GENERAL INFORMATION REQUIREMENTS

Paragraph 2.983(a)

Name of Applicant:	Telephonics Corporation
Address of Applicant:	815 Broad Hollow Road Farmingdale, NY 11735
Name of Manufacturer:	Telephonics Corporation

Paragraph 2.983(b)

Equipment Identification:	**FCC ID: O2IMCB-RT-1601**

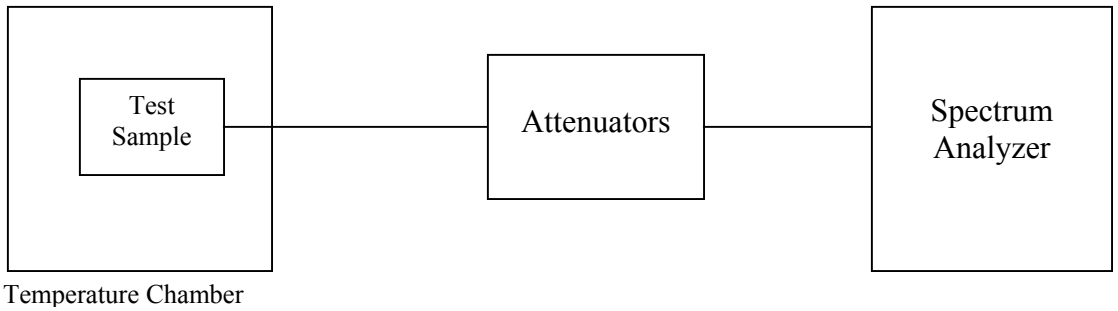
Power Output

POWER OUTPUT

A. Measurement Procedure:

The RF output of the transmitter was directly coupled through attenuators to the input of a spectrum analyzer. The output power was measured from -20°C to +50°C in 10°C increments.

Setup of the test is shown below:



B. Test Results:

The results for the above test are submitted as a separate attachment named Poweroutput.pdf.

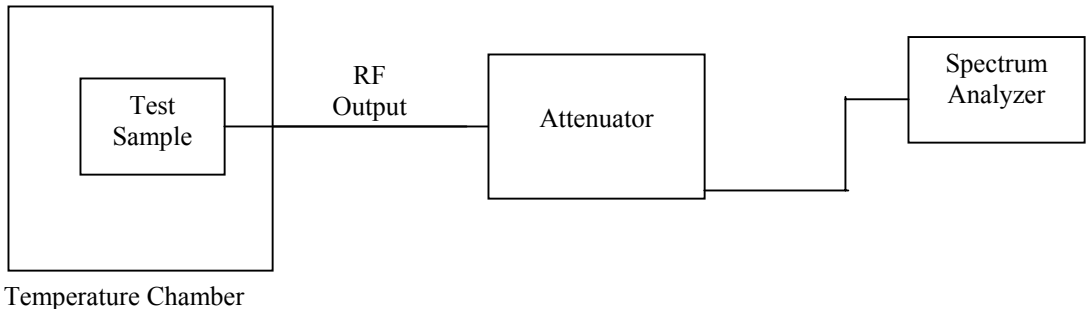
Paragraph 2.1049
Occupied Bandwidth
&
Paragraph 2.1055
Frequency Stability

OCCUPIED BANDWIDTH (Para.2.1049) and FREQUENCY STABILITY (Para. 2.1055)

A. Measurement Procedure:

The RF output was directly coupled through external attenuators to a spectrum analyzer. The occupied bandwidth of the RF carrier, modulated by its appropriate radar pulse was then recorded and plotted. The above procedure was performed with each pulse (weather mode and search mode). The modulated signal must be within the template as specified by the applicable paragraph in Part 87. The above procedure was repeated from -20°C to +50°C in ten-degree increments.

Setup of the test is shown below:



B. Test Results:

It was verified that the fundamental transmission stayed within the 9300 MHz to 9500 MHz band utilizing the emission mask specified in Part 87.139(a), using the authorized bandwidth of 200 MHz (9300 to 9500 MHz), and 9300 MHz and 9500 MHz as the points at which the emission must be at least 25 dB down. The results for the above test are submitted as a separate attachment named occbw-freqstab.pdf.

Para. 2.1051

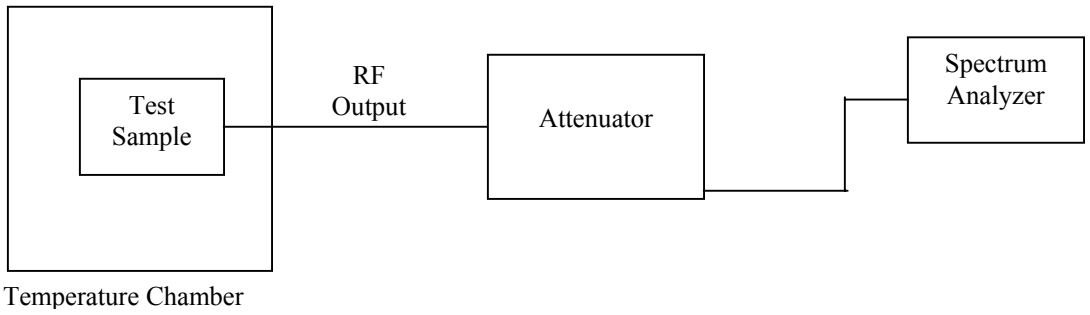
Spurious Emissions at Antenna Terminals

Spurious Emissions at Antenna Terminals (Para. 2.1051)

A. Measurement Procedure:

The RF output of the transmitter was directly coupled through attenuators to the input of a spectrum analyzer. With the transmitter on, the spectrum analyzer was swept from 10 kHz to 18 GHz. (Emissions above 18 GHz were measured during spurious case radiated emissions due to limitations in this set-up. i.e.: RG223 cable only rated to 18 GHz). This procedure was performed from -20°C to +50°C in 10°C increments. It was verified that all emissions not associated with the fundamental transmission were at least 43 +10 log (P) down from the fundamental transmit power level (P).

Setup of the test is shown below:



B. Test Results:

The results for the above test are submitted as a separate attachment named Cespur-ant.pdf.

Para. 2.1053

FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER

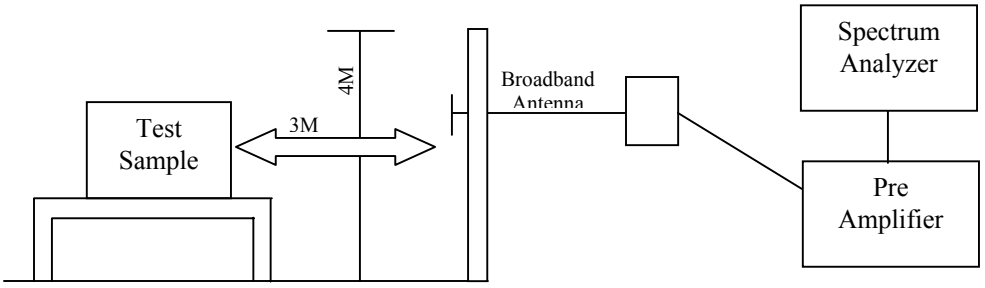
FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER (Para. 2.1053)

A. Measurement Procedure:

The spurious emissions of the transmitter from 10 kHz to 40 GHz were measured in accordance with TIA/EIA603, Paragraph 2.2.1.2 as described below:

The transmitter under test was placed on an 80-cm high non-metallic table on the Open Air Test Site with its antenna terminated into a shielded load. A receive antenna was placed three meters away from the transmitter. The turntable was rotated 360 degrees and the receive antenna was raised and lowered from 1 to 4 meters until a maximum reading was obtained at each spurious emission detected. This reading was recorded. The transmitter under test was replaced with a dipole (or equivalent antenna) and signal generator. The signal generator was set to the frequency for the spurious emission. The level of the signal generator was increased until the level was equal to that previously measured. The required input level from the signal generator in dBm was recorded and the antenna gain (in dB) of the transmit antenna was added. This was the Effective Radiated Power of the spurious emission.

Setup of the test is shown below:



B. Test Results:

The results for the above test are submitted as a separated attachment named Respur-erp.pdf

EQUIPMENT LIST

FCC Part 87

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
012	Loop Antenna, Active	EMCO	9 kHz - 30 MHz	6502	10/10/01	10/10/02
067	Open Area Test Site	Retlif	3 Meter	RNY	9/20/00	9/20/03
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	6/7/02	6/7/03
129F	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/21/01	9/21/02
129H	High Gain Horn Antenna	Microlab/FXR	26.5 GHz - 40 GHz	U638A	9/21/01	9/21/02
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/11/02	6/11/03
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	7/17/02	1/17/03
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/5/02	3/5/03
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/11/02	6/11/03
304	Temperature Chamber	Thermotron	-85 to +176° C	SM-16C	12/7/01	12/7/02
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	9/13/01	9/13/02
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	9/29/00	9/29/03
421A	Harmonic Mixer	Hewlett Packard	26.5 GHz - 40 GHz	11970A	9/29/00	9/29/03
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	7/11/02	7/11/03
585	Acrylic Test Fixture	Retlif	N/A	RI-Auto-1		
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	7/27/01	8/3/02
767	Biconilog	EMCO	26 - 2000 MHz	3142B	8/28/01	8/28/02

TEST SETUP PHOTOGRAPHS