TELTEST Laboratories
Tait International Ltd
Report Number 4372

LABORATORY TEST REPORT

RADIO PERFORMANCE MEASUREMENTS

for the

TPHN0A Handportable Transceiver

Tested in accordance with:

FCC 47 CFR Parts 22 and 90

RSS-119 Issue 12
RSS-Gen Issue 5

Report Revision: 1

Issue Date: 15 August 2024

PREPARED BY: J. J. Aro

Test Technician

CHECKED & APPROVED BY: M. C. James

Laboratory Technical Manager

ACCREDITED
TESTING LABORATORY
№ 9, 577

FCC Registration: 838288
ISED Registration: 737A

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation.

TELTEST Laboratories (A Division of Tait International Ltd)
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REVISION HISTORY

Date	Revision	Comments
15 August 2024	1	Initial test report

INTRODUCTION

This report supports a “Class 2” permissive change to add 20kHz channel spacing operation for the 757 to 870MHz frequency range of this radio. This additional frequency spacing only relates to analogue and FFSK (1200bps and 2400bps) modulations. The other frequency ranges of the radio are not included in the application.

Tested in accordance with: FCC 47 CFR Parts 22 and 90
RSS-119 Issue 12
RSS-Gen Issue 5

REPORT PREPARED FOR
Tait International Ltd
245 Wooldridge Road
Harewood
Christchurch 8051
New Zealand

DESCRIPTION OF SAMPLE

Manufacturer:	Tait International Limited
Equipment:	Handportable Transceiver
Type:	TPHN0A
Product Code:	T03-00071-NFCF
Serial Number(s):	26883010
Frequency range of addition:	757 → 870 MHz
Other frequency ranges of radio:	136 → 174, 378 → 520, 896 → 941
Transmit Power:	3 W

Modulation		Channel Spacing	Speech Channels	Symbol Rate (symbols/sec)	Data Rate (bps)
Analogue FM		20 kHz	1	-	-
FFSK	Fast Frequency Shift Keying	20 kHz	-	1200	1200
		20 kHz	-	2400	2400

HARDWARE & SOFTWARE
Quantity: 1

	Analogue and FFSK Tests
Hardware ID	TPHB11-N000_0002
Firmware Package	QIDUAL_3.04.01.0076
FPGA Image	QPH1G_S01_3.06.01.0000

TEST CONDITIONS
All testing was performed between 24 July 2024 → 15 August 2024, and under the following conditions:
Ambient temperature: 15°C → 30°C
Relative Humidity: 20% → 75%
Standard Test Voltage: 7.5 V_{DC}

TEST REQUIREMENTS AND RESULT SUMMARY

ISED Specification	FCC Specification	Test Name	Test Methods	Result
RSS-119 5.4	FCC 47 CFR 2.1046	Transmitter Output Power (Conducted)	ANSI C63.26 5.2.4.2	N1
No specification	FCC 47 CFR 2.1047 (a)	Transmitter Audio Frequency Response – Pre-emphasis	ANSI C63.26 5.3.3.2	P
No specification	FCC 47 CFR 2.1047 (b)	Transmitter Modulation Limiting	ANSI C63.26 5.3.2	P
RSS-119 5.5	FCC 47 CFR 2.1049 (c)	Transmitter Occupied (99%) Bandwidth	ANSI C63.26 5.4.4	P
RSS-119 5.5	FCC 47 CFR 90.210	Transmitter Spectrum Masks	ANSI C63.26.5.7.3	P
RSS-119 5.8.9	FCC 47 CFR 90.543	Adjacent Channel Power Ratio	TIA-603-E 2.2.14 TIA-102.CAAA-E 2.2.8	P
RSS-119 5.8	FCC 47 CFR 2.1051	Transmitter Spurious Emissions (Conducted)	ANSI C63.26 5.7	N1
RSS-119 5.8	FCC 47 CFR 2.1053	Transmitter Spurious Emissions (Radiated)	TIA-603-E 2.2.12	N1
No specification	FCC CFR 90.543	Transmitter Radiated Emissions in the GNSS Band	TIA-603-E 2.2.12	N1
RSS-119 5.8.9.2 rad	No specification	Transmitter Conducted Emissions in the GNSS Band	ANSI C63.26 6.5.2.7.4	N1
RSS-119 5.9	FCC 47 CFR 90.214	Transient Frequency Behaviour	ANSI C63.26 6.5.2.2	N/A 3
RSS-119 5.3	FCC 47 CFR 2.1055, FCC 47 CFR 90.213	Transmitter Frequency Stability - Temperature	ANSI C63.26 5.6.4	N1
RSS-119 5.3	FCC 47 CFR 2.1055 (d) (1), FCC 47 CFR 90.213	Transmitter Frequency Stability - Voltage	ANSI C63.26 5.6.5	N1
RSS-Gen 7.4	FCC 47CFR 15.111	Receiver Spurious Emissions (Conducted)	TIA-603-E 2.1.2	N1

Test Case Result Definitions	
No test Performed	N
Test does not apply to the test object	N/A
Test object meets requirements	P (Pass)
Test object does not meet requirements	F (Fail)
Test object is not conclusive	I (Inconclusive)

Comments:
N/A 1: Only required where the EUT is capable of Analogue modulation
N/A 2: Only required where the EUT transmits in the 768-776 or 798-806 MHz band (ISED), or 769-775 or 799-805 MHz band (FCC).
N/A 3: Only required where the EUT transmits in the 138-174 or 406.1-512 MHz band
N1: Not tested, as this parameter is unlikely to be affected by the addition of the 20 kHz channel spacing.

STATEMENT OF COMPLIANCE

We, TELTEST LABORATORIES of 558 Wairakei Road, Christchurch, New Zealand, declare under our sole responsibility that the product:

Equipment:	Handportable Transceiver
Type:	TPHN0A
Product Code:	T03-00071-NFCF
Serial Number(s):	26883010
Quantity:	1

to which this declaration relates, is in conformity with the following standards:

FCC 47 CFR Parts 22 and 90

RSS-119 Issue 12 & RSS-Gen Issue 5

for the parameters tested in this report.

Signature: 

M. C. James
Laboratory Technical Manager

Date: 22 August 2024

The results obtained in this test report pertain only to the item tested. Teltest does not make any claims of compliance for samples or variants that were not tested.

95% measurement uncertainties are stated in this report but are not applied in the assessment of results.

CHANNEL TABLE

Label	Channel Number	Transmit Frequency MHz	Power Watts	Channel Spacing kHz
757H	1	757.500	3	20
757L	2	757.500	1	20
768H	3	768.025	3	20
768L	4	768.025	1	20
769H	5	769.075	3	20
769L	6	769.075	1	20
774H	7	774.900	3	20
774L	8	774.900	1	20
775H	9	775.975	3	20
775L	10	775.975	1	20
787H	11	787.500	3	20
787L	12	787.500	1	20
798H	13	798.025	3	20
798L	14	798.025	1	20
799H	15	799.075	3	20
799L	16	799.075	1	20
804H	17	804.900	3	20
804L	18	804.900	1	20
8055H	19	805.500	3	20
8055L	20	805.500	1	20
8059H	21	805.975	3	20
8059L	22	805.975	1	20
806H	23	806.025	3	20
806L	24	806.025	1	20
815H	25	815.025	3	20
815L	26	815.025	1	20
823H	27	823.975	3	20
823L	28	823.975	1	20
851H	29	851.025	3	20
851L	30	851.025	1	20
860H	31	860.025	3	20
860L	32	860.025	1	20
868H	33	868.975	3	20
868L	34	868.975	1	20

Programming Application Name	**Version**
DMR and P25 Terminals Programming Application	3.55.4.2

MODULATION TYPES, NECESSARY BANDWIDTH & EMISSION DESIGNATORS

MODULATION TYPES:

F3E	Analogue Frequency Modulation (FM)
F2D	FFSK 1200 bps and FFSK 2400 bps

CHANNEL SPACING: 20.0 kHz

EMISSION DESIGNATORS:

Analogue FM	14K0F3E
FFSK Data 1200 bps	8K40F2D
FFSK Data 2400 bps	9K60F2D

CALCULATIONS

Equation: $B_n = 2M + 2Dk$
(M is highest modulating frequency; D is peak allowable deviation; k is a constant of 1 for FM)

Analogue Voice: 20.0 kHz Bandwidth

Necessary bandwidth
M = 3.0 kHz
D = 4.0 kHz
$B_n = (2 \times 3.0) + (2 \times 4.0) \times 1$
$= 14.0$ kHz

Emission Designator
14K0F3E
F3E represents an FM voice transmission

Fast Frequency Shift Keying (FFSK – 1200 bps): 20.0 kHz Channel Spacing

Necessary bandwidth
M = 1.8 kHz
D = 2.4 kHz (60% of peak deviation)
$B_n = (2 \times 1.8) + (2 \times 2.4) \times 1$
$= 8.4$ kHz

Emission Designator
8K40F2D
F2D represents a FM data transmission with the use of a modulating sub carrier

Fast Frequency Shift Keying (FFSK – 2400 bps): 20.0 kHz Channel Spacing

Necessary bandwidth
M = 2.4 kHz
D = 2.4 kHz (60% of peak deviation)
$B_n = (2 \times 2.4) + (2 \times 2.4) \times 1$
$= 9.6$ kHz

Emission Designator
9K60F2D
F2D represents a FM data transmission with the use of a modulating sub carrier

TEST RESULTS

TRANSMITTER AUDIO FREQUENCY RESPONSE - PRE-EMPHASIS

SPECIFICATION: FCC 47 CFR 2.1047 (a)

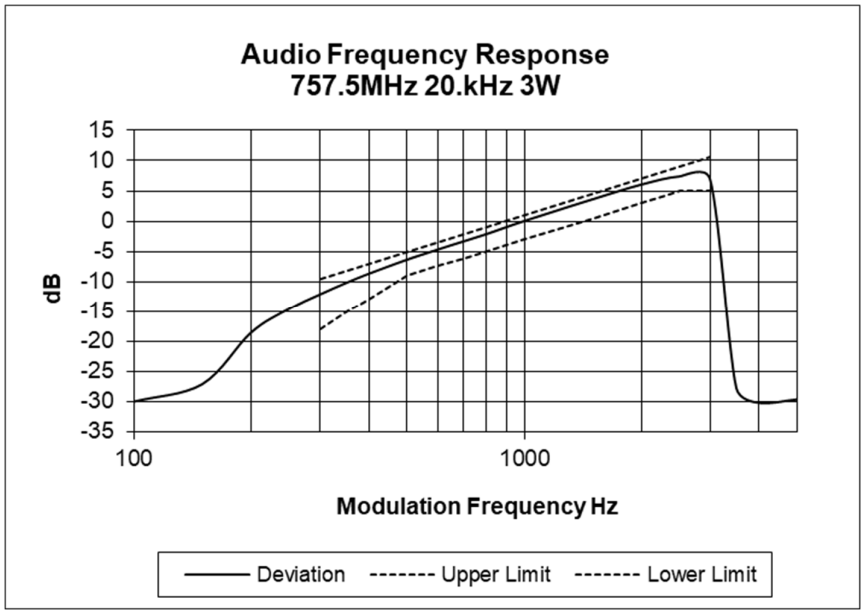
GUIDE: ANSI C63.26 5.3.3.2

MEASUREMENT PROCEDURE:
1. Refer Annex A for Equipment set up.
2. An audio input tone of 1000 Hz was applied with the level set to obtain 20% of maximum deviation. This was used as the 0 dB reference point.
3. The AF was varied while the audio level was held constant.
4. The response in dB relative to 1000 Hz was measured.

MEASUREMENT RESULTS:
See the plots on the following pages for 20.0 kHz channel spacing tested at 3 W transmit power.

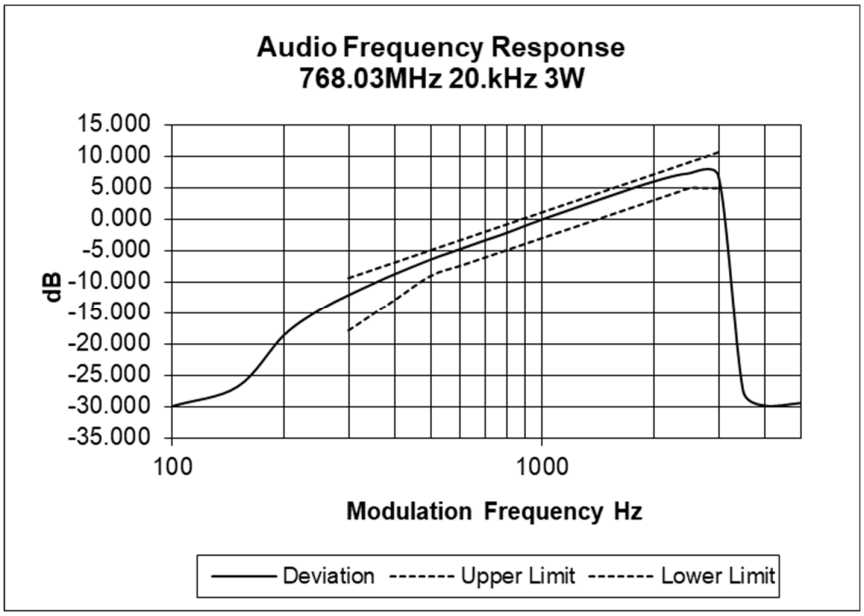
MEASUREMENT UNCERTAINTY: ± 1.5 %

Tx FREQUENCY: 757.500 MHz 20 kHz Channel Spacing

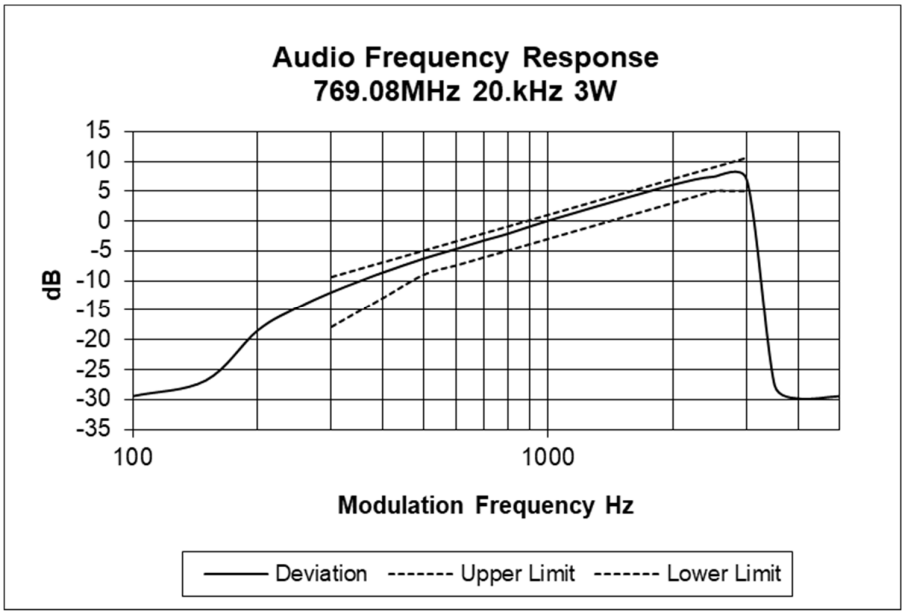


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 768.025 MHz 20 kHz Channel Spacing

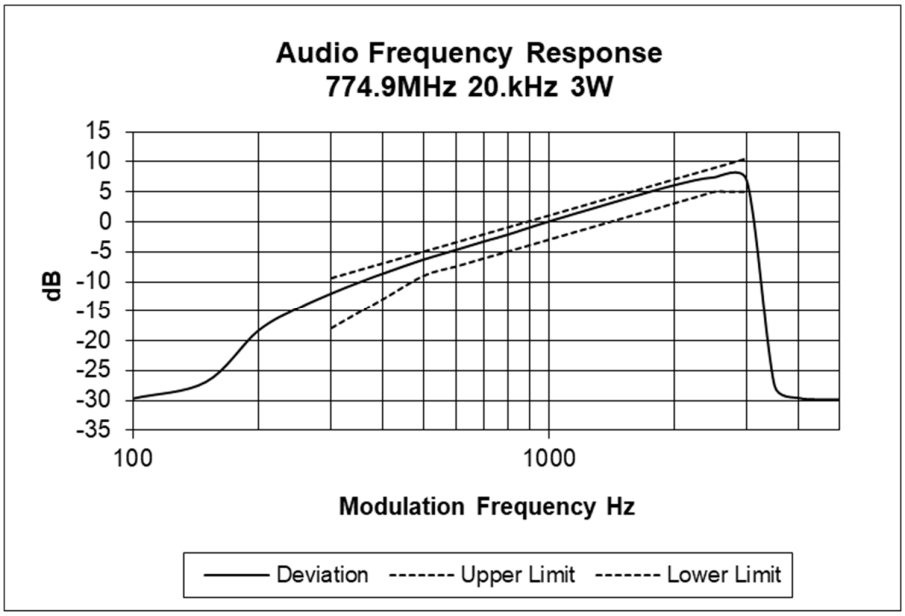


Tx FREQUENCY: 769.075 MHz 20 kHz Channel Spacing

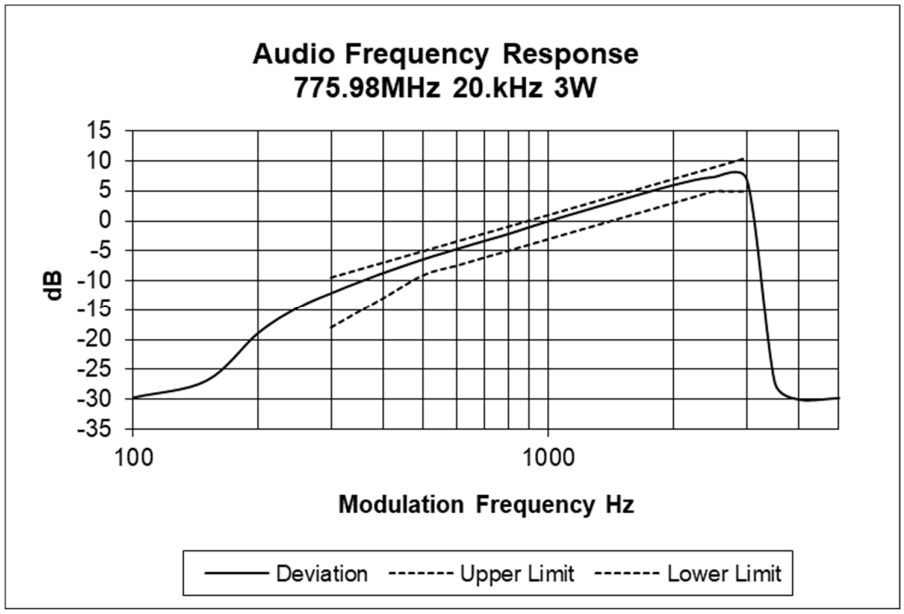


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 774.900 MHz 20 kHz Channel Spacing

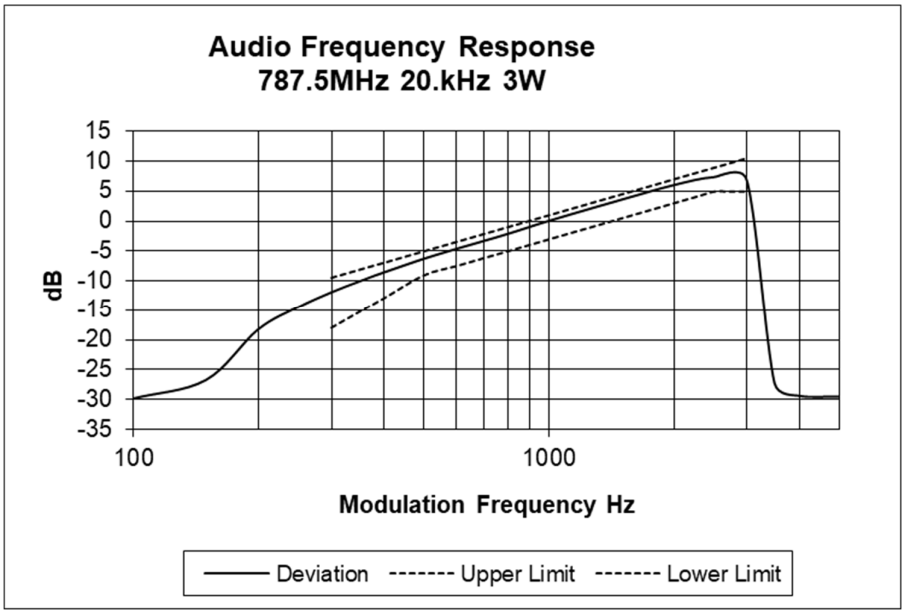


Tx FREQUENCY: 775.975 MHz 20 kHz Channel Spacing

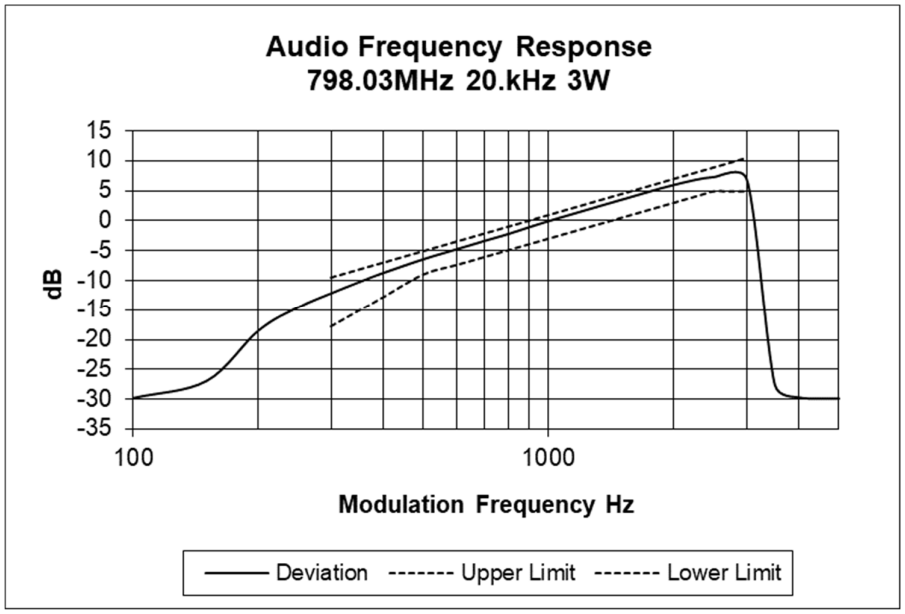


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 787.500 MHz 20 kHz Channel Spacing

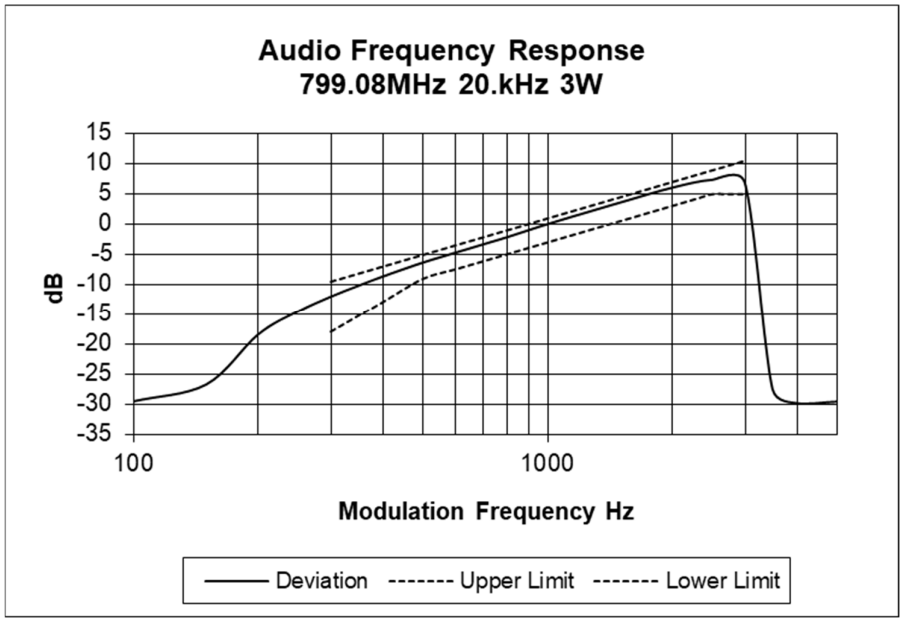


Tx FREQUENCY: 798.025 MHz 20 kHz Channel Spacing

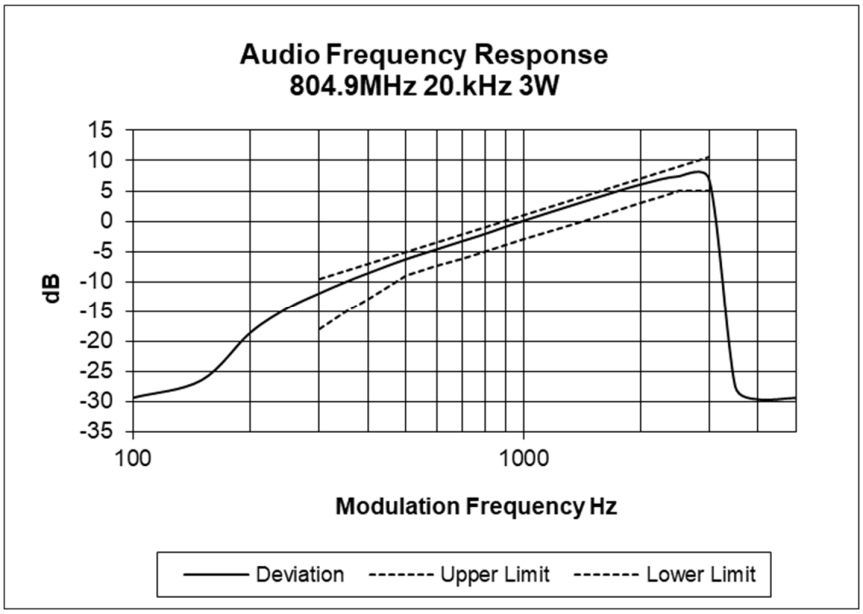


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 799.075 MHz 20 kHz Channel Spacing

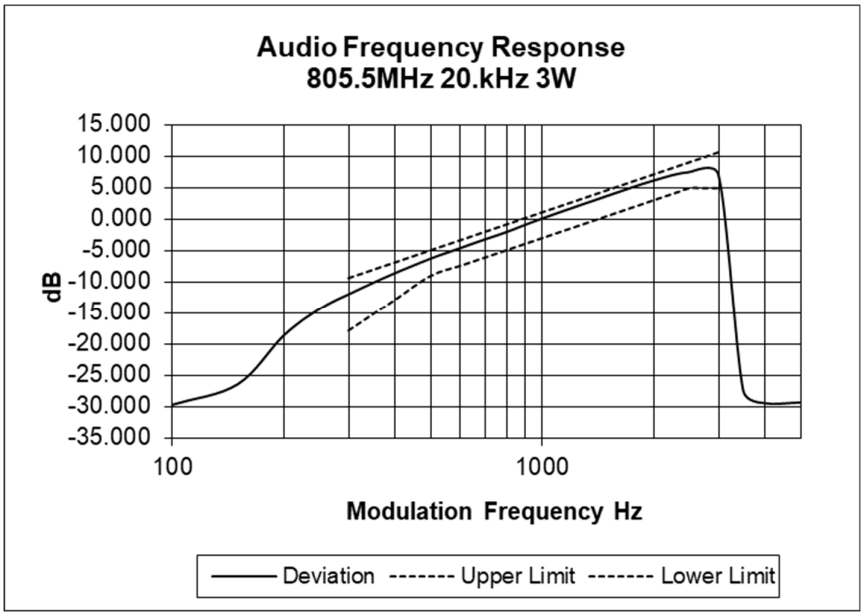


Tx FREQUENCY: 804.900 MHz 20 kHz Channel Spacing

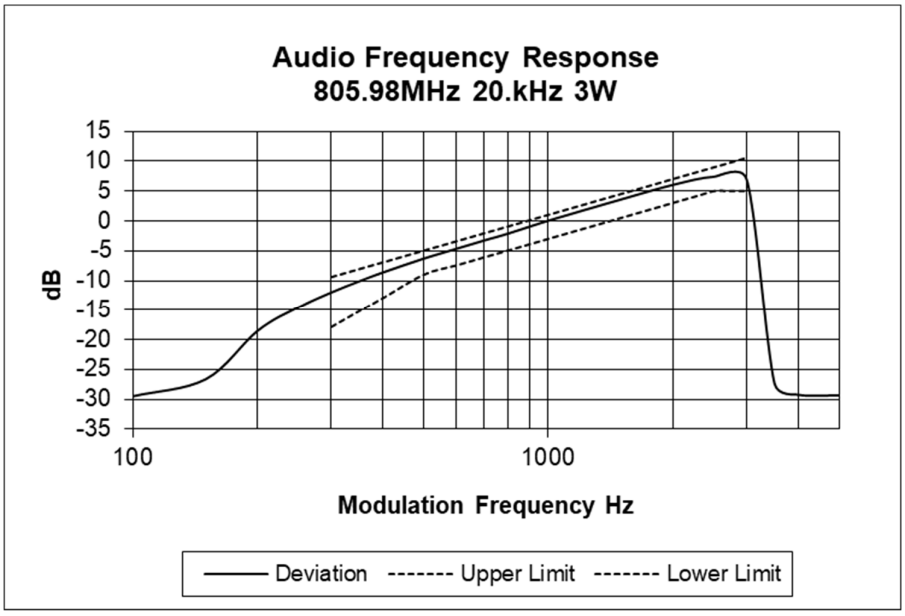


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 805.5000 MHz 20 kHz Channel Spacing

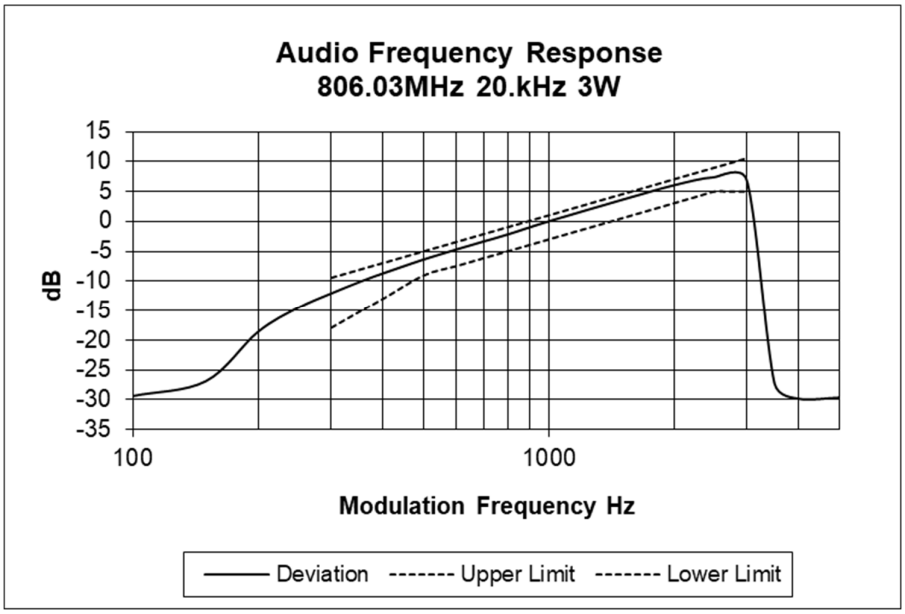


Tx FREQUENCY: 805.975 MHz 20 kHz Channel Spacing

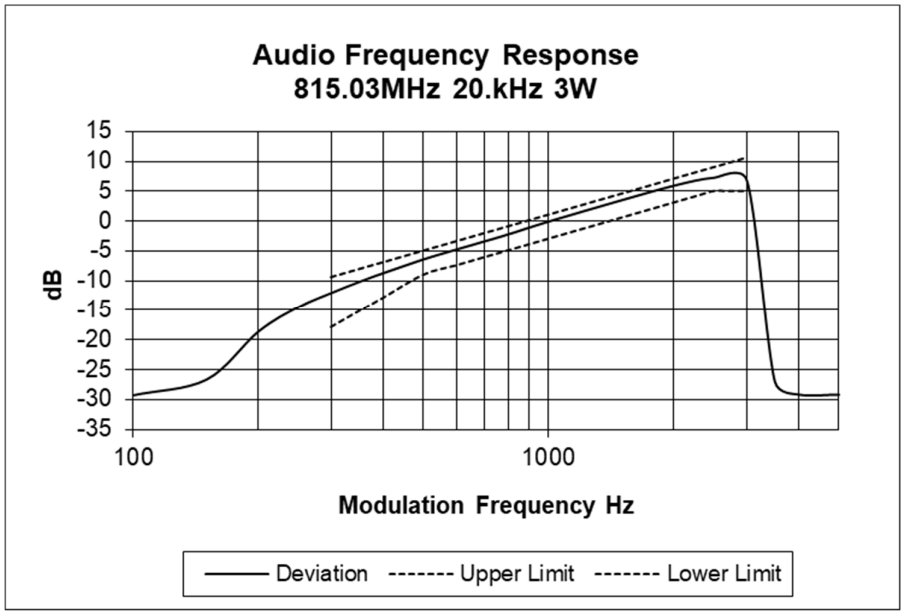


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 806.025 MHz 20 kHz Channel Spacing

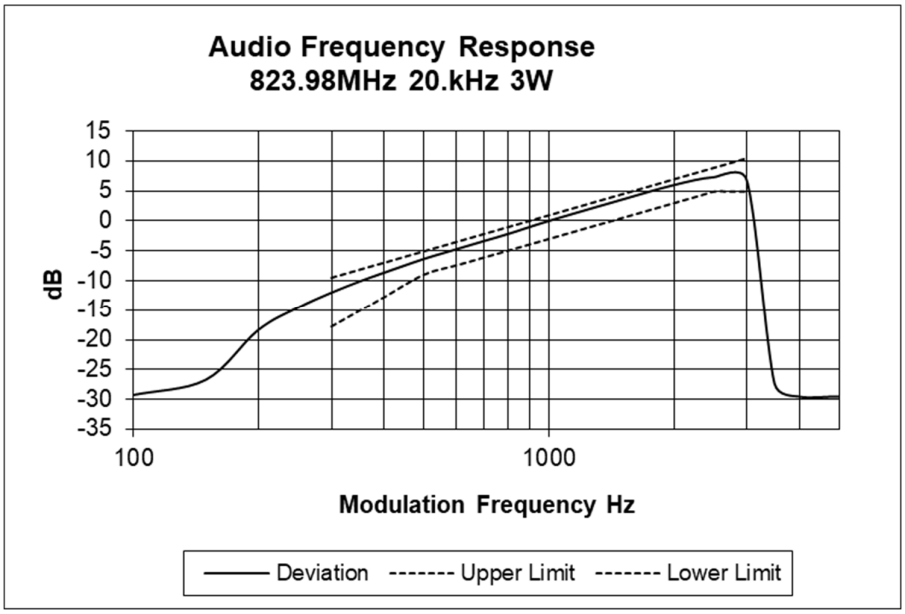


Tx FREQUENCY: 815.025 MHz 20 kHz Channel Spacing

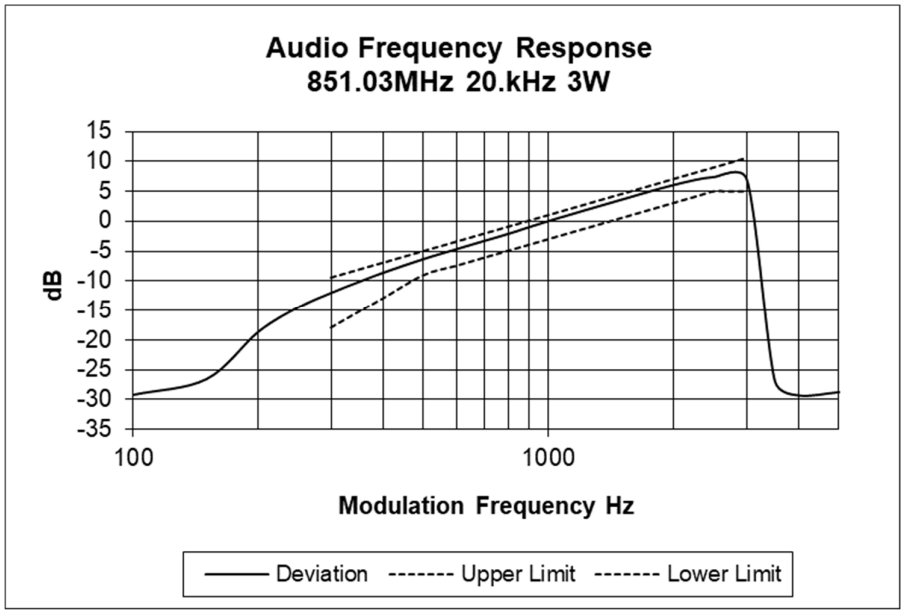


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 823.975 MHz 20 kHz Channel Spacing

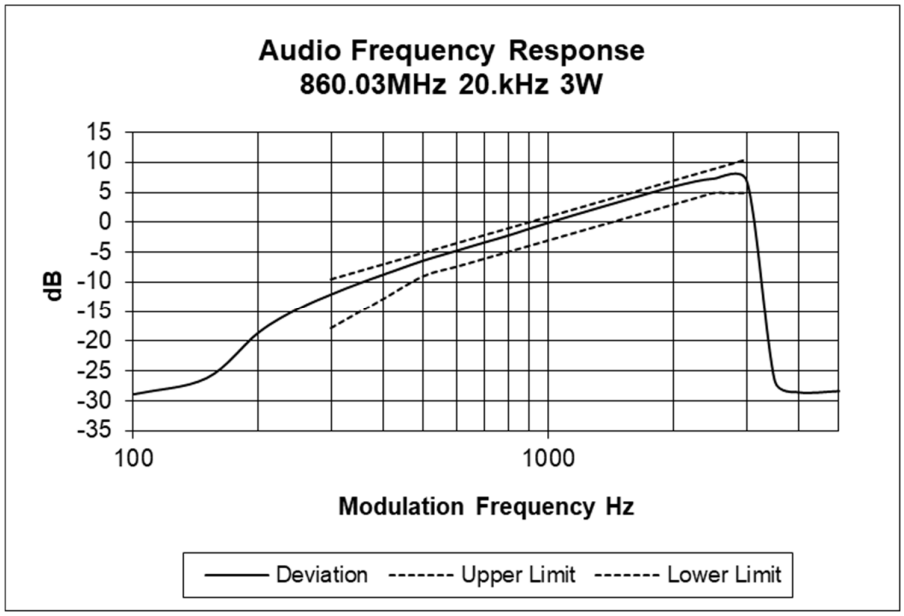


Tx FREQUENCY: 851.025 MHz 20 kHz Channel Spacing

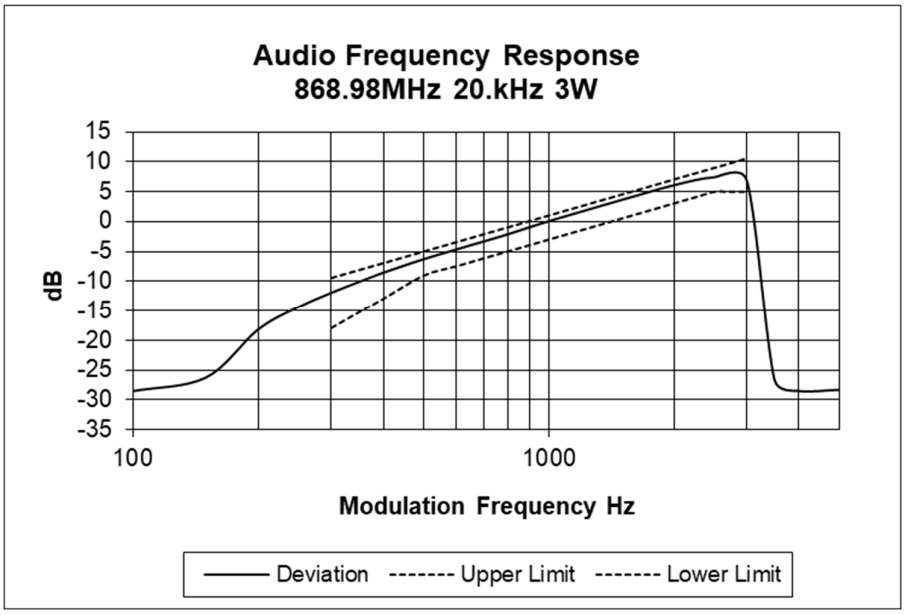


Transmitter Audio Frequency Response – Pre-emphasis

Tx FREQUENCY: 860.025 MHz 20 kHz Channel Spacing



Tx FREQUENCY: 868.975 MHz 20 kHz Channel Spacing



TRANSMITTER MODULATION LIMITING

SPECIFICATION: FCC 47 CFR 2.1047 (b)

GUIDE: ANSI C63.26 5.3.2

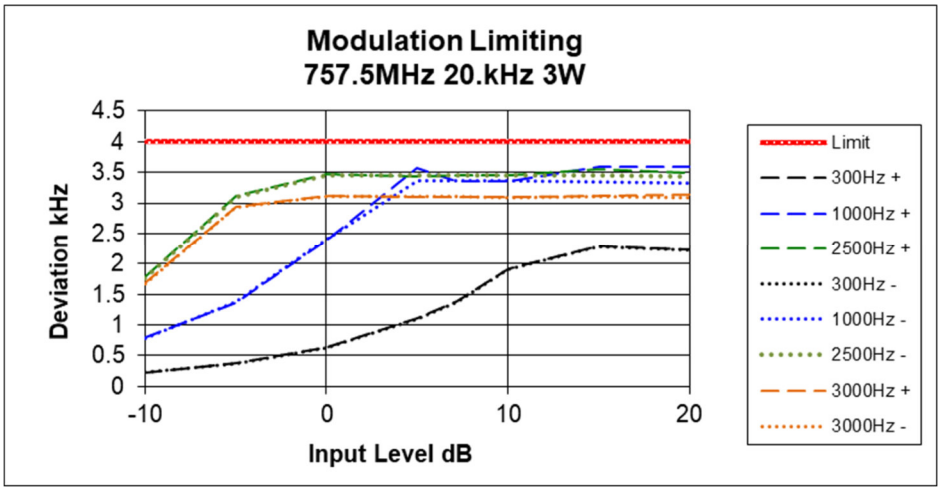
MEASUREMENT PROCEDURE:
1. Refer Annex A for Equipment set up.
2. An audio input tone of 1000 Hz was applied with the level set to obtain 60% of maximum deviation. This was used as the 0 dB reference point.
3. The modulation response was measured at four audio frequencies while increasing the input level in 5dB steps.
4. Additionally, the level used to measure sideband spectrum (occupied bandwidth) was included in the level sweep.
5. Measurements were made for both Positive and Negative Deviation.

MEASUREMENT RESULTS:
See the plots on the following pages for 20 kHz channel spacing tested at 3W transmit power.

LIMIT CLAUSE: TIA/EIA-603E 1.3.4.4

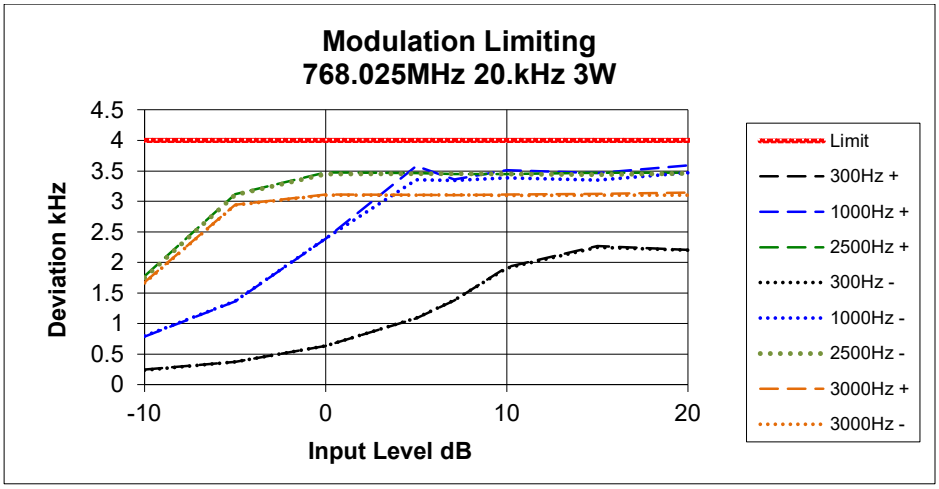
MEASUREMENT UNCERTAINTY: ± 1.5 %

Tx FREQUENCY: 757.500 MHz 20 kHz Channel Spacing

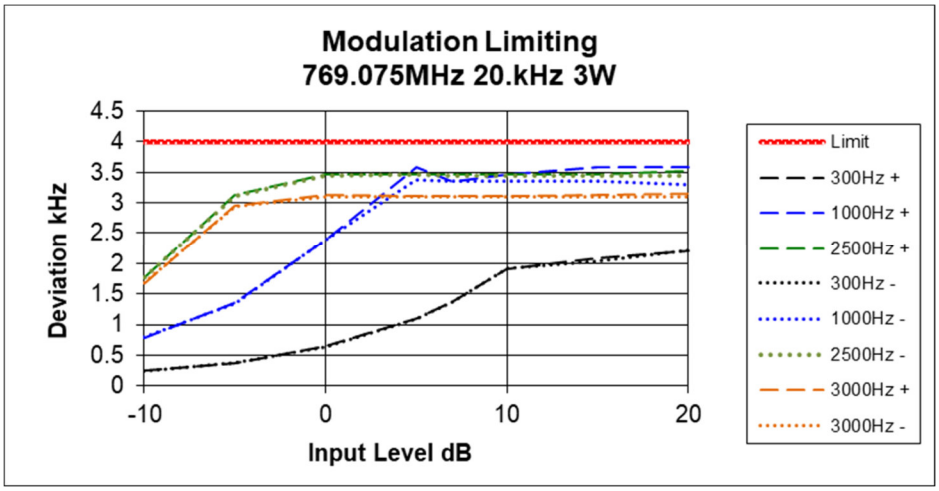


Transmitter Modulation Limiting

Tx FREQUENCY: 768.025 MHz 20 kHz Channel Spacing

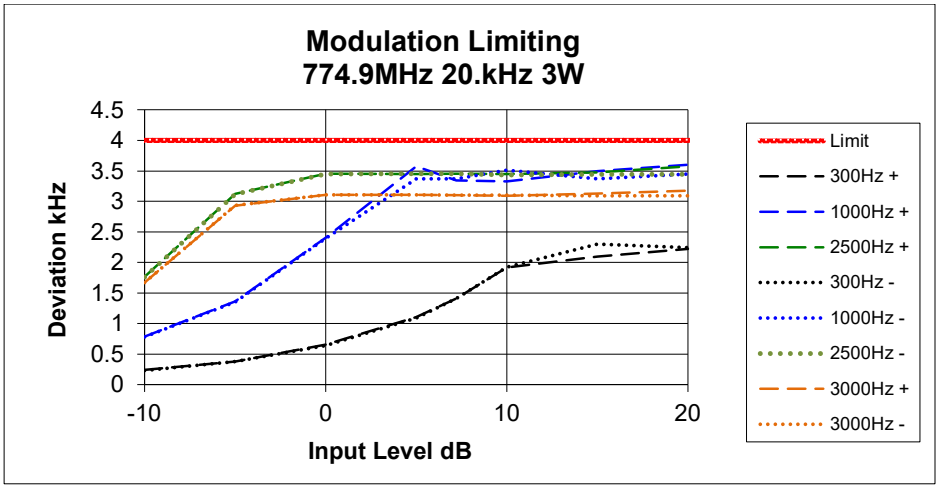


Tx FREQUENCY: 769.075 MHz 20 kHz Channel Spacing

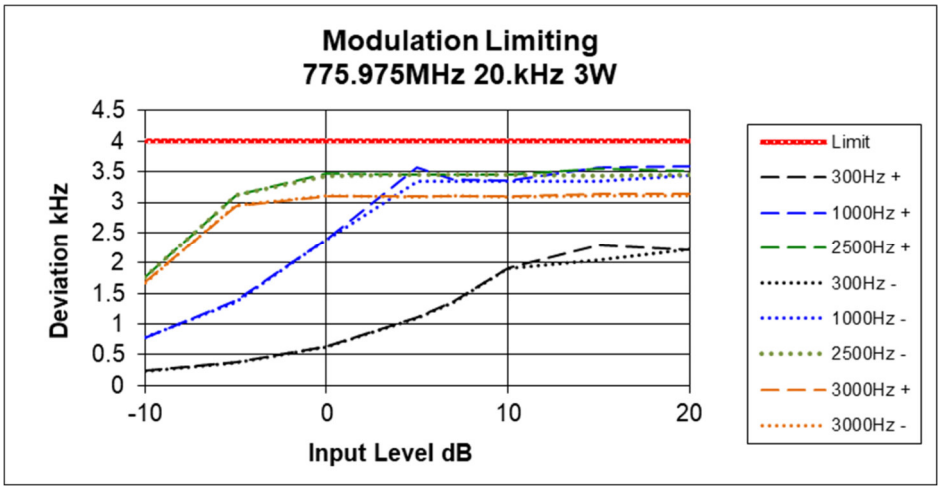


Transmitter Modulation Limiting

Tx FREQUENCY: 774.900 MHz 20 kHz Channel Spacing

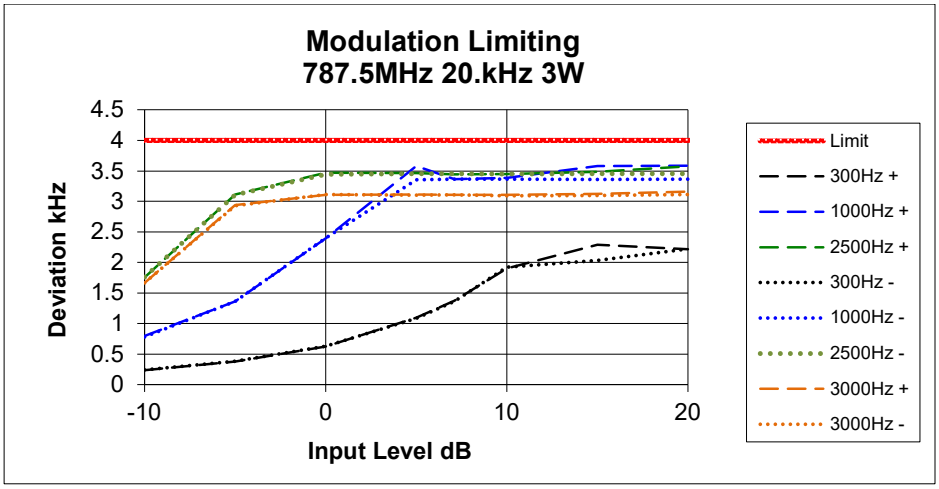


Tx FREQUENCY: 775.975 MHz 20 kHz Channel Spacing

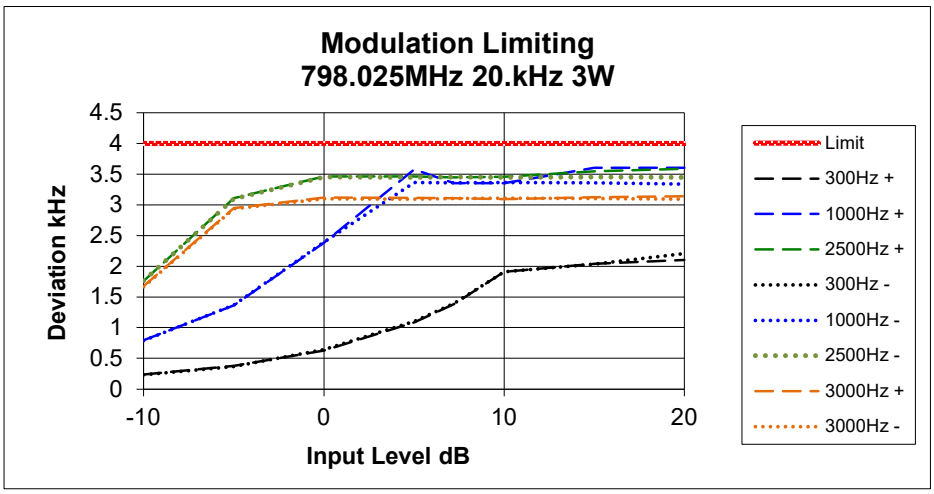


Transmitter Modulation Limiting

Tx FREQUENCY: 787.500 MHz 20 kHz Channel Spacing

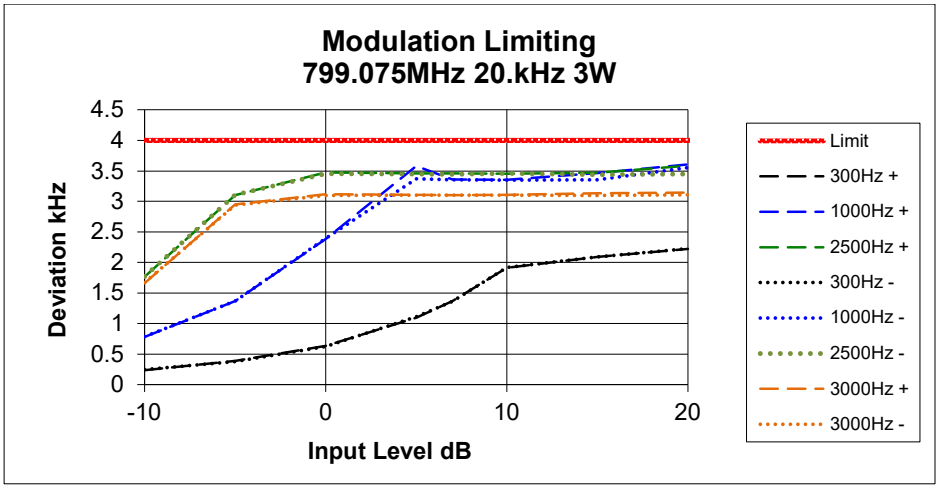


Tx FREQUENCY: 798.025 MHz 20 kHz Channel Spacing

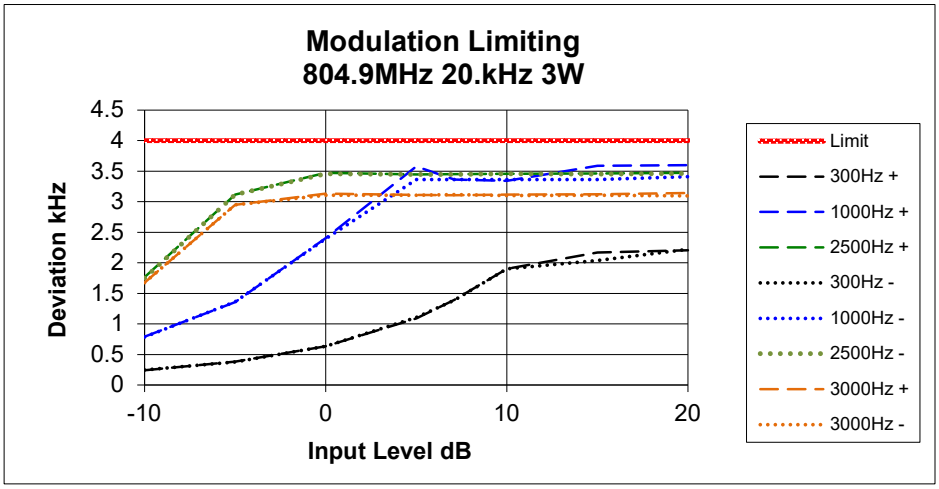


Transmitter Modulation Limiting

Tx FREQUENCY: 799.075 MHz 20 kHz Channel Spacing

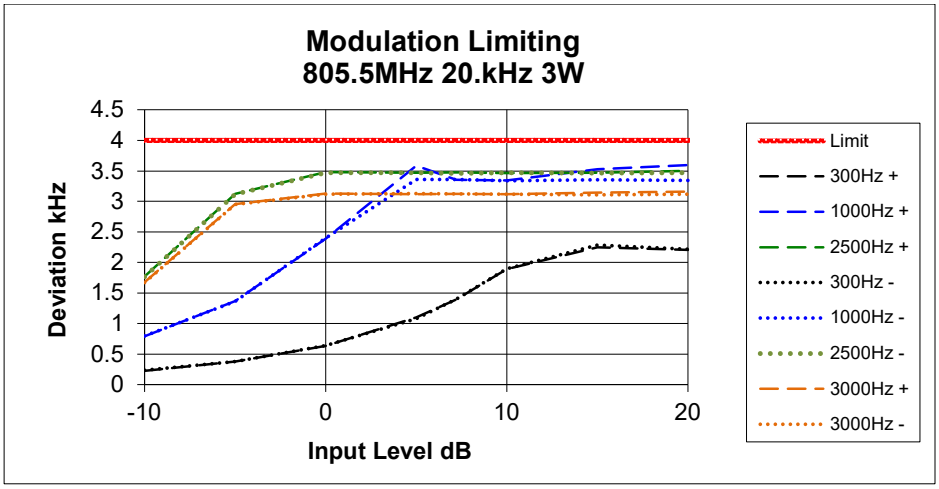


Tx FREQUENCY: 804.900 MHz 20 kHz Channel Spacing

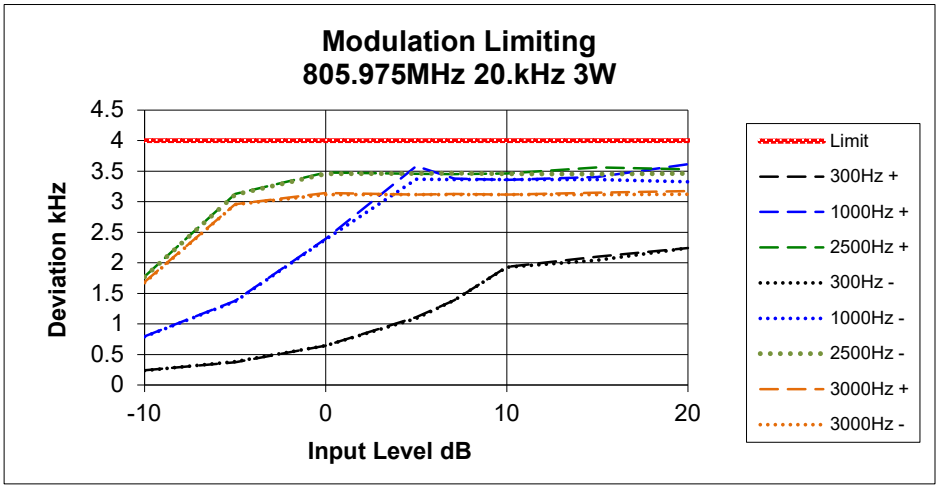


Transmitter Modulation Limiting

Tx FREQUENCY: 805.5000 MHz 20 kHz Channel Spacing

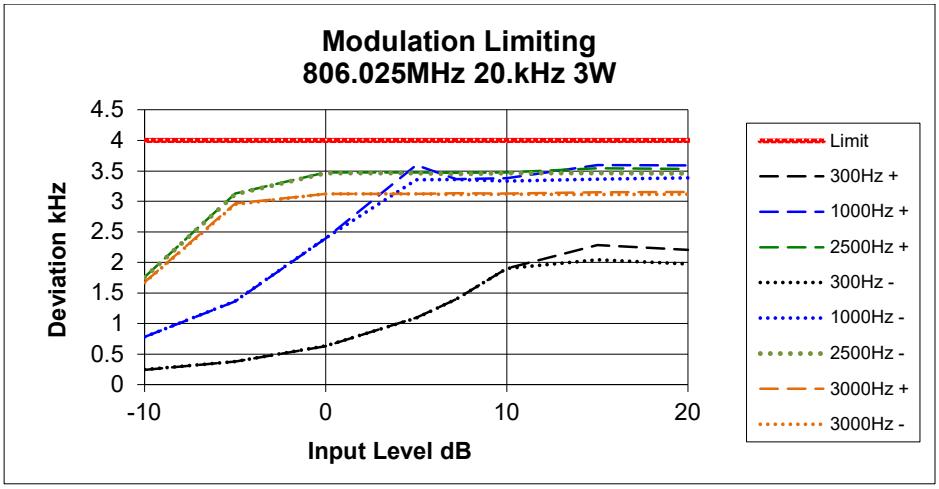


Tx FREQUENCY: 805.975 MHz 20 kHz Channel Spacing

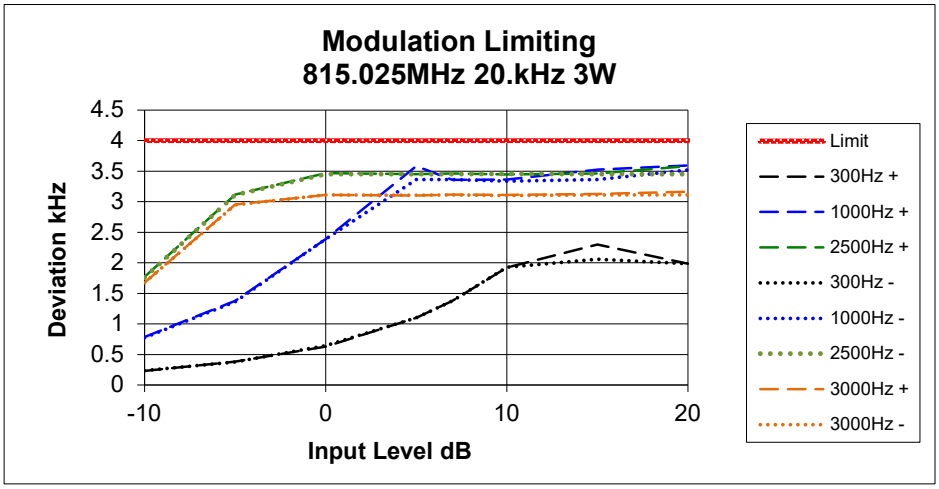


Transmitter Modulation Limiting

Tx FREQUENCY: 806.025 MHz 20 kHz Channel Spacing

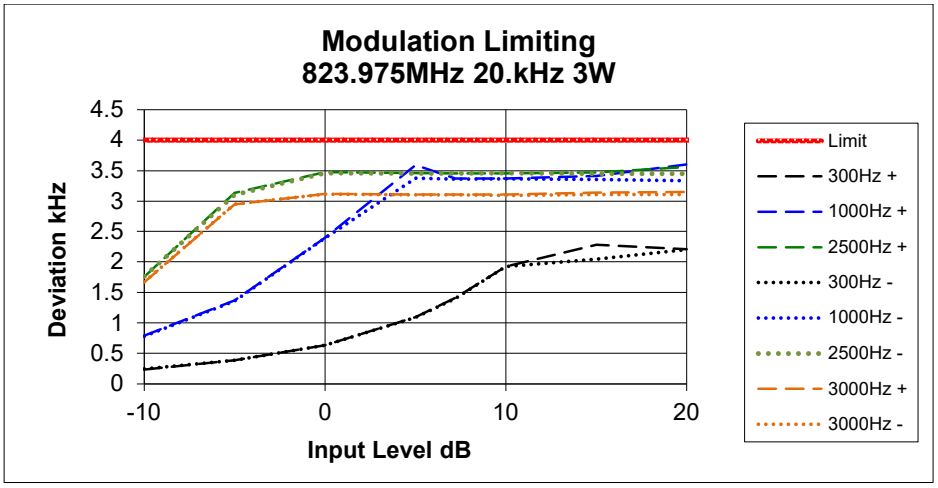


Tx FREQUENCY: 815.025 MHz 20 kHz Channel Spacing

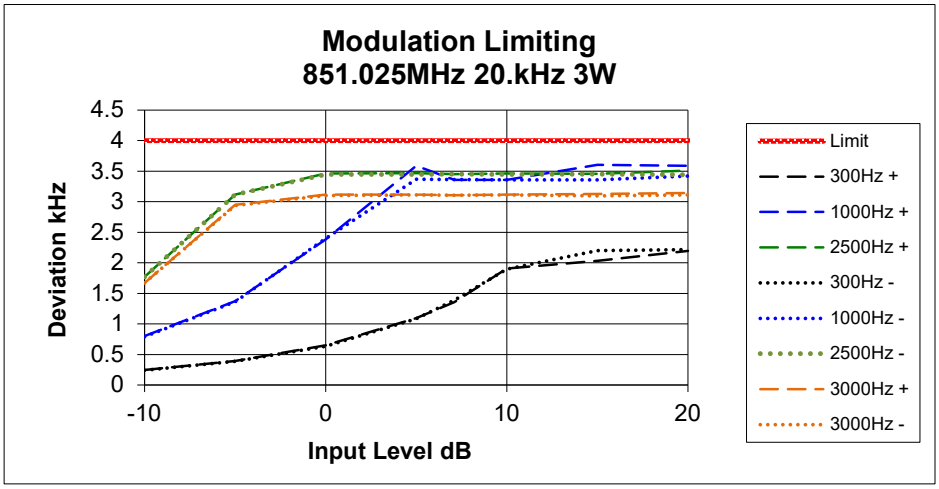


Transmitter Modulation Limiting

Tx FREQUENCY: 823.975 MHz 20 kHz Channel Spacing

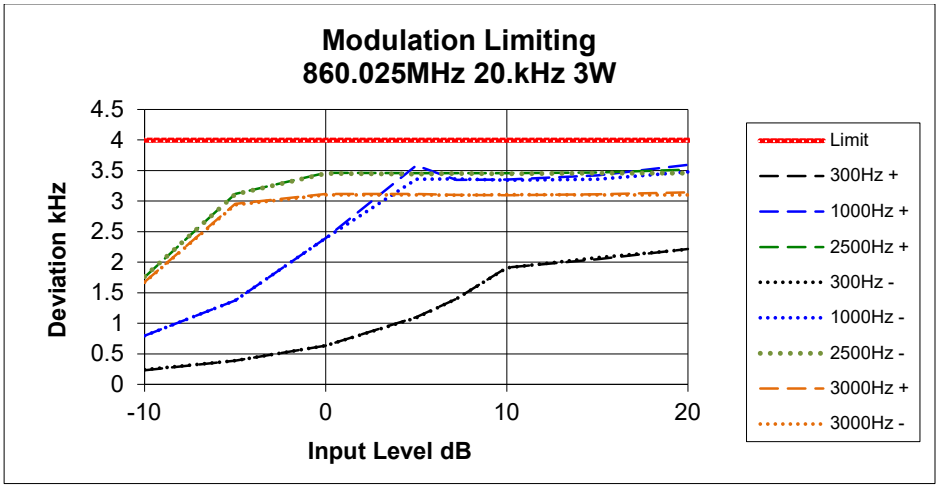


Tx FREQUENCY: 851.025 MHz 20 kHz Channel Spacing

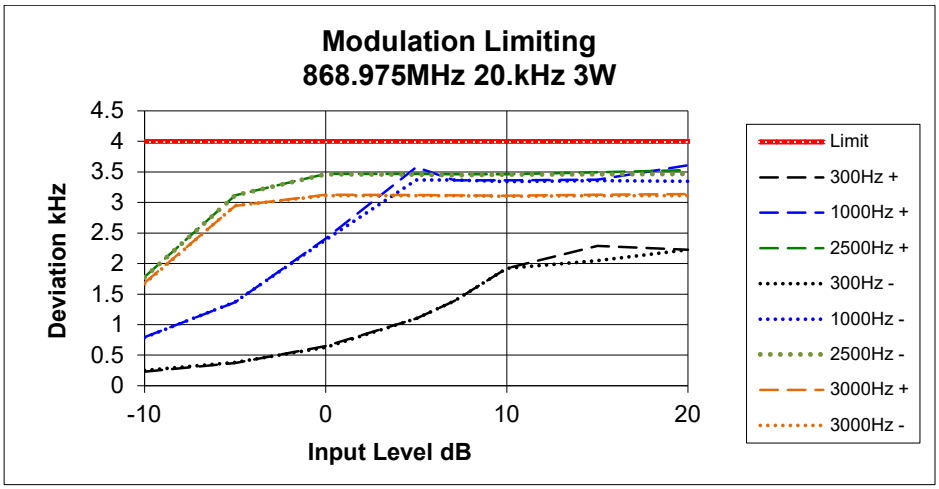


Transmitter Modulation Limiting

Tx FREQUENCY: 860.025 MHz 20 kHz Channel Spacing



Tx FREQUENCY: 868.975 MHz 20 kHz Channel Spacing



TRANSMITTER OCCUPIED (99%) BANDWIDTH

SPECIFICATION: FCC 47 CFR 2.1046
RSS-119 5.5

GUIDE: ANSI C63.26 5.4.4

MEASUREMENT PROCEDURE:

1. Refer Annex A for Equipment Set up.
2. For Analogue measurements: The EUT was modulated by a 2500 Hz tone at an input level 16 dB above a level that produced 50% deviation. The input level was established at the frequency of maximum response of the audio modulating circuit.
   For Data measurements: The EUT was modulated with an internally generated pseudo random bit sequence at the appropriate Baud rates.
3. The Occupied Bandwidth was measured on the Spectrum Analyser, with bandwidth settings as follows.
   Resolution Bandwidth = 100 Hz, Video Bandwidth = 300 Hz

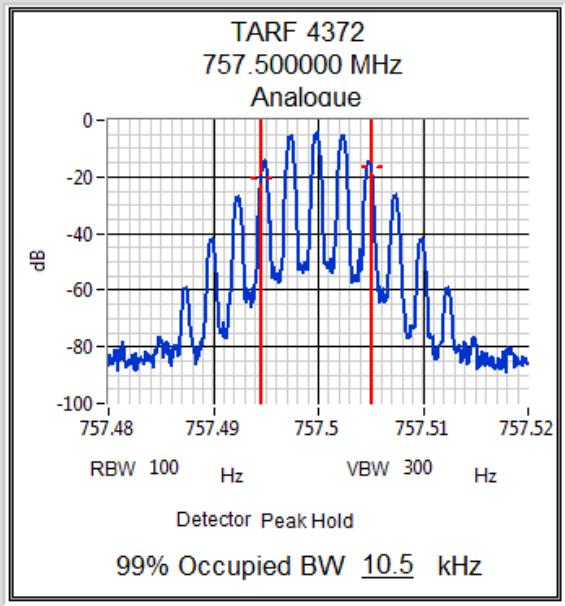
MEASUREMENT RESULTS:

		Bandwidths (kHz)		
Channel Frequency (MHz)	Channel Spacing (kHz)	Analogue	FFSK 1200 bps	FFSK 2400 bps
757.500 MHz	20.0	10.5	7.67	9.07
768.025 MHz	20.0	10.5	7.73	9.00
769.075 MHz	20.0	10.5	7.73	9.13
774.900 MHz	20.0	10.5	7.73	9.07
775.975 MHz	20.0	10.5	7.67	9.00
787.500 MHz	20.0	10.5	7.67	9.00
798.025 MHz	20.0	10.5	7.73	9.07
799.075 MHz	20.0	10.5	7.80	9.07
804.900 MHz	20.0	10.5	7.67	9.07
805.500 MHz	20.0	10.5	7.80	9.13
805.975 MHz	20.0	10.5	7.67	9.13
806.025 MHz	20.0	10.5	7.73	9.13
815.025 MHz	20.0	10.5	7.67	9.07
823.975 MHz	20.0	10.5	7.73	9.13
851.025 MHz	20.0	10.5	7.67	9.00
860.025 MHz	20.0	10.5	7.67	9.00
868.975 MHz	20.0	10.5	7.73	9.13
Limit Authorized Bandwidth 47 CFR 90.209 RSS 119 5.5		20.0	20.0	20.0
Necessary BW used in emission designator		14.0	8.4	9.6
Result		Pass	Pass	Pass

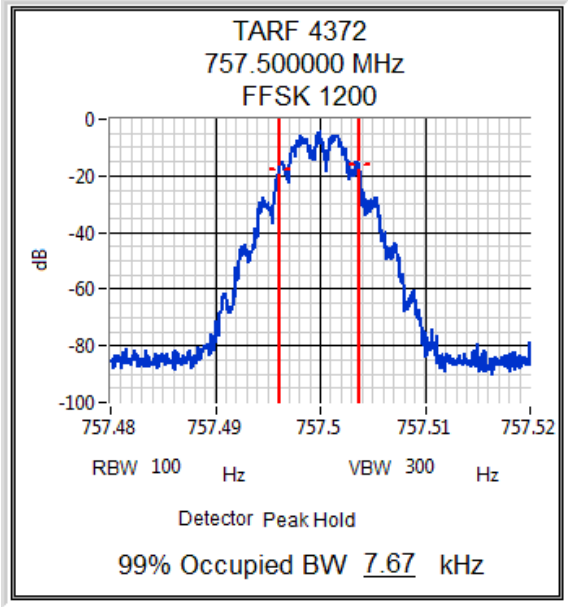
Transmitter Occupied (99%) Bandwidth

757.500 MHz, 20 kHz Channel Spacing, 3W Power

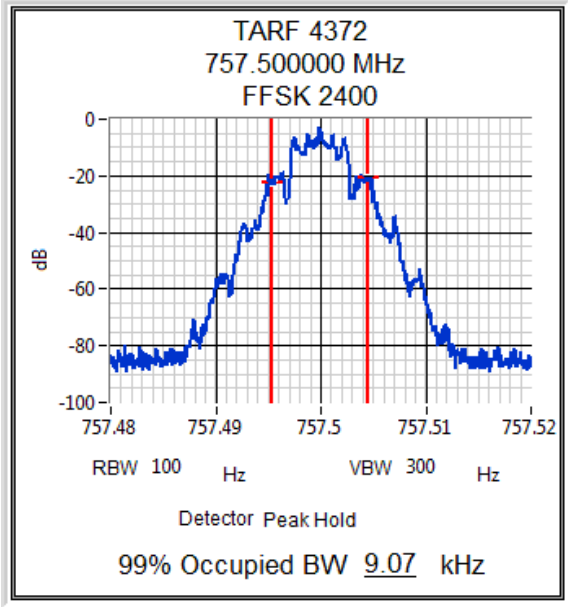
Analogue



FFSK 1200 bps



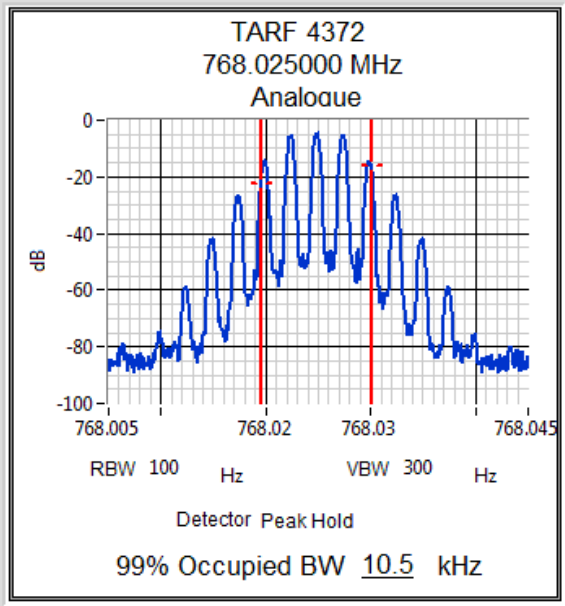
FFSK 2400 bps



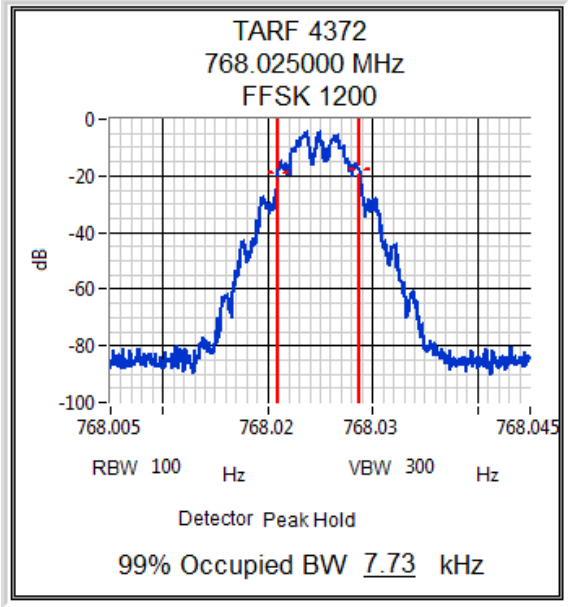
Transmitter Occupied (99%) Bandwidth

768.025 MHz, 20 kHz Channel Spacing, 3W Power

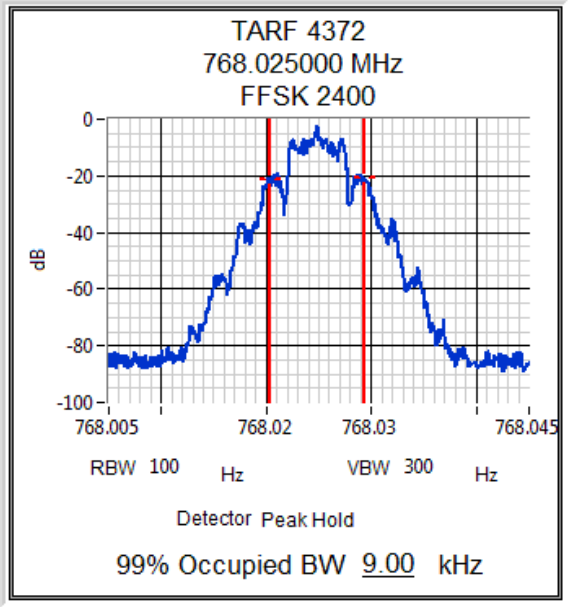
Analogue



FFSK 1200 bps



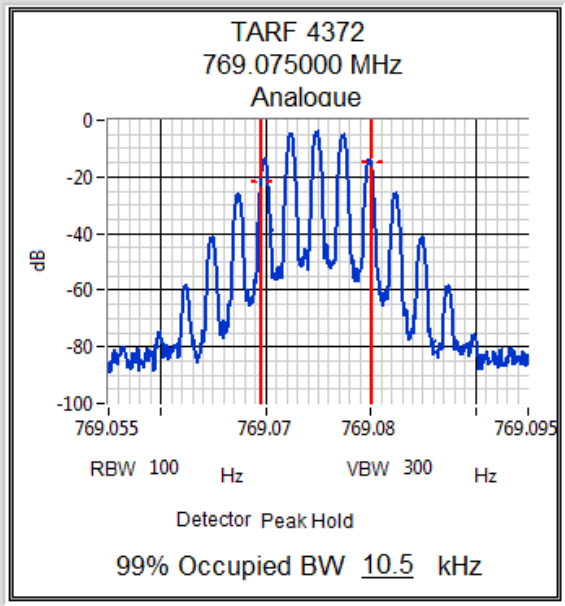
FFSK 2400 bps



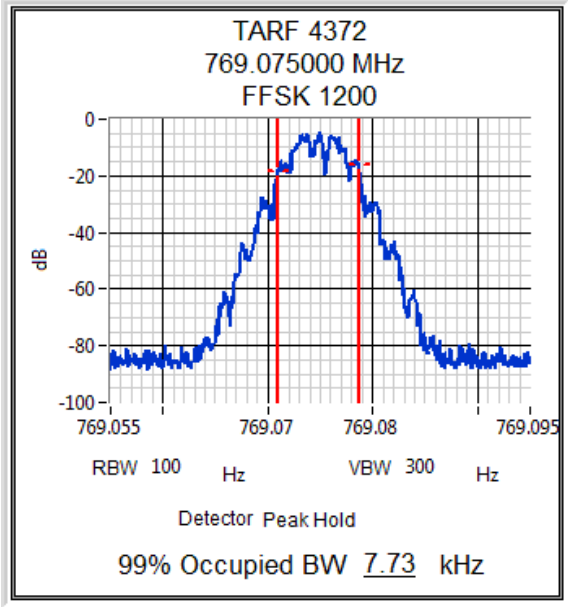
Transmitter Occupied (99%) Bandwidth

769.075 MHz, 20 kHz Channel Spacing, 3W Power

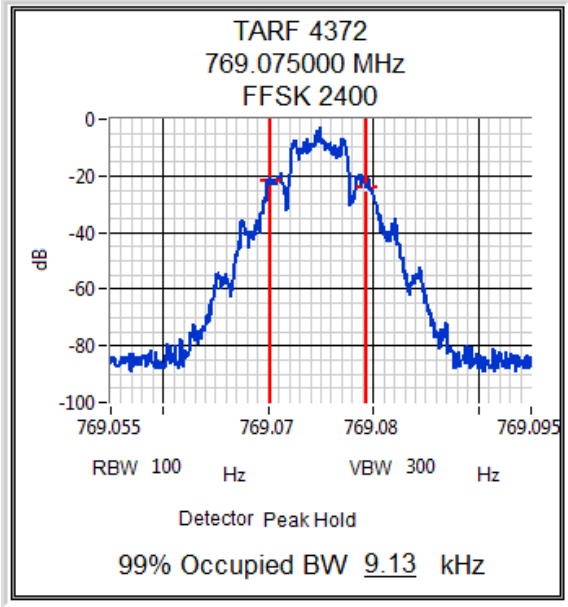
Analogue



FFSK 1200 bps



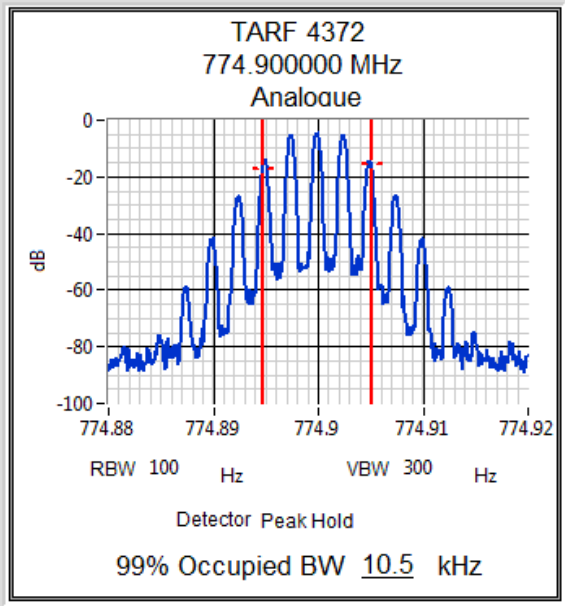
FFSK 2400 bps



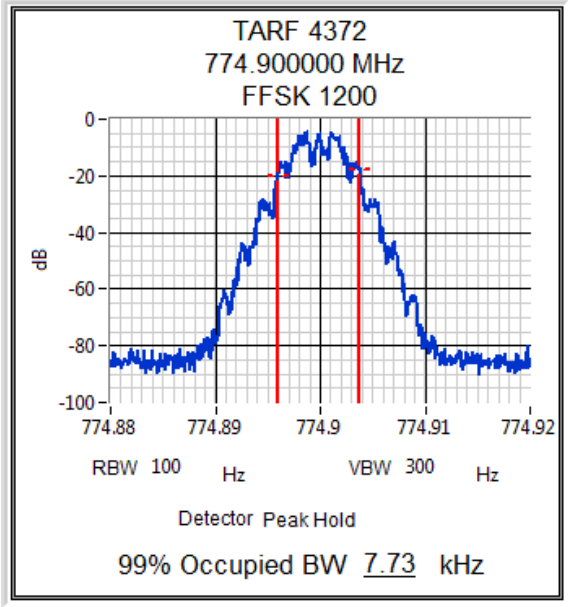
Transmitter Occupied (99%) Bandwidth

774.900 MHz, 20 kHz Channel Spacing, 3W Power

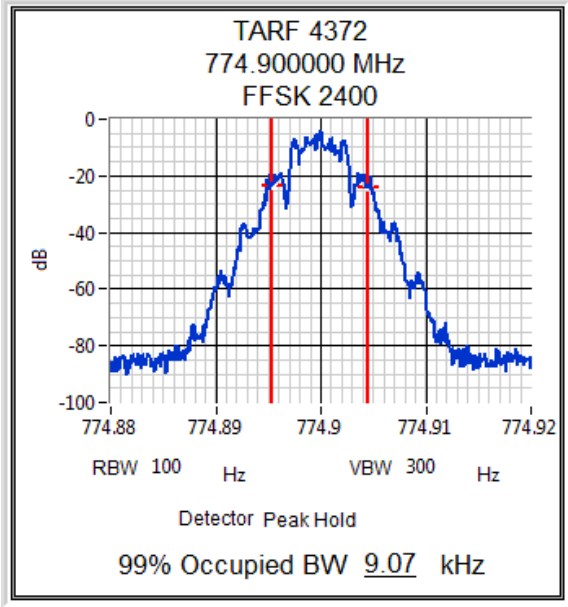
Analogue



FFSK 1200 bps



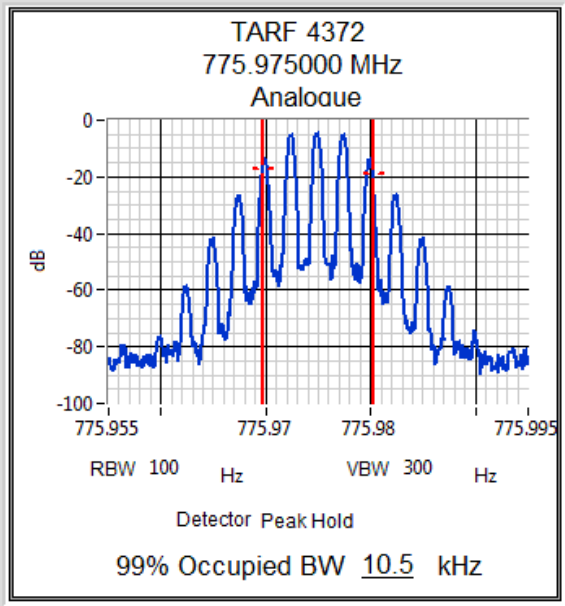
FFSK 2400 bps



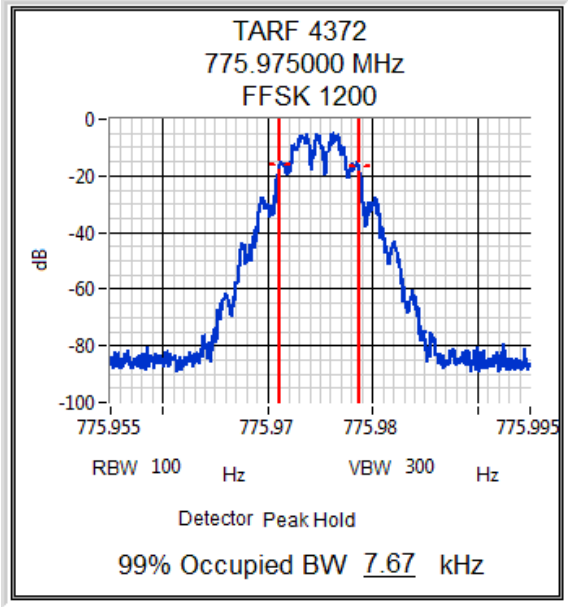
Transmitter Occupied (99%) Bandwidth

775.975 MHz, 20 kHz Channel Spacing, 3W Power

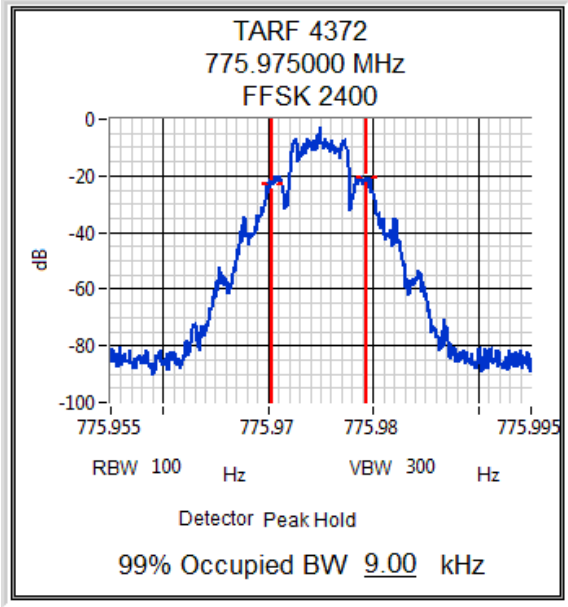
Analogue



FFSK 1200 bps



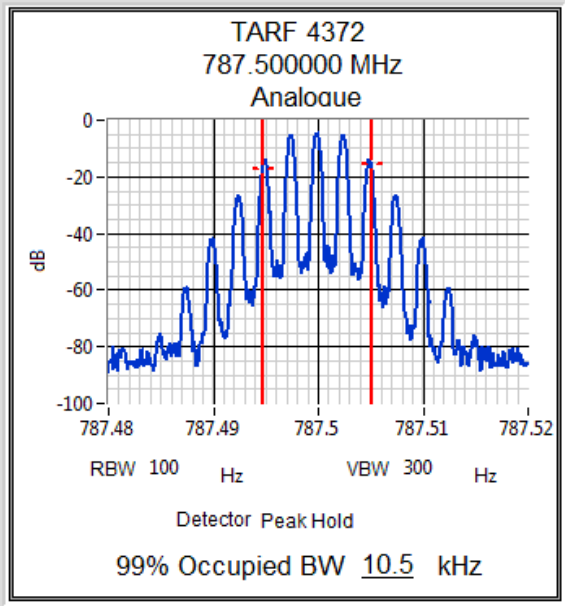
FFSK 2400 bps



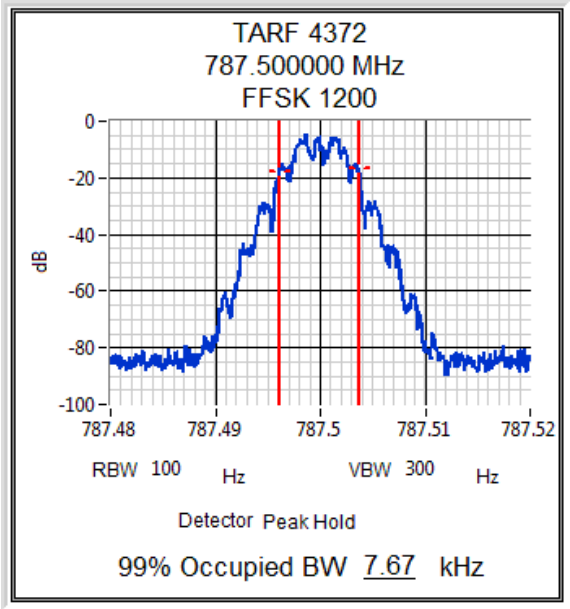
Transmitter Occupied (99%) Bandwidth

787.500 MHz, 20 kHz Channel Spacing, 3W Power

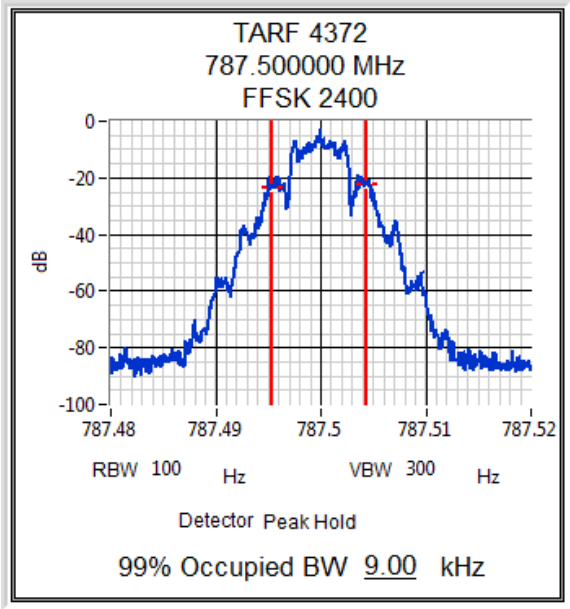
Analogue



FFSK 1200 bps



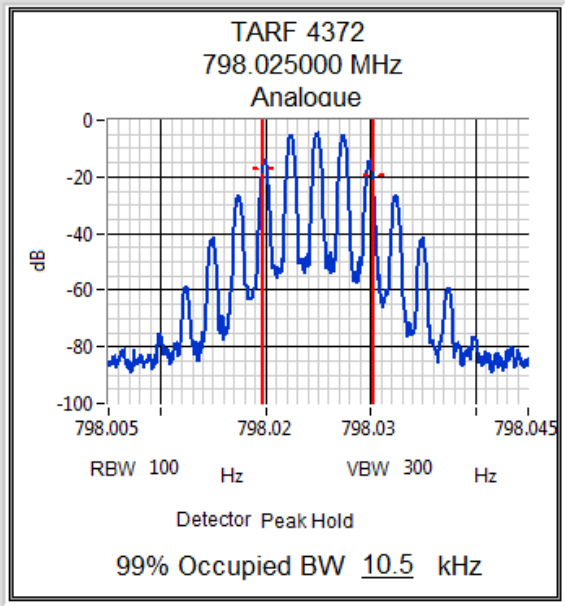
FFSK 2400 bps



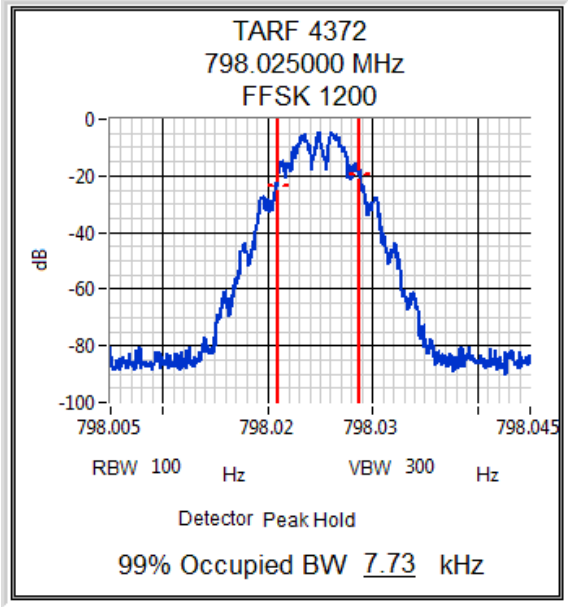
Transmitter Occupied (99%) Bandwidth

798.025 MHz, 20 kHz Channel Spacing, 3W Power

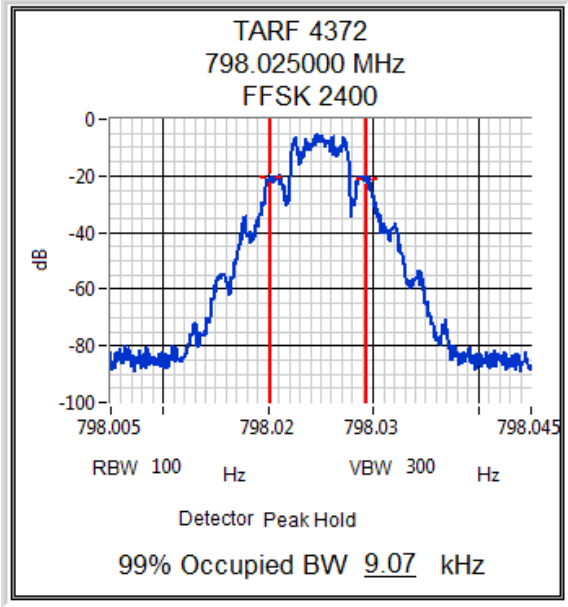
Analogue



FFSK 1200 bps



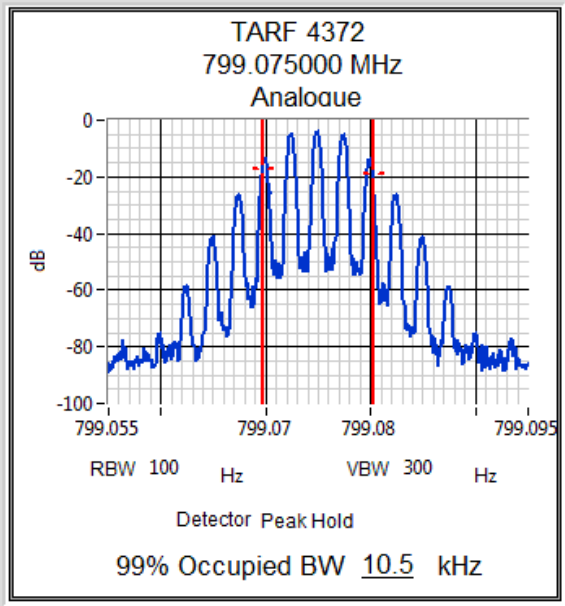
FFSK 2400 bps



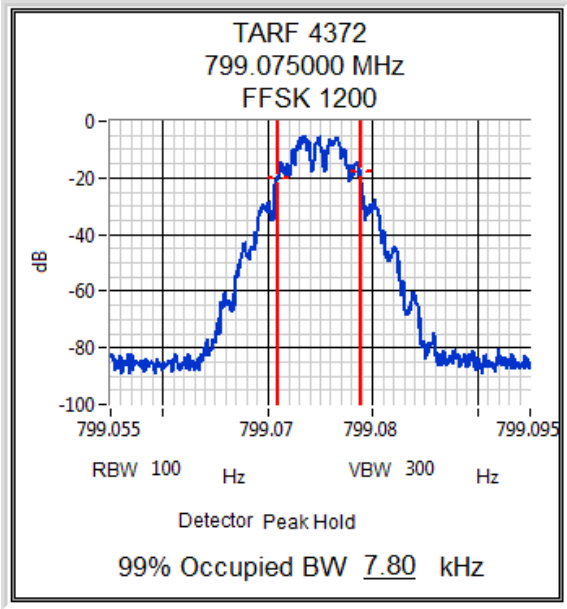
Transmitter Occupied (99%) Bandwidth

799.075 MHz, 20 kHz Channel Spacing, 3W Power

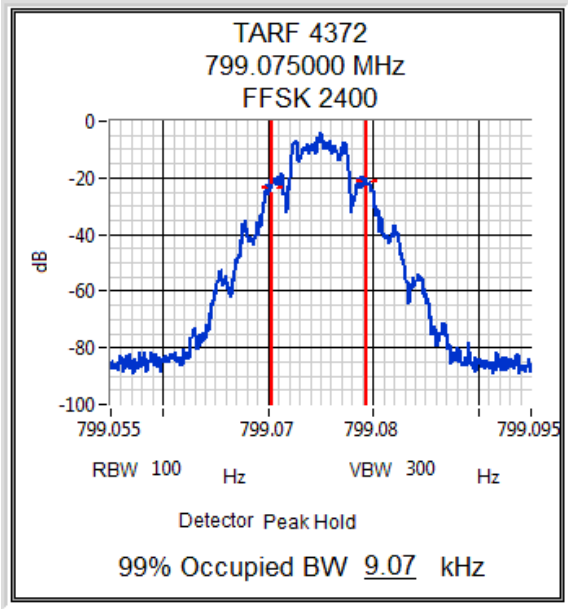
Analogue



FFSK 1200 bps



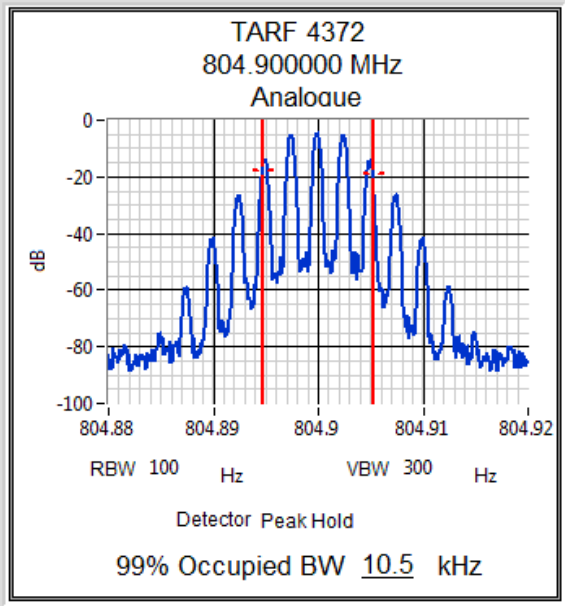
FFSK 2400 bps



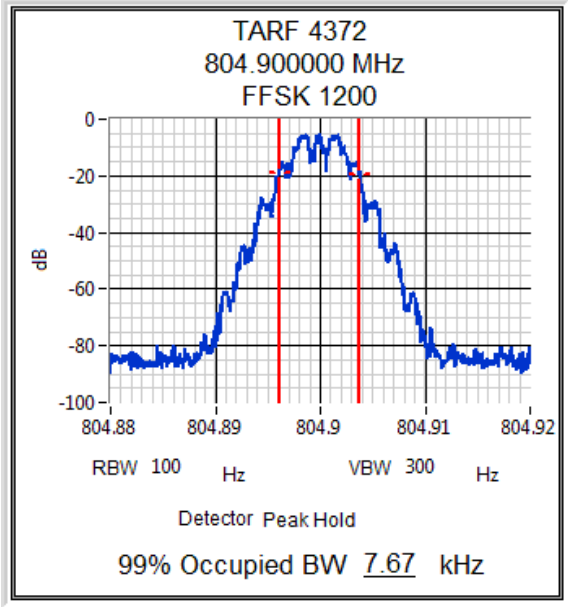
Transmitter Occupied (99%) Bandwidth

804.900 MHz, 20 kHz Channel Spacing, 3W Power

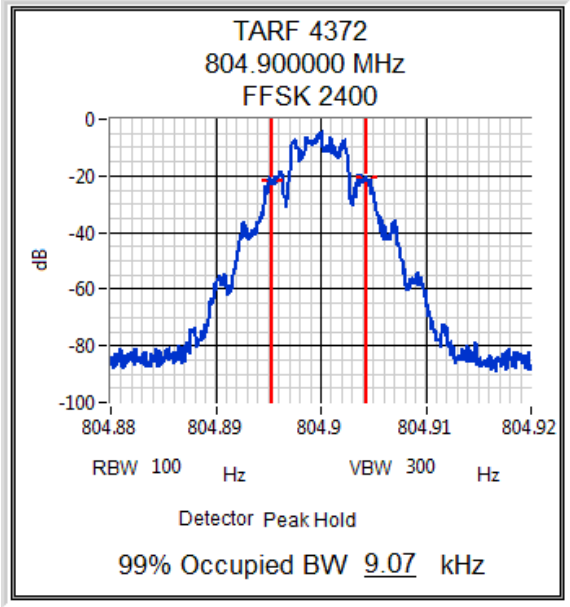
Analogue



FFSK 1200 bps



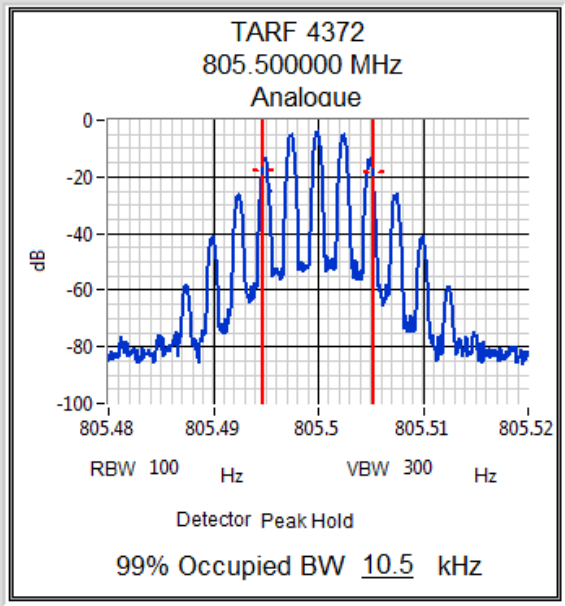
FFSK 2400 bps



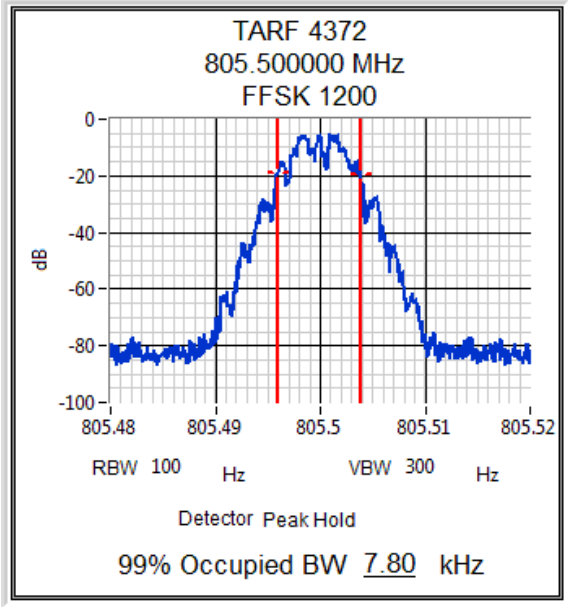
Transmitter Occupied (99%) Bandwidth

805.500 MHz, 20 kHz Channel Spacing, 3W Power

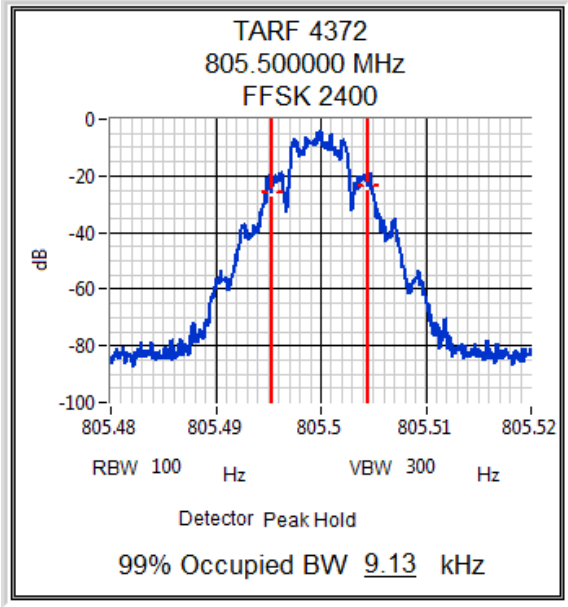
Analogue



FFSK 1200 bps



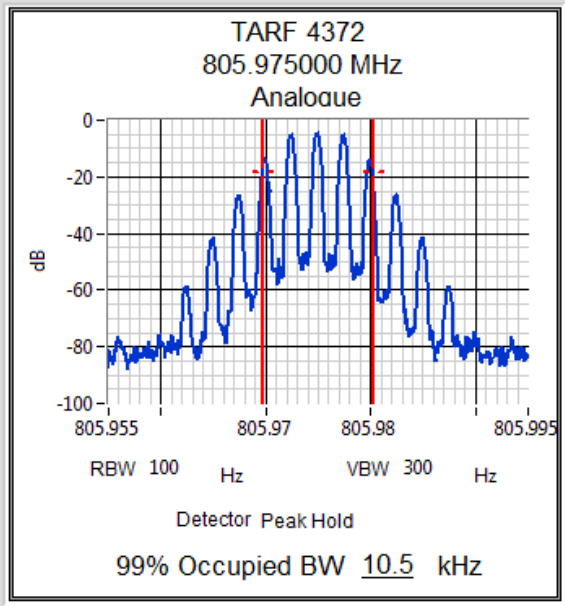
FFSK 2400 bps



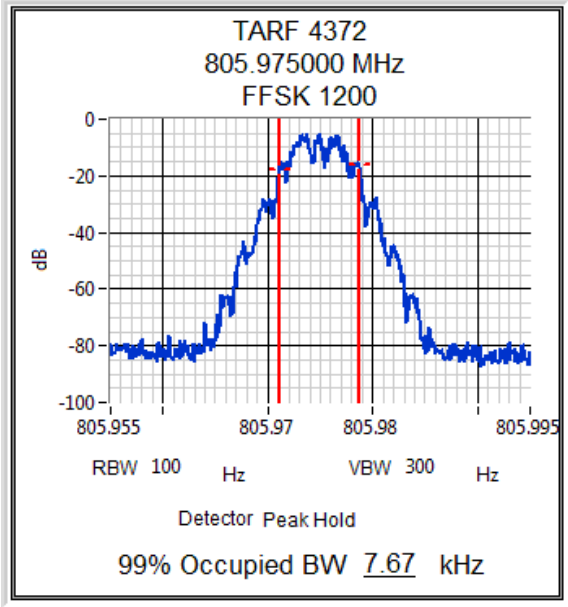
Transmitter Occupied (99%) Bandwidth

805.975 MHz, 20 kHz Channel Spacing, 3W Power

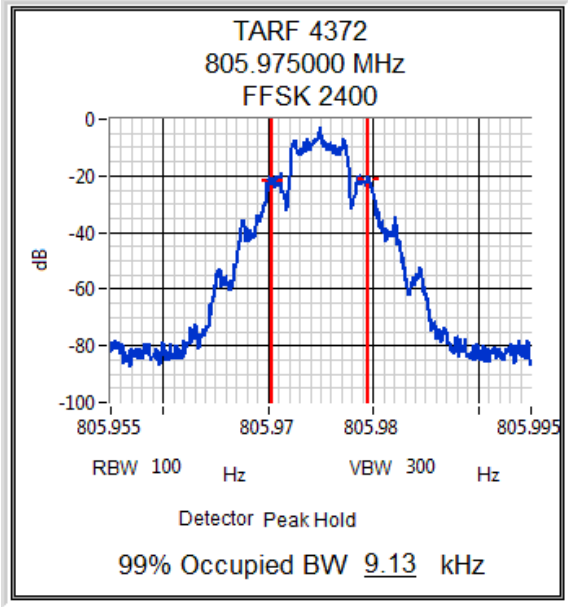
Analogue



FFSK 1200 bps



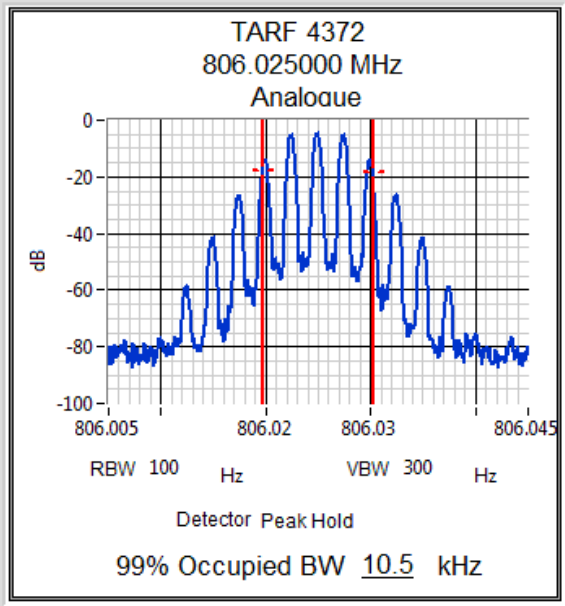
FFSK 2400 bps



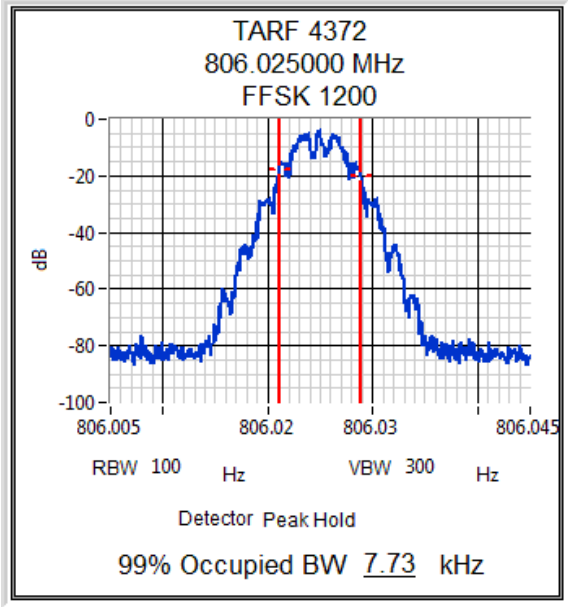
Transmitter Occupied (99%) Bandwidth

806.025 MHz, 20 kHz Channel Spacing, 3W Power

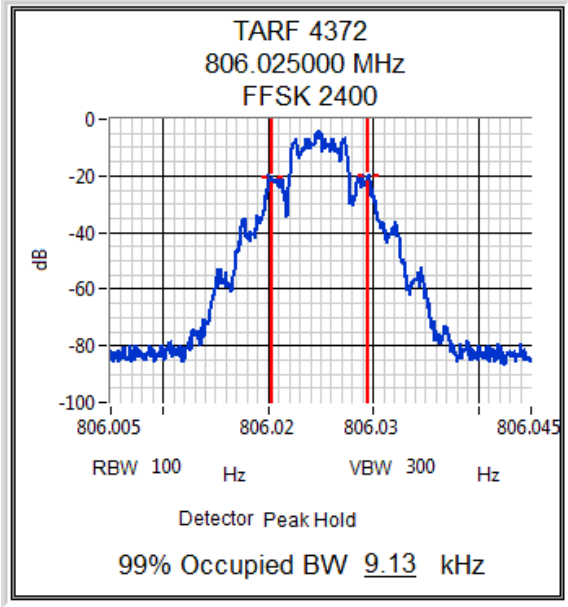
Analogue



FFSK 1200 bps



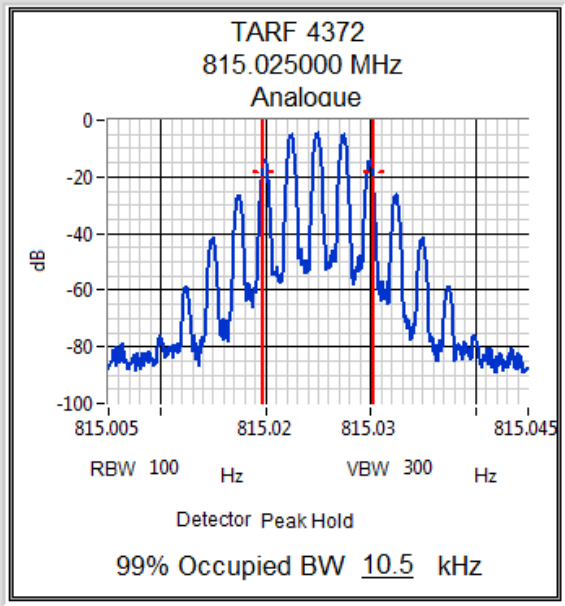
FFSK 2400 bps



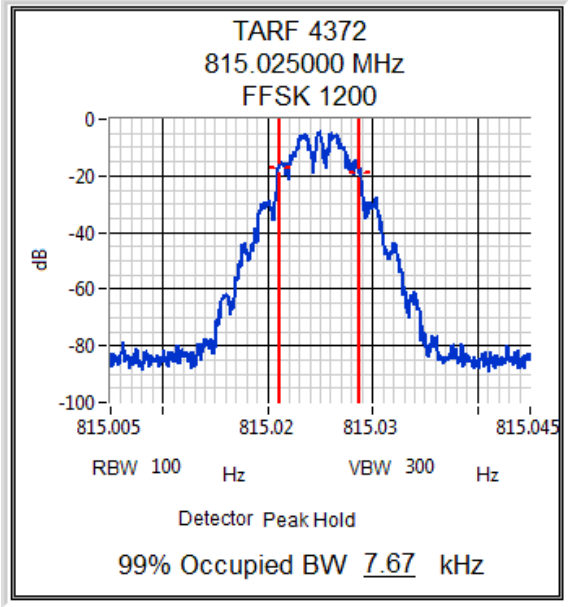
Transmitter Occupied (99%) Bandwidth

815.025 MHz, 20 kHz Channel Spacing, 3W Power

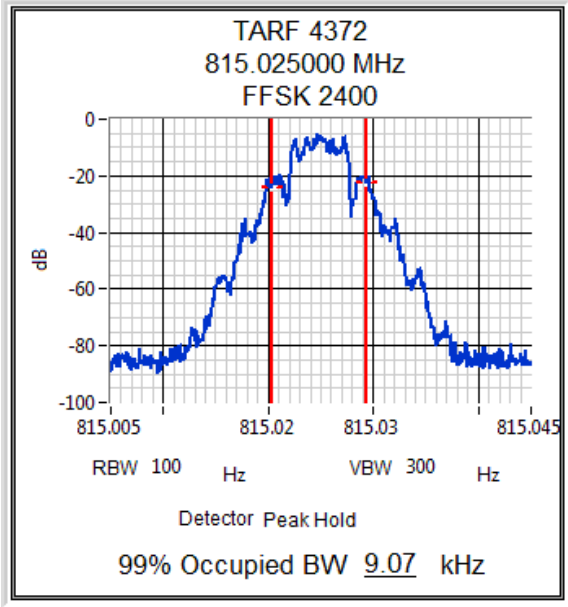
Analogue



FFSK 1200 bps



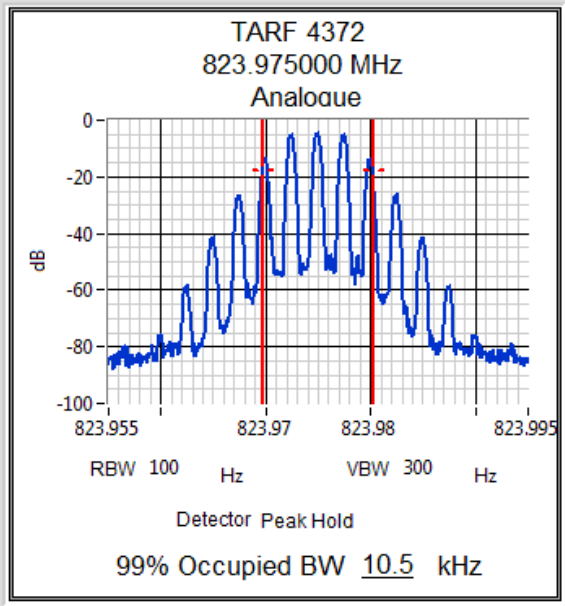
FFSK 2400 bps



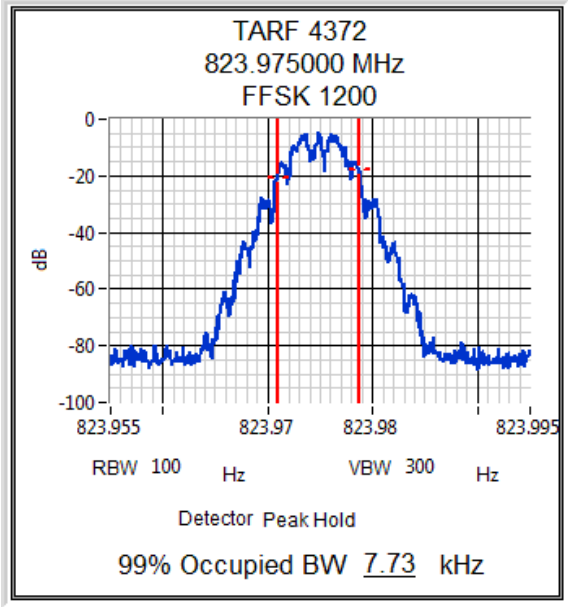
Transmitter Occupied (99%) Bandwidth

823.975 MHz, 20 kHz Channel Spacing, 3W Power

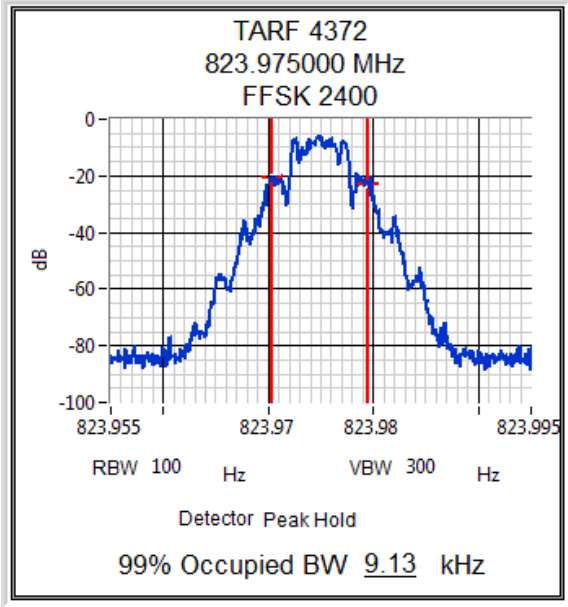
Analogue



FFSK 1200 bps



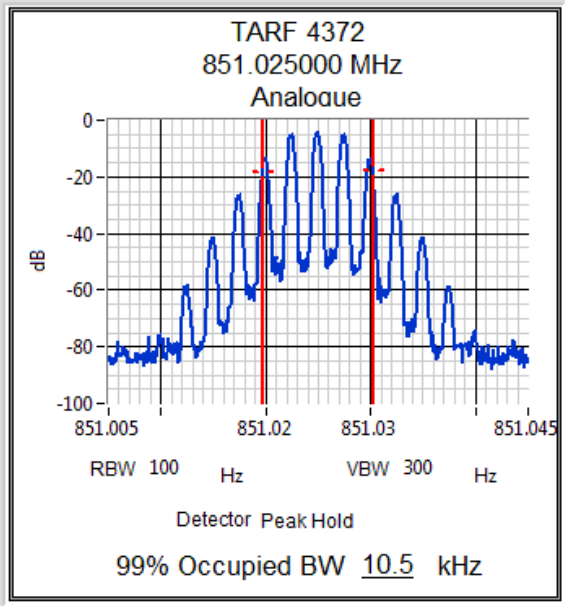
FFSK 2400 bps



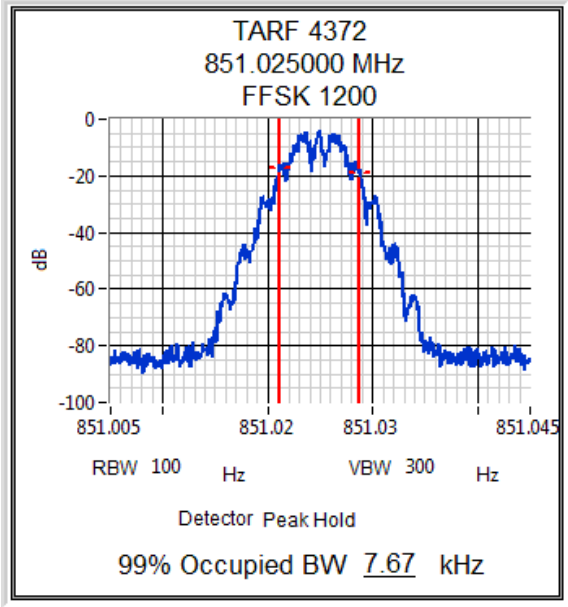
Transmitter Occupied (99%) Bandwidth

851.025 MHz, 20 kHz Channel Spacing, 3W Power

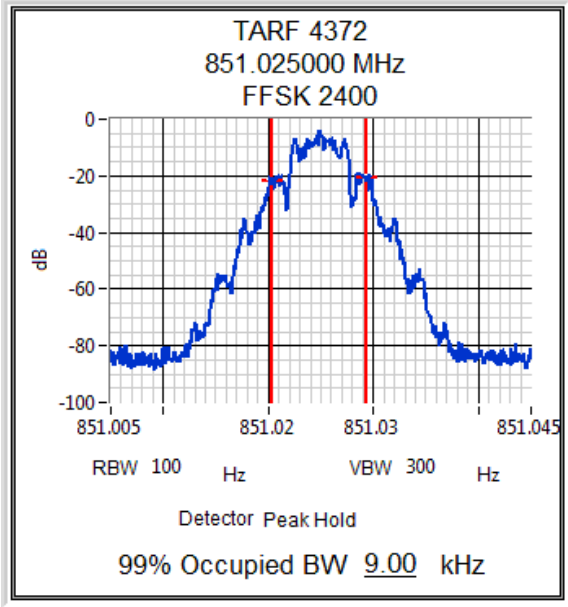
Analogue



FFSK 1200 bps



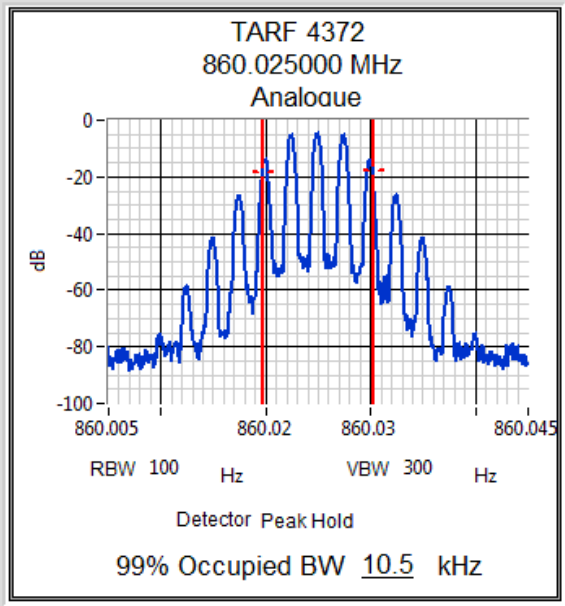
FFSK 2400 bps



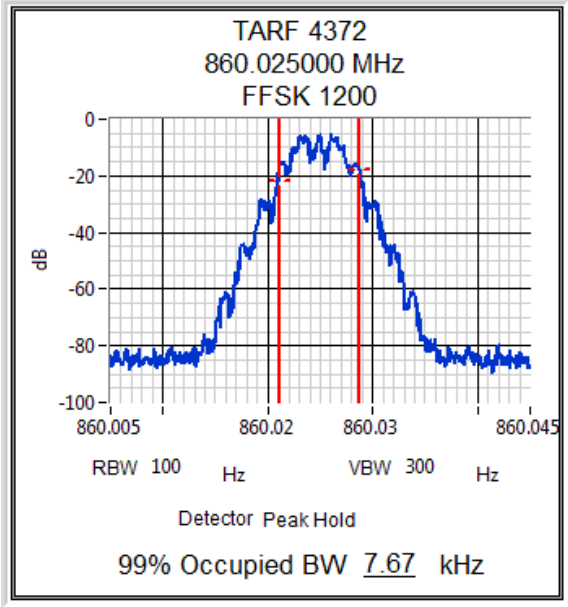
Transmitter Occupied (99%) Bandwidth

860.025 MHz, 20 kHz Channel Spacing, 3W Power

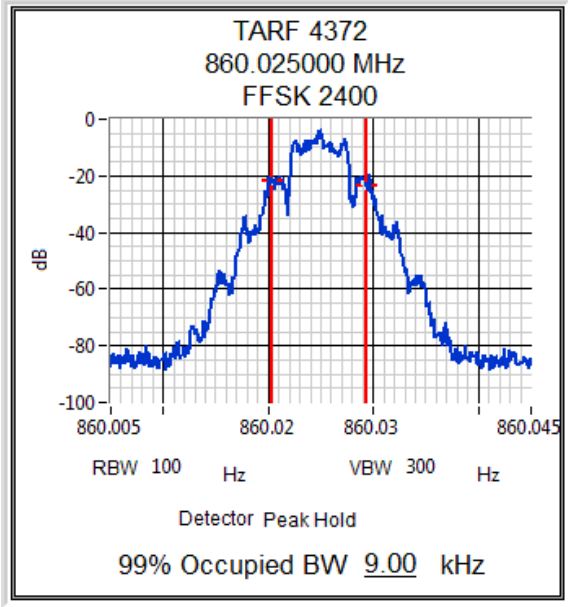
Analogue



FFSK 1200 bps



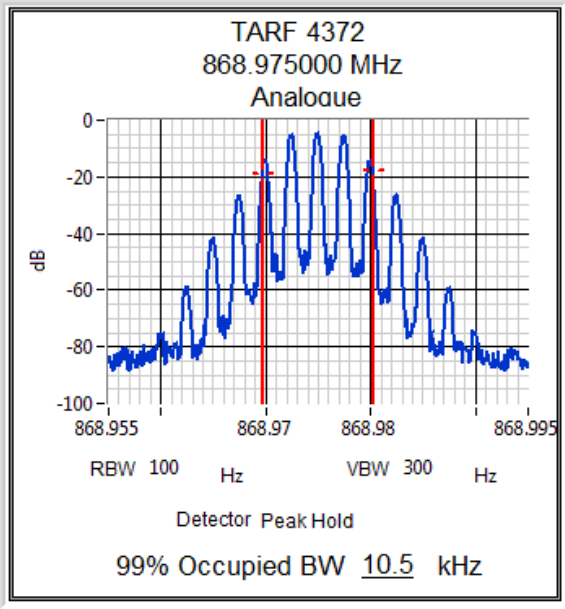
FFSK 2400 bps



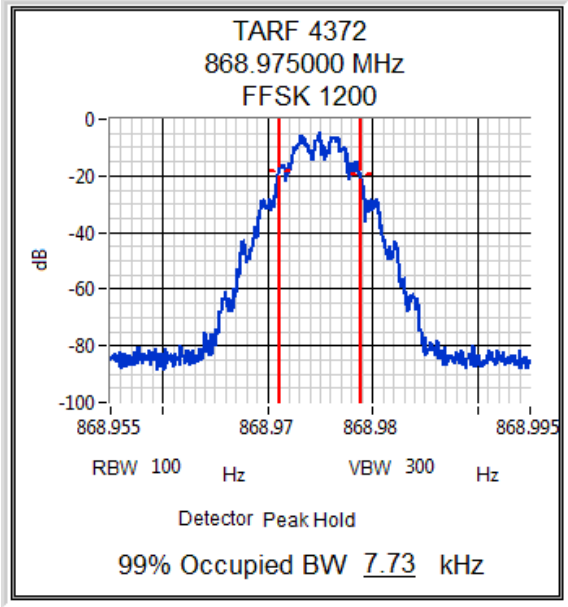
Transmitter Occupied (99%) Bandwidth

868.975 MHz, 20 kHz Channel Spacing, 3W Power

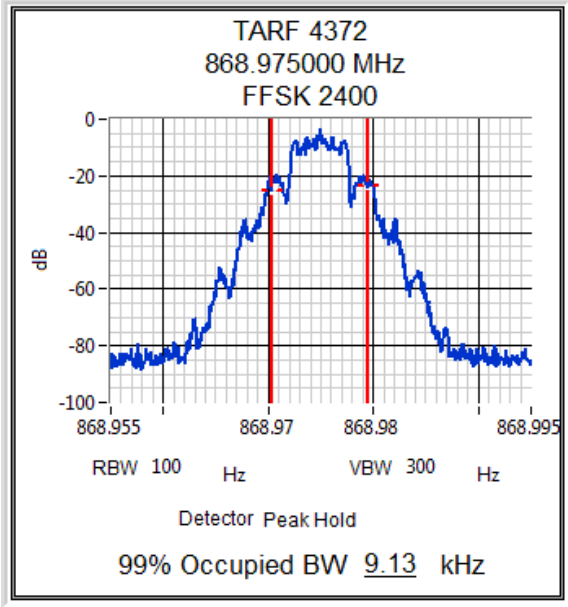
Analogue



FFSK 1200 bps



FFSK 2400 bps



TRANSMITTER SPECTRUM MASKS

SPECIFICATION: FCC 47 CFR 2.1049 (c) RSS-119 5.5

GUIDE: ANSI C63.26.5.7.3

MEASUREMENT PROCEDURE:

1. Refer Annex A for Equipment Set up.
2. For Analogue measurements: The EUT was modulated by a 2500 Hz tone at an input level 16 dB above a level that produced 50% deviation. The input level was established at the frequency of maximum response of the audio modulating circuit.
   For Data measurements: The EUT was modulated with an internally generated pseudo random bit sequence at the appropriate Baud rates.
3. The Occupied Bandwidth was measured on the Spectrum Analyser, with bandwidth settings as noted on the recorded plots.

MEASUREMENT RESULTS:
See the plots on the following pages for 20.0 kHz channel spacing.

MEASUREMENT UNCERTAINTY: 95% ± 0.65dB

LIMIT CLAUSE:	FCC 47 CFR 90.210	RSS-119 5.5

EMISSION MASKS

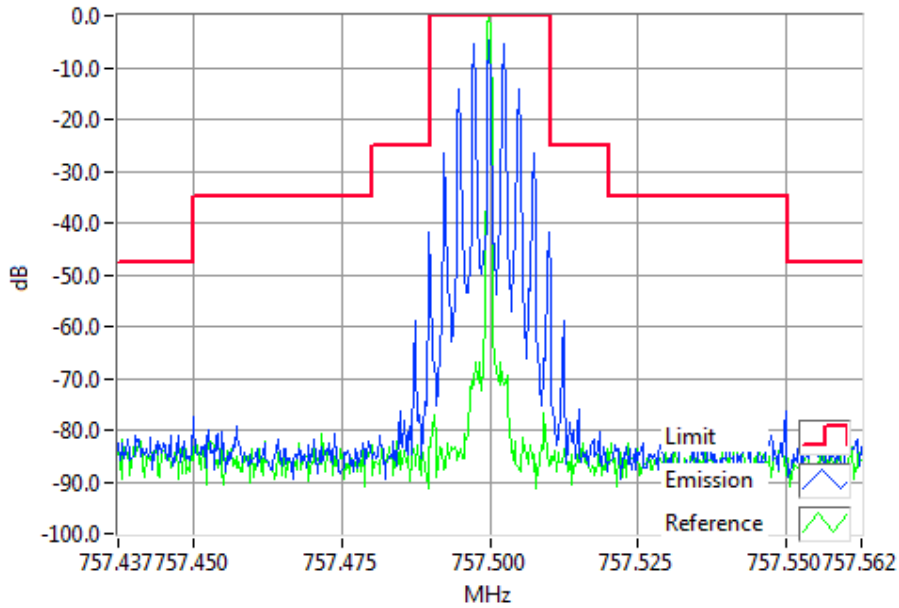
Emission Mask B	20 kHz Channel Spacing	Analogue
Emission Mask G & H	20 kHz Channel Spacing	FFSK 1200bps & FFSK 2400bps

DATA SPEED

FFSK	20 kHz Channel Spacing	1200 bps & 2400 bps

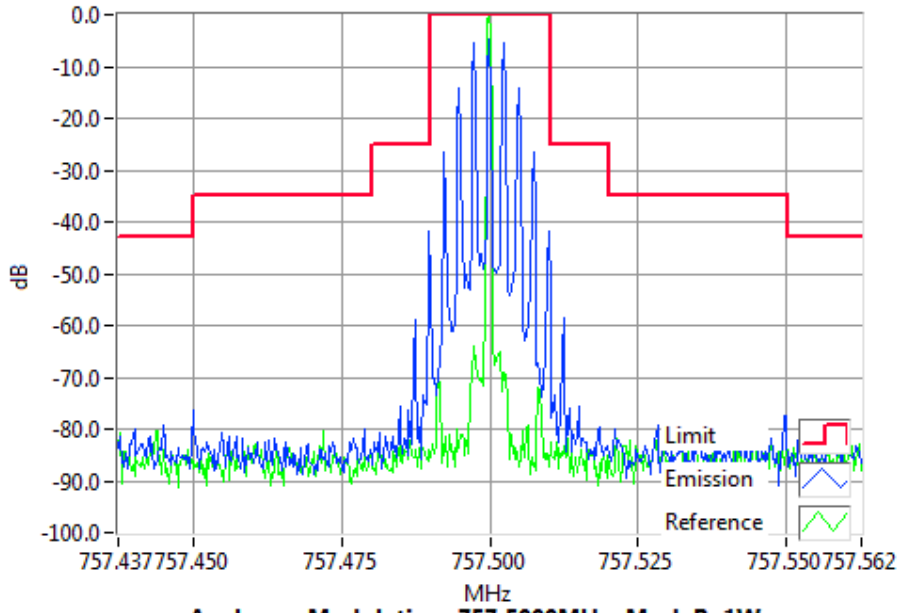
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 757.500 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 757.5000MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

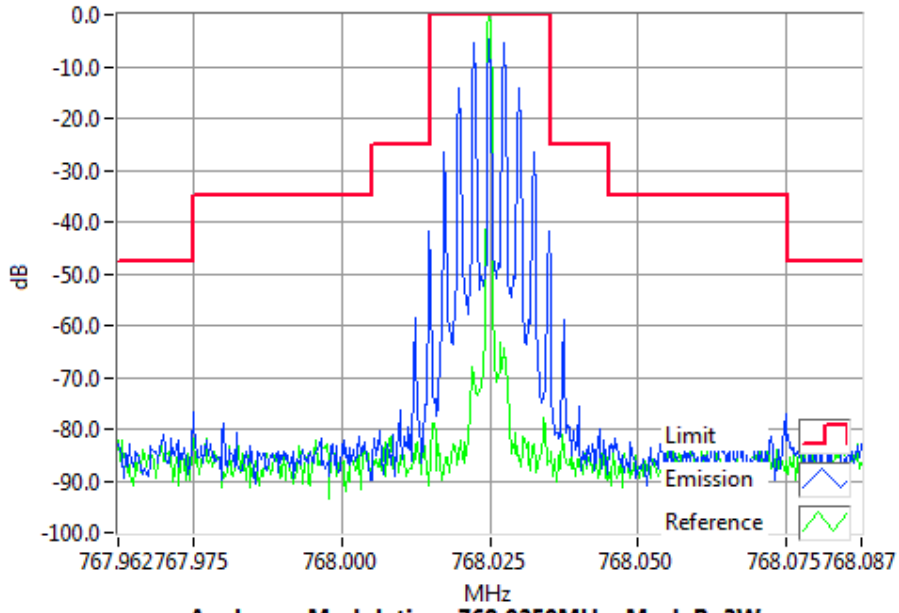
Tx FREQUENCY: 757.500 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 757.5000MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

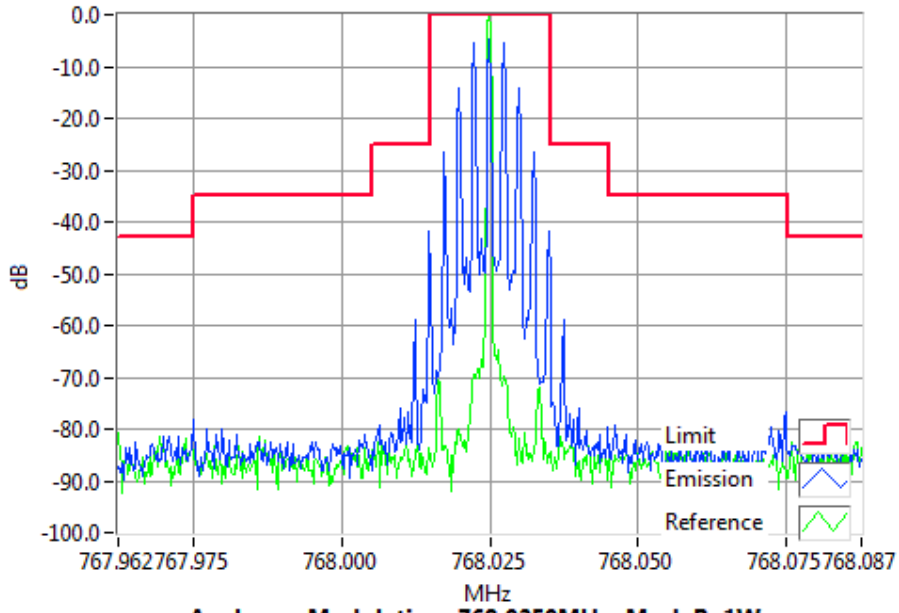
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 768.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 768.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

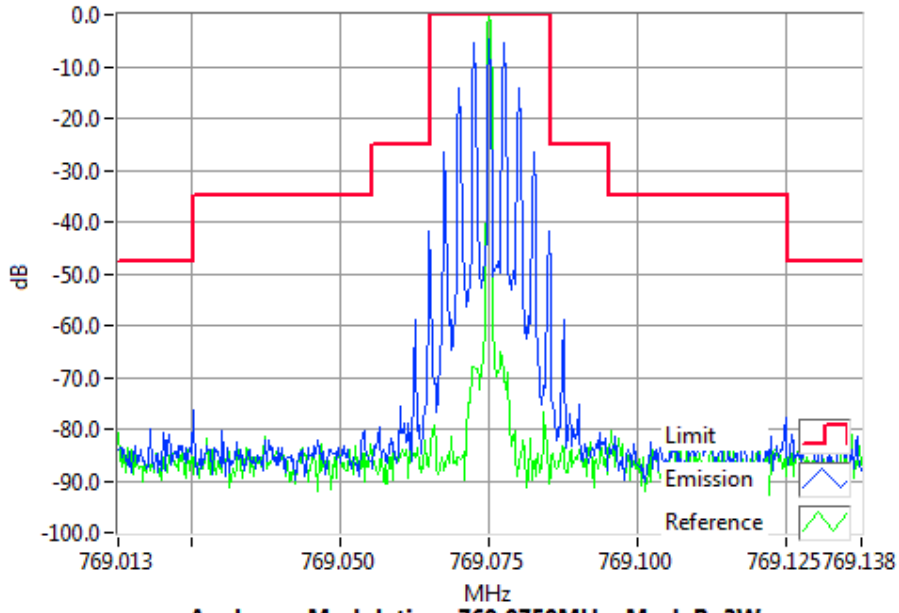
Tx FREQUENCY: 768.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 768.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

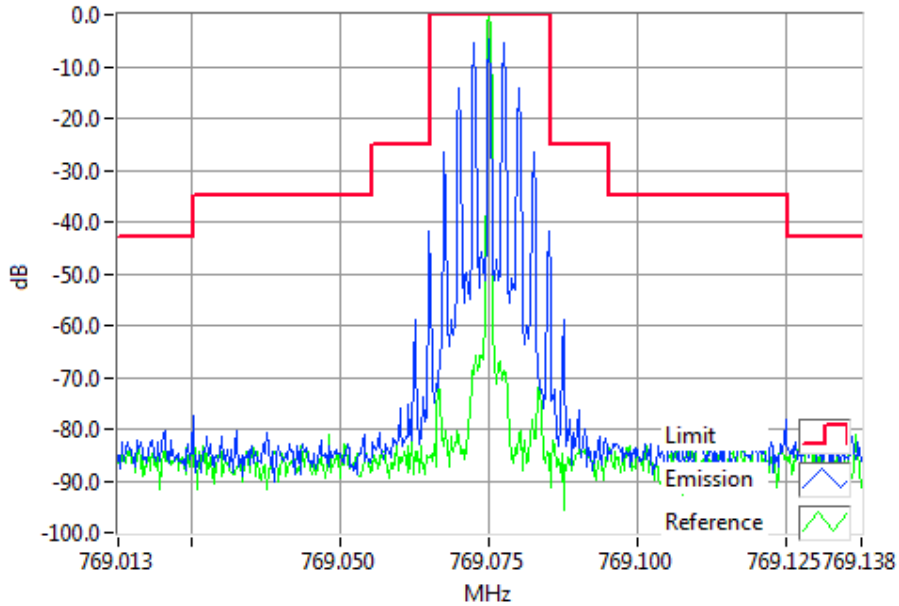
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 769.0750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

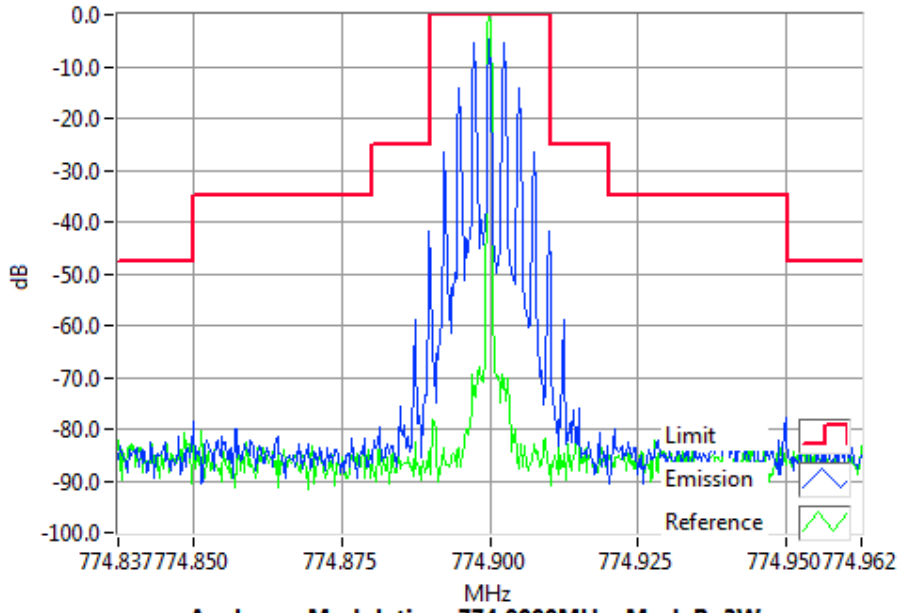
Tx FREQUENCY: 769.075 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 769.0750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

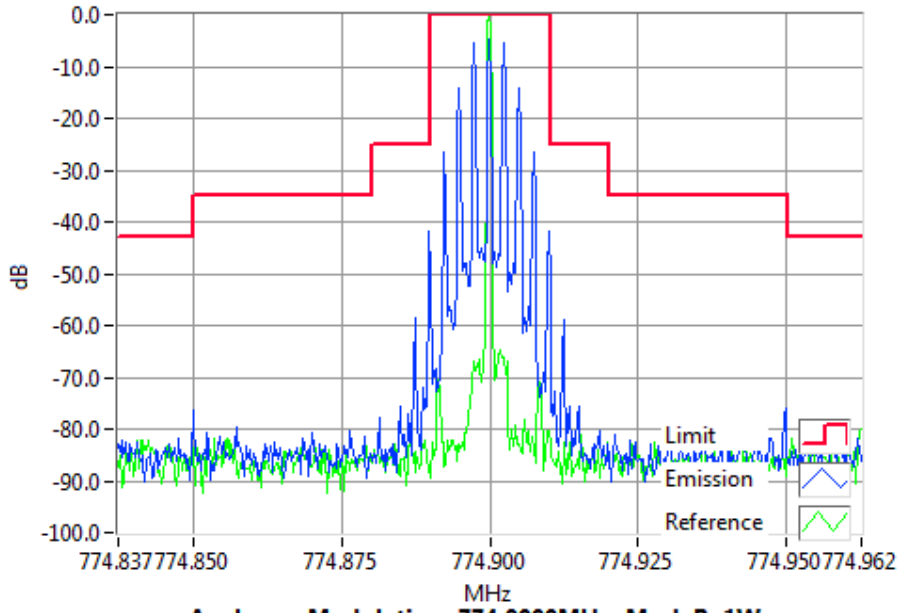
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 774.9000MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

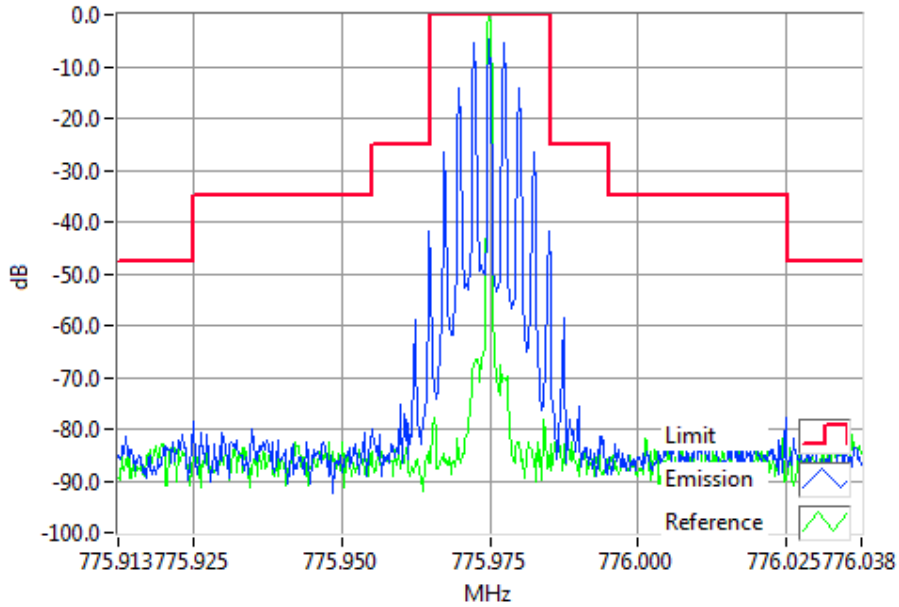
Tx FREQUENCY: 774.900 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 774.9000MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

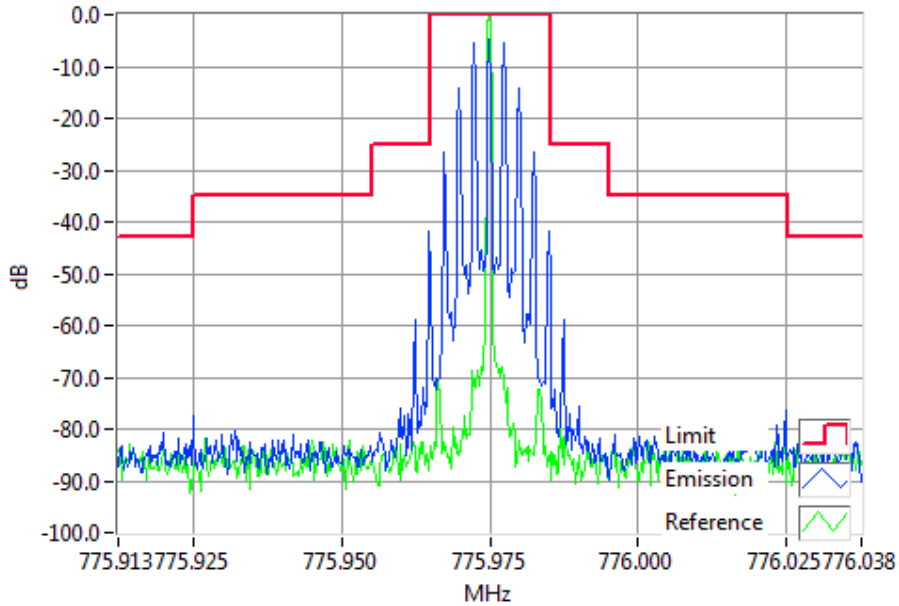
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 775.975 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 775.9750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

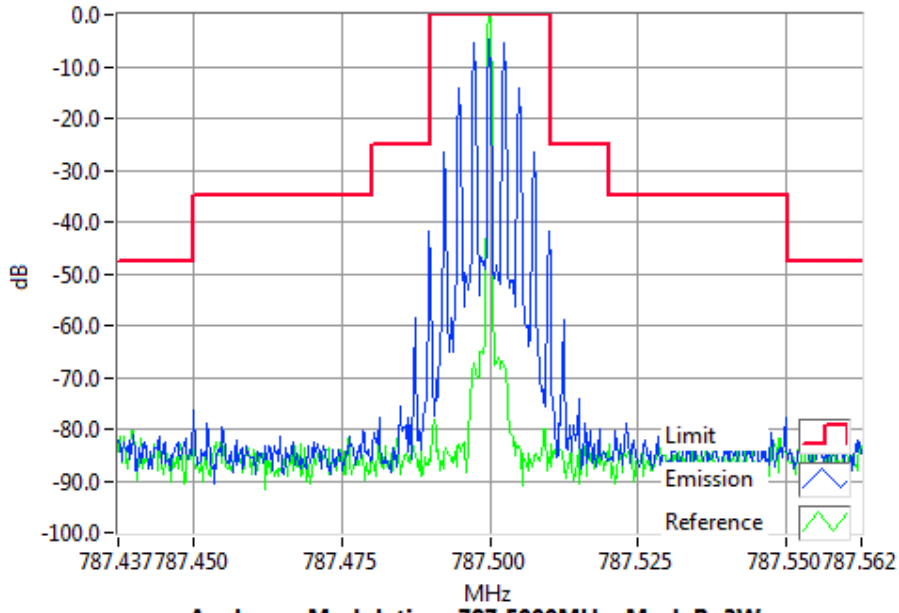
Tx FREQUENCY: 775.975 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 775.9750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

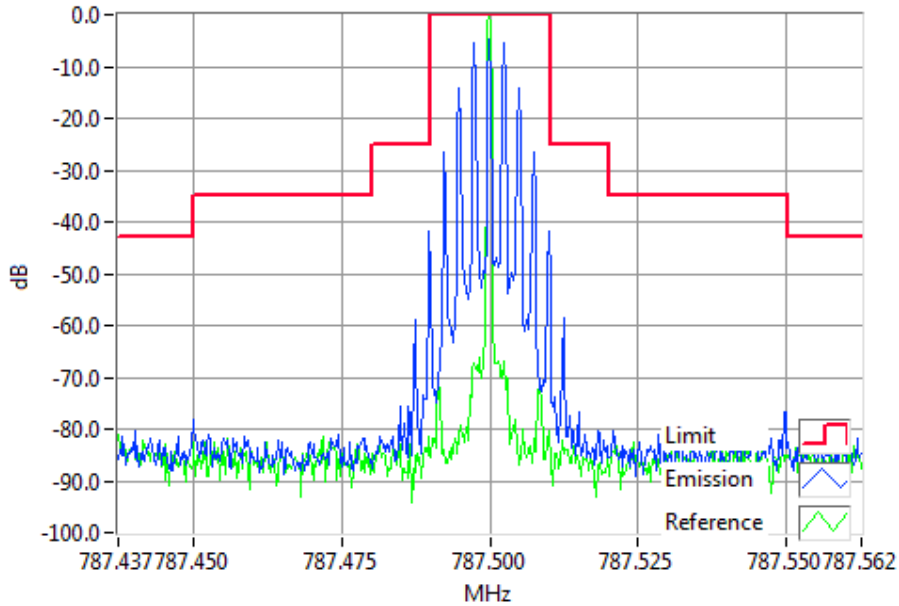
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 787.500 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 787.5000MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

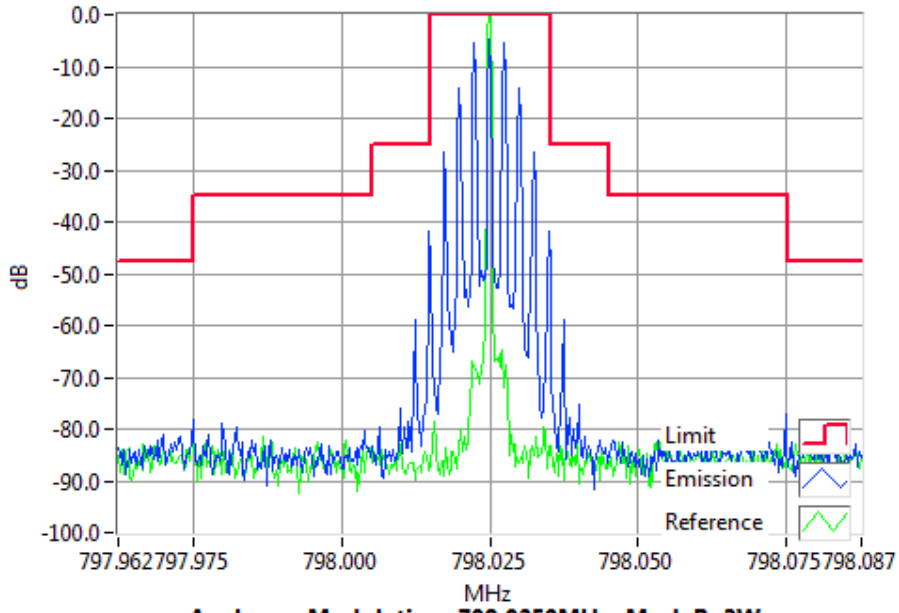
Tx FREQUENCY: 787.500 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 787.5000MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

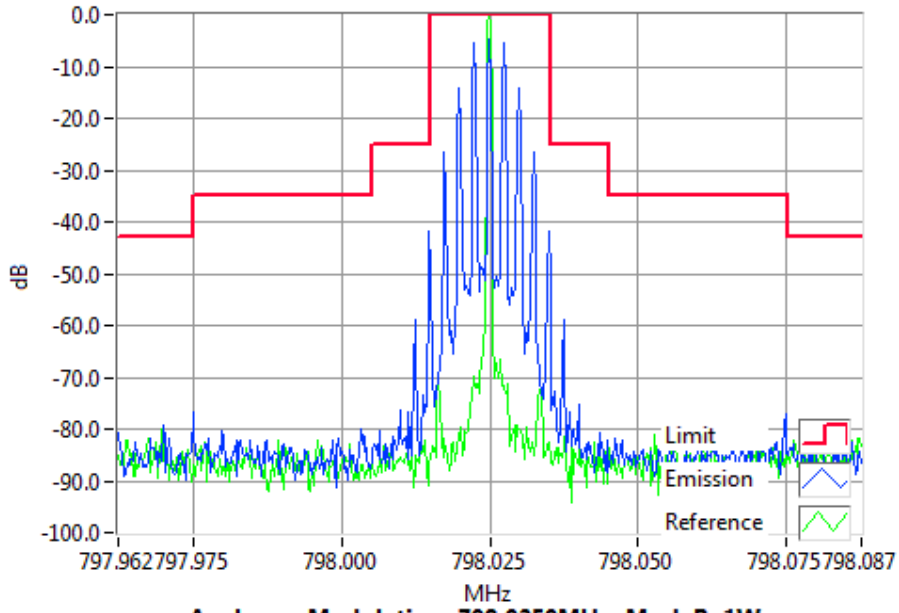
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 798.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 798.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

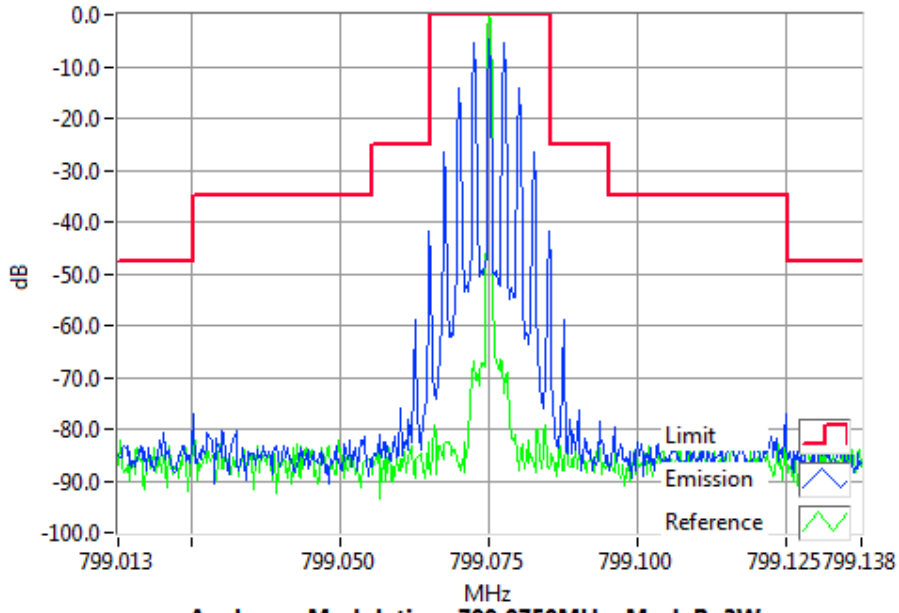
Tx FREQUENCY: 798.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 798.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

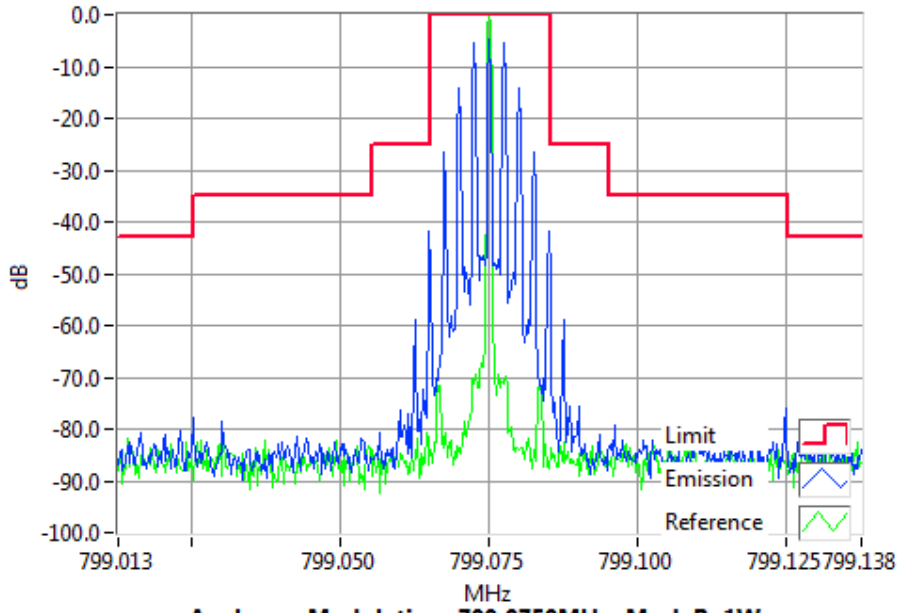
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 799.0750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

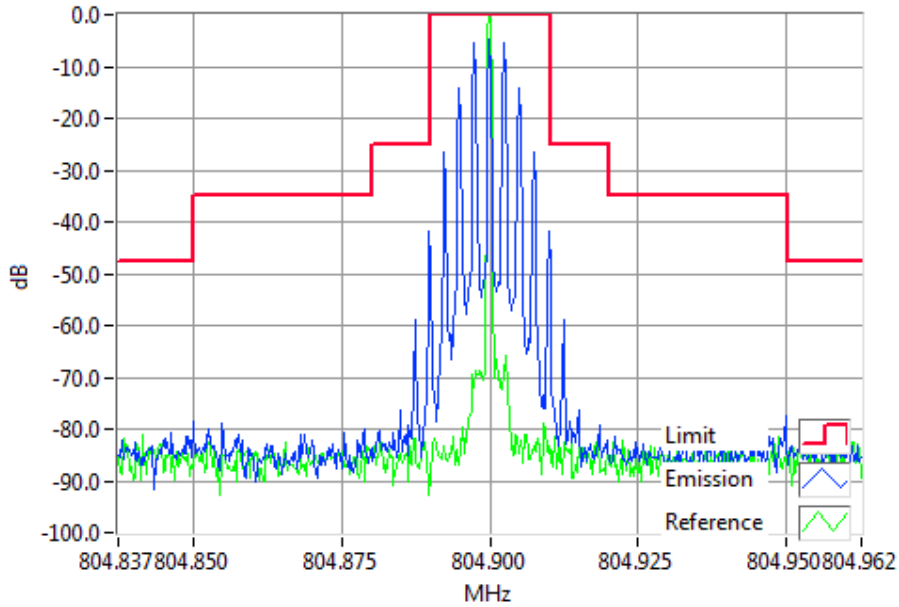
Tx FREQUENCY: 799.075 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 799.0750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

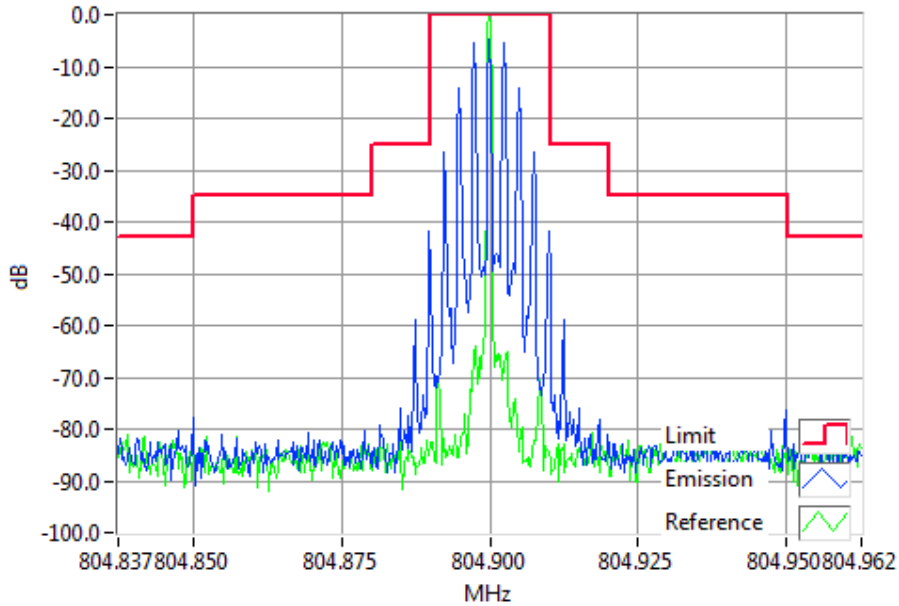
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 804.9000MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

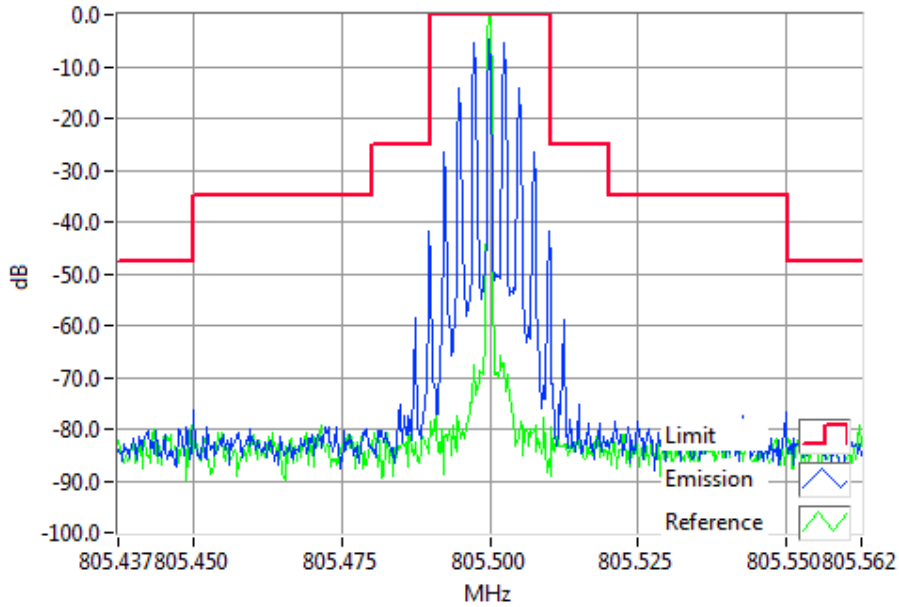
Tx FREQUENCY: 804.900 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 804.9000MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

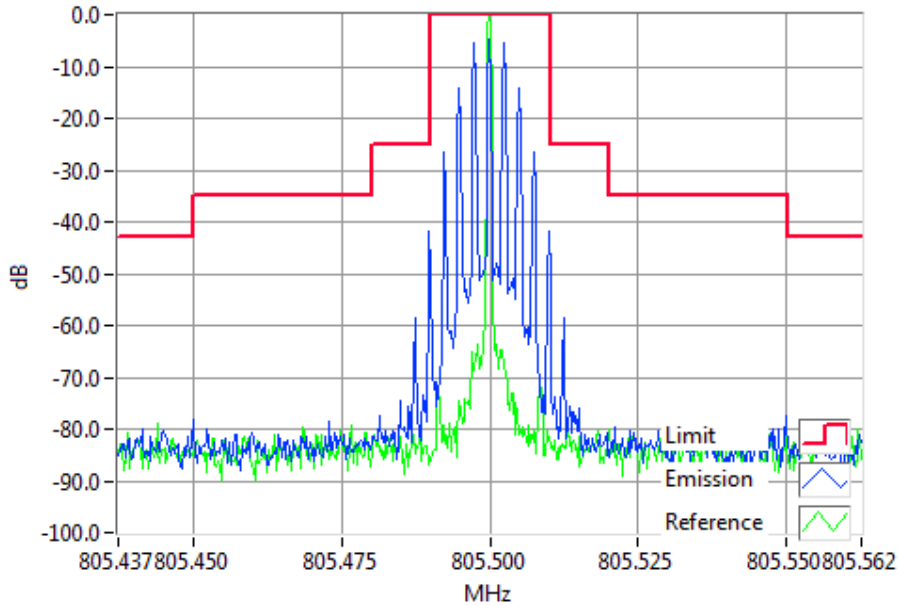
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 805.500 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 805.5000MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

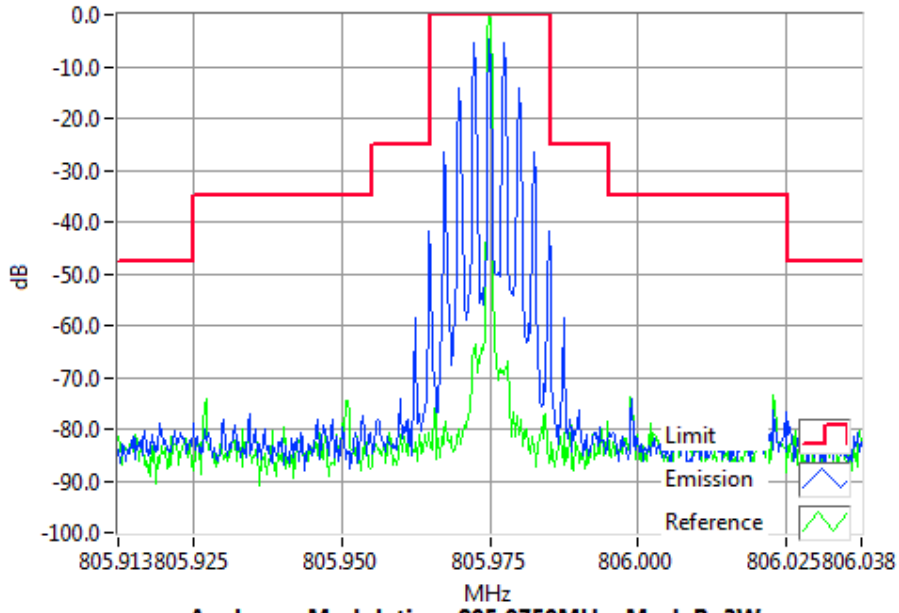
Tx FREQUENCY: 805.500 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 805.5000MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

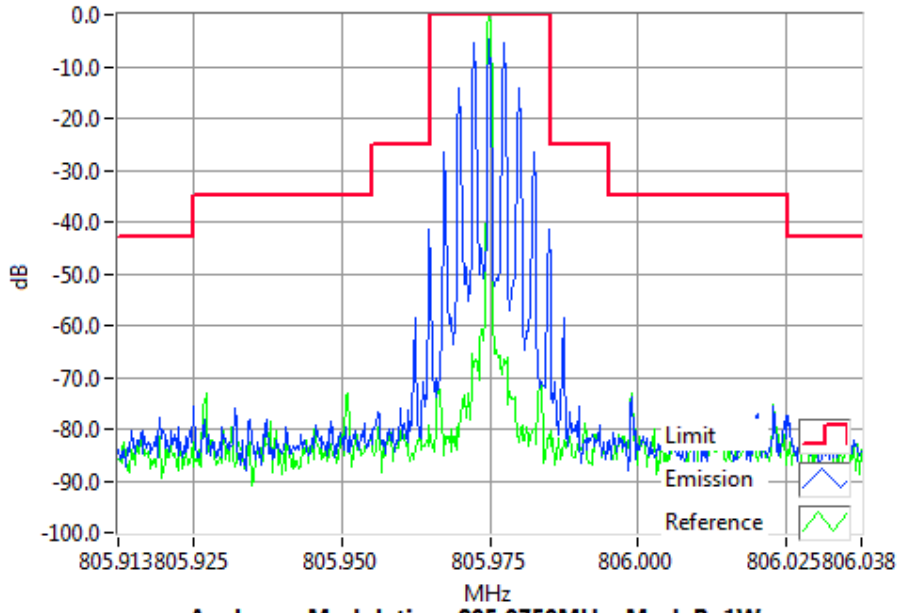
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 805.975 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 805.9750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

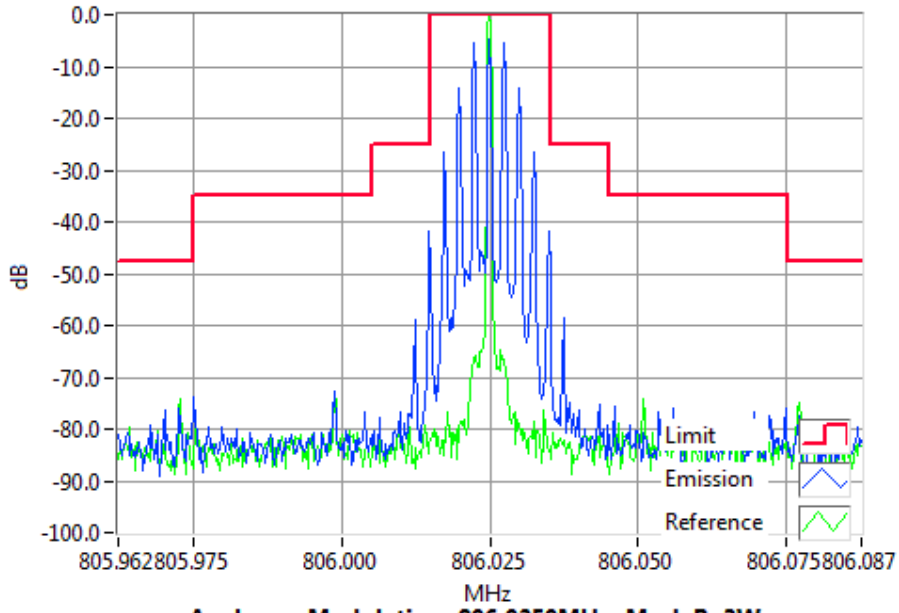
Tx FREQUENCY: 805.975 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 805.9750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

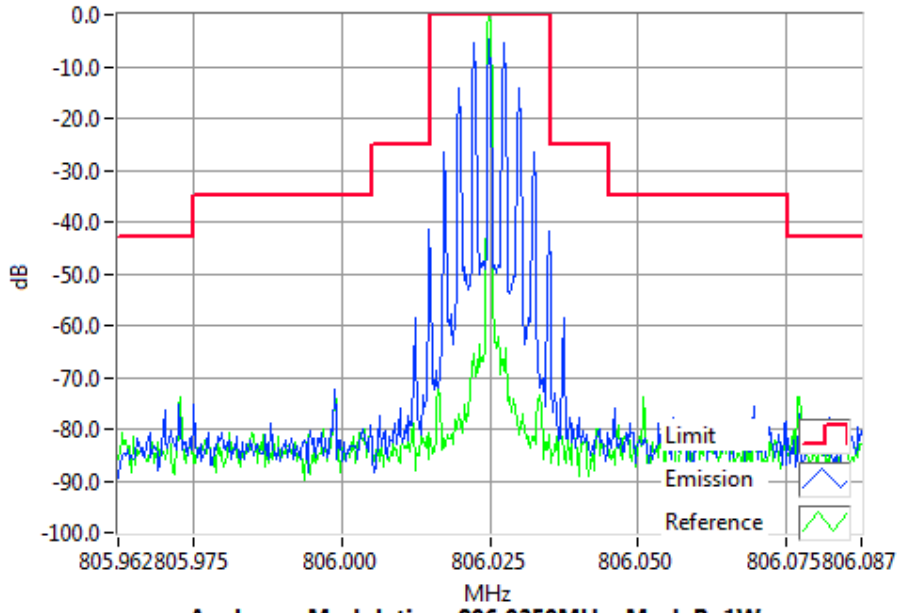
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 806.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 806.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

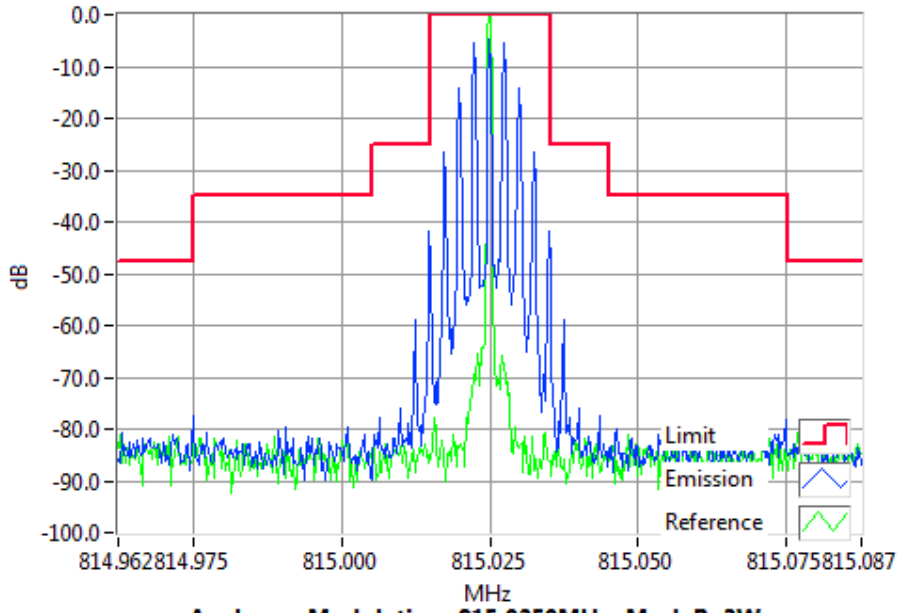
Tx FREQUENCY: 806.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 806.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

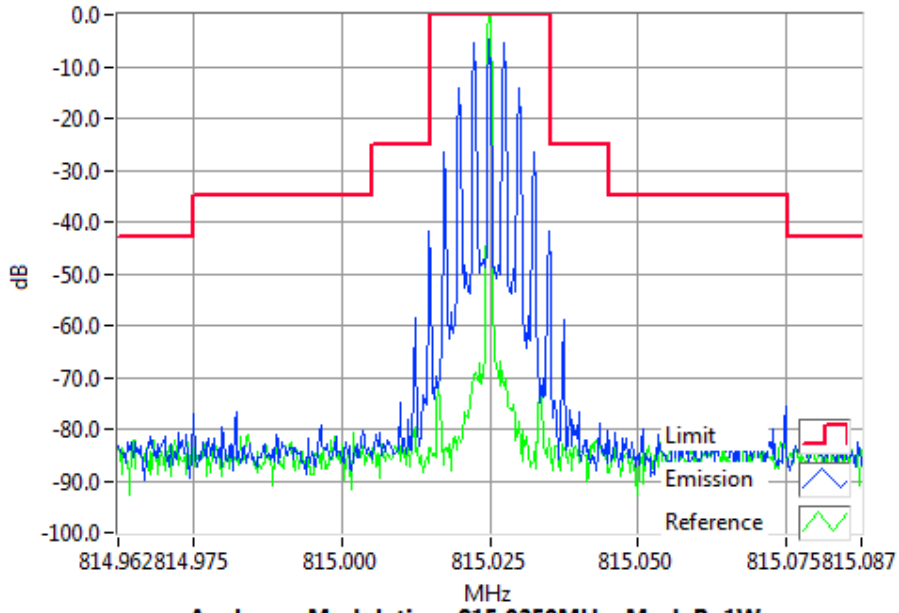
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 815.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 815.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

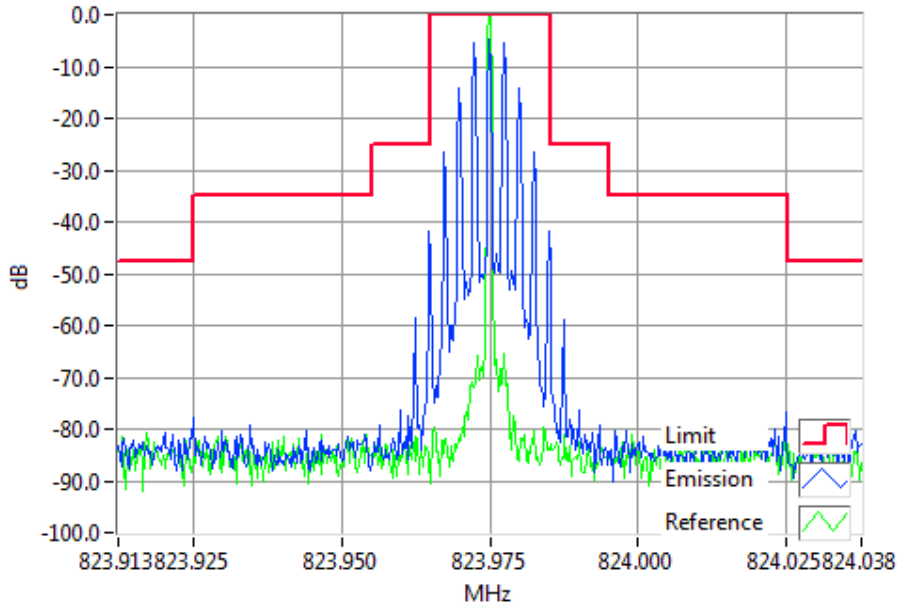
Tx FREQUENCY: 815.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 815.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

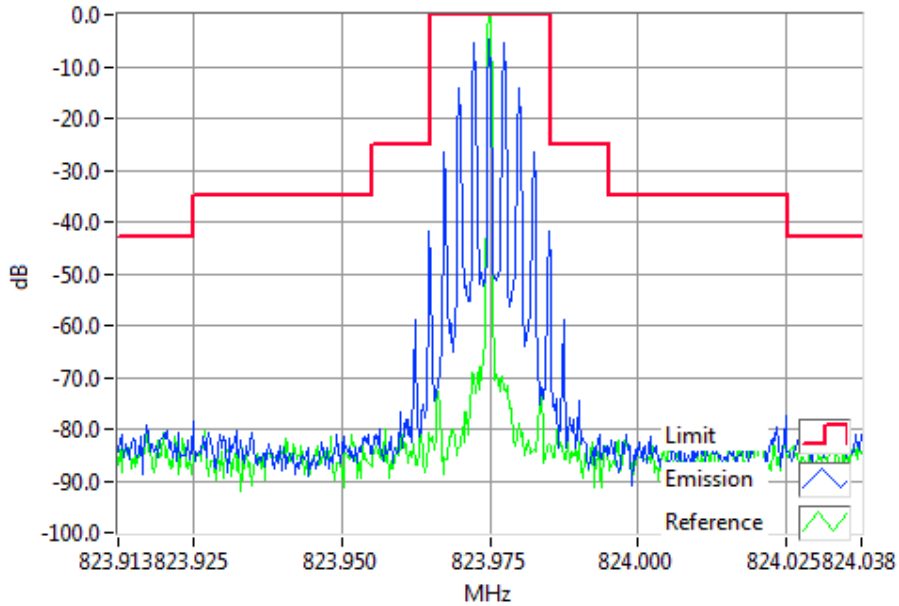
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 823.975 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 823.9750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

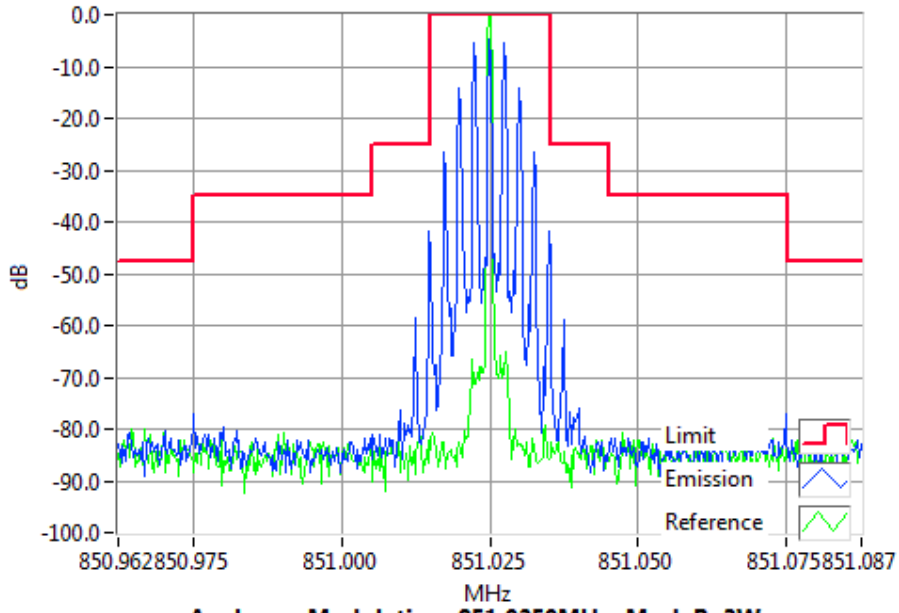
Tx FREQUENCY: 823.975 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 823.9750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

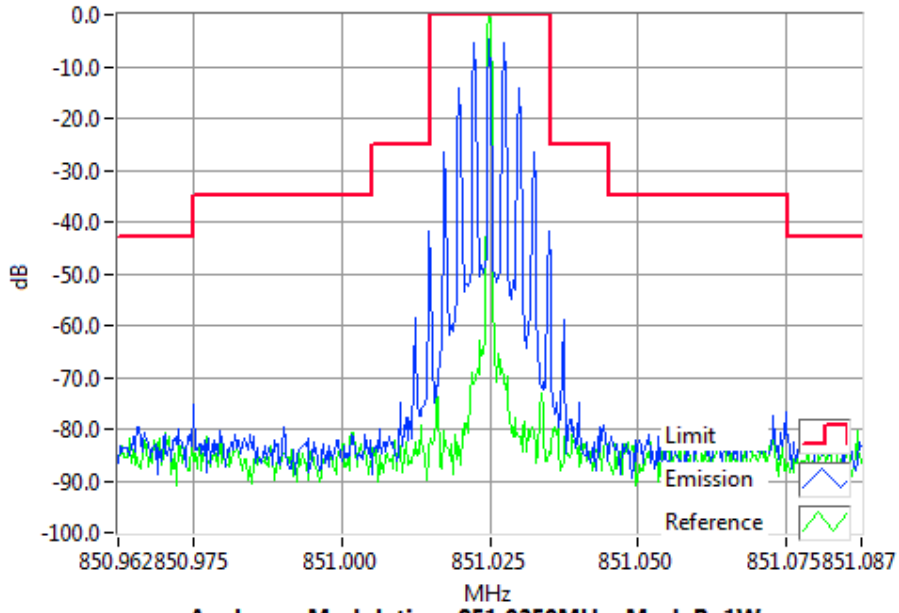
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 851.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 851.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

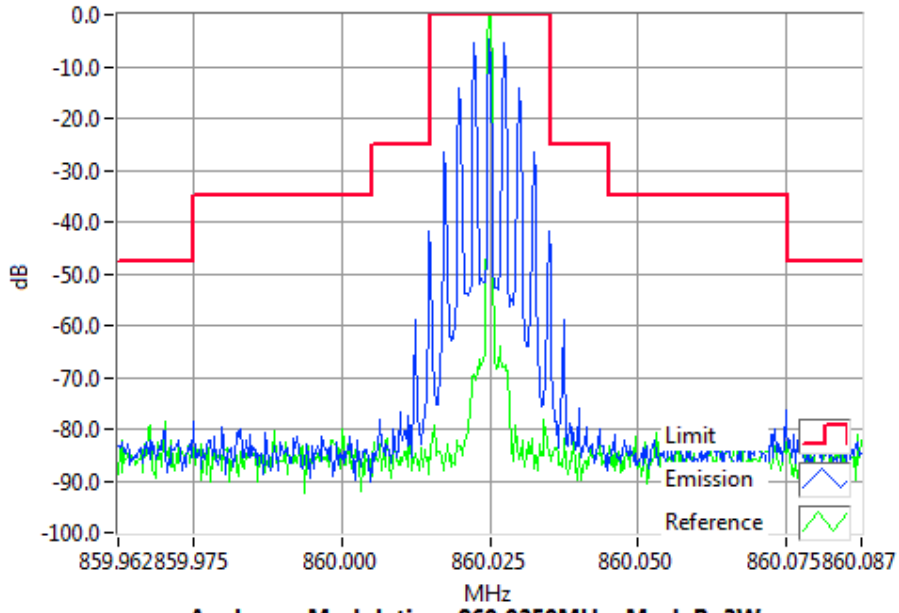
Tx FREQUENCY: 851.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 851.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

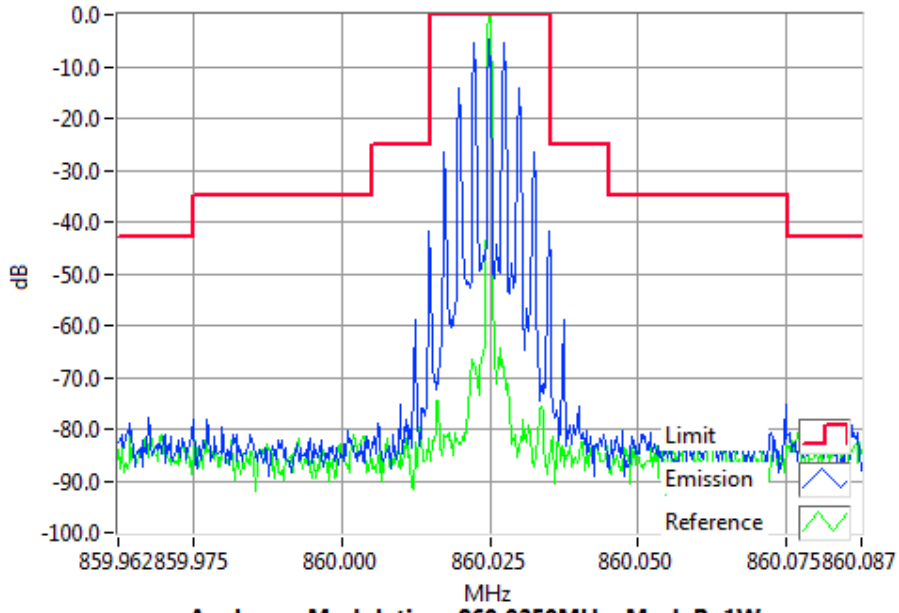
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 860.025 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 860.0250MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

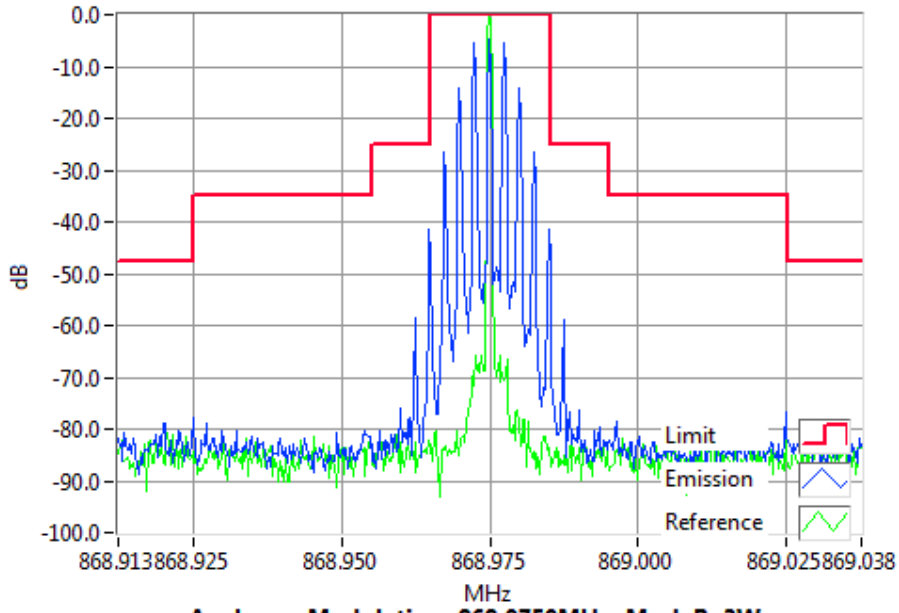
Tx FREQUENCY: 860.025 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 860.0250MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

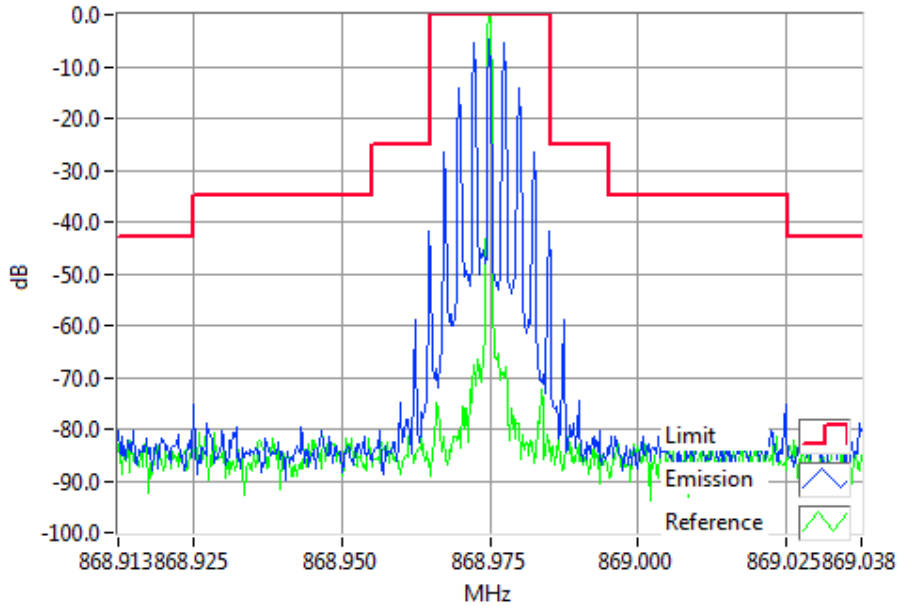
Transmitter Spectrum Masks – Analogue

Tx FREQUENCY: 868.975 MHz 3 W 20 kHz Channel Spacing



Analogue Modulation 868.9750MHz Mask B 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

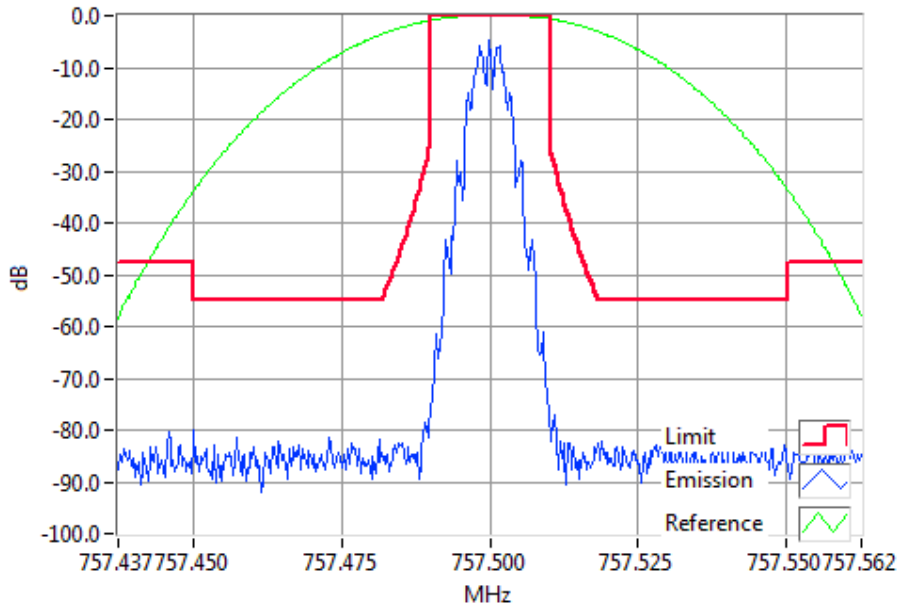
Tx FREQUENCY: 868.975 MHz 1 W 20 kHz Channel Spacing



Analogue Modulation 868.9750MHz Mask B 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

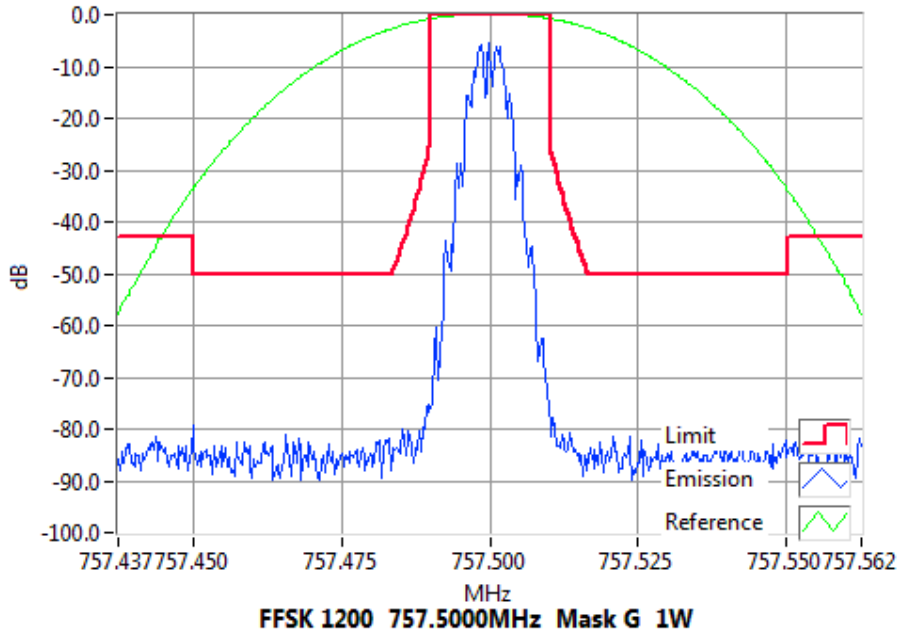
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 757.500 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 757.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

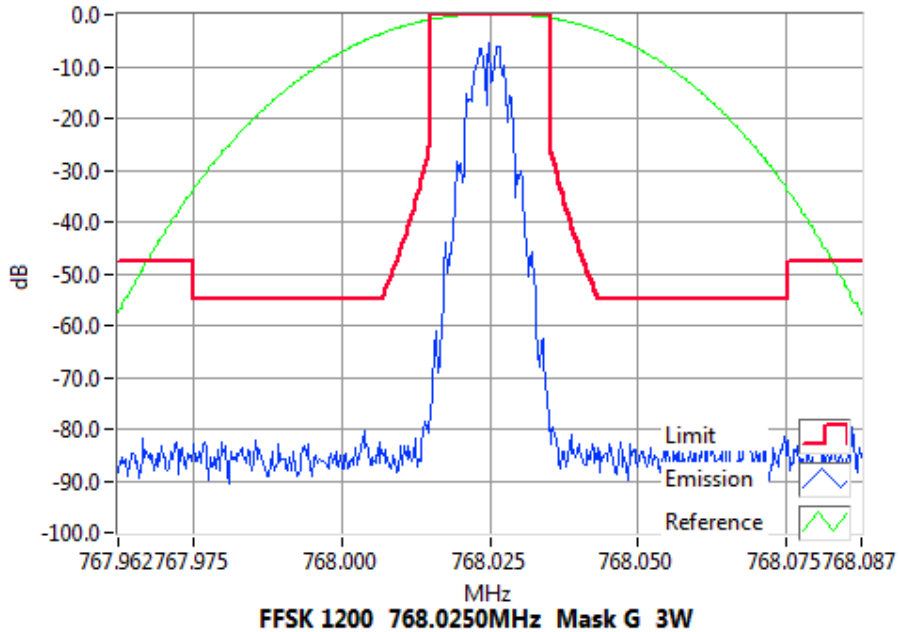
Tx FREQUENCY: 757.500 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 757.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

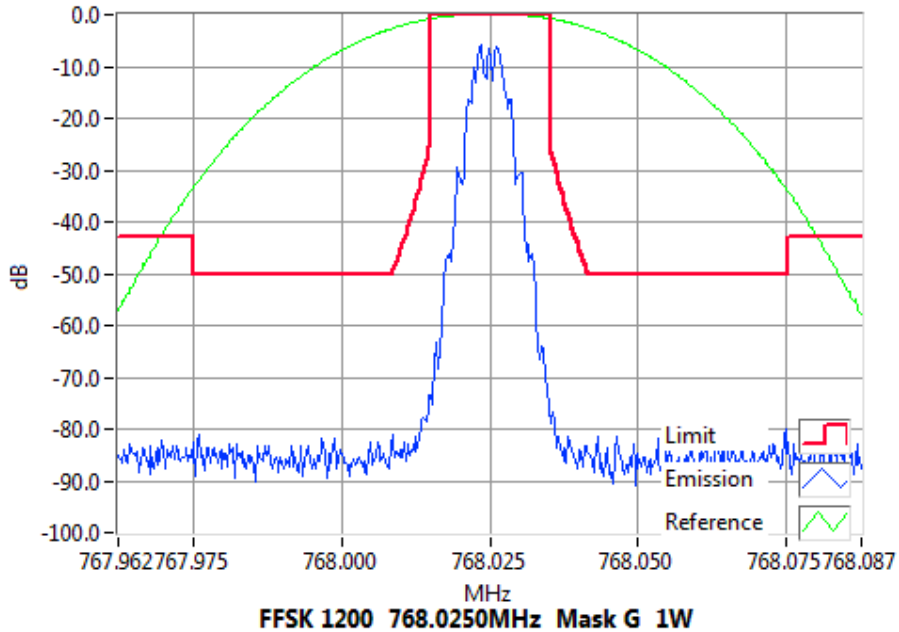
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 768.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 768.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

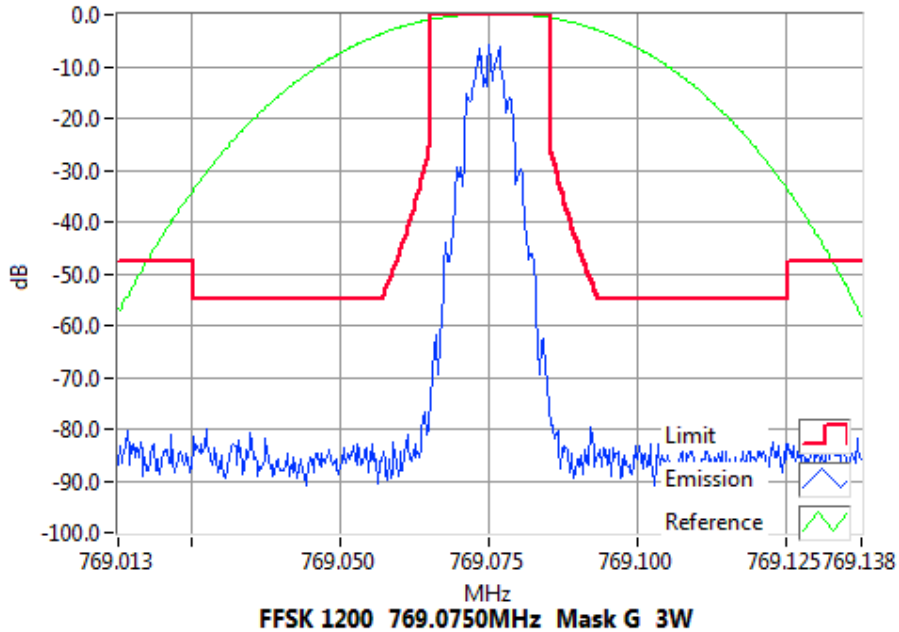
Tx FREQUENCY: 768.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 768.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

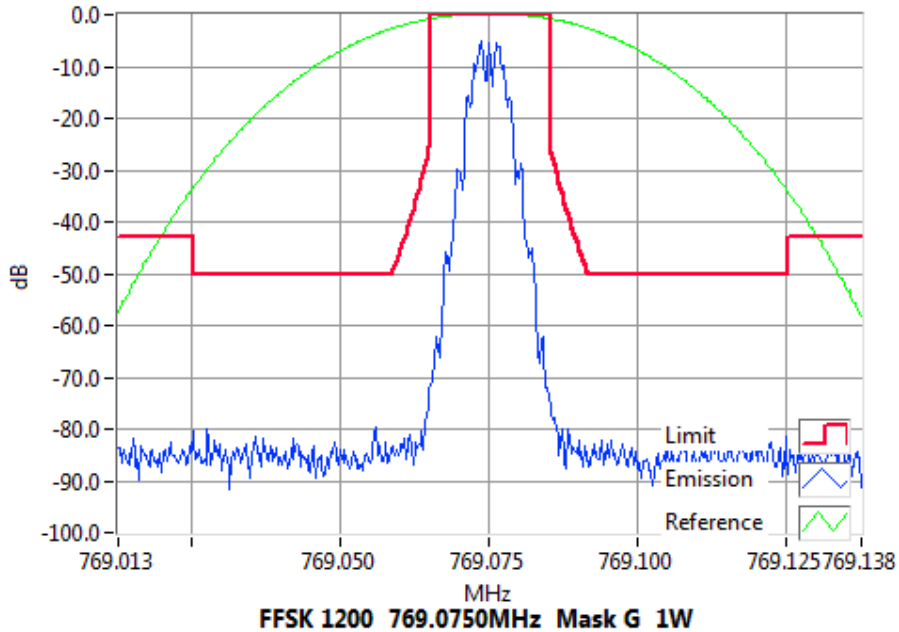
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 769.0750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

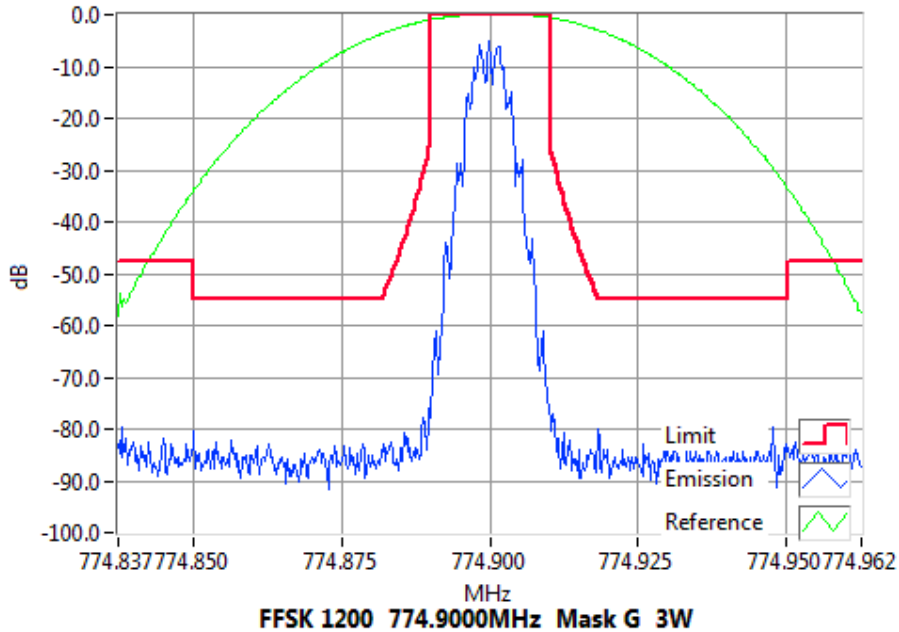
Tx FREQUENCY: 769.075 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 769.0750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

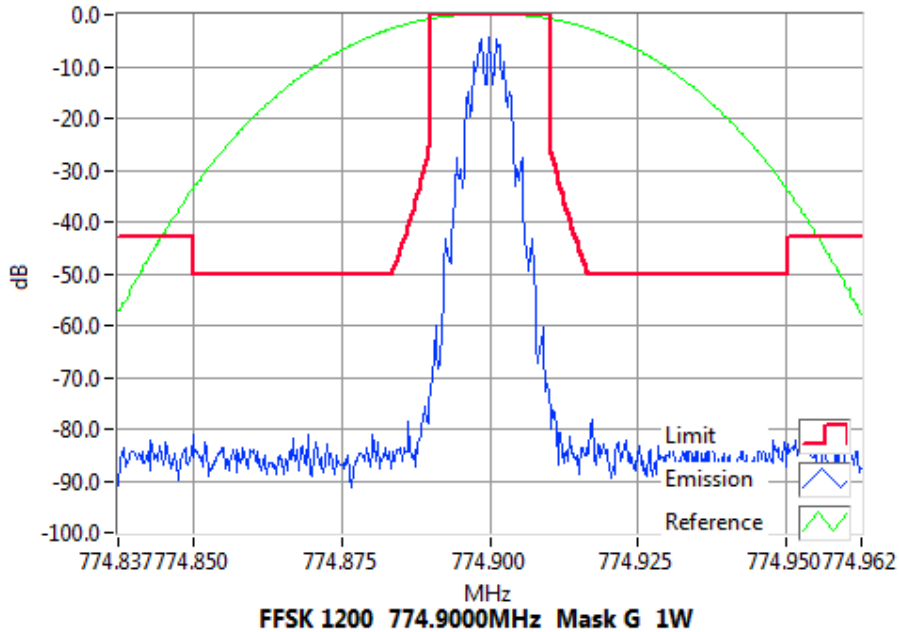
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 774.9000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

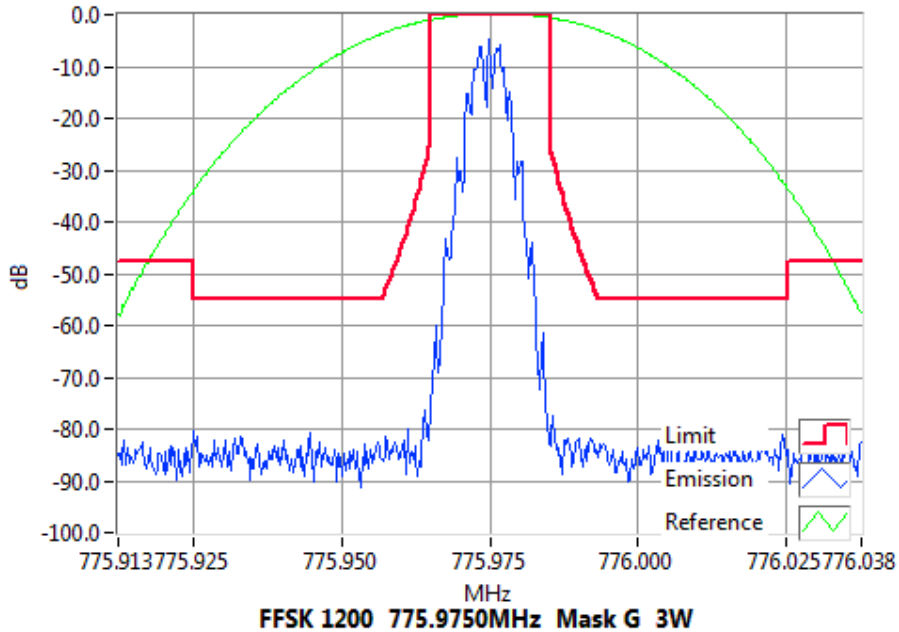
Tx FREQUENCY: 774.900 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 774.9000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

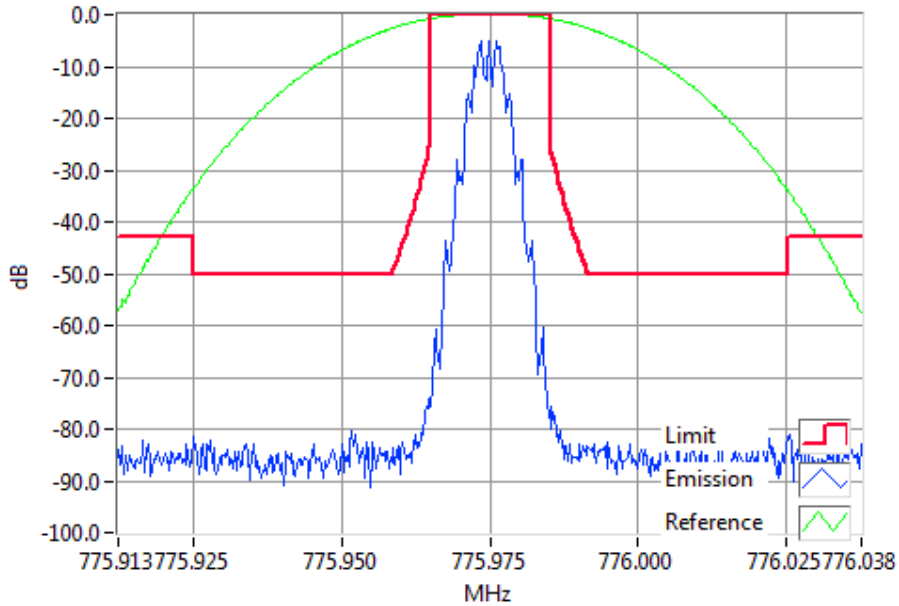
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 775.975 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 775.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

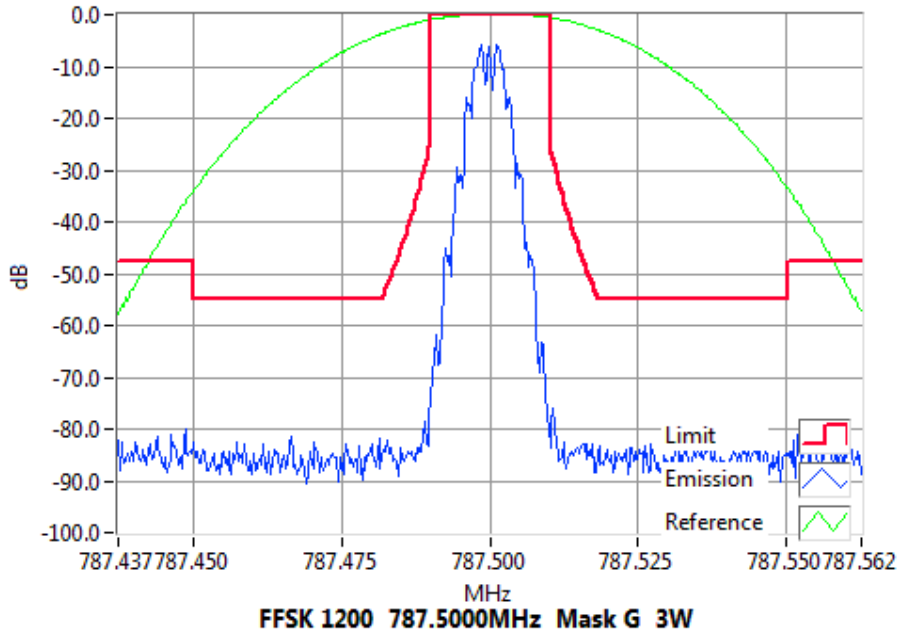
Tx FREQUENCY: 775.975 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 775.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

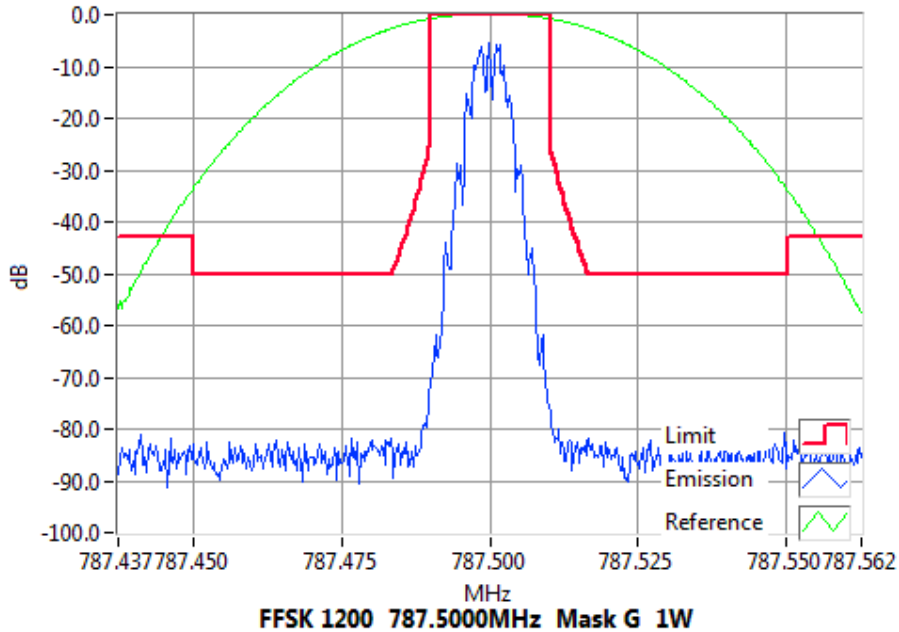
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 787.500 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 787.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

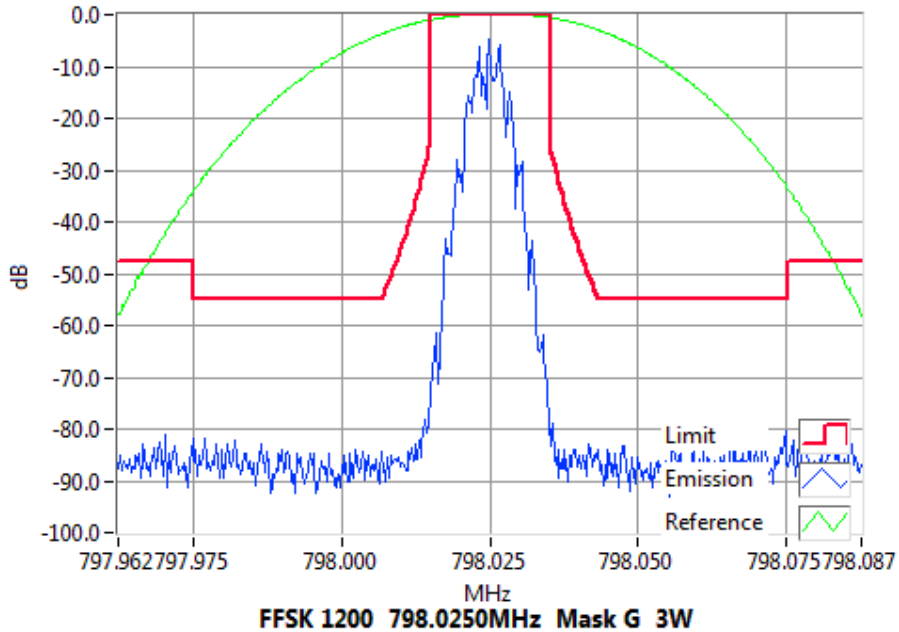
Tx FREQUENCY: 787.500 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 787.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

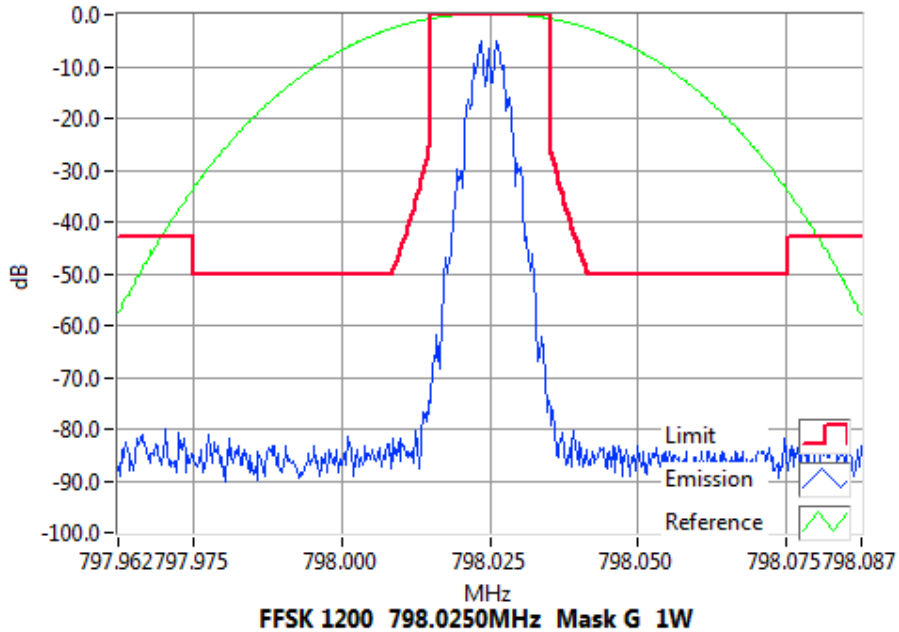
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 798.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 798.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

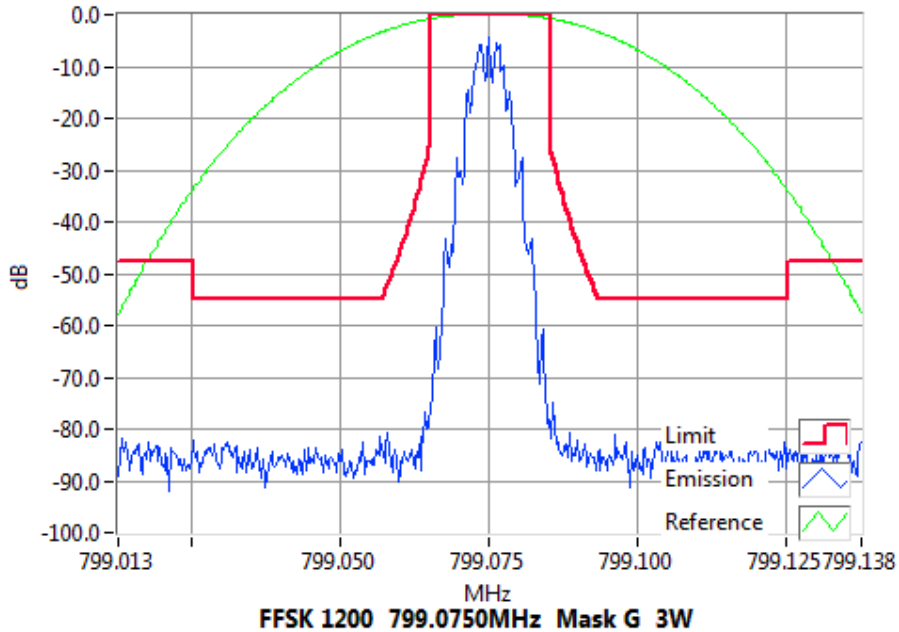
Tx FREQUENCY: 798.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 798.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

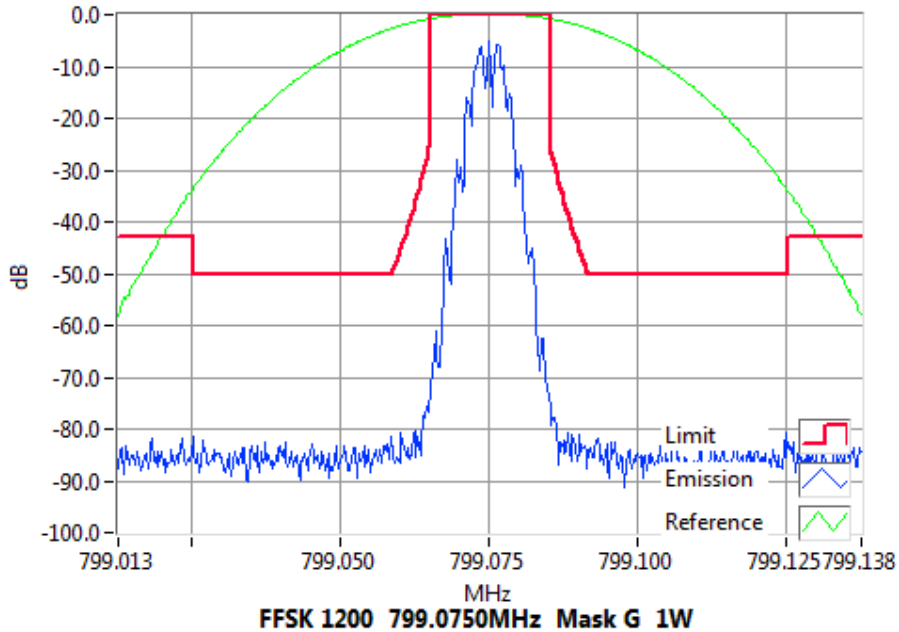
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 799.0750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

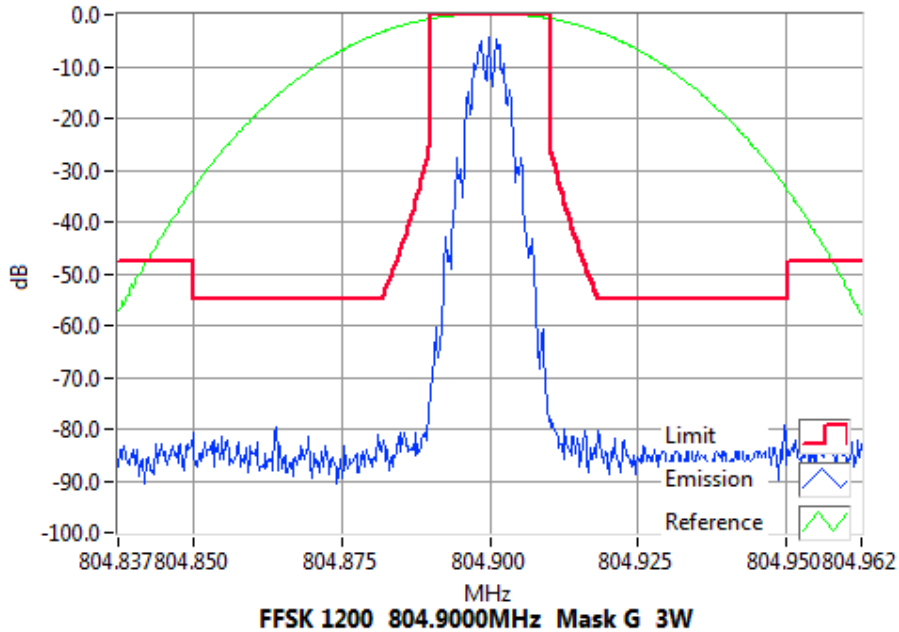
Tx FREQUENCY: 799.075 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 799.0750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

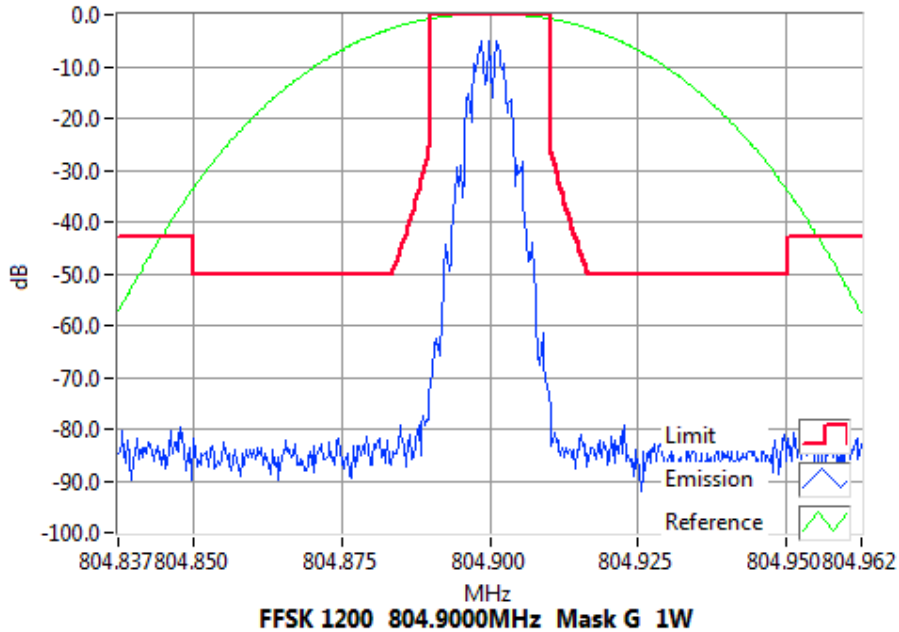
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 804.9000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

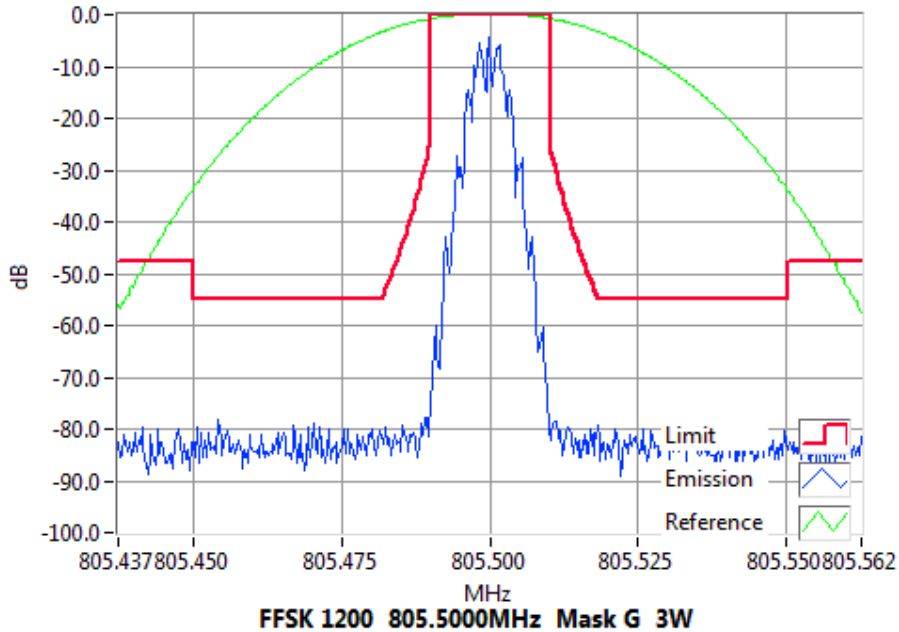
Tx FREQUENCY: 804.900 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 804.9000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

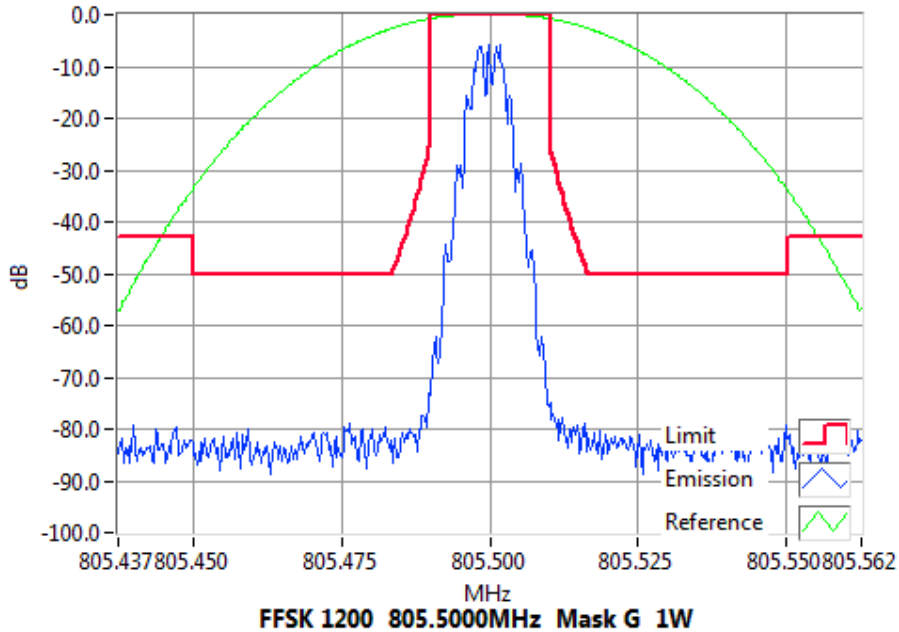
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 805.500 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 805.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

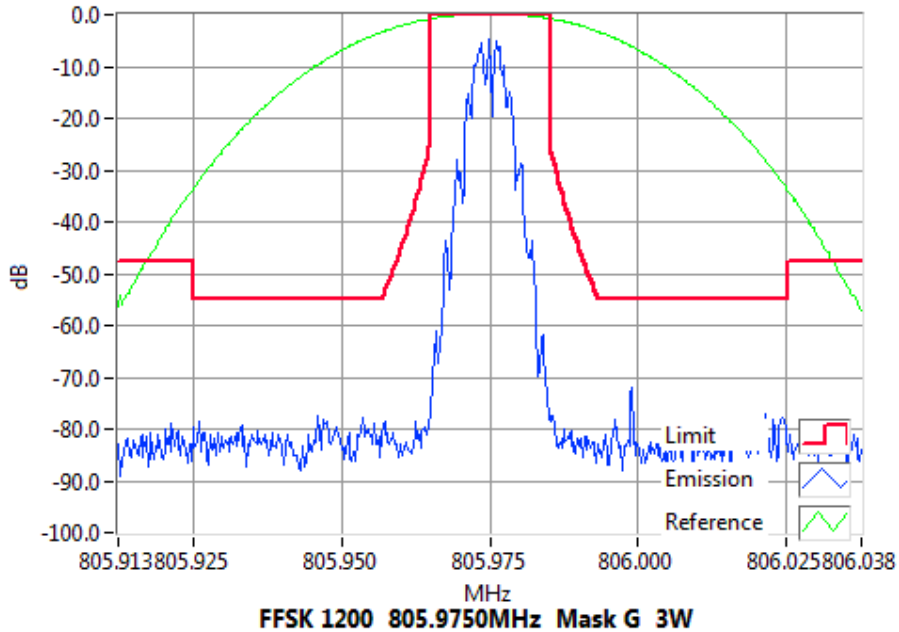
Tx FREQUENCY: 805.500 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 805.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

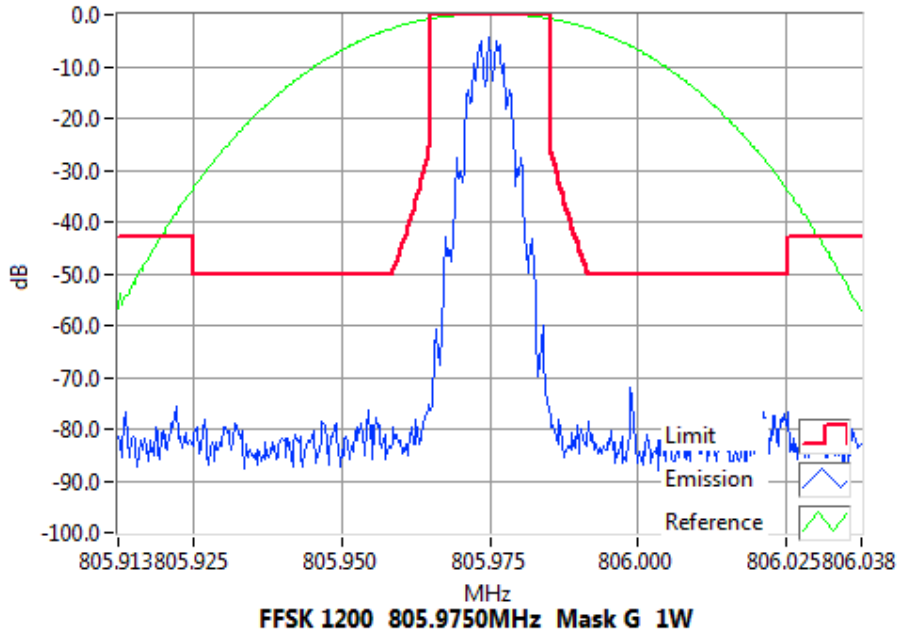
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 805.975 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 805.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

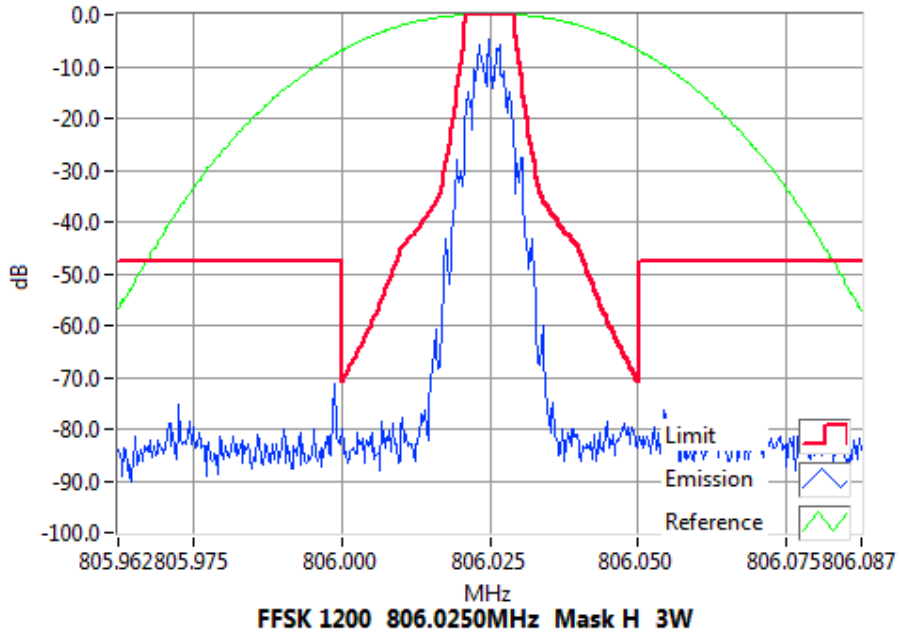
Tx FREQUENCY: 805.975 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 805.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

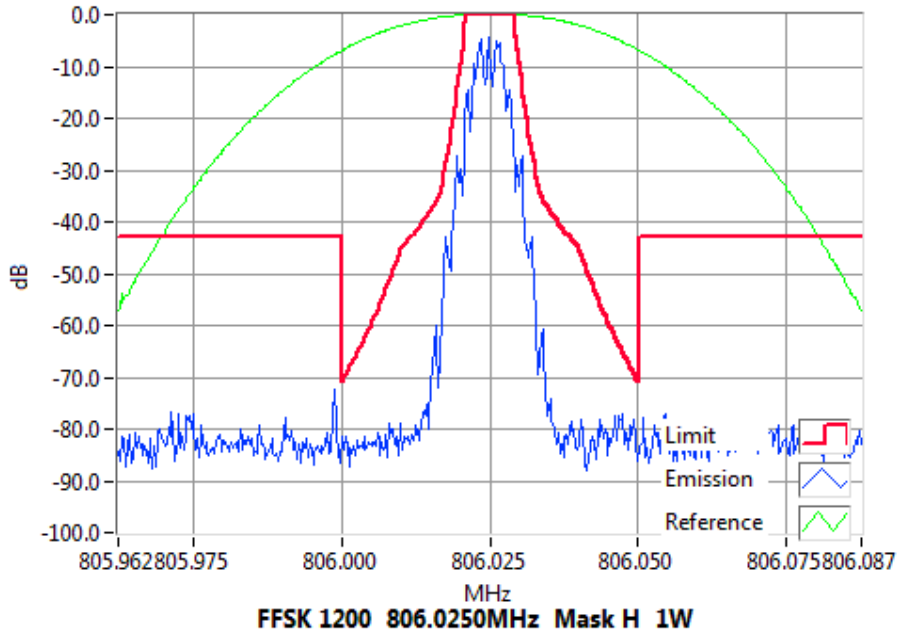
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 806.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 806.0250MHz Mask H 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

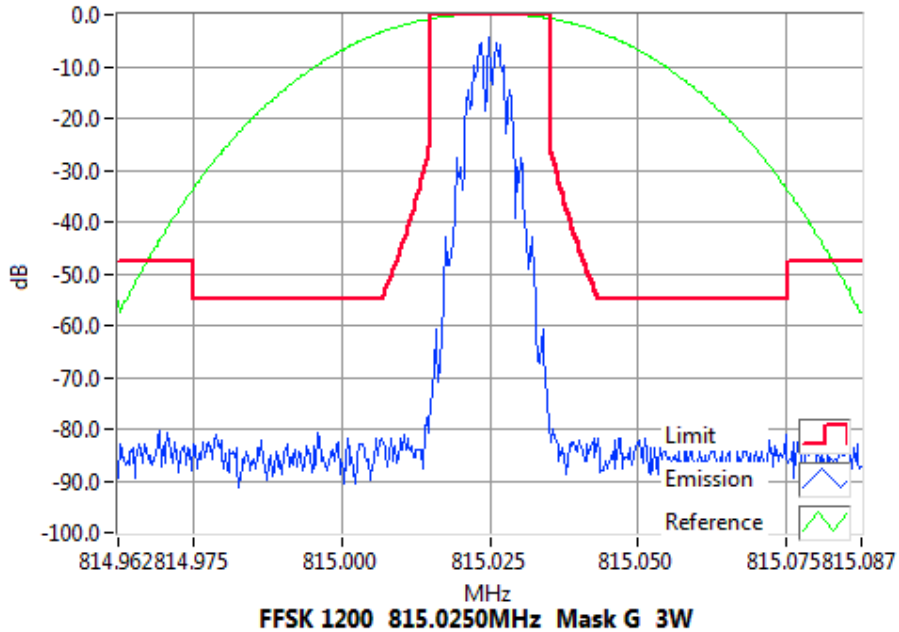
Tx FREQUENCY: 806.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 806.0250MHz Mask H 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

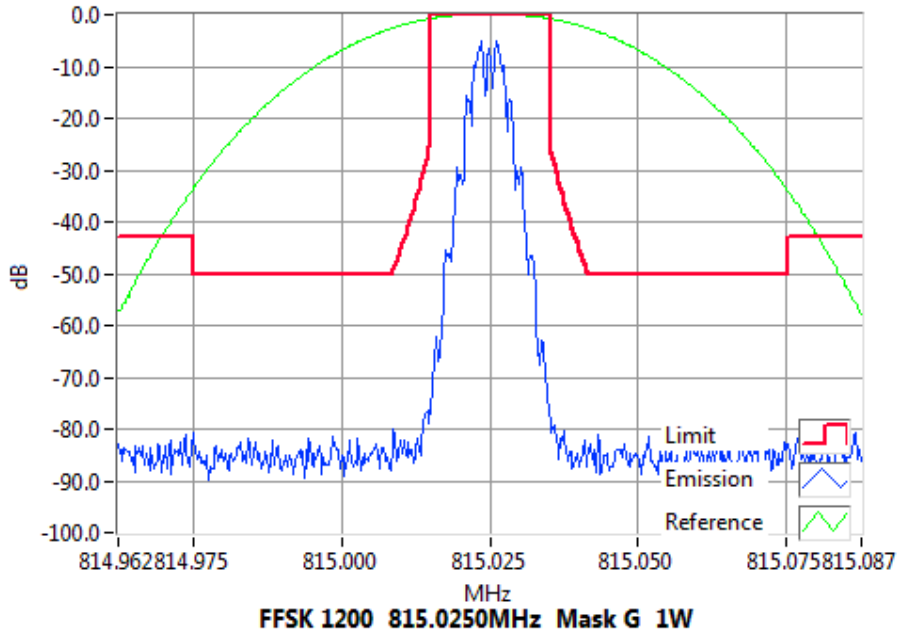
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 815.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 815.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

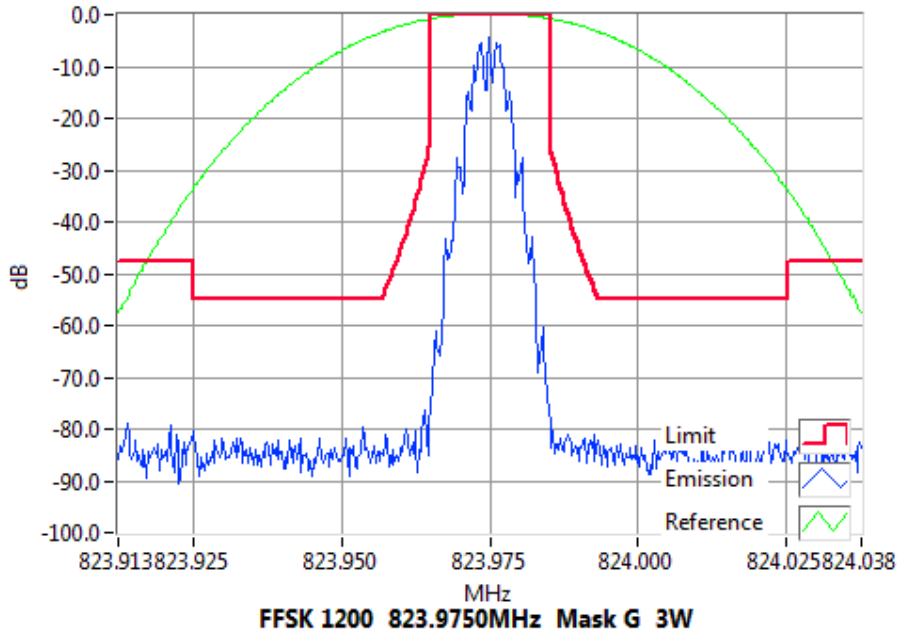
Tx FREQUENCY: 815.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 815.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

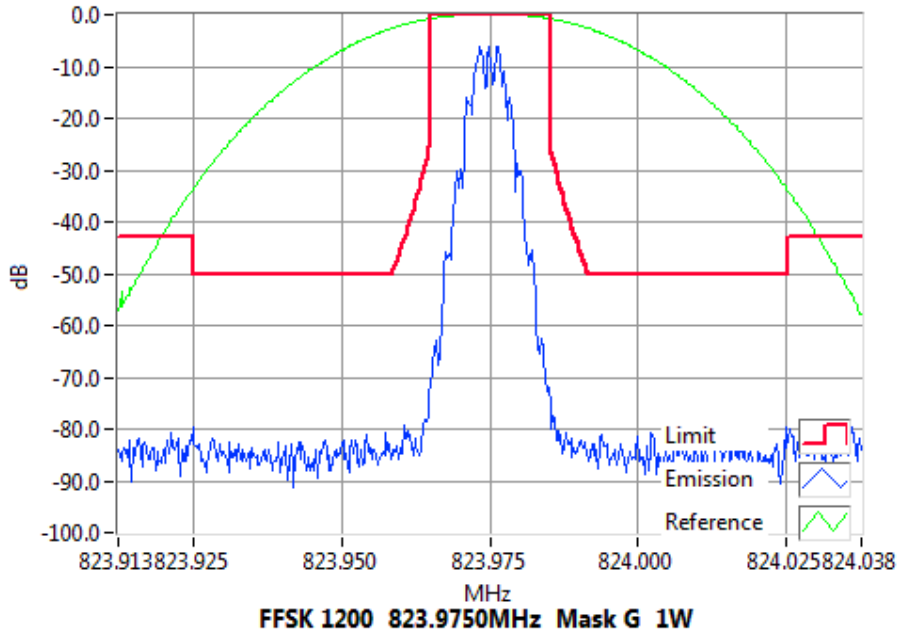
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 823.975 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 823.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

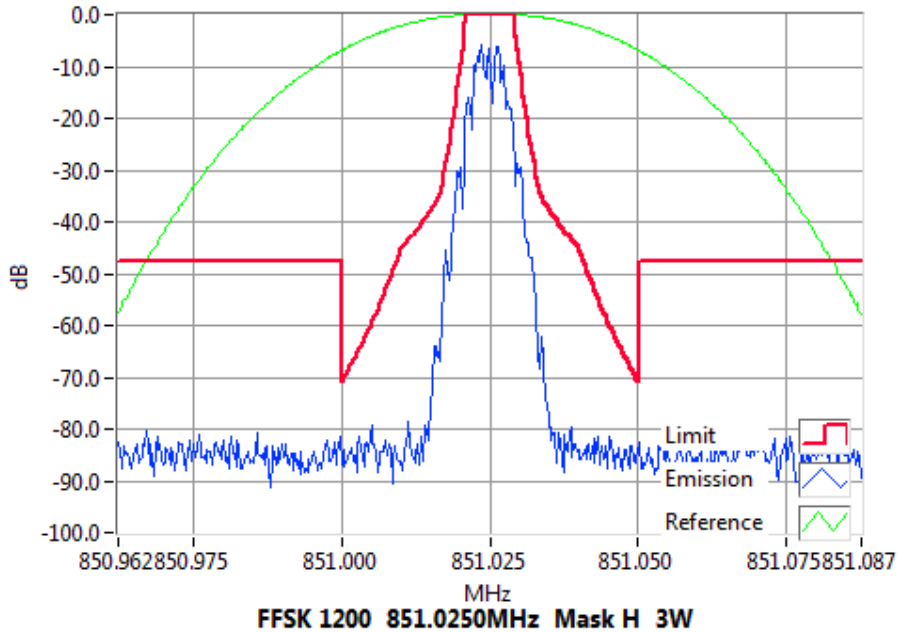
Tx FREQUENCY: 823.975 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 823.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

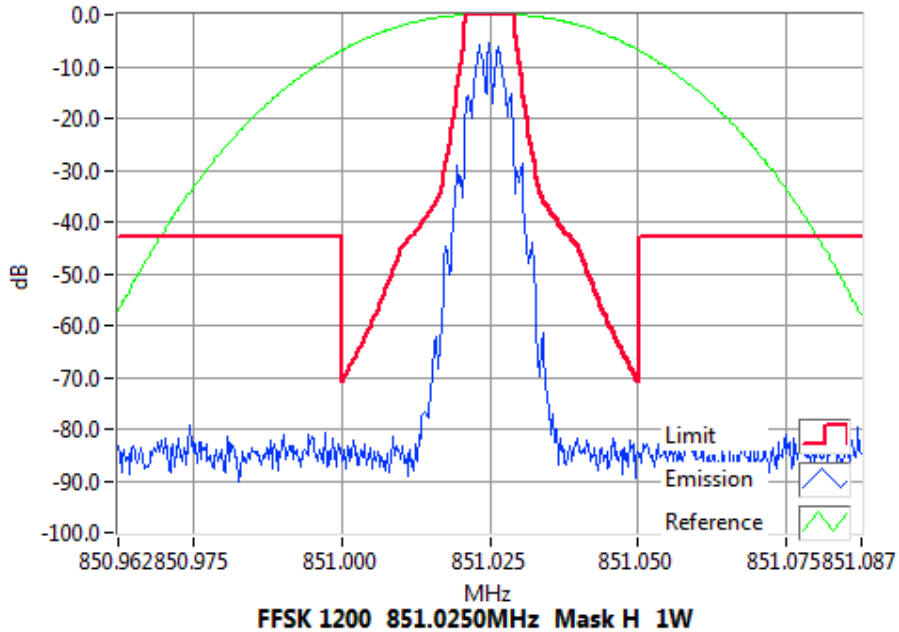
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 851.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 851.0250MHz Mask H 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

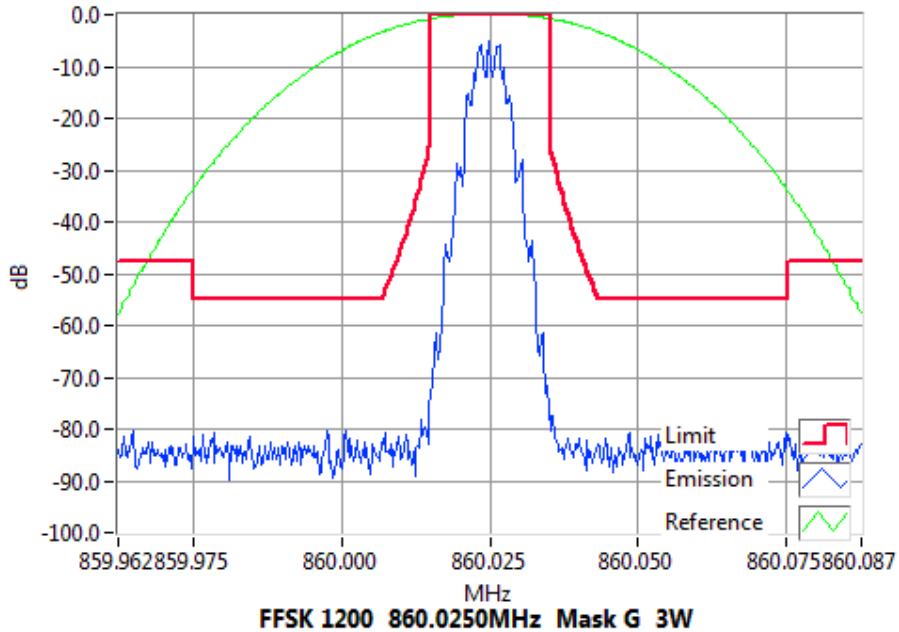
Tx FREQUENCY: 851.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 851.0250MHz Mask H 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

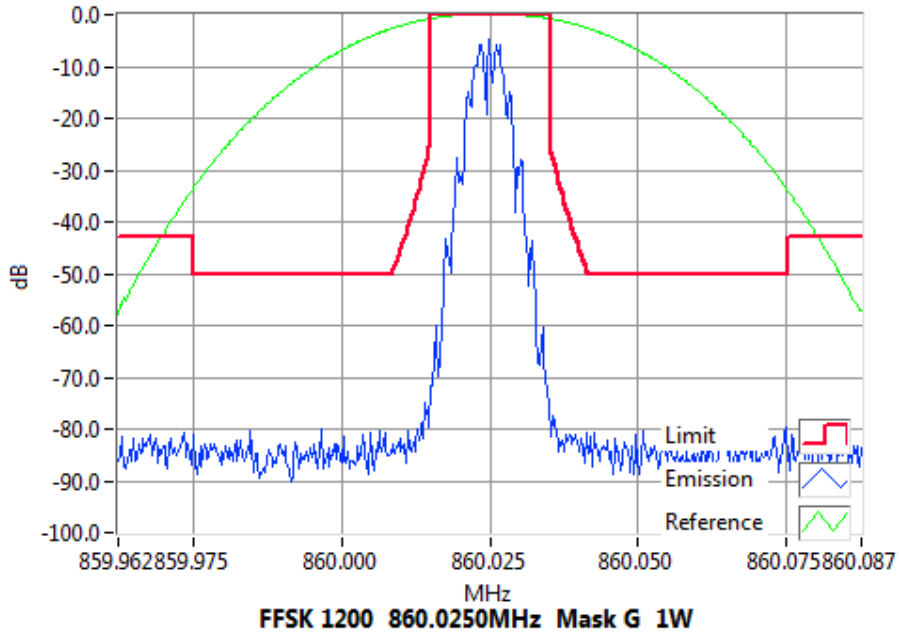
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 860.025 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 860.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

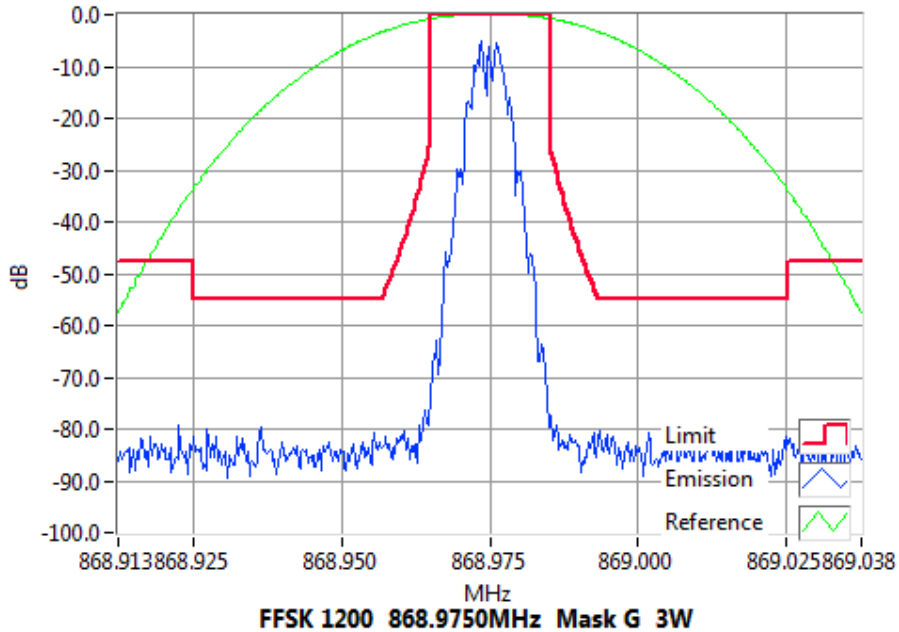
Tx FREQUENCY: 860.025 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 860.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

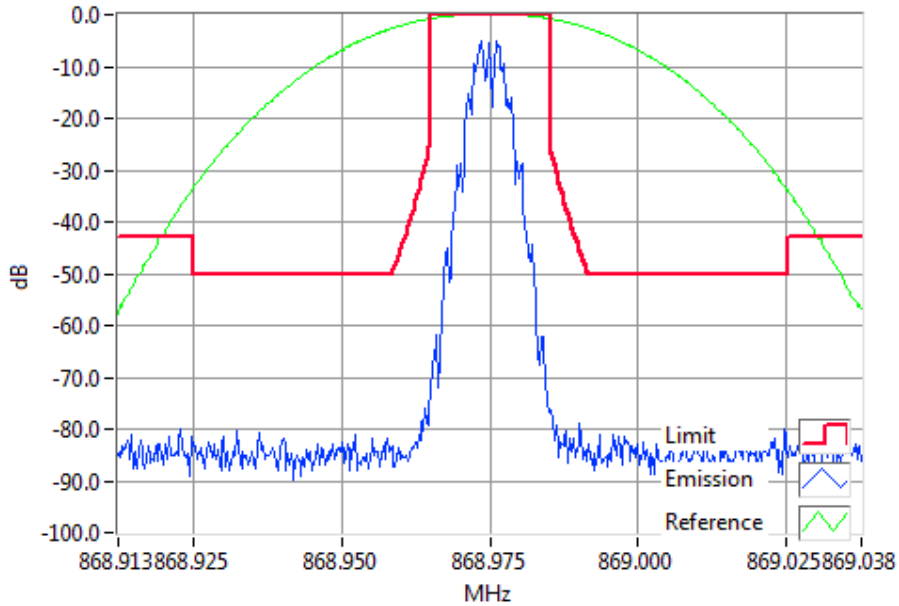
Transmitter Spectrum Masks – FFSK 1200 bps

Tx FREQUENCY: 868.975 MHz 3 W 20 kHz Channel Spacing



FFSK 1200 868.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

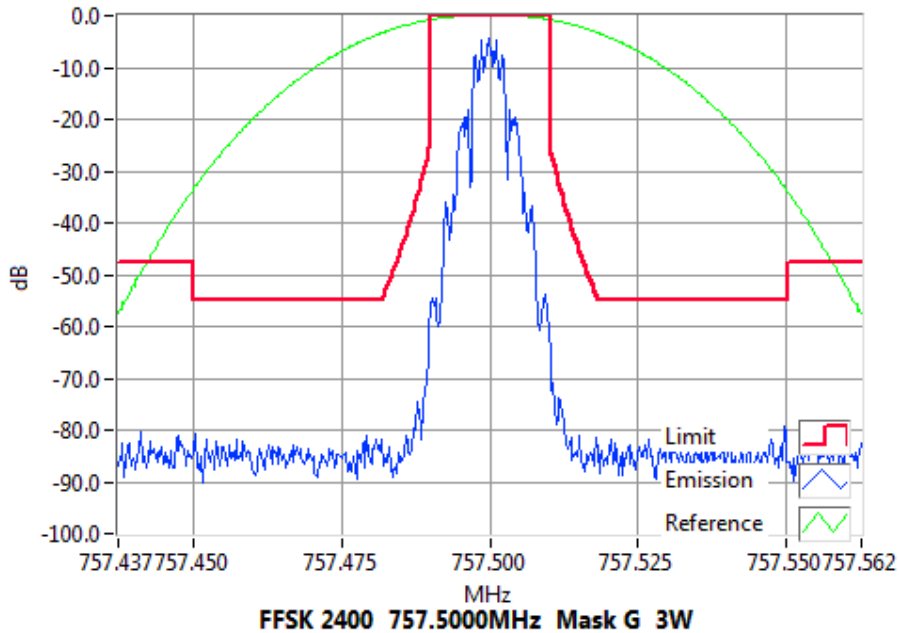
Tx FREQUENCY: 868.975 MHz 1 W 20 kHz Channel Spacing



FFSK 1200 868.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

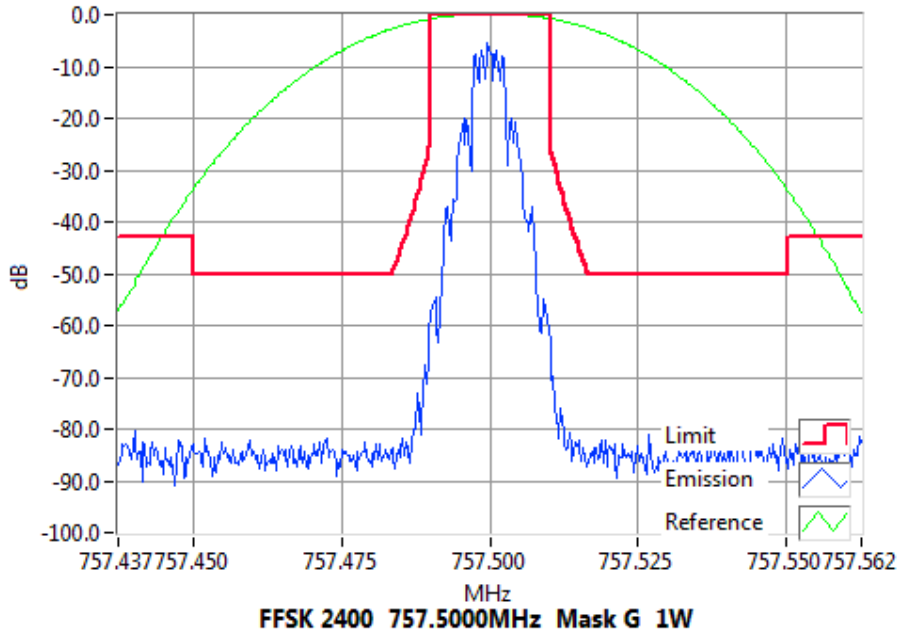
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 757.500 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 757.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

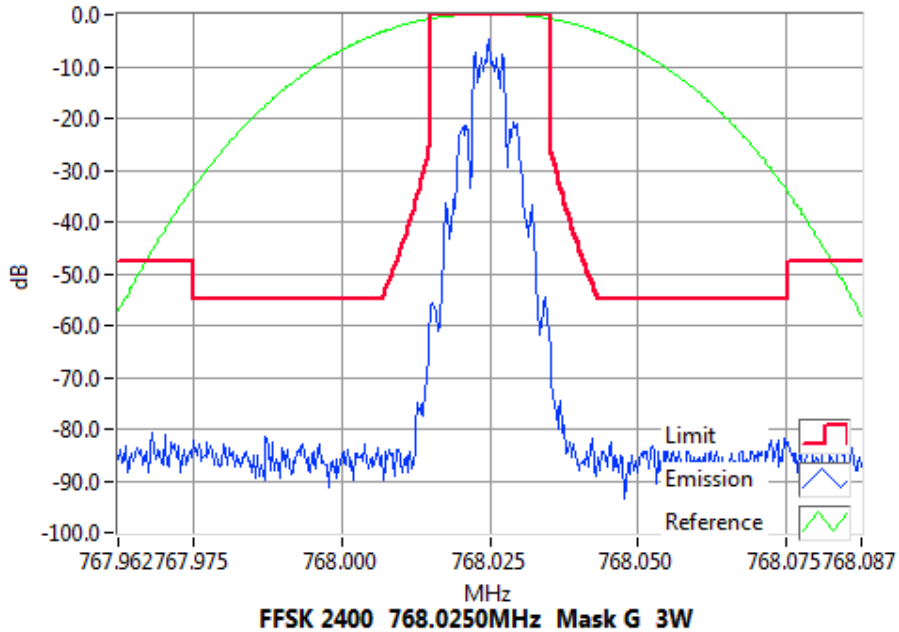
Tx FREQUENCY: 757.500 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 757.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

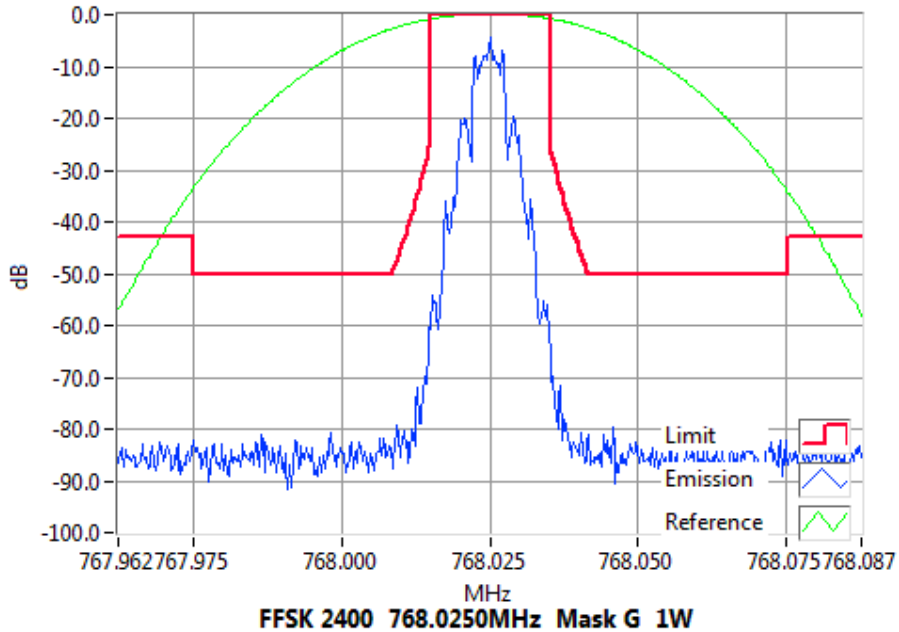
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 768.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 768.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

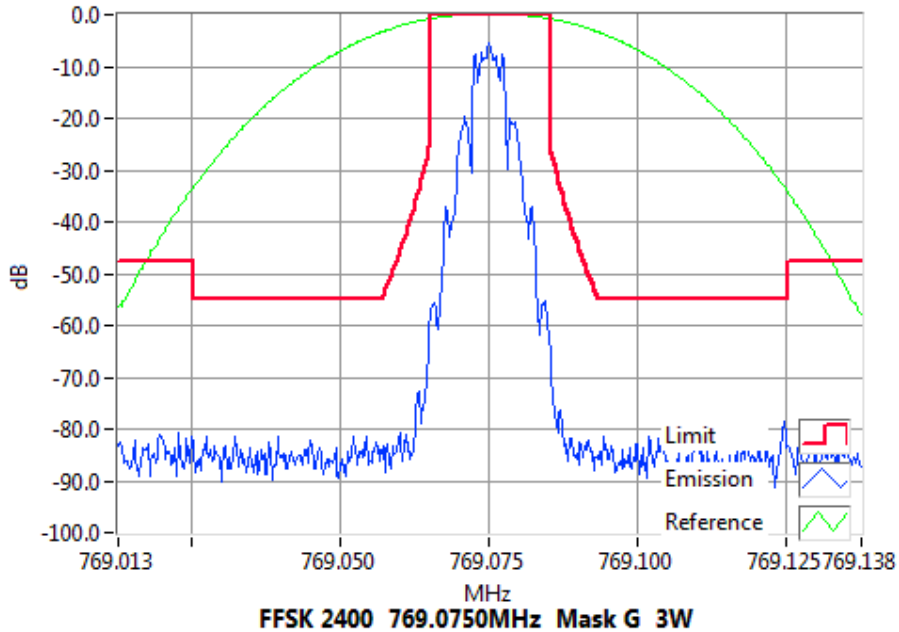
Tx FREQUENCY: 768.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 768.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

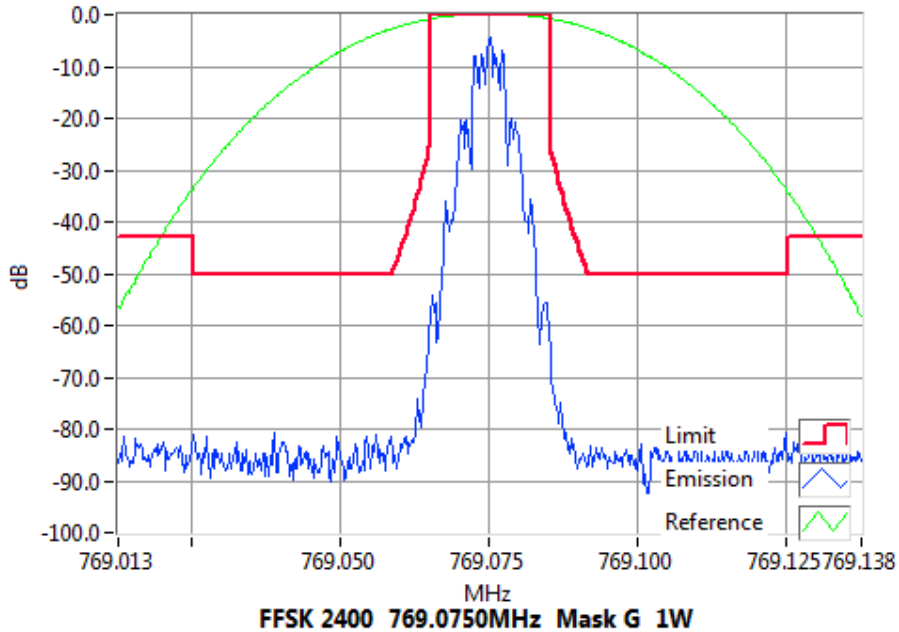
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 769.0750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

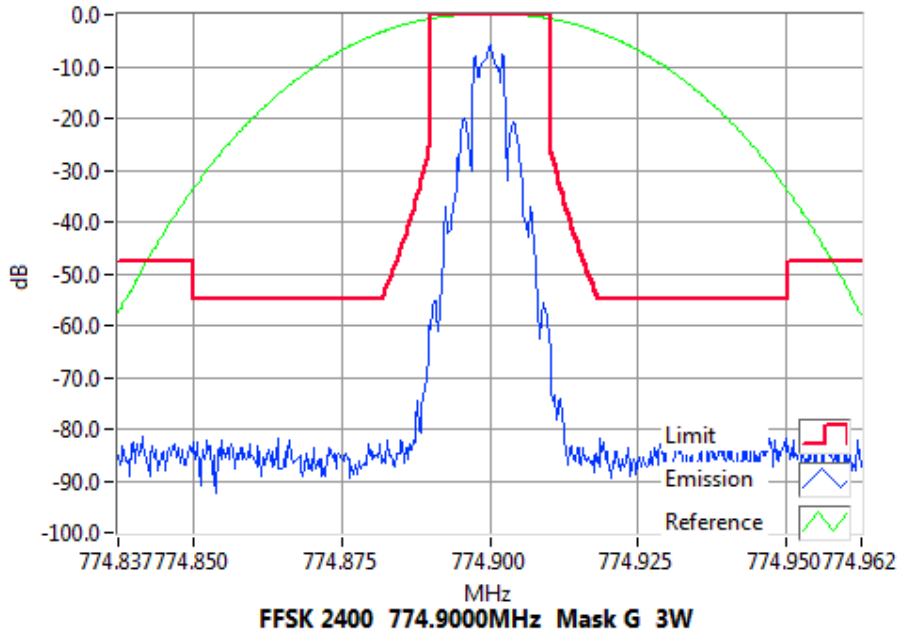
Tx FREQUENCY: 769.075 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 769.0750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

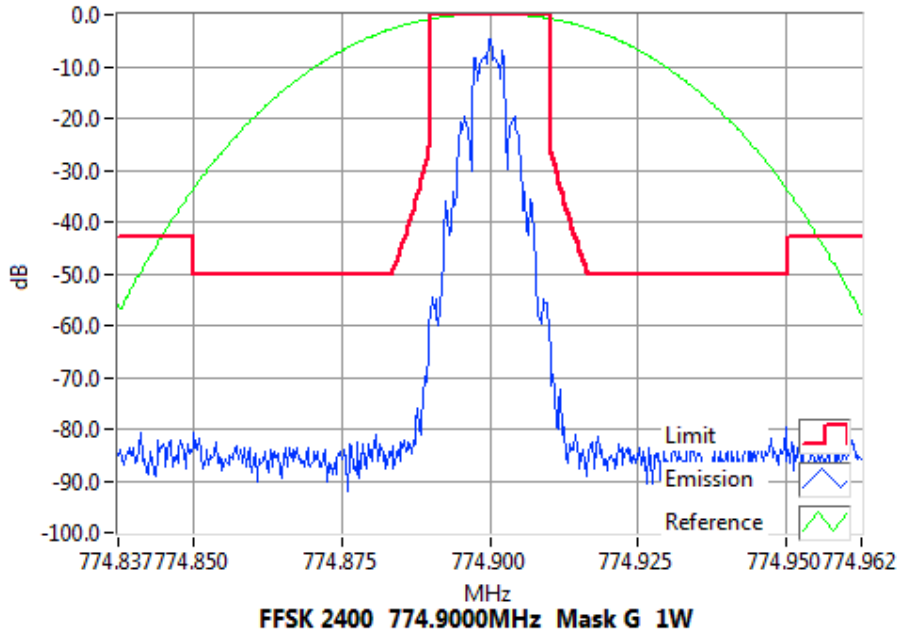
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 774.9000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

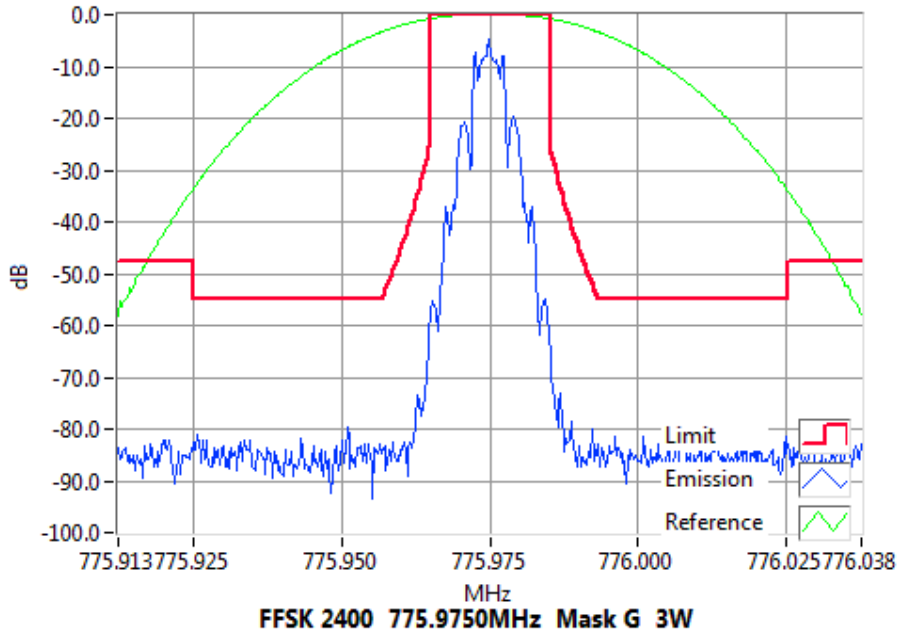
Tx FREQUENCY: 774.900 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 774.9000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

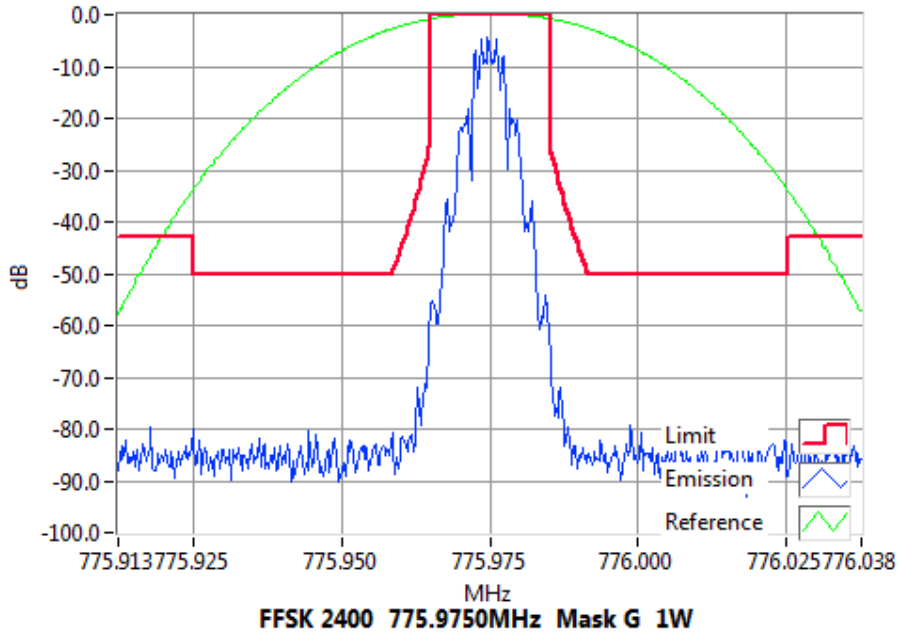
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 775.975 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 775.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

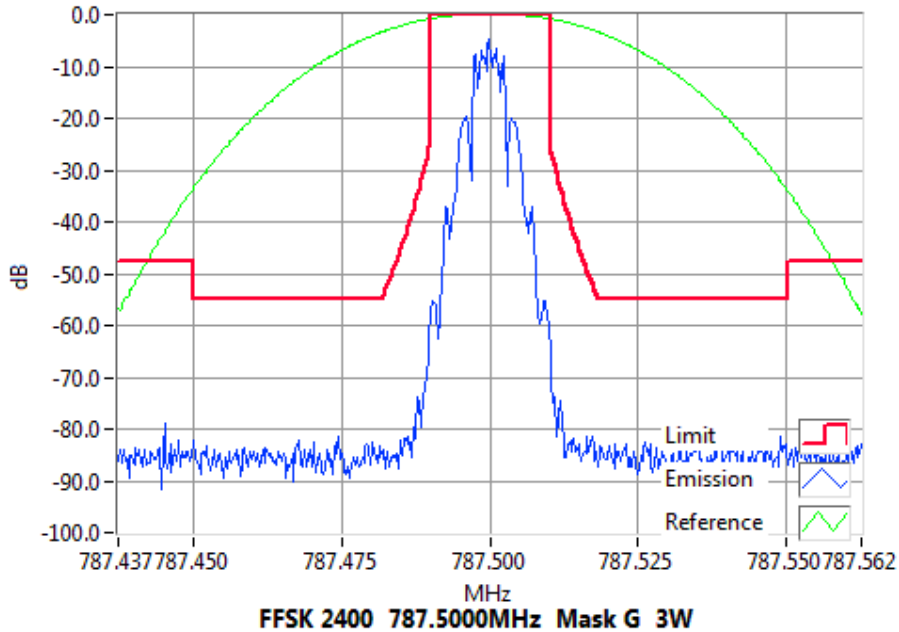
Tx FREQUENCY: 775.975 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 775.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

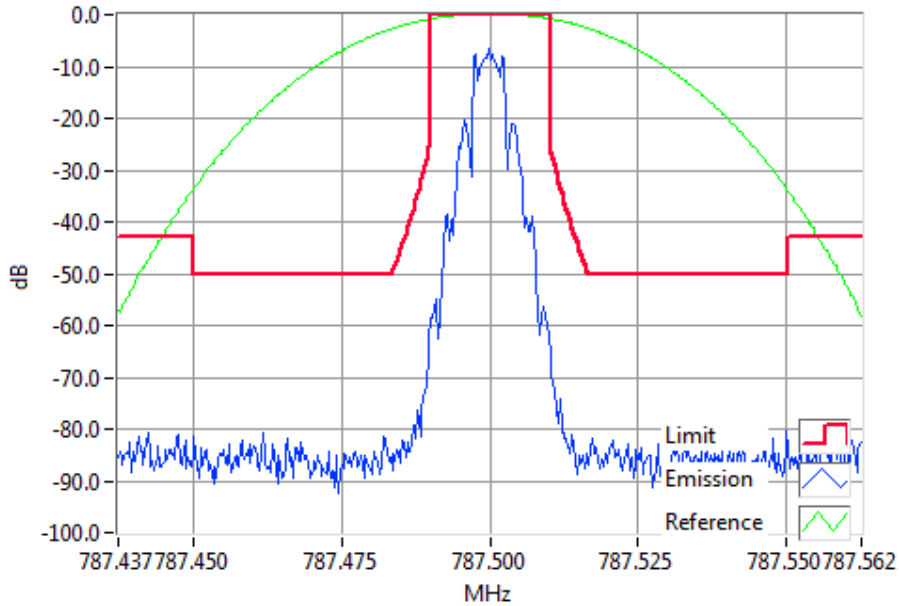
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 787.500 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 787.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

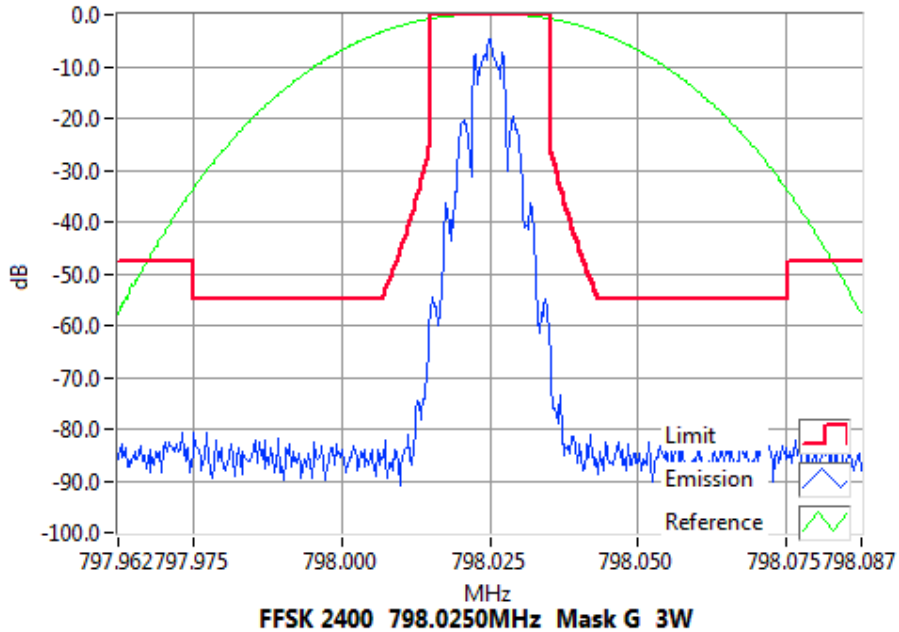
Tx FREQUENCY: 787.500 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 787.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

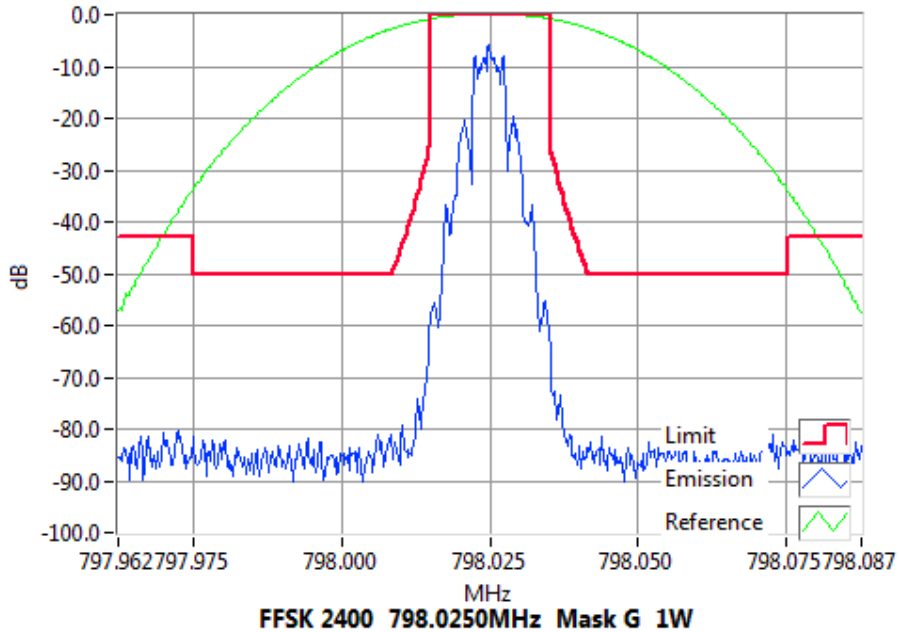
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 798.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 798.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

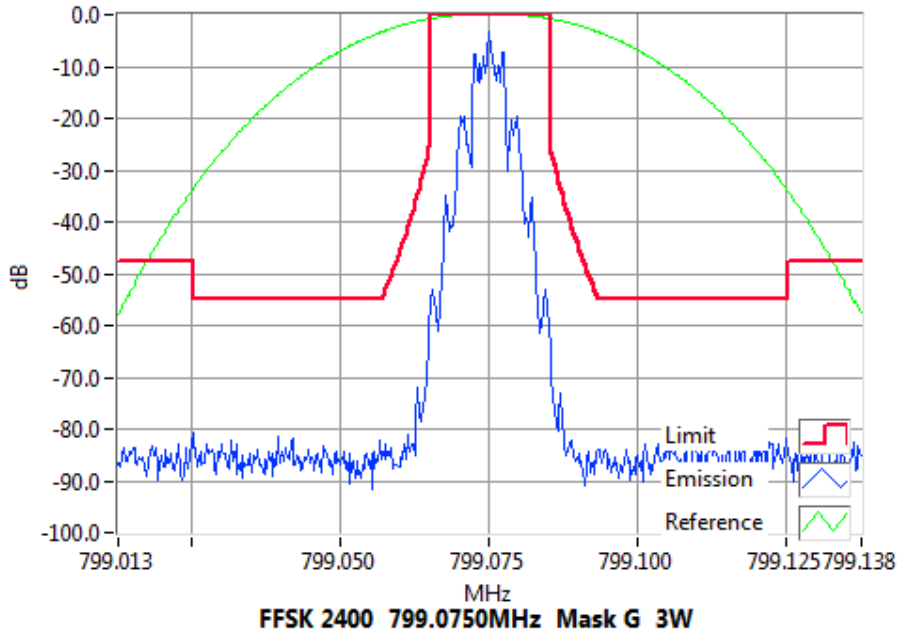
Tx FREQUENCY: 798.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 798.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

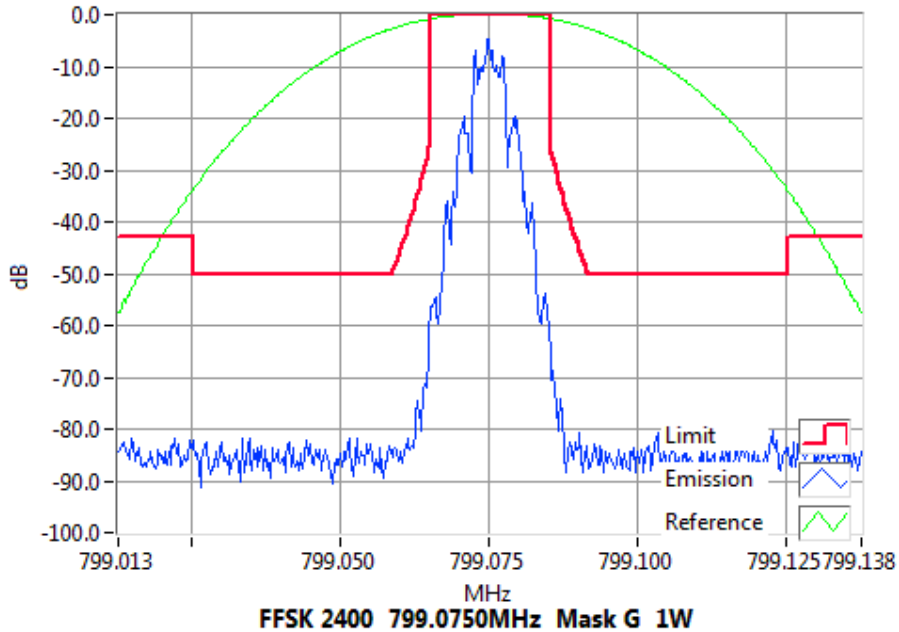
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 799.0750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

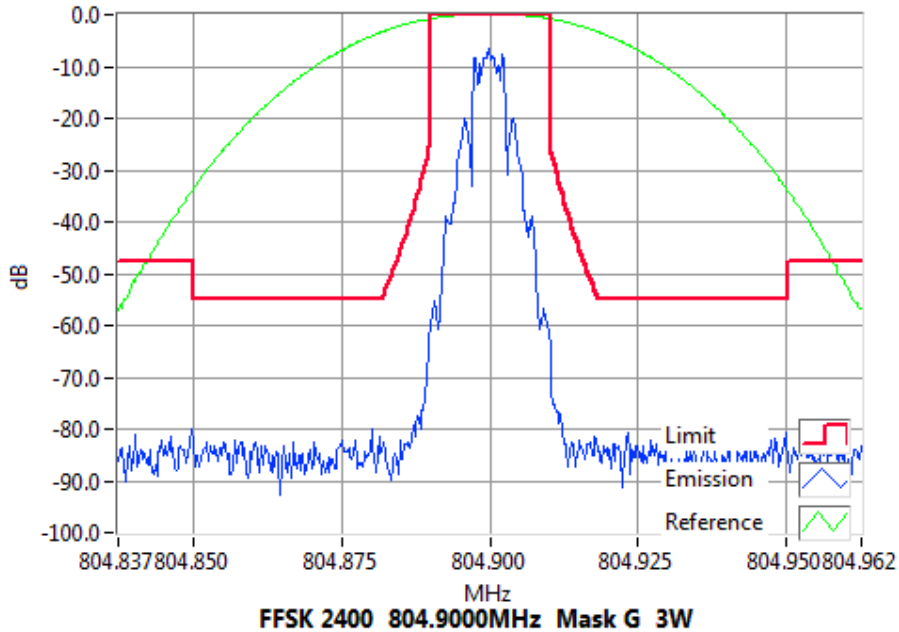
Tx FREQUENCY: 799.075 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 799.0750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

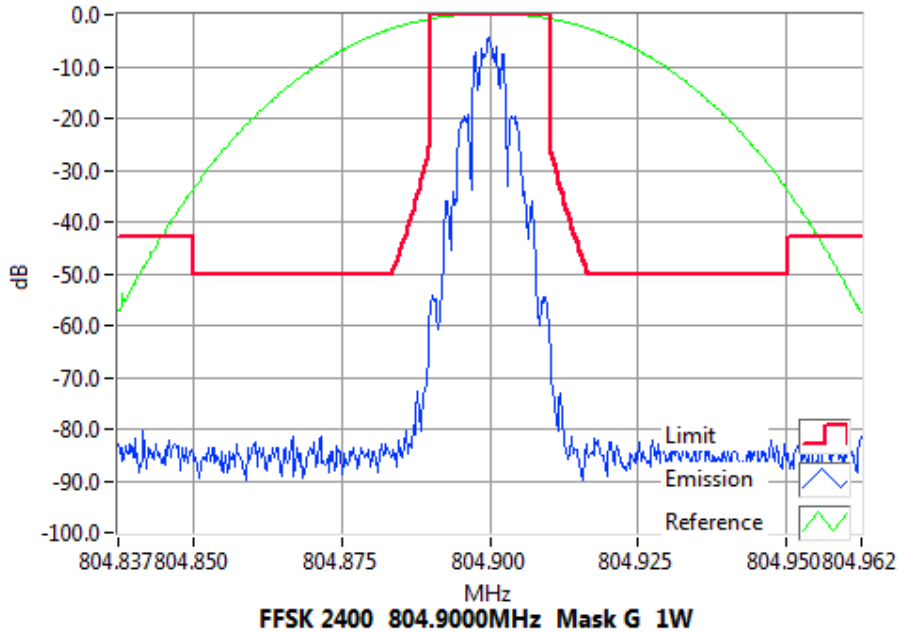
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 804.9000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

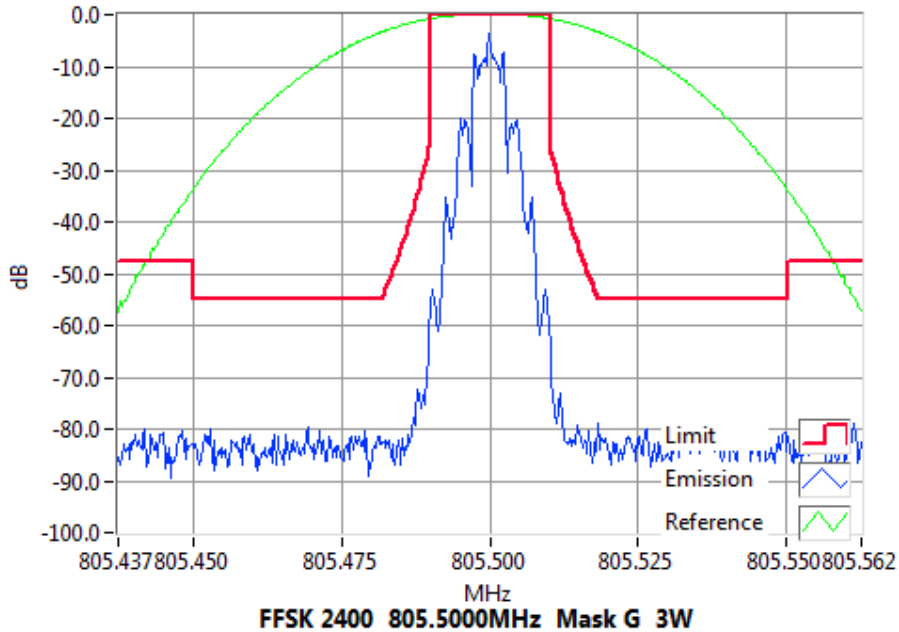
Tx FREQUENCY: 804.900 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 804.9000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

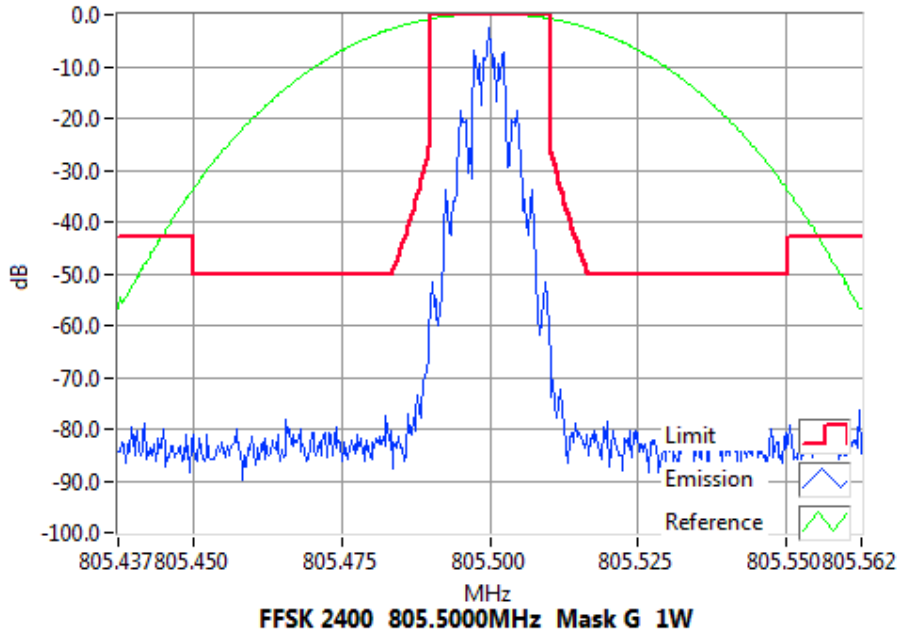
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 805.500 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 805.5000MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

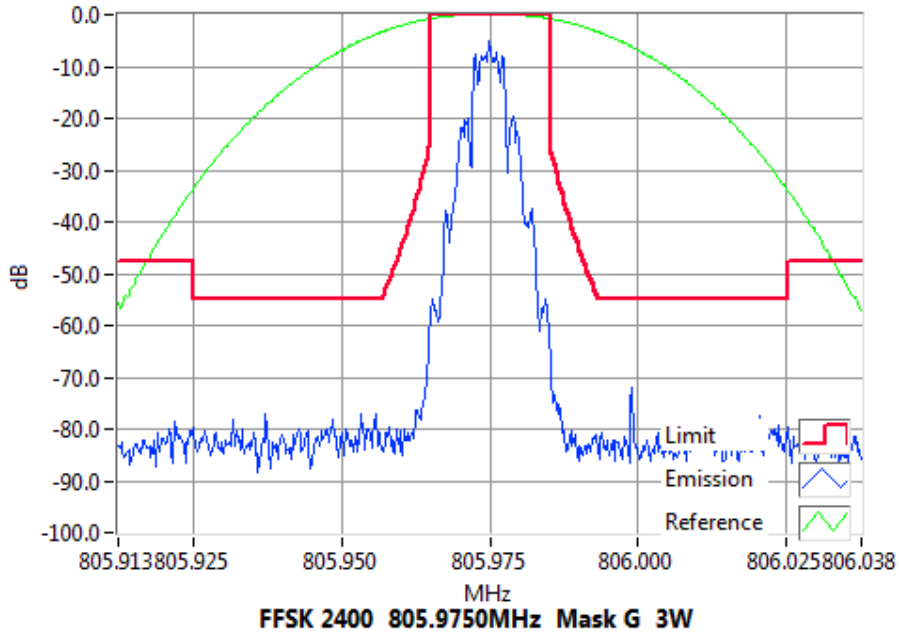
Tx FREQUENCY: 805.500 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 805.5000MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

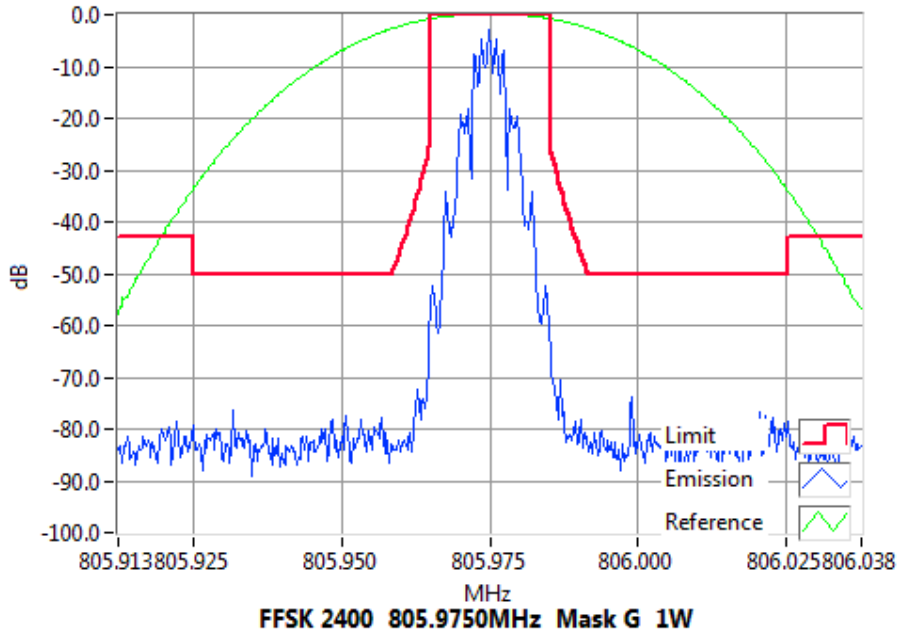
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 805.975 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 805.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

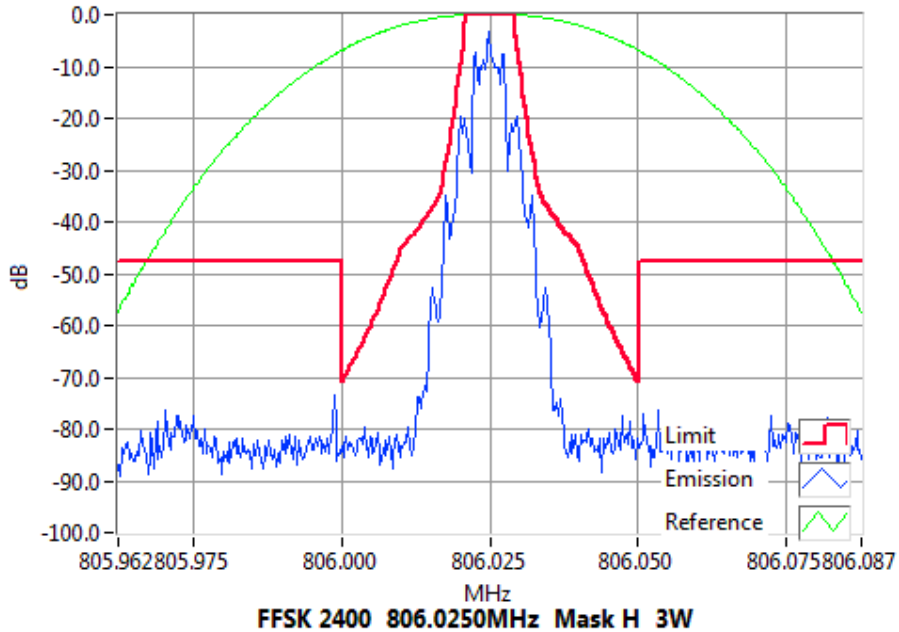
Tx FREQUENCY: 805.975 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 805.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

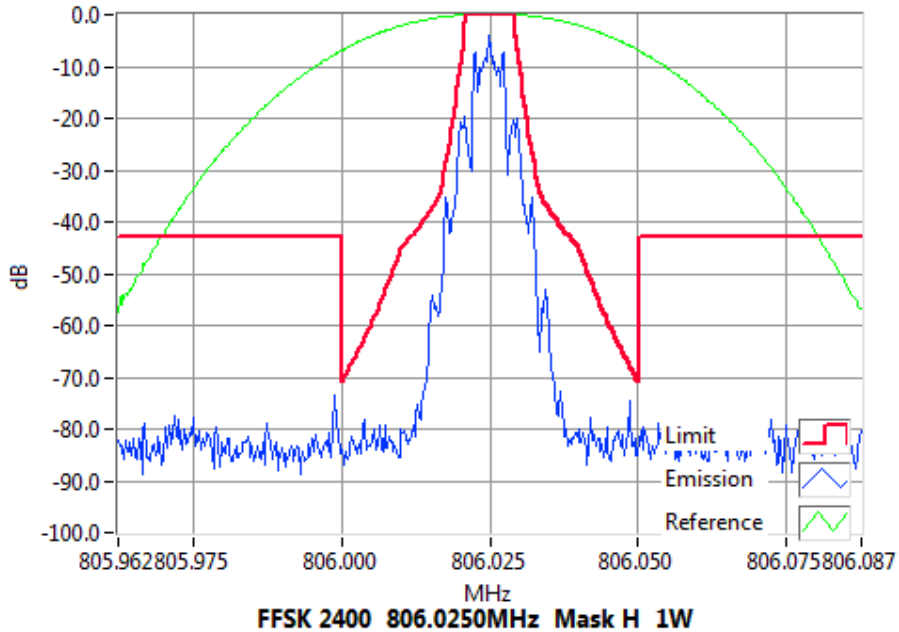
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 806.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 806.0250MHz Mask H 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

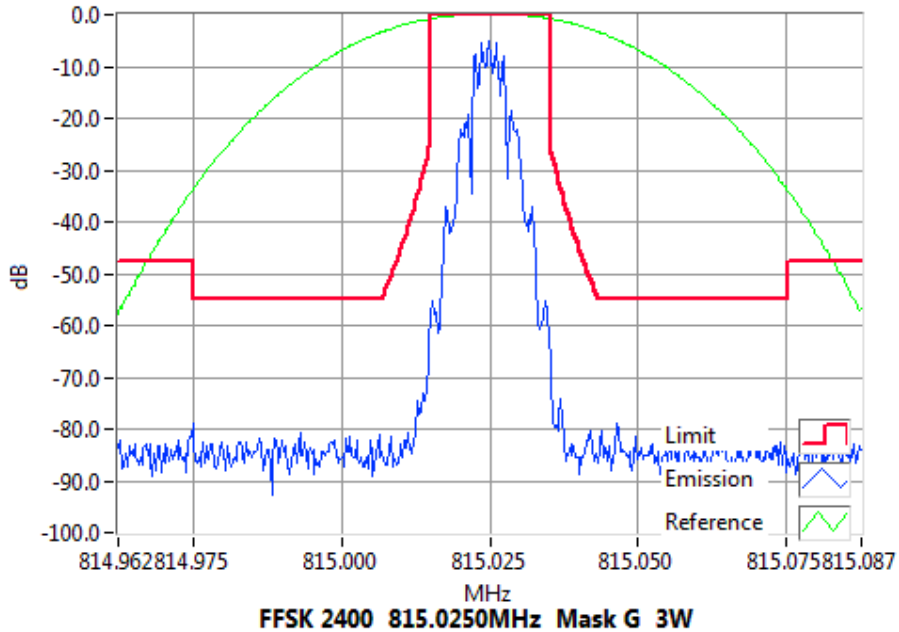
Tx FREQUENCY: 806.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 806.0250MHz Mask H 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

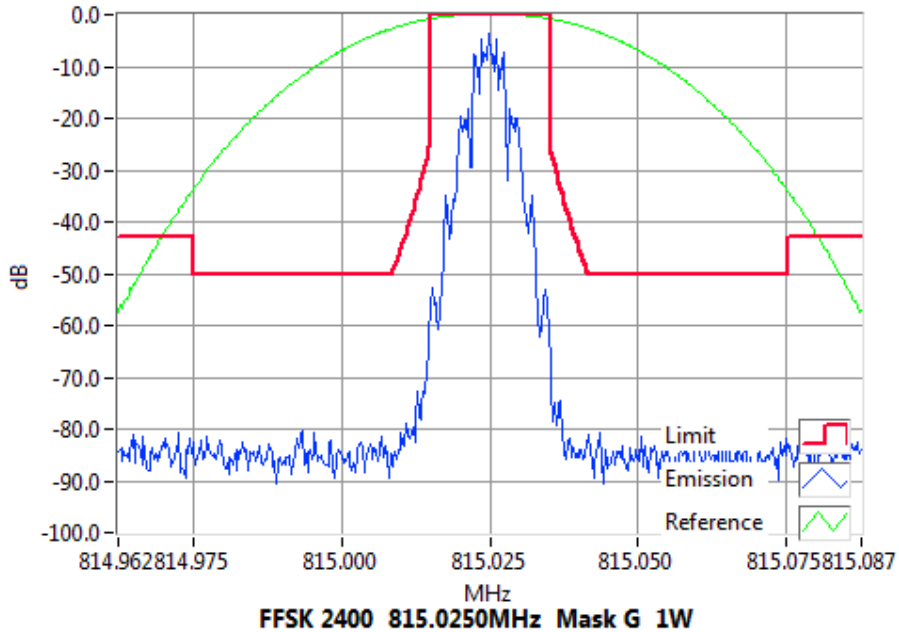
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 815.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 815.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

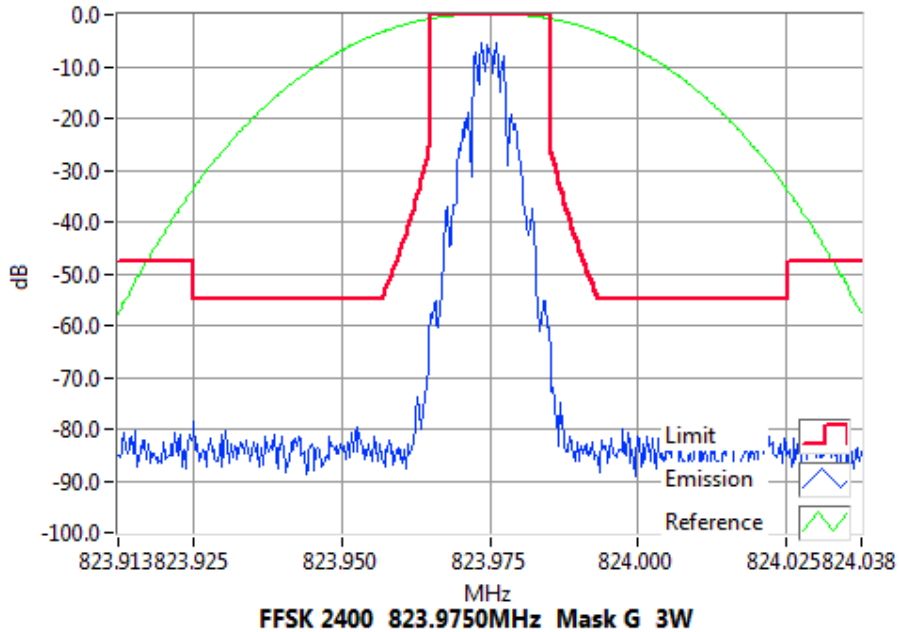
Tx FREQUENCY: 815.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 815.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

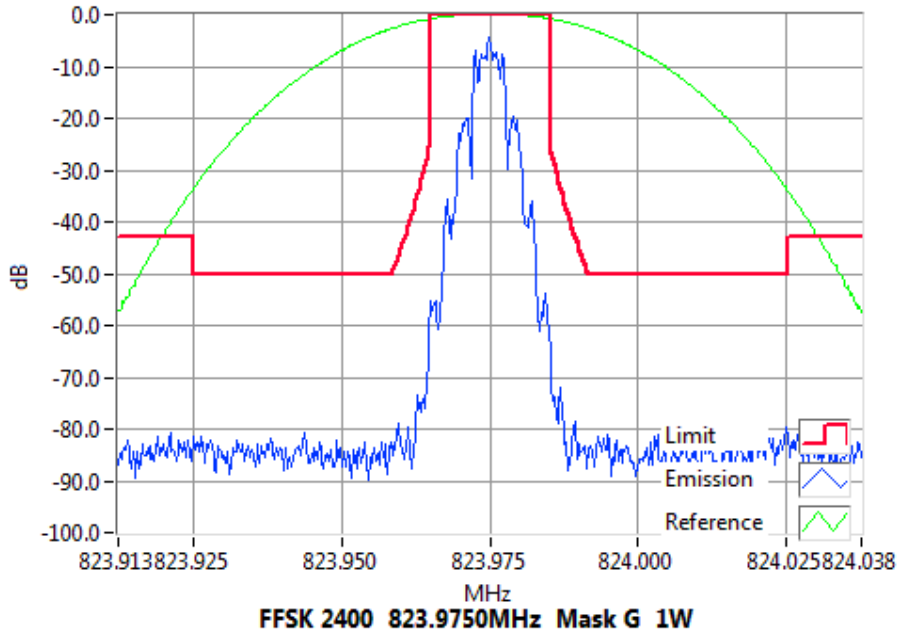
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 823.975 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 823.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

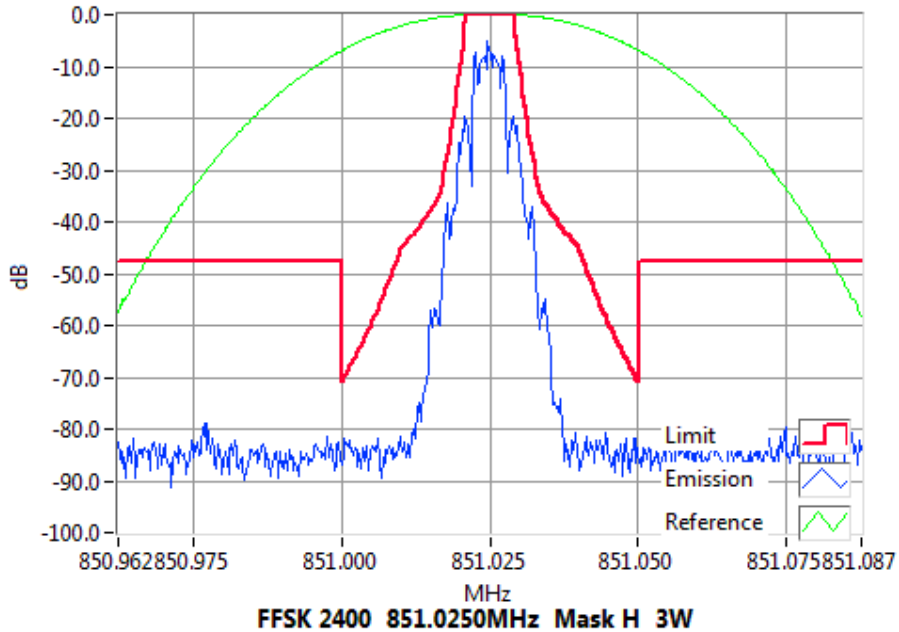
Tx FREQUENCY: 823.975 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 823.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

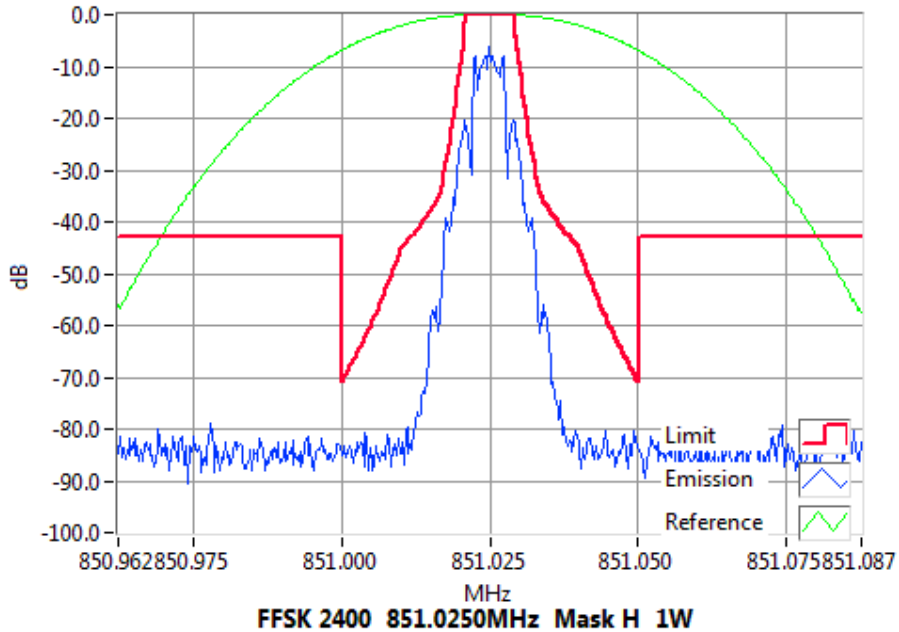
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 851.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 851.0250MHz Mask H 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

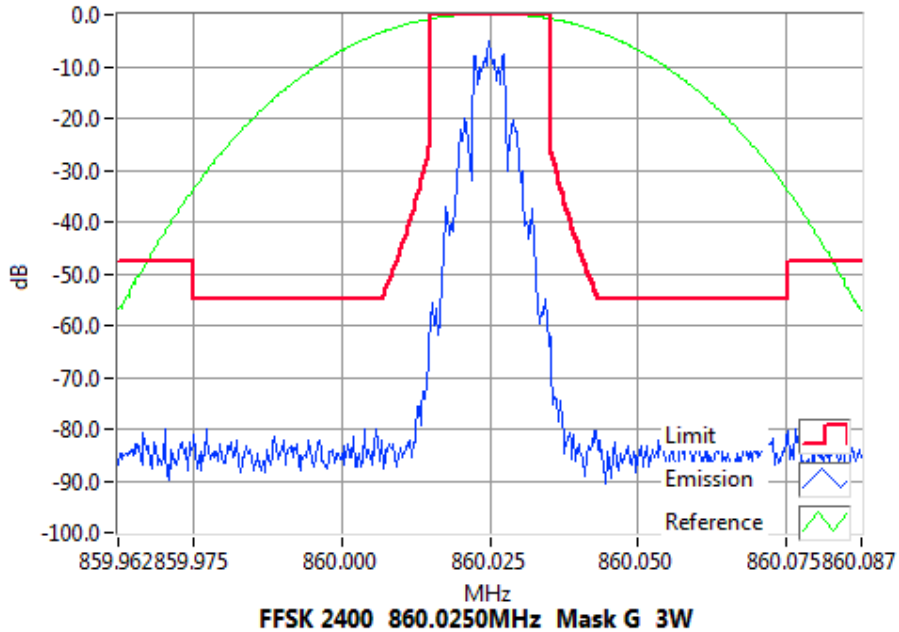
Tx FREQUENCY: 851.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 851.0250MHz Mask H 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

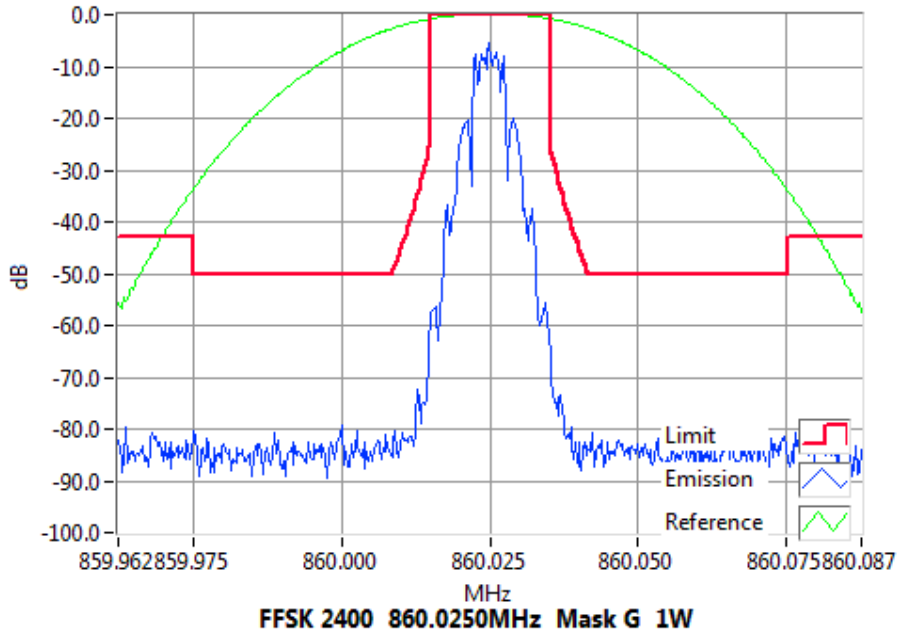
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 860.025 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 860.0250MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

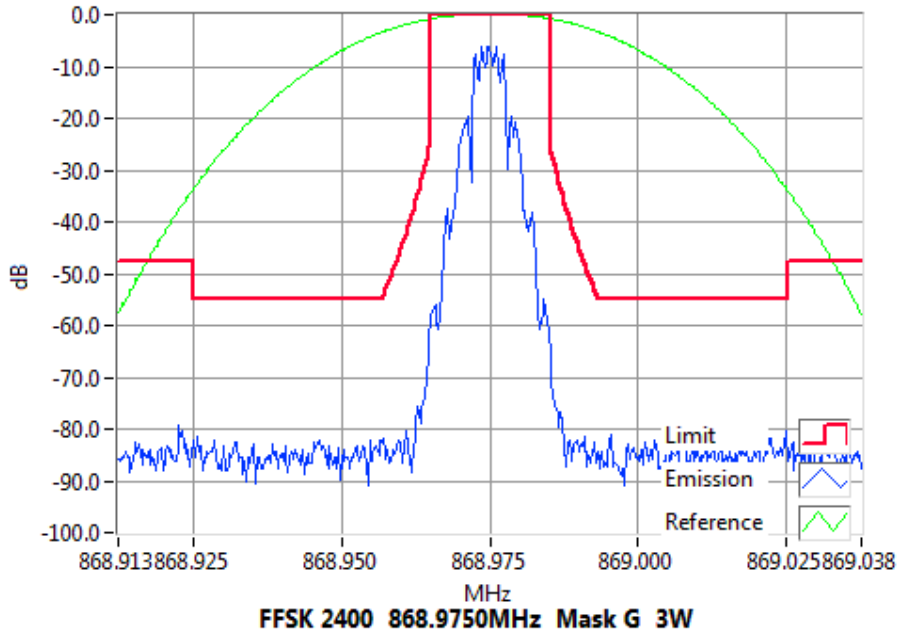
Tx FREQUENCY: 860.025 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 860.0250MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

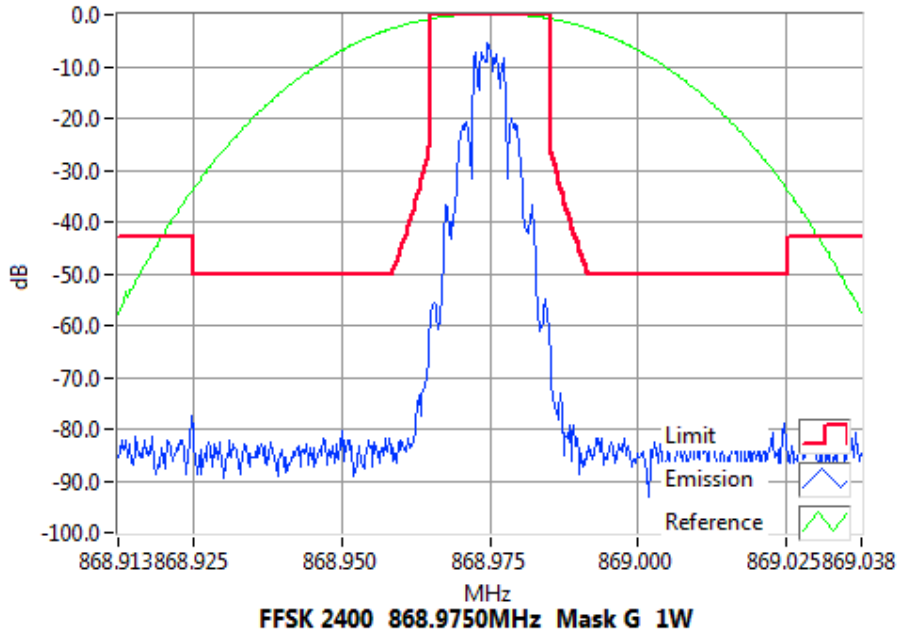
Transmitter Spectrum Masks – FFSK 2400 bps

Tx FREQUENCY: 868.975 MHz 3 W 20 kHz Channel Spacing



FFSK 2400 868.9750MHz Mask G 3W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

Tx FREQUENCY: 868.975 MHz 1 W 20 kHz Channel Spacing



FFSK 2400 868.9750MHz Mask G 1W
RBW=300Hz, VBW=3000Hz, Detector Mode=Peak
Result=Pass

ADJACENT CHANNEL POWER RATIO

SPECIFICATION: FCC 47 CFR 90.543 RSS-119 5.8.9

GUIDE: TIA-603-E 2.2.14
TIA-102.CAAA-E 2.2.8

MEASUREMENT PROCEDURE:
1. Refer Annex A for equipment set up.
2. The transmitter is modulated with the standard test pattern for digital modulation.
3. The test is performed in accordance with 47 CFR 90.543

MEASUREMENT UNCERTAINTY: ≤ 12.75 GHz ± 3.0 dB

MEASUREMENT RESULTS:

Adjacent Channel Power Ratio

Analogue

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-66.14	-66.58	-40
21.875 kHz	6.25 kHz	-76.58	-77.01	-60
37.5 kHz	25 kHz	-74.09	-74.16	-60
62.5 kHz	25 kHz	-74.61	-74.67	-65
87.5 kHz	25 kHz	-74.86	-74.92	-65
150 kHz	100 kHz	-68.94	-68.94	-65
250 kHz	100 kHz	-72.61	-72.59	-65
350 kHz	100 kHz	-77.07	-77.07	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.70		-75
12 MHz to paired receive band	30 kHz (swept)	-100.30		-75
In the paired receive band	30 kHz (swept)	-112.20		-100

FFSK 1200 bps

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-78.04	-78.11	-40
21.875 kHz	6.25 kHz	-79.67	-79.64	-60
37.5 kHz	25 kHz	-73.85	-73.88	-60
62.5 kHz	25 kHz	-74.32	-74.36	-65
87.5 kHz	25 kHz	-74.39	-74.46	-65
150 kHz	100 kHz	-69.03	-69.00	-65
250 kHz	100 kHz	-72.62	-72.63	-65
350 kHz	100 kHz	-77.08	-77.1	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.60		-75
12 MHz to paired receive band	30 kHz (swept)	-99.40		-75
In the paired receive band	30 kHz (swept)	-110.20		-100

FFSK 2400 bps

Tx FREQUENCY: 769.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.74	-77.96	-40
21.875 kHz	6.25 kHz	-79.87	-79.99	-60
37.5 kHz	25 kHz	-74.19	-74.19	-60
62.5 kHz	25 kHz	-74.72	-74.78	-65
87.5 kHz	25 kHz	-74.93	-75.01	-65
150 kHz	100 kHz	-69.00	-68.97	-65
250 kHz	100 kHz	-72.62	-72.58	-65
350 kHz	100 kHz	-76.90	-77.01	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.20		-75
12 MHz to paired receive band	30 kHz (swept)	-99.80		-75
In the paired receive band	30 kHz (swept)	-112.40		-100

Adjacent Channel Power Ratio

Analogue

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-65.98	-66.19	-40
21.875 kHz	6.25 kHz	-76.61	-76.82	-60
37.5 kHz	25 kHz	-74.19	-74.18	-60
62.5 kHz	25 kHz	-74.62	-74.69	-65
87.5 kHz	25 kHz	-74.89	-74.95	-65
150 kHz	100 kHz	-68.87	-68.91	-65
250 kHz	100 kHz	-72.42	-72.44	-65
350 kHz	100 kHz	-76.81	-76.84	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.40		-75
12 MHz to paired receive band	30 kHz (swept)	-99.80		-75
In the paired receive band	30 kHz (swept)	-111.00		-100

FFSK 1200 bps

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.98	-78.05	-40
21.875 kHz	6.25 kHz	-79.60	-79.59	-60
37.5 kHz	25 kHz	-73.92	-73.92	-60
62.5 kHz	25 kHz	-74.37	-74.44	-65
87.5 kHz	25 kHz	-74.41	-74.47	-65
150 kHz	100 kHz	-69.01	-69.02	-65
250 kHz	100 kHz	-72.59	-72.55	-65
350 kHz	100 kHz	-76.88	-76.84	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.40		-75
12 MHz to paired receive band	30 kHz (swept)	-100.30		-75
In the paired receive band	30 kHz (swept)	-111.00		-100

FFSK 2400 bps

Tx FREQUENCY: 774.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.75	-77.95	-40
21.875 kHz	6.25 kHz	-79.90	-79.91	-60
37.5 kHz	25 kHz	-74.23	-74.26	-60
62.5 kHz	25 kHz	-74.79	-74.85	-65
87.5 kHz	25 kHz	-74.90	-74.94	-65
150 kHz	100 kHz	-69.03	-69.01	-65
250 kHz	100 kHz	-72.57	-72.64	-65
350 kHz	100 kHz	-76.93	-76.91	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.80		-75
12 MHz to paired receive band	30 kHz (swept)	-99.50		-75
In the paired receive band	30 kHz (swept)	-110.90		-100

Adjacent Channel Power Ratio

Analogue

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-66.03	-66.25	-40
21.875 kHz	6.25 kHz	-76.63	-76.86	-60
37.5 kHz	25 kHz	-74.34	-74.37	-60
62.5 kHz	25 kHz	-74.78	-74.84	-65
87.5 kHz	25 kHz	-75.05	-75.11	-65
150 kHz	100 kHz	-68.73	-68.71	-65
250 kHz	100 kHz	-71.86	-71.85	-65
350 kHz	100 kHz	-76.20	-76.20	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.60		-75
12 MHz to paired receive band	30 kHz (swept)	-99.50		-75
In the paired receive band	30 kHz (swept)	-111.90		-100

FFSK 1200 bps

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-78.14	-78.18	-40
21.875 kHz	6.25 kHz	-79.75	-79.71	-60
37.5 kHz	25 kHz	-74.03	-74.03	-60
62.5 kHz	25 kHz	-74.45	-74.51	-65
87.5 kHz	25 kHz	-74.44	-74.47	-65
150 kHz	100 kHz	-68.61	-68.56	-65
250 kHz	100 kHz	-71.79	-71.74	-65
350 kHz	100 kHz	-76.09	-76.10	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.50		-75
12 MHz to paired receive band	30 kHz (swept)	-101.20		-75
In the paired receive band	30 kHz (swept)	-110.90		-100

FFSK 2400 bps

Tx FREQUENCY: 799.075 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.98	-78.14	-40
21.875 kHz	6.25 kHz	-80.16	-80.20	-60
37.5 kHz	25 kHz	-74.29	-74.33	-60
62.5 kHz	25 kHz	-74.83	-74.89	-65
87.5 kHz	25 kHz	-75.02	-75.07	-65
150 kHz	100 kHz	-68.6	-68.67	-65
250 kHz	100 kHz	-71.91	-71.87	-65
350 kHz	100 kHz	-76.20	-76.21	-65
>400 kHz to 12 MHz	30 kHz (swept)	-85.10		-75
12 MHz to paired receive band	30 kHz (swept)	-99.30		-75
In the paired receive band	30 kHz (swept)	-112.70		-100

Adjacent Channel Power Ratio

Analogue

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-65.80	-66.08	-40
21.875 kHz	6.25 kHz	-76.21	-76.47	-60
37.5 kHz	25 kHz	-73.74	-73.75	-60
62.5 kHz	25 kHz	-74.22	-74.29	-65
87.5 kHz	25 kHz	-74.76	-74.84	-65
150 kHz	100 kHz	-69.25	-69.27	-65
250 kHz	100 kHz	-73.91	-73.90	-65
350 kHz	100 kHz	-78.09	-78.12	-65
>400 kHz to 12 MHz	30 kHz (swept)	-86.00		-75
12 MHz to paired receive band	30 kHz (swept)	-100.10		-75
In the paired receive band	30 kHz (swept)	-110.70		-100

FFSK 1200 bps

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.92	-77.92	-40
21.875 kHz	6.25 kHz	-79.32	-79.40	-60
37.5 kHz	25 kHz	-73.63	-73.67	-60
62.5 kHz	25 kHz	-74.19	-74.24	-65
87.5 kHz	25 kHz	-74.58	-74.63	-65
150 kHz	100 kHz	-69.38	-69.38	-65
250 kHz	100 kHz	-73.88	-73.88	-65
350 kHz	100 kHz	-78.12	-78.09	-65
>400 kHz to 12 MHz	30 kHz (swept)	-86.30		-75
12 MHz to paired receive band	30 kHz (swept)	-100.40		-75
In the paired receive band	30 kHz (swept)	-110.70		-100

FFSK 2400 bps

Tx FREQUENCY: 804.900 MHz 3 W 20 kHz Channel Spacing

Frequency Offset	Measurement Bandwidth	ACP Measured Lower (dBc)	ACP Measured Upper (dBc)	Maximum ACP(dBc)
15.625 kHz	6.25 kHz	-77.53	-77.68	-40
21.875 kHz	6.25 kHz	-79.45	-79.47	-60
37.5 kHz	25 kHz	-73.69	-73.71	-60
62.5 kHz	25 kHz	-74.33	-74.40	-65
87.5 kHz	25 kHz	-74.70	-74.76	-65
150 kHz	100 kHz	-69.26	-69.25	-65
250 kHz	100 kHz	-73.83	-73.86	-65
350 kHz	100 kHz	-78.12	-78.05	-65
>400 kHz to 12 MHz	30 kHz (swept)	-86.00		-75
12 MHz to paired receive band	30 kHz (swept)	-100.20		-75
In the paired receive band	30 kHz (swept)	-111.20		-100

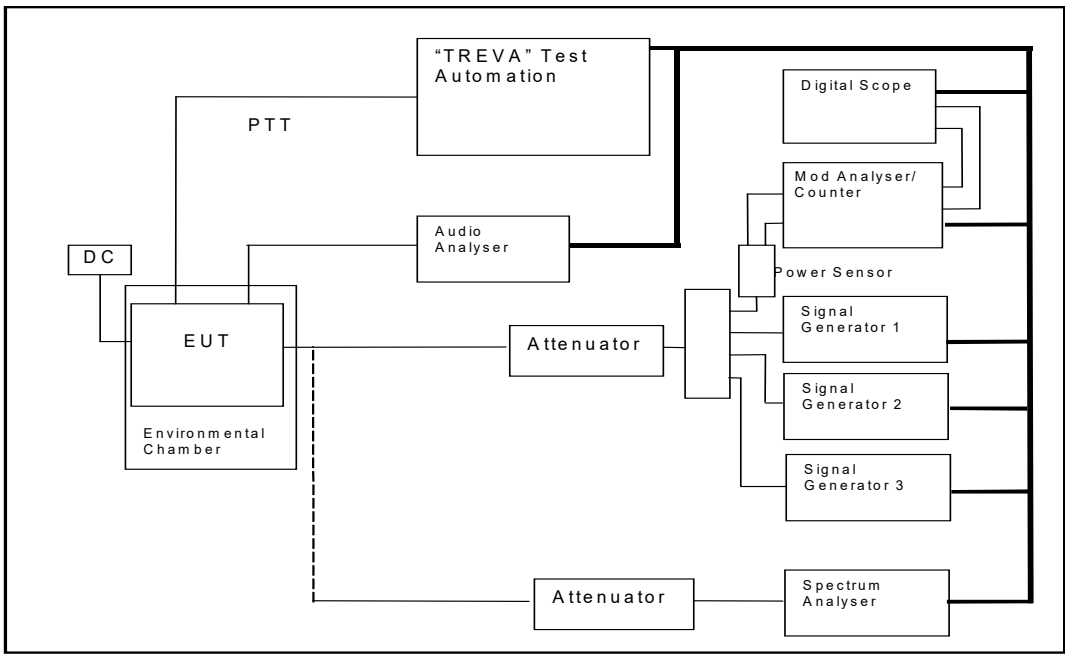
TEST EQUIPMENT LIST

Equipment Type	Information	Manufacturer	Model No	Serial No#	Tait ID	Cal Due
Audio Analyser	TREVA1	Hewlett Packard	HP8903A	2437A04625	E4986	04-Oct-24
Coax Cable	1.5m Blue	Suhner	Sucoflex 126EA	502868/126EA	E5028	08-Oct-24
Modulation Analyser	Includes Audio Analyser	Rohde & Schwarz	FMA0852.8500.52	842541/001	E3554	03-Apr-25
Modulation Analyser	TREVA1	Hewlett Packard	HP8901B (Opt 002)	3704A05837	E3786	04-Oct-24
Multimeter		Fluke	77	35069359	E3237	11-Oct-24
Power Meter	TREVA1 Power Head for HP8901	Hewlett Packard	HP11722A	3111A05573	E7054	08-Oct-24
Power Supply	TREVA 1 60V/25A	Agilent	N5767A	US23D6941R	E11372	03-Oct-24
RF Attenuator	20dB 50W	Weinschel	24-20-44	AW1266	E3562	08-Oct-24
RF Attenuator	20dB 25W	Weinschel	33-20-33	BD5871	E3673	08-Oct-24
RF Attenuator	TREVA1 3dB	Weinschel	Model 1	BL9958	E4081	08-Oct-24
RF Attenuator	TREVA1 20dB 150W	Weinschel	40-20-23	MF817	E4082	08-Oct-24
RF Combiner	TREVA1	Minicircuits	ZFSC-4-1	-	E4083	
Signal Generator	TREVA1 Analog 3.2GHz	Agilent	E8663D	MY50420224	E4908	18-Oct-24
Spectrum Analyser	13.2GHz	Agilent	PSA E4445A	MY42510072	E4139	18-Oct-24
Spectrum Analyser	26.5GHz	Agilent	PXA N9030A	MY49432161	E4907	02-Mar-25
Temp & Humidity datalogger		TP-Link TAPO	T315	22383M6000671	E11377	08-Feb-25
TREVA 1		Teltest	-	1	-	23-Oct-24
Testware	Occupied Bandwidth		TTEL_OCCBW 2.00.01	-	-	
Testware	Sideband Spectrum		February 2017	-	-	
Testware	TREVA		TTEL_TREVA 2.00.00	-	-	

* NOTE: Items without calibration dates are calibrated immediately before use or set using calibrated instruments.

ANNEX A – TEST SETUP DETAILS

All testing is performed using the Teltest Radio EVAluation system (TREVA), which is configured as shown below. The spectrum analyzer is connected to the EUT via the attenuator network for occupied bandwidth, sideband spectrum, and ACPR tests.



END OF REPORT