

EXHIBIT 6

INDEX OF SUBMITTED MEASURED DATA

This exhibit contains the measured data for this equipment as follows:

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EXHIBIT 6B – Tx Audio Frequency Response

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6C-1: 12.5 kHz Channel Spacing, 467.775 MHz, Transmit Audio Low Pass Filter Response

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6F-1: 3.6 Watt Harmonic of Carrier 450.65 MHz, 12.5 kHz Channel Spacing

6F-2: 3.6 Watt Harmonic of Carrier 459.125 MHz, 12.5 kHz Channel Spacing

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6F-5: 3.6 Watt Harmonic of Carrier 526.9875 MHz, 12.5 kHz Channel Spacing (Not for FCC review)

EXHIBIT 6G – Tx Radiated Spurious Emissions

6G-1: 3.6 Watt Harmonic of Carrier 450.65 MHz, 12.5 kHz Channel Spacing

6G-2: 3.6 Watt Harmonic of Carrier 459.125 MHz, 12.5 kHz Channel Spacing

6G-3: 3.6 Watt Harmonic of Carrier 467.775 MHz, 12.5 kHz Channel Spacing

6G-4: 3.6 Watt Harmonic of Carrier 511.9875 MHz, 12.5 kHz Channel Spacing

6G-5: 3.6 Watt Harmonic of Carrier 526.9875 MHz, 12.5 kHz Channel Spacing (Not for FCC review)

EXHIBIT 6H – Frequency Stability

- 6H-1 – 467.775 MHz, 0.5 ppm Frequency Stability vs. Temperature
- 6H-2 – 467.775 MHz, 0.5 ppm Frequency Stability vs. Supply Voltage

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- 6I-1: 12.5 kHz Channel Spacing, 467.775 MHz, Key-Up Attack Time
- 6I-2: 12.5 kHz Channel Spacing, 467.775 MHz, De-Key Decay Time

**** Please note that the above data were taken following the procedures and limits outlined in TIA 603-D and RSS 119 during the month of August 2015. See Table 2 in Ex07_test procedures**

Radio model tested: AAH81TCN9TA2AN

Important Note: The data in this test report meets or exceeds the technical requirements of FCC Rule Part 90 and RSS 119.

EXHIBIT 6A

RF Conducted Output Power Data:

Frequency 450.65 MHz:

Output RF power	1.19 Watts
DC Voltage	3.70 Volts
DC Current	1.23 Amps

Output RF power	3.59 Watts
DC Voltage	3.70 Volts
DC Current	2.14 Amps

Frequency 459.125 MHz:

Output RF power	1.19 Watts
DC Voltage	3.70 Volts
DC Current	1.20 Amps

Output RF power	3.59 Watts
DC Voltage	3.70 Volts
DC Current	2.13 Amps

Frequency 467.775 MHz:

Output RF power	1.20 Watts
DC Voltage	3.70 Volts
DC Current	1.18 Amps

Output RF power	3.60 Watts
DC Voltage	3.70 Volts
DC Current	2.12 Amps

Frequency 511.9875 MHz:

Output RF power	1.20 Watts
DC Voltage	3.70 Volts
DC Current	1.16 Amps

Output RF power	3.60 Watts
DC Voltage	3.70 Volts
DC Current	2.20 Amps

Frequency 526.9875 MHz (Not for FCC review):

Output RF power	1.20 Watts
DC Voltage	3.70 Volts
DC Current	1.20 Amps

Output RF power	3.60 Watts
DC Voltage	3.70 Volts
DC Current	2.27 Amps

EXHIBIT 6B

Transmit Audio Response

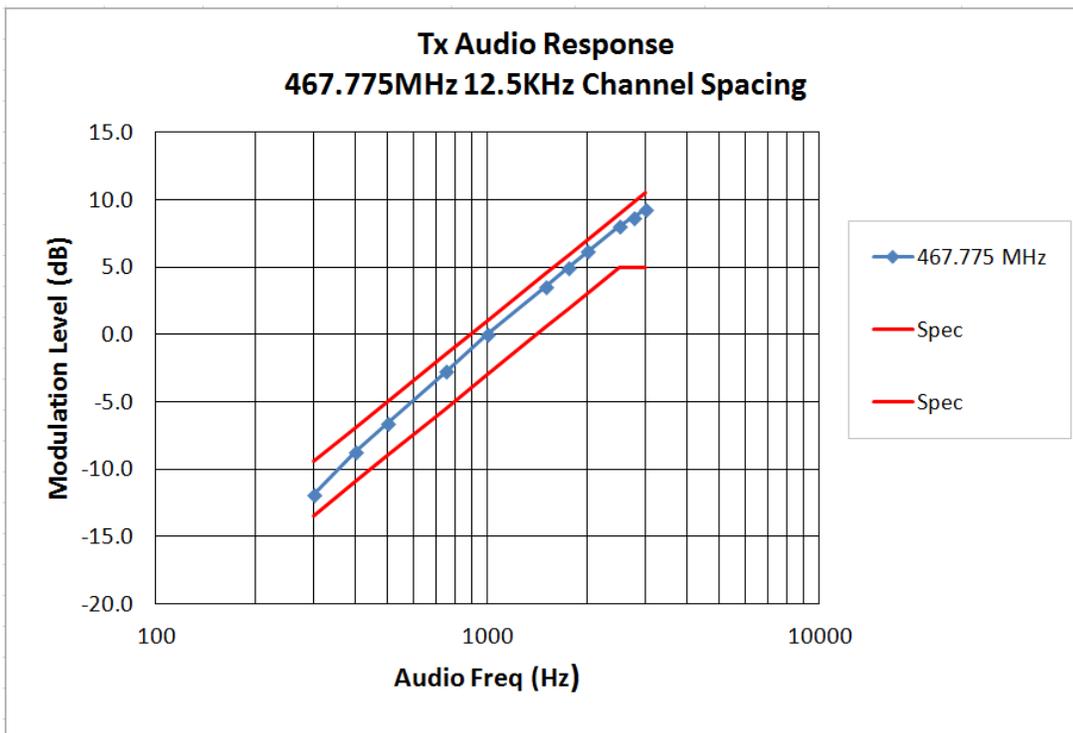


Figure 6B-1: 12.5 KHz Channel Spacing, 467.775 MHz, Transmit Audio Frequency Response

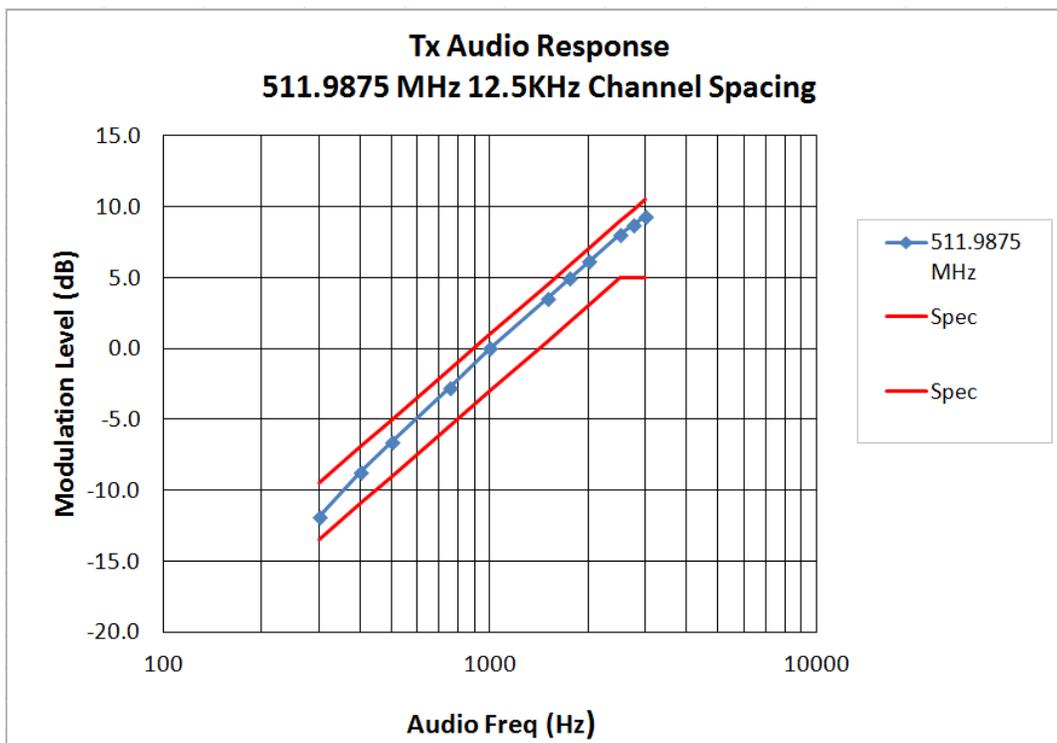


Figure 6B-2: 12.5 KHz Channel Spacing, 511.9875 MHz, Transmit Audio Frequency Response

EXHIBIT 6C

Transmit Audio Post Limiter Low Pass Filter Response

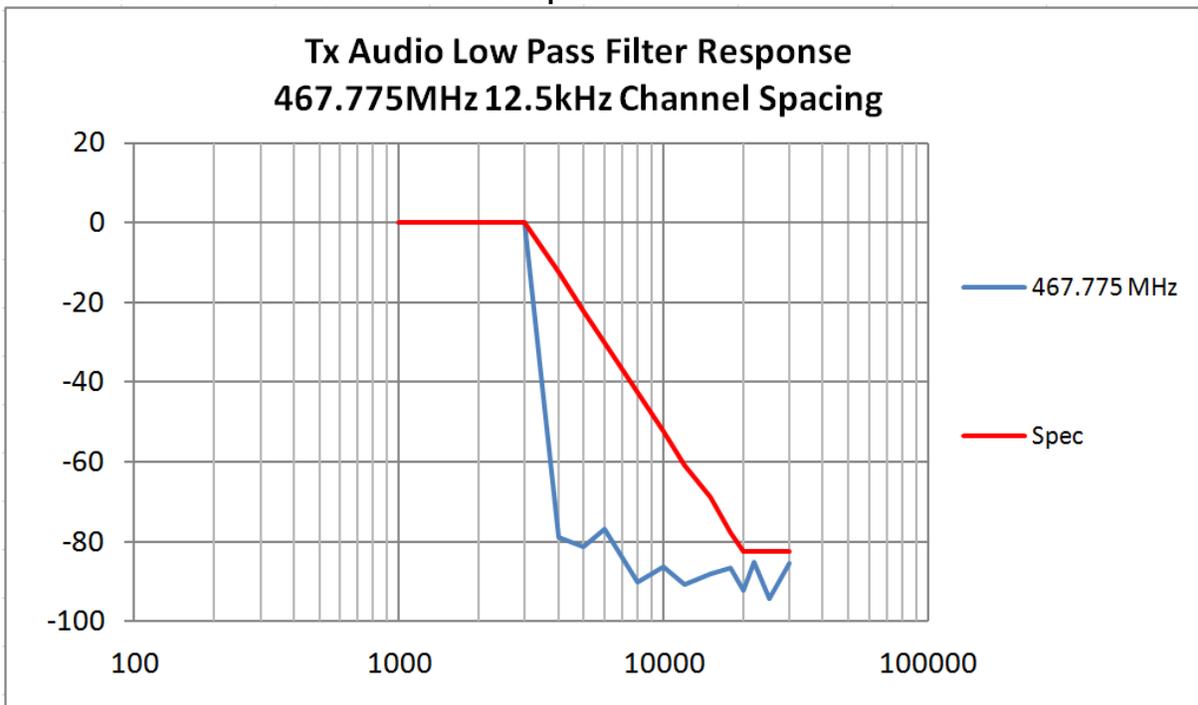


Figure 6C-1: 12.5 KHz Channel Spacing, 467.775 MHz, Transmit Audio Low Pass Filter Response

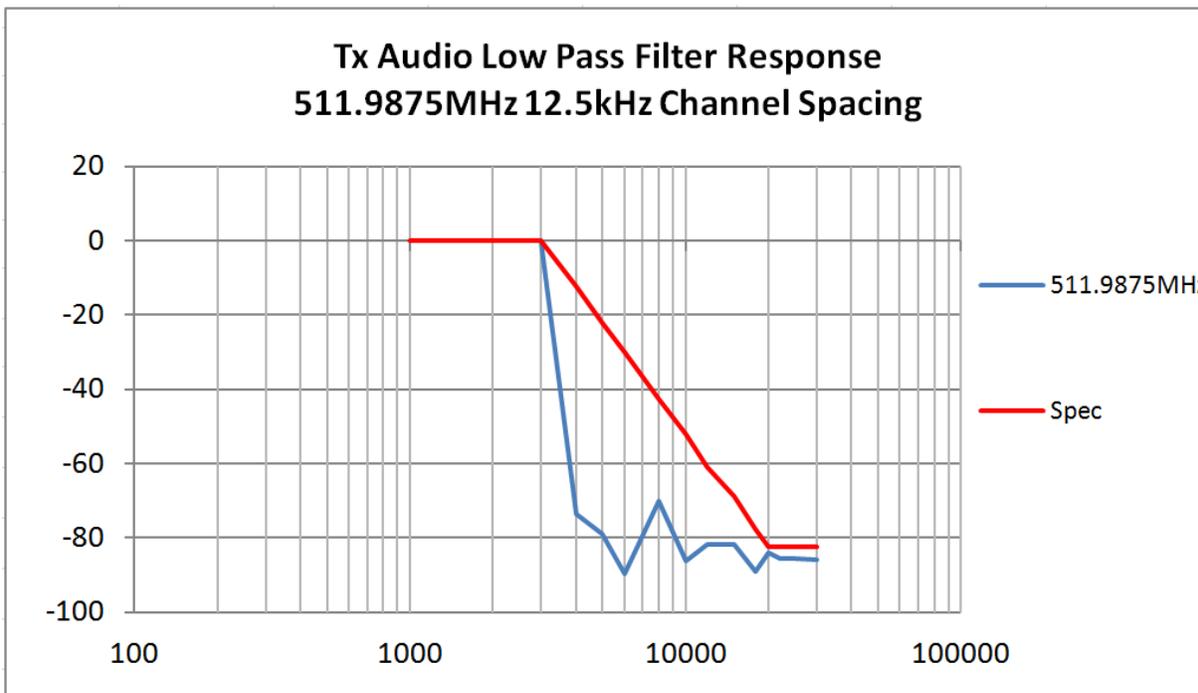


Figure 6C-2: 12.5 KHz Channel Spacing, 511.9875 MHz, Transmit Audio Low Pass Filter Response

EXHIBIT 6D

Modulation Limiting

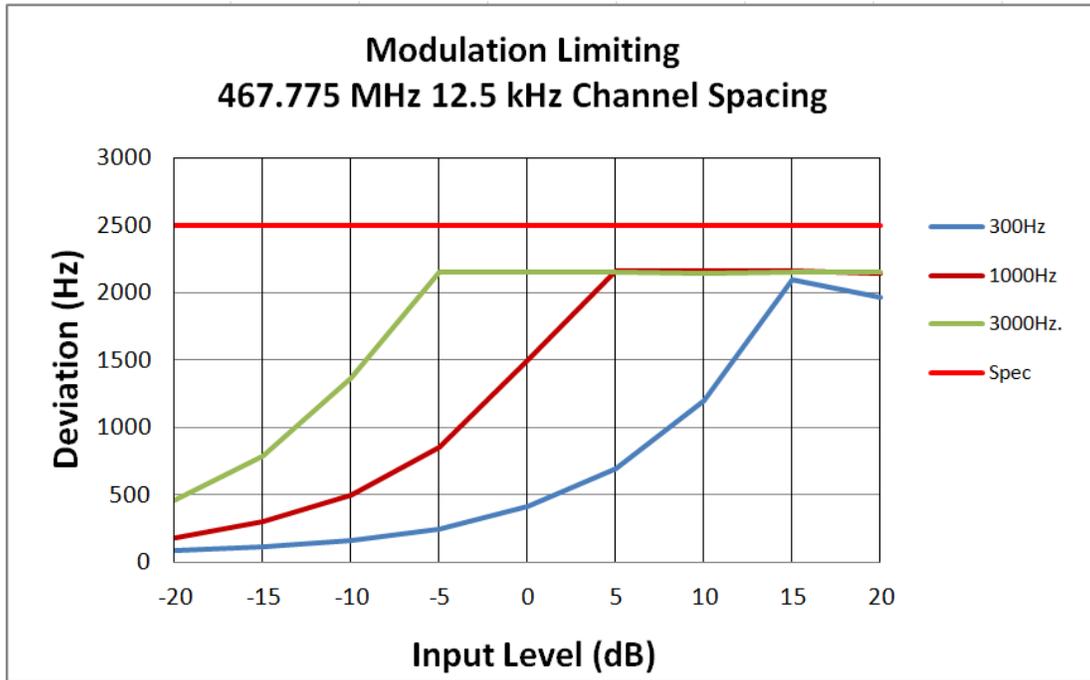


Figure 6D-1: 12.5 KHz Channel Spacing, 467.775 MHz

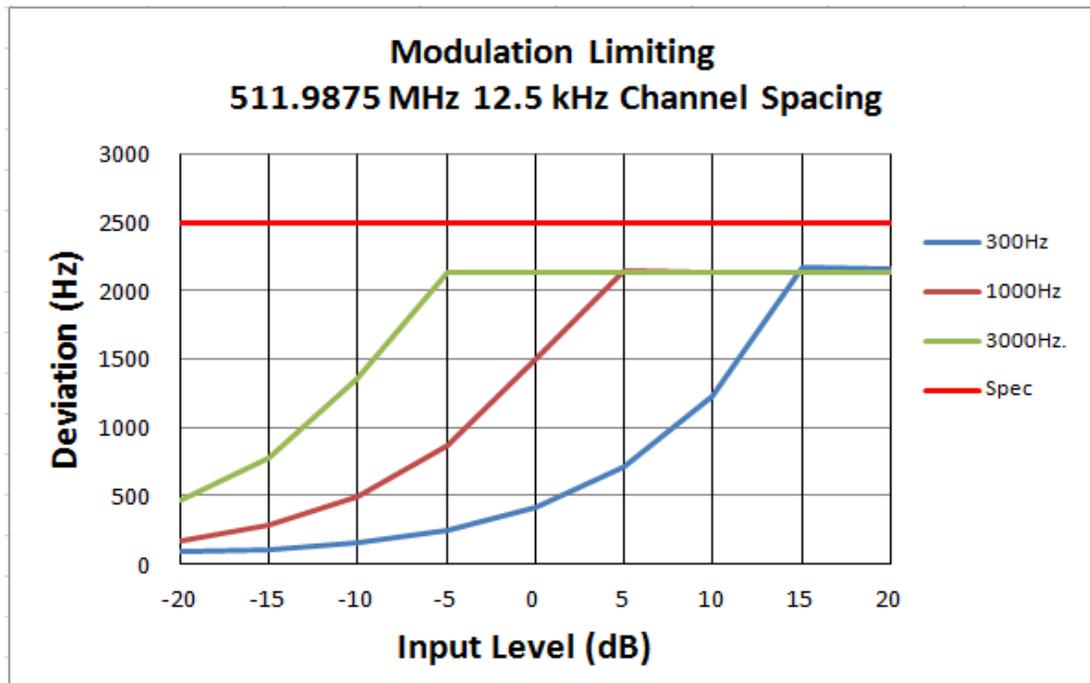


Figure 6D-2: 12.5 KHz Channel Spacing, 511.9875 MHz

EXHIBIT 6E

The transmitter is capable of the following types of modulation:

- i) Modulation of 9600 bps 4 level FSK Data

4 Level FSK Digital Modulation Techniques

The modulation sends 4800 symbols/sec with each symbol conveying 2 bits of information for a data rate of 9600 bps in a 12.5 kHz channel, which is equivalent to 4800 bps per 6.25 kHz. The maximum deviation D , of the symbol is defined as:

$$D = 3h / 2T$$

where:

h is the deviation index defined for the modulation

T is the symbol time (1/4800) in seconds

The deviation index, h , is 0.27. This yields a symbol deviation of 1.944 kHz at the symbol center. The mapping between symbols and bits is shown below:

Information Bits		Symbol	4FSK Deviation
Bit 1	Bit 0		
0	1	+3	+1.944 kHz
0	0	+1	+0.648 kHz
1	0	-1	-0.648 kHz
1	1	-3	-1.944 kHz

A Square Root Raised Cosine Filter is implemented for the modulation low pass filter. The input to the modulation low pass filter consists of a series of impulses separated in time by 208.33 microseconds (1/4800 sec). The group delay of the filter is flat over the passband for $|f| < 2880$ Hz. The magnitude response of the filter is given by the following formula.

$|F(f)|$ = magnitude response of the Square Root Raised Cosine Filter

$$|F(f)| = 1 \text{ for } |f| \leq 1920 \text{ Hz}$$

$$|F(f)| = |\cos(\pi f / 1920)| \text{ for } 1920 \text{ Hz} < |f| \leq 2880 \text{ Hz}$$

$$|F(f)| = 0 \text{ for } |f| > 2880 \text{ Hz}$$

where f = frequency in hertz.

The 4FSK modulator consists of a Square Root Raised Cosine Filter, cascaded with a frequency modulator.



4 Level FSK Digital Modulation (12.5 kHz Channelization, Digital Data)

Measurement's per Rule Part 2.202(c)(4) where employed because Part 2.202(g) Table III A formulation produces an excessive result using the value of K recommended in the Table. Therefore, the 99% energy rule (Title 47 CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It states that 99% of the modulation energy falls within X kHz, which in this case is 7.6 kHz (**7K60** designator).

Per CFR Title 47, Part 2, Section 2.201:

Frequency Modulation.....	F
A single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex.....	1
Data Transmission, telemetry, telecommand	D

Note: This product utilizes a Time Division Multiple Access (TDMA) protocol.

The complete emissions designator for this transmitter is **7K60F1D**.

4 Level FSK Digital Modulation (12.5 kHz Channelization, Digital Voice and Data)

Measurement's per Rule Part 2.202(c)(4) where employed because Part 2.202(g) Table III A formulation produces an excessive result using the value of K recommended in the Table. Therefore the 99% energy rule (title 47CFR2.989) was used for digital mode and is more accurate than Carson's rule. It states that 99% of the modulation energy falls within X kHz, which in this case is 7.6 kHz (**7K60** designator).

Per CFR Title 47, Part 2, Section 2.201:

Frequency Modulation.....	F
A single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex.....	1
Telephony (including sound broadcasting).....	E

Note: This product utilizes a Time Division Multiple Access (TDMA) protocol.

The complete emissions designator for this transmitter is **7K60F1E**.

Digital (12.5 kHz Channelization, Digital TDMA)

Measurement's per Rule Part 2.202(c)(4) where employed because Part 2.202(g) Table III A formulation produces an excessive result using the value of K recommended in the Table. Therefore the 99% energy rule (title 47CFR2.989) was used for digital mode and is more accurate than Carson's rule. It states that 99% of the modulation energy falls within X kHz, which in this case is 7.6 kHz (**7K60** designator).

Per CFR Title 47, Part 2, Section 2.201:

Frequency Modulation.....	F
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A single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex.....	1
Combination of Data Transmission, telemetry, telecommand (D), and Telephony (E)	...
	W

Note: This product utilizes a Time Division Multiple Access (TDMA) protocol.

The complete emissions designator for this transmitter is **7K60F1W**.

4 Level FSK Digital Modulation (12.5 kHz Channelization, Digital Data)

Measurement's per Rule Part 2.202(c)(4) where employed because Part 2.202(g) Table III A formulation produces an excessive result using the value of K recommended in the Table. Therefore, the 99% energy rule (Title 47 CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It states that 99% of the modulation energy falls within X kHz, which in this case is 7.6 kHz (**7K60** designator).

Per CFR Title 47, Part 2, Section 2.201:

Frequency Modulation.....	F
Case not otherwise covered.....	X
Data Transmission, telemetry, telecommand.....	D

Note: This product utilizes a Time Division Multiple Access (TDMA) protocol.

The complete emissions designator for this transmitter is **7K60FXD**.

4 Level FSK Digital Modulation (12.5 kHz Channelization, Digital Voice and Data)

Measurement's per Rule Part 2.202(c)(4) where employed because Part 2.202(g) Table III A formulation produces an excessive result using the value of K recommended in the Table. Therefore the 99% energy rule (title 47CFR2.989) was used for digital mode and is more accurate than Carson's rule. It states that 99% of the modulation energy falls within X kHz, which in this case is 7.6 kHz (**7K60** designator).

Per CFR Title 47, Part 2, Section 2.201:

Frequency Modulation.....	F
Case not otherwise covered.....	X
Telephony (including sound broadcasting).....	E

Note: This product utilizes a Time Division Multiple Access (TDMA) protocol.

The complete emissions designator for this transmitter is **7K60FXE**.

Occupied Bandwidth Data

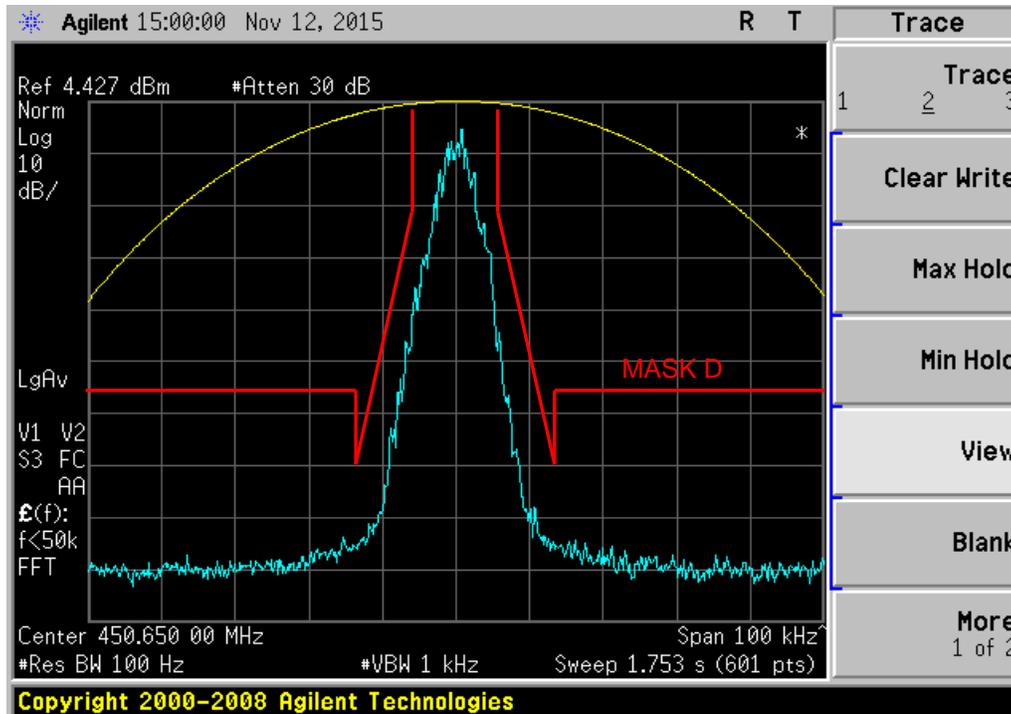


Figure 6E-1: 450.65MHz, 12.5KHz Channel Spacing, 4FSK Data only (7K60F1D)

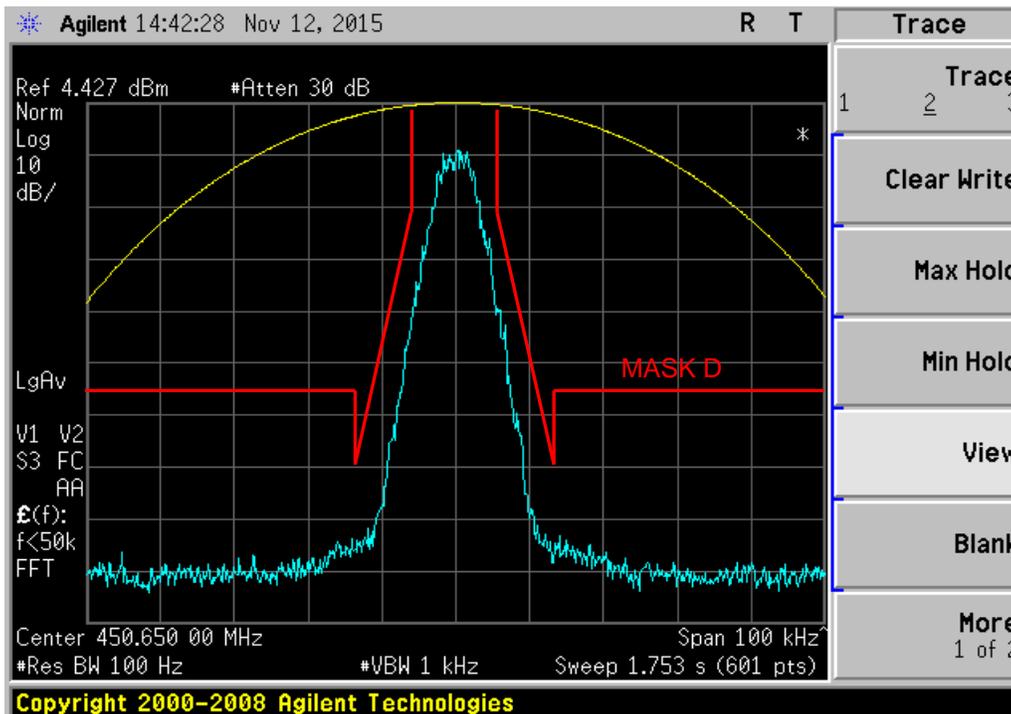


Figure 6E-2: 450.65MHz, 12.5 kHz Channel Spacing, 4FSK Voice and Data (7K60F1W)

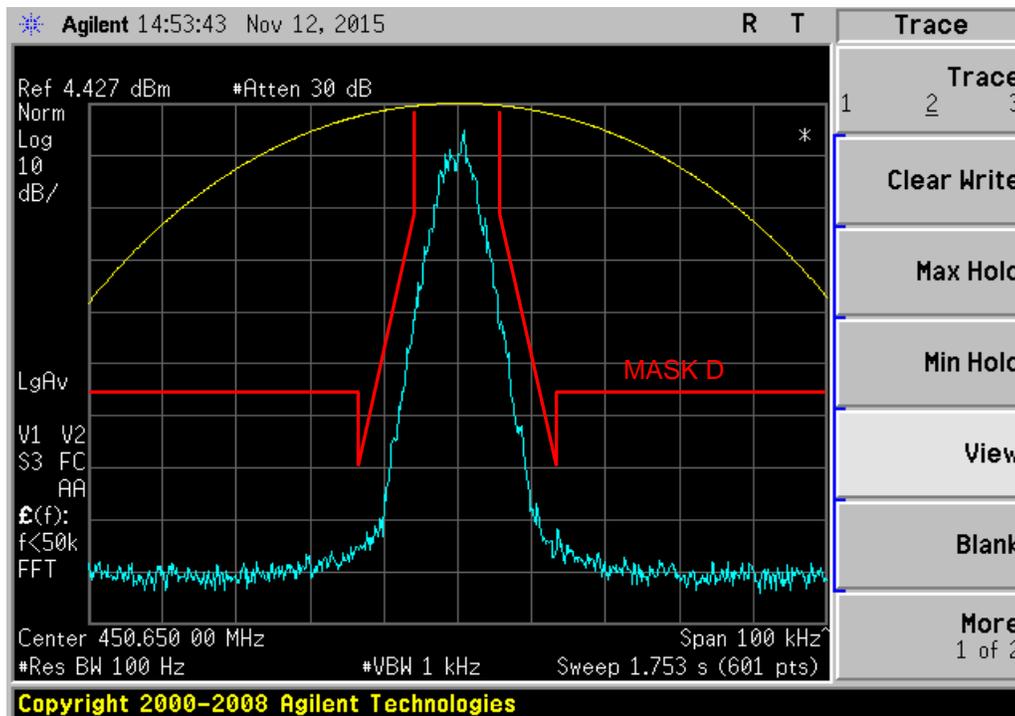


Figure 6E-3: 450.65MHz, 12.5kHz Channel Spacing, 4FSK Voice only (7K60F1E)

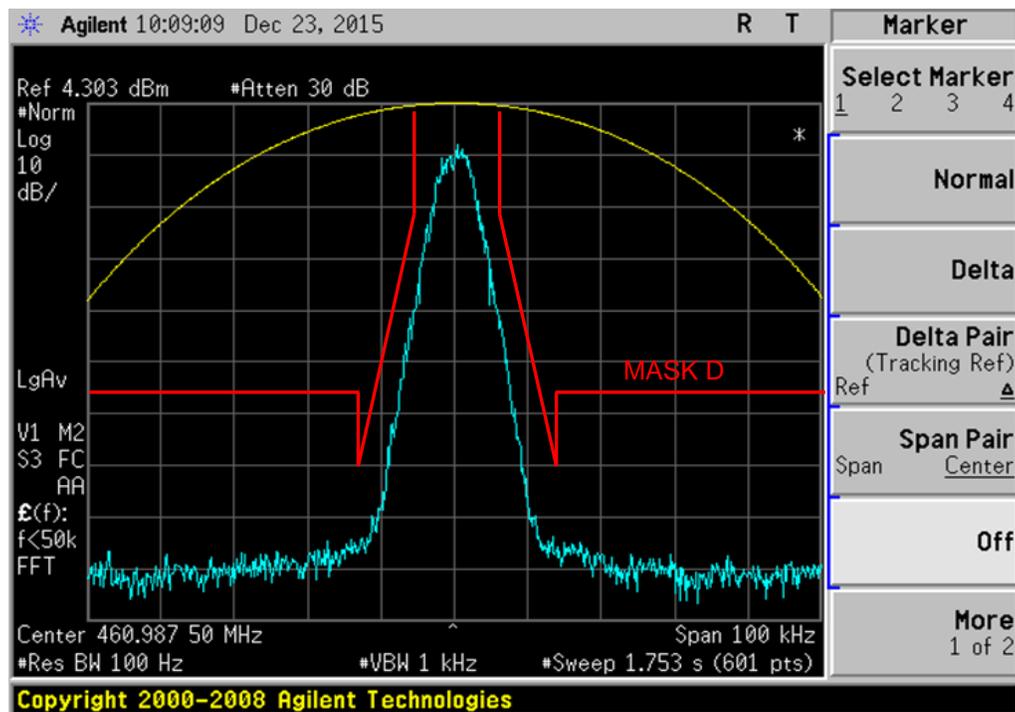


Figure 6E-4: 460.9875MHz, 12.5kHz Channel Spacing, 4FSK Data only (7K60F1D)

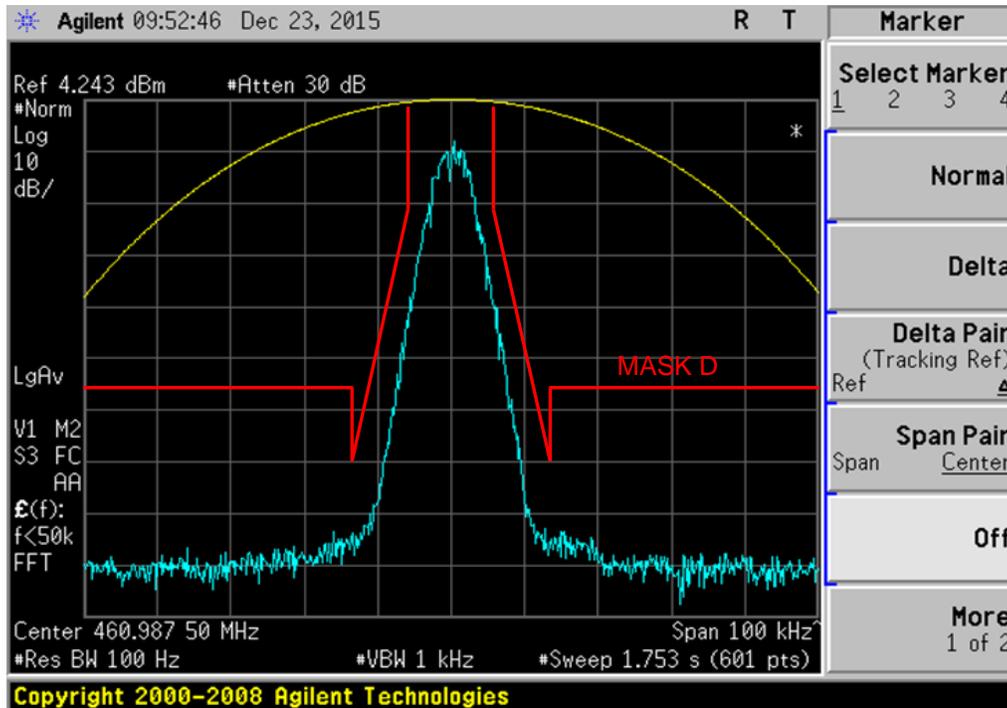


Figure 6E-5: 460.9875MHz, 12.5kHz Channel Spacing, 4FSK Voice and Data (7K60F1W)

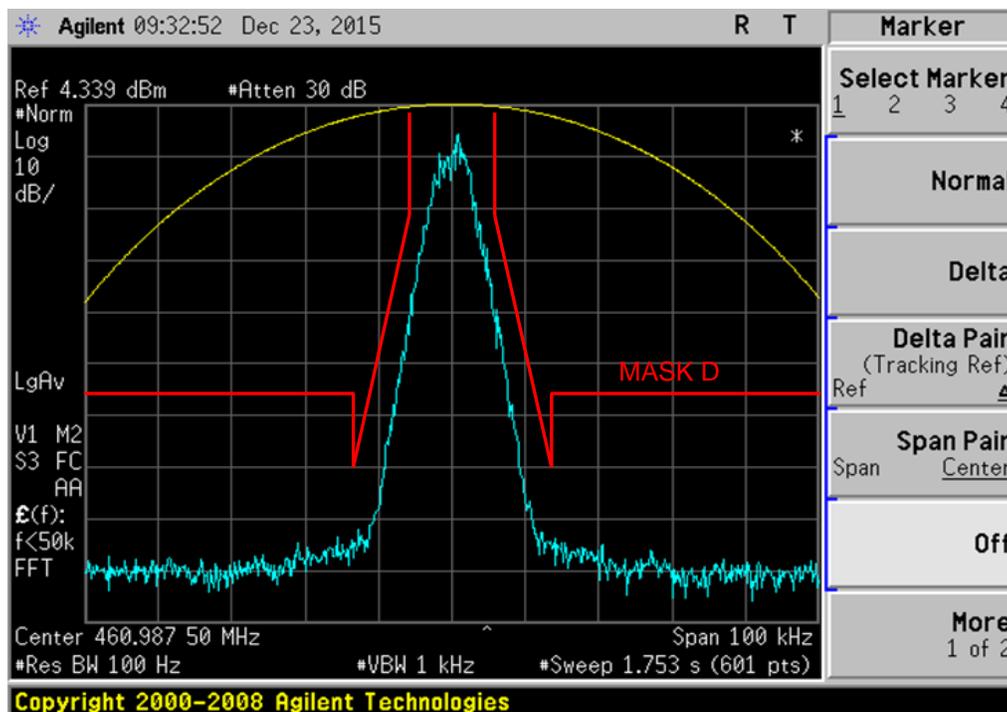


Figure 6E-6: 460.9875MHz, 12.5kHz Channel Spacing, 4FSK Voice only (7K60F1E)

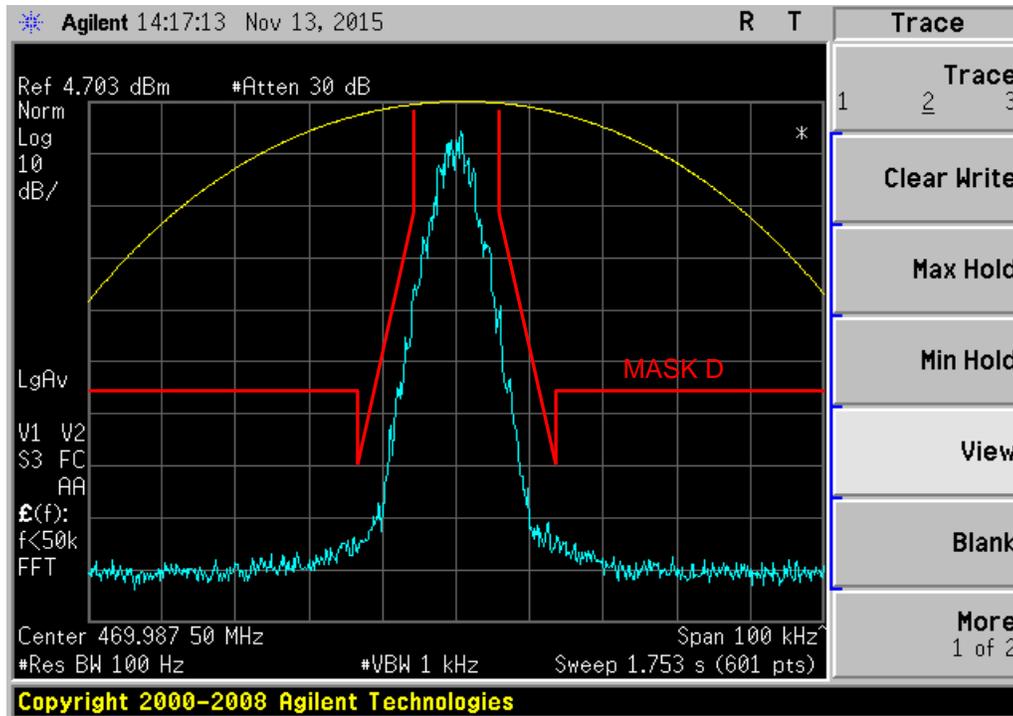


Figure 6E-7: 469.9875MHz, 12.5KHz Channel Spacing, 4FSK Data only (7K60F1D)

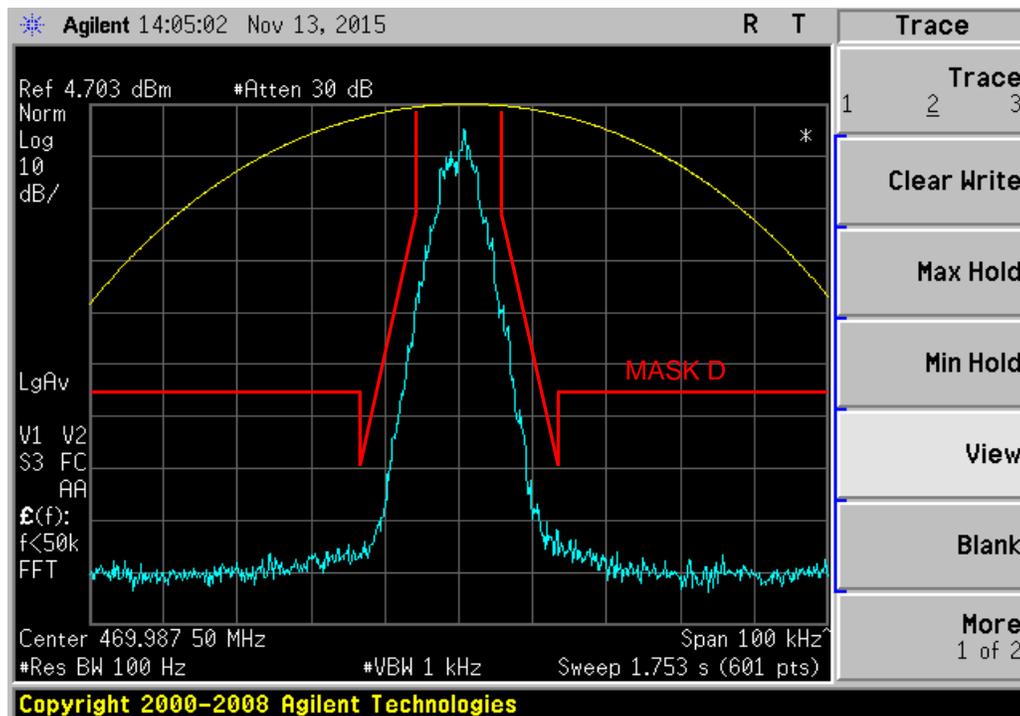


Figure 6E-8: 469.9875MHz, 12.5 kHz Channel Spacing, 4FSK Voice and Data (7K60F1W)

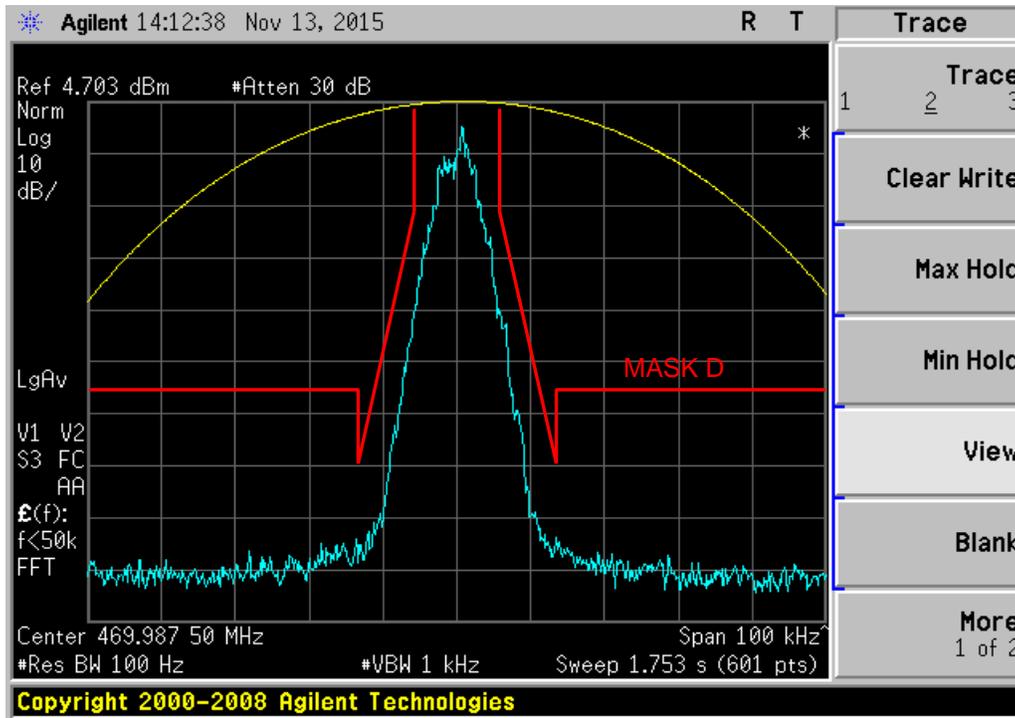


Figure 6E-9: 469.9875MHz, 12.5kHz Channel Spacing, 4FSK Voice only (7K60F1E)

****NOTE:-**

- For 4FSK Digital Modulation, 12.5kHz Data 7K60F1D & 7K60FXD would be the same. Therefore only measurements with 7K60F1D shown above.
- For 4FSK Digital Modulation, 12.5kHz Data 7K60F1E & 7K60FXE would be the same. Therefore only measurements with 7K60F1E shown above
- All measurements of Occupied Bandwidth which are shown on the above plots are measured using a Spectrum Analyzer
- Measurement using a Spectrum Analyzer must use a 30dB attenuation in order to avoid damage to it
- Therefore the reference power level (Ref) shown on each plot refers to its true power level

99% Bandwidth Power

Spectrum Analyzer setting as below:

RBW = 150 Hz, VBW = 15 kHz, Span = 40 kHz

Description	Bandwidth Power (99%)
Carrier, 4FSK data, O.153 test pattern, 7K60F1D, 7K60F1E, 7K60F1W, 7K60FXD, 7K60FXE	7.3319 kHz

EXHIBIT 6F

Transmitter Conducted Spurious Emissions

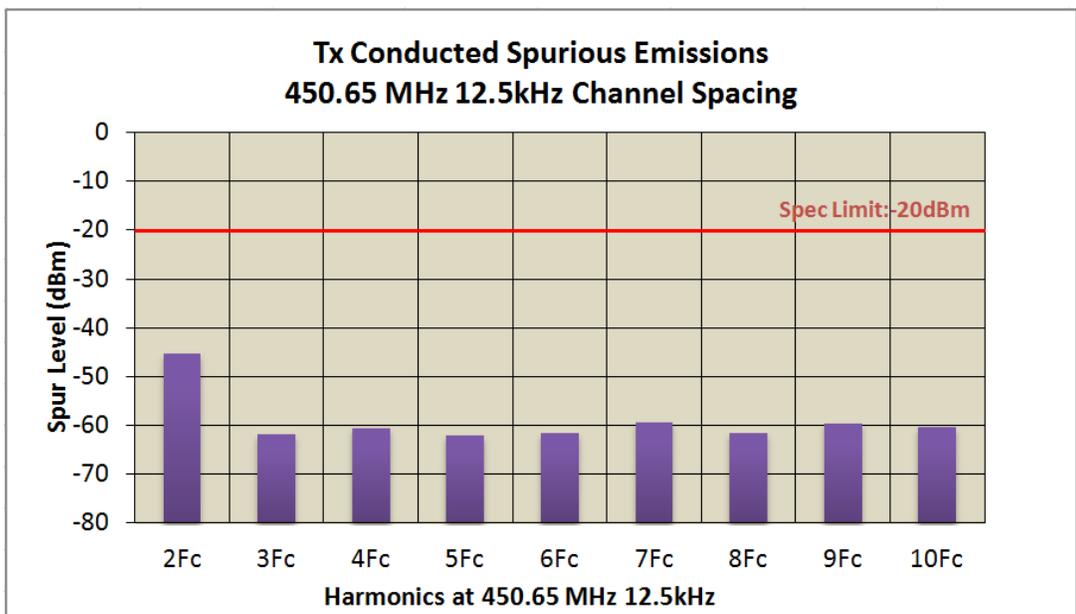


Table 6F-1: 3.6 Watt Harmonic of Carrier 450.65MHz, 12.5 KHz Channel Spacing

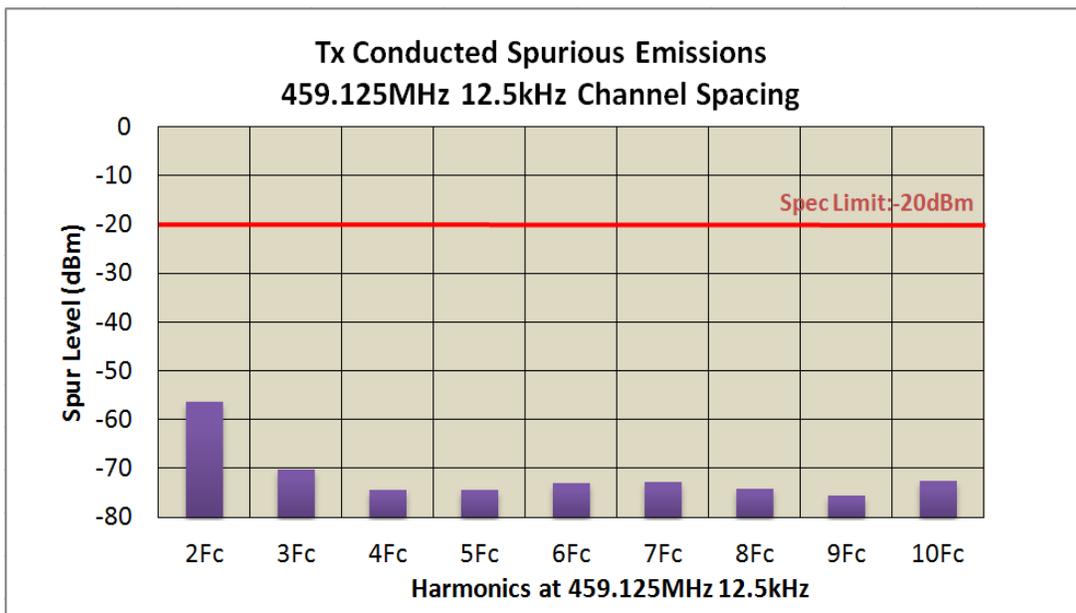


Table 6F-2: 3.6 Watt Harmonic of Carrier 459.125MHz, 12.5 KHz Channel Spacing

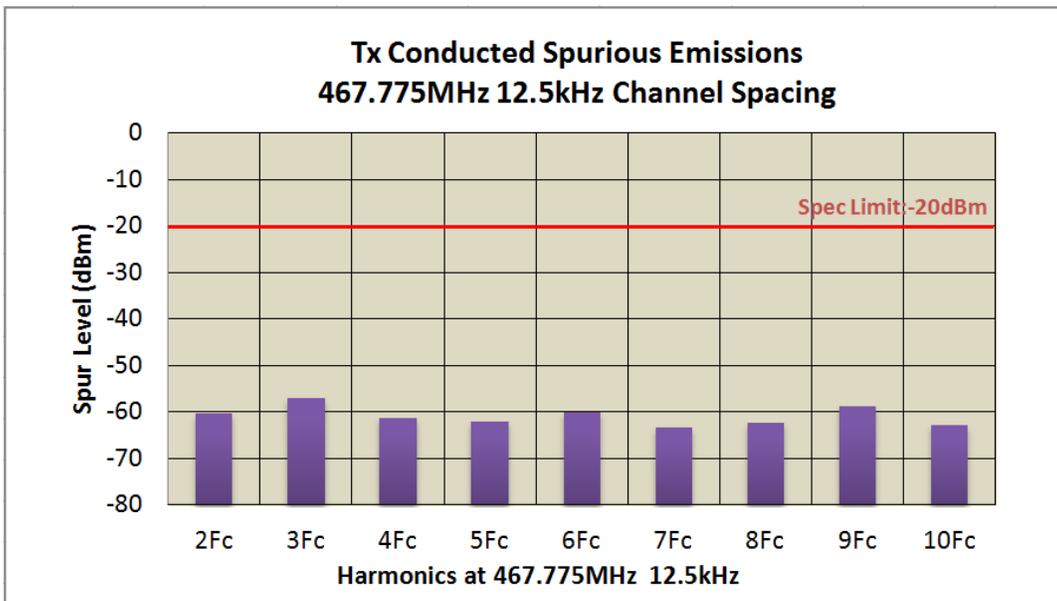


Table 6F-3: 3.6 Watt Harmonic of Carrier 467.775 MHz, 12.5 kHz Channel Spacing

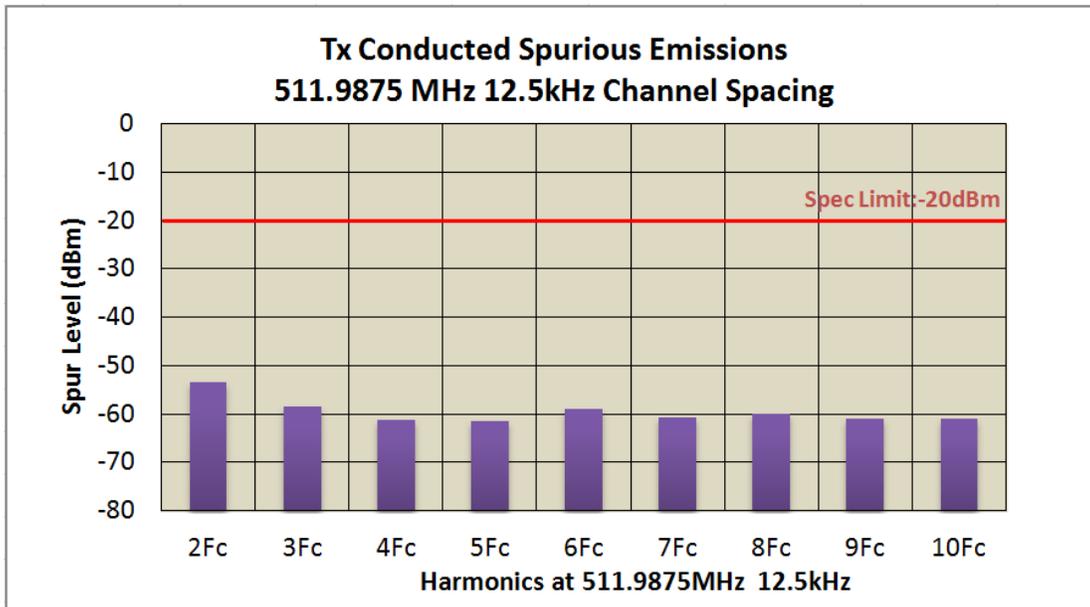


Table 6F-4: 3.6 Watt Harmonic of Carrier 511.9875MHz, 12.5 kHz Channel Spacing

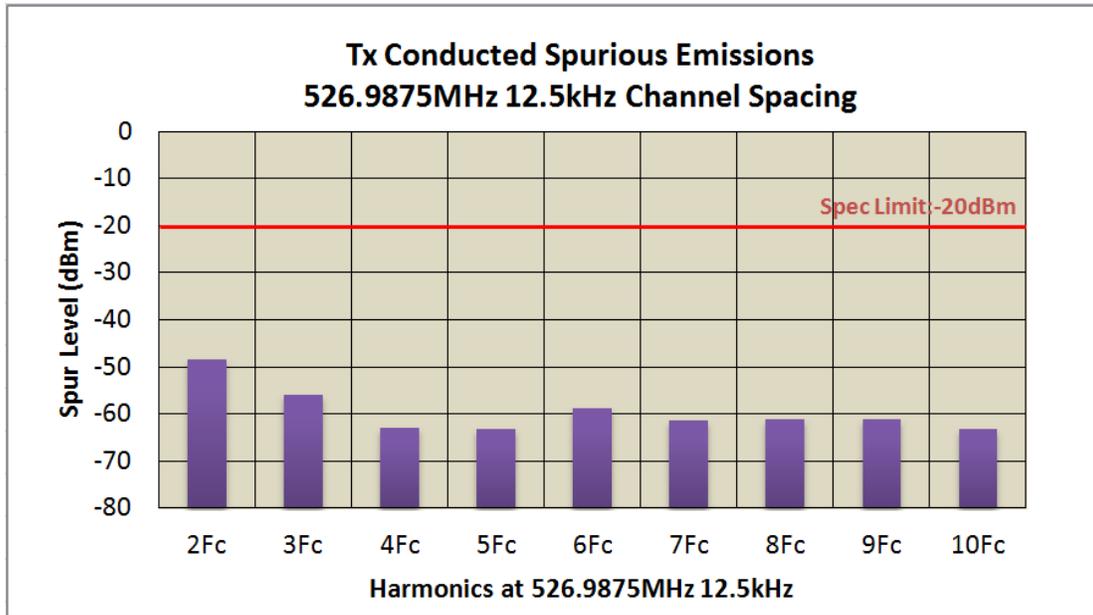


Table 6F-5: 3.6 Watt Harmonic of Carrier 526.9875MHz, 12.5 kHz Channel Spacing (Not for FCC review)

EXHIBIT 6H

Frequency Stability

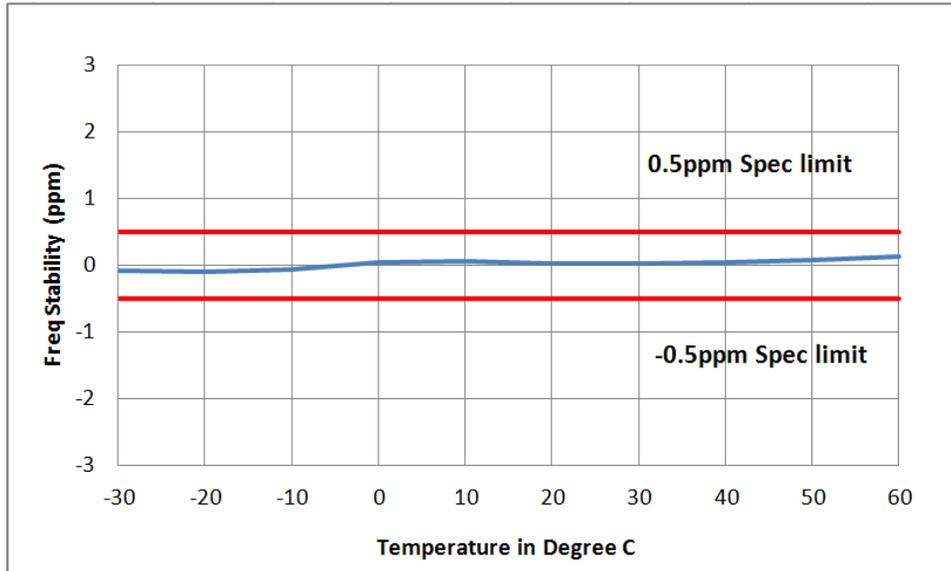


Figure 6H-1: 467.775 MHz, 0.5 ppm Frequency Stability vs. Temperature

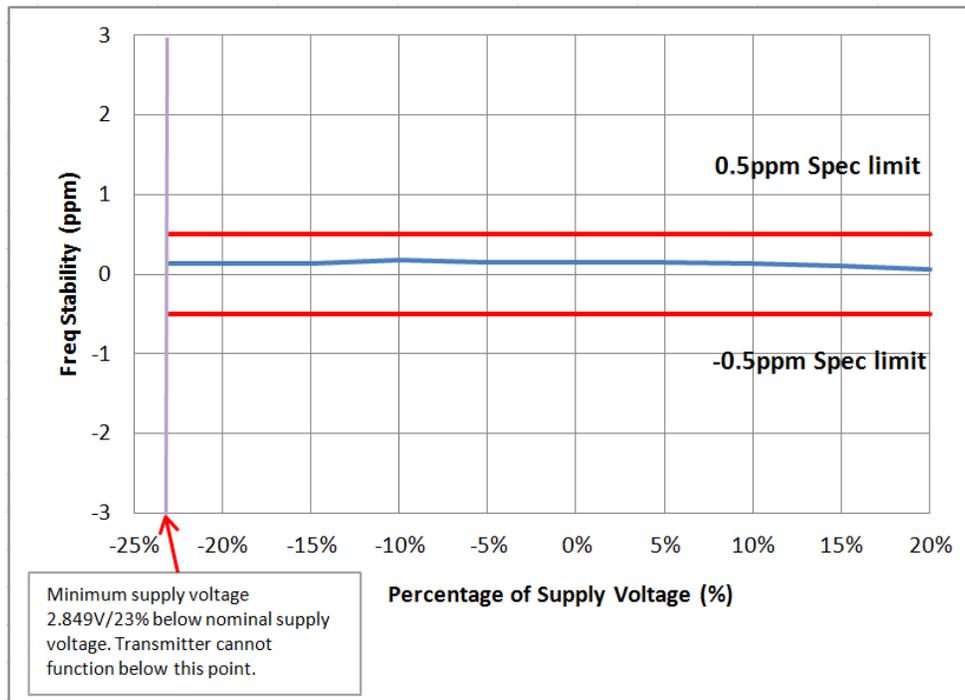


Figure 6H-2: 467.775 MHz, 0.5 ppm Frequency Stability vs. Supply Voltage

EXHIBIT 6I

Transient Frequency Behavior

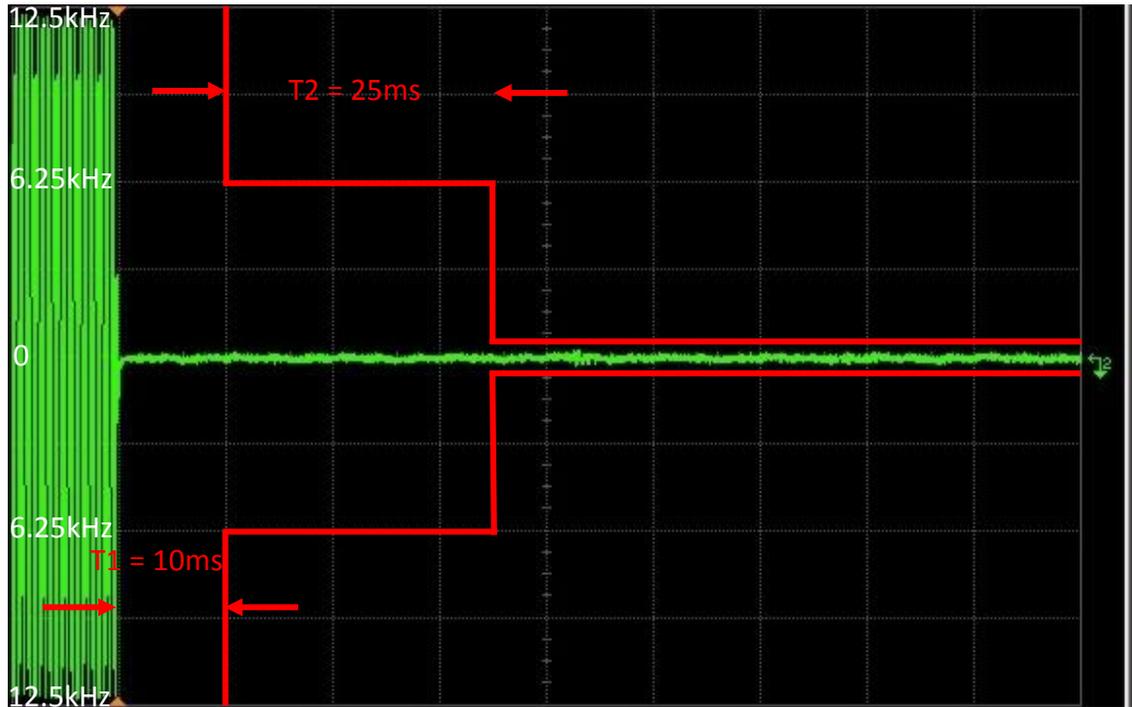


Figure 6I-1: 12.5 kHz Channel Spacing, 467.775 MHz, Key-Up Attack Time

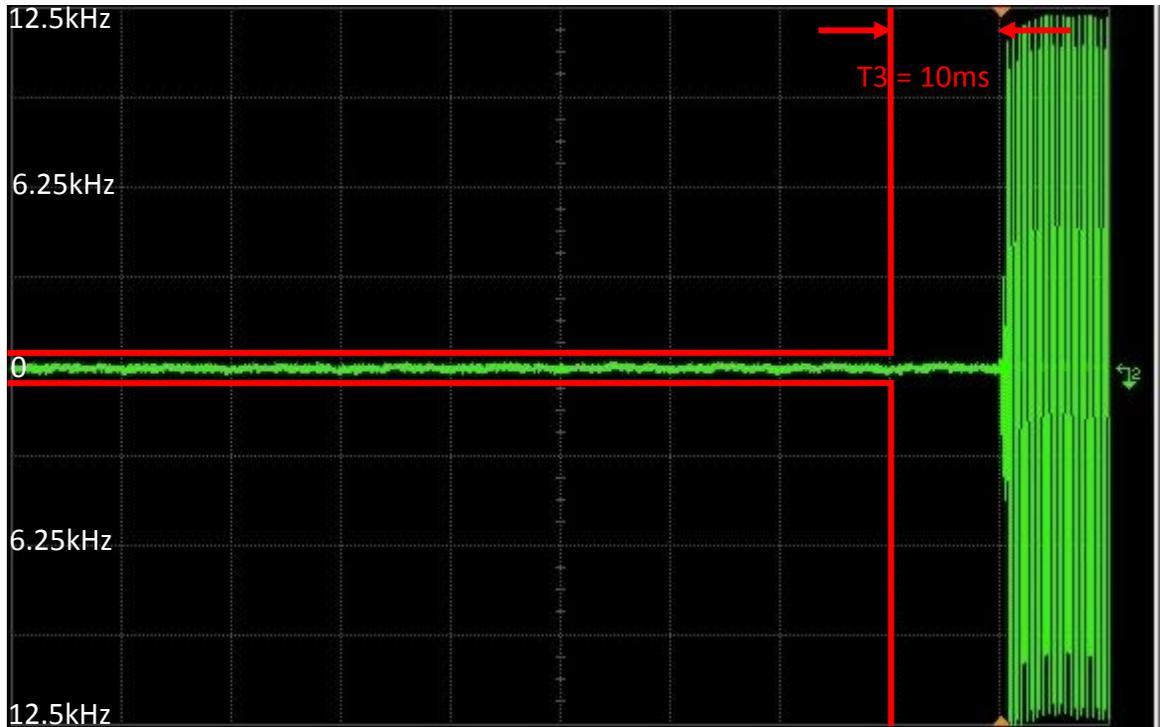


Figure 6I-2: 12.5 kHz Channel Spacing, 467.775 MHz, De-Key Decay Time