

FCC RADIO TEST REPORT

FCC ID: 2ABCMPRO-7500

Product : GPS device

Trade Name : N/A

Model Name : PRO-7500

Serial Model : PRO-7600, PRO-7800, PRO-7900, RD-505,
RD-505R , RD-503 , RD-508 , PRO-2501 ,
PRO-2502, PRO-2431, PRO-2432, MT-3502,
PRO-6000

Prepared for

PROLECH ELECTRONICS LIMITED

Building 2, No.220, Niucheng Road, Niucheng village, xili Town, Nanshan district, Shenzhen

Prepared by

Shenzhen STONE Testing Technology Co.,Ltd.

F/6, Bldg.12, Zhongxing Industrial City, Chuangye Rd., Nanshan District
Shenzhen P.R. China

TEST RESULT CERTIFICATION

Applicant's name : PROLECH ELECTRONICS LIMITED
Address : Building 2, No.220, Niucheng Road, Niucheng village, xili
Town, Nanshan district, Shenzhen
Manufacture's Name : PROLECH ELECTRONICS LIMITED
Address : Building 2, No.220, Niucheng Road, Niucheng village, xili
Town, Nanshan district, Shenzhen

Product description

Product name : GPS device
Model and/or type reference : PRO-7500
Serial Model : PRO-7600, PRO-7800, PRO-7900, RD-505, RD-505R,
RD-503, RD-508, PRO-2501, PRO-2502, PRO-2431,
PRO-2432, MT-3502, PRO-6000
Rating(s) : DC 3.7V

Standards : FCC Part15.239

Test procedure ANSI C63.4-2003

This device described above has been tested by STT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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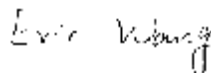
Date of Test :

Date (s) of performance of tests : 03 Nov. 2013 ~15 Nov. 2013

Date of Issue : 15 Nov. 2013

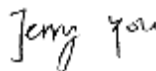
Test Result : **Pass**

Testing Engineer :



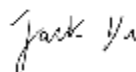
(Eric Wang)

Technical Manager :



(Jerry You)

Authorized Signatory :



(Jack yu)

Table of Contents	Page
1 . SUMMARY OF TEST RESULTS	4
1.1 TEST FACILITY	5
1.2 MEASUREMENT UNCERTAINTY	5
2 . GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	7
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	8
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	9
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	10
3 . ANTENNA REQUIREMENT	11
3.1 STANDARD REQUIREMENT	11
3.2 EUT ANTENNA	11
3.3 CONDUCTED EMISSION MEASUREMENT	12
3.3.1 POWER LINE CONDUCTED EMISSION LIMITS	12
3.3.2 TEST PROCEDURE	13
3.3.3 DEVIATION FROM TEST STANDARD	13
3.3.4 TEST SETUP	13
3.2.5 TEST RESULT	14
3.4 RADIATED EMISSION MEASUREMENT	16
3.4.1 RADIATED EMISSION LIMITS	16
3.4.2 TEST PROCEDURE	17
3.4.3 DEVIATION FROM TEST STANDARD	17
3.4.4 TEST SETUP	18
3.4.5 TEST RESULTS (BLOW 30MHZ)	20
3.4.6 TEST RESULTS (BETWEEN 30 - 1000 MHZ)	21
4 . BANDWIDTH TEST	27
4.1 TEST PROCEDURE	27
4.2 DEVIATION FROM STANDARD	27
4.3 TEST SETUP	27
4.4 TEST RESULTS	28
5 . EUT TEST PHOTO	31
APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.239)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.239	Radiated Spurious Emission	Pass	
15.239	Occupied Bandwidth	Pass	

1.1 TEST FACILITY

Shenzhen STONE Testing Technology Co.,Ltd.

Add. : F/1, Bldg.12, Zhongxing Industrial City, Chuangye Rd., Nanshan District
Shenzhen China

FCC Registration No.: 323508; IC Registration No.: 11043A

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	GPS device	
Model Name	PRO-7500	
Serial Model	PRO-7600, PRO-7800, PRO-7900, RD-505, RD-505R, RD-503, RD-508, PRO-2501, PRO-2502, PRO-2431, PRO-2432, MT-3502, PRO-6000	
Model Difference	All the model are the same circuit and RF module,except the model names.	
Product Description	The EUT is a GPS device	
	Product Type	Low Power Communication Device Transmitter
	Operation Frequency:	88.1-107.9MHz
	Modulation Type:	FM
	Number Of Channel	199CH.
	Antenna Designation:	external antenna
	Antenna Gain(Peak)	0 dBi
	Output Power:	42.84 dBuV/m (AV Max.)
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
Channel List	88.1-107.9MHz, Step 0.1MHz, 199CH	
Adapter	N/A	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	88.1MHz
Mode 2	98.1MHz
Mode 3	107.9MHz

For Conducted Emission	
Final Test Mode	Description
Mode 2	98.1MHz

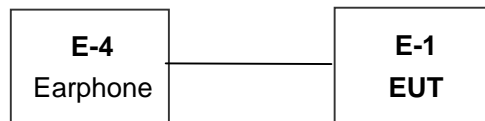
For Radiated Emission	
Final Test Mode	Description
Mode 1	88.1MHz
Mode 2	98.1MHz
Mode 3	107.9MHz

Note:

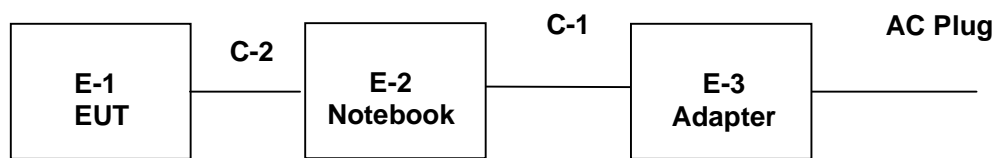
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT use new battery.
- (3) During testing, the EUT was actively playing music set to its maximum audio volume in order to generate the worst case emissions (e.g. to generate the maximum bandwidth during bandwidth test). No test tones were used for testing. The tuning range of the EUT was manually verified and the conclusion is that it only works at selected channels within 88.1-107.9MHz, not below and not above this range.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

RE



CE



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	GPS device	N/A	PRO-7500	N/A	EUT
E-2	Notebook	Dell	D2234	22544	
E-3	Adapter	Dell	D195000200	N/A	
E-4	N/A	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	100cm	
C-2	NO	NO	120cm	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2013.07.06	2014.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2013.06.07	2014.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2013.07.06	2014.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2013.06.07	2014.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2013.06.07	2014.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2013.07.06	2014.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2013.07.06	2014.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2012.12.22	2013.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2013.06.08	2014.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2013.07.06	2014.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2013.07.06	2014.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2013.06.06	2014.06.05	1 year
2	LISN	R&S	ENV216	101313	2013.08.24	2014.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2013.08.24	2014.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2013.06.07	2014.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2013.06.07	2014.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2013.06.08	2014.06.07	1 year
7	Attenuation	MCE	24-10-34	BN9258	2013.06.08	2014.06.07	1 year

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.2 EUT ANTENNA

The EUT antenna is external Antenna. It comply with the antenna requirement.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP002.
0.50 -5.0			56.00	46.00	LP002.
5.0 -30.0			60.00	50.00	LP002.

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

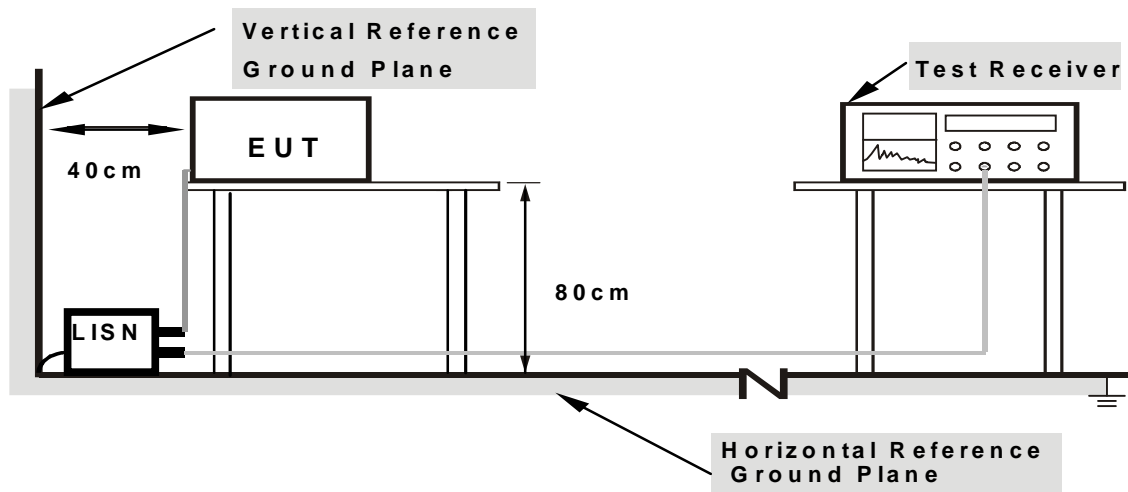
3.3.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

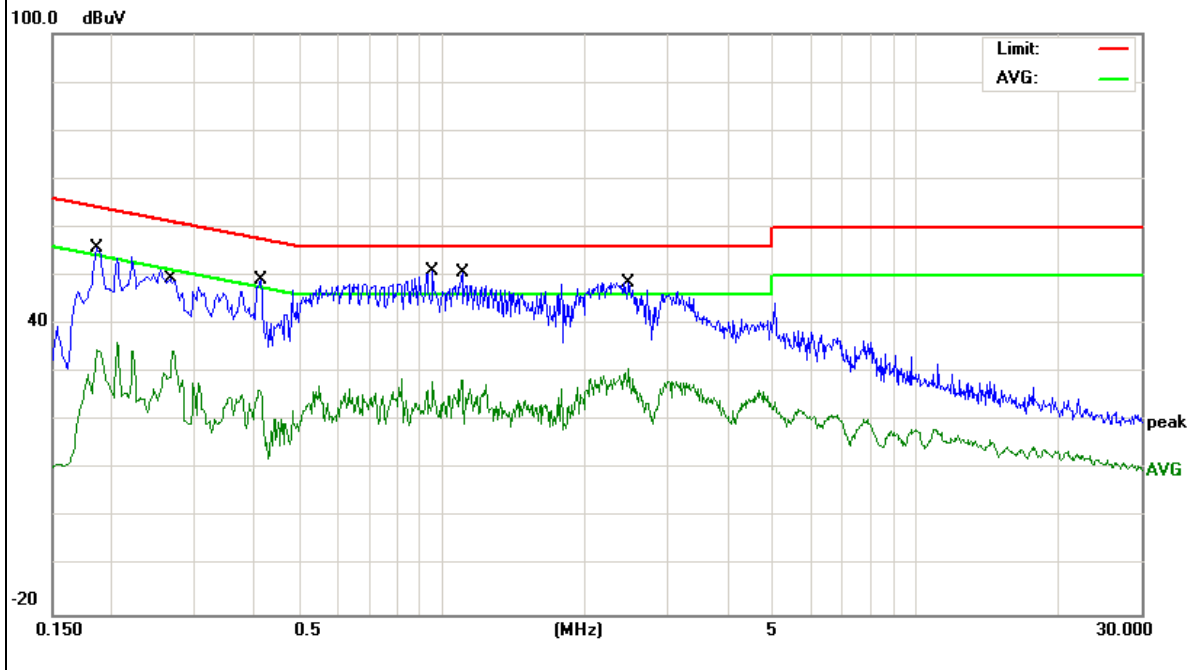
3.2.5 TEST RESULT

EUT :	GPS device	Model Name :	PRO-7500
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from PC AC 120V/60Hz	Test Mode :	Mode 2

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.1860	46.25	9.53	55.78	64.21	-8.43	QP
0.1860	25.18	9.53	34.71	54.21	-19.50	AVG
0.2700	40.06	9.49	49.55	61.12	-11.57	QP
0.2700	24.94	9.49	34.43	51.12	-16.69	AVG
0.4100	16.98	9.50	26.48	47.65	-21.17	AVG
0.4100	39.79	9.50	49.29	57.65	-8.36	QP
0.9540	41.53	9.53	51.06	56.00	-4.94	QP
0.9540	18.53	9.53	28.06	46.00	-17.94	AVG
1.0980	18.91	9.53	28.44	46.00	-17.56	AVG
1.0980	41.14	9.53	50.67	56.00	-5.33	QP
2.4780	39.12	9.56	48.68	56.00	-7.32	QP
2.4780	21.39	9.56	30.95	46.00	-15.05	AVG

Remark:

Factor = Insertion Loss + Cable Loss.

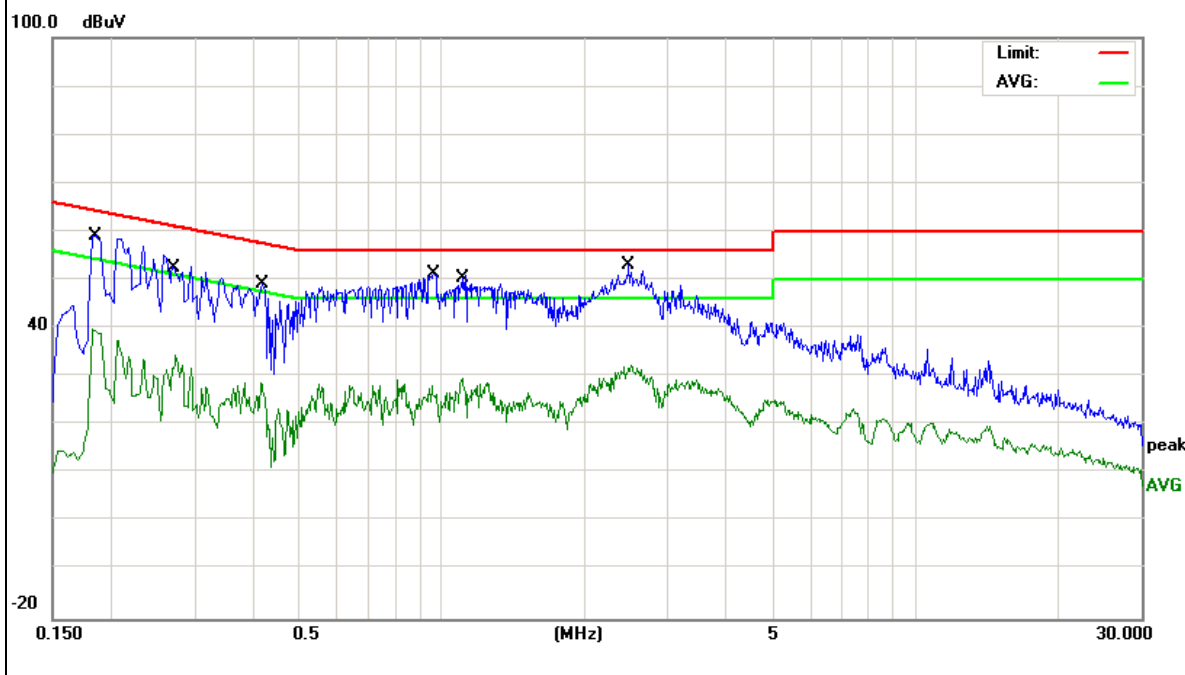


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from PC AC 120V/60Hz	Test Mode :	Mode 2

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.1819	30.29	9.56	39.85	54.39	-14.54	AVG
0.1819	49.68	9.56	59.24	64.39	-5.15	QP
0.2740	45.56	9.51	55.07	60.99	-5.92	QP
0.2740	24.95	9.51	34.46	50.99	-16.53	AVG
0.4139	19.30	9.52	28.82	47.57	-18.75	AVG
0.4179	39.66	9.52	49.18	57.49	-8.31	QP
0.9499	18.45	9.55	28.00	46.00	-18.00	AVG
0.9499	41.72	9.55	51.27	56.00	-4.73	QP
1.1019	20.20	9.55	29.75	46.00	-16.25	AVG
1.1019	41.41	9.55	50.96	56.00	-5.04	QP
2.5019	43.57	9.57	53.14	56.00	-2.86	QP
2.5019	22.76	9.57	32.33	46.00	-13.67	AVG

Remark:

Factor = Insertion Loss + Cable Loss.



3.4 RADIATED EMISSION MEASUREMENT

3.4.1 Radiated Emission Limits (FCC 15.209)

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.239)

Frequency of Emission (MHz)	Field Strength of fundamental (dBμV/m)	
88-108	Peak	Average
	68	48

Notes:

- (1) FCC part 15.239 (b) The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in Section 15.35 for limiting peak emissions apply.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.4.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

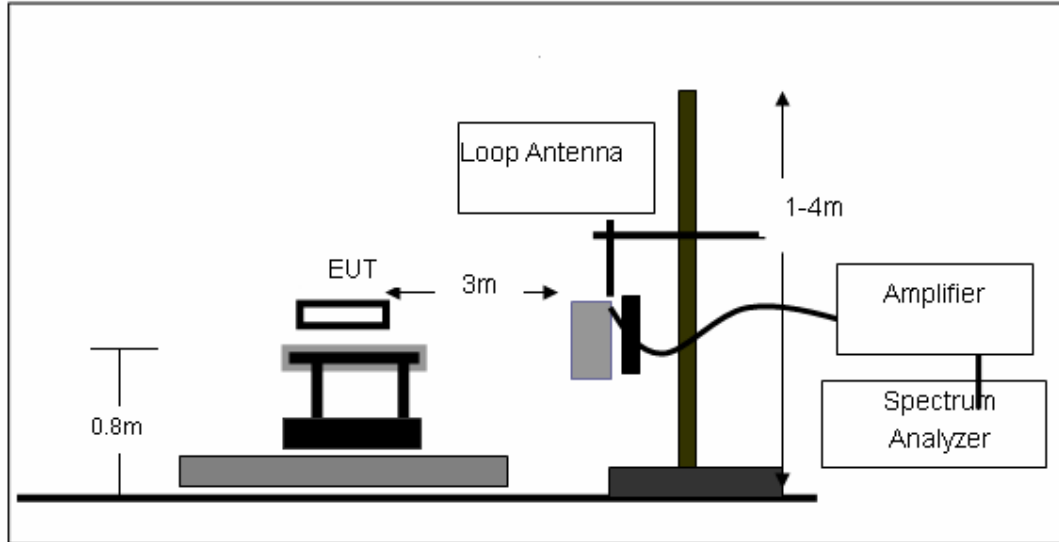
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

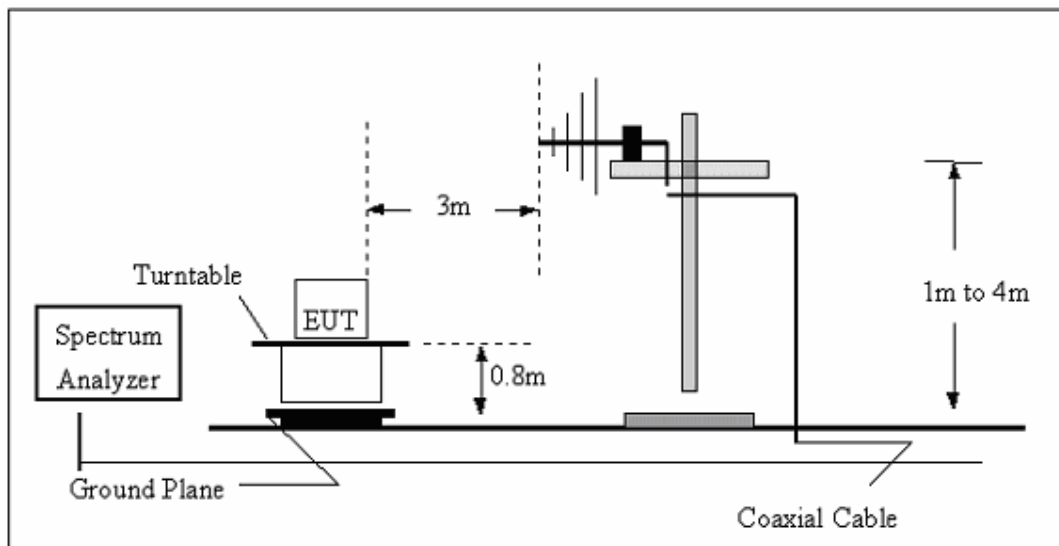
No deviation

3.4.4 TEST SETUP

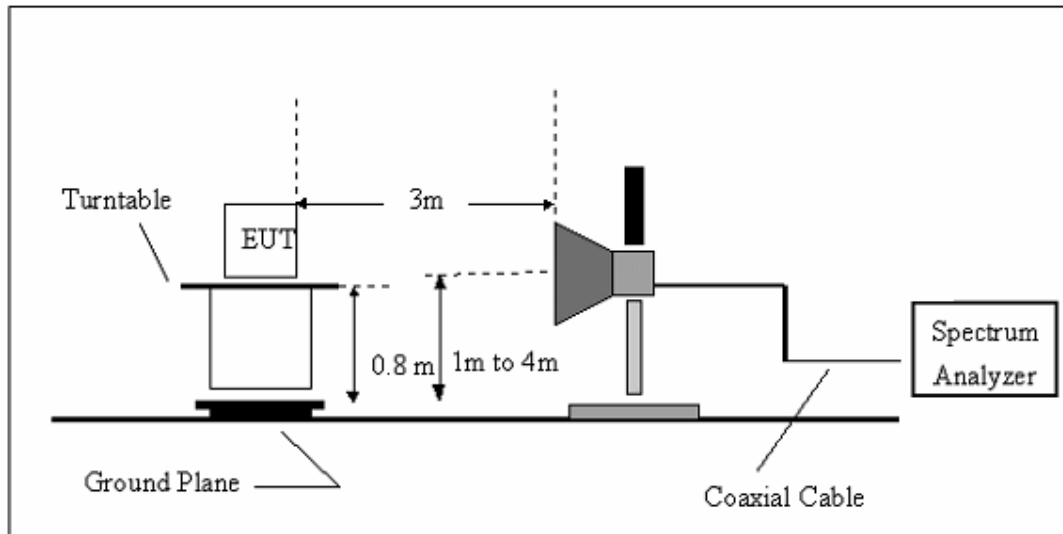
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.4.5 TEST RESULTS (BLOW 30MHz)

EUT :	GPS device	Model Name. :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $20 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.

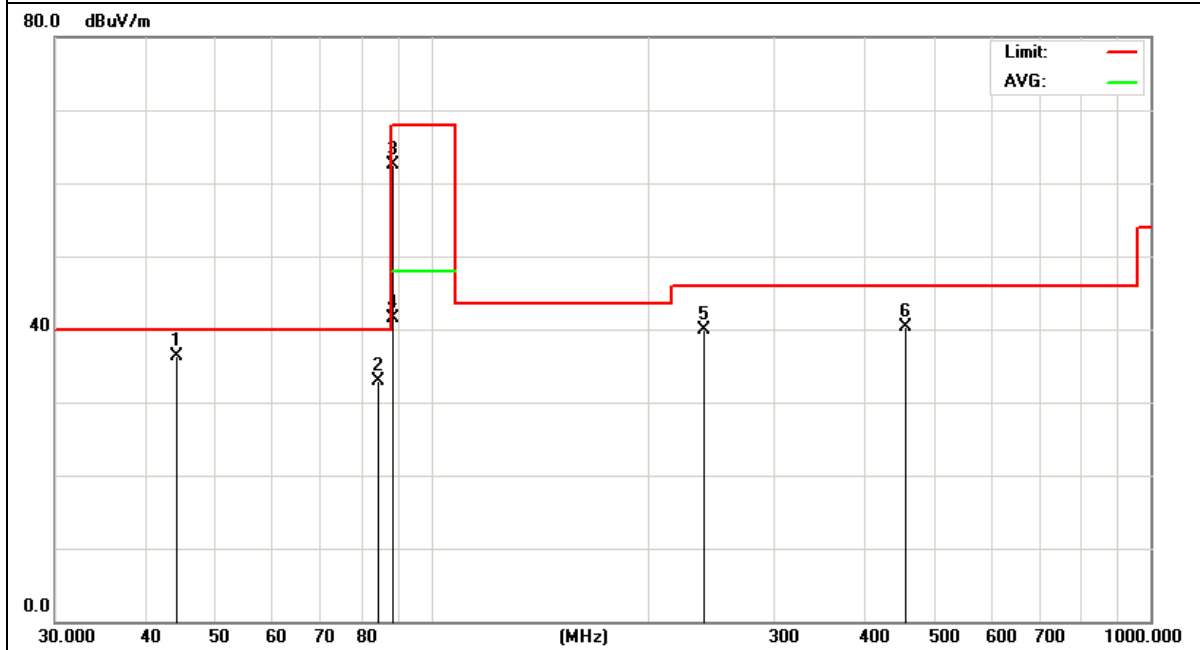
3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	88.1MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
44.2751	13.21	23.14	36.35	40.00	-3.65	QP
84.1099	12.18	20.65	32.83	40.00	-7.17	QP
88.1000	41.26	21.21	62.47	68.00	-5.53	peak
88.1000	20.28	21.21	41.49	48.00	-6.51	AVG
239.9874	16.35	23.48	39.83	46.00	-6.17	QP
457.5072	9.76	30.48	40.24	46.00	-5.76	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

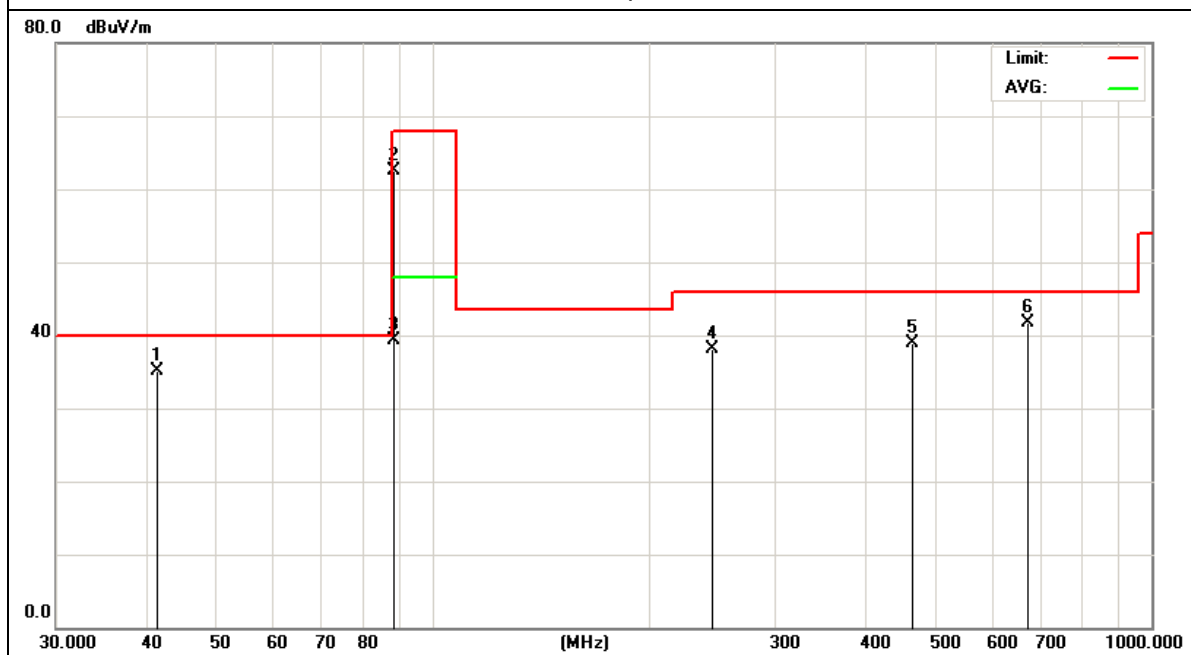


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	88.1MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
41.2765	10.27	24.75	35.02	40.00	-4.98	QP
88.1000	41.22	21.21	62.43	68.00	-5.57	peak
88.1000	18.03	21.21	39.24	48.00	-8.76	AVG
245.0900	13.75	24.43	38.18	46.00	-7.82	QP
465.5994	8.29	30.59	38.88	46.00	-7.12	QP
672.8444	7.48	34.23	41.71	46.00	-4.29	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

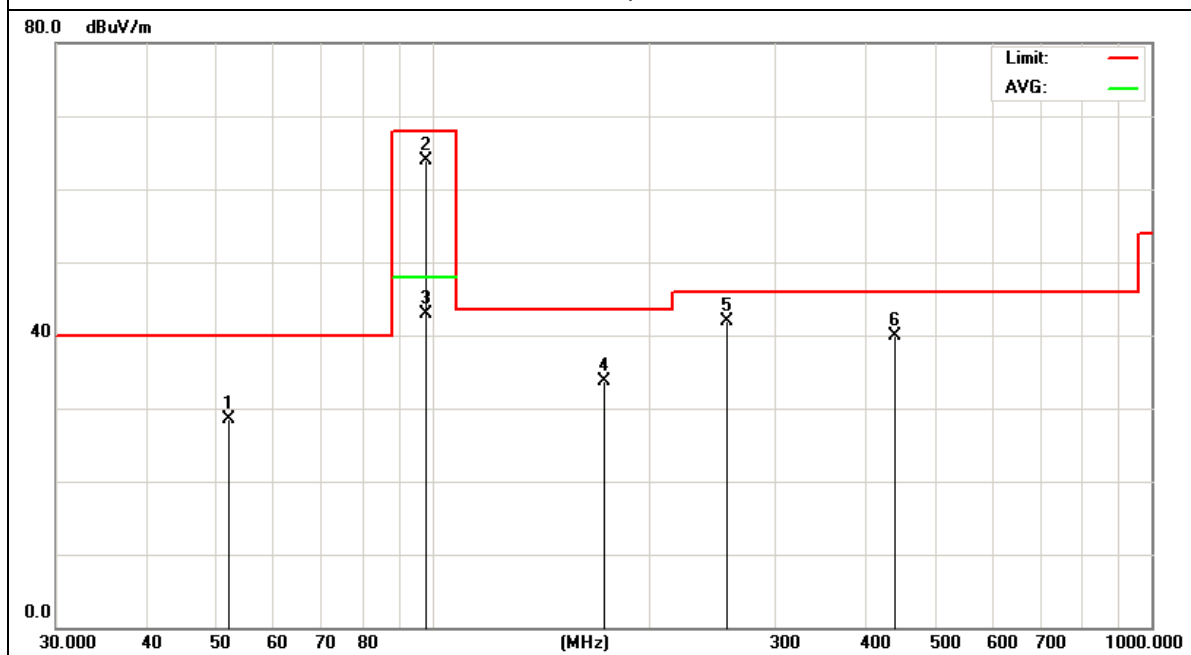


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	98.1MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
52.2079	9.27	19.27	28.54	40.00	-11.46	QP
98.1000	41.42	22.42	63.84	68.00	-4.16	peak
98.1000	20.42	22.42	42.84	48.00	-5.16	AVG
173.8135	11.89	21.89	33.78	43.50	-9.72	QP
255.6231	15.93	25.93	41.86	46.00	-4.14	QP
438.6554	9.98	29.98	39.96	46.00	-6.04	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

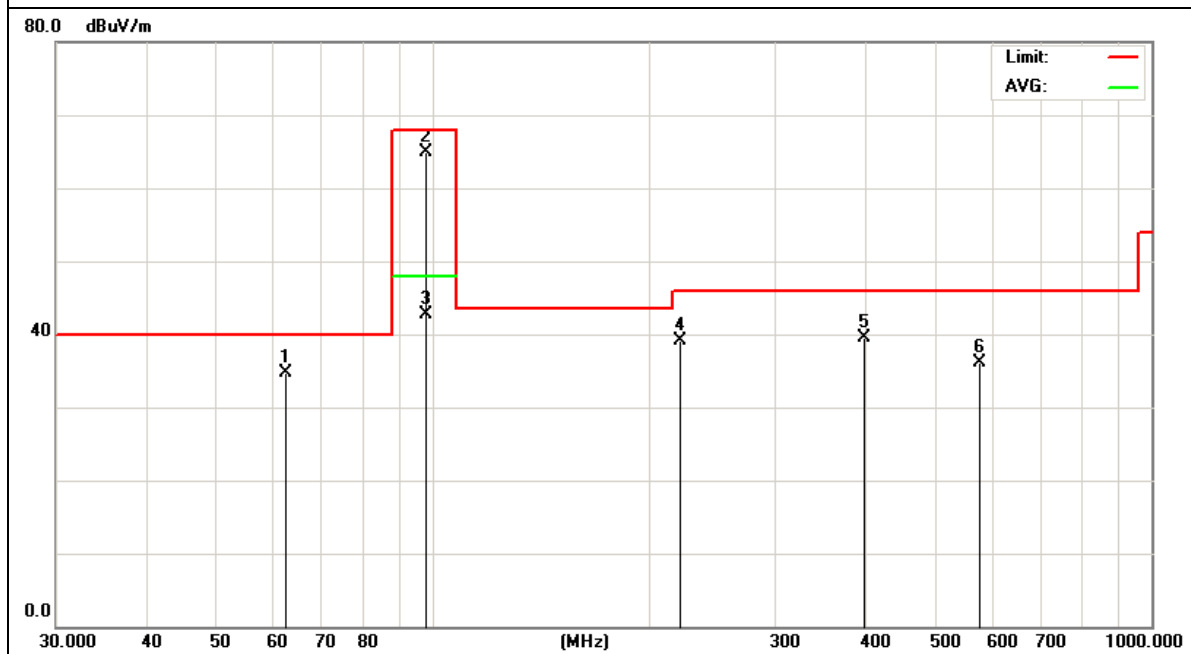


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	98.1MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
62.4314	17.33	17.33	34.66	40.00	-5.34	QP
98.1000	42.42	22.42	64.84	68.00	-3.16	peak
98.1000	20.37	22.42	42.79	48.00	-5.21	AVG
220.6171	17.03	22.03	39.06	46.00	-6.94	QP
397.6334	10.24	29.24	39.48	46.00	-6.52	QP
576.6443	3.02	33.02	36.04	46.00	-9.96	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

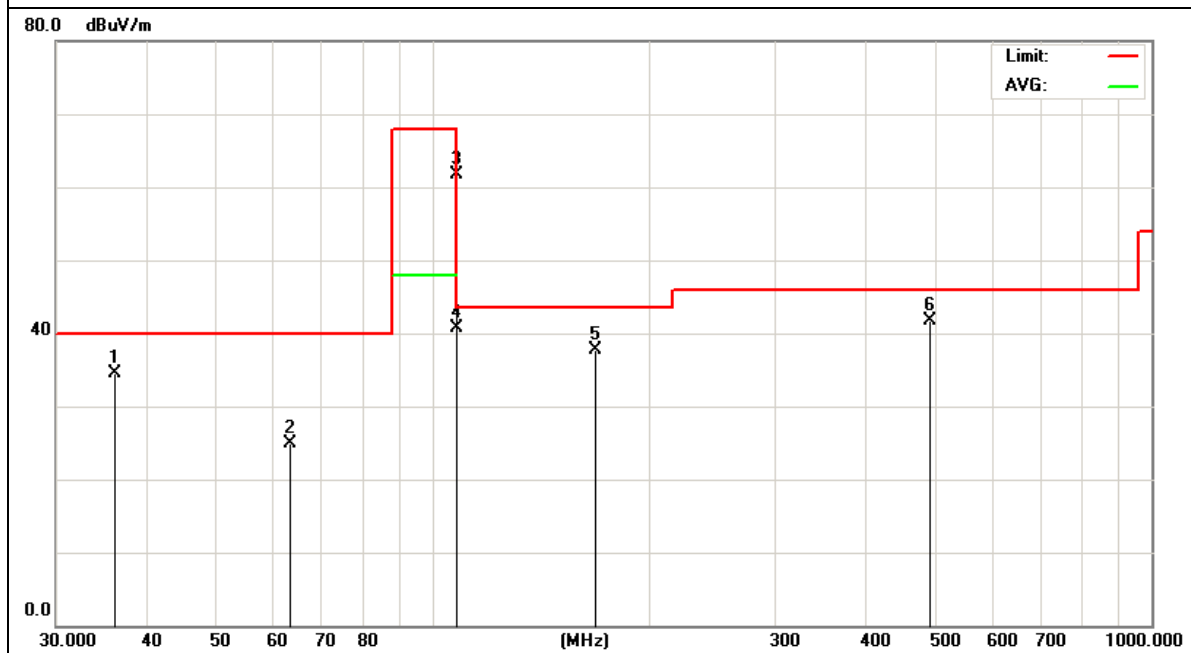


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	107.9MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
36.2541	7.21	27.20	34.41	40.00	-5.59	QP
63.5356	7.43	17.40	24.83	40.00	-15.17	QP
107.9000	38.33	23.33	61.66	68.00	-6.34	peak
107.9000	17.33	23.33	40.66	48.00	-7.34	AVG
167.8243	15.33	22.33	37.66	43.50	-5.84	QP
492.4685	10.31	31.31	41.62	46.00	-4.38	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

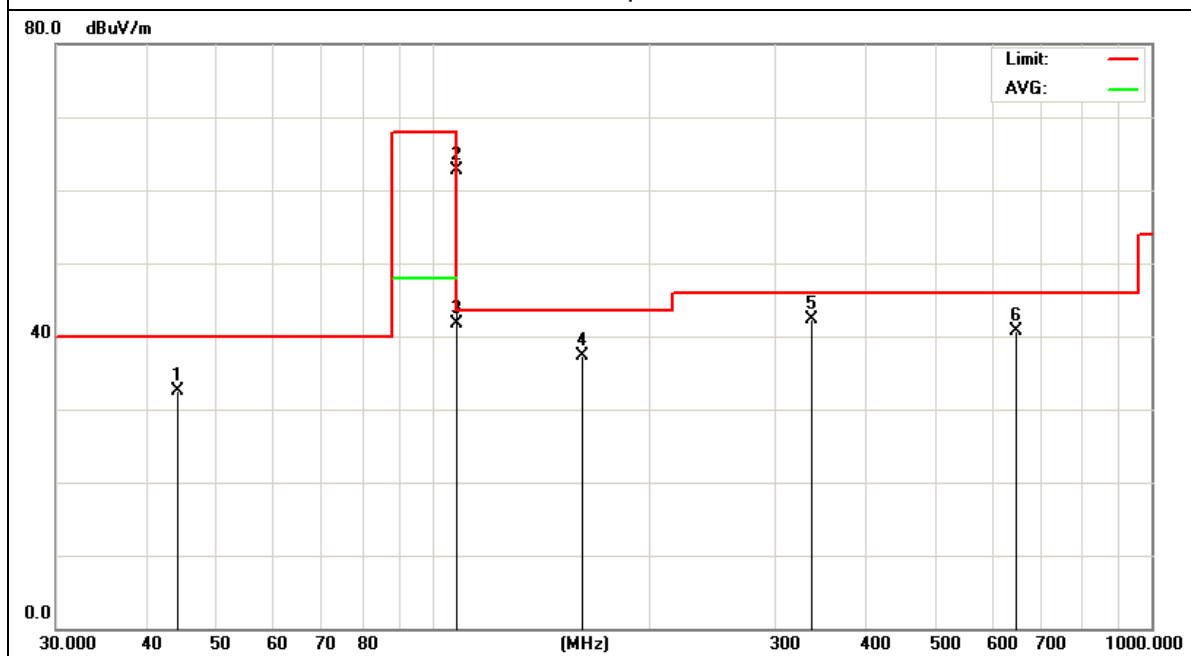


EUT :	GPS device	Model Name :	PRO-7500
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	107.9MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
44.1202	9.23	23.23	32.46	40.00	-7.54	QP
107.9000	39.33	23.33	62.66	68.00	-5.34	peak
107.9000	18.35	23.33	41.68	48.00	-6.32	AVG
162.0414	14.68	22.68	37.36	43.50	-6.14	QP
336.0352	15.16	27.16	42.32	46.00	-3.68	QP
649.6597	6.82	33.82	40.64	46.00	-5.36	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



4. BANDWIDTH TEST

4.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 10KHz, VBW \geq RBW, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

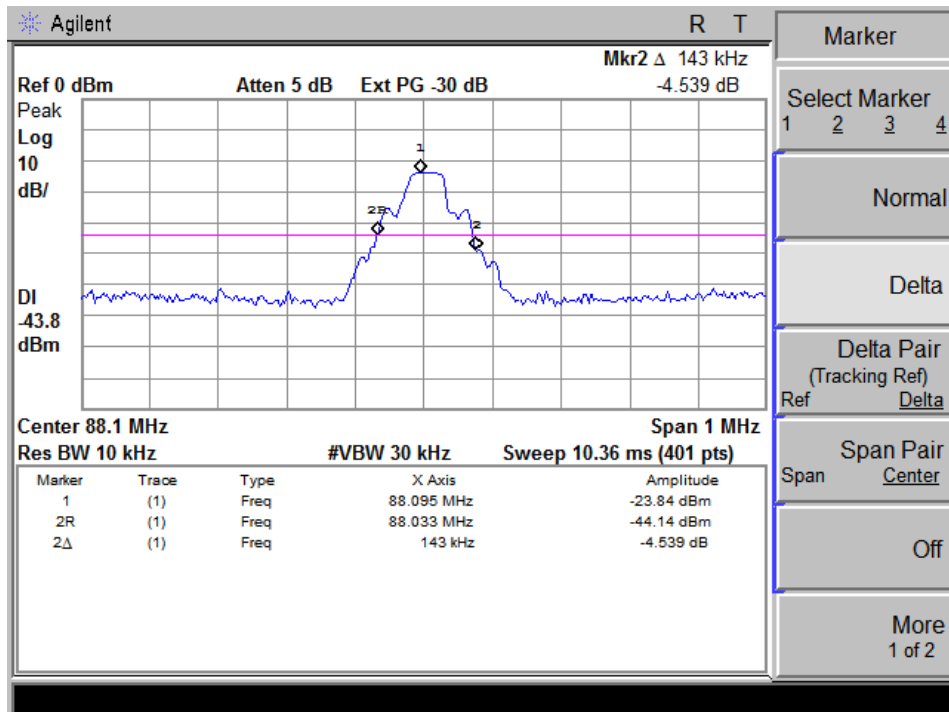


4.4 TEST RESULTS

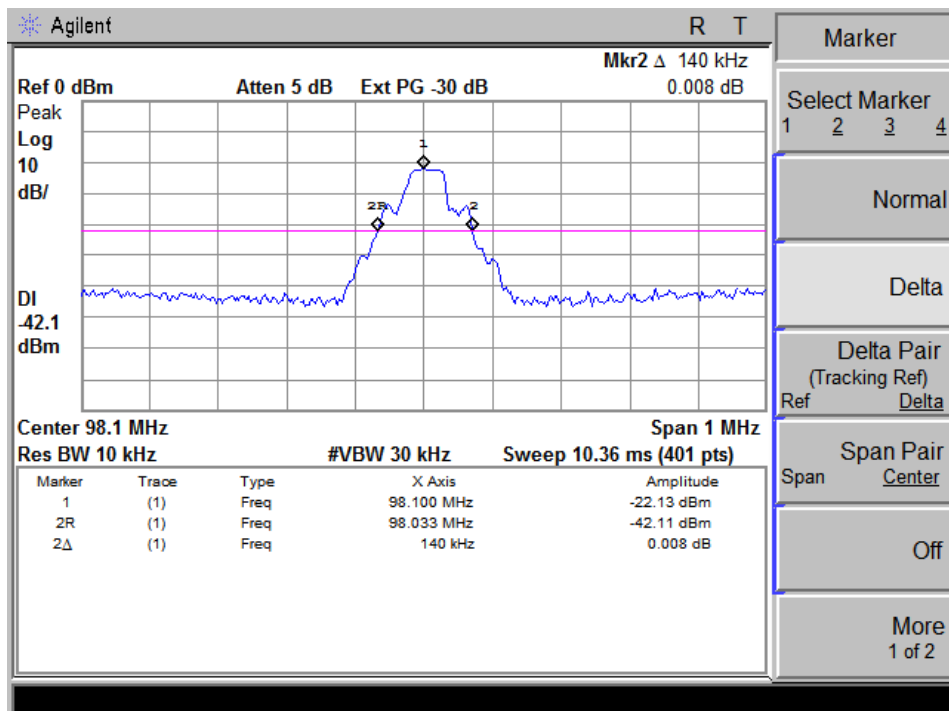
EUT :	GPS device	Model Name :	PRO-7500
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 3.7V
Test Mode :	TX		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (KHz)	Limit (KHz)
Low	88.1	143	200
Mid	98.1	130	200
High	107.9	140	200

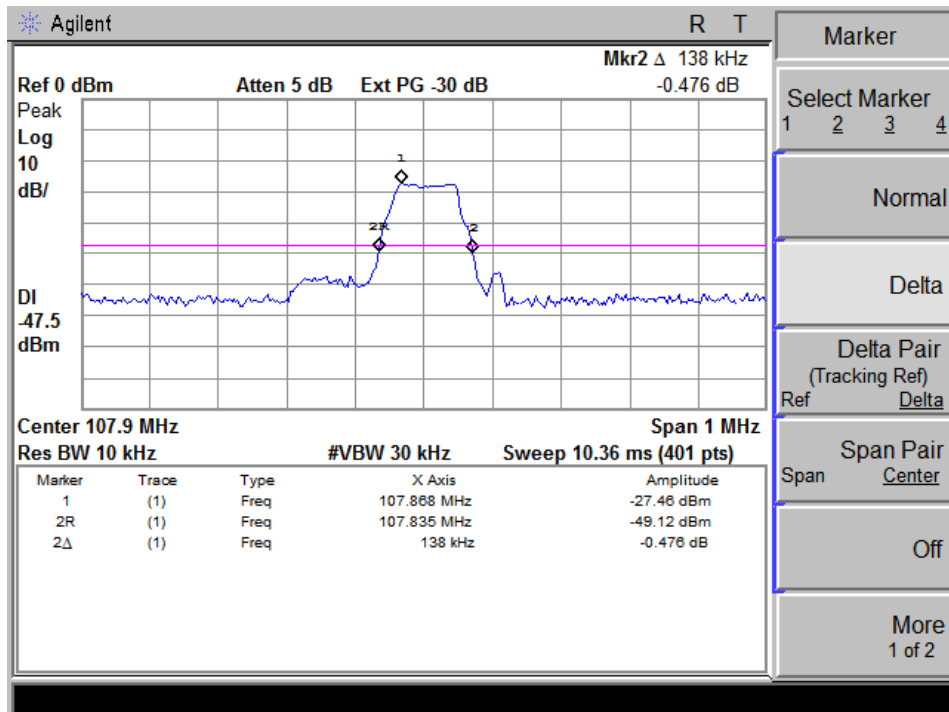
The Lowest Channel: 88.1 MHz



The Middle Channel: 98.1 MHz

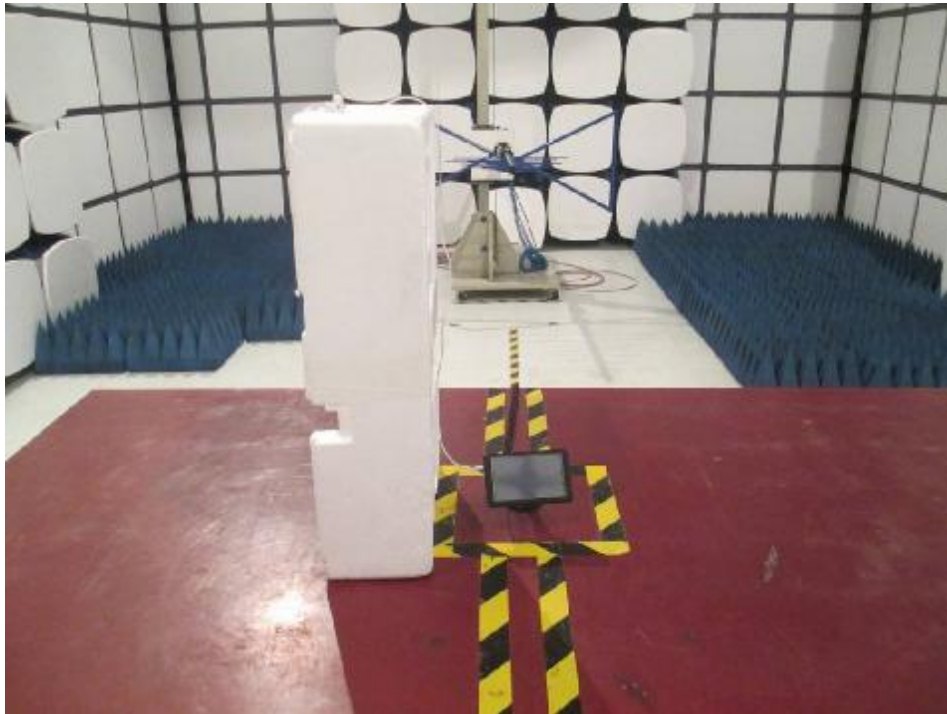


The High Channel:107.9MHz



5. EUT TEST PHOTO

Radiated Measurement Photos



CONDUCTED EMISSION Photos

