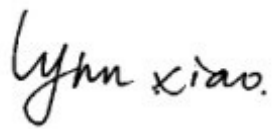
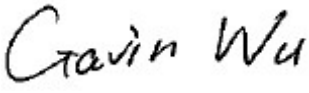
TEST REPORT

Report No.:	**EM201400864-3**	**Application No.:**	**ZJ00053634-1**
Client:	Stonex Srl		
Address:	Via Zucchi 1,20900 Monza(MB),Italy		
Sample Description:	Multi-Frequency GNSS Receiver		
Model:	S9III Plus GNSS		
Adding Model:	S9IIIN Plus GNSS, S8 Plus GNSS, S8N Plus GNSS		
FCC ID	Y44-S9P		
Test Specification:	FCC Part 2,90		
Test Date:	2014-11-18 to 2015-05-11		
Issue Date:	2015-05-11		
Test Result:	*Pass.*		

Prepared By:	**Reviewed By:**	**Approved By:**
Lynn Xiao/ Test Engineer	Jane Cao / Technical Manager	Gavin Wu / Manager
 Date:2015-05-11	Date:2015-05-11	 Date:2015-05-11

Other Aspects:

/

Abbreviations: *ok / P = passed; fail / F = failed; n.a. / N = not applicable*

The test result in this test report refers exclusively to the presented test sample. This report shall not be reproduced except in full, without the written approval of GRGT.

DIRECTIONS OF TEST

1. This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.

2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

Table of Contents

1. TEST RESULT SUMMARY 4

2. GENERAL DESCRIPTION OF EUT 5

2.1 APPLICANT 5
2.2 MANUFACTURER 5
2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST 5

3. LABORATORY AND ACCREDITATIONS 6

3.1 LABORATORY 6
3.2 ACCREDITATIONS 6
3.3 MEASUREMENT UNCERTAINTY 6
3.4 LIST OF USED TEST EQUIPMENT AT GRGT 7

4. TEST RESULTS 9

4.1 E.U.T. TEST CONDITIONS 9
4.1 RF OUTPUT POWER 10
4.1.1 LIMITS 10
4.1.2 TEST PROCEDURES 10
4.1.3 TEST SETUP 10
4.1.4 TEST RESULTS 11
4.2 OCCUPIED BANDWIDTH & EMISSION MASK 12
4.2.1 LIMITS 12
4.2.2 TEST PROCEDURES 13
4.2.3 TEST SETUP 13
4.2.4 TEST RESULTS 13
4.3 SPURIOUS EMISSIONS AT ANTENNA TERMINALS 16
4.3.1 LIMITS 16
4.3.2 TEST PROCEDURES 16
4.3.3 TEST SETUP 16
4.3.4 TEST RESULTS 16
4.4 FREQUENCY STABILITY FOR TEMPERATURE 19
4.4.1 LIMITS 19
4.4.2 TEST PROCEDURES 19
4.4.3 TEST SETUP 20
4.4.4 TEST RESULTS 20
4.5 FIELD STRENGTH OF SPURIOUS RADIATION 21
4.5.1 LIMITS 21
4.5.2 TEST PROCEDURES 21
4.5.3 TEST SETUP 22
4.5.4 TEST RESULTS 23

APPENDIX A: PHOTOGRAPH OF THE TEST ARRANGEMENT 26

APPENDIX B: PHOTOGRAPH OF THE EUT 27

1. TEST RESULT SUMMARY

FCC Part 2,90			
Standard	**Item**	**Limit / Severity**	**Result**
FCC Part 2,90	RF output power	Section 2.1046 Section 90.205	PASS
	Modulation characteristics, Audio Frequency response and audio filter response	Section 2.1047 Section 90.207	N/A
	Occupied bandwidth and emission mask	Section 2.1049 Section 90.209 Section 90.210	PASS
	Spurious emissions at antenna terminals	Section 2.1051	PASS
	Frequency Stability	Section 2.1055 Section 90.213	PASS
	Field Strength of Spurious Radiation	Section 2.1053	PASS
	Transient frequency behavior	Section 90.214	N/A

Note: N/A, Modulation characteristics, Transient frequency behavior are not required for non-voice communication.

2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name:	Stonex Srl
Address:	Via Zucchi 1,20900 Monza(MB),Italy

2.2 MANUFACTURER

Name:	Stonex Srl
Address:	Via Zucchi 1,20900 Monza(MB),Italy

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment:	Multi-Frequency GNSS Receiver
Model No.:	S9III Plus GNSS
Trade Name:	STONEX
EUT Power Supply:	Battery:BT-S9374 DC 7.4V 2500mAh 18.5Wh
Power supply:	AC Adapter：PSA18R-120P INPUT:AC100-240V 0.5A 50-60Hz 40-60VA OUTPUT:DC 12V 1.5A Battery Charger:CH-S932X84 INPUT: DC 12V 1.5A max OUTPUT:2*8.4V DC 400mA max
Frequency Range	450-470 MHz
Type of Modulation	GMSK
Channel Space	25kHz
Channal bandwidth	25kHz
Baud Rate	19.2kHz
Antenna Type	Fixed External Antenna
Antenna Model	QT4401-1
Max Antenna gain	4dBi (1.85dBd)
Maximum range	About 3-4 Km (urban environment)
HAAT (height above average terrain)	2.45m

3. LABORATORY AND ACCREDITATIONS

3.1 LABORATORY

The tests and measurements refer to this report were performed by Guangzhou GRG Metrology and Test CO., LTD.

Add. : 163 Pingyun Rd, West of Huangpu Ave, Guangzhou, 510656, P. R. China

Telephone: +86-20-38699959, 38699960, 38699961

Fax : +86-20-38695185

3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC Listed Lab (No. 688188)
Canada	Registration No.:8355A-1

3.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		**Frequency**	**Uncertainty**
Radiated Emission	Horizontal	30MHz～1000MHz	4.2dB
		1GHz～26.5GHz	4.2dB
	Vertical	30MHz～1000MHz	4.4dB
		1GHz～26.5GHz	4.4dB
Conducted Emission		9kHz～30MHz	3.1dB

This uncertainty represents an expanded uncertainty factor of *k*=2.

3.4 LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Output Power				
Receiver	R&S	ESU40	100106	2015-01-26
Effective Radiated Power/ Equivalent Isotropic Radiated Power				
Receiver	R&S	ESU40	100106	2015-01-26
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2016-04-17
Signal Generator	Agilent	N5183A-540	50142096	2015-09-28
Biconical antenna	ELECTRO-METRICS	BIA-30S	166	2016-04-17
log-periodical antenna	ELECTRO-METRICS	LPA-30	383	2016-04-17
Horn antenna	ETS.LINDGREN	3117C	00075824	2015-08-02
Horn antenna	SCHWARZBECK	BBHA9120D	752	2016-04-17
Per-Amplifier (0.1-26.5GHz)	Compliance Directions systems Inc.	PAP-0126	25002	2015-01-04
Semi-anechoic chamber	ETS	966(RFD-F/A-100)	3730	2015-03-11
Occupied Bandwidth				
Receiver	R&S	ESU40	100106	2015-01-26
Band Edges Measurement				
Receiver	R&S	ESU40	100106	2015-01-26
Conducted Emission				
Receiver	R&S	ESU40	100106	2015-01-26
Field Strength of Spurious Radiation				
Receiver	R&S	ESU40	100106	2015-01-26
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2016-04-17
Signal Generator	Agilent	N5183A-540	50142096	2015-09-28
Biconical antenna	ELECTRO-METRICS	BIA-30S	166	2016-04-17
log-periodical antenna	ELECTRO-METRICS	LPA-30	383	2016-04-17
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Per-Amplifier (0.1-26.5GHz)	Compliance Directions systems Inc.	PAP-0126	25002	2015-01-04

Semi-anechoic chamber	ETS	966(RFD-F/A-100)	3730	2015-03-11
Frequency Stability for Temperature & Voltage				
Receiver	R&S	ESU40	100106	2015-01-26
DC power supply	LONGWEI	TPR-6420D	2011090901	2015-09-11
Temperature& humidity chamber	CEPREI	CEEC-MSJ-60BE	11015	2015-04-20
oscilloscope	TEK	DP02022B	C020137	2015-5-28

4. TEST RESULTS

4.1 E.U.T. TEST CONDITIONS

Band 1(MDC)	
Channel	Frequency(MHz)
1	463.2125
2	463.7125
3	464.2125
4	464.7125
5	/
6	465.7125
7	466.2125
8	466.7125

.

4.2 RF OUTPUT POWER

4.2.1 LIMITS

According to FCC 2.1046, and 90.205 450-470MHz(1) The maximum allowable station effective radiated power (ERP) is dependent upon the station's antenna HAAT and required service area and will be authorized in accordance with table 2.

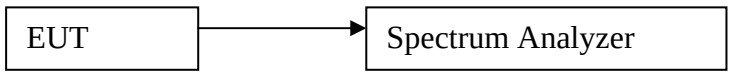
Table 2

	Service area radius (km)									
	3	8	13	16	24	32	40[4]	48[4]	64[4]	80[4]
Maximum ERP (w)1	2	100	2500	2500	2500	2500	2500	2500	2500	2500
Up to reference HAAT (m)3	15	15	15	27	63	125	250	410	950	2700

4.2.2 TEST PROCEDURES

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Connected the EUT to the input of the spectrum analyzer;
3. Select lowest, middle, and highest channels for each band and different modulation.

4.2.3 TEST SETUP



4.2.4 TEST RESULTS

Low Power:

Frequency Band	Frequency (MHz)	low output power (dBm)	antenna gain (dBd)	High output power (dBm)	High output power (Watt)	limit (W)
Band 1	463.2125	27.36	1.85	29.21	0.834	30
	466.7125	27.37	1.85	29.22	0.836	30

High Power:

Frequency Band	Frequency (MHz)	low output power (dBm)	antenna gain (dBd)	High output power (dBm)	High output power (Watt)	limit (W)
Band 1	463.2125	31.72	1.85	33.57	2.275	30
	466.7125	31.80	1.85	33.65	2.317	30

The EUT is compliant with the requirment.

4.3 OCCUPIED BANDWIDTH & EMISSION MASK

4.3.1 LIMITS

Operations using equipment designed to operate with a 25 kHz channel bandwidth will be authorized a 20 kHz bandwidth.

APPLICABLE EMISSION MASKS

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
Below 251	A or B	A or C
25-50	B	C
72-76	B	C
150-1742	B, D, or E	C, D or E
150 paging only	B	C
220-222	F	F
421-5122 5	B, D, or E	C, D, or E
450 paging only	B	G
806-809/851-854	B	H
809-824/854-8693 5	B	G
896-901/935-940	I	J
902-928	K	K
929-930	B	G
4940-4990 MHz	L or M	L or M
5850-59254		
All other bands	B	C

[2]Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.

(c) Emission Mask C. For transmitters that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier output power (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 5 kHz, but not more than 10 kHz: At least 83 log (fd/5) dB;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 10 kHz, but not more than 250 percent of the authorized bandwidth: At least 29 log (fd^2/11) dB or 50 dB, whichever is the lesser attenuation;

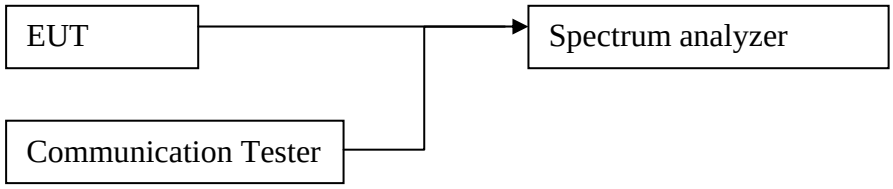
(3) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.

4.3.2 TEST PROCEDURES

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum and the ;
2. Set the spectrum analyzer: Span = approximately 2 to 3 times the 26dB bandwidth, centre on channel;
3. Set the spectrum analyzer: RBW >= 1% of the 99% Bandwidth. VBW >= RBW. Sweep = auto; Detector Function = Peak. Trace = Max Hold.
4. Mark the peak frequency and 99% bandwidth.
5. Bandwidth value is OBW value.

Remark:

4.3.3 TEST SETUP

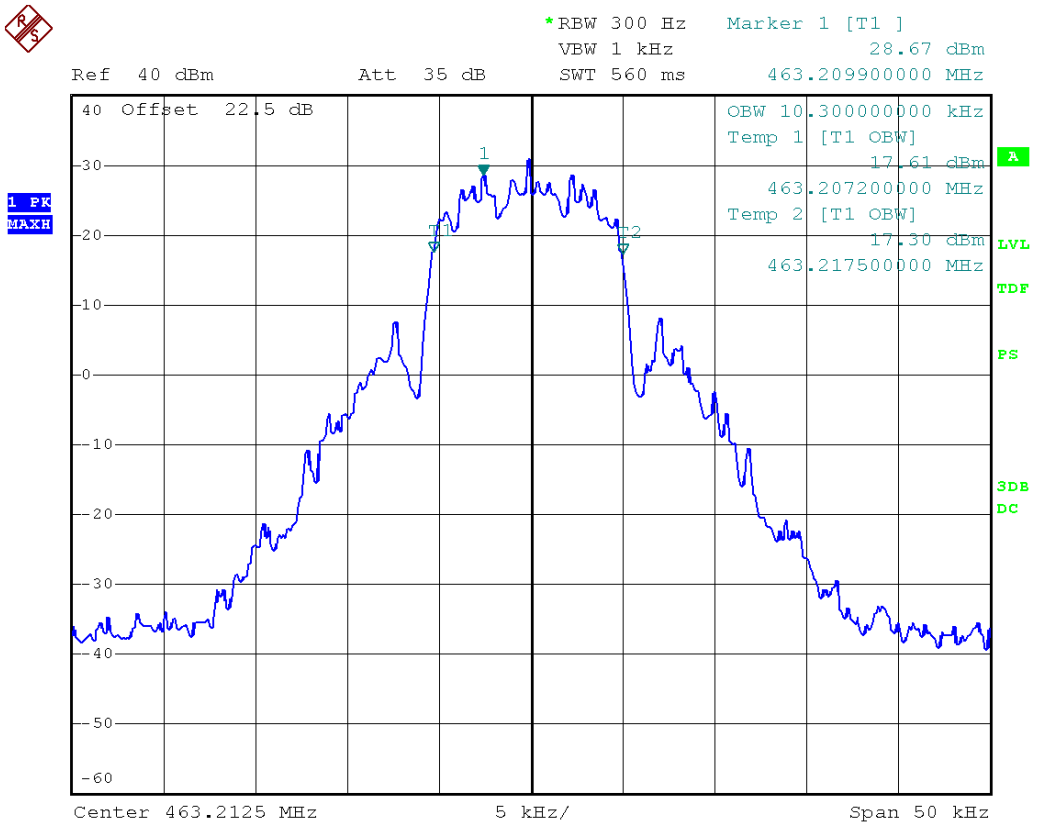


4.3.4 TEST RESULTS

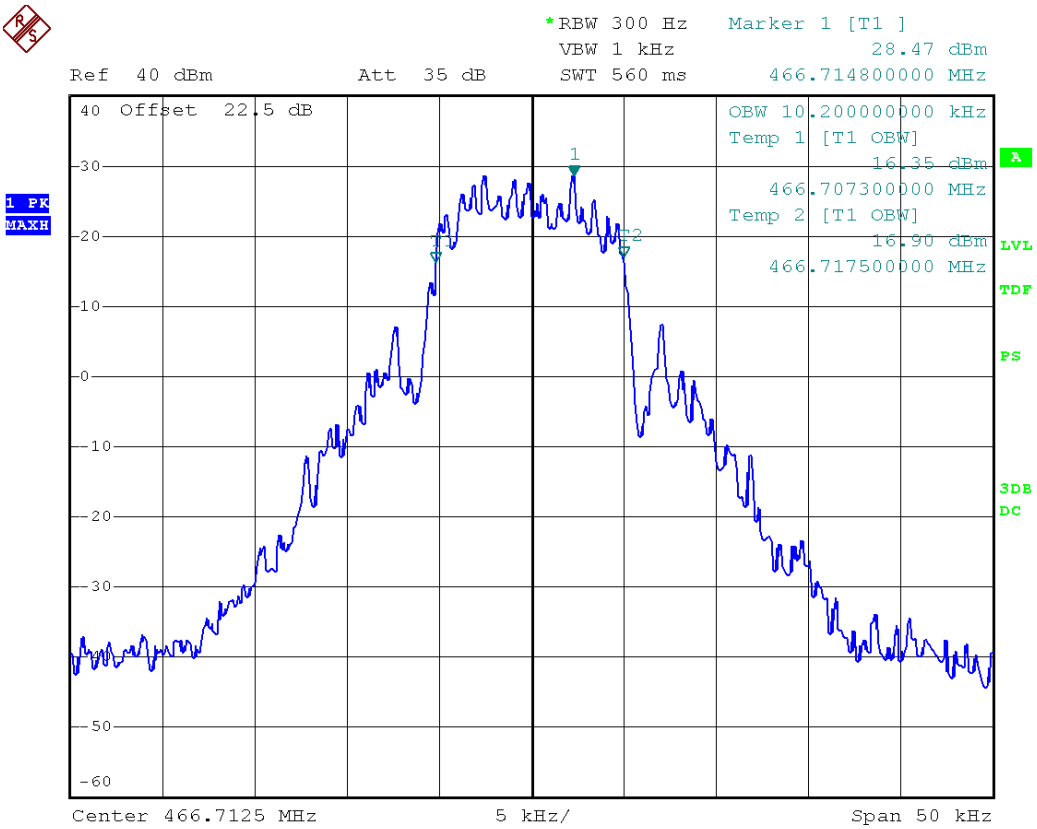
Frequency Band	Frequency(MHz)	High output power		
		99% OBW (kHz)	limit(kHz)	Result
Band 1	463.2125	10.3	20	Pass
	466.7125	10.2	20	

Test result plot as follows:

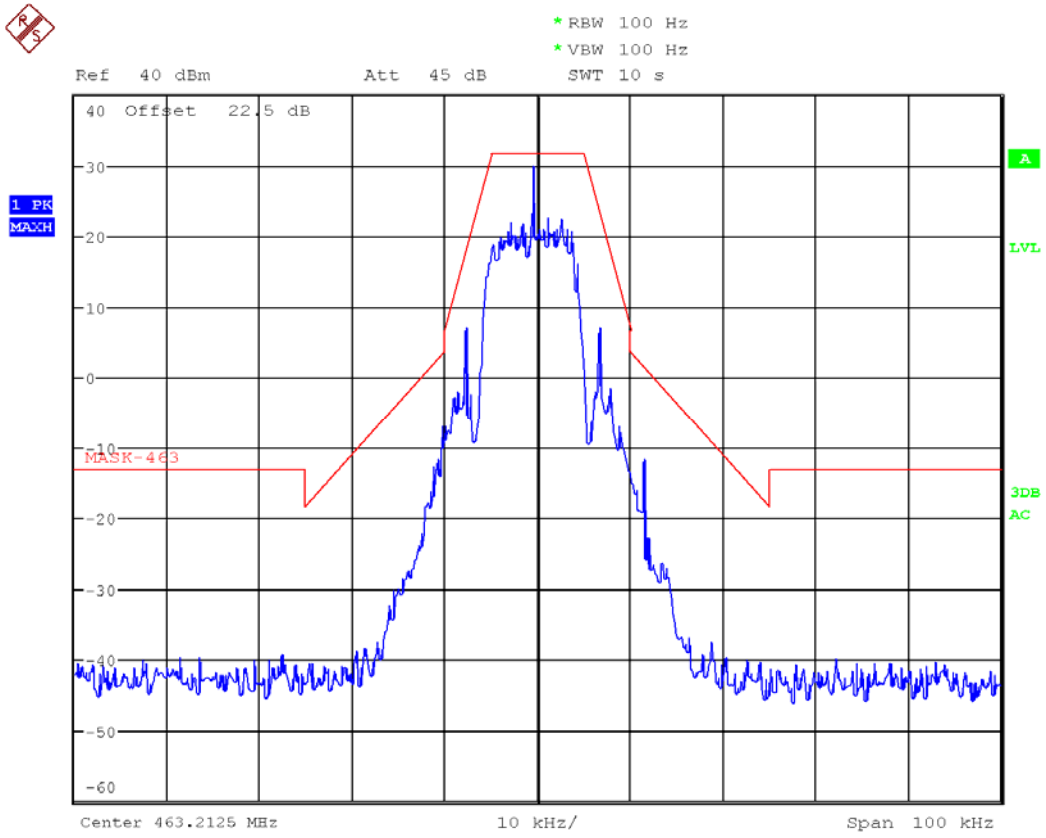
Band 1 463.2125MHz
99% OBW



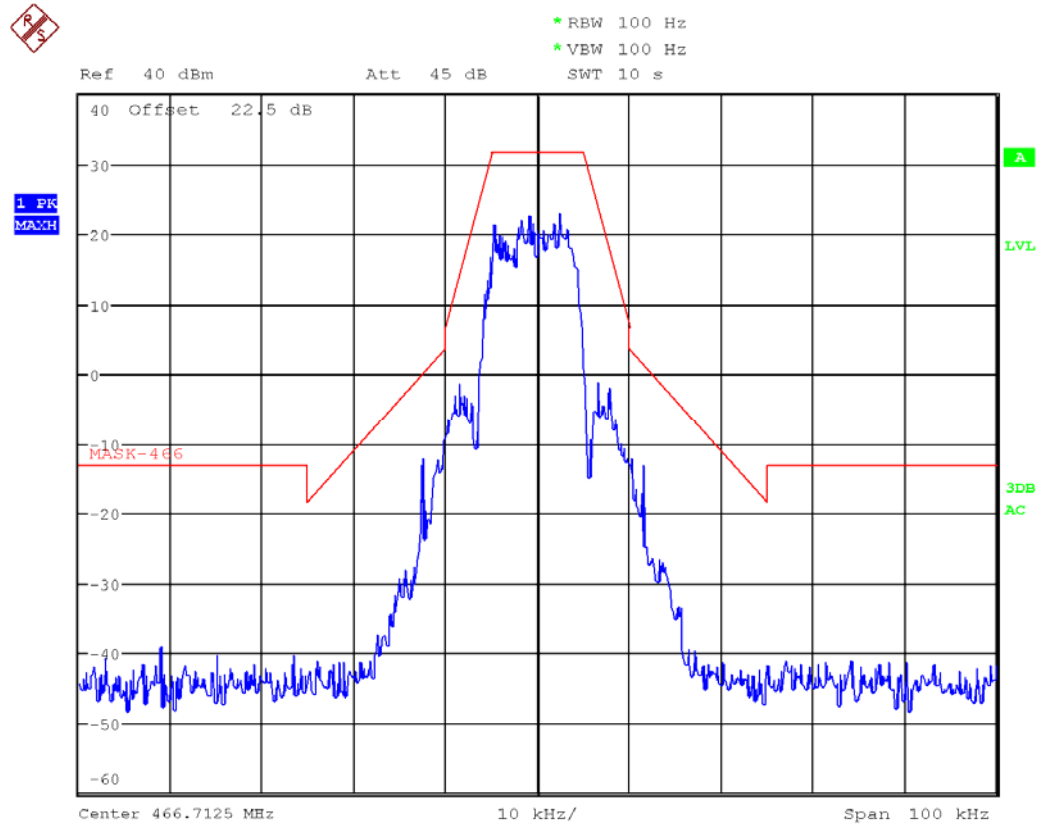
Band 1 466.7125MHz
99% OBW



Emission Mask:
Band 1 463.2125MHz
High power



Band 1 466.7125MHz
High power



The unit does meet the FCC requirements.

4.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

4.4.1 LIMITS

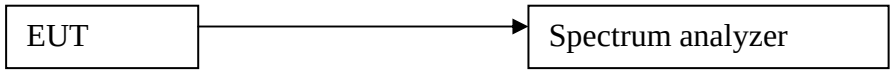
According to FCC 90.210: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 TEST PROCEDURES

Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.
Set the spectrum analyzer: RBW =1MHz VBW >= RBW, Span = enough to catch the trace. Sweep = auto; Detector Function = Peak. Trace = Max, hold.

4.4.3 TEST SETUP



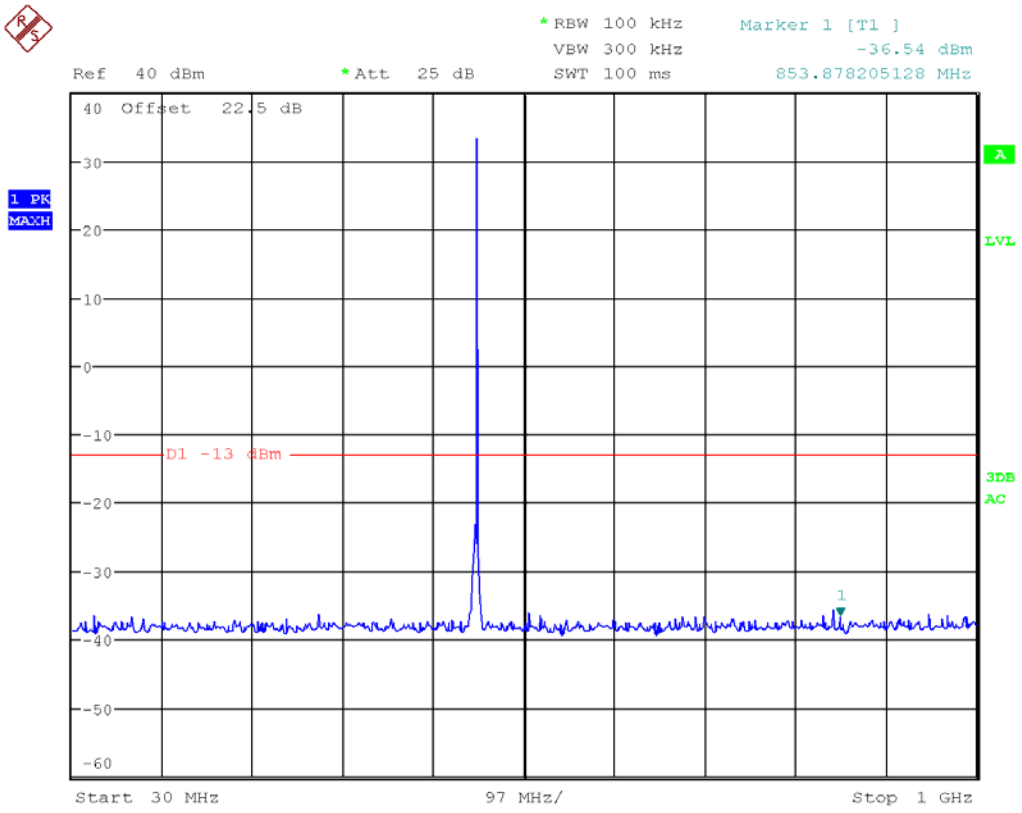
4.4.4 TEST RESULTS

The unit does meet the FCC requirements.

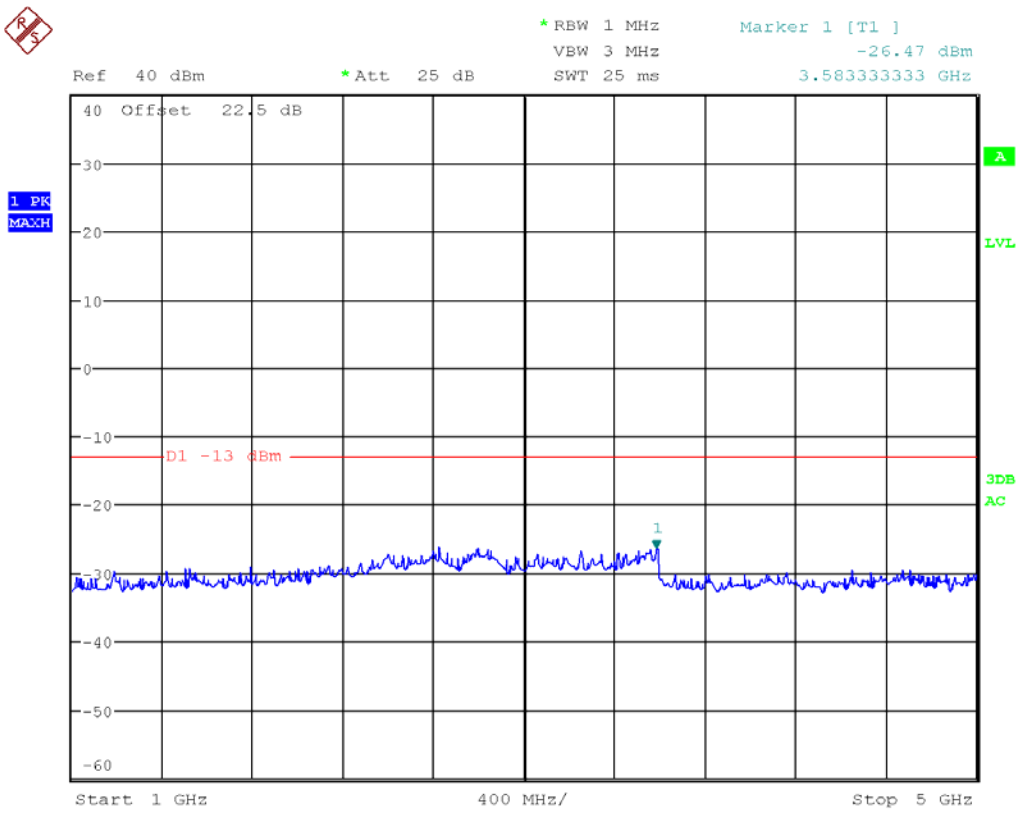
Test result plot as follows:

Band 1 463.2125MHz

30M to 1GHz

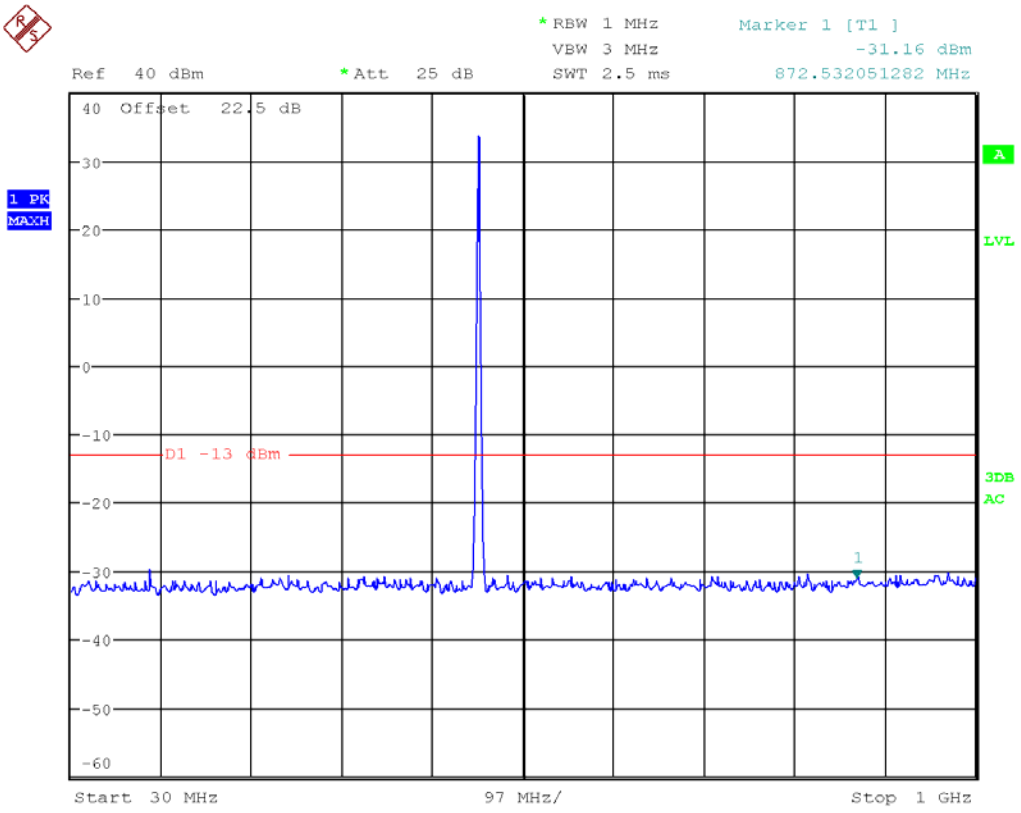


1G to 5GHz

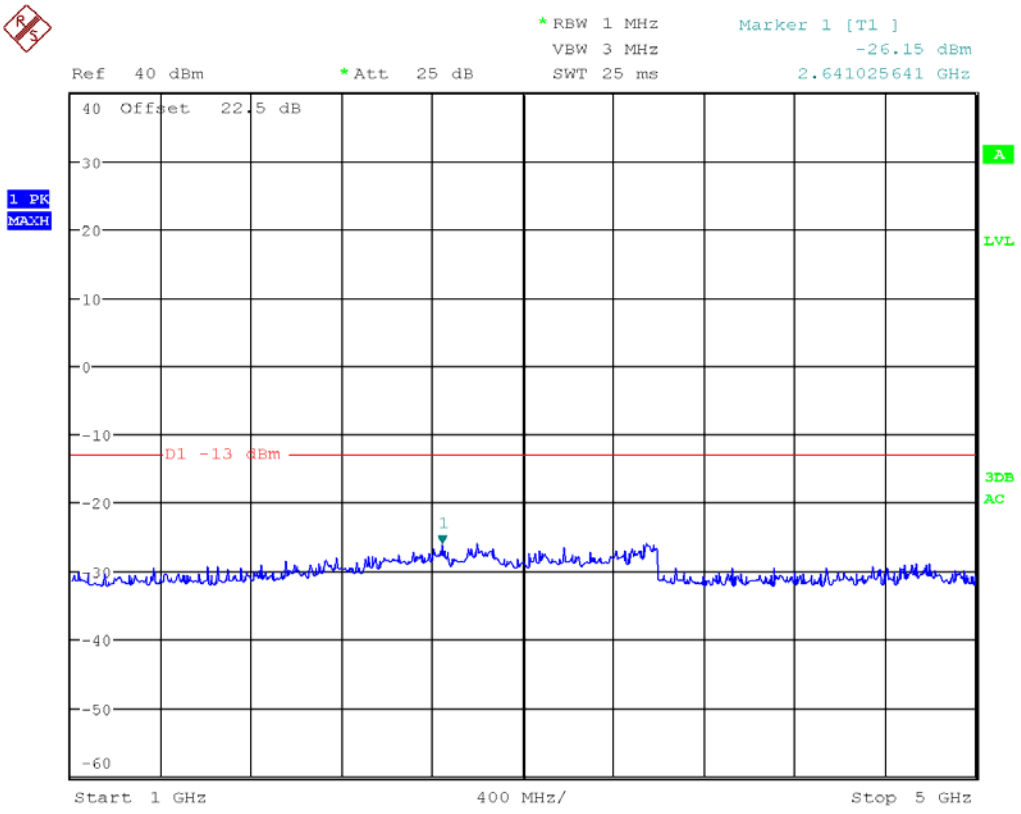


Band 1 466.7125MHz

30M to 1GHz



1G to 5GHz



4.5 FREQUENCY STABILITY FOR TEMPERATURE

4.5.1 LIMITS

According to 2.1055, 90.213, the limit is as follow table:

MINIMUM FREQUENCY STABILITY

[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	1 2 3100	100	200
25-50	20	20	50
72-76	5		50
150-174	5 115	65	4 650
216-220	1.0		1.0
220-22212	0.1	1.5	1.5
421-512	7 11 142.5	85	85
806-809	141.0	1.5	1.5
809-824	141.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	140.1	1.5	1.5
902-928	2.5	2.5	2.5
902-92813	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	9300	300	300
Above 245010			

[7]In the 421-512 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 1.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 0.5 ppm.

4.5.2 TEST PROCEDURES

Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and remove the antenna from the EUT, then connect a low RF cable from the antenna port to the spectrum.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

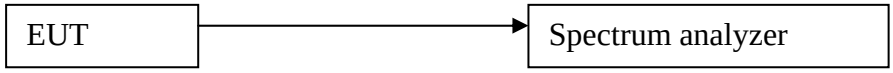
Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at normal temperature and remove the antenna from the EUT, then connect a low RF cable from the antenna port to the spectrum.
2. The power supply voltage to the EUT was varied from primary supply voltage to the battery operating end point. The maximum frequency change was recorded within one minute.

Remark：

The variation in frequency was measured for the worst case.

4.5.3 TEST SETUP



4.5.4 TEST RESULTS

Band 1

Channel 1:463.2125MHz

Test Condition		Frequency Stability		Limit (ppm)	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)		
Frequency vs. Temperature					
7.4	-30	-440	-0.950	±5.0	Pass
7.4	-20	-480	-1.036		
7.4	-10	-440	-0.950		
7.4	0	-440	-0.950		
7.4	10	-440	-0.950		
7.4	20	-480	-1.036		
7.4	30	-400	-0.951		
7.4	40	-480	-1.036		
7.4	50	-480	-1.036		
Frequency vs. Voltage					
5.7	20	-440	-0.950	±5.0	Pass

Channel 8:466.7125MHz

Test Condition		Frequency Stability		Limit (ppm)	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)		
Frequency vs. Temperature					
7.4	-30	-480	-1.029	±5.0	Pass
7.4	-20	-480	-1.029		
7.4	-10	-440	-0.943		
7.4	0	-400	-0.857		
7.4	10	-480	-1.029		
7.4	20	-400	-0.857		
7.4	30	-400	-0.857		
7.4	40	-440	-0.943		
7.4	50	-400	-0.857		
Frequency vs. Voltage					
5.7	20	-440	-0.943	±5.0	Pass

4.6 FIELD STRENGTH OF SPURIOUS RADIATION

4.6.1 LIMITS

According to FCC 90.210, The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.6.2 TEST PROCEDURES

Procedure of Test

1. The EUT was placed on a turntable with 1.0 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
5. Taking the record of maximum ERP/EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
9. ERP/EIRP = Pg (dBm) – cable loss (dB) + antenna gain (dBi). Pg is the generator output power

Remark:

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW >= RBW , Span = enough to captch the trace. Sweep = auto; Detector Function = Peak. Trace = Max,hold.

Above 1GHz Set the spectrum analyzer: RBW =1MHz VBW >= RBW , Span = enough to captch the trace. Sweep = auto; Detector Function = Peak. Trace = Max,hold.

The worst case emissions were reported.

4.6.3 TEST SETUP

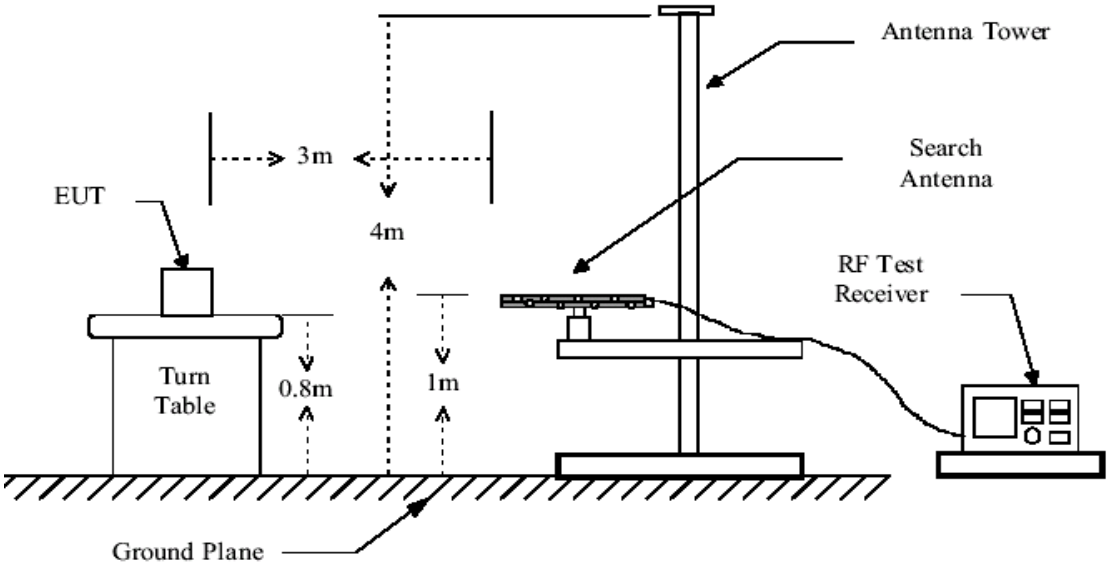


Figure 1. 30MHz to 1GHz radiated emissions test configuration

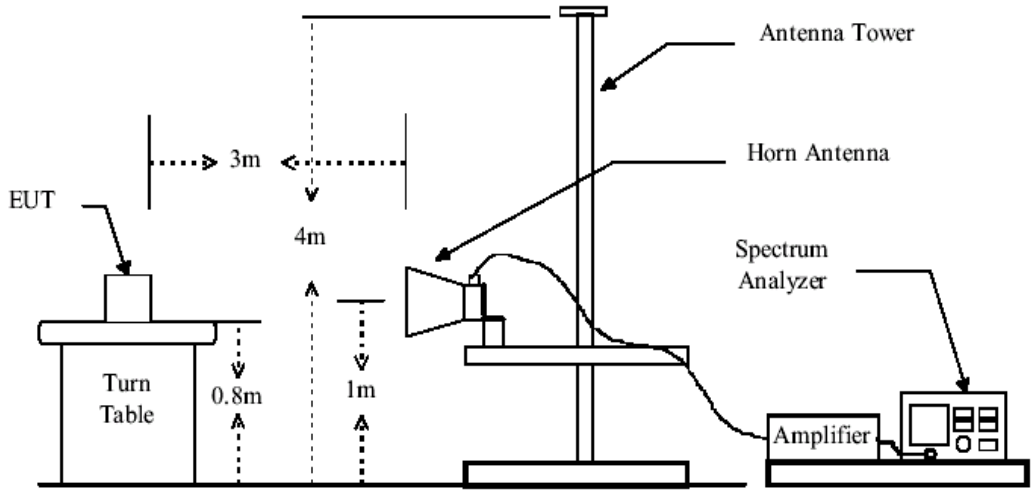


Figure 2. Above 1GHz radiated emissions test configuration

4.6.4 TEST RESULTS

Band 1 channel 1:463.2125MHz

Project No.:	**ZJ00053634**	**Polarziation:**	**Vertical**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**9:23:01**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	135.2627	-68.22	30.53	-37.69	-13.00	-24.69	peak
2	328.6842	-77.21	35.62	-41.59	-13.00	-28.59	peak
3	437.7689	-73.12	41.63	-31.49	-13.00	-18.49	peak
4	509.4936	-67.59	37.72	-29.87	-13.00	-16.87	peak
5	835.4177	-88.78	43.24	-45.54	-13.00	-32.54	peak
6	929.5511	-68.36	42.90	-25.46	-13.00	-12.46	peak

Project No.:	**ZJ00053634**	**Polarziation:**	**Vertical**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**11:00:48**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1586.740	-69.86	29.59	-40.27	-13.00	-27.27	peak
2	1809.811	-69.60	29.72	-39.88	-13.00	-26.88	peak
3	2931.569	-69.27	35.42	-33.85	-13.00	-20.85	peak
4	3134.901	-69.05	35.97	-33.08	-13.00	-20.08	peak
5	3933.658	-70.31	38.04	-32.27	-13.00	-19.27	peak
6	4239.169	-69.56	38.74	-30.82	-13.00	-17.82	peak

Project No.:	**ZJ00053634**	**Polarziation:**	**Horizontal**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**9:25:53**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	135.2627	-79.10	30.53	-48.57	-13.00	-35.57	peak
2	143.8877	-85.17	31.08	-54.09	-13.00	-41.09	peak
3	328.6842	-87.68	35.62	-52.06	-13.00	-39.06	peak
4	445.2116	-88.58	42.88	-45.70	-13.00	-32.70	peak
5	620.2354	-98.35	45.55	-52.80	-13.00	-39.80	peak
6	826.0810	-90.52	43.13	-47.39	-13.00	-34.39	peak

Project No.:	**ZJ00053634**	**Polarziation:**	**Horizontal**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**11:02:00**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1487.655	-70.40	29.42	-40.98	-13.00	-27.98	peak
2	1723.258	-69.99	29.67	-40.32	-13.00	-27.32	peak
3	2348.377	-69.55	31.31	-38.24	-13.00	-25.24	peak
4	2961.970	-69.16	35.60	-33.56	-13.00	-20.56	peak
5	3707.091	-70.63	37.14	-33.49	-13.00	-20.49	peak
6	4835.130	-70.12	39.94	-30.18	-13.00	-17.18	peak

Band 1 channel 8:466.7125MHz

Project No.:	**ZJ00053634**	**Polarziation:**	**Vertical**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**9:36:17**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	135.2627	-66.41	30.53	-35.88	-13.00	-22.88	peak
2	332.3991	-74.34	35.29	-39.05	-13.00	-26.05	peak
3	423.2548	-61.98	39.33	-22.65	-13.00	-9.65	peak
4	503.7994	-62.88	37.69	-25.19	-13.00	-12.19	peak
5	627.2456	-98.10	45.98	-52.12	-13.00	-39.12	peak
6	934.7896	-66.84	42.97	-23.87	-13.00	-10.87	peak

Project No.:	**ZJ00053634**	**Polarziation:**	**Vertical**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**11:06:49**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1366.273	-69.59	28.38	-41.21	-13.00	-28.21	peak
2	1679.380	-69.39	29.64	-39.75	-13.00	-26.75	peak
3	2145.669	-69.63	30.42	-39.21	-13.00	-26.21	peak
4	3175.591	-69.74	36.00	-33.74	-13.00	-20.74	peak
5	3893.283	-70.54	37.88	-32.66	-13.00	-19.66	peak
6	4797.861	-70.62	39.86	-30.76	-13.00	-17.76	peak

Project No.:	**ZJ00053634**	**Polarziation:**	**Horizontal**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**9:38:03**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	135.2627	-79.02	30.53	-48.49	-13.00	-35.49	peak
2	332.3991	-85.64	35.29	-50.35	-13.00	-37.35	peak
3	423.2548	-80.34	39.33	-41.01	-13.00	-28.01	peak
4	503.7994	-91.01	37.69	-53.32	-13.00	-40.32	peak
5	630.7803	-98.51	45.88	-52.63	-13.00	-39.63	peak
6	785.3406	-97.27	43.80	-53.47	-13.00	-40.47	peak

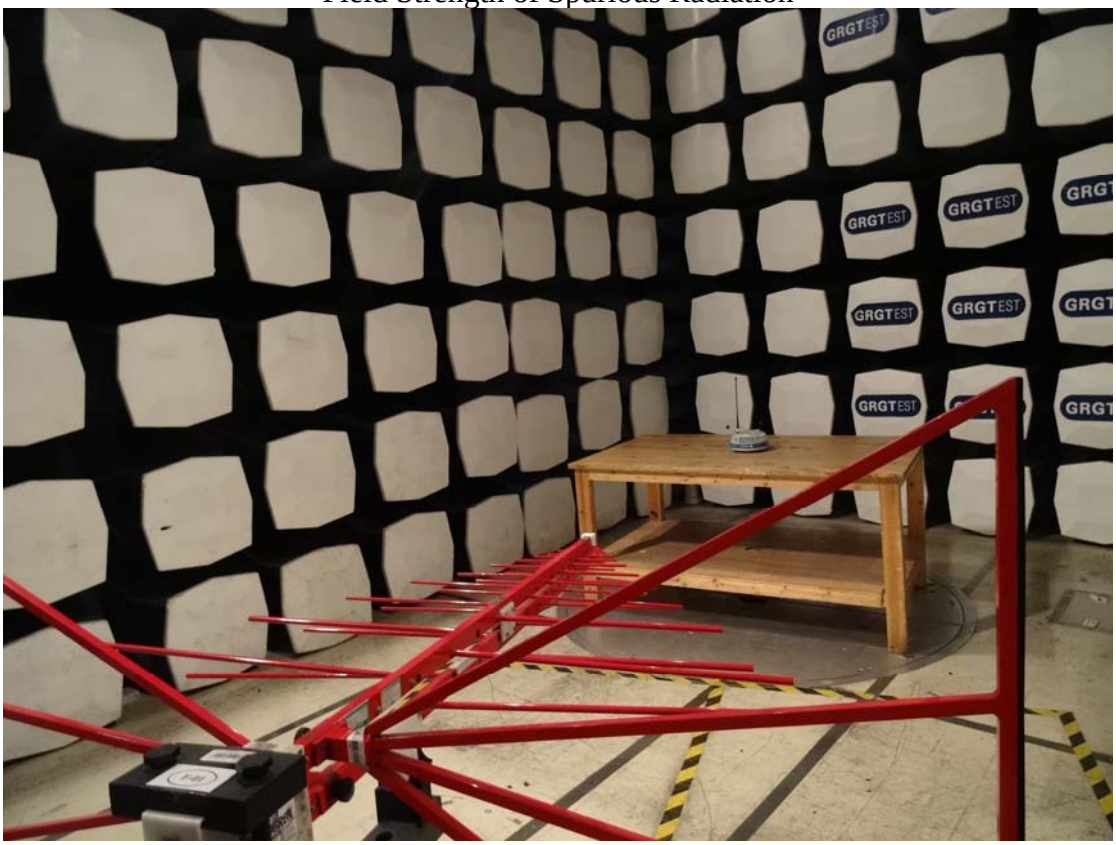
Project No.:	**ZJ00053634**	**Polarziation:**	**Horizontal**
Standard:	**FCC part 90**	**Power Source:**	**DC 7.4V**
Test item:	**Radiation Test**	**Date:**	**2015-5-11**
Temp./Hum.(%RH):	**23.5/56%RH**	**Time:**	**11:09:15**
EUT:	**Multi-Frequency GNSS Receiver**	**Distance:**	**3m**
Model:	**S9III Plus GNSS**	**Test Result:**	**Pass**

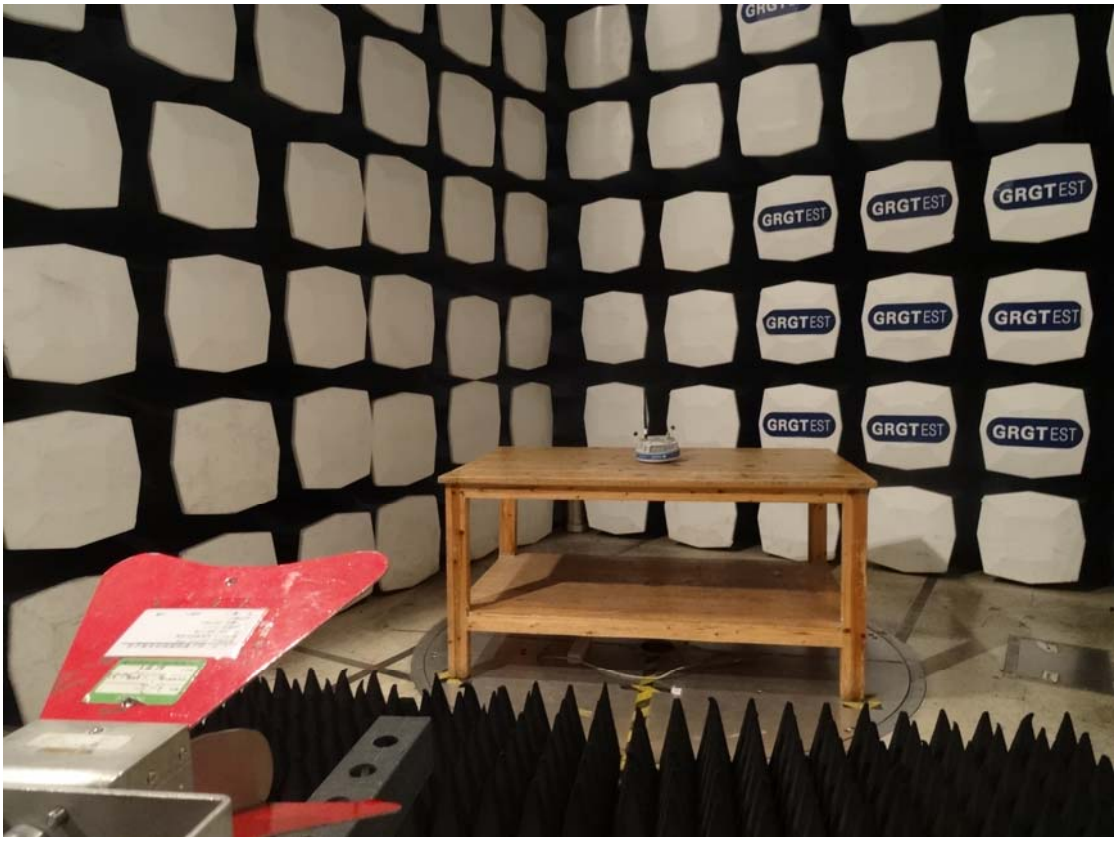
Note:

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1590.838	-69.90	29.59	-40.31	-13.00	-27.31	peak
2	1772.850	-69.46	29.70	-39.76	-13.00	-26.76	peak
3	2769.855	-69.85	34.37	-35.48	-13.00	-22.48	peak
4	3047.209	-70.09	35.88	-34.21	-13.00	-21.21	peak
5	3954.002	-70.04	38.12	-31.92	-13.00	-18.92	peak
6	4687.771	-70.50	39.62	-30.88	-13.00	-17.88	peak

APPENDIX A: PHOTOGRAPH OF THE TEST ARRANGEMENT

Field Strength of Spurious Radiation





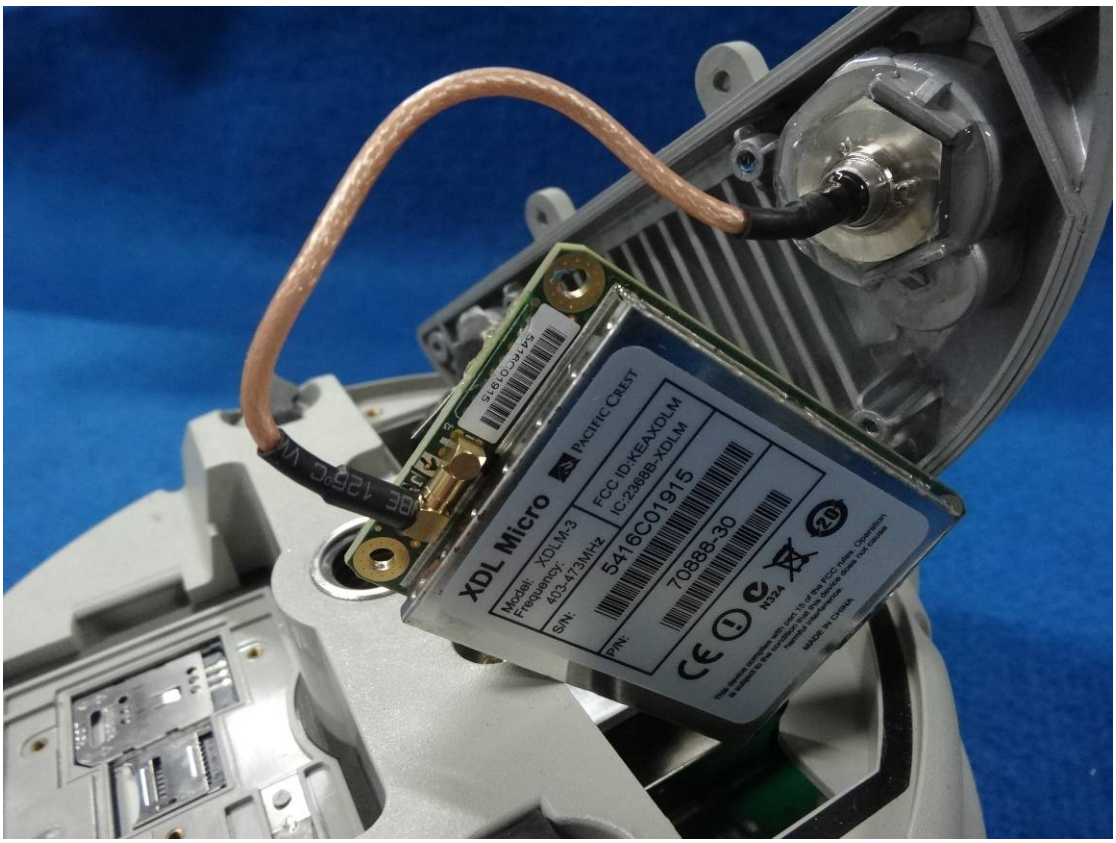
APPENDIX B: PHOTOGRAPH OF THE EUT

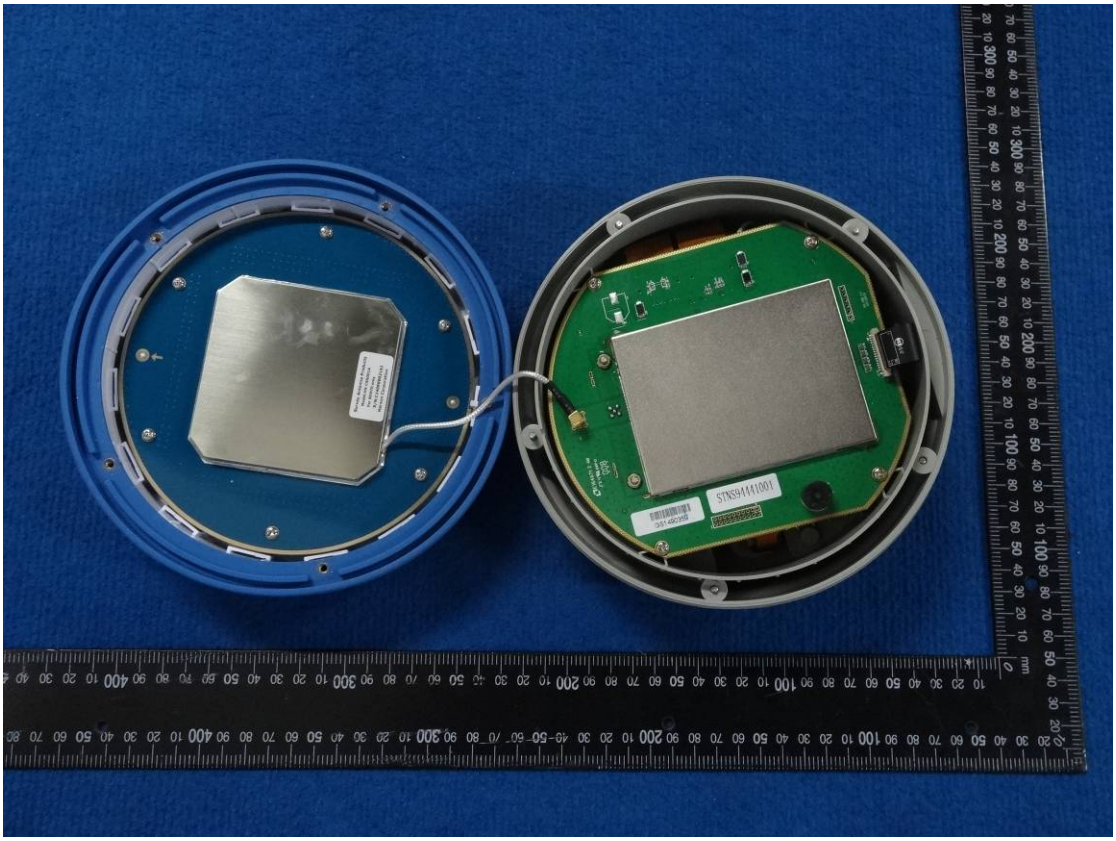
STONEX
S8 GNSS RECEIVER
Multi-Frequency GNSS Receiver
Model: S8N Plus GNSS
Input: Battery 7.4V 0.7A
Designed in Italy
Assembled in P.R.C.
CE 0700
RoHS
Bluetooth
GPRS
UHF

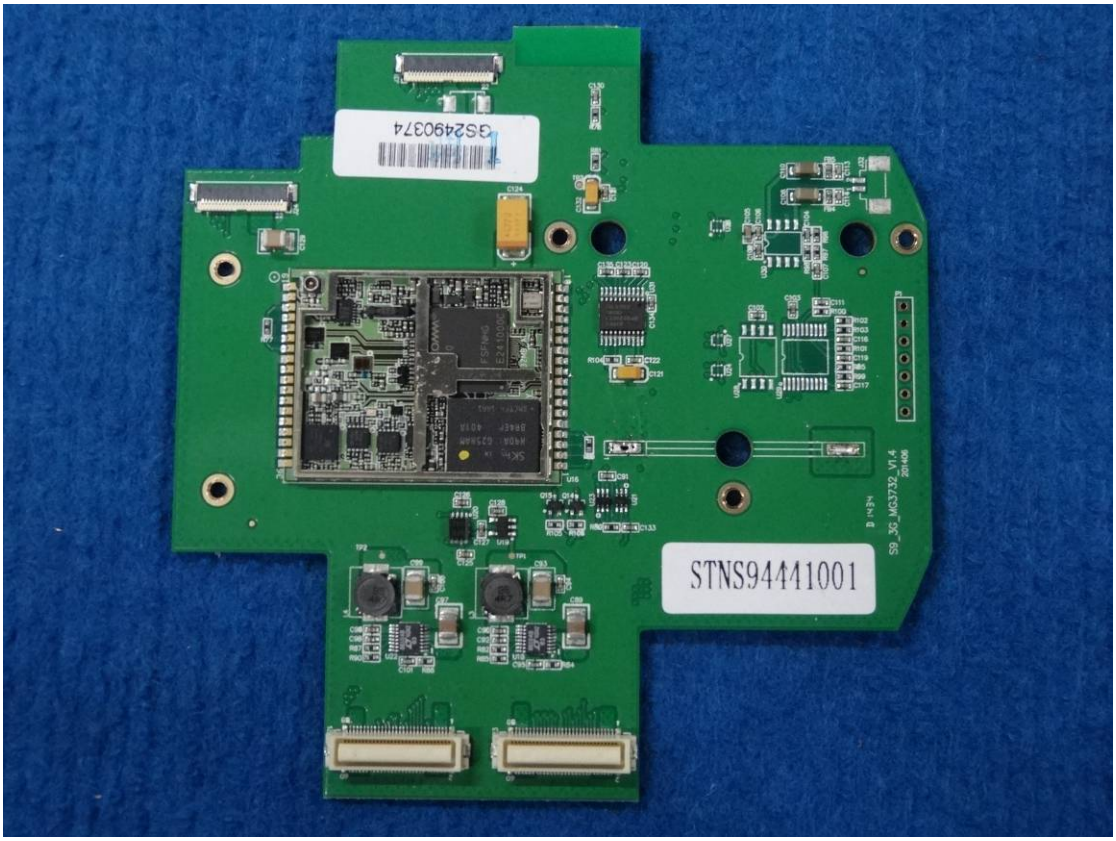
STONEX

S8 PLUS

STONEX
STONEX GNSS RECEIVER


XDL Micro
PACIFIC CREST
Model: XDLM-3
Frequency: 403-473MHz
S/N:
5416C01915
FCC ID:KEAXDLM
IC:2368B-XDLM
P/N:
70888-30





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