#### **EXHIBIT 6**

#### INDEX OF SUBMITTED MEASURED DATA

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

```
EXHIBIT 6A – RF Power Output (Table)
```

#### **EXHIBIT 6B** – Audio Frequency Response

6B-1 –485.025 MHz, 12.5 kHz Channel Spacing 6B-2 –155.025 MHz, 12.5 kHz Channel Spacing 6B-3 –485.025 MHz, 25 kHz Channel Spacing 6B-4 –155.025 MHz, 25 kHz Channel Spacing

## **EXHIBIT 6C** – Audio Low Pass Filter Response

6C-1 –485.025 MHz, 12.5 kHz Channel Spacing 6C-2 –155.025 MHz, 12.5 kHz Channel Spacing 6C-3 –485.025 MHz, 25 kHz Channel Spacing 6C-4 –155.025 MHz, 25 kHz Channel Spacing

### **EXHIBIT 6D** – Modulation Limiting

6D-1 –485.025 MHz, 12.5 kHz Channel Spacing 6D-2 –155.025 MHz, 12.5 kHz Channel Spacing 6D-3 –485.025 MHz, 25 kHz Channel Spacing 6D-4 –155.025 MHz, 25 kHz Channel Spacing

### **EXHIBIT 6E** – Occupied Bandwidth

6E-1 –485.075 MHz, 12.5 kHz Channel Spacing (Analog Voice) 6E-2 –153.0125 MHz, 12.5 kHz Channel Spacing (Analog Voice) 6E-3 –485.075 MHz, 25 kHz Channel Spacing (Analog Voice) 6E-4 –153.0125 MHz, 25 kHz Channel Spacing (Analog Voice) 6E-5 –485.075 MHz, 12.5 kHz Channel Spacing (Digital Data) 6E-6 –153.0125 MHz, 12.5 kHz Channel Spacing (Digital Data) 6E-7 –485.075 MHz, 12.5 kHz Channel Spacing (Digital Voice) 6E-8 –153.0125 MHz, 12.5 kHz Channel Spacing (Digital Voice) 6E-9 –485.075 MHz, 12.5 kHz Channel Spacing (Digital TDMA) 6E-10 –153.0125 MHz, 12.5 kHz Channel Spacing (Digital TDMA) 6E-11 –485.075 MHz, (Digital Voice with Encryption)

## **EXHIBIT 6F** – Radiated Spurious Emissions

6F-1 - High Power 450.075, 485.075 MHz, 25 kHz Channel Spacing 6F-2 - High Power 519.975 MHz, 25 kHz Channel Spacing 6F-3 - High Power 136.0125, 153.0125 MHz, 25 kHz Channel Spacing 6F-4 - High Power 173.9875 MHz, 25 kHz Channel Spacing

### **EXHIBIT 6G** – Frequency Stability

6G-1 – 425.025 MHz vs. Supply Voltage 6G-2 –156.675 MHz vs. Supply Voltage 6G-3 – 425.0125 MHz vs. Temperature 6G-4 – 156.675 MHz vs. Temperature

- 6F-1 High Power 450.075 MHz, 25 kHz Channel Spacing 6F-2 - High Power 485.075 MHz, 25 kHz Channel Spacing 6F-3 - High Power 519.975 MHz, 25 kHz Channel Spacing 6F-4 - High Power 136.0125 MHz, 25 kHz Channel Spacing 6F-5 - High Power 153.0125 MHz, 25 kHz Channel Spacing 6F-6 - High Power 173.9875 MHz, 25 kHz Channel Spacing
- **EXHIBIT 6I** Power Line Conducted Interference
  - 6I-1- Radio Off Line/Neutral
  - 6I-2- Radio On Line/Neutral 450.075MHz
  - 6I-3- Radio On Line/Neutral 485.075MHz
  - 6I-4- Radio On Line/Neutral 519.975MHz
  - 6I-5- Radio On Line/Neutral 136.0125MHz
  - 6I-6- Radio On Line/Neutral 153.0125MHz
  - 6I-7- Radio On Line/Neutral 173.9875MHz
- **EXHIBIT 6J** Transient Frequency Behavior
  - 6J-1 485.075 MHz, 12.5 kHz Channel Spacing Transmitter On
  - 6J-2 485.075 MHz, 12.5 kHz Channel Spacing Transmitter Off
  - 6J-3 153.0125 MHz, 12.5 kHz Channel Spacing Transmitter On
  - 6J-4 153.0125 MHz, 12.5 kHz Channel Spacing Transmitter Off
  - 6J-5 485.075 MHz, 25 kHz Channel Spacing Transmitter On
  - 6J-6 485.075 MHz, 25 kHz Channel Spacing Transmitter Off
  - 6J-7 153.0125 MHz, 25 kHz Channel Spacing Transmitter On
  - 6J-8 153.0125 MHz, 25 kHz Channel Spacing Transmitter Off

## **EXHIBIT 6A**

RF Conducted Power Output Data -- Pursuant 47 CFR 2.1046(a), 2.1033(c)(6), 2.1033(c)(7) and 2.1033(c)(8)

## Frequency = 485.025 MHz:

Output RF power DC Voltage DC Current	1.0 Watts 7.50 Volts 1.42 Amps
Output RF power DC Voltage DC Current	3.00 Watts 7.50 Volts 1.75 Amps
Output RF power DC Voltage DC Current	5.6 Watts 7.50 Volts 2.03 Amps

## Freque

1.0 Watts
7.50 Volts
1.04 Amps
3.00 Watts
7.50 Volts
1.47 Amps
6.6 Watts
7.50 Volts
2.12 Amps

**EXHIBIT 6B** 

Transmit Audio Response - Pursuant 47 CFR 2.1047 and 2.1033(c) (13)

## **Audio Frequency Response**

(Freq: 485.025MHz, ChSp: 12.5kHz)

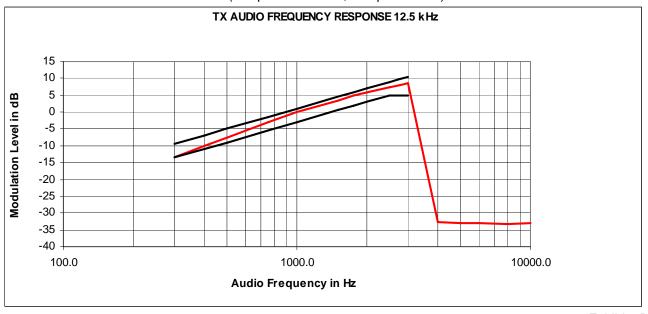
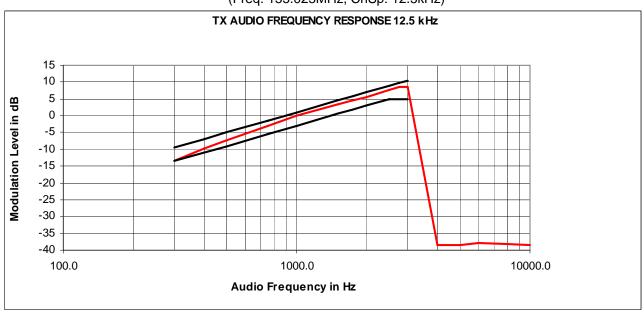


Exhibit 6B-1

## Audio Frequency Response

(Freq: 155.025MHz, ChSp: 12.5kHz)



# **Audio Frequency Response**

(Freq: 485.025MHz, ChSp: 25kHz)

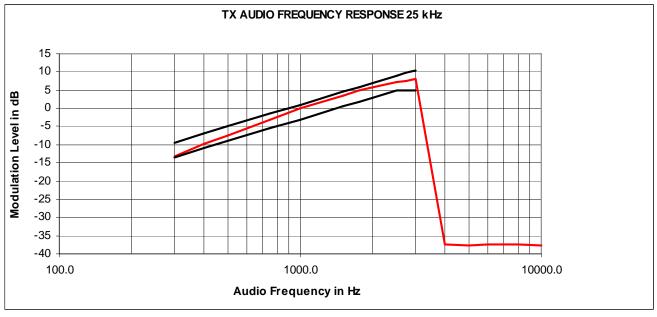


Exhibit 6B-3

# **Audio Frequency Response**

(Freq: 155.025MHz, ChSp: 25kHz)

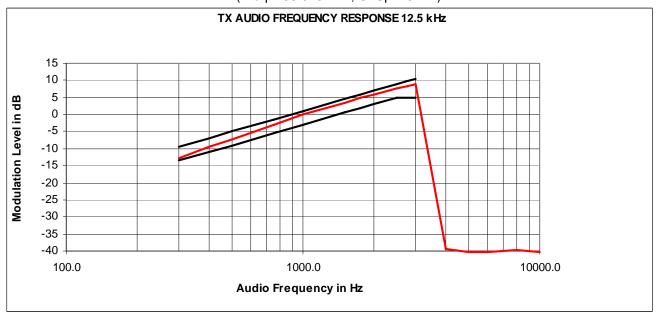


EXHIBIT 6C Audio Low Pass Filter Response- Pursuant 47 CFR 2.1047 and 2.1033(c)(13)

## **Transmit Low Pass Filter Frequency Response**

(Freq: 485.025MHz, ChSp: 12.5kHz)

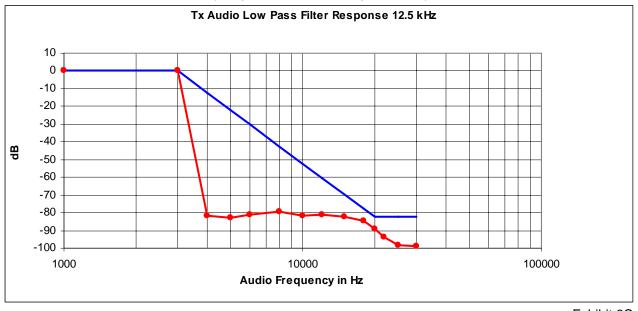
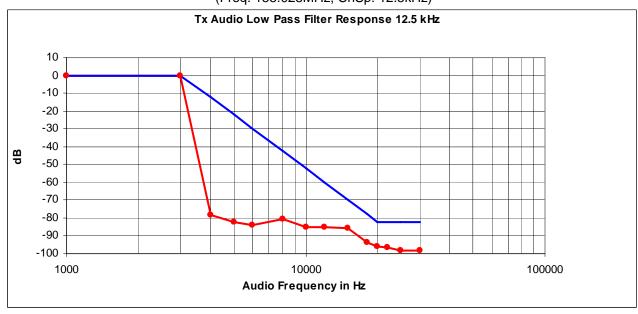


Exhibit 6C-1

## **Transmit Low Pass Filter Frequency Response**

(Freq: 155.025MHz, ChSp: 12.5kHz)



# **Transmit Low Pass Filter Frequency Response**

(Freq: 485.025MHz, ChSp: 25kHz)

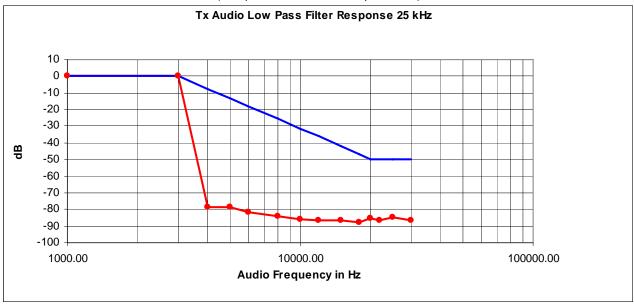
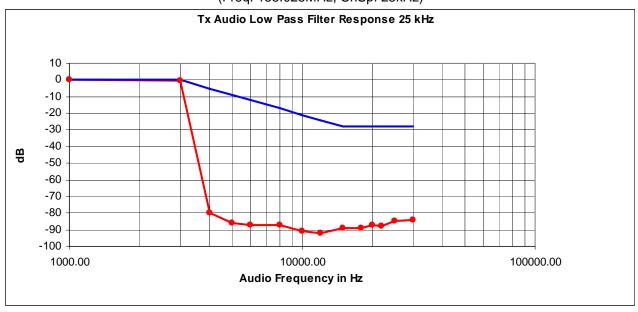


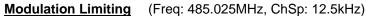
Exhibit 6C-3

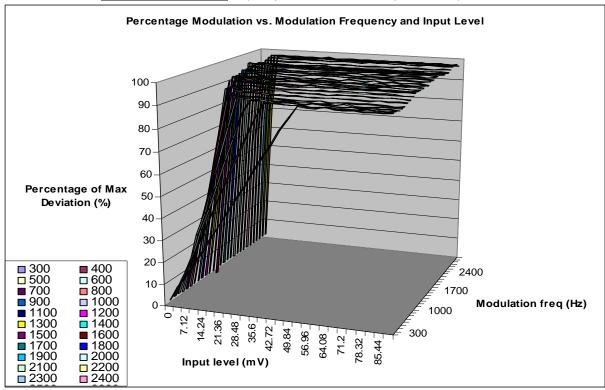
## **Transmit Low Pass Filter Frequency Response**

(Freq: 155.025MHz, ChSp: 25kHz)



**EXHIBIT 6D Modulation Limiting -** Pursuant 47 CFR 2.1047 and 2.1033(c)(13)





Modulation Limiting (Freq: 155.025MHz, ChSp: 12.5kHz)

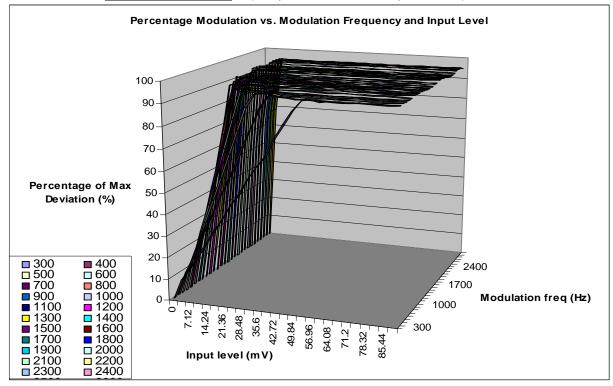
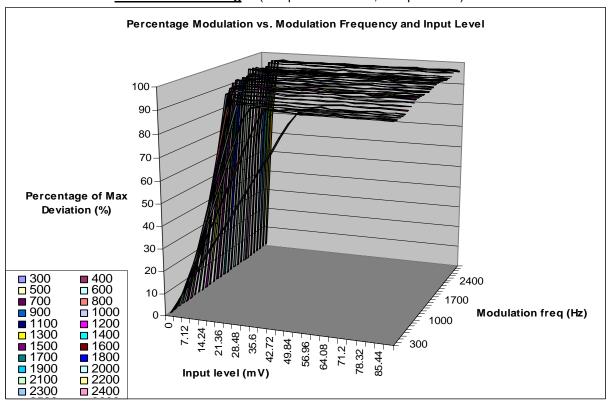


Exhibit 6D-2

## Modulation Limiting (Freq: 485.025MHz, ChSp: 25kHz)



Applicant: Motorola Inc.

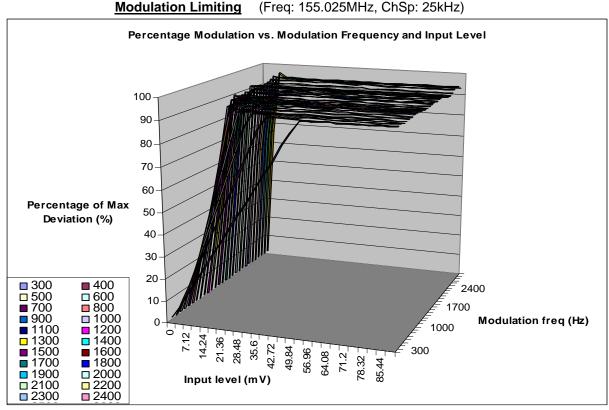


Exhibit 6D-4

FCC ID: AZ489FT4893

## **BANDWIDTH CALCULATIONS:**

Carson's Rule for FM modulation is utilized to compute the bandwidth shown in the FCC emission designator. Carson's

Rule is: BW = 2 \* (M + D) where: BW = Bandwidth

M= Maximum modulating frequency

D = Deviation

Shown below are the calculations required for FCC ID: AZ489FT7036.

### **EXHIBIT 6E-1**

Standard Audio Modulation (12.5 kHz Channelization, Analog Voice):

Emission Designator 11K0F3E

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

BW =  $2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} = 3 \times 11 \text{ kHz}$ 

F3E portion of the designator indicates voice.

Therefore, the entire designator for 12.5 KHz channelization analog voice is 11K0F3E.

#### **EXHIBIT 6E-2**

Standard Audio Modulation (25 kHz Channelization, Analog Voice):

Emission Designator 16K0F3E

In this case, the maximum modulating frequency is 3 kHz with a 5 kHz deviation.

BW = 2(M+D) = 2\*(3 kHz + 5 kHz) = 16 kHz = 3\*16K0

F3E portion of the designator indicates voice.

Therefore, the entire designator for 25 kHz channelization analog voice is 16K0F3E.EXHIBIT 6E-3 Digital (12.5 kHz Channelization, Digital Data):

Emission Designator 8K10F1D

The 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz Measurements were performed in accordance with TIA/EIA TSB102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1D portion of the designator indicates digital data.

Therefore, the entire designator for 12.5 kHz channelization digital data is 8K10F1D.

#### EXHIBIT 6E-4

Digital (12.5 kHz Channelization, Digital Voice):

Emission Designator 8K10F1E

The 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz. Measurements were performed in accordance with TIA/EIA TSB102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1E portion of the designator indicates digital voice.

Therefore, the entire designator for 12.5 kHz channelization digital voice is 8K10F1E.

#### EXHIBIT 6E-5

Digital (12.5 kHz Channelization, Digital TDMA):

Emission Designator 8K10F1W

The 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz Measurements were performed in accordance with TIA/EIA TSB102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1W portion of the designator indicates digital TDMA.

Therefore, the entire designator for 12.5 kHz channelization digital TDMA is 8K10F1W.

#### **EXHIBIT 6E-6**

<u>Digital Modulation (20 kHz Channelization, Digital Voice with encryption):</u>

Emission Designator 20K0F1E

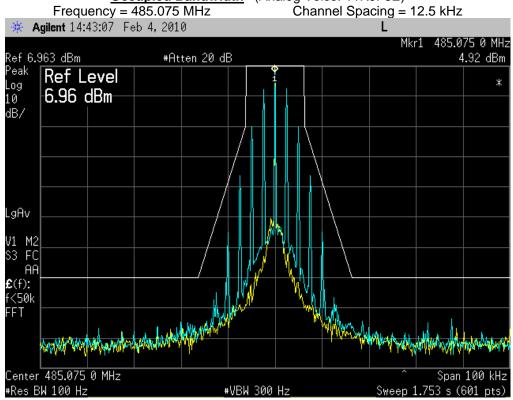
In this case, the maximum modulating frequency is 6 kHz with a 4 kHz deviation.

BW = 2(M+D) = 2\*(6 kHz + 4 kHz) = 20 kHz = 20K0

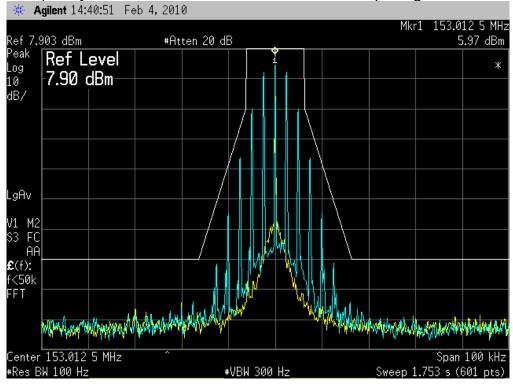
F1E portion of the designator indicates digital voice.

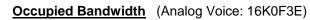
Therefore, the entire designator for 20 kHz channelization analog voice is 20K0F1E.

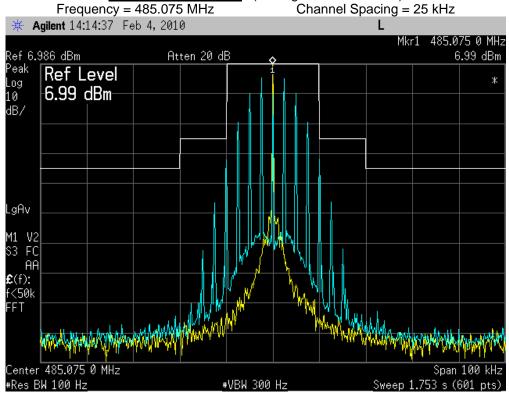
EXHIBIT 6E
Occupied Bandwidth Data -- Pursuant 47 CFR 2.1049, 90.210(g) and 90.691
Occupied Bandwidth (Analog Voice: 11K0F3E)

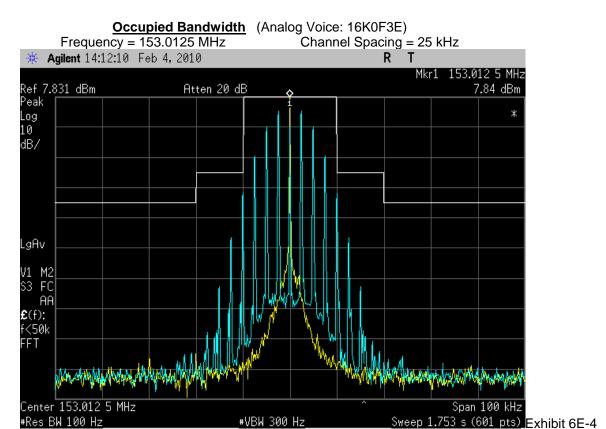


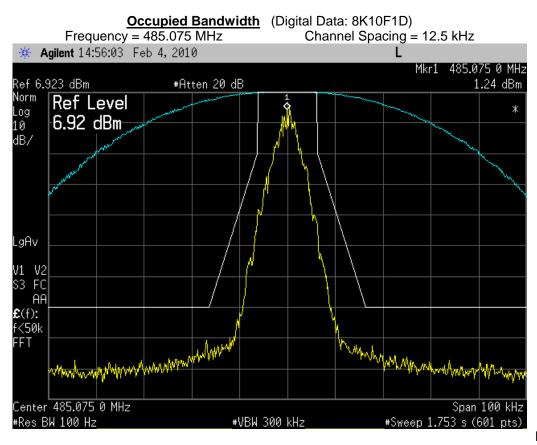
Occupied Bandwidth (Analog Voice: 11K0F3E) Frequency = 153.0125 MHz Channel Spacing = 12.5 kHz Agilent 14:40:51 Feb 4, 2010











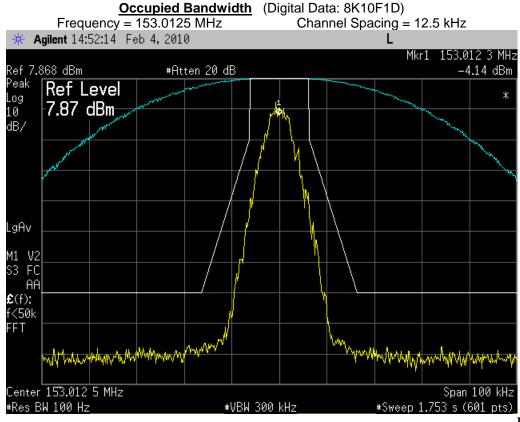
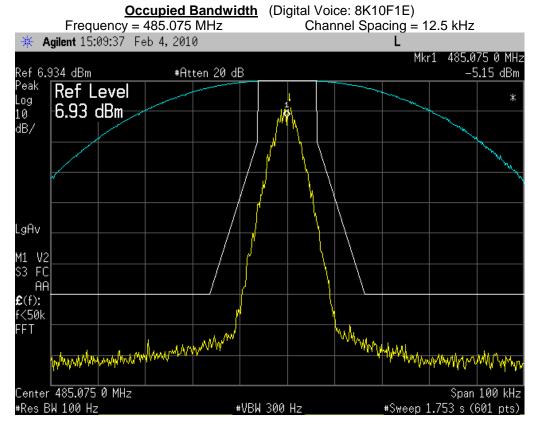


Exhibit 6E-6



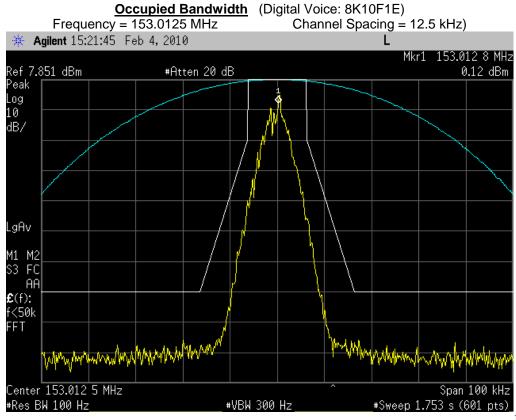
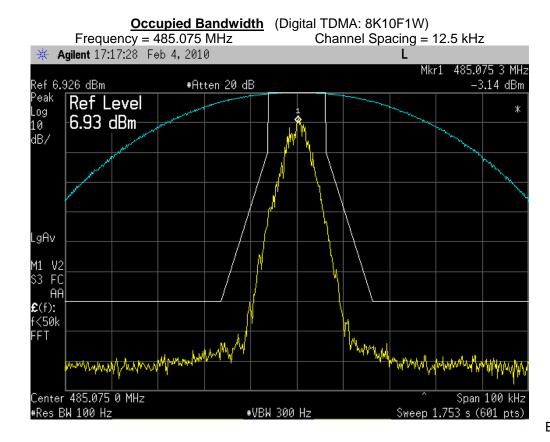


Exhibit 6E-8



# Occupied Bandwidth (Digital TDMA: 8K10F1W) Frequency = 153.0125 MHz Channel Spacing = 12.5 kHz Agilent 17:13:10 Feb 4, 2010 Mkr1 153.012 3 MHz Ref 7.84 dBm <sup>Peak</sup> **Ref** -2.55 dBm #Atten 20 dB Ref Level Log 7.84 dBm 10 dB/ LgAv M1 V2 S3 FC AΑ <50k Center 153.012 5 MHz #Res BW 100 Hz #VBW 300 Hz

Exhibit 6E-10

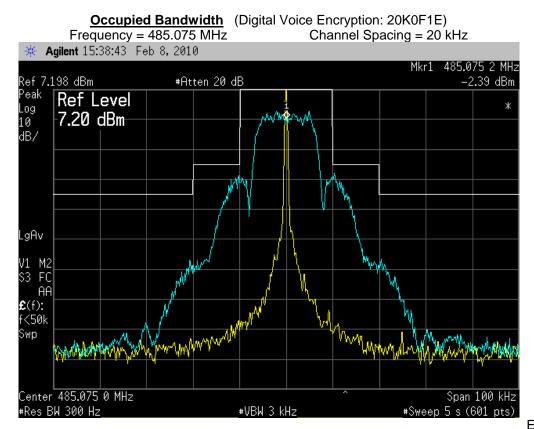
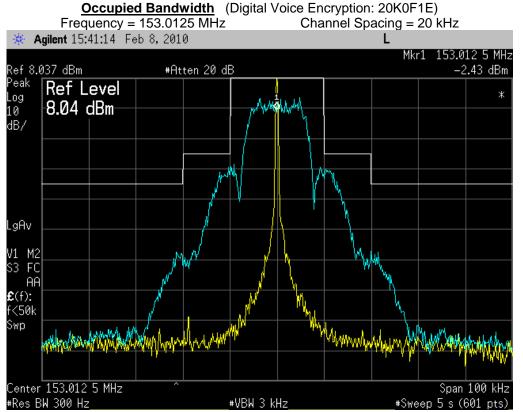


Exhibit 6E-11

EXHIBIT 6 SHEET 17 OF 38



## **EXHIBIT 6F**

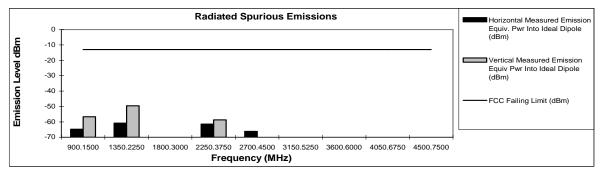
Transmitter Radiated Spurious Emissions - Pursuant 47 CFR 2.1053 and 2.1033(c)(13)

Motorola Inc. FCC ID:AZ489FT4893

## Transmit Radiated Spurious Emissions: APX 7000

450.075 MHz Channel Spacing 25kHz | S/N Q0NLT01S

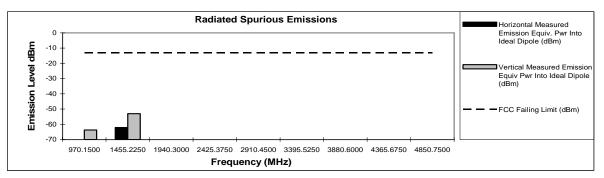
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
900.1500	-13	-64.84	-56.71
1350.2250	-13	-60.86	-49.48
1800.3000	-13	*	*
2250.3750	-13	-61.42	-58.67
2700.4500	-13	-66.24	*
3150.5250	-13	*	*
3600.6000	-13	*	*
4050.6750	-13	*	*
4500.7500	-13	*	*



#### **Transmit Radiated Spurious Emissions: APX 7000**

485.075 MHz Channel Spacing 25kHz | S/N Q0NLT01S

		•	0 1
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
970.1500	-13	-70.06	-63.69
1455.2250	-13	-62.07	-52.97
1940.3000	-13	*	*
2425.3750	-13	*	*
2910.4500	-13	*	*
3395.5250	-13	*	*
3880.6000	-13	*	*
4365.6750	-13	*	*
4850.7500	-13	*	*



<sup>\*</sup> Indicates the spurious emission could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan

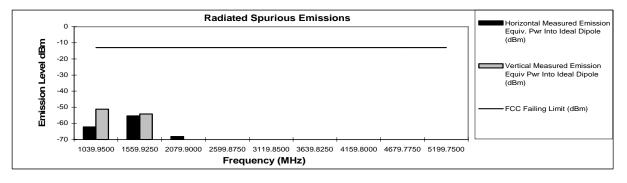
February 15, 2010 Exhibit 6F-1

Motorola Inc. FCC ID:AZ489FT4893

## **Transmit Radiated Spurious Emissions: APX 7000**

519.975 MHz Channel Spacing 25kHz | S/N Q0NLT01S

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1039.9500	-13	-62.20	-51.20
1559.9250	-13	-55.37	-54.22
2079.9000	-13	-68.21	*
2599.8750	-13	*	*
3119.8500	-13	*	*
3639.8250	-13	*	*
4159.8000	-13	*	*
4679.7750	-13	*	*
5199.7500	-13	*	*



Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan FCC Registration: 91932 / Industry Canada: IC109U-1

February 15, 2010

<sup>\*</sup> Indicates the spurious emission could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Motorola Inc. FCC ID:AZ489FT4893

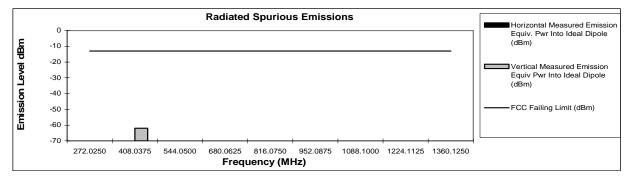
## Transmit Radiated Spurious Emissions: APX 7000

Tx Power: 6.6 Watts

136.0125 MHz

#### Channel Spacing 25kHz | S/N Q0NLT01S

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
272.0250	-13	*	*
408.0375	-13	-80.16	-62.00
544.0500	-13	*	*
680.0625	-13	*	*
816.0750	-13	*	*
952.0875	-13	*	*
1088.1000	-13	*	*
1224.1125	-13	*	-70.48
1360.1250	-13	*	*



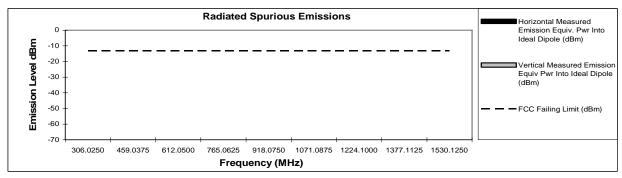
## **Transmit Radiated Spurious Emissions: APX 7000**

Tx Power: 6.6 Watts

#### 153.0125 MHz

## Channel Spacing 25kHz | S/N Q0NLT01S

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
306.0250	-13	*	*
459.0375	-13	-75.12	*
612.0500	-13	*	*
765.0625	-13	*	*
918.0750	-13	*	*
1071.0875	-13	*	*
1224.1000	-13	*	*
1377.1125	-13	*	*
1530.1250	-13	*	*



<sup>\*</sup> Indicates the spurious emission could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan FCC Registration: 91932 / Industry Canada: IC109U-1

February 8, 2010

Motorola Inc. FCC ID:AZ489FT4893

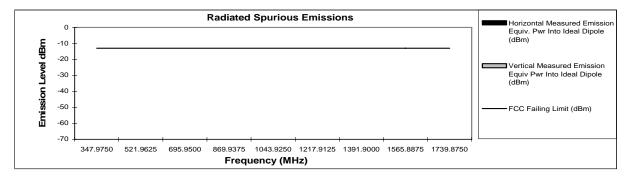
## **Transmit Radiated Spurious Emissions: APX 7000**

Tx Power: 6.6 Watts

1	7	3.	.9	8	7	5	I	И	Н	z
---	---	----	----	---	---	---	---	---	---	---

Channel Spacing 25kHz   S/N Q0NLT01S
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	one grand of the g					
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)			
347.9750	-13	*	-72.12			
521.9625	-13	*	*			
695.9500	-13	*	*			
869.9375	-13	*	*			
1043.9250	-13	*	*			
1217.9125	-13	*	*			
1391.9000	-13	*	*			
1565.8875	-13	*	*			
1739.8750	-13	*	*			



Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan FCC Registration: 91932 / Industry Canada: IC109U-1

February 8, 2010

<sup>\*</sup> Indicates the spurious emission could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

**EXHIBIT 6G** 

Frequency Stability - Pursuant 47 CFR 2.1055 and 2.1033(c)(13)

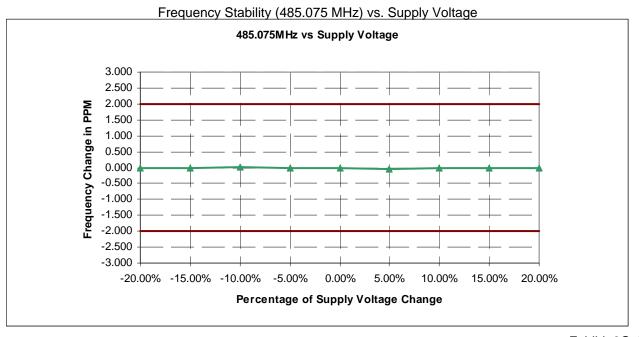
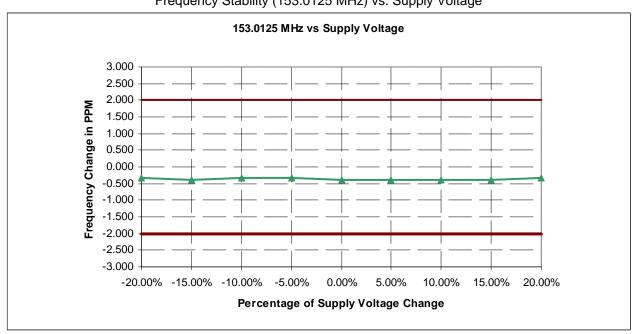
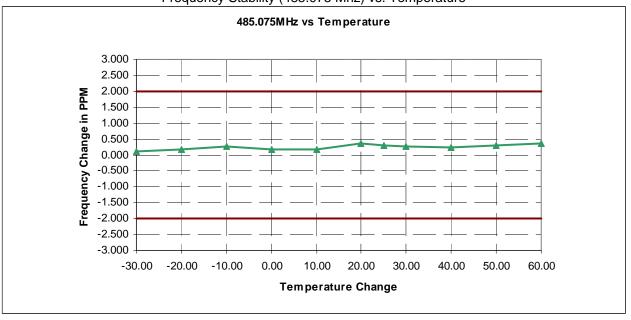


Exhibit 6G-1

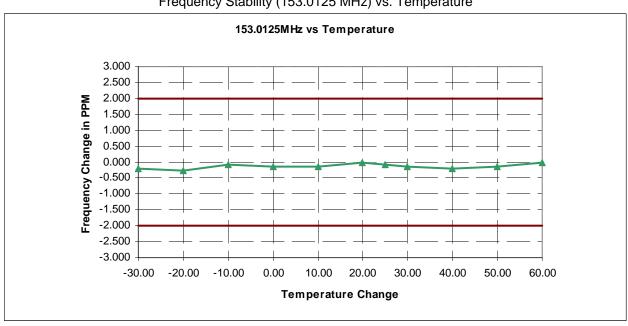
Frequency Stability (153.0125 MHz) vs. Supply Voltage



Frequency Stability (485.075 Mhz) vs. Temperature



Frequency Stability (153.0125 MHz) vs. Temperature



**EXHIBIT 6H** 

Transmitter Conducted Spurious Emissions - Pursuant 47 CFR 2.1051 and 2.1033(c) (13)

Note: Lines on graphs correspond to the FCC limit of -13dBm.

Spurs which are not shown is less than 100dB

450.075 MHz, 25KHz Channel Spacing, 5.6Watts

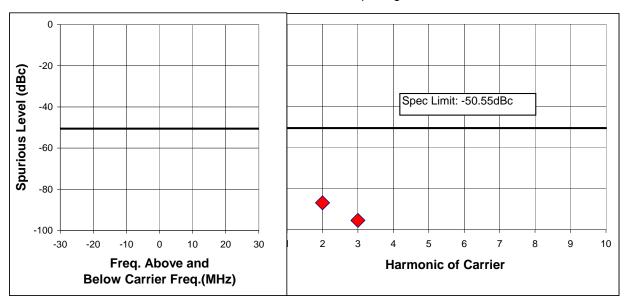


Exhibit 6H-1

485.075 MHz, 25KHz Channel Spacing, 5.6Watts

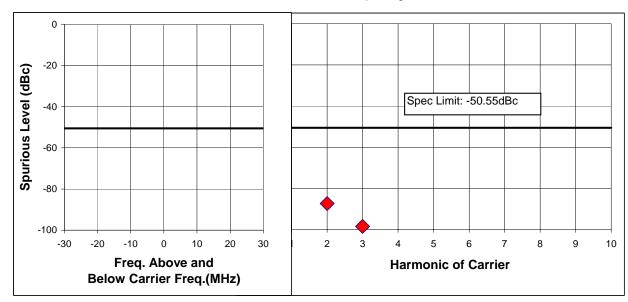


Exhibit 6H-2

519.975 MHz, 25KHz Channel Spacing, 5.6Watts

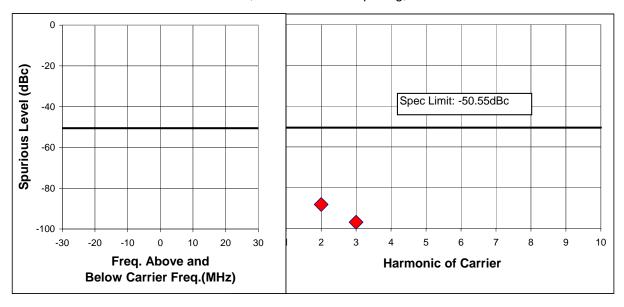


Exhibit 6H-3

136.0125 MHz, 25KHz Channel Spacing, 6.6 Watts

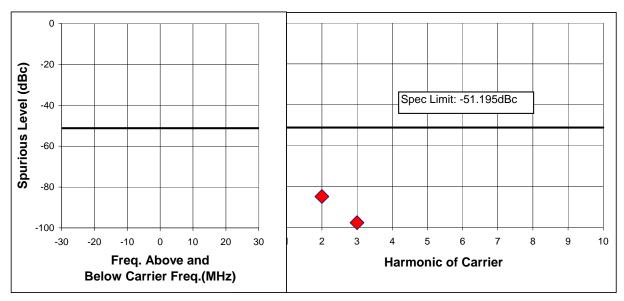
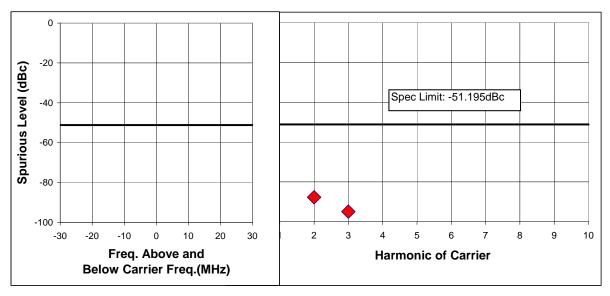
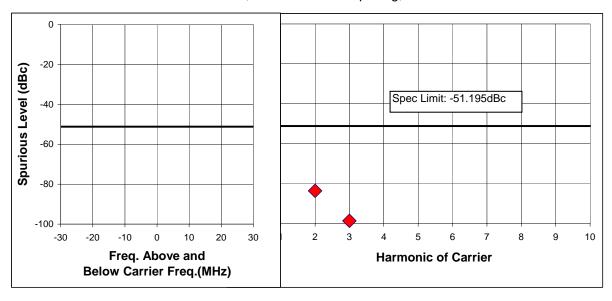


Exhibit 6H-4

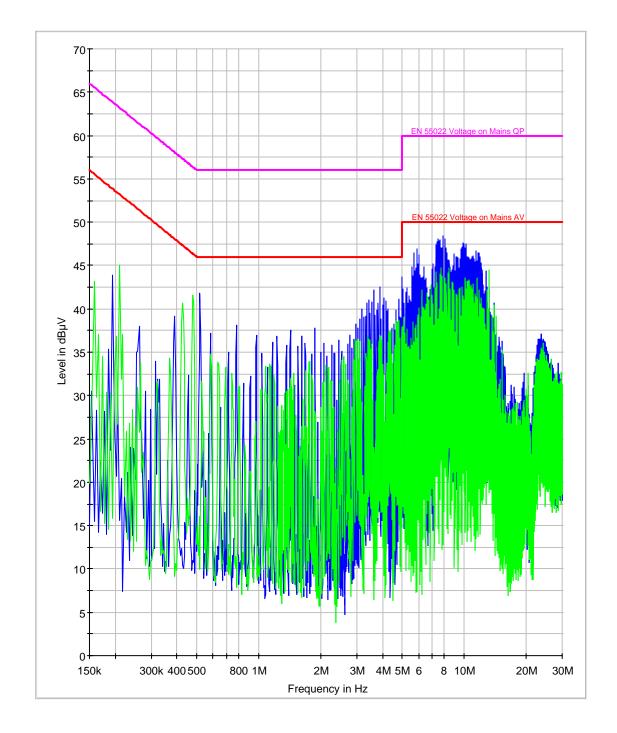
153.0125 MHz, 25KHz Channel Spacing, 6.6 Watts



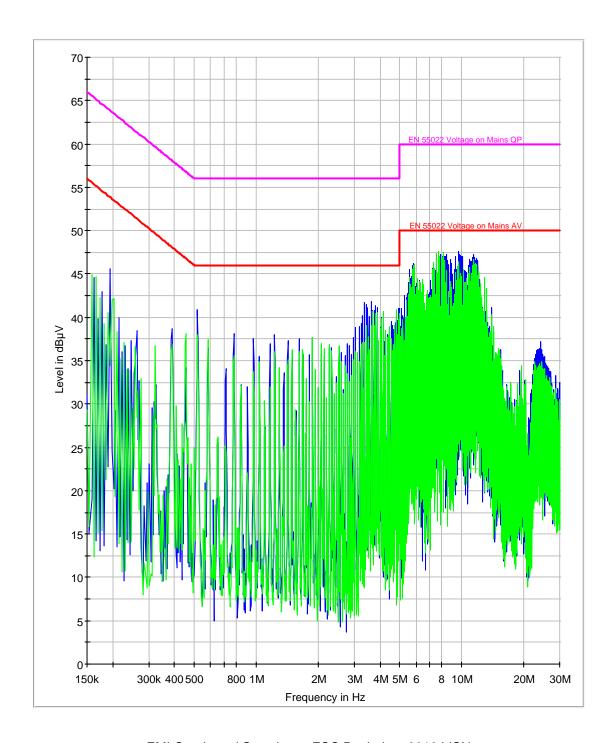
173.9875 MHz, 25KHz Channel Spacing, 6.6 Watts



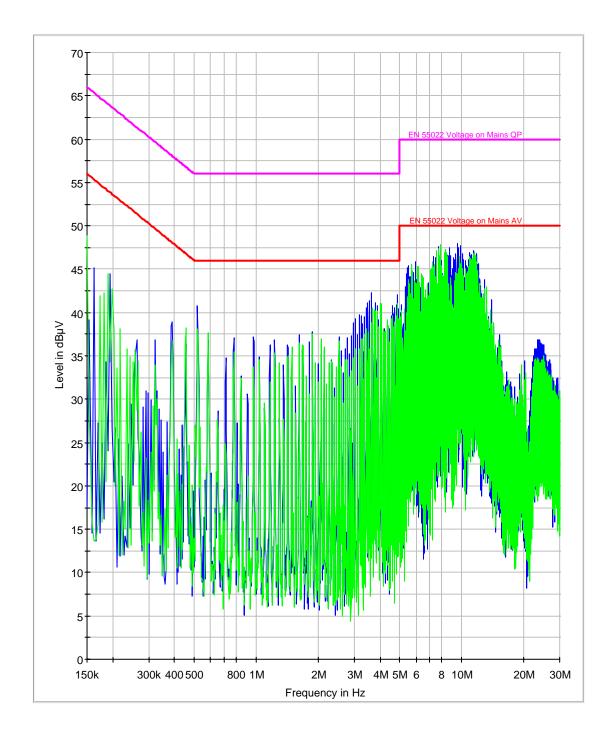
**EXHIBIT 6I**Power Line Conducted Spurious Emissions - Pursuant to FCC Rules Part 15.107



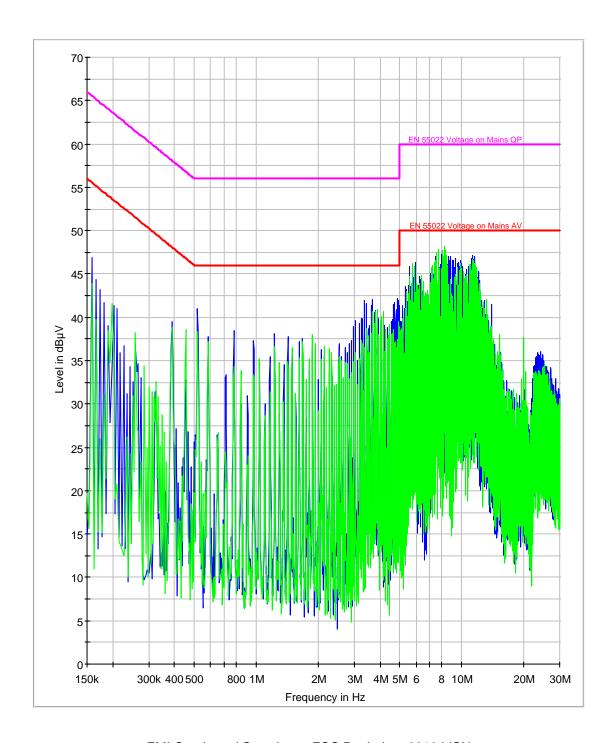
EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue Radio Off



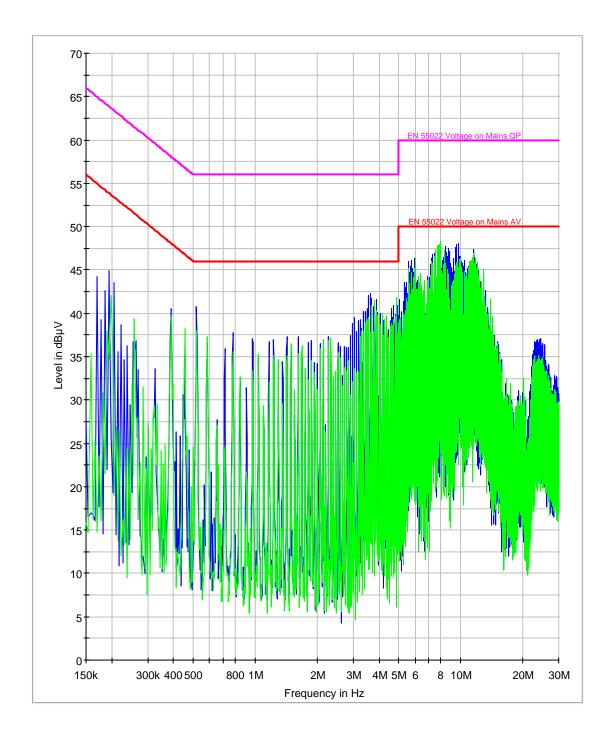
EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 450.075MHz



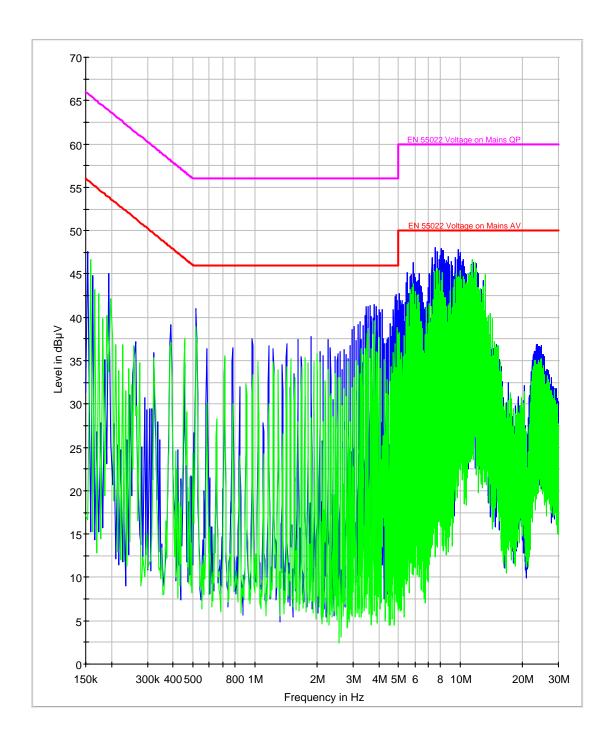
EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 485.075MHz



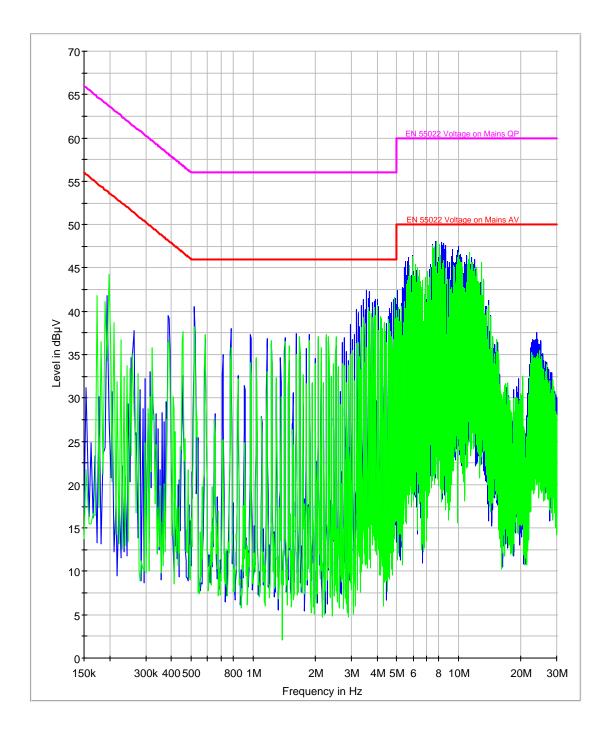
EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 519.975MHz



EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 136.0125MHz



EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 153.0125MHz



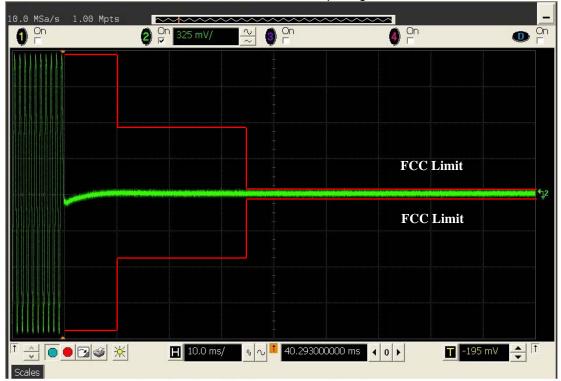
EMI Conducted Scan latest FCC Peak det - 3810 LISN Auto Merge Results N – Green L1 – Blue TX – 173.9875MHz

## **EXHIBIT 6J**

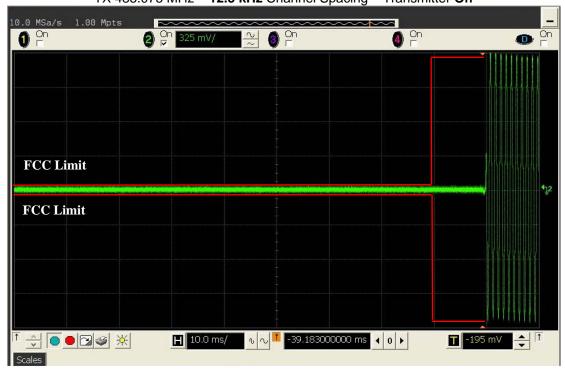
Transient Frequency Behavior- Pursuant 47 CFR 90.214

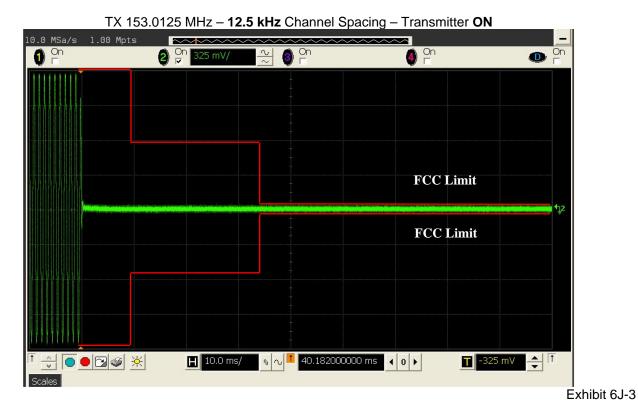
# **Transient Frequency Behavior**

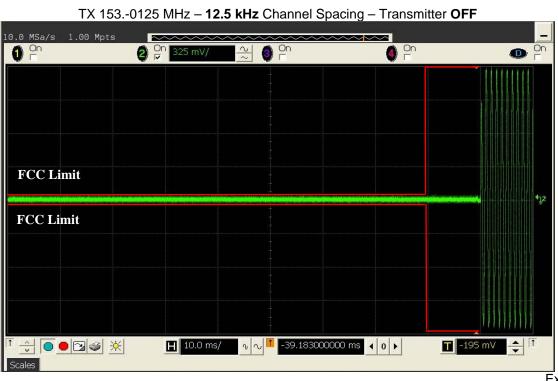


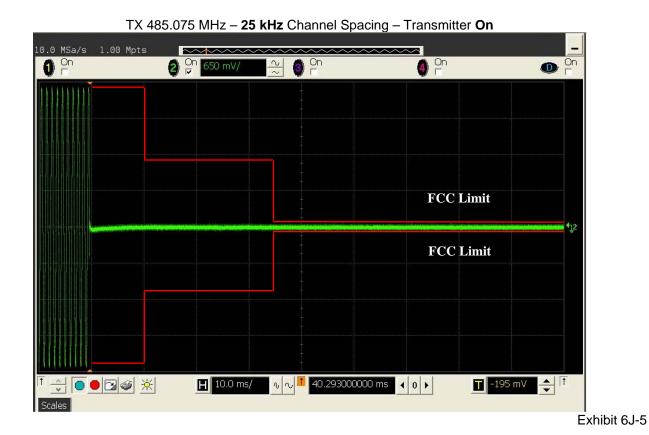


TX 485.075 MHz - 12.5 kHz Channel Spacing - Transmitter Off

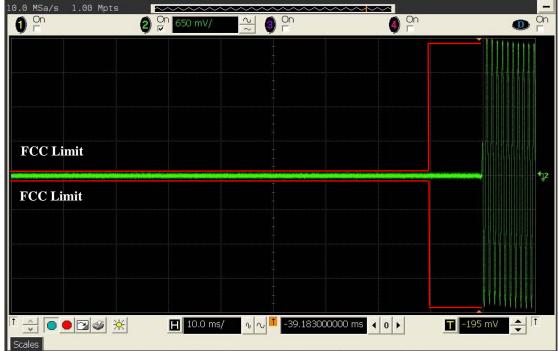


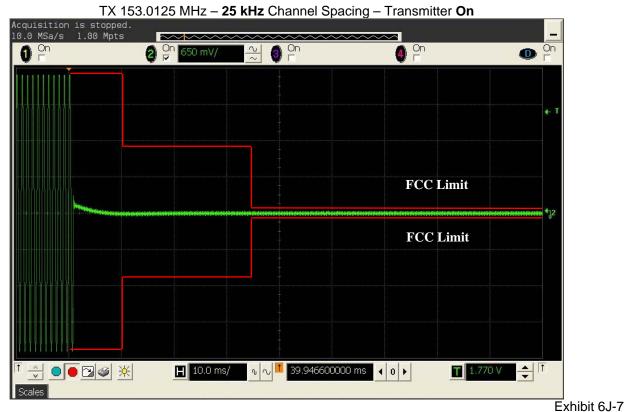


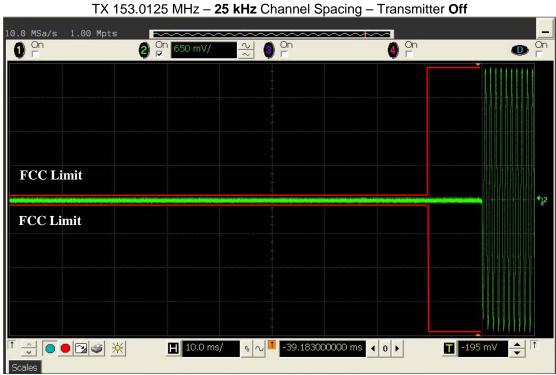












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