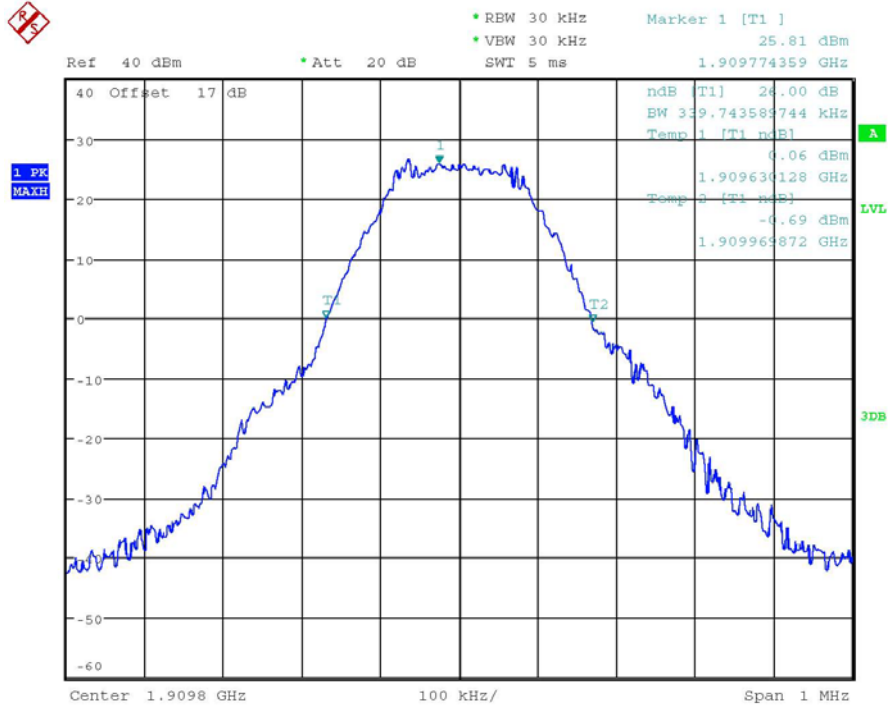
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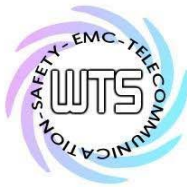
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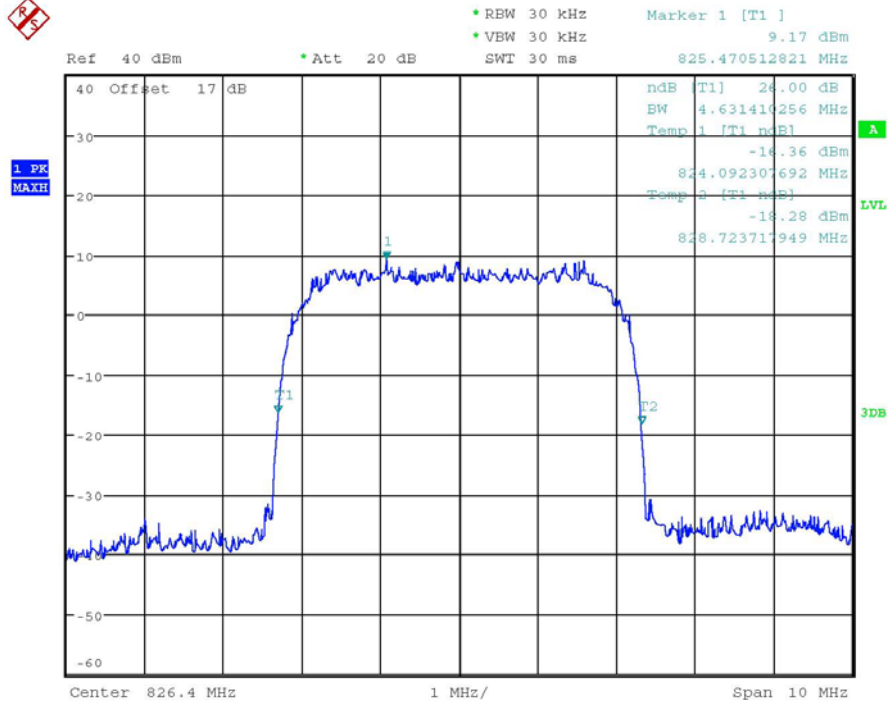
26DB BANDWIDTH 1900 BAND CH810

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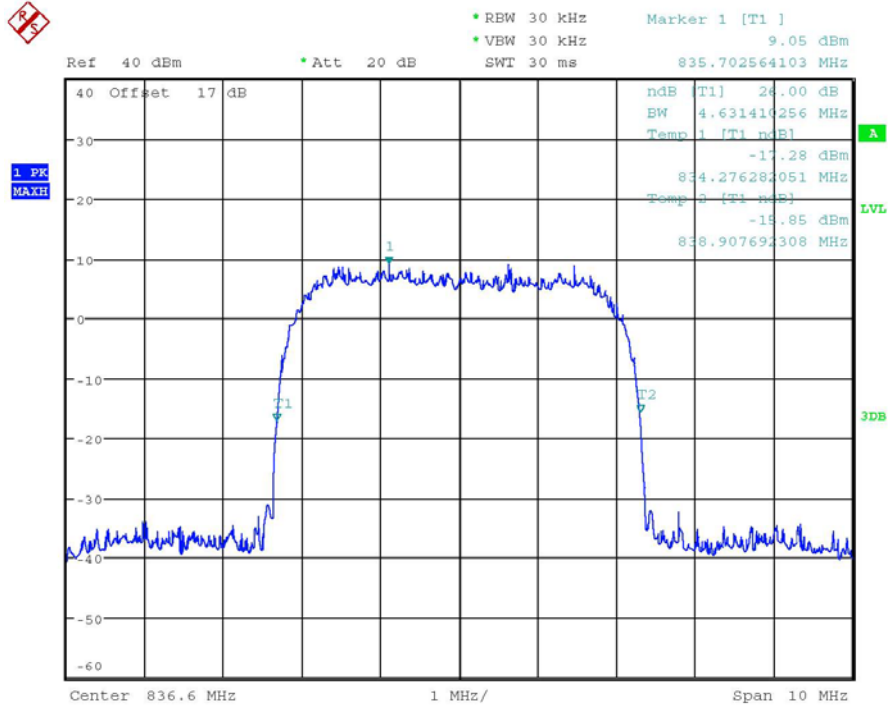
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



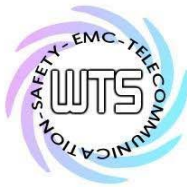
26DB BANDWIDTH WCDMA BAND V CH4132

Date: 5.JUL.2011 07:56:42



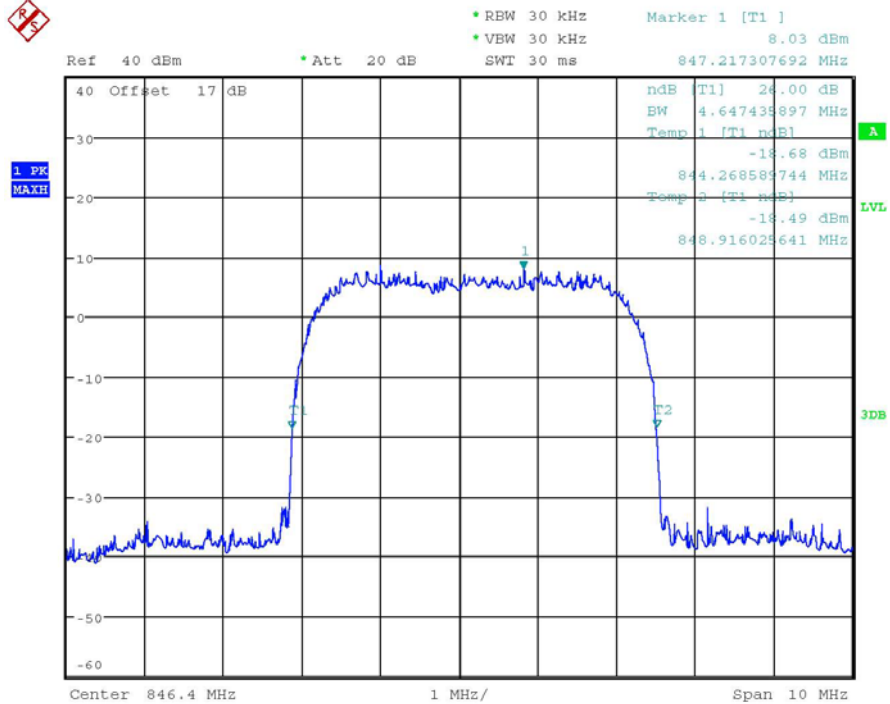
26DB BANDWIDTH WCDMA BAND V CH4183

Date: 5.JUL.2011 08:00:34



Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



26DB BANDWIDTH WCDMA BAND V CH4233

Date: 5.JUL.2011 08:03:58

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

Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300

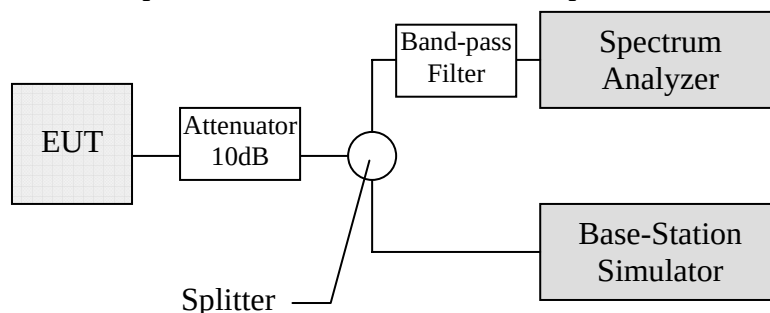
6. Spurious Emissions at Antenna Terminals

6.1 Test procedure

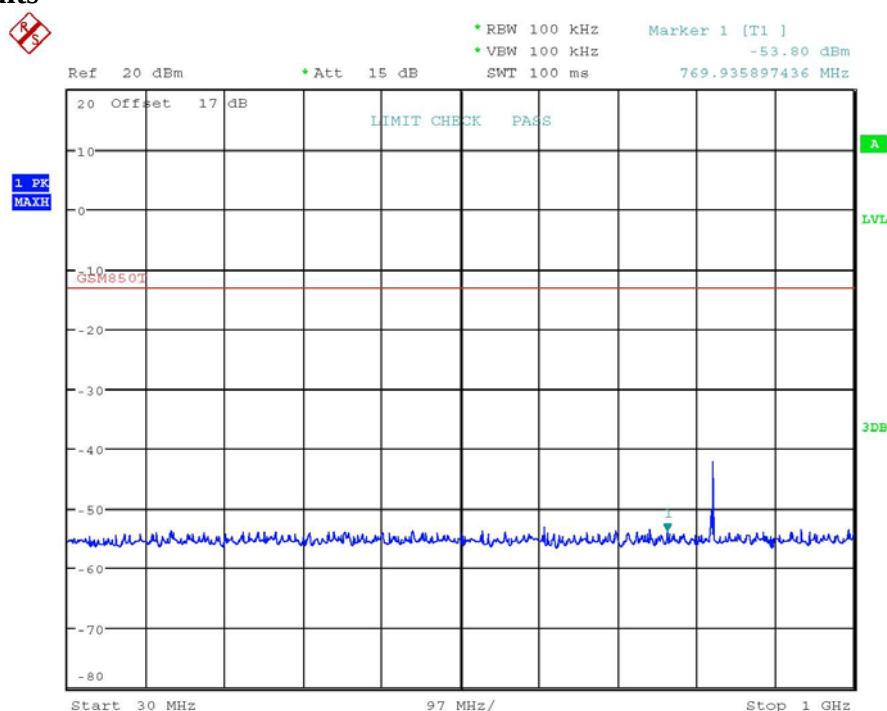
This transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer via a three-port splitter. Please refer to the following figure. Transmitter output was derived with the spectrum analyzer in dBm.

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.

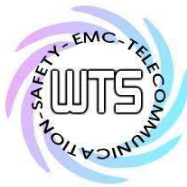


6.2 Test Results



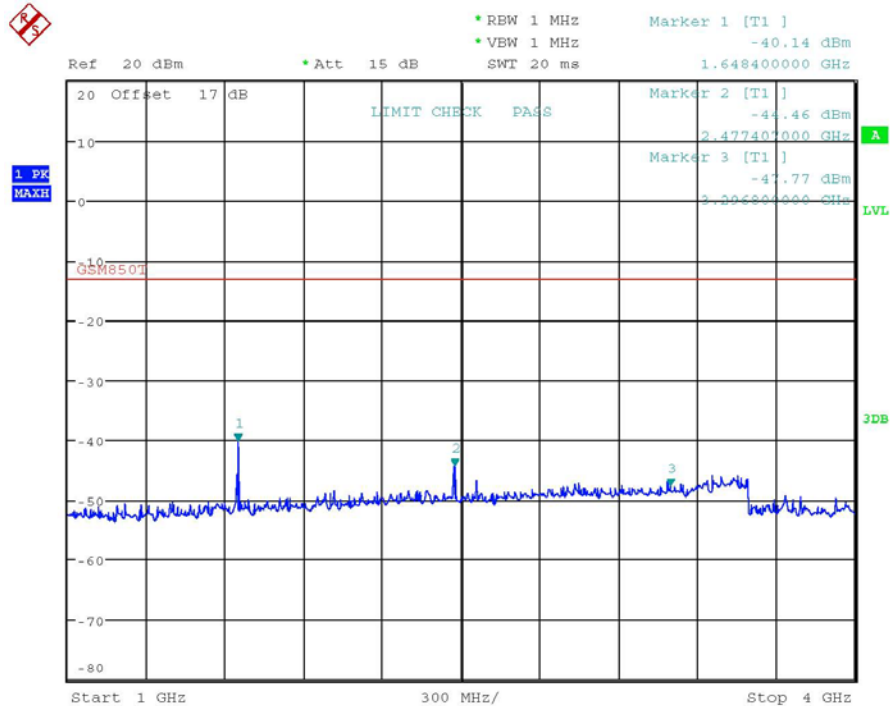
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:13:44



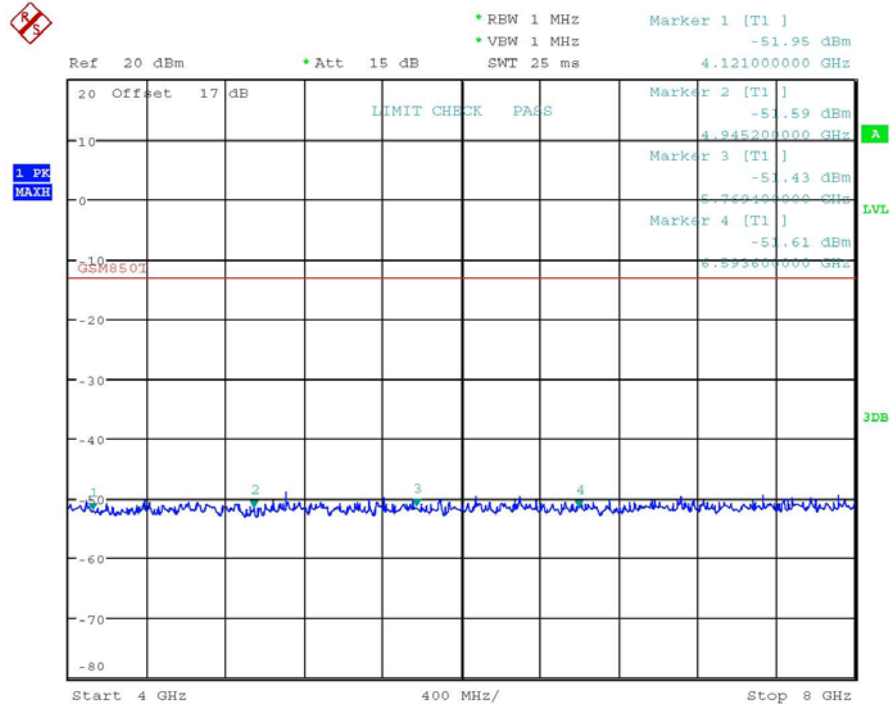
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



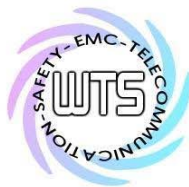
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:14:11



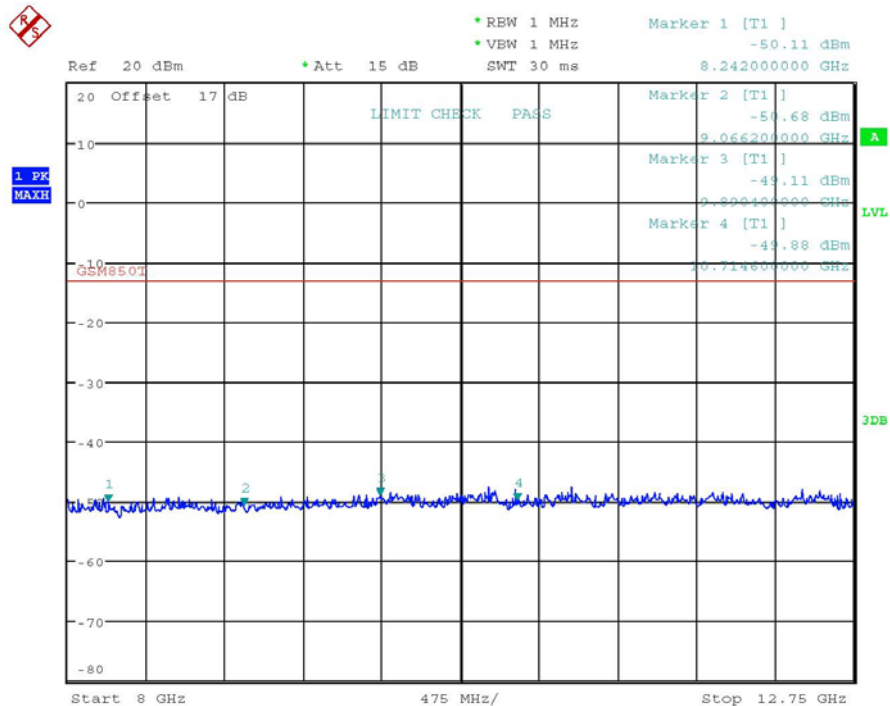
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:14:19



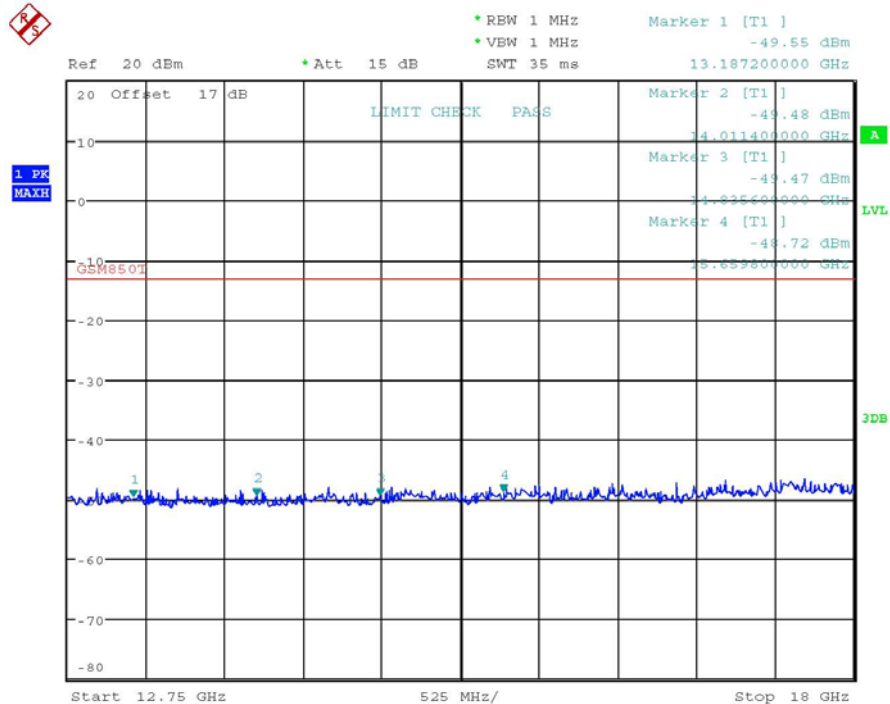
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



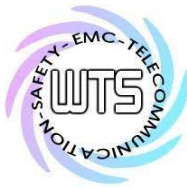
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:14:26



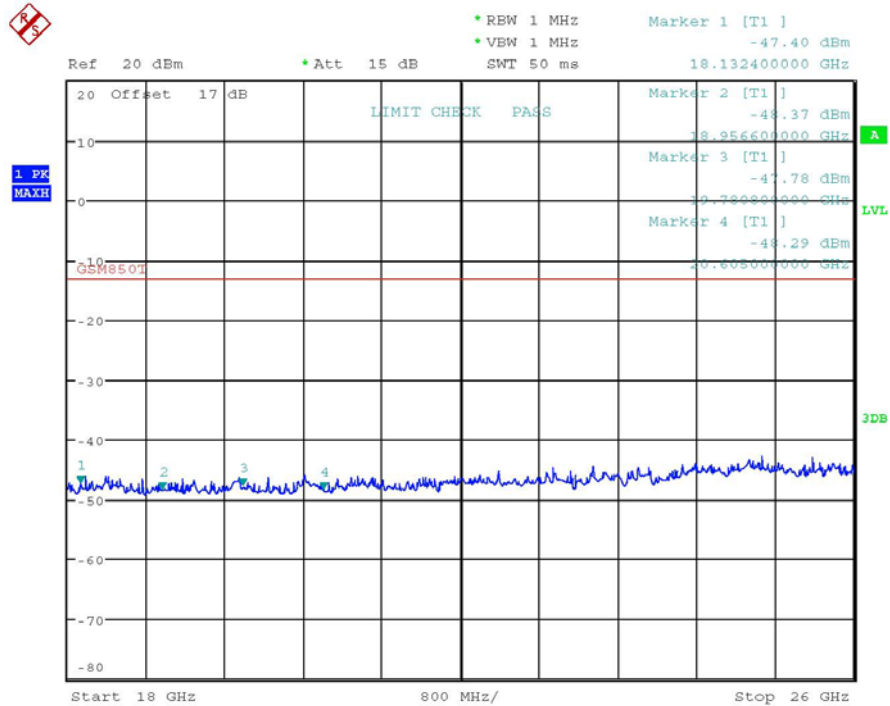
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:14:34



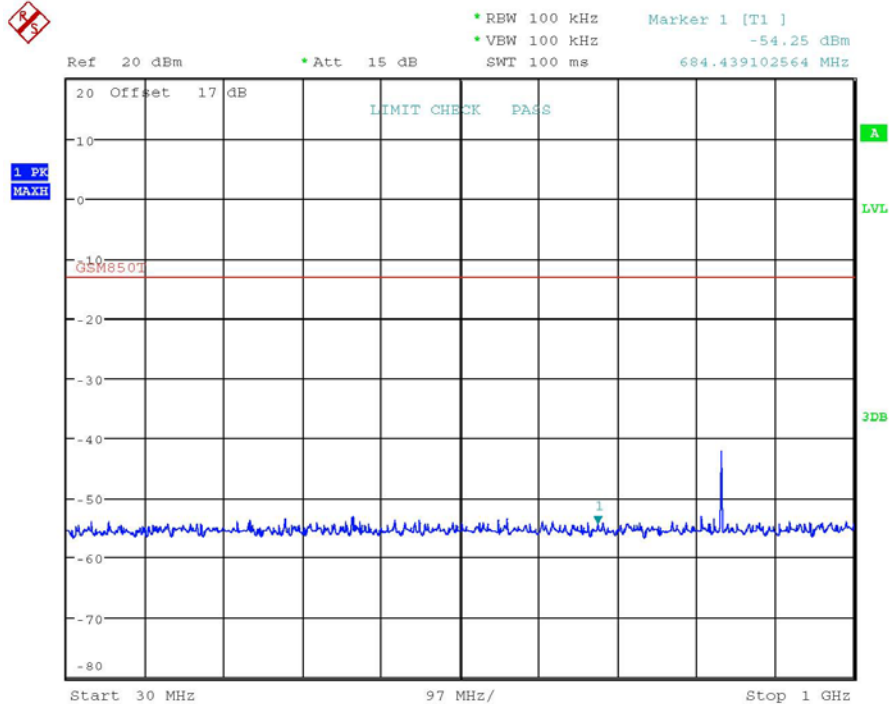
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



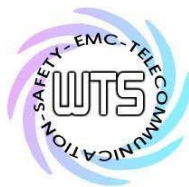
CONDUCTED SPURIOUS EMISSION 850 BAND CH128

Date: 5.JUL.2011 07:14:43



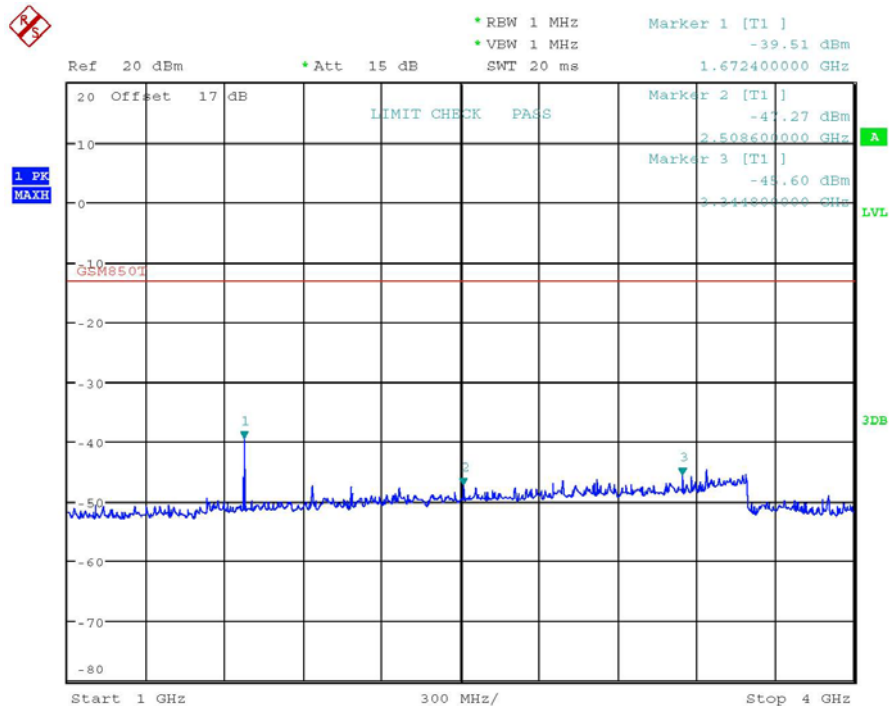
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:16:40



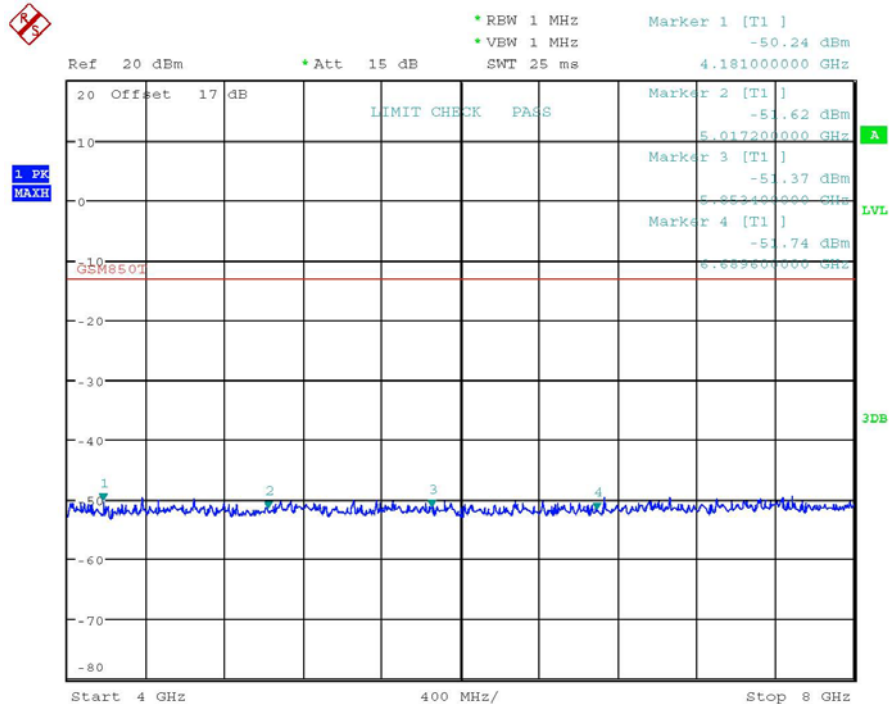
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



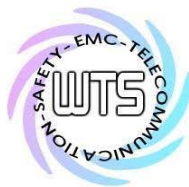
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:17:34



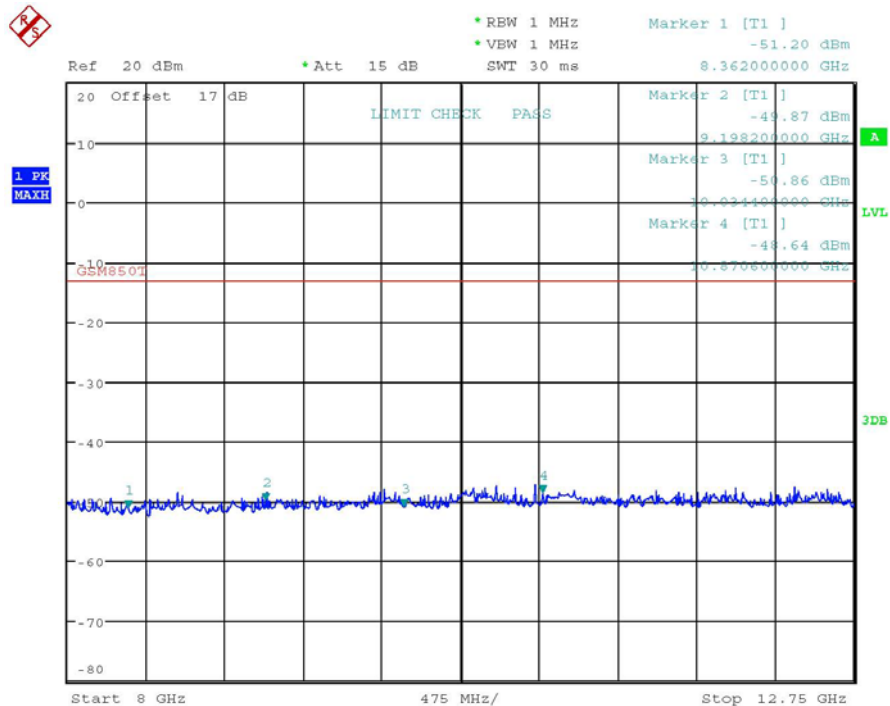
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:17:42



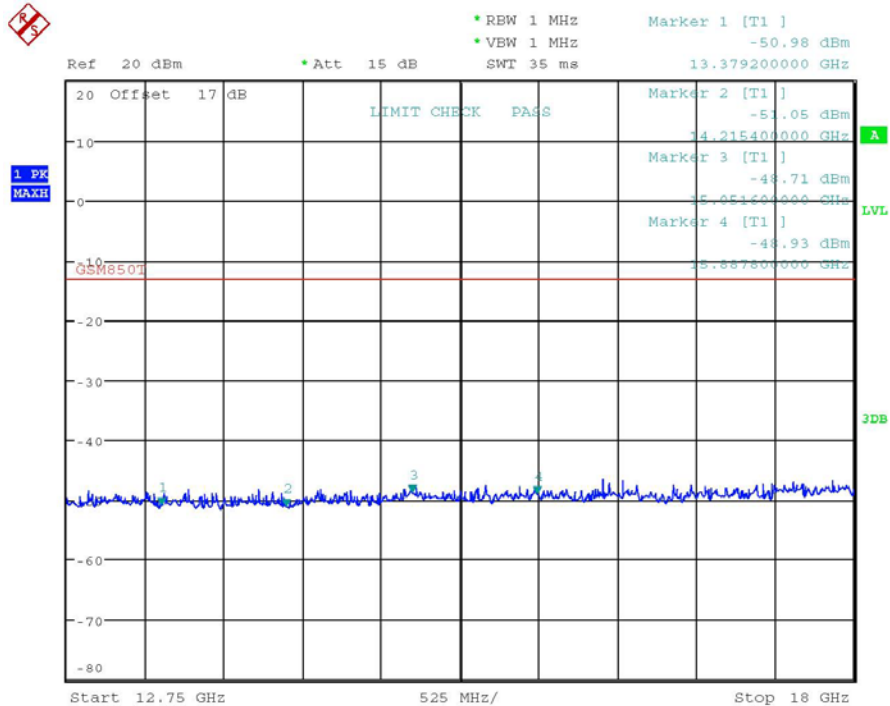
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



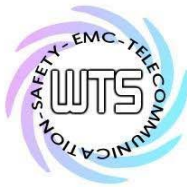
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:17:50



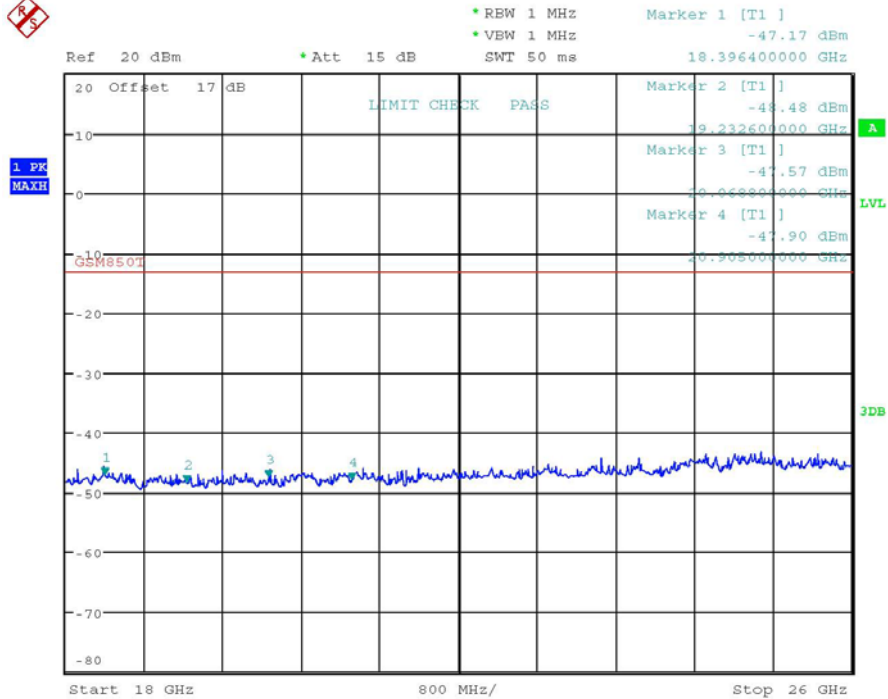
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:17:58



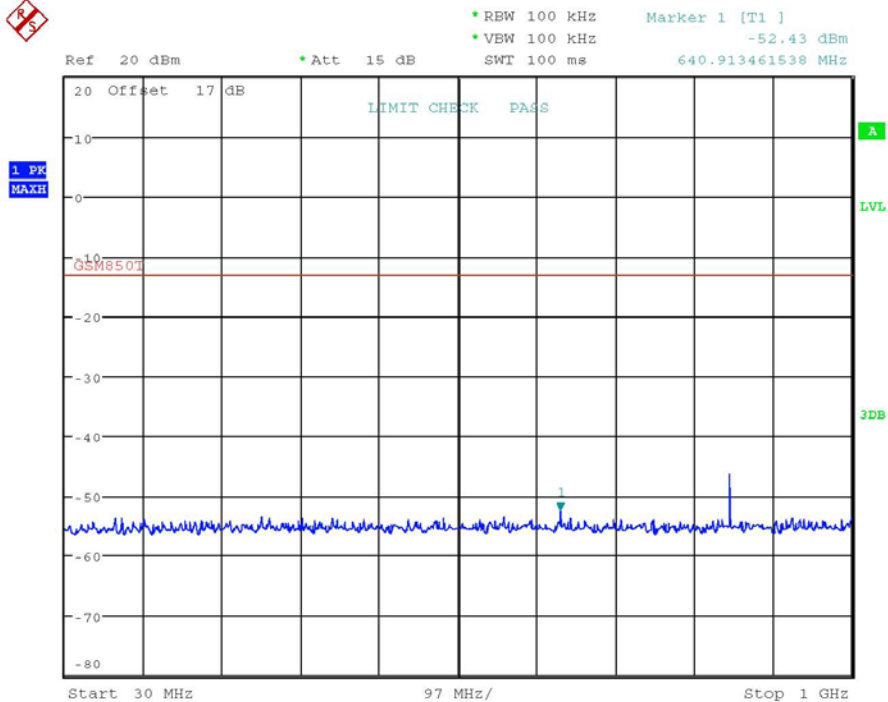
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



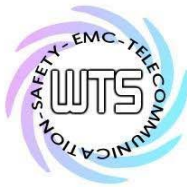
CONDUCTED SPURIOUS EMISSION 850 BAND CH188

Date: 5.JUL.2011 07:18:07



CONDUCTED SPURIOUS EMISSION 850 BAND CH251

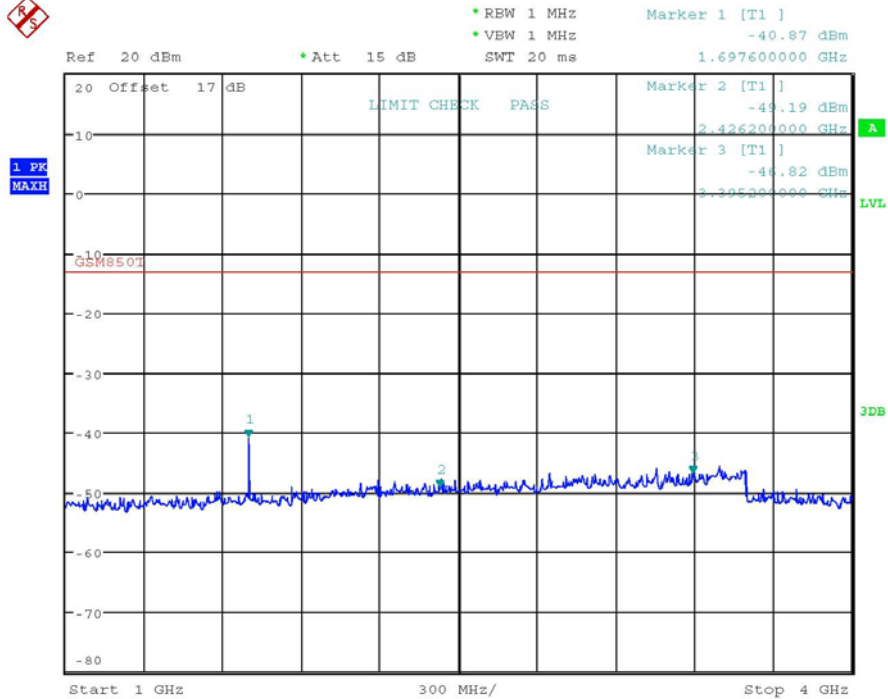
Date: 5.JUL.2011 07:20:13



Worldwide Testing Services(Taiwan) Co., Ltd.

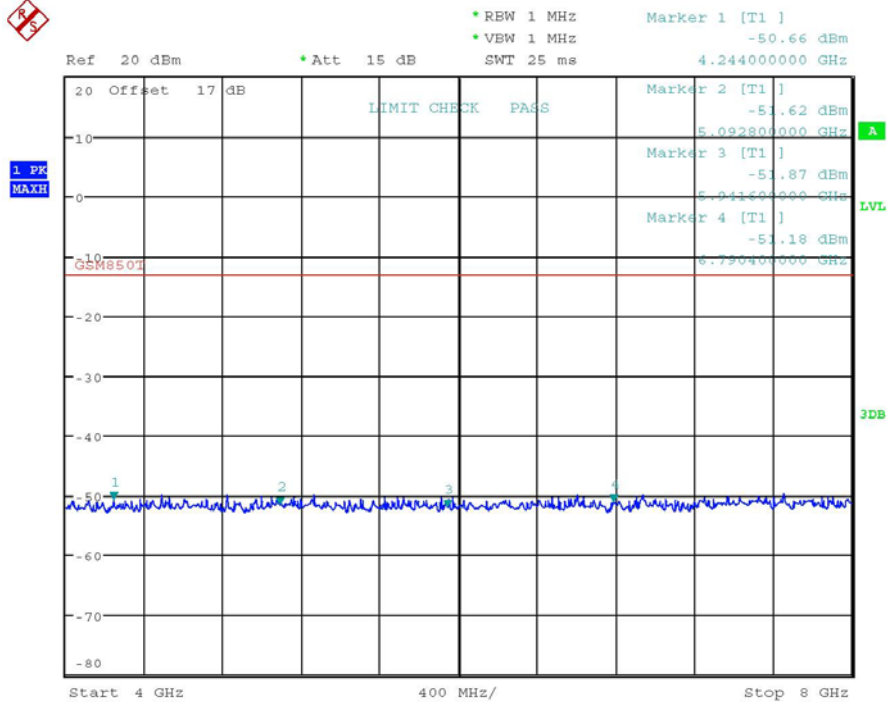
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



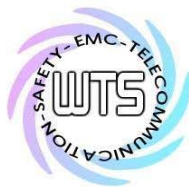
CONDUCTED SPURIOUS EMISSION 850 BAND CH251

Date: 5.JUL.2011 07:20:38



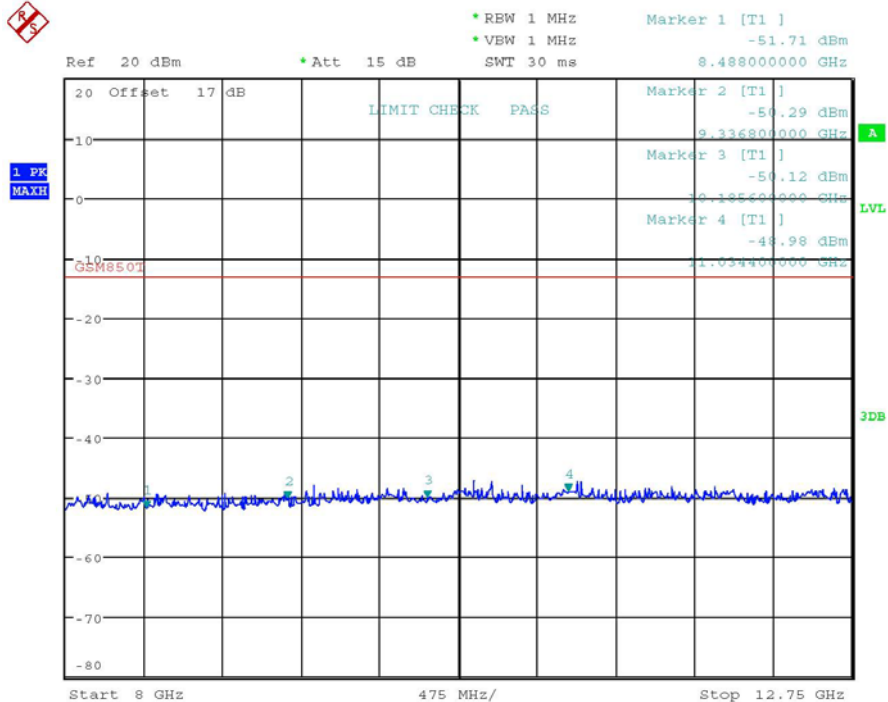
CONDUCTED SPURIOUS EMISSION 850 BAND CH251

Date: 5.JUL.2011 07:20:46



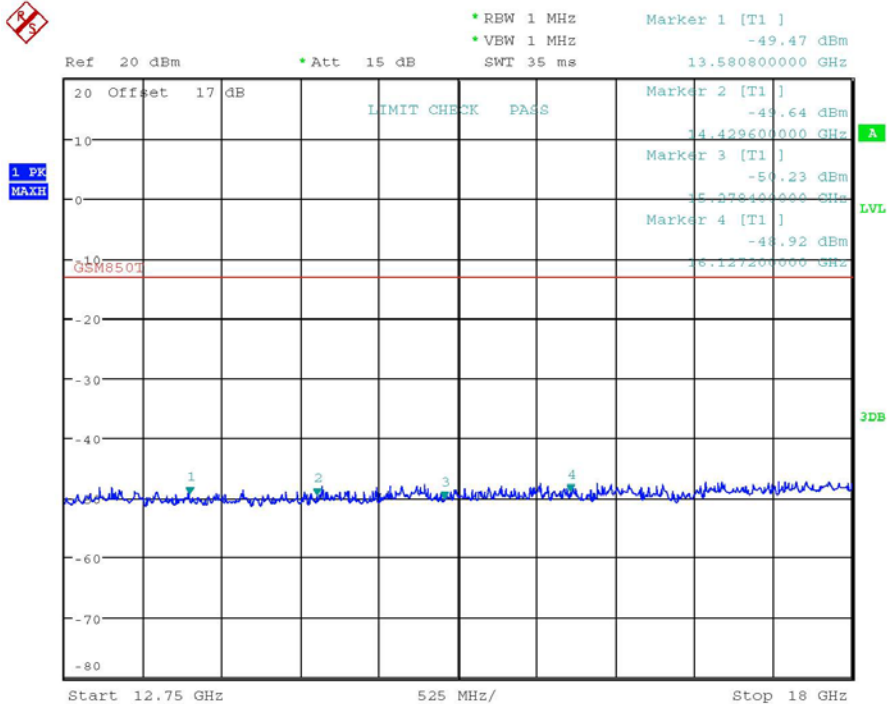
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



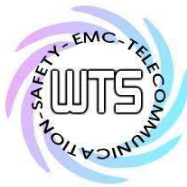
CONDUCTED SPURIOUS EMISSION 850 BAND CH251

Date: 5.JUL.2011 07:20:54



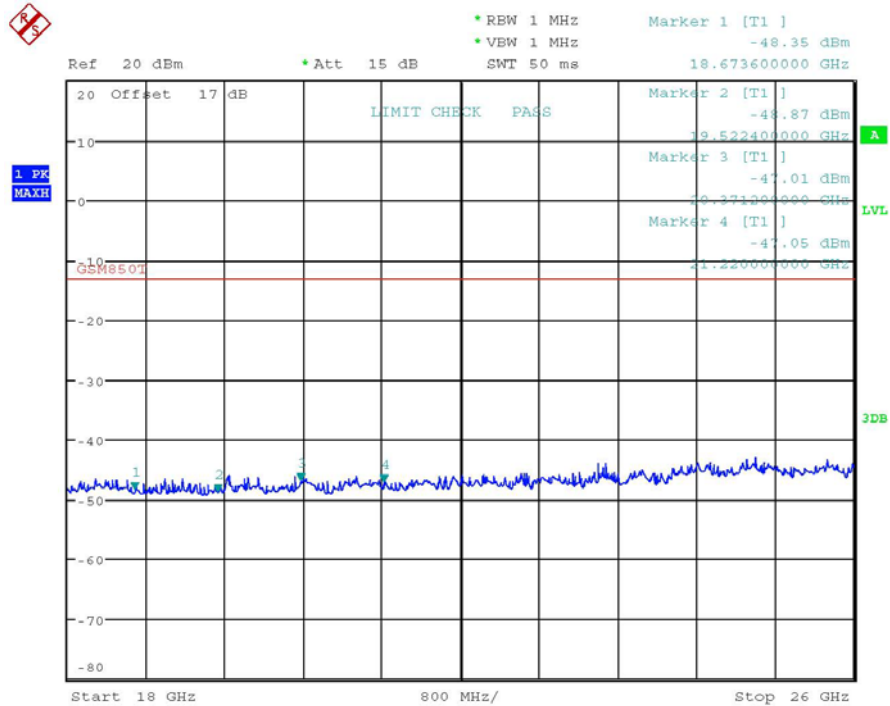
CONDUCTED SPURIOUS EMISSION 850 BAND CH251

Date: 5.JUL.2011 07:21:02



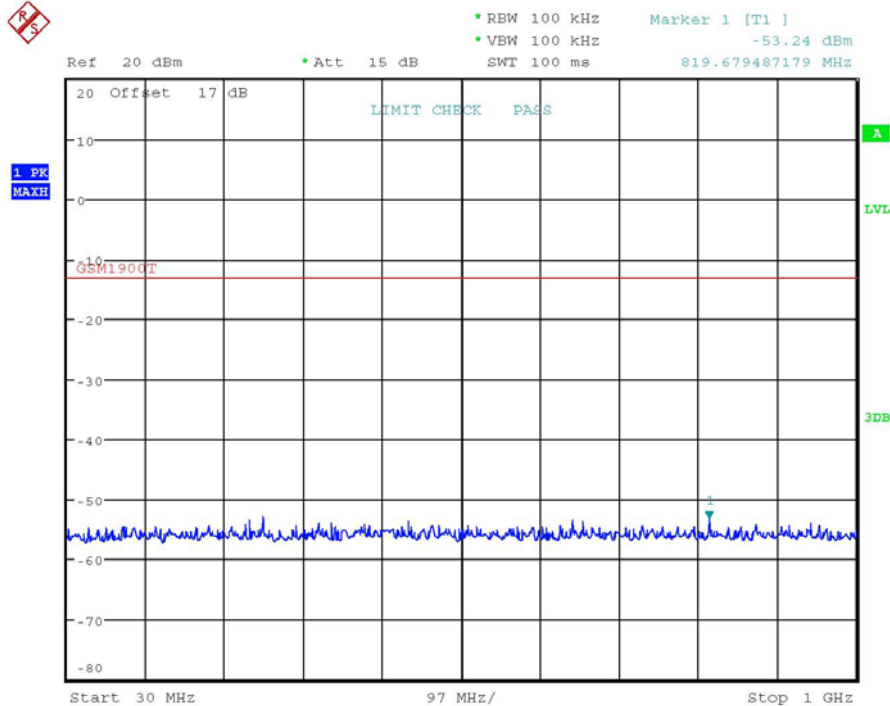
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



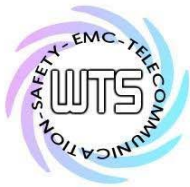
CONDUCTED SPURIOUS EMISSION 850 BAND CH251

Date: 5.JUL.2011 07:21:11



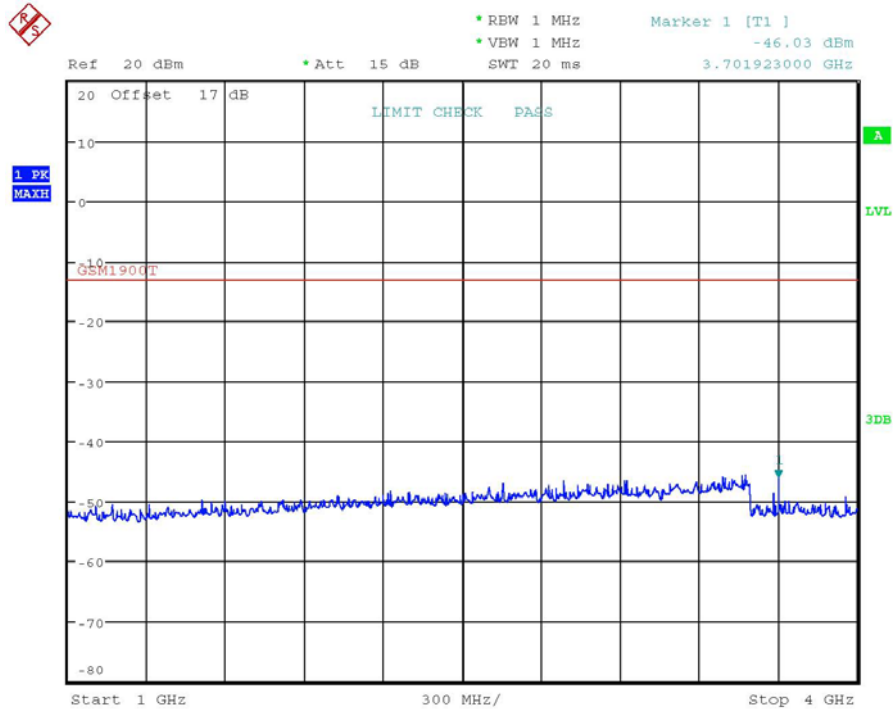
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:05:23



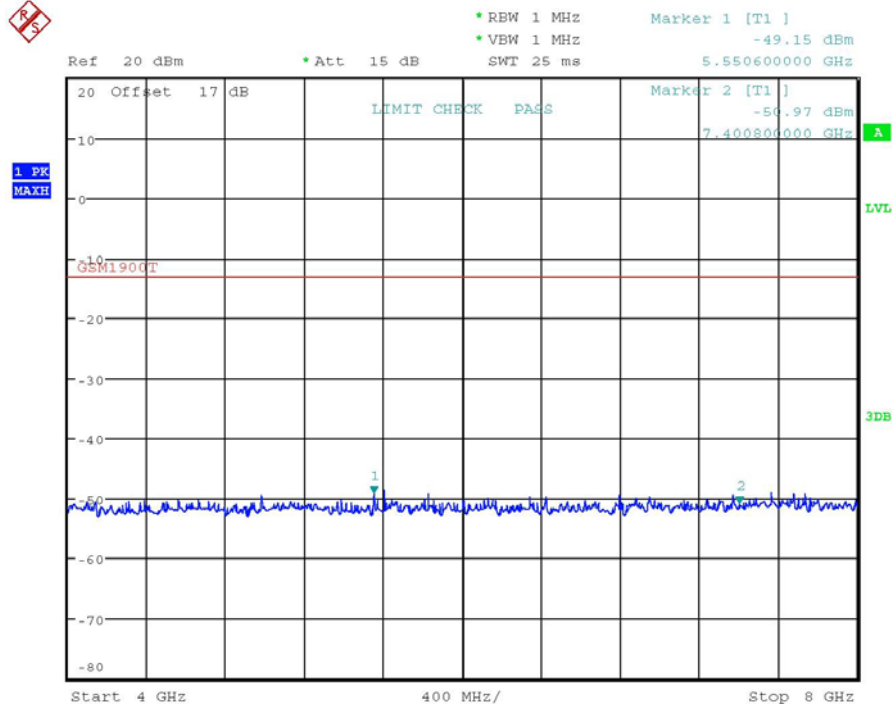
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



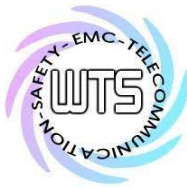
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:06:14



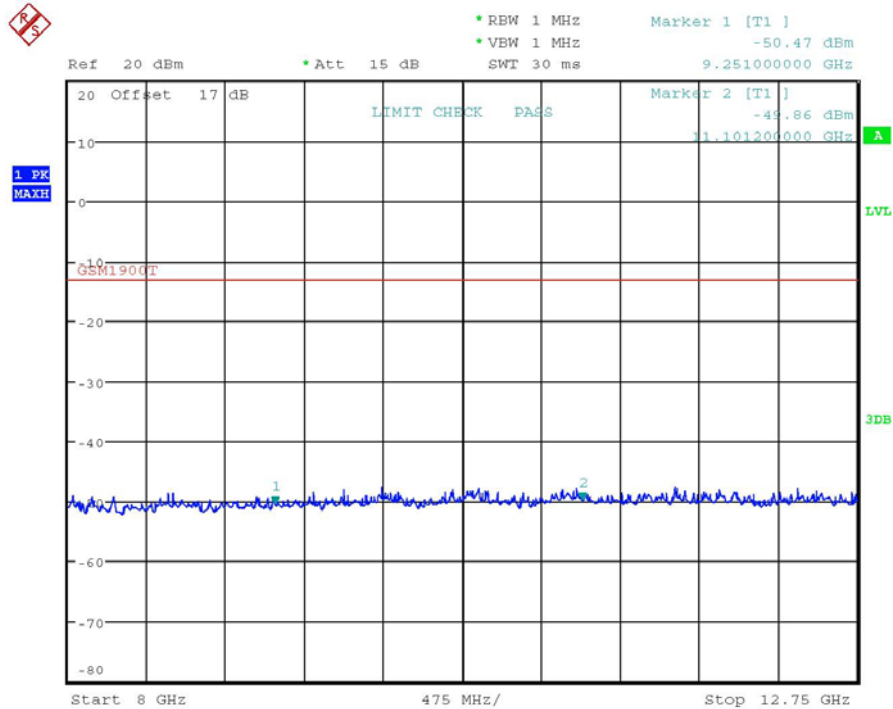
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:06:23



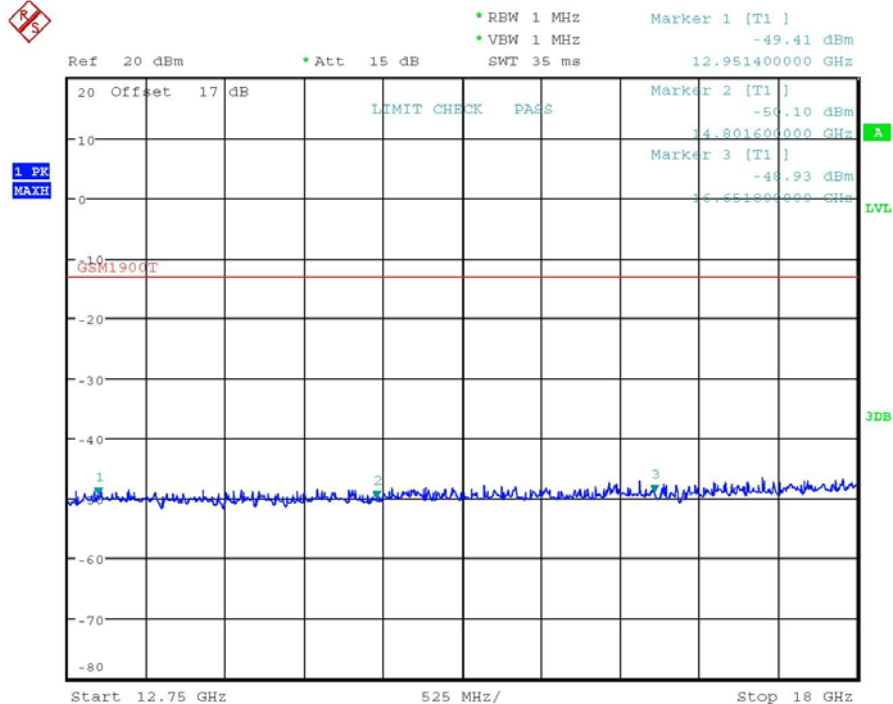
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



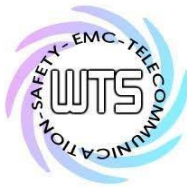
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:06:31



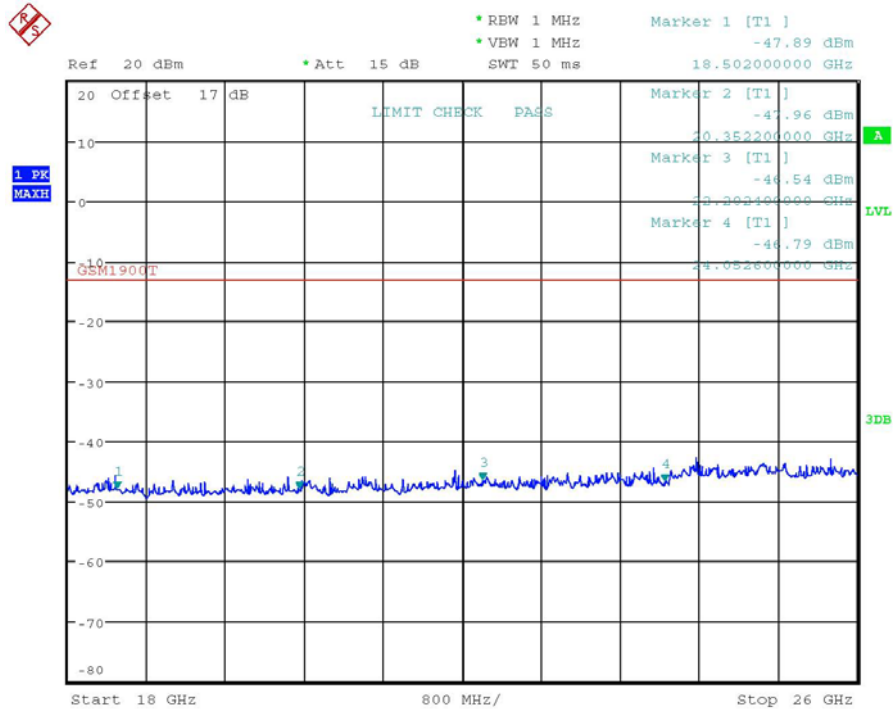
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:06:39



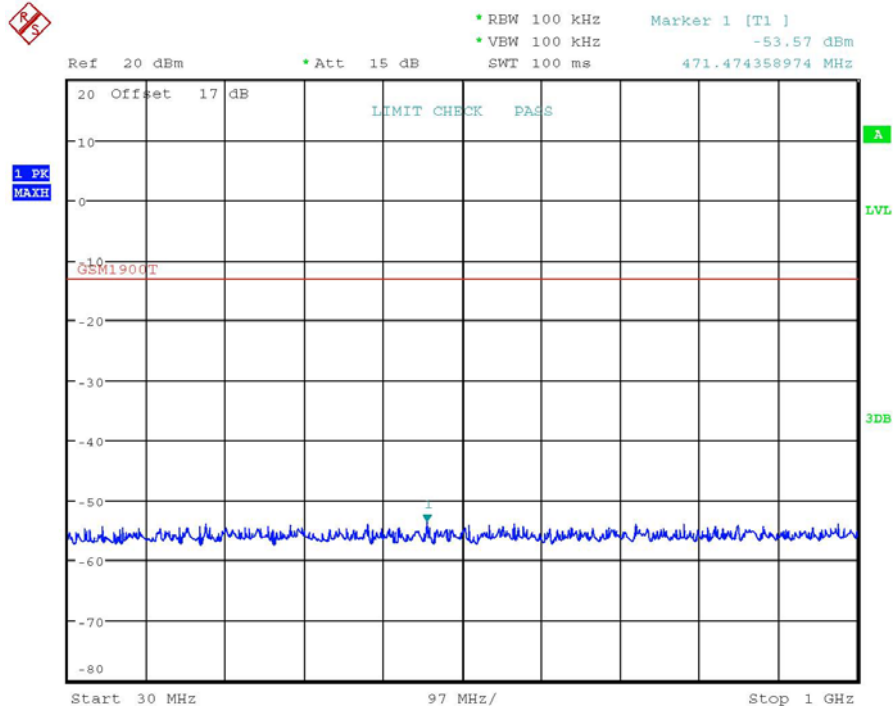
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



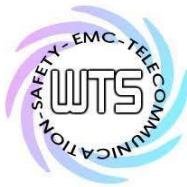
CONDUCTED SPURIOUS EMISSION 1900 BAND CH512

Date: 5.JUL.2011 07:06:47



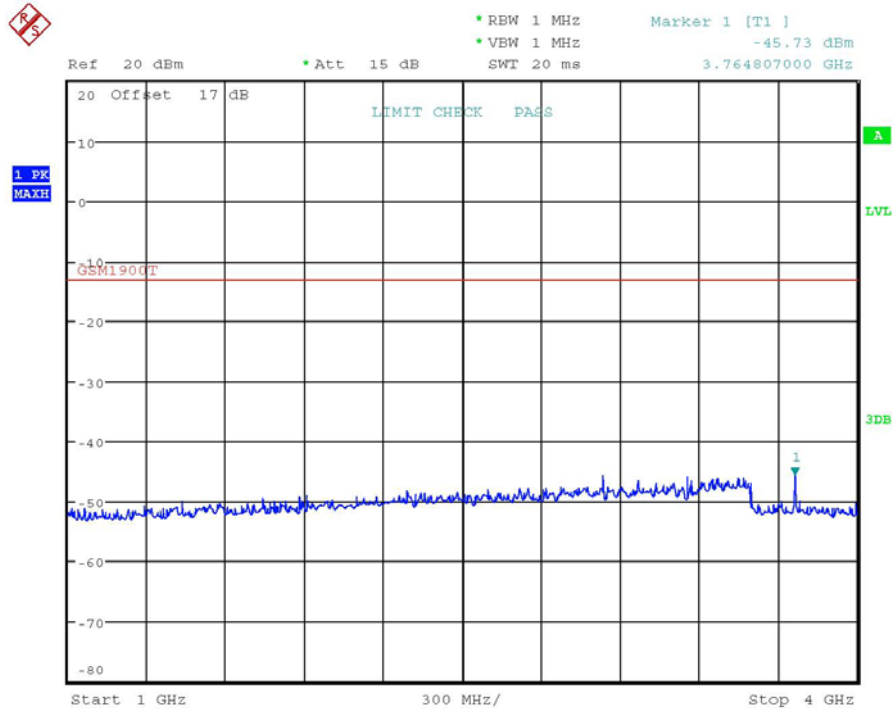
CONDUCTED SPURIOUS EMISSION 1900 BAND CH661

Date: 5.JUL.2011 07:07:51



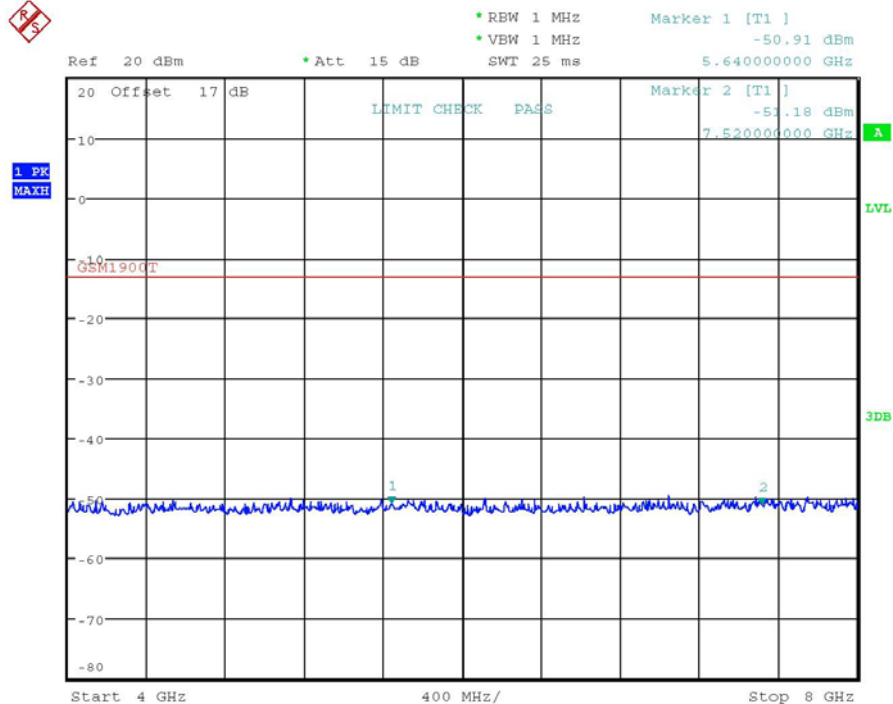
Report Number: W6M21106-11577-P-2224

FCC ID: SRKVT300



CONDUCTED SPURIOUS EMISSION 1900 BAND CH661

Date: 5.JUL.2011 07:08:18



CONDUCTED SPURIOUS EMISSION 1900 BAND CH661

Date: 5.JUL.2011 07:08:27