
RF Test Report

Report No.: AGC00552200501EE03A

PRODUCT DESIGNATION : Smart Phone
BRAND NAME : HAFURY
MODEL NAME : M20
APPLICANT : Shenzhen Huafurui Technology Co., Ltd.
DATE OF ISSUE : Jul 22, 2020
STANDARD(S) : EN 301 511 V12.5.1: 2017-03
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.



Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 22, 2020	Valid	Re-certification

Note: The original test report Ref. No.(AGC00552200501EE03) (dated 2020-06-08), was modified on 2020-07-22 to include the following changes for:

- Updated brand name and model name;
- Updated battery brand name and model name;
- Changed software version. (It changes due to the change of the product model, does not affect the test result

For the above described changes, no further testing necessary.



TABLE OF CONTENTS

1. TEST REPORT CERTIFICATION.....	5
2. GENERAL INFORMATION	6
2.1. DESCRIPTION OF EUT.....	6
2.2. TYPE OF MOBILE STATION AND ADDITIONAL INFORMATION	7
3. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION.....	8
4. MEASUREMENT UNCERTAINTY.....	10
5. TEST RESULT.....	11
5.1. APPLIED REFERENCE DOCUMENTS	11
5.2. TEST ENVIRONMENT/CONDITIONS	11
5.3. ITEMS USED IN THE TEST RESULTS LIST	11
5.4. TEST RESULTS LIST	13
Appendix A.Transmitter - Frequency error and phase error	21
Appendix B. Frequency error under multipath and interference conditions	23
Appendix C.Frequency error and phase error in GPRS multislots configuration	24
Appendix D.Transmitter output power and burst timing	26
Appendix E.Transmitter – Output RF spectrum	36
Appendix F.Transmitter output power in GPRS multislots configuration	46
Appendix G.Output RF spectrum in GPRS multislots configuration.....	56
Appendix H.Conducted spurious emissions - MS allocated a channel.....	66
Appendix I.Conducted spurious emissions- MS in idle mode	97
Appendix J.Receiver Blocking and spurious response – speech channel.....	112
Appendix K.Frequency error and Modulation accuracy in EGPRS Configuration	113
Appendix L. Frequency error under multipath and interference conditions in EGPRS Configuration.....	114
Appendix M.EGPRS Transmitter output power	115
Appendix N.Output RF spectrum in EGPRS configuration	125
Appendix P. Blocking and spurious response in EGPRS configuration.....	135
Appendix Q .AM suppression - speech channels	136
Appendix R. Intermodulation rejection - EGPRS.....	137
Adjacent S. Adjacent channel rejection – EGPRS.....	138
Appendix T. Adjacent channel rejection - speech channels (TCH/FS).....	139
Appendix U. Reference sensitivity - TCH/FS	140
Appendix V. Reference sensitivity - FACCH/F.....	141
AppendixW. Minimum Input level for Reference Performance - GPRS.....	142
Appendix X. Minimum Input level for Reference Performance – EGPRS.....	143



Appendix Y. Radiated spurious emissions - MS in idle mode	144
APPENDIX Z. RADIATED SPURIOUS EMISSIONS TEST RESULT	145
APPENDIX A1: PHOTOGRAPHS OF TEST SETUP	149



1. TEST REPORT CERTIFICATION

Applicant	Shenzhen Huafurui Technology Co., Ltd.
Address	Unit 1401 &1402, 14/F, Jin qi zhi gu mansion (No. 4 building of Chong wen Garden), Crossing of the Liu xian street and Tang ling road, Tao yuan street, Nan shan district, Shenzhen,P.R. China
Manufacturer	Shenzhen Huafurui Technology Co., Ltd.
Address	Unit 1401 &1402, 14/F, Jin qi zhi gu mansion (No. 4 building of Chong wen Garden), Crossing of the Liu xian street and Tang ling road, Tao yuan street, Nan shan district, Shenzhen,P.R. China
Factory Name	Shenzhen Huafurui Technology Co., Ltd.
Address	Unit 1401 &1402, 14/F, Jin qi zhi gu mansion (No. 4 building of Chong wen Garden), Crossing of the Liu xian street and Tang ling road, Tao yuan street, Nan shan district, Shenzhen,P.R. China
Product Designation	Smart Phone
Brand Name	HAFURY
Test Model	M20
Date of test	May 25, 2020~Jun. 08, 2020
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-EC-2.5G2/RF

We, Attestation of Global Compliance (Shenzhen) Co., Ltd., for compliance with the requirements set forth in the European Standard ETSI EN 301 511 V12.5.1. The results of testing in this report apply to the product/ system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

The test results of this report relate only to the tested sample identified in this report.

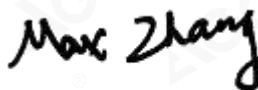
Prepared By



Calvin Liu
(Project Engineer)

Jun. 08, 2020

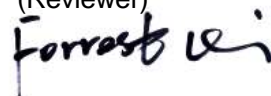
Reviewed By



Max Zhang
(Reviewer)

Jul. 22, 2020

Approved By



Forrest Lei
Authorized Officer

Jul. 22, 2020



2. GENERAL INFORMATION

2.1. DESCRIPTION OF EUT

2.1.1. FINAL EQUIPMENT BUILD STATUS

Details of technical specification refer to the description in follows:

Product Name	Smart Phone
Brand Name	HAFURY
Test Model	M20
Product Type	GSM
Hardware Version	TE647_MAIN_PCN_V1.0
Software Version	HAFURY_M20_A041CH_V03_20200713
Frequency Bands	<input checked="" type="checkbox"/> GSM 900 <input checked="" type="checkbox"/> DCS 1800 (EU Frequency) <input checked="" type="checkbox"/> GSM 850 <input checked="" type="checkbox"/> PCS1900 (none EU Frequency)
Modulation Mode	GMSK, 8PSK
Antenna Type	PIFA Antenna
Antenna Gain	GSM900: 2.4dBi, DCS1800: 2.49dBi
Power Class	GSM900: 4, DCS1800: 1
GSM Release Version	N/A
GPRS Class	Class 12
SIM Card Description	There are dual-SIM cards for GSM, just one for GSM/WCDMA /LTE and the other only for GSM.

2.1.2. PHOTOGRAPHS OF THE EUT

Please see photographs of the EUT.

2.1.3. IDENTIFICATION OF SAMPLES EUT

The EUT Identity consists of numerical and letter characters (see the table below), the first five numerical characters indicates the Type of the EUT defined by AGC, the next letter character indicates the test sample, and the following two numerical characters indicates the software version of the test sample.

SAMPLE A01

Sample Reference Number	A01
Factory Name	Shenzhen Huafului Technology Co., Ltd.
Test Model	M20
Product Type	GSM
Frequency Bands	GSM 900: 880 -915 MHz (TX); 925 - 960 MHz (RX) DCS1800: 1710 -1785 MHz (TX); 1805-1880 MHz (RX)



2.2. TYPE OF MOBILE STATION AND ADDITIONAL INFORMATION

Table A.2: Type of Mobile Station (Re. ETSI EN 301 511 Annex A)

Item	Type of Mobile Station	Support	Mnemonic
1	HSCSD Multislot MS	NO	Type_HSCSD_Multislot
2	R-GSM MS	NO	Type_R-GSM
3	Support of GPRS Multislot class on the uplink	YES	Type_GPRS_Multislot_uplink
4	EGPRS	YES	Type_EGPRS
5	EGPRS capable of 8PSK in Uplink, of all Multislot classes	YES	Type_EGPRS_8PSK_uplink
6	ER-GSM MS	NO	Type-GSM
7	DLMC MS	NO	Type DLMC

Type A.3: Additional information (Re. ETSI EN 301 511 Annex A)

Item	Additional Information	Support	Mnemonic
1	Telephony	YES	TSPC_Serv_TS11
2	Permanent Antenna Connector	YES	TSPC_AddInfo_PermAntenna

Note: Telephony means make a phone call.

3. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION

Test Site-1	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao 'an District, Shenzhen, Guangdong, China

Note: Blocking and spurious response test within the scope of TAF approval.

LIST OF EQUIPMENTS USED OF AGC

No.	Type	Manufacturer	S/N	Cal. Date	Cal. Due
1	H & T Chamber ETH225-40A	Test EQ	WIT-05121302	Feb. 25, 2020	Feb. 24, 2021
2	CMU200	R&S	120237	July 13, 2019	July 12, 2020
3	Wireless communication test set 8960	Agilent	GB46200384	July 11, 2019	July 10, 2020
4	Power Splitter 11636A	Agilent	34	Sep.18, 2019	Sep.17, 2020
5	Attenuator	JFW	50FHC-006-50	June 12, 2019	June 11, 2020
6	Vector Signal Generator SMU200A	R&S	104332	Sep.18, 2019	Sep.17, 2020
7	VECTOR ANALYZER E4440A	Agilent	MY44303916	June 12, 2019	June 11, 2020
8	MXG Vector Signal Generator N5182A	AGILENT	MY50140530	Sep.18, 2019	Sep.17, 2020
9	PSG Analog Signal Generator E8257D	AGILENT	MY45141029	Sep.18, 2019	Sep.17, 2020
10	MXA Signal Analyzer N9020A	AGILENT	W1312-60196	Oct. 08, 2019	Oct. 07, 2020
11	Universal Switch Control Unit	JS TONSCEND	N/A	---	---
12	Programmable Power Supply PPT-1830	GW INSTEK	EM907629	Aug.16, 2019	Aug.15, 2020
13	DC Power Source	N/A	GBD-60V30A	Feb. 25, 2020	Feb. 24, 2021
14	Attenuator	JFW	50FHC-006-50	June 12, 2019	June 11, 2020
15	EMI Test Receiver ESCI	R&S	100694	June 12, 2019	June 11, 2020
16	Double-Ridged Waveguide Horn Antenna 3117	ETS LINDGREN	00034609	May 17, 2019	May 16, 2021
17	Trilog Broadband Antenna	SCHWARZBEC K	VULB9168-494	Jan, 09, 2019	Jan. 08, 2021
18	LOOP ANTENNA SAS-562B	A.H	/	Feb. 27, 2020	Feb. 26, 2021
19	Artificial Mains Network ENV4200	R&S	101116	July 11, 2019	July 10, 2020



No.	Type	Manufacturer	S/N	Cal. Date	Cal. Due
20	Artificial Mains Network ENV216	R&S	101242	July 11, 2019	July 10, 2020
21	Filter Bank Notch 1(880-915MHz)	MICRO-TRONI CS	010	Feb. 25, 2020	Feb. 24, 2021
22	Filter Bank Notch 2(1710-1785MHz)	MICRO-TRONI CS	009	Feb. 25, 2020	Feb. 24, 2021
23	Filter Bank Notch 3(1920-1980MHz)	MICRO-TRONI CS	008	Feb. 25, 2020	Feb. 24, 2021



4. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in Measurement” (GUM) published by ISO.

- Uncertainty of Radio Frequency, $U_c = \pm 1 \times 10^{-5}$
- Uncertainty of total RF power, conducted, $U_c = \pm 1.5\text{dB}$
- Uncertainty of RF power density, conducted, $U_c = \pm 3\text{dB}$
- Uncertainty of spurious emissions, conducted, $U_c = \pm 3\text{dB}$
- Uncertainty of spurious emissions, radiated, $U_c = \pm 6\text{dB}$
- Uncertainty of Temperature: $\pm 1^\circ\text{C}$
- Uncertainty of Humidity: $\pm 5\%$
- Uncertainty of DC and low frequency voltages: $\pm 3\%$



5. TEST RESULT

5.1. APPLIED REFERENCE DOCUMENTS

Leading reference documents for testing:

No.	Identity	Document Title
1	ETSI EN 301 511	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

Specific reference documents for testing:

No.	Identity	Document Title
2	ETSI TS 151 010-1	3 rd Generation Partnership Project; Technical Specification Group GSM/EDGE Radio Access Network Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification

5.2. TEST ENVIRONMENT/CONDITIONS

Normal Temperature (NT)	15 ... 35 °C
Relative Humidity	30 ... 75 %
Air Pressure	980 ... 1020 kPa
Adapter Test Model Name	TPA-97050100VU
Details of Power Supply (Rated Input)	AC100-240V, 50/60Hz, 0.15A
Details of Power Supply (Rated Output)	DC5.0V,1000mA
Extreme Temperature	Low Temperature (TL) = -10°C High Temperature (TH) = +40°C
Extreme Voltage of the EUT	Low Voltage = DC 3.23V Normal Voltage= DC 3.80V High Voltage = DC 4.35V

Note: The Limit Voltage 4.23V was declared by manufacturer,
The EUT couldn't be operate normally with higher voltage.
The maximum temperature of 40 is not a standard requirement and is measured according to the maximum service temperature stated by the manufacturer.

5.3. ITEMS USED IN THE TEST RESULTS LIST

Terms in the column "Verdict" for the test results list of the section:

Verdict	Description
PASS	EUT passed this test case
FAIL	EUT failed this test case
INC.	EUT did not pass and did not fail this test case, therefore the verdict is inconclusive



Verdict	Description
N/A	Test case not applicable for the EUT, see the column "Note" for detailed



5.4. TEST RESULTS LIST

Table A.1: The EN Requirements Table (EN-RT) (Re. ETSI EN 301 511 Annex A) for SIM Card 1

Test Case (ETSI TS 151010-1)	Test Case (EN 301 511)	Parameter	GSM 900		GSM 1800		Note
			Sample	Result	Sample	Result	
12.1.1	4.2.12	Conducted spurious emissions - MS allocated a channel					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.1.2	4.2.13	Conducted spurious emissions - MS in idle mode					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.2.1	4.2.16	Radiated spurious emissions - MS allocated a channel					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.2.2	4.2.17	Radiated spurious emissions - MS in idle mode					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.1	4.2.1	Transmitter - Frequency error and phase error					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
		Vibration X-axis	A01	PASS	A01	PASS	
		Vibration Y-axis	A01	PASS	A01	PASS	
		Vibration Z-axis	A01	PASS	A01	PASS	
13.2	4.2.2	Transmitter - Frequency error under multipath and interference conditions					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	



13.3	4.2.5	Transmitter output power and burst timing				
		NT / NV	A01	PASS	A01	PASS
		LT / LV	A01	PASS	A01	PASS
		LT / HV	A01	PASS	A01	PASS
		HT / LV	A01	PASS	A01	PASS
		HT / HV	A01	PASS	A01	PASS
13.4	4.2.6	Transmitter - Output RF spectrum				
		NT / NV	A01	PASS	A01	PASS
		LT / LV	A01	PASS	A01	PASS
		LT / HV	A01	PASS	A01	PASS
		HT / LV	A01	PASS	A01	PASS
		HT / HV	A01	PASS	A01	PASS
13.16.1	4.2.4	Frequency error and phase error in GPRS multislot configuration				
		NT / NV	A01	PASS	A01	PASS
		LT / LV	A01	PASS	A01	PASS
		LT / HV	A01	PASS	A01	PASS
		HT / LV	A01	PASS	A01	PASS
		HT / HV	A01	PASS	A01	PASS
		Vibration X-axis	A01	PASS	A01	PASS
		Vibration Y-axis	A01	PASS	A01	PASS
13.16.2	4.2.10	Transmitter output power in GPRS multislot configuration				
		NT / NV	A01	PASS	A01	PASS
		LT / LV	A01	PASS	A01	PASS
		LT / HV	A01	PASS	A01	PASS
		HT / LV	A01	PASS	A01	PASS
		HT/HV	A01	PASS	A01	PASS
13.16.3	4.2.11	Output RF spectrum in GPRS multislot configuration				
		NT / NV	A01	PASS	A01	PASS
		LT / LV	A01	PASS	A01	PASS
		LT / HV	A01	PASS	A01	PASS
		HT / LV	A01	PASS	A01	PASS
		HT/HV	A01	PASS	A01	PASS
14.2.1	4.2.42	Reference sensitivity - TCH/FS				
		NT / NV	A01	PASS	A01	PASS



		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.2.3	4.2.43	Reference sensitivity - FACCH/F					
		NT / NV	A01	PASS	A01	PASS	
14.16.1	4.2.44	Minimum Input level for Reference Performance - GPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.6.1	4.2.32	Intermodulation rejection-speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.8.1	4.2.35	AM suppression-speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.5.1	4.2.38	Adjacent channel rejection-speech channels (TCH/FS)					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.7.1	4.2.20	Blocking and spurious response – speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.3	4.2.40	Adjacent channel rejection - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.4	4.2.34	Intermodulation rejection - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.1	4.2.26	Frequency error and Modulation accuracy in EGPRS Configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	



		NT / HV	A01	PASS	A01	PASS	
13.17.2	4.2.27	Frequency error under multipath and interference conditions in EGPRS Configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.3	4.2.28	EGPRS Transmitter output power					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.4	4.2.29	Output RF spectrum in EGPRS configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.1	4.2.45	Minimum Input level for Reference Performance - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.5	4.2.30	Blocking and spurious response in EGPRS configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	



Table A.2: The EN Requirements Table (EN-RT) (Re. ETSI EN 301 511 Annex A) for SIM Card 2

Test Case (ETSI TS 151010-1)	Test Case (EN 301 511)	Parameter	GSM 900		GSM 1800		Note
			Sample	Result	Sample	Result	
12.1.1	4.2.12	Conducted spurious emissions - MS allocated a channel					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.1.2	4.2.13	Conducted spurious emissions - MS in idle mode					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.2.1	4.2.16	Radiated spurious emissions - MS allocated a channel					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
12.2.2	4.2.17	Radiated spurious emissions - MS in idle mode					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.1	4.2.1	Transmitter - Frequency error and phase error					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
		Vibration X-axis	A01	PASS	A01	PASS	
		Vibration Y-axis	A01	PASS	A01	PASS	
13.2	4.2.2	Transmitter - Frequency error under multipath and interference conditions					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
13.3	4.2.5	Transmitter output power and burst timing					



		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
13.4	4.2.6	Transmitter - Output RF spectrum					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
13.16.1	4.2.4	Frequency error and phase error in GPRS multislot configuration					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT / HV	A01	PASS	A01	PASS	
		Vibration X-axis	A01	PASS	A01	PASS	
		Vibration Y-axis	A01	PASS	A01	PASS	
		Vibration Z-axis	A01	PASS	A01	PASS	
13.16.2	4.2.10	Transmitter output power in GPRS multislot configuration					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT/HV	A01	PASS	A01	PASS	
13.16.3	4.2.11	Output RF spectrum in GPRS multislot configuration					
		NT / NV	A01	PASS	A01	PASS	
		LT / LV	A01	PASS	A01	PASS	
		LT / HV	A01	PASS	A01	PASS	
		HT / LV	A01	PASS	A01	PASS	
		HT/HV	A01	PASS	A01	PASS	
14.2.1	4.2.42	Reference sensitivity - TCH/FS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	



		NT / HV	A01	PASS	A01	PASS	
14.2.3	4.2.43	Reference sensitivity - FACCH/F					
		NT / NV	A01	PASS	A01	PASS	
14.16.1	4.2.44	Minimum Input level for Reference Performance - GPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.6.1	4.2.32	Intermodulation rejection-speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.8.1	4.2.35	AM suppression-speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.5.1	4.2.38	Adjacent channel rejection-speech channels (TCH/FS)					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.7.1	4.2.20	Blocking and spurious response – speech channels					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.3	4.2.40	Adjacent channel rejection - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.4	4.2.34	Intermodulation rejection - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.1	4.2.26	Frequency error and Modulation accuracy in EGPRS Configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	



		NT / HV	A01	PASS	A01	PASS	
13.17.2	4.2.27	Frequency error under multipath and interference conditions in EGPRS Configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.3	4.2.28	EGPRS Transmitter output power					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
13.17.4	4.2.29	Output RF spectrum in EGPRS configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.1	4.2.45	Minimum Input level for Reference Performance - EGPRS					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	
14.18.5	4.2.30	Blocking and spurious response in EGPRS configuration					
		NT / NV	A01	PASS	A01	PASS	
		NT / LV	A01	PASS	A01	PASS	
		NT / HV	A01	PASS	A01	PASS	

Note: The worst test case is SIM Card 1.



Appendix A. Transmitter - Frequency error and phase error

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

GSM900

RMS phase error(degree)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	0.6	0.6	0.6	PASS
	19	0.5	0.6	0.6	PASS
When the MS is being vibrated	5	0.6	0.6	0.6	PASS
	19	0.5	0.5	0.6	PASS

Peak phase error(degree)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	1.7	1.7	1.7	PASS
	19	1.6	1.6	1.7	PASS
When the MS is being vibrated	5	1.6	1.7	1.7	PASS
	19	1.6	1.6	1.7	PASS

frequency error(Hz)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	12	11	13	PASS
	19	16	12	11	PASS
When the MS is being vibrated	5	9	11	13	PASS
	19	14	13	9	PASS



DCS1800

RMS phase error(degree)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	1.2	1.3	1.4	PASS
	15	1.3	1.3	1.3	PASS
When the MS is being vibrated	0	1.3	1.3	1.4	PASS
	15	1.3	1.3	1.3	PASS

Peak phase error(degree)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	3.4	3.5	6.2	PASS
	15	3.3	3.3	3.5	PASS
When the MS is being vibrated	0	3.5	3.5	5.9	PASS
	15	3.3	3.4	3.5	PASS

frequency error(Hz)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	22	24	29	PASS
	15	20	22	24	PASS
When the MS is being vibrated	0	23	25	26	PASS
	15	21	20	23	PASS



Appendix B. Frequency error under multipath and interference conditions

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

GSM900

Fading set	Test conditions	Power control LEVEL	Result			
			GSM900			
			ARFCN			
			LCH	MCH	HCH	Result
RA250	TNVN	5	11	12	12	PASS
		19	13	13	12	PASS
HT100	TNVN	5	10	13	11	PASS
		19	12	11	14	PASS
TU50	TNVN	5	15	10	11	PASS
		19	15	12	13	PASS
TU3	TNVN	5	11	14	10	PASS
		19	11	14	14	PASS

DCS1800

Fading set	Test conditions	Power control LEVEL	Result			
			DCS1800			
			ARFCN			
			LCH	MCH	HCH	Result
RA130	TNVN	0	22	27	29	PASS
		15	27	23	26	PASS
HT100	TNVN	0	25	32	25	PASS
		15	25	25	26	PASS
TU50	TNVN	0	28	23	27	PASS
		15	24	30	26	PASS
TU1.5	TNVN	0	25	25	26	PASS
		15	24	24	25	PASS



Appendix C.Frequency error and phase error in GPRS multislot configuration

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

GSM900

RMS phase error(degree)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	0.6	0.6	0.6	PASS
	19	0.6	0.6	0.6	PASS
When the MS is being vibrated	5	0.6	0.6	0.6	PASS
	19	0.6	0.6	0.6	PASS

Peak phase error(degree)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	1.7	1.7	1.7	PASS
	19	1.7	1.7	1.7	PASS
When the MS is being vibrated	5	1.7	1.8	1.7	PASS
	19	1.7	1.8	1.7	PASS

frequency error(Hz)	Power control LEVEL	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	5	6	10	11	PASS
	19	11	7	8	PASS
When the MS is being vibrated	5	10	9	9	PASS
	19	13	11	15	PASS



DCS1800

RMS phase error(degree)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	1.0	1.0	1.0	PASS
	15	1.0	1.0	1.1	PASS
When the MS is being vibrated	0	1.0	1.0	1.1	PASS
	15	1.0	1.0	1.1	PASS

Peak phase error(degree)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	2.9	2.8	3.2	PASS
	15	2.8	3.0	3.0	PASS
When the MS is being vibrated	0	2.8	2.9	3.3	PASS
	15	2.8	2.9	2.9	PASS

frequency error(Hz)	Power control LEVEL	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
TN VN	0	14	17	20	PASS
	15	15	16	18	PASS
When the MS is being vibrated	0	15	18	20	PASS
	15	16	18	24	PASS



Appendix D. Transmitter output power and burst timing

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

A. output power

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
GSM900		LCH	MCH	HCH	Result
TN,VN	5	33.16	33.18	33.24	PASS
	12	19.27	19.34	19.45	PASS
	19	5.64	5.68	5.74	PASS

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
DCS1800		LCH	MCH	HCH	Result
TN,VN	0	30.19	30.61	30.95	PASS
	8	14.38	14.60	14.92	PASS
	15	2.00	1.50	1.80	PASS

B. Power VS Time

Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
GSM900	Power level	LCH	MCH	HCH
TN,VN	5	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

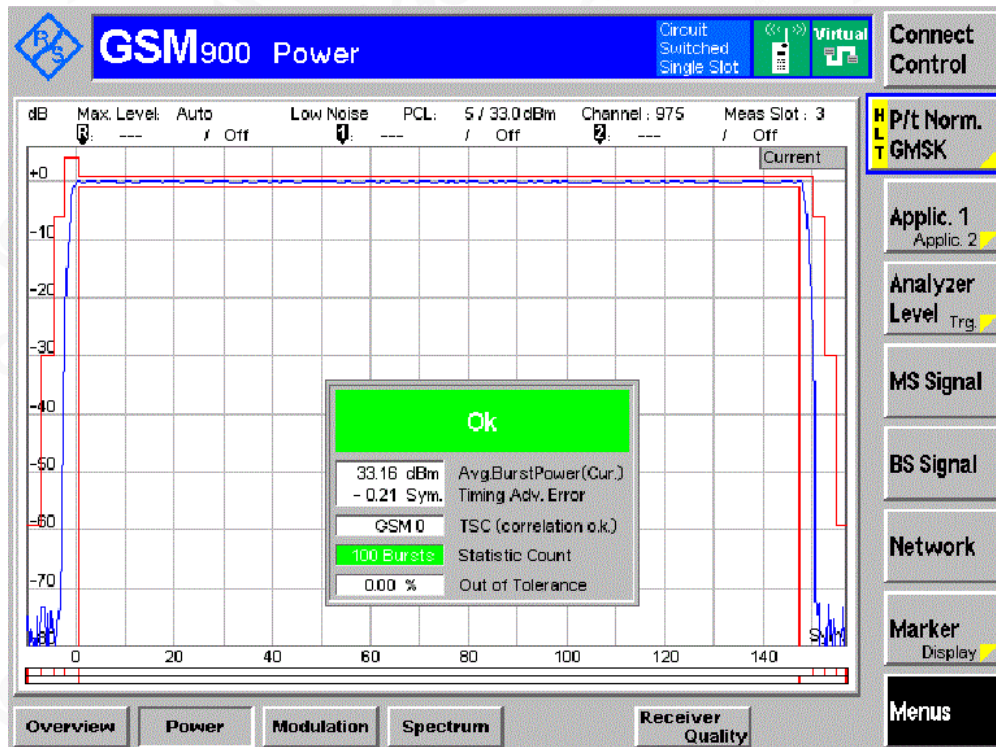
Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
DCS1800	Power level	LCH	MCH	HCH
TN,VN	0	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS



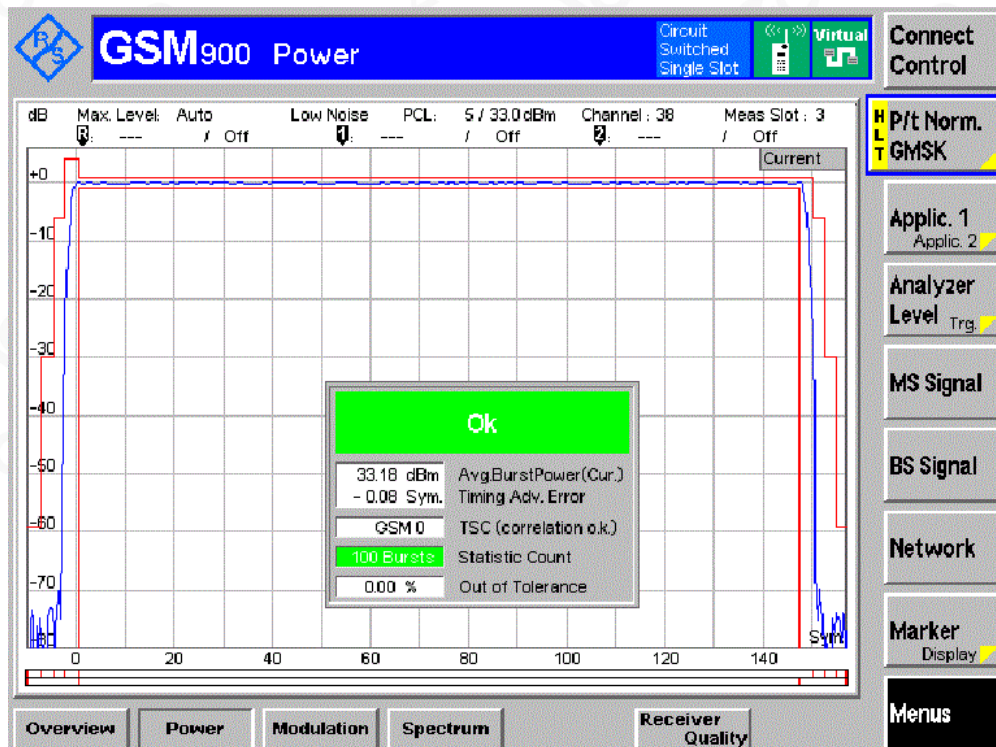
Graphs of output power and burst timing

GSM 900 TN,VN

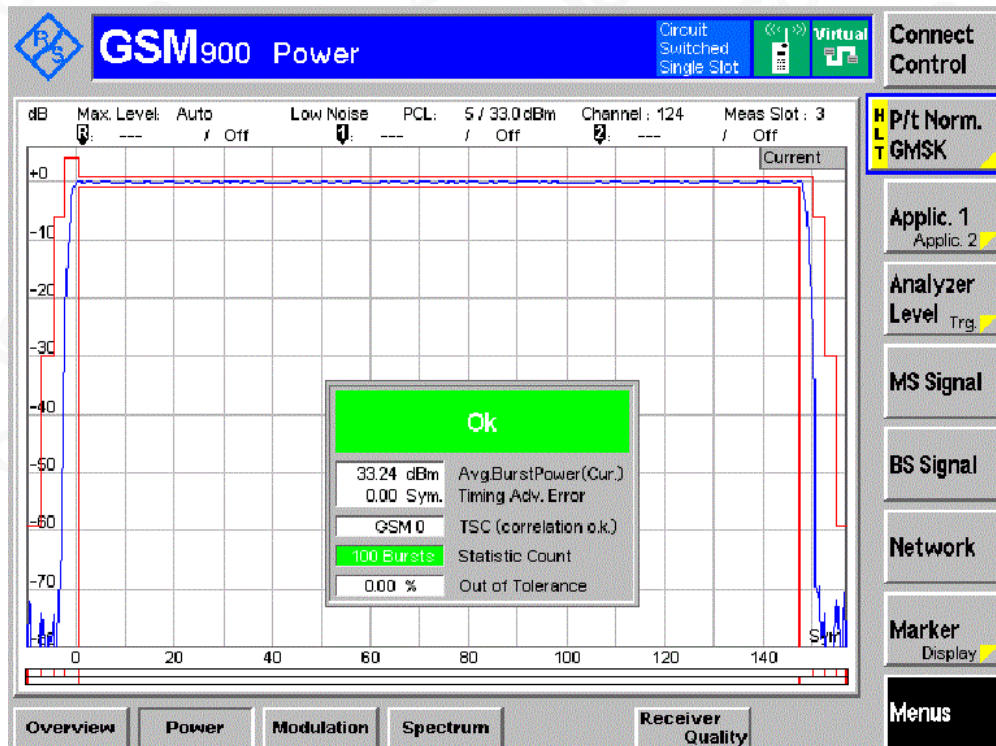
Channel LCH PCL 5



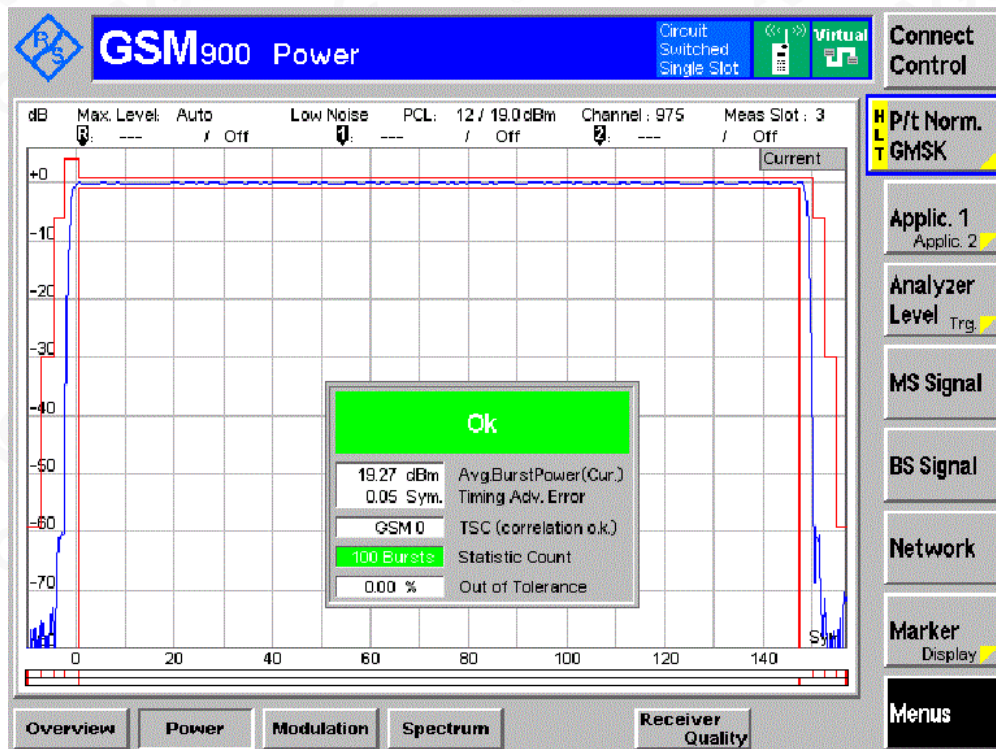
Channel MCH PCL 5



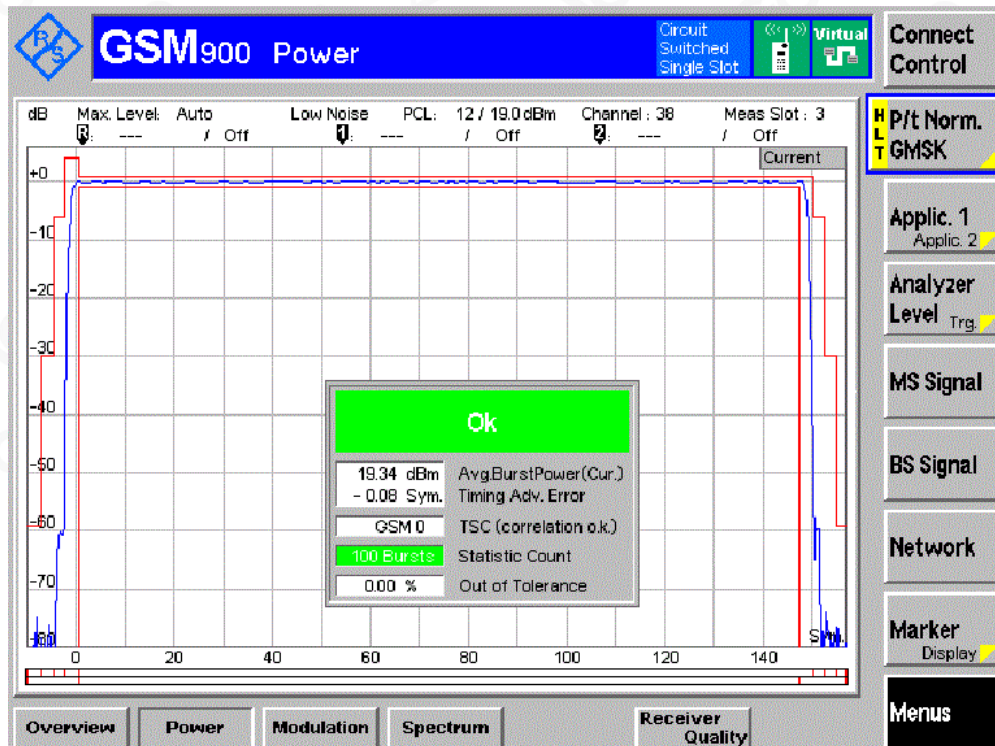
Channel HCH PCL 5



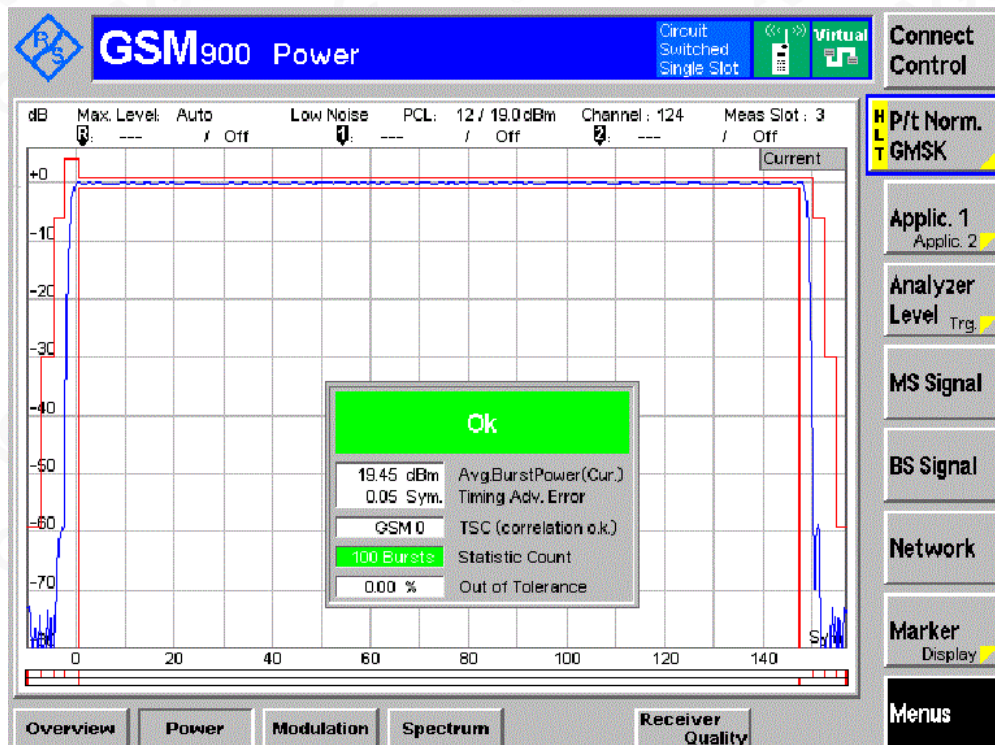
Channel LCH PCL 12



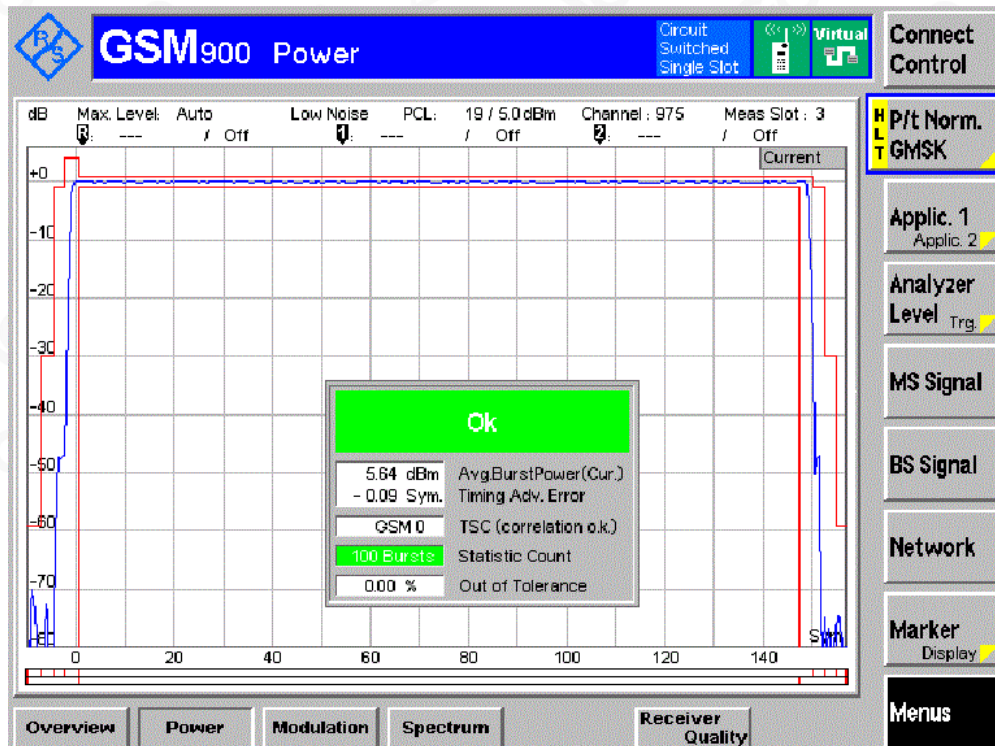
Channel MCH PCL 12



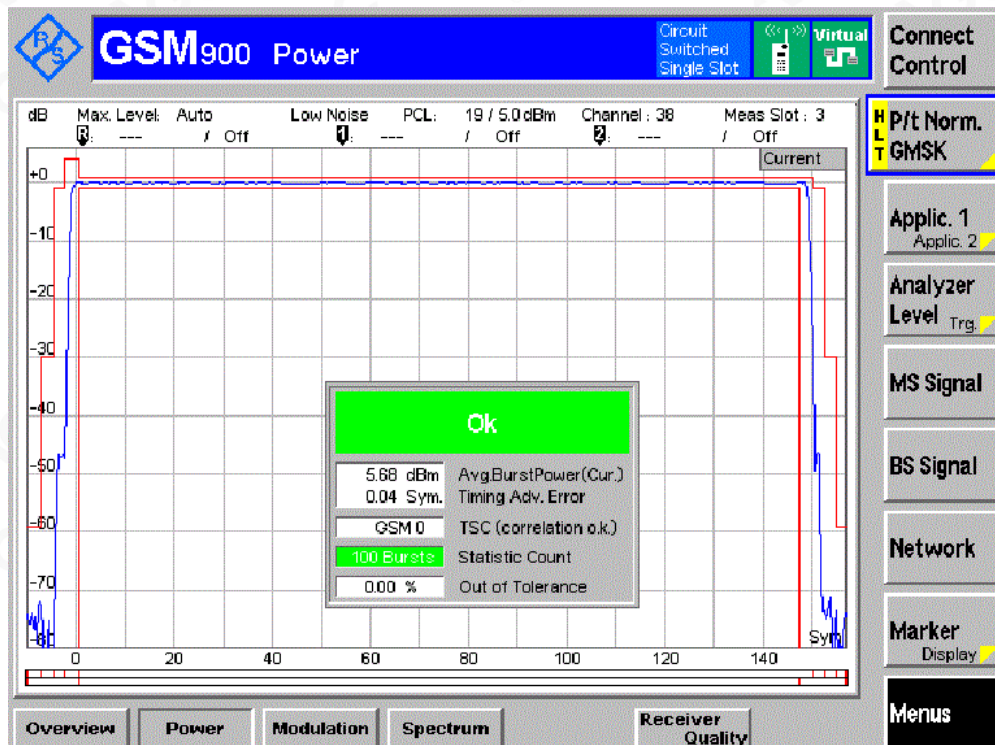
Channel HCH PCL 12



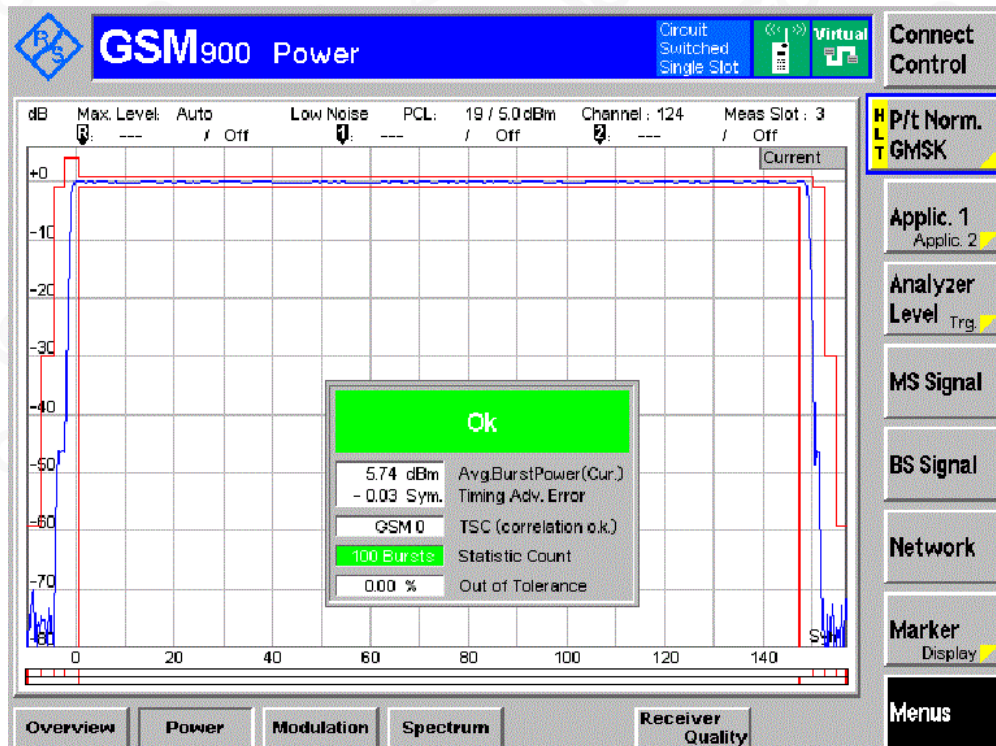
Channel LCH PCL 19



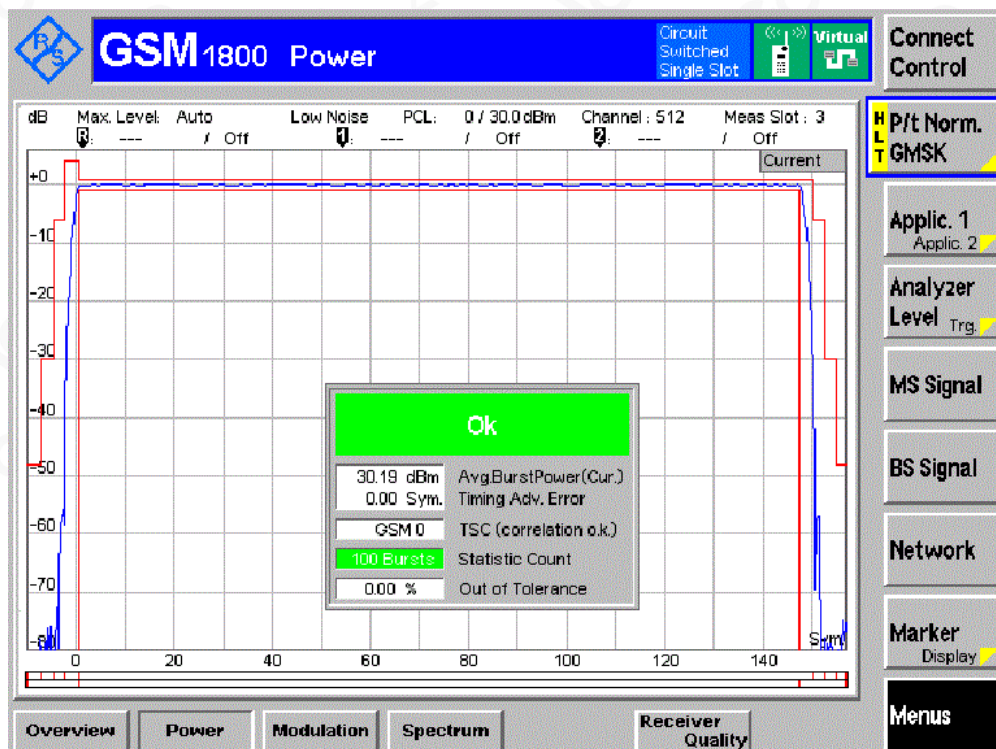
Channel MCH PCL 19



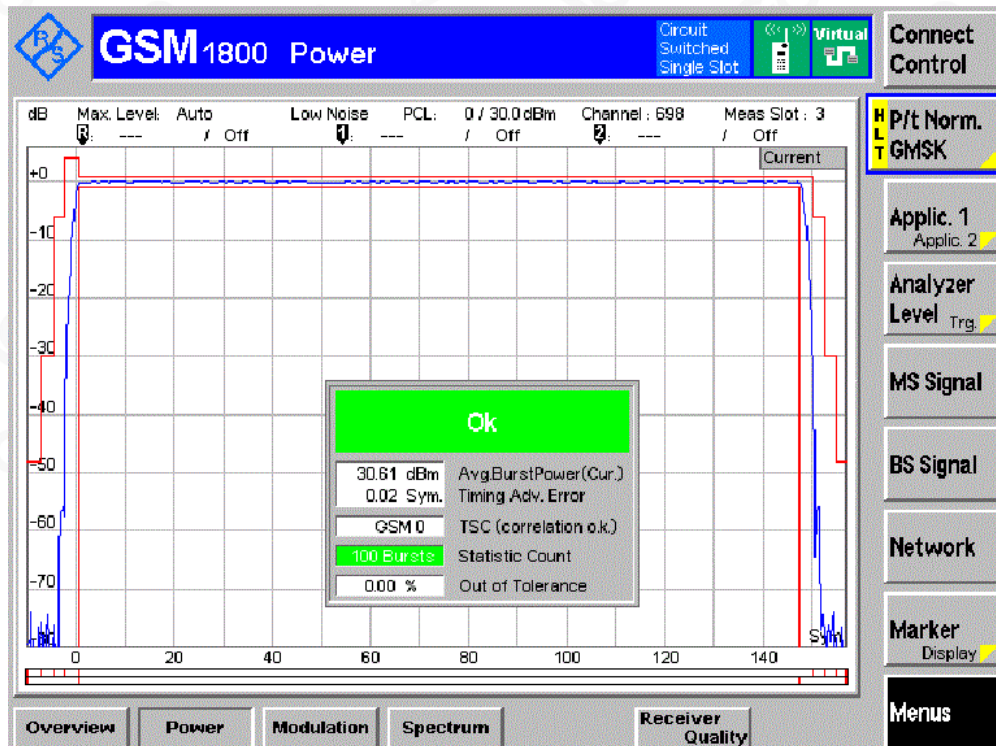
Channel HCH PCL 19



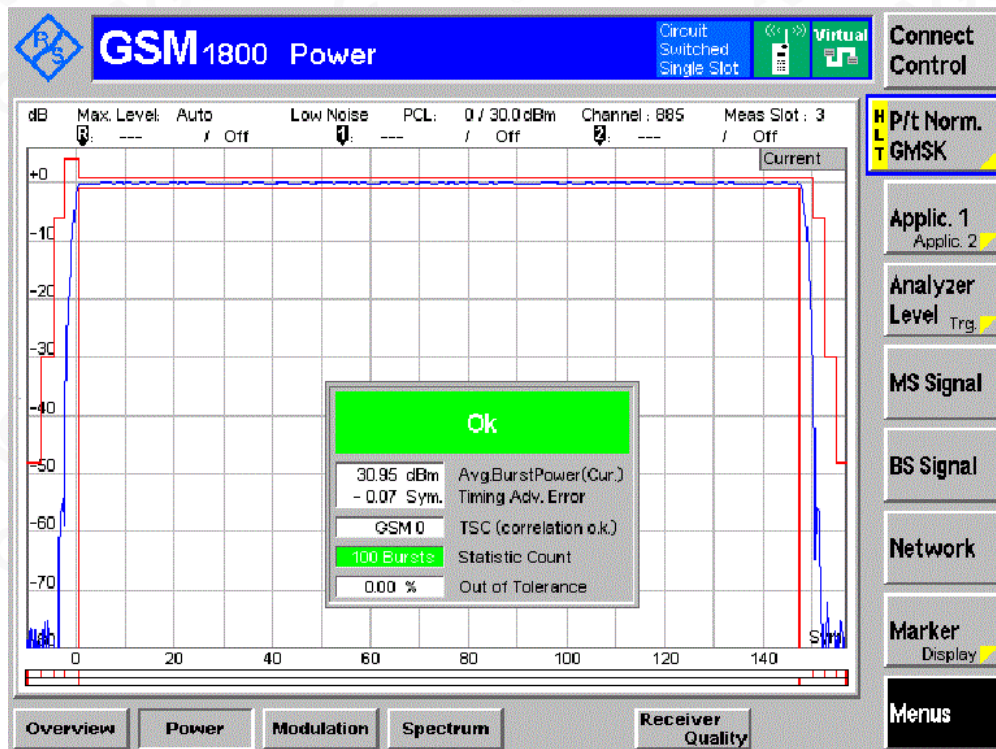
DCS1800 TN,VN
Channel LCH PCL 0



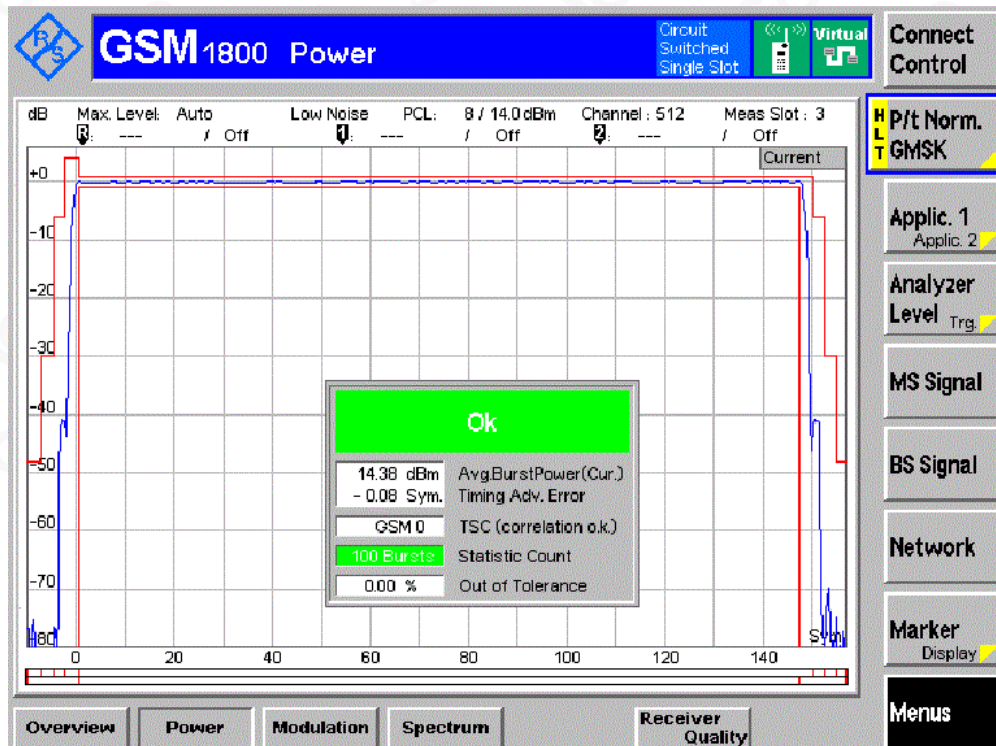
Channel MCH PCL 0



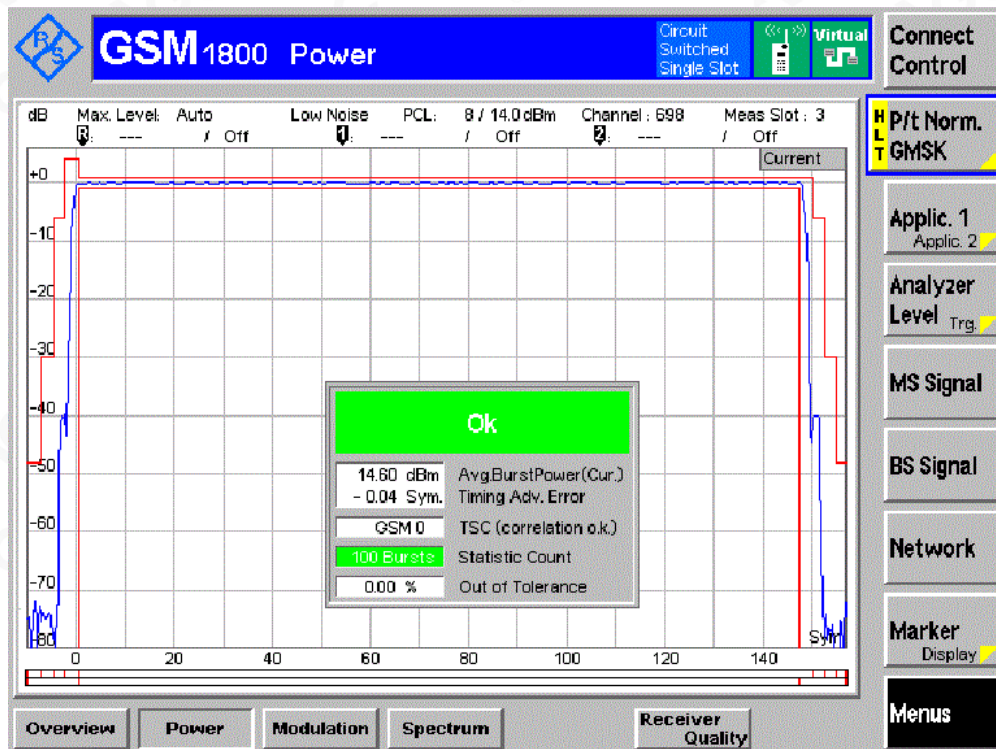
Channel HCH PCL 0



Channel LCH PCL 8



Channel MCH PCL 8



GSM 1800 Power

Circuit Switched Single Slot Virtual

Connect Control

H P/t Norm.
L T GMSK

Applic. 1
Applic. 2

Analyzer Level Trg

MS Signal

BS Signal

Network

Marker Display

Menus

Overview Power Modulation Spectrum Receiver Quality

dB Max. Level: Auto Low Noise: Off PCL: 8 / 14.0 dBm Channel: 885 Meas Slot: 3

Current

Ok

14.92 dBm AvgBurstPower(Cur.)
0.09 Sym. Timing Adv. Error

GSM 0 TSC (correlation o.k.)

100 Bursts Statistic Count

0.00 % Out of Tolerance

GSM 1800 Power

Circuit Switched Single Slot Virtual

Connect Control

dB Max. Level: Auto Low Noise PCL: 15 / 0.0 dBm Channel: 512 Meas Slot: 3

dB: --- / Off dB: --- / Off dB: --- / Off

Current

Ok

2.00 dBm	AvgBurstPower(Cur.)
0.14 Sym.	Timing Adv. Error
GSM 0	TSC (correlation o.k.)
100 Bursts	Statistic Count
0.00 %	Out of Tolerance

dBm

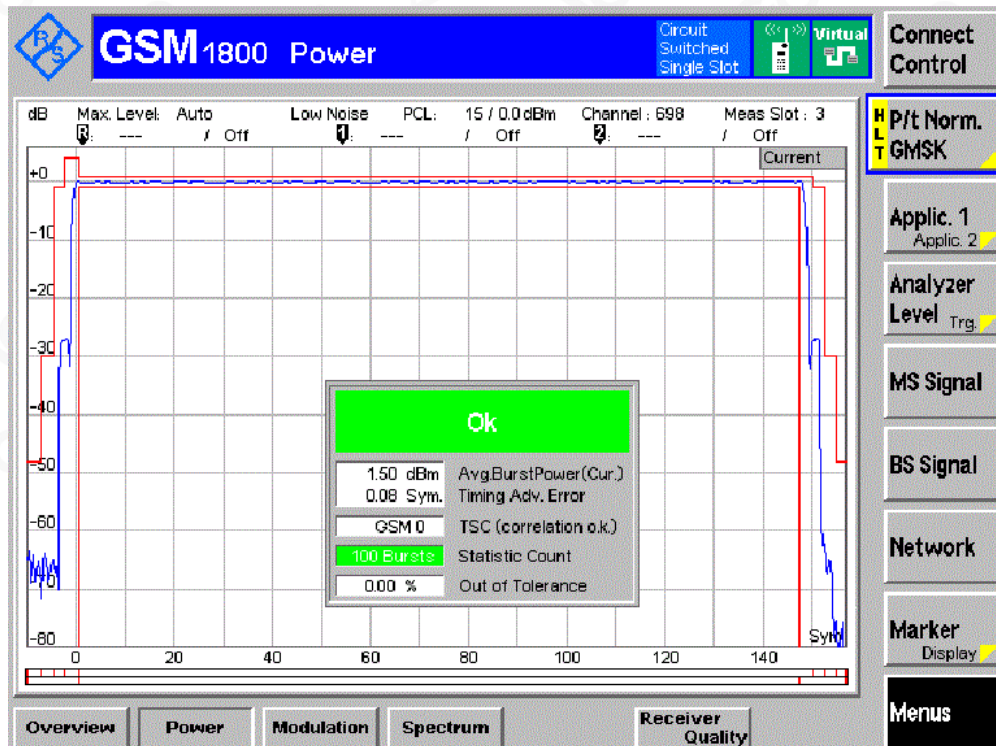
0 20 40 60 80 100 120 140

Overview Power Modulation Spectrum Receiver Quality

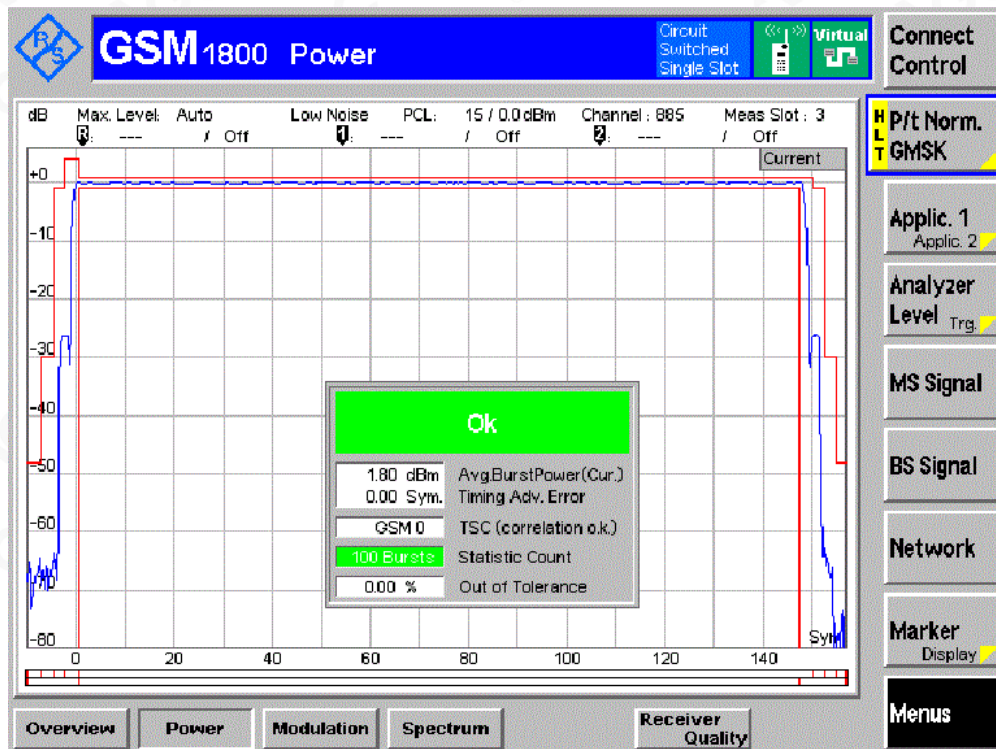
Menus



Channel MCH PCL 15



Channel HCH PCL 15



Appendix E. Transmitter – Output RF spectrum

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
GSM900		LCH	MCH	HCH
TN,VN	5	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

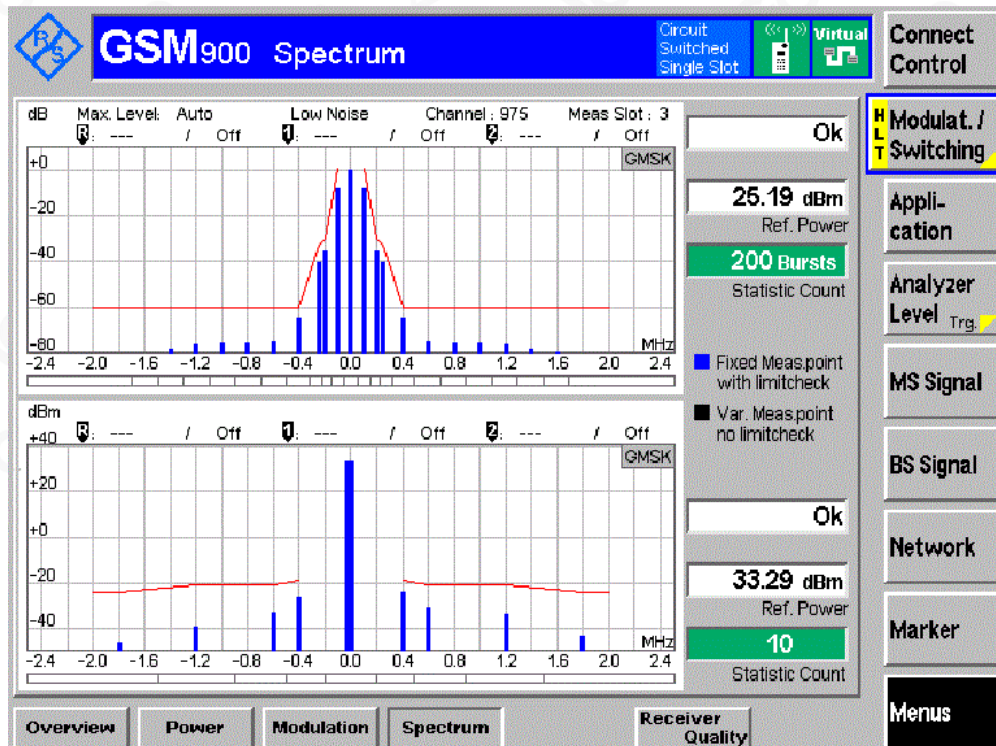
Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
DCS1800		LCH	MCH	HCH
TN,VN	0	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS

Graphs of output RF spectrum

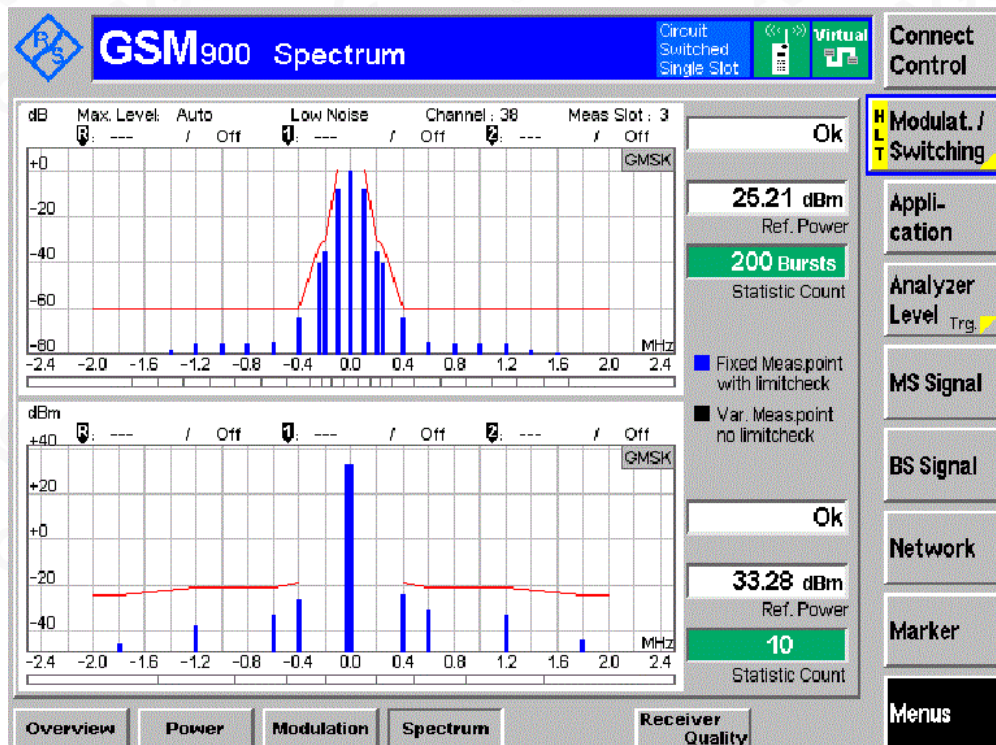
GSM 900 TN,VN



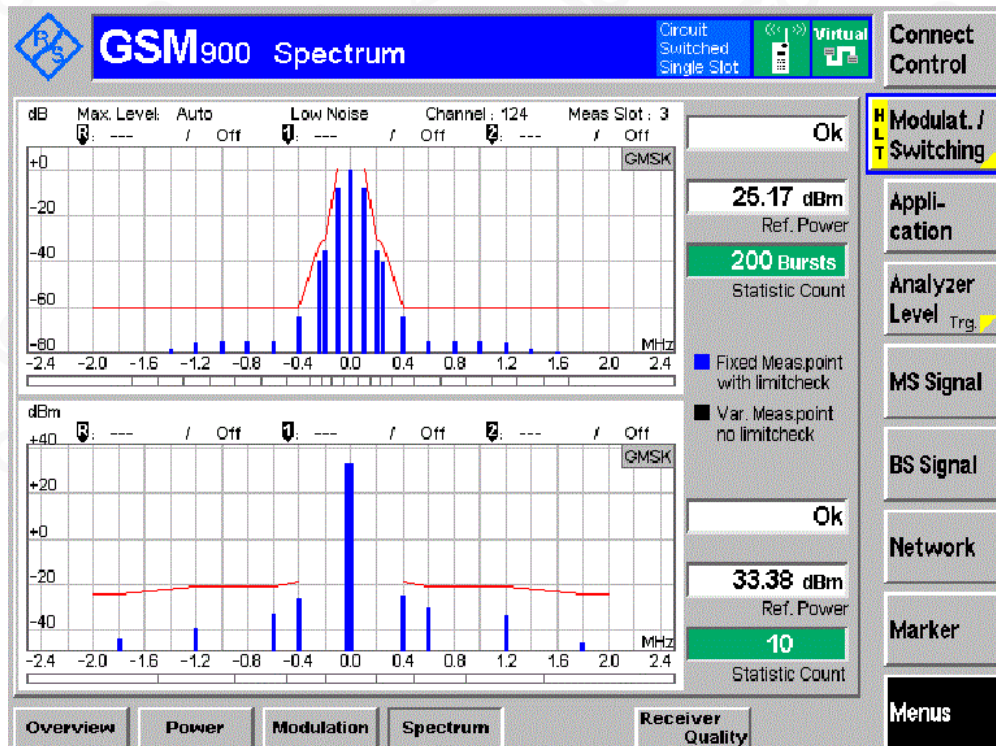
Channel LCH PCL 5



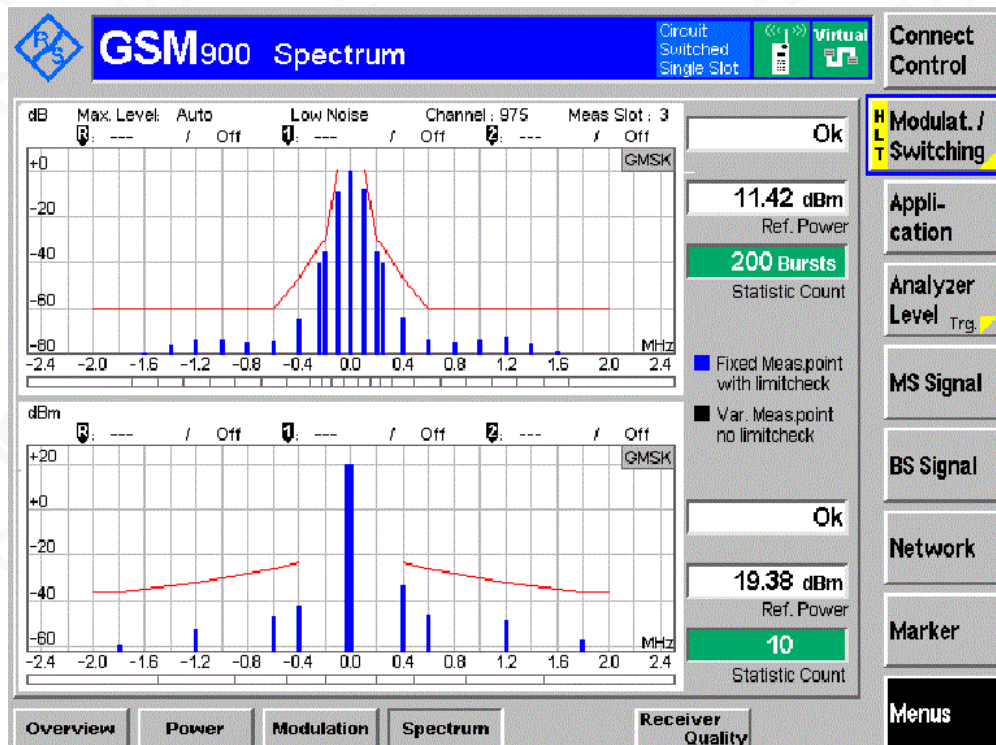
Channel MCH PCL 5



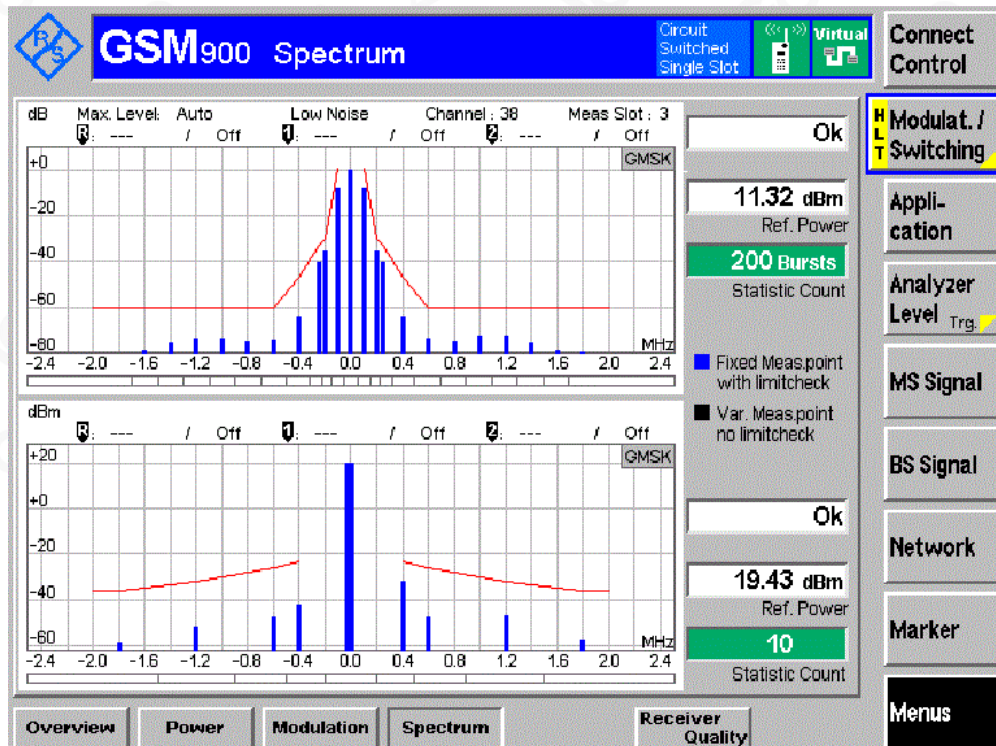
Channel HCH PCL 5



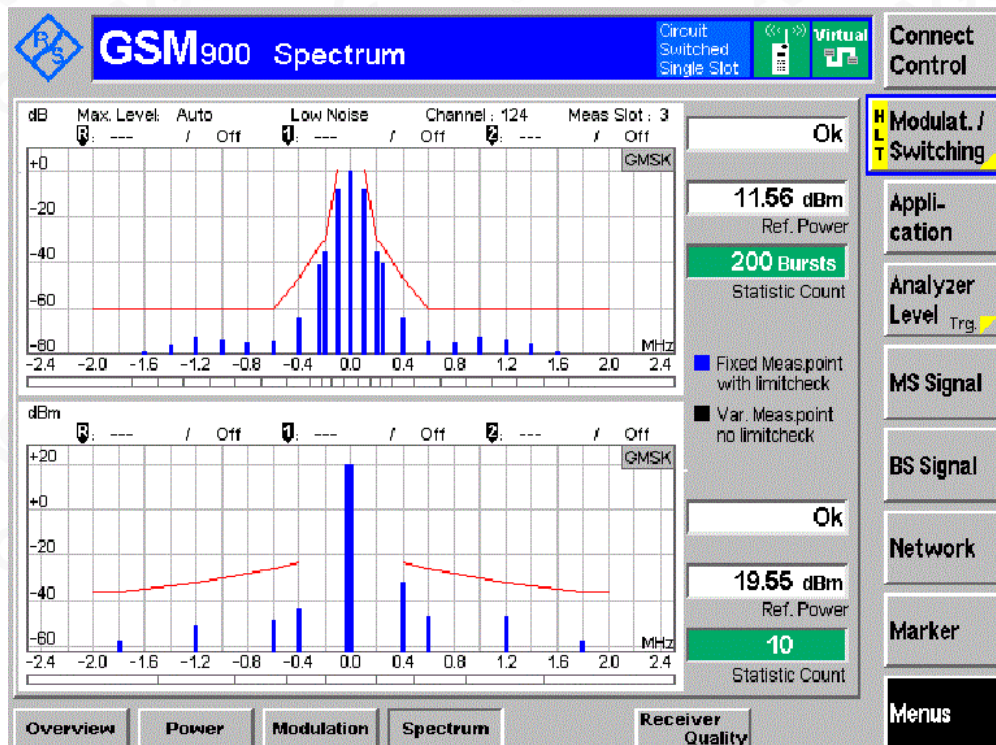
Channel LCH PCL 12



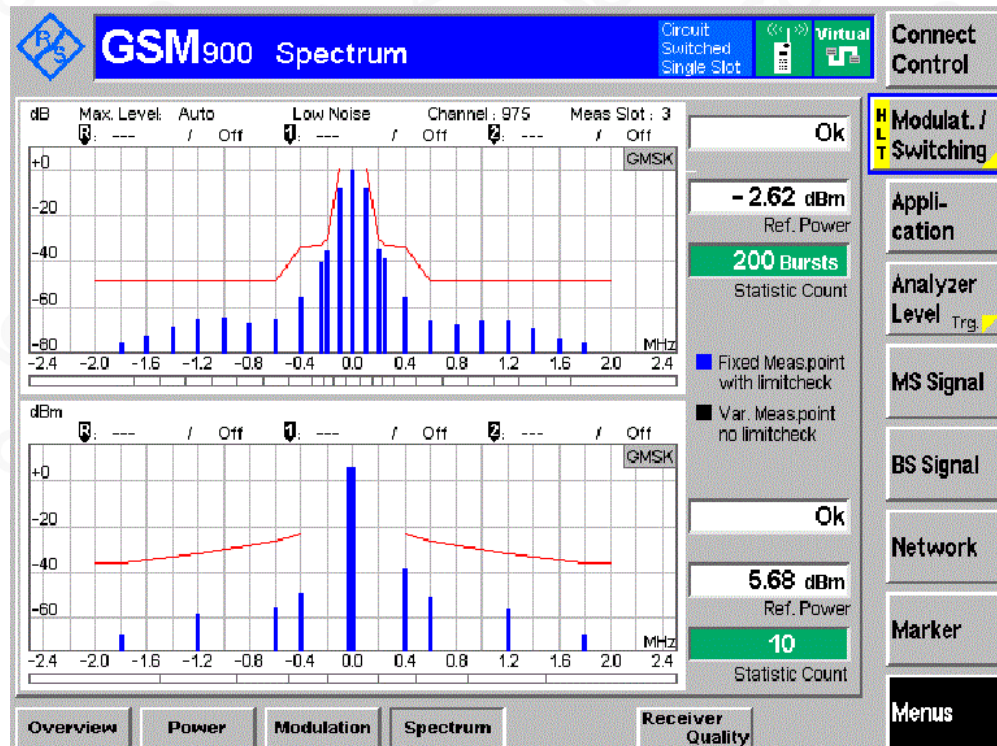
Channel MCH PCL 12



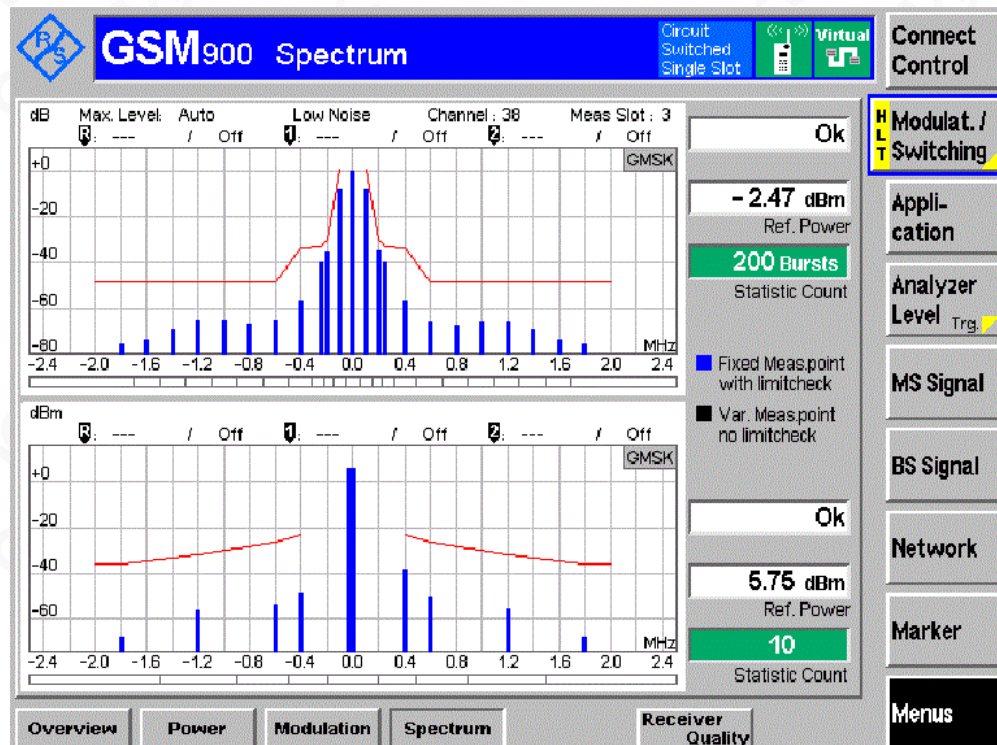
Channel HCH PCL 12



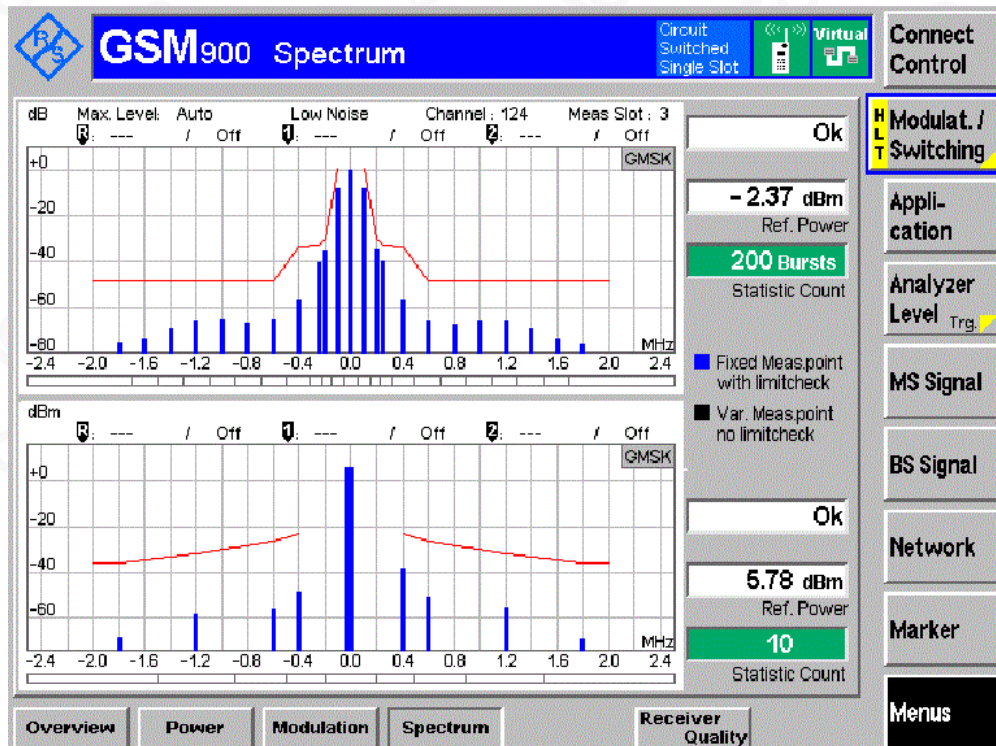
Channel LCH PCL 19



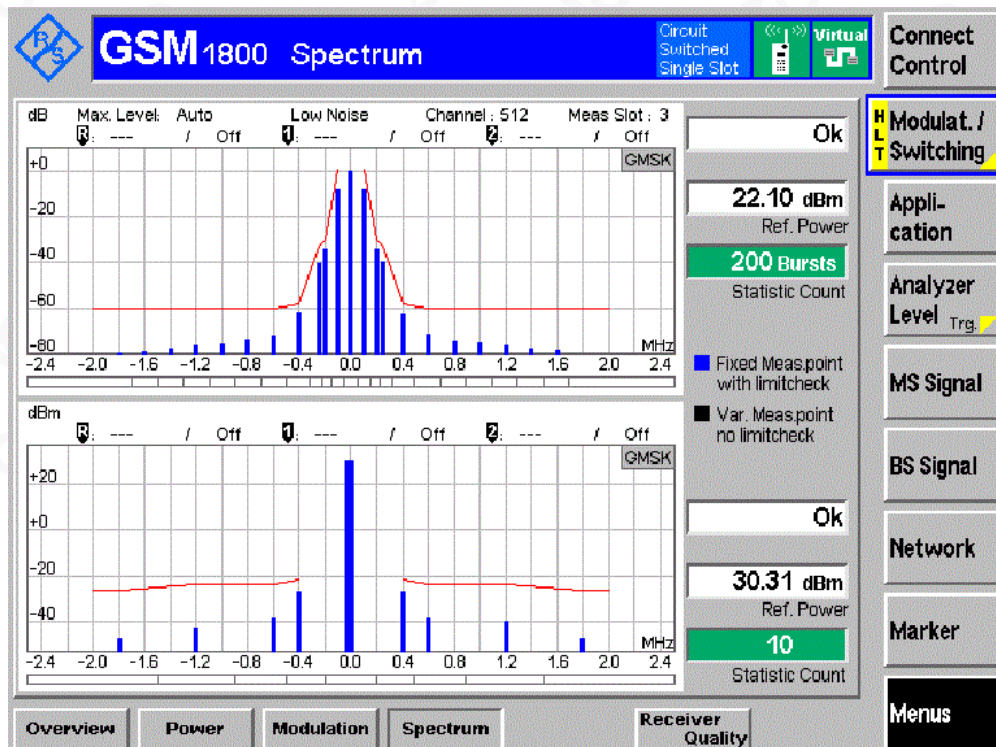
Channel MCH PCL 19



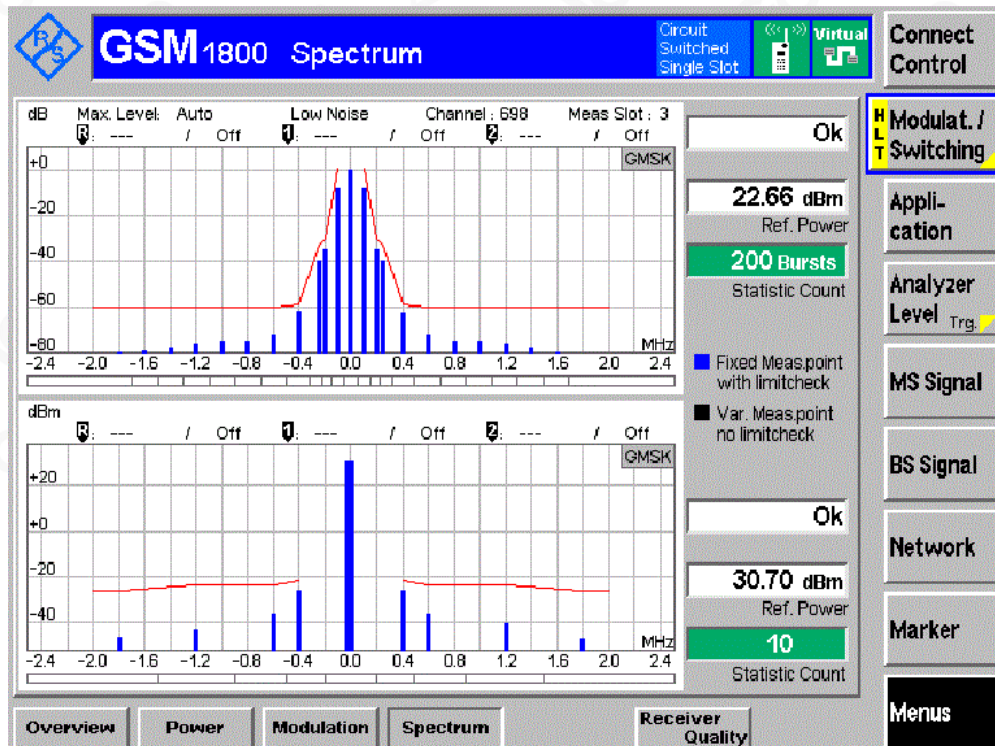
Channel HCH PCL 19



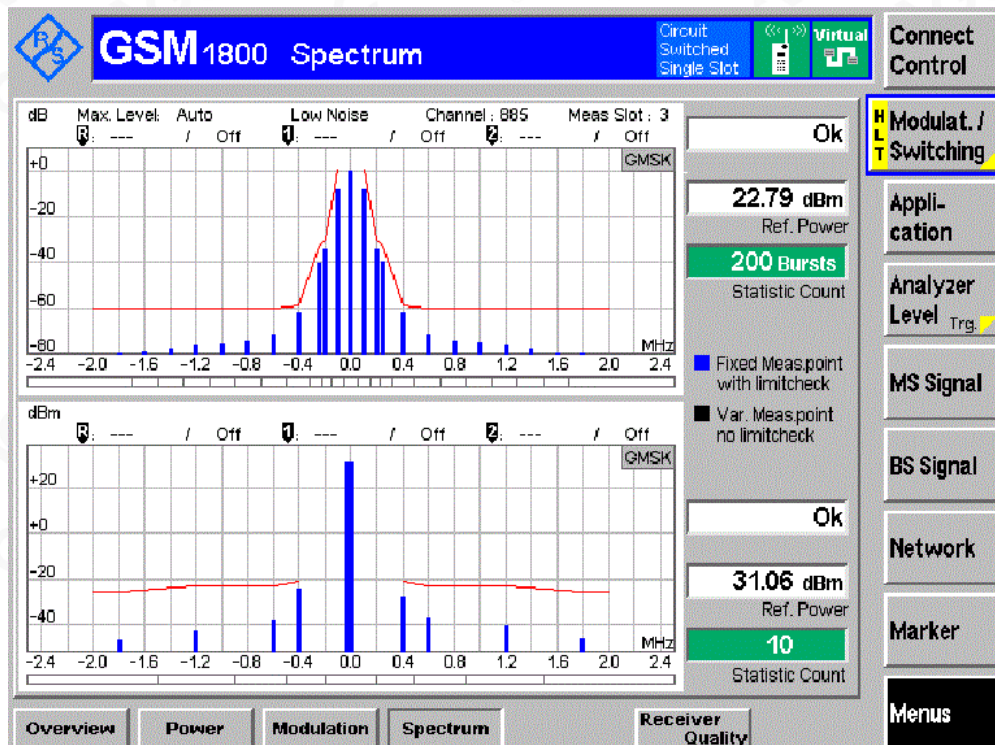
DCS1800 TN,VN
Channel LCH PCL 0



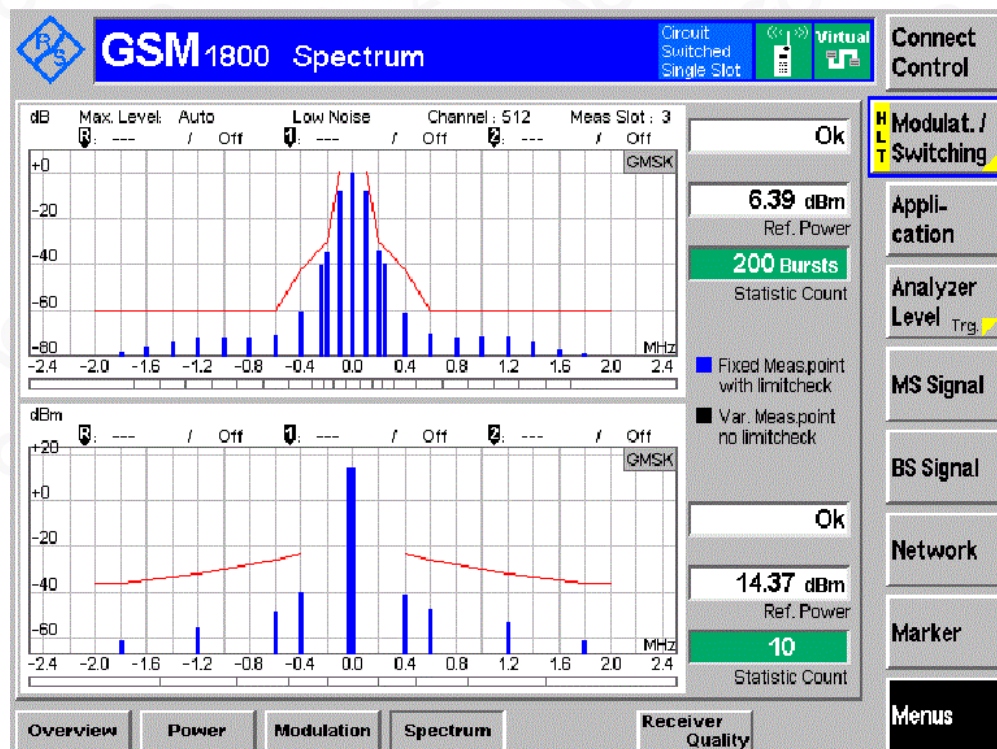
Channel MCH PCL 0



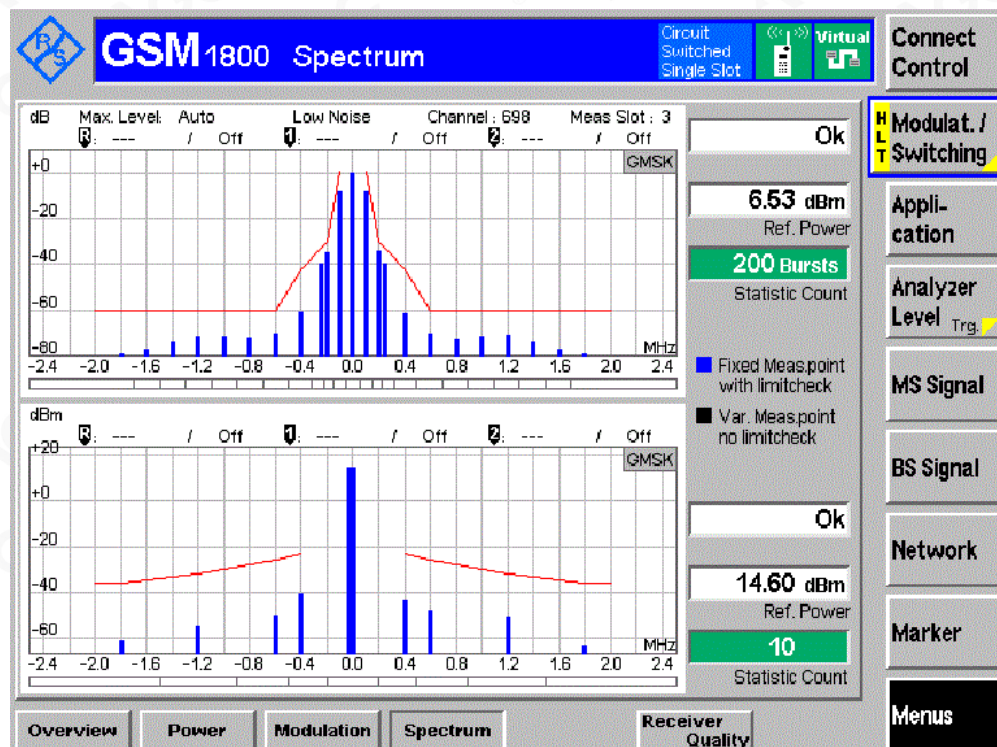
Channel HCH PCL 0



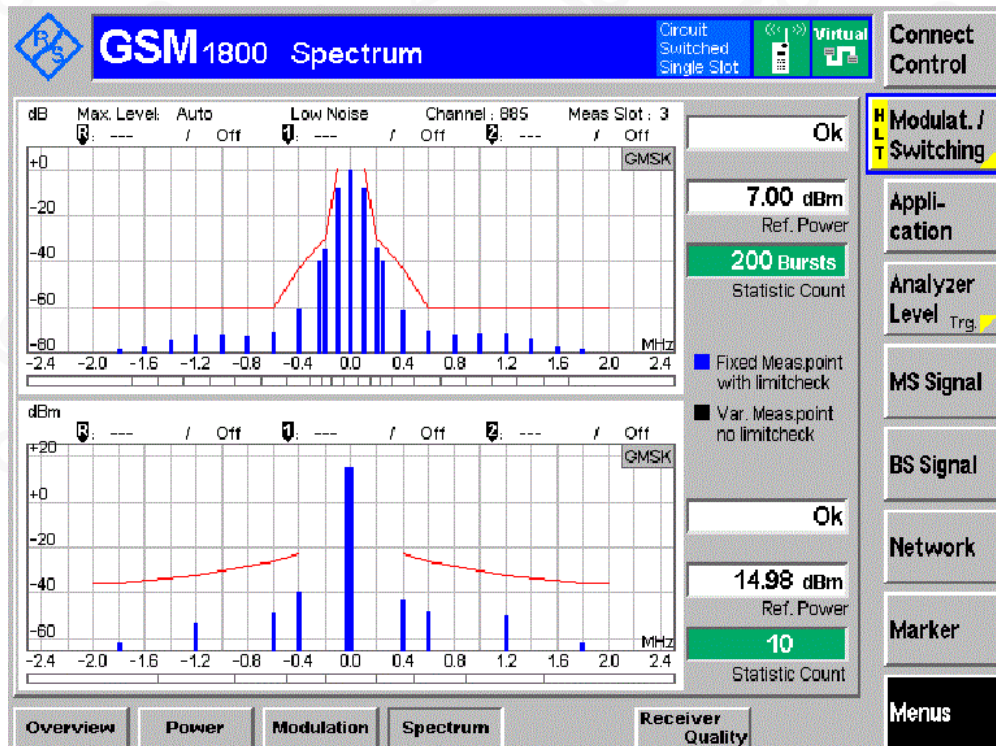
Channel LCH PCL 8



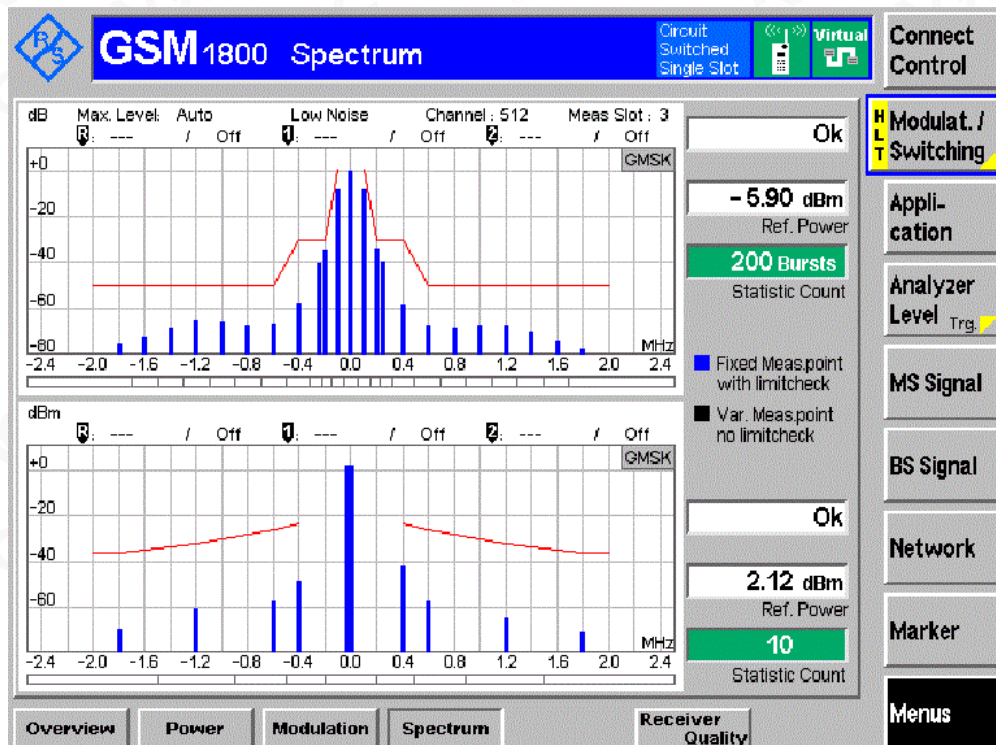
Channel MCH PCL 8



Channel HCH PCL 8



Channel LCH PCL 8



[illegible]

GSM 1800 Spectrum

dBm Max. Level: Auto Low Noise Channel: 885 Meas Slot: 3
 [Off] [Off] [Off]

-6.19 dBm
 Ref. Power

200 Bursts
 Statistic Count

■ Fixed Measpoint with limitcheck
 ■ Var. Measpoint no limitcheck

1.93 dBm
 Ref. Power

10
 Statistic Count

Overview Power Modulation Spectrum Receiver Quality

Connect Control

Modulat. / Switching

Application

Analyzer Level Trg.

MS Signal

BS Signal

Network

Marker

Menus



Appendix F. Transmitter output power in GPRS multislot configuration

Note: the worst test data is record the report:

A. output power

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
GSM900		LCH	MCH	HCH	Result
TN,VN	5	29.27	29.23	29.37	PASS
	12	19.14	19.22	19.33	PASS
	19	6.01	6.07	6.11	PASS

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
DCS1800		LCH	MCH	HCH	Result
TN,VN	0	26.57	26.94	27.32	PASS
	8	14.38	14.56	14.99	PASS
	15	2.15	1.69	2.04	PASS

B. Power VS Time

Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
GSM900	Power level	LCH	MCH	HCH
TN,VN	5	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

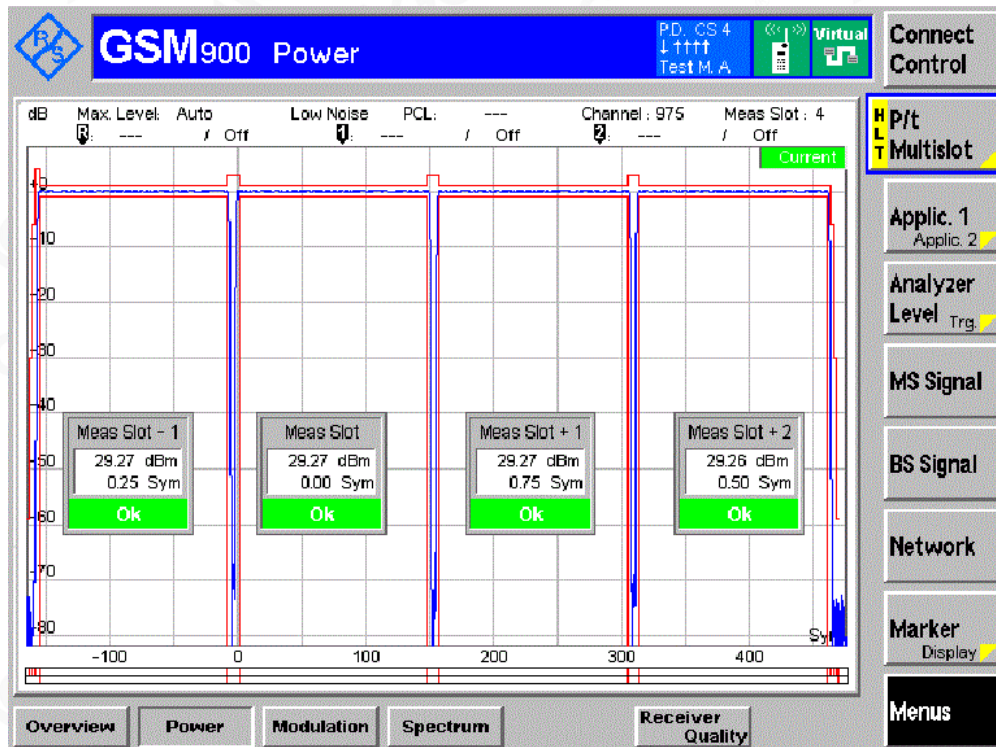
Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
DCS1800	Power level	LCH	MCH	HCH
TN,VN	0	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS



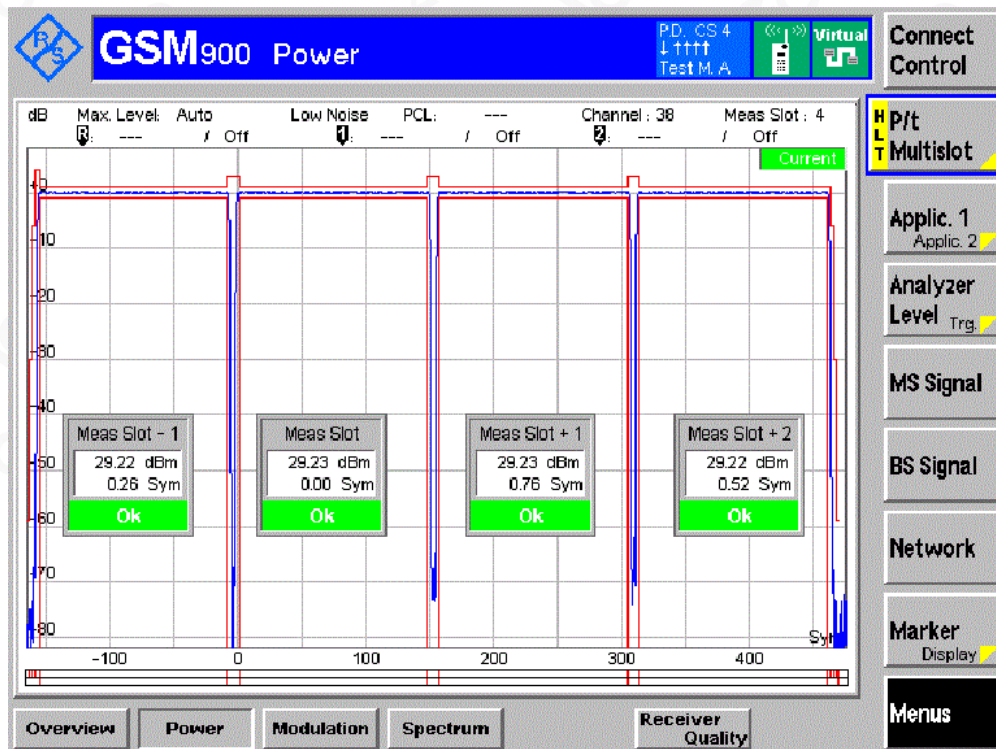
Graphs of output power in GPRS multislot configuration

GSM 900 TN,VN

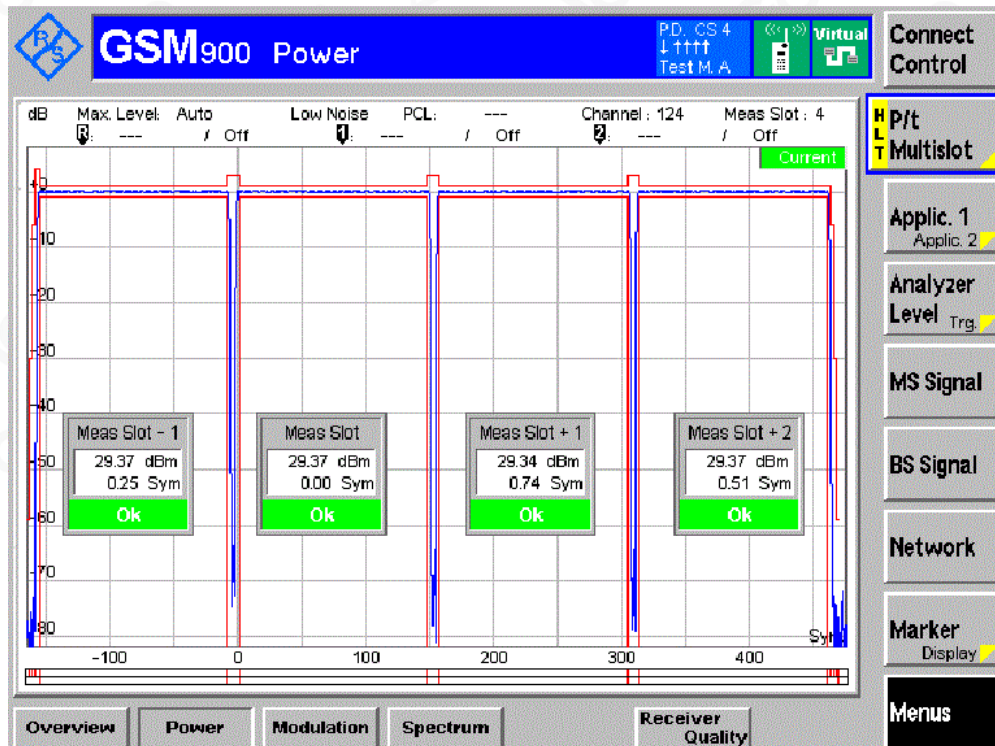
Channel LCH PCL 5



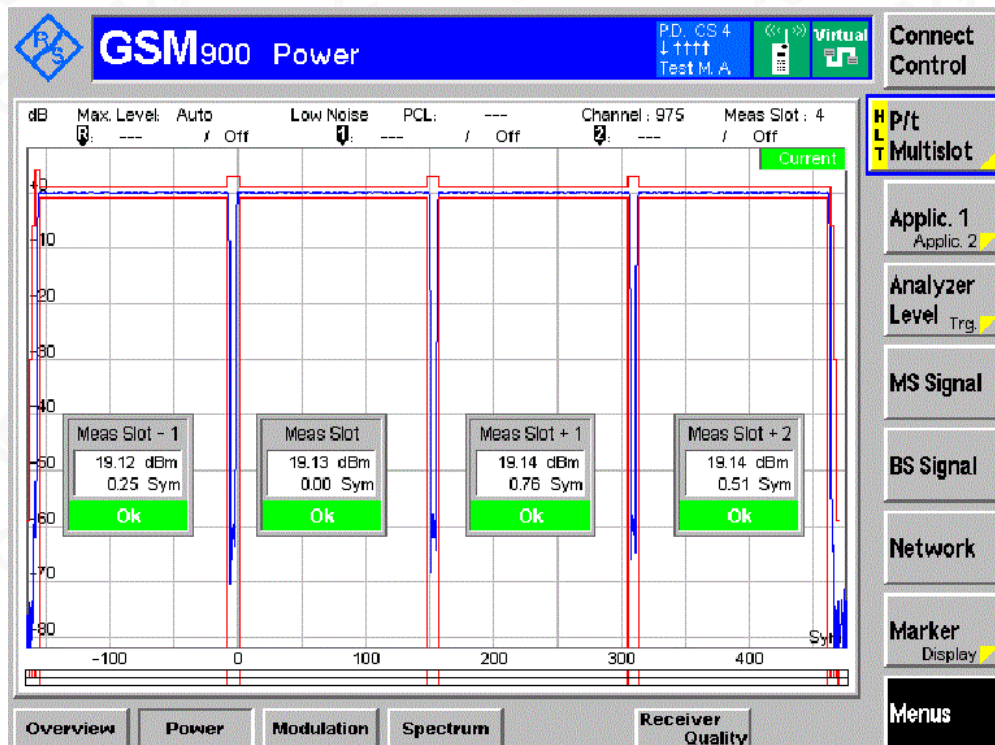
Channel MCH PCL 5



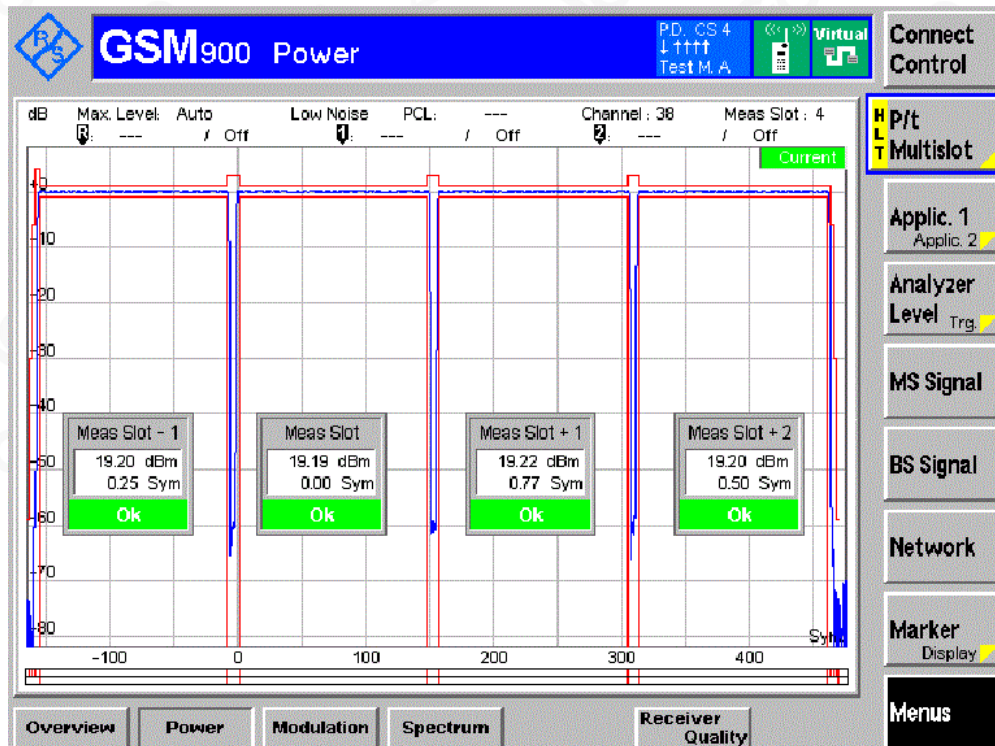
Channel HCH PCL 5



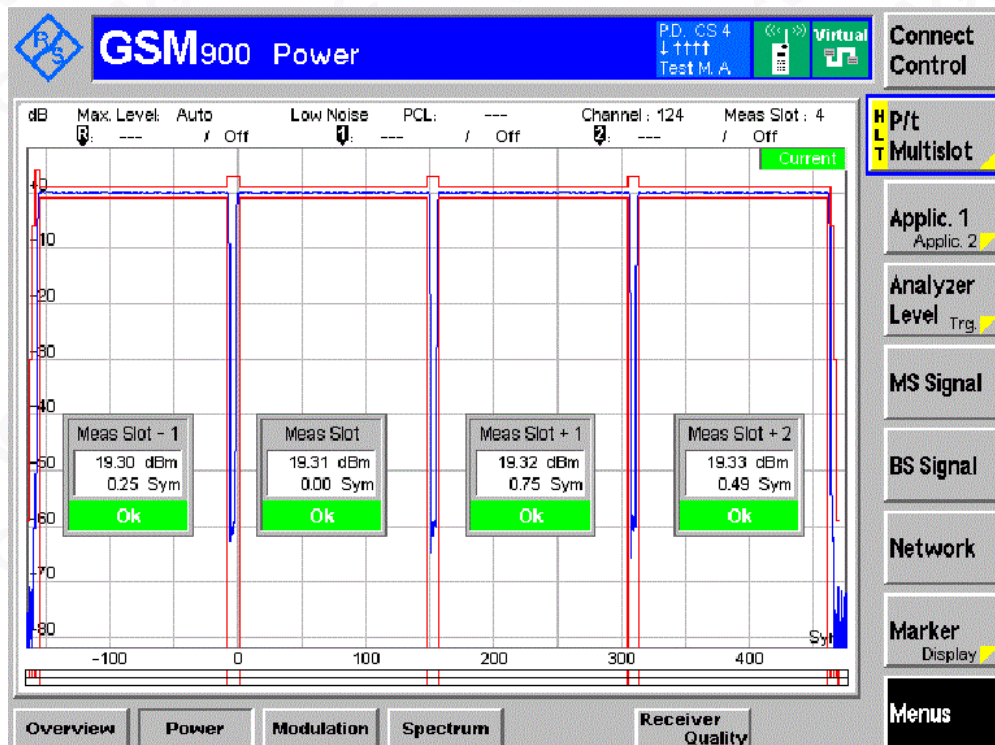
Channel LCH PCL 12



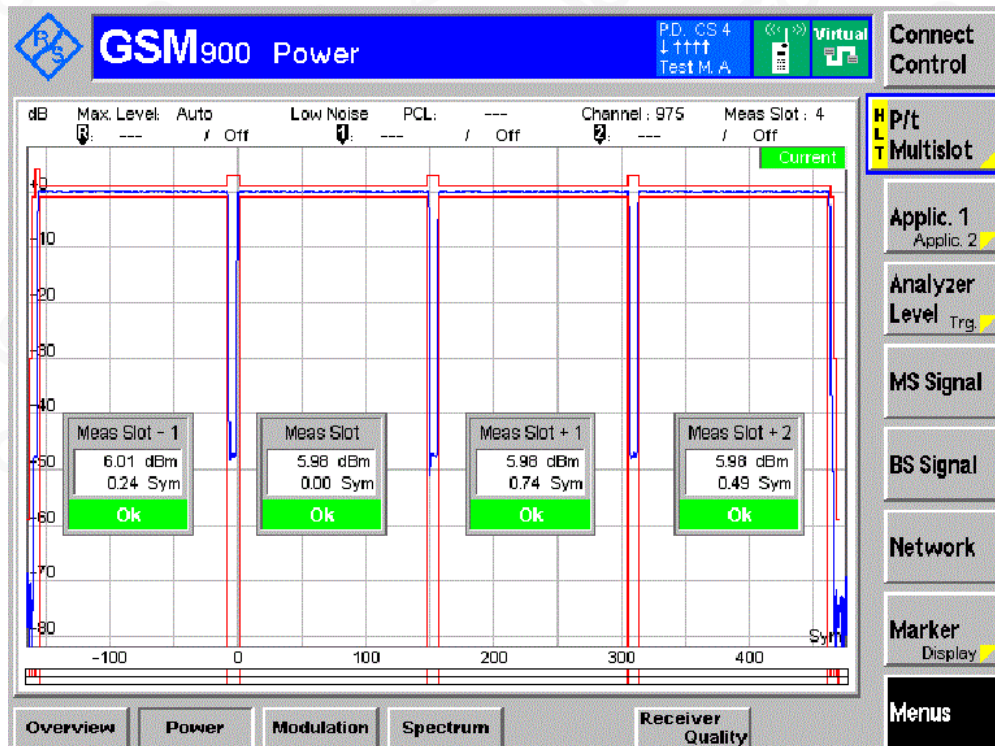
Channel MCH PCL 12



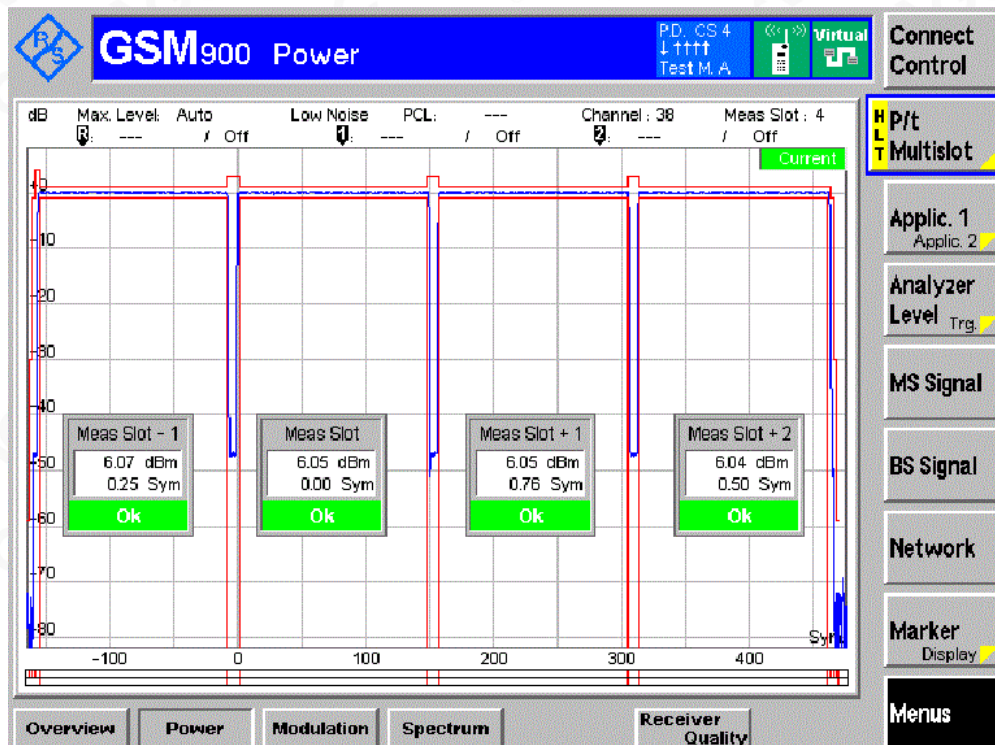
Channel HCH PCL 12



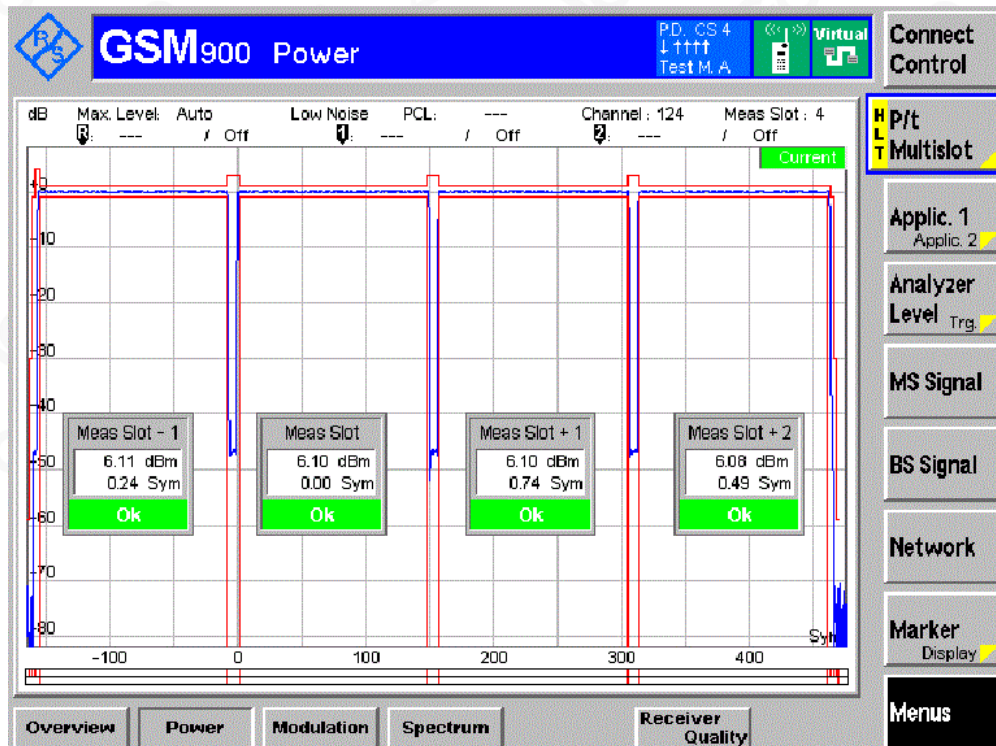
Channel LCH PCL 19



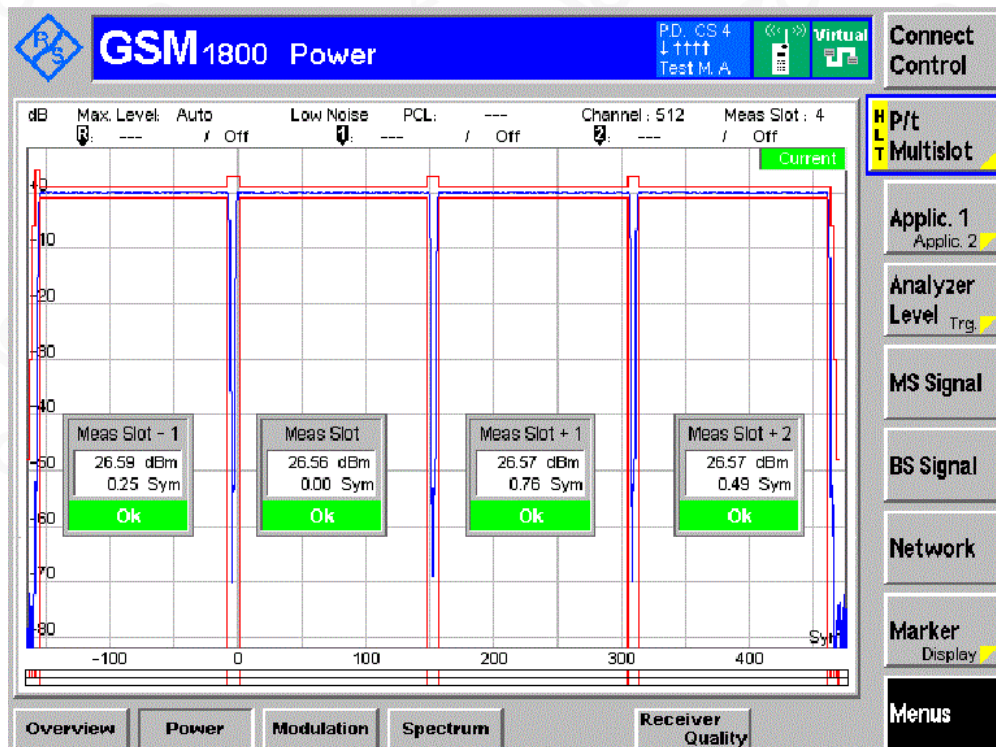
Channel MCH PCL 19



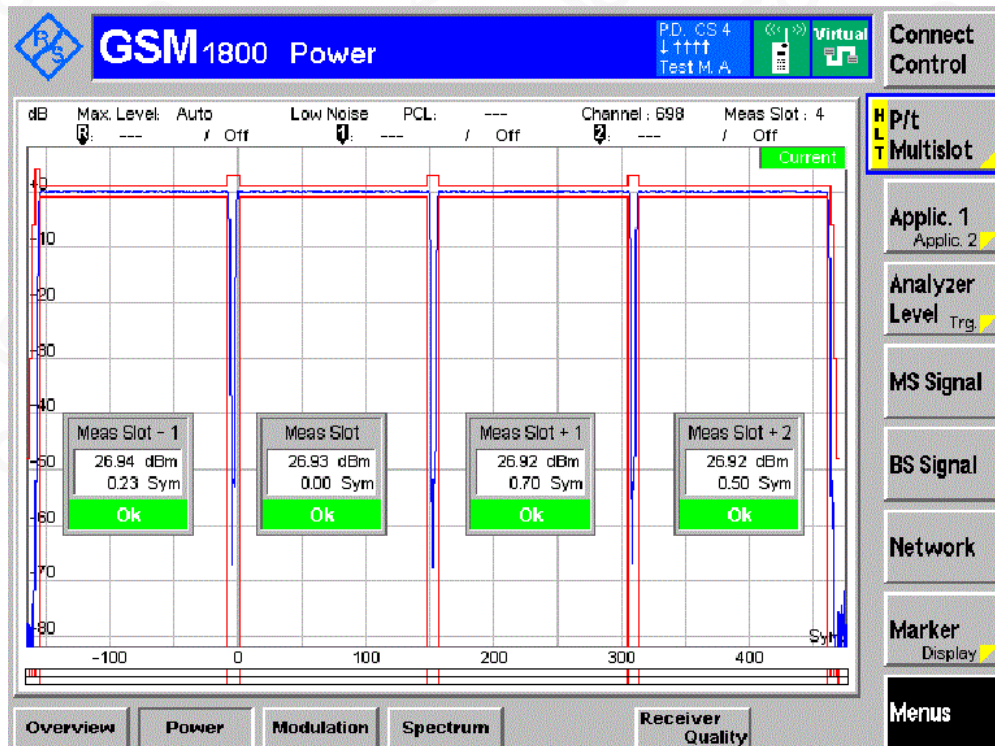
Channel HCH PCL 19



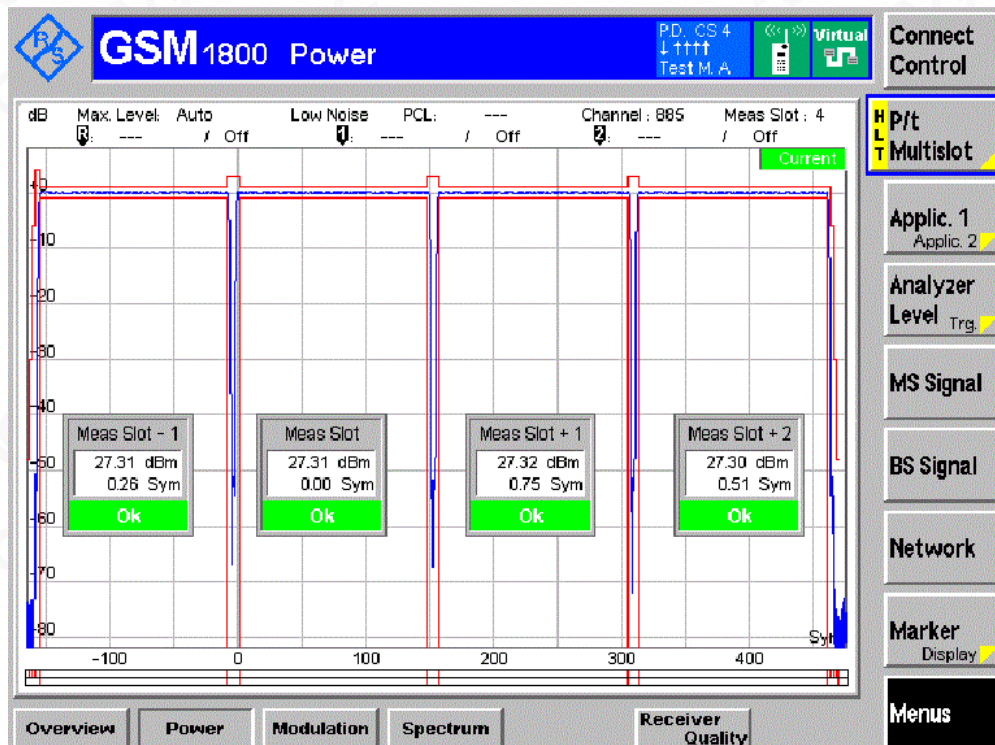
DCS1800 TN,VN Channel LCH PCL 0



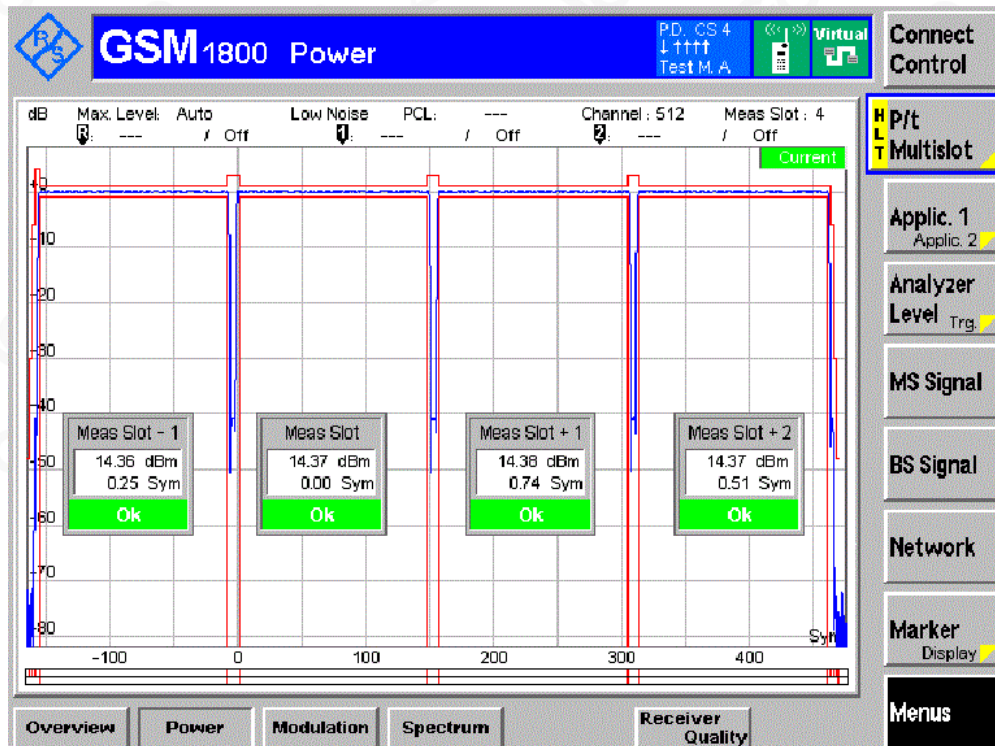
Channel MCH PCL 0



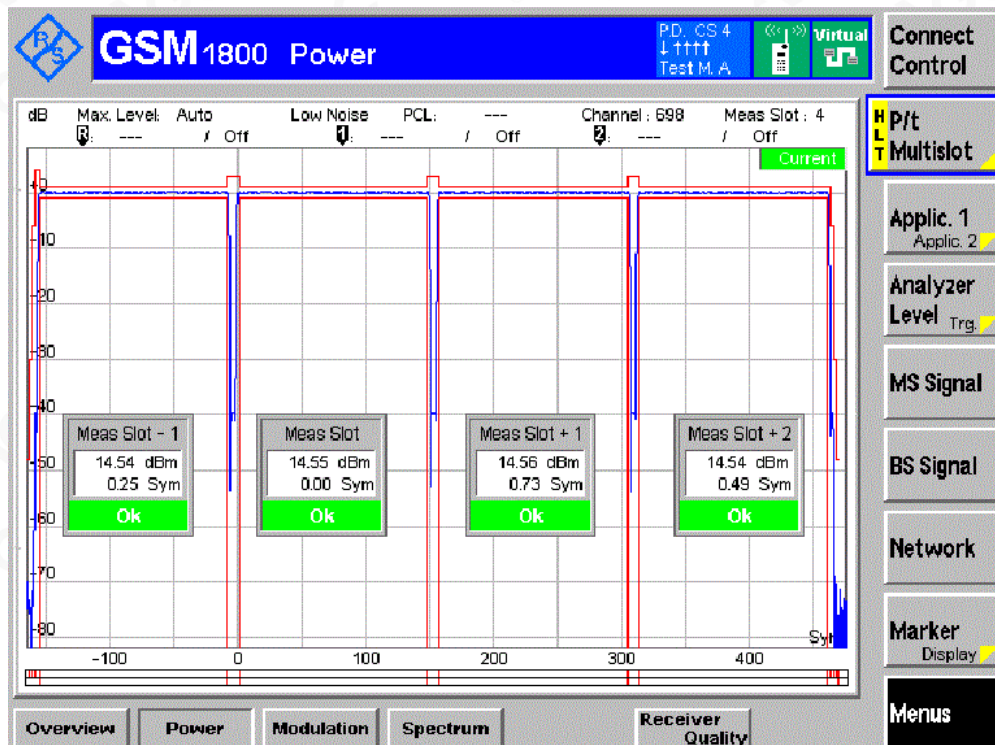
Channel HCH PCL 0



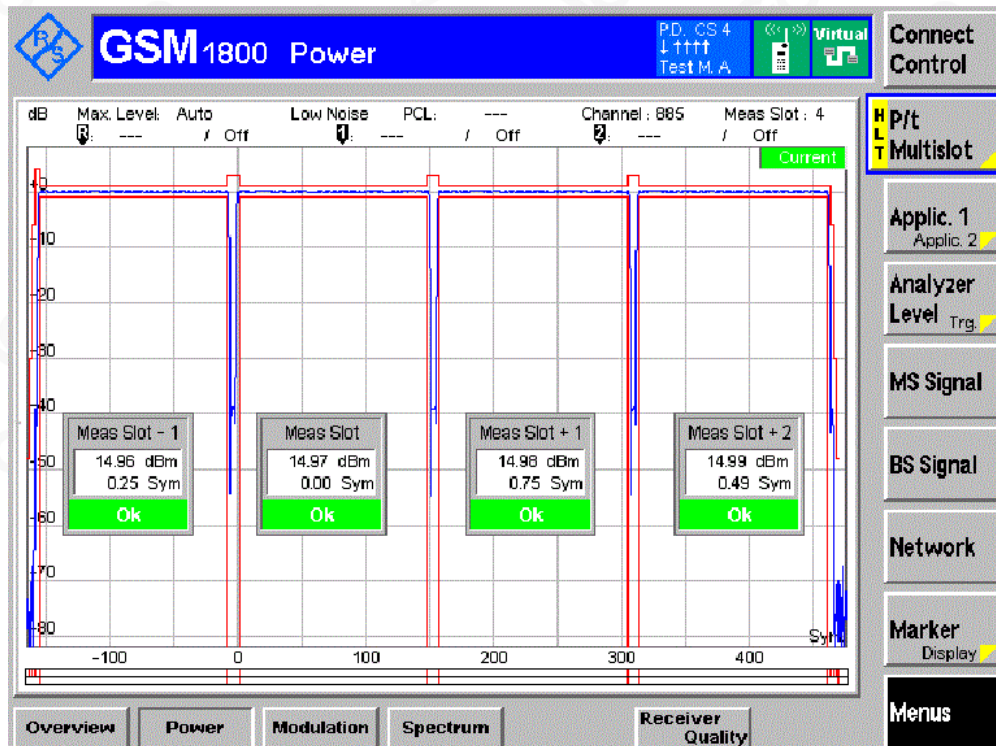
Channel LCH PCL 8



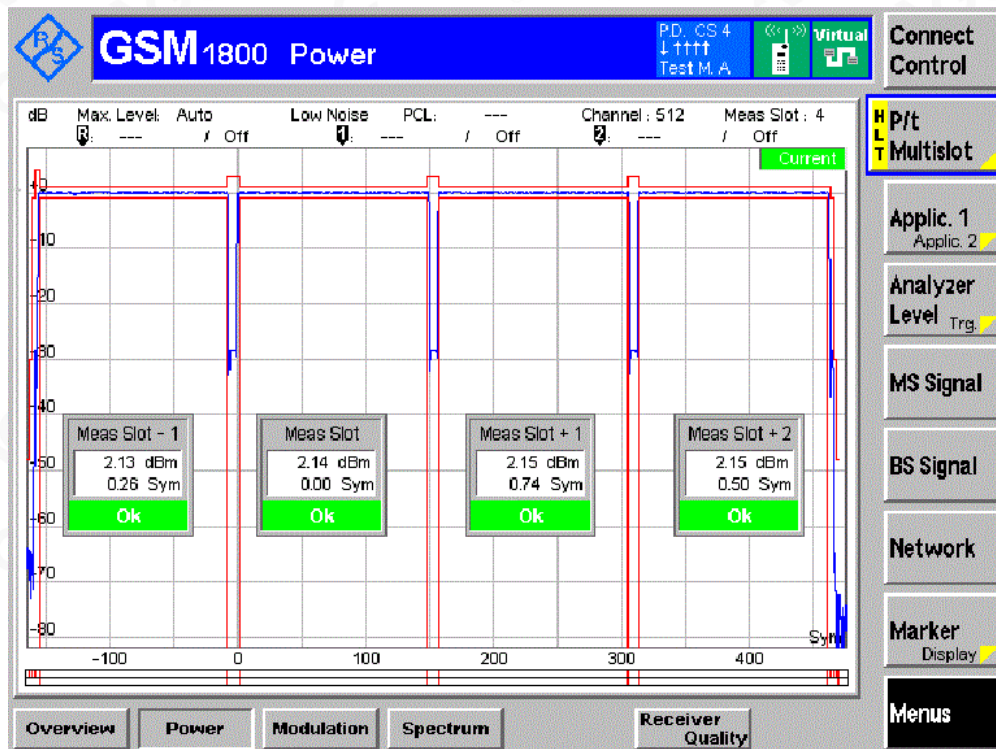
Channel MCH PCL 8



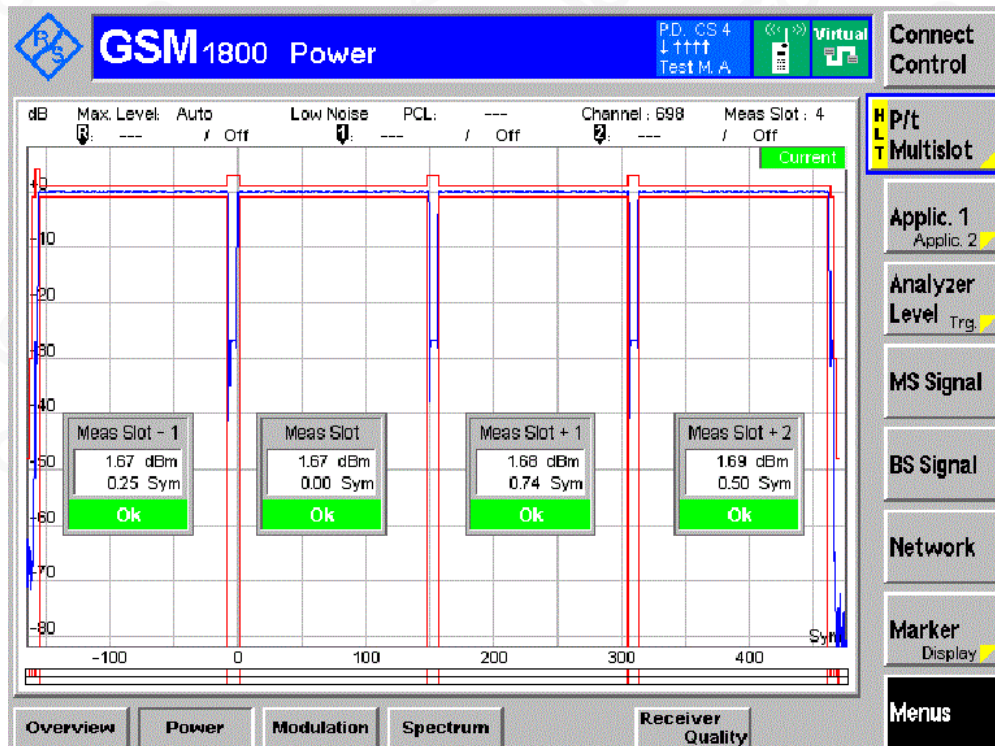
Channel HCH PCL 8



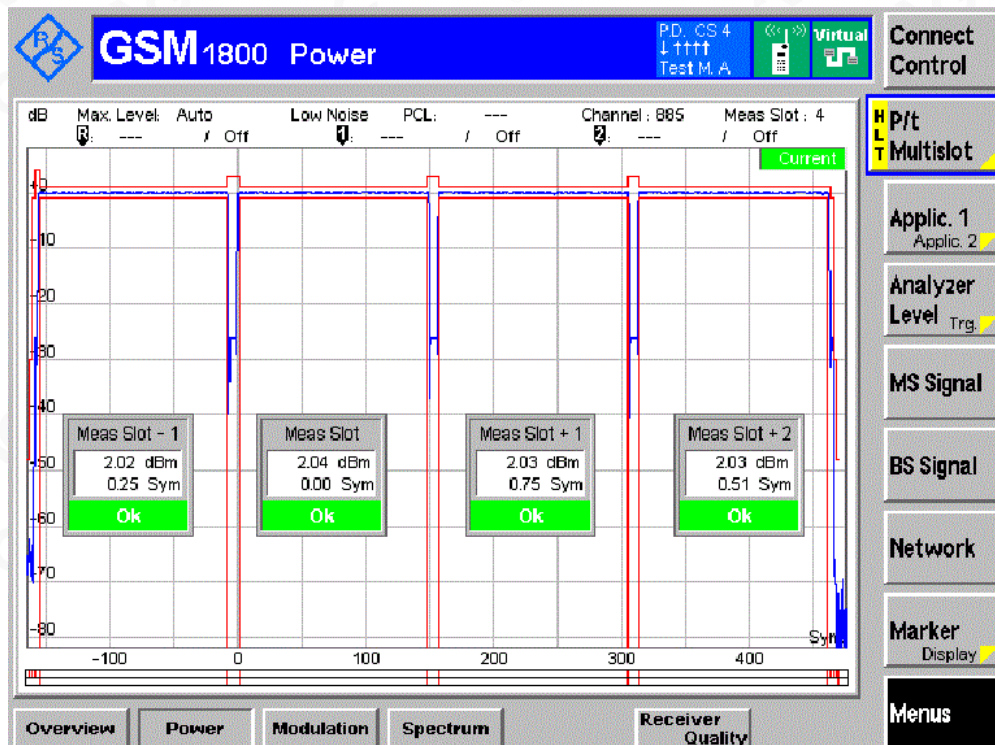
Channel LCH PCL 15



Channel MCH PCL 15



Channel HCH PCL 15



Appendix G. Output RF spectrum in GPRS multislot configuration

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of follow:

Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
GSM900		LCH	MCH	HCH
TN,VN	5	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

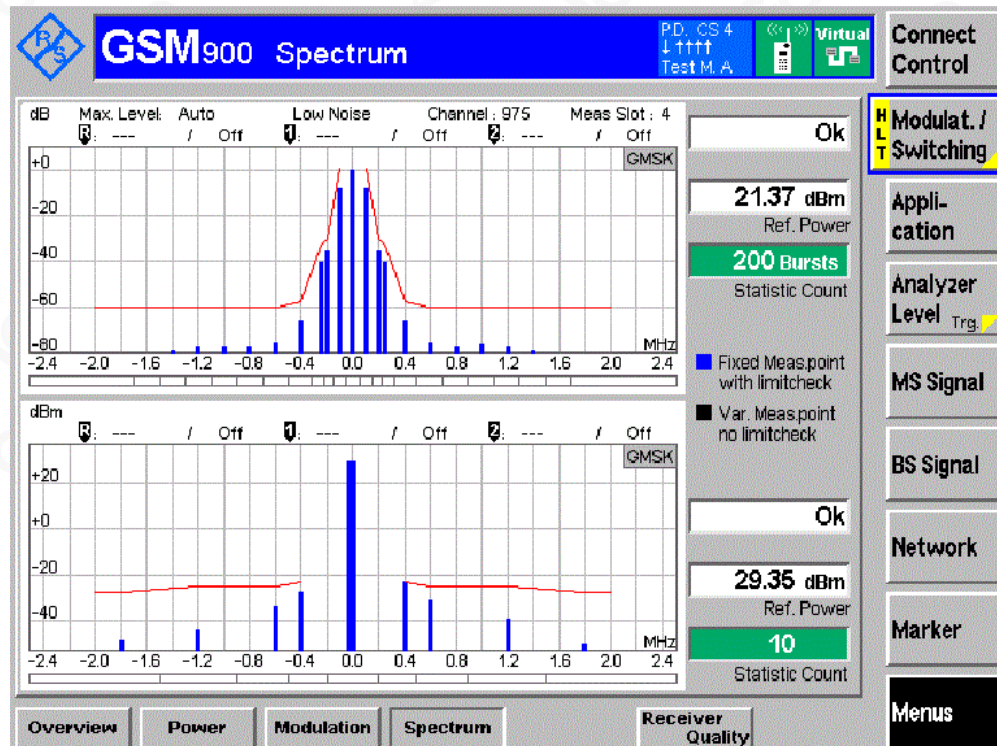
Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
DCS1800		LCH	MCH	HCH
TN,VN	0	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS

Graphs of output RF spectrum in GPRS multislot configuration

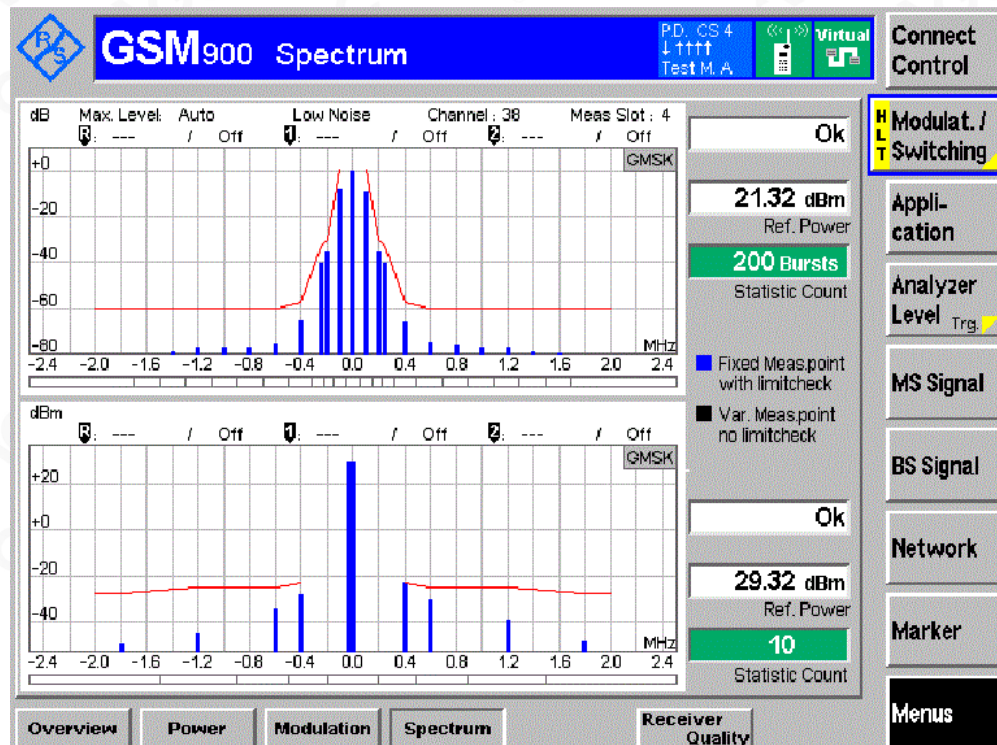
GSM 900 TN,VN



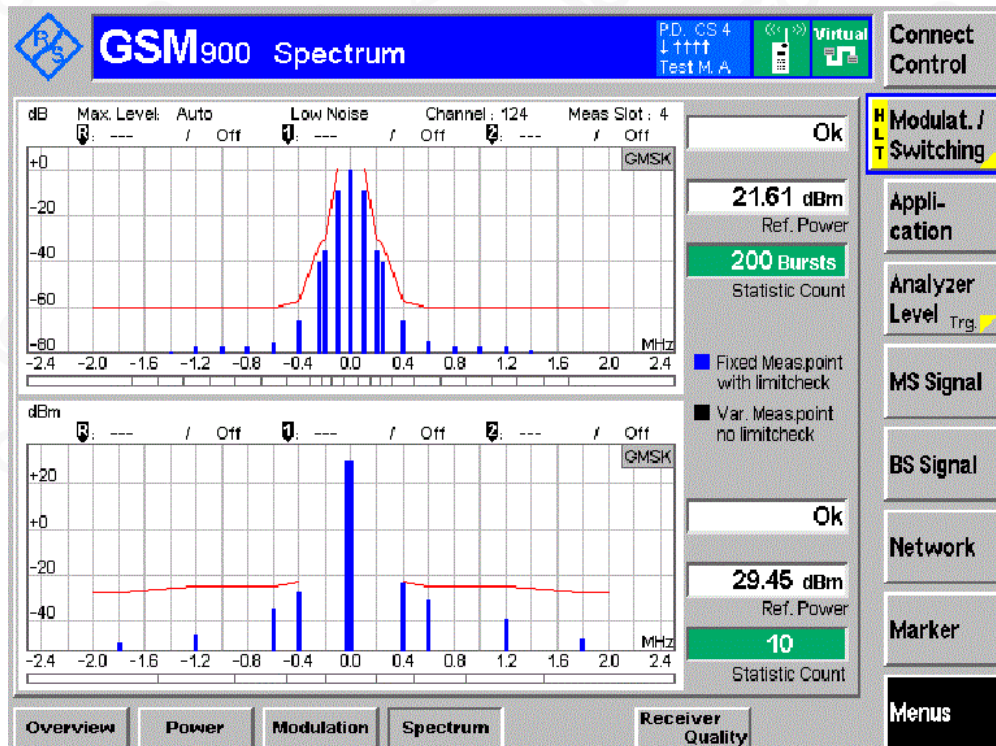
Channel LCH PCL 5



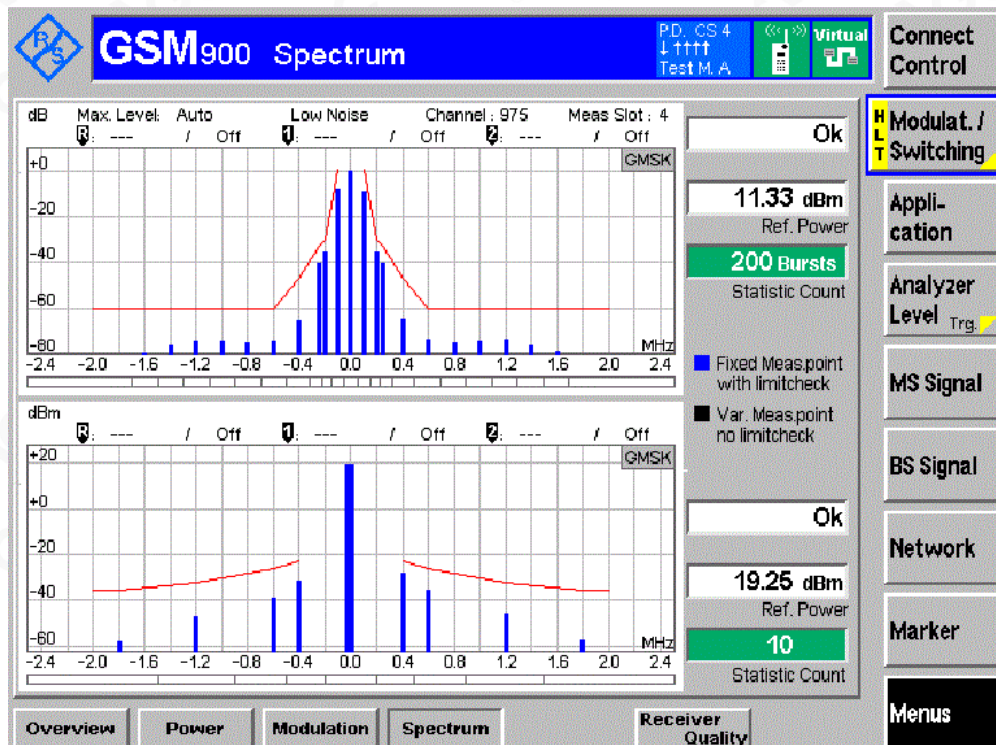
Channel MCH PCL 5



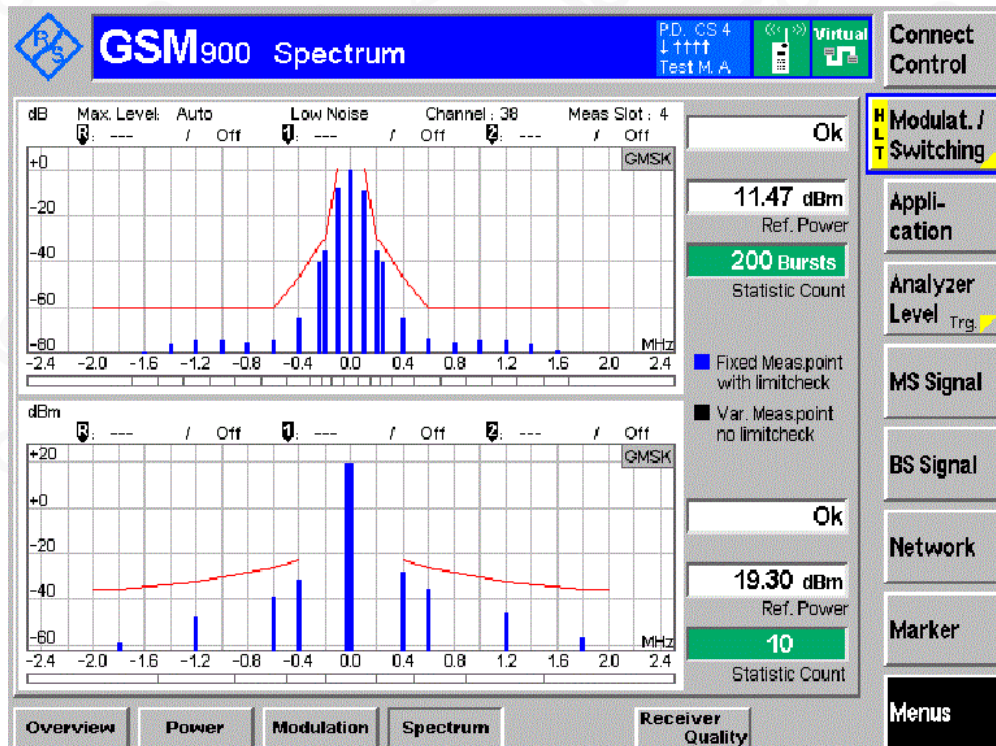
Channel HCH PCL 5



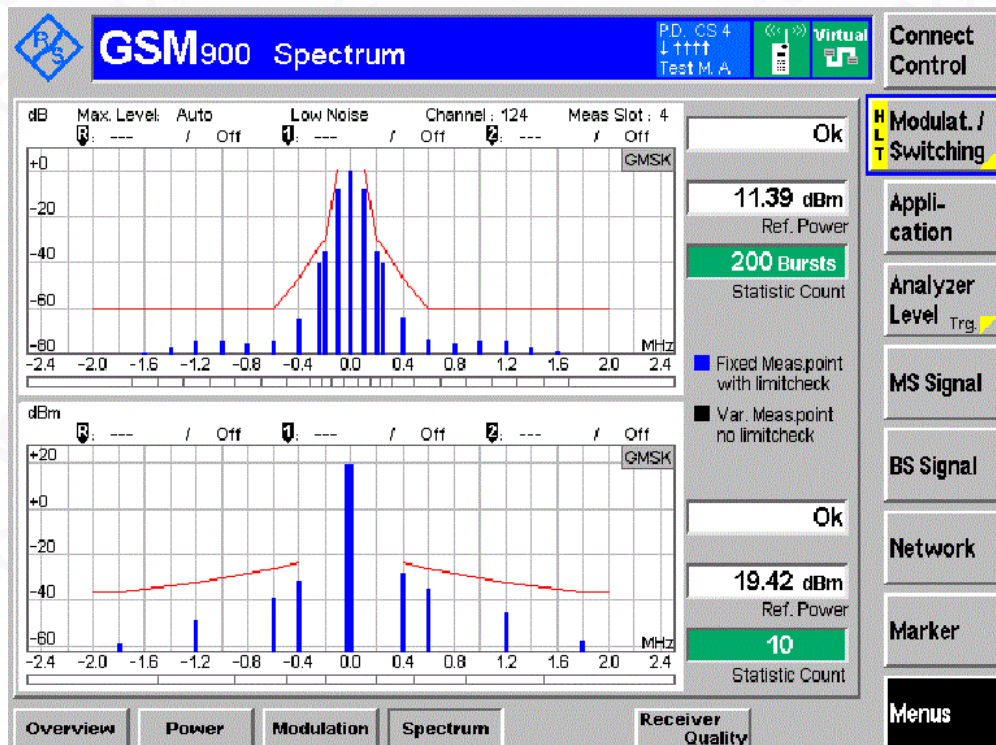
Channel LCH PCL 12



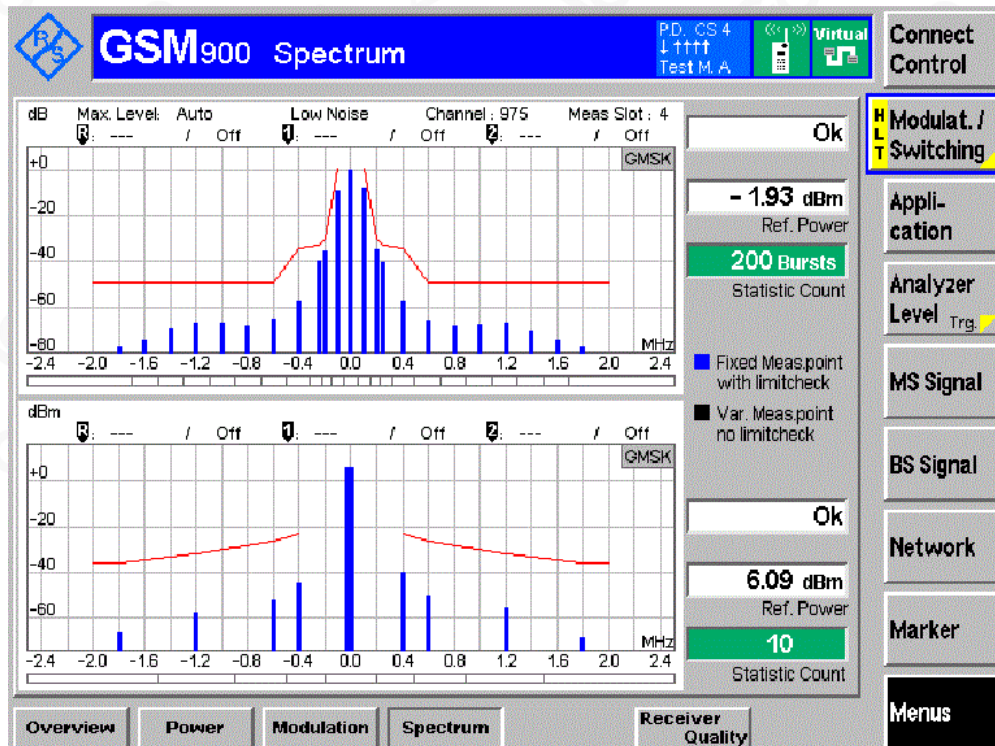
Channel MCH PCL 12



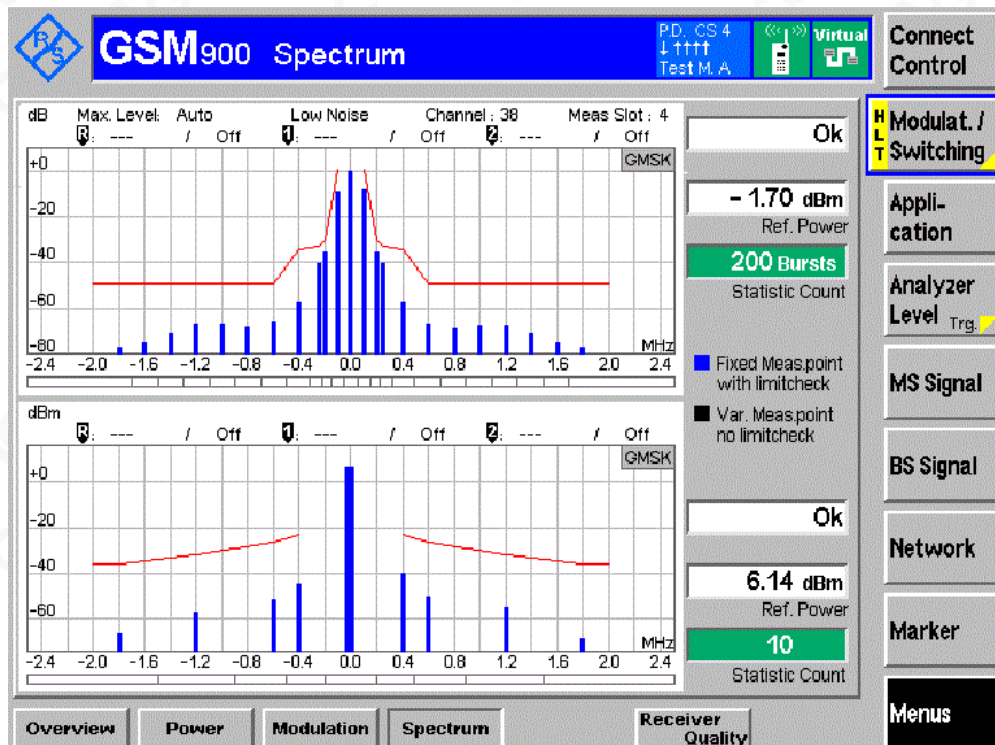
Channel HCH PCL 12



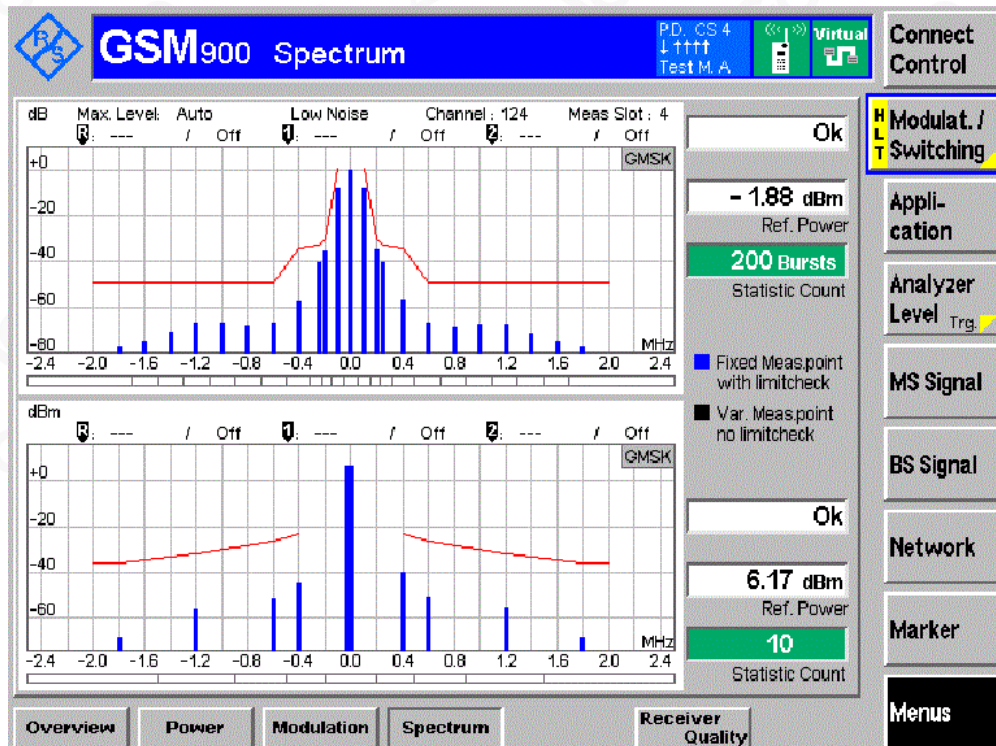
Channel LCH PCL 19



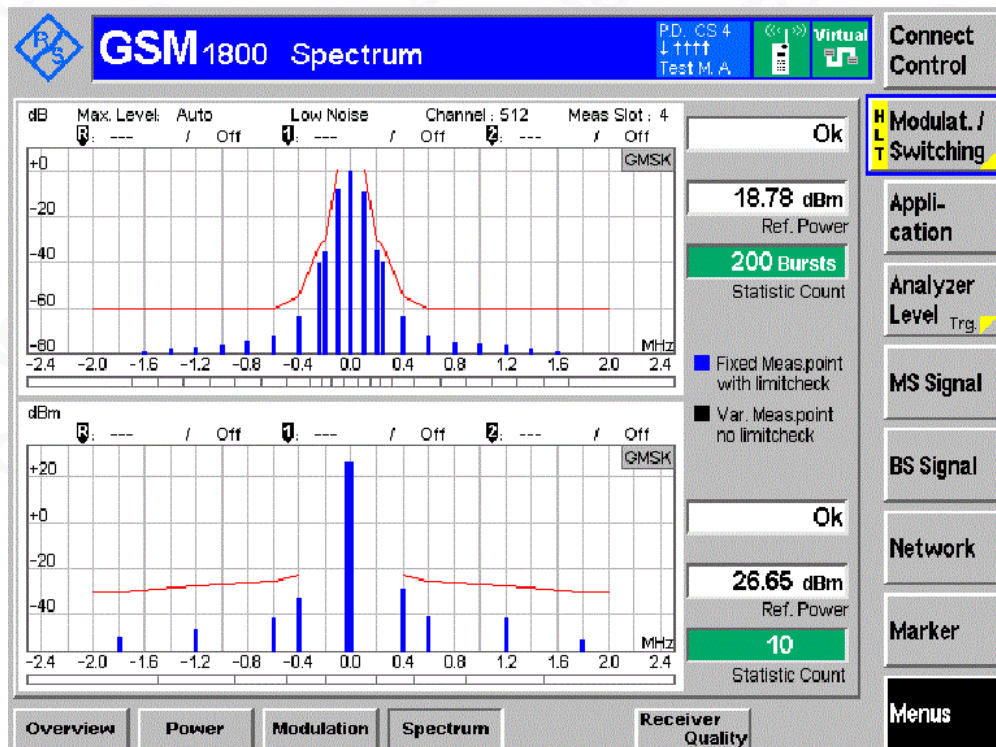
Channel MCH PCL 19



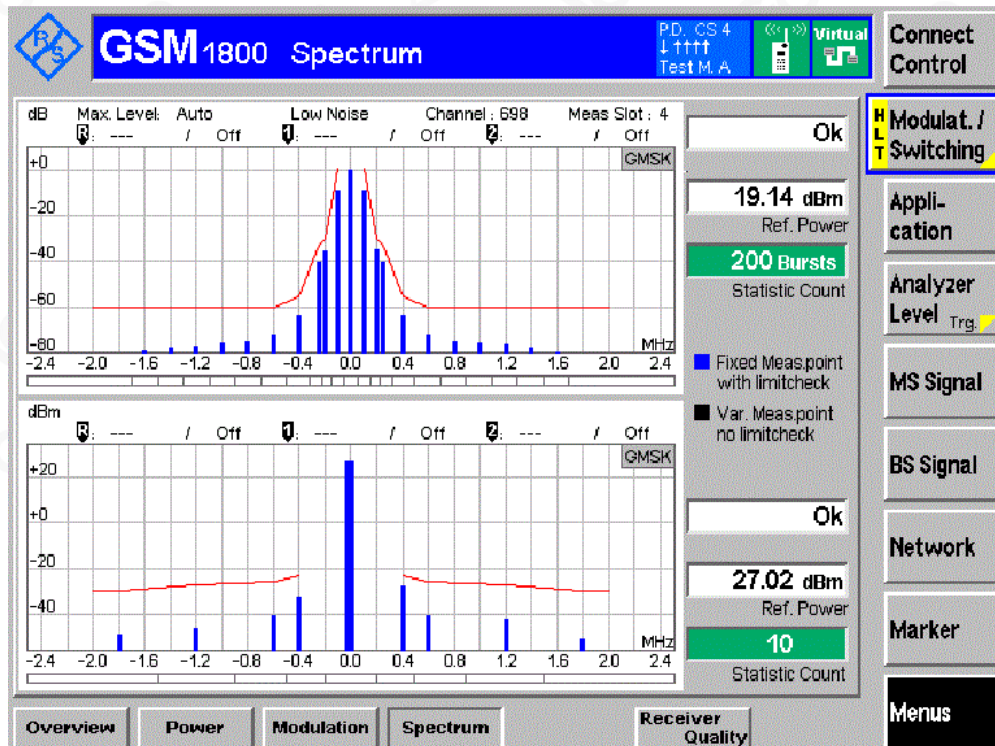
Channel HCH PCL 19



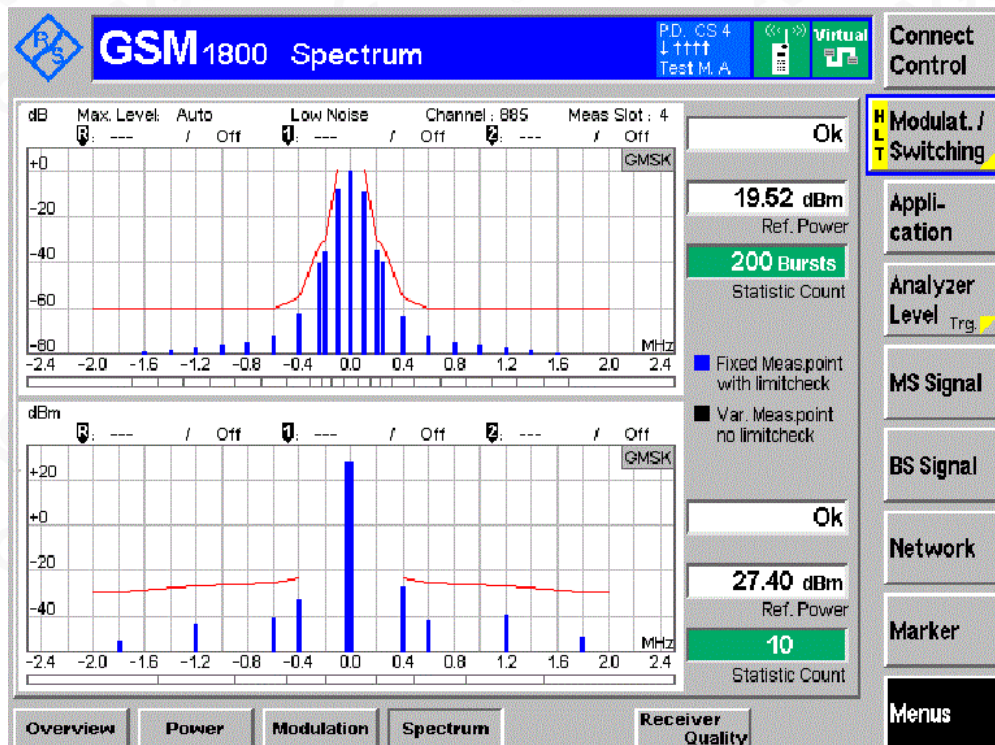
DCS1800 TN,VN
Channel LCH PCL 0



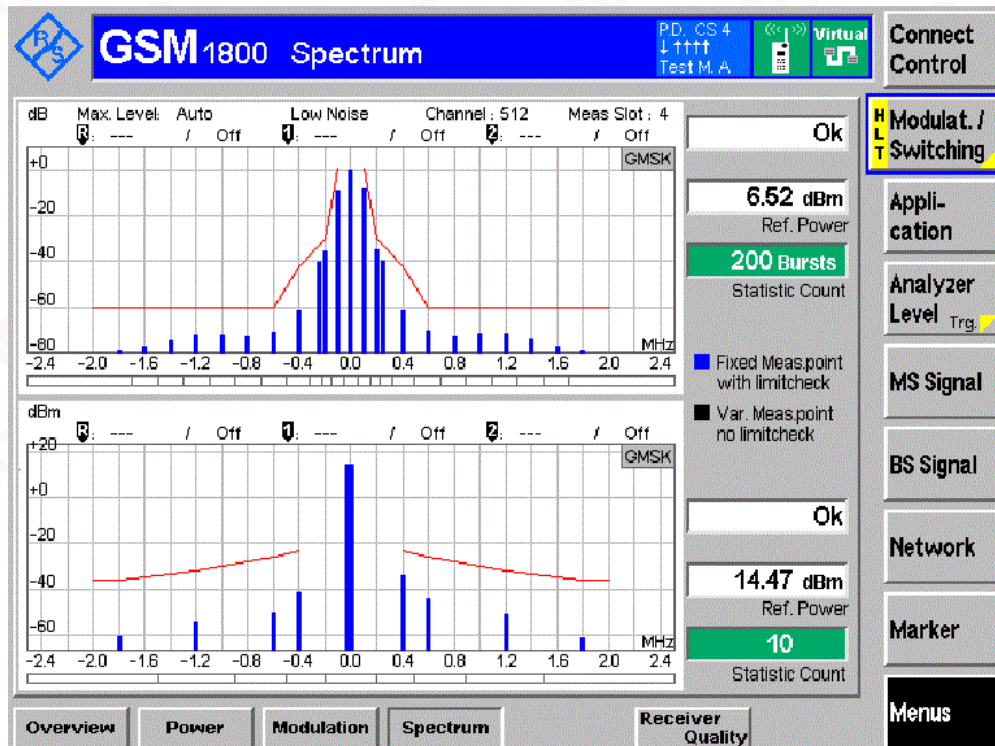
Channel MCH PCL 0



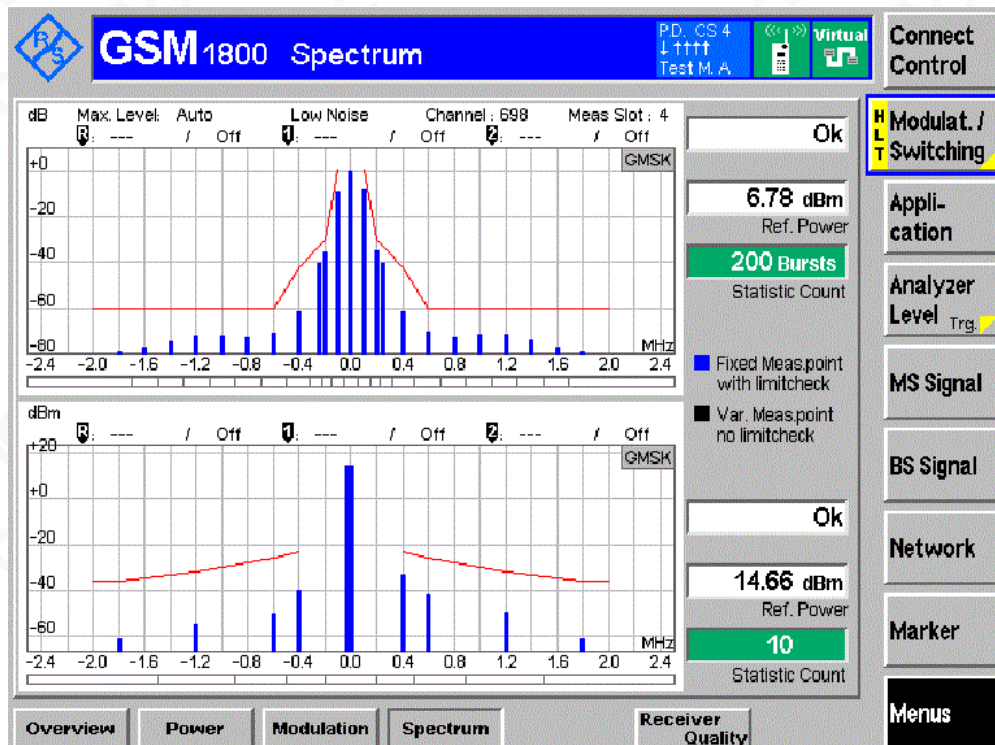
Channel HCH PCL 0



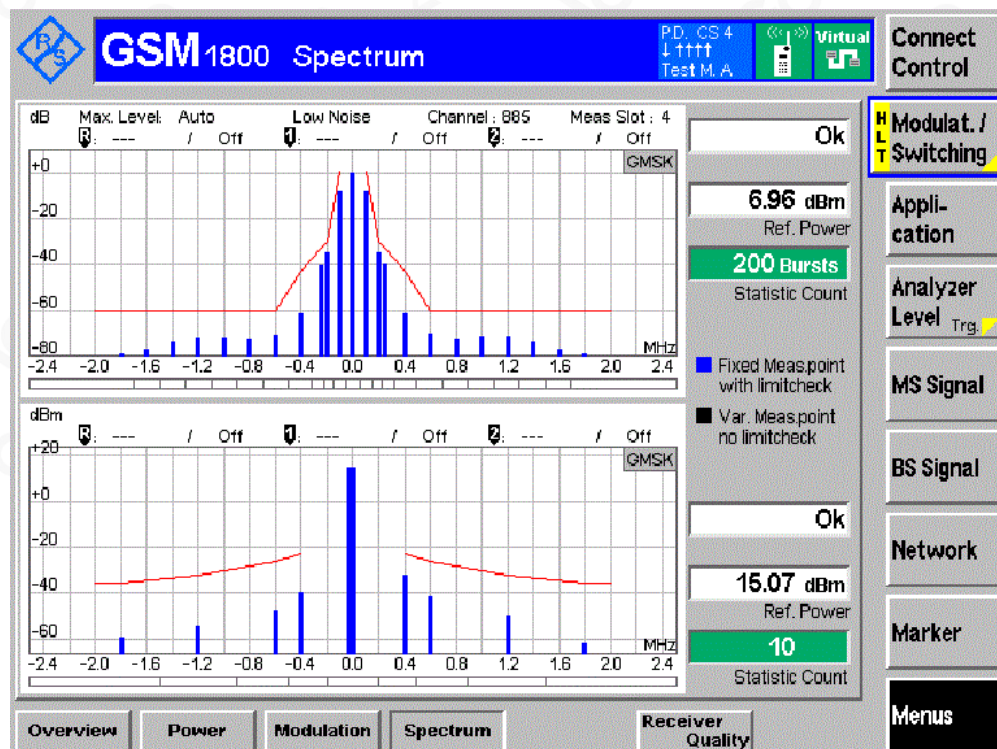
Channel LCH PCL 8



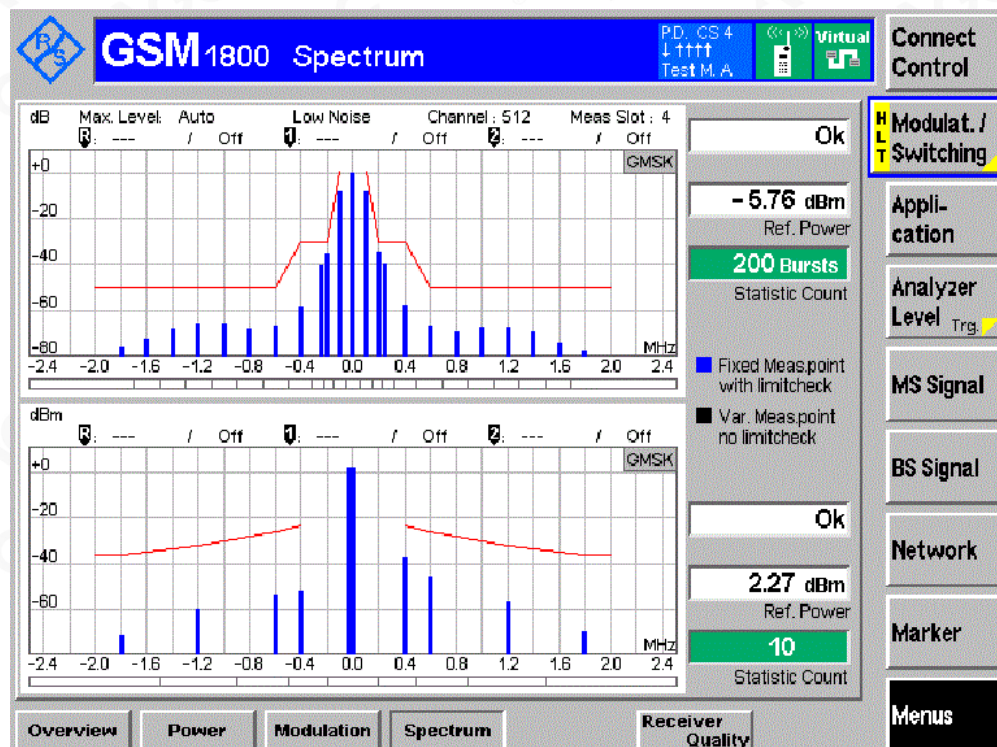
Channel MCH PCL 8



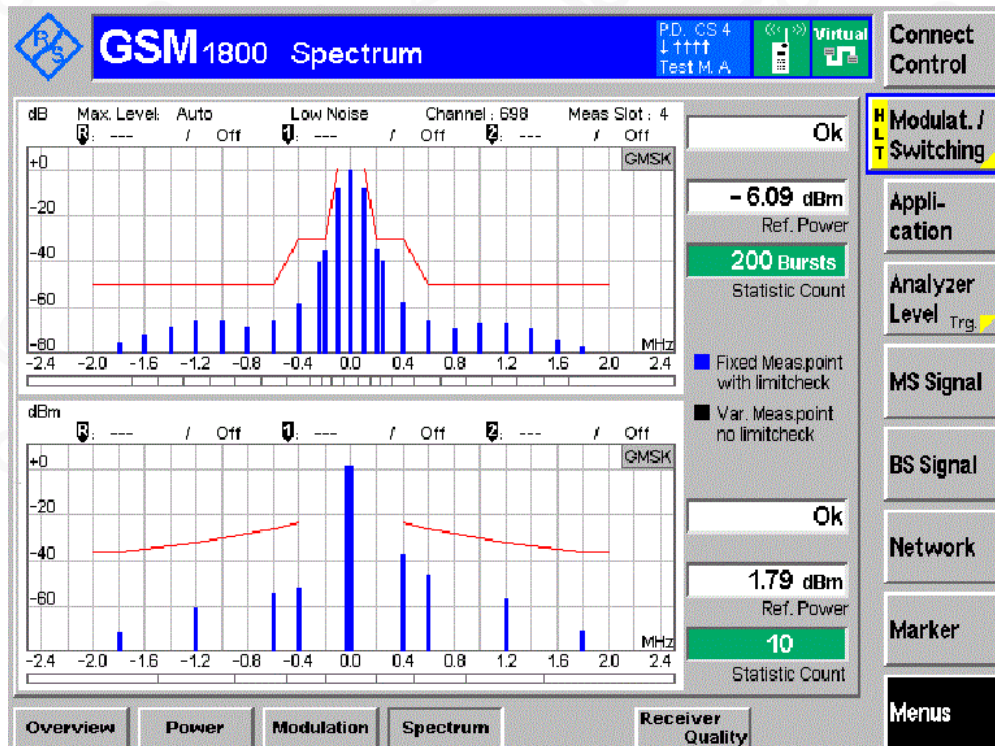
Channel HCH PCL 8



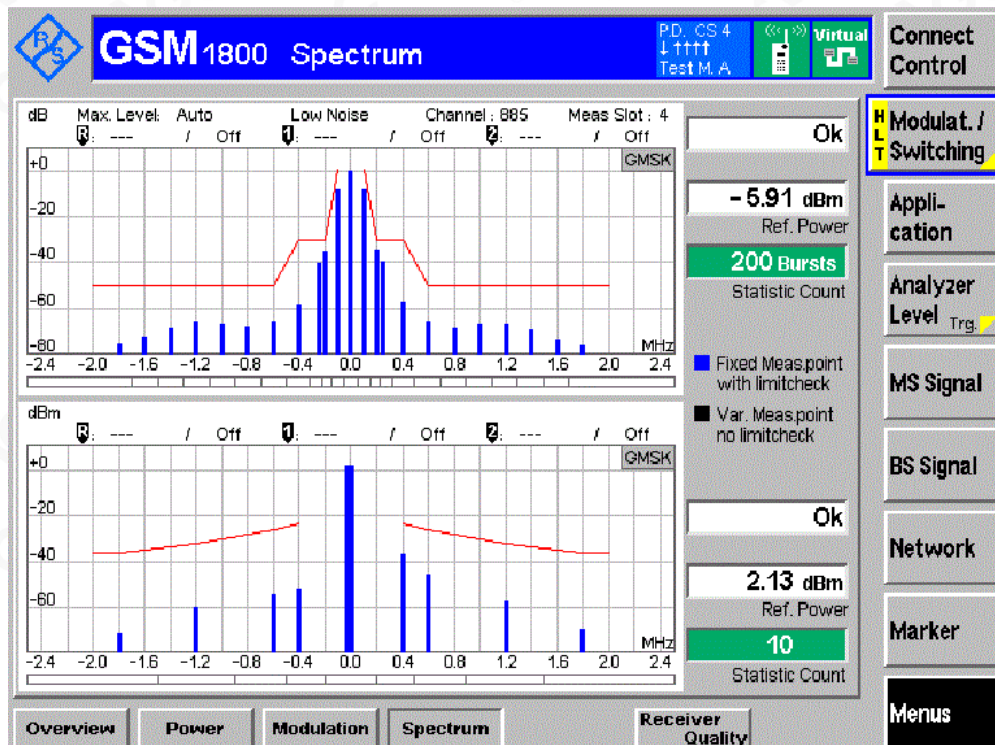
Channel LCH PCL 15



Channel MCH PCL 15



Channel HCH PCL 15



Appendix H. Conducted spurious emissions - MS allocated a channel

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

Conducted spurious emissions	GSM900;VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
100kHz~50MHz	10k	-36	-53.75	PASS
50MHz~500MHz	100k	-36	-43.94	PASS
500MHz~850MHz	3M	-36	-41.55	PASS
850MHz~860MHz	1M	-36	-44.61	PASS
860MHz~870MHz	300k	-36	-46.34	PASS
870MHz~880MHz	100k	-36	-46.30	PASS
915MHz~925MHz	100k	-36	-48.28	PASS
960MHz~1GHz	3M	-36	-43.95	PASS
1GHz~1805MHz	3M	-30	-34.96	PASS
1880MHz~12.75GHz	3M	-30	-31.40	PASS
896.6MHz~900.8MHz	30K	-36	-46.54	PASS
904.4MHz~908.6MHz	30K	-36	-50.25	PASS
880MHz~896.6MHz	100K	-36	-45.88	PASS
908.6MHz~915MHz	100K	-36	-48.14	PASS

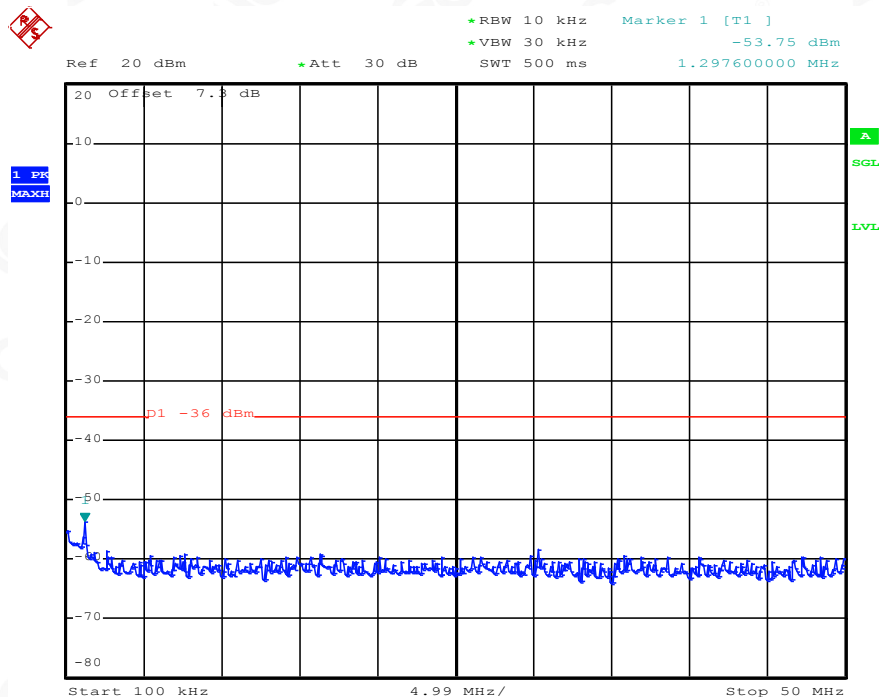
Conducted spurious emissions	DCS1800;VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
100kHz~50MHz	10k	-36	-54.15	PASS
50MHz~500MHz	100k	-36	-44.67	PASS
500MHz~925MHz	3M	-36	-39.58	PASS
960MHz~1GHz	3M	-36	-39.21	PASS
1GHz~1680MHz	3M	-30	-38.20	PASS
1680MHz~1690MHz	1M	-30	-42.15	PASS
1690MHz~1700MHz	300k	-30	-46.08	PASS
1700MHz~1710MHz	100k	-30	-45.29	PASS
1785MHz~1795MHz	100K	-30	-42.04	PASS
1795MHz~1805MHz	300k	-30	-43.91	PASS
1880MHz~12.75GHz	3M	-30	-31.73	PASS
1741.4MHz~1745.6MHz	30K	-36	-48.17	PASS
1749.2MHz~1753.4MHz	30K	-36	-48.69	PASS
1710MHz~1741.4MHz	100K	-36	-43.75	PASS
1753.4MHz~1785MHz	100K	-36	-43.48	PASS



Graphs of conducted spurious emission-MS allocated a channel

GSM900: channel MCH VN

100kHz~50MHz



AAA

Date: 28.MAY.2020 17:24:04



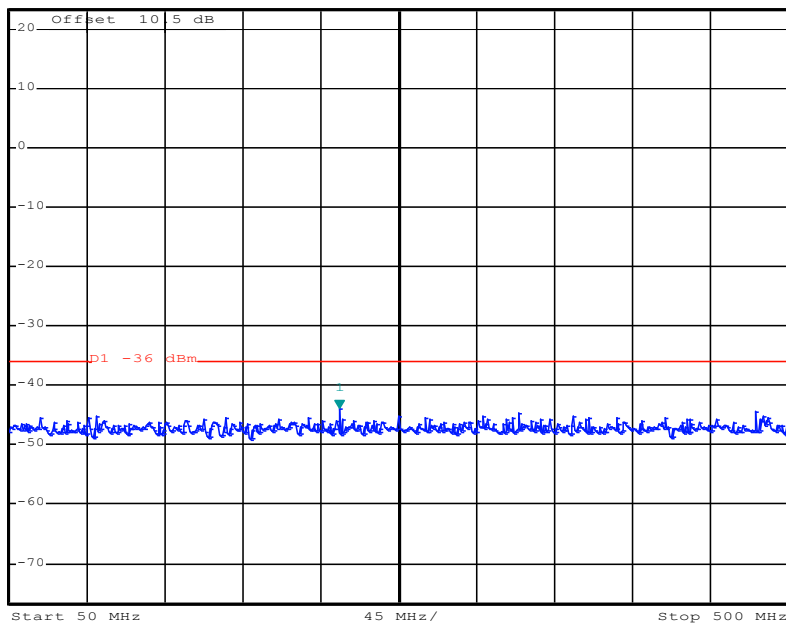
50MHz~500MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -43.94 dBm
SWT 45 ms 240.800000000 MHz

Ref 23.2 dBm *Att 30 dB

1 PK
MAXH



AAA

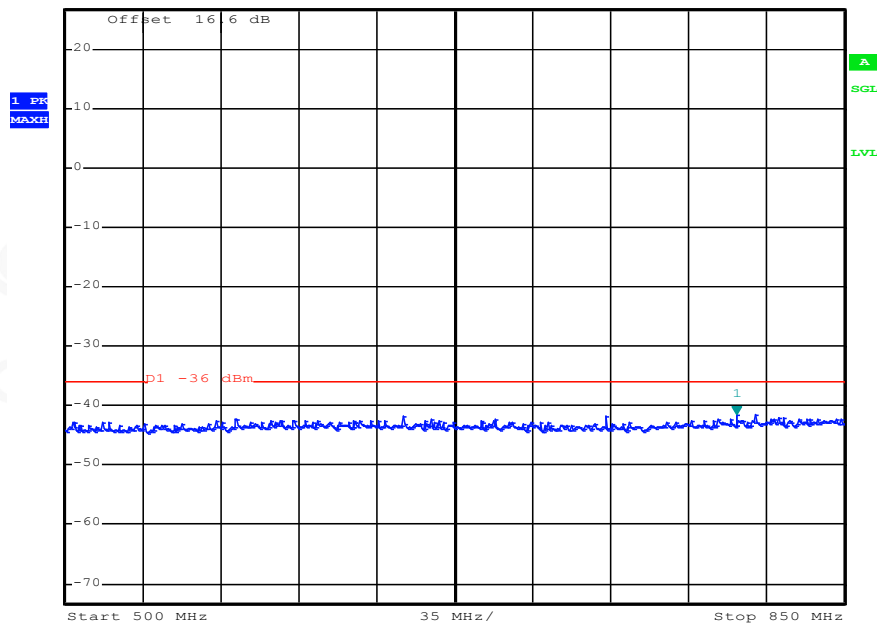
Date: 28.MAY.2020 17:24:12



500MHz~850MHz



Ref 26.6 dBm *Att 20 dB *RBW 3 MHz *VBW 3 MHz *SWT 205 ms Marker 1 [T1] -41.55 dBm 801.700000000 MHz

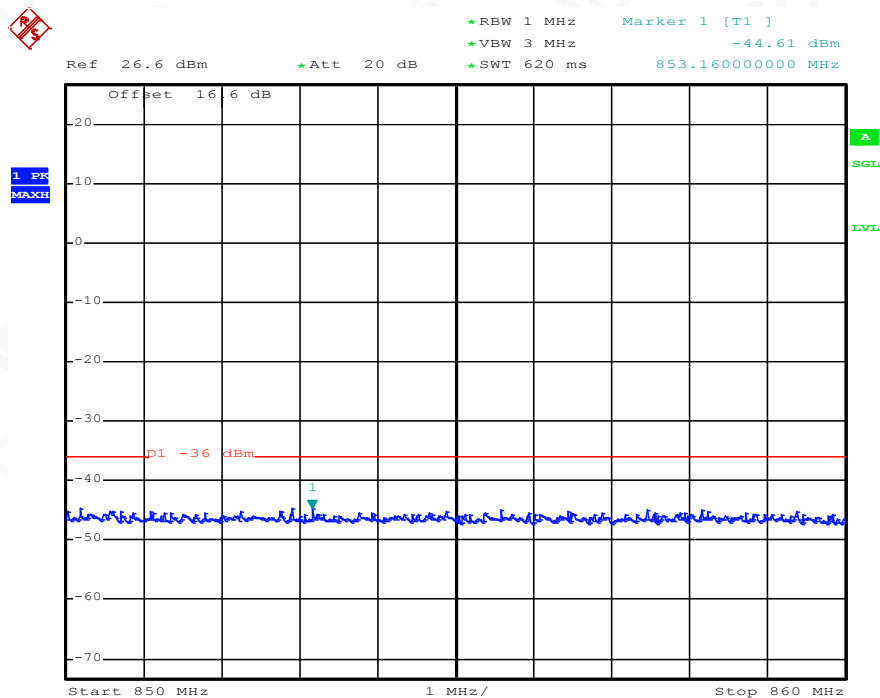


AAA

Date: 28.MAY.2020 17:24:28



850MHz~860MHz

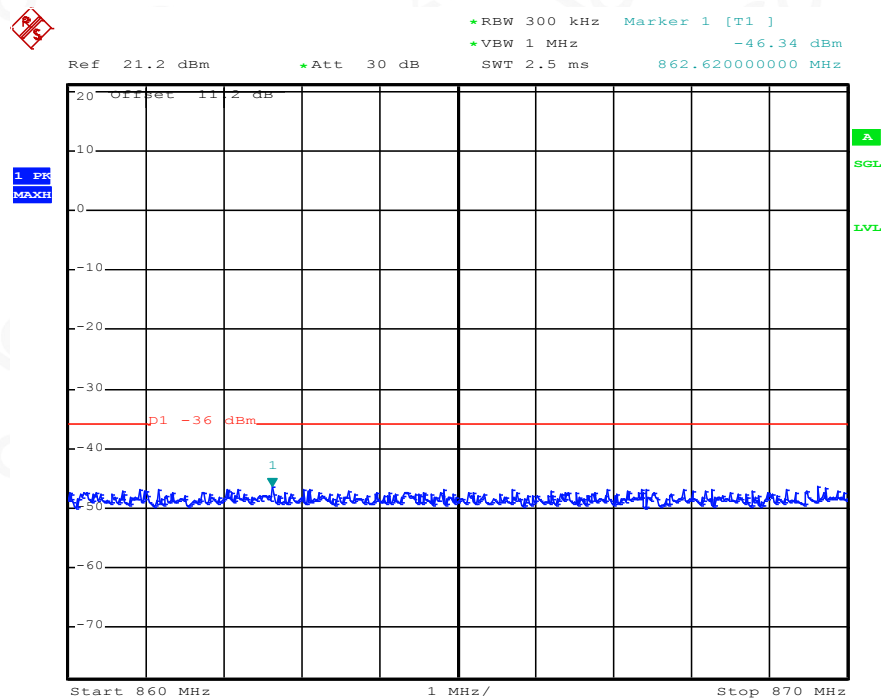


AAA

Date: 28.MAY.2020 17:24:58



860MHz~870MHz

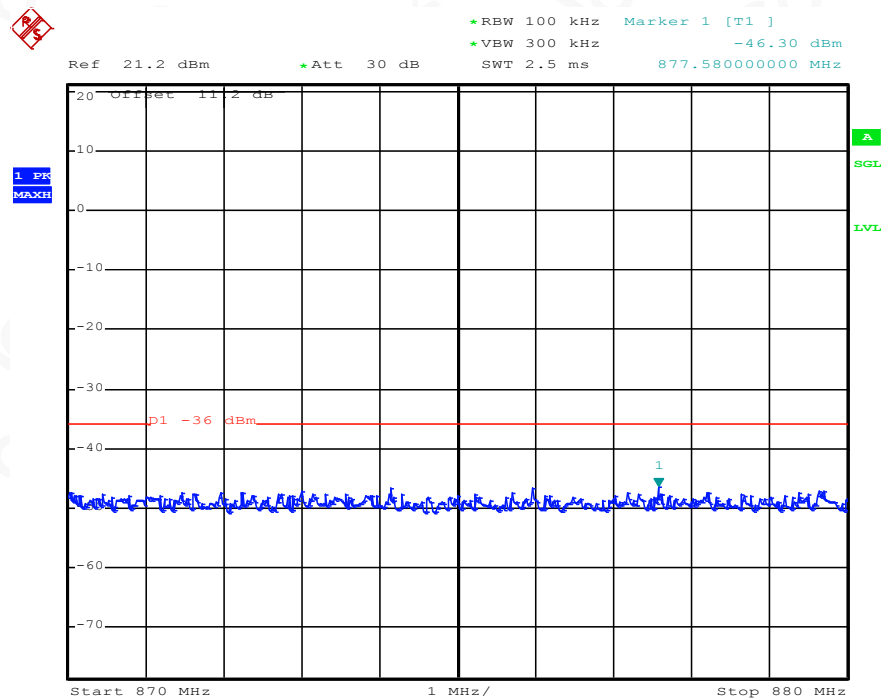


AAA

Date: 28.MAY.2020 17:25:06



870MHz~880MHz



AAA

Date: 28.MAY.2020 17:25:14

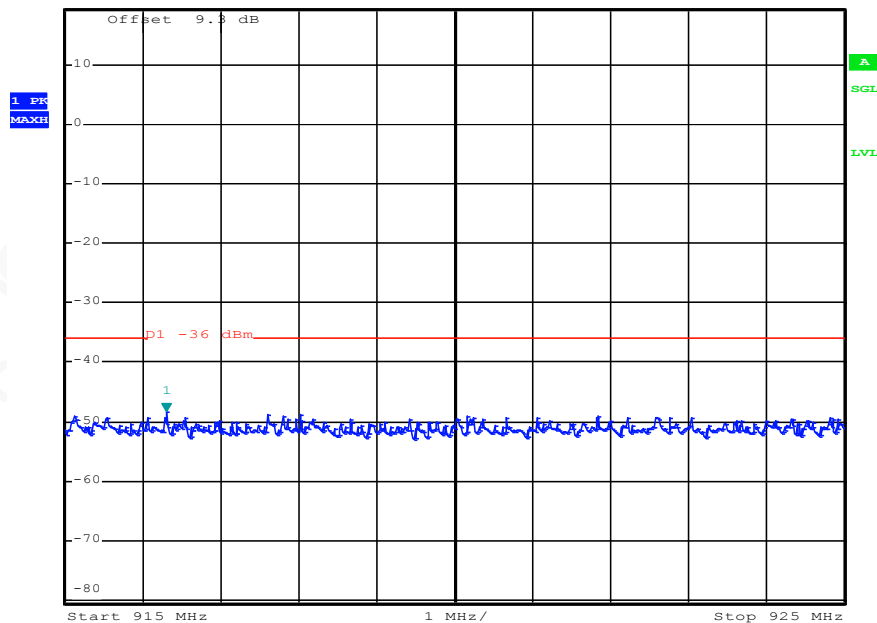


915MHz~925MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -48.28 dBm
SWT 2.5 ms 916.30000000 MHz

Ref 19.3 dBm *Att 30 dB

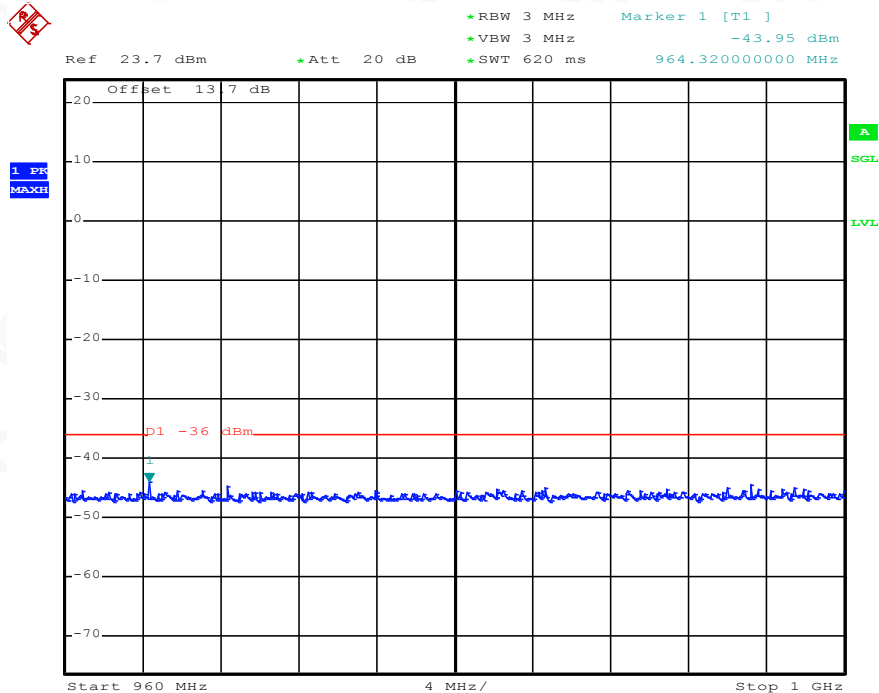


AAA

Date: 28.MAY.2020 17:25:22



960MHz~1GHz



AAA

Date: 28.MAY.2020 17:25:52



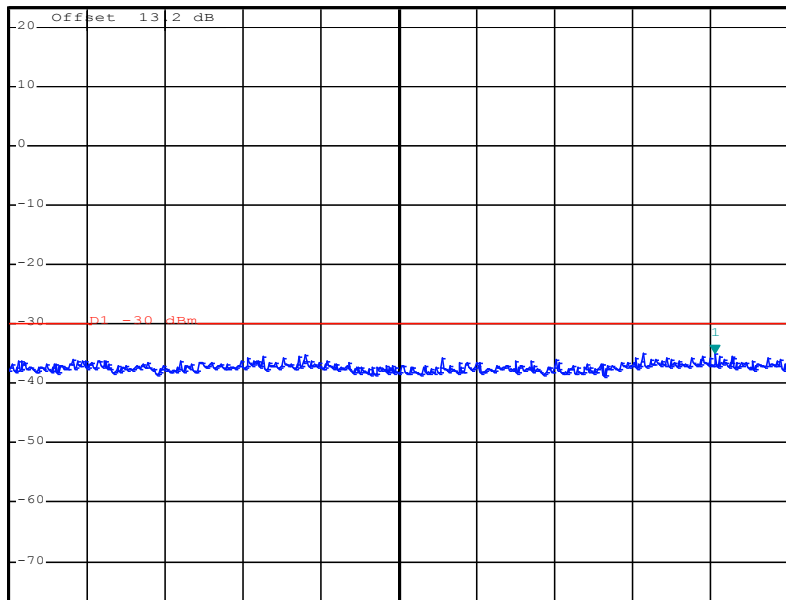
1GHz~1805MHz



*RBW 3 MHz Marker 1 [T1]
*VBW 3 MHz -34.96 dBm
SWT 5 ms 1.729330000 GHz

Ref 23.2 dBm *Att 30 dB

1 PK
MAXH



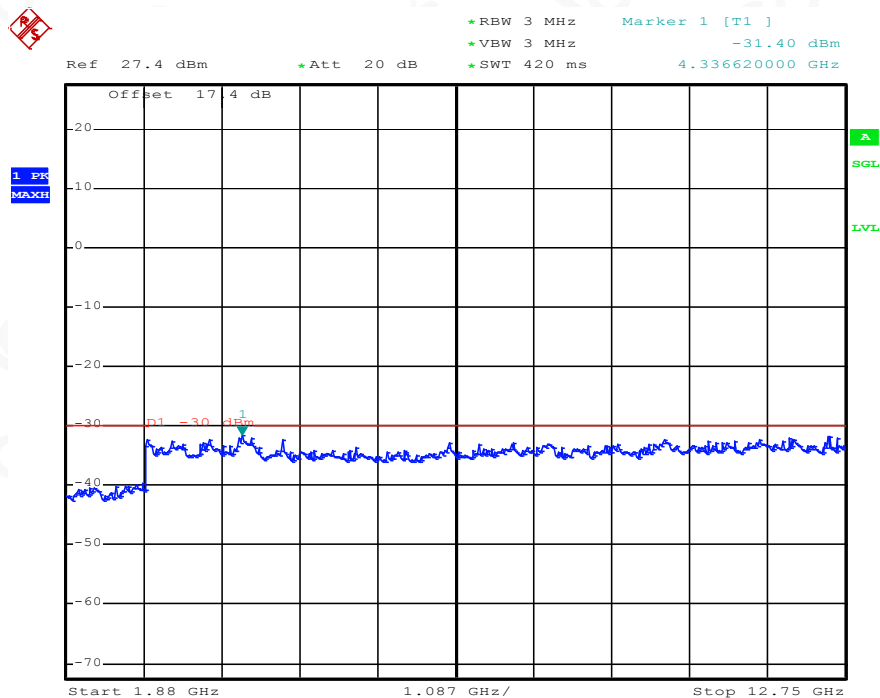
Start 1 GHz 80.5 MHz/ Stop 1.805 GHz

AAA

Date: 28.MAY.2020 17:26:00



1880MHz~12.75GHz

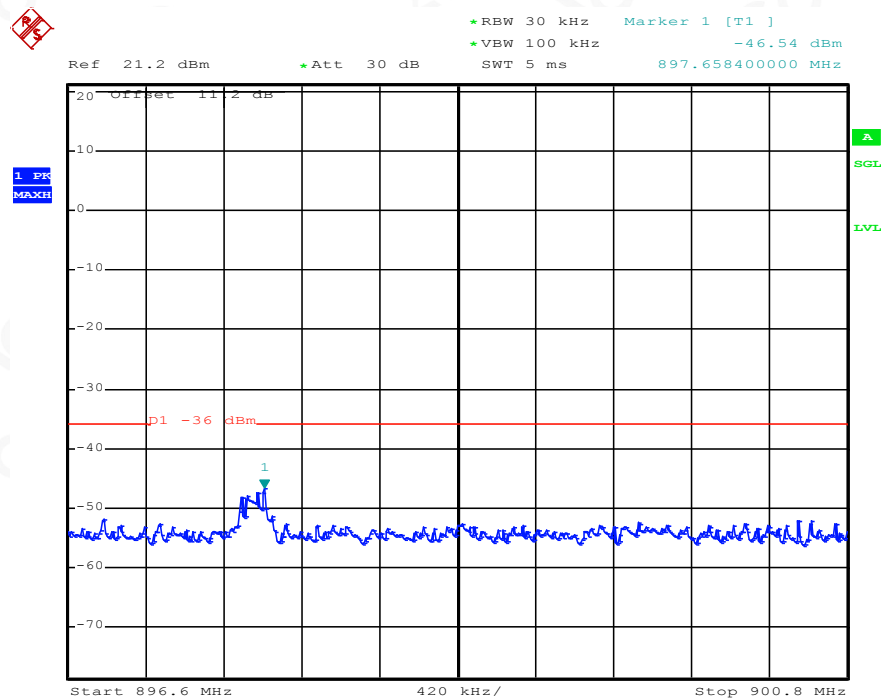


AAA

Date: 28.MAY.2020 17:26:16



896.6MHz~900.8MHz

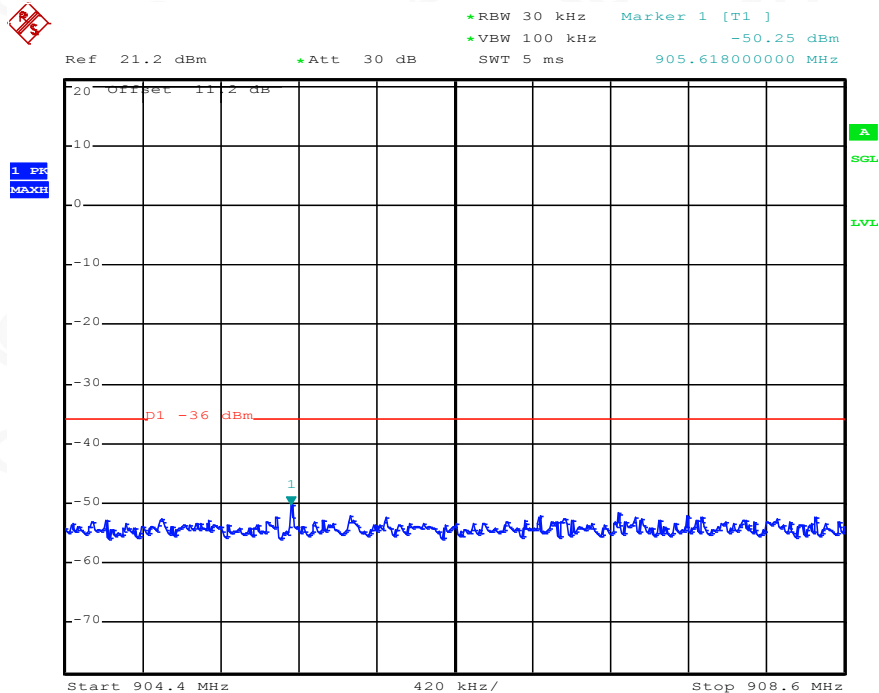


AAA

Date: 28.MAY.2020 17:26:24



904.4MHz~908.6MHz

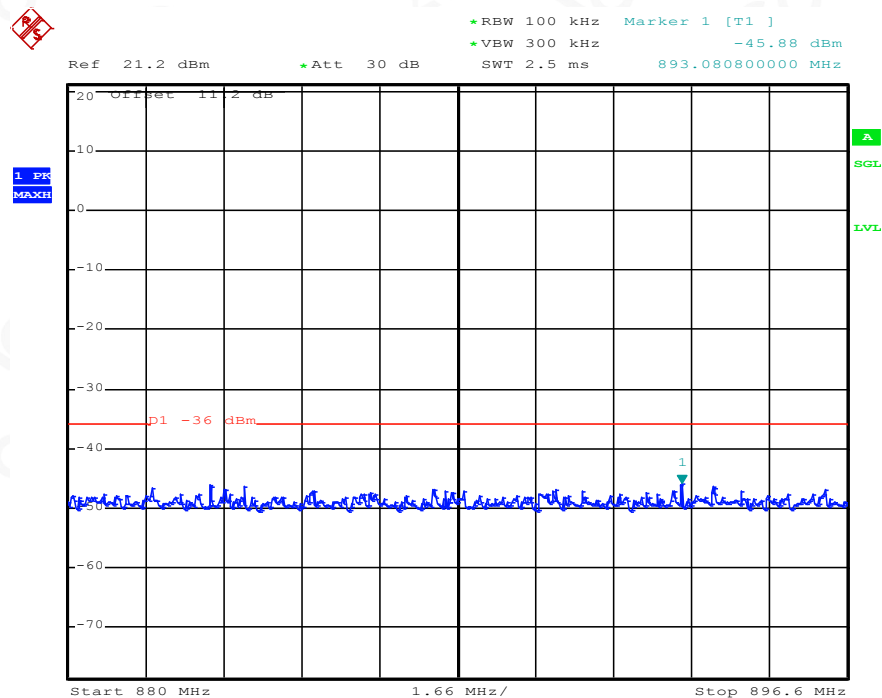


AAA

Date: 28.MAY.2020 17:26:32



880MHz~896.6MHz



AAA

Date: 28.MAY.2020 17:26:40

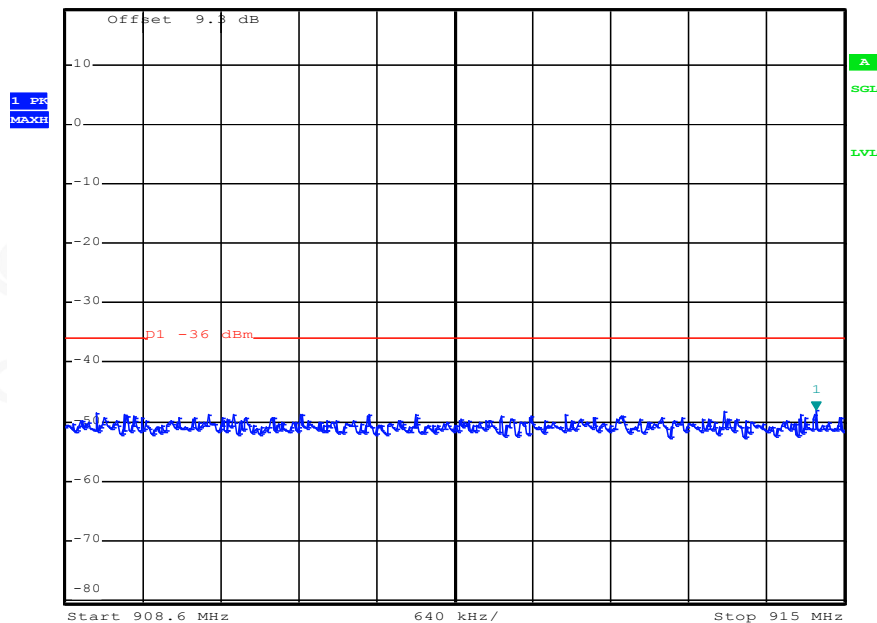


908.6MHz~915MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -48.14 dBm
SWT 2.5 ms 914.769600000 MHz

Ref 19.3 dBm *Att 30 dB

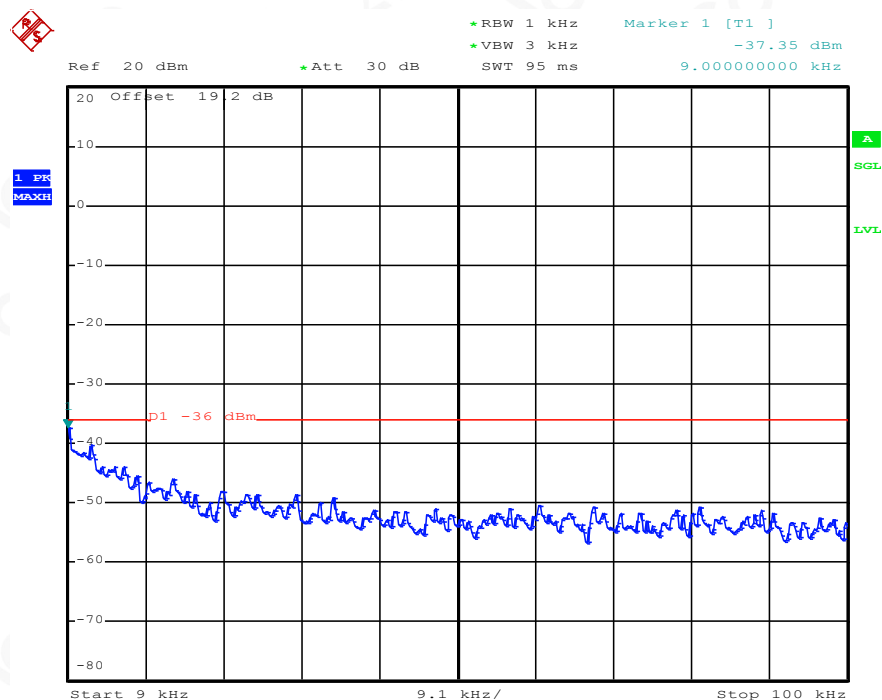


AAA

Date: 28.MAY.2020 17:26:48



DCS1800: channel MCH VN
9kHz~100kHz

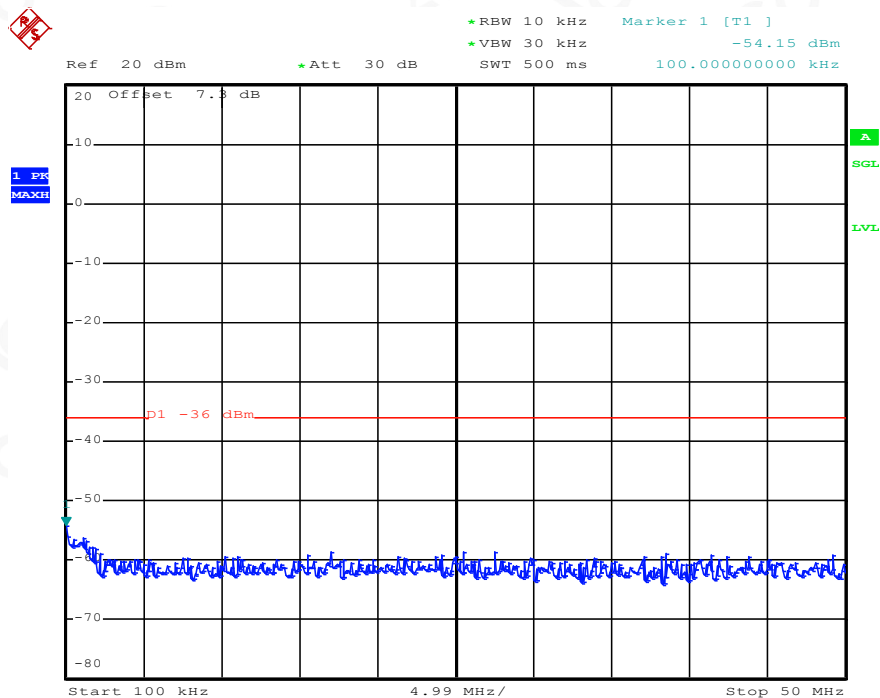


AAA

Date: 28.MAY.2020 17:34:09



100kHz~50MHz



AAA

Date: 28.MAY.2020 17:34:17



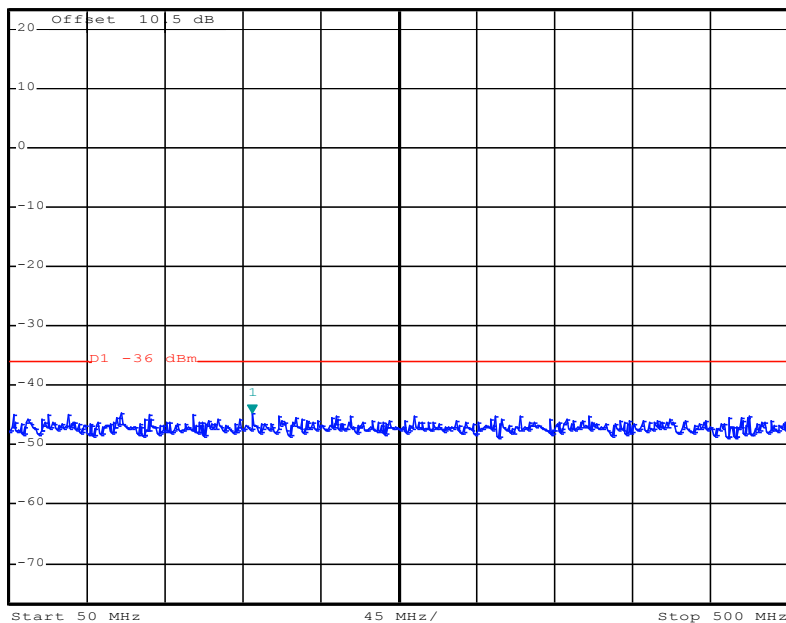
50MHz~500MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -44.67 dBm
SWT 45 ms 190.40000000 MHz

Ref 23.2 dBm *Att 30 dB

1 PK
MAXH

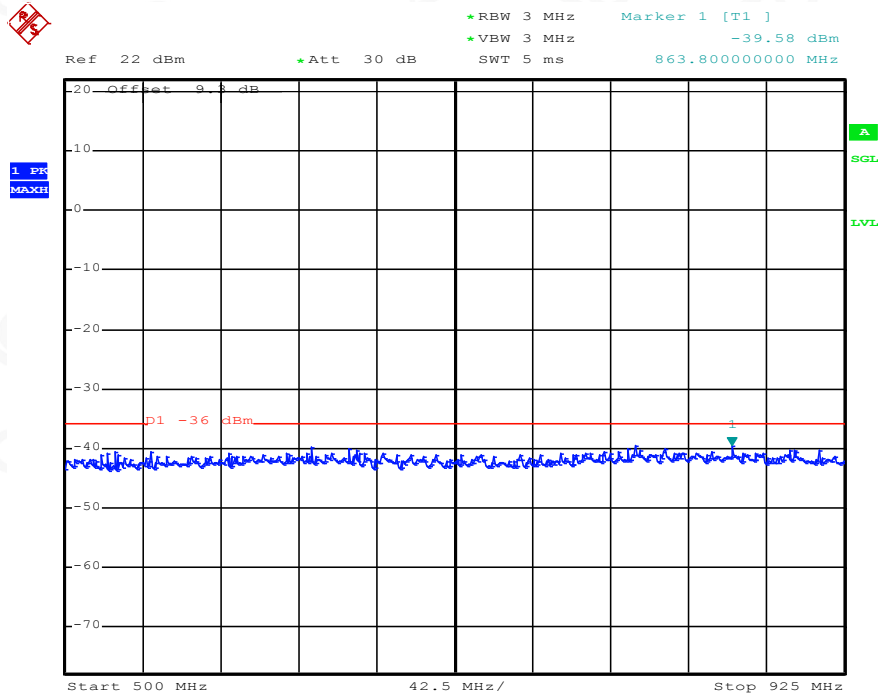


AAA

Date: 28.MAY.2020 17:34:26



500MHz~925MHz

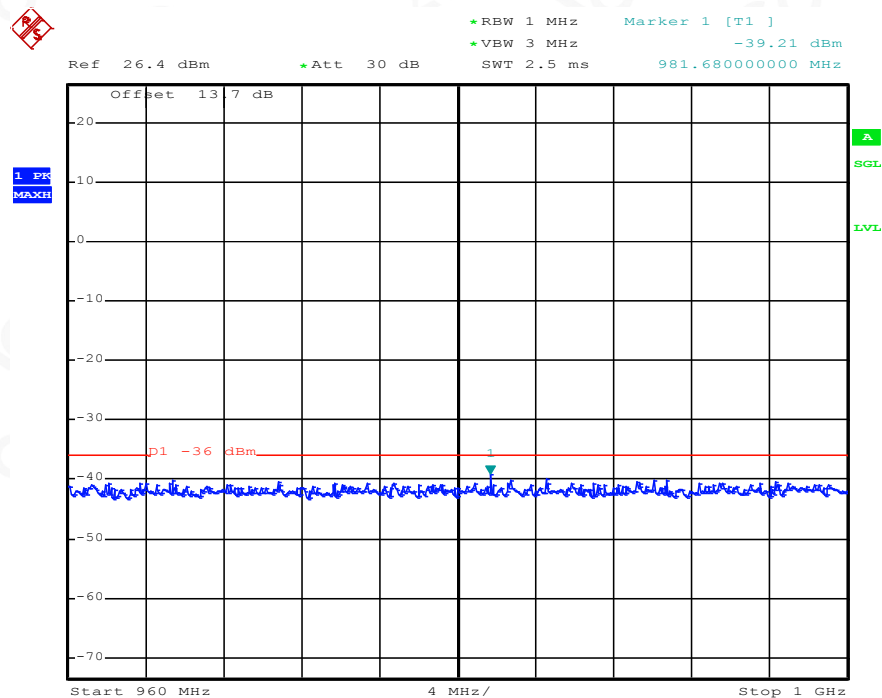


AAA

Date: 28.MAY.2020 17:34:34



960MHz~1GHz

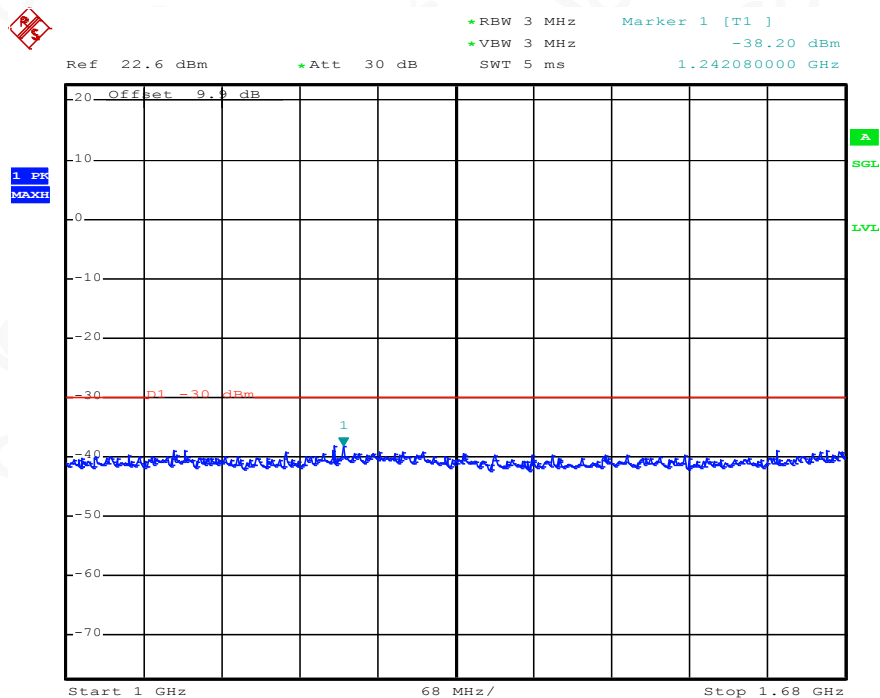


AAA

Date: 28.MAY.2020 17:34:42



1GHz~1680MHz

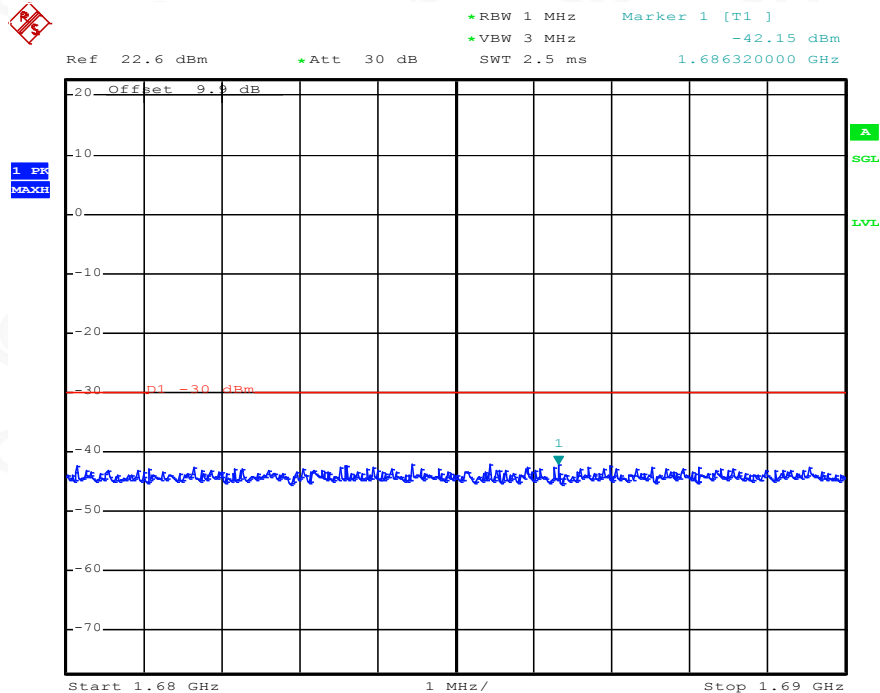


AAA

Date: 28.MAY.2020 17:34:50



1680MHz~1690MHz



AAA

Date: 28.MAY.2020 17:34:59

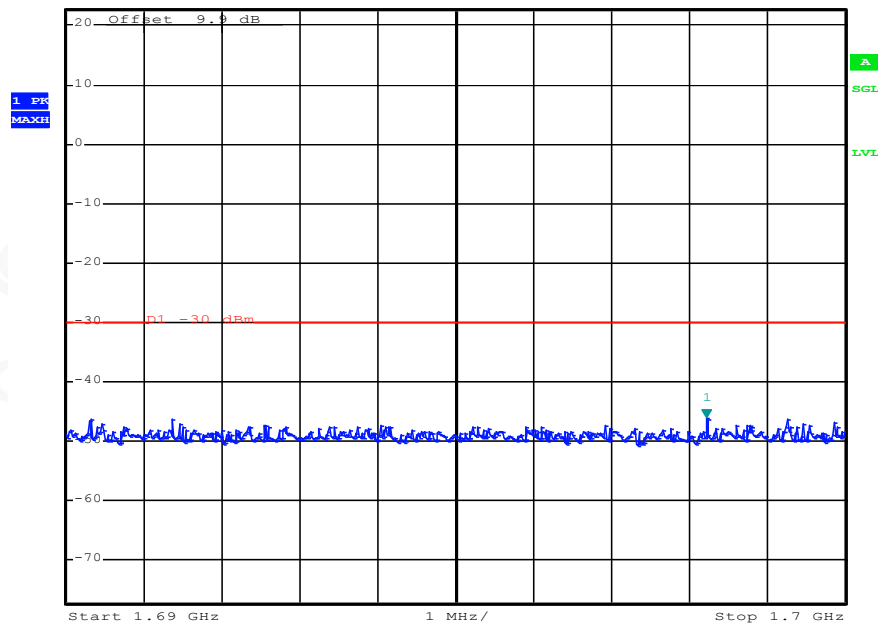


1690MHz~1700MHz



*RBW 300 kHz Marker 1 [T1]
*VBW 1 MHz -46.08 dBm
SWT 2.5 ms 1.698220000 GHz

Ref 22.6 dBm *Att 30 dB

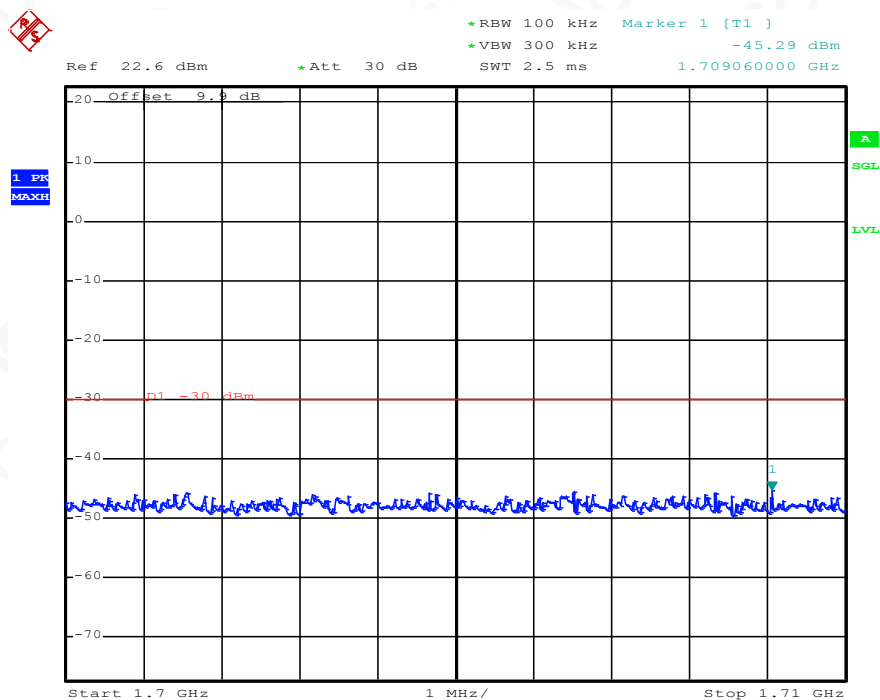


AAA

Date: 28.MAY.2020 17:35:07



1700MHz~1710MHz



AAA

Date: 28.MAY.2020 17:35:15



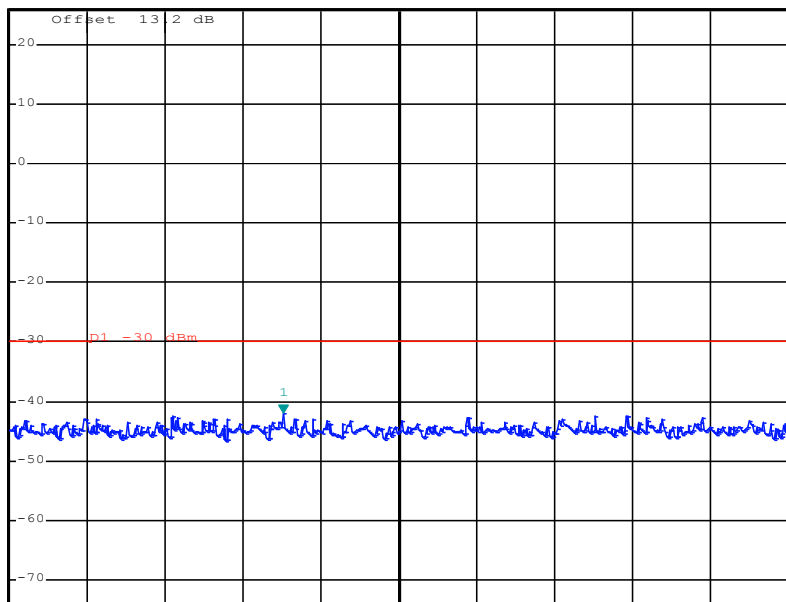
1785MHz~1795MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -42.04 dBm
SWT 2.5 ms 1.788520000 GHz

Ref 25.9 dBm *Att 30 dB

1. PK
MAXH



Start 1.785 GHz 1 MHz/ Stop 1.795 GHz

AAA

Date: 28.MAY.2020 17:35:22

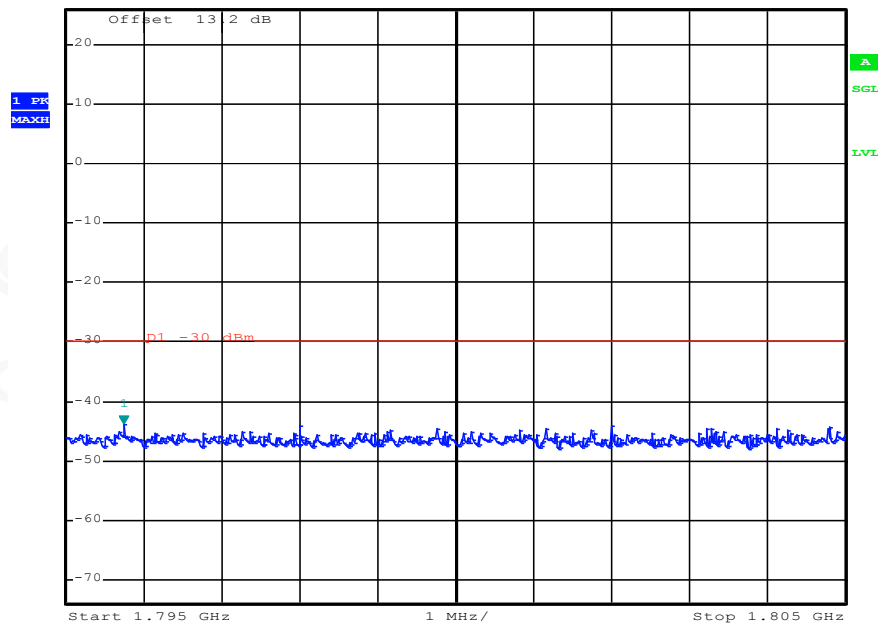


1795MHz~1805MHz



*RBW 300 kHz Marker 1 [T1]
*VBW 1 MHz -43.91 dBm
SWT 2.5 ms 1.795740000 GHz

Ref 25.9 dBm *Att 30 dB

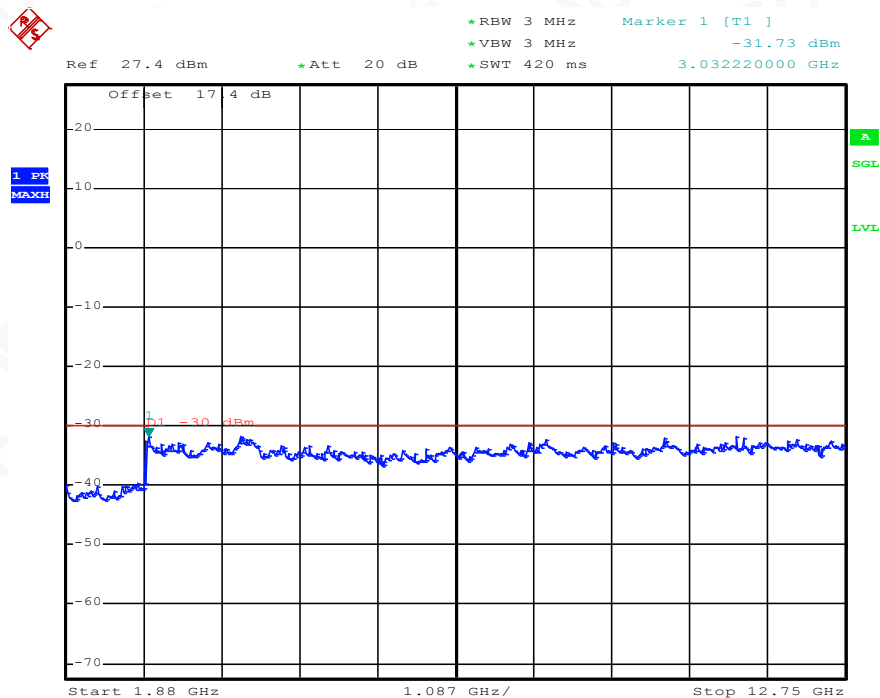


AAA

Date: 28.MAY.2020 17:35:30



1880MHz~12.75GHz

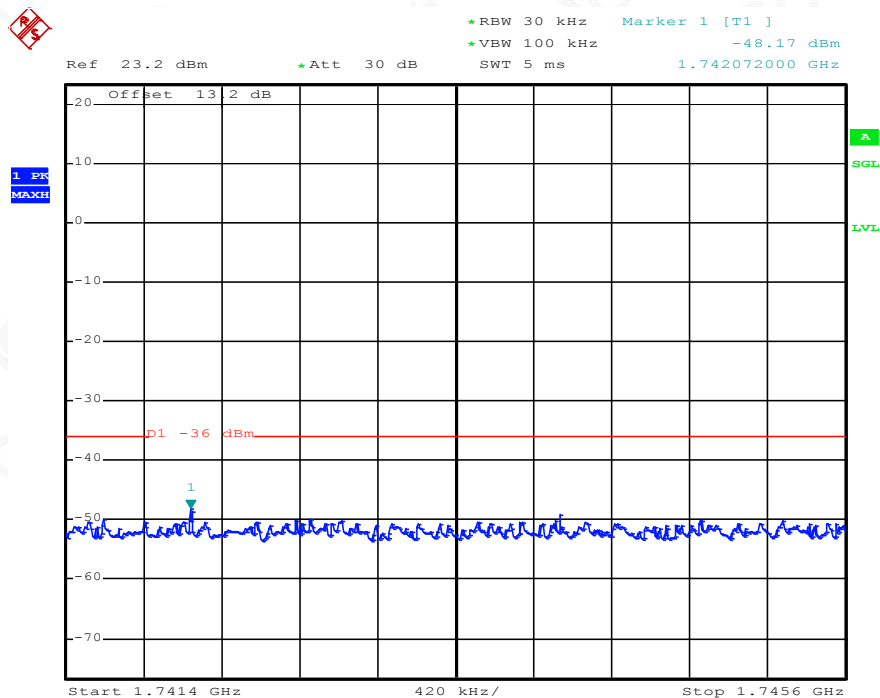


AAA

Date: 28.MAY.2020 17:35:45



1741.4MHz~1745.6MHz

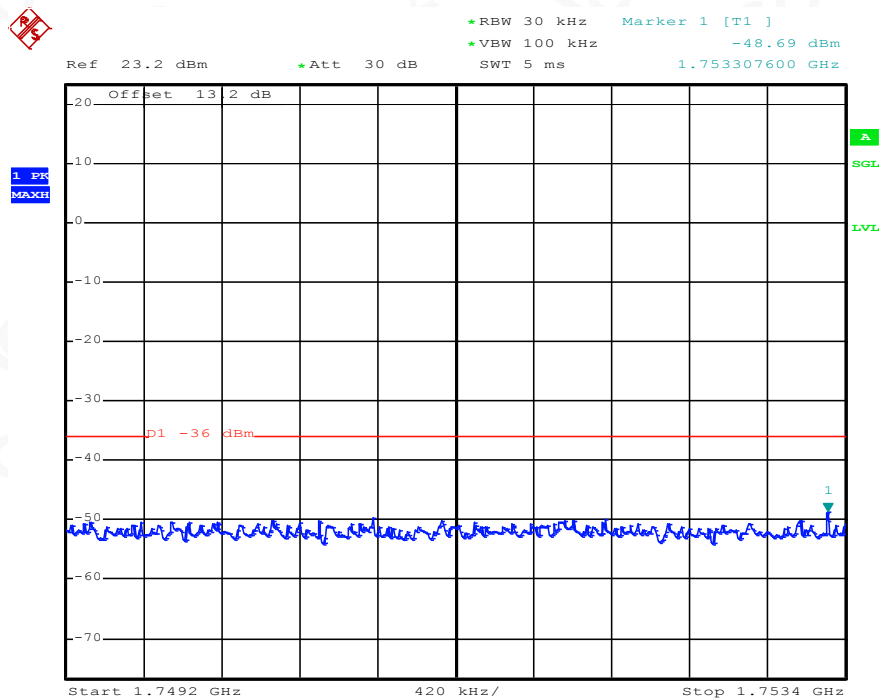


AAA

Date: 28.MAY.2020 17:35:53



1749.2MHz~1753.4MHz

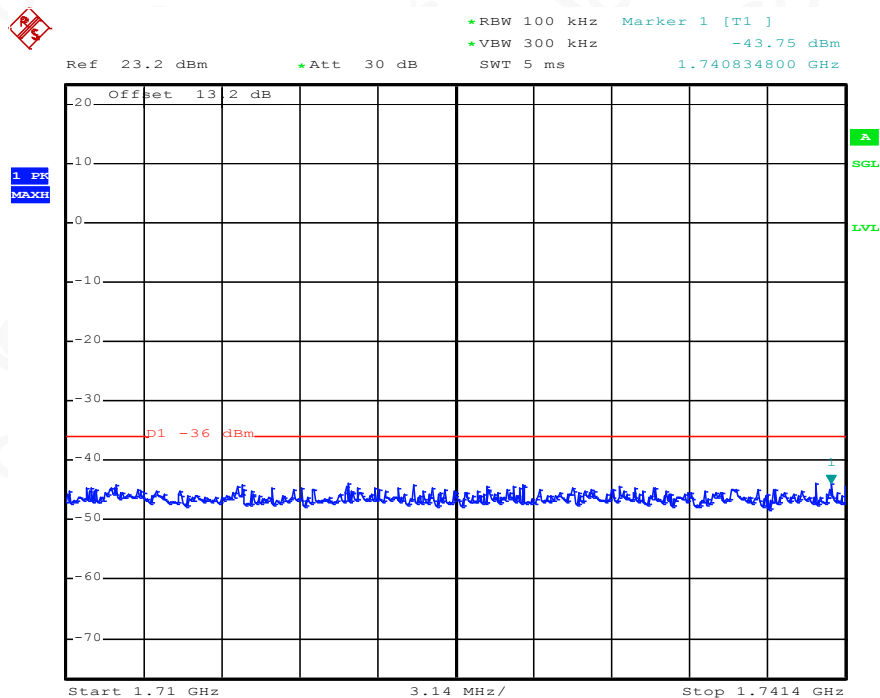


AAA

Date: 28.MAY.2020 17:36:01



1710MHz~1741.4MHz

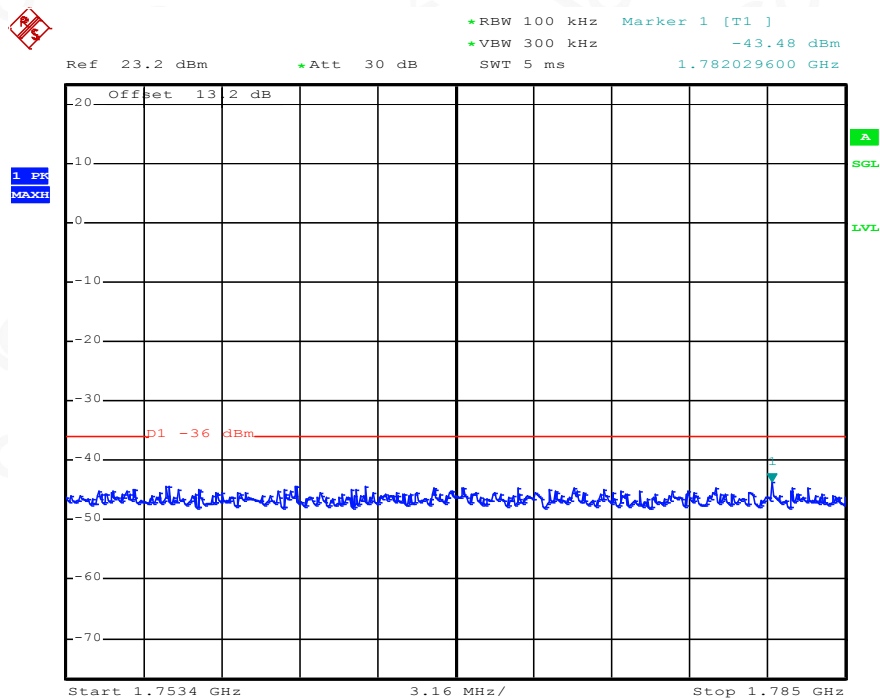


AAA

Date: 28.MAY.2020 17:36:09



1753.4MHz~1785MHz



AAA

Date: 28.MAY.2020 17:36:16



Appendix I. Conducted spurious emissions- MS in idle mode

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

Conducted spurious emissions	GSM900;VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
100kHz~50MHz	10k	-57	-62.28	PASS
50MHz~880MHz	100k	-57	-66.41	PASS
880MHz~915MHz	100k	-59	-62.20	PASS
915MHz~1000MHz	100k	-57	-62.50	PASS
1GHz~1710MHz	100k	-47	-52.33	PASS
1710MHz~1785MHz	100k	-53	-57.42	PASS
1785MHz~12.75GHz	100k	-47	-50.21	PASS

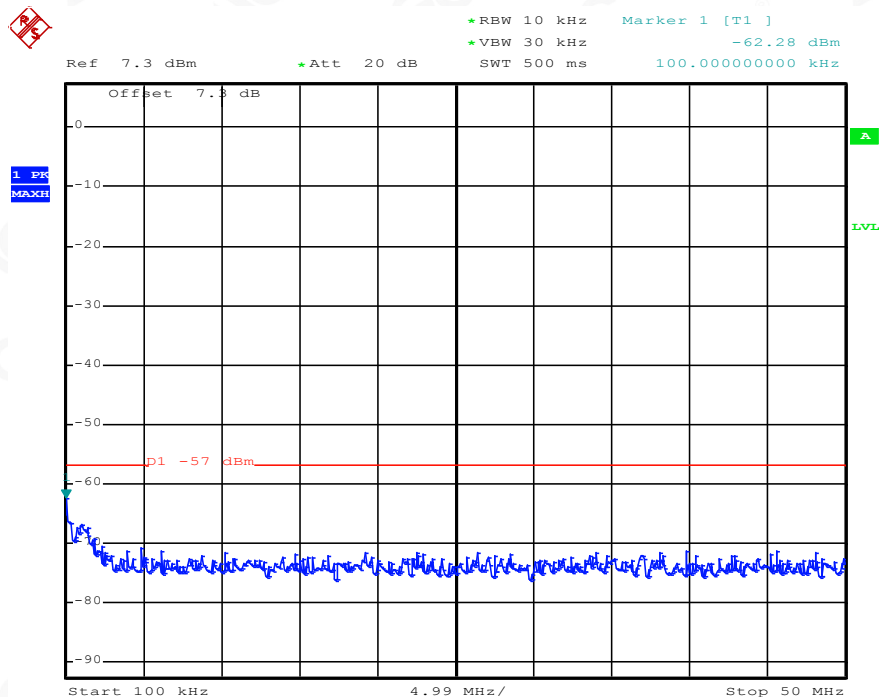
Conducted spurious emissions	DCS1800;VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
100kHz~50MHz	10k	-57	-63.84	PASS
50MHz~880MHz	100k	-57	-66.15	PASS
880MHz~915MHz	100k	-59	-62.27	PASS
915MHz~1000MHz	100k	-57	-63.64	PASS
1GHz~1710MHz	100k	-47	-52.13	PASS
1710MHz~1785MHz	100k	-53	-57.89	PASS
1785MHz~12.75GHz	100k	-47	-49.78	PASS



Graphs of conducted spurious emission-MS in idle mode

GSM900: channel MCH VN

100kHz~50MHz



AAA

Date: 28.MAY.2020 17:27:45



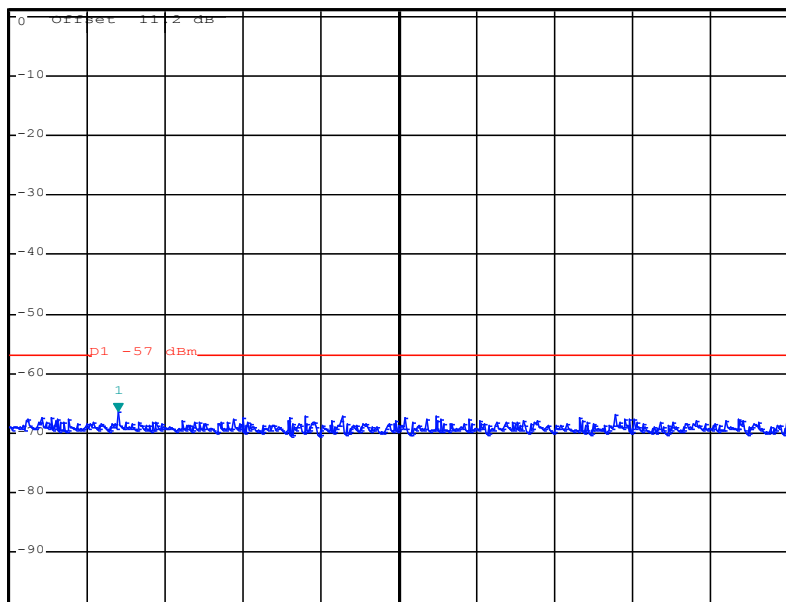
50MHz~880MHz



*RBW 100 kHz Marker 1 [T1]
*VBW 300 kHz -66.41 dBm
*SWT 1.3 s 166.20000000 MHz

Ref 1.2 dBm *Att 0 dB

1. PK
MAXH



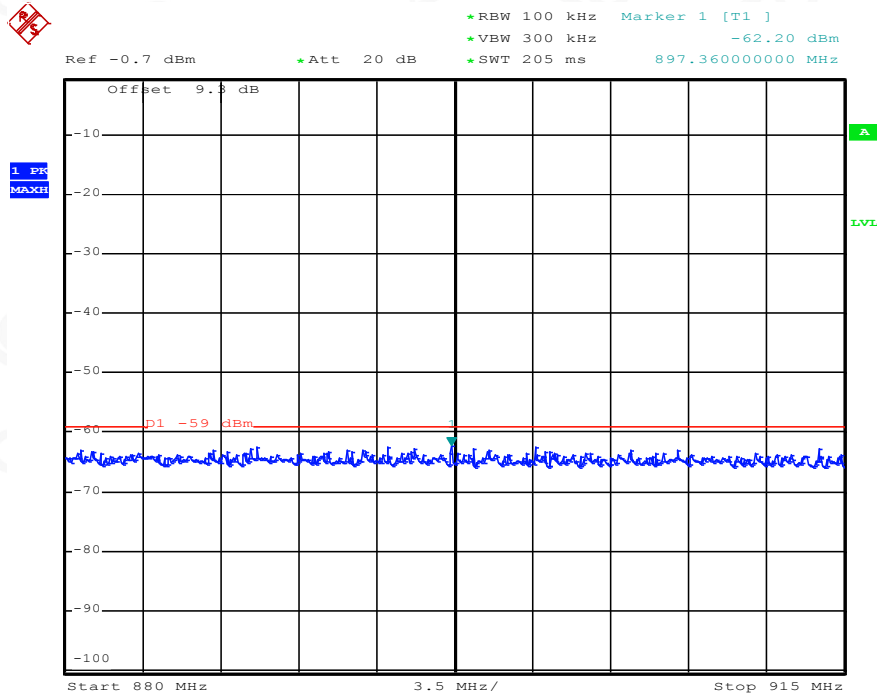
Start 50 MHz 83 MHz/ Stop 880 MHz

AAA

Date: 28.MAY.2020 17:28:27



880MHz~915MHz

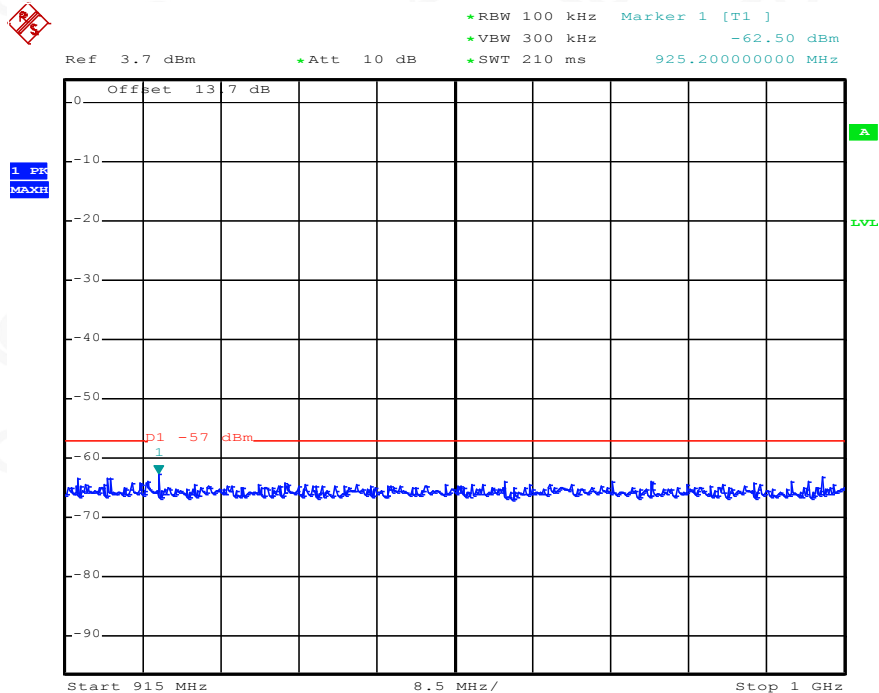


AAA

Date: 28.MAY.2020 17:28:40



915MHz~1000MHz

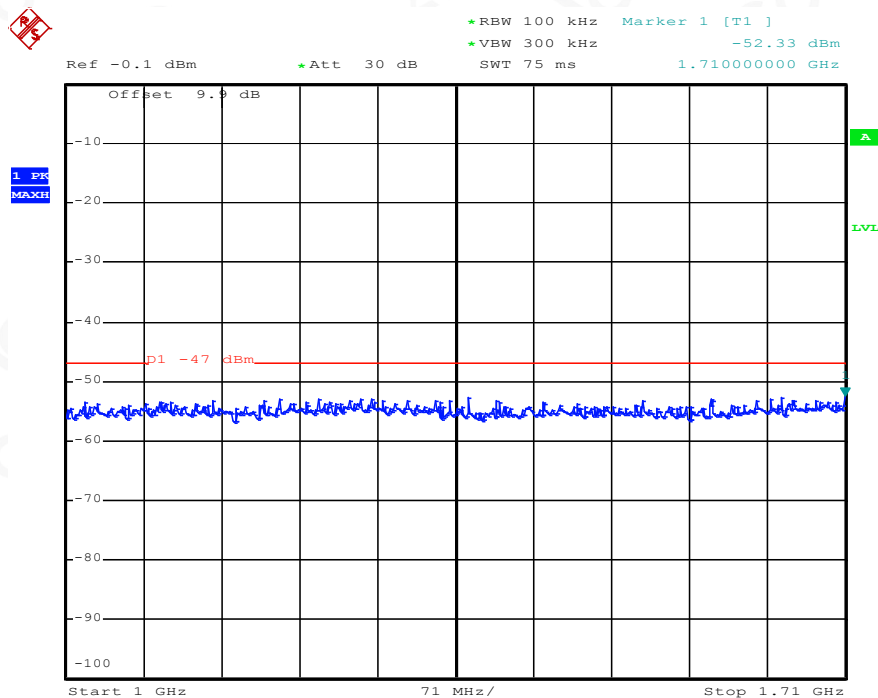


AAA

Date: 28.MAY.2020 17:29:10



1GHz~1710MHz

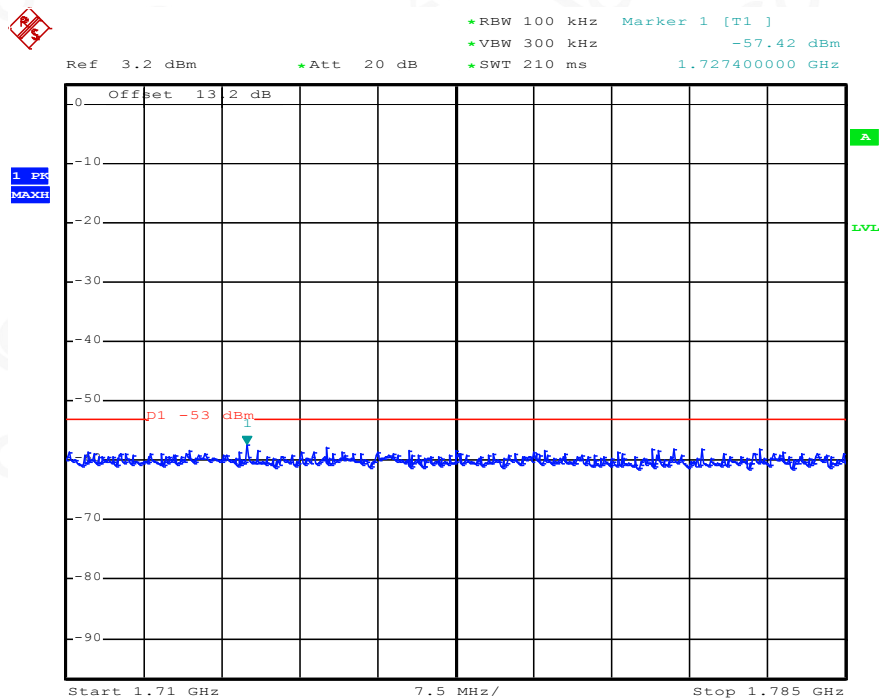


AAA

Date: 28.MAY.2020 17:29:17



1710MHz~1785MHz

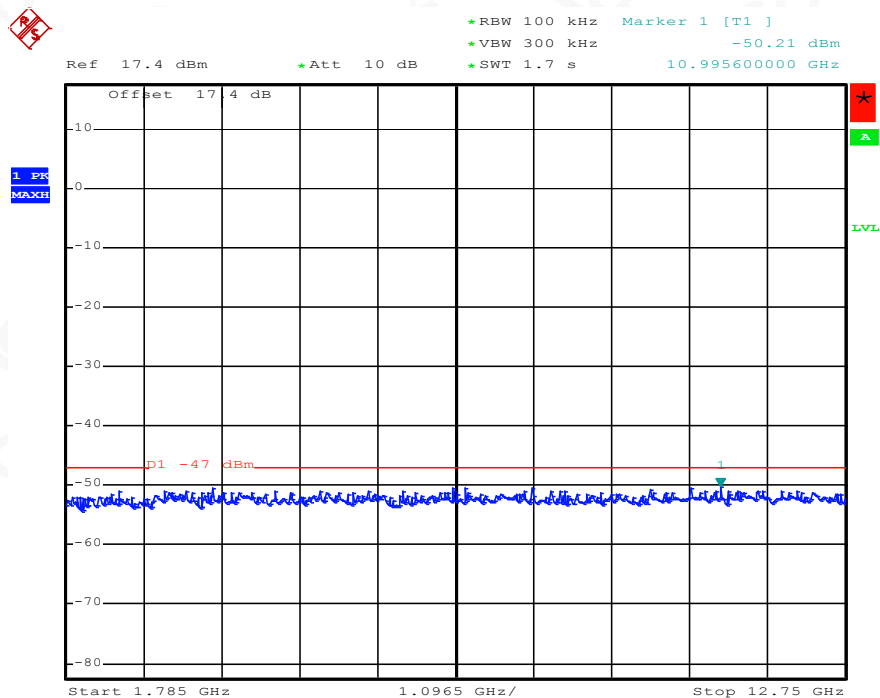


AAA

Date: 28.MAY.2020 17:29:30



1785MHz~12.75GHz

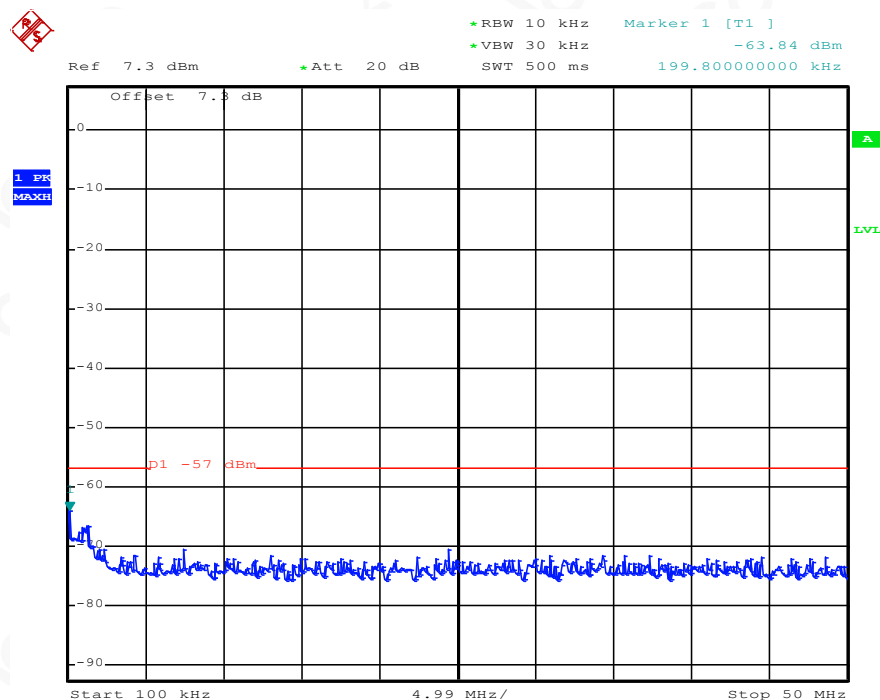


AAA

Date: 28.MAY.2020 17:29:54



DCS1800: channel MCH VN
100kHz~50MHz

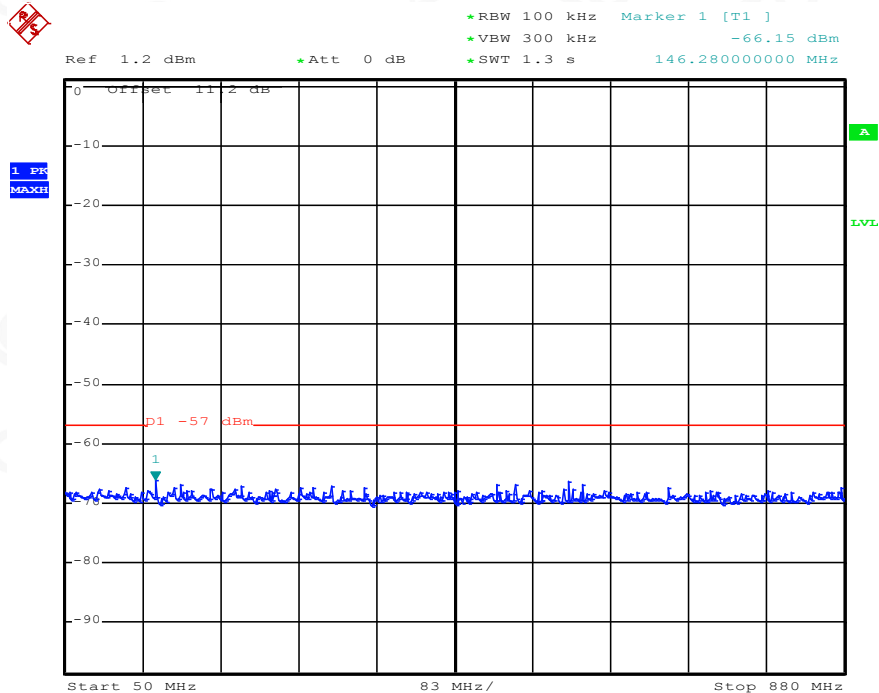


AAA

Date: 28.MAY.2020 17:44:41



50MHz~880MHz

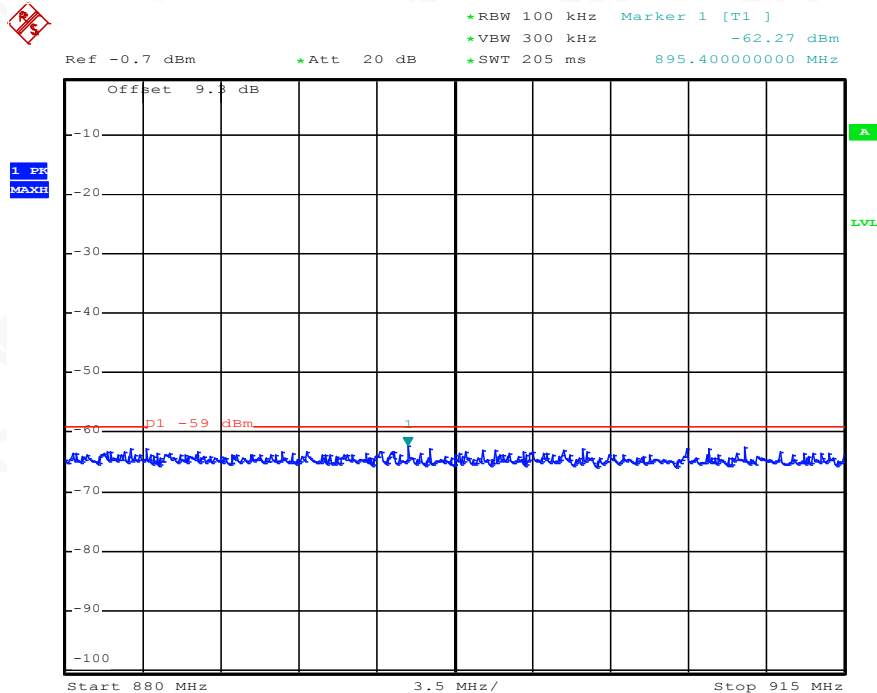


AAA

Date: 28.MAY.2020 17:45:34



880MHz~915MHz

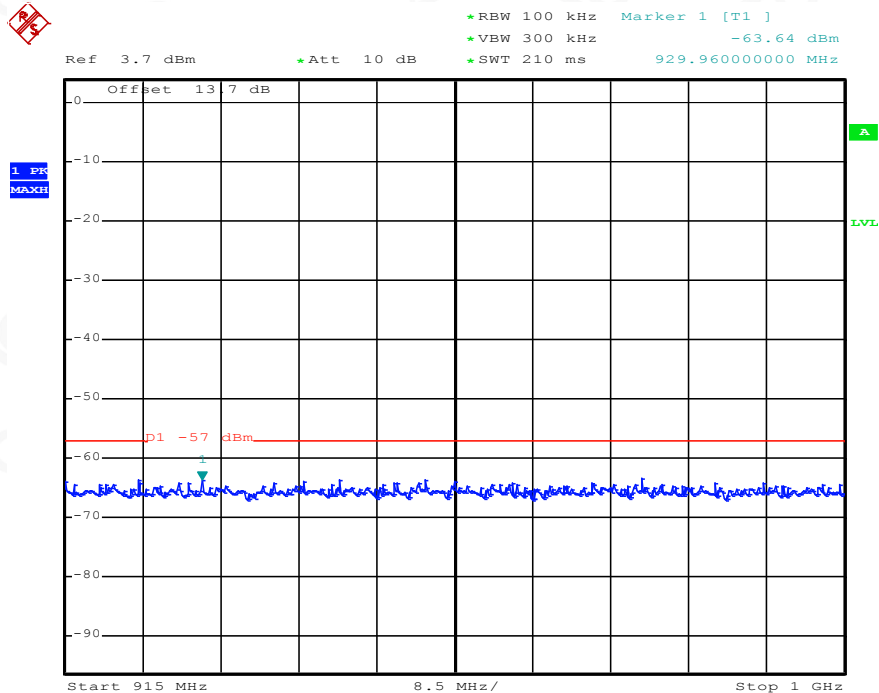


AAA

Date: 28.MAY.2020 17:45:52



915MHz~1000MHz

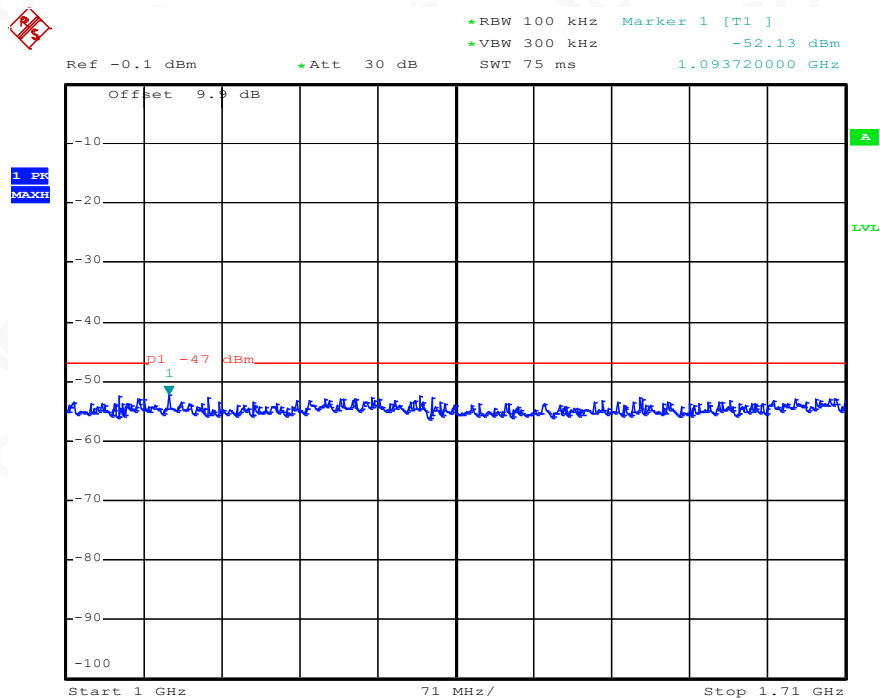


AAA

Date: 28.MAY.2020 17:46:35



1GHz~1710MHz

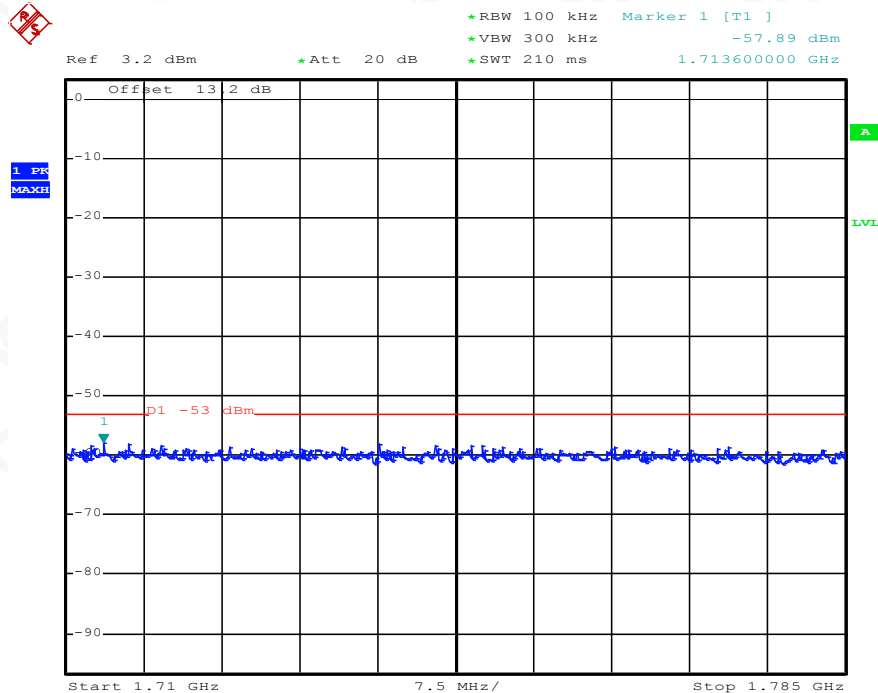


AAA

Date: 28.MAY.2020 17:46:47



1710MHz~1785MHz

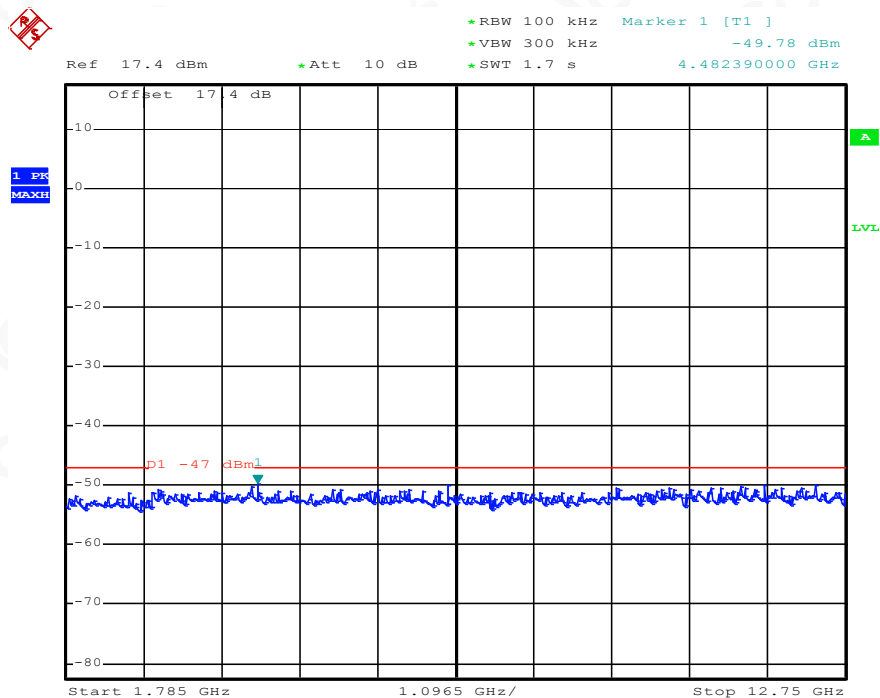


AAA

Date: 28.MAY.2020 17:47:01



1785MHz~12.75GHz



AAA

Date: 28.MAY.2020 17:47:36



Appendix J.Receiver Blocking and spurious response – speech channel

GSM900

FREQUENCY	Measurement Result	
	GSM900	
	Small MS	
	Interference Level in dBμVemf()	Result
FR +/- 600 kHz to FR +/- 800 kHz	70	PASS
FR +/- 800 kHz to FR +/- 1.6 MHz	70	PASS
FR +/- 1.6 MHz to FR +/- 3 MHz	80	PASS
915 MHz to FR - 3 MHz	90	PASS
FR + 3 MHz to 980 MHz	90	PASS
835 MHz to <915 MHz	113	PASS
>980 MHz to 1000 MHz	113	PASS
100 kHz to <835 MHz	90	PASS
>1000 MHz to 12.75 GHz	90	PASS

DCS1800

FREQUENCY	Measurement Result	
	DCS1800	
	Small MS	
	Interference Level in dBμVemf()	Result
FR +/- 600 kHz to FR +/- 800 kHz	70	PASS
FR +/- 800 kHz to FR +/- 1.6 MHz	70	PASS
FR +/- 1.6 MHz to FR +/- 3 MHz	80	PASS
1785 MHz to FR - 3 MHz	87	PASS
FR + 3 MHz to 1920 MHz	87	PASS
100 kHz to 1705 MHz	113	PASS
>1705 MHz to <1785 MHz	101	PASS
>1920 MHz to 1980 MHz	101	PASS
>1980 MHz to 12.75 GHz	90	PASS



Appendix K.Frequency error and Modulation accuracy in EGPRS Configuration

GSM900

TN,VN			≤9%	≤15%	≤30%	≤10E-7	Result
BAND	ARFCN	PCL	RMS EVM	the 95% EVM	Peak EVM	Frequency error	
GSM900	LCH	8	1.0	1.9	2.5	15	PASS
		19	0.9	1.6	2.3	15	PASS
	MCH	8	1.0	1.8	2.4	14	PASS
		19	0.9	1.7	2.4	14	PASS
	HCH	8	1.0	1.9	2.6	15	PASS
		19	0.9	1.8	2.4	14	PASS

DCS1800

TN,VN			≤9%	≤15%	≤30%	≤10E-7	Result
BAND	ARFCN	PCL	RMS EVM	the 95% EVM	Peak EVM	Frequency error	
DCS1800	LCH	2	2.4	4.2	6.7	20	PASS
		15	1.4	2.6	3.7	21	PASS
	MCH	2	2.2	3.9	5.9	26	PASS
		15	1.5	2.7	3.8	26	PASS
	HCH	2	1.9	3.3	5.4	27	PASS
		15	1.4	2.6	3.6	25	PASS



Appendix L. Frequency error under multipath and interference conditions in EGPRS Configuration

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

GSM900

Fading set	Test conditions	Result			
		GSM900			
		ARFCN			
		LCH	MCH	HCH	Result
RA250	TNVN	12	14	13	PASS
HT100	TNVN	12	14	14	PASS
TU50	TNVN	12	14	15	PASS
TU3	TNVN	13	12	14	PASS

DCS1800

Fading set	Test conditions	Result			
		DCS1800			
		ARFCN			
		LCH	MCH	HCH	Result
RA130	TNVN	18	28	26	PASS
HT100	TNVN	19	25	27	PASS
TU50	TNVN	19	30	25	PASS
TU1.5	TNVN	19	27	25	PASS



Appendix M. EGPRS Transmitter output power

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

A. output power

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
		LCH	MCH	HCH	Result
GSM900					
TN,VN	8	19.74	19.49	19.63	PASS
	12	16.70	16.48	16.60	PASS
	19	2.39	2.16	2.34	PASS

Transmitter Output power(dBm)	Power level	Result			
		Traffic Channels			
		LCH	MCH	HCH	Result
DCS1800					
TN,VN	2	21.65	21.83	21.77	PASS
	8	14.09	14.32	14.21	PASS
	15	0.07	0.34	0.30	PASS

B. Power VS Time

Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
		LCH	MCH	HCH
GSM900	Power level			
TN,VN	8	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

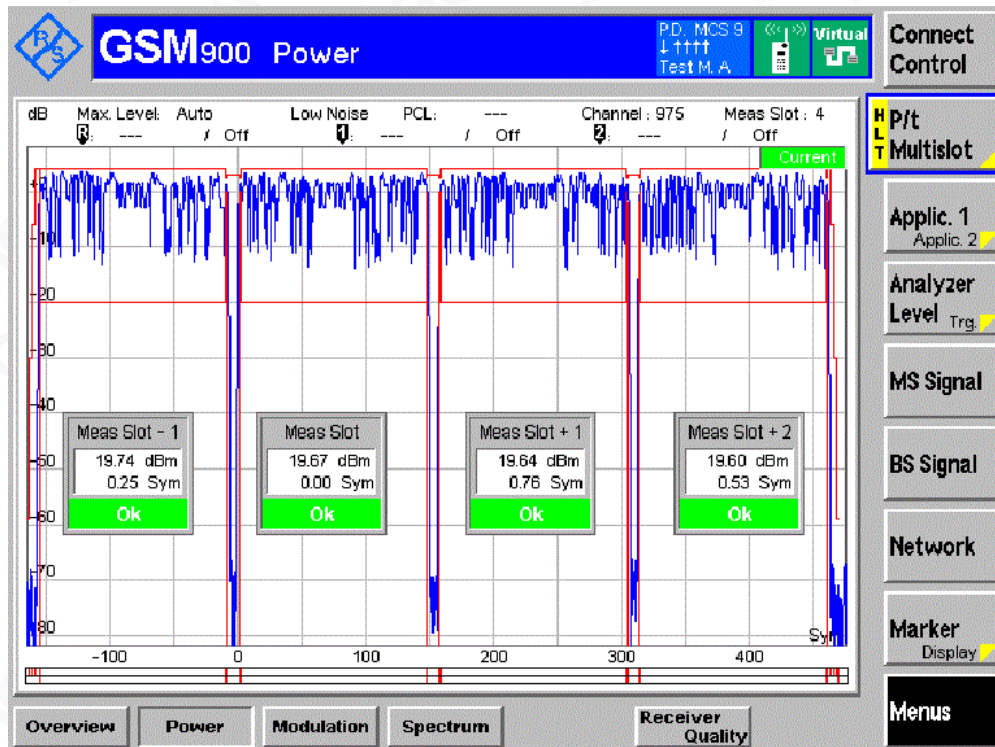
Power VS Time Graph	ACCESS BURST	Result		
		Traffic Channels		
		LCH	MCH	HCH
DCS1800	Power level			
TN,VN	2	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS



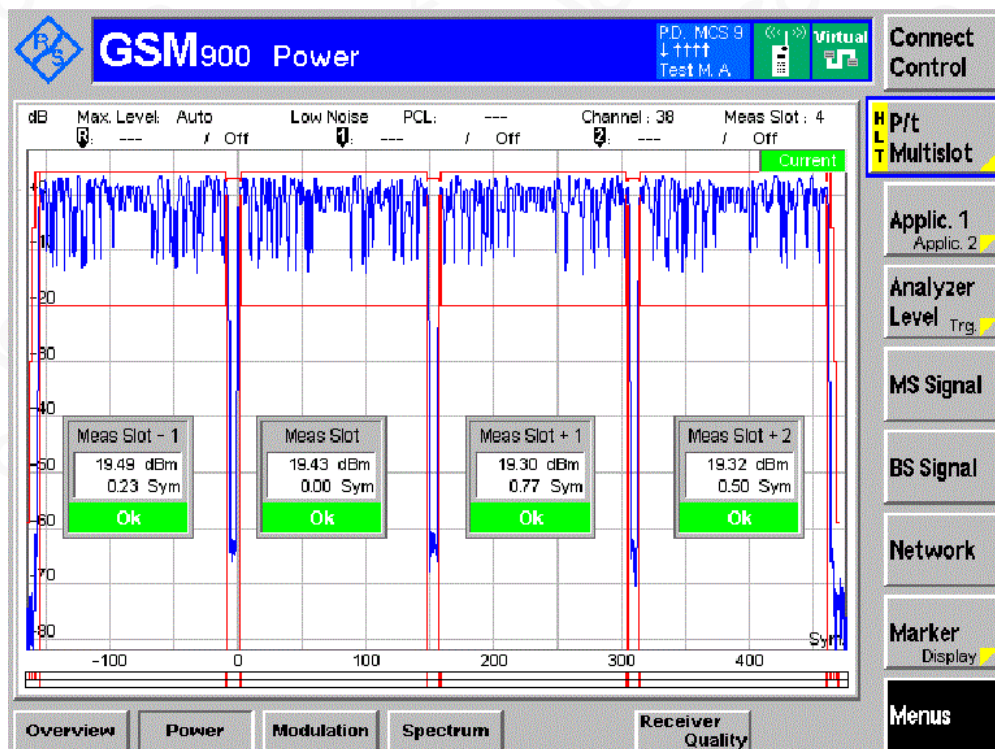
Graphs of EGPRS Transmitter output power

GSM 900 TN,VN

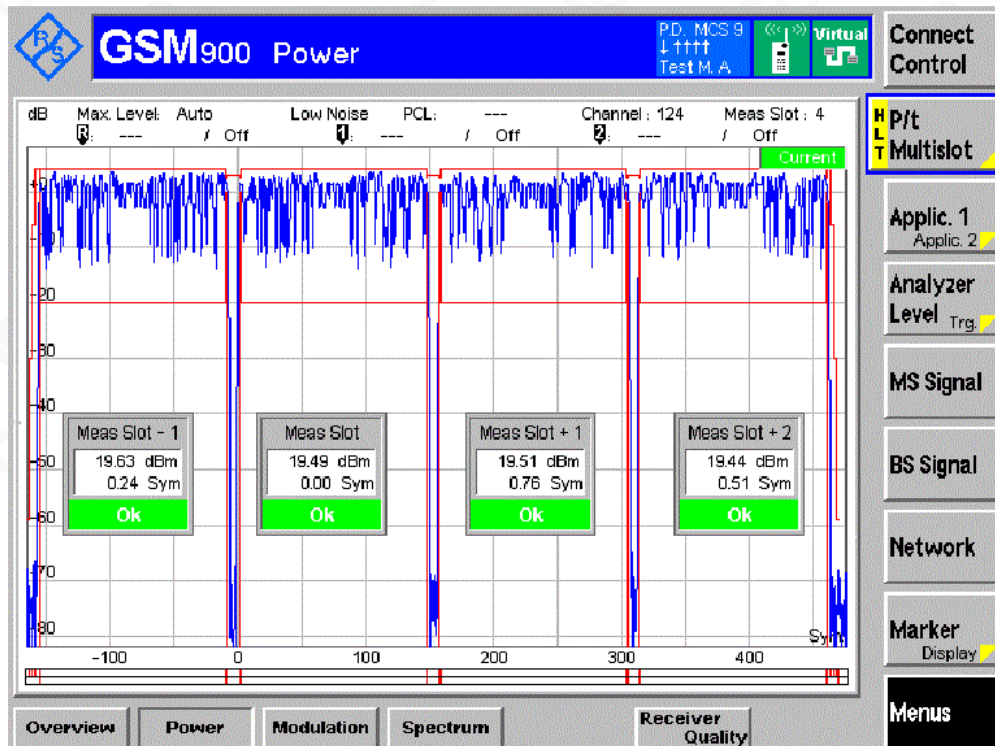
Channel LCH PCL 8



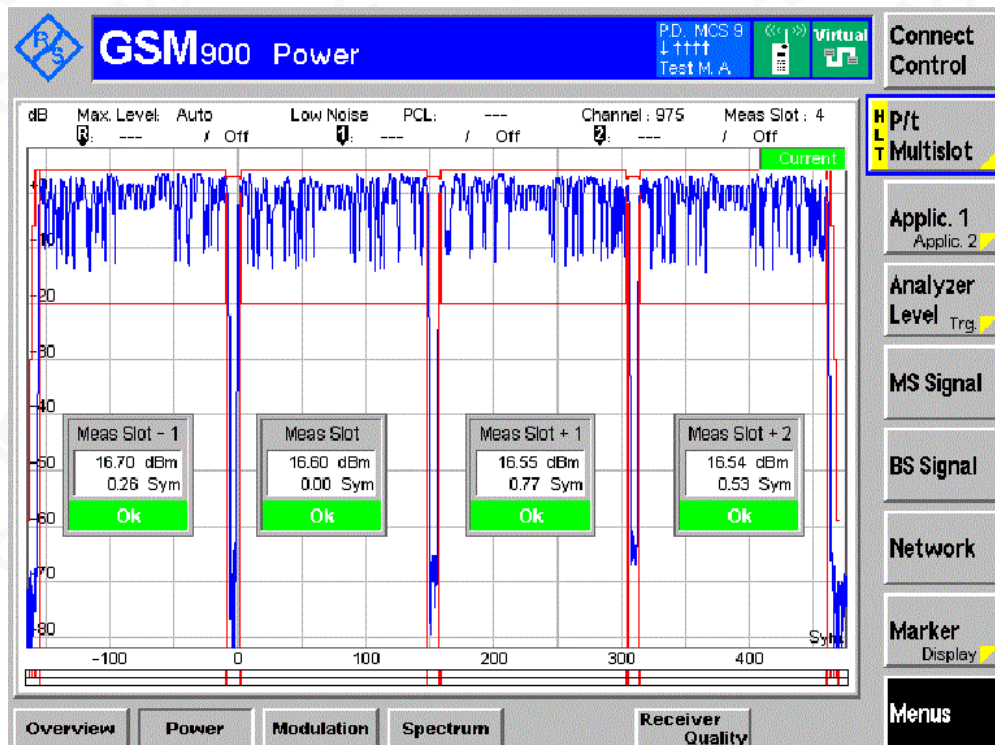
Channel MCH PCL 8



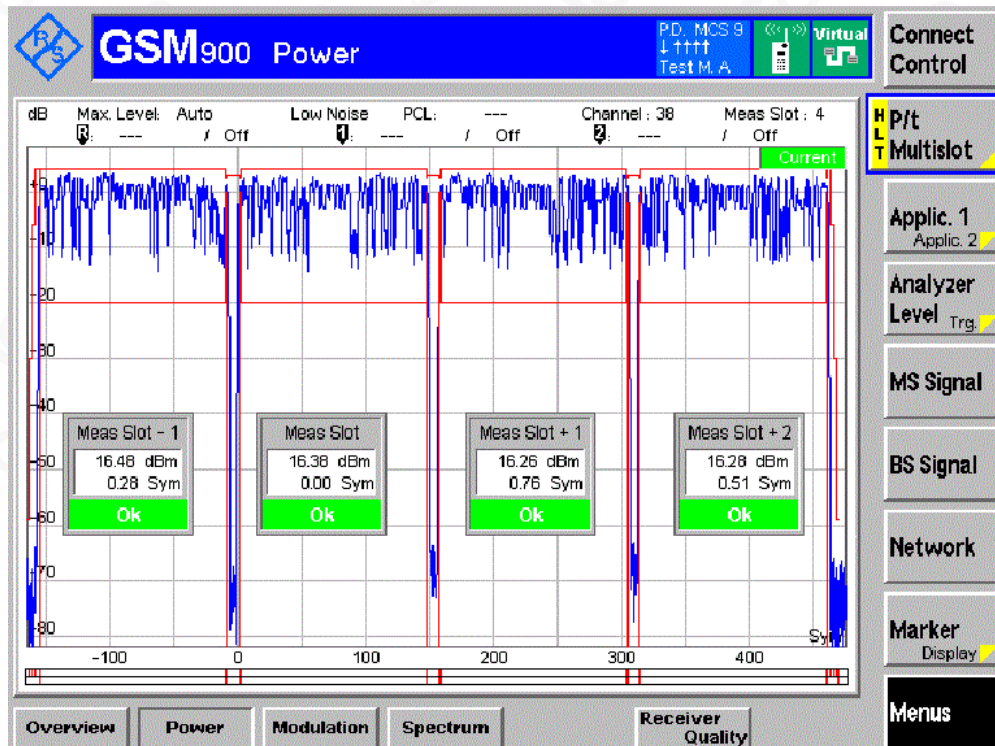
Channel HCH PCL 8



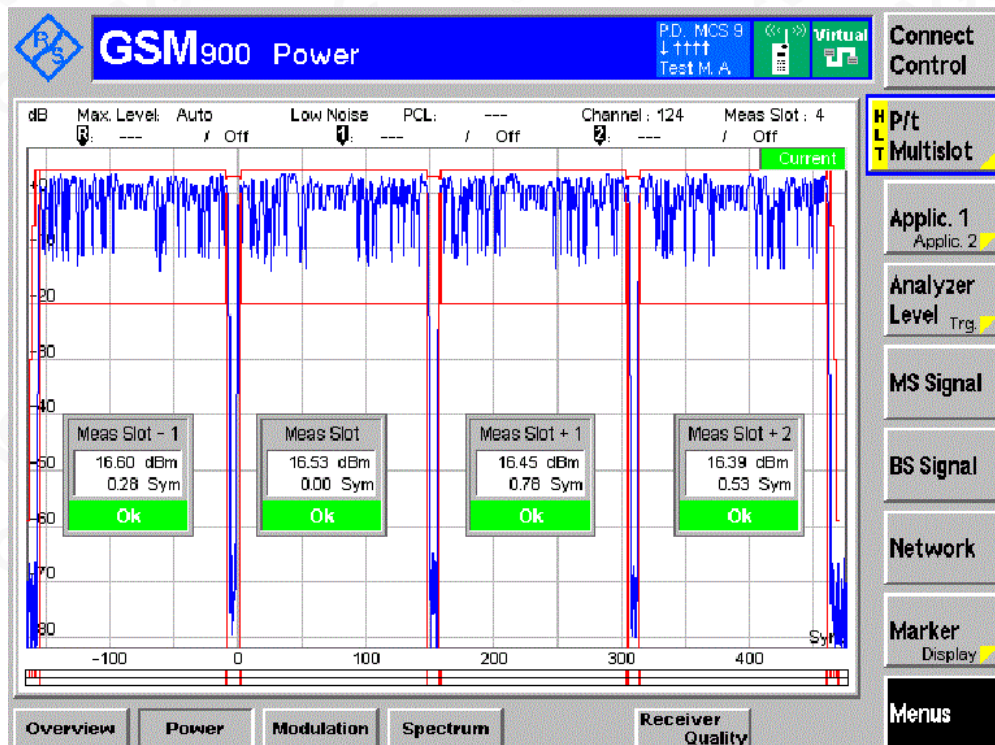
Channel LCH PCL 12



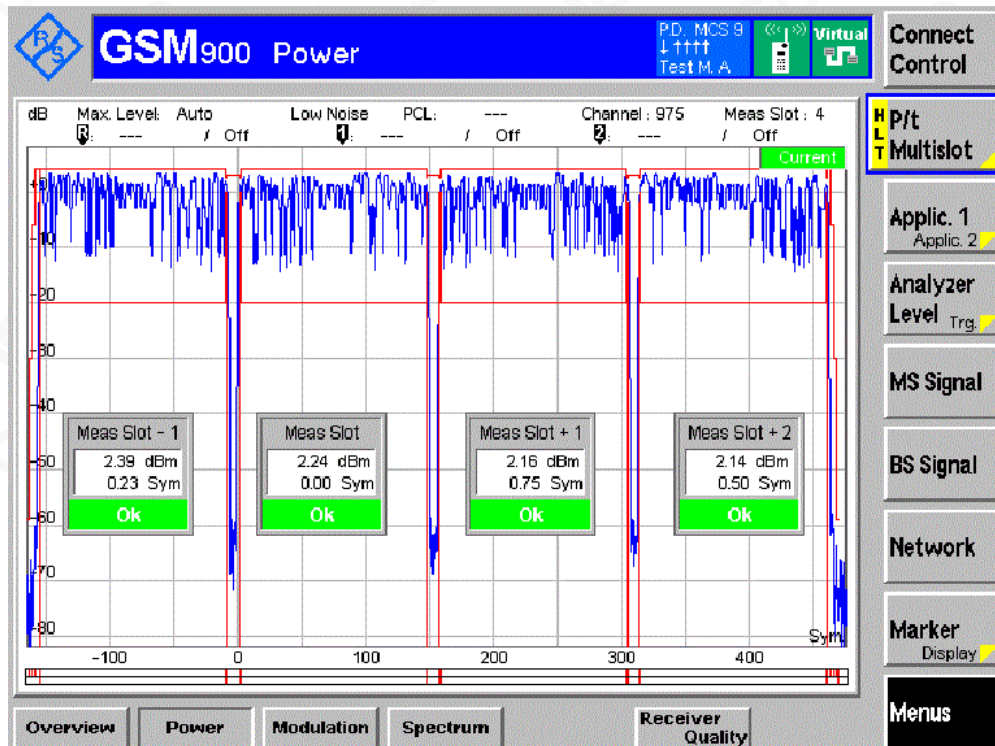
Channel MCH PCL 12



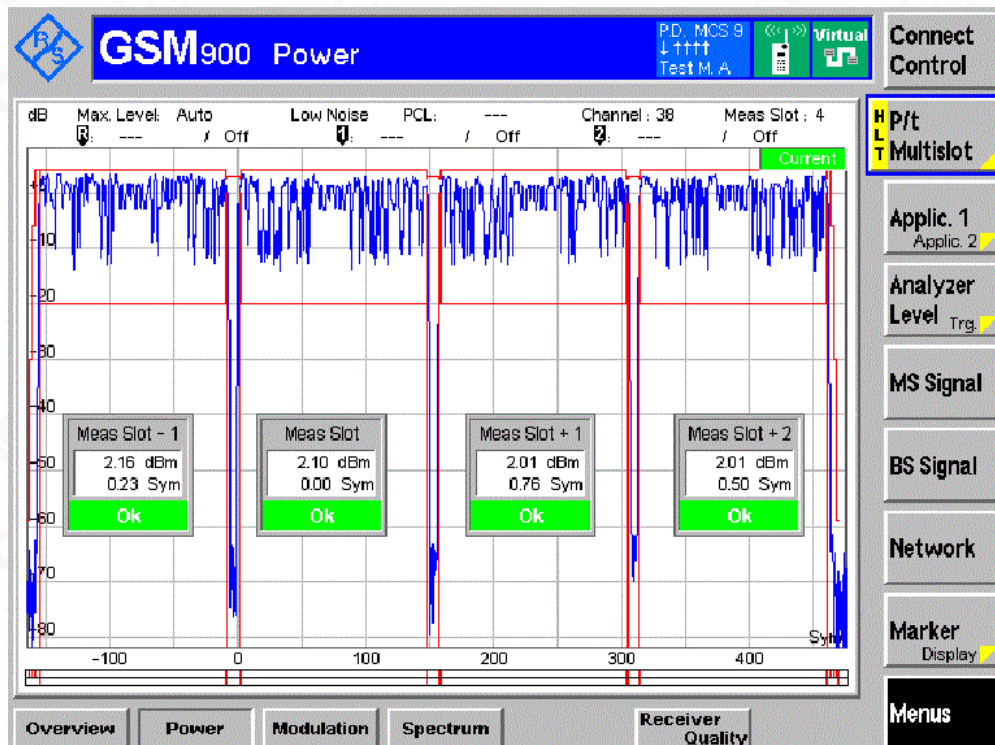
Channel HCH PCL 12



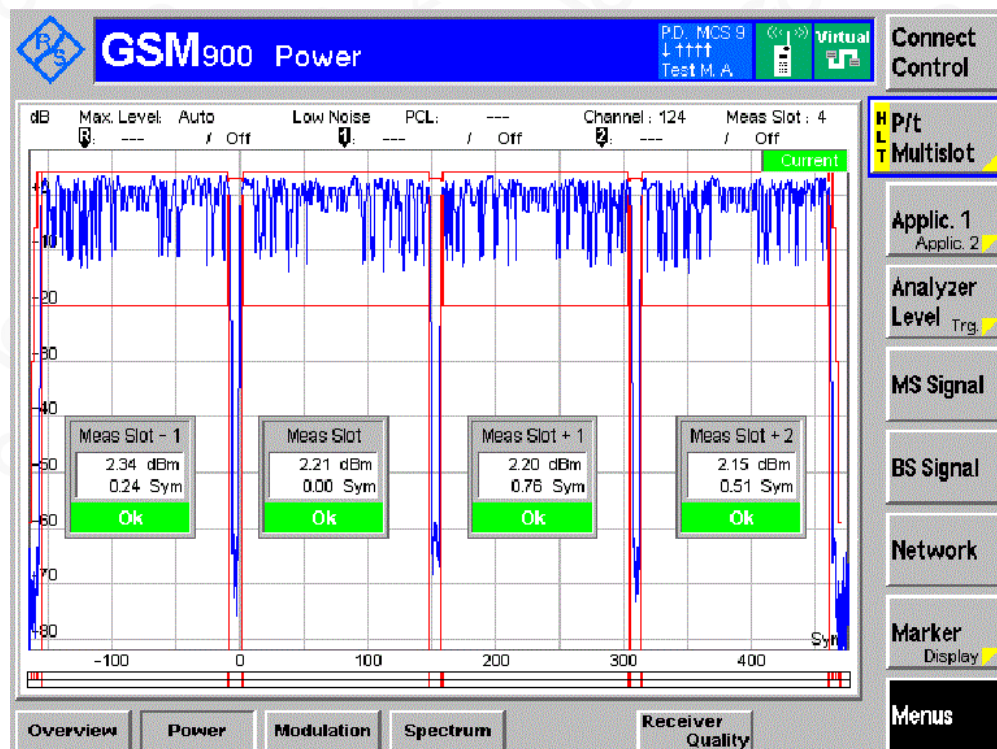
Channel LCH PCL 19



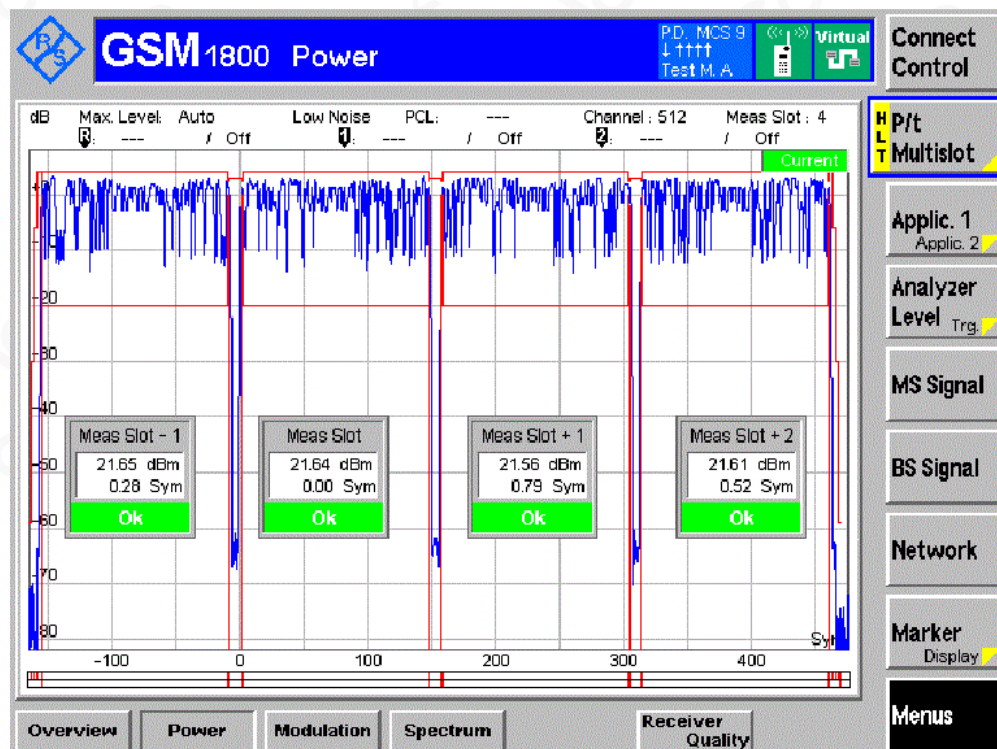
Channel MCH PCL 19



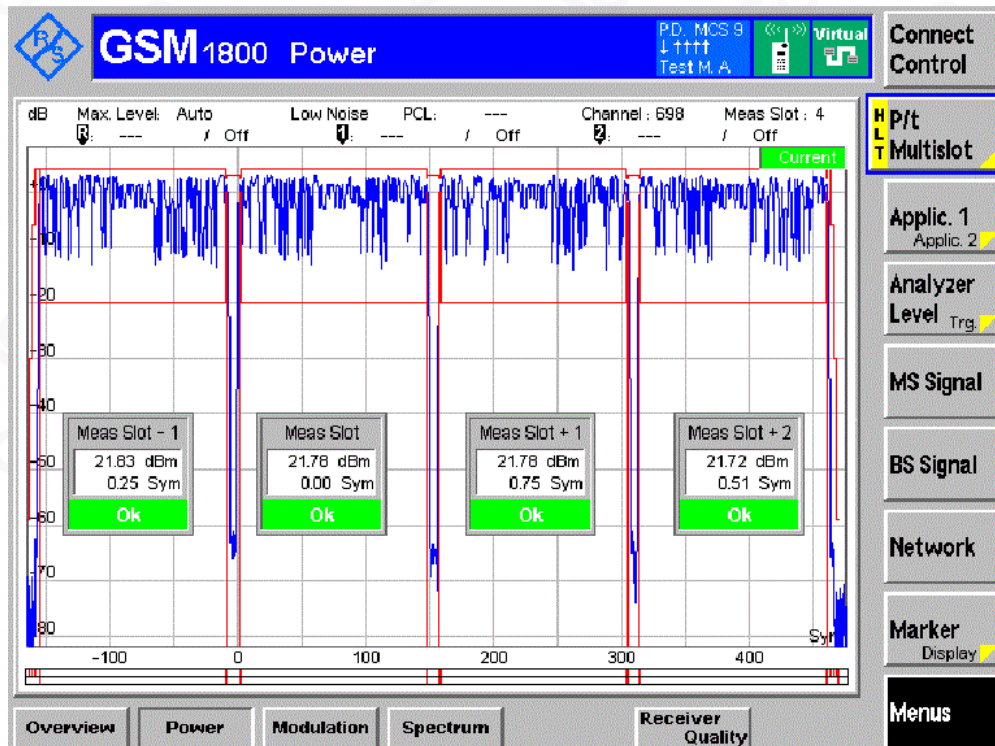
Channel HCH PCL 19



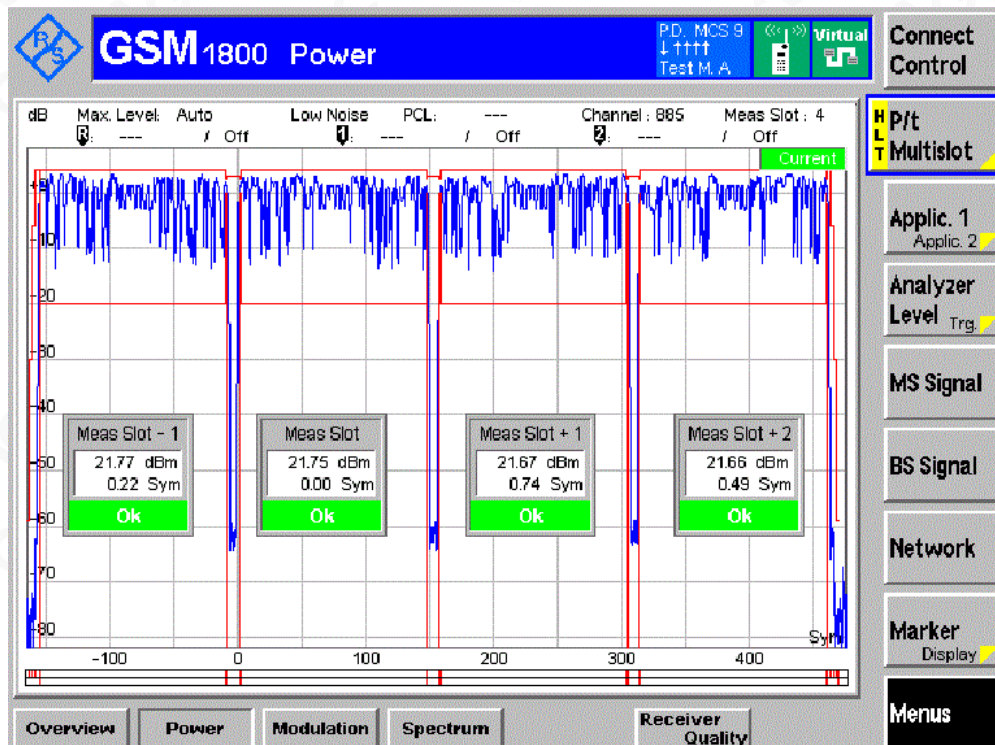
DCS1800 TN,VN Channel LCH PCL 2



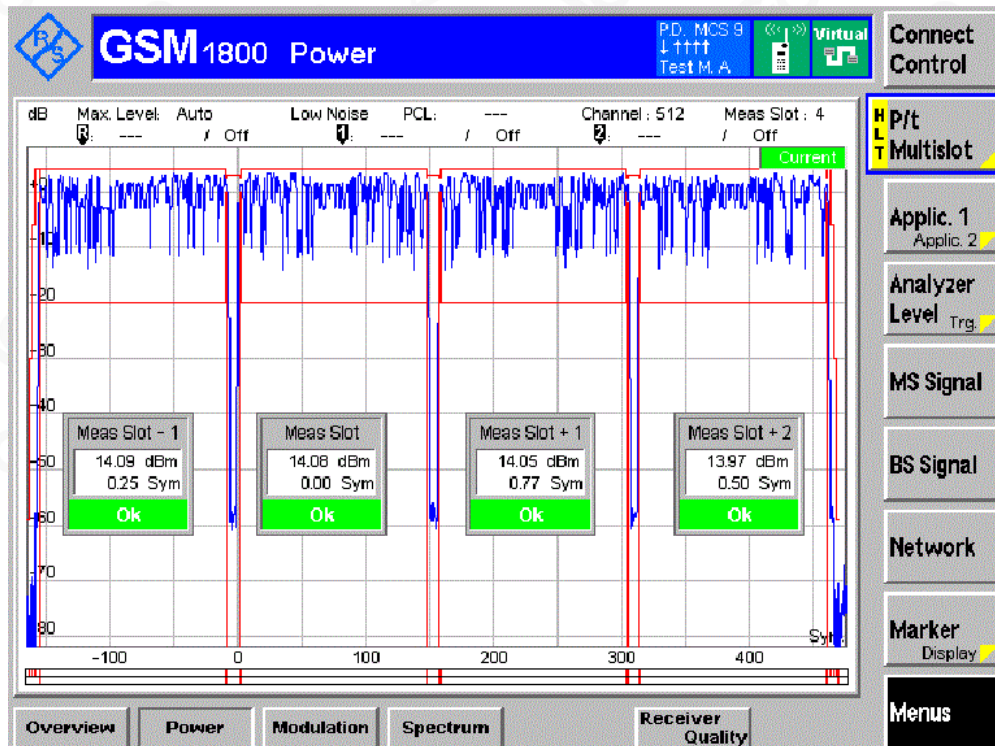
Channel MCH PCL 2



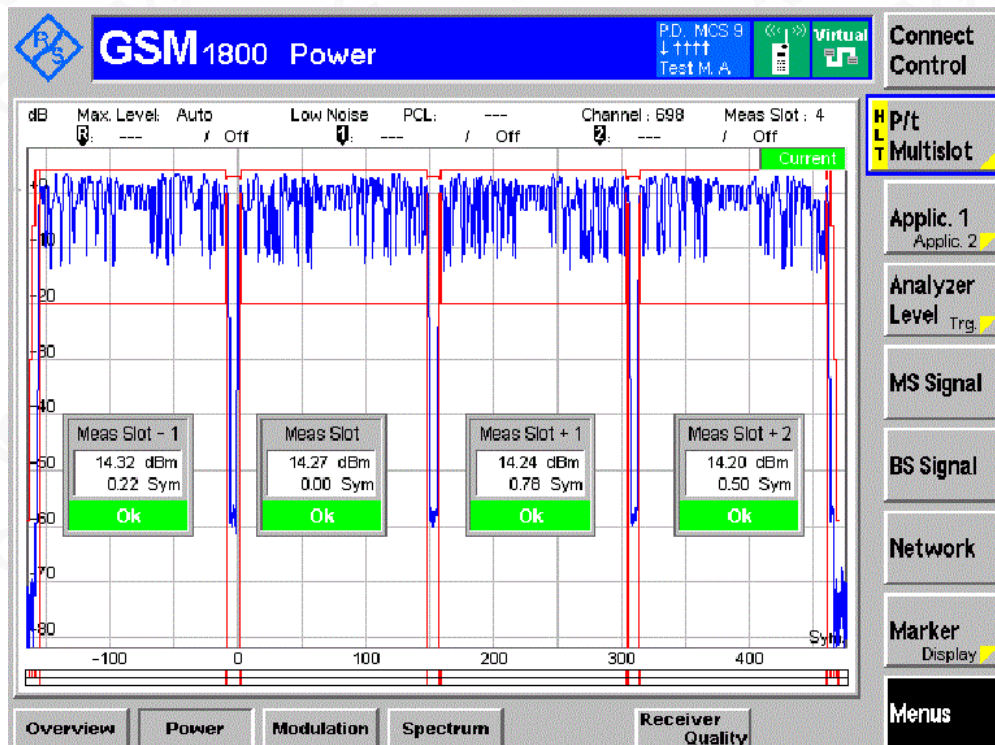
Channel HCH PCL 2



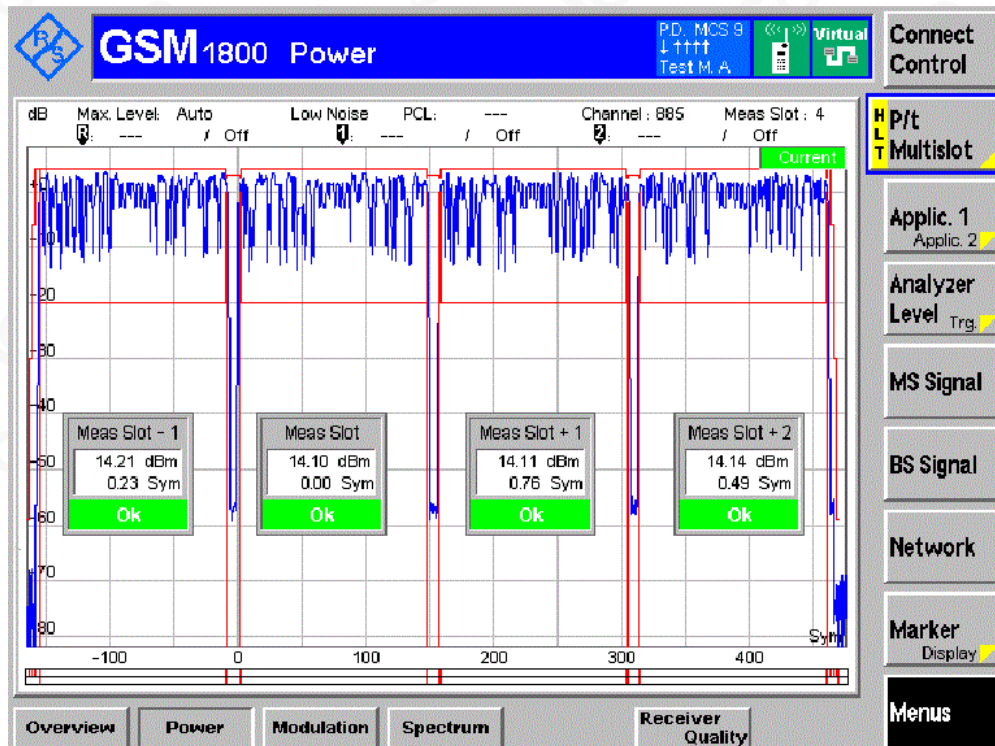
Channel LCH PCL 8



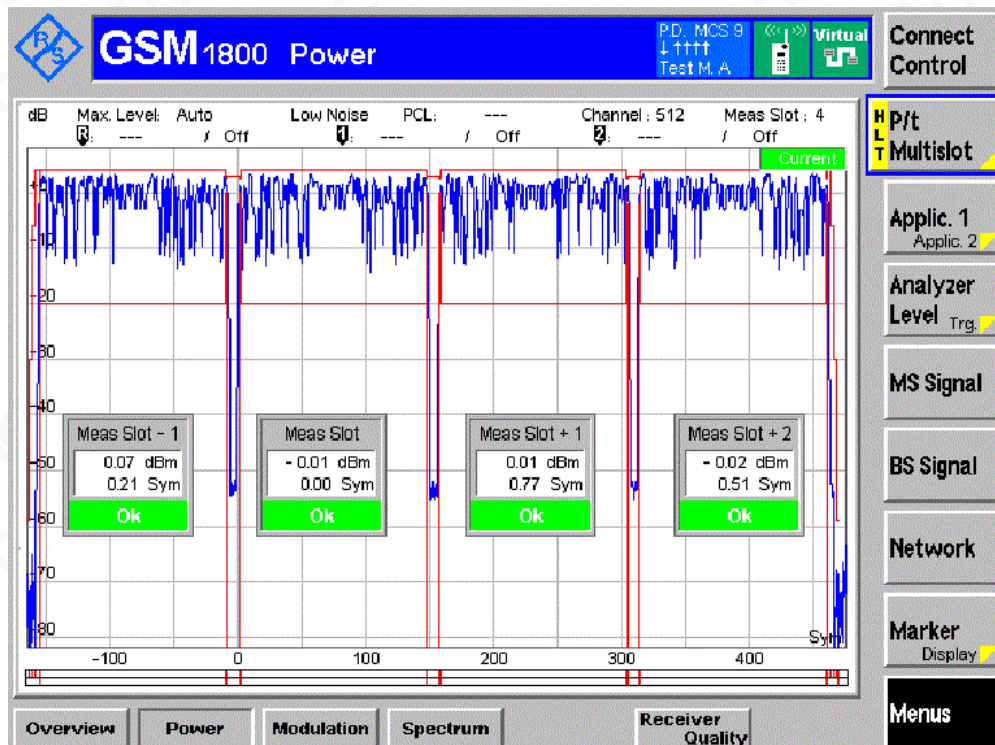
Channel MCH PCL 8



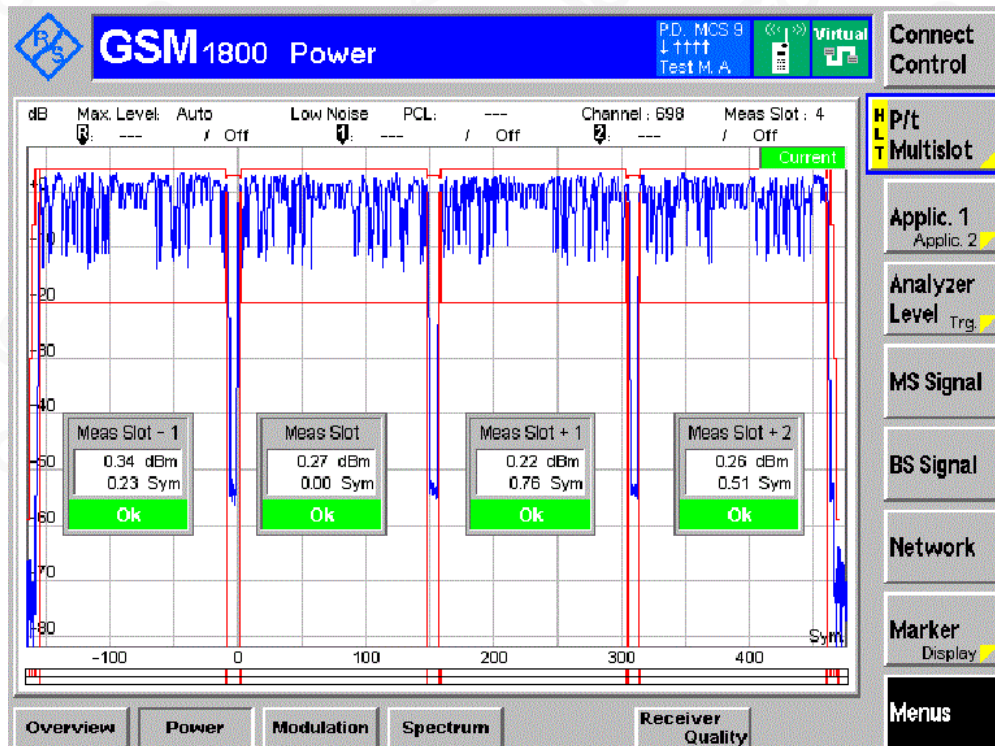
Channel HCH PCL 8



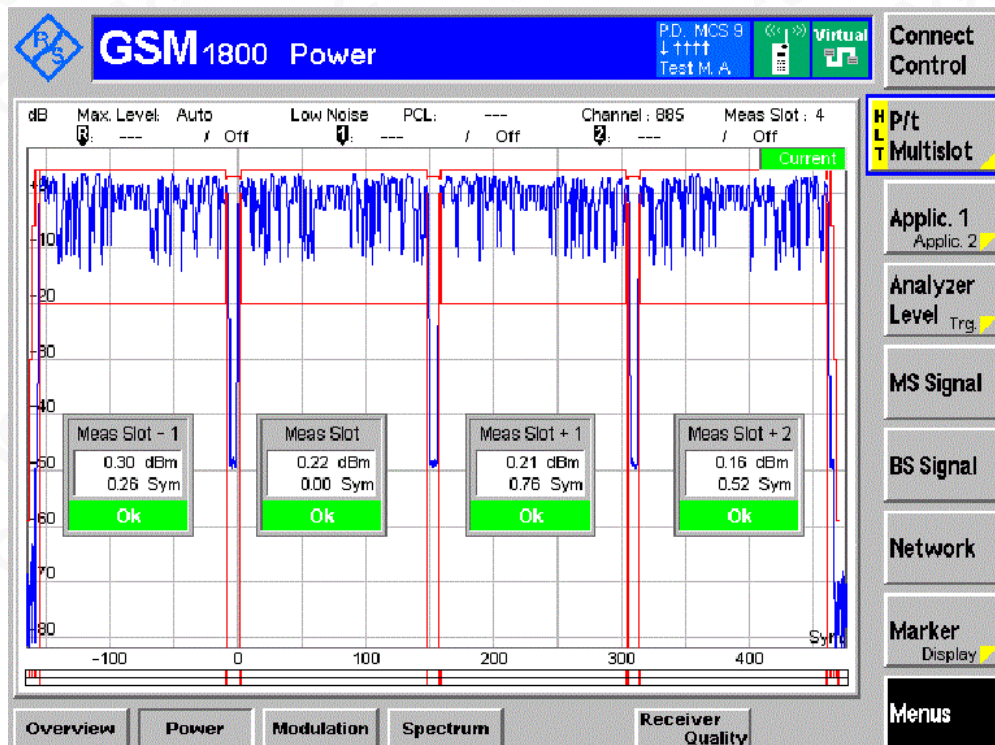
Channel LCH PCL 8



Channel MCH PCL 15



Channel HCH PCL 15



Appendix N. Output RF spectrum in EGPRS configuration

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN/VN) of fellow:

Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
GSM900		LCH	MCH	HCH
TN,VN	8	PASS	PASS	PASS
	12	PASS	PASS	PASS
	19	PASS	PASS	PASS

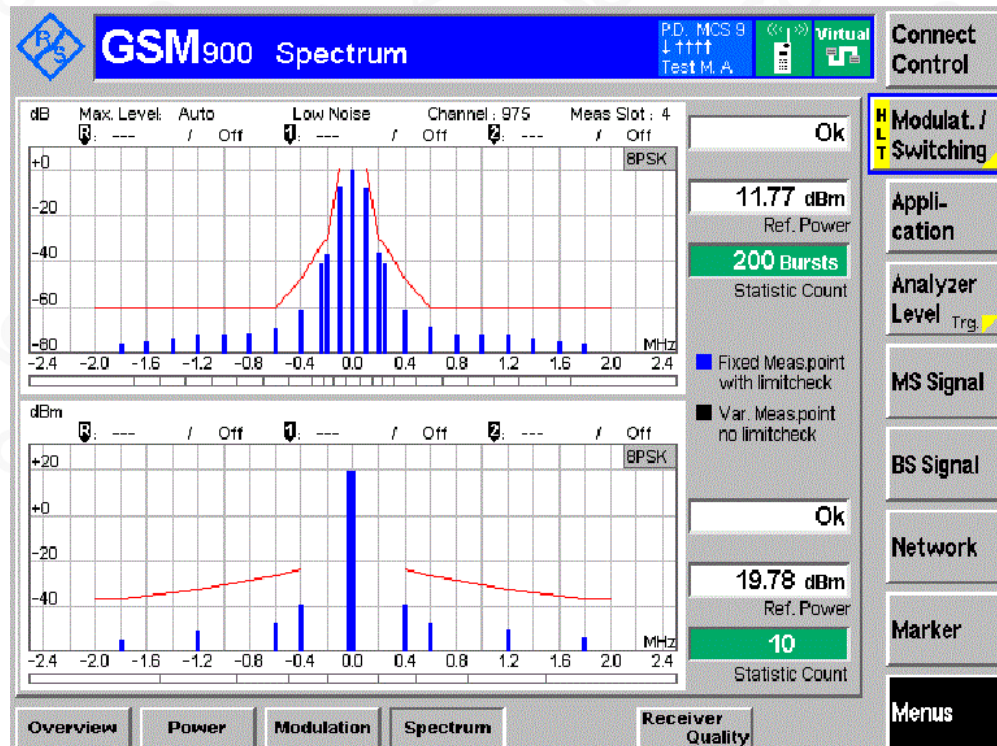
Modulation& switch Spectrum	Power level	Result		
		Traffic Channels		
DCS1800		LCH	MCH	HCH
TN,VN	2	PASS	PASS	PASS
	8	PASS	PASS	PASS
	15	PASS	PASS	PASS

Graphs of output RF spectrum in EGPRS multislot configuration

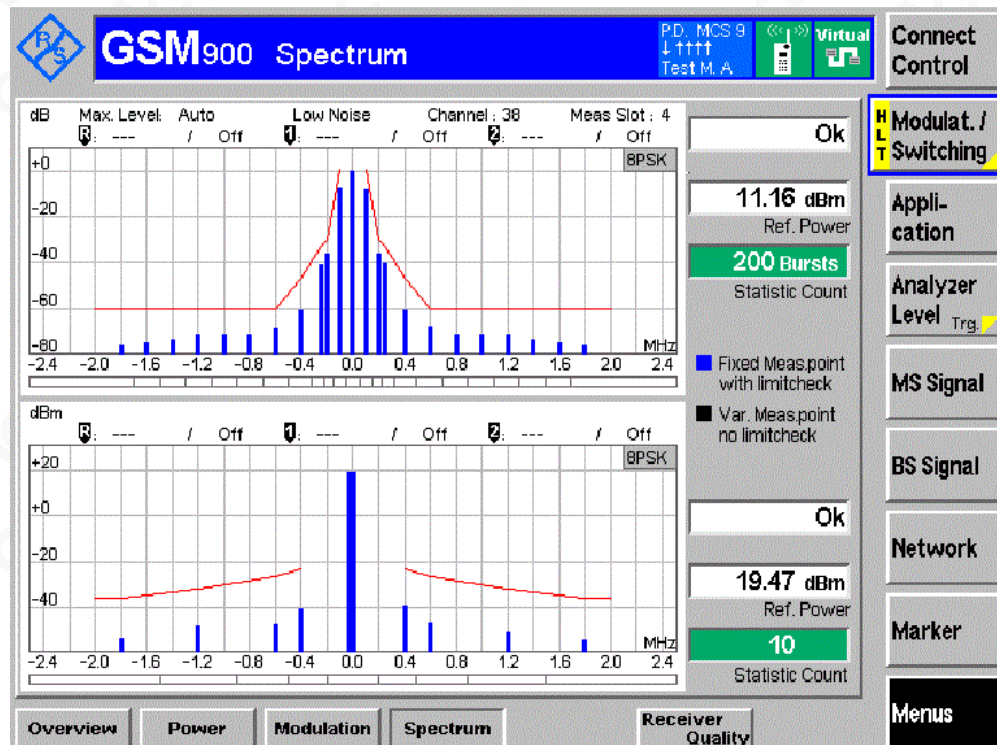
GSM 900 TN,VN



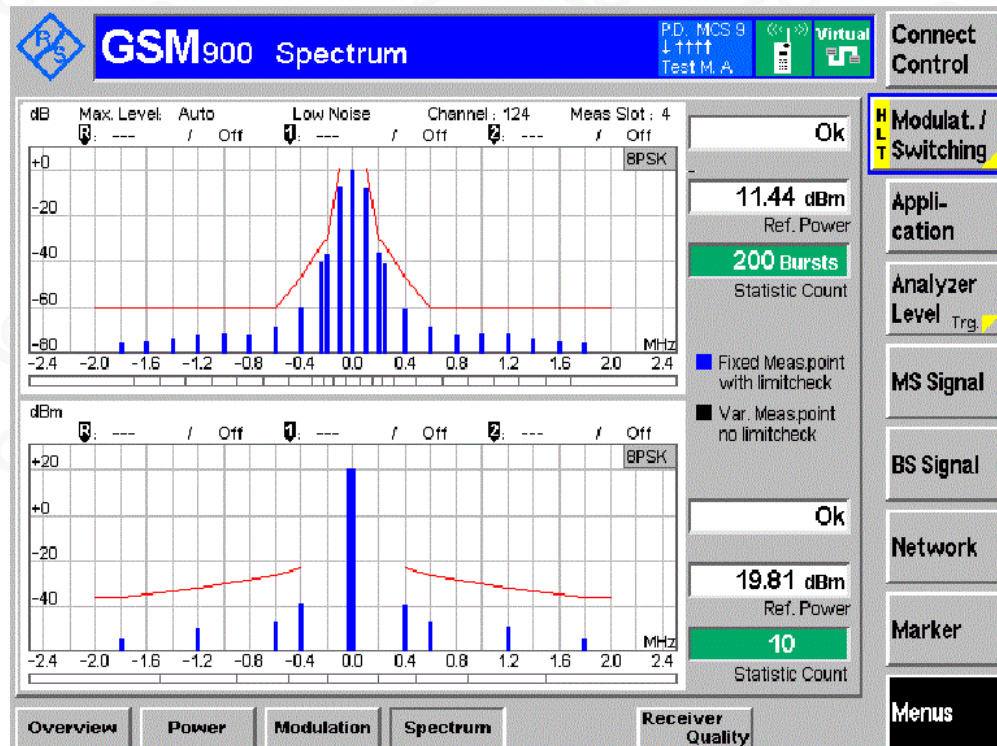
Channel LCH PCL 8



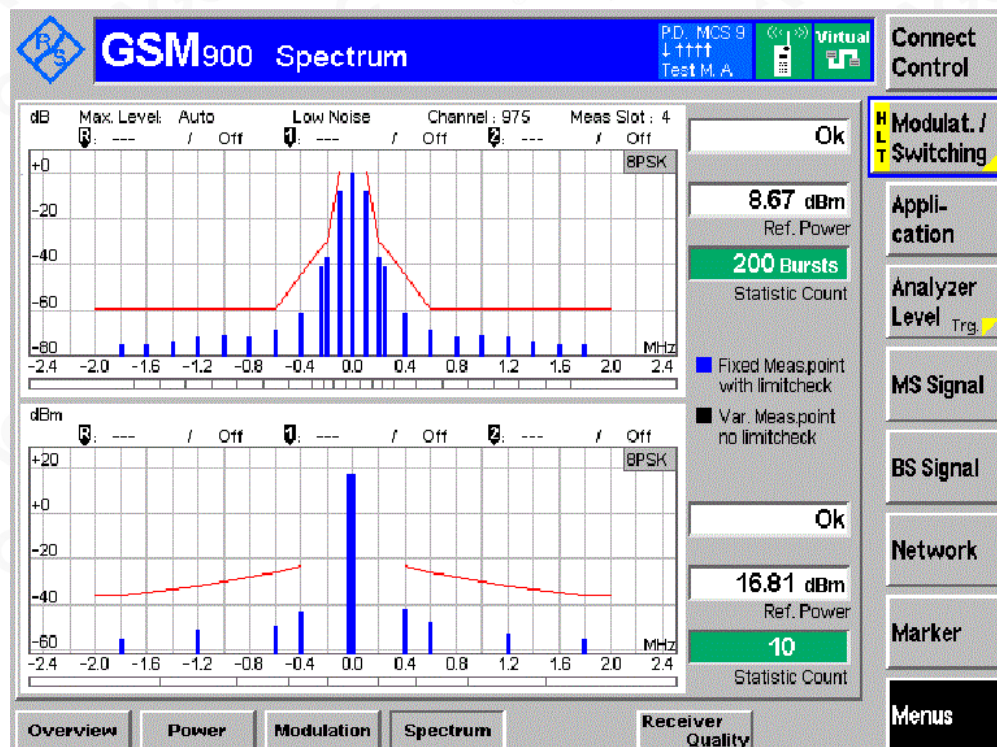
Channel MCH PCL 8



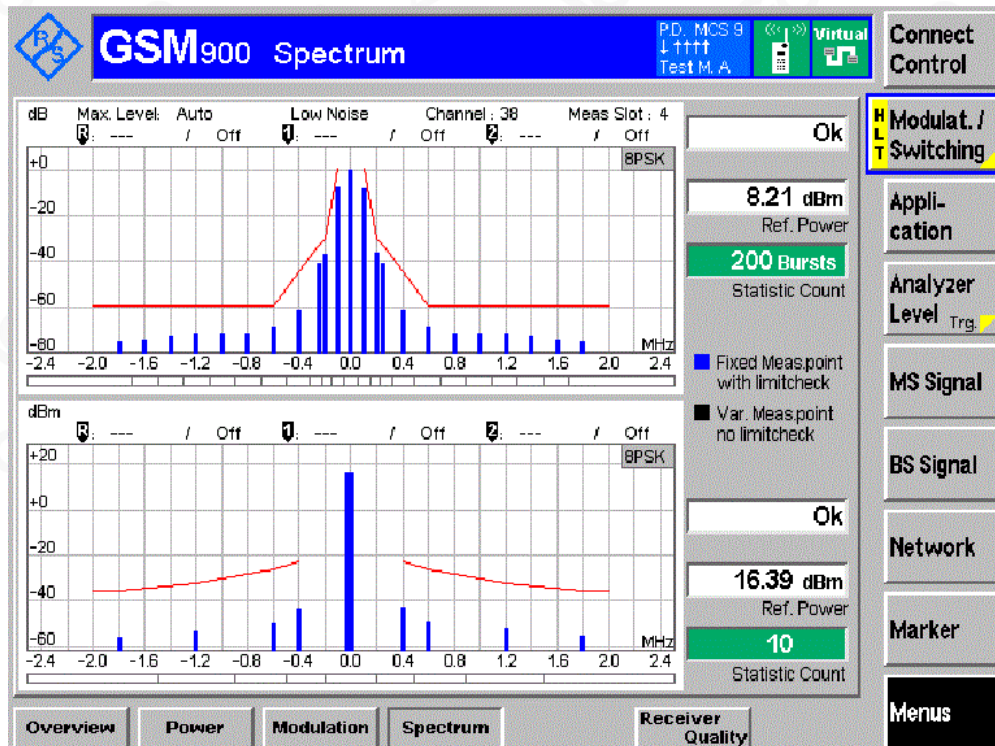
Channel HCH PCL 8



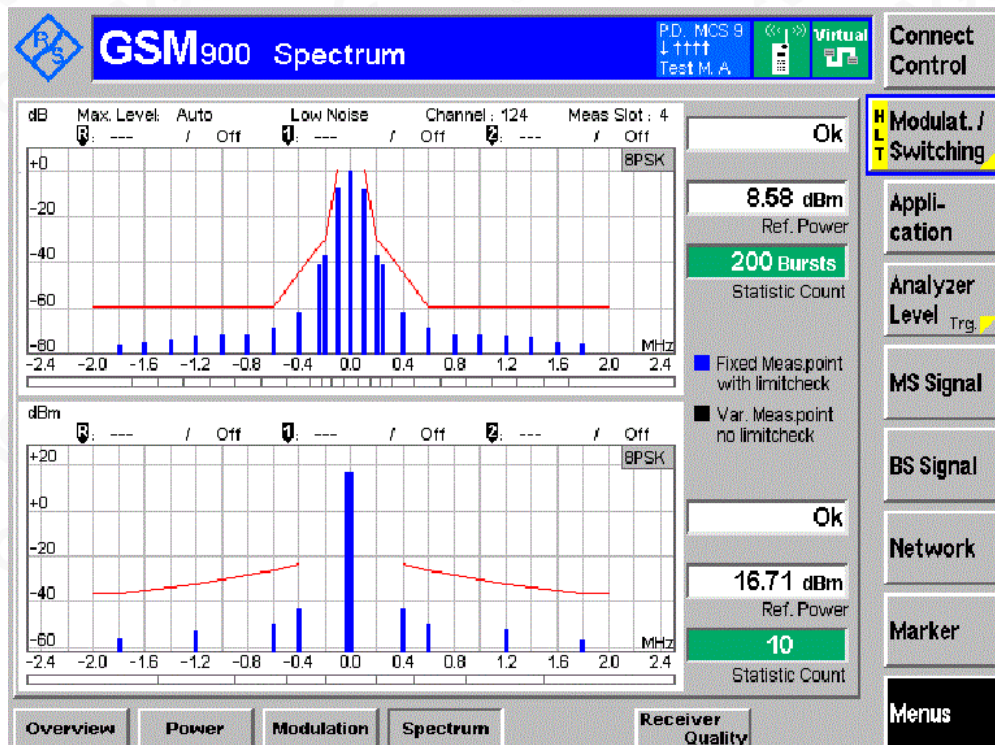
Channel LCH PCL 12



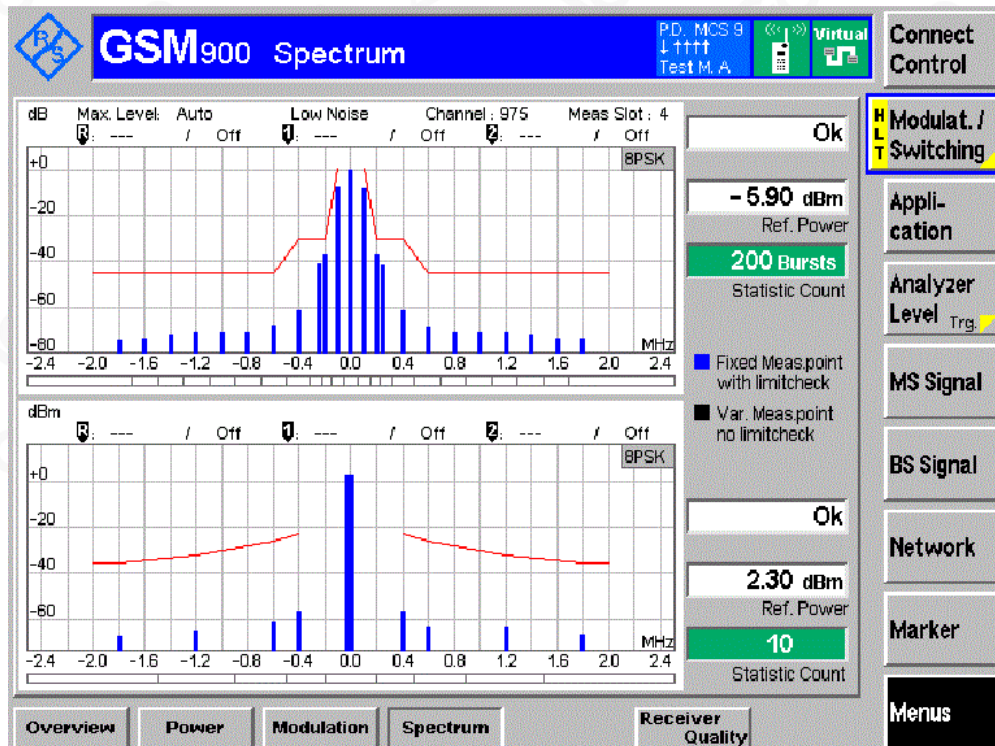
Channel MCH PCL 12



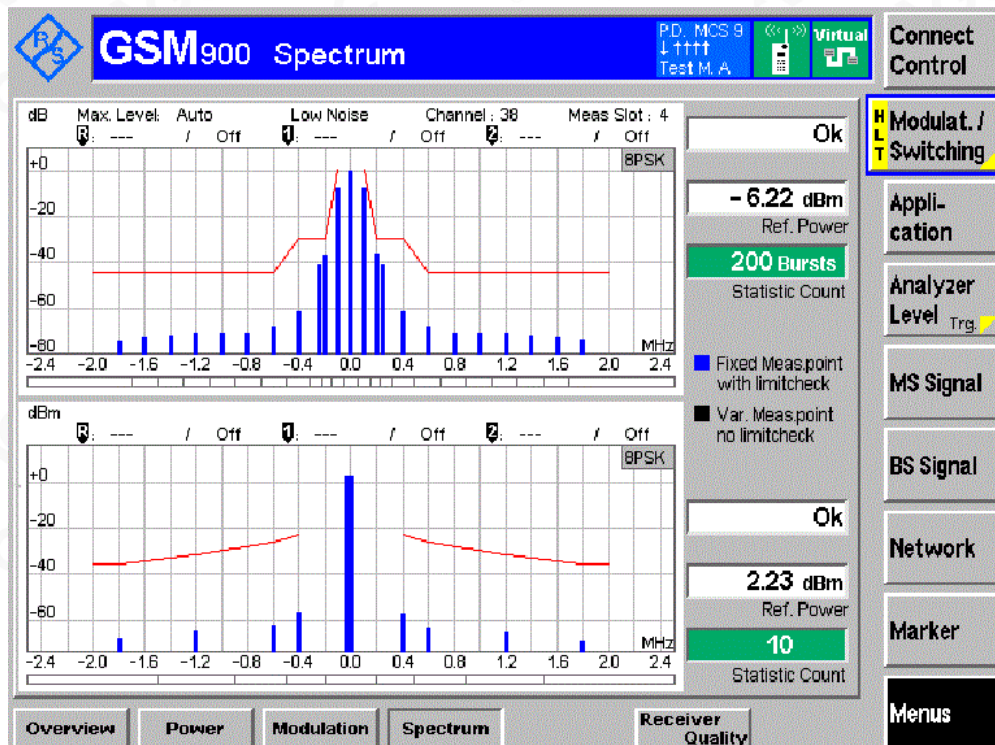
Channel HCH PCL 12



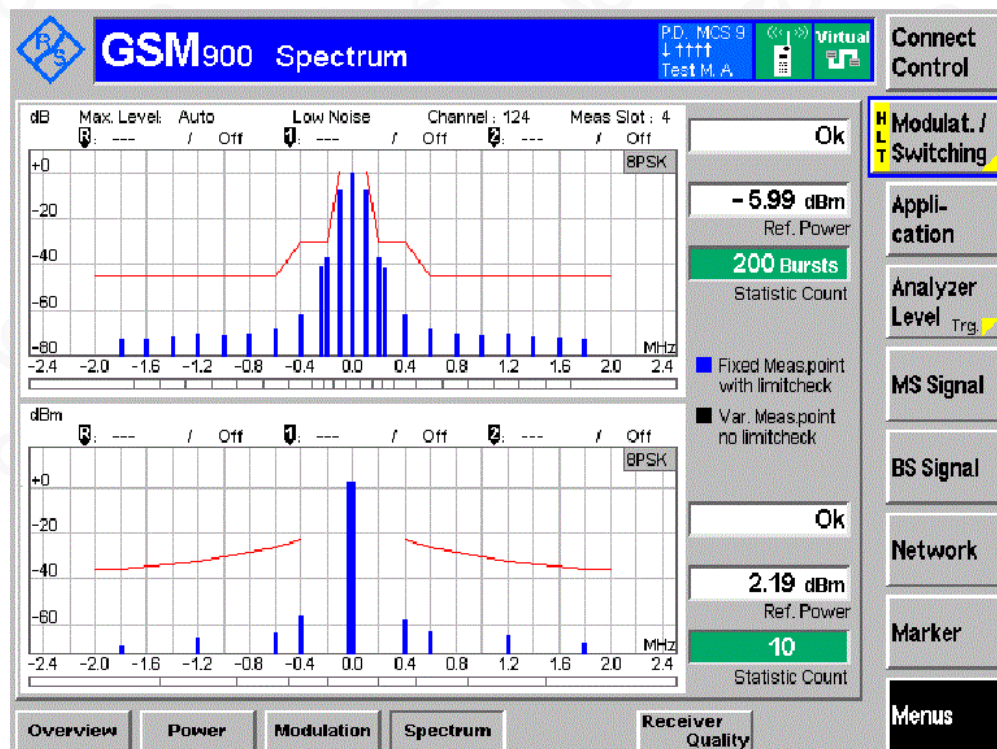
Channel LCH PCL 19



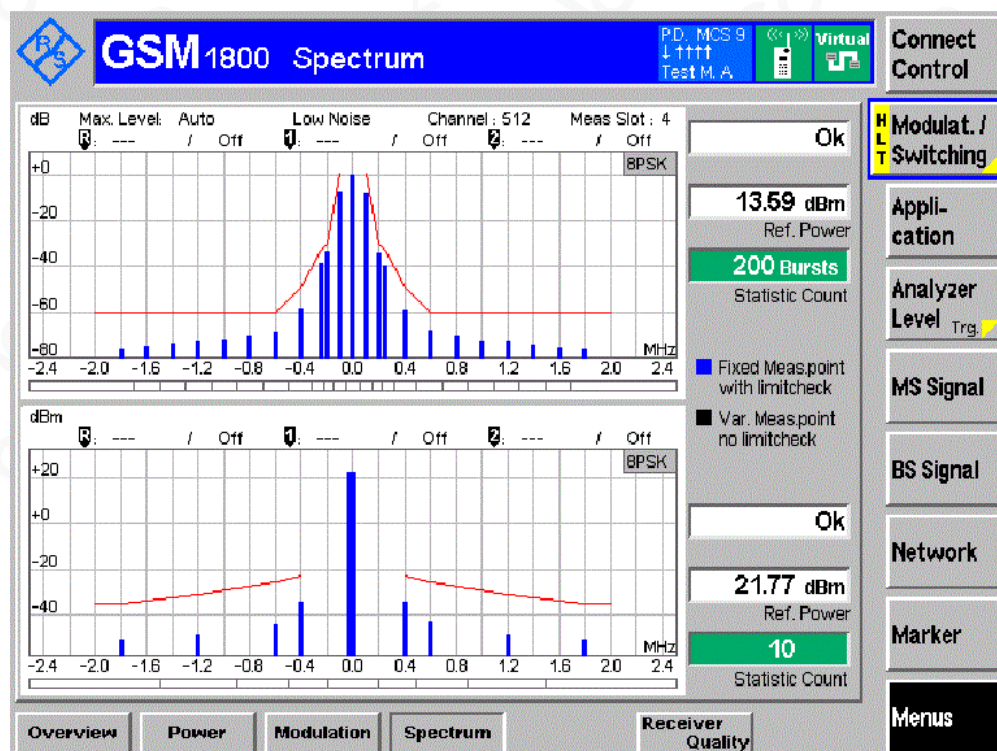
Channel MCH PCL 19



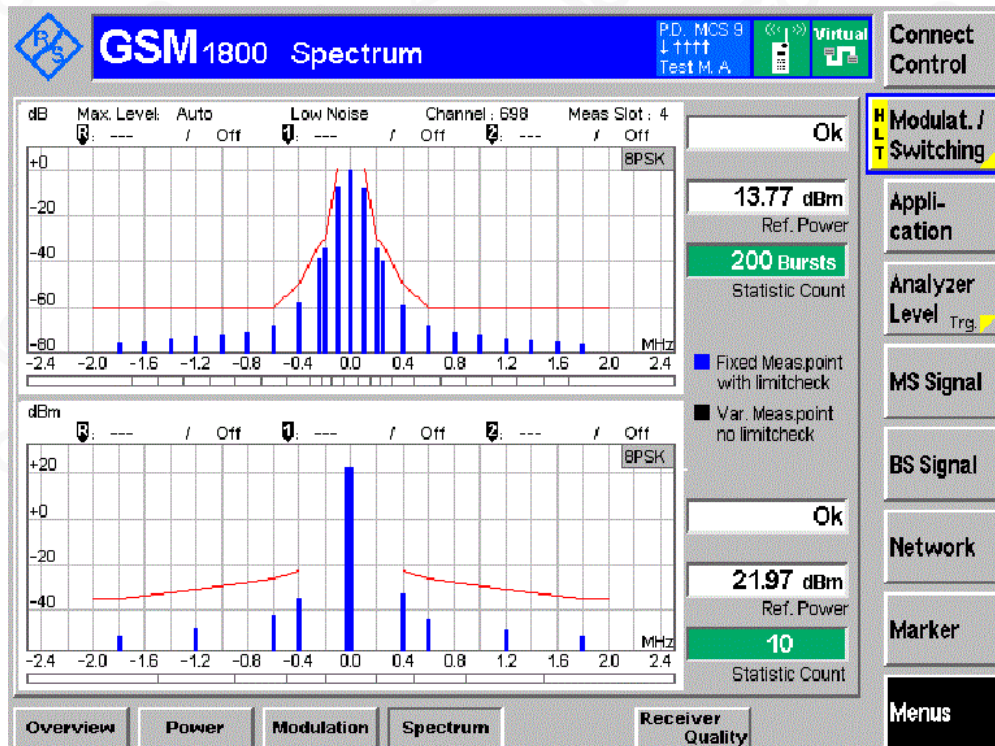
Channel HCH PCL 19



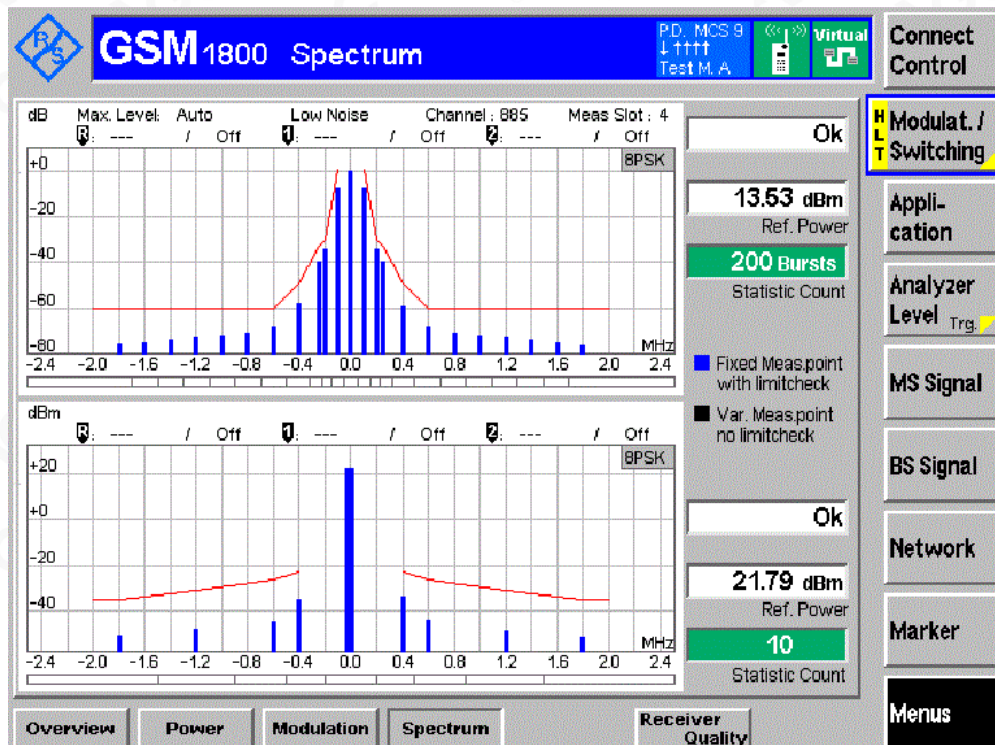
DCS1800 TN,VN
Channel LCH PCL 2



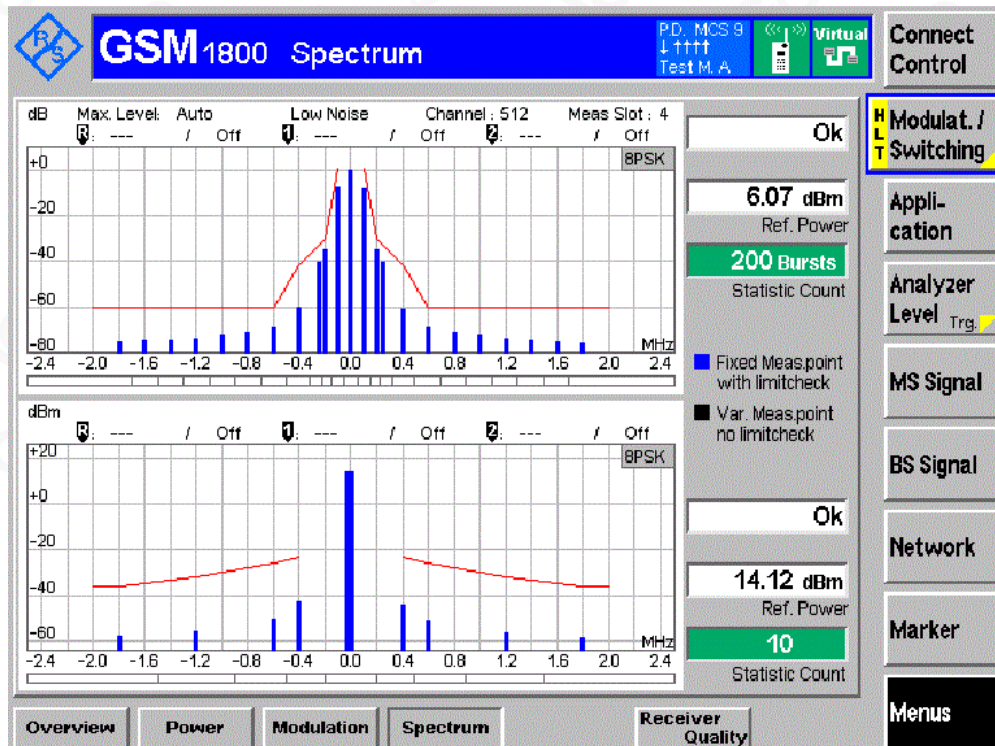
Channel MCH PCL 2



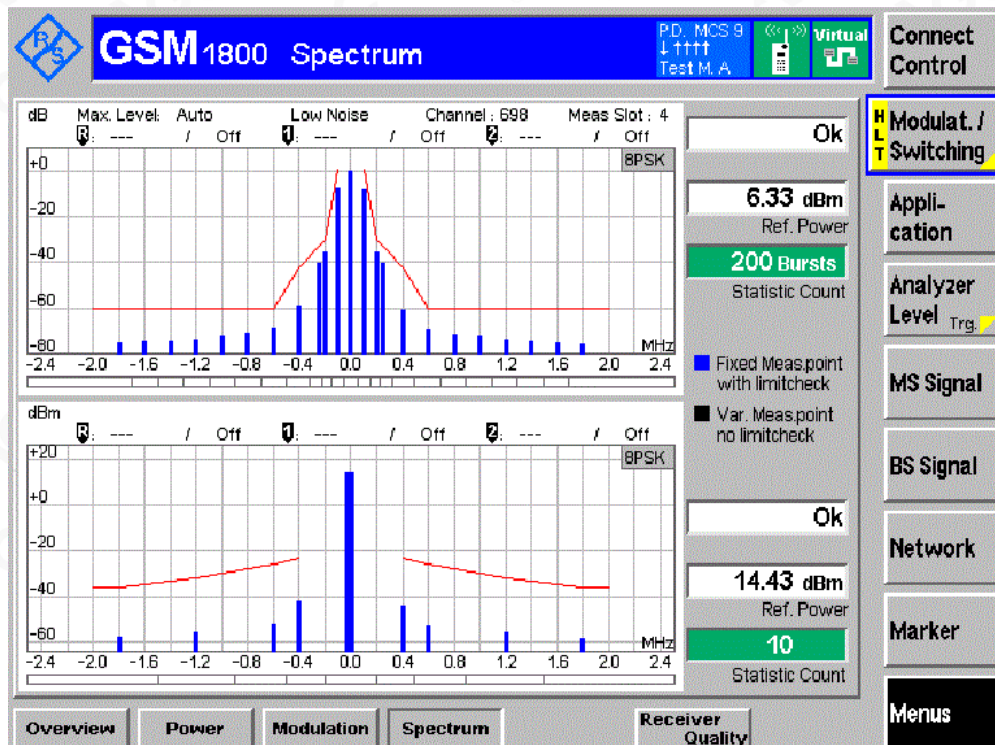
Channel HCH PCL 2



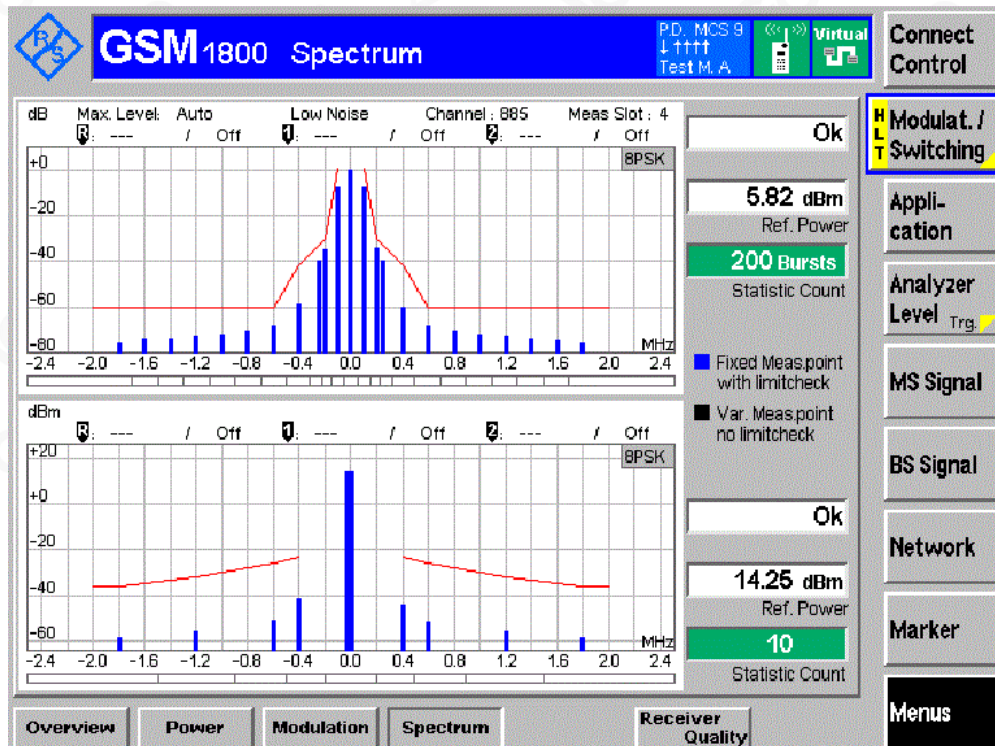
Channel LCH PCL 8



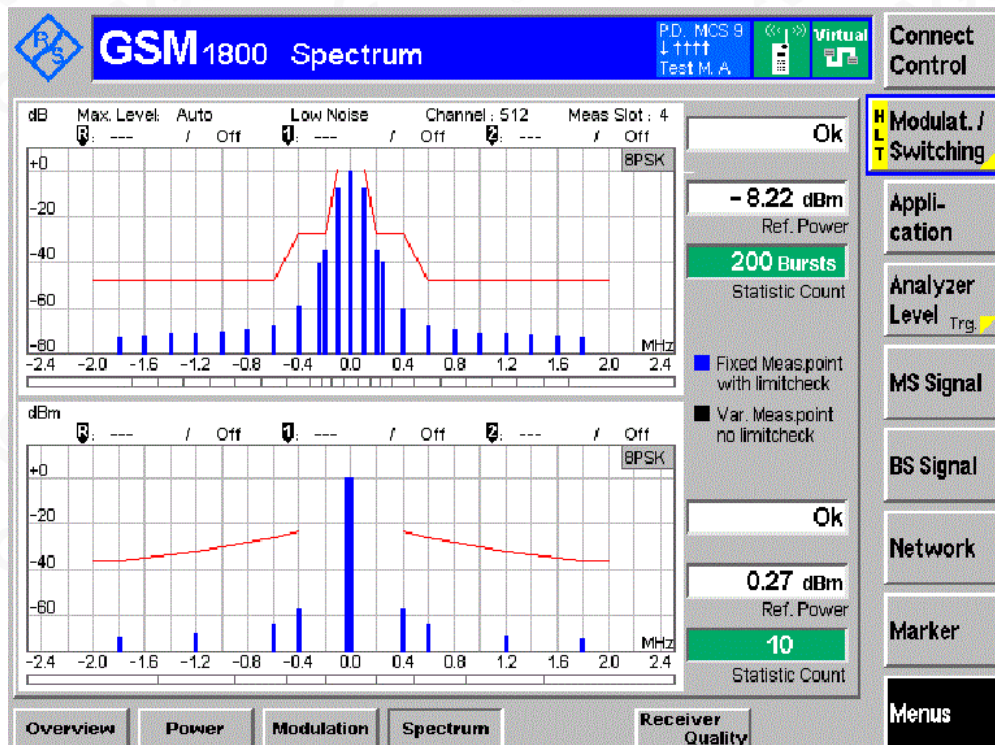
Channel MCH PCL 8



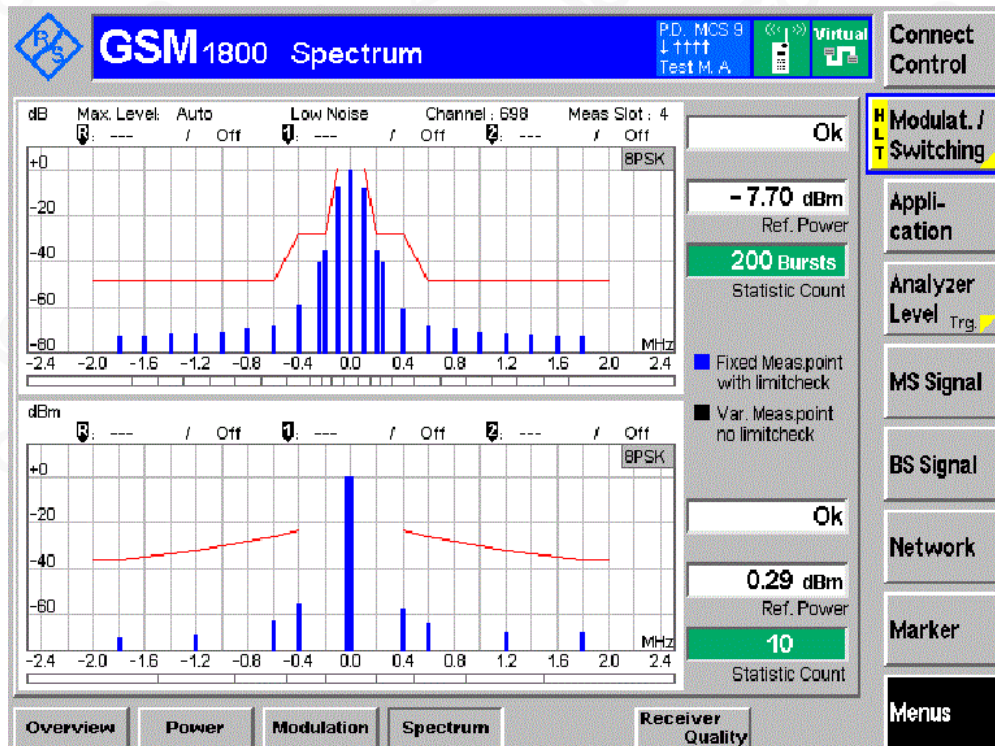
Channel HCH PCL 8



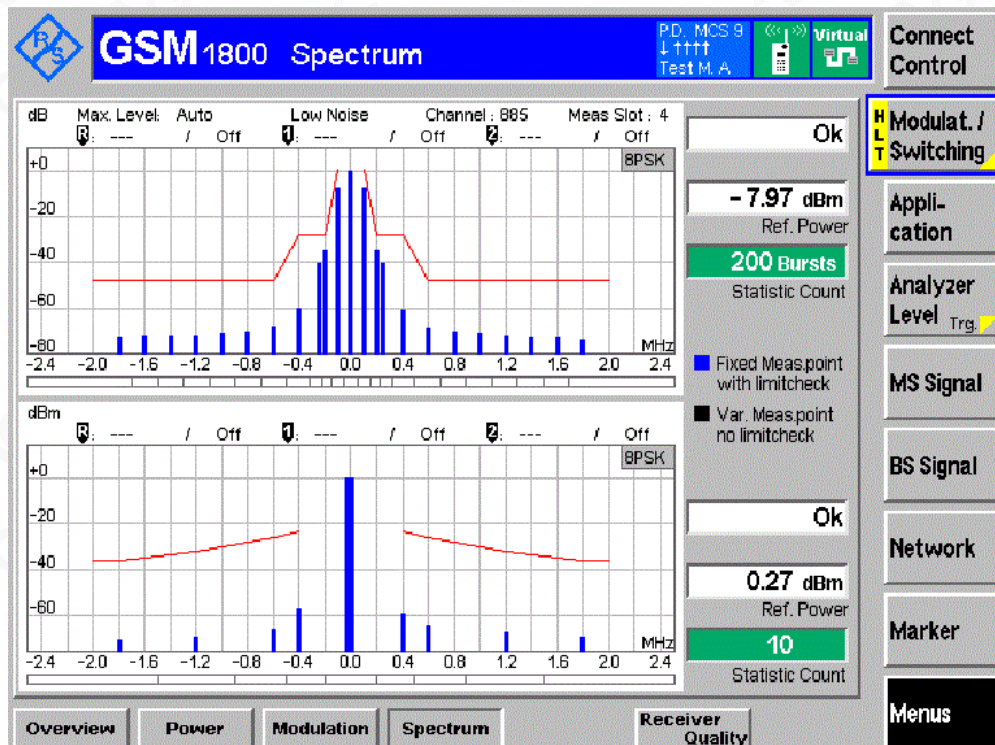
Channel LCH PCL 15



Channel MCH PCL 15



Channel HCH PCL 15



Appendix P. Blocking and spurious response in EGPRS configuration

GSM900

FREQUENCY	Measurement Result	
	GSM900	
	Small MS	
	Interference Level in dBμVemf()	Result
FR +/- 600 kHz to FR +/- 800 kHz	70	PASS
FR +/- 800 kHz to FR +/- 1.6 MHz	70	PASS
FR +/- 1.6 MHz to FR +/- 3 MHz	80	PASS
915 MHz to FR - 3 MHz	90	PASS
FR + 3 MHz to 980 MHz	90	PASS
835 MHz to <915 MHz	113	PASS
>980 MHz to 1000 MHz	113	PASS
100 kHz to <835 MHz	113	PASS
>1000 MHz to 12.75 GHz	113	PASS

DCS1800

FREQUENCY	Measurement Result	
	DCS1800	
	Small MS	
	Interference Level in dBμVemf()	Result
FR +/- 600 kHz to FR +/- 800 kHz	70	PASS
FR +/- 800 kHz to FR +/- 1.6 MHz	70	PASS
FR +/- 1.6 MHz to FR +/- 3 MHz	80	PASS
1785 MHz to FR - 3 MHz	87	PASS
FR + 3 MHz to 1920 MHz	87	PASS
100 kHz to 1705 MHz	113	PASS
>1705 MHz to <1785 MHz	101	PASS
>1920 MHz to 1980 MHz	101	PASS
>1980 MHz to 12.75 GHz	113	PASS



Appendix Q .AM suppression - speech channels

GSM900

Channel	Propagation conditions	Type of measurement	Test limit error rate %	Minimum No. of max-samples	Result	
TCH/FS Class II	Static	RBER	2.439	8200	0.632%	Pass

GSM1800

Channel	Propagation conditions	Type of measurement	Test limit error rate %	Minimum No. of max-samples	Result	
TCH/FS Class II	Static	RBER	2.439	8200	0.812%	Pass



Appendix R. Intermodulation rejection - EGPRS

Note: Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN VN) of fellow:

GSM900

	Intermodulation Test Signal Levels	Small MS	Result
TNVN	FIRST INTERFERER dBμVemf()	64	Pass
	SECOND INTERFERER dBμVemf()	63	Pass

GSM1800

	Intermodulation Test Signal Levels	Small MS	Result
TNVN	FIRST INTERFERER dBμVemf()	68	Pass
	SECOND INTERFERER dBμVemf()	68	Pass



Adjacent S. Adjacent channel rejection – EGPRS

Note: Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN VN) of fellow:

GSM900

	Channel types	Block per s	Channel types	Derived test limit	Target number of samples	Target test time /s	Target test time /hh:mm:ss	Result
TNVN	USF/MCS-1 to 9	50	0.01	0.01234	27958	559	00:09:19	Pass

GSM1800

	Channel types	Block per s	Channel types	Derived test limit	Target number of samples	Target test time /s	Target test time /hh:mm:ss	Result
TNVN	USF/MCS-1 to 9	50	0.01	0.01234	27958	559	00:09:19	Pass



Appendix T. Adjacent channel rejection - speech channels (TCH/FS)

Note: Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN VN) of fellow:

GSM900

	Channel	Interference at	Type of Measurement	Test limit error rate %	Minimum No. of samples	Result
TNVN	TCH/FS class Ib class II	200 kHz	FER RBER RBER	6.742* α 0.420/ α 8.333	8 900 1 000 000 600 000	Pass
	TCH/FS class Ib class II	400 kHz	FER RBER RBER	11.461* α 0.756/ α 9.167	8 900 1 000 000 600 000	Pass

GSM1800

	Channel	Interference at	Type of Measurement	Test limit error rate %	Minimum No. of samples	Result
TNVN	TCH/FS class Ib class II	200 kHz	FER RBER RBER	3.371* α 0.270/ α 8.333	17 800 2 000 000 1 200 000	Pass
	TCH/FS class Ib class II	400 kHz	FER RBER RBER	5.714* α 0.483/ α 9.167	10 500 1 200 000 720 000	Pass



Appendix U. Reference sensitivity - TCH/FS

Note: Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TN VN) of follow:

GSM900

	Channels	Propagation conditions TUhigh		Propagation conditions RA		Propagation conditions HT		Static conditions		Result
		Test limit Error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	
TNVN	TCH/FS FER class Ib(RBER) class II(RBER)	1	8 900					1	164 000	Pass
		0.06	1 000000	6.55	24 000	5.49	60 000	0.07	20000000	
		4.1	120 000					6.58	8 200	

GSM1800

	Channels	Propagation conditions TUhigh		Propagation conditions RA		Propagation conditions HT		Static conditions		Result
		Test limit Error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	Test limit error rate %	Minimum No. of samples	
TNVN	TCH/FS FER class Ib(RBER) class II(RBER)	1	13 400					1	164 000	Pass
		0.06	1500000	5.75	24 000	5.64	30 000	0.07	20000000	
		5.44	60 000					6.58	8 200	



Appendix V. Reference sensitivity - FACCH/F

GSM900

Channel	Propagation	Type of Measurement	Test limit error rate %	Result	
FACCH/F	TUhigh	FER	7.728	3.246%	Pass

GSM1800

Channel	Propagation	Type of Measurement	Test limit error rate %	Result	
FACCH/F	TUhigh	FER	8.064	3.128%	Pass



AppendixW. Minimum Input level for Reference Performance - GPRS

GSM900

	Type of channel	Propagation conditions							Result
		static	TUhigh (no FH)	TUhigh (ideal FH)	RA (no FH)	HT (no FH)	BLER		
GSM 900									
TNVN	PDTCH/CS-1 dBm	-104	-104	-104	-104	-103	10 %	0.1 %	Pass
	PDTCH/CS-2 dBm	-104	-100	-101	-101	-99	10 %	0.1 %	Pass
	PDTCH/CS-3 dBm	-104	-98	-99	-98	-96	10 %	0.1 %	Pass
	PDTCH/CS-4 dBm	-101	-90	-90	--		10 %	0.1 %	Pass
	USF/CS-1 dBm	< -104	<-101	<-103	<-103	<-101	1 %	0.1 %	Pass
	USF/CS-2to 4 dBm	< -104	<-103	<-104	<-104	<-104	1 %	0.1 %	Pass

GSM1800

	Type of channel	Propagation conditions							Result
		static	TUhigh (no FH)	TUhigh (ideal FH)	RA (no FH)	HT (no FH)	BLER		
	GSM 1800								
TNVN	PDTCH/CS-1 dBm	-104	-104	-104	-104	-109	10 %	0.1 %	Pass
	PDTCH/CS-2 dBm	-104	-100	-100	-101	-99	10 %	0.1 %	Pass
	PDTCH/CS-3 dBm	-104	-98	-98	-98	-94	10 %	0.1 %	Pass
	PDTCH/CS-4 dBm	-101	-88	-88	--		10 %	0.1 %	Pass
	USF/CS-1 dBm	< -104	<-103	<-103	<-103	<-101	1 %	0.1 %	Pass
	USF/CS-2to 4 dBm	< -104	<-104	<-104	<-104	<-103	1 %	0.1 %	Pass



Appendix X. Minimum Input level for Reference Performance – EGPRS

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 TNVN) of fellow:

GSM900

	Type of Channel	Propagation conditions					Result
		static	TUhigh (no FH)	TUhigh (ideal FH)	RA (no FH)	HT (no FH)	
TNVN	USF/MCS-5 to 9 dBm	-102	-97.5	-99	-100	-99	Pass

GSM1800

	Type of Channel	Propagation conditions					Result
		static	TUhigh (no FH)	TUhigh (ideal FH)	RA (no FH)	HT (no FH)	
TNVN	USF/MCS-5 to 9 dBm	-102	-97.5	-99	-100	-99	Pass



Appendix Y. Radiated spurious emissions - MS in idle mode

Note: All test modes were carried out for all operation modes and record the worst test mode (GSM 900/1800 MCH VN) of fellow

GSM900

Radiated spurious emissions	GSM900 VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
30MHz~880MHz	10k	-57	-63.33	PASS
880MHz~915MHz	10k	-59	-65.21	PASS
915MHz~1000MHz	100k	-57	-71.00	PASS
1GHz~1710MHz	100k	-47	-69.99	PASS
1710MHz~1785MHz	100k	-53	-65.21	PASS
1785MHz~4GHz	100k	-47	-63.54	PASS

GSM1800

Radiated spurious emissions	GSM1800 VN			
Frequency range	RBW(Hz)	Max.Limit(dBm)	MCH(dBm)	Result
30MHz~880MHz	10k	-57	-62.69	PASS
880MHz~915MHz	10k	-59	-63.47	PASS
915MHz~1000MHz	100k	-57	-61.51	PASS
1GHz~1710MHz	100k	-47	-65.28	PASS
1710MHz~1785MHz	100k	-53	-63.46	PASS
1785MHz~4GHz	100k	-47	-61.29	PASS



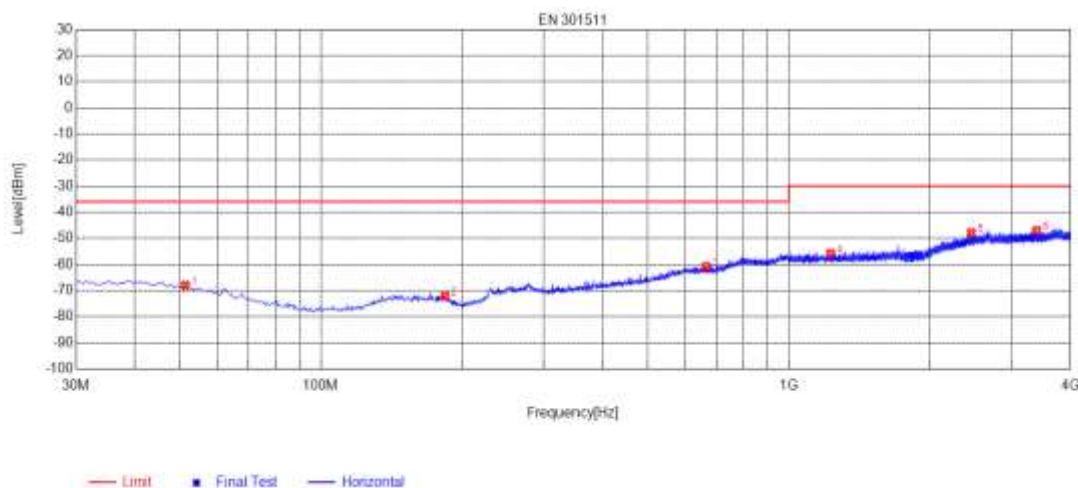
APPENDIX Z. RADIATED SPURIOUS EMISSIONS TEST RESULT

All test modes were carried out for all operation modes

The (middle channel) was showed as the follow:

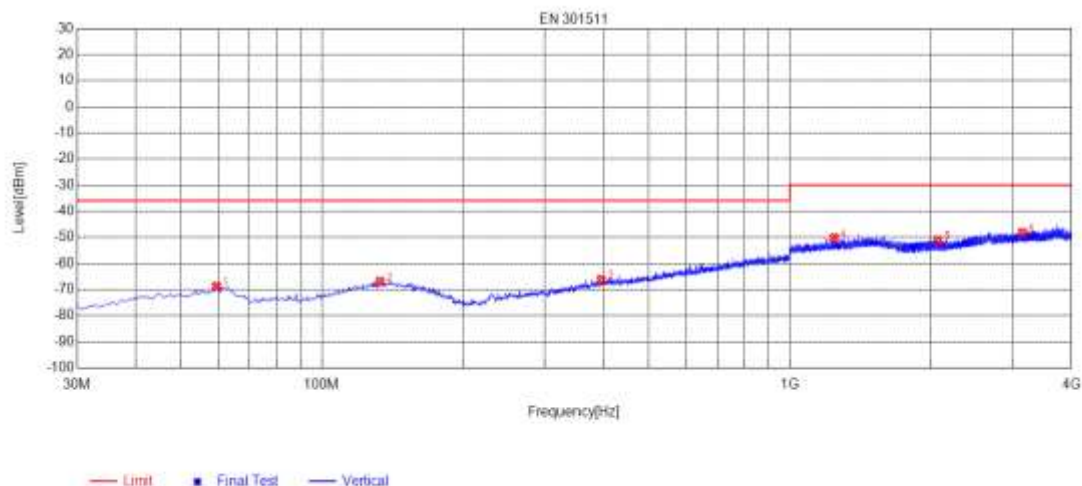
Note: The filter has been used in this test.

RADIATED SPURIOUS EMISSIONS GSM 900– HORIZONTAL



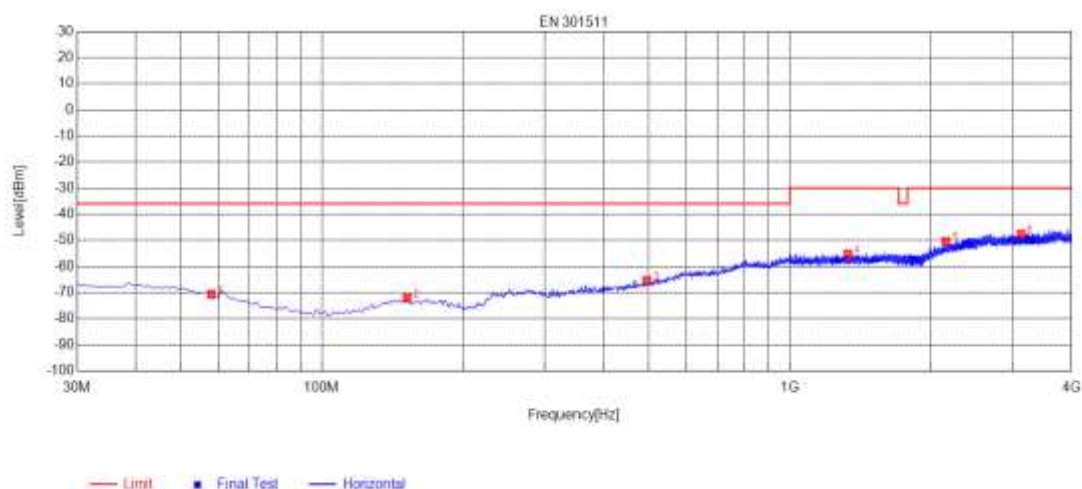
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	51.3400	-101.32	-68.05	-36.00	32.05	33.27	290	Horizontal
2	184.2300	-101.22	-72.24	-36.00	36.24	28.98	256	Horizontal
3	665.3500	-100.92	-60.89	-36.00	24.89	40.03	138	Horizontal
4	1229.2229	-52.07	-55.85	-30.00	25.85	-3.78	214	Horizontal
5	2455.7456	-52.07	-47.98	-30.00	17.98	4.09	52	Horizontal
6	3386.4386	-53.08	-47.10	-30.00	17.10	5.98	172	Horizontal

RADIATED SPURIOUS EMISSIONS GSM 900- VERTICAL



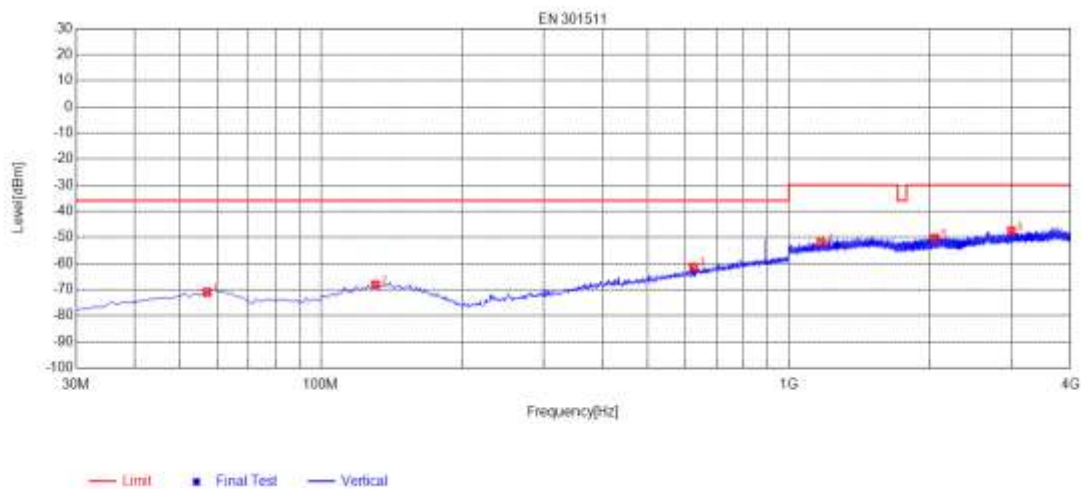
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	59.5850	-100.11	-68.80	-36.00	32.80	31.31	0	Vertical
2	133.3050	-100.92	-66.98	-36.00	30.98	33.94	265	Vertical
3	395.6900	-101.05	-66.23	-36.00	30.23	34.82	78	Vertical
4	1245.4245	-50.72	-50.25	-30.00	20.25	0.47	120	Vertical
5	2073.8074	-52.03	-51.15	-30.00	21.15	0.88	248	Vertical
6	3142.5143	-53.74	-48.29	-30.00	18.29	5.45	342	Vertical

RADIATED SPURIOUS EMISSIONS GSM 1800- HORIZONTAL



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	58.1300	-102.05	-70.73	-36.00	34.73	31.32	85	Horizontal
2	152.2200	-101.55	-72.21	-36.00	36.21	29.34	85	Horizontal
3	494.6300	-101.72	-65.49	-36.00	29.49	36.23	28	Horizontal
4	1330.6331	-51.70	-55.27	-30.00	25.27	-3.57	85	Horizontal
5	2156.6157	-52.22	-50.47	-30.00	20.47	1.75	216	Horizontal
6	3120.3120	-53.13	-47.63	-30.00	17.63	5.50	160	Horizontal

RADIATED SPURIOUS EMISSIONS GSM 1800- VERTICAL



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	57.1600	-101.96	-71.03	-36.00	35.03	30.93	139	Vertical
2	130.880	-101.99	-68.22	-36.00	32.22	33.77	333	Vertical
3	625.580	-100.52	-61.36	-36.00	25.36	39.16	350	Vertical
4	1171.31	-51.98	-52.00	-30.00	22.00	-0.02	26	Vertical
5	2051.00	-51.06	-50.33	-30.00	20.33	0.73	314	Vertical
6	2992.19	-52.78	-47.60	-30.00	17.60	5.18	350	Vertical

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED SPURIOUS EMISSION TEST SETUP



RADIATED SPURIOUS EMISSION ABOVE 1G TEST SETUP



----END OF REPORT----