



## TEST REPORT

**Application No.:** SZEM1908017790CR  
**Applicant:** Dspread Technology (Beijing) Inc  
**Address of Applicant:** Rm.407, B12C, #10(Universal Business Park), Jiuxianqiao Road,Chaoyang District,Beijing, China  
**Manufacturer:** Dspread Technology (Beijing) Inc  
**Address of Manufacturer:** Rm.407, B12C, #10(Universal Business Park), Jiuxianqiao Road,Chaoyang District,Beijing, China  
**Factory:** SHENZHEN WINSTAR PRECISION ELECTRONICS CO.,LTD  
**Address of factory:** The East Side of the Floor 6,Floor 5,Building 28,Shancheng Industrial Park,Shixin Connmunity, LangxinCommunity,shiyang Street,Bao'an District,shenzhen City,Guangdong Province,P.R.China  
**Equipment Under Test (EUT):**  
**EUT Name:** Mobile POS  
**Model No.:** GD004  
**FCC ID:** 2AGQ6-GD004-4G  
**Standard(s) :** 47 CFR Part 2  
47 CFR Part 22 subpart H  
47 CFR Part 24 subpart E  
**Date of Receipt:** 2019-08-23  
**Date of Test:** 2019-08-28 to 2020-07-22  
**Date of Issue:** 2020-07-23

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu  
EMC Laboratory Manager





Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-07-23		Original

Authorized for issue by:				
				
		Calvin Weng /Project Engineer		
				
		Eric Fu /Reviewer		



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## 2 Test Summary

Test Item	FCC Rule No.	Requirements	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913, §24.232	ERP≤7W(GSM850, WCDMA band V) EIRP≤2W(GSM1900, WCDMA band II)	PASS
Peak-Average Ratio	§24.232	≤13dB	PASS
Modulation Characteristics	§2.1047	Digital modulation	PASS
Bandwidth	§2.1049(h)	OBW: No limit EBW: No limit	PASS
Band Edge Compliance	§2.1051, §22.917, §24.238	≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	PASS
Spurious emissions at antenna terminals	§2.1051, §22.917, §24.238	≤ -13dBm	PASS
Field strength of spurious radiation	§2.1051, §22.917, §24.238	≤ -13dBm	PASS
Frequency stability	§2.1055, §22.355, §24.235	≤ ±2.5ppm.	PASS

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## 4 General Information

### 4.1 Details of E.U.T.

Power Supply:	DC 3.7V by Li-ion battery Recharge input: DC5V/1A by adapter
Sample Type:	Portable production
Support Network:	GPRS, EGPRS, RMC, HSDPA, HSUPA
Operation Frequency Band:	GSM850/GSM1900/UMTS FDD Band II/V
Modulation Type:	GMSK for GPRS/EGPRS; 8PSK for EGPRS; QPSK for WCDMA
Supported Channel Bandwidth:	200KHz for GSM; 5MHz for WCDMA
GPRS Class:	12
EGPRS Class:	12
UMTS Power Class:	Level 3
Designation of Emissions	GPRS850: 246KGXW, EGPRS850: 248KG7W
	GPRS1900: 245KGXW, EGPRS1900: 254KG7W
	WCDMA band II: 4M19F9W
	WCDMA band V: 4M17F9W
Antenna Type:	Integral antenna
Antenna Gain:	GSM850MHz: -1.45dBi, DCS1900MHz: -0.55dBi. UMTS band II: -0.55dBi UMTS band V: -1.45dBi
SIM Card:	This device has dual SIM Card sockets. Both the SIM sockets have been tested. SIM1 was worst case, only record SIM1.
Extreme temp. Tolerance:	-30℃ to +50℃
Extreme vol. Limits:	3.3VDC to 4.3VDC (nominal: 3.7VDC)

## 4.2 Test Frequency

Test mode:	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
GSM850	TX	Channel 128	Channel 190	Channel 251
		824.2MHz	836.6 MHz	848.8 MHz
	RX	Channel 128	Channel 190	Channel 251
		869.2 MHz	881.6 MHz	893.8 MHz
Test mode:	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
GSM1900	TX	Channel 512	Channel 661	Channel 810
		1850.2MHz	1880.0 MHz	1909.8 MHz
	RX	Channel 512	Channel 661	Channel 810
		1930.2 MHz	1960.0 MHz	1989.8 MHz
Test Mode	TX/RX	RF Channel		
		Low(L)	Middle (M)	High (H)
WCDMA Band V	TX	Channel 4132	Channel 4183	Channel 4233
		826.4 MHz	836.6 MHz	846.6 MHz
	RX	Channel 4357	Channel 4407	Channel 4458
		871.4 MHz	881.4 MHz	891.6 MHz
Test Mode	TX/RX	RF Channel		
		Low(L)	Middle (M)	High (H)
WCDMA Band II	TX	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz
	RX	Channel 9662	Channel 9800	Channel 9938
		1932.4 MHz	1960.0 MHz	1987.6 MHz

## 4.3 Test Environment

Environment Parameter	Selected Values During Tests	
Relative Humidity	52%	
Atmospheric Pressure:	1015Pa	
Temperature:	TN	25 °C
Voltage:	VL	3.3 V
	VN	3.7 V
	VH	4.3 V

NOTE: VL= lower extreme test voltage  
VN= nominal voltage  
VH= upper extreme test voltage  
TN= normal temperature



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#### 4.4 Description of Support Units

The EUT has been tested independent unit.

#### 4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 2.84\text{dB}$
6	Conducted Spurious emissions	$\pm 0.75\text{dB}$
7	RF Radiated power	$\pm 4.5\text{dB}$ (below 1GHz)
		$\pm 4.8\text{dB}$ (above 1GHz)
8	Radiated Spurious emission test	$\pm 4.5\text{dB}$ (Below 1GHz)
		$\pm 4.8\text{dB}$ (Above 1GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Supply voltages	$\pm 1.5\%$
12	Time	$\pm 3\%$



#### 4.6 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

#### 4.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 4.8 Deviation from Standards

None

#### 4.9 Abnormalities from Standard Conditions

None



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## 5 Equipment List

RF conducted test					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
DC Power Supply	ZhaoXin	PS-3005D	SEM011-05	2018-09-25	2019-09-24
DC Power Supply	ZhaoXin	PS-3005D	SEM011-05	2019-09-24	2020-09-23
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2019-04-12	2020-04-11
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2020-04-11	2021-04-10
Signal Analyzer (10Hz-40GHz)	Rohde & Schwarz	FSV40	SEM008-04	2019-04-01	2020-03-31
Signal Analyzer (10Hz-40GHz)	Rohde & Schwarz	FSV40	SEM008-04	2020-03-31	2021-03-30
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2019-07-11	2020-07-10
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2019-04-01	2020-03-31
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	SEM010-02	2019-04-01	2020-03-31
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	SEM010-02	2020-03-31	2021-03-30
Power Sensor	KEYSIGHT	U2021XA	SEM009-13	2019-04-12	2020-04-11
Power Sensor	KEYSIGHT	U2021XA	SEM009-13	2020-04-11	2021-04-10
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2018-09-25	2019-09-24
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2019-09-24	2020-09-23

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
EXA Signal Analyzer (10Hz-44GHz)	Agilent Technologies Inc	N9010A	SEM004-12	2019-04-12	2020-04-11
EXA Signal Analyzer (10Hz-44GHz)	Agilent Technologies Inc	N9010A	SEM004-12	2020-04-11	2021-04-10
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12



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Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2018-09-25	2019-09-24
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2019-09-24	2020-09-23
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-11-12	2019-11-11
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2019-11-11	2020-11-10
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2019-04-01	2020-03-31
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2020-03-31	2021-03-30
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2019-04-01	2020-03-31
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2019-07-11	2020-07-10
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09
Substitution Antenna	ETS-Lindgren	3142C	SEM003-01	2017-06-27	2020-06-26
Substitution Antenna	ETS-Lindgren	3142C	SEM003-01	2020-06-26	2023-06-25
Signal Generator	R&S	SMA100A	102174	2019-07-11	2020-07-10
Signal Generator	R&S	SMA100A	102174	2020-07-10	2021-07-09

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2018-09-25	2019-09-24
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2019-09-24	2020-09-23
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2020-06-26	2023-06-25



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Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2019-04-01	2020-03-31
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2020-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2019-07-11	2020-07-10
Coaxial Cable	SGS	N/A	SEM025-01	2020-07-10	2021-07-09
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2019-04-01	2020-03-31
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30

**General used equipment**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2019-09-26	2020-09-25
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2019-04-04	2020-04-03
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2020-04-03	2021-04-02



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## 6 Radio Spectrum Matter Test Results

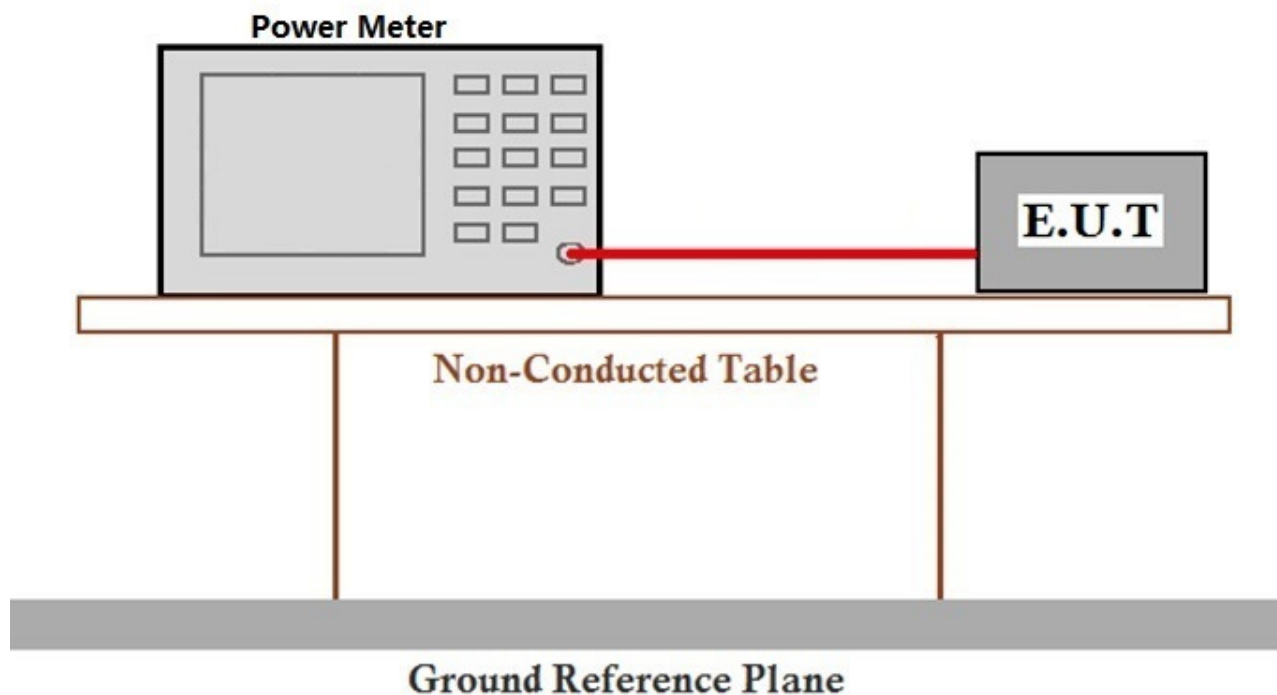
### 6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement: §2.1046, §22.913, §24.232  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: ERP≤7W(GSM850, WCDMA BAND V)  
EIRP ≤ 2W(GSM1900, WCDMA BAND II)

#### 6.1.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

#### 6.1.2 Test Setup Diagram



#### 6.1.3 Measurement Data



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Test band: GSM850										
Conducted output power(dBm)					Antenna gain (dBd)	Antenna gain (dBi)	FCC: ERP(dBm)			Limit (dBm)
Channel		128	190	251			128	190	251	
GPRS/EGPRS (GMSK)	1 TX Slot	32.45	32.56	32.46	-3.60	-1.45	28.85	28.96	28.86	38.45
	2 TX Slots	30.60	30.74	30.61	-3.60	-1.45	27.00	27.14	27.01	38.45
	3 TX Slots	28.75	28.90	28.75	-3.60	-1.45	25.15	25.30	25.15	38.45
	4 TX Slots	27.66	27.76	27.62	-3.60	-1.45	24.06	24.16	24.02	38.45
EGPRS(8PSK)	1 TX Slot	24.65	24.46	25.7	-3.60	-1.45	21.05	20.86	22.10	38.45
	2 TX Slots	22.79	22.62	23.80	-3.60	-1.45	19.19	19.02	20.20	38.45
	3 TX Slots	20.92	20.73	21.95	-3.60	-1.45	17.32	17.13	18.35	38.45
	4 TX Slots	19.03	18.89	20.11	-3.60	-1.45	15.43	15.29	16.51	38.45

Note:

1) dBd= dBi-2.15

2) ERP= Conducted output power+Antenna gain (dBd)

3) EIRP= Conducted output power+Antenna gain (dBi)

Test band: GSM1900									
Conducted output power(dBm)					Antenna gain (dBi)	FCC: EIRP(dBm)			Limit (dBm)
Channel		512	661	810		512	661	810	
GPRS/EGPRS (GMSK)	1 TX Slot	29.85	29.86	29.87	-0.55	29.30	29.31	29.32	33
	2 TX Slots	27.39	27.70	27.78	-0.55	26.84	27.15	27.23	33
	3 TX Slots	25.86	25.82	25.73	-0.55	25.31	25.27	25.18	33
	4 TX Slots	24.34	24.34	24.27	-0.55	23.79	23.79	23.72	33
EGPRS(8PSK)	1 TX Slot	24.54	24.63	25.41	-0.55	23.99	24.08	24.86	33
	2 TX Slots	22.67	22.73	23.53	-0.55	22.12	22.18	22.98	33
	3 TX Slots	20.82	20.84	21.64	-0.55	20.27	20.29	21.09	33
	4 TX Slots	18.96	19.02	19.81	-0.55	18.41	18.47	19.26	33

Note:

1) EIRP= Conducted output power+Antenna gain (dBi)



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Test band: WCDMA BAND V									
Conducted output power(dBm)				Antenna gain (dBd)	Antenna gain (dBi)	FCC: ERP(dBm)			Limit (dBm)
Channel	4132	4182	4233			4132	4182	4233	
12.2kbps RMC	22.56	22.65	22.75	-3.60	-1.45	18.96	19.05	19.15	38.45
Subtest 1	21.94	22.01	22.07	-3.60	-1.45	18.34	18.41	18.47	38.45
Subtest 2	21.84	21.92	22.02	-3.60	-1.45	18.24	18.32	18.42	38.45
Subtest 3	21.44	21.62	21.67	-3.60	-1.45	17.84	18.02	18.07	38.45
Subtest 4	21.41	21.54	21.57	-3.60	-1.45	17.81	17.94	17.97	38.45
Subtest 1	21.62	21.65	21.81	-3.60	-1.45	18.02	18.05	18.21	38.45
Subtest 2	21.60	21.60	21.80	-3.60	-1.45	18.00	18.00	18.20	38.45
Subtest 3	21.55	21.51	21.72	-3.60	-1.45	17.95	17.91	18.12	38.45
Subtest 4	21.51	21.47	21.67	-3.60	-1.45	17.91	17.87	18.07	38.45
Subtest 5	21.43	21.39	21.67	-3.60	-1.45	17.83	17.79	18.07	38.45

Note:

- 1) dBd= dBi-2.15
- 2) ERP= Conducted output power+Antenna gain (dBd)
- 3) EIRP= Conducted output power+Antenna gain (dBi)

Test band: WCDMA BAND II								
Conducted output power(dBm)				Antenna gain (dBi)	FCC: EIRP(dBm)			Limit (dBm)
Channel	512	661	810		512	661	810	
12.2kbps RMC	22.73	22.7	22.62	-0.55	22.18	22.15	22.07	33
Subtest 1	22.28	22.22	22.19	-0.55	21.73	21.67	21.64	33
Subtest 2	22.20	22.15	22.15	-0.55	21.65	21.60	21.60	33
Subtest 3	21.71	21.70	21.68	-0.55	21.16	21.15	21.13	33
Subtest 4	21.66	21.69	21.60	-0.55	21.11	21.14	21.05	33
Subtest 1	21.89	21.87	21.81	-0.55	21.34	21.32	21.26	33
Subtest 2	21.80	21.86	21.77	-0.55	21.25	21.31	21.22	33
Subtest 3	21.76	21.84	21.67	-0.55	21.21	21.29	21.12	33
Subtest 4	21.71	21.82	21.57	-0.55	21.16	21.27	21.02	33
Subtest 5	21.62	21.74	21.56	-0.55	21.07	21.19	21.01	33

Note:

- 1) EIRP= Conducted output power+Antenna gain (dBi)



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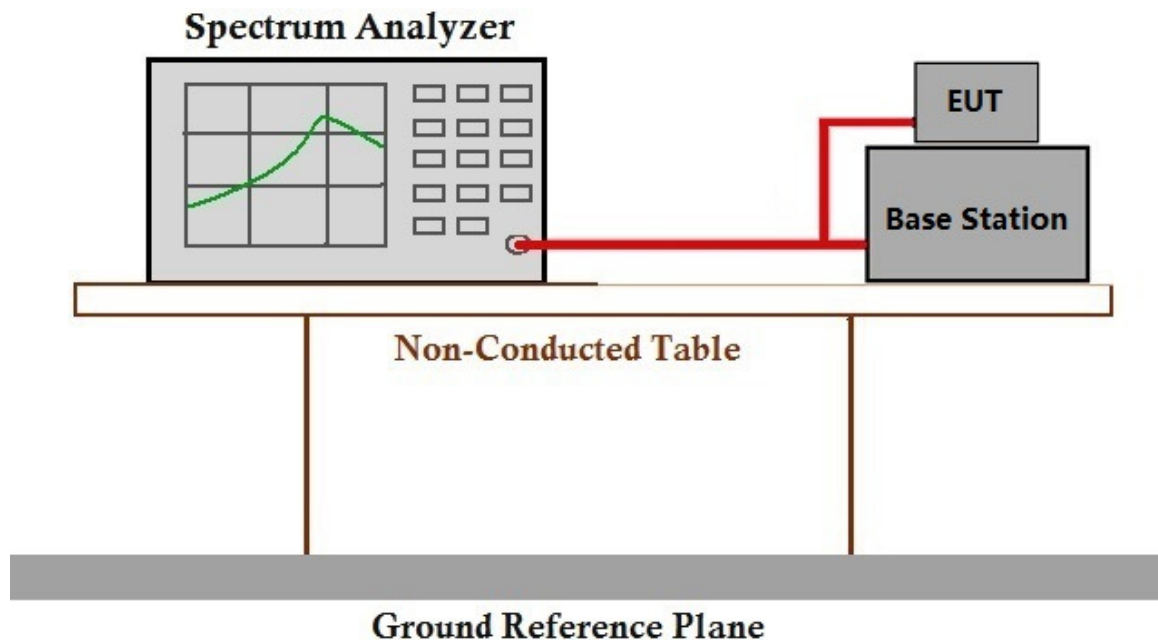
## 6.2 Peak-Average Ratio

Test Requirement: §24.232  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: ≤13dB

### 6.2.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

### 6.2.2 Test Setup Diagram



### 6.2.3 Measurement Data

Test mode:	Test Band	Test result (dB)			Limit (dB)	Verdict
		LCH	MCH	HCH		
GSM	GPRS850	8.52	8.44	8.52	13	Pass
	EGPRS850	10.68	8.44	11.00	13	Pass
	GPRS1900	7.76	7.76	7.76	13	Pass
	EGPRS1900	10.68	10.52	10.64	13	Pass
WCDMA	WCDMA BAND V	2.84	2.88	2.68	13	Pass
	WCDMA BAND II	2.20	2.60	2.16	13	Pass

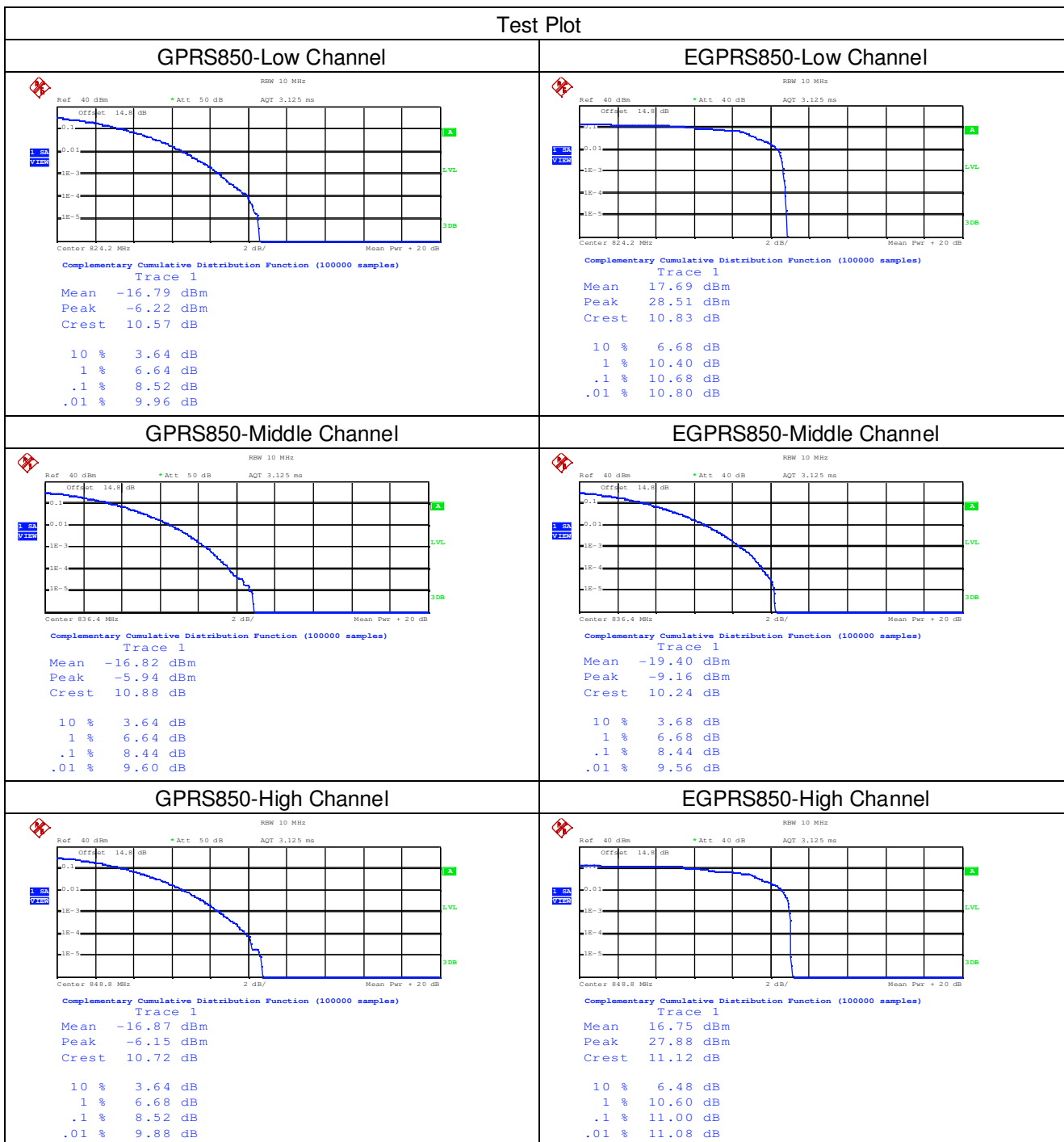
Note: For WCDMA, all modes have been tested and we found RMC test mode has the worst test result. Only record the worst test result.



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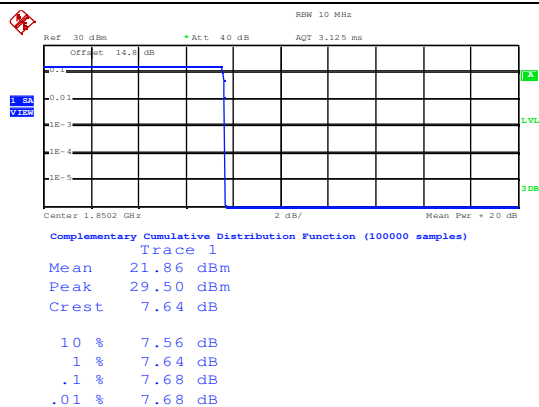
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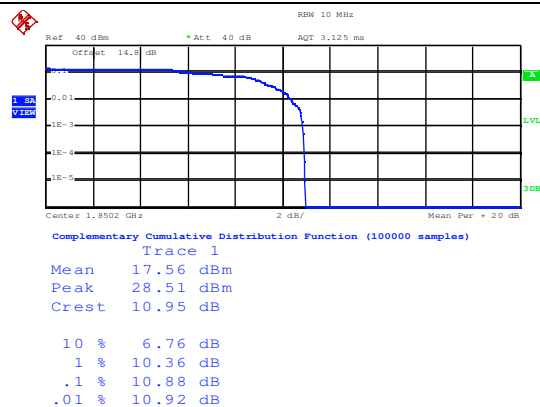


Test Plot

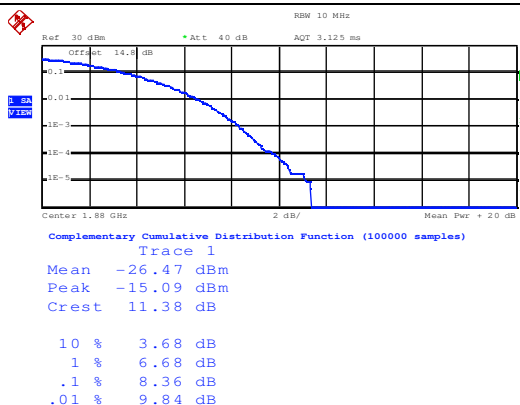
GPRS1900-Low Channel



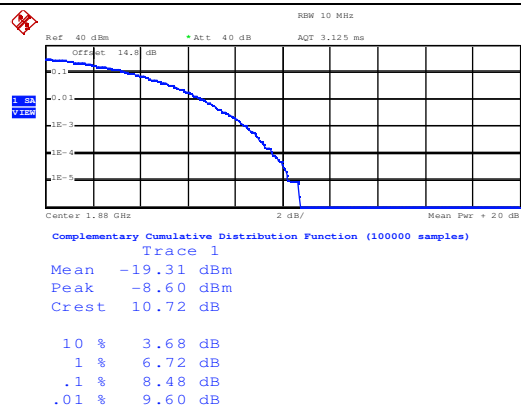
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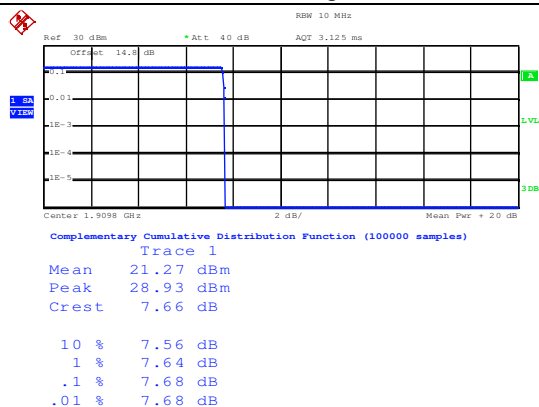
GPRS1900-Middle Channel



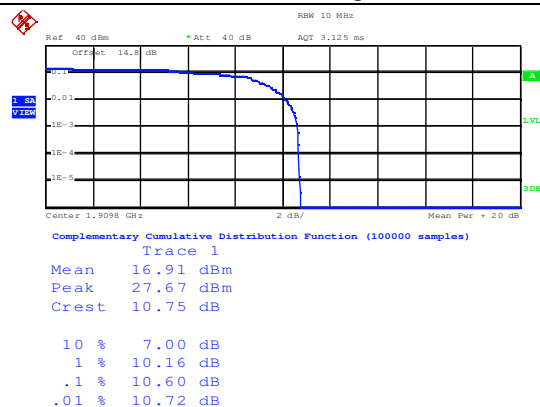
EGPRS1900-Middle Channel



GPRS1900-High Channel



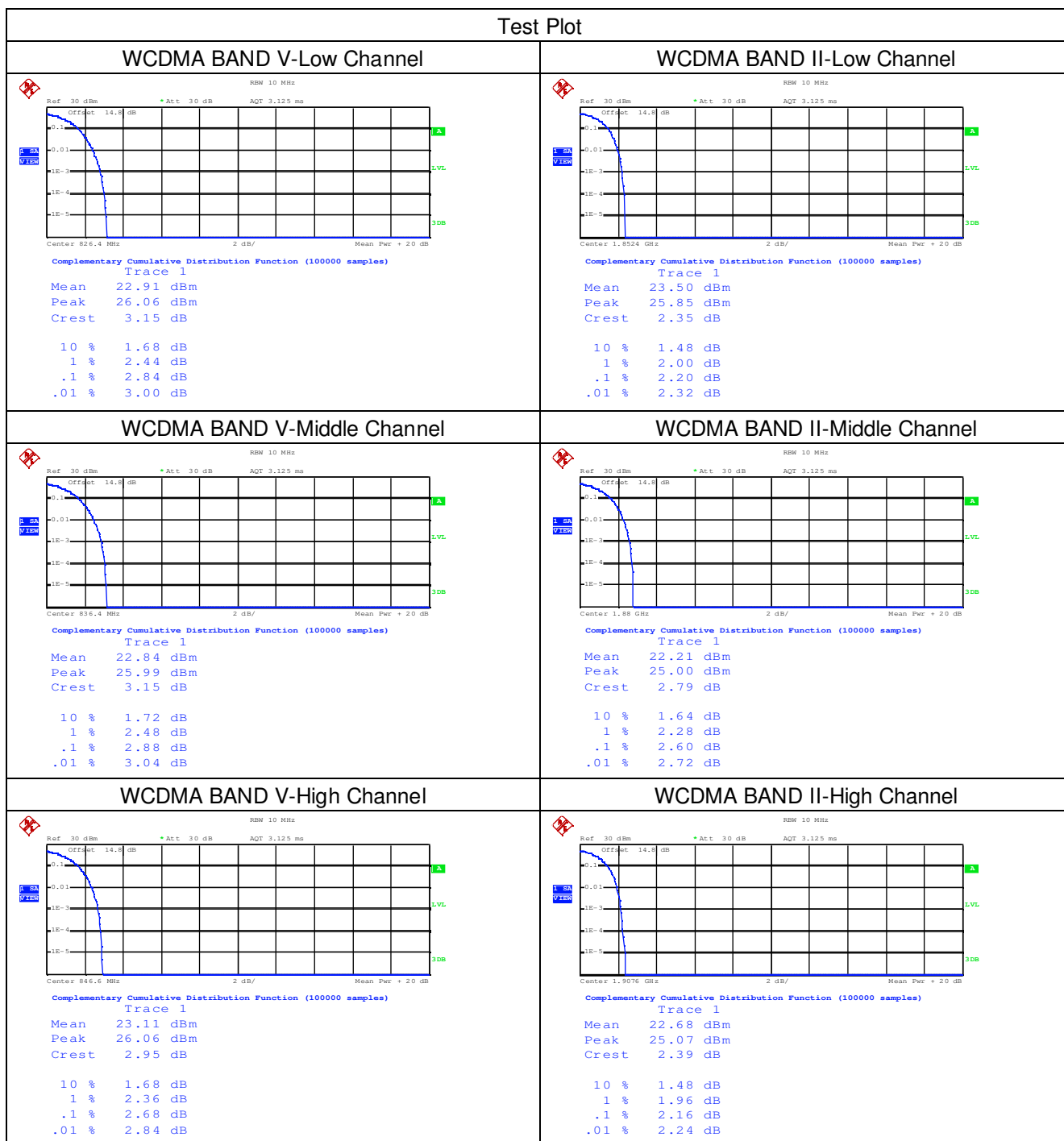
EGPRS1900-High Channel



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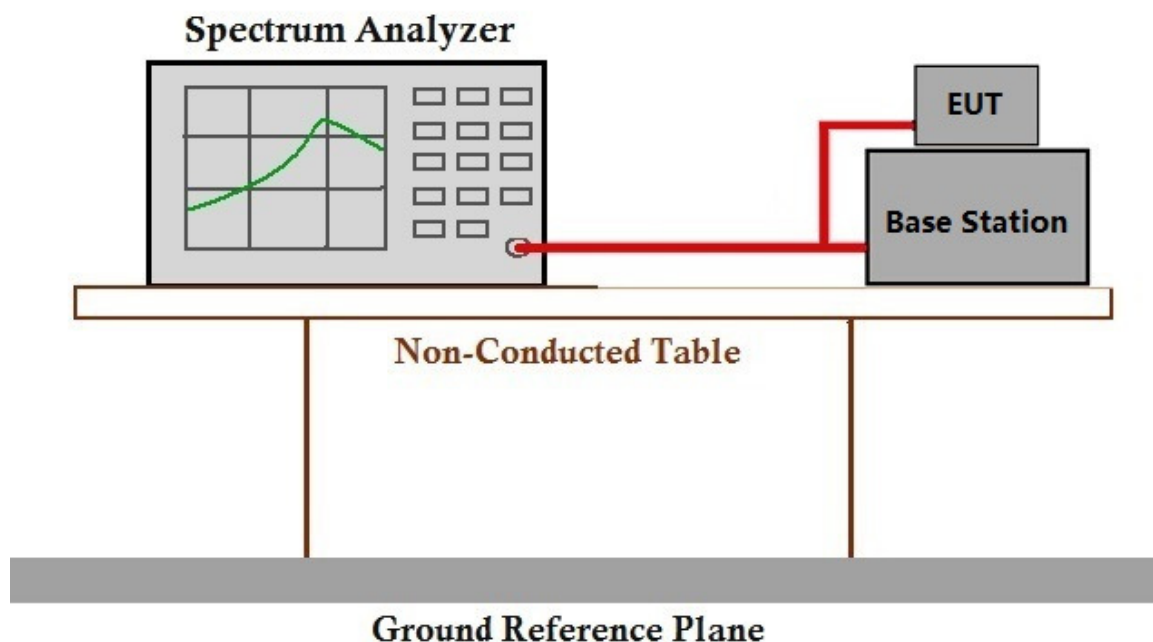
### 6.3 Bandwidth

Test Requirement: §2.1049(h), §22.917, §24.238  
 Test Method: ANSI C63.26, KDB 971168 D01 v03  
 Limit: OBW: No limit  
 EBW: No limit

#### 6.3.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
 Test mode: f:TX mode\_Keep the EUT in transmitting mode

#### 6.3.2 Test Setup Diagram



#### 6.3.3 Measurement Data



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Test mode:	Test Band	Test result of 26dB Bandwidth (MHz)			Limit (dB)	Verdict
		LCH	MCH	HCH		
GSM	GPRS850	0.313	0.307	0.314	N/A	Pass
	EGPRS850	0.320	0.317	0.305	N/A	Pass
	GPRS1900	0.307	0.307	0.313	N/A	Pass
	EGPRS1900	0.309	0.320	0.316	N/A	Pass
WCDMA	WCDMA BAND V	4.680	4.680	4.690	N/A	Pass
	WCDMA BAND II	4.720	4.690	4.740	N/A	Pass

Test mode:	Test Band	Test result of Occupied Bandwidth (MHz)			Limit (dB)	Verdict
		LCH	MCH	HCH		
GSM	GPRS850	0.244	0.245	0.246	N/A	Pass
	EGPRS850	0.248	0.247	0.247	N/A	Pass
	GPRS1900	0.244	0.245	0.243	N/A	Pass
	EGPRS1900	0.254	0.249	0.248	N/A	Pass
WCDMA	WCDMA BAND V	4.170	4.160	4.160	N/A	Pass
	WCDMA BAND II	4.190	4.170	4.190	N/A	Pass

Note: For WCDMA, all modes have been tested and we found RMC test mode has the worst test result. Only record the worst test result.



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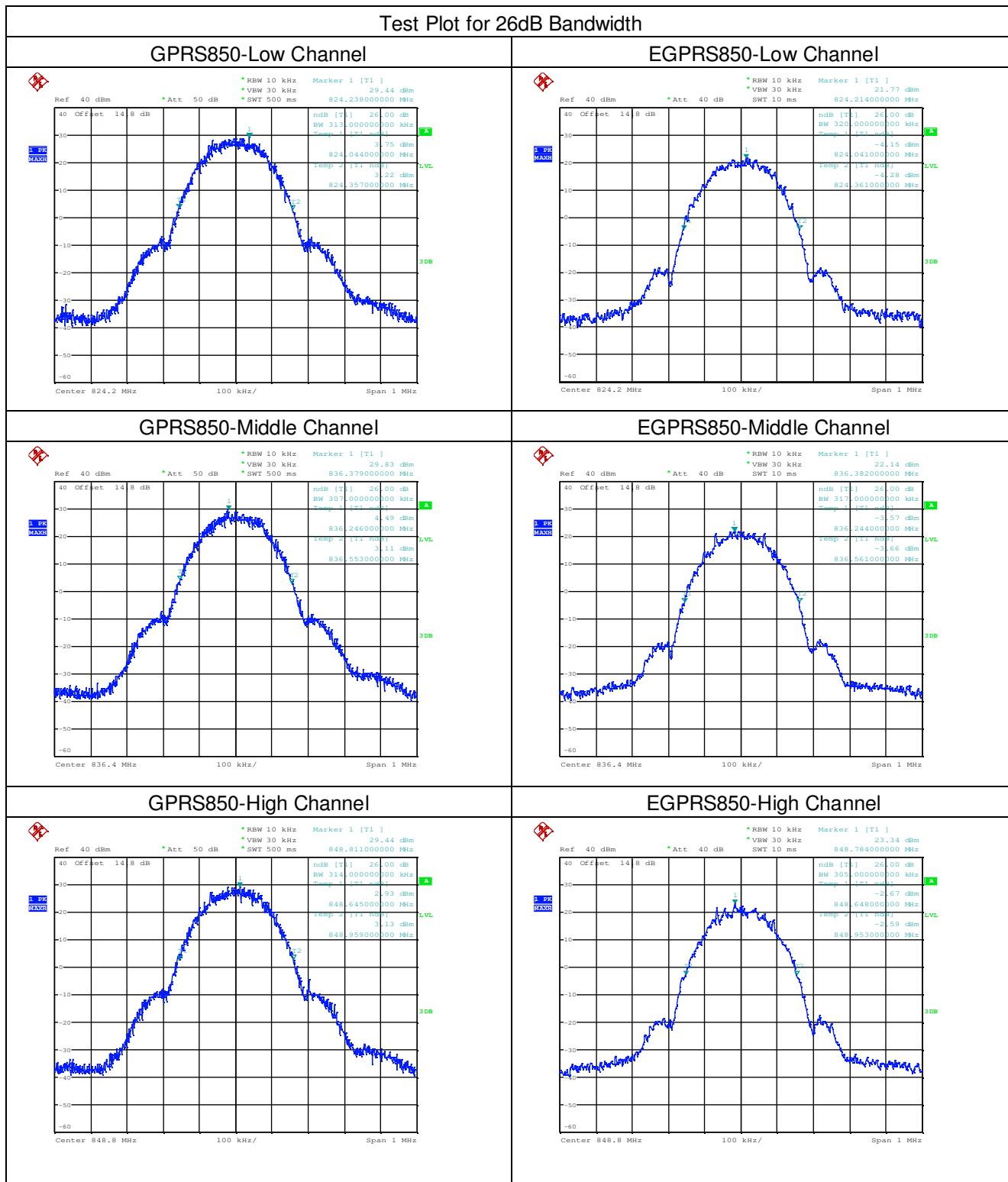
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Test Plot for 26dB Bandwidth



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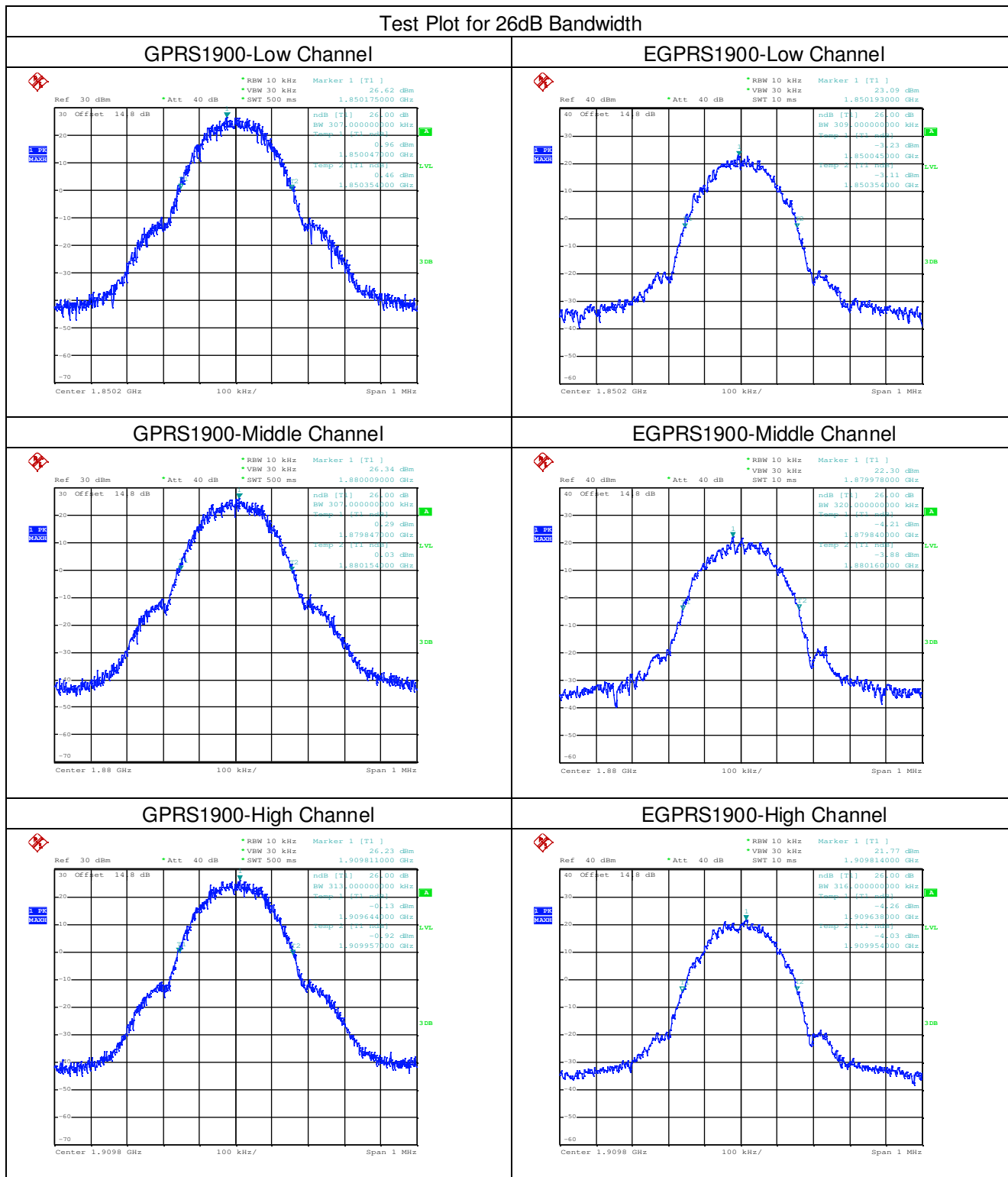
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Test Plot for 26dB Bandwidth

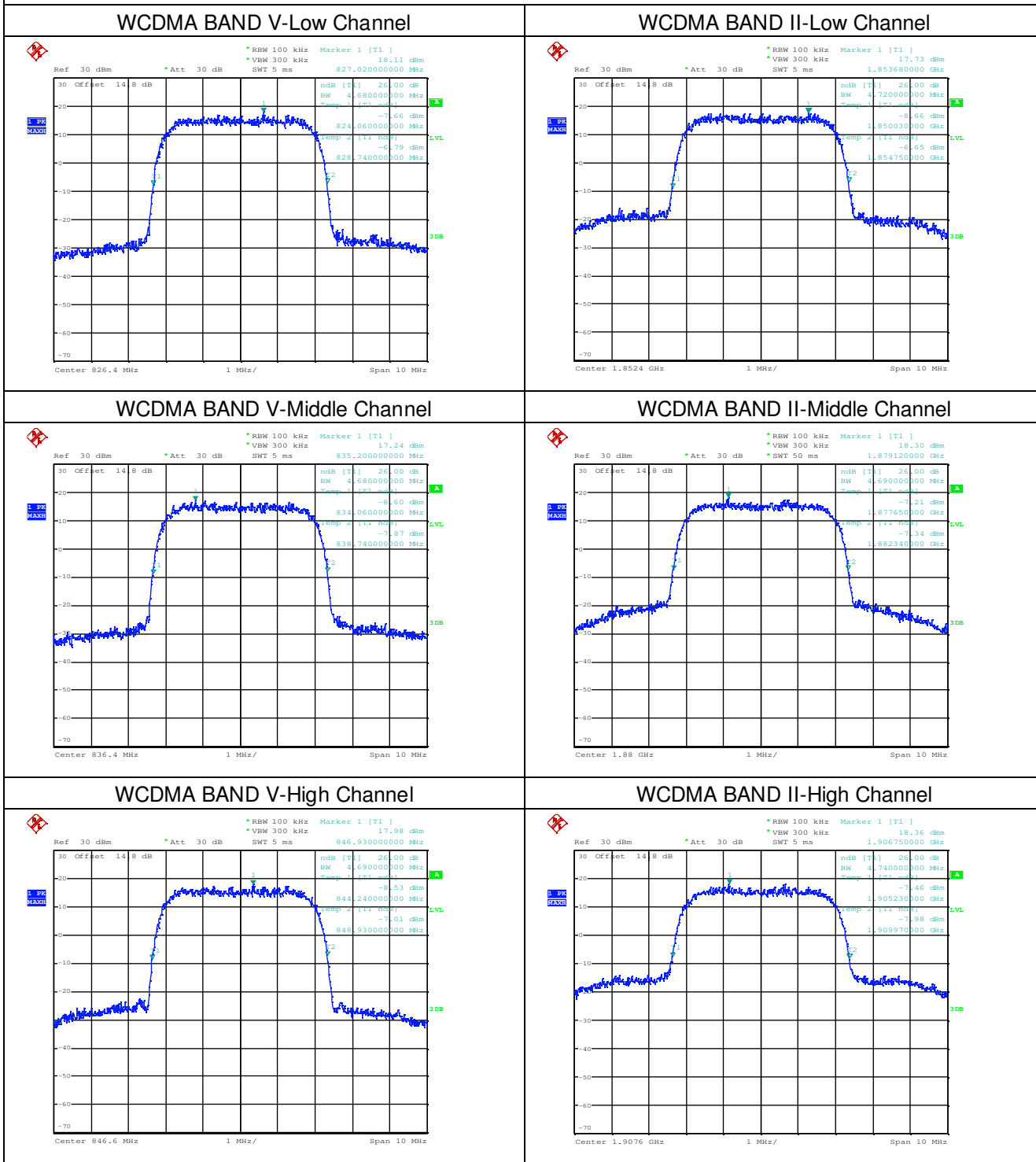


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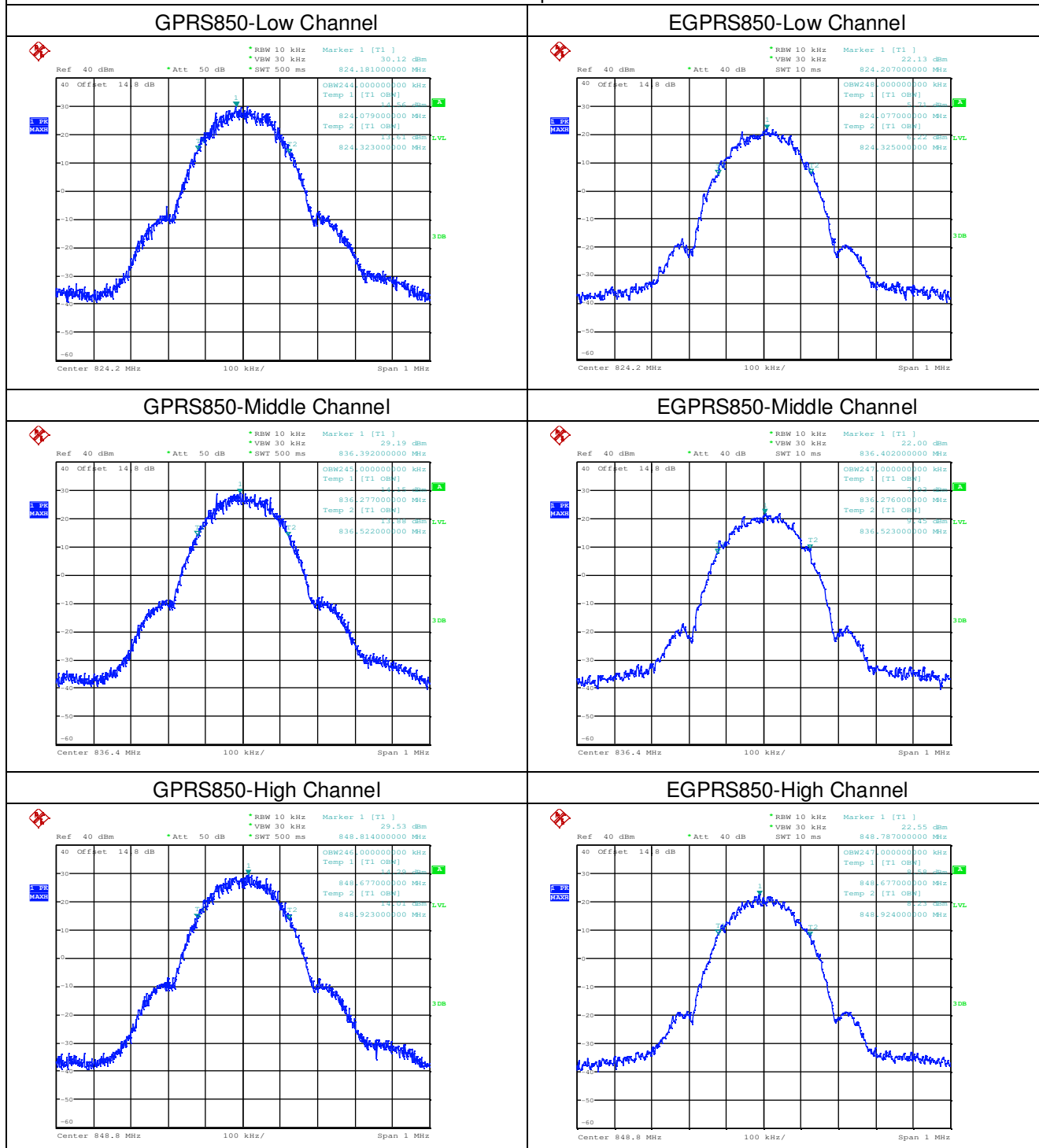
Test Plot for 26dB Bandwidth



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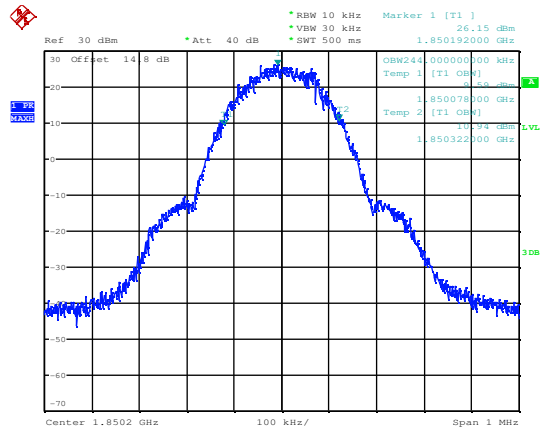
## Test Plot for Occupied Bandwidth



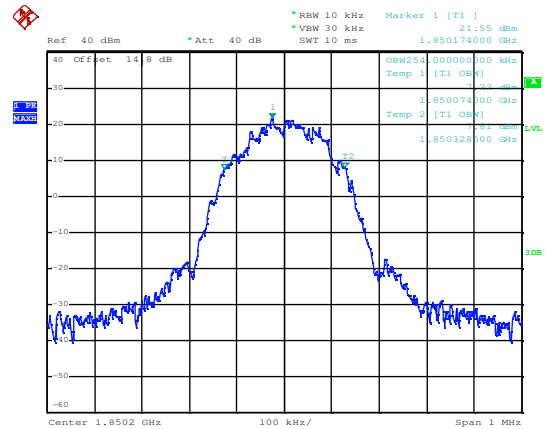


Test Plot for Occupied Bandwidth

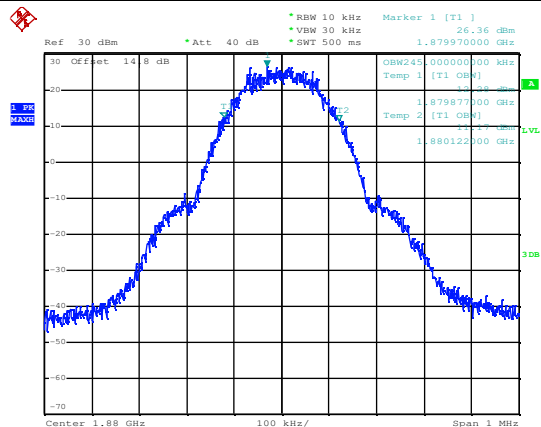
GPRS1900-Low Channel



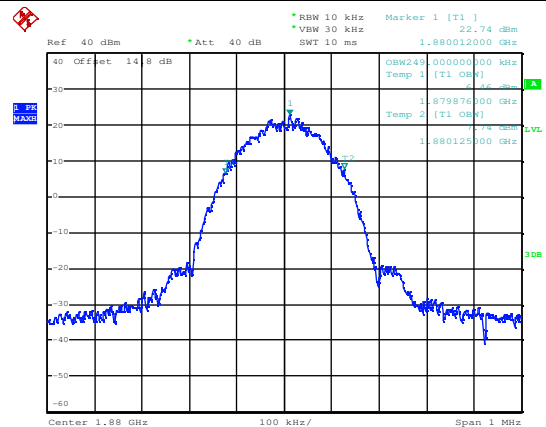
EGPRS1900-Low Channel



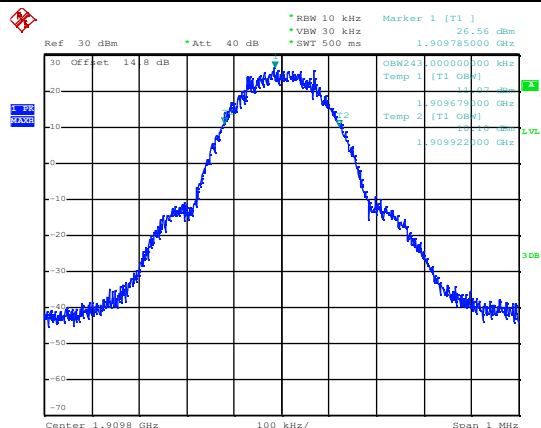
GPRS1900-Middle Channel



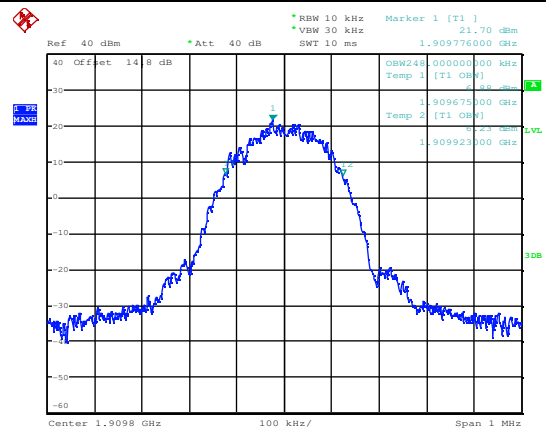
EGPRS1900-Middle Channel



GPRS1900-High Channel



EGPRS1900-High Channel



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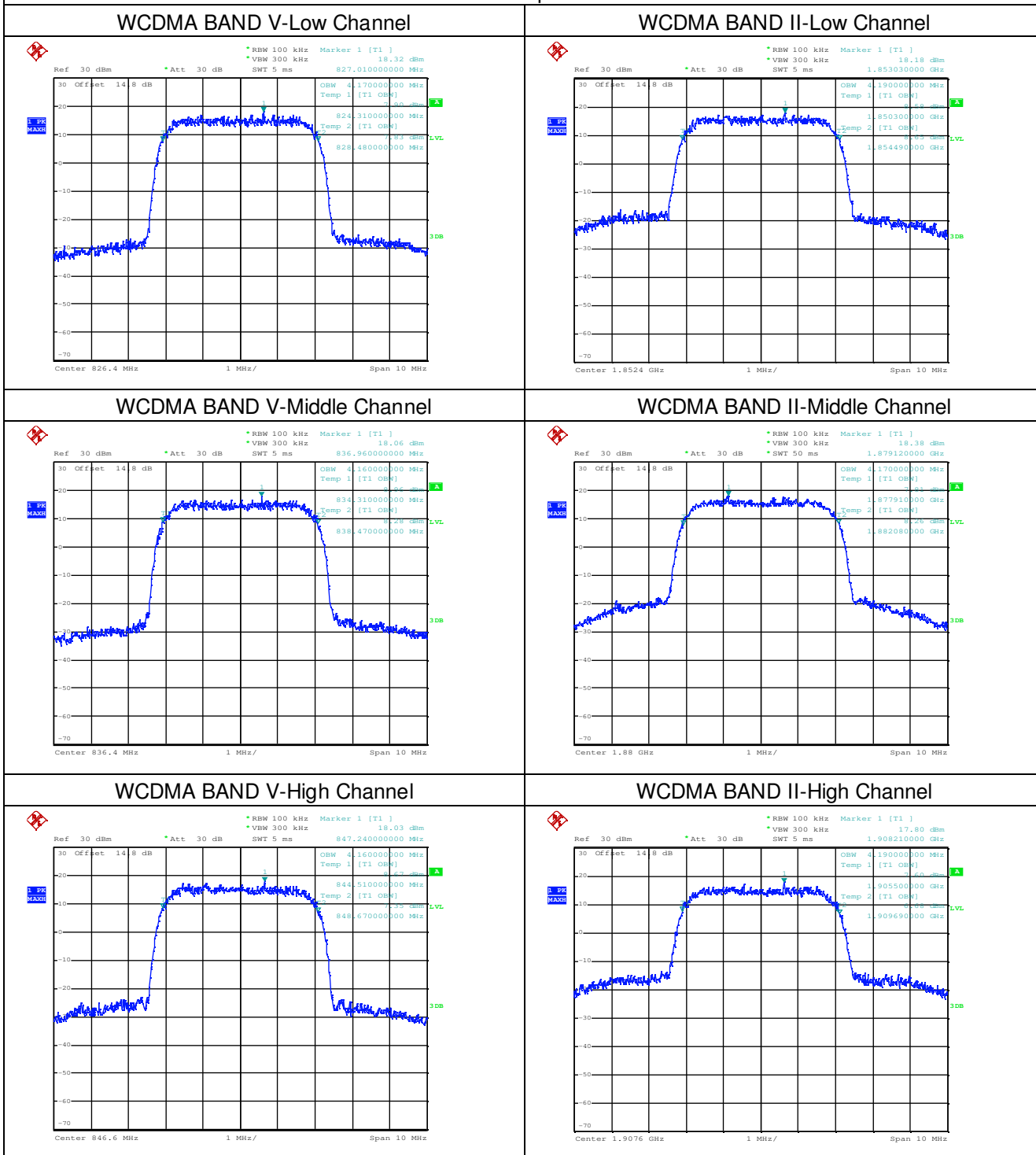
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Test Plot for Occupied Bandwidth



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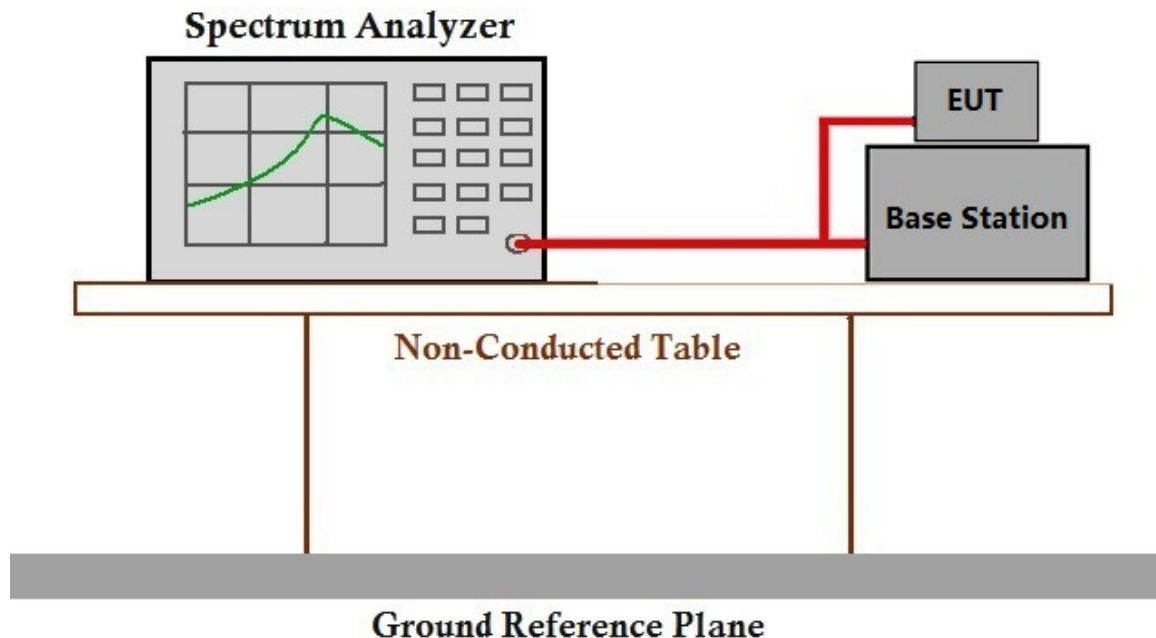
## 6.4 Band Edge Compliance

Test Requirement: §2.1051, §22.917, §24.238  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit:  $\leq -13\text{dBm}/1\% \cdot \text{EBW}$ , in 1 MHz bands immediately outside and adjacent to the frequency block.

### 6.4.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

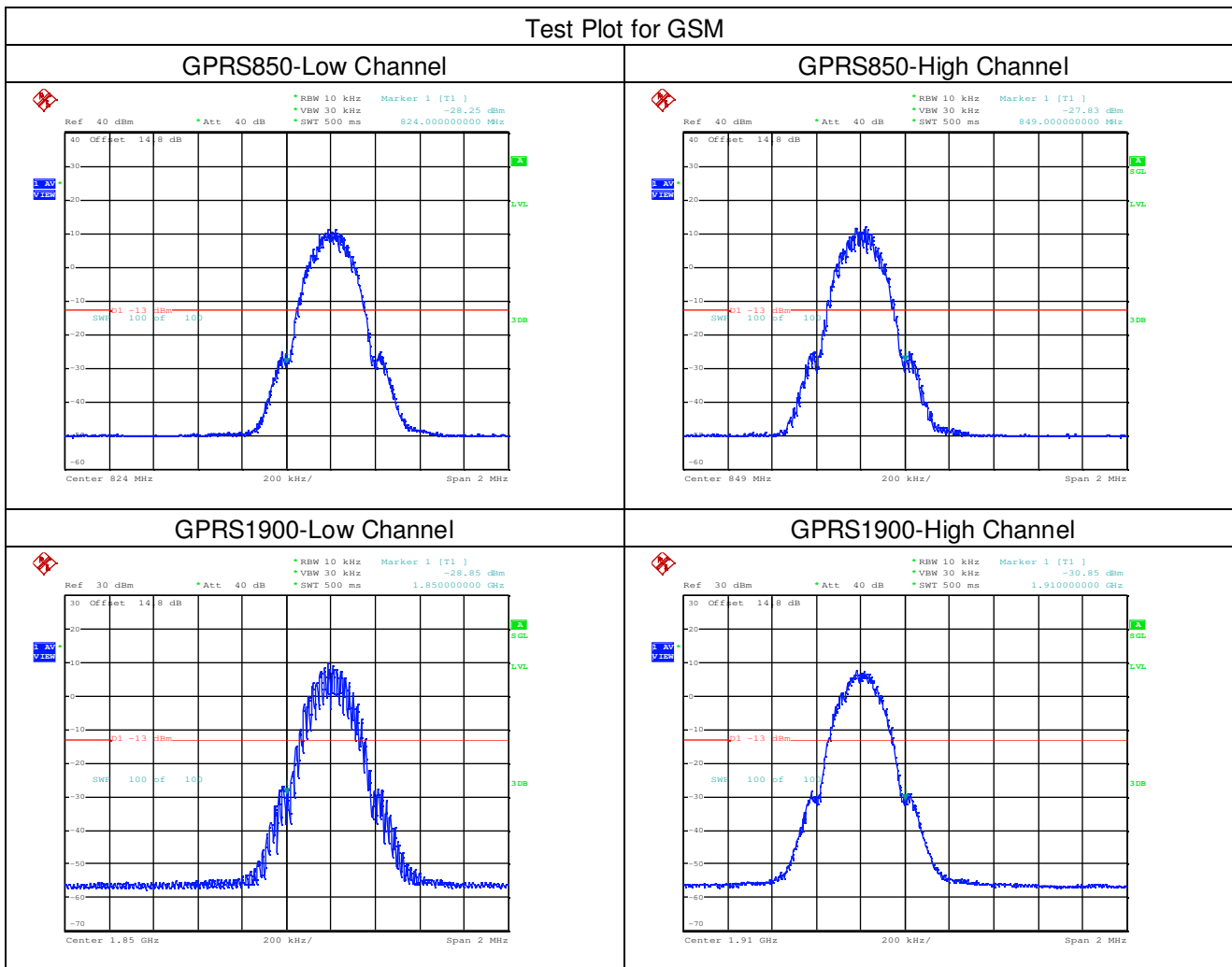
### 6.4.2 Test Setup Diagram



### 6.4.3 Measurement Data



Test Plot for GSM



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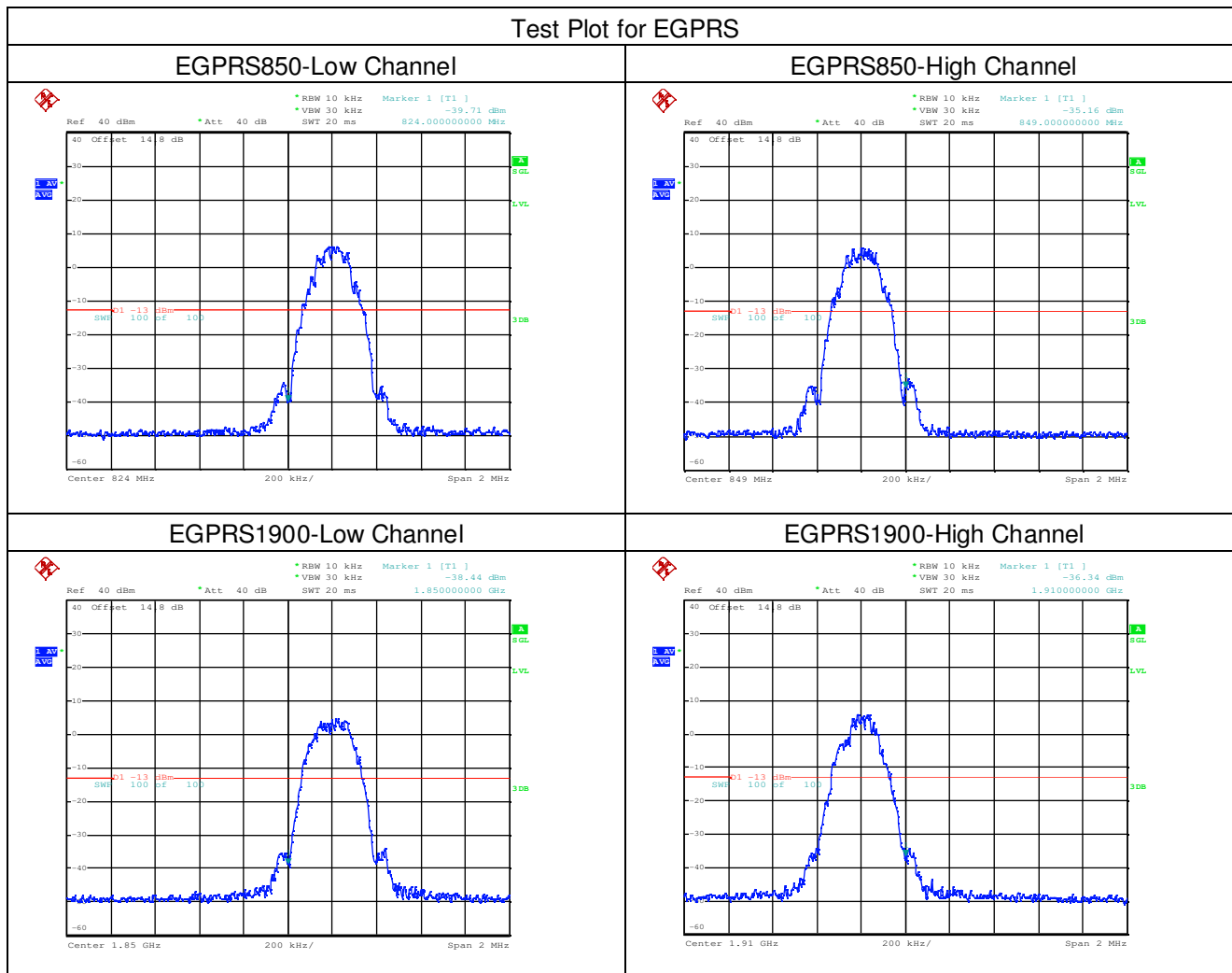
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Test Plot for EGPRS



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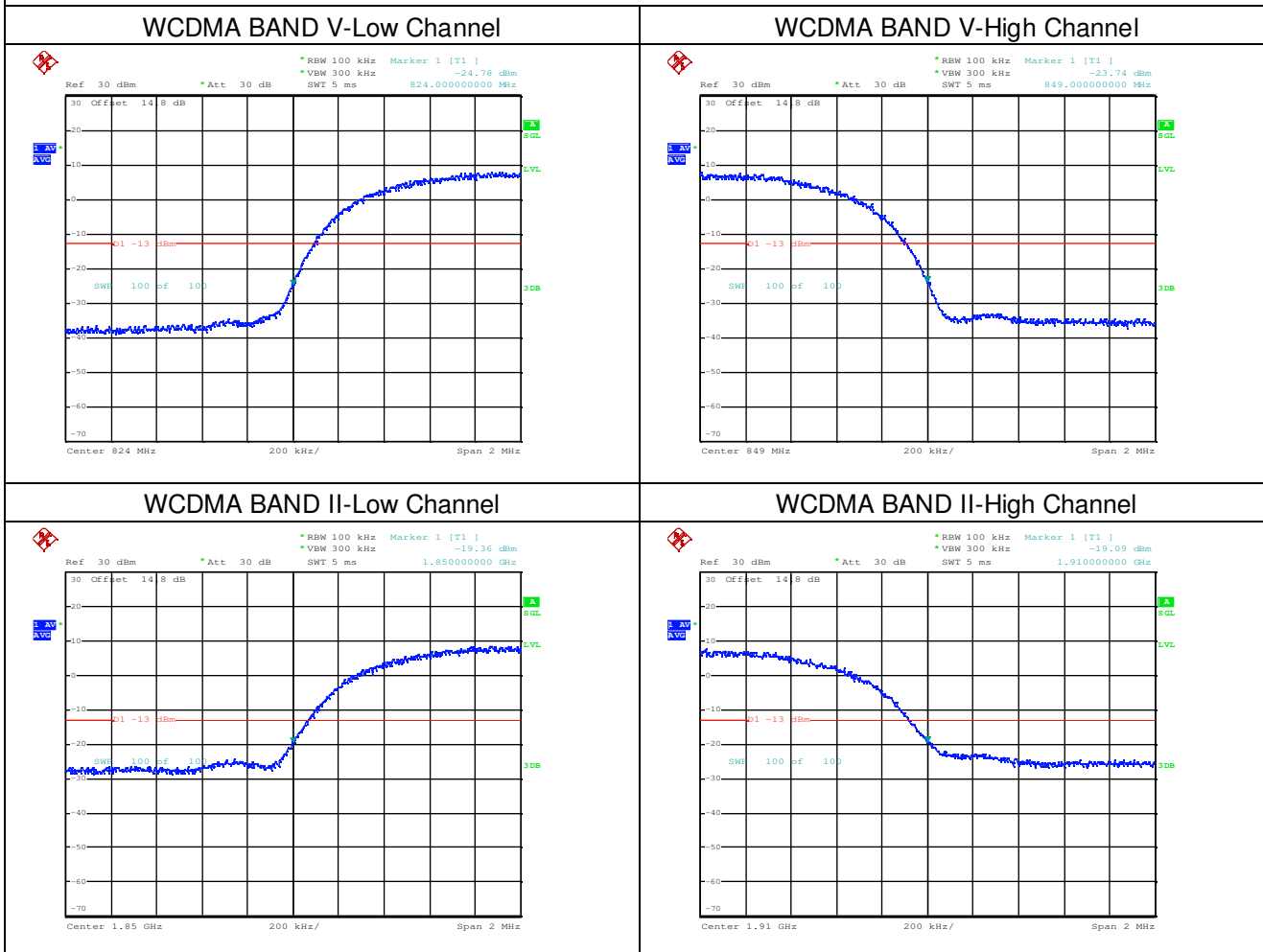
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Test Plot for WCDMA



Note: All modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.



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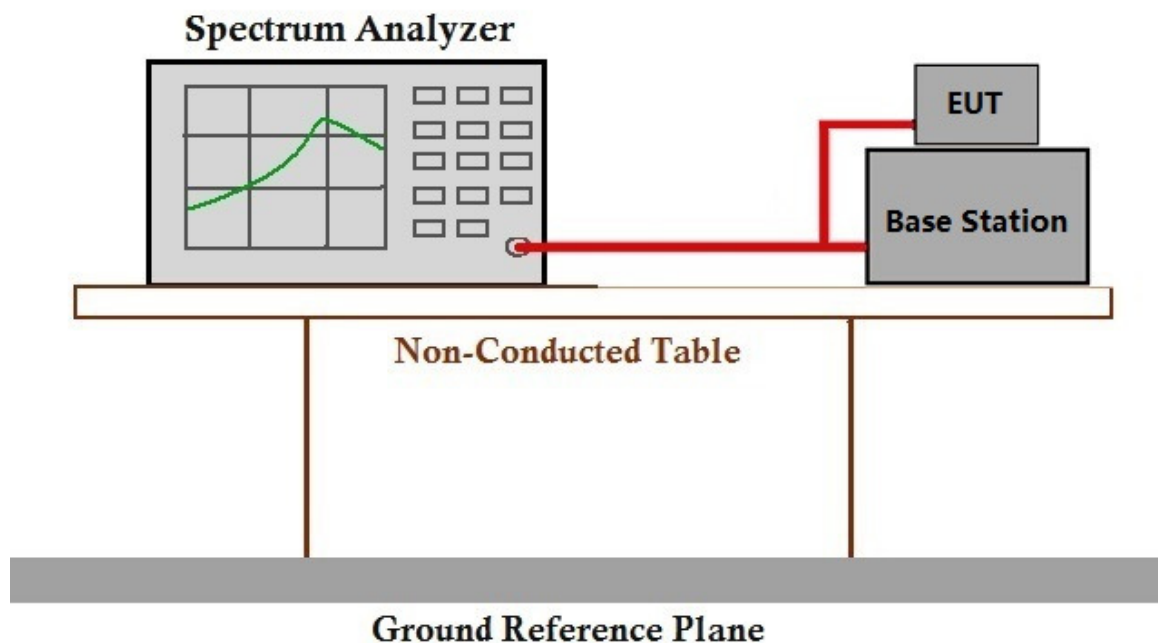
## 6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051, §22.917, §24.238  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit:  $\leq -13\text{dBm}$

### 6.5.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

### 6.5.2 Test Setup Diagram



### 6.5.3 Measurement Data



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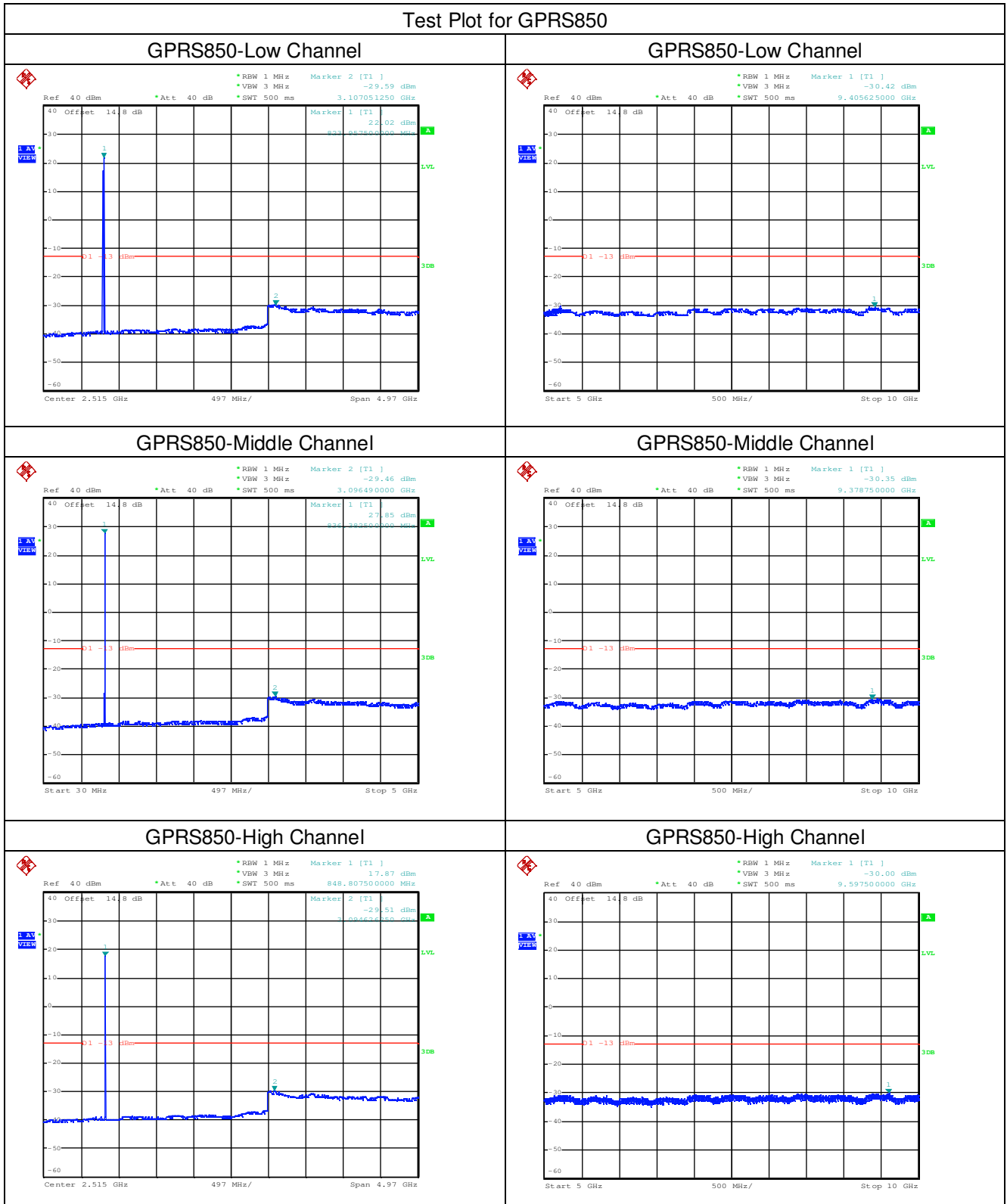
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Test Plot for GPRS850



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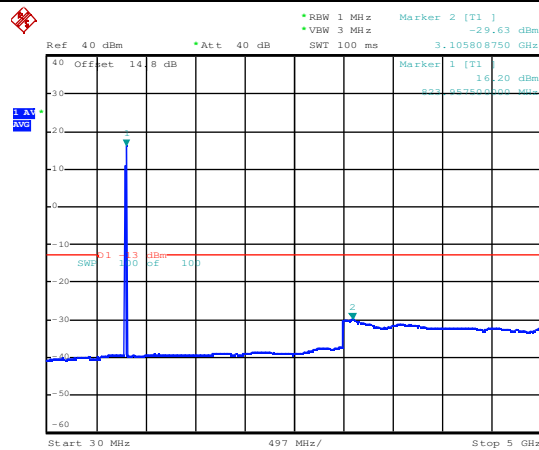
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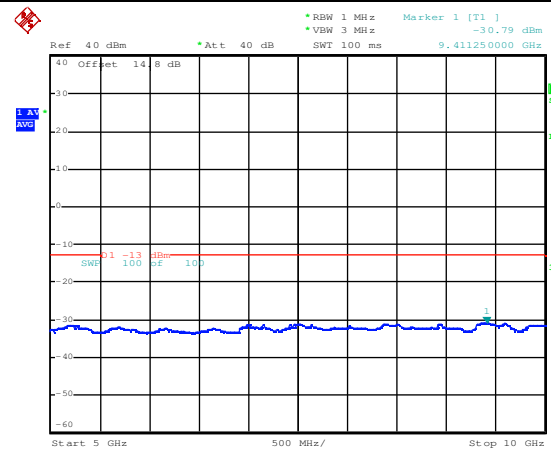


Test Plot for EGPRS850

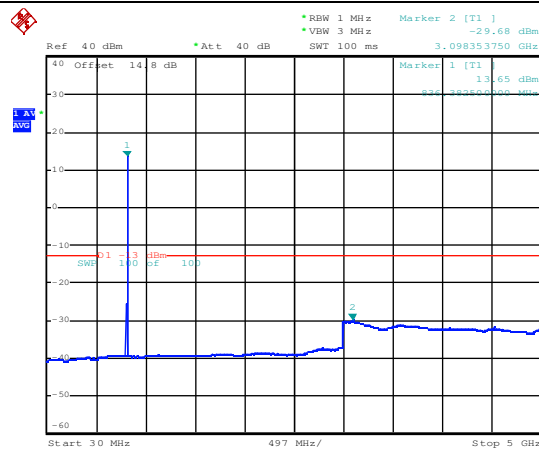
EGPRS850-Low Channel



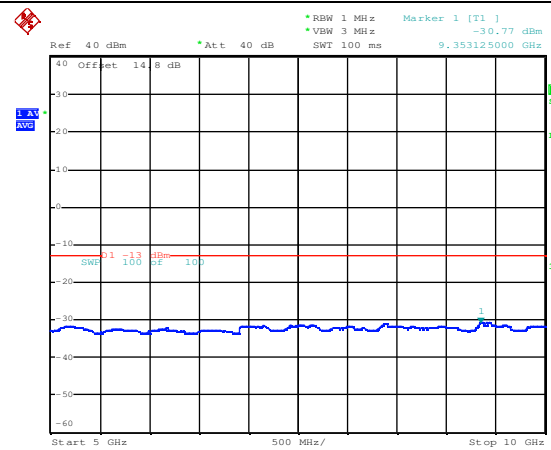
EGPRS850-Low Channel



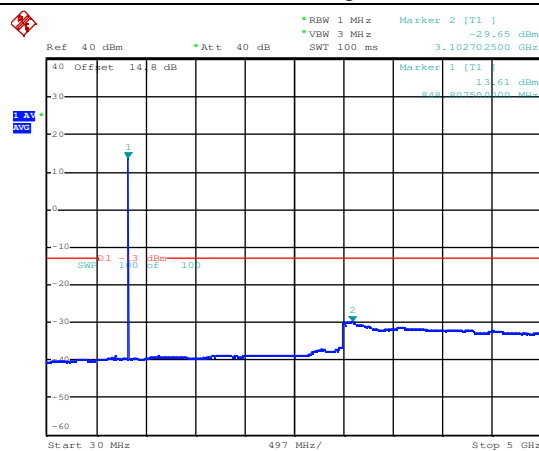
EGPRS850-Middle Channel



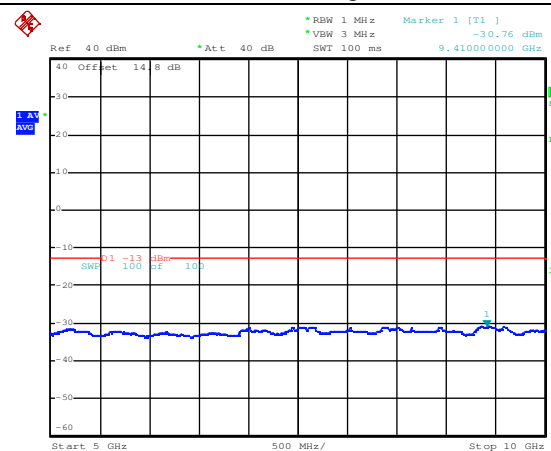
EGPRS850-Middle Channel



EGPRS850-High Channel



EGPRS850-High Channel



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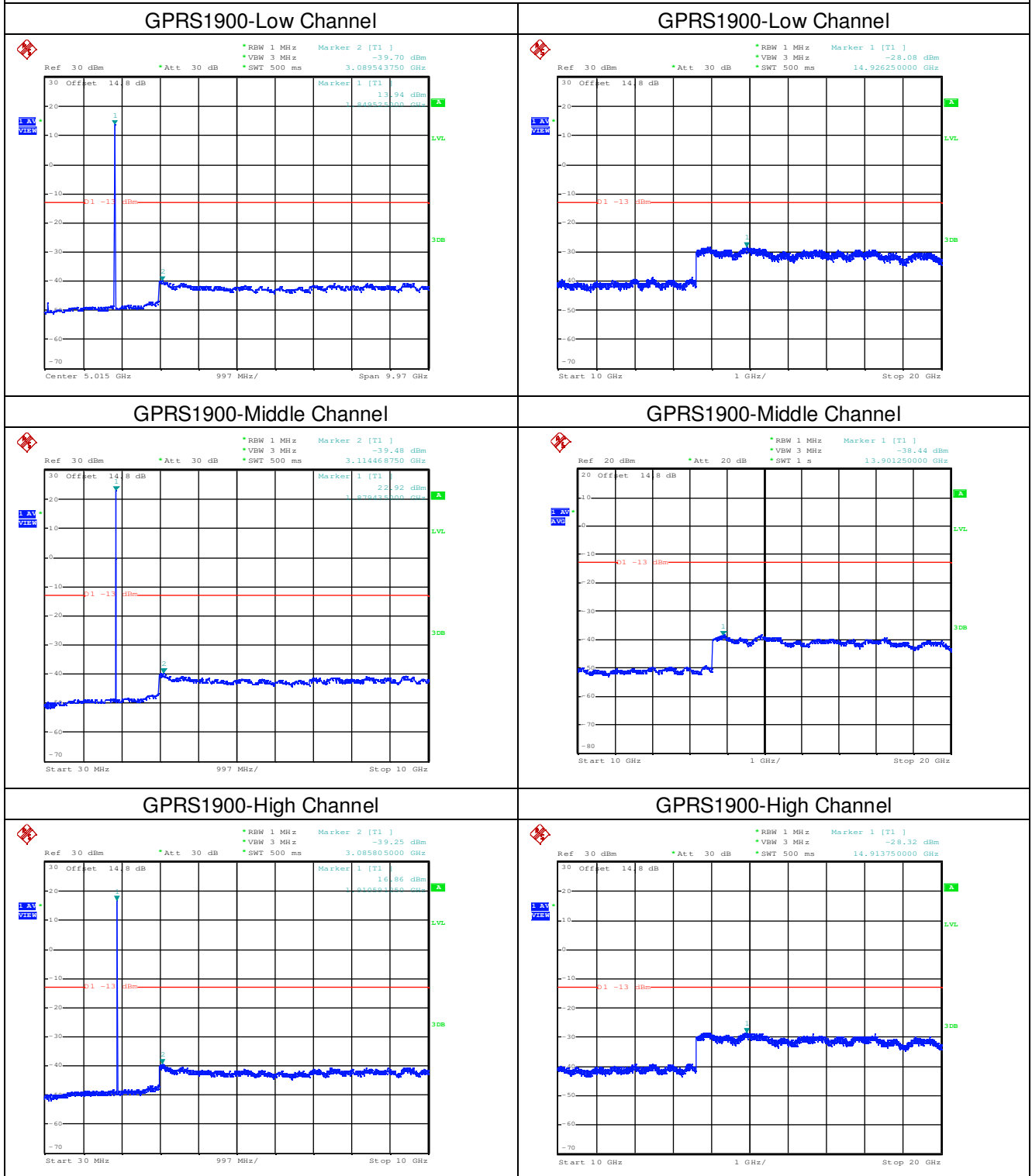
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Test Plot for GPRS1900



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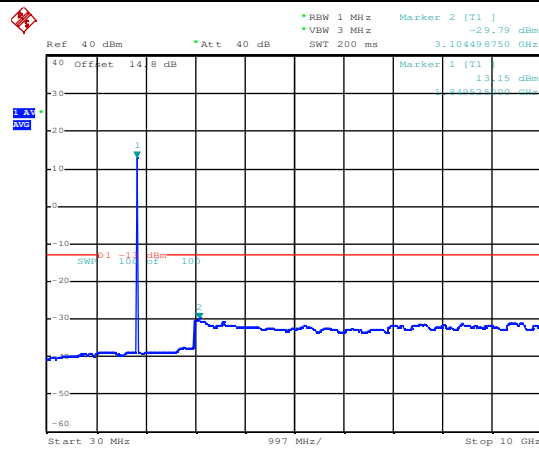
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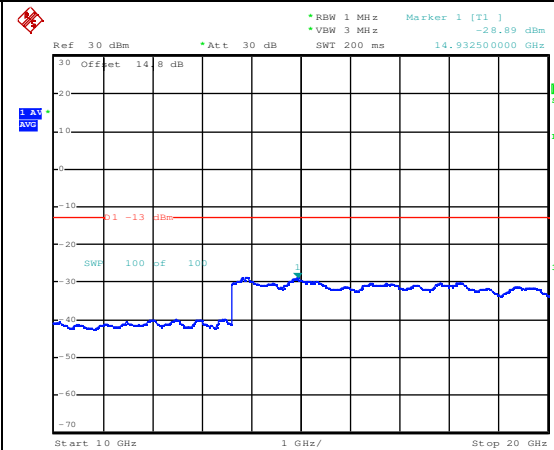


Test Plot for EGPRS1900

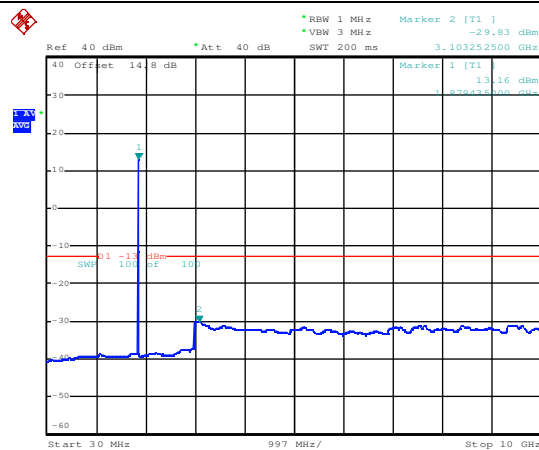
EGPRS1900-Low Channel



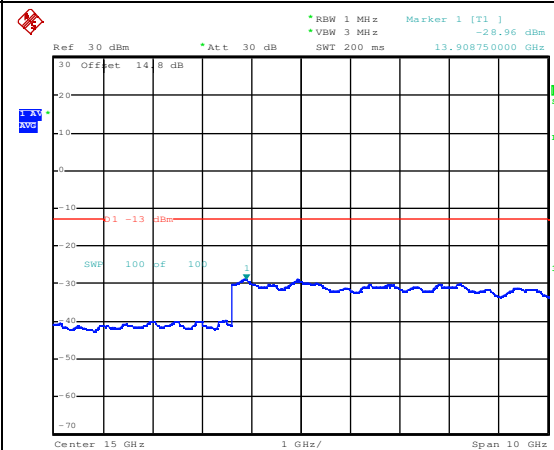
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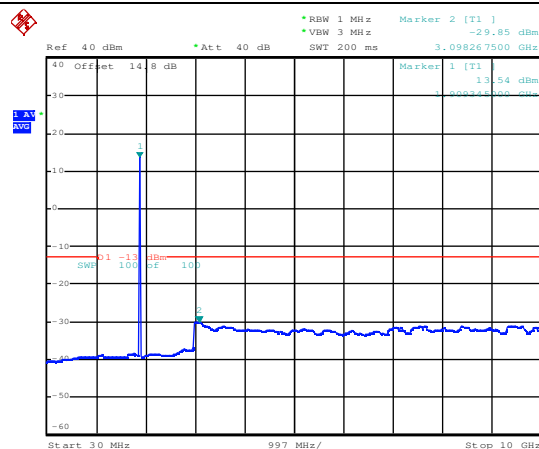
EGPRS1900-Middle Channel



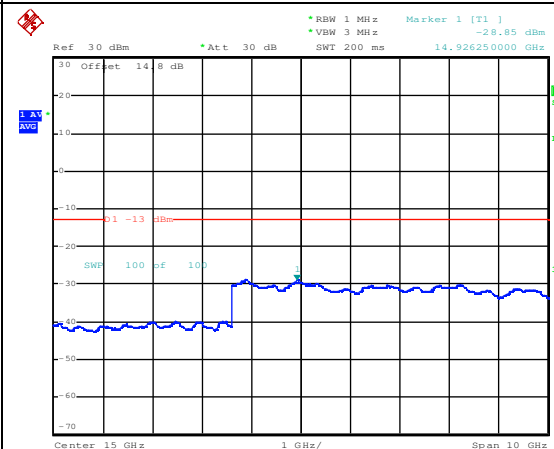
EGPRS1900-Middle Channel



EGPRS1900-High Channel



EGPRS1900-High Channel

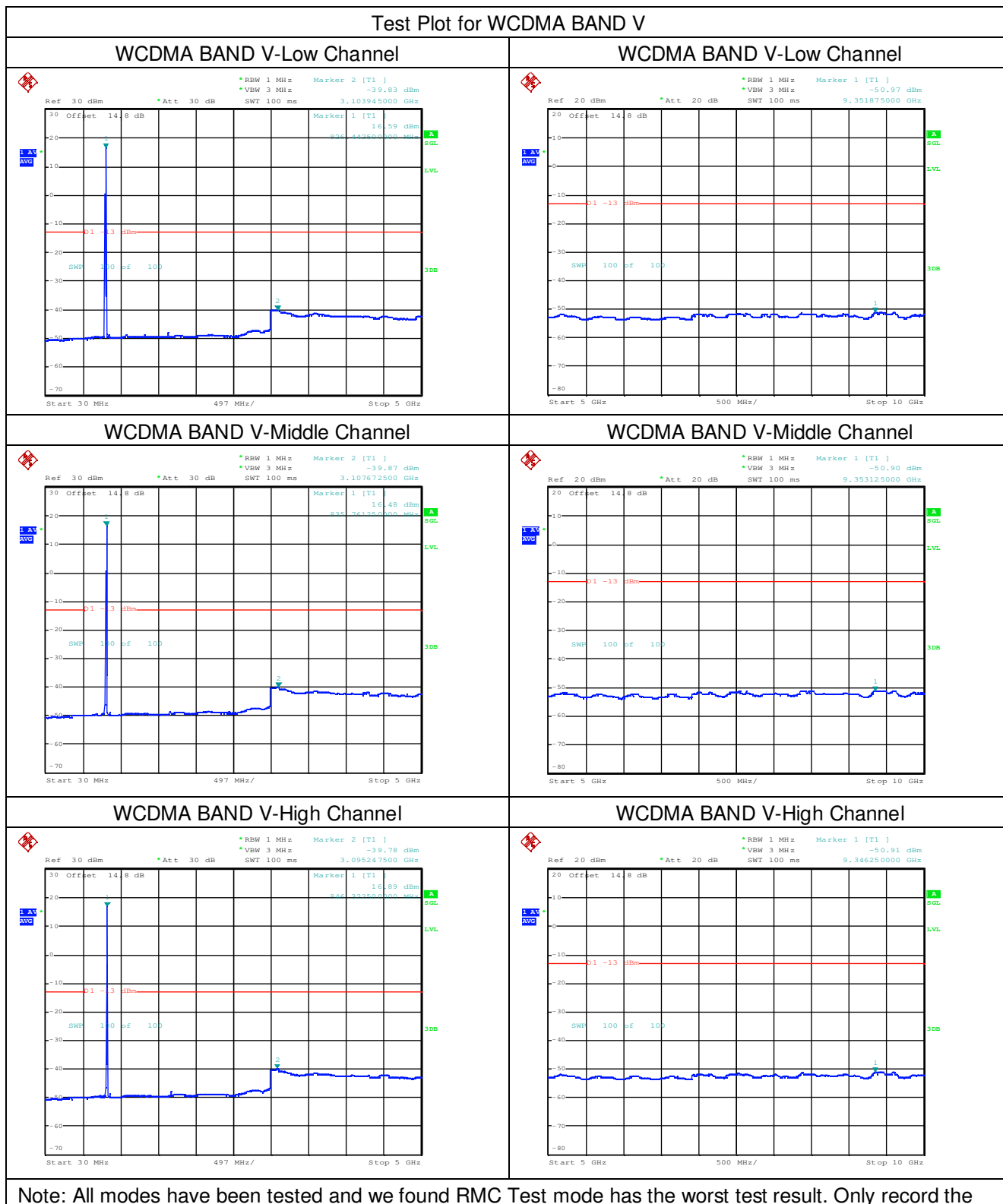


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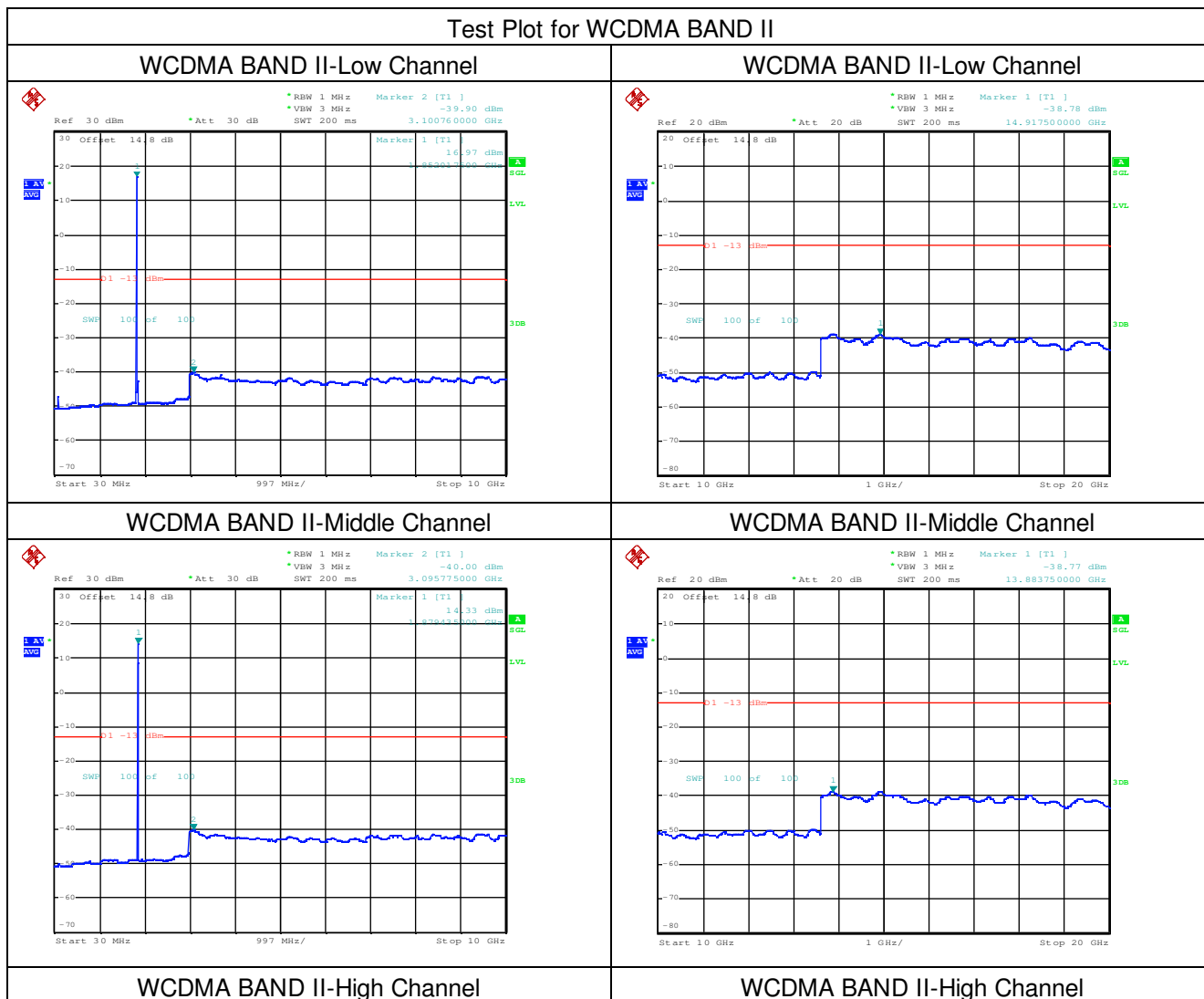
Note: All modes have been tested and we found RMC Test mode has the worst test result. Only record the



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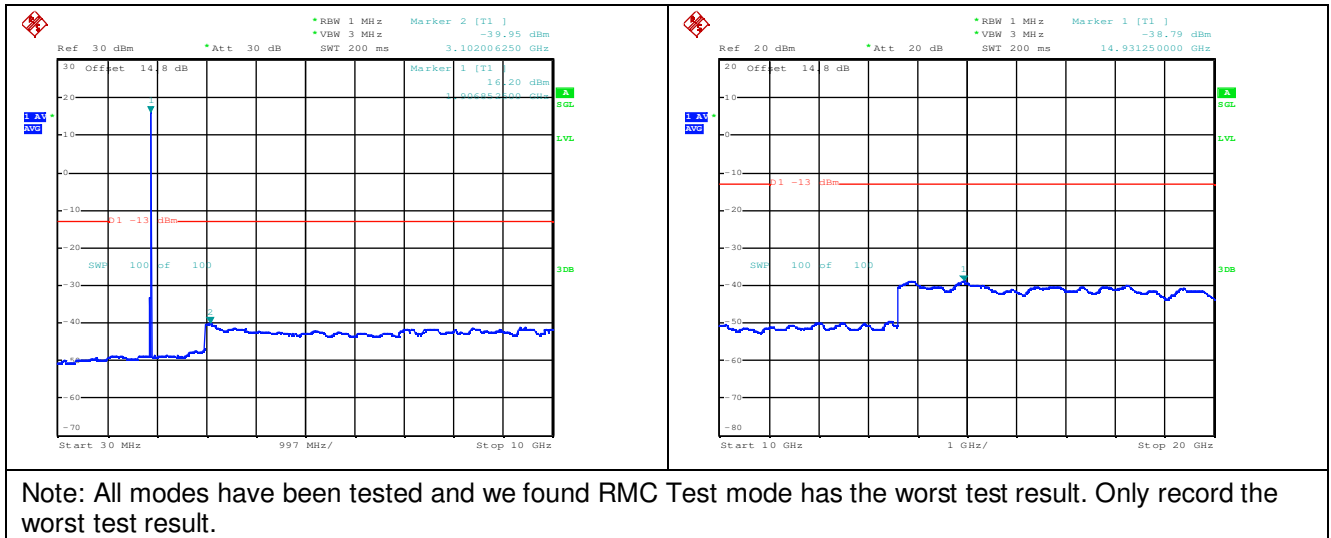


worst test result.



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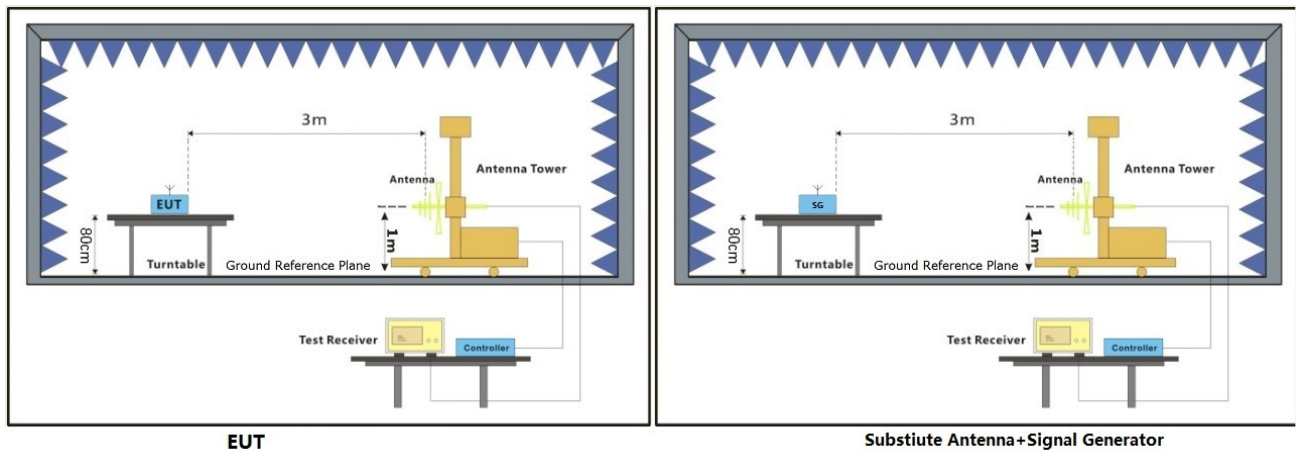
## 6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §22.917, §24.238,  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit:  $\leq -13\text{dBm}$

### 6.6.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

### 6.6.2 Test Setup Diagram



### 6.6.3 Measurement Procedure and Data

#### Test Procedure:

- (1) On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
- (2) The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
- (3) The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- (4) The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- (5) The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
- (6) The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- (7) The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
- (8) The maximum signal level detected by the measuring receiver shall be noted.
- (9) The measurement shall be repeated with the test antenna set to horizontal polarization.
- (10) Replace the antenna with a proper Antenna (substitution antenna).
- (11) The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
- (12) The substitution antenna shall be connected to a calibrated signal generator.
- (13) If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- (14) The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- (15) The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- (16) The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- (17) The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.



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GPRS850-Low channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1648.4	-64.73	0.52	6	-59.25	-13	-46.25	Horizontal	Pass
2472.6	-60.44	0.53	5.8	-55.17	-13	-42.17	Horizontal	Pass
3296.8	-57.57	0.65	6.2	-52.02	-13	-39.02	Horizontal	Pass
1648.4	-65.29	0.52	6	-59.81	-13	-46.81	Vertical	Pass
2472.6	-61.92	0.53	5.8	-56.65	-13	-43.65	Vertical	Pass
3296.8	-57.97	0.65	6.2	-52.42	-13	-39.42	Vertical	Pass

GPRS850-Middle channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1672.8	-63.96	0.52	6	-58.48	-13	-45.48	Horizontal	Pass
2509.2	-60.47	0.59	5.3	-55.76	-13	-42.76	Horizontal	Pass
3345.6	-56.38	0.65	6.2	-50.83	-13	-37.83	Horizontal	Pass
1672.8	-60.57	0.52	6	-55.09	-13	-42.09	Vertical	Pass
2509.2	-61.68	0.59	5.3	-56.97	-13	-43.97	Vertical	Pass
3345.6	-57.9	0.65	6.2	-52.35	-13	-39.35	Vertical	Pass

GPRS850-High channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1697.6	-65	0.52	6	-59.52	-13	-46.52	Horizontal	Pass
2546.4	-60.61	0.59	5.3	-55.9	-13	-42.9	Horizontal	Pass
3395.2	-57.41	0.65	6.2	-51.86	-13	-38.86	Horizontal	Pass
1697.6	-62.32	0.52	6	-56.84	-13	-43.84	Vertical	Pass
2546.4	-61.39	0.59	5.3	-56.68	-13	-43.68	Vertical	Pass
3395.2	-57.13	0.65	6.2	-51.58	-13	-38.58	Vertical	Pass



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GPRS1900-Low channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3700.4	-67.43	0.71	7.6	-60.54	-13	-47.54	Horizontal	Pass
5550.6	-60.5	0.85	10.3	-51.05	-13	-38.05	Horizontal	Pass
7400.8	-58.56	1	12.9	-46.66	-13	-33.66	Horizontal	Pass
3700.4	-68.28	0.71	7.6	-61.39	-13	-48.39	Vertical	Pass
5550.6	-61.31	0.85	10.3	-51.86	-13	-38.86	Vertical	Pass
7400.8	-59.37	1	12.9	-47.47	-13	-34.47	Vertical	Pass

GPRS1900-Middle channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3760	-67.46	0.71	7.6	-60.57	-13	-47.57	Horizontal	Pass
5640	-60.8	0.85	10.3	-51.35	-13	-38.35	Horizontal	Pass
7520	-59.21	0.99	13.2	-47	-13	-34	Horizontal	Pass
3760	-67.2	0.71	7.6	-60.31	-13	-47.31	Vertical	Pass
5640	-60.95	0.85	10.3	-51.5	-13	-38.5	Vertical	Pass
7520	-59.42	0.99	13.2	-47.21	-13	-34.21	Vertical	Pass

GPRS1900-High channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3819.6	-66.85	0.71	7.6	-59.96	-13	-46.96	Horizontal	Pass
5729.4	-60.65	0.85	10.3	-51.2	-13	-38.2	Horizontal	Pass
7639.2	-59.06	0.99	13.2	-46.85	-13	-33.85	Horizontal	Pass
3819.6	-63.27	0.71	7.6	-56.38	-13	-43.38	Vertical	Pass
5729.4	-59.64	0.85	10.3	-50.19	-13	-37.19	Vertical	Pass
7639.2	-57.51	0.99	13.2	-45.3	-13	-32.3	Vertical	Pass



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WCDMA BAND V-Low channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1649.4	-57.37	0.52	6	-51.89	-13	-38.89	Horizontal	Pass
2474.1	-52.2	0.53	5.8	-46.93	-13	-33.93	Horizontal	Pass
3298.8	-56.7	0.65	6.2	-51.15	-13	-38.15	Horizontal	Pass
1649.4	-50.23	0.52	6	-44.75	-13	-31.75	Vertical	Pass
2474.1	-47.7	0.53	5.8	-42.43	-13	-29.43	Vertical	Pass
3298.8	-56.7	0.65	6.2	-51.15	-13	-38.15	Vertical	Pass

WCDMA BAND V-Middle channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1673.04	-57.51	0.52	6	-52.03	-13	-39.03	Horizontal	Pass
2509.56	-51.04	0.59	5.3	-46.33	-13	-33.33	Horizontal	Pass
3346.08	-56.76	0.65	6.2	-51.21	-13	-38.21	Horizontal	Pass
1673.04	-49.48	0.52	6	-44	-13	-31	Vertical	Pass
2509.56	-47.22	0.59	5.3	-42.51	-13	-29.51	Vertical	Pass
3346.08	-58.01	0.65	6.2	-52.46	-13	-39.46	Vertical	Pass

WCDMA BAND V-High channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1696.62	-59.09	0.52	6	-53.61	-13	-40.61	Horizontal	Pass
2544.93	-53.6	0.59	5.3	-48.89	-13	-35.89	Horizontal	Pass
3393.24	-57.72	0.65	6.2	-52.17	-13	-39.17	Horizontal	Pass
1696.62	-50.94	0.52	6	-45.46	-13	-32.46	Vertical	Pass
2544.93	-50.81	0.59	5.3	-46.1	-13	-33.1	Vertical	Pass
3393.24	-57.82	0.65	6.2	-52.27	-13	-39.27	Vertical	Pass



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WCDMA Band II-Low channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3704.8	-52.94	0.71	7.6	-46.05	-13	-33.05	Horizontal	Pass
5557.2	-56.1	0.85	10.3	-46.65	-13	-33.65	Horizontal	Pass
7411.461	-57.59	1	12.9	-45.69	-13	-32.69	Horizontal	Pass
3704.8	-54.68	0.71	7.6	-47.79	-13	-34.79	Vertical	Pass
5557.2	-54.61	0.85	10.3	-45.16	-13	-32.16	Vertical	Pass
7409.6	-56.52	1	12.9	-44.62	-13	-31.62	Vertical	Pass

WCDMA Band II-Middle channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3760	-57.14	0.71	7.6	-50.25	-13	-37.25	Horizontal	Pass
5640	-55.78	0.85	10.3	-46.33	-13	-33.33	Horizontal	Pass
7520	-56.56	0.99	13.2	-44.35	-13	-31.35	Horizontal	Pass
3760	-58.26	0.71	7.6	-51.37	-13	-38.37	Vertical	Pass
5640	-55.19	0.85	10.3	-45.74	-13	-32.74	Vertical	Pass
7520	-57.94	0.99	13.2	-45.73	-13	-32.73	Vertical	Pass

WCDMA Band II-High channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3815.2	-56.12	0.71	7.6	-49.23	-13	-36.23	Horizontal	Pass
5722.8	-55.25	0.85	10.3	-45.8	-13	-32.8	Horizontal	Pass
7630.4	-56.53	0.99	13.2	-44.32	-13	-31.32	Horizontal	Pass
3815.2	-57.03	0.71	7.6	-50.14	-13	-37.14	Vertical	Pass
5722.8	-56.94	0.85	10.3	-47.49	-13	-34.49	Vertical	Pass
7630.4	-56.14	0.99	13.2	-43.93	-13	-30.93	Vertical	Pass

**Note:**

For GSM, all modes have been tested and we found GPRS Test mode has the worst test result. Only record the worst test result.

For WCDMA, all modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.



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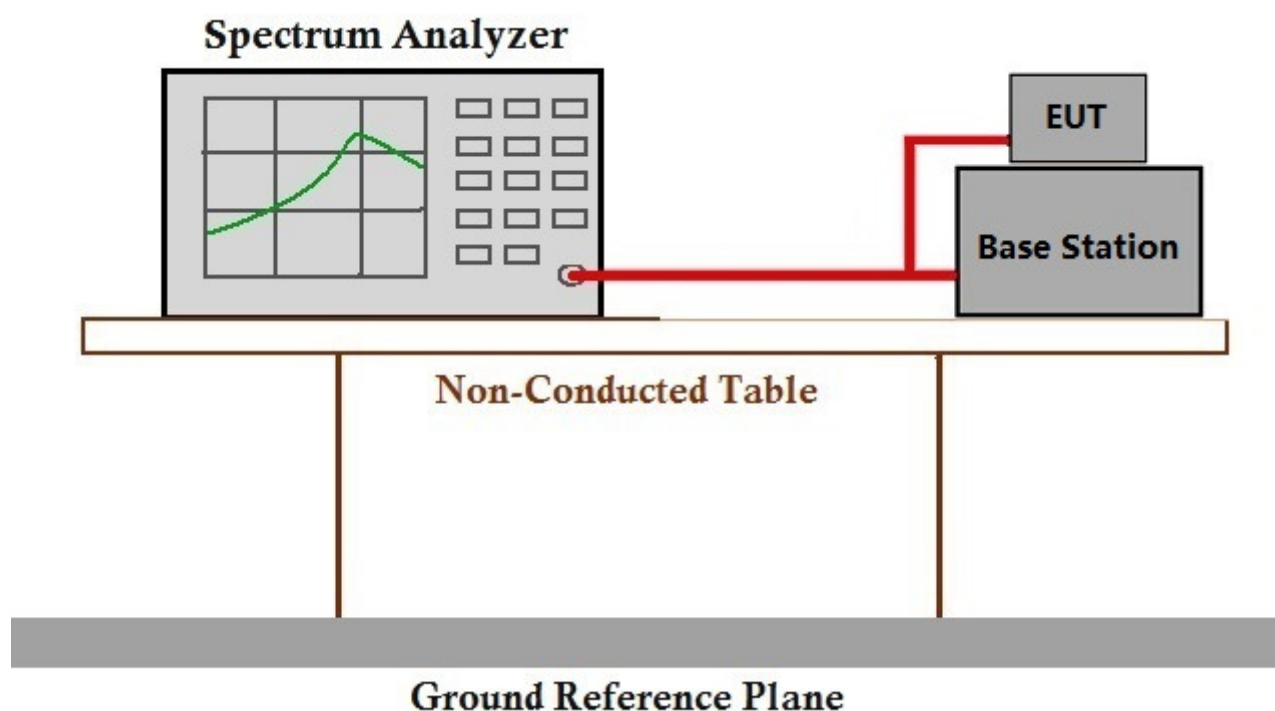
## 6.7 Frequency stability

Test Requirement: §2.1055, §22.355, §24.235  
 Test Method: ANSI C63.26, KDB 971168 D01 v03  
 Limit:  $\leq \pm 2.5\text{ppm}$ .

### 6.7.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
 Test mode: f:TX mode\_Keep the EUT in transmitting mode

### 6.7.2 Test Setup Diagram



### 6.7.3 Measurement Data

Frequency Error VS. Voltage

Test Band	Test mode:	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 850	GPRS	LCH	TN	VL	-4.34	-0.005266	PASS
				VN	7.20	0.008736	PASS
				VH	0.34	0.000413	PASS
		MCH	TN	VL	-2.24	-0.002678	PASS
				VN	5.74	0.006861	PASS
				VH	-2.63	-0.003144	PASS
		HCH	TN	VL	6.81	0.008023	PASS
				VN	-6.58	-0.007752	PASS
				VH	6.23	0.007340	PASS
	EGPRS	LCH	TN	VL	9.57	0.011611	PASS
				VN	-9.18	-0.011138	PASS
				VH	-0.09	-0.000109	PASS
		MCH	TN	VL	9.17	0.010961	PASS
				VN	4.26	0.005092	PASS
				VH	-2.76	-0.003299	PASS
		HCH	TN	VL	9.35	0.011016	PASS
				VN	-9.13	-0.010756	PASS
				VH	1.94	0.002286	PASS



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Test Band	Test mode:	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 1900	GPRS	LCH	TN	VL	-5.10	-0.002756	PASS
				VN	-6.55	-0.003540	PASS
				VH	4.18	0.002259	PASS
		MCH	TN	VL	8.58	0.004564	PASS
				VN	7.45	0.003963	PASS
				VH	-8.33	-0.004431	PASS
		HCH	TN	VL	1.49	0.000780	PASS
				VN	3.81	0.001995	PASS
				VH	7.86	0.004116	PASS
	EGPRS	LCH	TN	VL	7.61	0.004113	PASS
				VN	-7.74	-0.004183	PASS
				VH	8.99	0.004859	PASS
		MCH	TN	VL	-0.24	-0.000128	PASS
				VN	5.13	0.002729	PASS
				VH	-6.54	-0.003479	PASS
		HCH	TN	VL	8.90	0.004660	PASS
				VN	7.03	0.003681	PASS
				VH	-0.38	-0.000199	PASS

Test Band	Test mode:	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA band V	RMC	LCH	TN	VL	-2.11	-0.002553	PASS
				VN	7.30	0.008833	PASS
				VH	2.62	0.003170	PASS
		MCH	TN	VL	7.02	0.008391	PASS
				VN	-4.07	-0.004865	PASS
				VH	-9.63	-0.011511	PASS
		HCH	TN	VL	-0.67	-0.000791	PASS
				VN	-5.22	-0.006166	PASS
				VH	-7.35	-0.008682	PASS



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Test Band	Test mode:	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA band II	RMC	LCH	TN	VL	-7.44	-0.004016	PASS
				VN	2.50	0.001350	PASS
				VH	-4.64	-0.002505	PASS
		MCH	TN	VL	-2.89	-0.001537	PASS
				VN	-1.94	-0.001032	PASS
				VH	-1.27	-0.000676	PASS
		HCH	TN	VL	6.45	0.003381	PASS
				VN	8.87	0.004650	PASS
				VH	4.12	0.002160	PASS

Note: All modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.



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Frequency Error VS. Temperature

Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 850	GPRS	LCH	VN	-30	8.65	0.010495	PASS
				-20	-0.06	-0.000073	PASS
				-10	-1.66	-0.002014	PASS
				0	-9.18	-0.011138	PASS
				10	6.26	0.007595	PASS
				20	3.53	0.004283	PASS
				30	4.80	0.005824	PASS
				40	6.78	0.008226	PASS
				50	3.95	0.004793	PASS
		MCH	VN	-30	0.50	0.000598	PASS
				-20	0.22	0.000263	PASS
				-10	3.44	0.004112	PASS
				0	-0.46	-0.000550	PASS
				10	3.91	0.004674	PASS
				20	2.89	0.003454	PASS
				30	7.98	0.009539	PASS
				40	6.02	0.007196	PASS
				50	6.79	0.008116	PASS
		HCH	VN	-30	-2.61	-0.003075	PASS
				-20	6.33	0.007458	PASS
				-10	1.77	0.002085	PASS
				0	-9.91	-0.011675	PASS
				10	-3.27	-0.003852	PASS
				20	7.94	0.009354	PASS
				30	-5.99	-0.007057	PASS
				40	-4.73	-0.005573	PASS
				50	-8.77	-0.010332	PASS



Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 850	EGPRS	LCH	VN	-30	-3.55	-0.004307	PASS
				-20	-5.77	-0.007001	PASS
				-10	-5.16	-0.006261	PASS
				0	8.64	0.010483	PASS
				10	5.87	0.007122	PASS
				20	5.50	0.006673	PASS
				30	3.89	0.004720	PASS
				40	1.81	0.002196	PASS
				50	-0.66	-0.000801	PASS
		MCH	VN	-30	-3.69	-0.004411	PASS
				-20	-0.21	-0.000251	PASS
				-10	6.69	0.007997	PASS
				0	1.86	0.002223	PASS
				10	6.31	0.007542	PASS
				20	4.17	0.004984	PASS
				30	-3.32	-0.003968	PASS
				40	6.86	0.008200	PASS
				50	7.58	0.009060	PASS
		HCH	VN	-30	-0.05	-0.000059	PASS
				-20	8.26	0.009731	PASS
				-10	2.84	0.003346	PASS
				0	-8.83	-0.010403	PASS
				10	4.05	0.004771	PASS
				20	0.55	0.000648	PASS
				30	7.40	0.008718	PASS
				40	8.56	0.010085	PASS
				50	-4.35	-0.005125	PASS





Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 1900	GPRS	LCH	VN	-30	5.13	0.002773	PASS
				-20	9.62	0.005199	PASS
				-10	6.05	0.003270	PASS
				0	-9.45	-0.005108	PASS
				10	-3.35	-0.001811	PASS
				20	7.18	0.003881	PASS
				30	9.65	0.005216	PASS
				40	-3.30	-0.001784	PASS
				50	5.39	0.002913	PASS
		MCH	VN	-30	8.47	0.004505	PASS
				-20	6.66	0.003543	PASS
				-10	4.35	0.002314	PASS
				0	-2.24	-0.001191	PASS
				10	7.26	0.003862	PASS
				20	8.16	0.004340	PASS
				30	4.67	0.002484	PASS
				40	-1.41	-0.000750	PASS
				50	9.46	0.005032	PASS
		HCH	VN	-30	2.31	0.001210	PASS
				-20	6.74	0.003529	PASS
				-10	4.24	0.002220	PASS
				0	-8.89	-0.004655	PASS
				10	-2.68	-0.001403	PASS
				20	5.63	0.002948	PASS
				30	3.69	0.001932	PASS
				40	-3.13	-0.001639	PASS
				50	-8.19	-0.004288	PASS



Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM 1900	EGPRS	LCH	VN	-30	5.80	0.003135	PASS
				-20	8.01	0.004329	PASS
				-10	8.12	0.004389	PASS
				0	1.51	0.000816	PASS
				10	4.41	0.002384	PASS
				20	-4.25	-0.002297	PASS
				30	8.76	0.004735	PASS
				40	-4.72	-0.002551	PASS
				50	-6.35	-0.003432	PASS
		MCH	VN	-30	3.94	0.002096	PASS
				-20	0.59	0.000314	PASS
				-10	6.29	0.003346	PASS
				0	9.49	0.005048	PASS
				10	9.67	0.005144	PASS
				20	-1.32	-0.000702	PASS
				30	-2.80	-0.001489	PASS
				40	3.06	0.001628	PASS
				50	7.99	0.004250	PASS
		HCH	VN	-30	6.61	0.003461	PASS
				-20	8.54	0.004472	PASS
				-10	8.15	0.004267	PASS
				0	-7.38	-0.003864	PASS
				10	-2.66	-0.001393	PASS
				20	2.60	0.001361	PASS
				30	9.91	0.005189	PASS
				40	-6.47	-0.003388	PASS
				50	-3.34	-0.001749	PASS



Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA band V	RMC	LCH	VN	-30	-2.05	-0.002481	PASS
				-20	-9.26	-0.011205	PASS
				-10	4.29	0.005191	PASS
				0	-4.63	-0.005603	PASS
				10	-9.32	-0.011278	PASS
				20	6.37	0.007708	PASS
				30	-8.35	-0.010104	PASS
				40	-7.43	-0.008991	PASS
				50	0.63	0.000762	PASS
		MCH	VN	-30	6.56	0.007841	PASS
				-20	-5.76	-0.006885	PASS
				-10	3.60	0.004303	PASS
				0	-2.95	-0.003526	PASS
				10	-2.12	-0.002534	PASS
				20	-3.19	-0.003813	PASS
				30	3.92	0.004686	PASS
				40	-8.36	-0.009993	PASS
				50	-9.34	-0.011164	PASS
		HCH	VN	-30	9.27	0.010950	PASS
				-20	-3.15	-0.003721	PASS
				-10	-7.27	-0.008587	PASS
				0	6.28	0.007418	PASS
				10	-4.62	-0.005457	PASS
				20	-4.52	-0.005339	PASS
				30	-9.78	-0.011552	PASS
				40	-6.56	-0.007749	PASS
				50	8.62	0.010182	PASS

Test Band	Test mode:	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
WCDMA band II	RMC	LCH	VN	-30	-8.42	-0.004545	PASS
				-20	1.60	0.000864	PASS
				-10	9.10	0.004913	PASS
				0	-4.53	-0.002445	PASS
				10	3.30	0.001781	PASS
				20	9.28	0.005010	PASS
				30	2.87	0.001549	PASS
				40	7.47	0.004033	PASS
				50	9.23	0.004983	PASS
		MCH	VN	-30	2.91	0.001548	PASS
				-20	-3.83	-0.002037	PASS
				-10	-8.76	-0.004660	PASS
				0	-2.25	-0.001197	PASS
				10	-1.23	-0.000654	PASS
				20	-9.11	-0.004846	PASS
				30	4.37	0.002324	PASS
				40	-9.40	-0.005000	PASS
				50	6.72	0.003574	PASS
		HCH	VN	-30	-7.62	-0.003995	PASS
				-20	2.72	0.001426	PASS
				-10	5.03	0.002637	PASS
				0	9.72	0.005095	PASS
				10	8.85	0.004639	PASS
				20	3.95	0.002071	PASS
				30	-5.77	-0.003025	PASS
				40	-0.06	-0.000031	PASS
				50	-5.42	-0.002841	PASS

Note: All modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.



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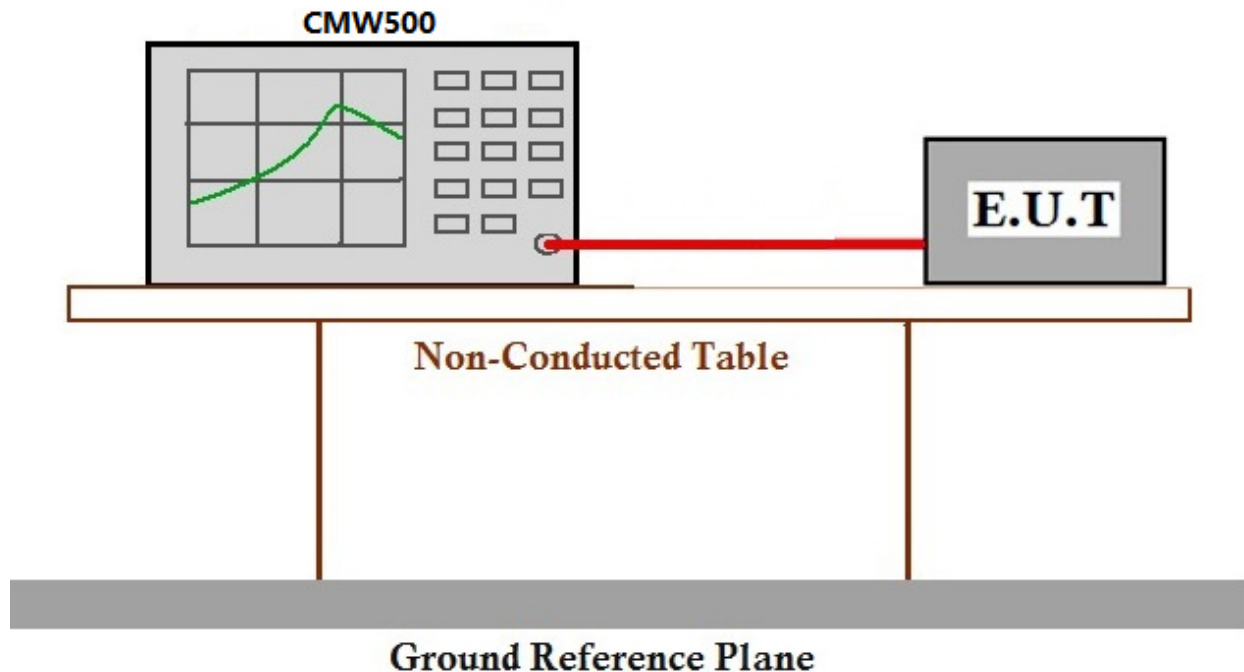
## 6.8 Modulation Characteristics

Test Requirement: §2.1047  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: Digital modulation

### 6.8.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C Humidity: 68.2 % RH Atmospheric Pressure: 1030 mbar  
Test mode: f:TX mode\_Keep the EUT in transmitting mode

### 6.8.2 Test Setup Diagram



### 6.8.3 Measurement Data



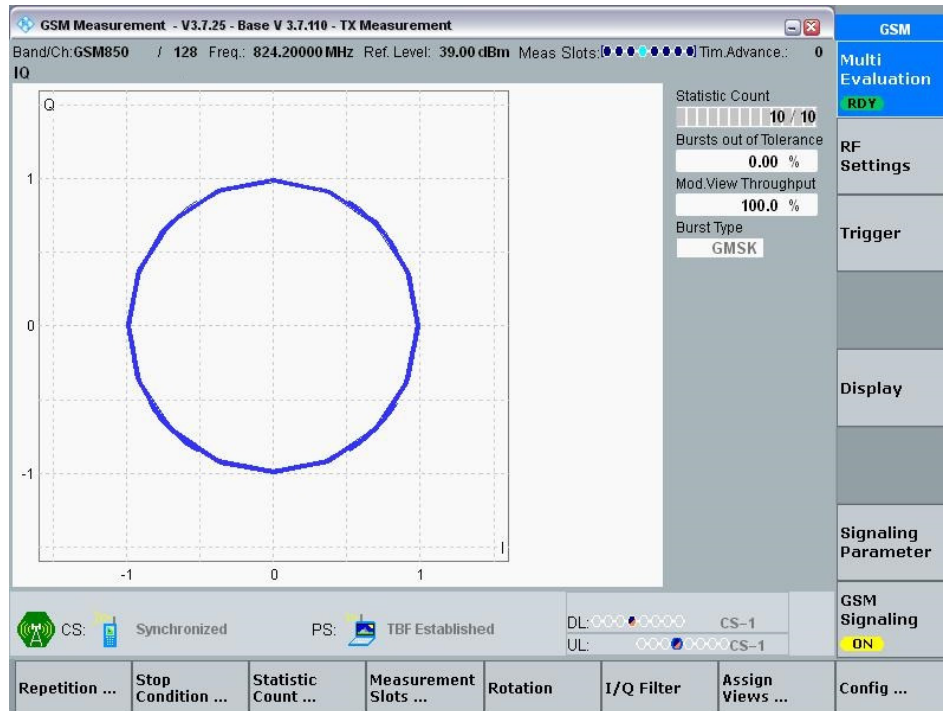
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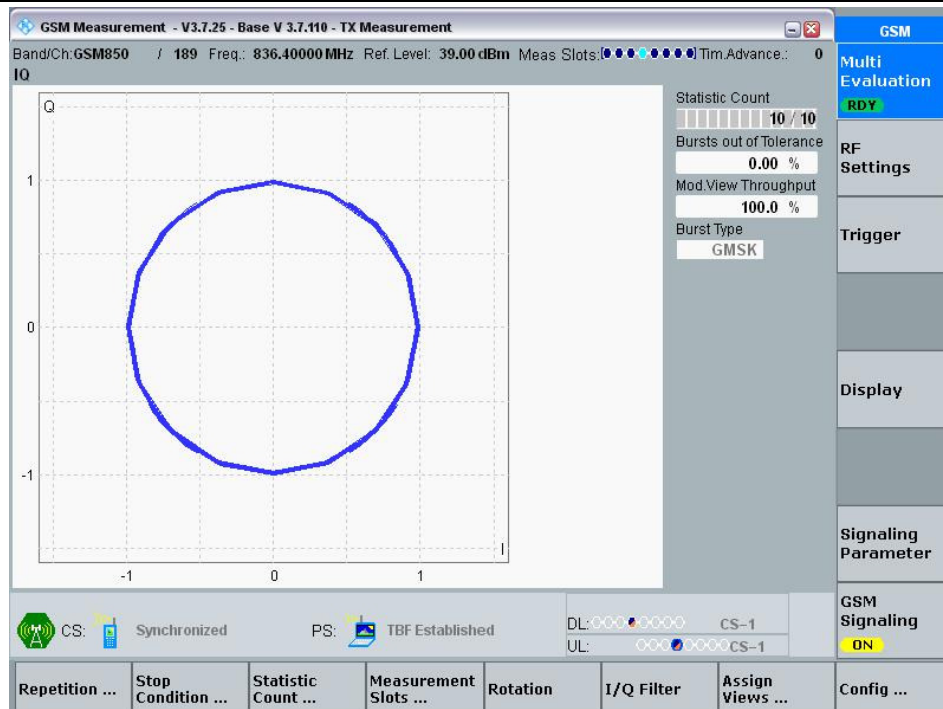
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### Test Plot GPRS850-L

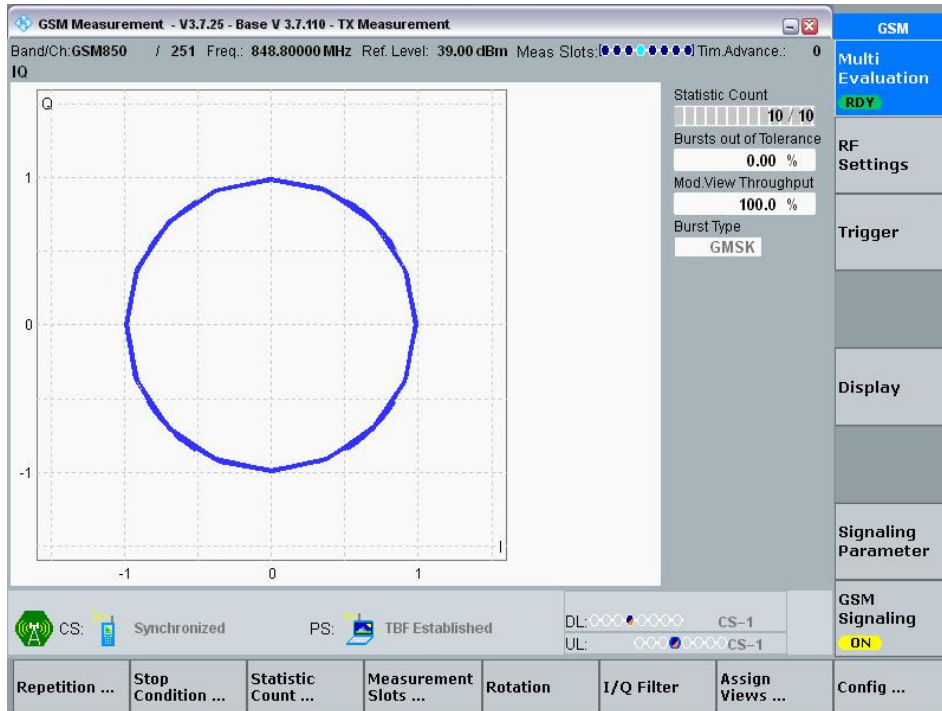


### GPRS850-M

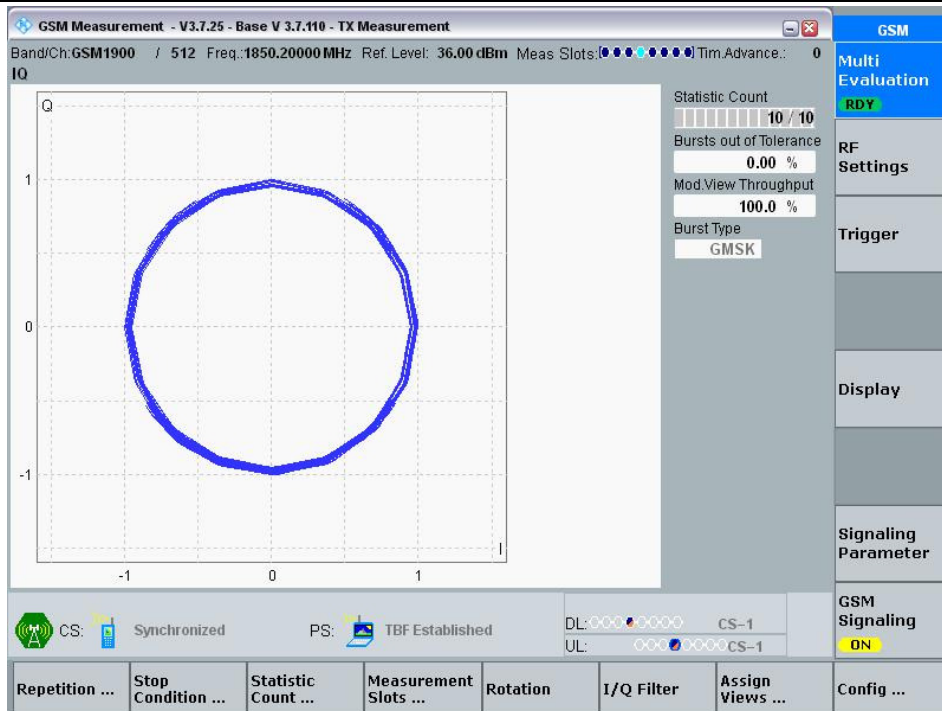


### Test Plot

#### GPRS850-H



#### GPRS1900-L



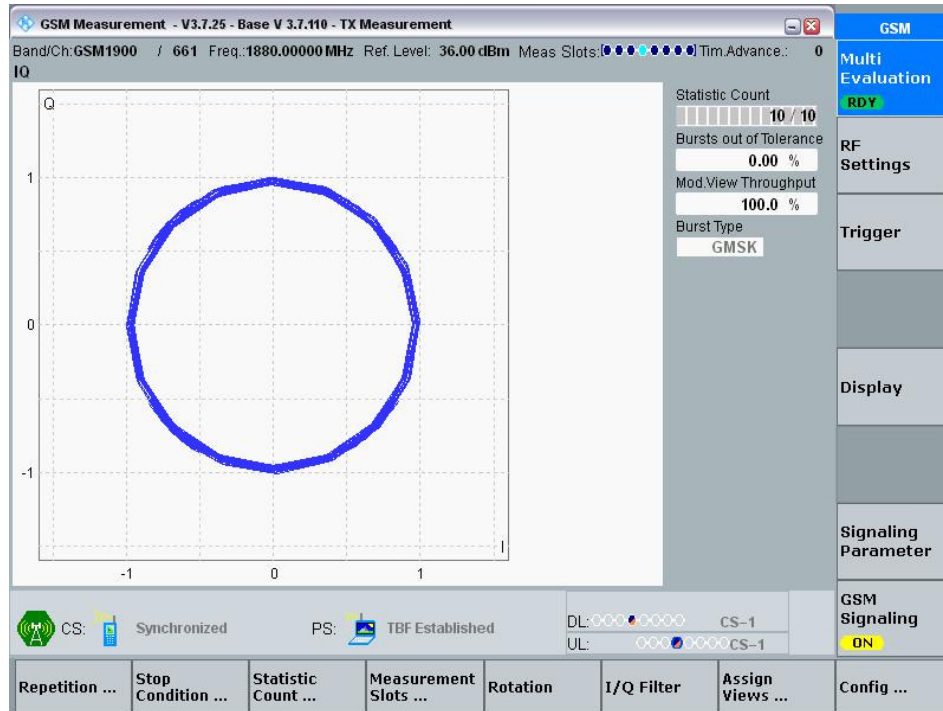
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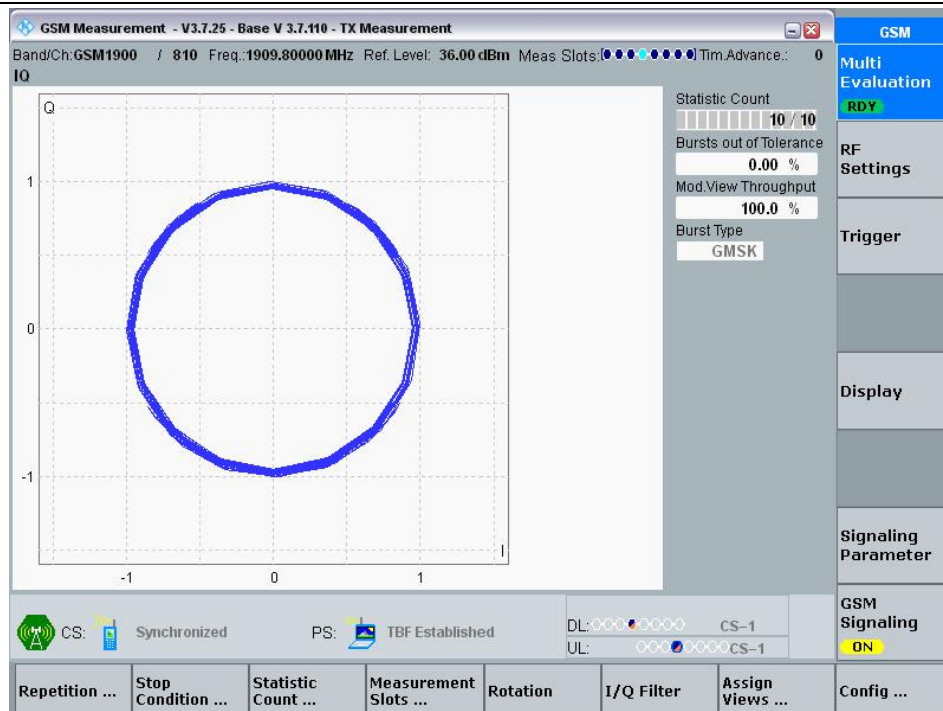


### Test Plot

#### GPRS1900-M



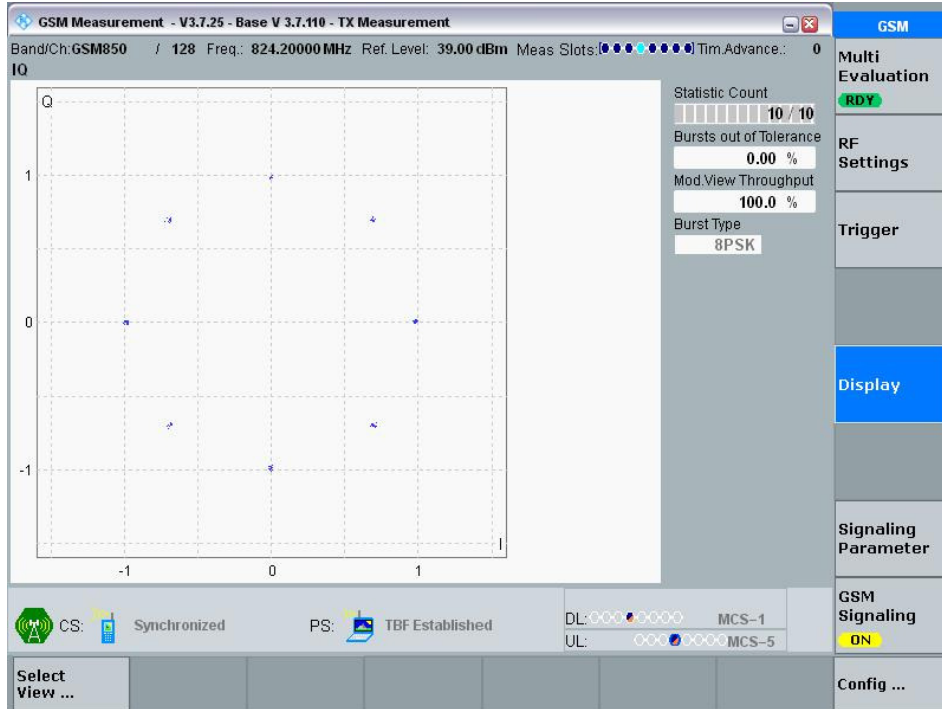
#### GPRS1900-H



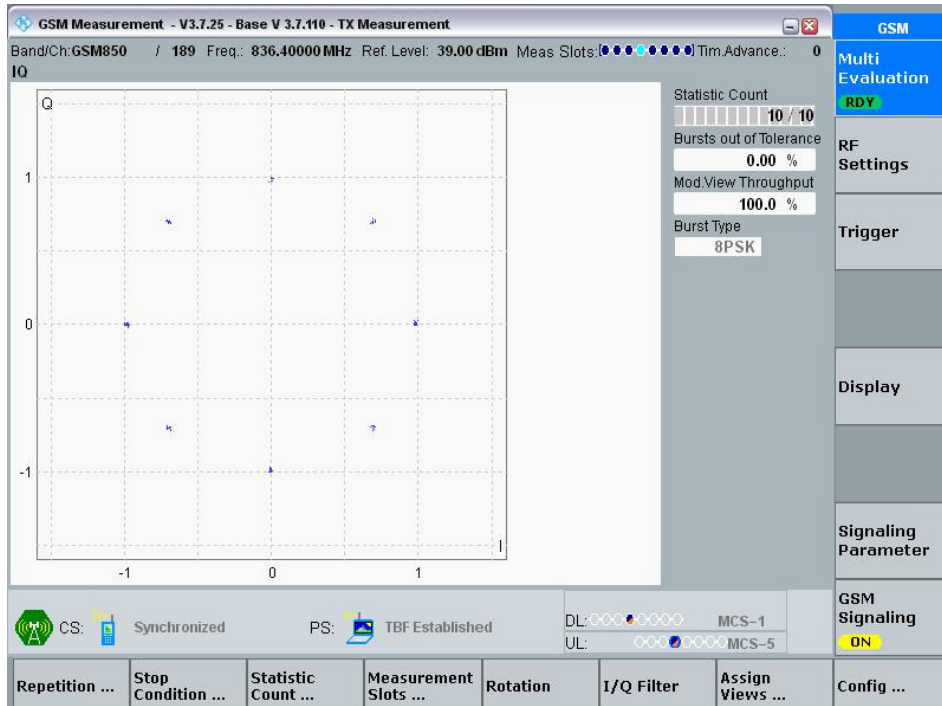


### Test Plot

#### EGPRS850-L



#### EGPRS850-M

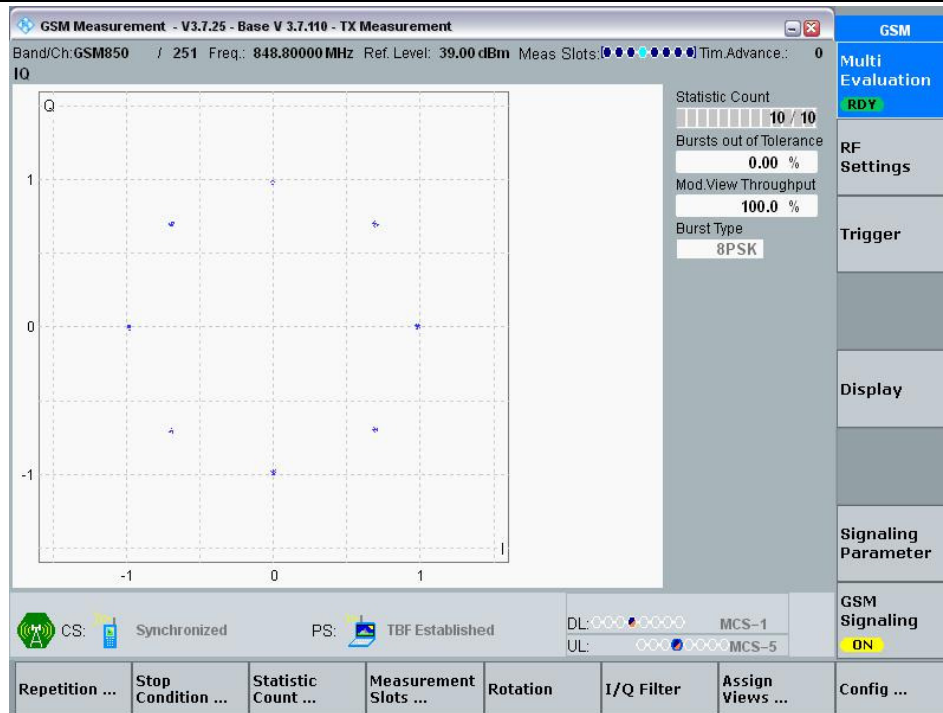


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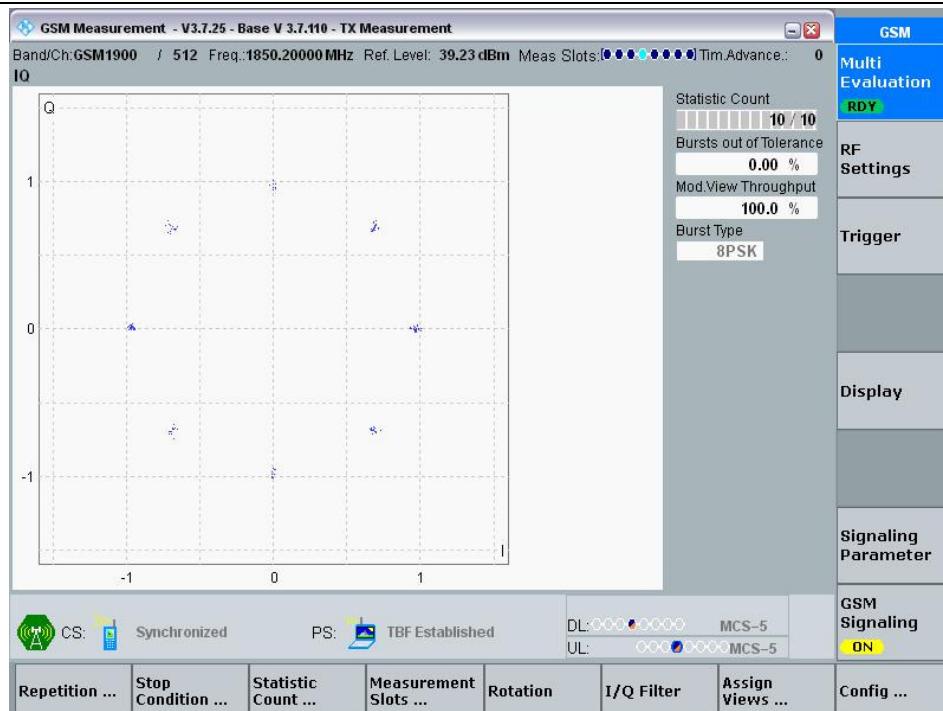
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### Test Plot

#### EGPRS850-H

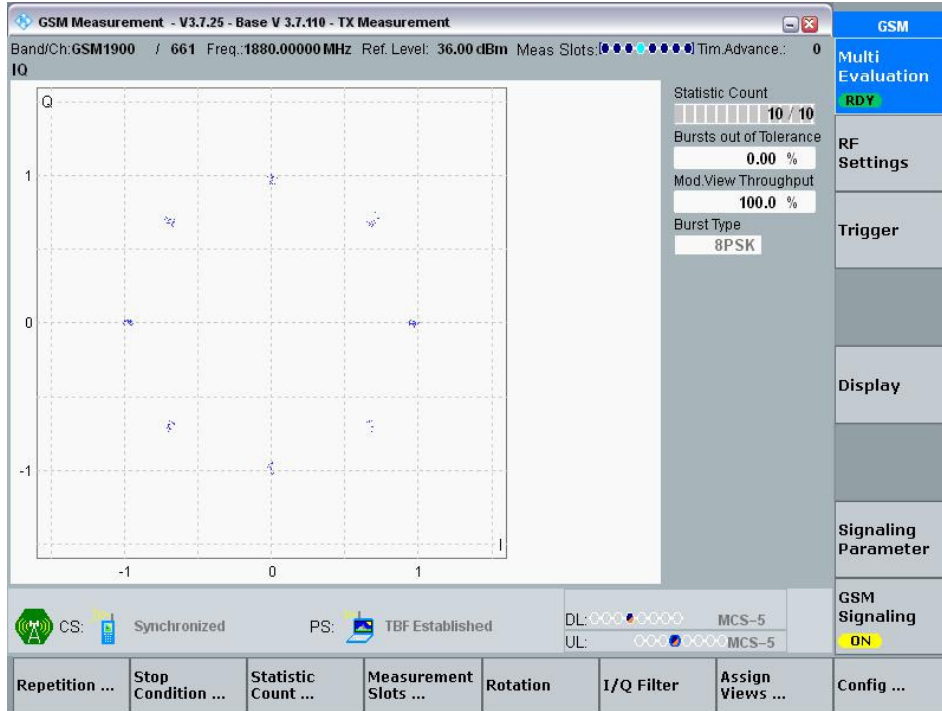


#### EGPRS1900-L

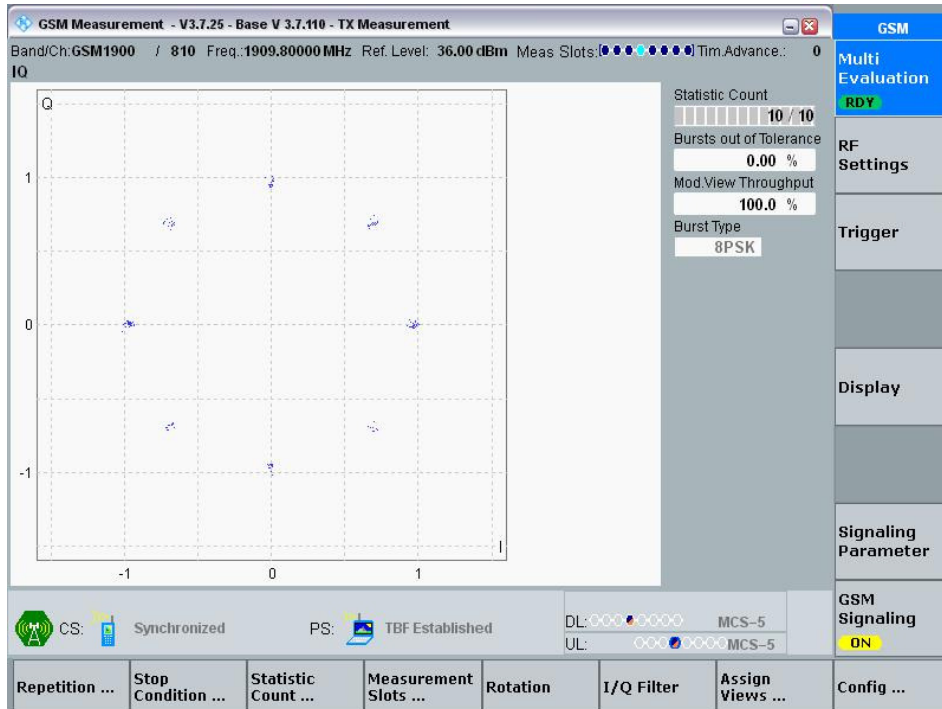


### Test Plot

#### EGPRS1900-M



#### EGPRS1900-H



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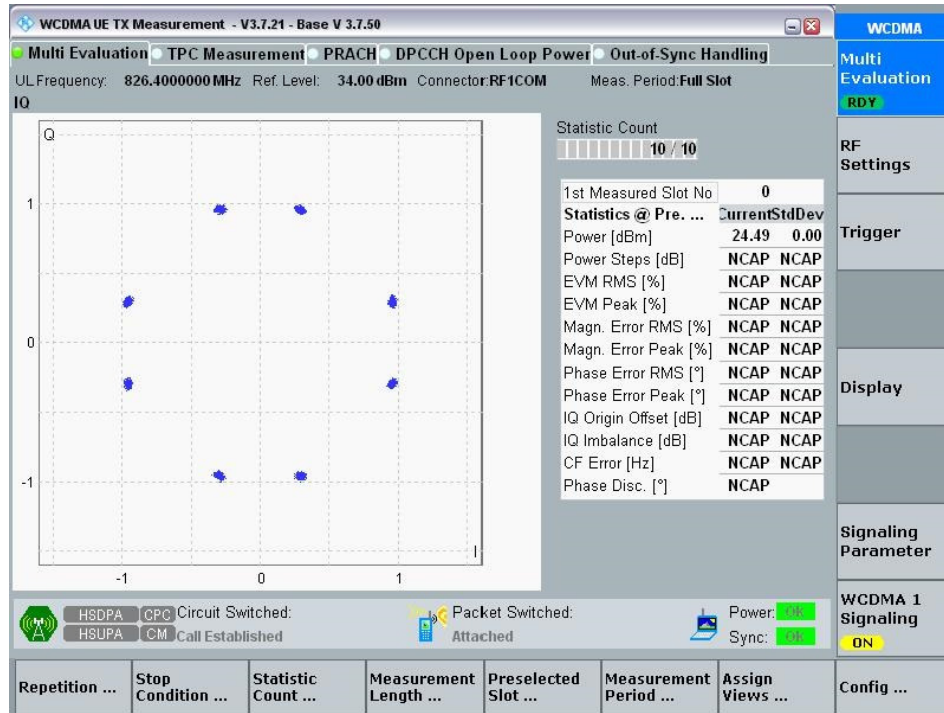
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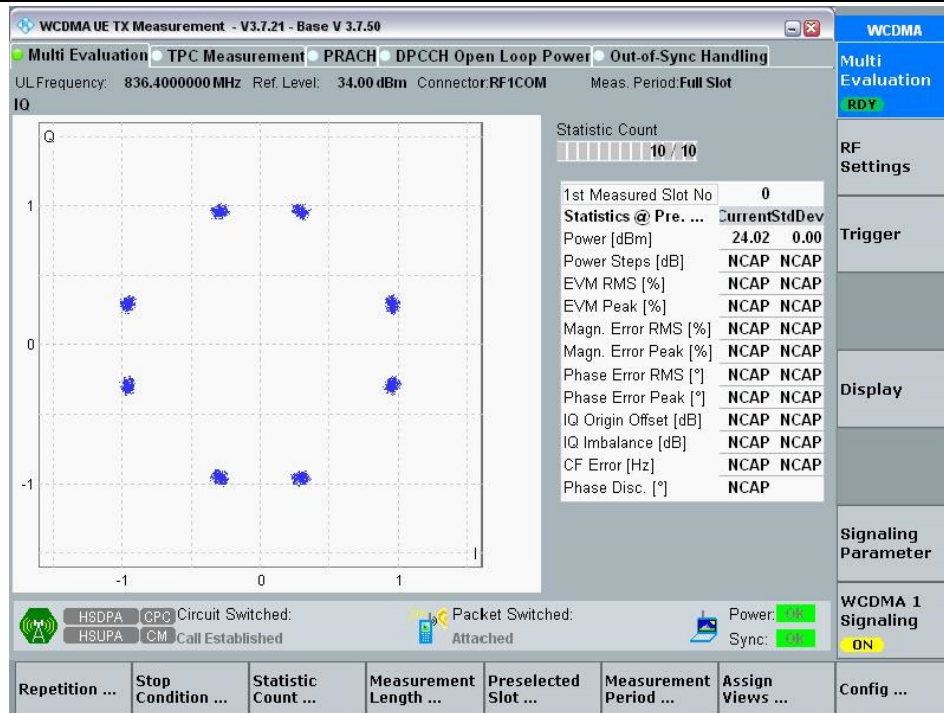


### Test Plot

#### WCDMA Band V-Low



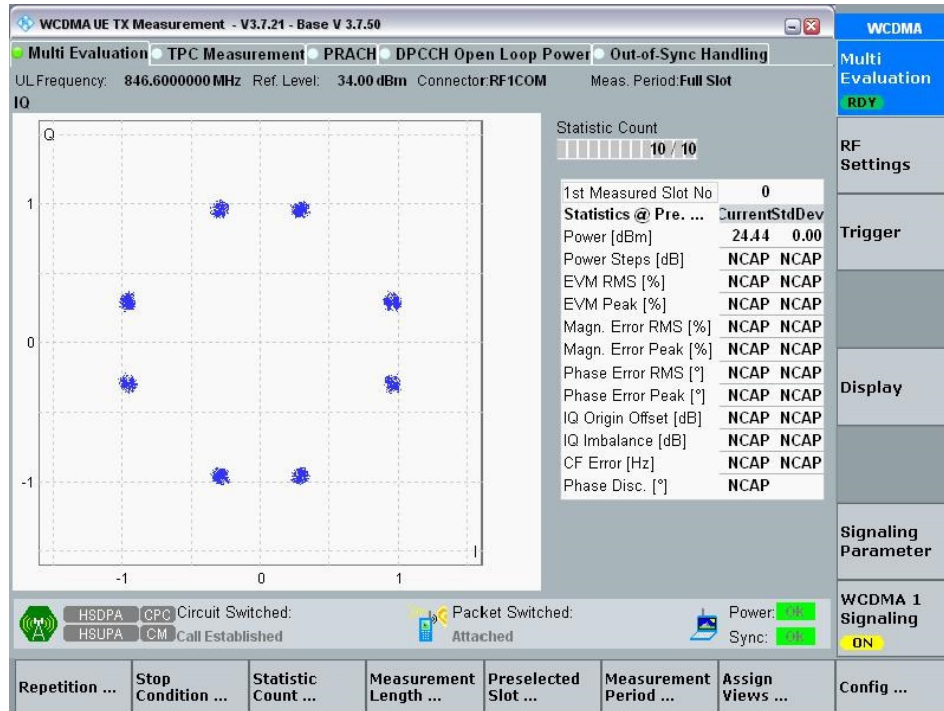
#### WCDMA Band V-Middle



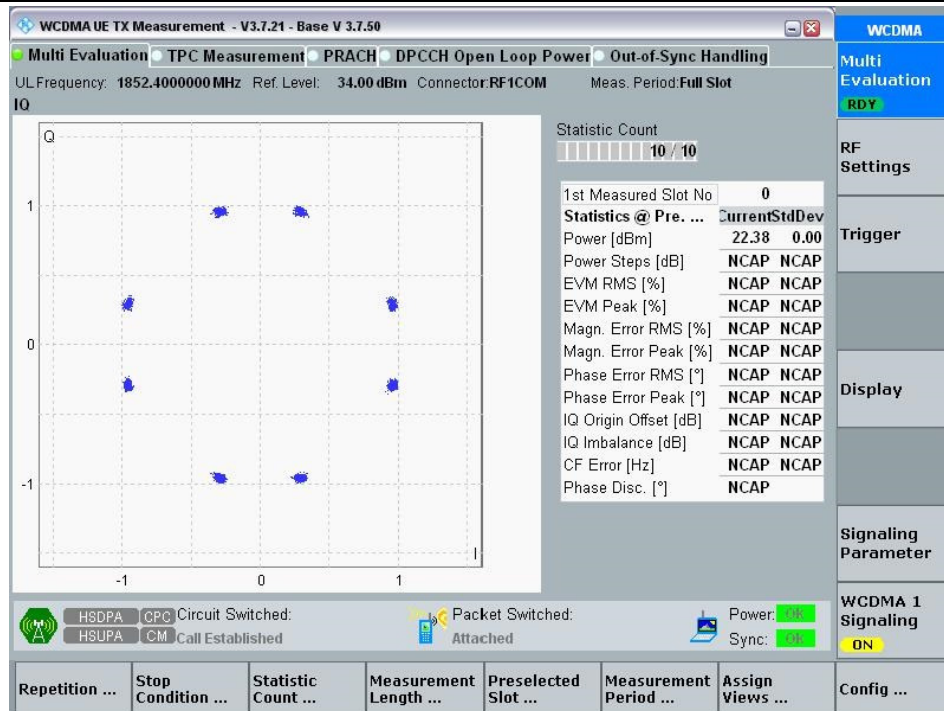


### Test Plot

#### WCDMA Band V-High

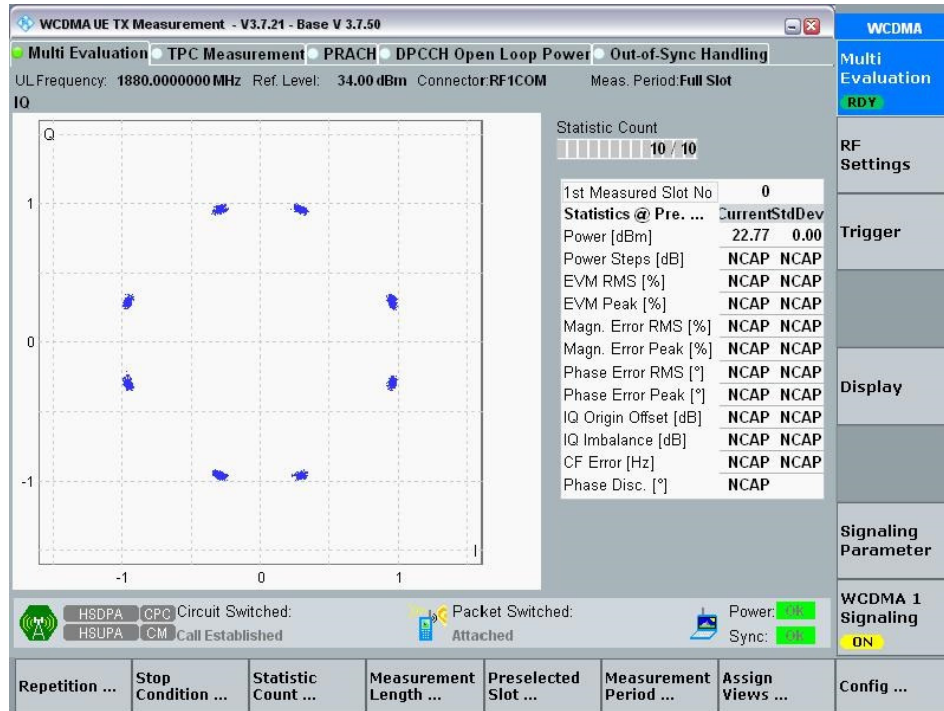


#### WCDMA Band II-Low

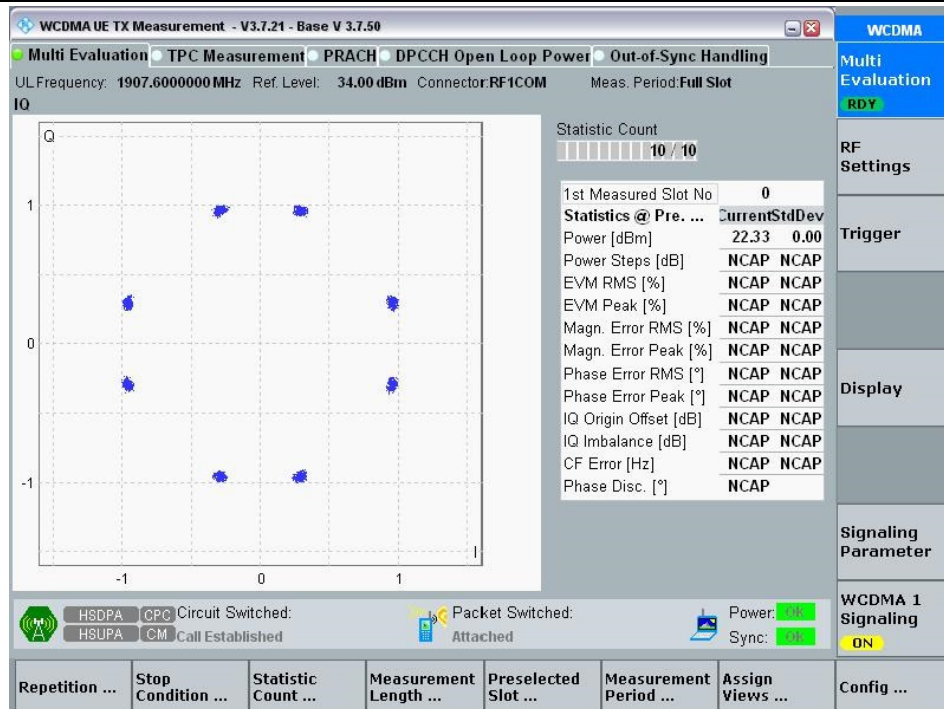


### Test Plot

#### WCDMA Band II-Middle



#### WCDMA Band II-High





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- End of the Report -



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