TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-5008-1021 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR23-SRF0259-A Page (1) of (291)	eurofins | KCTL

1. Client

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
- Date of Receipt : 2023-09-05

2. Use of Report : Certification

3. Name of Product / Model : Tablet PC / SM-X308U

4. Manufacturer / Country of Origin : Samsung Electronics Co., Ltd. / Vietnam

5. FCC ID : A3LSMX308U

6. IC Certificate No. : 649E-SMX308U

7. Date of Test : 2023-09-20 to 2023-11-22

8. Location of Test : ■ Permanent Testing Lab ☐ On Site Testing
(Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

9. Test method used : FCC Part 2 / RSS-Gen Issue 5
FCC Part 22 subpart H / RSS-132 Issue 4
FCC Part 24 subpart E / RSS-133 Issue 6
FCC Part 27 subpart C / RSS-130 Issue 2, RSS-139 Issue 4, RSS-195 Issue 2, RSS-199 Issue 4

10. Test Result : Refer to the test result in the test report

	Tested by	Technical Manager
Affirmation	Name : Kwonse Kim (Signature)	Name : Seungyong Kim (Signature)

2023-12-20

Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2023-11-24	Originally issued	-
2023-12-20	Added a note	7, 8, 249

Note. The report No. KR23-SRF0259 is superseded by the report No. KR23-SRF0259-A.

General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ **Statement not required by the standard or client used for type testing**

CONTENTS

1. General information

Client	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Manufacturer	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Factory	:	Samsung Electronics Vietnam Thai Nguyen Co., Ltd
Address	:	Yen Binh Industrial Park, Dong Tien Ward, Pho Yen Town, Thai Nguyen Province, Vietnam
Laboratory	:	Eurofins KCTL Co.,Ltd.
Address	:	65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations	:	FCC Site Designation No: KR0040, FCC Site Registration No: 687132 VCCI Registration No. : R-20080, G-20078, C-20059, T-20056 CAB Identifier: KR0040 IC Number: 8035A KOLAS No.: KT231

2. Device information

Equipment under test	:	Tablet PC		
Model	:	SM-X308U		
Modulation technique	:	QPSK, 16QAM, 64QAM, 256QAM		
Power source	:	DC 3.85 V		
Antenna specification	:	Main Antenna 1	:	LDS Antenna (LTE B2/4/5/12/13/25/26/66/71)
		Main Antenna 2	:	LDS Antenna (LTE B7/30/40/41)
Anchor band for EN-DC	:	Sub Antenna 1	:	LDS Antenna (LTE B2/4/7/66)
Frequency range	:	LTE Band 2	:	1 850.7 MHz ~ 1 909.3 MHz
		LTE Band 4	:	1 710.7 MHz ~ 1 754.3 MHz
		LTE Band 5	:	824.7 MHz ~ 848.3 MHz
		LTE Band 7	:	2 502.5 MHz ~ 2 567.5 MHz
		LTE Band 12	:	699.7 MHz ~ 715.3 MHz
		LTE Band 13	:	779.5 MHz ~ 784.5 MHz
		LTE Band 25	:	1 850.7 MHz ~ 1 914.3 MHz
		LTE Band 26	:	824.7 MHz ~ 848.3 MHz
		LTE Band 30	:	2 307.5 MHz ~ 2 312.5 MHz
		LTE Band 40(L)	:	2 307.5 MHz ~ 2 312.5 MHz
		LTE Band 40(U)	:	2 352.5 MHz ~ 2 357.5 MHz
		LTE Band 41(FCC)	:	2 498.5 MHz ~ 2 687.5 MHz
		LTE Band 41(IC)	:	2 502.5 MHz ~ 2 687.5 MHz
		LTE Band 66	:	1 710.7 MHz ~ 1 779.3 MHz
		LTE Band 71	:	665.5 MHz ~ 695.5 MHz
Bandwidth	:	LTE Band 2	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 4	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 5	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
		LTE Band 7	:	5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 12	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
		LTE Band 13	:	5 MHz, 10 MHz
		LTE Band 25	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 26	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz
		LTE Band 30	:	5 MHz, 10 MHz
		LTE Band 40(L)	:	5 MHz, 10 MHz
		LTE Band 40(U)	:	5 MHz, 10 MHz
		LTE Band 41	:	5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 66	:	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
		LTE Band 71	:	5 MHz, 10 MHz, 15 MHz, 20 MHz
Software version	:	X308U.001		
Hardware version	:	REV1.0		
Test device serial No.	:	Conducted	:	R32WA0000FY
		Radiated	:	R32W90021BEW, R32W900200M
Operation temperature	:	0 ℃ ~ 35 ℃		

2.1. Frequency/channel operations

This device contains the following capabilities:
WLAN (11a/b/g/n/ac/ax), Bluetooth (BDR/EDR/BLE), NFC, Digitizer, WCDMA 850/1700/1900,
LTE B2/4/5/7/12/13/14/25/26/30/40/41(PC2/PC3)/48/66/71, ULCA 41C(PC2/PC3)/48C
NR n2/5/12/25/30/41(PC2/PC3)/48/66/71/77(PC2/PC3)/78(PC3), SRS n48/n77(PC2/PC3)/n78(PC3)

LTE Band 2

Ch.	Frequency (㎒)
18607	1 850.7
18900	1 880.0
19193	1 909.3

Table 2.1-1. 1.4M BW

Ch.	Frequency (㎒)
18615	1 851.5
18900	1 880.0
19185	1 908.5

Table 2.1-2. 3M BW

Ch.	Frequency (㎒)
18625	1 852.5
18900	1 880.0
19175	1 907.5

Table 2.1-3. 5M BW

Ch.	Frequency (㎒)
18650	1 855.0
18900	1 880.0
19150	1 905.0

Table 2.1-4. 10M BW

Ch.	Frequency (㎒)
18675	1 857.5
18900	1 880.0
19125	1 902.5

Table 2.1-5. 15M BW

Ch.	Frequency (㎒)
18700	1 860.0
18900	1 880.0
19100	1 900.0

Table 2.1-6. 20M BW

LTE Band 4

Ch.	Frequency (㎒)
19957	1 710.7
20175	1 732.5
20393	1 754.3

Table 2.1-7. 1.4M BW

Ch.	Frequency (㎒)
19965	1 711.5
20175	1 732.5
20385	1 753.5

Table 2.1-8. 3M BW

Ch.	Frequency (㎒)
19975	1 712.5
20175	1 732.5
20375	1 752.5

Table 2.1-9. 5M BW

Ch.	Frequency (㎒)
20000	1 715.0
20175	1 732.5
20350	1 750.0

Table 2.1-10. 10M BW

Ch.	Frequency (㎒)
20025	1 717.5
20175	1 732.5
20325	1 747.5

Table 2.1-11. 15M BW

Ch.	Frequency (㎒)
20050	1 720.0
20175	1 732.5
20300	1 745.0

Table 2.1-12. 20M BW

LTE Band 5

Ch.	Frequency (㎒)
20407	824.7
20525	836.5
20643	848.3

Table 2.1-13. 1.4M BW

Ch.	Frequency (㎒)
20415	825.5
20525	836.5
20635	847.5

Table 2.1-14. 3M BW

Ch.	Frequency (㎒)
20425	826.5
20525	836.5
20625	846.5

Table 2.1-15. 5M BW

Ch.	Frequency (㎒)
20450	829.0
20525	836.5
20600	844.0

Table 2.1-16. 10M BW

LTE Band 7

Ch.	Frequency (㎒)
20775	2 502.5
21100	2 535.0
21425	2 567.5

Table 2.2-17. 5M BW

Ch.	Frequency (㎒)
20800	2 505.0
21100	2 535.0
21400	2 565.0

Table 2.2-18. 10M BW

Ch.	Frequency (㎒)
20825	2 507.5
21100	2 535.0
21375	2 562.5

Table 2.2-19. 15M BW

Ch.	Frequency (㎒)
20850	2 510.0
21100	2 535.0
21350	2 560.0

Table 2.2-20. 20M BW

LTE Band 12

Ch.	Frequency (㎒)
23017	699.7
23095	707.5
23173	715.3

Table 2.1-21. 1.4M BW

Ch.	Frequency (㎒)
23025	700.5
23095	707.5
23165	714.5

Table 2.1-22. 3M BW

Ch.	Frequency (㎒)
23035	701.5
23095	707.5
23155	713.5

Table 2.1-23. 5M BW

Ch.	Frequency (㎒)
23060	704.0
23095	707.5
23130	711.0

Table 2.1-24. 10M BW

LTE Band 13

Ch.	Frequency (㎒)
23205	779.5
23230	782.0
23255	784.5

Table 2.1-25. 5M BW

Ch.	Frequency (㎒)
-	-
23230	782.0
-	-

Table 2.1-26. 10M BW

LTE Band 25

Ch.	Frequency (㎒)
26047	1 850.7
26365	1 882.5
26683	1 914.3

Table 2.2-27. 1.4M BW

Ch.	Frequency (㎒)
26055	1 851.5
26365	1 882.5
26675	1 913.5

Table 2.2-28. 3M BW

Ch.	Frequency (㎒)
26065	1 852.5
26365	1 882.5
26665	1 912.5

Table 2.2-29. 5M BW

Ch.	Frequency (㎒)
26090	1 855.0
26365	1 882.5
26640	1 910.0

Table 2.2-30. 10M BW

Ch.	Frequency (㎒)
26115	1 857.5
26365	1 882.5
26615	1 907.5

Table 2.2-31. 15M BW

Ch.	Frequency (㎒)
26140	1 860.0
26365	1 882.5
26590	1 905.0

Table 2.2-32. 20M BW

LTE Band 26 (FCC)

Ch.	Frequency (㎒)
26797	824.7
26915	836.5
27033	848.3

Table 2.1-33. 1.4M BW

Ch.	Frequency (㎒)
26805	825.5
26915	836.5
27025	847.5

Table 2.1-34. 3M BW

Ch.	Frequency (㎒)
26815	826.5
26915	836.5
27015	846.5

Table 2.1-35. 5M BW

Ch.	Frequency (㎒)
26840	829.0
26915	836.5
26990	844.0

Table 2.1-36. 10M BW

Ch.	Frequency (㎒)
26865	831.5
26915	836.5
26965	841.5

Table 2.1-37. 15M BW

LTE Band 30

Ch.	Frequency (㎒)
27685	2307.5
27710	2310.0
27735	2312.5

Table 2.1-38. 5M BW

Ch.	Frequency (㎒)
-	-
27710	2310.0
-	-

Table 2.1-39. 10M BW

LTE Band 40(L)

Ch.	Frequency (㎒)
38725	2 307.5
38750	2 310.0
38775	2 312.5

Table 2.1-40. 5M BW

Ch.	Frequency (㎒)
-	-
38750	2 310.0
-	-

Table 2.1-41. 10M BW

LTE Band 40(U)

Ch.	Frequency (㎒)
39175	2 352.5
39200	2 355.0
39225	2 357.5

Table 2.1-42. 15M BW

Ch.	Frequency (㎒)
-	-
39200	2 355.0
-	-

Table 2.1-43. 20M BW

LTE Band 41 (FCC)

Ch.	Frequency (㎒)
39675	2 498.5
40620	2 593.0
41565	2 687.5

Table 2.1-44. 5M BW

Ch.	Frequency (㎒)
39700	2 501.0
40620	2 593.0
41540	2 685.0

Table 2.1-45. 10M BW

Ch.	Frequency (㎒)
39725	2 503.5
40620	2 593.0
41515	2 682.5

Table 2.1-46. 15M BW

Ch.	Frequency (㎒)
39750	2 506.0
40620	2 593.0
41490	2 680.0

Table 2.1-47. 20M BW

LTE Band 41 (IC)

Ch.	Frequency (㎒)
39715	2 502.5
40620	2 593.0
41565	2 687.5

Table 2.1-48. 5M BW

Ch.	Frequency (㎒)
39740	2 505.0
40620	2 593.0
41540	2 685.0

Table 2.1-49. 10M BW

Ch.	Frequency (㎒)
39765	2 507.5
40620	2 593.0
41515	2 682.5

Table 2.1-50. 15M BW

Ch.	Frequency (㎒)
39790	2 510.0
40620	2 593.0
41490	2 680.0

Table 2.1-51. 20M BW

LTE Band 66

Ch.	Frequency (㎒)
131979	1 710.7
132322	1 745.0
132665	1 779.3

Table 2.1-52. 1.4M BW

Ch.	Frequency (㎒)
131987	1 711.5
132322	1 745.0
132657	1 778.5

Table 2.1-53. 3M BW

Ch.	Frequency (㎒)
131997	1 712.5
132322	1 745.0
132647	1 777.5

Table 2.1-54. 5M BW

Ch.	Frequency (㎒)
132022	1 715.0
132322	1 745.0
132622	1 775.0

Table 2.1-55. 10M BW

Ch.	Frequency (㎒)
132047	1 717.5
132322	1 745.0
132597	1 772.5

Table 2.1-56. 15M BW

Ch.	Frequency (㎒)
132072	1 720.0
132322	1 745.0
132572	1 770.0

Table 2.1-57. 20M BW

LTE Band 71

Ch.	Frequency (㎒)
133147	665.5
133297	680.5
133447	695.5

Table 2.1-58. 5M BW

Ch.	Frequency (㎒)
133172	668.0
133297	680.5
133422	693.0

Table 2.1-59. 10M BW

Ch.	Frequency (㎒)
133197	670.5
133297	680.5
133397	690.5

Table 2.1-60. 15M BW

Ch.	Frequency (㎒)
133222	673.0
133297	680.5
133372	688.0

Table 2.1-61. 20M BW

Notes:

1. LTE Band 2(1850 - 1910 ㎒) overlaps the entire frequency range of LTE Band 25(1850 - 1915 ㎒) and they have same maximum tune-up power. Therefore, Band 25 was tested as a representative and the test data provided in this report covers Band 25 as well as Band 2 subpart to Part24.
2. LTE Band 4(1 710 – 1 755 ㎒) overlaps the entire frequency range of LTE Band 66(1 710 – 1 780 ㎒) and they have same maximum tune-up power. Therefore, Band 66 was tested as a representative and the test data provided in this report covers Band 66 as well as Band 4 subpart to Part27.
3. LTE Band 26 is not supported in Canada.

3. Maximum ERP/EIRP power

LTE Band 5

Mode	Tx frequency (㎒)	Emission designator	ERP	
			Max. power (dBm)	Max. power (W)
LTE Band 5	824.7 ~ 848.3	1M11G7D	23.09	0.204
		1M11W7D	22.08	0.161
	825.5 ~ 847.5	2M72G7D	23.18	0.208
		2M72W7D	22.22	0.167
	826.5 ~ 846.5	4M53G7D	23.16	0.207
		4M56W7D	22.30	0.170
	829.0 ~ 844.0	9M07G7D	23.20	0.209
		9M07W7D	22.37	0.173

LTE Band 7

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 7	2 502.5 ~ 2 567.5	4M55G7D	22.11	0.163
		4M57W7D	21.37	0.137
	2 505.0 ~ 2 565.0	9M02G7D	22.92	0.196
		9M07W7D	21.89	0.155
	2 507.5 ~ 2 562.5	13M5G7D	23.47	0.222
		13M6W7D	22.81	0.191
	2 510.0 ~ 2 560.0	18M1G7D	23.24	0.211
		18M0W7D	22.32	0.171

LTE Band 12

Mode	Tx frequency (㎒)	Emission designator	ERP	
			Max. power (dBm)	Max. power (W)
LTE Band 12	699.7 ~ 715.3	1M11G7D	22.79	0.190
		1M11W7D	21.74	0.149
	700.5 ~ 714.5	2M71G7D	22.61	0.182
		2M71W7D	21.54	0.143
	701.5 ~ 713.5	4M55G7D	22.54	0.179
		4M55W7D	21.56	0.143
	704.0 ~ 711.0	9M07G7D	22.25	0.168
		9M07W7D	21.28	0.134

LTE Band 13

Mode	Tx frequency (㎒)	Emission designator	ERP	
			Max. power (dBm)	Max. power (W)
LTE Band 13	779.5 ~ 784.5	4M53G7D	23.81	0.240
		4M53W7D	22.98	0.199
	782.0	9M02G7D	24.04	0.254
		9M02W7D	23.01	0.200

LTE Band 25/2

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 25/2	1 850.7 ~ 1 914.3	1M11G7D	23.28	0.213
		1M11W7D	22.25	0.168
	1 851.5 ~ 1 913.5	2M71G7D	23.79	0.239
		2M72W7D	22.73	0.187
	1 852.5 ~ 1 912.5	4M56G7D	23.57	0.228
		4M55W7D	22.79	0.190
	1 855.0 ~ 1 910.0	9M02G7D	23.89	0.245
		9M04W7D	22.96	0.198
	1 857.5 ~ 1 907.5	13M5G7D	23.60	0.229
		13M5W7D	22.86	0.193
	1 860.0 ~ 1 905.0	18M0G7D	23.39	0.218
		18M0W7D	22.73	0.187

LTE Band 26

Mode	Tx frequency (㎒)	Emission designator	ERP	
			Max. power (dBm)	Max. power (W)
LTE Band 26	824.7 ~ 848.3	1M10G7D	22.14	0.164
		1M10W7D	21.21	0.132
	825.5 ~ 847.5	2M71G7D	22.42	0.175
		2M70W7D	21.53	0.142
	826.5 ~ 846.5	4M53G7D	22.53	0.179
		4M56W7D	21.65	0.146
	829.0 ~ 844.0	9M04G7D	22.78	0.190
		9M02W7D	21.88	0.154
	831.5 ~ 841.5	13M5G7D	23.21	0.209
		13M5W7D	22.09	0.162

LTE Band 30

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 30	2 307.5 ~ 2 312.5	4M56G7D	22.29	0.169
		4M56W7D	21.43	0.138
	2 310.0	8M99G7D	22.42	0.175
		8M99W7D	21.51	0.142

LTE Band 40(L)

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 40	2 307.5 ~ 2 312.5	4M52G7D	23.38	0.218
		4M55W7D	22.64	0.184
	2 310.0	8M99G7D	23.33	0.215
		9M02W7D	22.03	0.160

LTE Band 40(U)

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 40	2 352.5 ~ 2 357.5	4M55G7D	23.02	0.200
		4M55W7D	21.78	0.151
	2 355.0	8M99G7D	22.68	0.185
		9M02W7D	21.77	0.150

LTE Band 41(Power Class 2) - FCC

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 41 (FCC)	2 498.5 ~ 2 687.5	4M53G7D	26.59	0.456
		4M52W7D	26.41	0.438
	2 501.0 ~ 2 685.0	8M99G7D	26.84	0.483
		9M02W7D	26.72	0.470
	2 503.5 ~ 2 682.5	13M5G7D	26.53	0.450
		13M5W7D	26.28	0.425
	2 506.0 ~ 2 680.0	18M1G7D	27.08	0.511
		18M0W7D	26.53	0.450

LTE Band 41(Power Class 2) - IC

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 41 (IC)	2 502.5 ~ 2687.5	4M53G7D	26.52	0.449
		4M52W7D	26.43	0.440
	2 505.0 ~ 2685.0	9M04G7D	27.20	0.525
		9M02W7D	27.56	0.570
	2 507.5 ~ 2682.5	13M5G7D	28.24	0.667
		13M5W7D	28.05	0.638
	2 510.0 ~ 2680.0	18M1G7D	27.84	0.608
		18M0W7D	27.97	0.627

LTE Band 66/4

Mode	Tx frequency (㎒)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE Band 66/4	1 710.7 ~ 1 779.3	1M10G7D	24.15	0.260
		1M11W7D	22.99	0.199
	1 711.5 ~ 1 778.5	2M73G7D	23.93	0.247
		2M71W7D	23.04	0.201
	1 712.5 ~ 1 777.5	4M53G7D	23.98	0.250
		4M55W7D	23.01	0.200
	1 715.0 ~ 1 775.0	8M99G7D	23.88	0.244
		9M02W7D	22.98	0.199
	1 717.5 ~ 1 772.5	13M5G7D	23.77	0.238
		13M5W7D	23.06	0.202
	1 720.0 ~ 1 770.0	18M0G7D	25.52	0.356
		18M1W7D	23.50	0.224

LTE Band 71

Mode	Tx frequency (㎒)	Emission designator	ERP	
			Max. power (dBm)	Max. power (W)
LTE Band 71	665.5 ~ 695.5	4M57G7D	20.18	0.104
		4M52W7D	19.16	0.082
	668.0 ~ 693.0	9M02G7D	21.13	0.130
		8M99W7D	19.98	0.100
	670.5 ~ 690.5	13M5G7D	21.48	0.141
		13M5W7D	20.33	0.108
	673.0 ~ 688.0	18M1G7D	21.59	0.144
		18M0W7D	20.09	0.102

4. Summary of tests

FCC Part section(s)	RSS Section(s)	Parameter	Test Limit	Test Condition	Test results
2.1046	RSS-130(4.6) RSS-132(5.4) RSS-133(4.1) RSS-139(5.5) RSS-195(5.5) RSS-199(5.5)	Conducted Output Power	N/A	Conducted	Pass
2.1049	RSS-Gen(6.7)	Occupied Bandwidth & 26 dB Bandwidth	N/A		Pass
2.1051 22.917(a) 24.238(a) 27.53(a) 27.53(c)(2) 27.53(g),(h),(m)(4)	RSS-130(4.7) RSS-132(5.5) RSS-133(6.5) RSS-139(5.6) RSS-195(5.6) RSS-199(5.6)	Band Edge Emissions at Antenna Terminal	Refer to Section 7.3 and 7.4		Pass
		Spurious Emissions at Antenna Terminal			Pass
24.232(d) 27.50(d)(5)	RSS-130(4.6) RSS-132(5.4) RSS-133(6.4) RSS-139(5.5) RSS-195(5.5) RSS-199(5.5)	Peak to Average Power Ratio	< 13 dB		Pass
2.1055 22.355	RSS-132(5.3)	Frequency stability	< 2.5 ppm (FCC), Emission must remain in band (IC)		Pass
24.235	RSS-133(6.3)		Emission must remain in band (FCC), < 2.5 ppm (IC)		
27.54	RSS-130(4.5) RSS-139(5.4) RSS-195(5.4) RSS-199(5.4)		Emission must remain in band		
22.913(a)(5)	RSS-132(5.4)	Effective Radiated Power	< 7 Watts max. ERP (FCC) < 3 Watts max. ERP (IC)	Radiated	Pass
27.50(b)(10) 27.50(c)(10)	RSS-130(4.6)		< 3 Watts max. ERP		Pass
24.232(c) 27.50(h)	RSS-133(6.4) RSS-199(5.5)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP		Pass
27.50(a)	RSS-195(5.5)		< 0.25 Watts max. EIRP		Pass
27.50(d)(4)	RSS-139(5.5)		< 1 Watts max. EIRP		Pass
2.1053 22.917(a) 24.238(a) 27.53(a) 27.53(c)(2), 27.53(f),(g), (h),(m)(4)	RSS-130(4.7) RSS-132(5.5) RSS-133(6.5) RSS-139(5.6) RSS-195(5.6) RSS-199(5.6)	Radiated Spurious Emissions	<43 + 10Log$_{10}$(P) dB for all out of band emissions, <-70 dBW/㎒ EIRP - Wideband <-80 dBW/㎒ EIRP- Narrowband, < 55 + 10log10 (P) dB, <70 + 10Log$_{10}$(P) dB		Pass

Notes:

1. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.26-2015
   - ANSI/TIA-603-E-2016
   - KDB 971168 D01 v03r01
   - KDB 971168 D02 v02r02

4.1. Worst case orientation

1. All modes of operation were investigated and the worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations in the test data.
2. Output power measurements were measured on QPSK, 16QAM, 64QAM and 256QAM modulation. All tests except output power was performed with QPSK and 16QAM modulation.
3. In the case of radiated spurious emissions, only the worst case bandwidth results were reported.
4. All configurations have been performed (Stand-alone, Stand-alone with TA, with accessories).
5. Output power measurement was performed about all power classes for LTE Band 41, and the All tests except output power was performed at PC2 as the worst case.
6. In case of sub antenna 1 (usage of EN-DC), LTE B2, B7, B66/4 were investigated additionally for EIRP and spurious emissions.
7. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z and all of the radiated tests have been performed with the accessories as below. It was determined that below orientation was worst case orientation for each band.

Band	Stand-alone			Stand-alone with TA			With accessories		
	X-axis	Y-axis	Z-axis	X-axis	Y-axis	Z-axis	X-axis	Y-axis	Z-axis
LTE B5	O	-	-	-	-	-	-	-	-
LTE B7	-	-	-	O	-	-	-	-	-
LTE B12	O	-	-	-	-	-	-	-	-
LTE B13	O	-	-	-	-	-	-	-	-
LTE B25/2	-	-	-	O	-	-	-	-	-
LTE B26	O	-	-	-	-	-	-	-	-
LTE B30	-	-	-	O	-	-	-	-	-
LTE B40(L)	-	-	-	O	-	-	-	-	-
LTE B40(U)	-	-	-	O	-	-	-	-	-
LTE B41 PC2	-	-	-	O	-	-	-	-	-
LTE B66/4	-	-	-	O	-	-	-	-	-
LTE B71	O	-	-	-	-	-	-	-	-
LTE B2 (Sub ANT)	-	-	-	O	-	-	-	-	-
LTE B7 (Sub ANT)	-	-	-	O	-	-	-	-	-
LTE B66/4 (Sub ANT)	-	-	-	O	-	-	-	-	-

6. Test Condition

- The measurement was performed with various configurations then worst results are reported.

1) Radiated measurement

Test Description	Modulation	RB size	Test Channel
Effective Radiated Power	QPSK,16QAM	1	Low, Mid, High
Equivalent Isotropic Radiated Power			
Radiated Spurious Emissions	QPSK		

LTE Band	Bandwidth (㎒)	RB size	RB offset
B5	1.4, 3, 5, 10	1	Low, Mid, High
B7	5, 10, 15, 20		
B12	1.4, 3, 5, 10		
B13	5, 10		
B25/2	1.4, 3, 5, 10, 15, 20		
B26	1.4, 3, 5, 10, 15		
B30	5, 10		
B40(L)	5, 10		
B40(U)	5, 10		
B41(PC2)	5, 10, 15, 20		
B66/4	1.4, 3, 5, 10, 15, 20		
B71	5, 10, 15, 20		
LTE B2 (Sub ANT)	1.4, 3, 5, 10, 15, 20		
LTE B7 (Sub ANT)	5, 10, 15, 20		
LTE B66/4 (Sub ANT)	1.4, 3, 5, 10, 15, 20		

2) Conducted measurement

Test Description	Modulation	RB size	Test Channel
OBW & 26 ㏈ BW	QPSK, 16QAM	Full	Low, Mid, High
PAPR	QPSK, 16QAM	Full	Mid
Band Edge	QPSK	1	Low, High
		Full	
Spurious Emissions	QPSK	1	Low, Mid, High

LTE Band	Bandwidth (㎒)	RB size	RB offset
B5	1.4, 3, 5, 10	1	0, 5, 14, 24, 49
		Full	0
B7	5, 10, 15, 20	1	0, 24, 49, 74, 99
		Full	0
B12	1.4, 3, 5, 10	1	0, 5, 14, 24, 49
		Full	0
B13	5, 10	1	0, 24, 49
		Full	0
B25/2	1.4, 3, 5, 10, 15, 20	1	0, 5, 14, 24, 49, 74, 99
		Full	0
B26	1.4, 3, 5, 10, 15	1	0, 5, 14, 24, 49, 74
		Full	0
B30	5, 10	1	0, 24, 49
		Full	0
B40(L)	5, 10	1	0, 24, 49
		Full	0
B40(U)	5, 10	1	0, 24, 49
		Full	0
B41(PC2)	5, 10, 15, 20	1	0, 24, 49, 74, 99
		Full	0
B66/4	1.4, 3, 5, 10, 15, 20	1	0, 5, 14, 24, 49, 74, 99
		Full	0
B71	5, 10, 15, 20	1	0, 24, 49,74, 99
		Full	0

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.

All measurement uncertainty values are shown with a coverage factor of k=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty (±)	
Conducted RF power	0.9 dB	
Conducted spurious emissions	1.3 dB	
Radiated spurious emissions	Below 1 000 ㎒	2.4 dB
	1 000 ㎒ ~ 18 000 ㎒	2.4 dB
	Above 1 8000 ㎒	2.6 dB

6. Measurement results explanation example

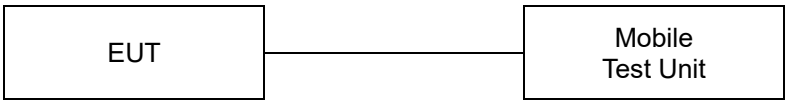
Frequency (㎒)	Factor(㏈)	Frequency (㎒)	Factor(㏈)
30	6.10	16 000	10.13
50	6.25	17 000	9.56
100	6.32	18 000	9.97
200	6.33	19 000	9.66
300	6.45	20 000	10.20
400	6.61	21 000	10.56
500	6.99	22 000	9.90
600	7.08	23 000	11.16
700	7.04	24 000	10.48
800	7.03	25 000	11.89
900	6.95	26 000	11.17
1 000	7.01	26 500	11.29
2 000	7.39	27 000	11.37
3 000	7.55	28 000	12.81
4 000	7.94	29 000	13.00
5 000	8.38	30 000	13.30
6 000	8.61	31 000	12.70
7 000	7.88	32 000	12.52
8 000	8.06	33 000	12.63
9 000	8.31	34 000	13.45
10 000	7.98	35 000	13.74
11 000	8.53	36 000	13.78
12 000	8.45	37 000	13.88
13 000	9.45	38 000	14.93
14 000	9.41	39 000	15.79
15 000	9.79	40 000	16.42

Note.
Offset(㏈) = RF cable loss(㏈) + Divider(㏈)

7. Test results

7.1. Conducted output power

Test setup



Test procedure

971168 D01 v03r01 – Section 5.2
ANSI C63.26-2015 – Section 5.2.4.2
CFR 47 - Section §2.1046
Radio Standards Specifications – Section 130, 132, 133, 139, 195, 199

Test settings

When an average power meter is used to perform RF output power measurements, the fundamental condition that measurement be performed only over durations of active transmissions at maximum output power level applies. Thus, an average power meter can always be used to perform the measurement when the EUT can be configured to transmit continuously.

If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle < 98%), then the following options can be implemented to facilitate measurement of the average power with an average power meter:

a) A gated average power meter can be used to perform the measurement if the gating parameters can be adjusted such that the power is measured only during active transmission bursts at maximum output power levels.
b) A conventional average power meter with no signal gating capability can also be used if the measured burst duty cycle is constant (i.e., duty cycle variations are less than or equal to ± 2%) by performing the measurement over the on/off burst cycles and then correcting (increasing) the measured level by a factor equal to [10log (1/duty cycle)]. See 5.2.4.3.4 for guidance with respect to measuring the transmitter duty cycle.

See item r) of 4.1 for more information regarding power meter functional requirements and limitations, and consult the instrumentation-specific application literature for proper set-up and use.

Test results
Main Antenna

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	1.4	QPSK	1	0	24.76	24.56	24.79
			1	3	24.61	24.37	24.61
			1	5	24.77	24.55	24.77
			3	0	24.91	24.64	24.75
			3	1	24.70	24.50	24.72
			3	3	24.70	24.40	24.83
			6	0	24.00	23.75	23.96
		16QAM	1	0	24.21	23.90	24.00
			1	3	24.20	23.86	23.96
			1	5	23.97	23.96	24.13
			3	0	24.01	23.79	24.09
			3	1	23.99	23.75	24.01
			3	3	23.88	23.72	23.92
			6	0	22.95	22.69	23.08
		64QAM	1	0	23.13	22.81	22.85
			1	3	22.87	22.78	22.91
			1	5	23.02	22.68	23.11
			3	0	22.93	22.77	23.03
			3	1	22.86	22.70	22.88
			3	3	22.88	22.65	22.90
			6	0	21.72	21.68	21.89
		256QAM	1	0	19.93	19.89	19.94
			1	3	19.90	19.76	19.90
			1	5	19.75	19.75	20.06
			3	0	19.79	19.77	19.93
			3	1	19.86	19.44	19.80
			3	3	19.71	19.50	19.85
			6	0	19.83	19.68	19.88
	3	QPSK	1	0	24.73	24.63	24.83
			1	8	24.66	24.52	24.75
			1	14	24.64	24.64	24.80
			8	0	24.05	23.75	23.99
			8	4	23.95	23.77	23.93
			8	7	23.99	23.77	23.96
			15	0	24.07	23.75	23.93
		16QAM	1	0	24.27	24.08	23.82
			1	8	24.08	23.94	23.79
			1	14	24.18	23.94	23.88
			8	0	23.01	22.75	23.06
			8	4	23.05	22.70	23.05
			8	7	22.99	22.73	22.91
			15	0	23.03	22.88	22.98
		64QAM	1	0	22.92	22.86	22.99
			1	8	22.86	22.74	23.01
			1	14	22.87	22.76	23.03
			8	0	21.82	21.70	21.90
			8	4	21.81	21.77	21.90
			8	7	21.82	21.74	21.92
			15	0	21.89	21.72	21.89
		256QAM	1	0	20.04	19.78	19.97
			1	8	19.96	19.85	20.17
			1	14	19.94	19.89	19.78
			8	0	19.98	19.75	19.87
			8	4	19.96	19.60	19.80
			8	7	19.75	19.73	19.95
			15	0	19.86	19.67	19.86

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	5	QPSK	1	0	24.76	24.49	24.65
			1	12	24.88	24.66	24.89
			1	24	24.74	24.55	24.83
			12	0	23.97	23.83	23.94
			12	7	23.97	23.79	23.97
			12	13	23.94	23.73	23.98
			25	0	23.97	23.75	23.97
		16QAM	1	0	23.90	23.98	24.09
			1	12	24.08	24.03	24.17
			1	24	23.85	23.87	24.04
			12	0	22.92	22.76	22.89
			12	7	23.00	22.73	22.86
			12	13	22.95	22.74	22.85
			25	0	23.05	22.76	22.97
		64QAM	1	0	23.00	22.88	23.05
			1	12	23.17	22.99	23.19
			1	24	23.03	22.80	22.97
			12	0	21.88	21.79	21.99
			12	7	21.90	21.82	21.89
			12	13	21.87	21.75	21.91
			25	0	21.81	21.66	21.88
		256QAM	1	0	19.84	19.91	20.11
			1	12	19.87	19.90	19.98
			1	24	19.98	19.79	19.99
			12	0	19.80	19.67	19.99
			12	7	19.81	19.68	19.89
			12	13	19.77	19.72	19.85
			25	0	19.83	19.68	19.88
	10	QPSK	1	0	24.83	24.59	24.67
			1	25	24.64	24.47	24.61
			1	49	24.75	24.54	24.74
			25	0	24.02	23.80	23.94
			25	12	23.95	23.77	23.93
			25	25	23.98	23.77	23.89
			50	0	23.97	23.79	23.93
		16QAM	1	0	24.09	23.97	24.08
			1	25	24.02	23.74	23.93
			1	49	24.13	23.82	23.98
			25	0	23.01	22.90	22.97
			25	12	22.94	22.81	22.89
			25	25	22.97	22.79	22.90
			50	0	22.99	22.74	22.95
		64QAM	1	0	23.21	22.93	22.91
			1	25	22.85	22.94	22.79
			1	49	23.05	22.74	23.10
			25	0	21.85	21.69	21.91
			25	12	21.85	21.72	21.86
			25	25	21.85	21.74	21.80
			50	0	21.91	21.74	21.89
		256QAM	1	0	19.84	19.76	19.88
			1	25	19.95	19.72	19.96
			1	49	20.01	20.04	19.78
			25	0	19.83	19.75	19.88
			25	12	19.82	19.73	19.85
			25	25	19.86	19.65	19.81
			50	0	19.84	19.75	19.83

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	15	QPSK	1	0	24.77	24.66	24.75
			1	36	24.61	24.52	24.64
			1	74	24.66	24.59	24.67
			36	0	24.05	23.81	23.96
			36	18	23.95	23.76	23.95
			36	37	23.98	23.80	24.00
			75	0	24.00	23.79	23.98
		16QAM	1	0	24.12	24.09	24.09
			1	36	24.05	23.94	23.99
			1	74	24.17	23.94	24.01
			36	0	23.02	22.88	22.99
			36	18	22.98	22.85	22.93
			36	37	22.96	22.84	22.89
			75	0	22.97	22.82	22.90
		64QAM	1	0	22.97	22.91	23.31
			1	36	22.96	22.94	22.93
			1	74	23.06	22.86	22.99
			36	0	21.91	21.78	21.99
			36	18	21.88	21.79	21.86
			36	37	21.91	21.79	21.91
			75	0	21.84	21.70	21.80
		256QAM	1	0	19.76	20.00	20.20
			1	36	19.83	19.97	19.65
			1	74	20.07	19.78	19.87
			36	0	19.88	19.70	19.88
			36	18	19.85	19.76	19.80
			36	37	19.84	19.74	19.87
			75	0	19.73	19.72	19.84
	20	QPSK	1	0	24.82	24.70	25.00
			1	49	24.46	24.59	24.87
			1	99	24.76	24.53	24.75
			50	0	24.00	23.89	24.01
			50	24	23.96	23.82	23.99
			50	50	23.99	23.79	23.97
			100	0	23.98	23.80	24.00
		16QAM	1	0	24.27	24.09	24.45
			1	49	24.28	24.05	24.49
			1	99	24.16	24.00	24.36
			50	0	22.98	22.85	23.01
			50	24	23.00	22.85	23.05
			50	50	23.06	22.80	23.02
			100	0	23.05	22.85	23.05
		64QAM	1	0	22.90	22.95	23.27
			1	49	22.86	22.83	23.00
			1	99	22.88	22.98	23.13
			50	0	21.89	21.76	21.91
			50	24	21.95	21.76	21.94
			50	50	21.92	21.75	21.98
			100	0	21.87	21.82	22.00
		256QAM	1	0	19.82	19.97	19.98
			1	49	19.97	19.74	19.94
			1	99	19.87	19.87	20.05
			50	0	19.74	19.74	19.88
			50	24	19.87	19.73	19.86
			50	50	19.84	19.71	19.79
			100	0	19.85	19.72	19.83

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	1.4	QPSK	1	0	24.68	24.85	24.64
			1	3	24.42	24.63	24.45
			1	5	24.65	24.82	24.62
			3	0	24.67	24.81	24.72
			3	1	24.50	24.73	24.59
			3	3	24.67	24.74	24.57
			6	0	23.59	23.72	23.57
		16QAM	1	0	23.49	23.91	23.66
			1	3	23.66	23.86	23.60
			1	5	23.65	23.87	23.68
			3	0	23.84	23.93	23.61
			3	1	23.79	23.91	23.67
			3	3	23.72	23.83	23.53
			6	0	22.68	22.83	22.62
		64QAM	1	0	22.79	22.94	22.76
			1	3	22.68	22.88	22.59
			1	5	22.87	22.92	22.78
			3	0	22.93	22.99	22.58
			3	1	22.81	22.87	22.46
			3	3	22.79	22.80	22.56
			6	0	21.79	21.77	21.57
		256QAM	1	0	19.75	19.91	19.75
			1	3	19.69	19.56	19.50
			1	5	19.89	19.88	19.63
			3	0	19.64	19.79	19.52
			3	1	19.74	19.78	19.37
			3	3	19.70	19.77	19.44
			6	0	19.75	19.68	19.57
	3	QPSK	1	0	24.81	24.98	24.77
			1	8	24.67	24.90	24.67
			1	14	24.79	24.98	24.82
			8	0	23.87	23.79	23.68
			8	4	23.80	23.80	23.60
			8	7	23.80	23.83	23.68
			15	0	23.82	23.79	23.67
		16QAM	1	0	24.12	24.10	23.65
			1	8	24.00	23.97	23.40
			1	14	24.09	23.91	23.48
			8	0	22.91	22.77	22.78
			8	4	22.92	22.71	22.77
			8	7	22.87	22.77	22.62
			15	0	22.87	22.89	22.70
		64QAM	1	0	22.79	22.97	22.80
			1	8	23.12	22.84	22.84
			1	14	22.90	22.95	22.82
			8	0	21.78	21.76	21.60
			8	4	21.87	21.85	21.59
			8	7	21.85	21.85	21.61
			15	0	21.82	21.83	21.73
		256QAM	1	0	19.77	19.91	19.51
			1	8	19.77	19.71	19.61
			1	14	20.01	19.79	19.49
			8	0	19.83	19.75	19.60
			8	4	19.81	19.84	19.54
			8	7	19.81	19.87	19.57
			15	0	19.86	19.80	19.57

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	5	QPSK	1	0	24.93	24.77	24.66
			1	12	25.01	24.90	24.75
			1	24	24.88	24.79	24.74
			12	0	23.84	23.82	23.74
			12	7	23.89	23.82	23.76
			12	13	23.85	23.84	23.74
			25	0	23.91	23.87	23.73
		16QAM	1	0	23.97	24.10	23.94
			1	12	23.98	24.22	23.99
			1	24	24.07	24.04	23.74
			12	0	22.85	22.80	22.71
			12	7	22.92	22.83	22.64
			12	13	22.81	22.83	22.61
			25	0	22.95	22.83	22.71
		64QAM	1	0	22.98	23.06	23.06
			1	12	23.09	23.43	22.85
			1	24	23.10	23.11	22.83
			12	0	21.89	21.85	21.59
			12	7	21.97	21.86	21.63
			12	13	21.92	21.87	21.62
			25	0	21.74	21.85	21.56
		256QAM	1	0	19.83	20.02	19.65
			1	12	20.26	19.98	19.72
			1	24	20.20	20.08	19.59
			12	0	19.85	19.77	19.69
			12	7	19.77	19.69	19.58
			12	13	19.76	19.75	19.62
			25	0	19.79	19.80	19.58
	10	QPSK	1	0	24.98	24.85	24.88
			1	25	24.88	24.75	24.71
			1	49	24.93	24.85	24.88
			25	0	23.97	23.87	23.88
			25	12	23.93	23.79	23.88
			25	25	23.90	23.81	23.84
			50	0	23.95	23.89	23.88
		16QAM	1	0	24.27	24.08	23.87
			1	25	24.13	23.89	23.67
			1	49	24.13	24.15	23.71
			25	0	22.92	22.97	22.90
			25	12	22.96	22.85	22.83
			25	25	22.90	22.88	22.89
			50	0	22.93	22.84	22.90
		64QAM	1	0	22.88	22.97	22.92
			1	25	23.07	22.90	22.90
			1	49	23.12	23.06	22.93
			25	0	21.84	21.81	21.90
			25	12	21.83	21.84	21.75
			25	25	21.87	21.85	21.80
			50	0	21.94	21.78	21.87
		256QAM	1	0	19.94	20.03	19.91
			1	25	19.99	19.81	19.90
			1	49	19.95	19.98	19.73
			25	0	19.88	19.83	19.78
			25	12	19.87	19.79	19.77
			25	25	19.88	19.80	19.81
			50	0	19.82	19.80	19.69

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	15	QPSK	1	0	25.03	24.86	25.02
			1	36	24.92	24.86	24.85
			1	74	24.93	24.91	24.91
			36	0	24.00	23.83	24.00
			36	18	23.97	23.86	24.00
			36	37	23.96	23.86	23.98
			75	0	23.95	23.85	23.98
		16QAM	1	0	24.27	24.15	24.44
			1	36	24.16	24.15	23.87
			1	74	24.10	23.99	24.08
			36	0	22.93	22.94	23.04
			36	18	22.88	22.91	23.02
			36	37	22.85	22.90	22.91
			75	0	22.89	22.83	23.01
		64QAM	1	0	23.00	23.01	22.93
			1	36	23.03	23.01	23.00
			1	74	23.24	22.96	23.21
			36	0	21.92	21.84	21.98
			36	18	22.00	21.90	21.96
			36	37	21.90	21.86	21.97
			75	0	21.87	21.76	21.93
		256QAM	1	0	20.16	19.87	20.01
			1	36	19.99	19.90	19.97
			1	74	20.14	20.05	20.14
			36	0	19.86	19.81	19.89
			36	18	19.88	19.88	19.92
			36	37	19.95	19.76	19.95
			75	0	19.87	19.75	19.84
	20	QPSK	1	0	24.84	24.87	25.06
			1	49	24.46	24.90	25.15
			1	99	24.81	24.80	24.98
			50	0	23.90	23.94	24.13
			50	24	23.85	23.86	24.06
			50	50	23.83	23.85	24.05
			100	0	23.85	23.84	24.08
		16QAM	1	0	23.95	24.26	24.44
			1	49	23.92	23.92	24.46
			1	99	24.06	24.14	24.31
			50	0	22.89	22.89	23.10
			50	24	22.87	22.86	23.13
			50	50	22.78	22.81	23.06
			100	0	22.84	22.87	23.12
		64QAM	1	0	22.90	22.90	23.17
			1	49	22.94	22.96	23.25
			1	99	22.95	23.02	23.35
			50	0	21.84	21.84	22.07
			50	24	21.80	21.86	22.06
			50	50	21.88	21.90	22.05
			100	0	21.73	21.80	21.99
		256QAM	1	0	20.02	19.86	20.15
			1	49	19.87	19.84	20.03
			1	99	19.74	20.05	19.97
			50	0	19.74	19.75	19.95
			50	24	19.69	19.70	19.95
			50	50	19.77	19.72	19.93
			100	0	19.72	19.80	19.98

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 5	1.4	QPSK	1	0	23.87	23.74	23.62
			1	3	23.81	23.65	23.51
			1	5	23.94	23.74	23.61
			3	0	23.89	23.79	23.58
			3	1	23.83	23.66	23.52
			3	3	23.89	23.72	23.56
			6	0	22.91	22.84	22.60
		16QAM	1	0	23.26	23.00	22.86
			1	3	22.97	22.98	22.64
			1	5	23.25	22.99	22.77
			3	0	22.94	22.91	22.72
			3	1	22.92	22.87	22.63
			3	3	22.98	22.91	22.62
			6	0	22.00	21.89	21.74
		64QAM	1	0	21.99	22.00	21.89
			1	3	21.89	21.96	21.81
			1	5	21.95	22.11	21.75
			3	0	21.94	21.78	21.68
			3	1	21.88	21.98	21.66
			3	3	21.96	21.81	21.67
			6	0	20.98	20.81	20.66
		256QAM	1	0	19.11	18.97	18.73
			1	3	19.01	18.80	18.72
			1	5	18.95	18.90	18.83
			3	0	19.02	18.78	18.70
			3	1	19.08	18.80	18.66
			3	3	18.98	18.91	18.66
			6	0	18.99	18.90	18.69
	3	QPSK	1	0	23.85	23.71	23.59
			1	8	23.87	23.70	23.51
			1	14	23.97	23.71	23.57
			8	0	22.97	22.91	22.69
			8	4	22.92	22.83	22.60
			8	7	23.00	22.90	22.69
			15	0	23.06	22.94	22.74
		16QAM	1	0	23.21	23.02	22.85
			1	8	23.16	22.96	22.73
			1	14	23.16	22.93	22.80
			8	0	22.12	21.91	21.73
			8	4	22.06	21.92	21.69
			8	7	22.05	21.93	21.78
			15	0	22.06	21.89	21.86
		64QAM	1	0	22.24	22.15	21.76
			1	8	22.05	22.04	21.75
			1	14	22.26	22.07	21.84
			8	0	21.11	20.96	20.76
			8	4	21.04	20.95	20.73
			8	7	21.11	20.90	20.77
			15	0	21.11	20.93	20.73
		256QAM	1	0	19.01	18.96	18.80
			1	8	19.02	18.85	18.82
			1	14	19.03	18.84	18.80
			8	0	19.06	18.88	18.79
			8	4	19.07	19.00	18.69
			8	7	19.02	18.90	18.73
			15	0	18.99	18.82	18.73

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 5	5	QPSK	1	0	23.85	23.73	23.64
			1	12	23.97	23.77	23.66
			1	24	23.85	23.76	23.62
			12	0	22.99	22.91	22.74
			12	7	23.00	22.88	22.69
			12	13	22.96	22.87	22.69
			25	0	23.01	22.99	22.81
		16QAM	1	0	23.33	23.19	22.85
			1	12	23.00	22.99	22.80
			1	24	23.02	23.00	22.74
			12	0	22.08	21.97	21.85
			12	7	22.05	21.94	21.75
			12	13	22.04	21.87	21.74
			25	0	22.02	21.93	21.80
		64QAM	1	0	22.24	21.99	21.99
			1	12	22.08	21.73	21.81
			1	24	22.19	22.04	21.83
			12	0	21.07	20.94	20.76
			12	7	21.08	20.90	20.75
			12	13	21.05	20.95	20.72
			25	0	21.01	20.89	20.76
		256QAM	1	0	18.97	18.91	18.74
			1	12	19.12	18.91	18.78
			1	24	19.05	18.86	18.80
			12	0	19.05	18.85	18.77
			12	7	18.94	18.90	18.70
			12	13	19.05	18.97	18.74
			25	0	19.00	18.83	18.71
	10	QPSK	1	0	23.93	23.85	23.71
			1	25	23.72	23.66	23.55
			1	49	23.91	23.80	23.66
			25	0	23.02	22.94	22.86
			25	12	23.03	23.00	22.83
			25	25	23.00	22.95	22.84
			50	0	23.16	22.98	22.91
		16QAM	1	0	23.12	23.14	23.02
			1	25	23.13	23.04	22.91
			1	49	23.12	23.10	22.81
			25	0	22.10	21.94	21.86
			25	12	22.05	21.95	21.77
			25	25	22.04	21.93	21.79
			50	0	22.08	22.00	21.87
		64QAM	1	0	22.14	22.08	22.06
			1	25	21.97	22.01	21.85
			1	49	22.16	22.12	21.91
			25	0	21.10	20.92	20.86
			25	12	21.04	20.93	20.78
			25	25	21.04	20.91	20.77
			50	0	21.07	20.93	20.82
		256QAM	1	0	19.20	18.94	19.02
			1	25	19.09	18.88	18.74
			1	49	19.16	18.99	18.89
			25	0	19.06	18.93	18.82
			25	12	19.03	18.95	18.76
			25	25	19.02	18.92	18.77
			50	0	18.99	18.97	18.78

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 7	5	QPSK	1	0	23.45	23.18	23.16
			1	12	23.42	23.23	23.09
			1	24	23.43	23.28	23.16
			12	0	22.48	22.31	22.31
			12	7	22.43	22.39	22.31
			12	13	22.44	22.34	22.23
			25	0	22.47	22.35	22.34
		16QAM	1	0	22.40	22.39	22.36
			1	12	22.43	22.48	22.39
			1	24	22.42	22.43	22.42
			12	0	21.47	21.44	21.38
			12	7	21.42	21.45	21.36
			12	13	21.42	21.46	21.28
			25	0	21.41	21.27	21.26
		64QAM	1	0	21.41	21.36	21.40
			1	12	21.36	21.39	21.38
			1	24	21.41	21.44	21.33
			12	0	20.47	20.37	20.38
			12	7	20.45	20.37	20.35
			12	13	20.41	20.36	20.34
			25	0	20.48	20.33	20.32
		256QAM	1	0	18.42	18.41	18.45
			1	12	18.43	18.42	18.37
			1	24	18.46	18.39	18.18
			12	0	18.46	18.35	18.22
			12	7	18.45	18.34	18.22
			12	13	18.46	18.33	18.15
			25	0	18.40	18.26	18.25
	10	QPSK	1	0	23.45	23.25	23.08
			1	25	23.44	23.18	23.10
			1	49	23.43	23.27	23.19
			25	0	22.48	22.42	22.40
			25	12	22.45	22.41	22.38
			25	25	22.33	22.32	22.39
			50	0	22.46	22.44	22.36
		16QAM	1	0	22.38	22.43	22.42
			1	25	22.42	22.49	22.37
			1	49	22.39	22.39	22.39
			25	0	21.47	21.44	21.43
			25	12	21.46	21.38	21.39
			25	25	21.42	21.39	21.39
			50	0	21.35	21.45	21.41
		64QAM	1	0	21.41	21.40	21.44
			1	25	21.46	21.40	21.38
			1	49	21.40	21.49	21.49
			25	0	20.46	20.35	20.39
			25	12	20.44	20.38	20.36
			25	25	20.42	20.33	20.28
			50	0	20.34	20.39	20.40
		256QAM	1	0	18.42	18.36	18.47
			1	25	18.40	18.39	18.31
			1	49	18.48	18.47	18.37
			25	0	18.46	18.31	18.33
			25	12	18.43	18.31	18.33
			25	25	18.40	18.33	18.31
			50	0	18.38	18.29	18.27

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 7	15	QPSK	1	0	23.35	23.27	23.31
			1	36	23.36	23.21	23.24
			1	74	23.47	23.30	23.35
			36	0	22.44	22.40	22.48
			36	18	22.46	22.42	22.41
			36	37	22.42	22.43	22.46
			75	0	22.45	22.43	22.45
		16QAM	1	0	22.38	22.42	22.42
			1	36	22.41	22.47	22.47
			1	74	22.47	22.40	22.33
			36	0	21.39	21.46	21.46
			36	18	21.40	21.39	21.34
			36	37	21.43	21.39	21.39
			75	0	21.47	21.39	21.42
		64QAM	1	0	21.40	21.36	21.35
			1	36	21.44	21.43	21.44
			1	74	21.41	21.45	21.46
			36	0	20.44	20.42	20.41
			36	18	20.43	20.40	20.42
			36	37	20.45	20.41	20.42
			75	0	20.40	20.32	20.42
		256QAM	1	0	18.38	18.42	18.33
			1	36	18.39	18.31	18.40
			1	74	18.45	18.36	18.41
			36	0	18.38	18.39	18.39
			36	18	18.42	18.33	18.37
			36	37	18.38	18.27	18.36
			75	0	18.34	18.31	18.30
	20	QPSK	1	0	23.48	23.34	23.41
			1	49	23.41	23.26	23.32
			1	99	23.43	23.21	23.26
			50	0	22.45	22.42	22.37
			50	24	22.35	22.41	22.40
			50	50	22.41	22.35	22.34
			100	0	22.43	22.40	22.38
		16QAM	1	0	22.41	22.44	22.44
			1	49	22.40	22.40	22.40
			1	99	22.42	22.40	22.44
			50	0	21.34	21.45	21.46
			50	24	21.33	21.41	21.40
			50	50	21.24	21.35	21.45
			100	0	21.29	21.36	21.46
		64QAM	1	0	21.46	21.41	21.45
			1	49	21.26	21.39	21.39
			1	99	21.30	21.43	21.41
			50	0	20.33	20.45	20.29
			50	24	20.31	20.38	20.45
			50	50	20.34	20.36	20.44
			100	0	20.35	20.33	20.40
		256QAM	1	0	18.37	18.28	18.33
			1	49	18.38	18.45	18.43
			1	99	18.43	18.33	18.43
			50	0	18.43	18.30	18.37
			50	24	18.42	18.28	18.32
			50	50	18.41	18.22	18.34
			100	0	18.42	18.32	18.34

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 12	1.4	QPSK	1	0	23.79	23.84	23.75
			1	3	23.71	23.70	23.69
			1	5	23.82	23.82	23.75
			3	0	23.86	23.88	23.83
			3	1	23.74	23.73	23.69
			3	3	23.78	23.77	23.71
			6	0	22.85	22.89	22.82
		16QAM	1	0	23.06	23.03	23.08
			1	3	22.89	22.79	22.90
			1	5	23.01	23.07	23.09
			3	0	22.92	22.86	22.77
			3	1	22.91	23.07	22.80
			3	3	22.97	22.96	22.85
			6	0	21.95	21.85	21.78
		64QAM	1	0	21.96	22.02	22.03
			1	3	21.97	21.97	21.78
			1	5	22.11	21.99	21.92
			3	0	21.92	21.90	21.76
			3	1	21.87	21.87	21.85
			3	3	21.88	21.84	21.88
			6	0	20.84	20.82	20.80
		256QAM	1	0	19.00	18.96	18.90
			1	3	18.78	18.86	18.79
			1	5	18.87	18.95	18.98
			3	0	18.78	18.79	18.86
			3	1	18.82	18.82	18.84
			3	3	18.77	18.75	18.77
			6	0	18.86	18.87	18.75
	3	QPSK	1	0	23.82	23.82	23.86
			1	8	23.71	23.71	23.73
			1	14	23.73	23.77	23.80
			8	0	22.89	22.92	22.91
			8	4	22.80	22.96	22.90
			8	7	22.92	22.92	22.91
			15	0	22.93	22.94	22.91
		16QAM	1	0	23.03	23.24	23.16
			1	8	22.94	23.08	23.02
			1	14	22.91	23.16	23.02
			8	0	21.83	21.93	21.93
			8	4	21.83	21.91	21.91
			8	7	21.88	21.98	21.94
			15	0	21.90	21.88	21.89
		64QAM	1	0	21.99	21.99	22.04
			1	8	22.01	21.98	21.82
			1	14	22.01	21.98	21.95
			8	0	20.91	20.91	20.85
			8	4	20.90	20.90	20.85
			8	7	20.90	21.00	20.84
			15	0	20.92	20.90	20.83
		256QAM	1	0	18.89	18.96	18.96
			1	8	18.72	18.91	18.84
			1	14	18.99	18.99	18.84
			8	0	18.85	18.93	18.83
			8	4	18.89	18.84	18.81
			8	7	18.86	18.82	18.81
			15	0	18.80	18.84	18.78

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 12	5	QPSK	1	0	23.84	23.90	23.90
			1	12	23.86	23.90	23.84
			1	24	23.75	23.89	23.79
			12	0	22.92	22.95	22.86
			12	7	22.93	22.92	22.91
			12	13	22.91	22.88	22.91
			25	0	23.02	23.00	22.96
		16QAM	1	0	23.13	23.09	23.01
			1	12	22.91	22.92	22.98
			1	24	23.06	23.00	23.01
			12	0	22.02	22.00	21.96
			12	7	21.97	21.94	21.86
			12	13	21.88	21.91	21.85
			25	0	21.92	21.98	21.89
		64QAM	1	0	22.07	22.02	22.08
			1	12	22.07	21.99	22.05
			1	24	21.98	21.96	22.01
			12	0	20.94	20.92	20.95
			12	7	20.92	20.95	20.86
			12	13	20.87	20.84	20.86
			25	0	20.87	20.95	20.81
		256QAM	1	0	18.93	19.10	18.89
			1	12	18.98	19.06	18.91
			1	24	18.90	18.88	18.95
			12	0	18.87	18.91	18.84
			12	7	18.80	18.82	18.87
			12	13	18.82	18.83	18.88
			25	0	18.95	18.87	18.88
	10	QPSK	1	0	23.88	23.95	23.91
			1	25	23.62	23.76	23.63
			1	49	23.80	23.75	23.78
			25	0	22.99	23.06	22.97
			25	12	23.00	22.95	23.00
			25	25	22.96	22.98	23.01
			50	0	22.99	23.02	23.01
		16QAM	1	0	23.24	23.19	23.22
			1	25	22.89	23.03	23.00
			1	49	22.95	23.02	23.00
			25	0	21.95	22.02	21.95
			25	12	21.93	21.96	21.92
			25	25	21.92	21.94	21.86
			50	0	21.93	21.93	21.95
		64QAM	1	0	22.22	22.23	22.07
			1	25	21.96	22.01	21.91
			1	49	21.95	22.06	21.89
			25	0	20.97	21.00	20.94
			25	12	20.90	20.94	20.92
			25	25	20.89	20.90	20.89
			50	0	20.91	20.92	20.94
		256QAM	1	0	19.04	19.03	18.98
			1	25	18.90	18.92	18.86
			1	49	18.97	18.90	18.92
			25	0	18.95	18.98	18.86
			25	12	18.90	18.96	18.89
			25	25	18.89	18.90	18.84
			50	0	18.93	18.90	18.88

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 13	5	QPSK	1	0	24.74	24.79	23.75
			1	12	24.79	24.84	24.81
			1	24	24.80	24.78	24.72
			12	0	23.86	23.87	23.81
			12	7	23.81	23.86	23.76
			12	13	23.85	23.85	23.80
			25	0	23.99	23.94	23.89
		16QAM	1	0	23.98	23.96	24.02
			1	12	23.95	23.98	24.00
			1	24	23.92	23.86	23.97
			12	0	22.88	22.87	22.81
			12	7	22.92	22.86	22.80
			12	13	22.88	22.83	22.76
			25	0	23.02	22.98	22.89
		64QAM	1	0	22.93	23.13	23.10
			1	12	22.96	23.05	23.02
			1	24	23.04	22.98	22.89
			12	0	21.83	21.86	21.83
			12	7	21.88	21.80	21.86
			12	13	21.92	21.87	21.84
			25	0	21.87	21.83	21.83
		256QAM	1	0	19.86	20.02	20.03
			1	12	20.01	19.95	19.89
			1	24	19.96	19.84	19.77
			12	0	19.93	19.85	19.79
			12	7	19.82	19.88	19.86
			12	13	19.88	19.79	19.78
			25	0	19.88	19.87	19.79
	10	QPSK	1	0	-	24.80	-
			1	25	-	24.53	-
			1	49	-	24.68	-
			25	0	-	23.97	-
			25	12	-	23.89	-
			25	25	-	23.90	-
			50	0	-	23.96	-
		16QAM	1	0	-	24.00	-
			1	25	-	23.88	-
			1	49	-	24.01	-
			25	0	-	22.93	-
			25	12	-	22.91	-
			25	25	-	22.87	-
			50	0	-	22.92	-
		64QAM	1	0	-	22.93	-
			1	25	-	22.86	-
			1	49	-	22.83	-
			25	0	-	21.88	-
			25	12	-	21.87	-
			25	25	-	21.78	-
			50	0	-	21.95	-
		256QAM	1	0	-	19.97	-
			1	25	-	19.78	-
			1	49	-	19.90	-
			25	0	-	19.85	-
			25	12	-	19.85	-
			25	25	-	19.84	-
			50	0	-	19.83	-

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 25	1.4	QPSK	1	0	24.78	24.51	24.86
			1	3	24.57	24.39	24.67
			1	5	24.79	24.50	24.91
			3	0	24.84	24.57	24.85
			3	1	24.76	24.50	24.83
			3	3	24.69	24.32	24.82
			6	0	23.96	23.69	24.05
		16QAM	1	0	23.88	23.68	23.90
			1	3	23.81	23.63	23.88
			1	5	24.04	23.77	23.95
			3	0	24.00	23.78	24.20
			3	1	24.05	23.68	24.05
			3	3	23.91	23.60	24.08
			6	0	23.03	22.71	23.18
		64QAM	1	0	23.03	22.81	22.99
			1	3	22.91	22.74	22.97
			1	5	22.94	22.77	23.08
			3	0	22.92	22.82	22.99
			3	1	22.99	22.65	23.08
			3	3	22.91	22.61	22.92
			6	0	21.94	21.69	21.96
		256QAM	1	0	20.10	19.63	20.12
			1	3	20.09	19.82	19.93
			1	5	20.01	19.62	20.02
			3	0	19.85	19.42	20.08
			3	1	19.96	19.64	20.06
			3	3	19.94	19.68	20.11
			6	0	19.83	19.54	19.96
	3	QPSK	1	0	24.78	24.61	24.92
			1	8	24.69	24.47	24.78
			1	14	24.76	24.54	24.66
			8	0	24.04	23.71	24.07
			8	4	23.99	23.62	24.03
			8	7	24.03	23.68	24.08
			15	0	23.96	23.66	24.07
		16QAM	1	0	24.24	23.86	24.09
			1	8	24.02	23.77	24.01
			1	14	24.18	23.86	24.02
			8	0	23.09	22.66	23.14
			8	4	23.07	22.64	23.13
			8	7	23.07	22.67	23.08
			15	0	22.97	22.71	23.11
		64QAM	1	0	22.92	22.86	23.20
			1	8	23.01	22.66	22.92
			1	14	22.95	22.68	23.03
			8	0	21.94	21.64	22.06
			8	4	22.01	21.61	22.06
			8	7	21.91	21.69	22.08
			15	0	21.98	21.61	22.07
		256QAM	1	0	20.15	19.79	20.02
			1	8	19.91	19.72	20.05
			1	14	20.09	19.83	20.06
			8	0	19.94	19.73	20.15
			8	4	19.85	19.59	19.99
			8	7	19.99	19.67	20.00
			15	0	19.89	19.58	19.96

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 25	5	QPSK	1	0	24.79	24.45	24.83
			1	12	24.86	24.55	24.84
			1	24	24.76	24.50	24.64
			12	0	23.98	23.67	24.08
			12	7	23.94	23.71	24.10
			12	13	23.99	23.73	24.07
			25	0	23.97	23.66	24.11
		16QAM	1	0	24.13	23.90	24.12
			1	12	24.25	24.01	24.32
			1	24	24.17	23.85	24.13
			12	0	22.96	22.66	23.07
			12	7	22.94	22.65	23.02
			12	13	22.91	22.69	23.01
			25	0	23.01	22.65	23.13
		64QAM	1	0	23.07	22.89	23.01
			1	12	23.22	22.82	23.36
			1	24	23.15	22.97	23.19
			12	0	21.95	21.72	22.02
			12	7	21.99	21.67	22.09
			12	13	21.95	21.80	22.04
			25	0	21.94	21.65	22.04
		256QAM	1	0	20.04	19.84	20.22
			1	12	20.02	19.88	20.32
			1	24	19.94	19.84	19.86
			12	0	19.85	19.70	20.07
			12	7	19.76	19.66	20.05
			12	13	19.83	19.60	20.07
			25	0	19.87	19.65	20.05
	10	QPSK	1	0	24.92	24.55	24.81
			1	25	24.67	24.45	24.73
			1	49	24.73	24.52	24.73
			25	0	24.03	23.77	24.04
			25	12	23.95	23.76	24.03
			25	25	23.98	23.73	24.04
			50	0	24.01	23.70	24.03
		16QAM	1	0	24.07	23.91	24.08
			1	25	23.99	23.76	23.94
			1	49	24.14	23.81	23.97
			25	0	22.99	22.76	23.08
			25	12	22.95	22.74	22.99
			25	25	22.98	22.72	22.99
			50	0	23.02	22.76	23.09
		64QAM	1	0	23.01	22.95	23.17
			1	25	22.82	22.61	23.10
			1	49	23.14	22.82	23.04
			25	0	21.94	21.69	22.01
			25	12	21.84	21.63	22.05
			25	25	21.78	21.67	22.04
			50	0	21.94	21.62	22.04
		256QAM	1	0	20.02	19.85	20.09
			1	25	19.97	19.69	20.03
			1	49	20.11	19.74	19.87
			25	0	19.85	19.72	20.01
			25	12	19.77	19.65	19.97
			25	25	19.89	19.63	19.98
			50	0	19.86	19.62	19.98

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 25	15	QPSK	1	0	24.78	24.60	24.75
			1	36	24.74	24.42	24.67
			1	74	24.83	24.44	24.69
			36	0	24.03	23.80	24.01
			36	18	23.97	23.73	24.06
			36	37	24.02	23.83	24.04
			75	0	24.02	23.79	24.05
		16QAM	1	0	24.06	24.14	24.41
			1	36	23.93	23.72	24.18
			1	74	24.04	23.77	24.18
			36	0	23.06	22.83	23.08
			36	18	22.96	22.75	23.02
			36	37	23.00	22.77	23.02
			75	0	23.02	22.78	23.00
		64QAM	1	0	23.01	22.91	23.16
			1	36	23.15	22.79	23.08
			1	74	23.29	22.83	23.07
			36	0	21.94	21.76	21.94
			36	18	21.92	21.71	21.99
			36	37	21.96	21.81	21.98
			75	0	21.86	21.63	21.99
		256QAM	1	0	20.12	19.52	20.05
			1	36	19.81	19.60	20.14
			1	74	20.16	19.66	20.06
			36	0	19.93	19.74	19.98
			36	18	19.90	19.65	19.91
			36	37	19.91	19.69	19.98
			75	0	19.78	19.71	19.88
	20	QPSK	1	0	24.77	24.61	24.78
			1	49	24.50	24.56	25.03
			1	99	24.76	24.48	24.79
			50	0	24.06	23.80	24.10
			50	24	24.05	23.77	24.00
			50	50	24.01	23.73	24.01
			100	0	23.99	23.73	24.00
		16QAM	1	0	23.90	24.32	24.34
			1	49	24.37	24.44	24.42
			1	99	23.80	24.05	24.33
			50	0	23.00	22.79	23.01
			50	24	23.07	22.80	23.02
			50	50	22.97	22.73	22.94
			100	0	23.02	22.80	23.04
		64QAM	1	0	22.92	22.95	22.99
			1	49	23.18	23.04	22.95
			1	99	23.09	22.74	22.85
			50	0	21.84	21.73	21.97
			50	24	21.94	21.72	21.94
			50	50	21.91	21.72	21.94
			100	0	21.81	21.68	21.85
		256QAM	1	0	19.80	19.98	19.90
			1	49	19.62	19.80	20.25
			1	99	19.99	19.62	19.84
			50	0	19.90	19.69	19.87
			50	24	19.81	19.66	19.81
			50	50	19.84	19.59	19.82
			100	0	19.81	19.68	19.83

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 26	1.4	QPSK	1	0	23.48	23.54	23.37
			1	3	23.44	23.49	23.25
			1	5	23.54	23.48	23.39
			3	0	23.58	23.68	23.42
			3	1	23.52	23.55	23.24
			3	3	23.55	23.64	23.29
			6	0	22.70	22.66	22.41
		16QAM	1	0	22.82	22.79	22.64
			1	3	22.70	22.70	22.56
			1	5	22.81	22.85	22.61
			3	0	22.78	22.79	22.44
			3	1	22.77	22.82	22.36
			3	3	22.70	22.73	22.37
			6	0	21.72	21.72	21.45
		64QAM	1	0	21.82	21.78	21.55
			1	3	21.81	21.82	21.50
			1	5	21.83	21.87	21.57
			3	0	21.77	21.63	21.42
			3	1	21.77	21.76	21.47
			3	3	21.60	21.80	21.47
			6	0	20.70	20.63	20.45
		256QAM	1	0	18.75	18.91	18.45
			1	3	18.72	18.72	18.44
			1	5	18.75	18.71	18.47
			3	0	18.79	18.73	18.45
			3	1	18.70	18.80	18.46
			3	3	18.80	18.66	18.42
			6	0	18.65	18.73	18.44
	3	QPSK	1	0	23.53	23.52	23.42
			1	8	23.50	23.52	23.30
			1	14	23.56	23.62	23.36
			8	0	22.78	22.74	22.45
			8	4	22.71	22.58	22.40
			8	7	22.70	22.69	22.46
			15	0	22.79	22.76	22.55
		16QAM	1	0	22.90	22.89	22.72
			1	8	22.67	22.66	22.55
			1	14	22.98	22.90	22.67
			8	0	21.78	21.79	21.52
			8	4	21.75	21.75	21.53
			8	7	21.79	21.81	21.49
			15	0	21.69	21.75	21.56
		64QAM	1	0	21.79	21.80	21.60
			1	8	21.74	21.82	21.54
			1	14	21.92	21.92	21.47
			8	0	20.65	20.66	20.55
			8	4	20.75	20.73	20.44
			8	7	20.80	20.76	20.54
			15	0	20.77	20.72	20.55
		256QAM	1	0	18.88	18.77	18.57
			1	8	18.67	18.77	18.41
			1	14	18.73	18.74	18.51
			8	0	18.75	18.78	18.52
			8	4	18.68	18.74	18.49
			8	7	18.64	18.74	18.49
			15	0	18.71	18.76	18.45

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 26	5	QPSK	1	0	23.68	23.53	23.46
			1	12	23.54	23.56	23.38
			1	24	23.60	23.55	23.40
			12	0	22.82	22.73	22.48
			12	7	22.73	22.62	22.46
			12	13	22.79	22.63	22.40
			25	0	22.66	22.65	22.52
		16QAM	1	0	22.93	22.77	22.68
			1	12	22.60	22.53	22.67
			1	24	22.70	22.62	22.59
			12	0	21.82	21.64	21.58
			12	7	21.76	21.75	21.51
			12	13	21.88	21.60	21.53
			25	0	21.85	21.63	21.55
		64QAM	1	0	21.96	21.80	21.69
			1	12	21.76	21.74	21.62
			1	24	21.78	21.67	21.69
			12	0	20.77	20.69	20.55
			12	7	20.73	20.73	20.50
			12	13	20.63	20.72	20.60
			25	0	20.82	20.64	20.55
		256QAM	1	0	18.85	18.78	18.63
			1	12	18.80	18.72	18.46
			1	24	18.85	18.80	18.64
			12	0	18.81	18.57	18.46
			12	7	18.78	18.60	18.50
			12	13	18.68	18.64	18.56
			25	0	18.69	18.72	18.51
	10	QPSK	1	0	23.81	23.76	23.52
			1	25	23.60	23.58	23.33
			1	49	23.58	23.51	23.41
			25	0	22.81	22.91	22.60
			25	12	22.87	22.81	22.60
			25	25	22.85	22.79	22.55
			50	0	22.79	22.87	22.65
		16QAM	1	0	22.93	22.98	22.74
			1	25	22.77	22.85	22.75
			1	49	22.77	22.77	22.72
			25	0	21.92	21.87	21.54
			25	12	21.75	21.71	21.54
			25	25	21.78	21.78	21.60
			50	0	21.82	21.89	21.62
		64QAM	1	0	21.86	21.90	21.66
			1	25	21.63	21.68	21.56
			1	49	21.85	21.88	21.55
			25	0	20.81	20.85	20.57
			25	12	20.83	20.87	20.57
			25	25	20.72	20.67	20.59
			50	0	20.79	20.75	20.54
		256QAM	1	0	18.79	18.78	18.67
			1	25	18.76	18.84	18.41
			1	49	18.83	18.92	18.62
			25	0	18.76	18.75	18.56
			25	12	18.76	18.74	18.51
			25	25	18.73	18.75	18.56
			50	0	18.78	18.65	18.54

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 26	15	QPSK	1	0	23.72	23.68	23.63
			1	36	23.60	23.66	23.41
			1	74	23.64	23.69	23.47
			36	0	22.85	22.83	22.67
			36	18	22.78	22.82	22.63
			36	37	22.70	22.72	22.64
			75	0	22.83	22.89	22.61
		16QAM	1	0	22.98	22.94	22.69
			1	36	22.85	22.84	22.64
			1	74	22.80	22.76	22.57
			36	0	21.83	21.79	21.66
			36	18	21.74	21.75	21.67
			36	37	21.81	21.84	21.56
			75	0	21.73	21.71	21.62
		64QAM	1	0	22.09	22.18	21.76
			1	36	21.78	21.73	21.69
			1	74	21.82	21.76	21.68
			36	0	20.84	20.84	20.69
			36	18	20.86	20.94	20.56
			36	37	20.78	20.72	20.64
			75	0	20.85	20.90	20.65
		256QAM	1	0	19.05	19.08	18.68
			1	36	18.69	18.72	18.55
			1	74	18.86	18.96	18.53
			36	0	18.85	18.77	18.62
			36	18	18.76	18.85	18.59
			36	37	18.77	18.76	18.57
			75	0	18.79	18.78	18.61

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 30	5	QPSK	1	0	22.83	22.82	22.33
			1	12	22.98	22.51	22.52
			1	24	22.79	22.81	22.28
			12	0	21.90	21.98	21.42
			12	7	21.87	21.96	21.47
			12	13	21.93	21.97	21.51
			25	0	21.93	21.96	21.48
		16QAM	1	0	21.61	21.69	21.67
			1	12	21.81	21.69	21.58
			1	24	21.51	21.60	21.64
			12	0	20.99	20.57	20.59
			12	7	20.56	20.98	20.56
			12	13	21.00	20.95	20.52
			25	0	20.98	20.53	20.44
		64QAM	1	0	20.71	20.64	20.73
			1	12	20.82	20.76	20.71
			1	24	20.97	20.60	20.64
			12	0	19.56	19.97	19.49
			12	7	19.97	19.52	19.50
			12	13	19.96	19.54	19.49
			25	0	19.98	19.94	19.44
		256QAM	1	0	17.51	17.74	17.62
			1	12	17.74	17.67	17.68
			1	24	17.99	17.11	17.73
			12	0	17.92	17.88	17.37
			12	7	17.92	17.88	17.40
			12	13	17.88	17.82	17.35
			25	0	17.90	17.86	17.37
	10	QPSK	1	0	-	22.86	-
			1	25	-	22.69	-
			1	49	-	22.84	-
			25	0	-	21.94	-
			25	12	-	21.86	-
			25	25	-	21.89	-
			50	0	-	21.93	-
		16QAM	1	0	-	21.25	-
			1	25	-	22.00	-
			1	49	-	21.66	-
			25	0	-	21.00	-
			25	12	-	20.99	-
			25	25	-	20.94	-
			50	0	-	20.86	-
		64QAM	1	0	-	20.77	-
			1	25	-	20.75	-
			1	49	-	20.65	-
			25	0	-	19.97	-
			25	12	-	19.93	-
			25	25	-	19.89	-
			50	0	-	19.88	-
		256QAM	1	0	-	17.00	-
			1	25	-	18.00	-
			1	49	-	17.75	-
			25	0	-	17.95	-
			25	12	-	17.89	-
			25	25	-	17.87	-
			50	0	-	17.87	-

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 40(L)	5	QPSK	1	0	22.97	23.12	23.08
			1	12	23.10	23.12	23.22
			1	24	23.15	23.18	23.12
			12	0	22.30	22.25	22.20
			12	7	22.18	22.19	22.19
			12	13	22.28	22.24	22.18
			25	0	22.27	22.28	22.36
		16QAM	1	0	22.38	22.48	22.41
			1	12	22.07	22.14	22.17
			1	24	22.14	22.21	22.29
			12	0	21.26	21.21	21.24
			12	7	21.09	21.25	21.29
			12	13	21.17	21.32	21.14
			25	0	21.24	21.30	21.23
		64QAM	1	0	21.34	21.20	21.34
			1	12	21.28	21.24	21.33
			1	24	21.40	21.28	21.33
			12	0	20.22	20.28	20.27
			12	7	20.18	20.23	20.25
			12	13	20.24	20.18	20.20
			25	0	20.23	20.29	20.24
		256QAM	1	0	18.30	18.22	18.17
			1	12	18.19	18.12	18.18
			1	24	18.12	18.04	17.99
			12	0	18.43	18.37	18.40
			12	7	18.26	18.26	18.34
			12	13	18.24	18.22	18.34
			25	0	18.25	18.32	18.25
	10	QPSK	1	0	-	23.20	-
			1	25	-	23.15	-
			1	49	-	23.12	-
			25	0	-	22.18	-
			25	12	-	22.17	-
			25	25	-	22.14	-
			50	0	-	22.21	-
		16QAM	1	0	-	22.06	-
			1	25	-	22.04	-
			1	49	-	22.02	-
			25	0	-	21.26	-
			25	12	-	21.15	-
			25	25	-	21.18	-
			50	0	-	21.21	-
		64QAM	1	0	-	21.37	-
			1	25	-	21.28	-
			1	49	-	21.35	-
			25	0	-	20.19	-
			25	12	-	20.15	-
			25	25	-	20.14	-
			50	0	-	20.15	-
		256QAM	1	0	-	18.02	-
			1	25	-	18.02	-
			1	49	-	18.11	-
			25	0	-	18.19	-
			25	12	-	18.18	-
			25	25	-	18.15	-
			50	0	-	18.22	-

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 40(U)	5	QPSK	1	0	22.85	22.88	22.75
			1	12	22.88	22.87	22.62
			1	24	22.82	22.90	22.59
			12	0	21.89	21.86	21.61
			12	7	21.88	21.87	21.60
			12	13	21.87	21.94	21.68
			25	0	21.93	21.96	21.59
		16QAM	1	0	21.83	21.82	21.67
			1	12	21.72	21.63	21.52
			1	24	21.67	21.72	21.48
			12	0	20.93	20.99	20.77
			12	7	20.91	20.92	20.68
			12	13	20.90	20.98	20.74
			25	0	20.89	20.89	20.67
		64QAM	1	0	21.06	21.04	20.95
			1	12	21.06	21.03	20.82
			1	24	20.96	21.03	20.90
			12	0	19.91	19.83	19.60
			12	7	19.89	19.93	19.76
			12	13	19.89	19.94	19.71
			25	0	19.91	19.82	19.75
		256QAM	1	0	17.72	17.60	17.59
			1	12	17.72	17.77	17.63
			1	24	17.66	17.61	17.54
			12	0	17.92	17.97	17.75
			12	7	17.89	17.88	17.57
			12	13	17.90	17.84	17.68
			25	0	17.91	17.91	17.68
	10	QPSK	1	0	-	23.05	-
			1	25	-	23.01	-
			1	49	-	22.98	-
			25	0	-	21.99	-
			25	12	-	21.87	-
			25	25	-	21.88	-
			50	0	-	21.92	-
		16QAM	1	0	-	22.15	-
			1	25	-	22.14	-
			1	49	-	22.11	-
			25	0	-	20.98	-
			25	12	-	20.94	-
			25	25	-	20.92	-
			50	0	-	20.89	-
		64QAM	1	0	-	21.02	-
			1	25	-	21.01	-
			1	49	-	21.30	-
			25	0	-	19.88	-
			25	12	-	19.99	-
			25	25	-	19.87	-
			50	0	-	19.88	-
		256QAM	1	0	-	17.41	-
			1	25	-	17.40	-
			1	49	-	17.39	-
			25	0	-	17.82	-
			25	12	-	17.88	-
			25	25	-	17.96	-
			50	0	-	17.94	-

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)			
					Low (FCC)	Low (IC)	Middle	High
LTE Band 41 PC2	5	QPSK	1	0	27.13	27.18	26.82	26.84
			1	12	27.25	27.18	26.76	26.68
			1	24	27.13	27.33	26.84	26.89
			12	0	26.25	26.31	25.89	26.08
			12	7	26.21	26.28	25.87	25.93
			12	13	26.34	26.25	25.88	25.96
			25	0	26.35	26.38	25.88	25.86
		16QAM	1	0	26.29	26.35	25.80	26.32
			1	12	26.47	26.30	25.73	26.16
			1	24	26.38	26.43	25.77	26.30
			12	0	25.29	25.42	24.94	24.88
			12	7	25.20	25.31	24.91	25.04
			12	13	25.27	25.40	24.91	24.84
			25	0	25.22	25.37	24.90	24.93
		64QAM	1	0	25.47	25.44	25.09	25.11
			1	12	25.35	25.36	25.08	25.08
			1	24	25.47	25.48	25.12	25.23
			12	0	24.32	24.24	23.89	24.02
			12	7	24.28	24.46	23.89	23.87
			12	13	24.37	24.40	23.86	23.85
			25	0	24.17	24.35	23.92	23.87
		256QAM	1	0	22.22	22.30	21.70	21.91
			1	12	22.14	22.24	21.66	21.81
			1	24	22.12	22.28	21.64	21.88
			12	0	22.22	22.31	21.88	21.92
			12	7	22.25	22.40	21.84	21.87
			12	13	22.25	22.30	21.84	21.96
			25	0	22.25	22.34	21.86	22.03
	10	QPSK	1	0	27.14	27.01	26.84	26.87
			1	25	27.15	26.69	26.91	26.33
			1	49	27.21	26.93	26.82	25.87
			25	0	26.32	26.03	25.93	25.91
			25	12	26.34	26.11	25.91	25.69
			25	25	26.37	25.96	25.90	25.54
			50	0	26.28	26.17	25.90	25.59
		16QAM	1	0	26.49	26.26	26.10	25.93
			1	25	26.43	26.22	25.97	25.63
			1	49	26.40	26.10	26.06	25.17
			25	0	25.29	25.14	24.91	24.94
			25	12	25.18	25.05	24.88	24.88
			25	25	25.19	24.88	24.87	24.69
			50	0	25.36	24.99	24.91	25.04
		64QAM	1	0	25.44	25.27	25.40	25.13
			1	25	25.46	25.40	25.31	25.13
			1	49	25.21	25.37	25.31	24.63
			25	0	24.24	23.99	23.91	23.97
			25	12	24.24	23.99	23.90	23.92
			25	25	24.35	24.15	23.87	23.85
			50	0	24.25	23.96	23.91	23.89
		256QAM	1	0	22.03	22.33	21.69	21.66
			1	25	22.01	22.11	21.60	21.54
			1	49	21.85	22.28	21.59	21.45
			25	0	22.35	22.02	21.92	22.07
			25	12	22.29	21.83	21.88	22.06
			25	25	22.23	21.81	21.89	21.95
			50	0	22.43	22.01	21.91	22.00

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒) Low (FCC)	Low (IC)	Middle	High
LTE Band 41 PC2	15	QPSK	1	0	27.43	26.96	26.88	26.61
			1	36	27.00	26.93	26.81	26.53
			1	74	27.08	26.86	26.84	25.92
			36	0	26.28	26.20	25.93	25.92
			36	18	26.36	26.29	25.91	25.63
			36	37	26.37	26.18	25.90	25.32
			75	0	26.36	26.14	25.92	25.41
		16QAM	1	0	26.13	25.84	26.11	25.86
			1	36	25.99	25.83	26.03	25.86
			1	74	26.01	26.08	26.07	24.75
			36	0	25.38	25.09	24.92	24.96
			36	18	25.21	25.26	24.88	25.00
			36	37	25.29	25.04	24.86	24.53
			75	0	25.40	25.11	24.89	24.95
		64QAM	1	0	25.30	24.89	25.16	25.07
			1	36	25.41	24.73	25.06	24.99
			1	74	25.45	24.75	25.09	23.99
			36	0	24.27	24.08	23.89	24.04
			36	18	24.26	24.29	23.88	23.93
			36	37	24.24	23.97	23.84	23.75
			75	0	24.40	23.95	23.87	23.97
		256QAM	1	0	22.04	21.92	21.86	21.60
			1	36	21.78	21.27	21.74	21.55
			1	74	21.81	21.58	21.77	21.34
			36	0	22.21	22.07	21.84	21.89
			36	18	22.16	22.11	21.83	21.85
			36	37	22.24	21.91	21.80	21.98
			75	0	22.20	21.91	21.85	21.92
	20	QPSK	1	0	26.79	26.99	26.90	26.91
			1	49	27.15	27.08	26.81	26.41
			1	99	27.18	27.02	26.82	26.04
			50	0	26.23	26.22	25.94	25.97
			50	24	26.33	26.20	25.93	25.69
			50	50	26.32	26.10	25.90	25.24
			100	0	26.37	26.29	25.92	25.62
		16QAM	1	0	25.81	26.18	26.13	25.93
			1	49	26.27	26.36	26.06	25.59
			1	99	26.31	26.16	26.01	24.65
			50	0	25.35	25.27	24.89	25.04
			50	24	25.32	25.25	24.87	25.00
			50	50	25.32	25.19	24.83	24.59
			100	0	25.36	25.24	24.93	25.03
		64QAM	1	0	25.37	25.39	25.07	25.10
			1	49	25.49	25.39	24.99	25.01
			1	99	25.43	25.34	24.95	24.16
			50	0	24.38	24.21	23.96	24.02
			50	24	24.35	24.20	23.93	23.98
			50	50	24.33	24.08	23.88	23.87
			100	0	24.30	24.12	23.89	23.96
		256QAM	1	0	22.14	22.37	21.92	21.62
			1	49	22.13	22.09	21.87	21.56
			1	99	22.07	22.28	21.78	21.42
			50	0	22.36	22.16	21.95	22.03
			50	24	22.36	22.13	21.92	22.00
			50	50	22.34	22.11	21.90	21.95
			100	0	22.26	22.00	22.21	21.91

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)			
					Low (FCC)	Low (IC)	Middle	High
LTE Band 41 PC3	5	QPSK	1	0	24.26	24.23	24.29	24.26
			1	12	24.22	24.21	24.26	24.22
			1	24	24.42	24.33	24.29	24.09
			12	0	23.56	23.30	23.41	23.19
			12	7	23.50	23.32	23.42	23.22
			12	13	23.36	23.50	23.40	23.37
			25	0	23.33	23.33	23.41	23.14
		16QAM	1	0	23.44	23.43	23.45	23.16
			1	12	23.25	23.33	23.23	23.26
			1	24	23.25	23.46	23.31	23.34
			12	0	22.39	22.39	22.37	22.36
			12	7	22.38	22.27	22.39	22.25
			12	13	22.36	22.41	22.35	22.16
			25	0	22.47	22.32	22.36	22.36
		64QAM	1	0	22.45	22.50	22.45	22.26
			1	12	22.44	22.25	22.39	22.38
			1	24	22.49	22.41	22.48	22.37
			12	0	21.47	21.36	21.34	21.12
			12	7	21.24	21.43	21.33	21.31
			12	13	21.34	21.16	21.30	21.06
			25	0	21.26	21.18	21.30	21.22
		256QAM	1	0	19.36	19.26	19.33	19.27
			1	12	19.25	19.13	19.19	18.97
			1	24	19.43	19.33	19.31	19.26
			12	0	19.19	19.26	19.30	19.14
			12	7	19.30	19.27	19.29	19.00
			12	13	19.39	19.22	19.27	19.12
			25	0	19.38	19.14	19.29	19.33
	10	QPSK	1	0	24.42	24.21	24.35	24.17
			1	25	24.12	24.13	24.24	24.04
			1	49	24.38	24.53	24.39	24.36
			25	0	23.42	23.56	23.45	23.34
			25	12	23.29	23.50	23.43	23.20
			25	25	23.38	23.31	23.43	23.46
			50	0	23.52	23.35	23.44	23.18
		16QAM	1	0	23.34	23.43	23.43	23.47
			1	25	23.17	23.41	23.29	23.33
			1	49	23.34	23.30	23.41	23.42
			25	0	22.39	22.40	22.44	22.26
			25	12	22.42	22.41	22.40	22.35
			25	25	22.36	22.44	22.41	22.21
			50	0	22.51	22.25	22.40	22.14
		64QAM	1	0	22.47	22.47	22.58	22.51
			1	25	22.69	22.72	22.57	22.29
			1	49	22.56	22.53	22.55	22.52
			25	0	21.27	21.50	21.40	21.16
			25	12	21.33	21.37	21.37	21.20
			25	25	21.45	21.21	21.35	21.36
			50	0	21.49	21.33	21.39	21.41
		256QAM	1	0	19.18	19.15	19.25	19.04
			1	25	19.16	19.26	19.19	19.10
			1	49	19.10	19.03	19.13	19.00
			25	0	19.42	19.27	19.35	19.29
			25	12	19.19	19.47	19.33	19.22
			25	25	19.32	19.43	19.33	19.10
			50	0	19.47	19.29	19.37	19.20

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)			
					Low (FCC)	Low (IC)	Middle	High
LTE Band 41 PC3	15	QPSK	1	0	24.36	24.51	24.36	24.40
			1	36	24.19	24.20	24.24	24.12
			1	74	24.19	24.23	24.32	24.31
			36	0	23.49	23.49	23.47	23.32
			36	18	23.38	23.52	23.44	23.30
			36	37	23.45	23.53	23.43	23.31
			75	0	23.37	23.58	23.44	23.46
		16QAM	1	0	23.45	23.40	23.54	23.40
			1	36	23.38	23.51	23.48	23.22
			1	74	23.29	23.34	23.42	23.12
			36	0	22.38	22.33	22.44	22.37
			36	18	22.30	22.42	22.41	22.28
			36	37	22.43	22.50	22.40	22.30
			75	0	22.40	22.34	22.42	22.38
		64QAM	1	0	22.72	22.57	22.69	22.69
			1	36	22.62	22.53	22.58	22.62
			1	74	22.57	22.59	22.62	22.34
			36	0	21.35	21.50	21.40	21.24
			36	18	21.44	21.26	21.39	21.34
			36	37	21.41	21.24	21.35	21.24
			75	0	21.28	21.36	21.39	21.35
		256QAM	1	0	19.15	19.33	19.25	19.18
			1	36	19.12	19.23	19.16	19.05
			1	74	19.15	19.19	19.10	18.84
			36	0	19.36	19.43	19.36	19.08
			36	18	19.40	19.23	19.34	19.37
			36	37	19.36	19.34	19.33	19.21
			75	0	19.24	19.26	19.34	19.20
	20	QPSK	1	0	24.71	24.11	24.37	24.14
			1	49	24.75	24.47	24.92	24.48
			1	99	24.74	24.36	24.32	23.14
			50	0	23.89	23.55	23.97	23.67
			50	24	23.83	23.45	23.46	23.55
			50	50	23.86	23.53	23.40	22.82
			100	0	23.86	23.58	23.91	23.20
		16QAM	1	0	23.56	23.29	23.60	23.69
			1	49	23.72	23.25	23.44	23.13
			1	99	23.76	23.44	23.35	22.20
			50	0	22.88	22.53	22.42	22.54
			50	24	22.85	22.47	22.39	22.50
			50	50	22.83	22.52	22.36	22.19
			100	0	22.88	22.56	22.44	22.55
		64QAM	1	0	22.96	22.47	22.48	22.66
			1	49	22.90	22.48	22.36	22.44
			1	99	22.88	22.48	22.39	21.70
			50	0	21.89	21.58	21.43	21.53
			50	24	21.88	21.50	21.39	21.51
			50	50	21.83	21.52	21.35	21.44
			100	0	21.81	21.51	21.37	21.46
		256QAM	1	0	19.71	19.31	19.21	19.35
			1	49	19.64	19.20	19.16	19.34
			1	99	19.65	19.15	19.21	19.29
			50	0	19.83	19.57	19.41	19.50
			50	24	19.81	19.58	19.37	19.47
			50	50	19.80	19.41	19.34	19.43
			100	0	19.75	19.45	19.32	19.42

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	1.4	QPSK	1	0	24.99	25.15	24.80
			1	3	24.77	24.99	24.66
			1	5	25.01	25.22	24.86
			3	0	25.02	25.28	24.90
			3	1	24.98	25.17	24.80
			3	3	24.96	25.11	24.69
			6	0	23.92	24.19	23.81
		16QAM	1	0	23.69	24.32	23.75
			1	3	24.10	24.26	24.03
			1	5	24.14	24.35	23.82
			3	0	24.21	24.26	23.93
			3	1	24.02	24.29	23.84
			3	3	24.09	24.20	23.77
			6	0	23.15	23.26	22.88
		64QAM	1	0	23.27	23.15	22.91
			1	3	23.03	23.13	22.74
			1	5	23.28	23.34	22.86
			3	0	22.91	23.23	22.56
			3	1	23.08	23.19	22.70
			3	3	23.07	23.10	22.68
			6	0	22.01	22.14	21.57
		256QAM	1	0	19.95	20.15	19.60
			1	3	20.03	19.92	19.62
			1	5	20.02	20.20	19.75
			3	0	20.05	20.22	19.75
			3	1	20.04	20.04	19.71
			3	3	20.07	20.10	19.66
			6	0	19.99	20.13	19.53
	3	QPSK	1	0	25.06	25.33	24.92
			1	8	24.98	25.19	24.83
			1	14	24.98	25.31	24.93
			8	0	24.15	24.22	23.84
			8	4	24.08	24.26	23.83
			8	7	24.11	24.23	23.83
			15	0	24.07	24.22	23.83
		16QAM	1	0	24.50	24.40	24.08
			1	8	24.10	24.26	23.76
			1	14	24.25	24.39	23.95
			8	0	23.14	23.18	22.91
			8	4	23.17	23.20	22.86
			8	7	23.22	23.26	22.91
			15	0	23.19	23.24	22.81
		64QAM	1	0	23.10	23.34	22.66
			1	8	23.16	23.33	22.83
			1	14	22.98	23.35	22.82
			8	0	22.20	22.23	21.76
			8	4	22.09	22.17	21.61
			8	7	22.12	22.22	21.80
			15	0	22.15	22.21	21.70
		256QAM	1	0	20.13	20.30	19.87
			1	8	20.13	20.11	19.62
			1	14	20.30	20.09	19.91
			8	0	20.14	20.24	19.74
			8	4	20.04	20.15	19.63
			8	7	20.09	20.25	19.66
			15	0	20.07	20.04	19.65

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	5	QPSK	1	0	25.17	25.18	24.78
			1	12	25.30	25.37	24.86
			1	24	25.14	25.26	24.82
			12	0	24.14	24.28	23.87
			12	7	24.09	24.23	23.87
			12	13	24.15	24.23	23.87
			25	0	24.13	24.29	23.85
		16QAM	1	0	24.18	24.31	24.02
			1	12	24.24	24.39	24.14
			1	24	24.16	24.29	24.01
			12	0	23.15	23.25	22.87
			12	7	23.15	23.26	22.81
			12	13	23.08	23.22	22.77
			25	0	23.15	23.25	22.84
		64QAM	1	0	23.09	23.16	22.79
			1	12	23.43	23.33	23.10
			1	24	23.25	23.34	22.94
			12	0	22.15	22.27	21.81
			12	7	22.14	22.24	21.79
			12	13	22.12	22.22	21.80
			25	0	22.07	22.18	21.75
		256QAM	1	0	19.97	20.35	19.86
			1	12	20.18	20.27	19.76
			1	24	20.14	20.21	19.84
			12	0	20.08	20.14	19.68
			12	7	20.00	20.12	19.65
			12	13	20.11	20.13	19.75
			25	0	20.03	20.10	19.60
	10	QPSK	1	0	25.25	25.26	24.91
			1	25	25.12	25.24	24.82
			1	49	25.22	25.34	24.92
			25	0	24.27	24.32	23.92
			25	12	24.23	24.28	23.94
			25	25	24.22	24.22	23.92
			50	0	24.24	24.29	23.95
		16QAM	1	0	24.40	24.39	24.23
			1	25	24.28	24.33	23.97
			1	49	24.47	24.33	24.08
			25	0	23.26	23.32	22.95
			25	12	23.28	23.34	22.93
			25	25	23.20	23.26	22.91
			50	0	23.29	23.29	22.97
		64QAM	1	0	23.33	23.32	22.95
			1	25	23.29	23.39	22.73
			1	49	23.36	23.33	22.81
			25	0	22.14	22.18	21.82
			25	12	22.12	22.19	21.77
			25	25	22.23	22.13	21.78
			50	0	22.20	22.17	21.78
		256QAM	1	0	20.11	20.19	19.83
			1	25	20.17	20.20	19.60
			1	49	20.43	20.21	19.96
			25	0	20.14	20.10	19.70
			25	12	20.15	20.11	19.70
			25	25	20.15	20.15	19.68
			50	0	20.10	20.06	19.73

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	15	QPSK	1	0	25.11	25.27	25.06
			1	36	25.10	25.19	24.95
			1	74	25.16	25.24	24.98
			36	0	24.27	24.32	24.02
			36	18	24.28	24.30	24.00
			36	37	24.27	24.24	23.96
			75	0	24.23	24.28	24.03
		16QAM	1	0	24.47	24.40	24.27
			1	36	24.42	24.40	24.14
			1	74	24.49	24.33	24.14
			36	0	23.27	23.36	22.99
			36	18	23.21	23.31	22.95
			36	37	23.19	23.37	22.94
			75	0	23.24	23.31	22.96
		64QAM	1	0	23.33	23.30	23.00
			1	36	23.32	23.29	22.86
			1	74	23.33	23.25	23.06
			36	0	22.15	22.26	21.83
			36	18	22.22	22.18	21.82
			36	37	22.15	22.33	21.84
			75	0	22.14	22.24	21.81
		256QAM	1	0	20.11	20.30	19.94
			1	36	20.09	20.32	19.63
			1	74	20.21	20.36	20.00
			36	0	20.14	20.26	19.75
			36	18	20.10	20.20	19.80
			36	37	20.08	20.22	19.74
			75	0	20.16	20.13	19.73
	20	QPSK	1	0	25.19	25.33	25.17
			1	49	24.86	25.34	25.13
			1	99	25.02	25.21	25.10
			50	0	24.21	24.33	24.11
			50	24	24.19	24.31	24.07
			50	50	24.17	24.29	24.04
			100	0	24.14	24.29	24.10
		16QAM	1	0	24.42	24.39	24.34
			1	49	24.12	24.23	24.36
			1	99	24.37	24.38	24.38
			50	0	23.18	23.33	23.09
			50	24	23.18	23.31	23.10
			50	50	23.11	23.27	23.10
			100	0	23.15	23.34	23.06
		64QAM	1	0	23.21	23.38	23.15
			1	49	23.27	23.31	23.04
			1	99	23.37	23.36	23.17
			50	0	22.06	22.17	21.99
			50	24	22.13	22.26	21.99
			50	50	22.12	22.24	21.96
			100	0	22.06	22.22	21.92
		256QAM	1	0	20.37	20.26	20.07
			1	49	20.32	20.31	19.93
			1	99	20.19	20.38	20.00
			50	0	19.98	20.13	19.84
			50	24	20.07	20.18	19.86
			50	50	20.05	20.05	19.86
			100	0	20.09	20.16	19.89

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 71	5	QPSK	1	0	24.07	23.77	23.61
			1	12	24.13	23.82	23.65
			1	24	23.96	23.72	23.51
			12	0	23.09	22.80	22.62
			12	7	23.09	22.80	22.74
			12	13	23.07	22.80	22.66
			25	0	23.12	22.82	22.73
		16QAM	1	0	23.38	22.96	22.94
			1	12	23.34	22.87	22.88
			1	24	23.23	22.94	22.87
			12	0	22.10	21.86	21.73
			12	7	22.03	21.86	21.69
			12	13	22.05	21.82	21.69
			25	0	22.10	21.84	21.71
		64QAM	1	0	22.05	21.94	21.90
			1	12	22.30	21.82	21.65
			1	24	22.04	21.96	21.76
			12	0	21.06	20.91	20.67
			12	7	21.03	20.84	20.68
			12	13	21.03	20.85	20.66
			25	0	21.01	20.76	20.69
		256QAM	1	0	19.24	18.90	18.84
			1	12	19.12	18.95	18.72
			1	24	19.05	18.78	18.50
			12	0	18.94	18.77	18.71
			12	7	18.96	18.72	18.57
			12	13	18.98	18.75	18.60
			25	0	19.04	18.76	18.65
	10	QPSK	1	0	23.91	23.82	23.80
			1	25	23.66	23.56	23.52
			1	49	23.77	23.70	23.54
			25	0	23.04	22.82	22.75
			25	12	22.95	22.76	22.74
			25	25	22.95	22.73	22.71
			50	0	23.04	22.86	22.80
		16QAM	1	0	23.18	22.97	23.04
			1	25	22.89	22.85	22.85
			1	49	23.02	22.82	22.84
			25	0	22.04	21.84	21.81
			25	12	22.04	21.82	21.81
			25	25	21.94	21.79	21.72
			50	0	22.03	21.88	21.72
		64QAM	1	0	22.14	22.04	21.96
			1	25	22.03	21.95	21.73
			1	49	22.11	21.91	21.90
			25	0	21.02	20.80	20.74
			25	12	20.93	20.77	20.76
			25	25	20.86	20.71	20.72
			50	0	20.96	20.81	20.69
		256QAM	1	0	19.04	19.01	18.87
			1	25	18.86	18.79	18.69
			1	49	19.03	18.79	18.78
			25	0	18.98	18.85	18.72
			25	12	18.92	18.78	18.71
			25	25	18.92	18.74	18.65
			50	0	18.92	18.76	18.63

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 71	15	QPSK	1	0	23.79	23.78	23.81
			1	36	23.62	23.68	23.59
			1	74	23.76	23.66	23.57
			36	0	22.91	22.88	22.81
			36	18	22.87	22.86	22.77
			36	37	22.86	22.80	22.73
			75	0	22.86	22.82	22.79
		16QAM	1	0	23.14	23.03	23.14
			1	36	22.95	22.83	22.95
			1	74	22.95	22.94	22.87
			36	0	21.87	21.83	21.82
			36	18	21.82	21.78	21.77
			36	37	21.79	21.76	21.73
			75	0	21.85	21.79	21.79
		64QAM	1	0	22.23	21.99	22.07
			1	36	22.07	21.96	21.91
			1	74	21.90	21.94	21.88
			36	0	20.97	20.89	20.79
			36	18	20.90	20.83	20.74
			36	37	20.87	20.76	20.74
			75	0	20.93	20.79	20.78
		256QAM	1	0	19.00	19.00	18.90
			1	36	18.83	18.81	18.76
			1	74	18.88	18.80	18.74
			36	0	18.90	18.85	18.79
			36	18	18.89	18.79	18.74
			36	37	18.80	18.73	18.72
			75	0	18.88	18.83	18.80
	20	QPSK	1	0	23.82	23.90	23.85
			1	49	23.71	23.75	23.72
			1	99	23.60	23.55	23.51
			50	0	22.88	22.91	22.88
			50	24	22.86	22.89	22.82
			50	50	22.80	22.78	22.74
			100	0	22.85	22.87	22.79
		16QAM	1	0	23.15	23.15	23.20
			1	49	23.03	22.69	22.98
			1	99	22.98	22.83	22.87
			50	0	21.98	21.89	21.91
			50	24	21.82	21.85	21.83
			50	50	21.87	21.73	21.72
			100	0	21.87	21.83	21.80
		64QAM	1	0	22.10	22.17	21.91
			1	49	21.98	21.98	21.98
			1	99	21.91	21.78	21.77
			50	0	20.99	20.89	20.88
			50	24	20.94	20.85	20.80
			50	50	20.87	20.73	20.70
			100	0	20.86	20.78	20.81
		256QAM	1	0	19.01	18.94	19.10
			1	49	18.94	18.87	18.78
			1	99	18.84	18.70	18.65
			50	0	18.90	18.87	18.84
			50	24	18.85	18.75	18.77
			50	50	18.83	18.65	18.70
			100	0	18.86	18.77	18.77

Sub Antenna

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	1.4	QPSK	1	0	23.42	23.47	23.29
			1	3	23.33	23.45	23.39
			1	5	23.63	23.55	23.58
			3	0	23.49	23.51	23.46
			3	1	23.60	23.59	23.58
			3	3	23.54	23.57	23.40
			6	0	22.56	22.60	22.55
		16QAM	1	0	22.57	22.63	22.52
			1	3	22.40	22.49	22.34
			1	5	22.79	22.60	22.67
			3	0	22.65	22.64	22.54
			3	1	22.66	22.66	22.60
			3	3	22.65	22.60	22.50
			6	0	21.75	21.67	21.65
		64QAM	1	0	21.58	21.59	21.45
			1	3	21.85	21.71	21.65
			1	5	21.86	21.67	21.79
			3	0	21.61	21.58	21.49
			3	1	21.53	21.54	21.45
			3	3	21.52	21.53	21.40
			6	0	20.58	20.53	20.43
		256QAM	1	0	18.62	18.61	18.61
			1	3	18.77	18.55	18.61
			1	5	18.86	18.62	18.72
			3	0	18.62	18.54	18.56
			3	1	18.65	18.57	18.55
			3	3	18.53	18.49	18.46
			6	0	18.57	18.52	18.40
	3	QPSK	1	0	23.53	23.56	23.42
			1	8	23.48	23.49	23.43
			1	14	23.53	23.54	23.47
			8	0	22.59	22.58	22.60
			8	4	22.60	22.60	22.52
			8	7	22.49	22.52	22.39
			15	0	22.65	22.65	22.56
		16QAM	1	0	22.60	22.72	22.62
			1	8	22.55	22.60	22.43
			1	14	22.70	22.52	22.60
			8	0	21.63	21.57	21.54
			8	4	21.73	21.61	21.51
			8	7	21.70	21.62	21.53
			15	0	21.67	21.62	21.62
		64QAM	1	0	21.57	21.58	21.45
			1	8	21.78	21.66	21.61
			1	14	21.90	21.63	21.74
			8	0	20.62	20.52	20.40
			8	4	20.51	20.57	20.47
			8	7	20.61	20.54	20.43
			15	0	20.65	20.61	20.45
		256QAM	1	0	18.68	18.66	18.67
			1	8	18.83	18.55	18.68
			1	14	18.84	18.52	18.67
			8	0	18.64	18.49	18.52
			8	4	18.51	18.44	18.39
			8	7	18.51	18.45	18.40
			15	0	18.46	18.44	18.30

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	5	QPSK	1	0	23.47	23.51	23.35
			1	12	23.51	23.54	23.48
			1	24	23.63	23.57	23.48
			12	0	22.58	22.65	22.66
			12	7	22.57	22.57	22.52
			12	13	22.72	22.63	22.44
			25	0	22.64	22.73	22.70
		16QAM	1	0	22.60	22.67	22.63
			1	12	22.46	22.59	22.42
			1	24	22.86	22.72	22.70
			12	0	21.68	21.66	21.53
			12	7	21.62	21.59	21.52
			12	13	21.65	21.60	21.52
			25	0	21.76	21.65	21.70
		64QAM	1	0	21.72	21.71	21.67
			1	12	21.76	21.64	21.50
			1	24	21.79	21.58	21.65
			12	0	20.68	20.58	20.47
			12	7	20.63	20.57	20.49
			12	13	20.56	20.54	20.49
			25	0	20.76	20.64	20.49
		256QAM	1	0	18.77	18.70	18.64
			1	12	18.94	18.68	18.79
			1	24	18.94	18.69	18.80
			12	0	18.75	18.63	18.70
			12	7	18.57	18.50	18.44
			12	13	18.61	18.56	18.60
			25	0	18.56	18.55	18.47
	10	QPSK	1	0	23.56	23.58	23.46
			1	25	23.48	23.47	23.43
			1	49	23.69	23.66	23.65
			25	0	22.80	22.81	22.73
			25	12	22.69	22.74	22.69
			25	25	22.60	22.58	22.43
			50	0	22.75	22.84	22.83
		16QAM	1	0	22.67	22.77	22.67
			1	25	22.48	22.58	22.44
			1	49	22.84	22.62	22.71
			25	0	21.71	21.69	21.57
			25	12	21.74	21.66	21.61
			25	25	21.65	21.61	21.58
			50	0	21.87	21.74	21.80
		64QAM	1	0	21.72	21.72	21.61
			1	25	21.64	21.59	21.53
			1	49	21.94	21.71	21.84
			25	0	20.75	20.67	20.59
			25	12	20.59	20.63	20.53
			25	25	20.56	20.58	20.48
			50	0	20.78	20.69	20.63
		256QAM	1	0	18.64	18.63	18.62
			1	25	18.91	18.62	18.62
			1	49	18.86	18.59	18.64
			25	0	18.61	18.53	18.54
			25	12	18.60	18.54	18.43
			25	25	18.63	18.51	18.46
			50	0	18.52	18.52	18.39

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 2	15	QPSK	1	0	23.47	23.57	23.39
			1	36	23.42	23.47	23.39
			1	74	23.36	23.33	23.29
			36	0	22.68	22.65	22.59
			36	18	22.52	22.62	22.53
			36	37	22.62	22.61	22.41
			75	0	22.59	22.63	22.54
		16QAM	1	0	22.76	22.80	22.68
			1	36	22.62	22.69	22.52
			1	74	22.76	22.57	22.61
			36	0	21.75	21.65	21.63
			36	18	21.58	21.54	21.53
			36	37	21.61	21.55	21.44
			75	0	21.60	21.55	21.58
		64QAM	1	0	21.71	21.74	21.58
			1	36	21.70	21.58	21.54
			1	74	21.58	21.43	21.47
			36	0	20.77	20.63	20.51
			36	18	20.55	20.59	20.48
			36	37	20.55	20.55	20.52
			75	0	20.63	20.54	20.50
		256QAM	1	0	18.71	18.66	18.57
			1	36	18.78	18.52	18.59
			1	74	18.82	18.55	18.62
			36	0	18.83	18.62	18.66
			36	18	18.63	18.61	18.51
			36	37	18.58	18.55	18.54
			75	0	18.62	18.62	18.53
	20	QPSK	1	0	23.53	23.56	23.42
			1	49	23.40	23.47	23.39
			1	99	23.42	23.38	23.35
			50	0	22.70	22.71	22.67
			50	24	22.60	22.63	22.58
			50	50	22.68	22.66	22.53
			100	0	22.64	22.68	22.61
		16QAM	1	0	22.72	22.76	22.67
			1	49	22.66	22.72	22.56
			1	99	22.72	22.54	22.58
			50	0	21.70	21.67	21.58
			50	24	21.63	21.58	21.54
			50	50	21.57	21.54	21.49
			100	0	21.62	21.53	21.54
		64QAM	1	0	21.66	21.67	21.56
			1	49	21.71	21.59	21.51
			1	99	21.58	21.37	21.47
			50	0	20.74	20.66	20.57
			50	24	20.64	20.64	20.55
			50	50	20.59	20.56	20.50
			100	0	20.62	20.57	20.47
		256QAM	1	0	18.72	18.66	18.65
			1	49	18.85	18.57	18.63
			1	99	18.67	18.42	18.51
			50	0	18.68	18.55	18.56
			50	24	18.64	18.56	18.49
			50	50	18.54	18.49	18.48
			100	0	18.63	18.60	18.52

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	1.4	QPSK	1	0	23.54	23.60	23.86
			1	3	23.51	23.61	23.91
			1	5	23.63	23.69	23.93
			3	0	23.54	23.74	23.96
			3	1	23.53	23.73	23.99
			3	3	23.65	23.78	24.12
			6	0	22.75	22.90	23.15
		16QAM	1	0	22.73	22.98	22.99
			1	3	22.90	22.92	23.23
			1	5	22.97	22.98	23.27
			3	0	22.70	22.89	23.15
			3	1	22.74	22.87	23.09
			3	3	22.72	22.90	23.15
			6	0	21.78	21.94	22.20
		64QAM	1	0	21.71	21.77	21.93
			1	3	21.81	22.00	22.22
			1	5	21.78	22.09	22.28
			3	0	21.72	21.85	22.11
			3	1	21.69	21.88	22.13
			3	3	21.67	21.83	22.02
			6	0	20.64	20.83	21.03
		256QAM	1	0	19.04	19.13	19.11
			1	3	18.88	18.99	19.00
			1	5	18.86	19.01	19.08
			3	0	18.65	18.93	19.12
			3	1	18.68	18.94	19.18
			3	3	18.71	18.90	19.08
			6	0	18.66	18.85	19.12
	3	QPSK	1	0	23.73	23.84	24.07
			1	8	23.63	23.82	24.15
			1	14	23.74	23.84	24.10
			8	0	22.53	22.86	23.14
			8	4	22.63	22.91	23.15
			8	7	22.67	22.88	23.23
			15	0	22.69	22.83	23.08
		16QAM	1	0	22.70	22.93	22.98
			1	8	22.88	22.91	23.22
			1	14	22.89	22.93	23.13
			8	0	21.64	21.87	22.14
			8	4	21.68	21.85	22.06
			8	7	21.71	21.93	22.20
			15	0	21.80	21.93	22.24
		64QAM	1	0	21.90	21.97	22.16
			1	8	21.75	21.94	22.14
			1	14	21.62	21.87	22.16
			8	0	20.77	20.91	21.20
			8	4	20.63	20.80	21.06
			8	7	20.68	20.84	21.07
			15	0	20.68	20.79	21.12
		256QAM	1	0	19.05	19.17	19.36
			1	8	18.83	18.95	18.98
			1	14	18.79	18.91	18.99
			8	0	18.54	18.84	19.01
			8	4	18.68	18.84	19.16
			8	7	18.65	18.87	19.14
			15	0	18.71	18.84	19.14

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	5	QPSK	1	0	23.56	23.62	23.95
			1	12	23.53	23.66	23.96
			1	24	23.65	23.75	24.03
			12	0	22.50	22.77	22.98
			12	7	22.55	22.77	23.02
			12	13	22.60	22.80	23.05
			25	0	22.57	22.76	22.97
		16QAM	1	0	22.50	22.84	22.96
			1	12	22.87	22.89	23.26
			1	24	22.88	22.97	23.23
			12	0	21.53	21.81	22.05
			12	7	21.64	21.78	22.11
			12	13	21.55	21.82	22.03
			25	0	21.73	21.82	22.07
		64QAM	1	0	21.93	21.97	22.24
			1	12	21.73	21.88	21.98
			1	24	21.58	21.89	22.14
			12	0	20.56	20.81	21.11
			12	7	20.58	20.75	20.94
			12	13	20.66	20.82	20.98
			25	0	20.60	20.77	21.00
		256QAM	1	0	18.85	19.00	19.32
			1	12	18.74	18.86	19.20
			1	24	18.89	19.05	19.12
			12	0	18.56	18.84	19.10
			12	7	18.55	18.79	19.06
			12	13	18.60	18.78	18.94
			25	0	18.70	18.79	18.98
	10	QPSK	1	0	23.71	23.77	24.06
			1	25	23.68	23.77	23.98
			1	49	23.75	23.81	24.16
			25	0	22.62	22.93	23.17
			25	12	22.70	22.95	23.22
			25	25	22.78	22.89	23.16
			50	0	22.88	23.03	23.32
		16QAM	1	0	22.90	23.16	23.22
			1	25	22.90	22.92	23.21
			1	49	22.99	22.99	23.22
			25	0	21.80	21.97	22.27
			25	12	21.70	21.87	22.09
			25	25	21.65	21.84	22.12
			50	0	21.76	21.90	22.20
		64QAM	1	0	22.03	22.08	22.30
			1	25	21.74	21.90	22.09
			1	49	21.70	22.03	22.27
			25	0	20.80	20.91	21.10
			25	12	20.63	20.83	21.08
			25	25	20.75	20.90	21.10
			50	0	20.79	20.99	21.19
		256QAM	1	0	18.99	19.16	19.55
			1	25	18.91	19.01	19.28
			1	49	18.97	19.06	19.18
			25	0	18.66	18.89	19.14
			25	12	18.72	18.91	19.25
			25	25	18.65	18.85	19.11
			50	0	18.73	18.87	19.17

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 4	15	QPSK	1	0	23.80	23.83	24.09
			1	36	23.67	23.80	24.12
			1	74	23.74	23.77	24.04
			36	0	22.61	22.94	23.21
			36	18	22.69	22.96	23.12
			36	37	22.61	22.84	23.06
			75	0	22.64	22.90	23.20
		16QAM	1	0	22.76	23.06	23.09
			1	36	22.99	23.03	23.42
			1	74	22.93	22.95	23.15
			36	0	21.64	21.91	22.17
			36	18	21.82	21.93	22.20
			36	37	21.69	21.90	22.08
			75	0	21.69	21.91	22.13
		64QAM	1	0	21.97	22.04	22.22
			1	36	21.63	21.84	22.00
			1	74	21.71	21.99	22.29
			36	0	20.73	20.90	21.09
			36	18	20.77	20.90	21.09
			36	37	20.75	20.94	21.14
			75	0	20.74	20.88	21.12
		256QAM	1	0	18.83	18.95	19.32
			1	36	18.90	18.93	19.27
			1	74	18.85	18.98	19.10
			36	0	18.65	18.90	19.07
			36	18	18.70	18.91	19.26
			36	37	18.80	18.94	19.14
			75	0	18.67	18.88	19.06
	20	QPSK	1	0	23.59	23.67	23.96
			1	49	23.55	23.69	23.98
			1	99	23.66	23.73	24.03
			50	0	22.65	22.96	23.20
			50	24	22.69	22.94	23.17
			50	50	22.74	22.91	23.21
			100	0	22.76	22.95	23.20
		16QAM	1	0	22.95	23.22	23.29
			1	49	22.88	22.89	23.23
			1	99	22.92	22.95	23.21
			50	0	21.75	21.98	22.23
			50	24	21.76	21.91	22.19
			50	50	21.69	21.91	22.13
			100	0	21.73	21.89	22.13
		64QAM	1	0	21.99	22.05	22.26
			1	49	21.76	21.96	22.11
			1	99	21.72	22.00	22.24
			50	0	20.78	20.96	21.21
			50	24	20.79	20.97	21.21
			50	50	20.74	20.95	21.13
			100	0	20.72	20.87	21.13
		256QAM	1	0	18.96	19.08	19.44
			1	49	19.07	19.15	19.37
			1	99	19.00	19.11	19.21
			50	0	18.71	18.98	19.19
			50	24	18.68	18.87	19.19
			50	50	18.70	18.89	19.11
			100	0	18.72	18.87	19.10

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 7	5	QPSK	1	0	21.93	21.79	22.26
			1	12	21.97	21.66	22.14
			1	24	22.05	22.14	22.32
			12	0	20.92	21.02	21.36
			12	7	21.02	21.02	21.33
			12	13	21.28	21.33	21.44
			25	0	21.09	21.26	21.39
		16QAM	1	0	21.03	21.02	21.22
			1	12	21.07	21.23	21.36
			1	24	20.99	21.04	21.22
			12	0	20.09	19.97	20.35
			12	7	20.10	20.12	20.33
			12	13	20.03	20.08	20.38
			25	0	20.14	20.16	20.42
		64QAM	1	0	19.99	19.93	20.32
			1	12	20.06	20.17	20.37
			1	24	20.22	20.25	20.34
			12	0	19.06	19.09	19.31
			12	7	18.94	18.98	19.27
			12	13	19.06	19.11	19.33
			25	0	19.10	19.11	19.31
		256QAM	1	0	17.00	17.02	17.31
			1	12	16.93	16.93	17.28
			1	24	17.16	17.13	17.30
			12	0	16.03	16.09	16.32
			12	7	16.09	16.05	16.22
			12	13	16.08	16.10	16.37
			25	0	16.01	16.02	16.28
	10	QPSK	1	0	21.69	21.53	21.86
			1	25	21.70	21.56	21.87
			1	49	21.65	21.64	21.79
			25	0	20.52	20.55	21.00
			25	12	20.57	20.59	20.98
			25	25	20.76	20.70	20.99
			50	0	20.57	20.70	20.97
		16QAM	1	0	20.62	20.65	20.94
			1	25	20.60	20.73	20.93
			1	49	20.50	20.55	20.84
			25	0	19.56	19.53	19.98
			25	12	19.54	19.56	19.92
			25	25	19.51	19.55	19.91
			50	0	19.55	19.64	19.94
		64QAM	1	0	19.62	19.58	20.06
			1	25	19.54	19.55	19.87
			1	49	19.74	19.75	19.97
			25	0	18.69	18.66	19.02
			25	12	18.53	18.60	18.90
			25	25	18.55	18.54	18.81
			50	0	18.63	18.69	18.94
		256QAM	1	0	16.59	16.70	17.11
			1	25	16.59	16.53	16.92
			1	49	16.68	16.60	16.94
			25	0	16.15	16.11	16.28
			25	12	16.04	16.06	16.24
			25	25	16.09	16.01	16.19
			50	0	16.02	16.14	16.20

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 7	15	QPSK	1	0	21.69	21.58	21.99
			1	36	21.69	21.60	21.94
			1	74	21.68	21.70	21.91
			36	0	20.77	20.86	21.14
			36	18	20.68	20.76	21.08
			36	37	20.92	20.93	21.07
			75	0	20.81	20.97	21.11
		16QAM	1	0	20.96	20.94	21.13
			1	36	20.65	20.84	20.93
			1	74	20.65	20.72	20.91
			36	0	19.79	19.73	20.09
			36	18	19.87	19.82	20.10
			36	37	19.75	19.73	20.04
			75	0	19.82	19.89	20.11
		64QAM	1	0	19.86	19.82	20.22
			1	36	19.71	19.85	20.05
			1	74	19.87	19.79	19.95
			36	0	18.91	18.93	19.15
			36	18	18.79	18.88	19.09
			36	37	18.71	18.74	19.00
			75	0	18.80	18.85	19.02
		256QAM	1	0	16.52	16.60	16.94
			1	36	16.57	16.55	16.86
			1	74	16.74	16.71	16.91
			36	0	16.01	16.14	16.28
			36	18	16.07	16.15	16.25
			36	37	16.01	16.13	16.21
			75	0	16.05	16.10	16.24
	20	QPSK	1	0	21.86	21.68	22.15
			1	49	21.89	21.64	22.12
			1	99	21.67	21.72	21.92
			50	0	20.85	20.92	21.24
			50	24	20.81	20.85	21.16
			50	50	20.75	20.81	20.94
			100	0	20.71	20.83	21.01
		16QAM	1	0	20.84	20.85	21.04
			1	49	20.67	20.84	20.94
			1	99	20.60	20.66	20.83
			50	0	19.86	19.80	20.16
			50	24	19.82	19.82	20.05
			50	50	19.78	19.79	20.08
			100	0	19.78	19.84	20.06
		64QAM	1	0	19.94	19.87	20.24
			1	49	19.74	19.83	20.06
			1	99	19.80	19.79	19.92
			50	0	18.90	18.91	19.15
			50	24	18.84	18.89	19.13
			50	50	18.78	18.85	19.06
			100	0	18.82	18.84	19.03
		256QAM	1	0	16.82	16.86	17.19
			1	49	16.76	16.78	17.09
			1	99	16.67	16.66	16.86
			50	0	16.01	16.04	16.29
			50	24	16.05	16.02	16.35
			50	50	16.01	16.03	16.29
			100	0	16.08	16.14	16.36

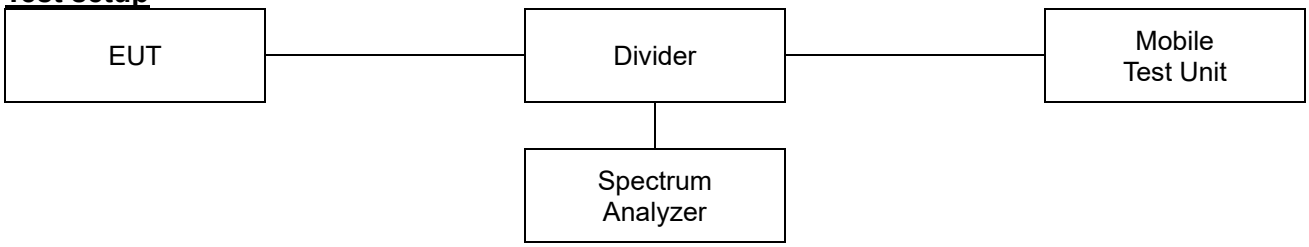
Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	1.4	QPSK	1	0	23.58	23.85	23.70
			1	3	23.58	23.85	23.55
			1	5	23.77	24.02	23.81
			3	0	23.70	23.95	23.82
			3	1	23.74	24.02	23.97
			3	3	23.73	23.99	23.85
			6	0	22.76	23.10	22.93
		16QAM	1	0	22.69	22.99	22.68
			1	3	23.13	23.25	23.17
			1	5	23.00	23.32	22.98
			3	0	22.63	23.00	22.78
			3	1	22.84	23.08	22.83
			3	3	22.82	23.11	22.91
			6	0	22.00	22.24	22.04
		64QAM	1	0	21.92	22.13	21.94
			1	3	21.86	22.16	21.93
			1	5	21.94	22.26	21.99
			3	0	21.83	22.17	21.83
			3	1	21.77	22.19	21.93
			3	3	21.82	22.13	21.94
			6	0	21.00	21.28	20.98
		256QAM	1	0	18.79	19.05	18.67
			1	3	18.98	19.27	18.73
			1	5	18.90	19.24	18.88
			3	0	18.83	19.14	18.89
			3	1	18.69	19.07	18.80
			3	3	18.81	19.21	18.92
			6	0	18.59	19.05	18.75
	3	QPSK	1	0	23.73	23.94	23.81
			1	8	23.55	23.92	23.74
			1	14	23.78	24.00	23.86
			8	0	22.74	23.07	22.89
			8	4	22.76	23.07	22.88
			8	7	22.82	23.06	22.88
			15	0	22.81	23.13	22.96
		16QAM	1	0	22.86	23.20	22.85
			1	8	22.96	23.07	22.95
			1	14	23.01	23.33	23.08
			8	0	21.73	22.09	21.86
			8	4	21.84	22.13	21.96
			8	7	21.87	22.12	22.00
			15	0	21.74	22.06	21.82
		64QAM	1	0	21.97	22.20	22.01
			1	8	21.84	22.17	21.96
			1	14	21.79	22.15	21.82
			8	0	20.71	21.12	20.84
			8	4	20.70	21.05	20.79
			8	7	20.92	21.14	20.94
			15	0	20.65	21.02	20.68
		256QAM	1	0	18.94	19.25	18.89
			1	8	18.78	19.04	18.50
			1	14	18.99	19.23	18.92
			8	0	18.76	19.13	18.85
			8	4	18.73	19.10	18.75
			8	7	18.67	19.03	18.78
			15	0	18.69	19.07	18.77

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	5	QPSK	1	0	23.65	23.99	23.93
			1	12	23.61	24.07	23.84
			1	24	23.67	24.02	23.82
			12	0	22.80	23.13	22.99
			12	7	22.70	23.07	23.00
			12	13	22.76	23.15	23.02
			25	0	22.68	23.15	22.92
		16QAM	1	0	22.86	23.24	22.93
			1	12	23.13	23.34	23.31
			1	24	22.83	23.24	22.90
			12	0	21.76	22.11	21.90
			12	7	21.70	22.13	21.95
			12	13	21.88	22.23	22.03
			25	0	21.70	22.17	21.91
		64QAM	1	0	22.06	22.35	22.23
			1	12	22.05	22.37	22.29
			1	24	21.69	22.16	21.90
			12	0	20.83	21.25	20.93
			12	7	20.74	21.18	20.94
			12	13	20.88	21.17	20.93
			25	0	20.77	21.16	20.81
		256QAM	1	0	19.06	19.40	19.06
			1	12	18.92	19.25	18.77
			1	24	19.02	19.44	19.13
			12	0	18.80	19.13	18.90
			12	7	18.50	19.04	18.67
			12	13	18.76	19.17	18.81
			25	0	18.61	19.07	18.81
	10	QPSK	1	0	23.73	24.04	23.92
			1	25	23.57	23.95	23.68
			1	49	23.76	24.09	23.98
			25	0	22.76	23.15	23.00
			25	12	22.68	23.10	23.03
			25	25	22.74	23.12	22.94
			50	0	22.73	23.11	22.91
		16QAM	1	0	22.85	23.34	22.97
			1	25	23.08	23.29	23.21
			1	49	22.88	23.30	22.98
			25	0	21.68	22.14	21.86
			25	12	21.84	22.16	21.93
			25	25	21.75	22.13	22.00
			50	0	21.68	22.12	21.94
		64QAM	1	0	22.07	22.30	22.15
			1	25	21.71	22.13	21.90
			1	49	21.74	22.20	21.90
			25	0	20.73	21.19	20.89
			25	12	20.58	21.12	20.85
			25	25	20.90	21.17	20.90
			50	0	20.65	21.15	20.83
		256QAM	1	0	19.05	19.37	19.11
			1	25	18.93	19.26	18.81
			1	49	18.91	19.31	18.98
			25	0	18.74	19.15	18.92
			25	12	18.57	19.09	18.79
			25	25	18.64	19.13	18.87
			50	0	18.66	19.14	18.90

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	Maximum power Frequency (㎒)		
					Low	Middle	High
LTE Band 66	15	QPSK	1	0	23.79	24.06	23.89
			1	36	23.61	23.98	23.69
			1	74	23.59	23.94	23.74
			36	0	22.75	23.10	22.92
			36	18	22.78	23.16	23.09
			36	37	22.78	23.13	22.97
			75	0	22.74	23.15	23.01
		16QAM	1	0	22.84	23.28	22.95
			1	36	23.07	23.32	23.18
			1	74	22.86	23.25	22.88
			36	0	21.71	22.17	21.98
			36	18	21.75	22.15	21.92
			36	37	21.73	22.14	21.89
			75	0	21.67	22.15	21.88
		64QAM	1	0	21.98	22.25	22.08
			1	36	21.86	22.23	22.09
			1	74	21.52	22.01	21.86
			36	0	20.65	21.20	20.90
			36	18	20.75	21.19	20.90
			36	37	20.83	21.20	20.95
			75	0	20.68	21.19	20.80
		256QAM	1	0	18.99	19.34	19.04
			1	36	18.86	19.19	18.86
			1	74	18.82	19.22	18.82
			36	0	18.78	19.15	18.89
			36	18	18.70	19.14	18.82
			36	37	18.62	19.11	18.83
			75	0	18.59	19.13	18.82
	20	QPSK	1	0	23.59	23.88	23.74
			1	49	23.62	24.00	23.78
			1	99	23.61	23.94	23.77
			50	0	22.75	23.14	22.99
			50	24	22.69	23.08	22.97
			50	50	22.70	23.06	22.90
			100	0	22.70	23.13	22.96
		16QAM	1	0	22.89	23.32	22.98
			1	49	22.94	23.17	23.10
			1	99	22.89	23.26	22.93
			50	0	21.77	22.20	21.96
			50	24	21.79	22.19	21.96
			50	50	21.75	22.14	21.94
			100	0	21.70	22.11	21.89
		64QAM	1	0	21.93	22.22	22.05
			1	49	21.91	22.32	22.15
			1	99	21.78	22.24	21.92
			50	0	20.78	21.26	20.93
			50	24	20.74	21.24	20.94
			50	50	20.79	21.13	20.91
			100	0	20.75	21.20	20.88
		256QAM	1	0	18.91	19.27	18.95
			1	49	19.00	19.38	18.89
			1	99	18.93	19.31	18.96
			50	0	18.78	19.17	18.88
			50	24	18.71	19.18	18.88
			50	50	18.68	19.15	18.84
			100	0	18.68	19.19	18.91

7.2. 99% Occupied Bandwidth & 26 dB Bandwidth

Test setup



Limit

According to §2.1049,

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

Test procedure

971168 D01 v03r01 – Section 4.2 and 4.3
ANSI C63.26-2015 – Section 5.4.3 and 5.4.4

Test settings

◆ **26dB Bandwidth**

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.

b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.

c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
See guidance provided in 4.2.3.

d) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target "−X dB" requirement, i.e., if the requirement calls for measuring the −26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.

e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

f) Determine the reference value by either of the following:
   1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
   2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.

g) Determine the "−X dB amplitude" as equal to (Reference Value − X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.

h) If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).

i) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "−X dB amplitude" determined in step f). If a marker is below this "−X dB amplitude" value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.

j) The spectral envelope can cross the "−X dB amplitude" at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the "−X dB amplitude."

k) The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

◆ 99% Occupied Bandwidth

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of 1.5 × OBW is sufficient).

b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.

c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.

d) Set the detection mode to peak, and the trace mode to max-hold.

e) If the instrument does not have a 99% OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5% of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5% of the total is reached and record that frequency as the upper OBW frequency. The 99% power OBW can be determined by computing the difference these two frequencies.

f) The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

Notes:

1. The EUT was setup to maximum output power as its lowest and highest channel with all bandwidth, modulation.

Test results

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 5	1.4	824.7	QPSK	1.32	1.09
			16QAM	1.34	1.10
		836.5	QPSK	1.34	1.10
			16QAM	1.35	1.10
		848.3	QPSK	1.35	1.10
			16QAM	1.32	1.11
	3	825.5	QPSK	3.11	2.71
			16QAM	3.12	2.72
		836.5	QPSK	3.10	2.70
			16QAM	3.15	2.70
		847.5	QPSK	3.10	2.72
			16QAM	3.10	2.70
	5	826.5	QPSK	5.32	4.53
			16QAM	5.48	4.56
		836.5	QPSK	5.41	4.53
			16QAM	5.35	4.51
		846.5	QPSK	5.37	4.52
			16QAM	5.40	4.55
	10	829.0	QPSK	10.32	8.99
			16QAM	10.24	9.02
		836.5	QPSK	10.24	8.99
			16QAM	10.19	9.07
		844.0	QPSK	10.24	9.07
			16QAM	10.37	9.02

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 7	5	2 502.5	QPSK	5.41	4.55
			16QAM	5.28	4.57
		2 535.0	QPSK	5.31	4.53
			16QAM	5.42	4.53
		2 567.5	QPSK	5.31	4.51
			16QAM	5.30	4.52
	10	2 505.0	QPSK	10.22	9.02
			16QAM	10.07	9.07
		2 535.0	QPSK	10.51	8.99
			16QAM	10.24	9.02
		2 565.0	QPSK	10.22	9.02
			16QAM	10.22	9.02
	15	2 507.5	QPSK	14.99	13.49
			16QAM	15.06	13.49
		2 535.0	QPSK	15.21	13.45
			16QAM	15.17	13.56
		2 562.5	QPSK	14.99	13.45
			16QAM	15.21	13.49
	20	2 510.0	QPSK	19.68	17.98
			16QAM	20.33	18.03
		2 535.0	QPSK	20.08	18.08
			16QAM	19.83	18.03
		2 560.0	QPSK	20.28	17.93
			16QAM	20.18	17.93

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 12	1.4	699.7	QPSK	1.33	1.09
			16QAM	1.34	1.10
		707.5	QPSK	1.33	1.10
			16QAM	1.33	1.10
		715.3	QPSK	1.34	1.10
			16QAM	1.33	1.10
	3	700.5	QPSK	3.13	2.71
			16QAM	3.12	2.71
		707.5	QPSK	3.13	2.71
			16QAM	3.13	2.70
		714.5	QPSK	3.08	2.70
			16QAM	3.14	2.71
	5	701.5	QPSK	5.48	4.55
			16QAM	5.46	4.52
		707.5	QPSK	5.40	4.53
			16QAM	5.32	4.53
		713.5	QPSK	5.35	4.52
			16QAM	5.45	4.55
	10	704.0	QPSK	10.54	9.04
			16QAM	10.44	9.07
		707.5	QPSK	10.39	8.99
			16QAM	10.39	8.99
		711.0	QPSK	10.19	9.07
			16QAM	10.22	9.02

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 13	5	779.5	QPSK	5.50	4.53
			16QAM	5.35	4.53
		782.0	QPSK	5.37	4.52
			16QAM	5.37	4.52
		784.5	QPSK	5.35	4.53
			16QAM	5.27	4.53
	10	782.0	QPSK	10.29	9.02
			16QAM	10.32	9.02

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 25/2	1.4	1 850.7	QPSK	1.35	1.10
			16QAM	1.31	1.10
		1 882.5	QPSK	1.33	1.10
			16QAM	1.34	1.09
		1 914.3	QPSK	1.33	1.10
			16QAM	1.39	1.10
	3	1 851.5	QPSK	3.12	2.71
			16QAM	3.09	2.70
		1 882.5	QPSK	3.09	2.70
			16QAM	3.12	2.72
		1 913.5	QPSK	3.10	2.70
			16QAM	3.13	2.71
	5	1 852.5	QPSK	5.35	4.55
			16QAM	5.32	4.53
		1 882.5	QPSK	5.42	4.56
			16QAM	5.41	4.55
		1 912.5	QPSK	5.32	4.53
			16QAM	5.28	4.55
	10	1 855.0	QPSK	10.17	8.99
			16QAM	10.29	8.99
		1 882.5	QPSK	10.32	9.02
			16QAM	10.32	8.99
		1 910.0	QPSK	10.27	9.02
			16QAM	10.37	9.04
	15	1 857.5	QPSK	14.99	13.49
			16QAM	15.32	13.45
		1 882.5	QPSK	15.25	13.49
			16QAM	15.29	13.49
		1 907.5	QPSK	15.14	13.49
			16QAM	15.21	13.41
	20	1 860.0	QPSK	19.98	17.98
			16QAM	19.83	18.03
		1 882.5	QPSK	19.78	18.03
			16QAM	20.03	17.98
		1 905.0	QPSK	20.23	17.98
			16QAM	19.73	17.93

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 26	1.4	824.7	QPSK	1.34	1.09
			16QAM	1.33	1.10
		836.5	QPSK	1.36	1.10
			16QAM	1.35	1.10
		848.3	QPSK	1.33	1.10
			16QAM	1.35	1.09
	3	825.5	QPSK	3.09	2.70
			16QAM	3.08	2.70
		836.5	QPSK	3.15	2.70
			16QAM	3.12	2.70
		847.5	QPSK	3.11	2.71
			16QAM	3.13	2.70
	5	826.5	QPSK	5.32	4.53
			16QAM	5.33	4.53
		836.5	QPSK	5.35	4.52
			16QAM	5.36	4.56
		846.5	QPSK	5.33	4.53
			16QAM	5.30	4.51
	10	829.0	QPSK	10.37	9.02
			16QAM	10.42	9.02
		836.5	QPSK	10.37	9.04
			16QAM	10.47	9.02
		844.0	QPSK	10.19	9.04
			16QAM	10.39	8.97
	15	831.5	QPSK	15.21	13.52
			16QAM	15.17	13.49
		836.5	QPSK	15.44	13.45
			16QAM	14.95	13.49
		841.5	QPSK	15.36	13.45
			16QAM	14.87	13.45

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 30	5	2 307.5	QPSK	5.35	4.51
			16QAM	5.42	4.52
		2 310.0	QPSK	5.45	4.52
			16QAM	5.30	4.56
		2 312.5	QPSK	5.40	4.56
			16QAM	5.41	4.56
	10	2 310.0	QPSK	10.29	8.99
			16QAM	10.34	8.99

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 40(L)	5	2 307.5	QPSK	5.32	4.52
			16QAM	5.41	4.55
		2 310.0	QPSK	5.46	4.51
			16QAM	5.26	4.51
		2 312.5	QPSK	5.32	4.52
			16QAM	5.41	4.55
	10	2 310.0	QPSK	10.09	8.99
			16QAM	10.07	9.02

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 40(U)	5	2 352.5	QPSK	5.31	4.52
			16QAM	5.41	4.52
		2 355.0	QPSK	5.37	4.52
			16QAM	5.35	4.55
		2 357.5	QPSK	5.38	4.55
			16QAM	5.48	4.53
	10	2 355.0	QPSK	10.29	8.99
			16QAM	10.42	9.02

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 41 PC2 (FCC)	5	2 498.5	QPSK	5.30	4.53
			16QAM	5.27	4.52
		2 593.0	QPSK	5.31	4.50
			16QAM	5.33	4.51
		2 687.5	QPSK	5.21	4.53
			16QAM	5.38	4.52
	10	2 501.0	QPSK	10.27	8.97
			16QAM	10.19	9.02
		2 593.0	QPSK	10.17	8.99
			16QAM	10.09	8.97
		2 685.0	QPSK	10.12	8.99
			16QAM	9.94	8.99
	15	2 503.5	QPSK	15.14	13.52
			16QAM	15.17	13.41
		2 593.0	QPSK	14.99	13.49
			16QAM	14.65	13.45
		2 682.5	QPSK	14.91	13.49
			16QAM	15.29	13.45
	20	2 506.0	QPSK	19.53	18.03
			16QAM	19.68	17.98
		2 593.0	QPSK	20.03	17.98
			16QAM	19.63	17.98
		2 680.0	QPSK	19.43	18.13
			16QAM	20.13	17.98

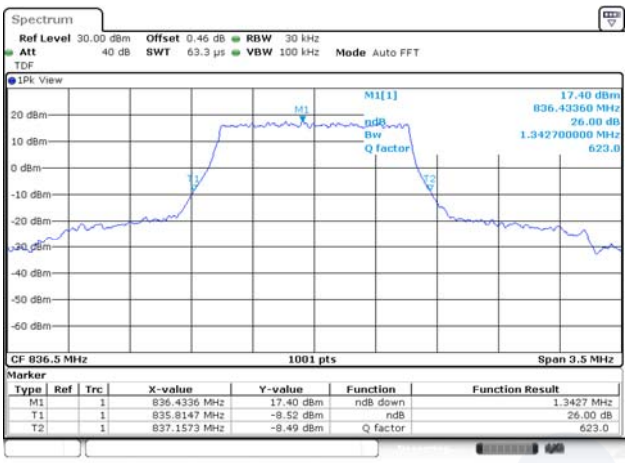
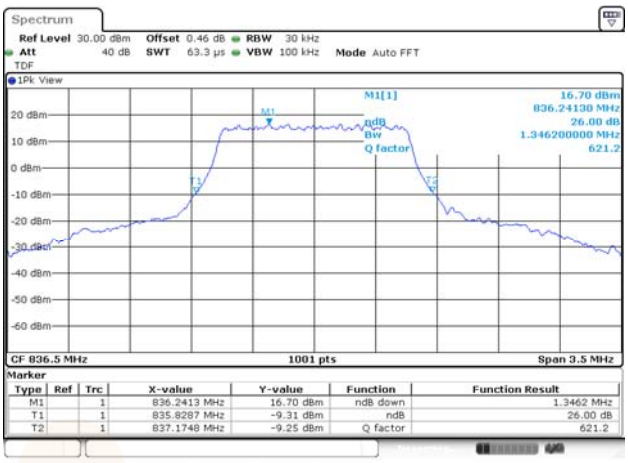
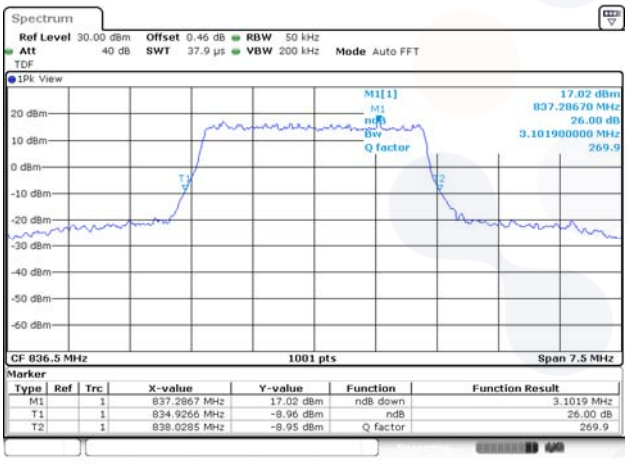
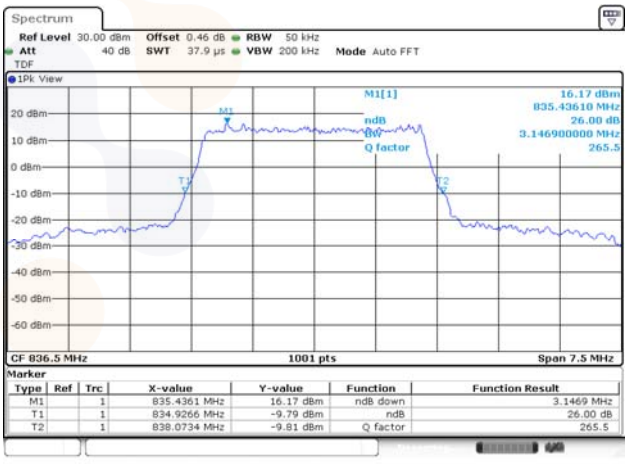
Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 41 PC2 (IC)	5	2 502.5	QPSK	5.43	4.52
			16QAM	5.31	4.52
	10	2 505.0	QPSK	9.97	9.04
			16QAM	10.51	9.02
	15	2 507.5	QPSK	15.21	13.52
			16QAM	15.25	13.45
	20	2 510.0	QPSK	19.68	17.98
			16QAM	19.88	17.93

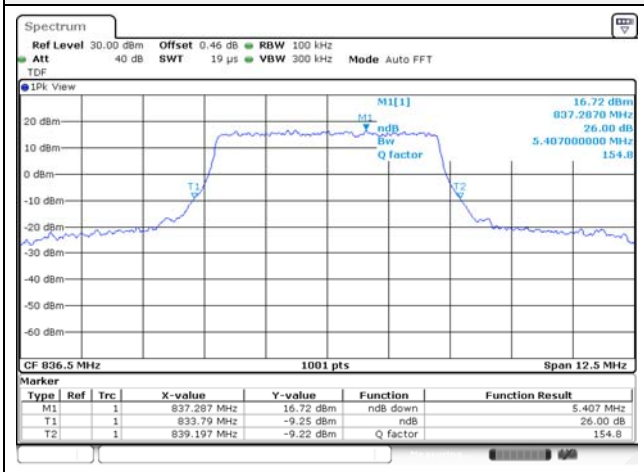
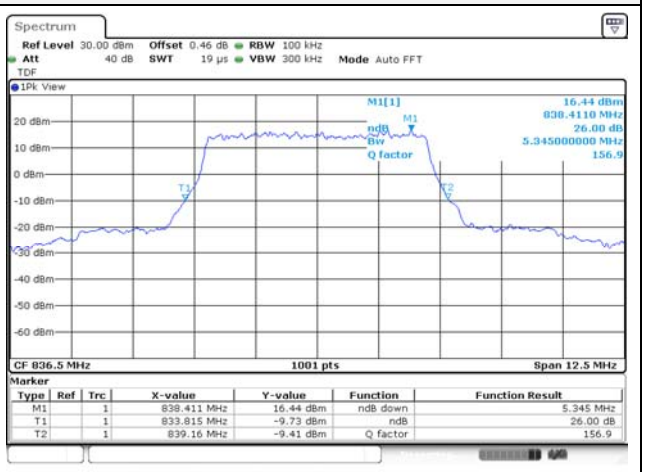
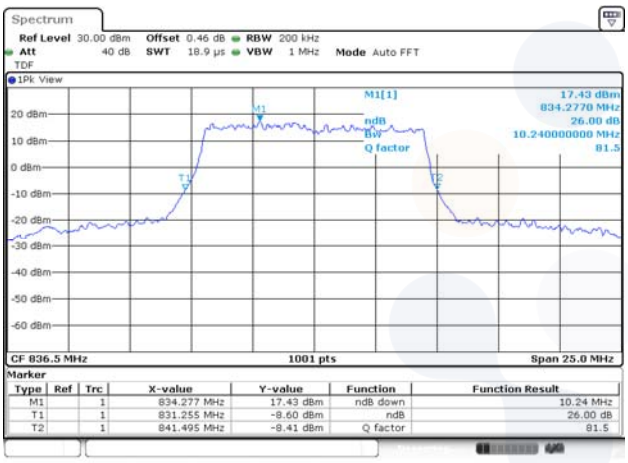
Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 66/4	1.4	1 710.7	QPSK	1.33	1.09
			16QAM	1.34	1.10
		1 745.0	QPSK	1.35	1.10
			16QAM	1.32	1.09
		1 779.3	QPSK	1.34	1.10
			16QAM	1.34	1.10
	3	1 711.5	QPSK	3.14	2.73
			16QAM	3.10	2.70
		1 745.0	QPSK	3.04	2.70
			16QAM	3.09	2.70
		1 778.5	QPSK	3.12	2.71
			16QAM	3.10	2.71
	5	1 712.5	QPSK	5.40	4.53
			16QAM	5.46	4.53
		1 745.0	QPSK	5.36	4.51
			16QAM	5.33	4.55
		1 777.5	QPSK	5.40	4.52
			16QAM	5.40	4.53
	10	1 715.0	QPSK	10.47	8.99
			16QAM	10.37	8.99
		1 745.0	QPSK	10.49	8.99
			16QAM	10.19	8.96
		1 775.0	QPSK	10.29	8.99
			16QAM	10.29	9.02
	15	1 717.5	QPSK	15.36	13.49
			16QAM	14.91	13.52
		1 745.0	QPSK	15.10	13.49
			16QAM	14.95	13.52
		1 772.5	QPSK	15.29	13.49
			16QAM	14.95	13.49
	20	1 720.0	QPSK	19.83	17.98
			16QAM	20.03	17.98
		1 745.0	QPSK	20.13	17.93
			16QAM	19.88	17.98
		1 770.0	QPSK	19.98	18.03
			16QAM	19.73	18.08

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 71	5	665.5	QPSK	5.43	4.57
			16QAM	5.30	4.52
		680.5	QPSK	5.27	4.52
			16QAM	5.36	4.52
		695.5	QPSK	5.45	4.53
			16QAM	5.36	4.52
	10	668.0	QPSK	10.37	9.02
			16QAM	10.29	8.99
		680.5	QPSK	10.44	9.02
			16QAM	10.22	8.97
		693.0	QPSK	10.34	8.99
			16QAM	10.09	8.99
	15	670.5	QPSK	15.17	13.45
			16QAM	15.21	13.45
		680.5	QPSK	15.36	13.49
			16QAM	14.95	13.45
		690.5	QPSK	15.06	13.45
			16QAM	14.91	13.45
	20	673.0	QPSK	19.83	13.03
			16QAM	20.03	17.98
		680.5	QPSK	19.73	18.08
			16QAM	19.98	18.03
		688.0	QPSK	19.78	17.93
			16QAM	19.83	17.98

26 dB Bandwidth

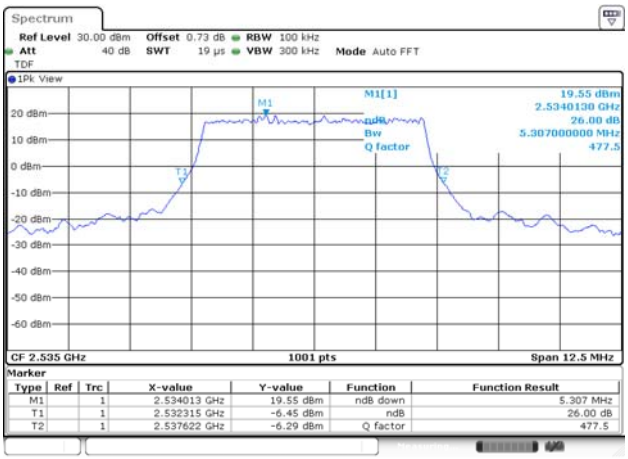
Test mode: LTE Band 5

1.4M BW QPSK Mid ch.	1.4M BW 16QAM Mid ch.
	
3M BW QPSK Mid ch.	**3M BW 16QAM Mid ch.**
	

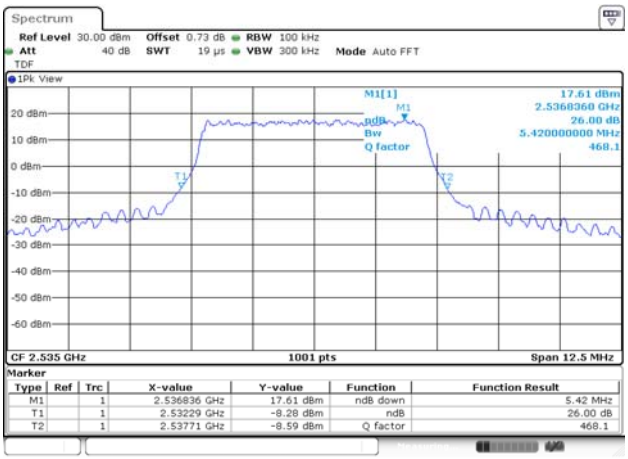
5M BW QPSK Mid ch.	5M BW 16QAM Mid ch.
	
10M BW QPSK Mid ch.	**10M BW 16QAM Mid ch.**
	

Test mode: LTE Band 7

5M BW QPSK Mid ch.

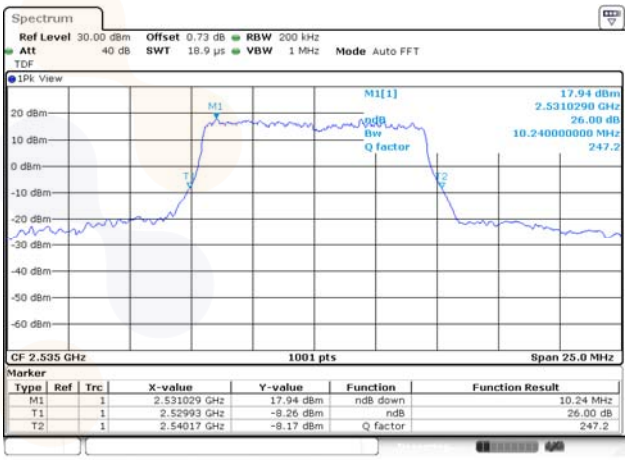


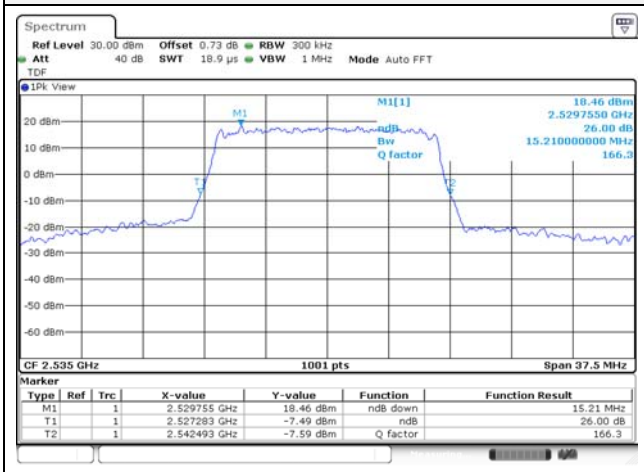
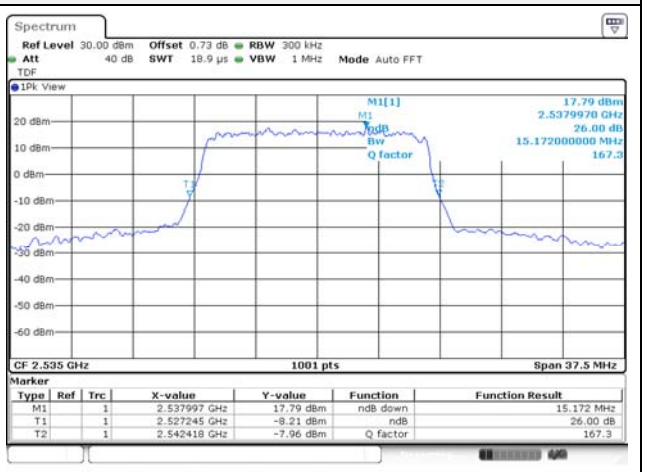
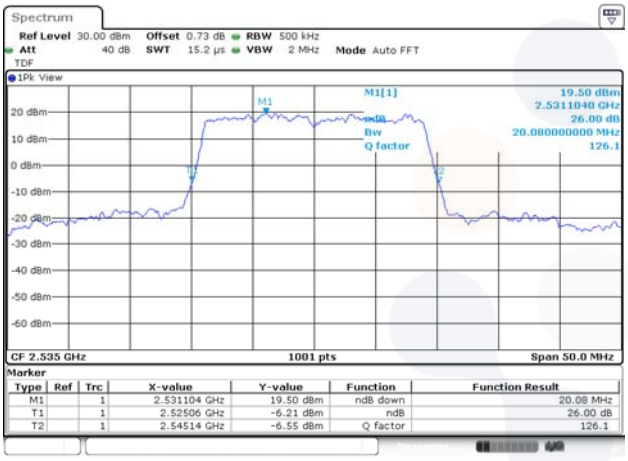
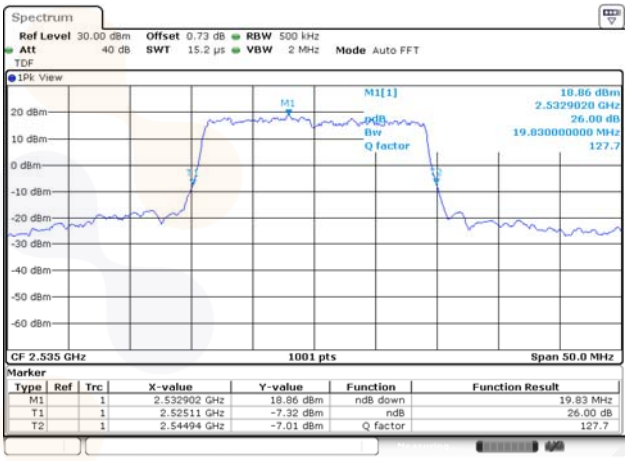
5M BW 16QAM Mid ch.



10M BW QPSK Mid ch.

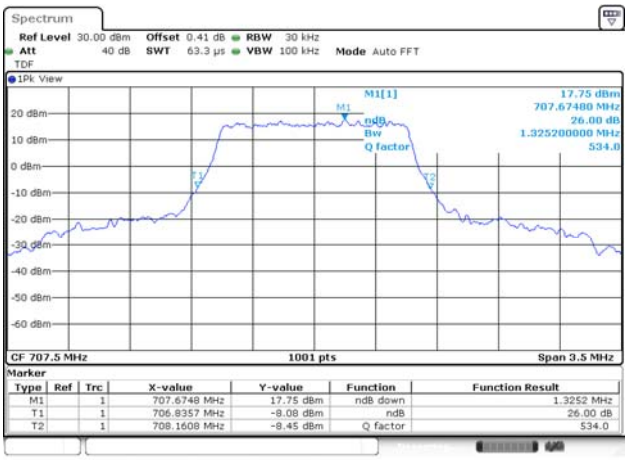
10M BW 16QAM Mid ch.



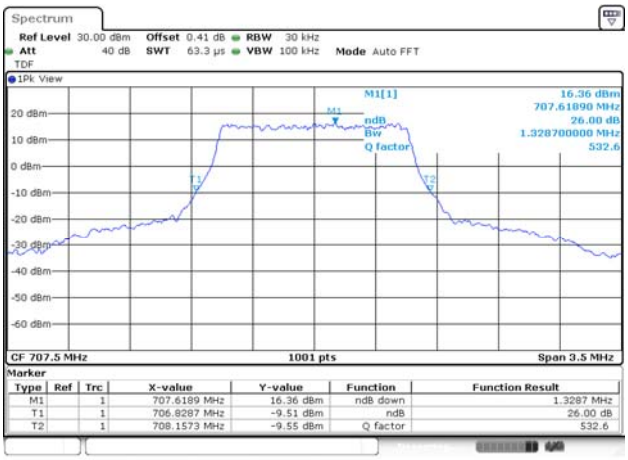
15M BW QPSK Mid ch.	15M BW 16QAM Mid ch.
	
20M BW QPSK Mid ch.	**20M BW 16QAM Mid ch.**
	

Test mode: LTE Band 12

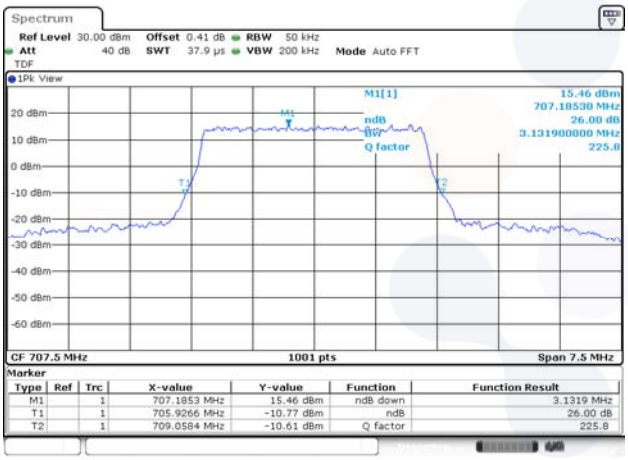
1.4M BW QPSK Mid ch.



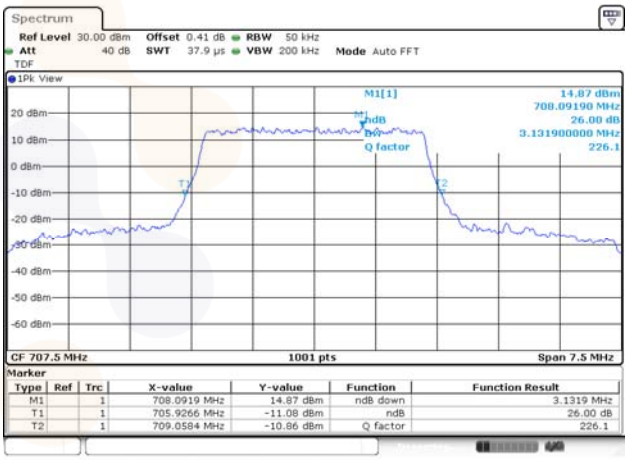
1.4M BW 16QAM Mid ch.

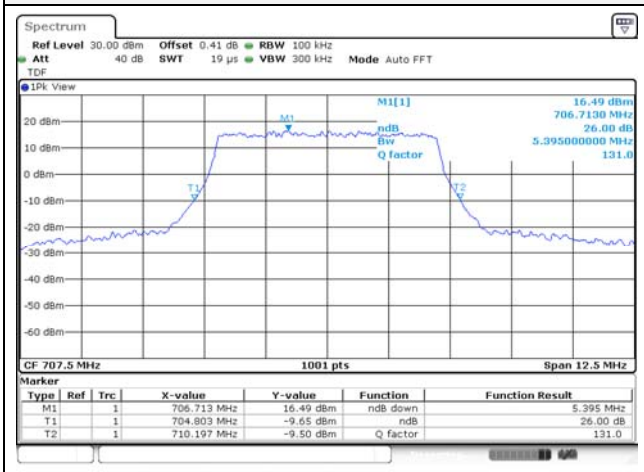
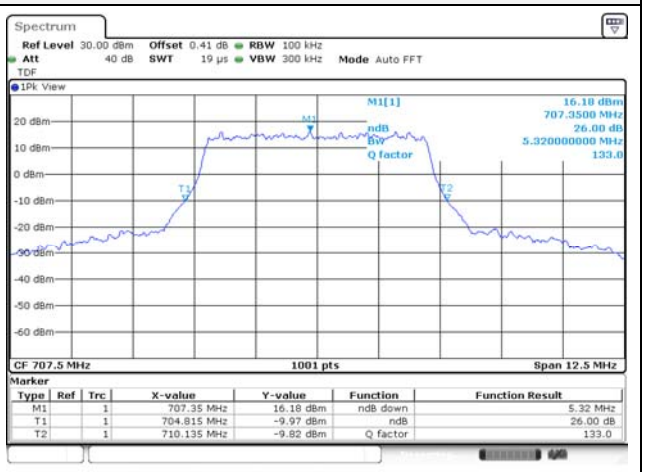
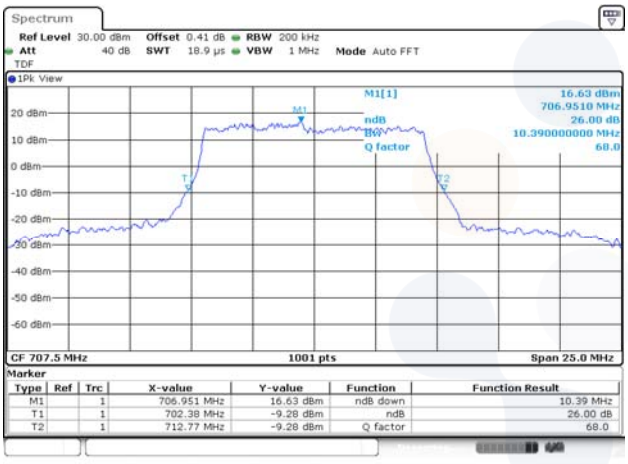
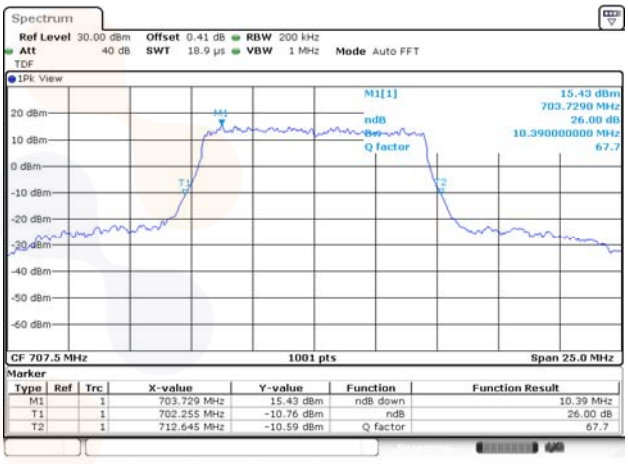


3M BW QPSK Mid ch.



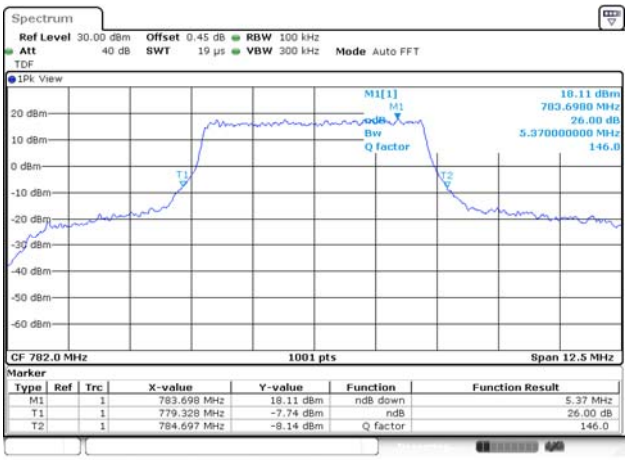
3M BW 16QAM Mid ch.



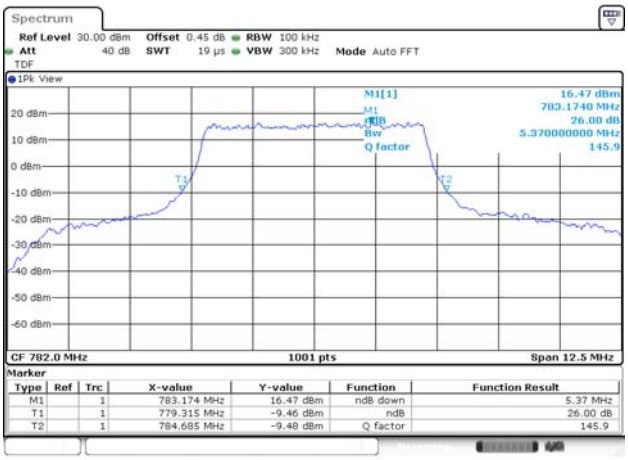
5M BW QPSK Mid ch.	5M BW 16QAM Mid ch.
	
10M BW QPSK Mid ch.	**10M BW 16QAM Mid ch.**
	

Test mode: LTE Band 13

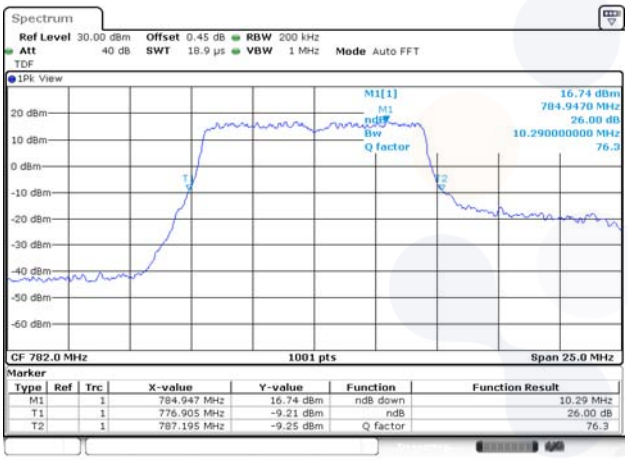
5M BW QPSK Mid ch.



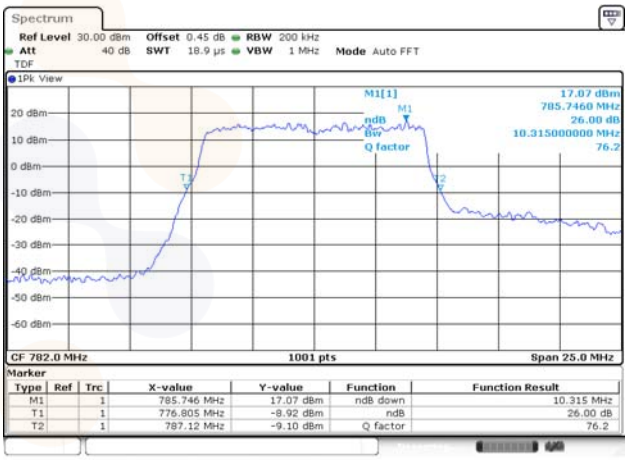
5M BW 16QAM Mid ch.



10M BW QPSK Mid ch.

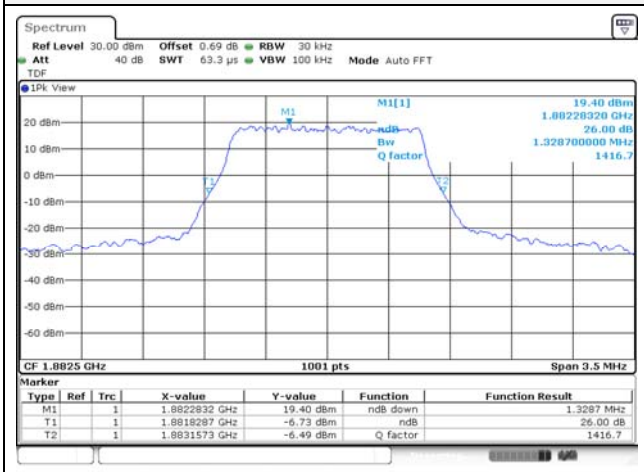


10M BW 16QAM Mid ch.

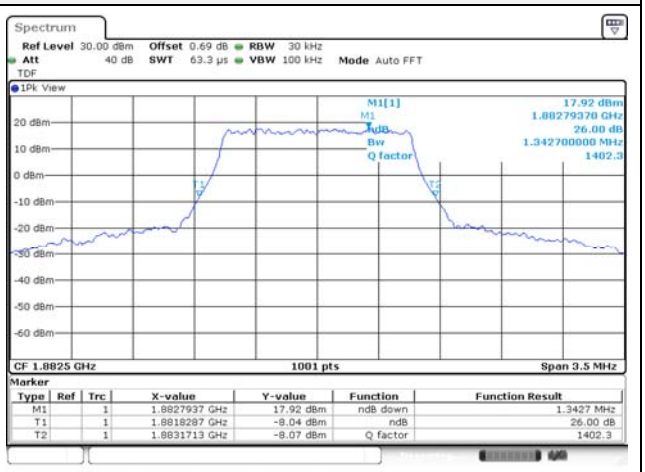


Test mode: LTE Band 25/2

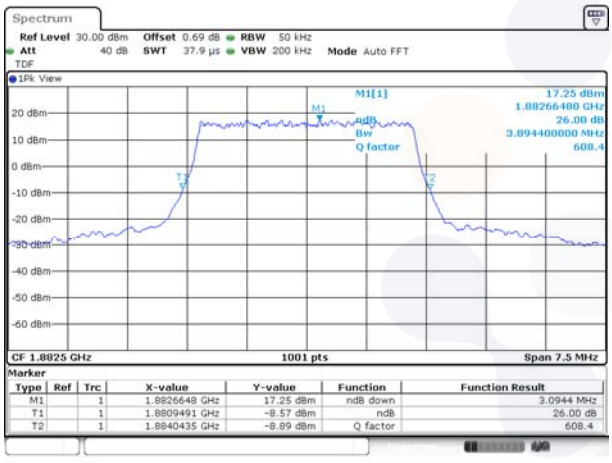
1.4M BW QPSK Mid ch.



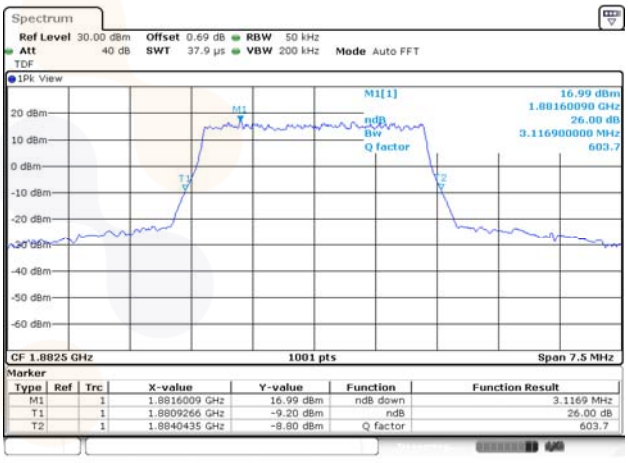
1.4M BW 16QAM Mid ch.



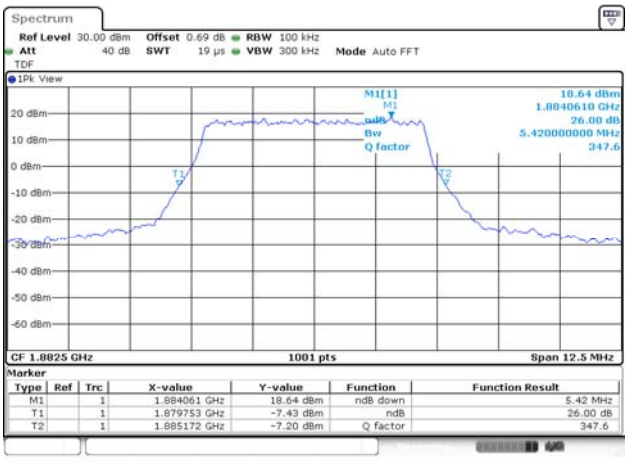
3M BW QPSK Mid ch.



3M BW 16QAM Mid ch.



5M BW QPSK Mid ch.



5M BW 16QAM Mid ch.