NCC

行動通信電信終端設備技術規範試驗報告

產品名稱	: 無線傳輸記錄器
型號	: GTI5.5.A
系列型號	: GTI5.5.B
廠牌	: EMS
商標	: EMS
申請者	: 弓銓企業股份有限公司
申請者地址	: 台南市善化區台南科學工業園區大利三路 8 號
測試標準	: PLMN ALL (109 年版)
適用範圍	: LTE 終端設備(PLMN10)
測試結果	: 符合
接收日期	: 2021/9/10
測試日期	: 2021/9/14~2021/9/24

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3261

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修訂紀錄

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1. 一般資訊

申請者	弓銓企業股份有限公司
申請者地址	台南市善化區台南科學工業園區大利三路 8 號
製造商	弓銓企業股份有限公司
製造商地址	台南市善化區台南科學工業園區大利三路 8 號
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	無線傳輸記錄器
產品型號	GTI5.5.A
產品系列型號	GTI5.5.B
廠牌	EMS
商標	EMS
支援規格	4G: Band3, 8
IMEI 碼	352835104557403
天線樣式	Dipole Antenna
天線規格	Brand: anjie M/N: AJLQ9Q-B0002 Gain: Band3: 0.4dBi, Band8:1.6dBi
TX Frequency	Band3: 1710~1785MHz; Band8: 885~915MHz
Rx Frequency	Band3: 1805~1880MHz; Band8:930~960MHz
是否有照相功能	□ 有 (聲響 : 有□ ; 無□) ■ 無

Note:

1. 型號差異為端口介面不同,主型號 GTI5.5.A 有壓力埠，GTI5.5.B 沒有壓力埠，其內部硬體電路及軟體與主型號相同。該產品亦符合同系列產品技術規格及射頻性能相同。(上述說明為廠商宣告)

2. 僅針對型號: GTI5.5.A 評估測試。

2.2 產品規格

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)

3. 測試設備明細

輻射干擾 – AC1

儀器名稱	廠牌	型號	財產編號	校正週期	有效日期
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2021/10/5
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2022/3/24
Acitve Loop Antenna	Schwarzbeck	FMZB 1519B	MRTTWA00002	1 year	2022/5/6
Broadband Horn antenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2022/4/21
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2022/4/28
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2022/4/26
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2022/4/21
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2022/6/15

傳導測試 – AC1

儀器名稱	廠牌	型號	財產編號	校正週期	有效日期
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/14
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2022/7/19
Wideband Radio Communication Taster	R&S	CMW 500	MRTTWA00084	1 year	2021/10/8
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2022/6/14

EMI 測試軟體

軟體名稱	廠牌	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=2Uc(y)): 9kHz~30MHz: ± 3.92dB 30MHz~1GHz: ± 4.25dB 1GHz~18GHz: ± 4.40dB 18GHz~40GHz: ± 4.45dB
頻率穩定度量測 (Frequency Error)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±78.4Hz
傳導功率量測 (Conducted Power)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 0.84dB
傳導干擾量測 (Conducted Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 2.65 dB
佔用頻寬量測 (Occupied Bandwidth)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.3%
溫度 / 濕度 (Temp. / Humidity)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±0.82°C/ ±3%
直流電源 (DC Voltage)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±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　　無線傳輸記錄器
型號　　GTI5.5.A, GTI5.5.B

法規章節	量測項目	限制值	測試結果	測試數據
6.3.1	功率限制	有效輻射功率(Effective Radiated Power，ERP) 攜帶式終端設備限制為1 W。 移動式終端設備限制為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，但設備屬高功率用戶終端設備(HPUE)者，其傳導輸出功率限制值為 26 dBm +2.7/-2.7 dB。	符合	第 5.1 章節
6.3.2	發射頻譜波罩	須符合行動通信電信終端設備技術規範附表 47 之頻譜波罩規範值	符合	第 5.2 章節
6.3.3	傳導帶外輻射發射	須符合行動通信電信終端設備技術規範附表 49 之帶外輻射規範值	符合	第 5.3 章節
6.3.4	相鄰頻道洩漏功率比 (ACLR)	≦ 29.2dB，但設備屬 HPUE 者限制值為 30.2 dB。	符合	第 5.4 章節
6.3.5	頻率穩定度	± 0.1PPM 以內	符合	第 5.5 章節
6.6.2.1	電波功率密度	適用移動式或固定式無線接取終端設備 700 MHz 頻段為 0.35 毫瓦特/平方公分(mW/cm²)； 900 MHz 頻段為 0.45 mW/cm²； 1800 MHz 頻段為 0.9 mW/cm²； 2100 MHz、2500 MHz 與2600 MHz頻段為1.0 mW/cm²。 量測距離為 20 公分，或以設備廠商宣告設備天線與附近人體可活動範圍之距離。	符合	第 5.6 章節
6.10.1	災防告警細胞廣播訊息接收功能	本項測試適用具 NR 終端設備、窄頻終端設備、LTE 或 WCDMA FDD 硬體介面攜帶式終端設備且具接取行動通信服務經營者提供之語音服務功能者。	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)
-攜帶式終端設備限制為 1W。
-移動式終端設備限制為 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。
-但設備屬高功率用戶終端設備(HPUE)者，其傳導輸出功率限制值為 26 dBm +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 TS 36.521-1 規定測試) 。

(1) 等效幅射功率 ：

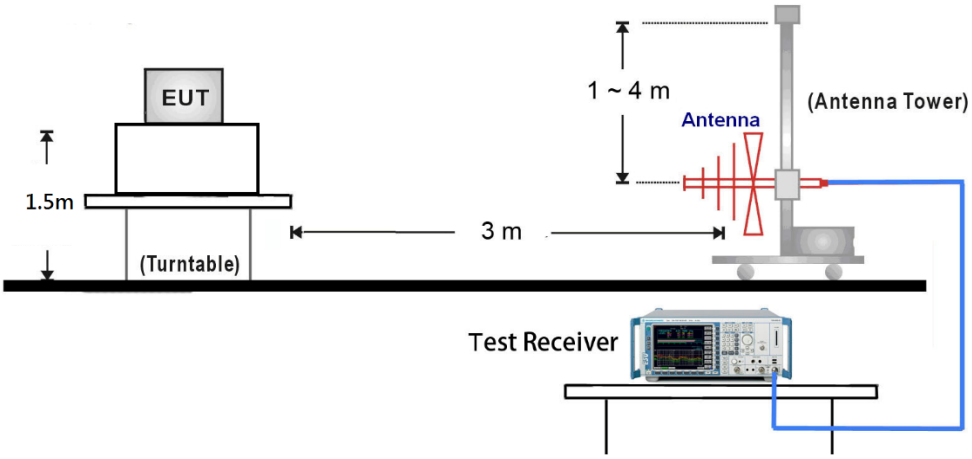
a. 量測發射功率時，必須使用均方根值等效電壓之儀器量測於任何連續傳輸時段，量測結果須依儀器之反應時間、解析頻寬能力及靈敏度等調整得出正確之發射功率。對每一測量頻率調整儀器足夠之頻率掃描範圍以檢測所欲測量之發射。
b. 在 1 到 4 米高度內上升下降水平極化之接收天線，將接收天線置於儀器顯示最高讀值時的高度，然後以 360 度轉動測試桌上的受測物，紀錄顯示在儀器上的最高值，以為參考位準。
c. 以發射天線(不大於 1GHz 為線諧調之偶極天線，1GHz 以上為號角型天線)取代受測物，並與接收天線之同為水平極化。將偶極天線連接至標準之信號產生器，信號產生器設定至前述步驟所得之頻率以及適當之輸出位準。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 ：

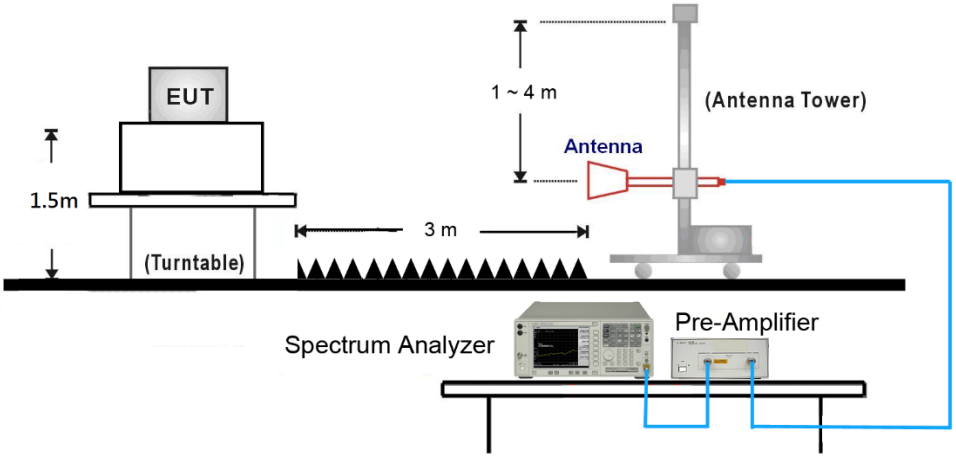
發射機輸出功率的測量藉由模擬基地台調諧頻率至測量頻率並量測其峰值.

5.1.3 實驗方法方塊圖

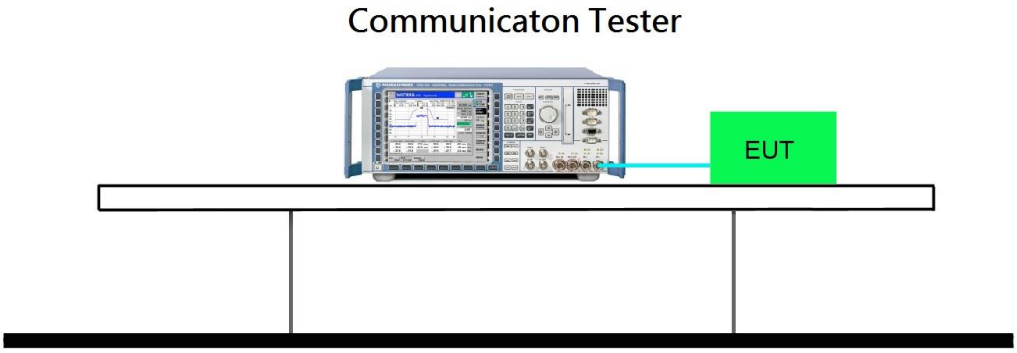
(1) 等效幅射功率 (1G 以下):



(2) 等效幅射功率 (1G 以上):



(3) 傳導輸出功率 :



5.1.4 實驗數據

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	22.94	19.8~25.7	0.40	21.19	30
	19575	QPSK	1	#0	22.95	19.8~25.7	0.40	21.20	30
			5	#0	22.79	19.8~25.7	0.40	21.04	30
	19943	QPSK	1	#0	22.85	19.8~25.7	0.40	21.10	30
5MHz	19225	QPSK	1	#0	23.11	19.8~25.7	0.40	21.36	30
			1	#24	23.00	19.8~25.7	0.40	21.25	30
	19575	QPSK	1	#0	22.79	19.8~25.7	0.40	21.04	30
			1	#24	22.72	19.8~25.7	0.40	20.97	30
			8	#0	22.87	19.8~25.7	0.40	21.12	30
	19925	QPSK	1	#0	22.95	19.8~25.7	0.40	21.20	30
			1	#24	22.61	19.8~25.7	0.40	20.86	30
20MHz	19300	QPSK	1	#0	23.39	19.8~25.7	0.40	21.64	30
			1	#99	22.62	19.8~25.7	0.40	20.87	30
	19575	QPSK	1	#0	22.99	19.8~25.7	0.40	21.24	30
			1	#99	22.26	19.8~25.7	0.40	20.51	30
			18	#0	23.00	19.8~25.7	0.40	21.25	30
	19850	QPSK	1	#0	23.49	19.8~25.7	0.40	21.74	30
			1	#99	22.34	19.8~25.7	0.40	20.59	30

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

1.4MHz CH19207 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	4.02	3.77	3.46	3.32	4.12	3.88	0.57	0.49
EVM Peak [%] l/h	12.88	11.15	11.04	10.26	13.62	11.85	1.46	0.92
EVM DMRS [%] l/h	3.25	2.54	2.93	2.12	3.53	2.80	0.22	0.35
MErr RMS [%] l/h	3.36	3.26	2.87	2.83	3.44	3.36	0.53	0.49
MErr Peak [%] l/h	−12.34	−11.13	10.74	10.17	−12.63	−11.76	1.19	0.92
MErr DMRS [%] l/h	2.56	1.92	2.21	1.56	2.92	2.15	0.29	0.29
PhErr RMS [°] l/h	1.28	1.09	1.12	1.01	1.35	1.21	0.15	0.10
PhErr Peak [°] l/h	3.73	3.43	3.14	2.98	4.36	4.21	0.58	0.50
PhErr DMRS [°] l/h	1.14	0.95	1.10	0.83	1.30	1.13	0.11	0.15
IQ Offset [dBc]		−36.30		−36.29		−35.88		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−1.56		1.77		12.00		4.41
Timing Error [Ts]		8.32		8.76		9.58		0.34
OBW [MHz]		0.23		0.21		0.23		0.01
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.74		22.84	22.69	22.94		0.10
Peak Power [dBm]		26.68		26.61	26.52	26.71		0.06
RB Power [dBm]		22.83		22.89	22.78	22.96		0.06

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

PS: Attached
RRC State: Connected

1.4MHz CH19575 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	2.83	2.76	2.94	2.80	3.36	3.14	0.19	0.10
EVM Peak [%] l/h	12.41	11.54	11.54	11.28	13.46	12.62	0.69	0.34
EVM DMRS [%] l/h	2.40	1.66	2.06	1.71	2.97	2.41	0.31	0.18
MErr RMS [%] l/h	2.24	2.30	2.43	2.37	2.68	2.51	0.17	0.06
MErr Peak [%] l/h	−11.18	−10.32	11.15	10.58	−12.30	−11.50	0.48	0.25
MErr DMRS [%] l/h	1.28	1.22	1.33	1.28	2.15	2.04	0.18	0.18
PhErr RMS [°] l/h	1.00	0.88	0.95	0.86	1.26	1.19	0.08	0.08
PhErr Peak [°] l/h	−3.28	−3.22	2.97	2.87	−5.58	−5.40	0.65	0.67
PhErr DMRS [°] l/h	1.16	0.64	0.90	0.65	1.46	1.13	0.21	0.11
IQ Offset [dBc]		−35.90		−36.04		−35.38		0.19
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		2.35		2.10		17.72		4.95
Timing Error [Ts]		−0.23		−0.09		13.25		0.29
OBW [MHz]		0.19		0.20		0.21		0.00
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.85		22.81	22.66	22.95		0.04
Peak Power [dBm]		27.22		27.20	27.13	27.44		0.03
RB Power [dBm]		22.84		22.84	22.73	22.94		0.00

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

PS: Attached
RRC State: Connected

1.4MHz CH19575 5RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	3.94	2.99	3.88	2.87	4.17	3.29	0.14	0.26
EVM Peak [%] l/h	30.41	10.73	32.78	9.61	37.15	12.48	2.27	1.55
EVM DMRS [%] l/h	2.57	2.39	3.49	2.46	4.48	3.01	0.77	0.15
MErr RMS [%] l/h	3.06	2.27	3.02	2.08	3.20	2.47	0.09	0.30
MErr Peak [%] l/h	−30.30	−9.96	30.32	8.63	−32.26	−11.59	0.55	1.72
MErr DMRS [%] l/h	1.56	1.36	2.46	1.56	3.44	2.23	0.75	0.16
PhErr RMS [°] l/h	1.47	1.12	1.45	1.14	1.60	1.31	0.06	0.06
PhErr Peak [°] l/h	13.89	4.54	12.89	3.97	15.44	−6.59	0.71	0.50
PhErr DMRS [°] l/h	1.17	1.13	1.42	1.10	1.81	1.43	0.21	0.11
IQ Offset [dBc]		−37.03		−35.71		−33.74		1.12
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		4.16		1.72		15.09		3.63
Timing Error [Ts]		1.37		1.57		1.85		0.15
OBW [MHz]		0.89		0.88		0.89		0.01
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.73		22.73	22.52	22.79		0.03
Peak Power [dBm]		27.80		27.57	27.21	27.92		0.24
RB Power [dBm]		15.80		15.82	15.61	15.87		0.03

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

PS: Attached
RRC State: Connected

1.4MHz CH19943 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	4.70	4.63	4.18	4.11	4.88	4.85	0.48	0.50
EVM Peak [%] l/h	13.64	13.29	11.55	11.29	14.73	14.48	2.19	2.15
EVM DMRS [%] l/h	2.71	2.75	2.77	2.78	3.27	3.36	0.18	0.22
MErr RMS [%] l/h	3.54	3.51	3.09	3.06	3.71	3.69	0.47	0.48
MErr Peak [%] l/h	−12.84	−12.47	10.13	9.78	−13.77	−13.42	2.97	2.98
MErr DMRS [%] l/h	1.94	2.02	1.80	1.86	2.38	2.37	0.17	0.23
PhErr RMS [°] l/h	1.79	1.75	1.63	1.59	1.90	1.86	0.13	0.14
PhErr Peak [°] l/h	−4.34	−4.28	4.94	4.87	−5.92	−5.73	0.47	0.46
PhErr DMRS [°] l/h	1.08	1.06	1.21	1.18	1.52	1.48	0.11	0.11
IQ Offset [dBc]		−36.01		−36.16		−35.82		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.24		−1.37		−10.71		4.05
Timing Error [Ts]		4.90		5.32		6.02		0.30
OBW [MHz]		0.19		0.21		0.21		0.01
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.75		22.71	22.56	22.85		0.07
Peak Power [dBm]		25.93		25.92	25.86	25.97		0.03
RB Power [dBm]		22.73		22.74	22.59	22.90		0.07

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

PS: Attached
RRC State: Connected

5MHz CH19225 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - 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		Extreme		StdDev	
EVM RMS [%] l/h	3.24	2.43	3.14	2.66	3.39	3.10	0.10	0.31
EVM Peak [%] l/h	11.20	8.23	11.15	9.36	12.20	11.19	0.60	1.15
EVM DMRS [%] l/h	2.11	1.72	2.19	1.86	2.71	2.28	0.23	0.24
MErr RMS [%] l/h	2.44	1.85	2.47	2.13	2.64	2.45	0.08	0.26
MErr Peak [%] l/h	−10.20	−7.33	10.49	8.96	−11.75	−10.64	0.81	1.23
MErr DMRS [%] l/h	1.18	0.94	1.26	1.13	1.50	1.54	0.13	0.13
PhErr RMS [°] l/h	1.23	0.90	1.12	0.92	1.32	1.10	0.07	0.12
PhErr Peak [°] l/h	4.51	−2.72	3.59	2.94	4.93	−3.92	0.59	0.43
PhErr DMRS [°] l/h	1.00	0.82	1.02	0.85	1.29	1.09	0.13	0.14
IQ Offset [dBc]		−35.02		−34.93		−34.70		0.10
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		2.19		1.92		11.27		4.18
Timing Error [Ts]		7.95		8.17		8.63		0.35
OBW [MHz]		0.26		0.22		0.26		0.03
	Current		Average		Min	Max		StdDev
TX Power [dBm]		23.11		23.02	22.92	23.11		0.07
Peak Power [dBm]		27.00		27.03	26.92	27.13		0.06
RB Power [dBm]		23.05		22.99	22.93	23.05		0.04

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

PS: Attached
RRC State: Connected

5MHz CH19225 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - 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		Extreme		StdDev	
EVM RMS [%] l/h	2.03	1.60	2.39	1.82	2.83	2.20	0.28	0.20
EVM Peak [%] l/h	10.34	5.15	9.23	6.39	11.17	8.80	0.92	0.83
EVM DMRS [%] l/h	1.10	1.04	2.48	1.41	3.74	2.15	0.95	0.26
MErr RMS [%] l/h	1.43	1.18	1.85	1.33	2.31	1.60	0.35	0.17
MErr Peak [%] l/h	−7.17	−4.80	7.75	5.89	−8.60	−7.51	0.43	0.90
MErr DMRS [%] l/h	0.78	0.71	1.57	0.86	2.50	1.16	0.58	0.11
PhErr RMS [°] l/h	0.84	0.62	0.87	0.71	1.13	0.94	0.07	0.08
PhErr Peak [°] l/h	4.43	−2.13	3.20	2.16	4.58	−4.53	0.80	0.52
PhErr DMRS [°] l/h	0.45	0.44	1.10	0.64	1.74	1.10	0.44	0.16
IQ Offset [dBc]		−35.44		−35.31		−35.02		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−4.26		2.42		10.37		4.42
Timing Error [Ts]		7.56		7.85		8.45		0.23
OBW [MHz]		0.18		0.23		0.28		0.05
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.99		22.89	22.66	23.00		0.10
Peak Power [dBm]		27.28		27.35	27.21	27.46		0.07
RB Power [dBm]		22.92		22.87	22.71	22.92		0.05

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

PS: Attached
RRC State: Connected

5MHz CH19575 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.:1747.5 MHz Ref. Level: 40.70 dBm BW:5.0 MHz CP:Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	3.03	2.16	3.33	2.73	3.71	3.29	0.30	0.51
EVM Peak [%] l/h	11.97	7.34	13.41	10.97	15.88	15.38	1.81	3.69
EVM DMRS [%] l/h	2.40	1.72	2.00	1.54	2.60	1.92	0.22	0.26
MErr RMS [%] l/h	2.59	1.79	2.75	2.24	3.03	2.71	0.17	0.41
MErr Peak [%] l/h	−11.94	−7.35	11.77	9.47	−12.62	−12.52	0.42	2.22
MErr DMRS [%] l/h	1.49	1.21	1.33	1.13	1.74	1.54	0.21	0.19
PhErr RMS [°] l/h	0.91	0.69	1.10	0.91	1.37	1.20	0.18	0.20
PhErr Peak [°] l/h	2.84	−1.80	4.43	3.85	−6.62	−6.40	1.40	1.72
PhErr DMRS [°] l/h	1.07	0.70	0.85	0.60	1.12	0.89	0.12	0.14
IQ Offset [dBc]		−36.81		−36.61		−36.32		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−1.00		0.04		−11.20		3.93
Timing Error [Ts]		7.43		7.19		7.66		0.30
OBW [MHz]		0.23		0.23		0.24		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.78		22.78	22.78	22.79		0.00
Peak Power [dBm]		27.12		27.30	27.08	27.53		0.19
RB Power [dBm]		22.78		22.77	22.75	22.79		0.02

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

PS: Attached
RRC State: Connected

5MHz CH19575 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.:1747.5 MHz Ref. Level: 40.70 dBm BW:5.0 MHz CP:Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	3.16	2.27	3.01	1.98	3.36	2.46	0.19	0.41
EVM Peak [%] l/h	11.80	11.49	11.52	7.84	12.53	11.54	0.48	3.26
EVM DMRS [%] l/h	2.75	1.70	2.42	1.40	3.03	2.03	0.32	0.28
MErr RMS [%] l/h	2.57	1.83	2.38	1.53	2.66	1.98	0.20	0.38
MErr Peak [%] l/h	−9.14	−9.17	10.13	6.71	−11.58	−9.95	0.83	2.38
MErr DMRS [%] l/h	1.78	1.39	1.73	0.96	2.31	1.39	0.18	0.21
PhErr RMS [°] l/h	1.08	0.79	1.08	0.73	1.28	0.99	0.07	0.12
PhErr Peak [°] l/h	−4.49	−4.17	4.39	2.83	−5.59	−5.20	0.44	1.13
PhErr DMRS [°] l/h	1.20	0.56	0.96	0.58	1.35	0.96	0.24	0.15
IQ Offset [dBc]		−35.65		−35.94		−35.61		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		0.90		−0.76		10.41		4.02
Timing Error [Ts]		7.85		7.74		8.62		0.31
OBW [MHz]		0.28		0.28		0.28		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.68		22.70	22.68	22.72		0.01
Peak Power [dBm]		27.99		27.71	27.40	28.00		0.26
RB Power [dBm]		22.68		22.70	22.67	22.73		0.02

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

PS: Attached
RRC State: Connected

5MHz CH19575 8RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.:1747.5 MHz Ref. Level: 40.70 dBm BW:5.0 MHz CP:Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	4.81	2.41	4.70	2.41	4.86	2.58	0.07	0.06
EVM Peak [%] l/h	66.00	11.58	60.31	10.79	67.15	12.13	5.09	0.88
EVM DMRS [%] l/h	6.01	1.80	6.50	1.82	7.36	2.14	0.67	0.13
MErr RMS [%] l/h	3.38	1.85	3.43	1.82	3.49	1.88	0.04	0.03
MErr Peak [%] l/h	−56.34	−11.50	50.55	10.64	−57.44	−12.02	5.53	0.88
MErr DMRS [%] l/h	4.20	1.10	4.47	1.12	5.16	1.44	0.45	0.11
PhErr RMS [°] l/h	2.35	0.89	2.18	0.90	2.38	1.02	0.12	0.04
PhErr Peak [°] l/h	33.01	−3.41	29.01	3.20	33.27	−4.09	3.29	0.35
PhErr DMRS [°] l/h	2.47	0.82	2.71	0.82	3.10	0.96	0.29	0.07
IQ Offset [dBc]		−37.12		−37.24		−36.95		0.17
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−6.62		−0.64		9.34		3.56
Timing Error [Ts]		8.20		8.38		8.61		0.18
OBW [MHz]		1.39		1.39		1.39		0.00
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.87		22.87	22.87	22.87		0.00
Peak Power [dBm]		27.46		27.42	27.32	27.50		0.06
RB Power [dBm]		13.86		13.86	13.85	13.88		0.01

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

PS: Attached
RRC State: Connected

5MHz CH19925 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.:1782.5 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 [%] l/h	2.52	1.64	2.46	1.53	2.82	1.85	0.17	0.17
EVM Peak [%] l/h	8.92	6.87	9.12	5.02	10.18	8.67	0.47	1.55
EVM DMRS [%] l/h	1.86	1.32	2.31	1.36	2.96	2.08	0.40	0.24
MErr RMS [%] l/h	1.91	1.02	1.78	0.93	2.02	1.09	0.13	0.11
MErr Peak [%] l/h	−7.81	−3.70	7.76	3.44	−8.43	−5.16	0.32	0.87
MErr DMRS [%] l/h	1.23	0.84	1.75	0.80	2.45	1.33	0.51	0.14
PhErr RMS [°] l/h	0.96	0.74	0.99	0.70	1.17	0.89	0.08	0.09
PhErr Peak [°] l/h	−3.54	−3.38	3.51	2.32	4.62	−4.14	0.39	0.77
PhErr DMRS [°] l/h	0.80	0.58	0.87	0.63	1.15	1.10	0.10	0.15
IQ Offset [dBc]		−34.89		−34.86		−34.65		0.09
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.72		−0.80		−10.63		4.08
Timing Error [Ts]		8.77		8.92		9.52		0.27
OBW [MHz]		0.26		0.25		0.26		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.94		22.92	22.86	22.95		0.03
Peak Power [dBm]		27.90		27.64	27.31	27.94		0.27
RB Power [dBm]		22.95		22.95	22.89	22.98		0.03

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

PS: Attached
RRC State: Connected

5MHz CH19925 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.:1782.5 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 [%] l/h	4.32	3.95	4.14	3.84	4.57	4.26	0.20	0.16
EVM Peak [%] l/h	12.64	12.28	12.15	11.91	15.59	15.18	1.35	1.36
EVM DMRS [%] l/h	3.20	3.19	2.93	2.79	3.44	3.32	0.19	0.31
MErr RMS [%] l/h	3.33	2.88	3.04	2.76	3.44	2.95	0.29	0.12
MErr Peak [%] l/h	−10.12	−10.13	9.11	9.13	−10.75	−10.72	1.04	1.02
MErr DMRS [%] l/h	1.52	1.91	1.48	1.77	1.85	2.48	0.15	0.17
PhErr RMS [°] l/h	1.61	1.57	1.64	1.55	1.85	1.83	0.06	0.09
PhErr Peak [°] l/h	−4.90	−5.23	5.78	5.75	−7.36	−7.05	0.66	0.57
PhErr DMRS [°] l/h	1.61	1.45	1.44	1.23	1.79	1.55	0.12	0.18
IQ Offset [dBc]		−35.09		−34.97		−34.75		0.10
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		2.35		−2.73		−10.27		3.91
Timing Error [Ts]		8.92		9.19		9.70		0.26
OBW [MHz]		0.24		0.24		0.24		0.00
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.52		22.55	22.49	22.61		0.02
Peak Power [dBm]		26.11		26.00	25.85	26.15		0.11
RB Power [dBm]		22.52		22.55	22.49	22.62		0.03

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

PS: Attached
RRC State: Connected

20MHz CH19300 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

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		Extreme		StdDev	
EVM RMS [%] l/h	3.17	3.16	3.58	3.58	4.05	4.04	0.41	0.41
EVM Peak [%] l/h	10.49	10.56	11.93	11.91	14.25	14.18	1.77	1.72
EVM DMRS [%] l/h	2.60	2.53	2.53	2.48	3.00	2.97	0.22	0.20
MErr RMS [%] l/h	2.62	2.62	2.97	2.98	3.37	3.39	0.35	0.35
MErr Peak [%] l/h	−10.24	−10.30	11.64	11.63	−13.97	−13.93	1.85	1.80
MErr DMRS [%] l/h	1.53	1.45	1.48	1.49	1.89	1.89	0.17	0.15
PhErr RMS [°] l/h	1.03	1.01	1.15	1.15	1.34	1.35	0.13	0.13
PhErr Peak [°] l/h	−3.74	−3.70	3.76	3.76	−4.77	−4.80	0.48	0.49
PhErr DMRS [°] l/h	1.20	1.18	1.17	1.14	1.43	1.34	0.14	0.11
IQ Offset [dBc]		−37.51		−37.32		−36.98		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		2.26		3.22		11.37		3.36
Timing Error [Ts]		12.18		12.25		12.69		0.28
OBW [MHz]		0.18		0.33		0.50		0.15
		Current		Average	Min	Max		StdDev
TX Power [dBm]		23.31		23.26	23.13	23.39		0.08
Peak Power [dBm]		26.76		26.82	26.74	26.93		0.05
RB Power [dBm]		23.22		23.22	23.14	23.31		0.04

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

PS: Attached
RRC State: Connected

20MHz CH19300 1RB#99

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

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		Extreme		StdDev	
EVM RMS [%] l/h	1.54	1.54	1.48	1.48	1.70	1.65	0.12	0.12
EVM Peak [%] l/h	5.02	4.97	4.75	4.79	6.43	6.52	0.90	0.89
EVM DMRS [%] l/h	1.75	1.78	1.40	1.42	1.99	2.27	0.24	0.28
MErr RMS [%] l/h	0.84	0.85	0.77	0.77	0.91	0.92	0.08	0.09
MErr Peak [%] l/h	−3.23	−3.27	2.90	2.92	−4.12	−4.13	0.72	0.74
MErr DMRS [%] l/h	0.72	0.66	0.81	0.80	1.37	1.37	0.18	0.19
PhErr RMS [°] l/h	0.74	0.74	0.73	0.72	0.84	0.80	0.07	0.06
PhErr Peak [°] l/h	−2.35	−2.32	2.34	2.34	−3.19	−3.17	0.48	0.48
PhErr DMRS [°] l/h	0.91	0.95	0.65	0.67	0.97	1.18	0.16	0.18
IQ Offset [dBc]		−38.34		−38.46		−38.21		0.12
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		4.73		−0.97		−8.23		4.03
Timing Error [Ts]		12.71		12.34		12.80		0.27
OBW [MHz]		0.18		0.31		0.45		0.13
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.37		22.38	22.17	22.62		0.13
Peak Power [dBm]		27.55		27.44	27.23	27.62		0.11
RB Power [dBm]		22.40		22.37	22.20	22.55		0.12

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

PS: Attached
RRC State: Connected

20MHz CH19575 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	4.18	4.18	3.78	3.79	4.32	4.31	0.40	0.40
EVM Peak [%] l/h	15.30	15.17	13.05	13.03	15.96	15.67	1.91	1.84
EVM DMRS [%] l/h	3.21	3.17	2.64	2.62	3.47	3.43	0.34	0.32
MErr RMS [%] l/h	3.08	3.08	2.84	2.85	3.29	3.28	0.30	0.29
MErr Peak [%] l/h	−13.11	−13.04	11.34	11.35	−14.14	−13.96	1.89	1.86
MErr DMRS [%] l/h	2.03	1.98	1.63	1.64	2.26	2.30	0.21	0.21
PhErr RMS [°] l/h	1.65	1.65	1.45	1.45	1.71	1.71	0.17	0.17
PhErr Peak [°] l/h	−5.89	−5.95	5.12	5.13	−6.49	−6.51	0.54	0.57
PhErr DMRS [°] l/h	1.41	1.41	1.18	1.16	1.59	1.54	0.19	0.16
IQ Offset [dBc]		−38.50		−38.89		−38.50		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		5.11		1.70		11.24		4.23
Timing Error [Ts]		11.06		11.17		11.71		0.31
OBW [MHz]		0.48		0.33		0.50		0.15
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.68		22.79	22.58	22.99		0.10
Peak Power [dBm]		26.53		26.49	26.40	26.62		0.05
RB Power [dBm]		22.69		22.76	22.59	22.90		0.07

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

PS: Attached
RRC State: Connected

20MHz CH19575 1RB#99

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.33	1.33	1.30	1.29	1.48	1.46	0.09	0.10
EVM Peak [%] l/h	2.68	2.77	3.17	3.24	4.26	4.33	0.49	0.46
EVM DMRS [%] l/h	1.59	1.62	1.32	1.35	1.99	1.93	0.20	0.18
MErr RMS [%] l/h	0.63	0.65	0.70	0.70	0.78	0.79	0.05	0.05
MErr Peak [%] l/h	1.76	1.89	2.27	2.28	−2.87	−2.84	0.41	0.42
MErr DMRS [%] l/h	0.86	0.83	0.82	0.84	1.29	1.23	0.12	0.12
PhErr RMS [°] l/h	0.67	0.67	0.63	0.62	0.75	0.74	0.07	0.07
PhErr Peak [°] l/h	−1.45	−1.48	1.66	1.69	2.31	−2.45	0.31	0.33
PhErr DMRS [°] l/h	0.77	0.80	0.59	0.61	0.87	0.85	0.12	0.11
IQ Offset [dBc]		−36.29		−36.44		−36.24		0.11
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−1.93		−1.53		−9.67		4.79
Timing Error [Ts]		11.79		11.60		12.26		0.21
OBW [MHz]		0.47		0.32		0.47		0.14
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.17		22.17	22.06	22.26		0.06
Peak Power [dBm]		27.22		27.33	27.21	27.46		0.09
RB Power [dBm]		22.10		22.15	22.09	22.19		0.03

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

PS: Attached
RRC State: Connected

20MHz CH19575 18RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	4.48	4.45	4.53	4.50	4.61	4.57	0.04	0.04
EVM Peak [%] l/h	19.07	17.29	19.56	18.96	21.50	21.39	0.60	1.02
EVM DMRS [%] l/h	2.93	2.92	3.03	2.99	3.28	3.20	0.10	0.10
MErr RMS [%] l/h	3.58	3.57	3.63	3.61	3.68	3.67	0.04	0.04
MErr Peak [%] l/h	−18.04	−16.94	17.87	17.20	−19.27	−17.96	0.81	0.37
MErr DMRS [%] l/h	2.33	2.35	2.31	2.31	2.48	2.53	0.09	0.10
PhErr RMS [°] l/h	1.56	1.54	1.58	1.56	1.62	1.60	0.03	0.03
PhErr Peak [°] l/h	−6.96	−6.95	8.08	7.44	−9.50	−8.68	0.81	0.57
PhErr DMRS [°] l/h	1.02	0.99	1.12	1.08	1.32	1.27	0.07	0.07
IQ Offset [dBc]		−39.39		−39.35		−39.10		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−3.00		−0.56		−8.25		3.60
Timing Error [Ts]		12.23		11.93		12.23		0.17
OBW [MHz]		3.18		3.18		3.18		0.00
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.94		22.97	22.94	23.00		0.03
Peak Power [dBm]		26.47		26.51	26.44	26.59		0.04
RB Power [dBm]		10.38		10.41	10.38	10.44		0.03

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

PS: Attached
RRC State: Connected

20MHz CH19850 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	3.52	3.53	3.09	3.09	3.55	3.54	0.32	0.30
EVM Peak [%] l/h	13.95	13.76	12.09	12.04	14.66	14.59	1.60	1.53
EVM DMRS [%] l/h	1.99	1.92	2.00	1.98	2.44	2.41	0.24	0.23
MErr RMS [%] l/h	2.12	2.11	1.78	1.78	2.12	2.11	0.24	0.22
MErr Peak [%] l/h	−9.72	−9.60	7.59	7.57	−9.72	−9.60	1.49	1.44
MErr DMRS [%] l/h	1.48	1.35	1.42	1.42	1.74	1.90	0.19	0.21
PhErr RMS [°] l/h	1.63	1.64	1.46	1.47	1.69	1.70	0.14	0.13
PhErr Peak [°] l/h	−6.05	−6.09	5.80	5.78	−7.04	−7.02	0.59	0.58
PhErr DMRS [°] l/h	0.76	0.78	0.80	0.79	1.11	1.09	0.14	0.13
IQ Offset [dBc]		−38.11		−37.81		−37.53		0.16
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		7.15		2.35		10.93		4.29
Timing Error [Ts]		11.18		10.95		11.43		0.26
OBW [MHz]		0.47		0.33		0.48		0.15
		Current		Average	Min	Max		StdDev
TX Power [dBm]		23.32		23.34	23.16	23.49		0.09
Peak Power [dBm]		27.66		27.63	27.50	27.76		0.07
RB Power [dBm]		23.34		23.31	23.19	23.41		0.06

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

PS: Attached
RRC State: Connected

20MHz CH19850 1RB#99

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	3.02	2.99	2.98	2.96	3.12	3.11	0.10	0.09
EVM Peak [%] l/h	7.47	7.49	8.74	8.70	10.30	10.19	1.23	1.18
EVM DMRS [%] l/h	2.23	2.23	2.06	2.04	2.91	2.92	0.32	0.32
MErr RMS [%] l/h	2.10	2.12	2.17	2.16	2.33	2.31	0.09	0.09
MErr Peak [%] l/h	−5.69	−5.62	7.39	7.33	−9.35	−9.41	1.66	1.61
MErr DMRS [%] l/h	1.27	1.34	1.35	1.36	1.86	1.86	0.28	0.26
PhErr RMS [°] l/h	1.25	1.22	1.18	1.17	1.36	1.36	0.11	0.11
PhErr Peak [°] l/h	−3.67	−3.66	3.45	3.49	−5.05	−5.05	0.61	0.56
PhErr DMRS [°] l/h	1.05	1.02	0.89	0.87	1.31	1.29	0.15	0.15
IQ Offset [dBc]		−36.56		−36.51		−36.23		0.16
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−9.26		1.00		9.84		4.43
Timing Error [Ts]		11.74		11.80		12.31		0.25
OBW [MHz]		0.21		0.26		0.30		0.04
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.10		22.22	22.07	22.34		0.11
Peak Power [dBm]		25.98		26.10	25.98	26.22		0.09
RB Power [dBm]		22.16		22.17	22.13	22.19		0.01

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

PS: Attached
RRC State: 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	1.60	22.78	30
	21650	QPSK	1	#0	22.86	19.8~25.7	1.60	22.31	30
			5	#0	22.60	19.8~25.7	1.60	22.05	30
	21793	QPSK	1	#0	22.90	19.8~25.7	1.60	22.35	30
5MHz	21525	QPSK	1	#0	23.03	19.8~25.7	1.60	22.48	30
			1	#24	22.86	19.8~25.7	1.60	22.31	30
	21650	QPSK	1	#0	23.56	19.8~25.7	1.60	23.01	30
			1	#24	23.00	19.8~25.7	1.60	22.45	30
			8	#0	22.84	19.8~25.7	1.60	22.29	30
	21775	QPSK	1	#0	22.85	19.8~25.7	1.60	22.30	30
			1	#24	22.83	19.8~25.7	1.60	22.28	30
10MHz	21550	QPSK	1	#0	22.97	19.8~25.7	1.60	22.42	30
			1	#49	22.24	19.8~25.7	1.60	21.69	30
	21650	QPSK	1	#0	22.53	19.8~25.7	1.60	21.98	30
			1	#49	22.45	19.8~25.7	1.60	21.90	30
			12	#0	22.55	19.8~25.7	1.60	22.00	30
	21750	QPSK	1	#0	22.61	19.8~25.7	1.60	22.06	30
			1	#49	22.53	19.8~25.7	1.60	21.98	30

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

1.4MHz CH21507 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 885.7 MHz Ref. Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.17	0.81	1.54	0.93	2.01	1.17	0.35	0.11
EVM Peak [%] l/h	2.98	2.07	4.63	2.43	7.64	4.14	1.63	0.49
EVM DMRS [%] l/h	2.21	1.03	2.04	0.88	2.37	1.25	0.21	0.14
MErr RMS [%] l/h	0.78	0.43	0.91	0.48	1.07	0.59	0.12	0.04
MErr Peak [%] l/h	2.50	1.16	3.36	1.41	−4.57	−2.08	0.63	0.21
MErr DMRS [%] l/h	1.38	0.88	1.32	0.57	1.71	0.88	0.11	0.13
PhErr RMS [°] l/h	0.50	0.39	0.71	0.46	0.98	0.59	0.20	0.07
PhErr Peak [°] l/h	−1.18	−1.17	2.42	1.36	−4.38	−2.37	1.15	0.29
PhErr DMRS [°] l/h	0.99	0.31	0.89	0.38	1.13	0.58	0.15	0.08
IQ Offset [dBc]		−37.06		−36.99		−36.66		0.12
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		1.22		0.66		−6.18		2.12
Timing Error [Ts]		4.37		4.16		4.68		0.25
OBW [MHz]		0.19		0.20		0.21		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		23.04		22.99	22.87	23.33		0.07
Peak Power [dBm]		28.36		28.64	28.27	29.12		0.26
RB Power [dBm]		23.04		23.05	22.98	23.33		0.04

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

PS: Attached
RRC State: Connected

1.4MHz CH21650 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 MHz Ref. Level: 40.70 dBm BW: 1.4 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.60	0.96	1.48	0.99	1.73	1.19	0.15	0.07
EVM Peak [%] l/h	5.05	2.10	4.33	2.39	5.97	3.96	0.96	0.49
EVM DMRS [%] l/h	1.09	1.04	1.45	0.98	2.04	1.32	0.40	0.10
MErr RMS [%] l/h	1.13	0.56	1.01	0.56	1.21	0.64	0.16	0.03
MErr Peak [%] l/h	−5.05	1.28	3.89	1.54	−5.77	2.19	1.30	0.26
MErr DMRS [%] l/h	0.53	0.56	0.89	0.65	1.42	0.93	0.28	0.08
PhErr RMS [°] l/h	0.65	0.45	0.62	0.47	0.73	0.59	0.05	0.04
PhErr Peak [°] l/h	1.82	0.97	1.80	1.31	−2.50	−2.26	0.26	0.30
PhErr DMRS [°] l/h	0.54	0.50	0.65	0.42	0.97	0.63	0.18	0.07
IQ Offset [dBc]		−37.36		−37.22		−36.68		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		6.81		2.80		7.57		2.56
Timing Error [Ts]		6.22		6.06		7.19		0.19
OBW [MHz]		0.19		0.19		0.19		0.00
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.72		22.78	22.72	22.86		0.06
Peak Power [dBm]		28.81		28.86	28.76	28.97		0.06
RB Power [dBm]		22.81		22.82	22.81	22.84		0.01

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

PS: Attached
RRC State: Connected

1.4MHz CH21650 5RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 MHz Ref. Level: 40.70 dBm BW: 1.4 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	2.81	1.23	2.86	1.19	3.00	1.36	0.06	0.05
EVM Peak [%] l/h	29.90	3.19	31.33	3.11	33.83	4.06	1.61	0.33
EVM DMRS [%] l/h	1.28	1.01	2.57	1.14	3.53	1.44	0.99	0.08
MErr RMS [%] l/h	2.19	0.74	2.34	0.72	2.55	0.82	0.14	0.03
MErr Peak [%] l/h	−29.78	2.15	29.08	2.34	−30.34	3.09	0.63	0.21
MErr DMRS [%] l/h	0.89	0.74	1.78	0.72	2.51	0.88	0.73	0.06
PhErr RMS [°] l/h	1.07	0.56	1.02	0.54	1.11	0.62	0.05	0.03
PhErr Peak [°] l/h	13.56	1.64	12.33	1.68	14.38	−2.31	1.21	0.20
PhErr DMRS [°] l/h	0.53	0.40	1.07	0.50	1.50	0.65	0.39	0.05
IQ Offset [dBc]		−36.12		−36.35		−35.81		0.24
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		5.06		2.92		7.82		2.27
Timing Error [Ts]		6.10		5.95		6.34		0.14
OBW [MHz]		0.89		0.88		0.89		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.53		22.47	22.42	22.60		0.04
Peak Power [dBm]		28.78		28.44	28.02	28.82		0.34
RB Power [dBm]		15.61		15.56	15.54	15.67		0.03

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

PS: Attached
RRC State: Connected

1.4MHz CH21793 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 914.3 MHz Ref. Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.86	1.23	1.85	1.44	2.11	1.93	0.07	0.21
EVM Peak [%] l/h	5.34	3.54	5.75	4.48	7.23	7.14	0.51	1.28
EVM DMRS [%] l/h	1.04	0.87	1.34	1.02	1.85	1.50	0.23	0.15
MErr RMS [%] l/h	1.24	0.67	1.18	0.76	1.32	0.95	0.07	0.09
MErr Peak [%] l/h	−5.08	−2.32	5.12	2.31	−6.13	−3.15	0.27	0.30
MErr DMRS [%] l/h	0.55	0.46	0.85	0.71	1.19	1.22	0.15	0.14
PhErr RMS [°] l/h	0.79	0.59	0.82	0.71	1.01	0.97	0.05	0.11
PhErr Peak [°] l/h	2.50	−1.84	2.69	2.37	−3.92	−3.91	0.40	0.68
PhErr DMRS [°] l/h	0.51	0.42	0.59	0.42	0.93	0.69	0.12	0.09
IQ Offset [dBc]		−36.85		−36.73		−36.10		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.51		4.55		11.97		4.09
Timing Error [Ts]		−0.18		−0.32		−0.96		0.23
OBW [MHz]		0.21		0.20		0.21		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.78		22.82	22.70	22.90		0.04
Peak Power [dBm]		27.34		27.61	27.20	27.96		0.27
RB Power [dBm]		22.89		22.88	22.80	22.94		0.01

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

PS: Attached
RRC State: Connected

5MHz CH21525 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 887.5 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 [%] l/h	1.43	0.99	1.81	0.92	2.31	1.10	0.38	0.08
EVM Peak [%] l/h	6.16	2.80	7.37	2.77	9.70	4.25	1.35	0.57
EVM DMRS [%] l/h	1.48	1.14	1.40	0.91	1.85	1.22	0.12	0.13
MErr RMS [%] l/h	0.94	0.53	1.20	0.49	1.49	0.66	0.22	0.06
MErr Peak [%] l/h	−5.72	1.51	6.22	1.32	−7.35	2.36	0.47	0.32
MErr DMRS [%] l/h	0.96	0.69	0.99	0.58	1.21	0.89	0.10	0.09
PhErr RMS [°] l/h	0.62	0.48	0.79	0.44	1.05	0.54	0.18	0.04
PhErr Peak [°] l/h	1.97	−1.57	2.94	1.58	4.75	−2.43	0.99	0.33
PhErr DMRS [°] l/h	0.65	0.52	0.57	0.40	0.87	0.61	0.09	0.08
IQ Offset [dBc]		−36.17		−36.27		−35.85		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		7.78		2.89		8.45		2.86
Timing Error [Ts]		10.54		10.58		11.41		0.23
OBW [MHz]		0.19		0.22		0.26		0.03
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.86		22.93	22.86	23.03		0.06
Peak Power [dBm]		28.57		28.49	28.27	28.72		0.15
RB Power [dBm]		22.89		22.92	22.89	22.98		0.03

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

PS: Attached
RRC State: Connected

5MHz CH21525 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 887.5 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 [%] l/h	1.57	0.84	1.92	1.05	2.30	1.34	0.27	0.12
EVM Peak [%] l/h	9.00	2.38	8.85	3.83	9.91	5.02	0.39	0.65
EVM DMRS [%] l/h	1.06	0.83	2.17	0.92	3.16	1.24	0.93	0.15
MErr RMS [%] l/h	1.03	0.43	1.39	0.53	1.73	0.68	0.31	0.09
MErr Peak [%] l/h	−6.74	−1.09	7.27	1.61	−7.89	−2.47	0.37	0.46
MErr DMRS [%] l/h	0.75	0.61	1.60	0.60	2.36	0.85	0.72	0.10
PhErr RMS [°] l/h	0.68	0.41	0.77	0.52	0.89	0.66	0.05	0.06
PhErr Peak [°] l/h	3.54	−1.27	3.18	2.05	3.99	−2.68	0.36	0.33
PhErr DMRS [°] l/h	0.43	0.32	0.84	0.40	1.29	0.54	0.35	0.09
IQ Offset [dBc]		−37.39		−37.30		−36.99		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		1.04		2.72		7.55		2.36
Timing Error [Ts]		9.63		9.71		10.15		0.20
OBW [MHz]		0.18		0.23		0.28		0.05
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.79		22.75	22.64	22.86		0.08
Peak Power [dBm]		27.86		27.99	27.82	28.12		0.10
RB Power [dBm]		22.72		22.74	22.69	22.79		0.04

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

PS: Attached
RRC State: Connected

5MHz CH21650 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 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 [%] l/h	2.12	1.18	2.14	1.04	2.34	1.18	0.07	0.09
EVM Peak [%] l/h	7.60	3.95	8.73	2.49	10.77	4.18	1.08	0.59
EVM DMRS [%] l/h	1.87	1.31	1.72	1.03	2.09	1.47	0.16	0.16
MErr RMS [%] l/h	1.68	0.74	1.73	0.67	1.87	0.74	0.07	0.05
MErr Peak [%] l/h	−7.43	1.80	8.36	1.60	−10.09	1.95	0.95	0.17
MErr DMRS [%] l/h	1.35	0.86	1.10	0.70	1.59	0.97	0.17	0.13
PhErr RMS [°] l/h	0.75	0.53	0.73	0.46	0.82	0.56	0.03	0.05
PhErr Peak [°] l/h	−2.43	−2.26	2.32	1.35	−3.29	−2.35	0.22	0.36
PhErr DMRS [°] l/h	0.74	0.57	0.75	0.43	1.05	0.65	0.17	0.09
IQ Offset [dBc]		−37.63		−37.50		−36.82		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		3.45		2.06		8.55		2.19
Timing Error [Ts]		11.01		10.84		11.68		0.99
OBW [MHz]		0.24		0.23		0.24		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		23.15		23.12	22.96	23.56		0.05
Peak Power [dBm]		29.58		29.19	28.57	29.81		0.40
RB Power [dBm]		23.14		23.12	22.96	23.55		0.05

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

PS: Attached
RRC State: Connected

5MHz CH21650 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 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 [%] l/h	2.70	1.51	2.52	1.10	2.70	1.51	0.12	0.25
EVM Peak [%] l/h	9.03	7.09	9.84	4.39	10.80	7.09	0.57	1.81
EVM DMRS [%] l/h	2.54	0.84	2.33	0.89	2.71	1.30	0.28	0.19
MErr RMS [%] l/h	2.01	0.47	1.92	0.40	2.09	0.50	0.11	0.07
MErr Peak [%] l/h	−8.69	−1.54	9.24	1.04	−9.98	−1.54	0.40	0.22
MErr DMRS [%] l/h	1.92	0.59	1.78	0.53	2.08	0.78	0.21	0.12
PhErr RMS [°] l/h	1.04	0.82	0.95	0.59	1.04	0.82	0.04	0.14
PhErr Peak [°] l/h	−4.34	−4.06	3.79	2.50	−4.34	−4.06	0.27	1.05
PhErr DMRS [°] l/h	0.95	0.35	0.86	0.41	1.01	0.64	0.11	0.10
IQ Offset [dBc]		−37.87		−37.97		−37.67		0.12
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		1.19		0.74		4.95		1.79
Timing Error [Ts]		9.60		9.61		10.16		0.18
OBW [MHz]		0.28		0.27		0.28		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.98		22.95	22.87	23.00		0.03
Peak Power [dBm]		29.45		28.95	28.36	29.45		0.48
RB Power [dBm]		22.99		22.96	22.87	23.01		0.03

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

PS: Attached
RRC State: Connected

5MHz CH21650 8RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 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 [%] l/h	3.98	0.97	4.14	1.05	4.27	1.14	0.08	0.04
EVM Peak [%] l/h	63.70	3.21	60.53	3.08	66.53	4.90	4.68	0.39
EVM DMRS [%] l/h	5.47	0.92	6.29	1.05	7.03	1.23	0.61	0.08
MErr RMS [%] l/h	2.90	0.60	3.03	0.59	3.17	0.63	0.11	0.01
MErr Peak [%] l/h	−56.59	2.15	52.16	2.15	−58.50	2.83	5.41	0.29
MErr DMRS [%] l/h	3.83	0.58	4.36	0.64	4.82	0.78	0.34	0.05
PhErr RMS [°] l/h	1.90	0.44	1.95	0.49	2.07	0.56	0.06	0.03
PhErr Peak [°] l/h	27.66	−1.79	27.56	1.70	30.20	2.75	1.50	0.23
PhErr DMRS [°] l/h	2.24	0.41	2.61	0.48	2.98	0.61	0.31	0.05
IQ Offset [dBc]		−38.25		−38.28		−37.93		0.18
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		0.29		1.67		6.19		2.32
Timing Error [Ts]		8.47		8.47		8.80		0.16
OBW [MHz]		1.39		1.39		1.39		0.00
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.77		22.79	22.77	22.84		0.03
Peak Power [dBm]		28.96		28.88	28.75	29.04		0.10
RB Power [dBm]		13.76		13.79	13.76	13.84		0.03

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

PS: Attached
RRC State: Connected

5MHz CH21775 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 912.5 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 [%] l/h	2.29	0.99	2.23	0.97	2.48	1.29	0.17	0.17
EVM Peak [%] l/h	9.63	4.26	9.49	3.36	10.49	5.54	0.63	1.31
EVM DMRS [%] l/h	1.48	0.88	2.04	0.90	2.68	1.24	0.56	0.14
MErr RMS [%] l/h	1.82	0.60	1.73	0.53	1.96	0.66	0.16	0.11
MErr Peak [%] l/h	−8.63	−3.19	8.73	1.84	−9.52	−3.19	0.32	0.72
MErr DMRS [%] l/h	0.89	0.52	1.61	0.55	2.19	0.87	0.58	0.09
PhErr RMS [°] l/h	0.81	0.45	0.81	0.47	0.91	0.64	0.06	0.08
PhErr Peak [°] l/h	3.11	−2.08	3.14	1.77	3.68	−2.98	0.21	0.67
PhErr DMRS [°] l/h	0.68	0.41	0.71	0.41	0.90	0.57	0.11	0.09
IQ Offset [dBc]		−36.72		−36.86		−36.57		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.17		0.44		−6.14		2.12
Timing Error [Ts]		9.20		9.08		9.46		0.18
OBW [MHz]		0.24		0.25		0.26		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.79		22.77	22.74	22.85		0.02
Peak Power [dBm]		28.10		27.81	27.44	28.12		0.30
RB Power [dBm]		22.80		22.81	22.79	22.88		0.02

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

PS: Attached
RRC State: Connected

5MHz CH21775 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 912.5 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 [%] l/h	3.21	2.45	2.97	2.27	3.39	2.70	0.27	0.24
EVM Peak [%] l/h	10.52	10.00	9.44	8.23	11.70	11.18	1.41	2.09
EVM DMRS [%] l/h	1.80	1.74	1.74	1.49	2.23	2.05	0.22	0.30
MErr RMS [%] l/h	2.25	1.07	2.05	1.13	2.36	1.33	0.23	0.08
MErr Peak [%] l/h	−10.24	−3.29	8.90	4.03	−10.57	−5.63	1.19	0.75
MErr DMRS [%] l/h	1.03	1.01	1.22	1.08	1.64	1.64	0.14	0.25
PhErr RMS [°] l/h	1.32	1.27	1.23	1.13	1.43	1.39	0.10	0.16
PhErr Peak [°] l/h	−5.89	−5.57	4.74	4.56	−6.64	−6.34	1.30	1.24
PhErr DMRS [°] l/h	0.85	0.81	0.71	0.59	1.03	0.87	0.13	0.13
IQ Offset [dBc]		−36.33		−35.98		−35.46		0.19
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.64		−2.42		−9.88		2.50
Timing Error [Ts]		9.23		9.27		9.91		0.23
OBW [MHz]		0.24		0.23		0.24		0.01
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.72		22.68	22.51	22.83		0.07
Peak Power [dBm]		27.68		27.44	27.06	27.76		0.24
RB Power [dBm]		22.73		22.71	22.54	22.86		0.07

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

PS: Attached
RRC State: Connected

10MHz CH21550 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 890.0 MHz Ref. Level: 41.00 dBm BW:10.0 MHz CP:Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	0.92	0.85	0.87	0.80	1.03	0.96	0.06	0.07
EVM Peak [%] l/h	2.60	2.40	2.46	1.98	3.17	2.73	0.35	0.43
EVM DMRS [%] l/h	0.84	0.86	0.77	0.77	1.01	1.00	0.12	0.12
MErr RMS [%] l/h	0.48	0.36	0.50	0.41	0.58	0.47	0.04	0.03
MErr Peak [%] l/h	−2.58	−0.78	2.26	1.05	−2.87	1.58	0.31	0.18
MErr DMRS [%] l/h	0.58	0.55	0.49	0.48	0.72	0.70	0.10	0.10
PhErr RMS [°] l/h	0.45	0.44	0.41	0.40	0.52	0.50	0.05	0.05
PhErr Peak [°] l/h	−1.37	−1.36	1.13	1.11	−1.60	1.55	0.23	0.26
PhErr DMRS [°] l/h	0.35	0.38	0.34	0.34	0.47	0.47	0.08	0.08
IQ Offset [dBc]		−38.42		−38.42		−38.07		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		3.39		1.67		−5.35		1.79
Timing Error [Ts]		9.22		9.50		9.94		0.20
OBW [MHz]		0.26		0.21		0.26		0.02
		Current		Average	Min	Max		StdDev
TX Power [dBm]		22.91		22.93	22.88	22.97		0.02
Peak Power [dBm]		28.37		28.10	27.79	28.38		0.25
RB Power [dBm]		22.98		22.98	22.94	23.01		0.02

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

PS: Attached
RRC State: Connected

10MHz CH21550 1RB#49

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 890.0 MHz Ref. Level: 41.00 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	0.86	0.76	0.94	0.80	1.12	0.94	0.07	0.06
EVM Peak [%] l/h	1.92	1.94	2.60	1.82	3.73	2.70	0.51	0.24
EVM DMRS [%] l/h	0.97	0.74	1.10	0.83	1.46	1.20	0.18	0.14
MErr RMS [%] l/h	0.46	0.43	0.62	0.46	0.78	0.55	0.11	0.04
MErr Peak [%] l/h	1.21	1.16	2.12	1.18	−3.26	1.74	0.80	0.15
MErr DMRS [%] l/h	0.72	0.56	0.74	0.53	1.10	0.84	0.20	0.11
PhErr RMS [°] l/h	0.42	0.36	0.41	0.37	0.51	0.45	0.03	0.03
PhErr Peak [°] l/h	−1.10	−1.11	1.10	1.01	1.54	1.55	0.14	0.16
PhErr DMRS [°] l/h	0.37	0.28	0.46	0.37	0.60	0.57	0.07	0.08
IQ Offset [dBc]		−38.67		−38.59		−38.38		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−2.19		−0.70		−6.90		2.46
Timing Error [Ts]		11.52		10.45		11.66		0.94
OBW [MHz]		0.26		0.28		0.30		0.02
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.18		22.20	22.12	22.24		0.03
Peak Power [dBm]		27.53		27.33	27.03	27.56		0.21
RB Power [dBm]		22.25		22.26	22.19	22.29		0.02

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

PS: Attached
RRC State: Connected

10MHz CH21650 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 MHz Ref. Level: 40.60 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.04	0.98	1.01	0.93	1.17	1.06	0.07	0.05
EVM Peak [%] l/h	2.08	1.97	2.45	1.92	3.46	2.62	0.50	0.23
EVM DMRS [%] l/h	1.16	1.12	1.01	1.01	1.24	1.32	0.11	0.12
MErr RMS [%] l/h	0.59	0.57	0.66	0.60	0.75	0.69	0.07	0.05
MErr Peak [%] l/h	1.43	1.43	2.02	1.45	−2.91	1.84	0.48	0.13
MErr DMRS [%] l/h	0.67	0.62	0.67	0.66	0.87	0.92	0.09	0.10
PhErr RMS [°] l/h	0.49	0.46	0.44	0.41	0.52	0.48	0.04	0.03
PhErr Peak [°] l/h	1.15	1.08	1.10	1.04	1.45	1.49	0.15	0.14
PhErr DMRS [°] l/h	0.54	0.54	0.43	0.44	0.56	0.60	0.06	0.06
IQ Offset [dBc]		−39.83		−39.76		−39.43		0.14
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		1.40		1.36		4.85		2.22
Timing Error [Ts]		10.17		10.17		10.54		0.20
OBW [MHz]		0.24		0.22		0.24		0.02
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.48		22.50	22.47	22.53		0.02
Peak Power [dBm]		27.87		27.66	27.40	27.90		0.22
RB Power [dBm]		22.54		22.55	22.54	22.57		0.01

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

PS: Attached
RRC State: Connected

10MHz CH21650 1RB#49

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 MHz Ref. Level: 40.60 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	0.96	0.83	0.93	0.78	1.20	1.12	0.08	0.11
EVM Peak [%] l/h	2.82	2.38	2.78	2.15	3.76	3.80	0.37	0.62
EVM DMRS [%] l/h	0.85	0.59	0.98	0.74	1.20	1.02	0.12	0.12
MErr RMS [%] l/h	0.48	0.35	0.54	0.36	0.67	0.47	0.06	0.04
MErr Peak [%] l/h	−2.21	−0.89	2.19	1.05	−2.82	1.61	0.36	0.18
MErr DMRS [%] l/h	0.60	0.24	0.62	0.41	0.80	0.63	0.13	0.10
PhErr RMS [°] l/h	0.48	0.43	0.44	0.40	0.61	0.58	0.06	0.06
PhErr Peak [°] l/h	−1.34	−1.28	1.30	1.18	−2.03	−2.08	0.30	0.34
PhErr DMRS [°] l/h	0.35	0.31	0.43	0.35	0.64	0.54	0.08	0.08
IQ Offset [dBc]		−39.97		−39.82		−39.45		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		0.70		2.43		7.68		2.23
Timing Error [Ts]		9.47		9.21		9.65		0.22
OBW [MHz]		0.24		0.27		0.30		0.03
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.16		22.27	22.16	22.45		0.09
Peak Power [dBm]		27.43		27.29	26.96	27.64		0.23
RB Power [dBm]		22.23		22.33	22.23	22.50		0.09

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

PS: Attached
RRC State: Connected

10MHz CH21650 12RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

FDD Freq.: 900.0 MHz Ref. Level: 40.60 dBm BW: 10.0 MHz CP: Normal Meas Subfr./Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	1.63	1.17	1.50	1.17	1.75	1.24	0.20	0.03
EVM Peak [%] l/h	15.12	3.65	12.34	3.35	19.57	4.17	4.38	0.36
EVM DMRS [%] l/h	2.07	1.16	1.69	1.11	2.19	1.27	0.48	0.07
MErr RMS [%] l/h	1.11	0.74	1.01	0.74	1.17	0.76	0.13	0.01
MErr Peak [%] l/h	−13.29	−2.42	10.81	2.29	−15.97	2.85	3.50	0.20
MErr DMRS [%] l/h	1.54	0.75	1.20	0.74	1.60	0.89	0.38	0.05
PhErr RMS [°] l/h	0.69	0.52	0.64	0.52	0.76	0.56	0.09	0.02
PhErr Peak [°] l/h	8.49	2.07	6.52	1.83	10.98	2.37	2.86	0.22
PhErr DMRS [°] l/h	0.79	0.51	0.68	0.47	0.88	0.54	0.17	0.04
IQ Offset [dBc]		−39.19		−39.36		−39.12		0.13
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		0.59		−0.31		−5.38		2.45
Timing Error [Ts]		8.57		10.42		10.99		0.70
OBW [MHz]		2.12		2.12		2.12		0.00
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.54		22.53	22.47	22.55		0.03
Peak Power [dBm]		28.16		28.29	28.10	28.47		0.12
RB Power [dBm]		11.76		11.75	11.69	11.77		0.03

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

PS: Attached
RRC State: Connected

10MHz CH21750 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	0.93	0.87	0.92	0.86	1.19	1.14	0.12	0.13
EVM Peak [%] l/h	2.57	2.47	2.68	2.46	4.09	4.06	0.52	0.71
EVM DMRS [%] l/h	0.96	0.86	0.78	0.78	1.16	1.17	0.16	0.16
MErr RMS [%] l/h	0.48	0.45	0.48	0.39	0.57	0.49	0.04	0.06
MErr Peak [%] l/h	−1.93	−1.38	2.18	1.26	−3.48	−2.03	0.26	0.31
MErr DMRS [%] l/h	0.64	0.61	0.45	0.44	0.93	0.89	0.12	0.11
PhErr RMS [°] l/h	0.46	0.43	0.45	0.44	0.60	0.59	0.07	0.07
PhErr Peak [°] l/h	−1.30	−1.18	1.34	1.31	−2.24	−2.21	0.35	0.36
PhErr DMRS [°] l/h	0.41	0.34	0.36	0.37	0.62	0.62	0.09	0.09
IQ Offset [dBc]		−40.34		−40.15		−39.79		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−0.23		1.19		9.33		2.76
Timing Error [Ts]		10.51		9.64		11.50		0.89
OBW [MHz]		0.24		0.23		0.24		0.01
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.49		22.51	22.44	22.61		0.03
Peak Power [dBm]		27.60		27.45	27.18	27.75		0.20
RB Power [dBm]		22.55		22.56	22.50	22.64		0.03

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

PS: Attached
RRC State: Connected

10MHz CH21750 1RB#49

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement

Multi Evaluation | PRACH | SRS

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

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] l/h	2.77	2.69	2.30	2.24	2.86	2.77	0.52	0.50
EVM Peak [%] l/h	9.91	9.18	7.63	7.55	10.11	9.69	1.62	1.53
EVM DMRS [%] l/h	1.82	1.66	1.50	1.32	2.03	1.86	0.31	0.36
MErr RMS [%] l/h	1.67	1.57	1.35	1.27	1.75	1.65	0.39	0.37
MErr Peak [%] l/h	−6.32	−6.53	5.02	5.02	−6.90	−7.00	1.43	1.47
MErr DMRS [%] l/h	1.31	1.25	1.08	0.95	1.34	1.28	0.15	0.24
PhErr RMS [°] l/h	1.28	1.26	1.08	1.07	1.32	1.30	0.21	0.21
PhErr Peak [°] l/h	−4.52	−4.24	3.74	3.68	−4.70	−4.52	0.56	0.54
PhErr DMRS [°] l/h	0.72	0.63	0.59	0.53	0.97	0.88	0.19	0.17
IQ Offset [dBc]		−38.40		−38.38		−38.14		0.15
IQ Gain Imbalance [dB]		---		---		---		---
IQ Quadrature Error [°]		---		---		---		---
Freq Error [Hz]		−3.82		−1.76		−5.12		1.95
Timing Error [Ts]		9.66		9.54		10.15		0.24
OBW [MHz]		0.35		0.33		0.35		0.01
	Current		Average		Min	Max		StdDev
TX Power [dBm]		22.39		22.45	22.39	22.53		0.06
Peak Power [dBm]		27.50		27.40	27.25	27.55		0.12
RB Power [dBm]		22.45		22.47	22.45	22.50		0.02

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

PS: Attached
RRC State: Connected

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

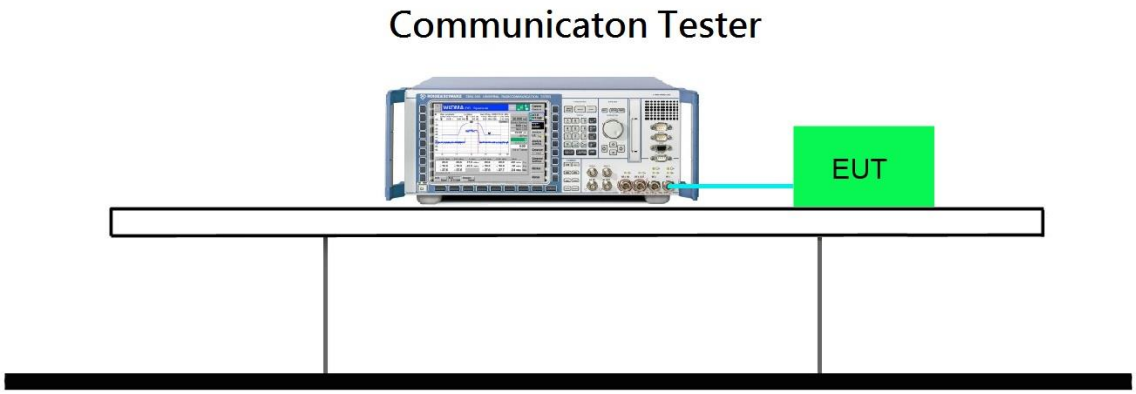
Δf_OOB (MHz)	發射限制值(dB)/頻道頻寬						
	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	解析頻寬
±0 to 1	-8.5	-11.5	-13.5	-16.5	-18.5	-19.5	30kHz
±1 to 2.5	-8.5	-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
±2.5 to 2.8	-23.5	-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
±2.8 to 5		-8.5	-8.5	-8.5	-8.5	-8.5	1MHz
±5 to 6		-23.5	-11.5	-11.5	-11.5	-11.5	1MHz
±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 TS 36.521-1。

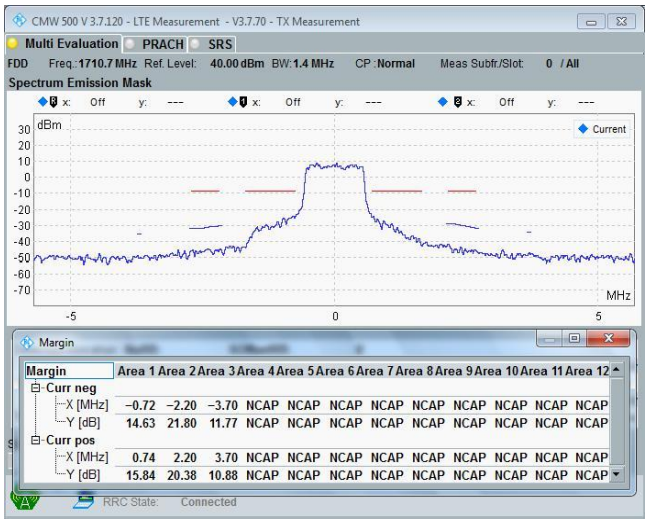
5.2.3 實驗方法方塊圖



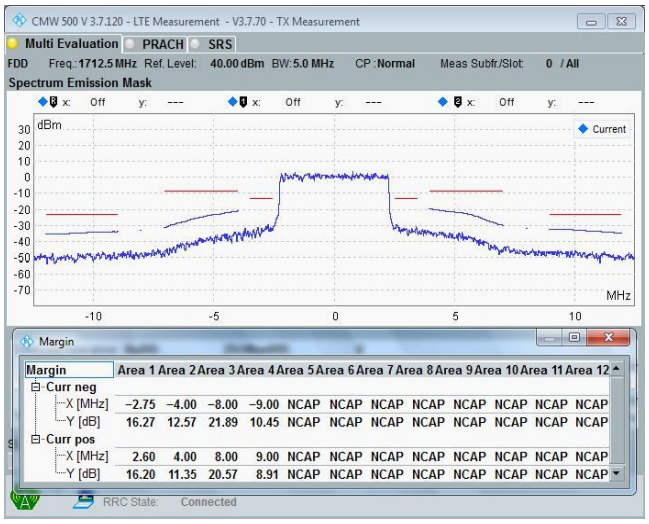
5.2.4 實驗數據

Band 3 (1800MHz)-Full RB														
Modu-laton	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	19207	1.4MHz	6	0	14.63	20.38	10.88	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	25	0	16.20	11.35			20.57	8.91	N/A	N/A	N/A
		19250	10MHz	50	0	16.33	15.27			14.59		9.53	N/A	N/A
		19300	20MHz	100	0	16.38	18.02			17.77				10.68
	MID	19575	1.4MHz	6	0	13.91	19.30	10.15	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	25	0	15.19	13.91			19.91	8.73	N/A	N/A	N/A
			10MHz	50	0	14.62	15.09			15.33		8.57	N/A	N/A
			20MHz	100	0	14.65	15.40			15.77				9.32
	HIGH	19943	1.4MHz	6	0	15.65	20.12	10.68	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	25	0	16.63	13.71			19.56	8.18	N/A	N/A	N/A
		19900	10MHz	50	0	12.18	12.73			11.21		8.56	N/A	N/A
		19850	20MHz	100	0	13.07	14.24			14.60				8.33
16-QAM	LOW	19207	1.4MHz	6	0	17.66	21.64	11.86	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	25	0	17.70	12.92			21.45	9.74	N/A	N/A	N/A
		19250	10MHz	50	0	17.07	15.24			16.41		9.47	N/A	N/A
		19300	20MHz	100	0	17.56	18.48			17.41				10.04
	MID	19575	1.4MHz	6	0	18.09	19.80	10.02	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	25	0	19.44	14.97			20.60	6.68	N/A	N/A	N/A
			10MHz	50	0	15.66	16.17			16.49		8.83	N/A	N/A
			20MHz	100	0	16.81	16.93			16.43				9.98
	HIGH	19943	1.4MHz	6	0	17.83	19.29	11.04	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	25	0	16.33	13.92			20.13	9.32	N/A	N/A	N/A
		19900	10MHz	50	0	16.02	14.05			12.75		8.10	N/A	N/A
		19850	20MHz	100	0	22.82	22.46			25.27				26.08

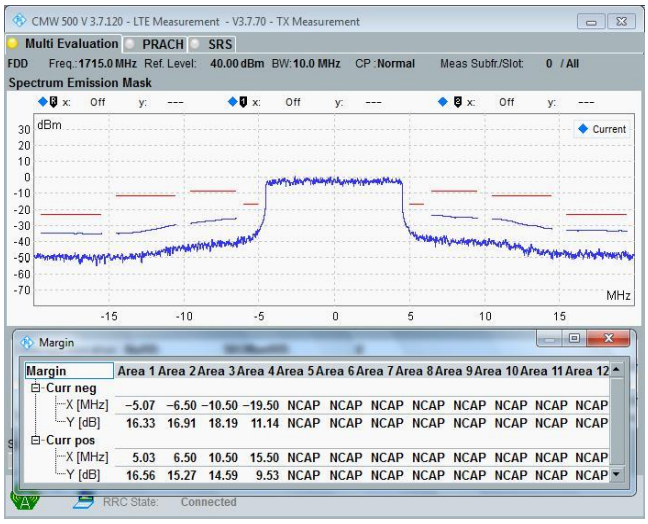
QPSK 1.4MHz CH19207 6RB#0



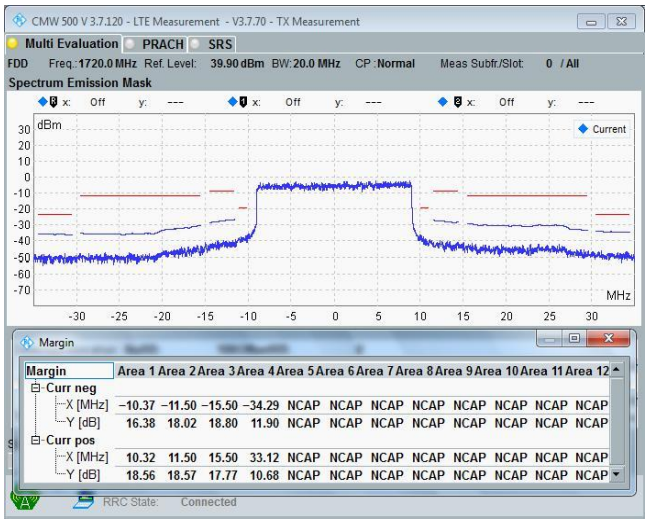
QPSK 5MHz CH19225 25RB#0



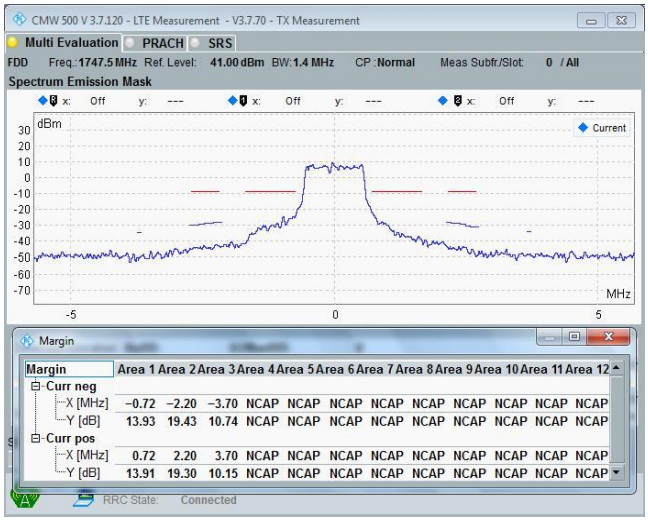
QPSK 10MHz CH19250 50RB#0



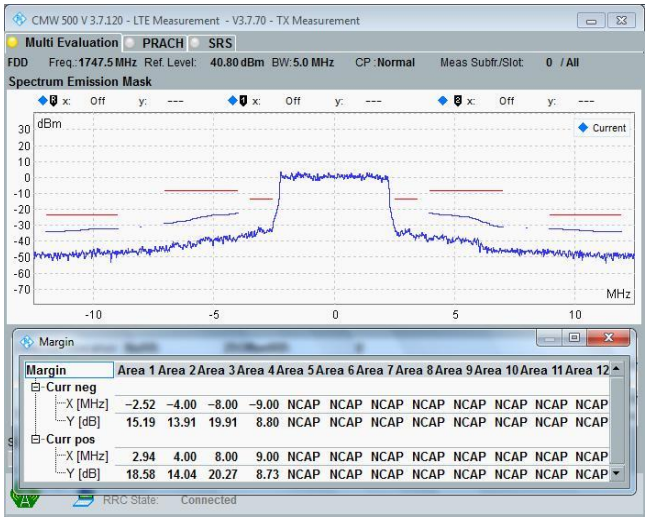
QPSK 20MHz CH19300 100RB#0



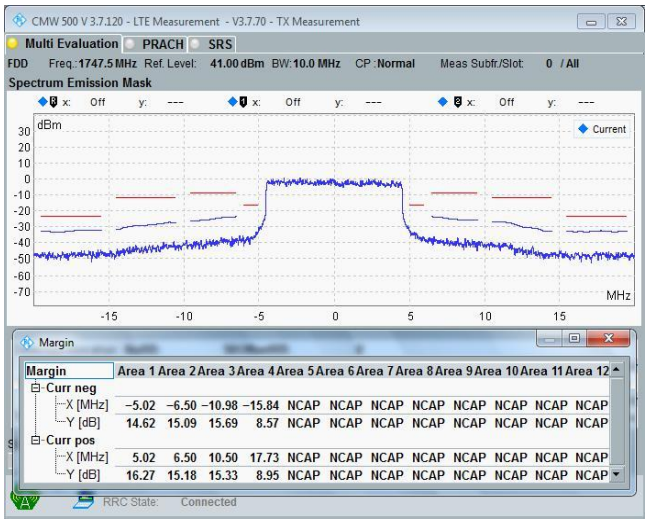
QPSK 1.4MHz CH19575 6RB#0



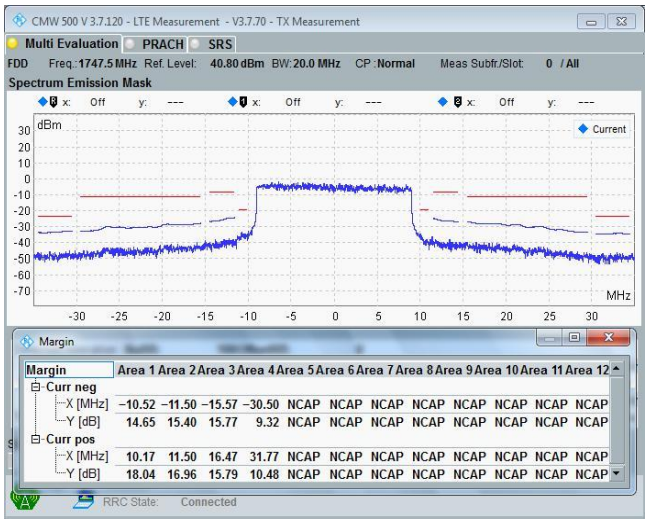
QPSK 5MHz CH19575 25RB#0



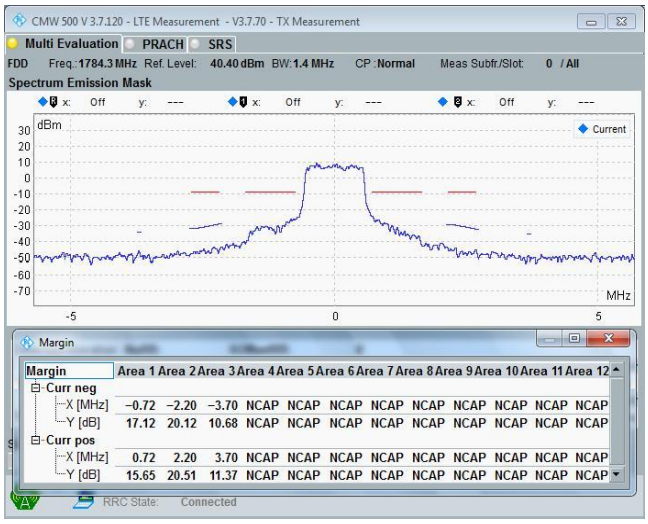
QPSK 10MHz CH19575 50RB#0



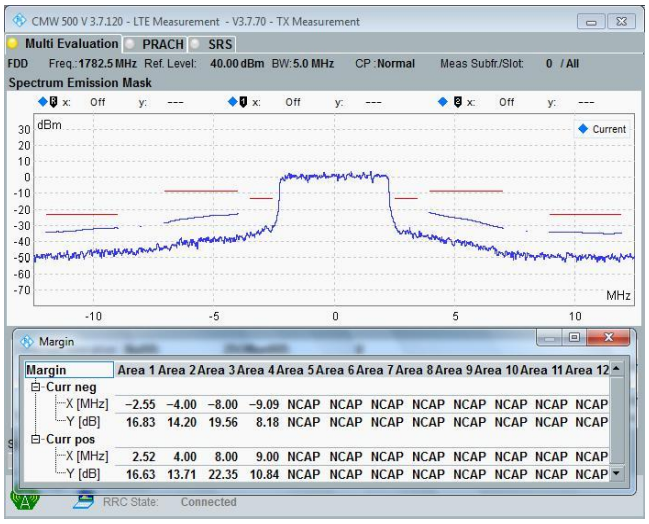
QPSK 20MHz CH19575 100RB#0



QPSK 1.4MHz CH19943 6RB#0



QPSK 5MHz CH19925 25RB#0



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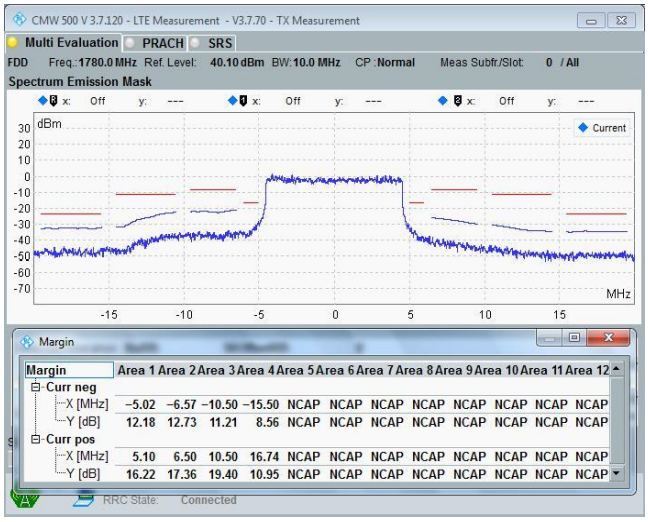

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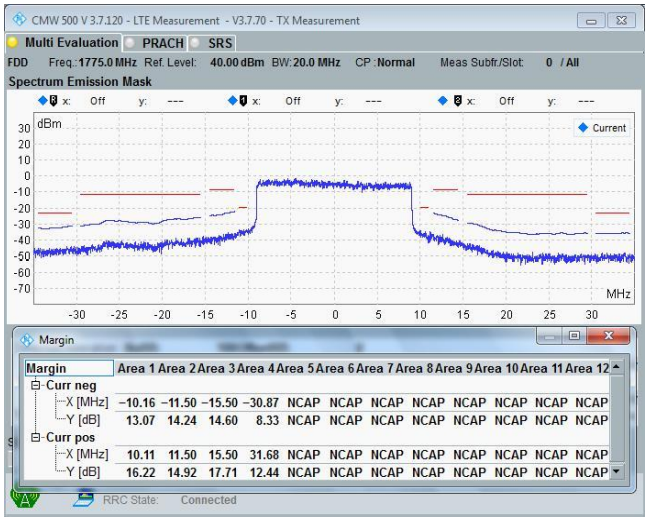
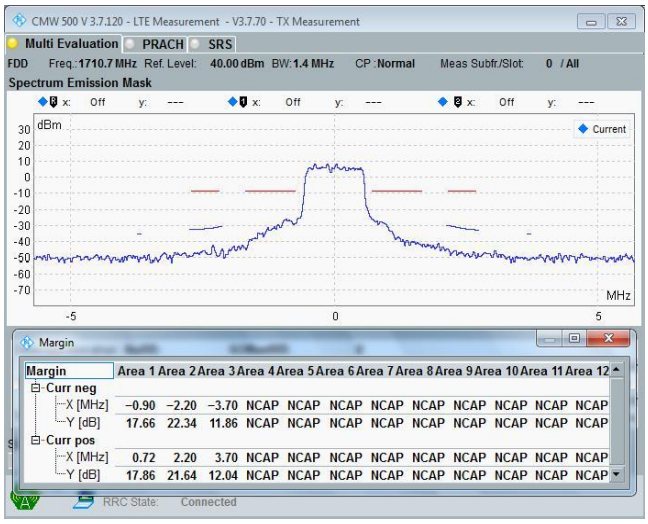


16-QAM 1.4MHz CH19207 6RB#0



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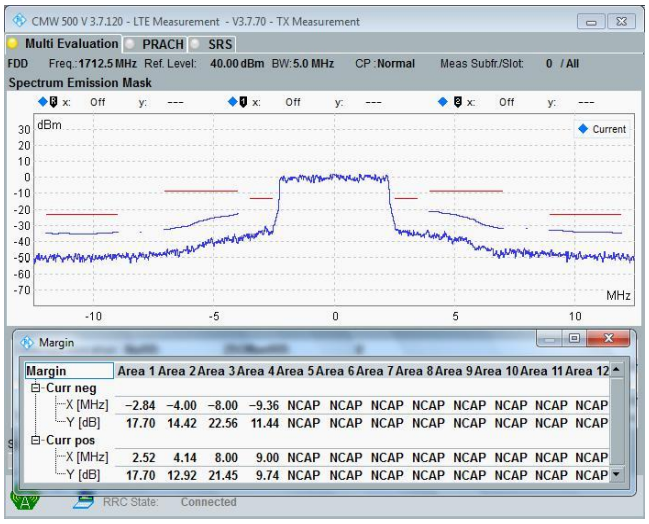

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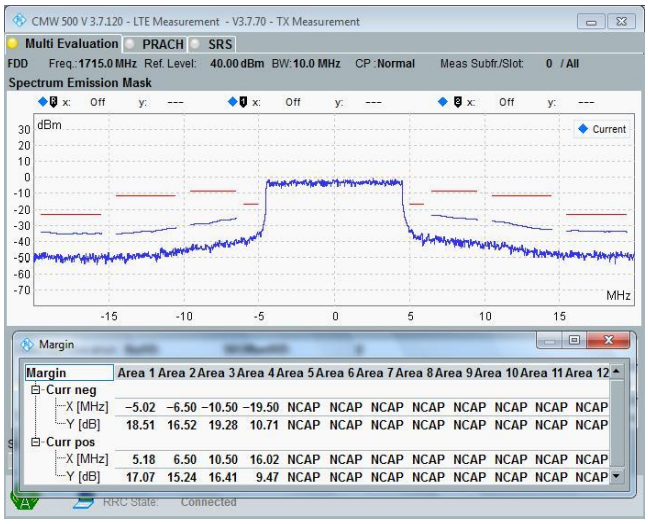

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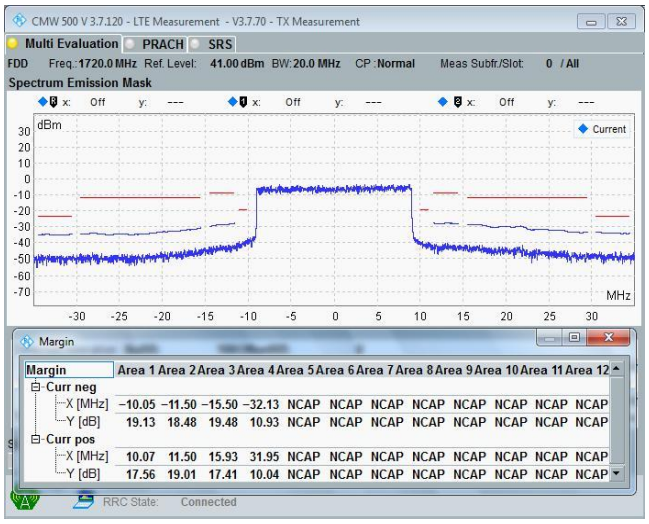
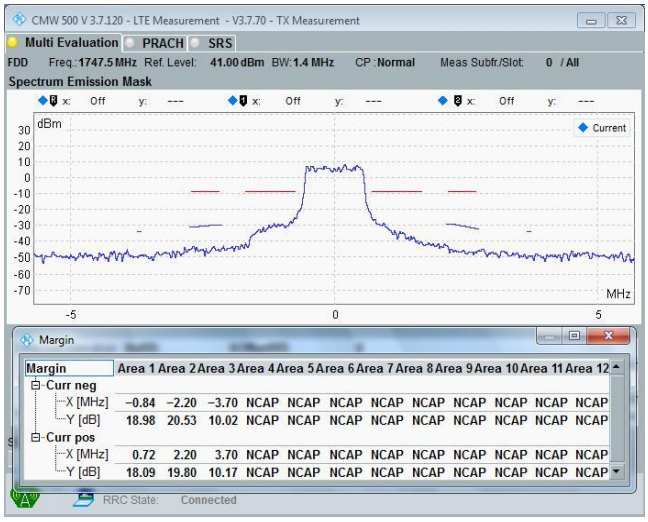
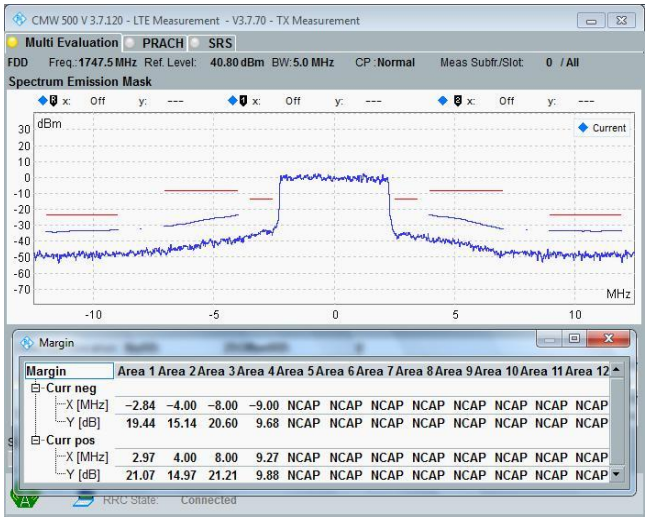


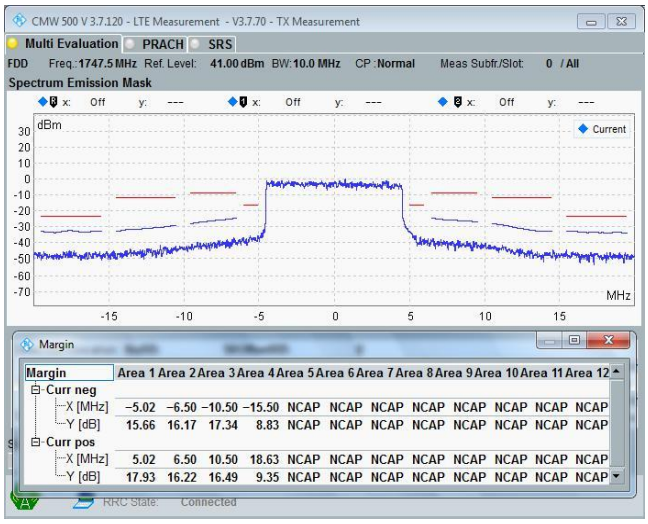
16-QAM 1.4MHz CH19575 6RB#0



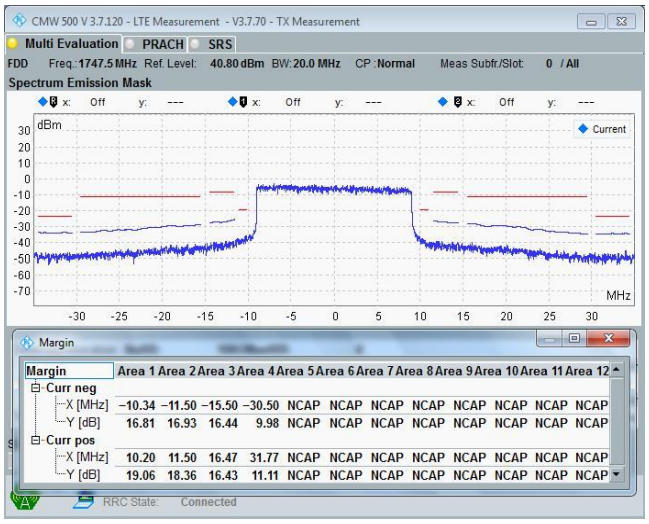
16-QAM 5MHz CH19575 25RB#0



16-QAM 10MHz CH19575 50RB#0



16-QAM 20MHz CH19575 100RB#0



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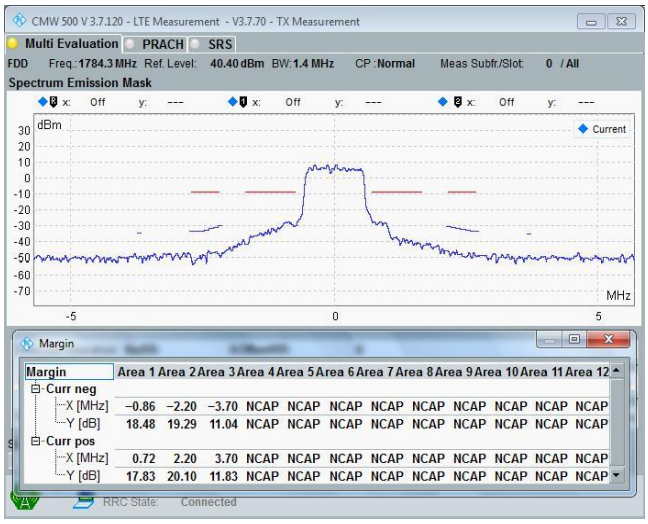
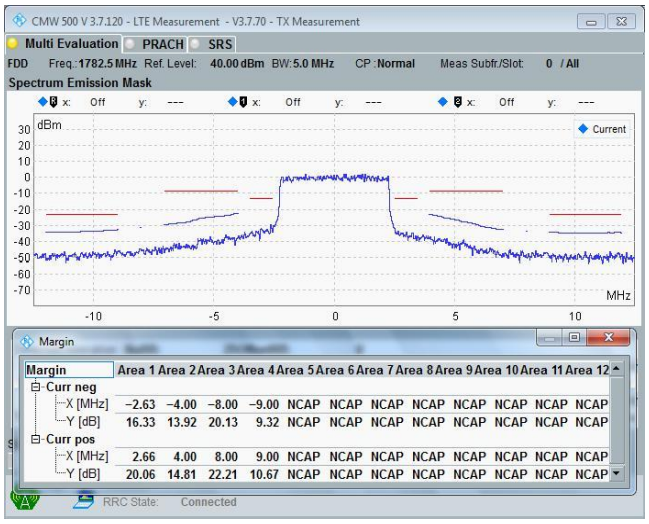
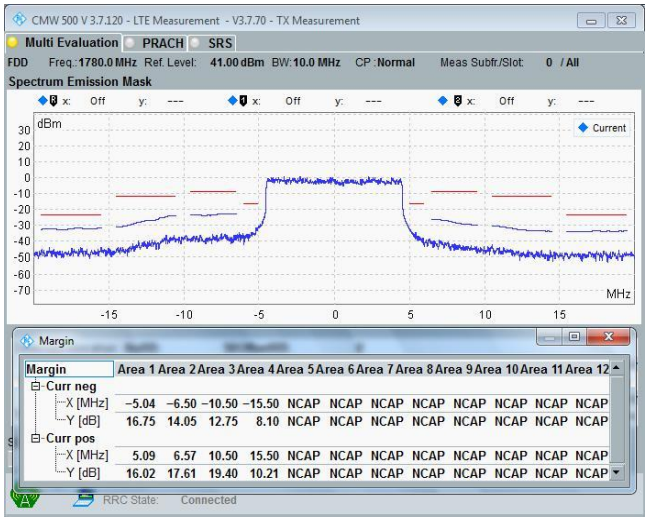


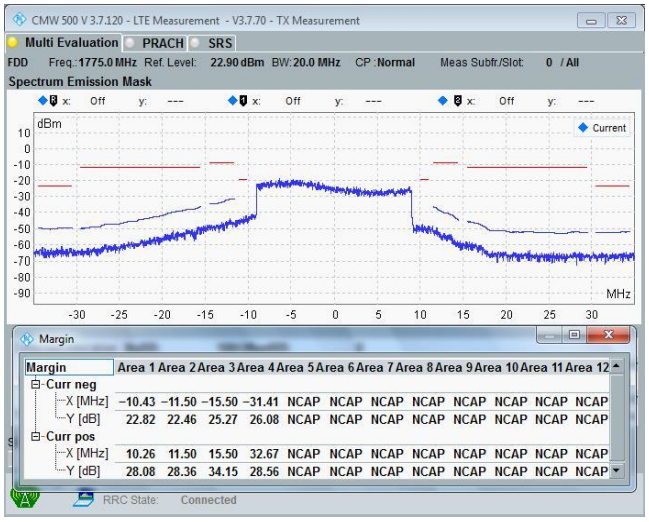
16-QAM 5MHz CH19925 25RB#0



16-QAM 10MHz CH19900 50RB#0

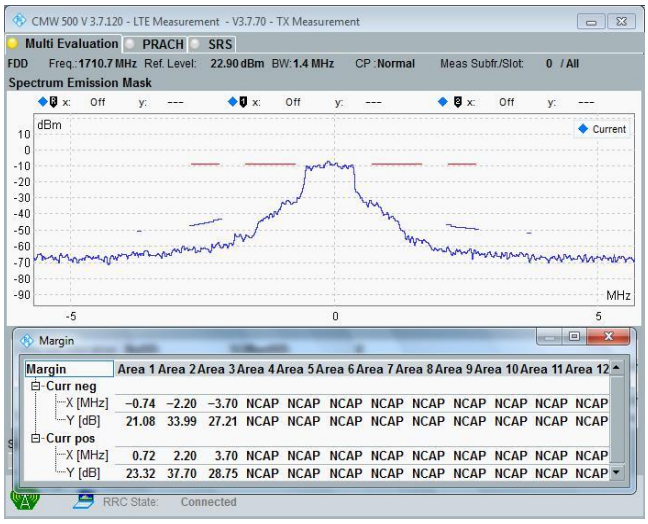


16-QAM 20MHz CH19850 100RB#0

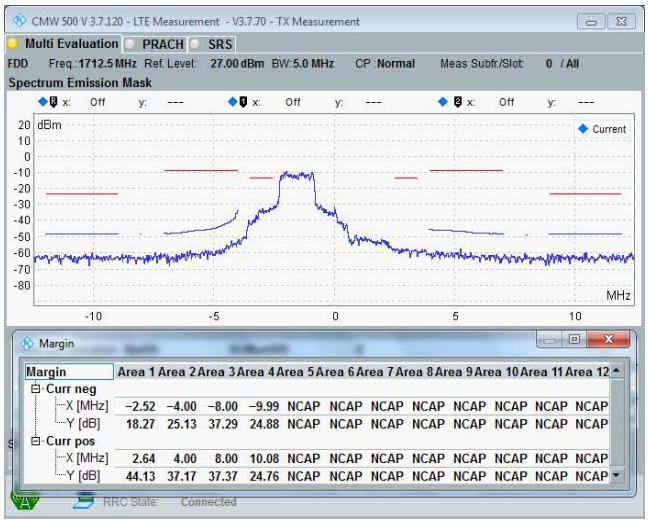


Band 3 (1800MHz)-Partial RB(#0)														
Modu-laton	Test CH	CH	ΔF_OOB (MHz)	RB No.	RB Offset	MHz / Margin(dB)								
						±0 to 1	±1 to 2.5	±2.5 to 2.8	±2.8 to 5	±5 to 6	±6 to 10	±10 to 15	±15 to 20	±20 to 25
QPSK	LOW	19207	1.4MHz	5	0	21.08	33.99	27.21	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	8	0	18.27	25.13			37.29	24.76	N/A	N/A	N/A
		19250	10MHz	12	0	16.50	21.16			32.58		21.12	N/A	N/A
		19300	20MHz	18	0	5.26	10.10			18.27				10.86
	MID	19575	1.4MHz	5	0	24.66	35.27	26.47	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	8	0	17.87	26.26			24.55	22.22	N/A	N/A	N/A
			10MHz	12	0	16.38	20.36			31.93		20.87	N/A	N/A
			20MHz	18	0	7.01	11.29			19.25				10.55
	HIGH	19943	1.4MHz	5	0	18.09	27.27	22.76	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	8	0	22.95	26.94			35.93	23.12	N/A	N/A	N/A
		19900	10MHz	12	0	5.45	9.17			20.22		9.56	N/A	N/A
		19850	20MHz	18	0	4.92	9.09			20.32				10.21
16-QAM	LOW	19207	1.4MHz	5	0	24.77	36.19	27.97	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	8	0	21.21	27.14			36.86	24.43	N/A	N/A	N/A
		19250	10MHz	12	0	30.16	34.41			35.01		22.10	N/A	N/A
		19300	20MHz	18	0	8.09	11.22			20.73				9.56
	MID	19575	1.4MHz	5	0	25.51	36.37	26.78	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	8	0	21.98	26.92			34.36	22.41	N/A	N/A	N/A
			10MHz	12	0	16.59	22.22			32.16		20.63	N/A	N/A
			20MHz	18	0	7.84	12.01			18.15				10.42
	HIGH	19943	1.4MHz	5	0	18.49	27.12	23.12	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	8	0	7.07	10.13			19.85	9.98	N/A	N/A	N/A
		19900	10MHz	12	0	18.48	21.10			32.84		20.88	N/A	N/A
		19850	20MHz	18	0	9.09	11.62			20.94				10.18

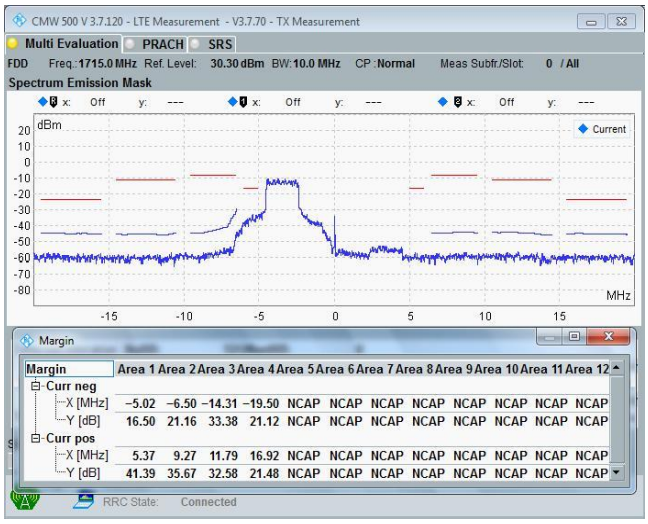
QPSK 1.4MHz CH19207 5RB#0



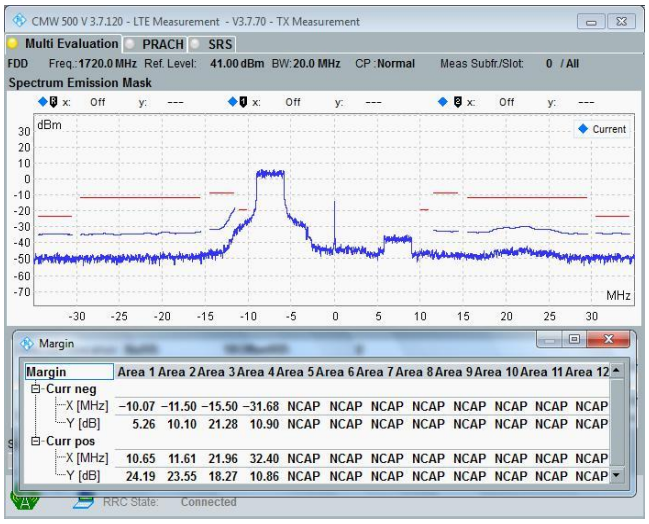
QPSK 5MHz CH19225 8RB#0



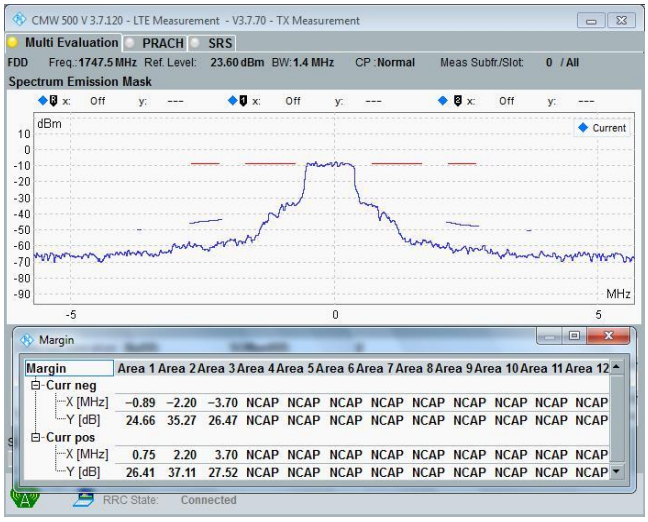
QPSK 10MHz CH19250 12RB#0



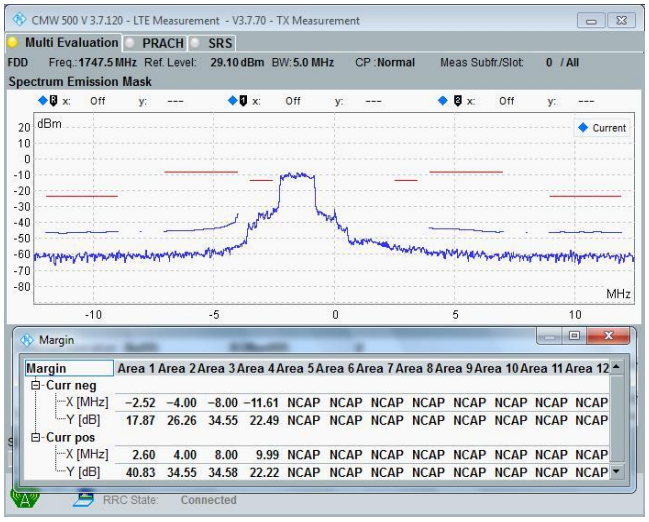
QPSK 20MHz CH19300 18RB#0



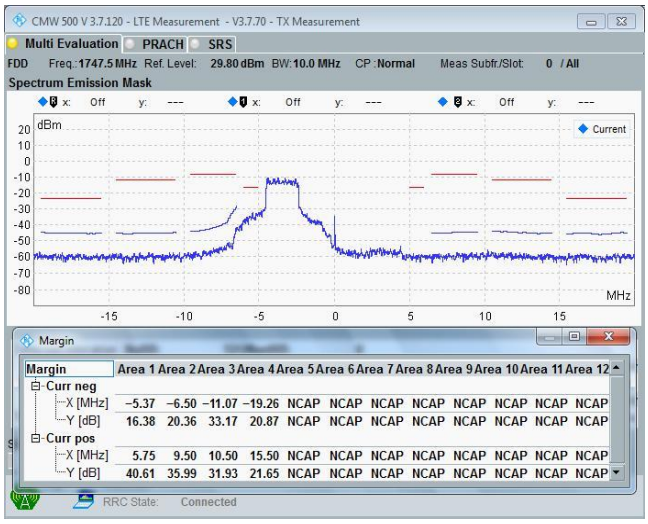
QPSK 1.4MHz CH19575 5RB#0



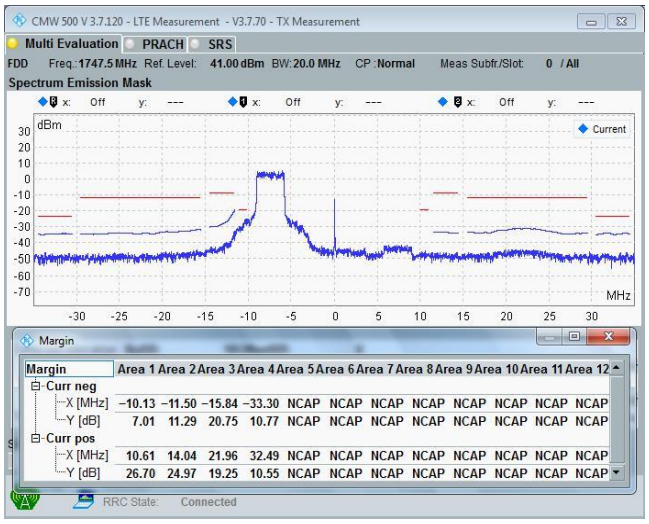
QPSK 5MHz CH19575 8RB#0



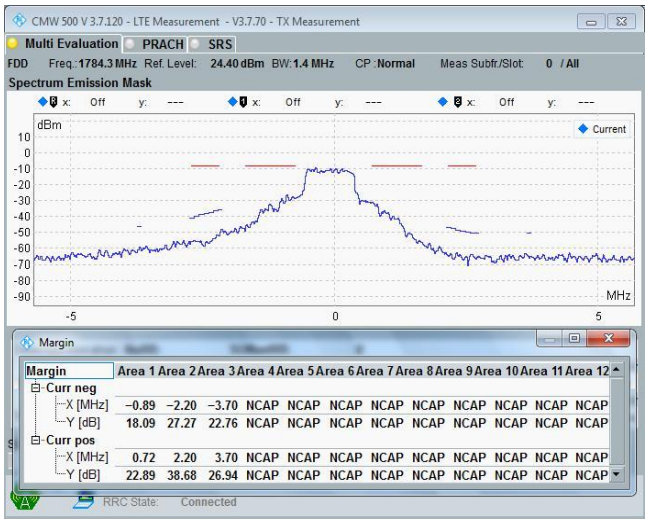
QPSK 10MHz CH19575 12RB#0



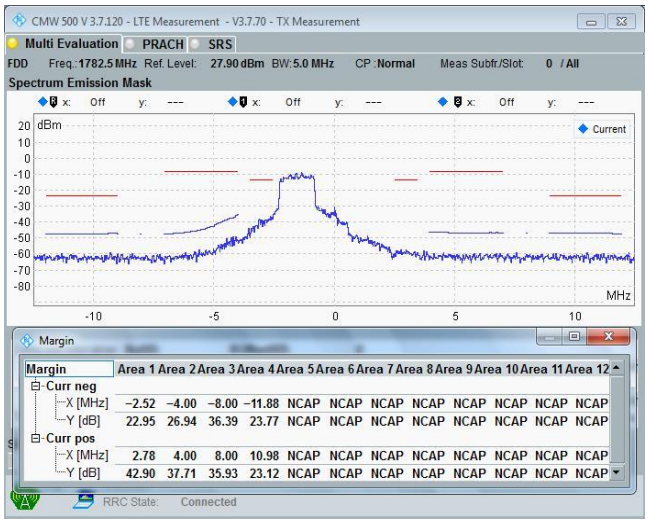
QPSK 20MHz CH19575 18RB#0



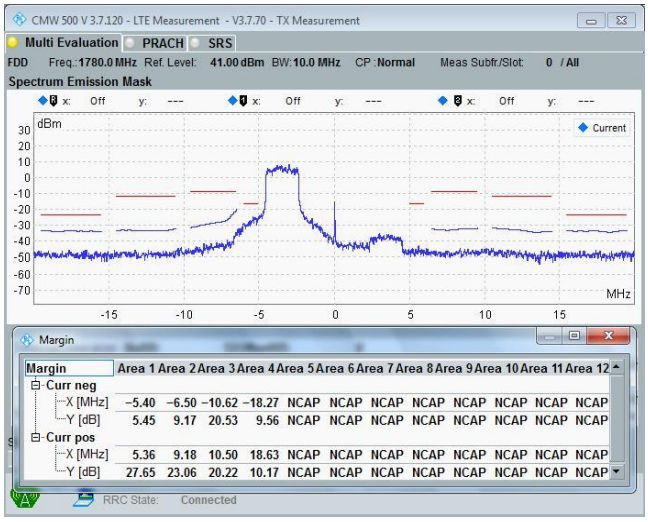
QPSK 1.4MHz CH19943 5RB#0



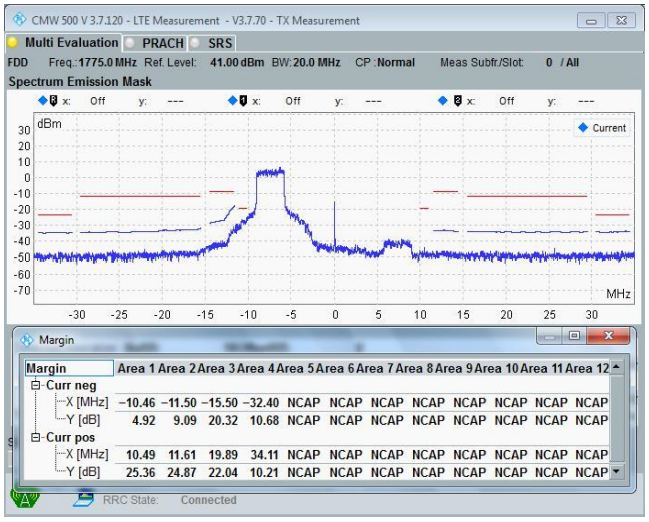
QPSK 5MHz CH19925 8RB#0



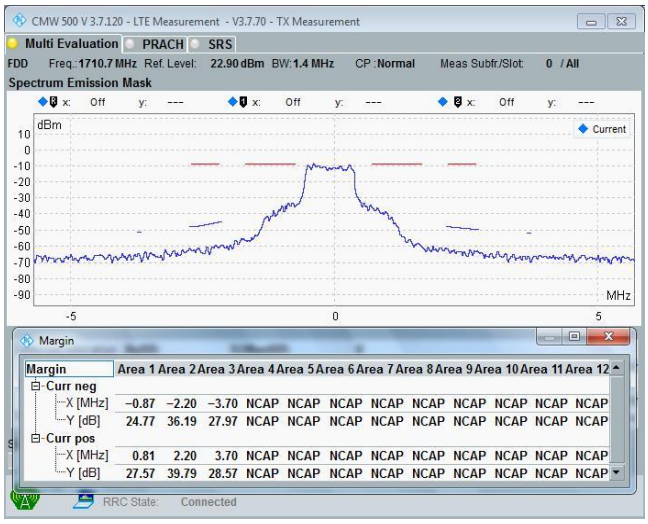
QPSK 10MHz CH19900 12RB#0



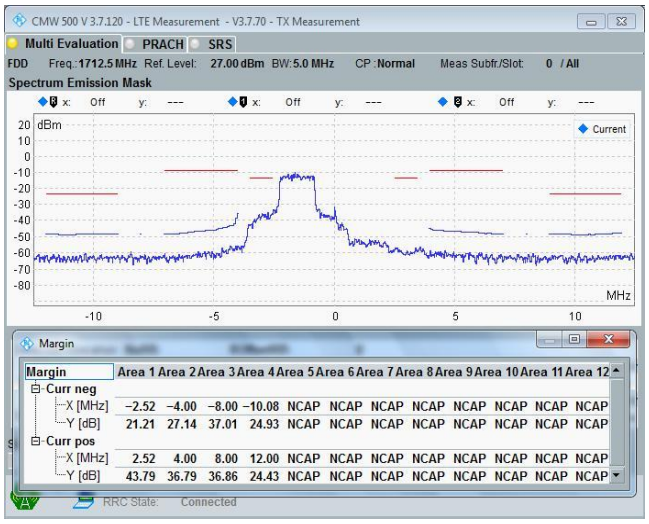
QPSK 20MHz CH19850 18RB#0



16-QAM 1.4MHz CH19207 5RB#0



16-QAM 5MHz CH19225 8RB#0



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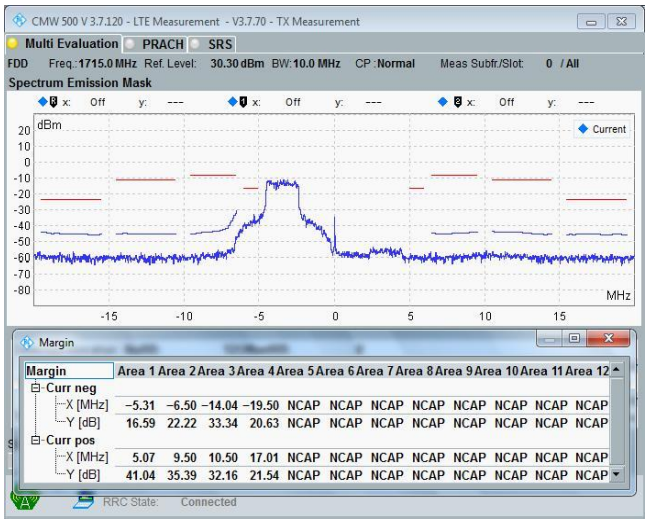
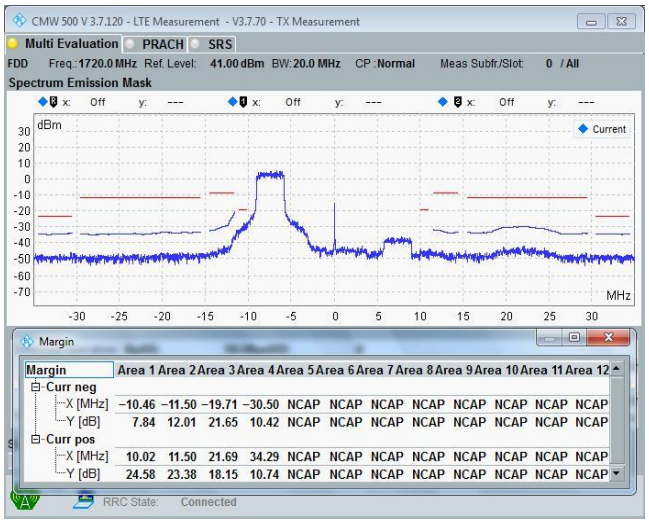
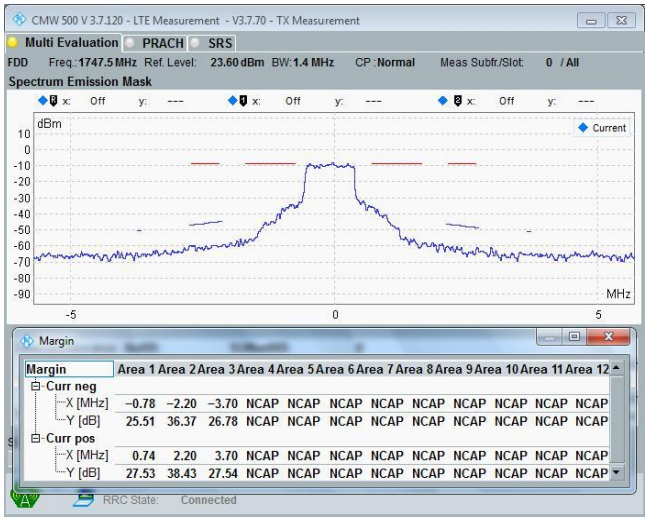


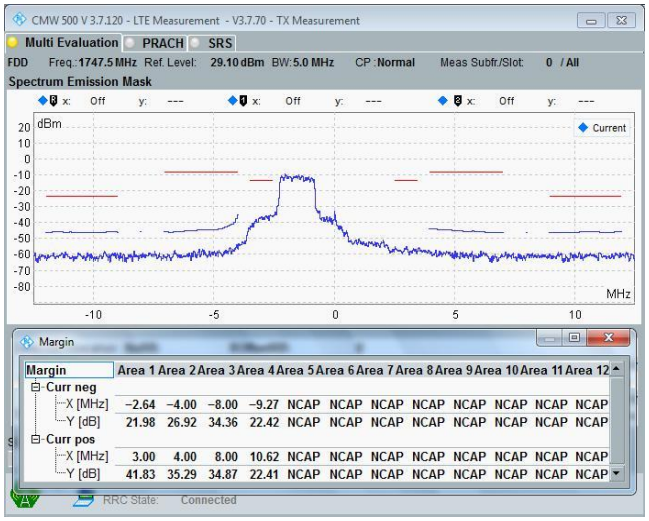
16-QAM 20MHz CH19300 18RB#0



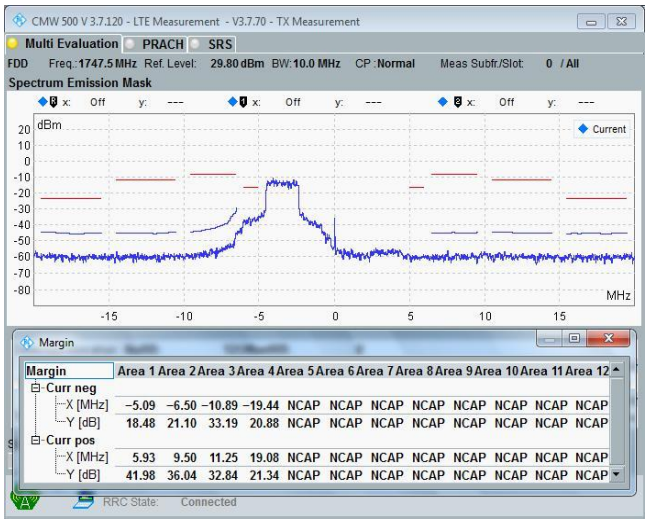
16-QAM 1.4MHz CH19575 5RB#0



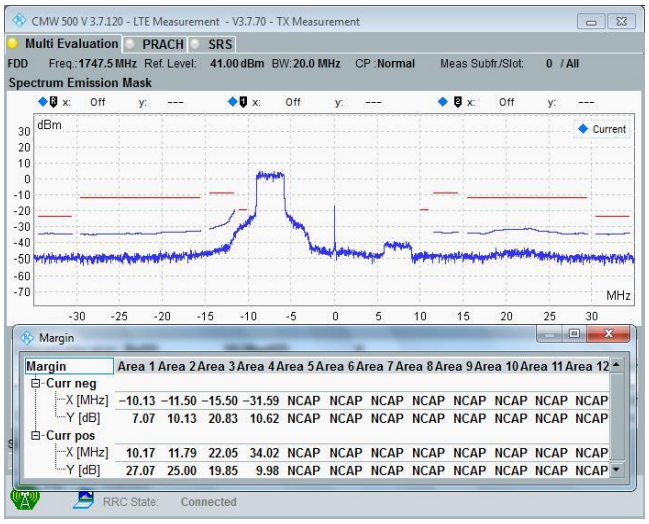
16-QAM 5MHz CH19575 8RB#0



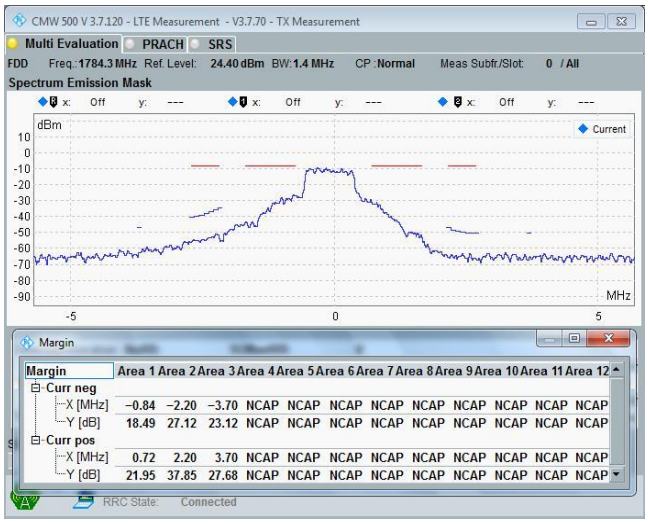
16-QAM 10MHz CH19575 12RB#0



16-QAM 20MHz CH19575 18RB#0



16-QAM 1.4MHz CH19943 5RB#0



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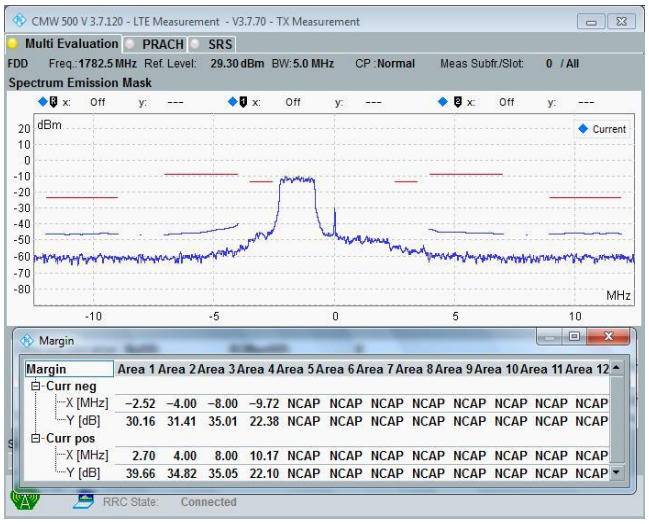

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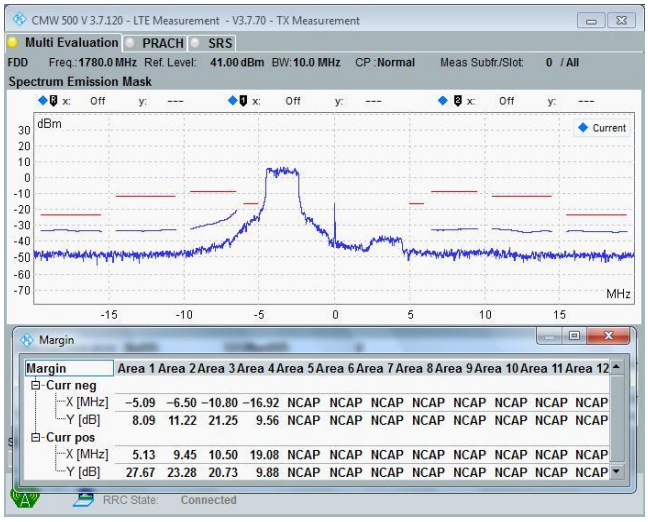
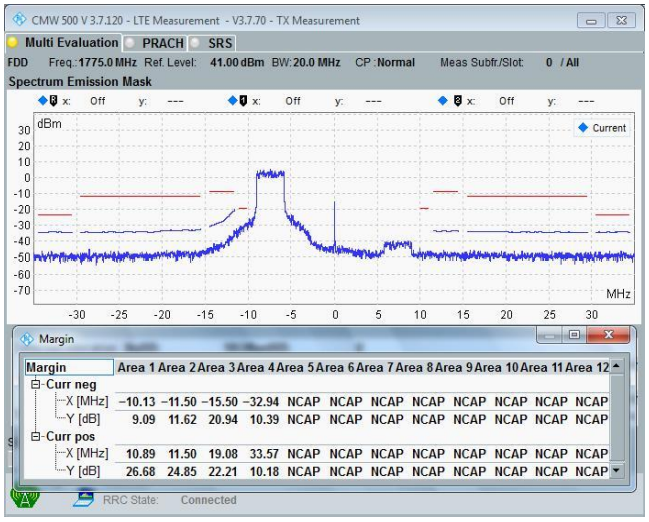
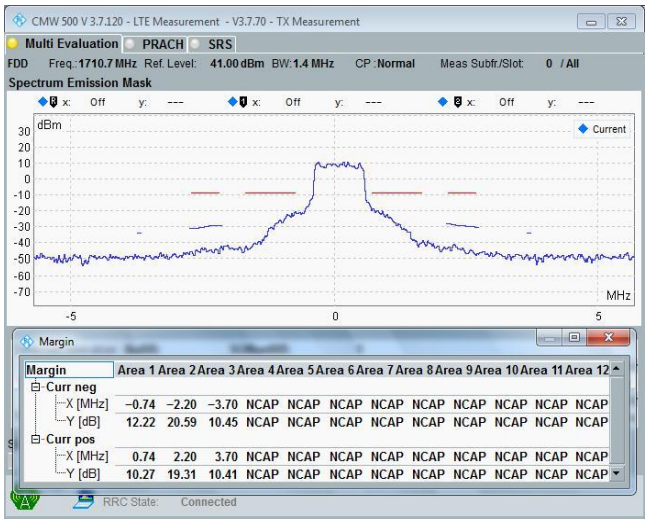


16-QAM 20MHz CH19850 18RB#0

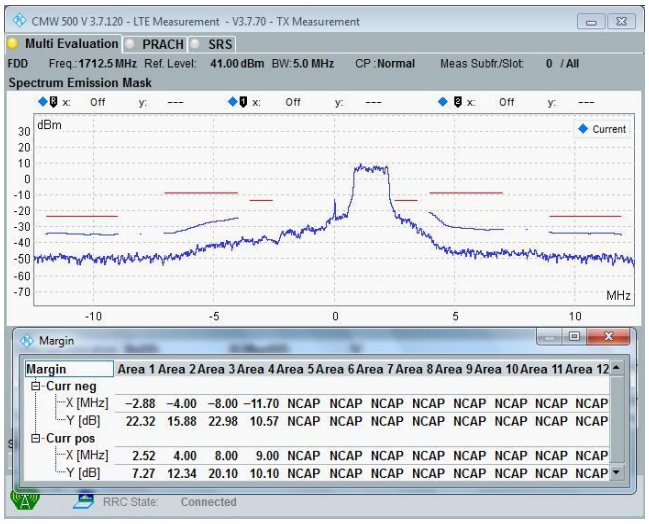


Band 3 (1800MHz)-Partial RB(#Max+1-RB allocation)														
Modu-laton	Test CH	CH	ΔF_OOB (MHz)	RB No.	RB Offset	MHz / Margin(dB)								
						±0 to 1	±1 to 2.5	±2.5 to 2.8	±2.8 to 5	±5 to 6	±6 to 10	±10 to 15	±15 to 20	±20 to 25
QPSK	LOW	19207	1.4MHz	5	1	10.27	19.31	10.41	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	8	17	7.27	12.34			20.10	10.10	N/A	N/A	N/A
		19250	10MHz	12	38	8.01	14.16			18.20		9.62	N/A	N/A
		19300	20MHz	18	82	12.06	14.28			21.38				10.40
	MID	19575	1.4MHz	5	1	11.30	19.24	9.63	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	8	17	8.66	14.15			22.48	10.43	N/A	N/A	N/A
			10MHz	12	38	12.17	16.29			16.02		9.74	N/A	N/A
			20MHz	18	82	12.67	14.93			16.65				10.58
	HIGH	19943	1.4MHz	5	1	8.00	19.19	9.96	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	8	17	7.13	12.82			22.05	10.05	N/A	N/A	N/A
		19900	10MHz	12	38	4.57	10.33			16.89		9.69	N/A	N/A
		19850	20MHz	18	82	9.67	13.57			18.37				10.53
16-QAM	LOW	19207	1.4MHz	5	1	11.51	19.74	10.36	N/A	N/A	N/A	N/A	N/A	N/A
		19225	5MHz	8	17	11.97	15.05			21.05	10.09	N/A	N/A	N/A
		19250	10MHz	12	38	8.32	14.43			18.87		9.82	N/A	N/A
		19300	20MHz	18	82	11.88	16.01			21.84				10.51
	MID	19575	1.4MHz	5	1	11.63	20.34	10.21	N/A	N/A	N/A	N/A	N/A	N/A
			5MHz	8	17	10.20	15.43			22.17	10.06	N/A	N/A	N/A
			10MHz	12	38	12.85	16.82			17.33		9.87	N/A	N/A
			20MHz	18	82	13.01	16.60			17.94				10.59
	HIGH	19943	1.4MHz	5	1	8.90	19.56	10.36	N/A	N/A	N/A	N/A	N/A	N/A
		19925	5MHz	8	17	10.32	13.69			22.32	10.14	N/A	N/A	N/A
		19900	10MHz	12	38	7.33	12.52			18.65		9.86	N/A	N/A
		19850	20MHz	18	82	10.21	15.09			20.00				10.39

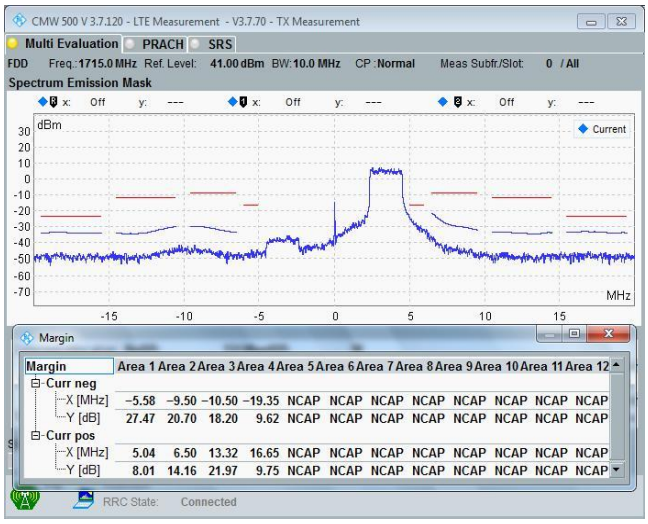
QPSK 1.4MHz CH19207 5RB#1



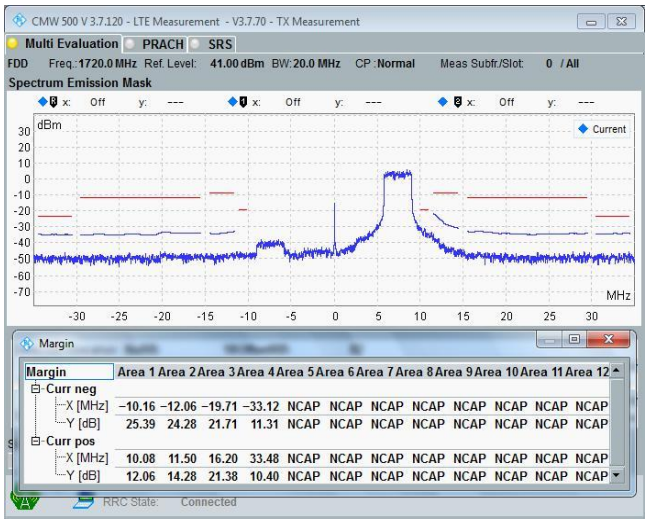
QPSK 5MHz CH19225 8RB#17



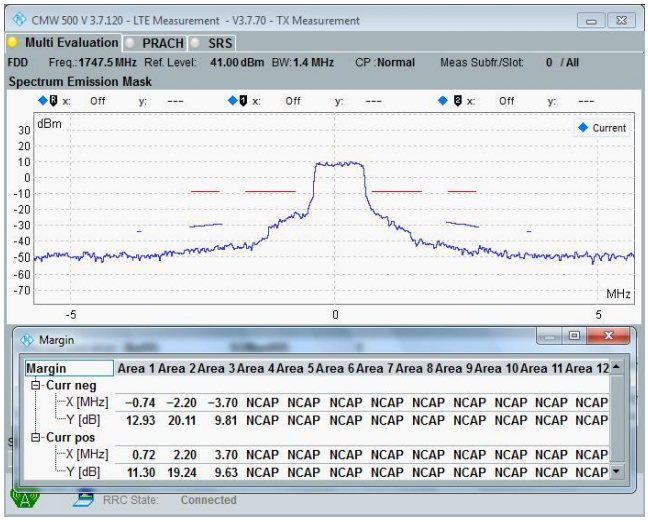
QPSK 10MHz CH19250 12RB#38



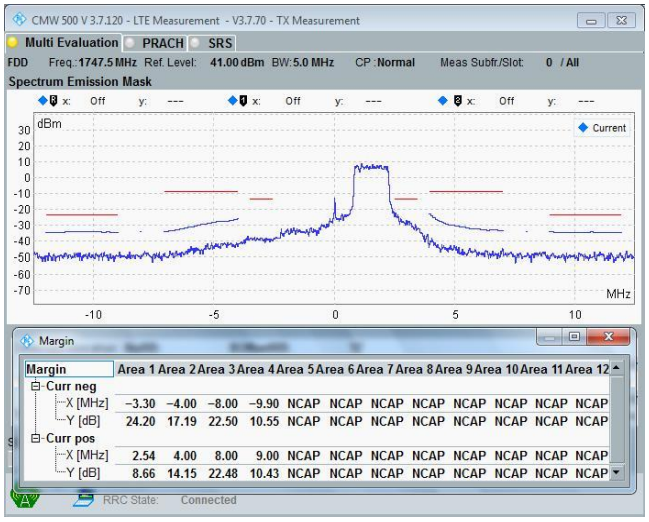
QPSK 20MHz CH19300 18RB#82



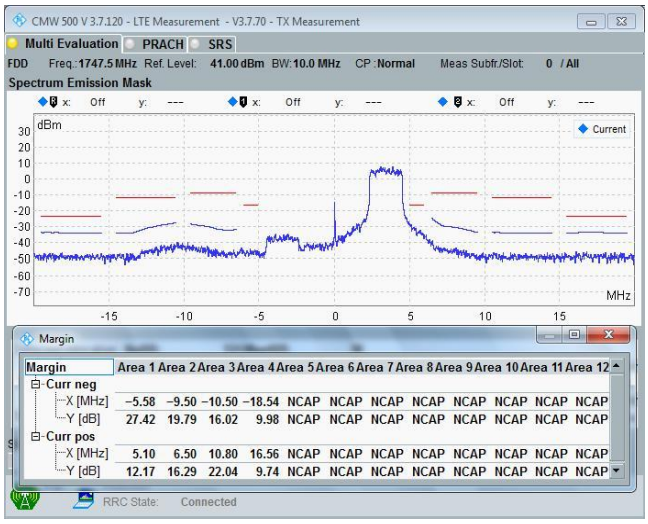
QPSK 1.4MHz CH19575 5RB#1



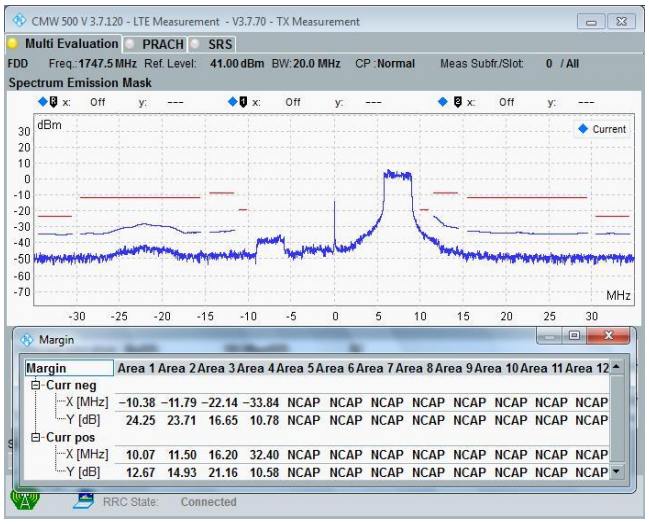
QPSK 5MHz CH19575 8RB#17



QPSK 10MHz CH19575 12RB#38



QPSK 20MHz CH19575 18RB#82



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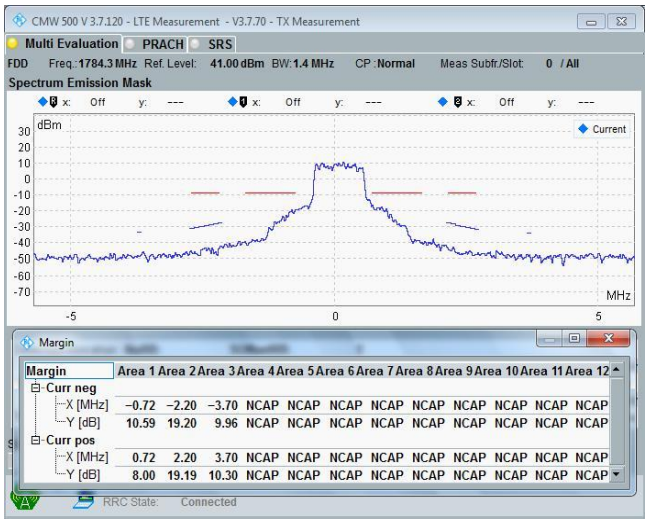

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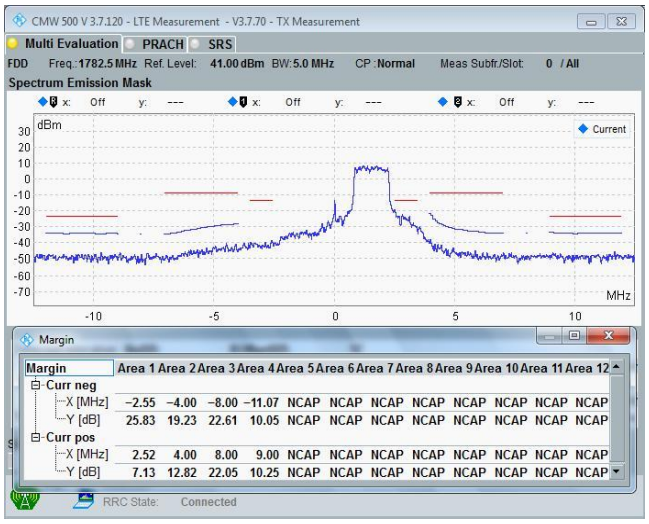

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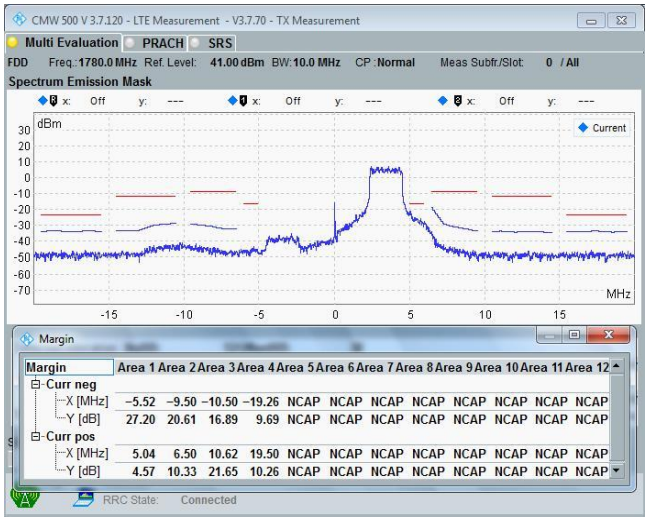
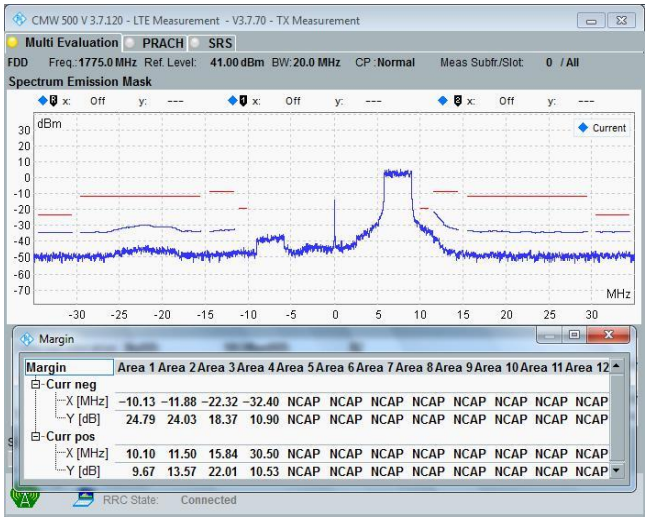
QPSK 20MHz CH19850 18RB#82