TESTING LABORATORY
CERTIFICATE #4820.01

FCC PART 22H, PART 24E,PART 27, PART 90 MEASUREMENT AND TEST REPORT

For

Hytera Communications Corporation Limited

Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, 518057 China

FCC ID: YAMVM780

Report Type:	**Product Type:**
Original Report	Body Worn Camera

Report Number:	RDG190606010-00D
Report Date:	2019-08-26
Reviewed By:	Jerry Zhang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:		Body Worn Camera
EUT Model:		VM780
Multiple Model:		DSJ-HYTH7A1
Rated Input Voltage:		DC 3.85V from battery or DC 5V charging from adapter
Adapter Information	**Model:**	S010WU0500200
	Input:	AC 100-240V 50/60Hz 400mA
	Output:	DC 5V 2000mA
External Dimension:		115mm(L)*63mm(W)*26mm(H)
Serial Number:		190606010
EUT Received Date:		2019.6.12

Note: The series product model DSJ-HYTH7A1 is electrically identical with model VM780, we selected VM780 for fully testing, the differences details was explained in the declaration letter.

Objective

This report is prepared on behalf of ***Hytera Communications Corporation Limited*** in accordance with: Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, Part 27, Part 90 of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

FCC Part 15C DTS submissions with FCC ID: YAMVM780.
FCC Part 15C DSS submissions with FCC ID: YAMVM780.
FCC Part 15C DXX submissions with FCC ID: YAMVM780.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous wireless communications services
Part 90 - PRIVATE LAND MOBILE RADIO SERVICES

TIA/EIA 603-D-2010.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp.(Dongguan).

Measurement Uncertainty

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Unwanted Emissions, radiated	30MHz ~ 1GHz:5.85 dB 1G~26.5GHz: 5.23 dB
Unwanted Emissions, conducted	±1.5 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier : CN0022.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to TIA/EIA-603-D 2010.

The test items were performed with the EUT operating at testing mode. The device operates on GSM Band 850/1900MHz(only supports GPRS/EDGE),WCDMA Band 2/4/5, and LTE band 2/4/5/7/13/17/26/38/40/41, test was performed with channels as below table:

Frequency Bands	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GPRS/EDGE850	0.25	824.2	836.6	848.8
GPRS/EDGE1900	0.25	1850.2	1880	1909.8
WCDMA Band 2	4.2	1852.4	1880	1907.6
WCDMA Band 4	4.2	1712.4	1732.6	1752.6
WCDMA Band 5	4.2	826.4	836.6	846.6
LTE Band 2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE Band 4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE Band 5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE Band 7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE Band 12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711
LTE Band 13	5	779.5	782	784.5
	10	/	782	/
LTE Band 17	5	706.5	710	713.5
	10	709	710	711

Frequency Bands	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE Band 26	1.4	814.7	831.5	848.3
	3	815.5	831.5	847.5
	5	816.5	831.5	846.5
	10	819	831.5	844
	15	821.5	831.5	841.5
LTE Band 38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE Band 40 2305-2315MHz	5	2307.5	2310	2312.5
	10	/	2310	/
LTE Band 40 2350-2360MHz	5	2352.5	2355	2357.5
	10	/	2355	/
LTE Band 41	5	2557.5	2595	2652.5
	10	2560	2595	2650
	15	2562.5	2595	2647.5
	20	2565	2595	2645

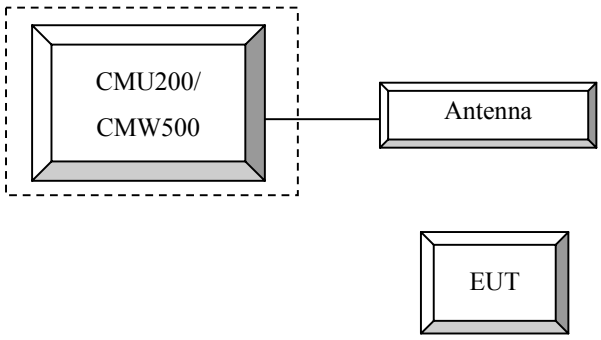
Equipment Modifications

No modification was made to the EUT.

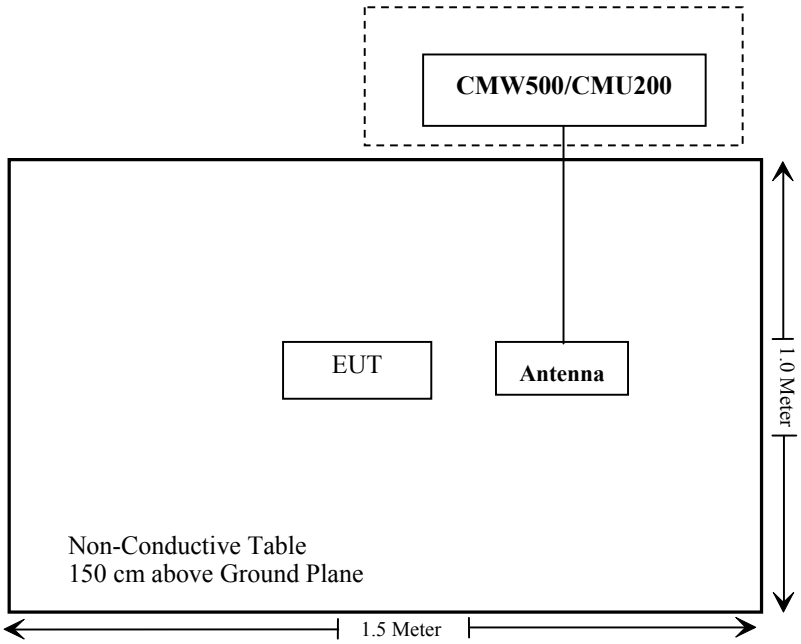
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
R&S	Universal Radio Communication Tester	CMU200	106 891
R&S	Wideband Radio Communication Tester	CMW500	147473
Unknown	ANTENNA	Unknown	/

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

Rules	Description of Test	Result
FCC§1.1310, §2.1093;	RF Exposure	Compliance
FCC§2.1046;§ 22.913 (a); § 24.232 (c);§27.50; §90.635	RF Output Power	Compliance
FCC§ 2.1047	Modulation Characteristics	Not Applicable
FCC§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53; §90.209	Occupied Bandwidth	Compliance
FCC§ 2.1051, § 22.917 (a); § 24.238 (a); §27.53; §90.691	Spurious Emissions at Antenna Terminal	Compliance
FCC§ 2.1053 § 22.917 (a); § 24.238 (a); §27.53; §90.691	Spurious Radiation Emissions	Compliance
FCC§ 22.917 (a); § 24.238 (a); §27.53; §90.691	Out of band emission, Band Edge	Compliance
FCC§ 2.1055;§ 22.355; § 24.235; §27.54; §90.213	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance

FCC §1.1310 & §2.1093- RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093

Test Result

Compliant, please refer to the SAR report: RDG190606010-20A.

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E, Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046, § 22.913 (a) & § 24.232 (c) & § 27.50 - RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §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.

According to §24.232 (d) Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

According to §27.50

(a) The following power limits and related requirements apply to stations transmitting in the 2305-2320 MHz band or the 2345-2360 MHz band.

(3) Mobile and portable stations. (i) For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

(ii) Mobile and portable stations are not permitted to transmit in the 2315-2320 MHz and 2345-2350 MHz bands.

(iii) Automatic transmit power control. Mobile and portable stations transmitting in the 2305-2315 MHz band or in the 2350-2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.

(iv) Prohibition on external vehicle-mounted antennas. The use of external vehicle-mounted antennas for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band is prohibited.

(b)(10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

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

(d), (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(h),(2) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

According to §90.635

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

Test Procedure

GSM/GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection Press Signal Off to turn off the signal and change settings
Network Support > GSM + GPRS or GSM + EGSM
Main Service > Packet Data
Service selection > Test Mode A – Auto Slot Config. off
MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting
> Slot configuration > Uplink/Gamma
> 33 dBm for GPRS 850
> 30 dBm for GPRS 1900
> 27 dBm for EGPRS 850
> 26 dBm for EGPRS 1900
BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset > + 0 Hz
Mode > BCCH and TCH
BCCH Level > -85 dBm (May need to adjust if link is not stable)
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off
P0 > 4 dB
Slot Config > Unchanged (if already set under MS signal)
TCH > choose desired test channel
Hopping > Off
Main Timeslot > 3
Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream
AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection Press Signal on to turn on the signal and change settings

WCDMA-Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	βc / βd	8/15

WCDMA HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	βc	2/15	12/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	βd (SF)	64			
	βc/ βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs=βhs/ βc	30/15			

WCDMA HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	0
	βec	209/225	12/15	30/15	2/15	5/15
	βc/ βd	11/15	6/15	15/9	2/15	-
	βhs	22/15	12/15	30/15	4/15	5/15
	CM(dB)	1.0	3.0	2.0	3.0	1.0
	MPR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	Ahs=βhs/ βc	30/15				
HSUPA Specific Settings	DE-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_FCIs	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

HSPA+

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

DC-HSDPA

The following tests were conducted according to the test requirements in Table C.8.1.12 of 3GPP TS 34.121-1

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

LTE (FDD):

The following tests were conducted according to the test requirements in 3GPP TS36.101

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	Table 6.2.4-2
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23[1]	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

LTE(TDD):

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

Calculated Duty Cycle = Extended cyclic prefix in uplink x (T_s) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
T_s = 1/(15000 x 2048) seconds

Radiated method:

ANSI/TIA-603-D section 2.2.17

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2018-12-10	2019-12-10
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
EMCO	Adjustable Dipole Antenna	3121C	9109-753	Not Required	/
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2019-05-06	2020-05-06
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2018-09-05	2019-09-05
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
TDK RF	Horn Antenna	HRN-0118	130 084	2018-10-12	2021-10-12
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2018-09-05	2019-09-05
Agilent	Signal Generator	E8247C	MY43321350	2018-12-10	2019-12-10
R&S	Universal Radio Communication Tester	CMU200	110 822	2018-12-14	2019-12-14
R&S	Wideband Radio Communication Tester	CMW500	147473	2018-08-03	2019-08-03

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	28.9°C
Relative Humidity:	55 %
ATM Pressure:	100.2 kPa

** The testing was performed by Tyler Pan on 2019-06-18.*

Conducted Output Power

Cellular Band & PCS Band

Band	Channel No.	Conducted Peak Output Power (dBm)				Conducted Peak Output Power (dBm)	
		GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EGPRS 1 uplink slot	EGPRS 2 uplink slot
Cellular	128	30.29	29.96	28.09	26.16	25.27	23.85
	190	30.35	30.05	28.39	26.37	25.31	23.88
	251	30.38	30.06	28.5	26.38	25.38	23.94
PCS	512	29.62	29.52	28.11	26.47	25.09	23.22
	661	29.81	29.72	28.16	26.46	25.08	23.20
	810	29.78	29.54	28.4	26.56	25.21	23.37

WCDMA Band II

Mode	3GPP Sub Test	Low Channel		Middle Channel		High Channel	
		Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)
Rel 99	1	22.62	3.39	22.53	3.28	22.38	2.84
HSDPA	1	21.53	3.57	21.42	3.51	21.37	3.33
	2	21.18	3.51	21.08	3.44	21.03	3.31
	3	20.83	3.26	21.72	3.69	20.71	3.44
	4	20.55	3.46	21.44	3.2	20.38	3.29
HSUPA	1	21.07	3.45	20.85	3.28	20.87	3.97
	2	20.74	3.41	20.53	3.21	20.54	3.88
	3	20.45	3.56	20.24	3.45	20.17	3.81
	4	20.19	3.62	19.96	3.69	19.83	3.69
	5	19.88	3.22	19.78	3.14	19.67	3.54
DC-HSDPA	1	21.44	3.51	21.36	3.25	21.29	3.31
	2	21.05	3.16	21.01	3.26	21.03	3.26
	3	20.75	3.29	20.78	3.67	20.74	3.42
	4	20.41	3.37	20.43	3.44	20.56	3.29
HSPA+ (16QAM)	1	21.44	3.17	21.36	3.21	21.22	3.64

WCDMA Band IV

Mode	3GPP Sub Test	Low Channel		Middle Channel		High Channel	
		Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)
Rel 99	1	23.55	2.72	22.57	2.52	23.14	2.61
HSDPA	1	22.97	3.04	21.8	3.01	22.24	2.87
	2	22.65	3.02	21.53	3.08	21.96	3.01
	3	22.31	2.99	21.18	2.95	21.68	2.89
	4	22.06	3.44	20.82	2.99	21.41	2.66
HSUPA	1	21.16	3.19	20.87	3.22	20.51	3.19
	2	20.87	3.26	20.61	3.11	20.13	3.14
	3	20.54	3.66	20.36	3.47	19.93	3.02
	4	20.16	3.14	20.07	2.96	19.74	3.63
	5	19.88	3.53	19.81	3.07	19.59	3.54
DC-HSDPA	1	22.65	3.08	21.53	3.44	21.96	3.28
	2	22.17	2.98	21.13	3.45	21.72	3.11
	3	21.83	3.01	20.86	3.51	21.36	3.26
	4	21.55	3.22	20.55	3.36	21.05	3.04
HSPA+ (16QAM)	1	22.86	3.14	21.78	3.49	22.18	3.21

WCDMA Band V

Mode	3GPP Sub Test	Low Channel		Middle Channel		High Channel	
		Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)	Ave. Power (dBm)	PAR (dB)
Rel 99	1	21.68	3.28	21.51	3.04	21.54	2.93
HSDPA	1	20.49	3.42	20.31	3.3	20.38	3.45
	2	20.17	3.44	20.09	3.36	20.13	3.41
	3	19.96	3.47	19.88	3.29	19.91	3.29
	4	19.77	3.18	19.69	2.99	19.72	3.33
HSUPA	1	19.98	3.51	19.81	3.04	19.91	3.97
	2	19.77	3.44	19.56	3.17	19.77	3.87
	3	19.64	3.08	19.41	3.11	19.53	3.19
	4	19.48	3.97	19.26	3.69	19.32	3.97
	5	19.26	3.14	19.01	3.58	19.11	4.02
DC-HSDPA	1	20.41	3.16	20.22	3.18	20.28	3.17
	2	20.06	2.98	20.01	3.52	20.01	3.11
	3	19.86	2.69	19.75	2.97	19.77	3.09
	4	19.54	3.04	19.55	3.14	19.56	3.28
HSPA+ (16QAM)	1	20.44	3.47	20.33	3.19	20.29	3.41

LTE Band 2

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	21.81	22.01	19.92
		RB1#3	22.09	22.35	22.17
		RB1#5	21.95	22.21	22.12
		RB3#0	21.80	21.86	21.81
		RB3#3	22.05	21.93	21.88
		RB6#0	21.12	20.96	20.95
	16QAM	RB1#0	20.61	21.12	21.36
		RB1#3	20.87	21.22	21.10
		RB1#5	20.67	21.13	21.03
		RB3#0	21.05	21.16	20.95
		RB3#3	21.21	21.20	21.10
		RB6#0	20.04	19.72	19.69
3MHz	QPSK	RB1#0	21.95	22.28	21.96
		RB1#8	21.89	22.20	21.70
		RB1#14	22.09	22.39	22.07
		RB6#0	21.08	21.00	20.98
		RB6#9	21.17	21.07	20.97
		RB15#0	21.13	21.03	20.98
	16QAM	RB1#0	21.25	21.71	20.91
		RB1#8	21.18	21.27	20.83
		RB1#14	21.31	21.89	20.98
		RB6#0	19.93	20.31	19.88
		RB6#9	20.00	20.26	19.93
		RB15#0	20.01	20.16	20.12
5MHz	QPSK	RB1#0	21.88	21.99	22.08
		RB1#13	22.02	22.02	21.94
		RB1#24	21.99	22.13	21.76
		RB15#0	21.10	21.05	21.00
		RB15#10	21.08	21.10	20.97
		RB25#0	21.03	21.15	20.98
	16QAM	RB1#0	20.53	21.40	20.81
		RB1#13	20.39	21.23	20.52
		RB1#24	20.40	21.31	20.64
		RB15#0	19.85	19.89	19.88
		RB15#10	19.91	20.00	19.90
		RB25#0	20.00	20.04	19.99

10MHz	QPSK	RB1#0	21.92	22.28	22.17
		RB1#25	22.18	22.18	22.19
		RB1#49	22.49	22.30	21.46
		RB25#0	21.15	21.10	21.13
		RB25#25	21.17	21.21	21.09
		RB50#0	21.13	21.18	21.12
	16QAM	RB1#0	21.41	21.56	21.16
		RB1#25	21.74	21.40	21.18
		RB1#49	21.49	21.78	20.54
		RB25#0	20.18	20.09	20.36
		RB25#25	20.20	20.06	20.27
		RB50#0	20.12	20.35	19.99
15MHz	QPSK	RB1#0	22.05	22.21	21.88
		RB1#38	22.05	21.99	21.83
		RB1#74	22.19	22.00	21.03
		RB36#0	21.17	21.18	20.98
		RB36#39	21.25	21.16	21.07
		RB75#0	21.20	21.08	21.11
	16QAM	RB1#0	21.49	21.45	21.04
		RB1#38	21.54	21.50	21.15
		RB1#74	21.56	21.39	20.48
		RB36#0	19.96	20.07	20.02
		RB36#39	20.15	20.03	20.04
		RB75#0	20.11	20.07	19.94
20MHz	QPSK	RB1#0	21.92	22.08	21.80
		RB1#50	22.41	22.14	22.43
		RB1#99	22.33	22.09	21.09
		RB50#0	21.24	21.14	21.34
		RB50#50	21.26	21.15	21.16
		RB100#0	21.24	21.19	21.15
	16QAM	RB1#0	21.17	21.20	21.34
		RB1#50	21.75	21.19	22.31
		RB1#99	21.68	21.23	20.71
		RB50#0	20.19	20.13	20.12
		RB50#50	20.27	20.17	20.08
		RB100#0	20.31	20.15	20.27

LTE Band 4

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	21.45	19.41	21.34
		RB1#3	21.52	21.53	21.66
		RB1#5	21.44	21.52	21.91
		RB3#0	21.48	21.68	21.37
		RB3#3	21.55	21.73	21.47
		RB6#0	20.54	20.67	20.53
	16QAM	RB1#0	20.84	20.94	20.58
		RB1#3	21.00	21.00	20.39
		RB1#5	20.84	21.13	20.29
		RB3#0	20.88	20.68	20.51
		RB3#3	20.58	20.59	20.53
		RB6#0	19.34	19.39	19.64
3MHz	QPSK	RB1#0	21.57	21.54	21.30
		RB1#8	21.55	21.49	21.25
		RB1#14	21.66	21.61	21.57
		RB6#0	20.62	20.68	20.32
		RB6#9	20.66	20.68	20.46
		RB15#0	20.70	20.73	20.44
	16QAM	RB1#0	20.84	21.18	20.52
		RB1#8	20.65	21.27	20.70
		RB1#14	20.99	21.38	20.72
		RB6#0	19.58	19.65	19.26
		RB6#9	19.52	19.78	19.41
		RB15#0	19.64	19.84	19.47
5MHz	QPSK	RB1#0	21.48	21.45	21.68
		RB1#13	21.55	21.44	21.40
		RB1#24	21.47	21.57	21.49
		RB15#0	20.56	20.63	20.28
		RB15#10	20.61	20.72	20.44
		RB25#0	20.67	20.59	20.33
	16QAM	RB1#0	19.88	20.19	20.73
		RB1#13	20.02	20.19	20.58
		RB1#24	19.43	20.18	20.86
		RB15#0	19.49	19.45	19.22
		RB15#10	19.65	19.70	19.36
		RB25#0	19.72	19.61	19.45

10MHz	QPSK	RB1#0	21.37	21.33	21.49
		RB1#25	21.28	21.40	21.61
		RB1#49	21.35	21.38	21.62
		RB25#0	20.57	20.53	20.43
		RB25#25	20.52	20.64	20.36
		RB50#0	20.54	20.53	20.46
	16QAM	RB1#0	20.76	21.10	20.37
		RB1#25	20.74	21.49	20.11
		RB1#49	20.57	21.74	20.20
		RB25#0	19.78	19.56	19.61
		RB25#25	19.58	19.68	19.38
		RB50#0	19.56	19.48	19.42
15MHz	QPSK	RB1#0	21.52	21.38	21.36
		RB1#38	21.34	21.56	21.39
		RB1#74	21.6	21.54	21.52
		RB36#0	20.68	20.56	20.48
		RB36#39	20.48	20.57	20.32
		RB75#0	20.53	20.63	20.37
	16QAM	RB1#0	20.79	21.08	20.76
		RB1#38	20.67	21.68	20.33
		RB1#74	20.46	21.12	20.37
		RB36#0	19.65	19.59	19.37
		RB36#39	19.47	19.64	19.35
		RB75#0	19.58	19.47	19.39
20MHz	QPSK	RB1#0	21.51	21.34	21.82
		RB1#50	21.28	21.91	21.80
		RB1#99	21.79	21.70	21.69
		RB50#0	20.73	20.58	20.70
		RB50#50	20.70	20.78	20.39
		RB100#0	20.71	20.86	20.63
	16QAM	RB1#0	21.55	20.87	21.63
		RB1#50	21.16	20.84	21.76
		RB1#99	21.29	20.85	21.31
		RB50#0	19.67	19.67	19.68
		RB50#50	19.54	19.78	19.37
		RB100#0	19.76	19.70	19.55

LTE Band 5

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	21.50	21.65	19.83
		RB1#3	21.56	21.82	21.94
		RB1#5	21.62	21.83	21.65
		RB3#0	21.69	21.90	21.71
		RB3#3	21.73	21.71	21.77
		RB6#0	20.70	20.75	20.99
	16QAM	RB1#0	20.93	20.51	20.52
		RB1#3	21.32	20.59	20.66
		RB1#5	21.27	20.44	20.58
		RB3#0	20.69	20.79	20.92
		RB3#3	20.77	20.76	21.08
		RB6#0	19.77	19.90	20.00
3MHz	QPSK	RB1#0	21.54	21.63	22.01
		RB1#8	21.55	21.57	22.04
		RB1#14	21.89	21.88	22.20
		RB6#0	20.74	20.71	20.70
		RB6#9	20.82	20.77	20.91
		RB15#0	20.76	20.83	20.72
	16QAM	RB1#0	20.24	20.95	21.25
		RB1#8	20.36	20.96	21.33
		RB1#14	20.36	20.80	21.88
		RB6#0	19.73	19.65	19.86
		RB6#9	19.72	19.67	19.77
		RB15#0	19.93	19.91	19.55
5MHz	QPSK	RB1#0	21.58	21.63	21.83
		RB1#13	21.73	21.85	21.71
		RB1#24	21.73	21.51	21.60
		RB15#0	20.81	20.72	20.76
		RB15#10	20.84	20.76	20.90
		RB25#0	20.76	20.82	20.87
	16QAM	RB1#0	20.09	20.87	20.97
		RB1#13	20.32	21.26	20.24
		RB1#24	20.34	21.12	20.42
		RB15#0	19.74	19.60	19.76
		RB15#10	19.78	19.47	19.85
		RB25#0	19.79	19.53	19.94
10MHz	QPSK	RB1#0	21.59	21.58	21.67
		RB1#25	21.81	21.93	21.66
		RB1#49	21.82	22.09	21.76
		RB25#0	20.76	20.80	20.84
		RB25#25	20.79	20.74	20.93
		RB50#0	20.78	20.83	20.91
	16QAM	RB1#0	21.41	20.85	21.09
		RB1#25	21.60	20.58	21.22
		RB1#49	21.73	20.35	21.23
		RB25#0	19.99	19.92	19.89
		RB25#25	19.82	19.89	20.04
		RB50#0	19.75	19.81	19.83

LTE Band 7

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	21.79	21.76	19.76
		RB1#13	21.88	21.71	21.89
		RB1#24	21.60	21.80	21.23
		RB15#0	20.84	20.86	20.89
		RB15#10	20.77	20.98	20.91
		RB25#0	20.67	20.89	20.92
	16QAM	RB1#0	20.79	20.25	20.83
		RB1#13	20.64	20.38	20.54
		RB1#24	20.60	20.21	20.56
		RB15#0	19.86	19.88	19.92
		RB15#10	19.82	19.93	19.87
		RB25#0	19.70	20.01	19.80
10MHz	QPSK	RB1#0	21.40	21.82	21.88
		RB1#25	21.75	22.00	21.93
		RB1#49	21.29	21.98	20.83
		RB25#0	20.93	21.01	21.03
		RB25#25	20.91	21.04	21.12
		RB50#0	21.10	21.02	21.03
	16QAM	RB1#0	20.77	21.50	21.27
		RB1#25	21.29	21.39	21.15
		RB1#49	20.87	21.41	20.13
		RB25#0	19.87	20.03	19.93
		RB25#25	19.90	19.99	20.07
		RB50#0	19.95	19.95	19.88
15MHz	QPSK	RB1#0	21.07	21.99	21.86
		RB1#38	21.60	21.79	21.98
		RB1#74	21.30	21.72	20.63
		RB36#0	21.00	21.01	21.12
		RB36#39	20.99	21.12	21.10
		RB75#0	20.96	20.97	20.93
	16QAM	RB1#0	20.44	21.42	21.15
		RB1#38	21.12	21.95	20.92
		RB1#74	20.88	21.18	20.19
		RB36#0	20.04	19.92	19.91
		RB36#39	19.78	19.85	19.99
		RB75#0	19.89	20.03	19.87
20MHz	QPSK	RB1#0	20.15	21.19	21.10
		RB1#50	21.25	22.17	22.03
		RB1#99	21.26	21.28	20.31
		RB50#0	21.04	21.17	21.08
		RB50#50	20.96	21.11	21.11
		RB100#0	21.00	21.13	21.04
	16QAM	RB1#0	19.43	20.50	20.40
		RB1#50	20.71	20.93	21.53
		RB1#99	20.72	20.75	19.81
		RB50#0	20.05	20.01	20.07
		RB50#50	19.98	19.99	20.16
		RB100#0	20.03	20.06	19.96

LTE Band 12

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	22.08	20.28	20.37
		RB1#3	22.23	22.22	22.14
		RB1#5	22.19	22.14	22.03
		RB3#0	22.25	22.20	22.05
		RB3#3	22.14	22.24	22.16
		RB6#0	21.18	21.27	21.24
	16QAM	RB1#0	21.51	20.92	21.54
		RB1#3	21.68	20.92	21.58
		RB1#5	21.68	20.83	21.47
		RB3#0	21.24	20.77	20.83
		RB3#3	21.17	21.30	20.84
		RB6#0	19.87	20.37	19.97
3MHz	QPSK	RB1#0	22.07	22.42	22.03
		RB1#8	22.10	22.46	22.26
		RB1#14	22.10	22.09	21.96
		RB6#0	21.16	21.33	21.04
		RB6#9	21.17	21.23	21.11
		RB15#0	21.25	21.28	21.20
	16QAM	RB1#0	21.44	21.67	21.44
		RB1#8	21.29	21.89	21.37
		RB1#14	21.04	21.89	21.29
		RB6#0	19.98	20.62	20.07
		RB6#9	20.11	20.67	20.03
		RB15#0	20.31	20.51	20.07
5MHz	QPSK	RB1#0	21.88	22.21	22.19
		RB1#13	22.08	22.02	21.89
		RB1#24	21.90	21.93	21.97
		RB15#0	21.12	21.22	21.01
		RB15#10	21.19	21.25	21.06
		RB25#0	21.07	21.20	21.05
	16QAM	RB1#0	20.57	21.51	20.81
		RB1#13	21.18	21.65	20.83
		RB1#24	20.52	21.37	19.80
		RB15#0	19.93	20.38	19.95
		RB15#10	19.79	20.45	19.89
		RB25#0	20.09	20.12	20.02
10MHz	QPSK	RB1#0	21.86	22.07	22.32
		RB1#25	22.07	22.19	22.19
		RB1#49	22.07	21.88	21.69
		RB25#0	21.06	21.12	21.21
		RB25#25	21.23	21.19	21.11
		RB50#0	21.03	21.10	21.16
	16QAM	RB1#0	21.23	21.41	20.83
		RB1#25	22.11	22.27	21.74
		RB1#49	20.91	21.55	20.65
		RB25#0	20.17	20.21	20.26
		RB25#25	20.23	20.07	20.28
		RB50#0	20.08	20.12	20.18

LTE Band 13

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	20.28	22.39	22.43
		RB1#13	22.15	22.21	22.38
		RB1#24	22.18	22.25	22.18
		RB15#0	21.51	21.37	21.29
		RB15#10	21.43	21.39	21.27
		RB25#0	21.32	21.36	21.32
	16QAM	RB1#0	20.85	21.59	21.06
		RB1#13	20.80	21.61	21.13
		RB1#24	20.61	21.78	21.27
		RB15#0	20.40	20.08	20.26
		RB15#10	20.32	19.99	20.26
		RB25#0	20.35	20.15	20.17
10MHz	QPSK	RB1#0	/	22.22	/
		RB1#25	/	22.32	/
		RB1#49	/	22.35	/
		RB25#0	/	21.40	/
		RB25#25	/	21.31	/
		RB50#0	/	21.39	/
	16QAM	RB1#0	/	21.57	/
		RB1#25	/	22.35	/
		RB1#49	/	21.76	/
		RB25#0	/	20.28	/
		RB25#25	/	20.15	/
		RB50#0	/	20.15	/

LTE Band 17

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	19.60	21.43	21.53
		RB1#13	21.64	21.45	21.65
		RB1#24	21.30	21.26	21.46
		RB15#0	20.58	20.60	20.58
		RB15#10	20.59	20.56	20.60
		RB25#0	20.57	20.52	20.57
	16QAM	RB1#0	19.95	20.72	20.30
		RB1#13	19.78	21.05	20.38
		RB1#24	19.64	20.74	19.79
		RB15#0	19.58	19.73	19.68
		RB15#10	19.51	19.80	19.64
		RB25#0	19.82	19.57	19.60
10MHz	QPSK	RB1#0	21.65	21.30	21.40
		RB1#25	21.57	21.70	21.62
		RB1#49	21.52	21.38	21.38
		RB25#0	20.69	20.52	20.68
		RB25#25	20.70	20.58	20.59
		RB50#0	20.68	20.58	20.58
	16QAM	RB1#0	21.24	20.28	20.77
		RB1#25	21.21	20.52	21.16
		RB1#49	21.15	20.12	20.32
		RB25#0	19.78	19.40	19.59
		RB25#25	19.75	19.53	19.72
		RB50#0	19.63	19.57	19.66

LTE Band 26

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	21.47	19.29	19.55
		RB1#3	21.64	21.35	21.39
		RB1#5	21.39	21.40	21.71
		RB3#0	21.36	21.65	21.39
		RB3#3	21.65	21.57	21.31
		RB6#0	20.47	20.37	20.49
	16QAM	RB1#0	20.74	20.55	20.62
		RB1#3	20.86	20.99	21.02
		RB1#5	20.89	20.87	20.74
		RB3#0	20.50	20.84	20.37
		RB3#3	20.62	20.80	20.45
		RB6#0	19.45	19.94	19.52
3MHz	QPSK	RB1#0	21.54	21.40	21.32
		RB1#8	21.34	21.27	21.35
		RB1#14	21.50	21.51	21.28
		RB6#0	20.51	20.44	20.37
		RB6#9	20.34	20.52	20.35
		RB15#0	20.56	20.42	20.47
	16QAM	RB1#0	20.70	20.58	20.04
		RB1#8	20.60	20.96	19.87
		RB1#14	20.59	21.58	19.93
		RB6#0	19.43	19.81	19.38
		RB6#9	19.26	19.43	19.37
		RB15#0	19.51	19.34	19.68
5MHz	QPSK	RB1#0	21.43	21.34	21.26
		RB1#13	21.39	21.36	21.48
		RB1#24	21.60	21.38	21.47
		RB15#0	20.49	20.44	20.47
		RB15#10	20.47	20.35	20.45
		RB25#0	20.52	20.45	20.41
	16QAM	RB1#0	19.60	20.67	19.84
		RB1#13	19.68	20.84	19.35
		RB1#24	19.79	20.64	19.22
		RB15#0	19.42	19.37	19.47
		RB15#10	19.47	19.34	19.43
		RB25#0	19.76	19.23	19.60
10MHz	QPSK	RB1#0	21.59	21.49	21.47
		RB1#25	21.43	21.35	21.70
		RB1#49	21.69	21.51	21.53
		RB25#0	20.54	20.42	20.50
		RB25#25	20.47	20.61	20.45
		RB50#0	20.52	20.43	20.52
	16QAM	RB1#0	20.42	21.12	20.40
		RB1#25	20.78	21.01	20.15
		RB1#49	20.92	21.26	20.02
		RB25#0	19.34	19.72	19.70
		RB25#25	19.58	19.54	19.54

		RB50#0	19.47	19.72	19.54
15MHz	QPSK	RB1#0	21.65	21.57	21.33
		RB1#38	21.55	21.19	21.36
		RB1#74	21.70	21.76	21.36
		RB36#0	20.45	20.49	20.50
		RB36#39	20.50	20.58	20.51
		RB75#0	20.50	20.46	20.45
	16QAM	RB1#0	20.83	20.96	20.41
		RB1#38	20.31	20.82	19.74
		RB1#74	20.28	21.08	19.83
		RB36#0	19.45	19.77	19.49
		RB36#39	19.51	19.63	19.39
		RB75#0	19.58	19.58	19.55

LTE Band 38

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	21.66	19.35	21.10
		RB1#13	21.67	21.41	21.35
		RB1#24	21.67	21.41	21.14
		RB15#0	20.75	20.54	20.39
		RB15#10	20.69	20.42	20.43
		RB25#0	20.72	20.48	20.40
	16QAM	RB1#0	20.95	20.67	19.72
		RB1#13	21.01	20.60	19.99
		RB1#24	20.86	20.30	19.98
		RB15#0	19.62	19.44	19.13
		RB15#10	19.57	19.29	19.13
		RB25#0	19.47	19.36	19.40
10MHz	QPSK	RB1#0	21.74	21.50	21.35
		RB1#25	21.68	21.41	21.23
		RB1#49	21.50	21.43	21.32
		RB25#0	20.78	20.48	20.43
		RB25#25	20.81	20.69	20.40
		RB50#0	20.73	20.56	20.42
	16QAM	RB1#0	20.96	20.77	20.41
		RB1#25	21.31	20.98	20.48
		RB1#49	20.90	20.76	20.48
		RB25#0	19.61	19.68	19.27
		RB25#25	19.65	19.59	19.40
		RB50#0	19.63	19.65	19.32
15MHz	QPSK	RB1#0	22.26	22.14	22.05
		RB1#38	22.17	21.96	21.99
		RB1#74	22.31	21.90	22.03
		RB36#0	21.25	21.10	21.07
		RB36#39	21.26	21.15	21.05
		RB75#0	21.16	21.08	21.00
	16QAM	RB1#0	21.24	21.27	21.19
		RB1#38	21.63	20.85	21.06
		RB1#74	21.66	21.14	21.11
		RB36#0	20.18	19.88	19.91
		RB36#39	20.23	19.91	20.04
		RB75#0	20.41	20.05	20.05
20MHz	QPSK	RB1#0	22.24	22.11	22.26
		RB1#50	22.18	22.12	22.26
		RB1#99	22.21	22.00	22.11
		RB50#0	21.25	21.09	20.91
		RB50#50	21.09	21.13	21.29
		RB100#0	21.20	21.17	21.25
	16QAM	RB1#0	21.59	21.71	20.85
		RB1#50	21.88	21.54	20.86
		RB1#99	21.78	21.31	20.71
		RB50#0	20.07	20.06	20.13
		RB50#50	20.20	20.12	20.09
		RB100#0	20.28	20.10	20.03

LTE Band 40(2305-2315 MHz)

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm/5MHz)	Middle Channel (dBm/5MHz)	High Channel (dBm/5MHz)
5MHz	QPSK	RB1#0	16.67	16.56	16.35
		RB1#13	16.73	16.56	16.40
		RB1#24	16.45	16.57	16.38
		RB15#0	15.86	15.62	15.62
		RB15#10	15.90	15.62	15.61
		RB25#0	15.74	15.60	15.61
	16QAM	RB1#0	15.97	15.59	15.05
		RB1#13	16.30	15.55	14.95
		RB1#24	16.20	15.45	15.26
		RB15#0	14.82	14.50	14.37
		RB15#10	14.74	14.49	14.36
		RB25#0	14.78	14.56	14.75
10MHz	QPSK	RB1#0	/	14.12	/
		RB1#25	/	14.03	/
		RB1#49	/	14.32	/
		RB25#0	/	13.76	/
		RB25#25	/	13.43	/
		RB50#0	/	13.12	/
	16QAM	RB1#0	/	13.32	/
		RB1#25	/	13.16	/
		RB1#49	/	13.23	/
		RB25#0	/	12.87	/
		RB25#25	/	12.12	/
		RB50#0	/	12.42	/
		RB100#0	/	12.33	/

Note: the device is a mobile station. For 5MHz mode, the channel power is equal to the test result in dBm/5MHz. For 10MHz mode, the channel power as below:

Channel Bandwidth	Modulation	Resource Block & RB offset	Middle Channel (dBm)
10MHz	QPSK	RB1#0	16.69
		RB1#25	16.63
		RB1#49	16.65
		RB25#0	15.69
		RB25#25	15.74
		RB50#0	15.70
	16QAM	RB1#0	15.84
		RB1#25	15.46
		RB1#49	15.21
		RB25#0	14.50
		RB25#25	14.50
		RB50#0	14.60
		RB100#0	14.62

LTE Band 40(2350-2360 MHz)

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm/5MHz)	Middle Channel (dBm/5MHz)	High Channel (dBm/5MHz)
5MHz	QPSK	RB1#0	16.69	16.56	16.66
		RB1#13	16.59	16.56	16.77
		RB1#24	16.63	16.57	16.70
		RB15#0	15.91	15.62	15.56
		RB15#10	15.84	15.62	15.65
		RB25#0	15.87	15.60	15.63
	16QAM	RB1#0	15.55	15.59	15.94
		RB1#13	16.09	15.55	16.31
		RB1#24	16.06	15.45	16.11
		RB15#0	15.06	14.50	14.67
		RB15#10	15.01	14.49	14.58
		RB25#0	14.69	14.56	14.65
10MHz	QPSK	RB1#0	/	14.32	/
		RB1#25	/	14.12	/
		RB1#49	/	14.24	/
		RB25#0	/	13.43	/
		RB25#25	/	13.32	/
		RB50#0	/	13.12	/
	16QAM	RB1#0	/	13.10	/
		RB1#25	/	13.12	/
		RB1#49	/	13.22	/
		RB25#0	/	12.32	/
		RB25#25	/	12.27	/
		RB50#0	/	12.14	/
		RB100#0	/	12.23	/

Note: the device is a mobile station. For 5MHz mode, the channel power is equal to the test result in dBm/5MHz. For 10MHz mode, the channel power as below:

Channel Bandwidth	Modulation	Resource Block & RB offset	Middle Channel (dBm)
10MHz	QPSK	RB1#0	16.78
		RB1#25	16.57
		RB1#49	16.74
		RB25#0	15.70
		RB25#25	15.70
		RB50#0	15.72
	16QAM	RB1#0	15.40
		RB1#25	15.39
		RB1#49	15.77
		RB25#0	14.62
		RB25#25	14.62
		RB50#0	14.72
		RB100#0	14.72

LTE Band 41

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	22.45	22.33	22.35
		RB1#13	22.64	22.52	22.50
		RB1#24	22.53	22.55	22.30
		RB15#0	21.64	21.54	21.71
		RB15#10	21.72	21.65	21.58
		RB25#0	21.69	21.54	21.52
	16QAM	RB1#0	21.74	21.44	21.24
		RB1#13	21.84	21.53	21.20
		RB1#24	21.80	21.51	21.08
		RB15#0	20.54	20.34	20.33
		RB15#10	20.56	20.43	20.20
		RB25#0	20.62	20.42	20.60
10MHz	QPSK	RB1#0	22.59	22.54	22.81
		RB1#25	22.76	22.45	22.72
		RB1#49	22.76	22.61	22.72
		RB25#0	21.83	21.51	21.98
		RB25#25	22.02	21.70	21.65
		RB50#0	22.06	21.89	21.80
	16QAM	RB1#0	22.01	21.72	21.84
		RB1#25	22.42	21.90	22.41
		RB1#49	21.96	21.79	22.07
		RB25#0	20.77	20.37	20.87
		RB25#25	20.71	20.64	20.64
		RB50#0	20.74	20.50	20.64
15MHz	QPSK	RB1#0	22.63	22.59	22.82
		RB1#38	22.55	22.48	22.83
		RB1#74	22.61	22.70	22.72
		RB36#0	21.84	21.54	21.79
		RB36#39	21.75	21.74	21.59
		RB75#0	21.74	21.68	21.78
	16QAM	RB1#0	21.76	21.46	21.90
		RB1#38	21.74	21.44	22.21
		RB1#74	21.76	21.83	21.97
		RB36#0	20.56	20.43	20.82
		RB36#39	20.58	20.64	20.74
		RB75#0	20.64	20.58	20.78

20MHz	QPSK	RB1#0	22.92	22.44	22.78
		RB1#50	22.92	22.80	22.93
		RB1#99	22.72	22.76	22.70
		RB50#0	21.91	21.79	21.80
		RB50#50	21.70	21.77	21.82
		RB100#0	21.83	21.73	21.96
	16QAM	RB1#0	22.26	21.79	21.50
		RB1#50	22.51	21.85	21.59
		RB1#99	22.01	21.99	21.29
		RB50#0	20.68	20.61	20.83
		RB50#50	20.49	20.69	20.77
		RB100#0	20.64	20.71	20.62

PAR, Band 2

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	3.85	3.56	3.56	13
	100 RB		5.22	5.06	5.19	13
16QAM	1 RB	20 MHz	4.55	4.49	4.20	13
	100 RB		6.06	5.93	6.09	13

PAR, Band 4

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	4.49	3.65	4.33	13
	100 RB		5.22	5.00	5.06	13
16QAM	1 RB	20 MHz	5.38	4.29	5.29	13
	100 RB		6.15	5.83	6.03	13

PAR, Band 5

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	4.78	3.65	4.87	13
	50 RB		5.29	5.58	5.42	13
16QAM	1 RB	10 MHz	5.74	4.55	5.74	13
	50 RB		6.25	6.35	6.28	13

PAR, Band 7

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	4.25	3.33	4.23	13
	100 RB		5.19	5.75	5.65	13
16QAM	1 RB	20 MHz	5.43	4.56	5.97	13
	100 RB		6.29	6.13	6.89	13

PAR, LTE Band 12

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	3.55	4.59	4.65	13
	50 RB		5.65	5.65	5.28	13
16QAM	1 RB	10 MHz	4.39	5.65	5.65	13
	50 RB		5.48	6.54	6.18	13

PAR, LTE Band 13

Test Modulation		Channel Bandwidth	Middle Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	4.87	13
	50 RB		5.62	13
16QAM	1 RB	10 MHz	5.02	13
	50 RB		6.04	13

PAR, LTE Band 17

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	4.54	4.32	4.44	13
	50 RB		5.21	5.32	5.28	13
16QAM	1 RB	10 MHz	5.32	5.75	5.56	13
	50 RB		6.48	6.38	6.56	13

PAR, LTE Band 26

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	3.58	4.65	4.78	13
	50 RB		4.51	5.22	5.28	13
16QAM	1 RB	10 MHz	3.56	5.68	5.87	13
	50RB		5.75	6.24	6.56	13

PAR, Band 38

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	4.58	3.87	4.56	13
	100 RB		5.65	5.98	5.78	13
16QAM	1 RB	20 MHz	5.59	4.58	5.98	13
	100 RB		6.28	6.53	6.88	13

PAR, Band 41

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	4.78	3.98	4.74	13
	100 RB		5.59	5.89	5.88	13
16QAM	1 RB	20 MHz	5.52	4.41	5.98	13
	100 RB		6.55	6.57	6.98	13

Note: peak-to-average ratio (PAR) <13 dB.

Band 40 Duty cycle:
2305-2315MHz

Test Modulation	Test Bandwidth	Ton (ms)	Total (ms)	Duty Cycle (%)	Limit (%)
QPSK	5M	3.216	10.030	32.06	38
	10M	3.216	10.030	32.06	
16-QAM	5M	3.216	10.030	32.06	
	10M	3.116	10.030	31.07	

2350-2360MHz

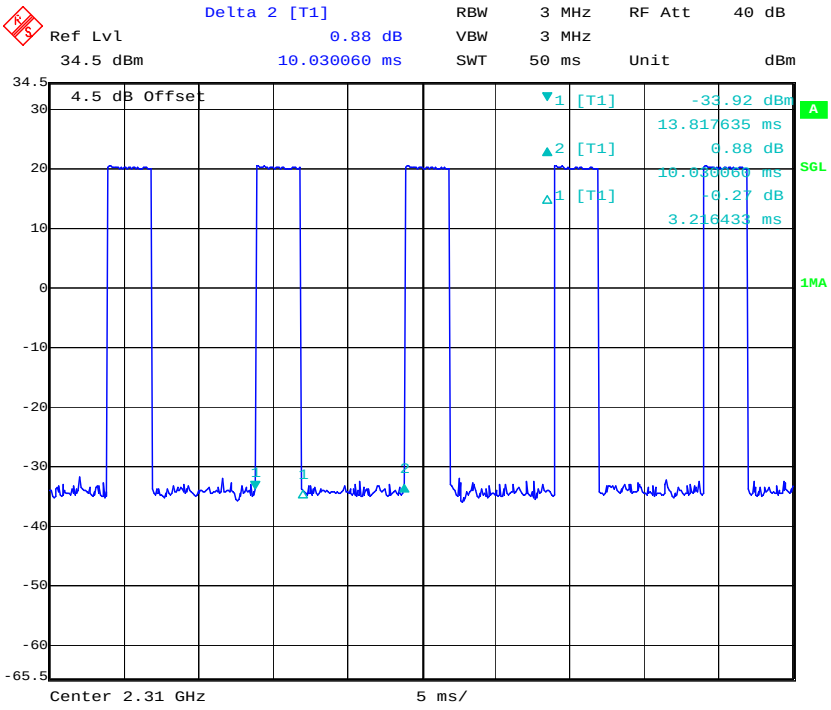
Test Modulation	Test Bandwidth	Ton (ms)	Total (ms)	Duty Cycle (%)	Limit (%)
QPSK	5M	3.216	10.030	32.06	38
	10M	3.216	10.030	32.06	
16-QAM	5M	3.216	10.030	32.06	
	10M	3.216	10.030	32.06	

Note: EUT setup is as following:

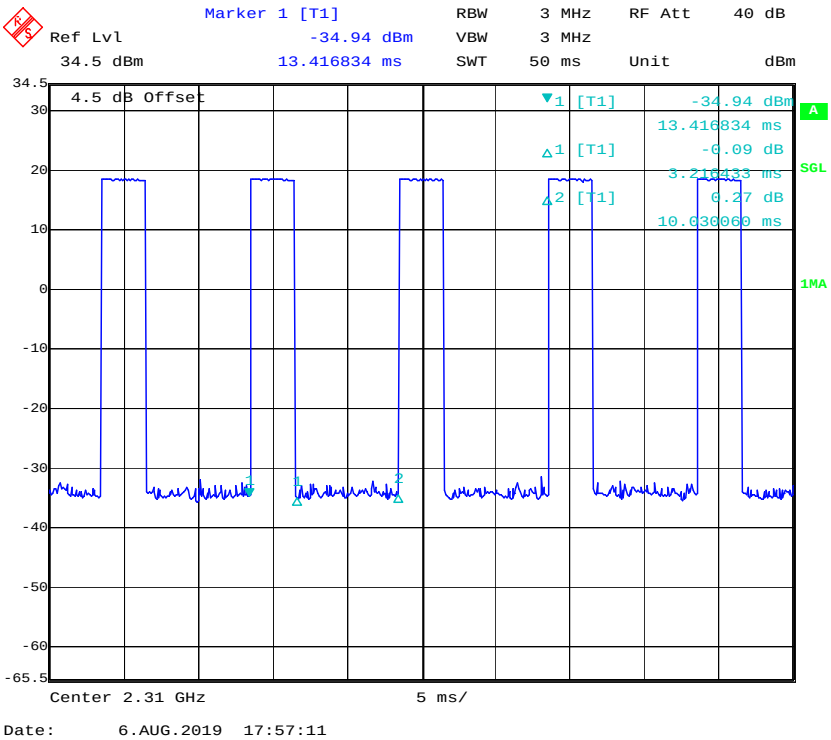
Uplink Downlink configuration	Subframe number									
	0	1	2	3	4	5	6	7	8	9
3	D	S	U	U	U	D	D	D	D	D

Band 40(2305-2315MHz)

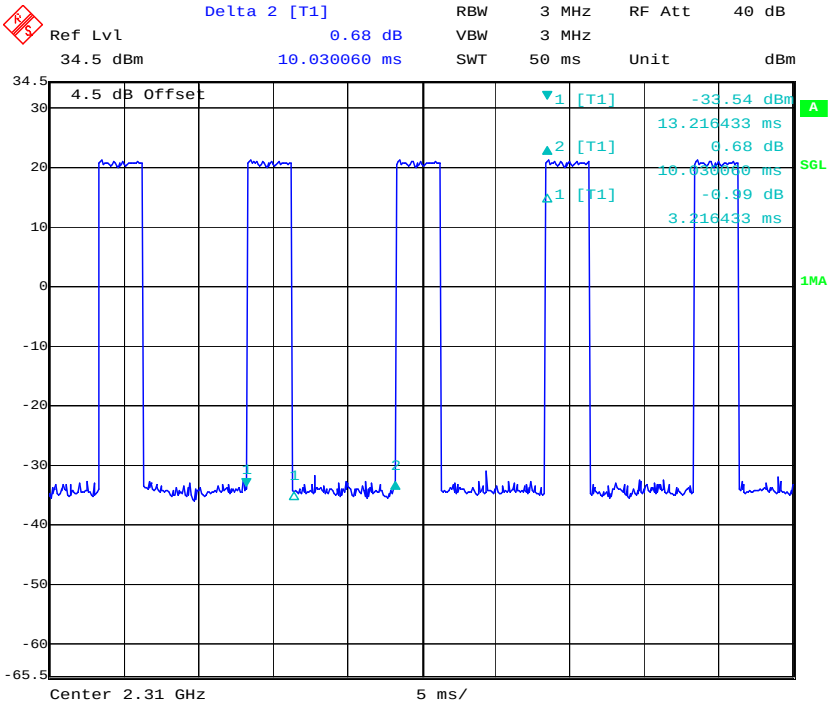
QPSK, 5MHz



QPSK, 10MHz

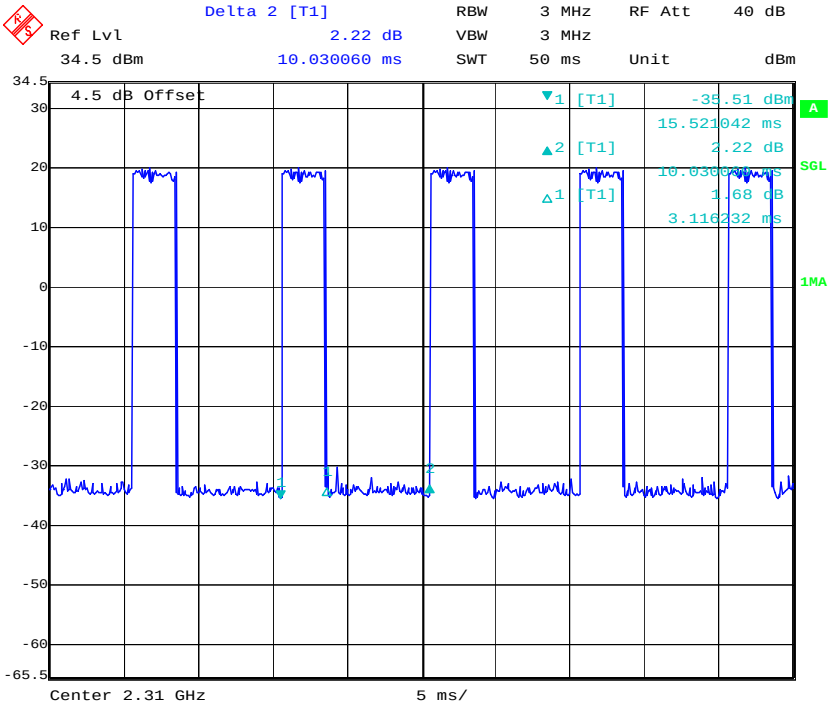


16-QAM, 5MHz



Date: 6.AUG.2019 18:04:54

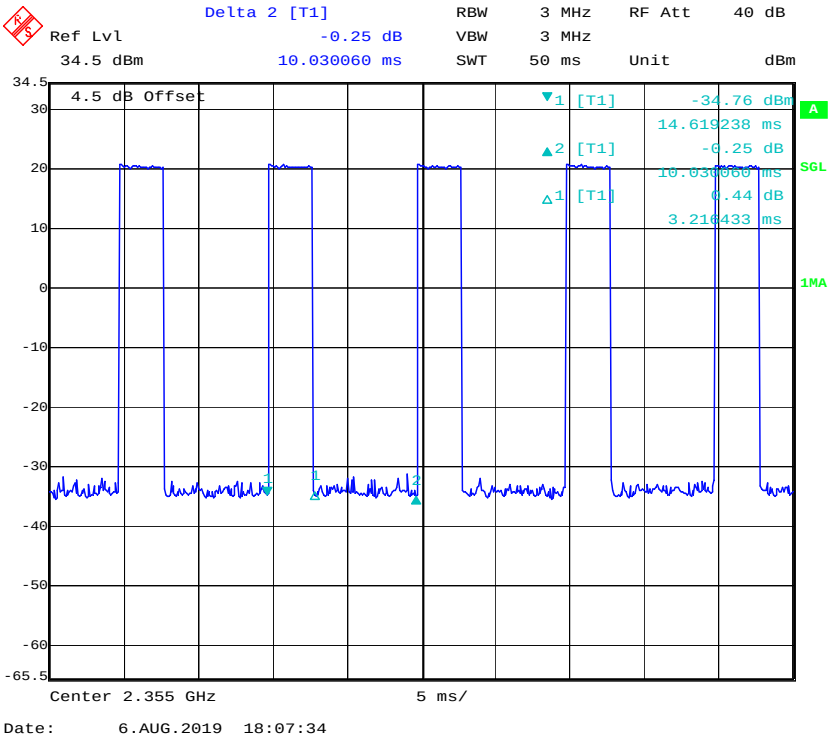
16-QAM, 10MHz



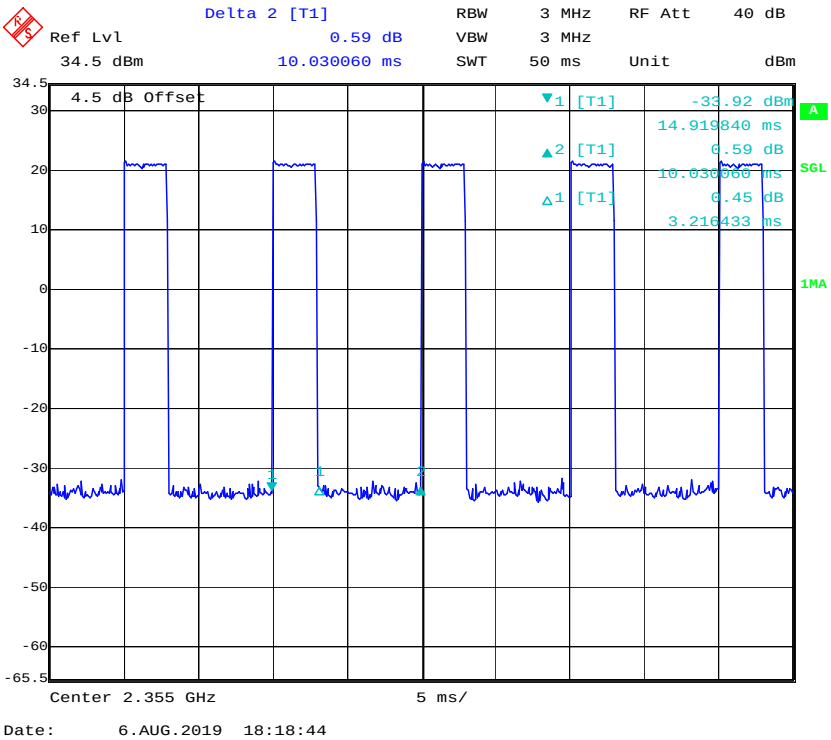
Date: 6.AUG.2019 18:01:08

Band 40(2350-2360MHz)

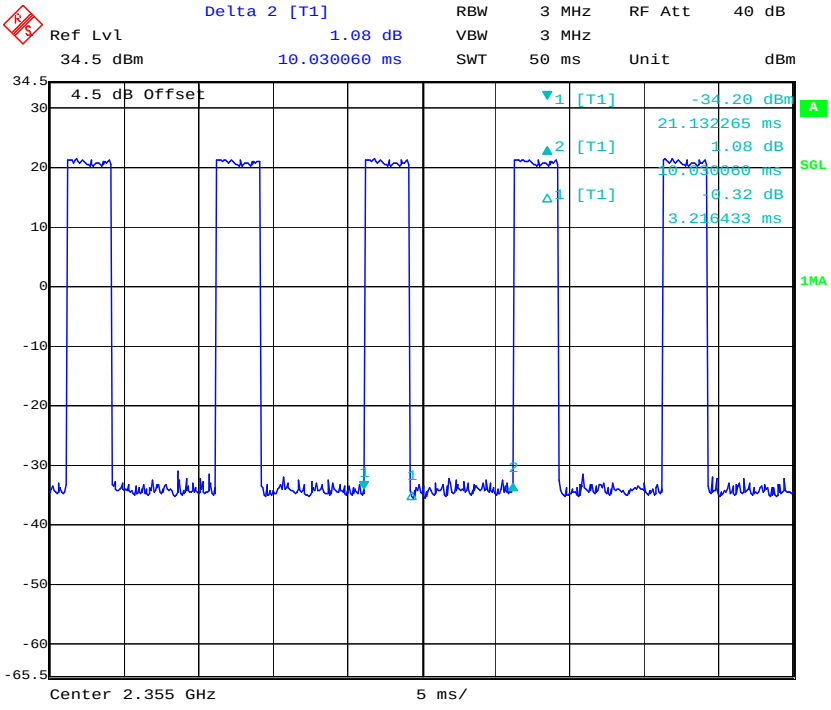
QPSK, 5MHz



QPSK, 10MHz

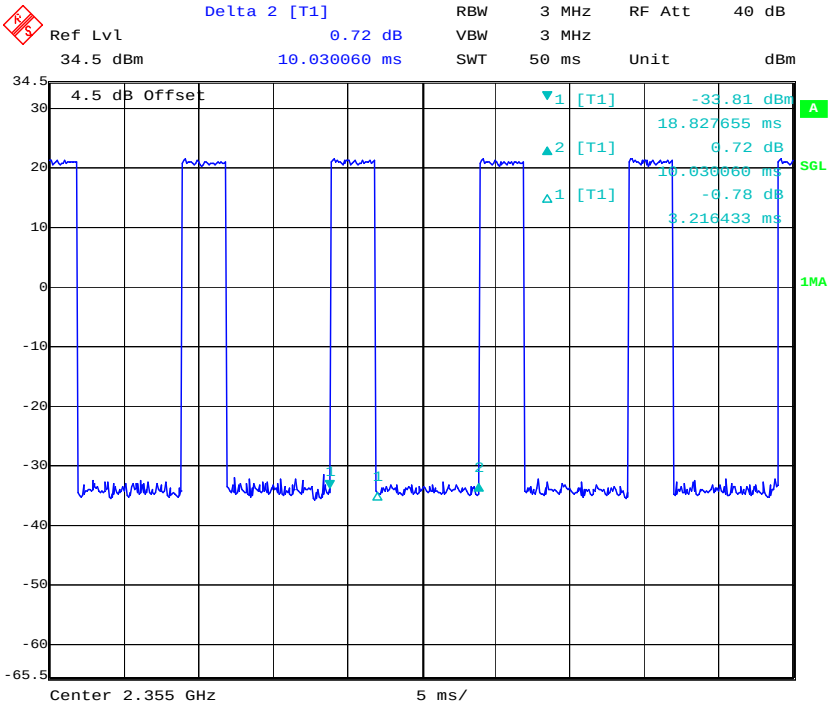


16-QAM, 5MHz



Date: 6.AUG.2019 18:08:20

16-QAM, 10MHz



Date: 6.AUG.2019 18:18:13

ERP & EIRP

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GPRS 850 Middle Channel								
836.60	H	87.53	12.61	0.00	0.97	11.64	38.45	26.81
836.60	V	99.27	27.48	0.00	0.97	26.51	38.45	11.94
EDGE 850 Middle Channel								
836.60	H	84.23	9.31	0.00	0.97	8.34	38.45	30.11
836.60	V	96.78	24.99	0.00	0.97	24.02	38.45	14.43
WCDMA Band V Middle Channel								
836.60	H	80.74	5.82	0.00	0.97	4.85	38.45	33.60
836.60	V	92.13	20.34	0.00	0.97	19.37	38.45	19.08
GPRS 1900 Middle Channel								
1880.00	H	92.57	17.79	11.14	1.56	27.37	33.00	5.63
1880.00	V	89.74	14.77	11.14	1.56	24.35	33.00	8.65
EDGE 1900 Middle Channel								
1880.00	H	89.13	14.35	11.14	1.56	23.93	33.00	9.07
1880.00	V	85.77	10.80	11.14	1.56	20.38	33.00	12.62
WCDMA Band II Middle Channel								
1880.00	H	87.88	13.10	11.14	1.56	22.68	33.00	10.32
1880.00	V	83.68	8.71	11.14	1.56	18.29	33.00	14.71
WCDMA Band IV Middle Channel								
1732.60	H	88.81	13.60	10.70	1.52	22.78	30.00	7.22
1732.60	V	86.07	10.56	10.70	1.52	19.74	30.00	10.26

Note:
1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
3) Margin = Limit-Absolute Level

LTE Band 2

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1880.00	1.40	QPSK	H	87.84	13.06	11.14	1.56	**22.64**	33.00	10.36
1880.00			V	85.60	10.63	11.14	1.56	20.21	33.00	12.79
1880.00	3.00		H	87.79	13.01	11.14	1.56	22.59	33.00	10.41
1880.00			V	85.63	10.66	11.14	1.56	20.24	33.00	12.76
1880.00	5.00		H	87.64	12.86	11.14	1.56	22.44	33.00	10.56
1880.00			V	85.44	10.47	11.14	1.56	20.05	33.00	12.95
1880.00	10.00		H	87.09	12.31	11.14	1.56	21.89	33.00	11.11
1880.00			V	84.89	9.92	11.14	1.56	19.50	33.00	13.50
1880.00	15.00		H	87.65	12.87	11.14	1.56	22.45	33.00	10.55
1880.00			V	85.41	10.44	11.14	1.56	20.02	33.00	12.98
1880.00	20.00		H	87.89	13.11	11.14	1.56	**22.69**	33.00	10.31
1880.00			V	85.74	10.77	11.14	1.56	20.35	33.00	12.65
1880.00	1.40	16QAM	H	87.09	12.31	11.14	1.56	**21.89**	33.00	11.11
1880.00			V	84.77	9.80	11.14	1.56	19.38	33.00	13.62
1880.00	3.00		H	87.02	12.24	11.14	1.56	21.82	33.00	11.18
1880.00			V	84.80	9.83	11.14	1.56	19.41	33.00	13.59
1880.00	5.00		H	87.05	12.27	11.14	1.56	21.85	33.00	11.15
1880.00			V	84.69	9.72	11.14	1.56	19.30	33.00	13.70
1880.00	10.00		H	86.74	11.96	11.14	1.56	21.54	33.00	11.46
1880.00			V	84.31	9.34	11.14	1.56	18.92	33.00	14.08
1880.00	15.00		H	87.05	12.27	11.14	1.56	21.85	33.00	11.15
1880.00			V	84.66	9.69	11.14	1.56	19.27	33.00	13.73
1880.00	20.00		H	87.18	12.40	11.14	1.56	**21.98**	33.00	11.02
1880.00			V	84.91	9.94	11.14	1.56	19.52	33.00	13.48

LTE Band 4

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1732.50	1.40	QPSK	H	85.76	10.55	10.70	1.52	**19.73**	30.00	10.27
1732.50			V	82.90	7.39	10.70	1.52	16.57	30.00	13.43
1732.50	3.00		H	85.51	10.30	10.70	1.52	19.48	30.00	10.52
1732.50			V	82.77	7.26	10.70	1.52	16.44	30.00	13.56
1732.50	5.00		H	85.41	10.20	10.70	1.52	19.38	30.00	10.62
1732.50			V	82.70	7.19	10.70	1.52	16.37	30.00	13.63
1732.50	10.00		H	84.84	9.63	10.70	1.52	18.81	30.00	11.19
1732.50			V	81.93	6.42	10.70	1.52	15.60	30.00	14.40
1732.50	15.00		H	85.45	10.24	10.70	1.52	19.42	30.00	10.58
1732.50			V	82.67	7.16	10.70	1.52	16.34	30.00	13.66
1732.50	20.00		H	85.65	10.44	10.70	1.52	**19.62**	30.00	10.38
1732.50			V	82.78	7.27	10.70	1.52	16.45	30.00	13.55
1732.50	1.40	16QAM	H	84.82	9.61	10.70	1.52	**18.79**	30.00	11.21
1732.50			V	81.99	6.48	10.70	1.52	15.66	30.00	14.34
1732.50	3.00		H	84.63	9.42	10.70	1.52	18.60	30.00	11.40
1732.50			V	81.78	6.27	10.70	1.52	15.45	30.00	14.55
1732.50	5.00		H	84.60	9.39	10.70	1.52	18.57	30.00	11.43
1732.50			V	81.74	6.23	10.70	1.52	15.41	30.00	14.59
1732.50	10.00		H	83.90	8.69	10.70	1.52	17.87	30.00	12.13
1732.50			V	80.86	5.35	10.70	1.52	14.53	30.00	15.47
1732.50	15.00		H	84.66	9.45	10.70	1.52	18.63	30.00	11.37
1732.50			V	81.71	6.20	10.70	1.52	15.38	30.00	14.62
1732.50	20.00		H	84.68	9.47	10.70	1.52	**18.65**	30.00	11.35
1732.50			V	81.75	6.24	10.70	1.52	15.42	30.00	14.58

LTE Band 5

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
836.50	1.40	QPSK	H	79.31	4.38	0.00	0.97	3.41	38.45	35.04
836.50			V	91.07	19.28	0.00	0.97	**18.31**	38.45	20.14
836.50	3.00		H	79.29	4.36	0.00	0.97	3.39	38.45	35.06
836.50			V	91.03	19.24	0.00	0.97	18.27	38.45	20.18
836.50	5.00		H	79.11	4.18	0.00	0.97	3.21	38.45	35.24
836.50			V	90.89	19.10	0.00	0.97	18.13	38.45	20.32
836.50	10.00		H	78.76	3.83	0.00	0.97	2.86	38.45	35.59
836.50			V	90.32	18.53	0.00	0.97	**17.56**	38.45	20.89
836.50	1.40	16QAM	H	78.54	3.61	0.00	0.97	2.64	38.45	35.81
836.50			V	90.10	18.31	0.00	0.97	**17.34**	38.45	21.11
836.50	3.00		H	78.57	3.64	0.00	0.97	2.67	38.45	35.78
836.50			V	90.03	18.24	0.00	0.97	17.27	38.45	21.18
836.50	5.00		H	78.26	3.33	0.00	0.97	2.36	38.45	36.09
836.50			V	89.69	17.90	0.00	0.97	16.93	38.45	21.52
836.50	10.00		H	77.81	2.88	0.00	0.97	1.91	38.45	36.54
836.50			V	89.69	17.90	0.00	0.97	**16.93**	38.45	21.52

LTE Band 7

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
2535.00	5.00	QPSK	H	81.94	8.85	12.21	1.79	**19.27**	33.00	13.73
2535.00			V	79.50	6.12	12.21	1.79	16.54	33.00	16.46
2535.00	10.00		H	81.39	8.30	12.21	1.79	18.72	33.00	14.28
2535.00			V	79.33	5.95	12.21	1.79	16.37	33.00	16.63
2535.00	15.00		H	81.84	8.75	12.21	1.79	19.17	33.00	13.83
2535.00			V	79.28	5.90	12.21	1.79	16.32	33.00	16.68
2535.00	20.00		H	82.22	9.13	12.21	1.79	**19.55**	33.00	13.45
2535.00			V	79.63	6.25	12.21	1.79	16.67	33.00	16.33
2535.00	5.00	16QAM	H	81.16	8.07	12.21	1.79	**18.49**	33.00	14.51
2535.00			V	78.46	5.08	12.21	1.79	15.50	33.00	17.50
2535.00	10.00		H	80.77	7.68	12.21	1.79	18.10	33.00	14.90
2535.00			V	78.04	4.66	12.21	1.79	15.08	33.00	17.92
2535.00	15.00		H	81.03	7.94	12.21	1.79	18.36	33.00	14.64
2535.00			V	78.23	4.85	12.21	1.79	15.27	33.00	17.73
2535.00	20.00		H	81.10	8.01	12.21	1.79	**18.43**	33.00	14.57
2535.00			V	78.09	4.71	12.21	1.79	15.13	33.00	17.87

LTE Band 12

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
707.50	1.40	QPSK	H	80.89	4.03	0.00	0.94	3.09	34.77	31.68
707.50			V	91.04	16.62	0.00	0.94	**15.68**	34.77	19.09
707.50	3.00		H	80.8	3.94	0.00	0.94	3.00	34.77	31.77
707.50			V	91.01	16.59	0.00	0.94	15.65	34.77	19.12
707.50	5.00		H	80.65	3.79	0.00	0.94	2.85	34.77	31.92
707.50			V	90.8	16.38	0.00	0.94	15.44	34.77	19.33
707.50	10.00		H	80.09	3.23	0.00	0.94	2.29	34.77	32.48
707.50			V	90.34	15.92	0.00	0.94	**14.98**	34.77	19.79
707.50	1.40	16QAM	H	79.06	2.2	0.00	0.94	1.26	34.77	33.51
707.50			V	90.14	15.72	0.00	0.94	**14.78**	34.77	19.99
707.50	3.00		H	79.13	2.27	0.00	0.94	1.33	34.77	33.44
707.50			V	90.1	15.68	0.00	0.94	14.74	34.77	20.03
707.50	5.00		H	78.93	2.07	0.00	0.94	1.13	34.77	33.64
707.50			V	89.87	15.45	0.00	0.94	14.51	34.77	20.26
707.50	10.00		H	78.79	1.93	0.00	0.94	0.99	34.77	33.78
707.50			V	89.66	15.24	0.00	0.94	**14.3**	34.77	20.47

LTE Band 13

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
782.00	5.00	QPSK	H	79.35	3.82	0.00	0.93	2.89	34.77	31.88
782.00			V	90.89	18.28	0.00	0.93	17.35	34.77	17.42
782.00	10.00		H	79.03	3.5	0.00	0.93	2.57	34.77	32.2
782.00			V	90.21	17.6	0.00	0.93	16.67	34.77	18.1
782.00	5.00	16QAM	H	78.22	2.69	0.00	0.93	1.76	34.77	33.01
782.00			V	89.14	16.53	0.00	0.93	15.6	34.77	19.17
782.00	10.00		H	77.94	2.41	0.00	0.93	1.48	34.77	33.29
782.00			V	89.13	16.52	0.00	0.93	15.59	34.77	19.18

LTE Band 17

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
710.00	5.00	QPSK	H	81.68	4.87	0.00	0.94	3.93	34.77	30.84
710.00			V	91.25	16.89	0.00	0.94	15.95	34.77	18.82
710.00	10.00		H	81.23	4.42	0.00	0.94	3.48	34.77	31.29
710.00			V	91.01	16.65	0.00	0.94	15.71	34.77	19.06
710.00	5.00	16QAM	H	80.46	3.65	0.00	0.94	2.71	34.77	32.06
710.00			V	90.34	15.98	0.00	0.94	15.04	34.77	19.73
710.00	10.00		H	80.16	3.35	0.00	0.94	2.41	34.77	32.36
710.00			V	89.89	15.53	0.00	0.94	14.59	34.77	20.18

LTE Band 26

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
831.50	1.40	QPSK	H	79.70	4.74	0.00	0.97	3.77	38.45	34.68
831.50			V	90.85	19.00	0.00	0.97	18.03	38.45	20.42
831.50	3.00		H	79.49	4.53	0.00	0.97	3.56	38.45	34.89
831.50			V	90.57	18.72	0.00	0.97	17.75	38.45	20.70
831.50	5.00		H	79.36	4.40	0.00	0.97	3.43	38.45	35.02
831.50			V	90.42	18.57	0.00	0.97	17.60	38.45	20.85
831.50	10.00		H	78.87	3.91	0.00	0.97	2.94	38.45	35.51
831.50			V	89.13	17.28	0.00	0.97	16.31	38.45	22.14
831.50	15.00		H	79.90	4.94	0.00	0.97	3.97	38.45	34.48
831.50			V	91.22	19.37	0.00	0.97	18.40	38.45	20.05
831.50	1.40	16QAM	H	78.71	3.75	0.00	0.97	2.78	38.45	35.67
831.50			V	89.65	17.80	0.00	0.97	16.83	38.45	21.62
831.50	3.00		H	78.44	3.48	0.00	0.97	2.51	38.45	35.94
831.50			V	89.52	17.67	0.00	0.97	16.70	38.45	21.75
831.50	5.00		H	78.10	3.14	0.00	0.97	2.17	38.45	36.28
831.50			V	89.39	17.54	0.00	0.97	16.57	38.45	21.88
831.50	10.00		H	77.88	2.92	0.00	0.97	1.95	38.45	36.50
831.50			V	88.28	16.43	0.00	0.97	15.46	38.45	22.99
831.50	15.00		H	78.86	3.89	0.00	0.97	2.92	38.45	35.53
831.50			V	90.29	18.44	0.00	0.97	17.47	38.45	20.98

LTE Band 38

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
2595.00	5.00	QPSK	H	83.63	10.70	12.24	1.80	21.14	33.00	11.86
2595.00			V	78.79	5.54	12.24	1.80	15.98	33.00	17.02
2595.00	10.00		H	82.87	9.94	12.24	1.80	20.38	33.00	12.62
2595.00			V	78.23	4.98	12.24	1.80	15.42	33.00	17.58
2595.00	15.00		H	83.69	10.76	12.24	1.80	21.20	33.00	11.80
2595.00			V	78.80	5.55	12.24	1.80	15.99	33.00	17.01
2595.00	20.00		H	83.73	10.80	12.24	1.80	21.24	33.00	11.76
2595.00			V	78.86	5.61	12.24	1.80	16.05	33.00	16.95
2595.00	5.00	16QAM	H	82.45	9.52	12.24	1.80	19.96	33.00	13.04
2595.00			V	77.81	4.56	12.24	1.80	15.00	33.00	18.00
2595.00	10.00		H	81.90	8.97	12.24	1.80	19.41	33.00	13.59
2595.00			V	77.14	3.89	12.24	1.80	14.33	33.00	18.67
2595.00	15.00		H	82.37	9.44	12.24	1.80	19.88	33.00	13.12
2595.00			V	77.65	4.40	12.24	1.80	14.84	33.00	18.16
2595.00	20.00		H	82.56	9.63	12.24	1.80	20.07	33.00	12.93
2595.00			V	77.82	4.57	12.24	1.80	15.01	33.00	17.99

LTE Band 40(2305-2315 MHz)

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
2310.00	5.00	QPSK	H	82.46	8.81	11.93	1.71	19.03	23.98	4.95
2310.00			V	73.31	-0.56	11.93	1.71	9.66	23.98	14.32
2310.00	10.00		H	81.63	7.98	11.93	1.71	18.20	23.98	5.78
2310.00			V	72.64	-1.23	11.93	1.71	8.99	23.98	14.99
2310.00	5.00	16QAM	H	81.50	7.85	11.93	1.71	18.07	23.98	5.91
2310.00			V	72.73	-1.14	11.93	1.71	9.08	23.98	14.90
2310.00	10.00		H	80.70	7.05	11.93	1.71	17.27	23.98	6.71
2310.00			V	71.64	-2.23	11.93	1.71	7.99	23.98	15.99

LTE Band 40(2350-2360 MHz)

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
2355.00	5.00	QPSK	H	82.46	8.92	12.00	1.73	19.19	23.98	4.79
2355.00			V	73.72	-0.05	12.00	1.73	10.22	23.89	13.67
2355.00	10.00		H	82.27	8.73	12.00	1.73	19.00	23.89	4.89
2355.00			V	73.21	-0.56	12.00	1.73	9.71	23.89	14.18
2355.00	5.00	16QAM	H	80.84	7.30	12.00	1.73	17.57	23.89	6.32
2355.00			V	72.10	-1.67	12.00	1.73	8.60	23.89	15.29
2355.00	10.00		H	80.78	7.24	12.00	1.73	17.51	23.89	6.38
2355.00			V	71.44	-2.33	12.00	1.73	7.94	23.89	15.95

Note: the total power result meets the requirement EIRP less than 250mW/5MHz

LTE Band 41

Frequency (MHz)	BW (MHz)	Modulation	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
					Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
2595.00	5.00	QPSK	H	83.71	11.70	12.38	1.89	22.19	33.00	10.81
2595.00			V	79.34	6.90	12.38	1.89	17.39	33.00	15.61
2595.00	10.00		H	83.17	11.16	12.38	1.89	21.65	33.00	11.35
2595.00			V	78.86	6.42	12.38	1.89	16.91	33.00	16.09
2595.00	15.00		H	83.55	11.54	12.38	1.89	22.03	33.00	10.97
2595.00			V	78.97	6.53	12.38	1.89	17.02	33.00	15.98
2595.00	20.00		H	83.80	11.79	12.38	1.89	22.28	33.00	10.72
2595.00			V	79.21	6.77	12.38	1.89	17.26	33.00	15.74
2595.00	5.00	16QAM	H	83.07	11.06	12.38	1.89	21.55	33.00	11.45
2595.00			V	78.52	6.08	12.38	1.89	16.57	33.00	16.43
2595.00	10.00		H	82.87	10.86	12.38	1.89	21.35	33.00	11.65
2595.00			V	78.16	5.72	12.38	1.89	16.21	33.00	16.79
2595.00	15.00		H	82.90	10.89	12.38	1.89	21.38	33.00	11.62
2595.00			V	78.20	5.76	12.38	1.89	16.25	33.00	16.75
2595.00	20.00		H	83.21	11.20	12.38	1.89	21.69	33.00	11.31
2595.00			V	78.38	5.94	12.38	1.89	16.43	33.00	16.57

Note:
1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
3) Margin = Limit-Absolute Level

FCC §2.1049, §22.917, §22.905 & §24.238 & §27.53&§90.209- OCCUPIED BANDWIDTH

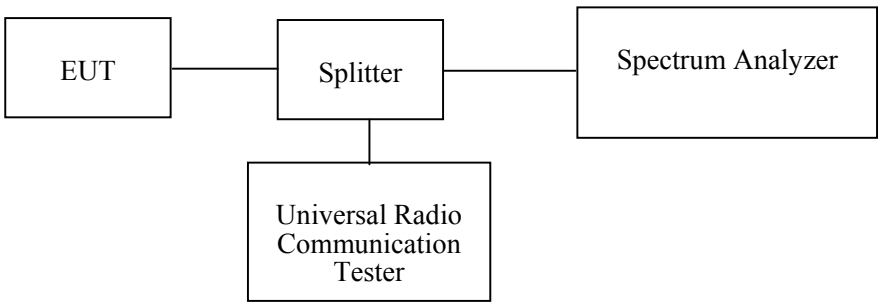
Applicable Standard

FCC §2.1049, §22.917, §22.905, §24.238, §27.53, and§90.209

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The 26 dB & 99% bandwidth was recorded.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2018-08-03	2019-08-03
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	/
E-Microwave	Two-way Spliter	ODP-1-6-2S	OE0120142	Each Time	/
Unknown	Coaxial Cable	C-SJ00-0010	C0010/03	Each time	/

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	28.1°C~28.9°C
Relative Humidity:	51 %~55 %
ATM Pressure:	100.3 kPa~100.5 kPa

** The testing was performed by Blake Yang on 2019-06-18~2019-06-20.*

Test Mode: Transmitting
Test Result: Compliant. Please refer to the following table and plots.

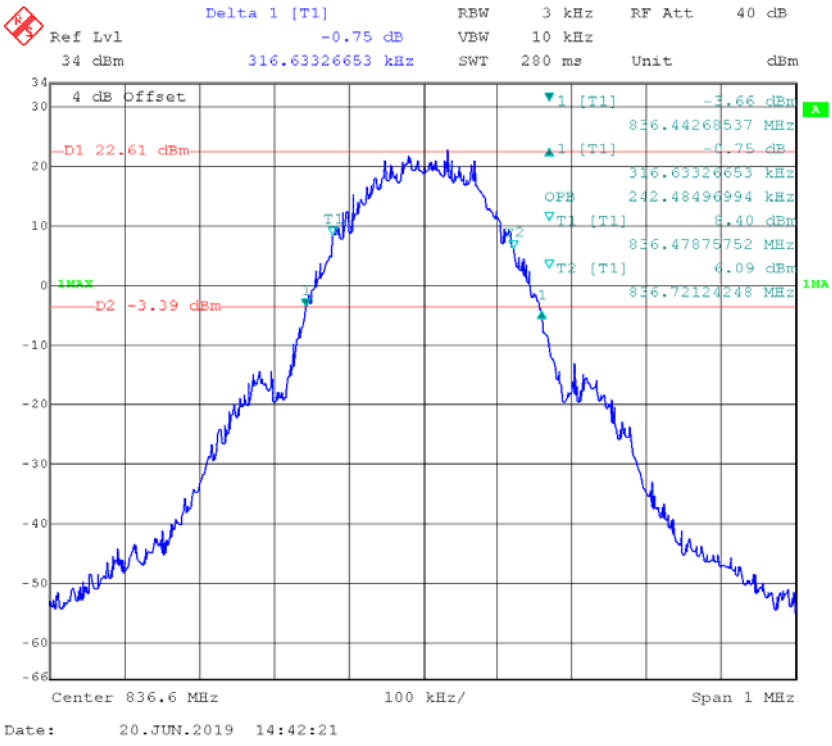
Band	Test Channel	Mode	99% Occupied Bandwidth (MHz)	26 dB Occupied Bandwidth (MHz)
Cellular	M	GRRS	0.24	0.32
		EDGE	0.24	0.32
PCS		GRRS	0.24	0.32
		EDGE	0.25	0.32
WCDMA Band II		Rel 99	4.13	4.73
		HSDPA	4.13	4.73
		HSUPA	4.13	4.69
WCDMA Band IV		Rel 99	4.15	4.77
		HSDPA	4.13	4.75
		HSUPA	4.13	4.75
WCDMA Band V		Rel 99	4.15	4.75
		HSDPA	4.13	4.77
		HSUPA	4.13	4.75

Band	Bandwidth	Modulation	99% occupied bandwidth (MHz)	26 dB bandwidth (MHz)
LTE Band 2	1.4 MHz	QPSK	1.106	1.401
		16QAM	1.106	1.353
	3 MHz	QPSK	2.705	2.970
		16QAM	2.693	2.946
	5 MHz	QPSK	4.549	5.070
		16QAM	4.509	5.010
	10 MHz	QPSK	8.938	9.860
		16QAM	8.938	9.780
	15 MHz	QPSK	13.467	14.729
		16QAM	13.467	14.850
	20 MHz	QPSK	17.956	19.319
		16QAM	17.956	19.559
LTE Band 4	1.4 MHz	QPSK	1.106	1.311
		16QAM	1.106	1.311
	3 MHz	QPSK	2.693	2.970
		16QAM	2.693	2.946
	5 MHz	QPSK	4.509	5.030
		16QAM	4.509	4.990
	10 MHz	QPSK	8.978	9.739
		16QAM	8.938	9.659
	15 MHz	QPSK	13.527	15.030
		16QAM	13.467	14.910
	20 MHz	QPSK	17.956	19.319
		16QAM	17.956	19.399
LTE Band 5	1.4 MHz	QPSK	1.100	1.329
		16QAM	1.094	1.311
	3 MHz	QPSK	2.693	2.946
		16QAM	2.693	2.922
	5 MHz	QPSK	4.529	5.010
		16QAM	4.509	5.030
	10 MHz	QPSK	8.978	9.780
		16QAM	8.978	9.699

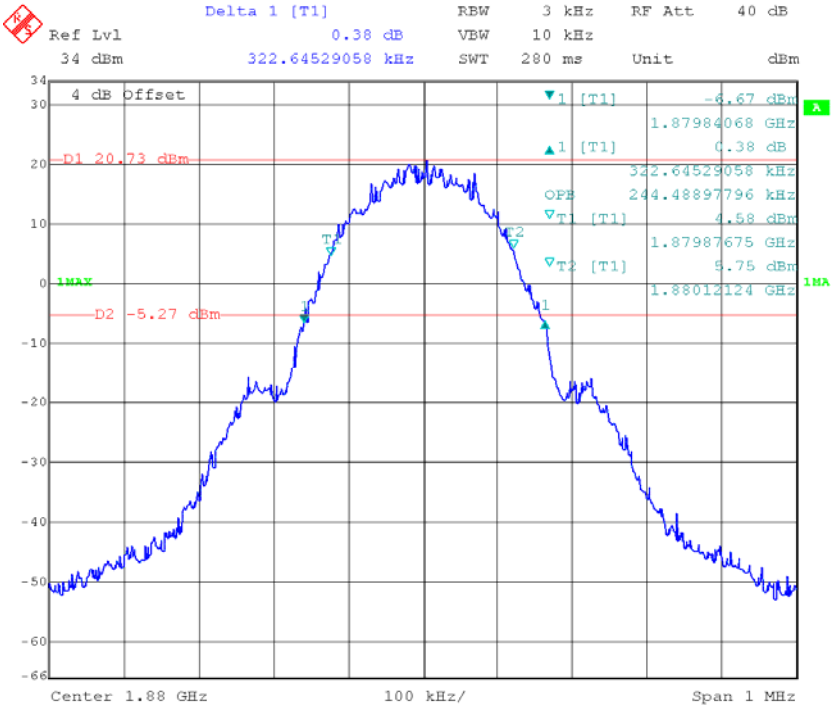
Band	Bandwidth	Modulation	99% occupied bandwidth (MHz)	26 dB bandwidth (MHz)
LTE Band 7	5 MHz	QPSK	4.529	5.070
		16QAM	4.529	5.030
	10 MHz	QPSK	8.978	9.900
		16QAM	8.938	9.699
	15 MHz	QPSK	13.527	14.850
		16QAM	13.467	14.910
	20 MHz	QPSK	17.956	19.479
		16QAM	17.956	19.399
LTE Band 12	1.4 MHz	QPSK	1.106	1.299
		16QAM	1.106	1.281
	3 MHz	QPSK	2.693	2.922
		16QAM	2.693	2.934
	5 MHz	QPSK	4.529	5.030
		16QAM	4.509	5.030
	10 MHz	QPSK	8.978	9.699
		16QAM	8.938	9.699
LTE Band 13	5 MHz	QPSK	4.529	5.050
		16QAM	4.529	5.030
	10 MHz	QPSK	8.978	9.780
		16QAM	8.938	9.659
LTE Band 17	5 MHz	QPSK	4.509	5.010
		16QAM	4.509	5.010
	10 MHz	QPSK	8.938	9.659
		16QAM	8.938	9.619
LTE Band 26	1.4 MHz	QPSK	1.106	1.311
		16QAM	1.100	1.287
	3 MHz	QPSK	2.705	2.922
		16QAM	2.693	2.922
	5 MHz	QPSK	4.529	5.010
		16QAM	4.509	5.030
	10 MHz	QPSK	8.938	9.659
		16QAM	8.938	9.619
	15 MHz	QPSK	13.467	14.910
		16QAM	13.467	14.790
LTE Band 38	5 MHz	QPSK	4.529	5.010
		16QAM	4.529	5.511
	10 MHz	QPSK	8.978	10.381
		16QAM	8.978	9.619
	15 MHz	QPSK	13.527	15.150
		16QAM	13.587	16.172
	20 MHz	QPSK	17.956	19.399
		16QAM	17.876	19.479

LTE Band 40 2305 - 2315MHz	5 MHz	QPSK	4.520	4.910
		16QAM	4.520	5.150
	10 MHz	QPSK	8.960	10.381
		16QAM	8.960	9.579
LTE Band 40 2350 - 2360MHz	5 MHz	QPSK	4.500	4.910
		16QAM	4.500	5.010
	10 MHz	QPSK	8.960	10.180
		16QAM	8.960	9.659
LTE Band 41	5 MHz	QPSK	4.509	4.990
		16QAM	4.509	5.190
	10 MHz	QPSK	8.978	10.301
		16QAM	8.978	9.619
	15 MHz	QPSK	13.527	15.752
		16QAM	13.527	16.112
	20 MHz	QPSK	17.956	19.399
		16QAM	17.876	20.040

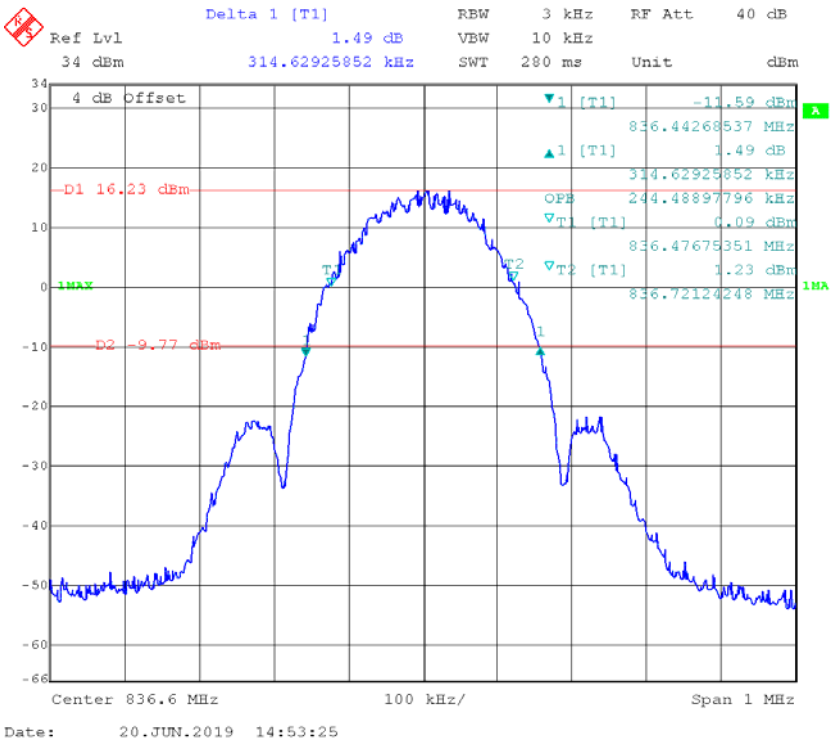
GPRS 850 Cellular Band



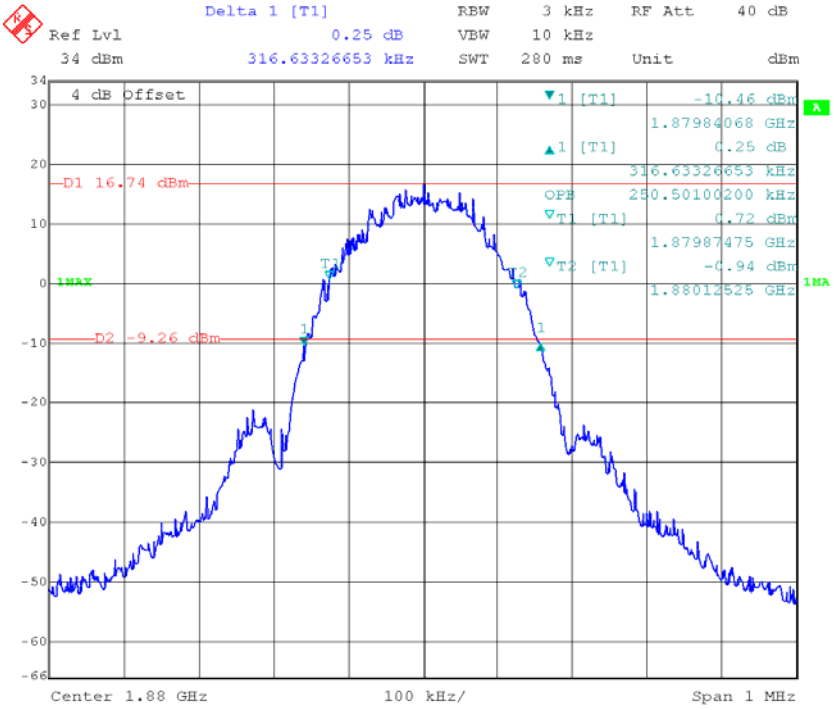
GPRS PCS1900 Cellular Band



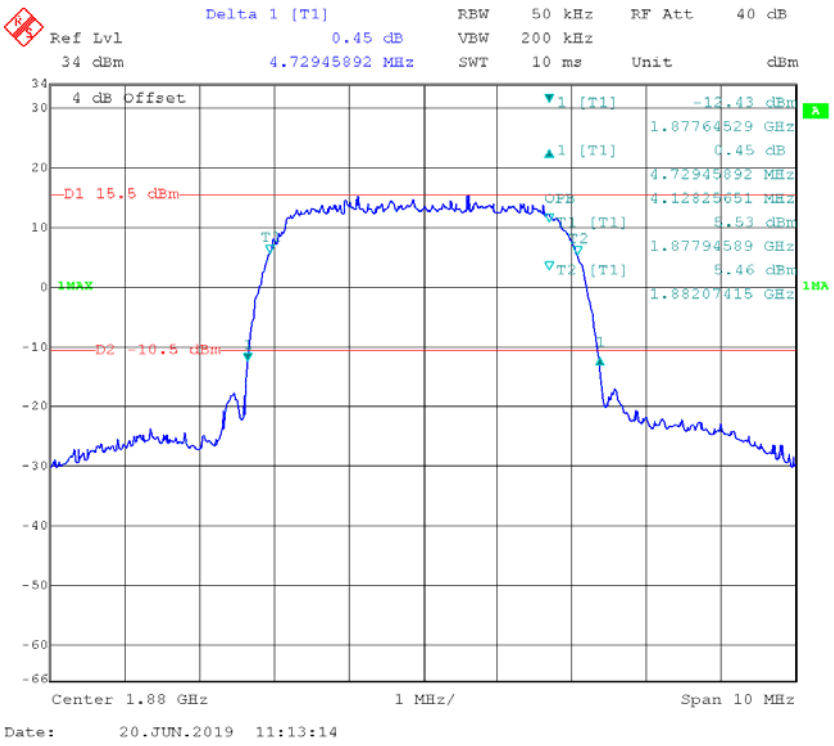
EDGE 850 Cellular Band



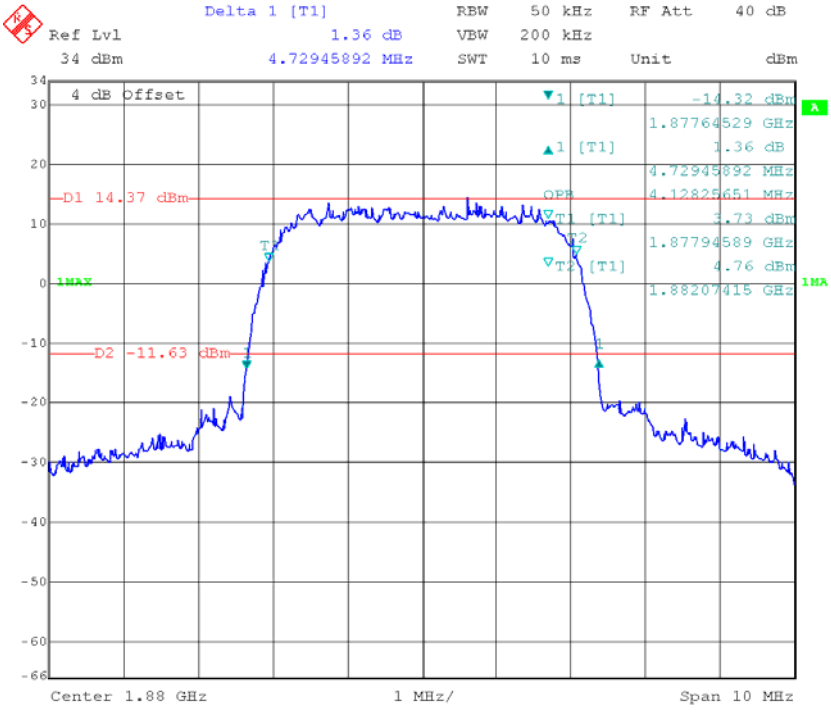
EDGE PCS1900 Cellular Band



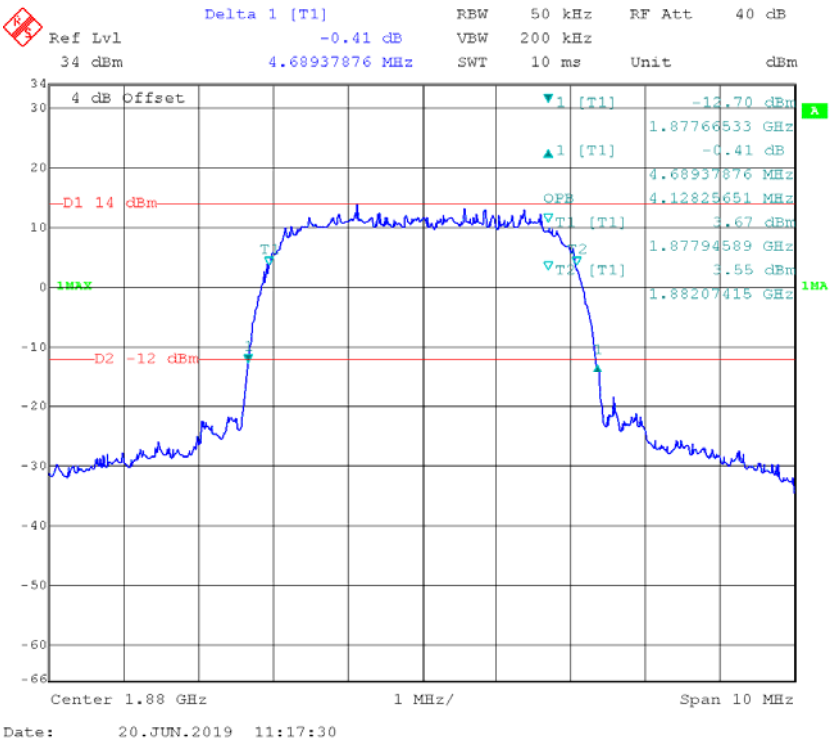
WCDMA Band II, Rel 99



WCDMA Band II, HSDPA



WCDMA Band II, HSUPA



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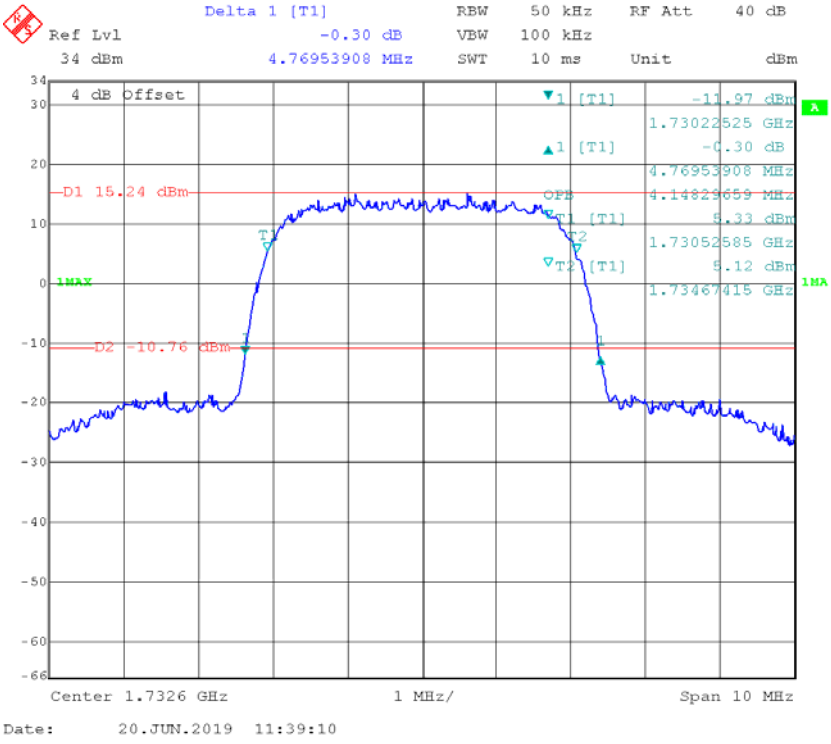
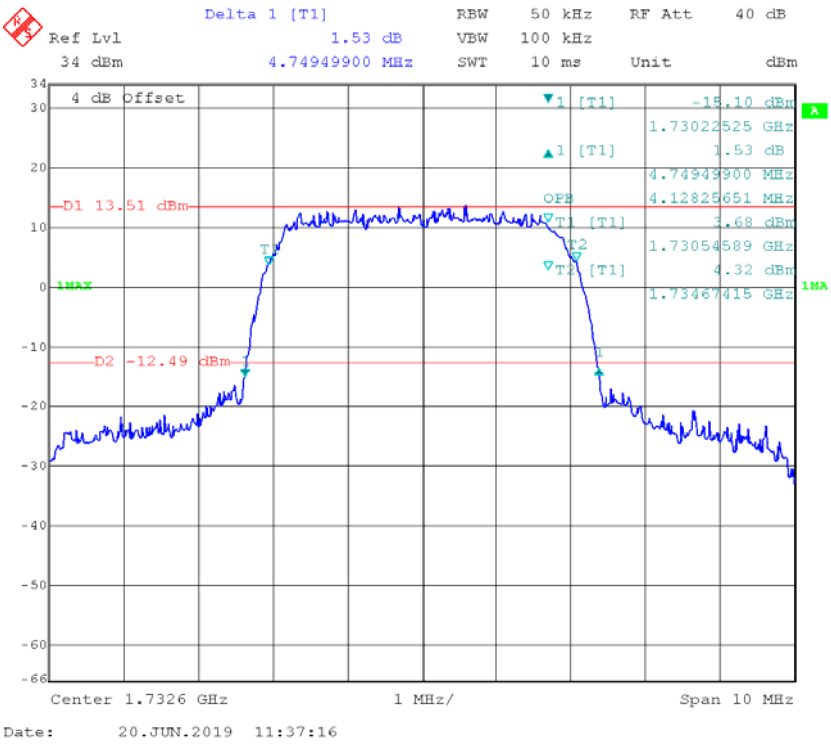


WCDMA Band IV, HSDPA



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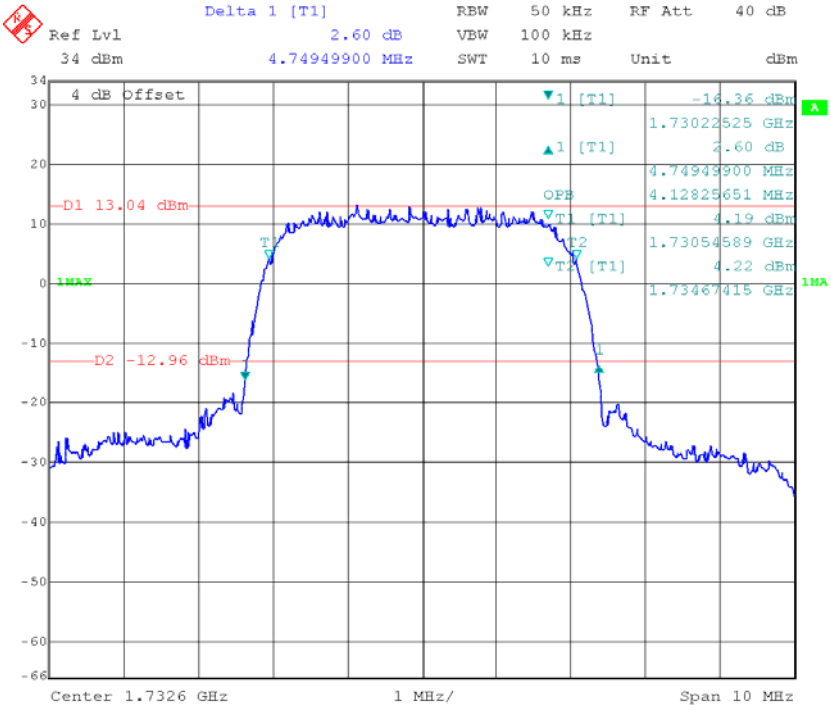

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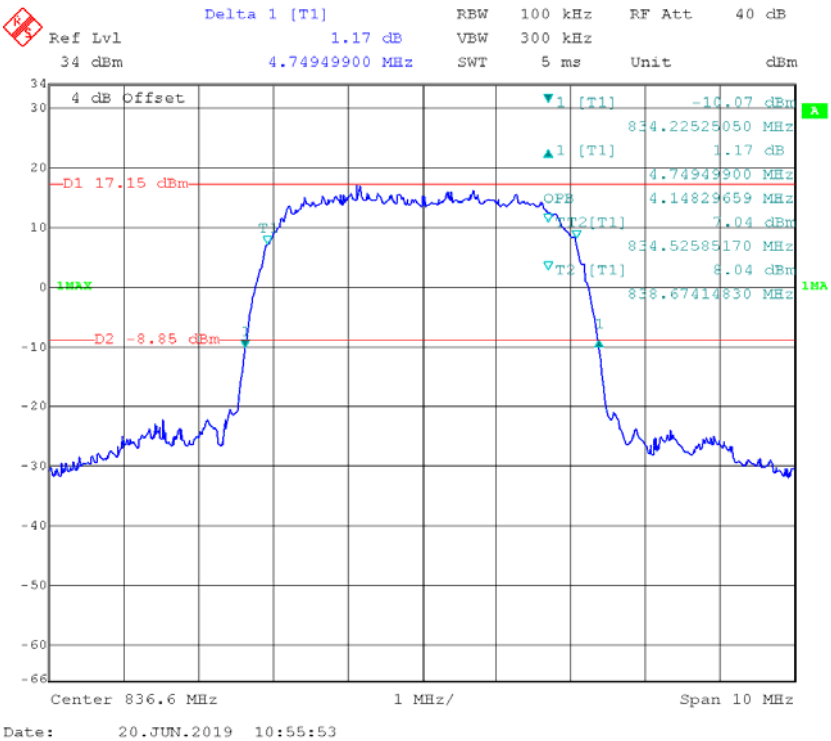

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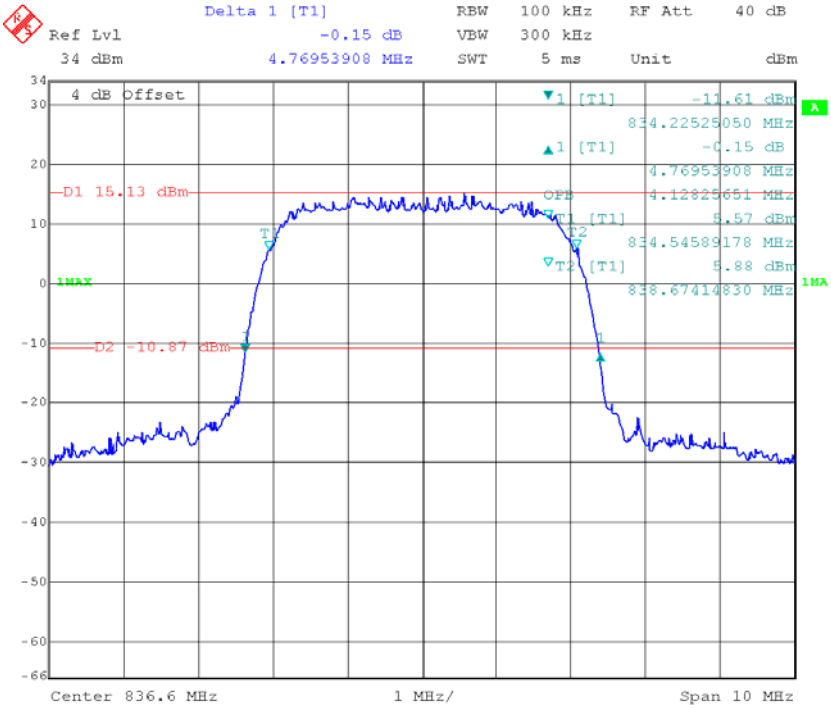
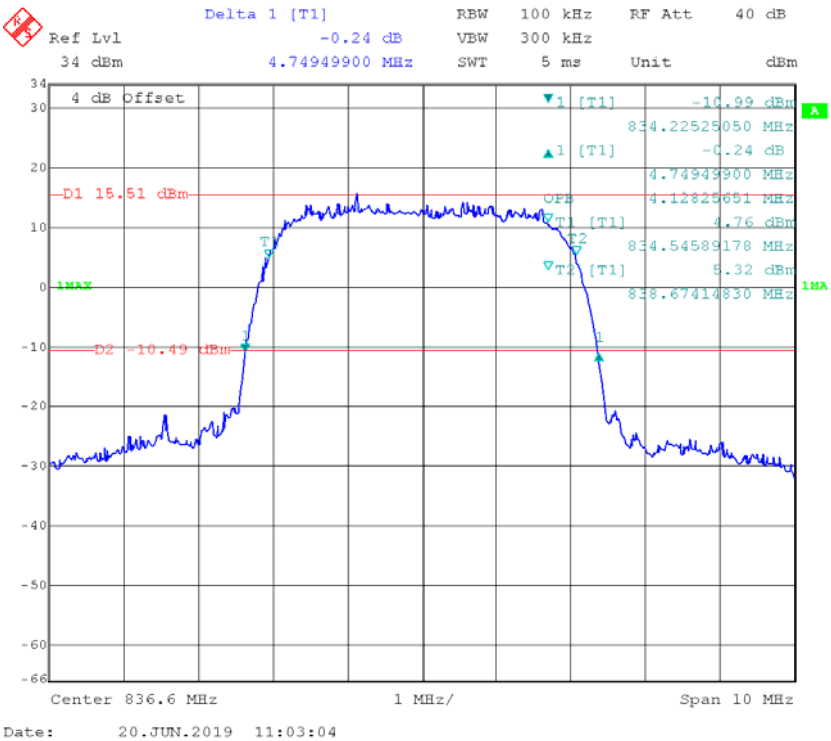
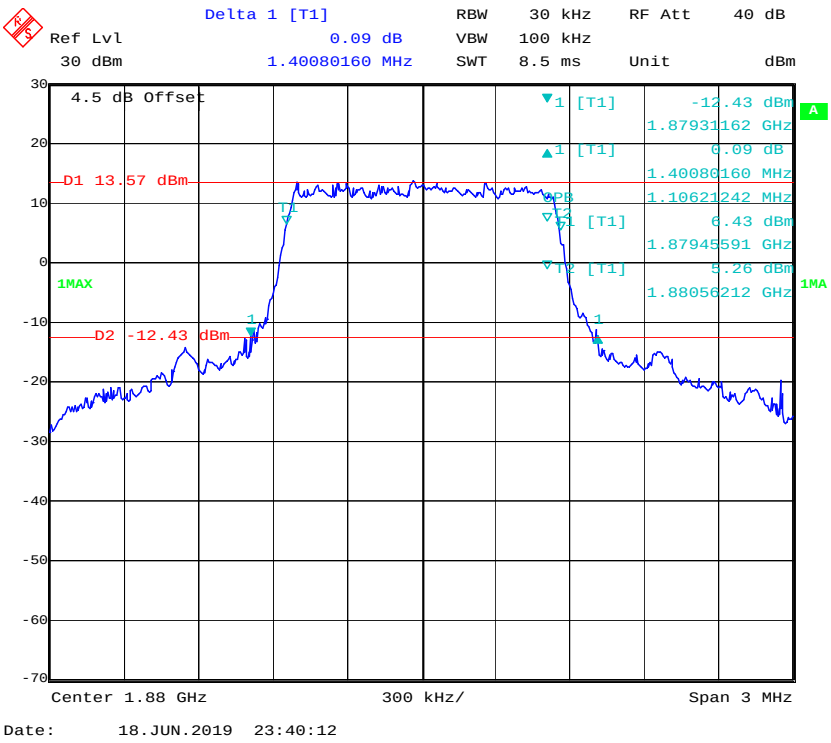


WCDMA Band V, HSUPA

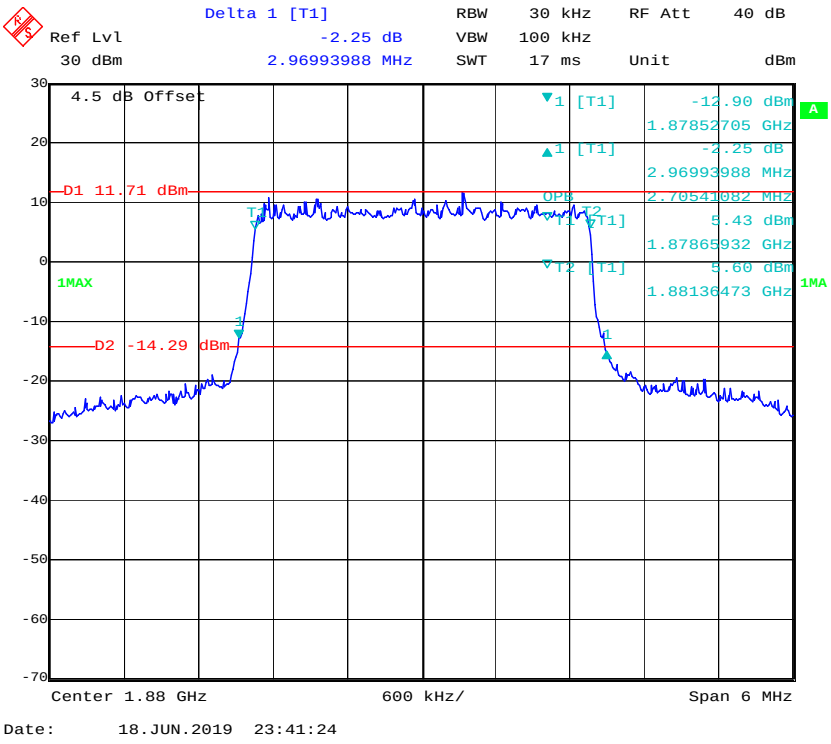


LTE Band 2

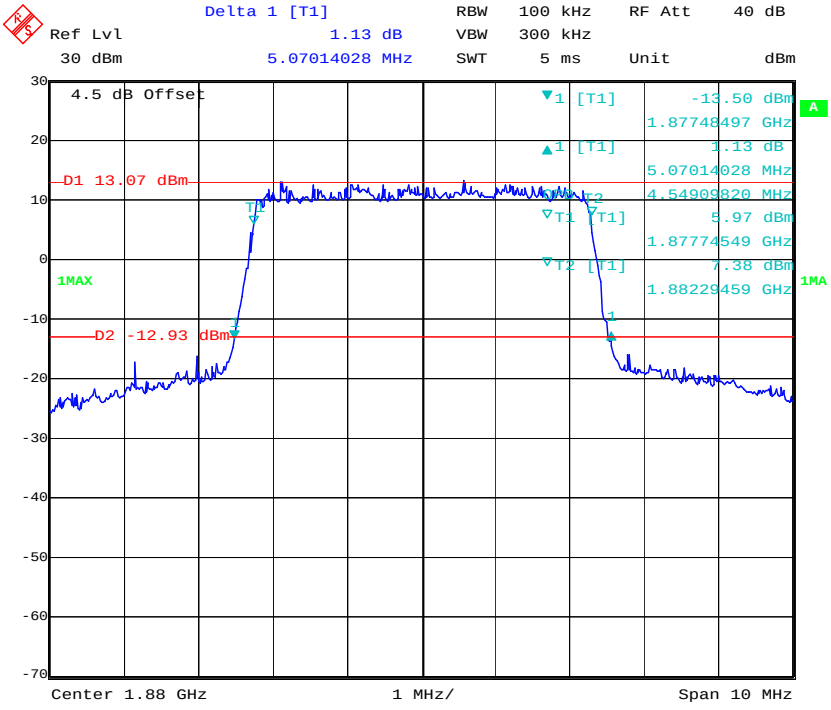
QPSK_1.4 MHz



QPSK_3 MHz



QPSK_5 MHz



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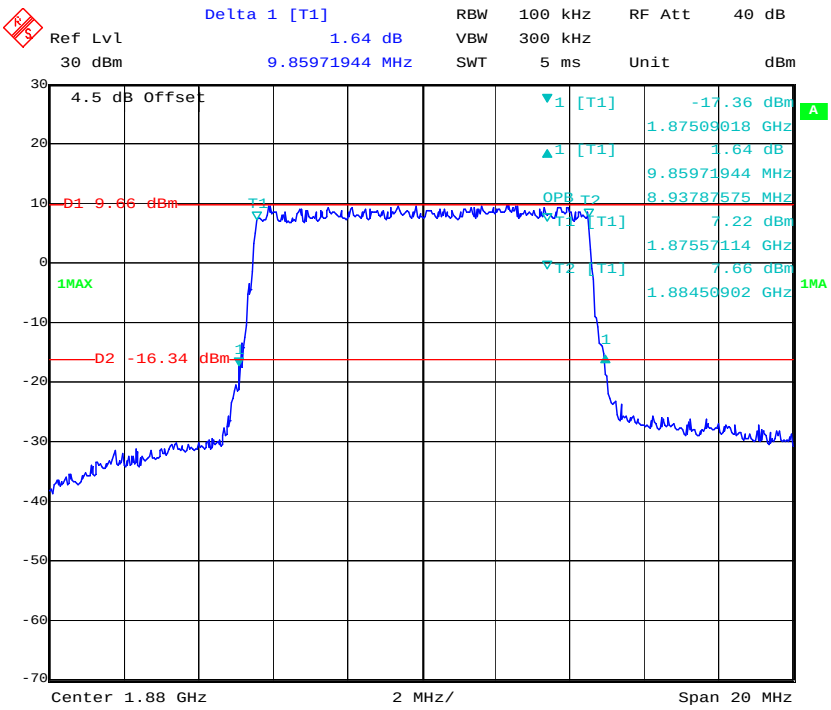
QPSK_10 MHz



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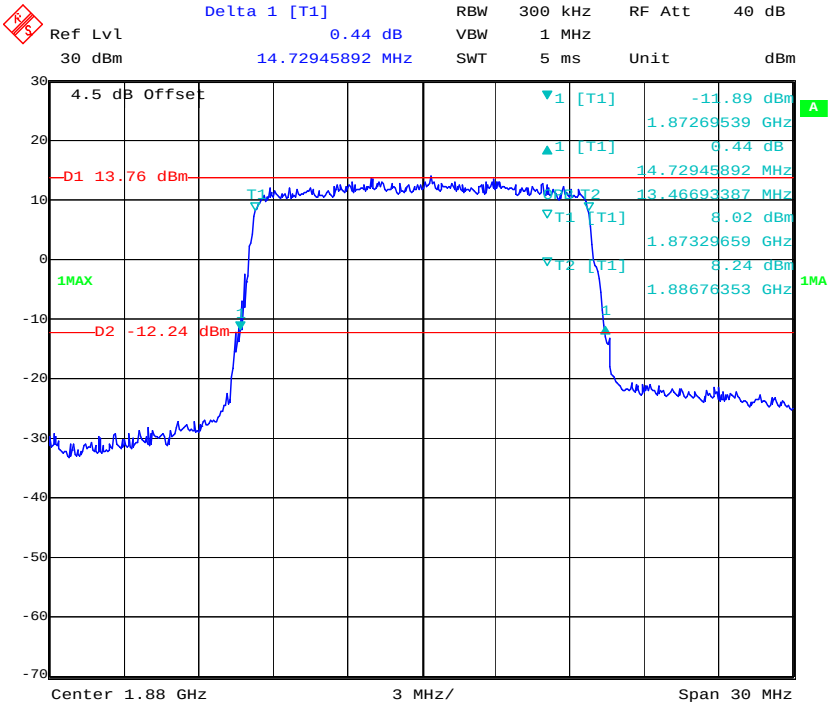
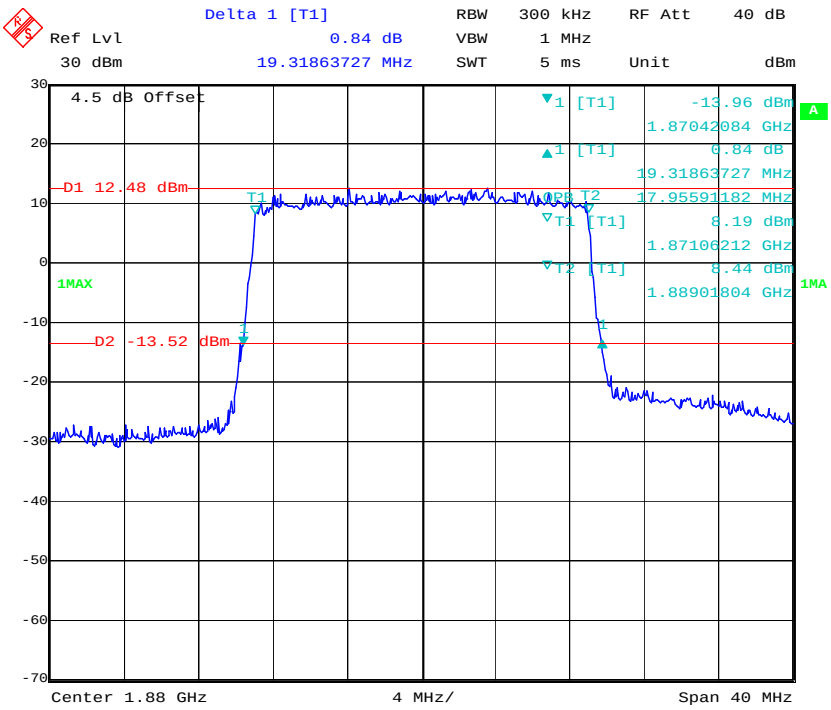
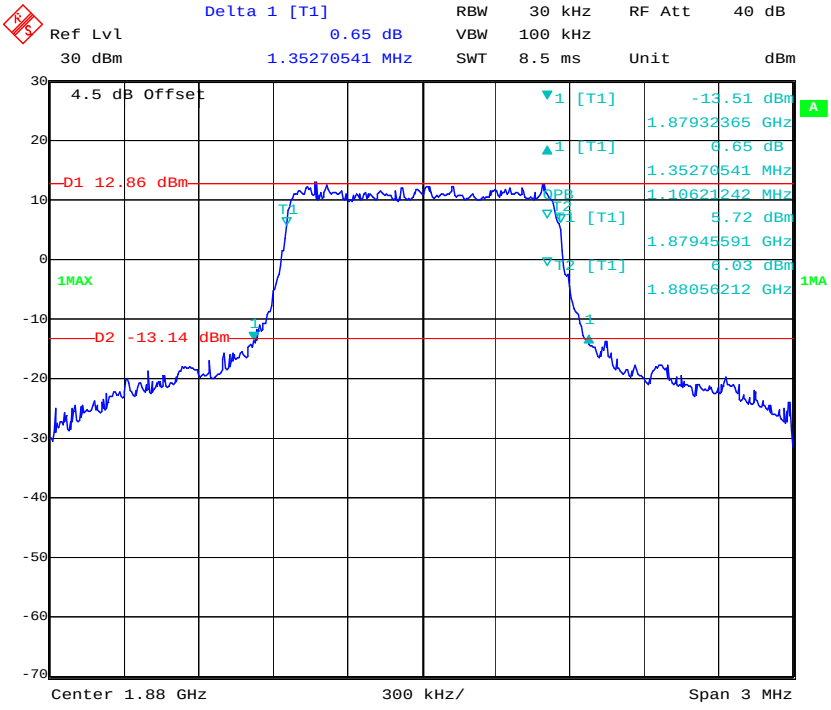
QPSK_15 MHz



QPSK_20 MHz



16QAM_1.4 MHz



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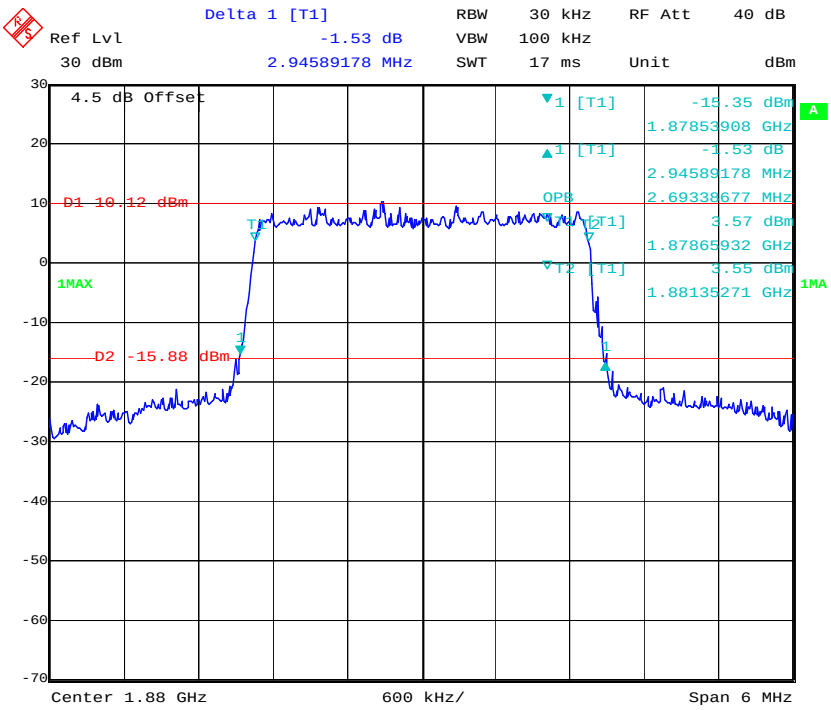
16QAM_3 MHz



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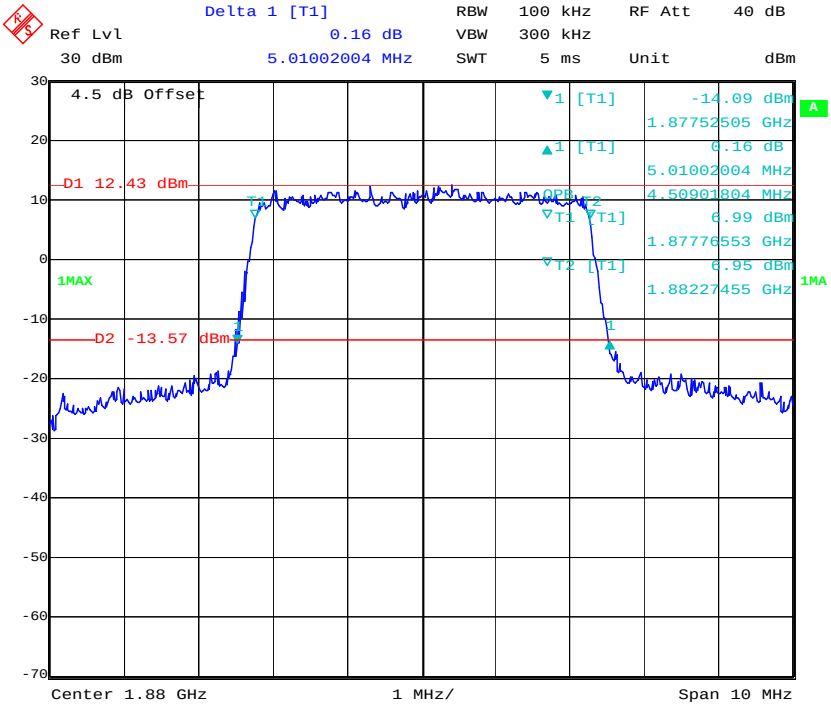
16QAM_5 MHz



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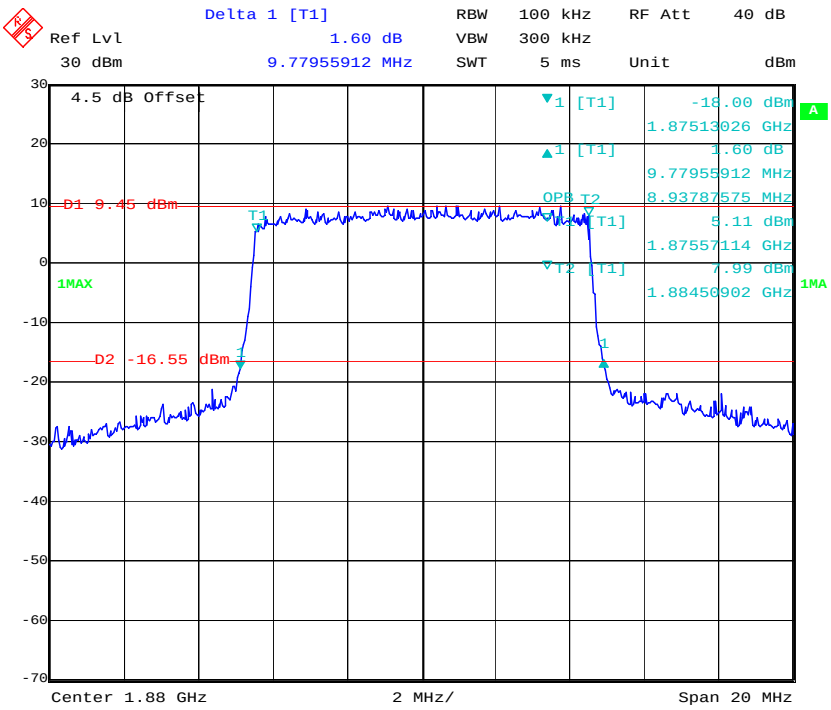
16QAM_10 MHz



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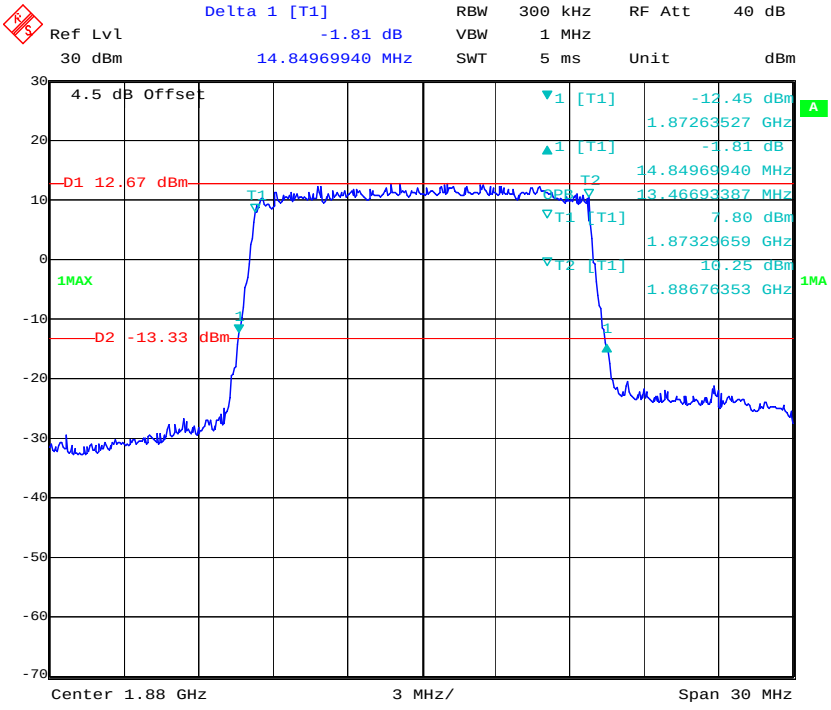
16QAM_15 MHz



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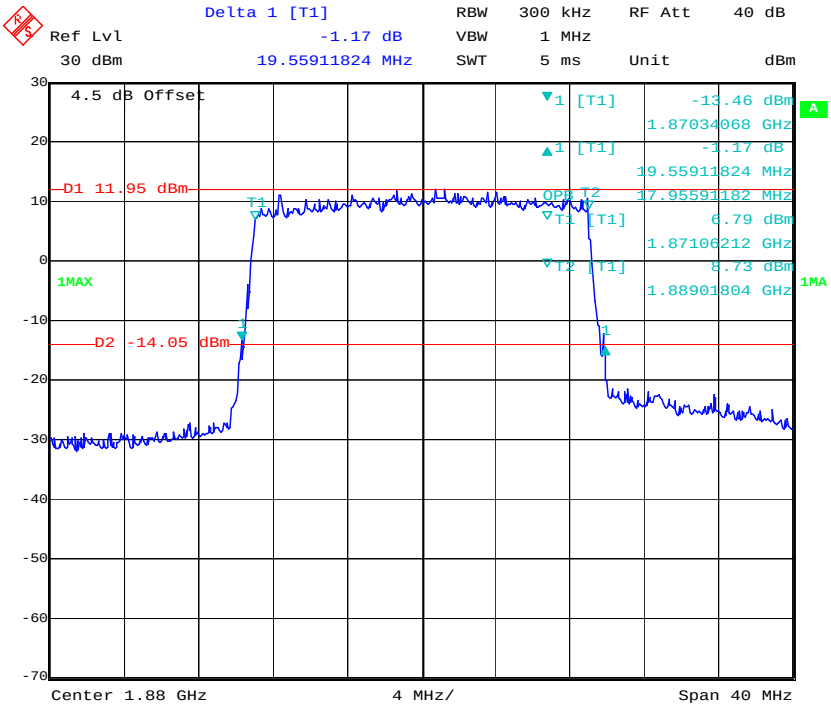
16QAM_20 MHz



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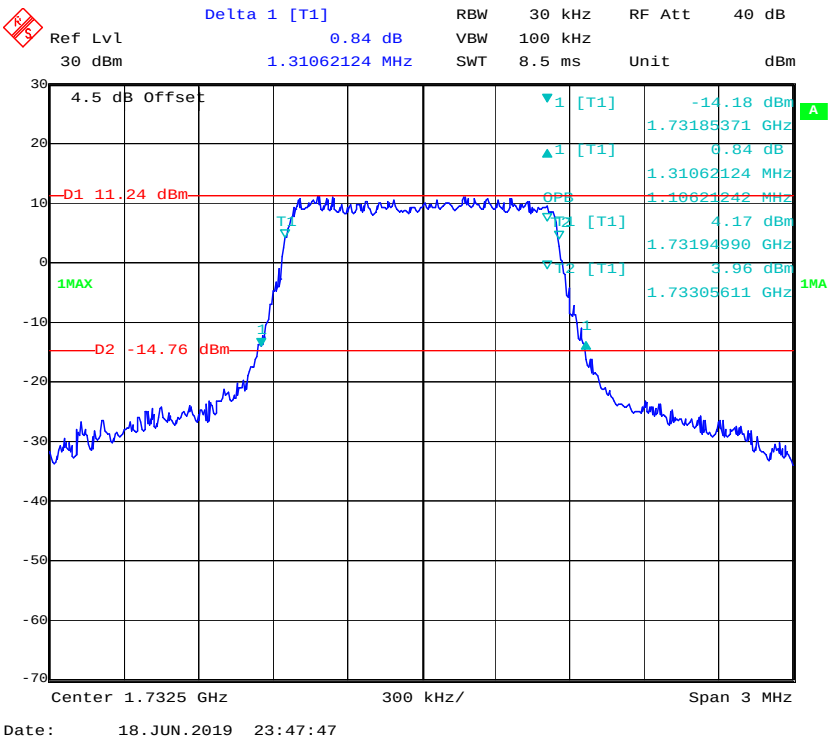
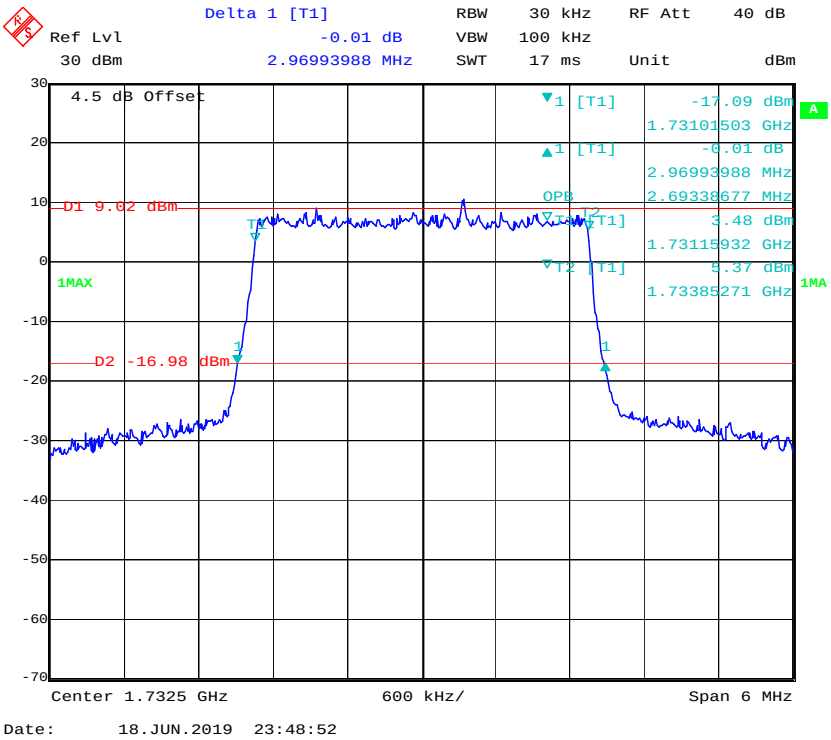
LTE Band 4

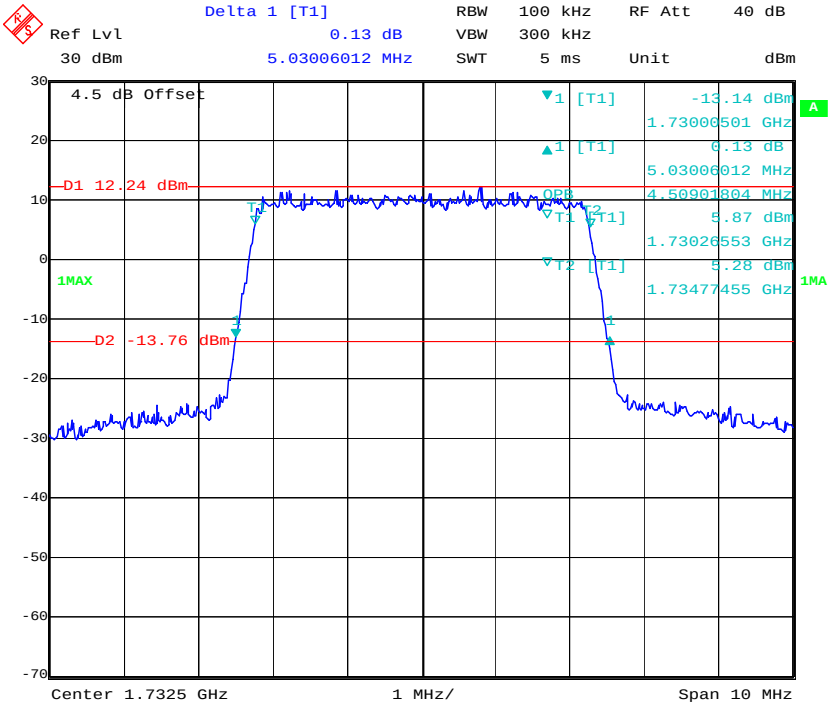
QPSK_1.4 MHz



QPSK_3 MHz



QPSK_5 MHz



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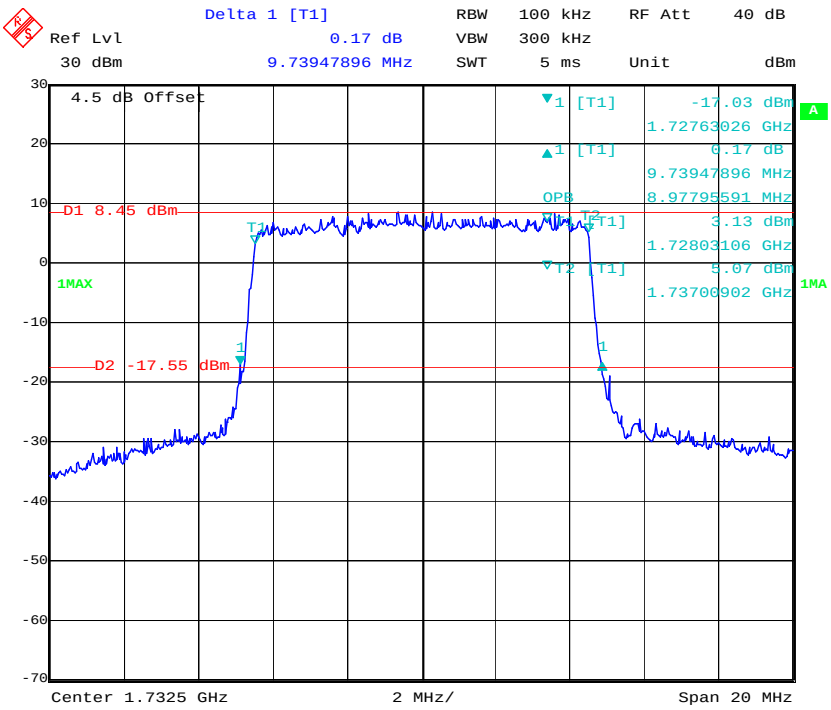
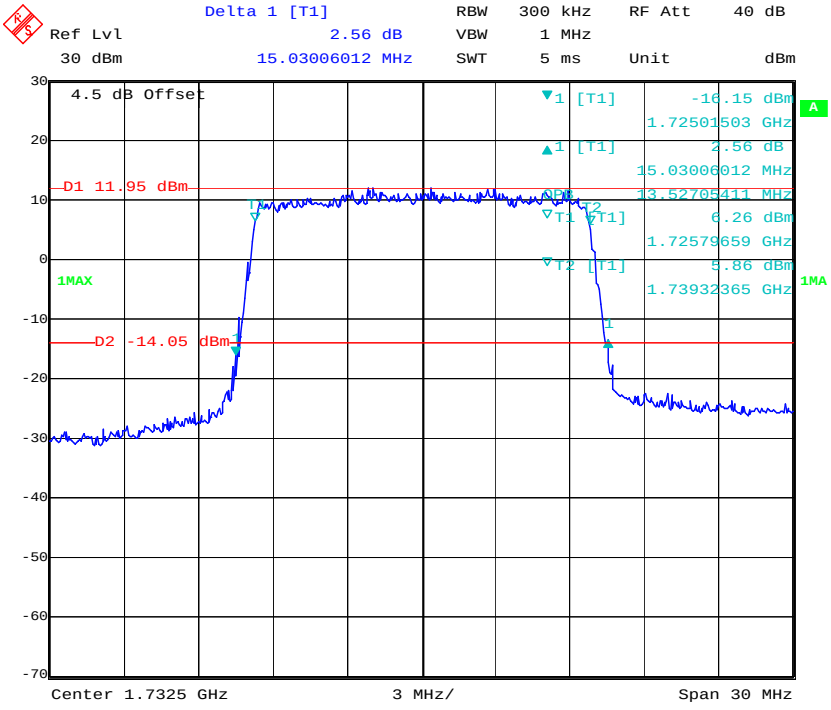
QPSK_10 MHz

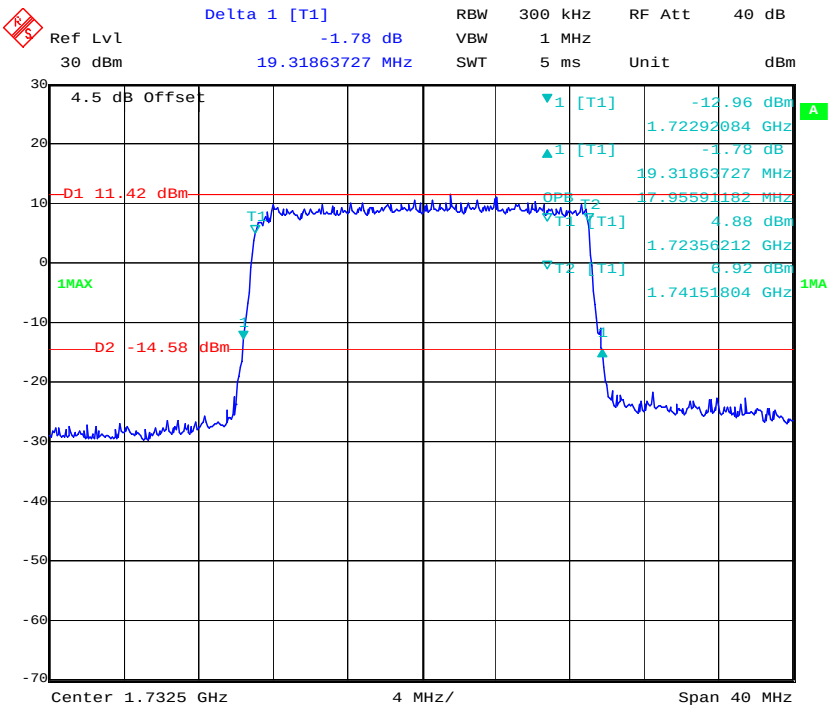


Date: 18.JUN.2019 23:51:21

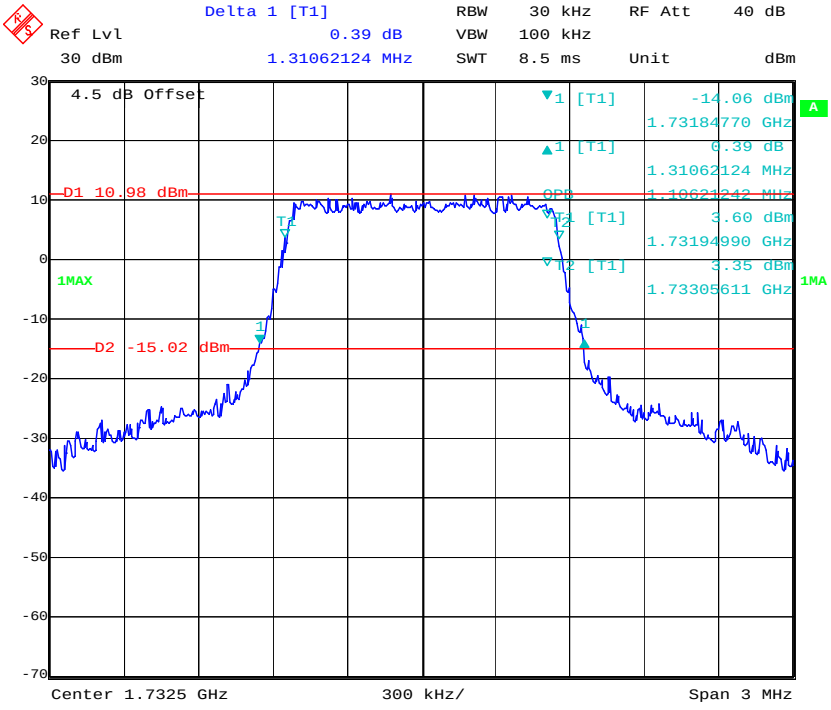
QPSK_15 MHz



QPSK_20 MHz

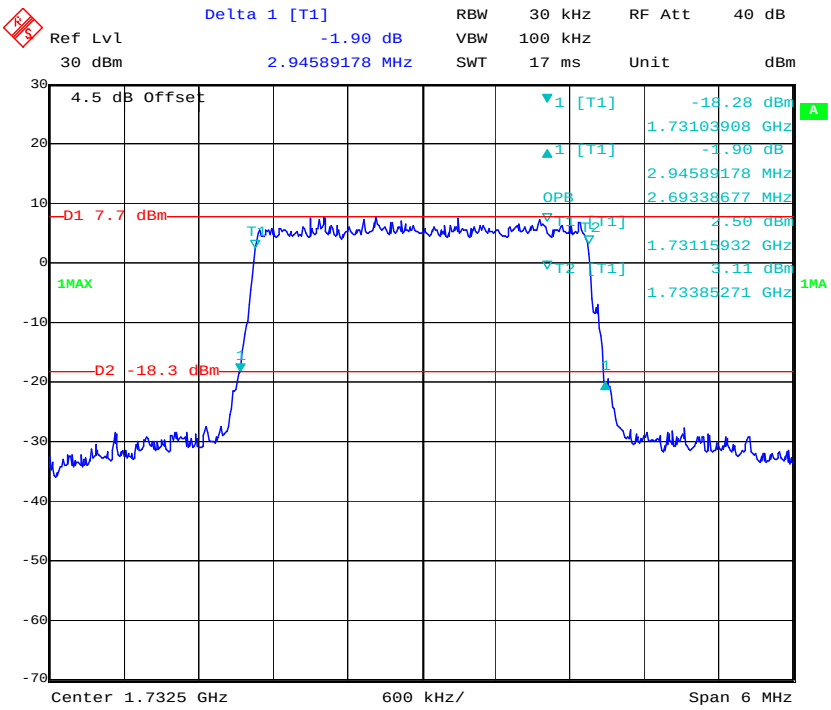


16QAM_1.4 MHz



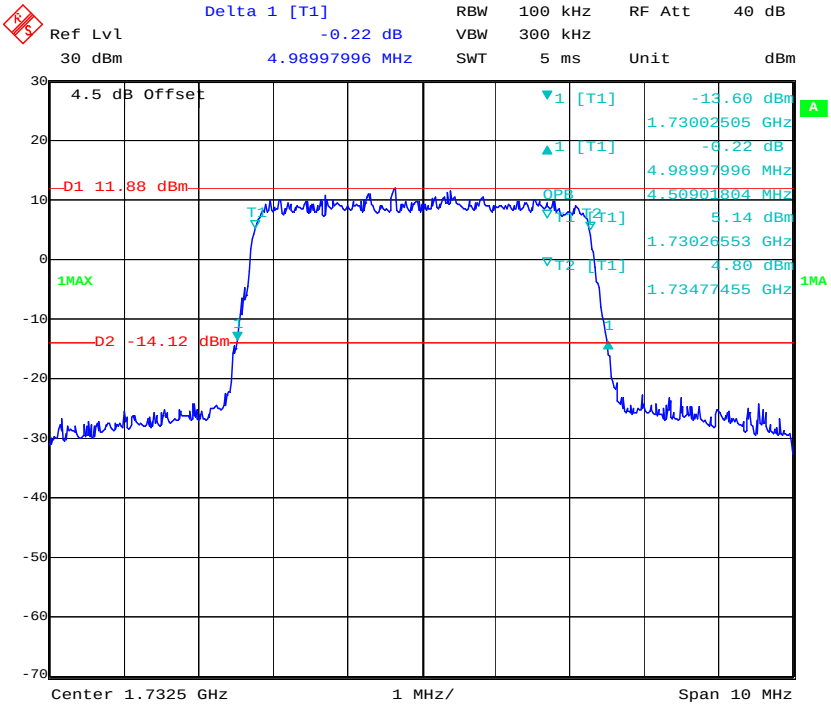
Date: 18.JUN.2019 23:48:13

16QAM_3 MHz



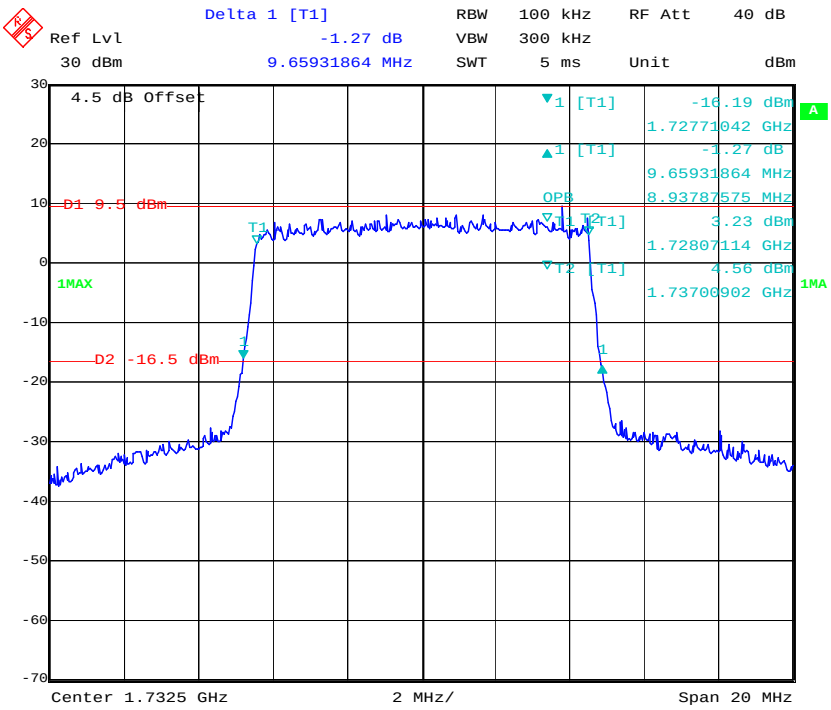
Date: 18.JUN.2019 23:49:24

16QAM_5 MHz



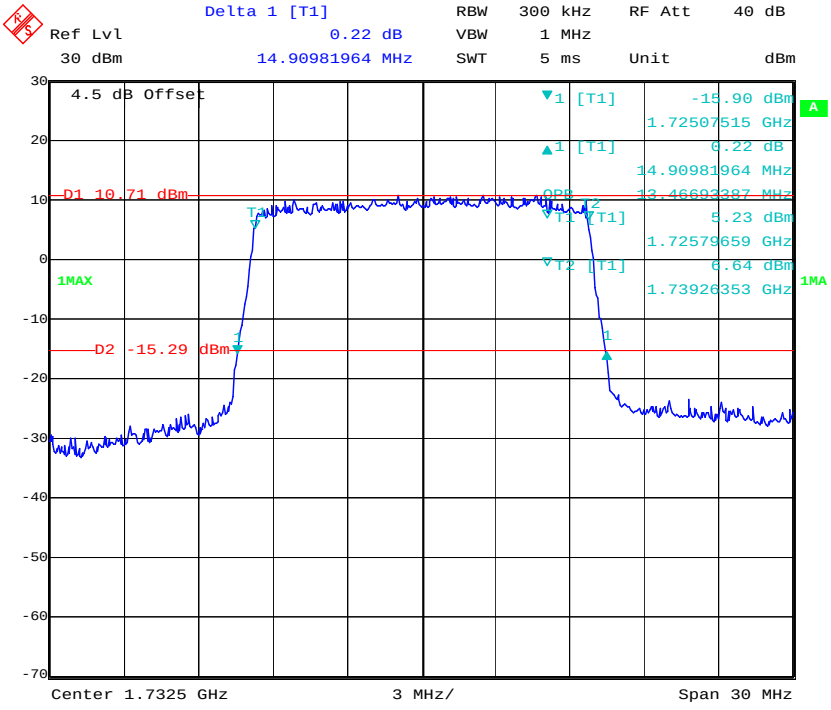
Date: 18.JUN.2019 23:50:51

16QAM_10 MHz

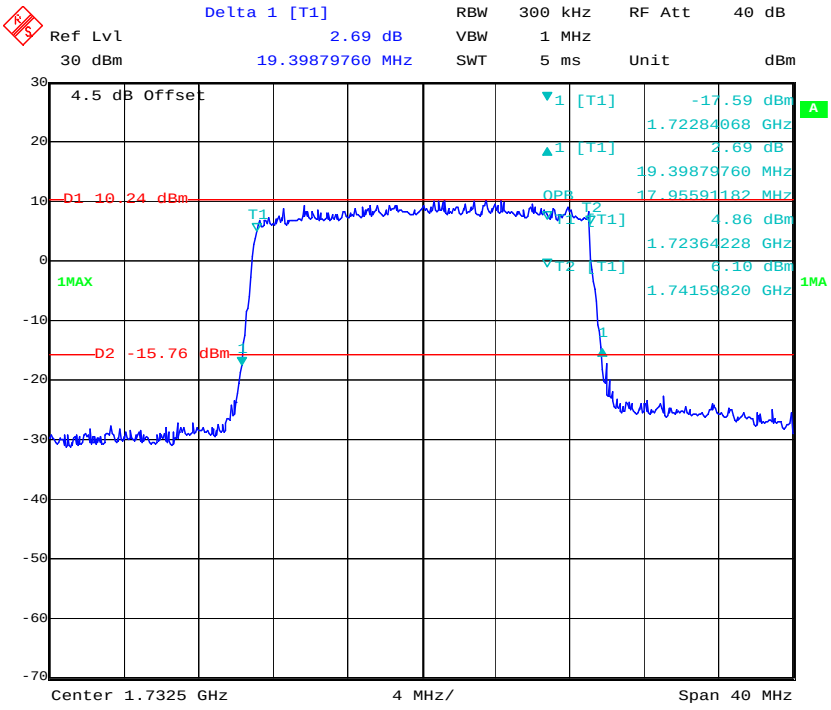


Date: 18.JUN.2019 23:52:10

16QAM_15 MHz

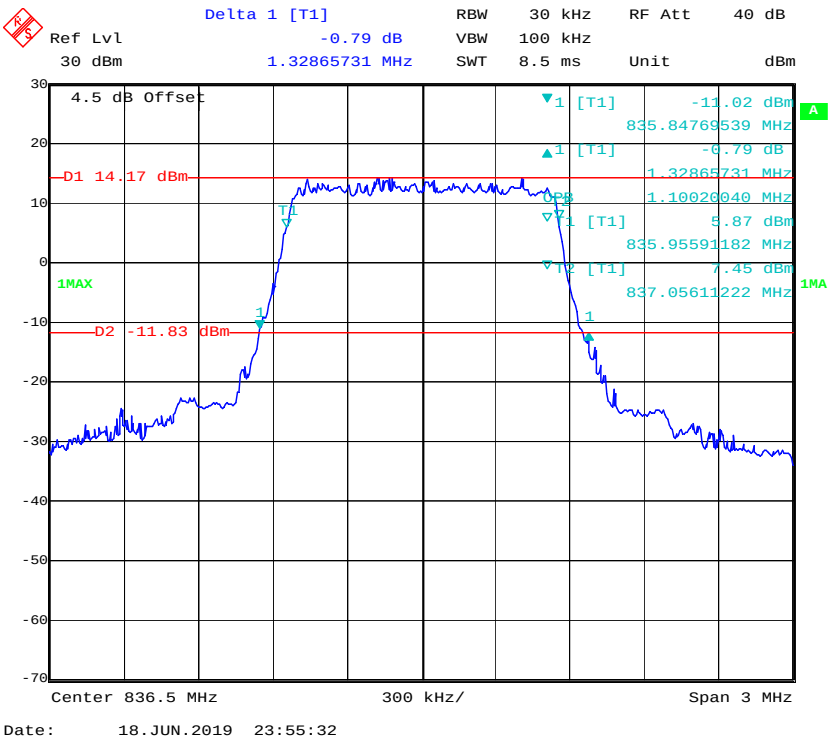


16QAM_20 MHz



LTE Band 5:

QPSK_1.4 MHz



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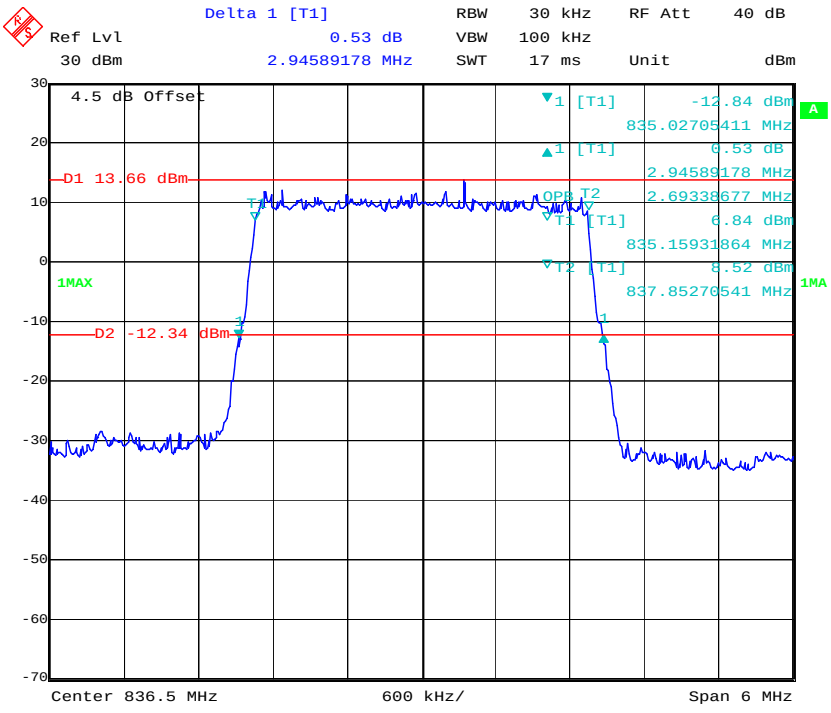
QPSK_3 MHz



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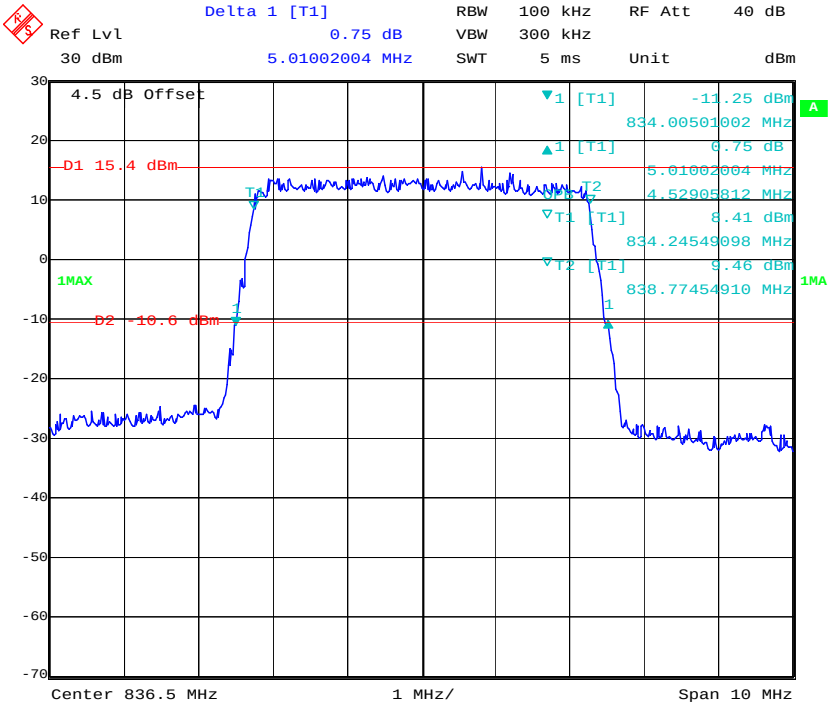
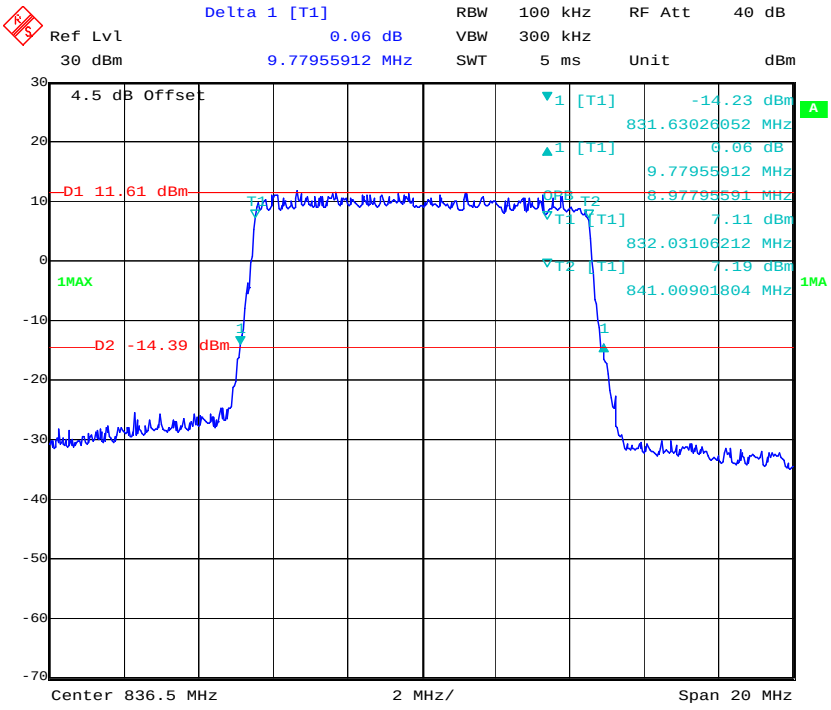
QPSK_5 MHz



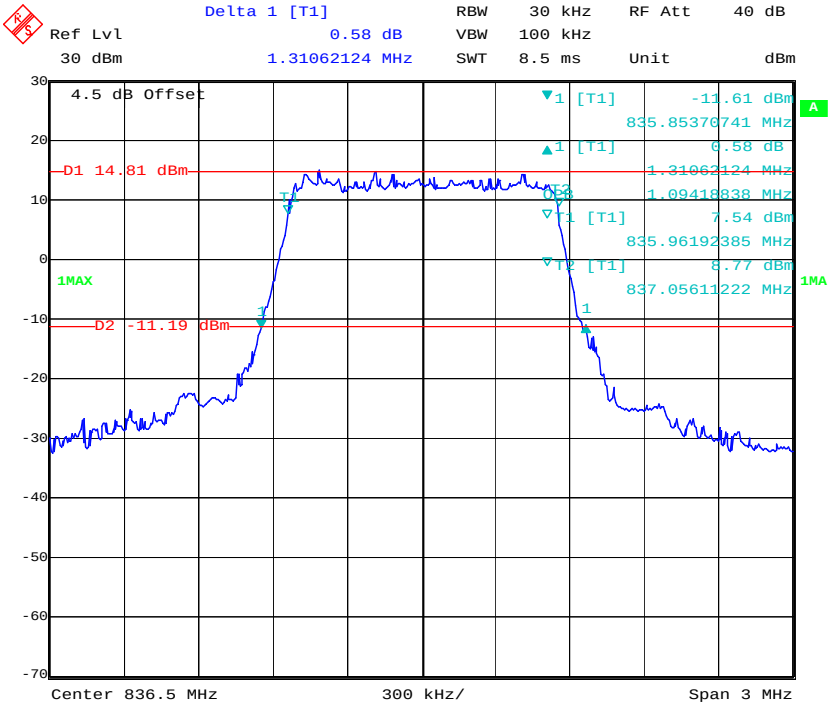
Date: 18.JUN.2019 23:57:37

QPSK_10 MHz



Date: 18.JUN.2019 23:58:49

16QAM_1.4 MHz



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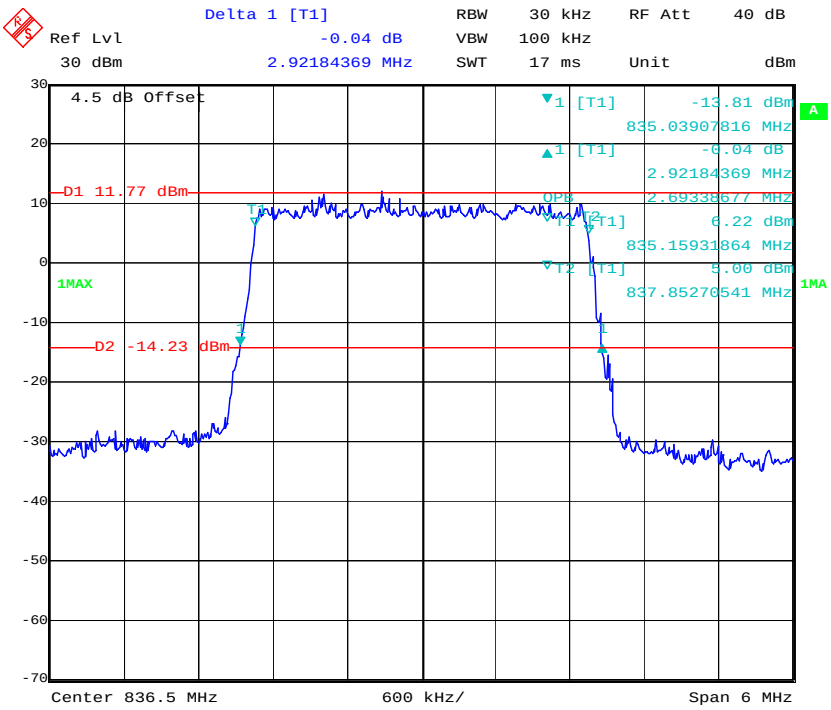
16QAM_3 MHz



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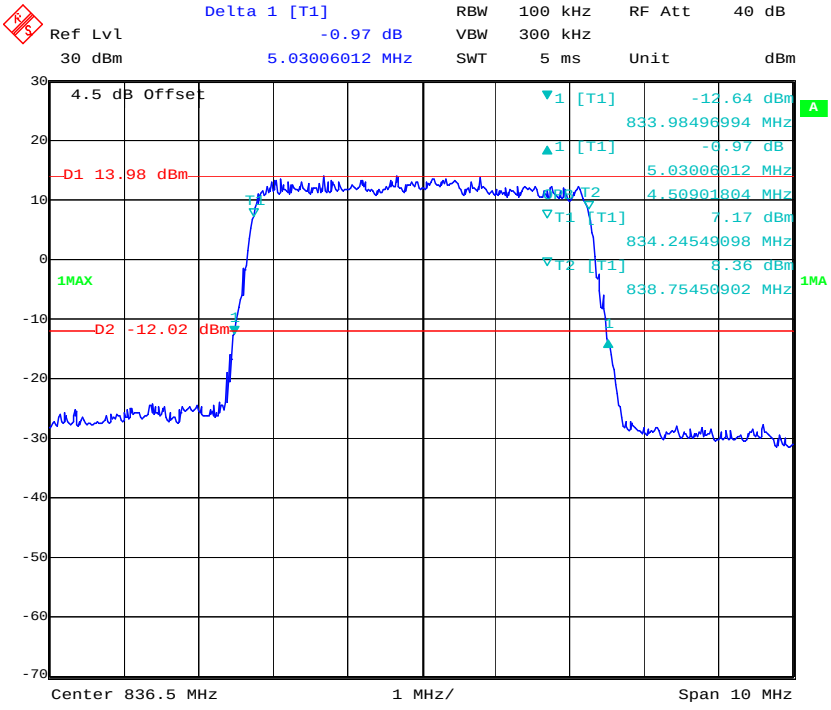
16QAM_5 MHz



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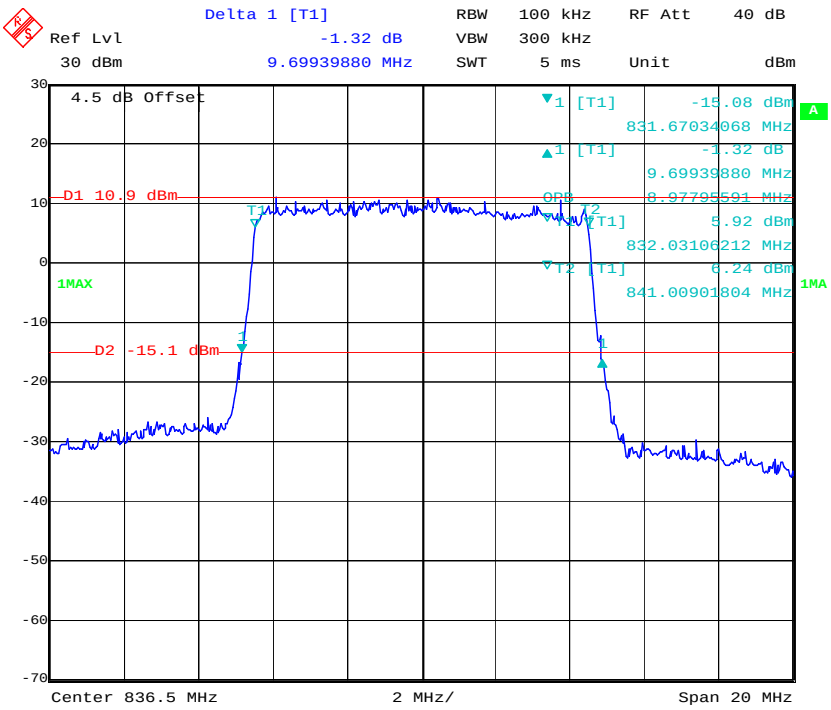
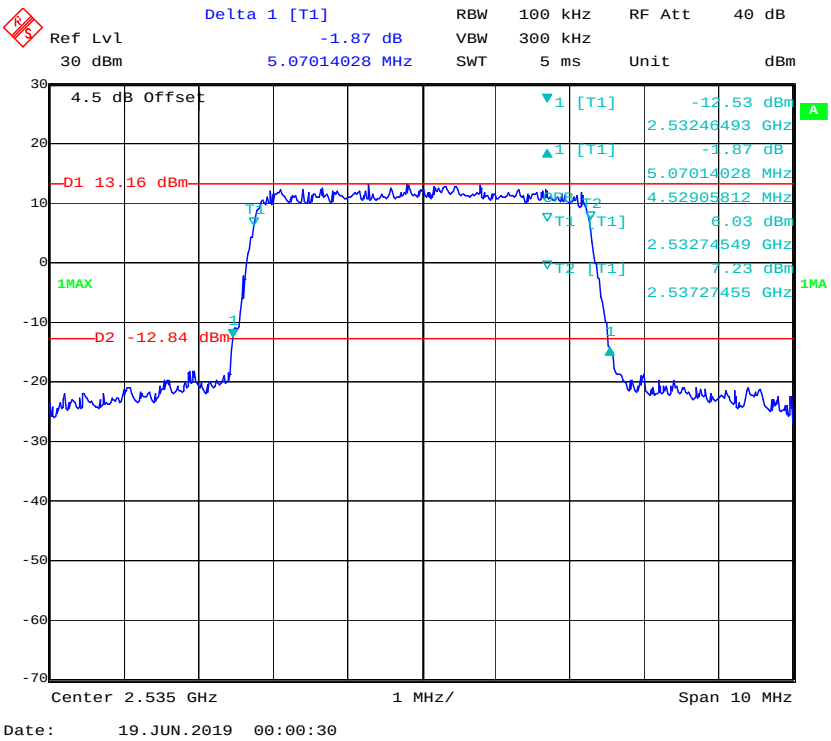
16QAM_10 MHz



Date: 18.JUN.2019 23:59:26

LTE Band 7:

QPSK_5 MHz



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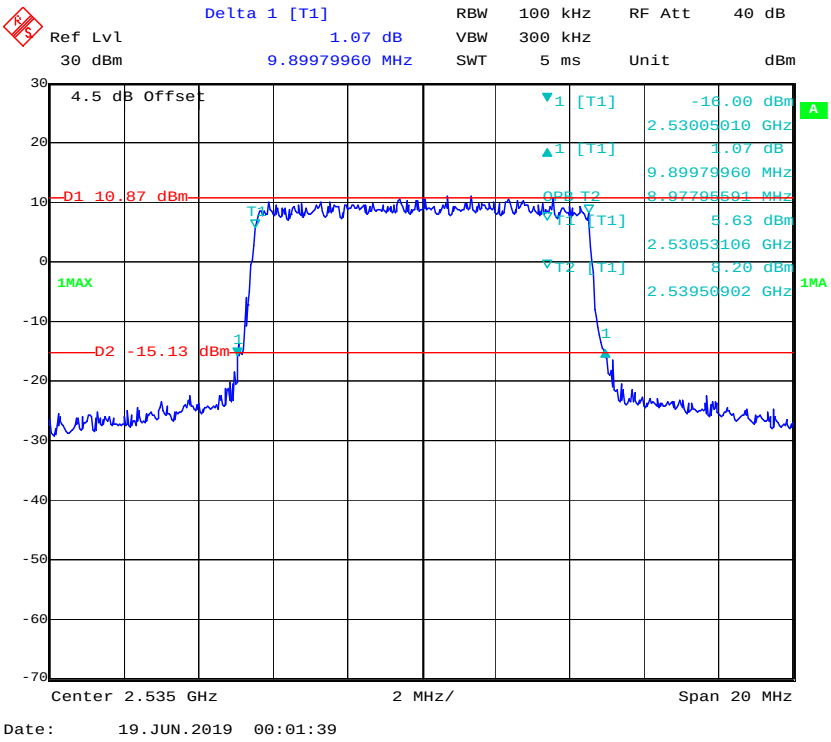
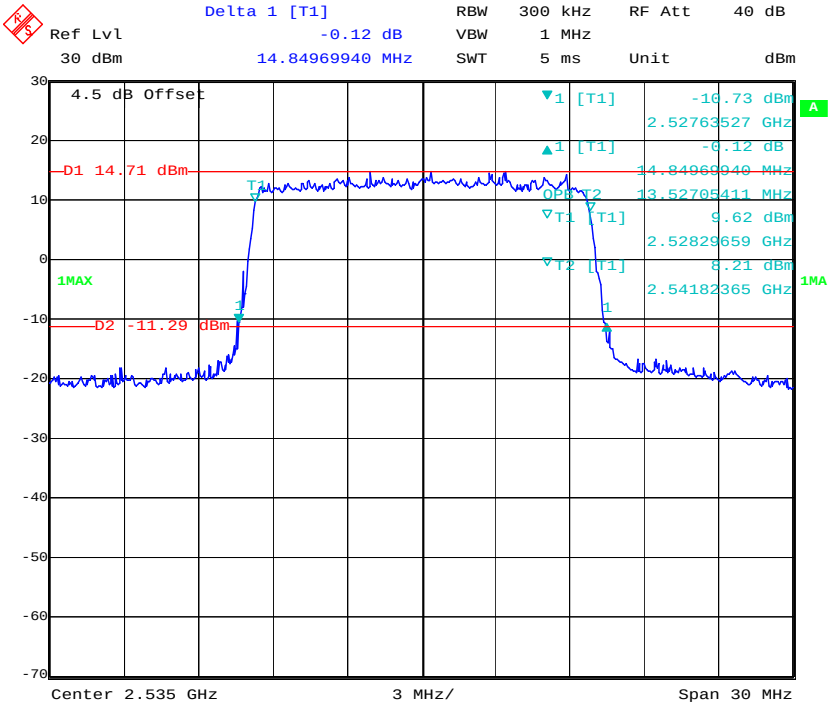
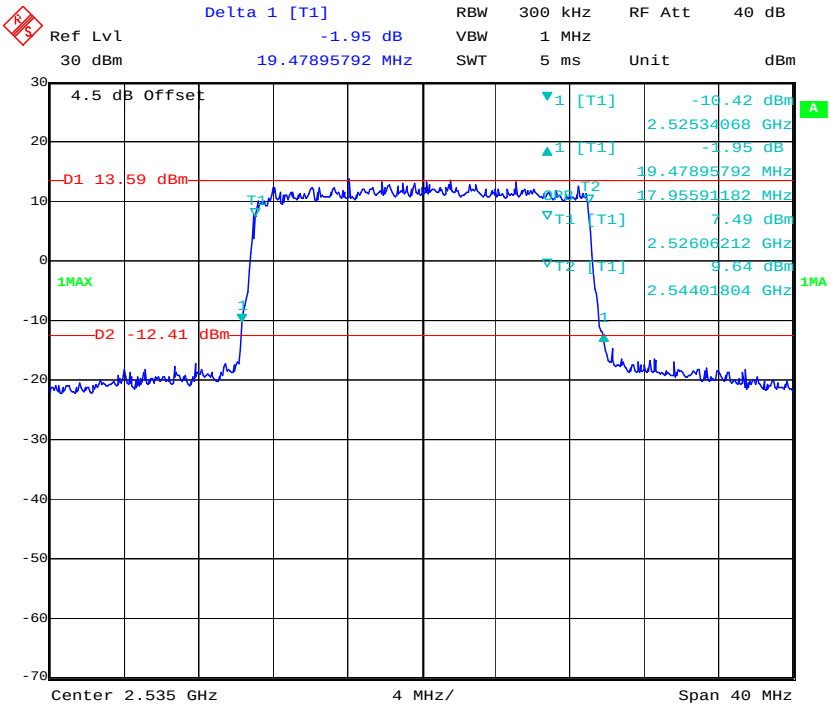


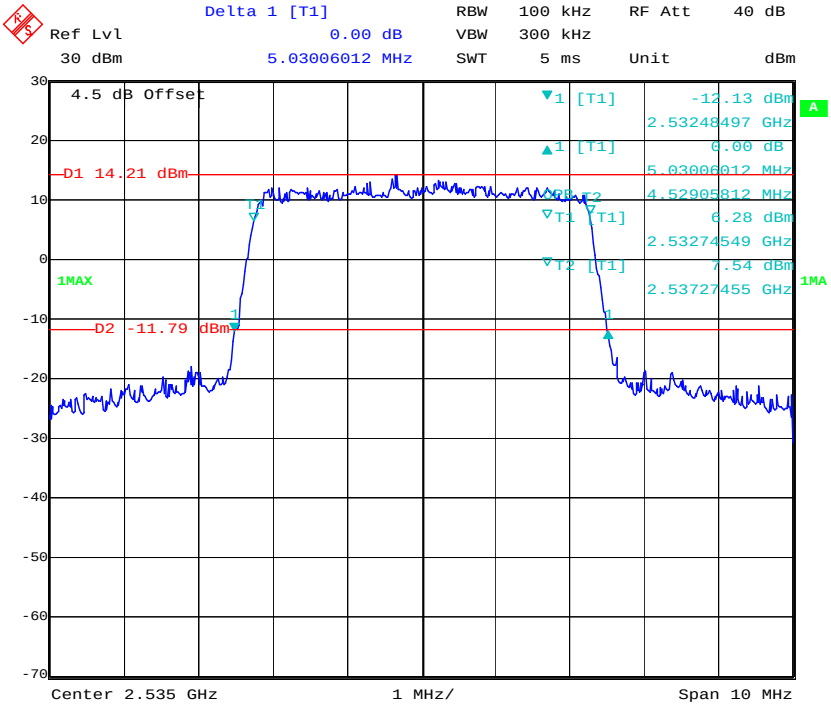
QPSK_15 MHz



QPSK_20 MHz

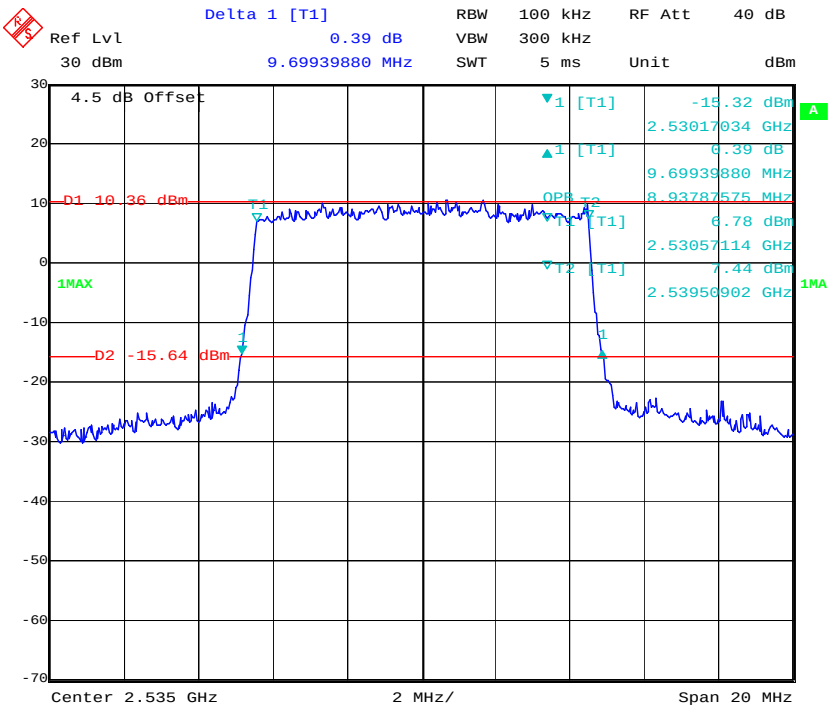


16QAM_5 MHz



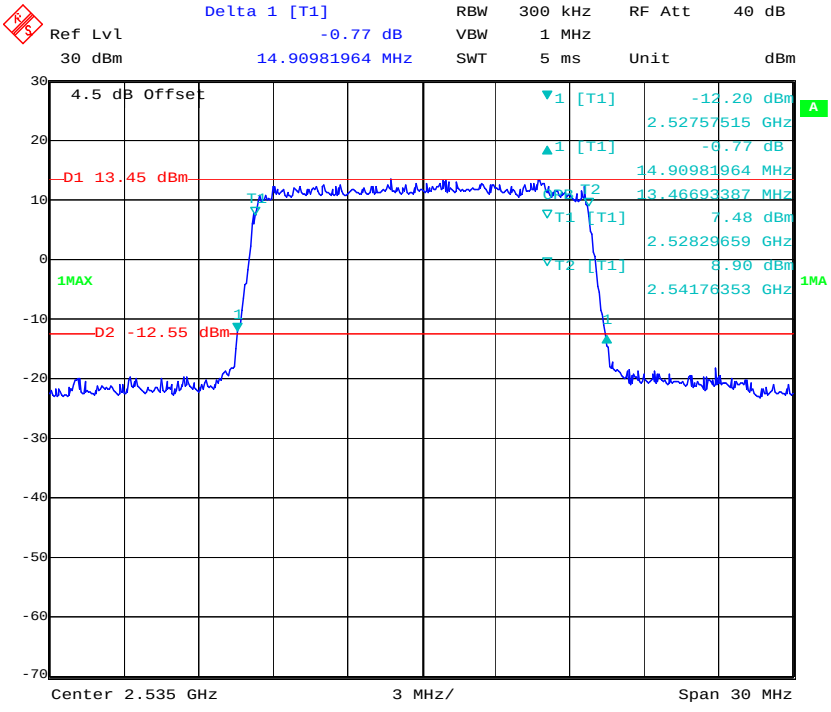
Date: 19.JUN.2019 00:01:09

16QAM_10 MHz

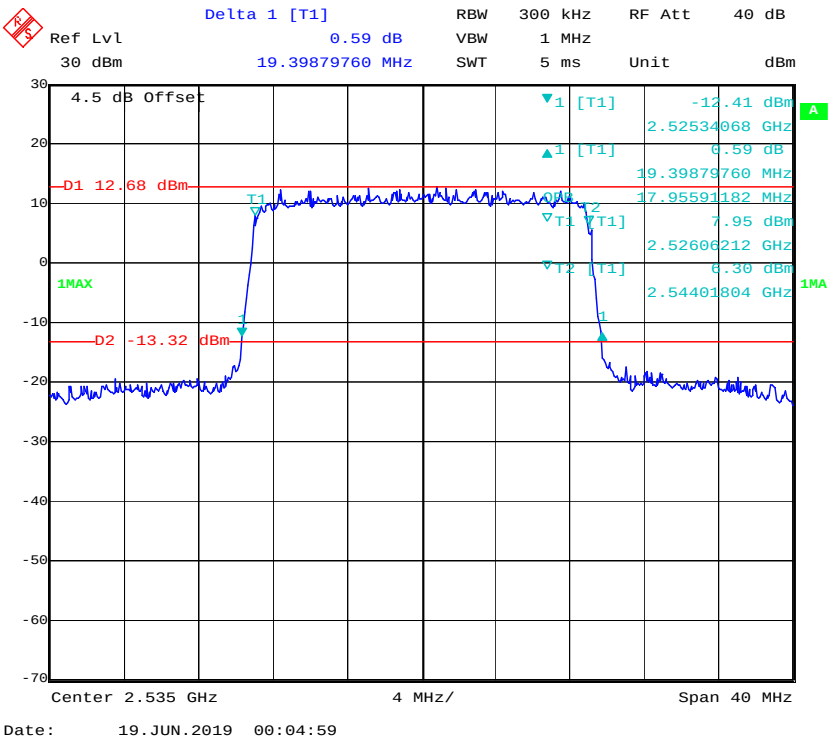


Date: 19.JUN.2019 00:02:26

16QAM_15 MHz

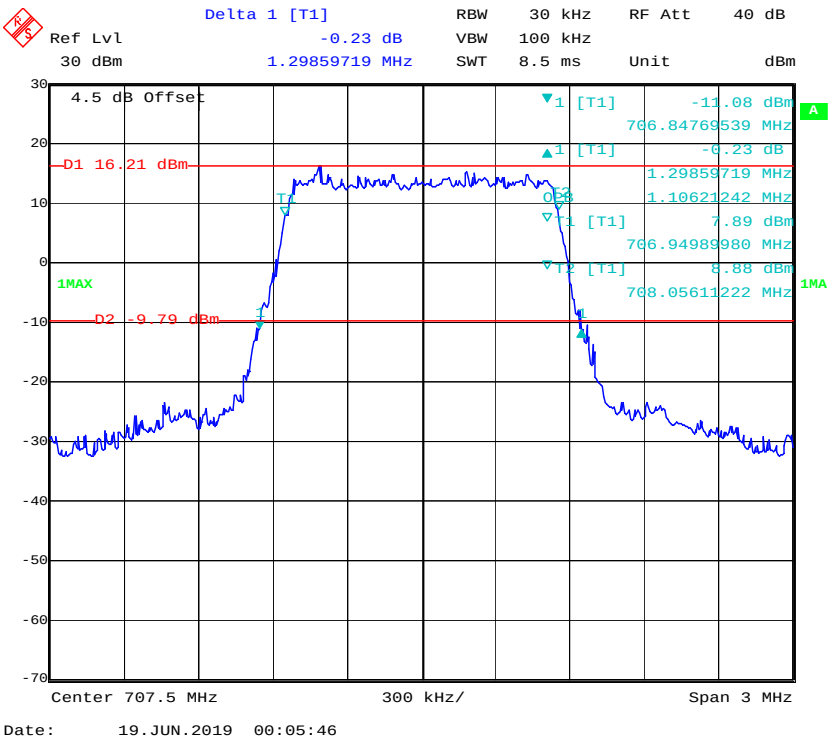


16QAM_20 MHz

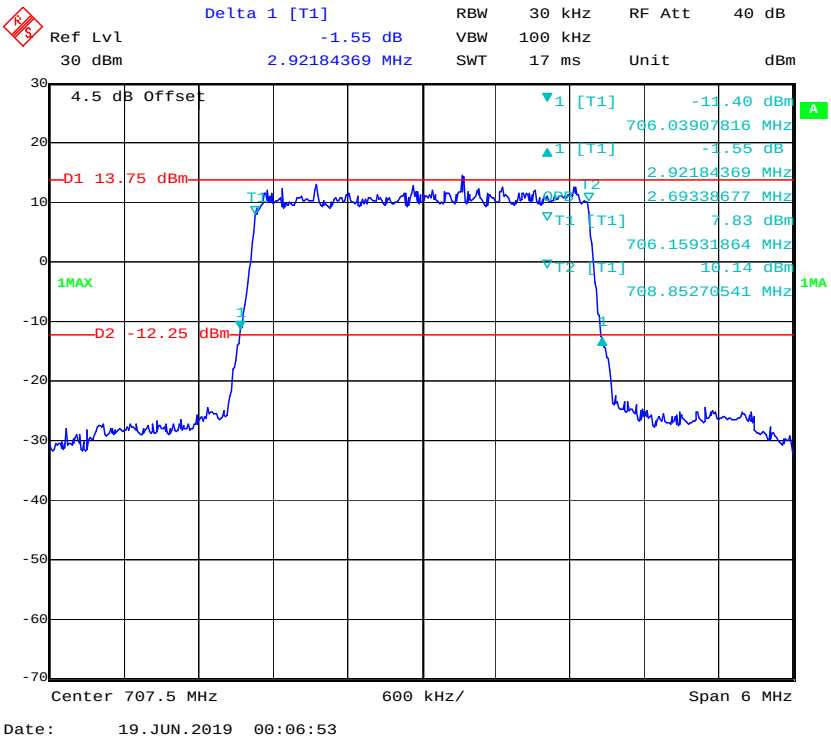


LTE Band 12:

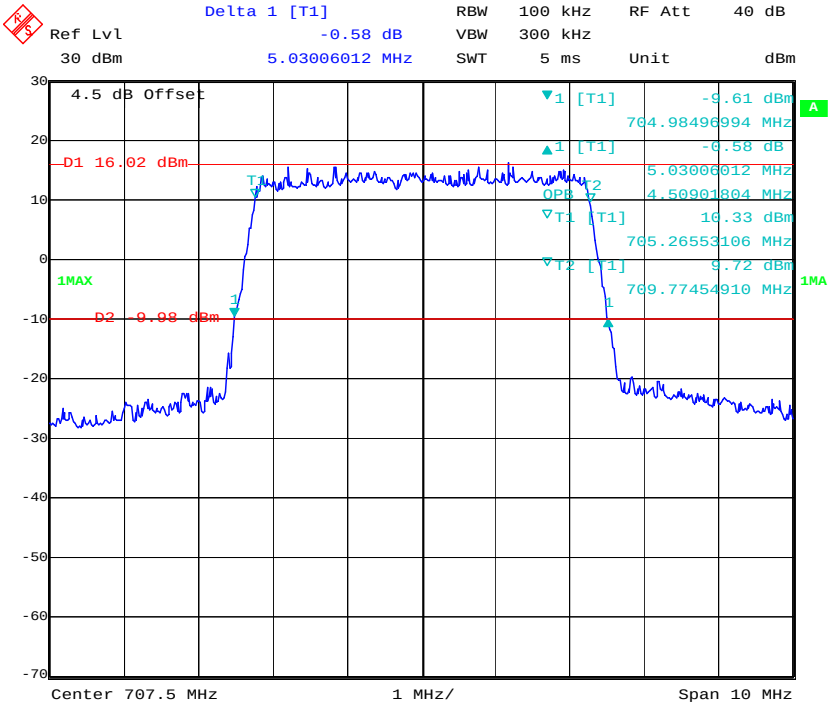
QPSK_1.4 MHz



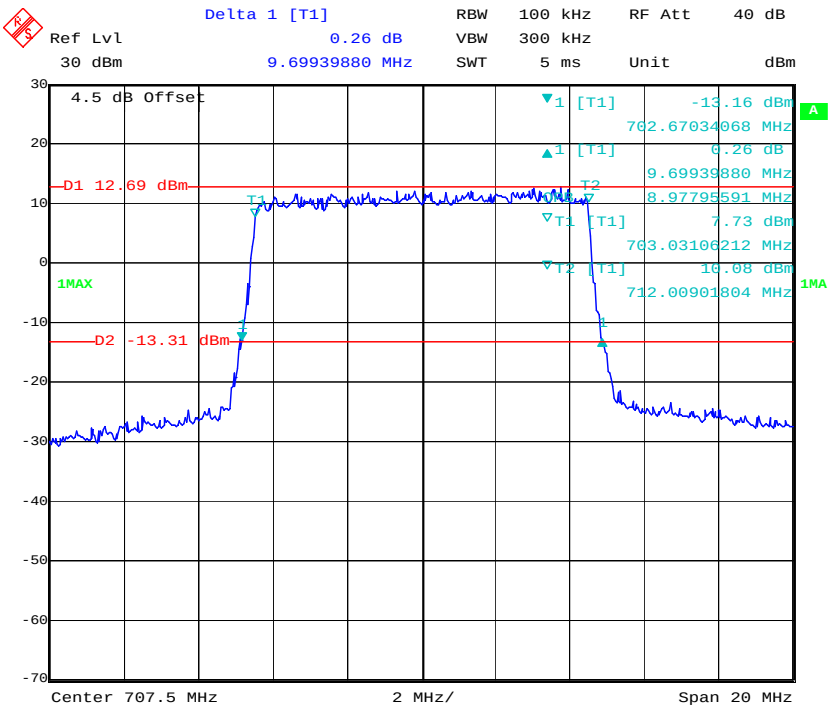
QPSK_3 MHz



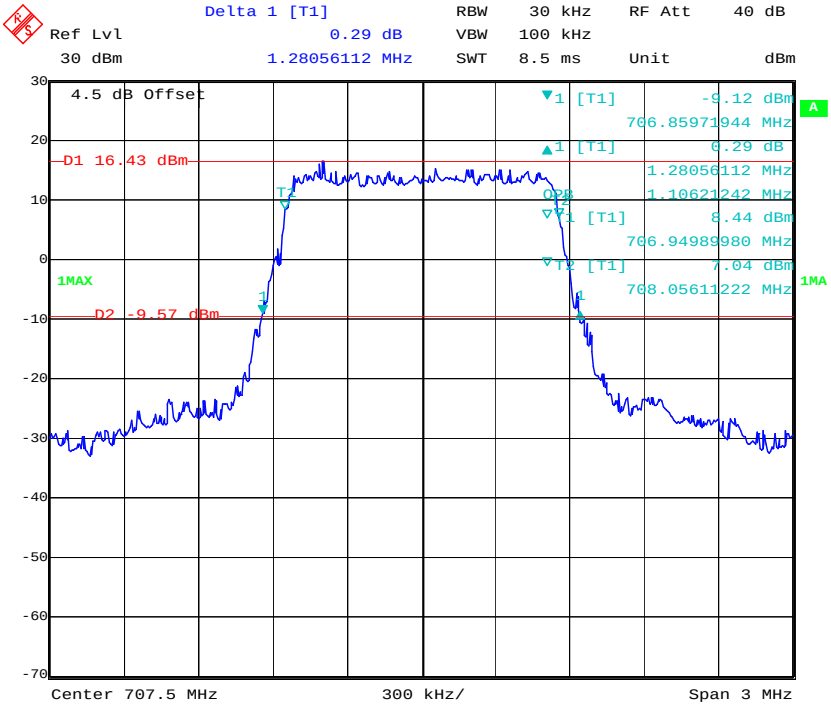
QPSK_5 MHz



QPSK_10 MHz

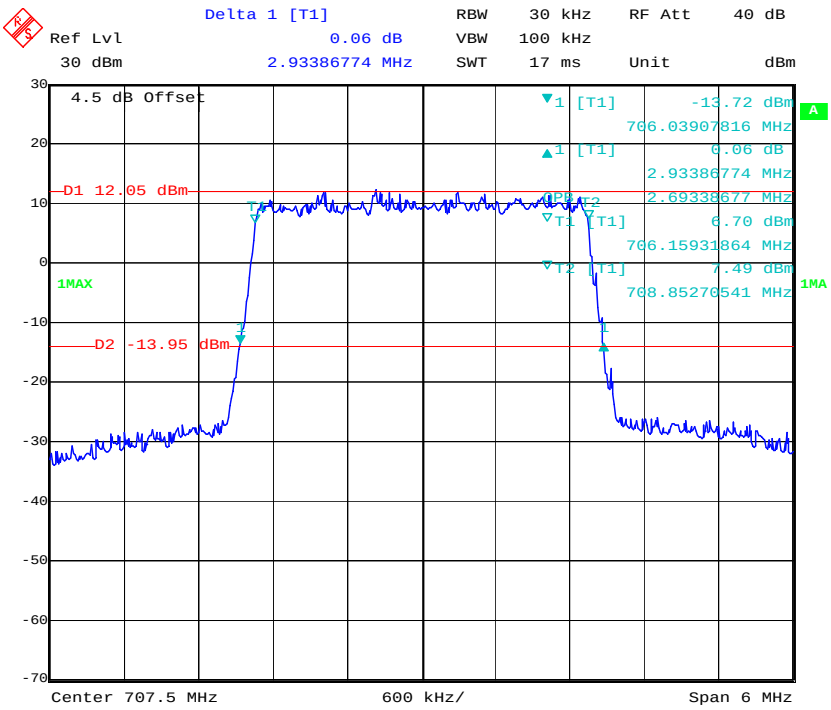


16QAM_1.4 MHz



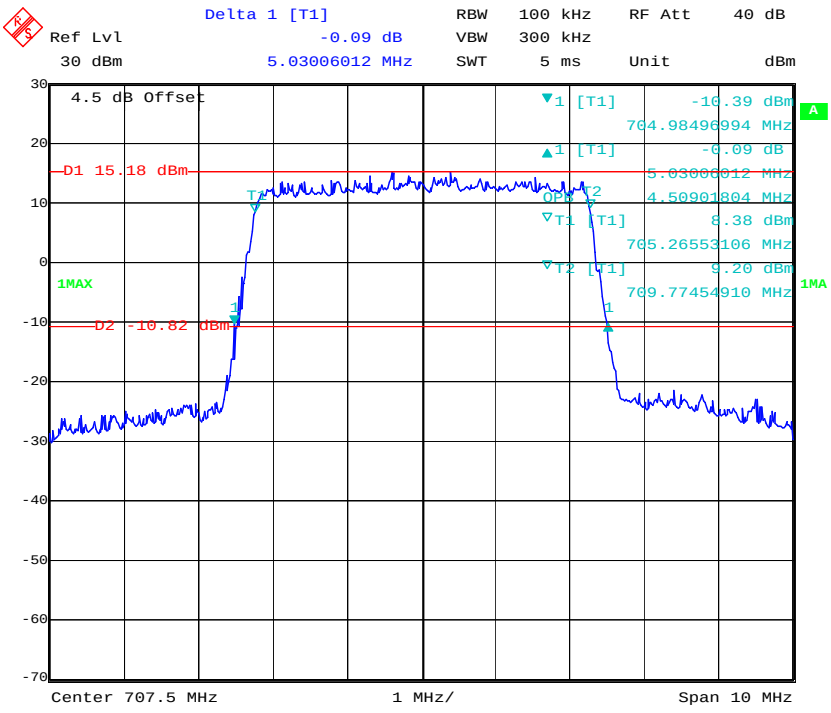
Date: 19.JUN.2019 00:06:21

16QAM_3 MHz

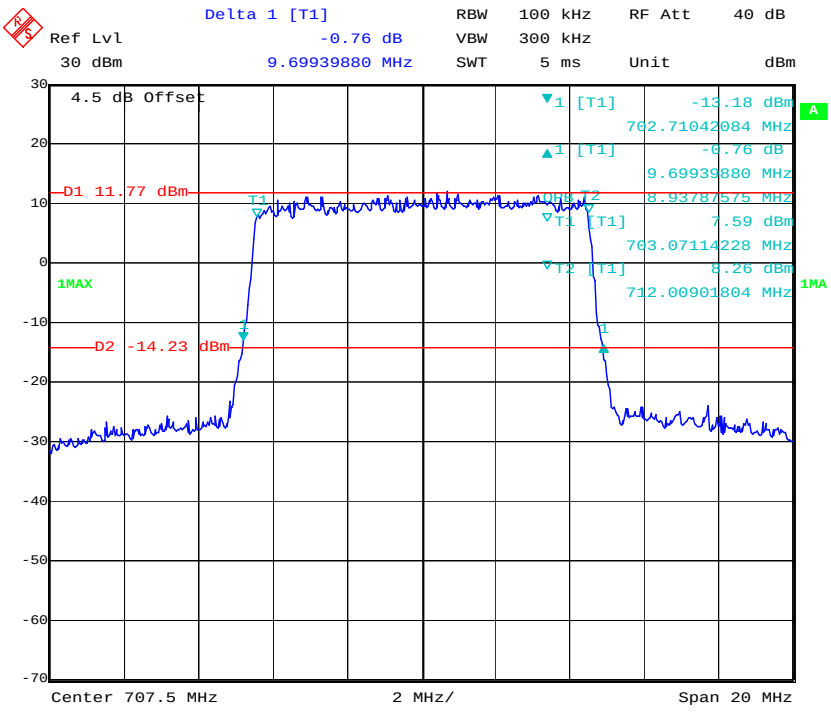


Date: 19.JUN.2019 00:07:31

16QAM_5 MHz

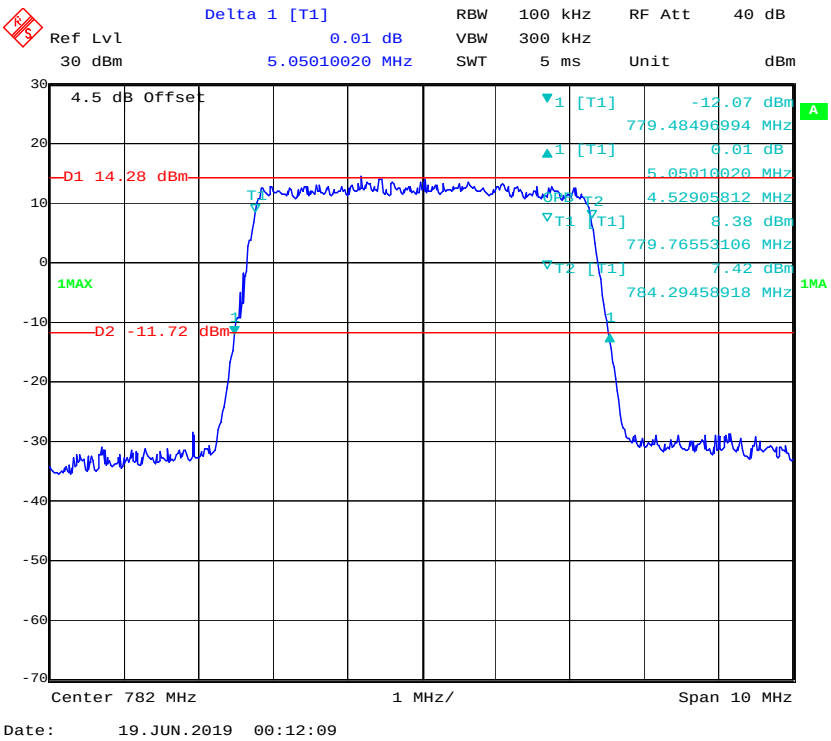


16QAM_10 MHz

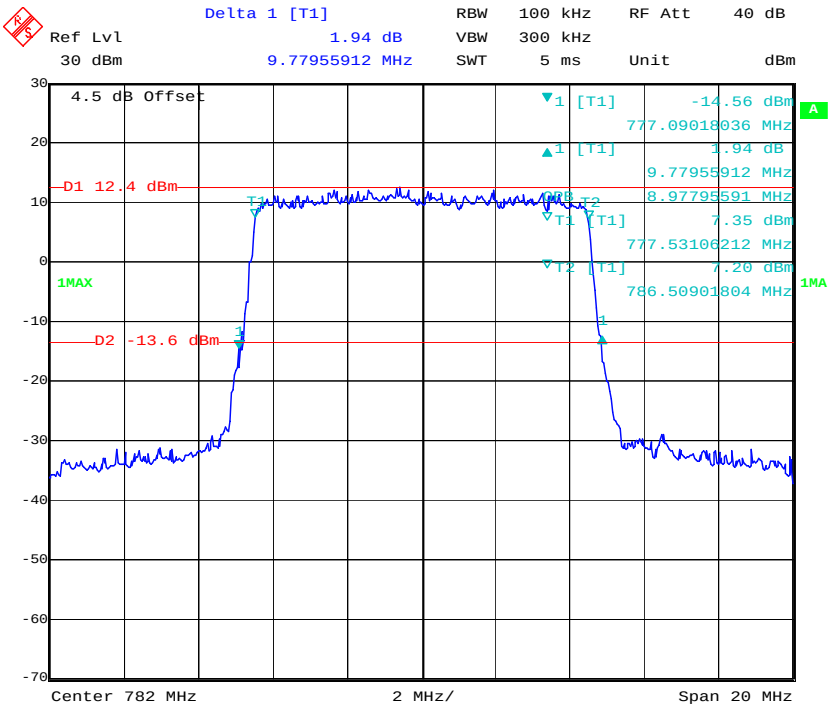


LTE Band 13:

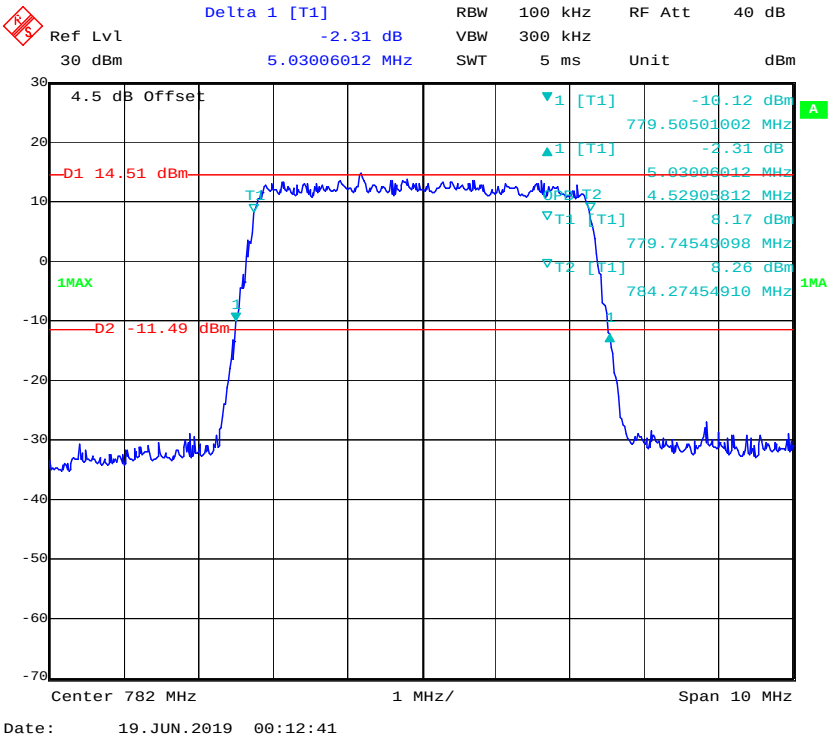
QPSK_5 MHz



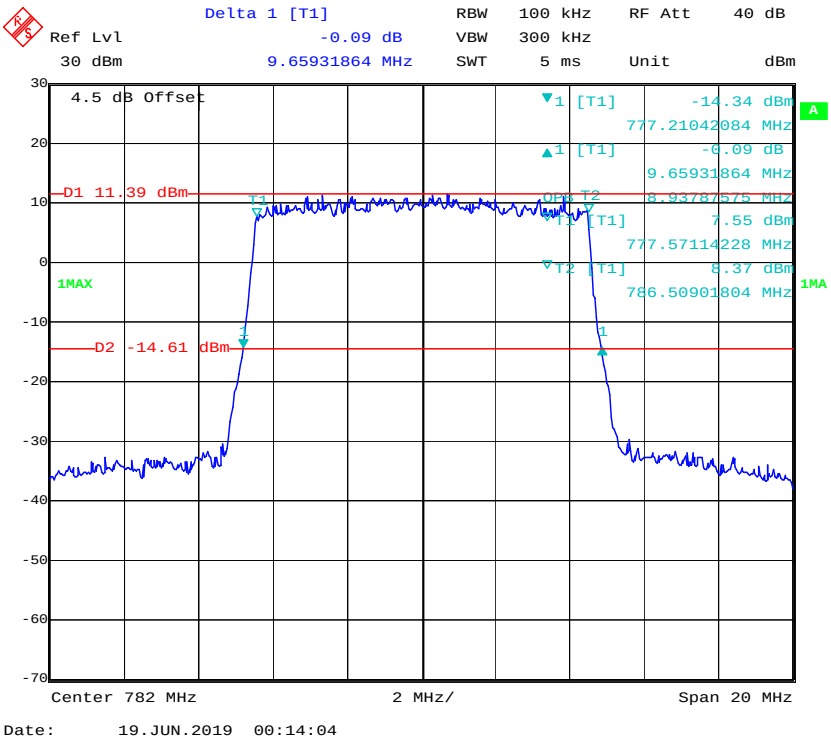
QPSK_10 MHz



16QAM_5 MHz

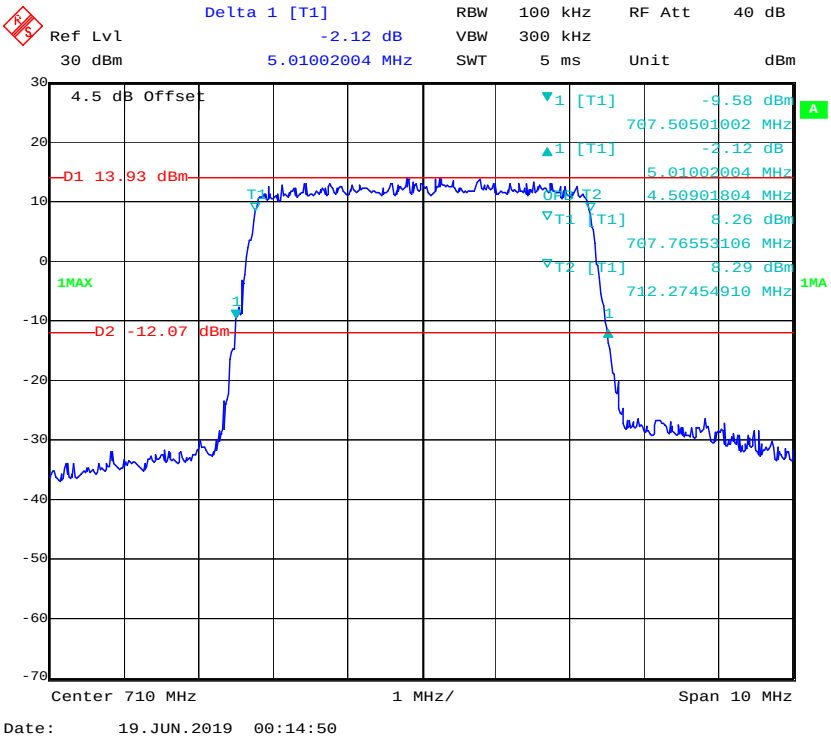


16QAM_10MHz



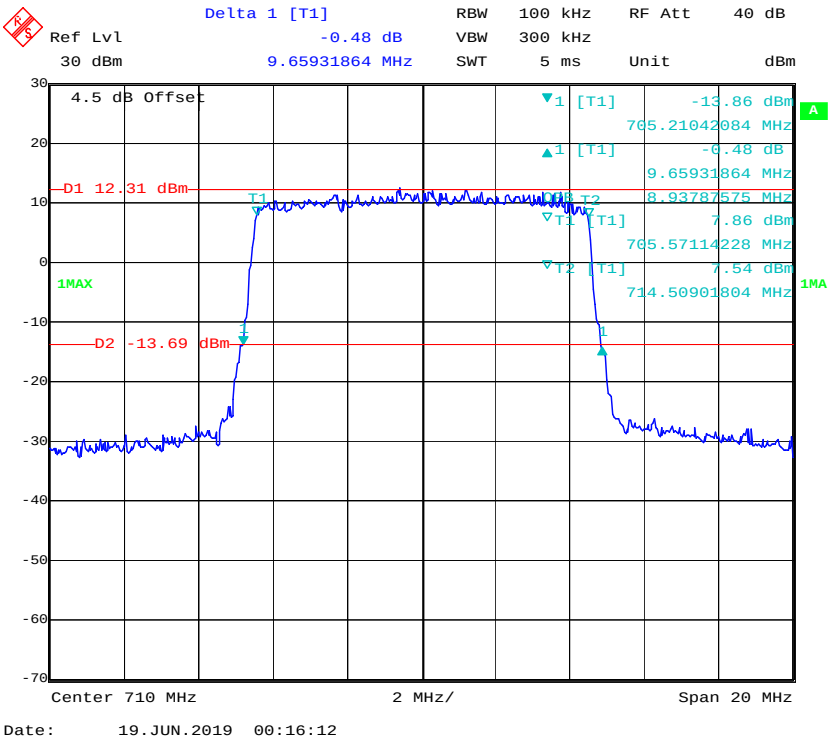
LTE Band 17:

QPSK_5 MHz



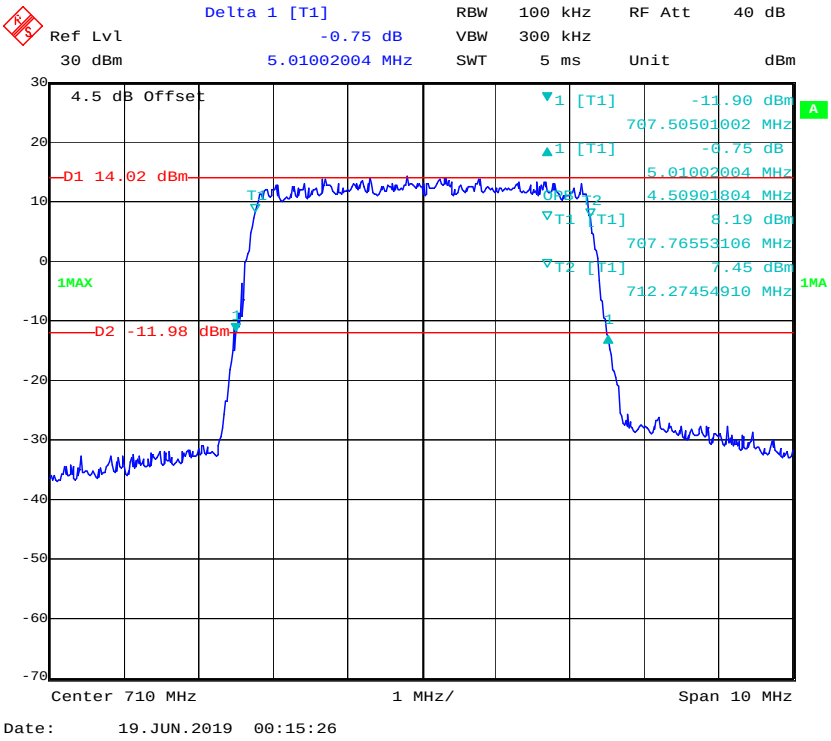
Date: 19.JUN.2019 00:14:50

QPSK_10 MHz

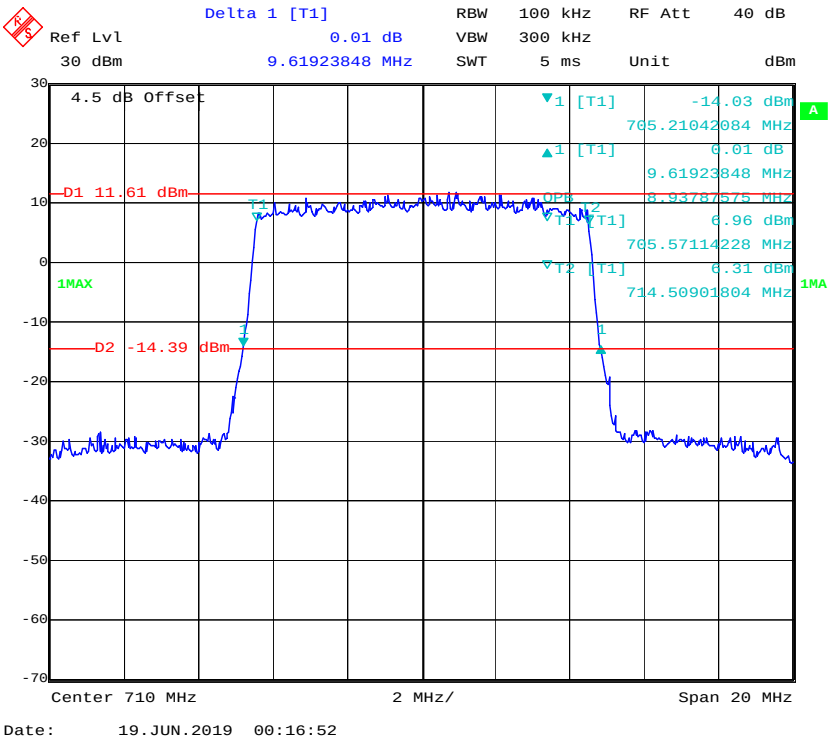


Date: 19.JUN.2019 00:16:12

16QAM_5 MHz

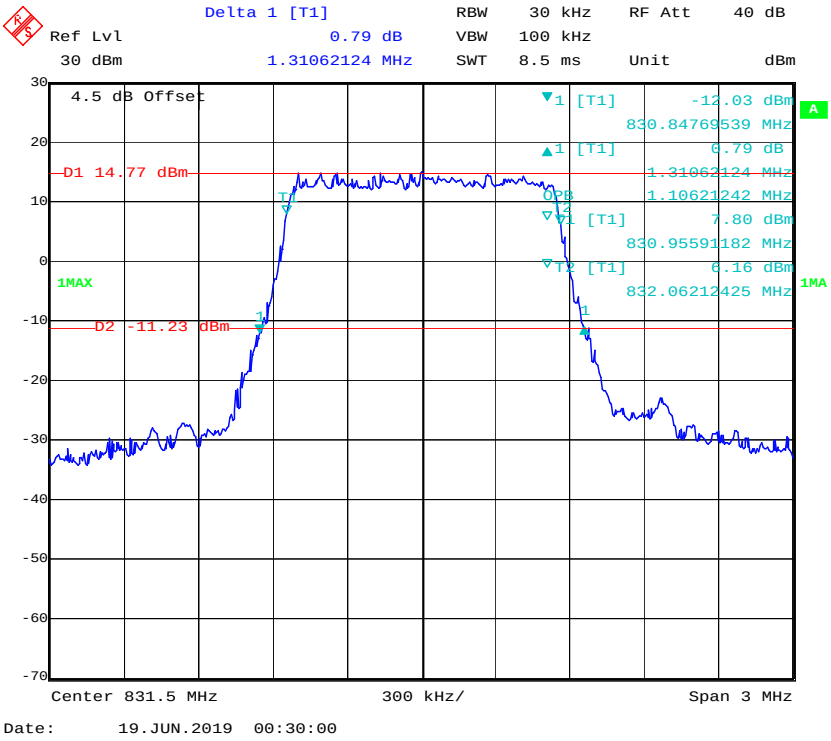


16QAM_10MHz

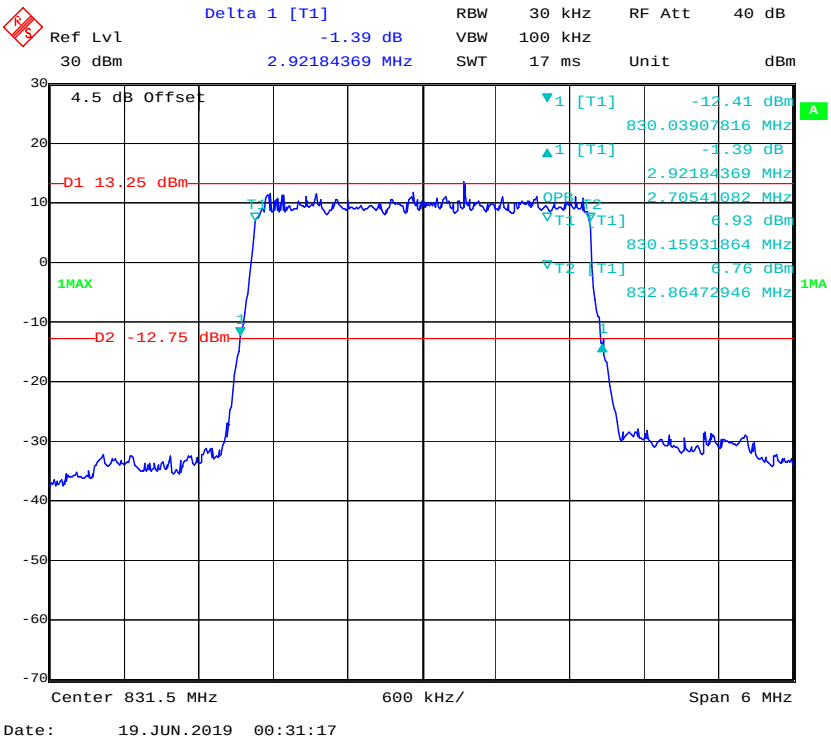


LTE Band 26:

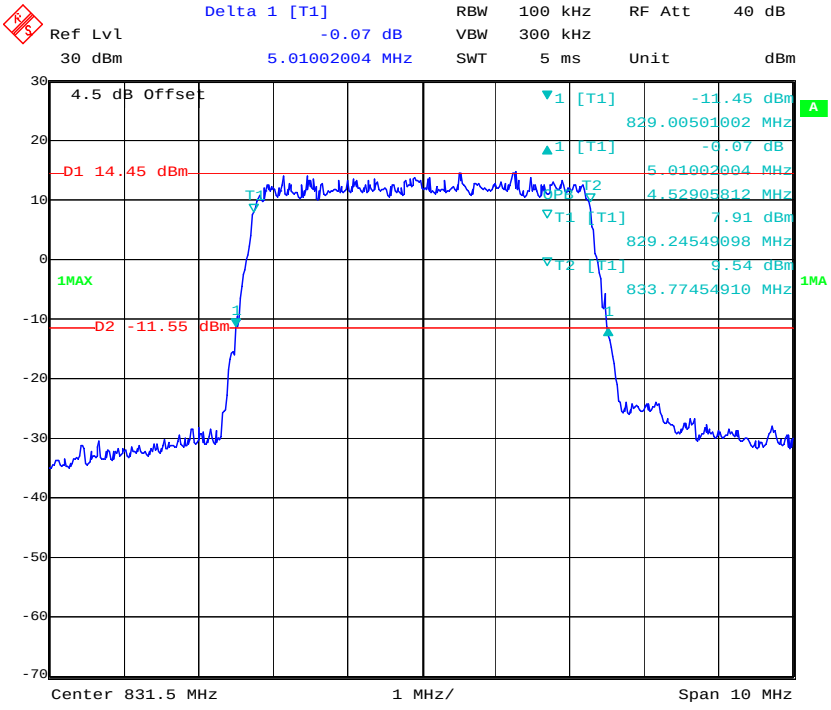
QPSK_1.4 MHz



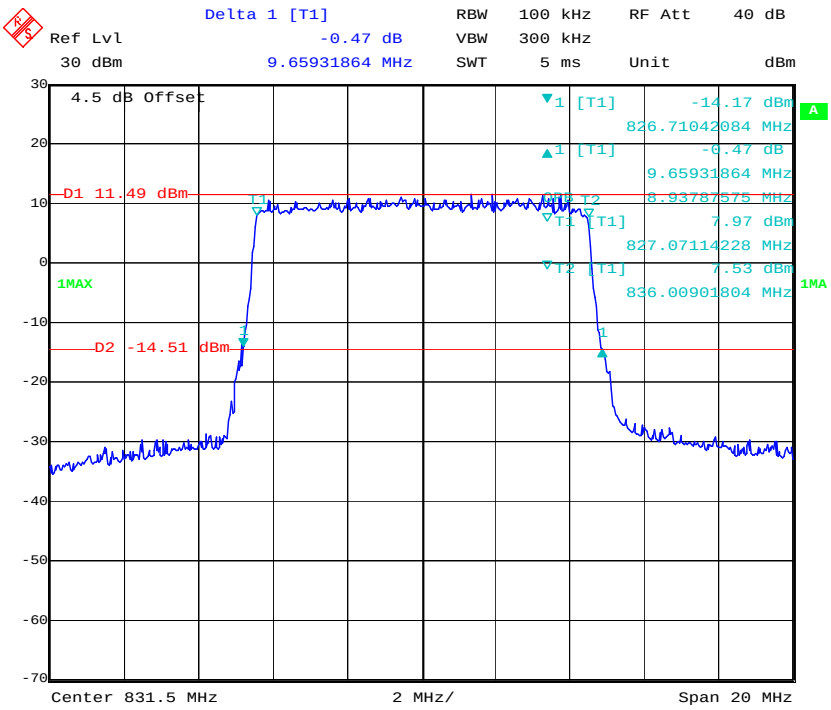
QPSK_3 MHz



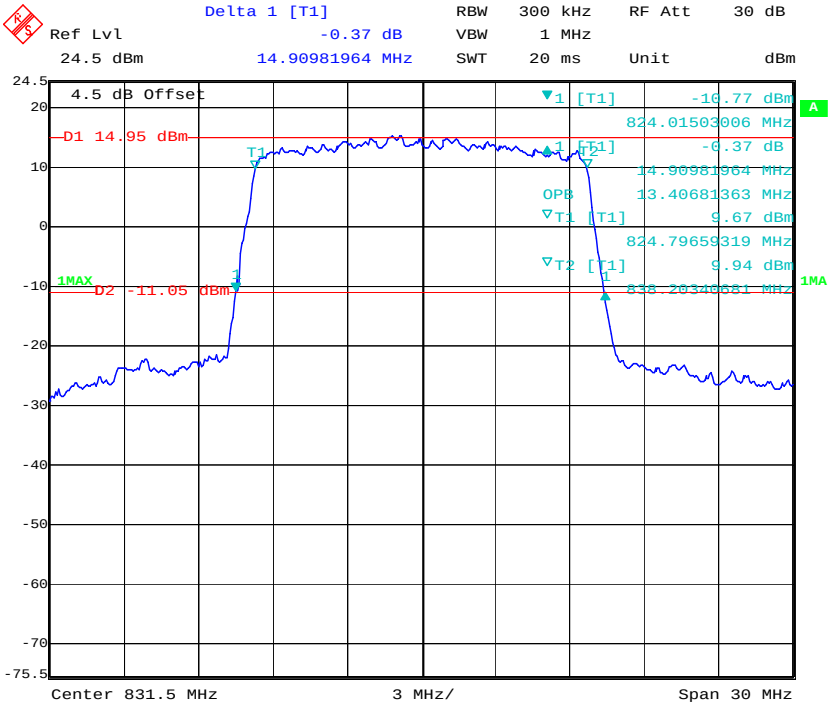
QPSK_5 MHz



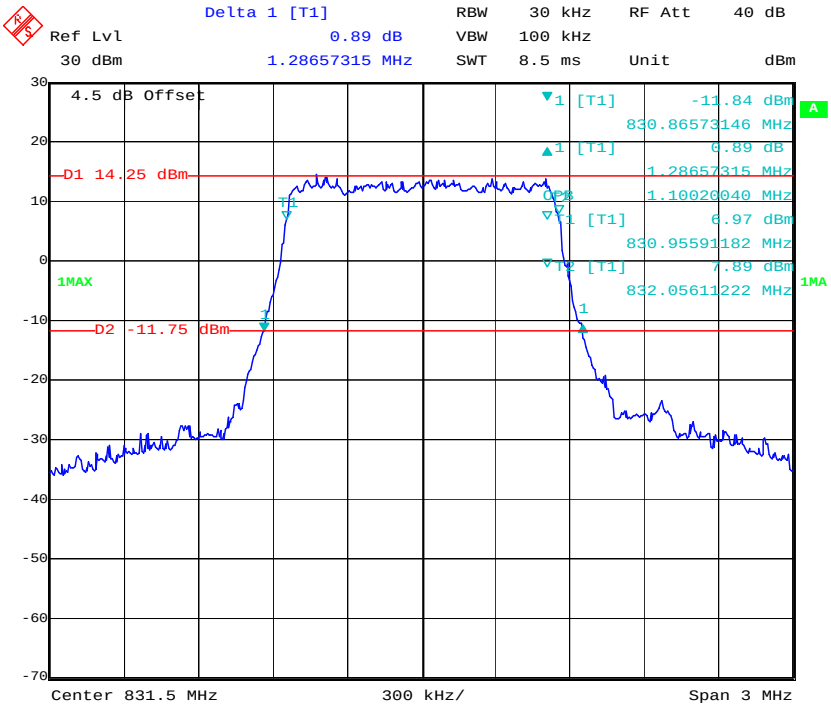
QPSK_10 MHz



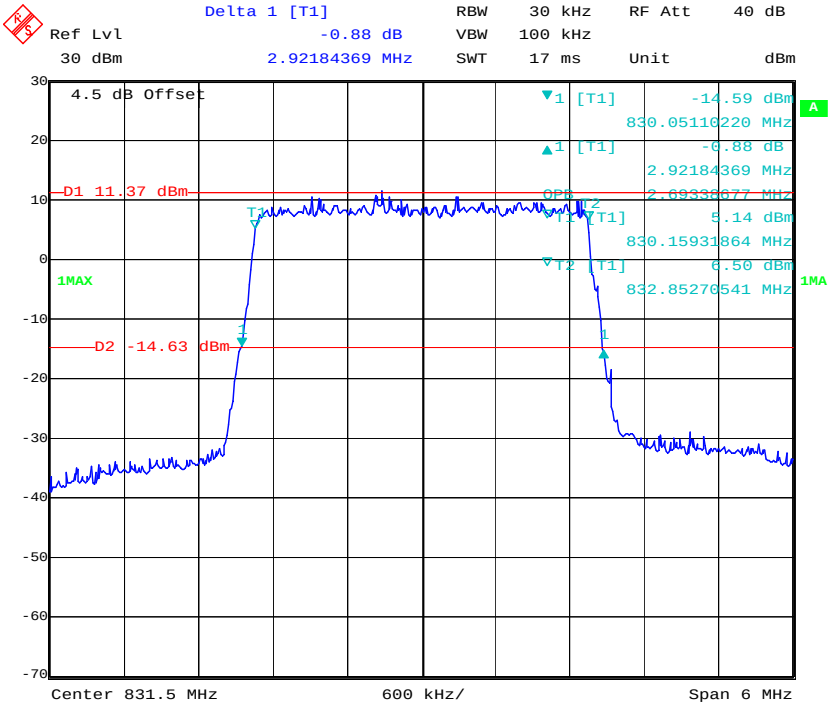
QPSK_15 MHz



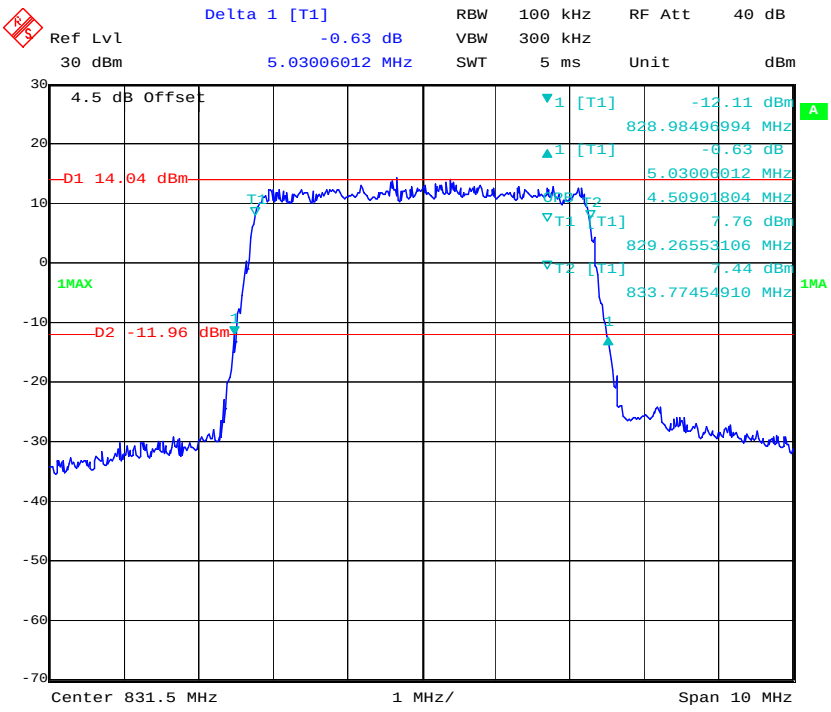
16QAM_1.4 MHz



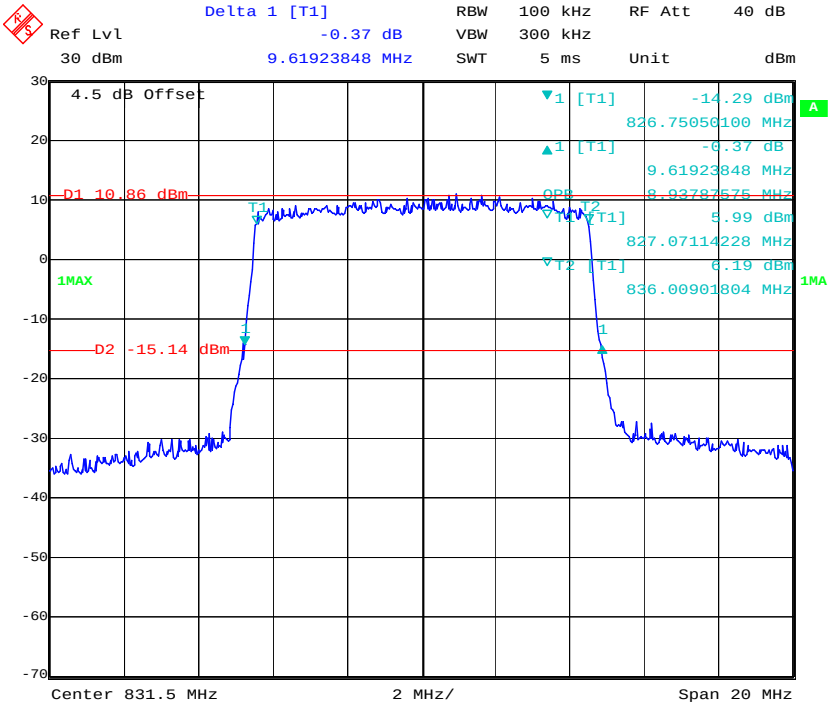
16QAM_3 MHz



16QAM_5 MHz

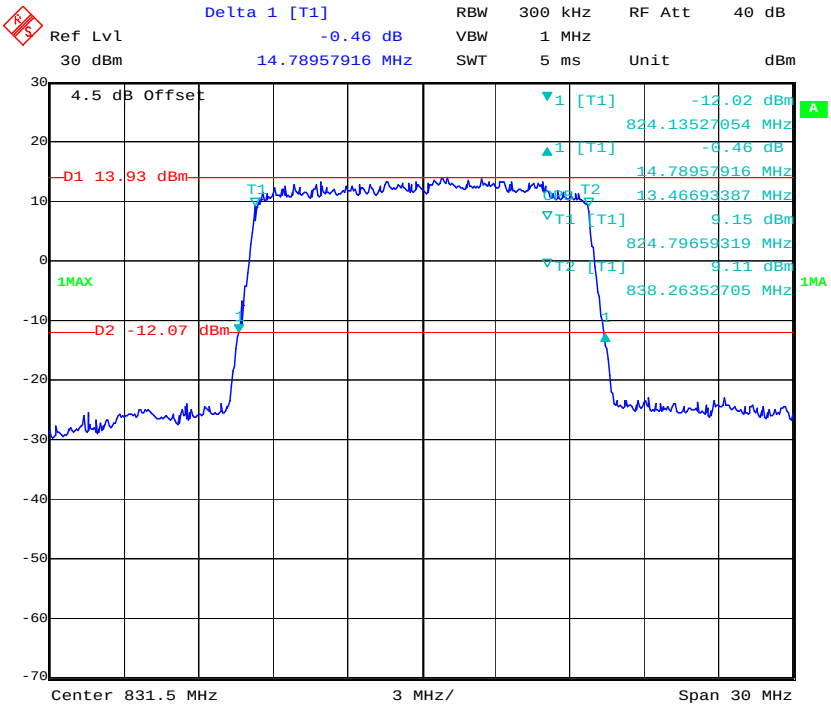


16QAM_10 MHz



Date: 19.JUN.2019 00:34:14

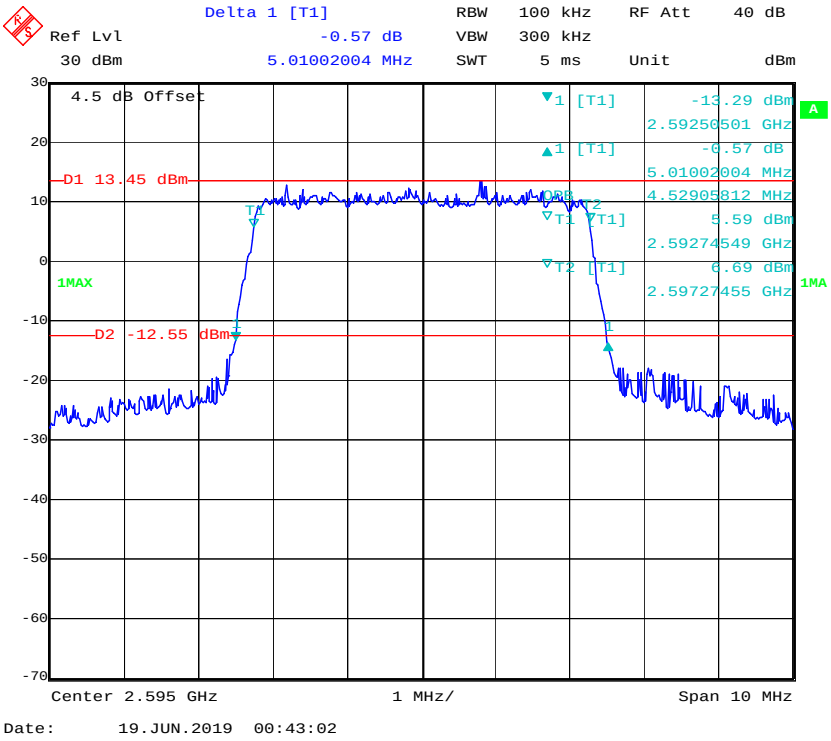
16QAM_15 MHz



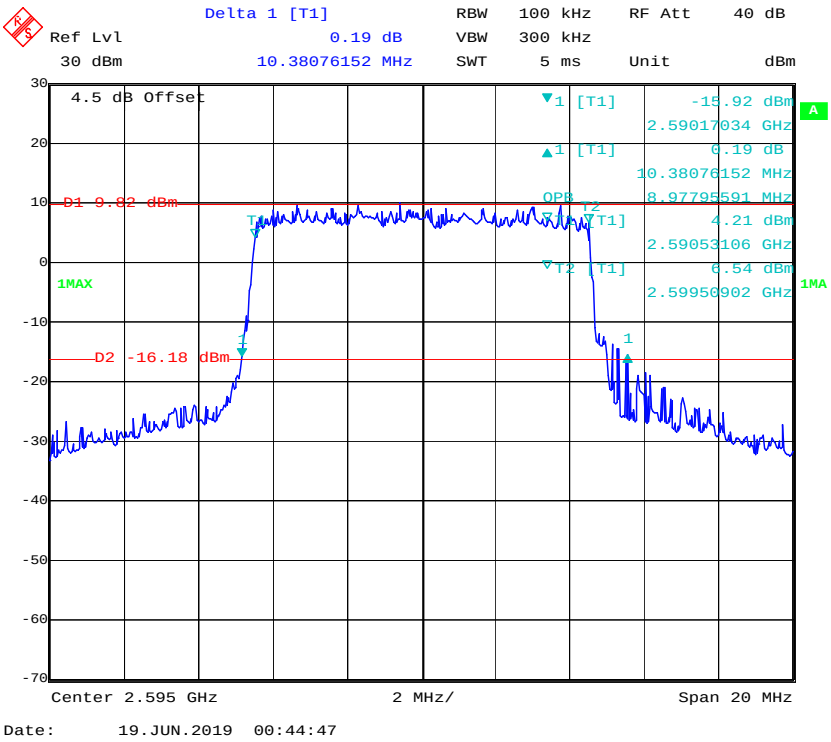
Date: 19.JUN.2019 00:35:29

LTE Band 38:

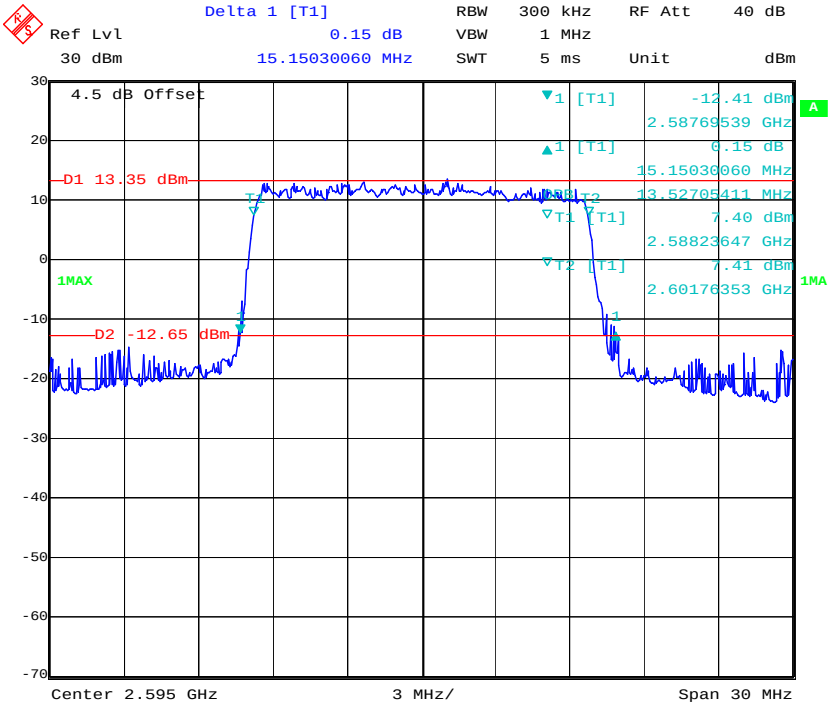
QPSK_5 MHz



QPSK_10 MHz

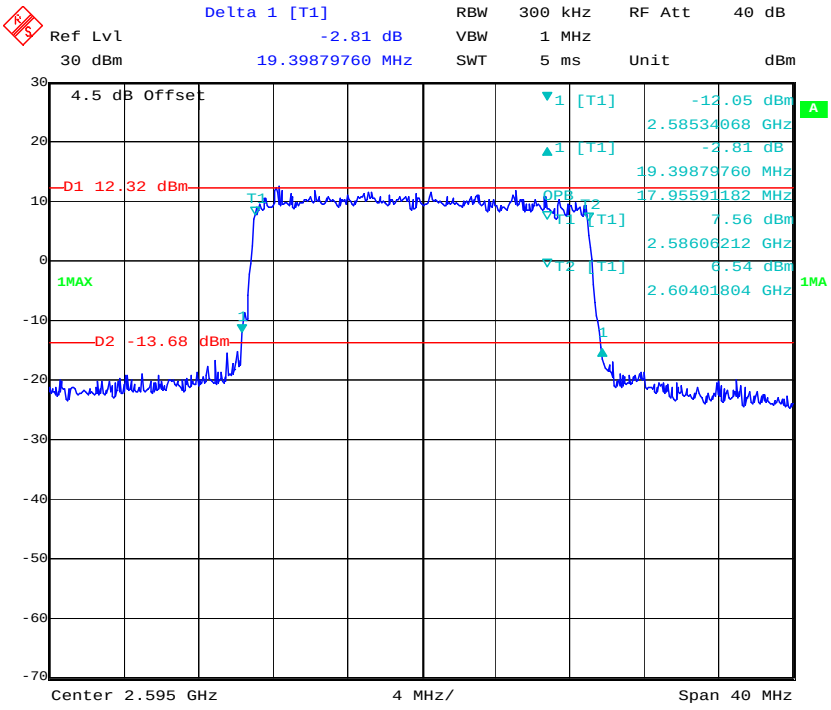


QPSK_15 MHz



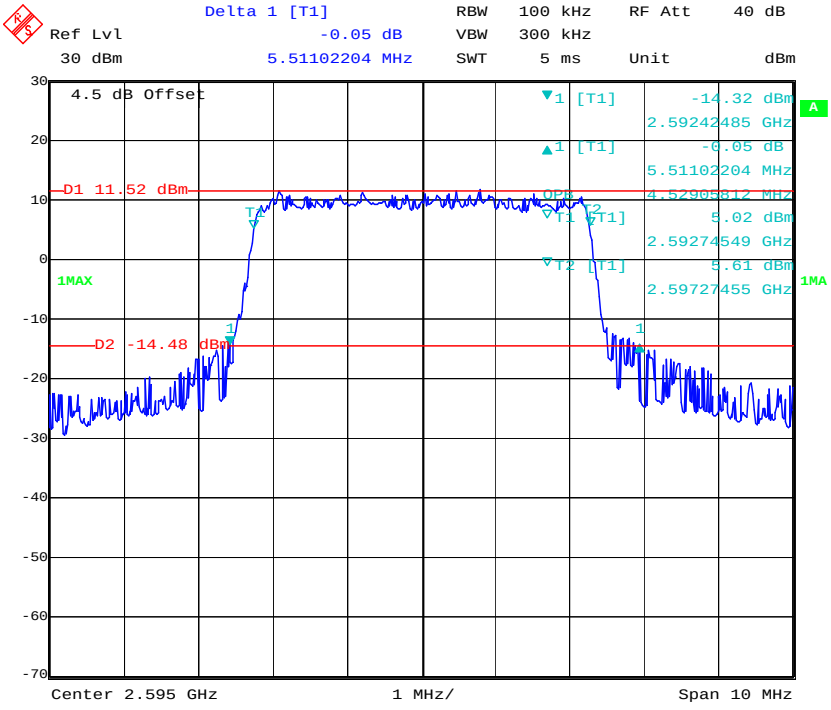
Date: 20.JUN.2019 17:43:00

QPSK_20 MHz



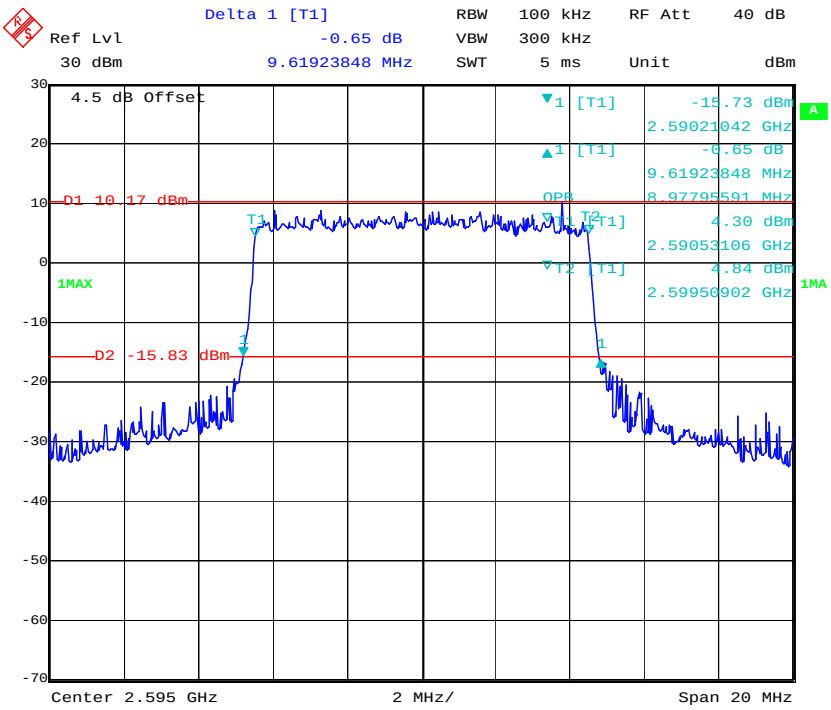
Date: 20.JUN.2019 17:44:16

16QAM_5 MHz



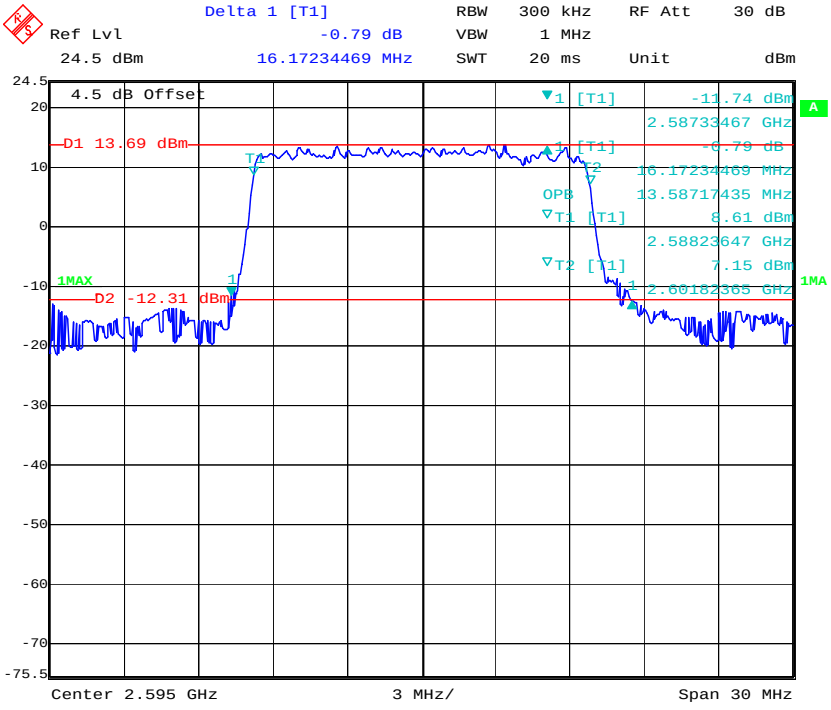
Date: 19.JUN.2019 00:44:00

16QAM_10 MHz



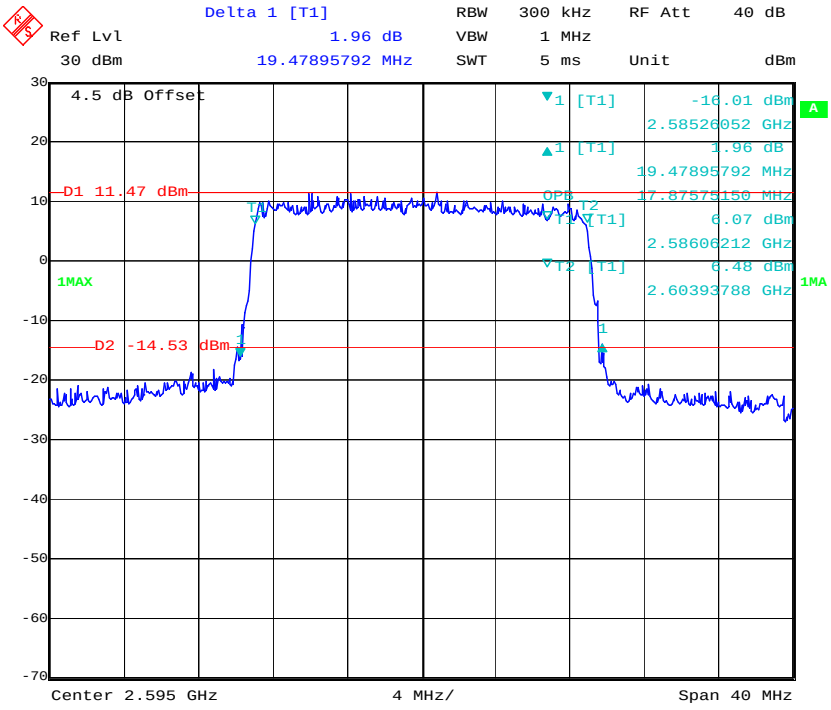
Date: 19.JUN.2019 00:45:30

16QAM_15 MHz



Date: 21.JUN.2019 18:29:13

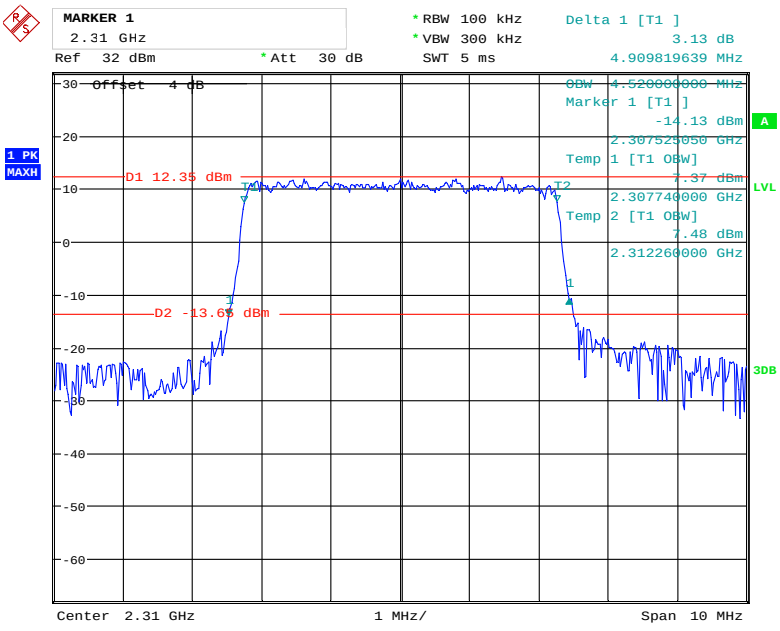
16QAM_20 MHz



Date: 20.JUN.2019 17:44:51

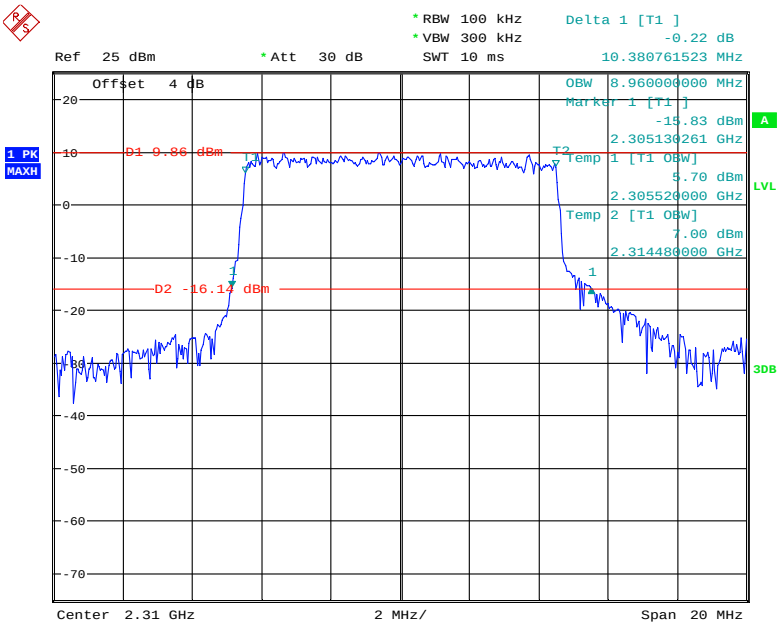
LTE Band 40(2305-2325 MHz):

QPSK_5 MHz



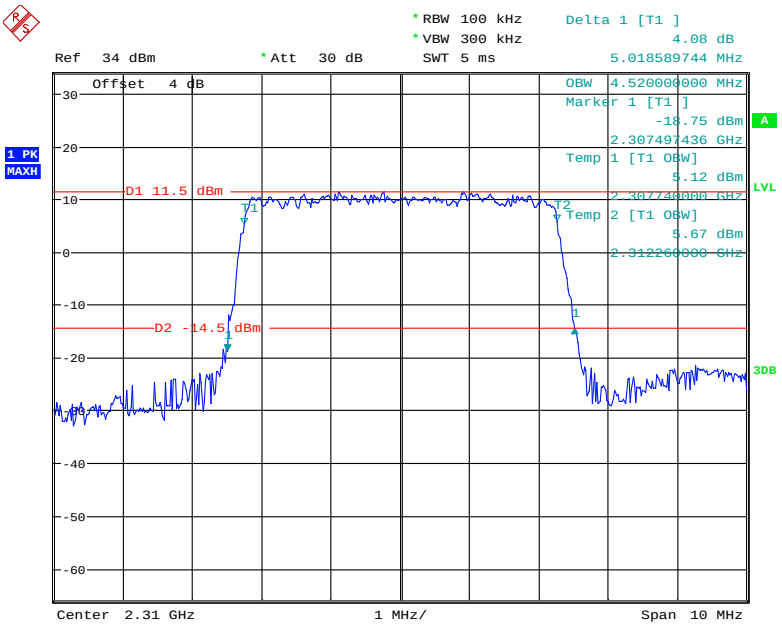
Date: 31.JUL.2019 14:18:01

QPSK_10 MHz



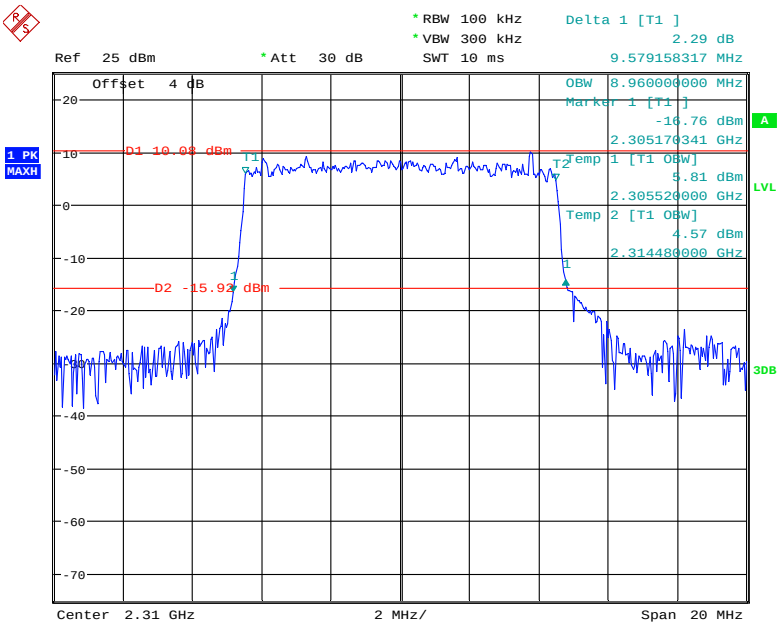
Date: 31.JUL.2019 14:19:59

16QAM_5 MHz



Date: 31.JUL.2019 16:05:49

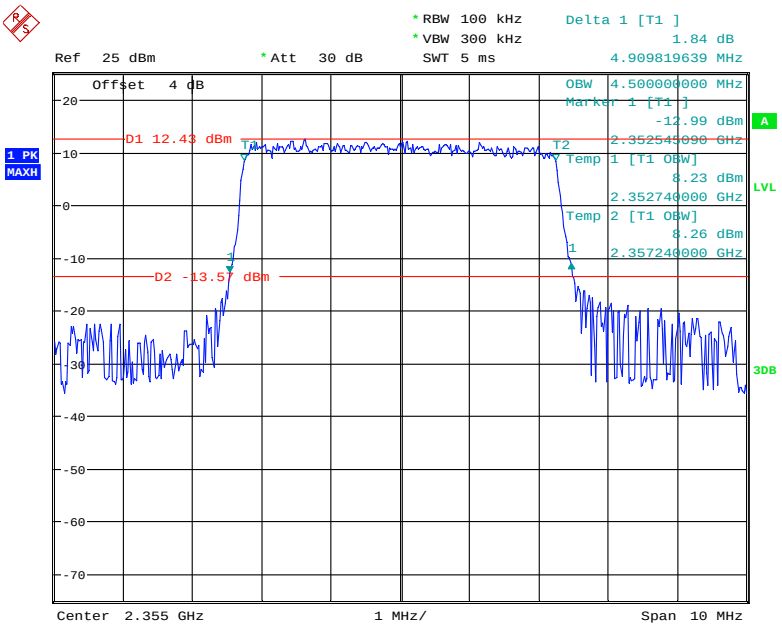
16QAM _10 MHz



Date: 31.JUL.2019 14:20:53

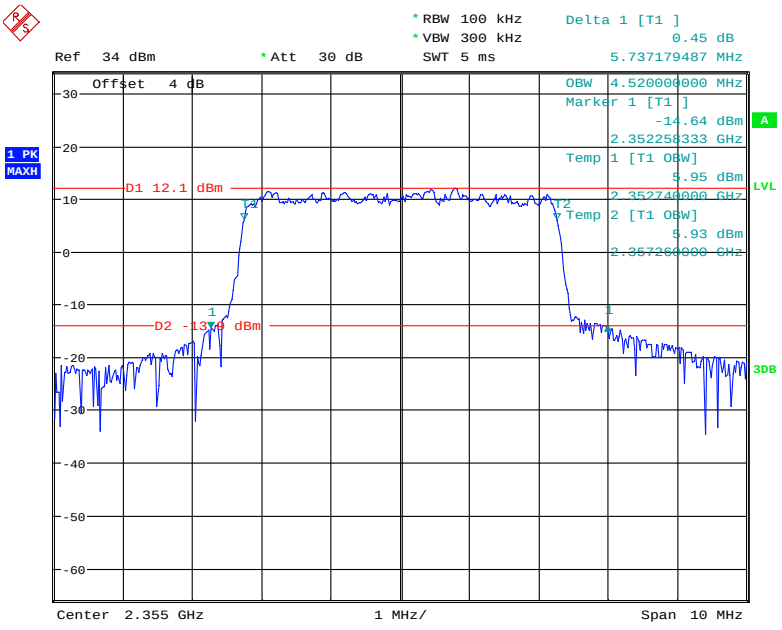
LTE Band 40(2350-2360 MHz):

QPSK_5 MHz



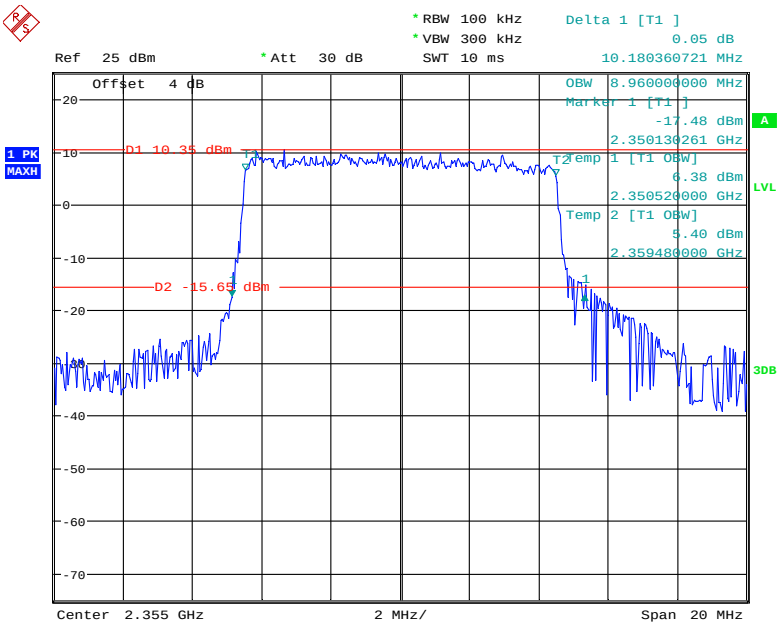
Date: 31.JUL.2019 14:37:47

QPSK_10 MHz



Date: 31.JUL.2019 15:54:46

16QAM _5 MHz



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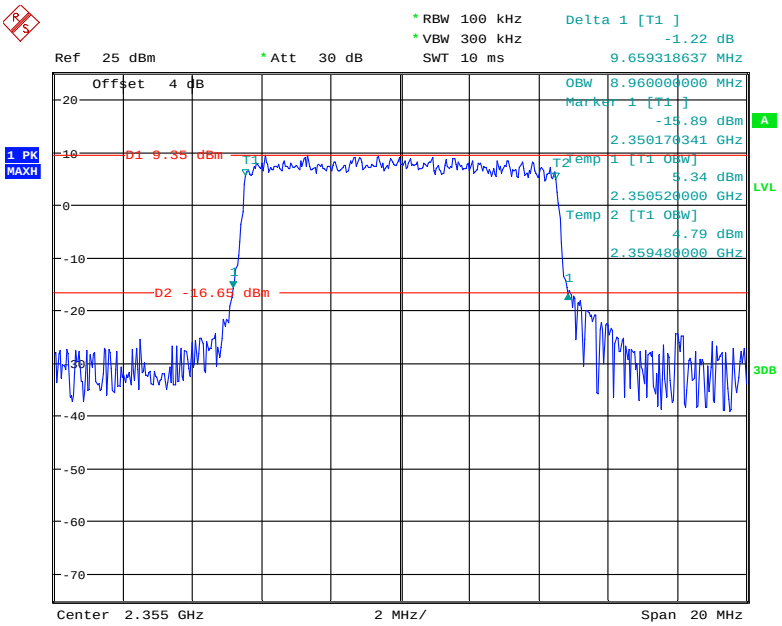
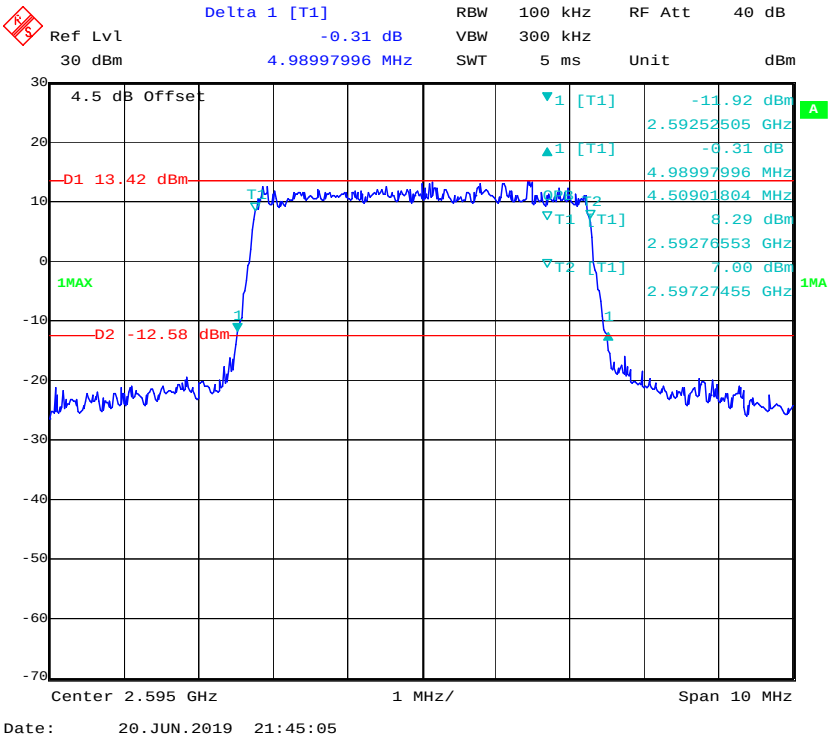
16QAM _10 MHz



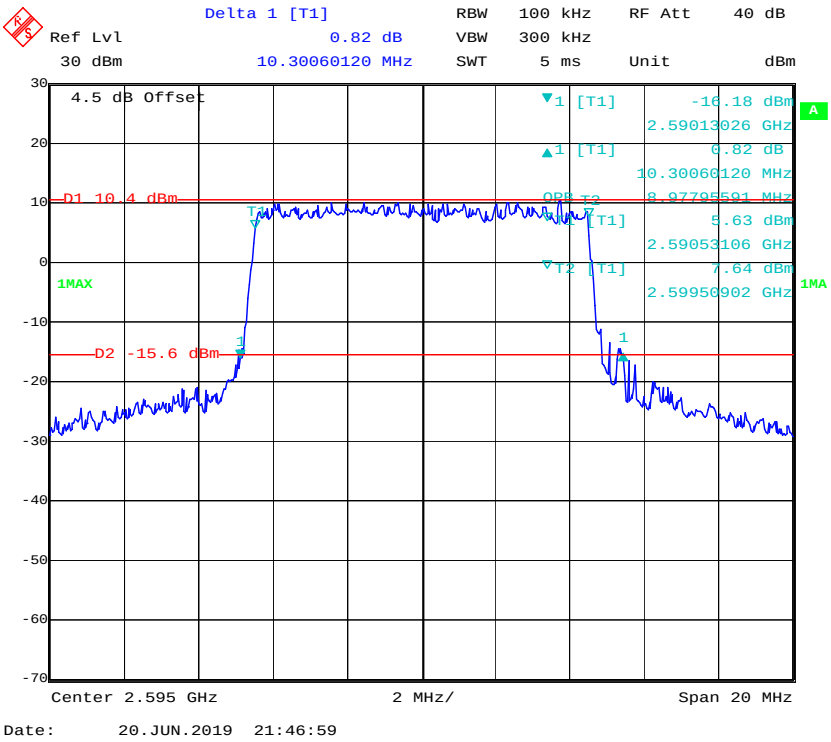
Date: 31.JUL.2019 14:39:14

LTE Band 41:

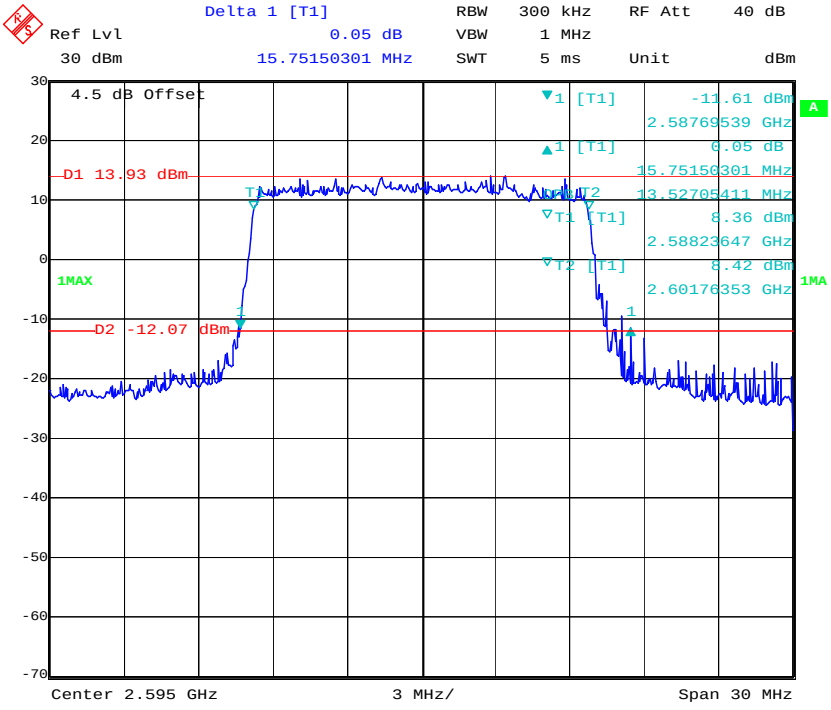
QPSK_5 MHz



QPSK_10 MHz

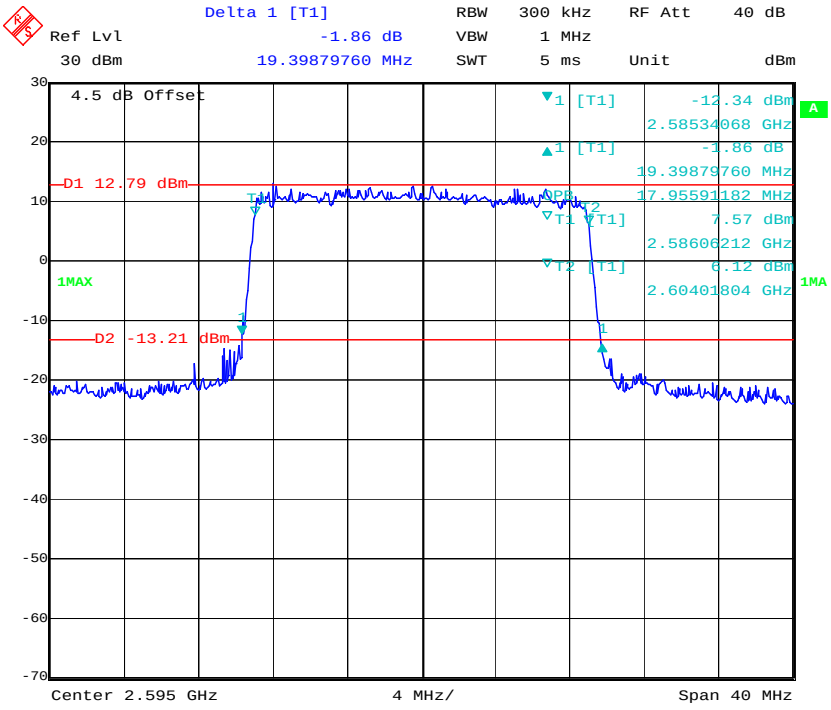


QPSK_15 MHz



Date: 20.JUN.2019 21:48:15

QPSK_20 MHz



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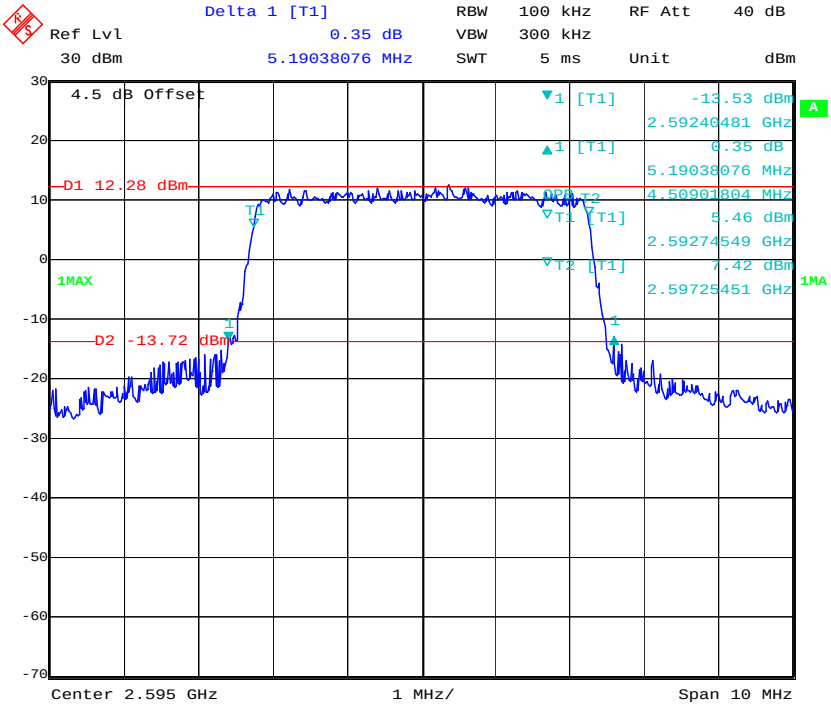
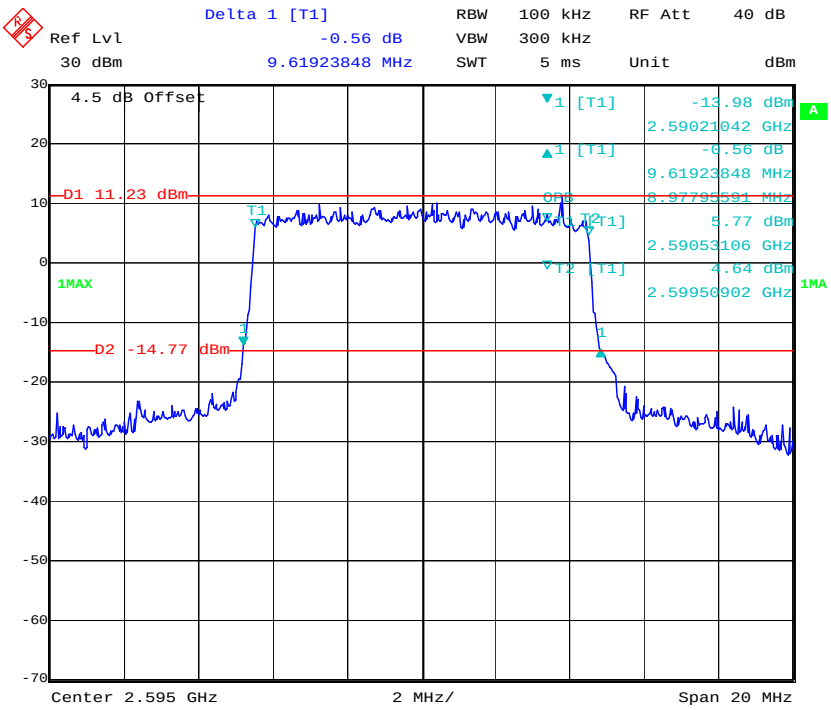
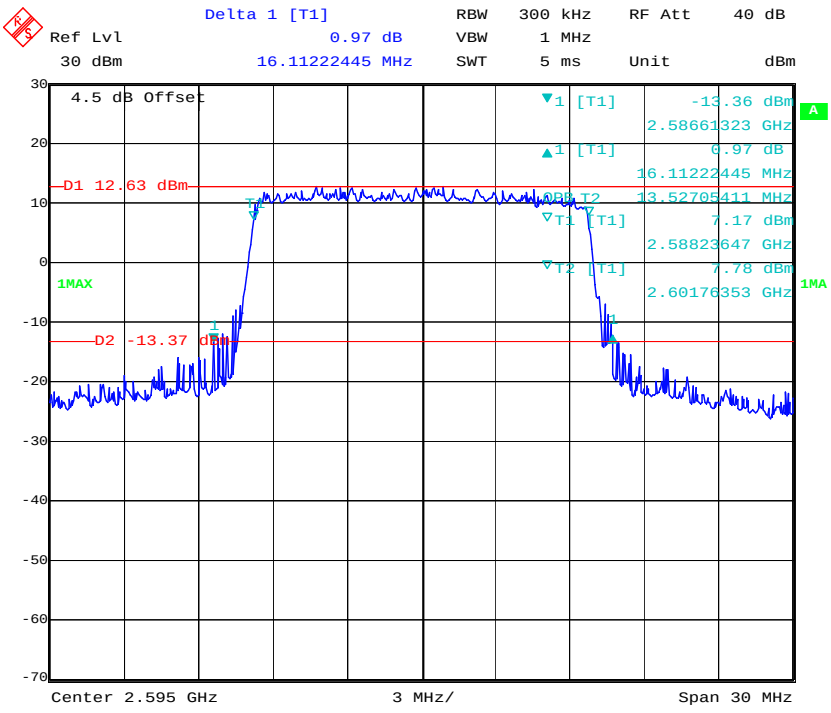
16QAM_5 MHz



16QAM_10 MHz



16QAM_15 MHz



16QAM_20 MHz