



FCC Test Report

APPLICANT : Locus Solutions, LLC
EQUIPMENT : GO Tracker 1.4
BRAND NAME : Emerson
MODEL NAME : GO TRACKER 1.4
MARKETING NAME : GO Tracker 1.4
FCC ID : AMH101010
STANDARD : FCC CFR Title 47 Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Jun. 26, 2018 and testing was completed on Jul. 27, 2018. We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.



Approved by: Eric Shih / Manager

Sporton International (Shenzhen) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC862610	Rev. 01	Initial issue of report	Aug. 27, 2018



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 14.88 dB at 879.72 MHz



1. General Description

1.1. Applicant

Locus Solutions, LLC

7121 Fairway DR. Suite #400, Plam Beach Gardens, FL 33418, United States

1.2. Manufacturer

Zhenshen Zhenhua Communication Equipment Co. Ltd

Zhenhua Industrial Park, No.44, Tiezai Rd., Xixiang Town, BaoAn, Shenzhen, Guang Dong, China

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	GO Tracker 1.4
Brand Name	Emerson
Model Name	GO Tracker 1.4
Marketing Name	GO Tracker 1.4
FCC ID	AMH101010
EUT supports Radios application	GPRS / GPS
IMEI Code	Radiation: 352544074664500
HW Version	TK108-61-SECURE-V11A
SW Version	M6100-V2.0.6
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz GPS : 1559 MHz ~ 1610 MHz
Antenna Type	WWAN : PIFA Antenna GPS: monopole Antenna
Type of Modulation	GPRS: GMSK GPS : BPSK

1.5. Modification of EUT

No modifications are made to the EUT during all test items.

1.6. Test Location

Sporton International (Shenzhen) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No. is CN5019.

Test Site	Sporton International (Shenzhen) Inc.	
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China TEL: +86-755-3320-2398	
Test Site No.	Sporton Site No.	FCC Test Firm Registration No.
	03CH03-SZ	577730

Note: The test site complies with ANSI C63.4 2014 requirement.

1.7. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC CFR Title 47 Part 15 Subpart B
- ♦ ANSI C63.4-2014

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2. Test Configuration of Equipment Under Test

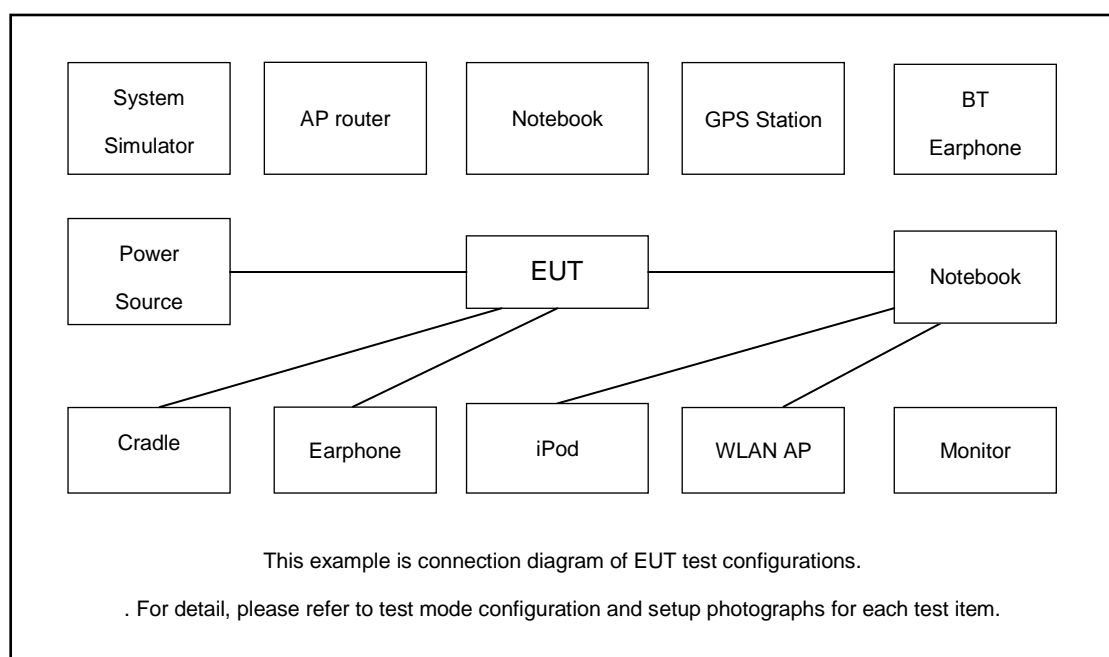
2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
Radiated Emissions	Mode 1: GPRS1900 Idle + Battery + Bolt

2.2.Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Agilent	8960	N/A	N/A	Unshielded,1.8m



2.4. EUT Operation Test Setup

The EUT was in GPRS idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

Execute program to make the EUT receive continuous signals from GPS station.

3. Test Result

3.1. Test of Radiated Emission Measurement

3.1.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.1.2. Measuring Instruments

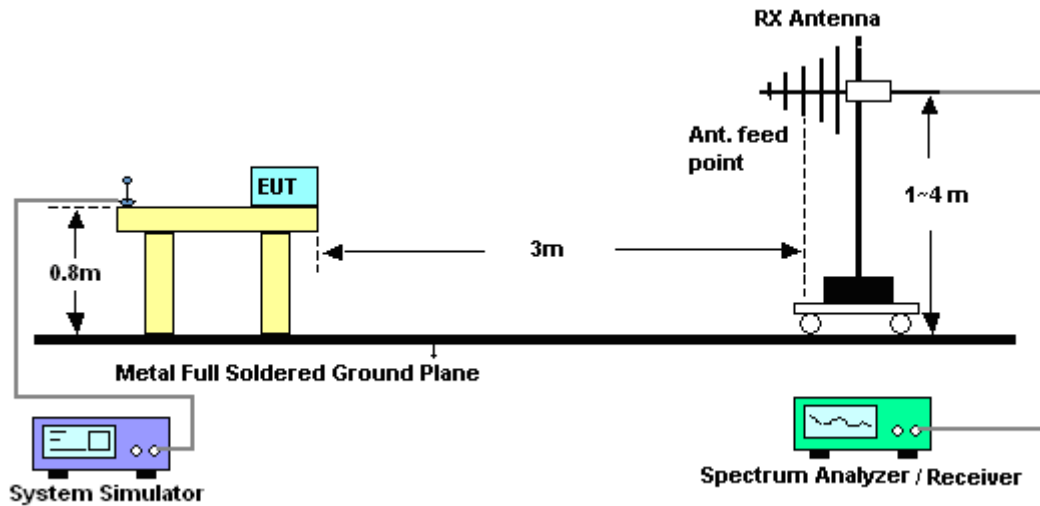
The measuring equipment is listed in the section 4 of this test report.

3.1.3. Test Procedures

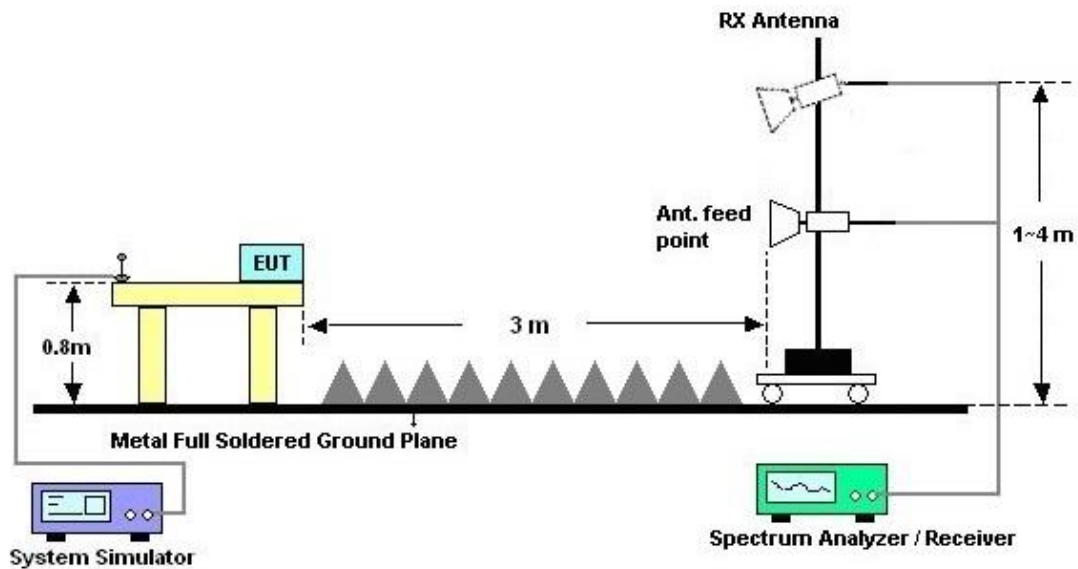
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.1.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

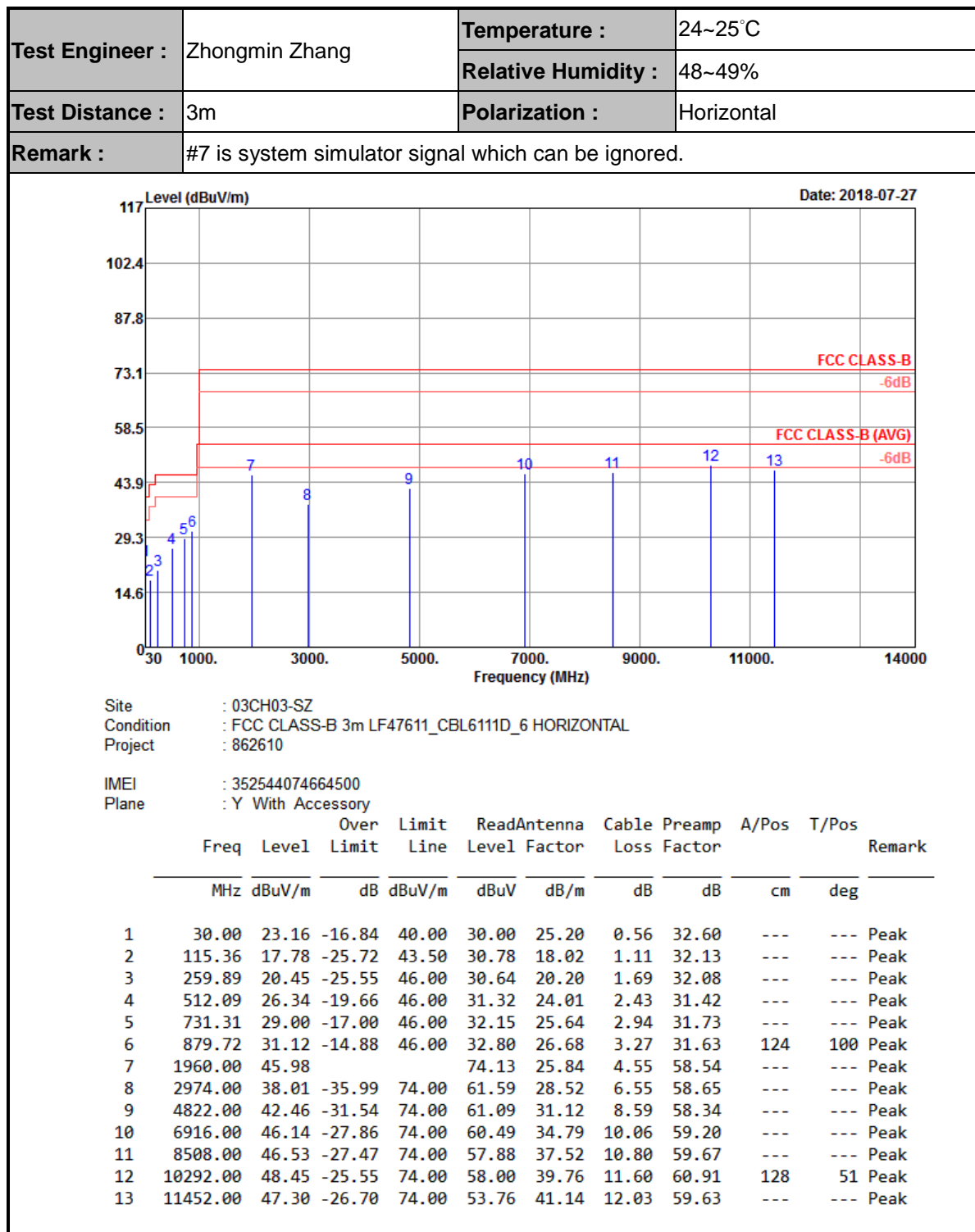


For radiated emissions above 1GHz



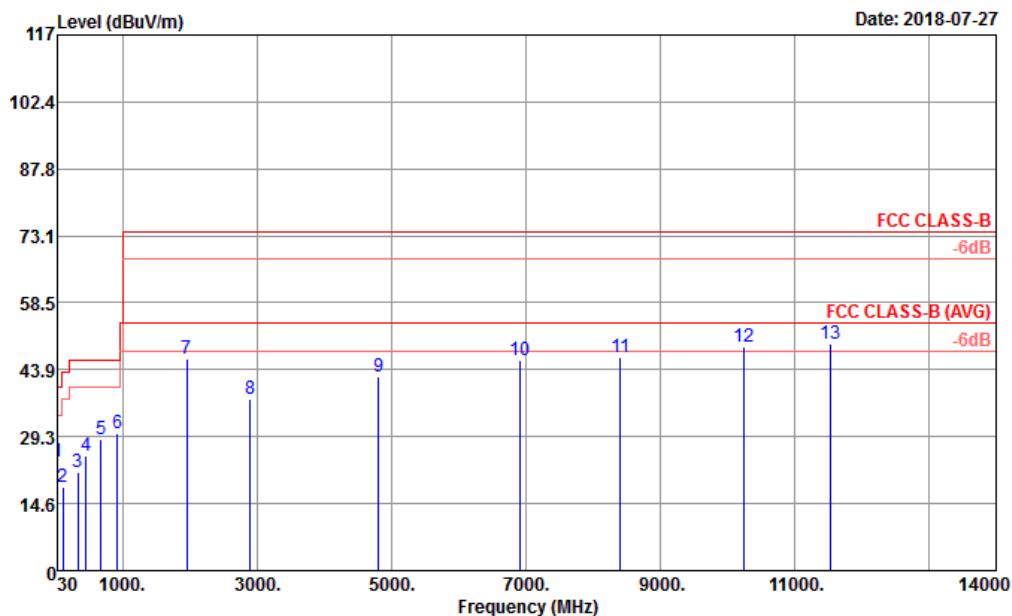


3.1.5. Test Result of Radiated Emission





Test Engineer :	Zhongmin Zhang	Temperature :	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	Polarization :	Vertical
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH03-SZ
Condition : FCC CLASS-B 3m LF47611_CBL6111D_6 VERTICAL

IMEI : 352544074664500
Plane : Y With Accessory

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Preamp	A/Pos	T/Pos			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.97	23.90	-16.10	40.00	31.31	24.62	0.57	32.60	---	---	Peak
2	118.27	18.26	-25.24	43.50	31.15	18.13	1.12	32.14	---	---	Peak
3	333.61	21.64	-24.36	46.00	31.51	20.14	1.93	31.94	---	---	Peak
4	456.80	25.11	-20.89	46.00	31.22	23.09	2.28	31.48	---	---	Peak
5	681.84	28.80	-17.20	46.00	32.37	25.20	2.83	31.60	---	---	Peak
6	922.40	30.07	-15.93	46.00	31.00	26.94	3.35	31.22	165	30	Peak
7	1960.00	46.26			74.41	25.84	4.55	58.54	---	---	Peak
8	2902.00	37.40	-36.60	74.00	61.56	28.35	6.13	58.64	---	---	Peak
9	4816.00	42.43	-31.57	74.00	61.08	31.10	8.59	58.34	---	---	Peak
10	6914.00	46.09	-27.91	74.00	60.44	34.79	10.06	59.20	---	---	Peak
11	8406.00	46.63	-27.37	74.00	58.02	37.55	10.75	59.69	---	---	Peak
12	10242.00	49.02	-24.98	74.00	58.67	39.70	11.59	60.94	---	---	Peak
13	11538.00	49.64	-24.36	74.00	56.13	41.09	12.06	59.64	133	269	Peak



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 19, 2018	Jul. 27, 2018	Apr. 18, 2019	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 19, 2018	Jul. 27, 2018	Apr. 18, 2019	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Apr. 19, 2018	Jul. 27, 2018	Apr. 18, 2019	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Mar. 29, 2018	Jul. 27, 2018	Mar. 28, 2019	Radiation (03CH03-SZ)
LF Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 19, 2017	Jul. 27, 2018	Oct. 18, 2018	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-00101 800-30-10P-R	1943528	1GHz~18GHz	Oct. 19, 2017	Jul. 27, 2018	Oct. 18, 2018	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Jul. 27, 2018	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jul. 27, 2018	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jul. 27, 2018	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

5. Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8 dB
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