



## REPORT ON :

Type Approval Testing of the TPAB12-H600 (Serial No 21000001)  
in accordance with:

FCC CFR 47 Parts 22 & 90

FCC ID: CASTPAH6A

## PREPARED FOR :

Tait Electronics Ltd  
PO Box 1645  
558 Wairakei Rd  
Christchurch  
New Zealand

## DISTRIBUTION :

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Tait Electronics Ltd	Mr. Des Fox	Copy No 2
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## APPROVED :

H G Newton

Senior Technician

## Date :

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

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## Revision History

Date	Revision	Comments
2-September-2004	1	Initial test report
4-May-2007	2	Change FFSK / THD Emission Designators, and test methods for ED's deleted

## DECLARATION OF CONFORMITY

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

Equipment: Portable Transceiver

Type: TPAH6A

Product code: TPAB12-H600

Serial Numbers: 21000001

Quantity: 1

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

FCC CFR 47 Parts 22 & 90

**Signature:** \_\_\_\_\_

S. A. Crompton  
Compliance Laboratory Manager.

**Date:** \_\_\_\_\_



#### 4. Fast Frequency Shift Keying (FFSK) 25kHz Bandwidth

Necessary bandwidth

Emission Designator

M = 1.8 kHz

D = 3 kHz (60% of peak deviation)

**9K60F2D**

F2D represents a FM data transmission with the use of a modulating sub carrier

Bn = 3.6 + 6 x 1.0  
= 9.60 kHz

#### 5. Tait High Speed Data (THSD)

THSD uses a 4 level gaussian frequency shift keying (CP-4GFSK) modulation scheme. It can be used when transferring data between two radios. Data is transmitted at a rate of 12000bps for narrow band channels, and 19200bps for wide-band channels.

12.5kHz Bandwidth

Emission Designator

**7K70F1D**

F1D represents a FM data transmission without the use of a modulating sub carrier

25kHz Bandwidth

Emission Designator

**12K7F1D**

F1D represents a FM data transmission without the use of a modulating sub carrier

#### 6. Digital Voice /Data (4 – Level FSK) – CFR 47 90.212 (b)

Digital Voice/data transmissions use a 4 level frequency shift keying modulation scheme.

a) Operating in a 12.5 kHz Bandwidth

*Digital voice*

Emission Designator

**8K10F1E**

F1E represents a digital FM voice transmission

**8K10F7E**

F7E represents two or more channels containing quantized or digital voice information

*Digital Data*

Emission Designator

**8K10F1D**

F1D represents a digital FM data transmission

**8K10F7D**

F7D represents two or more channels containing quantized or digital information

b) Operating in a 25 kHz Bandwidth

*Digital voice*

Emission Designator

**10K0F1E**

F1E represents a digital FM voice transmission

**10K0F7E**

F7E represents two or more channels containing quantized or digital voice information

*Digital Data*

Emission Designator

**10K0F1D**

F1D represents a digital FM data transmission

**10K0F7D**

F7D represents two or more channels containing quantized or digital information

**7. Digital Voice Encryption (4 – Level FSK) – CFR 47 90.212 (b)**

Digital Voice Encryption transmissions use a 4 level frequency shift keying modulation scheme.

b) Operating in a 12.5 kHz Bandwidth

*Digital voice*

Emission Designator

**8K10F1E**

F1E represents a digital FM voice transmission

c) Operating in a 25 kHz Bandwidth

*Digital voice*

Emission Designator

**10K0F1E**

F1E represents a digital FM voice transmission

## Test Results

### TRANSMITTER OUTPUT POWER (CONDUCTED)

SPECIFICATION: FCC 47 CFR 2.1046

GUIDE: TIA/EIA-603B 2.2.1

#### MEASUREMENT PROCEDURE:

1. Refer Appendix A for equipment set up.
2. The coaxial attenuator has impedance of 50 Ohms.
3. The unmodulated output power was measured with a RF Power meter.

#### MEASUREMENT RESULTS:

Manufacturer's Rated Output Power: Switchable: 1 W and 4 W

460.1MHz	1 W nominal	4 W nominal
POWER (W)	1.07	4.20
Variation from Nominal (%)	7.0	5.0
Measurement Uncertainty (dB)		+0.63 -0.68

LIMIT CLAUSE: FCC 47 CFR 90.205

Radio Type: Mobile Transceiver

Frequency Band: 421MHz~512MHz

- (o) The output power shall not exceed by more than 20% the manufacturer's rated output power for the particular transmitter.

TRANSMITTER AUDIO FREQUENCY RESPONSE - PRE-EMPHASIS

SPECIFICATION: FCC 47 CFR 2.1047 (a)

GUIDE: TIA/EIA-603B 2.2.6

MEASUREMENT PROCEDURE:

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

MEASUREMENT RESULTS:

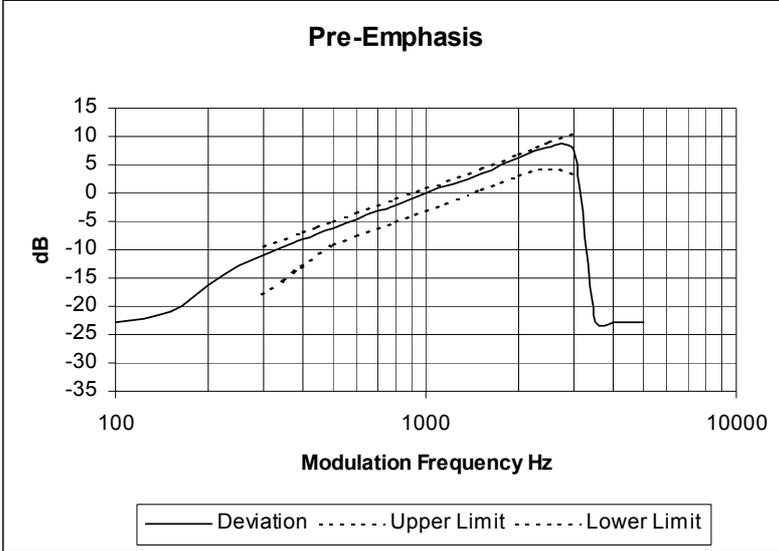
See the plots on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: TIA/EIA-603B 3.2.6

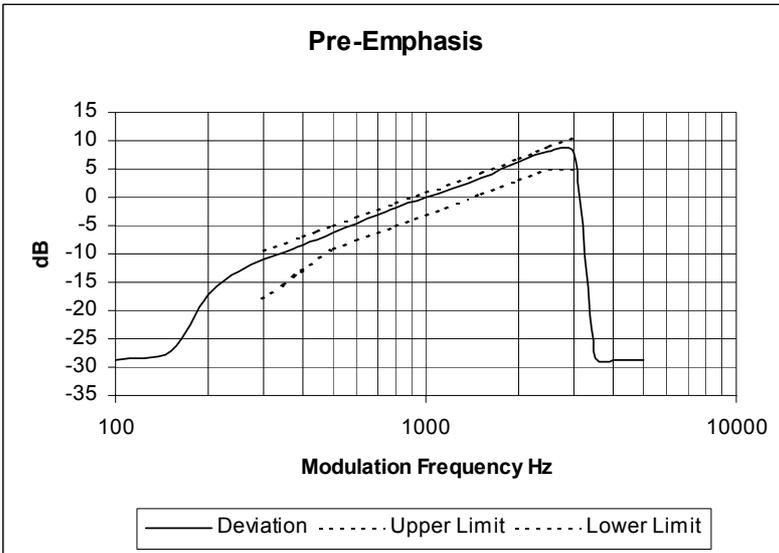
TRANSMITTER AUDIO FREQUENCY RESPONSE - PRE-EMPHASIS

SPECIFICATION: FCC CFR 2.1047 (a)

Tx FREQUENCY: 460.1MHz 12.5 kHz Channel Spacing



Tx FREQUENCY: 460.1MHz 25.0 kHz Channel Spacing



TRANSMITTER MODULATION LIMITING

SPECIFICATION: FCC 47 CFR 2.1047 (b)

MEASUREMENT PROCEDURE:

1. Refer Appendix A for equipment set up.
2. The modulation response was measured at three audio frequencies while varying the input level.
3. Measurements were made for both Positive and Negative Deviation.

MEASUREMENT RESULTS:

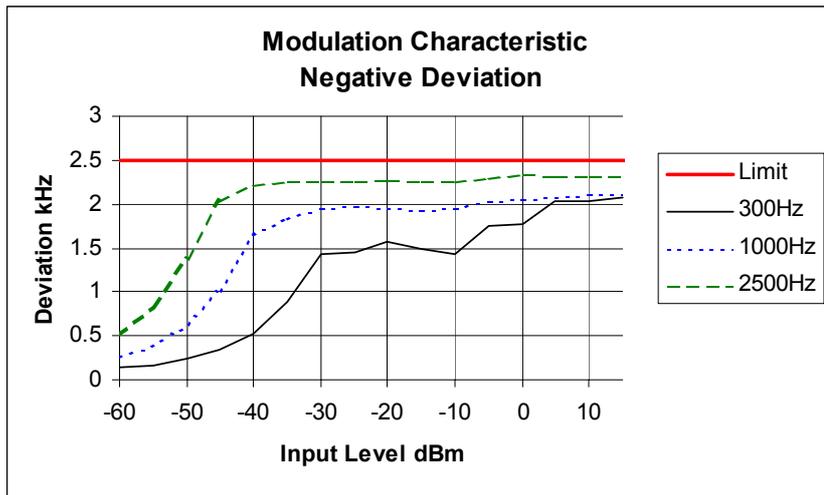
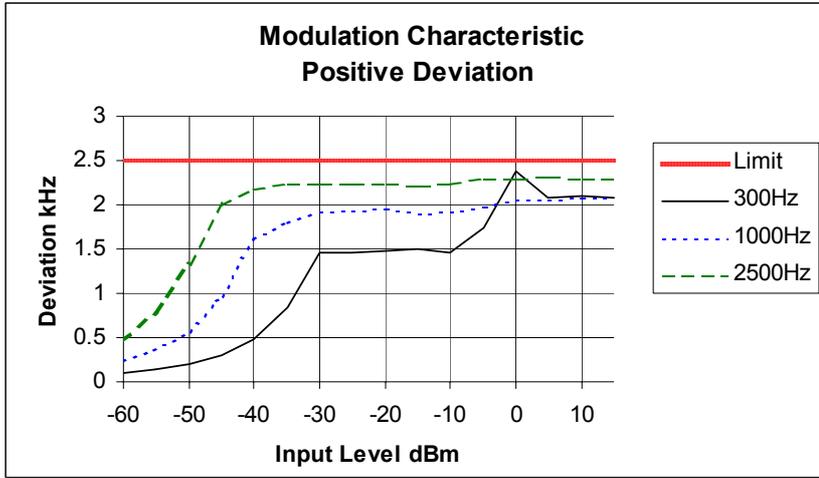
See the plots on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: TIA/EIA-603B 1.3.4.4

TRANSMITTER MODULATION LIMITING

SPECIFICATION: FCC CFR 2.1047 (b)

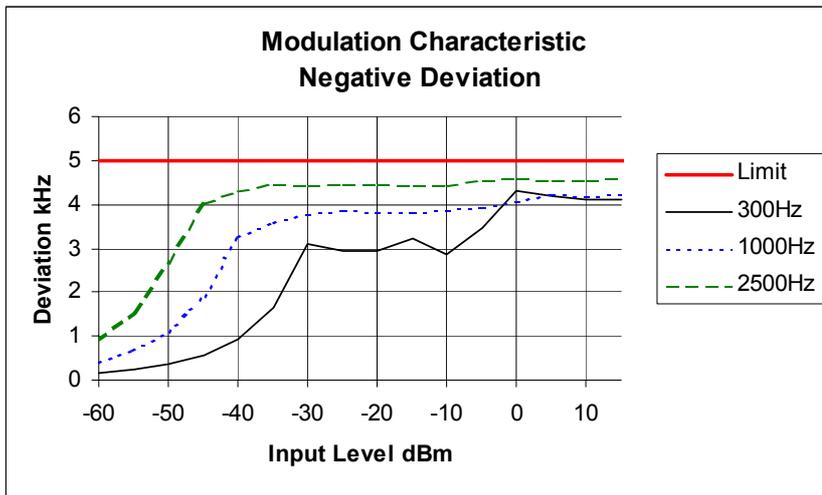
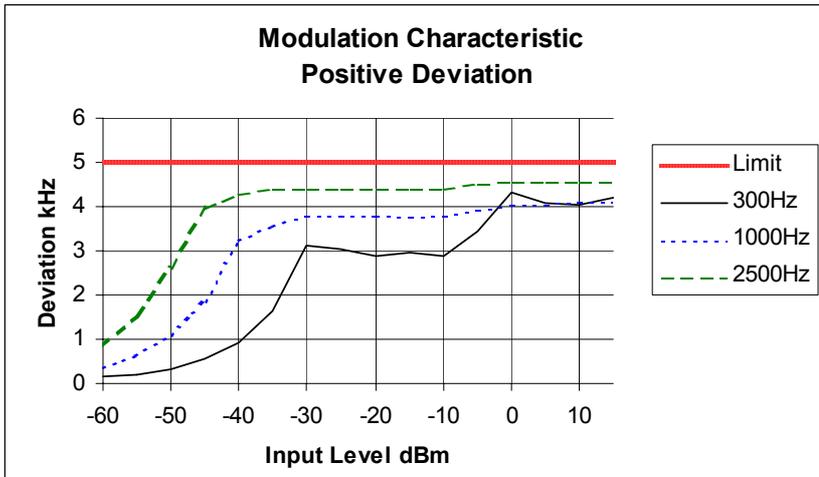
Tx FREQUENCY: 460.1MHz 12.5 kHz Channel Spacing



Tx FREQUENCY:

460.1MHz

25.0 kHz Channel Spacing



OCCUPIED BANDWIDTH

SPECIFICATION: FCC 47 CFR 2.1049 (c)

GUIDE: TIA/EIA-603B 2.2.11 for Analogue  
TIA/EIA-102CAAA-A 2.2.5 for Digital

MEASUREMENT PROCEDURE:

1. Refer Appendix A for Equipment Set up.
2. For analogue measurements: The EUT was modulated by a 2500Hz tone at an input level 16dB above a level that produced 50% deviation. The input level was established at the frequency of maximum response of the audio modulating circuit .  
For Digital 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.

Emission Mask D – Resolution Bandwidth = 100Hz, Video Bandwidth = 1 kHz  
Emission Mask B, and C – Resolution bandwidth = 300Hz, Video Bandwidth = 3 kHz

MEASUREMENT RESULTS:

See the plots on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: FCC 47 CFR 90.210

EMISSION MASKS

Emission Mask D	12.5 kHz Channel Spacing	Analog; Digital; FFSK; THSD
Emission Mask B	25.0 kHz Channel Spacing	Analog;
Emission Mask C	25.0 kHz Channel Spacing	Digital; FFSK; THSD

DATA SPEED

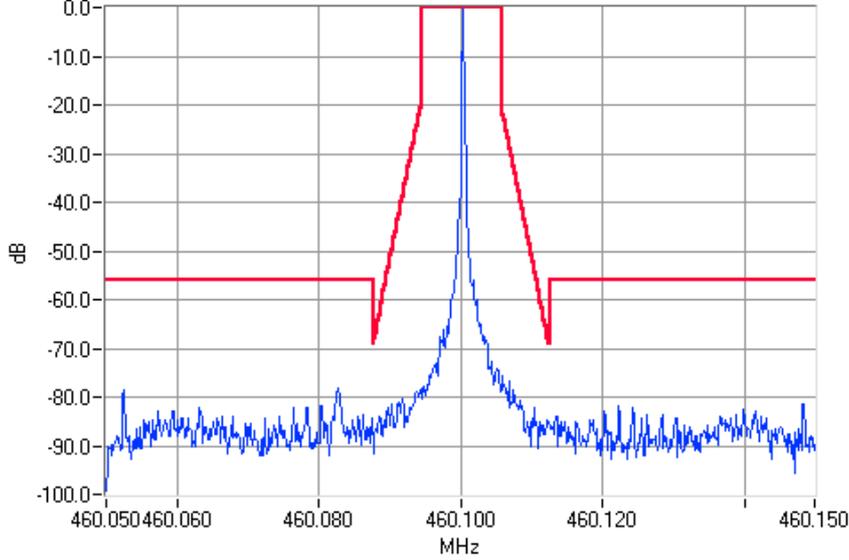
Digital 9600 bps	12.5 kHz Channel Spacing
Digital 9600 bps	25.0 kHz Channel Spacing
FFSK 1200 bps	12.5 kHz Channel Spacing
FFSK 1200 bps	25.0 kHz Channel Spacing
THSD 12000 bps	12.5 kHz Channel Spacing
THSD 19200 bps	25.0 kHz Channel Spacing

OCCUPIED BANDWIDTH

ANALOGUE VOICE

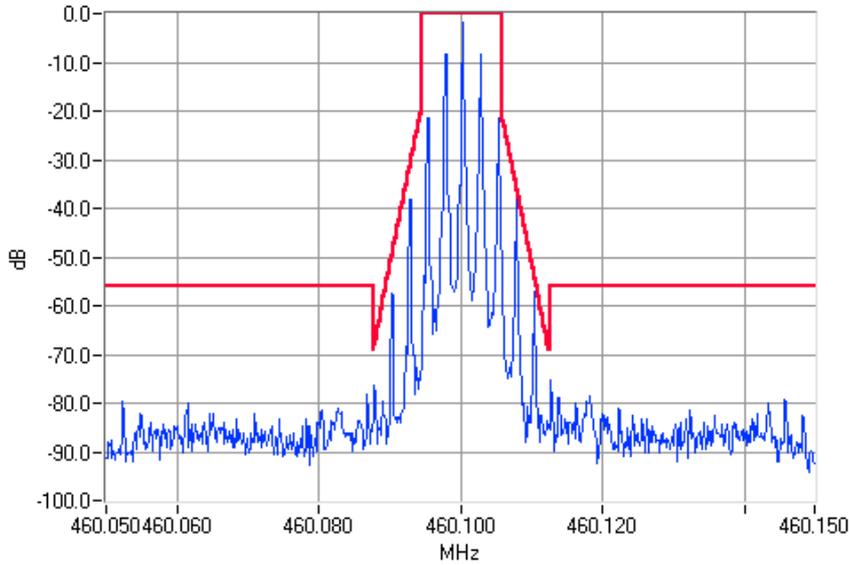
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



Unmodulated 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



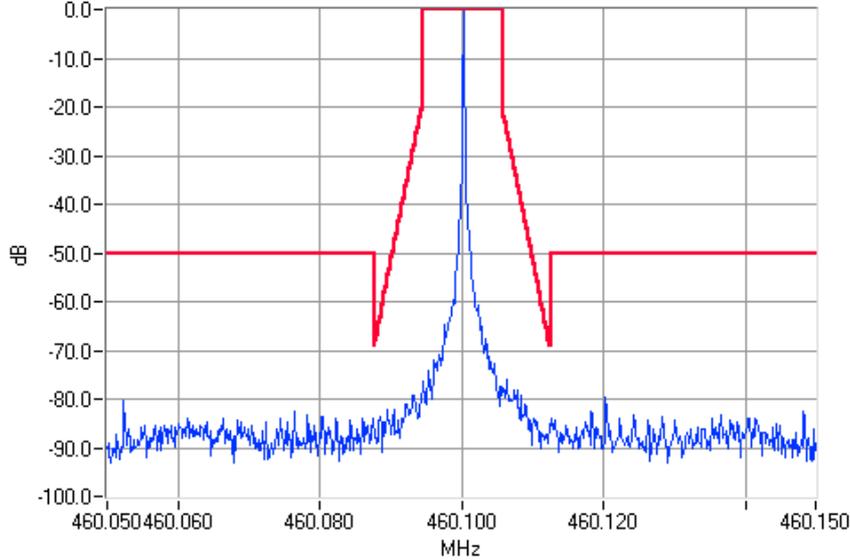
Analogue Modulation 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

ANALOGUE VOICE

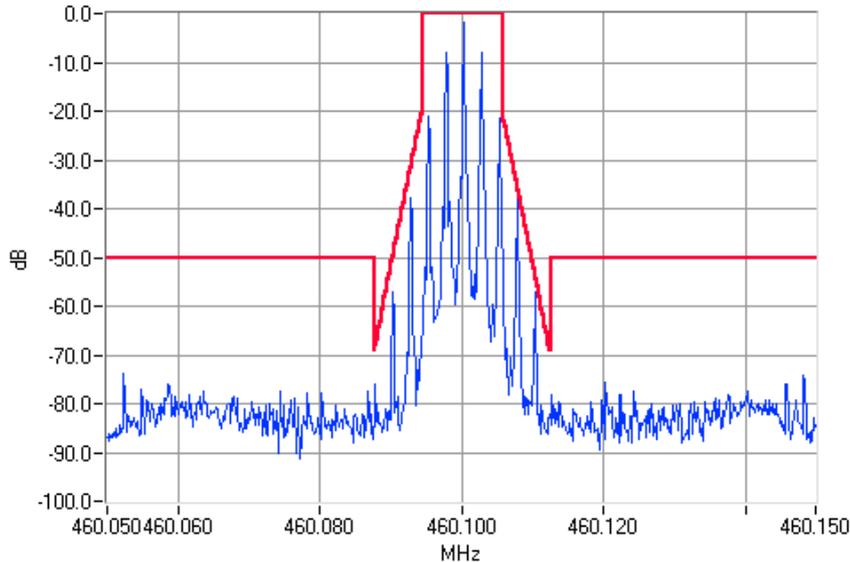
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 12.5 kHz Channel Spacing



**Unmodulated 460.1000MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz**

Tx FREQUENCY: 460.1MHz 1W 12.5 kHz Channel Spacing



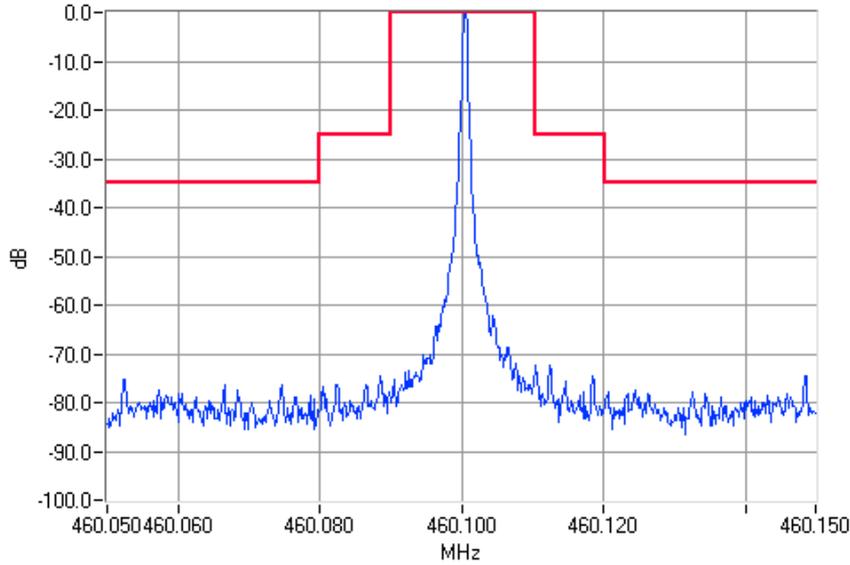
**Analogue Modulation 460.1000MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz**

OCCUPIED BANDWIDTH

ANALOGUE VOICE

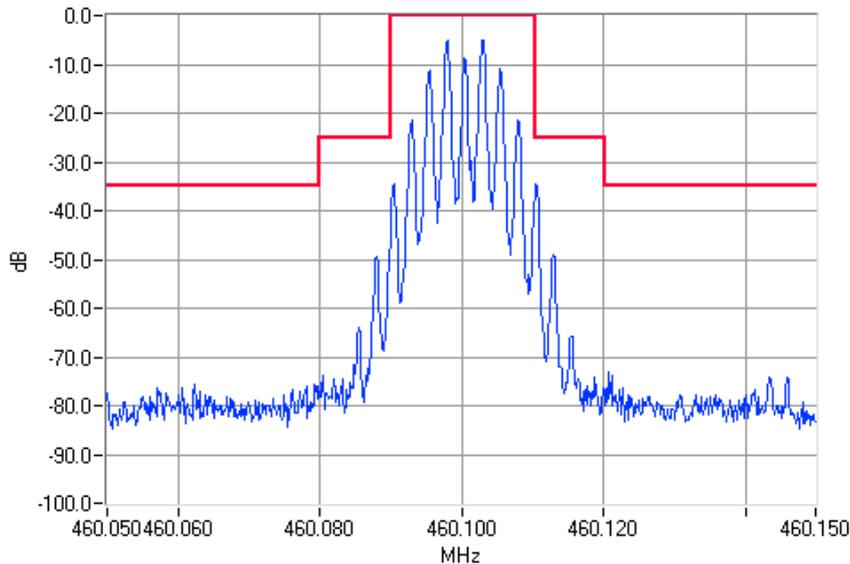
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 25 kHz Channel Spacing



**Unmodulated 460.1000MHz Mask B 4W Pass  
RBW=300Hz VBW=3000Hz**

Tx FREQUENCY: 460.1MHz 4W 25 kHz Channel Spacing



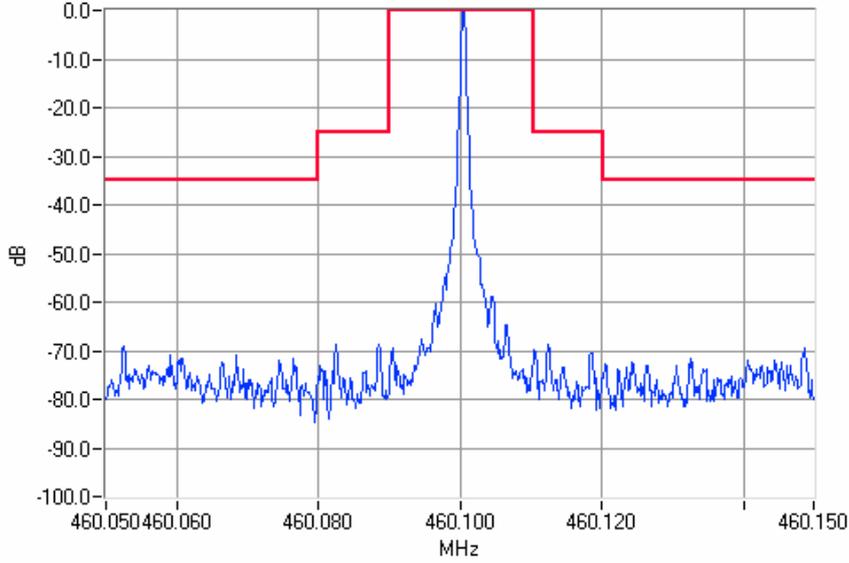
**Analogue Modulation 460.1000MHz Mask B 4W Pass  
RBW=300Hz VBW=3000Hz**

OCCUPIED BANDWIDTH

ANALOGUE VOICE

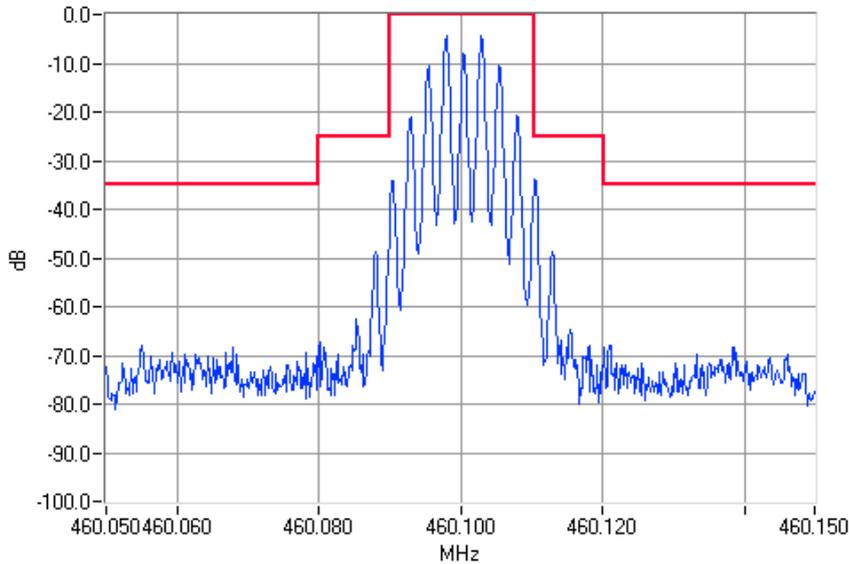
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



**Unmodulated 460.1000MHz Mask B 1W Pass  
RBW=300Hz VBW=3000Hz**

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



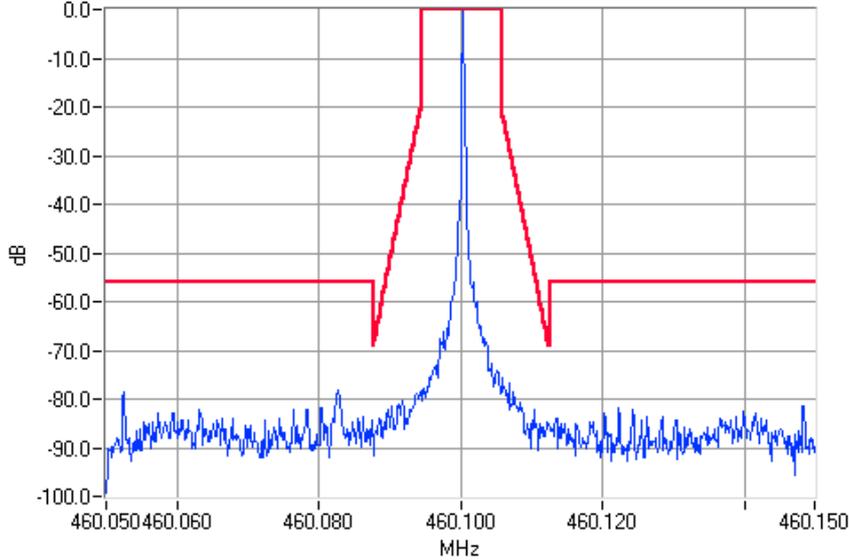
**Analogue Modulation 460.1000MHz Mask B 1W Pass  
RBW=300Hz VBW=3000Hz**

OCCUPIED BANDWIDTH

DIGITAL - 4 Level FSK

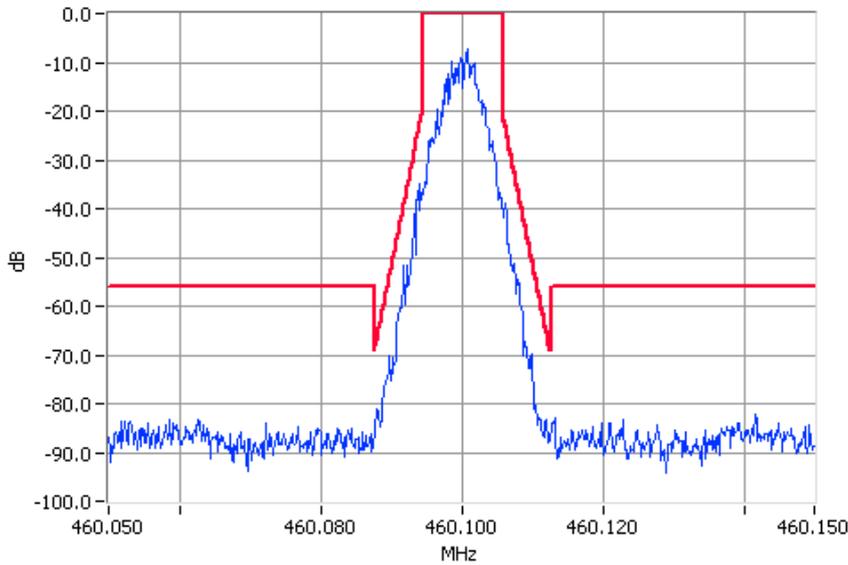
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



Unmodulated 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

Tx FREQUENCY: 460.1 MHz 4W 12.5 kHz Channel Spacing



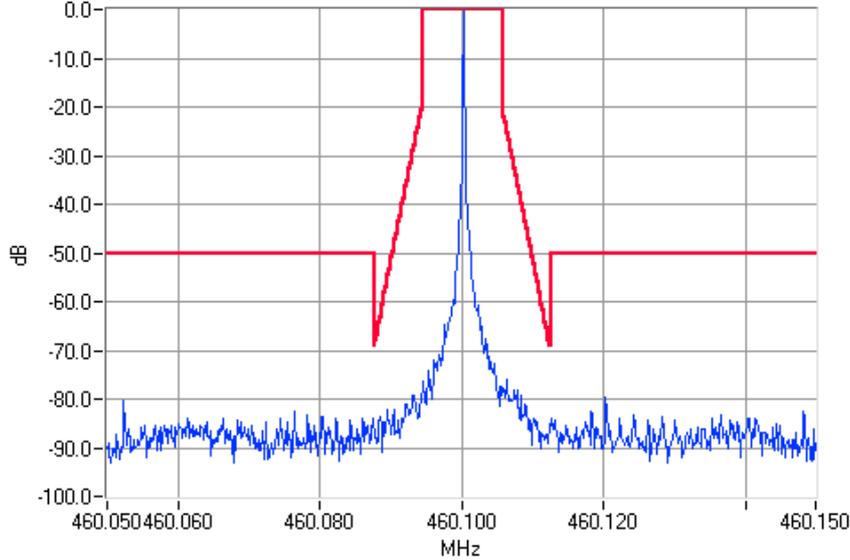
Digital Modulation 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

DIGITAL – 4 Level FSK

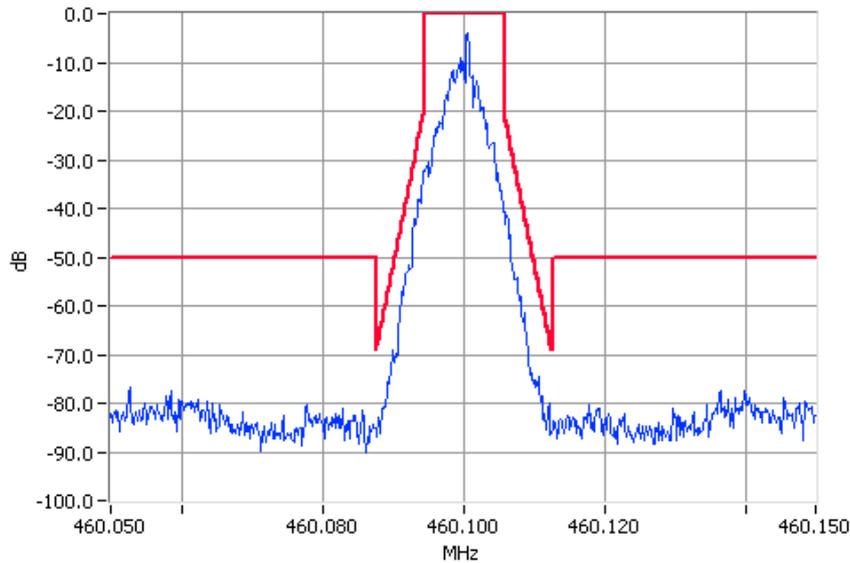
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 12.5 kHz Channel Spacing



Unmodulated 460.100MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz

Tx FREQUENCY: 460.1MHz 1W 12.5 kHz Channel Spacing



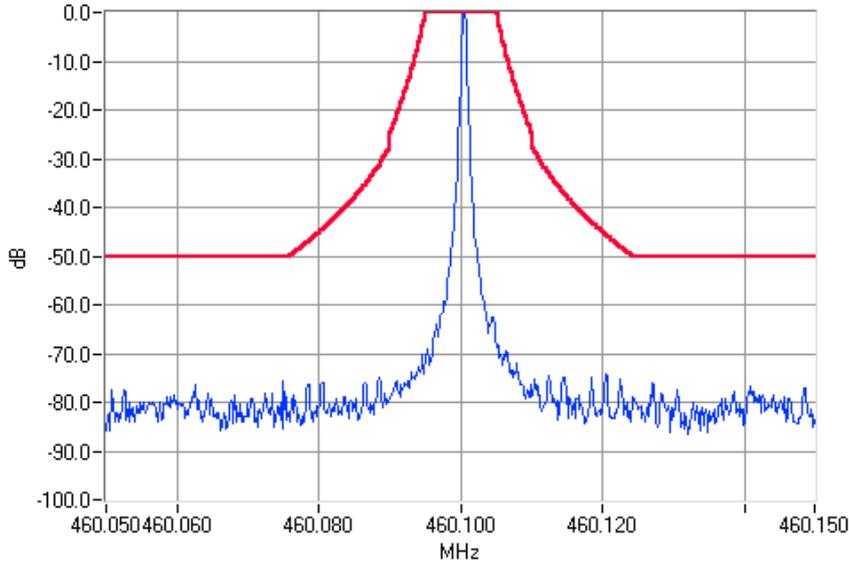
Digital Modulation 460.100MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

DIGITAL – 4 Level FSK

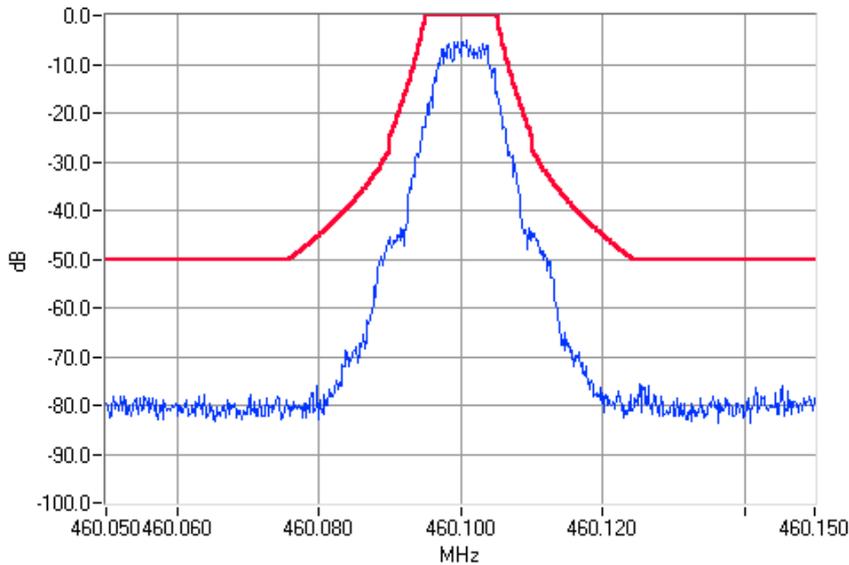
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 25 kHz Channel Spacing



Unmodulated 460.1000MHz Mask C 4W Pass  
RBW=300Hz VBW=3000Hz

Tx FREQUENCY: 460.1 MHz 4W 25 kHz Channel Spacing



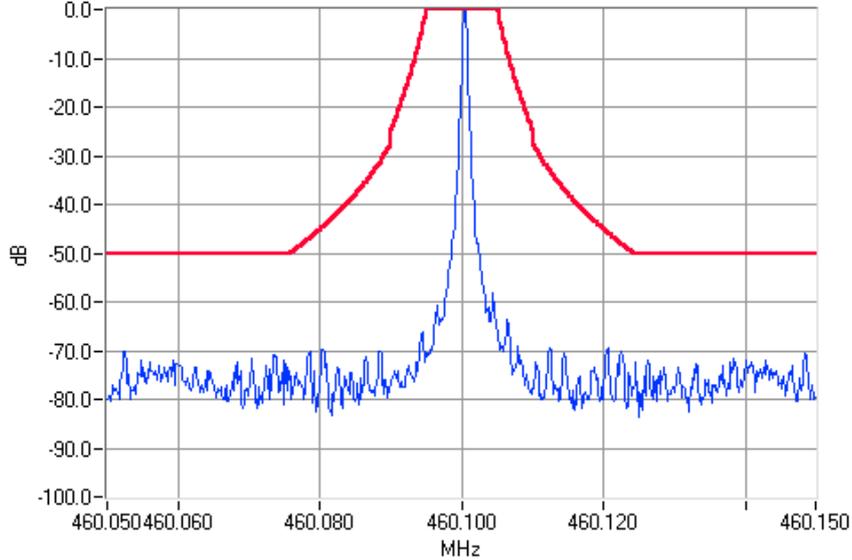
Digital Modulation 460.1000MHz Mask C 4W Pass  
RBW=300Hz VBW=3000Hz

OCCUPIED BANDWIDTH

DIGITAL 4 – Level FSK

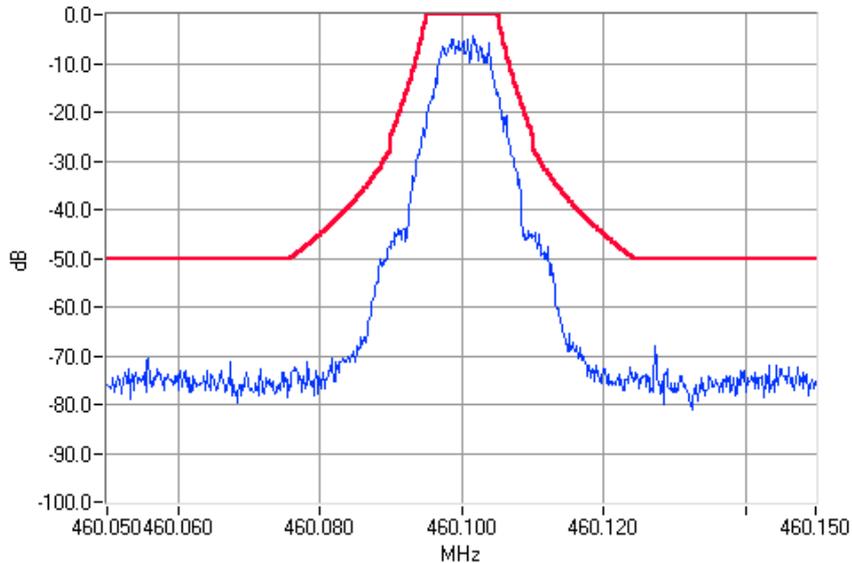
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



Unmodulated 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



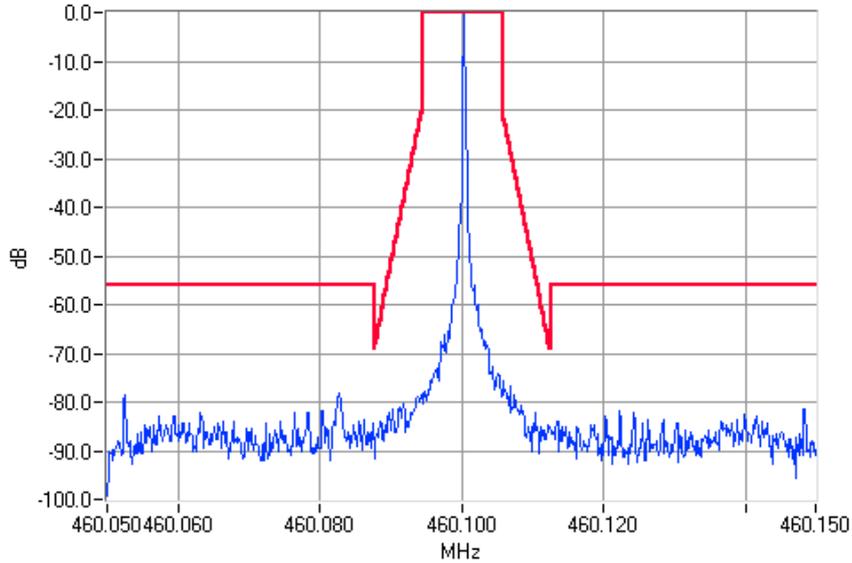
Digital Modulation 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

OCCUPIED BANDWIDTH

FFSK

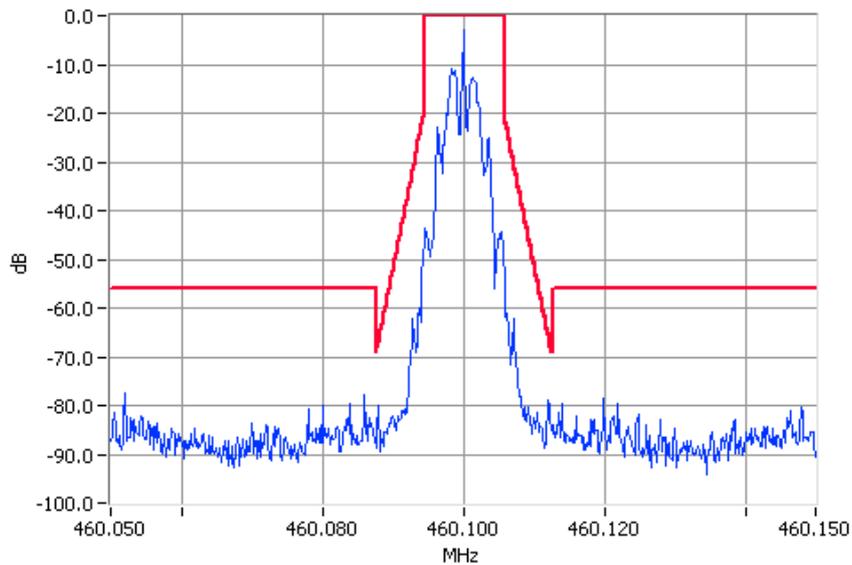
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Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



Unmodulated 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



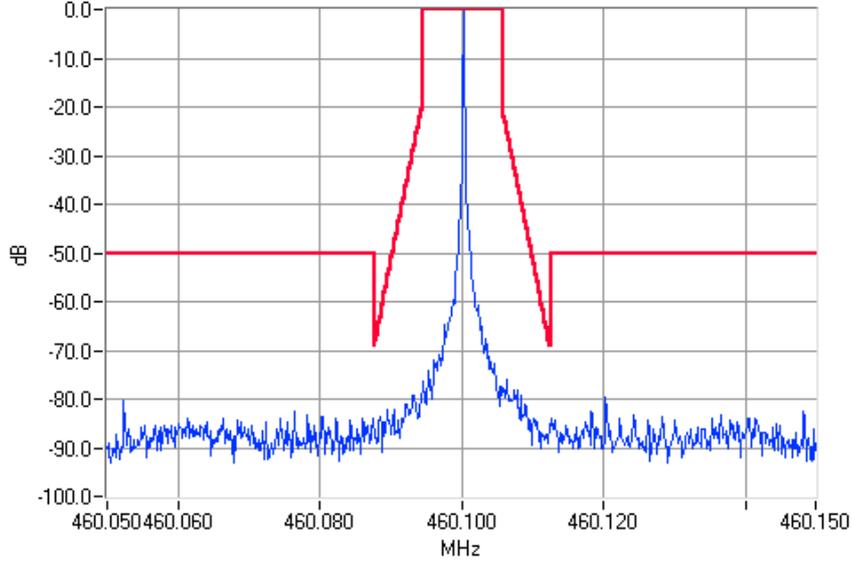
Digital Modulation 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

FFSK

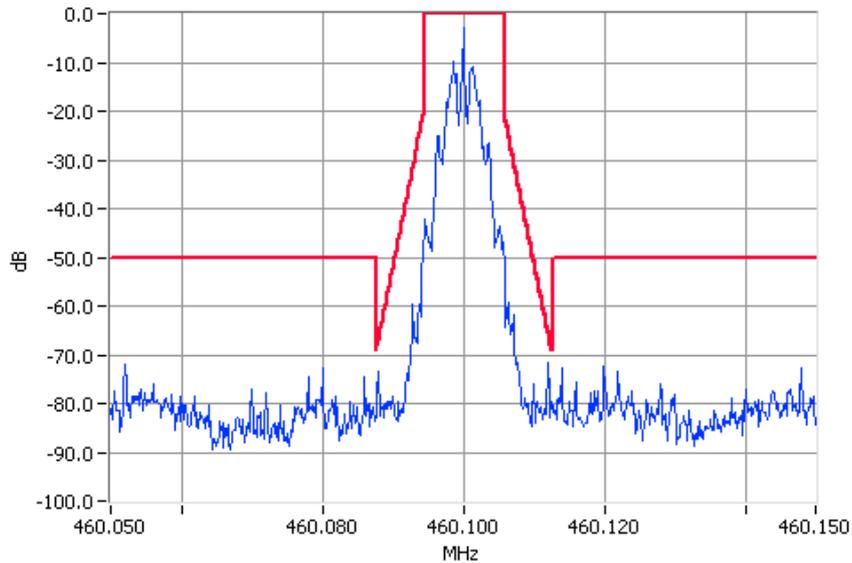
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Unmodulated 460.100MHz Mask D 1W Pass  
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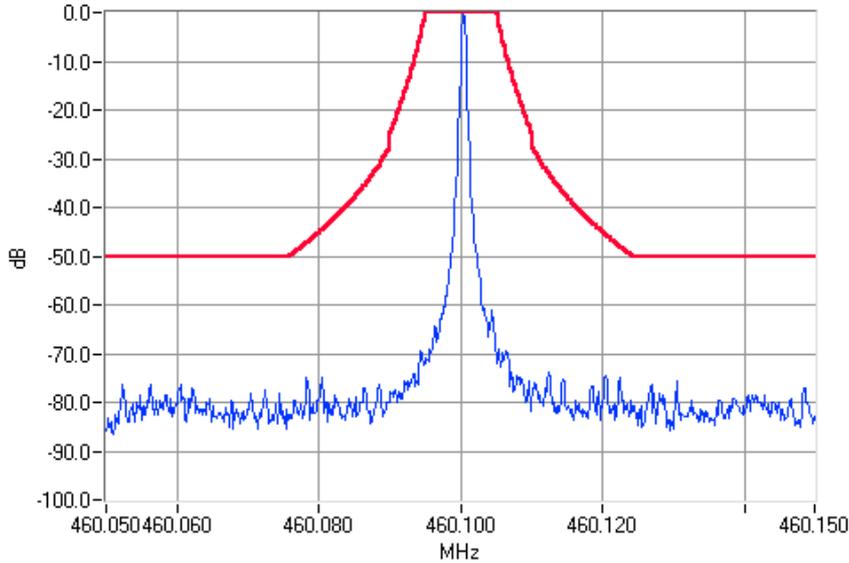
Digital Modulation 460.100MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

FFSK

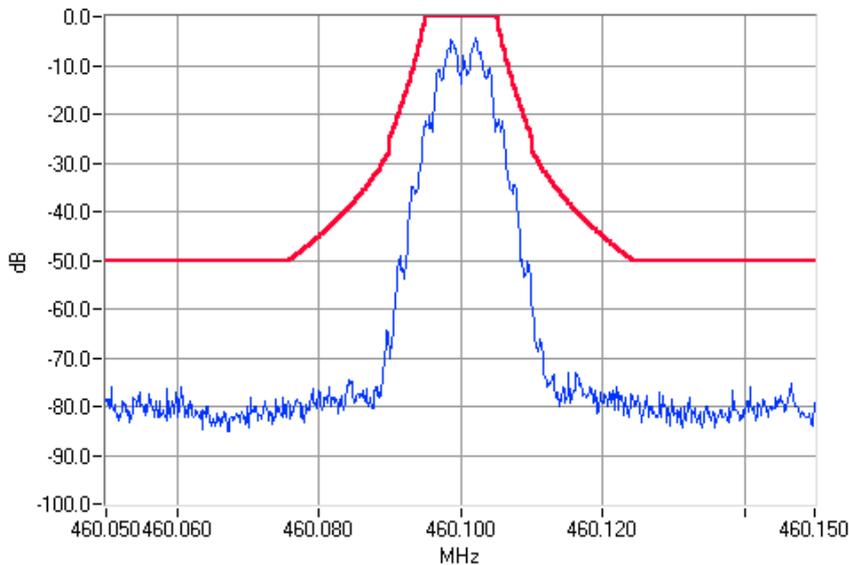
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 25 kHz Channel Spacing



Unmodulated 460.1000MHz Mask C 4W Pass  
RBW=300Hz VBW=3000Hz

Tx FREQUENCY: 460.1MHz 4W 25 kHz Channel Spacing



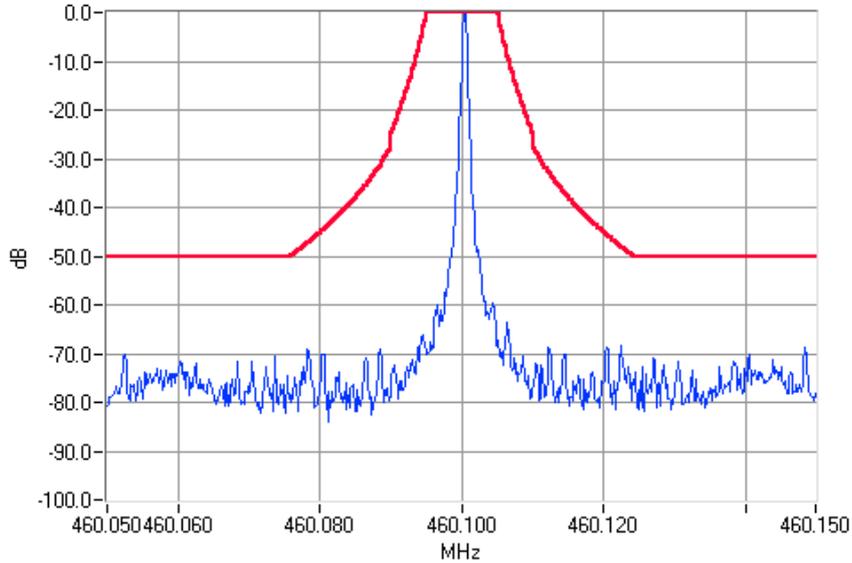
Digital Modulation 460.1000MHz Mask C 4W Pass  
RBW=300Hz VBW=3000Hz

OCCUPIED BANDWIDTH

FFSK

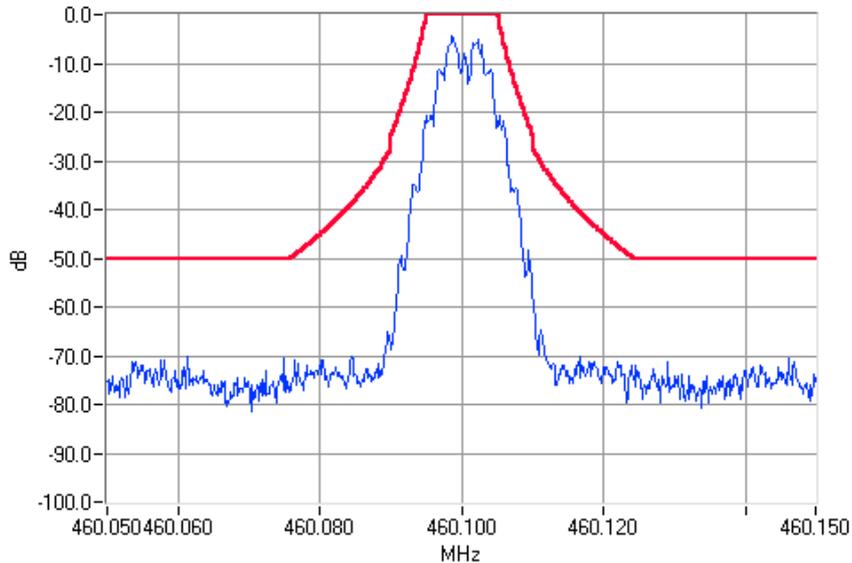
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



Unmodulated 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



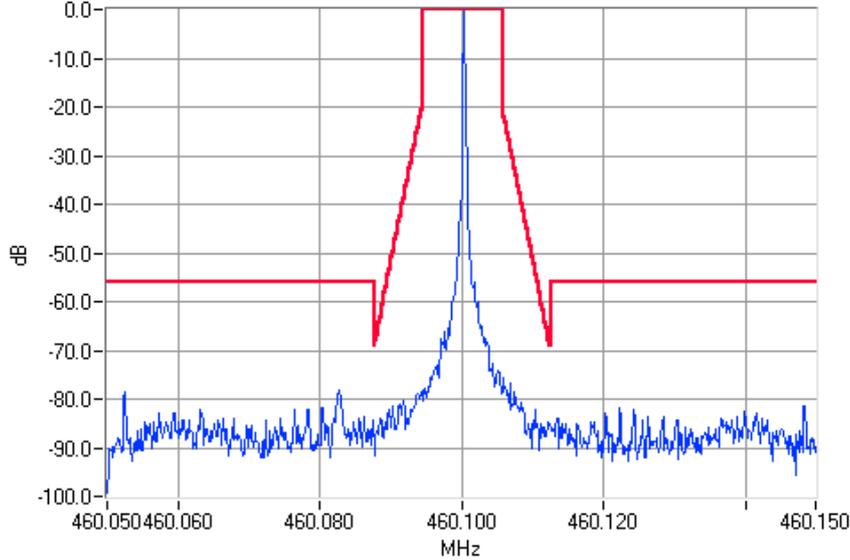
Digital Modulation 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

OCCUPIED BANDWIDTH

THSD

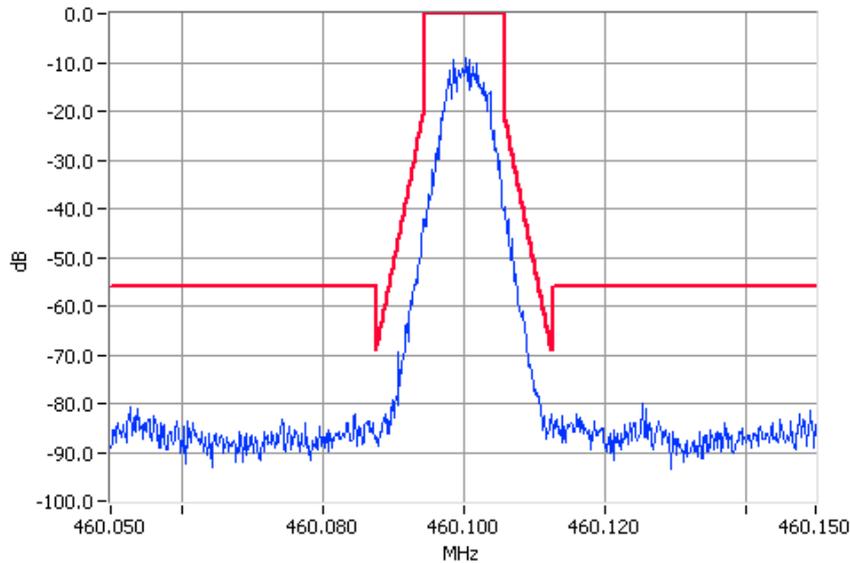
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



Unmodulated 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz Channel Spacing



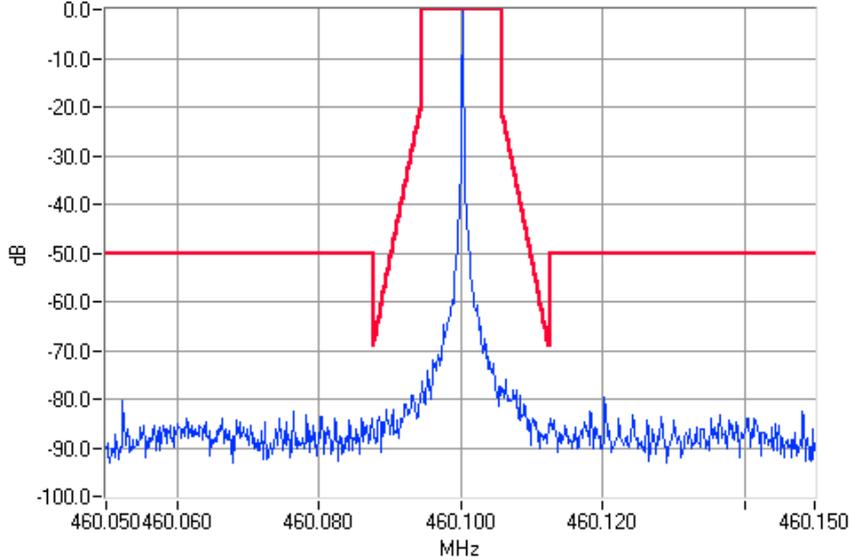
Digital Modulation 460.100MHz Mask D 4W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

THSD

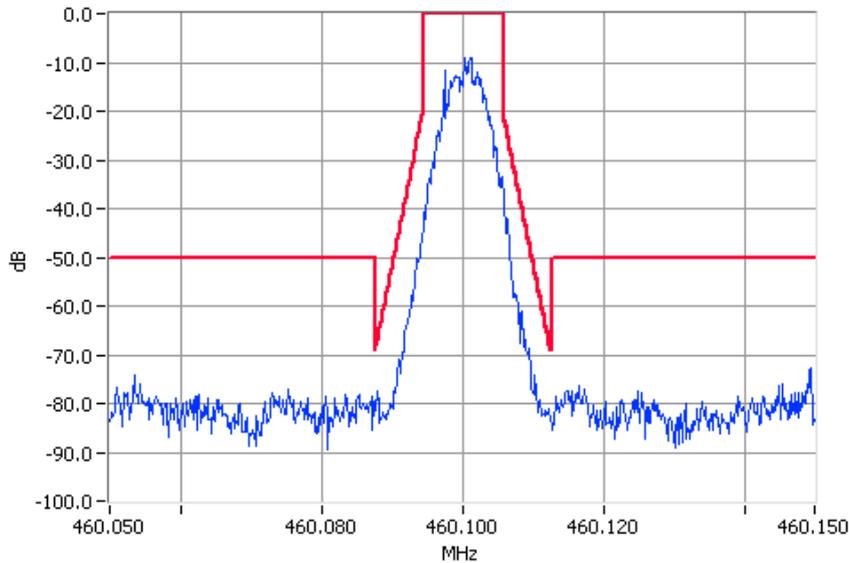
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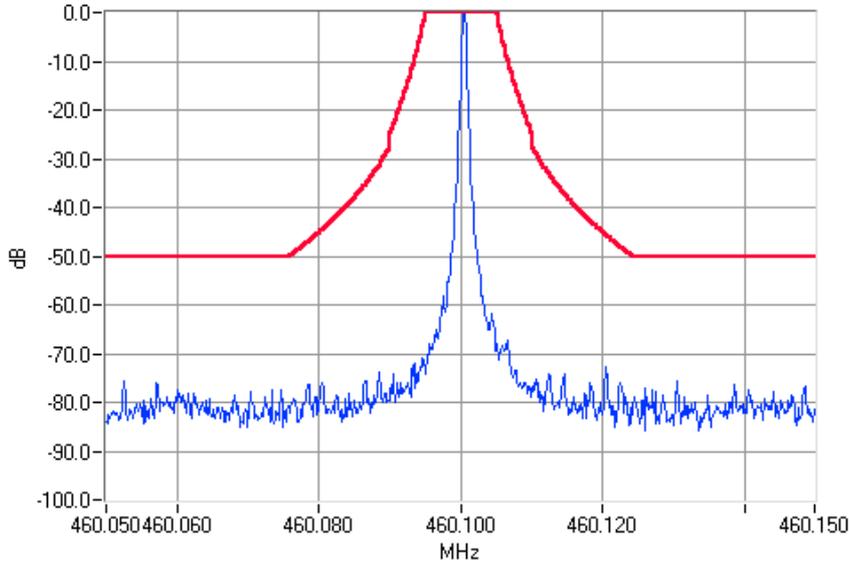
Digital Modulation 460.1000MHz Mask D 1W Pass  
RBW=100Hz VBW=1000Hz

OCCUPIED BANDWIDTH

THSD

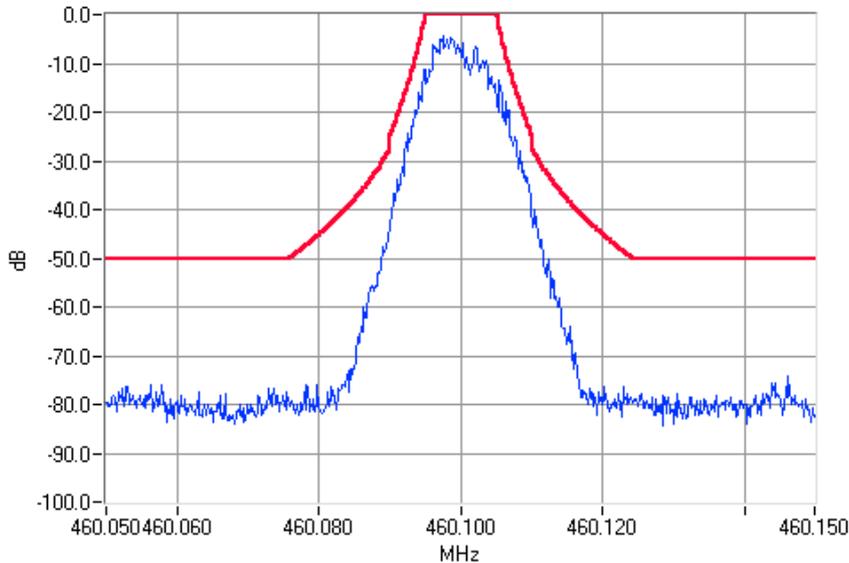
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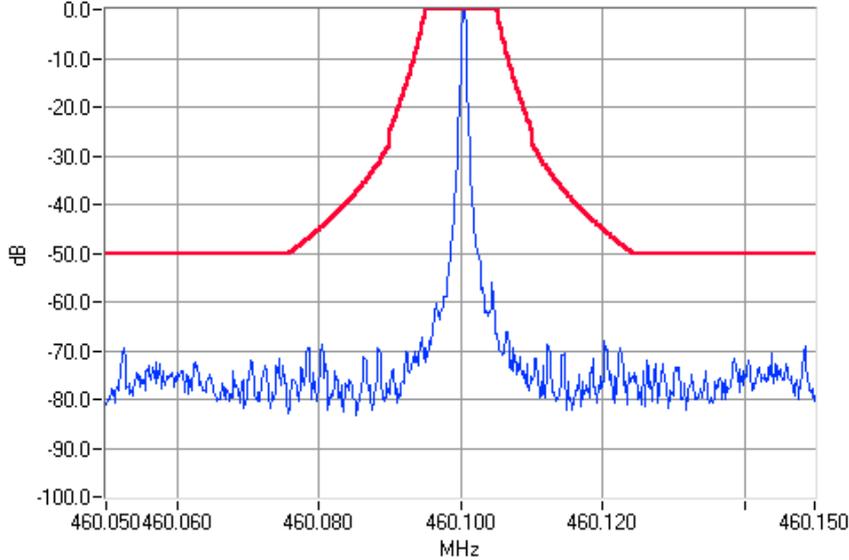
Digital Modulation 460.1000MHz Mask C 4W Pass  
RBW=300Hz VBW=3000Hz

OCCUPIED BANDWIDTH

THSD

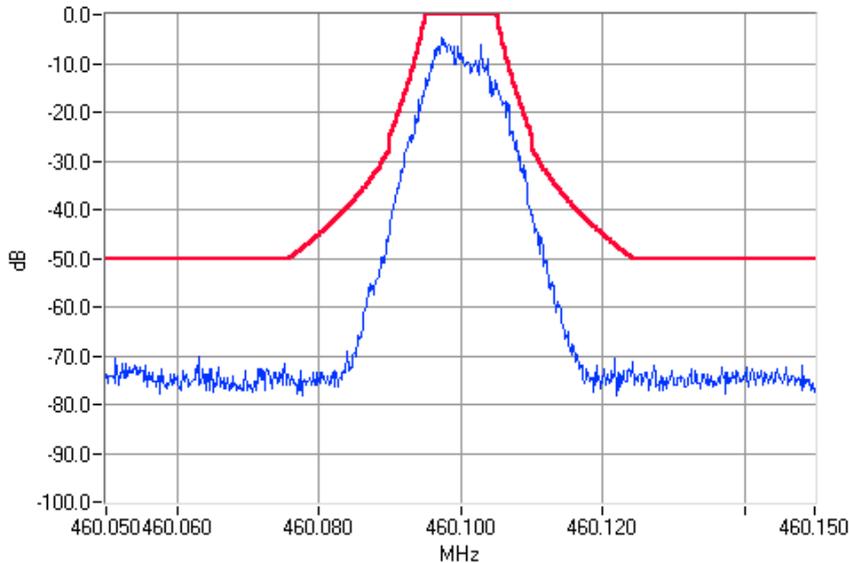
SPECIFICATION: FCC CFR 2.1049 (c)

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



Unmodulated 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

Tx FREQUENCY: 460.1MHz 1W 25 kHz Channel Spacing



Digital Modulation 460.1000MHz Mask C 1W Pass  
RBW=300Hz VBW=3000Hz

**SPURIOUS EMISSIONS (CONDUCTED)**

SPECIFICATION: FCC 47 CFR 2.1051

GUIDE: TIA/EIA-603B 2.2.13

MEASUREMENT PROCEDURE:

1. Refer Appendix A for equipment set up.
2. The frequency range examined was from the lowest frequency generated within the EUT, to a frequency higher than the 10<sup>th</sup> Harmonic: 100kHz to Fc-BW  
Fc+BW to 4.7 GHz
3. A Pre-scan is performed with a resolution bandwidth of 1 kHz, and a video bandwidth of 3 kHz. If any emissions are found to be within 20dB of the limit a second measurement is made with the carrier modulated, and a resolution bandwidth of 10 kHz, and a video bandwidth of 30kHz.
4. Spurious emissions which were attenuated more than 20dB below the limit were not recorded.

MEASUREMENT RESULTS:

See the tables on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: FCC 47 CFR 90.210





SPURIOUS EMISSIONS (RADIATED)

SPECIFICATION: FCC 47 CFR 2.1053

GUIDE: TIA/EIA-603B 2.2.12

MEASUREMENT PROCEDURE:

1. The Equipment Under Test was set up as shown in the following diagram.
2. The EUT was placed on a wooden turntable at a distance of three metres from the test antenna. The output terminal was connected to an RF dummy load.
3. The turntable was rotated through 360° to obtain the maximum response of each spurious emission. Valid emissions were determined by switching the EUT on and off.
4. The EUT was replaced by a signal generator and substitution antenna to make measurements by the substitution method.

MEASUREMENT RESULTS:

See the tables on the following pages

LIMIT CLAUSE: FCC 47 CFR 90.210

TEST SETUP: Refer Appendix A for set up details





**TRANSMITTER FREQUENCY STABILITY (TEMPERATURE)**

SPECIFICATION: FCC 47 CFR 2.1055 (a) (1)

GUIDE: TIA/EIA-603B 2.2.2

MEASUREMENT PROCEDURE:

1. Refer Appendix A for equipment set up.
2. The EUT was tested for frequency error from  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  in  $10^{\circ}\text{C}$  increments
3. The frequency error was recorded in parts per million (ppm).

MEASUREMENT RESULTS:

See the plots on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: FCC 47 CFR 90.213

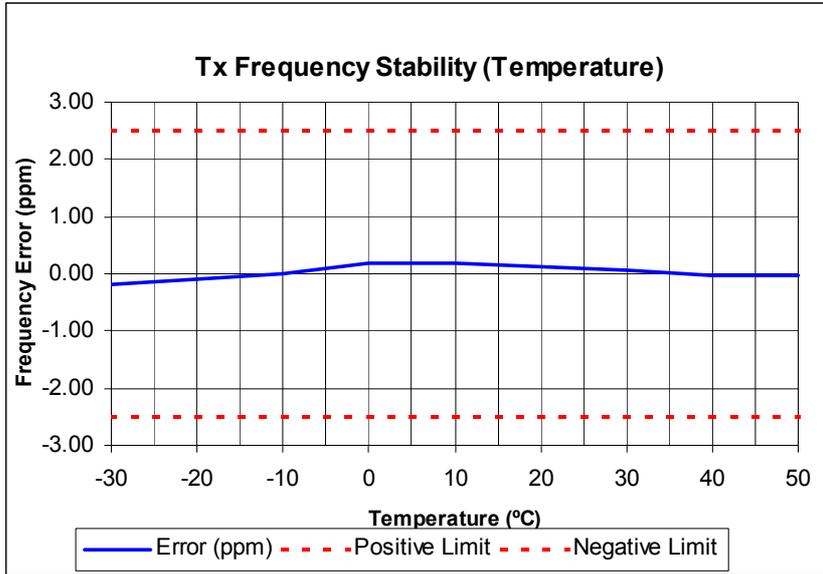
Frequency Range: 421 MHz to 512 MHz

Channel Spacing (kHz)	Frequency Error (ppm)
12.5	2.5
25.0	5.0

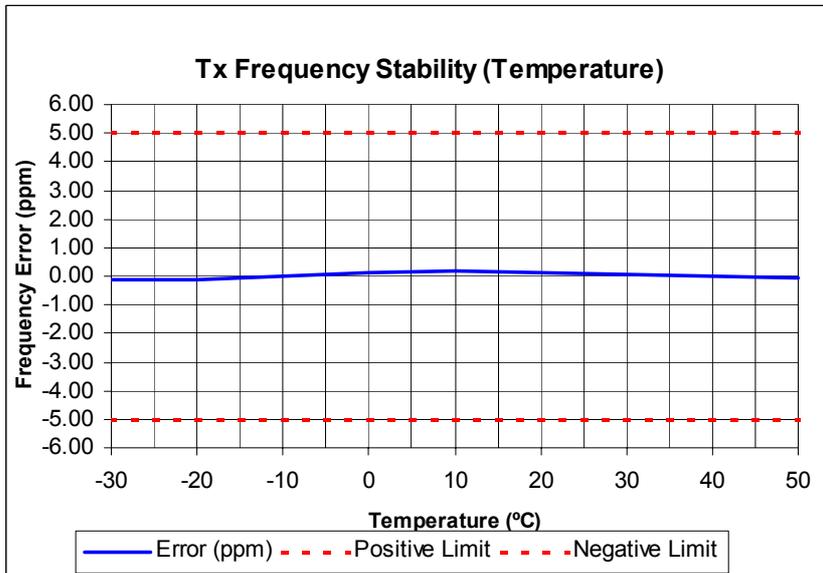
TRANSMITTER FREQUENCY STABILITY (TEMPERATURE)

SPECIFICATION: FCC 47 CFR 2.1055 (a) (1)

Tx FREQUENCY: 460.1MHz 4W 12.5 kHz channel Spacing



Tx FREQUENCY: 460.1MHz 4W 25.0 kHz channel Spacing



TRANSMITTER FREQUENCY STABILITY (VOLTAGE)

SPECIFICATION: FCC 47 CFR 2.1055 (d) (1)

GUIDE: TIA/EIA-603B 2.2.2

MEASUREMENT PROCEDURE:

4. Refer Appendix A for equipment set up.
5. The EUT was tested for frequency error at an input voltage to the radio of 85% to 115%. The frequency error was recorded in parts per million (ppm).

MEASUREMENT RESULTS: Frequency Range: 421MHz to 512MHz

Channel Spacing (kHz)	FREQUENCY ERROR (ppm) @ 460.1MHz		
	6.0 V DC	7.5 V DC	8.5 VDC
12.5	0.14	-0.07	0.14
25.0	0.14	-0.07	0.14

LIMIT CLAUSE: FCC 47 CFR 90.213

Channel Spacing (kHz)	Frequency Error (ppm)
12.5	2.5
25.0	5.0

TRANSIENT FREQUENCY BEHAVIOR

SPECIFICATION: FCC 47 CFR 90.214

GUIDE: TIA/EIA-603B 2.2.19

MEASUREMENT PROCEDURE:

6. Refer Appendix A for equipment set up.

7. Measurements and plots were made following the TIA/EIA procedure.

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MEASUREMENT RESULTS:

See the tables and plots on the following pages for 12.5 kHz & 25.0 kHz channel spacings.

LIMIT CLAUSE: FCC 47 CFR 90.214

TRANSIENT FREQUENCY BEHAVIOUR

SPECIFICATION: FCC 47 CFR 90.214

Tx FREQUENCY: 460.1 MHz    4 W    12.5 kHz Channel Spacing

FREQUENCY	460.1 MHz @ 4 W Tx	
TRANSIENT RESPONSE PERIOD	CARRIER PEAK VARIATION FROM NORMAL	
	Key ON (kHz)	Key OFF (kHz)
t <sub>1</sub>	0.7	N/A
t <sub>2</sub>	0.4	N/A
t <sub>3</sub>	N/A	0.6
t <sub>2</sub> → t <sub>3</sub> ppm	-1.1	
ERROR LIMIT (t <sub>2</sub> → t <sub>3</sub> ) ppm	2.5	

Confirm that during periods t <sub>1</sub> and t <sub>3</sub> the frequency difference does not exceed the value of one channel separation.	YES	NO
	<b>Y</b>	
Confirm that during the period t <sub>2</sub> the frequency difference does not exceed half a channel separation.	YES	NO
	<b>Y</b>	
Confirm that during the period t <sub>2</sub> to t <sub>3</sub> the frequency difference does not exceed the frequency error limit.	YES	NO
	<b>Y</b>	

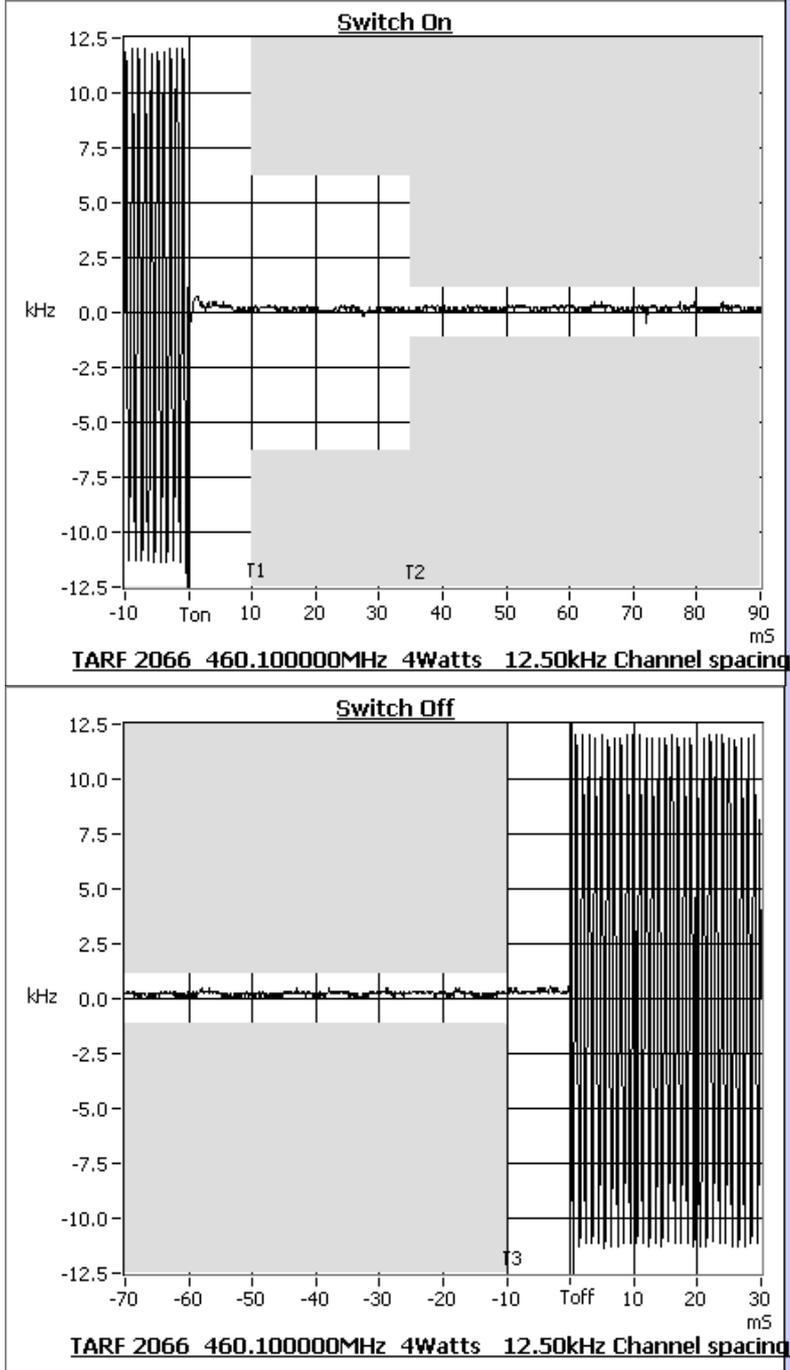
LIMIT:

TRANSIENT PERIODS	FREQUENCY RANGE 150MHz – 174 MHz	FREQUENCY RANGE 421MHz – 512 MHz
t <sub>1</sub> (ms)	5 ms	10 ms
t <sub>2</sub> (ms)	20 ms	25 ms
t <sub>3</sub> (ms)	5 ms	10 ms

TRANSIENT FREQUENCY BEHAVIOUR

SPECIFICATION: FCC 47 CFR 90.214

Tx FREQUENCY: 460.1MHz 4 W 12.5 kHz Channel Spacing



TRANSIENT FREQUENCY BEHAVIOUR

SPECIFICATION: FCC 47 CFR 90.214

Tx FREQUENCY: 460.1 MHz    4 W    25.0 kHz Channel Spacing

FREQUENCY	460.1MHz @ 4 W Tx	
TRANSIENT RESPONSE PERIOD	CARRIER PEAK VARIATION FROM NORMAL	
	Key ON (kHz)	Key OFF (kHz)
t <sub>1</sub>	0.7	N/A
t <sub>2</sub>	0.5	N/A
t <sub>3</sub>	N/A	1.0
t <sub>2</sub> → t <sub>3</sub> ppm	1.1	
ERROR LIMIT (t <sub>2</sub> → t <sub>3</sub> ) ppm	5.0	

Confirm that during periods t <sub>1</sub> and t <sub>3</sub> the frequency difference does not exceed the value of one channel separation.	YES	NO
	<b>Y</b>	
Confirm that during the period t <sub>2</sub> the frequency difference does not exceed half a channel separation.	YES	NO
	<b>Y</b>	
Confirm that during the period t <sub>2</sub> to t <sub>3</sub> the frequency difference does not exceed the frequency error limit.	YES	NO
	<b>Y</b>	

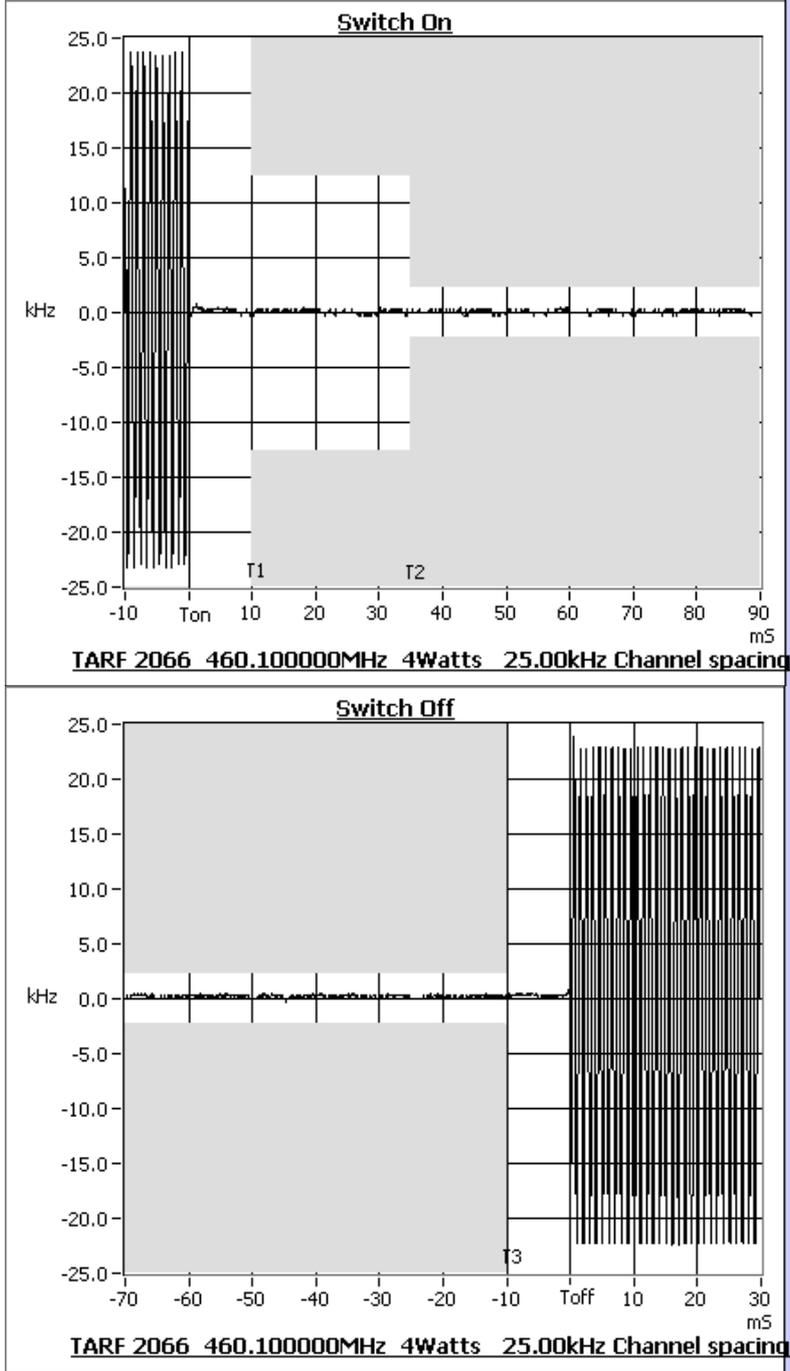
LIMIT:

TRANSIENT PERIODS	FREQUENCY RANGE 150MHz – 174 MHz	FREQUENCY RANGE 421MHz – 512 MHz
t <sub>1</sub> (ms)	5 ms	10 ms
t <sub>2</sub> (ms)	20 ms	25 ms
t <sub>3</sub> (ms)	5 ms	10 ms

TRANSIENT FREQUENCY BEHAVIOUR

SPECIFICATION: FCC 47 CFR 90.214

Tx FREQUENCY: 460.1 MHz 4 W 25.0 kHz Channel Spacing



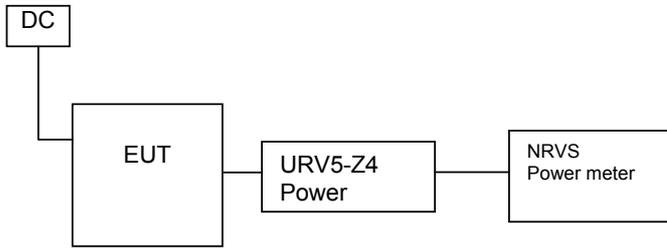
## TEST EQUIPMENT LIST

No#	Equipment	Manufacturer	Model No	Serial No#	Tait ID	Cal Due
1	Signal Generator	Hewlett Packard	HP8642B (Opt 001)	2512A00176	E3064	18-Feb-05
3	Signal Generator	Agilent	E4422B	GB40050320	E3788	22-Oct-04
4	Signal Generator	Hewlett Packard	HP8648C	3443U00543	E3558	11-Sep-05
5	Signal Generator	Rohde & Schwarz	SMY01 1062.5502.11	841736/019	E3553	29-Oct-04
11	Modulation Analyser	Hewlett Packard	HP8901B (Opt 002)	2441A00393	E3073	05-Aug-04
12	Modulation Analyser	Rohde & Schwarz	FMA0852.8500.52	842541/001	E3554	18-Jul-04
13	Audio Analyser	Hewlett Packard	HP8903A	2308A02597	E3074	15-Oct-04
15	Power Meter	Rohde & Schwarz	NRVS 1020.1809.02	841954/005	E3555	11-Mar-05
16	Power Sensor	Rohde & Schwarz	URV5- Z4 395.1619. 55	841.498/003	E3557	11-Mar-05
20	Power Supply	Hewlett Packard	HP6032A	2441A-0041Z	E3075	15-Oct-04
22	Oscilloscope	Tektronics	TDS340	B013611	E3585	25-Nov-04
42	Reference Horn Antenna	Emco	DRG3115	9512-4638	E3560	27-Sep-06
43	Horn Antenna	Emco	DRG3115		E3076	27-Sep-06
60	RF Attenuator 250W	Weinschel	45-30-34	JW663	E3386	09-Jul-04
65	RF Attenuator 50W	Weinschel	24-20-44	AW1266	E3562	28-Jun-05
67	RF Attenuator 150W Treva	Weinschel	40-20-33	CJ405	E3733	28-Jun-05
71	RF Load 50W	Weinschel	F1426	BF0487	E3675	11-Aug-04
72	RF Load 50W	Weinschel	F1426	AE2490	E3624	14-Jul-05
82	3m Coax Cable BLUE)	Suhner	Sucoflex 104A	25033/4A	E3694	11-Aug-04
83	1m Coax Cable (BLUE)	Suhner	Sucoflex 104A	25006/4A	E3693	11-Aug-04
86	1m Coax Cable (BLUE)	Suhner	Sucoflex 104A	25003/4A	E3690	11-Aug-04
88	Spectrum Analyser	Hewlett Packard	HP8562E	3821A00779	E3715	06-Jan-05
91	20m Coax Cable		RG214/U-50 (Ext Cal)	CBL01	E3404	08-Sep-04
100	Oscilloscope	Tektronics	TDS380	B017095	E3782	16-Oct-04
111	Modulation Analyser	Hewlett Packard	HP8901B (Opt 002)	3704A05837	E3786	15-Oct-04
115	Environ. Chamber	Contherm	5400 RHSLT.M		E4051	04-Mar-05
117	RF Attenuator	Weinschel	Model 1	BL9950	E4080	17-May-05
118	RF Attenuator	Weinschel	Model 1	BL9958	E4081	24-May-05
119	RF Attenuator 150W Treva	Weinschel	40-20-23	MF817	E4082	17-May-05
123	Spectrum Analyser	Agilent	E4445A	MY42510072	E4139	23-Apr-05

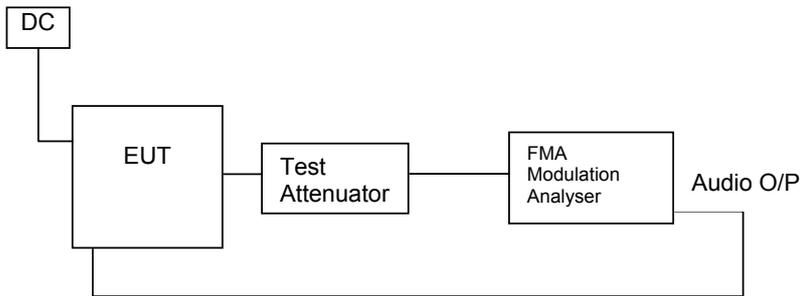
## APPENDIX A

### TEST SETUP DETAILS

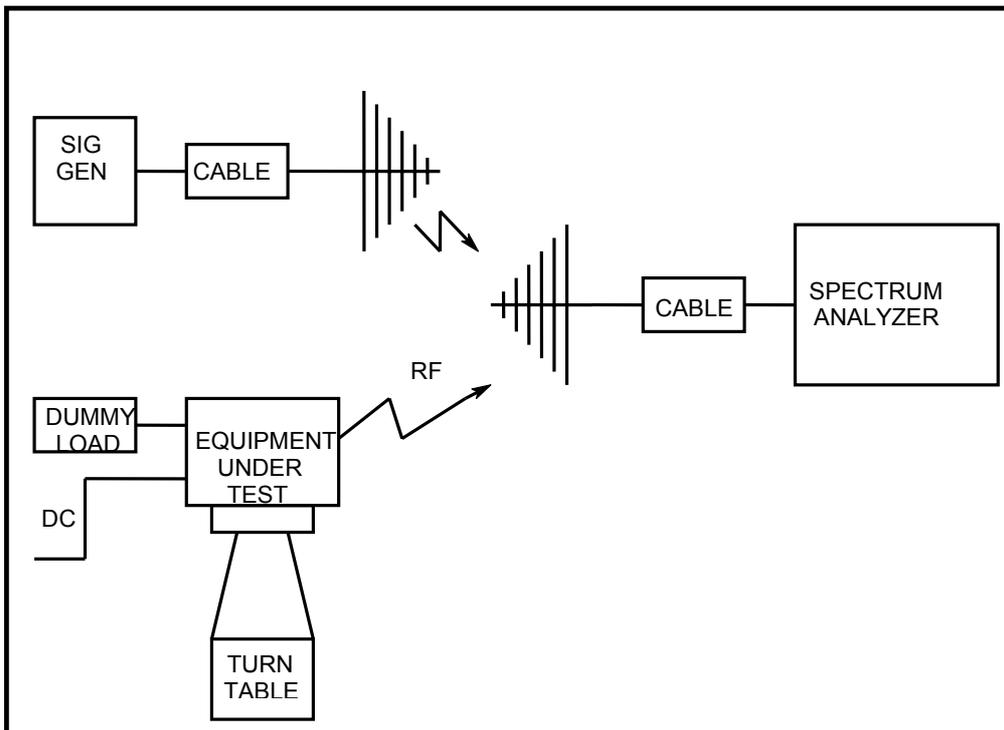
Test set up for Transmitter Carrier Power (Conducted)



Test set up for Transmitter Audio Frequency Response – Pre-Emphasis



Test set up for Spurious Emissions (Radiated)



All other testing was performed using the Teltest Radio **EVAL**uation system (TREVA), which is configured as shown below. The Spectrum Analyser is connected to the EUT via the attenuator network for Conducted Emissions testing, and Occupied Bandwidth.

