EXHIBIT 7: MEASUREMENT PROCEDURES – Pursuant 47 CFR 2.947

7.1 RF Power -- Pursuant to 47 CFR 2.947(c)

Method of Conducted Output Power Measurement: Adaptation of TIA/EIA-603-A clause 2.2.1 for Pulsed Measurements

The RF output power is not adjustable by the user. The output power is controlled by the radio software. To obtain RF output power reading, the radio was programmed to utilize the maximum output power setting.

A special DC/RF test fixture was utilized to interface with the radio test RF connector while simultaneously supplying the operating voltage of 4.0V. The radio RF connector is utilized in all factory tuning and testing procedures, and provides a 50 ohm connection to the transmitter path while disconnecting the radio antenna. All conducted measurements were performed via this test port.

NOTE: This DC/RF test fixture in not offered for sale

7.2 Emission Chart 902 MHz to 928 MHz ISM Band --- pursuant to 47 CFR 15.247(c)

(1) Connect DUT to spectrum analyzer through 10 dB, 2W, RF power attenuator
(2) Set up the spectrum analyzer as follows for measurement:
    (a) Center frequency 902.525 MHz
    (b) Span = 100KHz
    (c) Sweep = Auto
    (d) Ref Level = 30 dBm
    (e) Trace = Max Hold (Positive peak detector)
(3) Initiate transmission at 902.525 MHz and measure power
(4) Change spectrum analyzer frequency to center frequency 901.95 MHz and measure power.
(5) Repeat steps 2 and 3 for 927.475 MHZ
(6) Repeat step four for center frequency 928.05 MHz.

The comparison between on channel power in a 100 KHz BW and outside band edge 100 KHz BW power at both band edges demonstrates compliance with 47 CFR, part 15.247(c)

7.3 Radiated Spurious Emissions -- Pursuant to 47 CFR 2.947(b)

Test Sites:

Open Area Test Site (OATS) of the Motorola EMC Lab, 8000 W Sunrise Blvd, Plantation, Florida 33322 which is accredited to ISO/IEC 25 from the American Association for Laboratory Accreditation (FCC Registration: 91932/Industury Canada: IC3679). The radiated emission testing was performed for minimum and maximum powers in transmit mode.

Method of Measurement: TIA/EIA-603-A clause 2.2.12

The equipment is placed on the turntable and placed in normal operation transmit mode of operation.

A broad-band receiving antenna located 3 meters from the transmitter receives any signal radiated from the transmitter and its operational accessories. The antenna is adjustable in height and can be rotated for horizontal or vertical polarization. A spectrum analyzer covering the necessary frequency range is used to detect and measure any radiation received by the antenna.

The transmitter's modulated pseudo random digital signal is monitored and adjusted to obtain peak reading of received signals wherever they occur in the spectrum by:

(1) Rotating the transmitter under test.
(2) Adjusting the antenna height.

The testing procedure is repeated for both horizontal and vertical polarization of the receiving antenna. Relative signal strength is indicated on the spectrum analyzer connected to this antenna. The spectrum analyzer resolution bandwidth was set to 10 kHz for emissions below 1 GHz, and 1 MHz for higher frequency emissions. To obtain actual radiated signal strength for each spurious and harmonic frequency observed, a standard signal generator with calibrated output is connected to an antenna adjusted to in the range from 30 MHz to that harmonic frequency. This antenna is substituted for the transmitter under test. The signal generator output level is adjusted until a reading identical to that obtained with the actual transmitter is observed on the spectrum analyzer. Signal strength is then derived from the generator and appropriate cable losses due to set up. Measured emissions for both maximum and minimum transmit power levels are recorded in tables in Exhibit 6.

Test Setup

Figure 7 Test Unit

Figure 7 EMCTest Equipment

Figure 7 EME Test Site

7.4 Frequency Stability -- Pursuant to 47 CFR 2.947(c)

ISM Band: Frequency Error measurement in 902 MHz to 928 MHz ISM band

The unit was tested at a transmitter output frequency of 915.525 MHz. A power supply with the capability of toggling between 4.0 V and 3.55 V was used to provide battery voltage to the unit being tested. The units RF output was attached to a spectrum analyzer capable of making an occupied bandwidth measurement with high frequency accuracy.

The measurements were made by soaking the unit tested in an idle mode for the length of time necessary to stabilize transmitter temperature, at least 40 min per temperature. At the end the temperature soak the transmitter was enabled in the ISM band. Frequency deviation from 915.525 MHz was recorded after the transmitter had produced full output power for 10 seconds (as determined manually).

During operation of the transmitter at -30C, 20C, and 50C an attempt was made to determine frequency error caused by changing the supply voltage from 4.0 VDC (nominal) to 3.55 VDC (minimum). The voltage was toggled from nominal to minimum to nominal repeatedly while monitoring frequency.

7.2 Carrier Separation between Hopsets

The carriers within a 900 ISM Band hopset are separated by 500 kHz, and the 20 dB bandwidth of a 900 ISM Band carrier is 25.6 kHz.

The test is setup as shown in Figure 7-2. The spectrum analyzer is setup to capture two adjacent carriers. Transmission in the 900 ISM Band mode is initiated until relevant data is captured.

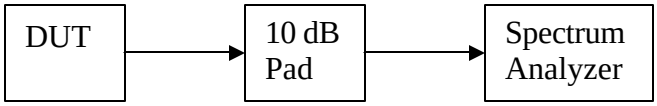

Figure 7-2. Test bench for ISM Band multi-channel measurements.

7.3 Hopping Bandwidth between Hopsets

The aggregate of all 10 hopsets result in an overall carrier separation of 50 kHz with a 20 dB bandwidth of 25.6 kHz.

Step 1. Connect the DUT to the spectrum analyzer as in Figure 7-3.
Step 2. Set up the spectrum analyzer as required to measure the 20 dB bandwidth
Span = 100 kHz
RBW = 300 kHz
Sweep = Auto
Ref. Level = 30 dBm
Trace = Max Hold (RMS Detector used)

Occupied Bandwidth
Step 3. Initiate Transmission until relevant data captured.
Step 4. Set up the spectrum analyzer as required to capture two adjacent carriers.
Span = 150 kHz
RBW = 300 Hz
Sweep = Auto
Ref. Level = 30 dBm
Trace = Max Hold
Use Markers
Step 5. Initiate Transmission until relevant data captured.

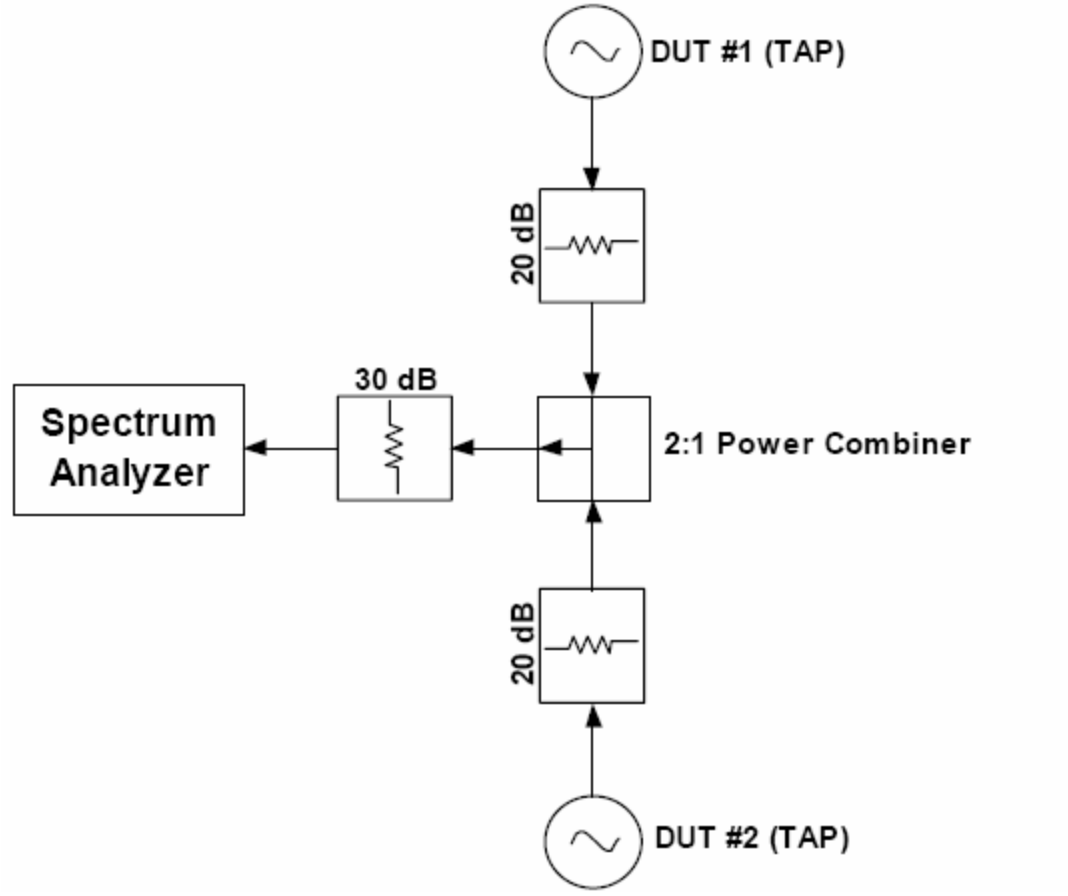

Figure 7-3. Test setup for multi-channel measurements.

7.4 Average Time of Occupancy

Step 1. Set up the spectrum analyzer (or oscilloscope) as required to capture a single transmitted burst (or a continuous stream of bursts at the same frequency).
Step 2. Initiate Transmission until relevant data captured.
Step 3. Measure the duration of the 85.625 ms burst.
Step 4. Describe worst case scenario (continuous transmission).

7.5 Equal Distribution of Hopping Frequencies for Continuous Transmission

Through ISM Band subscriber test-mode software, a frequency counting algorithm was implemented and used to keep count of how many times a particular frequency was used during a continuous transmission with a DUT. From this data, the frequency distribution can be calculated.

7.6 Equal Distribution of Hopping Frequencies for Discontinuous Transmission

Through ISM Band subscriber test-mode software, a frequency counting algorithm was implemented and used to keep count of how many times a particular frequency was used during a transmission with a DUT. To model multiple ISM Band transmission times with the same call length distribution. The frequency distribution was calculated from the data generated.

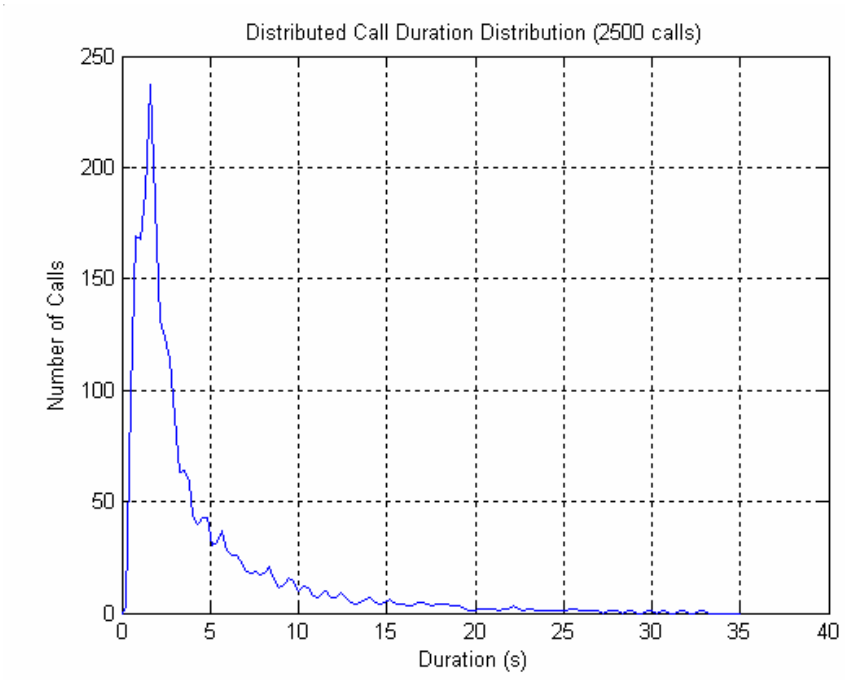

Figure 7-4. Call-length Probability Distribution Function

7.7 Measurement Equipment List ---- 47 CFR 2.947(d)

The following is the list of test equipment used to generate the data for Exhibit 6.

Spectrum Analyzers	Rohde & Schwarz FSEB 30 HP 8566B Spectrum Analyzer
Amplifiers	PST 10W amplifier
Antenna	Scientific Atlanta series 2080 Antenna Analyzer (positioner) Watkins-Johnson L.P. antenna AR7-17A (receiving antenna) Sleeved Dipole (reference antenna)
Signal Generators	P 8656A Signal Generator
Power Meters	Agilent E4418B Power Meter
Miscellaneous	60' Tapered Anechoic Chamber Dell Precision 420 Computer (running MI-3000 acquisition and Analysis Workstation) Fluke 45 Dual Display Multimeter Bryant Temperature Chamber
Signal Analyzers	Agilent 89441A Vector Signal Analyzer
Communication System Analyzer	Motorola R-2660 iDEN Digital Communications System Analyzer Fluke 2165A Digital Thermometer