



FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
FCC CFR47 PART 27 SUBPART M
FCC CFR47 PART 27 SUBPART H

WWAN

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Tablet + BT/BLE, DTS/UNII a/b/g/n/ac and ANT+

MODEL NUMBER : SM-T835C

FCC ID: A3LSMT835C

REPORT NUMBER: 4788506351-E6V1

ISSUE DATE: JUL 10, 2018

Prepared for

**SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA**

Prepared by

UL Korea, Ltd.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory

**218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea**

TEL: (031) 337-9902

FAX: (031) 213-5433



ACCREDITED*

Testing
Laboratory

TL-637

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	07/10/18	Initial issue	Hoonpyo Lee

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY.....	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	10
5.4. WORST-CASE ORIENTATION	11
5.5. DESCRIPTION OF TEST SETUP.....	12
6. TEST AND MEASUREMENT EQUIPMENT	14
7. Summary Table	15
8. PEAK TO AVERAGE RATIO	17
8.1. CONDUCTED PEAK TO AVERAGE RESULT.....	17
8.2. CONDUCTED PEAK TO AVERAGE PLOTS.....	19
9. LIMITS AND CONDUCTED RESULTS	24
9.1. OCCUPIED BANDWIDTH	24
9.1.1. OCCUPIED BANDWIDTH RESULTS	24
9.1.2. OCCUPIED BANDWIDTH PLOTS.....	29
9.2. BAND EDGE EMISSIONS.....	45
9.2.1. BAND EDGE PLOTS.....	50
9.2.2. EMISSION MASK PLOTS.....	60
9.3. OUT OF BAND EMISSIONS.....	64
9.3.1. OUT OF BAND EMISSIONS PLOTS.....	69
9.4. FREQUENCY STABILITY.....	85
9.4.1. FREQUENCY STABILITY RESULTS	86
10. RADIATED TEST RESULTS	90
10.1. RADIATED POWER (ERP & EIRP).....	90
10.1.1. ERP/EIRP Results.....	91
10.1.2. ERP/EIRP DATA.....	96

10.2.	<i>FIELD STRENGTH OF SPURIOUS RADIATION</i>	112
10.2.1.	SPURIOUS RADIATION PLOTS.....	113
11.	SETUP PHOTOS	140

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM/WCDMA/LTE Tablet + BT/BLE, DTS/UNII a/b/g/n/ac and ANT
MODEL NUMBER: SM-T835C
SERIAL NUMBER: R22K4004NBT (RADIATED);
R22K4004VWT (CONDUCTED);
DATE TESTED: JUN 20, 2018 - JUN 28, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H, 24E, 27H and 27M	Pass

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:



SungGil Park
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:



Hoonpyo Lee
Suwon Lab Engineer
UL Korea, Ltd.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 22.
3. FCC CFR 47 Part 24.
4. FCC CFR 47 Part 27.
5. ANSI TIA-603-E, 2016
6. KDB 971168 D01 Power Meas License Digital Systems v03r01

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro	
<input checked="" type="checkbox"/>	Chamber 1
<input type="checkbox"/>	Chamber 2
<input type="checkbox"/>	Chamber 3

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <http://www.iasonline.org/PDF/TL/TL-637.pdf>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$EIRP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)} + \text{Substitution Antenna Factor (dBi)}$

$ERP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)}$

(Path loss = Signal generator output – PSA reading with substitution antenna)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.32 dB
Radiated Disturbance, Below 1GHz	3.86 dB
Radiated Disturbance, Above 1 GHz	5.97 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Tablet + BT/BLE, DTS/UNII a/b/g/n/ac and ANT+. This test report addresses the WWAN operational mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum average radiated ERP / EIRP output powers as follows:

GSM

FCC Part 22/24				
Band	Frequency Range	Modulation	Radiated	
	[MHz]		Avg [dBm]	Avg [mW]
GSM850	824~849	GPRS	30.71	1177.61
		EGPRS	24.95	312.61
GSM1900	1850~1910	GPRS	30.25	1059.25
		EGPRS	26.11	408.32

WCDMA

FCC Part 22/24				
Band	Frequency Range	Modulation	Radiated	
	[MHz]		Avg [dBm]	Avg [mW]
Band 5	824~849	REL99	21.39	137.72
		HSDPA	20.56	113.76
Band 2	1850~1910	REL99	21.91	155.24
		HSDPA	21.30	134.90

LTE Band 5

FCC Part 22					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation Peak	Radiated	
				Avg [dBm]	Avg [mW]
Band 5	824 ~ 849	10	QPSK	23.34	215.77
			16QAM	22.23	167.11
		5	QPSK	23.32	214.78
			16QAM	22.46	176.20
		3	QPSK	23.55	226.46
			16QAM	22.18	165.20
		1.4	QPSK	23.37	217.27
			16QAM	22.31	170.22

LTE Band 12

FCC Part 27					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation	Radiated	
				Avg [dBm]	Avg [mW]
Band 12	699 ~ 716	10	QPSK	17.16	52.00
			16QAM	16.01	39.90
		5	QPSK	17.07	50.93
			16QAM	16.10	40.74
		3	QPSK	16.72	46.99
			16QAM	15.59	36.22
		1.4	QPSK	16.95	49.55
			16QAM	15.68	36.98

LTE Band 17

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 41

FCC Part 27					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation	Radiated	
				Avg [dBm]	Avg [mW]
Band 41	2496 ~ 2690	20	QPSK	24.84	304.79
			16QAM	25.26	335.74
		15	QPSK	23.24	210.86
			16QAM	23.56	226.99
		10	QPSK	23.31	214.29
			16QAM	23.51	224.39
		5	QPSK	22.60	181.97
			16QAM	22.65	184.08

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a internal antenna for the [List the bands supported] with a maximum peak gain as follow:

Frequency (MHz)	Peak Gain (dBi)
GSM1900 / WCDMA Band 2 1850 ~ 1910 MHz	-4.06
GSM850 / WCDMA Band 5 / LTE Band 5 824 ~ 849 MHz	-3.21
LTE Band 41 2496 ~ 2690 MHz	-3.88
LTE Band 12/17 699 ~ 716 MHz	-3.61

5.4. WORST-CASE ORIENTATION

For GSM1900 / WCDMA Band 2 / LTE Band2, the fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

For GSM850 / WCDMA Band 5 / LTE Band 5 / LTE Band 12, the fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

For LTE Band 41, the fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

The worst-case scenario for all measurements is based on the average conducted output power measurement investigation results. Output power measurements were measured on QPSK, 16QAM and 64QAM modulations. It was found that QPSK and 16QAM results were worst case. All testing was performed using QPSK and 16QAM modulations to represent the worst case.

Note : All radiated spurious tests were performed connected with earphone and charger for evaluation of worst case mode.(For erp/eirp tests, the EUT didn't connected with earphone and charger)

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA200	R37K49A2631DK3	N/A
Data Cable	SAMSUNG	EP-DN930CWE	N/A	N/A
Earphone	SAMSUNG	EO-EG920BW	N/A	N/A

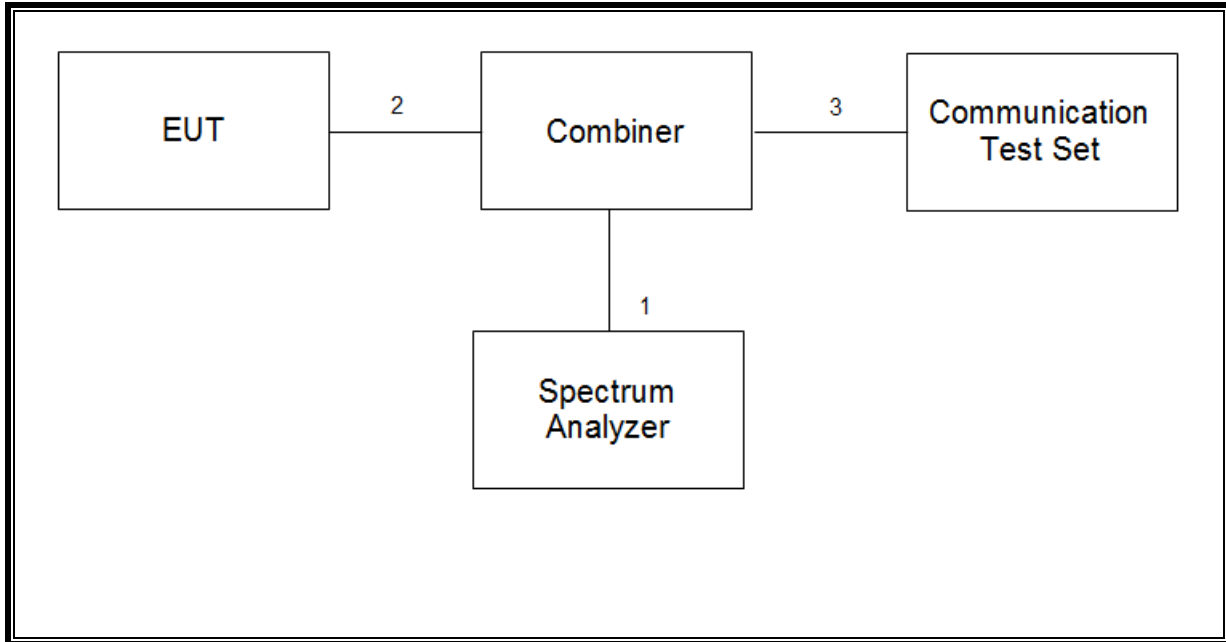
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	C Type	Shielded	1.1m	N/A
2	Audio	2	Mini-Jack	Unshielded	1.2m	N/A

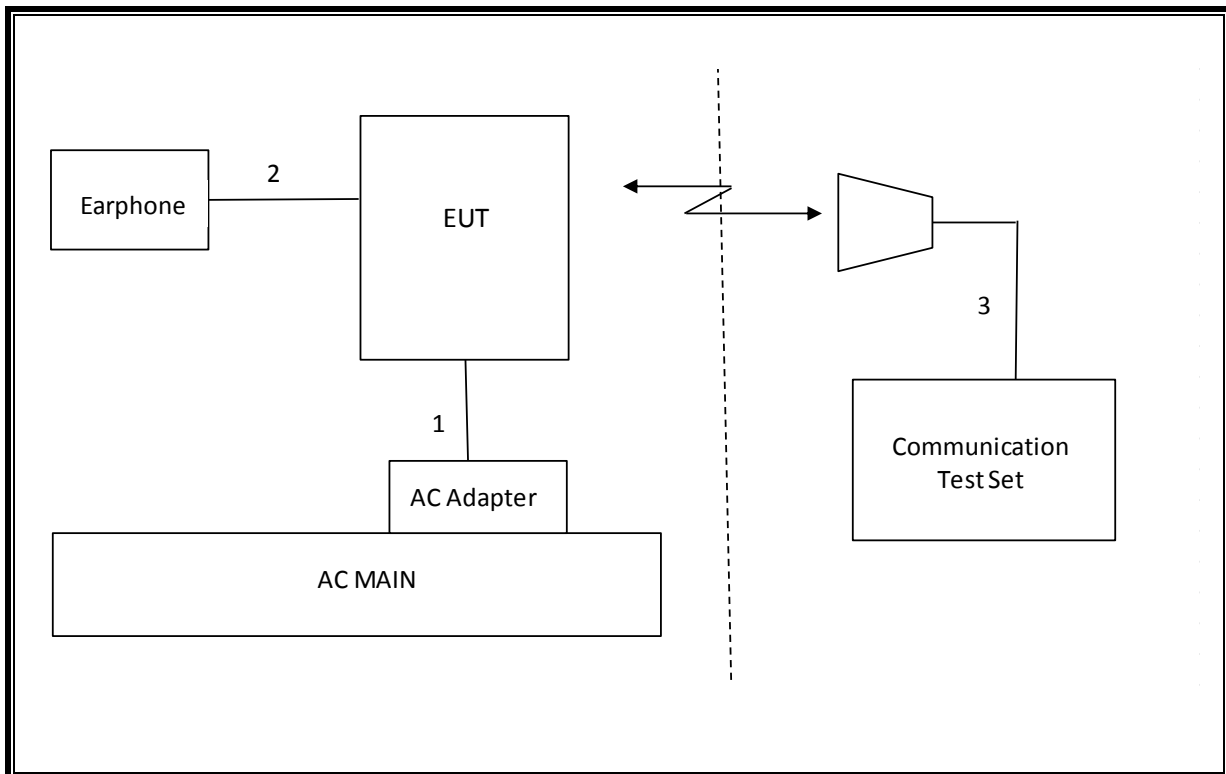
TEST SETUP

The EUT is continuously communicated to the call box during the tests.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121D DB4	00164753	06-30-19
Antenna, Horn, 40 GHz	ETS	3116C	00166155	12-04-19
Preamplifier	ETS	3116C-PA	00168841	11-13-19
Antenna, Horn, 40 GHz	ETS	3116C	00168645	12-04-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	08-31-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	845	08-31-19
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	09-14-19
Antenna, Horn, 18 GHz	ETS	3115	00167211	10-14-18
Antenna, Horn, 18 GHz	ETS	3115	00161451	03-10-19
Antenna, Horn, 18 GHz	ETS	3117	00168724	05-31-19
Antenna, Horn, 18 GHz	ETS	3117	00205959	11-29-18
Antenna, Horn, 18 GHz	ETS	3117	00168717	05-31-19
Combiner	WEINSCHTEL	1575	2152	08-08-18
Communications Test Set	R&S	CMW500	115331	08-07-18
DC Power Supply	Agilent / HP	E3640A	MY54226395	08-07-18
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-09-18
Preamplifier, 1000 MHz	Sonoma	310N	370599	08-10-18
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-07-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-08-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	2029169	08-11-18
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-08-18
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-08-18
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-08-18
EMI Test Receive, 44 GHz	R&S	ESW40	101590	08-09-18
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G005	08-09-18
High Pass Filter 1.2GHz	Micro-Tronics	HPM50108-02	G006	08-08-18
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	010	08-09-18
High Pass Filter 2.8GHz	Micro-Tronics	HPM50111-02	011	08-08-18
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G001	08-09-18
High Pass Filter 4GHz	Micro-Tronics	HPM50118-02	G002	08-08-18
Attenuator	PASTERNAK	PE7087-10	A009	08-08-18
Attenuator	PASTERNAK	PE7087-10	A001	08-08-18
Attenuator	PASTERNAK	PE7087-10	A008	08-08-18
Attenuator	PASTERNAK	PE7087-10	2	08-10-18
Attenuator	PASTERNAK	PE7395-10	A011	02-12-19
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	10-26-19
Temperature Chamber	ESPEC	SH-642	93001109	08-08-18
UL Software				
Description	Manufacturer	Model	Version	
Antenna port test software	UL	CLT	Ver 2.4	

7. Summary Table

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
2.1049	Occupied Band width (99%)	N/A	Conducted	Pass
22.917(a) 24.238(a) 27.53 (g)	Band Edge / Conducted Spurious Emission	-13dBm		Pass
27.53(m)	Conducted Spurious Emission	-25 dBm		Pass
27.53(m)	Emission mask	Section 9.2.2		Pass
2.1046	Conducted output power	N/A		See the RF exposure test report. (4788506351-S1 FCC Report SAR)
22.355 24.235 27.54	Frequency Stability	2.5PPM		Pass
22.913(a)(2)	Effective Radiated Power	38.5 dBm		Pass
27.50(b)(10)		34.77 dBm	Pass	
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power	33dBm	Radiated	Pass
22.917(a) 24.238(a) 27.53(g)	Radiated Spurious Emission	-13dBm		Pass
27.53 (m)		-25dBm		Pass

FCC Rule Part	Frequency Range [MHz]	Output Power [W]	Frequency Tolerance	Emission Designator	Emission Bandwidth [MHz]	Communication Type
GSM						
22H	824.2 - 848.8	1.178	2.5 ppm	249KGXW		GSM850
22H	824.2 - 848.8	0.313	2.5 ppm	246KG7W		EDGE850
24E	1850.2 - 1909.8	1.059	2.5 ppm	247KGXW		GSM1900
24E	1850.2 - 1909.8	0.408	2.5 ppm	244KG7W		EDGE1900
WCDMA						
22H	826.4 - 846.6	0.138	2.5 ppm	4M13F9W		WCDMA B5
24E	1852.4 - 1907.6	0.155	2.5 ppm	4M13F9W		WCDMA B2
LTE Band 5						
22H	829.0 - 844.0	0.216	2.5 ppm	8M96G7W	10	QPSK
22H	829.0 - 844.0	0.167	2.5 ppm	8M96D7W	10	16QAM
22H	826.5 - 846.5	0.176	2.5 ppm	4M48D7W	5	16QAM
22H	825.5 - 847.5	0.226	2.5 ppm	2M69G7W	3	QPSK
LTE Band 12/17						
27H	704.0 - 711.0	0.052	2.5 ppm	8M95G7W	10	QPSK
27H	704.0 - 711.0	0.040	2.5 ppm	8M98D7W	10	16QAM
27H	701.5 - 713.5	0.041	2.5 ppm	4M49D7W	5	16QAM
LTE Band 41						
27M	2506.0 - 2680.0	0.305	2.5 ppm	17M9G7W	20	QPSK
27M	2506.0 - 2680.0	0.336	2.5 ppm	17M9D7W	20	16QAM

8. PEAK TO AVERAGE RATIO

Test Procedure

Per KDB 971168 D01 Power Meas License Digital Systems v03r01;

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The PAR were measured on the Spectrum Analyzer.

Test Spec

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

8.1. CONDUCTED PEAK TO AVERAGE RESULT

GSM

Band	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
GSM850	190	836.6	GPRS	0.11	13.00
			EGPRS	3.31	
GSM1900	661	1880.0	GPRS	0.22	
			EGPRS	3.44	

WCDMA

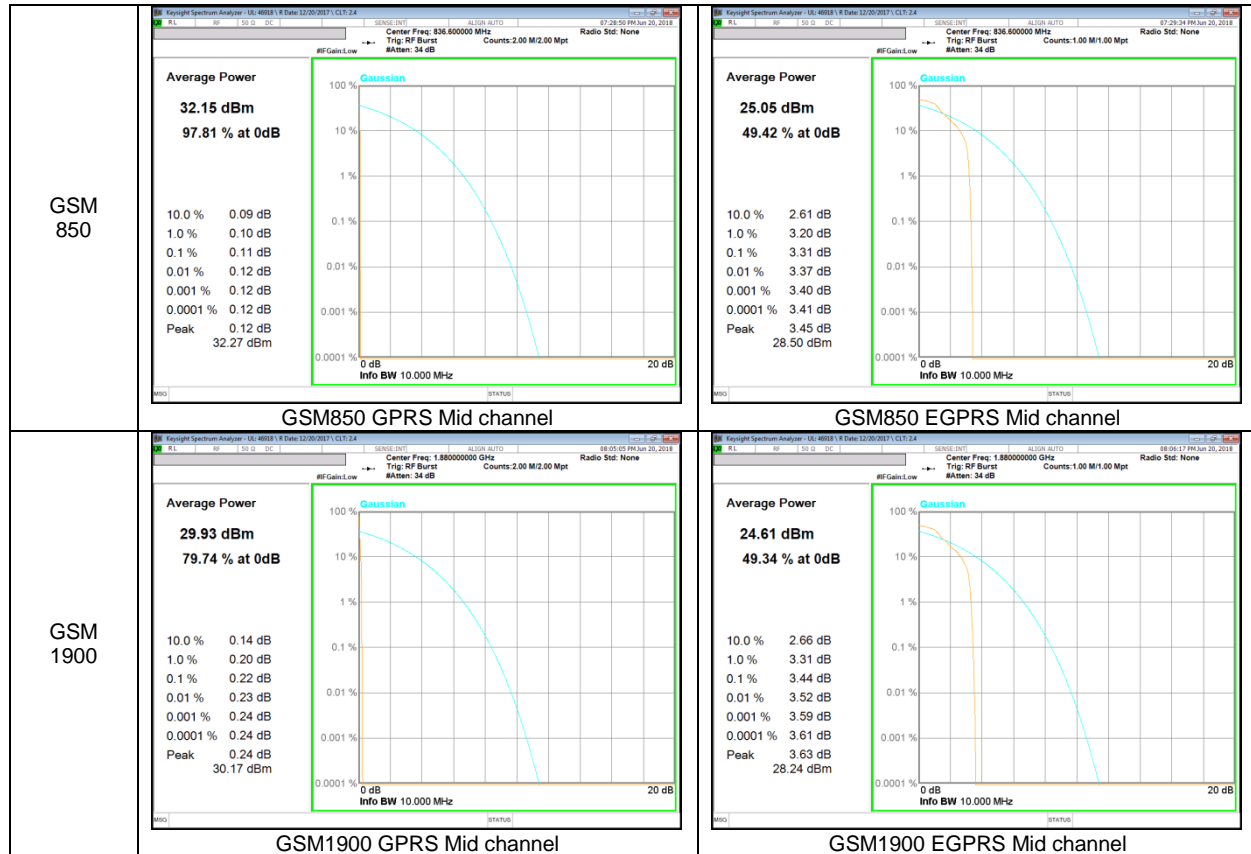
Band	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 5	4183	836.6	REL99	3.07	13.00
			HSDPA	3.14	
Band 2	9400	1880.0	REL99	3.14	
			HSDPA	3.16	

LTE

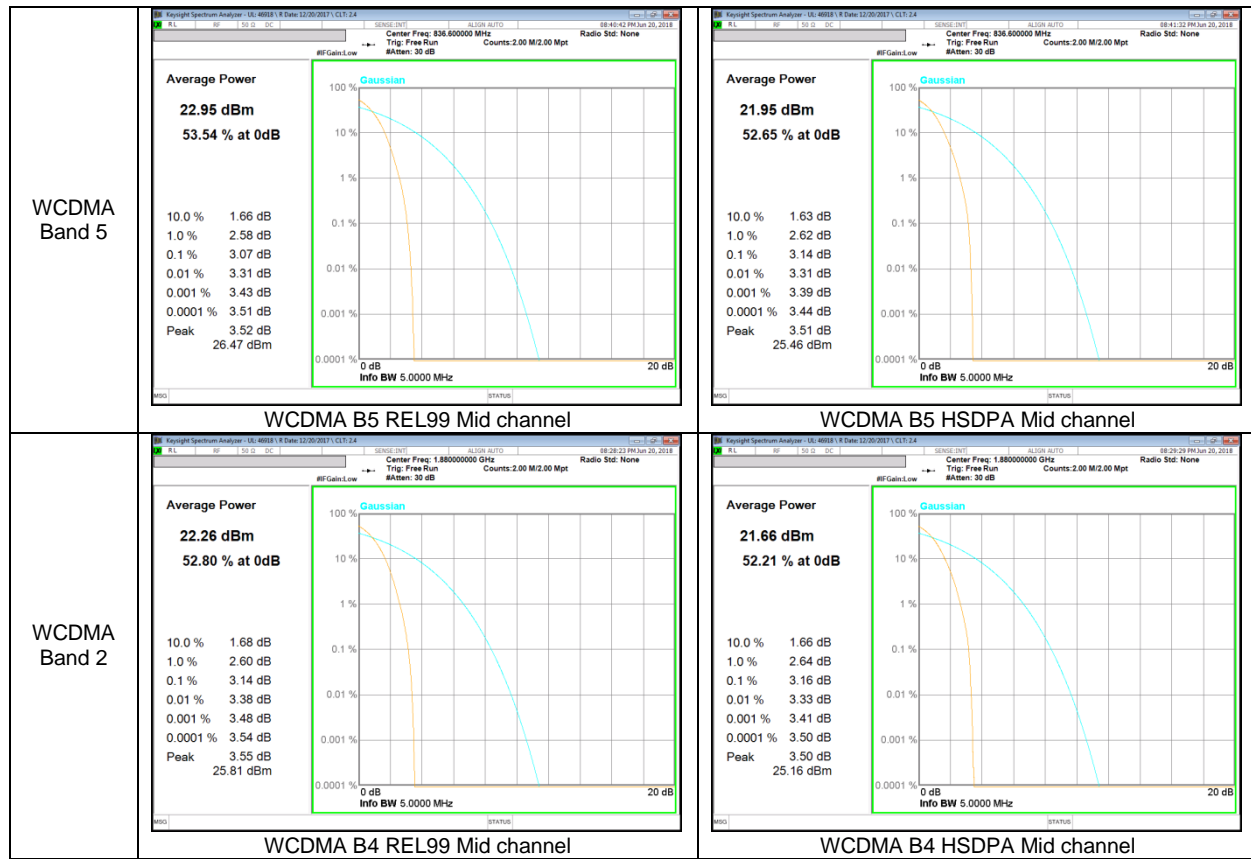
Band	BW [MHz]	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 5	10	20525	836.5	QPSK	4.48	13.00
				16QAM	5.24	
	5			QPSK	4.52	
				16QAM	5.22	
	3			QPSK	4.47	
				16QAM	5.23	
	1.4			QPSK	4.56	
				16QAM	5.35	
Band 41	20	40620	2593	QPSK	4.35	13.00
				16QAM	5.41	
	15			QPSK	4.13	
				16QAM	5.46	
	10			QPSK	4.16	
				16QAM	5.50	
	5			QPSK	4.22	
				16QAM	5.19	
Band 12	10	23095	707.5	QPSK	4.45	13.00
				16QAM	5.22	
	5			QPSK	4.48	
				16QAM	5.20	
	3			QPSK	4.39	
				16QAM	5.16	
	1.4			QPSK	4.50	
				16QAM	5.30	

8.2. CONDUCTED PEAK TO AVERAGE PLOTS

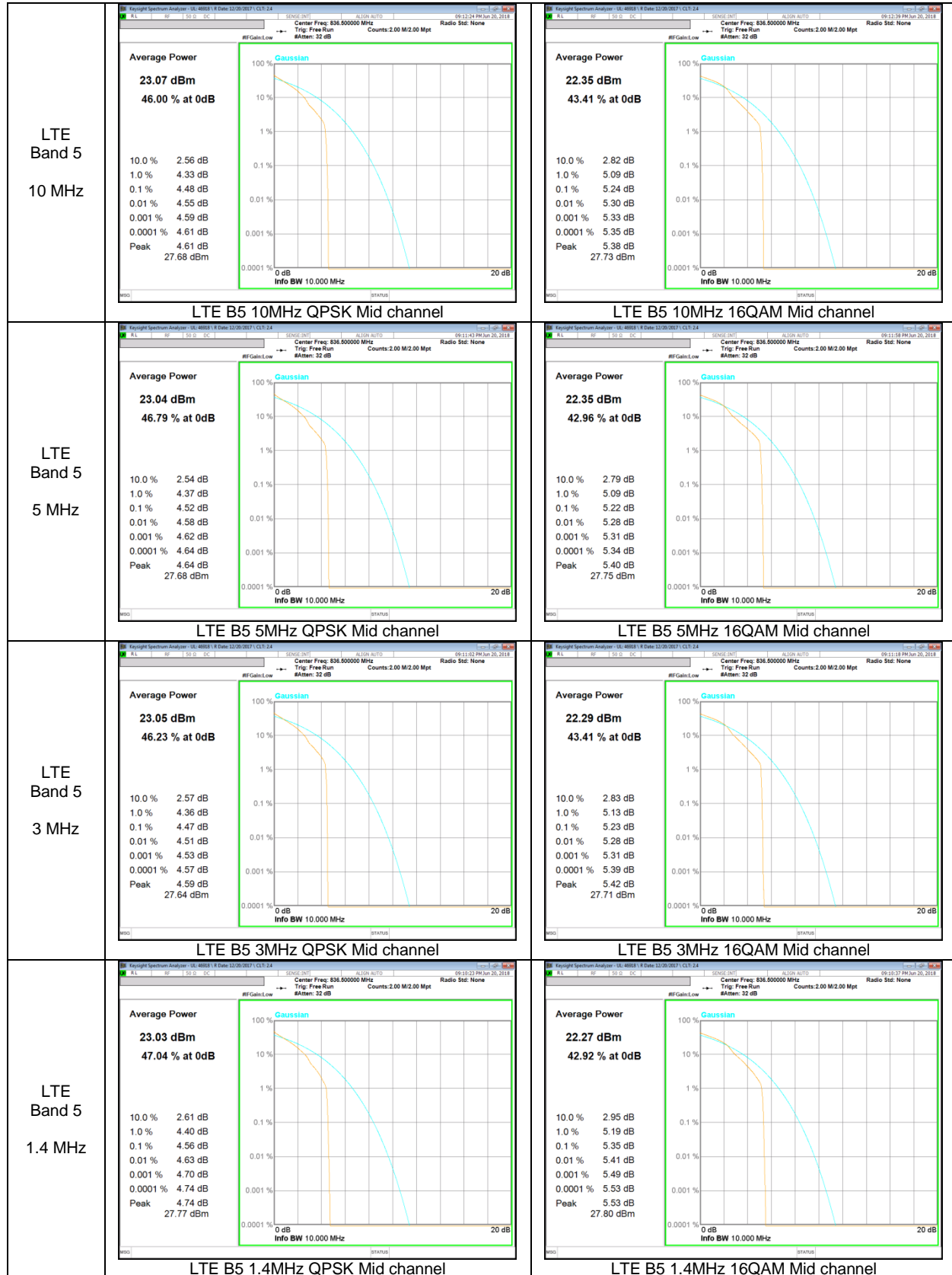
GSM



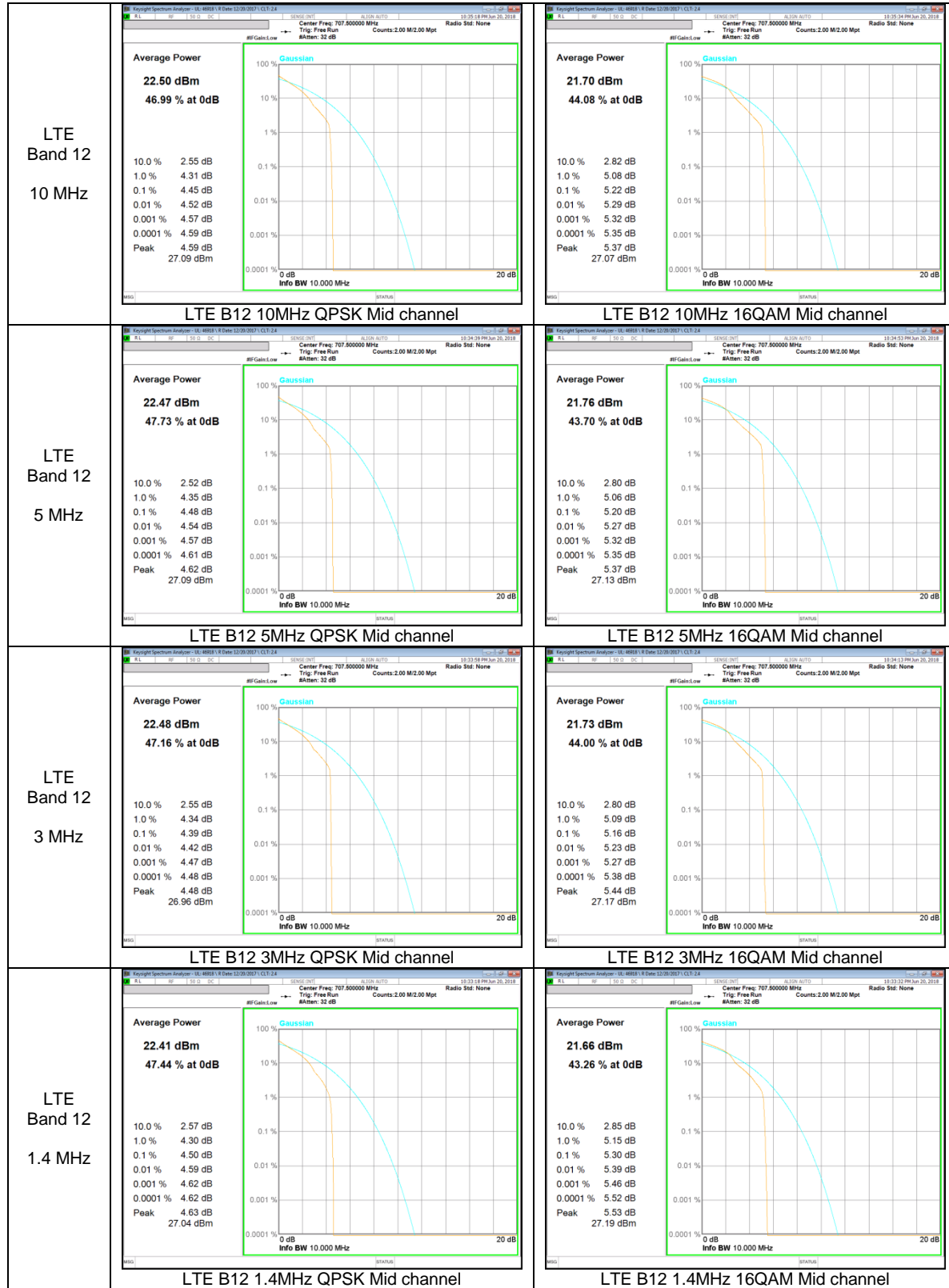
WCDMA



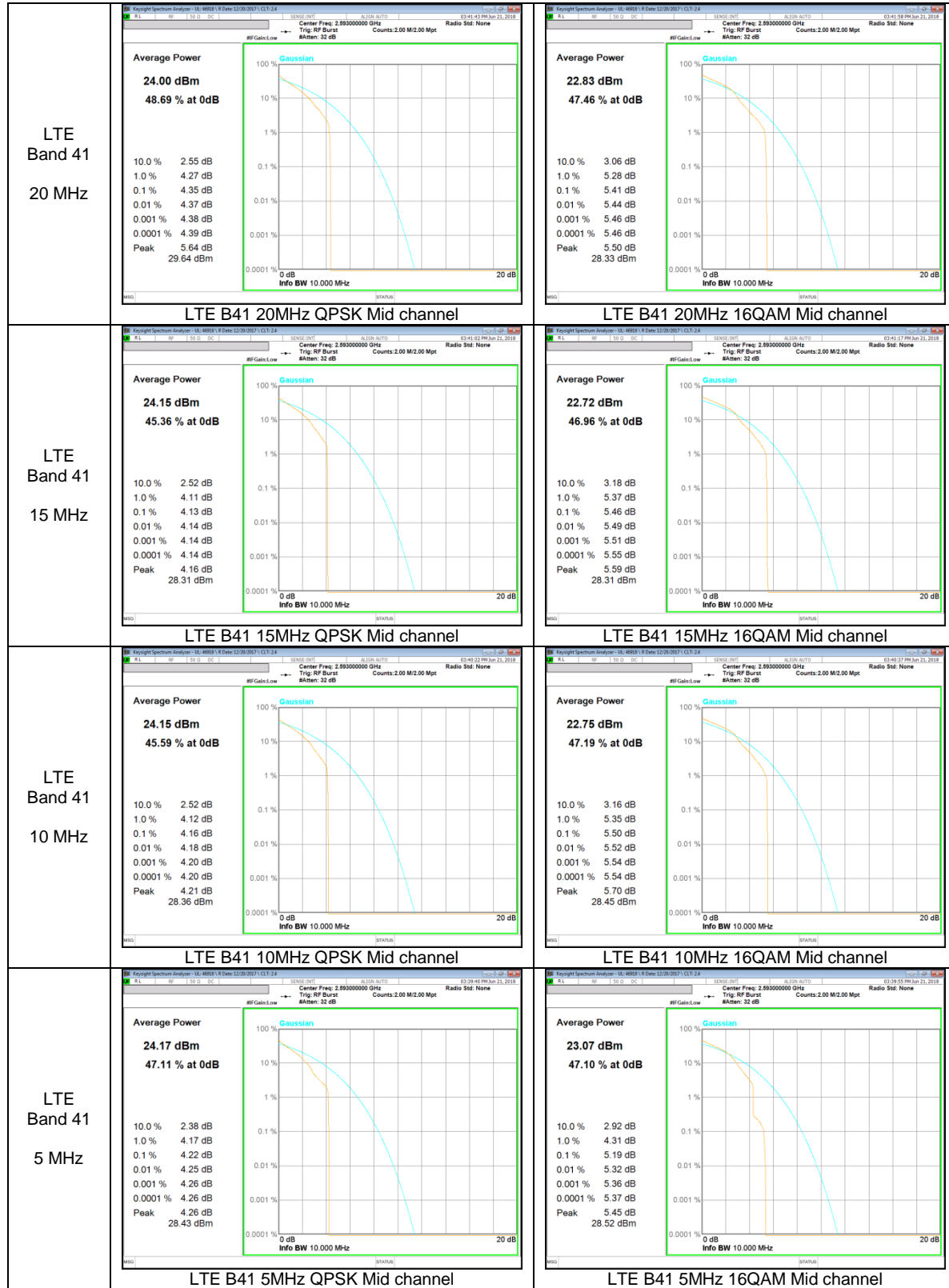
LTE Band 5



LTE Band 12



LTE Band 41



9. LIMITS AND CONDUCTED RESULTS

9.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(KDB 971168 D01 Power Meas License Digital Systems v03r01)

9.1.1. OCCUPIED BANDWIDTH RESULTS

GSM

Band	Mode	Channel	f [MHz]	99% BW [KHz]	26dB BW [KHz]
GSM850	GPRS	128	824.2	245.75	312.1
		190	836.6	248.64	319.8
		251	848.8	242.40	314.3
	EGPRS	128	824.2	246.01	304.1
		190	836.6	236.48	305.1
		251	848.8	240.26	303.7
GSM1900	GPRS	512	1850.2	244.49	314.8
		661	1880.0	243.71	314.9
		810	1909.8	246.63	310.7
	EGPRS	512	1850.2	240.67	312.5
		661	1880.0	243.75	310.3
		810	1909.8	243.99	312.4

WCDMA

Band	Mode	Channel	f [MHz]	99% BW [MHz]	26dB BW [MHz]
Band 5	REL99	4132	826.4	4.1169	4.654
		4183	836.6	4.1153	4.674
		4233	846.6	4.1159	4.659
	HSDPA	4132	826.4	4.1251	4.669
		4183	836.6	4.1267	4.690
		4233	846.6	4.1191	4.651
Band 2	REL99	9262	1852.4	4.1279	4.664
		9400	1880.0	4.1167	4.661
		9538	1907.6	4.1256	4.653
	HSDPA	9262	1852.4	4.1221	4.683
		9400	1880.0	4.1178	4.660
		9538	1907.6	4.1316	4.663

LTE Band 5

Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 5	10	20450	829.0	QPSK	8.9641	9.784
				16QAM	8.9647	9.760
		20524	836.5	QPSK	8.9443	9.826
				16QAM	8.9644	9.745
		20599	844.0	QPSK	8.9424	9.692
				16QAM	8.9214	9.710
	5	20425	826.5	QPSK	4.5061	4.918
				16QAM	4.4848	4.948
		20524	836.5	QPSK	4.4817	4.941
				16QAM	4.4801	4.940
		20624	846.5	QPSK	4.4887	4.900
				16QAM	4.4759	4.904
	3	20415	825.5	QPSK	2.6895	2.989
				16QAM	2.6932	2.996
		20524	836.5	QPSK	2.6926	2.975
				16QAM	2.6931	2.994
		20634	847.5	QPSK	2.6914	2.959
				16QAM	2.6902	2.991
	1.4	20407	824.7	QPSK	1.0913	1.227
				16QAM	1.0807	1.227
		20524	836.5	QPSK	1.0808	1.225
				16QAM	1.0815	1.226
		20624	848.3	QPSK	1.0856	1.230
				16QAM	1.0905	1.235

LTE Band 12

Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 12	10	23060	704.0	QPSK	8.9523	9.804
				16QAM	8.9785	9.639
		23095	707.5	QPSK	8.9517	9.792
				16QAM	8.9602	9.757
		23130	711.0	QPSK	8.9472	9.746
				16QAM	8.9443	9.708
	5	23035	701.5	QPSK	4.4974	4.941
				16QAM	4.4906	4.951
		23095	707.5	QPSK	4.4871	4.939
				16QAM	4.4831	4.926
		23155	713.5	QPSK	4.4898	4.885
				16QAM	4.4730	4.885
	3	23025	700.5	QPSK	2.6906	2.978
				16QAM	2.6905	3.004
		23095	707.5	QPSK	2.6918	2.969
				16QAM	2.6899	2.960
		23165	714.5	QPSK	2.6912	2.981
				16QAM	2.6872	2.991
	1.4	23017	699.7	QPSK	1.0923	1.230
				16QAM	1.0815	1.231
		23095	707.5	QPSK	1.0792	1.222
				16QAM	1.0824	1.224
		23173	715.3	QPSK	1.0842	1.230
				16QAM	1.0899	1.231

LTE Band 17

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 41

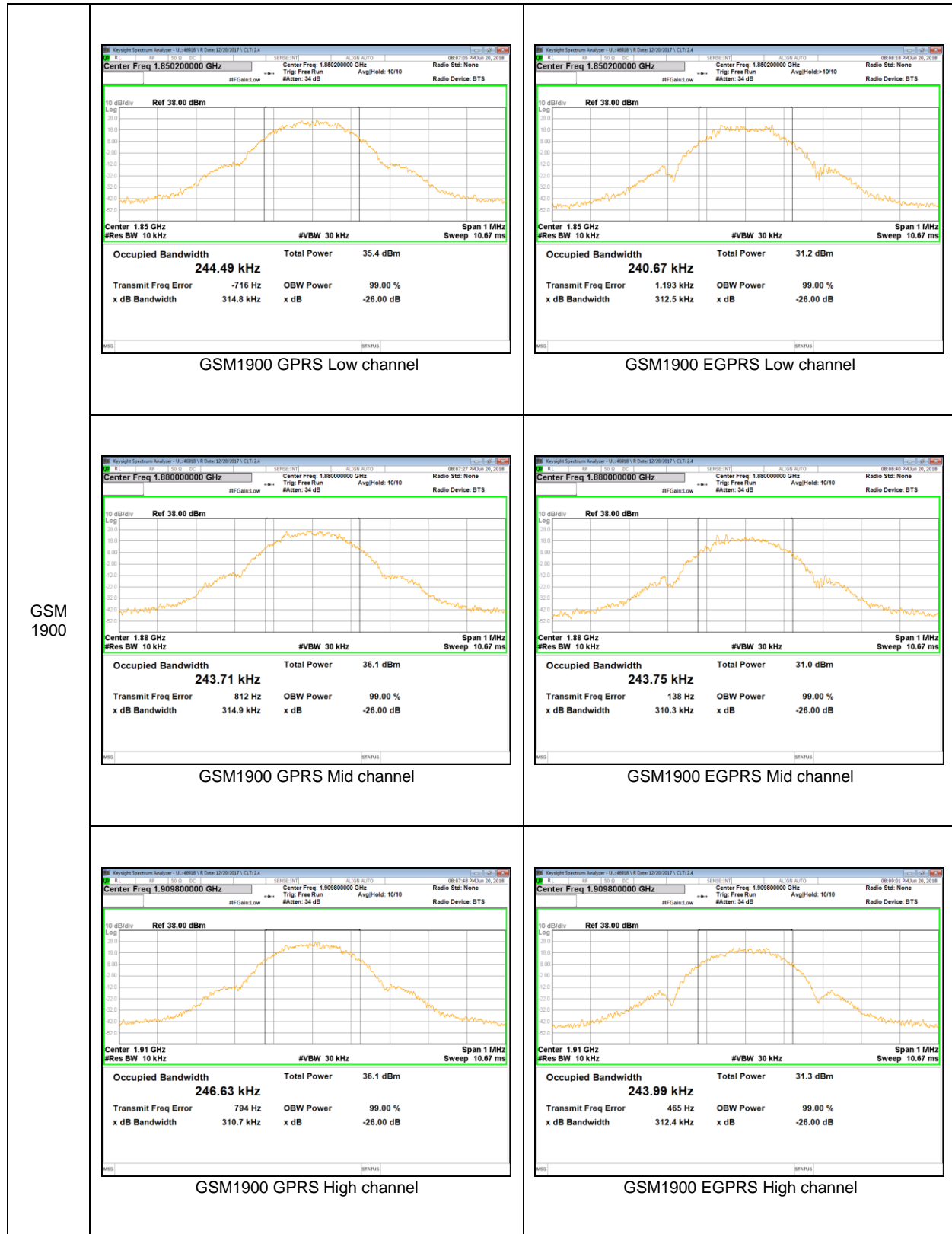
Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 41	20	35970	2506.0	QPSK	17.877	19.24
				16QAM	17.887	19.17
		40620	2593.0	QPSK	17.864	19.12
				16QAM	17.865	19.25
		41490	2680.0	QPSK	17.857	19.08
				16QAM	17.885	19.11
	15	39725	2503.5	QPSK	13.391	14.54
				16QAM	13.391	14.43
		40620	2593.0	QPSK	13.415	14.41
				16QAM	13.432	14.56
		41515	2682.5	QPSK	13.398	14.45
				16QAM	13.435	14.58
	10	39700	2501.0	QPSK	8.9896	9.671
				16QAM	8.9563	9.671
		40620	2593.0	QPSK	8.9414	9.768
				16QAM	8.9420	9.650
		41540	2685.0	QPSK	8.9611	9.713
				16QAM	8.9458	9.687
	5	39675	2498.5	QPSK	4.4863	4.906
				16QAM	4.4737	4.926
		40620	2593.0	QPSK	4.4911	4.905
				16QAM	4.4766	4.876
		41565	2687.5	QPSK	4.4848	5.077
				16QAM	4.4759	4.874

9.1.2. OCCUPIED BANDWIDTH PLOTS

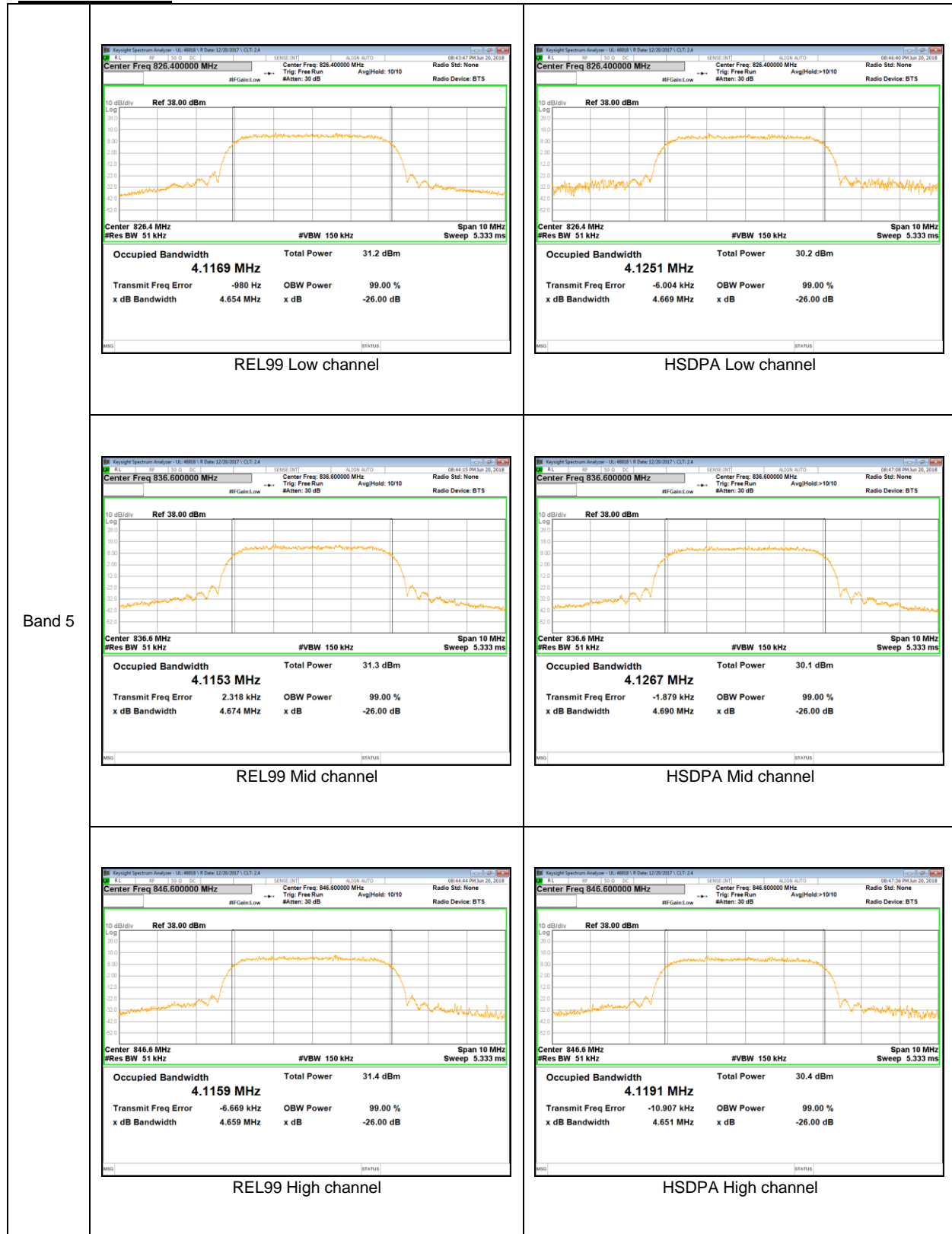
GSM 850



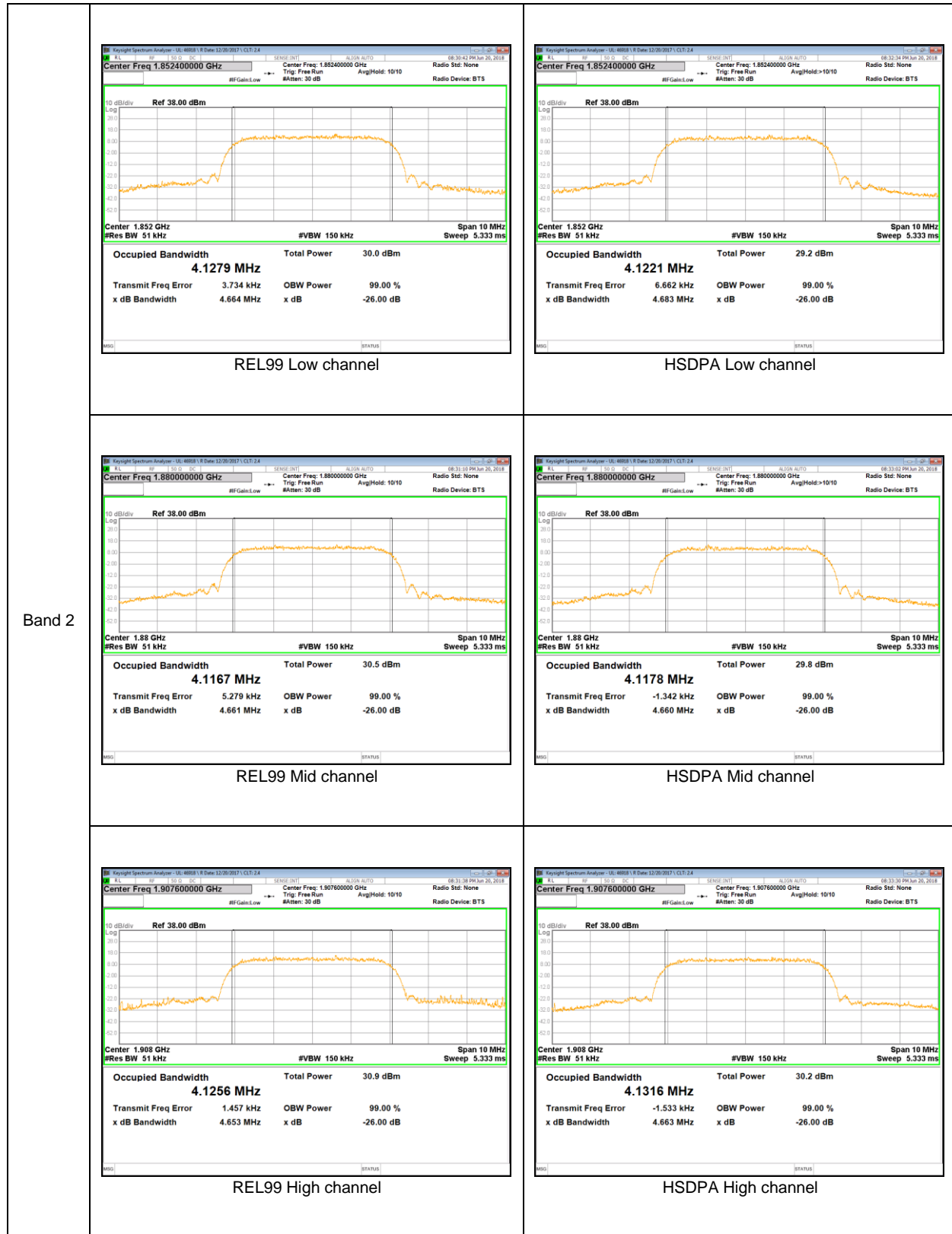
GSM 1900



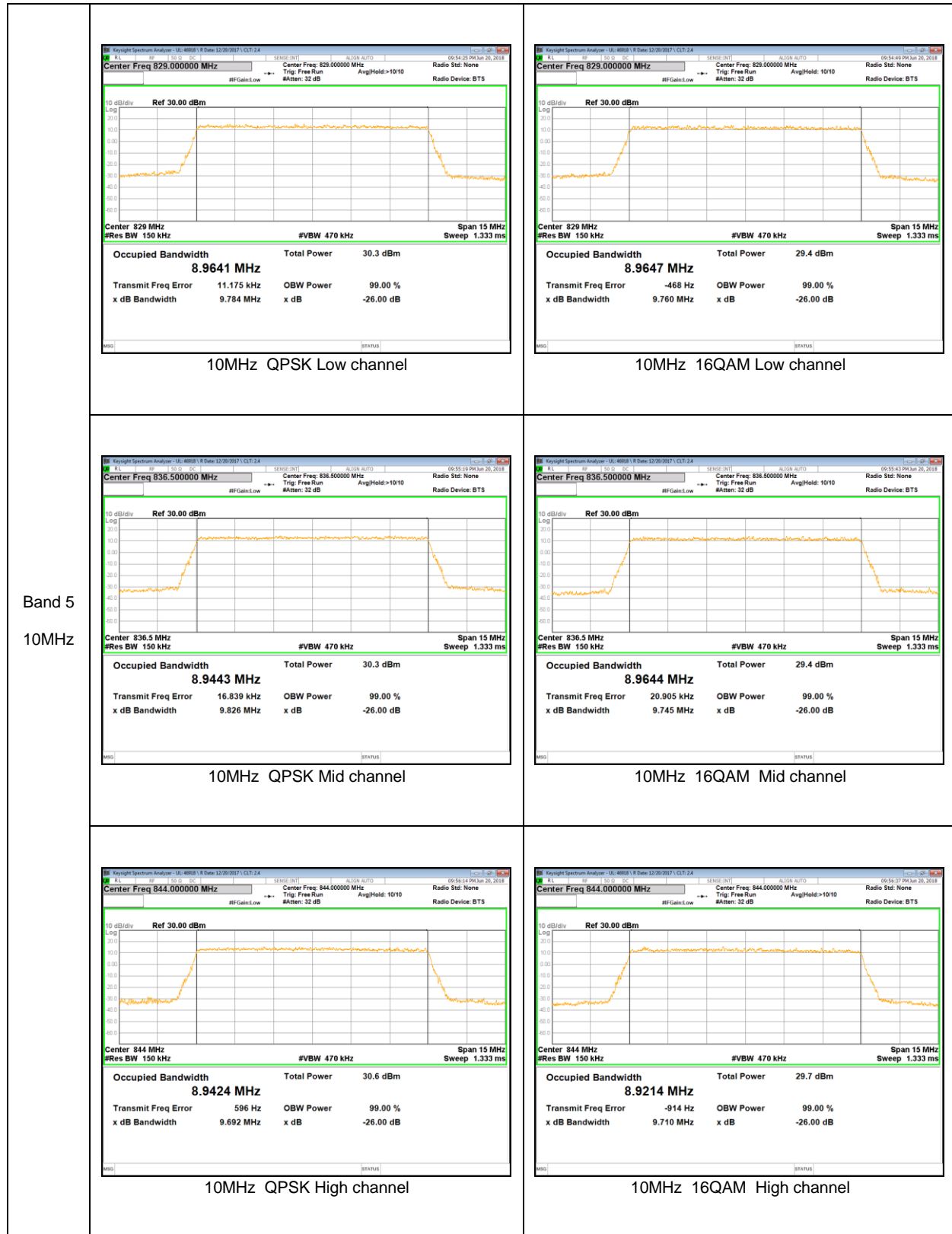
WCDMA Band 5



WCDMA Band 2

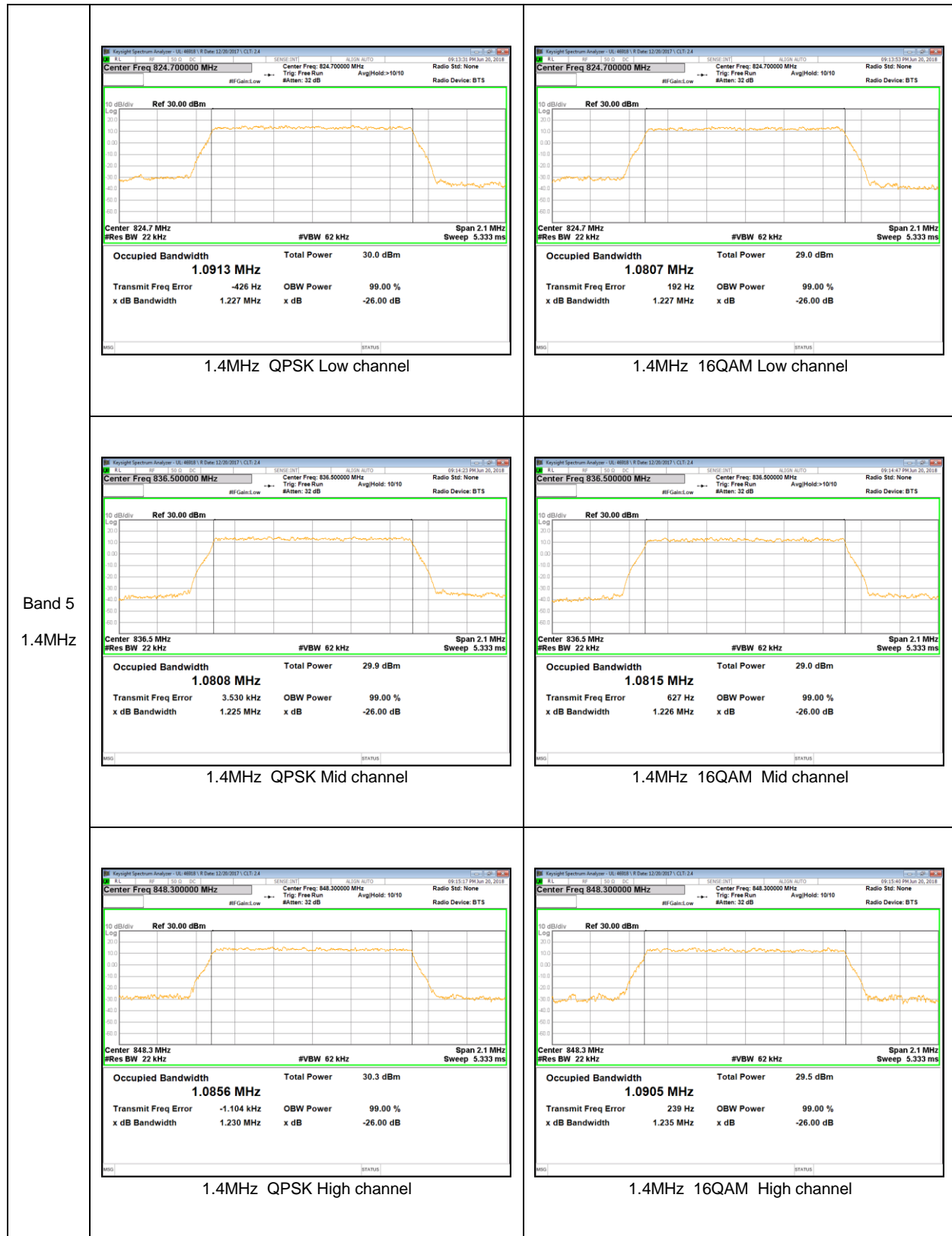


LTE Band 5









LTE Band 12



