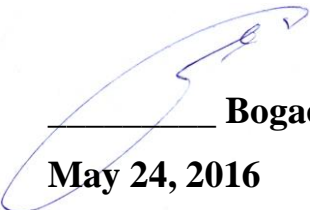**TESTING CENTER «OMEGA»**

Approved by

Head of TC

TC "OMEGA"

_____ Bogach S.V.

May 24, 2016

TEST REPORT No. 16/184

Issue 1

for compliance with IEC 61108-1

of GPS receiver module
integrated in Emergency Position Indicating Radio Beacon (EPIRB)

Model   MT603FG

Manufacturer Standard Communications Pty Ltd, Australia

TESTING CENTER «OMEGA»	**ACCREDITATION**
P.O.B. No.37, Sevastopol, 99053, Ukraine **Phone: +7 8692 537 072** **Fax: +7 8692 692 469 679** **E-mail: stcomega@stc-omega.biz**	**COSPAS-SARSAT Secretariat** **Reference No. CS497/F530 dated 21/09/1994**
	National Accreditation Agency of Ukraine **Certificate of accreditation for compliance DSTU ISO 17025:2006 No. 2H339 valid until 17.05.2019**
	Letter of FCC acceptance #181479 dated July 24, 2014
	IC registration of 3/10m OATS #8780A-1 dated May 29, 2013
	IC registration of 3m alternative test site #8780A-2 dated May 29, 2013
	Letter of USCG Acceptance for testing EPIRBs #16714/161.011/OMEGA dated February 7, 2008

Report on:	Emergency Position Indicating Radio Beacon (EPIRB) 406 MHz COSPAS–SARSAT model MT603FG
Prepared for:	<u>Beacon Manufacturer:</u> Standard Communications Pty Ltd 17 Gibbon Road, Winston Hills, NSW 2153, Australia <u>Manufacturer representative:</u> Kevan Wilson-Elswood Technical Compliance Manager Telephone number: +61 (0)2 8867 6063 kelswood@gme.net.au
Test commencement date	29.07.2015
Test completion date	12.05.2016

CONTENTS

Report Issue History		
No.	**Data of issue**	**Report reissue reason**
1	May 24, 2016	The initial issue.

1. EQUIPMENT UNDER TEST

Type	Emergency Position Indicating Radio Beacon (EPIRB) 406 MHz COSPAS–SARSAT
Model name	MT603FG
Serial number	1410407582
Equipment software/firmware version	OS0021 ver 1.00 (8/12/2014)
Hardware version or part number	MT603G

GPS receiver module
    model
    manufacturer
	M10478-A2
	Antenova, Ltd.

Note.   EUT was modified by manufacturer to provide output of GPS receiver module messages.
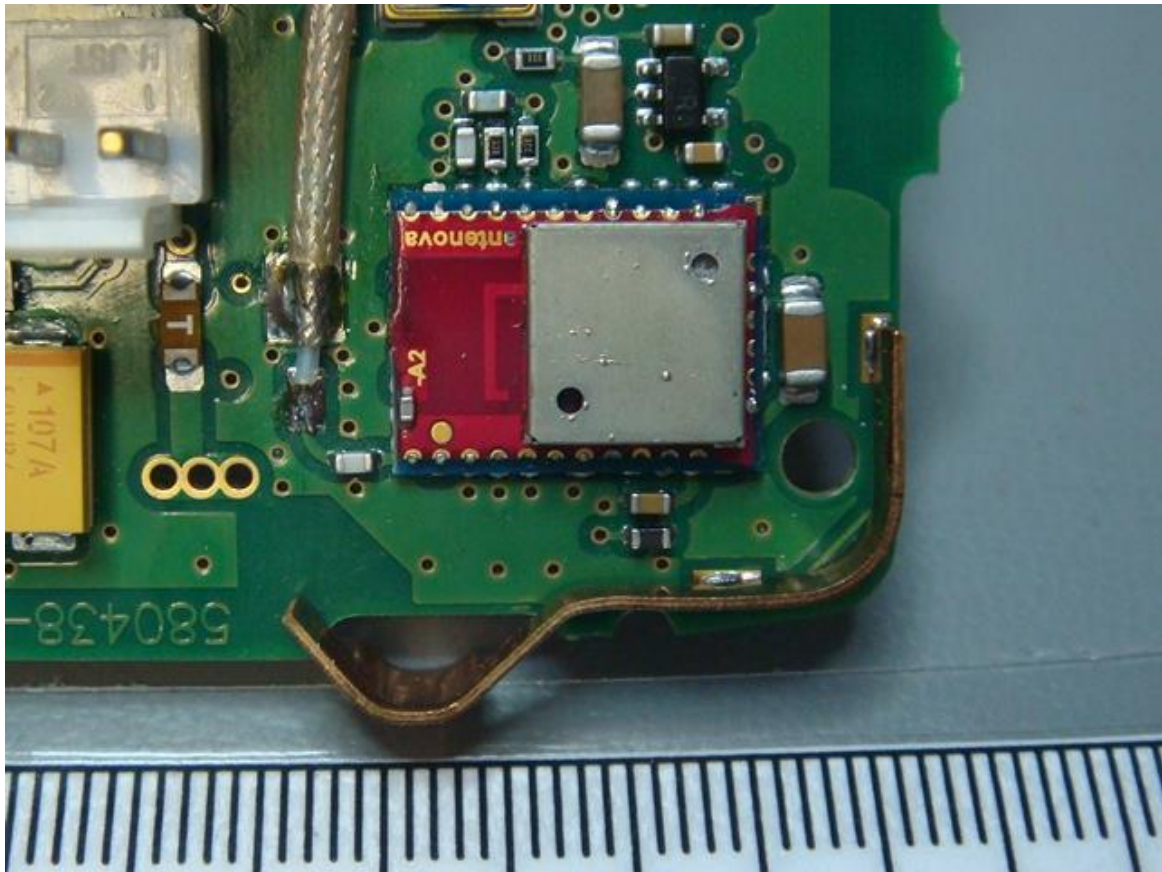

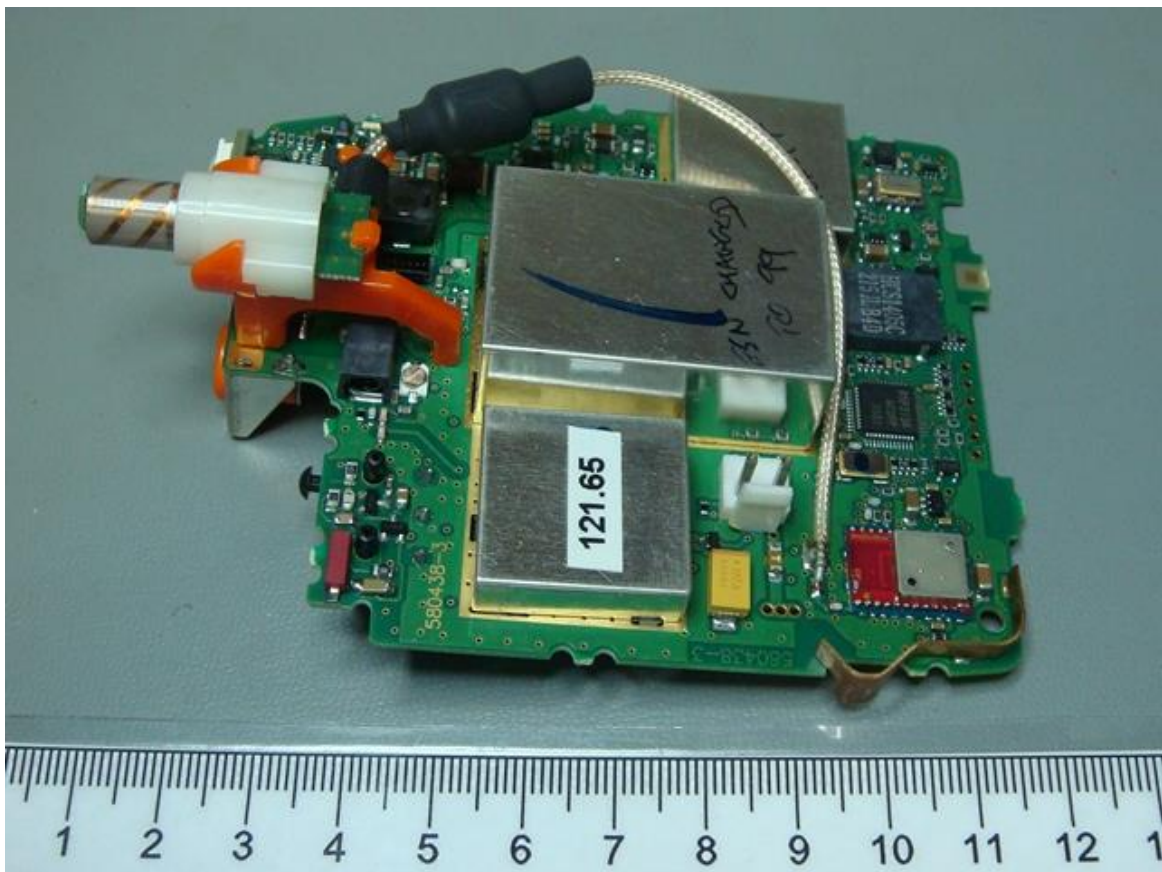**Fig. 1-1 – EUT**

Fig. 1-2 – GPS receiver module

Fig. 1-3 – GPS receiver module with antenna

2. TEST PURPOSE

Test purpose is to confirm compliance of GPS receiver module integrated in EPIRB model MT603FG with the applied standard:

IEC 61108-1 Ed.2 (2003)   Maritime navigation and radiocommunication equipment and system - Global navigation satellite systems (GNSS) -
Part 1: Global positioning system (GPS) - Receiver equipment - Performance requirements, methods of testing and required test results Maritime navigation and radiocommunication equipment and systems –General requirements – Methods of testing and required test result.

3. TEST CONDITIONS AND METHODS

Procedure, conditions and methods of testing correspond to requirements and methods of applied standard.

4. TEST PLAN

Requirements and methods the Table below are referenced to Standard IEC61108-1.

No.	Test	Requirements	Methods
1.	Static GPS accuracy	4.3.3.1	5.6.4.1.1
2.	Angular movement of antenna	4.3.3.1	5.6.4.2
3.	Dynamic GPS accuracy	4.3.3.2	5.6.4.3.1
4.	Acquisition after initialization	4.3.4	5.6.5.1
5.	Acquisition after power outrage	4.3.4	5.6.5.2
6.	Acquisition after interruption of GPS signals	4.3.4	5.6.5.3
7.	Acquisition after brief interruption of power	4.3.4	5.6.5.4
8.	Protection of antenna	4.3.5.1	5.6.6.1
9.	Sensitivity during acquisition	4.3.7	5.6.8.1
10.	Sensitivity during tracking	4.3.7	5.6.8.2
11.	Interference immunity - L band	4.3.8.a	5.6.9.1
12.	Interference immunity - S band	4.3.8.b	5.6.9.2
13.	Slow speed update rate	4.3.9	5.6.10.1
14.	High speed update rate	4.3.9	5.6.10.2

5. TEST SCHEDULE

No.	Test name	Date
1.	Static GPS accuracy	04.05.2016-05.05.2016
2.	Angular movement of antenna	05.05.2016-06.05.2016
3.	Dynamic GPS accuracy	12.05.2016
4.	Acquisition after initialization	10.05.2016
5.	Acquisition after power outrage	09.05.2016-10.05.2016
6.	Acquisition after interruption of GPS signals	13.05.2016-14.05.2016
7.	Acquisition after brief interruption of power	10.05.2016
8.	Protection of antenna	N/A
9.	Sensitivity during acquisition	13.05.2016
10.	Sensitivity during tracking	13.05.2016
11.	Interference immunity - L band	13.05.2016
12.	Interference immunity - S band	18.05.2016
13.	Slow speed update rate	12.05.2016
14.	High speed update rate	12.05.2016

6. TEST RESULT

No.	Test name	Ref. to page of test details	Result
1.	Static GPS accuracy	11	Passed
2.	Angular movement of antenna	14	Passed
3.	Dynamic GPS accuracy	17	Passed
4.	Acquisition after initialization	22	Passed
5.	Acquisition after power outrage	24	Passed
6.	Acquisition after interruption of GPS signals	26	Passed
7.	Acquisition after brief interruption of power	28	Passed
8.	Protection of antenna	N/A	N/A
9.	Sensitivity during acquisition	30	Passed
10.	Sensitivity during tracking	33	Passed
11.	Interference immunity - L band	35	Passed
12.	Interference immunity - S band	38	Passed
13.	Slow speed update rate	42	Passed
14.	High speed update rate	45	Passed

Test Engineer   D.Vasilev

7. CONCLUSION

I hereby confirm that GPS module integrated in EPIRB model MT603FG has been successfully tested in accordance with applied standard IEC 61108-1 Ed.2 (2003) and complies with the requirements of applied standard as demonstrated in this report.

Dated: May 24, 2016   Signed: V. Kovalenko

                                                                    Department manager

8. TEST DETAILS

8.1. Static GPS accuracy

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 04.05.2016-05.05.2016

Test Conditions:

Ambient temperature, °C:	19.1…25.8
Relative air humidity, %:	45…56
Atmospheric pressure, mm/Hg:	750…755
GPS signal:	real
Reference position:	44º 35'12.97036"N 33º 29'16.38945"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.3.1	5.6.4.1.1

Test equipment (as per Table 9-1): 3, 6, 9, 10.

Test description

EUT was installed in place with known position and position fix measurements were taken once per second over a period of 24 hours.

Fig. 8.1-1 – General view of set-up.
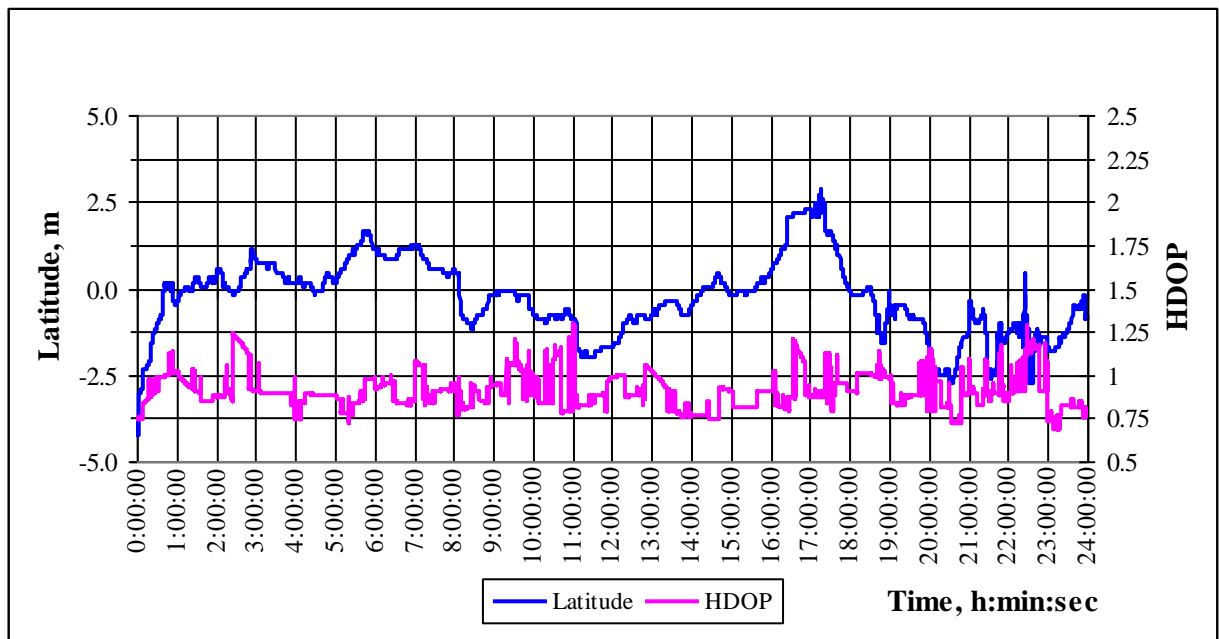
Fig. 8.1-2 – Latitude offset over 24 h.
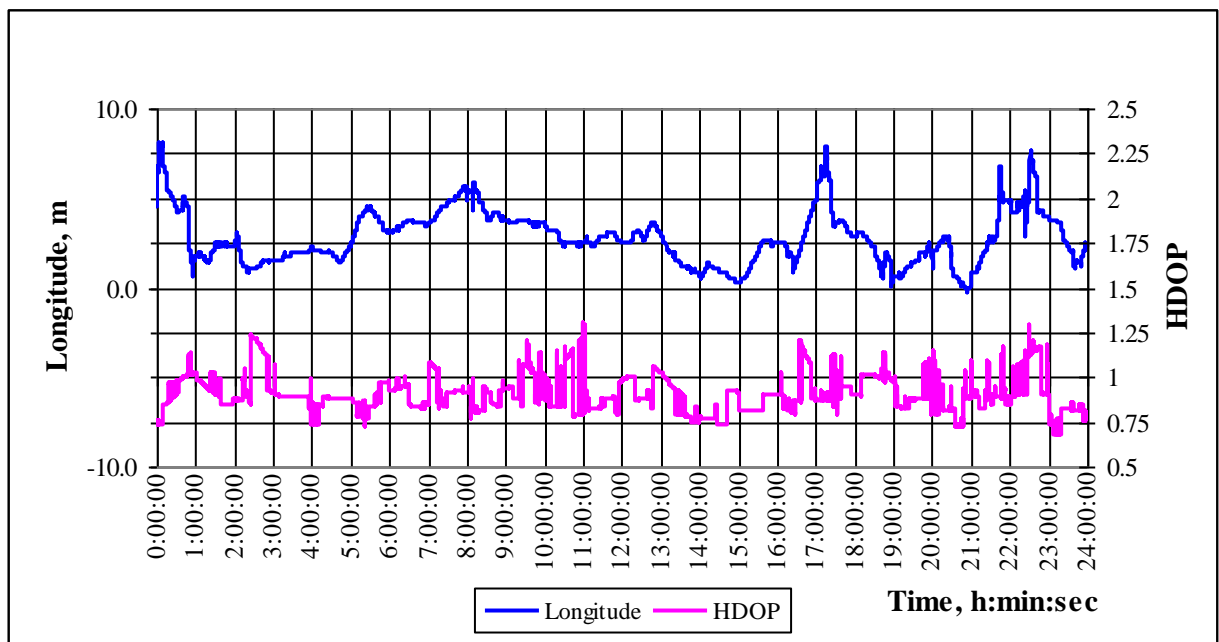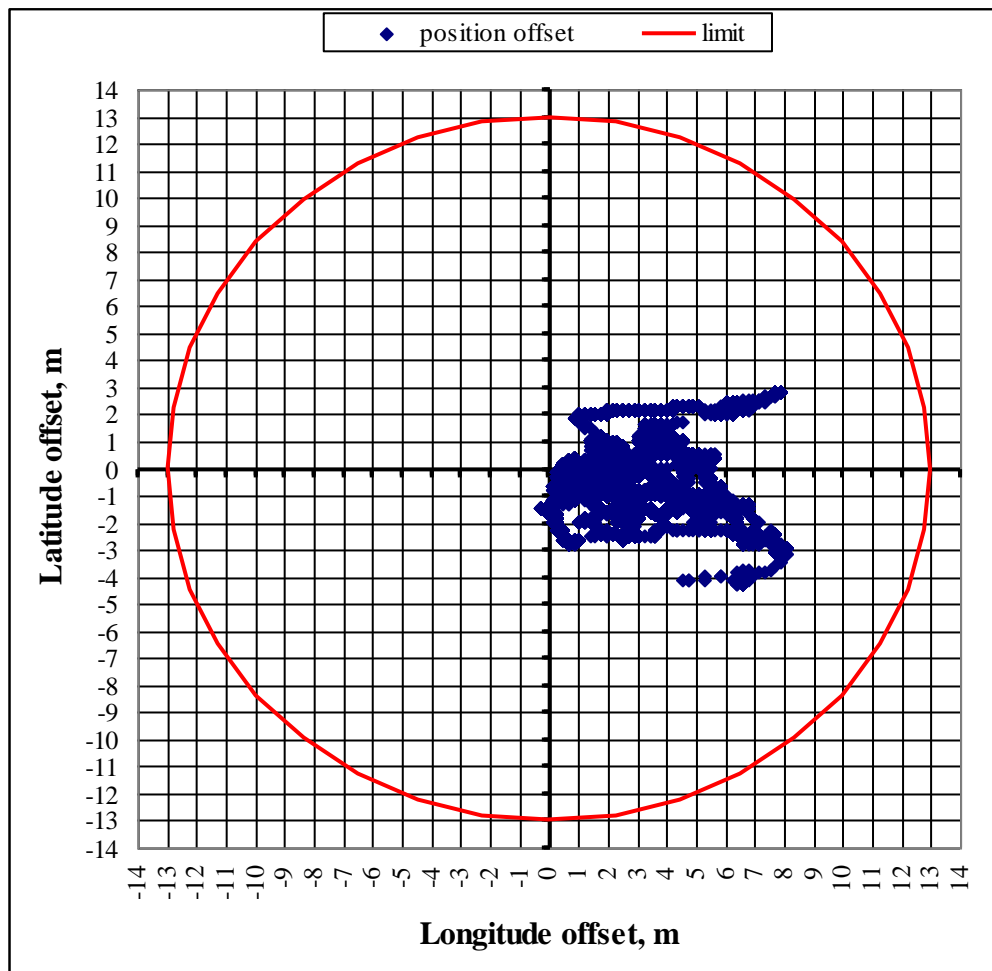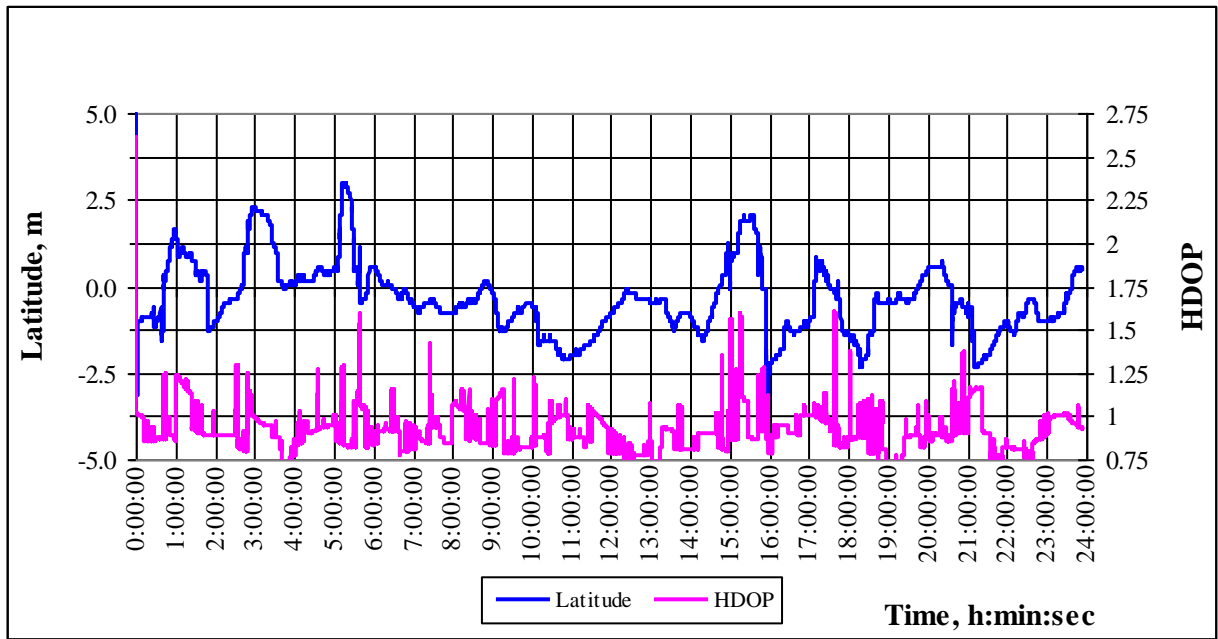

Fig. 8.1-3 – Longitude offset over 24 h.

Fig. 8.1-4 – Position offset.

Maximum position offset for 95% measurements in conditions HDOP<4 (or PDOP<6) is 8.7 m.

Test conclusion:

Passed with criteria: absolute horizontal position accuracy is within 13 m (95%), having discarded measurements taken in conditions of HDOP ≥ 4 (or PDOP ≥6).

8.2. Angular movement of antenna

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 05.05.16-06.05.16

Test Conditions:

Ambient temperature, °C:	18.4…25.3
Relative air humidity, %:	46…65
Atmospheric pressure, mm/Hg:	752…755
GPS signal:	real
Reference position:	44º 35'12.97036"N 33º 29'16.38945"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.3.1	5.6.4.2

Test equipment (as per Table 9-1): 3, 9, 10.

Test description

EUT was installed on the roll simulator and then simulator was activated with rolling rate 22.5º per 8 seconds. Position fix measurements were taken once per second over a period of 24 hours.

Fig. 8.2-1 – General view of set-up .
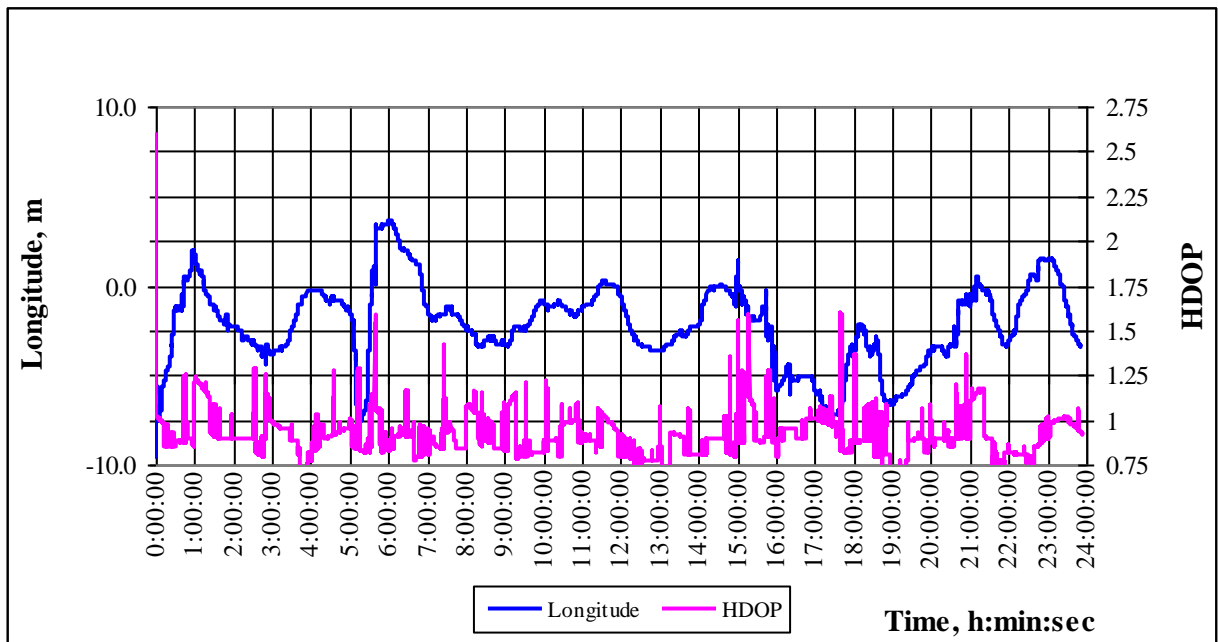
Fig. 8.2-2 – Latitude offset over 24 h.

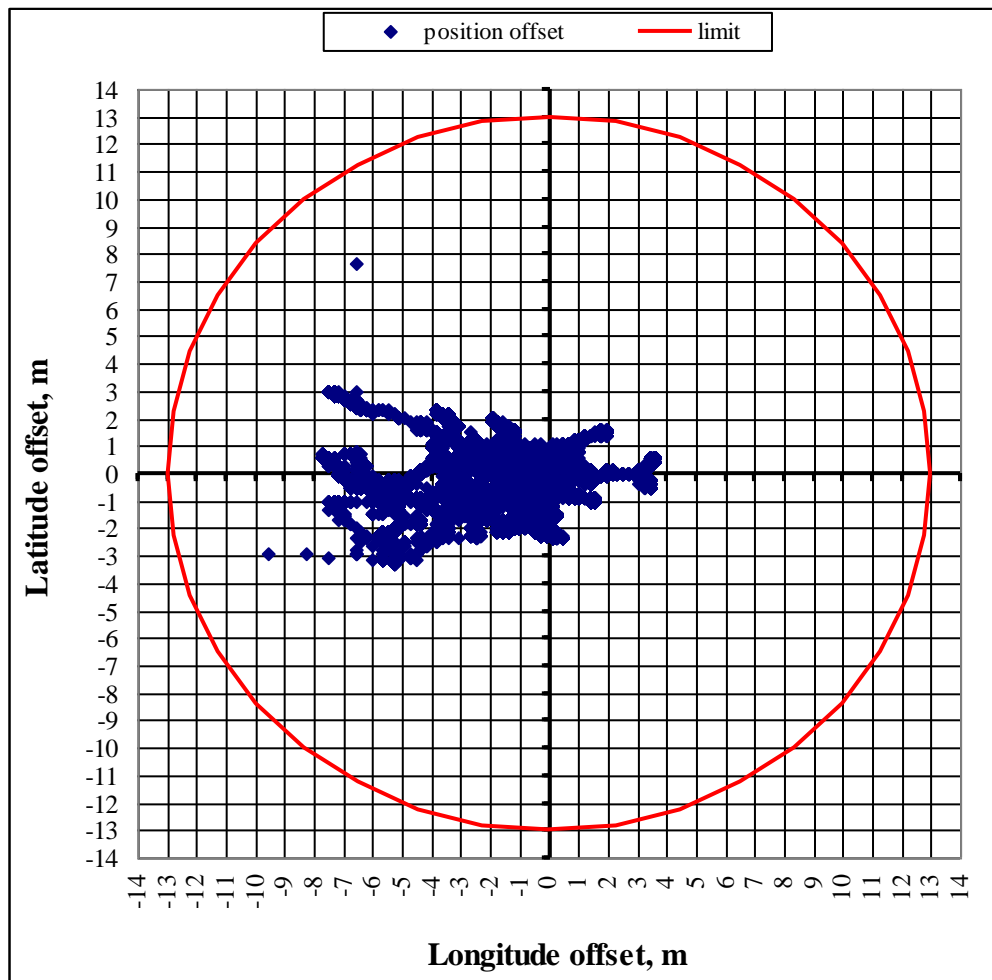**Fig. 8.2-3 – Longitude offset over 24 h.**

Fig. 8.2-4 – Position offset.

Maximum position offset for 95% measurements in conditions HDOP<4 (or PDOP<6) is 10.1 m.

Test conclusion:

Passed with criteria: absolute horizontal position accuracy is within 13 m (95%), having discarded measurements taken in conditions of HDOP ≥ 4 (or PDOP ≥6).

8.3. Dynamic GPS accuracy

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603FG

Test Date: 12.05.2016

Test Conditions:

Ambient temperature, °C:	18.1…21.5
Relative air humidity, %:	62…66
Atmospheric pressure, mm/Hg:	751
GPS signal:	simulated

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.3.2	5.6.4.3.1

Referenced Standard: IEC 60721-3-6

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

The test was performed using GPS signal simulation to simulate conditions a) and b):

a) a fully locked and settled EUT travelling in a straight line at 48 knots ±2 knots for a minimum at least of 1,2 min which is reduced to 0 knots in the same straight line in 5 seconds;

b) a fully locked and settled EUT travelling at least 100 m at 24 knots ±1 knot in a straight line then subjected, for at least 2 minutes, to smooth deviations either side of the straight line of approximately 2 m at a period of 11 s to 12 s shall remain in lock and follow the actual position to within a lane of 30 m wide centered on the mean direction of motion.

For both cases described above the rest position was established by providing the reference inputs from a simulator.
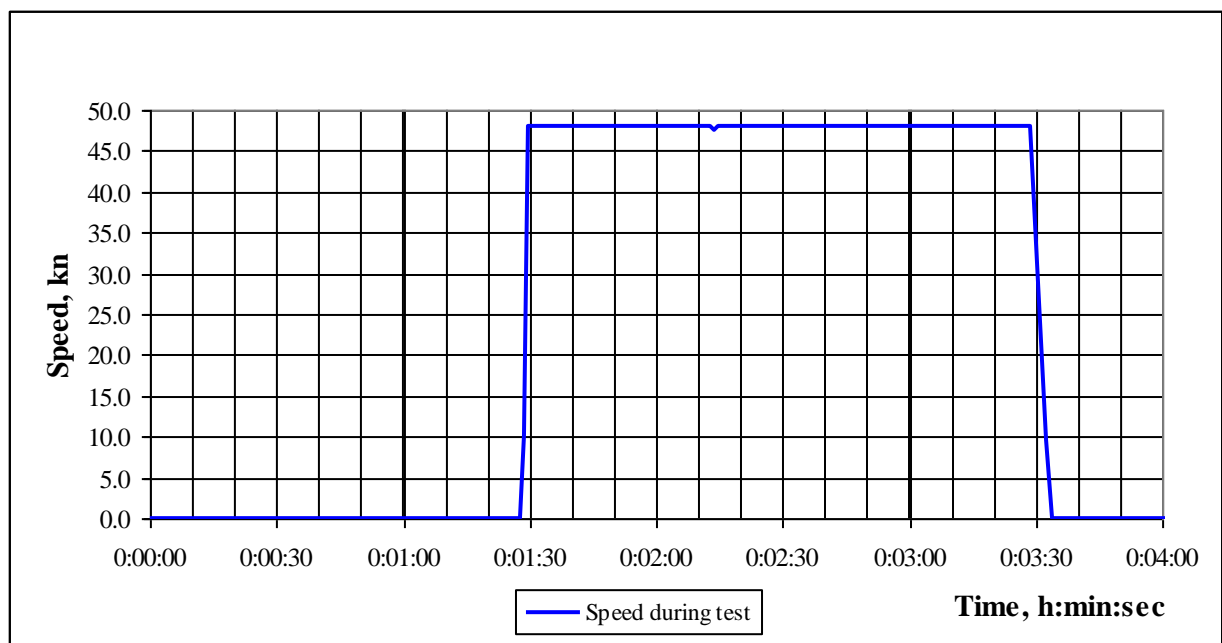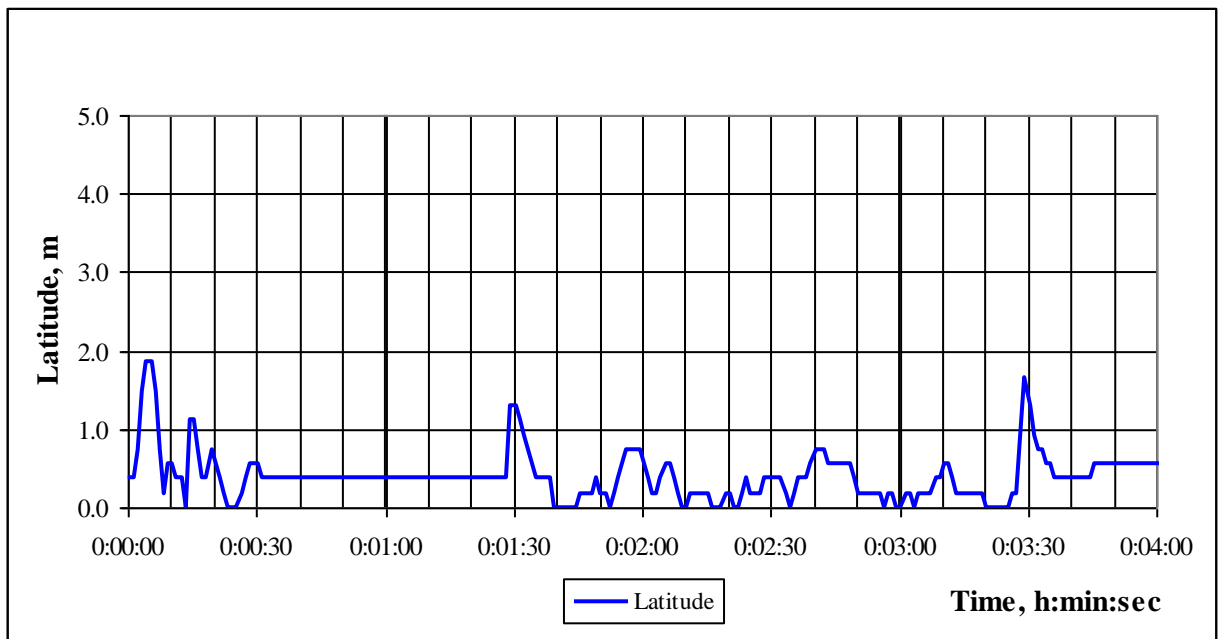

Fig. 8.3-1 – Speed over ground. Case a.
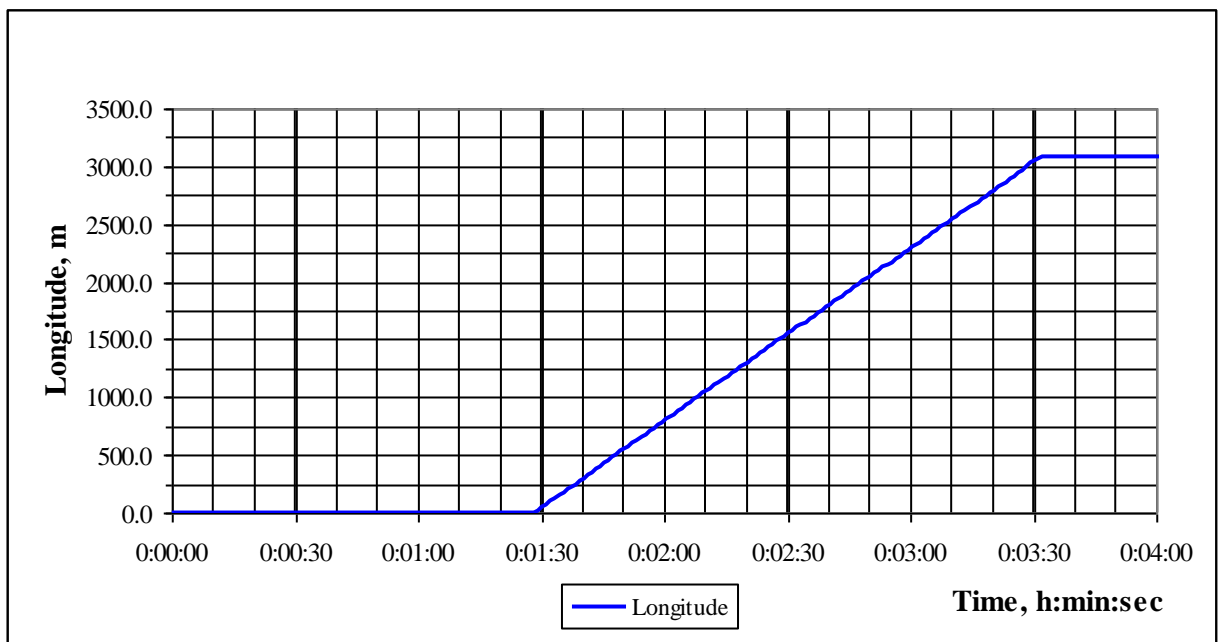
Fig. 8.3-2 – Latitude. Case a.

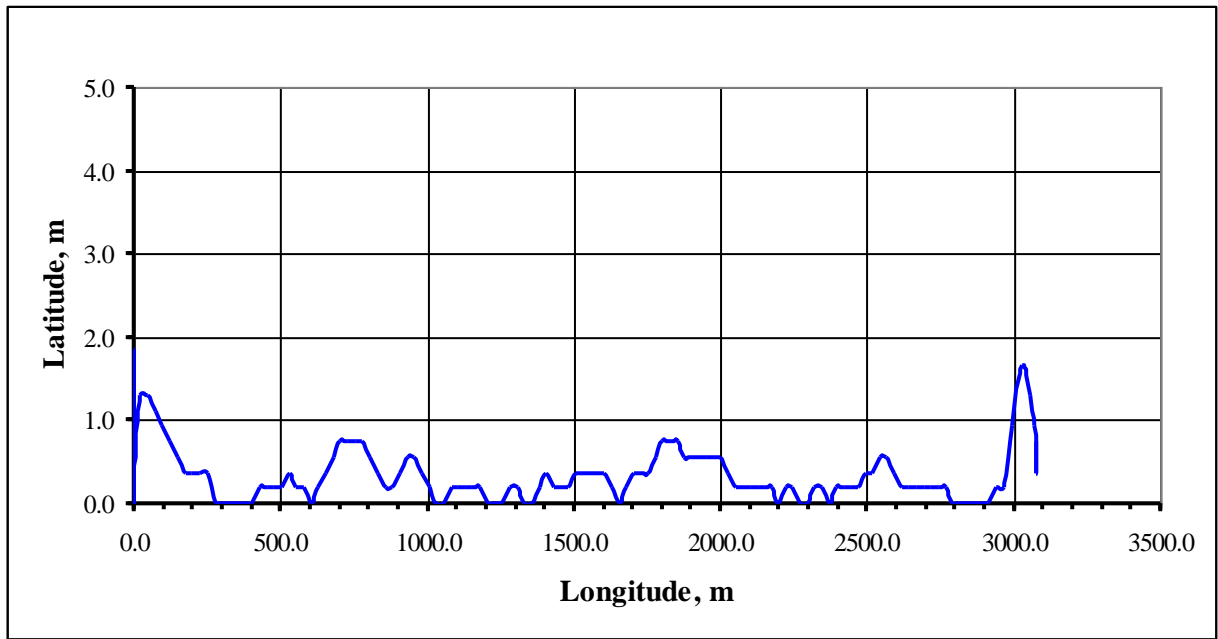
Fig. 8.3-3 – Longitude. Case a.

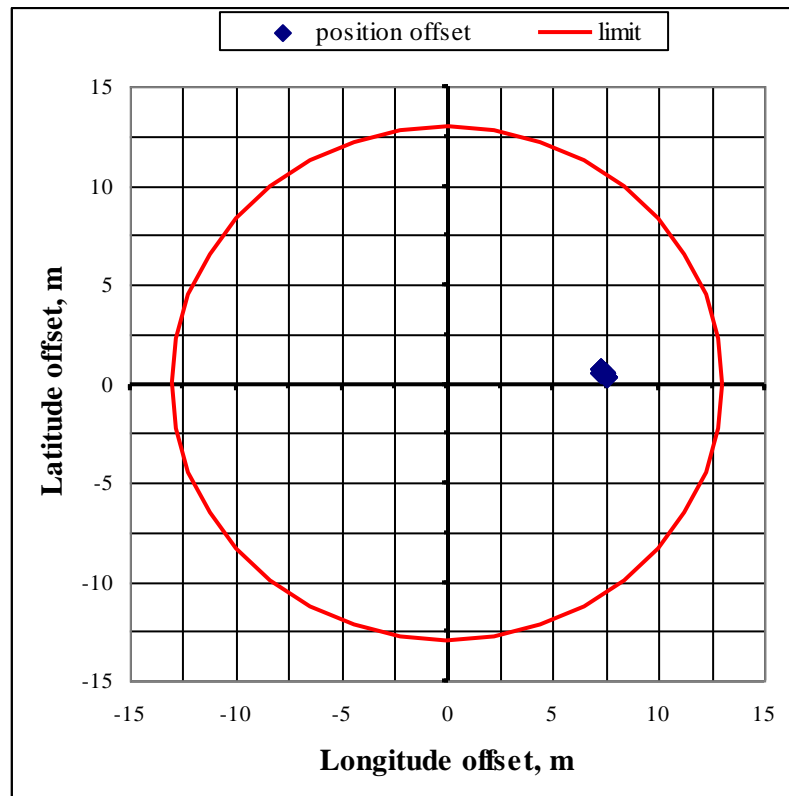**Fig. 8.3-4 – Position during test. Case a.**

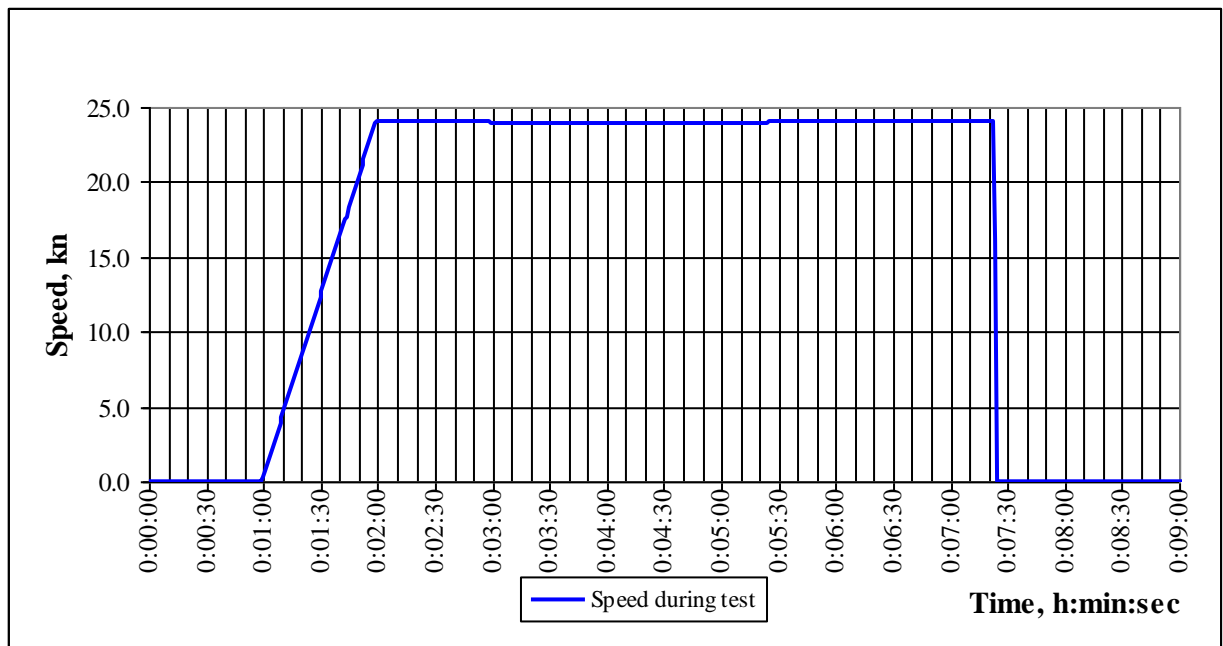**Fig. 8.3-5 – Position offset from the final position 10 s after coming to rest. Case a.**
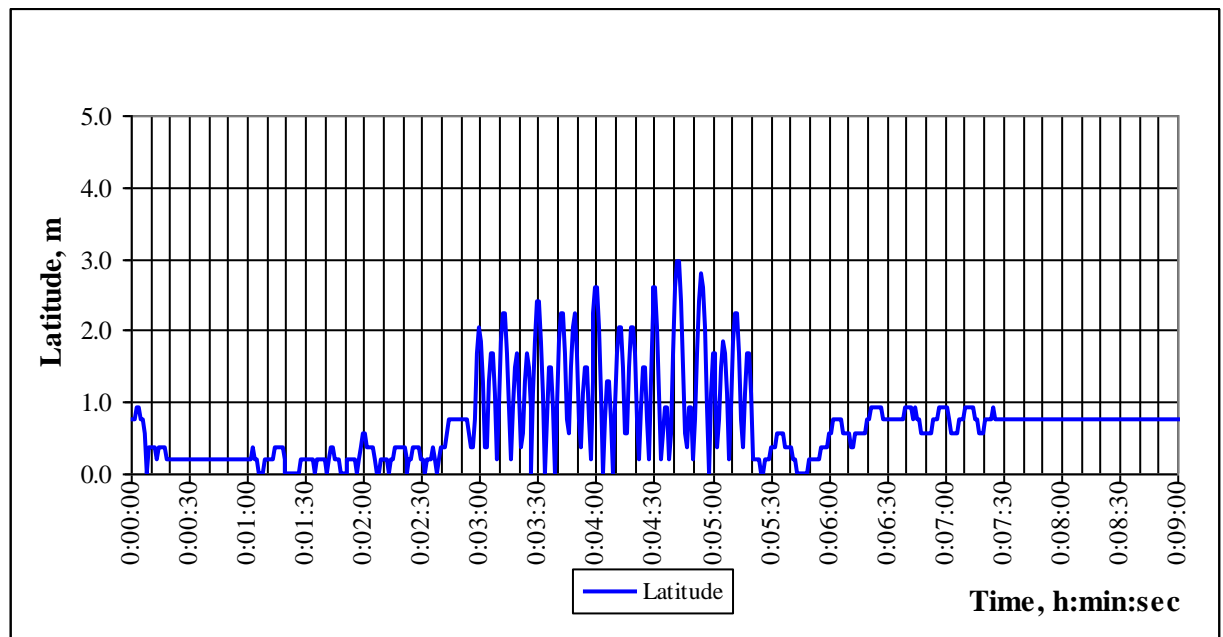
Fig. 8.3-6 – Speed over ground. Case b .

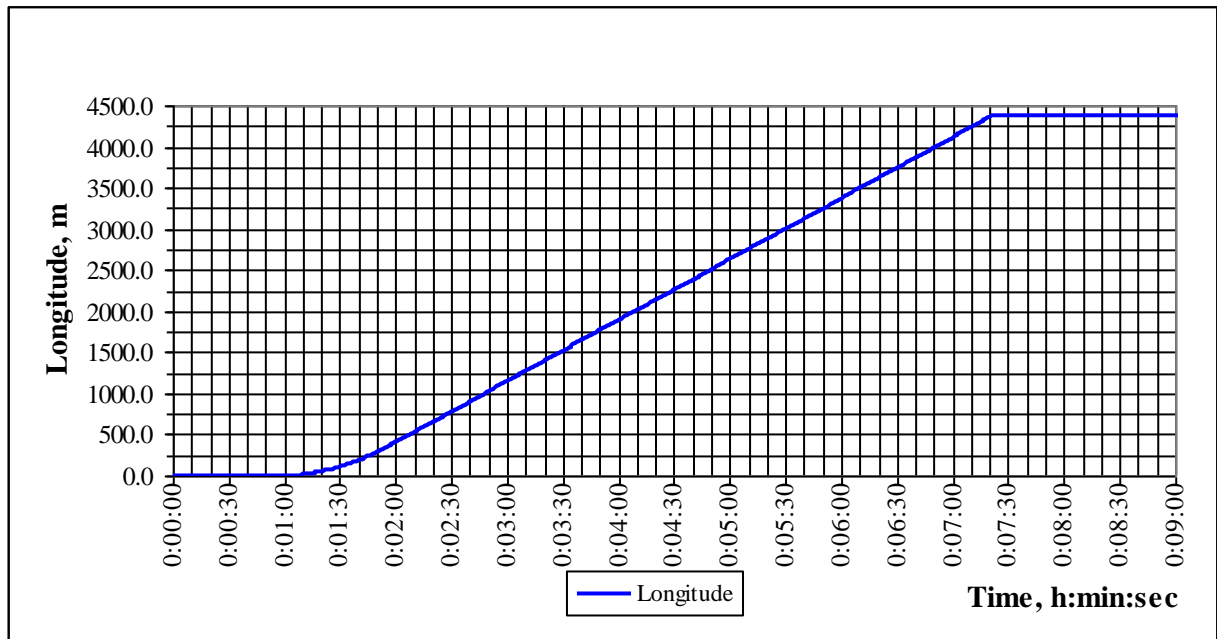**Fig. 8.3-7 – Latitude. Case b.**
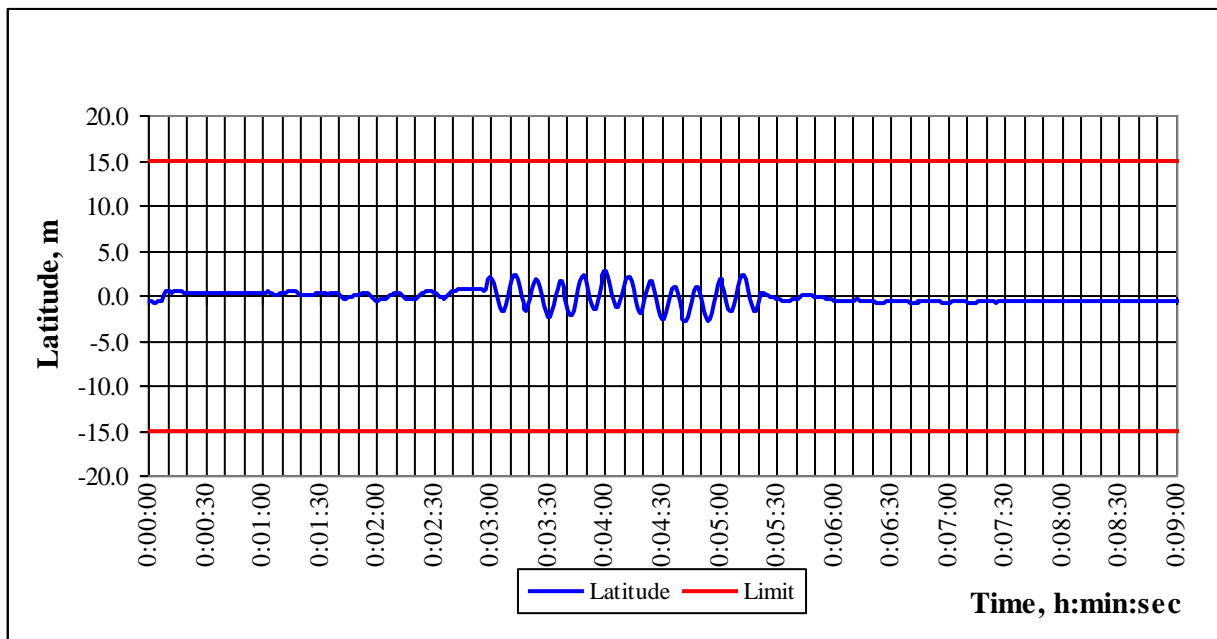
Fig. 8.3-8 – Longitude. Case b.

Fig. 8.3-9 – Position offset. Case b.

The absolute horizontal position offset was 7.6 m in case a) and 2.6 m in case b). Measurements taken in conditions of HDOP > 4 were discarded.

Test conclusion:

Passed with criteria: a) EUT's position offset is less than ±13m from the final position 10 s after coming to rest.

b) EUT remains in lock and follow the actual position to within a lane of 30 m wide centered on the mean direction of motion.

8.4. Acquisition

8.4.1.　　　　Condition A - Initialisation

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 10.05.2016

Test Conditions:

Ambient temperature, °C:	19.1…19.8
Relative air humidity, %:	54…57
Atmospheric pressure, mm/Hg:	758
GPS signal:	simulated

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.4	5.6.5.1

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

EUT was turned on with GPS simulated position as 44º 35'12"N 35º 29'17"E. After EUT fixed position GPS simulator was set to position 44º 35'12"N 98º 29'17"E, i.e. 4872 km away to get EUT in initialization mode. EUT provided valid position within time less than 30 minutes. A performance was carried out after 30 minutes of operation.

The maximum position offset was 24.4 m for 95% measurements, with HDOP<4.
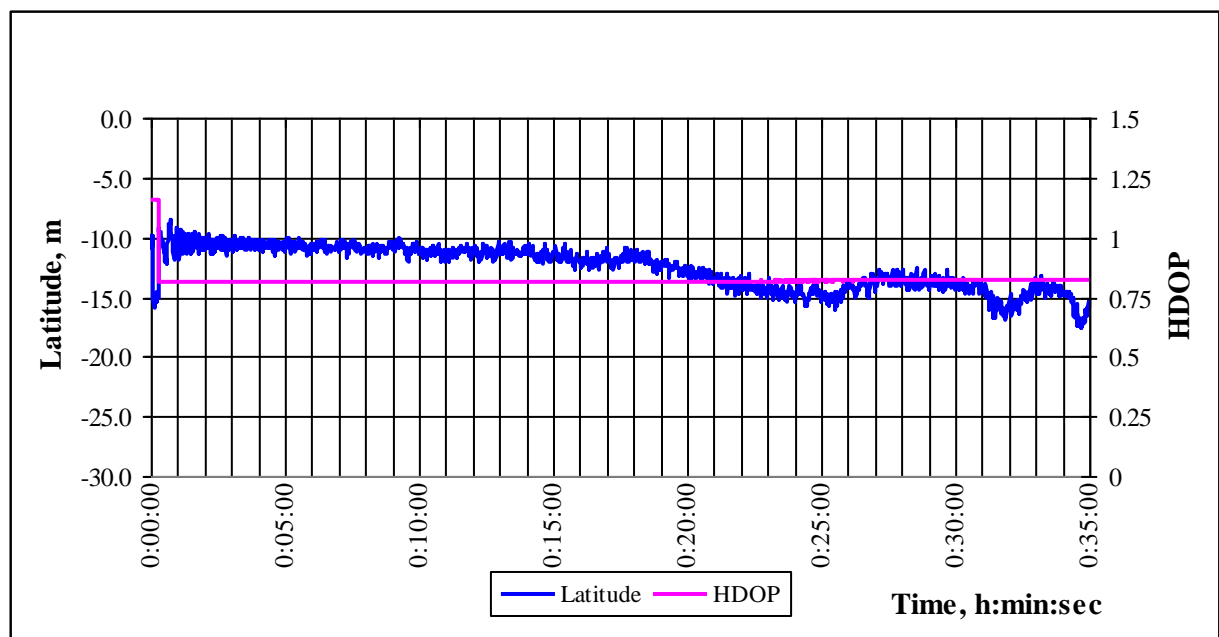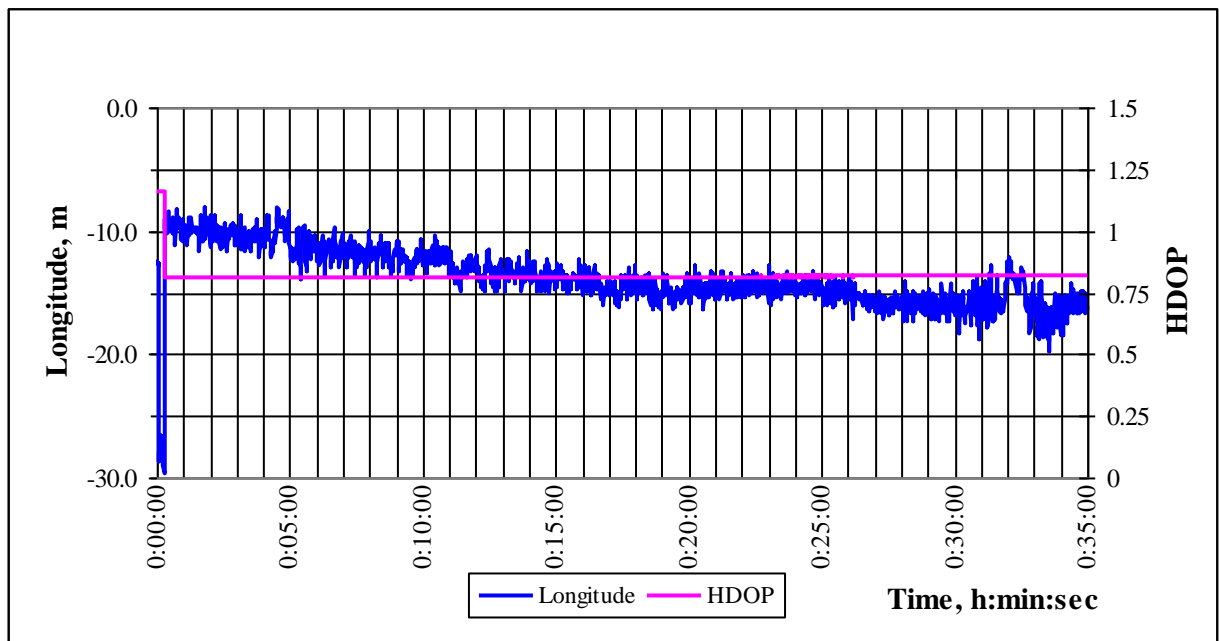

Fig. 8.4.1-1 – Latitude offset.
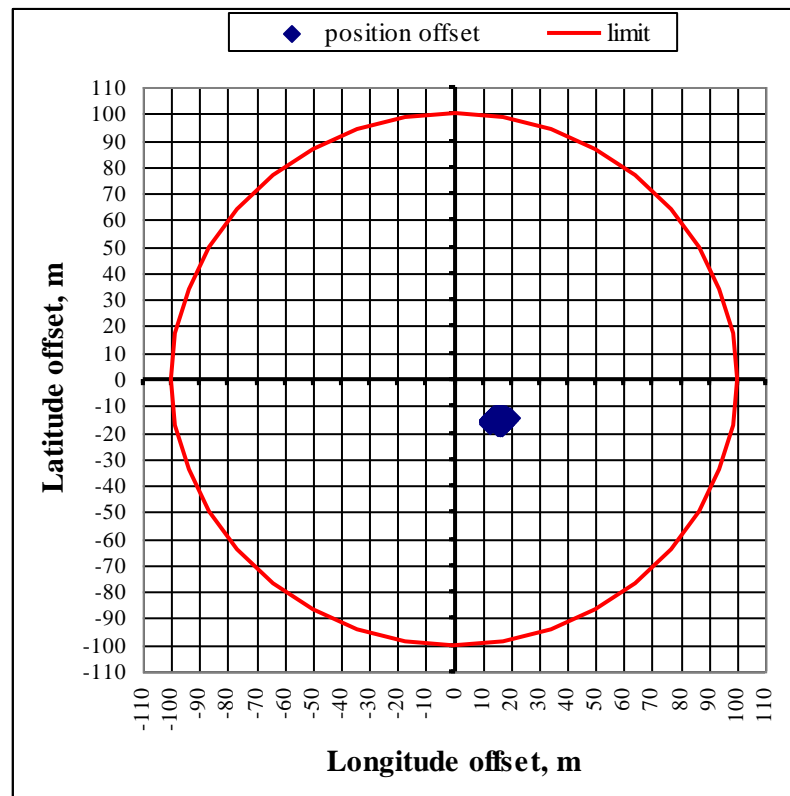
Fig. 8.4.1-2 – Longitude offset.

Fig. 8.4.1-3 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.4.2.   Condition B - Power outage

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 09.05.2016-10.05.2016

Test Conditions:

Ambient temperature, °C:	17.2…28.3
Relative air humidity, %:	45…56
Atmospheric pressure, mm/Hg:	758…760
GPS signal:	real
Reference position:	44º 35'12.97036"N 33º 29'16.38945"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.4	5.6.5.2

Test equipment (as per Table 9-1): 3, 9, 10.

Test description

EUT was turned on with GPS position as 44º 35'12.97036"N 33º 29'16.38945"E. After EUT fixed position EUT was turned off and the battery was disconnected for 24.5 hours period. Then the battery was connected and EUT was turned on. EUT provided valid position within time less than 5 minutes. A performance was carried out after 5 minutes of operation.

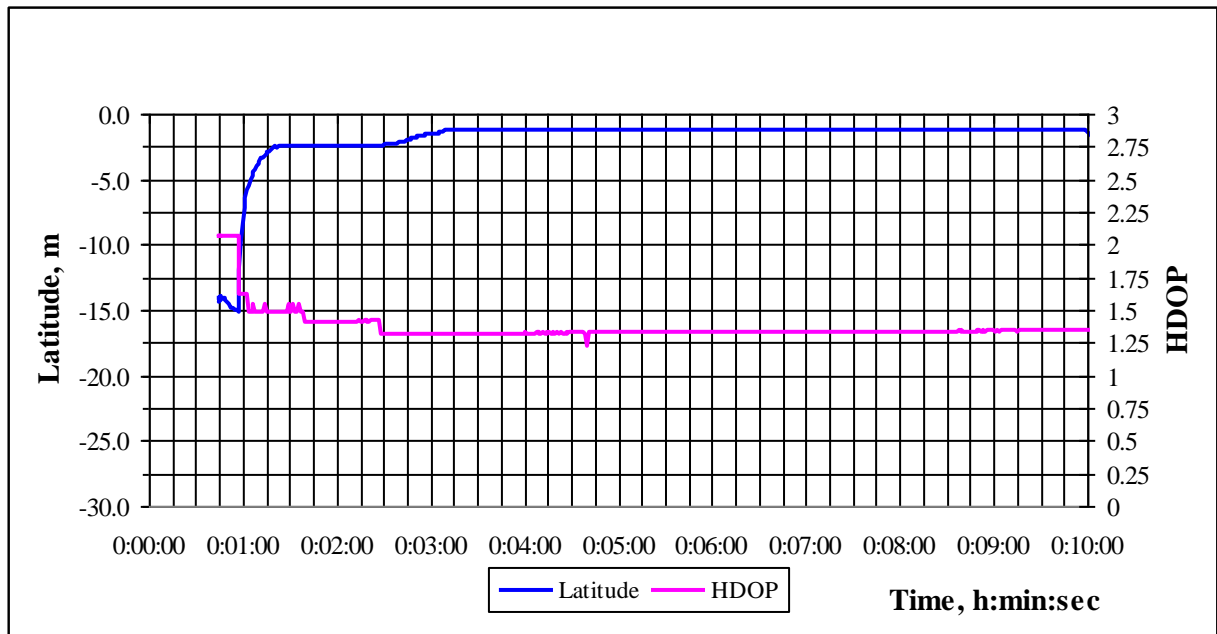The maximum position offset was 3.0 m for 95% measurements, with HDOP<4.
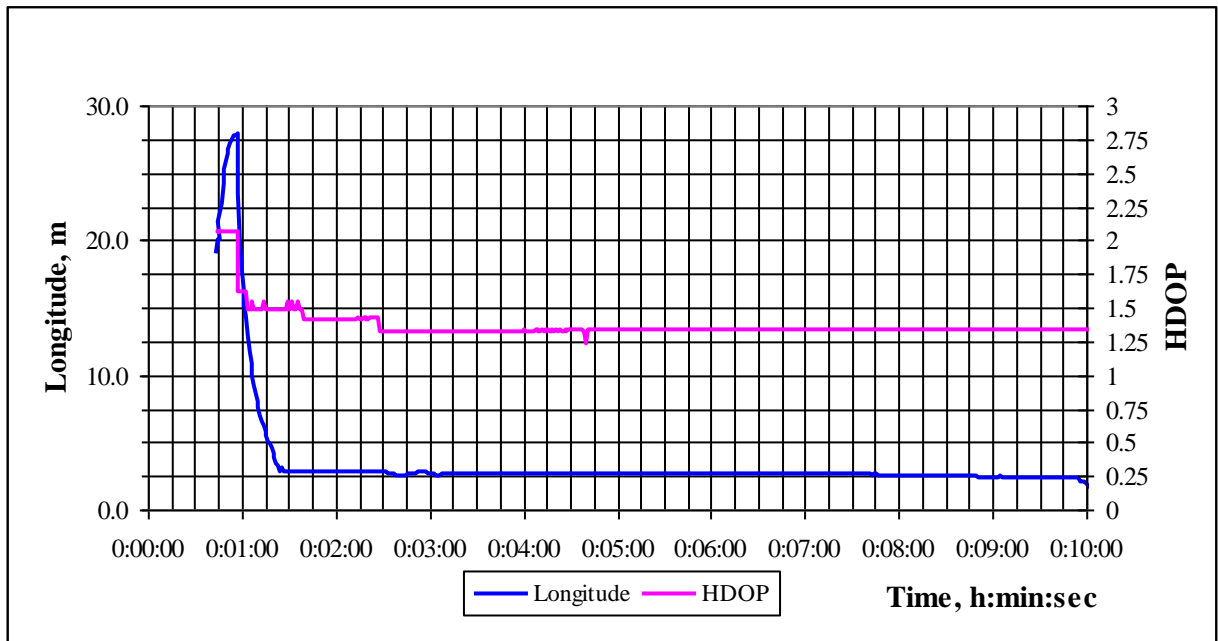

Fig. 8.4.2-1 – Latitude offset.

Ф.П4.2-238

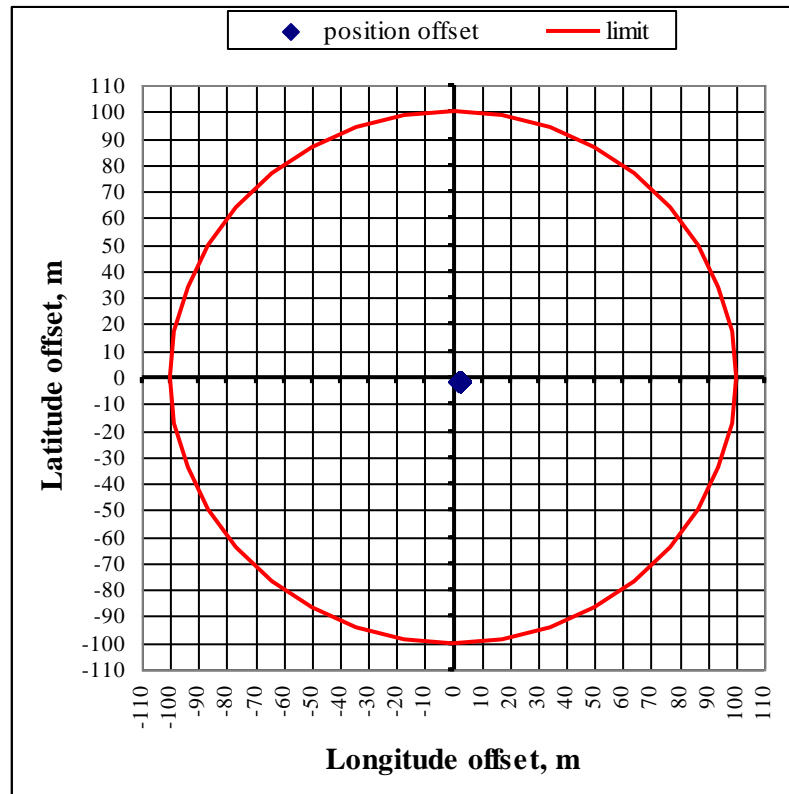**Fig. 8.4.2-2 – Longitude offset.**

Fig. 8.4.2-3 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.4.3.   Condition C - Interruption of GPS signals

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 13.05.16-14.05.16

Test Conditions:

Ambient temperature, °C:	17.4…21.4
Relative air humidity, %:	61…72
Atmospheric pressure, mm/Hg:	748…750
GPS signal:	simulated

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.4	5.6.5.3

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

EUT was turned on with GPS simulated position as 44º 35'12"N 33º 29'17"E. After EUT fixed position GPS simulator was turned off for 24.5 hours with EUT continuing operating. Then GPS simulator was turned on. EUT provided valid position within time less than 5 minutes. A performance was carried out after 5 minutes of operation.

The maximum position offset was 26.0 m for 95% measurements, with HDOP<4.
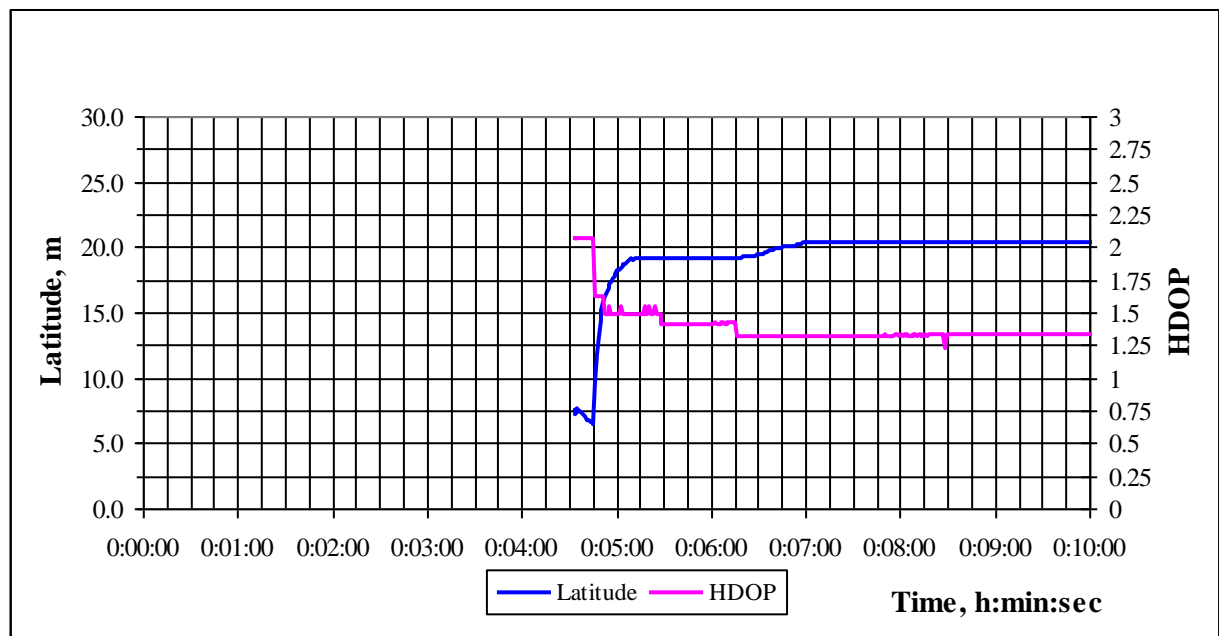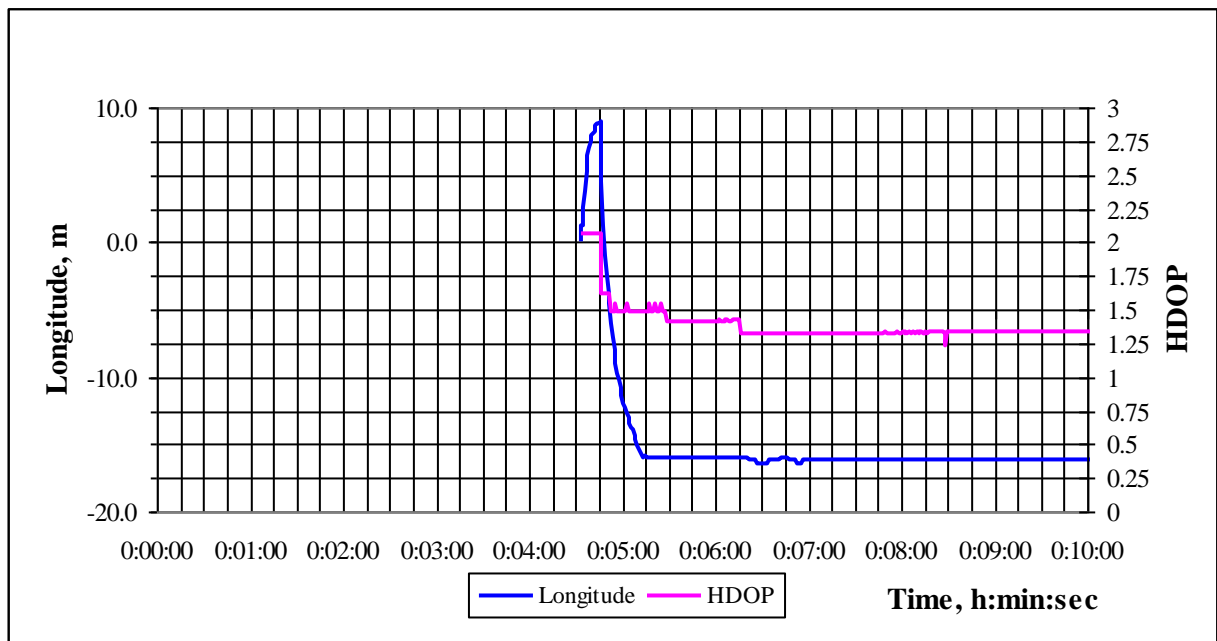

Fig. 8.4.3-1 – Latitude offset.
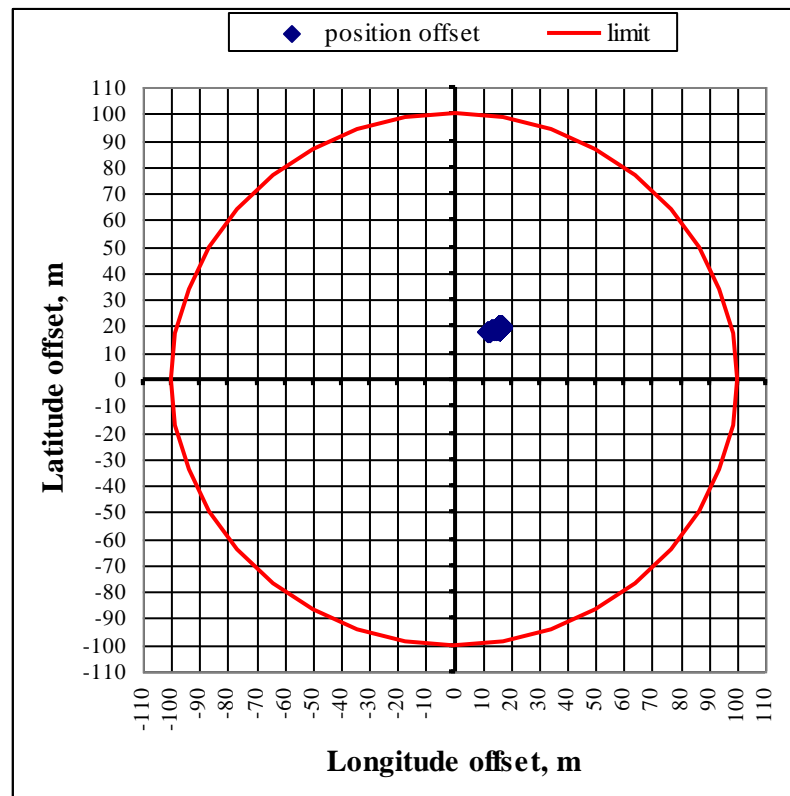
Fig. 8.4.3-2 – Longitude offset.

Fig. 8.4.3-3 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.4.4.   Condition D - Brief interruption of power

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 10.05.16

Test Conditions:

Ambient temperature, °C:	28.3
Relative air humidity, %:	45
Atmospheric pressure, mm/Hg:	758
GPS signal:	real
Reference position:	44º 35'12.97036"N 33º 29'16.38945"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.4	5.6.5.4

Test equipment (as per Table 9-1): 3, 9, 10.

Test description

EUT was turned on with GPS position as 44º 35'12.97036"N 33º 29'16.38945"E. After EUT fixed position EUT was turned off and the battery was disconnected for 60 seconds. Then the battery was connected and EUT was turned on. EUT provided valid position within time less than 2 minutes. A performance was carried out after 2 minutes of operation.

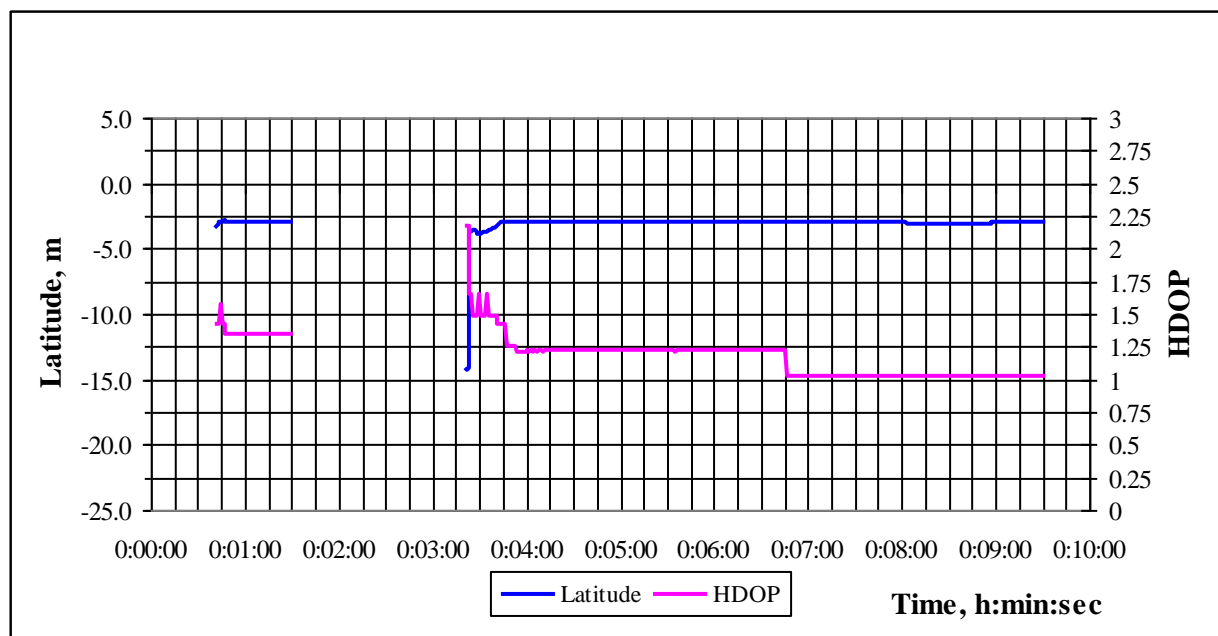The maximum position offset was 3.3 m for 95% measurements, with HDOP<4.
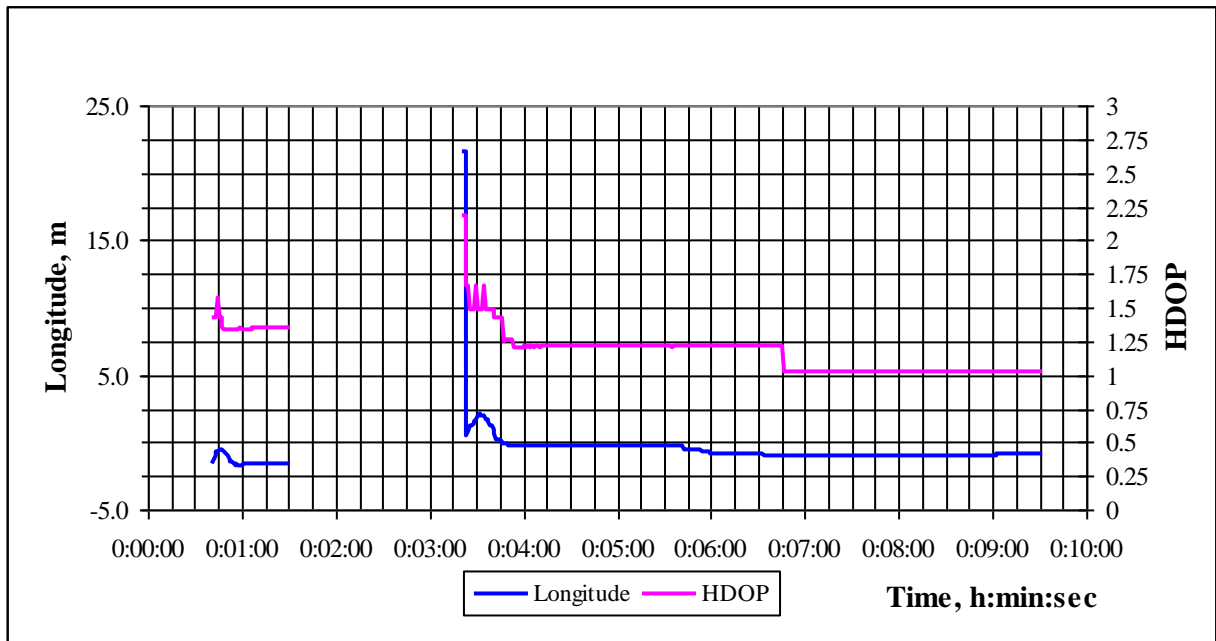

Fig. 8.4.4-1 – Latitude offset.
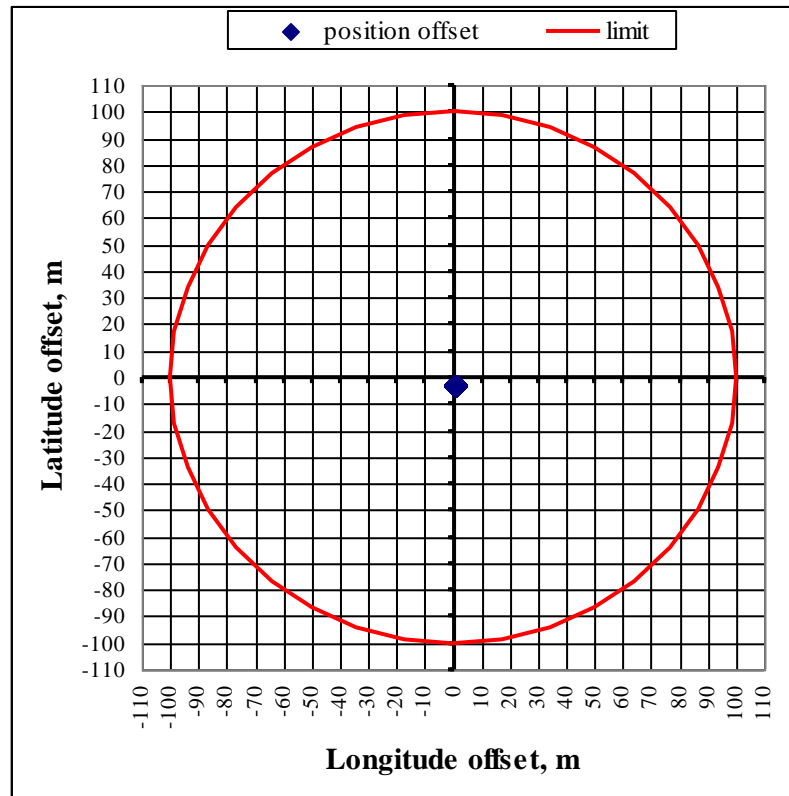
Fig. 8.4.4-2 – Longitude offset.

Fig. 8.4.4-3 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.5. Sensitivity

8.5.1.   Sensitivity during acquisition

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 13.05.16

Test Conditions:

Ambient temperature, °C:	19.3…19.7
Relative air humidity, %:	59…60
Atmospheric pressure, mm/Hg:	746…747
GPS signal:	simulated
Reference position:	44º 35'12"N 33º 29'17"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.7	5.6.8.1

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

EUT was turned on with GPS simulated position as 44º 35'12"N 33º 29'17"E. Output power of GPS simulator was adjusted to provide level at EUT location as -128 dBm taking to account receiving antenna -5 dBi. Then performance check was carried out.

The maximum position offset was 27.8 m for 95% measurements, with HDOP<4.
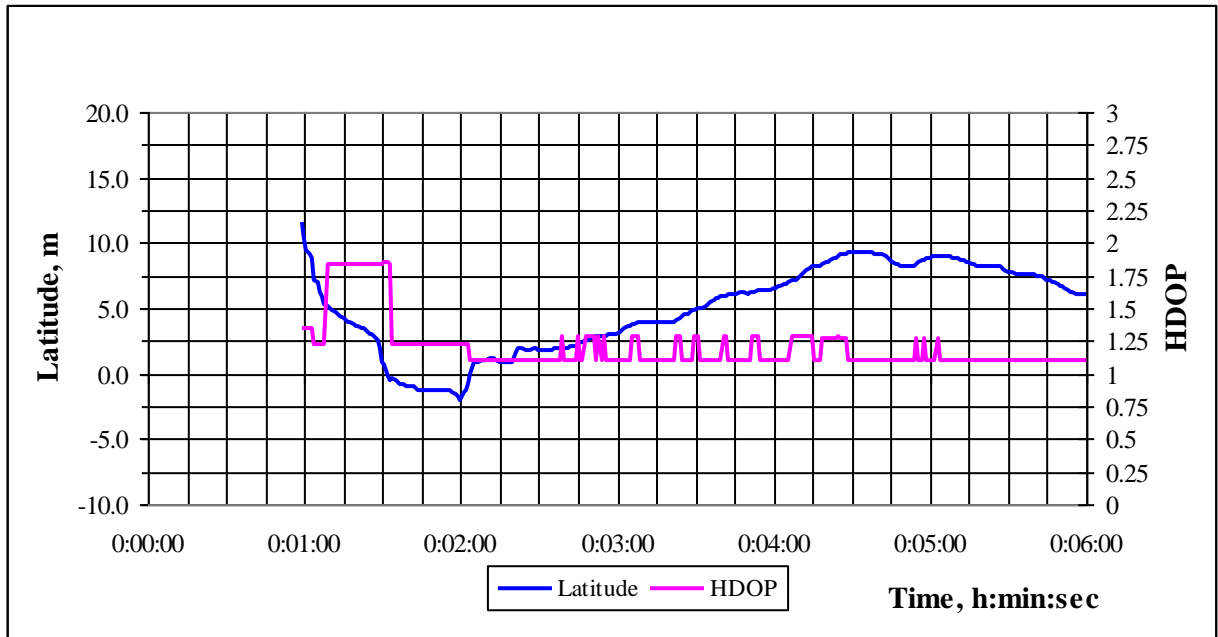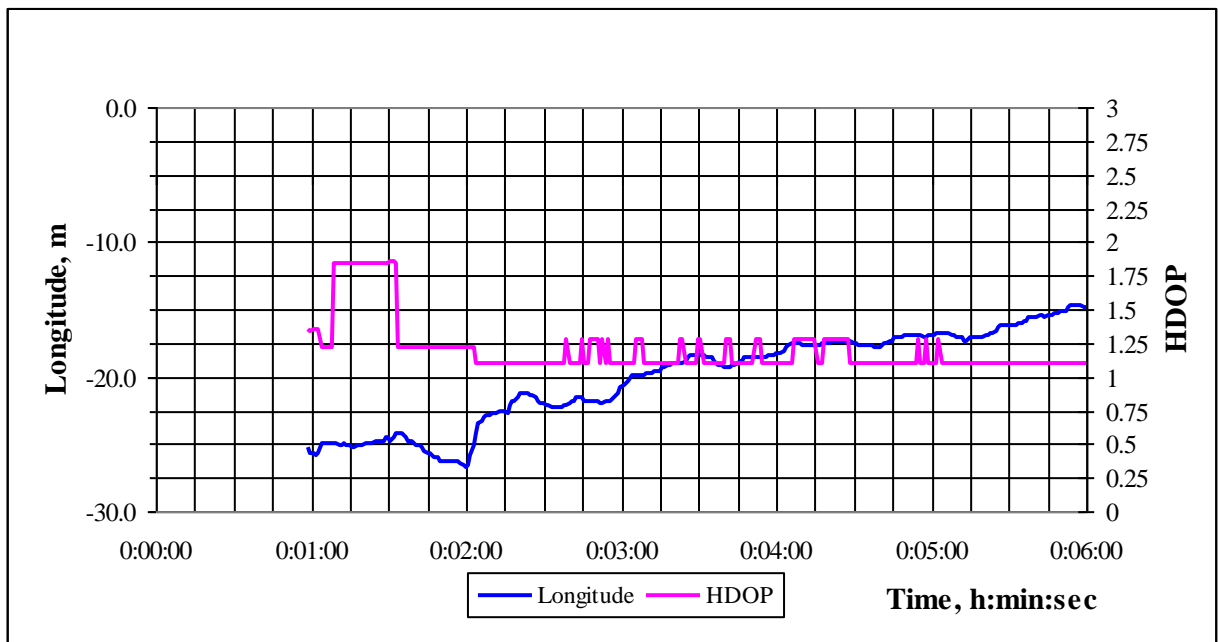

Fig. 8.5.1-1 –   General view of set-up.

Fig. 8.5.1-2 – Latitude offset.

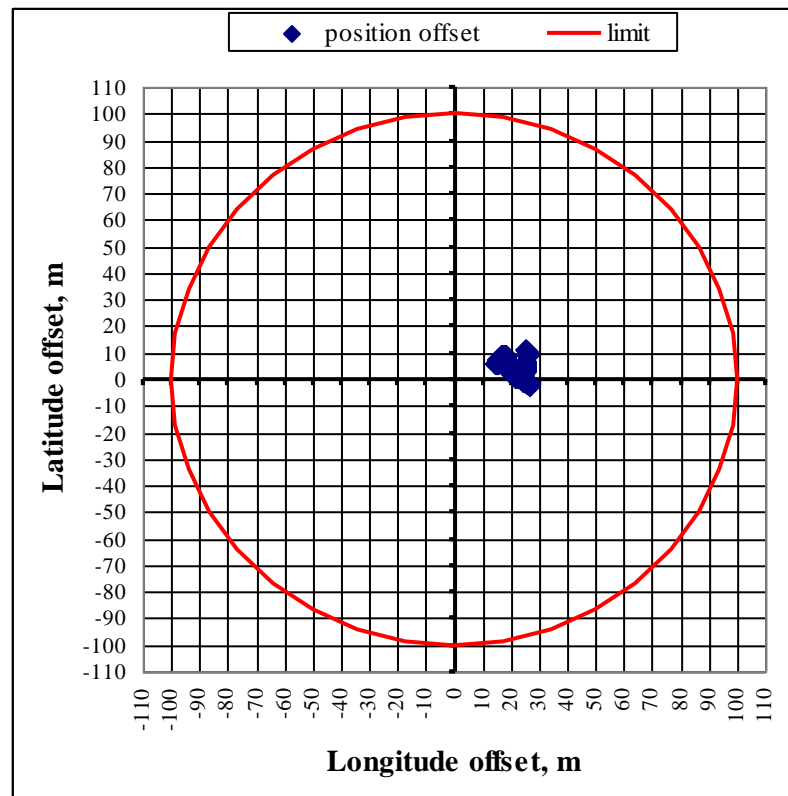
Fig. 8.5.1-3 – Longitude offset.

Fig. 8.5.1-4 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.5.2.   Sensitivity during tracking

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 20.05.14

Test Conditions:

Ambient temperature, °C:	19.4
Relative air humidity, %:	61
Atmospheric pressure, mm/Hg:	746
GPS signal:	simulated
Reference position:	44º 35'12"N 33º 29'17"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	5.6.8.2	4.3.7

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

After test *8.5.1 Sensitivity during acquisition* output power of GPS simulator was adjusted to provide level at EUT location as -136 dBm taking to account receiving antenna -5 dBi. Then performance check was carried out.

The maximum position offset was 32.1 m for 95% measurements, with HDOP<4.
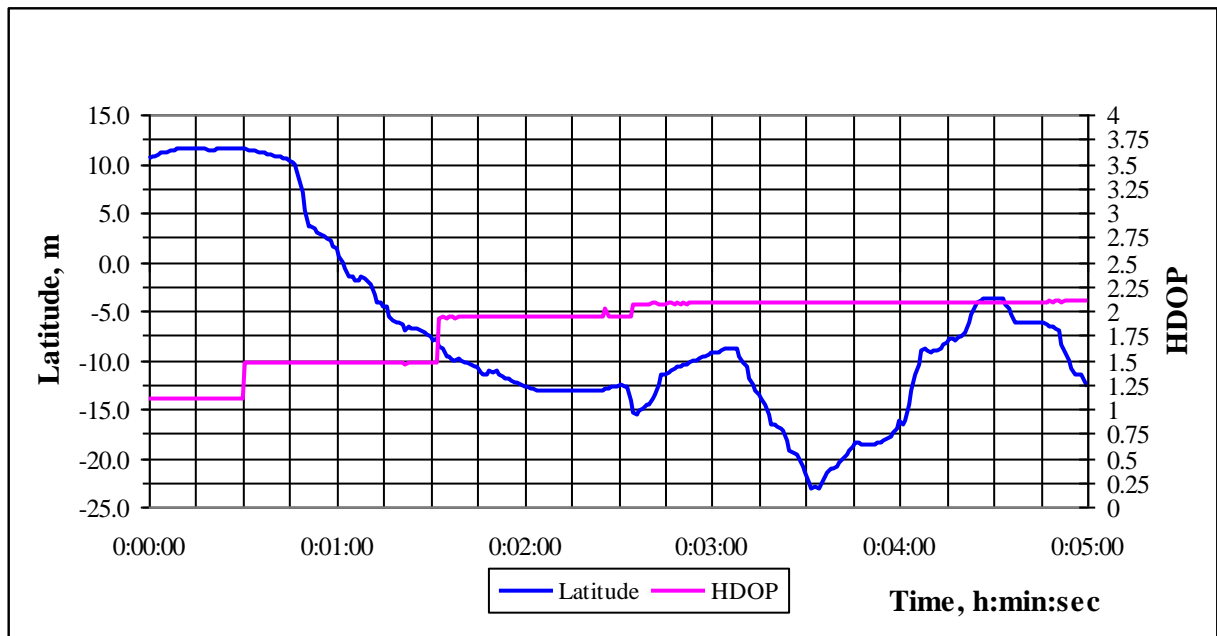
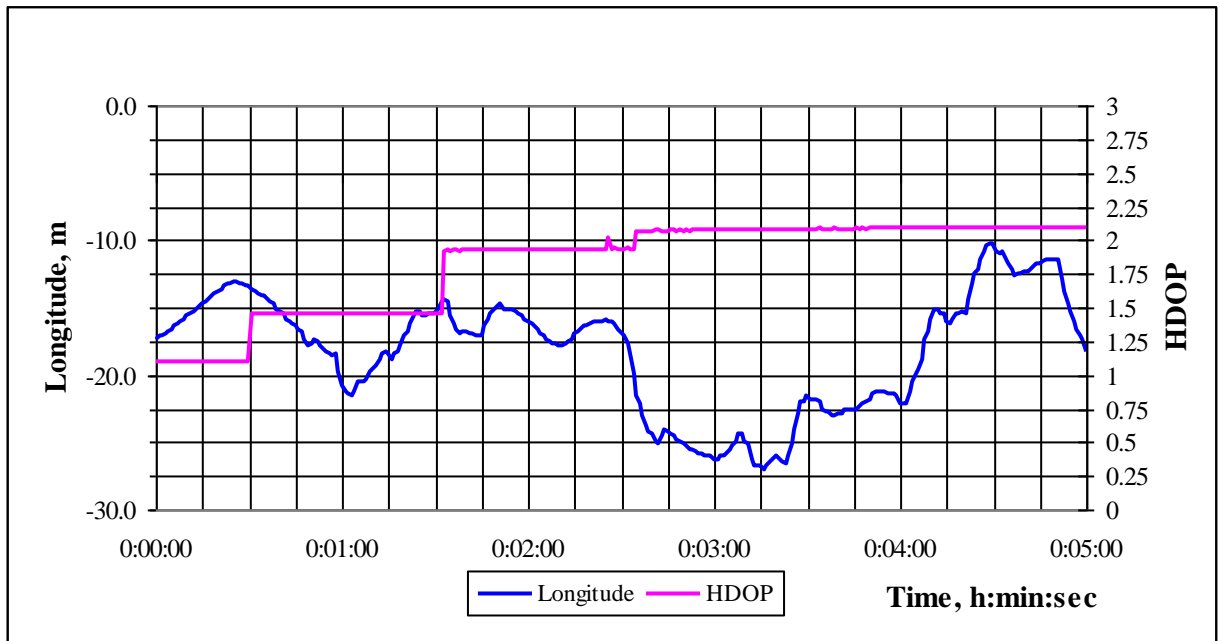

Fig. 8.5.2-1 – Latitude offset.
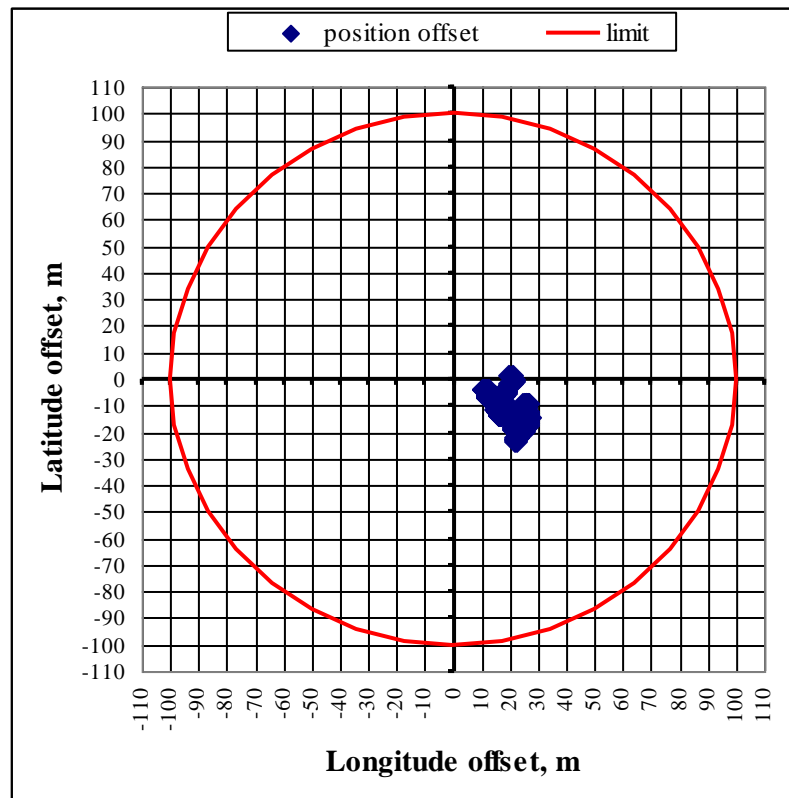
Fig. 8.5.2-2 – Longitude offset.

Fig. 8.5.2-3 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.6. Interference immunity

8.6.1.   L band

EUT:
Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 26.05.14

Test Conditions:
Ambient temperature, °C:	19.4
Relative air humidity, %:	61
Atmospheric pressure, mm/Hg:	746
GPS signal:	simulated
Reference position:	44º 35'12"N 33º 29'17"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.8.a	5.6.9.1

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 8, 9, 10.

Test description

In a normal operating mode the EUT was subjected to radiation of 3 W/m^2 at a frequency of 1636,5 MHz for 10 min. Then signal was removed and performance check was carried out.

The maximum position offset was 21.3 m for 95% measurements, with HDOP<4.
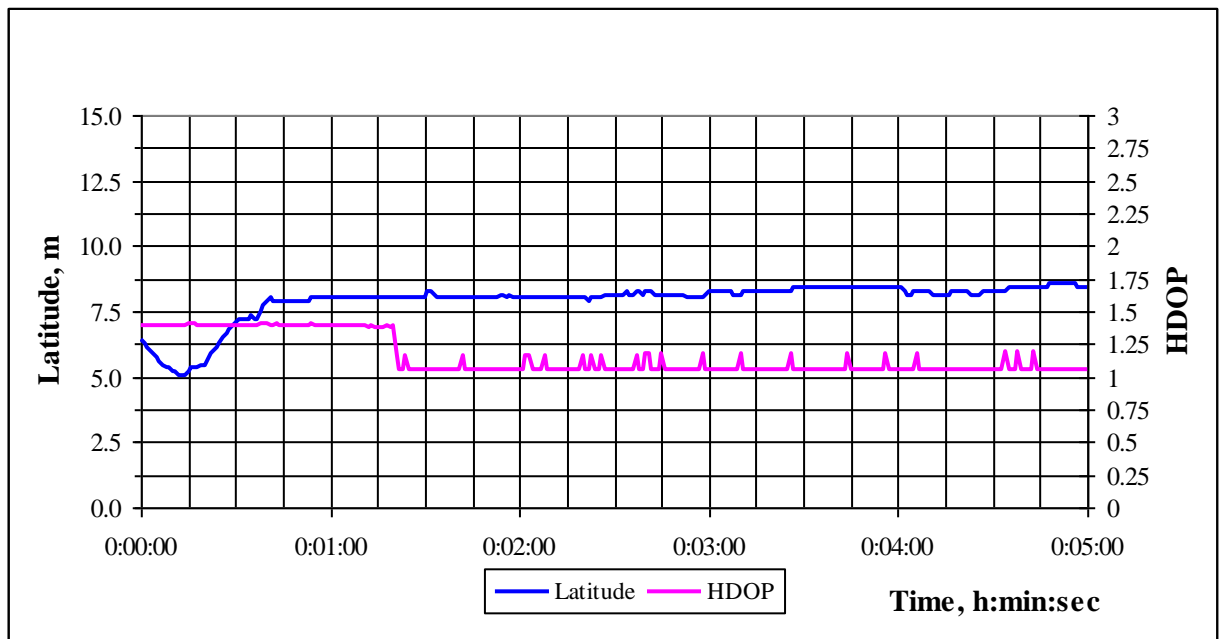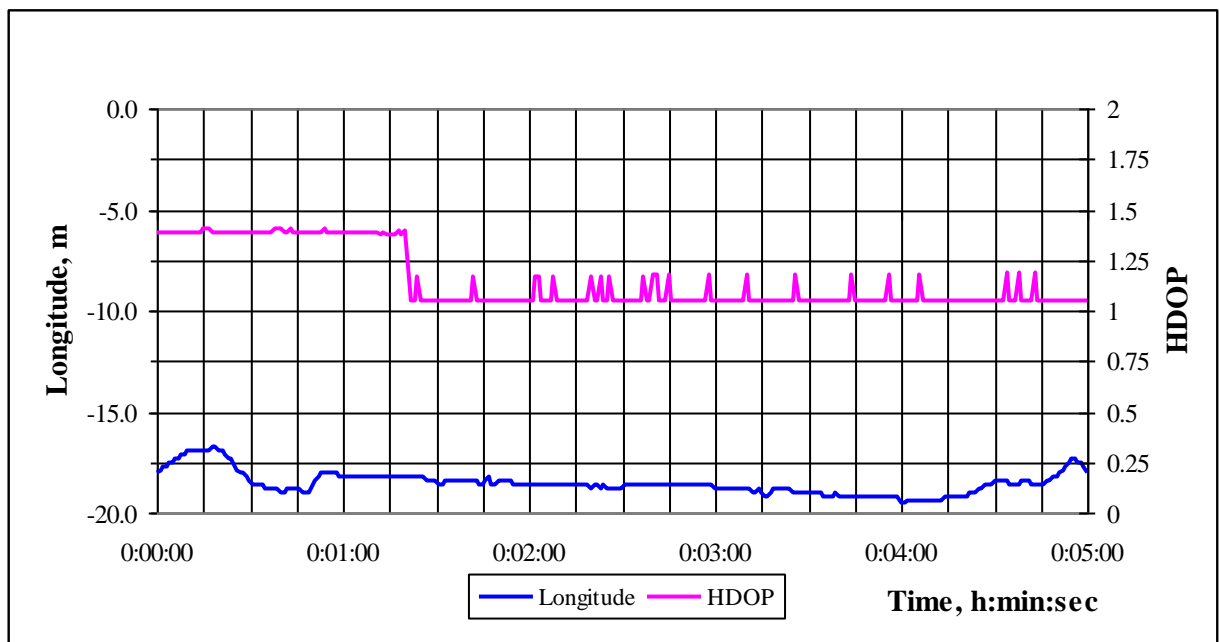

Fig. 8.6.1-1 – Test set-up.

Fig. 8.6.1-2 – Latitude offset.

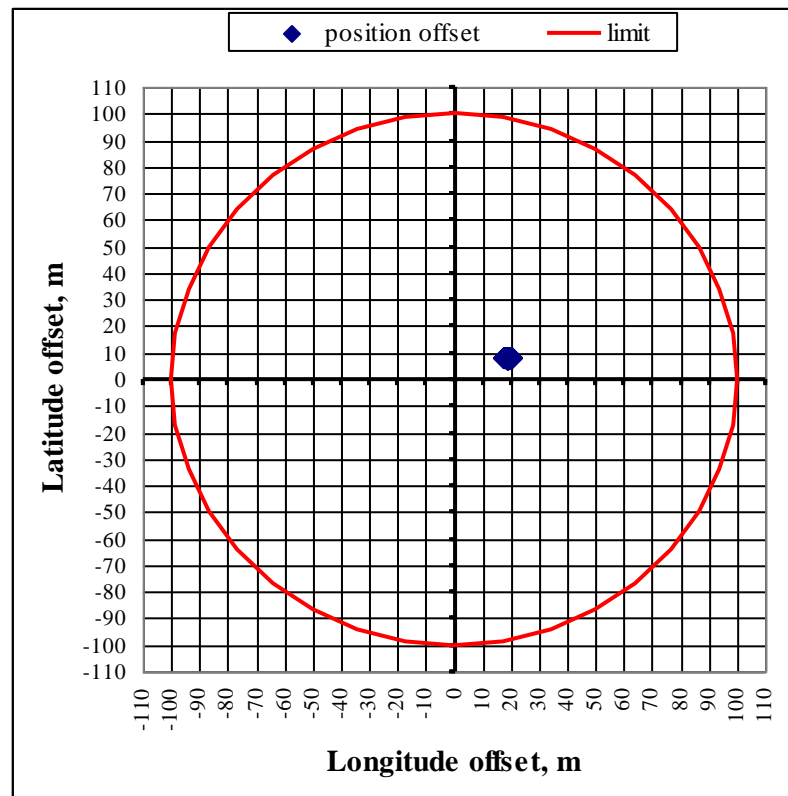**Fig. 8.6.1-3 – Longitude offset.**

Fig. 8.6.1-4 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.6.2.　　　S Band

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 05.08.14

Test Conditions:

Ambient temperature, °C:	23.1…23.5
Relative air humidity, %:	45…46
Atmospheric pressure, mm/Hg:	754
GPS signal:	simulated
Reference position:	44º 35'12"N 33º 29'17"E

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.8.b	5.6.9.2

Test description

In a normal operating mode the EUT was subjected to radiation consisting of a burst of 10 pulses, each 1,0 us to 1,5 us long on a duty cycle of 1600:1 at a frequency in the range of 2,9 GHz to 3,1 GHz at power density of approximately 7,5 kW/m^2. This condition was maintained for 10 min with the bursts of pulses repeated every 3 seconds. Then signal was removed and performance check was carried out over 5 min.

The maximum position offset was 5.1 m for 95% measurements with HDOP<4.

Fig. 8.6.2-1 – Test set-up.

Fig. 8.6.2-2 – Radar.

Specification of RADAR used for S-Band Test

Manufacturer: **Furuno Electric Co., LTD.**
Model: **FR-2105 Series**
Specifications:
Antenna radiator:
Type: Slotted waveguide array
Bandwidth: S-Band
Radiator Type: SN36AF
Length: 3765 mm
Beamwidth (H): 2.1°
Beamwidth (V) 25°
Sidelobes ±10°: -24 dB
Polarization: Horizontal
RF Transceiver:
Frequency: X-Band, 3050 MHz ± 30 MHz
Output power: FR-2135S/SW: 30 kW
Pulse lengths and PRR:

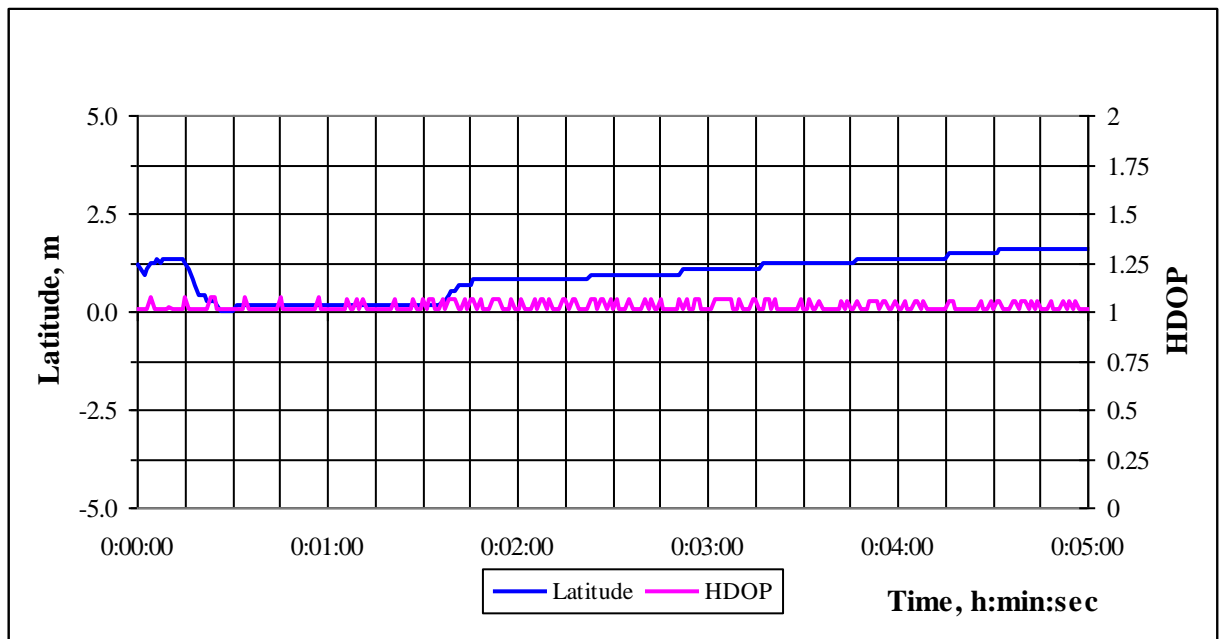| Range scales	P/L (µs)	PRR (Hz)
0.125, 0.25, 0.5	**0.08**	**2200**
0.75, 1.5	**0.08/0.3**	**2200/1100**
3	**2 from 0.08/0.3/0.6**	**2200/1100**
6	**2 from 0.08/0.3/0.6**	**2200/1100**
12, 24	**0.6/1.2**	**1100/600**
48, 96	**1.2**	**600/500**

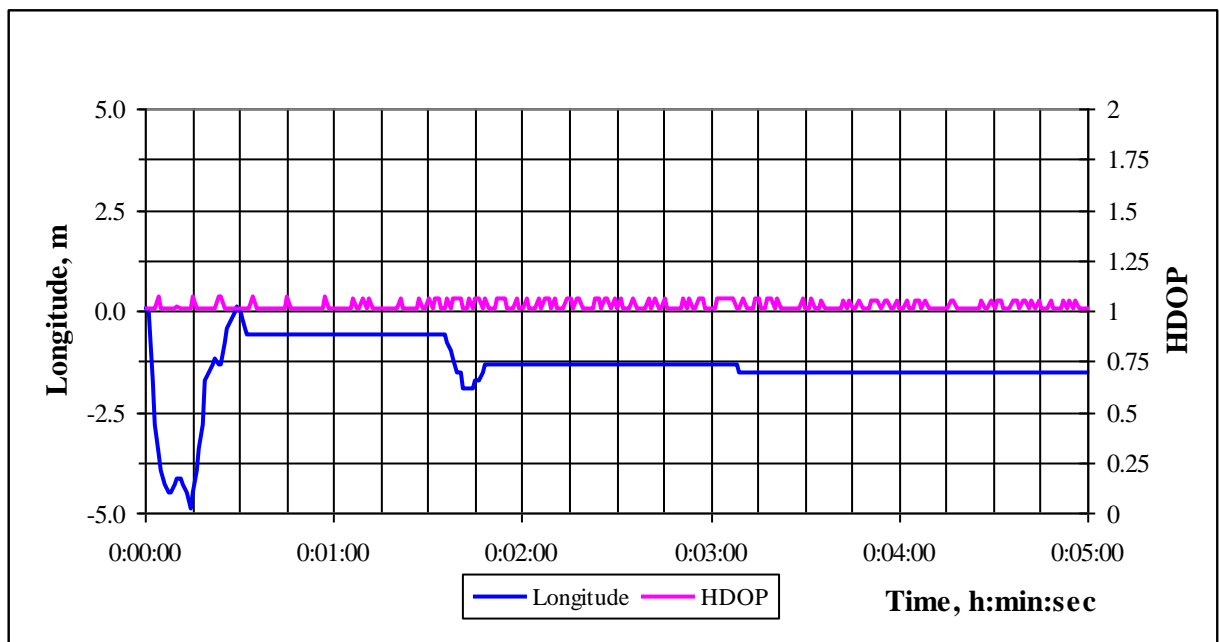**Fig. 8.6.2-3 – Latitude offset.**

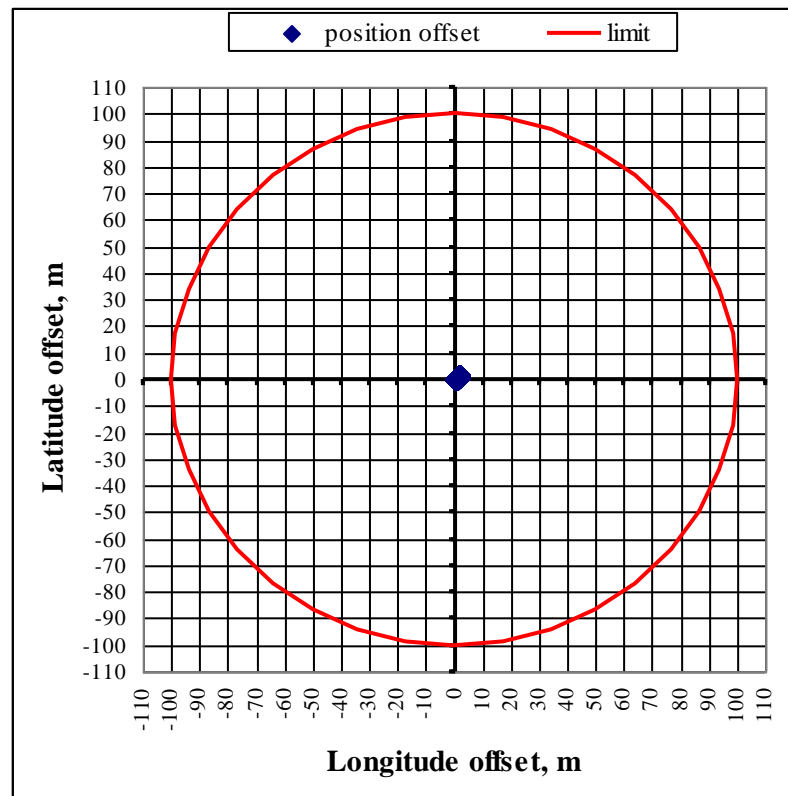**Fig. 8.6.2-4 – Longitude offset.**

Fig. 8.6.2-5 – Position offset.

Test conclusion:

Passed with criteria: position offset was less than 100 m for 95% measurements with HDOP<4.

8.7. Update rate

8.7.1.   Slow speed update rate

EUT:

Model: MT603FG
Serial number: 1410407582
Software version: OS0021 ver 1.00 (8/12/2014)
Hardware version: MT603G

Test Date: 12.05.16

Test Conditions:

Ambient temperature, °C: 21.6
Relative air humidity, %:   61
Atmospheric pressure, mm/Hg: 751
GPS signal: simulated

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.9	5.6.10.1

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

GPS simulator was activated to simulate moving in a straight line at a speed of 5 knots ±1 knots. The position output of the EUT was checked at intervals of 10 s, over a period of 10 min. The output position was observed to be updated on each occasion.

The minimum resolution of position, i.e. latitude and longitude was checked by observation of EUT output messages.

Output of the EUT during this test confirmed that received positions at the end of each interval are in compliance with the simulated reference position
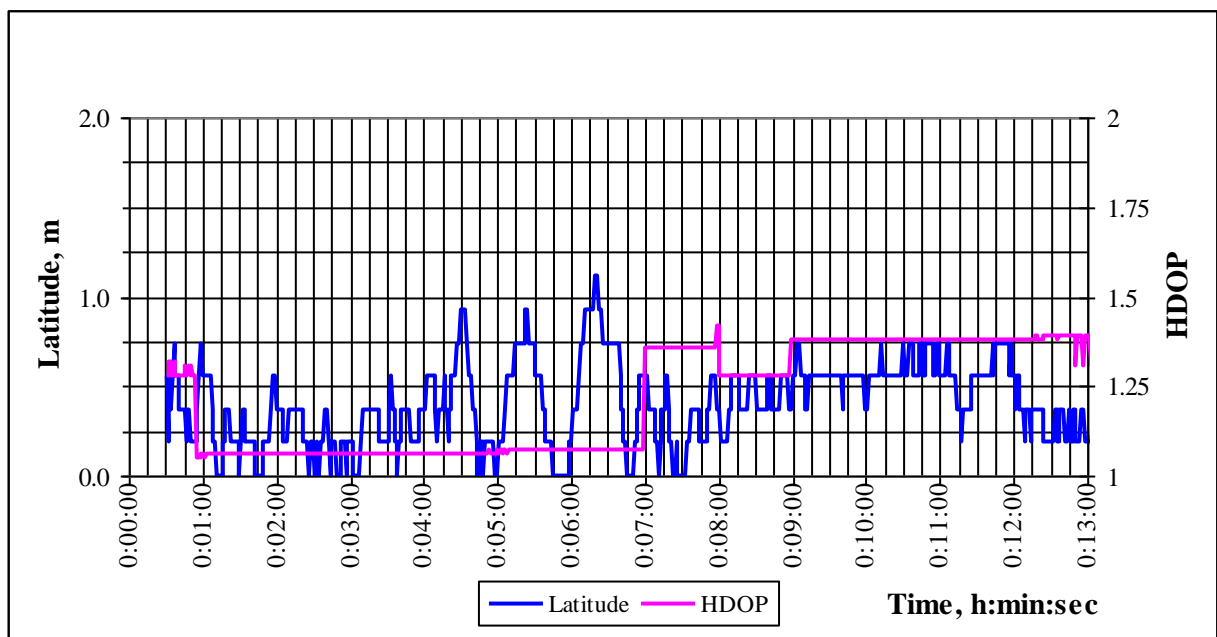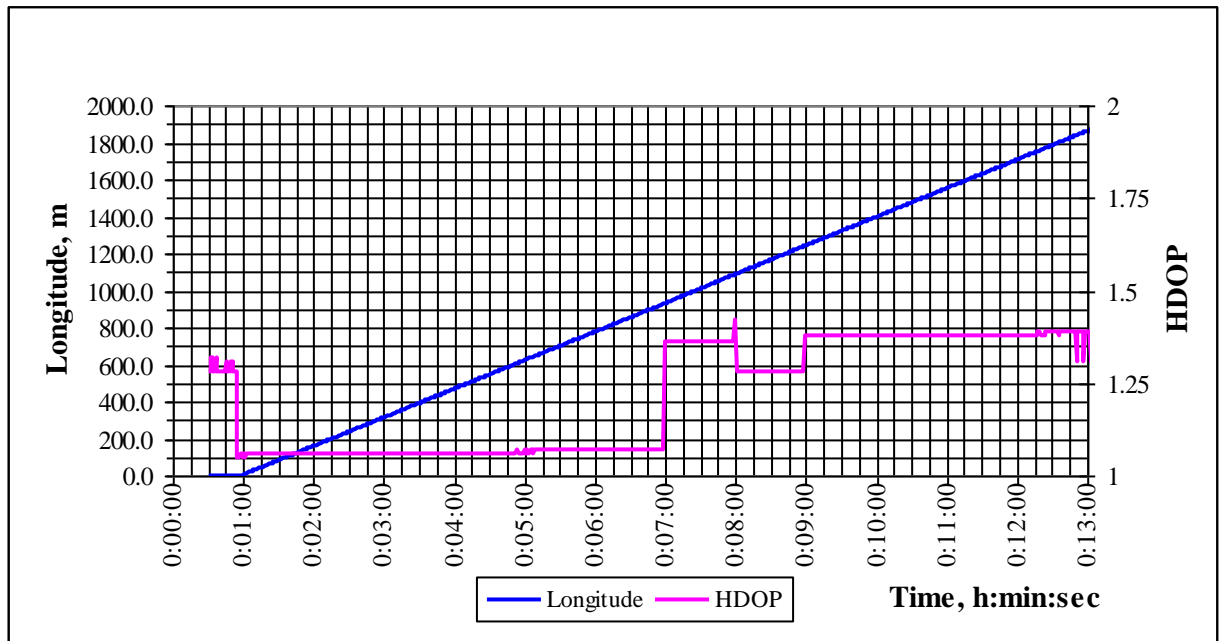

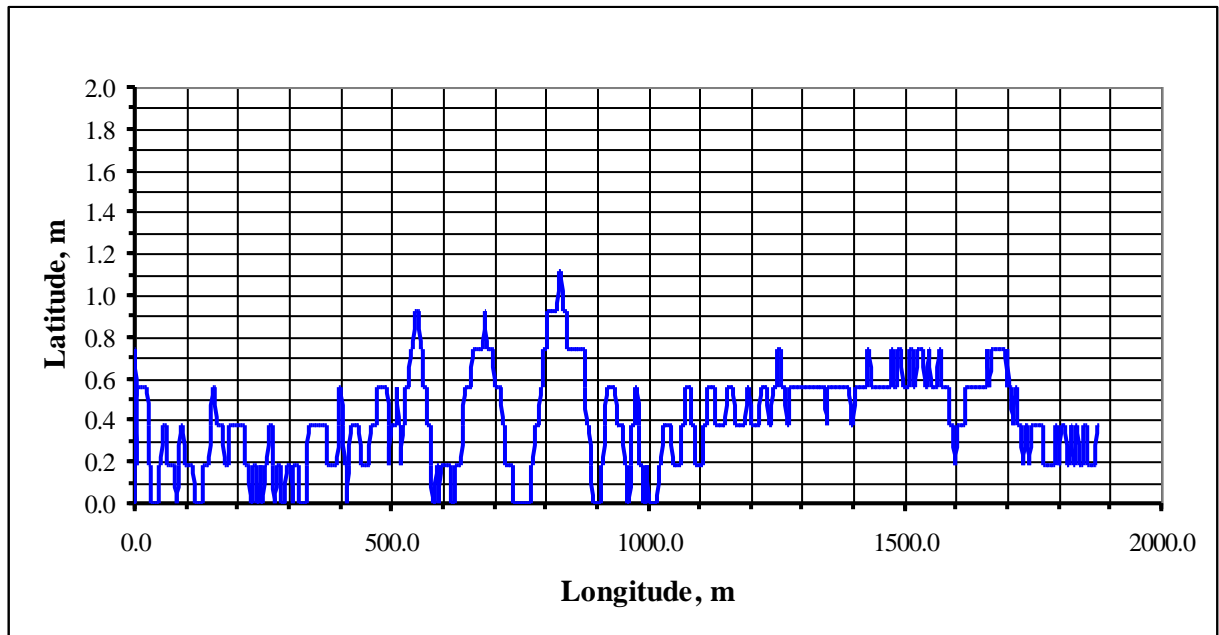**Fig. 8.7.1-1 – Latitude.**

Fig. 8.7.1-2 – Longitude.
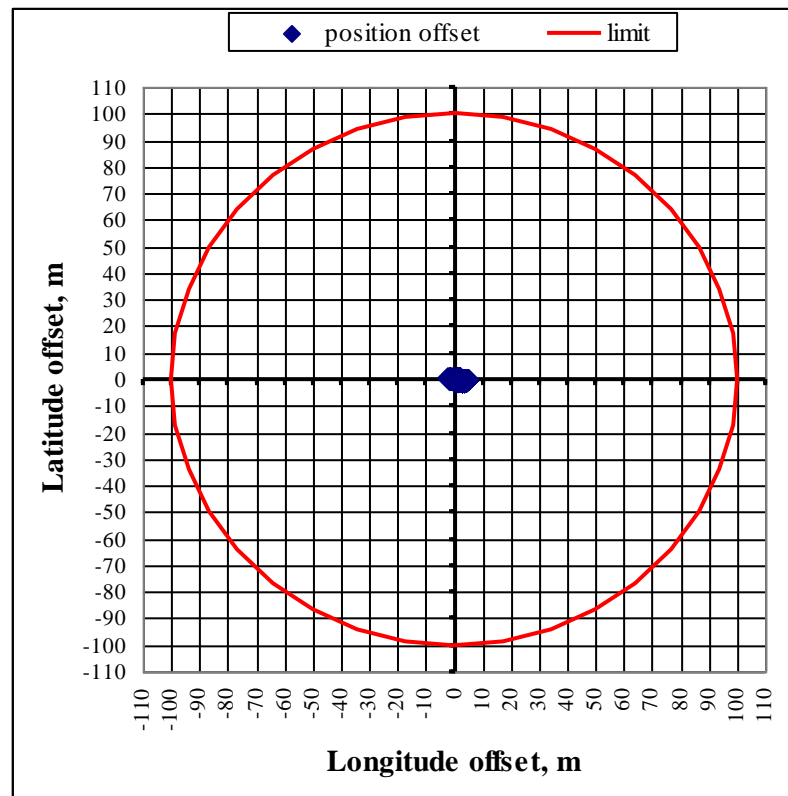

Fig. 8.7.1-3 – Position.

Fig. 8.7-4 – Position offset, coming to rest position

Test conclusion:

Passed with criteria: EUT generated and displayed new position every 1 s. The minimum resolution of position was 0,001 min

8.7.2. High speed update rate

EUT:

Model:	MT603FG
Serial number:	1410407582
Software version:	OS0021 ver 1.00 (8/12/2014)
Hardware version:	MT603G

Test Date: 13.05.14

Test Conditions:

Ambient temperature, °C:	21.6
Relative air humidity, %:	61
Atmospheric pressure, mm/Hg:	751
GPS signal:	simulated

Applied standards:

Standard	Requirements	Method
IEC 61108-1	4.3.9	5.6.10.2

Test equipment (as per Table 9-1): 1, 2, 3, 4, 5, 7, 9, 10.

Test description

GPS simulator was activated to simulate moving in approximately a straight line at a speed of 70 knots. EUT output was at 1 second interval not 0,5 s as recommended as per Clause 4.3.9. The position output of the EUT was checked at intervals of 1 s, over a period of 10 min. The output position was observed to be updated on each occasion.

The minimum resolution of position, i.e. latitude and longitude was checked by observation of EUT output messages.

Output of the EUT during this test confirmed that received positions at the end of each interval are in compliance with the simulated reference position
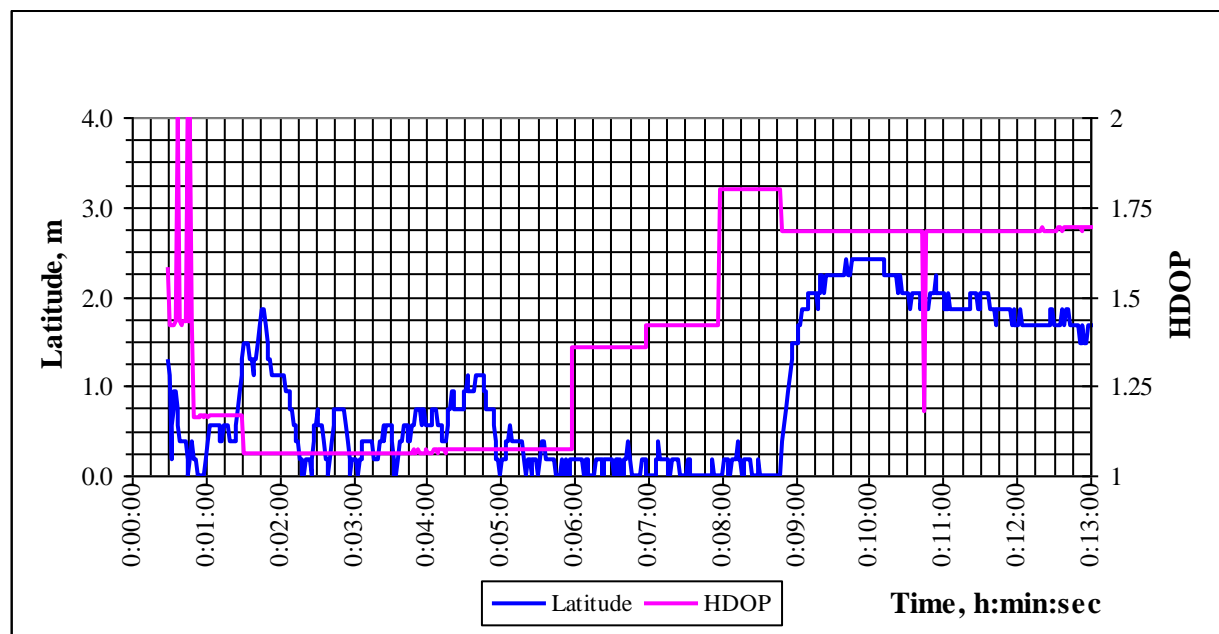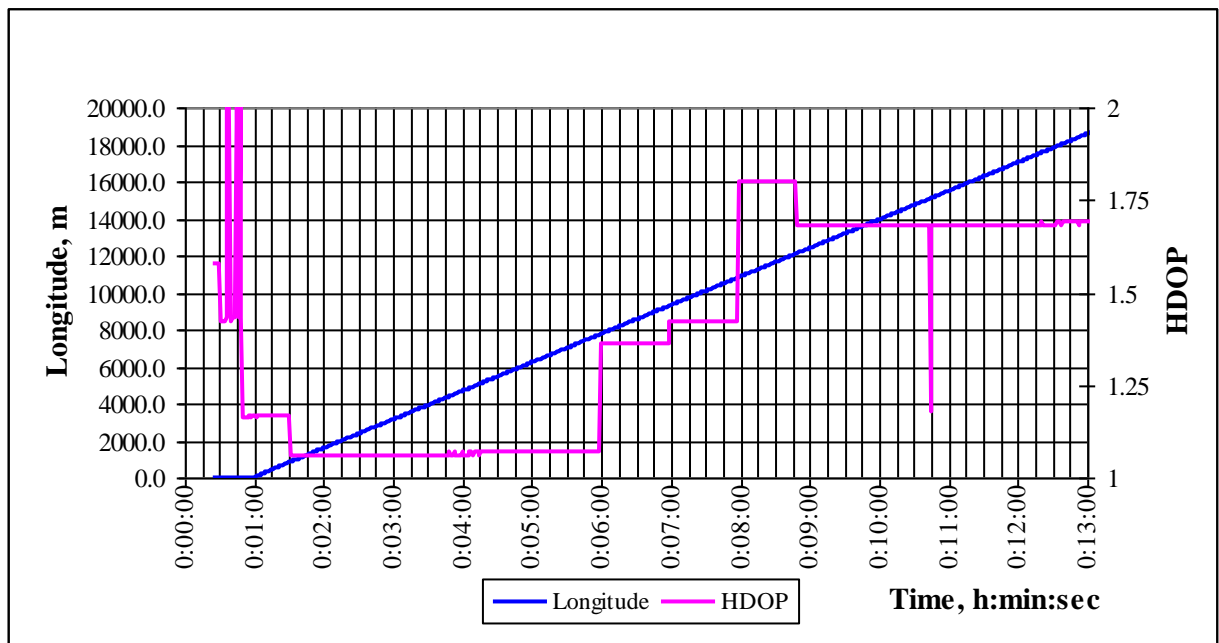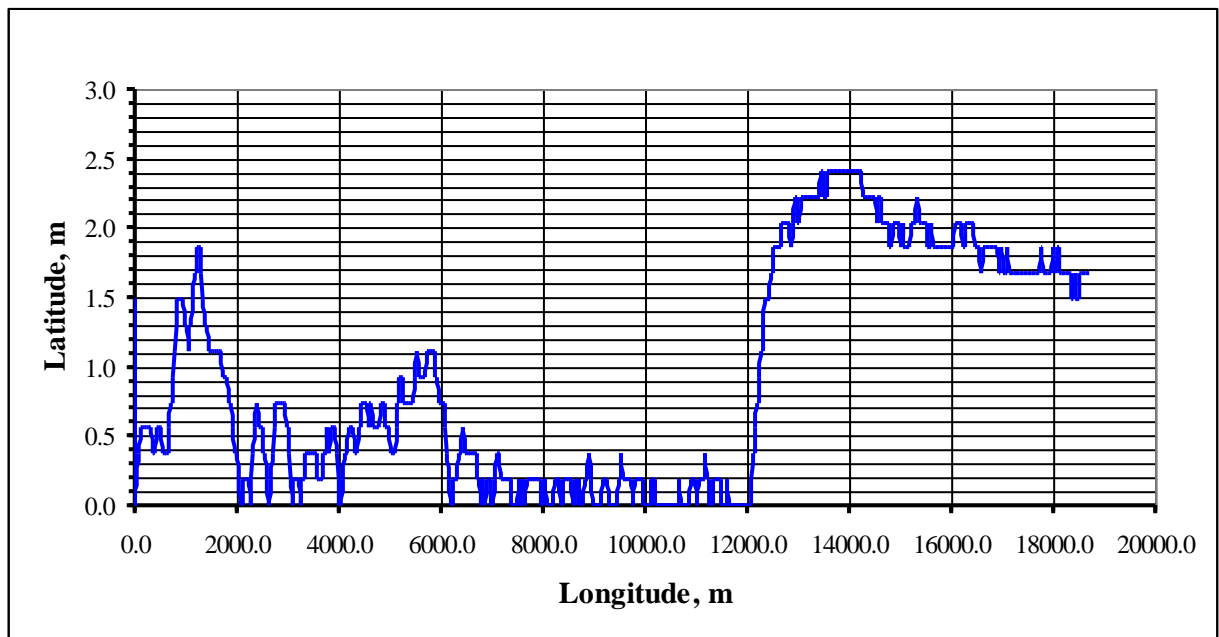

Fig. 8.7.2-1 – Latitude.

Fig. 8.7.2-2 – Longitude.
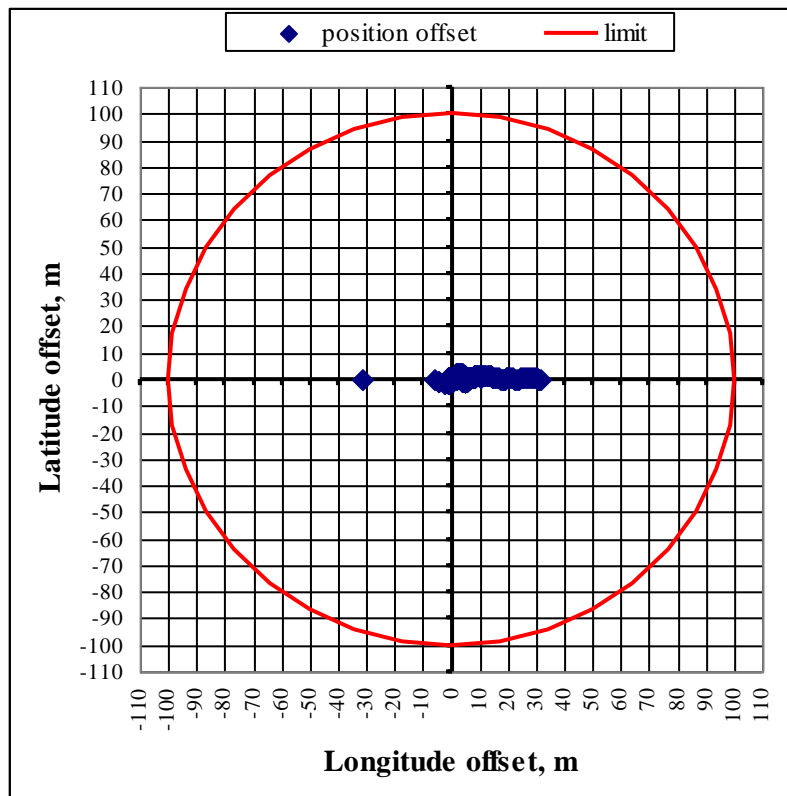

Fig. 8.7.2-3 – Position.

Fig. 8.7-4 – Position offset, coming to rest position

Test conclusion:

Passed with criteria: EUT generated and displayed new position every 1 s. The minimum resolution of position was 0,001 min.

9. TEST EQUIPMENT

Table 9-1. TEST EQUIPMENT

No	Type	Model	Manufacturer	s/n	Calibration valid until
1.	GPS simulator	SMBV-100A[1]	Rohde-Schwarz	256132	15.01.17
2.	Horn antenna	3115	ETS-Lidgren L.P.	154877	04.04.18
3.	GPS receiver	GM-3 N RU300	TranSystem Inc.	1351566797	-
4.	Spectrum analizer	FSV-40	Rohde-Schwarz	100821	01.10.16
5.	Anechoic chamber	Don	Omega	1	30.05.16
6.	Pitch and roll simulator	-	Omega	-	-
7.	Signal generator	SMB-100A	Rohde-Schwarz	103794	24.09.18
8.	Amplifier	BLMA 1060-30/20D	Bonn Electronik	100222	22.01.18
9.	Stopwatch	СОСпр-2б-2	USSR	2328	25.12.16
10.	Ruler measuring metal	Линейка-1000	USSR	64	25.12.16

Note 1. With options K44 and K92 installed.