



FCC PART 22, 74, 80 and 90

TEST REPORT

For

Hytera Communications Corporation Limited

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

FCC ID: YAMHR106XVHFS

Report Type: Original Report	Product Type: DIGITAL REPEATER
Report Number: DG2210812-33925E-00B	
Report Date: 2021-09-08	
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name:	DIGITAL REPEATER
Test Model:	HR1062 VHF
Multiple Model:	HR1065 VHF, HR1066 VHF, HR1068 VHF, HDR1062 VHF, HDR1065 VHF, HDR1066 VHF, HDR1068 VHF
Model Difference:	Refer to the DOS
Modulation Type:	FM, 4FSK
Channel Spacing:	12.5/25 kHz
Frequency Range:	136-174 MHz
Rated Output Power: (Conducted)	High Power Level: 50W Low Power Level: 5W
Rated Input Voltage:	AC 100-240V or DC 13.6V
Serial Number:	Basic Version: DG2210812-33925E-RF-RF-S3 Advanced Version: DG2210812-33925E-RF-RF-S4
EUT Received Date:	2021.8.9
EUT Received Status:	Good

Objective

This test report is prepared on behalf of *Hytera Communications Corporation Limited* in accordance with Part 2, and Part 22, 74, 80 and 90 of the Federal Communication Commissions rules.

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 22, Part 74, Part 80 and Part 90

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

TIA-603-E-2016, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

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 1st 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

Description of Test Configuration

The system was configured for testing in a test mode which has been done in the factory.

Special Accessories

Manufacturer	Description	Model	Serial Number	Note
Kenbotong Communication LTD	Antenna	TQJ-150M1	TQJ-150M1-S1	input impedance: 50 ohm Antenna Gain:9.6dBi▲

Note: Per the test method, the antenna sold with the device was not used during the test.

Equipment Modifications

No modification was made to the EUT.

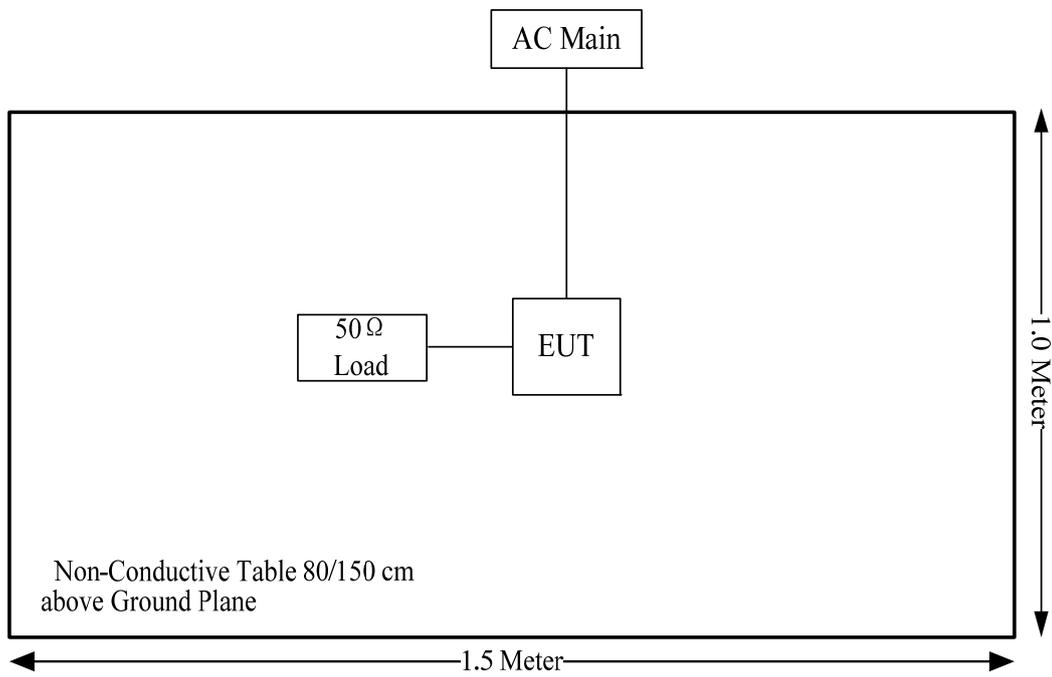
EUT Exercise Software

No software was tested in test.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Weinschel	50Ω Load Terminal	MD477	1440-3
HP	RF Communication Tester	8920A	3438A05201

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§1.1310 and §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§2.1046; § 22.727; §80.215; §74.461; §90.205	RF Output Power	Compliance
§2.1047	Modulation Characteristic	Compliance
§2.1049; §22.357; § 22.731; §74.462; §80.205; §80.207 §90.209; §90.210	Occupied Bandwidth & Emission Mask	Compliance
§2.1051; §22.861; §74.462; §80.211; §90.210	Spurious Emission at Antenna Terminal	Compliance
§2.1053; §22.861; §74.462; §80.211; §90.210	Spurious Radiated Emissions	Compliance
§2.1055; § 22.355; §74.464; §80.209; §90.213	Frequency Stability	Compliance
§90.214	Transient Frequency Behavior	Compliance

Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated emissions below 1GHz					
Sunol Sciences	Antenna	JB3	A060611-2	2020-08-25	2023-08-25
R&S	EMI Test Receiver	ESCI	100224	2020-09-12	2021-09-12
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2021-09-05	2022-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-02	2021-09-05	2022-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2020-09-24	2021-09-24
Sonoma	Amplifier	310N	185914	2020-10-13	2021-10-13
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-05	2022-09-05
Agilent	Signal Generator	E8247C	MY43321350	2021-04-25	2022-04-24
Radiated emissions above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
Agilent	Spectrum Analyzer	E4440A	SG43360054	2021-07-22	2022-07-21
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2021-09-05	2022-09-05
Mini-Circuit	Amplifier	ZVA-213-S+	54201245	2021-09-05	2022-09-05
TDK RF	Horn Antenna	HRN-0118	130 084	2018-10-12	2021-10-12
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2021-09-05	2022-09-05
Agilent	Signal Generator	E8247C	MY43321350	2021-04-25	2022-04-24
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2021-09-12	2022-09-12
R&S	Spectrum Analyzer	FSV40	101474	2021-07-06	2022-07-05
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41010012	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	OE01203218	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN749	Each time	N/A
E-Microwave	Coaxial Attenuators	EMCA40-200SN-6	OE01201046	Each time	N/A
Ouli	Bandpass Filter	136-174M	021	2021-07-23	2022-07-23
Mini-Circuits	High Pass Filter	BHP-300+	15542	2021-09-05	2022-09-04
HP	RF Communications Test Set	8920A	3438A05201	2021-07-06	2022-07-05
BACL	TEMP&HUMI Test Chamber	BTH-150	30022	2021-02-24	2022-02-23
UNI-T	Multimeter	UT39A	M130199938	2021-08-25	2022-08-24
Pro instrument	DC Power Supply	pps3300	3300012	N/A	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).

Environmental Conditions

Test Item:	RF Conducted	Radiation Below 1GHz	Radiation Above 1GHz
Temperature:	26.7~28.5℃	26.8℃	28.7℃
Relative Humidity:	54~57%	62%	66%
ATM Pressure:	100~100.6 kPa	100.1kPa	101.1kPa
Tester:	Levi shi	Joyce Qiao	Wayne wei
Test Date:	2021.08.10~2021.08.25	2021.08.24	2021.09.07

FCC §1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to 1.1310, 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for Maximum Permissible Exposure (MPE)

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E , H or S (minutes)
0.3- 3.0	614	1.63	(100)*	6
3.0 - 30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

f = frequency in MHz;

* = Plane-wave equivalent power density;

MPE Calculation

Prediction of power density at the distance of the applicable MPE limit

$$S = PG/4\pi R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

MPE Results

Frequency (MHz)	Antenna Gain		Maximum Average output power including Tune-up Tolerance ▲		Operation Duty Cycle (%)	Evaluation Distance (cm)	Power Density (mW/cm ²)	Power Density Limit (mW/cm ²)
	(dBi)	(numeric)	(dBm)	(mW)				
136-174	9.6	9.12	47.78	59979	50	200	0.54	1.0

Note: the maximum power including Tune-up Tolerance is declared by manufacturer.

Result: The device meet FCC MPE at 200 cm distance

FCC §2.1046 & § 22.727 & §74.461 & §80.215& §90.205- RF OUTPUT POWER

Applicable Standard

FCC §2.1046, § 22.727, §74.461, §80.215 and §90.205

Test Procedure

Conducted RF Output Power:

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

Spectrum Analyzer Setting:

R B/W Video B/W
 100 kHz 300 kHz

Test Data

Test Mode: Transmitting

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

Modulation Mode	Channel Separation	f _c	Reading (W)		Note
		MHz	High Power Level	Low Power Level	
FM	12.5kHz	136.0125	47.17	37.34	For Federal
		155.7525	47.16	37.31	For part 90
		173.9875	47.15	37.31	
		150.8125	47.22	37.31	For part 22
		161.1	47.18	37.33	For part 74
4FSK	12.5kHz	136.0125	47.16	37.34	For Federal
		155.7525	47.16	37.31	For part 90
		173.9875	47.15	37.32	
		150.8125	47.22	37.31	For part 22
		161.1	47.19	37.34	For part 74
FM	25kHz	154.0125	47.22	37.31	FCC part 80
		150.8125	47.22	37.31	For part 22
		161.1	47.18	37.33	For part 74

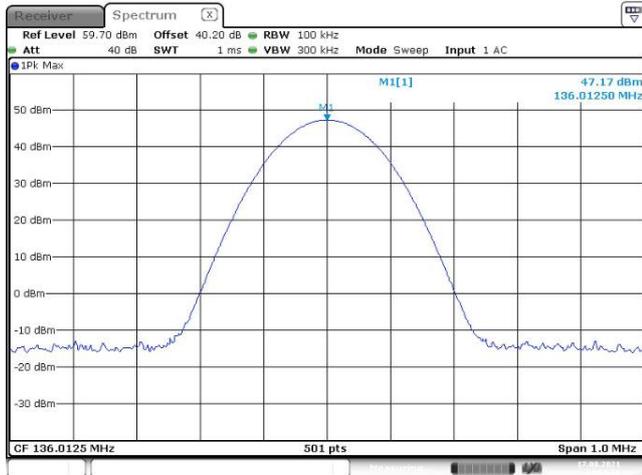
Note:

The high rated power level is 50W(47dBm), and low rated power level is 5W(37dBm).

The output power shall not exceed by more than 20 percent the manufacturer's rated output power for the particular transmitter specifically listed on the authorization.(47.78dBm for High power level, 37.78dBm for Low power level)

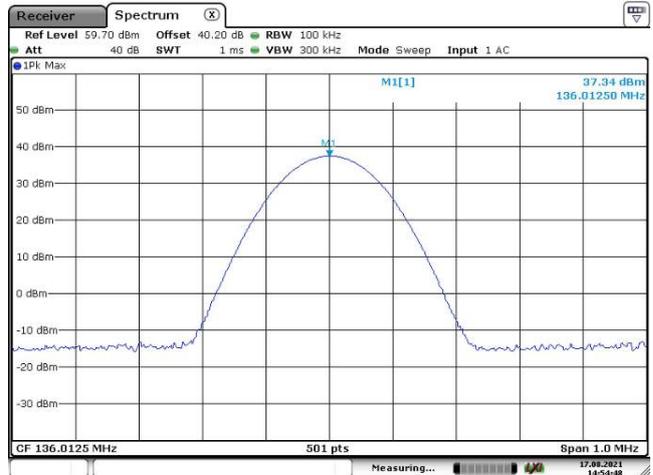
FM, 12.5kHz:

Low Channel, 136.0125 MHz High Power



Date: 17.AUG.2021 14:54:11

Low Channel, 136.0125 MHz Low Power



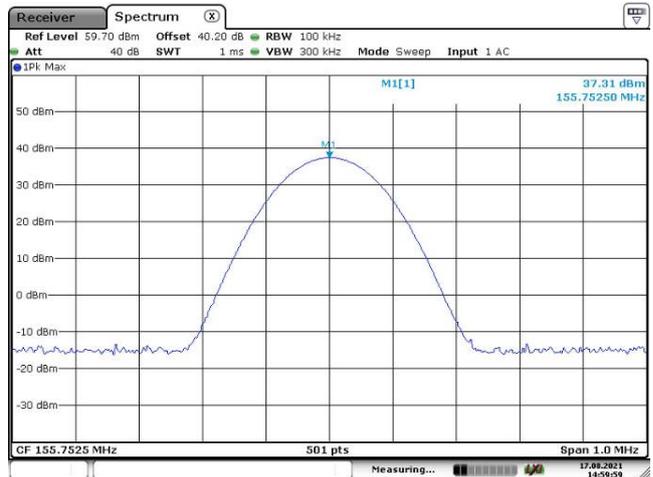
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Part 90, Middle Channel, 155.7525 MHz High Power



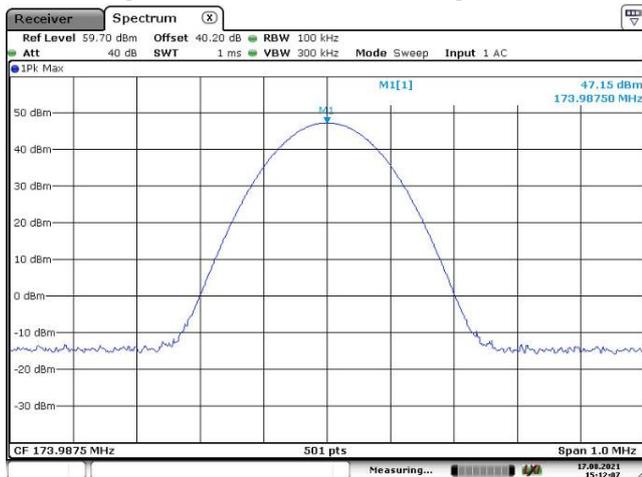
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Part 90, Middle Channel, 155.7525 MHz Low Power



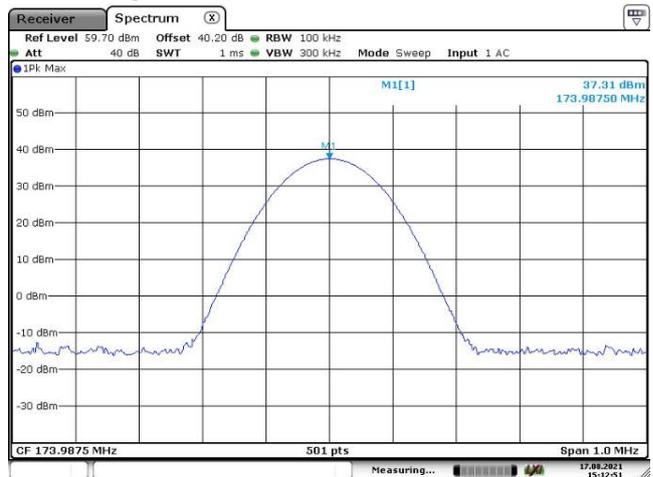
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High Channel, 173.9875MHz High Power



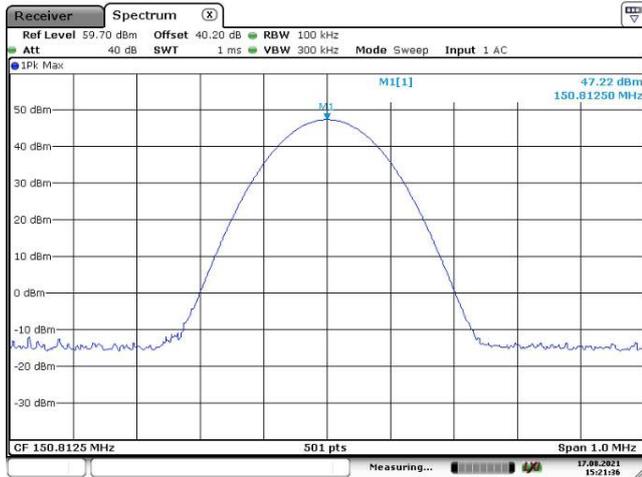
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High Channel, 173.9875 MHz Low Power



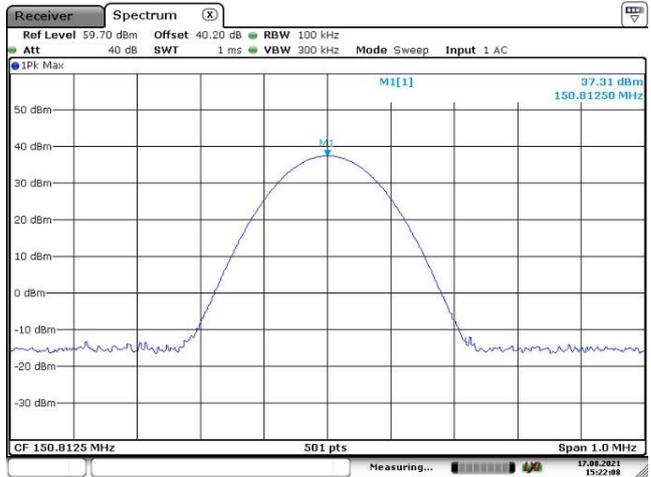
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Part 22, Additional Channel, 150.8125 MHz High Power



Date: 17.AUG.2021 15:21:37

Part 22, Additional Channel, 150.8125 MHz Low Power



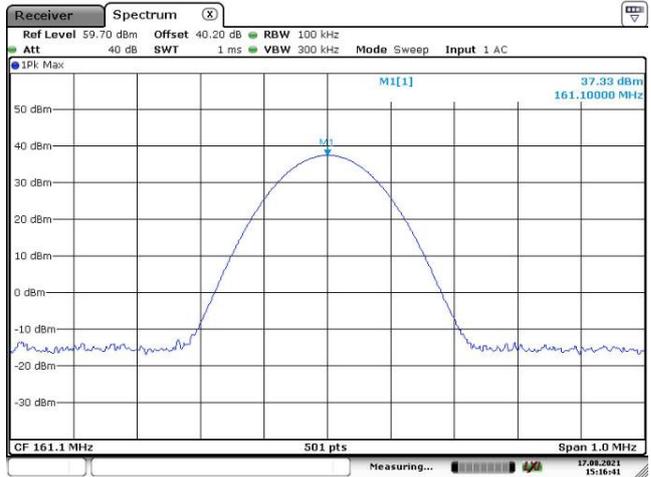
Date: 17.AUG.2021 15:22:08

Part 74, Additional Channel, 161.1 MHz High Power



Date: 17.AUG.2021 15:16:20

Part 74, Additional Channel, 161.1 MHz Low Power



Date: 17.AUG.2021 15:16:42

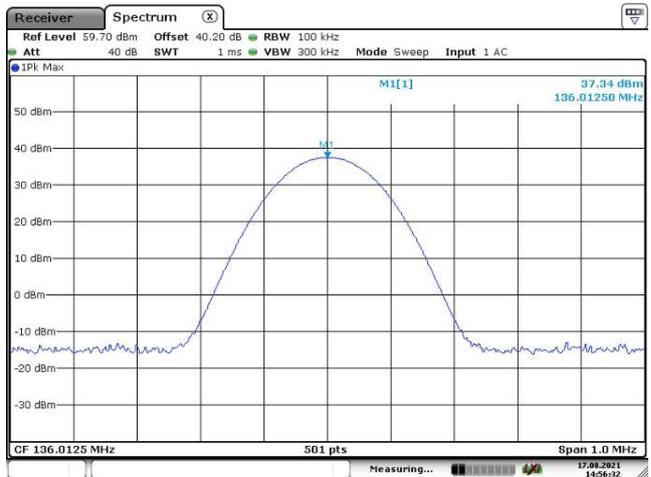
4FSK, 12.5kHz:

Low Channel, 136.0125 MHz High Power



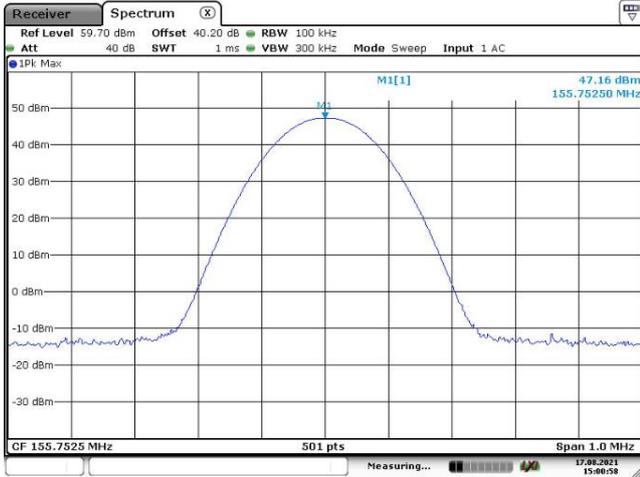
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Low Channel, 136.0125 MHz Low Power



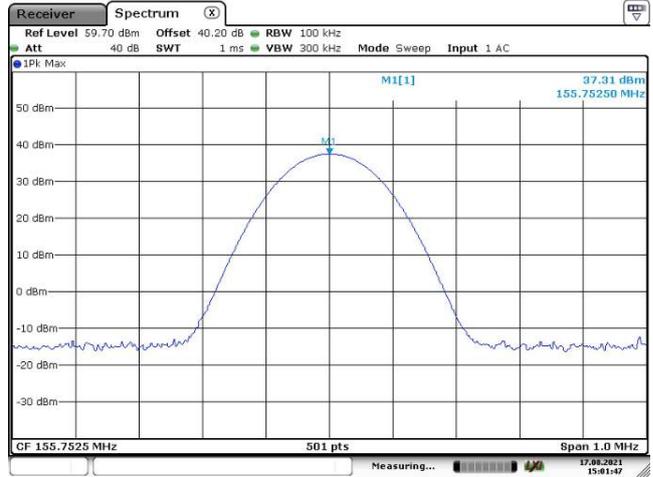
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Part 90, Middle Channel, 155.7525 MHz High Power



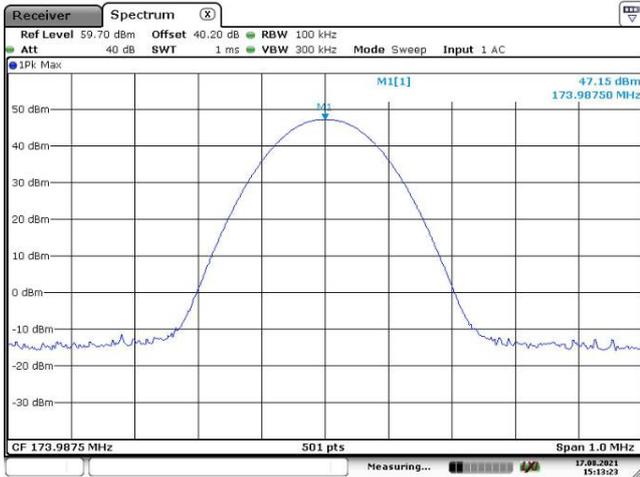
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Part 90, Middle Channel, 155.7525 MHz Low Power



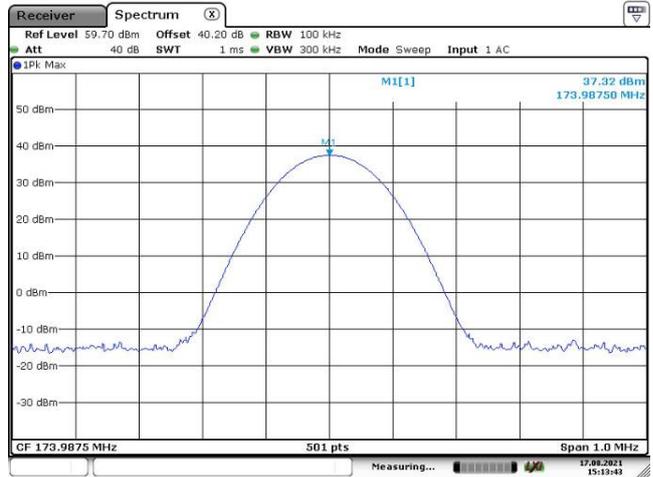
Date: 17.AUG.2021 15:01:48

High Channel, 173.9875 MHz High Power



Date: 17.AUG.2021 15:13:24

High Channel, 173.9875 MHz Low Power



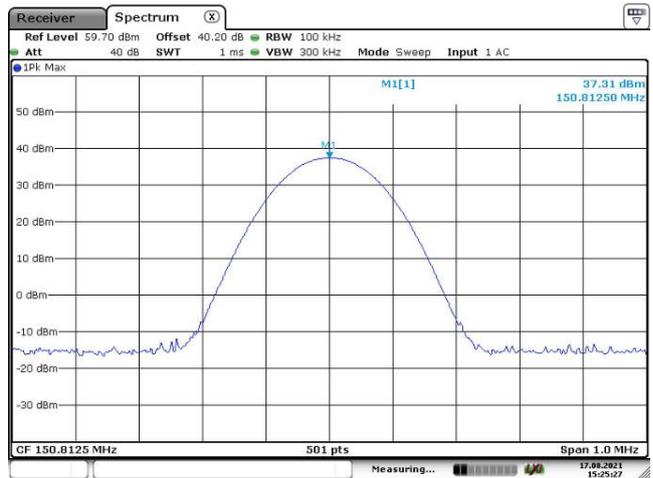
Date: 17.AUG.2021 15:13:43

Part 22, Additional Channel, 150.8125 MHz High Power



Date: 17.AUG.2021 15:24:46

Part 22, Additional Channel, 150.8125 MHz Low Power



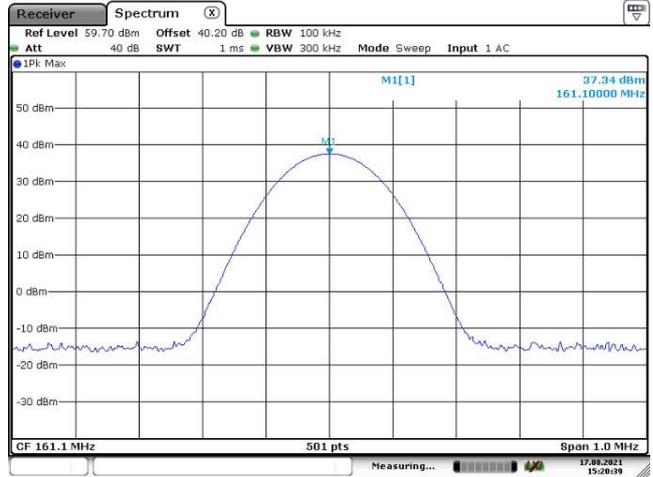
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Part 74, Additional Channel, 161.1 MHz High Power



Date: 17.AUG.2021 15:20:18

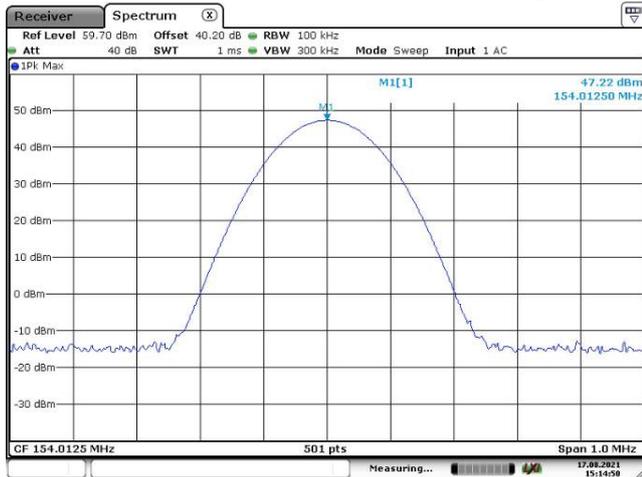
Part 74, Additional Channel, 161.1 MHz Low Power



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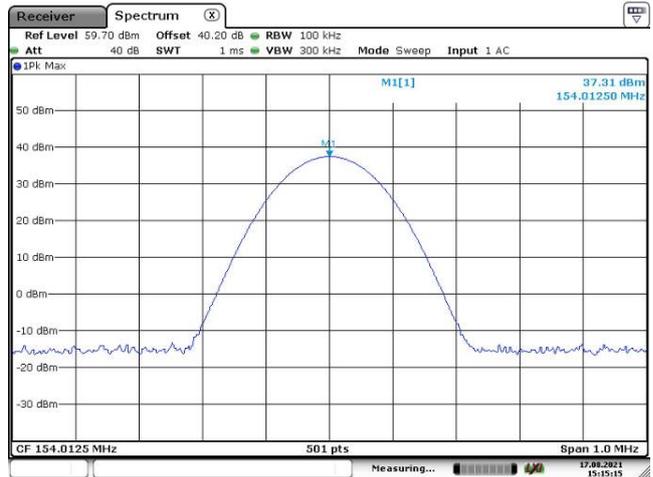
FM, 25kHz:

Part 80, Additional Channel, 154.0125 MHz High Power



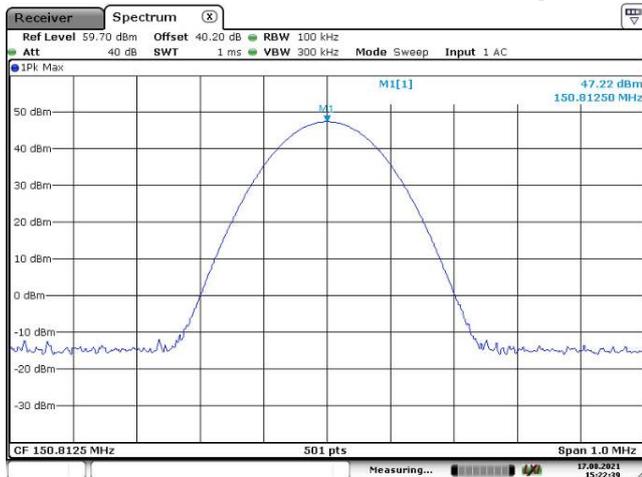
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Part 80, Additional Channel, 154.0125 MHz Low Power



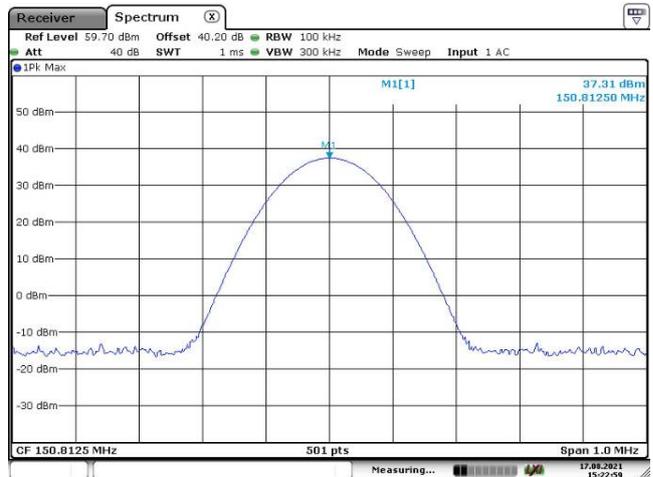
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Part 22, Additional Channel, 150.8125 MHz High Power



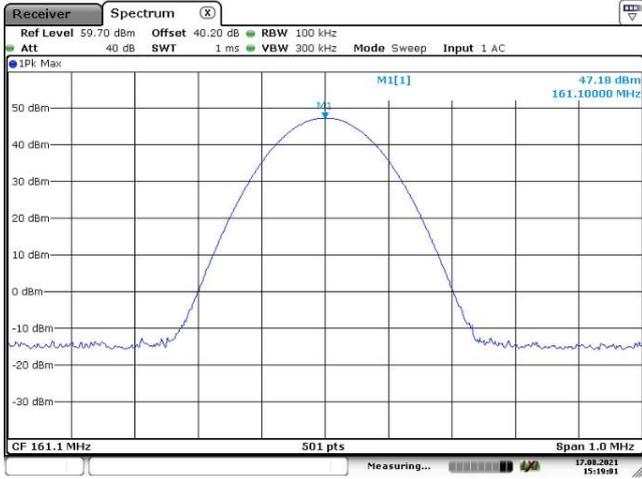
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Part 22, Additional Channel, 150.8125 MHz Low Power



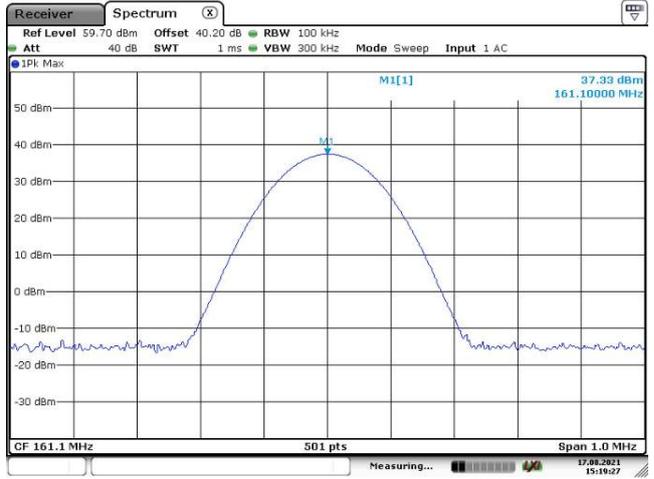
Date: 17.AUG.2021 15:22:59

Part 74, Additional Channel, 161.1 MHz High Power



Date: 17.AUG.2021 15:19:02

Part 74, Additional Channel, 161.1 MHz Low Power



Date: 17.AUG.2021 15:19:27

FCC §2.1047 - MODULATION CHARACTERISTIC

Applicable Standard

FCC §2.1047

- (a) Equipment which utilizes voice modulated communication shall show the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz. for equipment which is required to have a low pass filter, the frequency response of the filter, or all of the circuitry installed between the modulation limited and the modulated stage shall be supplied.
- (b) Equipment which employs modulation limiting, a curve showing the percentage of modulation versus the modulation input voltage shall be supplied.

Test Procedure

Test Method: TIA-603-E 2.2.3

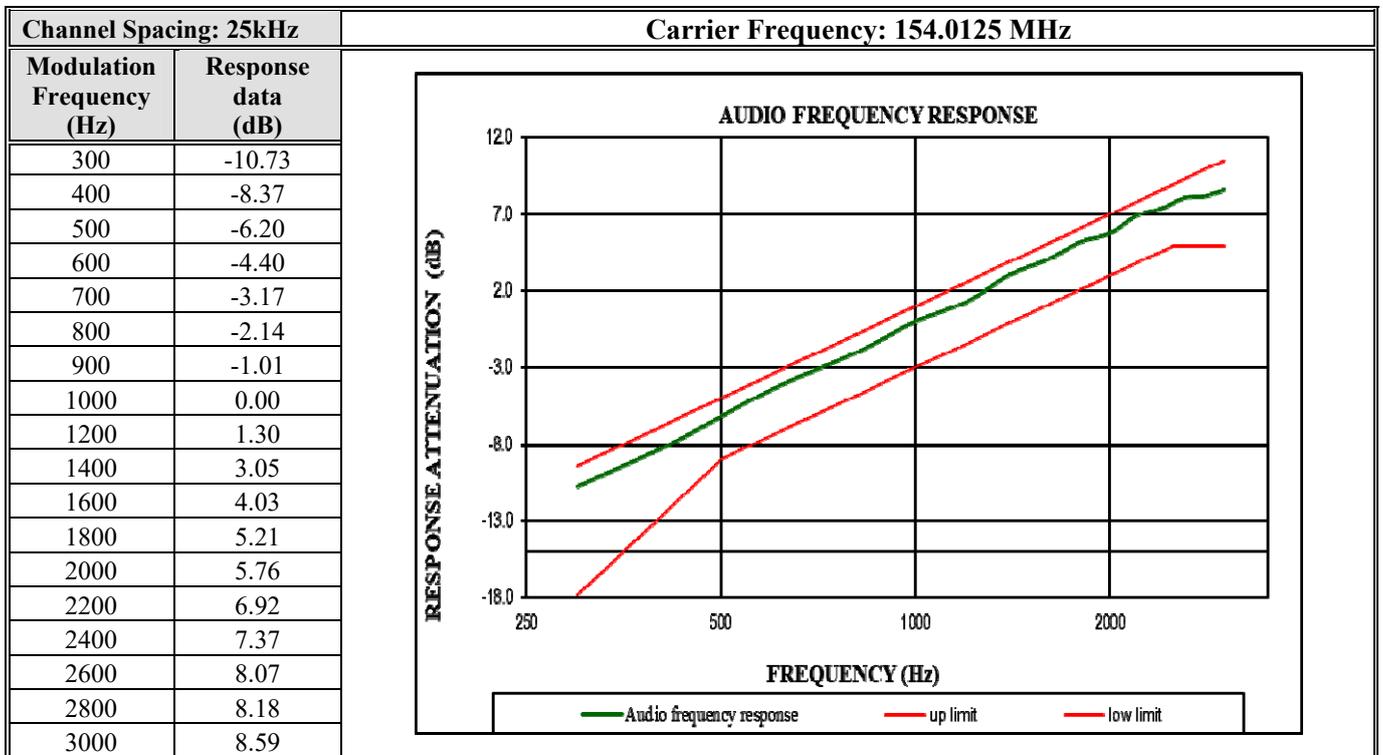
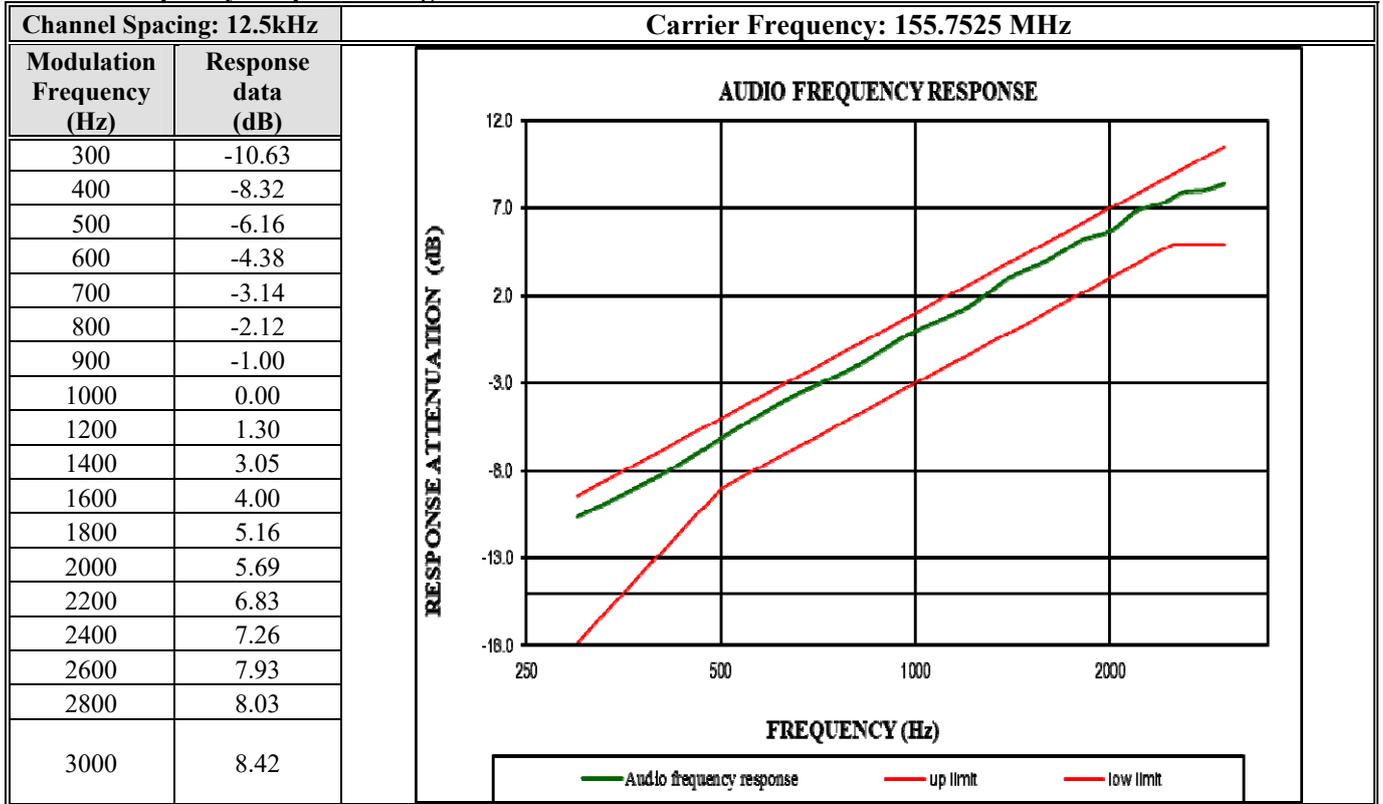
Test Data

Test Mode: Transmitting

Test Result: Compliance.

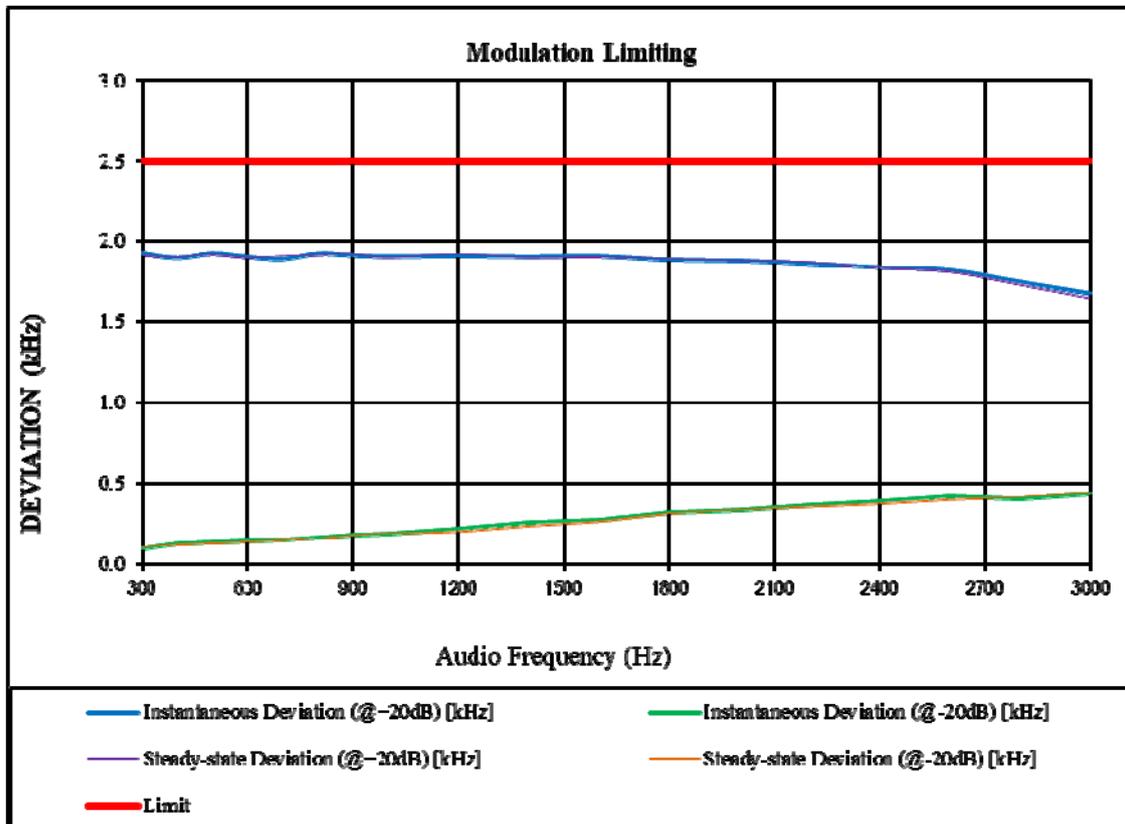
Please refer to the following tables and plots.

Audio Frequency Response – High Power

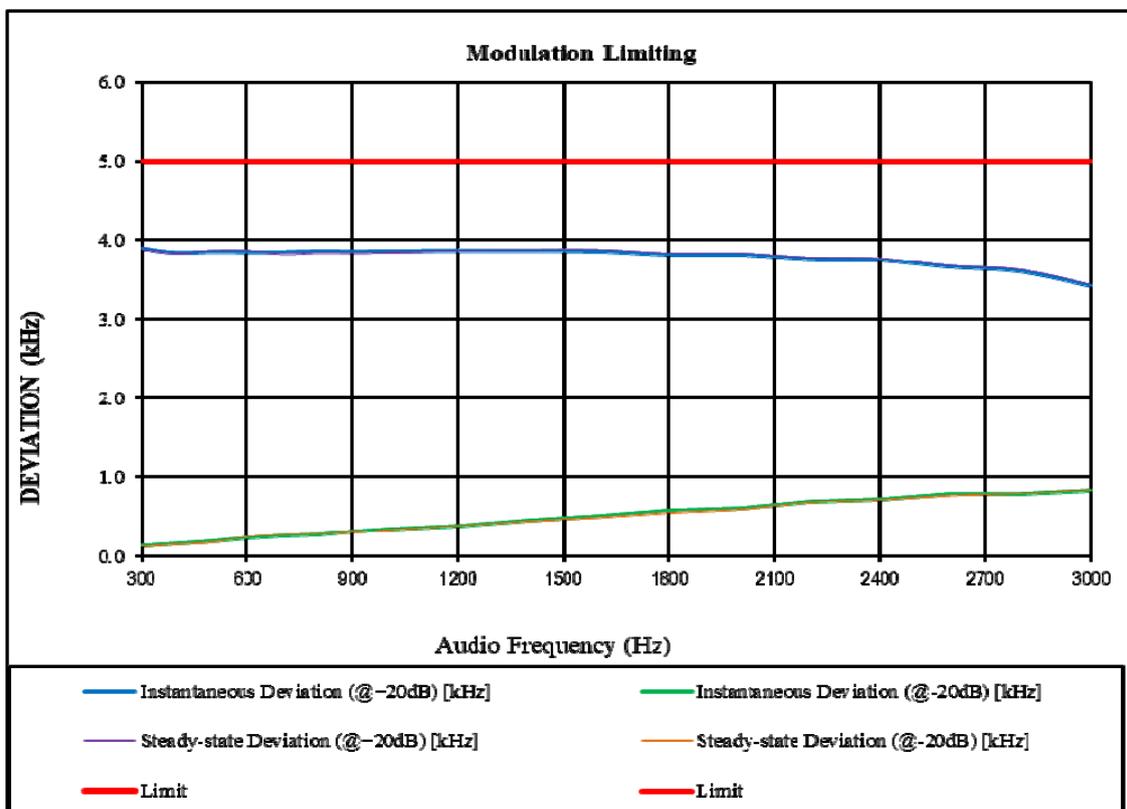


Modulation Limiting – High Power

Channel Spacing: 12.5kHz		Carrier Frequency: 155.7525 MHz			
Audio Frequency (Hz)	Instantaneous		Steady-state		Limit [kHz]
	Deviation (@+20dB) [kHz]	Deviation (@-20dB) [kHz]	Deviation (@+20dB) [kHz]	Deviation (@-20dB) [kHz]	
300	1.929	0.097	1.914	0.102	2.5
400	1.901	0.123	1.906	0.118	2.5
500	1.927	0.130	1.921	0.127	2.5
600	1.907	0.141	1.901	0.135	2.5
700	1.893	0.148	1.912	0.146	2.5
800	1.926	0.164	1.917	0.158	2.5
900	1.916	0.182	1.924	0.176	2.5
1000	1.909	0.190	1.902	0.189	2.5
1200	1.913	0.217	1.923	0.201	2.5
1400	1.908	0.255	1.902	0.235	2.5
1600	1.911	0.274	1.906	0.263	2.5
1800	1.889	0.322	1.894	0.311	2.5
2000	1.883	0.330	1.882	0.334	2.5
2200	1.864	0.363	1.873	0.354	2.5
2400	1.840	0.386	1.835	0.372	2.5
2600	1.822	0.416	1.812	0.398	2.5
2800	1.749	0.406	1.731	0.414	2.5
3000	1.678	0.432	1.648	0.437	2.5

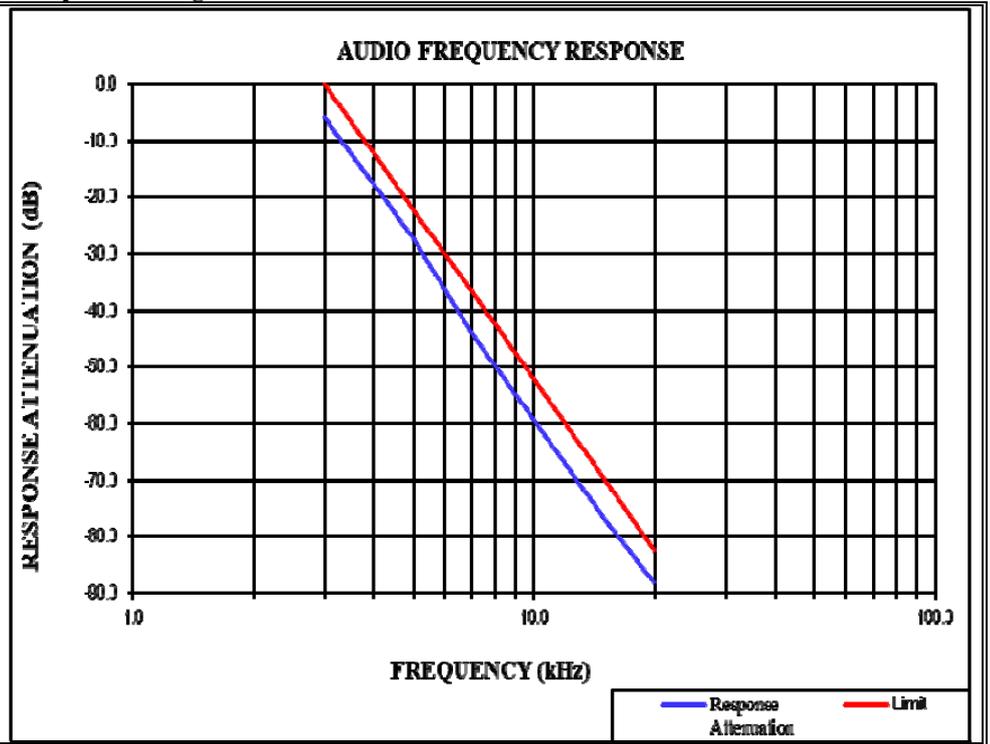


Channel Spacing: 25kHz		Carrier Frequency: 154.0125 MHz			
Audio Frequency (Hz)	Instantaneous		Steady-state		Limit [kHz]
	Deviation (@+20dB) [kHz]	Deviation (@-20dB) [kHz]	Deviation (@+20dB) [kHz]	Deviation (@-20dB) [kHz]	
300	3.897	0.135	3.889	0.124	5
400	3.845	0.168	3.836	0.154	5
500	3.856	0.189	3.868	0.178	5
600	3.852	0.239	3.872	0.244	5
700	3.853	0.258	3.827	0.269	5
800	3.863	0.280	3.842	0.281	5
900	3.859	0.319	3.841	0.302	5
1000	3.864	0.347	3.847	0.335	5
1200	3.870	0.392	3.867	0.384	5
1400	3.869	0.461	3.876	0.445	5
1600	3.862	0.508	3.882	0.492	5
1800	3.821	0.577	3.836	0.552	5
2000	3.819	0.606	3.836	0.594	5
2200	3.769	0.696	3.778	0.682	5
2400	3.750	0.722	3.771	0.712	5
2600	3.665	0.782	3.676	0.768	5
2800	3.608	0.789	3.628	0.791	5
3000	3.423	0.825	3.436	0.836	5

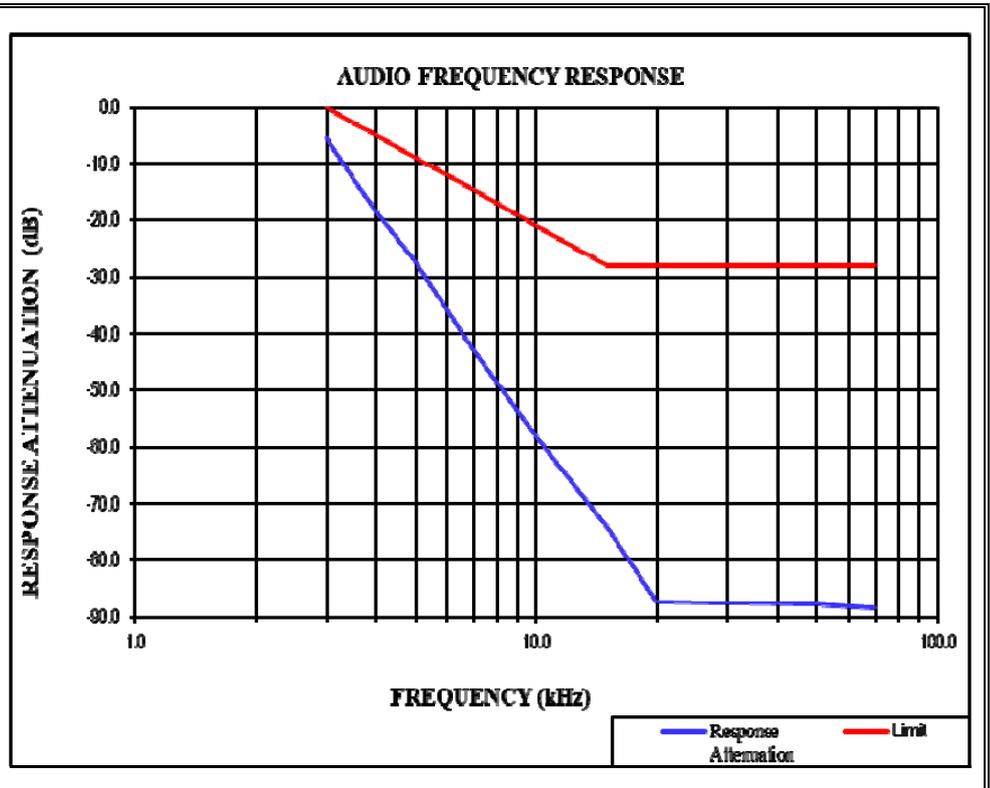


Audio Frequency Low Pass Filter Response – High Power

Channel Spacing: 12.5kHz		
Carrier Frequency: 155.7525 MHz		
Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
3.0	-5.8	0.0
3.5	-12.4	-6.7
4.0	-17.8	-12.5
5.0	-27.3	-22.2
7.0	-44.2	-36.8
10.0	-59.4	-52.3
15.0	-77.1	-69.9
20.0	-88.2	-82.5



Channel Spacing: 25kHz		
Carrier Frequency: 154.0125 MHz		
Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
3.0	-5.4	0.0
3.5	-12.6	-2.7
4.0	-18.5	-5.0
5.0	-27.4	-8.9
7.0	-43.1	-14.7
10.0	-58.1	-20.9
15.0	-74.2	-28.0
20.0	-87.4	-28.0
30.0	-87.6	-28.0
50.0	-87.8	-28.0
70.0	-88.4	-28.0



FCC §2.1049 & §22.357 & § 22.731 & §74.462 & 80.205& §80.207& §90.209 & §90.210 – OCCUPIED BANDWIDTH & EMISSION MASK

Applicable Standard

FCC §2.1049, §22.357, § 22.731, §74.462, §80.205, §80.207,§90.209 and §90.210

Test Procedure

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

The resolution bandwidth of the spectrum analyzer was set at 100 Hz or 300 Hz and the spectrum was recorded in the frequency band ±50 kHz from the carrier frequency.

Test Data

Test Mode: Transmitting

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

Test Mode	Test Channel	Test Frequency (MHz)	High Power Level		Low Power Level		Note
			99% Occupied Bandwidth (kHz)	26dB Emission Bandwidth (kHz)	99% Occupied Bandwidth (kHz)	26dB Emission Bandwidth (kHz)	
FM 12.5kHz	Low	136.0125	5.190	10.280	5.190	10.280	For federal
	Middle	155.7525	5.190	10.280	5.190	10.280	For Part 90
	High	173.9875	5.190	10.380	5.190	10.280	
	Additional	150.8125	5.190	10.380	5.190	10.280	For Part 22
	Additional	161.1	5.190	10.380	5.190	10.280	For Part 74
4FSK 12.5kHz	Low	136.0125	6.786	8.780	6.587	8.680	For federal
	Middle	155.7525	6.687	8.780	6.886	9.180	For Part 90
	High	173.9875	6.687	8.580	6.387	8.580	
	Additional	150.8125	6.487	8.380	6.886	8.880	For Part 22
	Additional	161.1	6.287	8.080	6.487	8.580	For Part 74
FM 25kHz	Additional	150.8125	10.579	15.770	10.579	15.970	For Part 22
	Additional	154.0125	10.579	15.770	10.579	15.970	For Part 74
	Additional	161.1	10.579	15.770	10.579	15.970	For Part 80

Note: Emission bandwidth was based on calculation method instead of measurement.

Emission Designator: Per CFR 47 §2.201& §2.202, BW = 2M + 2D

For FM Mode (Channel Spacing: 12.5 kHz)

Emission Designator: 11K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation.

$$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} = 11K0$$

F3E portion of the designator represents an FM voice transmission

Therefore, the entire designator for 12.5 kHz channel spacing FM mode is 11K0F3E.

For FM Mode (Channel Spacing: 25 kHz)

Emission Designator: 16K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 5.0 kHz deviation.

$$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 5.0 \text{ kHz}) = 16 \text{ kHz} = 16K0$$

F3E portion of the designator represents an FM voice transmission

Therefore, the entire designator for 25 kHz channel spacing FM mode is 16K0F3E.

For Digital Mode (Channel Spacing: 12.5 kHz)

Emission Designator: 7K60F1D and 7K60F1E

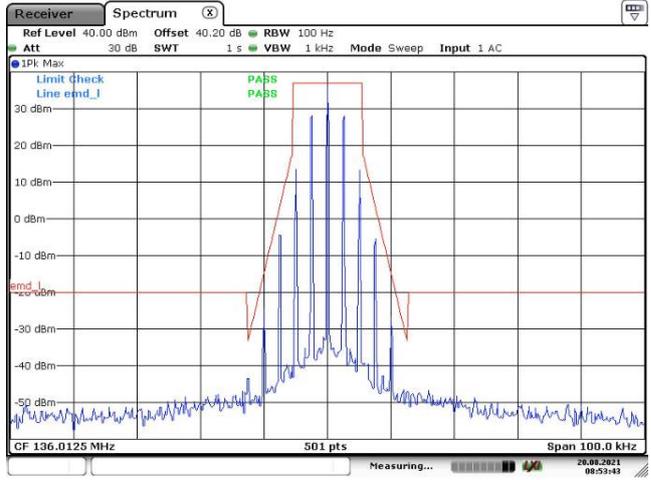
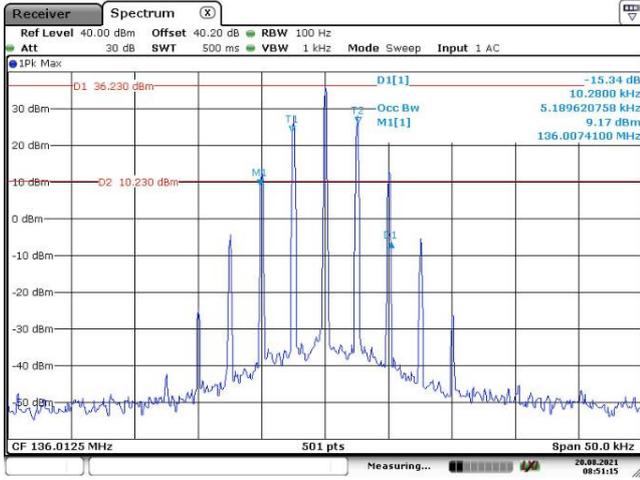
The 99% energy rule (title 47CFR 2.1049) was used for digital mode. It basically states that 99% of the modulation energy falls within X kHz, in this case, 7.60 kHz. The emission mask was obtained from 47CFR 90.210(d).

F1D and F1E portion of the designator indicates digital information.

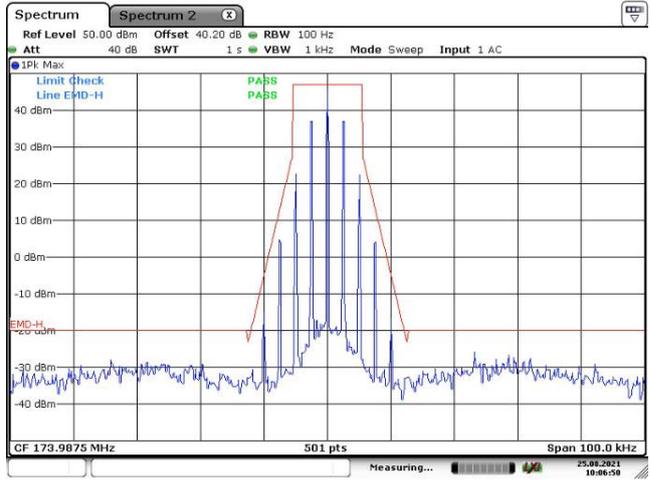
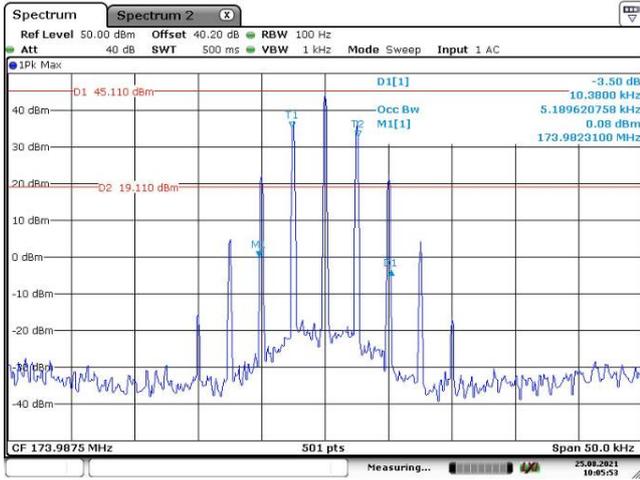
Therefore, the entire designator for 12.5 kHz channel spacing digital mode is 7K60F1D and 7K60F1E.

FM, 12.5kHz, High Power:

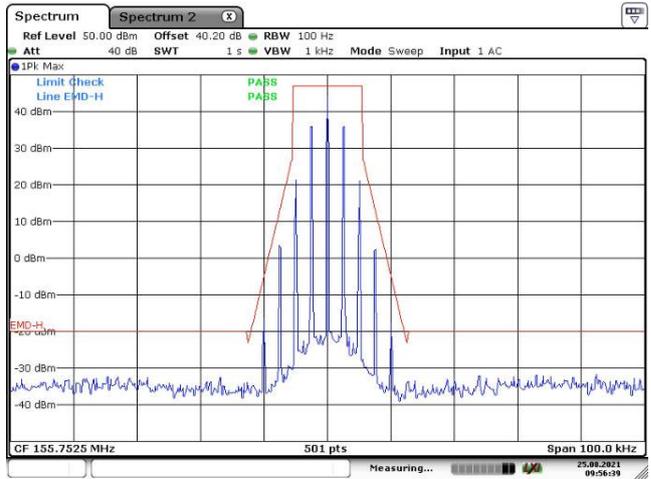
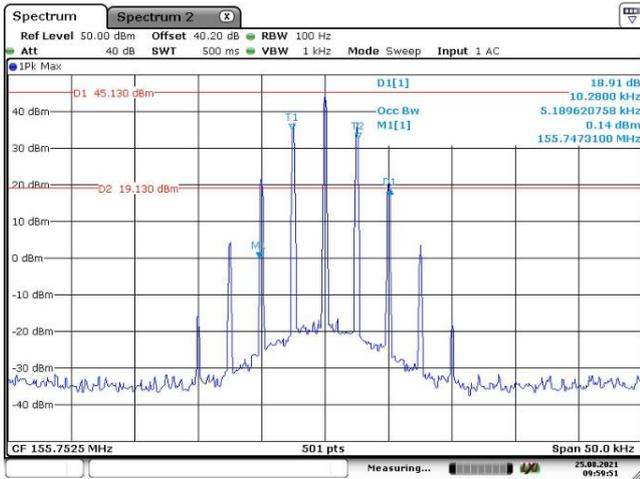
Low Channel



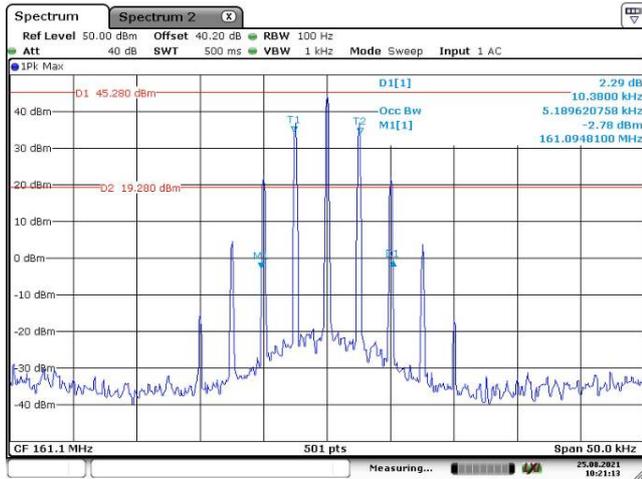
Middle Channel



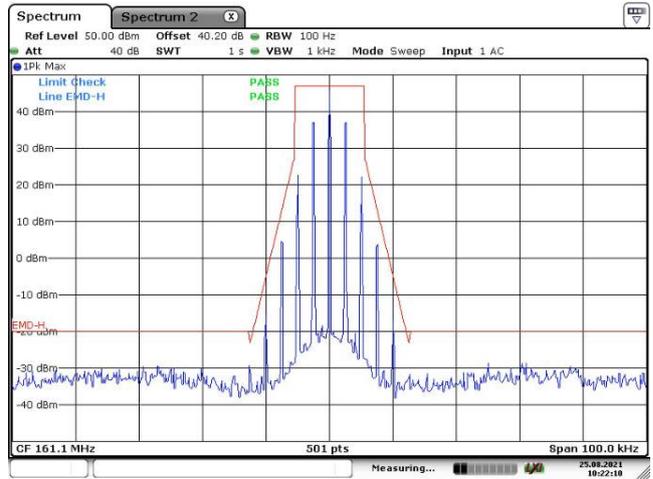
High Channel



Additional Channel Part 74, 161.1 MHz

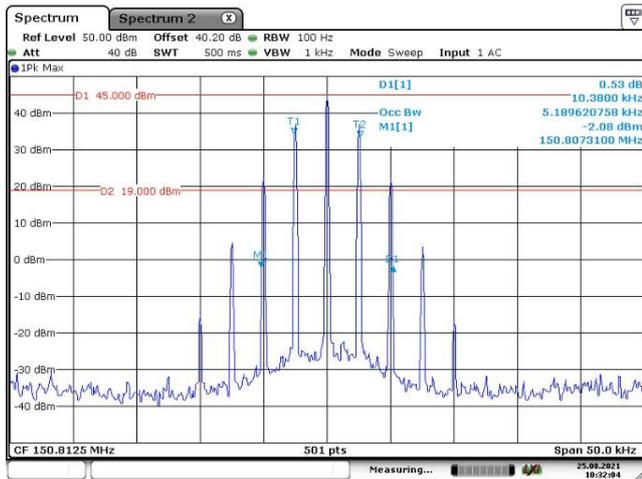


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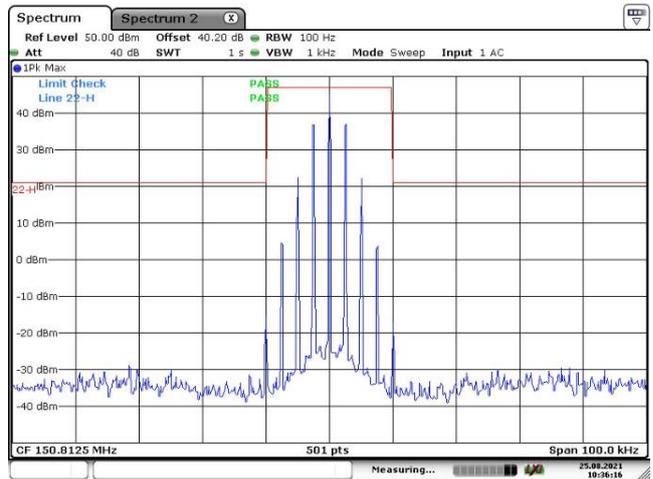


Date: 25.AUG.2021 10:22:10

Additional Channel Part 22, 150.8125 MHz



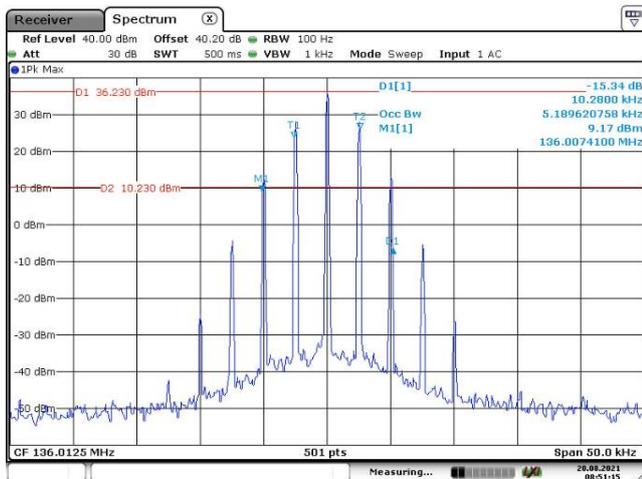
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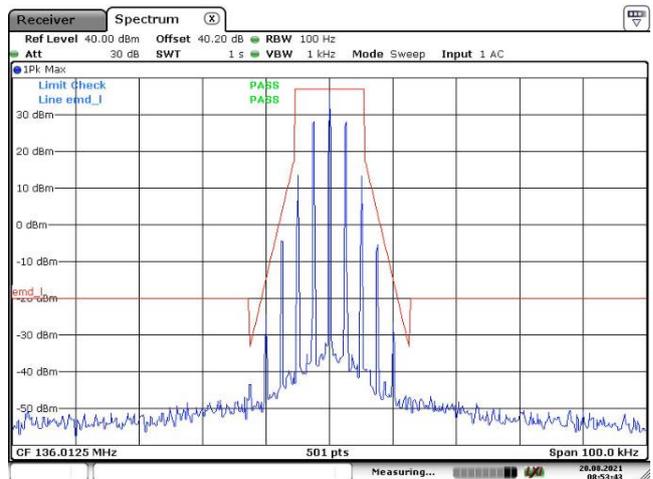
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FM, 12.5kHz, Low Power:

Low Channel

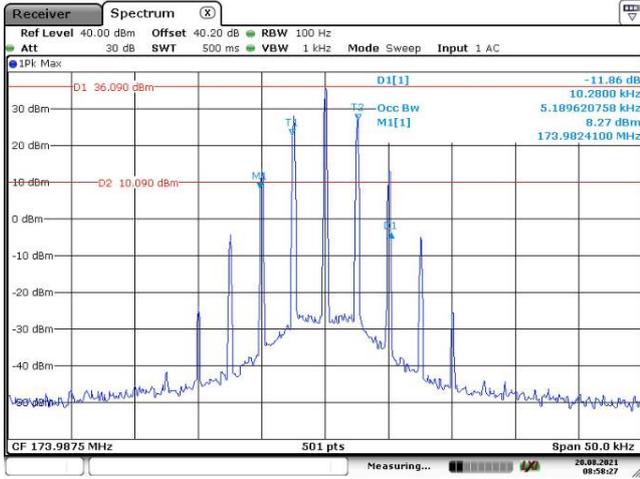


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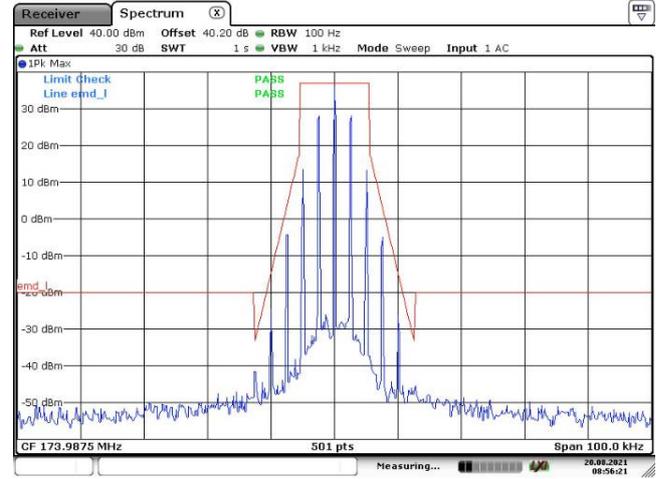


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Middle Channel

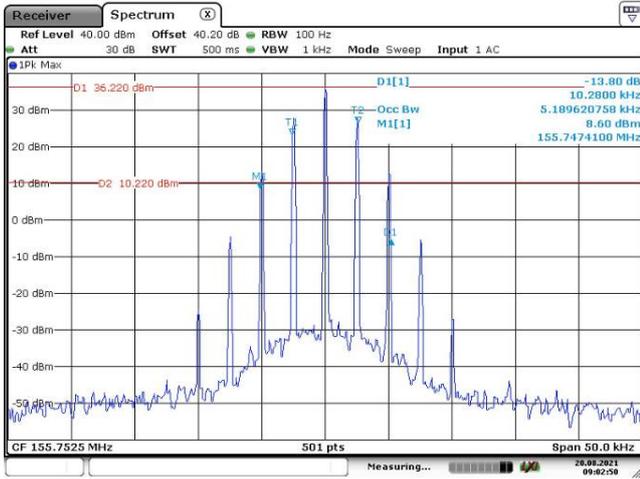


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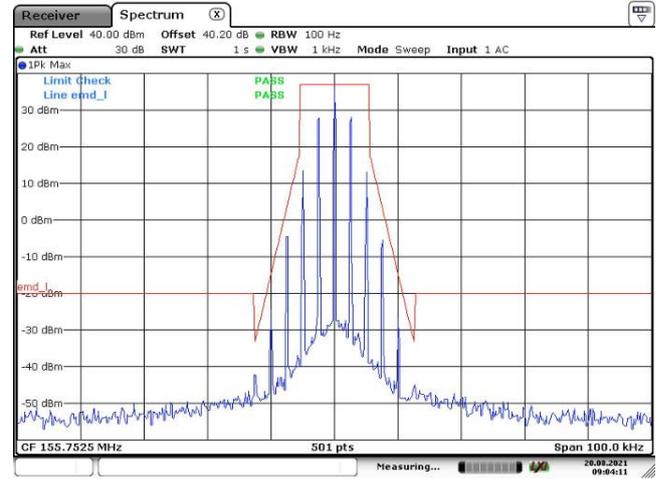


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High Channel

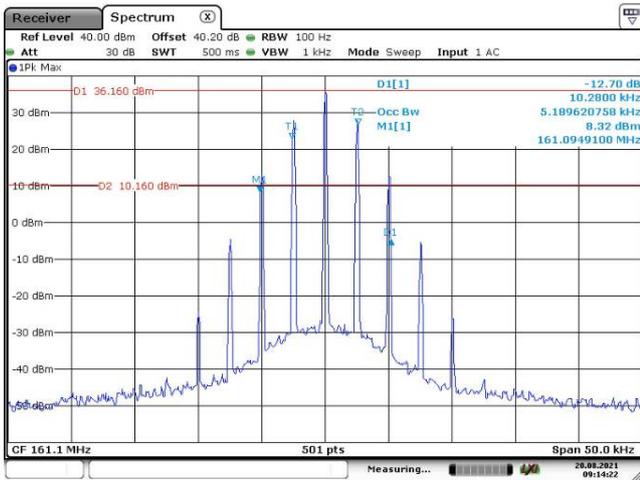


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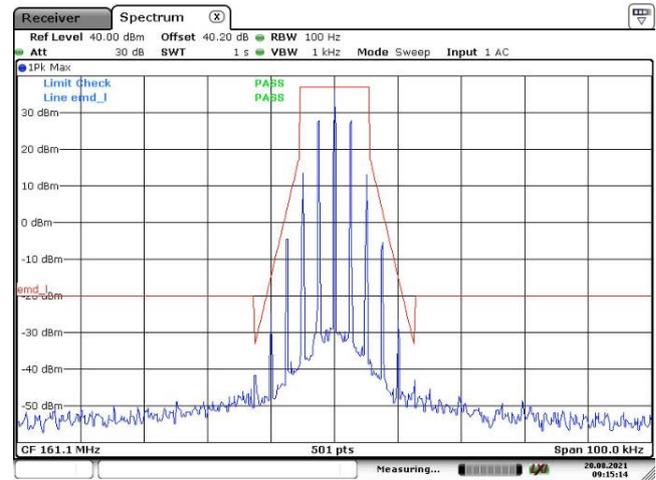


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Additional Channel Part 74, 161.1 MHz

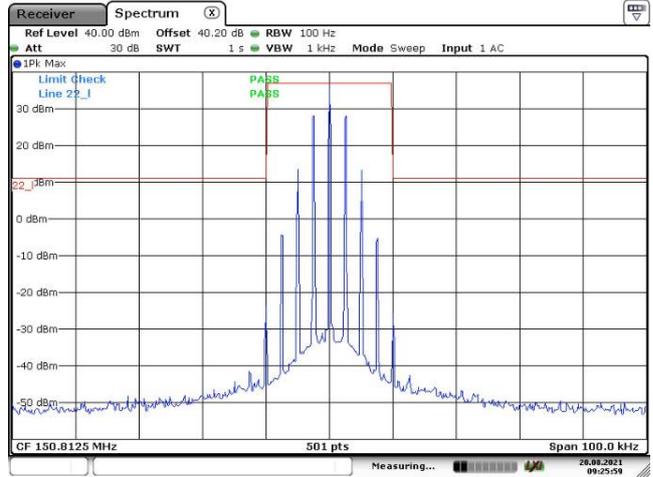
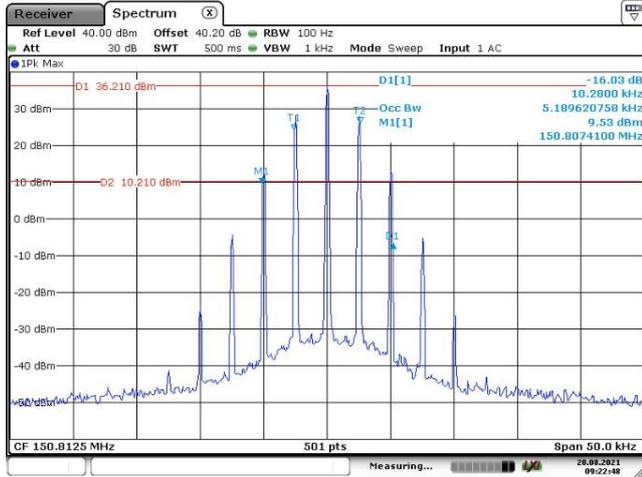


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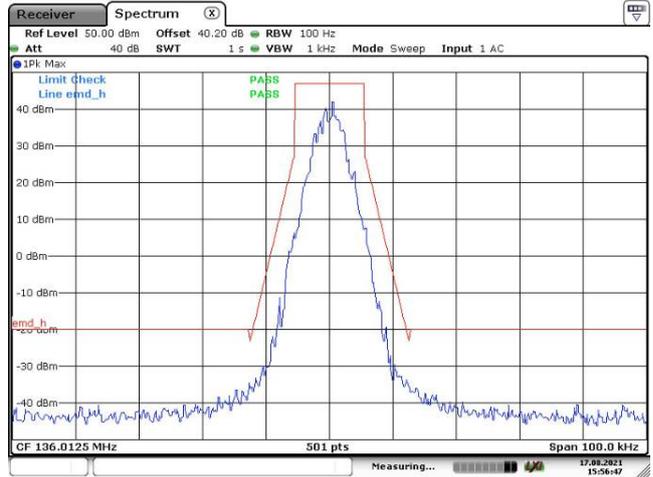
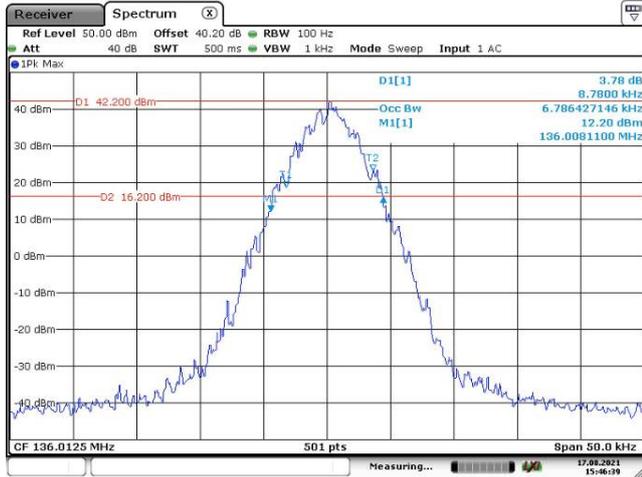
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Additional Channel Part 22, 150.8125 MHz

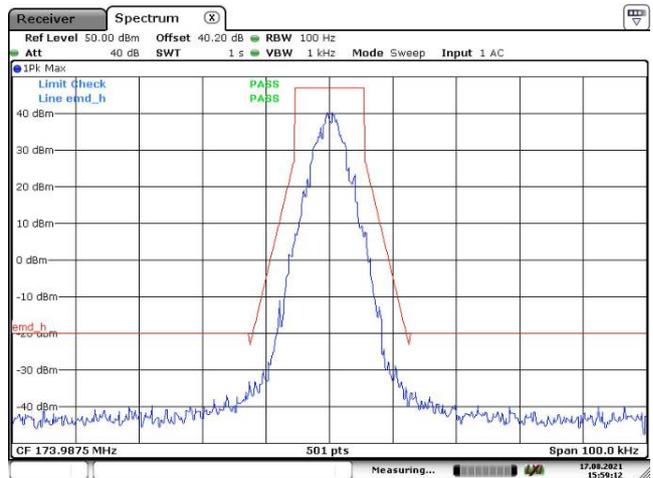
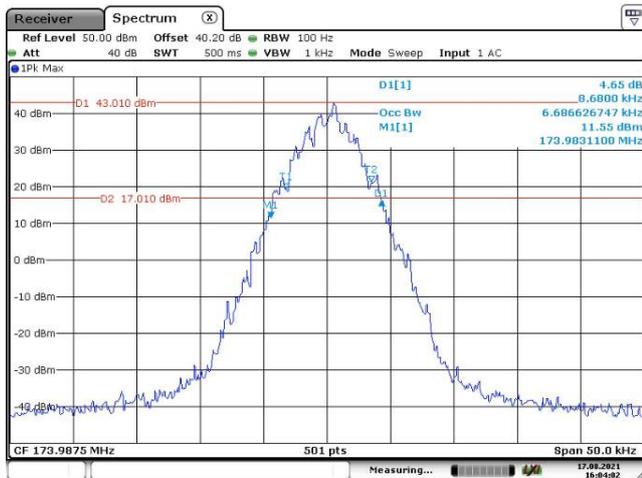


4FSK, 12.5kHz, High Power:

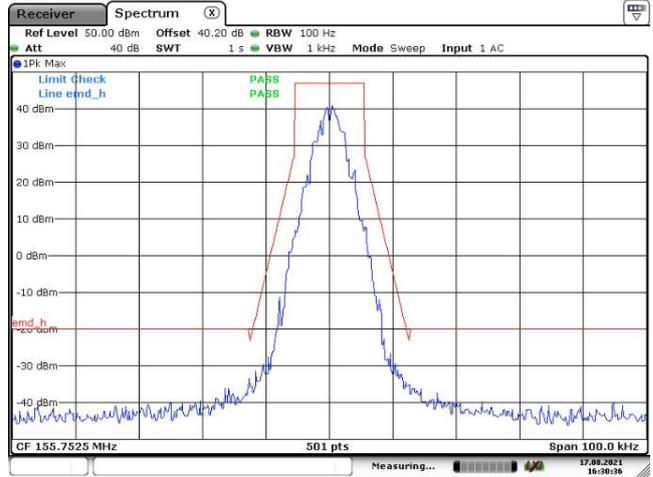
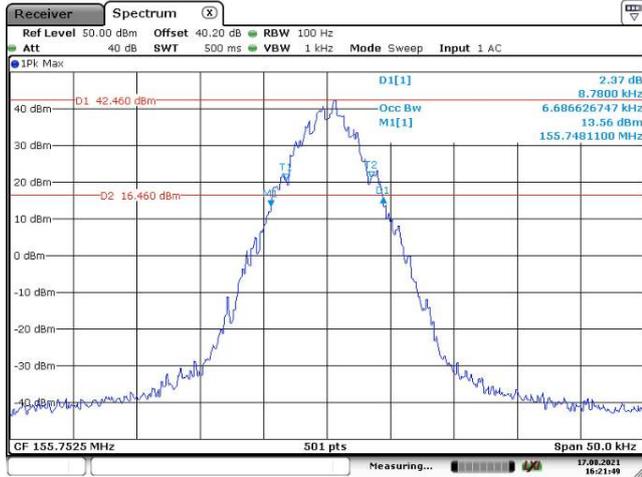
Low Channel



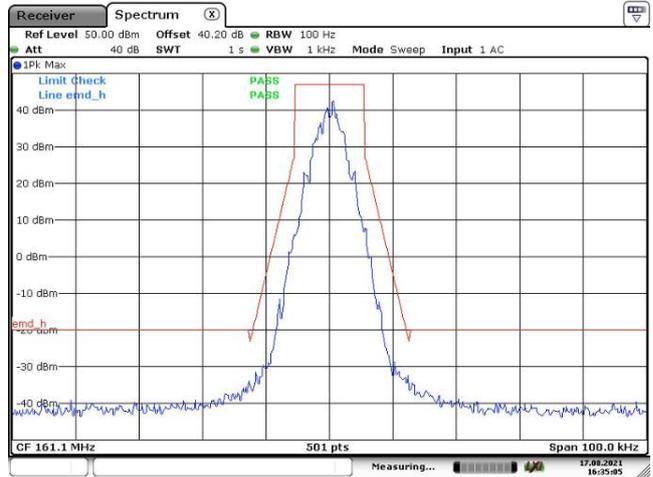
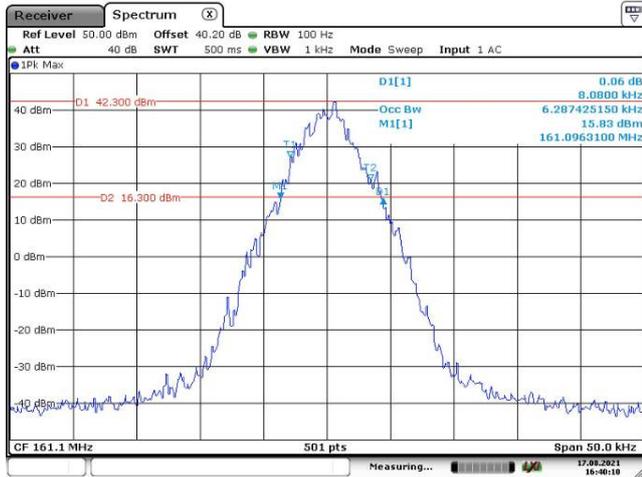
Middle Channel



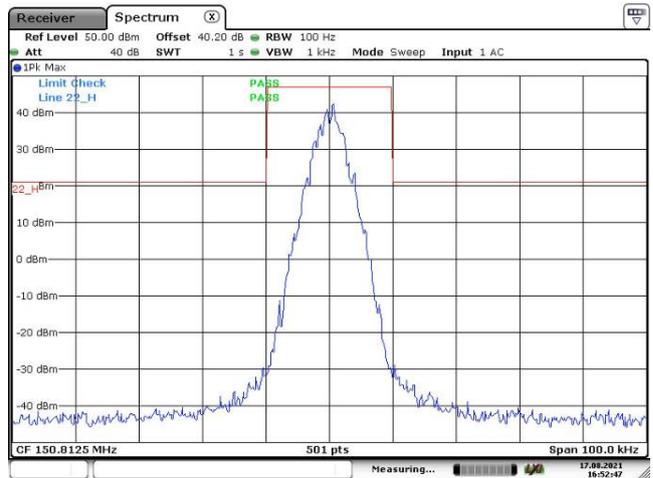
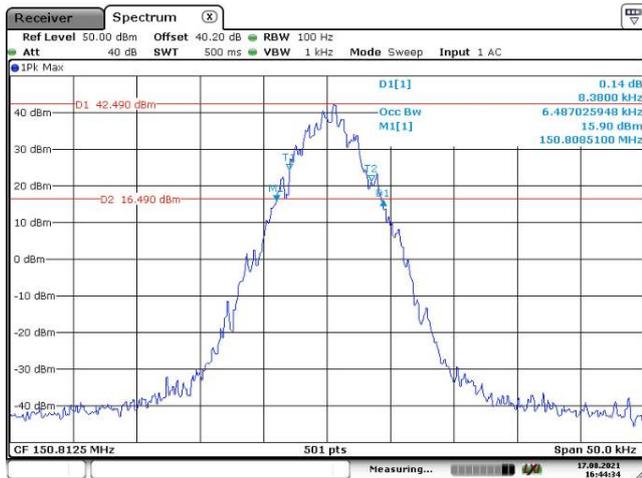
High Channel



Additional Channel Part 74, 161.1MHz

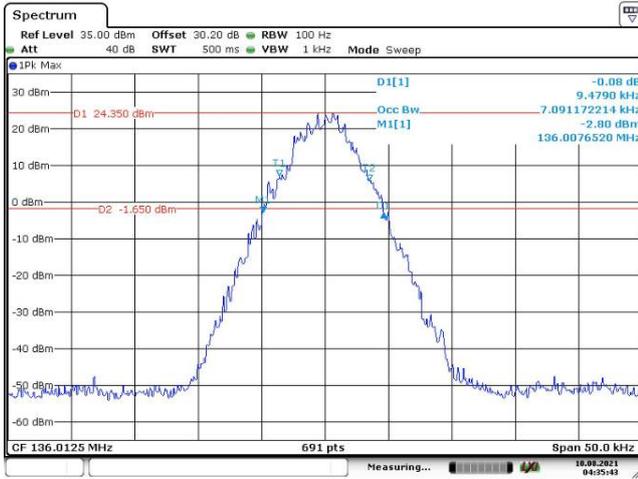


Additional Channel Part 22, 150.8125 MHz

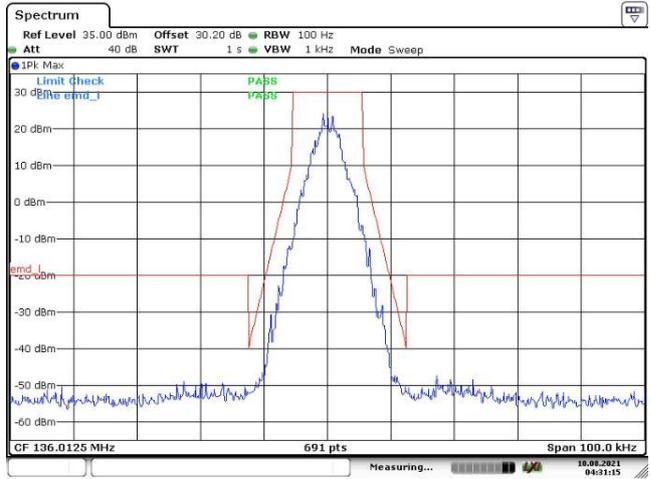


4FSK, 12.5kHz, Low Power:

Low Channel

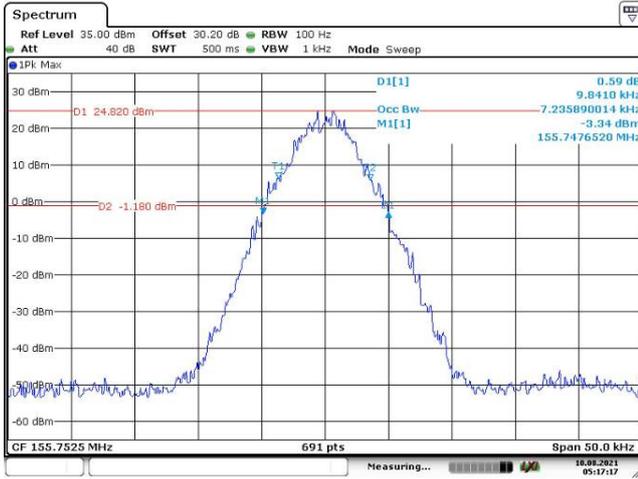


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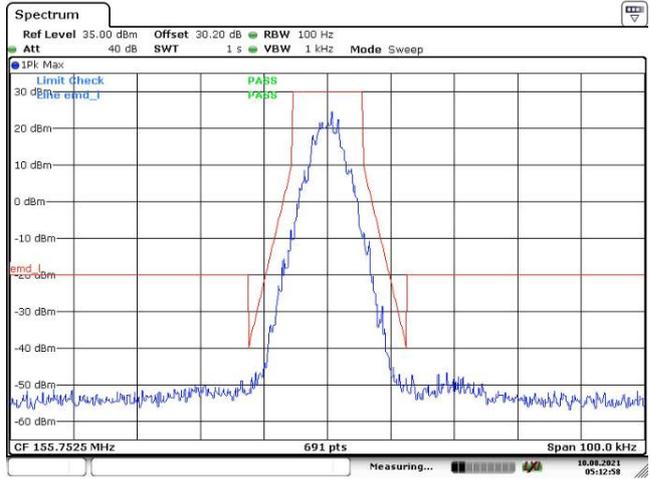


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Middle Channel

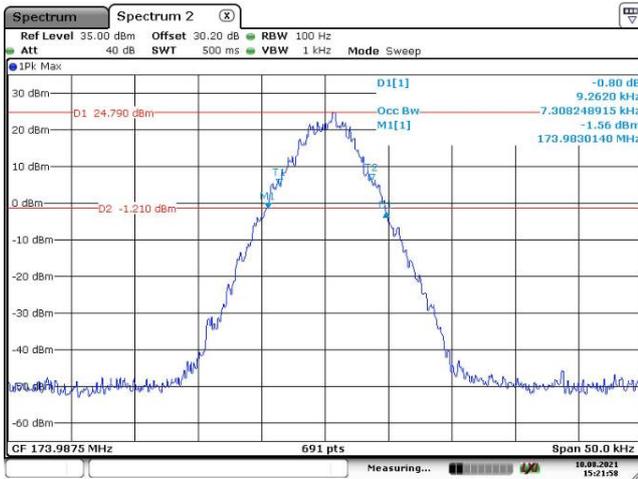


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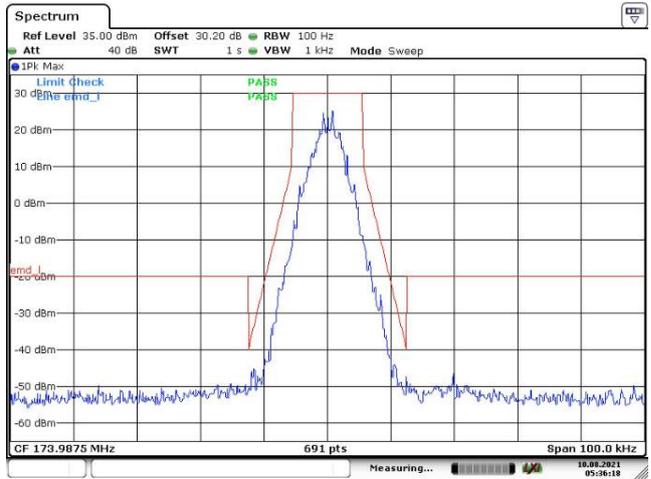


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High Channel

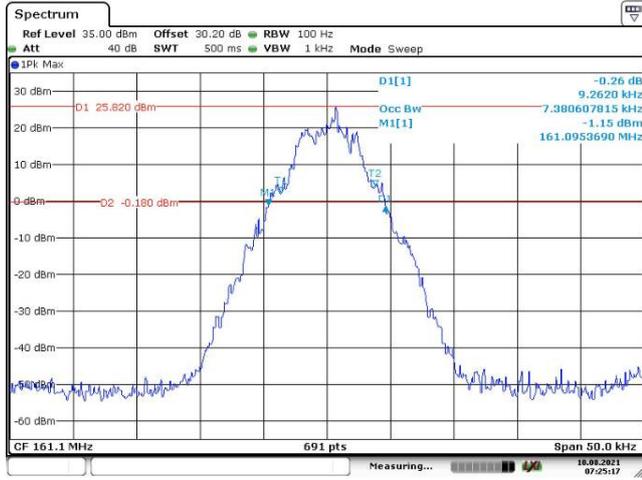


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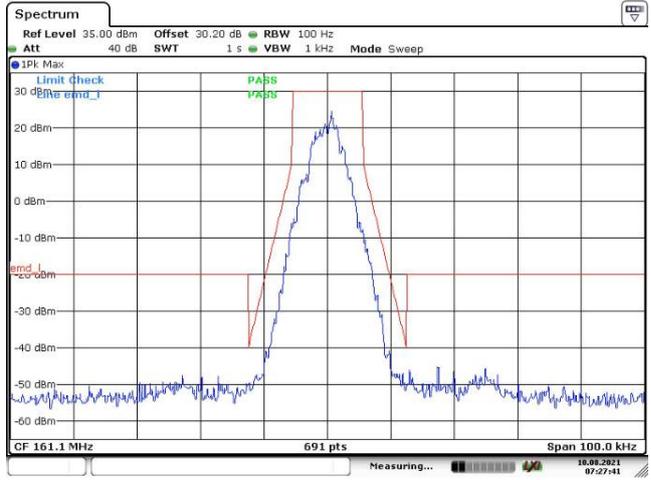


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Additional Channel Part 74, 161.1 MHz

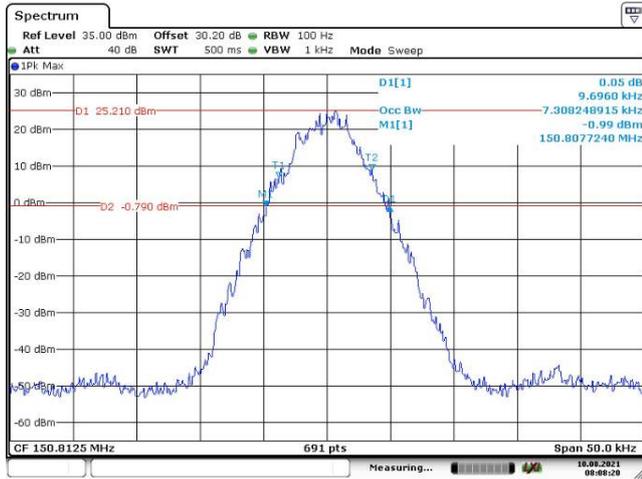


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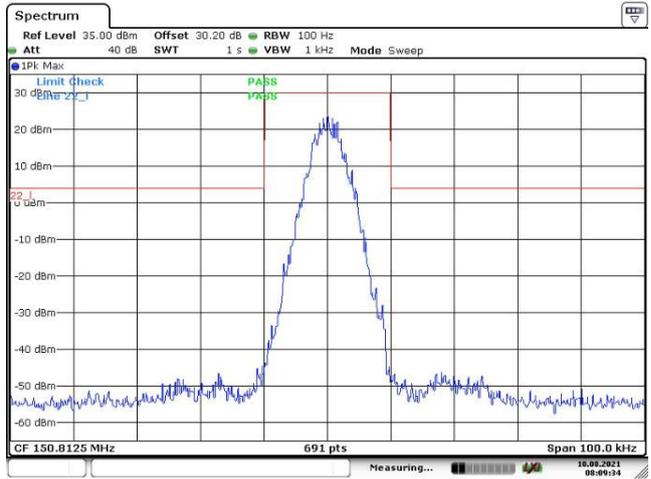


Date: 10.AUG.2021 07:27:41

Additional Channel Part 22, 150.8125 MHz



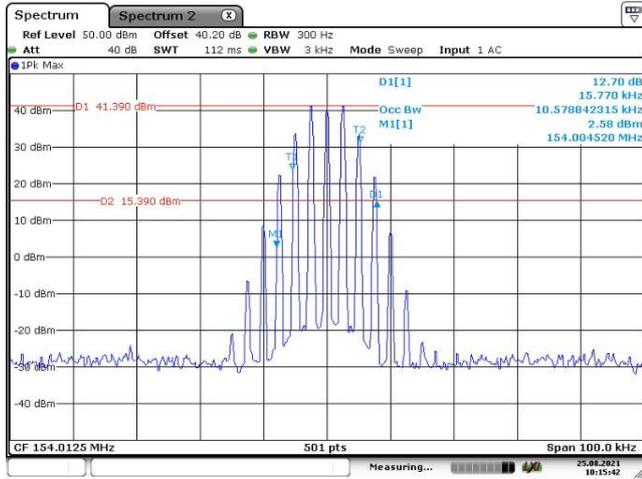
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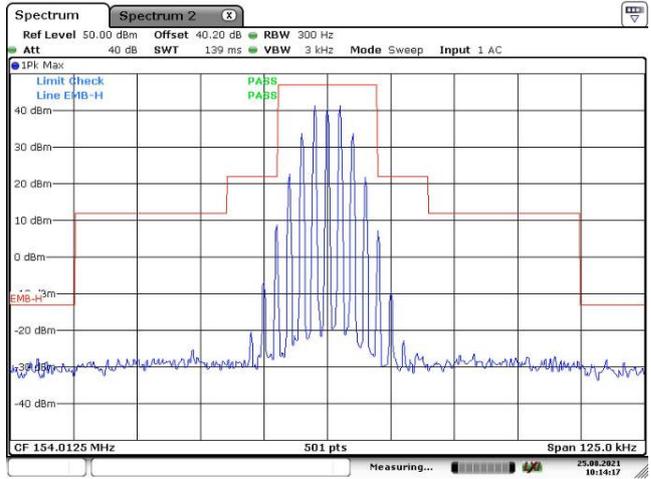
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FM, 25 kHz, High Power:

Additional Channel Part 80, 154.0125 MHz

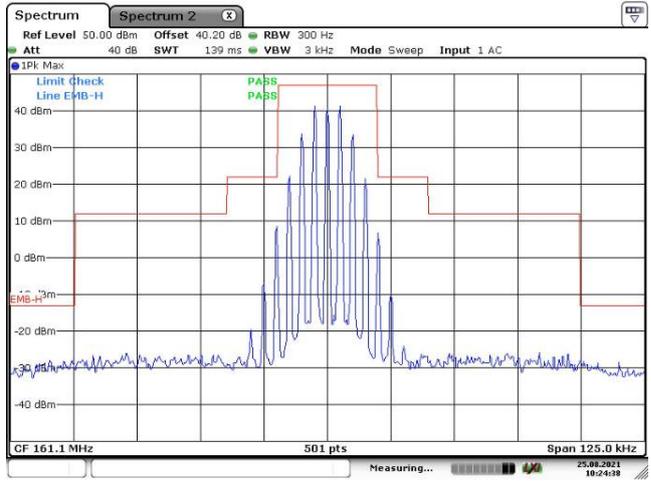
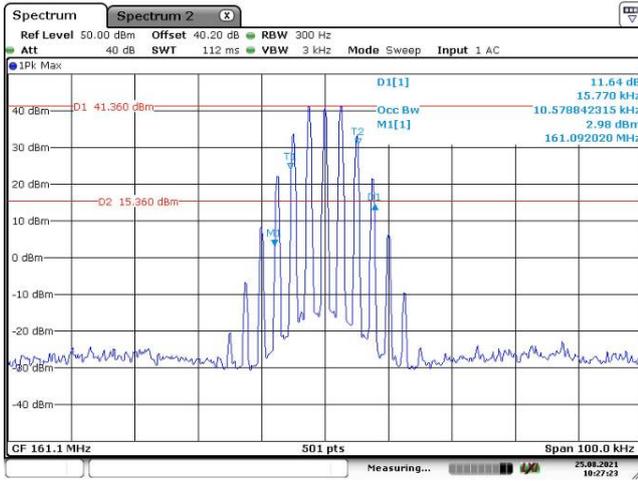


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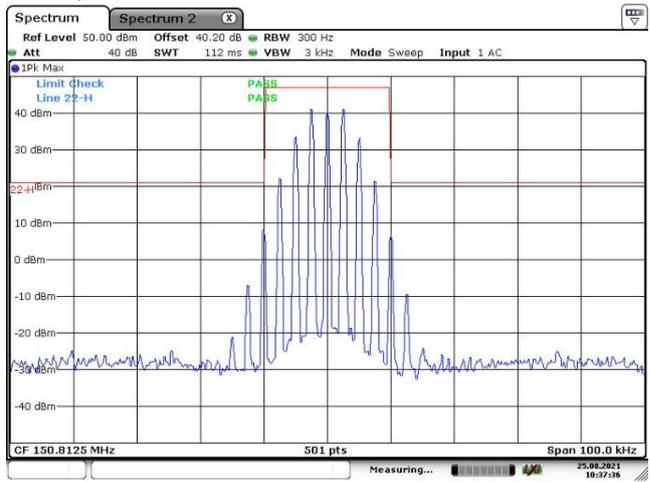
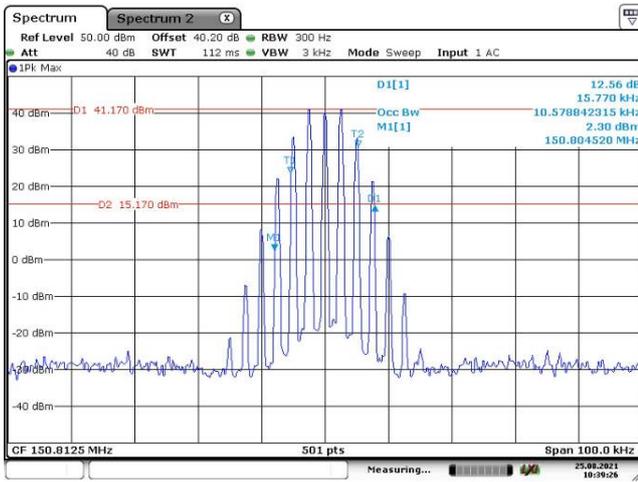


Date: 25.AUG.2021 10:14:18

Additional Channel Part 74, 161.1 MHz

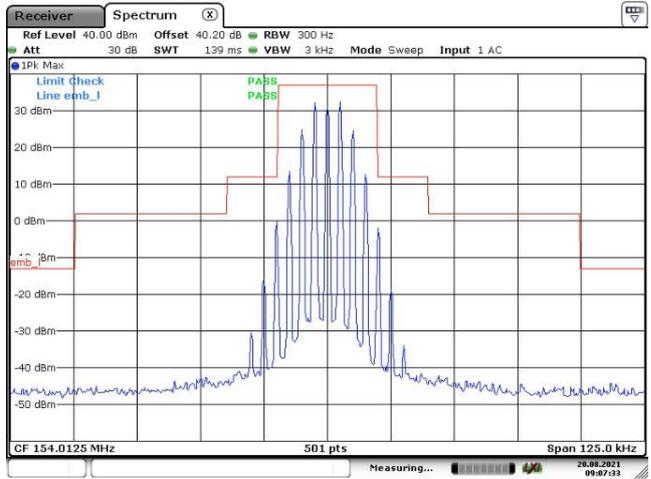
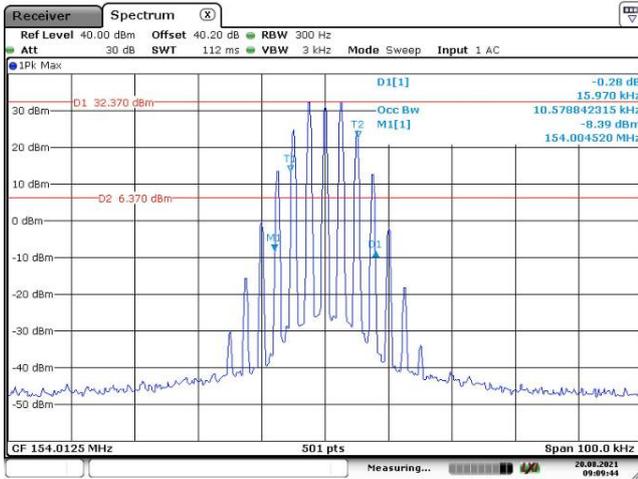


Additional Channel Part 22, 150.8125 MHz

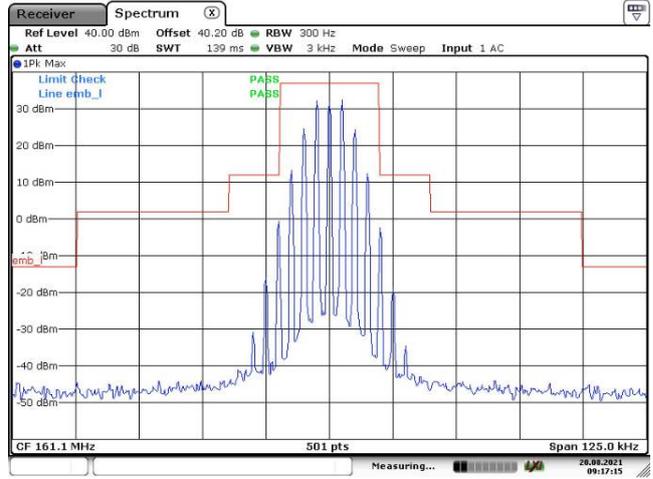
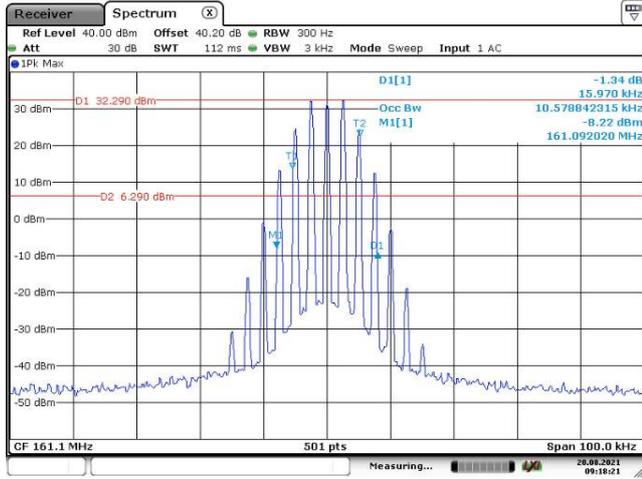


FM, 25 kHz, Low Power:

Additional Channel Part 80, 154.0125 MHz



Additional Channel Part 74, 161.1 MHz



Additional Channel Part 22,150.8125 MHz

