SUBMITTED MEASURED DATA INDEX

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RF POWER OUTPUT DATA

CONDUCTED RF POWER OUTPUT:

The input supply to the transmitter was set at 3.6 Volts. The voltage at the final amplifying device voltage was 3.6V. The RF power output was measured with the indicated voltage and current applied into the final RF amplifying device(s).

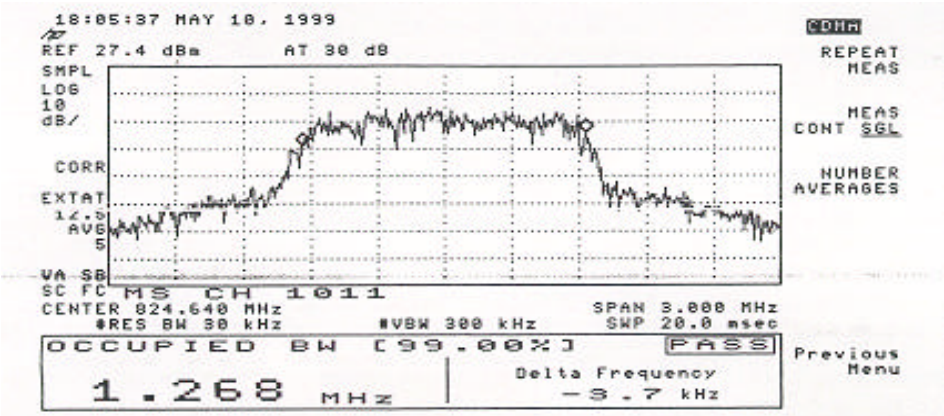
Measured RF Output:	0.263W
Measured DC Voltage:	3.6V
Measured DC Current:	386mA
Measured RF Input:	2.66mW

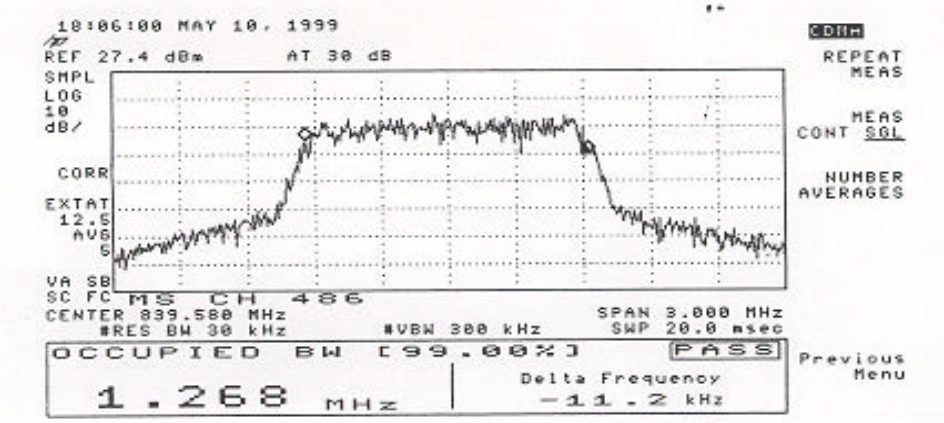
RADIATED RF POWER OUTPUT:

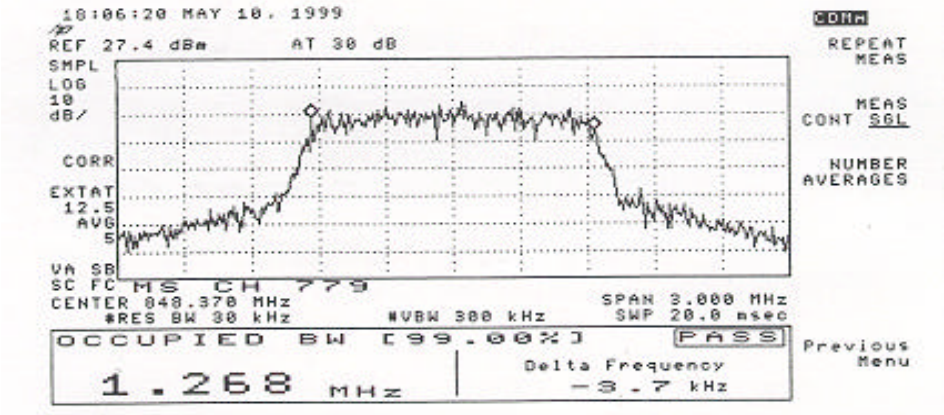
The input supply to the transmitter was set at 3.6 Volts. Measurements were made relative to a dipole with a known gain of 2.1dB relative to an isotropic source.

Measured ERP (Relative to Half-Wavelength Dipole): 198mW

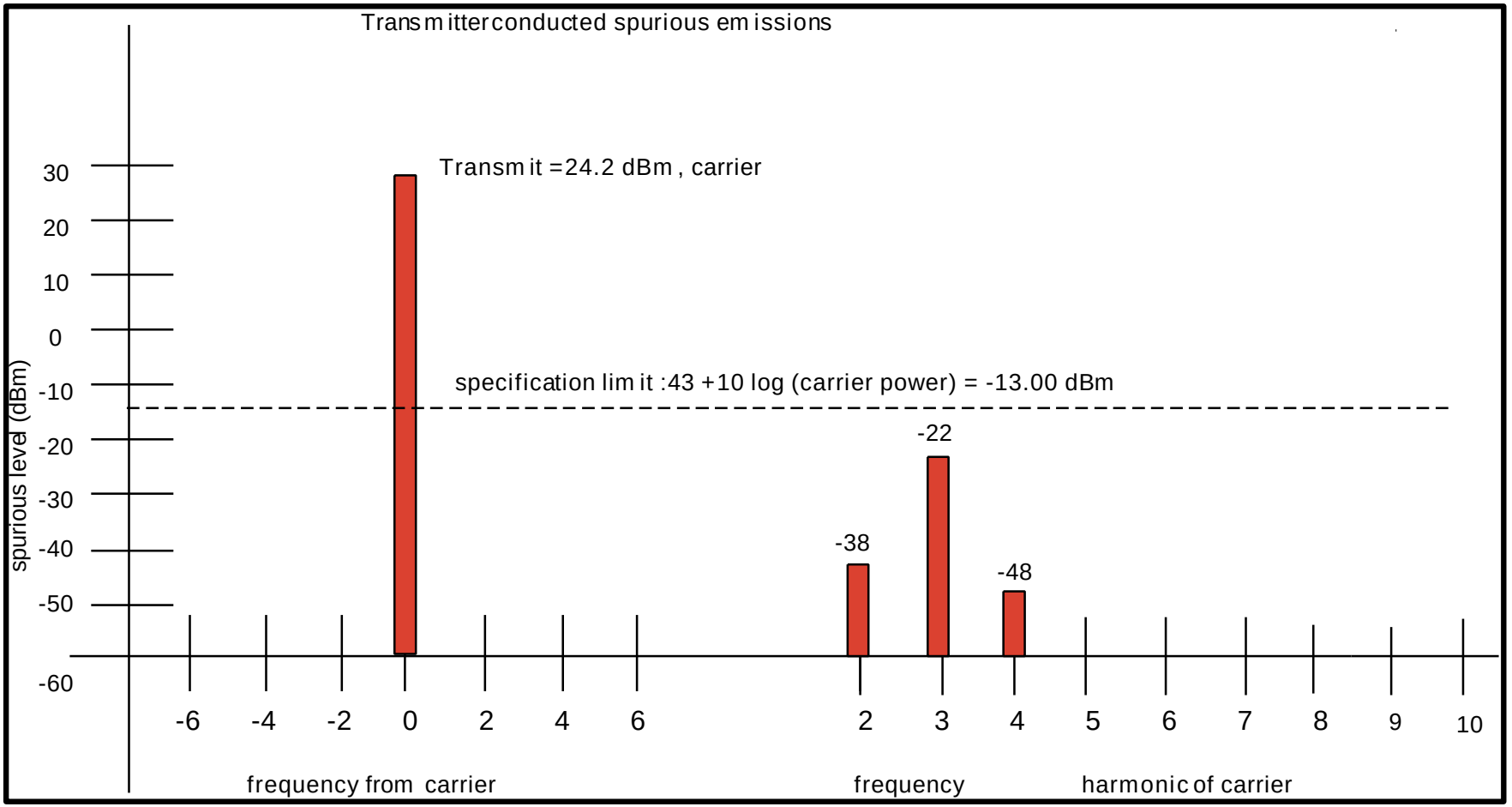
OCCUPIED BANDWIDTH





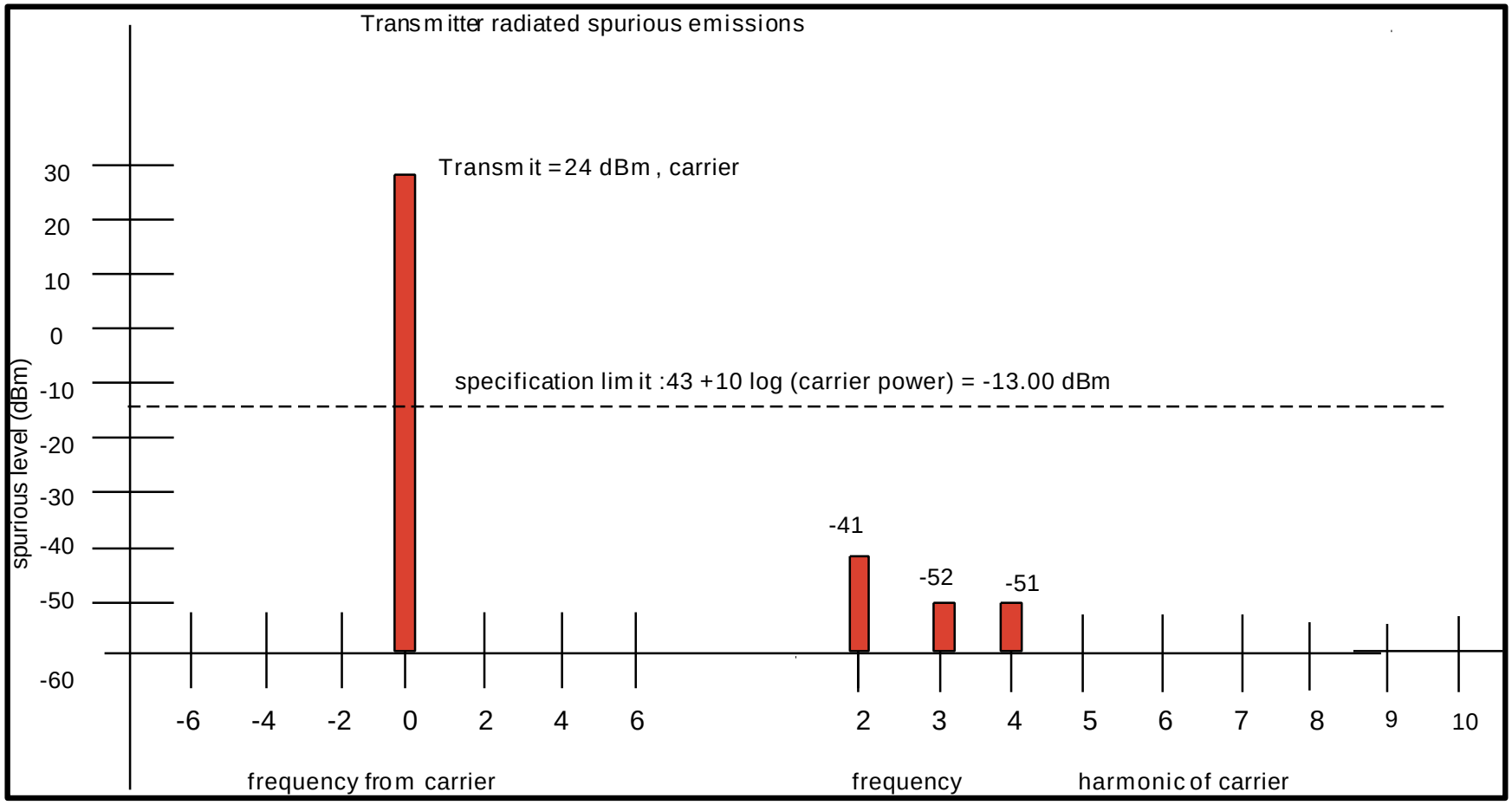


CONDUCTED SPURIOUS AND HARMONIC EMISSION



Carrier Power: 24.2 dBm
Each reported emission reflects the highest absolute level found among all power levels, channels, and power amplifier configuration s tested.
All emissions not reported are more 20 dB below the FCC specification.
Spectrum was searched from 30 kHz to the 10th harmonic of the transmitter.
Spurious Emission Limits when transmitting in CDMA mode (IS-98A, 10.5.1).

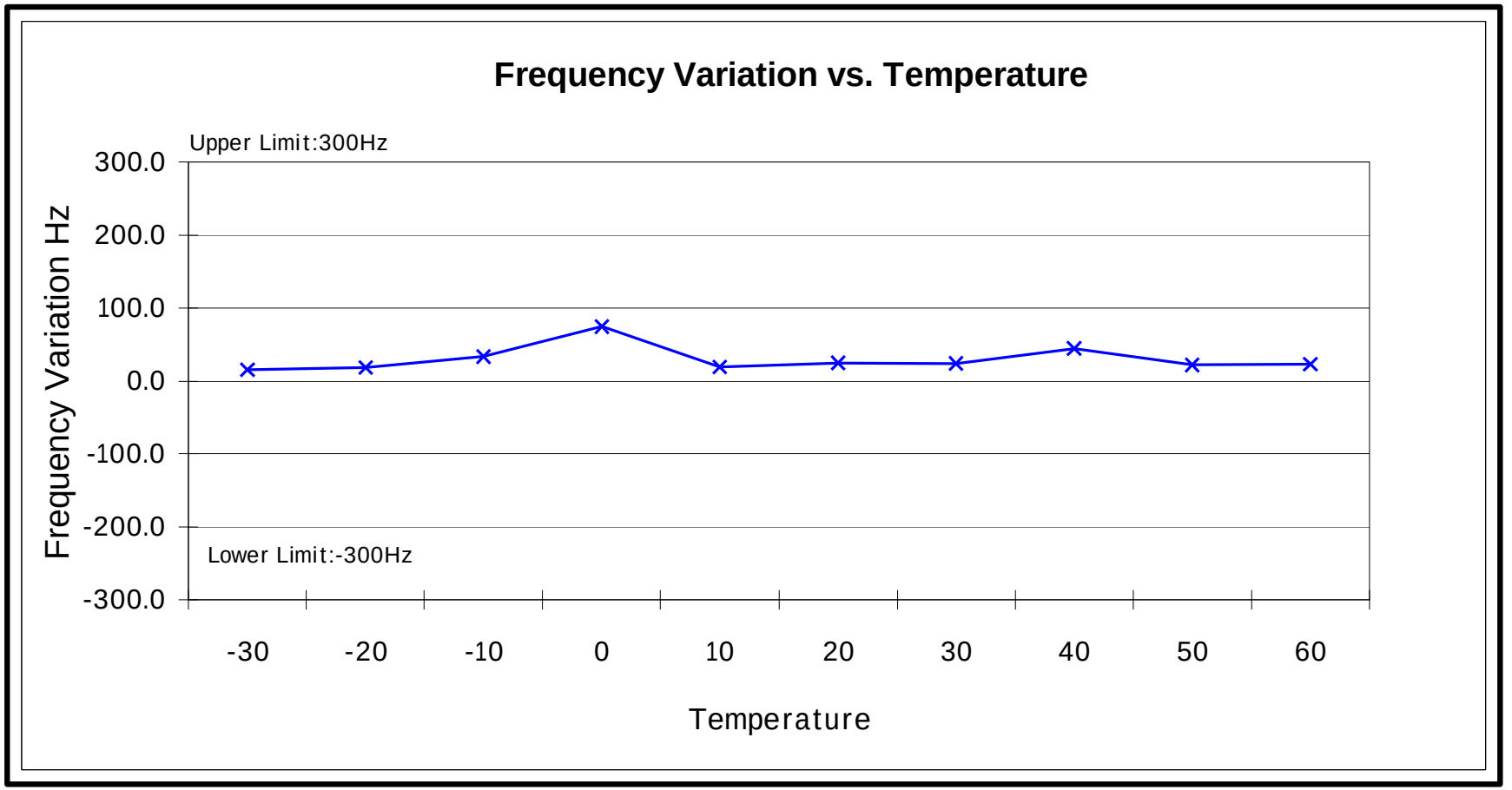
RADIATED SPURIOUS AND HARMONIC EMISSION



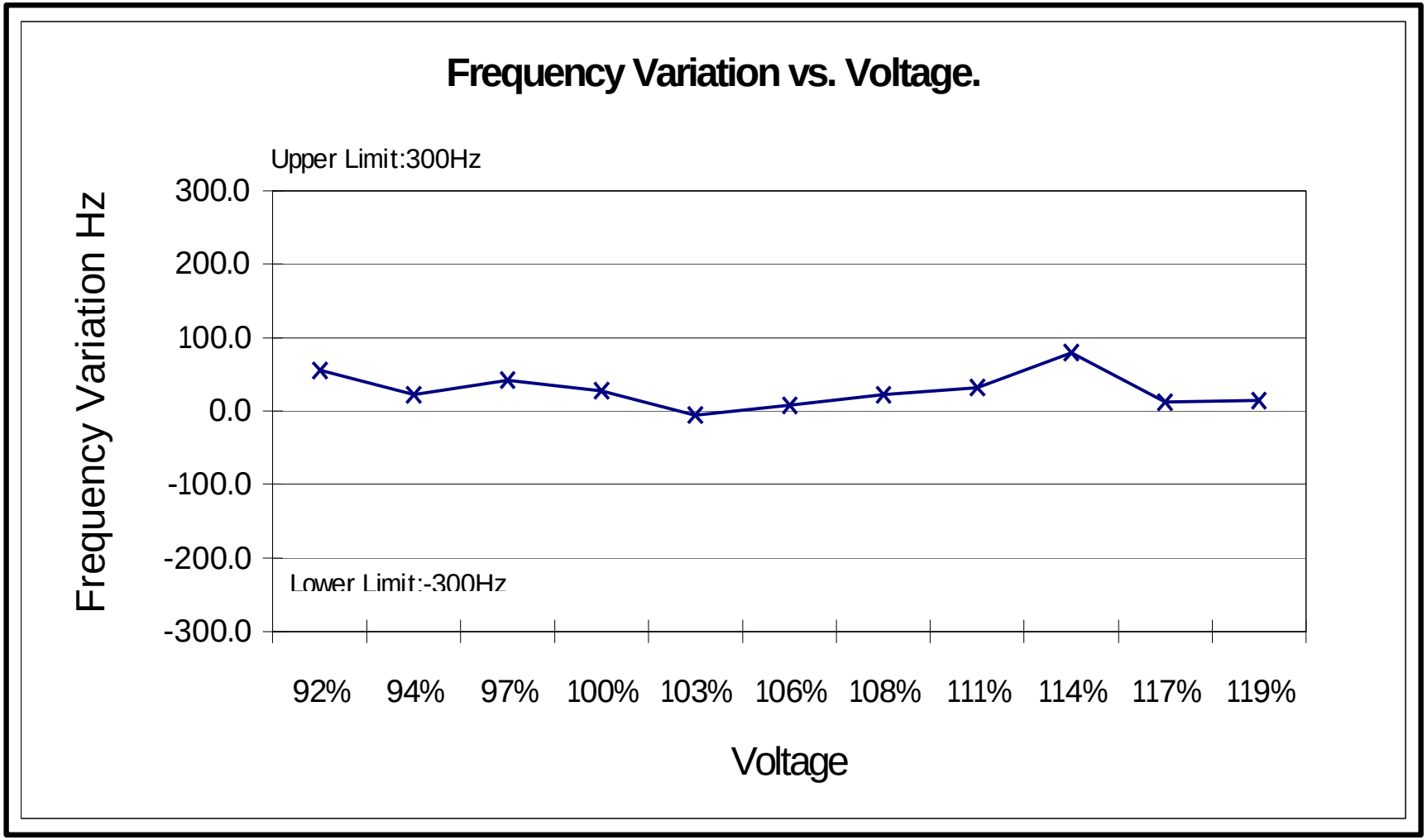
Each reported emission reflects the highest absolute level found among all power levels, channels, and operating mode (Analog or Digital)
All emissions not reported were greater than 20dB below the FCC specification.

Spectrum was searched from 30 MHz to the 10th harmonic of the transmitter

FREQUENCY CHANGE VS. TEMPERATURE



FREQUENCY CHANGE VS. VOLTAGE



MEASUREMENT TECHNIQUES

2.991 Measurements Required: Conducted Spurious and Harmonic Emissions at Antenna Terminals

Graph attached
EXHIBIT 6G

Definition- (as used herein) Spurious radiations are the radio frequency voltages or power generated within the equipment and appearing at the equipment's output terminals when properly loaded with its characteristic non-radiating artificial load.

Minimum Standard- The magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the alignment procedure, EXHIBIT 8B, shall be attenuated 43 dB below the mean power output. In the range of frequencies between 869.04 MHz and 893.97 MHz, no spur shall exceed –80 dBm.

Method of Measurement- The transmitter was modulated using pseudo random data. The spectrum was scanned from the lowest frequency generated in the equipment to the tenth harmonic of the carrier. The level of the carrier and various conducted spurious and harmonic frequencies shall be measured by means of a calibrated receiving system used to compare the output of the transmitter with that of a standard signal generator at the spurious frequency.

2.993 Measurements Required: Radiated Spurious and harmonic Radiation

Graph attached
EXHIBIT 6H

Definition: Radiated spurious and harmonic emissions are frequencies from the equipment when loaded into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to insure transmission of information of required quality for the class of communications desired. The reduction in the level of these spurious emissions will not effect the quality of the information being transmitted.

Minimum standard- Radiated spurious emissions shall be attenuated 43 dB below the mean power output. In the range of frequencies between 869.04 MHz and 893.97 MHz, no spur shall exceed –80 dBm.

Method of Measurement:

DESCRIPTION OF MEASUREMENT FACILITIES

Site on File With the FCC

ID Number: 31040/SIT

" The site referenced above has been found to comply with the test site criteria found in ANSI C63.4-1992 and 47CFR Section 2.948."

INTRODUCTION

On 8 and 9 of June, 1999, a series of Radiated Emissions tests were performed on a sample model of the Motorola CDMA (spark) Cellular Telephone. These tests were performed using the test procedures outlined in ANSI C63.4-1992 for intentional radiators, as called for in section 2.1033 for a type accepted device, and in accordance with the limits set forth in FCC Part 15.209 and 22.917e. Tests of conducted emissions were also performed in order to verify compliance with the limits set forth in part 22.917e and called out in section 2.1033 for a type accepted device.

PURPOSE

The above mentioned tests were performed in order to determine the compliance of the test sample with limits contained in various provisions of Title 47 CFR, including:

2.1051	15.209
2.1053	22.917

All radiated emissions tests were performed to measure the emissions in the frequency bands described by the above sections, and to determine whether said emissions are below the limits established by the above sections. These tests were performed in accordance with the procedure described in the American National Standard for methods of measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ANSI C63.4-1992). Another document used as reference for the EMI receiver specification was the International Special Committee on Radio Interference (CISPR) number 16-1 (1993).

RADIATED EMISSIONS TEST SETUP

The test sample was operated within the 3 meter Semi-Anechoic, FCC listed chamber located at L.S. Compliance in Cedarburg, WI. The sample was placed on an 80cm high wooden table, which was centered on the flush-mounted 2m diameter metal turntable. The test sample was operated on its internal rechargeable battery. The test sample was configured to run in a continuous transmit mode , with a 50 ohm dummy load attached to the antenna port, during the Radiated measurements. The test sample was set to operate on one of three standard channels within the Cellular frequency assignment: one at the low end of the band (1013), one in the middle of the band (384) and one near the top of the band(779).

RADIATED EMISSION TEST PROCEDURE

The fundamental and spurious (harmonic) emissions of the transmitter were tested for compliance to Title 47 CFR, FCC Part 22.917e limits for transmitters in the Public mobile services, and were also compared with the general limits laid out in Part 15.209. For the calculations used to determine the limits applicable for the test sample, refer to Appendix A. These limits are expressed in decibels below carrier level. (- dBc) The samples were tested from the lowest frequency generated by the transmitter (without going below 9 kHz) to the 10th harmonic of the fundamental frequency generated by the device. The limits described in part 15.209 were also observed for observation and measurement of spurious signals. The samples were placed on a nonconductive (wooden) pedestal in the 3 Meter chamber and the antenna mast was placed such that the antenna was 3m from the test object. A biconical antenna was used to measure emissions from 30 to 200 MHz, a log periodic was used to measure emissions from 200 to 1000 MHz, and a double ridged waveguide horn was used to measure emissions above 1 GHz. The test object was programmed to operate in continuous transmit, either in the

analog mode or digital mode; and the resultant signals were maximized by rotating the turntable 360 degrees, and by raising and lowering the antenna between 1 and 4 meters. The test object was also given several different orientations to determine the maximum signal levels, using both horizontal and vertical antenna polarities.

No significant emissions were found aside from the transmitter fundamental and the second through the sixth harmonic. Other emissions that were seen were lower than 20 dB below the specified limits. The unit was scanned for emissions in both transmit and receive modes, over the range 30 to 9000 MHz to establish compliance with Part 22.917 for the transmitter, and from 30 to 2000 MHz for the receiver, for compliance to 15.209

TEST EQUIPMENT UTILIZED FOR THE RADIATED EMISSIONS TEST

The test equipment and antennas list used for the tests includes the calibration information as well as the equipment description. All equipment is calibrated and used according to the user manuals supplied by the manufacturer. All antenna calibrations were performed at a N.I.S.T traceable site, and the resultant correction factors were entered into the Hewlett Packard 8546A EMI receiver software database. The connecting cables used were also measured for loss using a calibrated signal generator and the HP 8546A EMI receiver. The resulting loss factors were entered into the HP 8546A database. This allowed for automatic changes in the antenna correction factor, as well as cable loss or other corrections, to be added to the EMI receiver display while taking measurements. Thus, the resulting data taken from the HP 8546A is an actual reading and can be entered into the database as a corrected meter reading. When a reading is taken using the peak detector, a duty cycle correction factor can be applied for conversion to an average reading. This operation can be used when measuring periodic data transmission, under FCC part 15.231b, and Part 15.35c. The calculation for deriving this duty factor can be found in Appendix A. The resulting average reading was then compared to the appropriate limit in order to determine compliance. The HP 8546A EMI receiver was operated with a bandwidth of 120 kHz when receiving signals below 1 GHz, and with a bandwidth of 1 MHz when receiving signals above 1 GHz, in accordance with CISPR 16, while performing the Part 15 measurements. Other IF and Video bandwidths, narrower than stated above, were used where appropriate and allowable.

Test Equipment List

Asset #	Manufacturer	Model #	Serial #	Description	Due Date
AA960003	EMCO	3121C	786	Dipole Set Antenna	7/14/99
AA960004	EMCO	3146	9512-4276	Log Periodic Antenna	9/12/99
AA960005	EMCO	3110B	9601/2280	Biconical Antenna	9/12/99
AA960007	EMCO	3115	99111-4198	Double Ridged Guide/Horn Antenna	7/20/99
EE960004	EMCO	2090	9607-1164	Mast/Ttable Controller	I.O
EE960013	HP	8546A	3617A00320	Receiver RF Section W/Display and RF filter section	8/12/99
CC000130	HP	8596E	3205A00103	Spectrum Analyzer	7/30/99

2.994 Measurements Required: Frequency Stabilization

Definition- The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

Minimum standard- The minimum frequency stability shall be ±300 Hz referenced to a received carrier frequency from a base station. This meets the requirement for operational accuracy of .00005%.

Method of measurement- Frequency measurements shall be made at the extremes of the temperature range -30º to +60º C and at intervals of not more than 10º C throughout the range. A period of time sufficient to stabilize all of the components in the equipment shall be allowed prior to each frequency measurement. The frequency of the transmitter shall be measured by extracting a sample of the carrier and measuring its center frequency by equipment having a degree of accuracy of at least 10 times that of the minimum to be measured.

The frequency stability of transmitting equipment shall be checked with variations in:

(a) Temperature: Vary the ambient from -30º to +60º C.

Graphs attached EXHIBITS 6J

(b) Primary Supply Voltage:

Vary the primary supply voltage over the specified battery voltage range.

Graphs attached EXHIBITS 6K

Timing Period and Procedure for Frequency Stability Measurements

1. The carrier frequency of the transmitter was measured at room temperature (usually between 25º and 27º C) to provide a reference.

2. The equipment was then subjected to an overnight soak at -30º C without any power applied.

3. After an overnight soak at -30º C, measurement of the carrier frequency of the transmitter was made within a three minute interval after applying power to the transmitter.

4. Frequency measurements were made at each 10º C interval (-30º, -20º, -10º, 0º, +10º, +20º, +30º, +40º, +50º, +60º). A period of at least one hour was provided to allow stabilization of the equipment at each temperature level.

5. In all measurements, at the various temperature intervals, the temperature was held at ±1º C from the temperature level.

6. The artificial load was mounted external to the temperature chamber.