




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.: KR24-SRF0101 Page(1) of (47)	 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 : 2024-03-28

2. Use of Report : Certification

3. Name of Product / Model : Smart Wearable / SM-L705U

4. Derivative Model : SM-L705F

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

6. FCC ID : A3LSML705

7. Date of Test : 2024-04-01 to 2024-05-20

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
 FCC Part 27 Subpart C

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

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

2024-05-22

Eurofins KCTL Co.,Ltd.

As a test result of the sample which was submitted from the client, this report does not guarantee the whole product quality. This test report should not be used and copied without a written agreement by Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2024-05-22	Originally issued	-

This report shall not be reproduced except in full, without the written approval of Eurofins KCTL Co.,Ltd. This document may be altered or revised by Eurofins KCTL Co.,Ltd. personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by Eurofins KCTL Co.,Ltd. will constitute fraud and shall nullify the document. This test report is a general report that does not use the KOLAS accreditation mark and is not related to KS Q ISO/IEC 17025 and KOLAS accreditation.

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	4
2.	Device information	4
2.1.	Accessory information	4
2.2.	Frequency/channel operations.....	5
3.	Maximum ERP/EIRP power.....	5
4.	Summary of tests.....	6
4.1.	Worst case orientation	7
5.	Measurement uncertainty	8
6.	Measurement results explanation example	9
7.	Test results	10
7.1.	Conducted output power.....	10
7.2.	99% Occupied Bandwidth & 26dB Bandwidth	12
7.3.	Band Edge Emissions at Antenna Terminal	19
7.4.	Spurious Emissions at Antenna Terminal.....	25
7.5.	Peak to Average Power Ratio (PAPR)	34
7.6.	Frequency stability	37
7.7.	Radiated Power (EIRP)	40
7.8.	Radiated Spurious Emissions.....	44
8.	Measurement equipment.....	47

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 1 : Lot G3, Que Vo Industrial Park(Expanded Area), Nam son Ward, Bac Ninh Province, Vietnam
Factory 2 : ALMUS VINA
Address 2 : 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-L705U
Derivative model : SM-L705F
Modulation technique : LTE : QPSK, 16QAM
Power source : DC 3.88 V
Antenna specification : PIFA + Metal Antenna
Antenna gain : -13.5 dBi
Frequency range : LTE B7 : 2 502.5 MHz ~ 2 567.5 MHz
Bandwidth : LTE B7 : 5/10/15/20 MHz
Software version : L705U.001
Hardware version : REV1.0
Test device serial No. : Conducted : R3AX200WYAD
Radiated : R3AX200WYLH, R3AX200WYCR,
R3AX200WYKB, R3AX402DJKP
Operation Temperature : 0 °C ~ 35 °C

Note.

1. The product equality letter includes detailed information about the differences between SM-L705U and SM-L705F model.

2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source	FCC ID & IC
Wireless charger	RF TECH	EP-OL300	-	5.0 V, 2.0 A	FCC ID : A3LEPOL300 IC : 649E-EPOL300

2.2. Frequency/channel operations

This device contains the following capabilities:

LTE B7

LTE B7

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

Table 2.2-1. 5M BW

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

Table 2.2-2. 10M BW

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

Table 2.2-3. 15M BW

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

Table 2.2-4. 20M BW

3. Maximum ERP/EIRP power

LTE B7

Mode	Tx frequency (MHz)	Emission designator	EIRP	
			Max. power (dBm)	Max. power (W)
LTE B7	2 502.5 ~ 2 567.5	4M55G7D	6.60	0.005
		4M55W7D	5.56	0.004
	2 505.0 ~ 2 565.0	9M02G7D	7.89	0.006
		9M02W7D	6.85	0.005
	2 507.5 ~ 2 562.5	13M5G7D	7.42	0.006
		13M5W7D	6.58	0.005
	2 510.0 ~ 2 560.0	18M0G7D	7.30	0.005
		18M2W7D	6.35	0.004

4. Summary of tests

FCC Part section(s)	Parameter	Test Limit	Test Condition	Test results
2.1046	Conducted Output Power	N/A	Conducted	Pass
2.1049	Occupied Bandwidth & 26 dB Bandwidth	N/A		Pass
2.1051 27.53(m)(4)	Band Edge Emissions at Antenna Terminal	Refer to Section 7.3 and 7.4		Pass
	Spurious Emissions at Antenna Terminal			Pass
27.50(d)	Peak to Average Power Ratio	<13 dB		Pass
2.1055 27.54	Frequency stability	Emission must remain in band		Pass
27.53(h)(2)	Equivalent Isotropic Radiated Power	<2 Watts max. EIRP	Radiated	Pass
2.1053 27.53(m)(4)	Radiated Spurious Emissions	<55 + 10Log ₁₀ (P) dB for all out of band emissions		Pass

Notes:

- 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

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. In the case of radiated spurious emissions, only the worst case bandwidth results were reported.
3. Output power measurements were measured on all of modulation. All tests except output power was performed with below modulation with highest power.
 - 1) LTE: QPSK, 16QAM
4. However, the PAPR was evaluated for all wave forms and modulations during pre-test, then all bandwidth was performed for the modulations with the highest result.
 - 1) LTE: QPSK, 16QAM
5. All configurations have been performed (Stand-alone, Stand-alone with TA and Strap).
6. 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 B7	With strap	-	-	-	-
	Without strap	0	-	-	-

7. Test Condition

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

Test Description	Mode	Condition		Test Channel
Effective Isotropic power	LTE	QPSK, 16QAM	RB Size: 1	Low, Middle, High
Radiated Spurious Emissions	LTE	QPSK	RB Size: 1	Low, Middle, High

Band	Bandwidth (MHz)	RB size	RB offset
LTE B7	5, 10, 15, 20	1	Low, Middle, High

2) Conducted measurement

Test Description	Mode	Condition		Test Channel
OBW & 26 dB BW	LTE	QPSK, 16QAM	RB Size: Full	Low, Middle, High
PAPR	LTE	QPSK, 16QAM	RB Size: Full	Middle
Band Edge	LTE	QPSK	RB Size: 1, Full	Low, High
Spurious Emissions	LTE	QPSK	RB Size: 1	Low, Middle, High

Band	Bandwidth (MHz)	RB size	RB offset
LTE B7	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 or 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 (\pm)	
Conducted RF power	0.9 dB	
Conducted spurious emissions	1.9 dB	
Radiated spurious emissions	Below 1 000 MHz	2.5 dB
	1 000 MHz ~ 18 000 MHz	2.5 dB
	Above 1 8000 MHz	2.6 dB

6. Measurement results explanation example

Frequency (MHz)	Factor(dB)	Frequency (MHz)	Factor(dB)
30	5.82	16 000	9.29
50	6.09	17 000	9.50
100	6.15	18 000	9.55
200	6.09	19 000	9.31
300	6.28	20 000	8.51
400	6.51	21 000	9.00
500	6.57	22 000	9.52
600	6.62	23 000	9.53
700	6.67	24 000	9.95
800	6.70	25 000	10.82
900	6.74	26 000	10.60
1 000	6.76	26 500	10.73
2 000	7.06	27 000	10.59
3 000	7.25	28 000	11.48
4 000	7.39	29 000	10.38
5 000	7.54	30 000	10.69
6 000	7.94	31 000	11.57
7 000	8.10	32 000	11.70
8 000	8.21	33 000	12.00
9 000	8.26	34 000	11.88
10 000	7.36	35 000	11.65
11 000	8.35	36 000	11.80
12 000	8.40	37 000	11.51
13 000	8.62	38 000	10.82
14 000	8.71	39 000	11.00
15 000	9.02	40 000	11.30

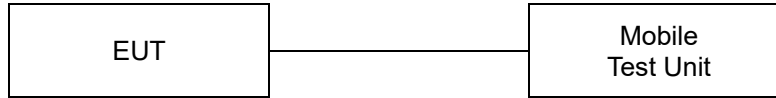
Note.

- Offset(dB) = RF cable loss(dB) + Divider (dB)

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 $\pm 2\%$) by performing the measurement over the on/off burst cycles and then correcting (increasing) the measured level by a factor equal to $[10\log(1/\text{duty cycle})]$. 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.

Note:

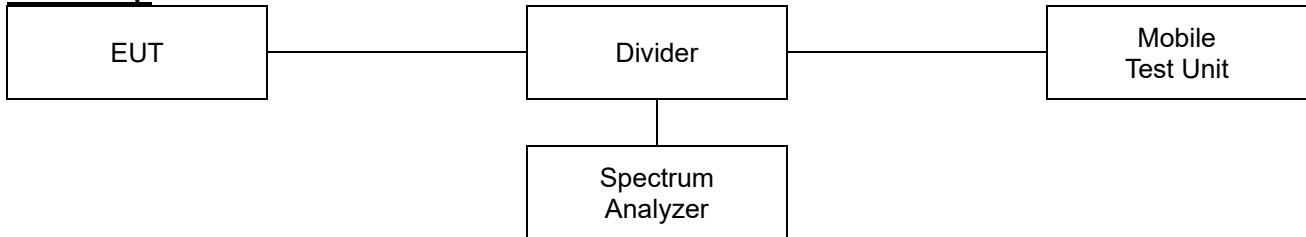
1. $\text{Offset}(\text{dB}) = \text{RF cable loss}(\text{dB})$

Test results

Test Band	Bandwidth (MHz)	Test mode	RB size	RB offset	Maximum Average Power (dBm)		
					Channel		
					Low	Middle	High
LTE B7	5	QPSK	1	0	22.15	21.95	21.78
			1	12	22.06	21.84	21.72
			1	24	22.00	21.83	21.61
			12	0	21.16	20.87	20.72
			12	7	21.14	20.86	20.71
			12	13	21.04	20.84	20.55
		16QAM	25	0	21.11	20.87	20.66
			1	0	21.25	20.96	20.70
			1	12	21.07	20.88	20.80
			1	24	21.08	20.81	20.59
			12	0	20.15	19.93	19.76
			12	7	20.05	19.90	19.63
	10	QPSK	12	13	20.04	19.77	19.55
			25	0	20.14	19.86	19.60
			1	0	22.29	22.05	21.96
			1	25	22.09	21.87	21.67
			1	49	21.92	21.75	21.53
			25	0	21.19	20.93	20.76
		16QAM	25	12	21.12	20.88	20.74
			25	25	21.04	20.77	20.65
			50	0	21.12	20.85	20.68
			1	0	21.23	21.14	21.01
			1	25	21.19	20.81	20.66
			1	49	21.00	20.67	20.57
	15	QPSK	25	0	20.15	19.92	19.77
			25	12	20.02	19.82	19.66
			25	25	20.07	19.79	19.58
			50	0	20.10	19.84	19.66
			1	0	22.41	22.26	22.05
			1	36	22.13	21.88	21.63
		16QAM	1	74	21.94	21.68	21.57
			36	0	21.18	21.01	20.83
			36	18	21.09	20.86	20.63
			36	37	20.97	20.76	20.56
			75	0	21.11	20.85	20.66
			1	0	21.41	21.35	20.96
	20	QPSK	1	36	21.08	20.95	20.73
			1	74	20.98	20.72	20.58
			36	0	20.22	20.05	19.78
			36	18	20.13	19.88	19.66
			36	37	19.99	19.76	19.55
			75	0	20.17	19.85	19.69
		16QAM	1	0	22.61	22.39	22.20
			1	49	22.04	21.87	21.59
			1	99	21.92	21.63	21.52
			50	0	21.34	21.01	20.83
			50	24	21.12	20.79	20.63
			50	50	20.98	20.73	20.51
16QAM	100	0	21.17	20.92	20.64		
	1	0	21.63	21.40	21.21		
	1	49	21.17	20.92	20.73		
	1	99	21.00	20.82	20.62		
	50	0	20.41	20.08	19.87		
	50	24	20.17	19.84	19.67		
16QAM	50	50	19.94	19.72	19.58		
	100	0	20.11	19.85	19.65		

7.2. 99% Occupied Bandwidth & 26dB 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

- 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.
- The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- 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.
- 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.
- Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- Determine the reference value by either of the following:
 - 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).
 - Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- 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.
- 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).

<p>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</p>	<p>Report No.: KR24-SRF0101 Page (13) of (47)</p>	 
--	---	---

- 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 $1.5 \times \text{OBW}$ 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 $\geq 3 \times \text{RBW}$.
- 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 with all bandwidth and modulation.

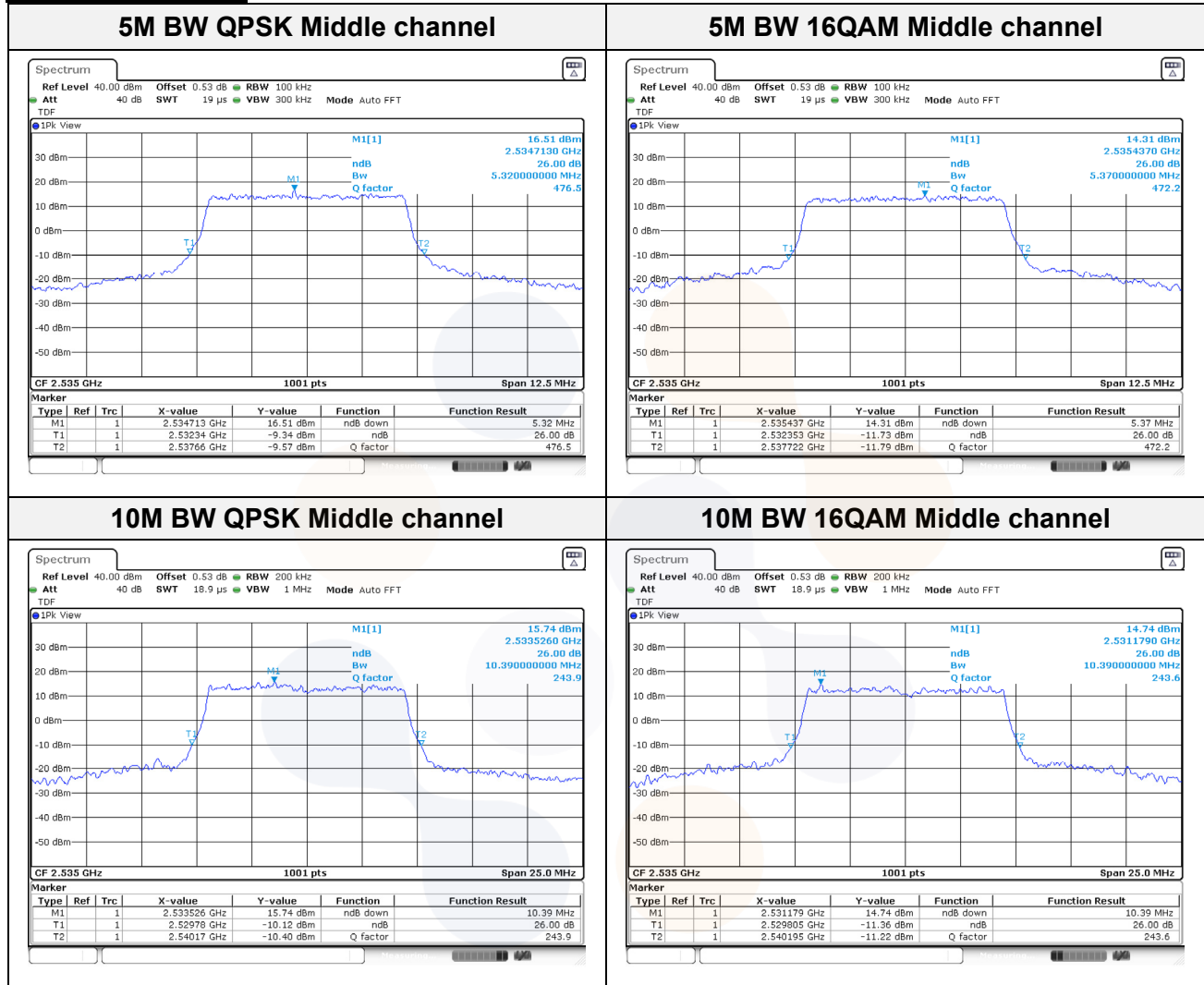
Test results

Test Band	Bandwidth (MHz)	Channel	Test mode	26dB Bandwidth (MHz)	99 % Bandwidth (MHz)
LTE B7	5	Low	QPSK	5.36	4.53
			16QAM	5.41	4.55
		Middle	QPSK	5.32	4.55
			16QAM	5.37	4.55
		High	QPSK	5.41	4.52
			16QAM	5.37	4.52
	10	Low	QPSK	10.29	9.02
			16QAM	10.27	9.02
		Middle	QPSK	10.39	9.02
			16QAM	10.39	9.02
		High	QPSK	10.22	8.99
			16QAM	10.22	9.02
	15	Low	QPSK	15.02	13.52
			16QAM	15.06	13.49
		Middle	QPSK	15.29	13.52
			16QAM	15.06	13.52
		High	QPSK	15.06	13.45
			16QAM	15.02	13.45
	20	Low	QPSK	19.98	17.98
			16QAM	20.08	18.18
Middle		QPSK	19.93	17.98	
		16QAM	20.13	18.08	
High		QPSK	19.73	17.98	
		16QAM	19.83	18.03	

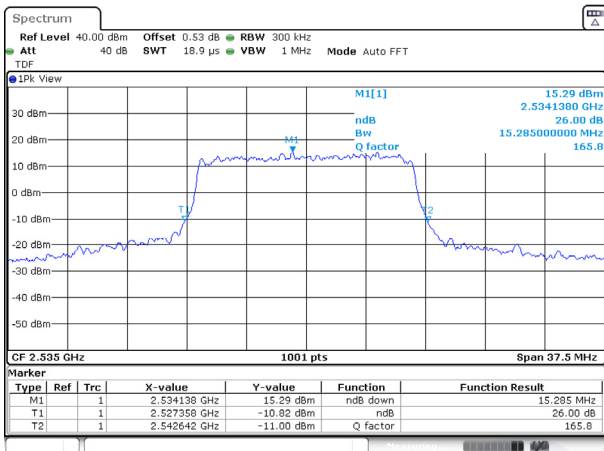
In order to simplify the report, only Middle channel test plots are attached

26dB Bandwidth

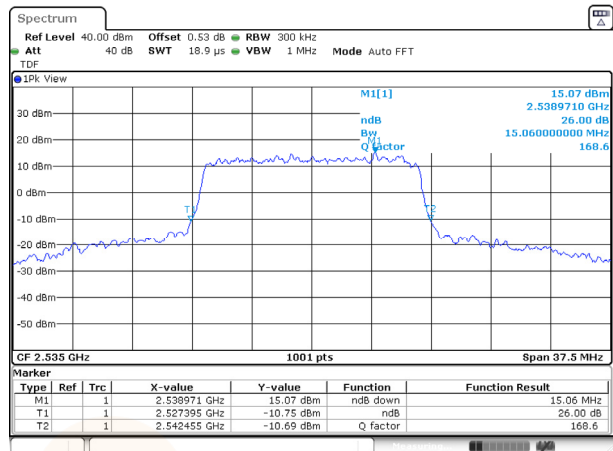
Test mode: LTE B7



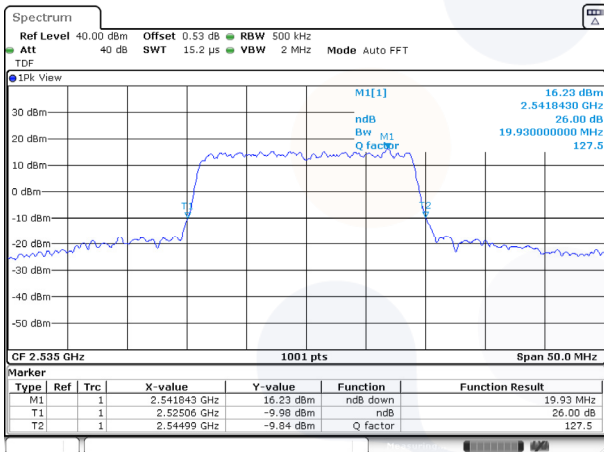
15M BW QPSK Middle channel



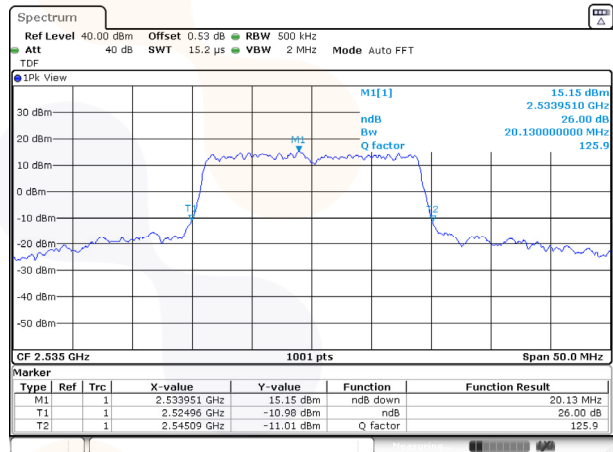
15M BW 16QAM Middle channel



20M BW QPSK Middle channel

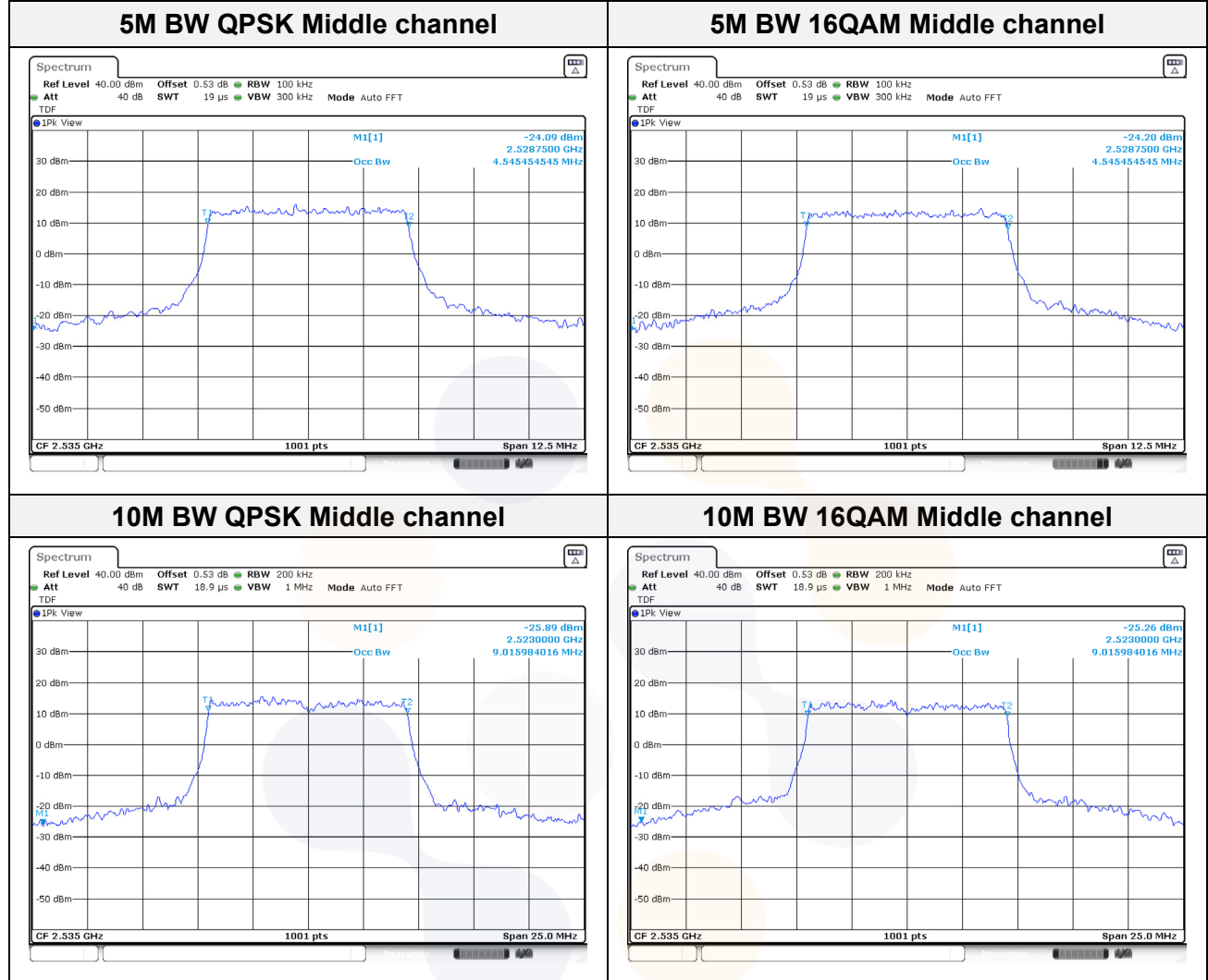


20M BW 16QAM Middle channel

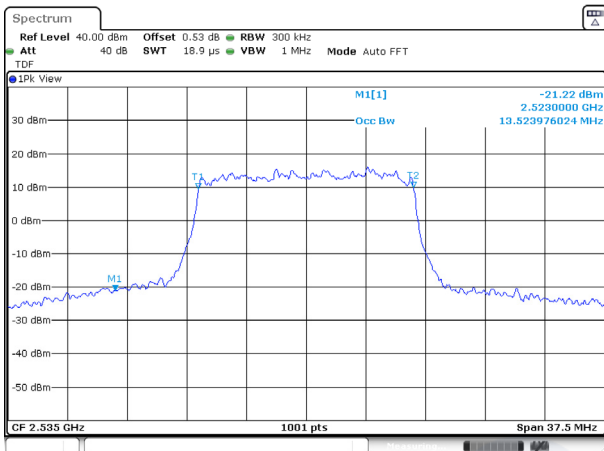


99% Occupied Bandwidth

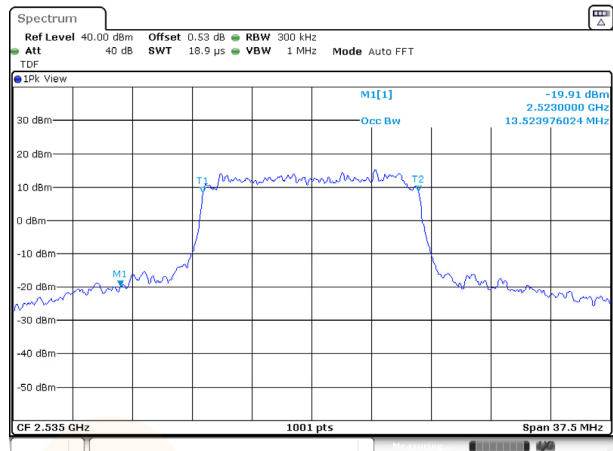
Test mode: LTE B7



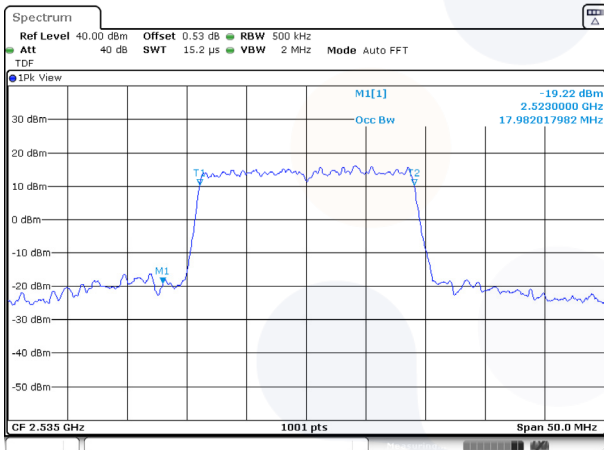
15M BW QPSK Middle channel



15M BW 16QAM Middle channel



20M BW QPSK Middle channel

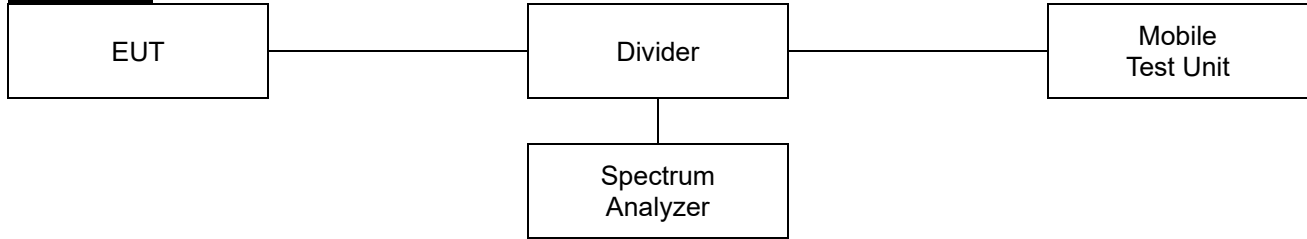


20M BW 16QAM Middle channel



7.3. Band Edge Emissions at Antenna Terminal

Test setup



Limit

According to §27.53(m)(4),

The attenuation factor shall be not less than $40 + 10\log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10\log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10\log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10\log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10\log(P)$ dB at or below 2490.5 MHz.

Test procedure

971168 D01 v03r01 - Section 6

ANSI C63.26-2015 – Section 5.7

Test settings

- 1) Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2) Span was set large enough so as to capture all out of band emissions near the band edge.
- 3) Set the RBW > 1% of the emission bandwidth.
- 4) Set the VBW $\geq 3 \times$ RBW.
- 5) Set the number of sweep points $\geq 2 \times$ Span/RBW
- 6) Detector = RMS
- 7) Trace mode = trace average
- 8) Sweep time should be auto for peak detection. For RMS detection the sweep time should be set as follows:
 - a) If the device can be configured to transmit continuously (duty cycle $\geq 98\%$), set the (sweep time) > (number of points in sweep) x (symbol period) (e.g., by a factor of 10 x symbol period x number of points) Increasing the sweep time (i.e., slowing the sweep speed) will allow for averaging over multiple symbols.
 - b) If the device cannot transmit continuously (duty cycle < 98%), a gated sweep shall be used when possible (i.e., gate triggered such that the analyzer only sweeps when the device is transmitting at full power), set the sweep time > (number of points in sweep) x (symbol period) but the sweep time shall always be maintained at a value that is less than or equal to the minimum transmission time
 - c) If the device cannot be configured to transmit continuously (duty cycle > 98%), and a free-running sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time

> (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by $[10 \log (1/\text{duty cycle})]$. This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation $\leq \pm 2\%$).

d) If the device cannot be configured to transmit continuously and a free-running sweep must be used, and if the transmissions exhibit a non-constant duty cycle (duty cycle variations $> \pm 2\%$), set the sweep time so that the averaging is performed over the on-period by setting the sweep time $> (\text{symbol period}) \times (\text{number of points})$, while also maintaining the sweep time $< (\text{transmitter on-time})$. The trace mode shall be set to max hold, since not every display point will be averaged only over just the on-time. Thus, multiple sweeps (e.g., 100) in maximum hold are necessary to ensure that the maximum power is measured.

9) Allow trace to fully stabilize.

Notes:

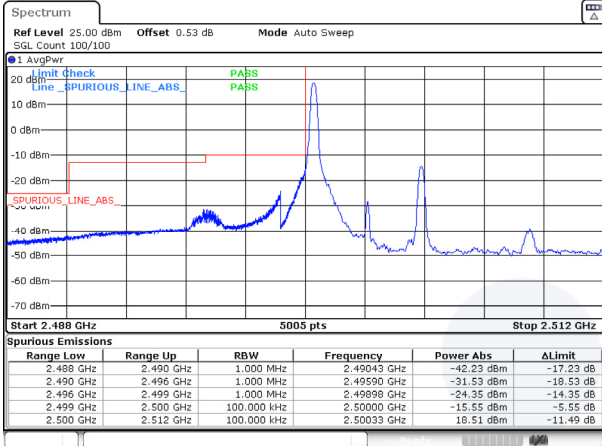
1. Per 27.53(m)(6), in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz).
2. The EUT was setup to maximum output power as its lowest and highest channel with all bandwidth, modulation and RB configurations.

Test results

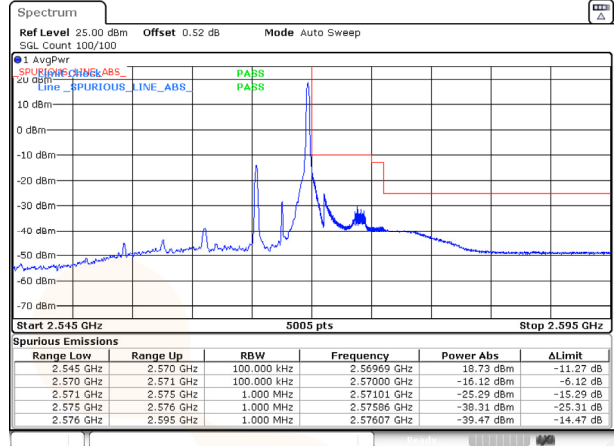
Test mode: LTE B7

5M BW QPSK

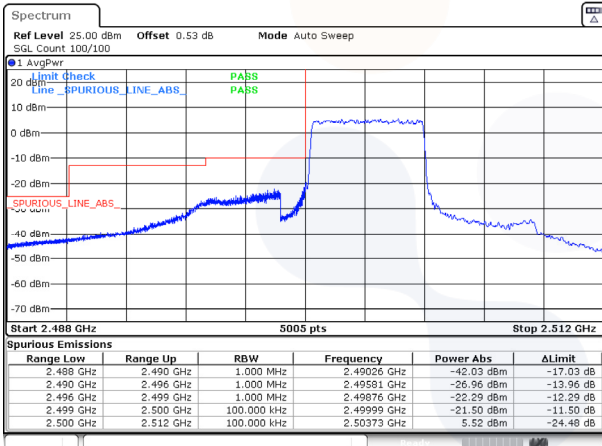
Low channel 1RB



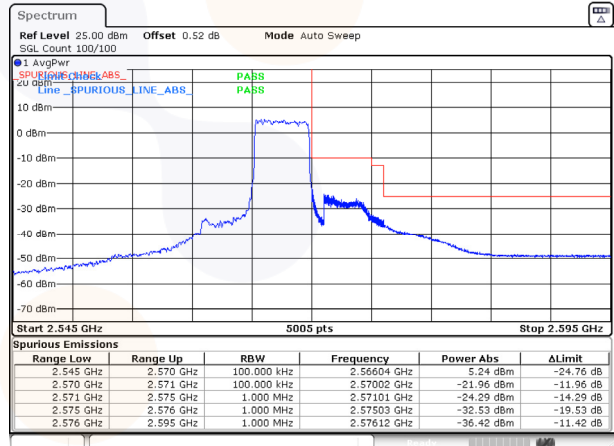
High channel 1RB



Low channel FRB

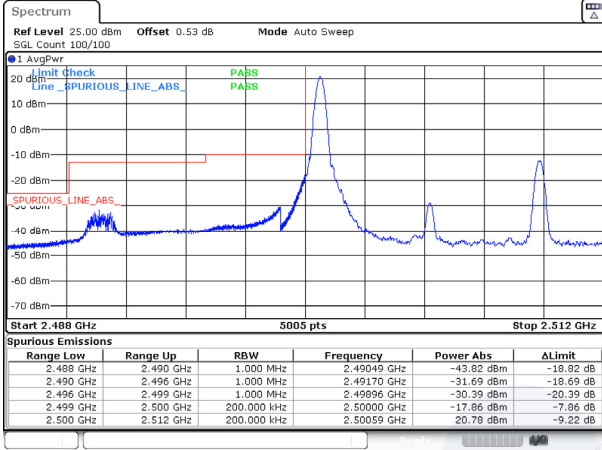


High channel FRB

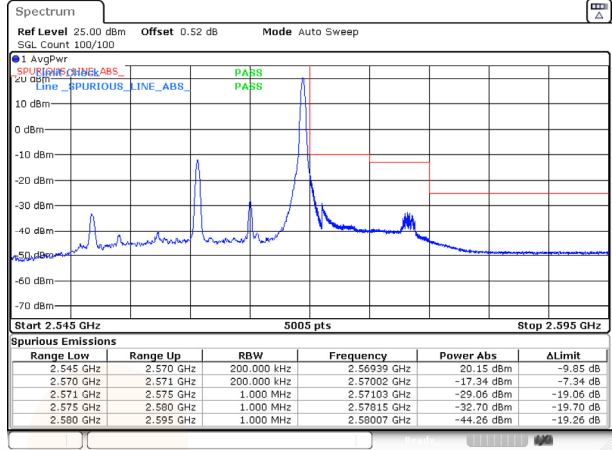


10M BW QPSK

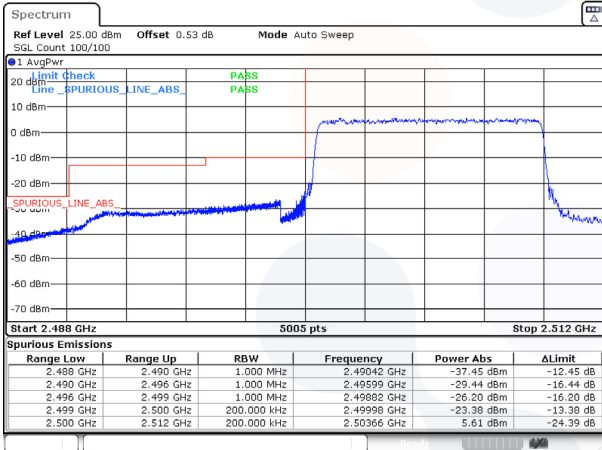
Low channel 1RB



High channel 1RB



Low channel FRB

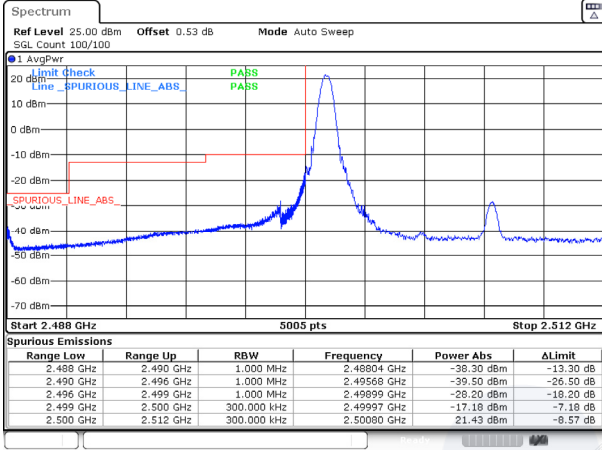


High channel FRB

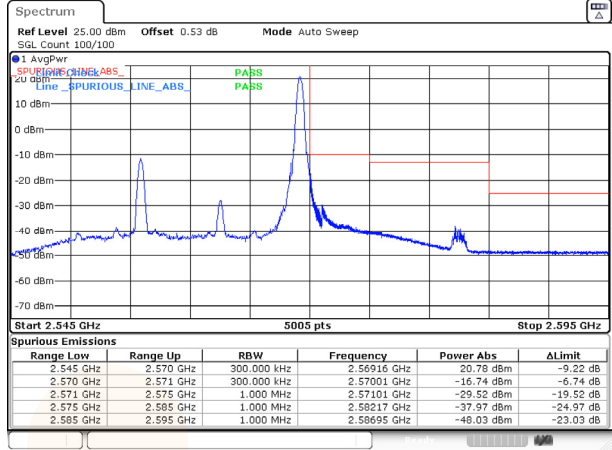


15M BW QPSK

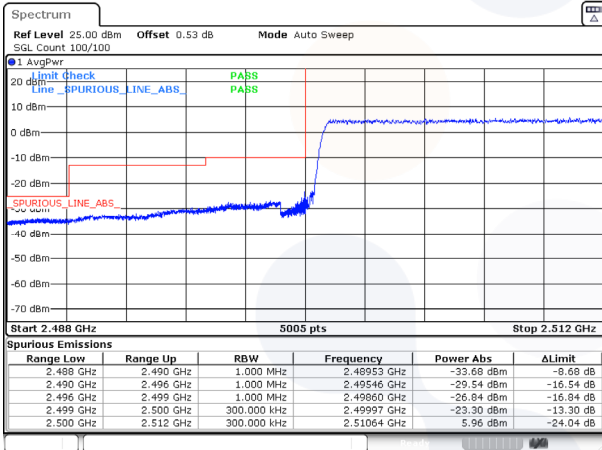
Low channel 1RB



High channel 1RB



Low channel FRB



High channel FRB

