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APPLICANT: J COMMUNICATIONS CO., LTD.

FCC ID: OAJGMRS1500XTM

TEST REPORT:

EXHIBITS CONTAINING:

GENERAL INFORMATION REQUIRED
FOR CERTIFICATION

2.1033(c)(1)(2) J COMMUNICATIONS CO., LTD. will manufacture the FCCID: OAJGMRS1500XTM GMRS CHANNELS TRANSCEIVER in quantity, for use under FCC RULES PART 95.

J COMMUNICATIONS CO., LTD.
124-4 OJEON-DONG, UIWANG-CITY
KYUNGKI-DO, KOREA

2.1033 (c) TECHNICAL DESCRIPTION

2.1033(c)(3) Instruction book. A draft copy of the instruction manual is included as EXHIBIT 5.

2.1033(c) (4) Type of Emission: 9K5F3E
95.631

Bn = 2M + 2DK
M = 3000
D = 1.75K
Bn = 2(3.0)+2(1.75) = 9.5K

95.633 Authorized Bandwidth 20.0KHz
2.1033(c)(5) Frequency Range: 462.5625 - 462.7250 MHz
95.621

2.10311c)(6)(7) The Maximum Output Power Rating:
High: 2.0 Watts EIRP

2.1033(c)(8) DC Voltages and Current into Final Amplifier:
FINAL AMPLIFIER ONLY

INPUT POWER: (6.0V)(.390A) = 2.34 Watts

2.1033(c)(9) Tune-up procedure.
The tune-up procedure is included in Exhibit # 9.

2.1033(c)(10) Complete Circuit Diagrams: The circuit diagram is included as EXHIBIT 4 of this report. The block diagrams are included as EXHIBIT 3 of this report.

2.1033(c)(11) A photograph or a drawing of the equipment identification label is included as exhibit No. 1.

2.1033(c)(12) Photographs(8"X10") of the equipment of sufficient clarity to reveal equipment construction and layout, including meters, labels for controls, including any view under shields. See exhibits 6a-8b.

2.1033(c)(13) Digital modulation is not allowed.

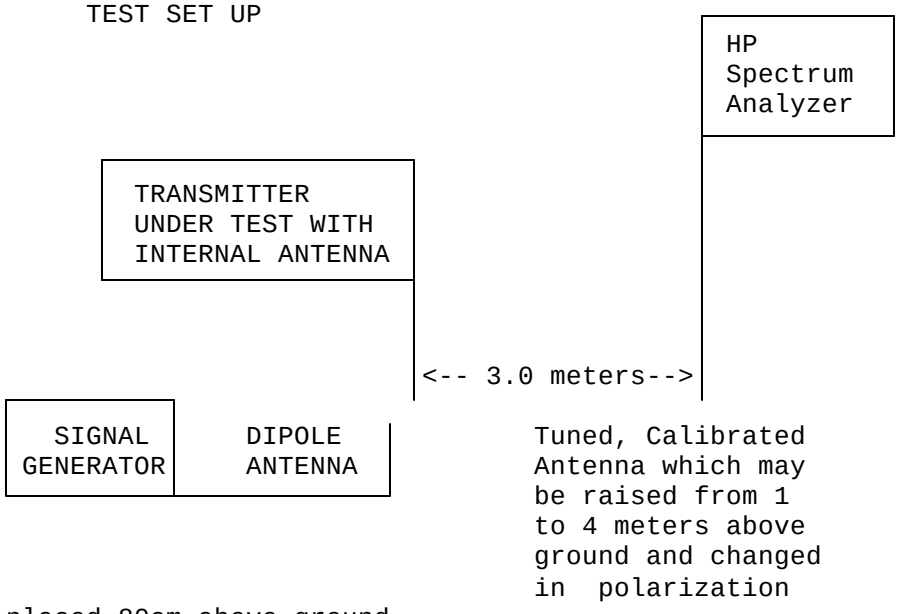
2.1033(c)(14) The data required by 2.1046 through 2.1057 is submitted below.

95.639 Power Output shall not exceed 50.0 Watts of carrier power. There can be no provisions for
95.649 increasing the power or varying the power. RF power output.

2.1046(a) RF_power_output.

RF power is measured by measuring the radiated power at 3 meters and then replacing the transmitter with a signal generator to determine the effective radiated power. The carrier power shall not exceed 50 WATTS.
MEASURED POWER OUTPUT = 2 WATTS EIRP

R.F. POWER OUTPUT
TEST SET UP



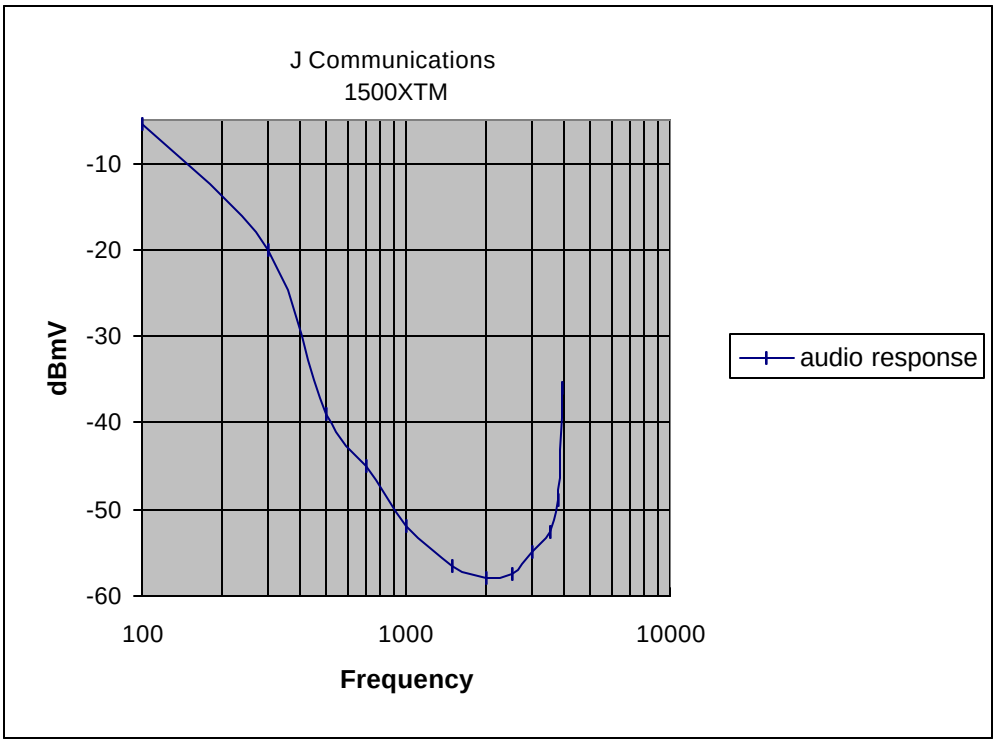
Equipment placed 80cm above ground on a rotatable platform.

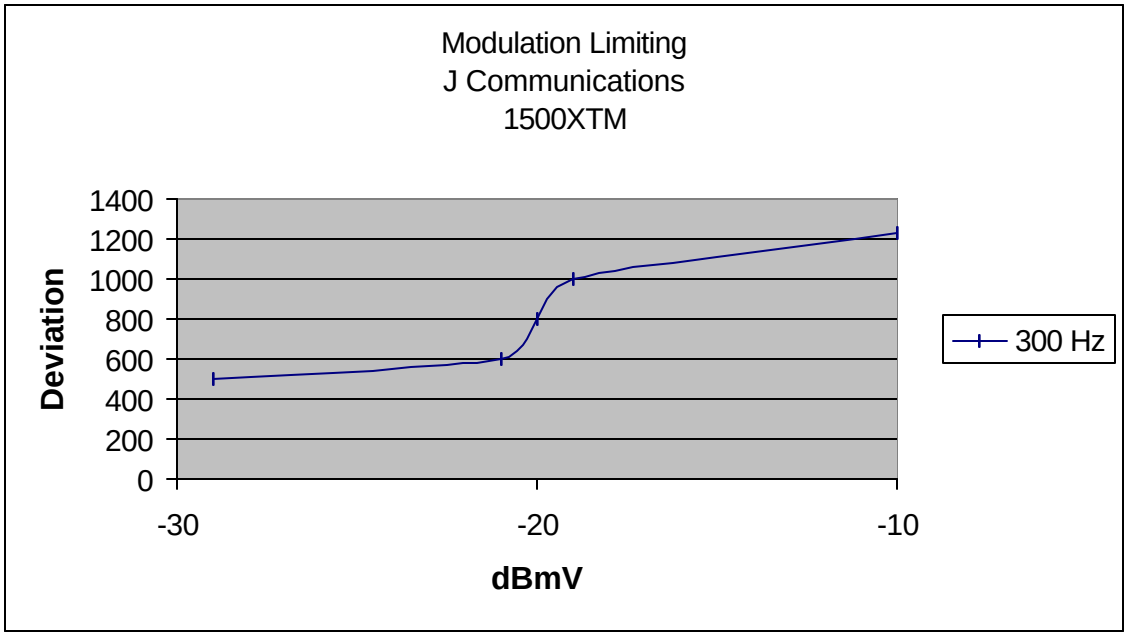
2.1047(a)(b) Modulation characteristics:

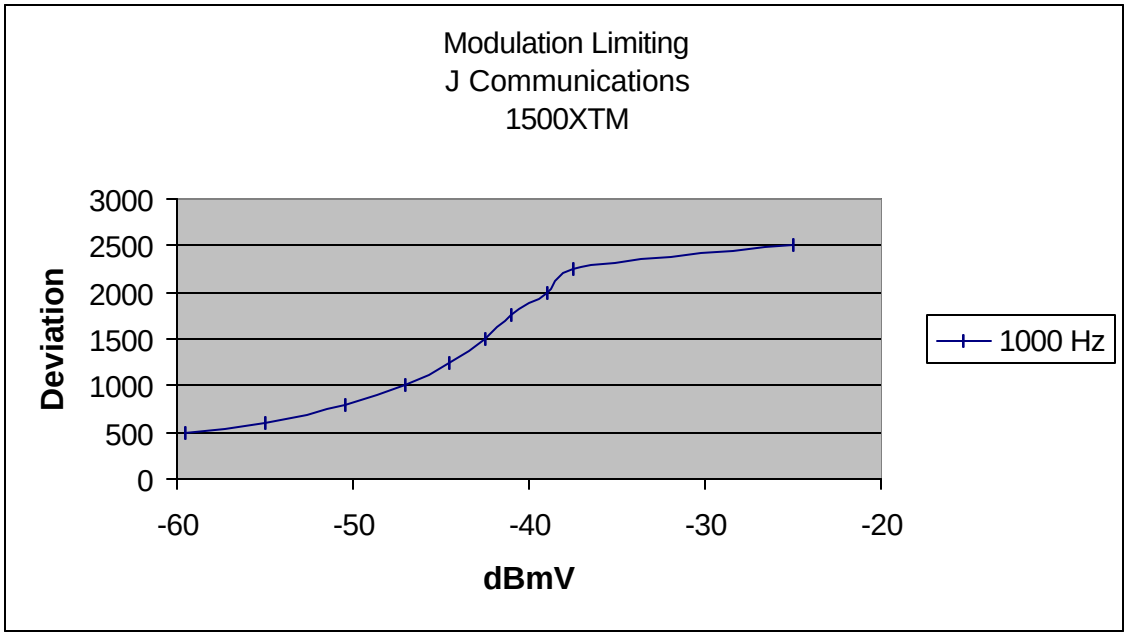
AUDIO FREQUENCY RESPONSE
The audio frequency response was measured in accordance with TIA/EIA Specification 603. The audio frequency response curve is shown on the next page. The audio signal was fed into a dummy microphone circuit and into the microphone connector. The input required to produce 30 percent modulation level was measured. See page 4 of report.

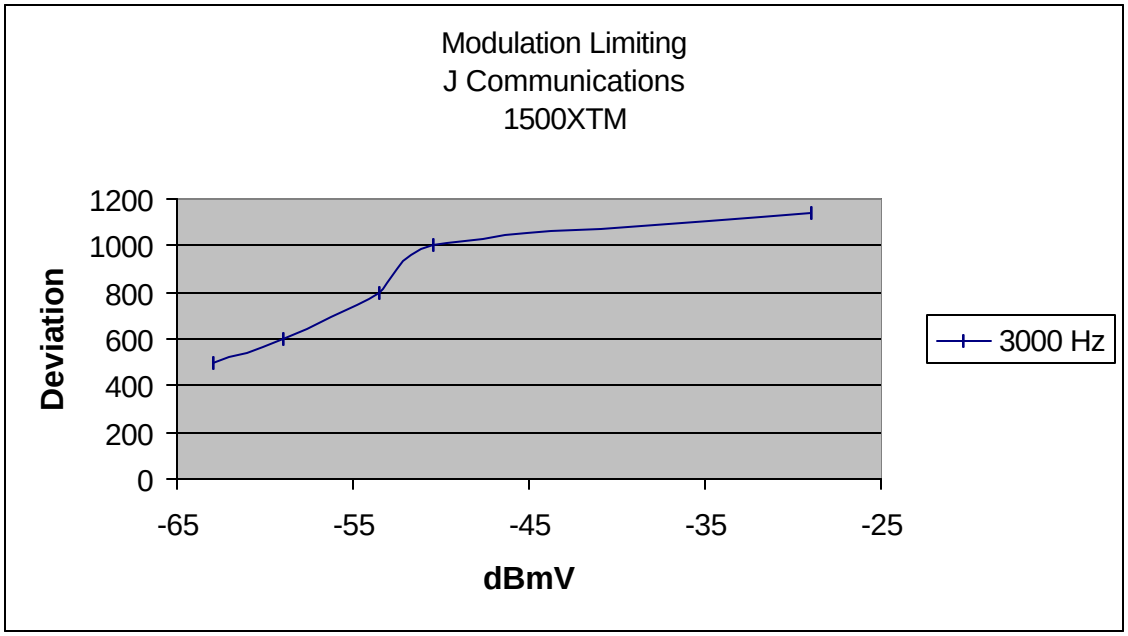
2.1047(b) Audio input versus modulation
The audio input level needed for a particular per-percentage of modulation was measured in accordance with TIA/EIA Specification 603. The audio input curves versus modulation are on the following pages. Curves are provided for audio input frequencies of 300, 1000, and 3000 Hz.
See pages 5-7 of report.

95.637 Post Limiter Filter Each GMRS transmitter, except a mobile station transmitter with a power of 2.5Watts or less, must be equipped with an audio low pass filter. At any frequency between 3 & 20KHz the filter must have an attenuation of 60log (f/3) greater than the attenuation at 1KHz.
See page 8 of report.


J Communications
1500XTM
-10
-20
-30
-40
-50
-60
dBmV
100
1000
10000
Frequency
audio response

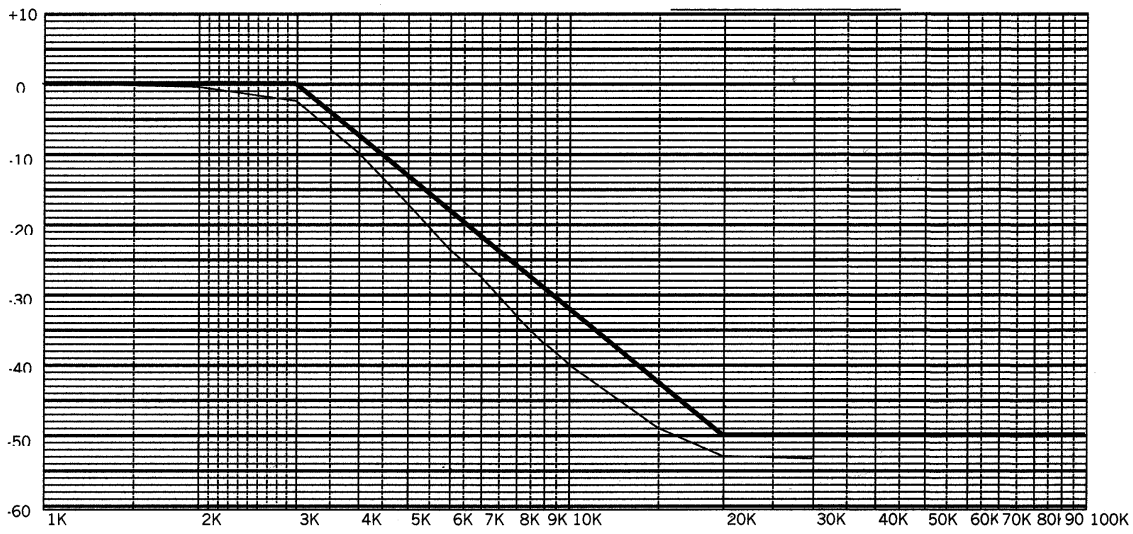

Modulation Limiting
J Communications
1500XTM
Deviation
1400
1200
1000
800
600
400
200
0
-30
-20
-10
dBmV
300 Hz


Modulation Limiting
J Communications
1500XTM
Deviation
3000
2500
2000
1500
1000
500
0
-60
-50
-40
-30
-20
dBmV
1000 Hz


Modulation Limiting
J Communications
1500XTM
Deviation
1200
1000
800
600
400
200
0
-65
-55
-45
-35
-25
dBmV
3000 Hz

Audio Lowpass Filter

Model : GMRS-1500XTM (#3)
Date : 01 . 11 . 2A
Test By : H. S. Moon

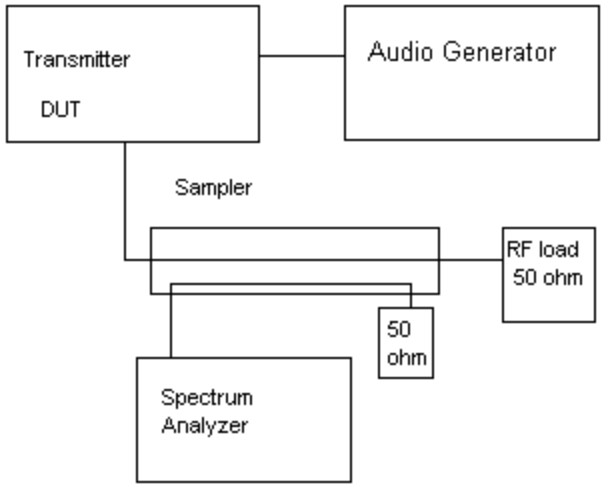


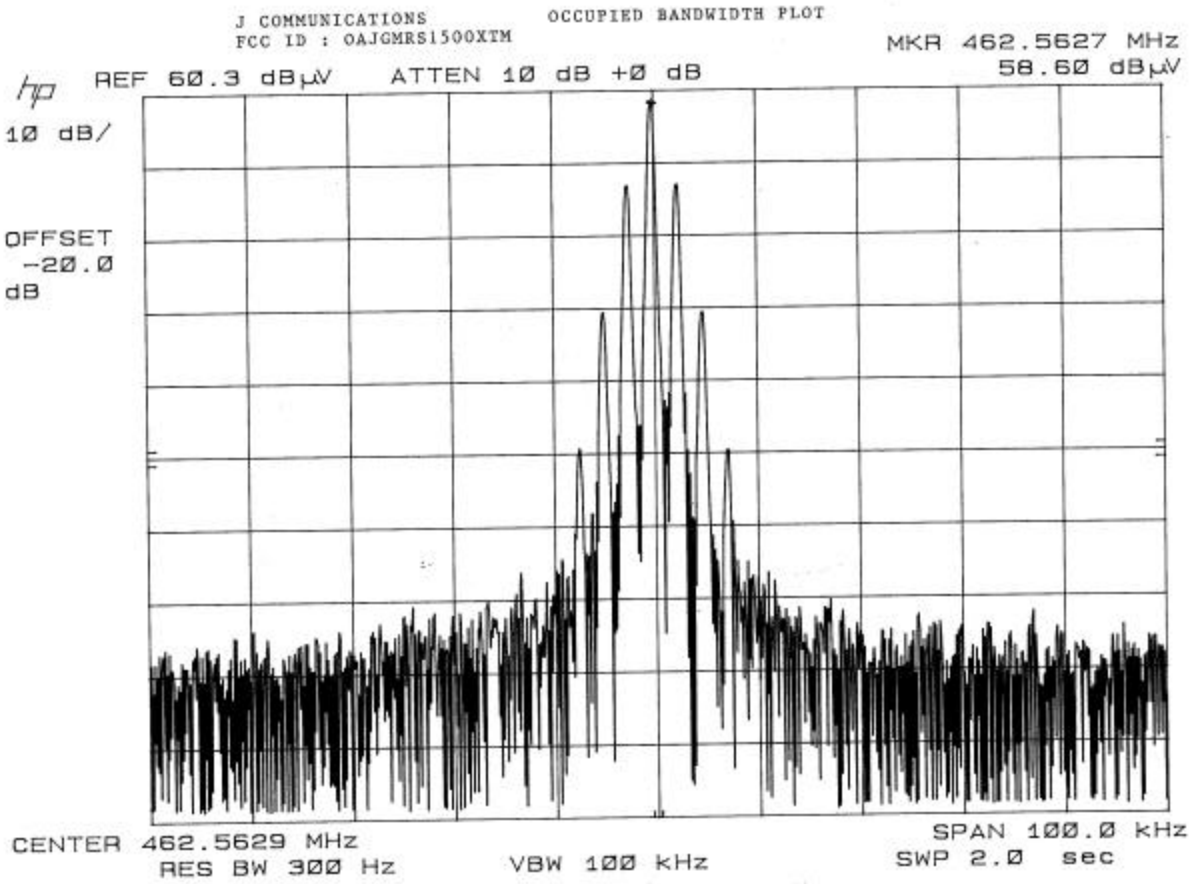
J COMMUNICATIONS FCC ID : OAJGMRS1500XTM JOB : 1224AK1

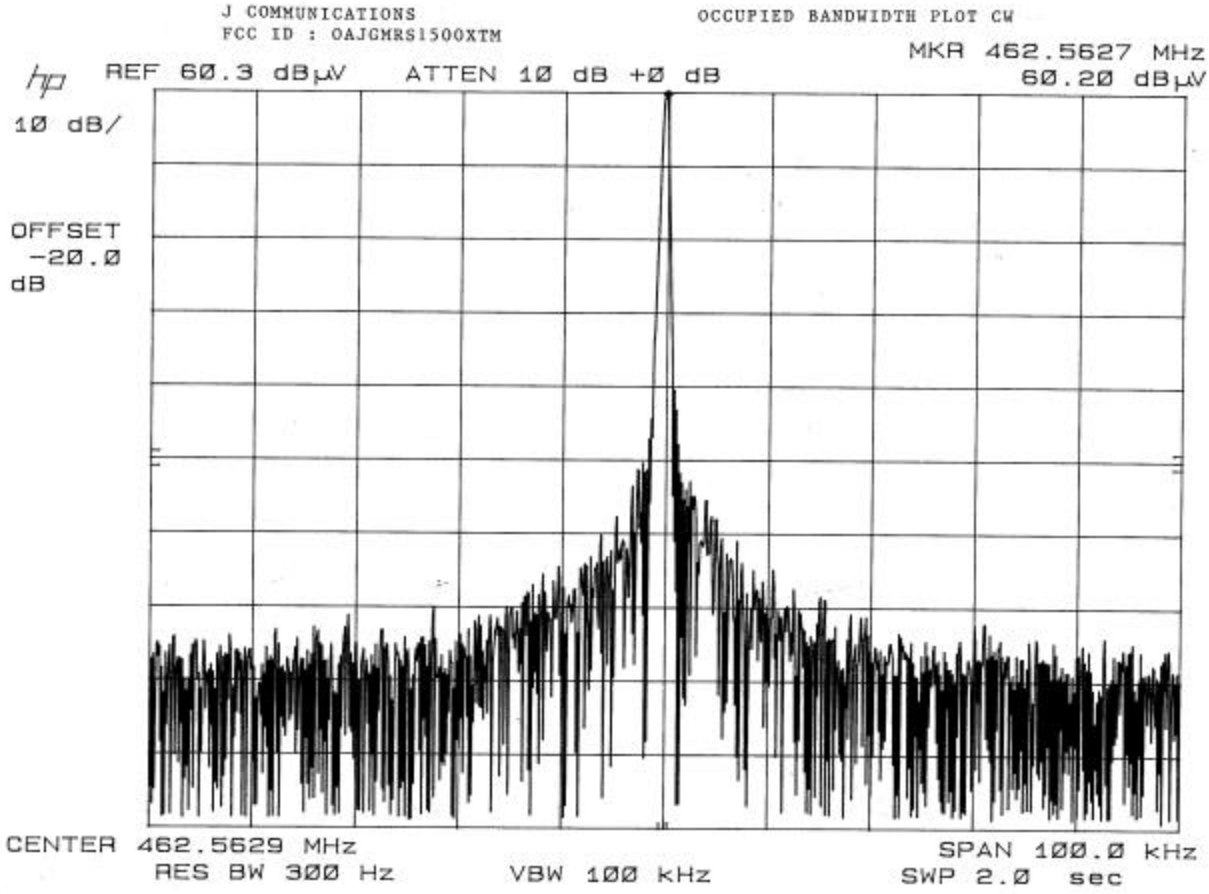
2.1049 Occupied bandwidth:

95.635(b)(1)(3)(7)
At least 25dB on any frequency removed from the center of the authorized bandwidth by more than 50%up to and including 100% of the authorized bandwidth. At least 35 dB on any frequency removed from the center of the authorized BW by more than 100% up to and including 250% of the authorized BW. At least 43+log10(T) on any frequency removed from the center of the authorized bandwidth by more than 250%. For plots see pages 9 and 10 of report.

Occupied BW Test Equipment Setup

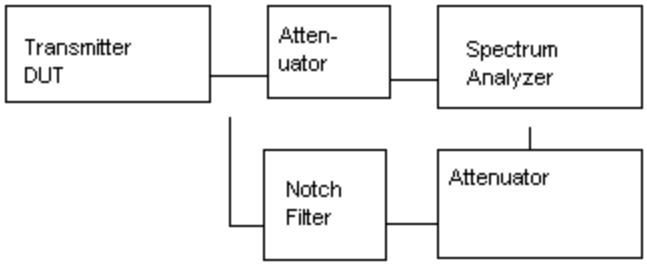



J COMMUNICATIONS
FCC ID : OAJGMRS1500XTM
OCCUPIED BANDWIDTH PLOT
MKR 462.5627 MHz
58.60 dBµV
REF 60.3 dBµV
ATTEN 10 dB +0 dB
10 dB/
OFFSET
-20.0
dB
CENTER 462.5629 MHz
RES BW 300 Hz
VBW 100 kHz
SPAN 100.0 kHz
SWP 2.0 sec


J COMMUNICATIONS
FCC ID : OAJGMRS1500XTM
OCCUPIED BANDWIDTH PLOT CW
MKR 462.5627 MHz
60.20 dBµV
REF 60.3 dBµV
ATTEN 10 dB +0 dB
10 dB/
OFFSET
-20.0
dB
CENTER 462.5629 MHz
RES BW 300 Hz
VBW 100 kHz
SPAN 100.0 kHz
SWP 2.0 sec

2.1051 Spurious emissions at antenna terminals(conducted):
The following data shows the level of conducted spurious responses at the antenna terminal. The test procedure used was TIA/EIA 603 S2.2.13 with the exception that the emissions were recorded in dBc. The spectrum was scanned from 0.4 to at least the 10th harmonic of the fundamental.

Spurious Emissions at
Antenna Terminals



Method of Measuring Conducted Spurious Emissions

2.1051 Spurious emissions at the Antenna Terminals

NAME OF TEST: SPURIOUS EMISSIONS AT ANTENNA TERMINALS

REQUIREMENTS: **NOT REQUIRED FOR THIS DEVICE; IT HAS A FIXED ANTENNA.**

2.1053 UNWANTED RADIATION:
95.635(b)(7)

The tabulated Data shows the results of the radiated field strength emissions test. The spectrum was scanned from 30 to at least the 10th harmonic of the fundamental. This test was conducted per ANSI C63.4-1992.

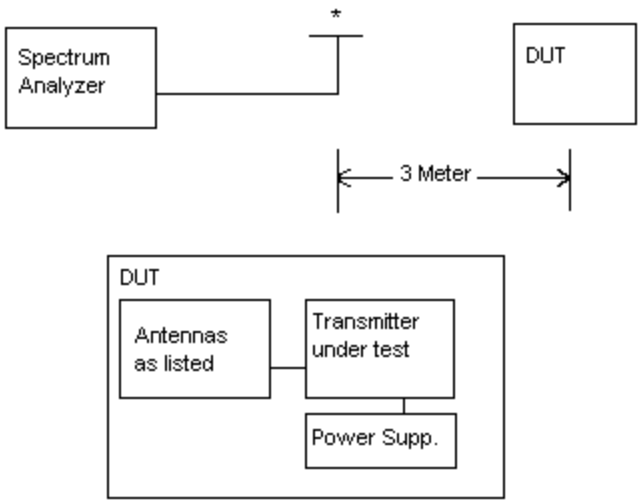
REQUIREMENTS: HIGH POWER: 43 + 10log(2.0) = 46.01 dB

TEST DATA:

Emission Frequency MHz	ATTN dBc	Margin dB
462.60	00.00	00.00
925.40	77.41	31.40
1,388.00	81.07	35.06
1,851.00	82.50	36.49
2,776.00	93.50	47.49
3,238.00	84.66	38.65
3,701.00	76.68	30.67
4,164.00	56.43	10.42
4,626.00	78.67	32.66

METHOD OF MEASUREMENT: The tabulated data shows the results of the radiated field strength emissions test. The spectrum was scanned from 30 to at least the tenth harmonic of the fundamental. This test was conducted per TIA/EIA STANDARD 603 using the substitution method. Measurements were made at the open field test site of TIMCO ENGINEERING, INC. located at 849 NW State Road 45, Newberry, FL 32669.

Method of Measuring Radiated Spurious Emissions



Equipment placed 80cm above ground
on a rotatable platform.

* Appropriate antenna raised from 1 to 4 M.

2.1055 Frequency stability:
95.621(b)

Temperature and voltage tests were performed to verify that the frequency remains within the 0.0005%, 5 ppm specification limit. The test was conducted as follows: The transmitter was placed in the temperature chamber at 25 degrees C and allowed to stabilize for one hour. The transmitter was keyed ON for one minute during which four frequency readings were recorded at 15 second intervals. The worse case number was taken for temperature plotting. The assigned channel frequency was considered to be the reference frequency. The temperature was then reduced to -30 degrees C after which the transmitter was again allowed to stabilize for one hour. The transmitter was keyed ON for one minute, and again frequency readings were noted at 15 second intervals. The worst case number was recorded for temperature plotting. This procedure was repeated in 10 degree increments up to + 50 degrees C.

Readings were also taken at plus and minus 15% of the battery voltage of 6.0 VDC.

MEASUREMENT DATA:

Assigned Frequency (Ref. Frequency): 462.587 096

TEMPERATURE_C	FREQUENCY_MHz	PPM
REFERENCE_____	462.587 096	
-30C_____	462.585 573	-3.29
-20C_____	462.587 023	-0.16
-10C_____	462.588 185	2.35
0C_____	462.588 508	3.05
10C_____	462.588 228	2.45
20C_____	462.587 777	1.47
30C_____	462.587 346	0.54
40C_____	462.587 163	0.14
50C_____	462.587 263	0.36

BATT. %	BATT. DATA	VOLTS	BATT. PPM
-15%	462.587 079	5.1	-0.04
+15%	462.587 119	6.9	0.05

RESULTS OF MEASUREMENTS: The maximum frequency variation over the temperature range was –3.29 to 3.05 ppm. The maximum frequency variation with voltage was 0.05 ppm.

TEST EQUIPMENT LIST

1._X_Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/ preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter HP 8565OA, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02, S/N 3008A00372 Cal. 8/31/01 Due 8/31/02
2.__ Biconnical Antenna: Eaton Model 94455-1, S/N 1057, Cal. 10/1/01 Due 10/1/02
3.__ Biconnical Antenna: Electro-Metrics Model BIA-25, S/N 1171 Cal. 4/26/01 Due 4/26/03
4.__ Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632 Char. 3/15/00 Due 3/15/01
5.__ Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409 Char. 3/15/00 Due 3/15/01
6._X_ Log-Periodic Antenna: Electro-Metrics Model LPA-25, S/N 1122 Char. 2/10/01 Due 3/10/02
7._X_ Double-Ridged Horn Antenna: Electro-Metrics Model RGA-180, 1-18 GHz, S/N 2319 Cal. 4/27/99 Due 4/27/00
8.__ 18-26.3GHz Systron Donner Standard Gain Horn #DBE-520-20 No Cal Required
9.__ Horn 40-60GHz: ATM Part #19-443-6R No Cal Required
10.__ Line Impedance Stabilization Network: Electro-Metrics Model EM-7820, w/NEMA Adapter S/N 2682 Cal. 3/16/01 Due 3/16/02
11._X_Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7 Char. 1/27/01 Due 1/27/02
12._X_Frequency Counter: HP Model 5385A, S/N 3242A07460 Char. 11/20/00 Due 11/20/01
13.__ Peak Power Meter: HP Model 8900C, S/N 2131A00545 Char. 1/26/01 Due 1/26/02
14._X_Open Area Test Site #1-3meters Cal. 12/22/99
15.__ Signal Generator: HP 8640B, S/N 2308A21464 Cal. 11/15/01 Due 11/15/02
16.__ Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N 9706-1211 Char. 6/10/00 Due 6/10/01
17.__ Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 153 Char. 11/24/00 Due 11/24/01
18.__ AC Voltmeter: HP Model 400FL, S/N 2213A14499 Cal. 10/9/01 Due 10/09/02
19._X_Digital Multimeter: Fluke Model 77, S/N 43850817 Cal. 11/16/00 Due 11/16/01
20.__ Oscilloscope: Tektronix Model 2230, S/N 300572 Char. 2/1/01 Due 2/1/02