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APPLICANT: TTI TECH CO., LTD.

FCC ID: PDHGMRS-1200L

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GENERAL INFORMATION REQUIRED
FOR CERTIFICATION

2.1033(c)(1)(2) TTI TECH CO., LTD. will manufacture the FCCID: PDHGMRS-1200L GMRS CHANNELS TRANSCEIVER in quantity, for use under FCC RULES PART 95.

TTI TECH CO., LTD.
EUNDO BLDG. # 402, 737-19, BANPO-1DONG
SEOCHO-KU 137-041 KOREA

2.1033 (c) TECHNICAL DESCRIPTION

2.1033(c)(3) Instruction book. A draft copy of the instruction manual is included as EXHIBIT 9.

2.1033(c) (4) Type of Emission: 10K0F3E
95.631

Bn = 2M + 2DK
M = 3000
D = 2.0K
Bn = 2(3.0)+2(2.0) = 10.0K

Authorized Bandwidth 12.5 kHz

2.1033(c)(5) Frequency Range:
95.621

1. 462.5500	13. 462.7000
2. 462.5625	14. 462.7125
3. 462.5750	15. 462.7250
4. 462.5875	16. 467.5500
5. 462.6000	17. 467.5750
6. 462.6125	18. 467.6000
7. 462.6250	19. 467.6250
8. 462.6375	20. 467.6500
9. 462.6500	21. 467.6750
10. 462.6625	22. 467.7000
11. 462.6750	23. 467.7250
12. 462.6875	

2.10311c)(6)(7) The Maximum Output Power Rating:
GMRS
High: 1.2 Watts ERP.
Low: 0.5 Watts ERP.

FRS
0.5 Watts effective radiated power.

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

FOR LOW POWER SETTING INPUT POWER: (6.0V)(.225A) = 1.35 Watts
FOR HIGH POWER SETTING INPUT POWER: (6.0V)(.560A) =3.36 Watts

2.1033(c)(9) Tune-up procedure. The tune-up procedure is included 11.

2.1033(c)(10) Complete Circuit Diagrams: The circuit diagram is included as EXHIBIT 8 of this report. The block diagrams are included as EXHIBIT 7 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 3-6.

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 effective radiated power. There can be no provisions for
95.649 increasing the power or varying the power.

2.1046(a) RF power (ERP) was measured by the substitution method and the ERP values are shown below.

OUTPUT POWER: GMRS
HIGH: 1.2 Watts ERP
LOW: 0.5 Watts ERP

FRS – 0.5 Watts ERP

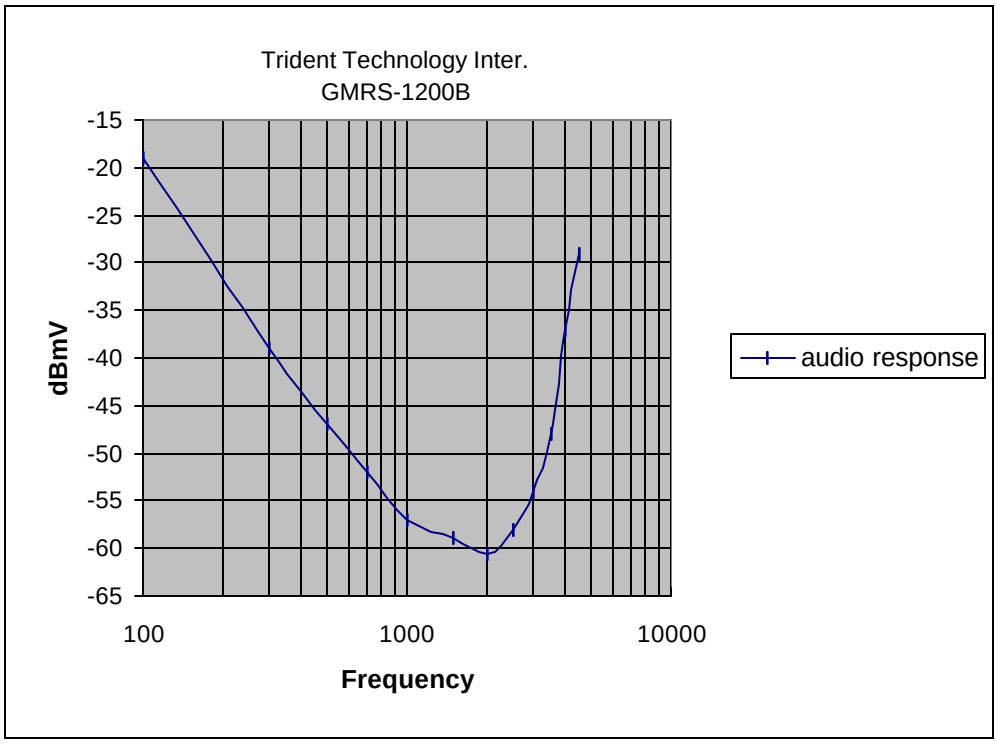
2.1046(a) RF power output. The test procedure used was TIA/EIA-603 S2.2.1.

2.1047(a)(b) Modulation characteristics:

AUDIO FREQUENCY RESPONSE

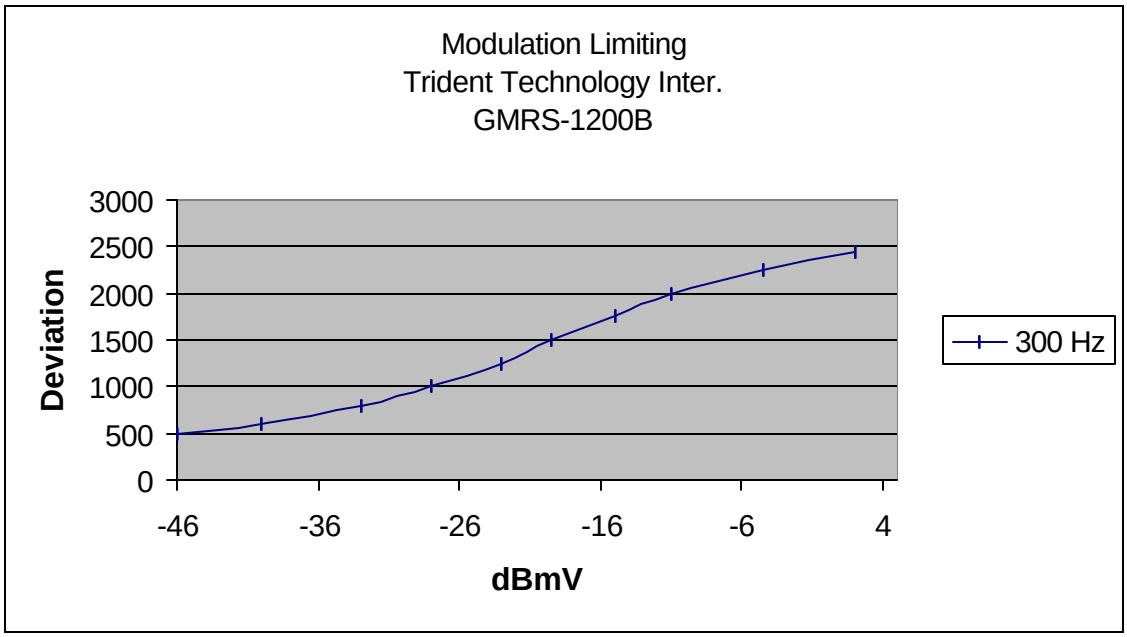
The audio frequency response was measured in accordance with TIA/EIA Specification 603. The audio frequency response curve is shown below.

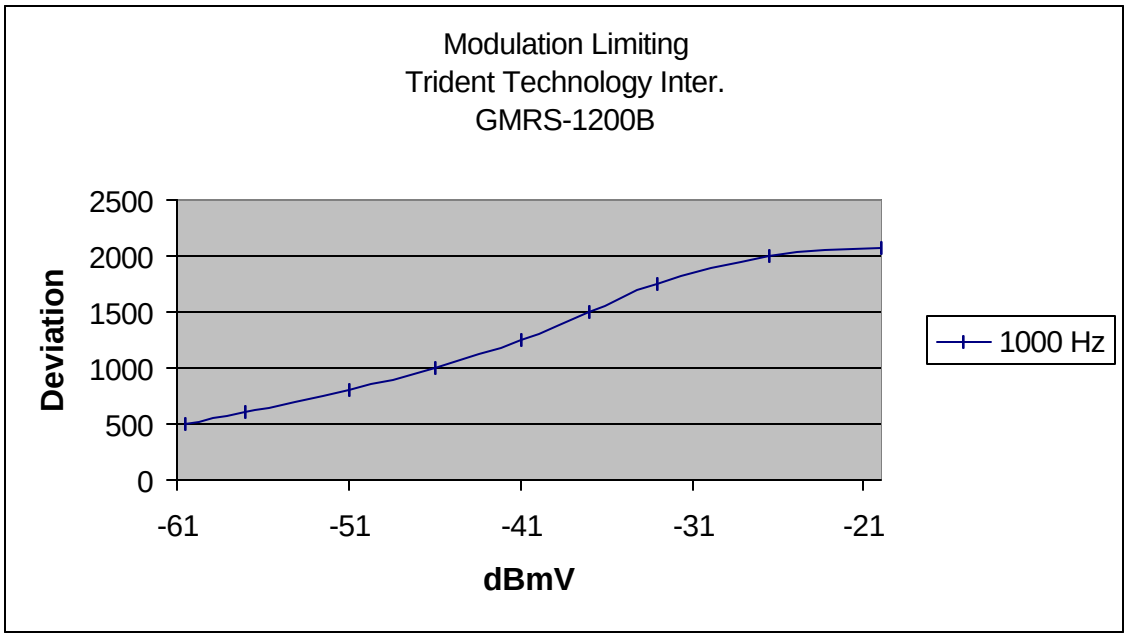
The audio signal was fed into a dummy microphone circuit and into the microphone connector. The input required to produce 30 percent modulation level was measured.

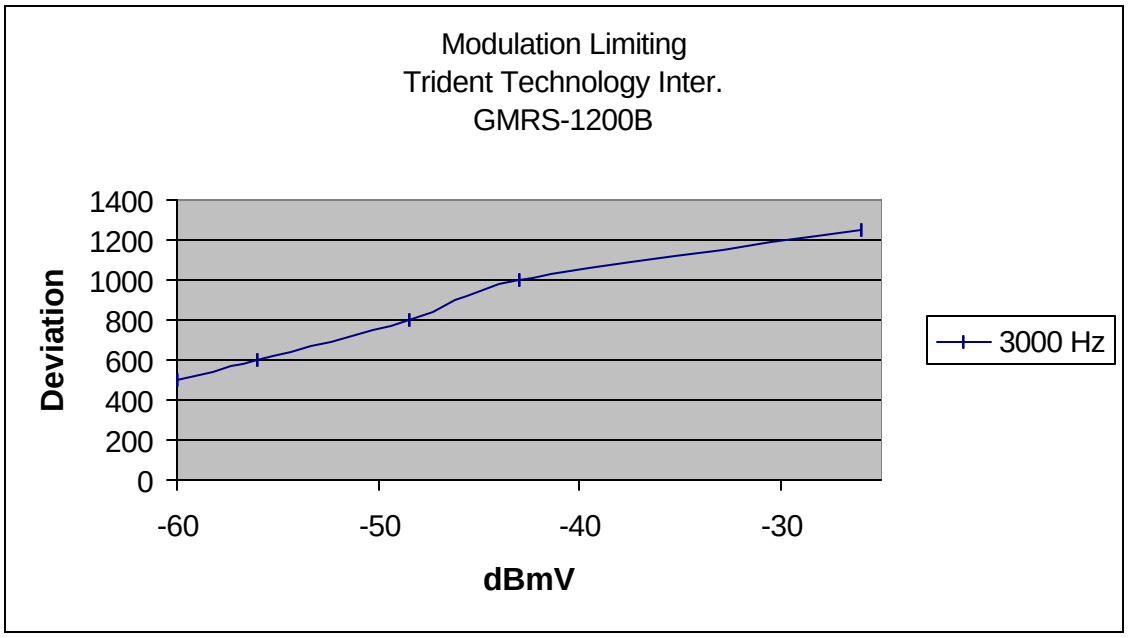


2.1047(b) Audio input versus modulation

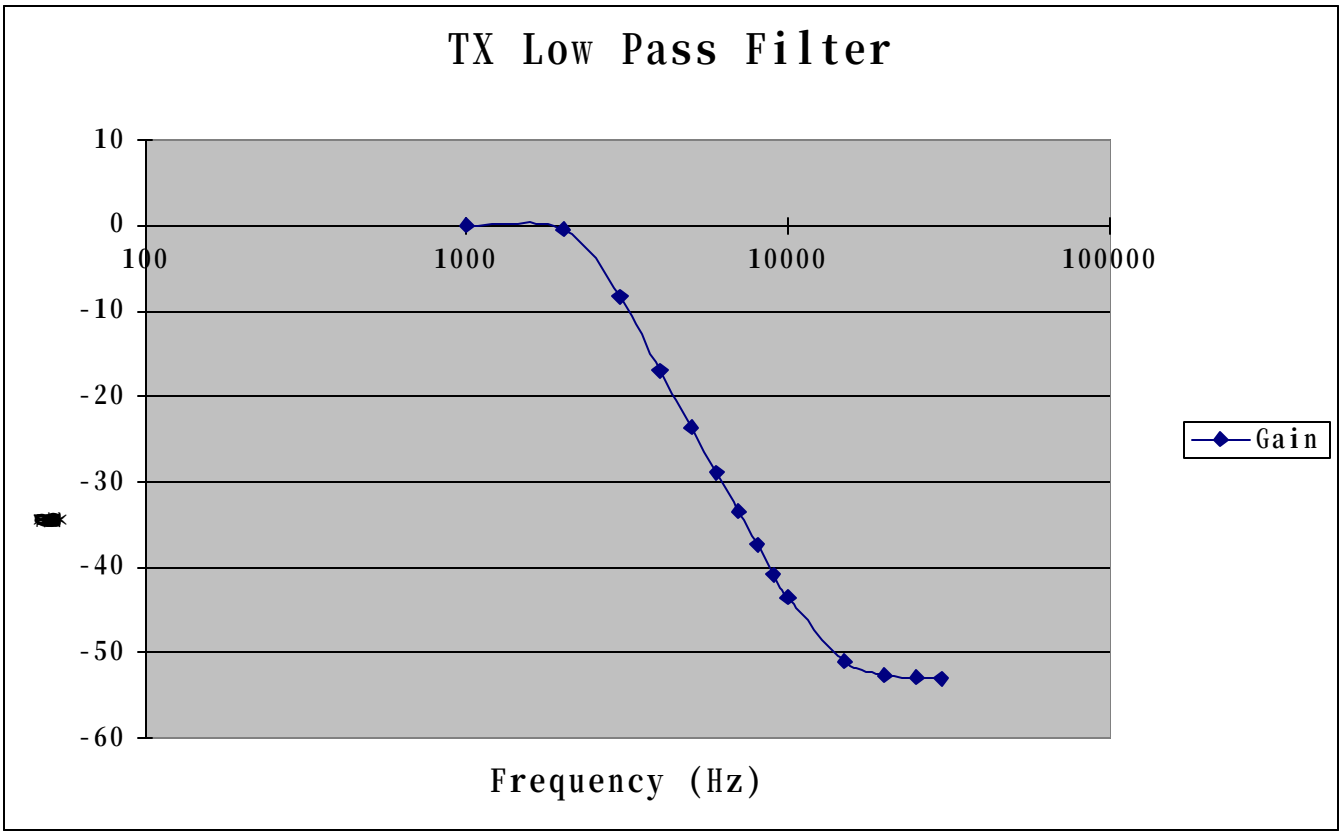
The audio input level needed for a particular per-percentage of modulation was measured in accordance with TIA/EIA Specification 603. The audio input curves versus modulation is shown below and on the following pages. Curves are provided for audio input frequencies of 300, 1000, and 3000 Hz.




Modulation Limiting
Trident Technology Inter.
GMRS-1200B
Deviation
2500
2000
1500
1000
500
0
-61
-51
-41
-31
-21
dBmV
1000 Hz

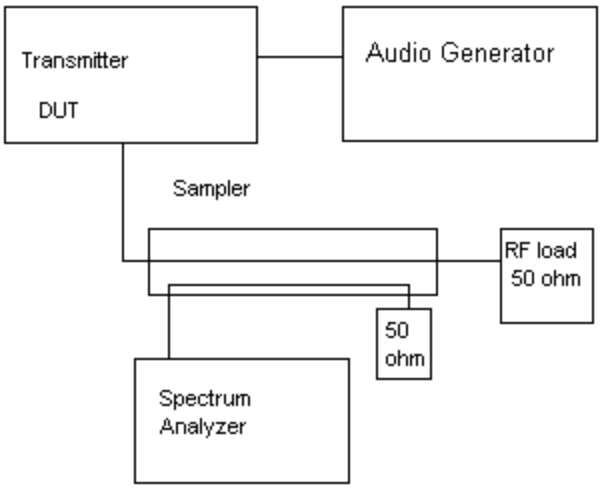

Modulation Limiting
Trident Technology Inter.
GMRS-1200B
Deviation
1400
1200
1000
800
600
400
200
0
-60
-50
-40
-30
dBmV
3000 Hz

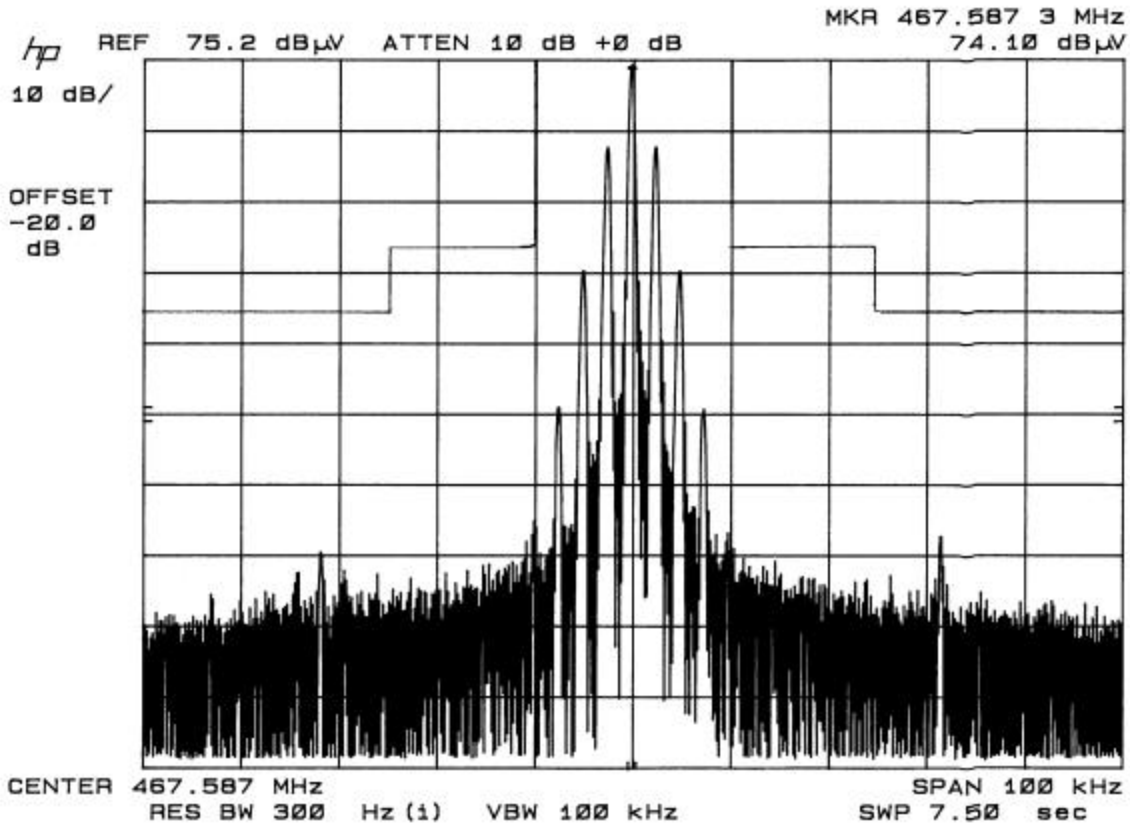
95.637 Post Limiter Filter Each GMRS transmitter, except a mobile station transmitter with a power of 2.5Watts or less, must be equipped with an audio low pass filter. At any frequency between 3 & 20 kHz the filter must have an attenuation of 60log (f/3) greater than the attenuation at 1KHz.

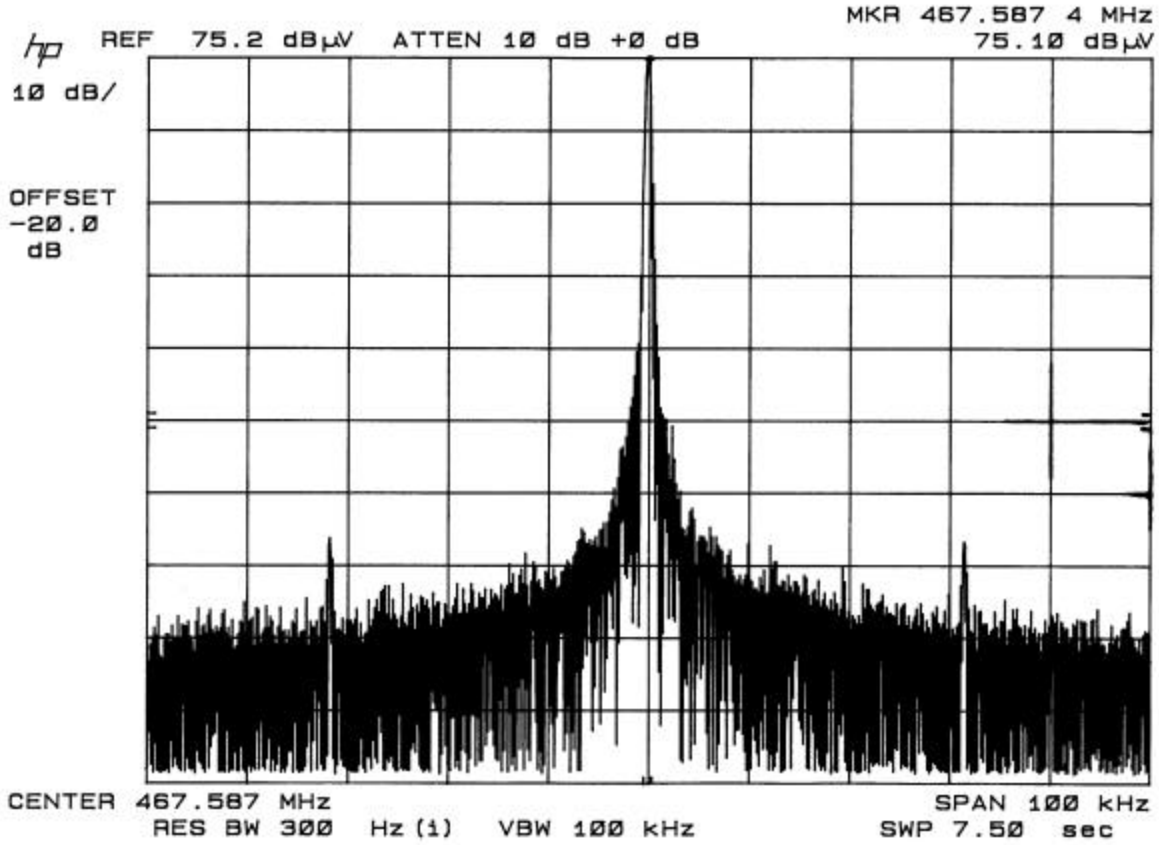


2.1049 95.635(b)(1)(3)(7)	Occupied bandwidth: At least 25dB on any frequency removed from the center of the authorized bandwidth by more than 50%up to and including 100% of the authorized bandwidth. At least 35 dB on any frequency removed from the center of the authorized BW by more than 100% up to and 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%.

Occupied BW Test Equipment Setup




MKR 467.587 3 MHz
REF 75.2 dBµV ATTEN 10 dB +0 dB
74.10 dBµV
10 dB/
OFFSET
-20.0
dB
CENTER 467.587 MHz
SPAN 100 kHz
RES BW 300 Hz (i) VBW 100 kHz
SWP 7.50 sec


MKR 467.587 4 MHz
REF 75.2 dBµV ATTEN 10 dB +0 dB
75.10 dBµV
10 dB/
OFFSET
-20.0
dB
CENTER 467.587 MHz
SPAN 100 kHz
RES BW 300 Hz (i) VBW 100 kHz
SWP 7.50 sec

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(1.2) = 43.79 dB
LOW POWER: 43 + 10log(.5) = 39.99 dB

TEST DATA - GMRS

Emission Frequency MHz	ATTN dBc	Margin dB
High Power		
462.70	0.0	0.0
925.40	57.0	13.2
1,388.20	74.0	30.2
1,850.90	58.2	14.4
2,313.60	68.1	24.3
2,776.40	71.4	27.6
3,239.10	60.9	17.1
3,701.90	77.6	33.8
4,164.60	75.8	32.0
4,627.30	77.7	33.9
LOW POWER		
462.70	0.00	0.00
925.40	56.4	16.4
1,388.20	65.3	25.3
1,850.90	56.0	16.0
2,313.60	69.0	29.0
2,776.40	71.7	31.7
3,239.10	55.2	15.2
3,701.90	71.8	31.8
4,164.60	74.9	34.9
4,627.30	75.6	35.6

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.

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: 43 + 10log(.5) = 39.99 dB

TEST DATA - FRS

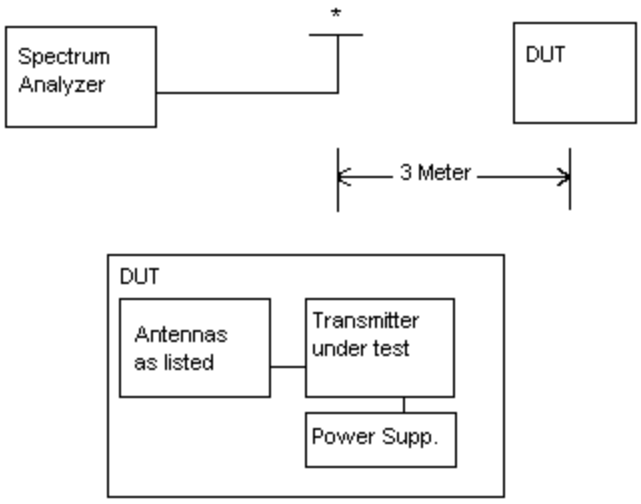
Emission Frequency MHz	ATTN dBc	Margin dB
467.50	0.0	0.0
935.10	54.4	14.4
1,402.70	63.5	23.5
1,870.20	53.8	13.8
2,337.80	66.8	26.8
2,805.30	72.8	32.8
3,272.90	55.2	15.2
3,740.50	71.1	31.1
4,208.00	74.9	34.9
4,675.60	74.5	34.5

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.

APPLICANT : TTI TECH CO., LTD.

FCC ID : PDHGMRS-1200L

Method of Measuring Radiated Spurious Emissions



Equipment placed 80 cm 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 0.00025%, 2.5 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): 462.725 265

TEMPERATURE°C	FREQUENCY_MHz	PPM
REFERENCE	462.725265	00.00
-30C	462.725242	-0.05
-20C	462.725955	1.49
-10C	462.725371	0.23
0C	462.725039	-0.49
10C	462.725347	0.18
20C	462.725345	0.17
30C	462.725108	-0.34
40C	462.725898	1.37
50C	462.725849	1.26

BATT. %	BATT. DATA	VOLTS	BATT. PPM
-15%	462.725258	5.1	-0.02
+15%	462.725266	6.9	0.00

RESULTS OF MEASUREMENTS: The maximum frequency variation over the temperature range was –0.49 to +1.49 ppm. The maximum frequency variation with voltage was 0.00 ppm.

Equipment List

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
X	3-Meter OATS	TEI	N/A	N/A	Listed 12/22/99	12/22/02
	3/10-Meter OATS	TEI	N/A	N/A	Listed 3/26/01	3/26/04
X	Receiver, Beige Tower					
X	Spectrum Analyzer (Tan)	HP	8566B Opt 462	3138A07786 3144A20661	CAL 8/31/01	8/31/02
X	RF Preselector (Tan)	HP	85685A	3221A01400	CAL 8/31/01	8/31/02
X	Quasi-Peak Adapter (Tan)	HP	85650A	3303A01690	CAL 8/31/01	8/31/02
	Receiver, Blue Tower					
	Spectrum Analyzer (Blue)	HP	8568B	2928A04729 2848A18049	CHAR 10/22/01	10/22/02
	RF Preselector (Blue)	HP	85685A	2926A00983	CHAR 10/22/01	10/22/02
	Quasi-Peak Adapter (Blue)	HP	85650A	2811A01279	CHAR 10/22/01	10/22/02
	Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/26/01	4/26/03
	Biconnical Antenna	Eaton	94455-1	1096	CAL 10/1/01	10/1/02
	Biconnical Antenna	Eaton	94455-1	1057	CHAR 3/15/00	3/15/01
	BiconiLog Antenna	EMCO	3143	9409-1043		
	Log-Periodic Antenna	Electro-Metrics	LPA-25	1122	CAL 10/2/01	10/2/02
X	Log-Periodic Antenna	Electro-Metrics	EM-6950	632	CHAR 10/15/01	10/15/02
	Log-Periodic Antenna	Electro-Metrics	LPA-30	409	CHAR 10/16/01	10/16/02
	Dipole Antenna Kit	Electro-Metrics	TDA-30/1-4	152	CAL 3/21/01	3/21/02
	Dipole Antenna Kit	Electro-Metrics	TDA-30/1-4	153	CHAR 11/24/00	11/24/01

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
X	Double-Ridged Horn Antenna	Electro-Metrics	RGA-180	2319	CAL 12/19/01	12/19/02
	Horn Antenna	Electro-Metrics	EM-6961	6246	CAL 3/21/01	3/21/02
	Horn Antenna	ATM	19-443-6R	None	No Cal Required	
	Passive Loop Antenna	EMC Test Systems	EMCO 6512	9706-1211	CHAR 7/10/01	7/10/02
	Line Impedance Stabilization . . .	Electro-Metrics	ANS-25/2	2604	CAL 10/9/01	10/9/02
	Line Impedance Stabilization . . .	Electro-Metrics	EM-7820	2682	CAL 3/16/01	3/16/02
	Termaline Wattmeter	Bird Electronic Corporation	611	16405	CAL 5/25/99	(5/25/00)
	Termaline Wattmeter	Bird Electronic Corporation	6104	1926	CAL 12/12/01	12/12/02
	Oscilloscope	Tektronix	2230	300572	CHAR 2/1/01	2/1/02
X	Temperature Chamber	Tenney Engineering	TTRC	11717-7	CHAR 1/22/02	1/22/03
	AC Voltmeter	HP	400FL	2213A14499	CAL 10/9/01	10/9/02
	AC Voltmeter	HP	400FL	2213A14261	CHAR 10/15/01	10/15/02
	AC Voltmeter	HP	400FL	2213A14728	CHAR 10/15/01	10/15/02
X	Digital Multimeter	Fluke	77	35053830	CHAR 1/8/02	1/8/03
	Digital Multimeter	Fluke	77	43850817	CHAR 1/8/02	1/8/03
	Digital Multimeter	HP	E2377A	2927J05849	CHAR 1/8/02	1/8/03
	Multimeter	Fluke	FLUKE-77-3	79510405	CAL 9/26/01	9/26/02
	Peak Power Meter	HP	8900C	2131A00545	CHAR 1/26/01	1/26/02
	Digital Thermometer	Fluke	2166A	42032	CAL 1/16/02	1/16/03
	Thermometer	Traulsen	SK-128		CHAR 1/22/02	1/22/03
X	Temp/Humidity gauge	EXTech	44577F	E000901	CHAR 1/22/02	1/22/03

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
	Frequency Counter	HP	5352B	2632A00165	CAL 11/28/01	11/28/02
	Power Sensor	Agilent Technologies	84811A	2551A02705	CAL 1/26/01	1/26/02
	Injection Probe	Fischer Custom Communications	F-120-9A	270	CAL 6/1/01	6/1/02
	Service Monitor	IFR	FM/AM 500A	5182	CAL 11/22/00	11/22/01
	Comm. Serv. Monitor	IFR	FM/AM 1200S	6593	CAL 11/12/99	11/12/00
	Signal Generator	HP	8640B	2308A21464	CAL 11/15/01	11/15/02
	Modulation Analyzer	HP	8901A	3435A06868	CAL 9/5/01	9/5/02
	Power Line Coupling/ Decoupling Network	Fischer Custom Communications	FCC-801-M2-16A	01048	CAL 8/29/01	8/29/02
	Power Line Coupling/ Decoupling Network	Fischer Custom Communications	FCC-801-M3-16A	01060	CAL 8/29/01	8/29/02
	VHF/UHF Current Probe	Fischer Custom Communications	F-52	130	CAL 8/30/01	8/30/02
	Passive Impedance Adapter	Fischer Custom Communications	FCC-801-150-50-CDN	01117 & 01118	CAL 8/29/01	8/29/02
	Radiating Field Coil	Fischer Custom Communications	F-1000-4-8/9/10-L-1M	9859	CAL 10/15/98	10/15/99
	Near Field Probe	HP	HP11940A	2650A02748	CHAR 2/1/01	2/1/02
	BandReject Filter	Lorch Microwave	5BR4-2400/ 60-N	Z1	CHAR 3/2/01	3/2/02
	BandReject Filter	Lorch Microwave	6BR6-2442/ 300-N	Z1	CHAR 3/2/01	3/2/02
	BandReject Filter	Lorch Microwave	5BR4-10525/ 900-S	Z1	CHAR 3/2/01	3/2/02
	High Pas Filter	Microlab	HA-10N		CHAR 10/4/01	10/4/02
	Audio Oscillator	HP	653A	832-00260	CHAR 3/1/01	3/1/02
	Frequency Counter	HP	5382A	1620A03535	CHAR 3/2/01	3/2/02
	Frequency Counter	HP	5385A	3242A07460	CHAR 12/11/01	12/11/02

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
	Preamplifier	HP	8449B-H02	3008A00372	CHAR 3/4/01	3/4/02
	Amplifier	HP	11975A	2738A01969	CHAR 3/1/01	3/1/02
	Egg Timer	Unk			CHAR 2/28/01	2/28/02
	Measuring Tape, 20M	Kraftixx	0631-20		CHAR 2/28/01	2/28/02
	Measuring Tape, 7.5M	Kraftixx	7.5M PROFI		CHAR 2/28/01	2/28/02
	EMC Immunity Test System	Keytek	CEMASTER	9810210		
	AC Power Source	California Instruments	1251RP	L05865		
	AC Power Source	California Instruments	PACS-1	X71484		
	Isotropic Field Probe	Amplifier Research	FP5000	22839		
	Isotropic Field Probe	Amplifier Research	FP5000	300103		
	Capacitor Clamp	Keytek	CM-CCL	9811359	No Cal Required	
	Amplifier	Amplifier Research	10W1000B	23117	No Cal Required	
	Field Monitor	Amplifier Research	FM5004	22288	No Cal Required	
	ELF Meter	F. W. Bell	4060	Not serialized		
	Coaxial Cable #51	Insulated Wire Inc.	NPS 2251-2880	Timco #51	CHAR 1/23/02	1/23/03
	Coaxial Cable #64	Semflex Inc.	60637	Timco #64	CHAR 1/24/02	1/24/03
	Coaxial Cable #65	General Cable Co.	E9917 RG233/U	Timco #65	CHAR 1/23/02	1/23/03
	Coaxial Cable #106	Unknown	Unknown	Timco #106	CHAR 1/23/02	1/23/03