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-SRF0136 Page (1) of (49)	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 : 2023-03-23

2. Use of Report : Certification

3. Name of Product / Model : Smart wearable / SM-R945U

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

5. FCC ID : A3LSMR945

6. Date of Test : 2023-03-28 to 2023-05-17

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

8. Test method used : FCC Part 2
FCC Part 90 subpart S

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

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

2023-05-19

Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2023-05-19	Originally issued	-

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 1	:	AG TECH CO.,LTD
Address	:	Lot G3, Que Vo Industrial Park(Expanded Area), Nam son Ward, Bac Ninh Province, Vietnam
Factory 2	:	ALMUS VINA
Address	:	Lot CN07A, Phu Ha Industrial Park, Ha Thach Commune, Phu Tho Town, Phu Tho 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 ISED Number: 8035A KOLAS No.: KT231

2. Device information

Equipment under test	:	Smart wearable		
Model	:	SM-R945U		
Modulation technique	:	QPSK, 16QAM		
Power source	:	DC 3.88 V		
Antenna specification	:	Metal Antenna		
Frequency range	:	LTE Band 26	:	814.7 ㎒ ~ 848.3 ㎒
Bandwidth	:	LTE Band 26	:	1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒
Software version	:	SM-R945U_R945U.001, SM-R945F_R945F.001		
Hardware version	:	REV1.0		
Test device serial No.	:	Conducted	:	R3AW2008FWL, R3AW400RKAJ, R3AW400RKK9N
		Radiated	:	R3AW400R4DD, R3AW400R56J
Operation temperature	:	-20 ℃ ~ 50 ℃		

2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source	FCC ID
Wireless charger	Samsung Electronics Co., Ltd.	EP-OR900	-	5.0 V, 2.0 A	FCC ID : A3LEPOR900

2.2. Frequency/channel operations

This device contains the following capabilities:
WLAN (11a/b/g/n), Bluetooth (BDR/EDR/BLE), LTE B2/4/5/7/12/13/25/26/66/71, WCDMA 850/1700/1900

LTE Band 26

Ch.	Frequency (㎒)
26697	814.7
26783	823.3

Table 2.2.1. 1.4M BW

Ch.	Frequency (㎒)
26705	815.5
26775	822.5

Table 2.2.2. 3M BW

Ch.	Frequency (㎒)
26715	816.5
26765	821.5

Table 2.2.3. 5M BW

Ch.	Frequency (㎒)
26740	819.0

Table 2.2.4. 10M BW

Ch.	Frequency (㎒)
26765	821.5

Table 2.2.5. 15M BW

3. Maximum output power

LTE Band 26 (Part 90)

Mode	Tx frequency (㎒)	Emission designator	Conducted	
			Max. power (dBm)	Max. power (W)
LTE Band 26	814.7 ~ 823.3	1M10G7D	23.21	0.209
		1M10W7D	21.70	0.148
	815.5 ~ 822.5	2M70G7D	23.18	0.207
		2M72W7D	21.78	0.151
	816.5 ~ 821.5	4M55G7D	23.20	0.209
		4M53W7D	21.86	0.153
	819.0	8M99G7D	23.14	0.206
		9M02W7D	21.77	0.150
	821.5	13M6G7D	22.80	0.191
		13M5W7D	21.43	0.139
Straddle channel	824.0	1M11G7D	23.22	0.210
		1M10W7D	21.71	0.148
		2M72G7D	23.17	0.207
		2M70W7D	21.80	0.151
		4M52G7D	23.20	0.209
		4M52W7D	21.88	0.154
		8M97G7D	23.19	0.208
		8M97W7D	21.87	0.154
		13M4G7D	22.90	0.195
		13M4W7D	21.51	0.142

4. Summary of tests

FCC Part section(s)	Parameter	Test Limit	Test Condition	Test results
2.1046 90.635	Conducted Output Power	< 100 Watts	Conducted	Pass
2.1049	Occupied Bandwidth & 26 dB Bandwidth	N/A		Pass
2.1051 90.691(a)	Band Edge Emissions at Antenna Terminal	<43 + 10Log$_{10}$(P) dB, <50 + 10Log$_{10}$(P) dB at Band Edge and for all out-of-band emissions within 37.5kHz of Block Edge		Pass
	Spurious Emissions at Antenna Terminal			Pass
2.1055 90.213	Frequency stability	< 2.5 ppm		Pass
22.913(a)(5)	Effective Radiated Power	< 7 Watts max. ERP	Radiated	Pass
2.1053 90.691(a)	Radiated Spurious Emissions	<43 + 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. 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	Strap	With charger	Without charger		
		X-axis	X-axis	Y-axis	Z-axis
LTE B26	With strap	-	-	-	-
	Without strap	O	-	-	-

3. In the case of radiated spurious emissions, only the worst case bandwidth results were reported.
4. 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
Radiated Spurious Emissions	QPSK		

LTE Band	Bandwidth (㎒)	RB size	RB offset
B26 (Part 90)	10	1	0, 25, 49

2) Conducted measurement

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

LTE Band	Bandwidth (㎒)	RB size	RB offset
B26 (Part 90)	1.4, 3, 5, 10, 15	1	0, 5, 14, 24, 49, 74
		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 ㎒	2.5 dB
	1 000 ㎒ ~ 18 000 ㎒	4.7 dB
	Above 1 8000 ㎒	4.8 dB

6. Measurement results explanation example

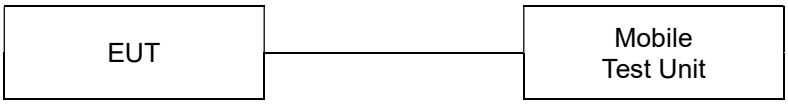
Frequency (㎒)	Factor(㏈)	Frequency (㎒)	Factor(㏈)
30	10.06	11 000	13.44
50	10.79	12 000	13.17
100	10.97	13 000	13.07
200	10.43	14 000	13.10
300	10.57	15 000	13.42
400	10.88	16 000	12.87
500	10.92	17 000	13.21
600	10.40	18 000	12.92
700	10.28	19 000	12.56
800	10.39	20 000	12.60
900	10.63	21 000	12.84
1 000	10.85	22 000	12.08
2 000	11.25	23 000	12.56
3 000	11.46	24 000	12.19
4 000	11.85	25 000	13.66
5 000	11.86	26 000	13.07
6 000	12.10	26 500	13.95
7 000	12.04	27 000	13.59
8 000	12.88	28 000	13.54
9 000	12.73	29 000	14.32
10 000	13.05	30 000	14.48

Note.
Offset(㏈) = RF cable loss(㏈) + Directional Coupler (㏈)

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

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.

Notes:

Offset(㏈) = RF cable loss(㏈)

Test results

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	MPR	Maximum power Frequency (㎒)		
						Low	Middle	High
LTE Band 26	1.4	QPSK	1	0	0	23.13	-	23.18
			1	3	0	23.12	-	23.21
			1	5	0	23.11	-	23.21
			3	0	0	23.01	-	23.10
			3	1	0	23.02	-	23.10
			3	3	0	23.04	-	23.12
			6	0	1	21.63	-	21.69
		16QAM	1	0	1	21.60	-	21.65
			1	3	1	21.62	-	21.70
			1	5	1	21.59	-	21.65
			3	0	1	21.44	-	21.53
			3	1	1	21.48	-	21.53
			3	3	1	21.46	-	21.54
			6	0	2	20.70	-	20.78
	3	QPSK	1	0	0	23.09	-	23.14
			1	8	0	23.10	-	23.18
			1	14	0	23.06	-	23.12
			8	0	1	21.69	-	21.76
			8	4	1	21.70	-	21.79
			8	7	1	21.70	-	21.78
			15	0	1	21.63	-	21.68
		16QAM	1	0	1	21.71	-	21.78
			1	8	1	21.69	-	21.77
			1	14	1	21.67	-	21.75
			8	0	2	20.78	-	20.83
			8	4	2	20.77	-	20.82
			8	7	2	20.79	-	20.85
			15	0	2	20.62	-	20.67
	5	QPSK	1	0	0	23.13	-	23.20
			1	12	0	23.09	-	23.16
			1	24	0	23.08	-	23.14
			12	0	1	21.63	-	21.70
			12	7	1	21.60	-	21.70
			12	13	1	21.64	-	21.69
			25	0	1	21.62	-	21.69
		16QAM	1	0	1	21.78	-	21.85
			1	12	1	21.77	-	21.86
			1	24	1	21.72	-	21.77
			12	0	2	20.65	-	20.72
			12	7	2	20.59	-	20.66
			12	13	2	20.63	-	20.73
			25	0	2	20.69	-	20.76

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	MPR	Maximum power Frequency (㎒)		
						Low	Middle	High
LTE Band 26	10	QPSK	1	0	0	-	23.14	-
			1	25	0	-	23.08	-
			1	49	0	-	23.11	-
			25	0	1	-	21.62	-
			25	12	1	-	21.66	-
			25	25	1	-	21.61	-
			50	0	1	-	21.61	-
		16QAM	1	0	1	-	21.77	-
			1	25	1	-	21.77	-
			1	49	1	-	21.67	-
			25	0	2	-	20.63	-
			25	12	2	-	20.62	-
			25	25	2	-	20.59	-
			50	0	2	-	20.70	-
	15	QPSK	1	0	0	-	22.80	-
			1	36	0	-	22.70	-
			1	74	0	-	22.58	-
			36	0	1	-	21.26	-
			36	18	1	-	21.20	-
			36	37	1	-	21.16	-
			75	0	1	-	21.17	-
		16QAM	1	0	1	-	21.43	-
			1	36	1	-	21.39	-
			1	74	1	-	21.26	-
			36	0	2	-	20.26	-
			36	18	2	-	20.24	-
			36	37	2	-	20.20	-
			75	0	2	-	20.21	-

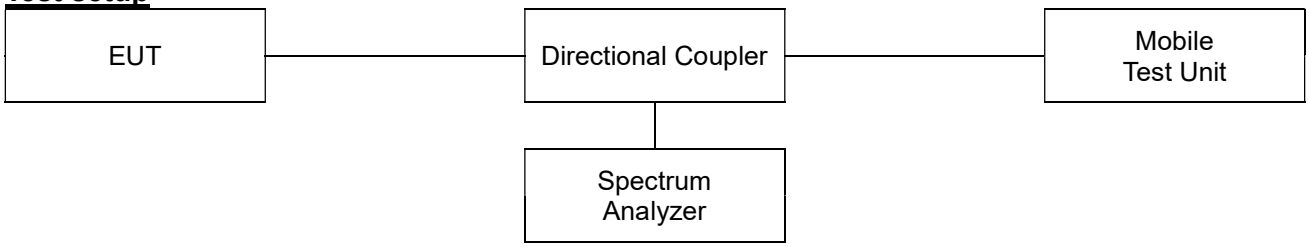
Straddle channel

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	MPR	Maximum power
LTE Band 26	1.4	QPSK	1	0	0	23.22
			1	3	0	23.17
			1	5	0	23.20
			3	0	0	23.10
			3	1	0	23.10
			3	3	0	23.10
			6	0	1	21.68
		16QAM	1	0	1	21.70
			1	3	1	21.71
			1	5	1	21.66
			3	0	1	21.54
			3	1	1	21.56
			3	3	1	21.51
			6	0	2	20.78
	3	QPSK	1	0	0	23.17
			1	8	0	23.15
			1	14	0	23.16
			8	0	1	21.79
			8	4	1	21.80
			8	7	1	21.76
			15	0	1	21.73
		16QAM	1	0	1	21.80
			1	8	1	21.76
			1	14	1	21.75
			8	0	2	20.88
			8	4	2	20.87
			8	7	2	20.85
			15	0	2	20.71
	5	QPSK	1	0	0	23.20
			1	12	0	23.16
			1	24	0	23.16
			12	0	1	21.68
			12	7	1	21.67
			12	13	1	21.71
			25	0	1	21.67
		16QAM	1	0	1	21.88
			1	12	1	21.86
			1	24	1	21.82
			12	0	2	20.72
			12	7	2	20.68
			12	13	2	20.69
			25	0	2	20.77

Test Band	Bandwidth (㎒)	Test mode	RB size	RB offset	MPR	Maximum power
LTE Band 26	10	QPSK	1	0	0	23.19
			1	25	0	23.13
			1	49	0	23.18
			25	0	1	21.71
			25	12	1	21.71
			25	25	1	21.67
			50	0	1	21.71
		16QAM	1	0	1	21.83
			1	25	1	21.87
			1	49	1	21.74
			25	0	2	20.71
			25	12	2	20.68
			25	25	2	20.65
			50	0	2	20.75
LTE Band 26	15	QPSK	1	0	0	22.90
			1	36	0	22.79
			1	74	0	22.65
			36	0	1	21.32
			36	18	1	21.29
			36	37	1	21.21
			75	0	1	21.22
		16QAM	1	0	1	21.51
			1	36	1	21.46
			1	74	1	21.33
			36	0	2	20.36
			36	18	2	20.29
			36	37	2	20.27
			75	0	2	20.29

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

c) 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.

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

e) 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."

j) 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 26	1.4	814.7	QPSK	1.35	1.10
			16QAM	1.34	1.10
		823.3	QPSK	1.35	1.10
			16QAM	1.35	1.10
	3	815.5	QPSK	3.12	2.70
			16QAM	3.10	2.72
		822.5	QPSK	3.12	2.70
			16QAM	3.09	2.71
	5	816.5	QPSK	5.50	4.55
			16QAM	5.42	4.53
		821.5	QPSK	5.33	4.52
			16QAM	5.32	4.52
	10	819.0	QPSK	9.94	8.99
			16QAM	10.22	9.02
	15	821.5	QPSK	15.29	13.56
			16QAM	15.17	13.49

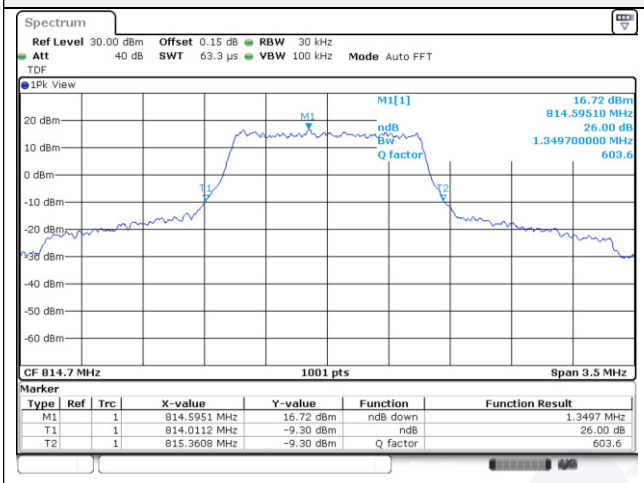
Straddle channel

Test Band	Bandwidth (㎒)	Frequency (㎒)	Test mode	26㏈ bandwidth (㎒)	99 % bandwidth (㎒)
LTE Band 26	1.4	824	QPSK	1.33	1.11
			16QAM	1.34	1.10
	3	824	QPSK	3.11	2.72
			16QAM	3.08	2.70
	5	824	QPSK	5.32	4.52
			16QAM	5.37	4.52
	10	824	QPSK	10.02	8.97
			16QAM	10.17	8.97
	15	824	QPSK	15.10	13.45
			16QAM	14.99	13.45

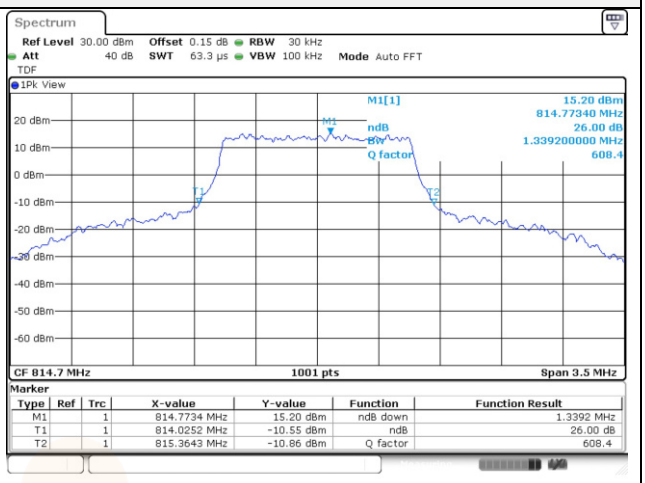
26dB Bandwidth

Test mode: LTE Band 26

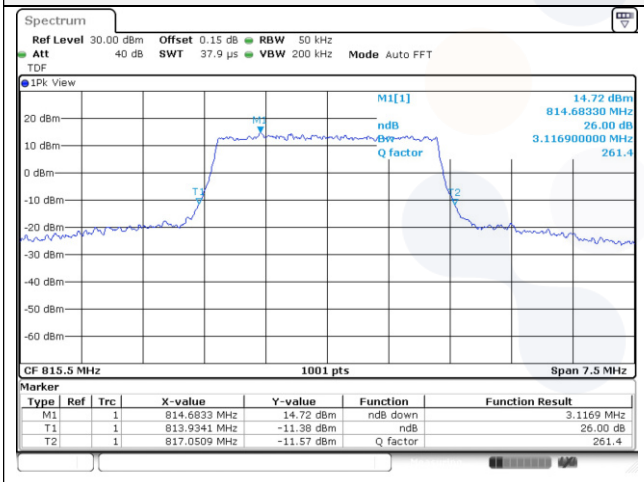
1.4M BW QPSK Low ch.



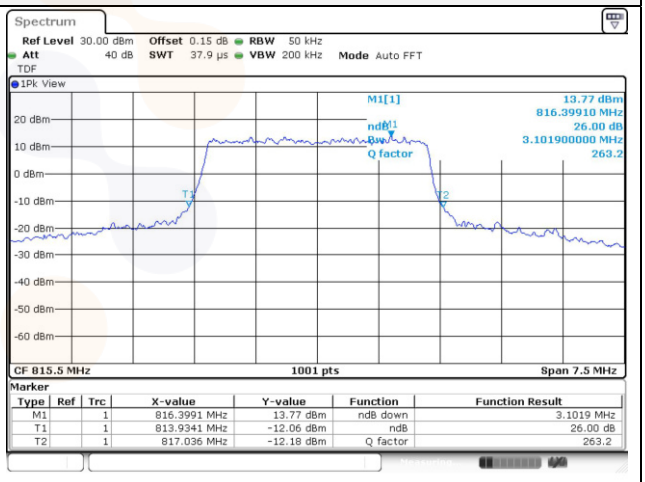
1.4M BW 16QAM Low ch.



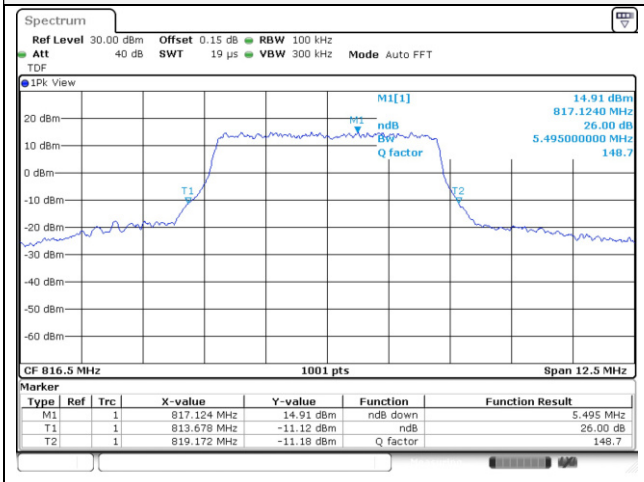
3M BW QPSK Low ch.



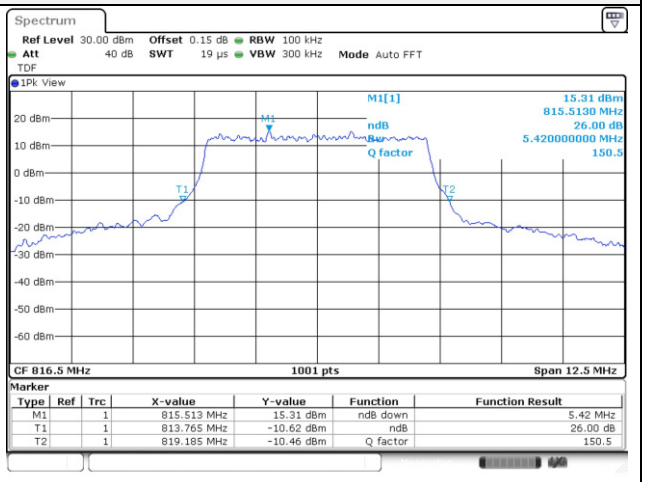
3M BW 16QAM Low ch.



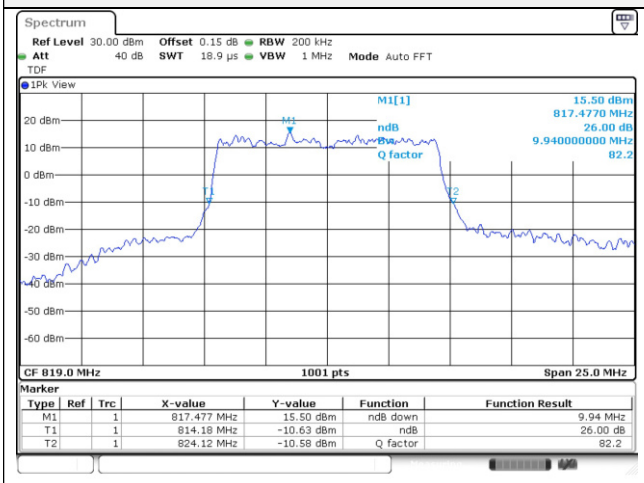
5M BW QPSK Low ch.



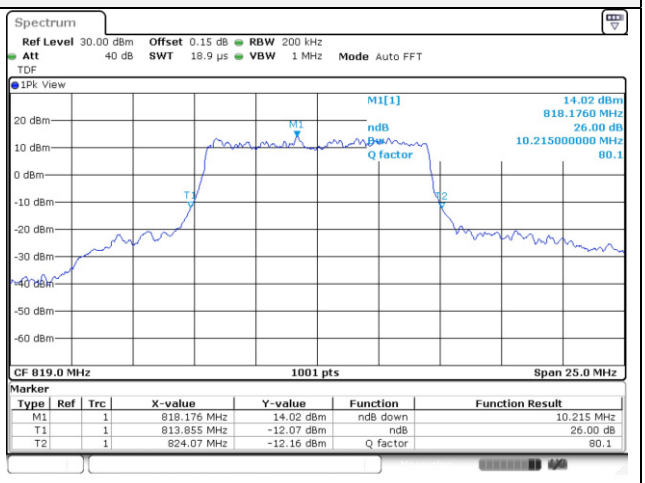
5M BW 16QAM Low ch.



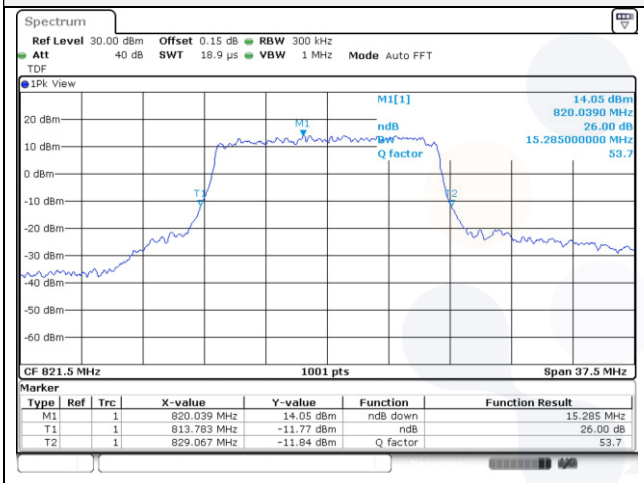
10M BW QPSK Mid ch.



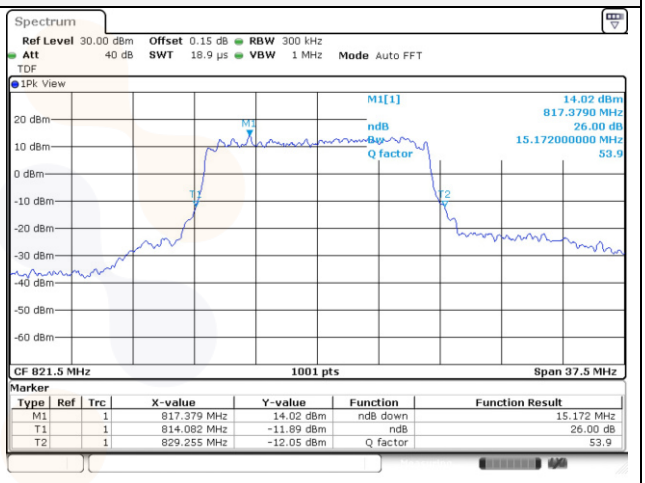
10M BW 16QAM Mid ch.



15M BW QPSK Mid ch.

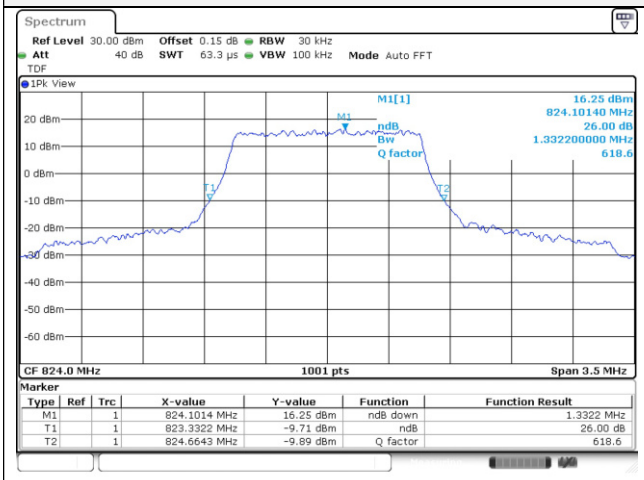


15M BW 16QAM Mid ch.

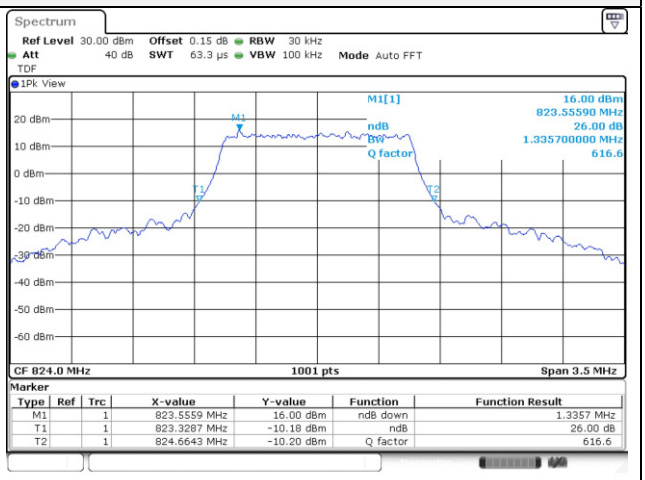


Straddle channel

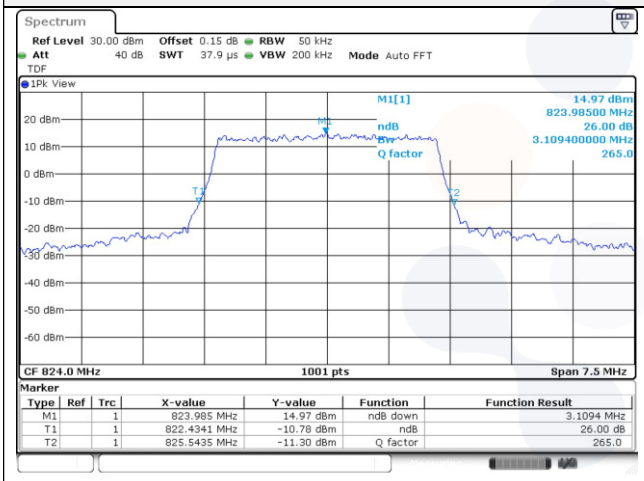
1.4M BW QPSK



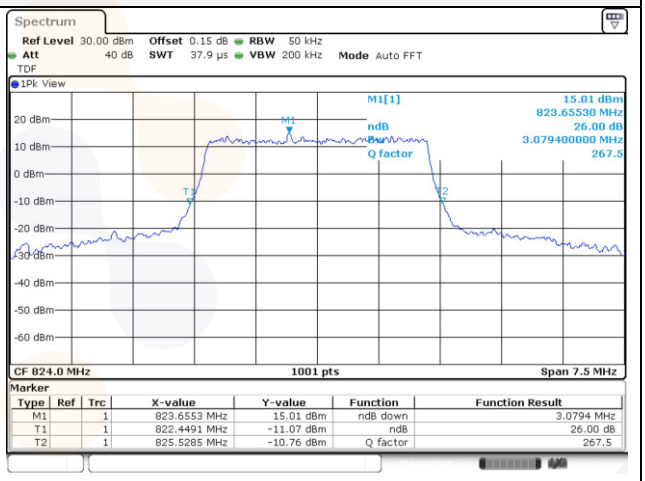
1.4M BW 16QAM



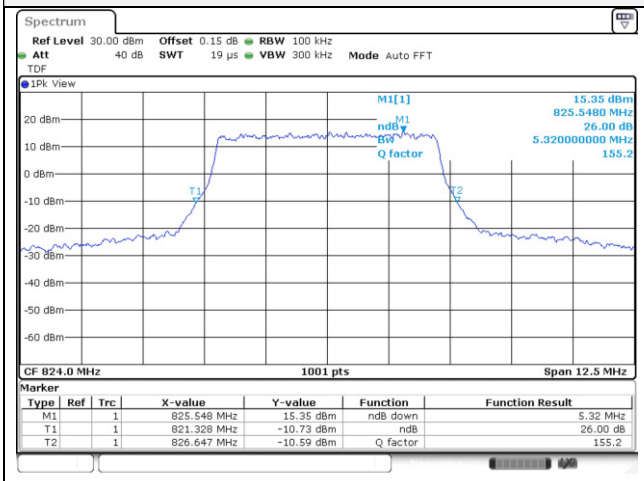
3M BW QPSK



3M BW 16QAM



5M BW QPSK



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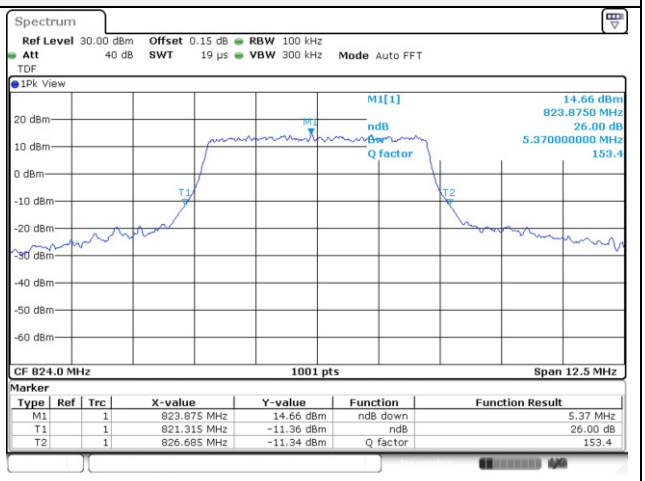
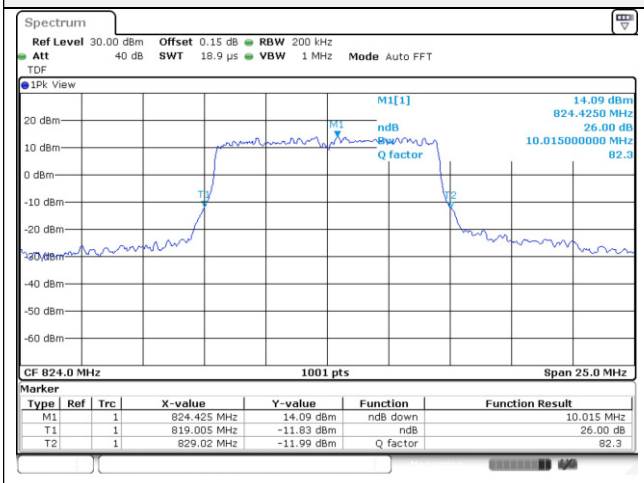
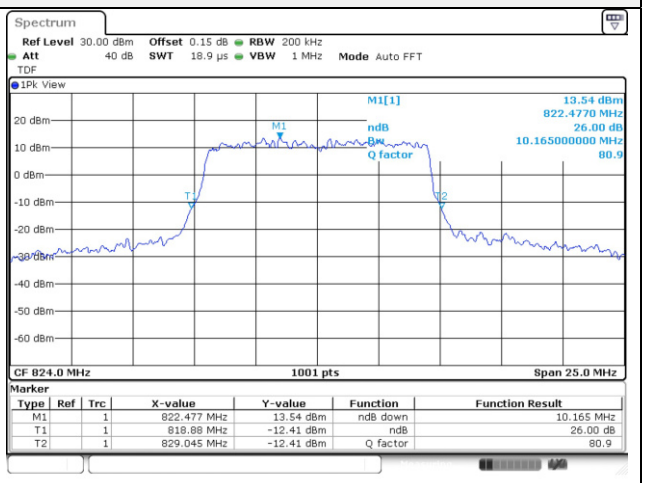


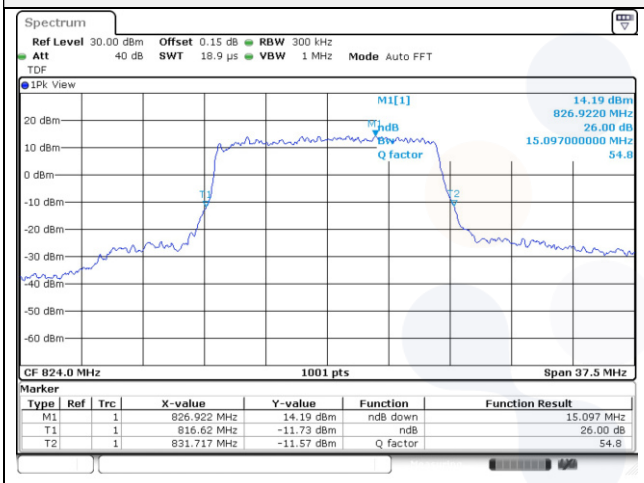
10M BW QPSK



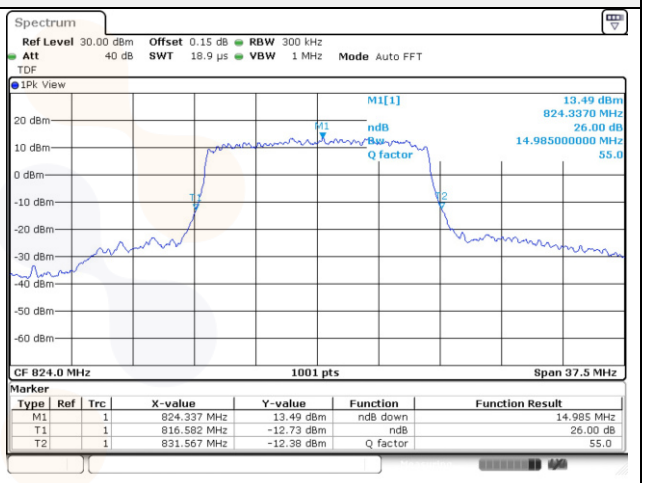
10M BW 16QAM



15M BW QPSK

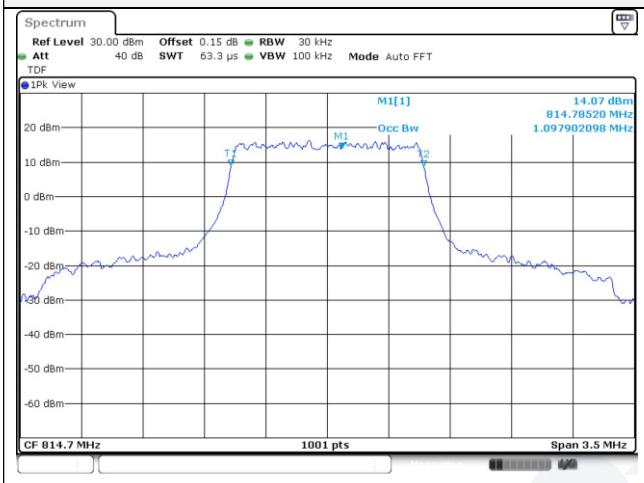
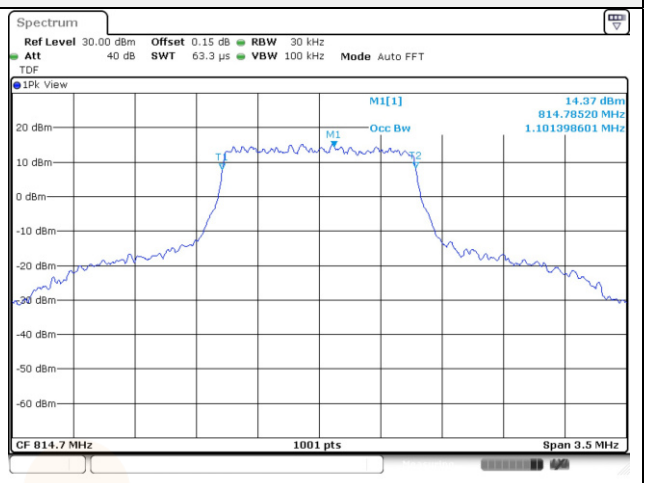
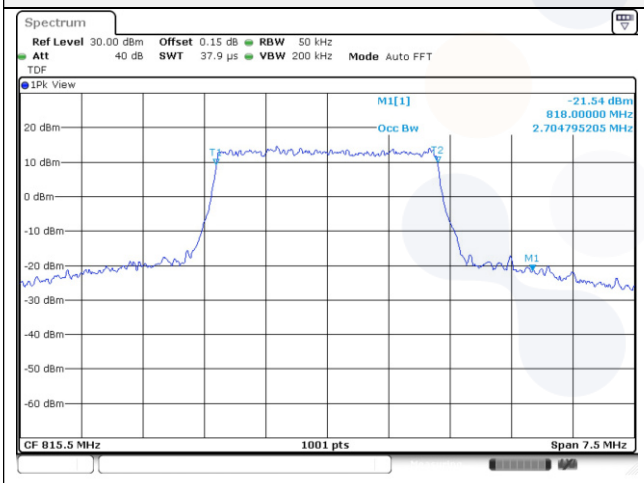
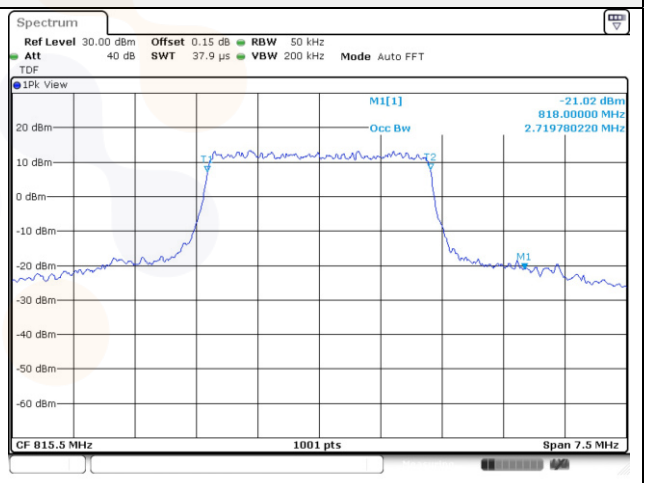
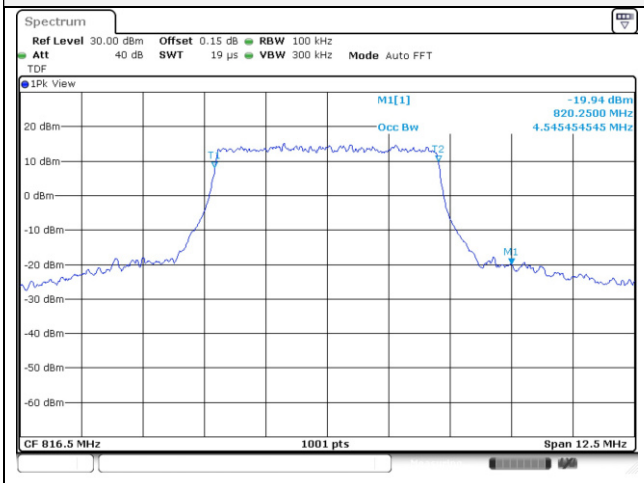
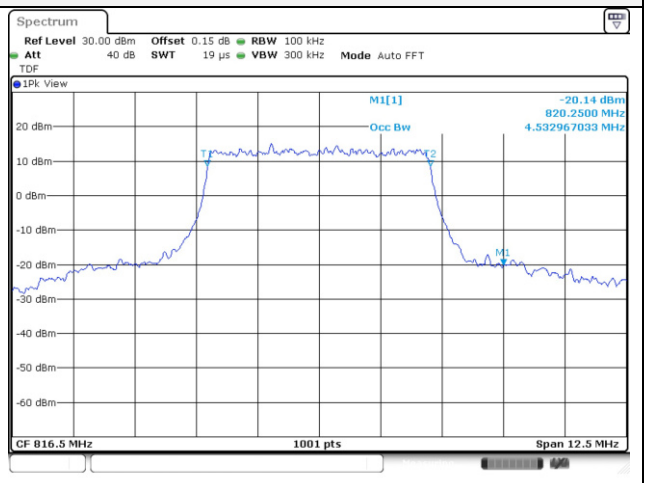


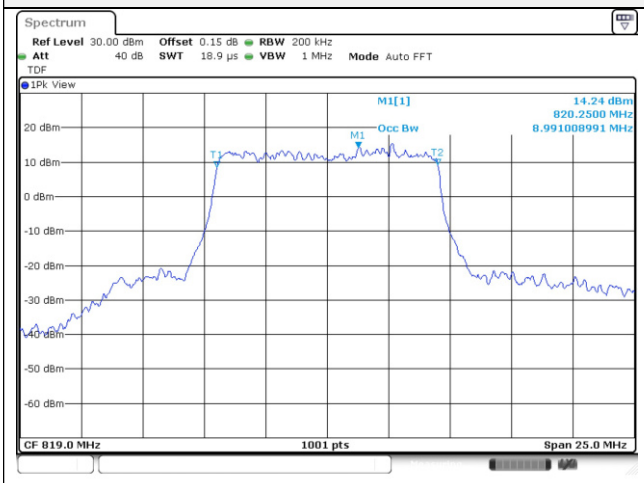
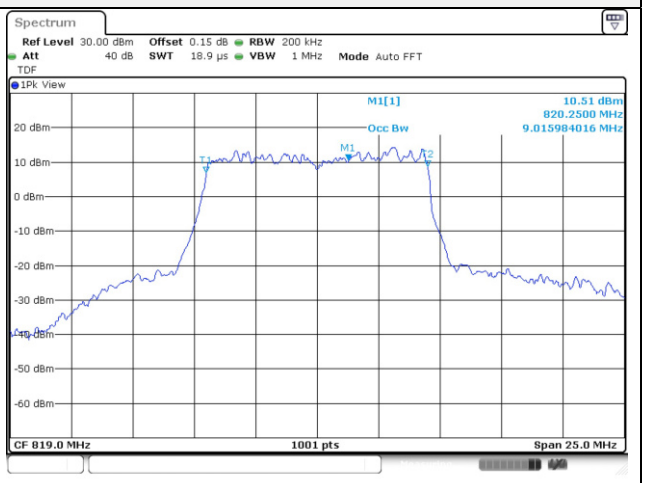
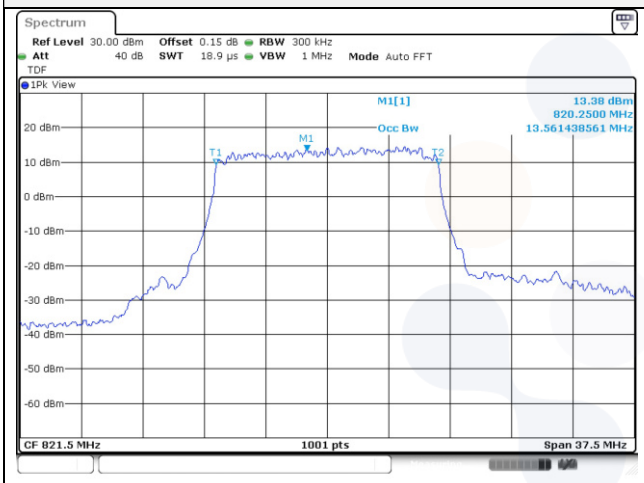
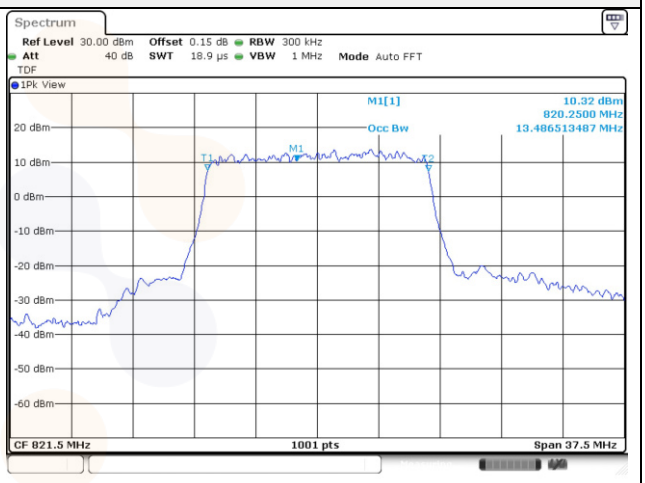
15M BW 16QAM



99% Occupied Bandwidth

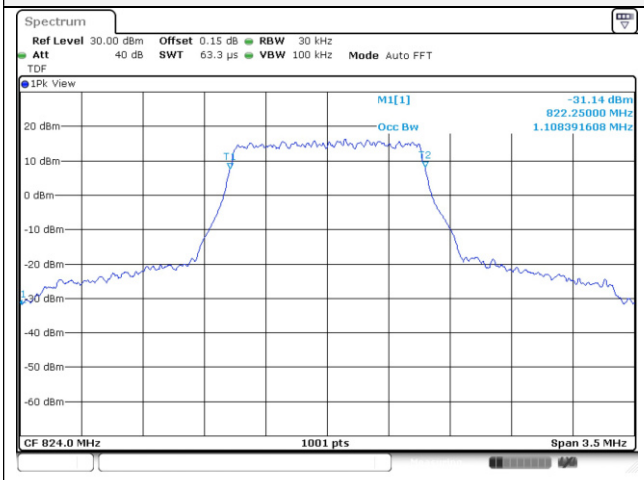
Test mode: LTE Band 26

1.4M BW QPSK Low ch.	1.4M BW 16QAM Low ch.
	
3M BW QPSK Low ch.	**3M BW 16QAM Low ch.**
	
5M BW QPSK Low ch.	**5M BW 16QAM Low ch.**
	

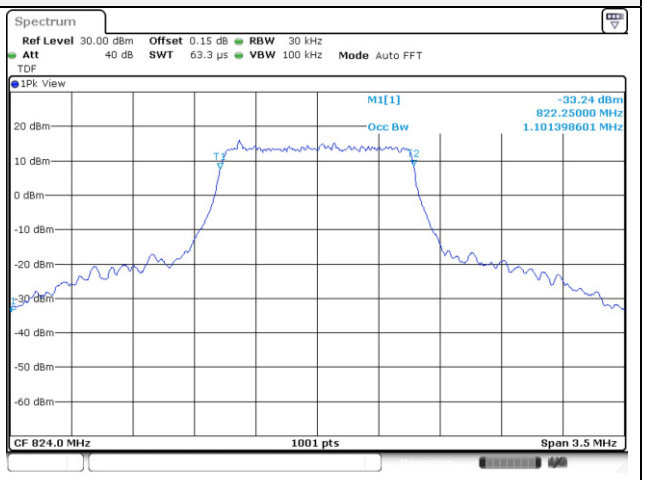
10M BW QPSK Mid ch.	10M BW 16QAM Mid ch.
	
15M BW QPSK Mid ch.	**15M BW 16QAM Mid ch.**
	

Straddle channel

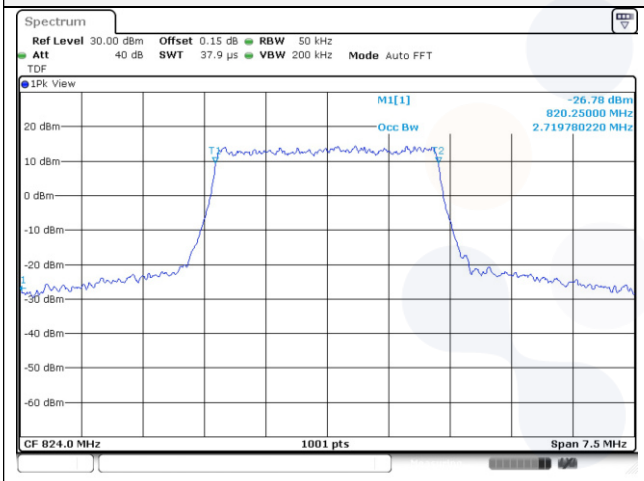
1.4M BW QPSK



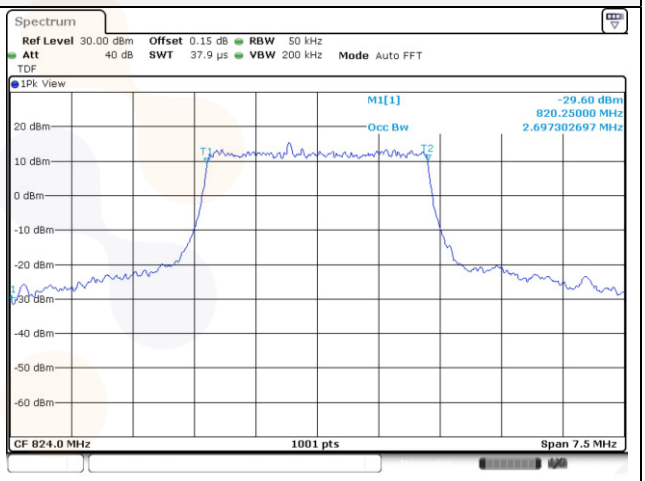
1.4M BW 16QAM



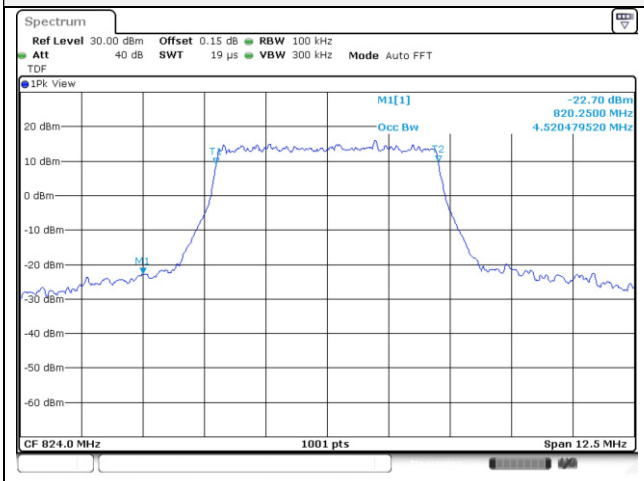
3M BW QPSK



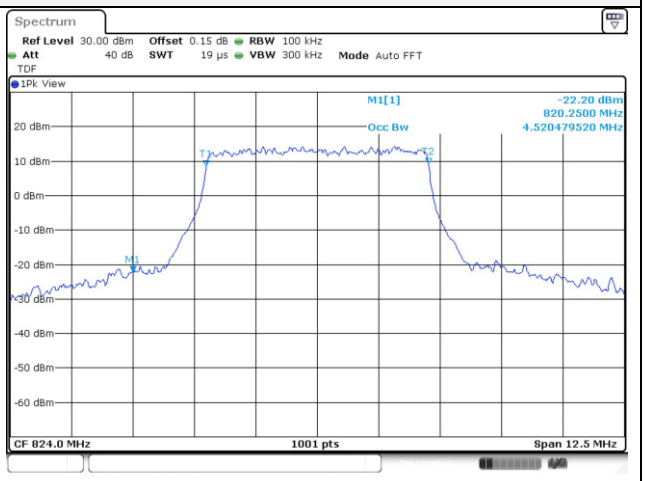
3M BW 16QAM

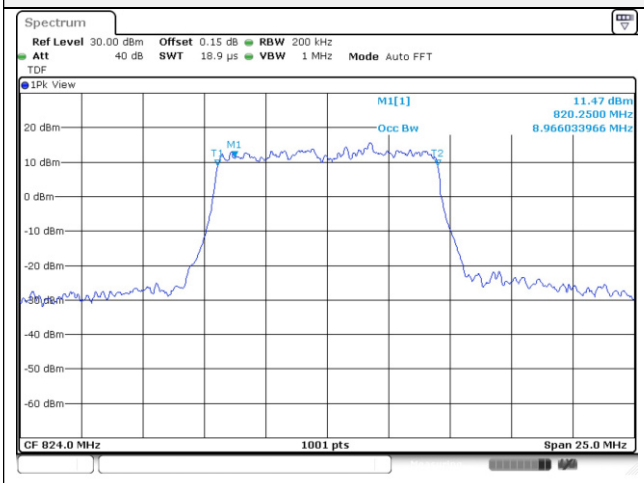
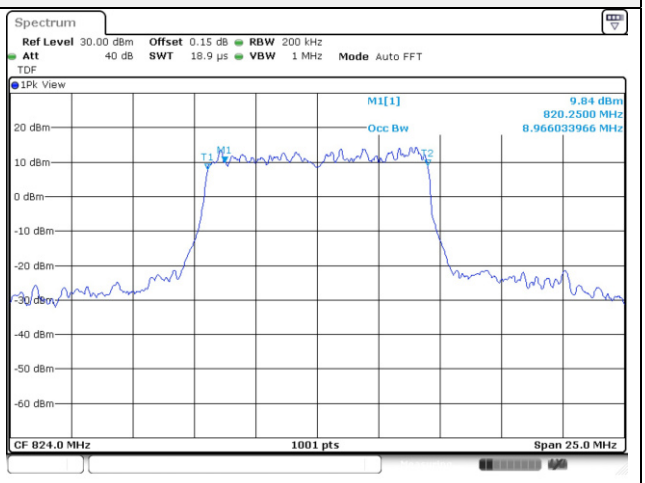


5M BW QPSK



5M BW 16QAM



10M BW QPSK	10M BW 16QAM
	
15M BW QPSK	**15M BW 16QAM**