



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: YAMVM750D**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Body Worn Camera
<b>Report Number:</b>	DG2210728-31605E-00D
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

<b>EUT Name:</b>	Body Worn Camera
<b>EUT Model:</b>	VM750D
<b>Antenna Gain<sup>▲</sup>:</b>	GSM850/WCDMA B5/LTE B5/B26: -0.33 dBi PCS1900/WCDMA B2/LTE B2: -0.11 dBi WCDMA B4/LTE B4: -1.14 dBi LTE B7/B38/B41: -0.10 dBi LTE B12/17: 0.30 dBi LTE B13: 0.58 dBi LTE B40: 1.14 dBi
<b>Modulation Type:</b>	GMSK,8PSK, BPSK, QPSK, 16QAM
<b>Rated Input Voltage:</b>	DC 3.85V from battery
<b>Adapter Information</b>	<b>Model:</b> S010WU0500200
	<b>Input:</b> 100-240Vac 50/60Hz 400mA
	<b>Output:</b> 5.0Vdc 2000mA
<b>Serial Number:</b>	DG2210728-31605E-RF-S1
<b>EUT Received Date:</b>	2021.07.29
<b>EUT Received Status:</b>	Good

### 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 Communications Commission's rules.

The objective is to determine compliance with FCC Rules for output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, spurious radiated emission, frequency stability and band edge.

### Test Methodology

All tests and measurements indicated in this document were performed in accordance with:

The Code of federal Regulations Title 47, Part 2, Part 22H, Part 24E, Part 27, Part 90.

ANSI C63.26-2015, American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Dongguan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## 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 °C
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%

*Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.*

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1<sup>st</sup> Road, Tangxia Town, 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.

## Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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## SYSTEM TEST CONFIGURATION

### Justification

The EUT was configured for testing according to ANSI C63.26-2015.

The test items were performed with the EUT operating at testing mode. The device operates on GSM Band 850/1900MHz, WCDMA Band 2/4/5, and LTE band 2/4/5/7/12/13/17/26/38/40/41, test was performed with channels as below table:

Frequency Bands	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM/GPRS 850	0.25	824.2	836.6	848.8
GSM/GPRS 1900	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
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 Lower 2305-2315MHz	5	2307.5	2310	2312.5
	10	/	2310	/
LTE Band 40 Upper 2350-2360MHz	5	2352.5	2355	2357.5
	10	/	2355	/
LTE Band 41	5	2498.5	2593	2687.5
	10	2501	2593	2685
	15	2503.5	2593	2682.5
	20	2506	2593	2680

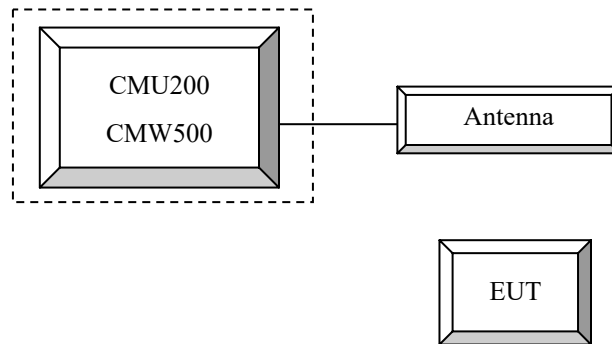
**Equipment Modifications**

No modification was made to the EUT.

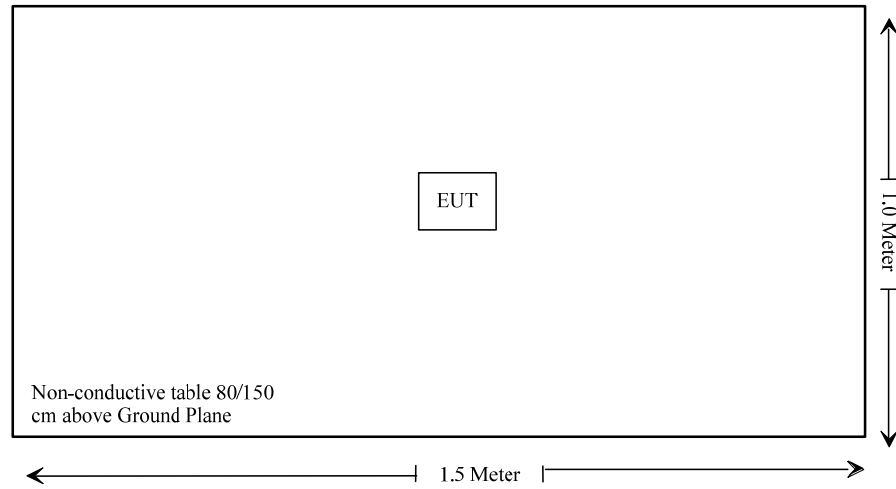
**Support Equipment List and Details**

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





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**SUMMARY OF TEST RESULTS**


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FCC 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	Field Strength of Spurious Radiation	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**

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### **Applicable Standard**

FCC§1.1310 and §2.1093.

### **Test Result**

Compliance, please refer to the SAR report: DG2210728-31605E-20.

## **FCC §2.1047 - MODULATION CHARACTERISTIC**

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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.

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## **FCC § 2.1046, § 22.913 (a) & § 24.232 (c) & § 27.50 & § 90.635 - RF OUTPUT POWER**

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### **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)(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.

(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.

**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).

<b>WCDMA General Settings</b>	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	$\beta_c / \beta_d$	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			
	$\beta_c$	2/15	12/15	15/15	15/15
	$\beta_d$	15/15	15/15	8/15	4/15
	$\beta_d$ (SF)	64			
	$\beta_c / \beta_d$	2/15	12/15	15/8	15/4
	$\beta_{hs}$	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			
	$A_{hs} = \beta_{hs} / \beta_c$	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.

	<b>Mode</b>	<b>HSUPA</b>	<b>HSUPA</b>	<b>HSUPA</b>	<b>HSUPA</b>	<b>HSUPA</b>
	<b>Subset</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>WCDMA General Settings</b>	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	$\beta_c$	11/15	6/15	15/15	2/15	15/15
	$\beta_d$	15/15	15/15	9/15	15/15	0
	$\beta_{ec}$	209/225	12/15	30/15	2/15	5/15
	$\beta_c / \beta_d$	11/15	6/15	15/9	2/15	-
	$\beta_{hs}$	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	
<b>HSDPA Specific Settings</b>	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	$A_{hs} = \beta_{hs} / \beta_c$	30/15				
<b>HSUPA Specific Settings</b>	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-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	$\beta_c$ (Note3)	$\beta_d$	$\beta_{HS}$ (Note1)	$\beta_{ec}$	$\beta_{ed}$ (2xSF2) (Note 4)	$\beta_{ed}$ (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	$\beta_{ed1}$ : 30/15 $\beta_{ed2}$ : 30/15	$\beta_{ed3}$ : 24/15 $\beta_{ed4}$ : 24/15	3.5	2.5	14	105	105

Note 1:  $\Delta_{ACK}, \Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ .

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  $\beta_c$  is set to 1 and  $\beta_d = 0$  by default.

Note 4:  $\beta_{ed}$  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 <sub>RB</sub> )	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	13	10	Table 6.2.4-2	Table 6.2.4-2
	6.6.3.3.2				
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 <sup>1</sup>	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)**

3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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<sub>s</sub>) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:  
 Calculated Duty Cycle =  $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$   
 where  
 T<sub>s</sub> = 1/(15000 x 2048) seconds

**Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Wideband Radio Communication Tester	CMW500	147473	2020-09-23	2021-09-22
R&S	Universal Radio Communication Tester	CMU200	106 891	2020-09-12	2021-09-12
E-Microwave	Blocking Control	EMDCB-00036	0E01201047	Each time	N/A
Unknown	Attenuator	UNAT-3+	15529	Each time	N/A
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41010012	Each time	N/A
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A

\* **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**

<b>Temperature:</b>	26.7~29.8 °C
<b>Relative Humidity:</b>	46~62 %
<b>ATM Pressure:</b>	99.3~100.7 kPa
<b>Tester:</b>	Lay Lei
<b>Test Date:</b>	2021-08-03~2021-08-20

*Test Result: Compliance*

**GSM/GPRS/EDGE****Conducted Output Power:**

Band	Channel No.	Conducted Peak Output Power (dBm)							
		GPRS 1 TX Slot	GPRS 2 TX Slots	GPRS 3 TX Slots	GPRS 4 TX Slots	EGPRS 1 TX Slot	EGPRS 2 TX Slots	EGPRS 3 TX Slots	EGPRS 4 TX Slots
Cellular	128	31.56	30.28	28.56	26.49	25.57	24.52	22.68	20.62
	190	31.73	30.22	28.47	26.53	25.51	24.61	22.52	20.57
	251	31.41	30.25	28.51	26.42	25.87	24.48	22.71	20.54
PCS	512	28.63	27.53	25.62	23.51	24.74	23.36	21.42	20.03
	661	28.72	27.42	25.48	23.73	24.68	23.51	21.37	20.11
	810	28.52	27.38	25.43	23.66	24.75	23.33	21.35	20.17

**ERP/EIRP:**

Band	Mode	Channel	Conducted Power (dBm)	Antenna Gain (dBi/dBd)	Result (dBm)	Limit (dBm)
Cellular	GSM	Low	31.56	-2.48	29.08	38.45
		Middle	31.73	-2.48	<b>29.25</b>	38.45
		High	31.41	-2.48	28.93	38.45
	EDGE	Low	25.57	-2.48	23.09	38.45
		Middle	25.51	-2.48	23.03	38.45
		High	25.87	-2.48	<b>23.39</b>	38.45
PCS	GSM	Low	28.63	-0.11	28.52	33
		Middle	28.72	-0.11	<b>28.61</b>	33
		High	28.52	-0.11	28.41	33
	EDGE	Low	24.74	-0.11	24.63	33
		Middle	24.68	-0.11	24.57	33
		High	24.75	-0.11	<b>24.64</b>	33

## 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) Result = Conducted Power + Antenna Gain
- 3) Antenna gain(dBd)= Antenna gain(dBi)-2.15

**WCDMA Band 2****Conducted Output Power and PAR:**

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	22.33	3.36	22.41	3.39	22.56	3.25
HSDPA	1	21.30	4.67	21.56	3.71	21.38	3.83
	2	21.26	3.51	21.47	3.47	21.58	3.47
	3	21.53	3.28	21.38	3.62	21.61	3.51
	4	21.37	3.47	21.84	3.49	21.82	3.61
HSUPA	1	20.70	4.23	20.84	4.46	21.23	3.77
	2	21.12	3.51	20.72	3.69	20.86	3.41
	3	21.24	4.28	20.89	4.12	20.82	3.59
	4	20.83	3.69	20.68	3.87	20.63	3.47
	5	21.36	3.72	21.76	3.53	20.92	3.84
DC-HSDPA	1	21.53	4.12	21.81	3.84	21.14	3.62
	2	21.48	3.56	21.83	3.92	21.08	3.51
	3	21.67	3.74	21.79	3.67	21.27	3.48
	4	21.28	3.86	21.87	3.96	21.31	3.69
HSPA+ (16QAM)	1	20.25	3.15	20.28	3.61	20.47	3.52

**EIRP:**

Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
Low	22.33	-0.11	22.22	33
Middle	22.41	-0.11	22.30	33
High	22.56	-0.11	22.45	33

**WCDMA Band 5**

**Conducted Output Power and PAR:**

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	22.83	3.51	22.35	3.51	22.68	3.48
HSDPA	1	21.60	3.45	22.16	3.57	21.87	4.35
	2	22.31	3.17	22.54	3.24	21.61	4.12
	3	21.57	3.28	21.87	3.42	21.52	3.89
	4	21.30	3.67	21.42	4.25	21.89	3.82
HSUPA	1	21.08	4.09	21.64	3.16	21.51	4.14
	2	21.43	4.28	21.47	3.22	21.47	4.10
	3	21.78	3.87	21.39	3.81	21.63	3.68
	4	21.37	3.68	21.28	3.42	21.38	3.57
	5	21.39	3.67	21.84	3.59	21.47	3.68
DC-HSDPA	1	21.31	3.52	21.27	3.27	21.62	3.71
	2	21.68	3.46	21.46	3.51	21.51	3.28
	3	21.59	3.82	21.31	3.28	21.57	4.27
	4	21.78	4.15	21.52	3.47	21.82	3.92
HSPA+ (16QAM)	1	20.34	3.07	20.51	3.16	20.28	3.02

**ERP:**

Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
Low	22.83	-2.48	20.35	38.45
Middle	22.54	-2.48	20.06	38.45
High	22.68	-2.48	20.20	38.45

**WCDMA Band 4**

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	22.23	2.90	22.31	2.72	22.28	2.72
HSDPA	1	21.05	3.13	21.27	3.07	21.37	3.74
	2	21.14	2.80	21.22	3.18	21.35	3.68
	3	20.93	3.25	21.08	3.25	21.18	3.82
	4	21.09	3.64	21.14	3.63	21.27	3.71
HSUPA	1	20.60	3.80	20.73	3.77	21.41	3.30
	2	20.58	3.25	20.37	3.42	20.93	3.12
	3	20.82	3.46	20.46	3.61	20.85	3.08
	4	20.74	3.57	20.51	3.89	20.72	2.93
	5	20.79	3.19	20.69	3.27	20.74	2.86
DC-HSDPA	1	21.28	3.28	21.54	3.18	21.62	3.58
	2	21.48	3.56	21.68	3.64	21.57	3.18
	3	21.69	3.47	21.43	3.48	21.27	2.87
	4	21.37	3.18	21.52	3.19	21.36	3.59
HSPA+ (16QAM)	1	20.36	2.81	20.27	2.92	20.48	2.95

**EIRP:**

Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
Low	22.23	-1.14	21.09	30
Middle	22.31	-1.14	21.17	30
High	22.28	-1.14	21.14	30

**LTE Band 2**

**Conducted Output Power:**

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	23.83	24.27	24.09
		RB1#3	24.33	24.37	24.21
		RB1#5	24.15	24.38	24.16
		RB3#0	23.98	24.03	24.20
		RB3#3	24.00	24.09	24.19
		RB6#0	23.02	23.16	23.30
	16QAM	RB1#0	23.00	23.38	23.37
		RB1#3	22.92	23.46	23.41
		RB1#5	22.78	23.40	23.31
		RB3#0	23.08	23.25	23.41
		RB3#3	23.23	23.20	23.51
		RB6#0	22.10	21.94	22.35
3MHz	QPSK	RB1#0	24.10	24.40	24.23
		RB1#8	24.29	24.36	24.55
		RB1#14	24.42	24.15	24.29
		RB6#0	23.14	23.23	23.36
		RB6#9	23.13	23.27	23.29
		RB15#0	23.16	23.26	23.37
	16QAM	RB1#0	23.41	23.89	23.30
		RB1#8	23.24	23.94	23.08
		RB1#14	23.10	23.93	22.93
		RB6#0	21.92	22.43	22.23
		RB6#9	21.94	22.33	22.18
		RB15#0	22.05	22.29	22.42
5MHz	QPSK	RB1#0	23.92	24.18	24.12
		RB1#13	24.23	24.23	24.48
		RB1#24	24.09	24.12	24.27
		RB15#0	23.23	23.29	23.42
		RB15#10	23.22	23.30	23.37
		RB25#0	23.16	23.24	23.41
	16QAM	RB1#0	22.77	23.51	23.15
		RB1#13	22.79	23.53	23.27
		RB1#24	22.64	23.47	22.87
		RB15#0	21.94	22.37	22.30
		RB15#10	21.97	22.48	22.24
		RB25#0	22.12	22.17	22.39



10MHz	QPSK	RB1#0	24.09	24.28	24.14
		RB1#25	24.32	24.31	24.71
		RB1#49	24.26	24.23	24.09
		RB25#0	23.22	23.30	23.33
		RB25#25	23.28	23.29	23.37
		RB50#0	23.32	23.30	23.45
	16QAM	RB1#0	23.52	23.64	23.30
		RB1#25	24.06	23.93	23.32
		RB1#49	23.56	23.81	23.06
		RB25#0	22.09	22.33	22.42
		RB25#25	22.20	22.19	22.48
		RB50#0	22.11	22.21	22.29
15MHz	QPSK	RB1#0	24.01	24.18	24.23
		RB1#38	24.17	24.41	24.32
		RB1#74	24.19	24.31	23.75
		RB36#0	23.27	23.33	23.36
		RB36#39	23.26	23.30	23.40
		RB75#0	23.23	23.32	23.32
	16QAM	RB1#0	23.50	23.43	23.46
		RB1#38	24.31	24.28	23.45
		RB1#74	23.64	23.77	22.87
		RB36#0	22.09	22.14	22.16
		RB36#39	22.06	22.20	22.25
		RB75#0	22.04	22.17	22.16
20MHz	QPSK	RB1#0	23.94	24.20	24.31
		RB1#50	24.44	24.55	24.61
		RB1#99	24.26	24.22	23.98
		RB50#0	23.22	23.27	23.41
		RB50#50	23.25	23.35	23.37
		RB100#0	23.24	23.28	23.38
	16QAM	RB1#0	23.60	23.60	23.43
		RB1#50	24.17	24.08	23.36
		RB1#99	23.84	23.66	23.29
		RB50#0	22.06	22.22	22.28
		RB50#50	22.14	22.25	22.37
		RB100#0	22.09	22.06	22.30

**PAR:**

Test Modulation		Channel Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)
QPSK	1 RB	20 MHz	3.71	3.77	3.62	13.00
	100 RB		4.99	4.75	4.52	13.00
16QAM	1 RB	20 MHz	4.72	4.72	4.70	13.00
	100 RB		6.00	6.00	5.65	13.00

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
1.4MHz	QPSK	Low	24.33	-0.11	24.22	33.00
		Middle	24.38	-0.11	24.27	33.00
		High	24.21	-0.11	24.10	33.00
	16QAM	Low	23.23	-0.11	23.12	33.00
		Middle	23.46	-0.11	23.35	33.00
		High	23.51	-0.11	23.40	33.00
3MHz	QPSK	Low	24.42	-0.11	24.31	33.00
		Middle	24.40	-0.11	24.29	33.00
		High	24.55	-0.11	24.44	33.00
	16QAM	Low	23.41	-0.11	23.30	33.00
		Middle	23.94	-0.11	23.83	33.00
		High	23.30	-0.11	23.19	33.00
5MHz	QPSK	Low	24.23	-0.11	24.12	33.00
		Middle	24.23	-0.11	24.12	33.00
		High	24.48	-0.11	24.37	33.00
	16QAM	Low	22.79	-0.11	22.68	33.00
		Middle	23.53	-0.11	23.42	33.00
		High	23.27	-0.11	23.16	33.00
10MHz	QPSK	Low	24.32	-0.11	24.21	33.00
		Middle	24.23	-0.11	24.12	33.00
		High	24.48	-0.11	24.37	33.00
	16QAM	Low	22.79	-0.11	22.68	33.00
		Middle	23.53	-0.11	23.42	33.00
		High	23.27	-0.11	23.16	33.00
15MHz	QPSK	Low	24.19	-0.11	24.08	33.00
		Middle	24.41	-0.11	24.30	33.00
		High	24.32	-0.11	24.21	33.00
	16QAM	Low	24.31	-0.11	24.20	33.00
		Middle	24.28	-0.11	24.17	33.00
		High	23.46	-0.11	23.35	33.00
20MHz	QPSK	Low	24.44	-0.11	24.33	33.00
		Middle	24.55	-0.11	24.44	33.00
		High	24.61	-0.11	24.50	33.00
	16QAM	Low	24.17	-0.11	24.06	33.00
		Middle	24.08	-0.11	23.97	33.00
		High	23.43	-0.11	23.32	33.00

LTE Band 4

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	23.23	23.01	22.97
		RB1#3	23.21	23.03	23.47
		RB1#5	23.22	22.91	23.30
		RB3#0	23.02	23.22	23.24
		RB3#3	22.97	23.21	23.20
		RB6#0	22.11	22.17	22.27
	16QAM	RB1#0	22.24	22.20	22.19
		RB1#3	22.40	22.84	22.25
		RB1#5	22.15	22.75	22.29
		RB3#0	22.13	22.18	22.24
		RB3#3	22.07	22.37	22.26
		RB6#0	21.20	21.38	21.45
3MHz	QPSK	RB1#0	23.12	23.35	22.92
		RB1#8	22.99	23.13	22.91
		RB1#14	22.88	23.17	23.33
		RB6#0	22.09	22.13	22.09
		RB6#9	21.98	22.26	22.22
		RB15#0	22.09	22.30	22.22
	16QAM	RB1#0	22.39	22.64	21.97
		RB1#8	22.18	22.88	21.76
		RB1#14	22.03	22.90	21.94
		RB6#0	21.20	21.46	21.17
		RB6#9	20.99	21.38	21.20
		RB15#0	21.11	21.44	21.41
5MHz	QPSK	RB1#0	22.93	23.01	22.99
		RB1#13	22.90	23.26	23.18
		RB1#24	22.94	23.19	23.30
		RB15#0	22.06	22.14	22.18
		RB15#10	22.08	22.23	22.31
		RB25#0	22.00	22.24	22.20
	16QAM	RB1#0	21.71	22.59	22.14
		RB1#13	21.63	22.72	22.03
		RB1#24	21.19	22.70	22.01
		RB15#0	20.85	21.03	21.06
		RB15#10	21.05	21.09	21.33
		RB25#0	21.10	21.10	21.30
10MHz	QPSK	RB1#0	22.99	23.07	22.96
		RB1#25	23.06	23.23	23.33
		RB1#49	23.02	23.08	23.17
		RB25#0	22.05	22.16	22.29
		RB25#25	22.10	22.32	22.18
		RB50#0	22.09	22.20	22.20
	16QAM	RB1#0	22.45	22.36	21.88
		RB1#25	22.64	22.80	21.93
		RB1#49	22.25	22.85	22.01
		RB25#0	20.92	21.29	21.51
		RB25#25	20.90	21.30	21.44
		RB50#0	21.05	21.32	21.29

15MHz	QPSK	RB1#0	23.01	23.12	23.06
		RB1#38	23.06	23.18	23.10
		RB1#74	23.12	23.12	23.16
		RB36#0	22.06	22.17	22.33
		RB36#39	22.27	22.22	22.34
		RB75#0	22.13	22.24	22.28
	16QAM	RB1#0	22.49	22.63	22.35
		RB1#38	22.46	22.84	22.17
		RB1#74	21.97	22.90	21.35
		RB36#0	21.14	21.15	21.08
		RB36#39	21.17	21.50	21.31
		RB75#0	21.22	21.34	21.36
20MHz	QPSK	RB1#0	22.94	23.23	23.26
		RB1#50	23.08	23.50	23.29
		RB1#99	23.11	23.43	23.05
		RB50#0	22.24	22.25	22.30
		RB50#50	22.35	22.30	22.16
		RB100#0	22.33	22.27	22.23
	16QAM	RB1#0	22.67	22.34	23.01
		RB1#50	23.02	22.42	23.44
		RB1#99	22.80	22.12	22.83
		RB50#0	21.27	21.18	21.33
		RB50#50	21.33	21.34	21.20
		RB100#0	21.33	21.33	21.27

**PAR:**

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	4.06	4.58	13
	100 RB		4.96	4.58	4.70	13
16QAM	1 RB	20 MHz	5.57	4.99	5.59	13
	100 RB		6.00	5.59	5.77	13

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
1.4MHz	QPSK	Low	23.23	-1.14	22.09	30.00
		Middle	23.22	-1.14	22.08	30.00
		High	23.47	-1.14	22.33	30.00
	16QAM	Low	22.40	-1.14	21.26	30.00
		Middle	22.84	-1.14	21.70	30.00
		High	22.29	-1.14	21.15	30.00
3MHz	QPSK	Low	23.12	-1.14	21.98	30.00
		Middle	23.35	-1.14	22.21	30.00
		High	23.33	-1.14	22.19	30.00
	16QAM	Low	22.39	-1.14	21.25	30.00
		Middle	22.90	-1.14	21.76	30.00
		High	21.97	-1.14	20.83	30.00
5MHz	QPSK	Low	22.94	-1.14	21.80	30.00
		Middle	23.26	-1.14	22.12	30.00
		High	23.30	-1.14	22.16	30.00
	16QAM	Low	21.71	-1.14	20.57	30.00
		Middle	22.72	-1.14	21.58	30.00
		High	22.14	-1.14	21.00	30.00
10MHz	QPSK	Low	23.06	-1.14	21.92	30.00
		Middle	23.26	-1.14	22.12	30.00
		High	23.30	-1.14	22.16	30.00
	16QAM	Low	21.71	-1.14	20.57	30.00
		Middle	22.72	-1.14	21.58	30.00
		High	22.14	-1.14	21.00	30.00
15MHz	QPSK	Low	23.12	-1.14	21.98	30.00
		Middle	23.18	-1.14	22.04	30.00
		High	23.16	-1.14	22.02	30.00
	16QAM	Low	22.49	-1.14	21.35	30.00
		Middle	22.90	-1.14	21.76	30.00
		High	22.35	-1.14	21.21	30.00
20MHz	QPSK	Low	23.11	-1.14	21.97	30.00
		Middle	23.50	-1.14	22.36	30.00
		High	23.29	-1.14	22.15	30.00
	16QAM	Low	23.02	-1.14	21.88	30.00
		Middle	22.42	-1.14	21.28	30.00
		High	23.44	-1.14	22.30	30.00

LTE Band 5

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	24.10	23.82	24.03
		RB1#3	24.24	23.91	24.16
		RB1#5	24.17	23.89	23.98
		RB3#0	24.01	23.85	24.06
		RB3#3	24.06	24.09	23.90
		RB6#0	23.01	22.88	23.04
	16QAM	RB1#0	23.15	23.45	23.05
		RB1#3	23.41	23.36	23.40
		RB1#5	23.09	23.32	22.62
		RB3#0	23.11	23.23	22.74
		RB3#3	23.01	23.32	22.86
		RB6#0	21.72	22.23	21.82
3MHz	QPSK	RB1#0	23.84	24.00	23.52
		RB1#8	23.69	23.85	23.78
		RB1#14	23.85	23.91	23.80
		RB6#0	22.92	22.98	22.73
		RB6#9	22.96	22.86	22.82
		RB15#0	23.03	22.87	22.87
	16QAM	RB1#0	23.17	23.43	22.60
		RB1#8	23.09	23.64	22.76
		RB1#14	23.10	23.45	22.36
		RB6#0	21.77	22.31	21.65
		RB6#9	21.82	22.36	21.73
		RB15#0	21.89	22.12	21.89
5MHz	QPSK	RB1#0	23.79	23.76	23.75
		RB1#13	23.82	23.96	23.85
		RB1#24	23.78	23.83	23.82
		RB15#0	23.03	22.95	22.64
		RB15#10	23.01	22.93	22.90
		RB25#0	22.94	22.89	22.91
	16QAM	RB1#0	22.54	22.94	22.44
		RB1#13	22.46	23.47	22.42
		RB1#24	22.08	23.20	22.27
		RB15#0	21.73	21.89	21.62
		RB15#10	21.69	21.91	21.81
		RB25#0	21.88	21.79	21.80
10MHz	QPSK	RB1#0	23.92	23.86	23.81
		RB1#25	24.24	24.06	24.09
		RB1#49	23.89	23.96	23.93
		RB25#0	22.97	22.95	22.84
		RB25#25	22.86	23.02	22.75
		RB50#0	22.98	23.00	22.84
	16QAM	RB1#0	23.39	23.17	22.93
		RB1#25	23.55	23.74	23.14
		RB1#49	22.92	24.02	22.75
		RB25#0	22.08	21.98	22.04
		RB25#25	21.86	21.96	21.72
		RB50#0	21.98	22.00	21.72

**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	4.26	4.09	4.23	13
	50 RB		5.25	5.36	5.28	13
16QAM	1 RB	10 MHz	5.30	5.01	5.30	13
	50 RB		6.17	6.38	6.20	13

**ERP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
1.4MHz	QPSK	Low	24.24	-2.48	21.76	38.45
		Middle	24.09	-2.48	21.61	38.45
		High	24.16	-2.48	21.68	38.45
	16QAM	Low	23.41	-2.48	20.93	38.45
		Middle	23.45	-2.48	20.97	38.45
		High	23.40	-2.48	20.92	38.45
3MHz	QPSK	Low	23.85	-2.48	21.37	38.45
		Middle	24.00	-2.48	21.52	38.45
		High	23.80	-2.48	21.32	38.45
	16QAM	Low	23.17	-2.48	20.69	38.45
		Middle	23.64	-2.48	21.16	38.45
		High	22.76	-2.48	20.28	38.45
5MHz	QPSK	Low	23.82	-2.48	21.34	38.45
		Middle	23.96	-2.48	21.48	38.45
		High	23.85	-2.48	21.37	38.45
	16QAM	Low	22.54	-2.48	20.06	38.45
		Middle	23.47	-2.48	20.99	38.45
		High	22.44	-2.48	19.96	38.45
10MHz	QPSK	Low	24.24	-2.48	21.76	38.45
		Middle	23.96	-2.48	21.48	38.45
		High	23.85	-2.48	21.37	38.45
	16QAM	Low	22.54	-2.48	20.06	38.45
		Middle	23.47	-2.48	20.99	38.45
		High	22.44	-2.48	19.96	38.45

LTE Band 7

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	RB1#0	23.78	24.00	24.03
		RB1#13	23.79	24.17	24.09
		RB1#24	23.89	24.10	23.98
		RB15#0	23.00	22.98	23.10
		RB15#10	23.00	23.01	23.21
		RB25#0	23.03	23.08	23.13
	16QAM	RB1#0	22.59	23.32	22.87
		RB1#13	22.41	23.31	22.98
		RB1#24	22.36	23.20	23.22
		RB15#0	22.00	21.86	22.22
		RB15#10	21.94	21.92	22.00
		RB25#0	22.04	22.14	22.30
10 MHz	QPSK	RB1#0	23.96	24.25	24.14
		RB1#25	24.04	24.16	24.13
		RB1#49	24.14	24.11	23.77
		RB25#0	23.10	23.11	23.45
		RB25#25	23.14	23.14	23.27
		RB50#0	23.15	23.13	23.42
	16QAM	RB1#0	23.33	23.46	23.27
		RB1#25	23.23	23.80	23.05
		RB1#49	23.31	23.53	23.00
		RB25#0	22.18	22.10	22.61
		RB25#25	22.22	22.13	22.28
		RB50#0	22.18	22.32	22.50
15 MHz	QPSK	RB1#0	24.15	24.26	24.03
		RB1#38	23.94	24.19	24.15
		RB1#74	24.06	24.02	23.58
		RB36#0	23.19	23.05	23.39
		RB36#39	23.19	23.13	23.32
		RB75#0	23.16	23.13	23.39
	16QAM	RB1#0	23.14	23.57	23.28
		RB1#38	23.15	23.56	23.34
		RB1#74	23.00	23.45	23.22
		RB36#0	22.23	22.01	22.49
		RB36#39	22.18	22.14	22.15
		RB75#0	22.18	22.16	22.36
20MHz	QPSK	RB1#0	23.82	24.21	23.89
		RB1#50	24.38	24.27	24.40
		RB1#99	24.01	24.35	23.26
		RB50#0	23.28	23.27	23.37
		RB50#50	23.17	23.19	23.35
		RB100#0	23.26	23.22	23.40
	16QAM	RB1#0	22.91	22.79	23.50
		RB1#50	23.82	22.65	24.06
		RB1#99	23.48	23.22	23.16
		RB50#0	22.26	22.40	22.40
		RB50#50	22.21	22.18	22.39
		RB100#0	22.34	22.17	22.42



**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1RB	20 MHz	3.74	3.25	2.93	13
	100RB		4.49	4.17	3.80	13
16QAM	1RB	20 MHz	4.93	4.09	3.77	13
	100RB		5.51	5.22	4.96	13

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
5MHz	QPSK	Low	23.89	-0.10	23.79	33.00
		Middle	24.17	-0.10	24.07	33.00
		High	24.09	-0.10	23.99	33.00
	16QAM	Low	22.59	-0.10	22.49	33.00
		Middle	23.32	-0.10	23.22	33.00
		High	23.22	-0.10	23.12	33.00
10MHz	QPSK	Low	24.14	-0.10	24.04	33.00
		Middle	24.17	-0.10	24.07	33.00
		High	24.09	-0.10	23.99	33.00
	16QAM	Low	22.59	-0.10	22.49	33.00
		Middle	23.32	-0.10	23.22	33.00
		High	23.22	-0.10	23.12	33.00
15MHz	QPSK	Low	24.15	-0.10	24.05	33.00
		Middle	24.26	-0.10	24.16	33.00
		High	24.15	-0.10	24.05	33.00
	16QAM	Low	23.15	-0.10	23.05	33.00
		Middle	23.57	-0.10	23.47	33.00
		High	23.34	-0.10	23.24	33.00
20MHz	QPSK	Low	24.38	-0.10	24.28	33.00
		Middle	24.35	-0.10	24.25	33.00
		High	24.40	-0.10	24.30	33.00
	16QAM	Low	23.82	-0.10	23.72	33.00
		Middle	23.22	-0.10	23.12	33.00
		High	24.06	-0.10	23.96	33.00

LTE Band 12

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	24.26	24.46	24.05
		RB1#3	24.46	24.50	24.46
		RB1#5	24.38	24.34	24.15
		RB3#0	24.18	24.37	24.19
		RB3#3	24.12	24.38	24.14
		RB6#0	23.21	23.33	23.20
	16QAM	RB1#0	23.33	23.89	23.31
		RB1#3	23.61	23.70	23.77
		RB1#5	23.44	23.63	23.47
		RB3#0	23.40	23.32	23.23
		RB3#3	23.43	23.40	23.27
		RB6#0	22.33	22.31	22.23
3MHz	QPSK	RB1#0	24.07	24.29	24.13
		RB1#8	24.14	24.55	24.45
		RB1#14	24.21	24.24	24.09
		RB6#0	23.23	23.23	23.30
		RB6#9	23.32	23.23	23.27
		RB15#0	23.16	23.27	23.30
	16QAM	RB1#0	23.42	23.45	23.31
		RB1#8	23.46	23.72	23.09
		RB1#14	23.08	23.61	22.98
		RB6#0	22.01	22.55	22.07
		RB6#9	22.25	22.61	21.99
		RB15#0	22.17	22.45	22.33
5MHz	QPSK	RB1#0	23.98	24.05	24.06
		RB1#13	24.18	24.39	24.30
		RB1#24	23.86	23.99	24.09
		RB15#0	23.12	23.28	23.24
		RB15#10	23.24	23.20	23.25
		RB25#0	23.24	23.25	23.23
	16QAM	RB1#0	22.61	23.47	23.00
		RB1#13	23.13	23.70	22.95
		RB1#24	22.36	23.51	22.68
		RB15#0	22.38	22.04	22.20
		RB15#10	22.19	22.09	22.18
		RB25#0	22.20	21.99	22.10
10MHz	QPSK	RB1#0	23.95	23.90	23.90
		RB1#25	24.24	24.34	24.42
		RB1#49	24.12	24.04	23.88
		RB25#0	23.10	23.24	23.18
		RB25#25	23.23	23.24	23.30
		RB50#0	23.16	23.25	23.25
	16QAM	RB1#0	23.39	23.55	22.76
		RB1#25	24.03	24.36	23.83
		RB1#49	22.96	23.65	22.75
		RB25#0	22.13	22.31	22.28
		RB25#25	22.18	22.33	22.28
		RB50#0	22.19	22.06	22.20

**PAR, 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	5.13	4.78	4.78	13
	50 RB		5.19	5.42	5.33	13
16QAM	1 RB	10 MHz	6.23	5.74	5.97	13
	50 RB		6.29	6.43	6.46	13

**ERP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
1.4MHz	QPSK	Low	24.46	-1.85	22.61	34.77
		Middle	24.50	-1.85	22.65	34.77
		High	24.46	-1.85	22.61	34.77
	16QAM	Low	23.61	-1.85	21.76	34.77
		Middle	23.89	-1.85	22.04	34.77
		High	23.77	-1.85	21.92	34.77
3MHz	QPSK	Low	24.21	-1.85	22.36	34.77
		Middle	24.55	-1.85	22.70	34.77
		High	24.45	-1.85	22.60	34.77
	16QAM	Low	23.46	-1.85	21.61	34.77
		Middle	23.72	-1.85	21.87	34.77
		High	23.31	-1.85	21.46	34.77
5MHz	QPSK	Low	24.18	-1.85	22.33	34.77
		Middle	24.39	-1.85	22.54	34.77
		High	24.30	-1.85	22.45	34.77
	16QAM	Low	23.13	-1.85	21.28	34.77
		Middle	23.70	-1.85	21.85	34.77
		High	23.00	-1.85	21.15	34.77
10MHz	QPSK	Low	24.24	-1.85	22.39	34.77
		Middle	24.39	-1.85	22.54	34.77
		High	24.30	-1.85	22.45	34.77
	16QAM	Low	23.13	-1.85	21.28	34.77
		Middle	23.70	-1.85	21.85	34.77
		High	23.00	-1.85	21.15	34.77

LTE Band 13

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	RB1#0	24.72	24.69	24.46
		RB1#13	24.54	24.48	24.63
		RB1#24	24.47	24.36	24.26
		RB15#0	23.63	23.57	23.56
		RB15#10	23.66	23.56	23.62
		RB25#0	23.58	23.56	23.57
	16QAM	RB1#0	23.34	23.84	23.40
		RB1#13	23.25	24.20	23.42
		RB1#24	22.80	23.76	22.99
		RB15#0	22.45	22.38	22.33
		RB15#10	22.45	22.51	22.45
		RB25#0	22.58	22.41	22.48
10 MHz	QPSK	RB1#0	/	24.58	/
		RB1#25	/	24.55	/
		RB1#49	/	24.26	/
		RB25#0	/	23.64	/
		RB25#25	/	23.58	/
		RB50#0	/	23.55	/
	16QAM	RB1#0	/	23.99	/
		RB1#25	/	24.19	/
		RB1#49	/	23.78	/
		RB25#0	/	22.53	/
		RB25#25	/	22.61	/
		RB50#0	/	22.38	/

PAR:

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	10 MHz	/	4.14	/	13
	50RB		/	5.25	/	13
16QAM	1 RB	10 MHz	/	4.96	/	13
	50 RB		/	6.38	/	13

ERP:

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
5MHz	QPSK	Low	24.72	-1.57	23.15	34.77
		Middle	24.69	-1.57	23.12	34.77
		High	24.63	-1.57	23.06	34.77
	16QAM	Low	23.34	-1.57	21.77	34.77
		Middle	24.20	-1.57	22.63	34.77
		High	23.42	-1.57	21.85	34.77
10MHz	QPSK	Middle	24.58	-1.57	23.01	34.77
	16QAM	Middle	24.19	-1.57	22.62	34.77

**LTE Band 17**

**Conducted Output Power:**

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	23.38	23.40	23.43
		RB1#13	23.57	23.61	23.60
		RB1#24	23.42	23.45	23.38
		RB15#0	22.52	22.53	22.54
		RB15#10	22.58	22.55	22.54
		RB25#0	22.48	22.53	22.54
	16QAM	RB1#0	22.05	22.85	22.28
		RB1#13	22.37	23.08	22.36
		RB1#24	21.77	22.81	22.05
		RB15#0	21.63	21.46	21.46
		RB15#10	21.32	21.47	21.53
		RB25#0	21.62	21.44	21.43
10MHz	QPSK	RB1#0	23.52	23.53	23.27
		RB1#25	23.66	23.55	23.68
		RB1#49	23.51	23.34	23.27
		RB25#0	22.58	22.54	22.58
		RB25#25	22.61	22.56	22.57
		RB50#0	22.61	22.57	22.54
	16QAM	RB1#0	22.89	23.02	22.49
		RB1#25	23.19	23.01	22.56
		RB1#49	22.80	22.94	21.96
		RB25#0	21.43	21.73	21.74
		RB25#25	21.65	21.74	21.75
		RB50#0	21.54	21.54	21.53

**PAR\_LTE Band 17**

Modulation	RB	Channel Bandwidth	Low channel (dB)	Middle channel (dB)	High channel (dB)	Limit (dB)
QPSK	1RB	10MHz	4.87	4.93	5.04	13
	50RB		5.57	5.51	5.45	
16QAM	1RB	10MHz	5.88	5.91	6.03	
	50RB		6.58	6.61	6.45	

ERP:

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
5MHz	QPSK	Low	23.57	-1.85	21.72	34.77
		Middle	23.61	-1.85	21.76	34.77
		High	23.60	-1.85	21.75	34.77
	16QAM	Low	22.37	-1.85	20.52	34.77
		Middle	23.08	-1.85	21.23	34.77
		High	22.36	-1.85	20.51	34.77
10MHz	QPSK	Low	23.66	-1.85	21.81	34.77
		Middle	23.61	-1.85	21.76	34.77
		High	23.60	-1.85	21.75	34.77
	16QAM	Low	23.19	-1.85	21.34	34.77
		Middle	23.02	-1.85	21.17	34.77
		High	22.56	-1.85	20.71	34.77

LTE Band 26

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4MHz	QPSK	RB1#0	23.69	23.61	23.44
		RB1#3	23.96	23.65	23.48
		RB1#5	23.88	23.62	23.33
		RB3#0	23.76	23.77	23.54
		RB3#3	23.75	23.55	23.52
		RB6#0	22.66	22.64	22.51
	16QAM	RB1#0	22.94	22.96	22.69
		RB1#3	22.93	23.08	22.44
		RB1#5	22.78	23.00	22.33
		RB3#0	22.81	22.96	22.82
		RB3#3	22.87	22.97	22.76
		RB6#0	21.55	22.02	21.66
3MHz	QPSK	RB1#0	23.79	23.69	23.55
		RB1#8	23.63	23.62	23.29
		RB1#14	23.67	23.68	23.93
		RB6#0	22.66	22.64	22.62
		RB6#9	22.64	22.58	22.48
		RB15#0	22.68	22.61	22.57
	16QAM	RB1#0	22.85	23.19	22.38
		RB1#8	22.87	23.18	22.03
		RB1#14	22.88	23.21	22.12
		RB6#0	21.64	21.59	21.76
		RB6#9	21.62	21.52	21.57
		RB15#0	21.77	21.57	21.84
5MHz	QPSK	RB1#0	23.51	23.70	23.66
		RB1#13	23.52	23.50	23.60
		RB1#24	23.66	23.46	23.71
		RB15#0	22.66	22.63	22.65
		RB15#10	22.59	22.66	22.57
		RB25#0	22.62	22.68	22.53
	16QAM	RB1#0	22.21	22.89	22.41
		RB1#13	22.25	23.05	22.21
		RB1#24	21.99	22.82	22.30
		RB15#0	21.51	21.60	21.72
		RB15#10	21.61	21.54	21.51
		RB25#0	21.72	21.77	21.54
10MHz	QPSK	RB1#0	23.64	23.65	23.49
		RB1#25	23.62	23.61	23.77
		RB1#49	23.62	23.61	23.68
		RB25#0	22.61	22.62	22.78
		RB25#25	22.64	22.68	22.59
		RB50#0	22.58	22.68	22.67
	16QAM	RB1#0	22.94	23.08	22.68
		RB1#25	23.15	23.28	22.28
		RB1#49	22.93	23.37	22.62
		RB25#0	21.68	21.94	21.85
		RB25#25	21.88	21.63	21.68
		RB50#0	21.60	21.80	21.68

15MHz	QPSK	RB1#0	23.61	23.55	23.48
		RB1#38	23.79	23.61	23.75
		RB1#74	23.94	23.77	23.55
		RB36#0	22.67	22.64	22.65
		RB36#39	22.71	22.65	22.67
		RB75#0	22.70	22.65	22.63
	16QAM	RB1#0	22.80	23.35	22.67
		RB1#38	22.90	23.09	22.71
		RB1#74	23.11	23.75	21.97
		RB36#0	21.58	21.74	21.62
		RB36#39	21.70	21.57	21.65
		RB75#0	21.73	21.70	21.66

**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	15 MHz	4.00	4.14	4.23	13
	75 RB		5.48	5.25	5.22	13
16QAM	1 RB	15 MHz	5.30	5.16	5.25	13
	75 RB		6.41	6.14	6.23	13



ERP:

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBd)	Result (dBm)	Limit (dBm)
1.4MHz	QPSK	Low	23.96	-2.48	21.48	38.45
		Middle	23.77	-2.48	21.29	38.45
		High	23.54	-2.48	21.06	38.45
	16QAM	Low	22.94	-2.48	20.46	38.45
		Middle	23.08	-2.48	20.60	38.45
		High	22.82	-2.48	20.34	38.45
3MHz	QPSK	Low	23.79	-2.48	21.31	38.45
		Middle	23.69	-2.48	21.21	38.45
		High	23.93	-2.48	21.45	38.45
	16QAM	Low	22.88	-2.48	20.40	38.45
		Middle	23.21	-2.48	20.73	38.45
		High	22.38	-2.48	19.90	38.45
5MHz	QPSK	Low	23.66	-2.48	21.18	38.45
		Middle	23.70	-2.48	21.22	38.45
		High	23.71	-2.48	21.23	38.45
	16QAM	Low	22.25	-2.48	19.77	38.45
		Middle	23.05	-2.48	20.57	38.45
		High	22.41	-2.48	19.93	38.45
10MHz	QPSK	Low	23.64	-2.48	21.16	38.45
		Middle	23.70	-2.48	21.22	38.45
		High	23.71	-2.48	21.23	38.45
	16QAM	Low	23.15	-2.48	20.67	38.45
		Middle	23.37	-2.48	20.89	38.45
		High	22.68	-2.48	20.20	38.45
15MHz	QPSK	Low	23.94	-2.48	21.46	38.45
		Middle	23.77	-2.48	21.29	38.45
		High	23.75	-2.48	21.27	38.45
	16QAM	Low	23.11	-2.48	20.63	38.45
		Middle	23.75	-2.48	21.27	38.45
		High	22.71	-2.48	20.23	38.45

LTE Band 38

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5MHz	QPSK	RB1#0	22.54	22.72	22.94
		RB1#13	22.53	22.75	23.02
		RB1#24	22.44	22.49	23.00
		RB15#0	21.68	21.90	21.93
		RB15#10	21.65	21.86	22.28
		RB25#0	21.65	21.86	22.27
	16QAM	RB1#0	21.30	21.96	22.10
		RB1#13	21.07	22.23	22.25
		RB1#24	20.97	21.92	22.28
		RB15#0	20.39	20.69	20.91
		RB15#10	20.45	20.63	20.84
		RB25#0	20.65	20.70	20.90
10MHz	QPSK	RB1#0	22.79	22.89	23.24
		RB1#25	22.81	23.13	23.09
		RB1#49	22.76	23.05	23.12
		RB25#0	21.75	22.00	22.04
		RB25#25	21.82	21.91	22.12
		RB50#0	21.82	21.97	22.13
	16QAM	RB1#0	21.94	21.80	22.42
		RB1#25	22.58	22.30	22.71
		RB1#49	21.55	21.99	22.41
		RB25#0	20.55	20.83	21.21
		RB25#25	20.51	20.93	21.05
		RB50#0	20.79	20.91	21.01
15MHz	QPSK	RB1#0	22.85	22.95	22.94
		RB1#38	22.81	22.93	23.00
		RB1#74	22.95	23.11	22.92
		RB36#0	21.80	21.96	22.11
		RB36#39	21.84	22.27	22.11
		RB75#0	21.92	22.01	22.03
	16QAM	RB1#0	21.64	22.38	22.08
		RB1#38	21.60	22.37	22.02
		RB1#74	21.75	22.47	22.10
		RB36#0	20.66	20.92	21.09
		RB36#39	20.56	20.98	20.94
		RB75#0	20.77	20.96	21.07
20MHz	QPSK	RB1#0	22.60	22.93	23.11
		RB1#50	22.95	23.33	23.40
		RB1#99	22.48	22.99	23.00
		RB50#0	21.84	22.01	22.07
		RB50#50	21.83	21.98	22.10
		RB100#0	21.76	21.99	22.11
	16QAM	RB1#0	22.05	21.58	22.36
		RB1#50	22.21	21.77	22.98
		RB1#99	21.87	21.69	22.72
		RB50#0	20.79	20.98	21.07
		RB50#50	20.76	20.96	21.07
		RB100#0	20.74	20.93	20.99

**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1RB	20MHz	7.36	5.94	7.91	13
	100RB		5.88	4.99	5.77	13
16QAM	1RB	20MHz	5.88	4.90	7.25	13
	100RB		8.55	8.17	7.54	13

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
5MHz	QPSK	Low	22.54	-0.10	22.44	33.00
		Middle	22.75	-0.10	22.65	33.00
		High	23.02	-0.10	22.92	33.00
	16QAM	Low	21.30	-0.10	21.20	33.00
		Middle	22.23	-0.10	22.13	33.00
		High	22.28	-0.10	22.18	33.00
10MHz	QPSK	Low	22.81	-0.10	22.71	33.00
		Middle	22.75	-0.10	22.65	33.00
		High	23.02	-0.10	22.92	33.00
	16QAM	Low	21.30	-0.10	21.20	33.00
		Middle	22.23	-0.10	22.13	33.00
		High	22.28	-0.10	22.18	33.00
15MHz	QPSK	Low	22.95	-0.10	22.85	33.00
		Middle	23.11	-0.10	23.01	33.00
		High	23.00	-0.10	22.90	33.00
	16QAM	Low	21.75	-0.10	21.65	33.00
		Middle	22.47	-0.10	22.37	33.00
		High	22.10	-0.10	22.00	33.00
20MHz	QPSK	Low	22.95	-0.10	22.85	33.00
		Middle	23.33	-0.10	23.23	33.00
		High	23.40	-0.10	23.30	33.00
	16QAM	Low	22.21	-0.10	22.11	33.00
		Middle	21.77	-0.10	21.67	33.00
		High	22.98	-0.10	22.88	33.00

**LTE Band 40 Lower**

**Conducted Output Power:**

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	RB1#0	22.32	22.34	22.24
		RB1#13	22.45	22.29	22.42
		RB1#24	22.32	22.15	22.4
		RB15#0	21.56	21.65	21.45
		RB15#10	21.59	21.6	21.5
		RB25#0	21.57	21.55	21.49
	16QAM	RB1#0	20.83	21.68	21.38
		RB1#13	20.87	21.99	21.37
		RB1#24	21.03	21.65	21.57
		RB15#0	20.31	20.56	20.3
		RB15#10	20.41	20.54	20.39
		RB25#0	20.48	20.52	20.48
10 MHz	QPSK	RB1#0	/	22.44	/
		RB1#25	/	22.48	/
		RB1#49	/	22.41	/
		RB25#0	/	21.5	/
		RB25#25	/	21.55	/
		RB50#0	/	21.51	/
	16QAM	RB1#0	/	21.08	/
		RB1#25	/	21.2	/
		RB1#49	/	20.94	/
		RB25#0	/	20.46	/
		RB25#25	/	20.44	/
		RB50#0	/	20.39	/

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 PSD as below:

Channel Bandwidth	Modulation	Resource Block & RB offset	Middle Channel (dBm/5MHz)
10MHz	QPSK	RB1#0	22.29
		RB1#25	22.27
		RB1#49	22.22
		RB25#0	21.29
		RB25#25	21.34
		RB50#0	19.35
	16QAM	RB1#0	20.93
		RB1#25	21.00
		RB1#49	20.74
		RB25#0	20.28
		RB25#25	20.28
		RB50#0	18.15

**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1RB	10MHz	/	7.33	/	13
	50RB		/	6.23	/	13
16QAM	1RB	10MHz	/	8.52	/	13
	50RB		/	4.90	/	13

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm/5MHz)	Antenna Gain (dBi)	Cable Loss (dB)	Result (dBm/5MHz)	Limit (dBm/5MHz)
5MHz	QPSK	Low	22.45	1.14	0.00	23.59	24.00
		Middle	22.34	1.14	0.00	23.48	24.00
		High	22.42	1.14	0.00	23.56	24.00
	16QAM	Low	21.03	1.14	0.00	22.17	24.00
		Middle	21.99	1.14	0.00	23.13	24.00
		High	21.57	1.14	0.00	22.71	24.00
10MHz	QPSK	Middle	22.48	1.14	0.00	23.62	24.00
	16QAM	Middle	21.20	1.14	0.00	22.34	24.00

**Duty Cycle**

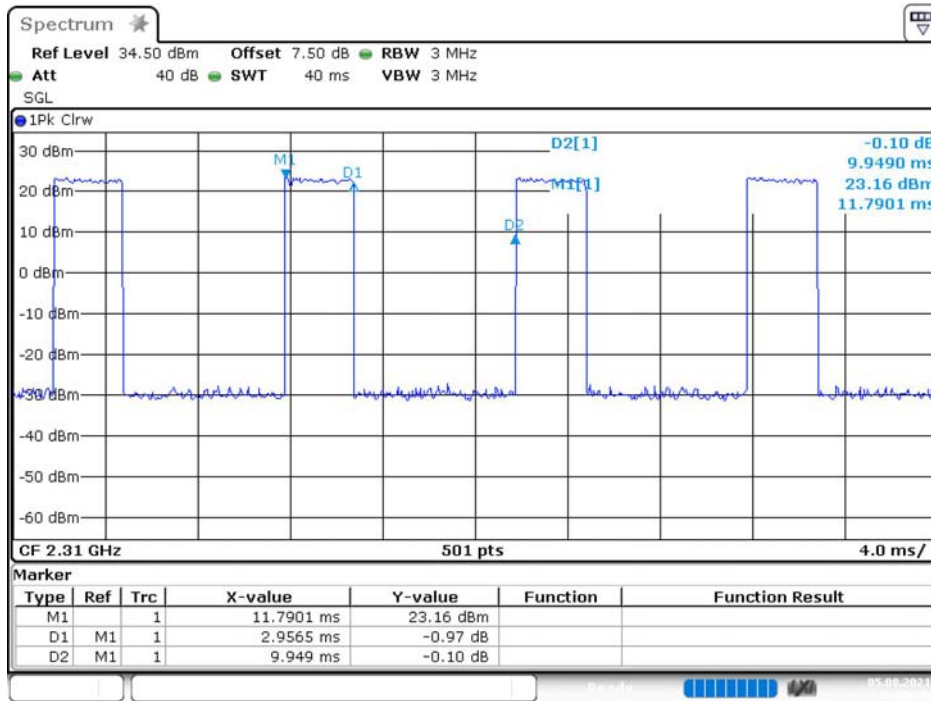
Test Modulation	Test Bandwidth	Ton (ms)	Total (ms)	Duty Cycle (%)	Limit (%)
QPSK	5M	2.9565	9.949	29.72	38
	10M	3.0145	10.51	28.68	
16-QAM	5M	2.9925	10.087	29.67	
	10M	2.9565	10.29	28.73	

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

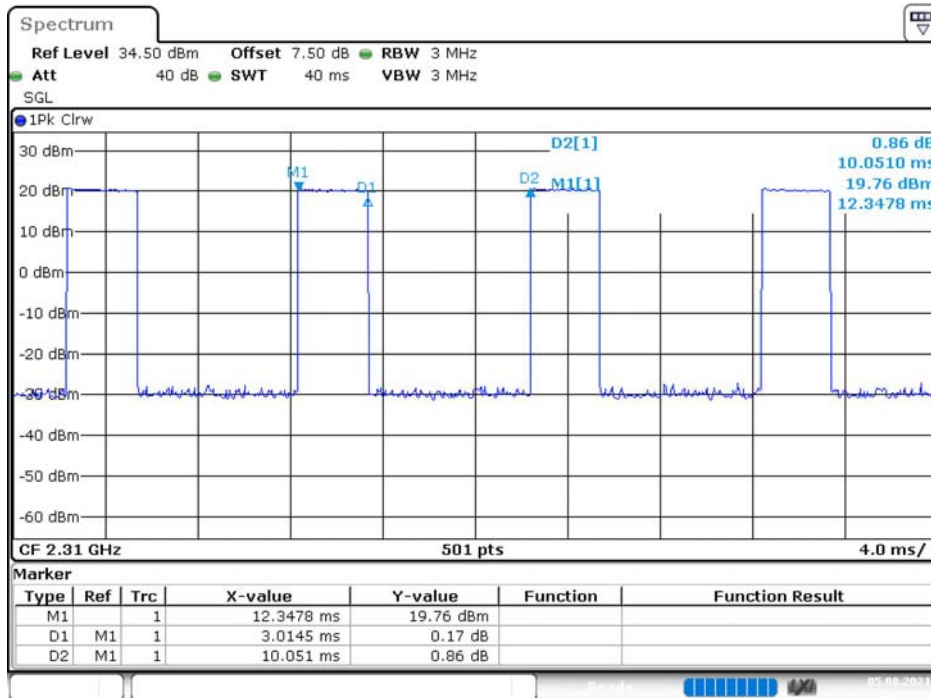
Duty Cycle:

QPSK, 5MHz



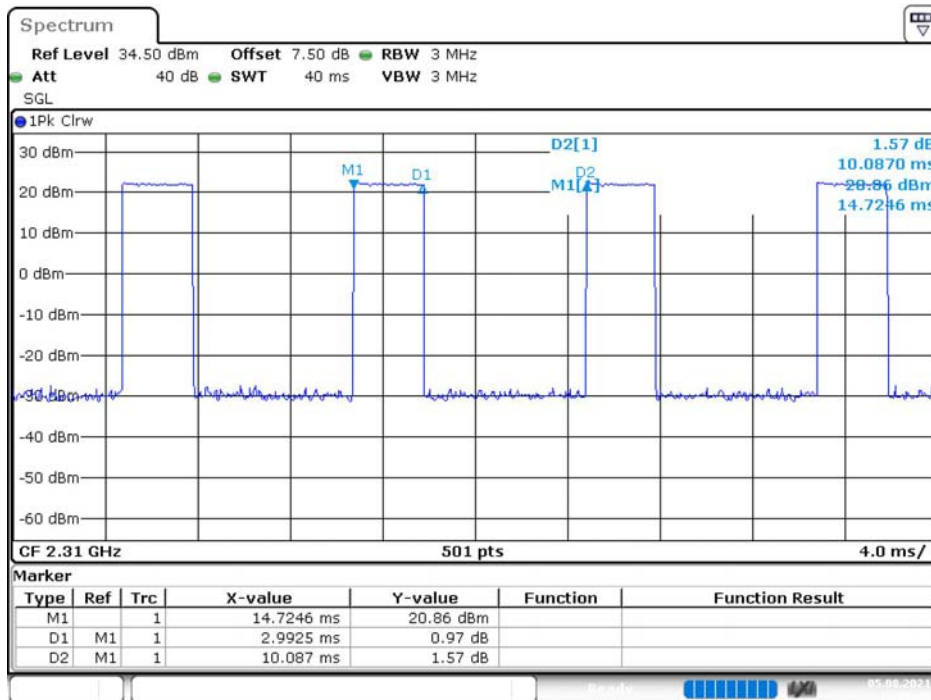
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QPSK, 10MHz



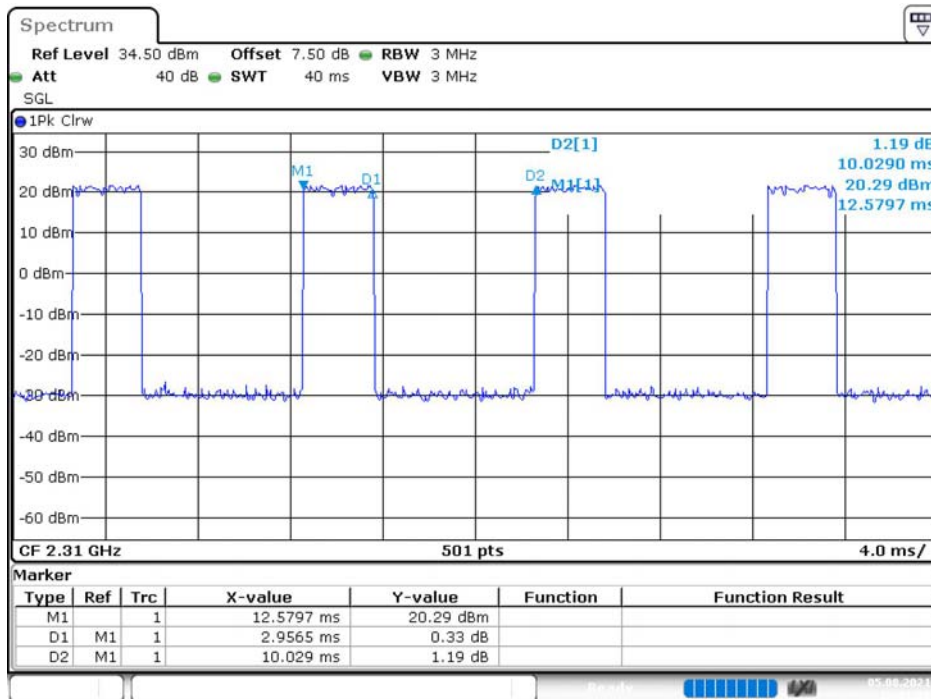
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### 16-QAM, 5MHz



Date: 5.AUG.2021 16:28:25

### 16-QAM, 10MHz



Date: 5.AUG.2021 16:31:28

**LTE Band 40 Upper**

**Conducted Output Power:**

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	RB1#0	22.41	22.12	22.08
		RB1#13	22.51	22.35	22.34
		RB1#24	22.48	22.41	22.26
		RB15#0	21.57	21.51	21.47
		RB15#10	21.63	21.52	21.72
		RB25#0	21.55	21.54	21.44
	16QAM	RB1#0	21.81	20.84	21.53
		RB1#13	21.52	20.88	21.71
		RB1#24	21.6	20.86	21.6
		RB15#0	20.42	20.22	20.39
		RB15#10	20.45	20.4	20.46
		RB25#0	20.52	20.37	20.39
10 MHz	QPSK	RB1#0	/	22.45	/
		RB1#25	/	22.41	/
		RB1#49	/	22.45	/
		RB25#0	/	21.53	/
		RB25#25	/	21.43	/
		RB50#0	/	21.49	/
	16QAM	RB1#0	/	21.6	/
		RB1#25	/	21.76	/
		RB1#49	/	21.64	/
		RB25#0	/	20.34	/
		RB25#25	/	20.28	/
		RB50#0	/	20.38	/

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 PSD as below:

Channel Bandwidth	Modulation	Resource Block & RB offset	Middle Channel (dBm/5MHz)
10MHz	QPSK	RB1#0	22.24
		RB1#25	22.25
		RB1#49	22.32
		RB25#0	21.36
		RB25#25	21.22
		RB50#0	19.29
	16QAM	RB1#0	21.33
		RB1#25	21.55
		RB1#49	21.37
		RB25#0	20.21
		RB25#25	20.02
		RB50#0	18.09



**PAR:**

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1RB	10MHz	/	4.90	/	13
	50RB		/	5.39	/	13
16QAM	1RB	10MHz	/	8.23	/	13
	50RB		/	7.51	/	13

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm/5MHz)	Antenna Gain (dBd)	Result (dBm/5MHz)	Limit (dBm/5MHz)
5MHz	QPSK	Low	22.51	1.14	23.65	24.00
		Middle	22.41	1.14	23.55	24.00
		High	22.34	1.14	23.48	24.00
	16QAM	Low	21.81	1.14	22.95	24.00
		Middle	20.88	1.14	22.02	24.00
		High	21.71	1.14	22.85	24.00
10MHz	QPSK	Middle	22.45	1.14	23.59	24.00
	16QAM	Middle	21.76	1.14	22.90	24.00

**Duty Cycle**

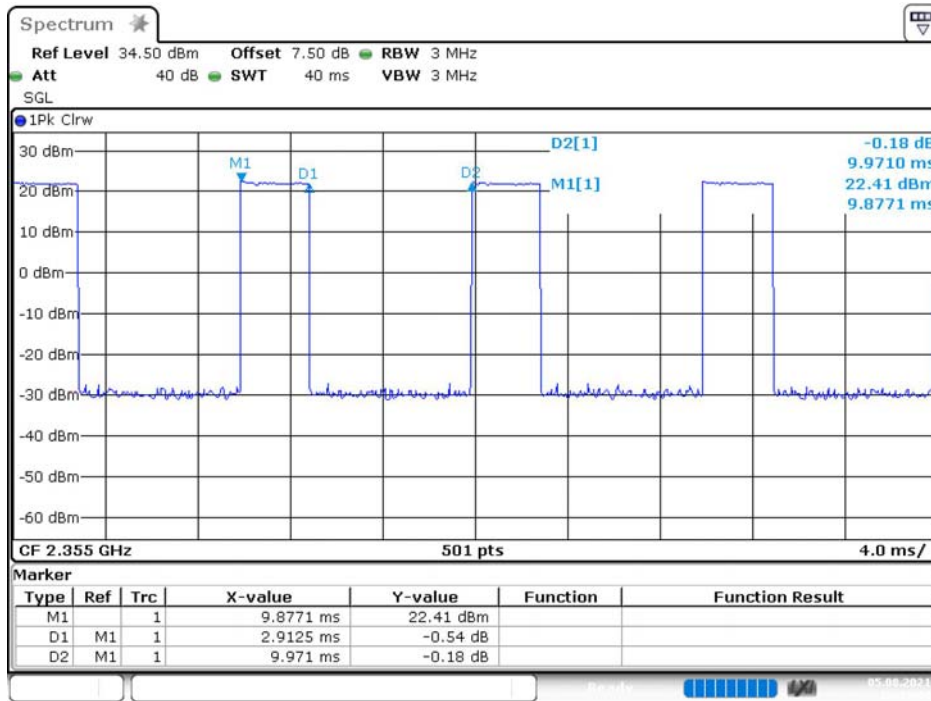
Test Modulation	Test Bandwidth	Ton (ms)	Total (ms)	Duty Cycle (%)	Limit (%)
QPSK	5M	2.9125	9.971	29.21	38
	10M	2.8765	9.971	28.85	
16-QAM	5M	2.8986	10.051	28.84	
	10M	3.0725	10.109	30.39	

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

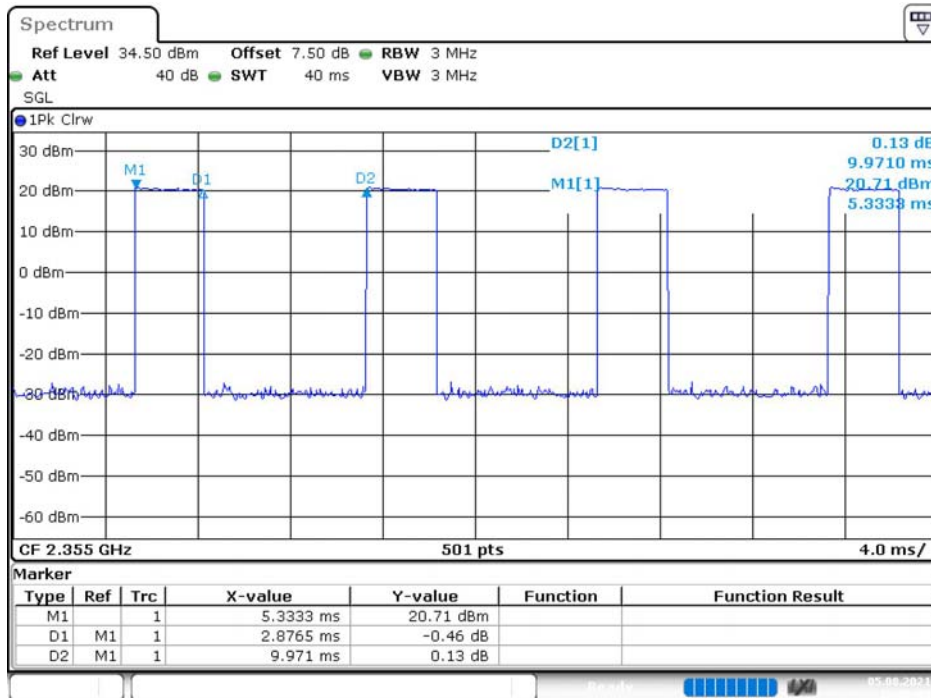
Duty Cycle:

QPSK, 5MHz



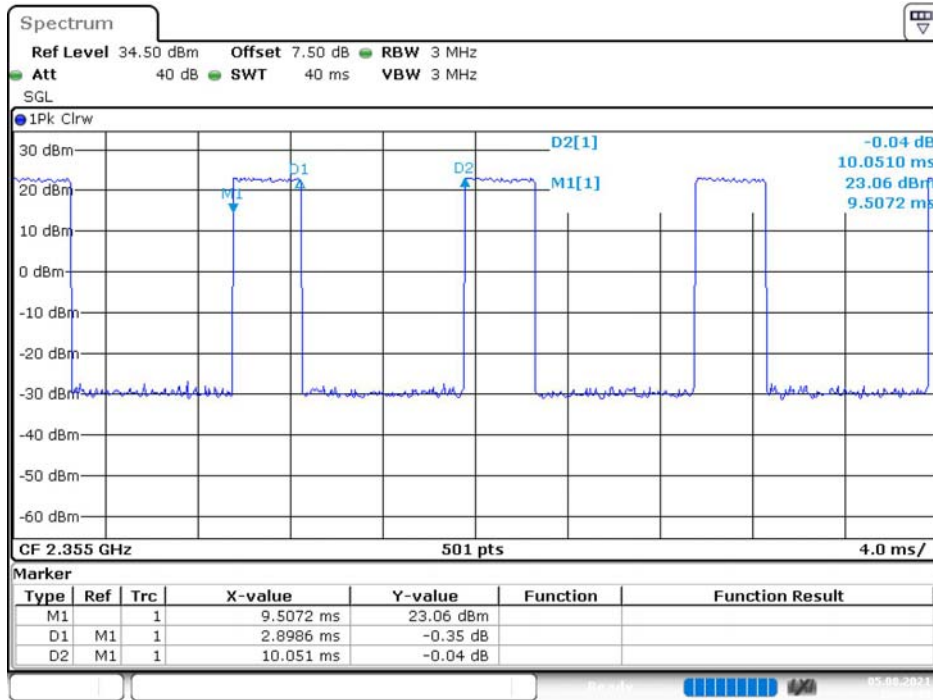
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QPSK, 10MHz



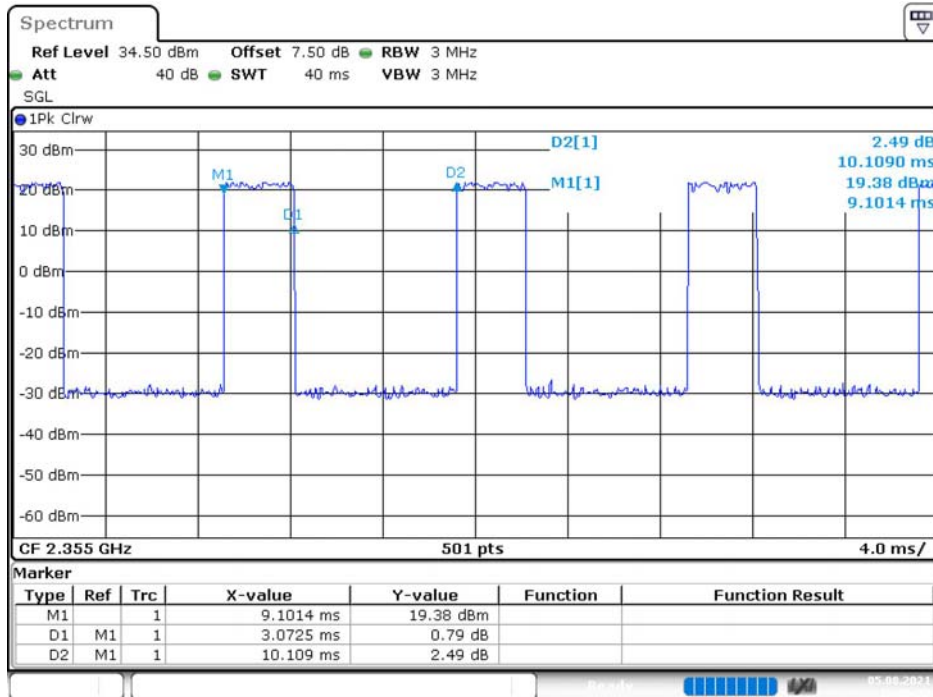
Date: 5.AUG.2021 16:36:03

### 16-QAM, 5MHz



Date: 5.AUG.2021 16:34:43

### 16-QAM, 10MHz



Date: 5.AUG.2021 16:36:57

LTE Band 41

Conducted Output Power:

Channel Bandwidth	Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	RB1#0	22.42	22.80	23.55
		RB1#13	22.51	22.93	23.56
		RB1#24	22.53	22.88	23.58
		RB15#0	21.69	21.98	22.53
		RB15#10	21.66	22.05	22.70
		RB25#0	21.70	21.95	22.66
	16QAM	RB1#0	21.23	22.09	22.91
		RB1#13	21.29	22.40	22.93
		RB1#24	21.07	22.33	22.96
		RB15#0	20.57	20.96	21.58
		RB15#10	20.54	20.94	21.54
		RB25#0	20.66	20.88	21.63
10 MHz	QPSK	RB1#0	22.70	23.01	23.62
		RB1#25	22.72	23.25	23.68
		RB1#49	22.73	23.17	23.71
		RB25#0	21.81	22.05	22.82
		RB25#25	21.78	22.09	22.65
		RB50#0	21.82	22.27	22.79
	16QAM	RB1#0	21.86	22.46	23.07
		RB1#25	22.28	22.78	23.42
		RB1#49	21.85	22.50	23.01
		RB25#0	20.70	21.04	21.80
		RB25#25	20.71	21.15	21.78
		RB50#0	20.83	21.03	21.80
15 MHz	QPSK	RB1#0	22.62	22.93	23.61
		RB1#38	22.65	23.00	23.53
		RB1#74	22.62	23.06	23.47
		RB36#0	21.62	22.25	22.82
		RB36#39	21.91	22.45	22.78
		RB75#0	21.68	22.37	22.70
	16QAM	RB1#0	21.40	22.05	22.82
		RB1#38	21.36	22.09	22.70
		RB1#74	21.34	22.13	23.05
		RB36#0	20.56	21.09	21.80
		RB36#39	20.54	21.45	21.84
		RB75#0	20.58	21.49	21.83
20MHz	QPSK	RB1#0	22.35	23.18	23.82
		RB1#50	22.74	23.21	23.78
		RB1#99	22.41	23.05	23.79
		RB50#0	21.69	22.01	22.77
		RB50#50	21.69	22.11	22.69
		RB100#0	21.63	22.08	22.72
	16QAM	RB1#0	21.81	21.55	23.07
		RB1#50	21.90	21.88	23.58
		RB1#99	21.81	21.66	23.12
		RB50#0	20.63	21.06	21.86
		RB50#50	20.68	21.15	21.87
		RB100#0	20.66	21.01	21.82

**PAR:**

Modulation	RB	Channel Bandwidth	Low channel (dB)	Middle channel (dB)	High channel (dB)	Limit (dB)
QPSK	1RB	20MHz	8.58	3.59	5.28	13
	100RB		8.41	6.75	8.14	
16QAM	1RB	20MHz	8.52	7.22	5.10	
	100RB		8.61	5.88	8.26	

**EIRP:**

Channel Bandwidth	Modulation	Channel	Conducted Power (dBm)	Antenna Gain (dBi)	Result (dBm)	Limit (dBm)
5MHz	QPSK	Low	22.53	-0.10	22.43	33.00
		Middle	22.93	-0.10	22.83	33.00
		High	23.58	-0.10	23.48	33.00
	16QAM	Low	21.29	-0.10	21.19	33.00
		Middle	22.40	-0.10	22.30	33.00
		High	22.96	-0.10	22.86	33.00
10MHz	QPSK	Low	22.73	-0.10	22.63	33.00
		Middle	22.93	-0.10	22.83	33.00
		High	23.58	-0.10	23.48	33.00
	16QAM	Low	21.29	-0.10	21.19	33.00
		Middle	22.40	-0.10	22.30	33.00
		High	22.96	-0.10	22.86	33.00
15MHz	QPSK	Low	22.65	-0.10	22.55	33.00
		Middle	23.06	-0.10	22.96	33.00
		High	23.61	-0.10	23.51	33.00
	16QAM	Low	21.40	-0.10	21.30	33.00
		Middle	22.13	-0.10	22.03	33.00
		High	23.05	-0.10	22.95	33.00
20MHz	QPSK	Low	22.74	-0.10	22.64	33.00
		Middle	23.21	-0.10	23.11	33.00
		High	23.82	-0.10	23.72	33.00
	16QAM	Low	21.90	-0.10	21.80	33.00
		Middle	21.88	-0.10	21.78	33.00
		High	23.58	-0.10	23.48	33.00

**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) Result = Conducted Power + Antenna Gain
- 3) Antenna gain(dBd)= Antenna gain(dBi)-2.15

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

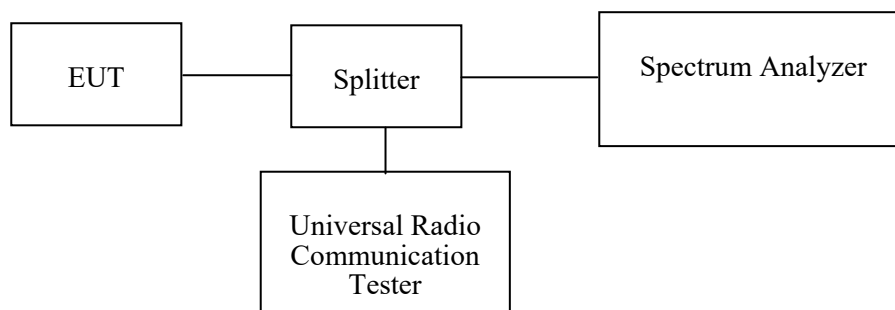
### Applicable Standard

FCC §2.1049, §22.917, §22.905, §24.238, §27.53&,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
R&S	Spectrum Analyzer	FSP 38	100478	2021-07-07	2022-07-07
R&S	Spectrum Analyzer	FSV40	101474	2021-01-09	2022-01-09
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41010012	Each time	N/A
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A
E-Microwave	Two-way Splitter	ODP-1-6-2S	OE0120142	Each Time	N/A
E-Microwave	Blocking Control	EMDCB-00036	0E01201047	Each time	N/A
Unknown	Attenuator	UNAT-3+	15529	Each time	N/A

\* **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

<b>Temperature:</b>	26.7~29.8 °C
<b>Relative Humidity:</b>	46~62 %
<b>ATM Pressure:</b>	99.3~100.7 kPa
<b>Tester:</b>	Lay Lei
<b>Test Date:</b>	2021-08-03~2021-08-20

Test Mode: Transmitting

Test Result: Compliance. Please refer to the following table and plots.

**GSM:**

Band	Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
		Low Channel	Middle Channel	High Channel	Low Channel	Middle Channel	High Channel
Cellular	GPRS	0.243	0.243	0.243	0.321	0.314	0.326
	EDGE	0.250	0.245	0.247	0.316	0.321	0.315
PCS	GPRS	0.245	0.242	0.245	0.314	0.318	0.318
	EDGE	0.246	0.245	0.245	0.313	0.311	0.317

**WCDMA:**

Band	Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
		Low Channel	Middle Channel	High Channel	Low Channel	Middle Channel	High Channel
WCDMA Band 2	Rel 99	4.124	4.124	4.124	4.718	4.718	4.718
	HSDPA	4.139	4.139	4.139	4.747	4.718	4.732
	HSUPA	4.139	4.139	4.139	4.718	4.718	4.718
WCDMA Band 4	Rel 99	4.124	4.139	4.124	4.747	4.747	4.761
	HSDPA	4.139	4.139	4.139	4.747	4.761	4.718
	HSUPA	4.124	4.139	4.139	4.732	4.747	4.747
WCDMA Band 5	Rel 99	4.110	4.124	4.124	4.732	4.718	4.732
	HSDPA	4.124	4.139	4.139	4.732	4.732	4.732
	HSUPA	4.124	4.139	4.139	4.732	4.747	4.732

**LTE Bands:**

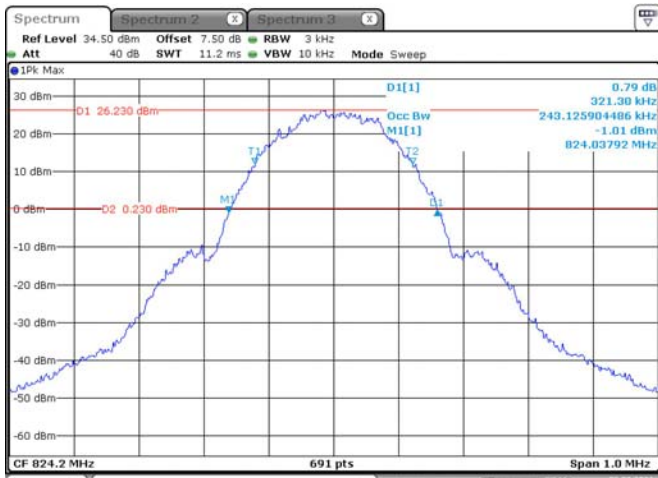
Band	Bandwidth (MHz)	Modulation mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
			Low Channel	Middle Channel	High Channel	Low Channel	Middle Channel	High Channel
LTE Band 2	1.4 MHz	QPSK	1.108	1.302	1.108	1.314	1.102	1.326
		16QAM	1.102	1.314	1.102	1.314	1.108	1.338
	3 MHz	QPSK	2.695	2.940	2.695	2.952	2.683	2.964
		16QAM	2.695	2.952	2.683	2.976	2.683	2.952
	5 MHz	QPSK	4.531	5.040	4.511	5.020	4.491	5.000
		16QAM	4.511	5.020	4.531	5.060	4.511	5.040
	10 MHz	QPSK	8.942	9.760	8.942	9.720	8.942	9.720
		16QAM	8.942	9.640	8.942	9.720	8.942	9.680
	15 MHz	QPSK	13.473	14.880	13.413	14.820	13.413	14.880
		16QAM	13.473	14.760	13.473	14.760	13.413	14.820
	20 MHz	QPSK	17.964	19.280	17.884	19.280	17.884	19.520
		16QAM	17.964	19.440	17.884	19.440	17.884	19.440
LTE Band 4	1.4 MHz	QPSK	1.102	1.320	1.102	1.302	1.102	1.338
		16QAM	1.102	1.332	1.102	1.320	1.102	1.332
	3 MHz	QPSK	2.695	2.952	2.695	2.952	2.683	2.964
		16QAM	2.695	2.964	2.683	2.964	2.683	2.952
	5 MHz	QPSK	4.531	5.020	4.511	5.020	4.491	5.000
		16QAM	4.511	4.980	4.511	5.040	4.511	5.020
	10 MHz	QPSK	8.942	9.840	8.942	9.760	8.942	9.680
		16QAM	8.942	9.640	8.942	9.720	8.942	9.680
	15 MHz	QPSK	13.473	14.820	13.413	14.820	13.473	14.880
		16QAM	13.473	14.820	13.473	14.760	13.473	14.820
	20 MHz	17.964	17.964	19.280	17.884	19.360	17.884	19.680
		17.884	17.884	19.520	17.884	19.440	17.964	19.440



Band	Bandwidth (MHz)	Modulation mode	99% Occupied Bandwidth(MHz)			26 dB Occupied Bandwidth(MHz)		
			Low Channel	Middle Channel	High Channel	Low Channel	Middle Channel	High Channel
LTE Band 5	1.4 MHz	QPSK	1.102	1.108	1.108	1.308	1.326	1.296
		16QAM	1.108	1.096	1.102	1.314	1.302	1.320
	3 MHz	QPSK	2.683	2.695	2.695	2.964	2.940	2.952
		16QAM	2.683	2.695	2.695	2.940	2.976	2.964
	5 MHz	QPSK	4.491	4.531	4.511	5.000	5.040	5.020
		16QAM	4.511	4.511	4.511	5.040	5.000	5.040
10 MHz	QPSK	8.901	8.942	8.942	9.680	9.800	9.800	
	16QAM	8.942	8.942	8.942	9.760	9.800	9.720	
LTE Band 7	5 MHz	QPSK	4.531	4.511	4.511	5.020	5.020	5.060
		16QAM	4.511	4.531	4.511	5.020	5.040	5.040
	10 MHz	QPSK	8.942	8.942	8.942	9.840	9.720	9.680
		16QAM	8.942	8.942	8.981	9.680	9.760	9.800
	15 MHz	QPSK	13.533	13.413	13.473	14.940	14.940	14.940
		16QAM	13.473	13.473	13.473	14.880	14.760	14.940
20 MHz	QPSK	17.964	17.964	17.964	20.160	19.440	19.680	
	16QAM	18.044	17.964	17.884	20.240	19.600	19.440	
LTE Band 12	1.4 MHz	QPSK	1.102	1.102	1.108	1.302	1.314	1.296
		16QAM	1.102	1.096	1.102	1.338	1.296	1.308
	3 MHz	QPSK	2.695	2.695	2.683	2.952	2.940	2.940
		16QAM	2.695	2.683	2.683	2.964	2.964	2.940
	5 MHz	QPSK	4.511	4.511	4.491	5.040	5.020	4.960
		16QAM	4.491	4.511	4.511	4.980	5.040	5.020
10 MHz	QPSK	8.901	8.942	8.942	9.680	9.720	9.840	
	16QAM	8.901	8.942	8.942	9.640	9.640	9.720	
LTE Band 13	5 MHz	QPSK	4.531	4.511	4.491	5.040	4.980	4.960
		16QAM	4.511	4.531	4.511	5.000	5.040	5.020
	10 MHz	QPSK	/	8.942	/	/	9.880	/
16QAM		/	8.942	/	/	9.760	/	
LTE Band 17	5 MHz	QPSK	4.511	4.511	4.491	5.040	5.020	4.980
		16QAM	4.491	4.531	4.511	4.960	5.020	5.040
	10 MHz	QPSK	8.942	8.942	8.942	9.840	9.760	9.720
		16QAM	8.942	8.942	8.942	9.680	9.680	9.760
LTE Band 26	1.4 MHz	QPSK	1.102	1.108	1.108	1.308	1.320	1.296
		16QAM	1.108	1.096	1.102	1.320	1.302	1.314
	3 MHz	QPSK	2.695	2.695	2.683	2.940	2.952	2.964
		16QAM	2.683	2.683	2.683	2.964	2.952	2.940
	5 MHz	QPSK	4.531	4.511	4.511	5.040	5.000	4.980
		16QAM	4.511	4.531	4.511	4.980	5.020	5.040
10 MHz	QPSK	8.942	8.942	8.901	9.840	9.760	9.720	
	16QAM	8.942	8.942	8.942	9.680	9.760	9.760	
LTE Band 26	15 MHz	QPSK	13.473	13.353	13.413	14.940	14.820	14.760
		16QAM	13.473	13.473	13.473	14.820	14.760	14.820
	5 MHz	QPSK	4.511	4.491	4.491	5.020	4.940	4.960
		16QAM	4.511	4.511	4.491	5.040	5.020	4.980
	10 MHz	QPSK	8.942	8.942	8.942	9.960	9.800	9.720
		16QAM	8.942	8.942	8.942	9.600	9.560	9.840
LTE Band 38	15 MHz	QPSK	13.533	13.473	13.473	15.840	15.120	16.140
		16QAM	13.473	13.473	13.533	16.320	15.180	15.300
	20 MHz	QPSK	17.964	17.964	17.884	19.280	19.360	19.360
		16QAM	17.884	17.884	17.884	19.680	20.480	19.520

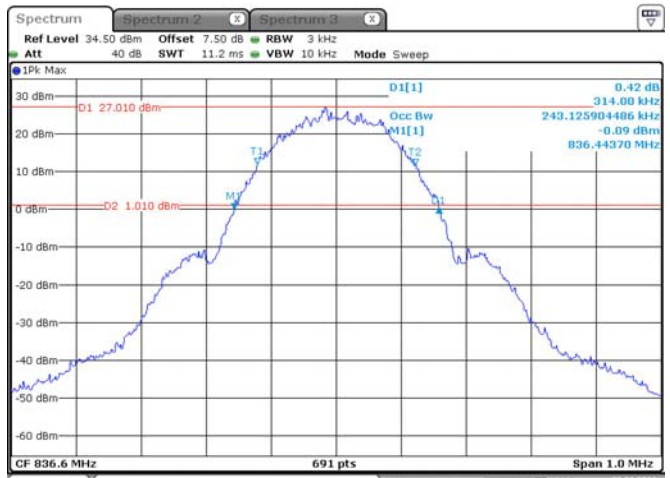
Band	Bandwidth (MHz)	Modulation mode	99% Occupied Bandwidth(MHz)			26 dB Occupied Bandwidth(MHz)		
			Low Channel	Middle Channel	High Channel	Low Channel	Middle Channel	High Channel
LTE Band 40 Lower	5 MHz	QPSK	4.511	4.511	4.491	5.040	4.960	5.020
		16QAM	4.511	4.511	4.531	5.100	5.000	5.020
	10 MHz	QPSK	/	8.942	/	/	9.840	/
		16QAM	/	8.942	/	/	9.720	/
LTE Band 40 Upper	5 MHz	QPSK	4.511	4.491	4.511	4.940	4.960	5.020
		16QAM	4.511	4.511	4.511	5.040	5.020	5.080
	10 MHz	QPSK	/	8.942	/	/	10.040	/
		16QAM	/	8.942	/	/	9.600	/
LTE Band 41	5 MHz	QPSK	4.491	4.511	4.511	4.960	5.020	4.940
		16QAM	4.511	4.511	4.511	5.000	5.140	5.060
	10 MHz	QPSK	8.942	8.942	8.942	9.960	9.800	9.680
		16QAM	8.942	8.942	8.942	9.640	9.640	9.720
	15 MHz	QPSK	13.473	13.473	13.413	15.600	14.940	15.780
		16QAM	13.533	13.473	13.533	15.780	15.060	14.940
	20 MHz	QPSK	17.884	17.964	17.884	19.280	19.760	19.840
		16QAM	17.884	17.884	17.884	20.000	20.960	19.680

**Cellular 850 Band, GPRS, Low Channel**



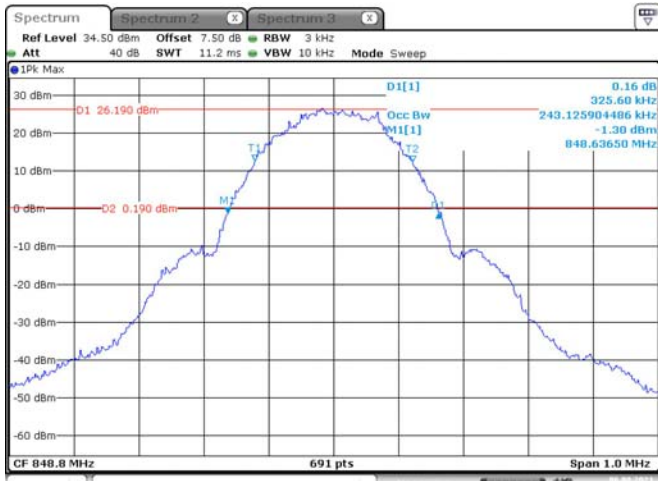
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**Cellular 850 Band, GPRS, Middle Channel**



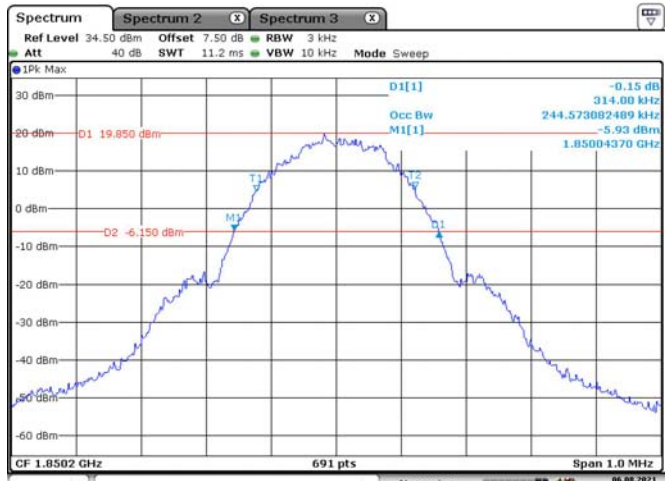
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**Cellular 850 Band, GPRS, High Channel**



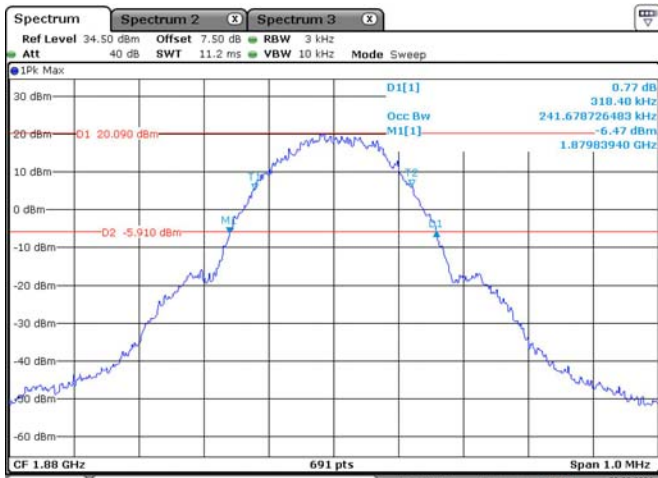
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**PCS 1900 Band, GPRS, Low Channel**



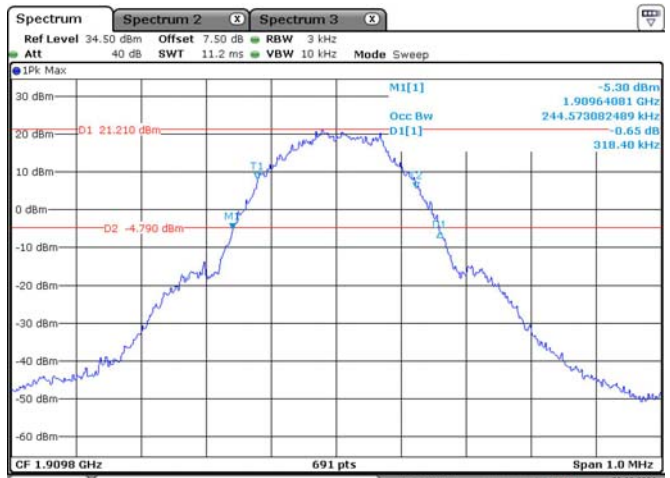
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**PCS 1900 Band, GPRS, Middle Channel**



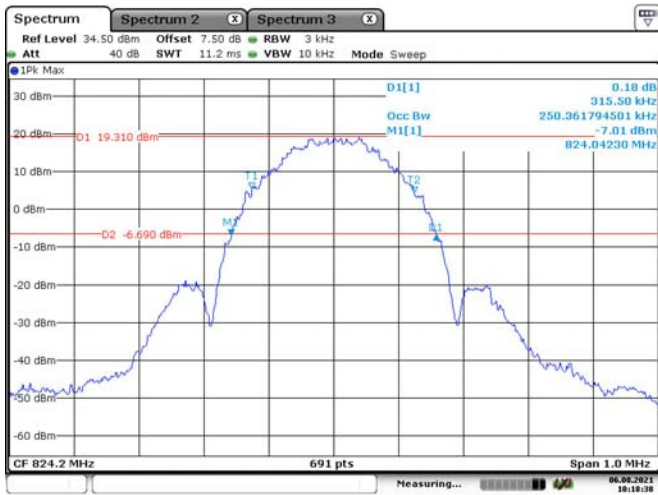
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**PCS 1900 Band, GPRS, High Channel**



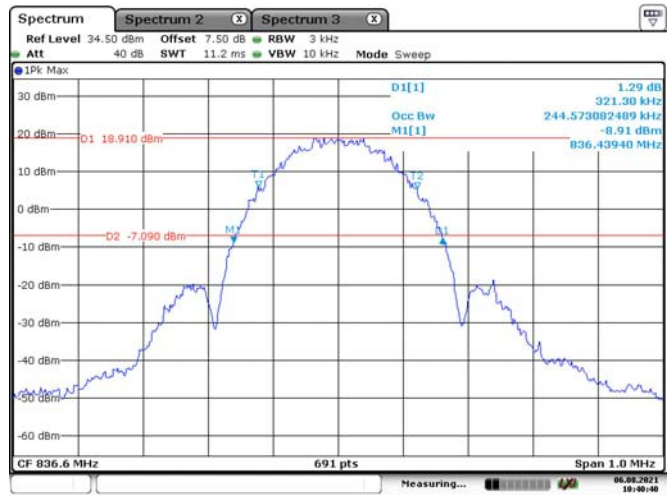
Date: 6.AUG.2021 11:15:42

Cellular 850 Band, EDGE, Low Channel



Date: 6.AUG.2021 10:18:38

Cellular 850 Band, EDGE, Middle Channel



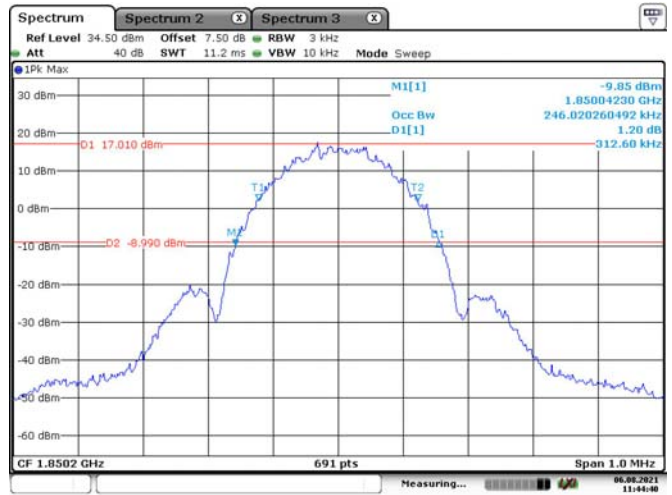
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Cellular 850 Band, EDGE, High Channel



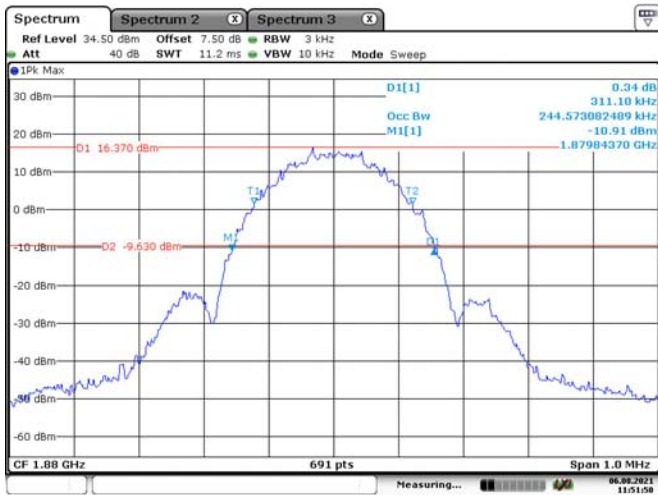
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PCS 1900 Band, EDGE, Low Channel



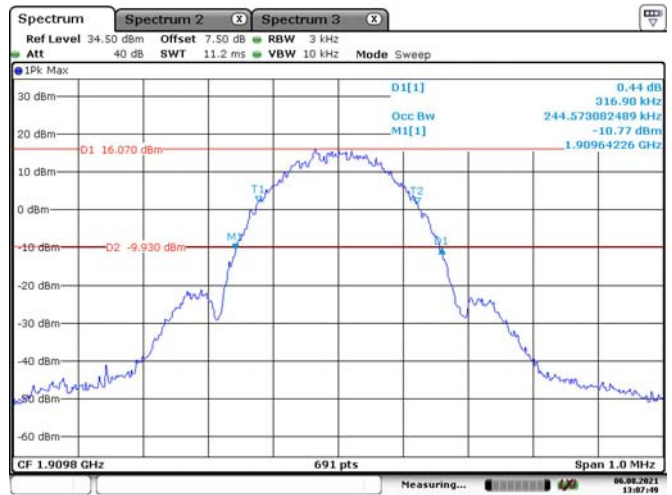
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PCS 1900 Band, EDGE, Middle Channel



Date: 6.AUG.2021 11:51:50

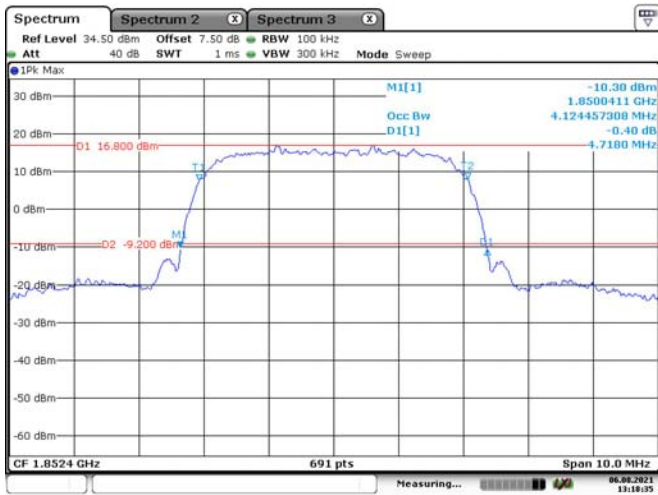
PCS 1900 Band, EDGE, High Channel



Date: 6.AUG.2021 13:07:50

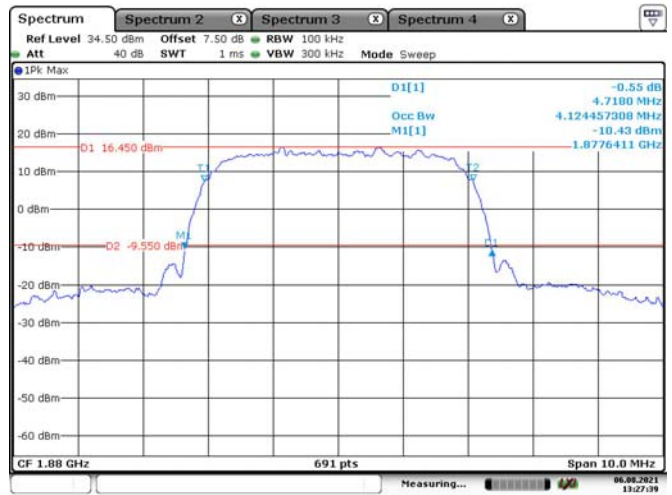


WCDMA Band II, Rel99, Low Channel



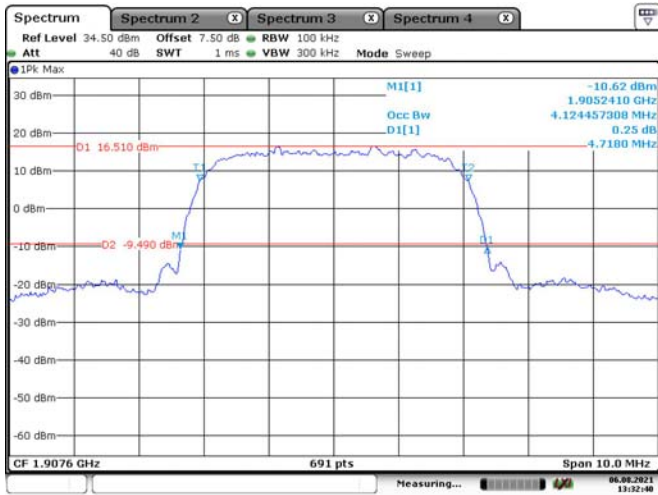
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WCDMA Band II, Rel99, Middle Channel



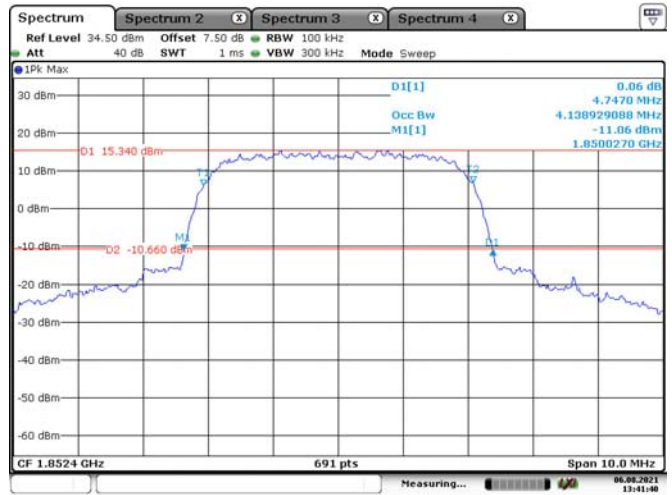
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WCDMA Band II, Rel99, High Channel



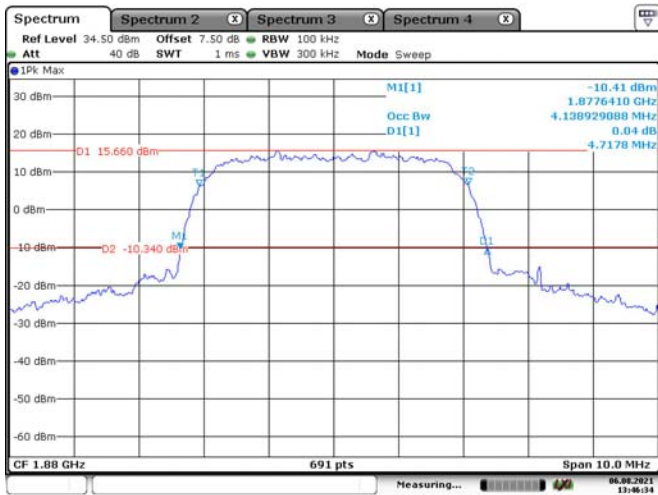
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WCDMA Band II, HSDPA, Low Channel



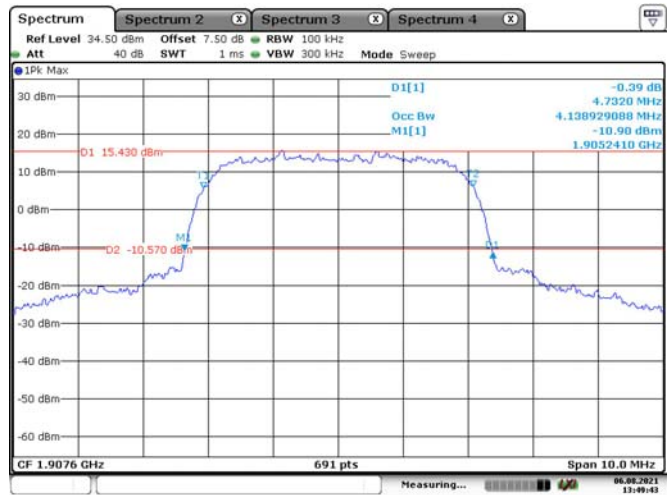
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WCDMA Band II, HSDPA, Middle Channel



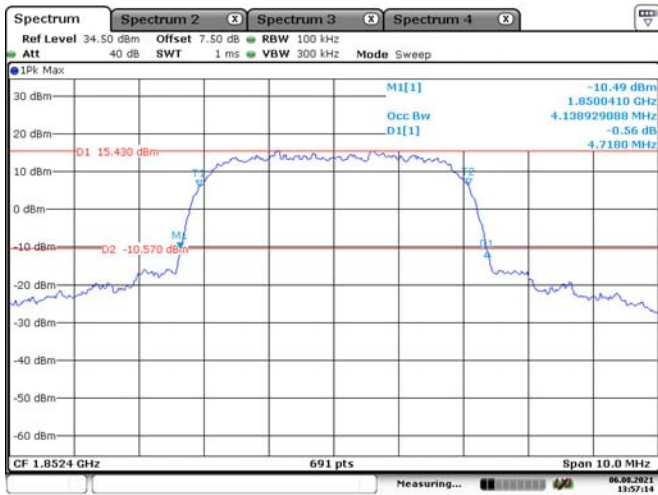
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WCDMA Band II, HSDPA, High Channel

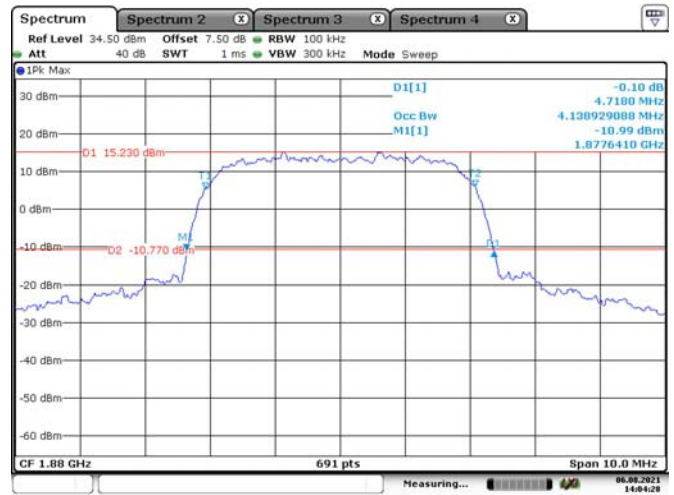


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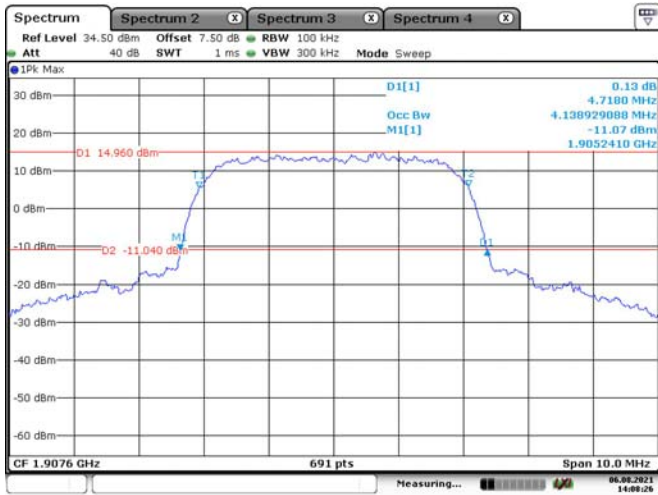
WCDMA Band II, HSUPA, Low Channel



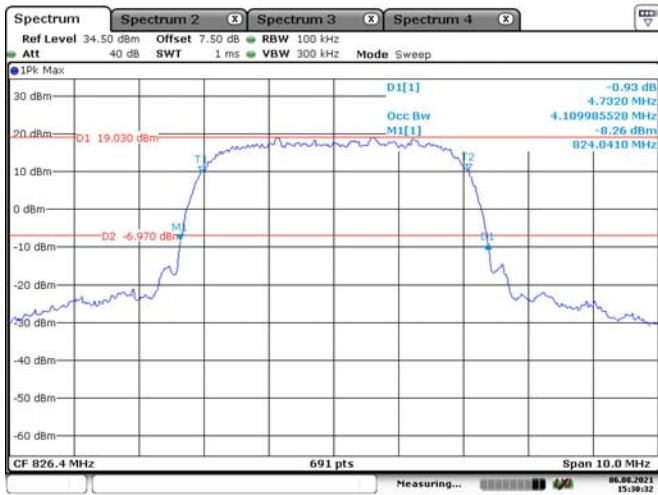
WCDMA Band II, HSUPA, Middle Channel



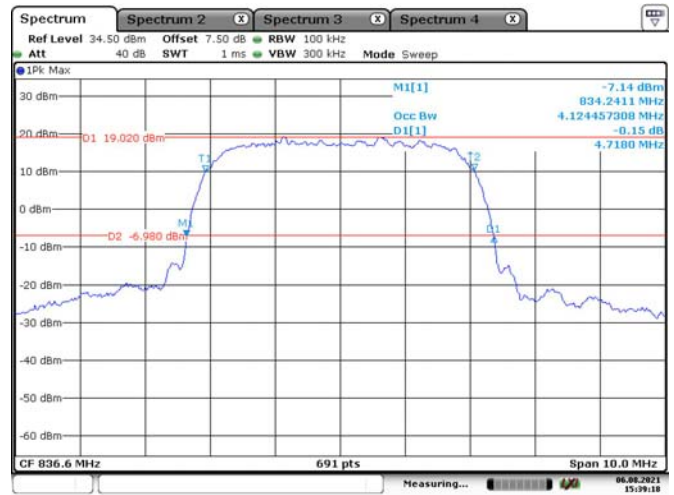
WCDMA Band II, HSUPA, High Channel



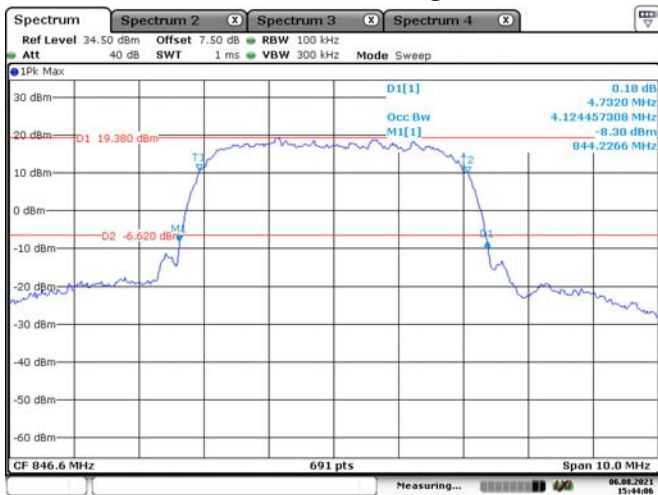
WCDMA Band V, Rel99, Low Channel



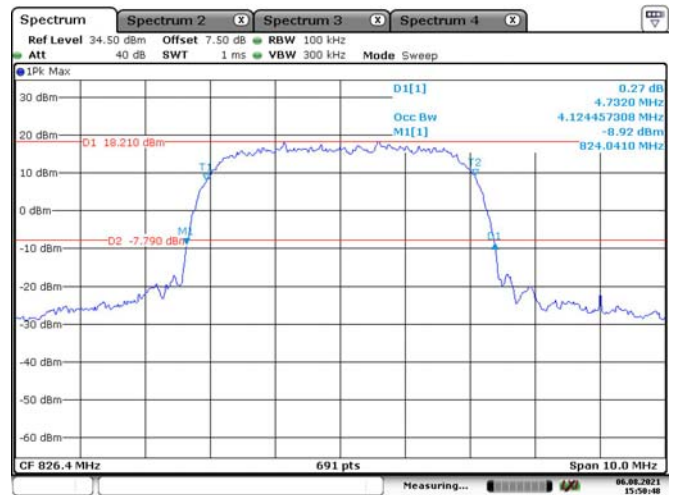
WCDMA Band V, Rel99, Middle Channel



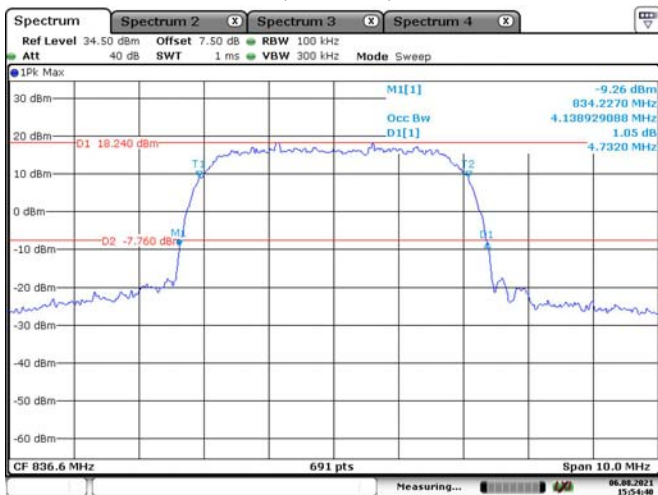
WCDMA Band V, Rel99, High Channel



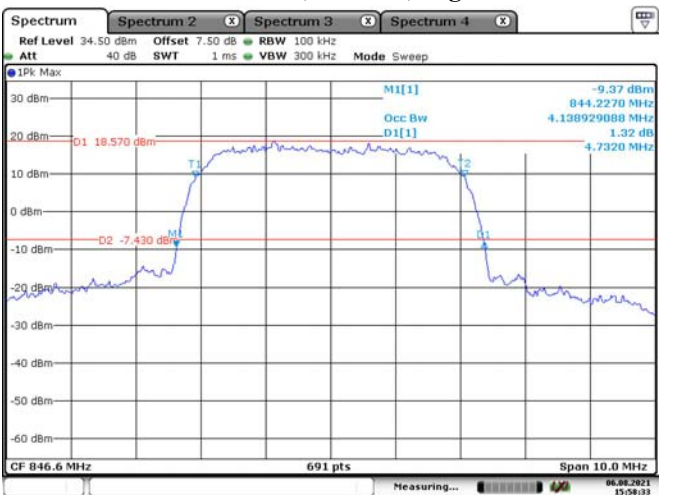
WCDMA Band V, HSDPA, Low Channel



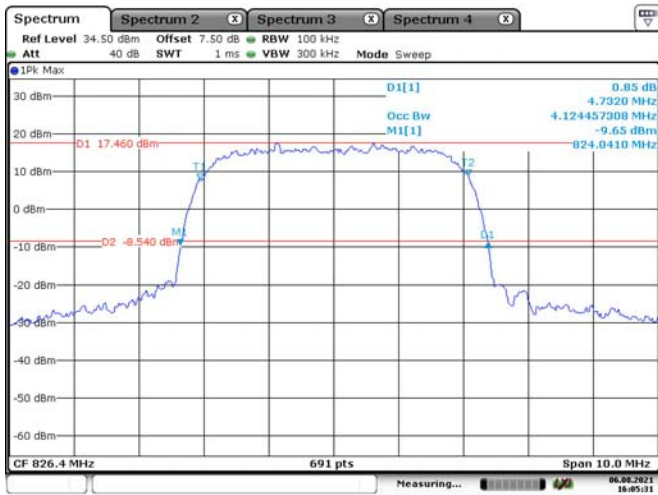
WCDMA Band V, HSDPA, Middle Channel



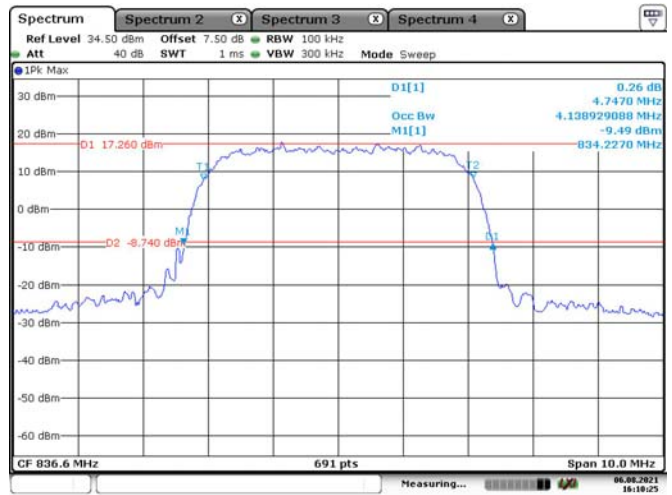
WCDMA Band V, HSDPA, High Channel



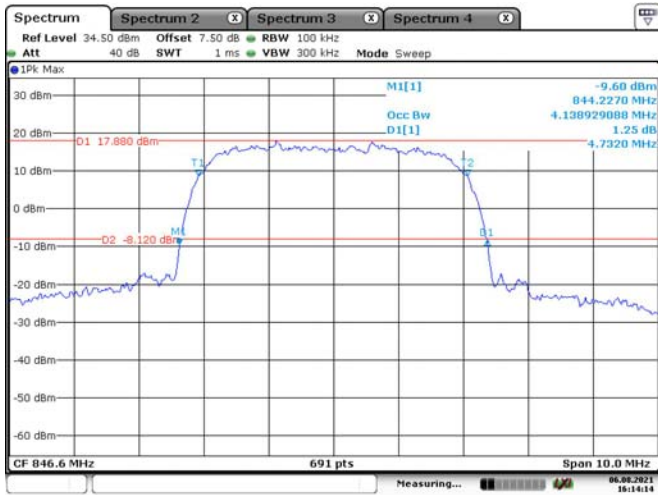
**WCDMA Band V, HSUPA, Low Channel**



**WCDMA Band V, HSUPA, Middle Channel**

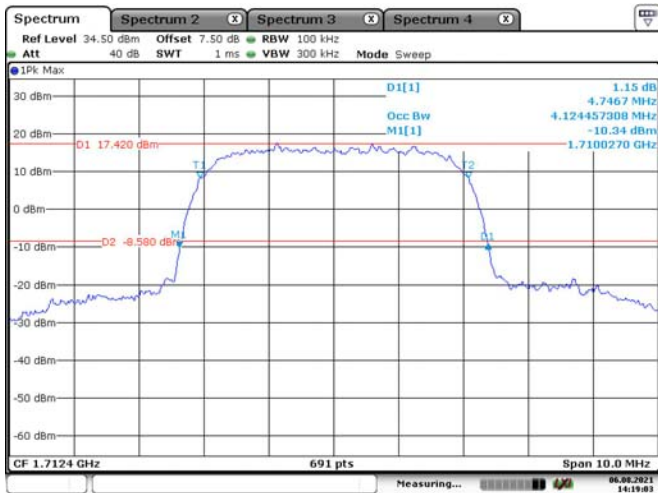


**WCDMA Band V, HSUPA, High Channel**



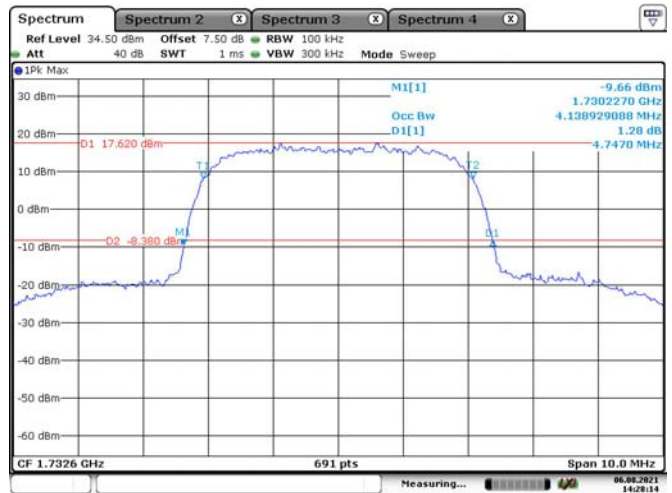


WCDMA Band IV, Rel99, Low Channel



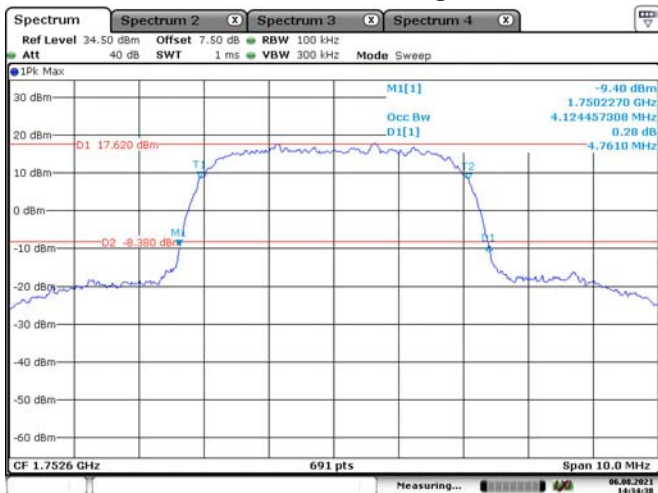
Date: 6.AUG.2021 14:19:03

WCDMA Band IV, Rel99, Middle Channel



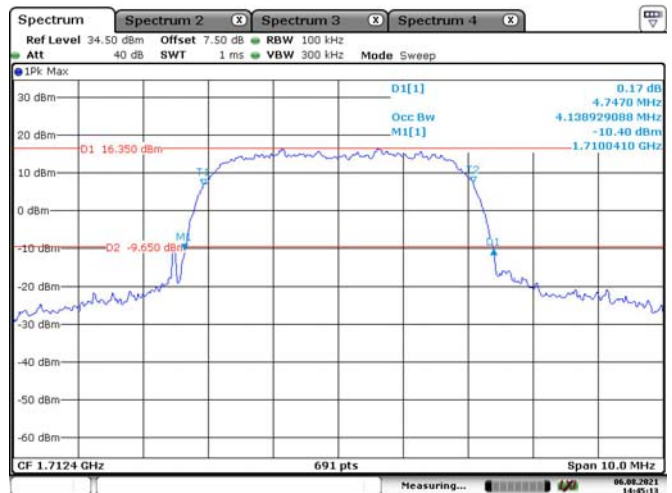
Date: 6.AUG.2021 14:28:15

WCDMA Band IV, Rel99, High Channel



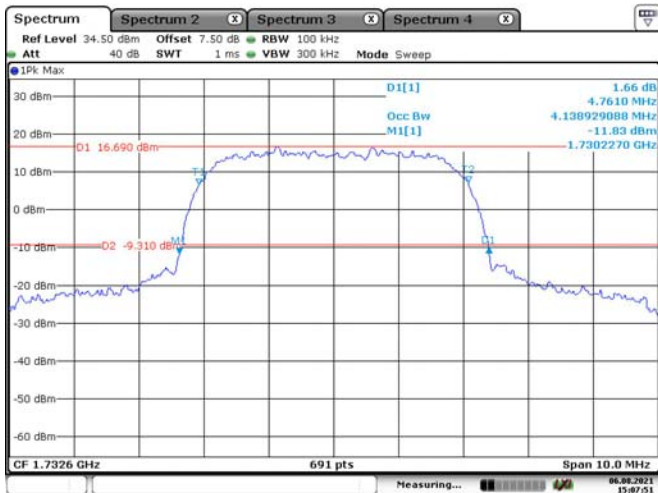
Date: 6.AUG.2021 14:34:39

WCDMA Band IV, HSDPA, Low Channel



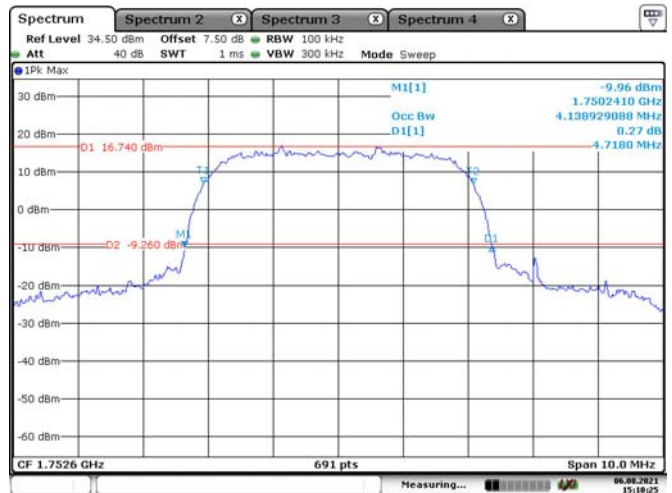
Date: 6.AUG.2021 14:45:13

WCDMA Band IV, HSDPA, Middle Channel



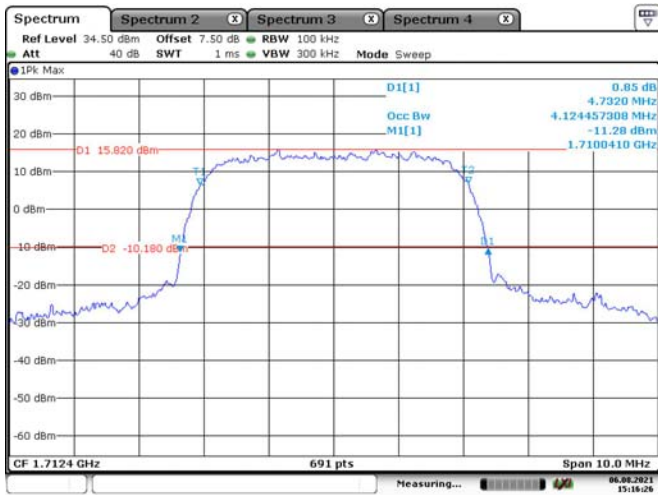
Date: 6.AUG.2021 15:07:52

WCDMA Band IV, HSDPA, High Channel

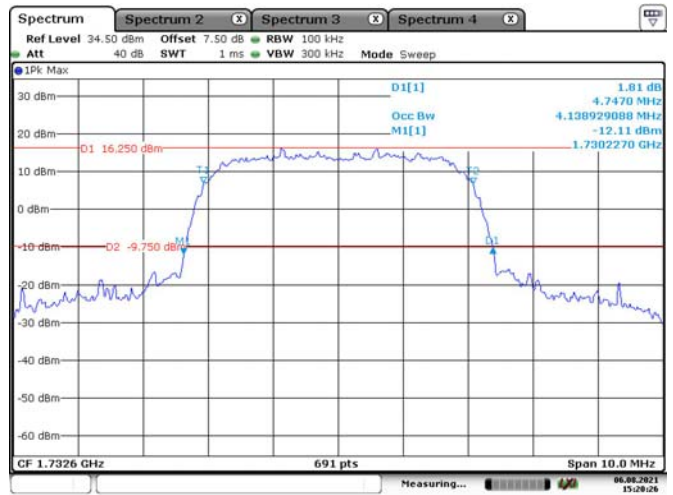


Date: 6.AUG.2021 15:10:25

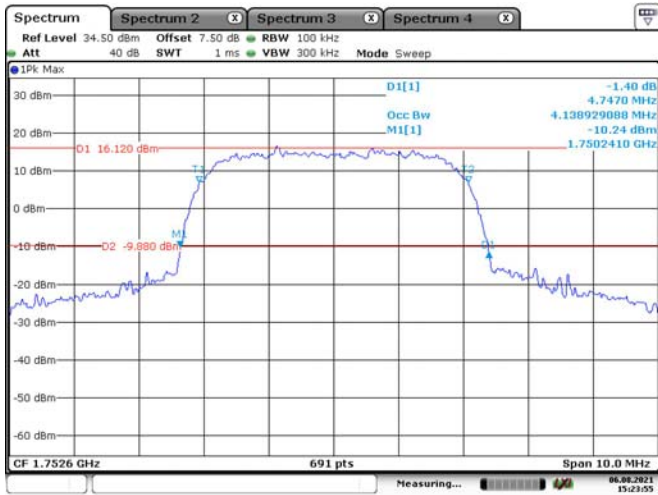
WCDMA Band IV, HSUPA, Low Channel



WCDMA Band IV, HSUPA, Middle Channel

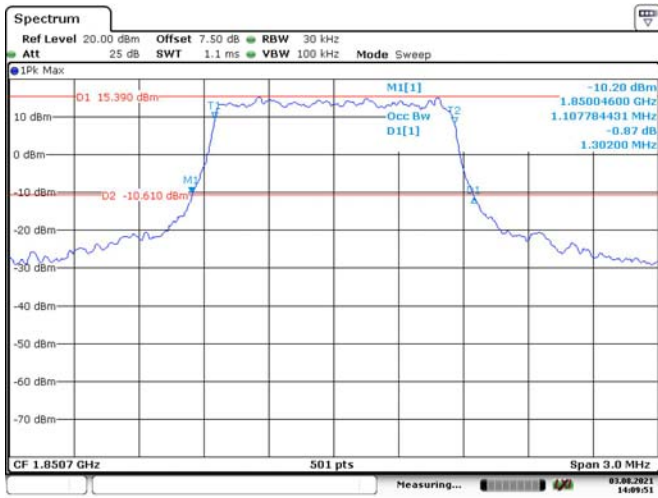


WCDMA Band IV, HSUPA, High Channel

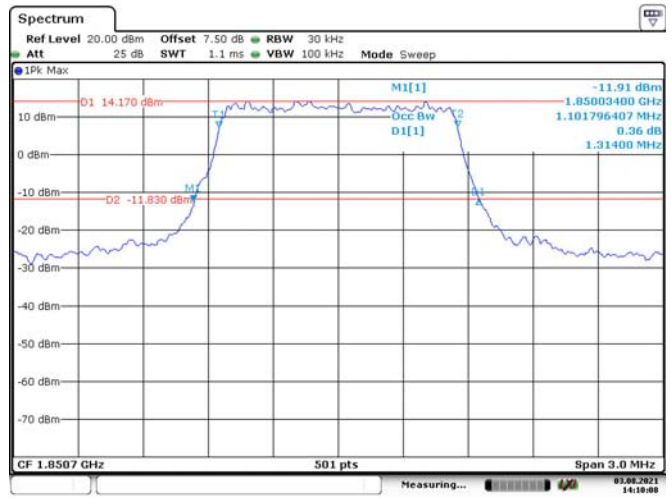


**LTE Band 2**

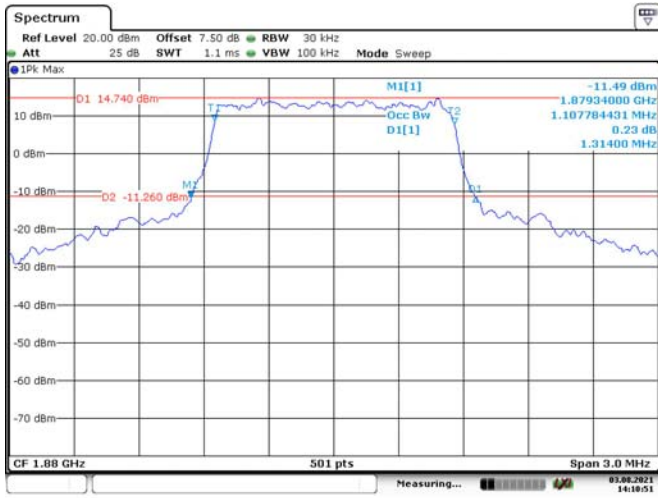
**1.4M, QPSK, Low Channel**



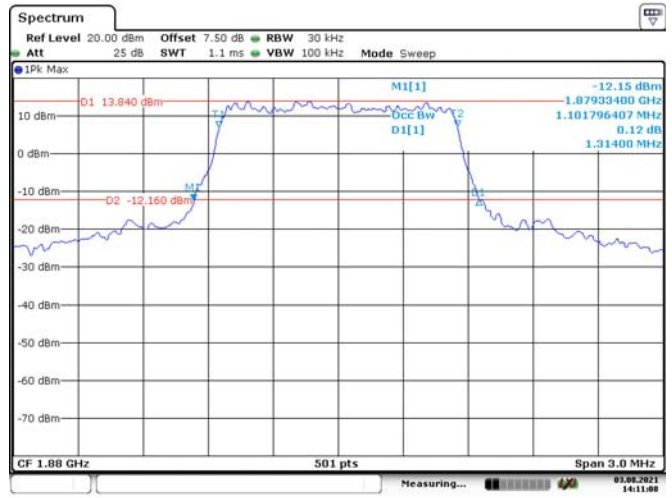
**1.4M, 16QAM, Low Channel**



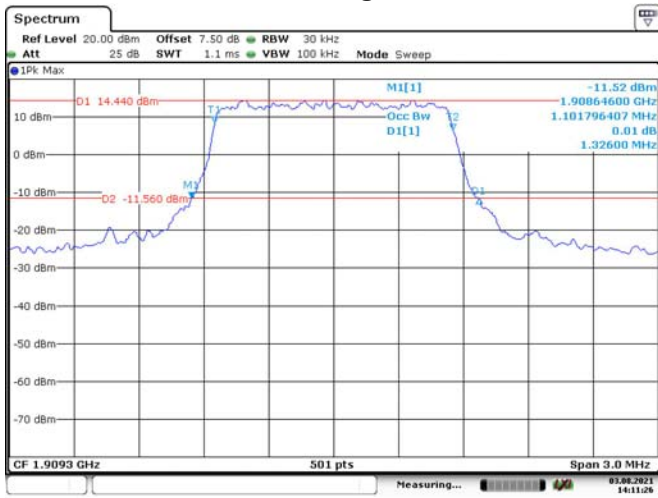
**1.4M, QPSK, Middle Channel**



**1.4M, 16QAM, Middle Channel**



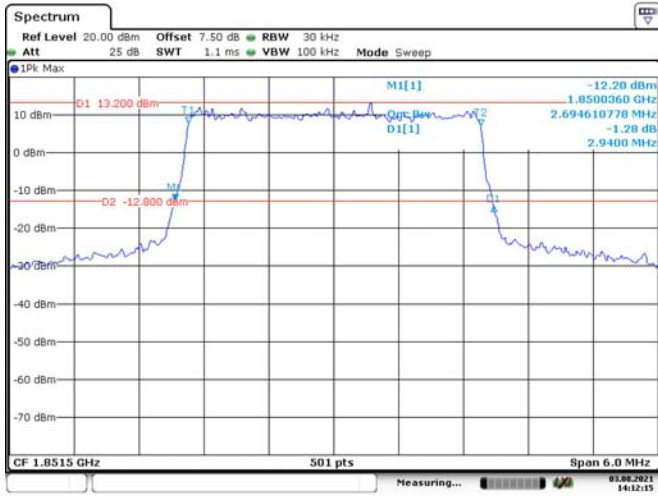
**1.4M, QPSK, High Channel**



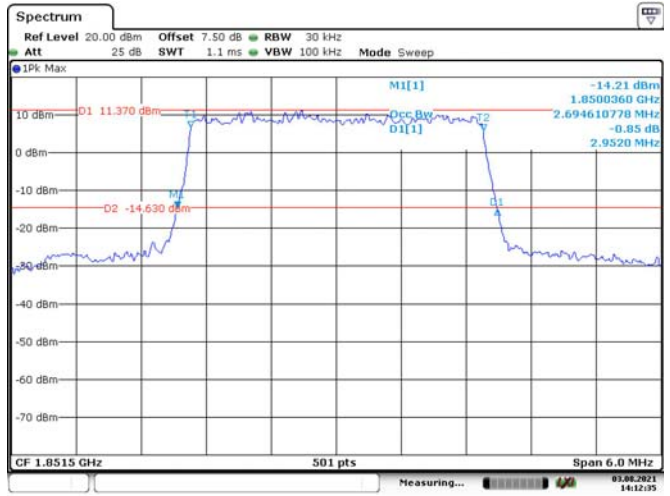
**1.4M, 16QAM, High Channel**



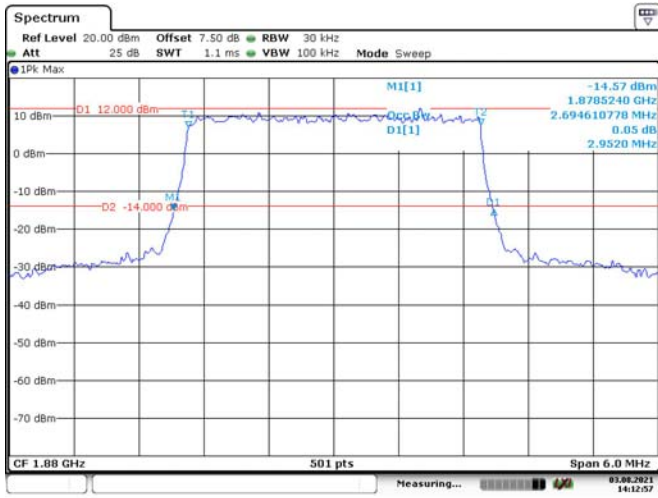
3M, QPSK, Low Channel



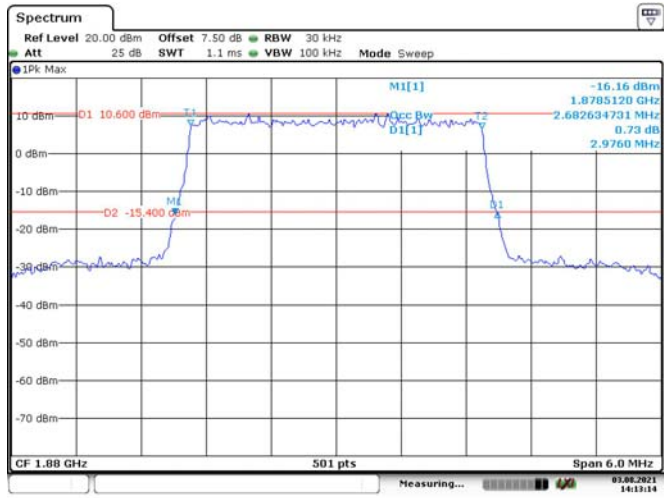
3M, 16QAM, Low Channel



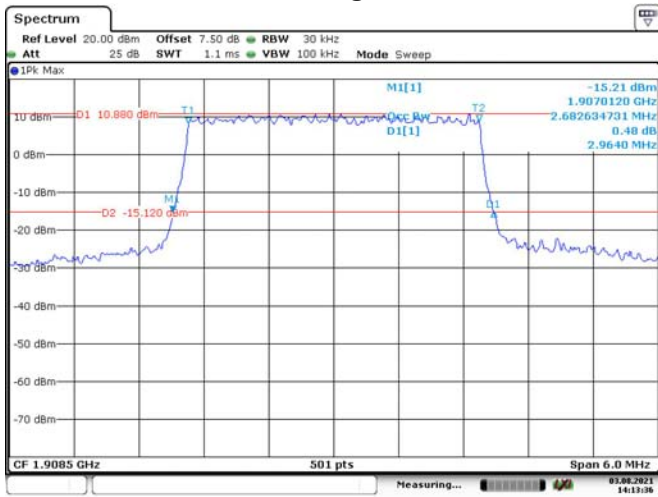
3M, QPSK, Middle Channel



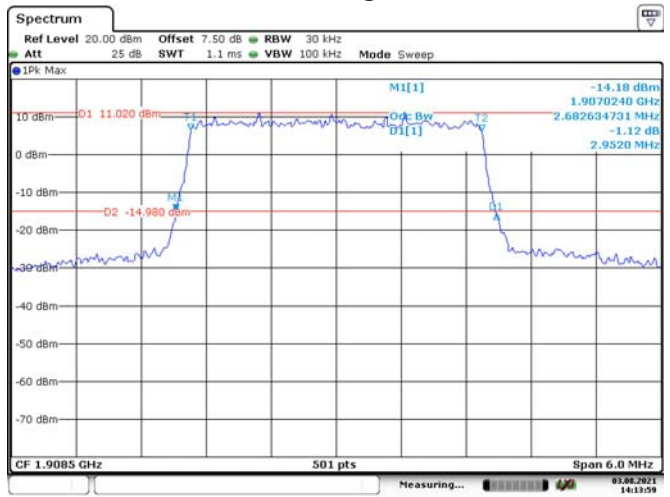
3M, 16QAM, Middle Channel



3M, QPSK, High Channel

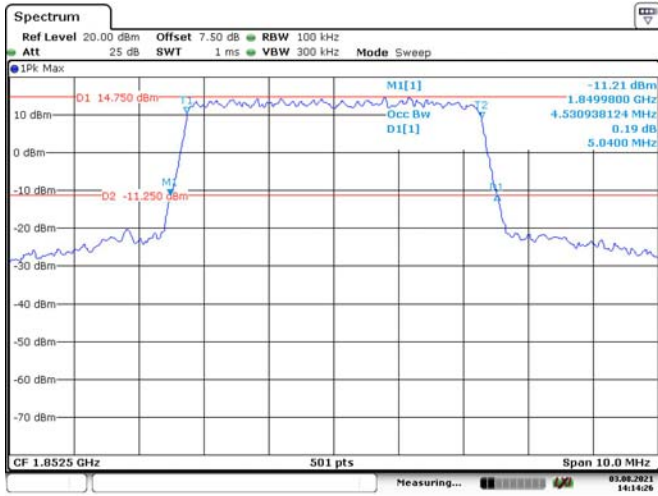


3M, 16QAM, High Channel



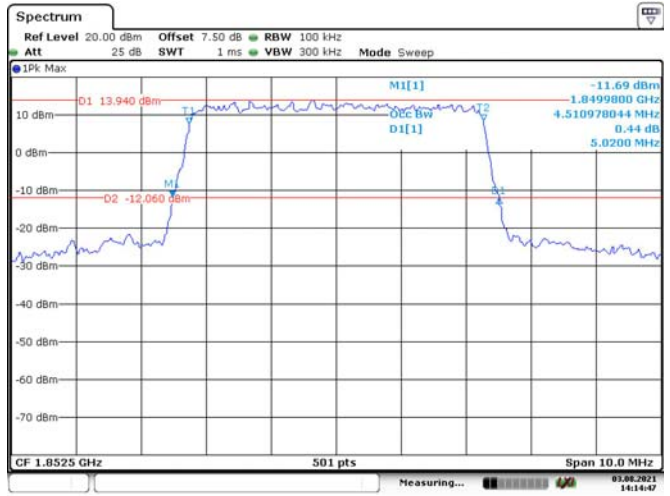


5M, QPSK, Low Channel



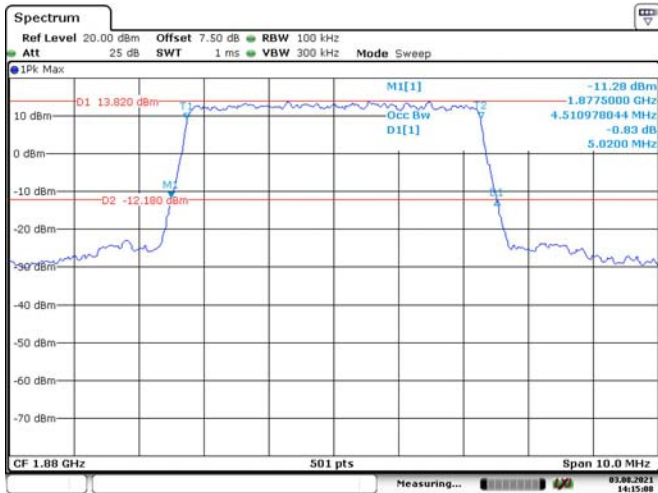
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5M, 16QAM, Low Channel



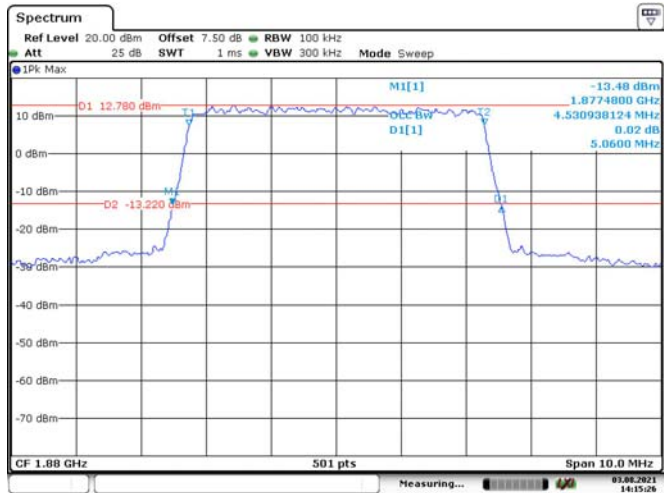
Date: 3.AUG.2021 14:14:47

5M, QPSK, Middle Channel



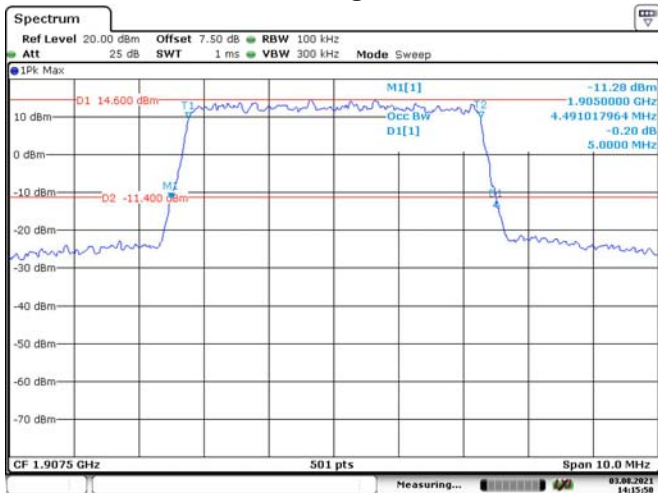
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5M, 16QAM, Middle Channel



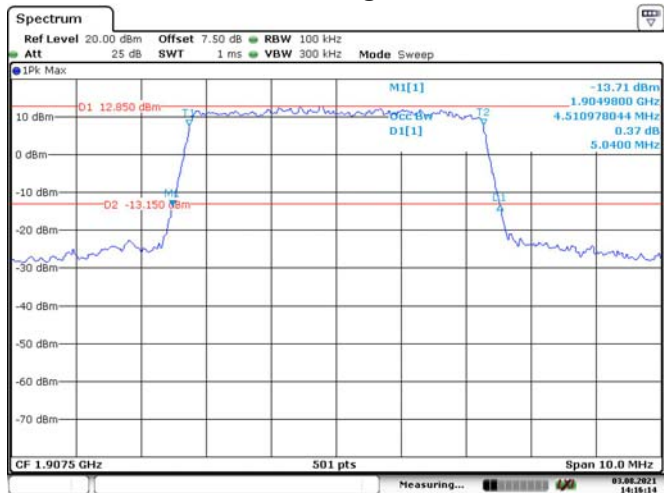
Date: 3.AUG.2021 14:15:26

5M, QPSK, High Channel



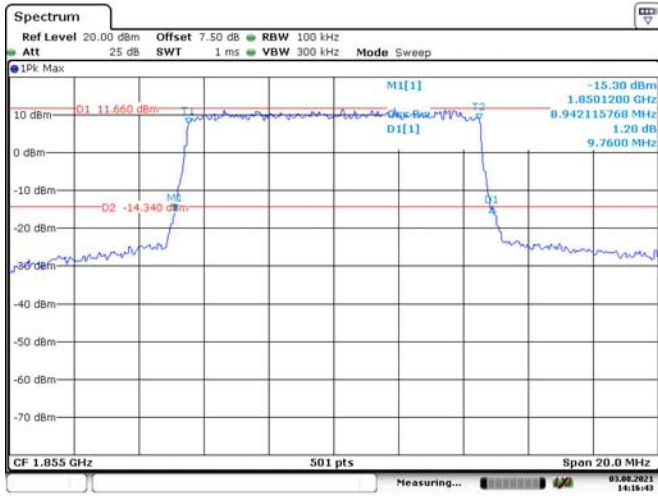
Date: 3.AUG.2021 14:15:51

5M, 16QAM, High Channel



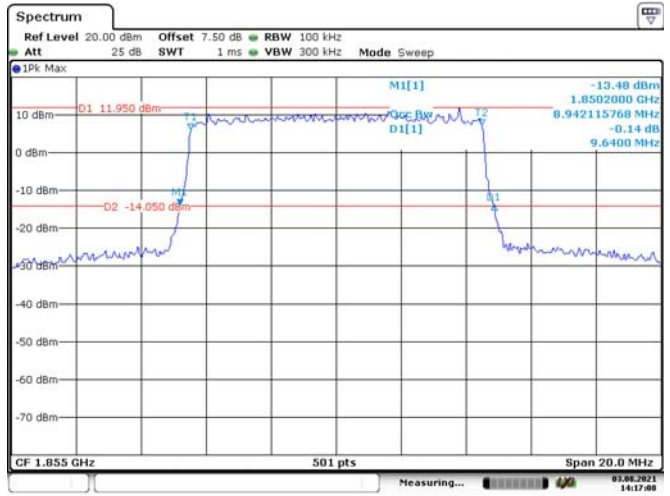
Date: 3.AUG.2021 14:16:14

10M, QPSK, Low Channel



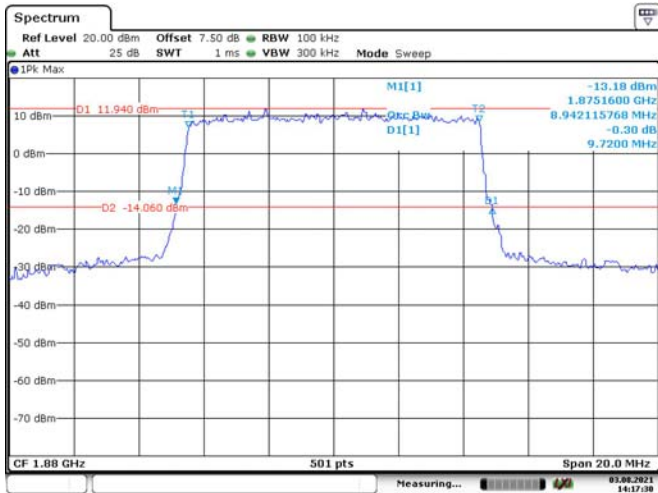
Date: 3.AUG.2021 14:16:43

10M, 16QAM, Low Channel



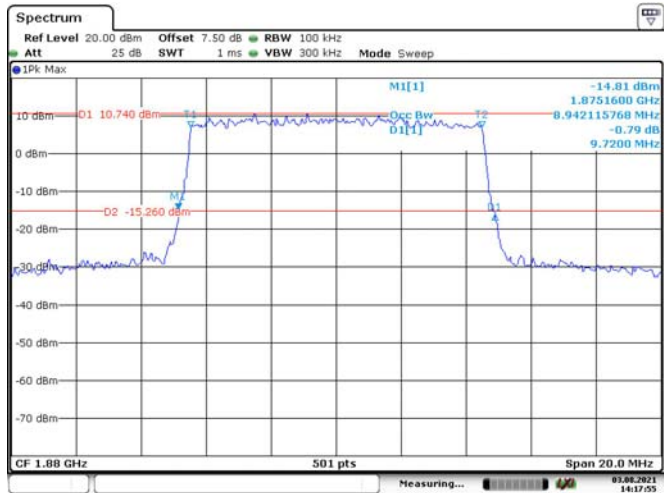
Date: 3.AUG.2021 14:17:08

10M, QPSK, Middle Channel



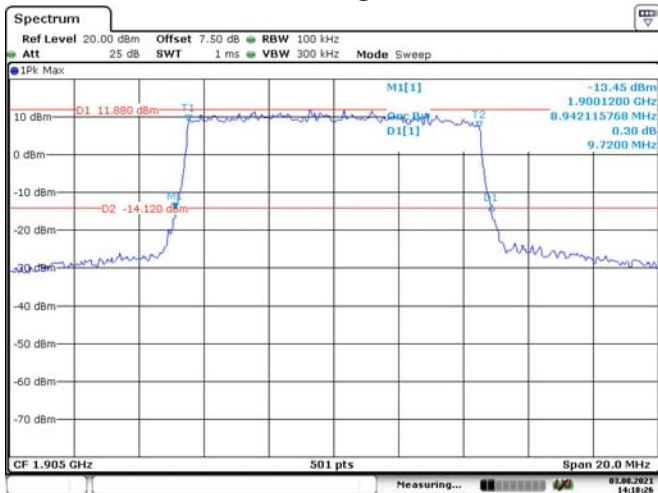
Date: 3.AUG.2021 14:17:30

10M, 16QAM, Middle Channel



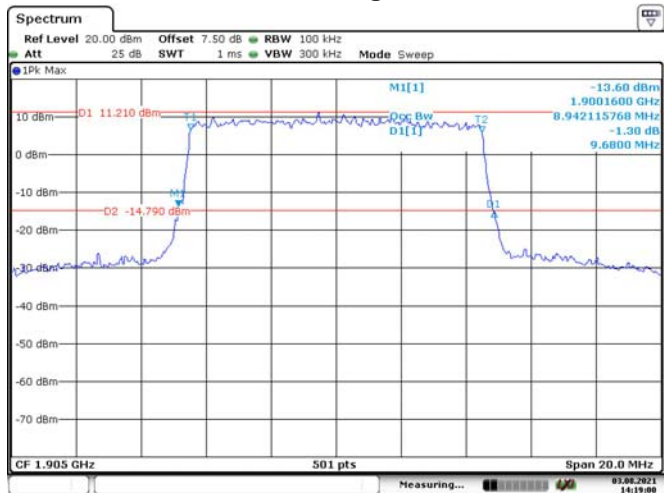
Date: 3.AUG.2021 14:17:55

10M, QPSK, High Channel



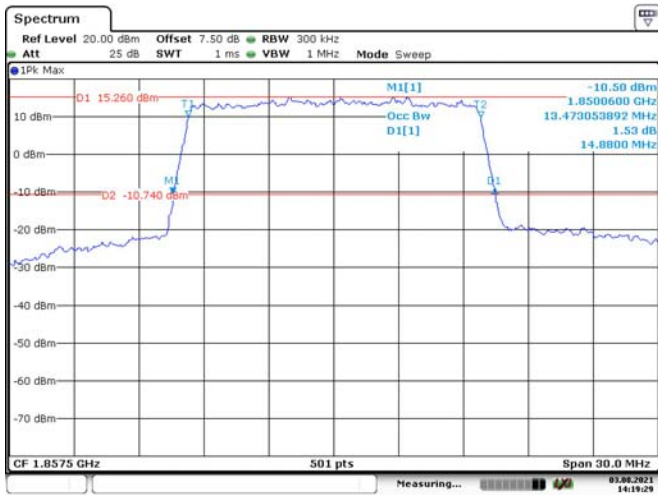
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10M, 16QAM, High Channel



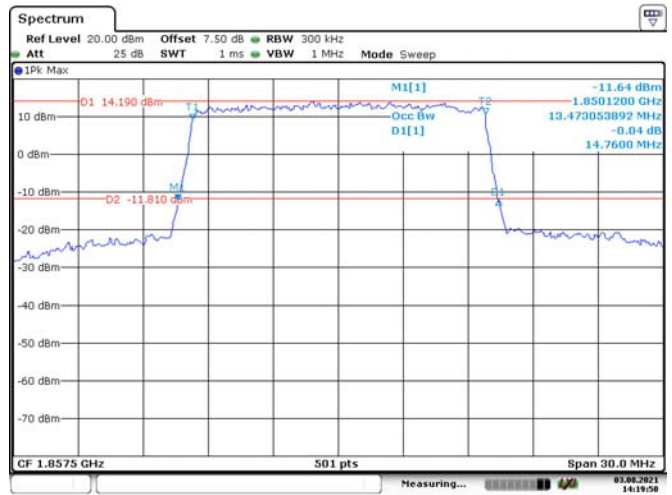
Date: 3.AUG.2021 14:19:01

15M, QPSK, Low Channel



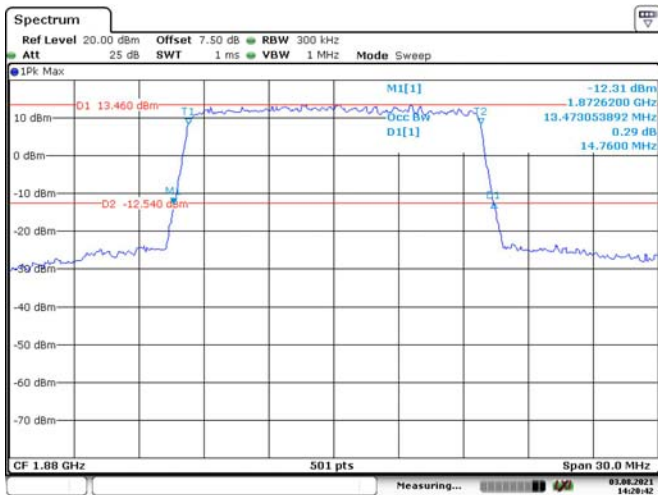
Date: 3.AUG.2021 14:19:29

15M, 16QAM, Low Channel



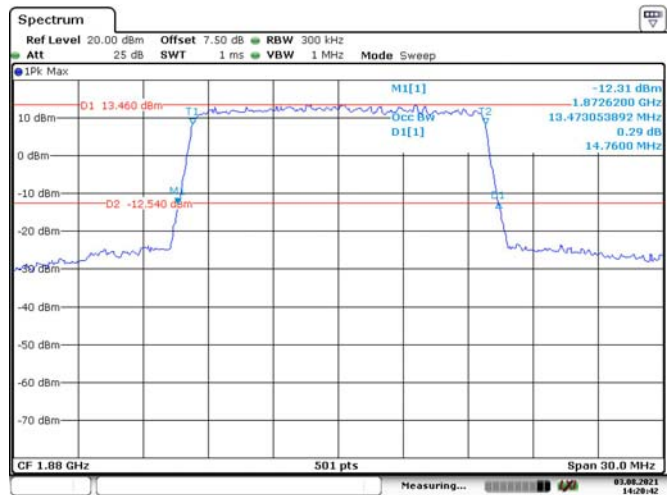
Date: 3.AUG.2021 14:19:50

15M, QPSK, Middle Channel



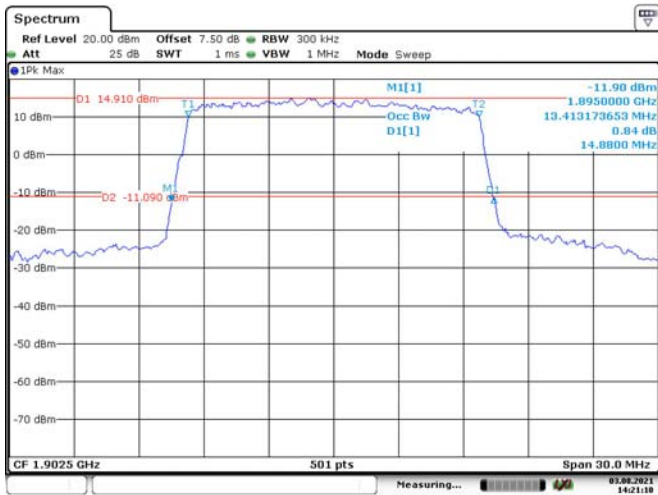
Date: 3.AUG.2021 14:20:42

15M, 16QAM, Middle Channel



Date: 3.AUG.2021 14:20:42

15M, QPSK, High Channel



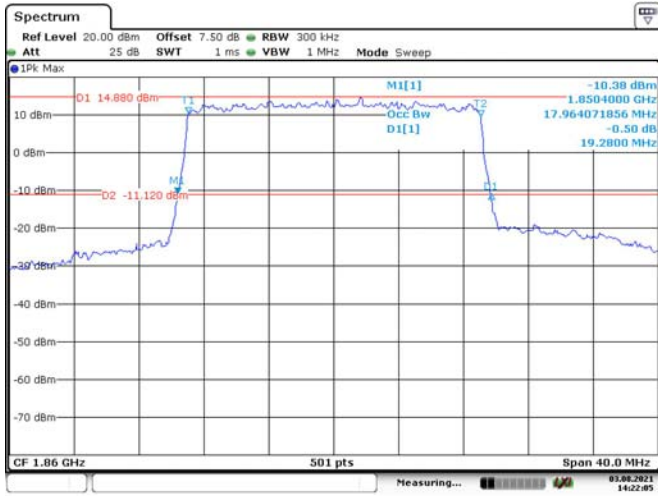
Date: 3.AUG.2021 14:21:10

15M, 16QAM, High Channel



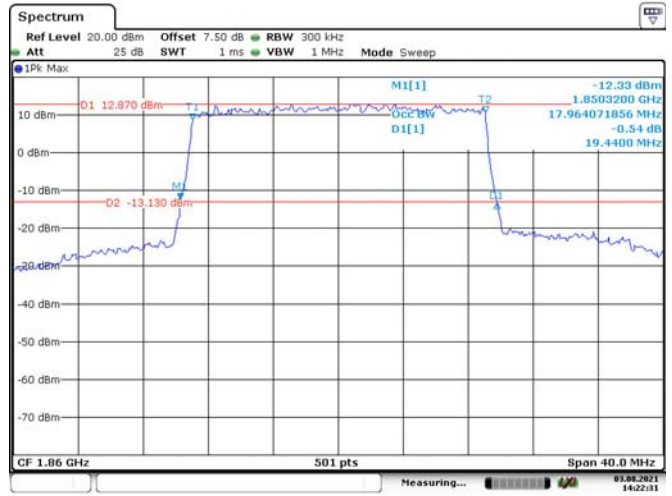
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20M, QPSK, Low Channel



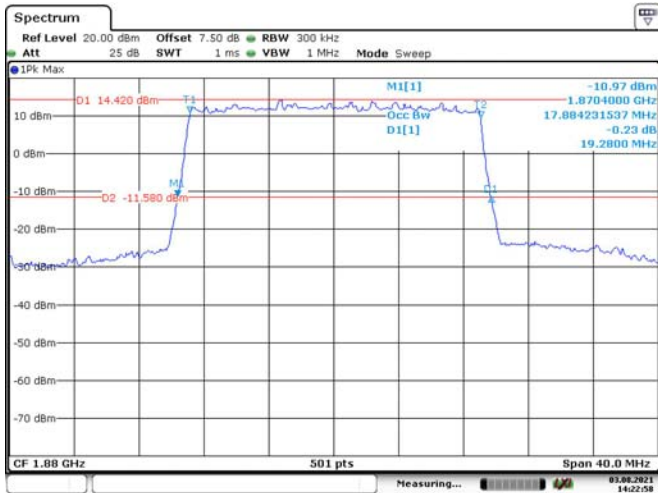
Date: 3.AUG.2021 14:22:06

20M, 16QAM, Low Channel



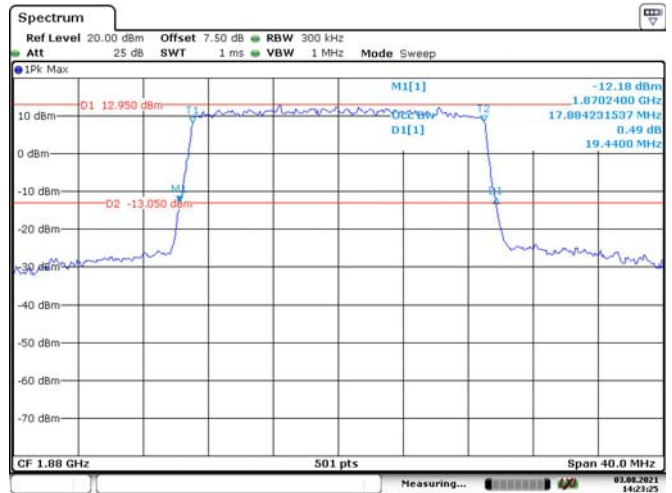
Date: 3.AUG.2021 14:22:31

20M, QPSK, Middle Channel



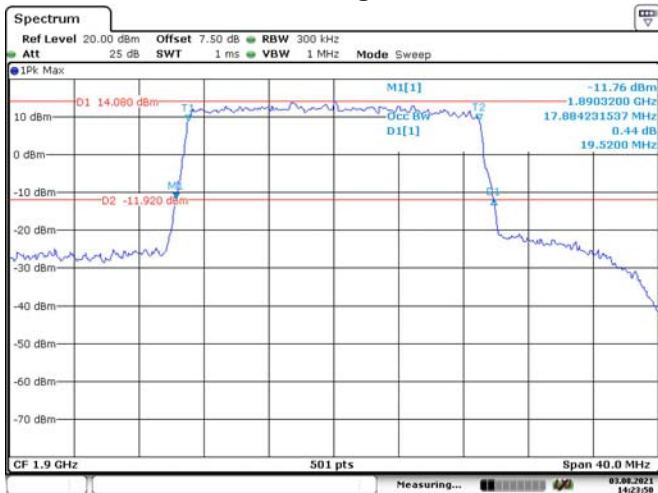
Date: 3.AUG.2021 14:22:59

20M, 16QAM, Middle Channel



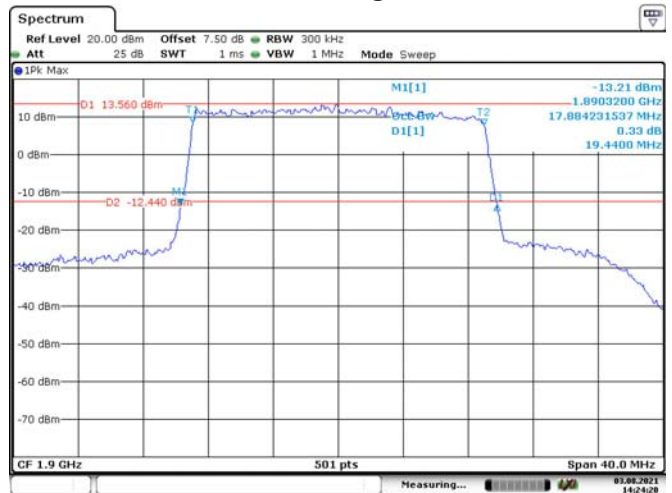
Date: 3.AUG.2021 14:23:26

20M, QPSK, High Channel



Date: 3.AUG.2021 14:23:50

20M, 16QAM, High Channel

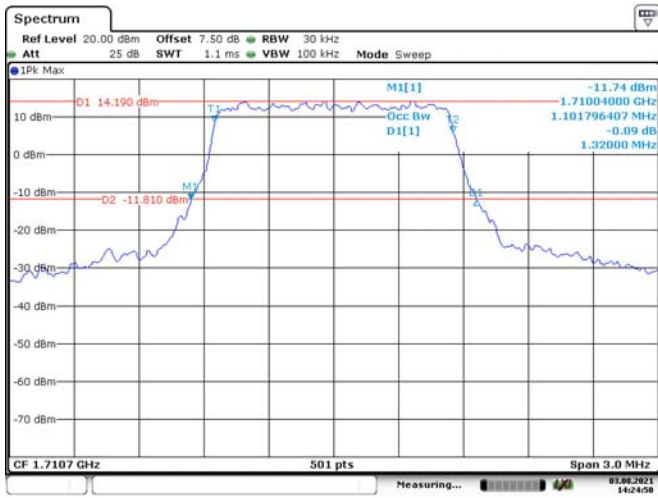


Date: 3.AUG.2021 14:24:20

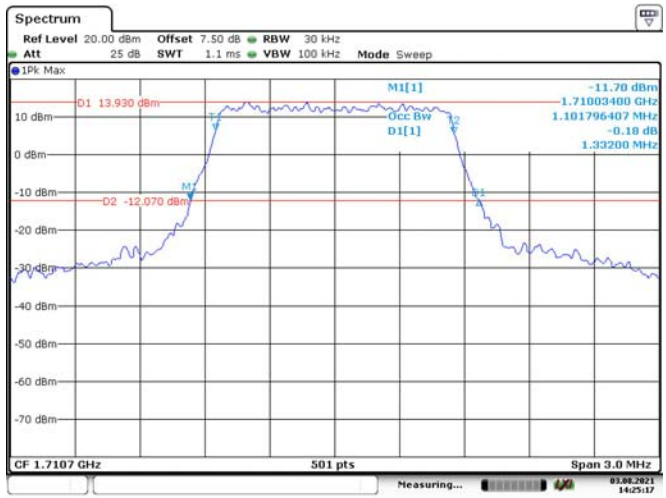


LTE Band 4:

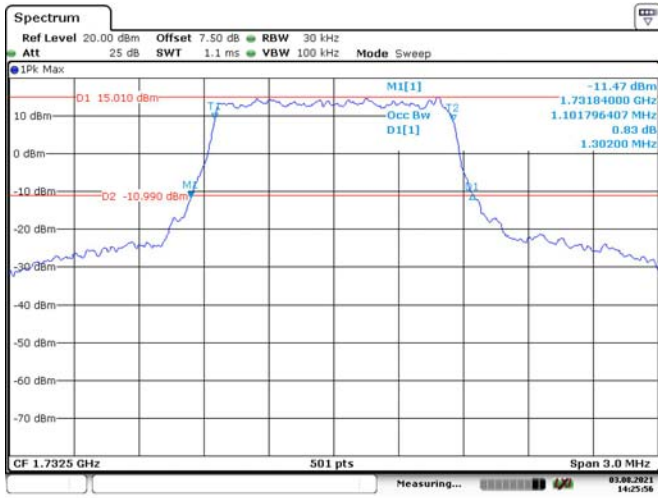
1.4M, QPSK, Low Channel



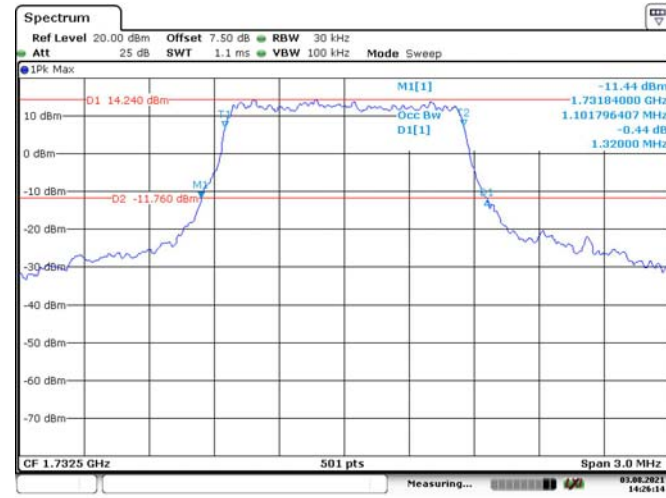
1.4M, 16QAM, Low Channel



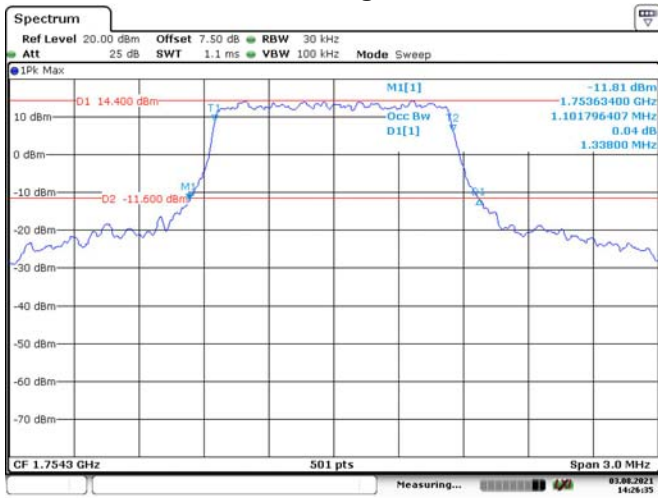
1.4M, QPSK, Middle Channel



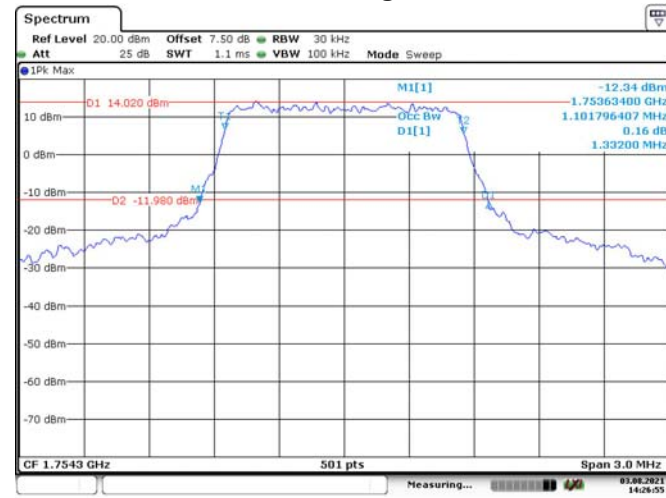
1.4M, 16QAM, Middle Channel



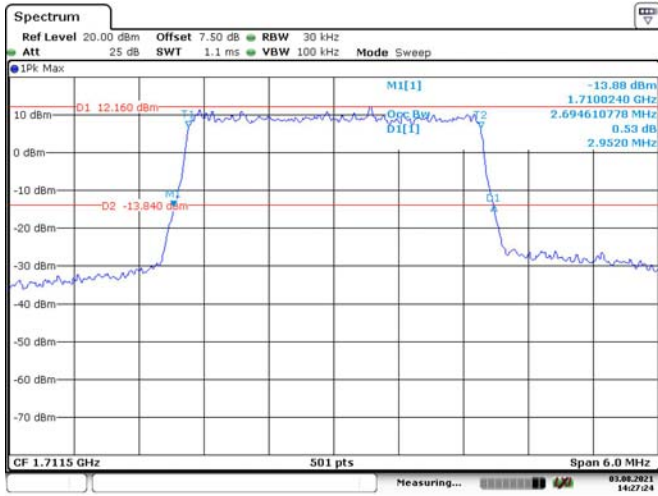
1.4M, QPSK, High Channel



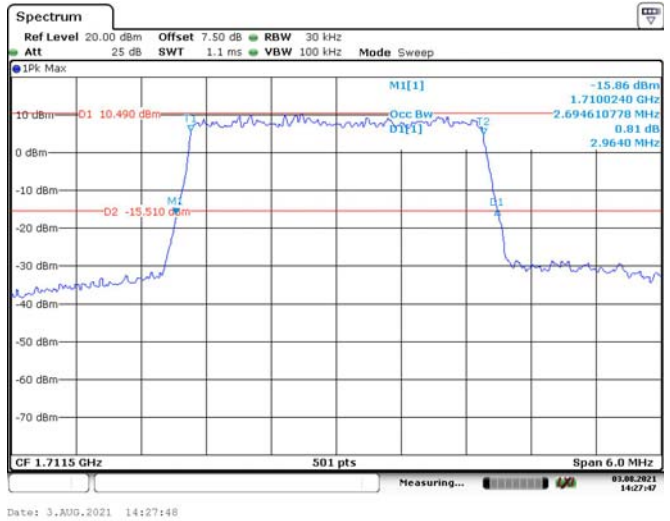
1.4M, 16QAM, High Channel



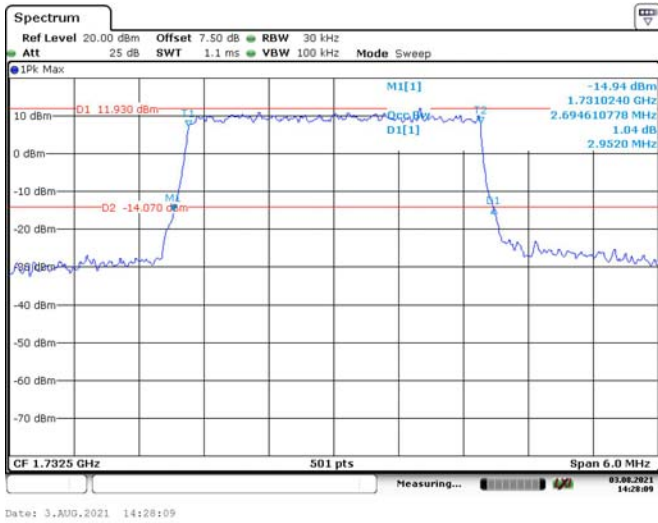
3M, QPSK, Low Channel



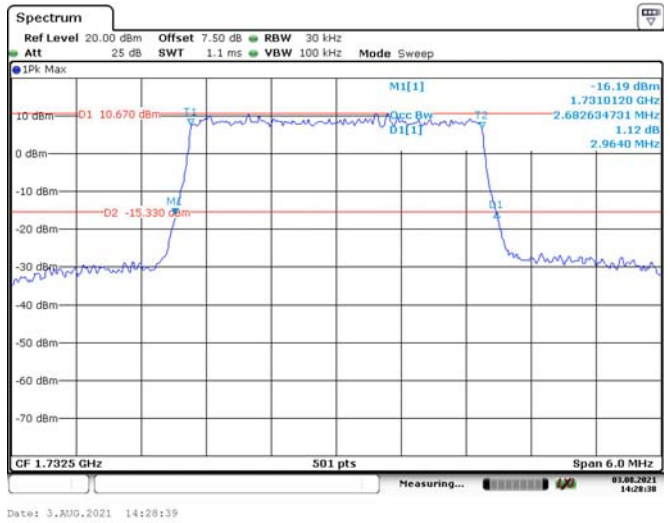
3M, 16QAM, Low Channel



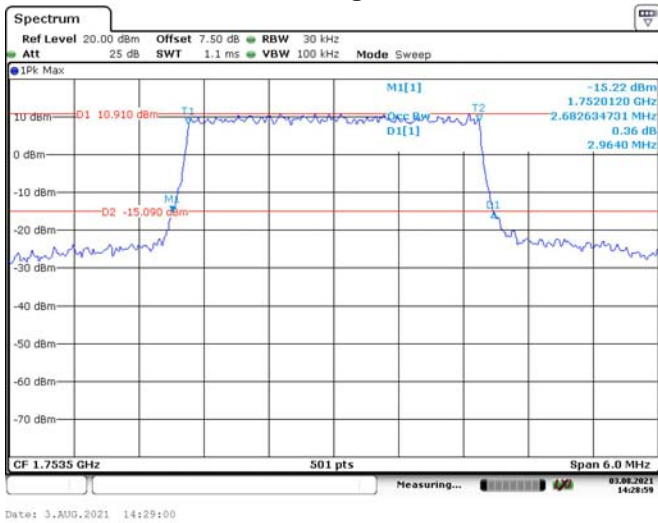
3M, QPSK, Middle Channel



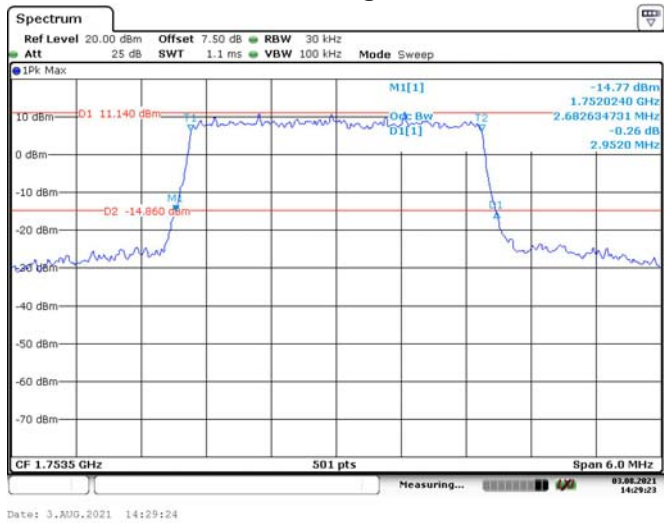
3M, 16QAM, Middle Channel



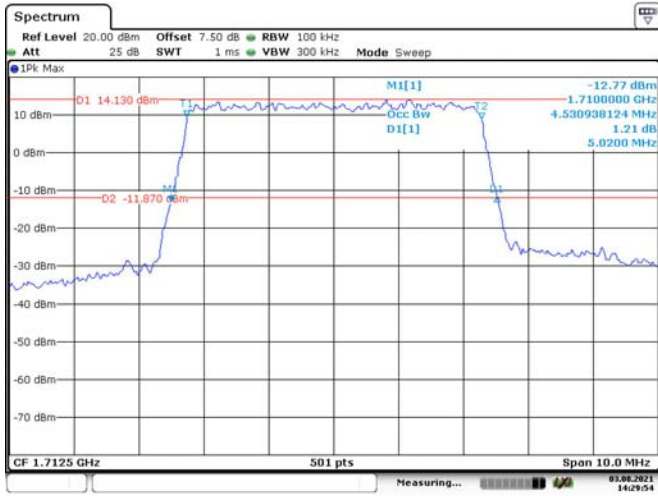
3M, QPSK, High Channel



3M, 16QAM, High Channel

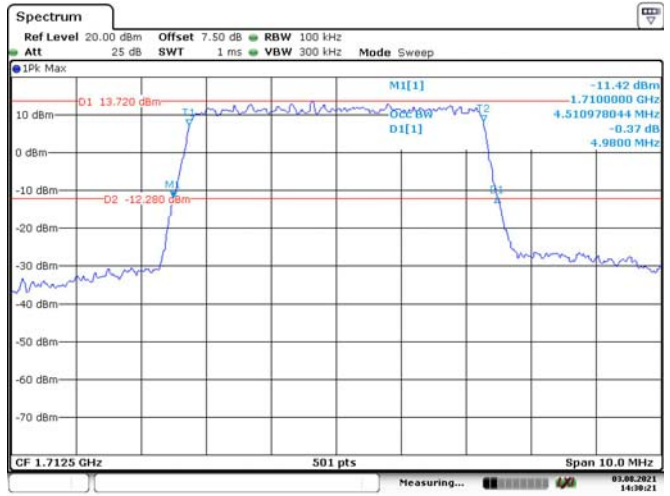


5M, QPSK, Low Channel



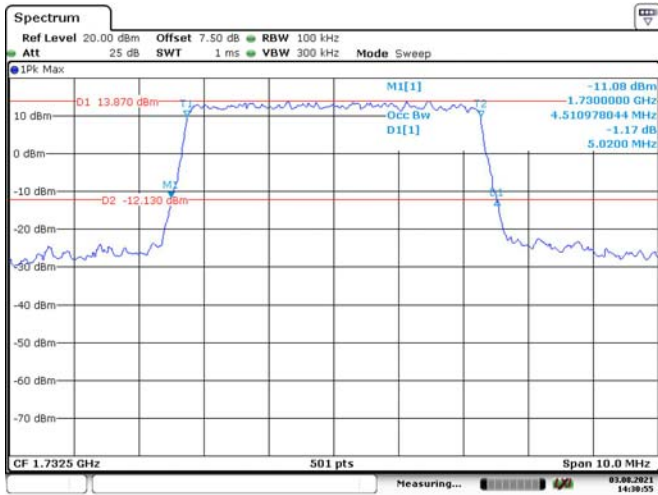
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5M, 16QAM, Low Channel



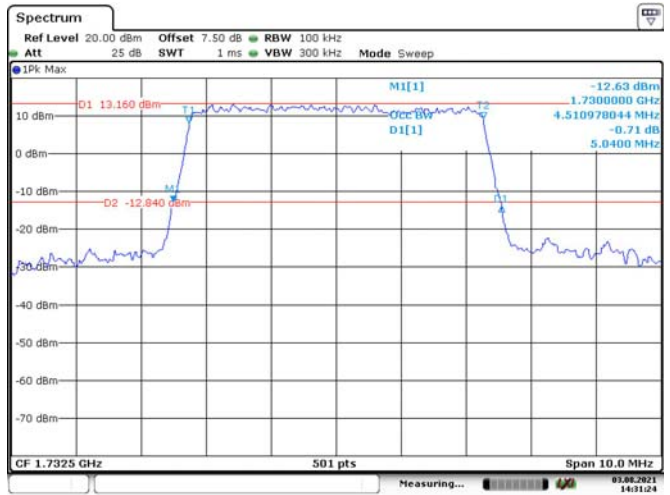
Date: 3.AUG.2021 14:30:21

5M, QPSK, Middle Channel



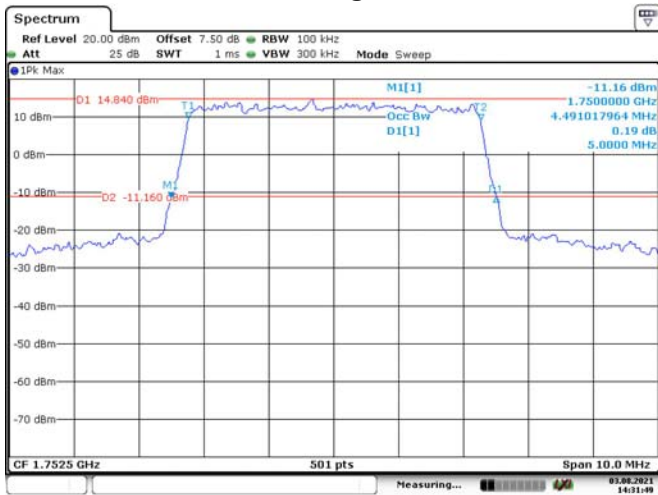
Date: 3.AUG.2021 14:30:55

5M, 16QAM, Middle Channel



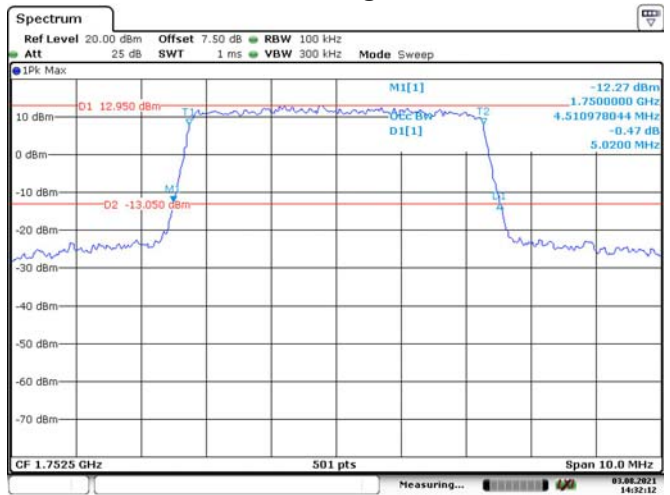
Date: 3.AUG.2021 14:31:25

5M, QPSK, High Channel



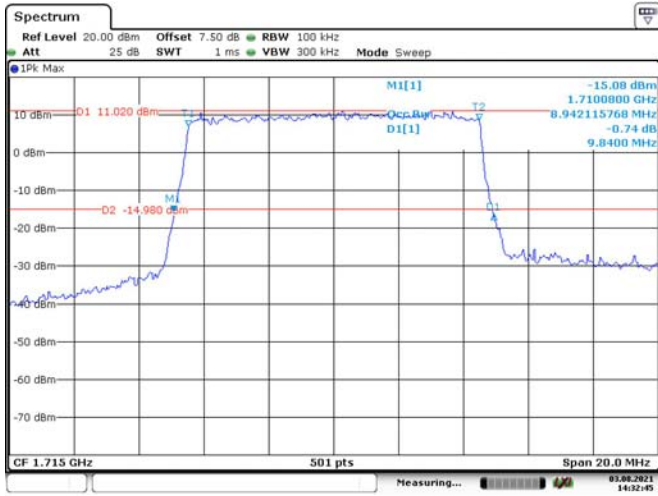
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5M, 16QAM, High Channel

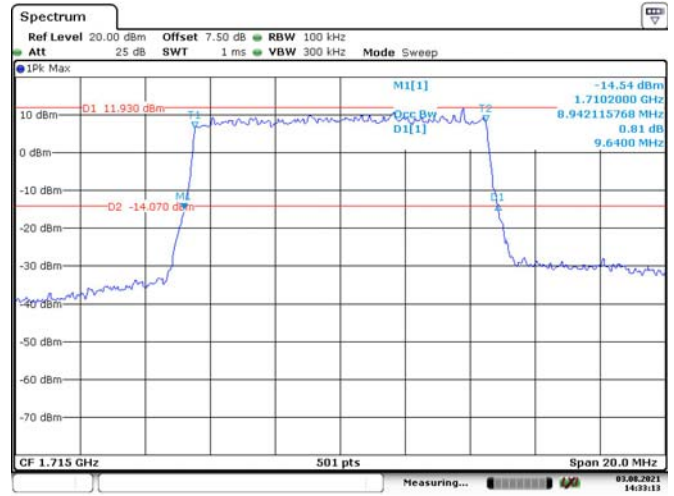


Date: 3.AUG.2021 14:32:13

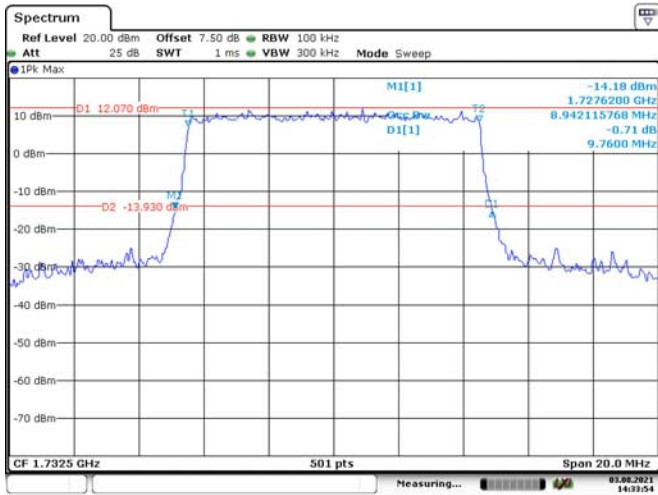
10M, QPSK, Low Channel



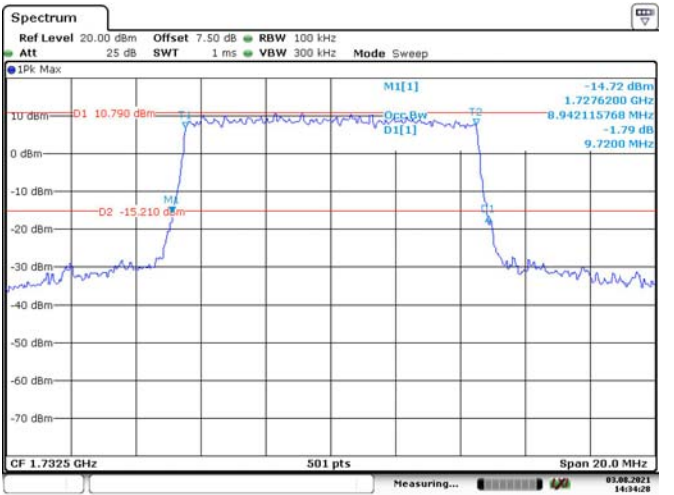
10M, 16QAM, Low Channel



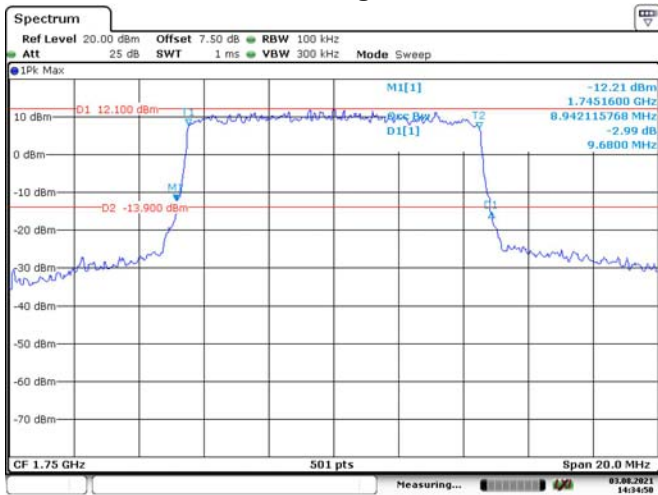
10M, QPSK, Middle Channel



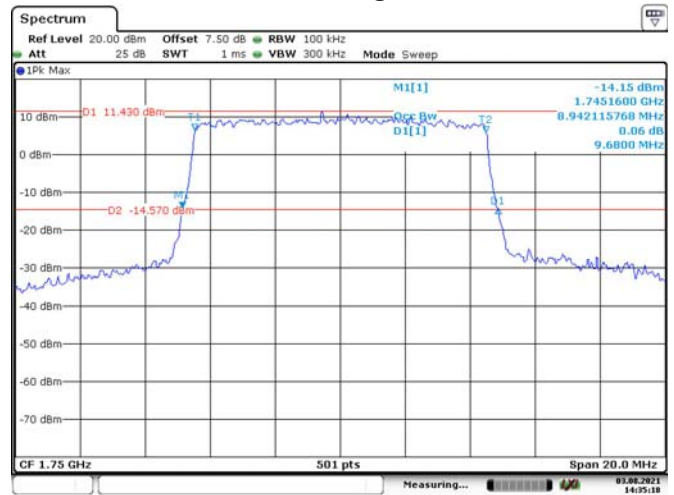
10M, 16QAM, Middle Channel



10M, QPSK, High Channel



10M, 16QAM, High Channel

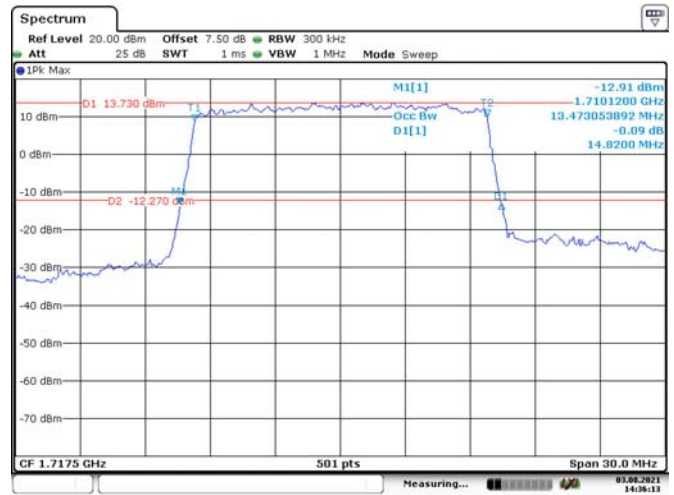




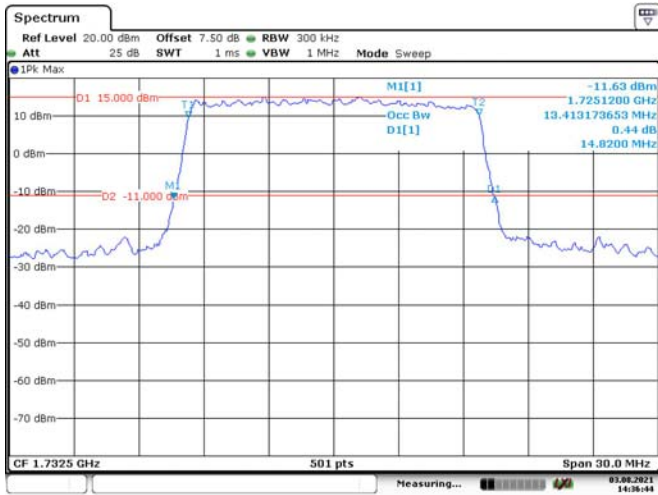
15M, QPSK, Low Channel



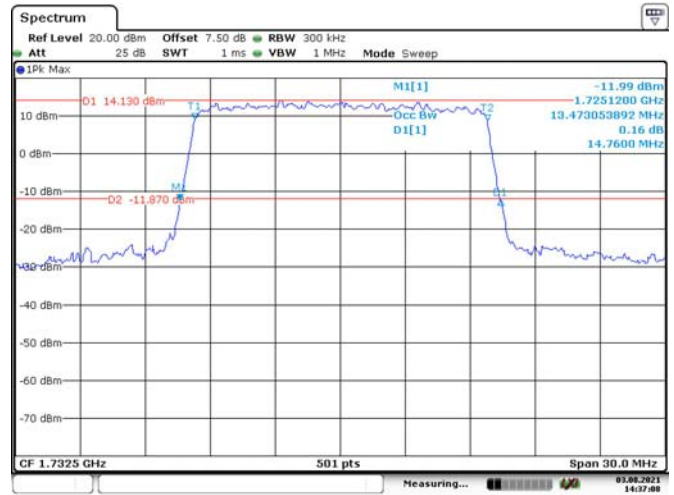
15M, 16QAM, Low Channel



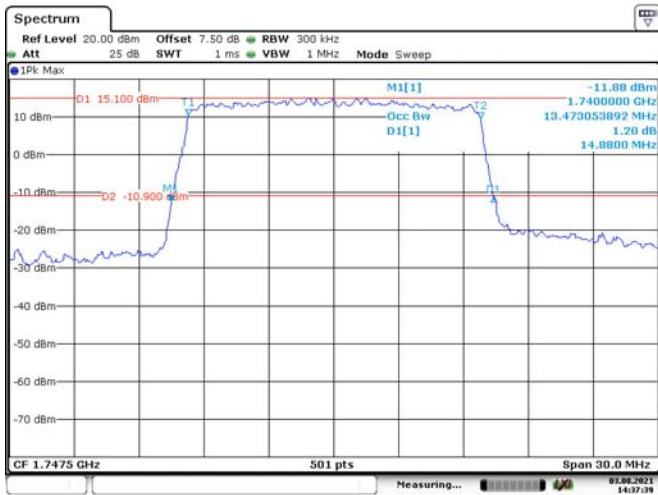
15M, QPSK, Middle Channel



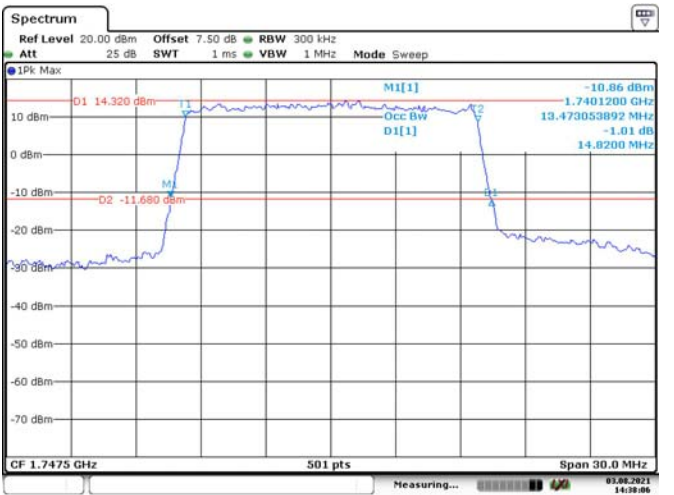
15M, 16QAM, Middle Channel



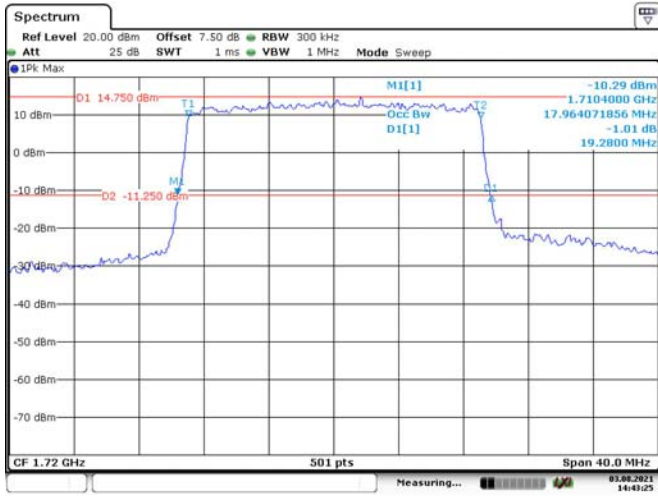
15M, QPSK, High Channel



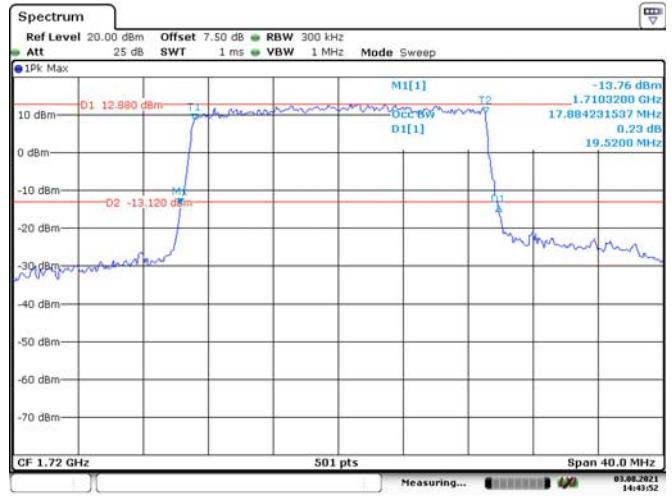
15M, 16QAM, High Channel



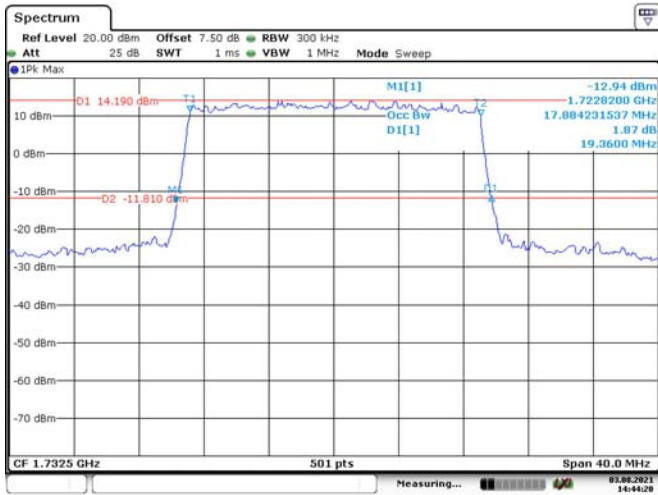
20M, QPSK, Low Channel



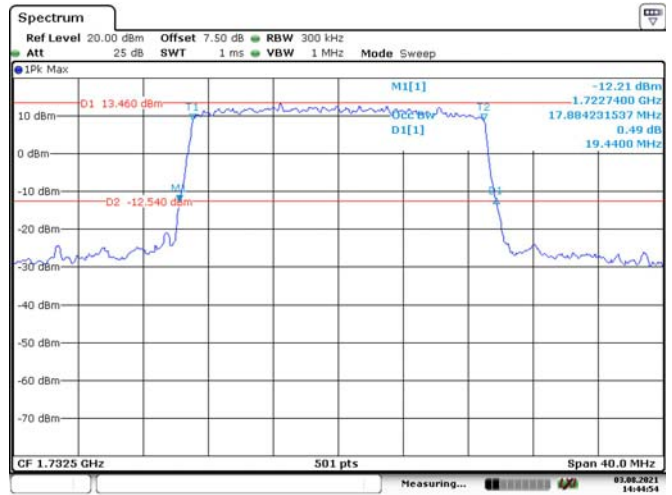
20M, 16QAM, Low Channel



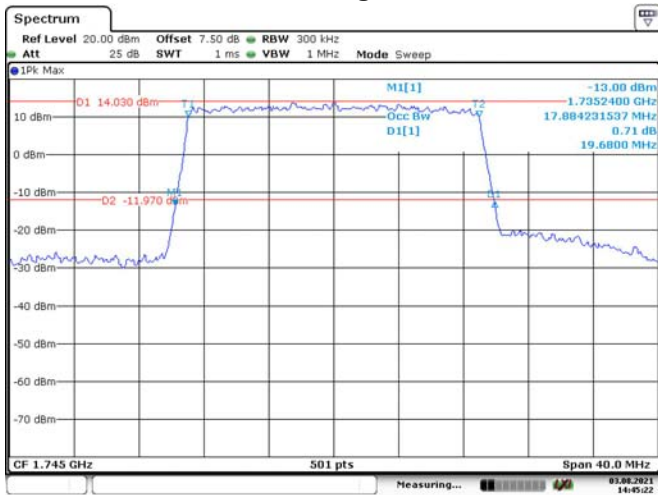
20M, QPSK, Middle Channel



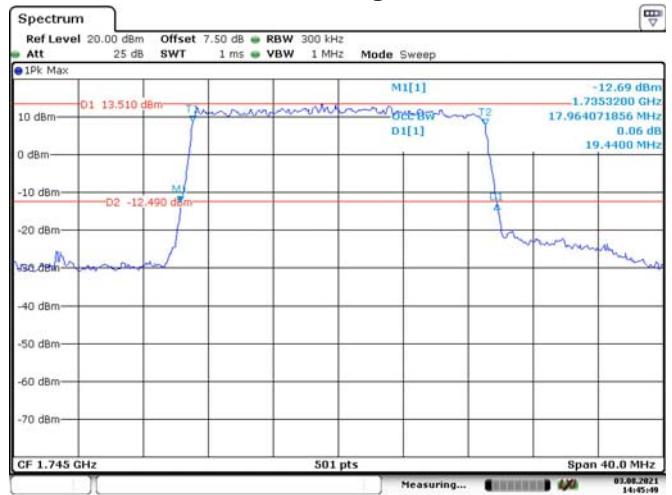
2M, 16QAM, Middle Channel



20M, QPSK, High Channel

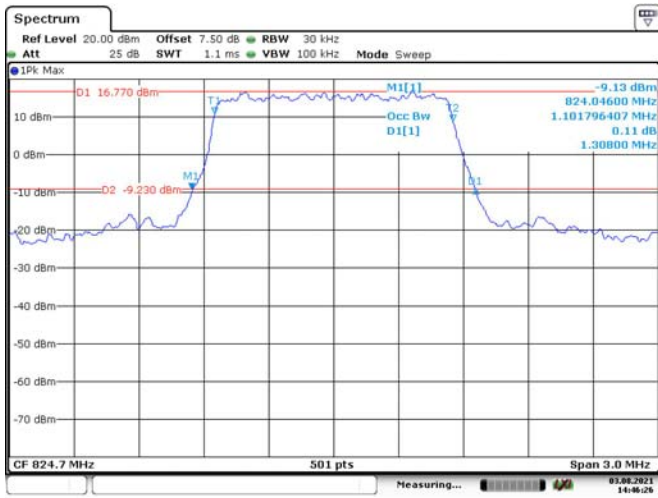


20M, 16QAM, High Channel

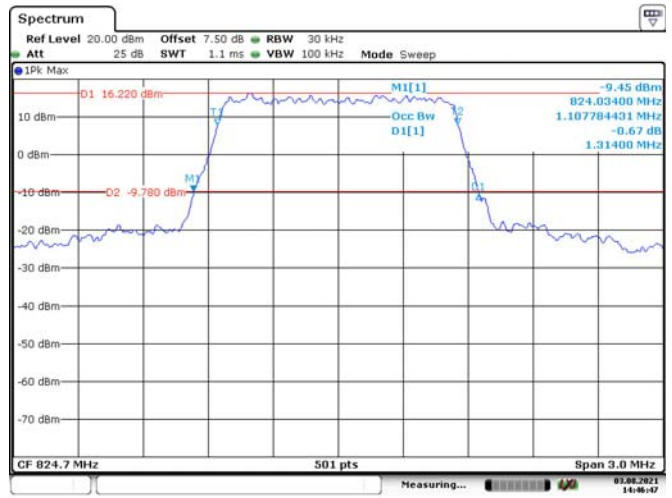


**LTE Band 5:**

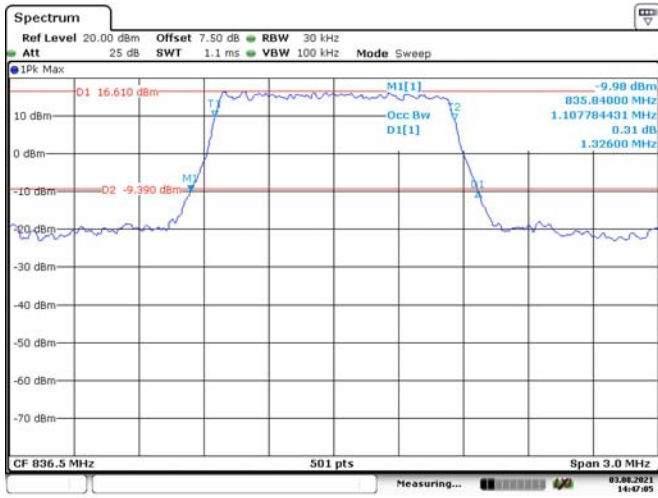
**1.4M, QPSK, Low Channel**



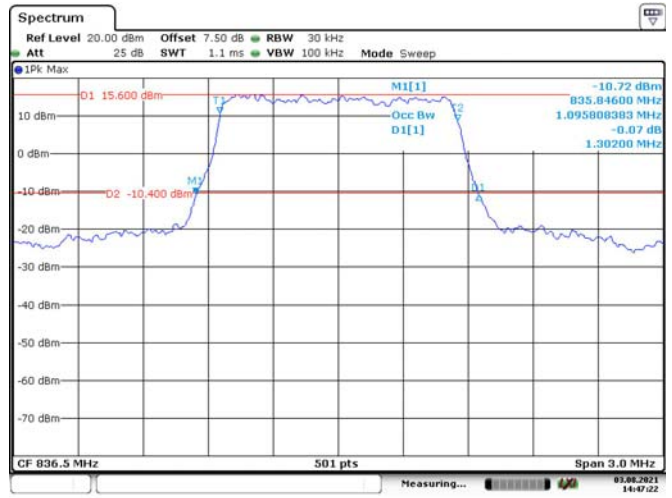
**1.4M, 16QAM, Low Channel**



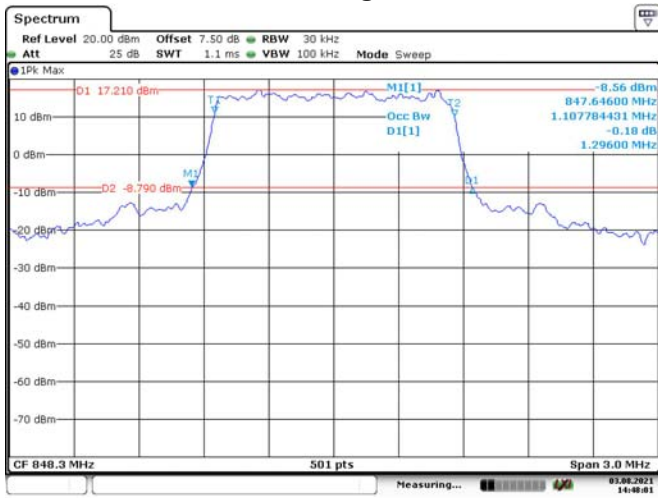
**1.4M, QPSK, Middle Channel**



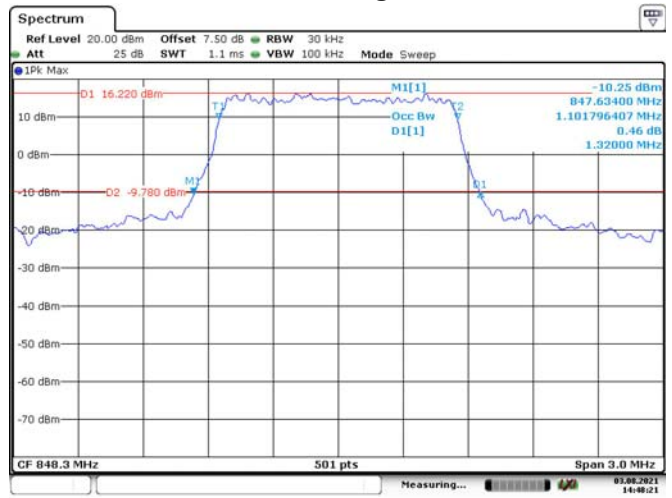
**1.4M, 16QAM, Middle Channel**



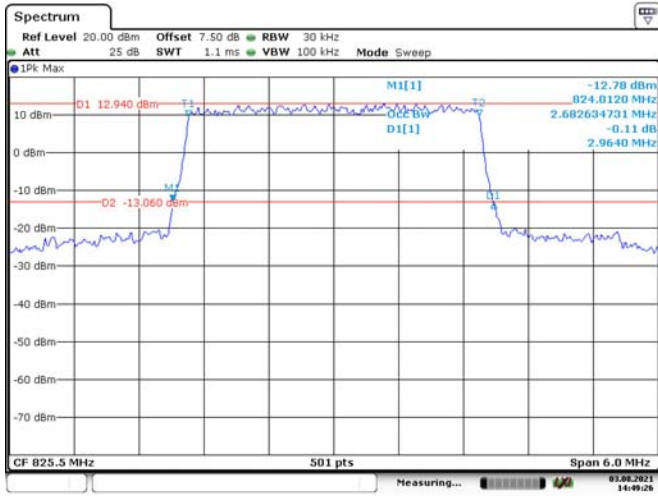
**1.4M, QPSK, High Channel**



**1.4M, 16QAM, High Channel**

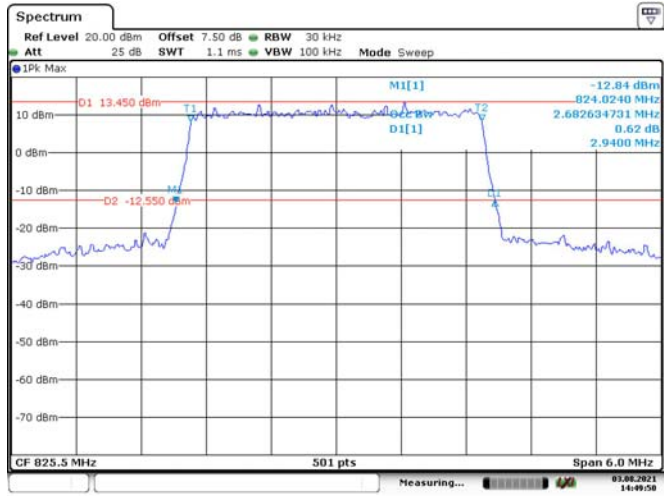


3M, QPSK, Low Channel



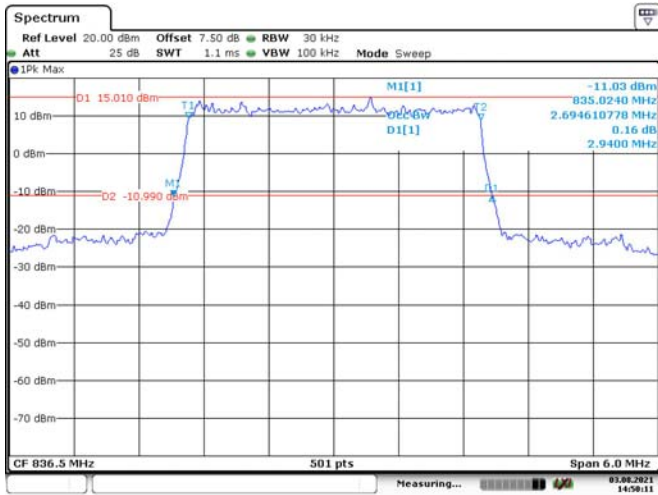
Date: 3.AUG.2021 14:49:27

3M, 16QAM, Low Channel



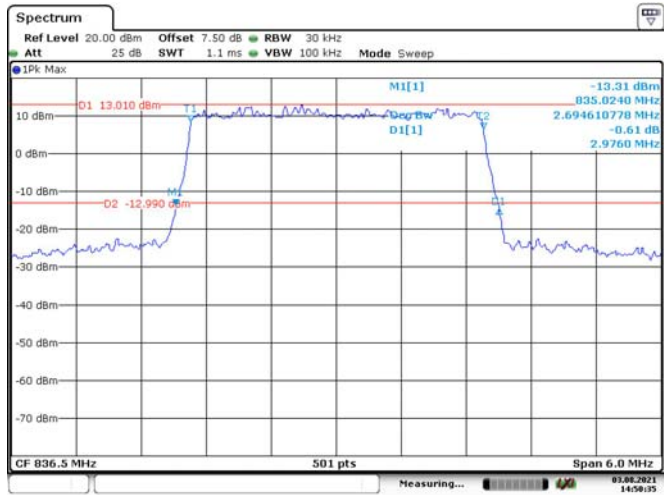
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3M, QPSK, Middle Channel



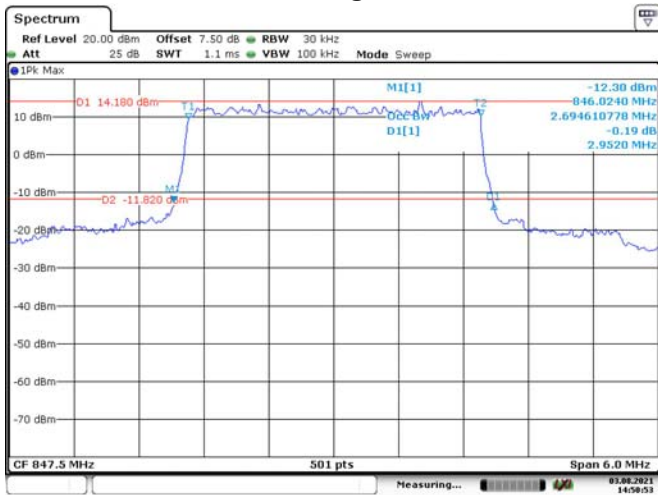
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3M, 16QAM, Middle Channel



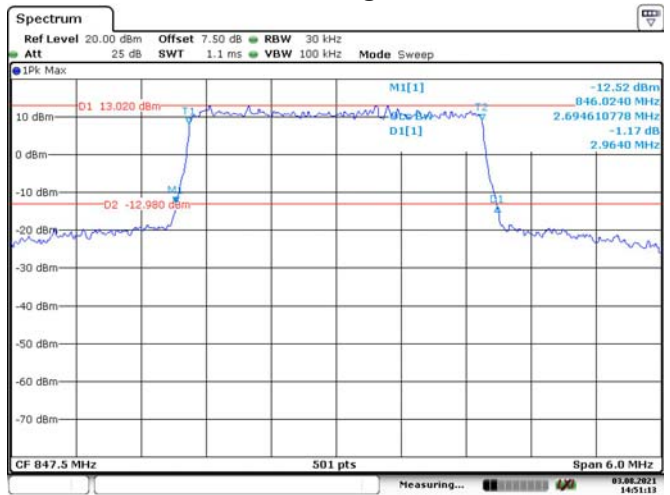
Date: 3.AUG.2021 14:50:35

3M, QPSK, High Channel



Date: 3.AUG.2021 14:50:53

3M, 16QAM, High Channel



Date: 3.AUG.2021 14:51:14