

NCC

行動通信電信終端設備技術規範試驗報告

產品名稱 : Mobile Computing Device
型號 : G47
廠牌 : ARBOR
商標 : 
申請者 : 磐儀科技股份有限公司
申請者地址 : 235 新北市中和區中正路 700 號 10 樓
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 : 2021/6/8
測試日期 : 2021/6/12~2021/8/30

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修訂紀錄

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1. 一般資訊

申請者	磐儀科技股份有限公司
申請者地址	235 新北市中和區中正路 700 號 10 樓
製造商	磐儀科技股份有限公司
製造商地址	235 新北市中和區中正路 700 號 10 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 Firm. 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	Mobile Computing Device
產品型號	G47
廠牌	ARBOR
商標	
支援規格	WPAN: Bluetooth Dual Mode: V4.2 NFC 13.56MHz WLAN: 2.4G: 802.11b/g/n-20/n-40 5G: 802.11a/n-20/ac-20/n-40/ac-40/ac-80, Band 1,4 WWAN: 3G: Band 1, 8 4G: Band 1 ,3,7,8,28,38,41
IMEI 碼	355480071759786
天線樣式	FPCB
天線規格	Brand: HSIEN JINN INDUSTRY M/N: KO-EM-2700-F-022 Gain: Band1: -1.77dBi, Band3: -1.67dBi, Band7: -2.31dBi, Band8: -1.00dBi, Band28: -0.50dBi, Band38: -2.31dBi, Band41: -2.31dBi
TX Frequency	Band1: 1920~1980MHz; Band3: 1710~1785MHz; Band7: 2500~2570MHz; Band8: 885~915MHz, Band28: 703MHz~748MHz Band38: 2570~2620MHz; Band41: 2555~2655MHz
Rx Frequency	Band1: 2110~2170MHz; Band3: 1805~1880MHz; Band7: 2620~2690MHz; Band8:930~960MHz, Band28: 758MHz~803MHz Band38: 2570~2620MHz; Band41: 2555~2655MHz
是否有照相功能	☒ 有 (聲響 : 有 ☒ ; 無 ☐) ☐ 無
配件	
Type-C USB Cable	Brand: 華億東 Model No: 3432122000890M Length: 2.0m (Shielded)

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 18100); 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)
Band7 Channel	5M/2502.5MHz(CH 20775);2535MHz(CH 21100);2567.5MHz(CH 21425) 10M/2505MHz(CH 20800); 2535MHz(CH 21100);2565MHz(CH 21400) 15M/2507.5MHz(CH 20825); 2535MHz(CH 21100);2562.5MHz(CH 21375) 20M/2510MHz(CH 20850); 2535MHz(CH 21100);2560MHz(CH 21350)
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)
Band41 Channel	5M/2557.5MHz(CH 40265);2605MHz(CH 40740);2652.5MHz(CH 41215) 10M/2560MHz(CH 40290); 2605MHz(CH 40740); 2650MHz(CH 41190) 15M/2562.5MHz(CH 40315); 2605MHz(CH 40740); 2647.5MHz(CH 41165) 20M/2565MHz(CH 40340); 2605MHz(CH 40740); 2645MHz(CH 41140)

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
Active 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	2021/9/8
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% ($U=2U_c(y)$): 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 Mobile Computing Device
型號 G47

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/cm ²)； 900 MHz 頻段為 0.45 mW/cm ² ； 1800 MHz 頻段為 0.9 mW/cm ² ； 2100 MHz、2500 MHz 與2600 MHz頻段為1.0 mW/cm ² 。 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。	N/A	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：

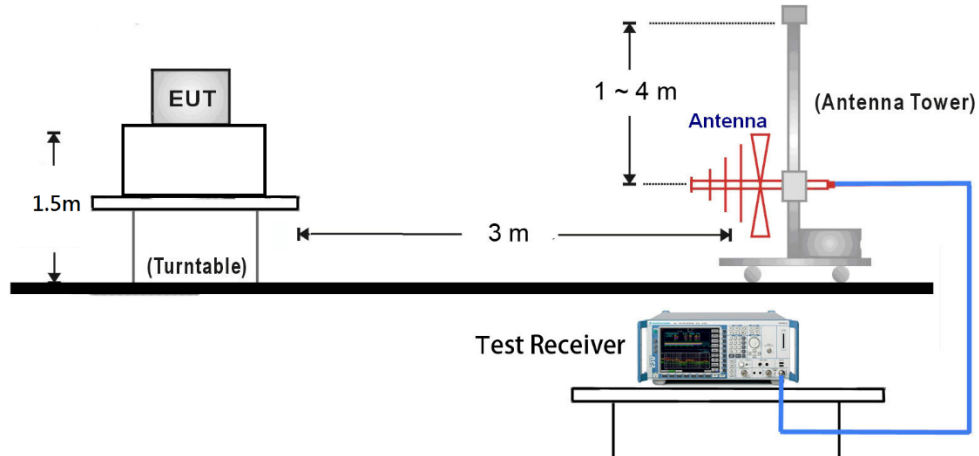
- a. 量測發射功率時，必須使用均方根值等效電壓之儀器量測於任何連續傳輸時段，量測結果須依儀器之反應時間、解析頻寬能力及靈敏度等調整得出正確之發射功率。對每一測量頻率調整儀器足夠之頻率掃描範圍以檢測所欲測量之發射。
- b. 在 1 到 4 米高度內上升下降水平極化之接收天線，將接收天線置於儀器顯示最高讀值時的高度，然後以 360 度轉動測試桌上的受測物，紀錄顯示在儀器上的最高值，以為參考位準。
- c. 以發射天線(不大於 1GHz 為線諧調之偶極天線，1GHz 以上為號角型天線)取代受測物，並與接收天線之同為水平極化。將偶極天線連接至標準之信號產生器，信號產生器設定至前述步驟所得之頻率以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

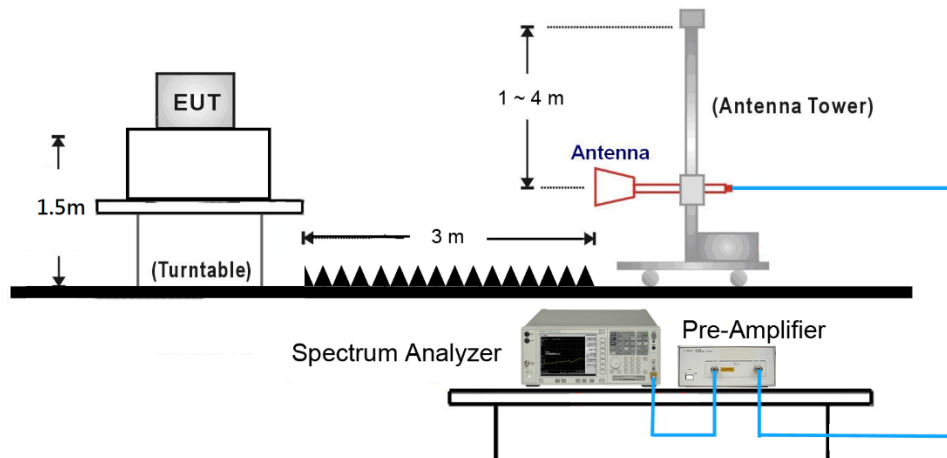
發射機輸出功率的測量藉由模擬基地台調諧頻率至測量頻率並量測其峰值。

5.1.3 實驗方法方塊圖

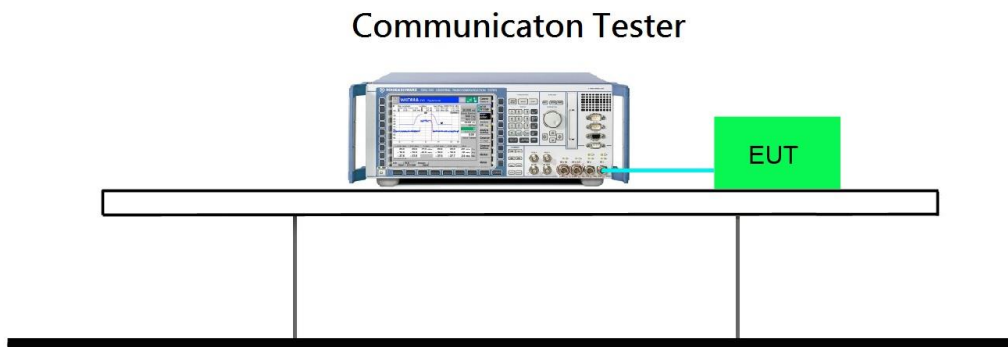
(1) 等效輻射功率 (1G 以下):



(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	22.96	19.8~25.7	-1.77	19.04	30
			8	#0	23.01	19.8~25.7	-1.77	19.09	30
	18300	QPSK	1	#0	22.99	19.8~25.7	-1.77	19.07	30
			8	#0	23.00	19.8~25.7	-1.77	19.08	30
	18575	QPSK	1	#24	22.98	19.8~25.7	-1.77	19.06	30
			8	#17	22.97	19.8~25.7	-1.77	19.05	30
20MHz	18100	QPSK	1	#0	22.98	19.8~25.7	-1.77	19.06	30
			18	#0	22.95	19.8~25.7	-1.77	19.03	30
	18300	QPSK	1	#0	22.95	19.8~25.7	-1.77	19.03	30
			18	#0	22.80	19.8~25.7	-1.77	18.88	30
	18500	QPSK	1	#99	22.57	19.8~25.7	-1.77	18.65	30
			18	#82	22.59	19.8~25.7	-1.77	18.67	30

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

5MHz CH18025 1RB#0

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

Multi EvaluationPRACHSRS

FDD Freq: 1922.5 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	2.03	2.07	1.84	1.87	2.22	2.25	0.27	0.27
EVM Peak [%] /h	4.95	4.97	4.69	4.69	5.74	5.74	0.68	0.67
EVM DMRS [%] /h	1.66	1.71	1.48	1.52	1.89	1.93	0.21	0.21
MErr RMS [%] /h	1.63	1.64	1.47	1.48	1.82	1.83	0.26	0.25
MErr Peak [%] /h	-4.93	-4.94	4.45	4.46	-5.57	-5.55	0.67	0.65
MErr DMRS [%] /h	1.33	1.34	1.16	1.17	1.48	1.52	0.22	0.20
PhErr RMS [%] /h	0.69	0.72	0.64	0.66	0.76	0.80	0.06	0.07
PhErr Peak [%] /h	1.77	1.76	1.74	1.76	-2.42	2.42	0.26	0.27
PhErr DMRS [%] /h	0.57	0.61	0.53	0.55	0.77	0.79	0.08	0.08
IQ Offset [dBc]	-51.11	-48.39	-46.80	-46.80	-46.80	-46.80	0.89	0.89
IQ Gain Imbalance [dB]	---	---	---	---	---	---	---	---
IQ Quadrature Error [°]	---	---	---	---	---	---	---	---
Freq Error [Hz]	0.33	-4.26	-10.23	-10.23	3.65	3.65	0.07	0.07
Timing Error [Ts]	16.23	16.27	16.72	16.72	0.21	0.21	0.01	0.01
OBW [MHz]	0.19	0.21	0.23	0.23	0.01	0.01	0.01	0.01
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.80	22.85	22.76	22.96	0.05			
Peak Power [dBm]	26.93	26.85	26.69	26.99	0.11			
RB Power [dBm]	22.69	22.80	22.69	22.92	0.06			

Statistic Count20 / 20

Out of Tolerance0.00 %

Detected ModulationQPSK

Detected Channel TypePUSCH

View Filter Throughput100.0 %

PS: Attached RRC State: Connected

5MHz CH18025 8RB#0

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

Multi EvaluationPRACHSRS

FDDFreq. 1922.5 MHzRef. Level: 41.00 dBmBW: 5.0 MHzCP: NormalMeas Subtr/Slot: 0 / All

TX Measurement

	Current		Average		Extreme		StdDev	
EVM RMS [%] /h	1.91	1.97	2.03	2.06	2.24	2.29	0.14	0.13
EVM Peak [%] /h	9.00	9.01	10.23	10.22	12.64	12.60	1.60	1.59
EVM DMRS [%] /h	1.47	1.51	1.56	1.57	1.79	1.78	0.07	0.08
MErr RMS [%] /h	1.46	1.48	1.59	1.60	1.81	1.82	0.15	0.15
MErr Peak [%] /h	-9.00	-9.00	10.03	10.02	-12.28	-12.28	1.45	1.44
MErr DMRS [%] /h	1.15	1.21	1.19	1.20	1.36	1.41	0.06	0.06
PhErr RMS [%] /h	0.70	0.75	0.73	0.75	0.79	0.82	0.03	0.03
PhErr Peak [%] /h	-3.60	-3.55	2.78	3.04	-4.30	-4.04	0.40	0.46
PhErr DMRS [%] /h	0.52	0.52	0.58	0.58	0.72	0.71	0.05	0.05
IQ Offset [dBc]	-48.29	-47.14	-44.62	-44.62	1.34	1.34	0.04	0.04
IQ Gain Imbalance [dB]	-----	-----	-----	-----	-----	-----	-----	-----
IQ Quadrature Error [°]	-----	-----	-----	-----	-----	-----	-----	-----
Freq Error [Hz]	-2.07	-5.46	-11.16	-11.16	3.46	3.46	0.07	0.07
Timing Error [Ts]	14.27	14.12	14.44	14.44	0.17	0.17	0.01	0.01
OBW [MHz]	1.41	1.42	1.42	1.42	0.01	0.01	0.01	0.01
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.93	22.91	22.84	23.01	0.04			
Peak Power [dBm]	27.58	27.69	27.50	27.88	0.13			
RB Power [dBm]	13.92	13.89	13.83	13.98	0.04			

Statistic Count20 / 20Out of Tolerance0.00 %Detected ModulationQPSKDetected Channel TypePUSCHView FilterThroughput100.0 %

PS:AttachedRRC State:Connected

5MHz CH18300 1RB#0

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

Multi EvaluationPRACHSRS

FDDFreq: 1950.0 MHzRef. Level: 41.00 dBmBW: 5.0 MHzCP: NormalMeas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Min	Max	StdDev			
EVM RMS [%] /h	3.59	3.59	3.33	3.36	3.68	3.67	0.20	0.17
EVM Peak [%] /h	10.29	10.28	8.70	8.74	10.36	10.42	1.28	1.27
EVM DMRS [%] /h	2.44	2.45	1.95	1.95	2.60	2.62	0.34	0.34
MErr RMS [%] /h	3.25	3.25	2.99	3.01	3.27	3.26	0.17	0.15
MErr Peak [%] /h	-10.23	-10.22	8.43	8.46	-10.23	-10.24	1.46	1.46
MErr DMRS [%] /h	1.78	1.79	1.44	1.42	1.93	1.94	0.33	0.32
PhErr RMS [%] /h	0.88	0.88	0.85	0.86	1.00	0.99	0.07	0.06
PhErr Peak [%] /h	-2.42	-2.41	2.38	2.38	-3.52	-3.52	0.33	0.30
PhErr DMRS [%] /h	0.95	0.95	0.75	0.76	0.99	1.01	0.11	0.11
IQ Offset [dBc]	-49.19	-48.68	-46.92	-46.92	0.90	0.90	0.09	0.09
IQ Gain Imbalance [dB]	-----	-----	-----	-----	-----	-----	-----	-----
IQ Quadrature Error [°]	-----	-----	-----	-----	-----	-----	-----	-----
Freq Error [Hz]	-5.41	-5.32	-15.71	-15.71	3.46	3.46	0.09	0.09
Timing Error [Ts]	1.81	-0.08	-2.48	-2.48	1.28	1.28	0.01	0.01
OBW [MHz]	0.31	0.30	0.31	0.31	0.02	0.02	0.01	0.01
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.82	22.84	22.68	22.99	0.09			
Peak Power [dBm]	26.34	26.23	26.10	26.34	0.09			
RB Power [dBm]	22.82	22.79	22.68	22.91	0.05			

Statistic Count20 / 20Out of Tolerance0.00 %Detected ModulationQPSKDetected Channel TypePUSCHView Filter Throughput100.0 %

PS:AttachedRRC State:Connected

5MHz CH18300 8RB#0

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

Multi EvaluationPRACHSRS

FDDFreq. 1950.0 MHzRef. Level: 41.00 dBmBW: 5.0 MHzCP: NormalMeas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Min	Max	StdDev
EVM RMS [%] /h	3.19	3.19	3.02	3.04	3.22
EVM Peak [%] /h	14.08	14.11	13.23	13.32	14.49
EVM DMRS [%] /h	2.66	2.66	2.41	2.46	2.66
MErr RMS [%] /h	2.74	2.75	2.58	2.60	2.78
MErr Peak [%] /h	-13.86	-13.90	13.07	13.03	-14.36
MErr DMRS [%] /h	1.48	1.50	1.45	1.48	1.61
PhErr RMS [%] /h	0.94	0.93	0.90	0.91	0.98
PhErr Peak [%] /h	-4.17	-4.15	4.31	4.45	-5.55
PhErr DMRS [%] /h	1.27	1.26	1.11	1.13	1.31
IQ Offset [dBc]	-48.39	-47.37	-44.80	-44.80	1.51
IQ Gain Imbalance [dB]	---	---	---	---	---
IQ Quadrature Error [°]	---	---	---	---	---
Freq Error [Hz]	-4.94	-4.15	-15.38	-15.38	3.46
Timing Error [Ts]	0.82	0.68	0.96	0.96	0.19
OBW [MHz]	1.41	1.41	1.41	1.41	0.00
	Current	Average	Min	Max	StdDev
TX Power [dBm]	22.97	22.93	22.82	23.00	0.05
Peak Power [dBm]	26.94	26.92	26.86	27.00	0.03
RB Power [dBm]	13.95	13.90	13.79	13.97	0.05

Statistic Count20 / 20Out of Tolerance0.00 %Detected ModulationQPSKDetected Channel TypePUSCHView Filter Throughput100.0 %

PS: Attached RRC State: Connected

5MHz CH18575 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement											
Multi Evaluation PRACH SRS											
FDD	1922.5 MHz	Ref. Level: 41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subtr/Slot: 0 / All						
TX Measurement											
	Current			Average		Max		StdDev			
EVM RMS [%] /h	1.35	1.37	1.28	1.36	1.55	1.58	0.14	0.11			
EVM Peak [%] /h	3.66	3.79	3.14	3.58	4.99	5.00	0.64	0.53			
EVM DMRS [%] /h	1.51	1.58	1.36	1.40	1.66	1.73	0.16	0.19			
MErr RMS [%] /h	0.85	0.95	0.77	0.90	0.92	1.05	0.09	0.06			
MErr Peak [%] /h	-2.68	-3.78	2.20	3.24	-3.04	-4.43	0.49	0.67			
PhErr DMRS [%] /h	1.19	1.25	1.03	1.07	1.30	1.38	0.15	0.16			
PhErr RMS [%] /h	0.60	0.57	0.59	0.59	0.73	0.73	0.06	0.06			
PhErr Peak [%] /h	2.06	2.01	1.66	1.68	2.65	2.56	0.37	0.36			
PhErr DMRS [%] /h	0.53	0.56	0.50	0.51	0.66	0.72	0.07	0.09			
IQ Offset [dBc]	-48.65			-47.64		-46.38				0.67	
IQ Gain Imbalance [dB]	-----			-----		-----				-----	
IQ Quadrature Error [°]	-----			-----		-----				-----	
Freq Error [Hz]	2.27			-6.92		-19.11				4.99	
Timing Error [Ts]	16.80			16.43		16.94				0.23	
OBW [MHz]	0.36			0.32		0.36				0.04	
	Current			Average	Min	Max			StdDev		
TX Power [dBm]	22.96			22.88	22.76	22.98			0.05		
Peak Power [dBm]	27.57			27.38	27.17	27.59			0.17		
RB Power [dBm]	22.87			22.84	22.74	22.92			0.04		
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 CH18100 1RB#0

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

Multi EvaluationPRACHSRS

FDD Freq: 1930.0 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	1.66	1.66	2.01	2.02	2.36	2.35	0.28	0.27
EVM Peak [%] /h	5.08	5.17	5.97	6.25	7.40	7.86	0.65	0.91
EVM DMRS [%] /h	1.17	1.08	1.57	1.54	2.03	2.00	0.28	0.27
MErr RMS [%] /h	1.36	1.37	1.64	1.66	1.97	1.98	0.26	0.26
MErr Peak [%] /h	-4.93	-5.03	5.61	5.91	-6.64	-7.27	0.59	0.88
MErr DMRS [%] /h	0.96	0.79	1.13	1.09	1.51	1.47	0.26	0.26
PhErr RMS [%] /h	0.55	0.54	0.67	0.66	0.82	0.79	0.08	0.07
PhErr Peak [%] /h	-1.43	-1.27	1.72	1.72	-2.56	-2.52	0.30	0.31
PhErr DMRS [%] /h	0.38	0.42	0.62	0.62	0.87	0.86	0.12	0.11
IQ Offset [dBc]	-45.43	-45.66	-44.52	0.58				
IQ Gain Imbalance [dB]								
IQ Quadrature Error [°]								
Freq Error [Hz]	-10.09	-7.10	-16.62	4.98				
Timing Error [Ts]	6.91	6.83	7.46	0.25				
OBW [MHz]	0.36	0.39	0.43	0.04				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.85	22.84	22.74	22.98	0.05			
Peak Power [dBm]	27.00	27.13	26.97	27.27	0.11			
RB Power [dBm]	22.74	22.74	22.66	22.87	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

20MHz CH18100 18RB#0

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

Multi EvaluationPRACHSRS

FDD Freq: 1930.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Latency	StdDev				
EVM RMS [%] /h	1.69	1.73	1.74	1.76	1.90	1.90	0.09	0.08
EVM Peak [%] /h	7.71	7.72	9.18	9.17	11.52	11.50	1.70	1.69
EVM DMRS [%] /h	1.49	1.50	1.43	1.42	1.59	1.60	0.09	0.09
MErr RMS [%] /h	1.14	1.17	1.23	1.24	1.36	1.36	0.08	0.07
MErr Peak [%] /h	-7.71	-7.72	8.90	8.90	-10.90	-10.90	1.56	1.56
MErr DMRS [%] /h	0.98	1.00	0.97	0.97	1.05	1.08	0.06	0.07
PhErr RMS [%] /h	0.72	0.73	0.71	0.72	0.76	0.76	0.03	0.03
PhErr Peak [%] /h	2.29	-3.62	2.80	3.07	-3.73	-3.62	0.42	0.35
PhErr DMRS [%] /h	0.64	0.65	0.60	0.59	0.71	0.72	0.05	0.04
IQ Offset [dBc]	-46.31	-45.87	-45.07	0.48				
IQ Gain Imbalance [dB]	-----	-----	-----	-----				
IQ Quadrature Error [°]	-----	-----	-----	-----				
Freq Error [Hz]	-13.75	-8.68	-16.42	5.34				
Timing Error [Ts]	7.61	6.94	7.61	0.59				
OBW [MHz]	3.18	3.19	3.19	0.01				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.86	22.86	22.82	22.95	0.03			
Peak Power [dBm]	27.87	27.96	27.84	28.09	0.09			
RB Power [dBm]	10.32	10.32	10.28	10.41	0.03			

Statistic Count20 / 20Out of Tolerance0.00 %Detected ModulationQPSKDetected Channel TypePUSCHView FilterThroughput100.0 %

PS: Attached RRC State: Connected

20MHz CH18300 1RB#0

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

Multi EvaluationPRACHSRS

FDDFreq. 1950.0 MHzRef. Level: 41.00 dBmBW: 20.0 MHzCP: NormalMeas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Latency	StdDev				
EVM RMS [%] /h	4.82	4.82	4.44	4.43	4.94	4.93	0.43	0.43
EVM Peak [%] /h	19.24	19.26	14.43	14.44	19.60	19.66	4.67	4.68
EVM DMRS [%] /h	3.17	3.18	3.08	3.08	3.44	3.41	0.15	0.15
MErr RMS [%] /h	3.67	3.66	3.48	3.47	3.77	3.76	0.22	0.21
MErr Peak [%] /h	-15.29	-15.28	11.97	11.97	-16.38	-16.41	3.14	3.14
MErr DMRS [%] /h	2.13	2.16	1.90	1.93	2.22	2.22	0.18	0.17
PhErr RMS [%] /h	1.86	1.86	1.62	1.62	1.93	1.94	0.27	0.28
PhErr Peak [%] /h	-9.06	-9.06	6.47	6.46	-9.73	-9.71	2.55	2.55
PhErr DMRS [%] /h	1.34	1.33	1.38	1.37	1.56	1.51	0.09	0.08
IQ Offset [dBc]	-45.68	-45.87	-44.82	0.60				
IQ Gain Imbalance [dB]								
IQ Quadrature Error [°]								
Freq Error [Hz]	-13.96	-7.70	-16.61	5.04				
Timing Error [Ts]	3.22	3.20	3.66	0.21				
OBW [MHz]	0.23	0.20	0.23	0.02				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.86	22.89	22.77	22.95	0.05			
Peak Power [dBm]	26.27	26.11	25.94	26.28	0.13			
RB Power [dBm]	22.80	22.82	22.72	22.87	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 CH18300 18RB#0

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

Multi EvaluationPRACHSRS

FDDFreq. 1950.0 MHzRef. Level: 41.00 dBmBW: 20.0 MHzCP: NormalMeas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	Latency	StdDev				
EVM RMS [%] /h	4.39	4.38	4.22	4.22	4.43	4.43	0.15	0.15
EVM Peak [%] /h	20.11	20.02	19.22	19.21	20.75	20.88	0.90	0.89
EVM DMRS [%] /h	2.78	2.80	2.77	2.79	2.87	2.88	0.07	0.06
MErr RMS [%] /h	3.81	3.81	3.63	3.63	3.85	3.85	0.17	0.16
MErr Peak [%] /h	-20.06	-19.96	19.16	19.12	-20.44	-20.38	0.86	0.82
MErr DMRS [%] /h	2.25	2.27	2.22	2.25	2.33	2.35	0.06	0.06
PhErr RMS [%] /h	1.25	1.25	1.24	1.24	1.29	1.29	0.03	0.03
PhErr Peak [%] /h	-5.04	-5.05	5.79	5.79	-6.79	-6.80	0.44	0.43
PhErr DMRS [%] /h	0.94	0.94	0.94	0.95	1.01	1.01	0.03	0.03
IQ Offset [dBc]	-44.05	-45.02	-44.05	-44.05	-44.05	-44.05	0.64	0.64
IQ Gain Imbalance [dB]	---	---	---	---	---	---	---	---
IQ Quadrature Error [°]	---	---	---	---	---	---	---	---
Freq Error [Hz]	-9.46	-5.39	-13.29	-13.29	-9.46	-9.46	4.95	4.95
Timing Error [Ts]	3.36	3.89	5.27	5.27	3.36	3.36	0.89	0.89
OBW [MHz]	3.19	3.19	3.19	3.19	3.19	3.19	0.00	0.00
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	22.77	22.75	22.69	22.80	0.04			
Peak Power [dBm]	26.27	26.19	26.11	26.27	0.05			
RB Power [dBm]	10.21	10.19	10.13	10.26	0.04			

Statistic Count20 / 20Out of Tolerance0.00 %Detected ModulationQPSKDetected Channel TypePUSCHView FilterThroughput100.0 %

PS: Attached RRC State: Connected

20MHz CH18500 1RB#99

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement									
Multi Evaluation PRACH SRS									
FDD	Freq: 1970.0 MHz	Ref. Level: 41.00 dBm	BW: 20.0 MHz	CP: Normal	Meas Subtr/Slot: 0 / All				
TX Measurement									
	Current		Average		Latency		StdDev		
EVM RMS [%] /h	3.00	3.00	2.83	2.82	3.01	3.00	0.10	0.10	
EVM Peak [%] /h	11.73	11.68	10.47	10.45	11.73	11.68	0.65	0.66	
EVM DMRS [%] /h	2.03	2.03	2.12	2.11	2.38	2.40	0.16	0.17	
MErr RMS [%] /h	2.45	2.44	2.34	2.34	2.48	2.47	0.08	0.07	
MErr Peak [%] /h	-10.05	-10.11	9.88	9.85	-10.46	-10.42	0.30	0.33	
MErr DMRS [%] /h	1.79	1.76	1.80	1.79	2.12	2.11	0.18	0.18	
PhErr [%] /h	1.01	1.01	0.92	0.92	1.01	1.01	0.06	0.06	
PhErr Peak [%] /h	-4.24	-4.24	3.22	3.22	-4.24	-4.24	0.60	0.59	
PhErr DMRS [%] /h	0.54	0.57	0.65	0.64	0.87	0.87	0.09	0.08	
IQ Offset [dBc]	-43.90		-43.78		-42.41				0.69
IQ Gain Imbalance [dB]	-----		-----		-----				-----
IQ Quadrature Error [°]	-----		-----		-----				-----
Freq Error [Hz]	-14.66		-10.79		-23.20				5.84
Timing Error [Ts]	3.72		3.23		3.88				0.57
OBW [MHz]	0.40		0.30		0.40				0.10
	Current	Average		Min	Max	StdDev			
TX Power [dBm]	22.55	22.51		22.41	22.57	0.04			
Peak Power [dBm]	27.33	27.32		27.24	27.40	0.03			
RB Power [dBm]	22.58	22.54		22.44	22.60	0.04			
Statistic Count Out of Tolerance Detected Modulation Detected Channel Type View Filter Throughout									
20 / 20 0.00 % QPSK PUSCH 100.0 %									
PS: Attached RRC 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	23.08	19.8~25.7	-1.67	19.26	30
	19575	QPSK	1	#0	22.90	19.8~25.7	-1.67	19.08	30
			5	#0	23.13	19.8~25.7	-1.67	19.31	30
	19943	QPSK	1	#0	23.08	19.8~25.7	-1.67	19.26	30
5MHz	19225	QPSK	1	#0	23.08	19.8~25.7	-1.67	19.26	30
			1	#24	23.11	19.8~25.7	-1.67	19.29	30
	19575	QPSK	1	#0	22.98	19.8~25.7	-1.67	19.16	30
			1	#24	23.06	19.8~25.7	-1.67	19.24	30
			8	#0	23.06	19.8~25.7	-1.67	19.24	30
	19925	QPSK	1	#0	23.38	19.8~25.7	-1.67	19.56	30
			1	#24	23.02	19.8~25.7	-1.67	19.20	30
	20MHz	19300	QPSK	1	#0	22.92	19.8~25.7	-1.67	19.10
1				#99	22.83	19.8~25.7	-1.67	19.01	30
19575		QPSK	1	#0	23.06	19.8~25.7	-1.67	19.24	30
			1	#99	23.06	19.8~25.7	-1.67	19.24	30
			18	#0	22.93	19.8~25.7	-1.67	19.11	30
19850		QPSK	1	#0	23.15	19.8~25.7	-1.67	19.33	30
			1	#99	23.07	19.8~25.7	-1.67	19.25	30

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

5MHz CH19575 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement									
Multi Evaluation PRACH SRS									
FDD Freq: 1747.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All									
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	2.16	1.87	1.89	2.20	2.21	0.28	0.27		
EVM Peak [%] /h	5.21	5.19	4.59	5.61	5.64	0.57	0.56		
EVM DMRS [%] /h	1.45	1.50	1.37	1.40	1.74	0.21	0.23		
MErr RMS [%] /h	1.90	1.90	1.57	1.58	1.90	0.31	0.29		
MErr Peak [%] /h	-5.17	-5.14	4.51	4.51	-5.44	0.52	0.52		
MErr DMRS [%] /h	1.21	1.20	1.07	1.08	1.38	0.23	0.22		
PhErr RMS [%] /h	0.59	0.62	0.58	0.59	0.70	0.04	0.04		
PhErr Peak [%] /h	-1.51	1.63	1.55	1.59	-2.44	0.24	0.27		
PhErr DMRS [%] /h	0.46	0.52	0.49	0.51	0.64	0.08	0.09		
IQ Offset [dBc]	-53.04	-51.58	-49.75				0.63		
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]	3.78	-5.39	-14.88				6.19		
Timing Error [Ts]	-2.80	-2.52	-3.21				0.65		
OBW [MHz]	0.19	0.21	0.23				0.01		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	22.98	22.94	22.89	22.98	0.03				
Peak Power [dBm]	27.06	26.94	26.79	27.11	0.13				
RB Power [dBm]	22.88	22.90	22.85	22.94	0.03				
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									

5MHz CH19575 1RB#24

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement									
Multi Evaluation PRACH SRS									
FDD Freq: 1747.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All									
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	1.44	1.45	1.21	1.29	1.44	0.13	0.09		
EVM Peak [%] /h	2.75	4.01	2.71	3.52	4.01	0.41	0.58		
EVM DMRS [%] /h	1.45	1.41	1.31	1.32	1.64	0.16	0.14		
MErr RMS [%] /h	0.95	1.03	0.79	0.91	0.96	0.13	0.07		
MErr Peak [%] /h	-2.51	-3.87	2.26	3.34	-2.94	0.36	0.67		
MErr DMRS [%] /h	1.16	1.18	1.04	1.07	1.36	0.19	0.16		
PhErr RMS [%] /h	0.62	0.59	0.53	0.52	0.62	0.05	0.04		
PhErr Peak [%] /h	1.47	1.55	1.49	1.51	2.29	0.26	0.26		
PhErr DMRS [%] /h	0.50	0.44	0.46	0.44	0.64	0.08	0.07		
IQ Offset [dBc]	-56.64	-56.26	-53.67				1.90		
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]	-7.95	-8.21	-16.74				6.18		
Timing Error [Ts]	-0.06	-0.19	-0.65				0.21		
OBW [MHz]	0.36	0.32	0.36				0.04		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	23.03	22.96	22.83	23.06	0.06				
Peak Power [dBm]	27.59	27.42	27.16	27.66	0.18				
RB Power [dBm]	22.94	22.92	22.82	23.00	0.04				
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									

5MHz CH19575 8RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement									
Multi Evaluation PRACH SRS									
FDD Freq: 1747.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All									
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	2.19	2.22	2.05	2.29	2.32	0.15	0.15		
EVM Peak [%] /h	11.41	11.39	10.04	10.04	12.33	1.59	1.58		
EVM DMRS [%] /h	1.58	1.55	1.53	1.70	1.70	0.07	0.06		
MErr RMS [%] /h	1.81	1.83	1.70	1.71	1.93	0.17	0.16		
MErr Peak [%] /h	-11.36	-11.35	9.93	9.92	-12.30	1.68	1.67		
MErr DMRS [%] /h	1.15	1.15	1.14	1.16	1.25	0.04	0.05		
PhErr RMS [%] /h	0.70	0.72	0.66	0.69	0.72	0.03	0.02		
PhErr Peak [%] /h	2.25	2.57	2.31	2.82	-2.97	0.27	0.49		
PhErr DMRS [%] /h	0.62	0.60	0.58	0.69	0.66	0.05	0.04		
IQ Offset [dBc]	-49.25	-51.41	-48.87				1.96		
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]	1.85	-5.09	-13.93				4.56		
Timing Error [Ts]	-3.50	-3.35	-3.57				0.13		
OBW [MHz]	1.42	1.42	1.42				0.01		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	22.96	22.98	22.91	23.06	0.04				
Peak Power [dBm]	27.86	27.73	27.54	27.92	0.13				
RB Power [dBm]	13.92	13.96	13.90	14.05	0.04				
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									

5MHz CH19925 1RB#0

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All									
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	3.79	3.78	3.81	3.82	4.11	0.17	0.16		
EVM Peak [%] /h	9.91	9.95	9.32	9.38	11.18	1.09	1.08		
EVM DMRS [%] /h	2.44	2.46	2.22	2.22	2.79	0.33	0.33		
MErr RMS [%] /h	3.17	3.17	3.22	3.22	3.46	0.12	0.11		
MErr Peak [%] /h	-9.62	-9.62	8.52	8.54	-10.45	1.50	1.50		
MErr DMRS [%] /h	1.59	1.60	1.42	1.39	1.91	0.32	0.31		
PhErr RMS [%] /h	1.19	1.19	1.18	1.18	1.35	0.09	0.08		
PhErr Peak [%] /h	-2.78	-2.80	3.16	3.17	-4.26	0.38	0.38		
PhErr DMRS [%] /h	1.06	1.07	0.97	0.99	1.16	0.11	0.11		
IQ Offset [dBc]	-51.10	-51.92	-50.46				0.96		
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]	-5.97	-3.73	-12.23				5.71		
Timing Error [Ts]	5.57	5.59	5.99				0.20		
OBW [MHz]	0.31	0.31	0.31				0.01		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	23.07	23.23	23.06	23.38	0.10				
Peak Power [dBm]	26.73	26.65	26.49	26.79	0.10				
RB Power [dBm]	23.07	23.18	23.06	23.29	0.06				
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									

5MHz CH19925 1RB#24

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All									
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	4.07	4.11	4.29	4.30	4.58	0.23	0.21		
EVM Peak [%] /h	9.03	9.17	10.71	10.71	12.61	1.60	1.47		
EVM DMRS [%] /h	2.18	2.21	2.51	2.56	3.00	0.34	0.38		
MErr RMS [%] /h	3.69	3.73	3.90	3.92	4.18	0.19	0.17		
MErr Peak [%] /h	-8.83	-8.99	10.59	10.60	-12.61	1.70	1.57		
MErr DMRS [%] /h	1.37	1.37	1.69	1.72	2.29	0.30	0.35		
PhErr RMS [%] /h	1.00	1.00	1.03	1.02	1.16	0.07	0.07		
PhErr Peak [%] /h	-2.54	2.65	3.16	3.05	-4.06	0.38	0.44		
PhErr DMRS [%] /h	0.97	0.99	1.06	1.08	1.25	0.12	0.12		
IQ Offset [dBc]	-52.77	-52.82	-51.21				0.99		
IQ Gain Imbalance [dB]									
IQ Quadrature Error [°]									
Freq Error [Hz]	-8.87	-4.58	-14.62				5.45		
Timing Error [Ts]	3.11	4.18	7.48				1.66		
OBW [MHz]	0.30	0.33	0.36				0.03		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	22.97	22.89	22.77	23.02	0.09				
Peak Power [dBm]	25.88	25.95	25.86	26.05	0.05				
RB Power [dBm]	22.88	22.85	22.77	22.93	0.05				
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 CH19300 1RB#0

CMW 500 V 3.712

20MHz CH19300 1RB#99

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAverage	StdDev						
EVM RMS [%] /h	2.16	2.18	2.17	2.18	2.34	2.35	0.08	0.08		
EVM Peak [%] /h	7.23	7.30	7.28	7.29	8.20	8.27	0.60	0.61		
EVM DMRS [%] /h	2.23	2.43	1.96	2.00	2.23	2.43	0.13	0.17		
MErr RMS [%] /h	1.67	1.66	1.67	1.67	1.80	1.79	0.06	0.06		
MErr Peak [%] /h	-7.17	-7.11	6.90	6.87	-7.65	-7.59	0.42	0.45		
MErr DMRS [%] /h	1.88	2.08	1.66	1.71	1.88	2.08	0.12	0.16		
PhErr RMS [%] /h	0.79	0.81	0.80	0.80	0.86	0.88	0.04	0.04		
PhErr Peak [%] /h	-2.09	-2.10	2.19	2.16	-3.10	-3.10	0.37	0.33		
PhErr DMRS [%] /h	0.69	0.71	0.60	0.60	0.84	0.83	0.08	0.09		
IQ Offset [dBc]	-49.48	-49.47	-48.34	0.95						
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	1.60	-6.15	-14.98	5.38						
Timing Error [Ts]	3.01	4.16	5.27	0.96						
OBW [MHz]	0.42	0.31	0.42	0.11						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	22.78	22.70	22.78	22.83	0.04					
Peak Power [dBm]	28.17	28.10	27.98	28.23	0.06					
RB Power [dBm]	22.80	22.82	22.73	22.87	0.03					
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 CH19575 1RB#0

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAverage	StdDev						
EVM RMS [%] /h	3.37	3.37	3.15	3.16	3.58	3.54	0.34	0.33		
EVM Peak [%] /h	8.84	9.38	8.62	8.93	10.06	10.37	0.62	0.88		
EVM DMRS [%] /h	2.26	2.23	1.99	2.00	2.44	2.43	0.34	0.30		
MErr RMS [%] /h	2.86	2.86	2.61	2.63	2.97	2.99	0.31	0.30		
MErr Peak [%] /h	-8.23	-8.90	7.92	8.26	-8.70	-9.58	0.40	0.71		
MErr DMRS [%] /h	1.55	1.47	1.27	1.27	1.58	1.58	0.23	0.21		
PhErr RMS [%] /h	1.04	1.03	1.02	1.02	1.20	1.21	0.10	0.10		
PhErr Peak [%] /h	-2.25	-2.25	2.57	2.58	-3.11	-3.24	0.31	0.34		
PhErr DMRS [%] /h	0.94	0.95	0.88	0.89	1.08	1.10	0.15	0.13		
IQ Offset [dBc]	-49.20	-49.19	-47.43	0.77						
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-3.15	-5.75	-15.44	4.68						
Timing Error [Ts]	5.10	4.76	5.22	0.23						
OBW [MHz]	0.45	0.41	0.45	0.04						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	22.85	22.94	22.78	23.06	0.07					
Peak Power [dBm]	27.03	26.94	26.77	27.09	0.10					
RB Power [dBm]	22.76	22.85	22.69	22.96	0.07					
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 CH19575 1RB#99

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAverage	StdDev						
EVM RMS [%] /h	1.39	1.37	1.31	1.30	1.42	1.43	0.05	0.05		
EVM Peak [%] /h	3.19	2.84	2.91	2.83	3.62	3.44	0.28	0.23		
EVM DMRS [%] /h	1.53	1.52	1.55	1.56	1.86	1.89	0.11	0.11		
MErr RMS [%] /h	0.84	0.85	0.80	0.81	0.85	0.87	0.03	0.03		
MErr Peak [%] /h	-2.36	-2.51	2.20	2.35	-2.78	-2.84	0.22	0.22		
MErr DMRS [%] /h	1.28	1.27	1.27	1.26	1.56	1.57	0.14	0.15		
PhErr RMS [%] /h	0.64	0.62	0.60	0.58	0.67	0.67	0.04	0.03		
PhErr Peak [%] /h	-1.37	-1.32	1.53	1.50	1.99	1.95	0.18	0.19		
PhErr DMRS [%] /h	0.47	0.48	0.51	0.53	0.67	0.68	0.07	0.07		
IQ Offset [dBc]	-50.97	-49.01	-47.32	1.02						
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-7.04	-3.93	-13.63	5.55						
Timing Error [Ts]	5.36	4.44	5.36	0.46						
OBW [MHz]	0.18	0.20	0.23	0.02						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	22.92	22.96	22.84	23.06	0.06					
Peak Power [dBm]	28.08	27.93	27.69	28.15	0.17					
RB Power [dBm]	22.81	22.85	22.74	22.94	0.05					
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 CH19575 18RB#0

CMW 500 V 3.7120 - 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 Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAverage	StdDev						
EVM RMS [%] /h	2.73	2.76	2.77	2.79	2.93	2.93	0.09	0.08		
EVM Peak [%] /h	11.82	11.85	13.42	13.42	15.47	15.46	1.47	1.44		
EVM DMRS [%] /h	1.75	1.75	1.83	1.83	1.98	1.98	0.09	0.09		
MErr RMS [%] /h	2.23	2.25	2.23	2.24	2.37	2.37	0.08	0.08		
MErr Peak [%] /h	-11.39	-11.37	12.92	12.92	-15.11	-15.09	1.62	1.61		
MErr DMRS [%] /h	1.34	1.34	1.37	1.37	1.52	1.51	0.07	0.06		
PhErr RMS [%] /h	0.91	0.92	0.95	0.96	1.01	1.02	0.03	0.03		
PhErr Peak [%] /h	-3.58	-3.58	3.90	3.92	-4.31	-4.33	0.21	0.19		
PhErr DMRS [%] /h	0.64	0.65	0.69	0.69	0.79	0.80	0.04	0.05		
IQ Offset [dBc]	-52.16	-51.12	-49.19	1.30						
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-18.22	-7.02	-18.93	6.47						
Timing Error [Ts]	5.52	5.55	5.86	0.19						
OBW [MHz]	3.18	3.19	3.19	0.01						
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	22.93	22.86	22.76	22.93	0.05					
Peak Power [dBm]	27.24	27.31	27.17	27.45	0.09					
RB Power [dBm]	10.40	10.32	10.22	10.40	0.05					
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 CH19850 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

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

TX Measurement

	Current	Average	LAverage	StdDev
EVM RMS [%] /h	2.94	2.96	2.66	2.67
EVM Peak [%] /h	12.82	12.88	9.59	9.60
EVM DMRS [%] /h	1.78	1.88	1.69	1.71
MErr RMS [%] /h	2.15	2.14	1.97	1.97
MErr Peak [%] /h	-11.90	-11.94	8.70	8.69
MErr DMRS [%] /h	1.37	1.46	1.09	1.12
PhErr RMS [%] /h	1.17	1.19	1.04	1.04
PhErr Peak [%] /h	-5.94	-5.93	4.43	4.43
PhErr DMRS [%] /h	0.65	0.67	0.74	0.74
IQ Offset [dBc]	-52.50	-51.22	-49.97	0.85
IQ Gain Imbalance [dB]				
IQ Quadrature Error [°]				
Freq Error [Hz]	-4.22	-3.62	-16.22	5.92
Timing Error [Ts]	3.55	4.07	5.51	0.84
OBW [MHz]	0.21	0.20	0.21	0.01
	Current	Average	Min	Max
TX Power [dBm]	23.01	23.05	22.96	23.15
Peak Power [dBm]	27.41	27.24	26.96	27.52
RB Power [dBm]	22.96	22.99	22.91	23.07

Statistic Count

Out of Tolerance

Detected Modulation

Detected Channel Type

View Filter Throughout

20 / 200.00 %QPSK

PUSCH100.0 %

PS: Attached RRC State: Connected

Band 7 (2600MHz) FDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP) (dBm)	ERP Limit (dBm)
5MHz	20775	QPSK	1	#0	20.96	19.8~25.7	-2.31	16.50	30
	21100	QPSK	1	#0	21.05	19.8~25.7	-2.31	16.59	30
			8	#0	21.06	19.8~25.7	-2.31	16.60	30
	21425	QPSK	1	#0	21.09	19.8~25.7	-2.31	16.63	30
20MHz	20850	QPSK	1	#0	20.78	19.8~25.7	-2.31	16.32	30
			1	#99	20.71	19.8~25.7	-2.31	16.25	30
	21100	QPSK	1	#0	21.02	19.8~25.7	-2.31	16.56	30
			1	#99	21.17	19.8~25.7	-2.31	16.71	30
			18	#0	21.02	19.8~25.7	-2.31	16.56	30
	21350	QPSK	1	#0	21.12	19.8~25.7	-2.31	16.66	30
			1	#99	21.07	19.8~25.7	-2.31	16.61	30

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

5MHz CH20775 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 2502.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current		Average		LAverage		StdDev			
EVM RMS [%] /h	1.57	1.71	1.83	1.88	2.15	2.09	0.25	0.15		
EVM Peak [%] /h	4.34	4.36	5.26	5.06	7.05	6.63	0.98	0.63		
EVM DMRS [%] /h	1.23	1.06	1.28	1.29	1.48	1.57	0.12	0.16		
MErr RMS [%] /h	1.22	1.39	1.44	1.52	1.74	1.69	0.22	0.10		
MErr Peak [%] /h	-4.07	-4.23	4.88	4.75	-6.44	-5.78	0.83	0.51		
MErr DMRS [%] /h	0.75	0.74	0.91	0.88	1.15	1.18	0.13	0.12		
PhErr RMS [%] /h	0.57	0.57	0.64	0.63	0.76	0.76	0.08	0.07		
PhErr Peak [%] /h	-1.37	1.53	1.85	1.79	-2.52	-2.50	0.27	0.27		
PhErr DMRS [%] /h	0.56	0.43	0.51	0.54	0.67	0.68	0.07	0.08		
IQ Offset [dBc]	-45.16		-45.68		-44.61			0.55		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-19.80			-8.41		-23.75		10.46		
Timing Error [Ts]	-2.08			-1.82		-2.42		0.43		
OBW [MHz]	0.18			0.19		0.21		0.01		
	Current		Average		Min		Max		StdDev	
TX Power [dBm]	20.95		20.90		20.84		20.96		0.04	
Peak Power [dBm]	25.21		25.30		25.16		25.48		0.11	
RB Power [dBm]	20.84		20.81		20.77		20.85		0.03	
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										

5MHz CH21100 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 2535.0 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current		Average		LAverage		StdDev			
EVM RMS [%] /h	2.41	2.51	2.91	2.99	3.49	3.58	0.43	0.43		
EVM Peak [%] /h	6.34	6.37	7.40	7.47	8.86	8.92	0.65	0.68		
EVM DMRS [%] /h	1.92	1.88	2.19	2.28	2.74	2.92	0.24	0.35		
MErr RMS [%] /h	1.84	1.92	2.32	2.36	2.83	2.82	0.42	0.38		
MErr Peak [%] /h	-5.44	-5.36	6.60	6.61	-8.22	-8.29	0.92	0.98		
MErr DMRS [%] /h	1.44	1.31	1.70	1.68	2.06	2.19	0.21	0.26		
PhErr RMS [%] /h	0.90	0.93	1.01	1.06	1.23	1.29	0.10	0.13		
PhErr Peak [%] /h	-3.54	-3.55	3.26	3.35	-4.52	-4.53	0.52	0.45		
PhErr DMRS [%] /h	0.72	0.77	0.79	0.88	1.11	1.23	0.09	0.14		
IQ Offset [dBc]	-49.57		-49.91		-45.97			0.71		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-7.44			-3.65		45.62		8.03		
Timing Error [Ts]	-1.99			-1.61		-3.53		0.28		
OBW [MHz]	0.24			0.24		0.26		0.01		
	Current		Average		Min		Max		StdDev	
TX Power [dBm]	20.92		20.95		20.88		21.05		0.02	
Peak Power [dBm]	24.45		24.51		24.37		24.73		0.07	
RB Power [dBm]	20.94		20.91		20.82		21.04		0.04	
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										

5MHz CH21100 8RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 2535.0 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current		Average		LAverage		StdDev			
EVM RMS [%] /h	3.18	3.30	3.03	3.11	3.29	3.39	0.21	0.24		
EVM Peak [%] /h	16.14	16.11	14.69	14.71	17.78	17.79	2.03	2.01		
EVM DMRS [%] /h	2.14	2.14	2.17	2.30	2.33	2.55	0.06	0.12		
MErr RMS [%] /h	2.48	2.52	2.34	2.37	2.55	2.59	0.19	0.20		
MErr Peak [%] /h	-14.27	-14.35	12.80	12.83	-15.62	-15.69	2.04	2.05		
MErr DMRS [%] /h	1.15	1.12	1.17	1.26	1.28	1.50	0.06	0.13		
PhErr RMS [%] /h	1.15	1.23	1.12	1.16	1.23	1.29	0.07	0.09		
PhErr Peak [%] /h	-5.13	-5.38	5.16	5.20	-6.09	-6.30	0.38	0.43		
PhErr DMRS [%] /h	1.04	1.05	1.05	1.10	1.13	1.21	0.04	0.05		
IQ Offset [dBc]	-49.72		-49.69		-46.86			1.99		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-15.12			-4.73		-21.73		10.03		
Timing Error [Ts]	-2.97			-0.75		-2.97		0.89		
OBW [MHz]	1.41			1.41		1.41		0.00		
	Current		Average		Min		Max		StdDev	
TX Power [dBm]	21.02		21.03		21.01		21.06		0.01	
Peak Power [dBm]	25.33		25.30		25.17		25.43		0.05	
RB Power [dBm]	11.99		12.00		11.98		12.04		0.01	
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										

5MHz CH21425 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 2567.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current		Average		LAverage		StdDev			
EVM RMS [%] /h	2.06	2.26	2.23	2.31	2.49	2.46	0.18	0.09		
EVM Peak [%] /h	5.04	5.20	5.73	5.70	6.78	6.76	0.69	0.71		
EVM DMRS [%] /h	1.27	1.20	1.58	1.66	1.95	2.20	0.17	0.31		
MErr RMS [%] /h	1.63	1.81	1.82	1.88	2.04	2.03	0.17	0.10		
MErr Peak [%] /h	-4.57	-4.75	5.30	5.28	-6.38	-6.32	0.79	0.72		
MErr DMRS [%] /h	1.04	1.02	1.15	1.22	1.45	1.63	0.15	0.22		
PhErr RMS [%] /h	0.72	0.78	0.73	0.77	0.84	0.84	0.05	0.04		
PhErr Peak [%] /h	-1.67	1.86	2.15	2.39	-3.32	-3.33	0.46	0.30		
PhErr DMRS [%] /h	0.42	0.37	0.62	0.65	0.85	0.94	0.09	0.14		
IQ Offset [dBc]	-47.84		-46.72		-44.91			0.95		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	12.99			-4.25		-17.01		8.93		
Timing Error [Ts]	-0.03			-0.36		-0.83		0.23		
OBW [MHz]	0.30			0.33		0.35		0.02		
	Current		Average		Min		Max		StdDev	
TX Power [dBm]	21.06		20.99		20.84		21.09		0.08	
Peak Power [dBm]	24.79		24.91		24.73		25.09		0.14	
RB Power [dBm]	20.97		20.94		20.85		21.00		0.03	
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 CH20850 1RB#0

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 2510.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current			Average			Latency		Jitter	
EVM RMS [%] /h	2.48	2.49	2.33	2.34	2.59	2.59	0.15	0.14		
EVM Peak [%] /h	10.41	10.49	8.87	8.89	10.41	10.49	0.92	0.95		
EVM DMRS [%] /h	1.92	1.95	1.84	1.81	2.19	2.17	0.15	0.14		
MErr RMS [%] /h	1.97	1.96	1.93	1.93	2.05	2.05	0.08	0.07		
MErr Peak [%] /h	-8.60	-8.53	8.14	8.14	-8.84	-8.81	0.42	0.40		
MErr DMRS [%] /h	1.43	1.45	1.36	1.35	1.64	1.61	0.16	0.16		
PhErr RMS [*] /h	0.88	0.89	0.76	0.77	0.93	0.94	0.10	0.10		
PhErr Peak [*] /h	-3.93	-3.95	2.69	2.70	-3.93	-3.95	0.70	0.70		
PhErr DMRS [*] /h	0.73	0.74	0.71	0.69	0.85	0.86	0.07	0.07		
IQ Offset [dBc]	-44.29			-43.74			-42.47		0.73	
IQ Gain Imbalance [dB]	-----			-----			-----		-----	
IQ Quadrature Error [°]	-----			-----			-----		-----	
Freq Error [Hz]	-2.36			-5.81			-18.68		7.47	
Timing Error [Ts]	3.05			2.54			3.34		0.49	
OBW [MHz]	0.19			0.31			0.42		0.11	
	Current			Average			Min	Max	StdDev	
TX Power [dBm]	20.69			20.71			20.63	20.78	0.04	
Peak Power [dBm]	25.78			25.77			25.66	25.87	0.05	
RB Power [dBm]	20.72			20.74			20.67	20.81	0.04	

Statistic Count		Out of Tolerance		Detected Modulation		Detected Channel Type		View Filter Throughout		
20 / 20		0.00 %		QPSK		PUSCH		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	24.03	19.8~25.7	-1.00	20.88	30
	21650	QPSK	1	#0	24.00	19.8~25.7	-1.00	20.85	30
			5	#0	24.15	19.8~25.7	-1.00	21.00	30
	21793	QPSK	1	#0	23.93	19.8~25.7	-1.00	20.78	30
5MHz	21525	QPSK	1	#0	23.96	19.8~25.7	-1.00	20.81	30
			1	#24	23.97	19.8~25.7	-1.00	20.82	30
	21650	QPSK	1	#0	23.90	19.8~25.7	-1.00	20.75	30
			1	#24	23.93	19.8~25.7	-1.00	20.78	30
			8	#0	24.03	19.8~25.7	-1.00	20.88	30
	21775	QPSK	1	#0	24.00	19.8~25.7	-1.00	20.85	30
			1	#24	24.01	19.8~25.7	-1.00	20.86	30
10MHz	21550	QPSK	1	#0	24.06	19.8~25.7	-1.00	20.91	30
			1	#49	24.06	19.8~25.7	-1.00	20.91	30
	21650	QPSK	1	#0	24.02	19.8~25.7	-1.00	20.87	30
			1	#49	24.00	19.8~25.7	-1.00	20.85	30
			12	#0	24.03	19.8~25.7	-1.00	20.88	30
	21750	QPSK	1	#0	24.05	19.8~25.7	-1.00	20.90	30
			1	#49	23.93	19.8~25.7	-1.00	20.78	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 EvaluationPRACHSRS

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

TX Measurement

	Current	Average	LAverage	StdDev							
EVM RMS [%] /h	2.14	2.14	2.00	2.03	2.30	2.29	0.18	0.14			
EVM Peak [%] /h	6.89	6.27	6.34	5.95	7.10	6.77	0.34	0.39			
EVM DMRS [%] /h	1.91	1.81	1.59	1.50	2.04	1.92	0.32	0.32			
MErr RMS [%] /h	1.62	1.55	1.54	1.56	1.76	1.69	0.11	0.05			
MErr Peak [%] /h	-6.72	-5.03	5.74	5.39	-6.82	-6.34	0.68	0.54			
MErr DMRS [%] /h	1.58	1.39	1.36	1.25	1.81	1.67	0.30	0.27			
PhErr RMS [%] /h	0.81	0.85	0.74	0.75	0.88	0.91	0.08	0.10			
PhErr Peak [%] /h	-3.36	-3.57	2.53	2.56	-3.44	-3.64	0.43	0.58			
PhErr DMRS [%] /h	0.60	0.66	0.47	0.47	0.69	0.71	0.09	0.12			
IQ Offset [dBc]	-50.12	-48.48	-46.58							0.91	
IQ Gain Imbalance [dB]											
IQ Quadrature Error [°]											
Freq Error [Hz]	-8.78	-7.32	-11.60							3.60	
Timing Error [Ts]	8.12	8.34	8.68							0.18	
OBW [MHz]	0.19	0.21	0.23							0.01	
	Current	Average	Min	Max	StdDev						
TX Power [dBm]	23.67	23.81	23.63	24.03							0.12
Peak Power [dBm]	28.09	28.07	27.97	28.14							0.05
RB Power [dBm]	23.74	23.81	23.70	23.96							0.06

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

1.4MHz CH21650 1RB#0

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

Multi EvaluationPRACHSRS

FDD Freq: 900.0 MHz Ref. Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Substr/Slot: 0 / All

TX Measurement

	Current	Average	LAverage	StdDev				
EVM RMS [%] /h	4.14	4.14	4.33	4.30	4.64	4.60	0.18	0.16
EVM Peak [%] /h	14.65	14.68	16.23	16.24	18.30	18.29	1.30	1.28
EVM DMRS [%] /h	2.34	2.36	2.13	2.13	2.43	2.42	0.17	0.18
MErr RMS [%] /h	3.17	3.15	3.55	3.53	4.01	3.98	0.36	0.35
MErr Peak [%] /h	-14.20	-14.19	15.95	15.96	-17.71	-17.73	1.30	1.31
MErr DMRS [%] /h	1.79	1.75	1.64	1.60	1.88	1.83	0.13	0.12
PhErr RMS [%] /h	1.56	1.57	1.45	1.44	1.62	1.63	0.12	0.14
PhErr Peak [%] /h	-7.61	-7.62	6.69	6.65	-8.54	-8.55	1.34	1.39
PhErr DMRS [%] /h	0.86	0.90	0.78	0.80	0.93	0.96	0.07	0.09
IQ Offset [dBc]	-47.73	-47.35	-45.61					
IQ Gain Imbalance [dB]								
IQ Quadrature Error [°]								
Freq Error [Hz]	-7.45	-5.65	-11.97					
Timing Error [Ts]	6.30	8.23	10.33					
OBW [MHz]	0.23	0.20	0.23					
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	23.89	23.91	23.83	24.00	0.03			
Peak Power [dBm]	27.63	27.65	27.59	27.76	0.03			
RB Power [dBm]	23.92	23.94	23.85	24.03	0.03			

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

1.4MHz CH21650 5RB#0

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

Multi EvaluationPRACHSRS

FDD Freq: 900.0 MHz Ref. Level: 41.00 dBm BW: 1.4 MHz CP: Normal Meas Substr/Slot: 0 / All

TX Measurement

	Current	Average	LAverage	StdDev						
EVM RMS [%] /h	4.06	4.23	3.68	3.83	4.17	4.35	0.35	0.37		
EVM Peak [%] /h	17.87	17.93	15.97	17.59	19.20	19.25	2.07	0.56		
EVM DMRS [%] /h	2.70	2.71	2.49	2.50	2.74	2.78	0.12	0.13		
MErr RMS [%] /h	3.20	3.34	2.92	3.06	3.30	3.44	0.26	0.26		
MErr Peak [%] /h	-16.53	-16.55	15.14	16.89	-17.70	-18.02	1.66	0.33		
MErr DMRS [%] /h	2.02	2.04	1.81	1.83	2.05	2.07	0.10	0.09		
PhErr RMS [%] /h	1.46	1.51	1.30	1.34	1.49	1.55	0.14	0.16		
PhErr Peak [%] /h	-6.21	-6.39	5.26	5.26	-6.32	-6.50	0.75	0.89		
PhErr DMRS [%] /h	1.03	1.03	0.98	0.97	1.09	1.09	0.06	0.07		
IQ Offset [dBc]	-49.23	-48.67	-45.49							
IQ Gain Imbalance [dB]	----	----	----							
IQ Quadrature Error [°]	----	----	----							
Freq Error [Hz]	-7.51	-5.94	-11.69							
Timing Error [Ts]	9.57	9.42	9.75							
OBW [MHz]	0.87	0.87	0.87							
	Current	Average	Min	Max	StdDev					
TX Power [dBm]	24.03	24.05	23.92	24.15						
Peak Power [dBm]	28.55	28.33	28.07	28.59						
RB Power [dBm]	17.11	17.09	17.00	17.17						

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

1.4MHz CH21793 1RB#0

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

Multi EvaluationPRACHSRS

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

TX Measurement

	Current	Average	LAverage	StdDev								
EVM RMS [%] /h	4.19	4.23	4.02	4.04	4.35	4.39	0.16	0.19				
EVM Peak [%] /h	14.94	14.84	13.72	13.68	15.50	15.39	1.48	1.43				
EVM DMRS [%] /h	2.12	2.14	2.07	2.08	2.23	2.26	0.08	0.08				
MErr RMS [%] /h	3.64	3.71	3.49	3.52	3.72	3.80	0.15	0.20				
MErr Peak [%] /h	-14.91	-14.81	13.24	13.20	-15.47	-15.36	1.94	1.88				
MErr DMRS [%] /h	1.66	1.68	1.49	1.49	1.78	1.79	0.20	0.23				
PhErr RMS [%] /h	1.21	1.18	1.16	1.15	1.31	1.28	0.04	0.03				
PhErr Peak [%] /h	-3.94	-3.76	3.61	3.61	-4.06	-4.12	0.27	0.23				
PhErr DMRS [%] /h	0.75	0.75	0.81	0.83	1.00	1.05	0.12	0.14				
IQ Offset [dBc]	-47.96	-48.28	-46.42									
IQ Gain Imbalance [dB]	---	---	---									
IQ Quadrature Error [°]	---	---	---									
Freq Error [Hz]	-6.59	-5.92	-12.12									
Timing Error [Ts]	9.99	9.99	10.33									
OBW [MHz]	0.18	0.19	0.21									
	Current	Average	Min	Max	StdDev							
TX Power [dBm]	23.89	23.87	23.77	23.93	0.02							
Peak Power [dBm]	27.57	27.49	27.39	27.59	0.05							
RB Power [dBm]	23.89	23.88	23.78	23.94	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 RRC 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	23.92	19.8~25.7	-0.50	21.27	30
			4	#0	23.96	19.8~25.7	-0.50	21.31	30
	27435	QPSK	1	#0	23.71	19.8~25.7	-0.50	21.06	30
			4	#0	23.76	19.8~25.7	-0.50	21.11	30
	27645	QPSK	1	#14	23.83	19.8~25.7	-0.50	21.18	30
			4	#11	23.94	19.8~25.7	-0.50	21.29	30
5MHz	27235	QPSK	1	#0	23.72	19.8~25.7	-0.50	21.07	30
			8	#0	23.85	19.8~25.7	-0.50	21.20	30
	27435	QPSK	1	#0	23.79	19.8~25.7	-0.50	21.14	30
			8	#0	23.71	19.8~25.7	-0.50	21.06	30
	27635	QPSK	1	#24	23.74	19.8~25.7	-0.50	21.09	30
			8	#17	23.82	19.8~25.7	-0.50	21.17	30
20MHz	27310	QPSK	1	#0	23.68	19.8~25.7	-0.50	21.03	30
			18	#0	23.67	19.8~25.7	-0.50	21.02	30
	27435	QPSK	1	#0	23.60	19.8~25.7	-0.50	20.95	30
			18	#0	23.74	19.8~25.7	-0.50	21.09	30
	27560	QPSK	1	#99	23.61	19.8~25.7	-0.50	20.96	30
			18	#82	23.66	19.8~25.7	-0.50	21.01	30

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

5MHz CH27235 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

FDD Freq: 705.5 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	3.74	3.76	4.44	4.45	5.19	5.20	0.70	0.69
EVM Peak [%] /h	9.70	9.66	9.91	9.93	10.53	10.56	0.42	0.43
EVM DMRS [%] /h	2.48	2.41	2.67	2.60	3.06	2.98	0.27	0.25
MErr RMS [%] /h	3.23	3.26	4.03	4.04	4.82	4.82	0.76	0.75
MErr Peak [%] /h	-9.66	-9.63	9.81	9.82	-10.35	-10.37	0.34	0.34
MErr DMRS [%] /h	1.83	1.82	1.94	1.88	2.20	2.09	0.20	0.17
PhErr RMS [%] /h	1.09	1.08	1.07	1.08	1.11	1.13	0.02	0.03
PhErr Peak [%] /h	3.57	3.54	3.35	3.45	3.81	3.78	0.23	0.18
PhErr DMRS [%] /h	0.97	0.91	1.05	1.03	1.25	1.23	0.10	0.11
IQ Offset [dBc]	-50.66		-50.10		-48.64		0.77	
IQ Gain Imbalance [dB]	---		---		---		---	
IQ Quadrature Error [°]	---		---		---		---	
Freq Error [Hz]	-2.57		-4.76		-9.27		2.85	
Timing Error [Ts]	2.97		2.68		3.13		0.24	
OBW [MHz]	0.24		0.23		0.24		0.01	
	Current		Average		Min		Max	StdDev
TX Power [dBm]	23.71		23.68		23.56		23.72	0.04
Peak Power [dBm]	26.56		26.61		26.52		26.70	0.06
RB Power [dBm]	23.71		23.63		23.47		23.73	0.07

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

5MHz CH27235 8RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

FDD Freq: 705.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot: 0 / All

TX Measurement

	Current	Average	LAUme	StdDev				
EVM RMS [%] /h	4.72	4.72	4.50	4.51	4.97	4.98	0.32	0.32
EVM Peak [%] /h	19.58	19.56	18.05	18.05	20.25	20.24	1.71	1.70
EVM DMRS [%] /h	3.07	3.03	3.14	3.12	3.32	3.30	0.09	0.10
MErr RMS [%] /h	4.34	4.34	4.07	4.07	4.57	4.58	0.37	0.38
MErr Peak [%] /h	-19.55	-19.53	17.93	17.93	-20.20	-20.19	1.78	1.77
MErr DMRS [%] /h	1.87	1.86	1.97	1.98	2.22	2.23	0.13	0.13
PhErr RMS [%] /h	1.06	1.07	1.11	1.12	1.18	1.20	0.04	0.04
PhErr Peak [%] /h	3.32	3.28	3.70	3.75	4.46	-4.52	0.35	0.45
PhErr DMRS [%] /h	1.40	1.37	1.40	1.39	1.50	1.50	0.06	0.06
IQ Offset [dBc]	-49.20	-49.20	-49.55	-46.69				3.14
IQ Gain Imbalance [dB]	---	---	---	---				---
IQ Quadrature Error [°]	---	---	---	---				---
Freq Error [Hz]	-4.82	-5.99	-12.10	2.98				
Timing Error [Ts]	1.41	1.11	1.42	0.21				
OBW [MHz]	1.44	1.43	1.44	0.01				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	23.73	23.77	23.69	23.85	0.05			
Peak Power [dBm]	27.26	27.22	27.07	27.34	0.07			
RB Power [dBm]	14.69	14.74	14.65	14.82	0.05			

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

5MHz CH27435 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

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	LAUme	StdDev														
EVM RMS [%] /h	1.86	1.96	2.05	2.12	2.36	2.38	0.21	0.18										
EVM Peak [%] /h	5.51	6.04	5.81	6.33	6.80	6.87	0.60	0.31										
EVM DMRS [%] /h	1.37	1.42	1.71	1.69	2.10	2.04	0.30	0.25										
MErr RMS [%] /h	1.53	1.66	1.72	1.79	2.00	2.03	0.21	0.17										
MErr Peak [%] /h	-4.92	-5.83	5.51	6.13	-6.61	-6.77	0.71	0.40										
MErr DMRS [%] /h	1.00	1.00	1.33	1.26	1.68	1.57	0.28	0.22										
PhErr RMS [%] /h	0.60	0.60	0.64	0.65	0.72	0.73	0.05	0.05										
PhErr Peak [%] /h	1.56	1.58	1.61	1.62	-2.05	-2.04	0.20	0.19										
PhErr DMRS [%] /h	0.54	0.57	0.62	0.64	0.79	0.80	0.09	0.08										
IQ Offset [dBc]	-49.80	-49.55	-48.11	0.76														
IQ Gain Imbalance [dB]	---	---	---	---														
IQ Quadrature Error [°]	---	---	---	---														
Freq Error [Hz]	-10.91	-7.97	-11.30	2.15														
Timing Error [Ts]	-3.91	-4.38	-8.19	0.83														
OBW [MHz]	0.19	0.20	0.21	0.01														
	Current	Average	Min	Max														
TX Power [dBm]	23.76	23.67	23.52	23.79														
Peak Power [dBm]	27.82	27.86	27.72	28.00														
RB Power [dBm]	23.65	23.57	23.43	23.68														
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																		

5MHz CH27435 8RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - 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	LAUme	StdDev
EVM RMS [%] /h	1.99	2.06	1.98	2.06
EVM Peak [%] /h	8.74	8.80	8.91	10.02
EVM DMRS [%] /h	1.51	1.53	1.50	1.54
MErr RMS [%] /h	1.58	1.62	1.58	1.63
MErr Peak [%] /h	-8.72	-8.78	8.82	9.89
MErr DMRS [%] /h	1.14	1.15	1.08	1.10
PhErr RMS [%] /h	0.70	0.73	0.69	0.73
PhErr Peak [%] /h	2.87	2.86	2.62	3.13
PhErr DMRS [%] /h	0.57	0.58	0.59	0.62
IQ Offset [dBc]	-47.24	-47.74	-46.95	0.89
IQ Gain Imbalance [dB]	---	---	---	---
IQ Quadrature Error [°]	---	---	---	---
Freq Error [Hz]	-7.85	-7.93	-10.36	2.35
Timing Error [Ts]	-5.49	-5.50	-5.94	0.22
OBW [MHz]	1.42	1.42	1.42	0.01
	Current	Average	Min	Max
TX Power [dBm]	23.68	23.64	23.56	23.71
Peak Power [dBm]	28.56	28.42	28.29	28.56
RB Power [dBm]	14.66	14.62	14.54	14.69

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

5MHz CH27635 1RB#24

20MHz CH27310 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 713.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAUme	StdDev						
EVM RMS [%] /h	6.07	6.07	5.81	5.80	6.07	6.07	0.16	0.16		
EVM Peak [%] /h	19.85	19.90	18.90	18.90	20.20	20.17	0.91	0.92		
EVM DMRS [%] /h	4.20	4.19	3.90	3.89	4.35	4.36	0.29	0.30		
MErr RMS [%] /h	5.62	5.61	5.37	5.36	5.62	5.61	0.16	0.16		
MErr Peak [%] /h	-19.79	-19.85	18.80	18.80	-20.07	-20.05	0.92	0.93		
MErr DMRS [%] /h	3.40	3.35	3.03	3.01	3.58	3.56	0.40	0.41		
PhErr RMS [%] /h	1.33	1.33	1.28	1.28	1.33	1.33	0.03	0.03		
PhErr Peak [%] /h	3.79	3.79	3.43	3.43	3.89	3.89	0.24	0.24		
PhErr DMRS [%] /h	1.43	1.46	1.41	1.42	1.50	1.50	0.05	0.05		
IQ Offset [dBc]	-48.93	-49.34	-48.24					0.67		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-3.95	-8.73	-13.88					2.95		
Timing Error [Ts]	3.62	4.14	5.49					0.81		
OBW [MHz]	0.19	0.30	0.40					0.10		
	Current	Average	Min	Max				StdDev		
TX Power [dBm]	23.68	23.57	23.43	23.68				0.07		
Peak Power [dBm]	26.99	26.98	26.92	27.03				0.03		
RB Power [dBm]	23.66	23.57	23.46	23.66				0.05		
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 18RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 713.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAUme	StdDev						
EVM RMS [%] /h	3.82	3.83	3.81	3.82	3.98	4.00	0.08	0.09		
EVM Peak [%] /h	16.95	17.00	17.98	17.96	18.74	18.72	0.47	0.46		
EVM DMRS [%] /h	2.42	2.47	2.38	2.42	2.54	2.57	0.08	0.08		
MErr RMS [%] /h	3.41	3.43	3.39	3.39	3.57	3.58	0.09	0.10		
MErr Peak [%] /h	-16.76	-16.83	17.83	17.82	-18.62	-18.61	0.47	0.47		
MErr DMRS [%] /h	1.84	1.88	1.77	1.80	1.92	1.98	0.09	0.11		
PhErr RMS [%] /h	0.99	0.99	1.01	1.02	1.07	1.08	0.03	0.03		
PhErr Peak [%] /h	4.08	4.06	4.59	4.55	5.29	5.25	0.44	0.43		
PhErr DMRS [%] /h	0.89	0.91	0.90	0.92	0.96	0.99	0.03	0.03		
IQ Offset [dBc]	-50.32	-49.65	-48.33					0.88		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-1.49	-6.25	-11.09					2.30		
Timing Error [Ts]	4.83	4.07	5.10					0.43		
OBW [MHz]	3.18	3.17	3.18					0.01		
	Current	Average	Min	Max				StdDev		
TX Power [dBm]	23.57	23.59	23.51	23.67				0.04		
Peak Power [dBm]	27.07	27.06	26.99	27.14				0.04		
RB Power [dBm]	11.03	11.04	10.96	11.12				0.04		
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 CH27435 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 738.0 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAUme	StdDev						
EVM RMS [%] /h	2.16	2.18	2.11	2.14	2.26	2.28	0.11	0.10		
EVM Peak [%] /h	12.48	12.38	11.26	11.25	13.14	13.05	1.37	1.29		
EVM DMRS [%] /h	1.63	1.67	1.62	1.64	1.74	1.76	0.07	0.07		
MErr RMS [%] /h	1.84	1.86	1.79	1.81	1.95	1.96	0.12	0.11		
MErr Peak [%] /h	-12.33	-12.23	11.21	11.20	-13.12	-13.03	1.34	1.27		
MErr DMRS [%] /h	1.43	1.45	1.39	1.40	1.48	1.49	0.07	0.07		
PhErr RMS [%] /h	0.65	0.66	0.65	0.66	0.68	0.70	0.01	0.01		
PhErr Peak [%] /h	3.28	3.27	2.90	2.99	3.61	3.60	0.32	0.26		
PhErr DMRS [%] /h	0.45	0.47	0.48	0.49	0.55	0.56	0.03	0.03		
IQ Offset [dBc]	-51.32	-49.53	-47.68					1.01		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-1.95	-6.48	-10.80					2.99		
Timing Error [Ts]	5.17	6.05	7.37					0.77		
OBW [MHz]	3.18	3.18	3.18					0.00		
	Current	Average	Min	Max				StdDev		
TX Power [dBm]	23.49	23.53	23.46	23.60				0.04		
Peak Power [dBm]	28.24	28.12	27.96	28.27				0.11		
RB Power [dBm]	10.93	10.98	10.92	11.06				0.04		
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 CH27435 18RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 725.5 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAUme	StdDev						
EVM RMS [%] /h	3.00	3.02	3.50	3.53	3.94	3.97	0.40	0.41		
EVM Peak [%] /h	9.16	9.19	9.77	10.12	10.50	11.13	0.44	0.74		
EVM DMRS [%] /h	1.55	1.58	2.08	2.06	2.59	2.51	0.46	0.42		
MErr RMS [%] /h	2.85	2.88	3.27	3.30	3.66	3.68	0.34	0.34		
MErr Peak [%] /h	-8.95	-8.97	9.66	10.01	-10.49	-11.12	0.52	0.83		
MErr DMRS [%] /h	1.06	1.09	1.52	1.52	1.94	1.88	0.39	0.36		
PhErr RMS [%] /h	0.54	0.53	0.72	0.72	0.86	0.88	0.15	0.15		
PhErr Peak [%] /h	1.19	1.20	1.81	1.83	2.60	2.67	0.50	0.51		
PhErr DMRS [%] /h	0.64	0.65	0.81	0.80	1.02	0.98	0.15	0.13		
IQ Offset [dBc]	-49.72	-49.55	-48.15					0.68		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-1.85	-3.53	-10.33					2.43		
Timing Error [Ts]	7.26	6.99	7.34					0.22		
OBW [MHz]	0.36	0.41	0.47					0.05		
	Current	Average	Min	Max				StdDev		
TX Power [dBm]	23.66	23.63	23.52	23.74				0.08		
Peak Power [dBm]	27.03	27.16	27.03	27.31				0.08		
RB Power [dBm]	23.56	23.53	23.42	23.64				0.07		
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 CH27560 1RB#99

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement										
Multi Evaluation PRACH SRS										
FDD Freq: 725.5 MHz Ref. Level: 41.00 dBm BW: 20.0 MHz CP: Normal Meas Substr/Slot: 0 / All										
TX Measurement										
	Current	Average	LAUme	StdDev						
EVM RMS [%] /h	2.79	2.79	2.59	2.60	2.79	2.80	0.12	0.12		
EVM Peak [%] /h	15.69	15.69	14.34	14.34	15.69	15.69	0.83	0.83		
EVM DMRS [%] /h	1.93	1.94	1.83	1.83	1.99	1.98	0.08	0.08		
MErr RMS [%] /h	2.46	2.47	2.26	2.27	2.46	2.47	0.13	0.12		
MErr Peak [%] /h	-15.63	-15.64	14.28	14.27	-15.63	-15.64	0.83	0.83		
MErr DMRS [%] /h	1.59	1.60	1.50	1.50	1.61	1.60	0.06	0.06		
PhErr RMS [%] /h	0.75	0.76	0.73	0.74	0.76	0.77	0.02	0.02		
PhErr Peak [%] /h	3.05	3.01	3.18	3.18	3.56	3.57	0.21	0.21		
PhErr DMRS [%] /h	0.62	0.63	0.60	0.60	0.67	0.67	0.04	0.03		
IQ Offset [dBc]	-50.34	-48.45	-47.29					1.01		
IQ Gain Imbalance [dB]										
IQ Quadrature Error [°]										
Freq Error [Hz]	-5.48	-5.32	-8.81					2.20		</

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	21.75	20.3~25.7	-2.31	17.29	30
			8	#0	21.79	20.3~25.7	-2.31	17.33	30
	38000	QPSK	1	#0	21.69	20.3~25.7	-2.31	17.23	30
			8	#0	21.84	20.3~25.7	-2.31	17.38	30
	38225	QPSK	1	#24	21.62	20.3~25.7	-2.31	17.16	30
			8	#17	21.68	20.3~25.7	-2.31	17.22	30
20MHz	37850	QPSK	1	#0	21.60	20.3~25.7	-2.31	17.14	30
			18	#0	21.70	20.3~25.7	-2.31	17.24	30
	38000	QPSK	1	#0	21.76	20.3~25.7	-2.31	17.30	30
			18	#0	21.76	20.3~25.7	-2.31	17.30	30
	38150	QPSK	1	#99	21.58	20.3~25.7	-2.31	17.12	30
			18	#82	21.54	20.3~25.7	-2.31	17.08	30

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

5MHz CH37775 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

TDD Freq: 2572.5 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	1.88	1.87	1.60	1.66	1.99	1.95	0.35	0.22
EVM Peak [%] /h	4.12	4.02	4.02	4.25	4.60	5.02	0.31	0.31
EVM DMRS [%] /h	1.39	1.35	1.17	1.31	1.57	1.54	0.25	0.08
MErr RMS [%] /h	1.60	1.60	1.32	1.37	1.63	1.63	0.29	0.22
MErr Peak [%] /h	-3.66	-3.67	3.56	3.60	-3.96	-3.99	0.22	0.19
MErr DMRS [%] /h	0.99	0.95	0.79	0.89	1.20	1.17	0.19	0.06
PhErr RMS [%] /h	0.56	0.56	0.52	0.54	0.67	0.66	0.11	0.05
PhErr Peak [%] /h	-1.97	-1.97	1.58	1.83	-2.49	-2.41	0.44	0.22
PhErr DMRS [%] /h	0.56	0.55	0.50	0.55	0.69	0.64	0.10	0.06
IQ Offset [dBc]	-44.75	-45.46	-43.79	0.68				
IQ Gain Imbalance [dB]	---	---	---	---				
IQ Quadrature Error [°]	---	---	---	---				
Freq Error [Hz]	-13.89	-10.00	-19.70	4.69				
Timing Error [Ts]	-2.45	-2.71	-3.32	0.23				
OBW [MHz]	0.18	0.23	0.30	0.05				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	21.74	21.64	21.48	21.75	0.10			
Peak Power [dBm]	26.06	25.86	25.60	26.08	0.20			
RB Power [dBm]	21.68	21.63	21.52	21.69	0.05			

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

5MHz CH37775 8RB#0

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

Multi EvaluationPRACHSRS

TDD Freq 2572.5 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot 0 / All

TX Measurement

	Current	Average	LAUme	StdDev	
EVM RMS [%] /h	1.67	1.99	1.83	2.07	2.02 2.22 0.12 0.07
EVM Peak [%] /h	7.96	16.19	7.93	13.39	9.06 16.60 0.36 2.82
EVM DMRS [%] /h	1.05	1.20	1.20	1.42	1.36 1.66 0.08 0.16
MErr RMS [%] /h	1.35	1.67	1.50	1.71	1.67 1.78 0.13 0.04
MErr Peak [%] /h	-6.54	-16.18	7.27	12.83	-8.38 -16.55 0.59 3.36
MErr DMRS [%] /h	0.70	0.70	0.77	0.90	0.86 1.11 0.05 0.17
PhErr RMS [%] /h	0.57	0.63	0.60	0.67	0.68 0.77 0.02 0.04
PhErr Peak [%] /h	-2.69	-4.65	2.81	5.07	-4.00 6.75 0.26 0.90
PhErr DMRS [%] /h	0.45	0.56	0.53	0.63	0.61 0.71 0.04 0.05
IQ Offset [dBc]	-45.89	-45.45	-44.25	0.46	
IQ Gain Imbalance [dB]	---	---	---	---	
IQ Quadrature Error [°]	---	---	---	---	
Freq Error [Hz]	-2.68	-4.16	-13.72	4.36	
Timing Error [Ts]	-1.02	-0.79	-1.22	0.19	
OBW [MHz]	1.42	1.42	1.42	0.01	
	Current	Average	Min	Max	StdDev
TX Power [dBm]	21.56	21.66	21.54	21.79	0.09
Peak Power [dBm]	26.40	26.59	26.33	26.89	0.22
RB Power [dBm]	12.55	12.66	12.53	12.79	0.09

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

5MHz CH38000 1RB#0

CMW 500 V 3.7120 - LTE Measurement - V3.7.70 - TX Measurement

Multi EvaluationPRACHSRS

TDD Freq: 2595.0 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot 0 / All

TX Measurement

	Current	Average	LAUme	StdDev				
EVM RMS [%] /h	5.43	5.43	4.68	4.70	5.52	5.55	0.74	0.73
EVM Peak [%] /h	14.98	15.02	13.23	13.23	15.50	15.53	1.75	1.78
EVM DMRS [%] /h	3.87	4.02	3.26	3.30	3.89	4.10	0.55	0.71
MErr RMS [%] /h	3.95	3.96	3.34	3.37	4.04	4.06	0.65	0.63
MErr Peak [%] /h	-12.82	-12.90	10.98	11.02	-13.31	-13.38	1.94	1.97
MErr DMRS [%] /h	3.19	3.22	2.48	2.51	3.19	3.26	0.71	0.76
PhErr RMS [%] /h	2.17	2.16	1.90	1.91	2.21	2.21	0.23	0.23
PhErr Peak [%] /h	-7.82	-7.83	6.50	6.51	-7.99	-7.98	1.23	1.21
PhErr DMRS [%] /h	1.24	1.36	1.20	1.22	1.32	1.43	0.05	0.13
IQ Offset [dBc]	-46.08	-45.89	-44.29	0.62				
IQ Gain Imbalance [dB]	---	---	---	---				
IQ Quadrature Error [°]	---	---	---	---				
Freq Error [Hz]	-12.95	-11.69	-20.48	4.53				
Timing Error [Ts]	14.96	14.19	14.96	0.32				
OBW [MHz]	0.27	0.29	0.31	0.02				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	21.69	21.61	21.51	21.69	0.06			
Peak Power [dBm]	25.05	24.95	24.78	25.10	0.11			
RB Power [dBm]	21.68	21.60	21.49	21.68	0.06			

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

5MHz CH38000 8RB#0

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

Multi EvaluationPRACHSRS

TDD Freq 2595.0 MHz Ref. Level: 41.00 dBm BW: 5.0 MHz CP: Normal Meas Subtr/Slot 0 / All

TX Measurement

	Current	Average	LAUme	StdDev				
EVM RMS [%] /h	3.43	3.43	3.62	3.65	3.85	3.91	0.10	0.14
EVM Peak [%] /h	14.84	14.87	15.54	15.56	16.99	17.03	0.67	0.65
EVM DMRS [%] /h	2.49	2.72	2.49	2.64	2.76	2.97	0.12	0.21
MErr RMS [%] /h	2.56	2.55	2.68	2.68	2.82	2.84	0.07	0.08
MErr Peak [%] /h	-12.24	-12.25	13.72	13.75	-15.83	-15.79	1.04	1.04
MErr DMRS [%] /h	1.51	1.70	1.49	1.58	1.64	1.84	0.06	0.18
PhErr RMS [%] /h	1.32	1.33	1.42	1.44	1.53	1.57	0.05	0.07
PhErr Peak [%] /h	-6.97	-6.97	6.73	6.71	-8.03	-8.03	0.32	0.34
PhErr DMRS [%] /h	1.14	1.22	1.14	1.21	1.30	1.39	0.07	0.08
IQ Offset [dBc]	-45.76	-45.27	-44.16	0.70				
IQ Gain Imbalance [dB]	---	---	---	---				
IQ Quadrature Error [°]	---	---	---	---				
Freq Error [Hz]	-18.30	-11.00	-21.36	5.71				
Timing Error [Ts]	17.88	18.01	18.36	0.24				
OBW [MHz]	1.41	1.42	1.42	0.01				
	Current	Average	Min	Max	StdDev			
TX Power [dBm]	21.71	21.66	21.52	21.84	0.10			
Peak Power [dBm]	25.92	25.84	25.66	26.08	0.12			
RB Power [dBm]	12.72	12.65	12.49	12.85	0.11			

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 CH38225 1RB#24

CMW 500 V 3.7.120 - LTE Measurement - V3.7.70 - TX Measurement									
Multi Evaluation PRACH SRS									
TDD	Freq: 2617.5 MHz	Ref. Level: 41.00 dBm	BW: 5.0 MHz	CP: Normal	Meas Subtr/Slot	0 / All			
TX Measurement									
	Current	Average	LAUme	StdDev					
EVM RMS [%] /h	1.92	2.06	1.64	1.78	1.99	2.11	0.31	0.27	
EVM Peak [%] /h	6.39	6.35	5.05	5.23	6.82	6.79	1.33	1.14	
EVM DMRS [%] /h	1.18	1.39	1.04	1.30	1.27	1.48	0.13	0.08	
MErr RMS [%] /h	1.60	1.69	1.36	1.45	1.65	1.73	0.26	0.24	
MErr Peak [%] /h	-5.79	-5.77	4.77	4.76	-6.21	-6.18	1.12	1.09	
MErr DMRS [%] /h	0.98	1.08	0.84	1.00	1.09	1.14	0.14	0.06	
PhErr RMS [%] /h	0.62	0.68	0.53	0.59	0.65	0.71	0.10	0.08	
PhErr Peak [%] /h	-2.14	-2.83	1.63	2.02	-2.27	-2.86	0.41	0.57	
PhErr DMRS [%] /h	0.38	0.49	0.35	0.48	0.48	0.61	0.05	0.06	
IQ Offset [dBc]	-45.31		-44.83		-43.65		0.67		
IQ Gain Imbalance [dB]	-----		-----		-----		-----		
IQ Quadrature Error [°]	-----		-----		-----		-----		
Freq Error [Hz]	-1.65		-4.78		-12.39		3.62		
Timing Error [Ts]	13.61		13.57		14.23		0.26		
OBW [MHz]	0.30		0.29		0.30		0.01		
	Current	Average	Min	Max	StdDev				
TX Power [dBm]	21.48	21.50	21.40	21.62	0.06				
Peak Power [dBm]	25.72	25.51	25.23	25.78	0.23				
RB Power [dBm]	21.53	21.49	21.43	21.57	0.04				

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

PS: Attached RRC State: Connected									

Band 41 (2500MHz) TDD									
Bandwidth	Channel	Modulation	RB No.	RB Offset	Max Power (Conducted)	Limit (dBm)	Antenna Gain (dBi)	Max Power (ERP) (dBm)	ERP Limit (dBm)
5MHz	40265	QPSK	1	#0	21.60	20.3~25.7	-2.31	17.14	30
			1	#24	21.54	20.3~25.7	-2.31	17.08	30
	41215	QPSK	1	#0	21.67	20.3~25.7	-2.31	17.21	30
			1	#24	21.69	20.3~25.7	-2.31	17.23	30
20MHz	40340	QPSK	1	#0	21.59	20.3~25.7	-2.31	17.13	30
			1	#99	21.72	20.3~25.7	-2.31	17.26	30
	41140	QPSK	1	#0	21.59	20.3~25.7	-2.31	17.13	30
			1	#99	21.54	20.3~25.7	-2.31	17.08	30

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