

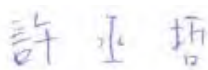


NCC

行動寬頻業務終端設備技術規範試驗報告

產品名稱 : KARDI 行車紀錄器
型號 : KD002
廠牌 : Trans-iot
商標 : 
申請者 : 創星物聯科技股份有限公司
申請者地址 : 11492 臺北市內湖區瑞光路 618 號 7 樓
測試標準 : PLMN10 (107 年版)
測試結果 : 符合
接收日期 : 2020/7/1
測試日期 : 2020/7/1~10/8

測試工程師 :



(許丞哲)

報告審核人 :



(陳柏均)

報告簽屬人 :



(柯承志)



本測試報告僅對實驗室所受測之樣品負責

本測試報告非經本公司同意不可局部複製使用

修訂紀錄

Report No.	Version	Description	Issue Date
2007TW0110-T5	1.0	Original Report	2020-10-15

CONTENTS

Description	Page
1. 一般資訊.....	5
2. 產品描述.....	6
2.1 產品資訊.....	6
2.2 產品規格.....	7
3. 測試設備明細.....	8
4. 量測不確定度.....	9
5. 測試結果.....	10
5.1 功率限制.....	11
5.1.1 合格標準.....	11
5.1.2 測試方法.....	11
5.1.3 實驗方法方塊圖.....	12
5.1.4 實驗數據.....	13
5.2 發射頻譜波罩.....	31
5.2.1 合格標準.....	31
5.2.2 測試方法.....	31
5.2.3 實驗方法方塊圖.....	31
5.2.4 實驗數據.....	32
5.3 傳導帶外輻射發射限制.....	98
5.3.1 合格標準.....	98
5.3.2 測試方法.....	98
5.3.3 實驗方法方塊圖.....	98
5.3.4 實驗數據.....	99
5.4 相鄰頻道洩漏功率比(ACLR).....	186
5.4.1 合格標準.....	186
5.4.2 測試方法.....	186
5.4.3 實驗方法方塊圖.....	186
5.4.4 實驗數據.....	187
5.5 頻率穩定性.....	243
5.5.1 合格標準.....	243
5.5.2 測試方法.....	243
5.5.3 實驗方法方塊圖.....	243
5.5.4 實驗數據.....	244

5.6	電波功率密度	247
5.6.1	合格標準.....	247
5.6.2	計算方式.....	247
5.6.3	計算結果.....	247

1. 一般資訊

申請者	創星物聯科技股份有限公司
申請者地址	11492 臺北市內湖區瑞光路 618 號 7 樓
製造商	創星物聯科技股份有限公司
製造商地址	11492 臺北市內湖區瑞光路 618 號 7 樓
實驗室	台灣曼瑞檢測科技有限公司
實驗室地址	33377 台灣桃園市龜山區復興二路 38 號
實驗室資訊	1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品描述

2.1 產品資訊

產品名稱	KARDI 行車紀錄器
產品型號	KD002
廠牌	Trans-iot
商標	 創星物聯科技股份有限公司
支援規格	WLAN: 2.4G: 802.11b/g/n-20; Bluetooth Dual Mode: V4.1 WWAN: 3G: Band1,8 4G: FDD Band 1,3,8,28; TDD Band 38
IMEI 碼	867400020316612
天線樣式	FPCB
天線規格	MFR: 深圳市持勝科技有限公司 M/N: TX4509-5 Gain: Band1:-0.03dBi, Band3:-0.5dBi, Band8:-3.12dBi, Band28:-3.05dBi, Band38:1.07dBi
TX Frequency	Band1: 1920~1980MHz; Band3: 1710~1785MHz; Band8: 885~915MHz, Band28: 703MHz~748MHz; Band38: 2570~2620MHz
Rx Frequency	Band1: 2110~2170MHz; Band3: 1805~1880MHz; Band8:930~960MHz, Band28: 758MHz~803MHz; Band38: 2570~2620MHz
是否有照相功能	☒ 有 (聲響 : ☒ 有; ☐ 無) ☐ 無
配件	
GPS 天線	MFR: 持勝科技 M/N: MCX18 Length: 0.9m
車充	MFR: 創星物聯科技股份有限公司 M/N: MXT-0525 Length: 3.4m
行車記錄儀專用 智能電源盒	MFR: 溢星峰科技 M/N: DZ-5V-2.5-MXT0510-ACC Length: 3.2m

2.2 產品規格

Band1 Channel	5M/1922.5MHz(CH 18025);1950MHz(CH 18300);1977.5MHz(CH 18575) 10M/1925MHz(CH 18050); 1950MHz(CH 18300);1975MHz(CH 18550) 15M/1927.5MHz(CH 18075); 1950MHz(CH 18300);1972.5MHz(CH 18525) 20M/1930MHz(CH 18300); 1950MHz(CH 18300);1970MHz(CH 18500)
Band3 Channel	1.4M/1710.7MHz(CH 19207);1747.5MHz(CH 19575);1784.3MHz(CH 19943) 3M/1711.5MHz(CH 19215);1747.5MHz(CH 19575);1783.5MHz(CH 19935) 5M/1712.5MHz(CH 19225);1747.5MHz(CH 19575);1782.5MHz(CH 19925) 10M/1715MHz(CH 19250);1747.5MHz(CH 19575);1780MHz(CH 19900) 15M/1717.5MHz(CH 19275);1747.5MHz(CH 19575);1777.5MHz(CH 19875) 20M/1720MHz(CH 19300);1747.5MHz(CH 19575);1775MHz(CH 19850)
Band8 Channel	1.4M/885.7MHz(CH 21507);900MHz(CH 21650);914.3MHz(CH 21793) 3M/886.5MHz(CH21515); 900MHz(CH 21650);913.5MHz(CH 21785) 5M/887.5MHz(CH 21525); 900MHz(CH 21650);912.5MHz(CH 21775) 10M/890MHz(CH 21550); 900MHz(CH 21650);910MHz(CH 21750)
Band28 Channel	3M/704.5MHz(CH 27225), 725.5MHz(CH 27435), 746.5MHz(CH 27645) 5M/705.5MHz(CH 27235), 725.5MHz(CH 27435), 745.5MHz(CH 27635) 10M/708MHz(CH 27260), 725.5MHz(CH 27435), 743MHz(CH 27610) 15M/710.5MHz(CH 27285), 725.5MHz(CH 27435), 740.5MHz(CH 27585) 20M/713MHz(CH 27310), 725.5MHz(CH 27435), 738MHz(CH 27560)
Band38 Channel	5M/2572.5MHz(CH 37775);2595MHz(CH 38000);2617.5MHz(CH 38225) 10M/2575MHz(CH 37800); 2595MHz(CH 38000);2515MHz(CH 38200) 15M/2577.5MHz(CH 37825); 2595MHz(CH 38000);2612.5MHz(CH 38175) 20M/2580MHz(CH 37850); 2595MHz(CH 38000);2610MHz(CH 38150)

3. 測試設備明細

輻射干擾 – AC1

儀器名稱	製造商	型號	財產編號	校正週期	有效日期
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2020/11/4
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2021/3/25
Active Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2021/4/27
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2021/4/24
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2021/4/24
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2021/4/24
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2021/4/24
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2021/6/16

傳導測試 – AC1

儀器名稱	製造商	型號	財產編號	校正週期	有效日期
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/1
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/7/14
Wideband Radio Communication Taster	R&S	CMW 500	MRTTWA00041	1 year	2021/1/7
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2021/6/9

EMI 測試軟體

軟體名稱	製造商	版本
e3	Audix	9.160520a
EMI	Quietek	V3

4. 量測不確定度

輻射干擾量測 (Radiated Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~30MHz: $\pm 3.92\text{dB}$ 30MHz~1GHz: $\pm 4.25\text{dB}$ 1GHz~18GHz: $\pm 4.40\text{dB}$ 18GHz~40GHz: $\pm 4.45\text{dB}$
頻率誤差量測 (Frequency Error)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$
傳導功率量測 (Conducted Power)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.84\text{dB}$
傳導干擾量測 (Conducted Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 2.65\text{ dB}$
佔用頻寬量測 (Occupied Bandwidth)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.3%
溫度 / 濕度 (Temp. / Humidity)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C}/ \pm 3\%$
直流電源 (DC Voltage)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.3\%$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

5. 測試結果

產品名稱 **KARDI行車紀錄器**
型號 **KD002**

法規章節	量測項目	限制值	測試結果	測試數據
5.1	功率限制	有效輻射功率(Effective Radiated Power, ERP) 手持式行動臺設備限制為1瓦特(W)。 移動式行動臺設備限制為 2 W。 傳導輸出功率限制值 採 FDD者：23dBm +2.7/-3.2 dB。 採TDD者：23 dBm + 2.7/-2.7 dB。	符合	第 5.1 章節
5.2	發射頻譜波罩	需符合行動寬頻行動臺技術規範附表二	符合	第 5.2 章節
5.3	傳導帶外輻射發射	需符合行動寬頻行動臺技術規範附表四	符合	第 5.3 章節
5.4	相鄰頻道洩漏功率比 (ACLR)	$\leq 29.2\text{dB}$	符合	第 5.4 章節
5.5	頻率容許差度	$\pm 0.1\text{PPM}$ 以內	符合	第 5.5 章節
5.6	電波功率密度	僅適用於移動式行動臺設備 700 MHz 頻段為 0.35 毫瓦特/平方公分(mW/cm^2)； 900 MHz 頻段為 0.45 mW/cm^2 ； 1800 MHz 頻段為 0.9 mW/cm^2 ； 2500 MHz 與 2600 MHz 頻段為 1.0 mW/cm^2 。	N/A	第 5.6 章節
5.14	災防告警細胞廣播訊息 接收功能	適用行動臺設備具接取行動寬頻業務經營者提供之 語音服務功能者。 需符合行動寬頻行動臺技術規範附表四	N/A	第 5.7 章節

備註：符合性的判定是基於測試結果符合規範的限制值或客戶的宣告要求，測試結果的判定是不考慮測量不確定度的值。

5.1 功率限制

5.1.1 合格標準

(1) 等效幅射功率(Effective Radiated Power, ERP)

- 手持式行動臺設備限制為 1W。
- 移動式行動臺設備限制為 2W。

(2) 傳導輸出功率限制為

- FDD 為: 23dBm +2.7/-3.2 dB。
- TDD 為: 23dBm +2.7/-2.7 dB。

5.1.2 測試方法

檢測頻道為低、中、高三個頻道，對最低、5MHz 及最高的工作頻寬之 QPSK 調變級數發射模式，均應分別檢測之。(請參照 3GPP 36.521-1 規定測試)。

(1) 等效幅射功率：

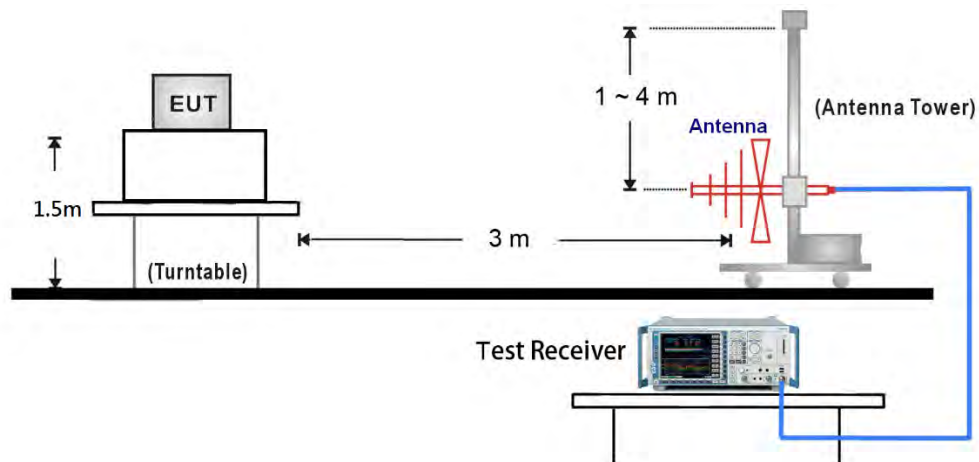
- a. 量測發射功率時，必須使用均方根值等效電壓之儀器量測於任何連續傳輸時段，量測結果須依儀器之反應時間、解析頻寬能力及靈敏度等調整得出正確之發射功率。對每一測量頻率調整儀器足夠之頻率掃描範圍以檢測所欲測量之發射。
- b. 在 1 到 4 米高度內上升下降水平極化之接收天線，將接收天線置於儀器顯示最高讀值時的高度，然後以 360 度轉動測試桌上的受測物，紀錄顯示在儀器上的最高值，以為參考位準。
- c. 以發射天線(不大於 1GHz 為線諧調之偶極天線，1GHz 以上為號角型天線)取代受測物，並與接收天線之同為水平極化。將偶極天線連接至標準之信號產生器，信號產生器設定至前述步驟所得之頻率以及適當之輸出位準。上升、下降接收天線使測試儀器量得最高值，並置於該高度。調整信號產生器之輸出位準以使測試儀器顯示與步驟 2 所得之值相同。紀錄此值以計算結果值。
- d. 若受測物相對於偶極天線(或全向性天線)之天線增益為已知，則 ERP(或 EIRP)可由天線端子之傳導輸出功率與天線增益之積求得。

(2) 傳導輸出功率：

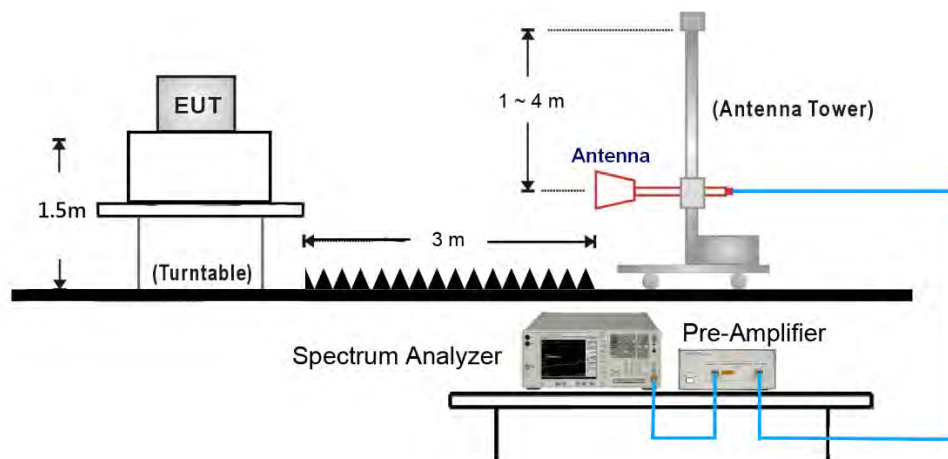
發射機輸出功率的測量藉由模擬基地台調諧頻率至測量頻率並量測其峰值。

5.1.3 實驗方法方塊圖

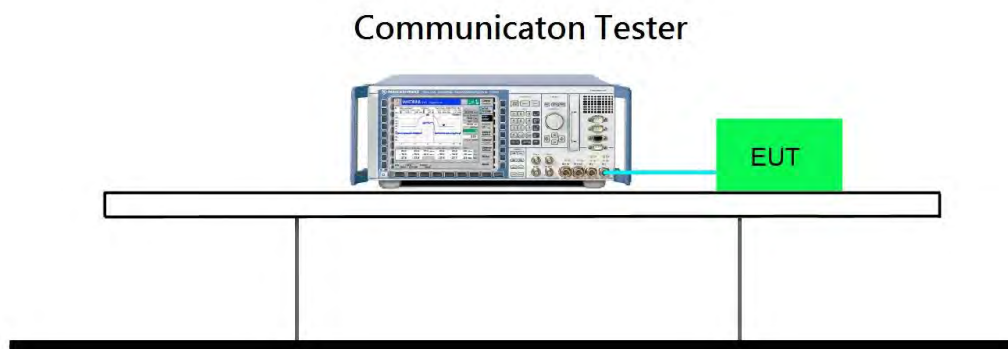
(1) 等效輻射功率 (1G 以下):



(2) 等效輻射功率 (1G 以上):



(3) 傳導輸出功率 :



5.1.4 實驗數據

Band 1 (2100MHz) FDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP) (dBm)	ERP Limit (dBm)
5MHz	18025	QPSK	1	#0	21.12	19.8~25.7	-0.03	18.94	30
			8	#0	21.22	19.8~25.7	-0.03	19.04	30
	18300	QPSK	1	#0	21.49	19.8~25.7	-0.03	19.31	30
			8	#0	21.37	19.8~25.7	-0.03	19.19	30
	18575	QPSK	1	#24	21.06	19.8~25.7	-0.03	18.88	30
			8	#17	20.87	19.8~25.7	-0.03	18.69	30
20MHz	18100	QPSK	1	#0	20.94	19.8~25.7	-0.03	18.76	30
			18	#0	20.94	19.8~25.7	-0.03	18.76	30
	18300	QPSK	1	#0	21.02	19.8~25.7	-0.03	18.84	30
			18	#0	20.88	19.8~25.7	-0.03	18.7	30
	18500	QPSK	1	#99	21.70	19.8~25.7	-0.03	19.52	30
			18	#82	21.70	19.8~25.7	-0.03	19.52	30

Note: ERP= Conducted Power + Antenna Gain(dBi)-2.15

5MHz CH18025 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD	Freq: 1922.5 MHz	Ref Level: 41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subfr/Slot	0 / All				
TX Measurement										
	Current		Average		Extreme		StdDev			
EVM RMS [%] /h	3.57	3.59	3.78	3.79	4.68	4.65	0.25	0.25		
EVM Peak [%] /h	11.14	10.99	14.49	14.31	18.58	18.31	2.21	2.19		
EVM DMRS [%] /h	2.56	2.45	2.66	2.57	3.32	3.28	0.25	0.25		
MErr RMS [%] /h	2.44	2.47	2.68	2.71	3.25	3.26	0.24	0.25		
MErr Peak [%] /h	-10.05	-10.18	10.92	10.96	-16.86	-16.87	1.16	1.11		
MErr DMRS [%] /h	2.21	1.97	2.28	2.14	2.95	2.75	0.18	0.21		
PhErr RMS [%] /h	1.51	1.51	1.56	1.55	1.96	1.93	0.08	0.08		
PhErr Peak [%] /h	5.28	5.30	6.51	6.38	9.44	9.19	1.34	1.24		
PhErr DMRS [%] /h	0.74	0.83	0.78	0.80	1.36	1.36	0.13	0.12		
IQ Offset [dBc]	-52.68		-52.20		-45.24		0.29			
IQ Gain Imbalance [dB]	---		---		---		---			
IQ Quadrature Error [%]	---		---		---		---			
Freq Error [Hz]	-25.22		-9.58		60.60		12.40			
Timing Error [Ts]	4.01		3.70		9.16		0.23			
OBW [MHz]	0.33		0.28		4.44		0.05			
	Current		Average		Min	Max	StdDev			
TX Power [dBm]	20.87		20.81		16.63	21.12	0.07			
Peak Power [dBm]	25.17		24.82		23.20	26.54	0.30			
RB Power [dBm]	20.81		20.78		2.66	20.99	0.03			
Statistic Count Out of Tolerance 20 / 20 0.00 % Detected Modulation QPSK Detected Channel Type PUSCH View Filter Throughput 100.0 %										
PS: Connection Established RRC State: Connected										

5MHz CH18025 8RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation

PRACH

SRS

FDD

Freq: 1922.5 MHz

Ref Level: 41.00 dBm

BW: 5.0 MHz

CP: Normal

Meas Subfr/Slot: 0 / All

TX Measurement

	Current	Average	Extremes	StdDev
EVM RMS [%] /h	4.16	4.19	4.21 4.23	4.32 4.34 0.05 0.06
EVM Peak [%] /h	16.16	16.18	18.19 18.20	20.61 20.59 1.20 1.20
EVM DMRS [%] /h	3.17	3.08	3.19 3.14	3.45 3.41 0.11 0.13
MErr RMS [%] /h	3.45	3.43	3.47 3.48	3.54 3.54 0.02 0.02
MErr Peak [%] /h	-15.82	-15.82	17.01 17.05	-18.50 -18.61 0.82 0.87
MErr DMRS [%] /h	2.24	2.14	2.03 2.01	2.41 2.32 0.14 0.14
PhErr RMS [%] /h	1.35	1.38	1.38 1.39	1.48 1.49 0.05 0.05
PhErr Peak [%] /h	5.14	5.11	5.60 5.60	7.69 7.71 0.68 0.69
PhErr DMRS [%] /h	1.29	1.27	1.41 1.39	1.62 1.60 0.07 0.08
IQ Offset [dBc]	-53.04	-55.91	-53.04	3.24
IQ Gain Imbalance [dB]	---	---	---	---
IQ Quadrature Error [%]	---	---	---	---
Freq Error [Hz]	-1.09	2.43	8.54	2.85
Timing Error [Ts]	1.81	1.61	1.81	0.16
OBW [MHz]	1.42	1.41	1.42	0.01
	Current	Average	Min	Max
TX Power [dBm]	21.20	21.20	21.19	21.22
Peak Power [dBm]	24.56	24.58	24.49	24.65
RB Power [dBm]	12.19	12.18	12.15	12.21

Statistic Count

Out of Tolerance

Detected Modulation

Detected Channel Type

View Filter

Throughput

20 / 20

0.00 %

OPSK

PUSCH

100.0 %

PS:

Connection Established

RRC State: Connected

5MHz CH18300 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD	Freq: 1950.0 MHz	Ref Level: 41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subfr/Slot	0 / All				
TX Measurement										
	Current	Average	Extreme	StdDev						
EVM RMS [%] /h	3.81	3.78	3.26	3.26	4.02	3.98	0.58	0.57		
EVM Peak [%] /h	18.77	18.69	14.18	14.17	20.21	20.19	5.10	5.06		
EVM DMRS [%] /h	2.47	2.46	2.40	2.22	3.16	3.12	0.32	0.35		
MErr RMS [%] /h	3.06	3.05	2.67	2.66	3.39	3.39	0.55	0.55		
MErr Peak [%] /h	-18.12	-18.01	13.03	12.97	-19.84	-19.80	5.64	5.62		
MErr DMRS [%] /h	2.00	1.98	1.88	1.73	2.58	2.39	0.37	0.34		
PhErr RMS [%] /h	1.34	1.31	1.10	1.10	1.39	1.38	0.16	0.15		
PhErr Peak [%] /h	-6.36	-6.31	4.80	4.78	-7.09	-7.05	1.15	1.13		
PhErr DMRS [%] /h	0.82	0.84	0.86	0.80	1.22	1.24	0.10	0.12		
IQ Offset [dBc]	-50.39	-50.66	-49.06	-49.06						
IQ Gain Imbalance [dB]	---	---	---	---						
IQ Quadrature Error [%]	---	---	---	---						
Freq Error [Hz]	46.21	39.14	55.40	7.78						
Timing Error [Ts]	9.70	9.95	15.23	0.69						
OBW [MHz]	0.31	0.31	1.42	0.01						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	21.27	21.26	21.14	21.49	0.01					
Peak Power [dBm]	25.44	25.35	25.13	26.02	0.08					
RB Power [dBm]	21.23	21.24	12.32	21.48	0.02					
Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput										
20 / 20 0.00 % QPSK PUSCH 100.0 %										
PS: Connection Established RRC State: Connected										

5MHz CH18300 8RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation

PRACH

SRS

FDD

Freq: 1950.0 MHz

Ref Level: 41.00 dBm

BW: 5.0 MHz

CP: Normal

Meas Subfr/Slot: 0 / All

TX Measurement

	Current	Average	Extremes	StdDev
EVM RMS [%] /h	2.00	2.04	2.05	2.09
EVM Peak [%] /h	9.74	9.75	10.49	10.50
EVM DMRS [%] /h	1.69	1.65	1.57	1.56
MErr RMS [%] /h	1.48	1.48	1.48	1.51
MErr Peak [%] /h	-9.67	-9.68	10.31	10.29
MErr DMRS [%] /h	1.05	1.07	1.05	1.05
PhErr RMS [%] /h	0.77	0.80	0.81	0.83
PhErr Peak [%] /h	2.60	-3.23	3.10	3.34
PhErr DMRS [%] /h	0.76	0.72	0.67	0.66
IQ Offset [dBc]	-53.48	-54.53	-51.63	-51.63
IQ Gain Imbalance [dB]	---	---	---	---
IQ Quadrature Error [%]	---	---	---	---
Freq Error [Hz]	-37.67	-26.21	-57.02	13.25
Timing Error [Ts]	-0.93	2.06	3.17	1.34
OBW [MHz]	1.42	1.41	1.42	0.01
	Current	Average	Min	Max
TX Power [dBm]	21.30	21.30	21.24	21.37
Peak Power [dBm]	25.80	25.85	25.65	26.09
RB Power [dBm]	12.28	12.28	12.21	12.35

Statistic Count: 20 / 20

Out of Tolerance: 0.00 %

Detected Modulation: QPSK

Detected Channel Type: PUSCH

View Filter: Throughput

100.0 %

PS: Connection Established

RRC State: Connected

5MHz CH18575 1RB#24

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement									
Multi Evaluation PRACH SRS									
FDD	Freq: 1977.5 MHz		Ref Level: 41.00 dBm		BW: 5.0 MHz		CP: Normal	Meas Subfr/Slot	0 / All
TX Measurement									
	Current		Average		Extreme		StdDev		
EVM RMS [%] /h	2.43	2.52	3.04	3.11	3.78	3.86	0.58	0.59	0.59
EVM Peak [%] /h	6.90	7.01	11.96	12.07	19.18	19.30	5.34	5.29	5.29
EVM DMRS [%] /h	1.92	1.76	2.37	2.24	3.15	3.08	0.37	0.39	0.39
MErr RMS [%] /h	1.47	1.46	2.36	2.39	3.24	3.30	0.71	0.74	0.74
MErr Peak [%] /h	-4.39	-3.81	10.69	10.62	-19.10	-19.21	6.52	6.65	6.65
MDMRS [%] /h	1.24	1.17	1.70	1.63	2.24	2.34	0.28	0.30	0.30
PhErr RMS [%] /h	1.11	1.18	1.11	1.15	1.28	1.31	0.07	0.07	0.07
PhErr Peak [%] /h	3.95	4.02	4.28	4.29	6.14	6.06	0.78	0.72	0.72
PhErr DMRS [%] /h	0.84	0.75	0.95	0.88	1.31	1.46	0.17	0.17	0.17
IQ Offset [dBc]	-54.43		-54.64		-53.45		0.43		
IQ Gain Imbalance [dB]	-----		-----		-----		-----		
IQ Quadrature Error [%]	-----		-----		-----		-----		
Freq Error [Hz]	-9.73		-23.80		-58.18		15.69		
Timing Error [Ts]	2.09		2.20		4.80		0.62		
OBW [MHz]	0.35		0.40		0.47		0.05		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	20.79	20.79	20.76	21.06	0.02				
Peak Power [dBm]	25.60	25.42	25.24	25.06	0.15				
RB Power [dBm]	20.78	20.78	20.73	21.05	0.02				
Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput									
20 / 20		0.00 %		QPSK		PUSCH		100.0 %	
PS: Attached (PRC State: Connected)									

Band 3 (1800MHz) FDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP) (dBm)	ERP Limit (dBm)
1.4MHz	19207	QPSK	1	#0	21.14	19.8~25.7	-0.5	18.49	30
	19575	QPSK	1	#0	22.18	19.8~25.7	-0.5	19.53	30
			5	#0	22.22	19.8~25.7	-0.5	19.57	30
	19943	QPSK	1	#0	20.29	19.8~25.7	-0.5	17.64	30
5MHz	19225	QPSK	1	#0	20.15	19.8~25.7	-0.5	17.5	30
			1	#24	20.30	19.8~25.7	-0.5	17.65	30
	19575	QPSK	1	#0	22.19	19.8~25.7	-0.5	19.54	30
			1	#24	22.23	19.8~25.7	-0.5	19.58	30
			8	#0	22.38	19.8~25.7	-0.5	19.73	30
	19925	QPSK	1	#0	22.30	19.8~25.7	-0.5	19.65	30
			1	#24	20.06	19.8~25.7	-0.5	17.41	30
	20MHz	19300	QPSK	1	#0	20.10	19.8~25.7	-0.5	17.45
1				#99	22.16	19.8~25.7	-0.5	19.51	30
19575		QPSK	1	#0	22.34	19.8~25.7	-0.5	19.69	30
			1	#99	22.19	19.8~25.7	-0.5	19.54	30
			18	#0	22.12	19.8~25.7	-0.5	19.47	30
19850		QPSK	1	#0	22.15	19.8~25.7	-0.5	19.5	30
			1	#99	20.62	19.8~25.7	-0.5	17.97	30

Note: ERP= Conducted Power + Antenna Gain(dBi)-2.15

1.4MHz CH19207 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.129 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 1710.7 MHz Ref Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] /h	1.21	1.09	1.22	1.28	3.95	3.99	0.06	0.10
EVM Peak [%] /h	3.27	2.15	2.99	3.72	17.83	17.82	0.35	0.89
EVM DMRS [%] /h	1.19	0.95	1.34	1.17	4.29	4.30	0.13	0.18
MErr RMS [%] /h	0.82	0.76	0.79	0.80	2.09	2.11	0.04	0.04
MErr Peak [%] /h	-2.99	-1.64	2.51	2.13	-12.35	-12.30	0.36	0.25
MErr DMRS [%] /h	1.05	0.76	1.03	0.81	3.04	3.00	0.17	0.14
PhErr RMS [%] /h	0.52	0.45	0.53	0.57	2.08	2.10	0.03	0.06
PhErr Peak [%] /h	1.56	-1.09	1.52	2.01	-10.16	-10.14	0.24	0.56
PhErr DMRS [%] /h	0.32	0.33	0.50	0.48	1.78	1.83	0.10	0.09
IQ Offset [dBc]	-51.89		-51.90		-41.88		0.46	
IQ Gain Imbalance [dB]	-----		-----		-----		-----	
IQ Quadrature Error [°]	-----		-----		-----		-----	
Freq Error [Hz]	15.44		16.39		49.78		15.01	
Timing Error [Ts]	-5.48		-5.65		-20.55		2.63	
OBW [MHz]	0.23		0.25		1.05		0.03	
	Current		Average		Min		Max	
TX Power [dBm]	20.10		20.03		16.28		21.14	
Peak Power [dBm]	25.27		25.49		21.77		26.40	
RB Power [dBm]	20.07		20.06		12.39		20.12	

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0 %

PS: Attached (PRC State: Connected)

1.4MHz CH19575 1RB#0

LTE Measurement - X3.5.9v23 - Base V 3.15.10 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 1747.5 MHz Ref Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Subt./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev
EVm RMS [%] /h	3.13	3.22	3.59	3.67	4.33	4.38	0.47
EVm Peak [%] /h	9.52	9.18	10.77	10.61	15.20	14.59	1.52
EVm DMRS [%] /h	2.00	2.09	2.22	2.25	2.83	2.84	0.22
MErr RMS [%] /h	2.60	2.61	3.07	3.10	3.70	3.74	0.46
MErr Peak [%] /h	-9.50	-9.18	10.36	10.16	-12.98	-12.82	1.17
MErr DMRS [%] /h	1.66	1.67	1.54	1.51	1.92	1.90	0.13
PhErr RMS [%] /h	1.00	1.08	1.08	1.13	1.47	1.48	0.10
PhErr Peak [%] /h	3.12	3.26	3.28	3.30	5.83	5.22	0.34
PhErr DMRS [%] /h	0.63	0.72	0.92	0.96	1.34	1.39	0.19
IQ Offset [dBc]	-54.57		-55.40		-45.46		0.70
IQ Gain Imbalance [dB]	-----		-----		-----		-----
IQ Quadrature Error [°]	-----		-----		-----		-----
Freq Error [Hz]	-19.17		-21.37		100.59		5.92
Timing Error [Ts]	7.45		7.41		-15.37		0.29
CBW [MHz]	0.28		0.25		0.28		0.03
	Current		Average		Min	Max	StdDev
TX Power [dBm]	22.11		22.13		15.14	22.18	0.02
Peak Power [dBm]	25.25		25.32		20.01	25.62	0.08
RB Power [dBm]	22.19		22.16		15.22	22.20	0.03

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH Filter: No Filter Throughput: 10.0

PS: Attached (PRC State: Connected)

1.4MHz CH19575 5RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.10 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 1747.5MHz Ref Level: 41.00dBm BW: 1.4 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Layers		StdDev	
EVm RMS [%] /h	5.93	5.96	5.71	5.73	6.33	6.34	0.31	0.31
EVm Peak [%] /h	23.65	23.74	20.61	21.54	24.60	24.64	2.84	1.97
EVm DMRS [%] /h	4.75	4.70	4.90	4.84	5.29	5.27	0.13	0.12
MErr RMS [%] /h	4.06	4.09	3.89	3.90	4.38	4.42	0.23	0.24
MErr Peak [%] /h	-22.87	-23.00	19.82	20.05	-23.81	-23.88	2.84	2.69
PhErr DMRS [%] /h	3.68	3.71	3.62	3.63	4.05	4.06	0.10	0.11
PhErr RMS [%] /h	2.50	2.50	2.41	2.42	2.66	2.65	0.13	0.12
PhErr Peak [%] /h	7.96	7.67	8.01	7.91	9.05	8.94	0.49	0.49
PhErr DMRS [%] /h	1.73	1.66	1.91	1.84	2.07	2.02	0.07	0.07
IQ Offset [dBc]	-46.42		-46.30		-44.17		1.19	
IQ Gain Imbalance [dB]	---		---		---		---	
IQ Quadrature Error [°]	---		---		---		---	
Freq Error [Hz]	0.76		-2.65		-19.96		3.95	
Timing Error [Ts]	-2.96		-3.25		-4.43		0.19	
OBW [MHz]	0.89		0.89		0.89		0.00	
	Current		Average		Min	Max	StdDev	
TX Power [dBm]	22.17		22.18		22.05	22.22	0.03	
Peak Power [dBm]	26.38		26.33		26.01	26.50	0.08	
RB Power [dBm]	15.18		15.20		15.06	15.25	0.04	

Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % QPSK PUSCH 110.0 %

PS: Attached (ARC State: Connected)

1.4MHz CH19943 1RB#0

LTE Measurement - X3.5.9b.23 - Base V3.5.12v - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 1784.3 MHz Ref Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Subst/Slot: 0 / All

TX Measurement

	Current			Average			Lastest			StdDev		
EVM RMS [%] /h	1.19	1.37	1.31	1.34	1.54	1.57	0.09	0.08				
EVM Peak [%] /h	3.48	4.64	3.65	3.95	5.12	5.53	0.39	0.53				
EVM DMRS [%] /h	1.64	1.08	1.43	1.25	1.96	1.72	0.13	0.16				
MErr RMS [%] /h	0.92	0.97	0.88	0.92	0.98	1.07	0.05	0.05				
MErr Peak [%] /h	-3.45	-3.46	3.16	3.40	-4.27	-4.43	0.40	0.30				
MErr DMRS [%] /h	1.33	0.83	1.16	0.92	1.70	1.47	0.15	0.17				
PhErr RMS [%] /h	0.43	0.55	0.55	0.56	0.73	0.69	0.07	0.05				
PhErr Peak [%] /h	1.59	1.80	1.56	1.70	2.45	-2.83	0.30	0.26				
PhErr DMRS [%] /h	0.55	0.40	0.48	0.48	0.80	0.73	0.07	0.09				
IQ Gain [dBc]	-51.83			-52.03			-50.67			0.42		
IQ Gain Imbalance [dB]	---			---			---			---		
IQ Quadrature Error [°]	---			---			---			---		
Freq Error [Hz]	26.24			23.69			58.14			10.13		
Timing Error [Ts]	-11.89			-11.68			-12.13			0.40		
OBW [MHz]	0.23			0.25			0.30			0.03		
	Current			Average			Min			Max		
							StdDev					
TX Power [dBm]	20.22			20.16			20.08			25.29		
Peak Power [dBm]	25.74			25.69			24.59			25.80		
RB Power [dBm]	20.20			20.19			20.17			20.27		

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: (N/A)

PS: Connection Established (RR: State: Connected)

5MHz CH19225 1RB#0

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 1712.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Layers		StdDev
EVM RMS [%] /h	1.02	1.07	1.16	1.16	1.38	1.39	0.07
EVM Peak [%] /h	3.45	2.91	2.98	2.99	4.81	4.17	0.60
EVM DMS [%] /h	1.00	1.01	1.05	1.11	1.40	1.71	0.14
MER RMS [%] /h	0.65	0.73	0.73	0.76	0.89	0.93	0.04
MER Peak [%] /h	-1.82	-2.67	1.99	2.58	3.23	-3.30	0.25
MER DMS [%] /h	0.69	0.81	0.71	0.79	1.13	1.32	0.11
PhErr RMS [%] /h	0.45	0.45	0.52	0.50	0.65	0.63	0.04
PhErr Peak [%] /h	1.86	-1.44	1.57	1.42	2.57	-2.11	0.33
PhErr DMS [%] /h	0.42	0.35	0.44	0.45	0.65	0.72	0.09
IQ Offset [dBc]	-63.22		-62.79		-60.04		1.05
IQ Gain Imbalance [dB]	---		---		---		---
IQ Quadrature Error [%]	---		---		---		---
Freq Error [Hz]	9.41		23.23		58.25		16.31
Timing Error [Ts]	-12.46		-12.43		-15.45		-0.77
OBW [MHz]	0.31		0.31		0.31		0.01
	Current		Average		Min	Max	StdDev
TX Power [dBm]	19.98		20.01		19.98	20.15	0.02
Peak Power [dBm]	24.93		25.49		24.91	26.14	0.54
RB Power [dBm]	20.03		20.04		20.03	20.16	0.01

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH Type Filter Throughput: (0.0 %)

PS: Connection Established (ARC State: Connected)

5MHz CH19225 1RB#24

LTE Measurement - X3.5.90.23 - Base V3.5.120 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD | Freq: 1712.5 MHz | Ref Level: 41.00 dBm | BW: 5.0 MHz | CP: Normal | Meas Subfr/Slot: 0 | All

TX Measurement

	Current		Average		LastOne		Stdev	
EVM RMS [%] /h	1.20	1.25	1.21	1.24	1.42	1.45	0.10	0.09
EVM Peak [%] /h	2.75	2.92	3.03	3.22	4.81	4.56	0.43	0.45
EVM DMRS [%] /h	1.06	1.08	1.07	1.15	1.47	1.71	0.17	0.22
MErr RMS [%] /h	0.76	0.73	0.74	0.76	0.89	0.93	0.04	0.04
MErr Peak [%] /h	2.31	-2.33	2.14	2.54	3.23	-3.30	0.28	0.31
MErr DMRS [%] /h	0.80	0.70	0.84	0.77	1.18	1.32	0.15	0.13
PhErr RMS [%] /h	0.53	0.58	0.55	0.56	0.68	0.68	0.06	0.05
PhErr Peak [%] /h	-1.49	1.68	1.53	1.67	2.57	2.58	0.27	0.31
PhErr DMRS [%] /h	0.40	0.47	0.38	0.49	0.73	0.74	0.09	0.13
IQ Offset [dBc]	-60.63		-62.01		-59.33		0.97	
IQ Gain Imbalance [dB]	---		---		---		---	
IQ Quadrature Error [°]	---		---		---		---	
Freq Error [Hz]	18.35		16.97		58.25		13.02	
Timing Error [Ts]	-10.18		-9.88		-16.48		1.04	
OBW [MHz]	0.26		0.30		0.40		0.04	
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	20.21	20.21	19.93	20.30	0.08			
Peak Power [dBm]	25.19	25.70	24.86	26.57	0.53			
RB Power [dBm]	20.25	20.23	19.98	20.28	0.08			

Statistic Count: 20 / 20 | Out of Tolerance: 0.00 % | Detected Modulation: QPSK | Detected Channel Type: PUSCH | View Filter Throughput: (0.0 %)

PS: Connection Established (RR State: Connected)

5MHz CH19575 1RB#0

LTE Measurement - X35.90.23 - Base V 3.5.129 - TX Measurement									
Multi Evaluation		PRACH		SRS					
FDD	Freq: 1747.5 MHz	Ref Level:	41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subtr/Slot:	0 / All		
TX Measurement									
	Current	Average		Extreme		StdDev			
EVM RMS [%] /h	3.23	3.25	3.79	3.78	4.41	4.43	0.51	0.51	0.54
EVM Peak [%] /h	11.54	11.53	15.77	15.74	21.33	21.27	4.50	4.48	4.48
EVM DMRS [%] /h	1.72	1.59	1.96	1.85	2.54	2.38	0.31	0.33	0.33
MErr RMS [%] /h	2.68	2.70	3.37	3.39	4.09	4.12	0.62	0.63	0.63
MErr Peak [%] /h	-9.82	-9.81	14.85	14.81	-21.31	-21.25	5.35	5.33	5.33
MErr DMRS [%] /h	1.28	1.13	1.52	1.37	2.04	1.85	0.26	0.26	0.26
PhErr RMS [*] /h	1.05	1.05	1.01	0.97	1.22	1.21	0.08	0.06	0.06
PhErr Peak [*] /h	5.19	5.17	4.30	4.28	5.40	5.43	0.62	0.59	0.59
PhErr DMRS [*] /h	0.66	0.63	0.70	0.71	0.91	0.94	0.11	0.13	0.13
IQ Offset [dBc]	-56.86			-56.57			-55.53	0.43	
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]			-8.10			-18.54			-57.06
Timing Error [Ts]			0.51			0.21			-2.55
OBW [MHz]			0.30			0.31			0.33
	Current	Average		Min	Max		StdDev		
TX Power [dBm]	22.14	22.14		22.00	22.19		0.01		
Peak Power [dBm]	25.75	26.00		25.73	26.29		0.25		
RB Power [dBm]	22.13	22.12		22.02	22.17		0.02		
Statistic Count 20 / 20 Out of Tolerance 0.00 % Detected Modulation QPSK Detected Channel Type PUSCH View Filter Throughput 100.0 %									
PS: Connection Established RRC State: Connected									

5MHz CH19575 1RB#24

LTE Measurement - X3.5.9v23 - Base V 3.15.10 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq: 1747.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP Normal Meas Subfr/Slot 0 / All

TX Measurement

	Current		Average		Extreme		StdDev
EVMM RMS [%] /h	3.33	3.38	2.95	3.01	4.56	4.57	0.51
EVMM Peak [%] /h	16.89	16.99	12.83	12.90	22.39	22.33	4.19
EVMM DMRS [%] /h	1.86	1.82	1.79	1.62	2.63	2.42	0.14
MErr RMS [%] /h	2.95	2.99	2.48	2.53	4.15	4.17	0.63
MErr Peak [%] /h	-16.81	-16.91	12.00	12.04	-22.39	-22.33	4.97
MErr DMRS [%] /h	1.32	1.17	1.32	1.21	2.04	1.85	0.12
PhErr RMS [%] /h	0.90	0.92	0.92	0.94	1.22	1.21	0.07
PhErr Peak [%] /h	3.30	3.21	3.67	3.67	5.53	5.47	0.51
PhErr DMRS [%] /h	0.75	0.80	0.69	0.62	1.02	1.03	0.08
IQ Offset [dBc]	-59.28		-58.87		-55.53		0.67
IQ Gain Imbalance [dB]							
IQ Quadrature Error [°]							
Freq Error [Hz]	33.04		23.73		-57.06		10.79
Timing Error [Ts]	-3.48		-2.76		-3.48		0.42
CBW [MHz]	0.47		0.40		0.47		0.07
	Current		Average		Min	Max	StdDev
TX Power [dBm]	22.07		22.08		22.00	22.23	0.01
Peak Power [dBm]	26.76		26.47		25.72	26.80	0.29
RB Power [dBm]	22.05		22.07		22.02	22.21	0.02

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: (n/a)

PS: Connection Established (ARC State: Connected)

5MHz CH19575 8RB#0

LTE Measurement - X35.590.23 - Base V 3.5.10 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 1747.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Layers		StdDev
EVm RMS [%] /h	2.86	2.86	2.83	2.86	4.56	4.57	0.07
EVm Peak [%] /h	13.23	13.21	14.24	14.24	22.39	22.33	1.10
EVm DMRS [%] /h	1.84	1.75	1.92	1.88	2.63	2.42	0.09
MErr RMS [%] /h	2.29	2.27	2.27	2.29	4.15	4.17	0.07
MErr Peak [%] /h	-11.87	-11.87	12.37	12.38	-22.39	-22.33	0.77
MDMRS DMRS [%] /h	1.15	1.11	1.22	1.21	2.04	1.85	0.08
PhErr RMS [%] /h	0.99	1.00	0.98	0.99	1.22	1.21	0.03
PhErr Peak [%] /h	3.75	3.73	4.97	4.97	7.34	7.37	0.96
PhErr DMRS [%] /h	0.82	0.78	0.85	0.83	1.02	1.03	0.05
IQ Offset [dBc]	-57.36		-58.74		-55.53		2.18
IQ Gain Imbalance [dB]	---		---		---		---
IQ Quadrature Error [°]	---		---		---		---
Freq Error [Hz]	0.97		20.23		59.51		23.98
Timing Error [Ts]	-1.04		-0.50		43.34		0.63
OBW [MHz]	1.42		1.41		1.42		0.06
	Current		Average		Min	Max	StdDev
TX Power [dBm]	22.31		22.31	22.00	22.38		0.02
Peak Power [dBm]	26.37		26.43	25.72	26.91		0.06
RB Power [dBm]	13.30		13.37	13.20	22.21		0.48

Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % QPSK PUSCH (0.0 %)

PS: Connection Established
PRC State: Connected

5MHz CH19925 1RB#0

LTE Measurement - X3.5.96.23 - Base V.3.5.129 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq: 1782.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		LastDev		StdDev	
EVM RMS [%] /h	1.82	1.79	1.75	1.74	2.86	2.90	0.15	0.14
EVM Peak [%] /h	8.25	8.24	7.26	7.15	15.52	15.52	1.23	1.25
EVM DMRS [%] /h	1.66	1.62	1.34	1.28	2.06	1.96	0.17	0.18
MErr RMS [%] /h	1.38	1.39	1.30	1.31	2.27	2.31	0.12	0.13
MErr Peak [%] /h	-6.48	-6.68	5.96	5.96	-14.55	-14.56	1.05	1.04
MErr DMRS [%] /h	1.50	1.42	1.13	1.02	1.50	1.42	0.16	0.18
PhErr RMS [%] /h	0.69	0.65	0.67	0.67	1.02	1.02	0.07	0.06
PhErr Peak [%] /h	3.05	2.86	2.69	2.58	6.23	6.25	0.64	0.57
PhErr DMRS [%] /h	0.42	0.45	0.41	0.44	0.91	0.88	0.08	0.07
IQ Offset [dBc]	-55.41		-55.38		-52.37			0.41
IQ Gain Imbalance [dB]	---		---		---			---
IQ Quadrature Error [°]	---		---		---			---
Freq Error [Hz]	2.47		9.16		53.94			15.44
Timing Error [Ts]	-10.25		-10.71		-13.77			0.82
OBW [MHz]	0.23		0.28		1.42			0.15
	Current		Average		Min		Max	StdDev
TX Power [dBm]	21.34		21.06		18.31		22.30	0.07
Peak Power [dBm]	25.85		25.76		23.21		26.99	0.26
RB Power [dBm]	21.37		21.00		9.29		21.48	1.12

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: (10.0 %)

PS: Connection Established (RR: State: Connected)

5MHz CH19925 1RB#24

LTE Measurement - X3.5.90.23 - Base V 3.5.129 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 1782.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Layers	Subcarriers
EVM RMS [%] / h	1.00	1.11	1.30	1.35
EVM Peak [%] / h	2.39	3.89	4.31	4.72
EVM DMRS [%] / h	0.93	0.79	1.12	1.04
MErm RMS [%] / h	0.48	0.54	0.57	0.66
MErr Peak [%] / h	-1.74	-1.83	1.88	2.32
MErm DMRS [%] / h	0.43	0.44	0.72	0.63
PhErr RMS [%] / h	0.50	0.56	0.67	0.68
PhErr Peak [%] / h	-1.34	1.99	2.35	2.52
PhErr DMRS [%] / h	0.47	0.37	0.49	0.47
IQ Offset [dBc]	-58.67	-59.47	-58.31	0.68
IQ Gain Imbalance [dB]	---	---	---	---
IQ Quadrature Error [°]	---	---	---	---
Freq Error [Hz]	30.86	9.51	-49.30	23.15
Timing Error [Ts]	18.61	18.82	19.78	0.38
OBW [MHz]	0.33	0.40	0.48	0.07
	Current	Average	Min	Max
TX Power [dBm]	19.98	20.00	19.98	20.06
Peak Power [dBm]	25.28	25.85	25.28	26.40
RB Power [dBm]	19.98	19.99	19.97	20.06

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: Viter Filter Throughput: 100.0 %

PS: Connection Established PRF State: Connected

20MHz CH19300 1RB#0

Multi Evaluation | PRACH | SRS

FDD Freq: 1720.0 MHz Ref Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Subfr/Slot: 0 / All

TX Measurement

	Current	Average	Min	Max	StdDev
EVM RMS [%] /h	1.16	1.15	1.19	1.20	1.39
EVM Peak [%] /h	3.62	3.65	2.91	2.93	3.82
EVM DMRS [%] /h	1.25	1.32	1.23	1.20	1.42
MErm RMS [%] /h	0.71	0.72	0.72	0.73	0.79
MErm Peak [%] /h	-1.58	-1.63	1.77	1.75	2.26
MErm DMRS [%] /h	1.06	1.10	0.96	0.93	1.17
PhErr RMS [%] /h	0.52	0.51	0.54	0.55	0.65
PhErr Peak [%] /h	2.06	2.07	1.58	1.60	-2.16
PhErr DMRS [%] /h	0.38	0.41	0.44	0.44	0.63
IQ Gain Imbalance [dBc]	-55.38	-56.13	-55.21	-55.21	0.43
IQ Quadrature Error [°]	---	---	---	---	---
Freq Error [Hz]	44.12	27.52	44.12	44.12	10.26
Timing Error [Ts]	0.59	-0.09	-1.97	-1.97	1.34
OBW [MHz]	---	---	---	---	---
	Current	Average	Min	Max	StdDev
TX Power [dBm]	19.85	19.97	19.85	20.10	0.12
Peak Power [dBm]	25.70	26.13	25.17	26.80	0.45
RB Power [dBm]	19.94	19.94	19.93	19.94	0.00

Statisc Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: (0.0 %)

PS: Connection Established RRC State: Connected

20MHz CH19575 1RB#0

LTE Measurement - X3.5.90.3 - Base V 3.5.129 - TX Measurement

Multi Evaluation | PRACH | SRS

TX Measurement

Freq: 1747.5 MHz Ref Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas SubBt/Slot: 0 / All

	Current			Average	Extensive			StdDev
EVM RMS [%] /h	3.19	3.21	3.61	3.60	4.05	4.01	0.41	0.39
EVM Peak [%] /h	10.99	11.03	13.16	13.09	15.43	15.49	2.05	1.99
EVM DMRS [%] /h	2.48	2.47	2.48	2.46	2.81	2.78	0.23	0.23
MER RMS [%] /h	2.76	2.80	3.18	3.18	3.55	3.53	0.37	0.35
MER Peak [%] /h	-10.89	-10.93	13.13	13.06	-15.43	-15.41	2.05	1.98
MER DMRS [%] /h	1.41	1.35	1.45	1.43	1.69	1.66	0.18	0.16
PhErr RMS [%] /h	0.92	0.91	0.98	0.98	1.12	1.11	0.11	0.10
PhErr Peak [%] /h	2.67	2.63	2.82	2.83	-3.63	-3.66	0.45	0.46
PhErr DMRS [%] /h	1.17	1.18	1.15	1.14	1.32	1.32	0.10	0.10
IQ Offset [dBc]	-59.48			-60.24		-59.41		0.48
IQ Gain Imbalance [dB]	-----			-----		-----		-----
IQ Quadrature Error [°]	-----			-----		-----		-----
Freq Error [Hz]	38.08			25.58		38.70		9.13
Timing Error [Ts]	-0.20			0.62		1.36		0.41
OBW [MHz]	-----			-----		-----		-----
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.33	22.25	22.15	22.34	0.09			
Peak Power [dBm]	25.84	25.66	25.54	25.94	0.12			
RB Power [dBm]	22.25	22.21	22.17	22.26	0.04			

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0

PS: Connection Established
PR State: Connected

20MHz CH19575 18RB#0

LTE Measurement - X3.530.23 - Base V 3.5.12v - TX Measurement

Multi Evaluation PRACH SRS

FDX Freq: 1747.5 MHz Ref Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas SubBt/Slt: 0 / All

TX Measurement	Current		Average		Extreme		StdDev	
EVM RMS [%] /h	3.20	3.21	3.18	3.19	3.25	3.25	0.04	0.04
EVM Peak [%] /h	16.99	16.98	16.08	16.08	17.67	17.68	0.66	0.66
EVM DMRS [%] /h	2.06	2.09	2.12	2.12	2.22	2.22	0.08	0.08
MErr RMS [%] /h	2.78	2.78	2.75	2.76	2.80	2.80	0.03	0.03
MErr Peak [%] /h	-14.63	-14.63	14.70	14.69	-15.20	-15.19	0.27	0.27
MErr DMRS [%] /h	1.67	1.69	1.68	1.68	1.77	1.78	0.06	0.06
PhErr RMS [%] /h	0.91	0.92	0.92	0.92	0.96	0.97	0.02	0.02
PhErr Peak [%] /h	5.35	5.34	4.27	4.27	5.82	5.83	0.71	0.72
PhErr DMRS [%] /h	0.69	0.70	0.73	0.74	0.81	0.84	0.04	0.04
IQ Offset [dBc]	-63.40		-63.90		-61.84		1.11	
IQ Gain Imbalance [dB]	-----		-----		-----		-----	
IQ Quadrature Error [%]	-----		-----		-----		-----	
Freq Error [Hz]	13.98		32.73		52.73		15.19	
Timing Error [Ts]	-0.21		0.40		1.27		0.45	
OBW [MHz]	-----		-----		-----		-----	
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.11	22.12	22.11	22.12	0.00			
Peak Power [dBm]	25.80	25.80	25.77	25.83	0.01			
RB Power [dBm]	9.55	9.56	9.55	9.56	0.00			

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0 %

PS: Connection Established RRC State: Connected

20MHz CH19850 1RB#99

LTE Measurement - X3.6.30.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 1775.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Extreme	StdDev
EVM RMS [%] /h	0.98	1.03	1.26	0.11
EVM Peak [%] /h	3.13	2.68	3.69	0.55
EVM DMRS [%] /h	1.14	1.06	1.52	0.18
MErr RMS [%] /h	0.58	0.61	0.76	0.10
MErr Peak [%] /h	-2.33	2.33	-3.59	0.73
MErr DMRS [%] /h	0.93	0.82	1.16	0.15
PhErr RMS [%] /h	0.46	0.47	0.58	0.06
PhErr Peak [%] /h	-1.70	1.27	-1.83	0.24
PhErr DMRS [%] /h	0.37	0.39	0.56	0.09
IQ Offset [dBc]	-53.65	-53.17	-52.42	0.37
IQ Gain Imbalance [dB]	-----	-----	-----	-----
IQ Quadrature Error [°]	-----	-----	-----	-----
Freq Error [Hz]	32.83	25.84	45.66	12.95
Timing Error [Ts]	-7.38	-7.27	-7.68	0.32
OBW [MHz]	-----	-----	-----	-----
	Current	Average	Min	Max
TX Power [dBm]	20.61	20.56	20.50	20.62
Peak Power [dBm]	25.65	25.70	25.60	25.84
RB Power [dBm]	20.54	20.54	20.54	20.55
				StdDev
				0.05
				0.06
				0.00

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0 %

PS: Connection Established
 GPS Status: Connected

Band 8 (900MHz) FDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP) (dBm)	ERP Limit (dBm)
1.4MHz	21507	QPSK	1	#0	23.33	19.8~25.7	-3.12	18.06	30
	21650	QPSK	1	#0	21.92	19.8~25.7	-3.12	16.65	30
			5	#0	22.15	19.8~25.7	-3.12	16.88	30
	21793	QPSK	1	#0	21.51	19.8~25.7	-3.12	16.24	30
5MHz	21525	QPSK	1	#0	22.26	19.8~25.7	-3.12	16.99	30
			1	#24	23.14	19.8~25.7	-3.12	17.87	30
	21650	QPSK	1	#0	22.94	19.8~25.7	-3.12	17.67	30
			1	#24	22.94	19.8~25.7	-3.12	17.67	30
			8	#0	22.94	19.8~25.7	-3.12	17.67	30
	21775	QPSK	1	#0	22.67	19.8~25.7	-3.12	17.4	30
			1	#24	22.67	19.8~25.7	-3.12	17.4	30
10MHz	21550	QPSK	1	#0	22.79	19.8~25.7	-3.12	17.52	30
			1	#49	22.79	19.8~25.7	-3.12	17.52	30
	21650	QPSK	1	#0	22.33	19.8~25.7	-3.12	17.06	30
			1	#49	22.03	19.8~25.7	-3.12	16.76	30
			12	#0	22.07	19.8~25.7	-3.12	16.8	30
	21750	QPSK	1	#0	23.09	19.8~25.7	-3.12	17.82	30
			1	#49	23.09	19.8~25.7	-3.12	17.82	30

Note: ERP= Conducted Power + Antenna Gain(dBi)-2.15

10MHz CH21650 1RB#0

LTE Measurement - X3.530.23 - Base V 3.5.129 - TX Measurement					
Multi Evaluation PRACH SRS					
FDD Freq: 900.0 MHz Ref Level: 41.00 dBm BW: 10.0 MHz CP Normal Meas Subtr/Slot 0 / All					
TX Measurement					
	Current	Average	Min	Max	StdDev
EVM RMS [%] /h	2.47	2.53	2.18	2.22	2.57
EVM Peak [%] /h	5.88	5.86	5.56	5.55	8.55
EVM DMRS [%] /h	1.89	1.93	2.06	2.04	2.52
MErr RMS [%] /h	1.50	1.52	1.33	1.36	1.81
MErr Peak [%] /h	-3.46	-3.44	3.60	3.57	-7.40
MErr DMRS [%] /h	1.48	1.57	1.49	1.49	1.71
PhErr RMS [%] /h	1.13	1.16	0.99	1.01	1.20
PhErr Peak [%] /h	3.30	3.34	2.82	2.84	3.79
PhErr DMRS [%] /h	0.67	0.64	0.81	0.80	1.06
IQ Offset [dBc]	-45.83	-45.87	-44.76	-44.76	-44.76
IQ Gain Imbalance [dB]	---	---	---	---	---
IQ Quadrature Error [%]	---	---	---	---	---
Freq Error [Hz]	45.89	42.00	49.21	49.21	7.74
Timing Error [Ts]	8.46	9.19	11.84	11.84	0.67
OBW [MHz]	0.35	0.33	0.43	0.43	0.03
TX Power [dBm]	22.25	22.20	5.79	22.33	0.08
Peak Power [dBm]	27.27	26.98	10.58	27.23	0.30
RB Power [dBm]	22.26	22.22	5.83	22.34	0.08

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: View Filter Throughput: PUSCH 100.0 %

PS: Connection Established (ARC State: Connected)

10MHz CH21650 12RB#0

LTE Measurement - X3.53623 - Base V 3.5.129 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq: 900.0 MHz Ref Level: 41.00 dBm BW: 10.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] /h	1.42	1.42	1.30	1.31	2.50	2.50	0.12	0.12
EVM Peak [%] /h	12.47	12.43	10.26	10.23	13.18	13.13	2.40	2.38
EVM DMRS [%] /h	1.25	1.23	1.09	1.07	2.61	2.38	0.09	0.08
MErr RMS [%] /h	1.12	1.11	0.99	0.99	1.97	2.00	0.13	0.13
MErr Peak [%] /h	-12.33	-12.28	10.23	10.20	-13.11	-13.06	2.40	2.38
MErr DMRS [%] /h	0.81	0.78	0.77	0.74	1.81	1.72	0.06	0.06
PhErr RMS [%] /h	0.51	0.51	0.49	0.49	0.91	0.88	0.03	0.02
PhErr Peak [%] /h	-1.54	-1.52	1.68	1.73	2.90	2.91	0.18	0.23
PhErr DMRS [%] /h	0.54	0.55	0.44	0.44	1.08	0.95	0.05	0.05
IQ Offset [dBc]	-45.58		-45.48		-45.07		0.12	
IQ Gain Imbalance [dB]	---		---		---		---	
IQ Quadrature Error [°]	---		---		---		---	
Freq Error [Hz]	-37.88		-21.11		-57.19		12.90	
Timing Error [Ts]	10.18		9.46		12.28		0.49	
OBW [MHz]	2.12		2.11		2.13		0.17	
	Current		Average		Min	Max	StdDev	
TX Power [dBm]	22.00		21.93		21.53	22.07	0.02	
Peak Power [dBm]	27.15		26.92		25.82	27.20	0.14	
RB Power [dBm]	11.20		11.55		11.20	22.06	1.02	

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: View Filter Throughput: 100.0 %

PS: Connection Established (ARC State: Connected)

10MHz CH21750 1RB#49

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDX Freq.: 910.0 MHz Ref. Level: 41.00 dBm BW: 10.0 MHz CP: Normal Meas SubBt/Slot: 0 / All

TX Measurement

	Current	Average	Extreme	StdDev
EVM RMS [%] /h	1.69	1.71	1.66	1.65
EVM Peak [%] /h	5.11	5.05	4.28	4.13
EVM DMRS [%] /h	1.74	1.66	1.86	1.78
MER RMS [%] /h	1.35	1.36	1.25	1.24
MER Peak [%] /h	-5.10	-5.04	4.12	3.98
MER DMRS [%] /h	1.35	1.37	1.33	1.30
PhErr Peak [%] /h	0.58	0.60	0.62	0.62
PhErr Peak [%] /h	1.57	1.63	1.66	1.68
PhErr DMRS [%] /h	0.63	0.54	0.74	0.69
IQ Offset [dBc]	-45.78	-45.85	-43.03	-43.03
IQ Gain Imbalance [dB]				
IQ Quadrature Error [°]				
Freq Error [Hz]	-30.48	-33.56	-49.47	5.72
Timing Error [Ts]	13.33	12.38	14.61	0.66
OBW [MHz]	0.27	0.31	2.13	0.04
	Current	Average	Min	Max
TX Power [dBm]	20.12	20.25	12.14	23.09
TX Power [dBm]	24.51	24.56	17.54	27.97
RB Power [dBm]	20.19	20.30	3.32	23.13

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0 %

PS: Connected Established Connected PR: State: Connected

Band 28 (700MHz) FDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP)	Limit (dBm)
3MHz	27225	QPSK	1	#0	22.64	19.8~25.7	-3.05	17.44	30
			4	#0	23.00	19.8~25.7	-3.05	17.8	30
	27435	QPSK	1	#0	22.66	19.8~25.7	-3.05	17.46	30
			4	#0	22.70	19.8~25.7	-3.05	17.5	30
	27645	QPSK	1	#14	23.23	19.8~25.7	-3.05	18.03	30
			4	#11	23.03	19.8~25.7	-3.05	17.83	30
5MHz	27235	QPSK	1	#0	22.63	19.8~25.7	-3.05	17.43	30
			8	#0	22.95	19.8~25.7	-3.05	17.75	30
	27435	QPSK	1	#0	22.79	19.8~25.7	-3.05	17.59	30
			8	#0	22.89	19.8~25.7	-3.05	17.69	30
	27635	QPSK	1	#24	22.65	19.8~25.7	-3.05	17.45	30
			8	#17	23.06	19.8~25.7	-3.05	17.86	30
20MHz	27310	QPSK	1	#0	22.78	19.8~25.7	-3.05	17.58	30
			18	#0	23.00	19.8~25.7	-3.05	17.8	30
	27435	QPSK	1	#0	23.24	19.8~25.7	-3.05	18.04	30
			18	#0	22.93	19.8~25.7	-3.05	17.73	30
	27560	QPSK	1	#99	23.03	19.8~25.7	-3.05	17.83	30
			18	#82	23.13	19.8~25.7	-3.05	17.93	30

Note: ERP= Conducted Power + Antenna Gain(dBi)-2.15

3MHz CH27225 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD	Freq: 704.5 MHz	Ref Level: 41.00 dBm	BW 3.0 MHz	CP Normal	Meas Subfr/Slot	0 / All				
TX Measurement										
	Current		Average		Extreme		SubDev			
EVM RMS [%] /h	4.11	4.10	4.46	4.45	5.02	5.01	0.28	0.28		
EVM Peak [%] /h	12.74	12.81	12.04	12.09	20.60	20.59	1.02	1.01		
EVM DMRS [%] /h	3.37	3.49	3.54	3.59	4.05	4.10	0.16	0.16		
MErr RMS [%] /h	3.61	3.60	3.99	3.97	4.55	4.51	0.29	0.28		
MErr Peak [%] /h	-11.65	-11.58	11.55	11.60	-20.20	-20.22	0.70	0.61		
MErr DMRS [%] /h	2.26	2.34	2.25	2.27	3.09	3.12	0.14	0.19		
PhErr RMS [%] /h	1.14	1.13	1.15	1.16	1.33	1.32	0.04	0.05		
PhErr Peak [%] /h	3.14	3.33	3.19	3.19	6.49	6.52	0.25	0.25		
PhErr DMRS [%] /h	1.43	1.47	1.56	1.59	1.83	1.87	0.10	0.09		
IQ Offset [dBc]	-46.79		-47.01		-46.52		0.33			
IQ Gain Imbalance [dB]	---		---		---		---			
IQ Quadrature Error [°]	---		---		---		---			
Freq Error [Hz]	15.45		15.03		-30.38		2.20			
Timing Error [Ts]	9.82		10.44		17.01		0.46			
OBW [MHz]	0.30		0.29		2.64		0.01			
	Current		Average		Min		Max		StdDev	
TX Power [dBm]	22.44		22.47		18.63		22.64		0.08	
Peak Power [dBm]	25.30		25.25		21.49		26.63		0.07	
RB Power [dBm]	22.49		22.50		8.31		22.69		0.09	
Statistic Count		Out of Tolerance		Detected Modulation		Detected Channel Type		View Filter Throughput		
20 / 20		0.00 %		QPSK		PUSCH		(10.0 %)		
PS: Connection Established RRC State: Connected										

3MHz CH27225 4RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD	Freq: 704.5 MHz	Ref Level:	41.00 dBm	BW: 3.0 MHz	CP: Normal	Meas Subfr/Slot	0 / All			
TX Measurement										
	Current	Average	Extreme	StdDev						
EVM RMS [%] /h	4.43	4.46	4.82	4.86	5.24	5.28	0.36	0.36		
EVM Peak [%] /h	15.24	15.08	16.08	16.19	17.98	18.16	0.96	1.23		
EVM DMRS [%] /h	3.05	3.03	3.09	3.10	3.29	3.32	0.06	0.07		
MErr RMS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
MErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
MErr DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr RMS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
IQ Offset [dBc]	-46.84	-49.12	-46.63	3.52						
IQ Gain Imbalance [dB]	NCAP	NCAP	NCAP	NCAP						
IQ Quadrature Error [°]	NCAP	NCAP	NCAP	NCAP						
Freq Error [Hz]	-15.08	-13.26	-51.77	1.90						
Timing Error [Ts]	-1.30	-1.59	12.09	0.27						
OBW [MHz]	0.83	0.77	0.84	0.05						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	22.96	22.97	22.96	23.00	0.01					
Peak Power [dBm]	26.49	26.53	26.41	26.62	0.03					
RB Power [dBm]	16.95	16.95	16.95	16.97	0.00					
Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: View Filter Throughput: PUSCH (10.0 %)										
PS: Connection Established RRC State: Connected										

3MHz CH27435 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation		PRACH		SRS						
FDD	Freq: 725.5 MHz	Ref Level:	41.00 dBm	BW 3.0 MHz	CP Normal	Meas Subfr/Slot	0 / All			
TX Measurement										
	Current		Average		Extreme		SubDev			
EVM RMS [%] /h	4.05	4.09	4.63	4.62	5.40	5.34	0.57	0.53		
EVM Peak [%] /h	12.75	12.70	14.64	14.10	17.53	16.19	1.87	1.22		
EVM DMRS [%] /h	2.72	2.75	3.14	3.14	3.85	3.82	0.48	0.45		
MErr RMS [%] /h	3.51	3.55	4.06	4.03	4.79	4.71	0.52	0.47		
MErr Peak [%] /h	-12.66	-12.54	14.46	13.93	-17.32	-16.16	1.97	1.38		
MErr DMRS [%] /h	1.78	1.83	2.09	2.08	2.63	2.55	0.36	0.30		
PhErr RMS [%] /h	1.16	1.18	1.28	1.30	1.47	1.50	0.14	0.15		
PhErr Peak [%] /h	-3.33	-3.37	4.20	4.25	5.56	5.64	0.82	0.84		
PhErr DMRS [%] /h	1.18	1.18	1.35	1.35	1.70	1.73	0.19	0.20		
IQ Offset [dBc]	-48.63		-48.50		-46.41		0.20			
IQ Gain Imbalance [dB]	---		---		---		---			
IQ Quadrature Error [°]	---		---		---		---			
Freq Error [Hz]	32.07		30.28		47.59		2.68			
Timing Error [Ts]	6.88		7.31		9.63		1.46			
OBW [MHz]	0.23		0.24		0.30		0.01			
	Current		Average		Min	Max	StdDev			
TX Power [dBm]	22.45		22.34		10.87	22.66	0.12			
Peak Power [dBm]	25.40		25.54		16.12	25.87	0.17			
RB Power [dBm]	22.44		22.36		10.95	22.64	0.09			
Statistic Count		Out of Tolerance		Detected Modulation		Detected Channel Type		View Filter Throughput		
20 / 20		0.00 %		QPSK		PUSCH		(10.0 %)		
PS:		Connection Established								
		RRC State: Connected								

3MHz CH27435 4RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation

PRACH

SRS

FDD

Freq: 725.5 MHz

Ref Level: 41.00 dBm

BW 3.0 MHz

CP Normal

Meas Subfr/Slot

0 / All

TX Measurement

	Current	Average	Extreme	SubDev
EVM RMS [%] /h	3.96	3.98	3.98	4.00
EVM Peak [%] /h	12.82	12.70	13.17	13.02
EVM DMRS [%] /h	3.20	3.20	3.22	3.25
MErr RMS [%] /h	3.32	3.37	3.38	3.41
MErr Peak [%] /h	-12.53	-12.39	12.93	12.83
MErr DMRS [%] /h	2.31	2.26	2.36	2.36
PhErr RMS [%] /h	1.25	1.22	1.21	1.20
PhErr Peak [%] /h	-4.38	-4.40	4.12	4.13
PhErr DMRS [%] /h	1.27	1.29	1.26	1.28
IQ Offset [dBc]	-47.33	-46.84	-46.19	
IQ Gain Imbalance [dB]	---	---	---	
IQ Quadrature Error [°]	---	---	---	
Freq Error [Hz]	29.24	26.52	48.27	
Timing Error [Ts]	5.07	5.72	15.06	
OBW [MHz]	0.78	0.74	0.78	
	Current	Average	Min	Max
TX Power [dBm]	22.45	22.48	10.87	22.70
Peak Power [dBm]	26.14	26.12	16.12	26.24
RB Power [dBm]	16.42	16.45	10.95	22.69

Statistic Count

20 / 20

Out of Tolerance

0.00 %

Detected Modulation

QPSK

Detected Channel Type

PUSCH

View Filter Throughput

(10.0 %)

PS:

Connection Established

RRC State: Connected

3MHz CH27645 1RB#14

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD	746.5 MHz	Ref Level:	41.00 dBm	BW 3.0 MHz	CP Normal	Meas Subfr/Slot	0 / All			
TX Measurement										
	Current		Average		Extreme		SubDev			
EVM RMS [%] /h	4.36	4.40	3.88	3.90	4.62	4.66	0.60	0.61		
EVM Peak [%] /h	13.77	13.93	12.59	12.63	14.98	15.06	1.44	1.47		
EVM DMRS [%] /h	2.71	2.75	2.49	2.49	3.06	3.12	0.32	0.36		
MErr RMS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
MErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
MErr DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr RMS [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr Peak [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
PhErr DMRS [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP		
IQ Offset [dBc]	-49.27		-49.29		-48.66		0.23			
IQ Gain Imbalance [dB]	NCAP		NCAP		NCAP		NCAP			
IQ Quadrature Error [*]	NCAP		NCAP		NCAP		NCAP			
Freq Error [Hz]	9.48		9.47		29.20		1.32			
Timing Error [Ts]	-5.86		-5.86		-6.19		0.18			
OBW [MHz]	0.35		0.29		0.35		0.06			
	Current		Average		Min	Max	StdDev			
TX Power [dBm]	22.86		22.99		22.76	23.23	0.12			
Peak Power [dBm]	26.43		26.34		26.16	26.51	0.11			
RB Power [dBm]	22.92		23.01		22.82	23.21	0.08			
Statistic Count										
20 / 20		Out of Tolerance		0.00 %		Detected Modulation		Detected Channel Type		
						OPSK		PUSCH		
								/RB 0.0 %		
PS: Connector Established RRC State: Connected										

5MHz CH27235 1RB#0

LTE Measurement - X35.90.23 - Base V 3.5.129 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 705.5MHz Ref Level: 41.00dBm BW:3.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev
EVM RMS [%] /h	4.54	4.55	4.76	4.76	5.84	5.83	0.25
EVM Peak [%] /h	14.04	14.09	12.78	12.83	15.26	15.37	1.47
EVM DMRS [%] /h	4.01	4.08	3.98	3.98	4.64	4.73	0.11
MErr RMS [%] /h	3.97	3.97	4.20	4.19	5.20	5.18	0.27
MErr Peak [%] /h	-12.37	-12.34	11.80	11.83	-13.60	-13.55	0.66
MErr DMRS [%] /h	2.92	2.97	2.74	2.74	3.26	3.24	0.19
PhErr RMS [*] /h	1.28	1.29	1.30	1.31	1.54	1.55	0.03
PhErr Peak [*] /h	4.05	4.17	3.89	3.97	4.77	4.95	0.38
PhErr DMRS [*] /h	1.56	1.60	1.65	1.65	1.97	1.97	0.06
IQ Offset [dBc]	-49.15		-49.39		-48.50		0.16
IQ Gain Imbalance [dB]	-----		-----		-----		-----
IQ Quadrature Error [°]	-----		-----		-----		-----
Freq Error [Hz]	19.25		16.04		20.67		2.88
Timing Error [Ts]	12.18		9.41		13.16		3.67
OBW [MHz]	0.30		0.29		0.30		0.00
	Current	Average		Min	Max	StdDev	
TX Power [dBm]	22.36	22.30	11.53	22.63	0.05		
Peak Power [dBm]	24.97	24.91	16.32	25.44	0.05		
RB Power [dBm]	22.40	22.32	11.61	22.67	0.07		

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 110.0 %

PS: Connection Established
PRC State: Connected

5MHz CH27235 8RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 705.5 MHz Ref Level: 40.00 dBm BW: 5.0 MHz CP: Normal Meas Subfr/Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] /h	4.59	4.58	4.74	4.73	4.94	4.94	0.17	0.18
EVM Peak [%] /h	18.75	18.81	22.84	22.87	30.85	27.47	3.97	3.95
EVM DMRS [%] /h	3.94	3.93	3.76	3.79	3.98	4.02	0.16	0.15
MER RMS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
MER Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
MER DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr RMS [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr Peak [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr DMRS [*] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
IQ Offset [dBc]	-50.85		-49.72		-48.43		1.22	
IQ Gain Imbalance [dB]	NCAP		NCAP		NCAP		NCAP	
IQ Quadrature Error [°]	NCAP		NCAP		NCAP		NCAP	
Freq Error [Hz]	4.58		3.13		46.71		2.52	
Timing Error [Ts]	5.43		5.42		6.56		0.26	
OBW [MHz]	1.41		1.41		4.44		0.04	
	Current		Average		Min		StdDev	
TX Power [dBm]	22.94		22.94		21.90		22.95	
Peak Power [dBm]	26.38		26.48		26.34		27.59	
RB Power [dBm]	13.91		13.90		7.92		13.91	

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: View Filter Throughput: PUSCH 100.0 %

PS: Connection Established RRC State: Connected

5MHz CH27435 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.10 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 725.5MHz Ref Level: 41.00dBm BW:5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Layers		StdDev
EVm RMS [%] /h	5.47	5.44	5.02	4.99	8.03	8.11	0.45
EVm Peak [%] /h	18.16	18.41	15.78	15.85	32.81	32.86	2.52
EVm DMRS [%] /h	3.83	3.85	3.80	3.88	5.17	5.15	0.12
MErr RMS [%] /h	4.58	4.61	4.29	4.30	7.23	7.26	0.30
MErr Peak [%] /h	-18.12	-18.33	15.73	15.78	-32.68	-32.74	2.55
MDMRS [%] /h	2.33	2.33	2.27	2.34	3.61	3.56	0.10
PhErr RMS [%] /h	1.73	1.67	1.50	1.47	2.38	2.45	0.22
PhErr Peak [%] /h	-4.78	-4.60	4.06	3.98	9.88	10.00	0.69
PhErr DMRS [%] /h	1.74	1.75	1.74	1.77	2.38	2.34	0.06
IQ Offset [dBc]	-47.12		-47.19		-45.58		0.20
IQ Gain Imbalance [dB]	---		---		---		---
IQ Quadrature Error [°]	---		---		---		---
Freq Error [Hz]	27.91		29.27		36.29		2.59
Timing Error [Ts]	9.49		10.42		14.81		1.26
OBW [MHz]	0.24		0.29		0.52		0.06
	Current		Average		Min	Max	StdDev
TX Power [dBm]	22.66		22.71		9.46	22.79	0.07
Peak Power [dBm]	25.81		26.05		15.40	26.84	0.31
RB Power [dBm]	22.66		22.68		9.50	22.72	0.05

Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % QPSK PUSCH (0.0 %)

PS: Connection Established (ARC State: Connected)

5MHz CH27435 8RB#0

LTE Measurement - X3.530.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation PRACH SRS

FDD Freq: 725.5 MHz Ref Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		LastDev		StdDev	
EVM RMS [%] /h	5.46	5.46	5.39	5.38	6.50	6.52	0.20	0.21
EVM Peak [%] /h	27.34	27.31	23.14	23.17	28.07	28.05	4.35	4.31
EVM DMRS [%] /h	4.26	4.26	4.52	4.51	5.25	5.23	0.20	0.19
MErr RMS [%] /h	4.89	4.89	4.76	4.75	5.71	5.66	0.22	0.22
MErr Peak [%] /h	-27.05	-27.03	22.75	22.78	-27.65	-27.64	4.39	4.35
MErr DMRS [%] /h	1.99	2.00	2.23	2.25	3.20	3.31	0.24	0.24
PhErr RMS [*] /h	1.40	1.39	1.46	1.45	1.81	1.88	0.05	0.06
PhErr Peak [*] /h	-5.57	-5.60	4.96	4.92	-5.86	-5.88	0.42	0.45
PhErr DMRS [*] /h	2.17	2.17	2.27	2.25	2.43	2.38	0.09	0.08
IQ Offset [dBc]	-46.81		-48.30		-46.58		1.27	
IQ Gain Imbalance [dB]	---		---		---		---	
IQ Quadrature Error [°]	---		---		---		---	
Freq Error [Hz]	17.82		17.87		21.77		1.80	
Timing Error [Ts]	12.57		11.38		14.22		1.45	
OBW [MHz]	1.41		1.41		1.56		0.29	
	Current		Average		Min	Max	StdDev	
TX Power [dBm]	22.57		22.55		22.49	22.89		0.03
Peak Power [dBm]	26.12		25.95		25.29	26.24		0.20
RB Power [dBm]	13.52		15.12		13.52	22.81		2.20

Stat: Stat Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % OPSK PUSCH 100.0 %

PS: Connection Established RRC State: Connected

5MHz CH27635 1RB#24

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement									
Multi Evaluation		PRACH		SRS					
FDD	Freq: 745.5 MHz	Ref Level:	41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subtr/Slot		0 / All	
TX Measurement									
	Current	Average			Layers		Subcarriers		
EVM RMS [%] / h	3.87	3.89	3.87	3.87	10.30	10.28	0.13	0.15	
EVM Peak [%] / h	11.19	11.37	11.07	11.22	27.48	27.45	0.42	0.40	
EVM DMRS [%] / h	3.01	2.94	2.80	2.77	8.18	8.58	0.32	0.33	
MErr RMS [%] / h	3.25	3.24	3.11	3.11	9.41	9.50	0.17	0.16	
MErr Peak [%] / h	-10.70	-10.91	9.71	9.87	-27.15	-27.12	0.88	0.89	
MErr DMRS [%] / h	1.77	1.62	1.73	1.66	5.93	5.89	0.16	0.14	
PhErr RMS [%] / h	1.22	1.25	1.34	1.33	2.48	2.32	0.08	0.06	
PhErr Peak [%] / h	4.06	4.17	4.49	4.58	-8.36	-8.36	0.80	0.84	
PhErr DMRS [%] / h	1.39	1.41	1.26	1.27	3.17	3.61	0.17	0.19	
IQ Offset [dBc]	-47.59			-47.50		-46.95		0.28	
IQ Gain Imbalance [dB]	---			---		---		---	
IQ Quadrature Error [%]	---			---		---		---	
Freq Error [Hz]	-1.30			-2.02		14.62		2.92	
Timing Error [Ts]	8.35			10.81		16.43		3.71	
OBW [MHz]	0.38			0.32		1.58		0.05	
	Current	Average			Min	Max	StdDev		
TX Power [dBm]	22.04	22.01			17.02	22.65	0.12		
Peak Power [dBm]	25.73	25.44			21.51	26.38	0.29		
RB Power [dBm]	22.04	22.01			7.98	22.65	0.12		
Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 100.0 %									
PS: Connected (Established) PRF State: Connected									

5MHz CH27635 8RB#17

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 745.5MHz Ref Level: 41.00dBm BW:5.0 MHz CP:Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		LastDev		StdDev	
EVM RMS [%] 1h	3.42	3.41	3.28	3.27	3.47	3.47	0.15	0.15
EVM Peak [%] 1h	21.00	20.97	17.81	17.82	21.78	21.75	3.42	3.37
EVM DMRS [%] 1h	2.27	2.26	2.42	2.39	2.67	2.61	0.16	0.14
Merr RMS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
Merr Peak [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
EMR DMRS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr RMS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr Peak [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr DMRS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP
IQ Offset [dBc]		-50.15		-51.20		-49.93		1.23
IQ Gain Imbalance [dB]		NCAP		NCAP		NCAP		NCAP
IQ Quadrature Error [°]		NCAP		NCAP		NCAP		NCAP
Freq Error [Hz]		-37.51		-28.52		-47.51		8.65
Timing Error [Ts]		5.14		4.27		5.21		0.77
OBW [MHz]		1.39		1.44		1.49		0.04
		Current		Average		Min		Max
TX Power [dBm]		23.01		23.02		22.95		23.06
Peak Power [dBm]		27.43		27.28		27.09		27.49
RB Power [dBm]		13.98		13.98		13.91		14.02

Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % QPSK PUSCH 100.0 %

PS: Attached RRC State: Connected

20MHz CH27310 1RB#0

LTE Measurement - X3.53023 - Base V 3.5.129 - TX Measurement

Multi Evaluation **PRACH** **SRS**

FDD Freq: 713.0 MHz Ref Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Subfr/Slot: 0 / All

TX Measurement

	Current	Average	Min	Max	StdDev
EVM RMS [%] /h	5.39	5.42	5.86	6.50	0.51
EVM Peak [%] /h	16.16	16.16	18.59	22.07	2.71
EVM DMRS [%] /h	4.38	4.37	4.46	4.78	0.20
MErr RMS [%] /h	4.83	4.83	5.24	5.80	0.45
MErr Peak [%] /h	-15.88	-15.87	18.23	-21.43	2.56
MErr DMRS [%] /h	2.83	2.81	2.73	3.02	0.09
PhErr RMS [%] /h	1.38	1.41	1.53	1.74	0.15
PhErr Peak [%] /h	4.42	4.43	4.10	4.94	0.37
PhErr DMRS [%] /h	1.92	1.92	2.02	2.25	0.14
IQ Offset [dBc]	-50.29	-50.42	-50.42	-49.83	0.20
IQ Gain Imbalance [dB]	-----	-----	-----	-----	-----
IQ Quadrature Error [°]	-----	-----	-----	-----	-----
Freq Error [Hz]	14.65	10.69	47.78	47.78	10.57
Timing Error [Ts]	13.33	12.80	14.10	14.10	1.06
OBW [MHz]	-----	-----	-----	-----	-----
	Current	Average	Min	Max	StdDev
TX Power [dBm]	22.77	22.66	22.56	22.78	0.09
Peak Power [dBm]	25.78	25.47	25.13	25.78	0.21
RB Power [dBm]	22.68	22.61	22.55	22.69	0.05

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter Throughput: 110.0 %

PS: Connector Established
 RF State: Connected

20MHz CH27310 18RB#0

The screenshot displays the 'LTE Measurement' software interface. At the top, the title bar reads 'LTE Measurement - X3.5.90.23 - Base V3.5.120 - TX Measurement'. Below the title bar, there are tabs for 'Multi Evaluation', 'PRACH', and 'SRS', with 'Multi Evaluation' being the active tab. The main display area is titled 'TX Measurement' and shows various performance metrics. The top section includes 'FDD' and 'Freq: 7.13.0 MHz'. Below this, a table lists measurement results for 'Current', 'Average', 'Min', 'Max', and 'StdDev' across different metrics. The metrics include EVM RMS [%] 1h, EVM Peak [%] 1h, EVM DMRS [%] 1h, MErr RMS [%] 1h, MErr Peak [%] 1h, MErr DMRS [%] 1h, PhErr RMS [°] 1h, PhErr Peak [°] 1h, PhErr DMRS [°] 1h, IQ Offset [dBc], IQ Gain Imbalance [dB], IQ Quadrature Error [°], Freq Error [Hz], Timing Error [Ts], and BW [MHz]. The bottom section shows 'TX Power [dBm]', 'Peak Power [dBm]', and 'RB Power [dBm]'. At the very bottom, there is a status bar with 'Statistic Count: 20 / 20', 'Out of Tolerance: 0.00 %', 'Detected Modulation: QPSK', 'Detected Channel Type: PUSCH', and 'View Filter: Throughput'.

	Current	Average	Min	Max	StdDev
EVM RMS [%] 1h	5.24	5.24	5.26	5.25	5.39
EVM Peak [%] 1h	23.34	23.38	22.03	22.04	24.35
EVM DMRS [%] 1h	3.46	3.45	3.45	3.44	3.58
MErr RMS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
MErr Peak [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
MErr DMRS [%] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr RMS [°] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr Peak [°] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr DMRS [°] 1h	NCAP	NCAP	NCAP	NCAP	NCAP
IQ Offset [dBc]	-49.12	-49.19	-48.56	-0.18	
IQ Gain Imbalance [dB]	NCAP	NCAP	NCAP	NCAP	
IQ Quadrature Error [°]	NCAP	NCAP	NCAP	NCAP	
Freq Error [Hz]	-37.97	-30.16	-48.97	6.78	
Timing Error [Ts]	3.23	2.29	4.04	0.73	
BW [MHz]	3.18	3.19	3.19	0.01	
	Current	Average	Min	Max	StdDev
TX Power [dBm]	22.94	22.94	22.88	23.00	0.00
Peak Power [dBm]	26.03	26.01	25.95	26.35	0.03
RB Power [dBm]	10.37	10.36	10.29	10.43	0.01

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter: Throughput

20MHz CH27435 1RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.19 - TX Measurement

Multi Evaluation | **PRACH** | **SRS**

FDD Freq: 725.5MHz Ref Level: 41.00dBm BW:20.0MHz CP: Normal Meas Subfr/Slot: 0 / All

TX Measurement

	Current	Average	Min	Max	StdDev			
EVM RMS [%] /h	5.16	5.14	5.18	5.12	6.15	6.03	0.72	0.68
EVM Peak [%] /h	12.40	12.48	13.51	13.50	17.82	17.77	2.46	2.37
EVM DMRS [%] /h	4.01	4.01	4.16	4.17	4.95	4.91	0.67	0.68
MErr RMS [%] /h	4.18	4.15	4.41	4.35	5.46	5.37	0.67	0.63
MErr Peak [%] /h	-12.26	-12.36	13.45	13.45	-17.44	-17.38	2.49	2.40
MErr DMRS [%] /h	2.48	2.49	2.65	2.67	3.40	3.37	0.43	0.44
PhErr RMS [%] /h	1.75	1.75	1.57	1.56	1.87	1.89	0.25	0.26
PhErr Peak [%] /h	-4.16	-4.15	3.58	3.56	-4.19	-4.20	0.58	0.59
PhErr DMRS [%] /h	1.80	1.80	1.83	1.84	2.09	2.10	0.32	0.32
IQ Offset [dBc]	-46.59	-46.59	-46.68	-46.68	-45.90	-45.90	0.60	0.60
IQ Gain Imbalance [dB]	-----	-----	-----	-----	-----	-----	-----	-----
IQ Quadrature Error [%]	-----	-----	-----	-----	-----	-----	-----	-----
Freq Error [Hz]	-0.23	-0.23	2.85	2.85	13.23	13.23	3.05	3.05
Timing Error [Ts]	4.96	4.96	5.32	5.32	18.27	18.27	0.98	0.98
OBW [MHz]	-----	-----	-----	-----	-----	-----	-----	-----
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.80	22.87	4.04	23.24	1.00			
Peak Power [dBm]	27.05	27.23	9.45	27.79	1.01			
RB Power [dBm]	22.84	22.82	4.11	23.09	1.00			

Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput

20 / 20 0.00 % QPSK PUSCH 110.0 %

PS: Connector Established Connected

RFIC State: Connected

20MHz CH27435 18RB#0

Measurement	Current	Average	Min	Max	StdDev
EVM RMS [%] U/I	2.93	2.93	2.92	2.92	2.98
EVM Peak [%] U/I	14.75	14.75	14.48	14.49	15.66
EVM DMRS [%] U/I	1.88	1.87	1.89	1.88	2.01
MErr RMS [%] U/I	NCAP	NCAP	NCAP	NCAP	NCAP
MErr Peak [%] U/I	NCAP	NCAP	NCAP	NCAP	NCAP
MErr DMRS [%] U/I	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr RMS [°] U/I	NCAP	NCAP	NCAP	NCAP	NCAP
PhErr DMRS [°] U/I	NCAP	NCAP	NCAP	NCAP	NCAP
IQ Offset [dBc]	-45.92	-46.11	-45.66	-45.66	0.18
IQ Gain Imbalance [dB]	NCAP	NCAP	NCAP	NCAP	NCAP
IQ Quadrature Error [°]	NCAP	NCAP	NCAP	NCAP	NCAP
Freq Error [Hz]	-38.24	-34.59	-39.30	-34.59	3.19
Timing Error [Ts]	-3.39	-3.83	-5.43	-3.83	0.76
OBW [MHz]	3.18	3.18	3.18	3.18	0.00
TX Power [dBm]	22.91	22.92	22.91	22.93	0.00
Peak Power [dBm]	27.23	27.32	27.21	27.54	0.09
RB Power [dBm]	10.36	10.37	10.36	10.38	0.00

20MHz CH27560 1RB#99

LTE Measurement - X3.5.30.23 - Base V 3.5.120 - TX Measurement									
Multi Evaluation		PRACH		SRS					
FDX	Freq: 738.0 MHz	Ref Level:	41.00 dBm	BW: 20.0 MHz	CP: Normal	Meas Subfr/Slot:	0 / All		
TX Measurement									
	Current		Average		Limits		Source		
EVM RMS [%] /h	3.77	3.76	4.29	4.27	5.97	5.97	0.48	0.48	
EVM Peak [%] /h	10.24	10.30	12.31	12.35	18.45	18.47	1.92	1.91	
EVM DMRS [%] /h	3.10	3.05	3.10	3.09	4.32	4.36	0.15	0.17	
MErr RMS [%] /h	3.24	3.22	3.84	3.82	5.46	5.46	0.54	0.53	
MErr Peak [%] /h	-10.22	-10.28	12.14	12.19	-18.44	-18.46	1.78	1.77	
MErr DMRS [%] /h	1.79	1.68	2.09	2.07	3.15	3.20	0.39	0.45	
PhErr RMS [%] /h	1.11	1.11	1.10	1.09	1.43	1.43	0.04	0.04	
PhErr Peak [%] /h	-2.60	-2.58	2.52	2.51	-6.52	-6.53	0.17	0.17	
PhErr DMRS [%] /h	1.45	1.46	1.31	1.32	1.97	1.98	0.15	0.15	
IQ Offset [dBc]	-46.46		-46.49		-45.59		0.16		
IQ Gain Imbalance [dB]	-----		-----		-----		-----		
IQ Quadrature Error [°]	-----		-----		-----		-----		
Freq Error [Hz]	31.29		32.87		37.62		2.16		
Timing Error [Ts]	5.36		6.03		7.83		0.78		
OBW [MHz]	-----		-----		-----		-----		
	Current	Average		Min	Max	StdDev			
TX Power [dBm]	22.48	22.53		12.41	23.03	0.05			
Peak Power [dBm]	25.92	26.09		17.89	27.03	0.28			
RB Power [dBm]	22.55	22.55		3.24	22.70	0.04			
Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput									
20 / 20 0.00 % QPSK PUSCH 100.0 %									
PS Connection Established PRACH State: Connected									

20MHz CH27560 18RB#82

LTE Measurement - X3.5.9v23 - Base V 3.15.10 - TX Measurement

Multi Evaluation PRACH SRS

FD Freq: 738.0 MHz Ref Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Subfr/Slot: 0 / All

TX Measurement

	Current			Average		LastOne		Success	
EVM RMS [%] /h	3.42	3.42	3.40	3.40	3.59	3.60	0.02	0.02	
EVM Peak [%] /h	21.89	21.89	19.16	19.20	22.57	22.58	2.66	2.61	
EVM DMRS [%] /h	2.16	2.15	2.16	2.16	2.31	2.34	0.03	0.04	
MErr RMS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
MErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
MErr DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
PhErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
PhErr Peak [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
PhErr DMRS [%] /h	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	NCAP	
IQ Offset [dBc]		-47.97		-47.90		-47.25		0.17	
IQ Gain Imbalance [dB]		NCAP		NCAP		NCAP		NCAP	
IQ Quadrature Error [°]		NCAP		NCAP		NCAP		NCAP	
Freq Error [Hz]		-0.89		-3.52		-24.36		1.80	
Timing Error [Ts]		6.69		6.85		8.63		0.59	
OBW [MHz]		3.18		3.18		3.18		0.00	
		Current		Average		Min	Max	StdDev	
TX Power [dBm]		22.98		22.98		22.96	23.13	0.01	
Peak Power [dBm]		27.01		26.98		26.84	27.13	0.09	
RB Power [dBm]		10.43		10.42		10.40	10.57	0.01	

Statistic Count: 20 / 20 Out of Tolerance: 0.00 % Detected Modulation: QPSK Detected Channel Type: PUSCH View Filter: Throughput: 10.0

PS: Connection Established (RRC State: Connected)

Band 38 (2600MHz) TDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP)	Limit (dBm)
5MHz	37775	QPSK	1	#0	22.39	20.3~25.7	1.07	21.31	30
			8	#0	21.51	20.3~25.7	1.07	20.43	30
	38000	QPSK	1	#0	22.46	20.3~25.7	1.07	21.38	30
			8	#0	22.46	20.3~25.7	1.07	21.38	30
	38225	QPSK	1	#24	23.24	20.3~25.7	1.07	22.16	30
			8	#17	23.24	20.3~25.7	1.07	22.16	30
20MHz	37850	QPSK	1	#0	23.46	20.3~25.7	1.07	22.38	30
			18	#0	22.74	20.3~25.7	1.07	21.66	30
	38000	QPSK	1	#0	22.22	20.3~25.7	1.07	21.14	30
			18	#0	22.22	20.3~25.7	1.07	21.14	30
	38150	QPSK	1	#99	22.66	20.3~25.7	1.07	21.58	30
			18	#82	22.75	20.3~25.7	1.07	21.67	30

Note: ERP= Conducted Power + Antenna Gain(dBi)-2.15

20MHz CH37850 18RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.120 - TX Measurement								
Multi Evaluation		PRACH	SRS					
TDD Freq: 2610.0 MHz		Ref Level:	41.00 dBm	BW: 20.0 MHz		CP: Normal	Meas SubPr/Slot	0 / All
TX Measurement		Current		Average		LastDev		StdDev
EVM RMS [%] /h	2.73	2.73	3.86	3.30	7.63	7.67	0.95	0.56
EVM Peak [%] /h	15.19	15.17	40.68	14.76	94.63	31.19	32.73	2.81
EVM DMRS [%] /h	2.46	2.41	2.88	2.83	8.32	8.30	0.88	0.86
MERn RMS [%] /h	1.82	1.83	2.70	2.00	6.35	6.32	0.80	0.35
MERn Peak [%] /h	-14.83	-14.82	38.93	13.37	-92.30	23.06	32.53	2.55
MERn DMRS [%] /h	1.79	1.77	2.03	2.00	7.97	7.98	0.86	0.85
PhErr RMS [%] /h	1.17	1.17	1.63	1.51	2.46	2.53	0.37	0.29
PhErr Peak [%] /h	3.69	3.72	12.17	5.62	30.91	-15.51	9.73	2.02
PhErr DMRS [%] /h	0.97	0.94	1.17	1.14	3.17	3.11	0.29	0.26
IQ Offset [dBc]	-48.46		-49.75		-46.59		0.95	
IQ Gain Imbalance [dB]	-----		-----		-----		-----	
IQ Quadrature Error [%]	-----		-----		-----		-----	
Freq Error [Hz]	-33.14		-27.22		-110.64		8.18	
Timing Error [Ts]	-33.89		-33.86		-36.13		0.71	
OBW [MHz]	3.19		2.59		3.19		1.15	
	Current		Average		Min	Max	StdDev	
TX Power [dBm]	22.65		22.65		22.11	22.74	0.09	
Peak Power [dBm]	27.46		27.44		24.42	27.79	0.15	
RB Power [dBm]	10.09		16.63		10.09	22.59	5.06	
Statistic: Count		Out of Tolerance		Detected Modulation		Detected Channel Type		View Filter Throughput
20 / 20		0.00 %		QPSK		PUSCH		(10.0 %)
PS: 		Connection Established						
		PRC: Status Connected						

20MHz CH38000 18RB#0

LTE Measurement - X3.5.90.23 - Base V 3.5.126 - TX Measurement							
Multi Evaluation		PRACH	SRS				
TDX	Freq. 2595.0 MHz	Ref Level:	38.50 dBm	BW: 20.0 MHz	CP Normal	Meas Subtr/Slot	0 / All
TX Measurement							
	Current	Average	Min	Max	StdDev		
EVM RMS [%] I/h	4.57	4.58	6.59	6.35	10.10	9.84	2.05
EVM Peak [%] I/h	20.94	20.89	49.98	23.68	90.27	35.63	30.18
EVM DMRS [%] I/h	3.32	3.19	5.16	5.15	8.31	8.25	1.94
MER _{RMS} [dB] I/h	3.69	3.70	4.97	4.67	7.61	7.30	1.33
MER _{Peak} [dB] I/h	-20.94	-20.89	48.61	22.09	-89.23	26.67	29.06
MER _{DMRS} [dB] I/h	2.39	2.29	4.45	4.44	7.89	7.84	2.19
PhErr RMS [%] I/h	1.56	1.56	2.56	2.49	4.33	4.04	0.97
PhErr Peak [%] I/h	6.62	6.61	16.04	9.29	66.58	-17.11	12.99
PhErr DMRS [%] I/h	1.31	1.27	1.48	1.47	1.86	1.93	0.14
IQ Offset [dBc]	-52.45	-	-51.10	-	-49.05	-	0.72
IQ Gain Imbalance [dB]	-	-	-	-	-	-	-
IQ Quadrature Error [%]	-	-	-	-	-	-	-
Freq Error [Hz]	-42.51	-	-17.05	-	-57.69	-	19.88
Timing Error [Ts]	-34.47	-	-34.00	-	-35.61	-	0.72
OBW [MHz]	3.18	-	3.19	-	3.21	-	0.01
	Current	Average	Min	Max	StdDev		
TX Power [dBm]	22.17	22.18	22.16	22.22	0.02		
Peak Power [dBm]	25.33	25.44	25.30	26.19	0.21		
RB Power [dBm]	9.61	9.62	9.60	9.66	0.01		

Status: Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughput
20 / 20 35.00 % QPSK PUSCH (10.0 %)

PS:

Connection Established
 RRC State: Connected

20MHz CH38150 18RB#82

LTE Measurement - X3.5.9.23 - Base V 3.5.120 - TX Measurement						
Multi Evaluation		PRACH	SRS			
TDX Freq: 26.10.0 MHz		Ref Level:	41.00 dBm	BM: 20.0 MHz	CP: Normal	Meas Subtr/Slot: 0 / All
TX Measurement		Current	Average		Last Meas	
EVM RMS [%] /h	4.78	3.47	3.86	3.13	9.70	0.97
EVM Peak [%] /h	85.58	14.00	50.10	14.83	94.63	32.46
EVM DMRS [%] /h	2.46	2.47	2.58	2.54	8.34	8.33
MErr RMS [%] /h	3.55	1.77	2.76	1.80	7.24	6.55
MErr Peak [%] /h	-83.47	-12.16	48.64	13.79	-92.30	32.44
MErr DMRS [%] /h	1.41	1.41	1.65	1.63	8.00	7.98
PhErr RMS [°] /h	1.98	1.71	1.61	1.47	3.67	3.65
PhErr Peak [°] /h	26.87	7.12	14.07	5.55	37.63	-17.48
PhErr DMRS [°] /h	1.15	1.16	1.13	1.12	3.17	3.11
IQ Offset [dBc]	-50.42		-50.25		-46.59	
IQ Gain Imbalance [dB]	-----		-----		-----	
IQ Quadrature Error [°]	-----		-----		-----	
Freq Error [Hz]	-29.30		-40.76		-110.64	
Timing Error [Ts]	-34.82		-34.07		-36.13	
OBW [MHz]	3.19		3.19		3.19	
	Current	Average		Min	Max	StdDev
TX Power [dBm]	22.74	22.69		22.11	22.75	0.05
Peak Power [dBm]	27.50	27.48		24.42	27.75	0.05
RB Power [dBm]	10.18	10.13		10.07	22.59	0.05
Statistic: Count		Out of Tolerance		Detected Modulation		Detected Channel Type
20 / 20		0.00 %		QPSK		PUSCH
						View Filter Throughput
						(10.0 %)

5.2 發射頻譜波罩

5.2.1 合格標準

需符合下表之頻譜波罩規範值

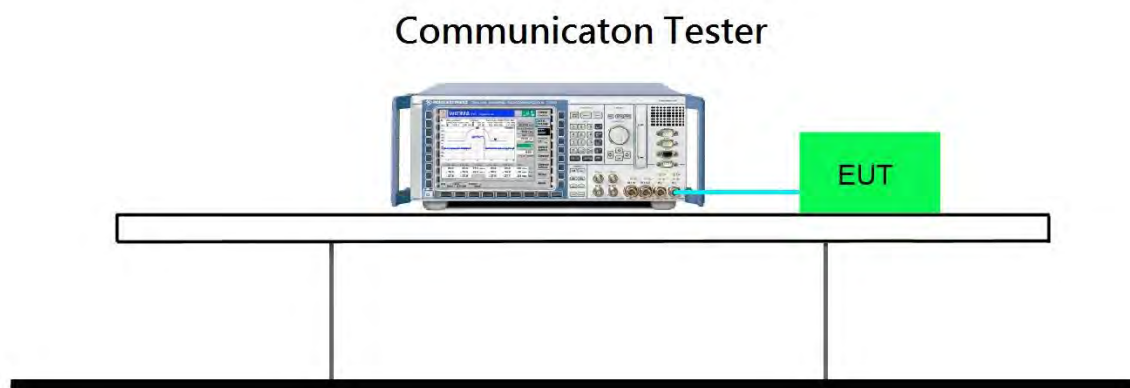
Δf_{OOB} (MHz)	發射限制值(dB)/頻道頻寬						
	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	解析頻寬
± 0 to 1	-8.5	-11.5	-13.5	-16.5	-18.5	-19.5	30kHz
± 1 to 2.5	-8.5	-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
± 2.5 to 2.8	-23.5	-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
± 2.8 to 5		-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
± 5 to 6		-23.5	-11.5	-11.5	-11.5	-11.5	1MHz
± 6 to 10			-23.5	-11.5	-11.5	-11.5	1MHz
± 10 to 15				-23.5	-11.5	-11.5	1MHz
± 15 to 20					-23.5	-11.5	1MHz
± 20 to 25						-23.5	1MHz

備註： Δf_{OOB} 是發射頻帶外的頻率偏移量 (Δ Frequency of Out-of-band emission)

5.2.2 測試方法

- (1) 頻譜波罩限制值依頻道頻寬及 Δf_{OOB} 而不同，量測時的解析頻寬不小於上表的設定值。
- (2) 檢測頻道為低、中、高三個頻道，對最低、5MHz、10MHz及最高的工作頻寬之調變級數發射模式，均應分別檢測之。
- (3) 其餘相關規定請參照 3GPP 36.521-1。

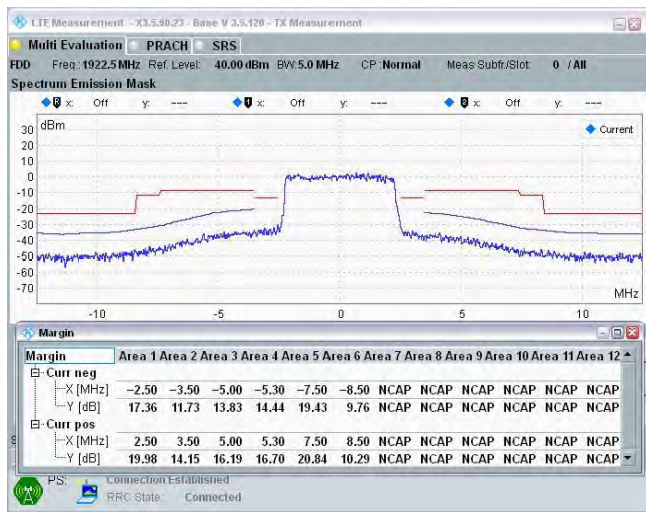
5.2.3 實驗方法方塊圖



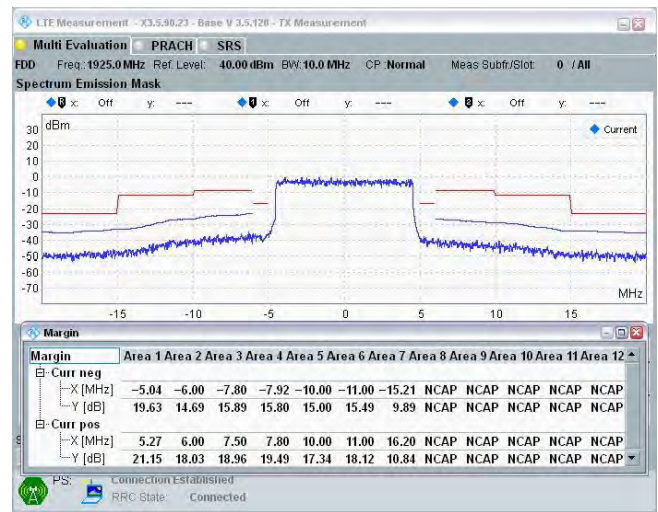
5.2.4 實驗數據

Band 1 (2100MHz)-Full RB														
Modulation	Test CH	CH	ΔF_{OOB} (MHz)	RB No.	RB Offset	MHz / Margin(dB)								
						± 0 to 1	± 1 to 2.5	± 2.5 to 2.8	± 2.8 to 5	± 5 to 6	± 6 to 10	± 10 to 15	± 15 to 20	± 20 to 25
QPSK	LOW	18025	5MHz	25	0	17.36	14.15		19.43	9.76	N/A	N/A	N/A	
		18050	10MHz	50	0	19.63	14.69		15		9.89	N/A	N/A	
		18100	20MHz	100	0	17.52	17.14		15.32				11.86	
	MID	18300	5MHz	25	0	22.14	20.04		23.12	12.04	N/A	N/A	N/A	
			10MHz	50	0	23.99	21.99		20.78		11.85	N/A	N/A	
			20MHz	100	0	23.5	23.56		21.66				12.5	
	HIGH	18575	5MHz	25	0	18.78	15.58		21.92	11.18	N/A	N/A	N/A	
		18550	10MHz	50	0	19.75	16.36		15.53		10.91	N/A	N/A	
		18500	20MHz	100	0	20.18	19.13		18.26				14.01	
16-QAM	LOW	18025	5MHz	25	0	17.52	12.24		20.9	11.41	N/A	N/A	N/A	
		18050	10MHz	50	0	19.2	14.71		15.25		10.45	N/A	N/A	
		18100	20MHz	100	0	17.74	17.62		15.4				12.09	
	MID	18300	5MHz	25	0	21.21	20.58		25.22	13.43	N/A	N/A	N/A	
			10MHz	50	0	23.63	22.1		21.68		12.96	N/A	N/A	
			20MHz	100	0	24.05	23.37		21.88				12.39	
	HIGH	18575	5MHz	25	0	23.31	16.01		22.48	11.88	N/A	N/A	N/A	
		18550	10MHz	50	0	20.85	16.1		16.03		11.01	N/A	N/A	
		18500	20MHz	100	0	19.47	19.14		18.15				14.06	

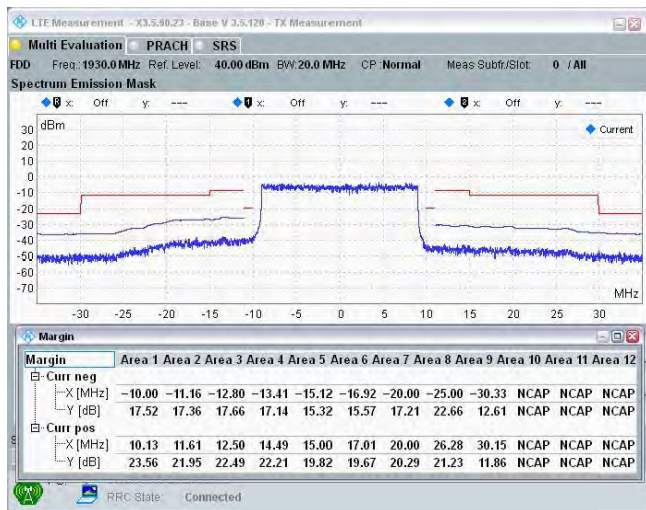
QPSK 5MHz CH18025 25RB#0



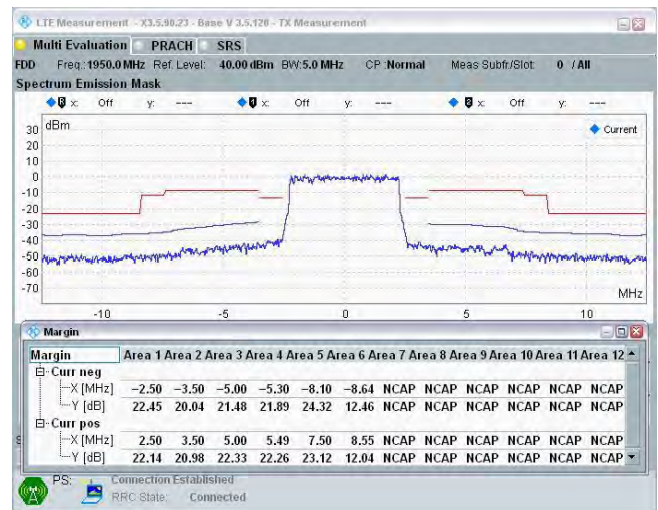
QPSK 10MHz CH18050 50RB#0



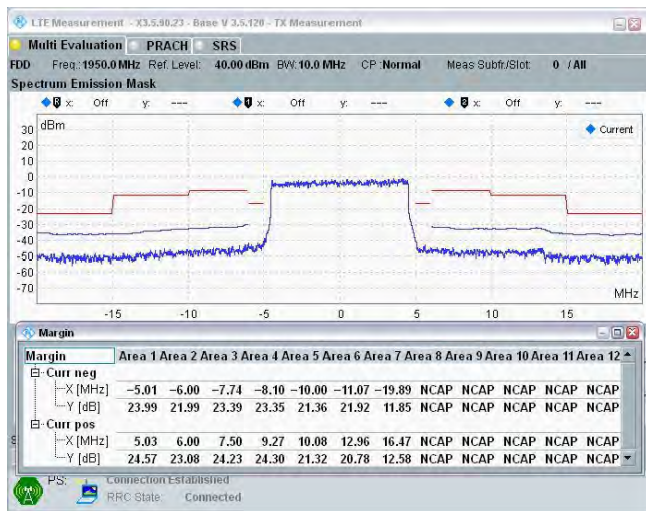
QPSK 20MHz CH18100 100RB#0



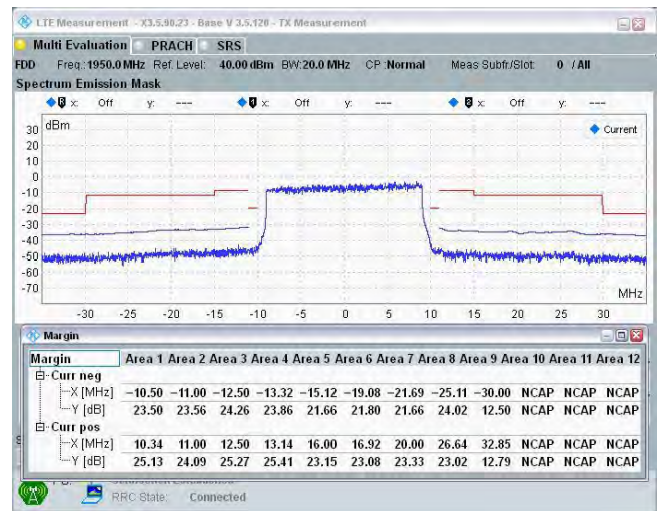
QPSK 5MHz CH18300 25RB#0



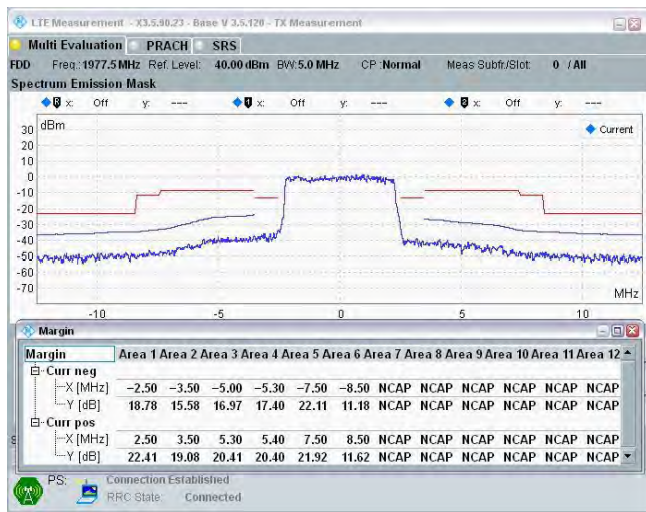
QPSK 10MHz CH18300 50RB#0



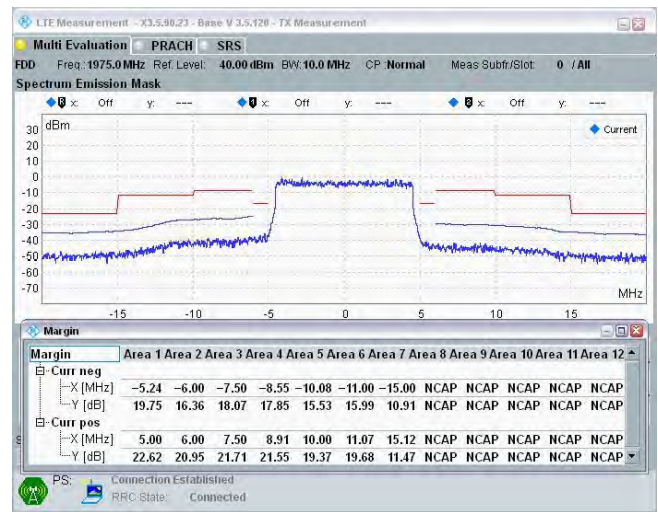
QPSK 20MHz CH18300 100RB#0



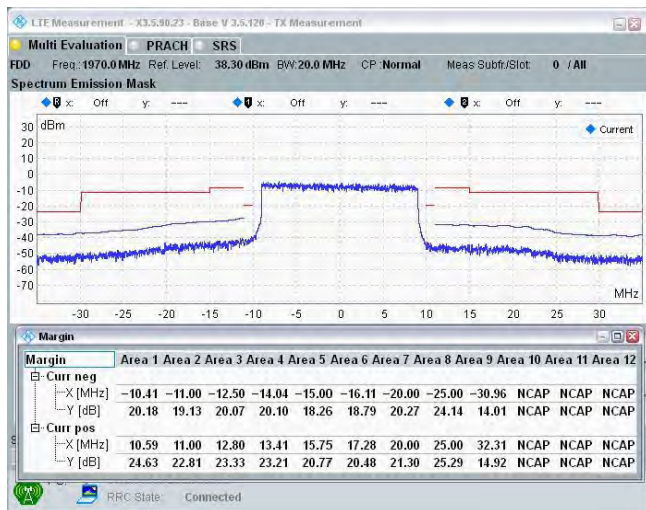
QPSK 5MHz CH18575 25RB#0



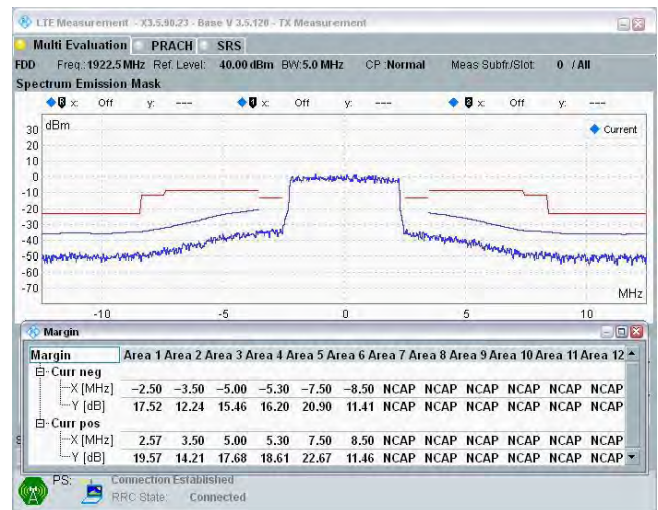
QPSK 10MHz CH18550 50RB#0



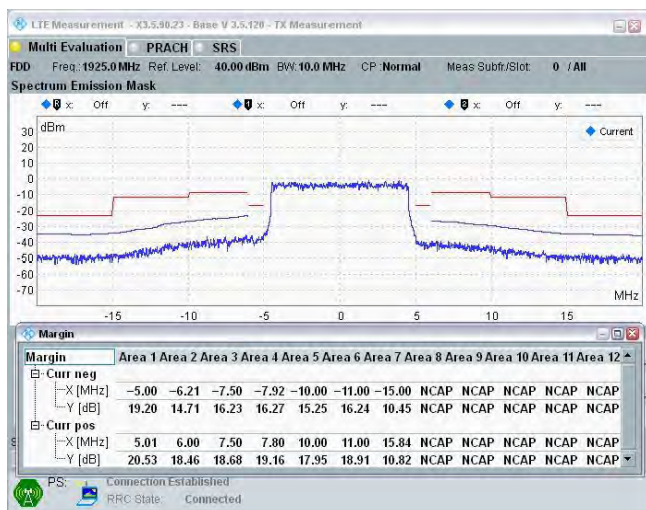
QPSK 20MHz CH18500 100RB#0



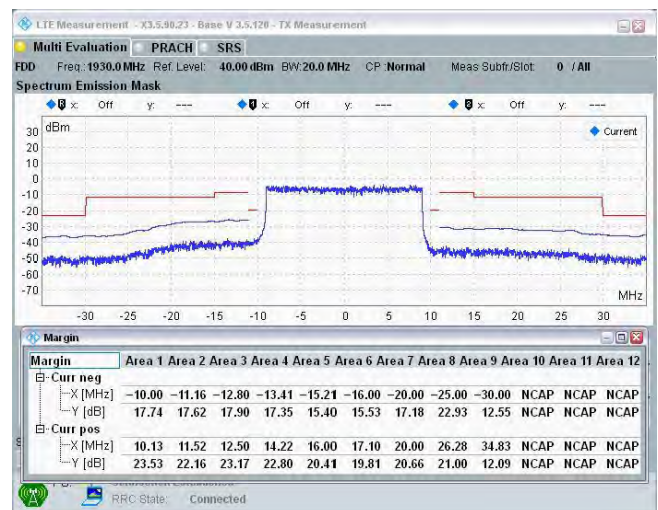
16-QAM 5MHz CH18025 25RB#0



16-QAM 10MHz CH18050 50RB#0



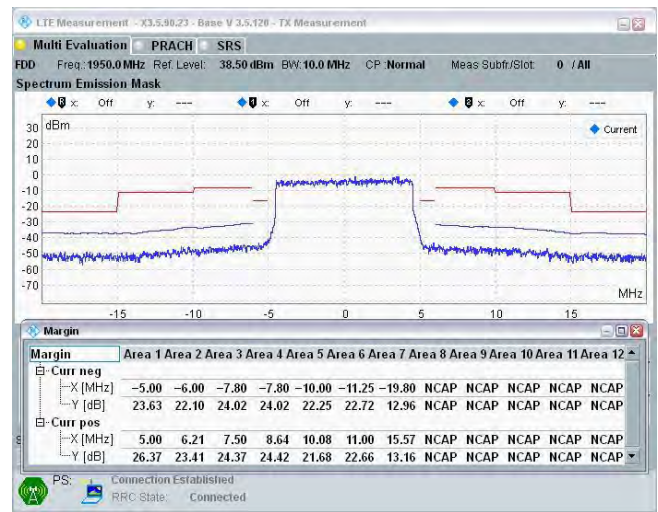
16-QAM 20MHz CH18100 100RB#0



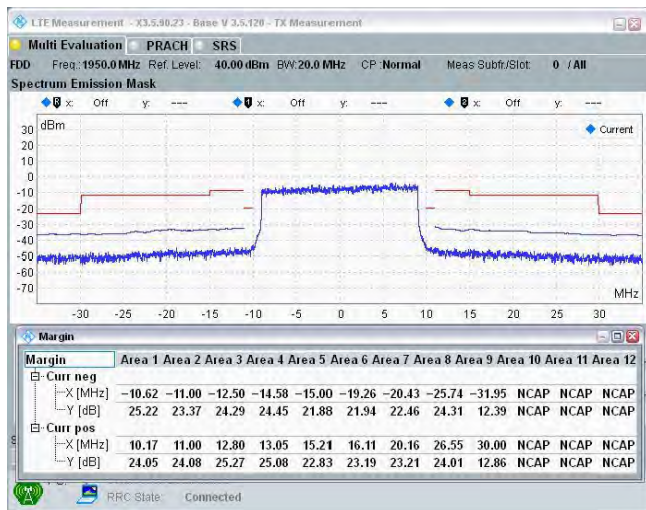
16-QAM 5MHz CH18300 25RB#0



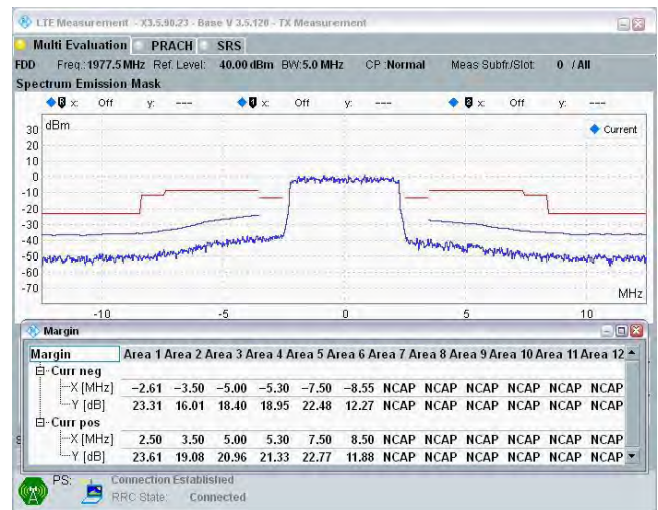
16-QAM 10MHz CH18300 50RB#0



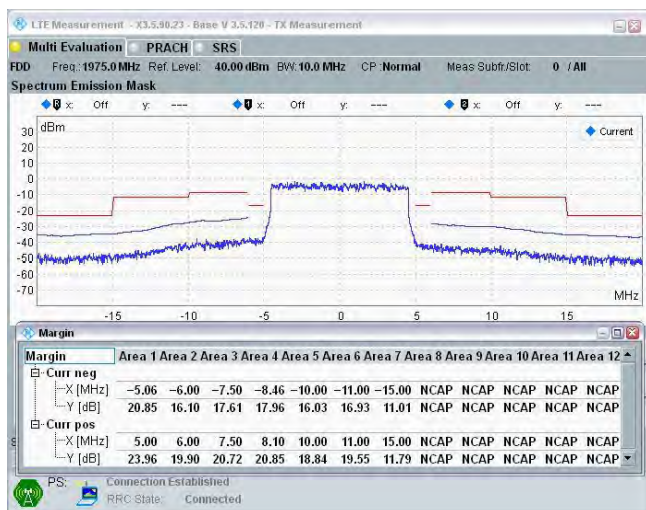
16-QAM 20MHz CH18300 100RB#0



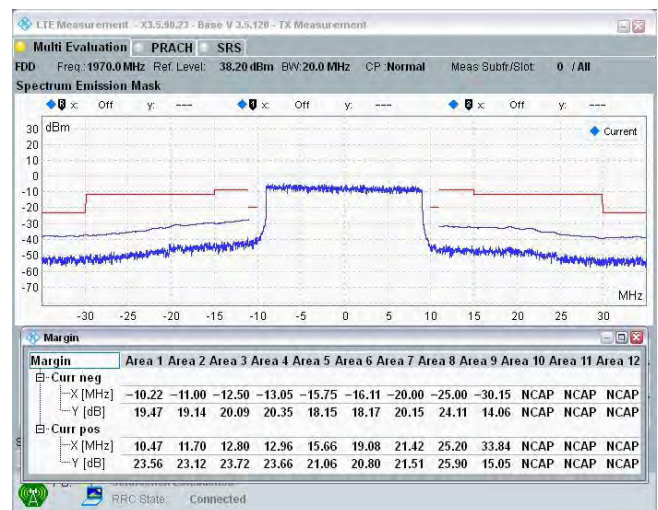
16-QAM 5MHz CH18575 25RB#0



16-QAM 10MHz CH18550 50RB#0

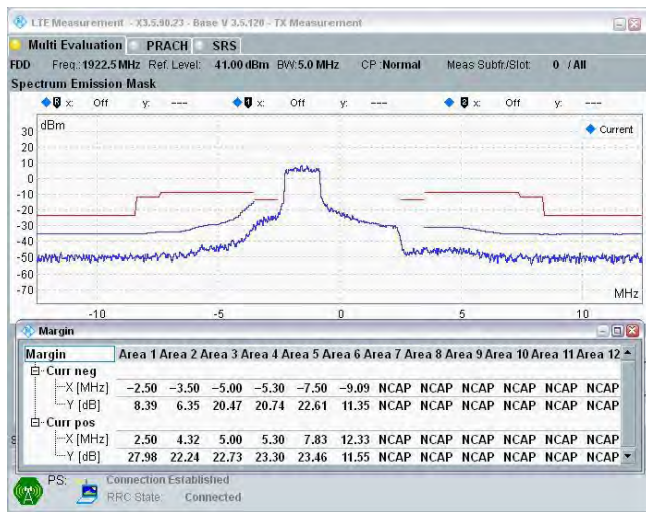


16-QAM 20MHz CH18500 100RB#0

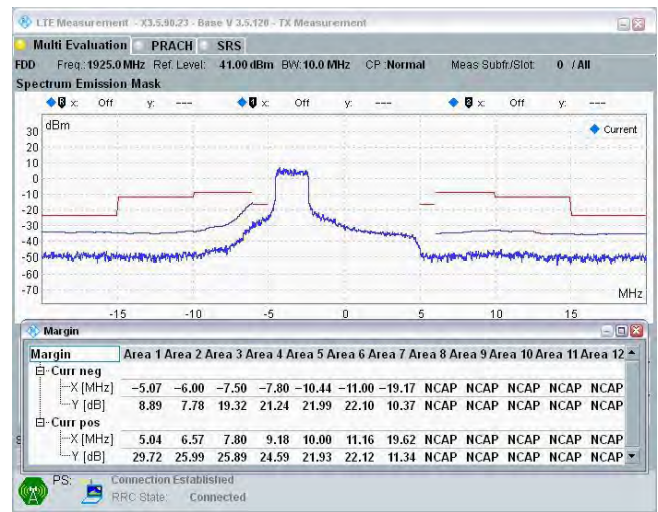


Band 1 (2100MHz)-Partial RB(#0)														
Modulation	Test CH	CH	ΔF_{OOB} (MHz)	RB No.	RB Offset	MHz / Margin(dB)								
						± 0 to 1	± 1 to 2.5	± 2.5 to 2.8	± 2.8 to 5	± 5 to 6	± 6 to 10	± 10 to 15	± 15 to 20	± 20 to 25
QPSK	LOW	18025	5MHz	8	0	8.39	6.35			22.61	11.35	N/A	N/A	N/A
		18050	10MHz	12	0	8.89	7.78			21.93		10.37	N/A	N/A
		18100	20MHz	18	0	6.52	6.98			21.06				11.79
	MID	18300	5MHz	8	0	14.26	16.96			23.76	11.87	N/A	N/A	N/A
			10MHz	12	0	16.88	16.17			21.34		11.1	N/A	N/A
			20MHz	18	0	17.95	16.85			22.47				11.6
	HIGH	18575	5MHz	8	0	15.07	11.84			23.54	11.46	N/A	N/A	N/A
		18550	10MHz	12	0	12.7	12			22.45		11.31	N/A	N/A
		18500	20MHz	18	0	11.31	12.15			22.84				12.07
16-QAM	LOW	18025	5MHz	8	0	10.25	8.36			23.14	11.07	N/A	N/A	N/A
		18050	10MHz	12	0	10.84	8.76			21.87		10.6	N/A	N/A
		18100	20MHz	18	0	7.17	8.2			21.85				11.7
	MID	18300	5MHz	8	0	18.84	17.32			24.13	12.2	N/A	N/A	N/A
			10MHz	12	0	19.77	17.88			21.45		10.92	N/A	N/A
			20MHz	18	0	17.87	16.94			22.8				11.4
	HIGH	18575	5MHz	8	0	16.19	12.59			23.76	11.8	N/A	N/A	N/A
		18550	10MHz	12	0	11.61	10.18			22.37		10.89	N/A	N/A
		18500	20MHz	18	0	14.03	14.17			22.9				12

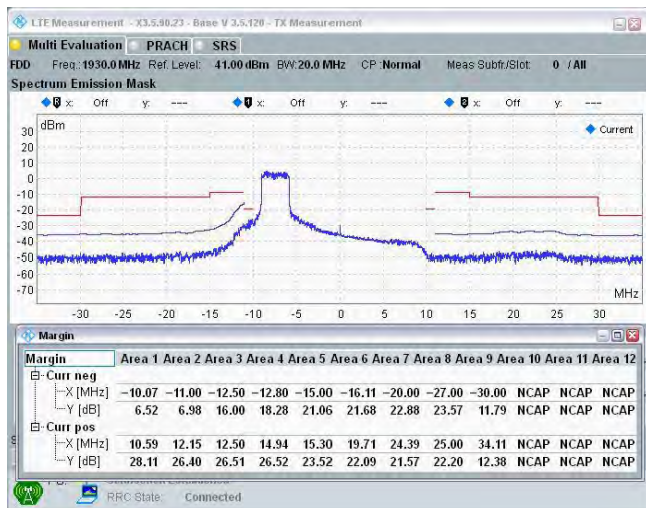
QPSK 5MHz CH18025 8RB#0



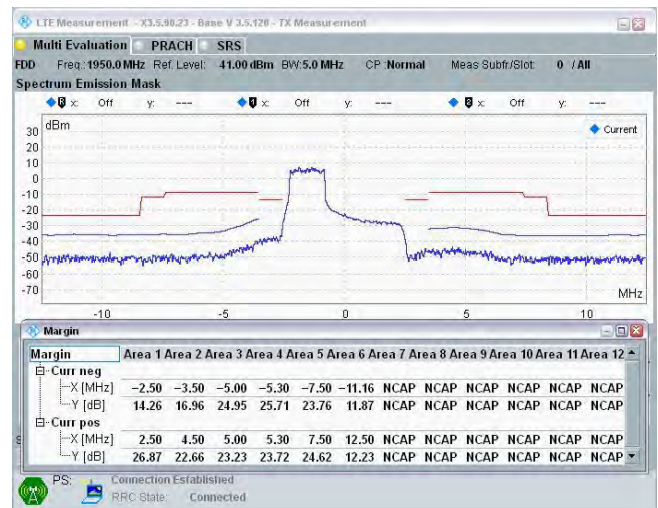
QPSK 10MHz CH18050 12RB#0



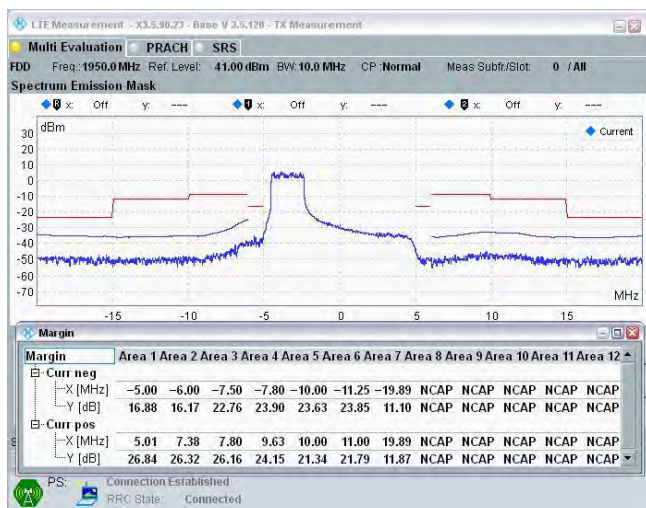
QPSK 20MHz CH18100 18RB#0



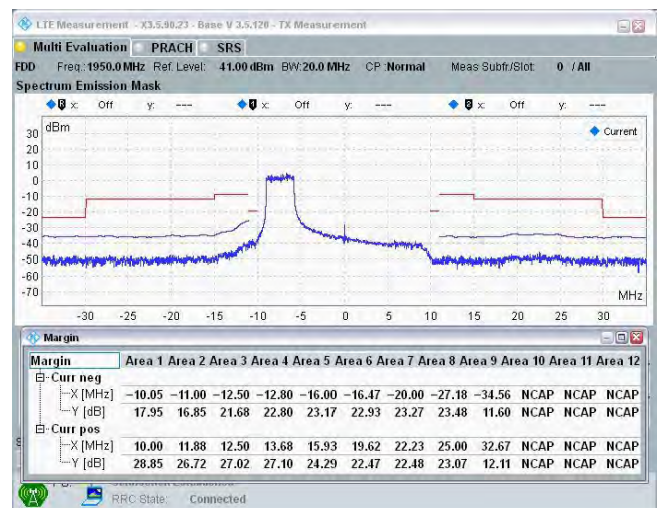
QPSK 5MHz CH18300 8RB#0



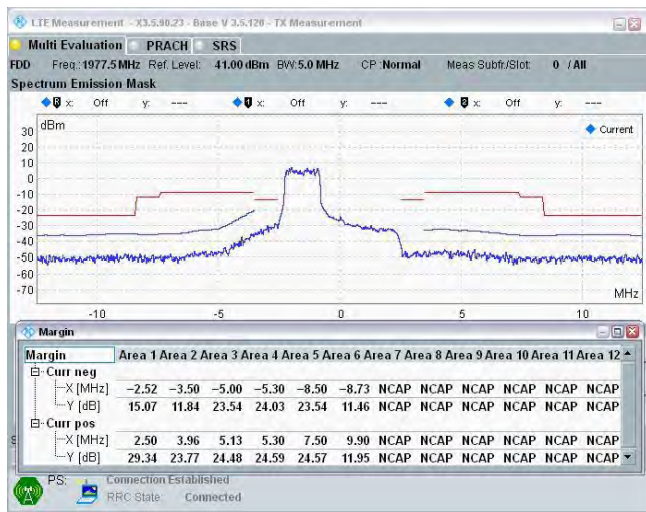
QPSK 10MHz CH18300 12RB#0



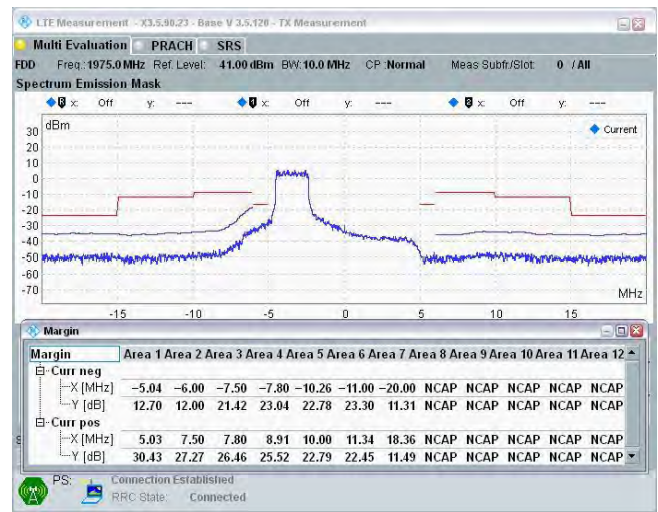
QPSK 20MHz CH18300 18RB#0



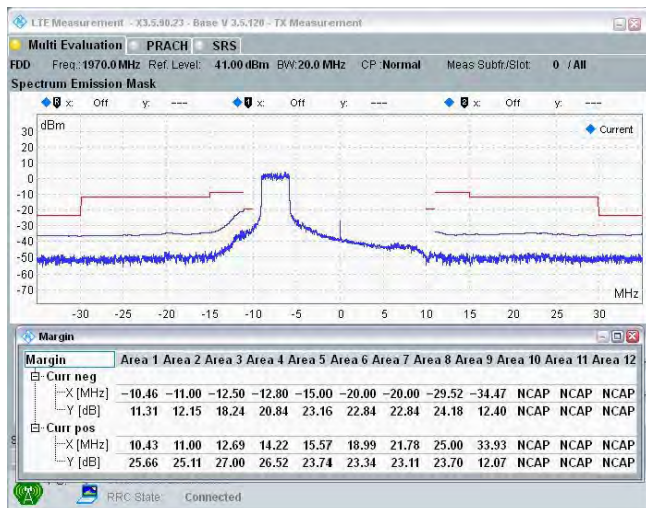
QPSK 5MHz CH18575 8RB#0



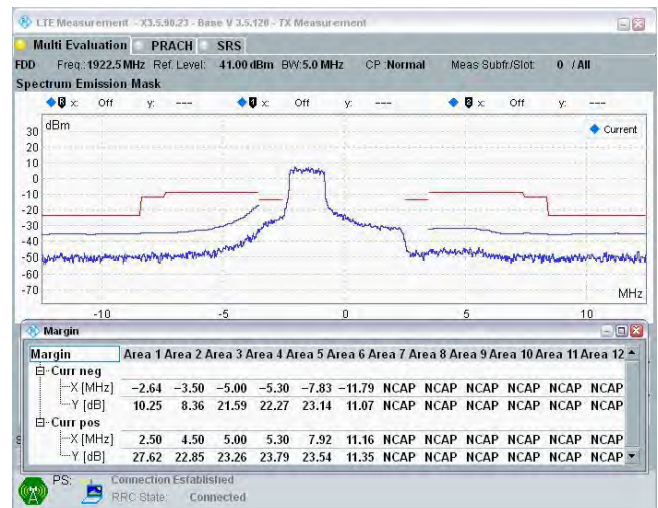
QPSK 10MHz CH18550 12RB#0



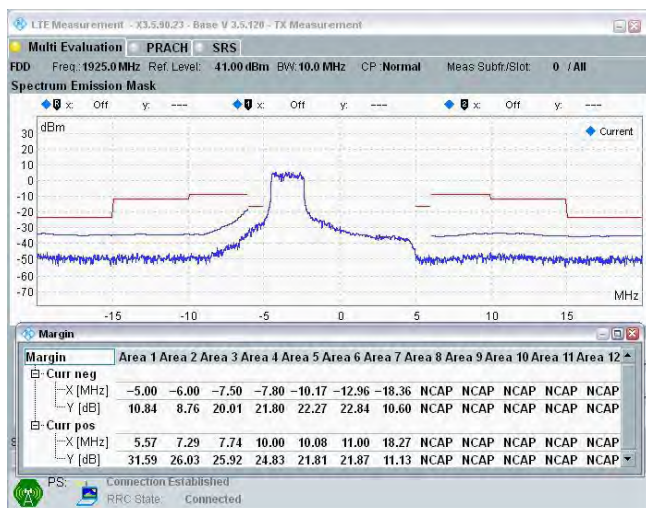
QPSK 20MHz CH18500 18RB#0



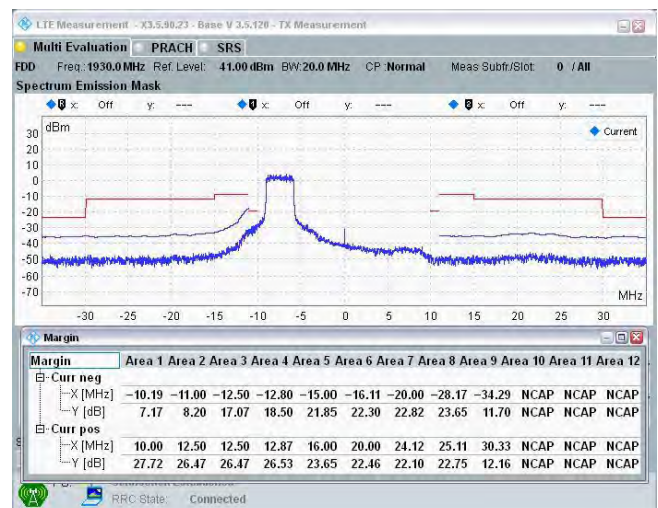
16-QAM 5MHz CH18025 8RB#0



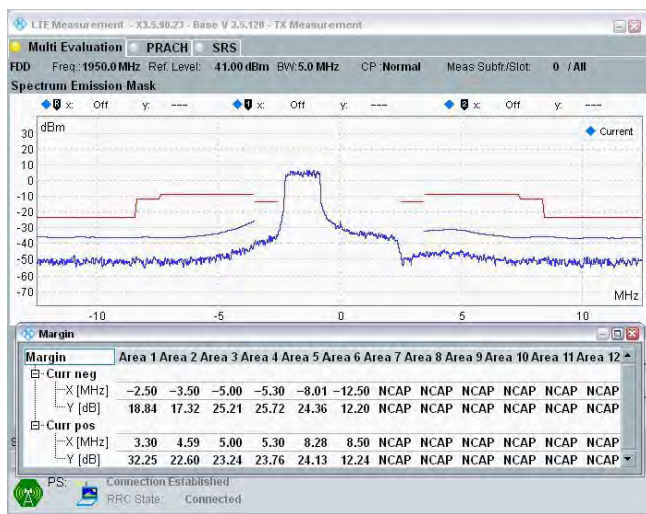
16-QAM 10MHz CH18050 12RB#0



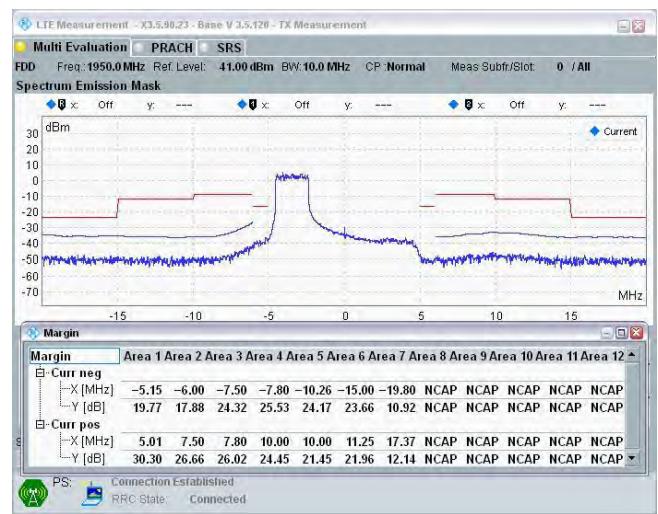
16-QAM 20MHz CH18100 18RB#0



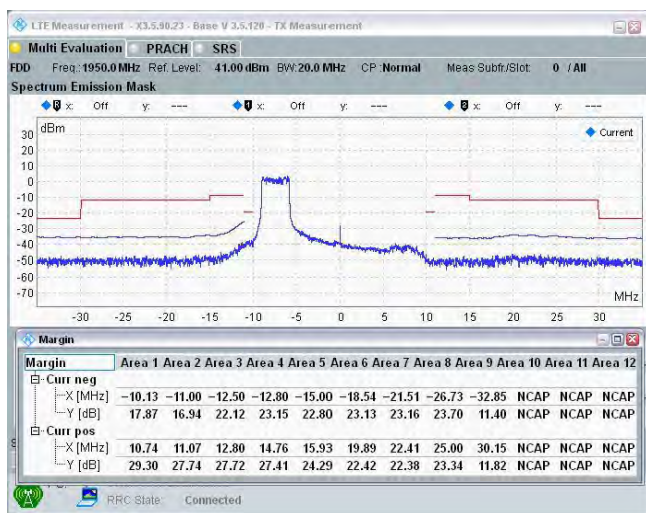
16-QAM 5MHz CH18300 8RB#0



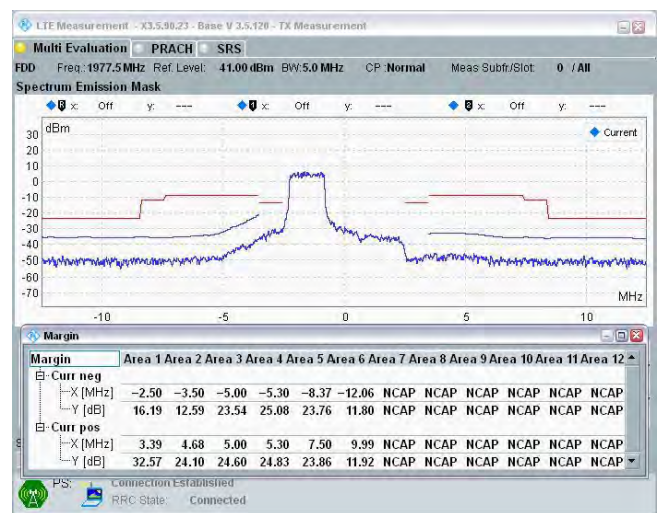
16-QAM 10MHz CH18300 12RB#0



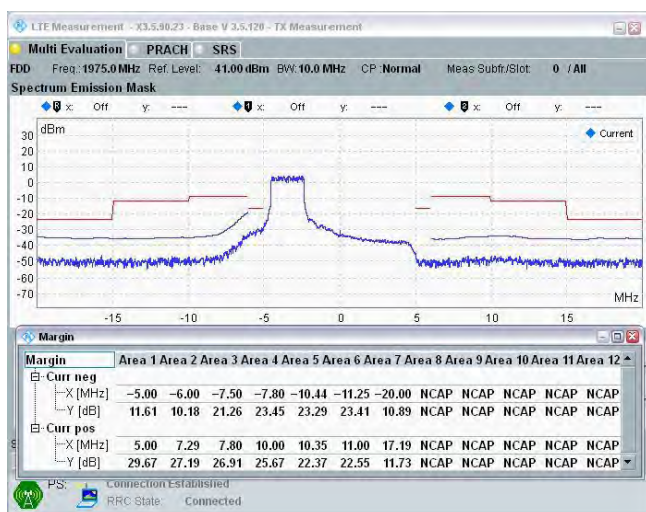
16-QAM 20MHz CH18300 18RB#0



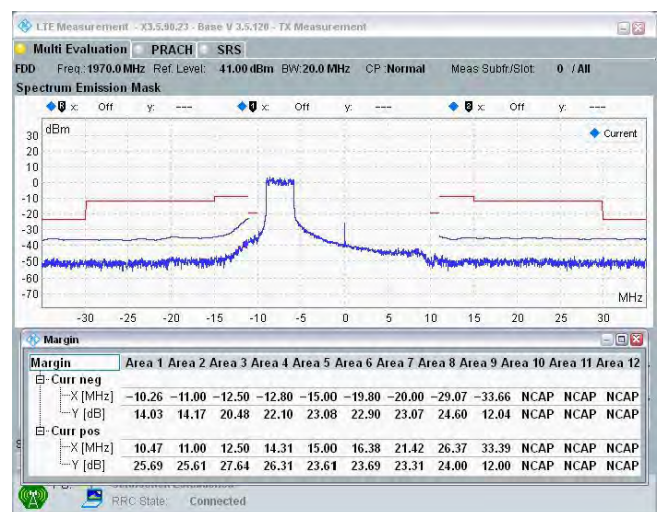
16-QAM 5MHz CH18575 8RB#0



16-QAM 10MHz CH18550 12RB#0

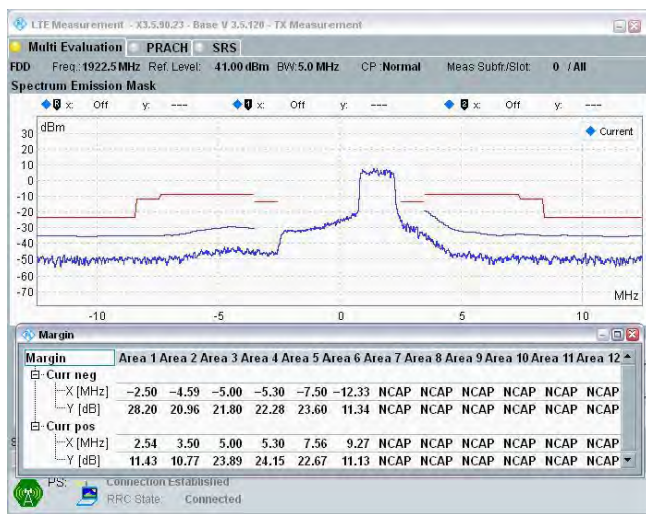


16-QAM 20MHz CH18500 18RB#0

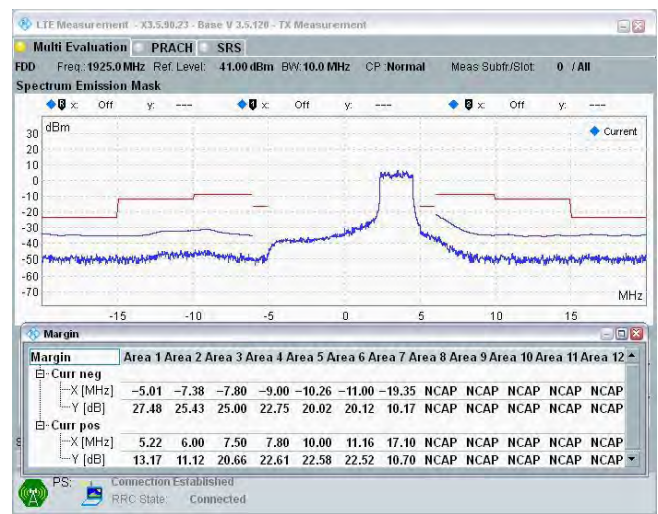


Band 1 (2100MHz)-Partial RB(#Max+1-RB allocation)														
Modulation	Test CH	CH	ΔF_{OOB} (MHz)	RB No.	RB Offset	MHz / Margin(dB)								
						± 0 to 1	± 1 to 2.5	± 2.5 to 2.8	± 2.8 to 5	± 5 to 6	± 6 to 10	± 10 to 15	± 15 to 20	± 20 to 25
QPSK	LOW	18025	5MHz	8	17	11.43	10.77			22.67	11.13	N/A	N/A	N/A
		18050	10MHz	12	38	13.17	11.12			20.02		10.17	N/A	N/A
		18100	20MHz	18	82	18.06	16.99			21.28				11.76
	MID	18300	5MHz	8	17	20	14.33			23.42	11.74	N/A	N/A	N/A
			10MHz	12	38	15.73	14.84			21.94		11.17	N/A	N/A
			20MHz	18	82	17.59	18.18			23.06				12.54
	HIGH	18575	5MHz	8	17	17.52	16.7			23.49	11.68	N/A	N/A	N/A
		18550	10MHz	12	38	17.03	16.67			20.99		11.04	N/A	N/A
		18500	20MHz	18	82	14.49	15.62			21.05				11.88
16-QAM	LOW	18025	5MHz	8	17	11.89	10.17			22.56	10.66	N/A	N/A	N/A
		18050	10MHz	12	38	14.77	12.96			20.1		10.66	N/A	N/A
		18100	20MHz	18	82	17.23	17.28			21.48				11.8
	MID	18300	5MHz	8	17	17.22	17.34			24.04	12.06	N/A	N/A	N/A
			10MHz	12	38	17.82	17.75			21.64		11.17	N/A	N/A
			20MHz	18	82	16.93	17.74			23.37				12.48
	HIGH	18575	5MHz	8	17	17.79	15.29			23.63	11.84	N/A	N/A	N/A
		18550	10MHz	12	38	18.35	15.41			21.11		11.26	N/A	N/A
		18500	20MHz	18	82	14.32	14.56			21.95				12.12

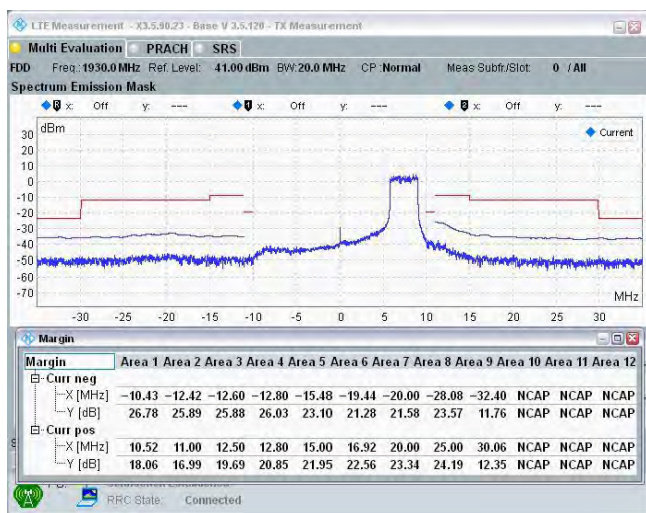
QPSK 5MHz CH18025 8RB#17



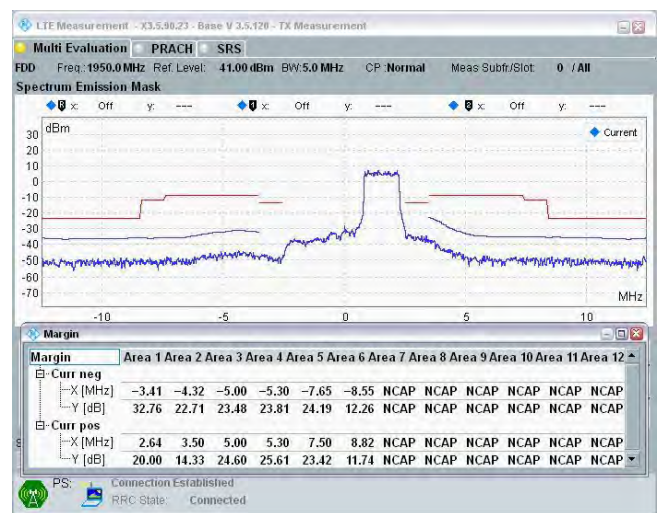
QPSK 10MHz CH18050 12RB#38



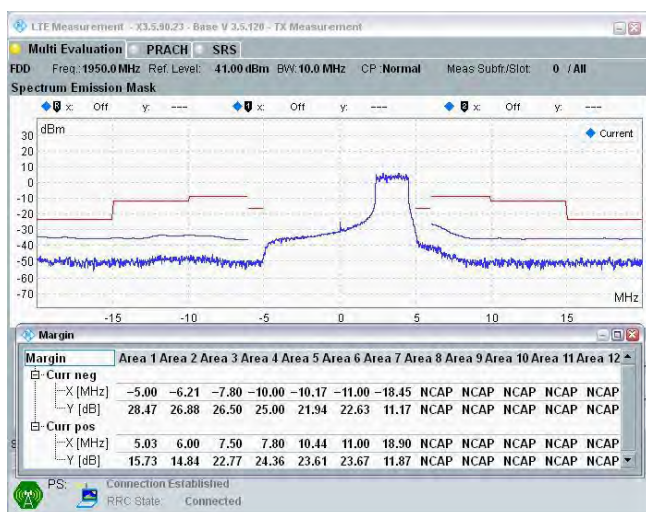
QPSK 20MHz CH18100 18RB#82



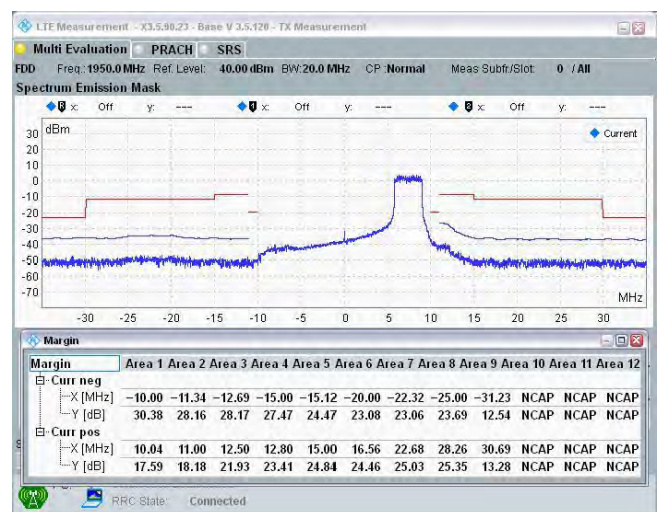
QPSK 5MHz CH18300 8RB#17



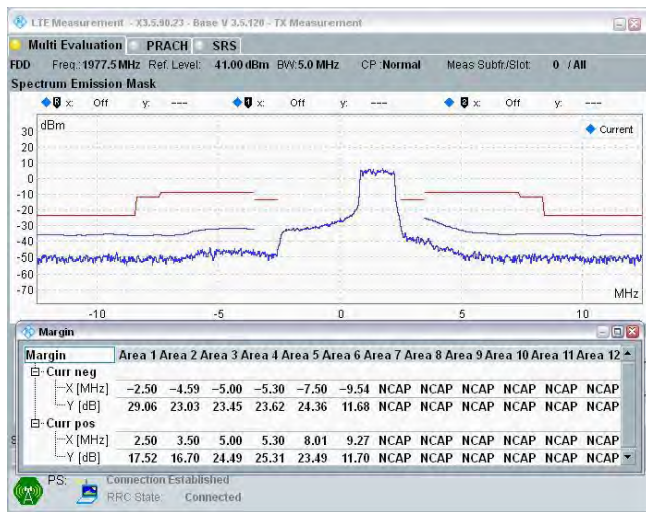
QPSK 10MHz CH18300 12RB#38



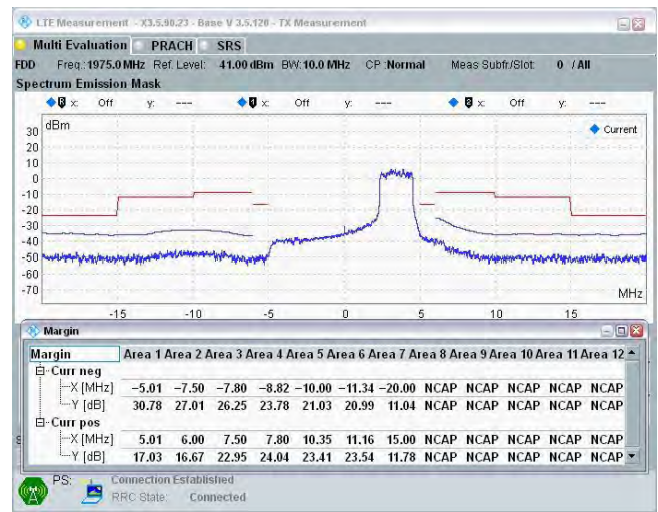
QPSK 20MHz CH18300 18RB#82



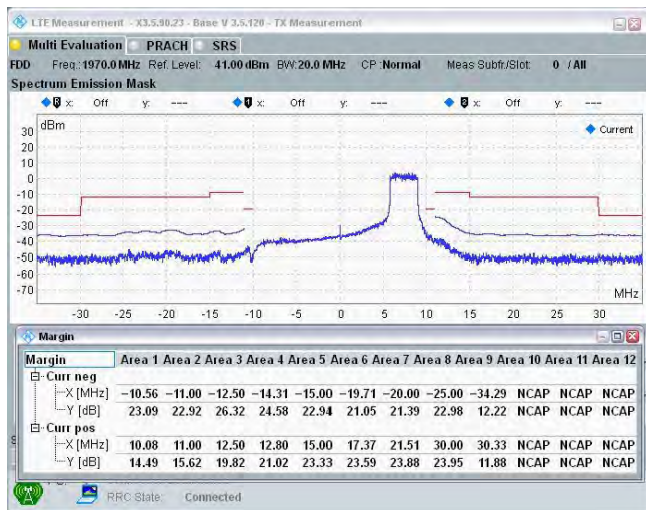
QPSK 5MHz CH18575 8RB#17



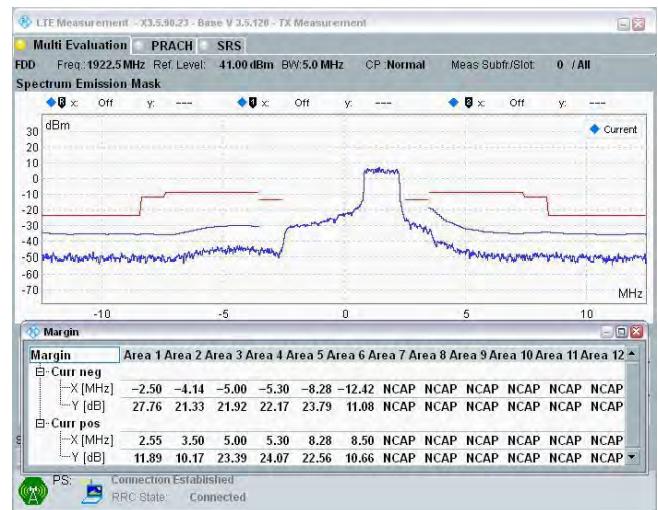
QPSK 10MHz CH18550 12RB#38



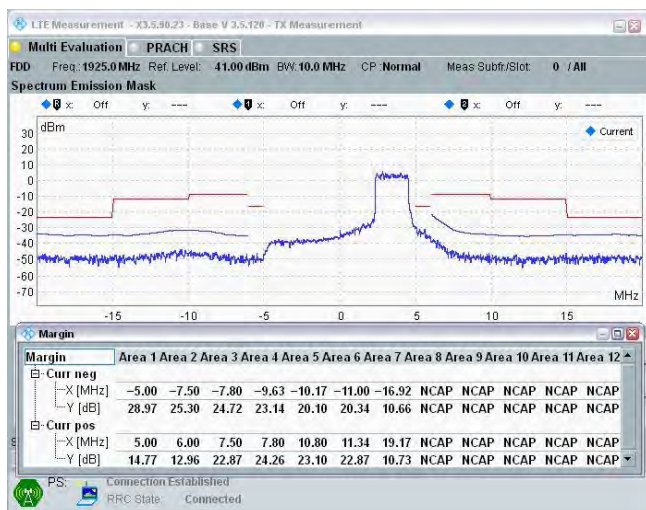
QPSK 20MHz CH18500 18RB#82



16-QAM 5MHz CH18025 8RB#17



16-QAM 10MHz CH18050 12RB#38



16-QAM 20MHz CH18100 18RB#82

