

Shenzhen Huatongwei International Inspection Co., Ltd.

1/F,Bldg 3,Hongfa Hi-tech Industrial Park,Genyu Road,Tianliao,Gongming,Shenzhen,China Phone:86-755-26748019 Fax:86-755-26748089 http://www.szhtw.com.cn



FCC REPORT

Report Reference No.....: TRE1612021402 R/C.....:53033

FCC ID.....: ZSW-30-040

Applicant's name.....: b mobile HK Limited

Address...... Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak

Street; Kwai Chung; New Territories; Hong Kong.

Manufacturer..... b mobile HK Limited

Address..... Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak

Street; Kwai Chung; New Territories; Hong Kong.

Test item description: Mobile Phone

Trade Mark Bmobile

Model/Type reference...... AX1075

Listed Model(s) -

Standard: FCC Part 24:PERSONAL COMMUNICATIONS SERVICES

FCC Part 27: MISCELLANEOUS WIRELESS

COMMUNICATIONS SERVICES

Date of receipt of test sample...... Dec. 30, 2016

Date of testing...... Dec. 30, 2016- Feb. 20, 2017

Date of issue...... Feb. 20, 2017

Result..... Pass

Compiled by

(position+printedname+signature)...: File administrators Becky Liang

Supervised by

(position+printedname+signature)....: Project Engineer Lion Cai

Approved by

(position+printedname+signature)....: Manager Hans Hu

Testing Laboratory Name: Shenzhen Huatongwei International Inspection Co., Ltd.

Gongming, Shenzhen, China

Shenzhen Huatongwei International Inspection Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Huatongwei International Inspection Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Huatongwei International Inspection Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Report No.: TRE1612021402 Page: 2 of 167 Issued: 2017-02-20

Contents

<u>1.</u>	TEST STANDARDS AND REPORT VERSION	3
1.1.	Applicable Standards	3
1.2.	Report version	3
		-
<u>2.</u>	TEST DESCRIPTION	4
<u>3.</u>	SUMMARY	5
3.1.	Client Information	5
3.2.	Product Description	5
3.3.	Operation state	6
3.4.	EUT operation mode	6
3.5.	EUT configuration	8
3.6.	Modifications	8
		•
<u>4.</u>	TEST ENVIRONMENT	9
4.1.	Address of the test laboratory	9
4.2.	Test Facility	9
4.3.	Equipments Used during the Test	10
4.4.	Environmental conditions	11
4.5.	Statement of the measurement uncertainty	11
<u>5.</u>	TEST CONDITIONS AND RESULTS	12
5.1.	Conducted Output Power	12
5.2.	99% & -26 dB Occupied Bandwidth	13
5.3.	Conducted Spurious Emissions	47
5.4. 5.5.	Band Edge ERP AND EIRP	80 145
5.6.	Radiated Spurious Emssion	151
5.6. 5.7.	Frequency stability V.S. Temperature measurement	161
5.7. 5.8.	Frequency stability V.S. Voltagemeasurement	163
5.9.	Peak-Average Ratio	165
J.J.	T cak-Average Natio	100
<u>6.</u>	TEST SETUP PHOTOS OF THE EUT	167
7.	EXTERNAL AND INTERNAL PHOTOS OF THE EUT	167
		101

Report No.: TRE1612021402 Page: 3 of 167 Issued: 2017-02-20

1. Test standards and Report version

1.1. Applicable Standards

The tests were performed according to following standards:

FCC Part 24:PUBLIC MOBILE SERVICES

FCC Part 27: MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

TIA/EIA 603 D June 2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

FCC Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REGULATIONS

<u>971168 D01 Power Meas License Digital Systems v02r02:</u>provides a methodology for fully characterizing the fundamental power of wideband (> 1 MHz) digitally modulated RF signals acceptable to the FCC for demonstrating compliance for licensed transmitters.

1.2. Report version

Version No.	Date of issue	Description
00	Feb. 20, 2017	Original

Report No.: TRE1612021402 Page: 4 of 167 Issued: 2017-02-20

2. Test Description

Test Item	Section in CFR 47	Result	
	Part 2.1046		
RF Output Power	Part 24.232(c)	Pass	
	Part 27.50		
000/ 9 26 dB Occupied Pandwidth	Part 2.1049	Pass	
99% & -26 dB Occupied Bandwidth	Part 24.238(b)	Pa55	
	Part 2.1051		
Conducted Spurious Emissions	Part 24.238	Pass	
	Part 27.53		
	Part 2.1051		
Band Edge	Part 24.238	Pass	
	Part 27.53		
EDD and EIDD	Part 22.913(a)	Door	
ERP and EIRP	Part 24.232(b)	Pass	
	Part 2.1053		
Radiated Spurious Emissions	Part 24.238	Pass	
	Part 27.53		
	Part 2.1055(a)(1)(b)		
Frequency stability vs. temperature	Part 24.235	Pass	
	Part 27.54		
	Part 2.1055(d)(1)(2)		
Frequency stability vs. voltage	Part 24.235	Pass	
	Part 27.54		
Dook Average Potio	Part 24.232	Door	
Peak-Average Ratio	Part 27.50	Pass	

Note: The measurement uncertainty is not included in the test result.

Report No.: TRE1612021402 Page: 5 of 167 Issued: 2017-02-20

3. **SUMMARY**

3.1. Client Information

Applicant:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.
Manufacturer:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.

3.2. Product Description

	3.2. Product Description						
Name of EUT	Mobile Phone						
Trade Mark:	Bmobile						
Model No.:	AX1075						
Listed Model(s):	-						
IMEI :	866270029864016						
Power supply:	DC 3.8V From internal battery						
Adapter information:	Input:100-240Va.c., 50-63Hz, 0.4A Output: 5Vd.c.,1A						
Hardware version:	V2.0						
Software version:	e version: Bmobile_AX1075_TEM_MX_V015						
RF Technical Description	RF Technical Description						
⊠FDD Band 2	⊠FDD Band 2						
Operation Frequency:	Uplink:1850.7 MHz – 1909.3 MHz Downlink: 1930.7 MHz – 1989.3 MHz						
Channel bandwidth:	⊠1.4MHz ⊠ 3MHz ⊠ 5MHz ⊠ 10MHz ⊠15MHz						
⊠FDD Band 4							
Operation Frequency:	Uplink:1710.7 MHz – 1754.3 MHz Downlink: 2110.7 MHz – 2154.3 MHz						
Channel bandwidth:	⊠1.4MHz ⊠ 3MHz ⊠ 5MHz ⊠ 10MHz ⊠15MHz ⊠20MHz						
⊠FDD Band 7							
Operation Frequency:	Uplink:2502.5 MHz – 2567.5 MHz Downlink: 2622.5 MHz – 2687.5 MHz						
Channel bandwidth:	□1.4MHz □ 3MHz □ 5MHz □10MHz □15MHz □20MHz						
Power Class:	☐ Class 1 ☐ Class 2 ☐ Class 3 ☐ Class 4						
Modulation type:	⊠QPSK ⊠16QAM □64QAM						
Antennna type:	Integral Antennna						
Antenna gain:	0 dBi						

Report No.: TRE1612021402 Page: 6 of 167 Issued: 2017-02-20

3.3. Operation state

> Test frequency list

FDD Band 2

Bandwidth [MHz]	NuL	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]
1.4	18607	1850.7	607	1930.7
3	18615	1851.5	615	1931.5
5	18625	1852.5	625	1932.5
10	18650	1855	650	1935
15 ^[1]	18675	1857.5	675	1937.5
رتا 20	18700	1860	700	1940
1.4/3/5/10 15 ^[1] /20 ^[1]	18900	1880	900	1960
1.4	19193	1909.3	1193	1989.3
3	19185	1908.5	1185	1988.5
5	19175	1907.5	1175	1987.5
10	19150	1905	1150	1985
	19125	1902.5	1125	1982.5
20 [1]	19100	1900	1100	1980
	1.4 3 5 10 15 [1] 20 [1] 1.4/3/5/10 15 [1]/20 [1] 1.4 3 5	[MHz] 1.4 18607 3 18615 5 18625 10 18650 15 ^[1] 18675 20 ^[1] 18700 1.4/3/5/10 15 ^[1] /20 ^[1] 18900 1.4 19193 3 19185 5 19175 10 19150 15 ^[1] 19125	[MHz] Uplink [MHz] 1.4 18607 1850.7 3 18615 1851.5 5 18625 1852.5 10 18650 1855 15 19 18675 1857.5 20 19 18700 1860 1.4/3/5/10 18900 1880 1.4 19193 1909.3 3 19185 1908.5 5 19175 1907.5 10 19150 1905 15 19 19125 1902.5	[MHz] Uplink [MHz] 1.4 18607 1850.7 607 3 18615 1851.5 615 5 18625 1852.5 625 10 18650 1855 650 15 [1] 18675 1857.5 675 20 [1] 18700 1860 700 1.4/3/5/10 18900 1880 900 1.4 19193 1909.3 1193 3 19185 1908.5 1185 5 19175 1907.5 1175 10 19150 1905 1150 15 [1] 19125 1902.5 1125

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

FDD Band 4

Test Frequency ID	Bandwidth [MHz]	NuL	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]
	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
Low Bongo	5	19975	1712.5	1975	2112.5
Low Range	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
High Dangs	5	20375	1752.5	2375	2152.5
High Range	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1745	2300	2145

FDD Band 7

Test Frequency ID	Bandwidth [MHz]	NuL	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]		
	5	20775	2502.5	2775	2622.5		
Law Banga	10	20800	2505	2800	2625		
Low Range	15	20825	2507.5	2825	2627.5		
	20 [1]	20850	2510	2850	2630		
Mid Range	5/10/15 20 ^[1]	21100	2535	3100	2655		
	5	21425	2567.5	3425	2687.5		
High Range	10	21400	2565	3400	2685		
	15	21375	2562.5	3375	2682.5		
	20 [1]	21350	2560	3350	2680		
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS							

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

3.4. EUT operation mode

For RF test items

The EUT has been tested under typical operating condition. The Applicant providessoftware to control the EUT for staying in continous transmitting and receiving mode for testing.

Report No.: TRE1612021402 Page: 7 of 167 Issued: 2017-02-20

Took Howe	Bandwidth (MHz)		Modulation		RB#			Test Channel							
Test Items	Бапи	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	М	Н
	2	٧	٧	V	٧	٧	V	٧	V	٧	V	٧	٧	٧	٧
Max OutputPower	4	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧
	7	-	-	٧	٧	٧	٧	٧	V	٧	٧	٧	٧	٧	٧
26dB and 99% Bandwidth	2	٧	٧	V	٧	٧	V	٧	٧			٧	٧	٧	٧
	4	٧	٧	V	٧	٧	V	٧	٧			٧	٧	٧	٧
Bandwidth	7	-	-	V	V	٧	V	٧	٧			٧	٧	٧	٧
Conducted	2	٧	٧	V	V	٧	V	٧	٧	٧		٧	٧		٧
Conducted Band Edge	4	٧	٧	V	V	٧	V	٧	٧	٧		٧	٧		٧
	7	-	-	V	٧	٧	V	٧	٧	٧		٧	٧		٧
Conducted Spurious Emission	2	٧	٧	V	V	٧	V	٧	٧	٧			٧	٧	٧
	4	٧	٧	V	V	٧	V	٧	٧	٧			٧	٧	٧
Emission	7	-	-	V	٧	٧	V	٧	٧	٧			٧	٧	٧
	2	٧	٧	٧	٧	٧	٧	٧	٧	٧			٧	٧	٧
E.R.P./ E.I.R.P.	4	٧	٧	V	٧	٧	V	٧	٧	٧			٧	٧	٧
	7	-	-	٧	٧	٧	٧	٧	٧	٧			٧	٧	٧
Radiated	2	٧	٧	V	٧	٧	V	٧		٧			٧	٧	٧
Spurious	4	٧	٧	V	٧	٧	V	٧		٧			٧	٧	٧
Emission	7	-	1	٧	٧	٧	٧	٧		٧			٧	٧	٧
_	2						V	٧	V			٧		٧	
Frequency Stability	4						V	٧	٧			٧		٧	
	7						V	٧	٧			٧		٧	
	2						٧	٧	V	٧		٧	٧	٧	>
Peak-to- AverageRatio	4						V	٧	V	٧		٧	٧	٧	٧
_	7						V	٧	V	٧		٧	٧	٧	٧
Remark	2. Th 3. Th														

different RB reported.

Report No.: TRE1612021402 Page: 8 of 167 Issued: 2017-02-20

3.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- supplied by the manufacturer
- O supplied by the lab

Length (m):	/
Shield:	/
Detachable :	/
Manufacturer :	/
Model No.:	/

3.6. Modifications

No modifications were implemented to meet testing criteria.

Report No.: TRE1612021402 Page: 9 of 167 Issued: 2017-02-20

4. TEST <u>ENVIRONMENT</u>

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd.

Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

Phone: 86-755-26748019 Fax: 86-755-26748089

4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: February 28, 2015. Valid time is until February 27, 2018.

A2LA-Lab Cert. No. 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until February 27, 2018.

FCC-Registration No.: 317478

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 317478, Renewal date Jul. 18, 2014, valid time is until Jul. 18, 2017.

IC-Registration No.: 5377B

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377B on Dec.03, 2014, valid time is until Dec.03, 2017.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

Report No.: TRE1612021402 Page: 10 of 167 Issued: 2017-02-20

4.3. Equipments Used during the Test

	Output Power(Conducted) &Occupied Bandwidth&Emission Bandwidth&Band Edge Compliance&Conducted Spurious Emission								
No.	No. Equipment Manufacturer Model No. SerialNo. Last Cal.								
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13				
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	2016/11/13				
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13				
4	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13				

Frequer	Frequency Stability									
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.					
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13					
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	2016/11/13					
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13					
4	Climate Chamber	ESPEC	EL-10KA	05107008	2016/11/13					
5	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13					

Output Power (Radiated) &Radiated Spurious Emission							
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.		
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13		
2	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13		
3	HORNANTENNA	ShwarzBeck	9120D	1012	2016/11/13		
4	HORNANTENNA	ShwarzBeck	9120D	1011	2016/11/13		
5	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2016/11/13		
6	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	539	2016/11/13		
7	TURNTABLE	MATURO	TT2.0		2016/11/13		
8	ANTENNA MAST	MATURO	TAM-4.0-P		N/A		
9	EMI Test Software	Audix	E3	N/A	N/A		
10	EMI Test Receiver	Rohde&Schwarz	ESIB 26	100009	2016/11/13		
11	RF Test Panel	Rohde&Schwarz	TS / RSP	335015/ 0017	2016/11/13		
12	High pass filter	Compliance Direction systems	BSU-6	34202	2016/11/13		
13	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13		
14	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2016/11/13		
15	Horn Antenna	SCHWARZBECK	BBHA9170	25842	2016/11/13		
16	Preamplifier	ShwarzBeck	BBV 9718	BBV 9718	2016/11/13		
17	Broadband Preamplifier	ShwarzBeck	BBV743	9743-0079	2016/11/13		
18	Signal Generator	Rohde&Schwarz	SMF100A	101932	2016/11/13		
19	Amplifer	Compliance Direction systems	PAP1-4060	120	2016/11/13		
20	TURNTABLE	ETS	2088	2149	2016/11/13		
21	ANTENNA MAST	ETS	2075	2346	2016/11/13		
22	HORNANTENNA	Rohde&Schwarz	HF906	100068	2016/11/13		
23	HORNANTENNA	Rohde&Schwarz	HF906	100039	2016/11/13		
24	WIDEB.RADIO COMM.TESRER	R&S	CMW500	1201.0002K50	2016/11/13		

The calibration interval was one year.

Report No.: TRE1612021402 Page: 11 of 167 Issued: 2017-02-20

4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature/Tnor:	15~35°C
lative Humidity	30~60 %
Air Pressure	950-1050 hPa

4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01"Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1"and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongweilaboratory is reported:

Hereafter the best measurement capability for Shenzhen Huatongwellaboratory is reported:					
Test Items	MeasurementUncertainty	Notes			
Frequency stability	25 Hz	(1)			
Transmitter power conducted	0.57 dB	(1)			
Transmitter power Radiated	2.20 dB	(1)			
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)			
Conducted Emission 9KHz-30MHz	3.39 dB	(1)			
Radiated Emission 30~1000MHz	4.24 dB	(1)			
Radiated Emissio 1~18GHz	5.16 dB	(1)			
Radiated Emissio 18-40GHz	5.54 dB	(1)			
Occupied Bandwidth		(1)			
Emission Mask		(1)			
Modulation Characteristic		(1)			
Transmitter Frequency Behavior		(1)			

⁽¹⁾ This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

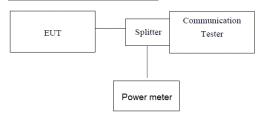
Report No.: TRE1612021402 Page: 12 of 167 Issued: 2017-02-20

5. TEST CONDITIONS AND RESULTS

5.1. Conducted Output Power

LIMIT N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The transmitter output port was connected to base station.
- 2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
- 3. Set EUT at maximum power through base station.
- 4. Select lowest, middle, and highest channels for each band and different modulation.
- 5. Measure the maximum burst average power.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

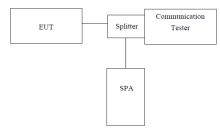
EUT Mode	Frequency (MHz)	Max Avg.Power QPSK (dBm)	Max Avg.Power 16QAM (dBm)	
LTE Band 2	1850.70 - 1909.30	20.93	20.24	
LTE Band 4	1710.70-1754.30	22.42	21.74	
LTE Band 7	2502.50 - 2567.50	21.18	19.77	

Report No.: TRE1612021402 Page: 13 of 167 Issued: 2017-02-20

5.2. 99% & -26 dB Occupied Bandwidth

LIMIT N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
- 2. RBWwas set to about 1% of emission BW, VBW= 3 times RBW.
- 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

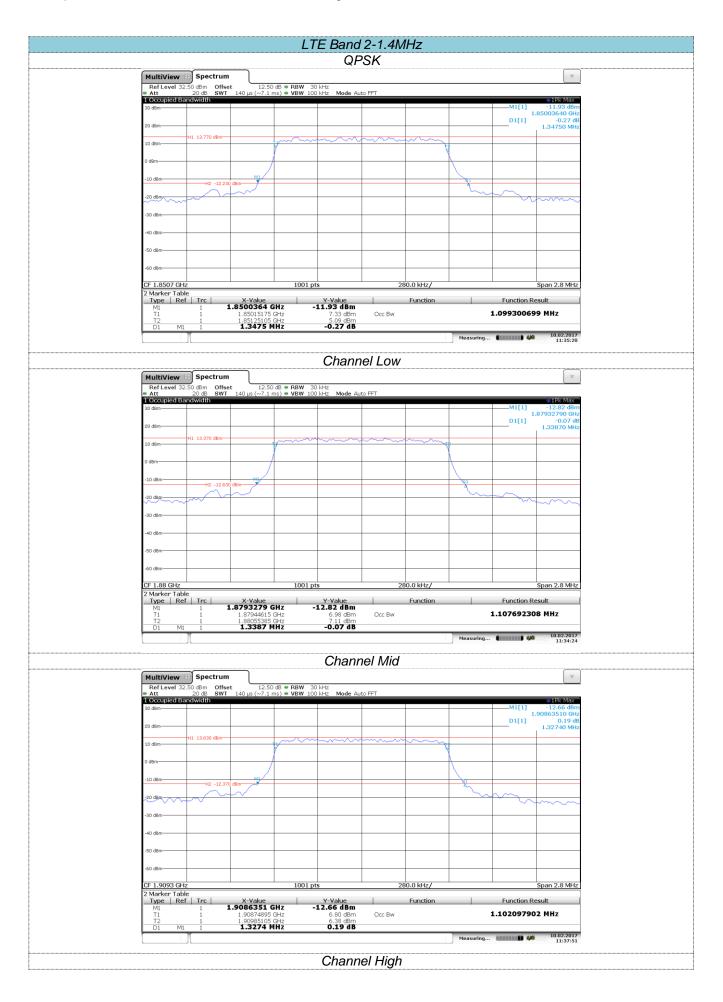
LTE Band 2					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
Danuwiuin		QPSK	16QAM	QPSK	16QAM
	Low	1.10	1.10	1.35	1.33
1.4MHz	Mid	1.11	1.10	1.34	1.33
	High	1.10	1.10	1.33	1.31
	Low	2.69	2.69	2.96	3.00
3MHz	Mid	2.69	2.69	2.97	2.96
	High	2.69	2.69	2.96	2.94
	Low	4.52	4.53	5.05	5.07
5MHz	Mid	4.52	4.51	5.06	5.06
	High	4.50	4.53	5.04	5.09
	Low	8.93	8.95	9.83	9.77
10MHz	Mid	8.95	8.93	9.91	9.70
	High	8.93	8.93	9.72	9.71
	Low	13.52	13.52	14.93	14.93
15MHz	Mid	13.49	13.49	14.98	14.85
	High	13.46	13.49	14.87	14.78
	Low	17.94	17.94	19.45	19.57
20MHz	Mid	17.94	17.90	19.58	19.46
	High	17.90	17.98	19.48	19.54

Report No.: TRE1612021402 Page: 14 of 167 Issued: 2017-02-20

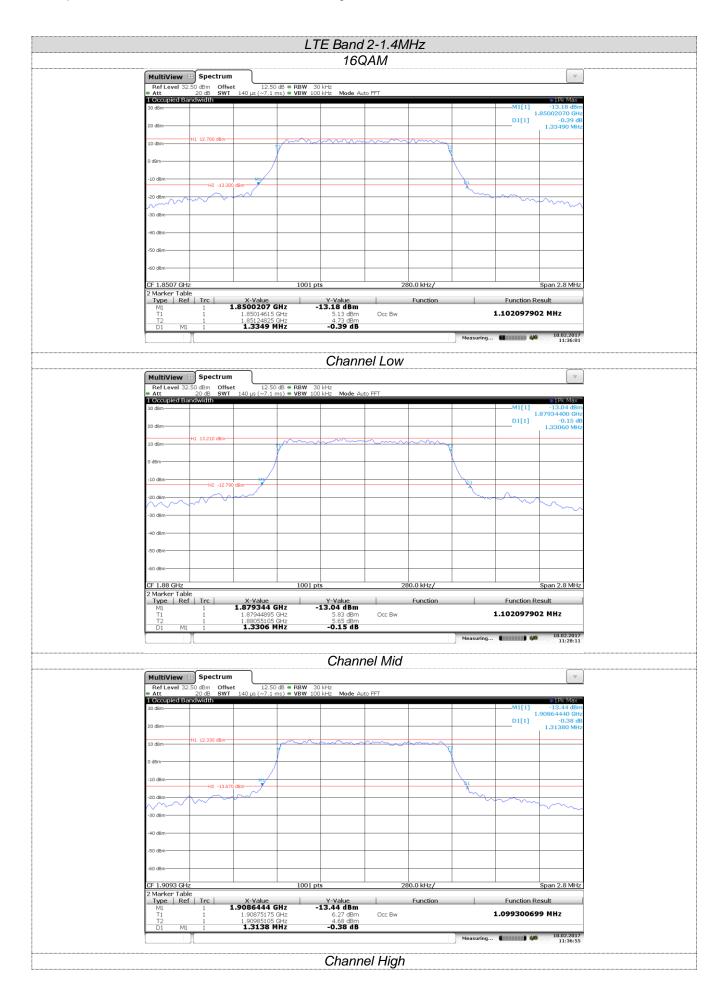
LTE Band 4					
Daniel de la late	Oleman	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
Bandwidth	Channel	QPSK	16QAM	QPSK	16QAM
	Low	1.10	1.10	1.31	1.32
1.4MHz	Mid	1.10	1.10	1.33	1.33
	High	1.10	1.10	1.33	1.29
	Low	2.69	2.69	2.95	2.98
3MHz	Mid	2.69	2.69	2.97	2.96
	High	2.69	2.68	2.93	2.93
	Low	4.51	4.53	5.06	5.07
5MHz	Mid	4.53	4.50	5.05	5.05
	High	4.50	4.53	5.03	5.06
	Low	8.93	8.95	9.78	9.76
10MHz	Mid	8.97	8.95	9.90	9.66
	High	8.93	8.95	9.76	9.72
	Low	13.49	13.49	14.87	14.78
15MHz	Mid	13.52	13.52	14.87	14.90
	High	13.46	13.49	14.84	14.81
	Low	17.90	17.94	19.39	19.49
20MHz	Mid	17.94	17.90	19.61	19.53
	High	17.94	17.94	19.43	19.56

LTE Band 7					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
Dandwidin	Channel	QPSK	16QAM	QPSK	16QAM
	Low	4.51	4.53	5.05	5.04
5MHz	Mid	4.53	4.51	5.05	5.06
	High	4.50	4.52	5.02	5.08
	Low	8.93	8.93	9.72	9.74
10MHz	Mid	8.95	8.95	9.83	9.66
	High	8.95	8.95	9.82	9.73
	Low	13.52	13.49	14.88	14.75
15MHz	Mid	13.49	13.49	14.90	14.86
	High	13.46	13.52	14.86	14.80
	Low	17.94	17.94	19.42	19.33
20MHz	Mid	17.94	17.90	19.59	19.44
	High	17.90	17.94	19.46	19.62

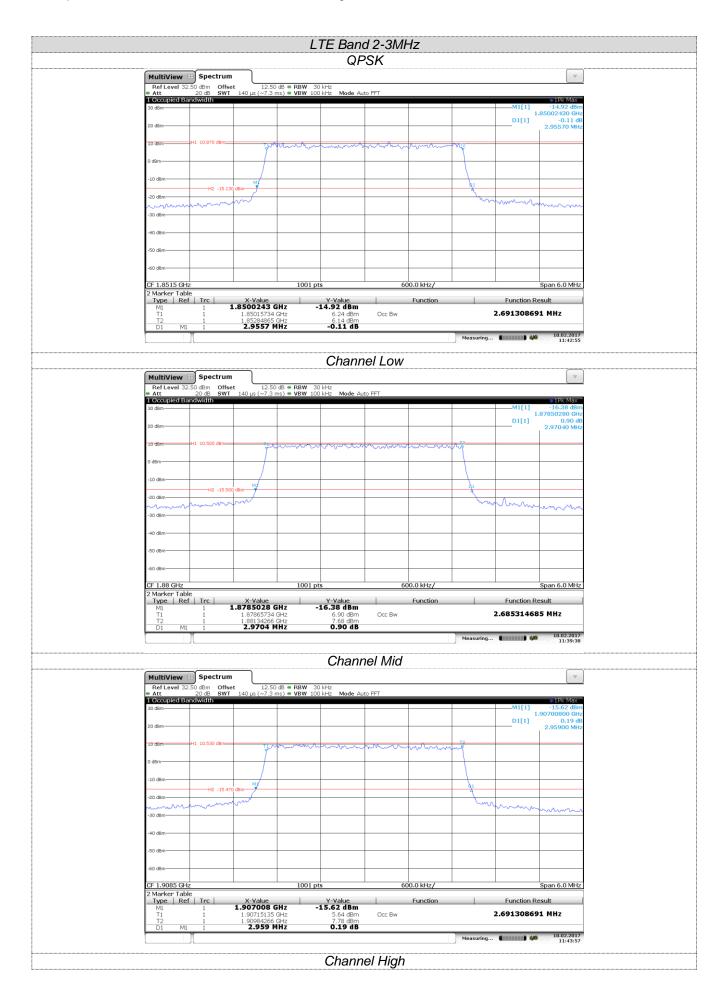
Report No.: TRE1612021402 Page: 15 of 167 Issued: 2017-02-20



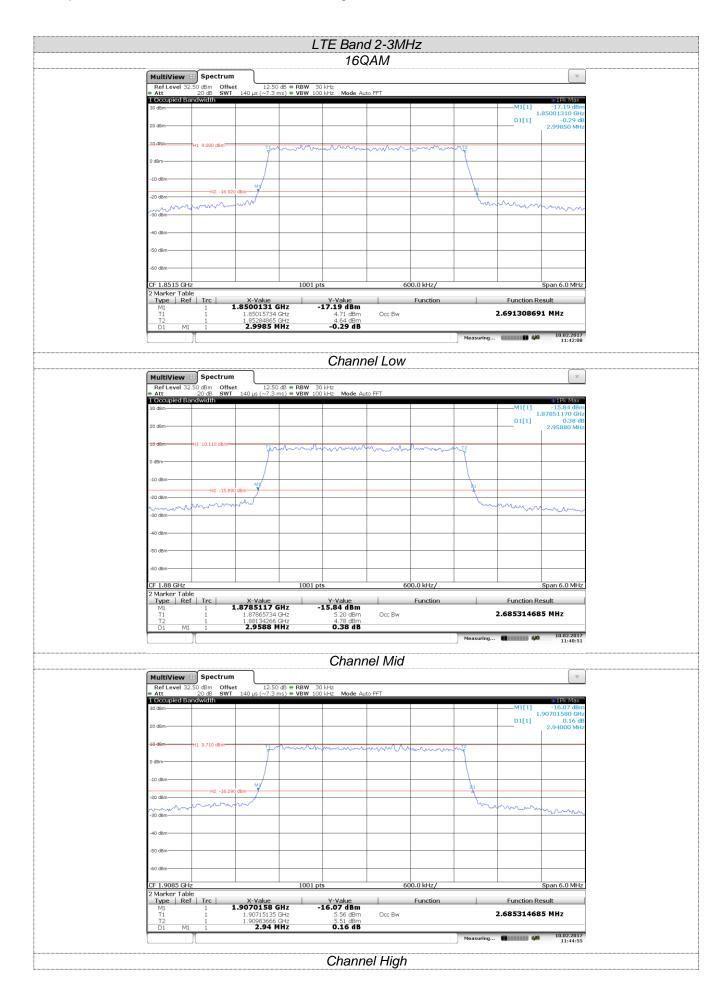
Report No.: TRE1612021402 Page: 16 of 167 Issued: 2017-02-20



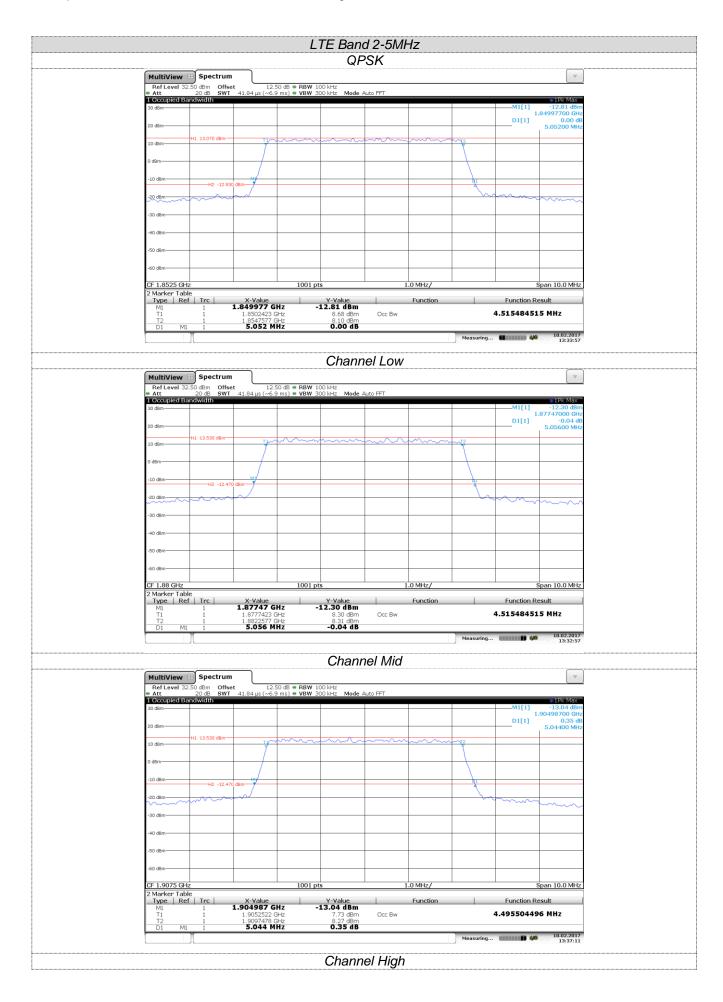
Report No.: TRE1612021402 Page: 17 of 167 Issued: 2017-02-20



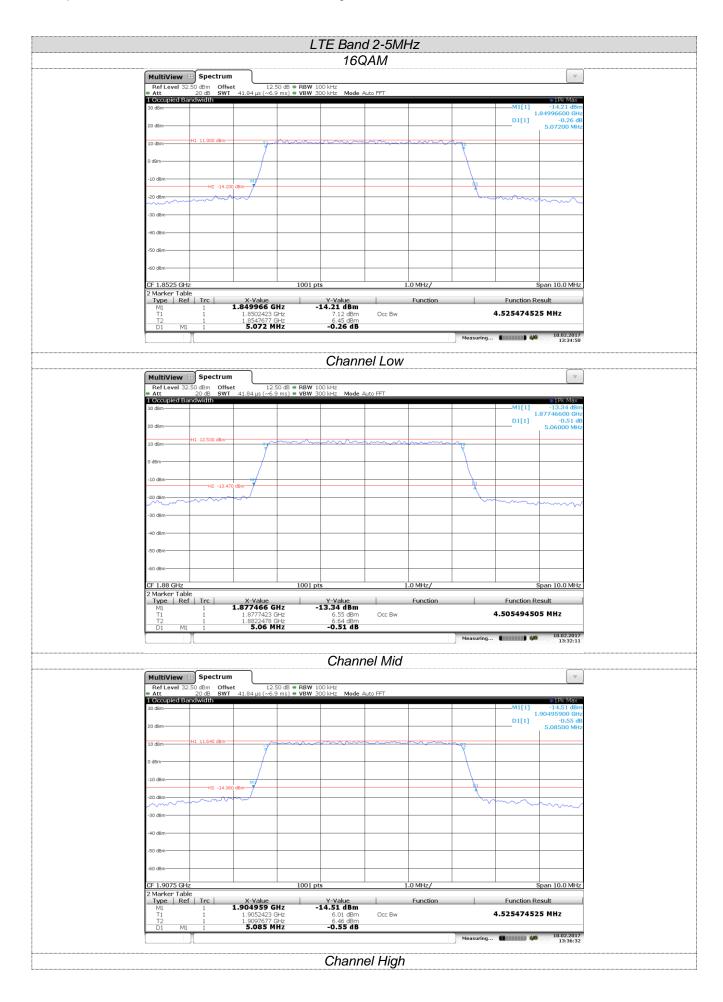
Report No.: TRE1612021402 Page: 18 of 167 Issued: 2017-02-20



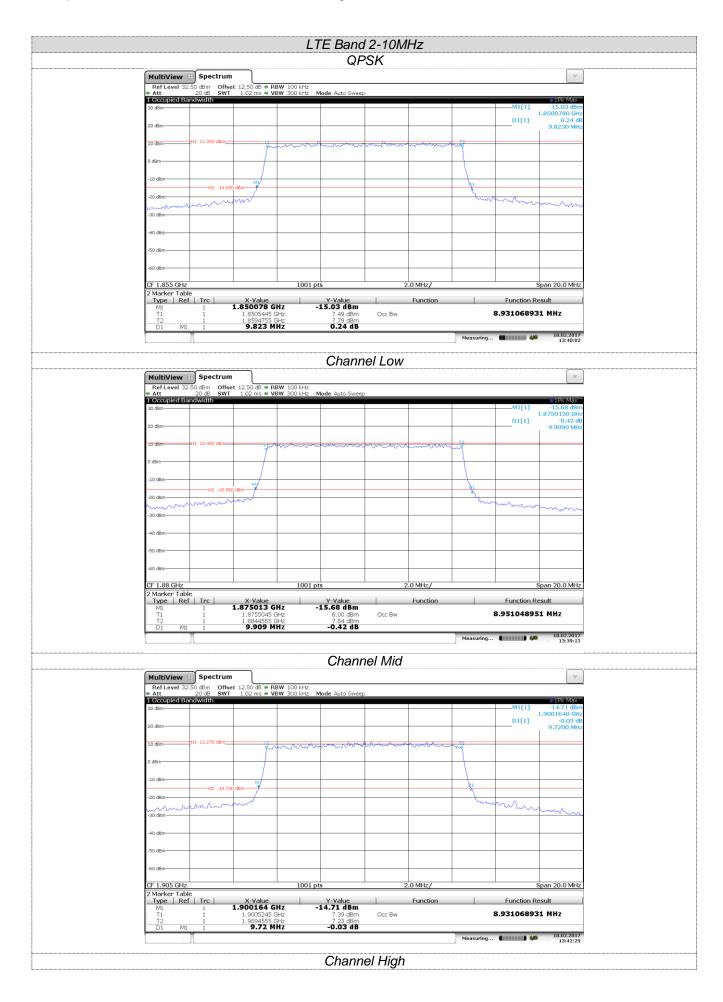
Report No.: TRE1612021402 Page: 19 of 167 Issued: 2017-02-20



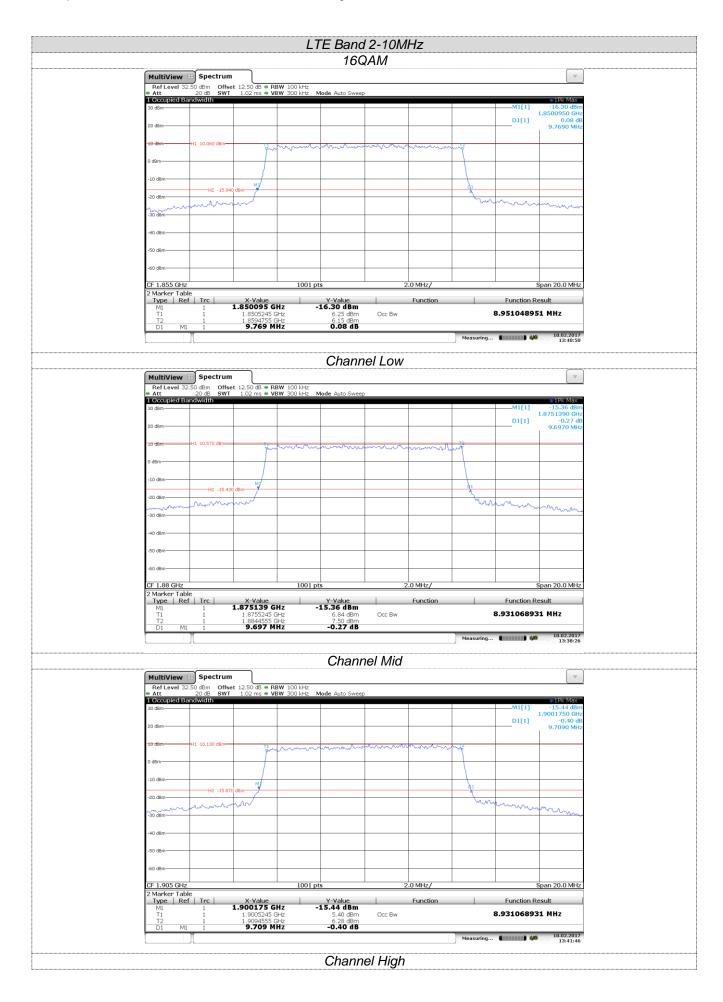
Report No.: TRE1612021402 Page: 20 of 167 Issued: 2017-02-20



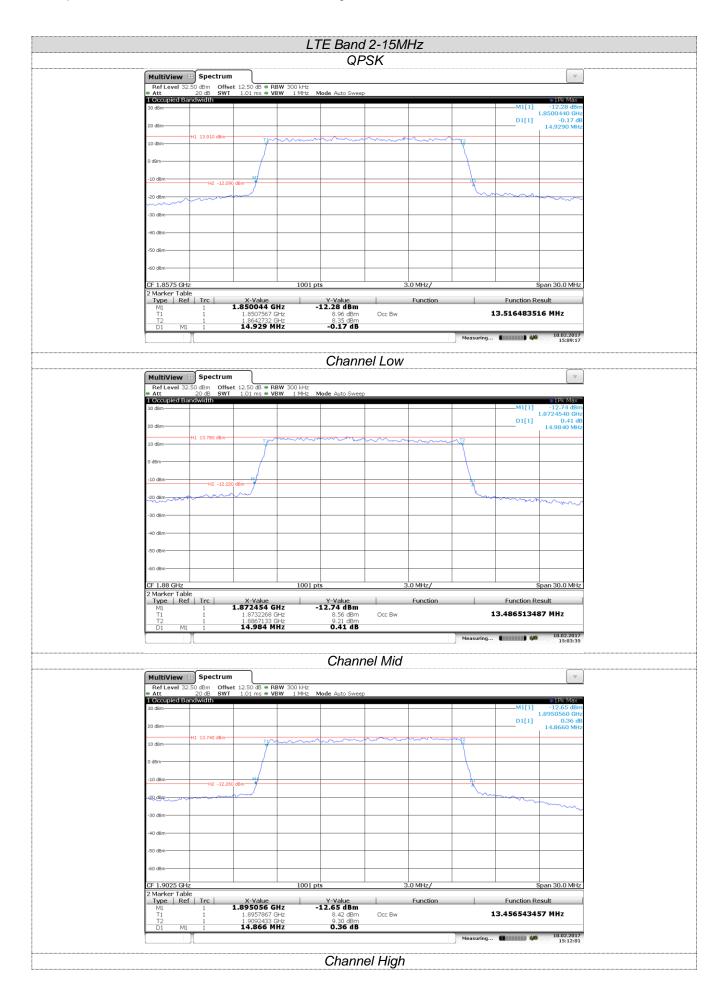
Report No.: TRE1612021402 Page: 21 of 167 Issued: 2017-02-20



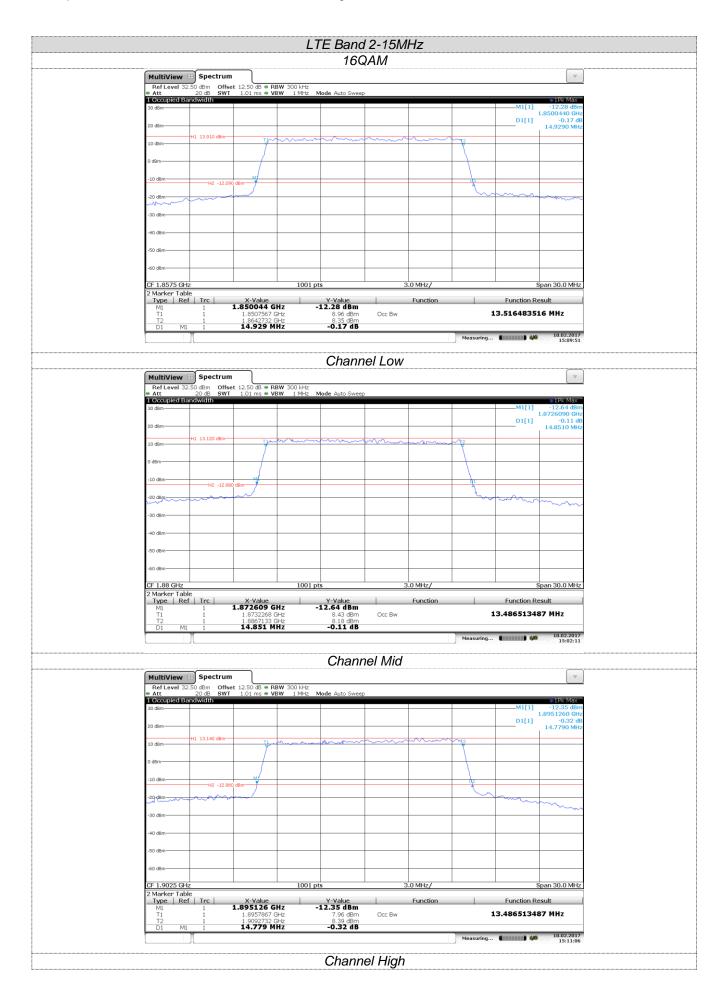
Report No.: TRE1612021402 Page: 22 of 167 Issued: 2017-02-20



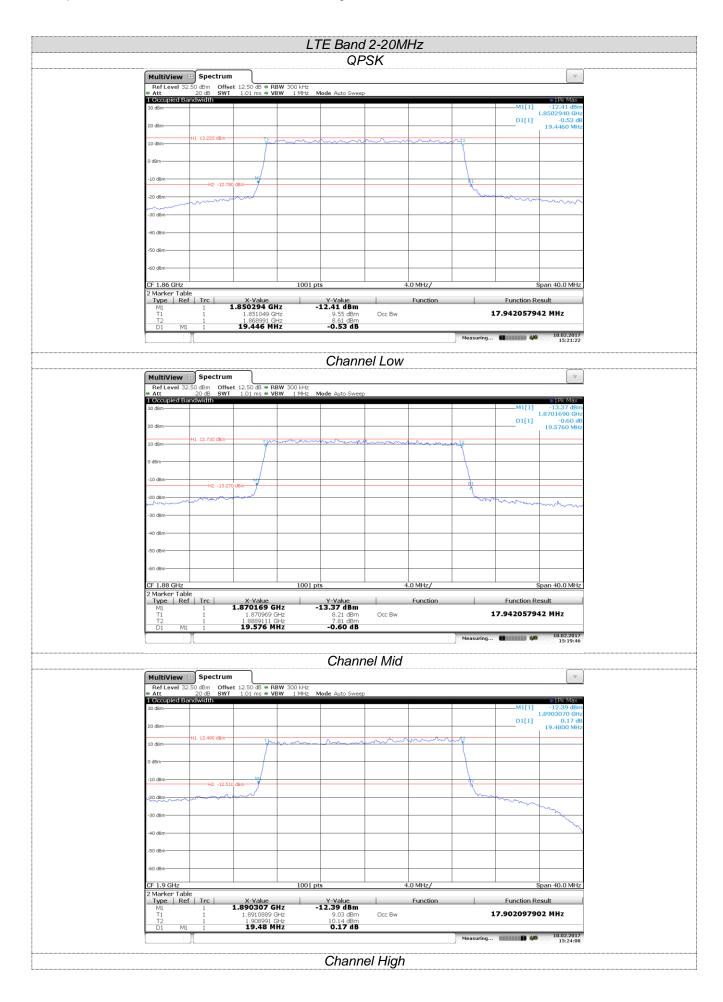
Report No.: TRE1612021402 Page: 23 of 167 Issued: 2017-02-20



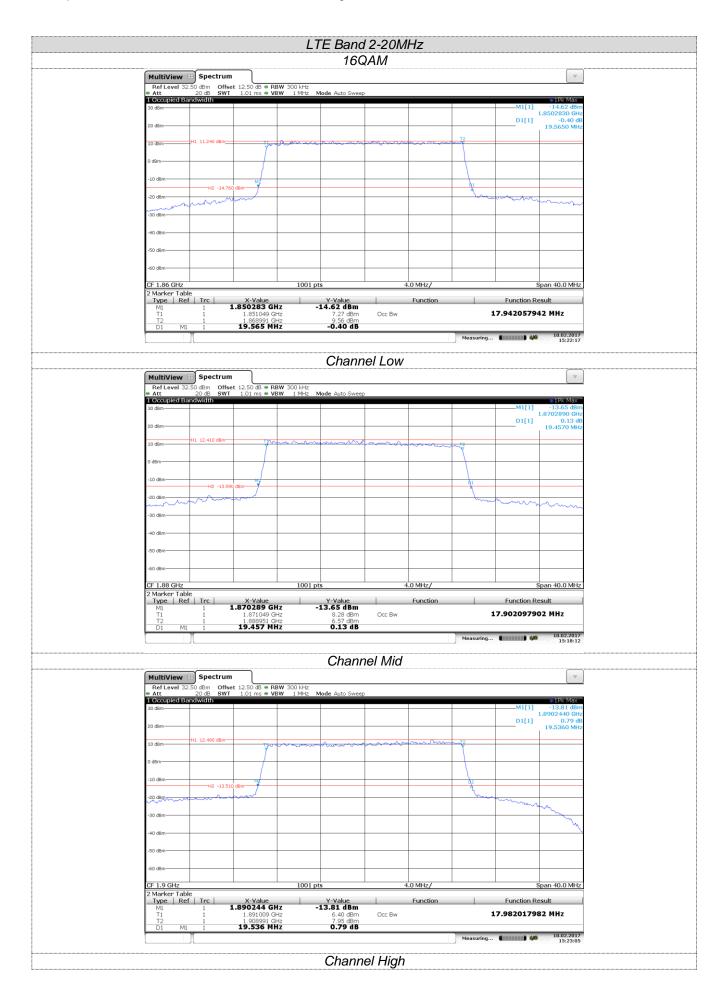
Report No.: TRE1612021402 Page: 24 of 167 Issued: 2017-02-20

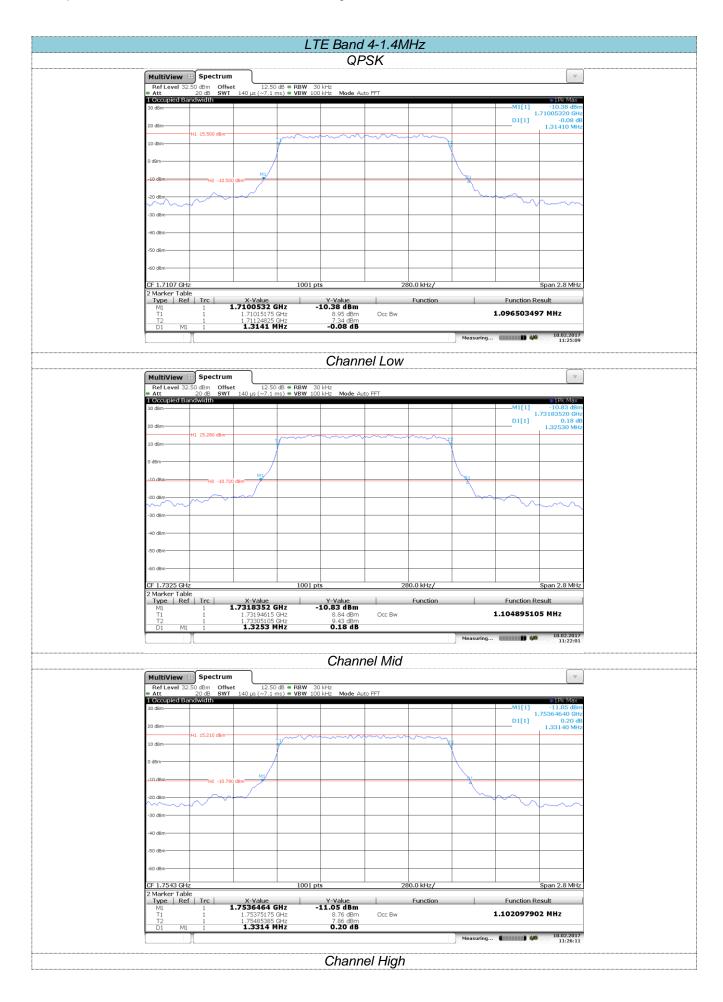


Report No.: TRE1612021402 Page: 25 of 167 Issued: 2017-02-20

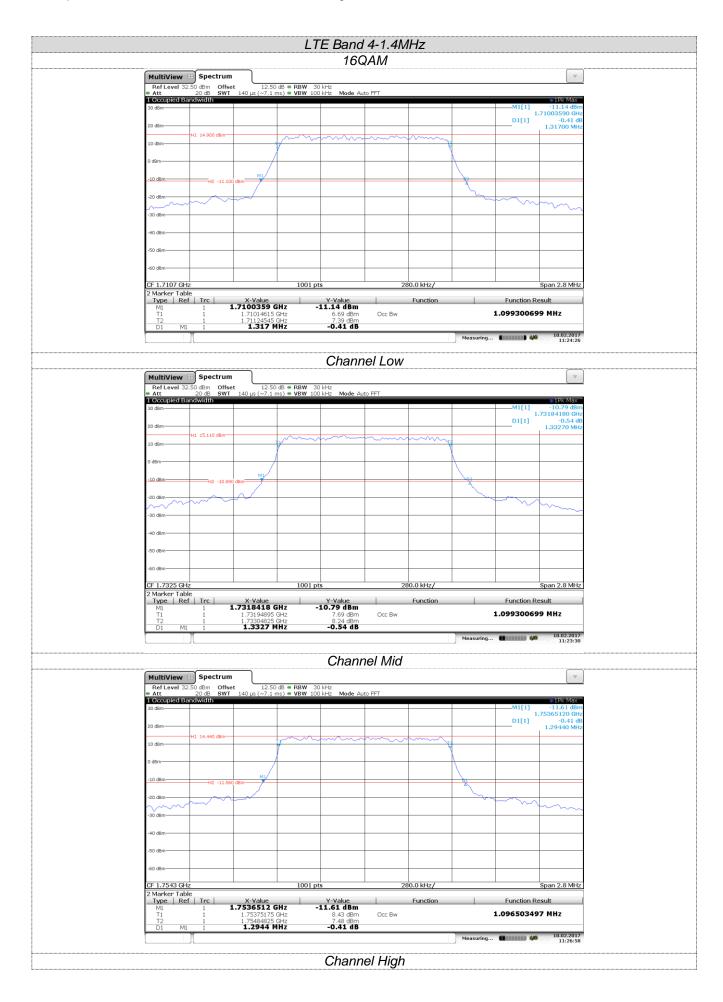


Report No.: TRE1612021402 Page: 26 of 167 Issued: 2017-02-20

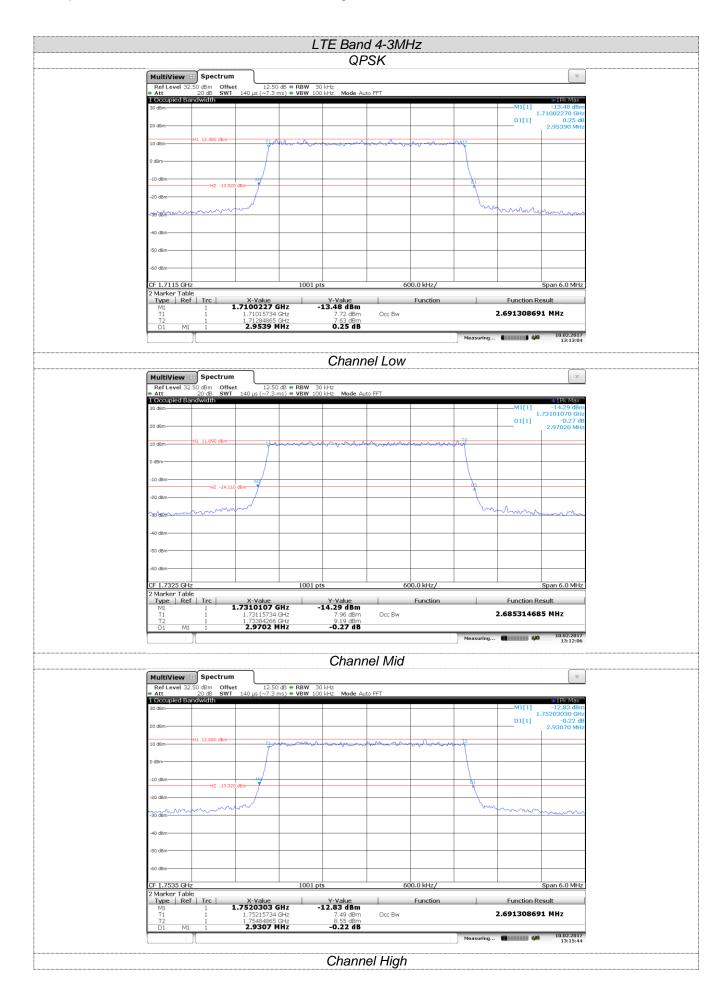




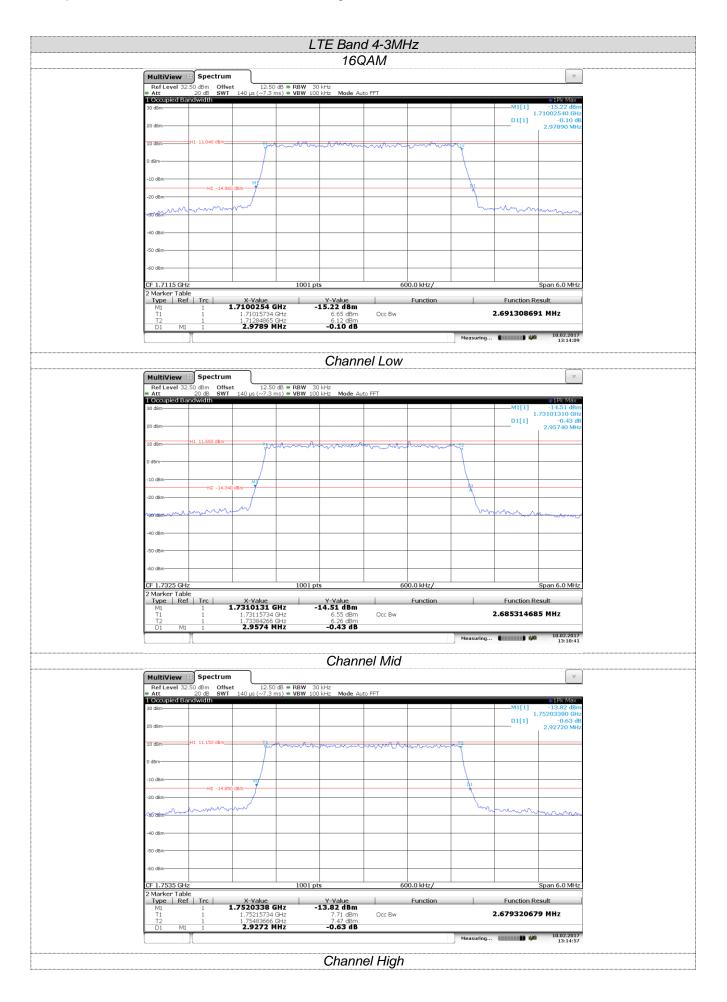
Report No.: TRE1612021402 Page: 28 of 167 Issued: 2017-02-20



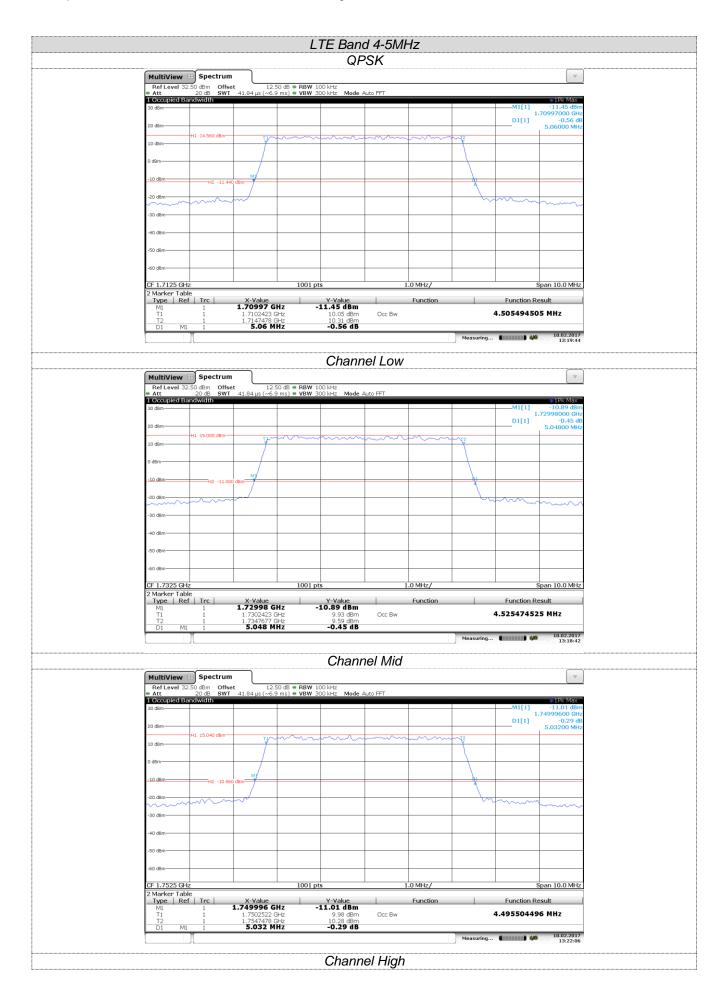
Report No.: TRE1612021402 Page: 29 of 167 Issued: 2017-02-20



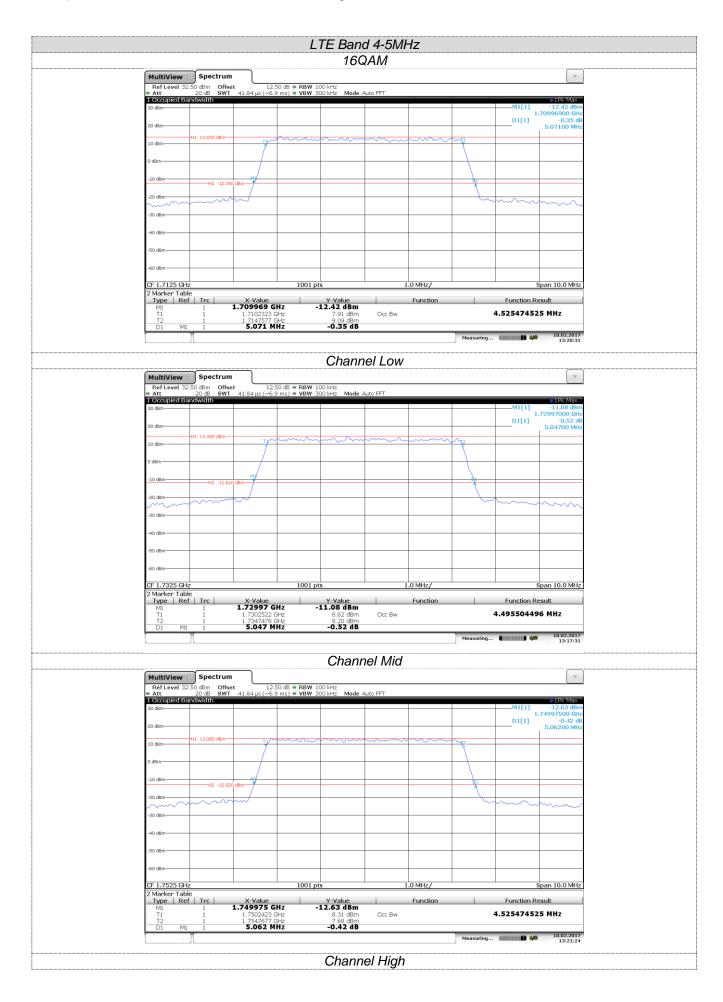
Report No.: TRE1612021402 Page: 30 of 167 Issued: 2017-02-20



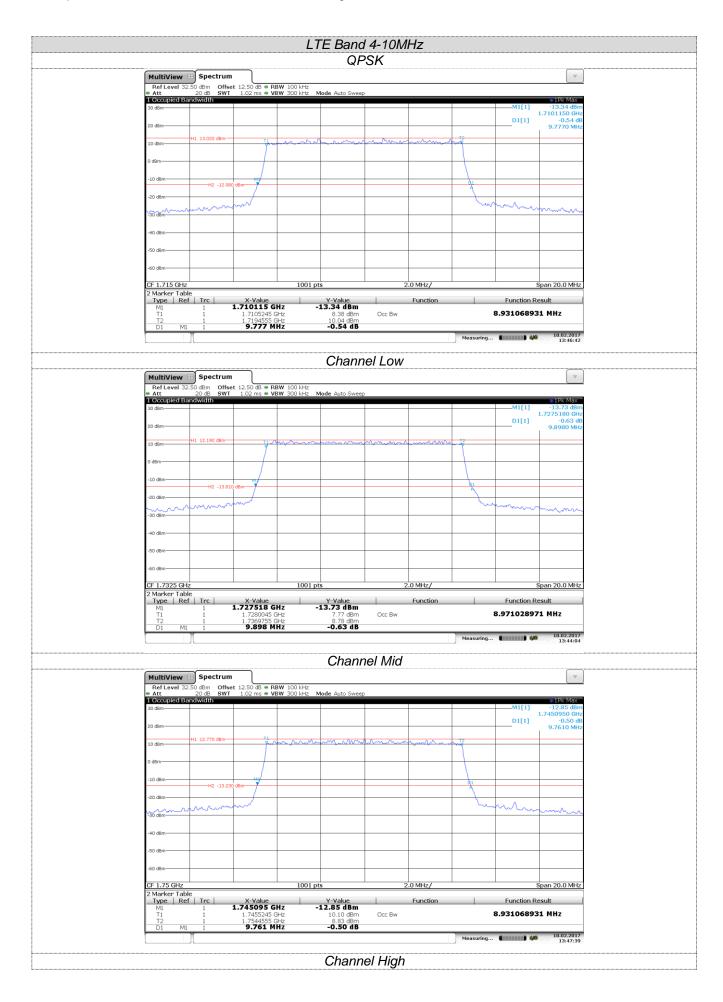
Report No.: TRE1612021402 Page: 31 of 167 Issued: 2017-02-20



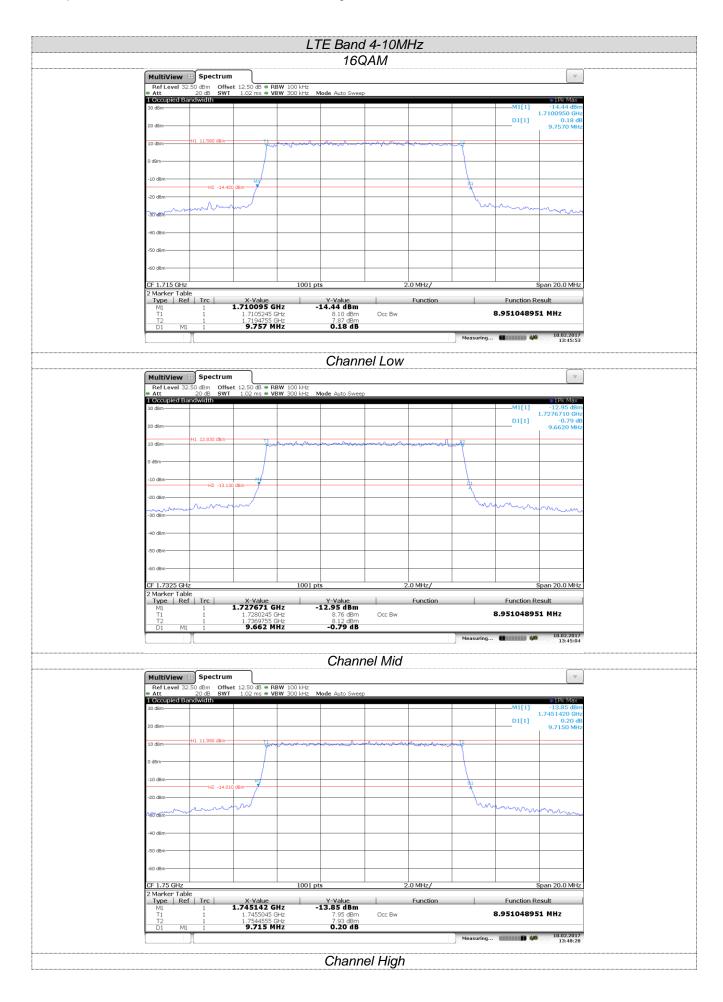
Report No.: TRE1612021402 Page: 32 of 167 Issued: 2017-02-20



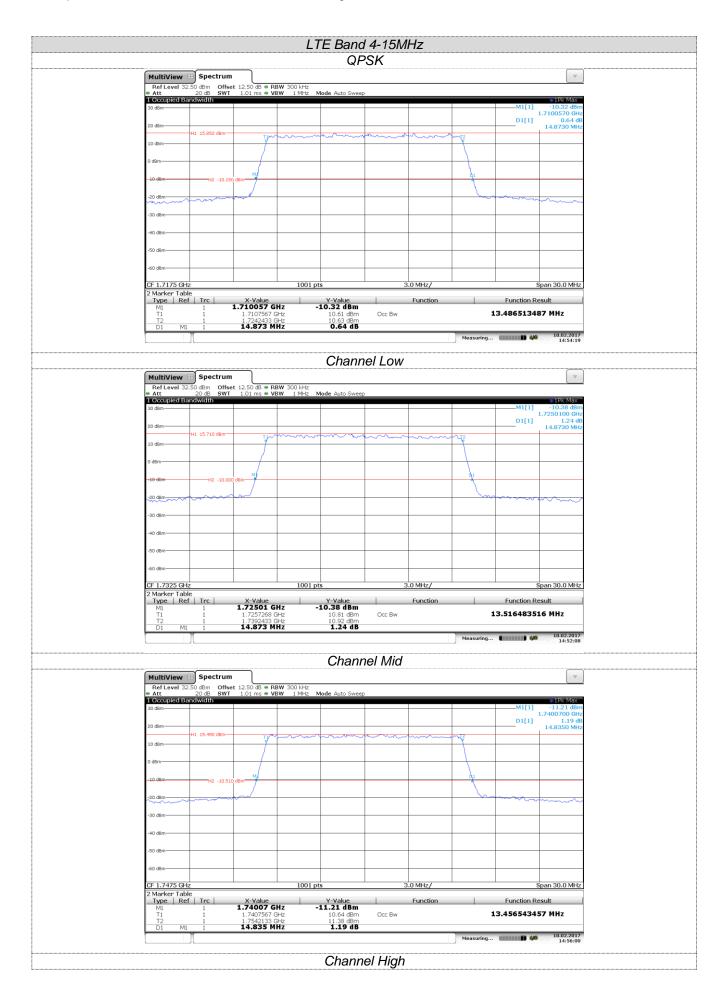
Report No.: TRE1612021402 Page: 33 of 167 Issued: 2017-02-20



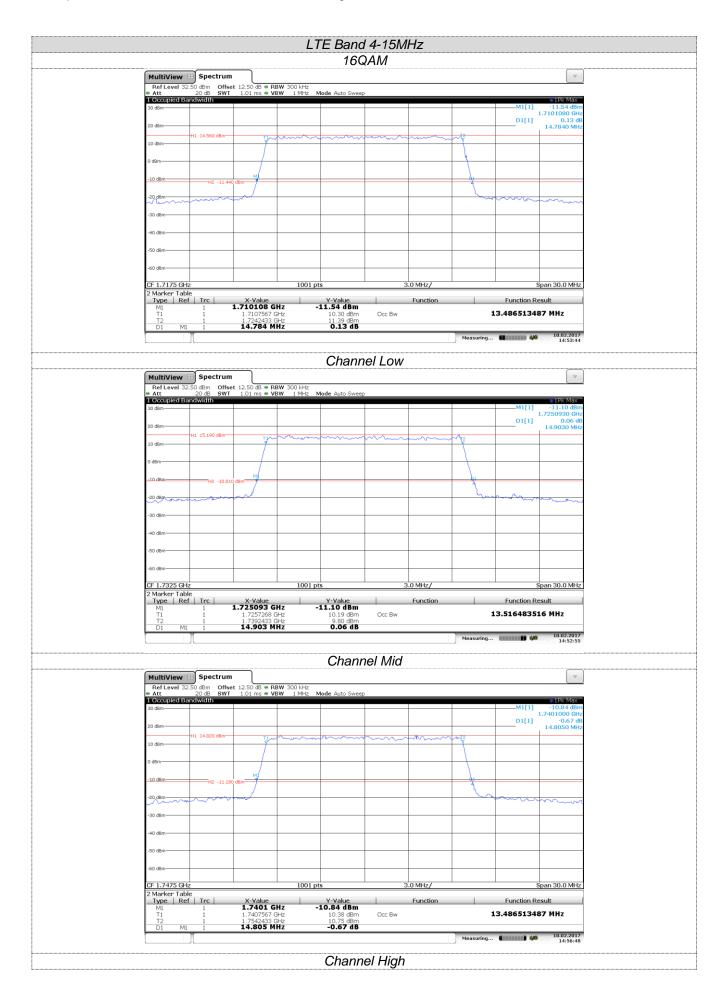
Report No.: TRE1612021402 Page: 34 of 167 Issued: 2017-02-20



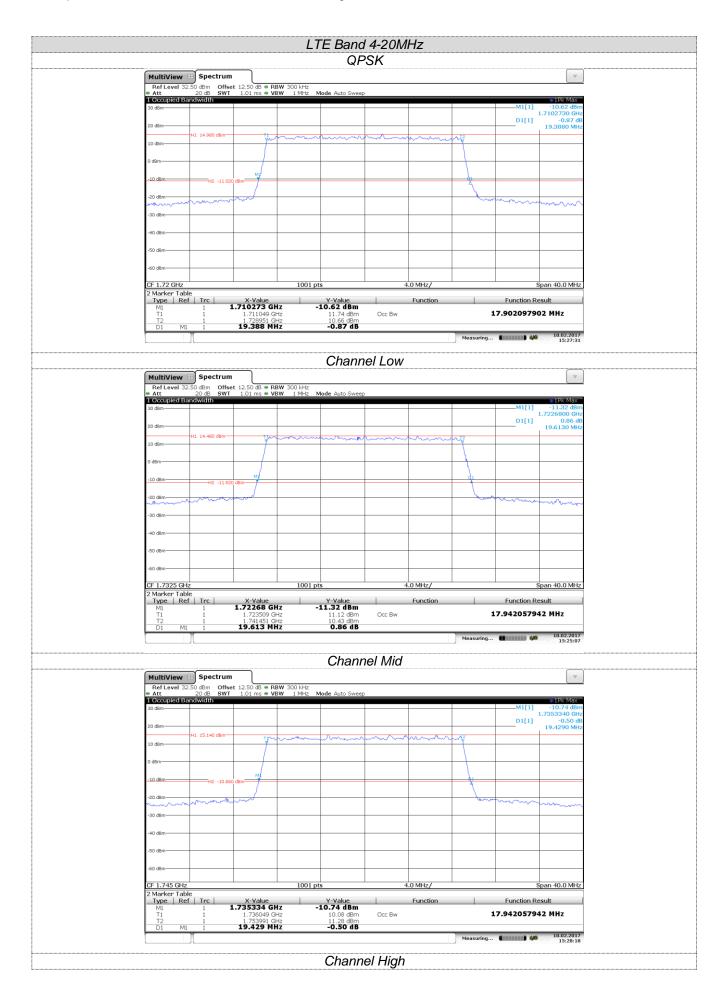
Report No.: TRE1612021402 Page: 35 of 167 Issued: 2017-02-20



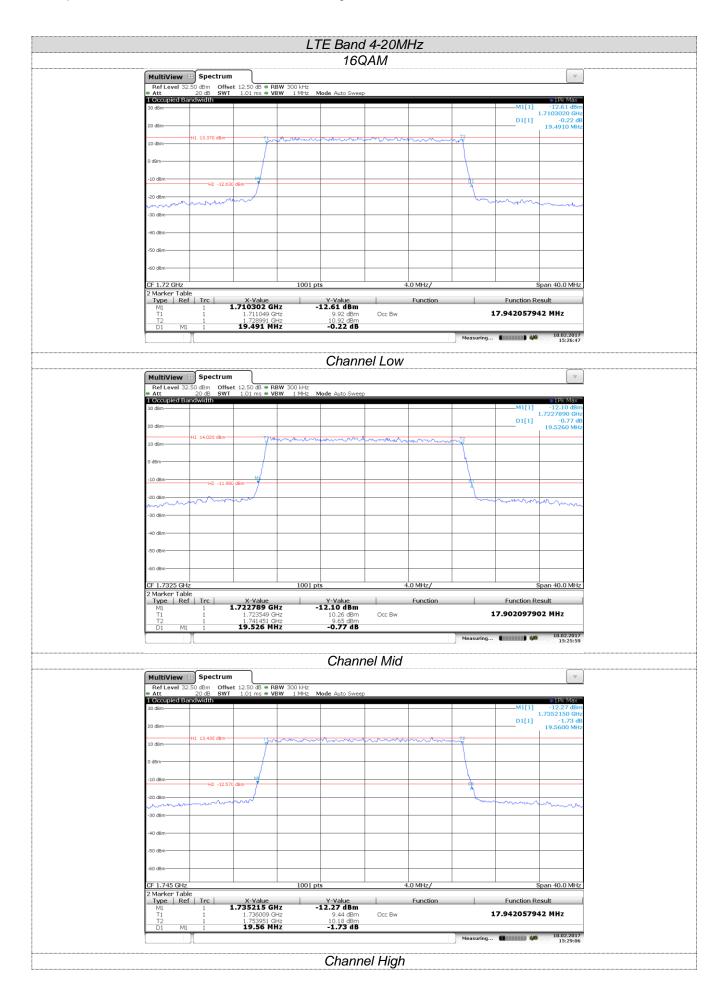
Report No.: TRE1612021402 Page: 36 of 167 Issued: 2017-02-20



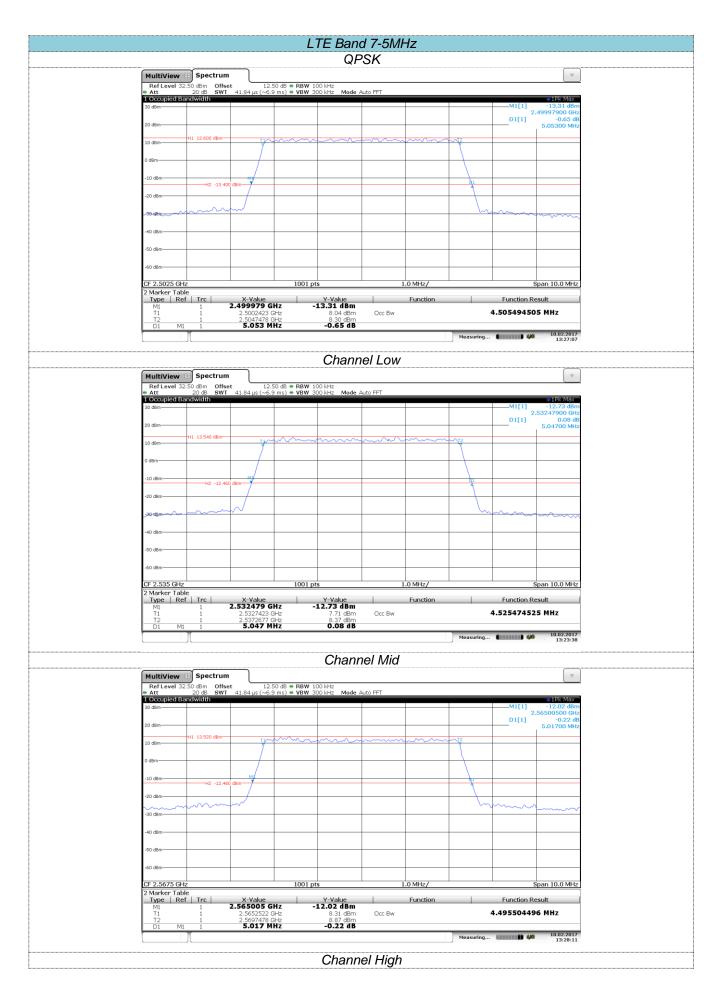
Report No.: TRE1612021402 Page: 37 of 167 Issued: 2017-02-20



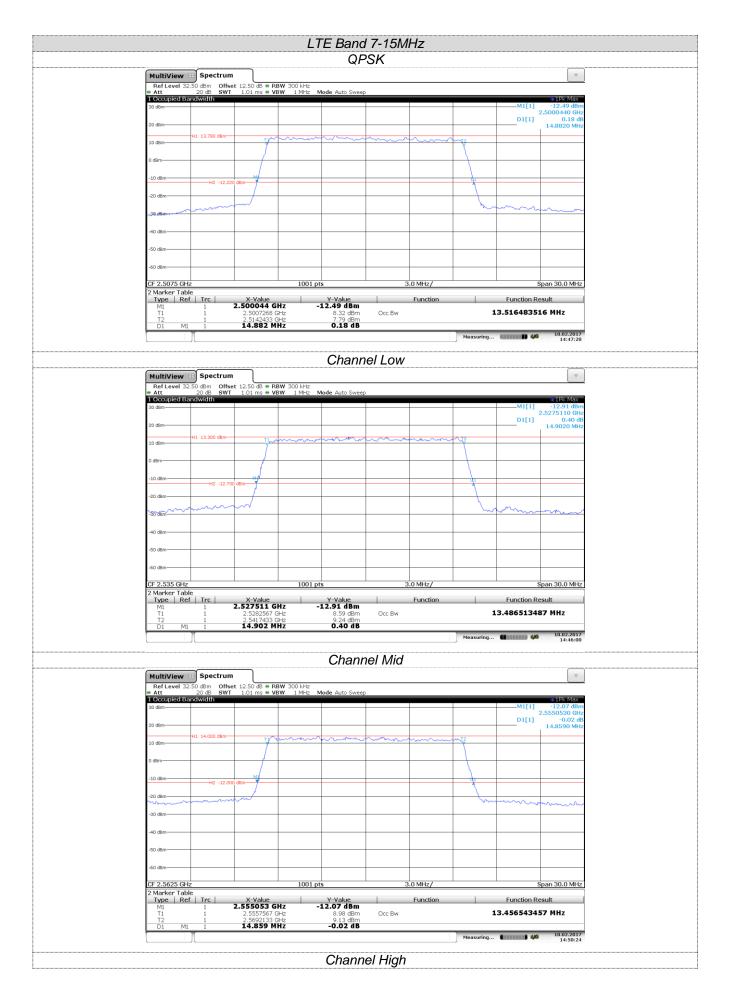
Report No.: TRE1612021402 Page: 38 of 167 Issued: 2017-02-20



Report No.: TRE1612021402 Page: 39 of 167 Issued: 2017-02-20



Report No.: TRE1612021402 Page: 43 of 167 Issued: 2017-02-20



Report No.: TRE1612021402 Page: 44 of 167 Issued: 2017-02-20

