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TEST REPORT

of

FCC Part 2 Subpart J, Part 22 Subpart C/H,
Part 24 Subpart E and Part 27 Subpart C
IC RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6,
RSS-139 Issue 3, RSS-199 Issue 3 and RSS-Gen Issue 5

FCC ID: BEJTM04ANNABM1
IC Certification: 2703H-TM04ANNABM1

Equipment Under Test	:	Telematics Module
Model Name	:	TM04ANNABM1
Variant Model Name(s)	:	-
Applicant	:	FCC: LG Electronics USA IC: LG ELECTRONICS INC.
Manufacturer	:	LG Electronics Inc.
Date of Receipt	:	2021.01.04
Date of Test(s)	:	2020.01.13 ~ 2021.02.05
Date of Issue	:	2021.03.05

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

1) The results of this test report are effective only to the items tested.
2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
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Tested by: Jinhyoung Cho

Technical Manager: Jungmin Yang

SGS Korea Co., Ltd. Gunpo Laboratory

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

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1.2. Details of Applicant

FCC Applicant : LG Electronics USA
FCC Address : 111 Sylvan Avenue, North Building, Englewood Cliffs, New Jersey, United States, 07632
IC Applicant : LG ELECTRONICS INC.
IC Address : 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyenggi-do, Korea (Republic of), 451-713
Contact Person : Kim, Dae-woong
Phone No. : +1 201 266 2215

1.3. Details of Manufacturer

Company : LG Electronics Inc.
Address : 10, Magokjungang 10-ro, Gangseo-gu, Seoul, Korea, 07796

1.4. Description of EUT

Kind of Product	Telematics Module
Model Name	TM04ANNABM1
Serial Number	001, 002
Power Supply	DC 12.5 V
Rated Power	LTE Band 2, 4, 5, 7, 12, 17, 66: 23 ㏈m
Frequency Range	LTE Band 2: 1 850 ㎒ ~ 1 910 ㎒ LTE Band 4: 1 710 ㎒ ~ 1 755 ㎒ LTE Band 5: 824 ㎒ ~ 849 ㎒ LTE Band 7: 2 500 ㎒ ~ 2 570 ㎒ LTE Band 12: 699 ㎒ ~ 716 ㎒ LTE Band 17: 704 ㎒ ~ 716 ㎒ LTE Band 66: 1 710 ㎒ ~ 1 780 ㎒
Modulation Technique	QPSK, 16QAM
Antenna Type	Planar Inverted F Antenna
Antenna Gain	699 ㎒ ~ 716 ㎒: -2.40 ㏈i 824 ㎒ ~ 849 ㎒: -0.82 ㏈i 1 710 ㎒ ~ 1 780 ㎒: -0.48 ㏈i 1 850 ㎒ ~ 1 910 ㎒: -0.48 ㏈i 2 500 ㎒ ~ 2 570 ㎒: -1.94 ㏈i
H/W Version	Rev.C
S/W Version	TN22XA01

1.5. Introduction of Test Data Reuse

This report referenced from the FCC ID: BEJ-TM04ANNABM0 and IC Certification: 2703H-TM04ANNABM0 LTE.
The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID and IC Certification.

1.6. Difference

The FCC ID: BEJTM04ANNABM1 and IC Certification: 2703H-TM04ANNABM1 share the same enclosure as FCC ID: BEJ-TM04ANNABM0 and 2703H-TM04ANNABM0.
Applicant as the manufacturer of the following products, declared that had changed the hardware of the EUT.

Band differences between TM04ANNABM0 and TM04ANNABM1

Band	Frequency (㎒)		FDD/TDD	Band	TM04ANNABM0	TM04ANNABM1
	Tx	Rx				
B2	1 850 ~ 1 910	1 930 ~ 1 990	FDD	Mid	G, W, L	G, W, L
B4	1 710 ~ 1 755	2 110 ~ 2 155	FDD	Mid	W, L	W, L
B5	824 ~ 849	869 ~ 894	FDD	Low	G, W, L	G, W, L
B7	2 500 ~ 2 570	2 620 ~ 2 690	FDD	High	L	L
B12(B17)	699 ~ 716	729 ~ 746	FDD	Low	L	L
B13	777 ~ 787	746 ~ 756	FDD	Low	L	
B25	1 850 ~ 1 915	1 930 ~ 1 995	FDD	Mid	L	
B26	814 ~ 849	859 ~ 894	FDD	Low	L	
B29	-	717 ~ 728	FDD	Low	L(RX only)	
B30	2 305 ~ 2 315	2 350 ~ 2 360	FDD	High	L(RX only)	
B41	2 496 ~ 2 690		TDD	High	L	
B66	1 710 ~ 1 780	2 110 ~ 2 200	FDD	Mid	L	L
B71	663 ~ 698	617 ~ 652	FDD	Low	L	

- G(GSM), W(WCDMA), T(TD-SCDMA), L(LTE)

After confirming through preliminary radiated emissions and conducted power that the performance of the FCC ID: BEJ-TM04ANNABM0 and IC Certification: 2703H-TM04ANNABM0 remain representative of FCC ID: BEJ-TM04ANNABM1 and IC Certification: 2703H-TM04ANNABM1.
The test data of FCC ID: BEJ-TM04ANNABM0 and IC Certification: 2703H-TM04ANNABM0 being submitted for this application to cover LTE features.

1.7. Spot Check Data

Band	Test Item(s)	Frequency (㎒)	Limit	Original model		Spot check model		Deviation (㏈)	Remark
				TM04ANNABM0		TM04ANNABM1			
				FCC ID: BEJ-TM04ANNABM0 IC Certification: 2703H-TM04ANNABM0		FCC ID: BEJ-TM04ANNABM1 IC Certification: 2703H-TM04ANNABM1			
				(㏈m)	(W)	(㏈m)	(W)		
7	Conducted power	2 500 ~ 2 570	2 W	22.85	0.193	23.07	0.203	0.22	-
	E.I.R.P.			28.40	0.692	22.71	0.187	-5.69	-
12/17	Conducted power	699 ~ 716	3 W	23.06	0.202	22.61	0.182	-0.43	-
	E.R.P.			21.45	0.140	19.45	0.088	-2.00	-
66/4	Conducted power	1 710 ~ 1 780	1 W	23.20	0.209	23.22	0.210	0.02	-
	E.I.R.P.			28.30	0.676	23.52	0.225	-4.78	-

1.8. Reference Detail

Reference applicant that contains the reused reference data in the individual test reports:

Mode	Reference FCC ID / IC Certification	Application type	Reference test report number	Exhibit type	Variant test report number	Data reuse
LTE	FCC: BEJ-TM04ANNABM0 IC: 2703H-TM04ANNABM0	Original grant	F690501-RF-RTL000881 (LTE)	Test report	F690501-RF-RTL001767 (LTE)	All

1.9. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	Agilent	E8257D	MY51501169	Nov. 21, 2020	Annual	Nov. 21, 2021
Spectrum Analyzer	R&S	FSV30	103210	Mar. 04, 2020	Annual	Mar. 04, 2021
Spectrum Analyzer	Agilent	N9030A	US51350132	Sep. 12, 2020	Annual	Sep. 12, 2021
Mobile Test Unit	R&S	CMW500	144034	Feb. 28, 2020	Annual	Feb. 28, 2021
Mobile Test Unit	R&S	CMW500	144032	May 08, 2020	Annual	May 08, 2021
Power Meter	Anritsu	ML2495A	1223004	Jun. 01, 2020	Annual	Jun. 01, 2021
Power Sensor	Anritsu	MA2411B	1207272	Jun. 01, 2020	Annual	Jun. 01, 2021
Temperature Chamber	ESPEC CORP.	PL-1J	15000796	Nov. 06, 2020	Annual	Nov. 06, 2021
Low Pass Filter	Mini-Circuits	NLP-1200+	V9500401023-2	Jun. 01, 2020	Annual	Jun. 01, 2021
High Pass Filter	Wainwright Instrument GmbH	WHKX10-900-1000-18000-40SS	7	Mar. 04, 2020	Annual	Mar. 04, 2021
High Pass Filter	Wainwright Instrument GmbH	WHKX1.5/15G-6SS	4	Jun. 11, 2020	Annual	Jun. 11, 2021
High Pass Filter	Wainwright Instrument GmbH	WHKX2.2/12.75G-10SS	8	Mar. 04, 2020	Annual	Mar. 04, 2021
High Pass Filter	Wainwright Instrument GmbH	WHK3.0/18G-10SS	344	May 18, 2020	Annual	May 18, 2021
High Pass Filter	Wainwright Instrument GmbH	WHK7.5/26.5G-6SS	15	Jun. 05, 2020	Annual	Jun. 05, 2021
Directional Coupler	KRYTAR	152613	122660	Jun. 11, 2020	Annual	Jun. 11, 2021
DC Power Supply	Agilent	U8002A	MY54110041	Sep. 17, 2020	Annual	Sep. 17, 2021
Preamplifier	H.P.	8447F	2944A03909	Aug. 06, 2020	Annual	Aug. 06, 2021
Preamplifier	R&S	SCU 18	10117	Jun. 10, 2020	Annual	Jun. 10, 2021
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	May 08, 2020	Annual	May 08, 2021
Test Receiver	R&S	ESU26	100368	Nov. 05, 2020	Annual	Nov. 05, 2021
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	Aug. 22, 2019	Biennial	Aug. 22, 2021
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB9163	396	Mar. 21, 2019	Biennial	Mar. 21, 2021
Horn Antenna	R&S	HF906	100326	Feb. 04, 2021	Annual	Feb. 04, 2022
Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA9170	BBHA9170431	Sep. 16, 2020	Annual	Sep. 16, 2021
Antenna Master	Innco systems GmbH	MM4000	N/A	N.C.R.	N/A	N.C.R.
Turn Table	Innco systems GmbH	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/383 30516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.4 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	RFONE	MWX221-NMSNMS (4 m)	J1023142	Dec. 01, 2020	Semi-annual	Jun. 01, 2021
Coaxial Cable	RFONE	PL520-NMNM-10M (10 m)	20200324001	Dec. 01, 2020	Semi-annual	Jun. 01, 2021
Coaxial Cable	Rosenberger	LA1-C006-1500	131014 01/20	Feb. 19, 2021	Semi-annual	Aug. 19, 2021
Coaxial Cable	Rosenberger	LA1-C006-1500	131014 05/20	Feb. 19, 2021	Semi-annual	Aug. 19, 2021
Coaxial Cable	Rosenberger	LA1-C006-1500	131014 10/20	Feb. 19, 2021	Semi-annual	Aug. 19, 2021

▶ Support Equipment

Description	Manufacturer	Model	Serial Number
N/A	-	-	-

1.10. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2, 22, 24 and 27 / IC part RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 3, RSS-199 Issue 3 and RSS-Gen Issue 5			
Section in FCC	**Section in IC**	**Test Item**	**Result**
§22.913(a)(5) §24.232(c) §27.50(c)(10) §27.50(d)(4) §27.50(h)(2)	RSS-130 Issue 2 4.6 RSS-132 Issue 3 5.4 RSS-133 Issue 6 6.4 RSS-139 Issue 3 6.5 RSS-199 Issue 3 4.4	RF Radiated Output Power	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 3 6.6 RSS-199 Issue 3 4.5	Spurious Radiated Emission	Complied
§2.1046	RSS-Gen Issue 5 6.12	Conducted Output Power	Complied
§2.1049	RSS-Gen Issue 5 6.7	Occupied Bandwidth	Complied
§22.913(d) §24.232(d) §27.50(d)(5)	RSS-130 Issue 2 4.6 RSS-132 Issue 3 5.4 RSS-133 Issue 6 6.4 RSS-139 Issue 3 6.5 RSS-199 Issue 3 4.4	Peak-Average Ratio	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 3 6.6 RSS-199 Issue 3 4.5	Spurious Emission at Antenna Terminal	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	RSS-130 Issue 2 4.7 RSS-132 Issue 3 5.5 RSS-133 Issue 6 6.5 RSS-139 Issue 3 6.6 RSS-199 Issue 3 4.5	Band Edge	Complied
§2.1055 §22.355 §24.235 §27.54	RSS-Gen Issue 5 6.11 RSS-130 Issue 2 4.5 RSS-132 Issue 3 5.3 RSS-133 Issue 6 6.3 RSS-139 Issue 3 6.4 RSS-199 Issue 3 4.3	Frequency Stability	Complied

1.11. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

1.11.1. Conducted Test

Offset value (㏈) = Directional Coupler (㏈) + Cable loss (㏈)

1.11.2. Radiation test

- E.I.R.P. (㏈ m) = Measured level (㏈㎶) + Antenna factor (㏈/m) + Cable loss (㏈) + 20 Log D - 104.5; where D is the measurement distance in meters.
- E.R.P. (㏈ m) = E.I.R.P. (㏈ m) - 2.15 (㏈)

1.12. Device Capabilities

This device contains the following capabilities;

LTE Band 4 (1 710 ㎒ ~ 1 755 ㎒) is covered by LTE Band 66 (1 710 ㎒ ~ 1 780 ㎒) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers LTE Band 4 as well as Band 66.
LTE Band 17 (704 ㎒ ~ 716 ㎒) is covered by LTE Band 12 (699 ㎒ ~ 716 ㎒) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth. Therefore test data provided in this report covers LTE Band 17 as well as Band 12.

1.13. Worst Case Configuration and Mode

All testing was performed using QPSK and 16QAM modulations, except radiated spurious emissions, peak-average ratio, conducted spurious emissions and band-edge were tested only QPSK modulation as worst case. The worst-case is based on the conducted output power measurement investigation results.

The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z, and the worst case data is reported.

1.14. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
Radiated Emission, 9 ㎑ to 30 ㎒	H	± 3.66 ㏈
	V	± 3.66 ㏈
Radiated Emission, below 1 ㎓	H	± 4.90 ㏈
	V	± 4.82 ㏈
Radiated Emission, above 1 ㎓	H	± 3.62 ㏈
	V	± 3.64 ㏈

Uncertainty figures are valid to a confidence level of 95 %.

1.15. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL001767	2021.03.05	Initial

1.16. Emission Designator and Max Power

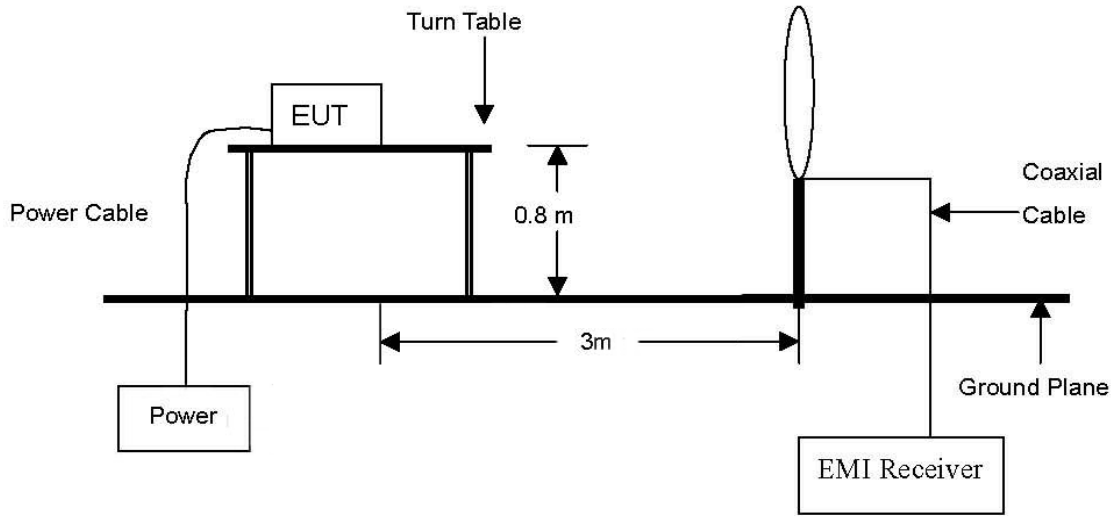
Band	Frequency Range (㎒)	Modulation	Emission Designator	E.R.P. / E.I.R.P.	
				Max power (㏈m)	Max power (W)
2	1 850.7 ~ 1 909.3	QPSK	1M09G7D	23.52	0.225
		16QAM	1M09D7D		
	1 851.5 ~ 1 908.5	QPSK	2M69G7D		
		16QAM	2M69D7D		
	1 852.5 ~ 1 907.5	QPSK	4M52G7D		
		16QAM	4M50D7D		
	1 855 ~ 1 905	QPSK	8M97G7D		
		16QAM	8M97D7D		
	1 857.5 ~ 1 902.5	QPSK	13M5G7D		
		16QAM	13M5D7D		
	1 860 ~ 1 900	QPSK	17M9G7D		
		16QAM	17M9D7D		
5	824.7 ~ 848.3	QPSK	1M09G7D	21.03	0.127
		16QAM	1M10D7D		
	825.5 ~ 847.5	QPSK	2M69G7D		
		16QAM	2M69D7D		
	826.5 ~ 846.5	QPSK	4M52G7D		
		16QAM	4M53D7D		
	829 ~ 844	QPSK	8M97G7D		
		16QAM	8M94D7D		
7	2 502.5 ~ 2 567.5	QPSK	4M53G7D	22.06	0.161
		16QAM	4M52D7D		
	2 505 ~ 2 565	QPSK	8M97G7D		
		16QAM	8M97D7D		
	2 507.5 ~ 2 562.5	QPSK	13M5G7D		
		16QAM	13M5D7D		
	2 510 ~ 2 560	QPSK	17M9G7D		
		16QAM	17M9D7D		
12	699.7 ~ 715.3	QPSK	1M10G7D	19.45	0.088
		16QAM	1M10D7D		
	700.5 ~ 714.5	QPSK	2M69G7D		
		16QAM	2M69D7D		
12/17	701.5 ~ 713.5	QPSK	4M52G7D		
		16QAM	4M53D7D		
	704 ~ 711	QPSK	8M97G7D		
		16QAM	8M97D7D		

Band	Frequency Range (㎒)	Modulation	Emission Designator	E.R.P. / E.I.R.P.	
				Max power (dB m)	Max power (W)
66/4	1710.7 ~ 1754.3	QPSK	1M10G7D	23.52	0.225
		16QAM	1M10D7D		
	1 711.5 ~ 1 753.5	QPSK	2M70G7D		
		16QAM	2M69D7D		
	1 712.5 ~ 1 752.5	QPSK	4M52G7D		
		16QAM	4M52D7D		
	1 715 ~ 1 750	QPSK	8M97G7D		
		16QAM	8M97D7D		
	1 717.5 ~ 1 747.5	QPSK	13M5G7D		
		16QAM	13M5D7D		
	1 720 ~ 1 745	QPSK	17M9G7D		
		16QAM	18M0D7D		

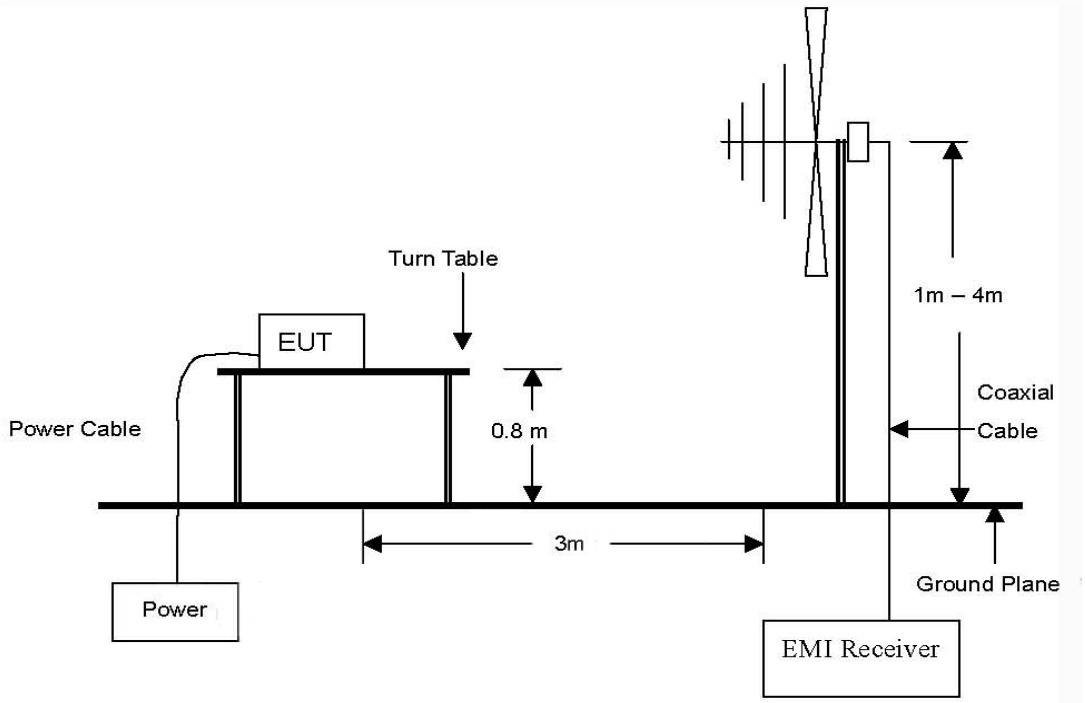
2. Radiated Output Power & Spurious Radiated Emission

2.1. Test setup

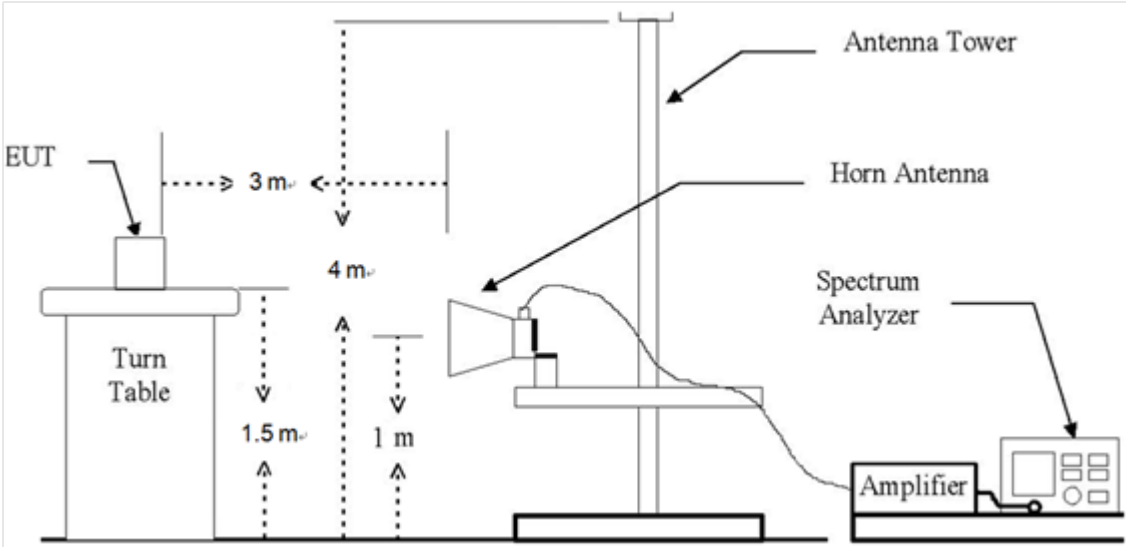
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 ㎓ to 26 ㎓ Emissions.



2.2. Limit

2.2.1. Limit of E.R.P. / E.I.R.P.

FCC
- §22.913(a)(5), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

- §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

- §27.50(c)(10), portable stations (hand-held devices) in the 600 ㎒ uplink band and the 698-746 ㎒ band, and fixed and mobile stations in the 600 ㎒ uplink band are limited to 3 watts ERP.

- §27.50(d)(4), fixed, mobile, and portable (hand-held) stations operating in the 1 710-1 755 ㎒ band and mobile and portable stations operating in the 1 695-1 710 ㎒ and 1 755-1 780 ㎒ bands are limited to 1 watt EIRP.

- §27.50(h)(2), mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

IC
- RSS-130 Issue 2
4.6.3, the e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

- RSS-132 Issue 3
5.4, the transmitter output power shall be measured in terms of average power.
The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment shall not exceed 11.5 watts.
Refer to SRSP-503 for base station e.i.r.p. limits.

- RSS-133 Issue 6
6.4, the equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510. Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

- RSS-139 Issue 3
6.5, the equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters shall not exceed one watt. The e.i.r.p. for fixed and base stations in the band 1 710-1 780 ㎒ shall not exceed one watt.

- RSS-199 Issue 3
4.4, the transmitter output power shall be measured in terms of average value.
For base station equipment, refer to SRSP-517 for the maximum permissible e.i.r.p.
For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 W. For fixed subscriber equipment, the transmitter output power shall not exceed 2 W and the e.i.r.p. shall be limited to 40 W.

2.2.2. Limit of Spurious Radiated Emission

FCC

- §22.917(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) ㏈.

- §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) ㏈.

- §27.53(g), the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) ㏈.

- §27.53(h)(1), for operations in the 1 695-1 710 ㎒, 1 710-1 755 ㎒, 1 755-1 780 ㎒, 1 915-1 920 ㎒, 1 995-2 000 ㎒, 2 000-2 020 ㎒, 2 110-2 155 ㎒, 2 155-2 180 ㎒, and 2 180-2 200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 $\log_{10}$ (P) ㏈.

- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than 40 + 10 $\log_{10}$ (P) ㏈ on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 $\log_{10}$ (P) ㏈ on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 $\log_{10}$ (P) ㏈ 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 that 43 + 10 $\log_{10}$ (P) ㏈ on all frequencies between 2490.5 ㎒ and 2496 ㎒ and 55 + 10 $\log_{10}$ (P) ㏈ at or below 2490.5 ㎒. Mobile Satellite Service licensees operating on frequencies below 2495 ㎒ may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

IC

- RSS-130 Issue 2

4.7.1, the unwanted emissions in any 100 ㎑ bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (㏈ W), by at least 43 + 10 $\log_{10}$ p (watts), ㏈. However, in the 100 ㎑ band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 ㎑ may be employed.

- RSS-132 Issue 3

5.5, Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 ㎒ band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1 % of the occupied bandwidth shall be attenuated (in ㏈) below the transmitter output power P (㏈ W) by at least 43 + 10 $\log_{10}$ p (watts).

(ii) After the first 1.0 ㎒ immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 ㎑ bandwidth shall be attenuated (in ㏈) below the transmitter output power P (㏈ W) by at least 43 + 10 $\log_{10}$ p (watts). If the measurement is performed using 1 % of the occupied bandwidth, power integration over 100 ㎑ is required.

- RSS-133 Issue 6
6.5, Equipment shall comply with the limits in (i) and (ii) below.

(i) In the 1.0 ㎒ bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1 % of the emission bandwidth shall be attenuated (in ㏈) below the transmitter output power P (㏈ W) by at least 43 + 10 $\log_{10}$ p(watts).

(ii) After the first 1.0 ㎒, the emission power in any 1 ㎒ bandwidth shall be attenuated (in ㏈) below the transmitter output power P (㏈ W) by at least 43 + 10 $\log_{10}$ p(watts). If the measurement is performed using 1 % of the emission bandwidth, power integration over 1.0 ㎒ is required.

- RSS-139 Issue 3
6.6, (i) In the first 1.0 ㎒ bands immediately outside and adjacent to the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power per any 1 % of the emission bandwidth shall be attenuated below the transmitter output power P (in ㏈ W) by at least 43 + 10 $\log_{10}$ p (watts) ㏈.

(ii) After the first 1.0 ㎒ outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 ㎒ bandwidth shall be attenuated below the transmitter output power P (in ㏈ W) by at least 43 + 10 $\log_{10}$ p (watts) ㏈.

- RSS-199 Issue 3
4.5, In the 1 ㎒ band immediately outside and adjacent to the channel edge, the unwanted emission power shall be measured with a resolution bandwidth of at least 1 % of the occupied bandwidth for base station and fixed subscriber equipment, and 2 % for mobile subscriber equipment. Beyond the 1 ㎒ band, a resolution bandwidth of 1 ㎒ shall be used. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 ㎒, or 1 % or 2% of the occupied bandwidth, as applicable.

Equipment shall comply with the following unwanted emission limits:

a. for base station and fixed subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in ㏈) below the transmitter power, P (㏈W), by at least 43 + 10 $\log_{10}$ p
b. for mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in ㏈) below the transmitter power, P (㏈W), by at least:

   i. 40 + 10 $\log_{10}$ p from the channel edges to 5 ㎒ away
   ii. 43 + 10 $\log_{10}$ p between 5 ㎒ and X ㎒ from the channel edges, and
   iii. 55 + 10 $\log_{10}$ p at X ㎒ and beyond from the channel edges

   In addition, the attenuation shall not be less than 43 + 10 $\log_{10}$ p on all frequencies between 2490.5 ㎒ and 2496 ㎒, and 55 + 10 $\log_{10}$ p at or below 2490.5 ㎒.

In (a) and (b), **p** is the transmitter power measured in watts and **X** is 6 ㎒ or the equipment occupied bandwidth, whichever is greater.

2.3. Test Procedure: Based on ANSI/TIA 603E: 2016 and ANSI C63.26-2015 and KDB 971168 D01 Power Meas License Digital Systems v03r01.

1. On a test site, the EUT shall be placed at 0.8 m or 1.5 m height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. Radiated spurious emissions measurement method was set as follows:
   RBW = 100 ㎑ for emissions below 1 ㎓ and 1 ㎒ for emissions above 1 ㎓, VBW ≥ 3 x RBW,
   Detector = RMS, trace mode = max hold.
5. The transmitter shall be switched on, the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
11. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
12. The measurement shall be repeated with the test antenna orientated for horizontal polarization.

2.4. Test result for E.R.P. / E.I.R.P.

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

Band	Frequency (㎒)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Output Power Limit
2	1 850 ~ 1 915	24	0.251	-0.48	23.52	0.225			2 W E.I.R.P.
5	824 ~ 849	24	0.251	-0.82	23.18	0.208	21.03	0.127	7 W E.R.P.
7	2 500 ~ 2 570	24	0.251	-1.94	22.06	0.161			2 W E.I.R.P.
12/17	699 ~ 716	24	0.251	-2.40	21.60	0.145	19.45	0.088	3 W E.R.P.
66/4	1 710 ~ 1 780	24	0.251	-0.48	23.52	0.225			1 W E.I.R.P.

Remark;

1. E.I.R.P. (dB m) = Maximum Conducted Power (dB m) + Antenna Gain (dB i)
2. E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.

2.5. Spurious radiated emission

LTE band 2 (1.4 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 850.7 ㎒)									
3 700.56	82.00	H	32.30	-36.68	77.62	-95.26	-17.64	-13	4.64
3 700.52	84.07	V	32.30	-36.68	79.69	-95.26	-15.57	-13	2.57
5 550.82	57.40	H	34.00	-34.89	56.51	-95.26	-38.75	-13	25.75
5 550.80	57.30	V	34.00	-34.89	56.41	-95.26	-38.85	-13	25.85
7 400.97	60.06	H	36.00	-34.42	61.64	-95.26	-33.62	-13	20.62
7 401.17	61.38	V	36.00	-34.42	62.96	-95.26	-32.30	-13	19.30
Middle Channel (1 880.0 ㎒)									
3 759.10	82.84	H	32.22	-36.79	78.27	-95.26	-16.99	-13	3.99
3 759.22	85.56	V	32.22	-36.79	80.99	-95.26	-14.27	-13	1.27
5 638.99	53.26	H	34.00	-35.01	52.25	-95.26	-43.01	-13	30.01
5 638.54	58.79	V	34.00	-35.01	57.78	-95.26	-37.48	-13	24.48
7 518.24	61.04	H	36.00	-34.40	62.64	-95.26	-32.62	-13	19.62
7 518.24	59.34	V	36.00	-34.40	60.94	-95.26	-34.32	-13	21.32
High Channel (1 909.3 ㎒)									
3 817.68	82.41	H	32.30	-36.56	78.15	-95.26	-17.11	-13	4.11
3 817.66	85.78	V	32.30	-36.56	81.52	-95.26	**-13.74**	-13	0.74
5 726.90	49.35	H	34.05	-34.81	48.59	-95.26	-46.67	-13	33.67
5 727.02	43.75	V	34.05	-34.81	42.99	-95.26	-52.27	-13	39.27
7 635.57	58.83	H	36.00	-34.10	60.73	-95.26	-34.53	-13	21.53
7 635.57	54.42	V	36.00	-34.10	56.32	-95.26	-38.94	-13	25.94

* 1 RB Size / 0 Offset

LTE band 2 (3 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 851.5 ㎒)									
3 700.50	81.99	H	32.30	-36.68	77.61	-95.26	-17.65	-13	4.65
3 700.52	84.02	V	32.30	-36.68	79.64	-95.26	-15.62	-13	2.62
5 550.82	57.44	H	34.00	-34.89	56.55	-95.26	-38.71	-13	25.71
5 550.80	57.21	V	34.00	-34.89	56.32	-95.26	-38.94	-13	25.94
7 400.90	60.14	H	36.00	-34.42	61.72	-95.26	-33.54	-13	20.54
7 400.90	61.23	V	36.00	-34.42	62.81	-95.26	-32.45	-13	19.45
Middle Channel (1 880.0 ㎒)									
3 757.51	82.77	H	32.22	-36.79	78.20	-95.26	-17.06	-13	4.06
3 757.72	85.51	V	32.22	-36.79	80.94	-95.26	**-14.32**	-13	1.32
5 636.49	53.53	H	34.00	-34.99	52.54	-95.26	-42.72	-13	29.72
5 636.51	55.43	V	34.00	-34.99	54.44	-95.26	-40.82	-13	27.82
7 515.00	61.34	H	36.00	-34.42	62.92	-95.26	-32.34	-13	19.34
7 515.00	59.55	V	36.00	-34.42	61.13	-95.26	-34.13	-13	21.13
High Channel (1 908.5 ㎒)									
3 814.48	82.48	H	32.30	-36.57	78.21	-95.26	-17.05	-13	4.05
3 814.66	85.18	V	32.30	-36.57	80.91	-95.26	-14.35	-13	1.35
5 721.90	47.99	H	34.06	-34.82	47.23	-95.26	-48.03	-13	35.03
5 721.93	44.24	V	34.06	-34.82	43.48	-95.26	-51.78	-13	38.78
7 629.10	57.69	H	36.00	-34.04	59.65	-95.26	-35.61	-13	22.61
7 629.10	54.97	V	36.00	-34.04	56.93	-95.26	-38.33	-13	25.33

* 1 RB Size / 0 Offset

LTE band 2 (5 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 852.5 ㎒)									
3 700.68	81.90	H	32.30	-36.68	77.52	-95.26	-17.74	-13	4.74
3 700.77	84.06	V	32.30	-36.68	79.68	-95.26	-15.58	-13	2.58
5 551.32	57.34	H	34.00	-34.90	56.44	-95.26	-38.82	-13	25.82
5 551.10	57.39	V	34.00	-34.90	56.49	-95.26	-38.77	-13	25.77
7 401.44	60.00	H	36.00	-34.42	61.58	-95.26	-33.68	-13	20.68
7 401.44	61.28	V	36.00	-34.42	62.86	-95.26	-32.40	-13	19.40
Middle Channel (1 880.0 ㎒)									
3 755.73	82.67	H	32.21	-36.78	78.10	-95.26	-17.16	-13	4.16
3 755.73	85.63	V	32.21	-36.78	81.06	-95.26	-14.20	-13	1.20
5 633.49	54.11	H	34.00	-34.98	53.13	-95.26	-42.13	-13	29.13
5 633.52	55.86	V	34.00	-34.98	54.88	-95.26	-40.38	-13	27.38
7 511.49	61.50	H	36.00	-34.44	63.06	-95.26	-32.20	-13	19.20
7 511.22	60.38	V	36.00	-34.44	61.94	-95.26	-33.32	-13	20.32
High Channel (1 907.5 ㎒)									
3 810.77	83.06	H	32.30	-36.59	78.77	-95.26	-16.49	-13	3.49
3 810.91	85.56	V	32.30	-36.58	81.28	-95.26	**-13.98**	-13	0.98
5 716.16	49.38	H	34.07	-34.87	48.58	-95.26	-46.68	-13	33.68
5 716.23	47.75	V	34.07	-34.87	46.95	-95.26	-48.31	-13	35.31
7 615.40	59.23	H	36.00	-33.90	61.33	-95.26	-33.93	-13	20.93
7 612.54	54.65	V	36.00	-33.87	56.78	-95.26	-38.48	-13	25.48

* 1 RB Size / 0 Offset

LTE band 2 (10 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 855.0 ㎒)									
3 701.20	82.18	H	32.30	-36.67	77.81	-95.26	-17.45	-13	4.45
3 701.25	84.22	V	32.30	-36.67	79.85	-95.26	-15.41	-13	2.41
5 551.85	57.30	H	34.00	-34.91	56.39	-95.26	-38.87	-13	25.87
5 551.70	57.27	V	34.00	-34.91	56.36	-95.26	-38.90	-13	25.90
7 402.52	60.29	H	36.00	-34.43	61.86	-95.26	-33.40	-13	20.40
7 402.52	61.22	V	36.00	-34.43	62.79	-95.26	-32.47	-13	19.47
Middle Channel (1 880.0 ㎒)									
3 751.15	83.05	H	32.20	-36.77	78.48	-95.26	-16.78	-13	3.78
3 751.22	85.90	V	32.20	-36.77	81.33	-95.26	**-13.93**	-13	0.93
5 626.77	54.13	H	34.00	-34.95	53.18	-95.26	-42.08	-13	29.08
5 626.92	57.24	V	34.00	-34.95	56.29	-95.26	-38.97	-13	25.97
7 502.32	61.02	H	36.00	-34.50	62.52	-95.26	-32.74	-13	19.74
7 502.59	60.71	V	36.00	-34.49	62.22	-95.26	-33.04	-13	20.04
High Channel (1 905.0 ㎒)									
3 801.24	83.48	H	32.30	-36.61	79.17	-95.26	-16.09	-13	3.09
3 801.35	85.64	V	32.30	-36.61	81.33	-95.26	-13.93	-13	0.93
5 701.67	51.73	H	34.10	-34.97	50.86	-95.26	-44.40	-13	31.40
5 702.15	51.32	V	34.10	-34.97	50.45	-95.26	-44.81	-13	31.81
7 602.39	58.96	H	36.00	-33.78	61.18	-95.26	-34.08	-13	21.08
7 602.66	54.89	V	36.00	-33.78	57.11	-95.26	-38.15	-13	25.15

* 1 RB Size / 0 Offset

LTE band 2 (15 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 857.5 ㎒)									
3 701.76	82.12	H	32.30	-36.67	77.75	-95.26	-17.51	-13	4.51
3 701.77	84.65	V	32.30	-36.67	80.28	-95.26	-14.98	-13	1.98
5 552.65	57.18	H	34.00	-34.92	56.26	-95.26	-39.00	-13	26.00
5 552.60	57.08	V	34.00	-34.92	56.16	-95.26	-39.10	-13	26.10
7 403.33	59.80	H	36.00	-34.43	61.37	-95.26	-33.89	-13	20.89
7 403.60	61.10	V	36.00	-34.43	62.67	-95.26	-32.59	-13	19.59
Middle Channel (1 880.0 ㎒)									
3 746.72	83.16	H	32.21	-36.72	78.65	-95.26	-16.61	-13	3.61
3 746.88	86.06	V	32.21	-36.72	81.55	-95.26	-13.71	-13	0.71
5 620.02	54.85	H	34.00	-34.99	53.86	-95.26	-41.40	-13	28.40
5 620.03	58.19	V	34.00	-34.99	57.20	-95.26	-38.06	-13	25.06
7 493.42	61.92	H	36.00	-34.54	63.38	-95.26	-31.88	-13	18.88
7 493.42	60.70	V	36.00	-34.54	62.16	-95.26	-33.10	-13	20.10
High Channel (1 902.5 ㎒)									
3 791.69	84.39	H	32.28	-36.70	79.97	-95.26	-15.29	-13	2.29
3 791.83	86.05	V	32.28	-36.69	81.64	-95.26	**-13.62**	-13	0.62
5 687.56	52.03	H	34.08	-34.90	51.21	-95.26	-44.05	-13	31.05
5 687.46	50.75	V	34.07	-34.89	49.93	-95.26	-45.33	-13	32.33
7 583.51	61.37	H	36.00	-33.91	63.46	-95.26	-31.80	-13	18.80
7 583.51	53.33	V	36.00	-33.91	55.42	-95.26	-39.84	-13	26.84

* 1 RB Size / 0 Offset

LTE band 2 (20 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 860.0 ㎒)									
3 702.24	82.28	H	32.30	-36.67	77.91	-95.26	-17.35	-13	4.35
3 702.20	84.54	V	32.30	-36.67	80.17	-95.26	-15.09	-13	2.09
5 553.37	56.59	H	34.00	-34.93	55.66	-95.26	-39.60	-13	26.60
5 553.35	58.34	V	34.00	-34.93	57.41	-95.26	-37.85	-13	24.85
7 404.44	60.11	H	36.00	-34.44	61.67	-95.26	-33.59	-13	20.59
7 404.41	61.97	V	36.00	-34.44	63.53	-95.26	-31.73	-13	18.73
Middle Channel (1 880.0 ㎒)									
3 742.17	83.17	H	32.22	-36.67	78.72	-95.26	-16.54	-13	3.54
3 742.23	85.98	V	32.22	-36.67	81.53	-95.26	-13.73	-13	0.73
5 613.29	57.20	H	34.00	-35.05	56.15	-95.26	-39.11	-13	26.11
5 613.44	58.24	V	34.00	-35.05	57.19	-95.26	-38.07	-13	25.07
7 484.52	60.60	H	36.00	-34.56	62.04	-95.26	-33.22	-13	20.22
7 484.52	62.08	V	36.00	-34.56	63.52	-95.26	-31.74	-13	18.74
High Channel (1 900.0 ㎒)									
3 782.19	84.33	H	32.26	-36.77	79.82	-95.26	-15.44	-13	2.44
3 782.24	86.16	V	32.26	-36.77	81.654	-95.26	**-13.61**	-13	0.61
5 673.19	58.74	H	34.05	-34.83	57.96	-95.26	-37.30	-13	24.30
5 673.38	52.85	V	34.05	-34.83	52.07	-95.26	-43.19	-13	30.19
7 564.36	62.11	H	36.00	-34.08	64.03	-95.26	-31.23	-13	18.23
7 564.36	56.06	V	36.00	-34.08	57.98	-95.26	-37.28	-13	24.28

* 1 RB Size / 0 Offset

LTE band 5 (1.4 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (824.7 ㎒)									
1 648.52	72.28	H	25.78	-40.61	57.45	-97.41	-39.96	-13	26.96
1 648.46	70.09	V	25.78	-40.61	55.26	-97.41	-42.15	-13	29.15
2 455.96	56.15	H	28.48	-39.12	45.51	-97.41	-51.90	-13	38.90
2 456.04	53.42	V	28.48	-39.12	42.78	-97.41	-54.63	-13	41.63
Middle Channel (836.5 ㎒)									
1 672.10	76.79	H	26.33	-40.48	62.64	-97.41	**-34.77**	-13	21.77
1 672.06	74.24	V	26.33	-40.48	60.09	-97.41	-37.32	-13	24.32
2 508.15	59.73	H	28.30	-39.00	49.03	-97.41	-48.38	-13	35.38
2 508.18	55.97	V	28.30	-39.00	45.27	-97.41	-52.14	-13	39.14
High Channel (848.3 ㎒)									
1 695.67	72.40	H	26.90	-40.25	59.05	-97.41	-38.36	-13	25.36
1 695.69	70.49	V	26.90	-40.25	57.14	-97.41	-40.27	-13	27.27
2 453.62	57.90	H	28.49	-39.13	47.26	-97.41	-50.15	-13	37.15
2 543.61	53.80	V	28.30	-38.93	43.17	-97.41	-54.24	-13	41.24

* 1 RB Size / 0 Offset

LTE band 5 (3 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (825.5 ㎒)									
1 648.62	72.07	H	25.78	-40.61	57.24	-97.41	-40.17	-13	27.17
1 648.24	70.69	V	25.77	-40.61	55.85	-97.41	-41.56	-13	28.56
2 453.82	57.39	H	28.48	-39.13	46.74	-97.41	-50.67	-13	37.67
2 453.67	55.87	V	28.49	-39.13	45.23	-97.41	-52.18	-13	39.18
Middle Channel (836.5 ㎒)									
1 670.50	76.22	H	26.25	-40.51	60.11	-97.41	-37.30	-13	24.30
1 670.47	72.82	V	26.25	-40.51	57.69	-97.41	-39.72	-13	26.72
2 505.77	59.04	H	28.30	-39.04	47.17	-97.41	-50.24	-13	37.24
2 505.85	55.26	V	28.30	-39.04	44.24	-97.41	-53.17	-13	40.17
High Channel (847.5 ㎒)									
1 692.58	74.37	H	26.82	-40.28	60.91	-97.41	**-36.50**	-13	23.50
1 692.49	72.21	V	26.82	-40.28	58.75	-97.41	-38.66	-13	25.66
2 538.54	57.11	H	28.30	-38.92	46.49	-97.41	-50.92	-13	37.92
2 538.82	54.82	V	28.30	-38.92	44.20	-97.41	-53.21	-13	40.21

* 1 RB Size / 0 Offset

LTE band 5 (5 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (826.5 ㎒)									
1 648.87	71.07	H	25.78	-40.61	56.24	-97.41	-41.17	-13	28.17
1 649.08	69.88	V	25.79	-40.61	55.06	-97.41	-42.35	-13	29.35
2 454.43	56.95	H	28.48	-39.13	46.30	-97.41	-51.11	-13	38.11
2 454.05	53.99	V	28.48	-39.13	43.34	-97.41	-54.07	-13	41.07
Middle Channel (836.5 ㎒)									
1 668.64	74.37	H	26.25	-40.51	60.11	-97.41	-37.30	-13	24.30
1 668.72	71.95	V	26.25	-40.51	57.69	-97.41	-39.72	-13	26.72
2 503.17	57.91	H	28.30	-39.04	47.17	-97.41	-50.24	-13	37.24
2 503.07	54.98	V	28.30	-39.04	44.24	-97.41	-53.17	-13	40.17
High Channel (846.5 ㎒)									
1 688.73	74.53	H	26.73	-40.33	60.93	-97.41	**-36.48**	-13	23.48
1 688.62	73.63	V	26.73	-40.33	60.03	-97.41	-37.38	-13	24.38
2 533.14	59.16	H	28.30	-38.92	48.54	-97.41	-48.87	-13	35.87
2 532.94	56.78	V	28.30	-38.92	46.16	-97.41	-51.25	-13	38.25

* 1 RB Size / 0 Offset

LTE band 5 (10 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (829.0 ㎒)									
1 649.12	71.07	H	25.79	-40.61	56.25	-97.41	-41.16	-13	28.16
1 649.32	69.04	V	25.79	-40.61	54.22	-97.41	-43.19	-13	30.19
2 454.82	56.89	H	28.48	-39.13	46.24	-97.41	-51.17	-13	38.17
2 454.39	54.05	V	28.48	-39.13	43.40	-97.41	-54.01	-13	41.01
Middle Channel (836.5 ㎒)									
1 664.16	72.42	H	26.14	-40.53	58.03	-97.41	-39.38	-13	26.38
1 664.17	69.27	V	26.14	-40.53	54.88	-97.41	-42.53	-13	29.53
2 496.17	58.39	H	28.32	-39.07	47.64	-97.41	-49.77	-13	36.77
2 496.47	53.47	V	28.31	-39.07	42.71	-97.41	-54.70	-13	41.70
High Channel (844.0 ㎒)									
1 679.24	75.54	H	26.50	-40.42	61.62	-97.41	**-35.79**	-13	22.79
1 679.20	74.26	V	26.50	-40.42	60.34	-97.41	-37.07	-13	24.07
2 518.75	60.35	H	28.30	-38.94	49.71	-97.41	-47.70	-13	34.70
2 518.76	58.61	V	28.30	-38.94	47.97	-97.41	-49.44	-13	36.44

* 1 RB Size / 0 Offset

LTE band 7 (5 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 502.5 ㎒)									
5 000.64	59.61	H	33.20	-35.78	57.03	-95.26	-38.23	-25	13.23
5 000.48	56.91	V	33.20	-35.78	54.33	-95.26	-40.93	-25	15.93
7 501.03	49.01	H	36.00	-34.77	50.24	-95.26	-45.02	-25	20.02
7 500.91	52.16	V	36.00	-34.77	53.39	-95.26	-41.87	-25	16.87
10 001.21	48.01	H	37.70	-32.30	53.41	-95.26	-41.85	-25	16.85
10 001.28	49.67	V	37.70	-32.30	55.07	-95.26	-40.19	-25	15.19
15 002.17	47.92	H	40.50	-28.76	59.66	-95.26	-35.60	-25	10.60
15 001.71	43.25	V	40.50	-28.76	54.99	-95.26	-40.27	-25	15.27
17 502.14	49.88	H	43.20	-27.88	65.20	-95.26	**-30.06**	-25	5.06
17 502.39	46.79	V	43.20	-27.88	62.11	-95.26	-33.15	-25	8.15
Middle Channel (2 535.0 ㎒)									
5 065.72	62.69	H	33.26	-35.65	60.30	-95.26	-34.96	-25	9.96
5 065.69	61.09	V	33.26	-35.65	58.70	-95.26	-36.56	-25	11.56
7 598.48	48.84	H	36.00	-34.48	50.36	-95.26	-44.90	-25	19.90
7 598.52	50.59	V	36.00	-34.48	52.11	-95.26	-43.15	-25	18.15
10 131.52	49.69	H	37.70	-32.02	55.37	-95.26	-39.89	-25	14.89
10 131.39	51.95	V	37.70	-32.02	57.63	-95.26	-37.63	-25	12.63
15 197.31	48.09	H	40.11	-28.65	59.55	-95.26	-35.71	-25	10.71
15 197.26	43.69	V	40.11	-28.65	55.15	-95.26	-40.11	-25	15.11
17 729.60	46.61	H	43.76	-27.69	62.68	-95.26	-32.58	-25	7.58
17 729.65	44.35	V	43.76	-27.69	60.42	-95.26	-34.84	-25	9.84

High Channel (2 567.5 ㎒)									
5 130.70	62.19	H	33.46	-35.68	59.97	-95.26	-35.29	-25	10.29
5 130.84	60.76	V	33.46	-35.68	58.54	-95.26	-36.72	-25	11.72
7 695.98	47.76	H	35.91	-34.61	49.06	-95.26	-46.20	-25	21.20
7 696.08	48.33	V	35.91	-34.61	49.63	-95.26	-45.63	-25	20.63
10 261.41	50.09	H	37.70	-31.94	55.85	-95.26	-39.41	-25	14.41
10 261.38	53.29	V	37.70	-31.94	59.05	-95.26	-36.21	-25	11.21
15 391.76	48.15	H	39.82	-28.54	59.43	-95.26	-35.83	-25	10.83
15 391.74	43.54	V	39.82	-28.54	54.82	-95.26	-40.44	-25	15.44
17 957.65	42.14	H	44.62	-27.49	59.27	-95.26	-35.99	-25	10.99
17 957.58	40.32	V	44.62	-27.49	57.45	-95.26	-37.81	-25	12.81

* 1 RB size / 0 Offset

LTE band 7 (10 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 505.0 ㎒)									
5 001.24	59.31	H	33.20	-35.78	56.73	-95.26	-38.53	-25	13.53
5 001.21	56.87	V	33.20	-35.78	54.29	-95.26	-40.97	-25	15.97
7 501.92	49.46	H	36.00	-34.77	50.69	-95.26	-44.57	-25	19.57
7 501.81	52.43	V	36.00	-34.77	53.66	-95.26	-41.60	-25	16.60
10 002.47	47.87	H	37.70	-32.29	53.28	-95.26	-41.98	-25	16.98
10 002.51	49.72	V	37.70	-32.29	55.13	-95.26	-40.13	-25	15.13
15 003.26	47.86	H	40.49	-28.75	59.60	-95.26	-35.66	-25	10.66
15 003.60	43.09	V	40.49	-28.75	54.83	-95.26	-40.43	-25	15.43
17 504.17	49.73	H	43.21	-27.87	65.07	-95.26	**-30.19**	-25	5.19
17 504.18	47.10	V	43.21	-27.87	62.44	-95.26	-32.82	-25	7.82
Middle Channel (2 535.0 ㎒)									
5 061.14	62.33	H	33.24	-35.65	59.92	-95.26	-35.34	-25	10.34
5 061.16	60.67	V	33.24	-35.65	58.26	-95.26	-37.00	-25	12.00
7 591.72	47.97	H	36.00	-34.48	49.49	-95.26	-45.77	-25	20.77
7 591.70	51.03	V	36.00	-34.48	52.55	-95.26	-42.71	-25	17.71
10 122.24	48.95	H	37.70	-32.01	54.64	-95.26	-40.62	-25	15.62
10 122.43	52.20	V	37.70	-32.01	57.89	-95.26	-37.37	-25	12.37
15 183.49	48.22	H	40.13	-28.66	59.69	-95.26	-35.57	-25	10.57
15 183.55	43.64	V	40.13	-28.66	55.11	-95.26	-40.15	-25	15.15
17 714.06	47.02	H	43.73	-27.70	63.05	-95.26	-32.21	-25	7.21
17 714.25	44.37	V	43.73	-27.70	60.40	-95.26	-34.86	-25	9.86

High Channel (2 565.0 ㎒)									
5121.19	56.33	H	33.44	-35.66	54.11	-95.26	-41.15	-25	16.15
5121.12	55.16	V	33.44	-35.66	52.94	-95.26	-42.32	-25	17.32
7681.73	49.31	H	35.94	-34.61	50.64	-95.26	-44.62	-25	19.62
7681.72	51.49	V	35.94	-34.61	52.82	-95.26	-42.44	-25	17.44
10242.33	48.06	H	37.70	-31.97	53.79	-95.26	-41.47	-25	16.47
10242.42	51.43	V	37.70	-31.97	57.16	-95.26	-38.10	-25	13.10
15363.30	47.39	H	39.87	-28.56	58.70	-95.26	-36.56	-25	11.56
15363.25	42.98	V	39.87	-28.56	54.29	-95.26	-40.97	-25	15.97
17924.47	42.02	H	44.50	-27.52	59.00	-95.26	-36.26	-25	11.26
17924.13	40.75	V	44.50	-27.52	57.73	-95.26	-37.53	-25	12.53

* 1 RB size / 0 Offset

LTE band 7 (15 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 507.5 ㎒)									
5 001.58	59.84	H	33.20	-35.78	57.26	-95.26	-38.00	-25	13.00
5 001.79	57.47	V	33.20	-35.78	54.89	-95.26	-40.37	-25	15.37
7 502.61	49.89	H	36.00	-34.76	51.13	-95.26	-44.13	-25	19.13
7 502.43	52.42	V	36.00	-34.76	53.66	-95.26	-41.60	-25	16.60
10 003.43	47.83	H	37.70	-32.29	53.24	-95.26	-42.02	-25	17.02
10 003.45	49.62	V	37.70	-32.29	55.03	-95.26	-40.23	-25	15.23
15 005.08	48.13	H	40.49	-28.76	59.86	-95.26	-35.40	-25	10.40
15 004.98	43.22	V	40.49	-28.76	54.95	-95.26	-40.31	-25	15.31
17 505.91	49.96	H	43.21	-27.87	65.30	-95.26	**-29.96**	-25	4.96
17 506.10	47.47	V	43.21	-27.87	62.81	-95.26	-32.45	-25	7.45
Middle Channel (2 535.0 ㎒)									
5 056.71	61.55	H	33.23	-35.65	59.13	-95.26	-36.13	-25	11.13
5 056.74	60.07	V	33.23	-35.65	57.65	-95.26	-37.61	-25	12.61
7 585.10	49.87	H	36.00	-34.48	51.39	-95.26	-43.87	-25	18.87
7 584.94	53.34	V	36.00	-34.48	54.86	-95.26	-40.40	-25	15.40
10 113.36	49.11	H	37.70	-32.02	54.79	-95.26	-40.47	-25	15.47
10 113.45	51.67	V	37.70	-32.02	57.35	-95.26	-37.91	-25	12.91
15 170.09	47.87	H	40.16	-28.67	59.36	-95.26	-35.90	-25	10.90
15 169.99	43.09	V	40.16	-28.67	54.58	-95.26	-40.68	-25	15.68
17 698.38	47.32	H	43.70	-27.71	63.31	-95.26	-31.95	-25	6.95
17 698.42	44.60	V	43.70	-27.71	60.59	-95.26	-34.67	-25	9.67

High Channel (2 562.5 ㎒)									
5 111.77	57.93	H	33.42	-35.65	55.70	-95.26	-39.56	-25	14.56
5 111.73	57.42	V	33.42	-35.65	55.19	-95.26	-40.07	-25	15.07
7 667.53	44.66	H	35.96	-34.61	46.01	-95.26	-49.25	-25	24.25
7 667.51	47.67	V	35.96	-34.61	49.02	-95.26	-46.24	-25	21.24
10 223.49	41.95	H	37.70	-31.99	47.66	-95.26	-47.60	-25	22.60
10 223.35	44.40	V	37.70	-31.99	50.11	-95.26	-45.15	-25	20.15
15 335.35	38.93	H	39.93	-28.57	50.29	-95.26	-44.97	-25	19.97
15 334.90	36.37	V	39.93	-28.57	47.73	-95.26	-47.53	-25	22.53
17 890.89	39.98	H	44.38	-27.56	56.80	-95.26	-38.46	-25	13.46
17 890.93	38.57	V	44.38	-27.56	55.39	-95.26	-39.87	-25	14.87

* 1 RB size / 0 Offset

LTE band 7 (20 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 510.0 ㎒)									
5 002.23	59.59	H	33.20	-35.77	57.02	-95.26	-38.24	-25	13.24
5 002.19	57.43	V	33.20	-35.77	54.86	-95.26	-40.40	-25	15.40
7 503.42	49.77	H	36.00	-34.76	51.01	-95.26	-44.25	-25	19.25
7 503.23	52.33	V	36.00	-34.76	53.57	-95.26	-41.69	-25	16.69
10 004.39	47.95	H	37.70	-32.29	53.36	-95.26	-41.90	-25	16.90
10 004.28	49.51	V	37.70	-32.29	54.92	-95.26	-40.34	-25	15.34
15 006.41	48.38	H	40.49	-28.76	60.11	-95.26	-35.15	-25	10.15
15 006.18	43.24	V	40.49	-28.76	54.97	-95.26	-40.29	-25	15.29
17 507.68	50.11	H	43.22	-27.87	65.46	-95.26	**-29.80**	-25	4.80
17 507.77	47.69	V	43.22	-27.87	63.04	-95.26	-32.22	-25	7.22
Middle Channel (2 535.0 ㎒)									
5 052.05	58.18	H	33.21	-35.66	55.73	-95.26	-39.53	-25	14.53
5 052.14	56.71	V	33.21	-35.66	54.26	-95.26	-41.00	-25	16.00
7 578.11	50.86	H	36.00	-34.48	52.38	-95.26	-42.88	-25	17.88
7 578.09	55.27	V	36.00	-34.48	56.79	-95.26	-38.47	-25	13.47
10 104.36	48.40	H	37.70	-32.01	54.09	-95.26	-41.17	-25	16.17
10 104.39	50.56	V	37.70	-32.01	56.25	-95.26	-39.01	-25	14.01
15 156.67	47.34	H	40.19	-28.67	58.86	-95.26	-36.40	-25	11.40
15 156.26	42.07	V	40.19	-28.67	53.59	-95.26	-41.67	-25	16.67
17 682.64	47.22	H	43.70	-27.72	63.20	-95.26	-32.06	-25	7.06
17 682.26	44.68	V	43.70	-27.72	60.66	-95.26	-34.60	-25	9.60

High Channel (2 560.0 ㎒)									
5 102.17	58.87	H	33.40	-35.63	56.64	-95.26	-38.62	-25	13.62
5 102.22	58.41	V	33.40	-35.63	56.18	-95.26	-39.08	-25	14.08
7 653.09	40.26	H	35.99	-34.61	41.64	-95.26	-53.62	-25	28.62
7 653.44	43.55	V	35.99	-34.61	44.93	-95.26	-50.33	-25	25.33
10 204.42	40.49	H	37.70	-32.03	46.16	-95.26	-49.10	-25	24.10
10 204.34	42.29	V	37.70	-32.03	47.96	-95.26	-47.30	-25	22.30
15 306.78	36.81	H	39.99	-28.59	48.21	-95.26	-47.05	-25	22.05
15 306.56	34.23	V	39.99	-28.59	45.63	-95.26	-49.63	-25	24.63
17 857.66	38.05	H	44.32	-27.58	54.79	-95.26	-40.47	-25	15.47
17 857.88	35.25	V	44.32	-27.58	51.99	-95.26	-43.27	-25	18.27

* 1 RB size / 0 Offset

LTE band 12/17 (1.4 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (699.7 ㎒)									
1 398.40	48.85	H	24.90	-41.03	32.72	-97.41	**-64.69**	-13	51.69
1 398.44	48.22	V	24.90	-41.03	32.09	-97.41	-65.32	-13	52.32
Middle Channel (707.5 ㎒)									
1 414.22	48.36	H	24.99	-40.97	32.38	-97.41	-65.03	-13	52.03
High Channel (715.3 ㎒)									
1 429.41	46.49	H	25.08	-40.92	30.65	-97.41	-66.76	-13	53.76

* 1 RB size / 0 Offset

LTE band 12/17 (3 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (700.5 ㎒)									
1 398.52	49.95	H	24.90	-41.03	33.82	-97.41	**-63.59**	-13	50.59
1 398.59	47.97	V	24.90	-41.03	31.84	-97.41	-65.57	-13	52.57
Middle Channel (707.5 ㎒)									
1 412.54	48.72	H	24.98	-40.98	32.72	-97.41	-64.69	-13	51.69
1 412.48	47.87	V	24.97	-40.98	31.86	-97.41	-65.55	-13	52.55
High Channel (714.5 ㎒)									
1 426.25	47.16	H	25.06	-40.93	31.29	-97.41	-66.12	-13	53.12
1 426.51	46.86	V	25.06	-40.93	30.99	-97.41	-66.42	-13	53.42

* 1 RB size / 0 Offset

LTE band 12/17 (5 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (701.5 ㎒)									
1 398.77	50.08	H	24.90	-41.03	33.95	-97.41	**-63.46**	-13	50.46
1 398.78	48.45	V	24.90	-41.03	32.32	-97.41	-65.09	-13	52.09
Middle Channel (707.5 ㎒)									
1 410.46	48.74	H	24.96	-40.99	32.71	-97.41	-64.70	-13	51.70
1 410.49	47.26	V	24.96	-40.99	31.23	-97.41	-66.18	-13	53.18
High Channel (713.5 ㎒)									
1 422.66	48.00	H	25.04	-40.94	32.10	-97.41	-65.31	-13	52.31
1 422.77	46.90	V	25.04	-40.94	31.00	-97.41	-66.41	-13	53.41

* 1 RB size / 0 Offset

LTE band 12/17 (10 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (704.0 ㎒)									
1 399.28	49.62	H	24.90	-41.03	33.49	-97.41	**-63.92**	-13	50.92
1 399.32	48.10	V	24.90	-41.03	31.97	-97.41	-65.44	-13	52.44
Middle Channel (707.5 ㎒)									
1 406.14	48.94	H	24.94	-41.01	32.87	-97.41	-64.54	-13	51.54
1 406.17	47.43	V	24.94	-41.01	31.36	-97.41	-66.05	-13	53.05
High Channel (711.0 ㎒)									
1 413.24	48.41	H	24.98	-40.98	32.41	-97.41	-65.00	-13	52.00

* 1 RB size / 0 Offset

LTE band 66/4 (1.4 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 710.7 ㎒)									
3 420.46	51.03	H	31.02	-37.57	44.48	-95.26	-50.78	-13	37.78
3 420.85	49.03	V	31.03	-37.57	42.49	-95.26	-52.77	-13	39.77
5 130.73	55.19	H	33.46	-35.68	52.97	-95.26	-42.29	-13	29.29
5 130.69	54.20	V	33.46	-35.68	51.98	-95.26	-43.28	-13	30.28
8 551.11	48.46	H	36.50	-33.71	51.25	-95.26	-44.01	-13	31.01
8 551.36	51.35	V	36.50	-33.71	54.14	-95.26	-41.12	-13	28.12
10 261.26	48.91	H	37.70	-31.94	54.67	-95.26	-40.59	-13	27.59
10 261.73	51.59	V	37.70	-31.94	57.35	-95.26	-37.91	-13	24.91
11 971.42	39.74	H	38.54	-30.11	48.17	-95.26	-47.09	-13	34.09
11 971.69	42.58	V	38.54	-30.11	51.01	-95.26	-44.25	-13	31.25
13 682.05	40.11	H	40.46	-29.39	51.18	-95.26	-44.08	-13	31.08
13 682.28	39.63	V	40.46	-29.39	50.70	-95.26	-44.56	-13	31.56
Middle Channel (1 745.0 ㎒)									
3 489.09	50.26	H	31.20	-37.38	44.08	-95.26	-51.18	-13	38.18
3 488.87	49.41	V	31.20	-37.37	43.24	-95.26	-52.02	-13	39.02
5 233.64	55.28	H	33.67	-35.55	53.40	-95.26	-41.86	-13	28.86
5 233.72	53.96	V	33.67	-35.55	52.08	-95.26	-43.18	-13	30.18
8 722.56	50.85	H	36.79	-33.67	53.97	-95.26	-41.29	-13	28.29
8 722.75	52.35	V	36.79	-33.67	55.47	-95.26	-39.79	-13	26.79
10 467.57	41.41	H	37.60	-31.65	47.36	-95.26	-47.90	-13	34.90
10 467.41	44.95	V	37.60	-31.66	50.89	-95.26	-44.37	-13	31.37
12 212.03	42.33	H	38.48	-29.85	50.96	-95.26	-44.30	-13	31.30
12 211.75	46.71	V	38.48	-29.85	55.34	-95.26	-39.92	-13	26.92
13 956.31	44.27	H	40.71	-29.48	55.50	-95.26	-39.76	-13	26.76
13 956.50	44.07	V	40.71	-29.48	55.30	-95.26	-39.96	-13	26.96

High Channel (1 779.3 ㎒)									
3 557.69	46.81	H	31.13	-37.20	40.74	-95.26	-54.52	-13	41.52
3 557.78	46.67	V	31.13	-37.20	40.60	-95.26	-54.66	-13	41.66
5 336.41	46.77	H	33.87	-35.35	45.29	-95.26	-49.97	-13	36.97
5 336.24	46.80	V	33.87	-35.35	45.32	-95.26	-49.94	-13	36.94
8 894.32	58.78	H	37.00	-33.57	62.21	-95.26	-33.05	-13	20.05
8 894.42	60.04	V	37.00	-33.57	63.47	-95.26	**-31.79**	-13	18.79
10 672.94	40.14	H	37.80	-31.46	46.48	-95.26	-48.78	-13	35.78
10 673.28	41.76	V	37.80	-31.46	48.10	-95.26	-47.16	-13	34.16
12 452.18	42.15	H	38.60	-29.98	50.77	-95.26	-44.49	-13	31.49
12 452.04	46.63	V	38.60	-29.98	55.25	-95.26	-40.01	-13	27.01
14 230.95	47.92	H	41.10	-29.32	59.70	-95.26	-35.56	-13	22.56
14 230.80	44.79	V	41.10	-29.32	56.57	-95.26	-38.69	-13	25.69

* 1 RB size / 0 Offset

LTE band 66/4 (3 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 711.5 ㎒)									
3 420.67	51.18	H	31.02	-37.57	44.63	-95.26	-50.63	-13	37.63
3 420.51	49.00	V	31.02	-37.57	42.45	-95.26	-52.81	-13	39.81
5 130.73	55.15	H	33.46	-35.68	52.93	-95.26	-42.33	-13	29.33
5 130.66	54.11	V	33.46	-35.68	51.89	-95.26	-43.37	-13	30.37
8 551.19	48.28	H	36.50	-33.71	51.07	-95.26	-44.19	-13	31.19
8 551.28	51.42	V	36.50	-33.71	54.21	-95.26	-41.05	-13	28.05
10 261.73	49.70	H	37.70	-31.94	55.46	-95.26	-39.80	-13	26.80
10 261.77	51.38	V	37.70	-31.94	57.14	-95.26	-38.12	-13	25.12
11 971.89	37.11	H	38.54	-30.12	45.53	-95.26	-49.73	-13	36.73
11 971.91	42.34	V	38.54	-30.12	50.76	-95.26	-44.50	-13	31.50
13 681.58	40.43	H	40.46	-29.39	51.50	-95.26	-43.76	-13	30.76
13 682.05	39.68	V	40.46	-29.39	50.75	-95.26	-44.51	-13	31.51
Middle Channel (1 745.0 ㎒)									
3 487.42	50.18	H	31.20	-37.37	44.01	-95.26	-51.25	-13	38.25
3 487.36	48.74	V	31.20	-37.37	42.57	-95.26	-52.69	-13	39.69
5 231.24	53.37	H	33.66	-35.55	51.48	-95.26	-43.78	-13	30.78
5 231.17	52.42	V	33.66	-35.55	50.53	-95.26	-44.73	-13	31.73
8 718.70	51.20	H	36.77	-33.68	54.29	-95.26	-40.97	-13	27.97
8 718.59	52.86	V	36.77	-33.68	55.95	-95.26	-39.31	-13	26.31
10 462.87	43.55	H	37.60	-31.68	49.47	-95.26	-45.79	-13	32.79
10 462.24	44.28	V	37.60	-31.69	50.19	-95.26	-45.07	-13	32.07
12 205.92	40.84	H	38.49	-29.89	49.44	-95.26	-45.82	-13	32.82
12 206.35	46.41	V	38.49	-29.88	55.02	-95.26	-40.24	-13	27.24
13 950.39	43.52	H	40.70	-29.46	54.76	-95.26	-40.50	-13	27.50
13 950.01	43.63	V	40.70	-29.46	54.87	-95.26	-40.39	-13	27.39

High Channel (1 778.5 ㎒)									
3 554.47	47.42	H	31.12	-37.21	41.33	-95.26	-53.93	-13	40.93
3 554.45	47.24	V	31.12	-37.21	41.15	-95.26	-54.11	-13	41.11
5 331.61	46.69	H	33.86	-35.37	45.18	-95.26	-50.08	-13	37.08
5 331.77	46.71	V	33.86	-35.36	45.21	-95.26	-50.05	-13	37.05
8 886.13	56.99	H	37.00	-33.58	60.41	-95.26	-34.85	-13	21.85
8 886.15	57.75	V	37.00	-33.58	61.17	-95.26	**-34.09**	-13	21.09
10 663.54	37.28	H	37.80	-31.47	43.61	-95.26	-51.65	-13	38.65
10 663.60	41.48	V	37.80	-31.47	47.81	-95.26	-47.45	-13	34.45
12 440.91	41.96	H	38.60	-29.92	50.64	-95.26	-44.62	-13	31.62
12 440.79	45.39	V	38.60	-29.92	54.07	-95.26	-41.19	-13	28.19
14 218.26	46.14	H	41.10	-29.39	57.85	-95.26	-37.41	-13	24.41
14 218.20	46.19	V	41.10	-29.39	57.90	-95.26	-37.36	-13	24.36

* 1 RB size / 0 Offset

LTE band 66/4 (5 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dBμV/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 712.5 ㎒)									
3 420.63	51.62	H	31.02	-37.57	45.07	-95.26	-50.19	-13	37.19
3 420.72	49.58	V	31.02	-37.57	43.03	-95.26	-52.23	-13	39.23
5 131.08	55.48	H	33.46	-35.68	53.26	-95.26	-42.00	-13	29.00
5 131.13	53.90	V	33.46	-35.68	51.68	-95.26	-43.58	-13	30.58
8 551.59	48.30	H	36.50	-33.71	51.09	-95.26	-44.17	-13	31.17
8 551.77	51.44	V	36.50	-33.71	54.23	-95.26	-41.03	-13	28.03
10 262.21	50.03	H	37.70	-31.94	55.79	-95.26	-39.47	-13	26.47
10 262.22	51.78	V	37.70	-31.94	57.54	-95.26	-37.72	-13	24.72
11 972.83	37.46	H	38.55	-30.12	45.89	-95.26	-49.37	-13	36.37
11 972.81	42.97	V	38.55	-30.12	51.40	-95.26	-43.86	-13	30.86
13 682.99	39.88	H	40.47	-29.40	50.95	-95.26	-44.31	-13	31.31
13 682.95	39.12	V	40.47	-29.40	50.19	-95.26	-45.07	-13	32.07
Middle Channel (1 745.0 ㎒)									
3 485.85	50.71	H	31.20	-37.36	44.55	-95.26	-50.71	-13	37.71
3 485.64	49.15	V	31.20	-37.36	42.99	-95.26	-52.27	-13	39.27
5 228.50	52.62	H	33.66	-35.56	50.72	-95.26	-44.54	-13	31.54
5 228.56	52.59	V	33.66	-35.56	50.69	-95.26	-44.57	-13	31.57
8 714.17	50.94	H	36.76	-33.70	54.00	-95.26	-41.26	-13	28.26
8 714.28	53.20	V	36.76	-33.70	56.26	-95.26	-39.00	-13	26.00
10 457.23	42.48	H	37.60	-31.71	48.37	-95.26	-46.89	-13	33.89
10 457.06	42.89	V	37.60	-31.71	48.78	-95.26	-46.48	-13	33.48
12 200.28	41.47	H	38.50	-29.91	50.06	-95.26	-45.20	-13	32.20
12 199.83	45.31	V	38.50	-29.91	53.90	-95.26	-41.36	-13	28.36
13 942.41	42.08	H	40.68	-29.42	53.34	-95.26	-41.92	-13	28.92
13 942.82	42.41	V	40.69	-29.42	53.68	-95.26	-41.58	-13	28.58

High Channel (1 777.5 ㎒)									
3 550.66	48.16	H	31.10	-37.22	42.04	-95.26	-53.22	-13	40.22
3 550.70	48.00	V	31.10	-37.22	41.88	-95.26	-53.38	-13	40.38
5 325.86	47.00	H	33.85	-35.38	45.47	-95.26	-49.79	-13	36.79
5 326.13	47.18	V	33.85	-35.38	45.65	-95.26	-49.61	-13	36.61
8 876.97	55.60	H	37.00	-33.60	59.00	-95.26	-36.26	-13	23.26
8 876.67	56.89	V	37.00	-33.60	60.29	-95.26	**-34.97**	-13	21.97
10 652.26	37.19	H	37.80	-31.49	43.50	-95.26	-51.76	-13	38.76
10 652.13	38.70	V	37.80	-31.49	45.01	-95.26	-50.25	-13	37.25
12 427.74	41.08	H	38.60	-29.85	49.83	-95.26	-45.43	-13	32.43
12 427.52	43.99	V	38.60	-29.85	52.74	-95.26	-42.52	-13	29.52
14 203.22	44.17	H	41.10	-29.47	55.80	-95.26	-39.46	-13	26.46
14 203.13	45.16	V	41.10	-29.47	56.79	-95.26	-38.47	-13	25.47

* 1 RB size / 0 Offset

LTE band 66/4 (10 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 715.0 ㎒)									
3 421.20	50.95	H	31.03	-37.57	44.41	-95.26	-50.85	-13	37.85
3 421.11	49.35	V	31.03	-37.57	42.81	-95.26	-52.45	-13	39.45
5 131.80	55.43	H	33.46	-35.68	53.21	-95.26	-42.05	-13	29.05
5 131.77	54.02	V	33.46	-35.68	51.80	-95.26	-43.46	-13	30.46
8 553.01	48.46	H	36.50	-33.71	51.25	-95.26	-44.01	-13	31.01
8 553.10	51.79	V	36.50	-33.71	54.58	-95.26	-40.68	-13	27.68
10 264.08	48.35	H	37.70	-31.94	54.11	-95.26	-41.15	-13	28.15
10 263.80	51.01	V	37.70	-31.94	56.77	-95.26	-38.49	-13	25.49
11 974.71	39.41	H	38.55	-30.12	47.84	-95.26	-47.42	-13	34.42
11 974.39	42.91	V	38.55	-30.12	51.34	-95.26	-43.92	-13	30.92
13 684.87	41.57	H	40.47	-29.41	52.63	-95.26	-42.63	-13	29.63
13 684.98	39.48	V	40.47	-29.42	50.53	-95.26	-44.73	-13	31.73
Middle Channel (1 745.0 ㎒)									
3 481.19	50.43	H	31.20	-37.36	44.27	-95.26	-50.99	-13	37.99
3 481.33	49.22	V	31.20	-37.36	43.06	-95.26	-52.20	-13	39.20
5 221.80	53.12	H	33.64	-35.58	51.18	-95.26	-44.08	-13	31.08
5 221.77	52.88	V	33.64	-35.58	50.94	-95.26	-44.32	-13	31.32
8 703.14	49.11	H	36.71	-33.74	52.08	-95.26	-43.18	-13	30.18
8 702.88	51.32	V	36.71	-33.74	54.29	-95.26	-40.97	-13	27.97
10 443.62	40.96	H	37.61	-31.80	46.77	-95.26	-48.49	-13	35.49
10 443.79	42.19	V	37.61	-31.80	48.00	-95.26	-47.26	-13	34.26
12 184.78	35.83	H	38.53	-29.88	44.48	-95.26	-50.78	-13	37.78
12 184.30	42.28	V	38.53	-29.88	50.93	-95.26	-44.33	-13	31.33
13 925.01	44.27	H	40.65	-29.36	55.56	-95.26	-39.70	-13	26.70
13 925.04	42.14	V	40.65	-29.36	53.43	-95.26	-41.83	-13	28.83

High Channel (1 775.0 ㎒)									
3 541.14	47.58	H	31.12	-37.18	41.52	-95.26	-53.74	-13	40.74
3 541.20	47.13	V	31.12	-37.18	41.07	-95.26	-54.19	-13	41.19
5 311.67	49.11	H	33.82	-35.41	47.52	-95.26	-47.74	-13	34.74
5 311.94	48.12	V	33.82	-35.41	46.53	-95.26	-48.73	-13	35.73
8 853.06	53.74	H	37.00	-33.63	57.11	-95.26	-38.15	-13	25.15
8 852.99	55.76	V	37.00	-33.63	59.13	-95.26	**-36.13**	-13	23.13
10 623.59	39.05	H	37.75	-31.55	45.25	-95.26	-50.01	-13	37.01
10 623.78	41.19	V	37.75	-31.55	47.39	-95.26	-47.87	-13	34.87
12 394.38	37.81	H	38.59	-29.68	46.72	-95.26	-48.54	-13	35.54
12 393.99	40.06	V	38.59	-29.68	48.97	-95.26	-46.29	-13	33.29
14 164.22	42.85	H	41.03	-29.41	54.47	-95.26	-40.79	-13	27.79
14 164.88	42.50	V	41.03	-29.42	54.11	-95.26	-41.15	-13	28.15

* 1 RB size / 0 Offset

LTE band 66/4 (15 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 717.5 ㎒)									
3 421.66	51.14	H	31.03	-37.56	44.61	-95.26	-50.65	-13	37.65
3 421.57	49.67	V	31.03	-37.57	43.13	-95.26	-52.13	-13	39.13
5 132.45	55.71	H	33.46	-35.69	53.48	-95.26	-41.78	-13	28.78
5 132.50	54.69	V	33.47	-35.69	52.47	-95.26	-42.79	-13	29.79
8 554.22	48.76	H	36.50	-33.71	51.55	-95.26	-43.71	-13	30.71
8 554.32	51.90	V	36.50	-33.71	54.69	-95.26	-40.57	-13	27.57
10 265.25	49.55	H	37.70	-31.94	55.31	-95.26	-39.95	-13	26.95
10 265.15	52.46	V	37.70	-31.94	58.22	-95.26	-37.04	-13	24.04
11 975.98	39.32	H	38.55	-30.12	47.75	-95.26	-47.51	-13	34.51
11 976.19	42.39	V	38.55	-30.13	50.81	-95.26	-44.45	-13	31.45
13 687.16	40.53	H	40.47	-29.42	51.58	-95.26	-43.68	-13	30.68
13 686.78	40.50	V	40.47	-29.42	51.55	-95.26	-43.71	-13	30.71
Middle Channel (1 745.0 ㎒)									
3 476.73	50.13	H	31.20	-37.35	43.98	-95.26	-51.28	-13	38.28
3 476.69	49.52	V	31.20	-37.35	43.37	-95.26	-51.89	-13	38.89
5 215.26	54.30	H	33.63	-35.60	52.33	-95.26	-42.93	-13	29.93
5 215.03	53.56	V	33.63	-35.60	51.59	-95.26	-43.67	-13	30.67
8 691.82	48.00	H	36.68	-33.76	50.92	-95.26	-44.34	-13	31.34
8 691.75	51.26	V	36.68	-33.76	54.18	-95.26	-41.08	-13	28.08
10 429.93	41.14	H	37.64	-31.88	46.90	-95.26	-48.36	-13	35.36
10 430.07	42.97	V	37.64	-31.88	48.73	-95.26	-46.53	-13	33.53
12 168.50	36.14	H	38.56	-29.85	44.85	-95.26	-50.41	-13	37.41
12 168.81	38.83	V	38.56	-29.85	47.54	-95.26	-47.72	-13	34.72
13 906.73	44.61	H	40.61	-29.28	55.94	-95.26	-39.32	-13	26.32
13 906.59	43.74	V	40.61	-29.28	55.07	-95.26	-40.19	-13	27.19

High Channel (1 772.5 ㎒)									
3 531.73	45.97	H	31.14	-37.13	39.98	-95.26	-55.28	-13	42.28
3 531.69	45.34	V	31.14	-37.13	39.35	-95.26	-55.91	-13	42.91
5 297.39	52.36	H	33.79	-35.45	50.70	-95.26	-44.56	-13	31.56
5 297.65	50.46	V	33.80	-35.45	48.81	-95.26	-46.45	-13	33.45
8 829.19	54.73	H	37.00	-33.68	58.05	-95.26	-37.21	-13	24.21
8 829.19	55.82	V	37.00	-33.68	59.14	-95.26	**-36.12**	-13	23.12
10 595.07	39.86	H	37.69	-31.59	45.96	-95.26	-49.30	-13	36.30
10 594.98	42.07	V	37.69	-31.59	48.17	-95.26	-47.09	-13	34.09
12 360.69	37.50	H	38.52	-29.61	46.41	-95.26	-48.85	-13	35.85
12 360.92	43.98	V	38.52	-29.61	52.89	-95.26	-42.37	-13	29.37
14 127.21	45.23	H	40.91	-29.35	56.79	-95.26	-38.47	-13	25.47
14 126.63	42.32	V	40.91	-29.34	53.89	-95.26	-41.37	-13	28.37

* 1 RB size / 0 Offset

LTE band 66/4 (20 ㎒ - QPSK)

Frequency (㎒)	Measured Level (dB㎶)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB㎶/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 720.0 ㎒)									
3 422.22	50.94	H	31.03	-37.56	44.41	-95.26	-50.85	-13	37.85
3 422.31	49.24	V	31.03	-37.56	42.71	-95.26	-52.55	-13	39.55
5 133.38	56.16	H	33.47	-35.69	53.94	-95.26	-41.32	-13	28.32
5 133.34	55.26	V	33.47	-35.69	53.04	-95.26	-42.22	-13	29.22
8 555.41	48.91	H	36.50	-33.72	51.69	-95.26	-43.57	-13	30.57
8 555.65	51.83	V	36.50	-33.72	54.61	-95.26	-40.65	-13	27.65
10 266.62	51.39	H	37.70	-31.94	57.15	-95.26	-38.11	-13	25.11
10 266.58	51.11	V	37.70	-31.94	56.87	-95.26	-38.39	-13	25.39
11 977.33	38.80	H	38.55	-30.13	47.22	-95.26	-48.04	-13	35.04
11 977.14	39.09	V	38.55	-30.13	47.51	-95.26	-47.75	-13	34.75
13 688.96	41.16	H	40.48	-29.43	52.21	-95.26	-43.05	-13	30.05
13 689.04	39.62	V	40.48	-29.43	50.67	-95.26	-44.59	-13	31.59
Middle Channel (1 745.0 ㎒)									
3 471.93	49.65	H	31.20	-37.36	43.49	-95.26	-51.77	-13	38.77
3 471.78	48.77	V	31.20	-37.36	42.61	-95.26	-52.65	-13	39.65
5 208.34	55.21	H	33.62	-35.62	53.21	-95.26	-42.05	-13	29.05
5 208.42	54.60	V	33.62	-35.62	52.60	-95.26	-42.66	-13	29.66
8 680.58	49.71	H	36.66	-33.78	52.59	-95.26	-42.67	-13	29.67
8 680.62	52.41	V	36.66	-33.78	55.29	-95.26	-39.97	-13	26.97
10 416.88	41.56	H	37.67	-31.95	47.28	-95.26	-47.98	-13	34.98
10 416.73	43.86	V	37.67	-31.95	49.58	-95.26	-45.68	-13	32.68
12 209.05	35.86	H	38.48	-29.87	44.47	-95.26	-50.79	-13	37.79
12 209.12	37.41	V	38.48	-29.87	46.02	-95.26	-49.24	-13	36.24
13 888.74	46.37	H	40.60	-29.26	57.71	-95.26	-37.55	-13	24.55
13 888.66	44.33	V	40.60	-29.26	55.67	-95.26	-39.59	-13	26.59

High Channel (1 770.0 ㎒)									
3 522.33	46.53	H	31.16	-37.13	40.56	-95.26	-54.70	-13	41.70
3 522.49	46.11	V	31.16	-37.13	40.14	-95.26	-55.12	-13	42.12
5 283.23	52.16	H	33.77	-35.47	50.46	-95.26	-44.80	-13	31.80
5 283.29	51.34	V	33.77	-35.47	49.64	-95.26	-45.62	-13	32.62
8 805.59	53.63	H	37.00	-33.71	56.92	-95.26	-38.34	-13	25.34
8 805.41	56.38	V	37.00	-33.71	59.67	-95.26	**-35.59**	-13	22.59
10 566.72	42.76	H	37.63	-31.55	48.84	-95.26	-46.42	-13	33.42
10 566.66	42.59	V	37.63	-31.55	48.67	-95.26	-46.59	-13	33.59
12 327.39	41.43	H	38.50	-29.53	50.40	-95.26	-44.86	-13	31.86
12 327.54	43.93	V	38.50	-29.53	52.90	-95.26	-42.36	-13	29.36
14 088.97	47.52	H	40.80	-29.33	58.99	-95.26	-36.27	-13	23.27
14 088.81	45.25	V	40.80	-29.33	56.72	-95.26	-38.54	-13	25.54

* 1 RB size / 0 Offset

Remark;

1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
2. E (㏈㎶/m) = Measured Level (㏈㎶) + Antenna Factor (㏈/m) + AMP (㏈) + Cable Loss (㏈).
3. E.I.R.P. (㏈ m) = E (㏈㎶/m) + CF (㏈).
4. E.R.P. (㏈ m) = E (㏈㎶/m) + CF (㏈) - 2.15 (㏈); where E.R.P. and E.I.R.P. are expressed in consistent units.
5. CF (㏈) = 20 log D - 104.8; where D is the measurement distance in meters, According to KDB 971168 D01 v03r01 5.8.4.
6. The frequency spectrum is examined from 9 ㎑ to the 10th harmonic of the fundamental frequency of the transmitter. No other spurious and harmonic emissions were reported greater than listed emissions above table.

3. Conducted Output Power

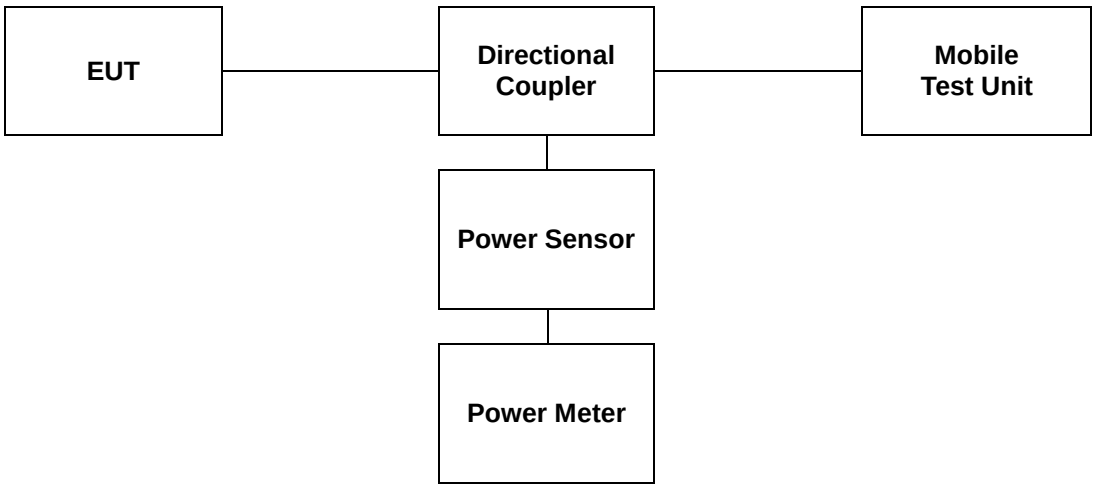
3.1. Limit

CFR 47, Section FCC §2.1046 and IC RSS-Gen Issue 5 6.12.

3.2. Test Procedure

Output power shall be measured at the RF output terminals for all configurations.

1. The RF output of the transmitter was connected to the input of the mobile test unit in order to establish communication with the EUT.
2. The EUT was set up for the max. output power with pseudo random data modulation by using mobile test unit parameters.
3. The measurement performed using a wideband RF power meter.
4. This EUT was tested under all configurations and the highest power was investigated and reported.



3.3. Test Result

Ambient temperature : (23 ± 1) ℃

Relative humidity : 47 % R.H.

Band	Bandwidth (㎒)	RB Size	RB Offset	QPSK					
				18607		18900		19193	
				1 850.7 ㎒		1 880.0 ㎒		1 909.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
2	1.4	1	0	22.09	0.162	21.88	0.154	22.21	0.166
		1	3	22.10	0.162	21.87	0.154	22.21	0.166
		1	5	22.18	0.165	21.89	0.155	22.18	0.165
		3	0	**22.23**	**0.167**	21.87	0.154	22.20	0.166
		3	2	22.23	0.167	21.88	0.154	22.20	0.166
		3	3	22.22	0.167	21.89	0.155	22.20	0.166
		6	0	21.20	0.132	20.88	0.122	21.18	0.131
	Bandwidth (㎒)	RB Size	RB Offset	18615		18900		19185	
				1 851.5 ㎒		1 880.0 ㎒		1 908.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	3	1	0	22.19	0.166	21.97	0.157	22.26	0.168
		1	8	22.19	0.166	21.92	0.156	**22.28**	**0.169**
		1	14	22.17	0.165	21.95	0.157	22.27	0.169
		8	0	21.16	0.131	22.25	0.168	21.28	0.134
		8	4	21.16	0.131	21.02	0.126	21.28	0.134
		8	7	21.15	0.130	21.00	0.126	21.27	0.134
		15	0	21.14	0.130	21.00	0.126	21.27	0.134
	Bandwidth (㎒)	RB Size	RB Offset	18625		18900		19175	
				1 852.5 ㎒		1 880.0 ㎒		1 907.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	5	1	0	22.28	0.169	22.11	0.163	**22.54**	**0.179**
		1	12	22.29	0.169	22.10	0.162	22.53	0.179
		1	24	22.28	0.169	22.10	0.162	22.53	0.179
		12	0	21.25	0.133	21.08	0.128	21.51	0.142
		12	7	21.27	0.134	21.07	0.128	21.51	0.142
		12	13	21.26	0.134	21.08	0.128	21.51	0.142
		25	0	21.23	0.133	21.05	0.127	21.50	0.141
	Bandwidth (㎒)	RB Size	RB Offset	18650		18900		19150	
				1 855.0 ㎒		1 880.0 ㎒		1 905.0 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	10	1	0	22.45	0.176	22.29	0.169	22.22	0.167
		1	25	**22.52**	**0.179**	22.32	0.171	22.23	0.167
		1	49	22.48	0.177	22.31	0.170	22.21	0.166
		25	0	21.26	0.134	21.07	0.128	21.29	0.135
		25	12	21.26	0.134	21.07	0.128	21.30	0.135
		25	25	21.27	0.134	21.07	0.128	21.31	0.135
		50	0	21.24	0.133	21.03	0.127	21.36	0.137
	Bandwidth (㎒)	RB Size	RB Offset	18675		18900		19125	
				1 857.5 ㎒		1 880.0 ㎒		1 902.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	15	1	0	**22.41**	**0.174**	22.20	0.166	22.34	0.171
		1	37	22.39	0.173	22.20	0.166	22.33	0.171
		1	74	22.39	0.173	22.21	0.166	22.32	0.171
		36	0	21.36	0.137	21.14	0.130	21.28	0.134
		36	20	21.36	0.137	21.14	0.130	21.26	0.134
		36	39	21.36	0.137	21.14	0.130	21.26	0.134
		75	0	21.27	0.134	21.08	0.128	21.32	0.136
	Bandwidth (㎒)	RB Size	RB Offset	18700		18900		19100	
				1 860.0 ㎒		1 880.0 ㎒		1 900.0 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	20	1	0	**22.64**	**0.184**	22.60	0.182	22.56	0.180
		1	50	22.62	0.183	22.60	0.182	22.56	0.180
		1	99	22.60	0.182	22.60	0.182	22.59	0.182
		50	0	21.37	0.137	21.26	0.134	21.49	0.141
		50	25	21.44	0.139	21.26	0.134	21.48	0.141
		50	50	21.47	0.140	21.25	0.133	21.50	0.141
		100	0	21.40	0.138	21.20	0.132	21.43	0.139

Band	Bandwidth (㎒)	RB Size	RB Offset	16QAM					
				18607		18900		19193	
				1 850.7 ㎒		1 880.0 ㎒		1 909.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
2	1.4	1	0	21.45	0.140	21.17	0.131	21.41	0.138
		1	3	21.45	0.140	21.12	0.129	21.46	0.140
		1	5	**21.47**	**0.140**	21.10	0.129	21.47	0.140
		3	0	21.32	0.136	21.00	0.126	21.29	0.135
		3	2	21.31	0.135	21.01	0.126	21.31	0.135
		3	3	21.33	0.136	21.01	0.126	21.33	0.136
		6	0	20.26	0.106	19.96	0.099	20.26	0.106
	Bandwidth (㎒)	RB Size	RB Offset	18615		18900		19185	
				1 851.5 ㎒		1 880.0 ㎒		1 908.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	3	1	0	21.44	0.139	21.26	0.134	**21.53**	**0.142**
		1	8	21.38	0.137	21.26	0.134	21.47	0.140
		1	14	21.28	0.134	21.32	0.136	21.45	0.140
		8	0	20.22	0.105	20.07	0.102	20.36	0.109
		8	4	20.23	0.105	20.10	0.102	20.35	0.108
		8	7	20.25	0.106	20.08	0.102	20.35	0.108
		15	0	20.21	0.105	20.05	0.101	20.32	0.108
	Bandwidth (㎒)	RB Size	RB Offset	18625		18900		19175	
				1 852.5 ㎒		1 880.0 ㎒		1 907.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	5	1	0	21.60	0.145	21.40	0.138	21.76	0.150
		1	12	21.54	0.143	21.42	0.139	**21.78**	**0.151**
		1	24	21.56	0.143	21.41	0.138	21.72	0.149
		12	0	20.32	0.108	20.13	0.103	20.49	0.112
		12	7	20.32	0.108	20.14	0.103	20.49	0.112
		12	13	20.33	0.108	20.14	0.103	20.46	0.111
		25	0	20.28	0.107	20.11	0.103	20.45	0.111
	Bandwidth (㎒)	RB Size	RB Offset	18650		18900		19150	
				1 855.0 ㎒		1 880.0 ㎒		1 905.0 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	10	1	0	21.75	0.150	21.54	0.143	21.61	0.145
		1	25	21.71	0.148	21.56	0.143	21.60	0.145
		1	49	**21.76**	**0.150**	21.58	0.144	21.65	0.146
		25	0	20.30	0.107	20.11	0.103	20.43	0.110
		25	12	20.32	0.108	20.10	0.102	20.41	0.110
		25	25	20.19	0.104	20.11	0.103	20.41	0.110
		50	0	20.27	0.106	20.07	0.102	20.37	0.109
	Bandwidth (㎒)	RB Size	RB Offset	18675		18900		19125	
				1 857.5 ㎒		1 880.0 ㎒		1 902.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	15	1	0	**21.66**	**0.147**	21.53	0.142	21.59	0.144
		1	37	21.62	0.145	21.48	0.141	21.61	0.145
		1	74	21.64	0.146	21.52	0.142	21.59	0.144
		36	0	20.40	0.110	20.17	0.104	20.29	0.107
		36	20	20.40	0.110	20.18	0.104	20.29	0.107
		36	39	20.39	0.109	20.17	0.104	20.29	0.107
		75	0	20.31	0.107	20.12	0.103	20.34	0.108
	Bandwidth (㎒)	RB Size	RB Offset	18700		18900		19100	
				1 860.0 ㎒		1 880.0 ㎒		1 900.0 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	20	1	0	21.95	0.157	21.76	0.150	21.80	0.151
		1	50	**21.96**	**0.157**	21.88	0.154	21.85	0.153
		1	99	21.92	0.156	21.80	0.151	21.81	0.152
		50	0	20.50	0.112	20.20	0.105	20.51	0.112
		50	25	20.49	0.112	20.21	0.105	20.50	0.112
		50	50	20.51	0.112	20.21	0.105	20.51	0.112
		100	0	20.41	0.110	20.14	0.103	20.45	0.111

Band	Bandwidth (㎒)	RB Size	RB Offset	QPSK					
				20407		20525		20643	
				824.7 ㎒		836.5 ㎒		848.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	1.4	1	0	22.66	0.185	22.68	0.185	22.76	0.189
		1	3	22.68	0.185	22.66	0.185	**22.81**	**0.191**
		1	5	22.67	0.185	22.68	0.185	22.81	0.191
		3	0	22.71	0.187	22.69	0.186	22.79	0.190
		3	2	22.67	0.185	22.70	0.186	22.80	0.191
		3	3	22.68	0.185	22.69	0.186	22.79	0.190
		6	0	21.70	0.148	21.68	0.147	21.82	0.152
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20415**		**20525**		**20635**	
				825.5 ㎒		**836.5 ㎒**		**847.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	3	1	0	22.46	0.176	22.39	0.173	22.41	0.174
		1	8	22.46	0.176	22.38	0.173	22.41	0.174
		1	14	22.45	0.176	22.38	0.173	**22.56**	**0.180**
		8	0	21.50	0.141	21.37	0.137	21.42	0.139
		8	4	21.49	0.141	21.37	0.137	21.41	0.138
		8	7	21.48	0.141	21.37	0.137	21.44	0.139
		15	0	21.46	0.140	21.38	0.137	21.52	0.142
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20425**		**20525**		**20625**	
				826.5 ㎒		**836.5 ㎒**		**846.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	5	1	0	22.54	0.179	**22.67**	**0.185**	22.61	0.182
		1	12	22.61	0.182	22.65	0.184	22.60	0.182
		1	24	22.62	0.183	22.65	0.184	22.59	0.182
		12	0	21.59	0.144	21.52	0.142	21.61	0.145
		12	7	21.61	0.145	21.54	0.143	21.61	0.145
		12	13	21.62	0.145	21.56	0.143	21.60	0.145
		25	0	21.62	0.145	21.51	0.142	21.58	0.144
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20450**		**20525**		**20600**	
				829.0 ㎒		**836.5 ㎒**		**844.0 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	10	1	0	**22.90**	**0.195**	22.57	0.181	22.72	0.187
		1	25	22.63	0.183	21.27	0.134	22.74	0.188
		1	49	22.65	0.184	22.75	0.188	22.69	0.186
		25	0	21.73	0.149	21.85	0.153	21.71	0.148
		25	12	21.70	0.148	21.88	0.154	21.80	0.151
		25	25	21.73	0.149	21.85	0.153	21.74	0.149
		50	0	21.67	0.147	21.75	0.150	21.77	0.150

Band	Bandwidth (㎒)	RB Size	RB Offset	16QAM					
				20407		20525		20643	
				824.7 ㎒		836.5 ㎒		848.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	1.4	1	0	22.00	0.158	22.00	0.158	**22.09**	**0.162**
		1	3	21.99	0.158	22.02	0.159	22.05	0.160
		1	5	21.97	0.157	22.00	0.158	22.07	0.161
		3	0	21.82	0.152	21.85	0.153	21.92	0.156
		3	2	21.79	0.151	21.80	0.151	21.89	0.155
		3	3	21.80	0.151	21.79	0.151	21.93	0.156
		6	0	20.76	0.119	20.76	0.119	20.87	0.122
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20415**		**20525**		**20635**	
				825.5 ㎒		**836.5 ㎒**		**847.5 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	3	1	0	21.77	0.150	21.69	0.148	21.71	0.148
		1	8	21.76	0.150	21.66	0.147	21.72	0.149
		1	14	**21.81**	**0.152**	21.65	0.146	21.72	0.149
		8	0	20.55	0.114	20.45	0.111	20.47	0.111
		8	4	20.57	0.114	20.46	0.111	20.49	0.112
		8	7	20.55	0.114	20.45	0.111	20.50	0.112
		15	0	20.49	0.112	20.42	0.110	20.57	0.114
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20425**		**20525**		**20625**	
				826.5 ㎒		**836.5 ㎒**		**846.5 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	5	1	0	21.93	0.156	21.92	0.156	21.88	0.154
		1	12	21.90	0.155	21.93	0.156	21.89	0.155
		1	24	21.94	0.156	**21.95**	**0.157**	21.89	0.155
		12	0	20.66	0.116	20.59	0.115	20.66	0.116
		12	7	20.65	0.116	20.60	0.115	20.65	0.116
		12	13	20.64	0.116	20.61	0.115	20.64	0.116
		25	0	20.59	0.115	20.53	0.113	20.60	0.115
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20450**		**20525**		**20600**	
				829.0 ㎒		**836.5 ㎒**		**844.0 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	10	1	0	22.01	0.159	22.16	0.164	21.95	0.157
		1	25	21.94	0.156	**22.19**	**0.166**	22.07	0.161
		1	49	21.95	0.157	22.17	0.165	21.96	0.157
		25	0	20.74	0.119	20.87	0.122	20.71	0.118
		25	12	20.71	0.118	20.88	0.122	20.84	0.121
		25	25	20.76	0.119	20.89	0.123	20.74	0.119
		50	0	20.69	0.117	20.76	0.119	20.78	0.120

Band	Bandwidth (㎒)	RB Size	RB Offset	QPSK					
				20775		21100		21425	
				2 502.5 ㎒		2 535.0 ㎒		2 567.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
7	5	1	0	22.39	0.173	22.64	0.184	22.54	0.179
		1	12	22.55	0.180	**22.67**	**0.185**	22.58	0.181
		1	24	22.43	0.175	22.59	0.182	22.48	0.177
		12	0	21.37	0.137	21.63	0.146	21.57	0.144
		12	6	21.46	0.140	21.68	0.147	21.63	0.146
		12	13	21.45	0.140	21.60	0.145	21.55	0.143
		25	0	21.46	0.140	21.62	0.145	21.56	0.143
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20800**		**21100**		**21400**	
				2 505.0 ㎒		**2 535.0 ㎒**		**2 565.0 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	10	1	0	22.41	0.174	22.34	0.171	**22.64**	**0.184**
		1	25	22.45	0.176	22.58	0.181	22.57	0.181
		1	49	22.50	0.178	22.45	0.176	22.50	0.178
		25	0	21.46	0.140	21.66	0.147	21.59	0.144
		25	12	21.50	0.141	21.71	0.148	21.60	0.145
		25	25	21.49	0.141	21.63	0.146	21.54	0.143
		50	0	21.47	0.140	21.63	0.146	21.59	0.144
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20825**		**21100**		**21375**	
				2 507.5 ㎒		**2 535.0 ㎒**		**2 562.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	15	1	0	22.65	0.184	**22.79**	**0.190**	22.76	0.189
		1	36	22.72	0.187	22.68	0.185	22.64	0.184
		1	74	22.74	0.188	22.51	0.178	22.55	0.180
		36	0	21.67	0.147	21.78	0.151	21.71	0.148
		36	18	21.69	0.148	21.60	0.145	21.69	0.148
		36	37	21.76	0.150	21.56	0.143	21.60	0.145
		75	0	21.73	0.149	21.70	0.148	21.64	0.146
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20850**		**21100**		**21350**	
				2 510.0 ㎒		**2 535.0 ㎒**		**2 560.0 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	20	1	0	22.66	0.185	**22.85**	**0.193**	22.81	0.191
		1	50	22.68	0.185	22.68	0.185	22.65	0.184
		1	99	22.71	0.187	22.53	0.179	22.54	0.179
		50	0	21.64	0.146	21.80	0.151	21.77	0.150
		50	25	21.72	0.149	21.69	0.148	21.74	0.149
		50	50	21.78	0.151	21.58	0.144	21.62	0.145
		100	0	21.70	0.148	21.75	0.150	21.69	0.148

Band	Bandwidth (㎒)	RB Size	RB Offset	16QAM					
				20775		21100		21425	
				2 502.5 ㎒		2 535.0 ㎒		2 567.5 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
7	5	1	0	21.55	0.143	21.75	0.150	**21.83**	**0.152**
		1	12	21.66	0.147	21.81	0.152	21.79	0.151
		1	24	21.57	0.144	21.70	0.148	21.71	0.148
		12	0	20.40	0.110	20.62	0.115	20.57	0.114
		12	6	20.51	0.112	20.71	0.118	20.60	0.115
		12	13	20.47	0.111	20.63	0.116	20.55	0.114
		25	0	20.49	0.112	20.67	0.117	20.59	0.115
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20800**		**21100**		**21400**	
				2 505.0 ㎒		**2 535.0 ㎒**		**2 565.0 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	10	1	0	21.61	0.145	**21.85**	**0.153**	21.82	0.152
		1	25	21.61	0.145	21.76	0.150	21.70	0.148
		1	49	21.65	0.146	21.61	0.145	21.64	0.146
		25	0	20.48	0.112	20.67	0.117	20.63	0.116
		25	12	20.53	0.113	20.73	0.118	20.66	0.116
		25	25	20.49	0.112	20.66	0.116	20.56	0.114
		50	0	20.46	0.111	20.65	0.116	20.58	0.114
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20825**		**21100**		**21375**	
				2 507.5 ㎒		**2 535.0 ㎒**		**2 562.5 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	15	1	0	21.86	0.153	**21.94**	**0.156**	21.93	0.156
		1	36	21.83	0.152	21.80	0.151	21.78	0.151
		1	74	21.92	0.156	21.68	0.147	21.71	0.148
		36	0	20.89	0.123	20.79	0.120	20.74	0.119
		36	18	20.90	0.123	20.75	0.119	20.66	0.116
		36	37	20.81	0.121	20.56	0.114	20.62	0.115
		75	0	20.74	0.119	20.70	0.117	20.63	0.116
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**20850**		**21100**		**21350**	
				2 510.0 ㎒		**2 535.0 ㎒**		**2 560.0 ㎒**	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
	20	1	0	21.83	0.152	22.00	0.158	**22.03**	**0.160**
		1	50	21.70	0.148	21.80	0.151	21.93	0.156
		1	99	21.77	0.150	21.68	0.147	21.75	0.150
		50	0	20.69	0.117	20.83	0.121	20.77	0.119
		50	25	20.74	0.119	20.66	0.116	20.69	0.117
		50	50	20.75	0.119	20.60	0.115	20.65	0.116
		100	0	20.72	0.118	20.77	0.119	20.67	0.117

Band	Bandwidth (㎒)	RB Size	RB Offset	QPSK					
				23017		23095		23173	
				699.7 ㎒		707.5 ㎒		715.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
12	1.4	1	0	22.77	0.189	22.73	0.187	22.86	0.193
		1	3	**22.94**	**0.197**	22.90	0.195	22.93	0.196
		1	5	22.88	0.194	22.83	0.192	22.84	0.192
		3	0	22.79	0.190	22.77	0.189	22.83	0.192
		3	2	22.83	0.192	22.83	0.192	22.84	0.192
		3	3	22.88	0.194	22.85	0.193	22.81	0.191
		6	0	21.88	0.154	21.85	0.153	21.82	0.152
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**23025**		**23095**		**23165**	
				700.5 ㎒		**707.5 ㎒**		**714.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	3	1	0	22.82	0.191	22.78	0.190	**22.95**	**0.197**
		1	8	22.88	0.194	22.85	0.193	22.93	0.196
		1	14	22.88	0.194	22.74	0.188	22.90	0.195
		8	0	21.95	0.157	21.82	0.152	21.93	0.156
		8	4	21.94	0.156	21.84	0.153	21.93	0.156
		8	7	21.92	0.156	21.88	0.154	21.92	0.156
		15	0	21.94	0.156	21.82	0.152	21.92	0.156
12/17	**Bandwidth (㎒)**	**RB Size**	**RB Offset**	**23035**		**23095**		**23155**	
				701.5 ㎒		**707.5 ㎒**		**713.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	5	1	0	22.83	0.192	22.87	0.194	22.85	0.193
		1	12	22.99	0.199	22.96	0.198	**23.06**	**0.202**
		1	24	22.86	0.193	22.76	0.189	22.99	0.199
		12	0	21.95	0.157	21.85	0.153	22.02	0.159
		12	7	21.93	0.156	21.84	0.153	22.00	0.158
		12	13	21.92	0.156	21.80	0.151	21.99	0.158
		25	0	21.93	0.156	21.84	0.153	22.02	0.159
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**23060**		**23095**		**23130**	
				704.0 ㎒		**707.5 ㎒**		**711.0 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	10	1	0	**23.00**	**0.200**	22.97	0.198	22.88	0.194
		1	25	23.04	0.201	22.95	0.197	22.98	0.199
		1	49	22.84	0.192	22.91	0.195	23.03	0.201
		25	0	22.01	0.159	21.97	0.157	21.92	0.156
		25	12	21.93	0.156	21.96	0.157	21.93	0.156
		25	25	21.86	0.153	21.99	0.158	21.95	0.157
		50	0	21.84	0.153	22.05	0.160	21.87	0.154

Band	Bandwidth (㎒)	RB Size	RB Offset	16QAM					
				23017		23095		23173	
				699.7 ㎒		707.5 ㎒		715.3 ㎒	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
12	1.4	1	0	21.91	0.155	21.91	0.155	21.95	0.157
		1	3	**22.07**	**0.161**	22.01	0.159	22.05	0.160
		1	5	22.02	0.159	21.98	0.158	21.98	0.158
		3	0	21.86	0.153	21.84	0.153	21.92	0.156
		3	2	21.90	0.155	21.93	0.156	21.93	0.156
		3	3	21.92	0.156	21.94	0.156	21.92	0.156
		6	0	20.91	0.123	20.88	0.122	20.84	0.121
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**23025**		**23095**		**23165**	
				700.5 ㎒		**707.5 ㎒**		**714.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	3	1	0	22.00	0.158	21.99	0.158	**22.09**	**0.162**
		1	8	22.03	0.160	22.05	0.160	22.02	0.159
		1	14	22.04	0.160	21.90	0.155	22.01	0.159
		8	0	20.98	0.125	20.90	0.123	20.95	0.124
		8	4	20.97	0.125	20.93	0.124	20.93	0.124
		8	7	20.97	0.125	20.90	0.123	20.94	0.124
		15	0	20.97	0.125	20.85	0.122	20.96	0.125
12/17	**Bandwidth (㎒)**	**RB Size**	**RB Offset**	**23035**		**23095**		**23155**	
				701.5 ㎒		**707.5 ㎒**		**713.5 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	5	1	0	21.99	0.158	22.02	0.159	21.99	0.158
		1	12	22.09	0.162	22.11	0.163	**22.15**	**0.164**
		1	24	22.05	0.160	21.97	0.157	22.06	0.161
		12	0	20.95	0.124	20.97	0.125	20.93	0.124
		12	7	20.96	0.125	20.96	0.125	20.89	0.123
		12	13	20.90	0.123	20.96	0.125	20.89	0.123
		25	0	20.96	0.125	20.96	0.125	20.95	0.124
	Bandwidth (㎒)	**RB Size**	**RB Offset**	**23060**		**23095**		**23130**	
				704.0 ㎒		**707.5 ㎒**		**711.0 ㎒**	
				(dB m)	**(W)**	**(dB m)**	**(W)**	**(dB m)**	**(W)**
	10	1	0	22.06	0.161	**22.14**	**0.164**	22.06	0.161
		1	25	22.13	0.163	22.14	0.164	22.04	0.160
		1	49	22.02	0.159	22.06	0.161	22.12	0.163
		25	0	21.01	0.126	21.02	0.126	20.96	0.125
		25	12	20.96	0.125	21.03	0.127	20.98	0.125
		25	25	20.87	0.122	21.02	0.126	20.96	0.125
		50	0	20.92	0.124	21.05	0.127	20.89	0.123

Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK					
				131979		132322		132665	
				1 710.7 MHz		1 745.0 MHz		1 779.3 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
66/4	1.4	1	0	22.94	0.197	22.87	0.194	22.85	0.193
		1	3	**22.98**	**0.199**	22.91	0.195	22.93	0.196
		1	5	22.93	0.196	22.85	0.193	22.87	0.194
		3	0	22.95	0.197	22.83	0.192	22.88	0.194
		3	2	22.91	0.195	22.84	0.192	22.90	0.195
		3	3	22.93	0.196	22.82	0.191	22.89	0.195
		6	0	21.90	0.155	21.80	0.151	21.88	0.154
	Bandwidth (MHz)	RB Size	RB Offset	131987		132322		132657	
				1 711.5 MHz		1 745.0 MHz		1 778.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	3	1	0	**23.01**	**0.200**	22.82	0.191	22.94	0.197
		1	8	22.97	0.198	22.81	0.191	22.93	0.196
		1	14	22.99	0.199	22.82	0.191	22.90	0.195
		8	0	21.99	0.158	21.89	0.155	21.94	0.156
		8	4	22.02	0.159	21.90	0.155	21.93	0.156
		8	7	22.01	0.159	21.87	0.154	21.91	0.155
		15	0	22.00	0.158	21.89	0.155	21.94	0.156
	Bandwidth (MHz)	RB Size	RB Offset	131997		132322		132647	
				1 712.5 MHz		1 745.0 MHz		1 777.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	5	1	0	23.04	0.201	22.90	0.195	**23.07**	**0.203**
		1	12	23.05	0.202	23.01	0.200	23.01	0.200
		1	24	22.92	0.196	22.89	0.195	22.95	0.197
		12	0	22.04	0.160	21.89	0.155	22.02	0.159
		12	7	22.06	0.161	21.90	0.155	22.05	0.160
		12	13	22.03	0.160	21.87	0.154	21.93	0.156
		25	0	22.03	0.160	21.89	0.155	21.96	0.157
	Bandwidth (MHz)	RB Size	RB Offset	132022		132322		132622	
				1 715.0 MHz		1 745.0 MHz		1 775.0 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	10	1	0	**23.08**	**0.203**	23.03	0.201	22.99	0.199
		1	25	22.93	0.196	22.96	0.198	23.01	0.200
		1	49	22.94	0.197	23.00	0.200	22.93	0.196
		25	0	22.08	0.161	22.03	0.160	22.08	0.161
		25	12	22.02	0.159	22.02	0.159	22.02	0.159
		25	25	21.98	0.158	22.01	0.159	21.96	0.157
		50	0	21.98	0.158	22.03	0.160	22.09	0.162
	Bandwidth (MHz)	RB Size	RB Offset	132047		132322		132597	
				1 717.5 MHz		1 745.0 MHz		1 772.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	15	1	0	**23.16**	**0.207**	23.07	0.203	23.11	0.205
		1	37	22.97	0.198	22.96	0.198	23.03	0.201
		1	74	23.05	0.202	23.04	0.201	22.97	0.198
		36	0	22.13	0.163	22.04	0.160	22.00	0.158
		36	20	22.05	0.160	22.03	0.160	22.03	0.160
		36	39	22.01	0.159	22.01	0.159	22.03	0.160
		75	0	22.01	0.159	21.98	0.158	22.00	0.158
	Bandwidth (MHz)	RB Size	RB Offset	132072		132322		132572	
				1 720.0 MHz		1 745.0 MHz		1 770.0 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	20	1	0	**23.20**	**0.209**	23.10	0.204	23.10	0.204
		1	50	22.97	0.198	22.95	0.197	22.90	0.195
		1	99	22.98	0.199	23.00	0.200	23.00	0.200
		50	0	22.09	0.162	22.07	0.161	22.07	0.161
		50	25	22.01	0.159	22.06	0.161	22.09	0.162
		50	50	22.04	0.160	22.02	0.159	22.08	0.161
		100	0	22.05	0.160	22.07	0.161	22.03	0.160

Band	Bandwidth (MHz)	RB Size	RB Offset	16QAM					
				131979		132322		132665	
				1 710.7 MHz		1 745.0 MHz		1 779.3 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
66/4	1.4	1	0	22.03	0.160	21.97	0.157	22.01	0.159
		1	3	**22.07**	**0.161**	22.04	0.160	21.99	0.158
		1	5	22.00	0.158	21.98	0.158	21.98	0.158
		3	0	22.02	0.159	21.90	0.155	21.95	0.157
		3	2	22.01	0.159	21.92	0.156	21.99	0.158
		3	3	22.02	0.159	21.90	0.155	22.01	0.159
		6	0	20.93	0.124	20.88	0.122	20.92	0.124
	Bandwidth (MHz)	RB Size	RB Offset	131987		132322		132657	
				1 711.5 MHz		1 745.0 MHz		1 778.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	3	1	0	22.13	0.163	21.96	0.157	22.04	0.160
		1	8	**22.14**	**0.164**	22.02	0.159	22.06	0.161
		1	14	22.12	0.163	21.96	0.157	22.02	0.159
		8	0	21.03	0.127	20.92	0.124	20.98	0.125
		8	4	21.04	0.127	20.92	0.124	20.99	0.126
		8	7	21.03	0.127	20.91	0.123	20.98	0.125
		15	0	21.04	0.127	20.91	0.123	20.96	0.125
	Bandwidth (MHz)	RB Size	RB Offset	131997		132322		132647	
				1 712.5 MHz		1 745.0 MHz		1 777.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	5	1	0	**22.24**	**0.167**	22.01	0.159	22.12	0.163
		1	12	22.15	0.164	21.98	0.158	22.15	0.164
		1	24	22.09	0.162	22.00	0.158	22.05	0.160
		12	0	21.02	0.126	20.90	0.123	21.09	0.129
		12	7	21.04	0.127	20.92	0.124	21.05	0.127
		12	13	21.02	0.126	20.90	0.123	20.98	0.125
		25	0	21.07	0.128	20.93	0.124	20.99	0.126
	Bandwidth (MHz)	RB Size	RB Offset	132022		132322		132622	
				1 715.0 MHz		1 745.0 MHz		1 775.0 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	10	1	0	**22.28**	**0.169**	22.13	0.163	22.16	0.164
		1	25	22.03	0.160	22.06	0.161	22.23	0.167
		1	49	22.07	0.161	22.03	0.160	22.07	0.161
		25	0	21.12	0.129	20.94	0.124	21.13	0.130
		25	12	21.06	0.128	20.96	0.125	21.02	0.126
		25	25	20.97	0.125	20.99	0.126	20.98	0.125
		50	0	21.01	0.126	21.03	0.127	21.10	0.129
	Bandwidth (MHz)	RB Size	RB Offset	132047		132322		132597	
				1 717.5 MHz		1 745.0 MHz		1 772.5 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	15	1	0	**22.28**	**0.169**	22.19	0.166	22.18	0.165
		1	37	22.14	0.164	22.08	0.161	22.19	0.166
		1	74	22.13	0.163	22.05	0.160	22.10	0.162
		36	0	21.15	0.130	21.07	0.128	21.04	0.127
		36	20	21.08	0.128	21.06	0.128	21.05	0.127
		36	39	21.03	0.127	21.02	0.126	21.09	0.129
		75	0	21.05	0.127	21.03	0.127	21.05	0.127
	Bandwidth (MHz)	RB Size	RB Offset	132072		132322		132572	
				1 720.0 MHz		1 745.0 MHz		1 770.0 MHz	
				(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
	20	1	0	**22.29**	**0.169**	22.23	0.167	22.17	0.165
		1	50	22.05	0.160	22.08	0.161	21.90	0.155
		1	99	22.03	0.160	22.18	0.165	21.96	0.157
		50	0	21.09	0.129	21.08	0.128	21.05	0.127
		50	25	21.04	0.127	21.06	0.128	21.07	0.128
		50	50	21.07	0.128	21.03	0.127	21.10	0.129
		100	0	21.08	0.128	21.07	0.128	21.17	0.131

4. Occupied Bandwidth

4.1. Limit

CFR 47, Section FCC §2.1049 and IC RSS-Gen Issue 5 6.7.

4.2. Test Procedure

FCC

The test follows section 5.4.4 of ANSI C63.26-2015.

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).

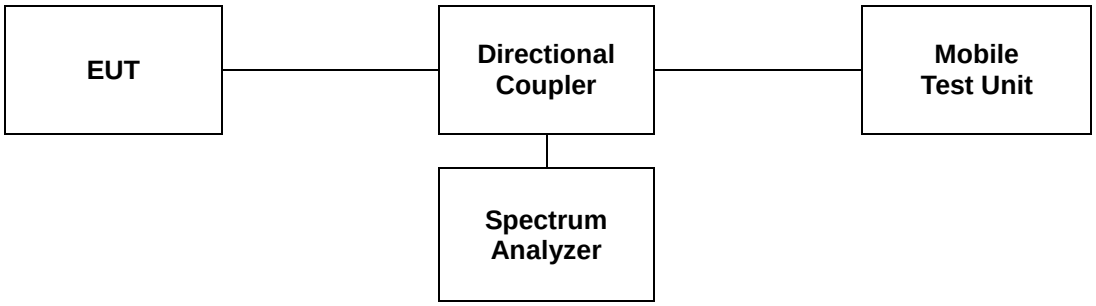
IC

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

• The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
• The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
• The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
• The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99 % emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99 % emission bandwidth).



4.3 Test Results

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

Band	Bandwidth (㎒)	Frequency (㎒)	Occupied Bandwidth (㎒)	
			QPSK	16QAM
2	1.4	1 850.7	1.094	1.094
		1 880.0	1.090	1.090
		1 909.3	1.094	1.094
	3	1 851.5	2.692	2.692
		1 880.0	2.692	2.683
		1 908.5	2.683	2.683
	5	1 852.5	4.515	4.501
		1 880.0	4.515	4.486
		1 907.5	4.501	4.501
	10	1 855.0	8.973	8.973
		1 880.0	8.944	8.915
		1 905.0	8.915	8.944
	15	1 857.5	13.502	13.502
		1 880.0	13.415	13.415
		1 902.5	13.459	13.415
	20	1 860.0	17.945	17.945
		1 880.0	17.757	17.800
		1 900.0	17.887	17.887

Band	Bandwidth (㎒)	Frequency (㎒)	Occupied Bandwidth (㎒)	
			QPSK	16QAM
5	1.4	824.7	1.094	1.090
		836.5	1.090	1.098
		848.3	1.094	1.094
	3	825.5	2.692	2.683
		836.5	2.692	2.692
		847.5	2.683	2.683
	5	826.5	4.501	4.515
		836.5	4.486	4.501
		846.5	4.515	4.530
	10	829.0	8.944	8.944
		836.5	8.944	8.944
		844.0	8.973	8.944

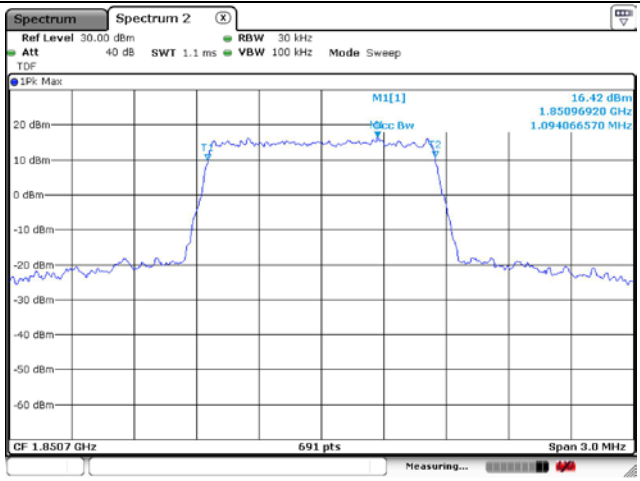
Band	Bandwidth (㎒)	Frequency (㎒)	Occupied Bandwidth (㎒)	
			QPSK	16QAM
7	5	2 502.5	4.501	4.501
		2 535.0	4.530	4.515
		2 567.5	4.515	4.515
	10	2 505.0	8.944	8.944
		2 535.0	8.973	8.973
		2 565.0	8.944	8.944
	15	2 507.5	13.502	13.502
		2 535.0	13.502	13.502
		2 562.5	13.502	13.546
	20	2 510.0	17.945	17.887
		2 535.0	17.887	17.887
		2 560.0	17.887	17.945

Band	Bandwidth (㎒)	Frequency (㎒)	Occupied Bandwidth (㎒)	
			QPSK	16QAM
12/17	1.4	699.7	1.103	1.098
		707.5	1.094	1.094
		715.3	1.094	1.103
	3	700.5	2.683	2.692
		707.5	2.692	2.692
		714.5	2.692	2.692
	5	701.5	4.515	4.515
		707.5	4.515	4.501
		713.5	4.515	4.530
	10	704.0	8.973	8.973
		707.5	8.973	8.973
		711.0	8.973	8.944

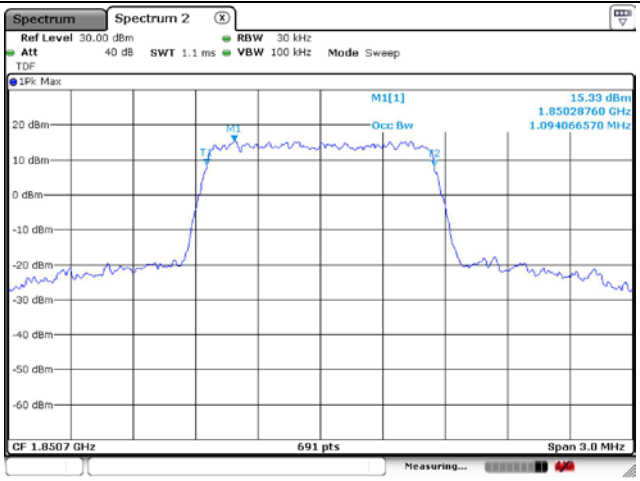
Band	Bandwidth (㎒)	Frequency (㎒)	Occupied Bandwidth (㎒)	
			QPSK	16QAM
66/4	1.4	1 710.7	1.098	1.094
		1 745.0	1.098	1.094
		1 779.3	1.098	1.098
	3	1 711.5	2.692	2.692
		1 745.0	2.692	2.692
		1 778.5	2.700	2.692
	5	1 712.5	4.515	4.515
		1 745.0	4.515	4.515
		1 777.5	4.515	4.515
	10	1 715.0	8.944	8.944
		1 745.0	8.973	8.973
		1 775.0	8.973	8.944
	15	1 717.5	13.502	13.502
		1 745.0	13.546	13.546
		1 772.5	13.502	13.459
	20	1 720.0	17.887	17.887
		1 745.0	17.945	18.003
		1 770.0	17.887	17.829

- Test plots

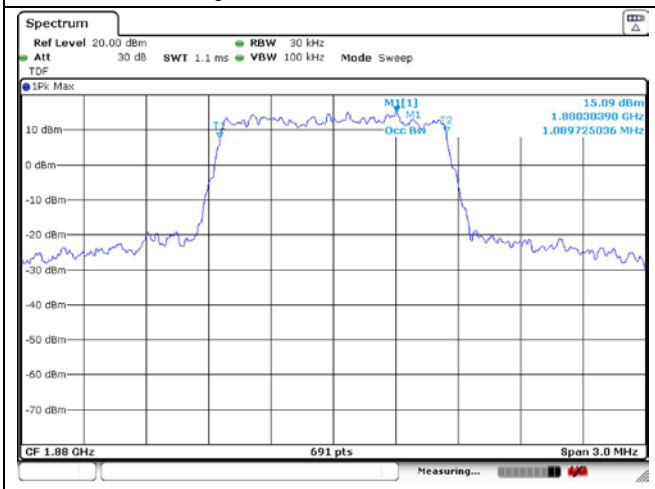
LTE band 2



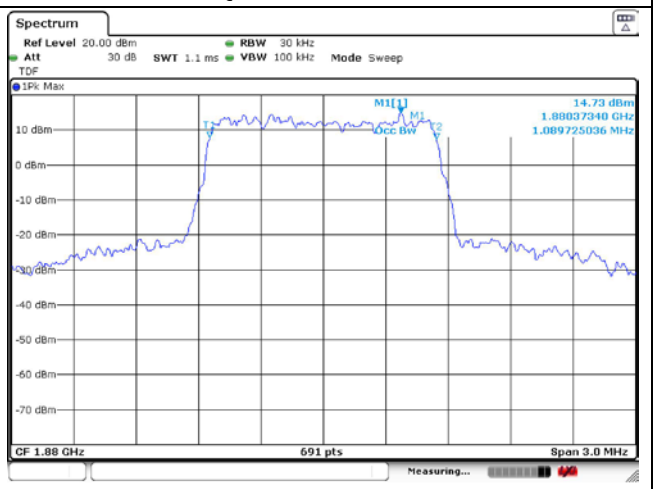
1.4 ㎒ QPSK Low Channel - Full RB



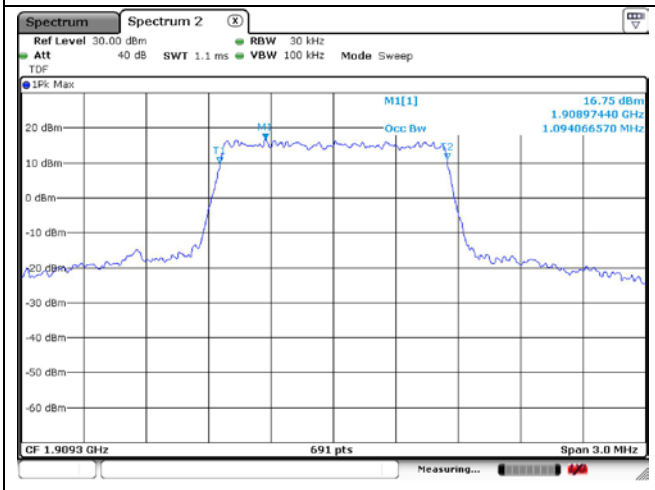
1.4 ㎒ 16QAM Low Channel - Full RB



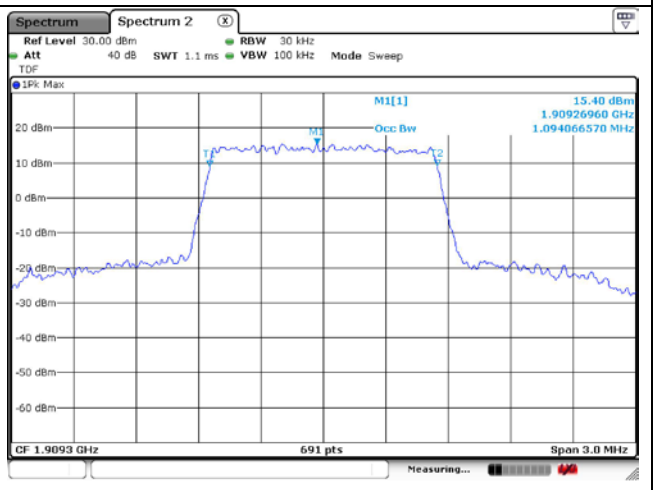
1.4 ㎒ QPSK Middle Channel - Full RB



1.4 ㎒ 16QAM Middle Channel - Full RB

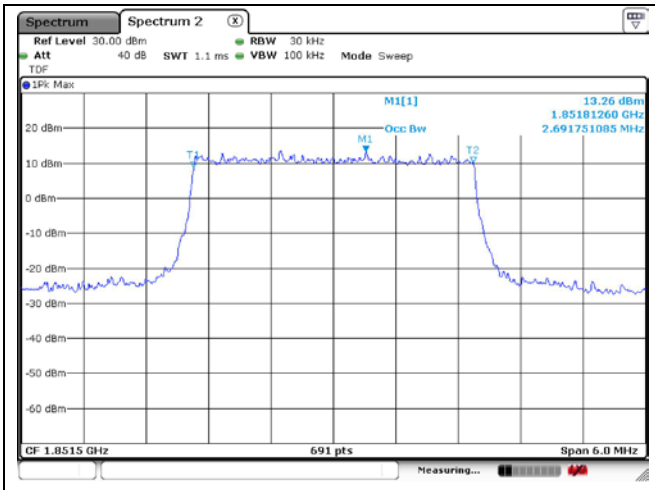


1.4 ㎒ QPSK High Channel - Full RB

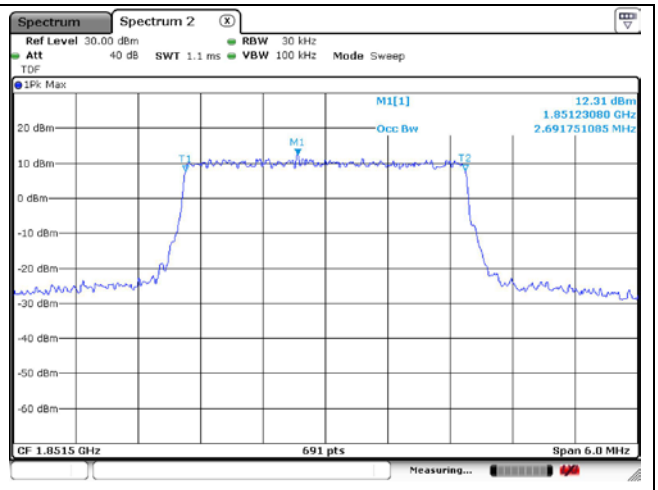


1.4 ㎒ 16QAM High Channel - Full RB

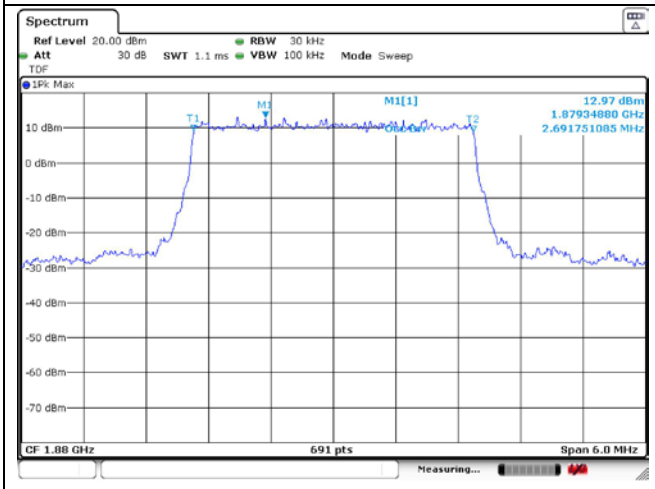
LTE band 2



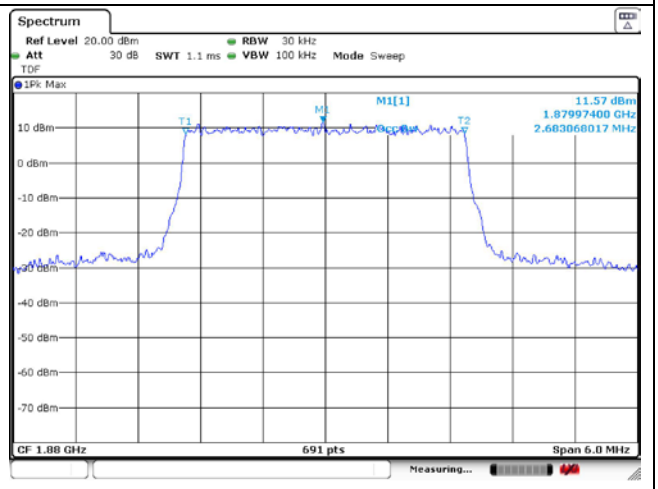
3 ㎒ QPSK Low Channel - Full RB



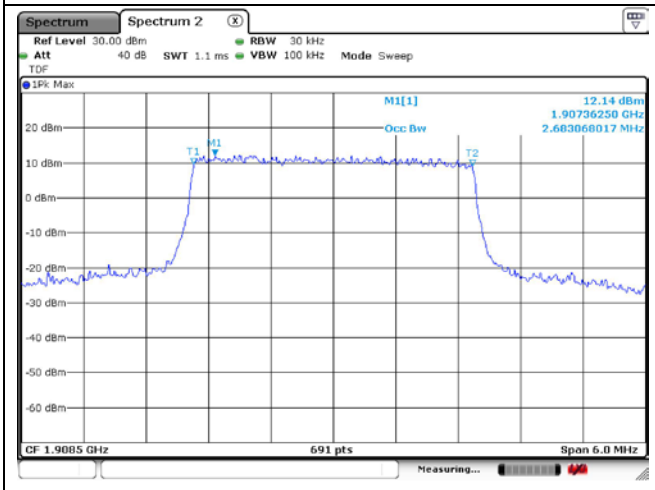
3 ㎒ 16QAM Low Channel - Full RB



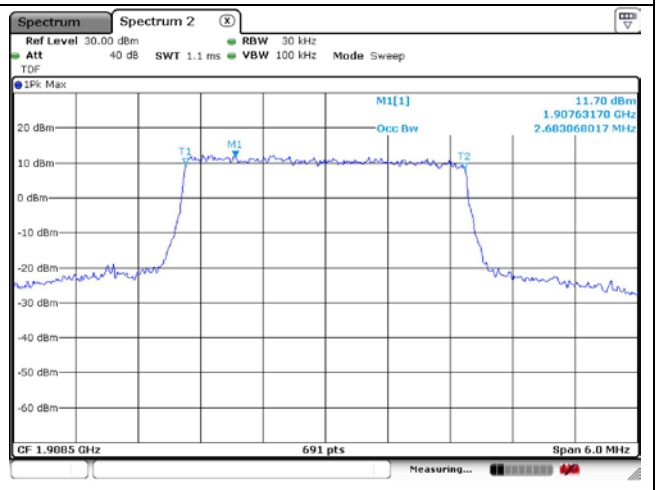
3 ㎒ QPSK Middle Channel - Full RB



3 ㎒ 16QAM Middle Channel - Full RB

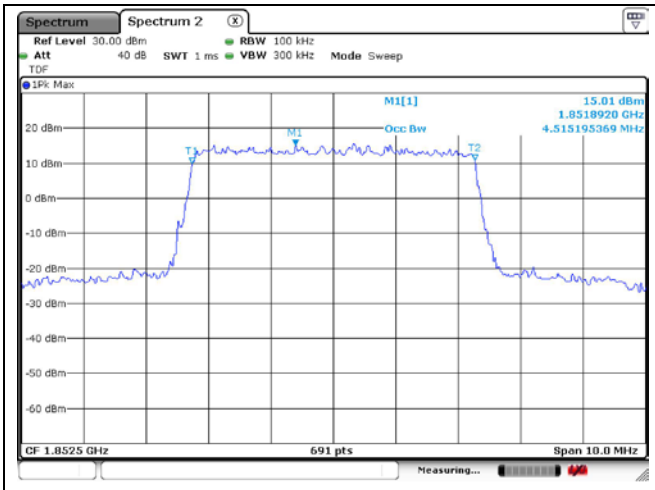


3 ㎒ QPSK High Channel - Full RB

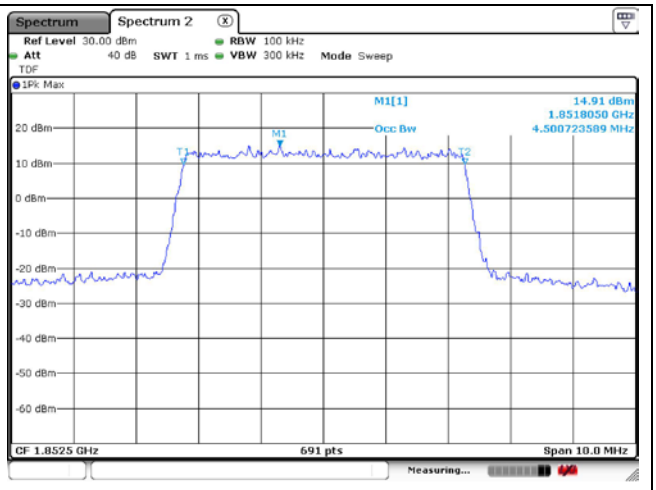


3 ㎒ 16QAM High Channel - Full RB

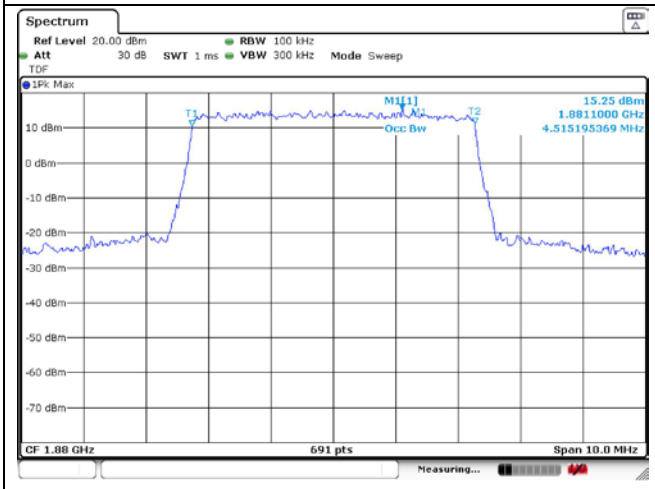
LTE band 2



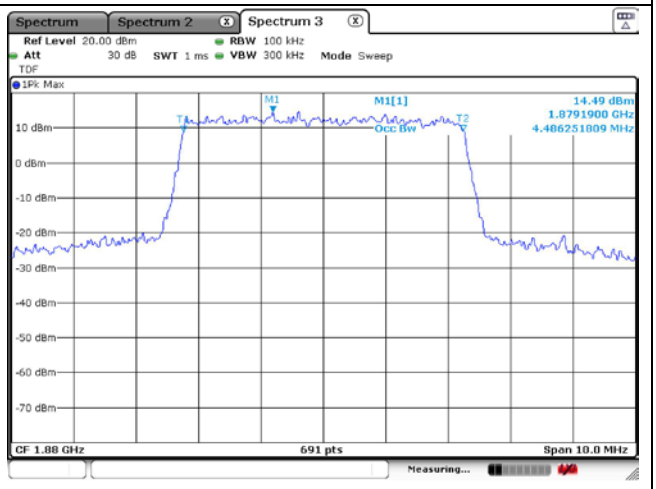
5 ㎒ QPSK Low Channel - Full RB



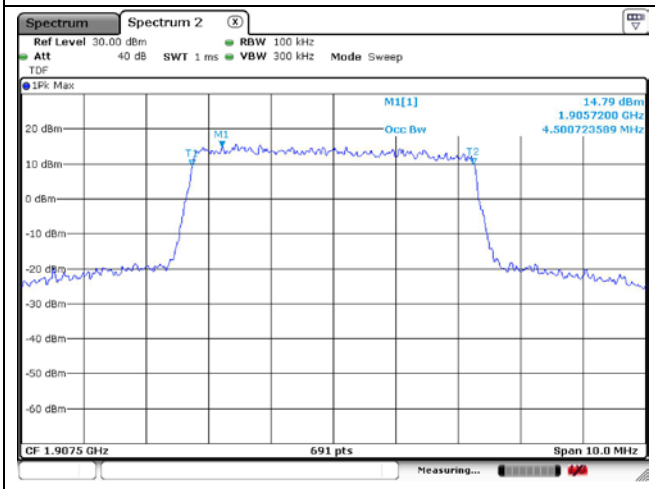
5 ㎒ 16QAM Low Channel - Full RB



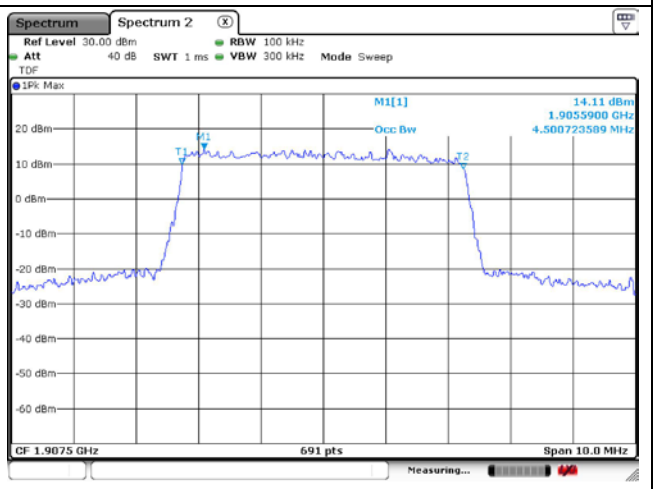
5 ㎒ QPSK Middle Channel - Full RB



5 ㎒ 16QAM Middle Channel - Full RB

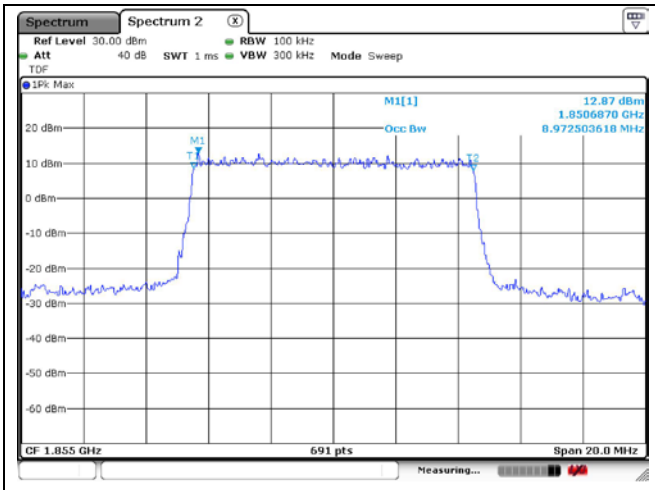


5 ㎒ QPSK High Channel - Full RB

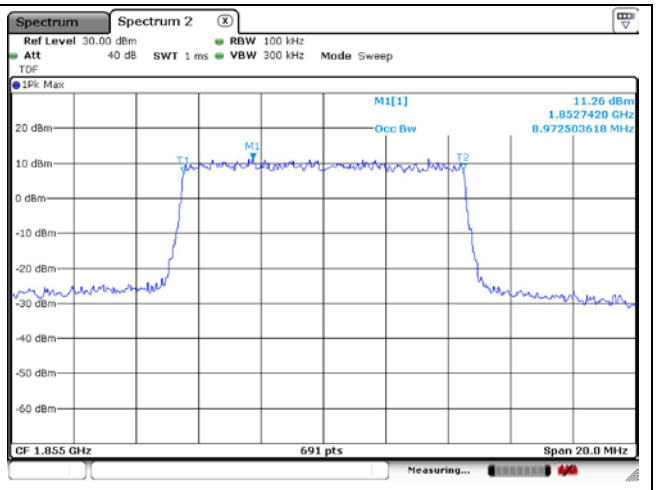


5 ㎒ 16QAM High Channel - Full RB

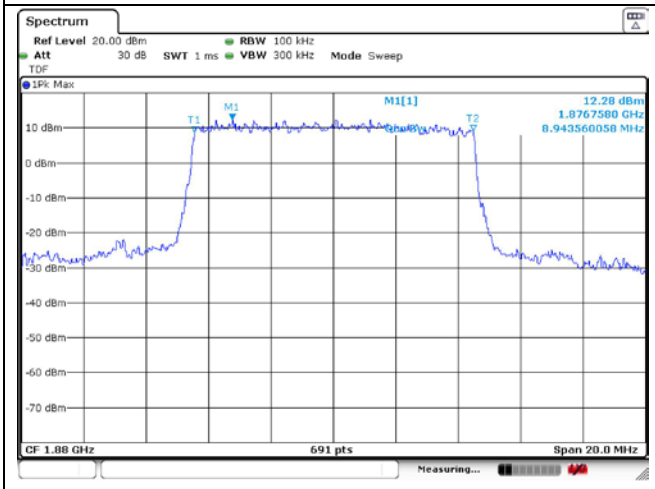
LTE band 2



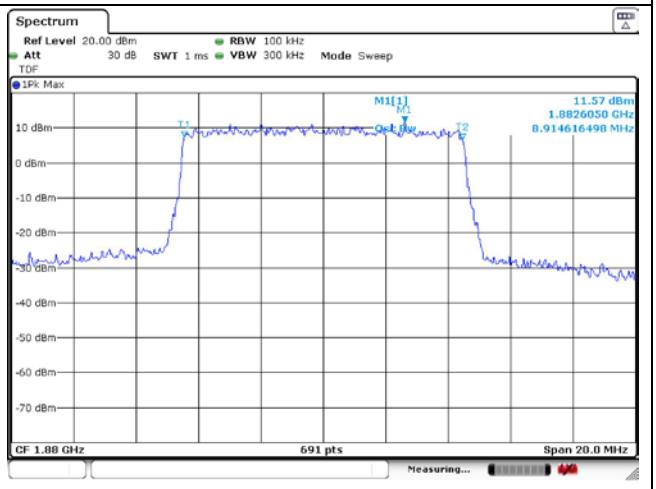
10 ㎒ QPSK Low Channel - Full RB



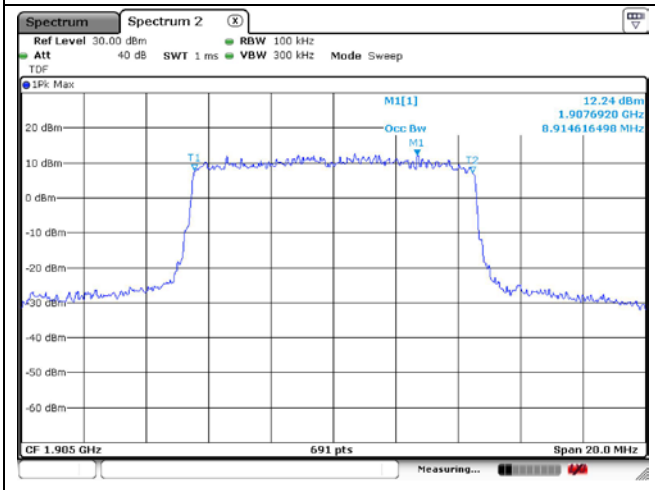
10 ㎒ 16QAM Low Channel - Full RB



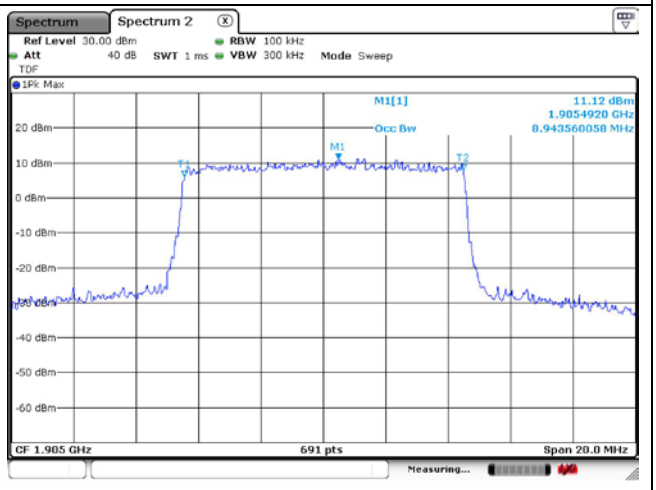
10 ㎒ QPSK Middle Channel - Full RB



10 ㎒ 16QAM Middle Channel - Full RB

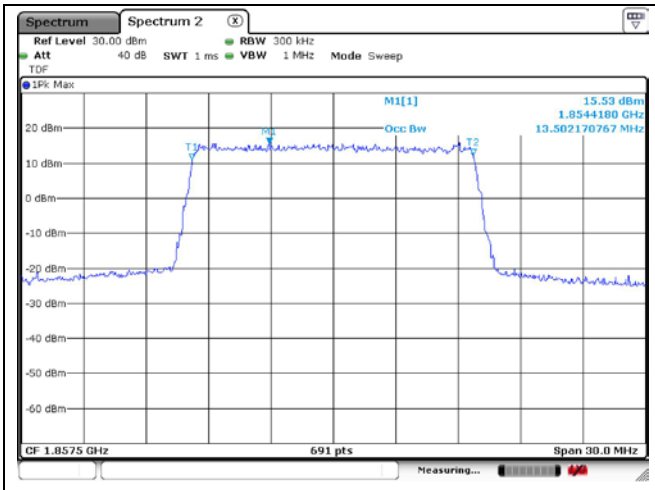


10 ㎒ QPSK High Channel - Full RB

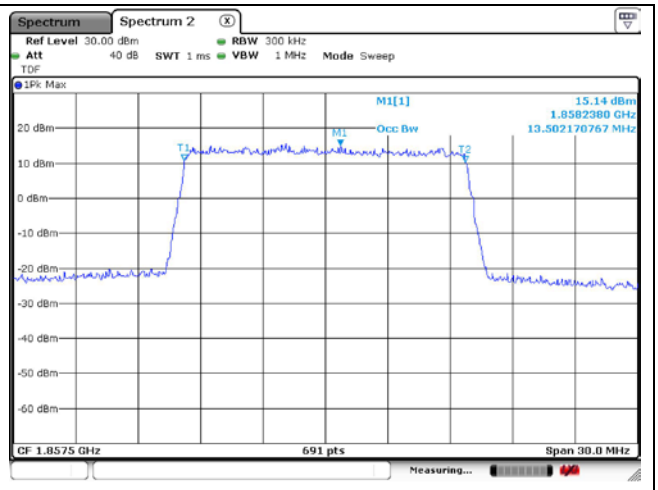


10 ㎒ 16QAM High Channel - Full RB

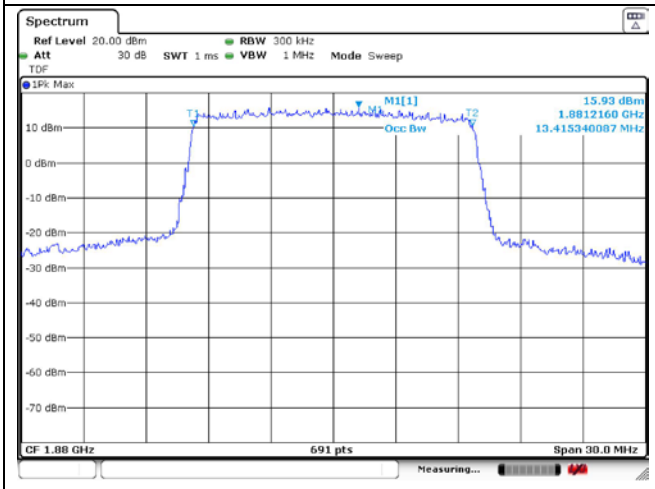
LTE band 2



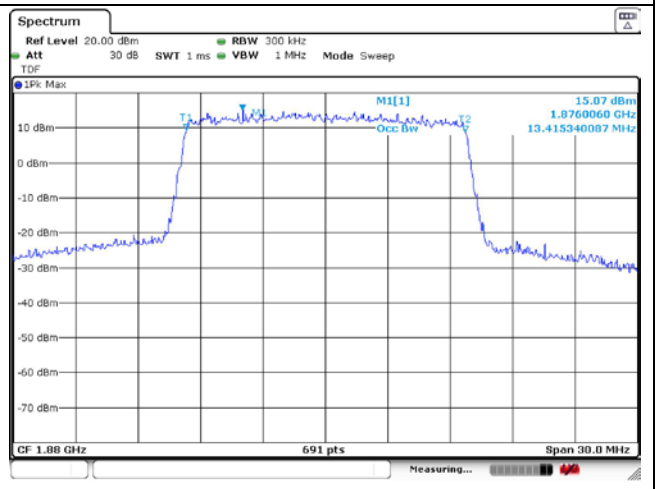
15 ㎒ QPSK Low Channel - Full RB



15 ㎒ 16QAM Low Channel - Full RB



15 ㎒ QPSK Middle Channel - Full RB



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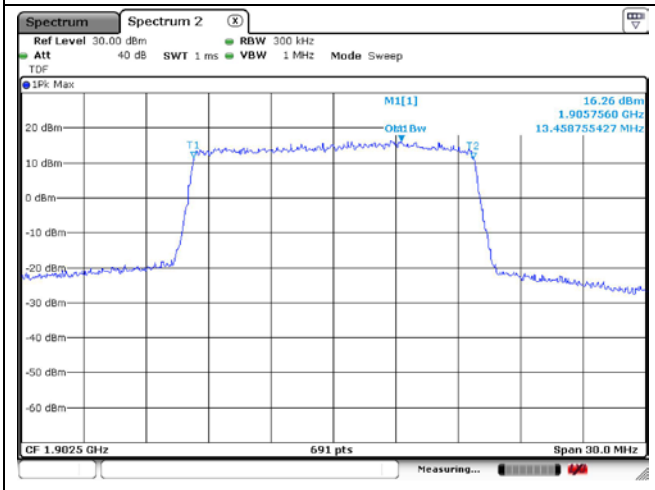
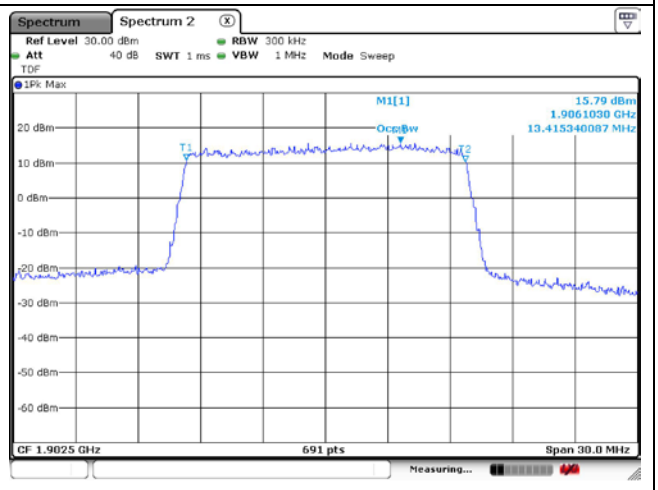
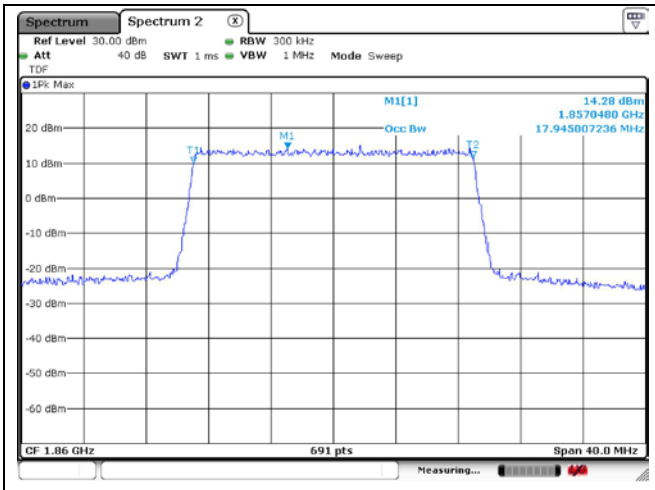


15 ㎒ QPSK High Channel - Full RB

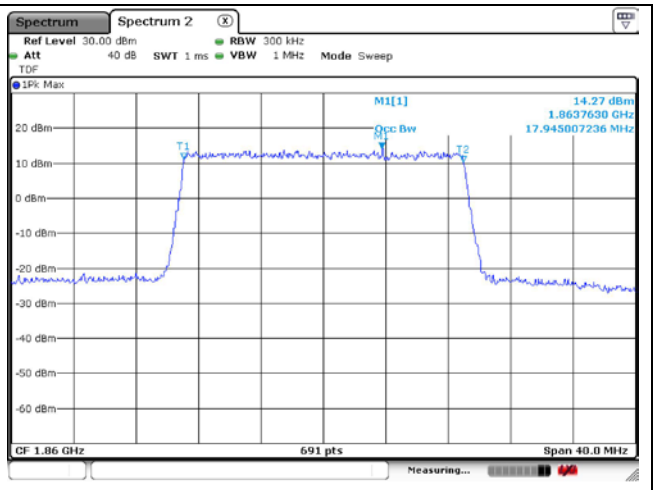


15 ㎒ 16QAM High Channel - Full RB

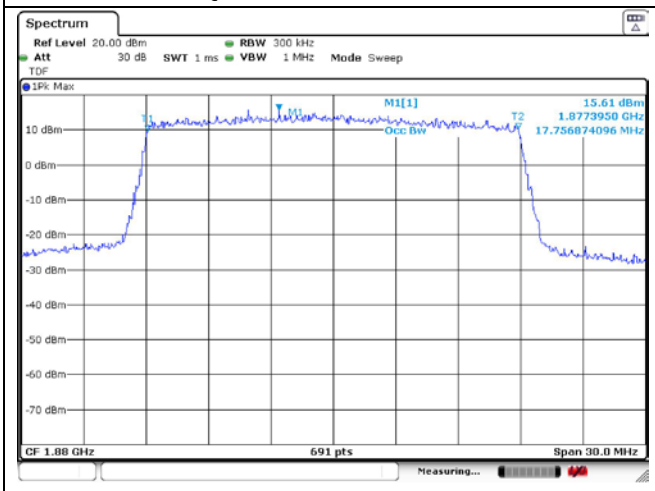
LTE band 2



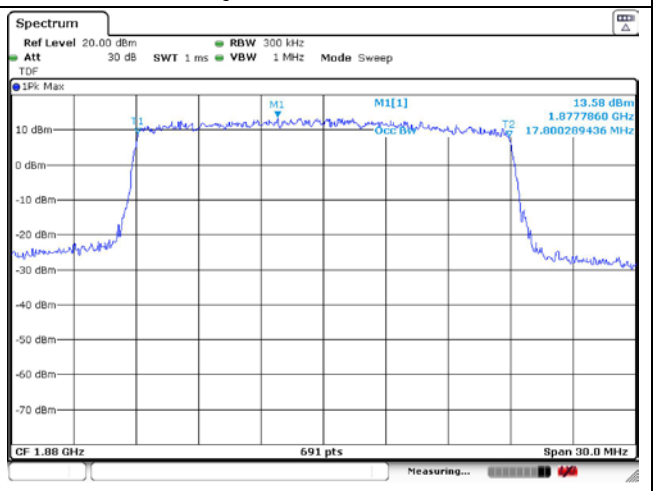
20 ㎒ QPSK Low Channel - Full RB



20 ㎒ 16QAM Low Channel - Full RB



20 ㎒ QPSK Middle Channel - Full RB



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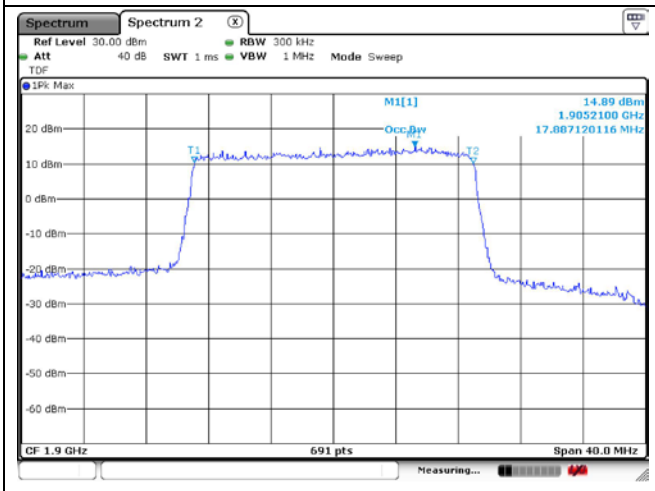
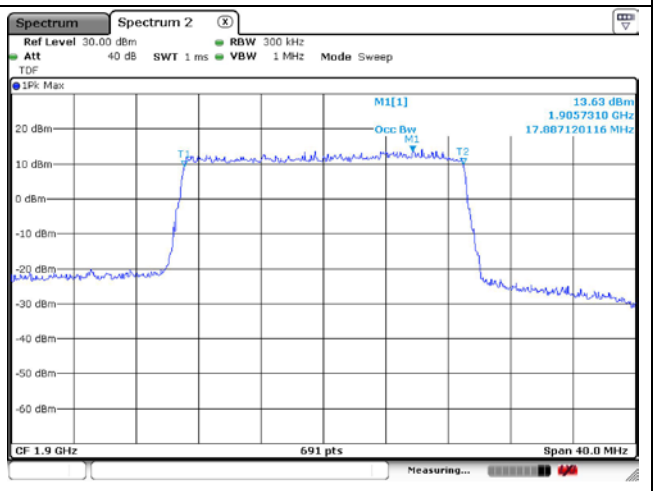
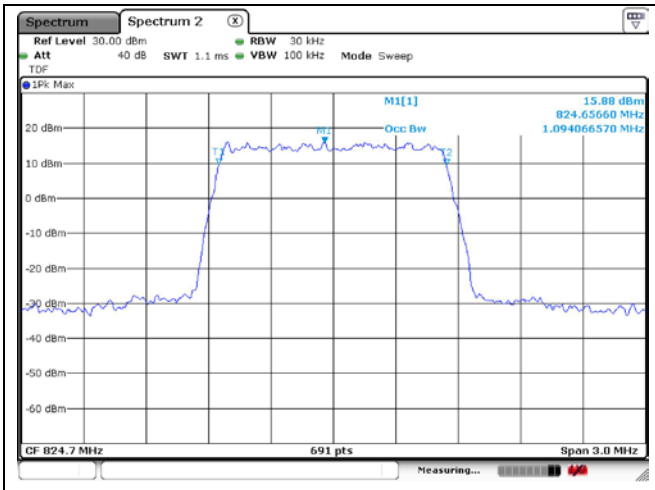


20 ㎒ QPSK High Channel - Full RB

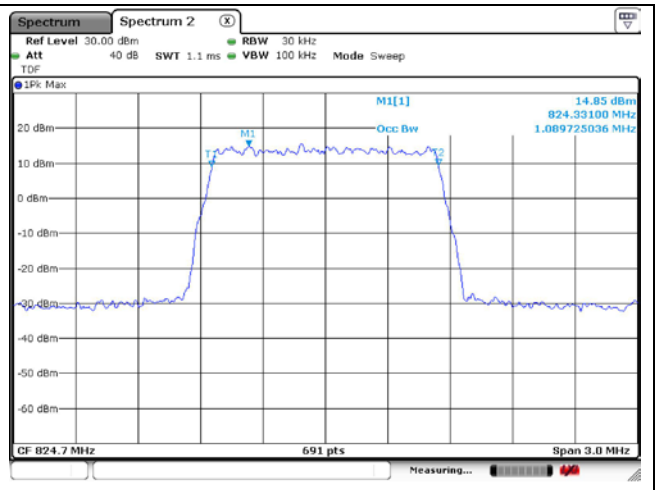


20 ㎒ 16QAM High Channel - Full RB

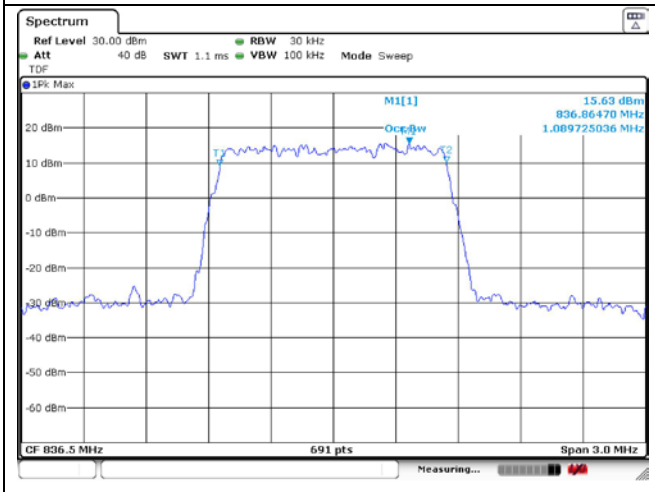
LTE band 5



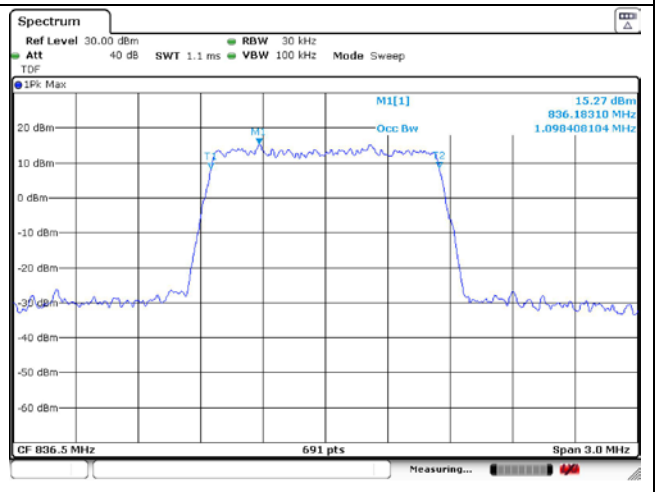
1.4 ㎒ QPSK Low Channel - Full RB



1.4 ㎒ 16QAM Low Channel - Full RB



1.4 ㎒ QPSK Middle Channel - Full RB



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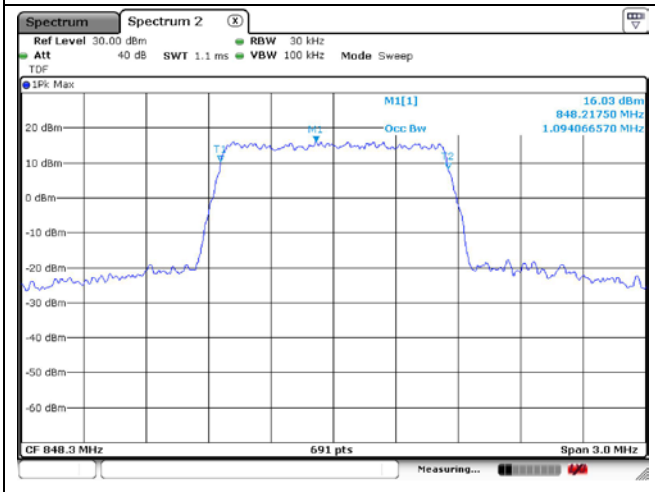
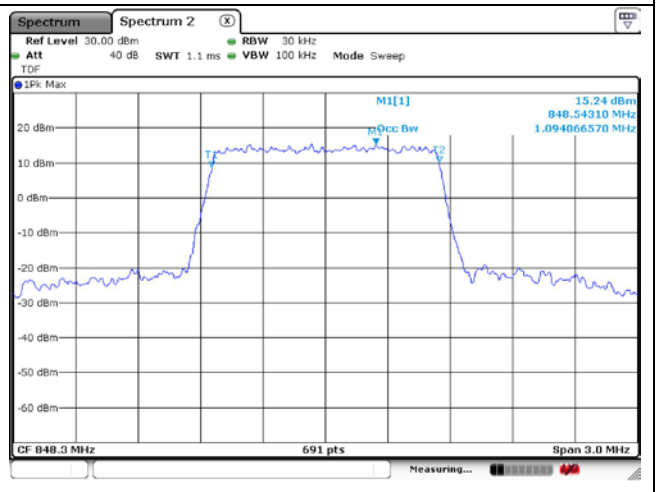
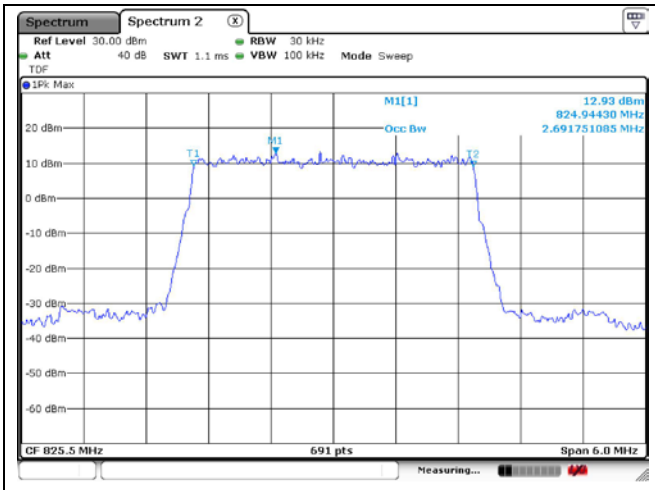


1.4 ㎒ QPSK High Channel - Full RB

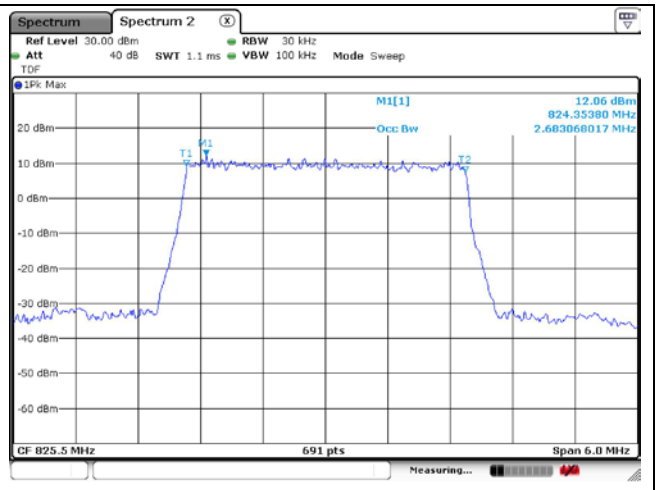


1.4 ㎒ 16QAM High Channel - Full RB

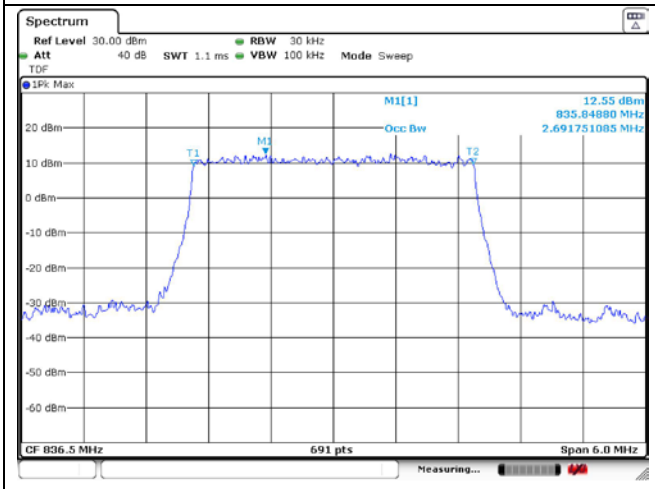
LTE band 5



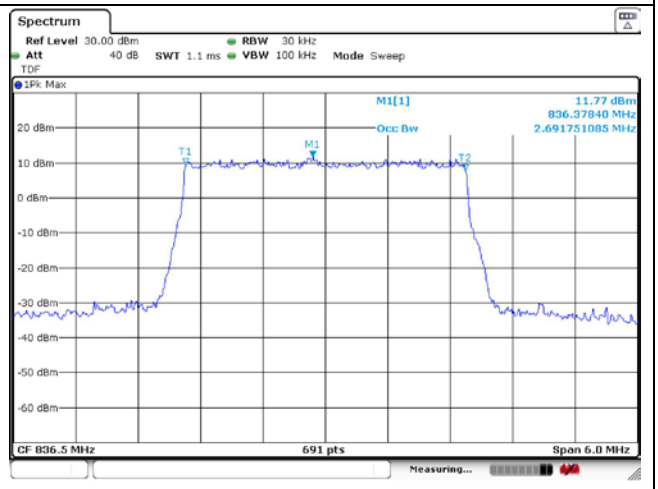
3 ㎒ QPSK Low Channel - Full RB



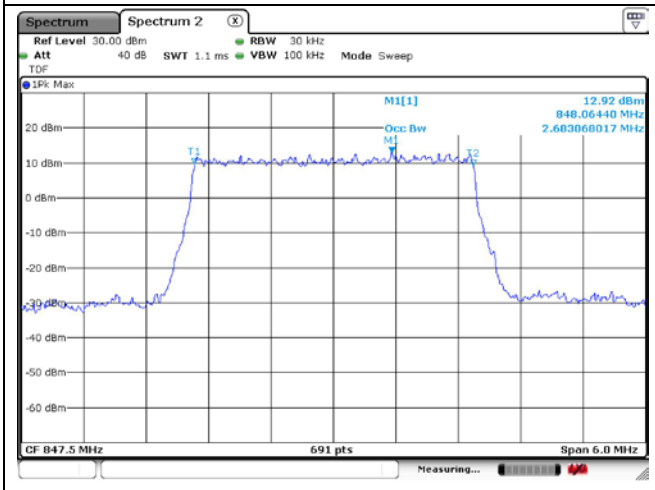
3 ㎒ 16QAM Low Channel - Full RB



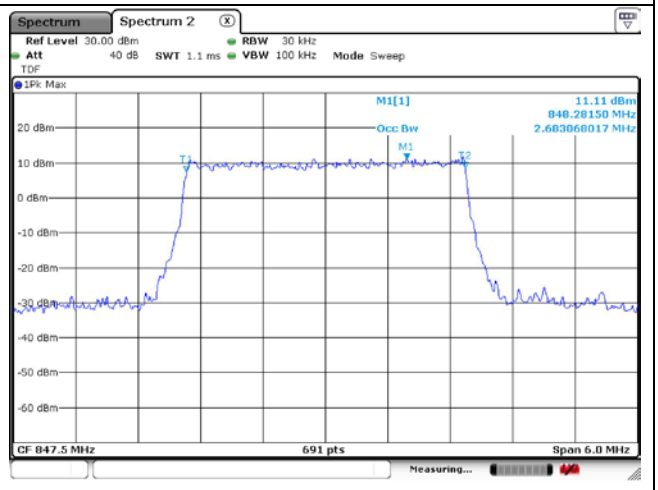
3 ㎒ QPSK Middle Channel - Full RB



3 ㎒ 16QAM Middle Channel - Full RB

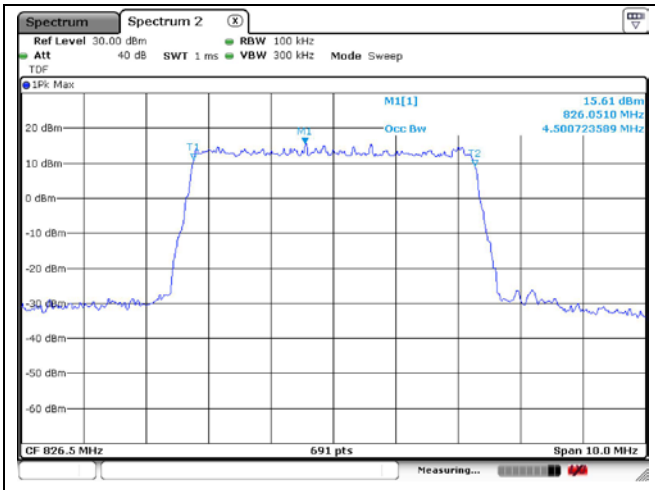


3 ㎒ QPSK High Channel - Full RB

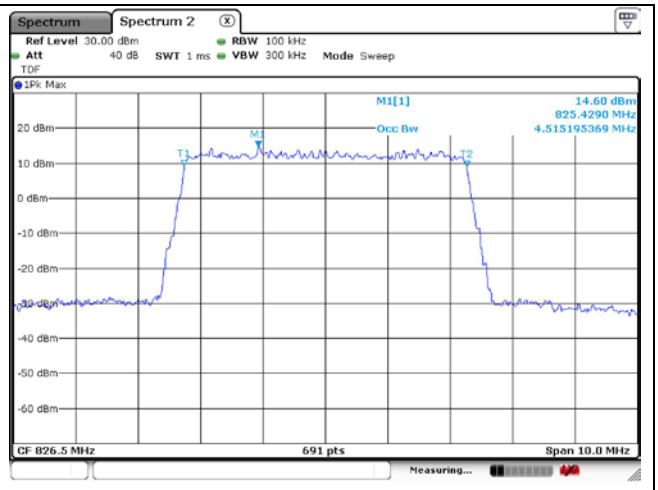


3 ㎒ 16QAM High Channel - Full RB

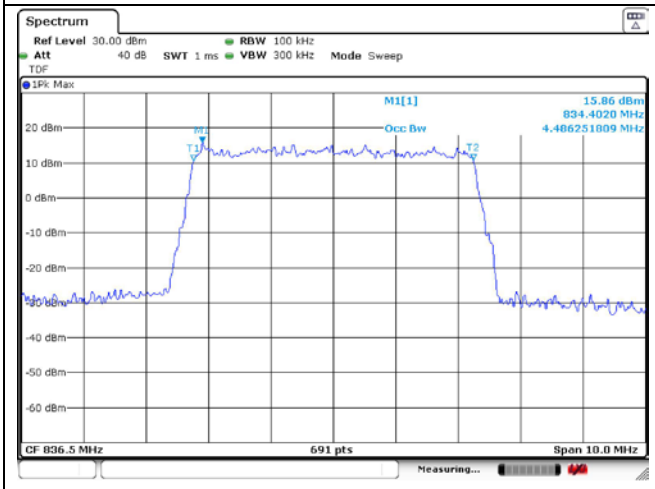
LTE band 5



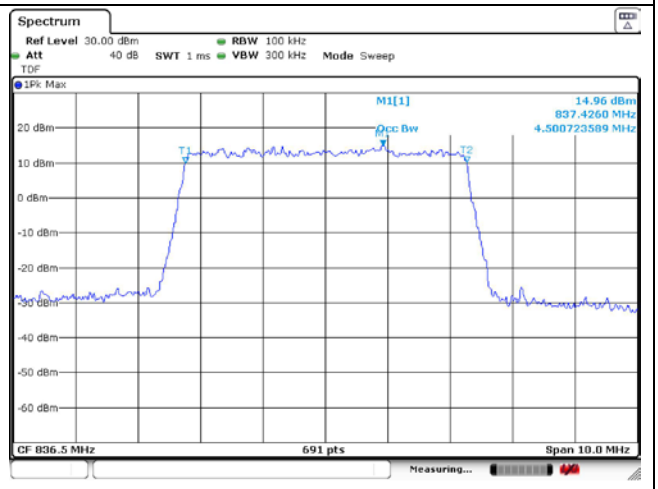
5 ㎒ QPSK Low Channel - Full RB



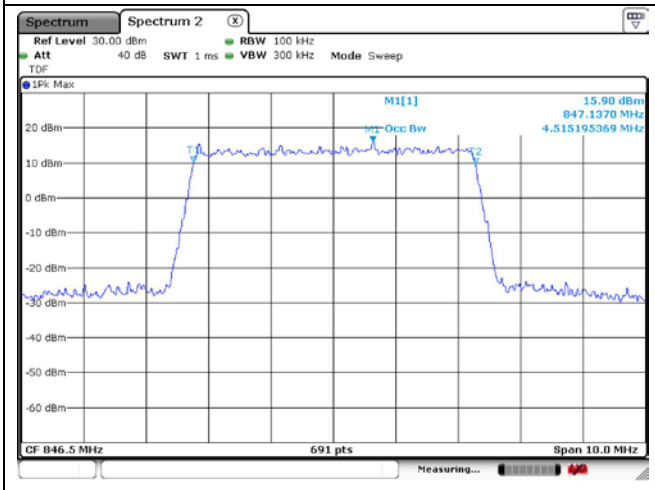
5 ㎒ 16QAM Low Channel - Full RB



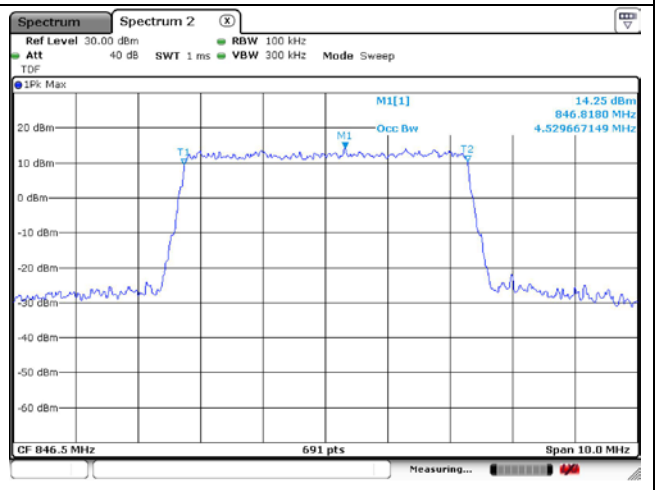
5 ㎒ QPSK Middle Channel - Full RB



5 ㎒ 16QAM Middle Channel - Full RB

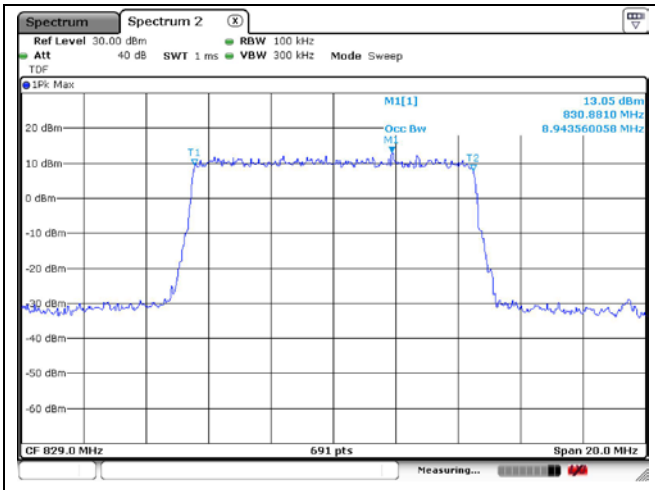


5 ㎒ QPSK High Channel - Full RB

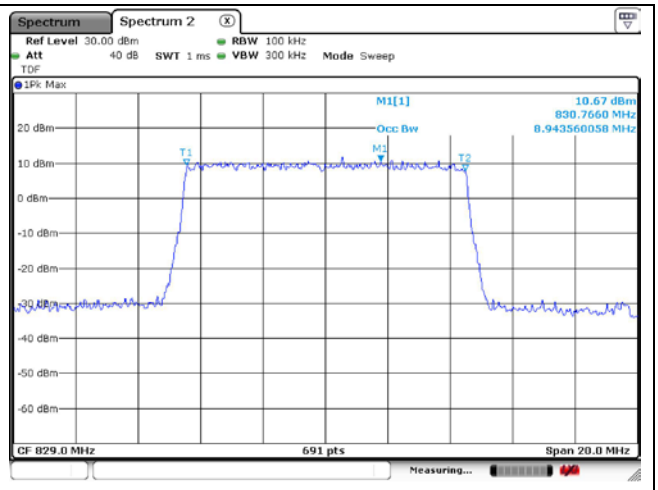


5 ㎒ 16QAM High Channel - Full RB

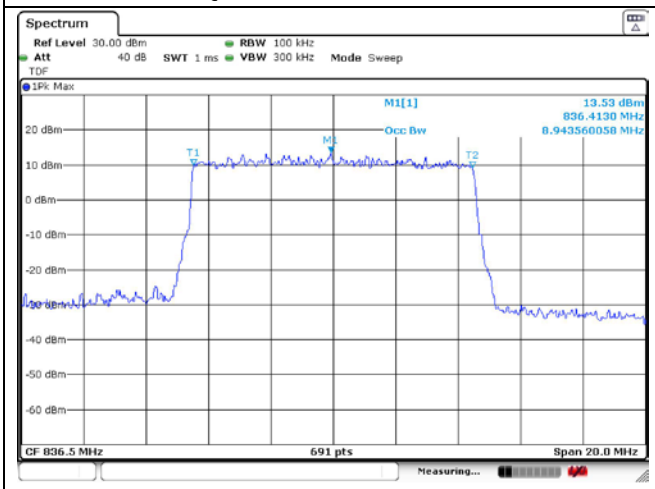
LTE band 5



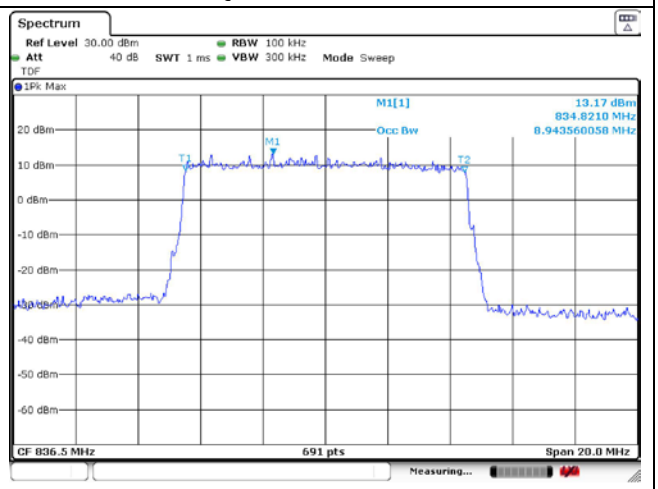
10 ㎒ QPSK Low Channel - Full RB



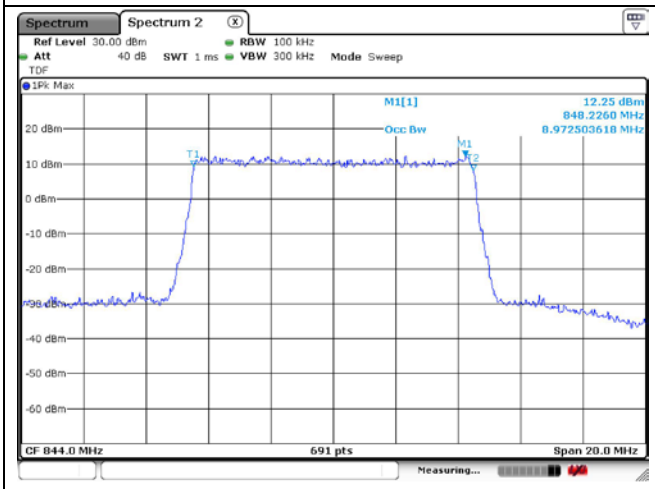
10 ㎒ 16QAM Low Channel - Full RB



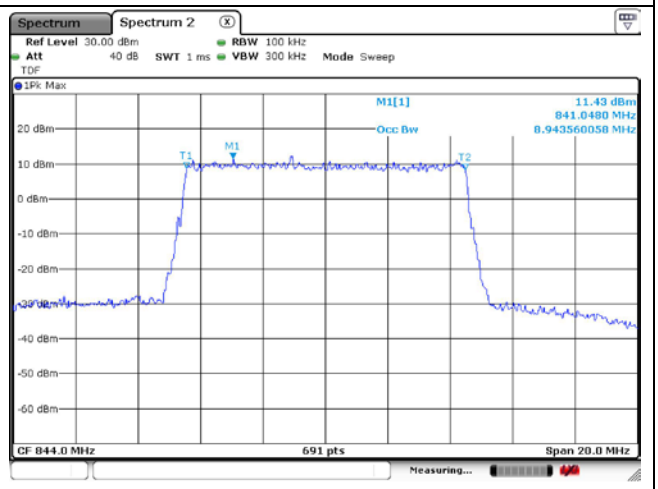
10 ㎒ QPSK Middle Channel - Full RB



10 ㎒ 16QAM Middle Channel - Full RB



10 ㎒ QPSK High Channel - Full RB



10 ㎒ 16QAM High Channel - Full RB