TEST REPORT

Report Number	:	TZ0266250501FRF19
Product Name	:	Repeater
Model/Type reference	:	XR-R1100, MDR-501
FCC ID	:	VSOXR-R1100
Prepared for	:	YEONHWA M TECH CO.,LTD 36, Jeonpa-ro 44beon-gil Manan-gu, Gyeonggi-do, Anyang-si, South Korea

Prepared By	:	Shenzhen Tongzhou Testing Co.,Ltd. 1st Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China
Standards	:	FCC CFR Title 47 Part 90, ANSI C63.26-2015
Date of Test	:	June 10, 2025 ~ June 30, 2025
Date of Issue	:	July 09, 2025

Prepared by	:	Nancy Li
Reviewed by	:	Allen Lai
Approved by	:	Max Zhang (Authorized Officer)

** Report Revise Record **

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	July 09, 2025	Valid	Initial release

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1. TEST STANDARDS

The tests were performed according to following standards:
FCC Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS
FCC Part 90: PRIVATE LAND MOBILE RADIO SERVICES.
ANSI/TIA-603-E-2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
ANSI/TIA-102.CAAA-E-2016: Project 25, Digital C4FM/CQPSK Transceiver Measurement Methods
ANSI C63.26-2015: IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 971168 D01: KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 579009 D03: KDB 579009 D03 Applications Part 90 Refarming Bands v01
KDB 634817 D01: KDB 634817 D01 Freq Range Listing for Grants v04r01

2. GENERAL INFORMATION

2.1. Client Information

Applicant	:	YEONHWA M TECH CO.,LTD
Address	:	36, Jeonpa-ro 44beon-gil Manan-gu, Gyeonggi-do, Anyang-si, South Korea
Manufacturer	:	YEONHWA M TECH CO.,LTD
Address	:	36, Jeonpa-ro 44beon-gil Manan-gu, Gyeonggi-do, Anyang-si, South Korea

2.2. Description of Device (EUT)

Product Name	:	Repeater
Trade Mark	:	X Radio maxon
Model Number	:	XR-R1100, MDR-501
Test Model	:	XR-R1100
Power Supply	:	AC 100-240V 50/60Hz or DC 13.6V
Hardware version	:	TS-R6000-MB V
Software version	:	R100D-20000

2.3. Wireless Function Tested in this Report

Two Way Radio		
Operation Frequency	:	136 MHz – 174 MHz
Modulation Type	:	FM, 4FSK
Channel Separation	:	4FSK: 12.5kHz FM: 12.5kHz
Emission Designator	:	F1D/F1W/F3E
Rated Output Power	:	50W/5W
Antenna Type	:	Detachable Antenna(0dBi Typical, 8dBi Max)

Note 1: Antenna position refer to EUT Photos.
Note 2: This equipment is capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth. DMR interphone's bandwidth is 12.5 kHz, and it has a double time slot, one is the speech time slot, one is the data time slot, just language sequence is satisfied with 4800 bps/6.25 kHz BW.
Note 3: the above information was supplied by the applicant.

2.4. EUT operation mode

Modulation	Channel separation	Frequency (MHz)	Operation Description
FM	12.5 KHz	136.025	Op1
	12.5 KHz	138.025	Op2
	12.5 KHz	155.025	Op3
	12.5 KHz	173.975	Op4
4FSK	12.5 KHz	136.025	Op5
	12.5 KHz	138.025	Op6
	12.5 KHz	155.025	Op7
	12.5 KHz	173.975	Op8

2.5. Special Accessories

No.	Equipment	Manufacturer	Model No.	Serial No.	Length	shielded/ unshielded	Notes
1	50 Ω dummy load	HX Microwave	50ohm 150W	/	/	/	/

2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: VSOXR-R1100** filing to comply with FCC Part 2, FCC Part 90 of the FCC CFR 47 Rules.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Tongzhou Testing Co.,Ltd
1st Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2014) and CISPR Publication 22.

3.2. Test Facility

FCC
Designation Number: CN1275
Test Firm Registration Number: 167722
Shenzhen Tongzhou Testing Co.,Ltd has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA
Certificate Number: 5463.01
Shenzhen Tongzhou Testing Co.,Ltd has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

IC
ISED#: 22033
CAB identifier: CN0099
Shenzhen Tongzhou Testing Co.,Ltd has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010

3.3. Environmental conditions

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

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Test Description

Test Specification clause	Test case	Pass	Fail	NA	NP	Remark
§90.205 §2.1046(a)	RF Power Output	☒	☐	☐	☐	Pass
§90.242(b)(8) §90.210 §2.1047	Modulation Characteristic	☒	☐	☐	☐	Pass
§90.209 §2.1049	99% Occupied Bandwidth	☒	☐	☐	☐	Pass
§90.210 §2.1049	Emission Mask	☒	☐	☐	☐	Pass
§90.213 §2.1055	Frequency Stability	☒	☐	☐	☐	Pass
§2.1051 §2.1053 §90.210	TX spurious emissions	☒	☐	☐	☐	Pass
§90.214	Transient frequency behavior	☒	☐	☐	☐	Pass
NA = Not Applicable; NP = Not Performed;						

3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Tongzhou Testing Co.,Ltd quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Shenzhen Tongzhou Testing Co.,Ltd laboratory is reported:

Test Item		Uncertainty	Note
Radiation Uncertainty(9KHz~30MHz)	:	±3.26dB	(1)
Radiation Uncertainty(30MHz~1000MHz)	:	±3.92dB	(1)
Radiation Uncertainty(1GHz~40GHz)	:	±5.62dB	(1)
Occupied Channel Bandwidth	:	±3.0%	(1)
Audio Level	:	±0.4%	(1)
FM deviation		±1.2%	(1)
Frequency stability		±0.12ppm	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

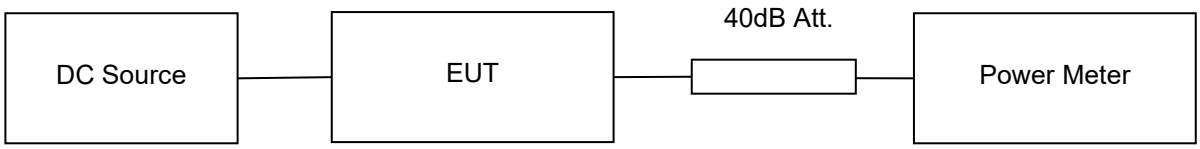
3.6. Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	EMI Test Receiver	R&S	ESCI-7	100849/003	2024-12-31	2025-12-30
2	Signal Generator (SG B)	Keysight	N5182A	MY4620709	2024-12-31	2025-12-30
3	Signal Generator(SG C)	R&S	SML03	102924/0013	2024-12-31	2025-12-30
4	Climate Chamber	KRUOMR	KRM-1000	KRM16072901	2024-12-31	2025-12-30
5	RF COMMUNICATION TEST SET(SG A)	HP	8921A	3430A01131	2024-12-31	2025-12-30
6	Wideband Antenna	schwarzbeck	VULB 9163	958	2022-11-13	2025-11-12
7	Wideband Antenna	Sunol	JB3	A020115	2022-11-13	2025-11-12
8	Amplifier	schwarzbeck	BBV 9743	209	2024-12-31	2025-12-30
9	Amplifier	Tonscend	TSAMP-0518SE	--	2024-12-31	2025-12-30
10	Horn Antenna	schwarzbeck	BBHA 9120D	01989	2022-11-13	2025-11-12
11	Horn Antenna	schwarzbeck	9120D-1141	1574	2022-11-13	2025-11-12
12	50Ω RF Load	MKRF	RFA001	RFA001	2024-12-31	2025-12-30
13	Attenuator	JS	RFA004	RFA004	2024-12-31	2025-12-30
14	Controller	MF	MF7802	N/A	N/A	N/A
15	Spectrum Analyzer	R&S	FSV40	101321	2024-12-31	2025-12-30
16	Test Software	Tonscend	JS36-RSE	V5.0.0.0	N/A	N/A
17	Power Sensor	Agilent	U2021XA	MY5365004	2024-12-31	2025-12-30

4. TEST CONDITIONS AND RESULTS

4.1. RF Power Output(Conducted Method)

TEST CONFIGURATION



TEST PROCEDURE

1) The EUT transmitter connected to Power Meter using the 40 dB attenuator and power sensor with above setup.
2) Path loss for the measurement included.
3) All the measurement was done at low, mid, high frequency for each band.
4) Record the power into the test report.

TEST RESULTS

Test data of RF Power Output						
Test Mode	Power Level	Channel Separation [Hz]	Test Frequency [MHz]	RF Power Output [dBm]	Limit [dBm]	Verdict
4FSK Data	50W	12.5k	136.025	47.254	47±1	Pass
4FSK Data	50W	12.5k	138.025	47.203	47±1	Pass
4FSK Data	50W	12.5k	155.025	47.126	47±1	Pass
4FSK Data	50W	12.5k	173.975	47.22	47±1	Pass
4FSK Data+Voice	50W	12.5k	136.025	47.219	47±1	Pass
4FSK Data+Voice	50W	12.5k	138.025	47.203	47±1	Pass
4FSK Data+Voice	50W	12.5k	155.025	47.127	47±1	Pass
4FSK Data+Voice	50W	12.5k	173.975	47.222	47±1	Pass
4FSK Data	5W	12.5k	136.025	37.312	37±1	Pass
4FSK Data	5W	12.5k	138.025	37.301	37±1	Pass
4FSK Data	5W	12.5k	155.025	37.264	37±1	Pass
4FSK Data	5W	12.5k	173.975	37.394	37±1	Pass
4FSK Data+Voice	5W	12.5k	136.025	37.33	37±1	Pass
4FSK Data+Voice	5W	12.5k	138.025	37.315	37±1	Pass
4FSK Data+Voice	5W	12.5k	155.025	37.268	37±1	Pass
4FSK Data+Voice	5W	12.5k	173.975	37.399	37±1	Pass
FM	50W	12.5k	136.025	47.219	47±1	Pass
FM	50W	12.5k	138.025	47.21	47±1	Pass
FM	50W	12.5k	155.025	47.148	47±1	Pass
FM	50W	12.5k	173.975	47.299	47±1	Pass
FM	5W	12.5k	136.025	37.398	37±1	Pass
FM	5W	12.5k	138.025	37.385	37±1	Pass
FM	5W	12.5k	155.025	37.34	37±1	Pass
FM	5W	12.5k	173.975	37.472	37±1	Pass

The rated 50W for High Power and 5W for Low power.

4.2. Modulation Characteristics

TEST CONFIGURATION

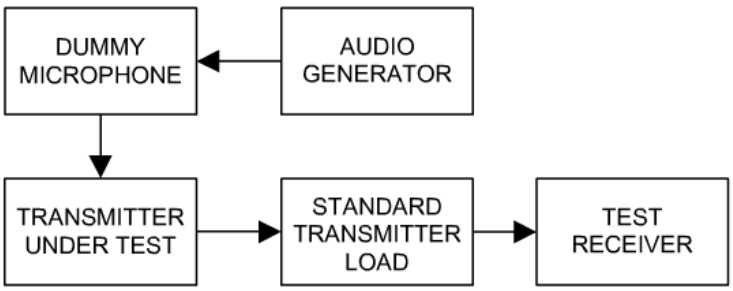


Figure 1: Modulation Limit&Audio Frequency Response

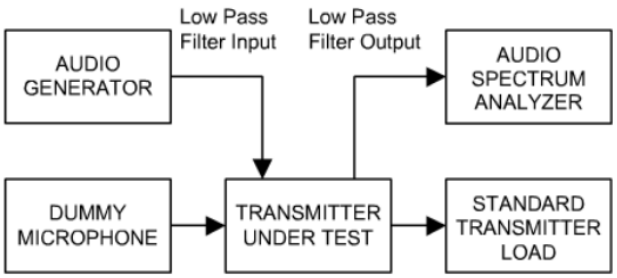


Figure 2: Audio Low Pass Filter Response

TEST PROCEDURE

Modulation limitations

1 Connect the equipment as illustrated.
2 Adjust the transmitter per the manufacturer's procedure for full rated system deviation.
3 Set the test receiver to measure peak positive deviation. Set the audio bandwidth for ≤0.25 Hz to ≥15,000 Hz. Turn the de-emphasis function off.
4 Apply a 1000 Hz modulating signal to the transmitter from the audio frequency generator, and adjust the level to obtain 60% of full rated system deviation, this level is as a reference (0dB) and vary the input level from –20 to +20dB.
5 Measure both the instantaneous and steady-state deviation at and after the time of increasing the audio input level
6 Repeat step 4-5 with input frequency changing to 300Hz, 2500Hz and 3000Hz in sequence.

Audio Frequency Response

1 Configure the EUT as shown in figure 1.
2 Adjust the audio input for 20% of rated system deviation at 1kHz using this level as a reference.
3 Vary the Audio frequency from 300Hz to 3 KHz. and record the frequency deviation.
4 Audio FrequencyResponse =$20\log_{10}$ (Deviationof test frequency/Deviation of 1 KHz reference).

Audio Low Pass Filter Frequency Response

1 Configure the EUT as shown in figure 2.
2 Connect the audio frequency generator as close as possible the input of the post litniter low pass filter within the transmitter under test.
3 Connect the audio spectrum analyzer to the output of the post limiter low pass filter within the transmitter under test.
4 Apply a 1000 Hz tone from the audio frequency generator and adjust the level per manufacturer's specifications.
5 Record the dB level of the 1000 Hz spectral line on the audio spectrum analyzer as $LEV_{REF.}$
6 Set the audio frequency generator to the desired test frequency between 3000 Hz and the upper low pass filter limit.
7 Record audio spectrum analyzer levels, at the test frequency in step 6).
8 Record the dB level on the audio spectrum analyzer as LEV_{RREQ}.
9 Calculate the audio frequency response at the test frequency as:
10 low pass filter response = LEV_{FREQ} –LEV_{REF}
11 Repeat steps 6) through 10) for all the desired test frequencies.

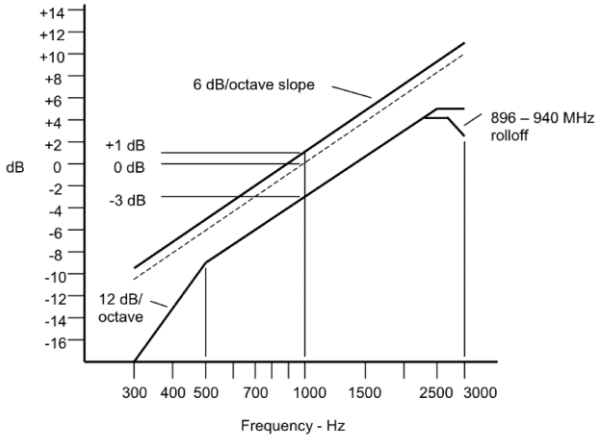
LIMIT

Modulation limitations

According to TIA/EIA 603 E, For FM transmitters, the sum of the highest modulating frequency in Hertz and the amount of the frequency deviation or swing in Hertz may not exceed 2800 Hz and the maximum deviation may not exceed 2.5 kHz.

Audio Frequency Response

According to TIA/EIA 603 E,



The audio frequency response from 300 Hz to 3000 Hz shall not vary more than+ 1 dB or -3 dB from a true 6 dB per octave pre-emphasis characteristic as referenced to the 1000 Hz level. The exception is from 500 Hz to 3000 Hz, where an additional 6 dB per octave rol loff is allowed.

The following exceptions are also permissible:
a) An additional 6 dB per octave attenuation is allowed from 2500 Hz to 3000 Hz in equipment operating in the 25 MHz to 869 MHz range.
b) An additional 6 dB per octave rolloff is allowed from 2300 Hz to 2700 Hz, and an additional 12 dB per octave is allowed from 2700 Hz to 3000 Hz, in equipment operating in the 896 MHz to 940 MHz range, and all narrowband (12.5 kHz and 15 kHz channelization) equipment.

Audio Low Pass Filter Frequency Response

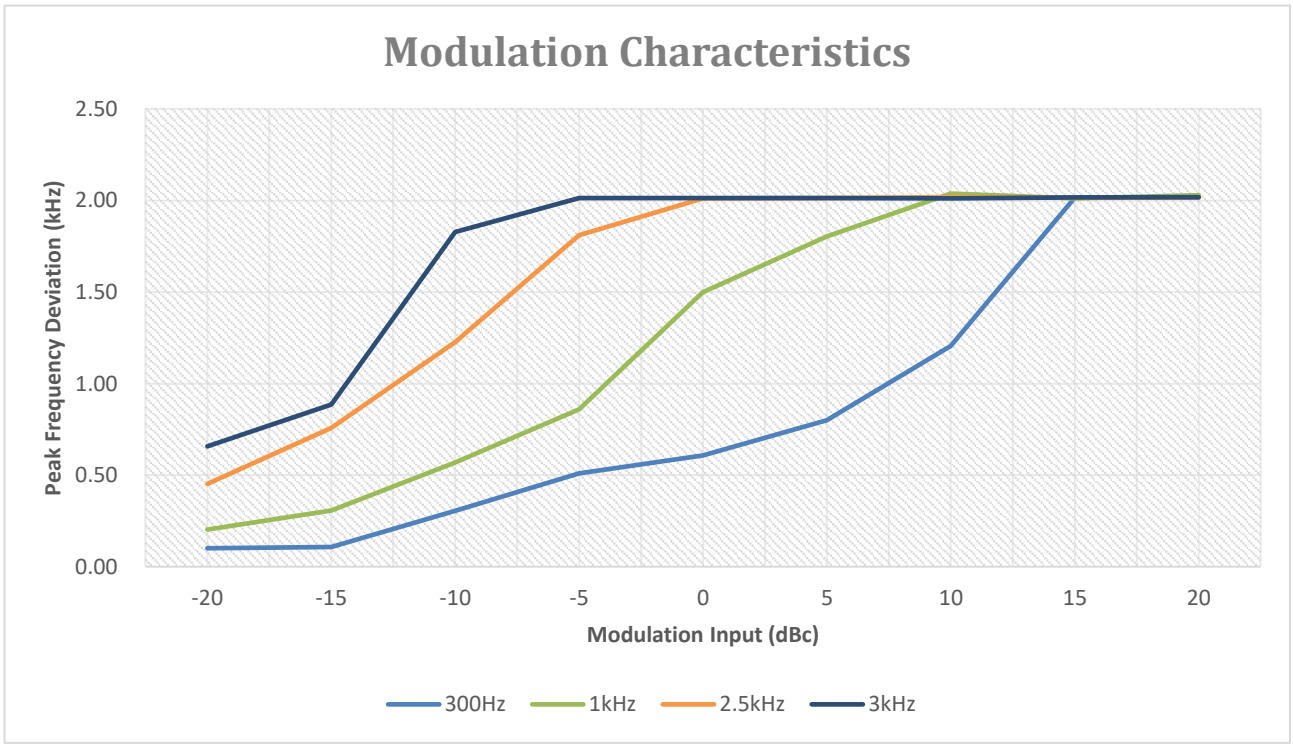
According to TIA/EIA 603 E,

Audio band	Minimum Attenuation Rel. to 1KHz Attenuation
3-20KHz	100* log10 (f/3) decibels
20-30KHz	82.5dB

TEST RESULTS

Modulation Characteristics

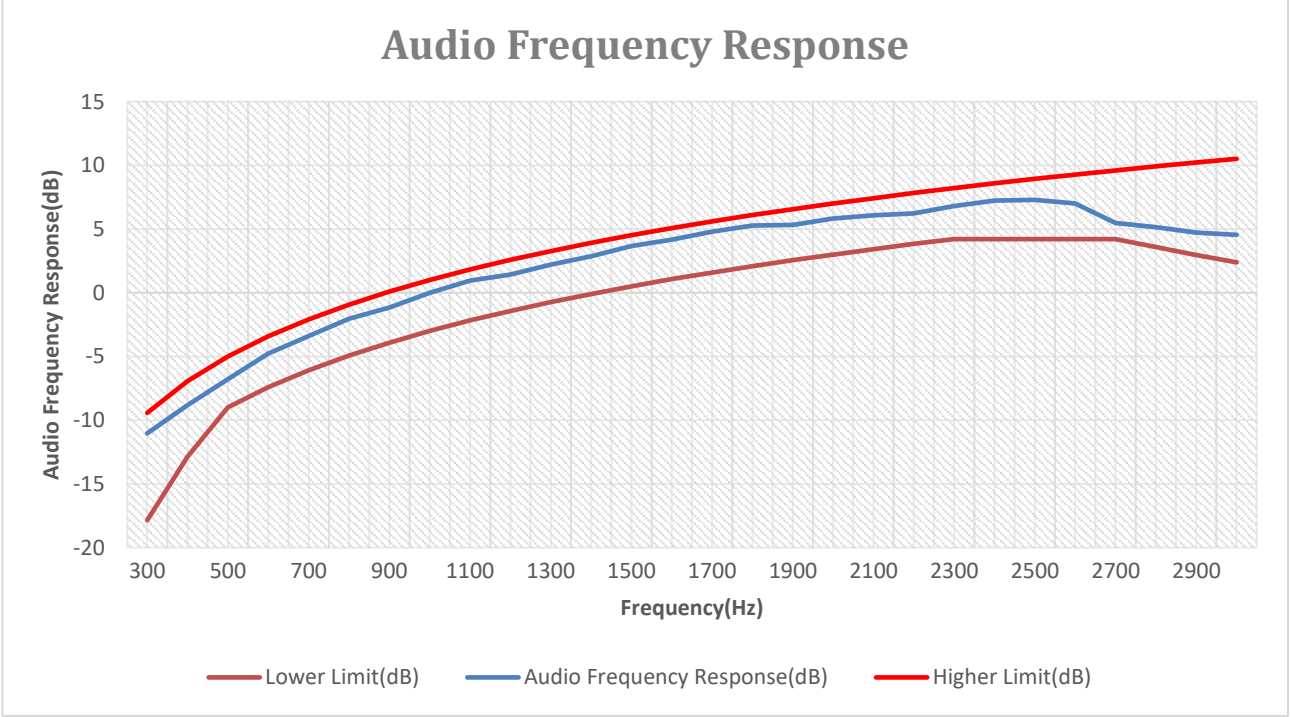
155.025MHz @ 12.5 KHz Channel Separation-50W						
Modulation Input(dBC)	Peak Frequency Deviation (KHz)				Limit(KHz)	Result
	300Hz	1KHz	2.5KHz	3KHz		
-20	0.10	0.20	0.45	0.66	2.5	Pass
-15	0.11	0.31	0.76	0.89	2.5	Pass
-10	0.30	0.57	1.23	1.83	2.5	Pass
-5	0.51	0.86	1.81	2.01	2.5	Pass
0	0.61	1.50	2.01	2.01	2.5	Pass
5	0.80	1.80	2.01	2.01	2.5	Pass
10	1.21	2.04	2.02	2.01	2.5	Pass
15	2.02	2.01	2.02	2.02	2.5	Pass
20	2.02	2.03	2.02	2.02	2.5	Pass



Note: All the test frequencies was tested, but only the worst data be recorded in this part.

Audio Frequency Response

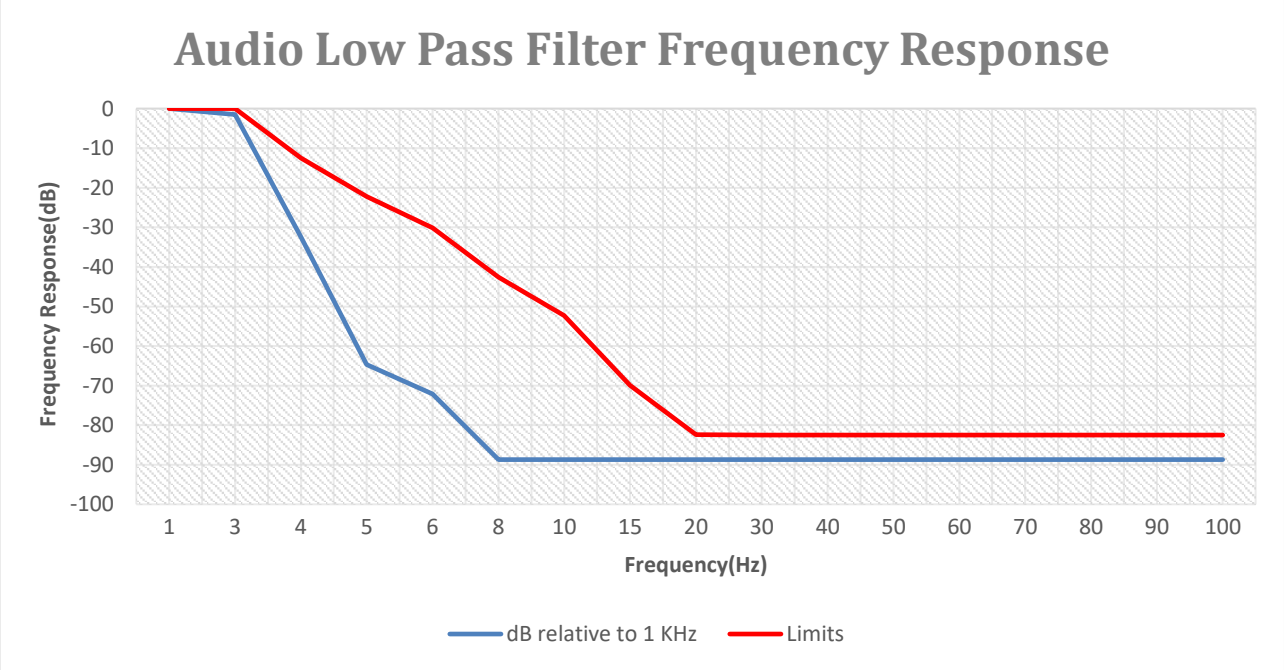
155.025MHz @ 12.5 KHz Channel Separation-50W			
Frequency(Hz)	Lower Limit(dB)	Audio Frequency Response(dB)	Higher Limit(dB)
300	-17.84	-11.05	-9.42
400	-12.86	-8.80	-6.93
500	-9.00	-6.75	-5.00
600	-7.42	-4.73	-3.42
700	-6.09	-3.37	-2.09
800	-4.93	-2.05	-0.93
900	-3.91	-1.13	0.09
1000	-3	0.00	1.00
1100	-2.17	0.94	1.83
1200	-1.42	1.44	2.58
1300	-0.73	2.19	3.27
1400	-0.09	2.84	3.91
1500	0.51	3.65	4.51
1600	1.07	4.17	5.07
1700	1.59	4.84	5.59
1800	2.09	5.23	6.09
1900	2.56	5.35	6.56
2000	3.00	5.81	7.00
2100	3.42	6.03	7.42
2200	3.83	6.26	7.83
2300	4.21	6.79	8.21
2400	4.21	7.24	8.58
2500	4.21	7.28	8.93
2600	4.21	7.06	9.27
2700	4.21	5.51	9.60
2800	3.58	5.17	9.91
2900	2.97	4.72	10.22
3000	2.39	4.52	10.51



Note: All the test frequencies was tested, but only the worst data be recorded in this part.

Audio Low Pass Filter Frequency Response

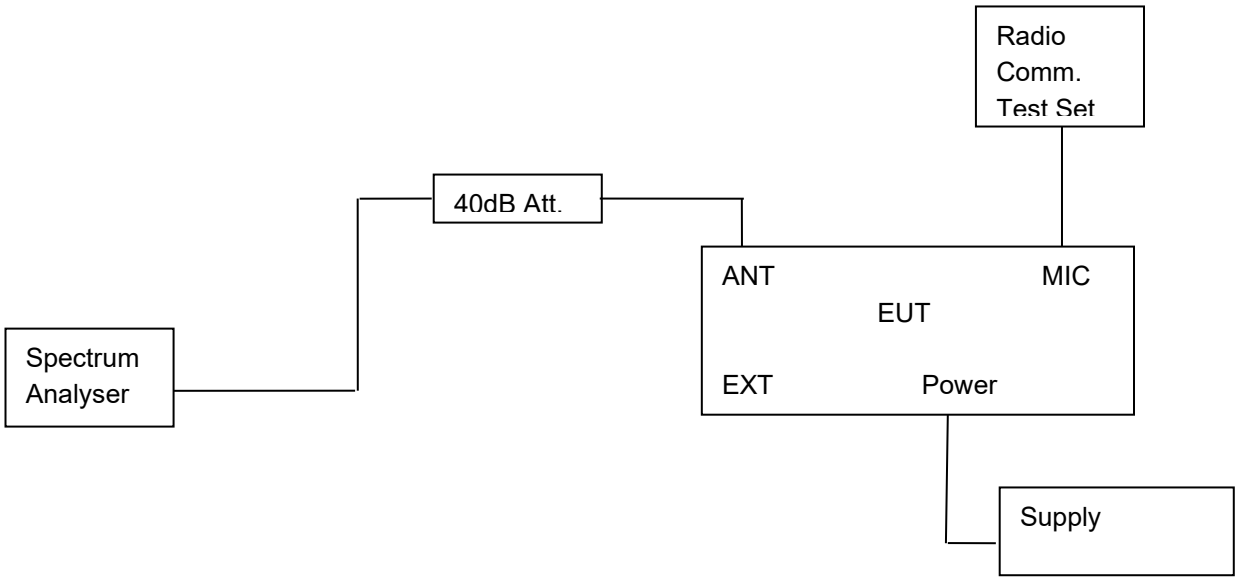
155.025MHz @ 12.5 KHz Channel Separation-50W		
Audio Frequency (KHz)	dB relative to 1 KHz	Limits
1	0	0
3	-1.5	0
4	-32.5	-12.5
5	-64.7	-22.2
6	-72.1	-30.1
8	-88.7	-42.6
10	-88.7	-52.3
15	-88.7	-69.9
20	-88.7	-82.4
30	-88.7	-82.5
40	-88.7	-82.5
50	-88.7	-82.5
60	-88.7	-82.5
70	-88.7	-82.5
80	-88.7	-82.5
90	-88.7	-82.5
100	-88.7	-82.5



Note: All the test frequencies was tested, but only the worst data be recorded in this part.

4.3. Occupied Bandwidth and Emission Mask

TEST CONFIGURATION



TEST PROCEDURE

1 The EUT was modulated by 2.5 KHz Sine wave audio signal;the level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation.
2 Set EUT work at continuous transmitting.
3 Set SPA Centre Frequency = fundamental frequency.
For 12.5kHz channel spacing: RBW=100Hz, VBW= 300 Hz, span = 30 KHz.
For 25kHz channel spacing: RBW=300Hz, VBW= 1000 Hz, span = 50 KHz.
4 Set SPA Max hold. Mark peak, Set 99% Occupied Bandwidth and 26dB Occupied Bandwidth.
5 For emission mask test
For 12.5kHz channel spacing: RBW=100Hz, VBW= 300 Hz, span = 111.25 KHz.
For 25kHz channel spacing: RBW=100Hz, VBW= 300 Hz, span = 120 KHz.

LIMIT

Standard Channel Spacing/Bandwidth

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
Below 25[2]		
25-50	20	20
72-76	20	20
150-174	[1]7.5	[1 3]20/11.25/6
216-220[5]	6.25	20/11.25/6
220-222	5	4
406-512[2]	[1]6.25	[136]20/11.25/6
806-809/851-854	12.5	20
809-824/854-869	25	[6]20
896-901/935-940	12.5	13.6
902-928[4]		
929-930	25	20
1427-1432[5]	12.5	12.5
[3]2450-2483.5[2]		
Above 2500[2]		

[1]For stations authorized on or after August 18, 1995.

[2]Bandwidths for radiolocation stations in the 420-450 MHz band and for stations operating in bands subject to this footnote will be reviewed and authorized on a case-by-case basis.

[3]Operations using equipment designed to operate with a 25 kHz channel bandwidth will be authorized a 20 kHz bandwidth. Operations using equipment designed to operate with a 12.5 kHz channel bandwidth will be authorized a 11.25 kHz bandwidth. Operations using equipment designed to operate with a 6.25 kHz channel bandwidth will be authorized a 6 kHz bandwidth. All stations must operate on channels with a bandwidth of 12.5 kHz or less beginning January 1, 2013, unless the operations meet the efficiency standard of §90.203(j)(3).

[4]The maximum authorized bandwidth shall be 12 MHz for non-multilateration LMS operations in the band 909.75-921.75 MHz and 2 MHz in the band 902.00-904.00 MHz. The maximum authorized bandwidth for multilateration LMS operations shall be 5.75 MHz in the 904.00-909.75 MHz band; 2 MHz in the 919.75-921.75 MHz band; 5.75 MHz in the 921.75-927.25 MHz band and its associated 927.25-927.50 MHz narrowband forward link; and 8.00 MHz if the 919.75-921.75 MHz and 921.75-927.25 MHz bands and their associated 927.25-927.50 MHz and 927.50-927.75 MHz narrowband forward links are aggregated.

[5]See §90.259.

[6]Operations using equipment designed to operate with a 25 kHz channel bandwidth may be authorized up to a 22 kHz bandwidth if the equipment meets the Adjacent Channel Power limits of §90.221.

(6)(i) Beginning January 1, 2011, no new applications for the 150-174 MHz and/or 421-512 MHz bands will be acceptable for filing if the applicant utilizes channels with an authorized bandwidth exceeding 11.25 kHz, unless specified elsewhere or the operations meet the efficiency standards of §90.203(j)(3).

(ii) Beginning January 1, 2011, no modification applications for stations in the 150-174 MHz and/or 421-512 MHz bands that increase the station's authorized interference contour, will be acceptable for filing if the applicant utilizes channels with an authorized bandwidth exceeding 11.25 kHz, unless specified elsewhere or the operations meet the efficiency standards of §90.203(j)(3). See §90.187(b)(2)(iii) and (iv) for interference contour designations and calculations. Applications submitted pursuant to this paragraph must comply with frequency coordination requirements of §90.175.

(7) Economic Area (EA)-based licensees in frequencies 817-824/862-869 MHz (813.5-824/858.5-869 MHz in the counties listed in §90.614(c)) may exceed the standard channel spacing and authorized bandwidth listed in paragraph (b)(5) of this section in any National Public Safety Planning Advisory Committee Region when all 800 MHz public safety licensees in the Region have completed band reconfiguration consistent with this part. In any National Public Safety Planning Advisory Committee Region where the 800 MHz band reconfiguration is incomplete, EA-based licensees in frequencies 817-821/862-866 MHz (813.5-821/858.5-866 MHz in the counties listed in §90.614(c)) may exceed the standard channel spacing and authorized bandwidth listed in paragraph (b)(5) of this section. Upon all 800 MHz public safety licensees in a National Public Safety Planning Advisory Committee Region completing band reconfiguration, EA-based 800 MHz SMR licensees in the 821-824/866-869 MHz band may exceed the channel spacing and authorized bandwidth in paragraph (b)(5) of this section. Licensees authorized to exceed the standard channel spacing and authorized bandwidth under this paragraph must provide at least 30 days written notice prior to initiating such service in the bands listed herein to every 800 MHz public safety licensee with a base station in an affected National Public Safety Planning Advisory Committee Region, and every 800 MHz public safety licensee with a base station within 113 kilometers (70 miles) of an affected National Public Safety Planning Advisory Committee Region. Such notice shall include the estimated date upon which the EA-based 800 MHz SMR licensee intends to begin operations that exceed the channel spacing and authorized bandwidth in paragraph (b)(5) of this section.

Applicable Emission Masks

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
Below 25[1]	A or B	A or C
25-50	B	C
72-76	B	C
150-174[2]	B, D, or E	C, D or E
150 paging only	B	C
220-222	F	F
421-512[2 5]	B, D, or E	C, D, or E
450 paging only	B	G
806-809/851-854[6]	B	H
809-824/854-869[3 5]	B	G
896-901/935-940	I	J
902-928	K	K
929-930	B	G
4940-4990 MHz	L or M	L or M
5850-5925[4]		
All other bands	B	C

[1]Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.

[2]Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.

[3]Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of §90.691 of this chapter.

[4]DSRCS Roadside Units equipment in the 5850-5925 MHz band is governed under subpart M of this part.

[5]Equipment may alternatively meet the Adjacent Channel Power limits of §90.221

TEST RESULTS

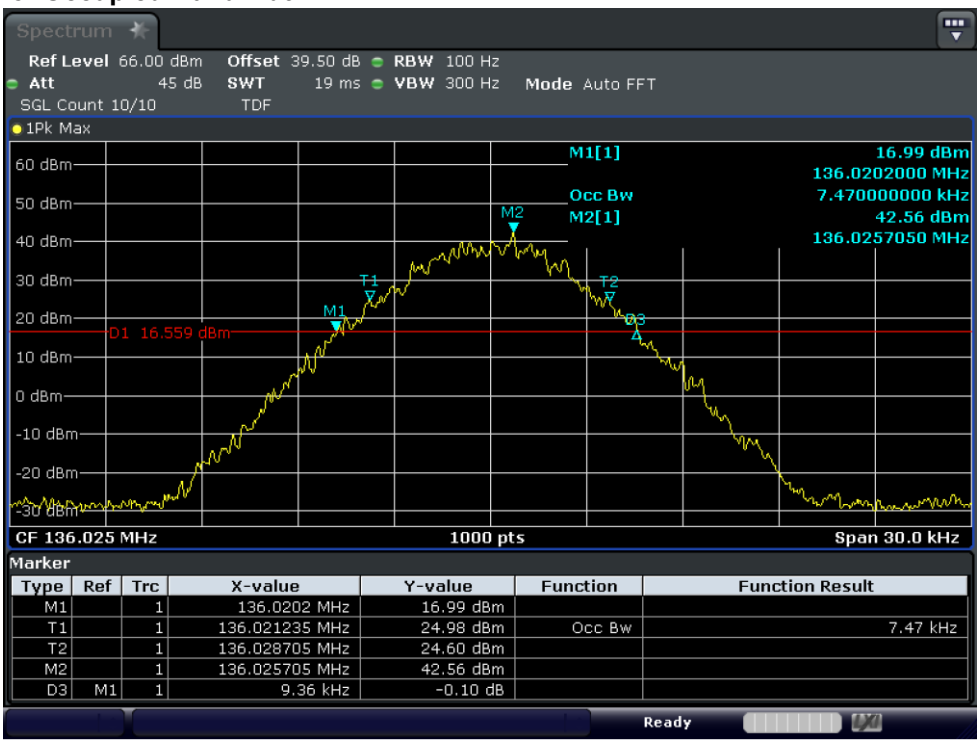
Test data of Occupied Bandwidth							
Test Mode	Power Level	Channel Separation [Hz]	Test Frequency [MHz]	99% OBW [kHz]	-26dB Bandwidth [kHz]	Limit [kHz]	Verdict
4FSK Data	50W	12.5k	136.025	7.47	9.36	11.25	Pass
4FSK Data	50W	12.5k	138.025	7.47	9.36	11.25	Pass
4FSK Data	50W	12.5k	155.025	7.5	9.36	11.25	Pass
4FSK Data	50W	12.5k	173.975	7.53	9.36	11.25	Pass
4FSK Data+Voice	50W	12.5k	136.025	7.47	9.36	11.25	Pass
4FSK Data+Voice	50W	12.5k	138.025	7.47	9.36	11.25	Pass
4FSK Data+Voice	50W	12.5k	155.025	7.5	9.36	11.25	Pass
4FSK Data+Voice	50W	12.5k	173.975	7.5	9.36	11.25	Pass
4FSK Data	5W	12.5k	136.025	7.47	9.33	11.25	Pass
4FSK Data	5W	12.5k	138.025	7.47	9.36	11.25	Pass
4FSK Data	5W	12.5k	155.025	7.5	9.36	11.25	Pass
4FSK Data	5W	12.5k	173.975	7.53	9.36	11.25	Pass
4FSK Data+Voice	5W	12.5k	136.025	7.47	9.36	11.25	Pass
4FSK Data+Voice	5W	12.5k	138.025	7.47	9.36	11.25	Pass
4FSK Data+Voice	5W	12.5k	155.025	7.5	9.36	11.25	Pass
4FSK Data+Voice	5W	12.5k	173.975	7.53	9.36	11.25	Pass
FM	50W	12.5k	136.025	9.99	10.14	11.25	Pass
FM	50W	12.5k	138.025	9.93	10.11	11.25	Pass
FM	50W	12.5k	155.025	9.99	10.14	11.25	Pass
FM	50W	12.5k	173.975	10.02	10.14	11.25	Pass
FM	5W	12.5k	136.025	9.99	10.17	11.25	Pass
FM	5W	12.5k	138.025	9.99	10.17	11.25	Pass
FM	5W	12.5k	155.025	9.99	10.17	11.25	Pass
FM	5W	12.5k	173.975	9.96	10.14	11.25	Pass

Test data of Emission Mask					
Test Mode	Power Level	Channel Separation [Hz]	Test Frequency [MHz]	Mask Type	Verdict
4FSK Data	50W	12.5k	136.025	D	Pass
4FSK Data	50W	12.5k	138.025	D	Pass
4FSK Data	50W	12.5k	155.025	D	Pass
4FSK Data	50W	12.5k	173.975	D	Pass
4FSK Data+Voice	50W	12.5k	136.025	D	Pass
4FSK Data+Voice	50W	12.5k	138.025	D	Pass
4FSK Data+Voice	50W	12.5k	155.025	D	Pass
4FSK Data+Voice	50W	12.5k	173.975	D	Pass
4FSK Data	5W	12.5k	136.025	D	Pass
4FSK Data	5W	12.5k	138.025	D	Pass
4FSK Data	5W	12.5k	155.025	D	Pass
4FSK Data	5W	12.5k	173.975	D	Pass
4FSK Data+Voice	5W	12.5k	136.025	D	Pass
4FSK Data+Voice	5W	12.5k	138.025	D	Pass
4FSK Data+Voice	5W	12.5k	155.025	D	Pass
4FSK Data+Voice	5W	12.5k	173.975	D	Pass
FM	50W	12.5k	136.025	D	Pass
FM	50W	12.5k	138.025	D	Pass
FM	50W	12.5k	155.025	D	Pass
FM	50W	12.5k	173.975	D	Pass
FM	5W	12.5k	136.025	D	Pass
FM	5W	12.5k	138.025	D	Pass
FM	5W	12.5k	155.025	D	Pass
FM	5W	12.5k	173.975	D	Pass

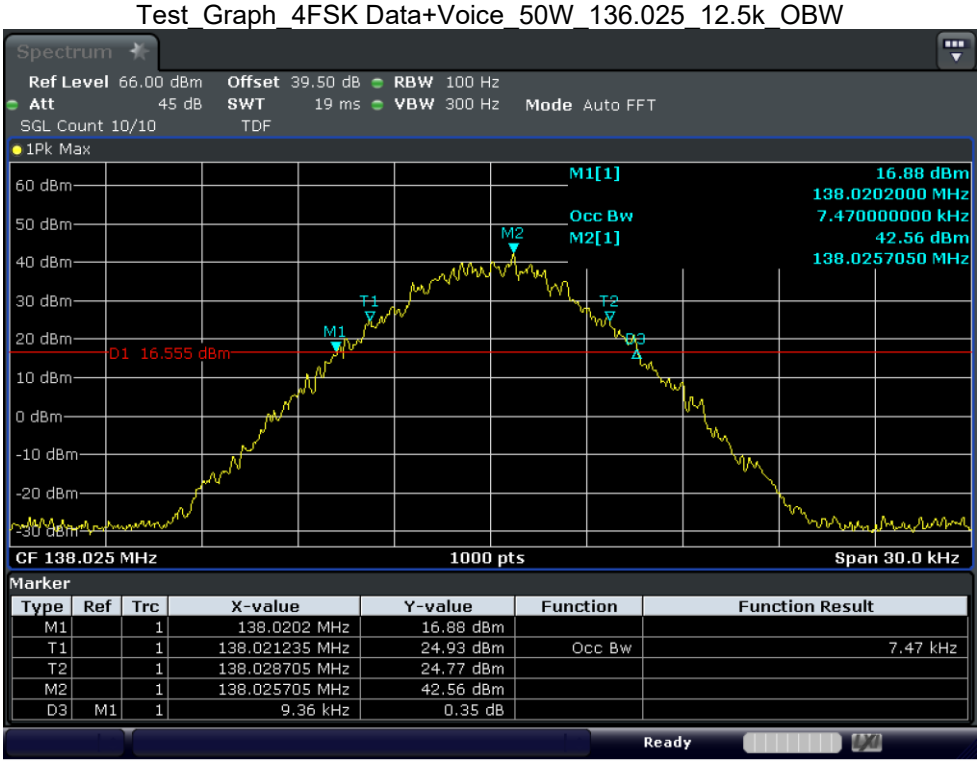
Note:

1. *All measured including cable loss and* attenuator factor.
2. *Please refer to following test plots;*

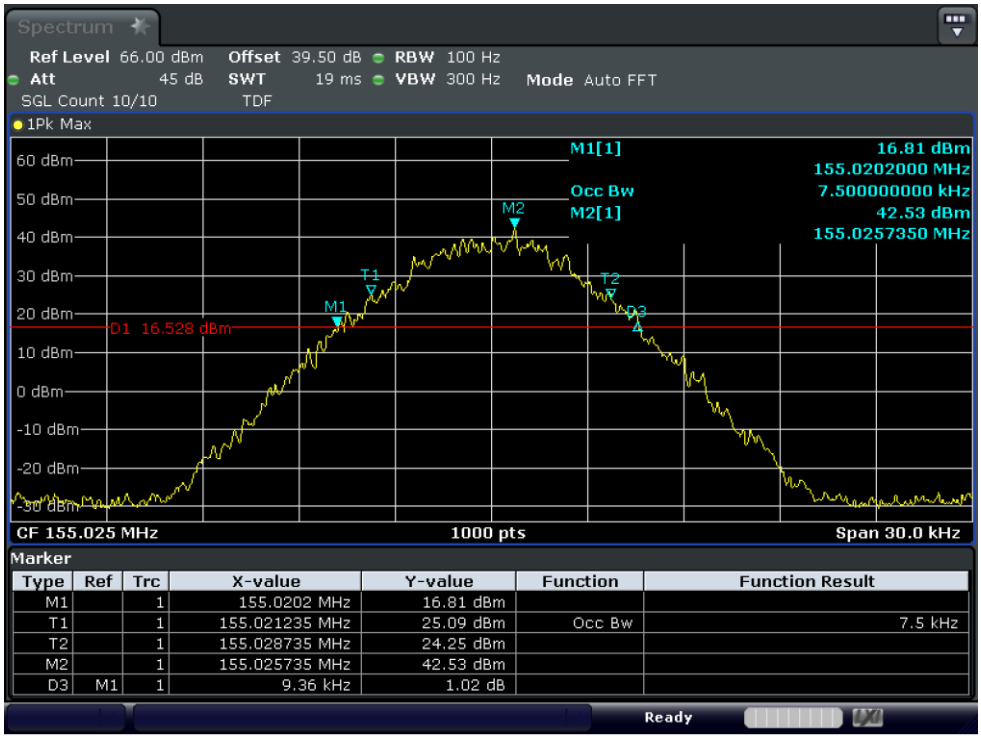
Test Graphs of Occupied Bandwidth



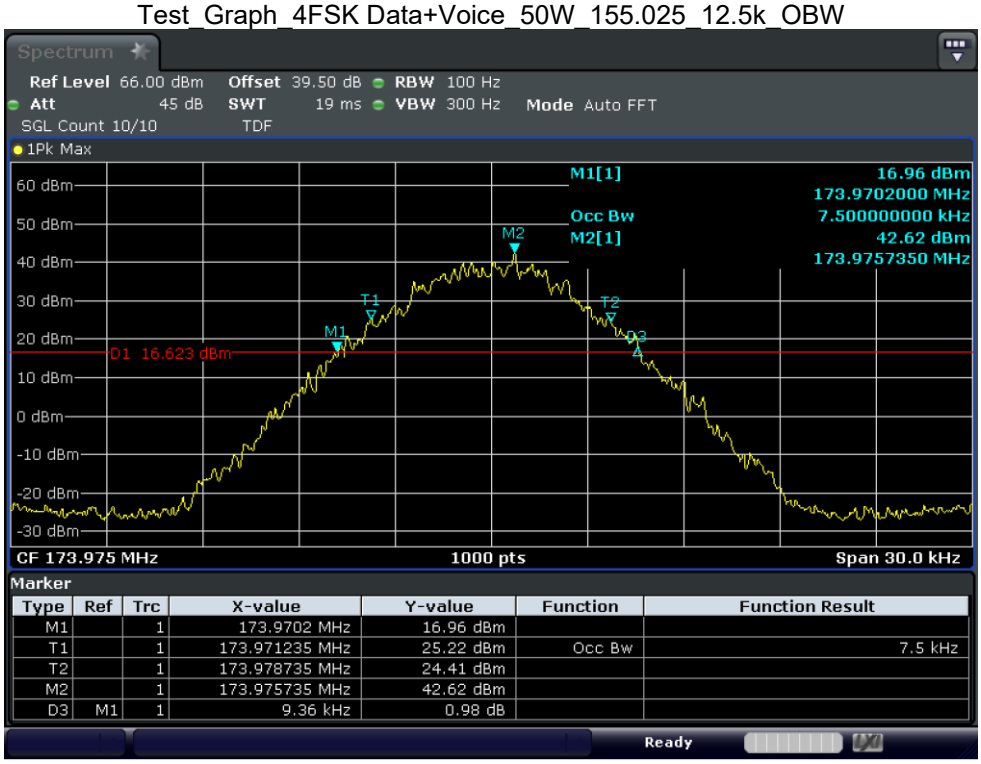
Test_Graph_4FSK Data+Voice_50W_136.025_12.5k_OBW



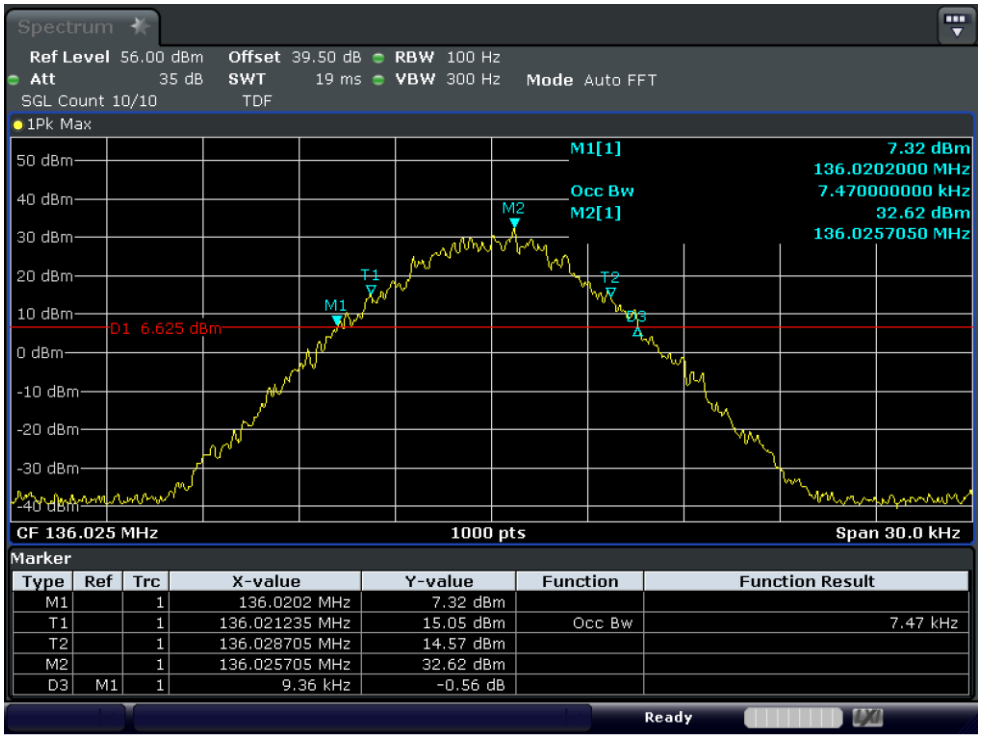
Test_Graph_4FSK Data+Voice_50W_138.025_12.5k_OBW



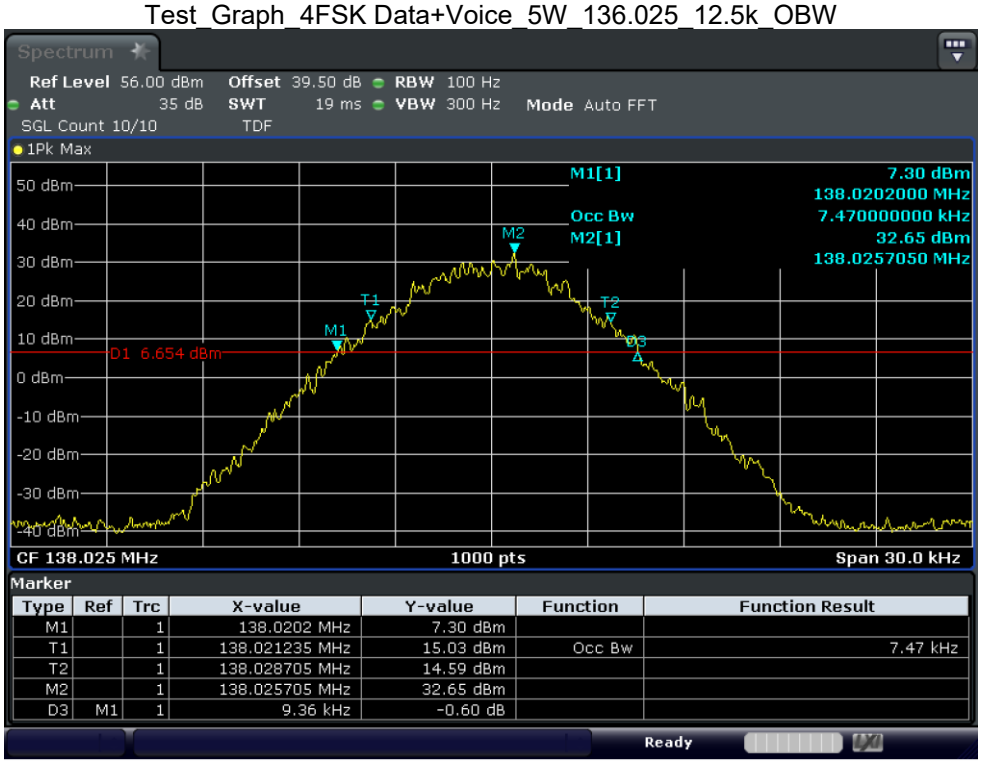
Test_Graph_4FSK Data+Voice_50W_155.025_12.5k_OBW



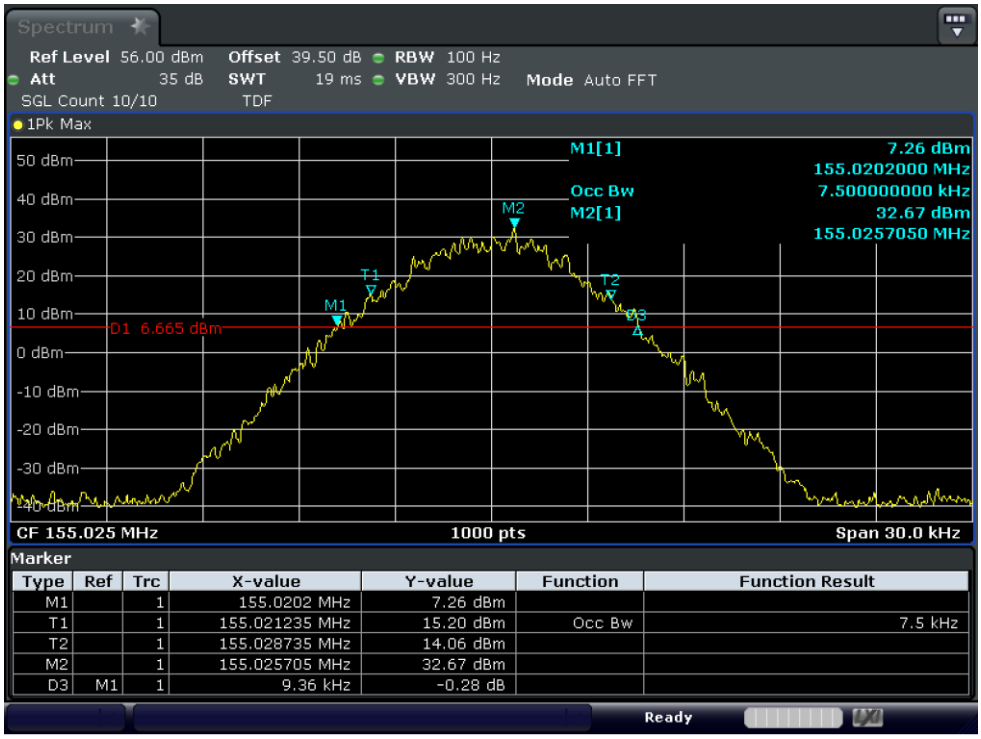
Test_Graph_4FSK Data+Voice_50W_173.975_12.5k_OBW



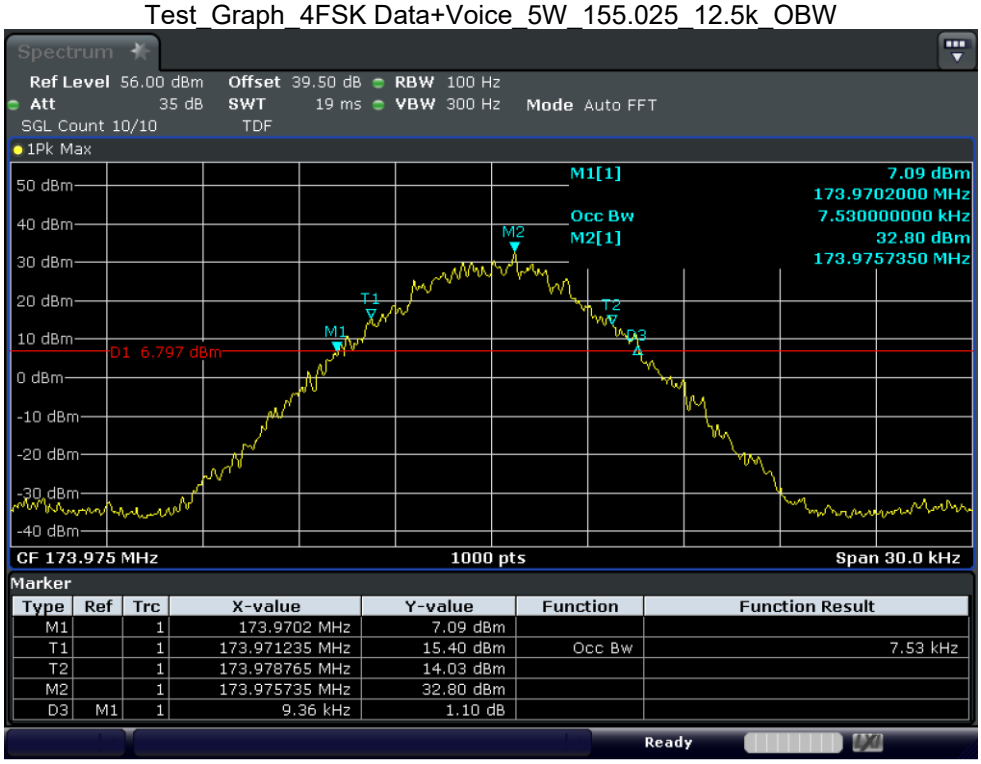
Test_Graph_4FSK Data+Voice_5W_136.025_12.5k_OBW



Test_Graph_4FSK Data+Voice_5W_138.025_12.5k_OBW



Test_Graph_4FSK Data+Voice_5W_155.025_12.5k_OBW



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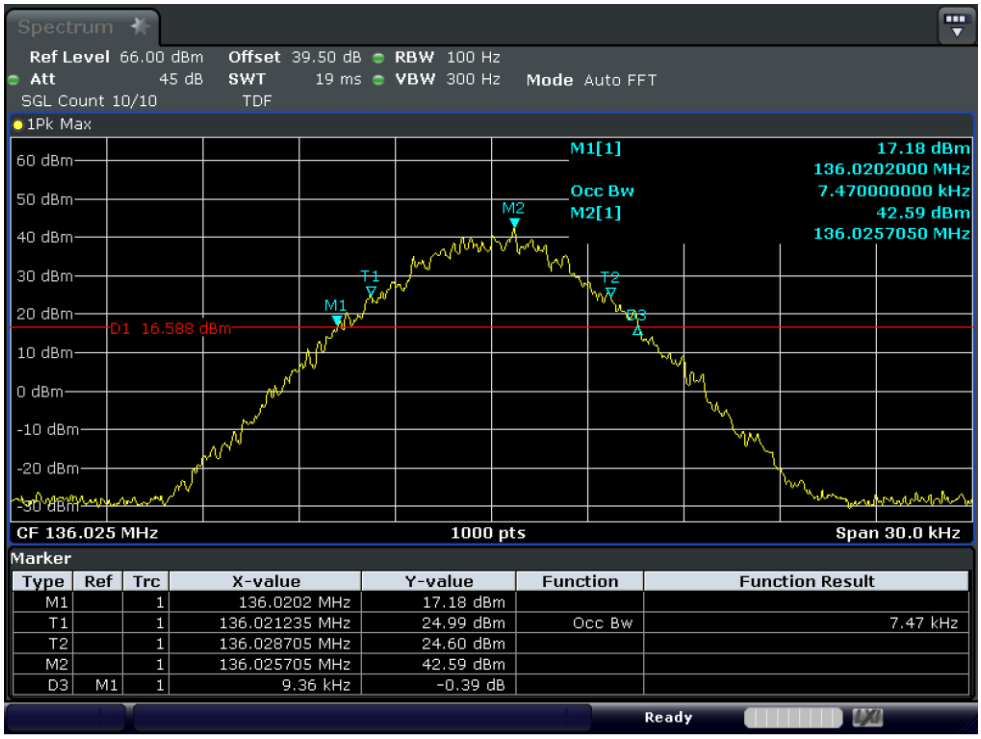
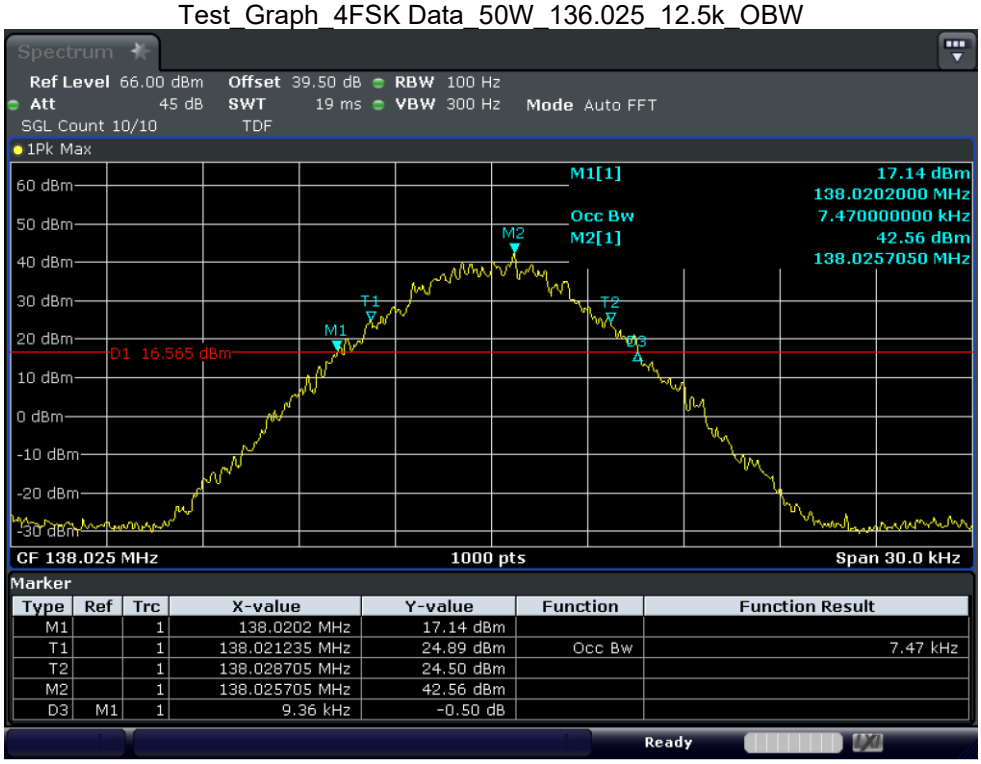


Test_Graph_4FSK Data_50W_136.025_12.5k_OBW



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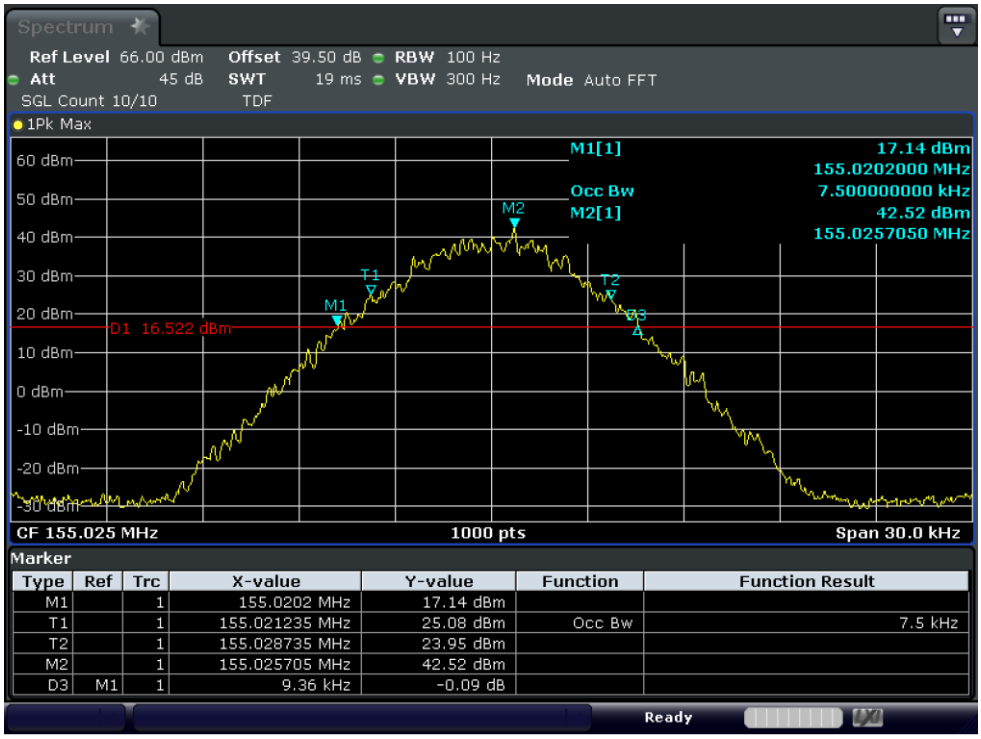

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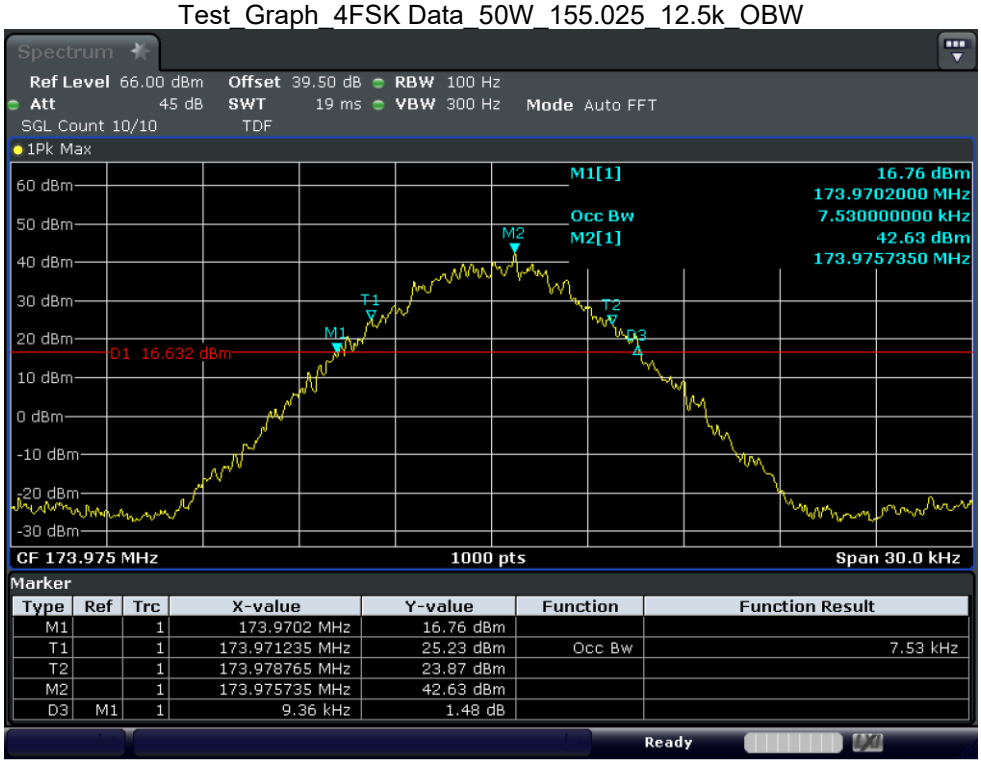
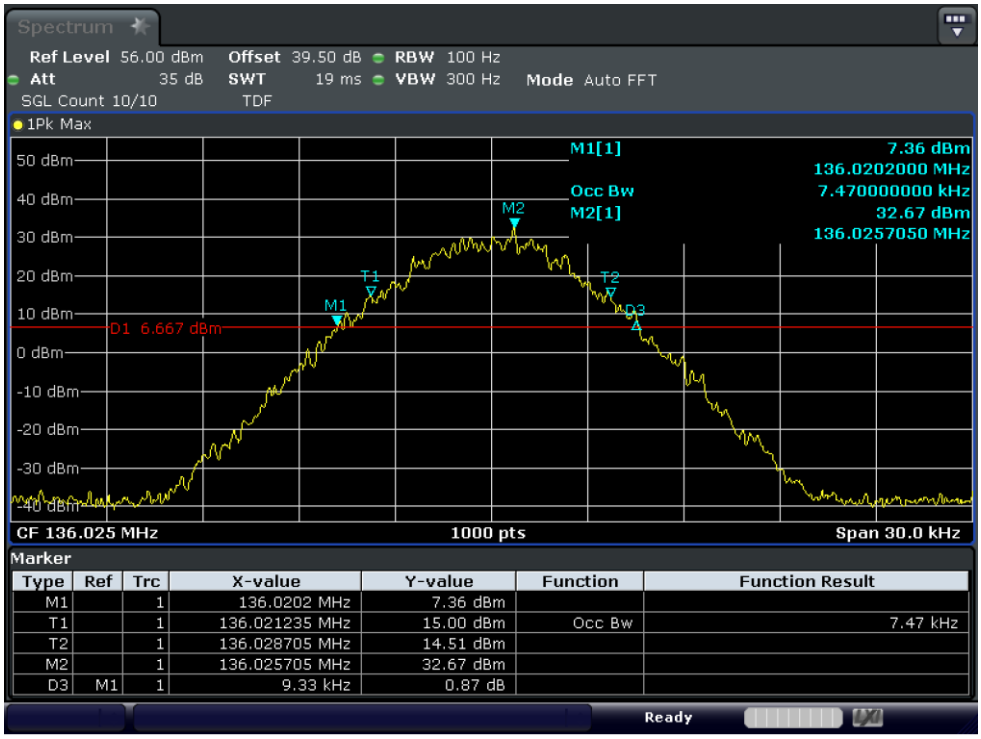


Test_Graph_4FSK Data_50W_173.975_12.5k_OBW



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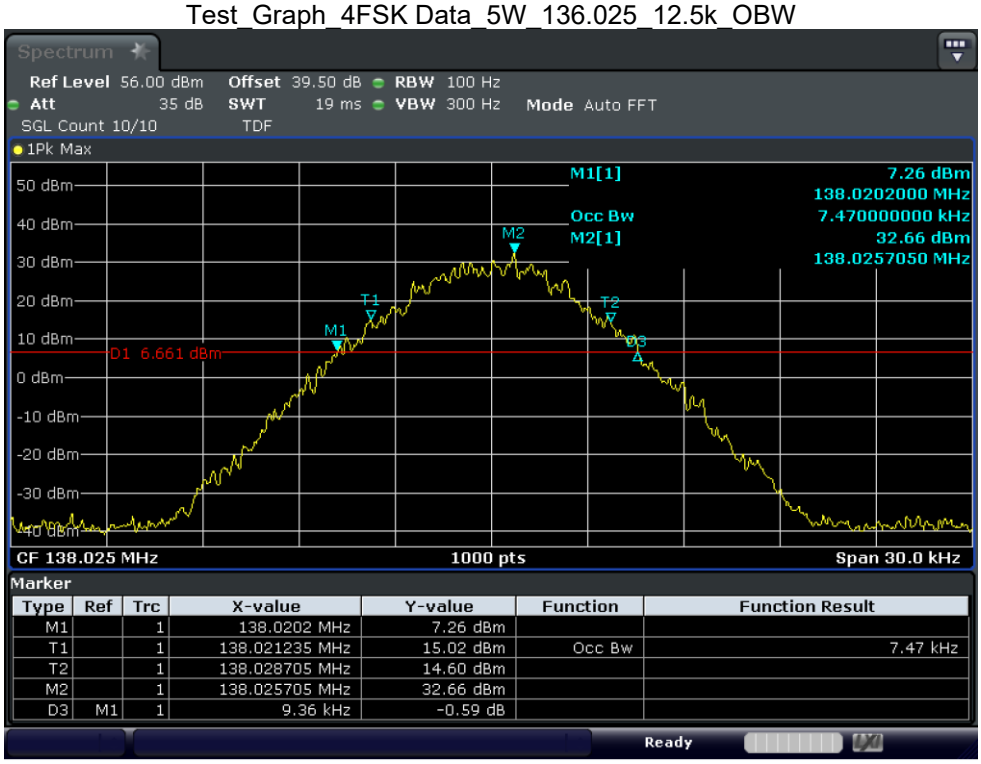

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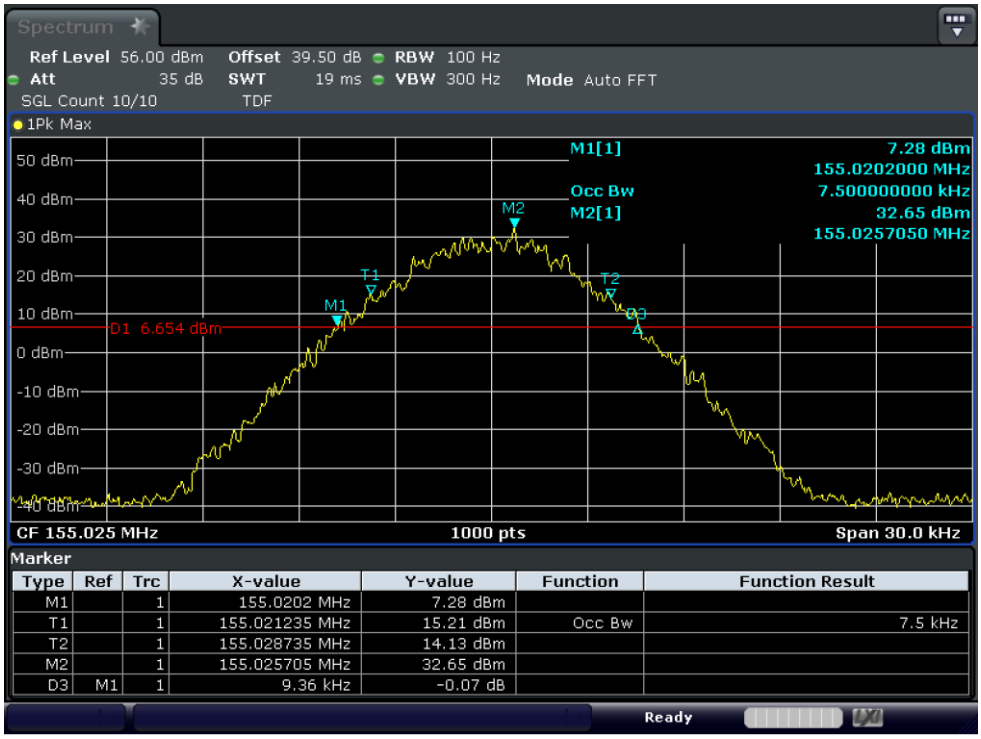

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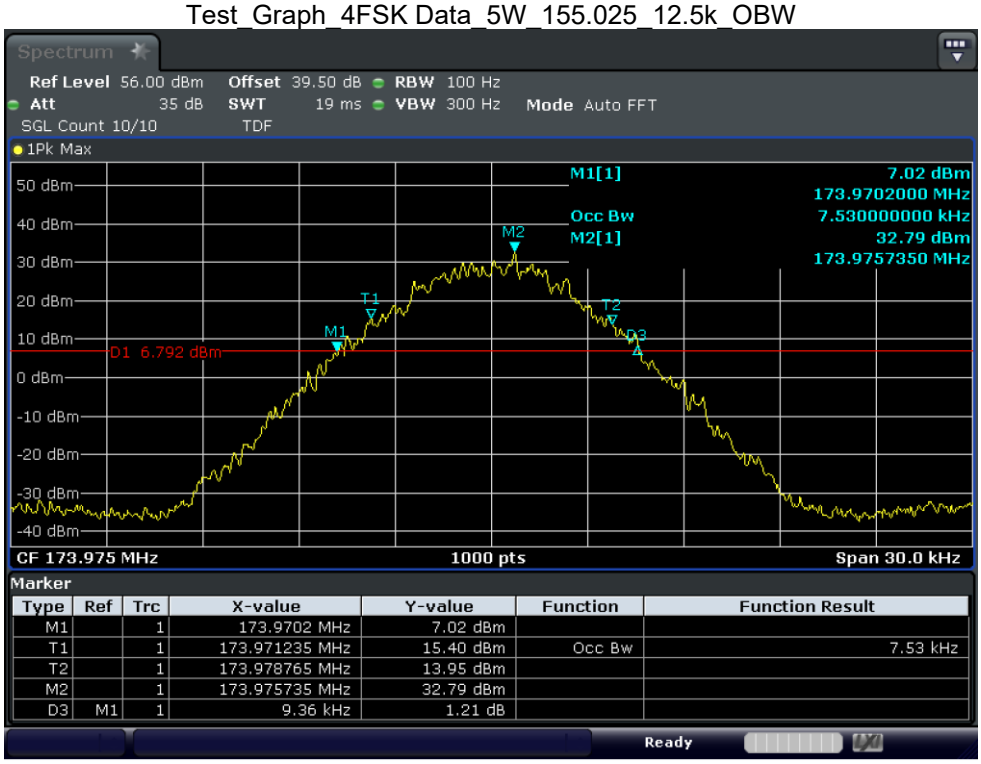
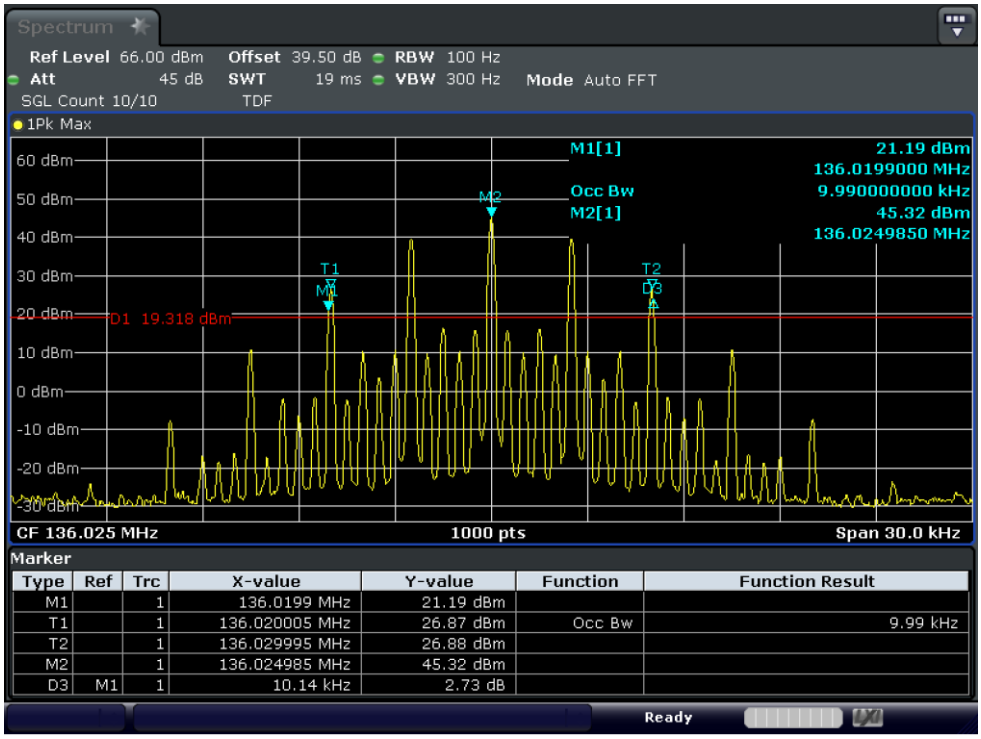
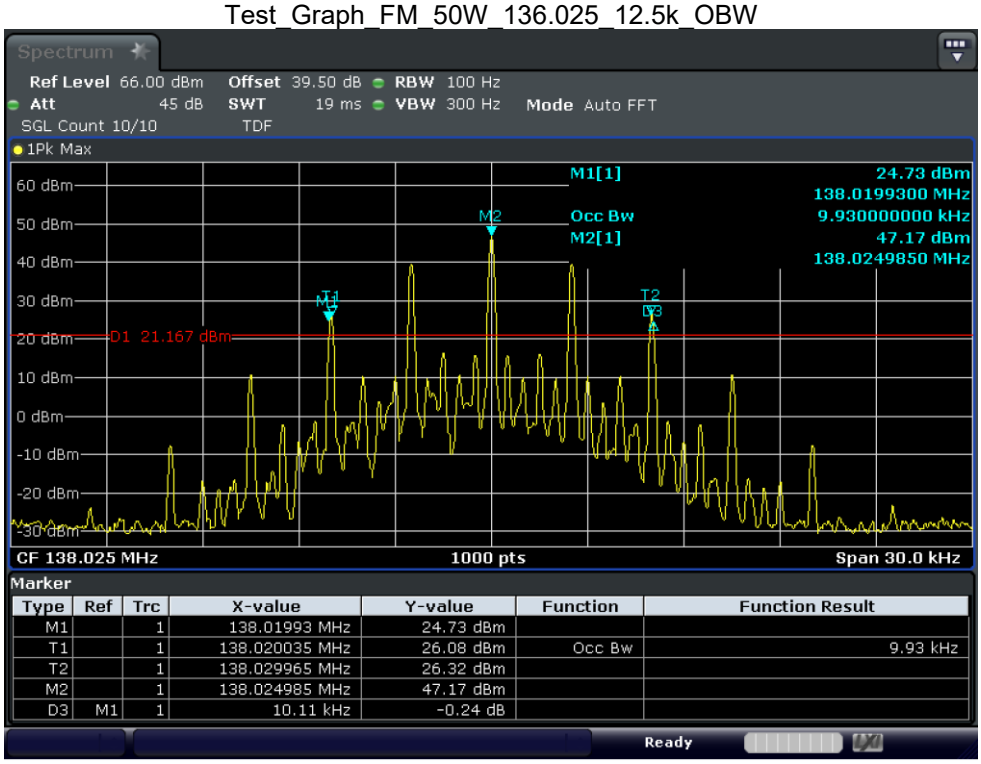


Test_Graph_4FSK Data_5W_173.975_12.5k_OBW



Test_Graph_FM_50W_136.025_12.5k_OBW



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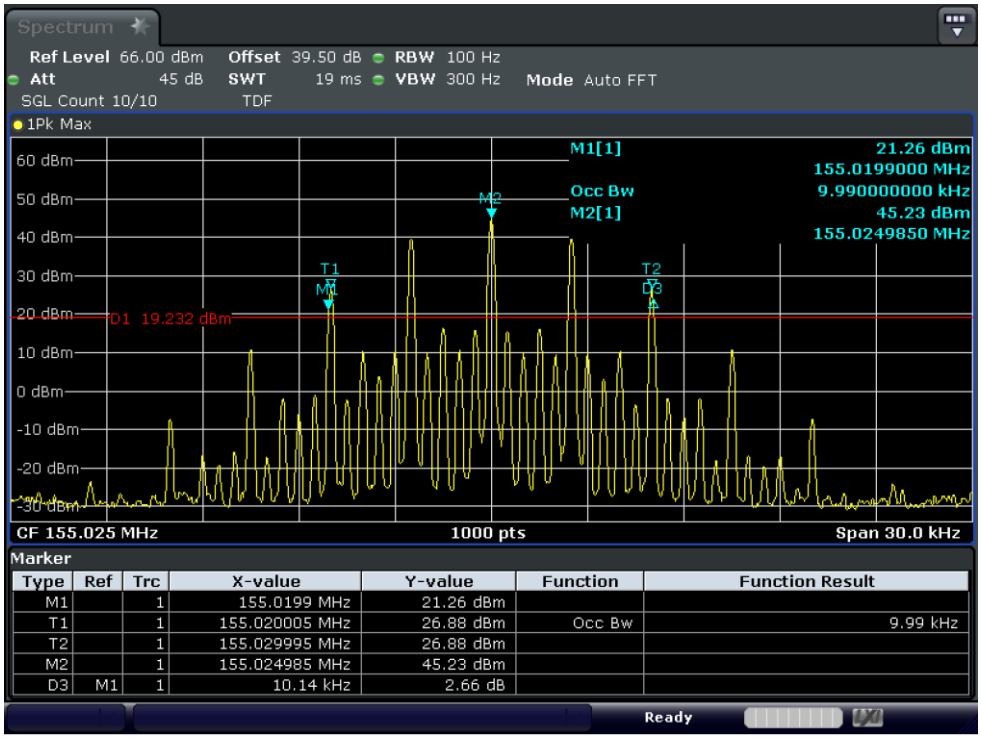

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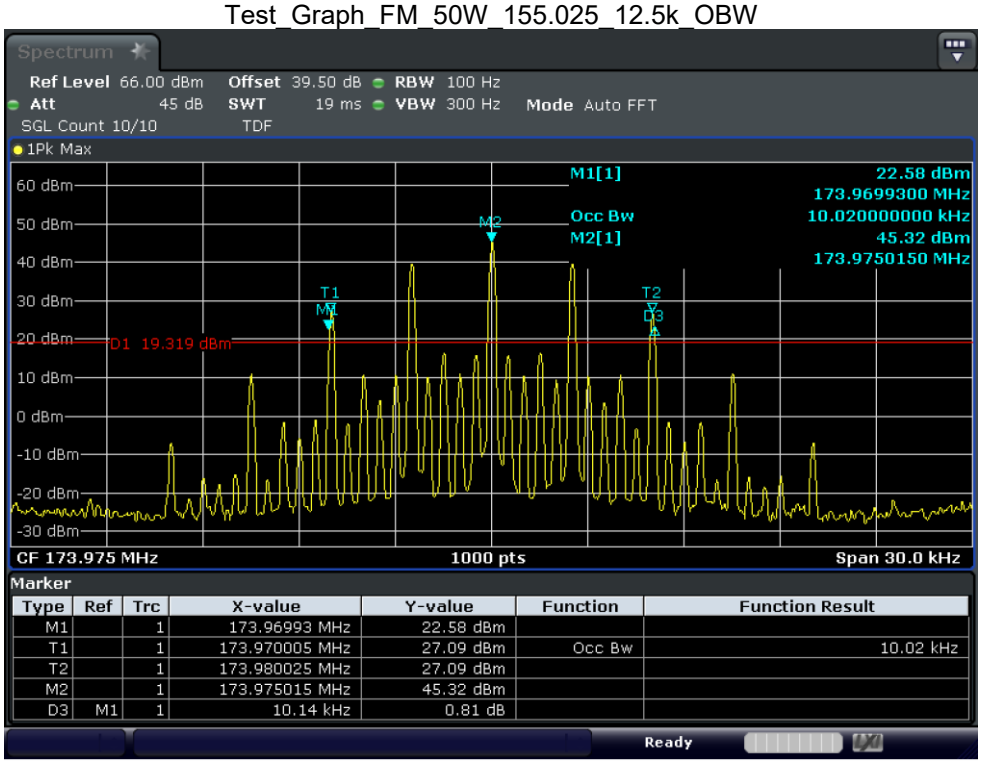

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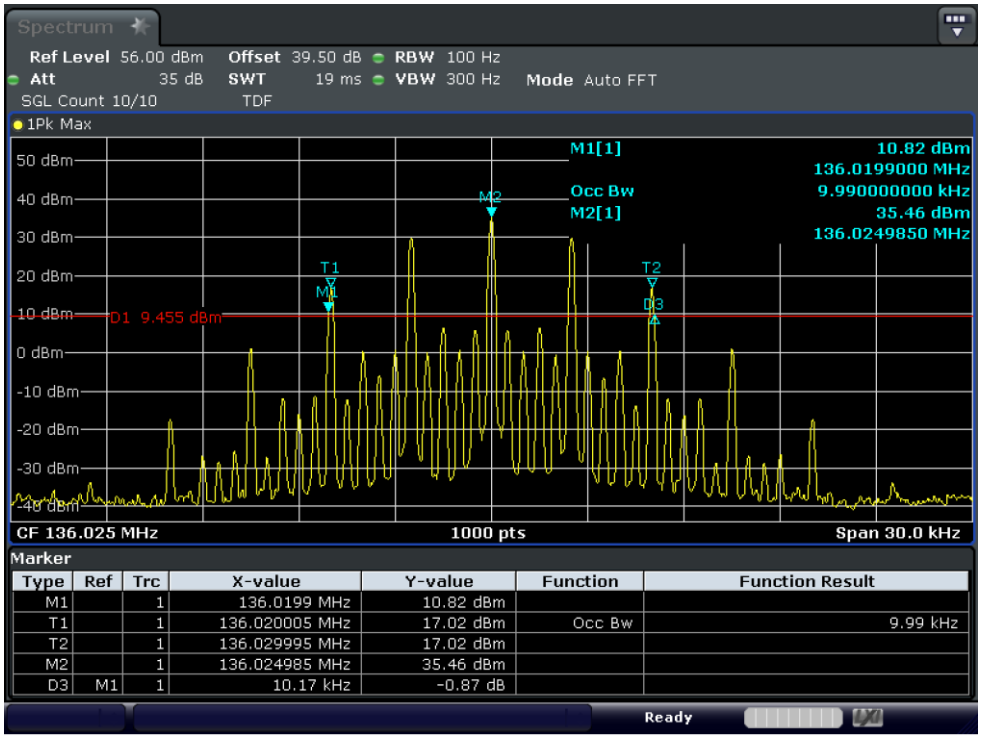

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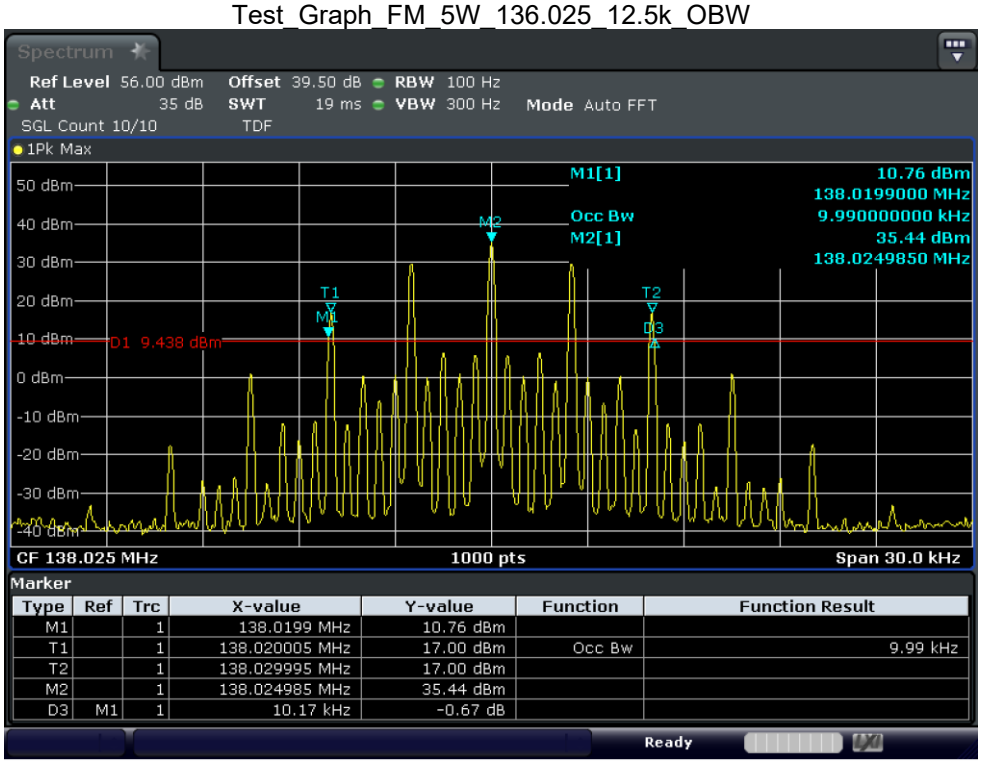

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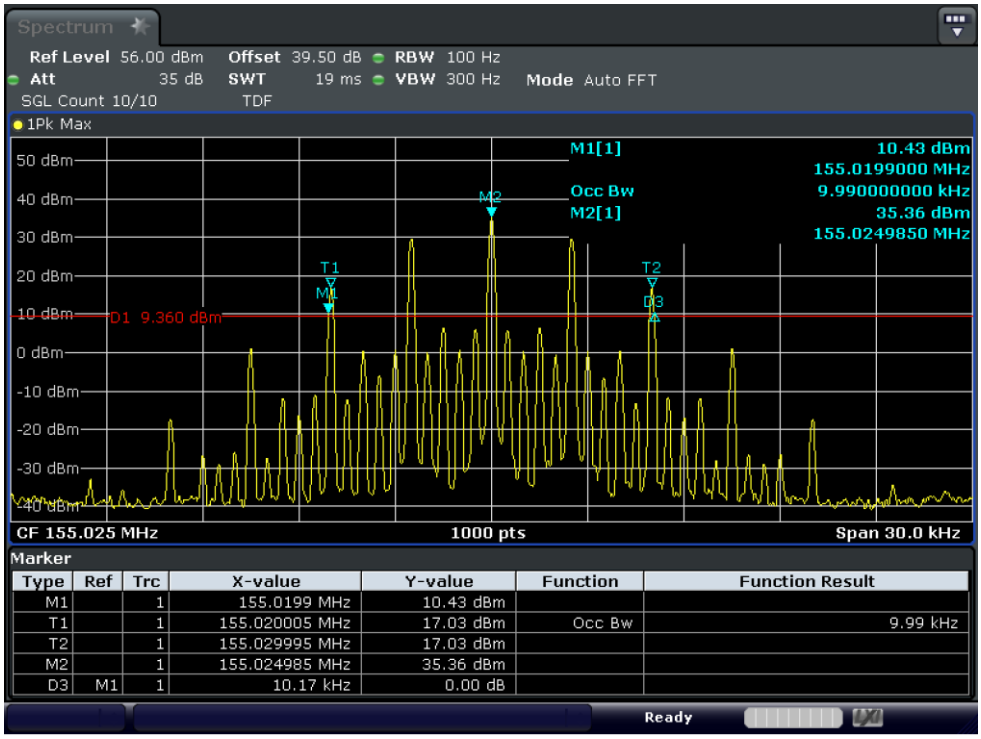

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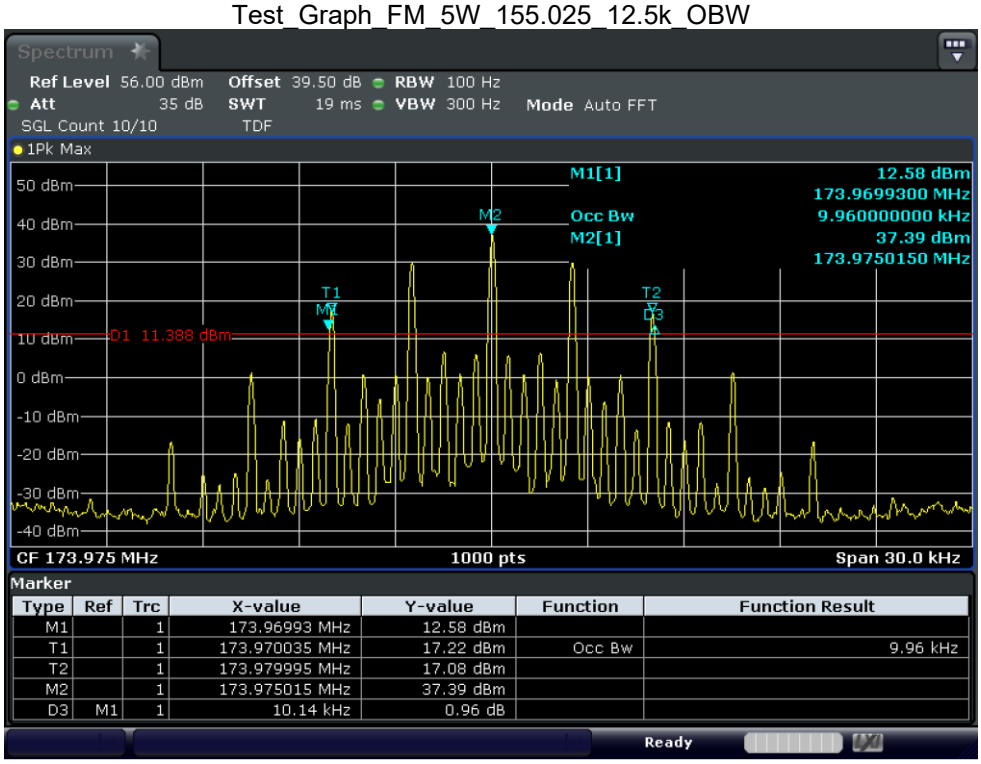
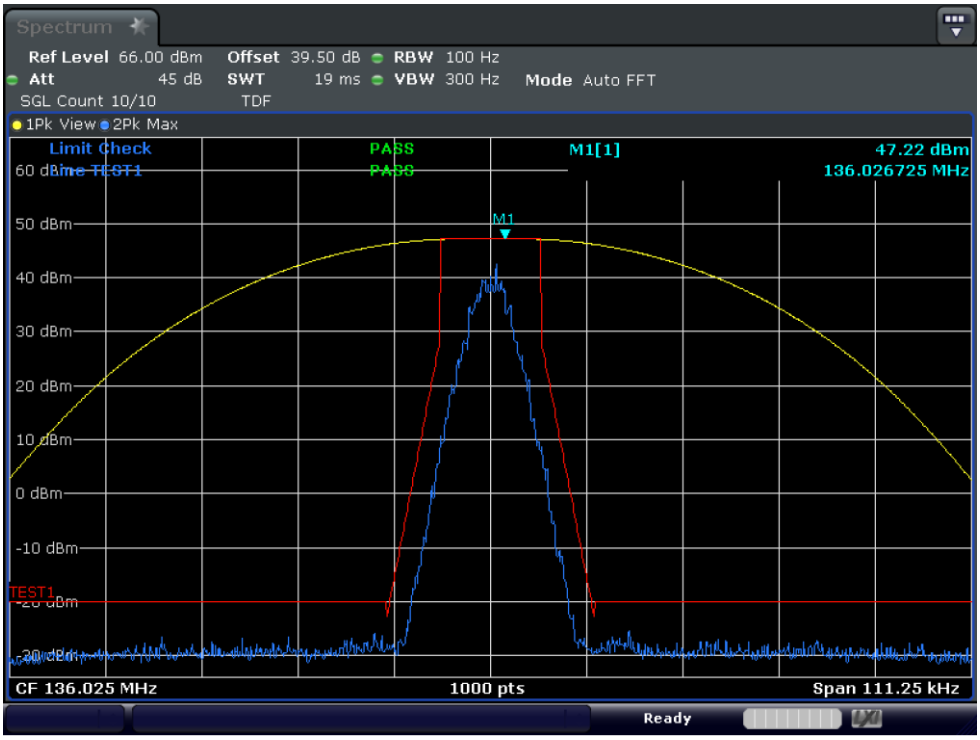
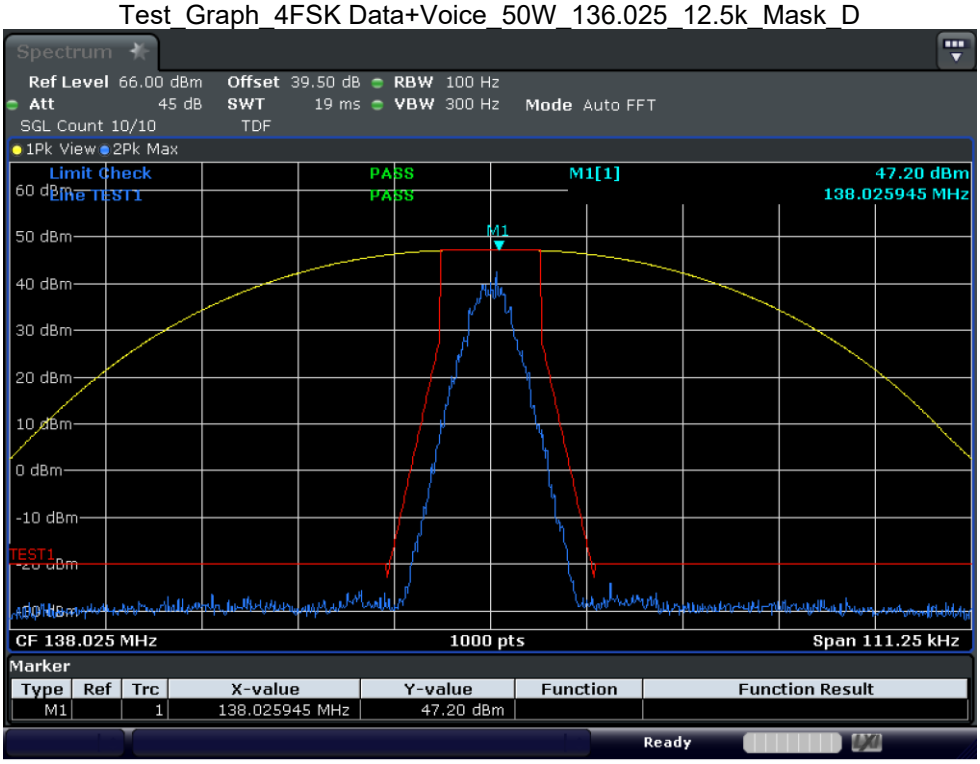


Test_Graph_FM_5W_173.975_12.5k_OBW

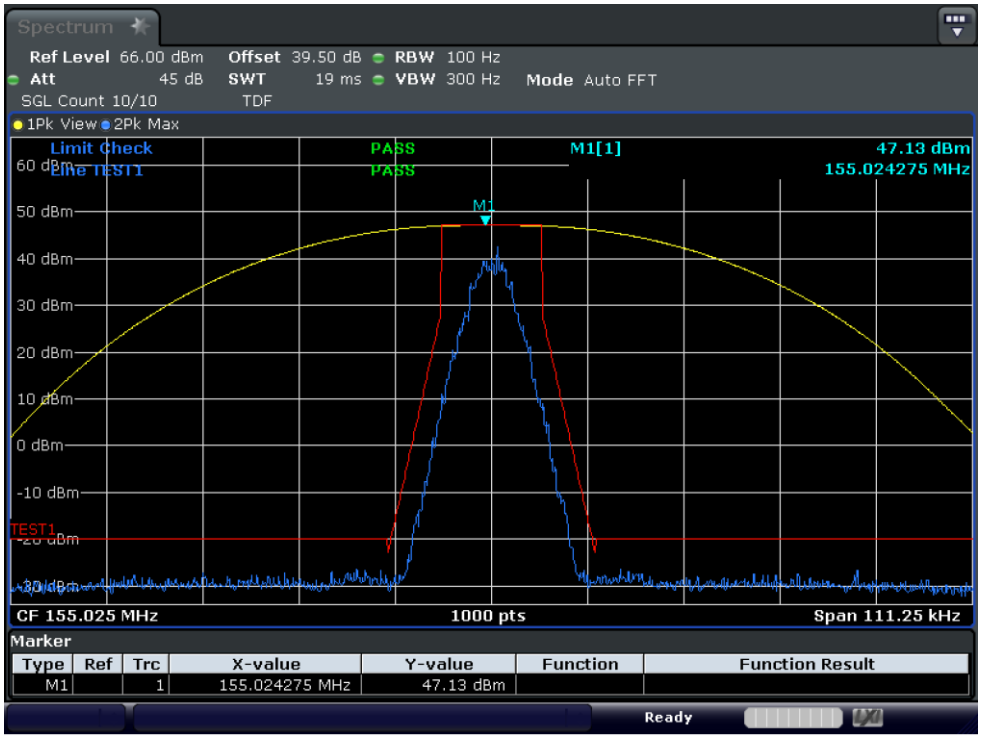
Test Graphs of Mask



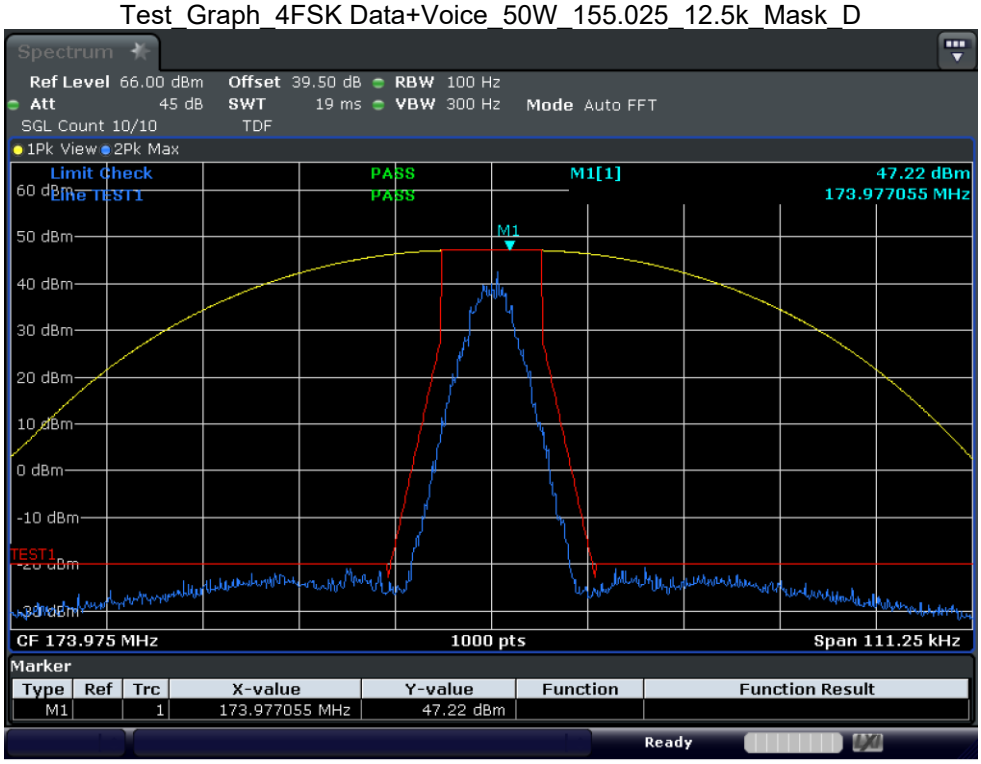
Test_Graph_4FSK Data+Voice_50W_136.025_12.5k_Mask_D



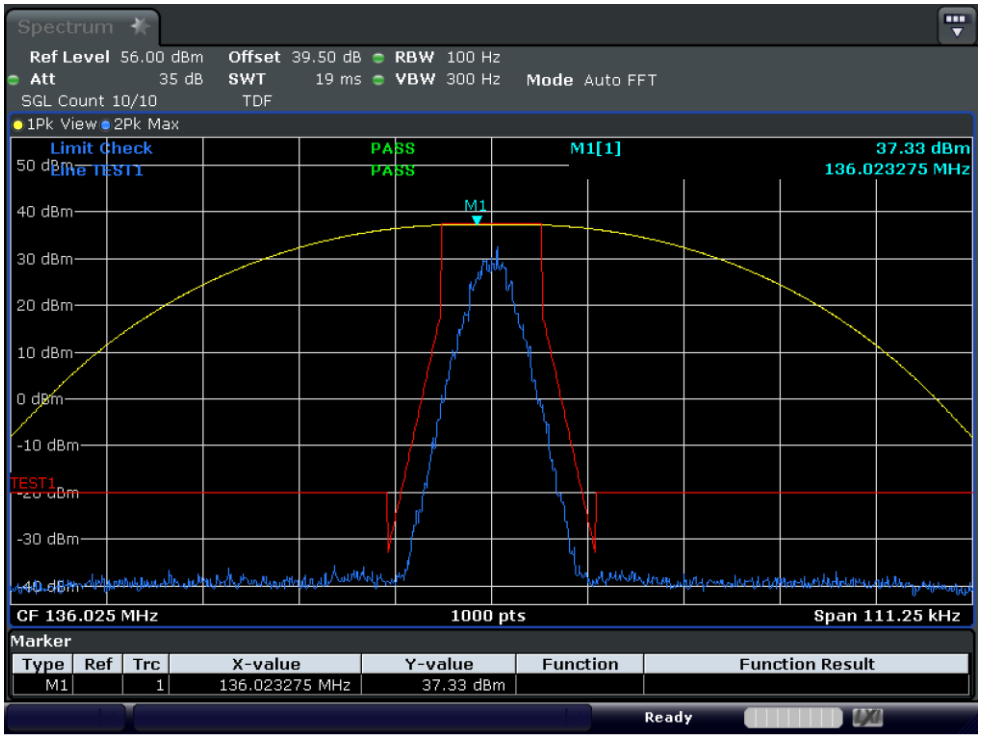
Test_Graph_4FSK Data+Voice_50W_138.025_12.5k_Mask_D



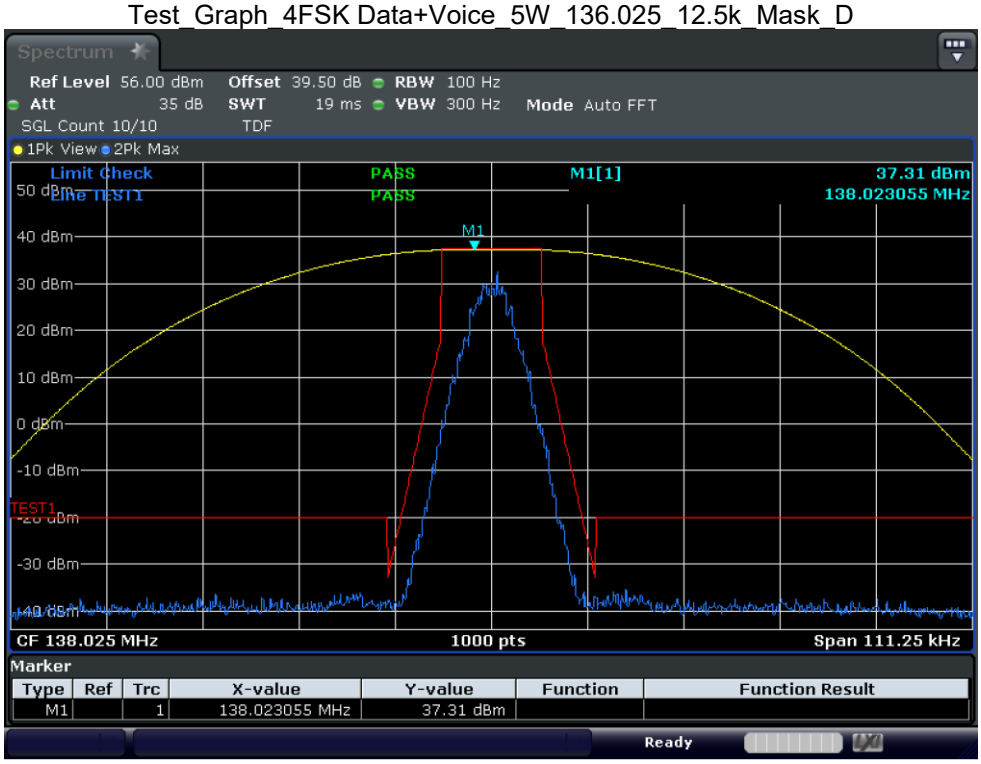
Test_Graph_4FSK Data+Voice_50W_155.025_12.5k_Mask_D



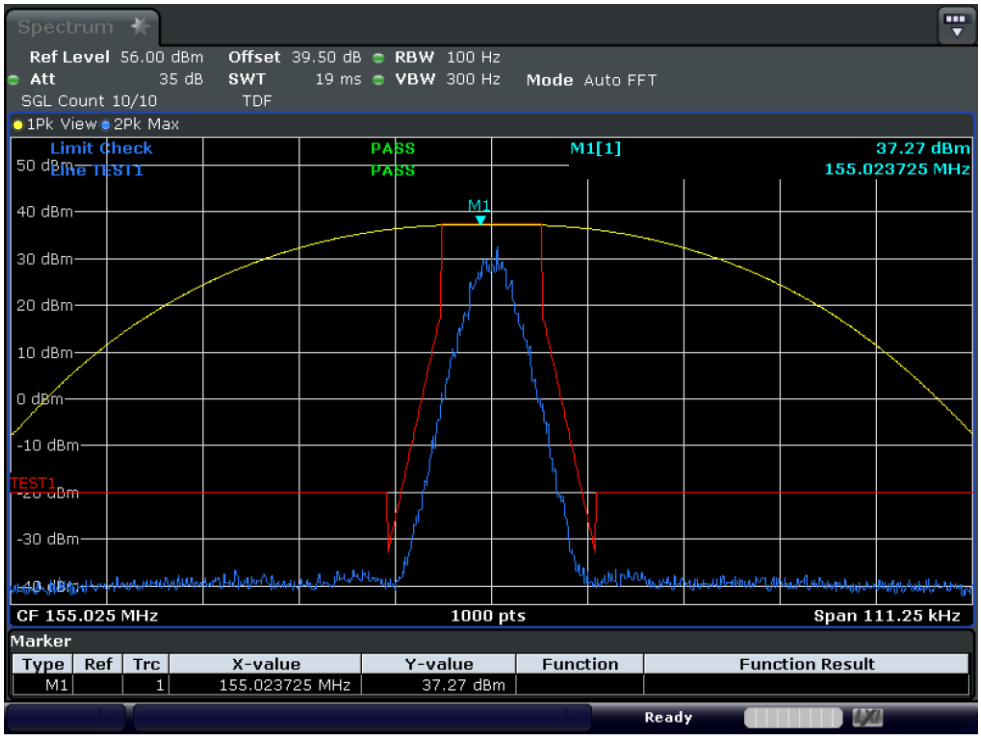
Test_Graph_4FSK Data+Voice_50W_173.975_12.5k_Mask_D



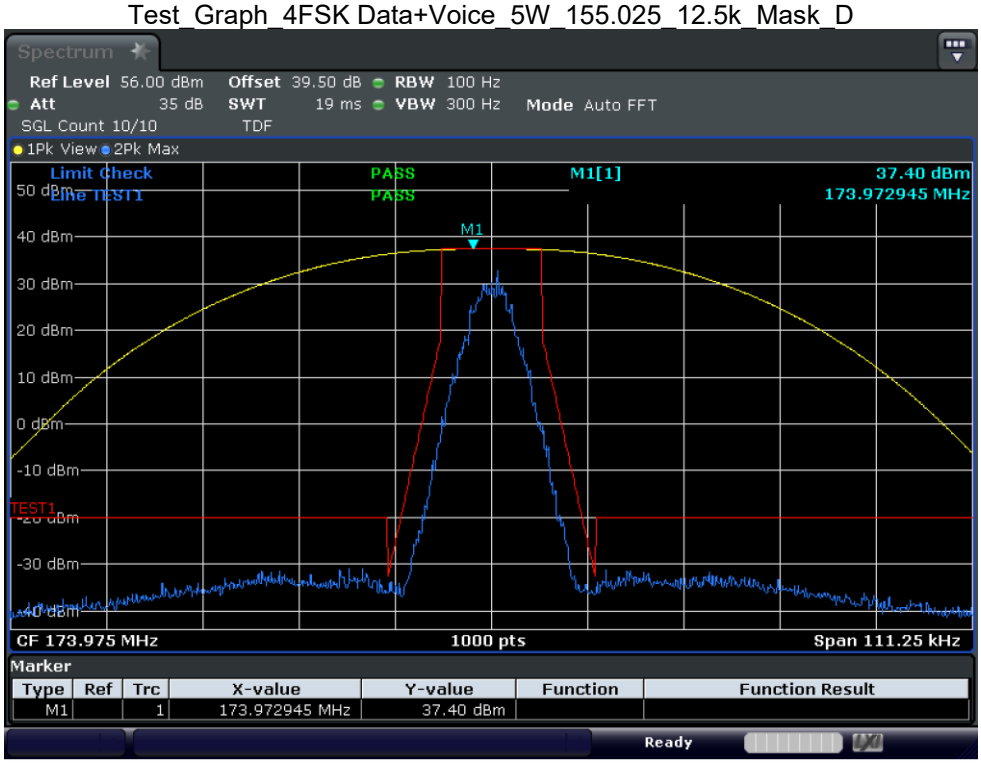
Test_Graph_4FSK Data+Voice_5W_136.025_12.5k_Mask_D



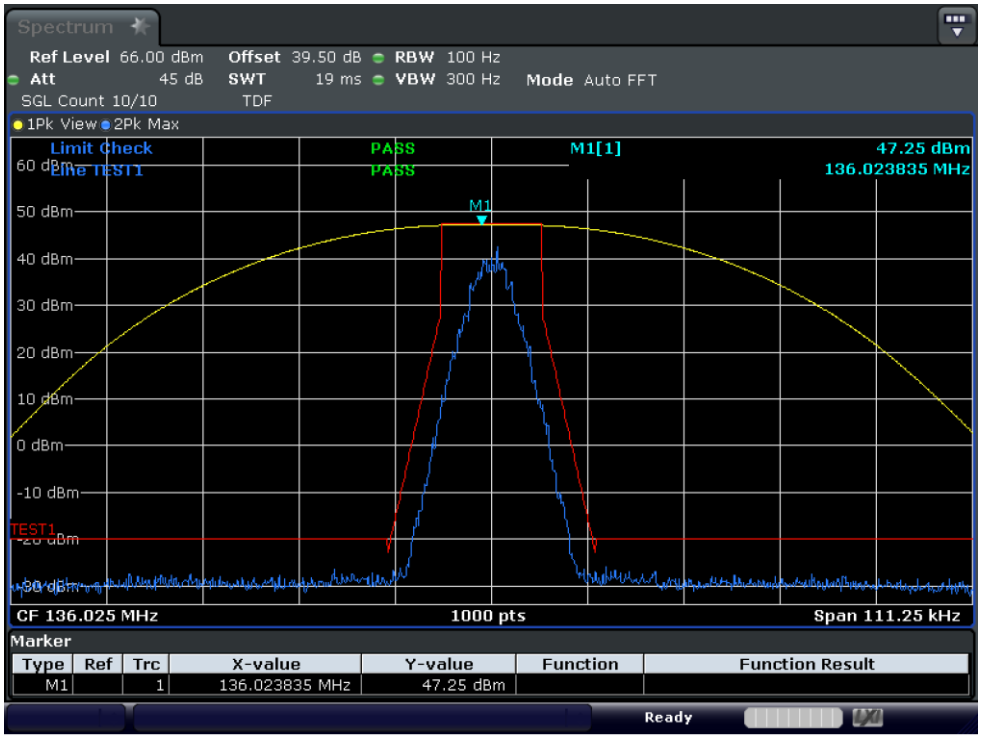
Test_Graph_4FSK Data+Voice_5W_138.025_12.5k_Mask_D



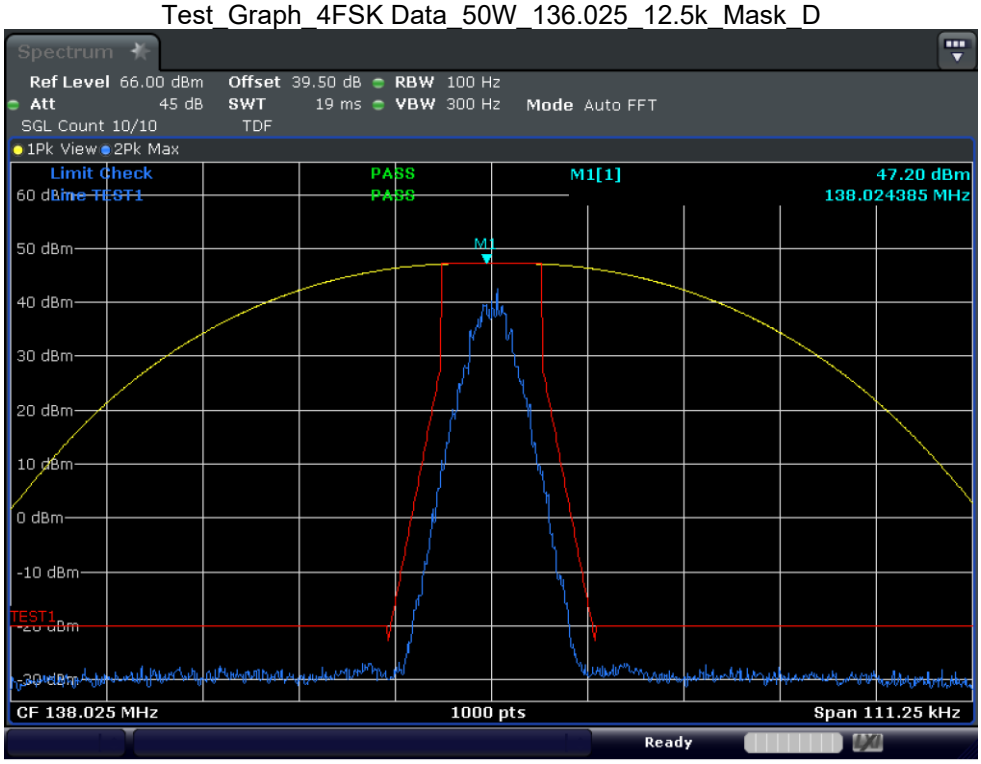
Test_Graph_4FSK Data+Voice_5W_155.025_12.5k_Mask_D



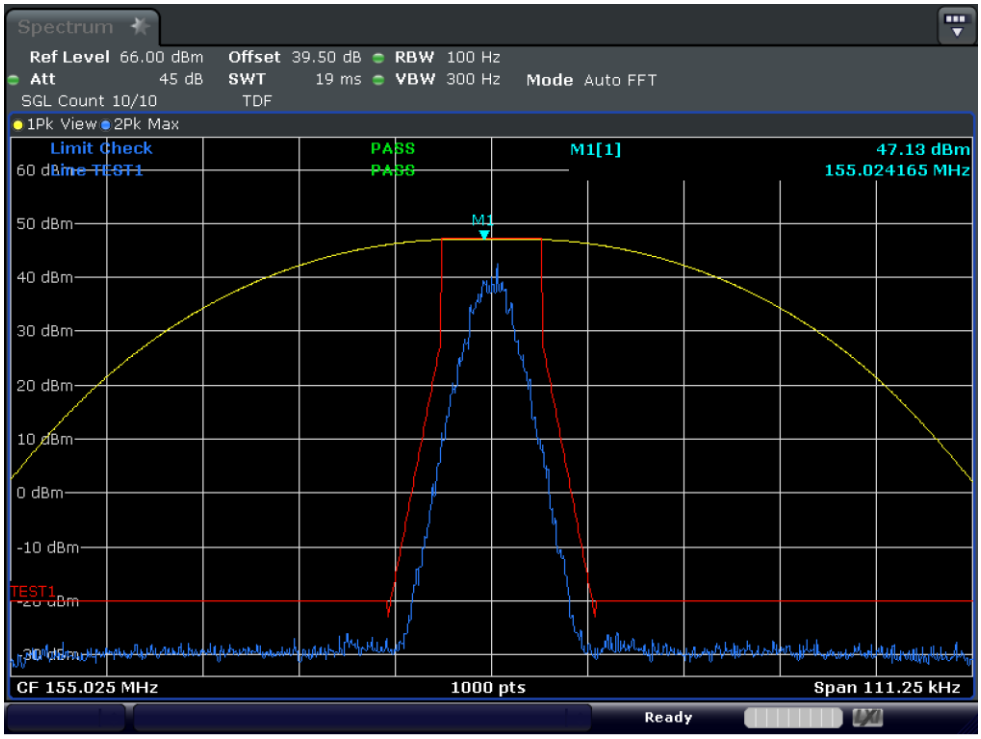
Test_Graph_4FSK Data+Voice_5W_173.975_12.5k_Mask_D



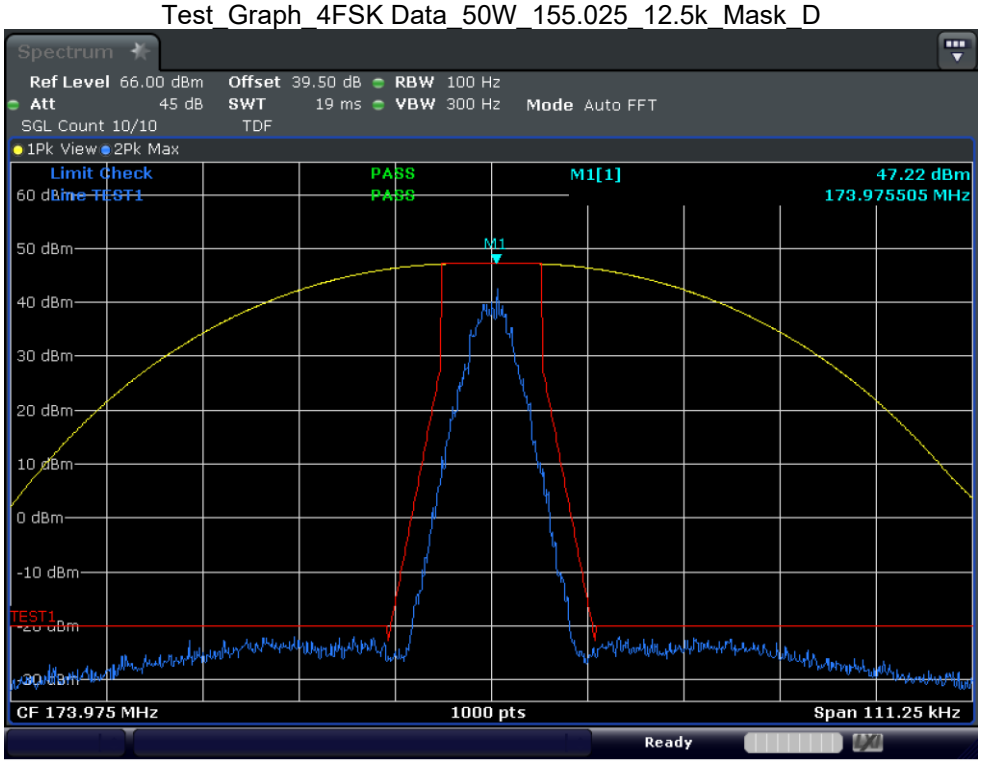
Test_Graph_4FSK Data_50W_136.025_12.5k_Mask_D



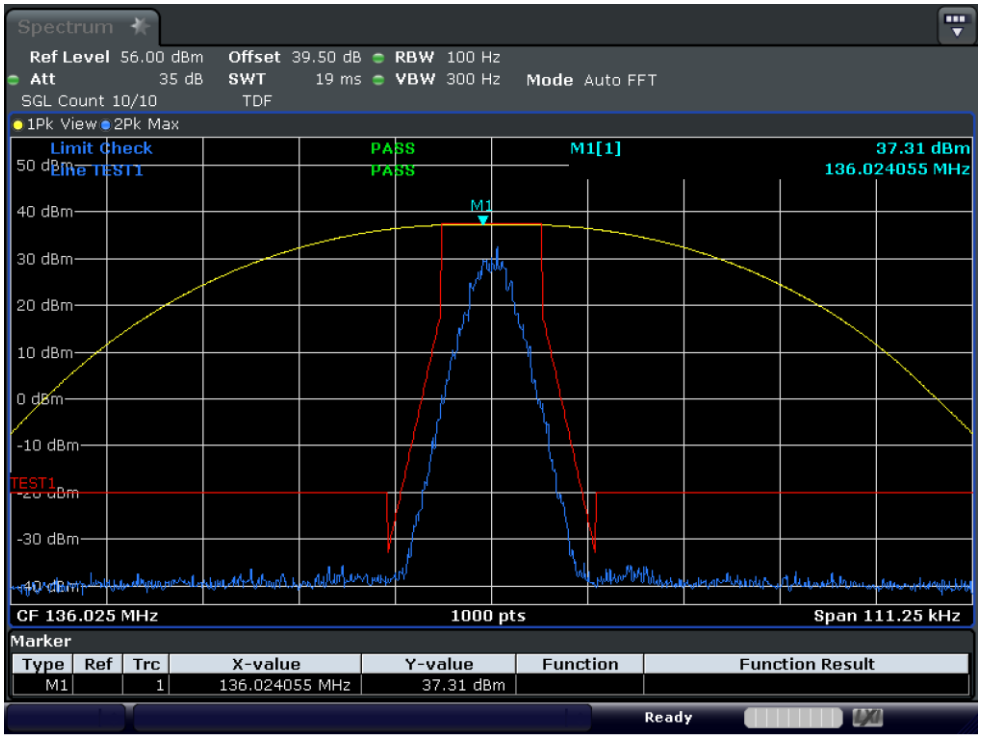
Test_Graph_4FSK Data_50W_138.025_12.5k_Mask_D



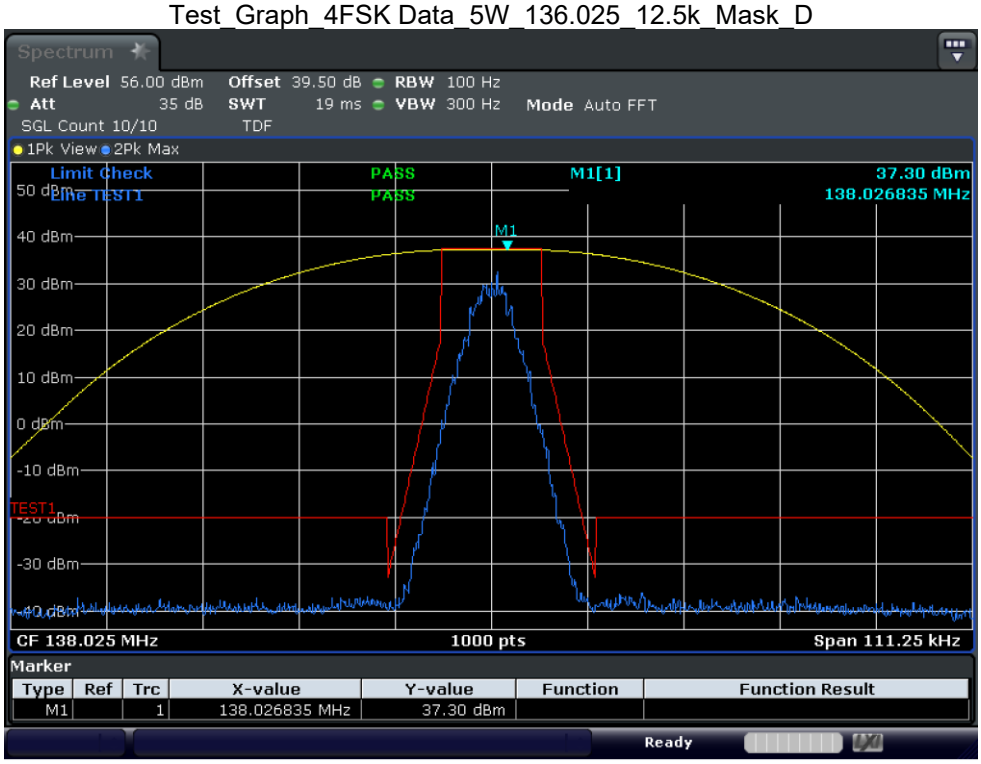
Test_Graph_4FSK Data_50W_155.025_12.5k_Mask_D



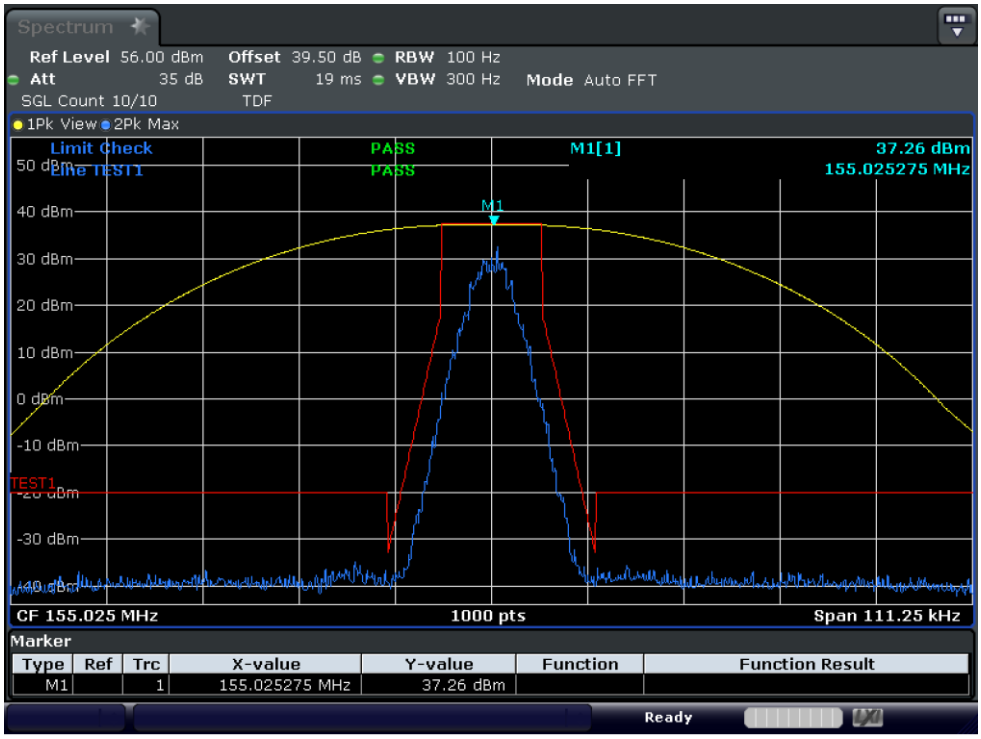
Test_Graph_4FSK Data_50W_173.975_12.5k_Mask_D



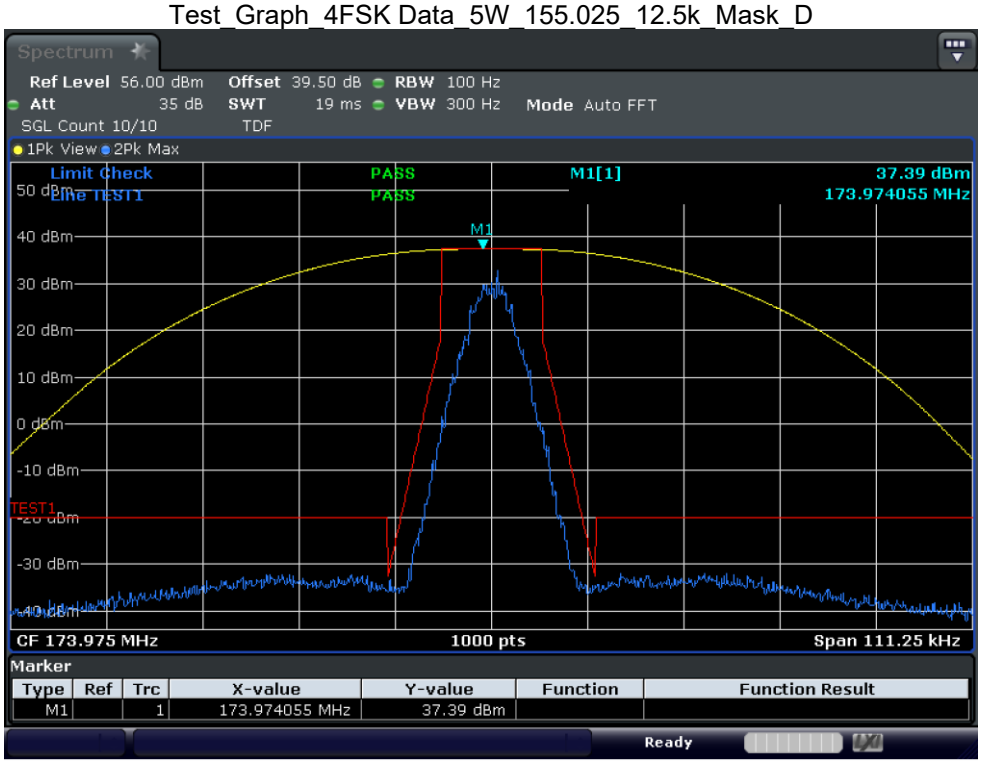
Test_Graph_4FSK Data_5W_136.025_12.5k_Mask_D



Test_Graph_4FSK Data_5W_138.025_12.5k_Mask_D



Test_Graph_4FSK Data_5W_155.025_12.5k_Mask_D



Test_Graph_4FSK Data_5W_173.975_12.5k_Mask_D