

FCC Test Report (PART 22)

Report No.: RFBEOO-WTW-P20090660

FCC ID: MAD-G08RRH-46-06B

Test Model: G08RRH-46-06B

Received Date: Sep. 28, 2020

Test Date: Oct. 28 to 31, 2020

Issued Date: Dec. 28, 2020

Applicant: Microelectronics Technology Inc.

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R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RFBEOO-WTW-P20090660	Original release.	Dec. 28, 2020

1 Certificate of Conformity

Product: LionHead 2x40W n5 RRH

Brand: MTI

Test Model: G08RRH-46-06B

Sample Status: ENGINEERING SAMPLE

Applicant: Microelectronics Technology Inc.

Test Date: Oct. 28 to 31, 2020

Standards: FCC Part 22, Subpart H

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Dec. 28, 2020
Claire Kuan / Specialist

Approved by :  , **Date:** Dec. 28, 2020
Clark Lin / Technical Manager

2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective radiated power	PASS	Meet the requirement of limit.
2.1047	Modulation characteristics	PASS	Meet the requirement
22.913 (d)	Peak To Average Ratio	PASS	Meet the requirement of limit.
2.1055 22.355	Frequency Stability	PASS	Meet the requirement of limit.
2.1049	Occupied Bandwidth	PASS	Meet the requirement of limit.
22.917	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 22.917	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -33.16dB at 407.31MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Test Site and Instruments

For radiated spurious emissions test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-3-1	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-2	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-3	Mar. 17, 2020	Mar. 16, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 24, 2020	Sep. 23, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1500	180504	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Tested Date: Oct. 31, 2020

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Power meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021
Power sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 10, 2020	Feb. 09, 2021
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 10, 2020	Feb. 09, 2021
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Oct. 28, 2020

3 General Information

3.1 General Description of EUT

Product	LionHead 2x40W n5 RRH		
Brand	MTI		
Test Model	G08RRH-46-06B		
Status of EUT	ENGINEERING SAMPLE		
Power Supply Rating	DC -40.5 to -57 V (Nominal -48Vdc)		
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM		
Modulation Technology	5G NR FDD		
Operating Frequency	Band n5	Channel Bandwidth: 5MHz	871.5MHz ~891.5MHz
		Channel Bandwidth: 10MHz	874MHz ~889MHz
		Channel Bandwidth: 15MHz	876.5MHz ~886.5MHz
		Channel Bandwidth: 20MHz	879MHz ~884MHz
Max. ERP Power	Channel Bandwidth: 5MHz		312607.94mW (QPSK)
	Channel Bandwidth: 10MHz		156314.76mW (QPSK)
	Channel Bandwidth: 15MHz		103992.02mW (QPSK)
	Channel Bandwidth: 20MHz		77983.01mW (QPSK)
	Channel Bandwidth: 5MHz+5MHz CA Contiguous		155955.25mW (QPSK)
	Channel Bandwidth: 5MHz+10MHz CA Contiguous		103992.02mW (QPSK)
	Channel Bandwidth: 5MHz+15MHz CA Contiguous		77624.71mW (QPSK)
	Channel Bandwidth: 5MHz+20MHz CA Contiguous		63679.55mW (QPSK)
	Channel Bandwidth: 10MHz+10MHz CA Contiguous		76736.15mW (QPSK)
	Channel Bandwidth: 10MHz+15MHz CA Contiguous		62086.90mW (QPSK)
	Channel Bandwidth: 5MHz+5MHz CA-NC Non-Contiguous		286417.80mW (QPSK)
	Channel Bandwidth: 5MHz+10MHz CA-NC Non-Contiguous		214783.05mW (QPSK)
	Channel Bandwidth: 5MHz+15MHz CA-NC Non-Contiguous		190546.07mW (QPSK)
	Channel Bandwidth: 10MHz+10MHz CA-NC Non-Contiguous		148593.56mW (QPSK)

Emission Designator	Channel Bandwidth: 5MHz	QPSK: 4M47G7D
		16QAM: 4M49D7W
		64QAM: 4M47D7W
		256QAM: 4M47D7W
	Channel Bandwidth: 10MHz	QPSK: 9M22G7D
		16QAM: 9M14D7W
		64QAM: 9M22D7W
		256QAM: 9M20D7W
	Channel Bandwidth: 15MHz	QPSK: 14M0G7D
		16QAM: 14M0D7W
		64QAM: 14M0D7W
		256QAM: 14M0D7W
	Channel Bandwidth: 20MHz	QPSK: 18M6G7D
		16QAM: 18M7D7W
		64QAM: 18M6D7W
		256QAM: 18M6D7W
	Channel Bandwidth: 5MHz+20MHz CA Contiguous	QPSK: 24M0G7D
		16QAM: 24M0D7W
		64QAM: 23M9D7W
		256QAM: 23M9D7W
	Channel Bandwidth: 10MHz+10MHz CA Non Contiguous	QPSK: 18M4G7D
		16QAM: 18M3D7W
		64QAM: 18M4D7W
		256QAM: 18M4D7W
Antenna Type	Refer to note as below	
Antenna Connector	Refer to user's manual	
Accessory Device	NA	
Data Cable Supplied	NA	

Note:

- This report is prepared for FCC Class II permissive change. The difference compared with the Report No.: RF200417E02 design is as the following information:
 - ◆ Add the 5G NR n5 by software.
 - ◆ Modified the antenna connector type to 2×4.3-10 Female due to typing error.
- According to above conditions, all test item needs to be performed. And all data are verified to meet the requirements.
- The EUT incorporates a MIMO function.

Channel Bandwidth	Modulation	TX & RX configuration	
5MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
10MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
15MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
20MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX

4. The antennas provided to the EUT, please refer to the following table:

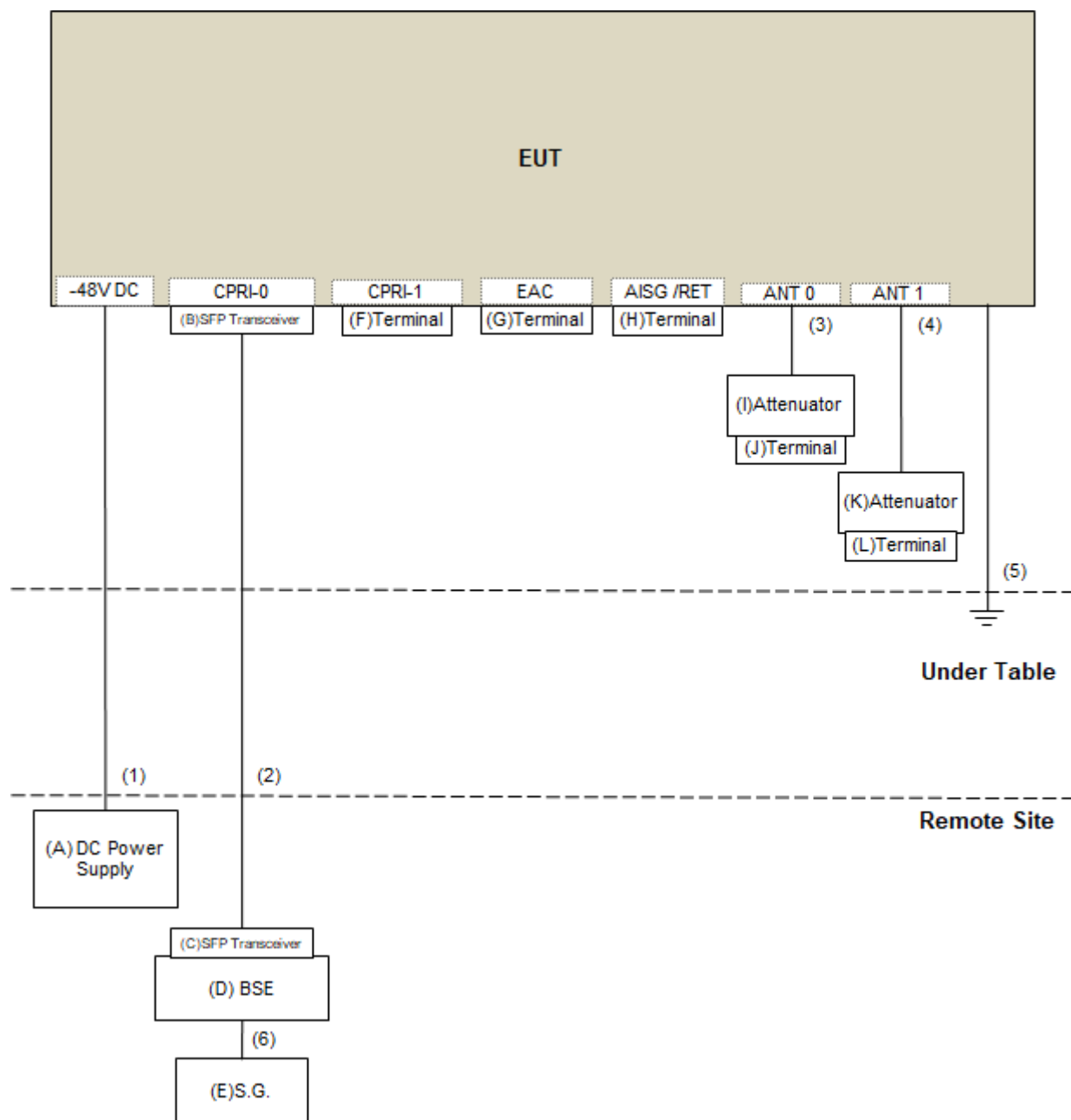
Antenna Gain (dBi)	Frequency range(MHz)	Antenna Type	Connector Type
18	806-894	Sector	2×4.3-10 Female

Notes Based on the manufacturer's statement :

The antenna is a polarization Sector antenna, +/- 45 degree means two port have 90 degree difference

- Based on the maximum RF power (conducted & EIRP) listed in this report, considerations pertaining to the maximum allowed EIRP (conducted power level), signal type and antenna gain should be considered for each installation.
- The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test



3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	DC Power Supply	NA	NA	NA	NA	Supplied by client
B	SFP Transceiver	NA	NA	NA	NA	Supplied by client
C	SFP Transceiver	NA	NA	NA	NA	Supplied by client
D	BSE (Note 2)	NA	NA	NA	NA	Supplied by client
E	S.G	Agilent	E4438C	NA	NA	Provided by Lab
F	Terminal	NA	NA	NA	NA	Supplied by client
G	Terminal	NA	NA	NA	NA	Supplied by client
H	Terminal	NA	NA	NA	NA	Supplied by client
I	Attenuator	NA	NA	NA	NA	Supplied by client
J	Terminal	NA	NA	NA	NA	Supplied by client
K	Attenuator	NA	NA	NA	NA	Supplied by client
L	Terminal	NA	NA	NA	NA	Supplied by client

NOTE:

1. All power cords of the above support units are non-shielded (1.8 m).
2. BSE: Based Station Emulator which is to transmit/receive the waveform
3. Items B-C acted as communication partners to transfer data.

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC Power Cable	1	10	Yes	0	Supplied by client
2	Coaxial Cable	1	10	Yes	0	Supplied by client
3	RF Cable	1	1.5	Yes	0	Supplied by client
4	RF Cable	1	1.5	Yes	0	Supplied by client
5	GND Cable	1	3	No	0	Provided by Lab
6	RF Cable	1	3	No	0	Supplied by client

3.3 Test Mode Applicability and Tested Channel Detail

Following channel(s) was (were) selected for the final test as listed below:

Test Item	Available Frequency (MHz)	Tested Frequency (MHz)	Channel Bandwidth	Modulation
Output Power	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		874, 881.5, 889	10MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		879, 881.5, 884	20MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+876.5, 879+884, 886.5+891.5	5MHz+5MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+879, 876.5+884, 884+891.5	5MHz+10MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+881.5, 874+884, 881.5+891.5	5MHz+15MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+884	5MHz+20MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		874+884, 876.5+886.5, 879+889	10MHz+10MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		874+886.5	10MHz+15MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+891.5	5MHz+5MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+889	5MHz+10MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+886.5	5MHz+15MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
Frequency Stability	871.5 to 891.5	881.5	5MHz Single Carrier	QPSK
		881.5	10MHz Single Carrier	QPSK
		881.5	15MHz Single Carrier	QPSK
		881.5	20MHz Single Carrier	QPSK
		871.5+884	5MHz+20MHz CA Contiguous	QPSK
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK

Test Item	Available Frequency (MHz)	Tested Frequency (MHz)	Channel Bandwidth	Modulation
Emission Bandwidth	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		874, 881.5, 889	10MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		879, 881.5, 884	20MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+876.5, 879+884, 886.5+891.5	5MHz+5MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+884	5MHz+20MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+891.5	5MHz+5MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
Channel Edge	871.5 to 891.5	871.5, 891.5	5MHz Single Carrier	QPSK
		874, 889	10MHz Single Carrier	QPSK
		876.5, 886.5	15MHz Single Carrier	QPSK
		879, 884	20MHz Single Carrier	QPSK
		871.5+884	5MHz+20MHz CA Contiguous	QPSK
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK
Peak To Average Ratio	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		874, 881.5, 889	10MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		879, 881.5, 884	20MHz Single Carrier	QPSK, 16QAM, 64QAM, , 256QAM
		871.5+884	5MHz+20MHz CA Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK, 16QAM, 64QAM, , 256QAM
Conducted Emission	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK
		874, 881.5, 889	10MHz Single Carrier	QPSK
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK
		879, 881.5, 884	20MHz Single Carrier	QPSK
		871.5+884	5MHz+20MHz CA Contiguous	QPSK
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK

Test Item	Available Frequency (MHz)	Tested Frequency (MHz)	Channel Bandwidth	Modulation
Radiated Emission Below 1GHz	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK
		874, 881.5, 889	10MHz Single Carrier	QPSK
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK
		879, 881.5, 884	20MHz Single Carrier	QPSK
		871.5+884	5MHz+20MHz CA Contiguous	QPSK
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK
Radiated Emission Above 1GHz	871.5 to 891.5	871.5, 881.5, 891.5	5MHz Single Carrier	QPSK
		874, 881.5, 889	10MHz Single Carrier	QPSK
		876.5, 881.5, 886.5	15MHz Single Carrier	QPSK
		879, 881.5, 884	20MHz Single Carrier	QPSK
		871.5+884	5MHz+20MHz CA Contiguous	QPSK
		874+889	10MHz+10MHz CA-NC Non-Contiguous	QPSK

NOTE:

1. All supported modulation types were evaluated. The Worst case of QPSK was selected. Therefore, the Frequency Stability, Band Edge, Conducted Emission and Radiated Emission were performed under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
Output Power	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Modulation characteristics	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Frequency Stability	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Emission Bandwidth	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Band Edge	25deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Peak To Average Ratio	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Conducted Emission	22deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Radiated Emission	25deg. C, 75%RH	120Vac, 60Hz	Ryan Du

Note: Above input power with the AC/DC PSU used during testing.

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 22, Subpart H

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

The ERP of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

- (i) 500 watts per emission; or
- (ii) 400 watts/MHz (PSD) per sector.

4.1.2 Test Procedures

EIRP / ERP Measurement:

Conducted Power Measurement:

- a. A spectrum analyzer was used on the output port of the EUT and recorded output power from the spectrum analyzer.
- b. The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + GT$$

Where ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

P_{Meas} : measured transmitter output power or PSD, in dBm or dBW

GT: gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

The numeric gain of an ideal half-wave dipole antenna is 1.64 and the numeric gain of an ideal isotropic antenna is 1.0.

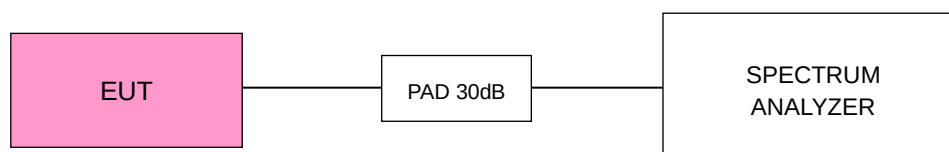
The gain of an ideal half-wave dipole antenna relative to an ideal isotropic antenna is $10\log 1.64$ or 2.15 dBi.

Therefore, if the antenna gain in dBd is unknown, it can be determined from the gain in dBi via the following relationship:

$$\text{ERP} = \text{EIRP} - 2.15 \text{ dB.}$$

4.1.3 Test Setup

Conducted Power Measurement:



4.1.4 Test Results

Single Mode

5MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300	871.5	38.97	38.92	18.00	54.82	54.77	303389.12	299916.25	56.02	PASS	46
176300	881.5	38.96	39.02	18.00	54.81	54.87	302691.34	306902.20	56.02	PASS	46
178300	891.5	39.10	38.92	18.00	54.95	54.77	312607.94	299916.25	56.02	PASS	46

10MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800	874	36.09	36.06	18.00	51.94	51.91	156314.76	155238.70	56.02	PASS	46
176300	881.5	36.05	36.09	18.00	51.90	51.94	154881.66	156314.76	56.02	PASS	46
177800	889	36.06	36.08	18.00	51.91	51.93	155238.70	155955.25	56.02	PASS	46

15MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175300	876.5	34.32	34.29	18.00	50.17	50.12	103992.02	102801.63	56.02	PASS	46
176300	881.5	34.32	34.26	18.00	50.17	50.05	103992.02	101157.95	56.02	PASS	46
177300	886.5	34.27	34.27	18.00	50.12	50.08	102801.63	101859.14	56.02	PASS	46

20MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175800	879	33.06	32.96	18.00	48.91	48.81	77803.66	76032.63	56.02	PASS	46
176300	881.5	33.01	33.04	18.00	48.86	48.89	76913.04	77446.18	56.02	PASS	46
176800	884	33.07	33.00	18.00	48.92	48.85	77983.01	76736.15	56.02	PASS	46

5MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300	871.5	38.90	38.90	18.00	54.75	54.75	298538.26	298538.26	56.02	PASS	46
176300	881.5	38.83	38.83	18.00	54.68	54.68	293764.97	293764.97	56.02	PASS	46
178300	891.5	39.04	38.80	18.00	54.89	54.65	308318.80	291742.70	56.02	PASS	46

10MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800	874	35.93	35.91	18.00	51.78	51.76	150660.71	149968.48	56.02	PASS	46
176300	881.5	35.91	36.00	18.00	51.76	51.85	149968.48	153108.75	56.02	PASS	46
177800	889	36.00	35.91	18.00	51.85	51.76	153108.75	149968.48	56.02	PASS	46

15MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175300	876.5	34.20	34.20	18.00	50.05	50.05	101157.95	101157.95	56.02	PASS	46
176300	881.5	34.11	34.16	18.00	49.96	50.01	99083.19	100230.52	56.02	PASS	46
177300	886.5	34.20	34.21	18.00	50.05	50.06	101157.95	101391.14	56.02	PASS	46

20MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175800	879	32.91	32.92	18.00	48.76	48.77	75162.29	75335.56	56.02	PASS	46
176300	881.5	32.89	32.92	18.00	48.74	48.77	74816.95	75335.56	56.02	PASS	46
176800	884	32.89	32.94	18.00	48.74	48.79	74816.95	75683.29	56.02	PASS	46

5MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300	871.5	38.93	38.86	18.00	54.78	54.71	300607.63	295801.25	56.02	PASS	46
176300	881.5	38.92	39.01	18.00	54.77	54.86	299916.25	306196.34	56.02	PASS	46
178300	891.5	38.97	38.82	18.00	54.82	54.67	303389.12	293089.32	56.02	PASS	46

10MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800	874	35.91	35.98	18.00	51.76	51.83	149968.48	152405.28	56.02	PASS	46
176300	881.5	35.91	35.91	18.00	51.76	51.76	149968.48	149968.48	56.02	PASS	46
177800	889	35.98	36.01	18.00	51.83	51.86	152405.28	153461.70	56.02	PASS	46

15MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175300	876.5	34.14	34.28	18.00	49.99	50.13	99770.01	103038.61	56.02	PASS	46
176300	881.5	34.20	34.14	18.00	50.05	49.99	101157.95	99770.01	56.02	PASS	46
177300	886.5	34.20	34.23	18.00	50.05	50.08	101157.95	101859.14	56.02	PASS	46

20MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175800	879	32.92	32.95	18.00	48.77	48.80	75335.56	75857.76	56.02	PASS	46
176300	881.5	32.91	32.92	18.00	48.76	48.77	75162.29	75335.56	56.02	PASS	46
176800	884	32.89	32.92	18.00	48.74	48.77	74816.95	75335.56	56.02	PASS	46

5MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
					Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300	871.5	38.86	38.84	18.00	54.71	54.69	295801.25	294442.16	56.02	PASS	46
176300	881.5	38.87	38.96	18.00	54.72	54.81	296483.14	302691.34	56.02	PASS	46
178300	891.5	39.06	38.85	18.00	54.91	54.70	309741.93	295120.92	56.02	PASS	46

10MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
					Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800	874	35.90	35.90	18.00	51.75	51.75	149623.57	149623.57	56.02	PASS	46
176300	881.5	35.87	35.95	18.00	51.72	51.80	148593.56	151356.12	56.02	PASS	46
177800	889	35.91	35.95	18.00	51.76	51.80	149968.48	151356.12	56.02	PASS	46

15MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit(dBm/MHz)		
					Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175300	876.5	34.26	34.16	18.00	50.11	50.01	102565.19	100230.52	56.02	PASS	46
176300	881.5	34.14	34.20	18.00	49.99	50.05	99770.01	101157.95	56.02	PASS	46
177300	886.5	34.21	34.12	18.00	50.06	49.97	101391.14	99311.60	56.02	PASS	46

20MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
					Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
175800	879	32.95	32.88	18.00	48.80	48.73	75857.76	74644.88	56.02	PASS	46
176300	881.5	32.85	33.06	18.00	48.70	48.91	74131.02	77803.66	56.02	PASS	46
176800	884	32.96	32.88	18.00	48.81	48.73	76032.63	74644.88	56.02	PASS	46

Contiguous Mode

5MHz+5MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175300	871.5+876.5	35.95	36.06	18.00	51.80	51.91	151356.12	155238.70	56.02	PASS	43
175800+176800	879+884	35.91	35.97	18.00	51.76	51.82	149968.48	152054.75	56.02	PASS	43
177300+178300	886.5+891.5	36.08	35.95	18.00	51.93	51.80	155955.25	151356.12	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175800	871.5+879	34.29	34.26	18.00	50.14	50.11	103276.14	102565.19	56.02	PASS	43
175300+176800	876.5+884	34.24	34.25	18.00	50.09	50.10	102093.95	102329.30	56.02	PASS	43
176800+178300	884+891.5	34.32	34.27	18.00	50.17	50.12	103992.02	102801.63	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176300	871.5+881.5	32.86	32.93	18.00	48.71	48.69	74301.91	73960.53	56.02	PASS	43
174800+176800	874+884	32.87	32.92	18.00	48.72	48.71	74473.20	74301.91	56.02	PASS	43
176300+178300	881.5+891.5	33.05	32.98	18.00	48.90	48.76	77624.71	75162.29	56.02	PASS	43

5MHz+20MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176800	871.5+884	32.19	32.18	18.00	48.04	48.03	63679.55	63533.09	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+176800	874+884	32.92	33.00	18.00	48.77	48.85	75335.56	76736.15	56.02	PASS	43
175300+177300	876.5+886.5	33.00	32.96	18.00	48.85	48.81	76736.15	76032.63	56.02	PASS	43
175800+177800	879+889	32.95	32.98	18.00	48.80	48.83	75857.76	76383.58	56.02	PASS	43

10MHz+15MHz

Channel Number	Freq. (MHz)	QPSK								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+177300	874+886.5	32.08	32.04	18.00	47.93	47.89	62086.90	61517.69	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175300	871.5+876.5	35.87	35.89	18.00	51.72	51.74	148593.56	149279.44	56.02	PASS	43
175800+176800	879+884	35.80	35.93	18.00	51.65	51.78	146217.72	150660.71	56.02	PASS	43
177300+178300	886.5+891.5	35.89	35.89	18.00	51.74	51.74	149279.44	149279.44	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175800	871.5+879	34.18	34.12	18.00	50.03	49.97	100693.17	99311.60	56.02	PASS	43
175300+176800	876.5+884	34.12	34.16	18.00	49.97	50.01	99311.60	100230.52	56.02	PASS	43
176800+178300	884+891.5	34.16	34.11	18.00	50.01	49.96	100230.52	99083.19	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176300	871.5+881.5	32.86	32.85	18.00	48.71	48.70	74301.91	74131.02	56.02	PASS	43
174800+176800	874+884	32.85	32.84	18.00	48.70	48.69	74131.02	73960.53	56.02	PASS	43
176300+178300	881.5+891.5	32.87	32.87	18.00	48.72	48.72	74473.20	74473.20	56.02	PASS	43

5MHz+20MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176800	871.5+884	31.89	31.68	18.00	47.74	47.53	59429.22	56623.93	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+176800	874+884	32.96	32.94	18.00	48.81	48.79	76032.63	75683.29	56.02	PASS	43
175300+177300	876.5+886.5	32.88	32.88	18.00	48.73	48.73	74644.88	74644.88	56.02	PASS	43
175800+177800	879+889	32.88	32.92	18.00	48.73	48.77	74644.88	75335.56	56.02	PASS	43

10MHz+15MHz

Channel Number	Freq. (MHz)	16QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+177300	874+886.5	31.85	31.85	18.00	47.70	47.70	58884.37	58884.37	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175300	871.5+876.5	35.90	35.93	18.00	51.75	51.78	149623.57	150660.71	56.02	PASS	43
175800+176800	879+884	35.84	35.86	18.00	51.69	51.71	147570.65	148251.81	56.02	PASS	43
177300+178300	886.5+891.5	36.02	35.88	18.00	51.87	51.73	153815.46	148936.11	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175800	871.5+879	34.18	34.18	18.00	50.03	50.03	100693.17	100693.17	56.02	PASS	43
175300+176800	876.5+884	34.12	34.16	18.00	49.97	50.01	99311.60	100230.52	56.02	PASS	43
176800+178300	884+891.5	34.18	34.16	18.00	50.03	50.01	100693.17	100230.52	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176300	871.5+881.5	32.81	32.84	18.00	48.66	48.69	73451.39	73960.53	56.02	PASS	43
174800+176800	874+884	32.84	32.86	18.00	48.69	48.71	73960.53	74301.91	56.02	PASS	43
176300+178300	881.5+891.5	32.96	32.91	18.00	48.81	48.76	76032.63	75162.29	56.02	PASS	43

5MHz+20MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176800	871.5+884	31.79	31.79	18.00	47.64	47.64	58076.44	58076.44	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+176800	874+884	32.85	32.85	18.00	48.70	48.70	74131.02	74131.02	56.02	PASS	43
175300+177300	876.5+886.5	32.96	32.96	18.00	48.81	48.81	76032.63	76032.63	56.02	PASS	43
175800+177800	879+889	32.92	32.95	18.00	48.77	48.80	75335.56	75857.76	56.02	PASS	43

10MHz+15MHz

Channel Number	Freq. (MHz)	64QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+177300	874+886.5	31.92	31.92	18.00	47.77	47.77	59841.16	59841.16	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175300	871.5+876.5	35.94	35.85	18.00	51.79	51.70	151008.02	147910.84	56.02	PASS	43
175800+176800	879+884	35.84	35.84	18.00	51.69	51.69	147570.65	147570.65	56.02	PASS	43
177300+178300	886.5+891.5	35.99	35.89	18.00	51.84	51.74	152756.61	149279.44	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+175800	871.5+879	34.16	34.16	18.00	50.01	50.01	100230.52	100230.52	56.02	PASS	43
175300+176800	876.5+884	34.11	34.16	18.00	49.96	50.01	99083.19	100230.52	56.02	PASS	43
176800+178300	884+891.5	34.20	34.11	18.00	50.05	49.96	101157.95	99083.19	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176300	871.5+881.5	32.85	32.85	18.00	48.70	48.70	74131.02	74131.02	56.02	PASS	43
174800+176800	874+884	32.83	32.85	18.00	48.68	48.70	73790.42	74131.02	56.02	PASS	43
176300+178300	881.5+891.5	32.88	32.93	18.00	48.73	48.78	74644.88	75509.22	56.02	PASS	43

5MHz+20MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174300+176800	871.5+884	31.69	31.77	18.00	47.54	47.62	56754.46	57809.60	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+176800	874+884	32.96	32.88	18.00	48.81	48.73	76032.63	74644.88	56.02	PASS	43
175300+177300	876.5+886.5	32.95	32.88	18.00	48.80	48.73	75857.76	74644.88	56.02	PASS	43
175800+177800	879+889	32.85	32.85	18.00	48.70	48.70	74131.02	74131.02	56.02	PASS	43

10MHz+15MHz

Channel Number	Freq. (MHz)	256QAM								PASS /FAIL	Setting
		Conducted Average Power (dBm/MHz)		Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0	Chain 1		Chain 0	Chain 1	Chain 0	Chain 1	Maximum		
174800+177300	874+886.5	31.85	31.92	18.00	47.70	47.77	58884.37	59841.16	56.02	PASS	43

Non Contiguous Mode

5MHz+5MHz

Channel Number	Freq. (MHz)	QPSK											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+178300	871.5+891.5	35.62	35.80	35.49	35.80	38.72	38.66	18.00	54.57	54.51	286417.80	282488.00	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	QPSK											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177800	871.5+889	35.62	32.87	35.51	32.84	37.47	37.39	18.00	53.32	53.24	214783.05	210862.81	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	QPSK											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177300	871.5+886.5	35.61	31.19	35.54	31.14	36.95	36.89	18.00	52.80	52.74	190546.07	187931.68	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	QPSK											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174800+177800	874+889	32.87	32.84	32.89	32.81	35.87	35.86	18.00	51.72	51.71	148593.56	148251.81	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	16QAM												PASS /FAIL	Setting
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1	Max.		
174300+178300	871.5+891.5	35.58	35.79	35.51	35.80	38.70	38.67	18.00	54.55	54.52	285101.83	283139.20	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	16QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177800	871.5+889	35.54	33.02	35.43	33.09	37.47	37.43	18.00	53.32	53.28	214783.05	212813.90	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	16QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177300	871.5+886.5	35.54	31.31	35.59	31.37	36.93	36.98	18.00	52.78	52.83	189670.59	191866.87	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	16QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174800+177800	874+889	32.68	32.81	32.65	32.79	35.76	35.73	18.00	51.61	51.58	144877.19	143879.86	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	64QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+178300	871.5+891.5	35.50	35.83	35.50	35.74	38.68	38.63	18.00	54.53	54.48	283791.90	280543.36	35.50	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	64QAM													PASS /FAIL	Setting
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)			
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1	Max.			
174300+177800	871.5+889	35.62	32.81	35.48	32.81	37.45	37.36	18.00	53.30	53.21	213796.21	209411.25	56.02	PASS	43	

5MHz+15MHz

Channel Number	Freq. (MHz)	64QAM												PASS /FAIL	Setting
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1	Max.		
174300+177300	871.5+886.5	35.53	31.21	35.46	31.19	36.90	36.84	18.00	52.75	52.69	188364.91	185780.45	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	64QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174800+177800	874+889	32.74	32.84	32.65	32.81	35.80	35.74	18.00	51.65	51.59	146217.72	144211.54	56.02	PASS	43

5MHz+5MHz

Channel Number	Freq. (MHz)	256QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+178300	871.5+891.5	35.61	35.79	35.42	35.87	38.71	38.66	18.00	54.56	54.51	285759.05	282488.00	56.02	PASS	43

5MHz+10MHz

Channel Number	Freq. (MHz)	256QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177800	871.5+889	35.56	32.84	35.44	33.01	37.42	37.40	18.00	53.27	53.25	212324.45	211348.90	56.02	PASS	43

5MHz+15MHz

Channel Number	Freq. (MHz)	256QAM											PASS /FAIL	Setting	
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)				Limit (dBm/MHz)
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1			Max.
174300+177300	871.5+886.5	35.57	31.18	35.40	31.19	36.92	36.80	18.00	52.77	52.65	189234.36	184077.20	56.02	PASS	43

10MHz+10MHz

Channel Number	Freq. (MHz)	256QAM												PASS /FAIL	Setting
		Conducted Average Power(dBm/MHz)						Gain (dBi)	ERP(dBm/MHz)		ERP(mW/MHz)		Limit (dBm/MHz)		
		Chain 0		Chain 1		Chain 0 Total	Chain 1 Total		Chain 0	Chain 1	Chain 0	Chain 1	Max.		
174800+177800	874+889	32.71	32.84	32.71	32.84	35.79	35.79	18.00	51.64	51.64	145881.43	145881.43	56.02	PASS	43

4.2 Modulation characteristics Measurement

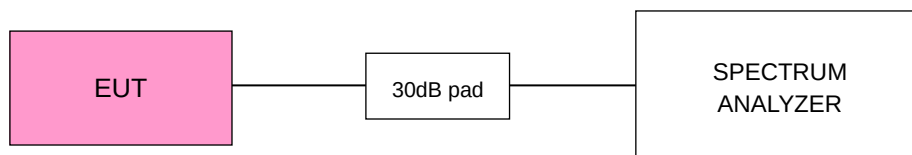
4.2.1 Limits of Modulation characteristics

N/A

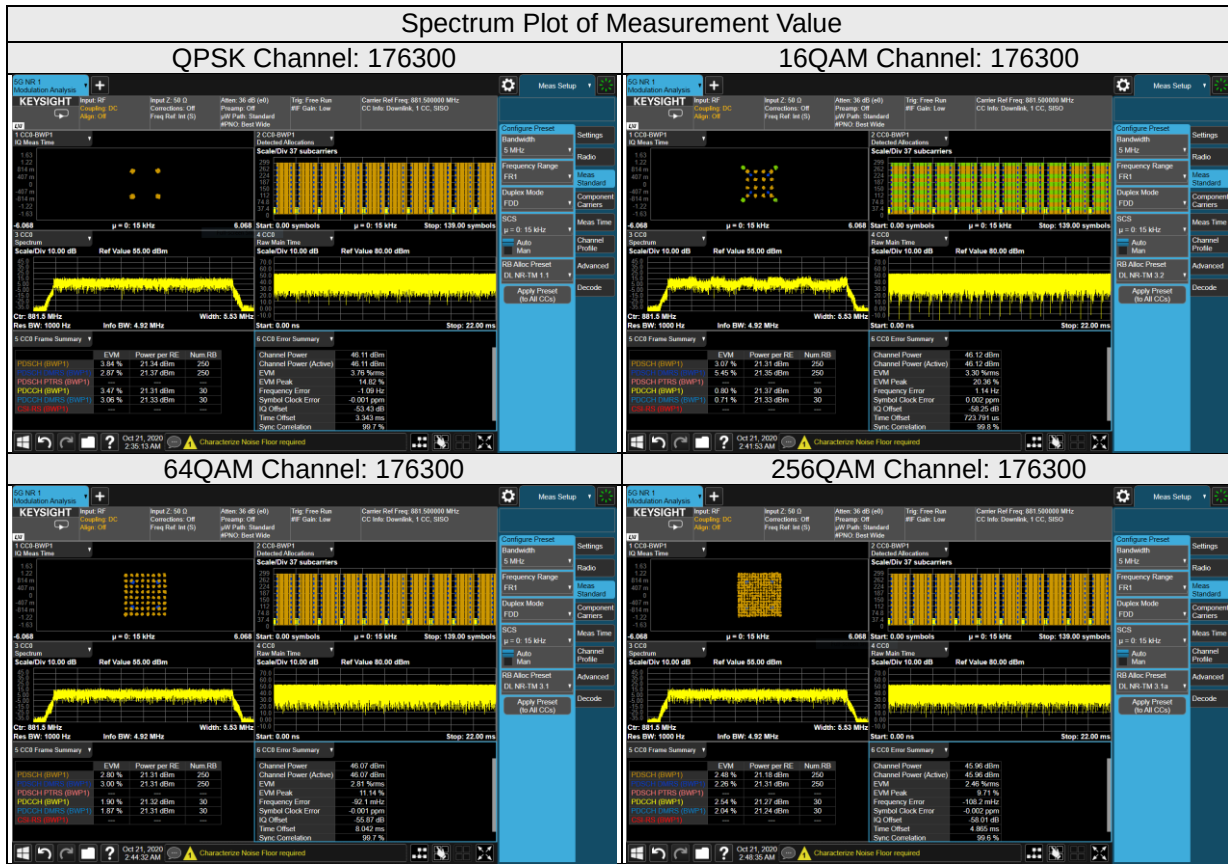
4.2.2 Test Procedure

Connect the EUT to spectrum analyzer. The frequency band is set as EUT supported modulation and channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup



4.2.4 Test Results



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

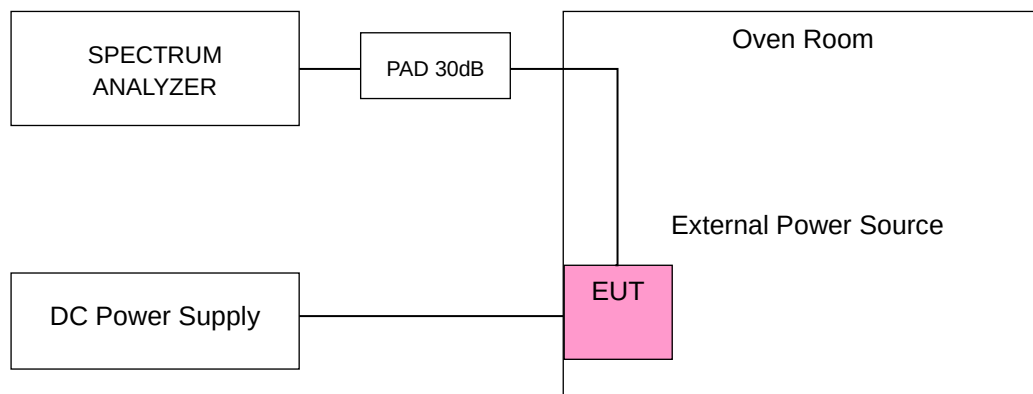
According to the FCC part 22.355. The rule is defined that "The frequency stability shall be 1.5 ppm for base and fixed station." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT $-40^{\circ}\text{C} \sim 55^{\circ}\text{C}$.

4.3.2 Test Procedure

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded from the spectrum analyzer.

4.3.3 Test Setup



4.3.4 Test Results

Single Mode- Chain 0

FREQUENCY ERROR vs. VOLTAGE					Limit (ppm)	PASS/FAIL
Voltage (Volts)	Test result (ppm)					
	5M	10M	15M	20M		
-40.8	-0.0212	-0.0230	-0.0197	-0.0229	±1.5	PASS
-55.2	-0.0195	-0.0223	-0.0203	-0.0245	±1.5	PASS

FREQUENCY ERROR vs. Temperature					Limit (ppm)	PASS/FAIL
Temp. (°C)	Test result (ppm)					
	5M	10M	15M	20M		
55	-0.0245	-0.0223	-0.0222	-0.0199	±1.5	PASS
50	-0.0238	-0.0227	-0.0243	-0.0222	±1.5	PASS
40	-0.0218	-0.0245	-0.0205	-0.0200	±1.5	PASS
30	-0.0220	-0.0238	-0.0227	-0.0231	±1.5	PASS
20	-0.0200	-0.0247	-0.0227	-0.0205	±1.5	PASS
10	-0.0208	-0.0209	-0.0228	-0.0227	±1.5	PASS
0	-0.0233	-0.0229	-0.0235	-0.0225	±1.5	PASS
-10	-0.0230	-0.0213	-0.0243	-0.0243	±1.5	PASS
-20	-0.0223	-0.0234	-0.0246	-0.0249	±1.5	PASS
-30	-0.0210	-0.0198	-0.0226	-0.0197	±1.5	PASS
-40	-0.0234	-0.0228	-0.0236	-0.0210	±1.5	PASS

Single Mode- Chain 1

FREQUENCY ERROR vs. VOLTAGE					Limit (ppm)	PASS/FAIL
Voltage (Volts)	Test result (ppm)					
	5M	10M	15M	20M		
-40.8	-0.0048	-0.0006	-0.0013	-0.0055	±1.5	PASS
-55.2	-0.0005	-0.0043	-0.0028	-0.0014	±1.5	PASS

FREQUENCY ERROR vs. Temperature					Limit (ppm)	PASS/FAIL
Temp. (°C)	Test result (ppm)					
	5M	10M	15M	20M		
55	-0.0011	-0.0039	-0.0007	-0.0022	±1.5	PASS
50	-0.0052	-0.0017	-0.0016	-0.0045	±1.5	PASS
40	-0.0003	-0.0002	-0.0002	-0.0010	±1.5	PASS
30	-0.0030	-0.0043	-0.0021	-0.0026	±1.5	PASS
20	-0.0001	-0.0010	-0.0007	-0.0002	±1.5	PASS
10	-0.0010	-0.0003	-0.0044	-0.0040	±1.5	PASS
0	-0.0059	-0.0017	-0.0009	-0.0058	±1.5	PASS
-10	-0.0026	-0.0008	0.0000	-0.0007	±1.5	PASS
-20	-0.0017	-0.0014	-0.0021	-0.0060	±1.5	PASS
-30	-0.0008	-0.0024	-0.0007	-0.0002	±1.5	PASS
-40	-0.0001	-0.0034	-0.0027	-0.0016	±1.5	PASS

Contiguous Mode

FREQUENCY ERROR vs. VOLTAGE					Limit (ppm)	PASS/FAIL
Voltage (Volts)	Test result (ppm)					
	5M+20M					
	Chain 0		Chain 1			
	CC0	CC1	CC0	CC1		
-40.8	0.0114	0.0136	0.0128	0.0071	±1.5	PASS
-55.2	0.0101	0.0098	0.0108	0.0121	±1.5	PASS

FREQUENCY ERROR vs. Temperature					Limit (ppm)	PASS/FAIL
Temp. (°C)	Test result (ppm)					
	5M+20M					
	Chain 0		Chain 1			
	CC0	CC1	CC0	CC1		
55	0.0134	0.0084	0.0139	0.0126	±1.5	PASS
50	0.0138	0.0086	0.0117	0.0139	±1.5	PASS
40	0.0159	0.0072	0.0090	0.0112	±1.5	PASS
30	0.0134	0.0085	0.0133	0.0126	±1.5	PASS
20	0.0141	0.0079	0.0066	0.0156	±1.5	PASS
10	0.0137	0.0115	0.0107	0.0109	±1.5	PASS
0	0.0158	0.0065	0.0114	0.0086	±1.5	PASS
-10	0.0082	0.0148	0.0075	0.0133	±1.5	PASS
-20	0.0080	0.0111	0.0100	0.0124	±1.5	PASS
-30	0.0082	0.0155	0.0158	0.0068	±1.5	PASS
-40	0.0123	0.0072	0.0101	0.0103	±1.5	PASS

Non Contiguous Mode

FREQUENCY ERROR vs. VOLTAGE					Limit (ppm)	PASS/FAIL
Voltage (Volts)	Test result (ppm)					
	10M+10M					
	Chain 0		Chain 1			
	CC0	CC1	CC0	CC1		
-40.8	0.0158	0.0069	0.0144	0.0075	±1.5	PASS
-55.2	0.0126	0.0088	0.0158	0.0115	±1.5	PASS

FREQUENCY ERROR vs. Temperature					Limit (ppm)	PASS/FAIL
Temp. (°C)	Test result (ppm)					
	10M+10M					
	Chain 0		Chain 1			
	CC0	CC1	CC0	CC1		
55	0.0139	0.0102	0.0151	0.0065	±1.5	PASS
50	0.0156	0.0085	0.0155	0.0122	±1.5	PASS
40	0.0102	0.0118	0.0103	0.0081	±1.5	PASS
30	0.0152	0.0133	0.0129	0.0121	±1.5	PASS
20	0.0109	0.0063	0.0089	0.0129	±1.5	PASS
10	0.0159	0.0122	0.0153	0.0141	±1.5	PASS
0	0.0116	0.0133	0.0151	0.0146	±1.5	PASS
-10	0.0114	0.0147	0.0159	0.0114	±1.5	PASS
-20	0.0077	0.0119	0.0085	0.0092	±1.5	PASS
-30	0.0094	0.0114	0.0078	0.0073	±1.5	PASS
-40	0.0065	0.0132	0.0081	0.0064	±1.5	PASS

4.4 Emission Bandwidth Measurement

4.4.1 Limits of Emission Bandwidth Measurement

-26dBc Bandwidth

That emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

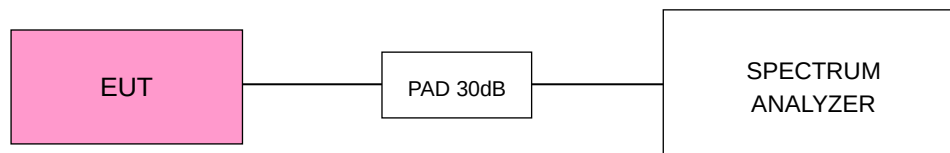
Occupied Bandwidth

All measurements were done at low, middle and high operational frequency range. EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.4.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 51kHz and VBW = 160kHz (Channel Bandwidth: 5MHz), RBW = 100kHz and VBW = 300kHz (Channel Bandwidth: 10MHz), RBW = 150kHz and VBW = 470kHz (Channel Bandwidth: 15MHz), RBW = 200kHz and VBW = 620kHz (Channel Bandwidth: 20MHz). The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.4.3 Test Setup

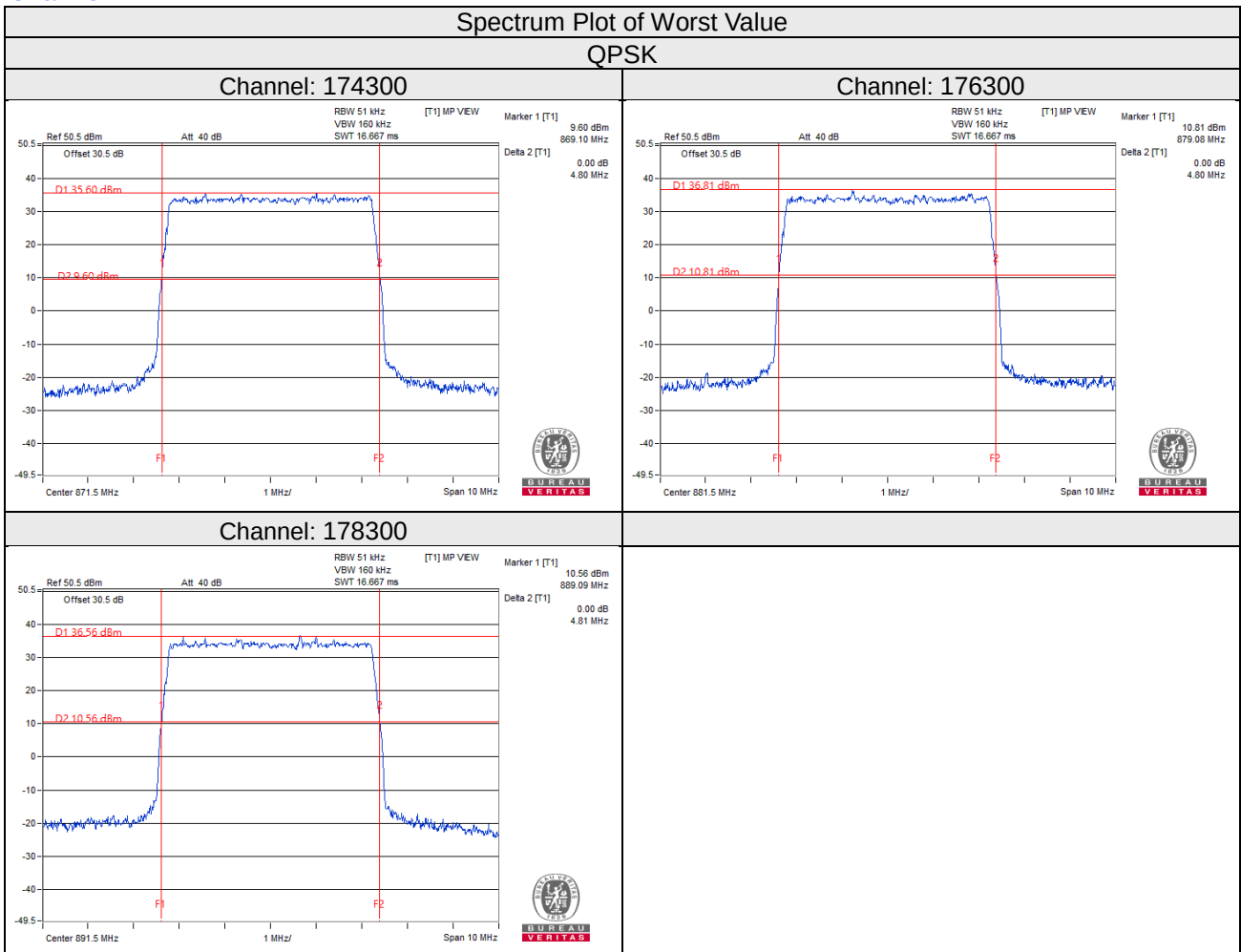


4.4.4 Test Results (-26dBc Bandwidth) Single Mode

5MHz

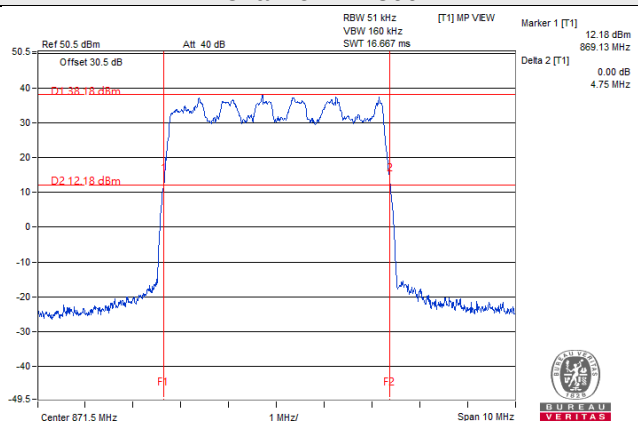
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300	871.5	4.80	4.75	4.78	4.79	4.81	4.77	4.77	4.80
176300	881.5	4.80	4.79	4.78	4.79	4.80	4.80	4.80	4.78
178300	891.5	4.81	4.75	4.80	4.77	4.80	4.76	4.80	4.76

Chain 0

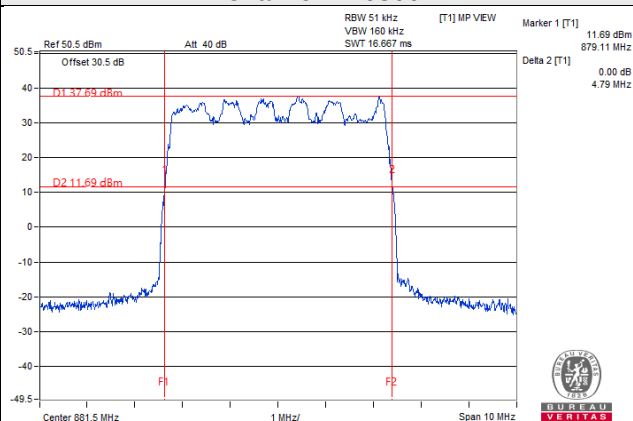


16QAM

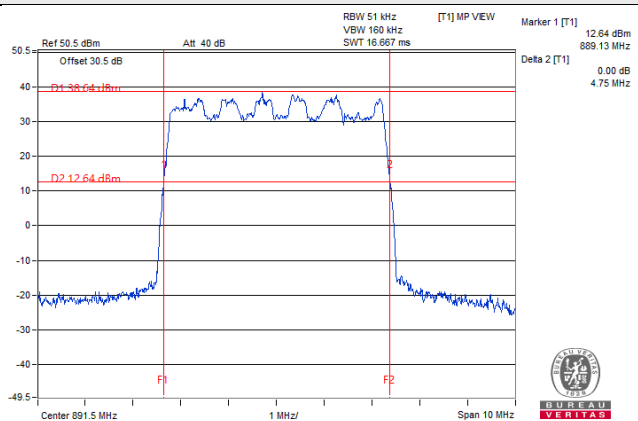
Channel: 174300



Channel: 176300

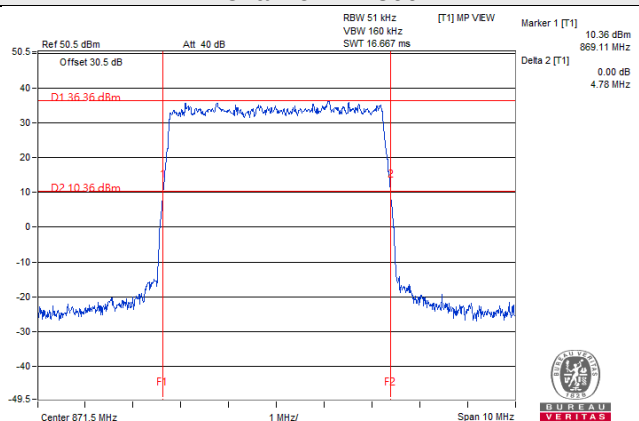


Channel: 178300

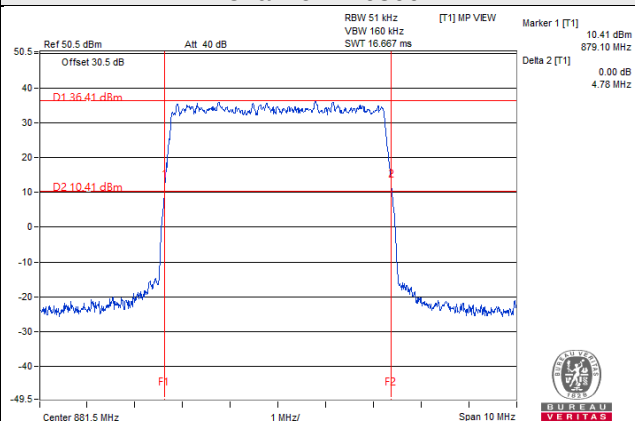


64QAM

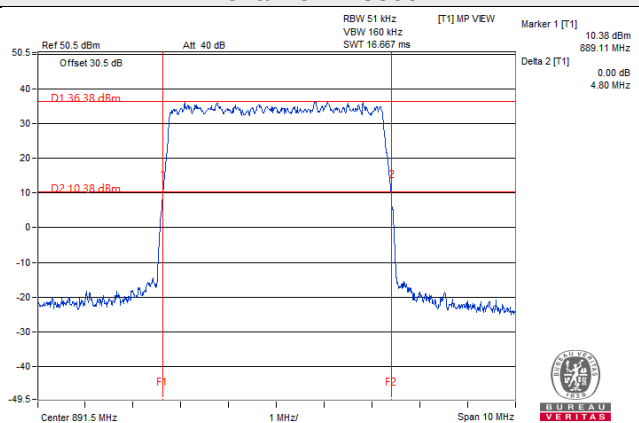
Channel: 174300



Channel: 176300

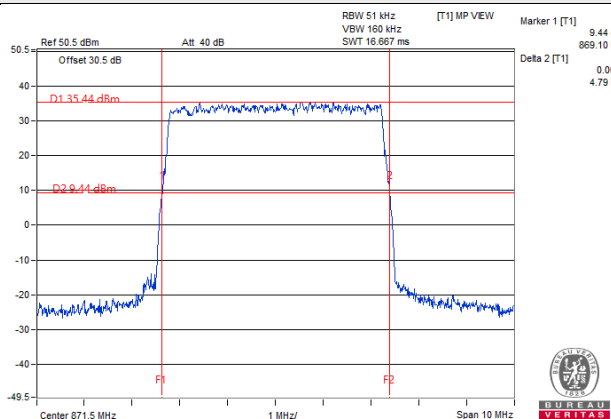


Channel: 178300

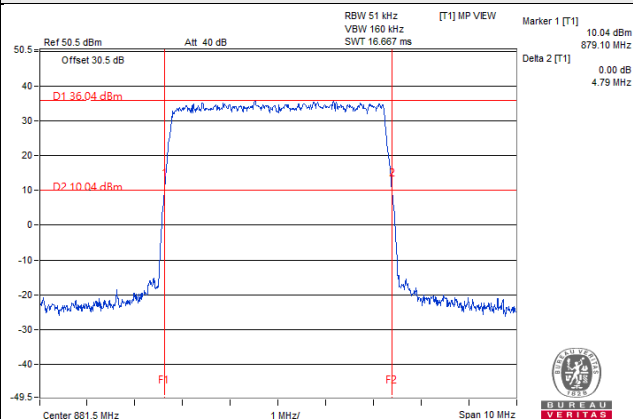


256QAM

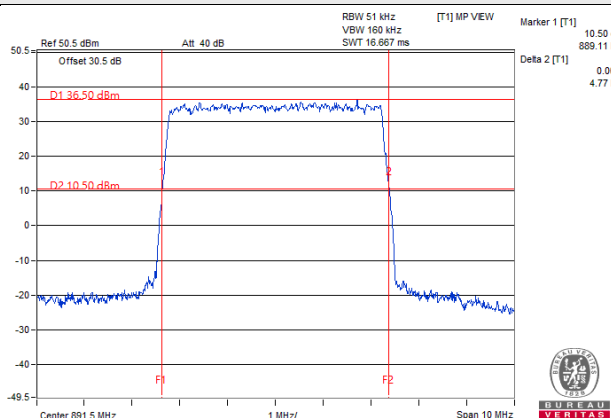
Channel: 174300



Channel: 176300



Channel: 178300



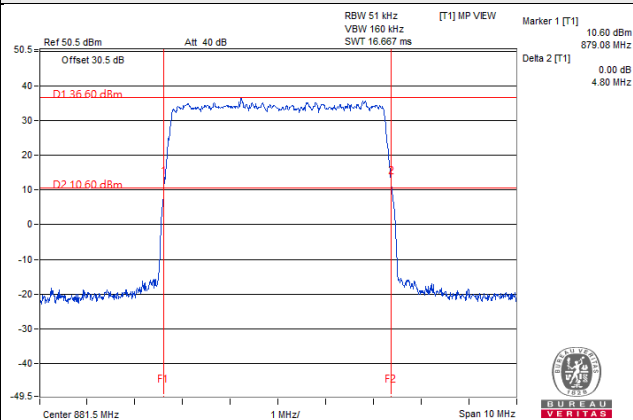
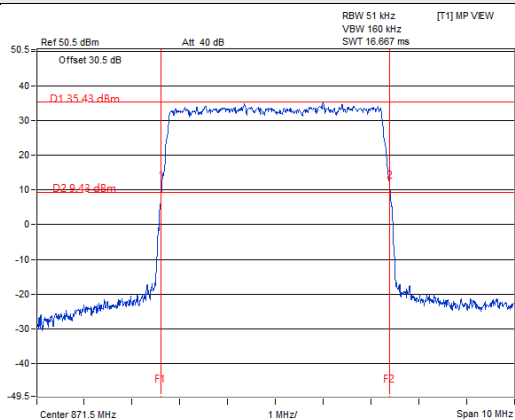
Chain 1

Spectrum Plot of Worst Value

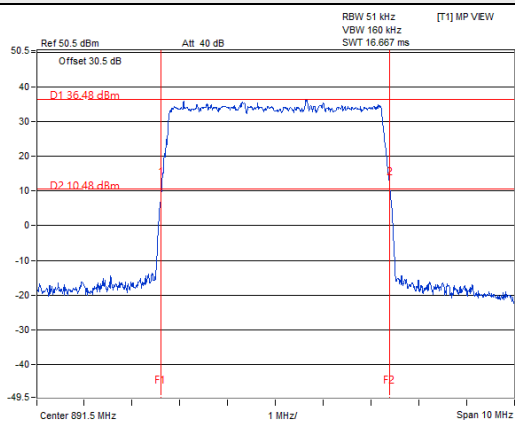
QPSK

Channel: 174300

Channel: 176300

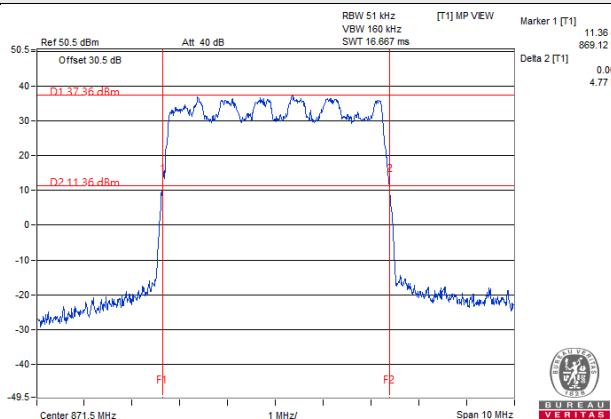


Channel: 178300

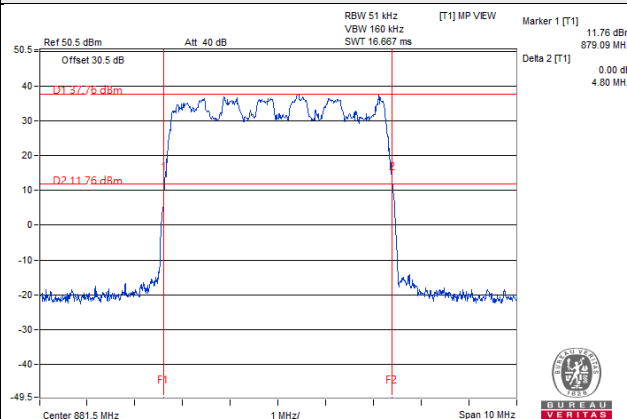


16QAM

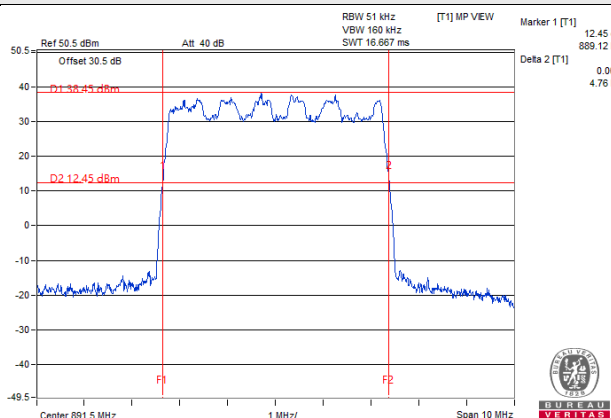
Channel: 174300



Channel: 176300

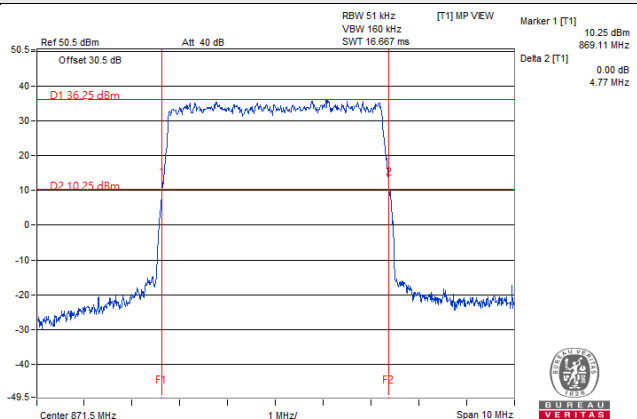


Channel: 178300

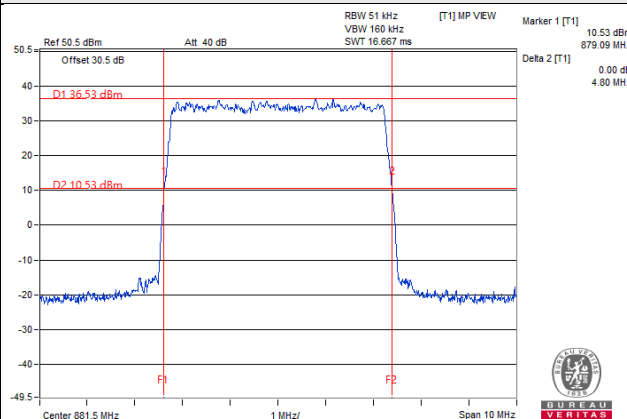


64QAM

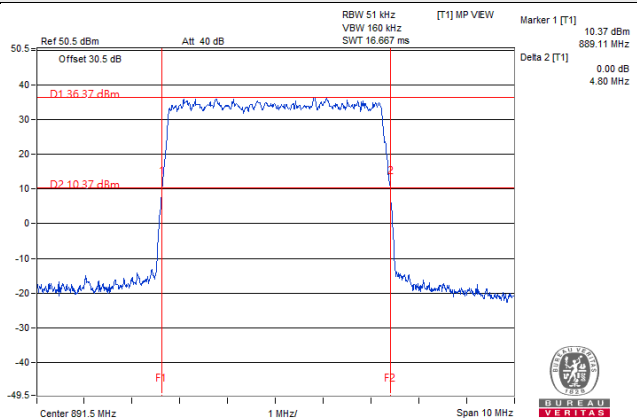
Channel: 174300



Channel: 176300

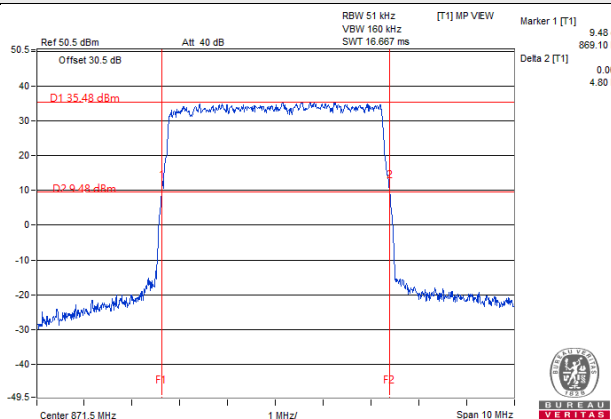


Channel: 178300

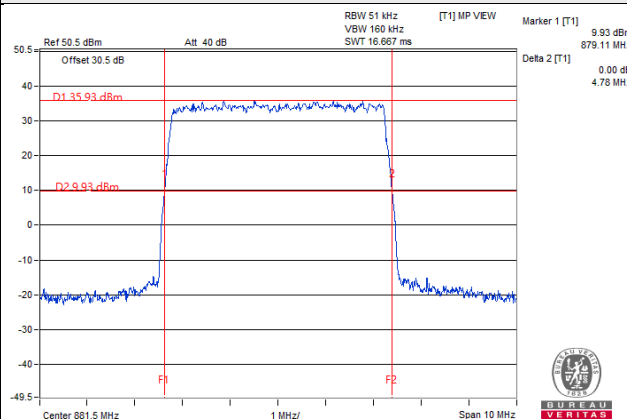


256QAM

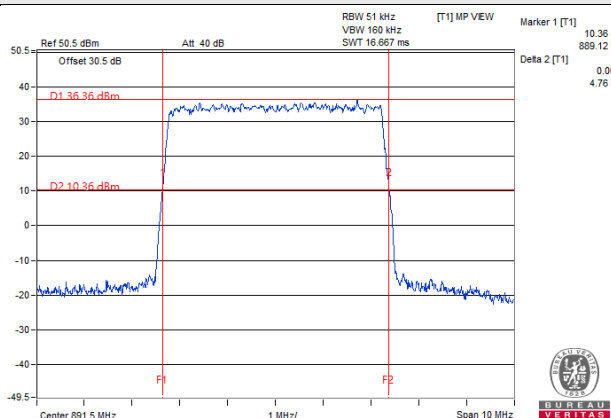
Channel: 174300



Channel: 176300



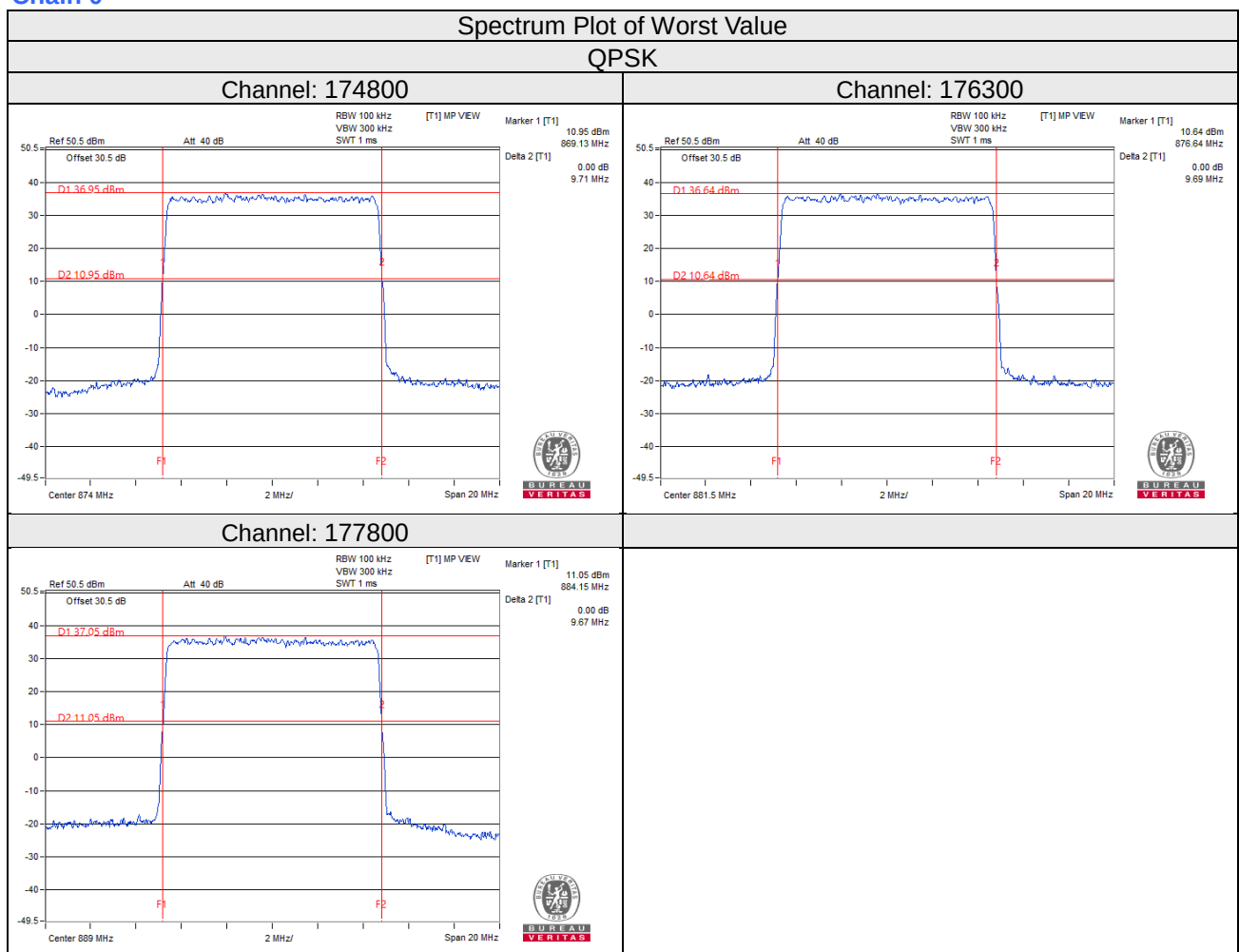
Channel: 178300



10MHz

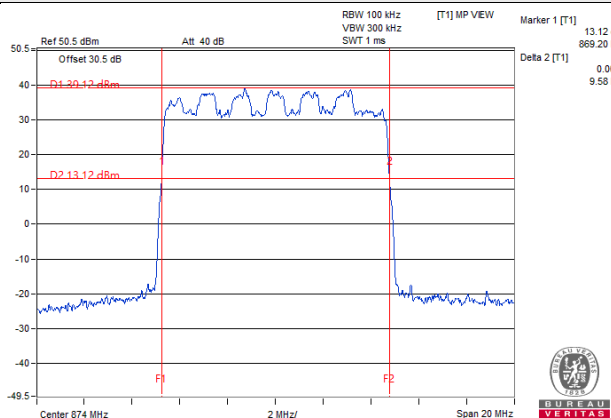
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174800	874	9.71	9.58	9.67	9.70	9.68	9.61	9.66	9.69
176300	881.5	9.69	9.63	9.68	9.69	9.65	9.61	9.67	9.69
177800	889	9.67	9.64	9.68	9.69	9.67	9.64	9.67	9.69

Chain 0

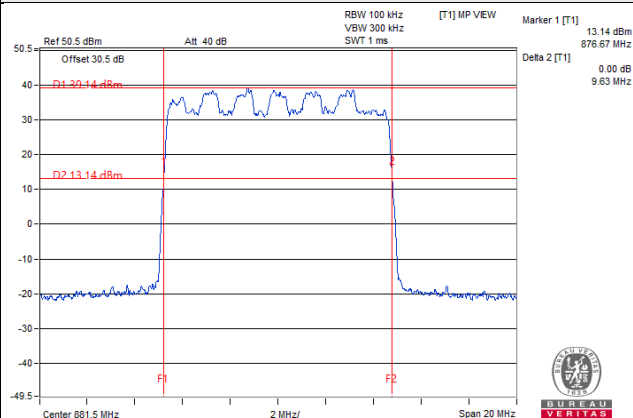


16QAM

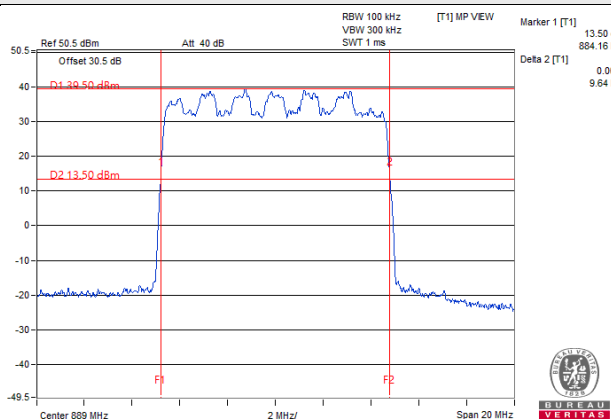
Channel: 174800



Channel: 176300

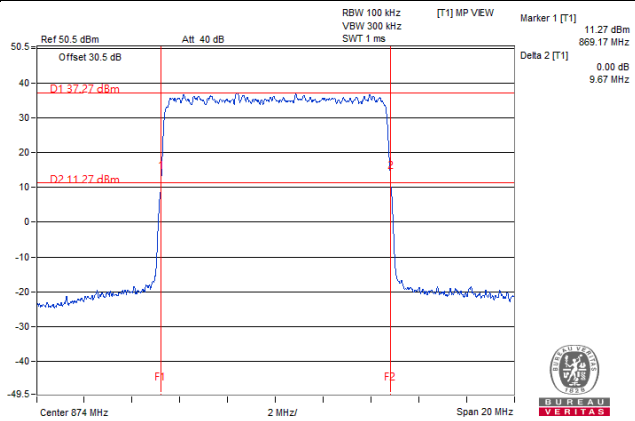


Channel: 177800

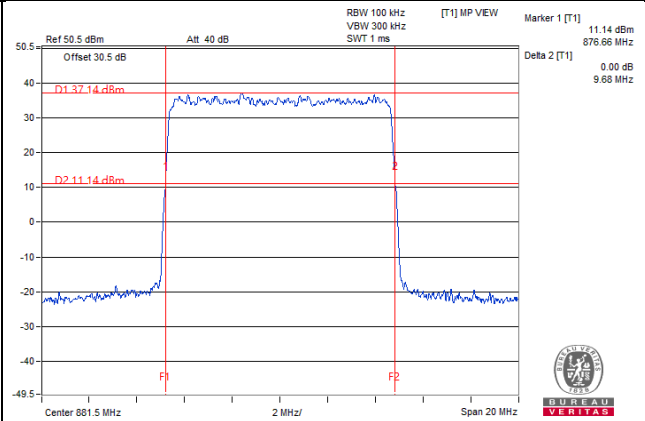


64QAM

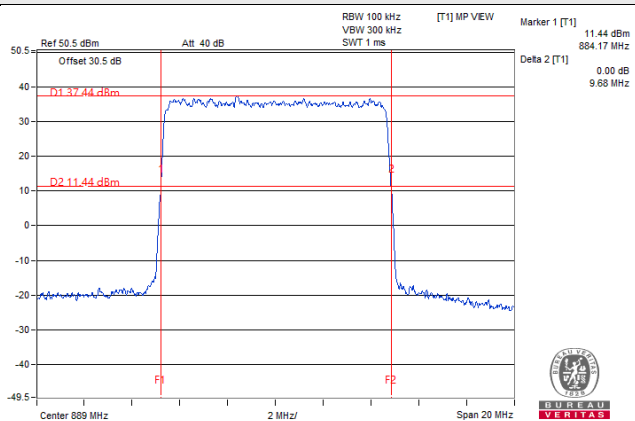
Channel: 174800



Channel: 176300

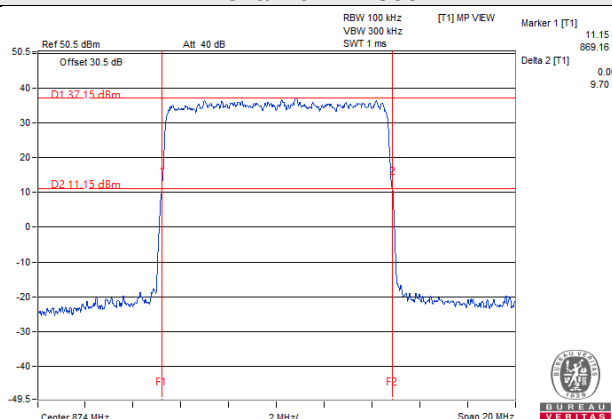


Channel: 177800

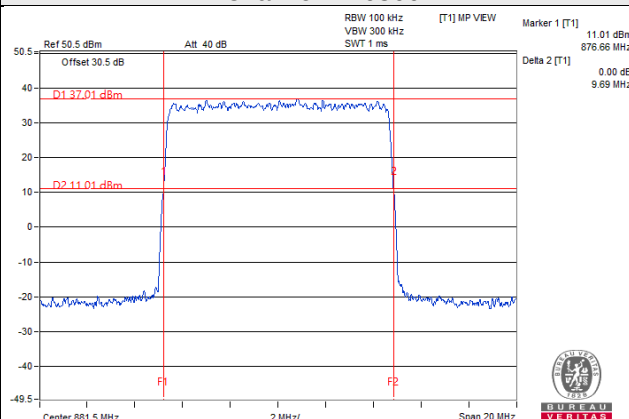


256QAM

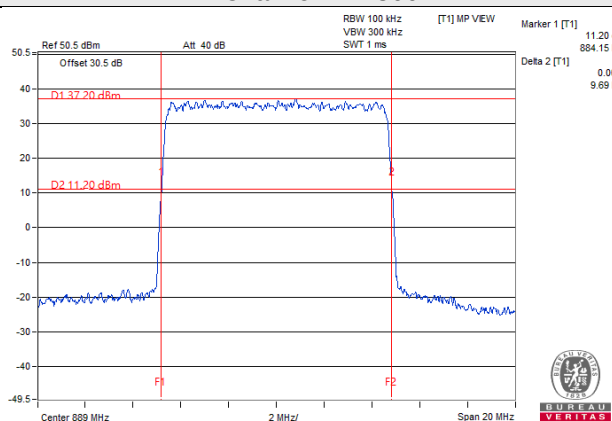
Channel: 174800



Channel: 176300



Channel: 177800



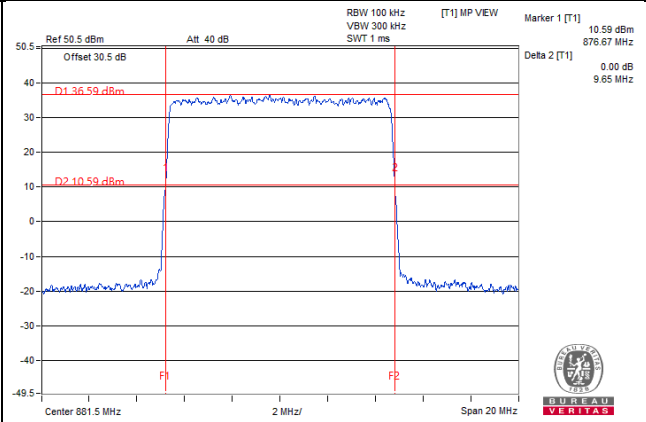
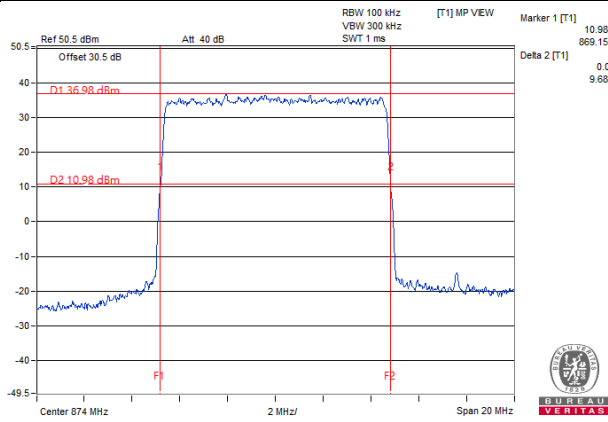
Chain 1

Spectrum Plot of Worst Value

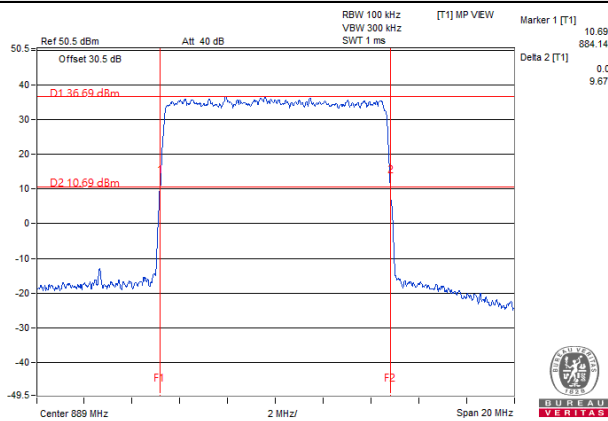
QPSK

Channel: 174800

Channel: 176300

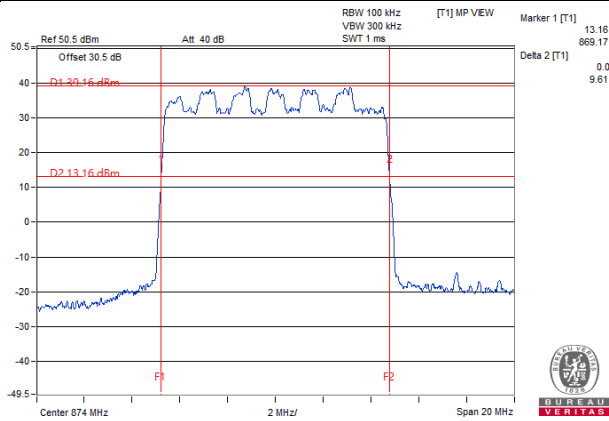


Channel: 177800

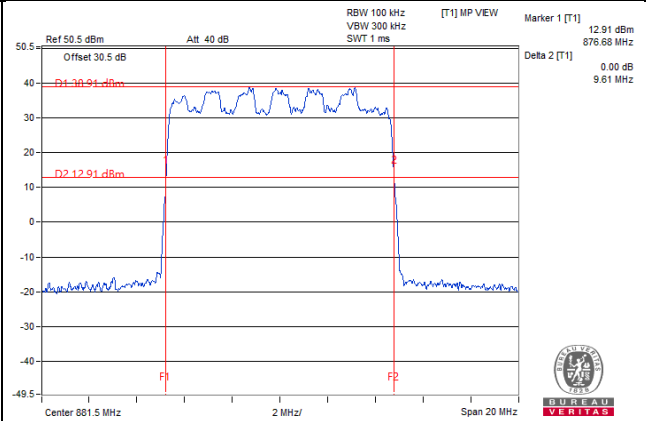


16QAM

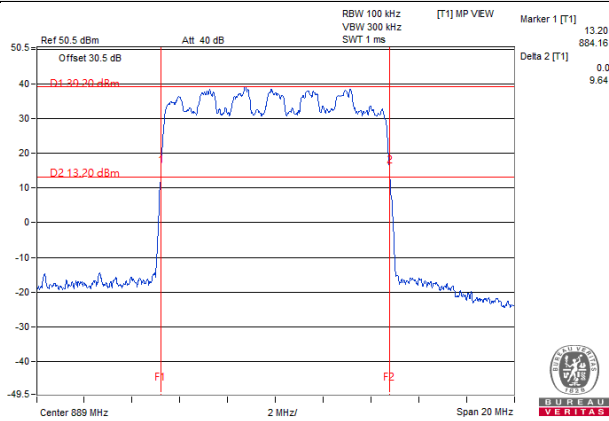
Channel: 174800



Channel: 176300

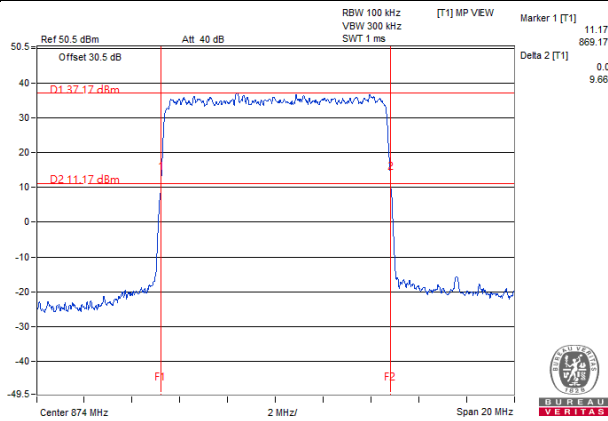


Channel: 177800

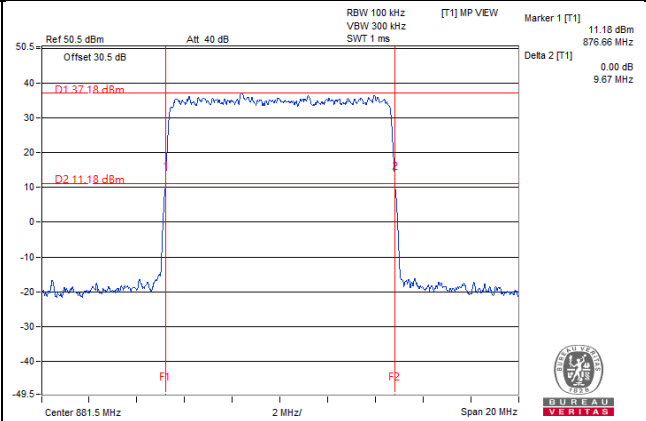


64QAM

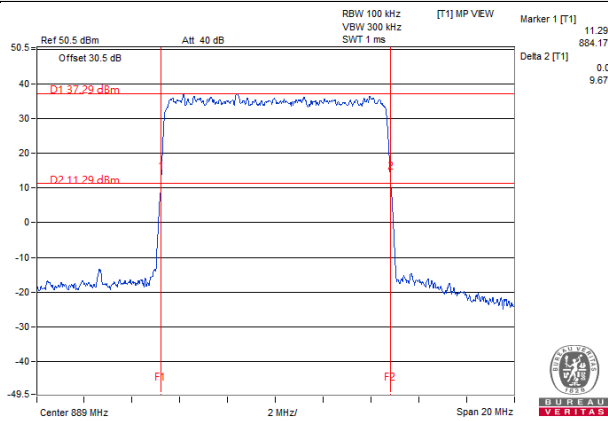
Channel: 174800



Channel: 176300

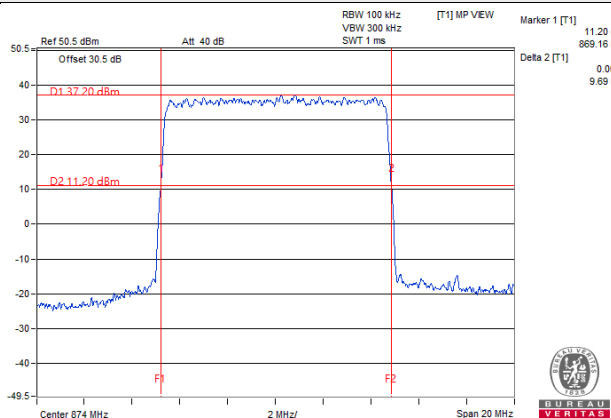


Channel: 177800

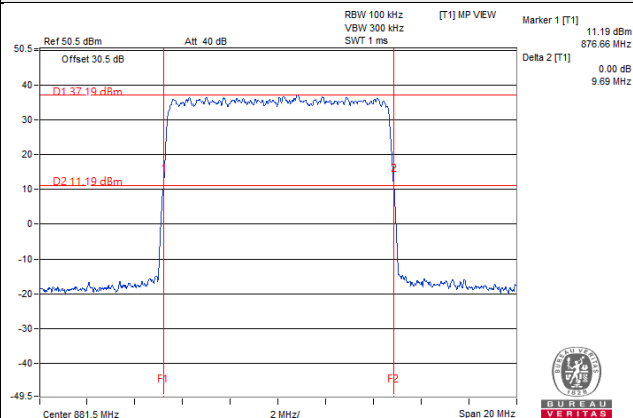


256QAM

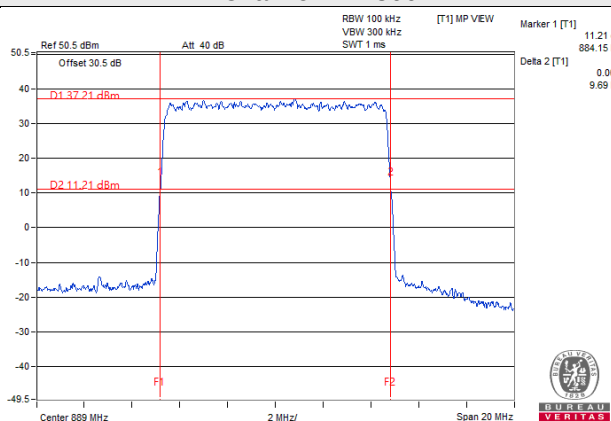
Channel: 174800



Channel: 176300



Channel: 177800



15MHz

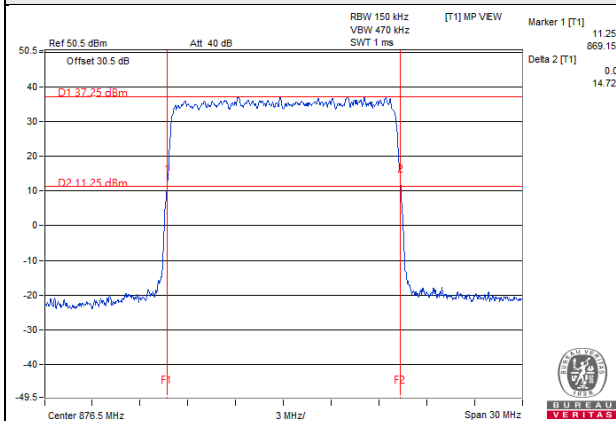
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
175300	876.5	14.72	14.67	14.68	14.66	14.72	14.69	14.68	14.67
176300	881.5	14.80	14.66	14.66	14.61	14.78	14.64	14.69	14.62
177300	886.5	14.74	14.68	14.65	14.65	14.74	14.67	14.66	14.65

Chain 0

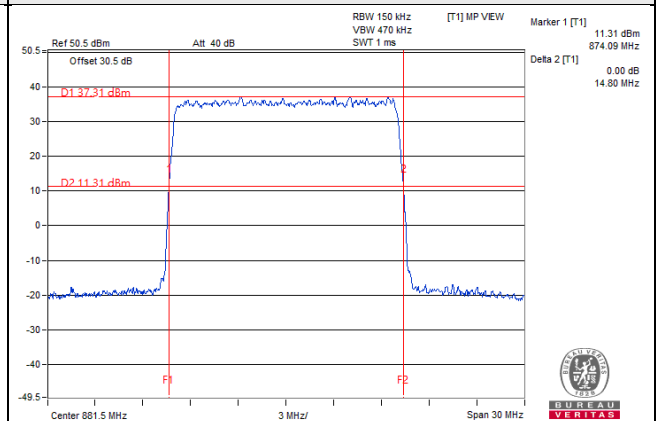
Spectrum Plot of Worst Value

QPSK

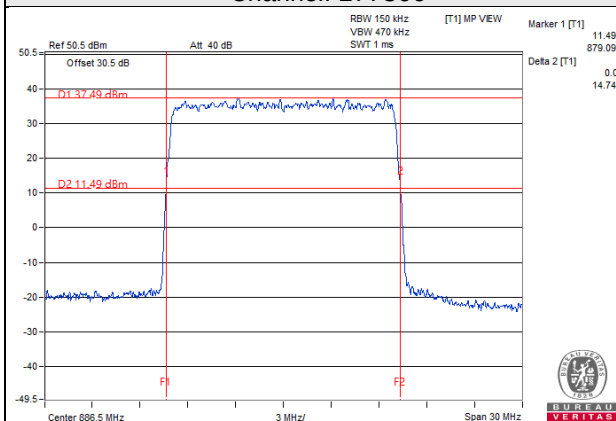
Channel: 175300



Channel: 176300

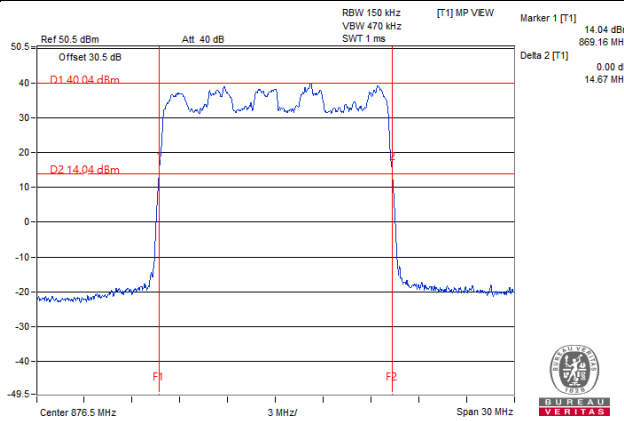


Channel: 177300

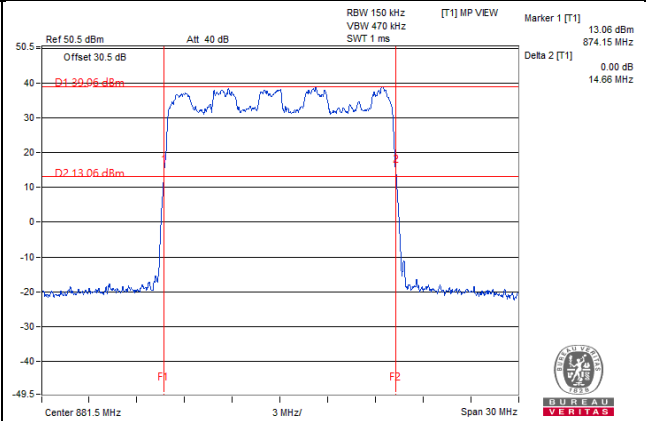


16QAM

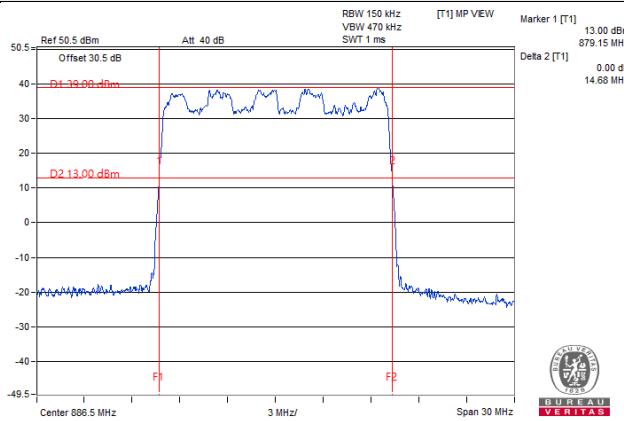
Channel: 175300



Channel: 176300

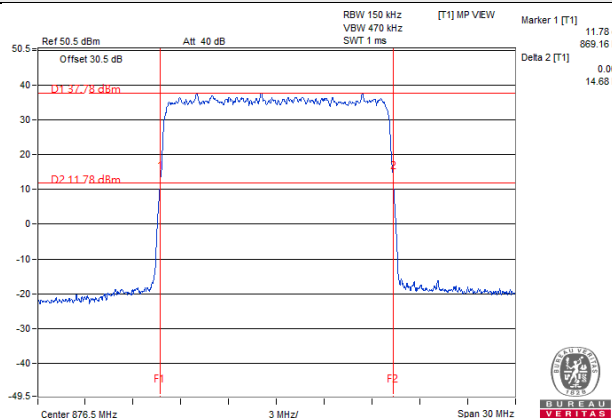


Channel: 177300

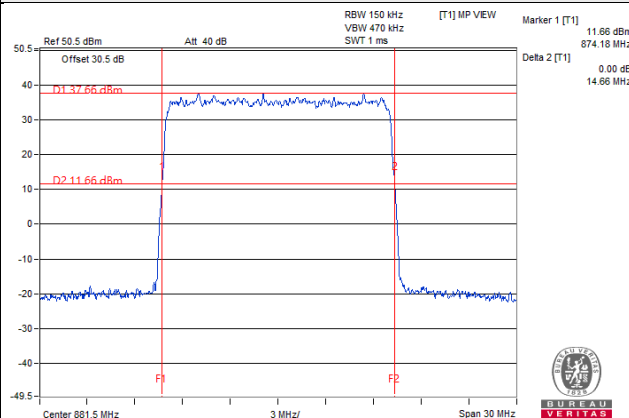


64QAM

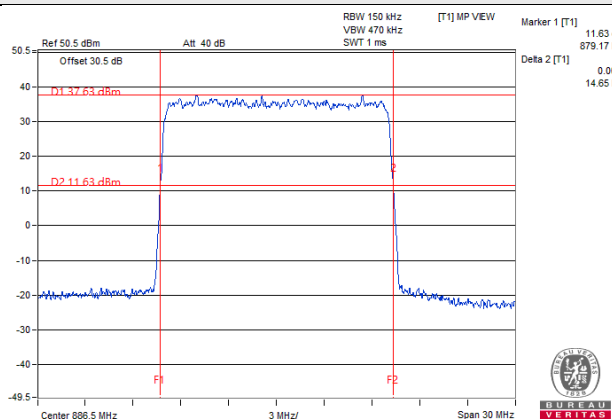
Channel: 175300



Channel: 176300

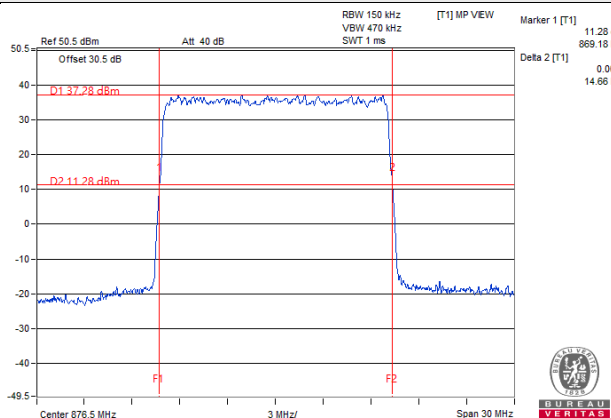


Channel: 177300

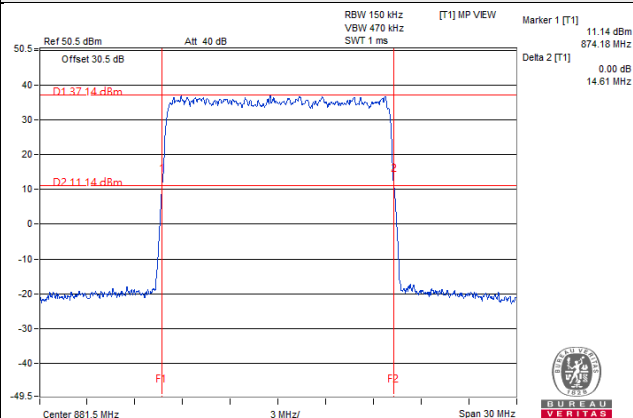


256QAM

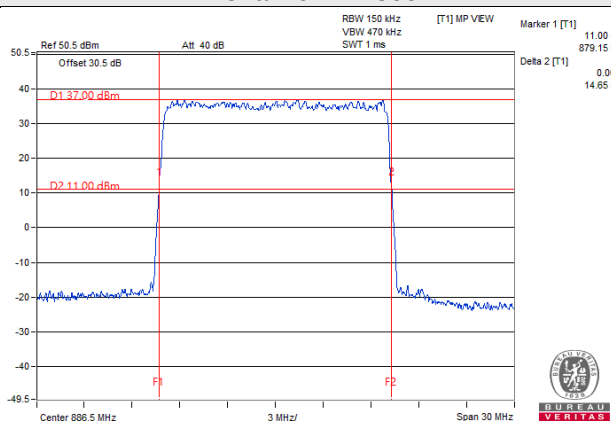
Channel: 175300



Channel: 176300



Channel: 177300



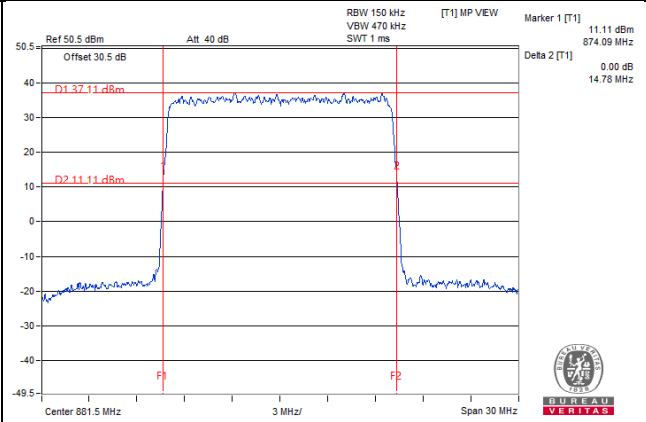
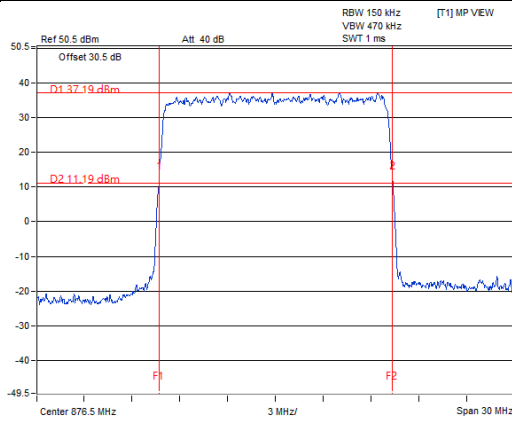
Chain 1

Spectrum Plot of Worst Value

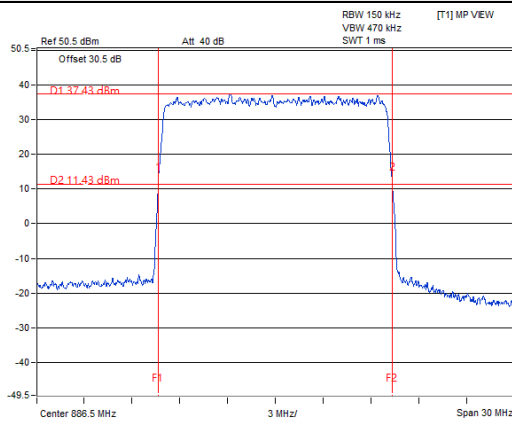
QPSK

Channel: 175300

Channel: 176300

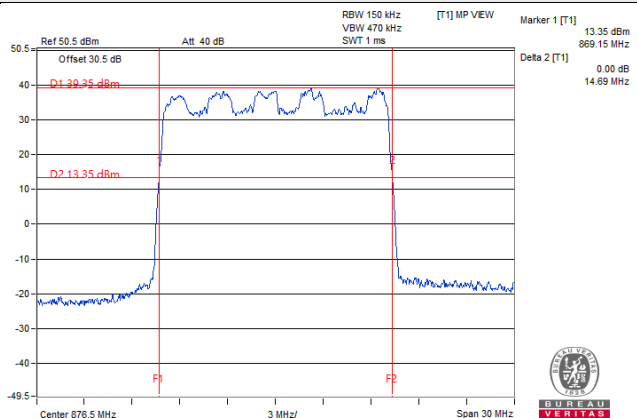


Channel: 177300

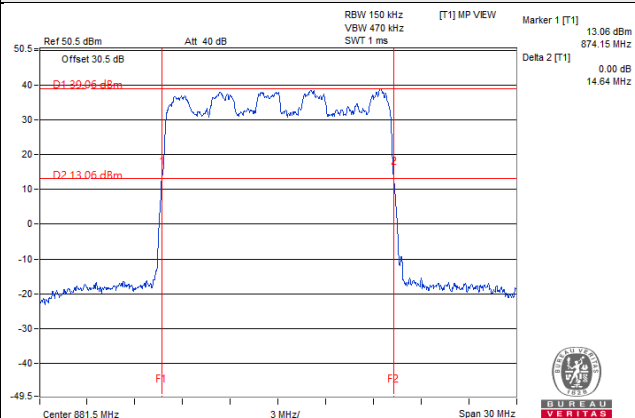


16QAM

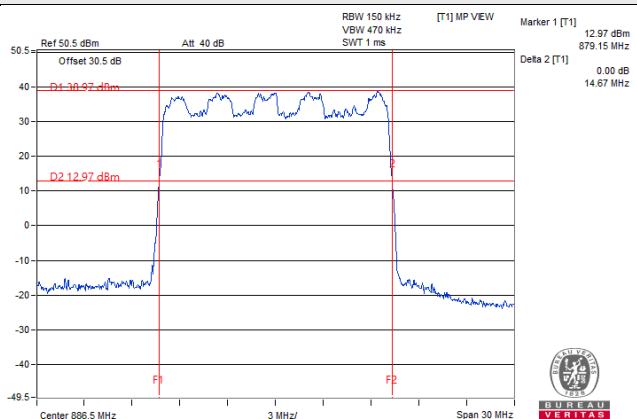
Channel: 175300



Channel: 176300

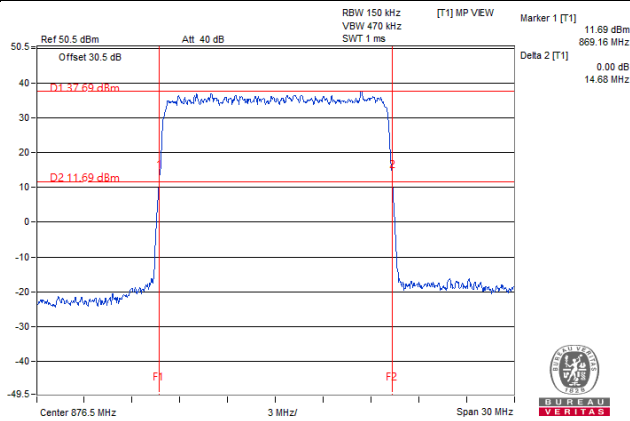


Channel: 177300

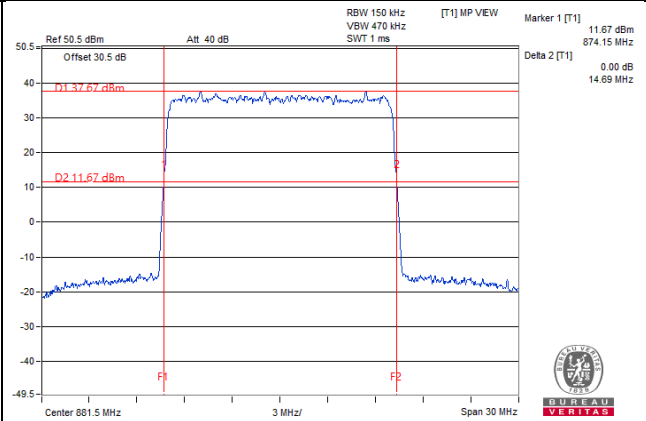


64QAM

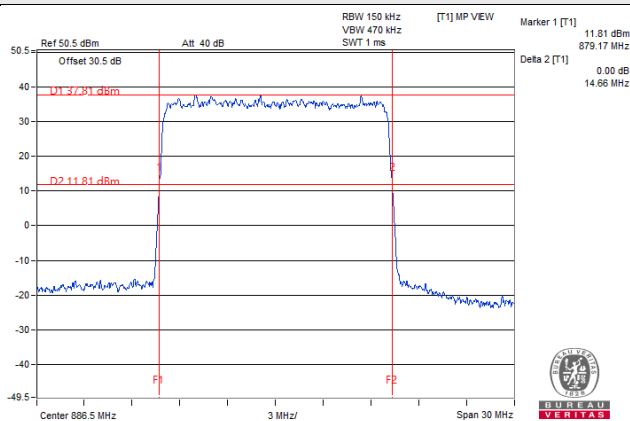
Channel: 175300



Channel: 176300

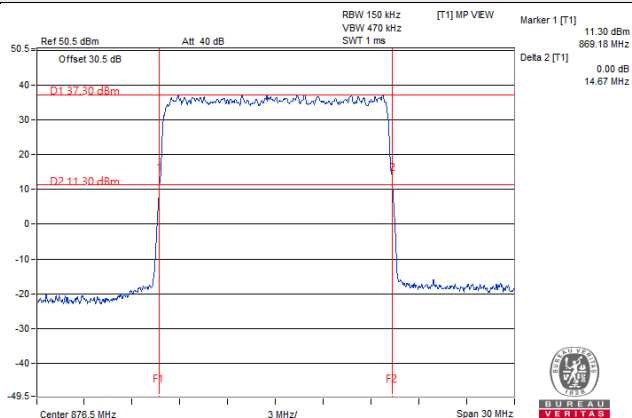


Channel: 177300

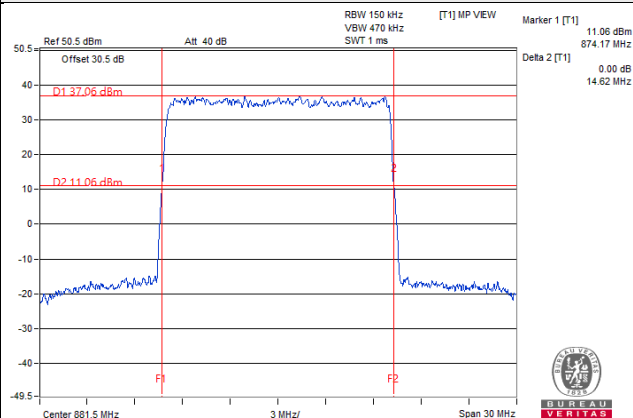


256QAM

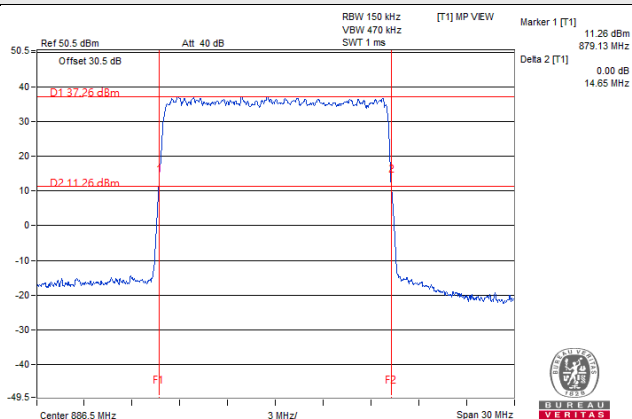
Channel: 175300



Channel: 176300



Channel: 177300



20MHz

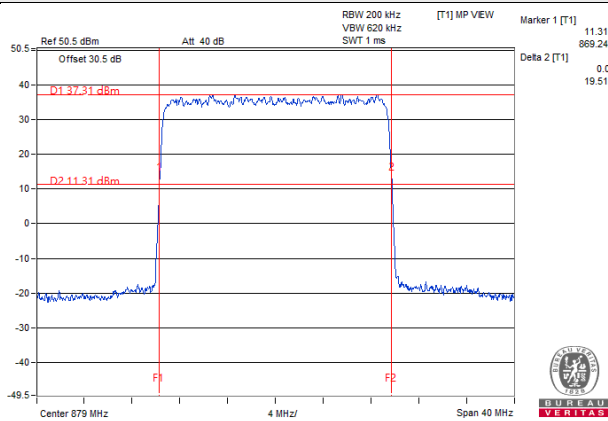
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
175800	879	19.51	19.45	19.51	19.56	19.53	19.47	19.49	19.52
176300	881.5	19.55	19.53	19.53	19.51	19.57	19.50	19.54	19.56
176800	884	19.55	19.53	19.54	19.54	19.53	19.53	19.53	19.55

Chain 0

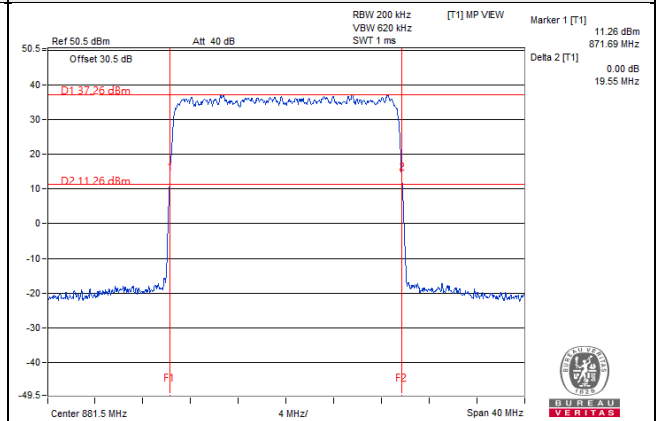
Spectrum Plot of Worst Value

QPSK

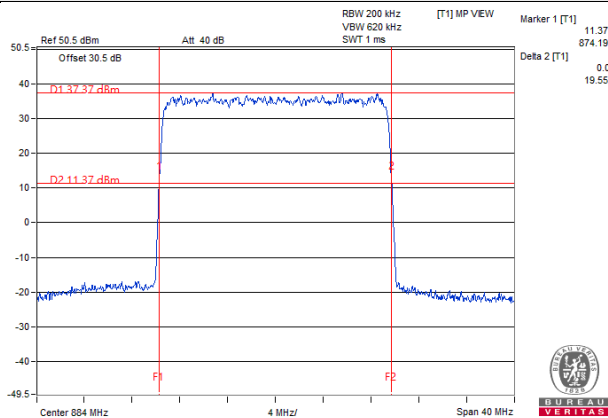
Channel: 175800



Channel: 176300

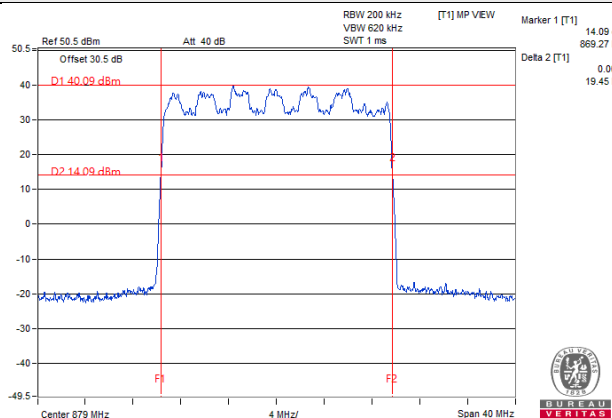


Channel: 176800

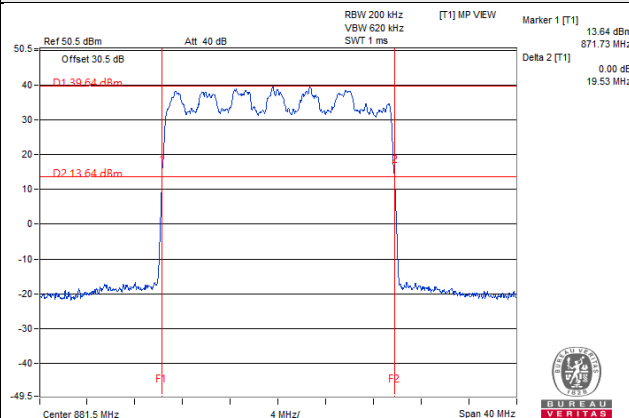


16QAM

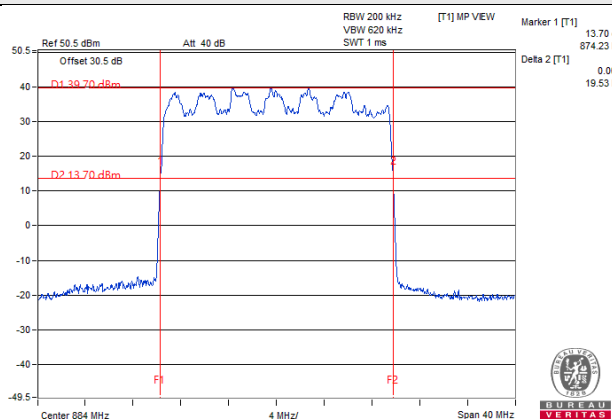
Channel: 175800



Channel: 176300

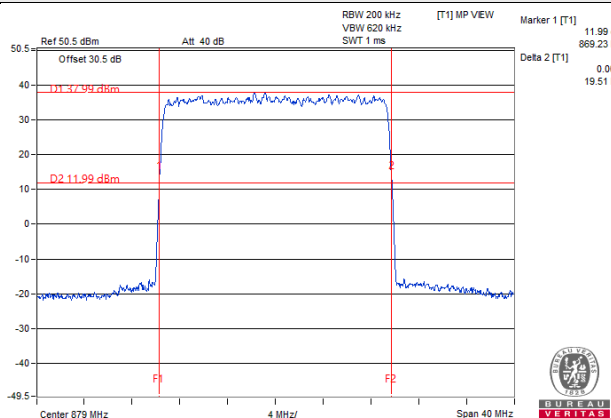


Channel: 176800

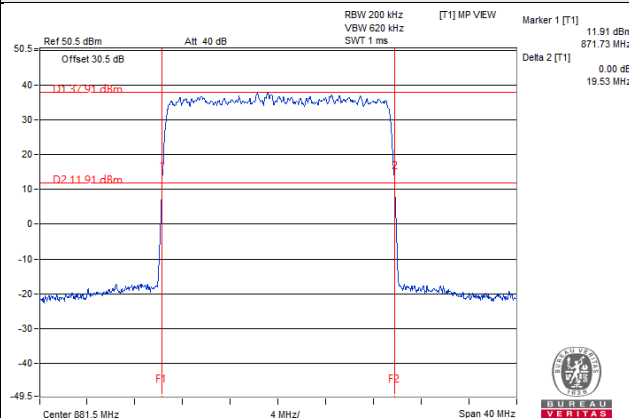


64QAM

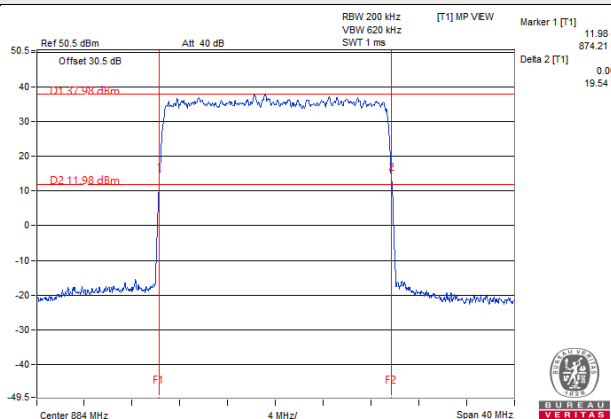
Channel: 175800



Channel: 176300

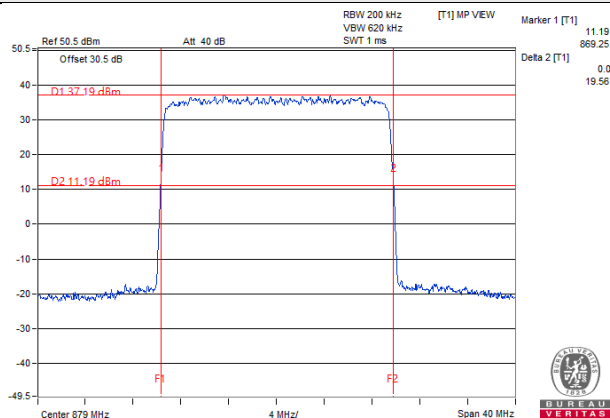


Channel: 176800

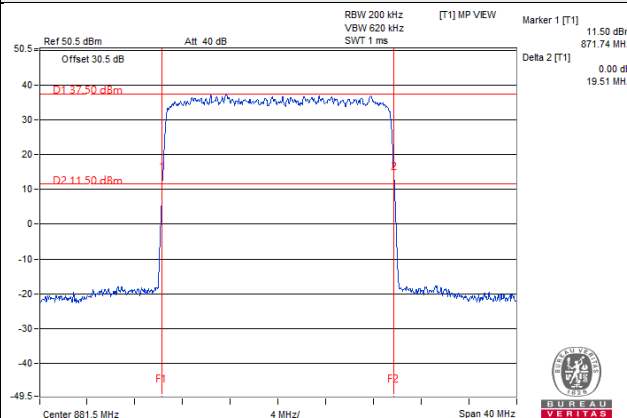


256QAM

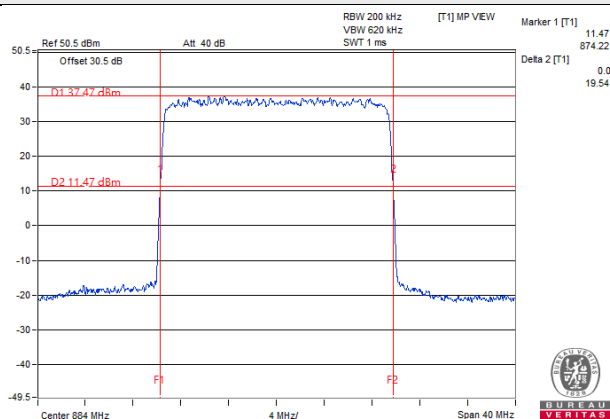
Channel: 175800



Channel: 176300



Channel: 176800



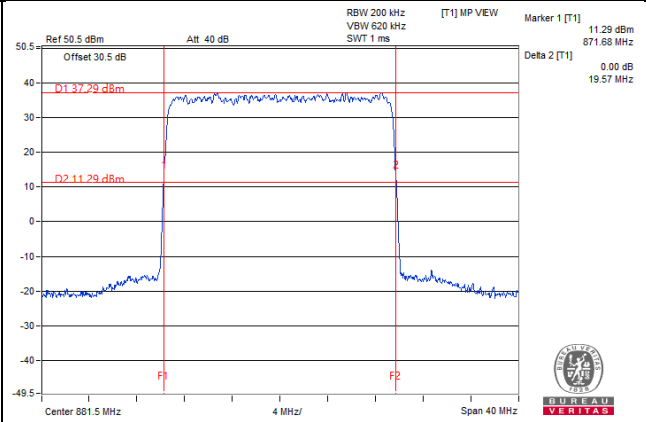
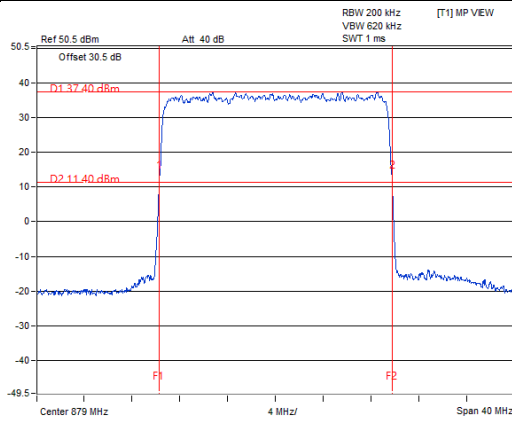
Chain 1

Spectrum Plot of Worst Value

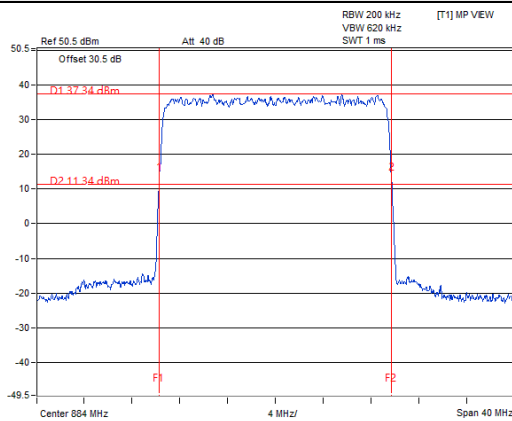
QPSK

Channel: 175800

Channel: 176300

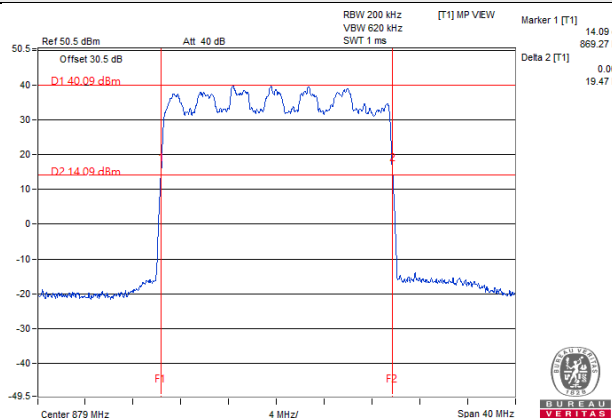


Channel: 176800

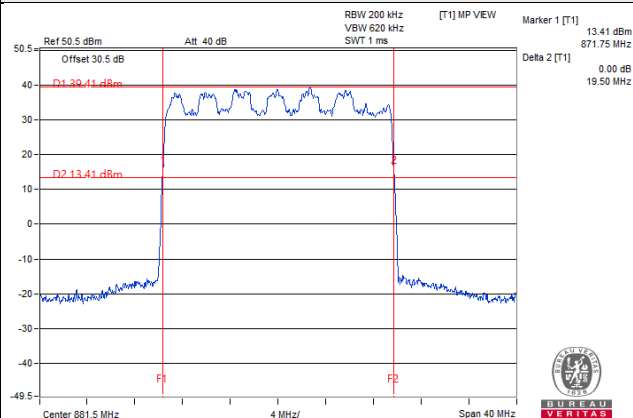


16QAM

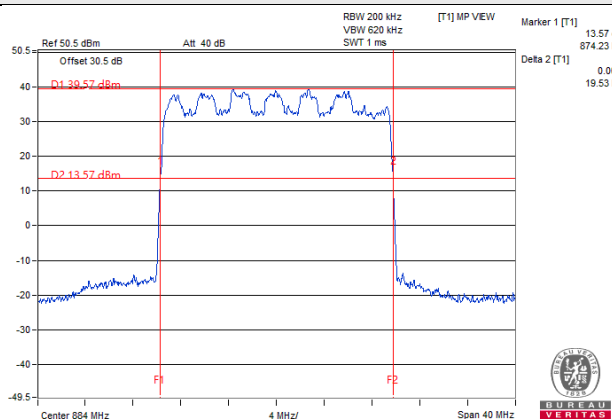
Channel: 175800



Channel: 176300

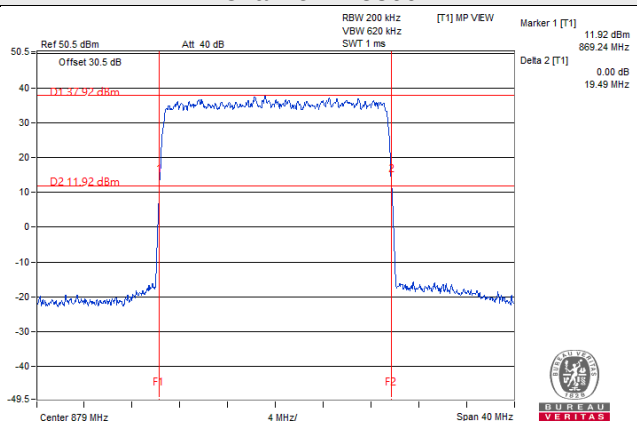


Channel: 176800

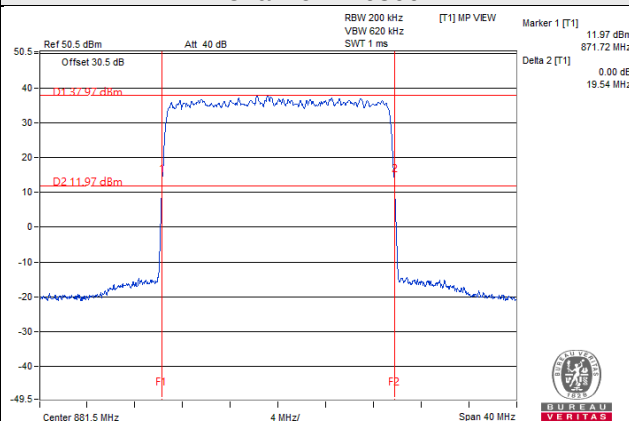


64QAM

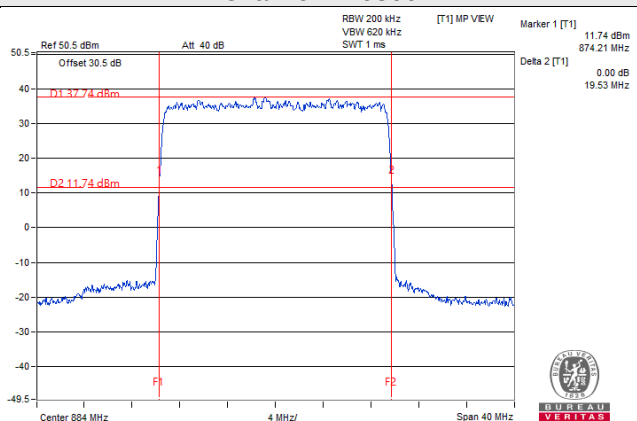
Channel: 175800



Channel: 176300

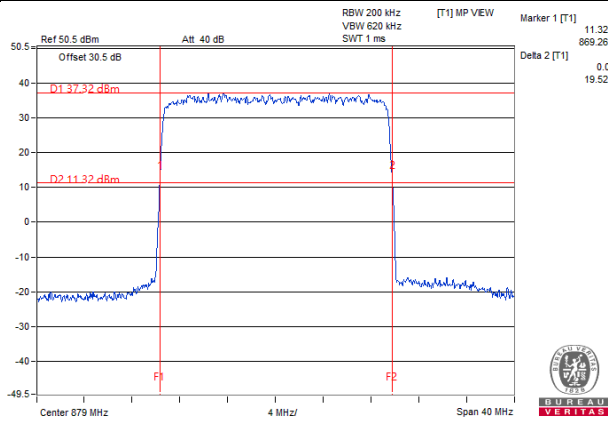


Channel: 176800

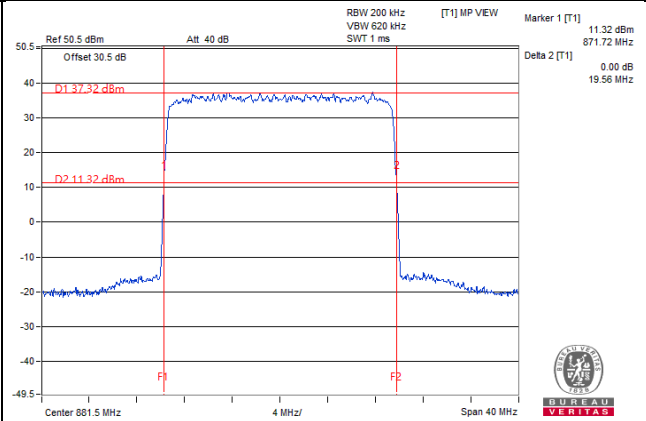


256QAM

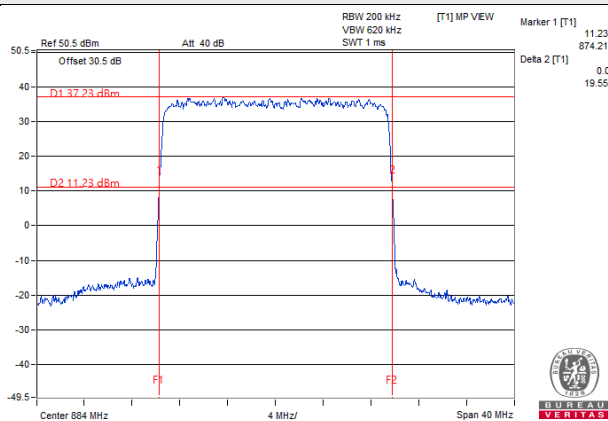
Channel: 175800



Channel: 176300



Channel: 176800



Contiguous Mode

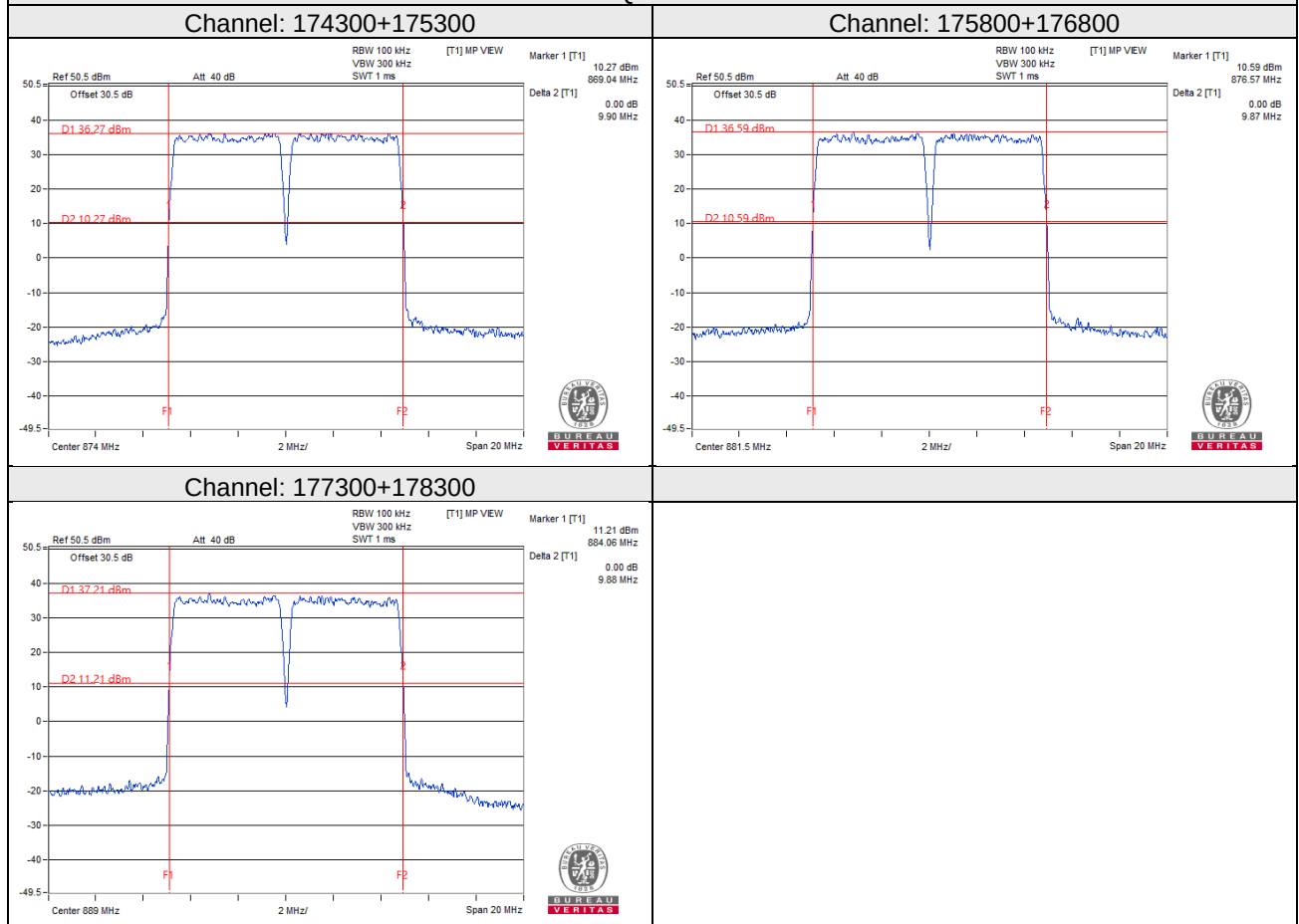
5MHz+5MHz

Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300+175300	871.5+876.5	9.90	9.86	9.86	9.85	9.87	9.86	9.85	9.84
175800+176800	879+884	9.87	9.84	9.84	9.84	9.89	9.85	9.85	9.84
177300+178300	886.5+891.5	9.88	9.85	9.86	9.85	9.88	9.87	9.84	9.84

Chain 0

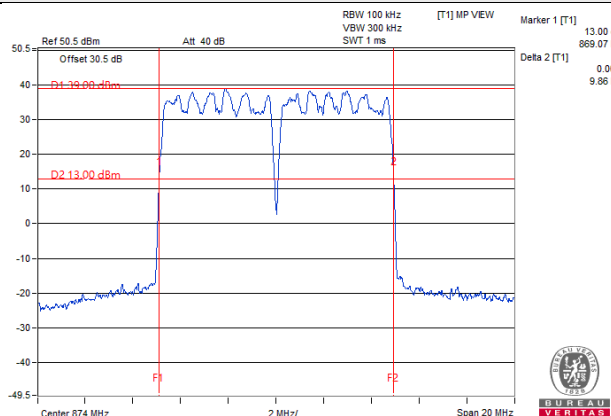
Spectrum Plot of Worst Value

QPSK

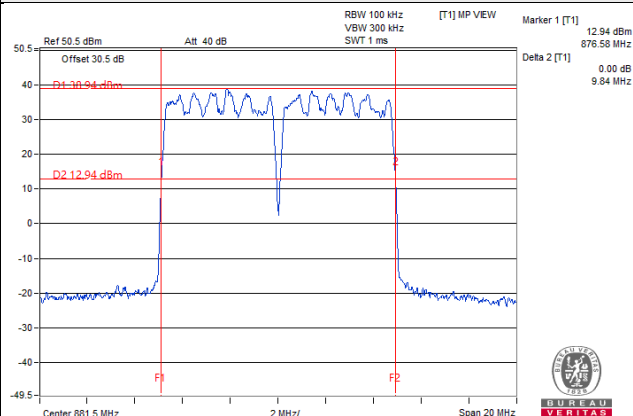


16QAM

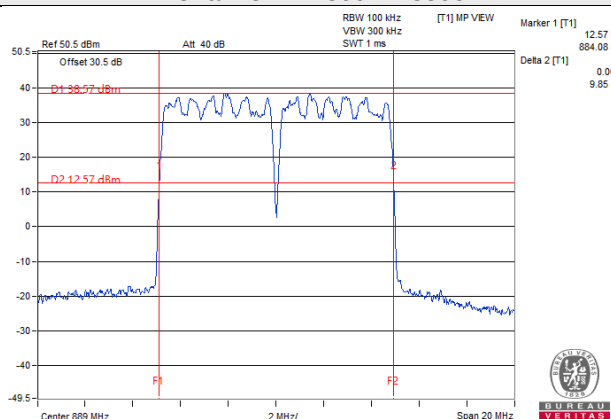
Channel: 174300+175300



Channel: 175800+176800

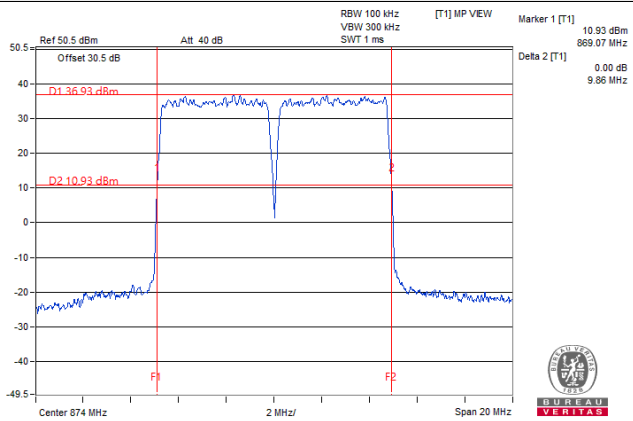


Channel: 177300+178300

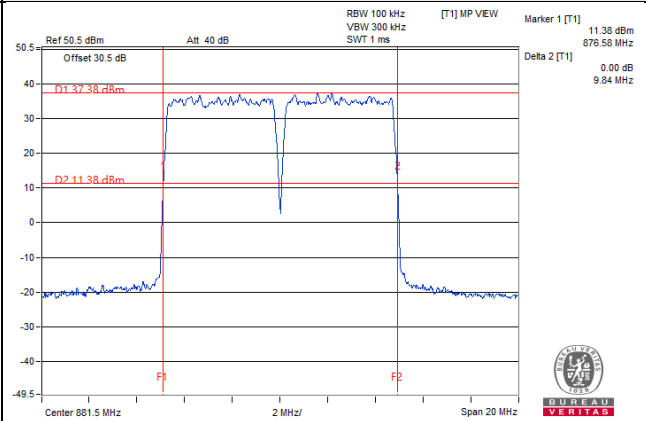


64QAM

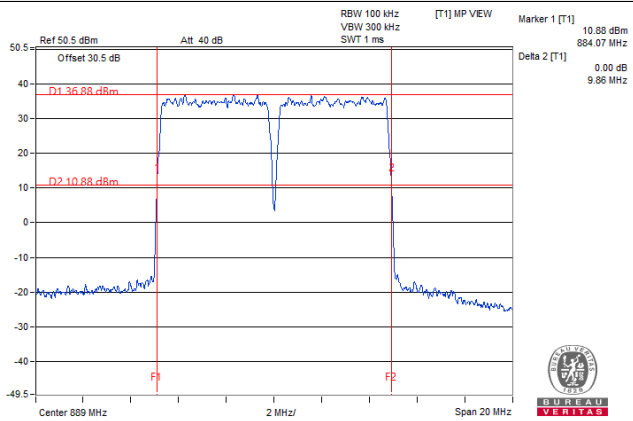
Channel: 174300+175300



Channel: 175800+176800

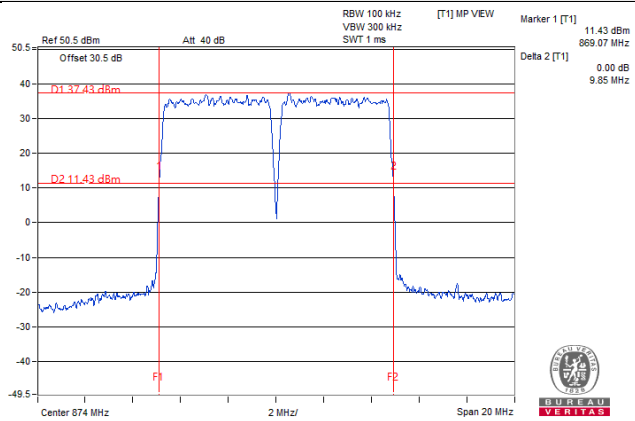


Channel: 177300+178300

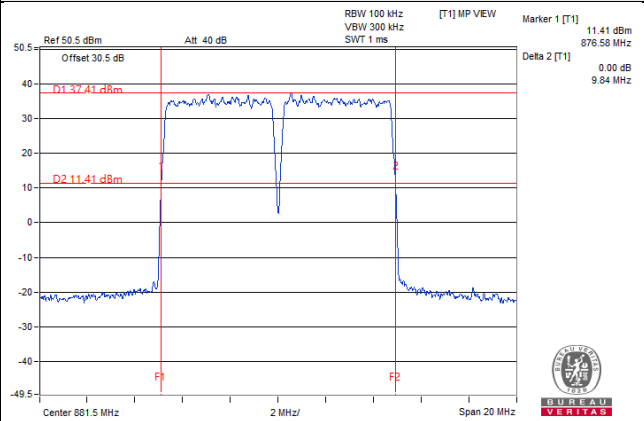


256QAM

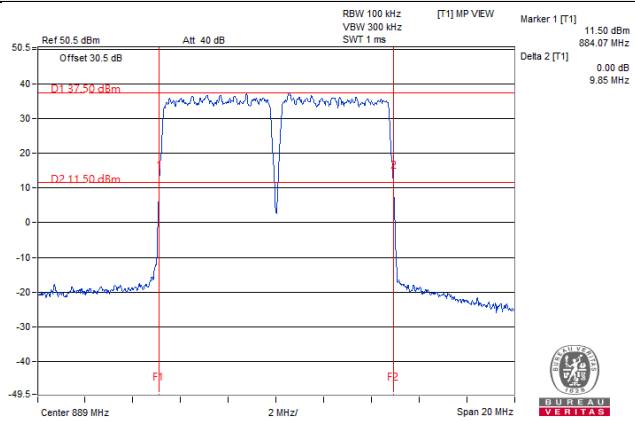
Channel: 174300+175300



Channel: 175800+176800



Channel: 177300+178300



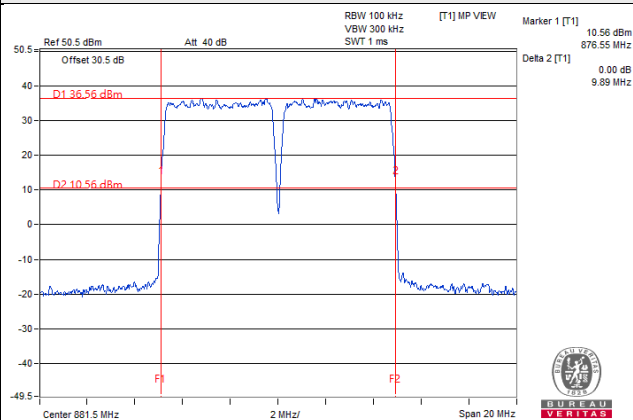
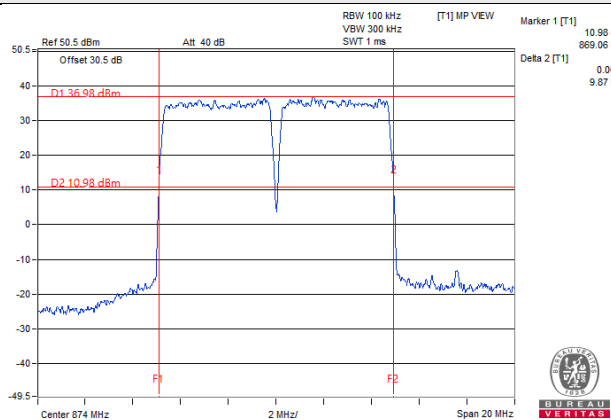
Chain 1

Spectrum Plot of Worst Value

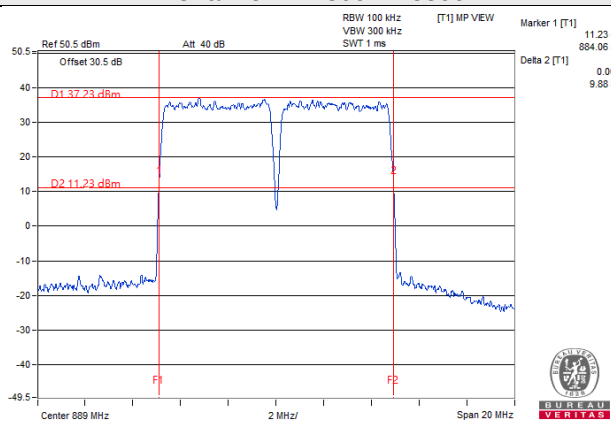
QPSK

Channel: 174300+175300

Channel: 175800+176800

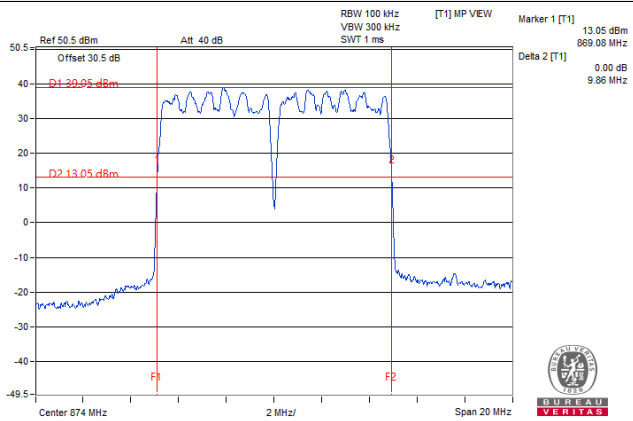


Channel: 177300+178300

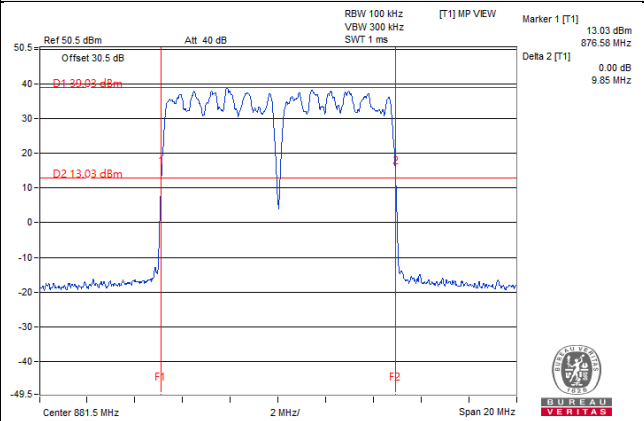


16QAM

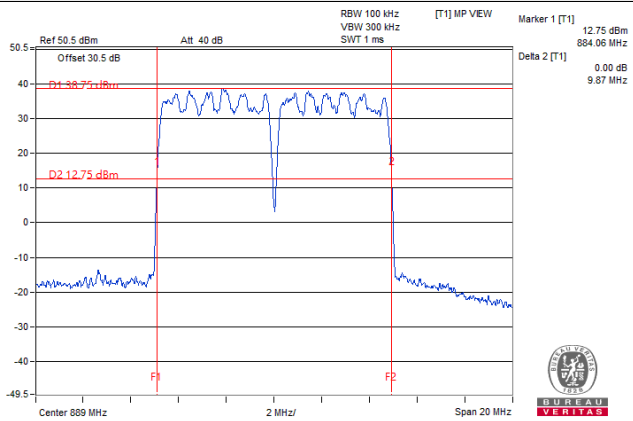
Channel: 174300+175300



Channel: 175800+176800

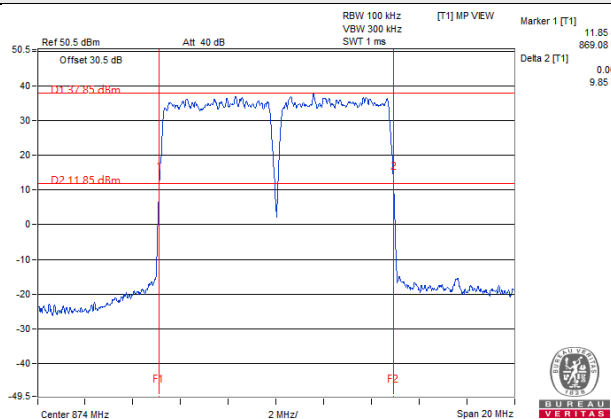


Channel: 177300+178300

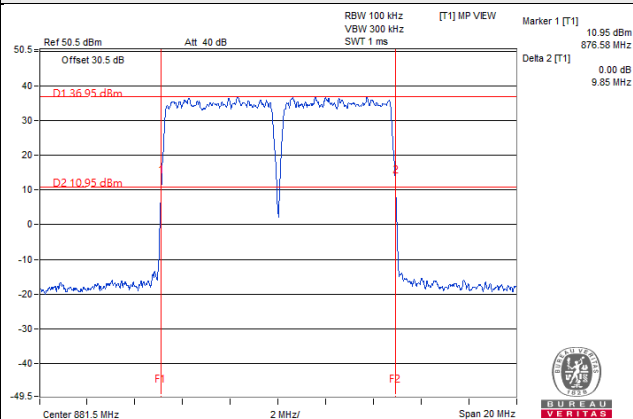


64QAM

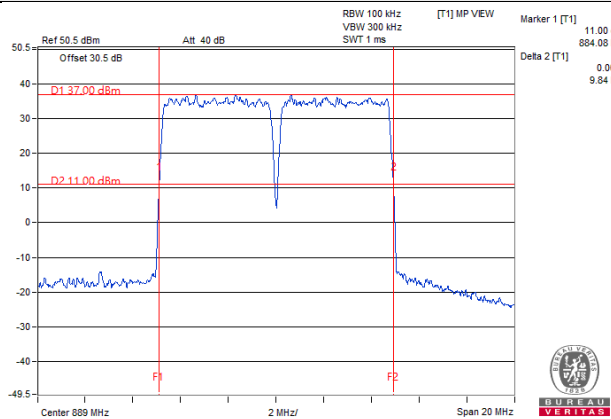
Channel: 174300+175300



Channel: 175800+176800

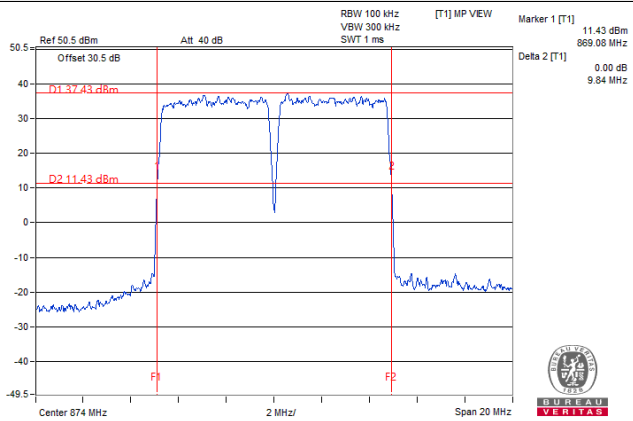


Channel: 177300+178300

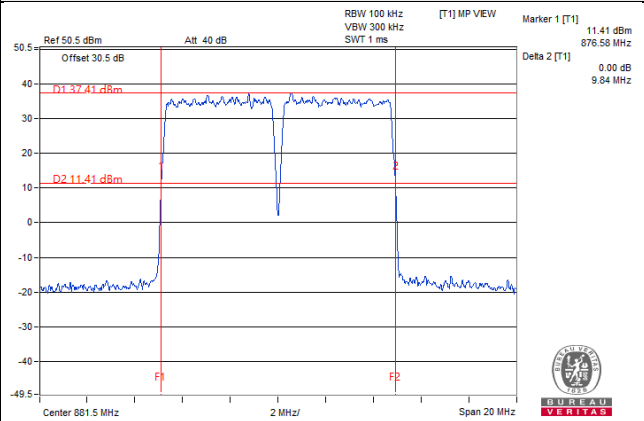


256QAM

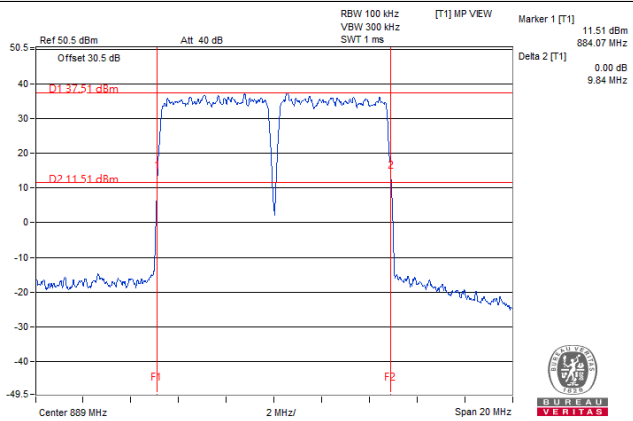
Channel: 174300+175300



Channel: 175800+176800



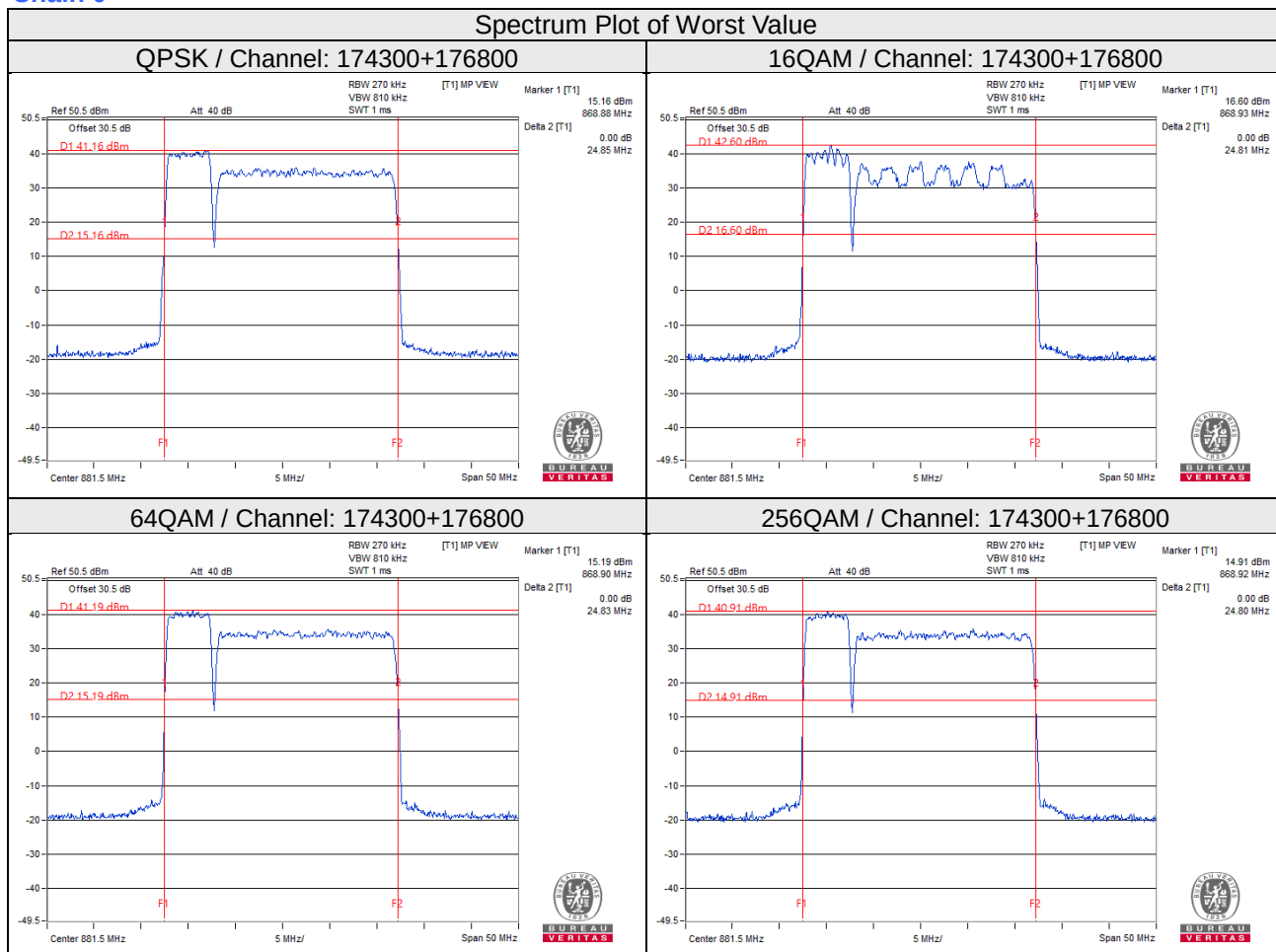
Channel: 177300+178300



5MHz+20MHz

Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300+176800	871.5+884	24.85	24.81	24.83	24.80	24.83	24.81	24.82	24.80

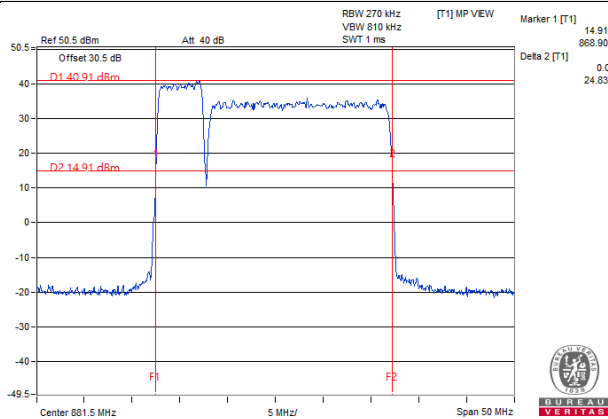
Chain 0



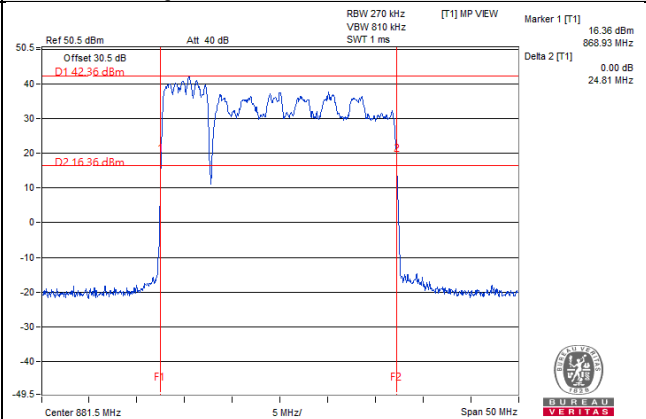
Chain 1

Spectrum Plot of Worst Value

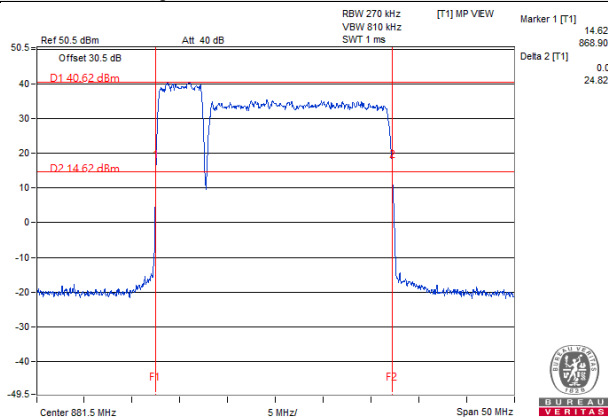
QPSK / Channel: 174300+176800



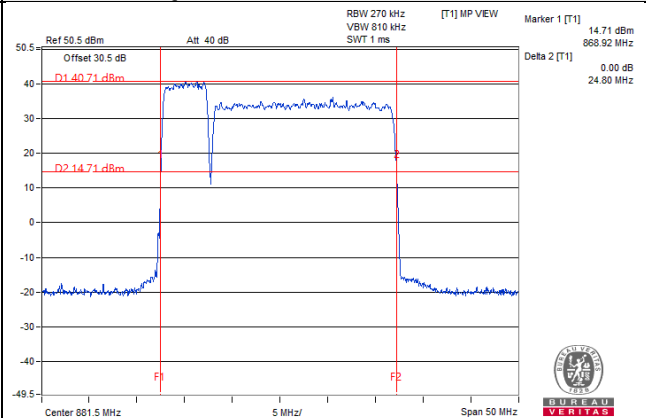
16QAM / Channel: 174300+176800



64QAM / Channel: 174300+176800



256QAM / Channel: 174300+176800



Non Contiguous Mode

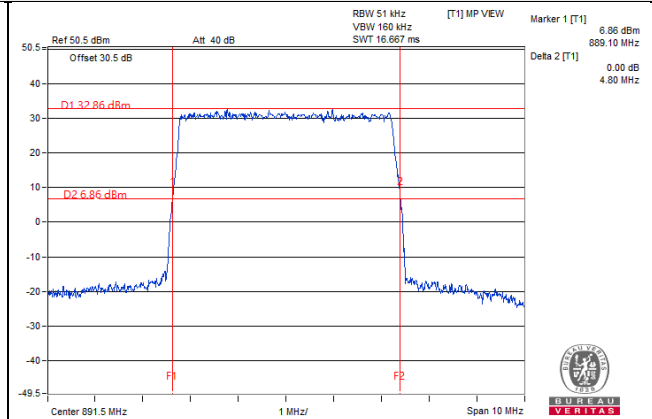
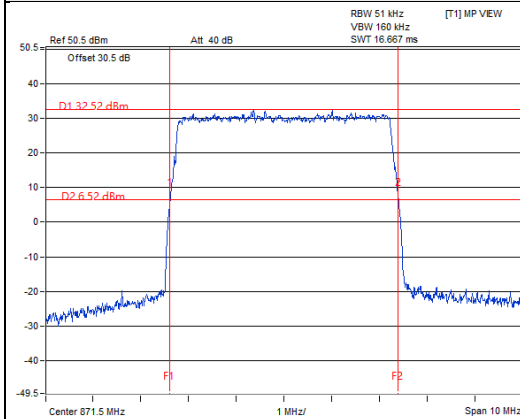
5MHz+5MHz

Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain 0							
		CC0				CC1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300+178300	871.5+891.5	4.81	4.73	4.78	4.76	4.80	4.78	4.78	4.77
Channel Number	Freq. (MHz)	CC0+CC1 Total							
		QPSK		16QAM		64QAM		256QAM	
174300+178300	871.5+891.5	9.61		9.51		9.56		9.53	

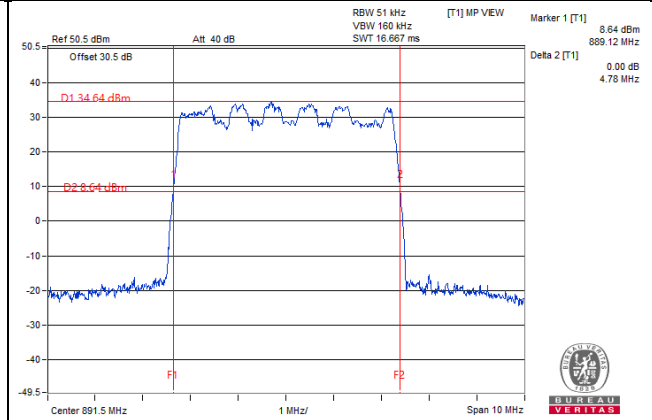
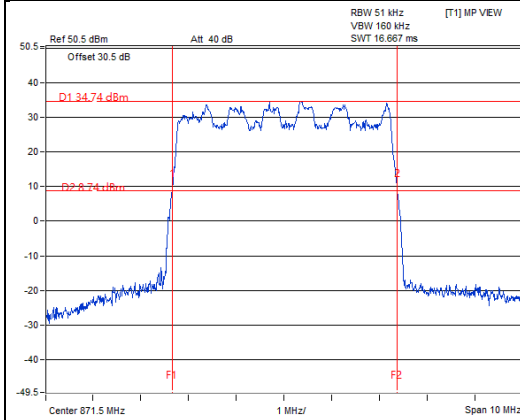
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain 1							
		CC0				CC1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300+178300	871.5+891.5	4.81	4.78	4.77	4.79	4.79	4.80	4.79	4.78
Channel Number	Freq. (MHz)	CC0+CC1 Total							
		QPSK		16QAM		64QAM		256QAM	
174300+178300	871.5+891.5	9.60		9.58		9.56		9.57	

Chain 0

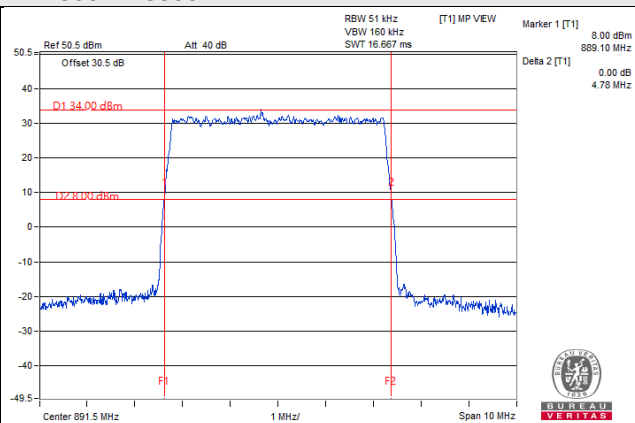
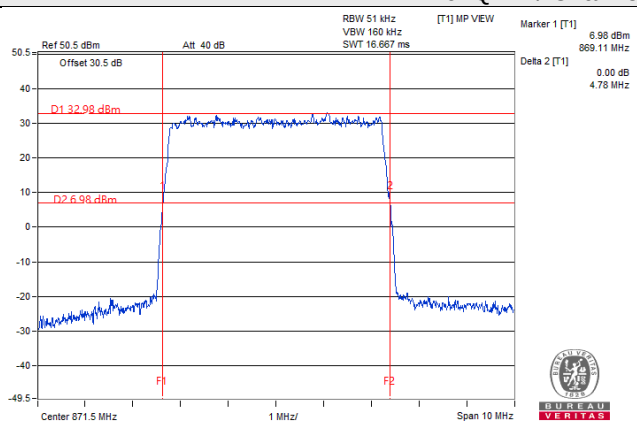
Spectrum Plot of Worst Value QPSK / Channel: 174300+178300



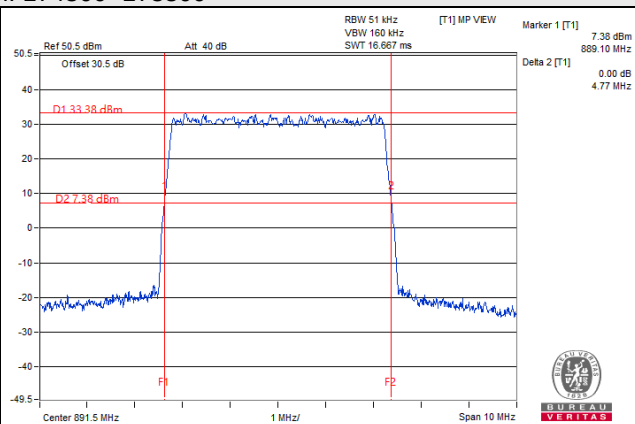
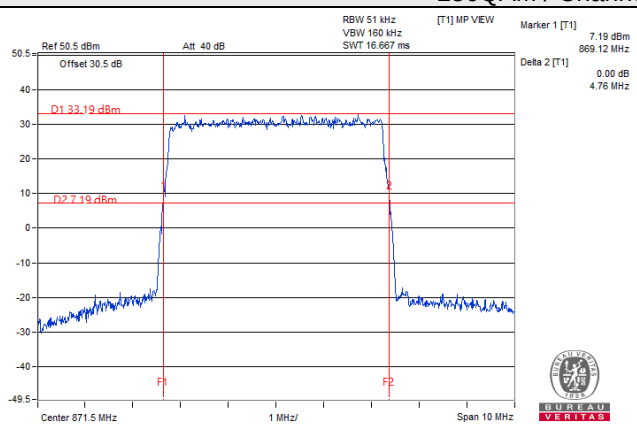
16QAM / Channel: 174300+178300



64QAM / Channel: 174300+178300

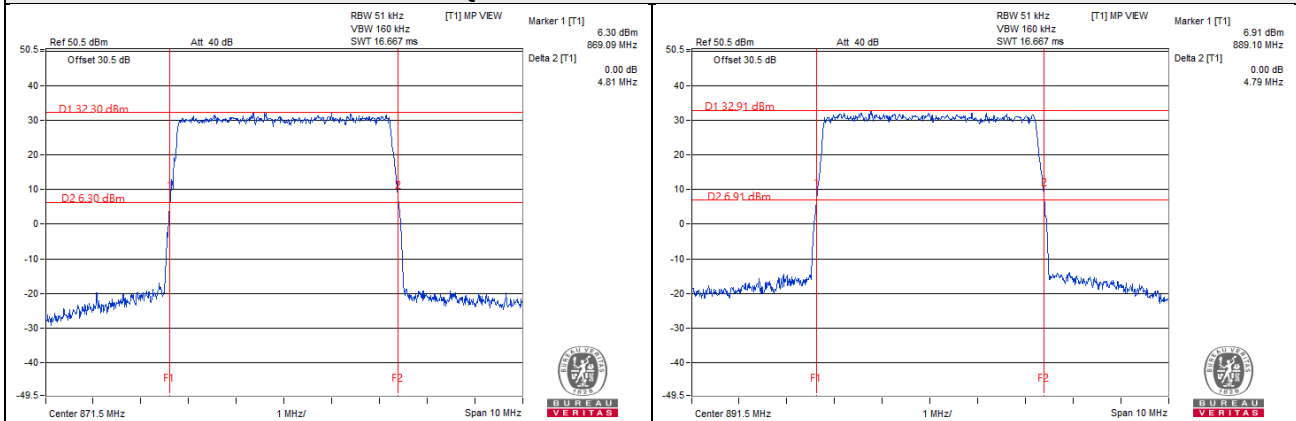


256QAM / Channel: 174300+178300

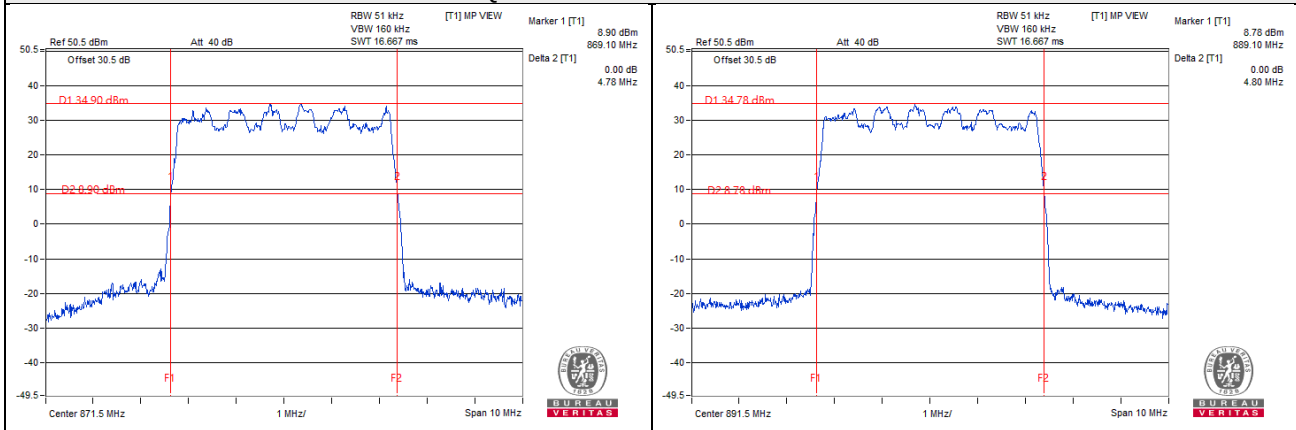


Chain 1

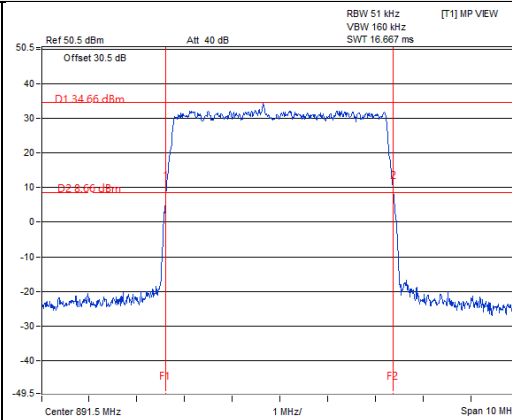
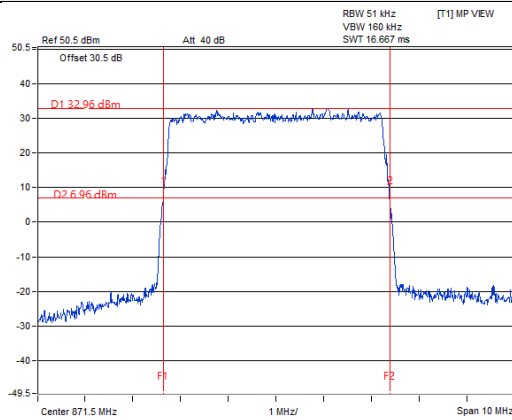
Spectrum Plot of Worst Value QPSK / Channel: 174300+178300



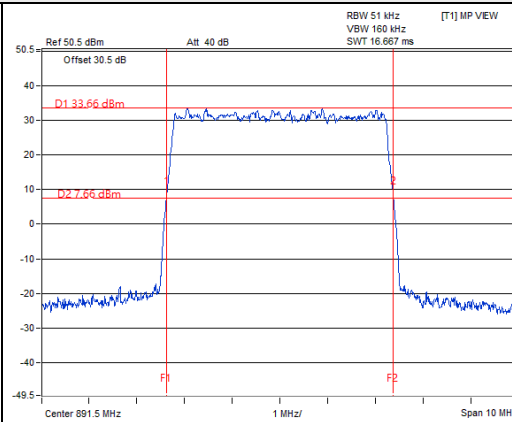
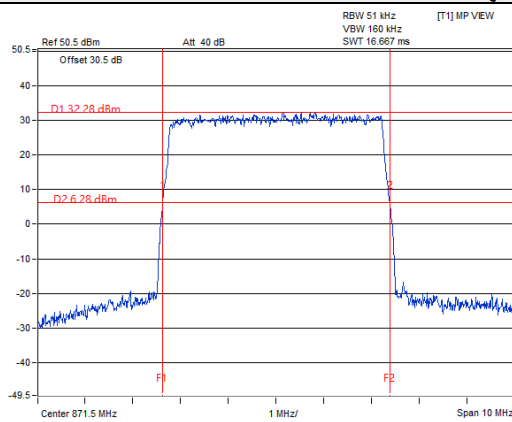
16QAM / Channel: 174300+178300



64QAM / Channel: 174300+178300



256QAM / Channel: 174300+178300



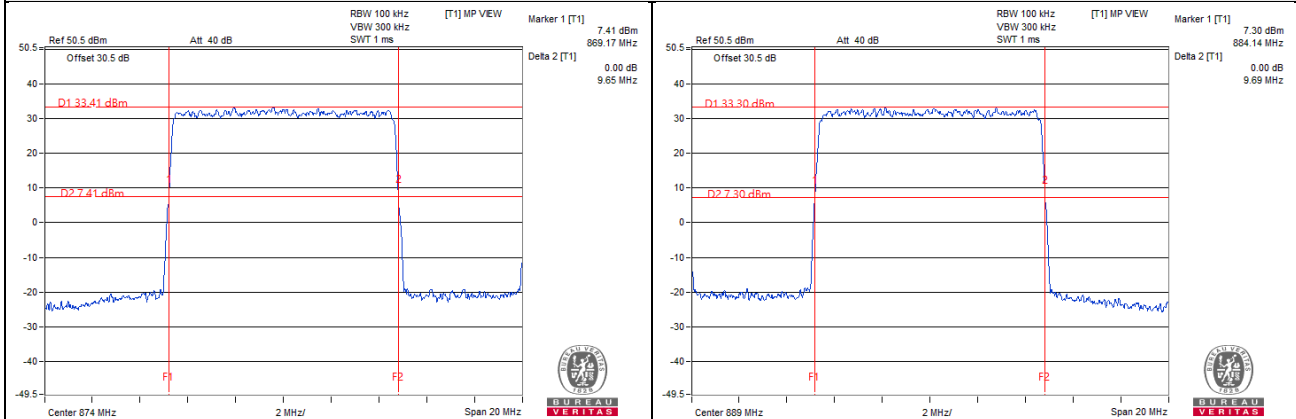
10MHz+10MHz

Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain 0							
		CC0				CC1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174800+177800	874+889	9.65	9.60	9.66	9.70	9.69	9.62	9.71	9.69
Channel Number	Freq. (MHz)	CC0+CC1 Total							
		QPSK		16QAM		64QAM		256QAM	
174800+177800	874+889	19.34		19.22		19.37		19.39	

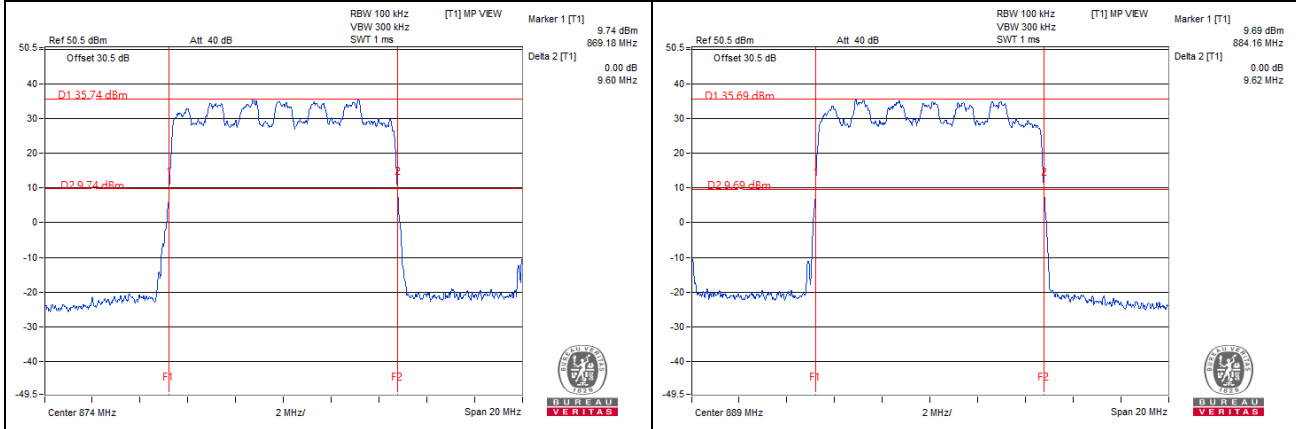
Channel Number	Freq. (MHz)	26dB Down Bandwidth (MHz)							
		Chain 1							
		CC0				CC1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174800+177800	874+889	9.70	9.62	9.66	9.69	9.71	9.64	9.71	9.71
Channel Number	Freq. (MHz)	CC0+CC1 Total							
		QPSK		16QAM		64QAM		256QAM	
174800+177800	874+889	19.41		19.26		19.37		19.40	

Chain 0

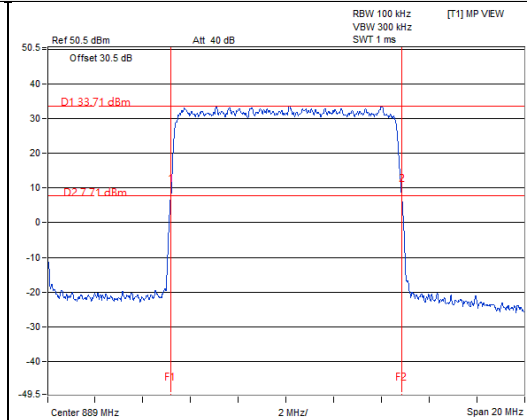
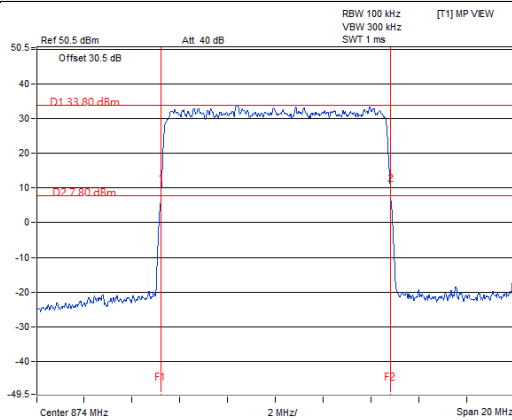
Spectrum Plot of Worst Value QPSK / Channel: 174800+177800



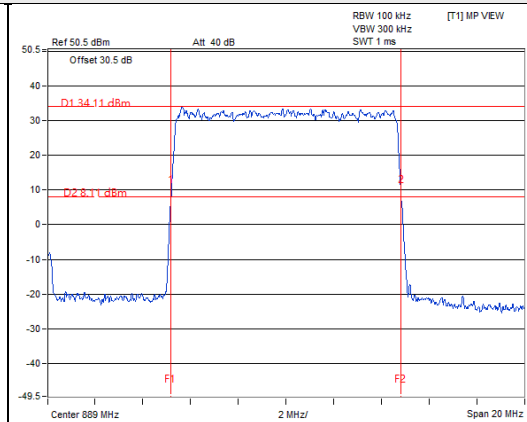
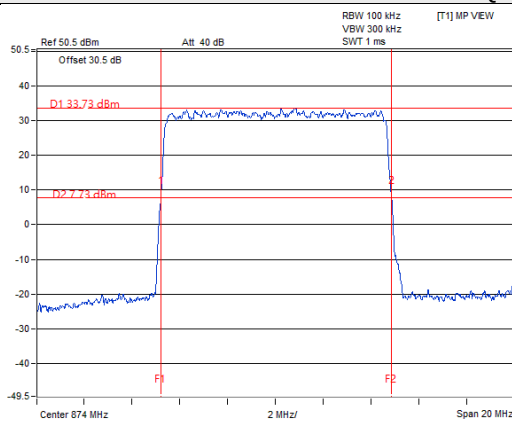
16QAM / Channel: 174800+177800



64QAM / Channel: 174800+177800

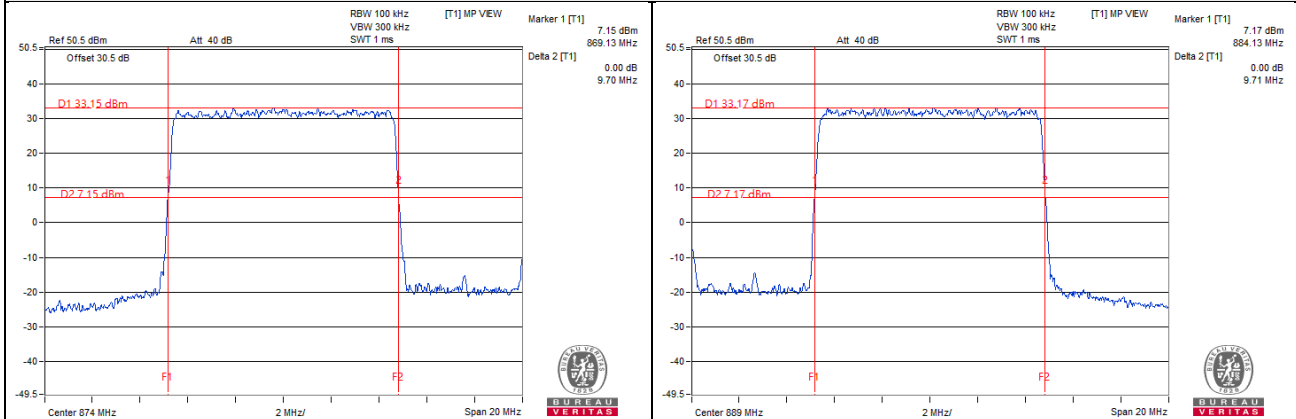


256QAM / Channel: 174800+177800

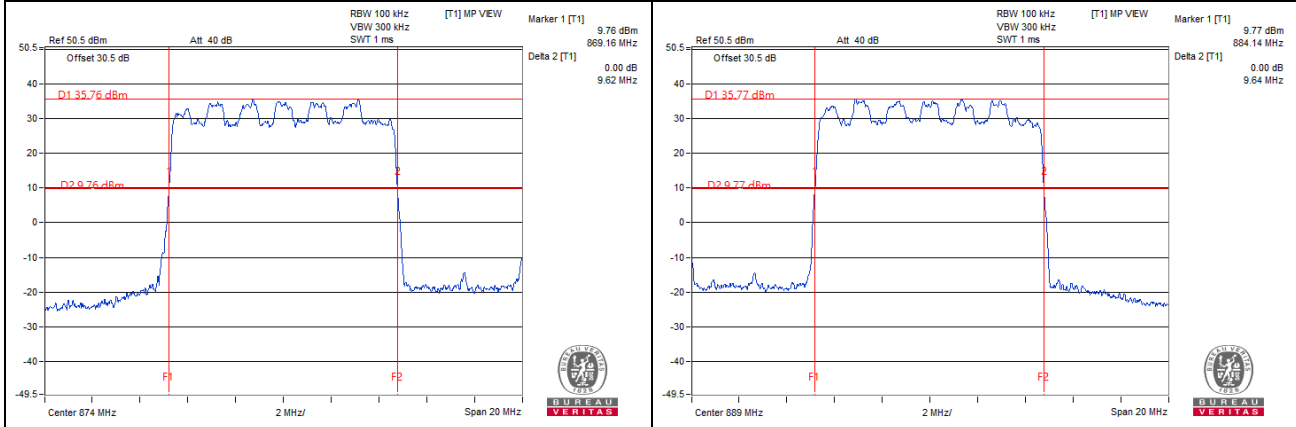


Chain 1

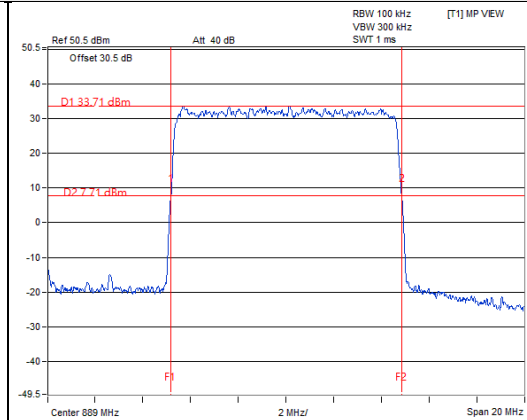
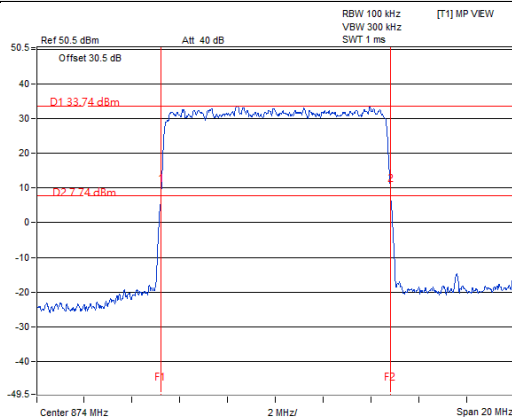
Spectrum Plot of Worst Value QPSK / Channel: 174800+177800



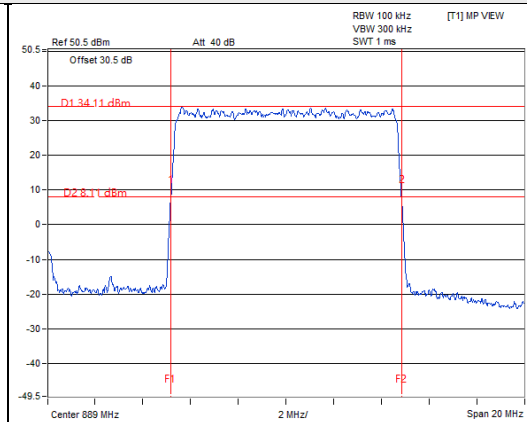
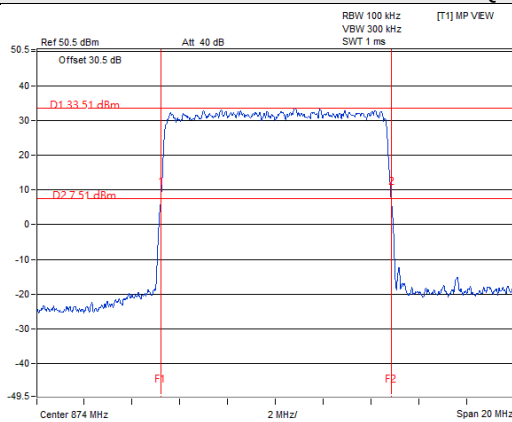
16QAM / Channel: 174800+177800



64QAM / Channel: 174800+177800



256QAM / Channel: 174800+177800



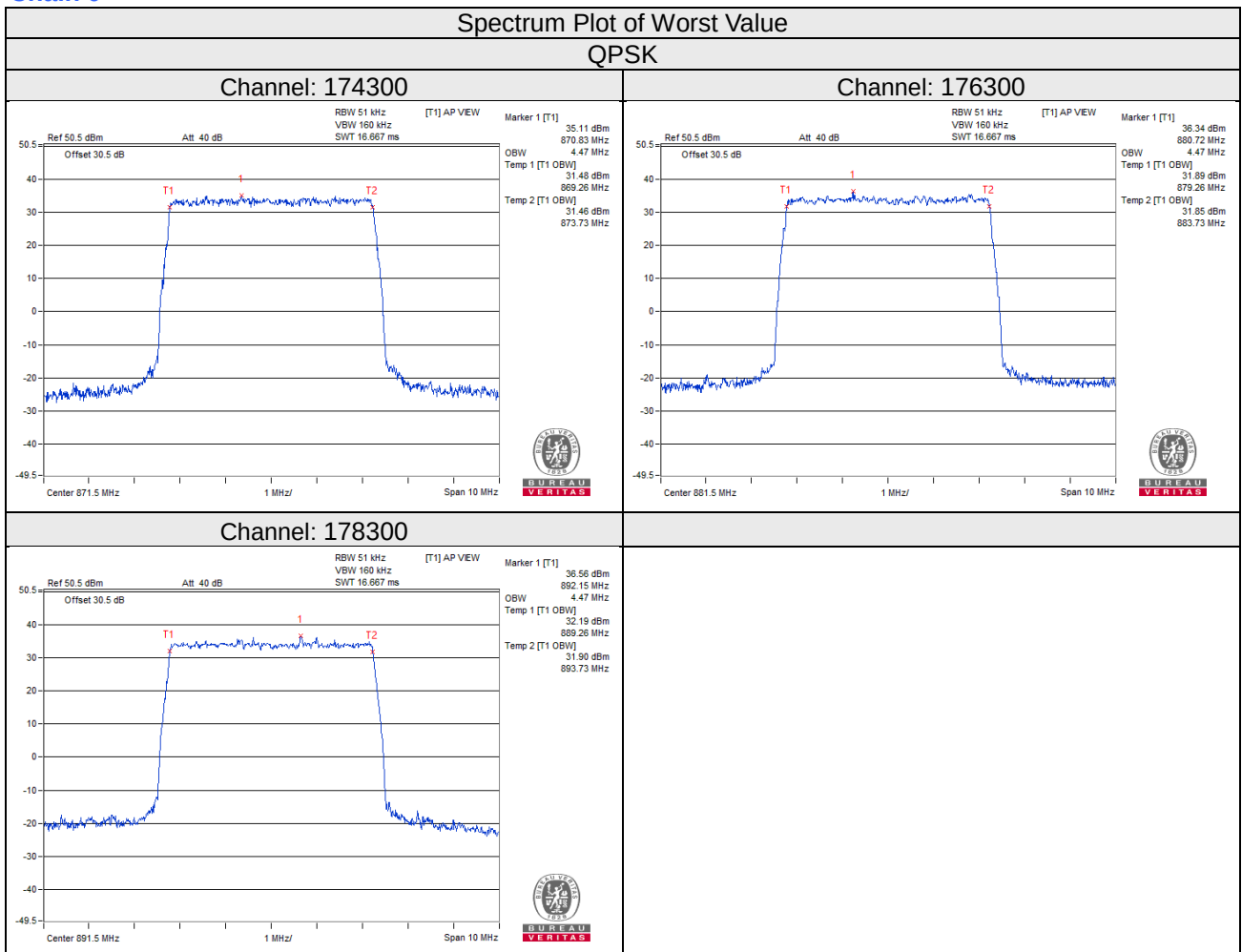
4.4.5 Test Results (Occupied Bandwidth)

Single Mode

5MHz

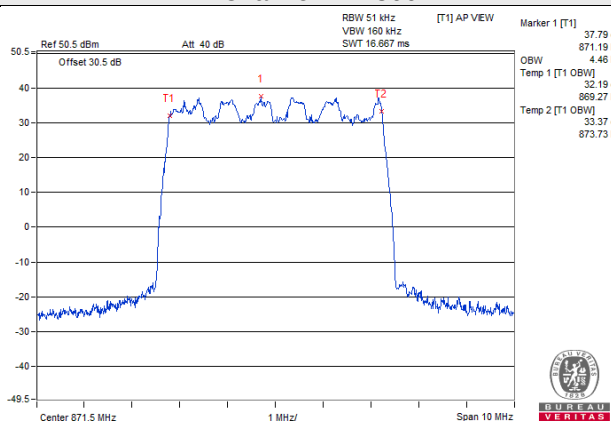
Channel Number	Freq. (MHz)	99% Occupied Bandwidth (MHz)							
		Chain0				Chain1			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
174300	871.5	4.47	4.46	4.46	4.46	4.47	4.47	4.47	4.46
176300	881.5	4.47	4.49	4.47	4.46	4.47	4.49	4.47	4.47
178300	891.5	4.47	4.47	4.47	4.47	4.47	4.48	4.47	4.47

Chain 0

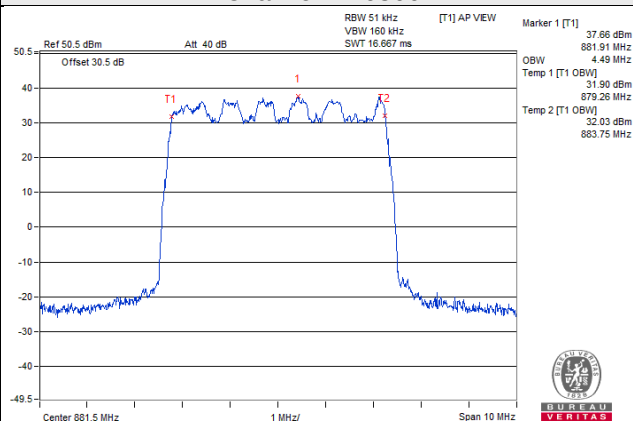


16QAM

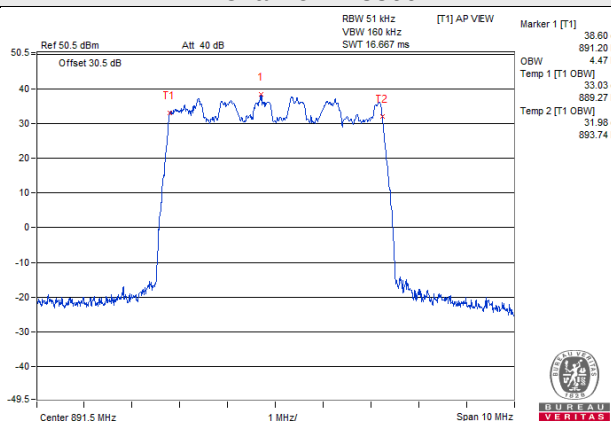
Channel: 174300



Channel: 176300

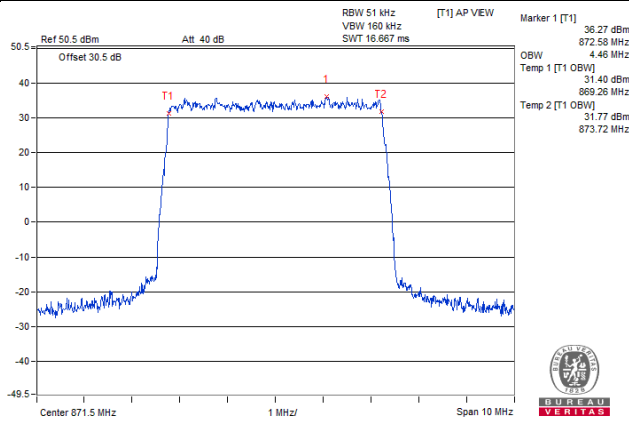


Channel: 178300

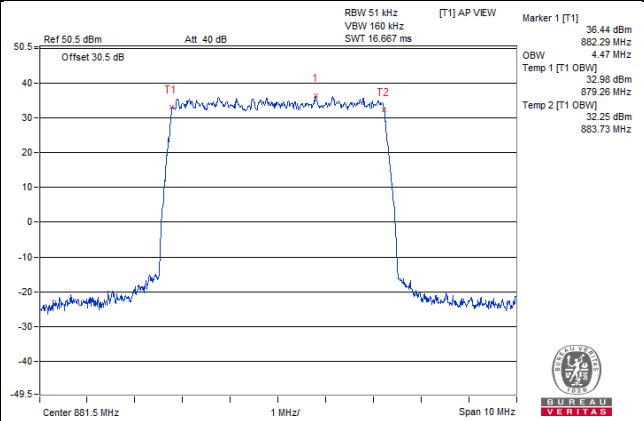


64QAM

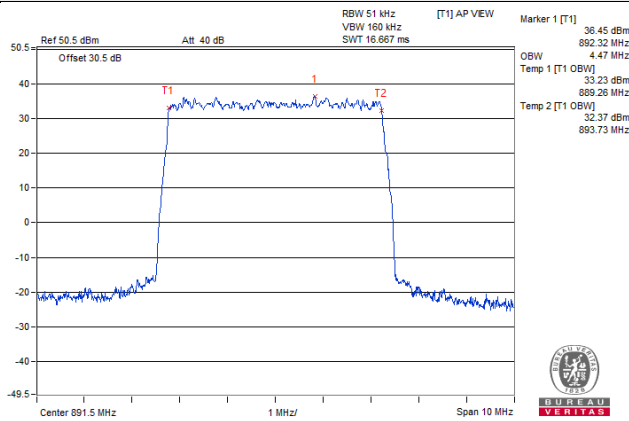
Channel: 174300



Channel: 176300

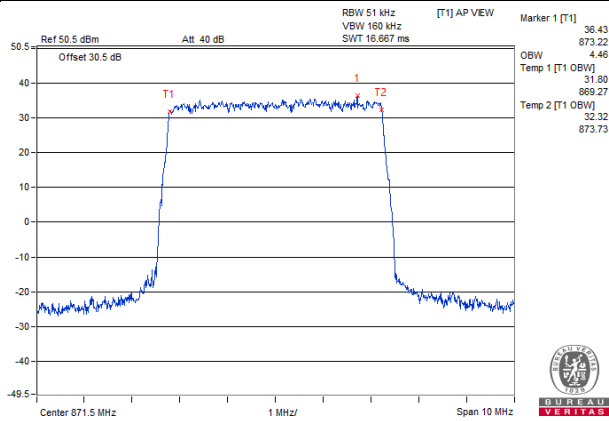


Channel: 178300

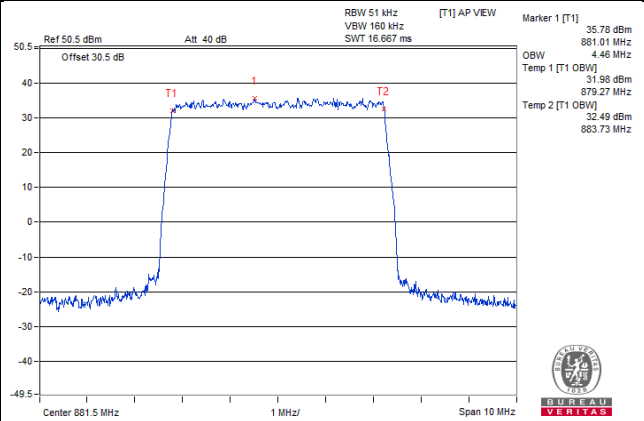


256QAM

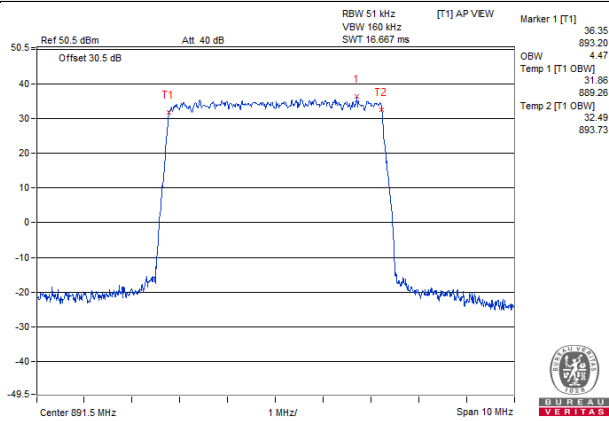
Channel: 174300



Channel: 176300



Channel: 178300

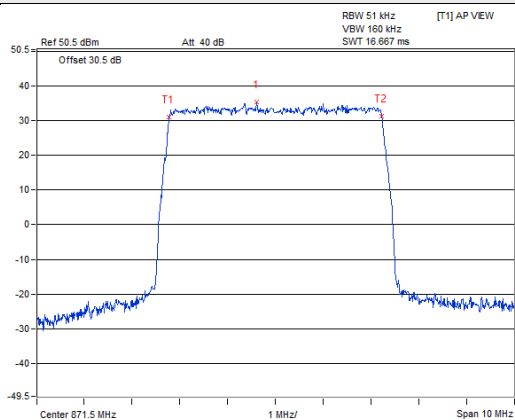


Chain 1

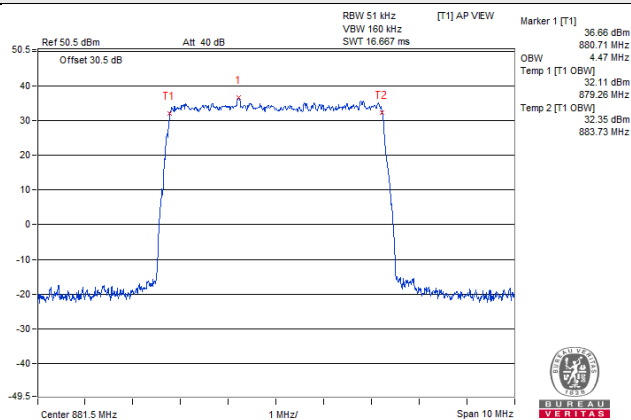
Spectrum Plot of Worst Value

QPSK

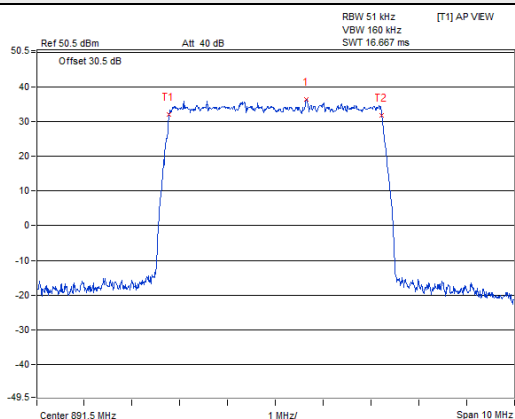
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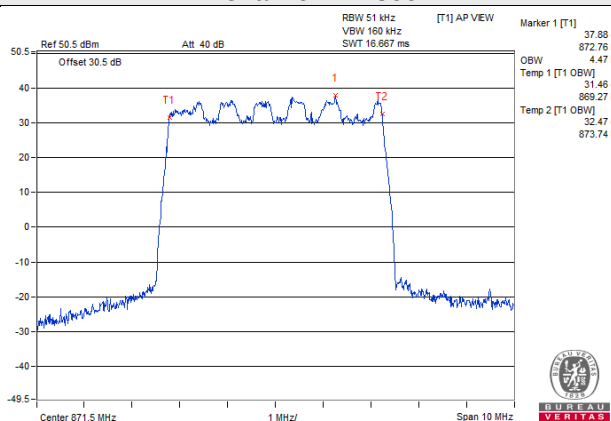


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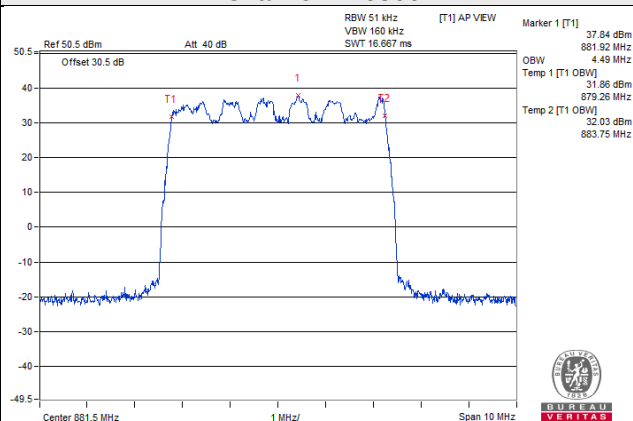


16QAM

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Channel: 178300

