High Temperature – ELT DT Location Protocol with 3LD Normal Message

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 30 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-16	1111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct: Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

High Temperature – ELT DT Location Protocol with 3LD
3LD Message

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C9900000147648E3D3850452ACF1**

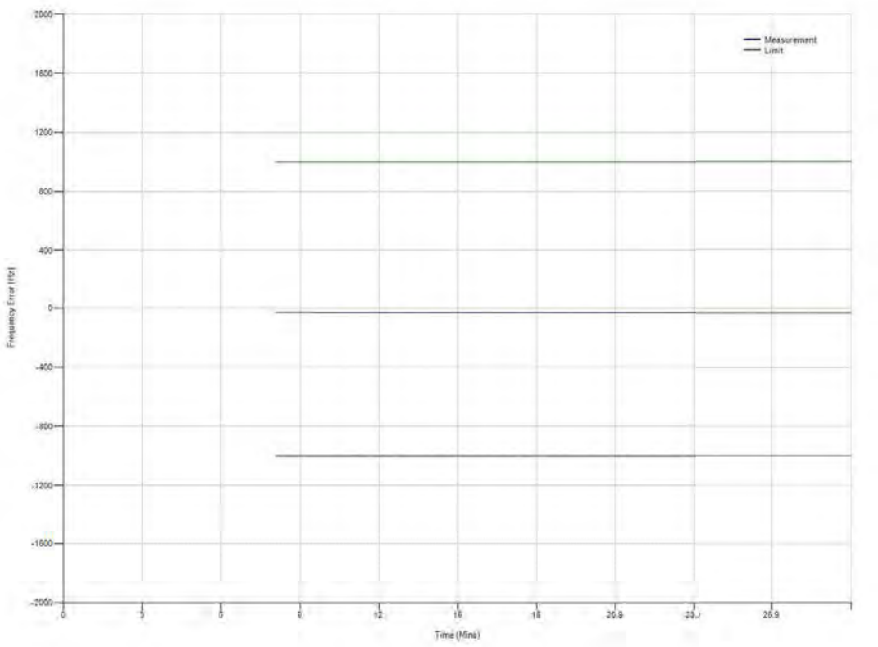
The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique Identifier:
19320000003FDFF

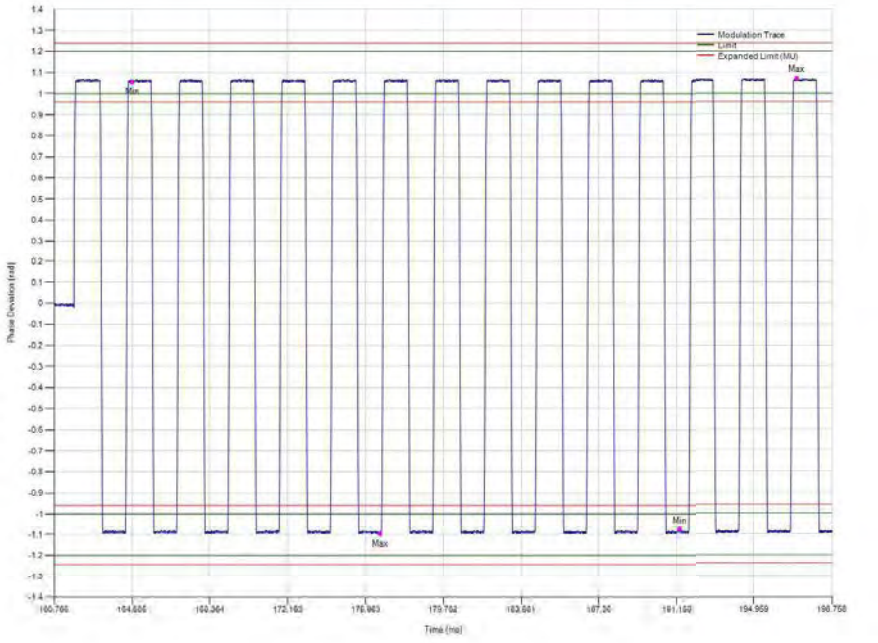
- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct. Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location. ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	010100011	Latitude	81.5 Degrees North (81.5)
76-86	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110011110001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.500

Frequency Plot



Modulation Plot



Ambient Temperature – ELT DT Location Protocol

Decoded Beacon Message

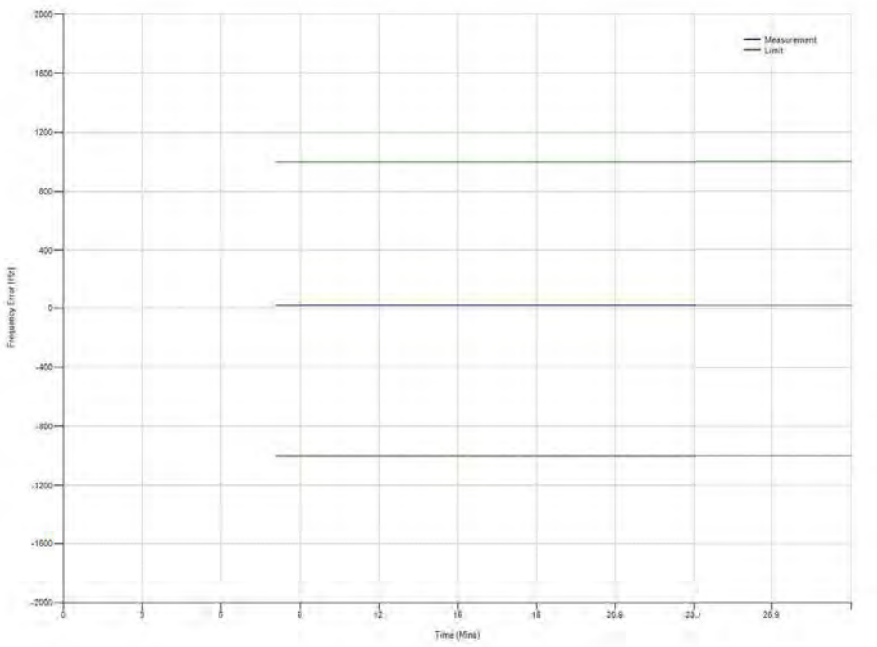
Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

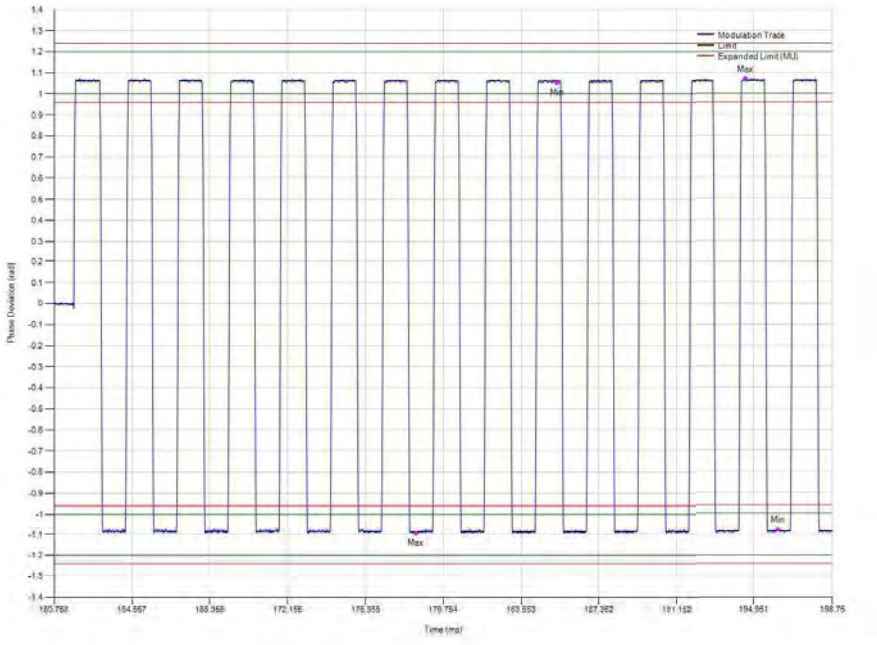
Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct: Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7,218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Frequency Plot



Modulation Plot



Low Temperature – ELT DT Location Protocol

Decoded Beacon Message

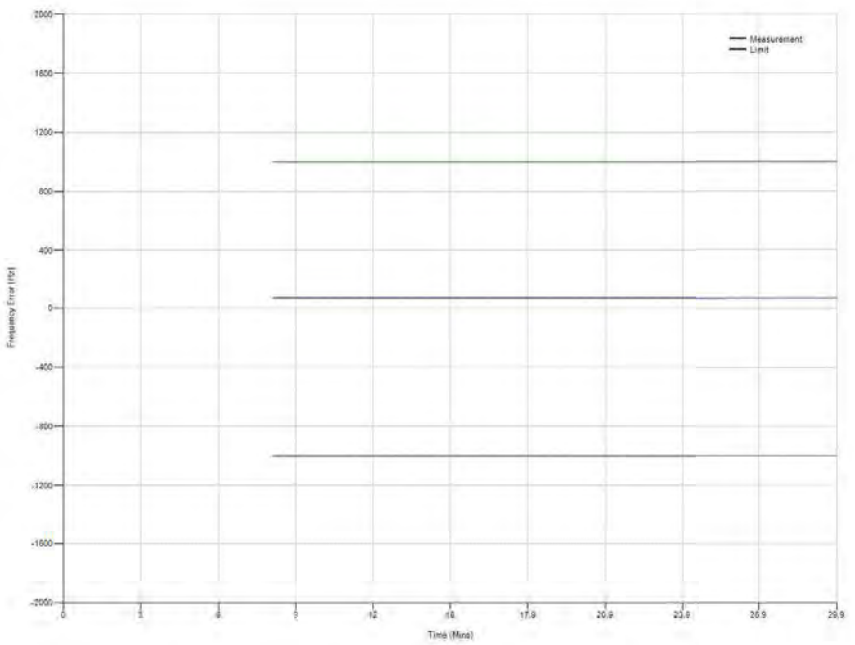
Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.8

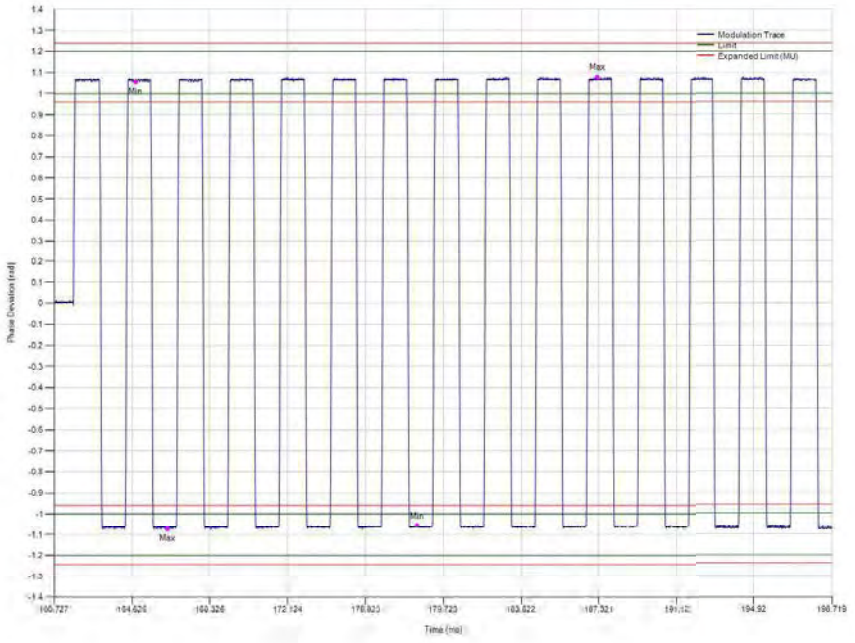
Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-16	1111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct. Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Frequency Plot



Modulation Plot



High Temperature – ELT DT Location Protocol

Decoded Beacon Message

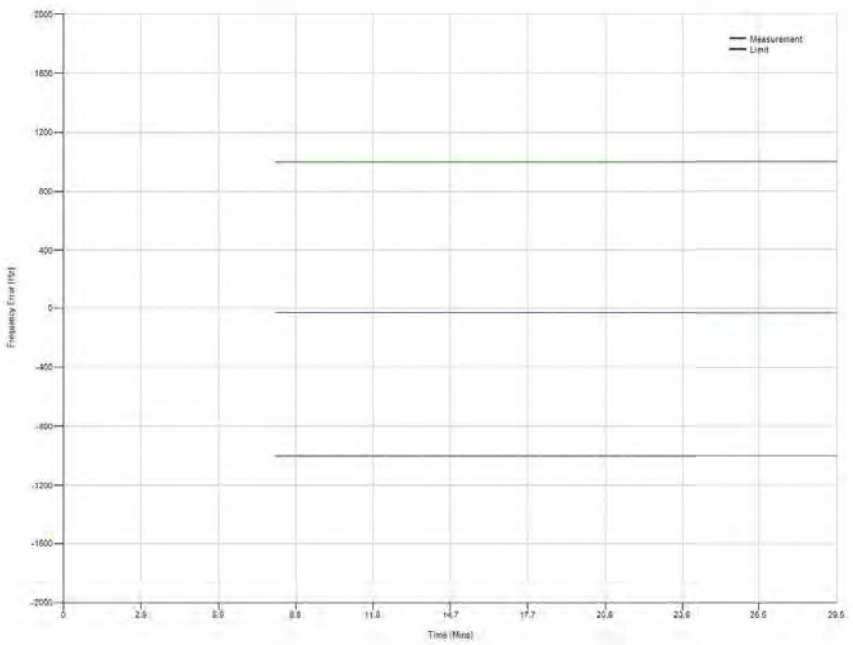
Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

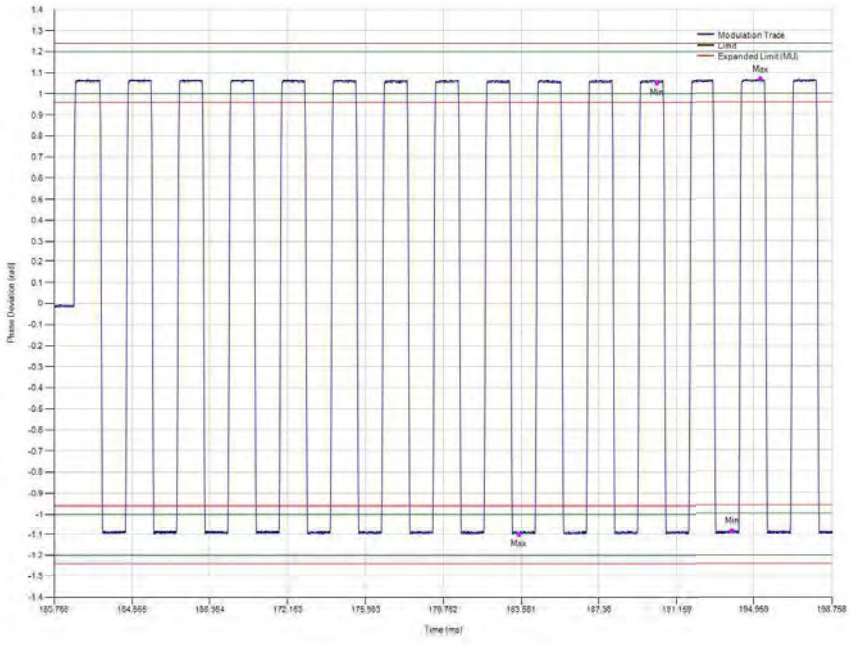
Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-16	1111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct: Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Frequency Plot



Modulation Plot



Summary

The EUT complies with clause A.3.3 of Cospas-Sarsat T.007.

2.7 SELF-TEST MODES

2.7.1 Specification

Cospas-Sarsat T.007, Clause A.2.1 (h)

2.7.2 Equipment Under Test and Modification State

ULTIMA-DT-05 S/N: TO0010000002 - Modification State 0

2.7.3 Date of Test

21 January 2022, 28 January 2022, 01 February 2022 and 21 February 2022

2.7.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.7.5 Laboratory Environmental Conditions

Ambient Temperature 24.4 - 26.5°C
Relative Humidity 19.1 - 30.5%

2.7.6 Test Results

Navigation Data status during test:

External Navigation Data Input: Applied

GNSS Simulator Navigation Data: Applied

EUT System Configuration

As per figure 1 of section 1.3.2

EUT Operating Mode

As described in section 1.3.3 ‘Self-Test’ or ‘GNSS Self-test’ as applicable

Self-test Mode

Ambient Temperature – ELT DT Location Protocol with 3LD

Decoded Beacon Message

Hexadecimal code: **FFFED08C990000001FEFFE6E1B0F0452AC6E**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct. Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110001101110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Low Temperature – ELT DT Location Protocol with 3LD

Decoded Beacon Message

Hexadecimal code: **FFFED08C980000001FEFFE6E1B0F0452AC6E**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct: Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	10011011100001101100	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110001101110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

High Temperature – ELT DT Location Protocol with 3LD

Decoded Beacon Message

Hexadecimal code: **FFFED08C990000001FEFFE6E1B0F0452AC6E**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct: Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110001101110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Ambient Temperature – ELT DT Location Protocol

Decoded Beacon Message

Hexadecimal code: **FFFED08C990000001FEFFE6E1B0F61F0FF01**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct. Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location; ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100001111	Latitude offset	Default value
124-132	100001111	Longitude offset	Default value
133-144	111100000001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Low Temperature – ELT DT Location Protocol

Decoded Beacon Message

Hexadecimal code: **FFFED08C390000001FEFFE6E1B0F61F0FF01**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct. Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100001111	Latitude offset	Default value
124-132	100001111	Longitude offset	Default value
133-144	111100000001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

High Temperature – ELT DT Location Protocol

Decoded Beacon Message

Hexadecimal code: **FFFED08C930000001FEFFE6E1B0F61F0FF01**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	011010000	Frame Synchronization Pattern	Correct: Self-Test Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location; ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
67-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100001111	Latitude offset	Default value
124-132	100001111	Longitude offset	Default value
133-144	111100000001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Table F-E.3: Self-test Mode Actions and Indications

No.	Action/Indication	Time-stamp (HH:MM:SS)	Description of action/indication	Duration of action/indication (sec)	Notes
1	Self-Test mode initiation (distinct action)	00:00:00	Test switch held down for 5 -10 seconds	5-10	
2	Distinct indication of the Self-test initiation	00:00:05	A double Red LED flash (5 seconds after a single flash)	1	
3	Self-test single burst transmission	00:00:32		520ms	Message burst time recorded on TUV test system
4	Self-test message default values				Decoded using TUV test system
5	Distinct indication of RF transmission	00:00:30	A single 50 millisecond red flash at transmission start	50ms	
6	Distinct indication of the Self-test PASS result	00:00:30	A Green LED shows for 3 seconds	3	
7	Distinct indication of the Self-test FAIL result	00:00:30	A Red LED flashes in a sequence	Up to 5 seconds	See manual for error codes
8	Distinct indication of Insufficient Battery Energy	00:00:30	A Red LED flashes 3 + 3 times	4 seconds	
9	Automatic termination of the Self-test mode, irrespectively of the switch position	00:03:10	If the switch is held in the TEST position, a GNSS ST is performed satisfactorily. No further current is drawn after this time.	-	See Test of operator controls
10	Duration of the Self-test mode	00:00:35	-	-	-

GNSS Self-test mode

General

All duration measurements below include activation method time, i.e. they start from test switch press and include any “hold for x seconds” requirement until all visual and audible activity appear to cease.

All positional accuracy values below were calculated using the Haversine Formula; the Earth’s radius was taken as 6367 km.

GNSS Self-test Observations

Parameter	Actual	Declared
GNSS Self-test count	60	60
GNSS Self-test maximum duration (s) incl. activation method	190	190
Indication of GNSS Self-test activation/completion	A GNSS self-test activation is activated by holding the Remote/ELT switch in the TEST position until the LED performs a second rapid flash (which is after 10 seconds) If navigation data is detected, the LED will light up green for 3 seconds. A 406 burst will be transmitted with position data. If no navigation data is detected the LED flashes rapidly at the end of the timeout period and a single 406 burst will be transmitted with default data.	
Indication of GNSS Self-test count limit reached	4 + 1 Red LED flashes	

Summary: GNSS Self-test with Valid Navigation Input via GNSS simulator (ELT DT Location Protocol with 3LD)

Protocol	ELT-DT Location Protocol with 3LD		
Temperature (°C)	-40	+24.4	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.633	520.672	520.703
Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	36	36	36
Position Input Latitude	N 51° 22.58443		
Position Input Longitude	W 1° 49.83337		
Position Output Latitude	N 51° 22’ 36”	N 51° 22’ 36”	N 51° 22’ 36”
Position Output Longitude	W 001° 49’ 52”	W 001° 49’ 52”	W 001° 49’ 52”
Position Error (m)	48.1	48.1	48.1

Summary: GNSS Self-test with Navigation Input from Arinc (ELT DT Location Protocol with 3LD)

Protocol	ELT-DT Location Protocol with 3LD		
Temperature (°C)	-40	+24.4	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.641	520.672	520.703
Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	190	190	190
Position Input Latitude	N 81.5°		
Position Input Longitude	W 100.25°		
Position Output Latitude	Default	Default	Default
Position Output Longitude	Default	Default	Default
Position Error (m)	N/A	N/A	N/A

Summary: GNSS Self-test without Valid Navigation Input (ELT DT Location Protocol with 3LD)

Protocol	ELT-DT Location Protocol with 3LD		
Temperature (°C)	-40	+22.1	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.617	520.687	520.708
Default Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	190	190	190

Summary: GNSS Self-test with Valid Navigation Input via GNSS simulator (ELT DT Location Protocol)

Protocol	ELT-DT Location Protocol		
Temperature (°C)	-40	+24.4	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.609	520.672	520.711
Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	36	36	36
Position Input Latitude	N 51° 22.58443		
Position Input Longitude	W 1° 49.83337		
Position Output Latitude	N 51° 22’ 36”	N 51° 22’ 36”	N 51° 22’ 36”
Position Output Longitude	W 001° 49’ 52”	W 001° 49’ 52”	W 001° 49’ 52”
Position Error (m)	48.1	48.1	48.1

Summary: GNSS Self-test with Navigation Input from Arinc (ELT DT Location Protocol)

Protocol	ELT-DT Location Protocol		
Temperature (°C)	-40	+24.4	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.625	520.672	520.703
Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	190	190	190
Position Input Latitude	N 81.5°		
Position Input Longitude	W 100.25°		
Position Output Latitude	Default	Default	Default
Position Output Longitude	Default	Default	Default
Position Error (m)	N/A	N/A	N/A

Summary: GNSS Self-test without Valid Navigation Input (ELT DT Location Protocol)

Protocol	ELT-DT Location Protocol		
Temperature (°C)	-40	+22.1	+55
Frame sync verification	011010000	011010000	011010000
Format Flag (1 bit)	1	1	1
Single Radiated burst (ms)	520.617	520.680	520.708
Default Position data	P	P	P
Single burst verification	P	P	P
Actual duration (s) incl. activation method	190	190	190

Full Hex Messages	
ELT-DT Location Protocol with Navigation data applied via GNSS simulator	
+55°C	FFFED08C990000000CF022D1C200CECA26FE
Ambient	FFFED08C990000000CF022D1C200CECA26FE
-40°C	FFFED08C990000000CF022D1C200CECA26FE
ELT-DT Location Protocol with Navigation data applied via ARINC interface	
+55°C	FFFED08C990000001FEFFE6E1B0F61F0FF01
Ambient	FFFED08C990000001FEFFE6E1B0F61F0FF01
-40°C	FFFED08C990000001FEFFE6E1B0F61F0FF01
ELT-DT Location Protocol without Navigation data applied	
+55°C	FFFED08C990000001FEFFE6E1B0F61F0FF01
Ambient	FFFED08C990000001FEFFE6E1B0F61F0FF01
-40°C	FFFED08C990000001FEFFE6E1B0F61F0FF01

Table F-E.4: GNSS Self-test Mode Actions and Indications

No.	Action/Indication	Time-stamp (HH:MM:SS)	Description of action/indication	Duration of action/indication (sec)	Notes
1	GNSS Self-test mode initiation (distinct action)	00:00:00	Hold down test switch	10	
2	Distinct indication of the GNSS Self-test initiation	00:00:10	Triple Red LED flash (5 seconds after the previous one)	1	
3	GNSS Self-test single burst transmission			520ms	Message burst time recorded on TUV test system
4	GNSS Self-test message position encoding		GNSS self-test message structure and bit values confirmed correct	520ms (with Nav input)	Decoded using TUV test system
5	Distinct indication of the GNSS Self-test PASS result	00:00:36	LED lights up green for 3 seconds	3	
6	Distinct indication of the GNSS Self-test FAIL result	00:03:00	Red LED burst flashes, then displays an error code with red flashes	10	4 + 2 means no GNSS acquisition
7	Distinct indication that the manufacturer-declared limited number of GNSS Self-tests is attained	00:00:15	LED flashes red 4 + 1 times	3	As described in manufacturer's documentation
8	Automatic termination of the Self-test mode, irrespectively of the switch position		If the switch is held in the TEST position, a GNSS ST is performed satisfactorily. No further current is drawn after this time.	190	See testing of operator controls
9	Duration of the GNSS Self-test mode	00:03:10	LED turns off		

Testing Insufficient Battery Energy

Table F-E.5: Indication of Insufficient Battery Energy

Parameter	Units	Declared by beacon manufacturer	Verified and evaluated by accepted test facility	Notes
Minimum duration of continuous operation (C_{CO})	hours	54h10 (406Mhz + 121.5Mhz to cover both oplife scenarios)		C_{CO} is declared in Annex G as "Operating Lifetime". C_{CO} is required for the test. Minimum duration of continuous operation (C_{CO})
Full Battery Pack Capacity **(C_{BP})**	hours	80h20		If needed to calculate $C_{SP\text{-}AMB}$
Battery Pre-Operational Losses **(C_{PO})**	hours	4h30 (0.9A.h @200mA outside the beacon)		Corresponds to L_{CDC}, as defined in the Table F- E.2
Spare Battery Capacity at ambient temperature **($C_{SP\text{-}AMB}$)**	hours	21h40		$C_{SP\text{-}AMB}$ is required for the test, and shall be defined by testing (see Footnote 4 to section A.3.6.2.2), or by calculation, as follows: **CSP-AMB = CBP – (CPO + CCO)**
Criteria and conditions to trigger **PIE** indication		Remaining capacity ≤ CCO (As described above)	-	Description of PIE criteria and conditions to be met to trigger PIE indication. Use a separate sheet if needed
Step-1: battery pack discharge	hours	Discharge battery for 4 hours @200mA outside the beacon		Battery discharge shall correspond to: C_{PO} - **30 minutes,** or the value declared by the beacon manufacturer less 30 minutes
Step-1: beacon conditions (if applicable)		-	Battery discharged over a resistor for 4 hours @ 200mA	Description of conditions recreated during the Step-1 for which the PIE criteria is not met
Step-1: observations of self-test indication		Green LED on SELF-TEST	The LED indicator showed Green and the self-test passed.	Test facility observations of self-test indication: time, duration, type of indication
Step-2: battery pack discharge	hours	Operate beacon in Manual ON mode for 22h40		Total battery discharge shall correspond to: C_{PO} + $C_{SP\text{-}AMB}$ + **30 minutes** or the value declared by the beacon manufacturer plus 30 minutes
Step-2: beacon conditions (if applicable)	-	-	The battery was discharged in the EUT for 22h40	Description of conditions recreated during the Step-2 for which the PIE criteria is met
Step-2: observations of distinct PIE indication		SELF-TEST With error: Red LED 3 + 3 flashes	The LED indicator blink Red in the pattern of 3 + 3	Test facility observations of PIE indication: time, duration, type of indication

PIE Indication
If the PIE criteria has been met the pass indication of the Self-Test shall change from a solid GREEN LED to a flashing RED LED
For this criterion to be met the beacon must have been operated for 22 hours 40 minutes.
The RED LED (3 + 3 flashes) indicates that the beacon has a faulty battery (expiry date/low voltage/potential insufficient energy) and therefore the battery should be replaced.

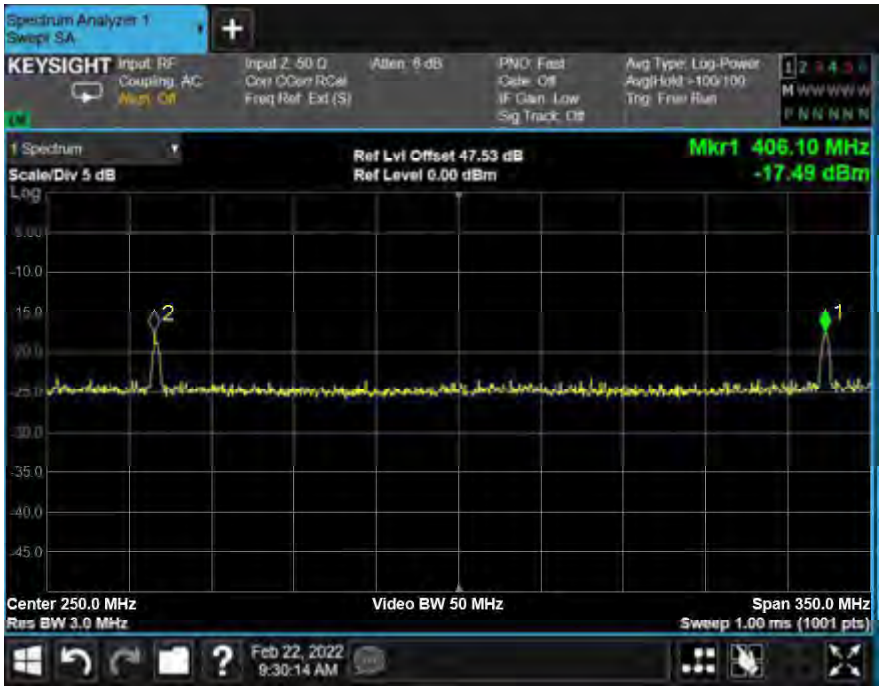
A.3.6.4 Testing for Repetitive Automated Interrogation of a Beacons Status

The EUT only performs one interrogation after 60 seconds of being in Armed mode. Interrogation can also be manually activated by holding and releasing the test switch for less than 5 seconds.

Frequency (MHz)	Power Level (dBm)
121.65	-17.65
406.031	-17.49

121.65MHz Power Plot

406.031MHz Power Plot



Summary

The EUT complies with clause A.3.6 of Cospas-Sarsat T.007.

2.8 THERMAL SHOCK

2.8.1 Specification

Cospas-Sarsat T.007, Clause A.2.2

2.8.2 Equipment Under Test and Modification State

ULTIMA-DT-05 S/N: TO0010000002 - Modification State 0

2.8.3 Date of Test

14 February 2022

2.8.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.8.5 Laboratory Environmental Conditions

Ambient Temperature 23.7°C
Relative Humidity 31.9%

2.8.6 Test Results

Soak Temperature: 23°C
Test Temperature: -30°C

Navigation Data status during test:

External Navigation Data Input: Applied

GNSS Simulator Navigation Data: Not Applied

EUT System Configuration

As per figure 1 of section 1.3.2

EUT Operating Mode

As described in section 1.3.3 ‘Operating (Active)’

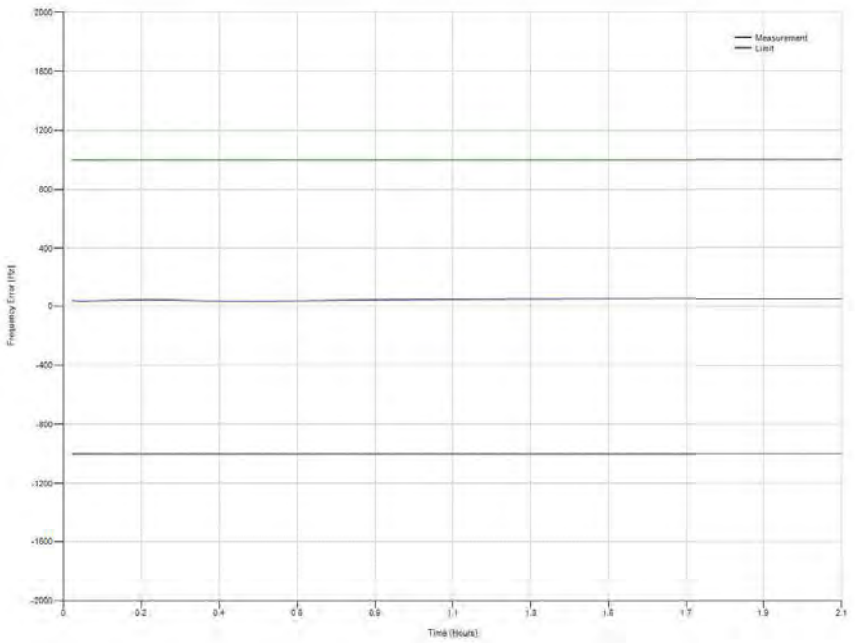
Encoded Protocol

ELT DT Location Protocol

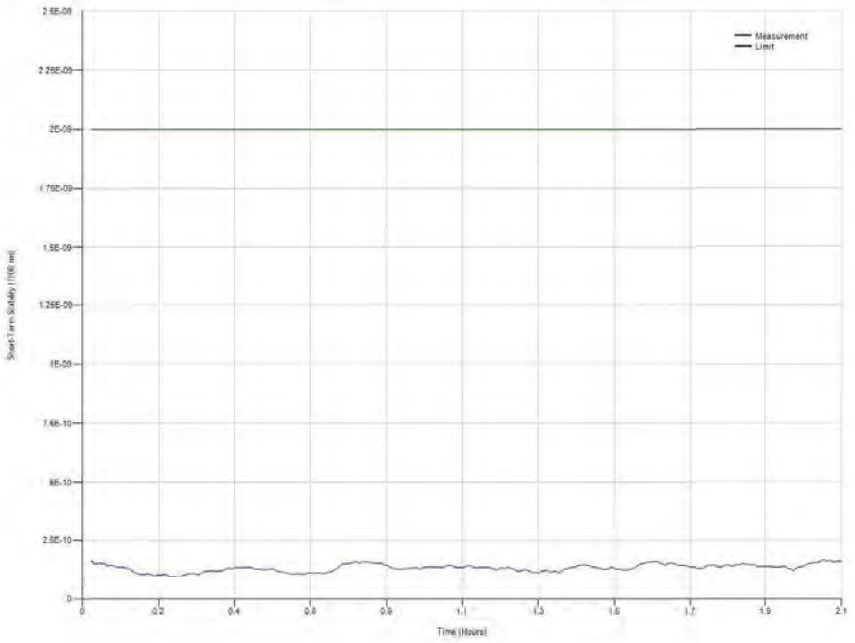
Test Duration

120 minutes

Nominal Frequency



Short Term Stability



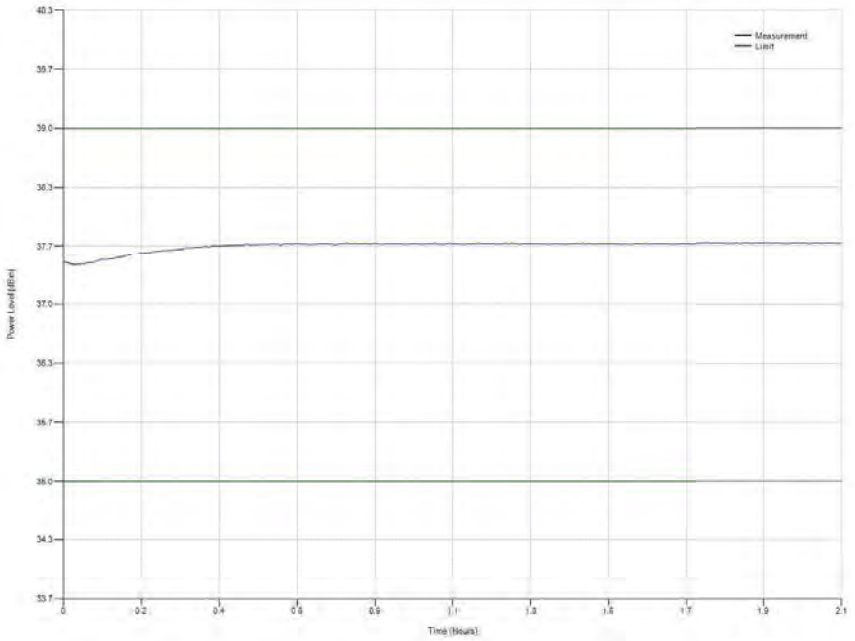
Medium Term Stability, Mean Slope

Not applicable for ELT(DT).

Medium Term Stability, Residual Frequency Variation

Not applicable for ELT(DT).

Output Power



Digital Message

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct. Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-68	00000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Summary

The EUT complies with clause A.2.2 of Cospas-Sarsat T.007.

2.9 OPERATING LIFETIME AT MINIMUM TEMPERATURE

2.9.1 Specification

Cospas-Sarsat T.007, Clause A.2.3

2.9.2 Equipment Under Test and Modification State

ULTIMA-DT-05 S/N: TO0010000002 - Modification State 0

2.9.3 Date of Test

25 February 2022 to 28 February 2022

2.9.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.9.5 Laboratory Environmental Conditions

Ambient Temperature 25.1 - 26.4°C
Relative Humidity 23.7 - 32.5%

2.9.6 Test Results

Navigation Data status during test:

External Navigation Data Input: Applied

GNSS Simulator Navigation Data: Not Applied

EUT System Configuration

As per figure 1 of section 1.3.2

28V removed just after EUT activation

Encoded Protocol

ELT DT Location Protocol with 3LD

EUT Operating Mode

A fresh battery pack was discharged over a resistive load outside the EUT until reaching its expiration date as per the requirement in C/S T.007 for Operating Lifetime at minimum temperature test. The battery pack was then fitted in the EUT and pre-conditioned for 2 hours in a climatic chamber at -40°C.
Following the soaking period, the EUT was activated in the following manner as requested by the Manufacturer:

1. via RCP front panel and no GNSS signal present
    - this mode draws the highest power consumption with 406 MHz and homing transmitters active, and

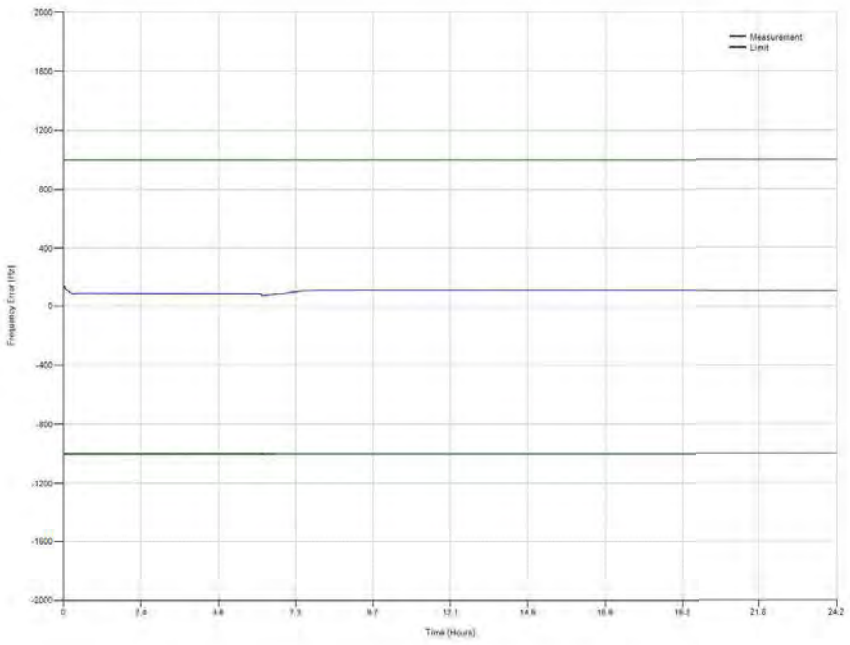
- 28 V Test Bench power supply removed.

After 6 hours and 10 minutes the EUT was re-started:

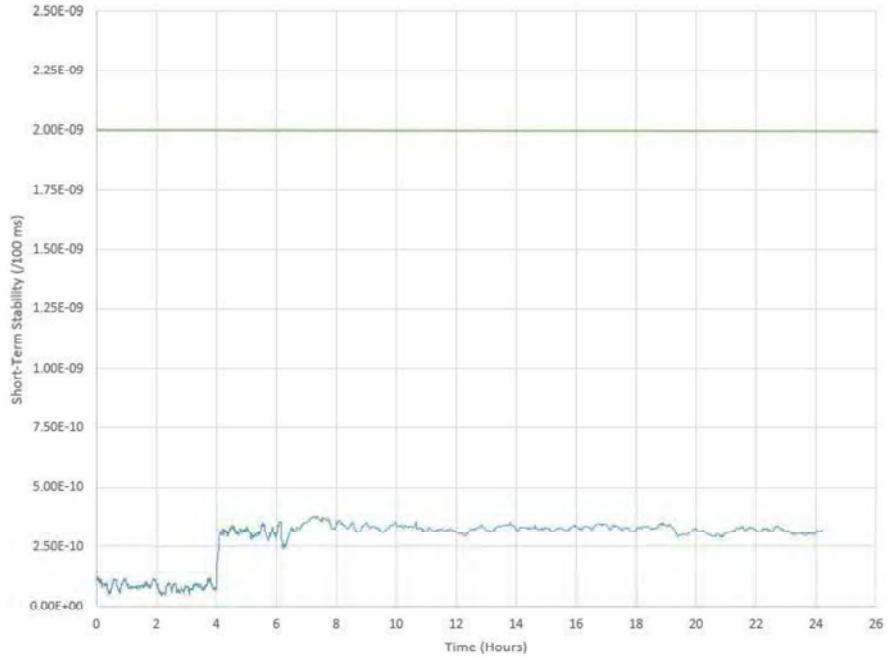
2. via EUT's Crash Sensor and no GNSS signal present
   - with 406 MHz and homing transmitters active.

The homing transmitter is designed to operate following activation via the crash sensor only (6 hours 10 mins after initial activation). However, for this test, the EUT was operational in the highest power consumption mode (406 MHz and homing) for 6 hours and 10 minutes prior to re-activation via the Crash Sensor – therefore it is considered that the homing transmitter measurements during the Operating Lifetime at minimum temperature meet with the requirement declared by the manufacturer.

Nominal Frequency



Short Term Stability



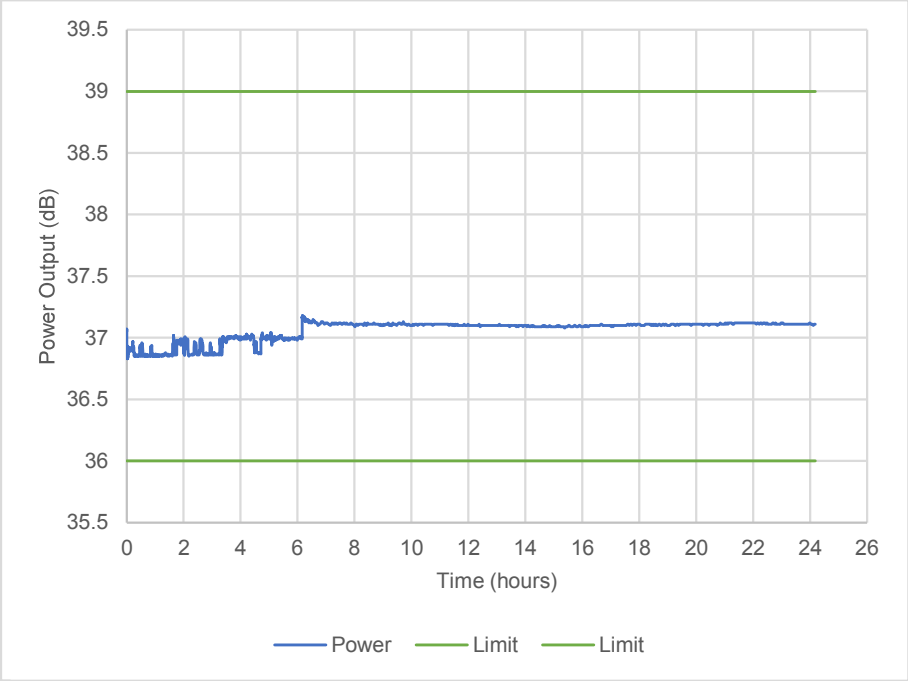
Medium Term Stability, Mean Slope

Not applicable for ELT(DT).

Medium Term Stability, Residual Frequency Variation

Not applicable for ELT(DT).

Output Power



Digital Messages Summary

Burst No.	Message	Comment
1	FFFE2F8C99000000147648E3D385E00F02FA	Arinc Location – 28V applied
2	FFFE2F8C99000000147648E3D3850452ACF1	Arinc Location - ELT DT Location Protocol with 3LD
4	FFFE2F8C99000000147648E3D385A00F09FE	Arinc Location - 28V removed < 60 seconds
16	FFFE2F8C99000000147648E3D385600F01CB	Arinc Location - 28V removed > 60 seconds
557	FFFE2F8C990000001FEFFE6E1B0F61F0FF01	Location returns to default – No 28V > 4hours
558	FFFE2F8C990000001FEFFE6E1B0F0452AC6E	Location returns to default – 28V removed > 4hours – ELT DT Location Protocol with 3LD
840	FFFE2F8C990000001FEFFE6E1B1F61F0F28E	Crash Sensor Activated
841	FFFE2F8C990000001FEFFE6E1B1F0452A1E1	Crash Sensor Activated – ELT DT Location Protocol with 3LD

Message 1

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C99000000147648E3D385E00F02FA**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-16	1111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-86	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111.0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Message 2

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C99000000147648E3D3850452ACF1**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110011110001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.500

Message 4

Decoded Beacon Message

Hexadecimal code: FFFE2F8C99000000147648E3D385A00F09FE

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-16	1111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-86	10110010001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	10	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is greater than two seconds and equal or less than 60 seconds old
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	100111111110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Message 16

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C99000000147648E3D385600F01CB**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique Identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	000111001011	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Message 557

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C990000001FEFFE6E1B0F61F0FF01**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100001111	Latitude offset	Default value
124-132	100001111	Longitude offset	Default value
133-144	111100000001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Message 558

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C990000001FEFFE6E1B0F0452AC6E**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-86	00000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-86 are all 0 or All 1, designates Test Protocol
87-75	011111111	Latitude	Default - no location (Default - no location)
76-86	01111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	110001101110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Message 840

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C990000001FEFFE6E1B1F61F0F28E**

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6.

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-76	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110001101100	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	01	means of activation	automatic activation by the beacon
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	01	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message more than 60 seconds old or the default encoded position is transmitted
115-123	100001111	Latitude offset	Default value
124-132	100001111	Longitude offset	Default value
133-144	001010001110	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

Message 841

Decoded Beacon Message

Hexadecimal code: **FFFE2F8C990000001FEFFE6E1B1F0452A1E1**

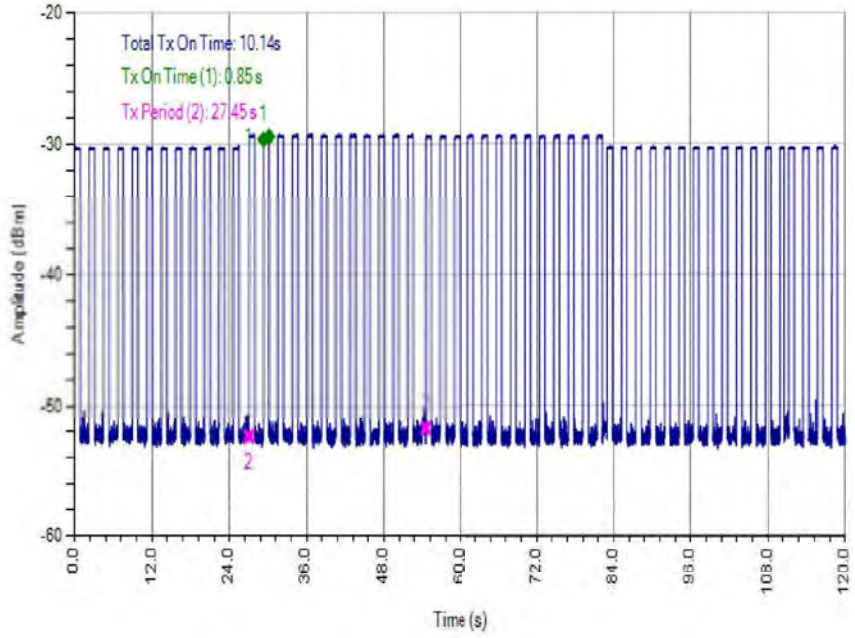
The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

- **WARNING: Location is a coarse position only, and hence has less resolution/accuracy than a message without the rotating field**

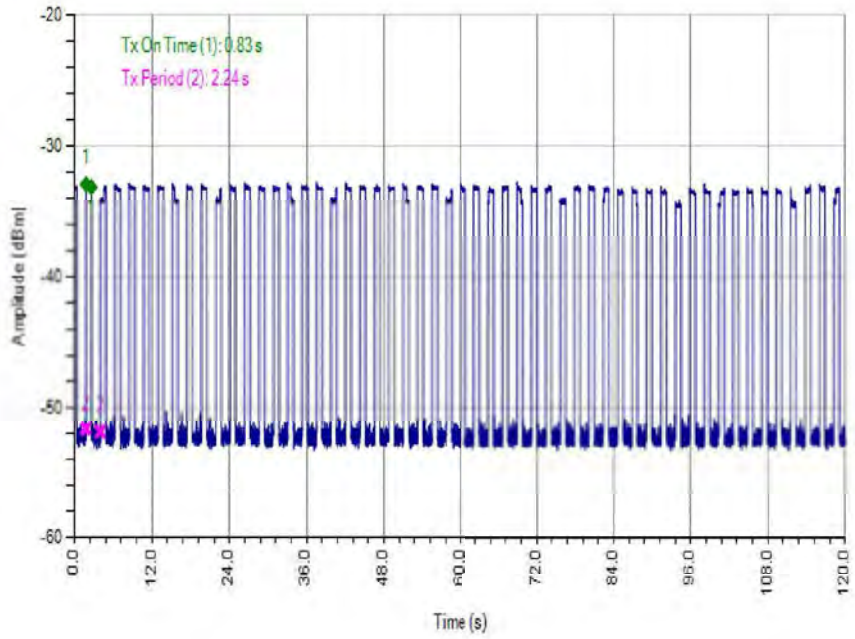
Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Normal beacon operation
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	011111111	Latitude	Default - no location (Default - no location)
76-85	0111111111	Longitude	Default - no location (Default - no location)
86-106	11001101110000110110	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	01	means of activation	automatic activation by the beacon
109-112	1111	encoded altitude	default value - altitude information is not available
113-114	00	Encoded location freshness or PDF-2 rotating field indicator	PDF-2 rotating field indicator
115-117	000	Aircraft operator 3LD designator or Spare	Aircraft operator 3LD designation
118-132	100010100101010	Aircraft operator 3LD	ZLR
133-144	000111100001	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field

121.65 MHz Homing Transmitter - Duty Cycle (Start of Test)



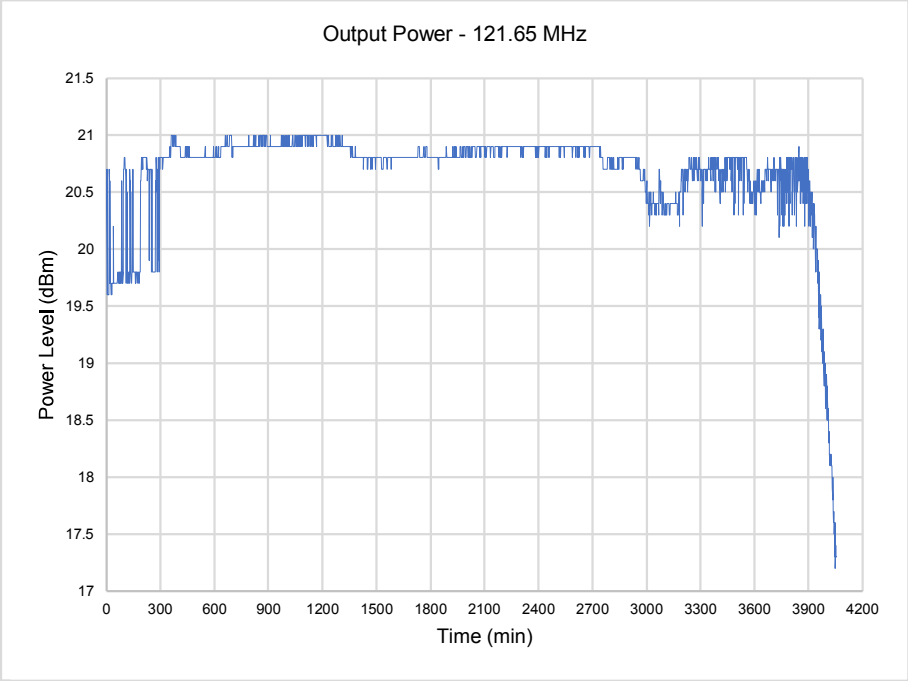
Duty Cycle = 10.137 / (10.137+17.314) = 36.93%

121.65 MHz Homing Transmitter - Duty Cycle (End of Test)

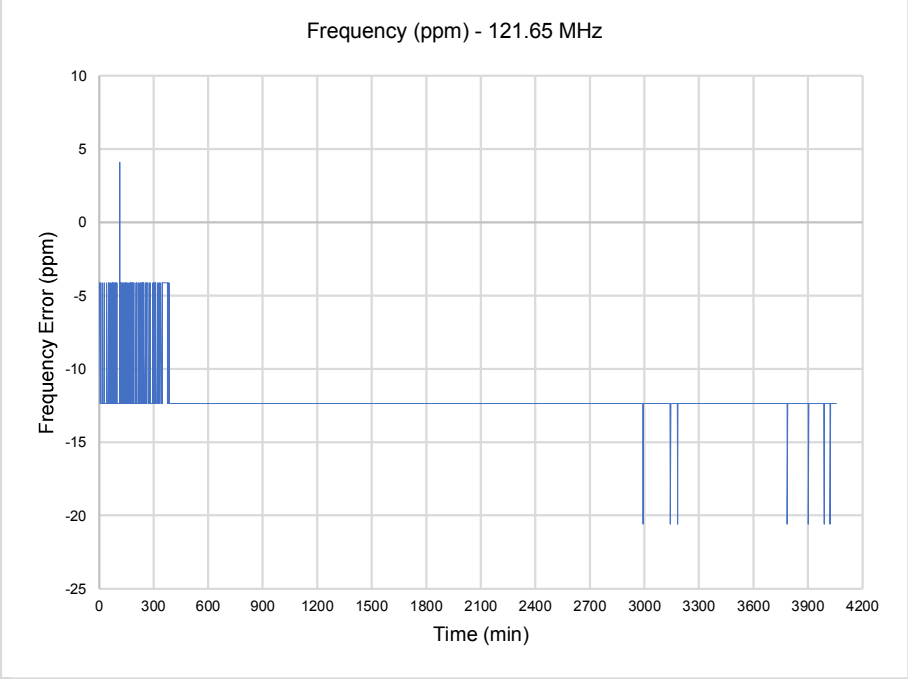


Duty Cycle = 0.835 / (0.835+1.406) = 37.25%

121.65 MHz Homing Transmitter Power



121.65 MHz Homing Transmitter Frequency



Operating Current Measurements and Analysis

System Configuration/Operating Mode Matrix (SCOMM):

System Configuration →	A
Operational Mode ↓	All Ancillaries Connected: Arinc, 28V supply, Remote Panel, Buzzer
1. OFF	A1
2. ARMED disabled mode (including periodic EBIT)	A2
3. ARMED enabled mode	A3
4. ARMED – WITHOUT 28V supply	A4
5. EUT activation from ARINC429 Interface (label 202) ONLY 406MHz (T0 to T1 = T0+6h10) - NO GNSS SIGNAL	A5
6. EUT activation from ARINC429 Interface (label 202) ONLY 406MHz (T0 to T1 = T0+6h10) - GNSS SIGNAL	A6
7. EUT activation WITH 28V power supply loss ONLY 406MHz (T0 to T1 = T0+6h10) - NO GNSS SIGNAL	A7
8. EUT activation from Activation with Crash Sensor 406MHz + 121,5MHz - NO GNSS SIGNAL	A8
9. EUT 121,5MHz after 24hours of beacon operation - NO GNSS SIGNAL	A9
10. EUT activation from beacon front panel control 406MHz + 121,5MHz - NO GNSS SIGNAL	A10
11. EUT activation from Remote Control Panel (RC820) 406MHz + 121,5MHz - NO GNSS SIGNAL	A11
12. Self-test activation from beacon front panel control	A12
13. Self-test from beacon from Remote Control Panel (RC820)	A13
15. GNSS Self-test from beacon front panel control – NO GNSS SIGNAL	A15
16. GNSS Self-test from beacon front panel control – GNSS SIGNAL	A16
17. Cancellation message from beacon front panel control (after EUT activation from beacon front panel control)	A17
18. Cancellation message from ARINC429 Interface (label 202) (after EUT activation from ARINC429 Interface (label 202))	A18
19. EUT activation from beacon front panel control 406MHz + 121,5MHz - NO GNSS SIGNAL and REMOVING 28V just after beacon manual activation	A19

SCOMM Results as per C/S T.007 Table F-E.1:

Beacon Operating Mode	Mode: Manually selectable or Automatic	Measurement interval, sec	Average Current, mA	Peak Current, mA
A1	Manual	1000	0.00000015	0.0000065
A2	Manual	1800	-0.00030783	0.00203601
A3	Manual	1800	-0.00030205	0.003755434
A4	Manual	1000	0.00003646	0.00006689956
A5	Autonomous	1000	70.01	504.164
A6	Autonomous	1000	69.13	506.6532
A7	Autonomous	1000	69.42	559.669
A8	Automatic	1000	71.57	468.089
A9	Automatic	1000	17.78	28.858
A10	Manual	1000	74.61	477.222
A11	Manual	1000	75.00	490.734
A12	Manual	25.8	40.06	72.924
A13	Manual	25.7	41.21	73.029
A15	Manual	179.9	18.39	77.541
A16	Manual	25.8	41.66	72.374
A17	Manual	100.1	82.01	146.646
A18	Autonomous	100.4	86.61	392.579
A19	Manual	1000	74.87	490.381

The sampling interval was a nominal 100 ms.

Worst Case System Configurations / Operating Modes

"Lifetime in service" drains (highest average current):

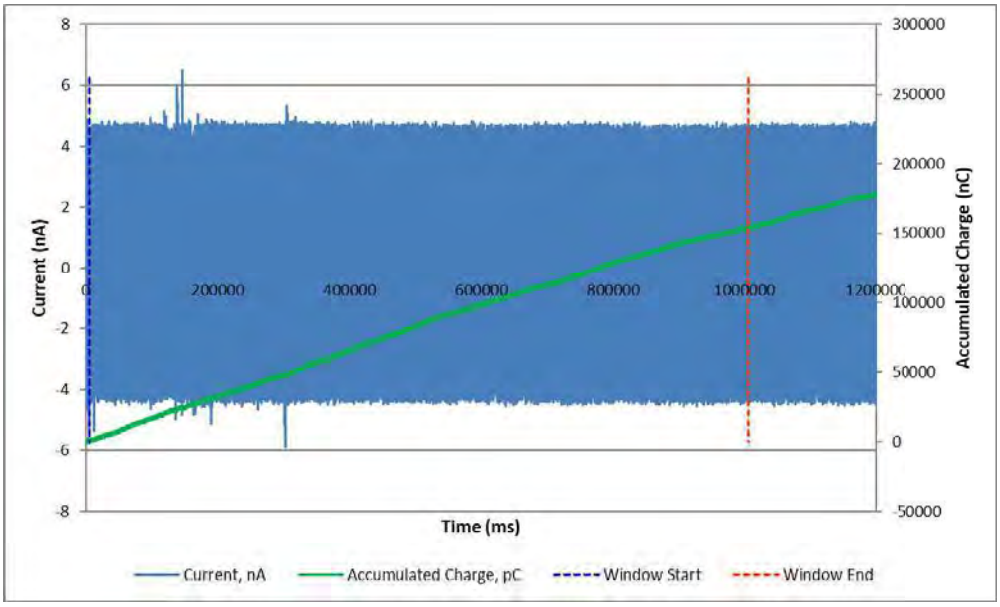
Standby: A4 – All Ancillaries – No 28V Supply, "ARM" at EUT
Self-test: A13 – All Ancillaries, Self-Test triggered from Remote Control Panel (RC820)
GNSS Self-test (Timeout): A15 – All Ancillaries, GNSS Self-Test triggered from EUT front panel

Note: "Worst case" GNSS Self-test is a test which times out because a long message is transmitted regardless of acquisition.

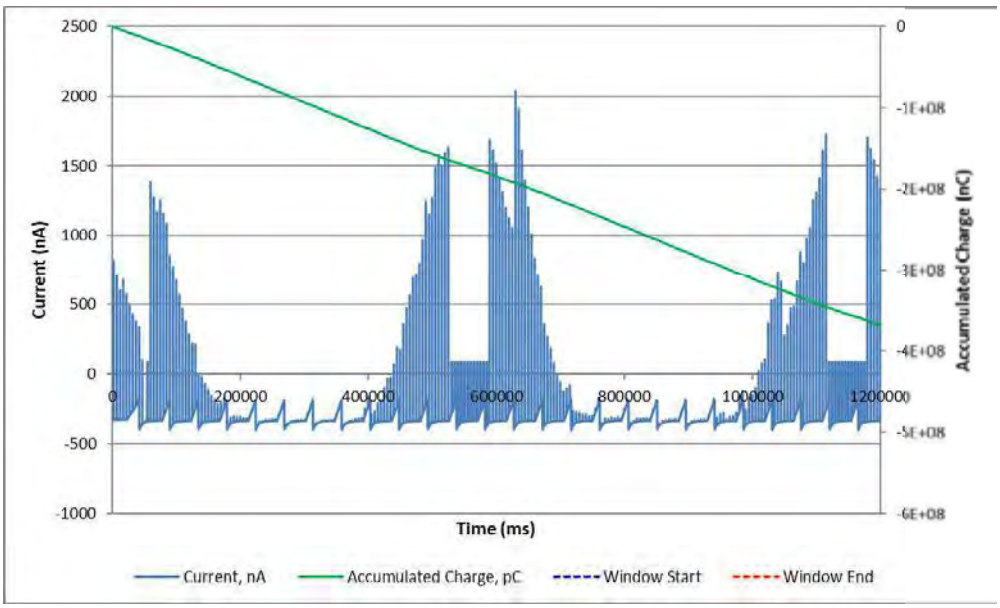
Operating mode during lifetime test (highest average current):

A11 – All Ancillaries, EUT triggered from Remote Control Panel (RC820)
GNSS Signals: No GNSS Applied
28V supply removed after activation

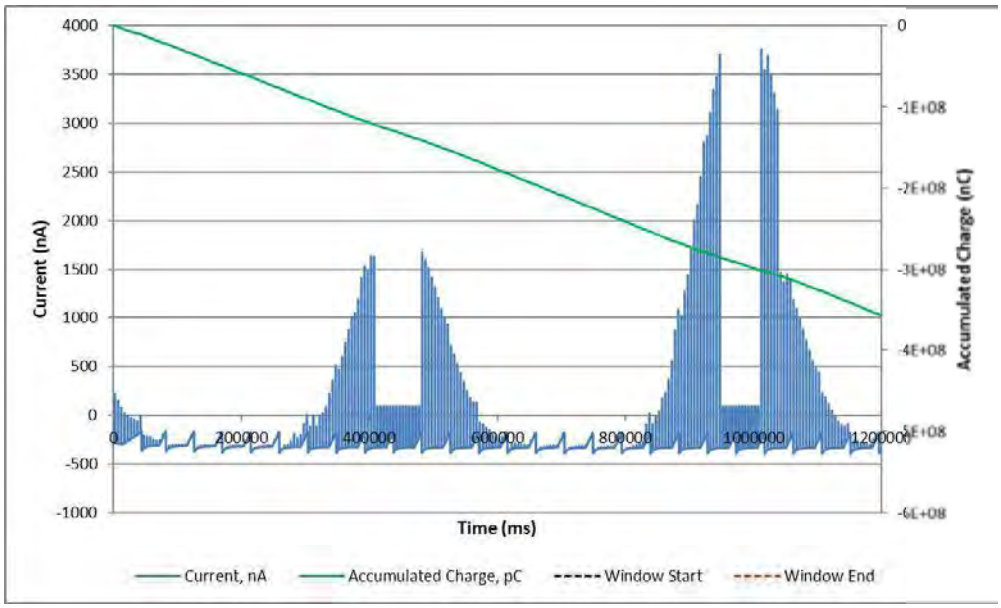
Current Measurement Plots



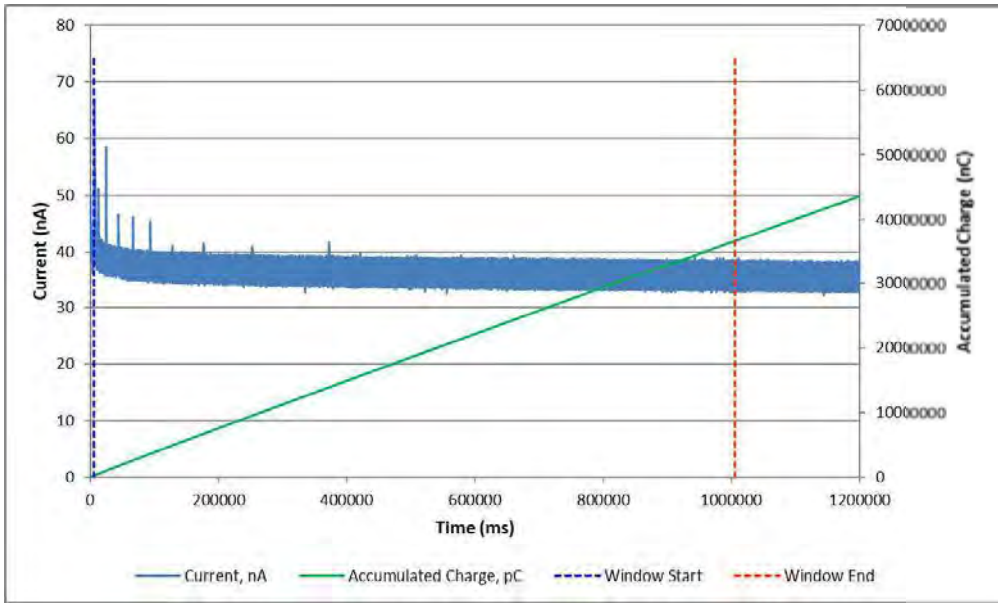
A1: OFF



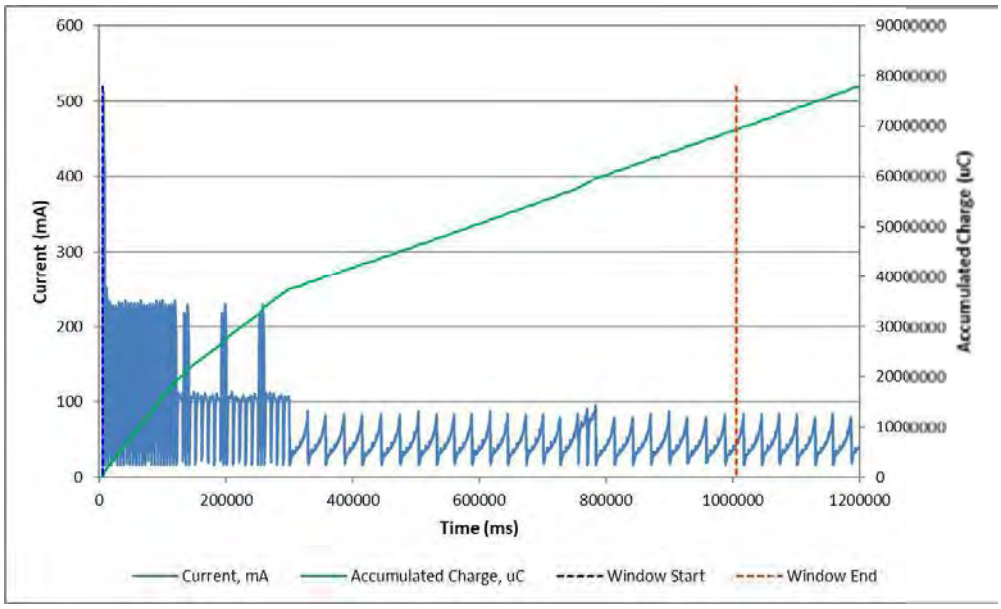
A2: ARMED disabled mode (including periodic EBIT)



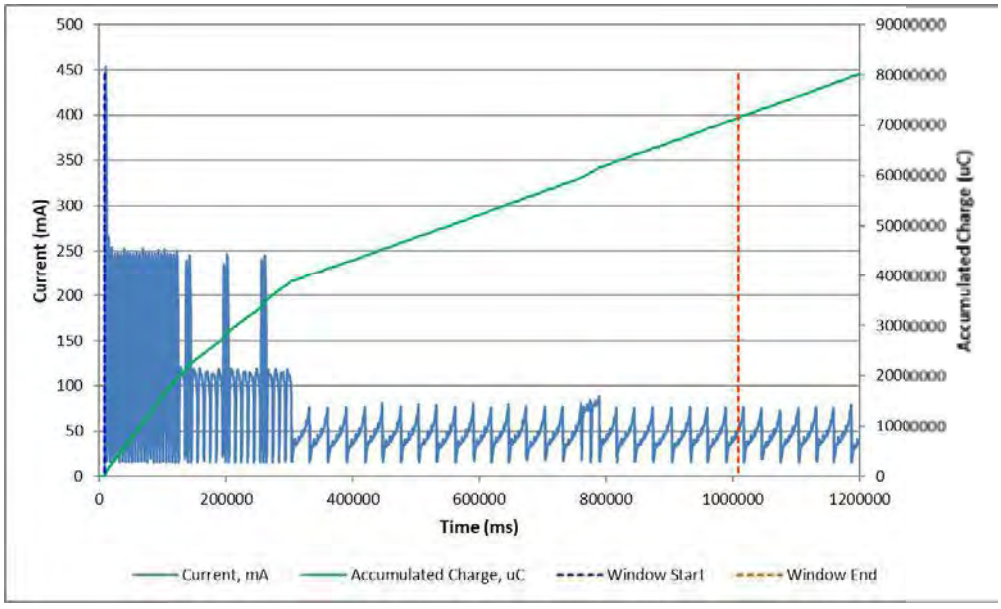
A3: ARMED enabled mode



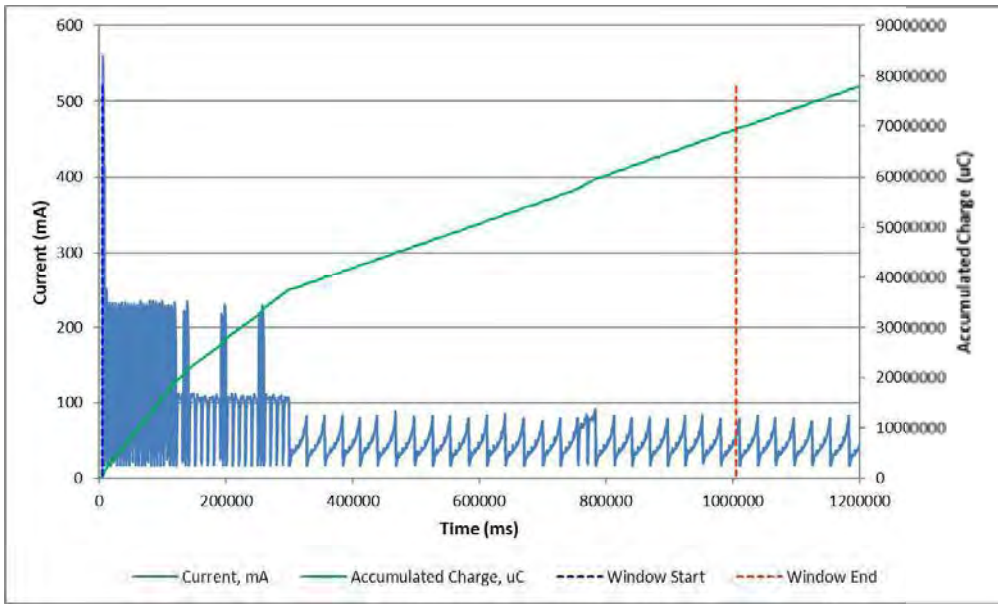
A4: ARMED – WITHOUT 28V supply



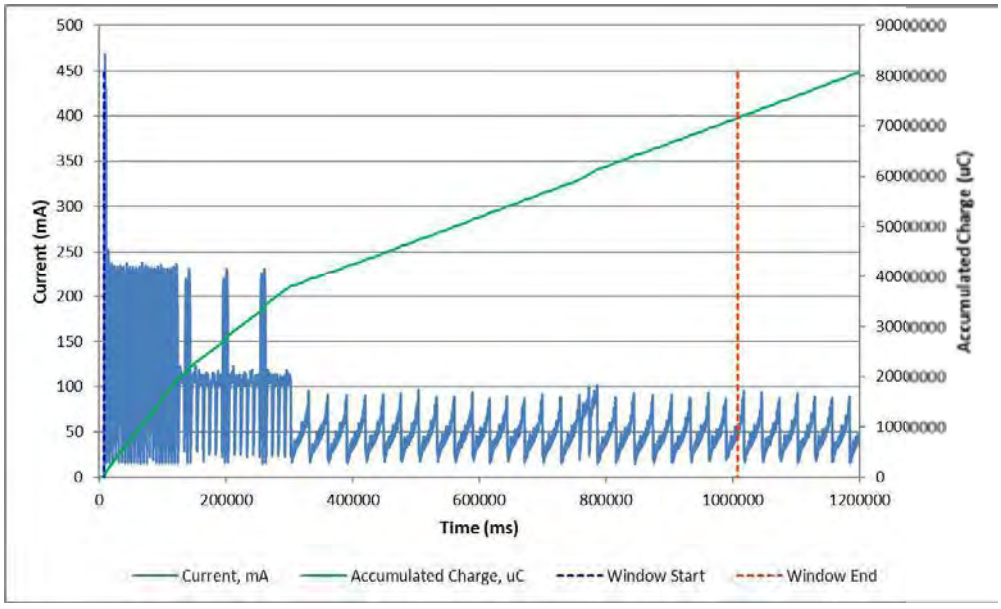
A5: EUT activation from ARINC429 Interface (label 202) ONLY 406MHz (T0 to T1 = T0+6h10) - NO GNSS SIGNAL



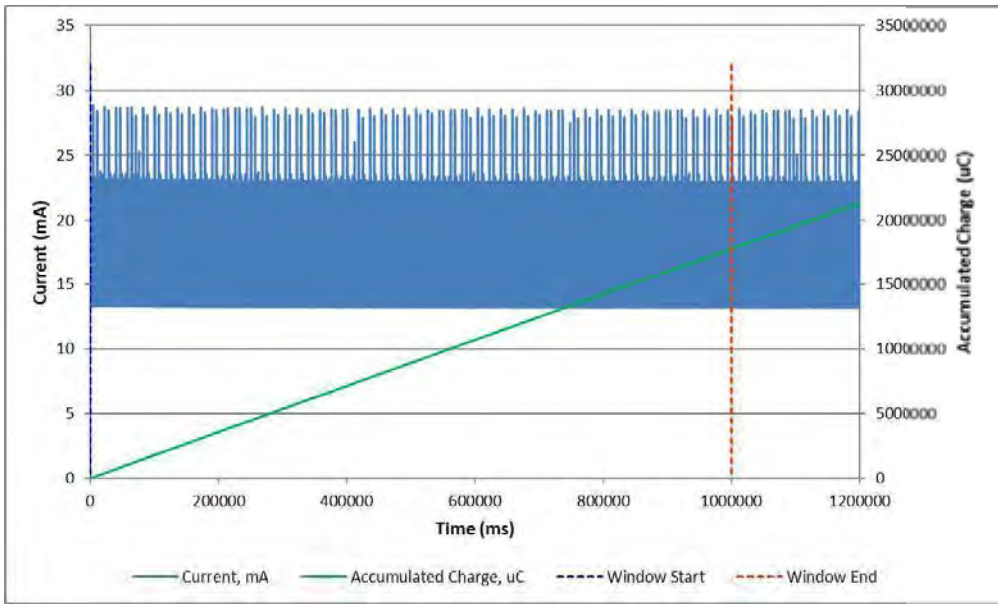
A6: EUT activation from ARINC429 Interface (label 202) ONLY 406MHz (T0 to T1 = T0+6h10) - GNSS SIGNAL



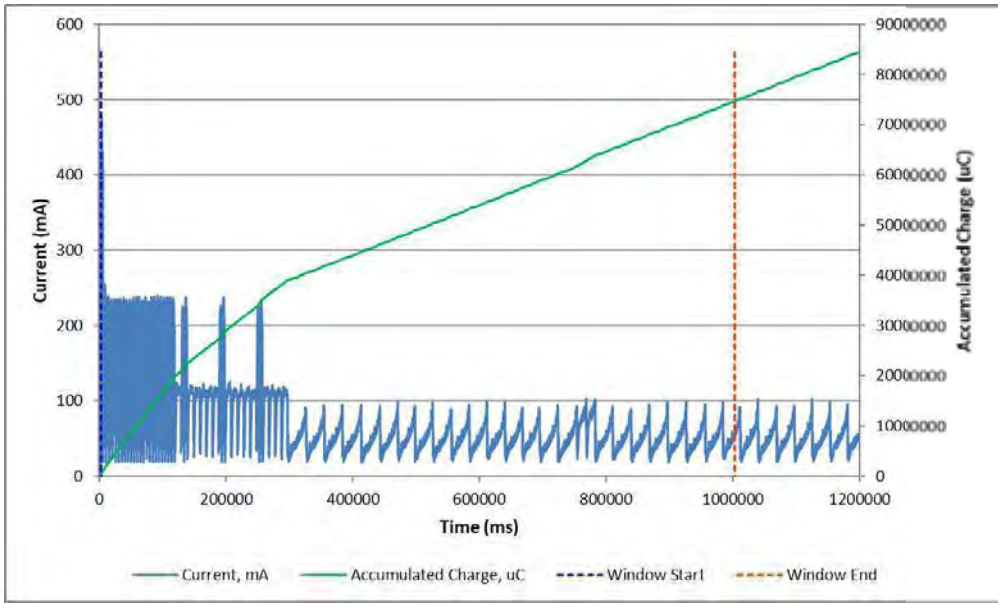
A7: EUT activation WITH 28V power supply loss ONLY 406MHz (T0 to T1 = T0+6h10) - NO GNSS SIGNAL



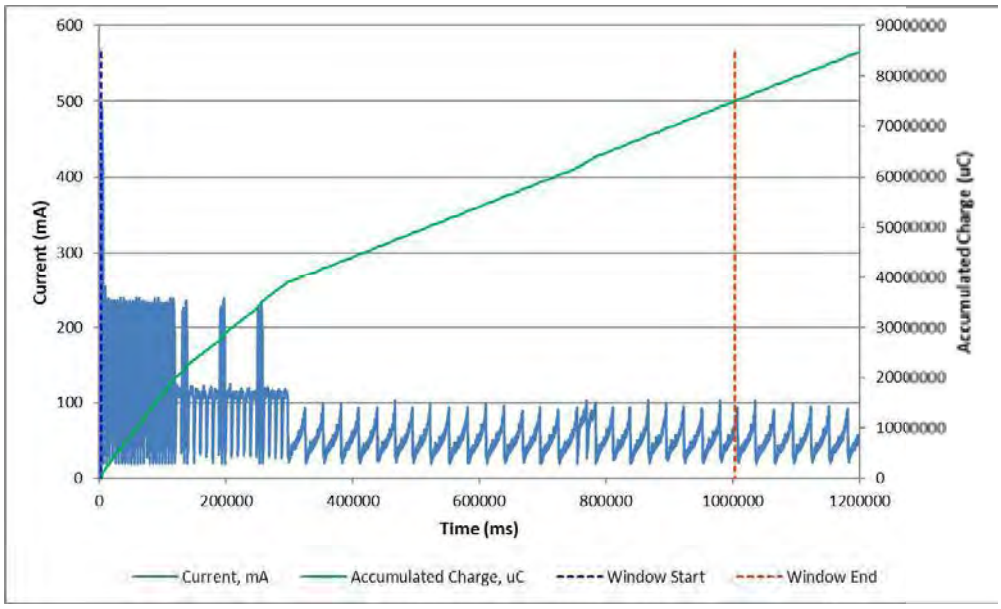
A8: EUT activation from Activation with Crash Sensor 406MHz + 121,5MHz - NO GNSS SIGNAL



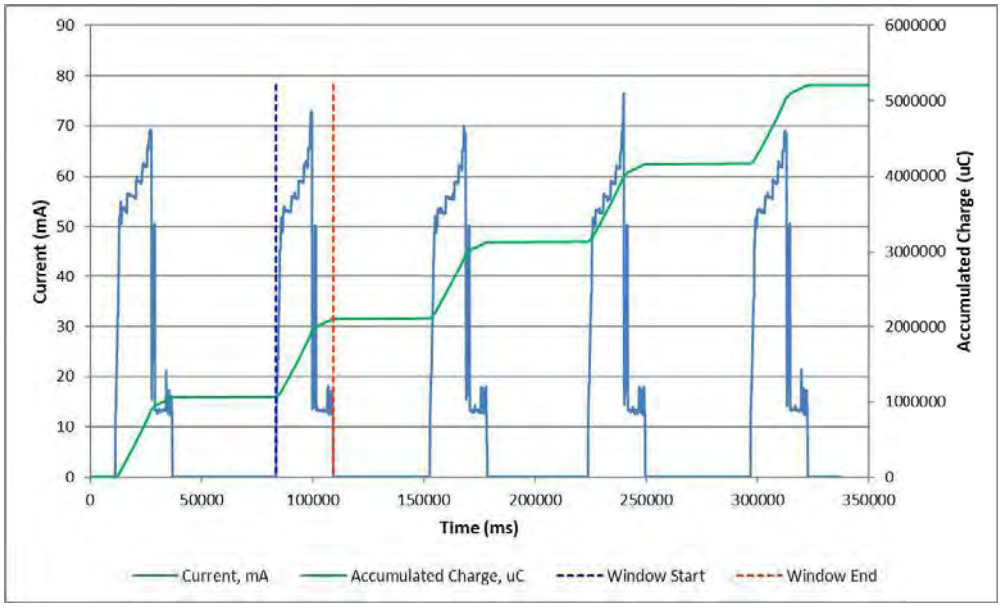
A9: EUT 121,5MHz after 24hours of beacon operation - NO GNSS SIGNAL



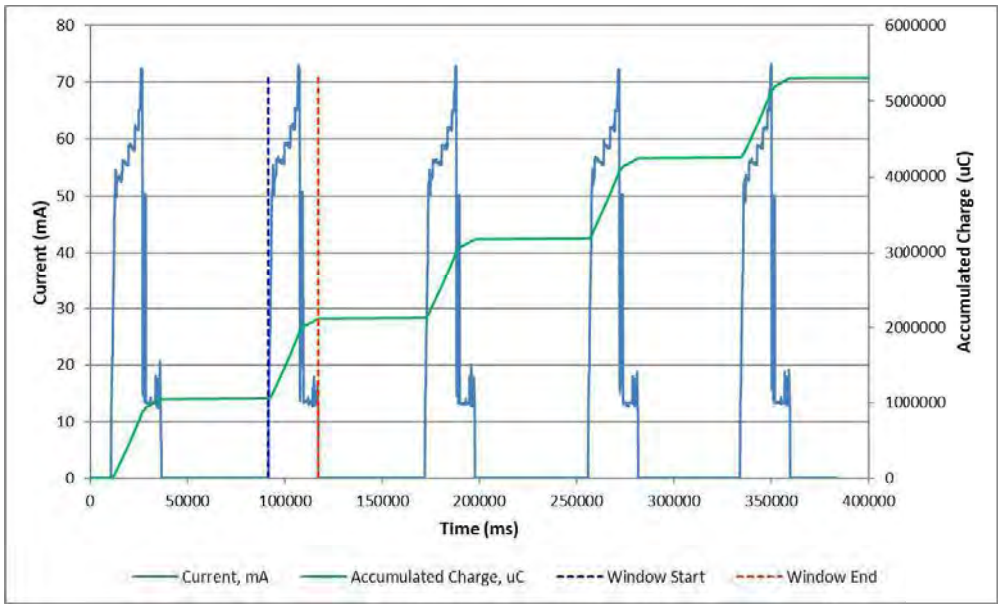
A10: EUT activation from beacon front panel control 406MHz + 121,5MHz - NO GNSS SIGNAL



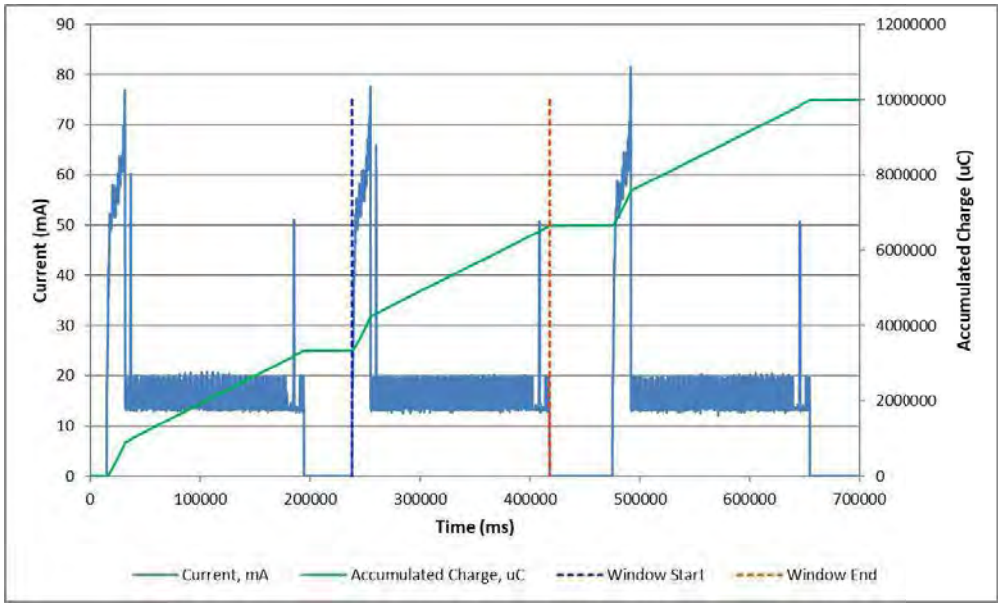
A11: EUT activation from Remote Control Panel (RC820) 406MHz + 121,5MHz - NO GNSS SIGNAL



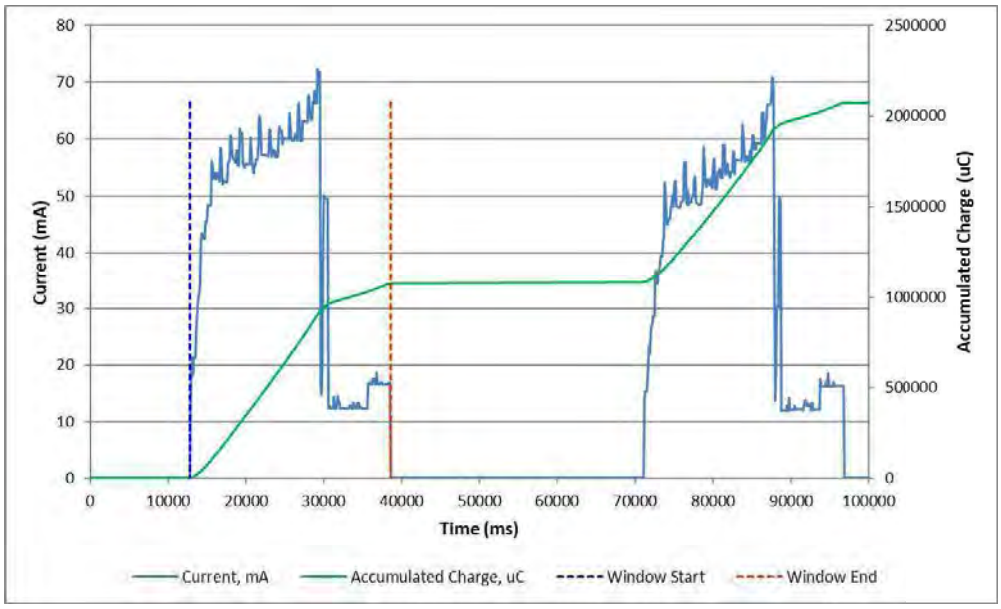
A12: Self-test activation from beacon front panel control



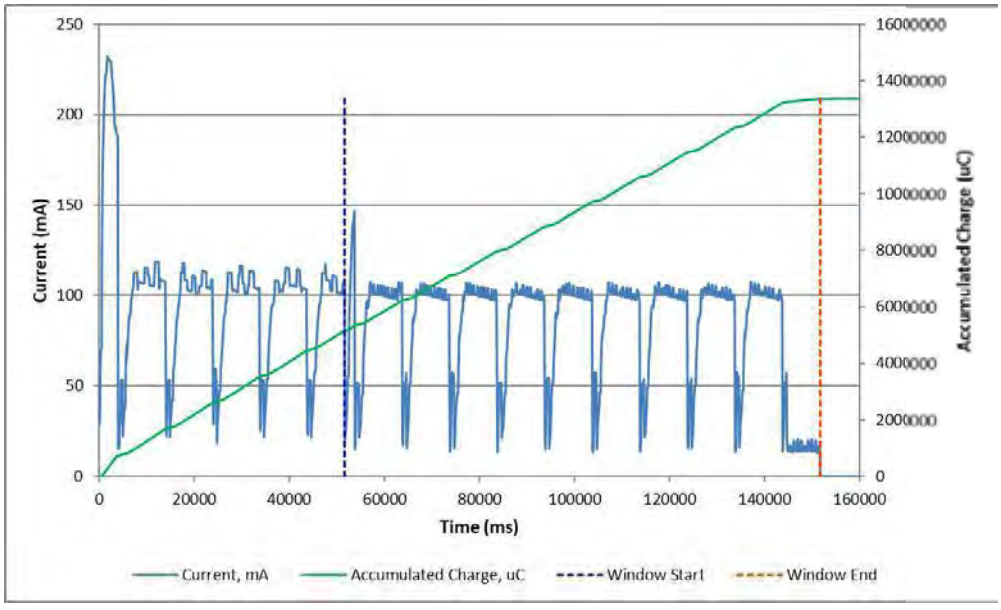
A13: Self-test from beacon from Remote Control Panel (RC820)



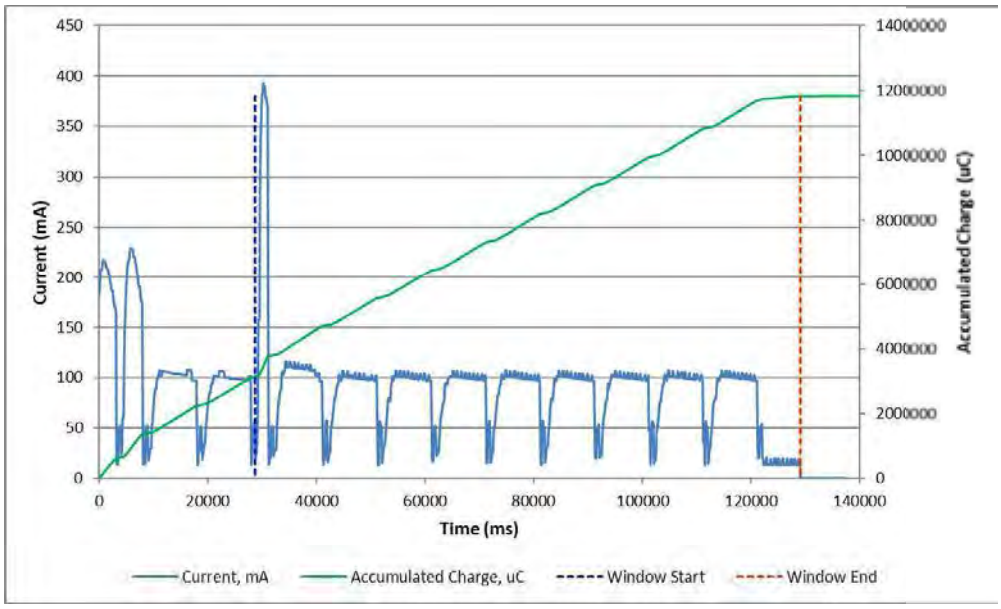
A15: GNSS Self-test from beacon front panel control – NO GNSS SIGNAL



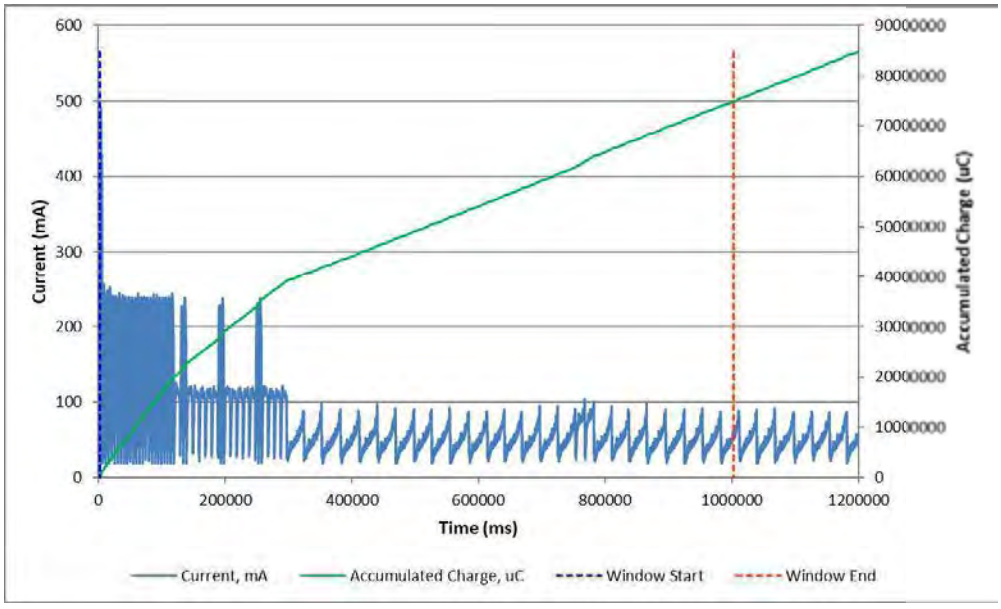
A16: GNSS Self-test from beacon front panel control – GNSS SIGNAL



A17: Cancellation message from beacon front panel control (after EUT activation from beacon front panel control)



A18: Cancellation message from ARINC429 Interface (label 202) (after EUT activation from ARINC429 Interface (label 202))



A19: EUT activation from beacon front panel control 406MHz + 121,5MHz - NO GNSS SIGNAL and REMOVING 28V just after beacon manual activation

Battery Conditioning Calculations

As per C/S T.007 Table F-E.2:

Characteristic	Designation	Units	Value	Comments
Beacon manufacturers declared maximum allowed cell shelf-life (from date of cell manufacture to date of battery pack installation in the beacon)	T_{CS} or TCS	Years	4	
Declared beacon battery replacement period (from date of installation in the beacon to expiry date marked on the beacon)	T_{BR} or TBR	Years	5	
Battery pack electrical configuration	-	-	Lithium Manganese Dioxide	
Cell model and cell chemistry	-	-	2 parallel of 4 in series	
Nominal cell capacity	-	Ah	3	
Nominal battery pack capacity	C_{BN}	Ah	6	
Annual battery cell capacity loss (self-discharge) due to aging, as specified by cell manufacturer at ambient temperature	$L_{SDC}1$	%	2	
Calculated battery pack capacity loss due to self-discharge: $L_{CBN} = C_{BN} - [C_{BN} * (1 - L_{SDC} /100)^{TBR+TCS}]$	$L_{CBN}1$	Ah	0.1200	
Annual battery cell capacity loss (self-discharge) due to aging, as specified by cell manufacturer at ambient temperature	L_{SDC2}	%	1	
Calculated battery pack capacity loss due to self-discharge: LCBN_2 = (CBN - LCBN_1) - [(CBN - LCBN_1) *(1 - LSDC_2 /100) ^ (TBR + TCS - 1)]	L_{CBN2}		0.4543	
Number of self-tests per year	N_{ST}	-	12	
Average battery current during a self-test	I_{ST}	mA	41.21	
Maximum duration of a self-test	T_{ST}	s	32	Manufacturer declared value
Calculated battery pack capacity loss due to self-tests during battery replacement period: $L_{ST} = I_{ST} * T_{ST} * T_{BR} * (N_{ST} / 3600)$	L_{ST}	mAh	21.98	
Maximum Number of GNSS self-tests between battery replacements	N_{GST}	-	60	
Average battery current during a GNSS self-test of maximum duration	I_{GST}	mA	18.39	
Maximum duration of a GNSS self-test	T_{GST}	s	190	Manufacturer declared value
Calculated battery pack capacity loss due to GNSS self-tests during battery replacement period: $L_{GST} = I_{GST} * T_{GST} * (N_{GST} / 3600)$	L_{GST}	mAh	58.235	
Average stand-by battery pack current	I_{SB}	mA	0.00003646	
Other Capacity Losses	L_{OTH}	mAh		
Battery pack capacity loss due to constant operation of circuitry prior to beacon activation: $L_{ISB} = I_{SB} * T_{BR} * 8760$	L_{ISB}	mAh	1.5969	
Calculated value of the battery pack pre-test discharge $L_{CDC} = L_{CBN} + L_{CBN2} + 1.65((L_{ST} + L_{GST} + L_{ISB})/1000) + (L_{OTH}/1000)$	L_{CDC}	Ah	0.7092	

Battery Conditioning Results

A fresh battery was used for the test; it was discharged over a resistor for the pre-test discharge duration calculated as follows:

Pre-test discharge (L_{CDC}) [mAh]	=	709.2
Current Drawn [mA]	=	94
Pre-test discharge duration [h]	=	709.2 / 94
Pre-test discharge duration [h]	=	7.544

The actual discharge duration was 7.62 h resulting in a discharge of 716 mAh: an over-test of 0.96 %.

Summary

Battery current measurements were found to have errors, therefore repeat measurements can be found in Annex B.

The EUT complies with clause A.2.3 of Cospas-Sarsat T.007.

2.10 FREQUENCY STABILITY TEST WITH TEMPERATURE GRADIENT

2.10.1 Specification

Cospas-Sarsat T.007, Clause A.2.4

2.10.2 Equipment Under Test and Modification State

ULTIMA-DT-05 S/N: TO0010000002 - Modification State 0

2.10.3 Date of Test

24 February 2022

2.10.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.10.5 Laboratory Environmental Conditions

Ambient Temperature 24.8°C
Relative Humidity 26.9%

2.10.6 Test Results

Navigation Data status during test:

External Navigation Data Input: Applied

GNSS Simulator Navigation Data: Not Applied

EUT System Configuration

As per figure 1 of section 1.3.2

EUT Operating Mode

As described in section 1.3.3 ‘Operating (Active)’

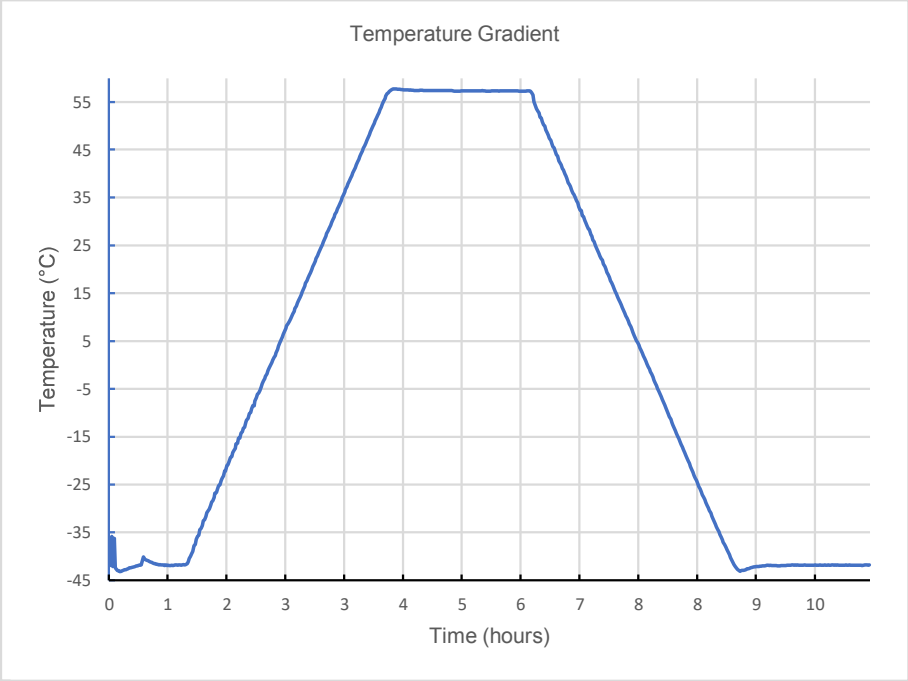
Encoded Protocol

ELT DT Location Protocol

Test Duration

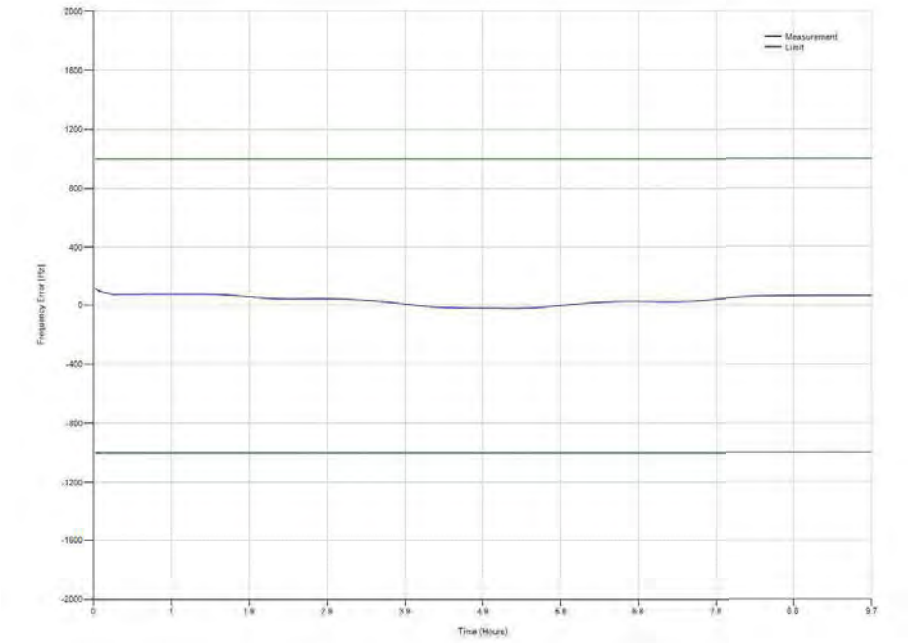
9.7 hours

Temperature Plot

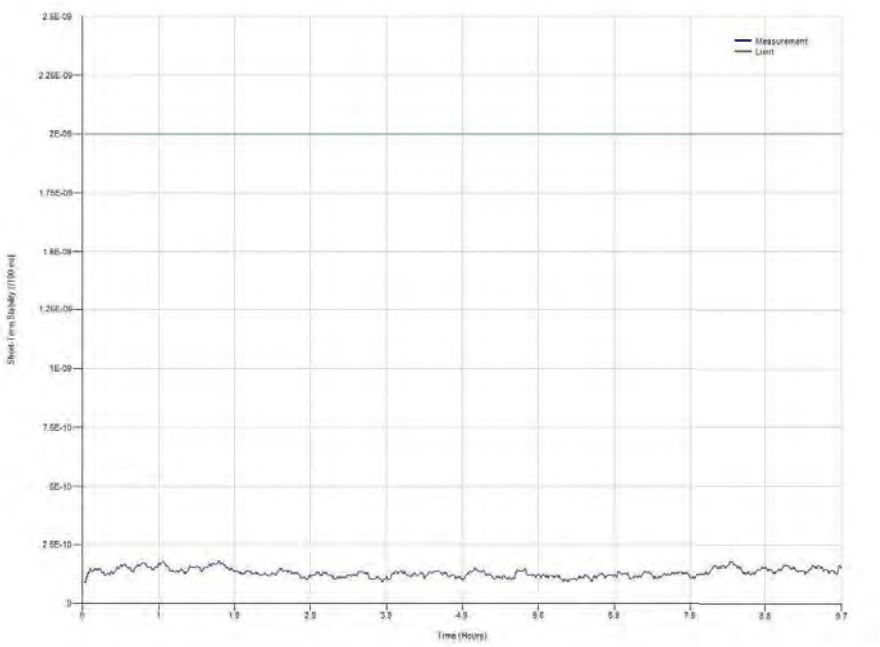


Full Test

Nominal Frequency



Short Term Stability



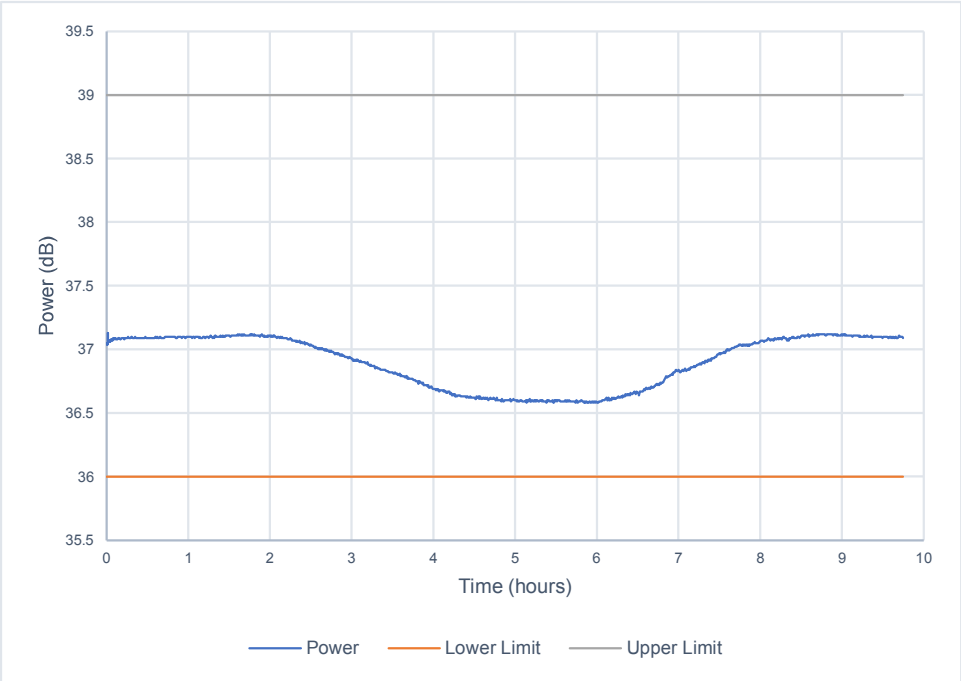
Medium Term Stability, Mean Slope

Not applicable for ELT(DT).

Medium Term Stability, Residual Frequency Variation

Not applicable for ELT(DT).

Output Power



Digital Message

Decoded Beacon Message

Hexadecimal code: FFFE2F8C99000000147648E3D385E00F02FA

The code consists of 36 hexadecimal characters representing a first generation beacon message with the format flag set to Long including bit and frame synchronization pattern prefix (24 bits) as defined by T.001 Issue 4 - Rev.6

Unique identifier:
19320000003FDFF

Binary Range	Binary Content	Field Name	Decoded Value
1-15	111111111111111	Bit-synchronization pattern consisting of "1"s shall occupy the first 15-bit positions	True
16-24	000101111	Frame Synchronization Pattern	Correct. Operational Message
25	1	Format Flag	Long Message
26	0	Protocol Flag	Location, further information provided in "Protocol Code"
27-36	0011001001	Country code:	Albania - 201
		For associated SAR Points of Contact (SPOC) related to Albania - 201 :	Search Contact list here
37-40	1001	Protocol Code	ELT - Location: ELT-DT Location Protocol
41-42	00	ELT Identity Type	Aircraft 24 bit address
43-66	000000000000000000000000	ELT(DT) test beacon	Test beacon type since bits 43-66 are all 0 or All 1, designates Test Protocol
67-75	010100011	Latitude	81.5 Degrees North (81.5)
76-85	1011001001	Longitude	100.5 Degrees West (-100.5)
86-106	00011100011110100111 0	BCH-1 error correcting code	BCH-1 code in message matches the recalculated BCH-1 from the PDF-1 field
107-108	00	means of activation	manual activation by user
109-112	0101	encoded altitude	Altitude is greater than 2200 m (7218 ft) up to and including 2800 m (9186 ft)
113-114	11	Encoded location freshness or PDF-2 rotating field indicator	Encoded location in message is current (i.e., the encoded location freshness is less or equal to 2 seconds)
115-123	100000000	Latitude offset	0.0 minutes 0.0 seconds (positive)
124-132	011110000	Longitude offset	15.0 minutes 0.0 seconds (negative)
133-144	001011111010	BCH-2 error correcting code	BCH-2 code in message matches the recalculated BCH-2 from the PDF-2 field
		Composite location	81.500 -100.250

Summary

The EUT complies with clause A.2.4 of Cospas-Sarsat T.007.

2.11 SATELLITE QUALITATIVE TESTS

2.11.1 Specification

Cospas-Sarsat T.007, Clause A.2.5

2.11.2 Equipment Under Test and Modification State

ULTIMA-DT-05 S/N: TO0010000002 - Modification State 0

2.11.3 Date of Test

9 March 2022

2.11.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.11.5 Laboratory Environmental Conditions

Ambient Temperature 9.1 – 18.2°C
Relative Humidity 44.1 – 79.1%

2.11.6 Test Results

Navigation Data status during test:

External Navigation Data Input: Applied

GNSS Simulator Navigation Data: Not Applied

EUT System Configuration

As per figure 2 of section 1.3.2

Without the RF splitter and GNSS Simulator replaced with Live Satellites

EUT Operating Mode

As described in section 1.3.3 ‘Operating (Active)’

Encoded Protocol

ELT DT Location Protocol with 3LD

Test Duration

3 x 20 minutes

Note: Cable loss from EUT to Antenna: 1.81dB

Actual location of the test beacon: (TÜV Product Service Ltd, Fareham Site, Central)

50.869039
-1.244664

Notes: Altitude Band 0000 = altitude is between 0 and 400 m
(Test location altitude = 40m above sea level)

Configuration 6

Test 1

Burst No.	Beacon TX Time	15 Hex ID	Complete Beacon Message	Encoded Location reported in the MEOLUT alert			2D Location Error (meters)	Valid altitude Band
				Latitude	Longitude	Altitude Band*		
1	07:21:43	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
2	07:21:48	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
3	07:21:52	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
4	07:21:57	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
5	07:22:02	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
6	07:22:07	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
7	07:22:12	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
8	07:22:17	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
9	07:22:22	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
10	07:22:27	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
11	07:22:32	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
12	07:22:37	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
13	07:22:42	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
14	07:22:46	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
15	07:22:51	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
16	07:22:56	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
17	07:23:01	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
18	07:23:06	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
19	07:23:11	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
20	07:23:16	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
21	07:23:21	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
22	07:23:26	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
23	07:23:30	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
24	07:23:35	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
25	07:23:45	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
26	07:23:50	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
27	07:23:55	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
28	07:24:05	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
29	07:24:15	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
30	07:24:25	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass

Burst No.	Beacon TX Time	15 Hex ID	Complete Beacon Message	Encoded Location reported in the MEOLUT alert			2D Location Error (meters)	Valid altitude Band
				Latitude	Longitude	Altitude Band*		
31	07:24:35	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
32	07:24:45	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
33	07:24:50	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
34	07:24:55	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
35	07:25:05	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
36	07:25:14	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
37	07:25:24	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
38	07:25:34	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
39	07:25:44	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
40	07:25:49	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
41	07:25:54	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
42	07:26:04	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
43	07:26:14	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899408FBEAF23	50.869	-1.244	0000	46.8	Pass
44	07:26:24	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
45	07:26:34	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
46	07:27:01	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
47	07:27:29	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
48	07:27:59	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
49	07:28:26	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
50	07:28:54	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
51	07:29:23	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
52	07:29:50	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
53	07:30:17	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
54	07:30:46	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
55	07:31:16	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
56	07:31:45	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
57	07:32:13	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
58	07:32:42	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
59	07:33:11	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
60	07:33:39	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
61	07:34:09	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
62	07:34:24	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A899400452A622					
63	07:34:39	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
64	07:35:07	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
65	07:35:34	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
66	07:36:02	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
67	07:36:32	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
68	07:36:59	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
69	07:37:27	19327FFFFFBFDFF	FFFE2F8C993FFFFFCCD013A89940CFBEA427	50.869	-1.244	0000	46.8	Pass
70	07:37:56	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass

Burst No.	Beacon TX Time	15 Hex ID	Complete Beacon Message	Encoded Location reported in the MEOLUT alert			2D Location Error (meters)	Valid altitude Band
				Latitude	Longitude	Altitude Band*		
71	07:38:23	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
72	07:38:50	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580FFFFFFFF	51.267	-1.267	0000	44251	Pass
73	07:39:19	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
74	07:39:49	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
75	07:40:18	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
76	07:40:46	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
77	07:41:15	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass

Measurements highlighted Blue contain 3LD in PDF-2 and may be discarded from the results.
Measurements highlighted Red indicate that the encoded longitude and latitude are incorrect as the 2D Location error is greater than 200m.

Test 1 Summary: MEOLUT alerts with complete beacon message and 15 Hex ID at least 1/min for >90% of total test time: 100% - Pass

Encoded location provided by the MEOLUT accurate in the horizontal plane ≤200m for >90% of the alerts: 98.7% - Pass

Encoded location provided by the MEOLUT accurate in the vertical plane reported as correct altitude band: 100% Pass

MEO Satellites in view during test

LUT ID	Antenna Id	Sat ID	AOS	LOS
2275	1	404	00:52:30	10:02:25
2275	1	421	02:06:30	07:25:56
2275	1	401	03:11:30	09:54:19
2275	1	409	03:44:30	11:59:18
2275	1	431	04:52:00	12:58:45
2275	1	434	05:36:00	07:36:50
2275	1	405	06:38:30	13:21:54

Date of Tracking	Tracking Start Time	Tracking End Time	Sat ID	MEOLUT ID (2325) Antenna ID	Start of tracking session		End of tracking session		Max Elev
					AOS Az	AOS El	LOS Az	LOS El	
09/03/2022	07:21	07:54	404	1	128.49	49.4	136.23	37.9	49.66
09/03/2022	07:01	07:33	421	2	39.84	15.7	38.89	6.1	15.8
09/03/2022	05:33	08:45	409	3	285.56	35.4	183.82	69.2	80.63
09/03/2022	08:45	11:33	405	3	299.8	47.1	216.08	37.7	61.02
09/03/2022	03:15	07:09	404	5	256.91	46	125.19	54.2	85.86
09/03/2022	07:09	08:18	415	5	354.9	5.2	333.86	5	7.02
09/03/2022	08:18	08:51	404	5	141.1	29	146.37	17.9	29
09/03/2022	04:33	08:30	401	6	140.98	22.4	52.12	31.8	56.23

Note: The raw results for the Satellite Qualitative test were provided by French MCC. However, as the French MEOLUT has an active antenna with no mechanical tracking they were unable to support the request to provide the starting and ending azimuth and elevation of each MEOSAR satellite tracked during the test. The starting and ending azimuth and elevation of each MEOSAR satellite tracked during the Satellite Qualitative test was provided by the UK MCC.

Test 2

Burst No.	Beacon TX Time	15 Hex ID	Complete Beacon Message	Encoded Location reported in the MEOLUT alert			2D Location Error (meters)	Valid altitude Band
				Latitude	Longitude	Altitude Band*		
1	12:46:23	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA58590DE69F7	50.869	-1.244	0000	46.8	Pass
2	12:46:28	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5850452ACF1					
3	12:46:33	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA58590DE69F7	50.869	-1.244	0000	46.8	Pass
4	12:46:37	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA58590DE69F7	50.869	-1.244	0000	46.8	Pass
5	12:46:42	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580FFFFFFFF	51.267	-1.267	0000	44251	Pass
6	12:46:47	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5850452ACF1					
7	12:46:52	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA58590DE69F7	50.869	-1.244	0000	46.8	Pass
8	12:46:57	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
9	12:47:02	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5808FBEAF23	50.869	-1.244	0000	46.8	Pass
10	12:47:07	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
11	12:47:12	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5808FBEAF23	50.869	-1.244	0000	46.8	Pass
12	12:47:17	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
13	12:47:22	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
14	12:47:26	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
15	12:47:31	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
16	12:47:36	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
17	12:47:41	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
18	12:47:46	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
19	12:47:51	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
20	12:47:56	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
21	12:48:01	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
22	12:48:06	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
23	12:48:11	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
24	12:48:15	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
25	12:48:25	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
26	12:48:30	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
27	12:48:35	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
28	12:48:45	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
29	12:48:55	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
30	12:49:05	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
31	12:49:15	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
32	12:49:25	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
33	12:49:30	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
34	12:49:35	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
35	12:49:44	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
36	12:49:55	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
37	12:50:04	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
38	12:50:14	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass

Burst No.	Beacon TX Time	15 Hex ID	Complete Beacon Message	Encoded Location reported in the MEOLUT alert			2D Location Error (meters)	Valid altitude Band
				Latitude	Longitude	Altitude Band*		
39	12:50:24	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
40	12:50:29	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
41	12:50:34	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
42	12:50:44	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
43	12:50:54	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
44	12:51:04	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
45	12:51:14	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
46	12:51:43	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
47	12:52:12	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
48	12:52:39	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
49	12:53:07	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
50	12:53:36	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
51	12:54:04	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
52	12:54:32	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
53	12:54:59	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
54	12:55:27	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
55	12:55:54	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
56	12:56:23	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
57	12:56:52	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
58	12:57:21	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
59	12:57:49	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
60	12:58:19	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
61	12:58:47	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
62	12:59:02	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA5800452A622					
63	12:59:17	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
64	12:59:47	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
65	13:00:16	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
66	13:00:45	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
67	13:01:12	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
68	13:01:40	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
69	13:02:09	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
70	13:02:37	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
71	13:03:05	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
72	13:03:33	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
73	13:04:00	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
74	13:04:27	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
75	13:04:56	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
76	13:05:25	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass
77	13:05:54	19327FFFFFBFDFF	FFFE2F8C990000000CD0134FA580CFBEA427	50.869	-1.244	0000	46.8	Pass