



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

WWAN

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER : SM-A605K

FCC ID: A3LSMA605K

REPORT NUMBER: 4788480738-E7V1

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ACCREDITED*

Testing
Laboratory

TL-637

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n, ANT+ and NFC

MODEL NUMBER: SM-A605K

SERIAL NUMBER: R38K108QG5F, R38K104R4WF(RADIATED, Original);
R38K104QAPL (CONDUCTED, Original);
R39K30GTZ6H , R39K30GV1ZF
(RADIATED, Additional & Spot check test);
R39K30GTZMV (CONDUCTED, Additional & Spot check test);

DATE TESTED: FEB 22, 2018 - MAR 19, 2018(Original);
MAY 14, 2018 - MAY 24, 2018 (Additional & Spot check test)

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.

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1.1. INTRODUCTION OF TEST DATA REUSE

This report referenced from the FCC ID: A3LSMA605FN WWAN(FCC CFR 47 Part 22). And the applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID.

1.2. DIFFERENCE

The FCC ID: A3LSMA605K shares the same enclosure and circuit board as FCC ID: A3LSMA605FN. The WWAN antennas and surrounding circuitry and layout regarding test data re-used bands are identical between these two units. The FCC ID: A3LSMA605K, some components for additional bands newly mounted and additional bands enabled by SW. Difference for these two units, PED document described in details.

After confirming through preliminary radiated emissions that the performance of the FCC ID: A3LSMA605FN remains representative of FCC ID: A3LSMA605K. The test data of FCC ID: A3LSMA605FN being submitted for this application to cover WWAN re-used bands features.

- Re-use bands - WCDMA Band 5, LTE Band 5
- Additional test bands for FCC ID : A3LSMA605K – GSM1900, WCDMA Band2, LTE Band 17 LTE Band 41

For GSM1900 / WCDMA Band2, all tests were performed newly due to different target power compared with original model(FCC ID : A3LSMA605FN).

1.3. SPOT CHECK VERIFICATION DATA

Band	Test Item	Worst Mode	Frequency	Test Limit	Original model	Spot check model	Deviation	Remark
					SM-A605FN/DS Results FCC ID : A3LSMA605FN	SM-A605K Results FCC ID : A3LSMA605K		
WCDMA Band 5	ERP	REL99	826.4 MHz	38.50 dBm	17.93 dBm	16.64 dBm	-1.29 dB	
	RSE	REL99	3305.6 MHz	-13.00 dBm	-50.20 dBm	-50.30 dBm	-0.10 dB	
LTE Band 5	ERP	3M QPSK	825.5 MHz	38.50 dBm	16.45 dBm	15.07 dBm	-1.38 dB	
	RSE	1.4M 16QAM	1696.6 MHz	-13.00 dBm	-46.20 dBm	-45.00 dBm	1.20 dB	

Comparison of two models, upper deviation is within 3dB range and all test results are under FCC Technical Limits.

1.4. REFERENCE DETAIL

Reference application that contains the reused reference data.

Equipment Class	Reference FCC ID	Type Grant/Permissive Change	Reference Application	Folder Test/RF Exposure	Report Title / Section
DXX	A3LSMA605FN	Grant	4788372835-E5V2	Test	FCC Report ANT+ / All sections
			4788372835-E6V3	Test	FCC Report NFC / All sections
PCE	A3LSMA605FN	Grant	4788372835-E7V2	Test	FCC Report WWAN / All sections for WCDMA Band 5 and LTE Band 5

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. ANSI TIA-603-E, 2016
5. 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 checked="" 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:

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

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

(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 Phone + BT/BLE, DTS/UNII a/b/g/n, ANT+ and NFC.
 This test report addresses the WWAN operational mode.

5.2. MAXIMUM OUTPUT POWER

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

GSM

FCC Part 22/24				
Band	Frequency Range	Modulation	Radiated	
	[MHz]		Peak	Avg [dBm]
GSM1900	1850~1910	GPRS	28.50	707.95
		EGPRS	25.02	317.69

WCDMA

FCC Part 22/24				
Band	Frequency Range	Modulation	Radiated	
	[MHz]		Peak	Avg [dBm]
Band 5	824~849	REL99	17.93	62.09
		HSDPA	17.43	55.34
Band 2	1850~1910	REL99	20.70	117.49
		HSDPA	19.82	95.94

LTE Band 5

FCC Part 22					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation	Radiated	
				Peak	Avg [dBm]
Band 5	824 ~ 849	10	QPSK	16.32	42.85
			16QAM	15.50	35.48
		5	QPSK	16.08	40.55
			16QAM	15.07	32.14
		3	QPSK	16.45	44.16
			16QAM	15.42	34.83
		1.4	QPSK	13.98	25.00
			16QAM	13.14	20.61

LTE Band 17

FCC Part 27					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation Peak	Radiated	
				Avg [dBm]	Avg [mW]
Band 17	704 ~ 716	10	QPSK	17.55	56.89
			16QAM	16.62	45.92
		5	QPSK	17.73	59.29
			16QAM	16.61	45.81

LTE Band 41

FCC Part 27					
Band	Frequency Range [MHz]	BandWidth [MHz]	Modulation Peak	Radiated	
				Avg [dBm]	Avg [mW]
Band 41	2496-2690	20	QPSK	22.58	181.13
			16QAM	22.12	162.93
		15	QPSK	22.37	172.58
			16QAM	22.21	166.34
		10	QPSK	23.03	200.91
			16QAM	22.43	174.98
		5	QPSK	23.20	208.93
			16QAM	22.34	171.40

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)
WCDMA Band 5 / LTE Band 5 824 ~ 849 MHz	-4.45
GSM1900 / WCDMA Band 2 1850 ~ 1910 MHz	-2.78
LTE Band 41 2496 ~ 2690 MHz	-2.58
LTE Band 17 704 ~ 716 MHz	-5.34

5.4. WORST-CASE ORIENTATION

For GSM1900 / WCDMA Band2 / LTE Band 17 / 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.

For WCDMA Band 5 / LTE Band 5 , 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.

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-TA50KWK	DK4K207VS/A- E	N/A
Data Cable	SAMSUNG	ECB-DU68WE	N/A	N/A
Earphone	SAMSUNG	EHS64AVFWE	N/A	N/A

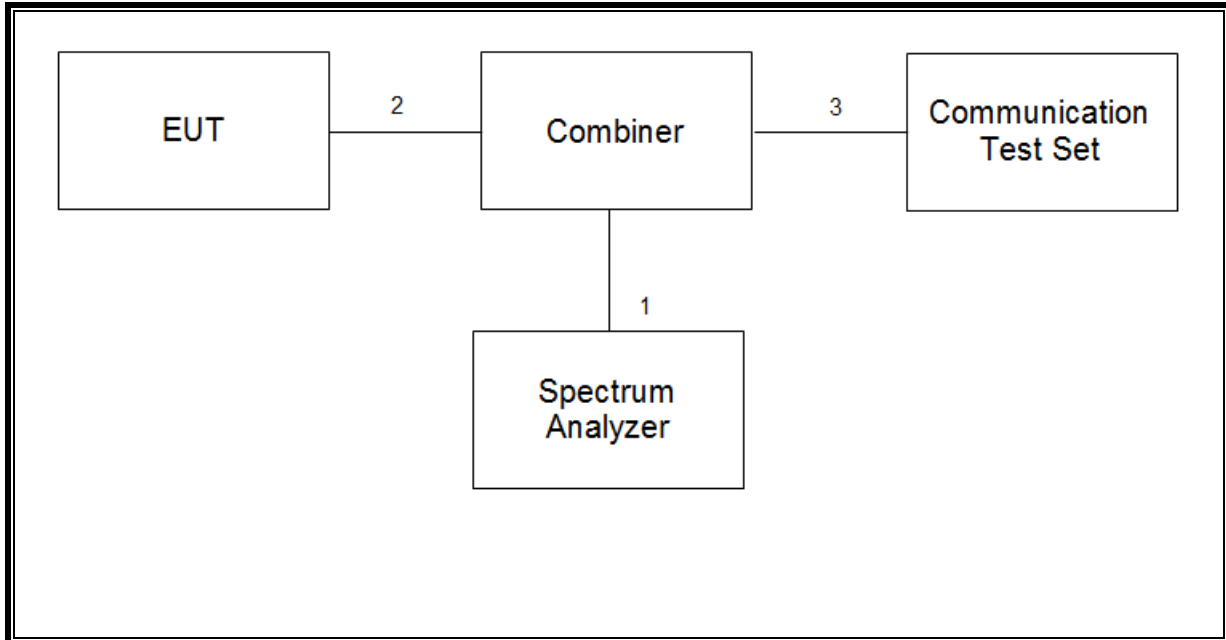
I/O CABLES

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

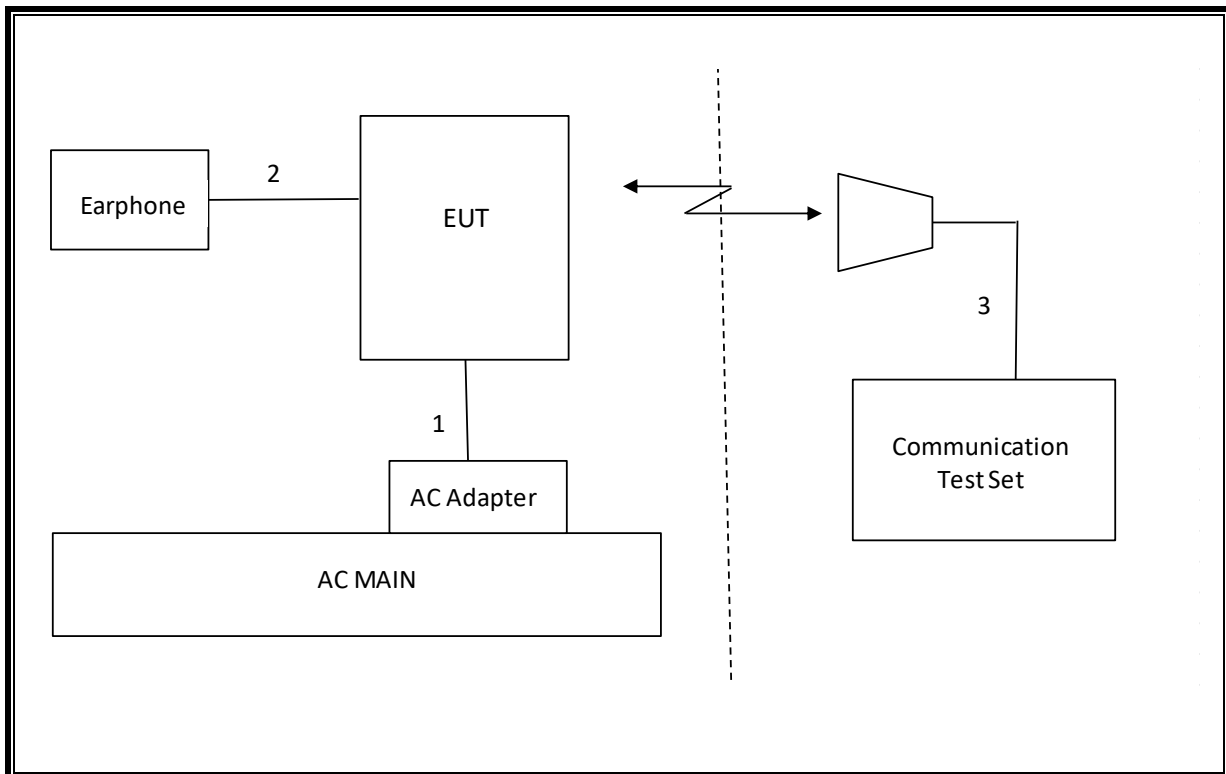
TEST SETUP

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
22.355 24.235 27.54	Frequency Stability	2.5PPM		Pass
22.913(a)(2)	Effective Radiated Power	38.5 dBm		Pass
27.50 (c)(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)	Radiated Spurious Emission	-25dBm		Pass

FCC Rule Part	Frequency Range [MHz]	Output Power [W]	Frequency Tolerance	Emission Designator	Emission Bandwidth [MHz]	Communication Type
GSM						
24E	1850.2 - 1909.8	0.708	2.5 ppm	246KGXW		GSM1900
24E	1850.2 - 1909.8	0.318	2.5 ppm	252KG7W		EDGE1900
WCDMA						
22H	826.4 - 846.6	0.062	2.5 ppm	4M13F9W		WCDMA B5
24E	1852.4 - 1907.6	0.117	2.5 ppm	4M15F9W		WCDMA B2
LTE Band 5						
22H	829.0 - 844.0	0.043	2.5 ppm	8M97G7W	10	QPSK
22H	829.0 - 844.0	0.035	2.5 ppm	8M97D7W	10	16QAM
22H	825.5 - 847.5	0.044	2.5 ppm	2M69G7W	3	QPSK
LTE Band 17						
27H	709.0 - 711.0	0.057	2.5 ppm	8M97G7W	10	QPSK
27H	709.0 - 711.0	0.046	2.5 ppm	8M97D7W	10	16QAM
27H	706.5 - 713.5	0.059	2.5 ppm	4M50G7W	5	QPSK
LTE Band 41						
27M	2506.0 - 2680.0	0.181	2.5 ppm	17M9G7W	20	QPSK
27M	2506.0 - 2680.0	0.163	2.5 ppm	17M9D7W	20	16QAM
27M	2501.0 - 2685.0	0.175	2.5 ppm	8M95D7W	10	16QAM
27M	2498.5 - 2687.5	0.209	2.5 ppm	4M50G7W	5	QPSK

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]
GSM1900	661	1880.0	GPRS	0.36	13.00
			EGPRS	3.31	

WCDMA

Band	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 5	4183	836.6	REL99	2.93	13.00
			HSDPA	3.08	
Band 2	9400	1880.0	REL99	3.01	
			HSDPA	3.16	

LTE Band 5

Band	BW [MHz]	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 5	10	20525	836.5	QPSK	3.54	13.00
				16QAM	4.29	
	5			QPSK	3.51	
				16QAM	4.27	
	3			QPSK	3.49	
				16QAM	4.32	
	1.4			QPSK	3.48	
				16QAM	4.34	

LTE Band 17

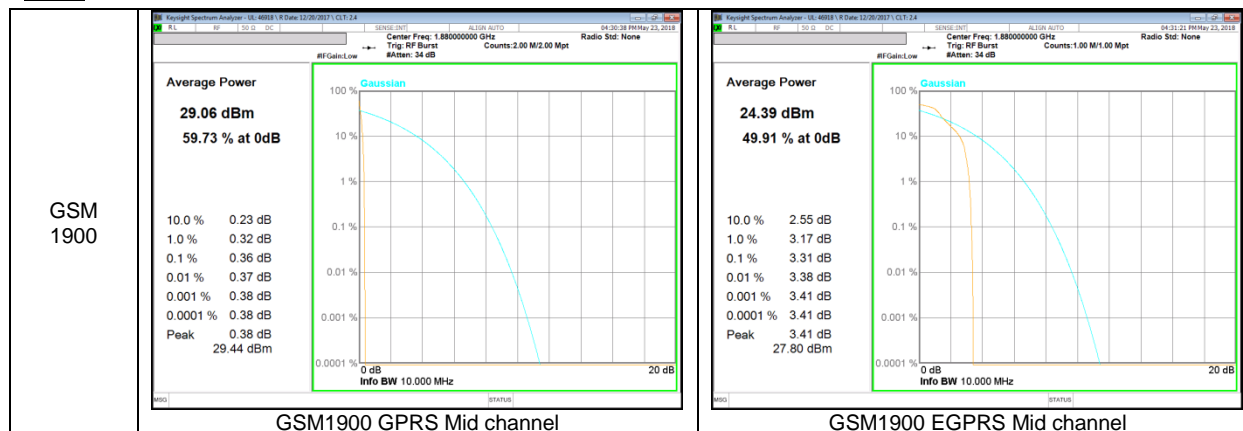
Band	BW [MHz]	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 17	10	23790	710	QPSK	4.60	13.00
				16QAM	5.41	
	5			QPSK	4.64	
				16QAM	5.39	

LTE Band41

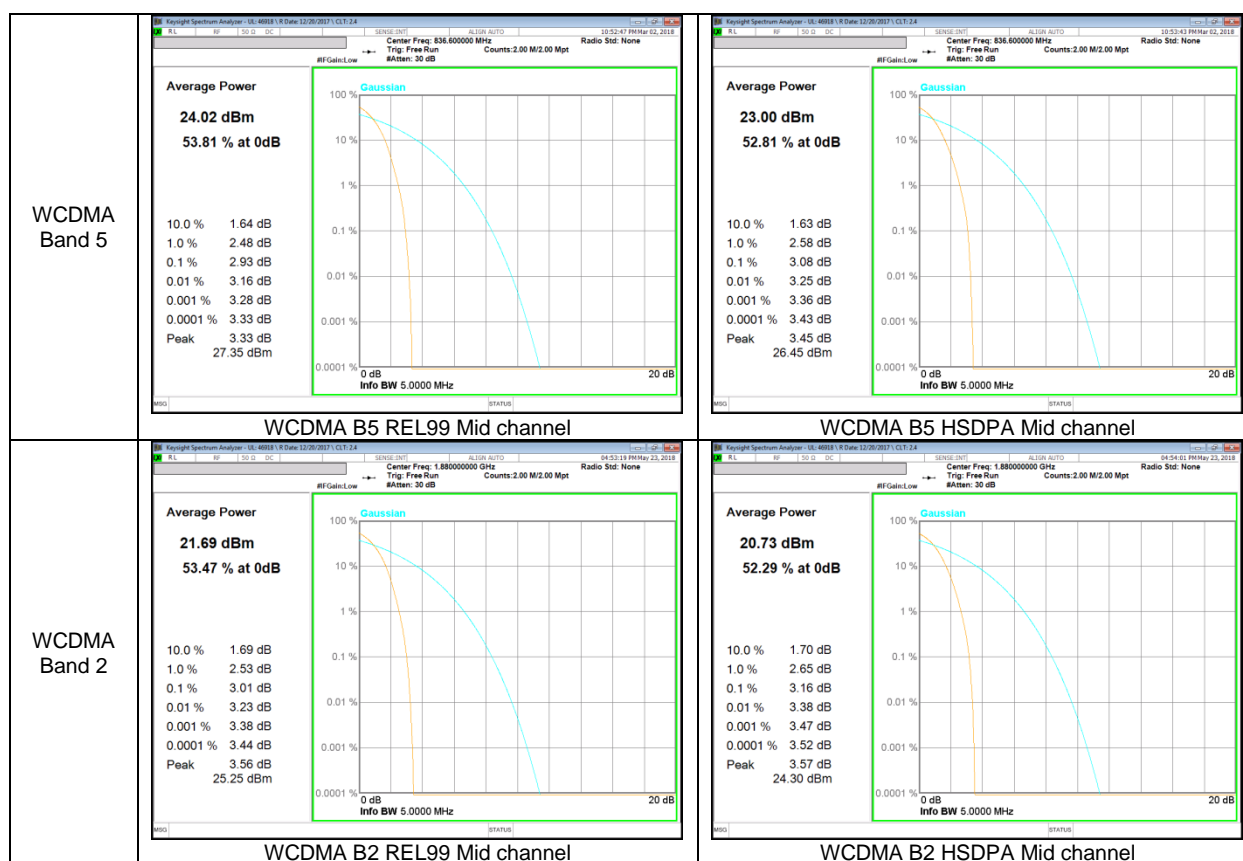
Band	BW [MHz]	Channel	f [MHz]	Mode	Ratio [dB]	Limit [dB]
Band 41	20	40620	2593	QPSK	5.53	13.00
				16QAM	5.87	
	15			QPSK	5.00	
				16QAM	6.07	
	10			QPSK	5.08	
				16QAM	6.06	
	5			QPSK	5.38	
				16QAM	5.91	

8.2. CONDUCTED PEAK TO AVERAGE PLOTS

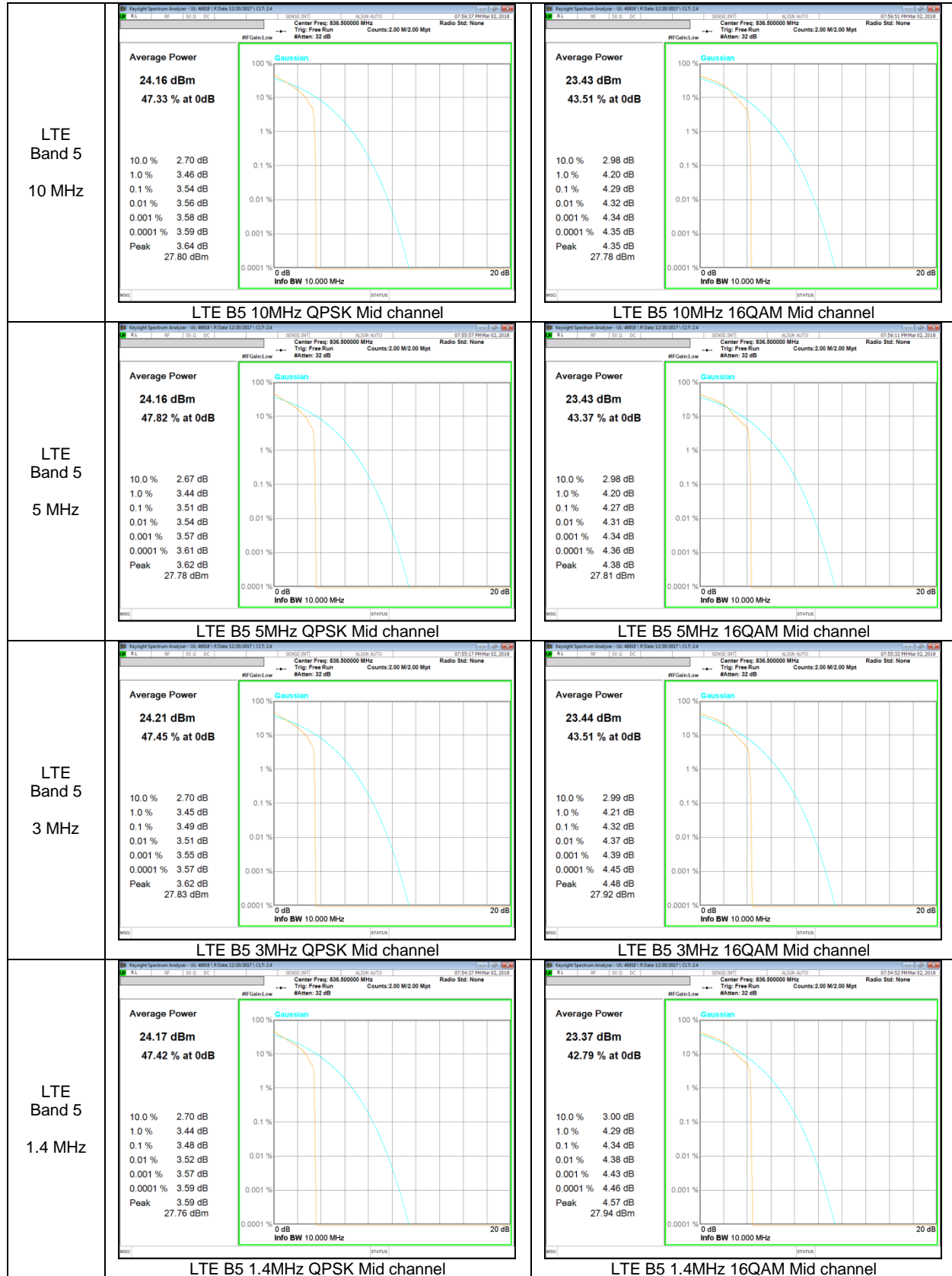
GSM



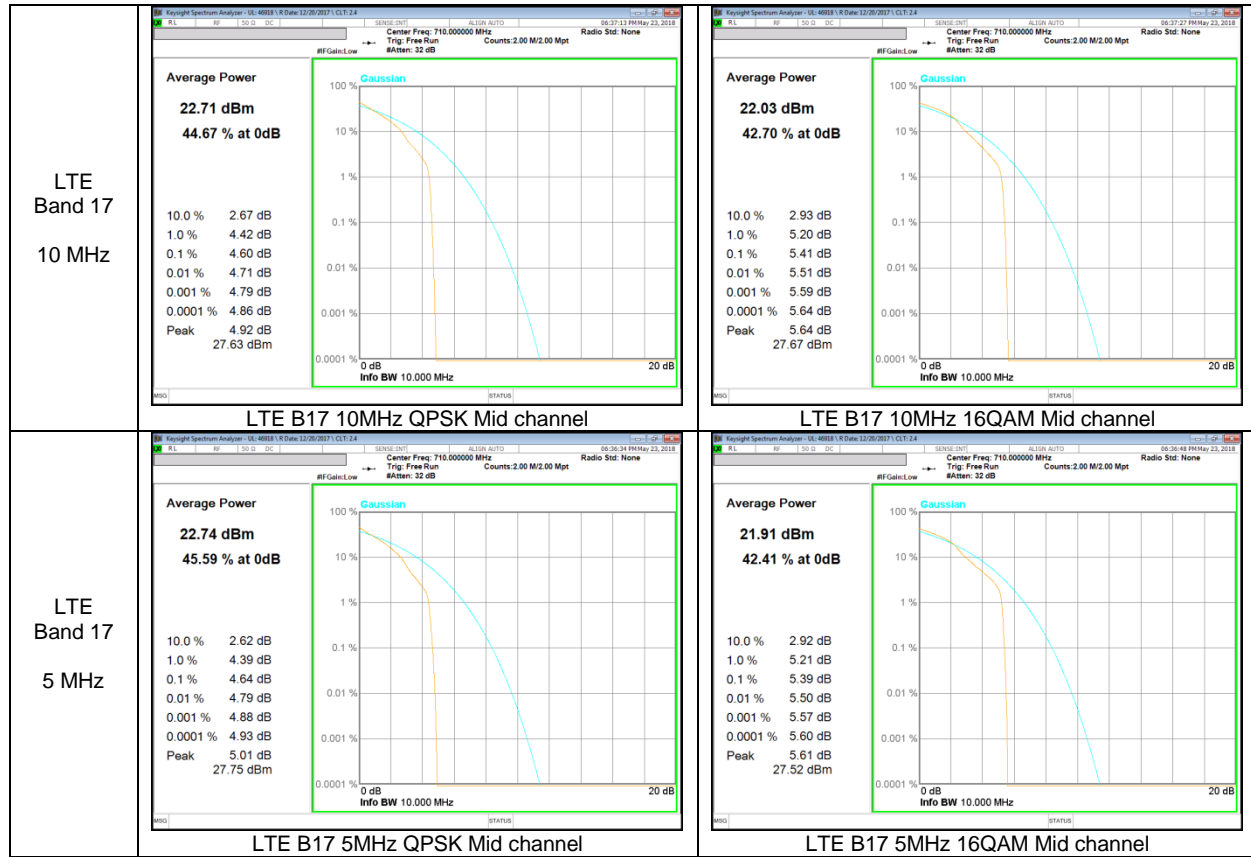
WCDMA



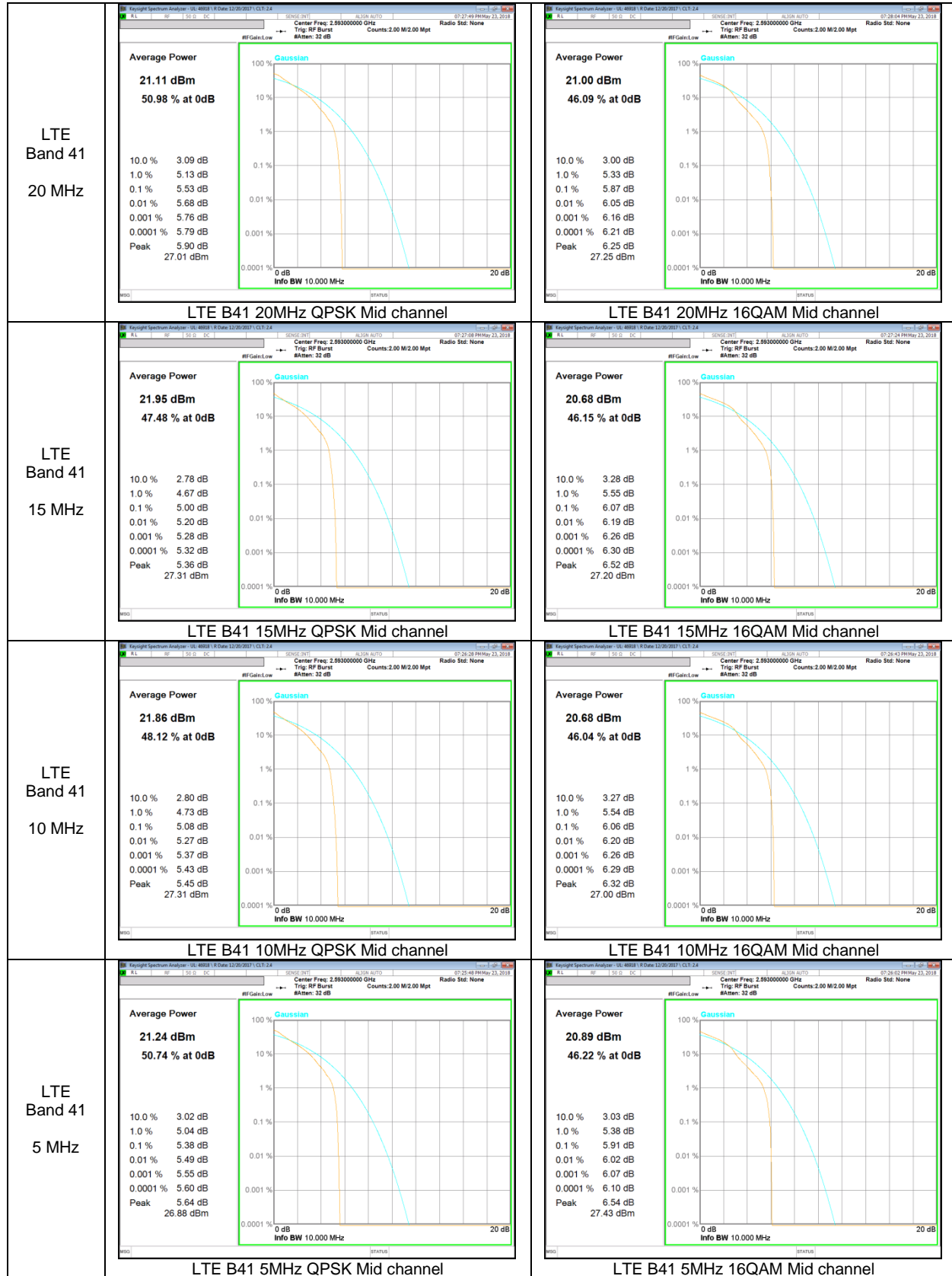
LTE Band 5



LTE Band 17



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]
GSM1900	GPRS	512	1850.2	243.89	314.8
		661	1880.0	245.72	304.9
		810	1909.8	243.62	326.4
	EGPRS	512	1850.2	251.57	310.4
		661	1880.0	232.95	292.1
		810	1909.8	241.44	300.5

WCDMA

Band	Mode	Channel	f [MHz]	99% BW [MHz]	26dB BW [MHz]
Band 5	REL99	4132	826.4	4.1265	4.657
		4183	836.6	4.1261	4.695
		4233	846.6	4.1333	4.680
	HSDPA	4132	826.4	4.1294	4.666
		4183	836.6	4.1271	4.696
		4233	846.6	4.1328	4.679
Band 2	REL99	9262	1852.4	4.1452	4.703
		9400	1880.0	4.1434	4.698
		9538	1907.6	4.1406	4.682
	HSDPA	9262	1852.4	4.1452	4.656
		9400	1880.0	4.1428	4.680
		9538	1907.6	4.1517	4.676

LTE Band 5

Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 5	10	20450	829.0	QPSK	8.9549	9.768
				16QAM	8.9694	9.814
		20524	836.5	QPSK	8.9428	9.812
				16QAM	8.9557	9.780
		20599	844.0	QPSK	8.9689	9.749
				16QAM	8.9419	9.729
	5	20425	826.5	QPSK	4.4985	4.970
				16QAM	4.4927	4.985
		20524	836.5	QPSK	4.4889	4.952
				16QAM	4.4881	4.952
		20624	846.5	QPSK	4.4950	4.945
				16QAM	4.4826	4.928
	3	20415	825.5	QPSK	2.6919	2.975
				16QAM	2.6949	2.948
		20524	836.5	QPSK	2.6909	2.970
				16QAM	2.6908	2.969
		20634	847.5	QPSK	2.6931	2.979
				16QAM	2.6898	2.980
	1.4	20407	824.7	QPSK	1.0952	1.296
				16QAM	1.0834	1.283
		20524	836.5	QPSK	1.0830	1.269
				16QAM	1.0842	1.283
		20624	848.3	QPSK	1.0873	1.311
				16QAM	1.0930	1.287

LTE Band 17

Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 17	10	23780	709.0	QPSK	8.9495	9.821
				16QAM	8.9659	9.716
		23790	710.0	QPSK	8.9709	9.706
				16QAM	8.9468	9.784
		23799	711.0	QPSK	8.9473	9.825
				16QAM	8.9487	9.786
	5	23755	706.5	QPSK	4.4831	4.943
				16QAM	4.4788	4.928
		23790	710.0	QPSK	4.4902	4.946
				16QAM	4.4781	4.909
		23824	713.5	QPSK	4.4971	4.983
				16QAM	4.4941	5.001

LTE Band 41

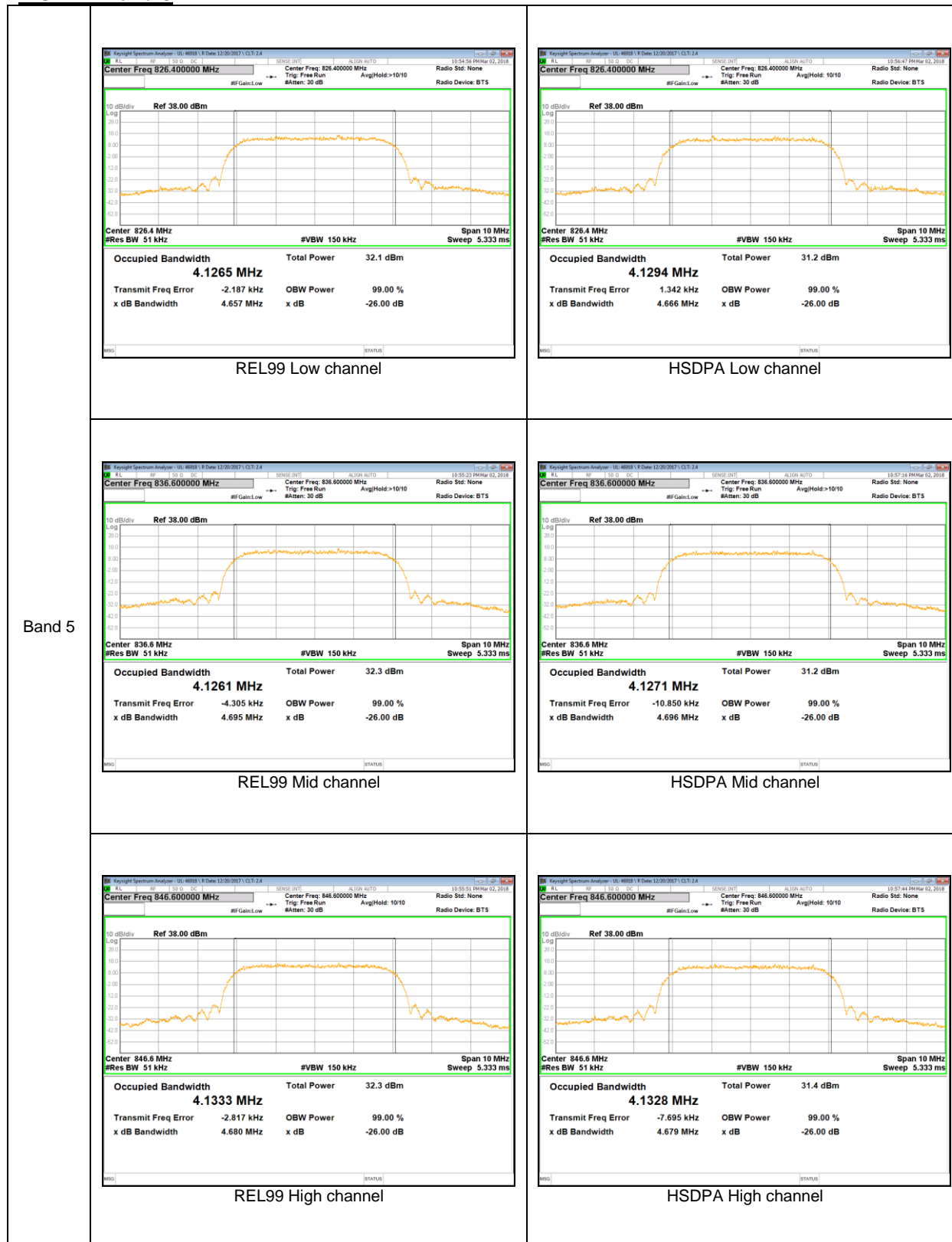
Band	BW [MHz]	Channel	f [MHz]	Mode	99% BW [MHz]	26dB BW [MHz]
Band 41	20	35970	2506.0	QPSK	17.869	19.27
				16QAM	17.887	19.40
		40620	2593.0	QPSK	17.886	19.37
				16QAM	17.884	19.56
		41490	2680.0	QPSK	17.891	19.20
				16QAM	17.894	19.84
	15	39725	2503.5	QPSK	13.383	14.55
				16QAM	13.407	14.79
		40620	2593.0	QPSK	13.401	14.67
				16QAM	13.430	14.62
		41515	2682.5	QPSK	13.401	14.51
				16QAM	13.413	14.80
	10	39700	2501.0	QPSK	8.9607	9.839
				16QAM	8.9473	9.733
		40620	2593.0	QPSK	8.9451	9.797
				16QAM	8.9516	9.807
		41540	2685.0	QPSK	8.9623	10.03
				16QAM	8.9451	9.903
	5	39675	2498.5	QPSK	4.4816	4.992
				16QAM	4.4793	4.942
		40620	2593.0	QPSK	4.4980	5.051
				16QAM	4.4813	4.910
		41565	2687.5	QPSK	4.4992	5.149
				16QAM	4.4827	4.951

9.1.2. OCCUPIED BANDWIDTH PLOTS

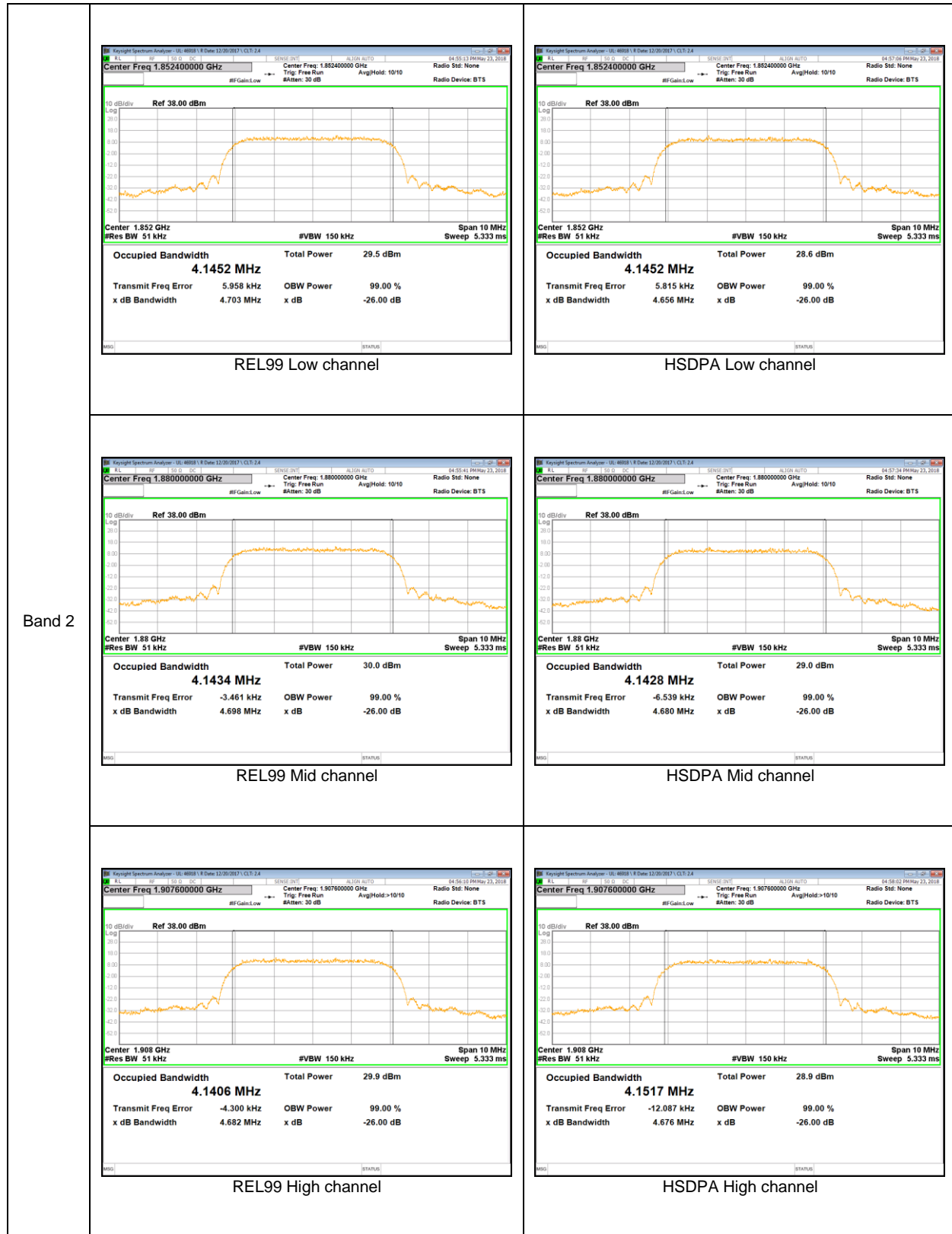
GSM 1900



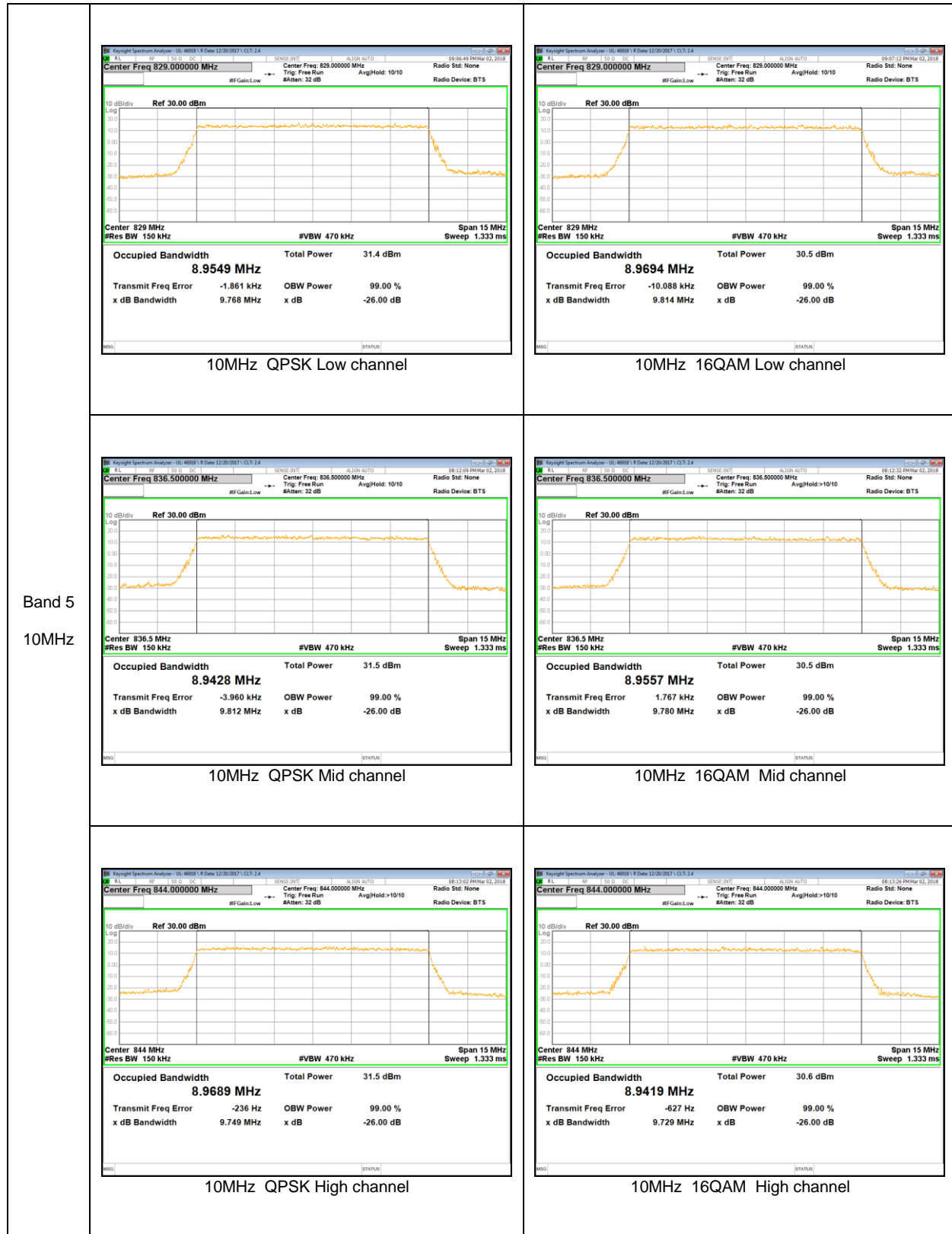
WCDMA Band 5



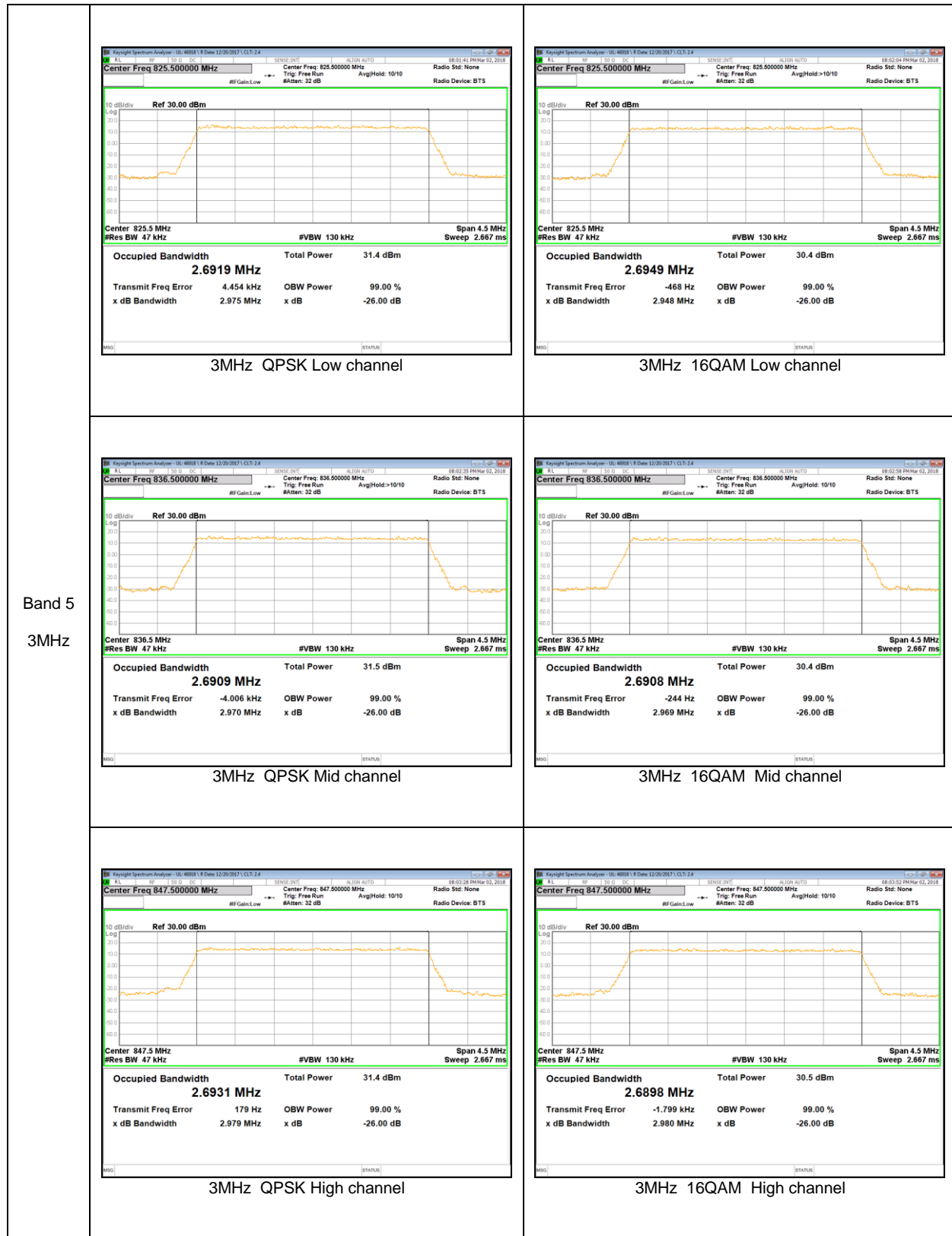
WCDMA Band 2

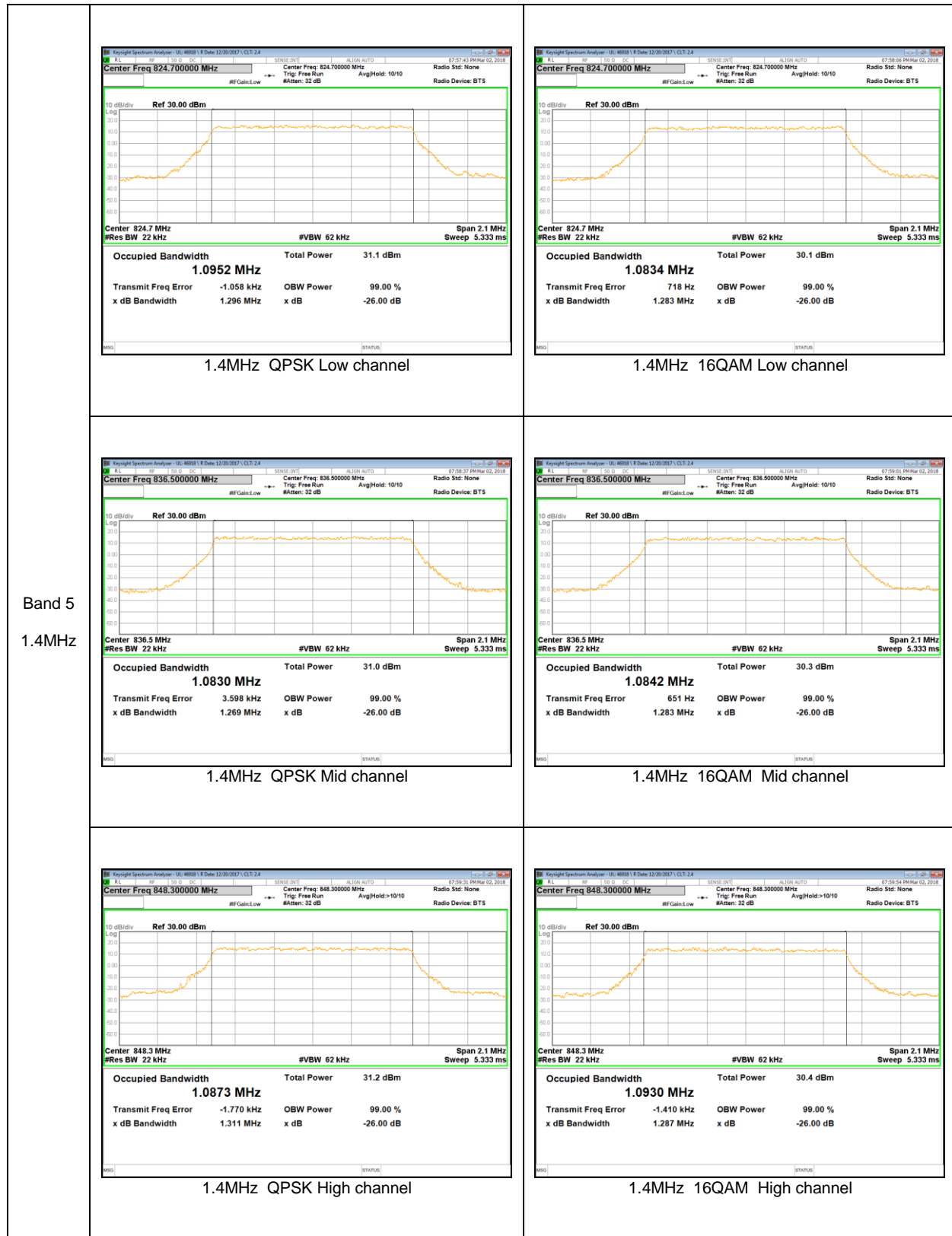


LTE Band 5

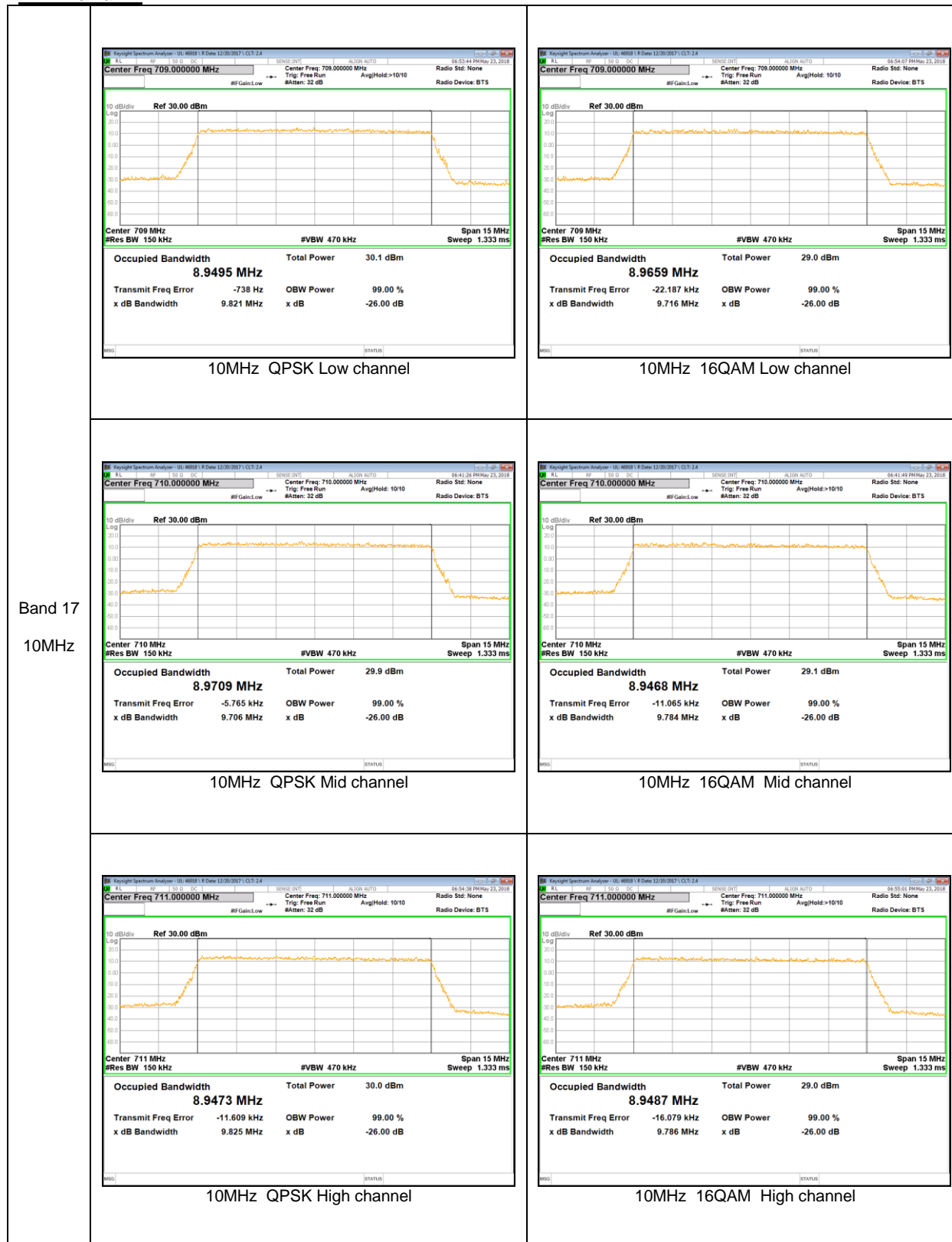


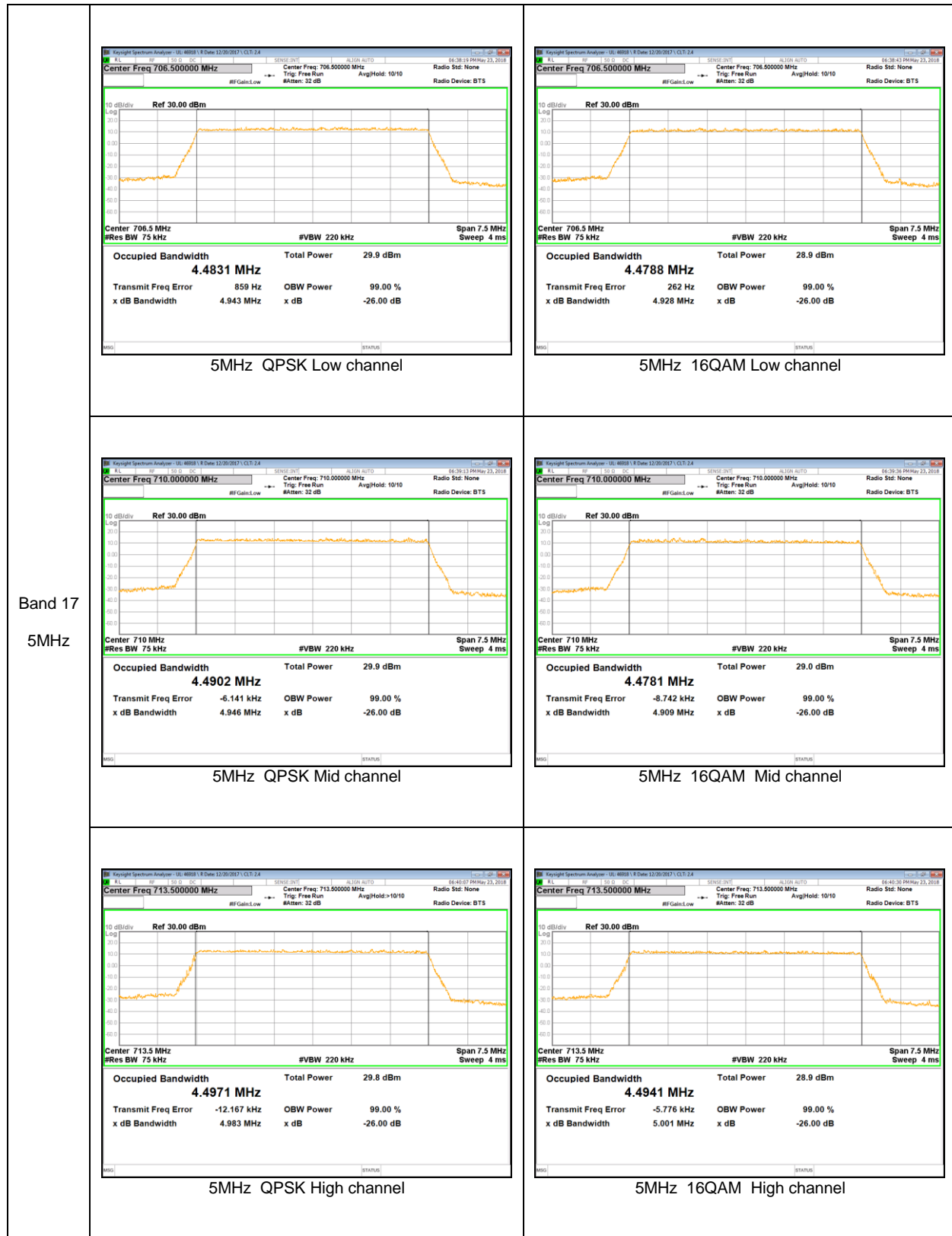






LTE Band 17





LTE Band 41

