

# RF-PHY Test Report

Report No.: AGC08509191001RB01

**TEST NAME** : BLUETOOTH RF-PHY CONFORMANCE TESTING

**PRODUCT DESIGNATION** : Bluetooth Low Energy Data Transmission Module

**BRAND NAME** : HOPERF

**MODEL NAME** : See page 4

**CLIENT** : WUXI HOPE SENSOR TECHNOLOGY CO., LTD

**DATE OF ISSUE** : Oct. 30, 2019

**STANDARD(S)** : Bluetooth Low Energy RF PHY Test Specification, Revision  
RF-PHY.TS.5.1.0

**REPORT VERSION** : V1.0

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**Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Oct. 30, 2019	Valid	Extension Report



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## 1. TEST RESULT CERTIFICATION

<b>Applicant</b>	WUXI HOPE SENSOR TECHNOLOGY CO., LTD
<b>Applicant Address</b>	No.5, Guanshan Road, Xin 'an Street, Xinwu District, Wuxi, Jiangsu, China
<b>Manufacturer</b>	SHEN ZHEN HOPE MICROELECTRONICS CO., LTD
<b>Manufacturer Address</b>	2/F, Building 3, Pingshan Private Enterprise Science and Technology Park, Xili Town, Nanshan District, Shenzhen, China
<b>Product Designation</b>	Bluetooth Low Energy Data Transmission Module
<b>Brand Name</b>	HOPERF
<b>Test Model</b>	HM-BT4502
<b>Series Model</b>	HM-BT4502B, HM-BT4502C, HM-BT4502D, HM-BT4502E, HM-BT4502F
<b>Model Difference</b>	All the same except for the model name
<b>Test Standard</b>	Bluetooth Low Energy RF PHY Test Specification, revision RF-PHY.TS.5.1.0
<b>Date of Test</b>	Jul. 09, 2019 to Jul. 18, 2019

We (AGC), Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the Bluetooth Low Energy RF PHY test specification revision RF-PHY.TS.5.1.0. The results of testing in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By



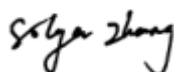
Cool Cheng(Cheng Mengguo) Oct. 30, 2019

Reviewed By



Forrest Lei(Lei Yonggang) Oct. 30, 2019

Approved By



Solger Zhang(Zhang Hongyi) Oct. 30, 2019  
Authorized Officer



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## 2. EUT DESCRIPTION

<b>Product Designation</b>	Bluetooth Low Energy Data Transmission Module
<b>Brand Name</b>	HOPERF
<b>Test Model</b>	HM-BT4502
<b>Frequency Bands</b>	2402~2480MHz
<b>Bluetooth Version</b>	V5.0
<b>Type of modulation</b>	GFSK
<b>Hardware Version</b>	V1.2
<b>Software Version</b>	V1.0.0
<b>Sample ID Number</b>	190708077
<b>PICS</b>	See Annex A
<b>Test Setup</b>	Connect EUT (Equipment under Test) directly to RF test system using low loss RF cable with SMA connector. Direct Test Mode (DTM) protocol defined in Bluetooth® specification is activated to enable test execution.

## 3. ADMINISTRATIVE DATA OF TEST FACILITY

<b>Facility</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd.
<b>Location</b>	1/F., Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
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#### 4. TESTING CHARACTERISTICS

PICS	See Annex A
PIXIT	See Annex B
Retention date for log reference	5 years
Test Specification	Bluetooth® Low Energy Radio Frequency Physical (RF-PHY) Test Specification, revision RF-PHY.TS.5.1.0

##### TEST CONDITION:

##### Normal Operation Conditions defined in RF-PHY Test Specification

Temperature in the range	manufacturer declared value $\pm 10^{\circ}\text{C}$	Yes
Relative Humidity in the range	manufacturer declared min. value to max. value	Yes
Power Source Voltage shall be	manufacturer declared nominal supply voltage	Yes

##### Actual Test Conditions

	NORMAL
Temperature	24.2°C
Relative Humidity	57.3%
Power Source (DC)	3.3V

The temperature and relative humidity are average value.



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## 5. TEST EQUIPMENT AND ACCESSORIES FOR TESTS

### Setup 1: RTSB-A Test Systems

No.	Equipment Name	Manufacturer	Model Name	Series Number	Cal. Due
1	Bluetooth Tester	R&S	CMW270	100528	2019.09.19
2	Signal Analyzer	R&S	FSL	104484	2019.09.19
3	Vector Signal Generator	R&S	SMBV100A	260838	2019.09.19
4	Analog Signal Generator	R&S	SMF100A	104685	2019.09.19
5	RF Box	CTTL-Systems	N/A	N/A	N/A
6	Power Supply	HAMEG	HMP2020	021610781	2019.09.19
7	Shielding Box	JIACHEN	JC-P505	JE512L192P	2019.12.19
8	Bluetooth RF Test System Software	CTTL-Systems	RTSB-A	V2.0.0 (SW Version)	N/A

### Setup 2: RTSB-A Test System

No.	Equipment Name	Manufacturer	Model Name	Series Number	Cal. Due
1	Bluetooth Tester	R&S	CBT32	100805	2019.12.17
2	Signal Analyzer	R&S	FSV3	101857	2019.12.17
3	Vector Signal Generator	R&S	SMJ100A	100745	2019.12.17
4	Analog Signal Generator	R&S	SMR20	101841	2019.12.17
5	RF Box	CTTL-Systems	N/A	N/A	N/A
6	Laboratory DC Power Supply	HP	6627A	3420A01542	2019.12.17
7	Shielding Box	JIACHEN	JC-P505	JE512L192P	2019.12.19
8	Bluetooth RF Test System Software	CTTL-Systems	RTSB-A	V2.0.0 (SW Version)	N/A



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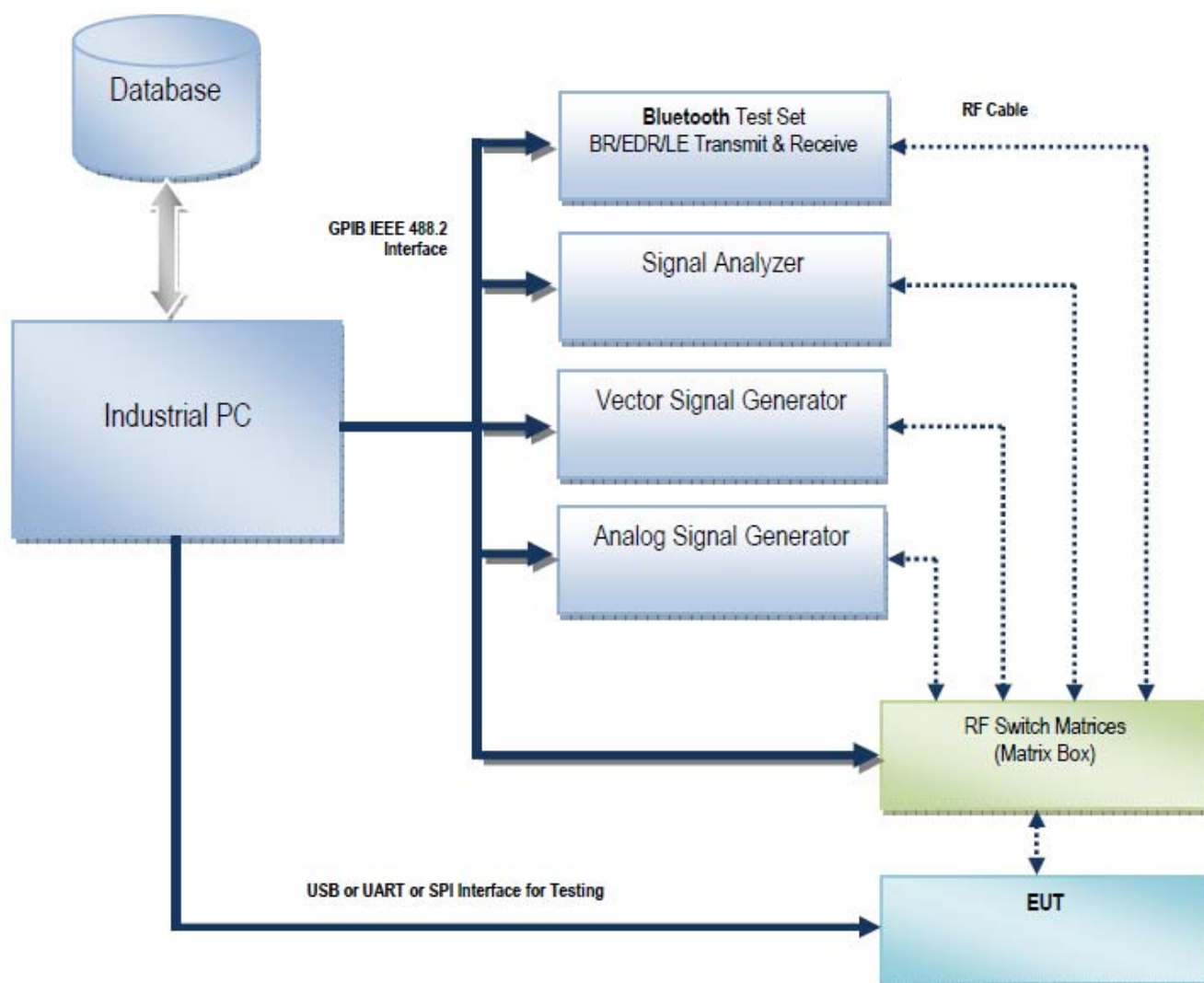
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## 6. RF-PHY Test Setup





## 7. MEASUREMENT UNCERTAINTY

According to applied Bluetooth RF-PHY Test Specification the conducted measurement RF power uncertainties are as follows:

1. Absolute RF power(wanted channel): $\pm 1.2$  dB
2. Absolute RF power(for unwanted emissions in the ISM band): $\pm 3$  dB
3. Absolute RF power(for unwanted emissions outside the 2.4GHz ISM band):  $\pm 3$  dB,  $\pm 4$ dB for frequencies above 4GHz.
4. Relative RF power (wanted channel): $\pm 1$ dB

According to applied Bluetooth RF-PHY Test Specification the radio frequency uncertainties are as follows:

1. Absolute frequency (RF frequencies): $\pm 5$ kHz
2. Absolute frequency (Frequency deviation of modulated signal): $\pm 4$ kHz
3. Relative frequency (Frequency drift of carrier during modulation): $\pm 1$ kHz

The measurement uncertainties of the used measurement equipment are better than what is described above. All measurements and results are recorded and maintained at the laboratory.

Measurement uncertainties are taken into account when concluding measurement to pass / fail criteria. The detailed measurement uncertainty is well defined in the test lab's internal documents.



## 8. SUMMARY OF TEST RESULTS

Test Standard: Bluetooth RF-PHY conformance test specification, revision RF-PHY.TS.5.1.0

The summary of test cases called for in RF-PHY.TS.5.1.0 is given as below

Test Suites	Tested	Passed	Failed
RF Conformance Testing	47	47	0
Sum	47	47	0

Note:

“Tested” means the test cases applied and performed on EUT.

“Passed” means the test cases in which EUT can successfully meet the requirement of quoted test standard.

“Failed” means the test cases in which EUT cannot meet the requirement of quoted test standard.

“N/A” means the test cases which are not applicable for EUT according to PICS statements.

No.	Test Case Identifier	Description	Verdict	Category	Test System
1	RF-PHY/TRM-LE/CA/BV-01-C	Output Power	Passed	A	Setup 2
2	RF-PHY/TRM-LE/CA/BV-03-C	In-band Emission	Passed	A	Setup 2
3	RF-PHY/TRM-LE/CA/BV-05-C	Modulation Characteristics	Passed	A	Setup 2
4	RF-PHY/TRM-LE/CA/BV-06-C	Carrier frequency offset and drift	Passed	A	Setup 2
5	RF-PHY/TRM-LE/CA/BV-08-C	In-band emissions at 2 Ms/s	Passed	A	Setup 2
6	RF-PHY/TRM-LE/CA/BV-09-C	Stable Modulation Characteristics at 1 Ms/s	Passed	A	Setup 1
7	RF-PHY/TRM-LE/CA/BV-10-C	Modulation Characteristics at 2 Ms/s	Passed	A	Setup 2
8	RF-PHY/TRM-LE/CA/BV-11-C	Stable Modulation Characteristics at 2 Ms/s	Passed	A	Setup 2
9	RF-PHY/TRM-LE/CA/BV-12-C	Carrier frequency offset and drift at 2 Ms/s	Passed	A	Setup 2
10	RF-PHY/TRM-LE/CA/BV-13-C	Modulation Characteristics, LE Coded (S=8)	Passed	A	Setup 1
11	RF-PHY/TRM-LE/CA/BV-14-C	Carrier frequency offset and drift, LE Coded (S=8)	Passed	A	Setup 2
12	RF-PHY/TRM/BV-15-C	Output power, With Constant Tone Extension	N/A	B	
13	RF-PHY/TRM/BV-16-C	Carrier frequency offset and drift, uncoded data at 1 Ms/s, Constant Tone Extension	N/A	B	
14	RF-PHY/TRM/BV-17-C	Carrier frequency offset and drift at 2 Ms/s, Constant Tone Extension	N/A	B	



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15	RF-PHY/TRM/PS/BV-01-C	[Tx Power Stability, AoD Transmitter at 1 Ms/s with 2 $\mu$ s Switching Slot	N/A	B	
16	RF-PHY/TRM/PS/BV-02-C	[Tx Power Stability, AoD Transmitter at 1 Ms/s with 1 $\mu$ s Switching Slot	N/A	B	
17	RF-PHY/TRM/PS/BV-03-C	Tx Power Stability, AoD Transmitter at 2 Ms/s with 2 $\mu$ s Switching Slot	N/A	B	
18	RF-PHY/TRM/PS/BV-04-C	Tx Power Stability, AoD Transmitter at 2 Ms/s with 1 $\mu$ s Switching Slot	N/A	B	
19	RF-PHY/TRM/ASI/BV-05-C	Antenna switching integrity, AoD Transmitter at 1 Ms/s with 2 $\mu$ s Switching Slot	N/A	B	
20	RF-PHY/TRM/ASI/BV-06-C	Antenna switching integrity, AoD Transmitter at 1 Ms/s with 1 $\mu$ s Switching Slot	N/A	B	
21	RF-PHY/TRM/ASI/BV-07-C	Antenna switching integrity, AoD Transmitter at 2 Ms/s with 2 $\mu$ s Switching Slot	N/A	B	
22	RF-PHY/TRM/ASI/BV-08-C	Antenna switching integrity, AoD Transmitter at 2 Ms/s with 1 $\mu$ s Switching Slot	N/A	B	
23	RF-PHY/RCV-LE/CA/BV-01-C	Receiver sensitivity	Passed	A	Setup 2
24	RF-PHY/RCV-LE/CA/BV-03-C	C/I and receiver selectivity performance	Passed	A	Setup 2
25	RF-PHY/RCV-LE/CA/BV-04-C	Blocking Performance	Passed	A	Setup 2
26	RF-PHY/RCV-LE/CA/BV-05-C	Intermodulation Performance	Passed	A	Setup 2
27	RF-PHY/RCV-LE/CA/BV-06-C	Maximum input Level	Passed	A	Setup 2
28	RF-PHY/RCV-LE/CA/BV-07-C	PER Report Integrity	Passed	A	Setup 2
29	RF-PHY/RCV-LE/CA/BV-08-C	Receiver sensitivity at 2 Ms/s	Passed	A	Setup 2
30	RF-PHY/RCV-LE/CA/BV-09-C	C/I and Receiver Selectivity Performance at 2 Ms/s	Passed	A	Setup 2
31	RF-PHY/RCV-LE/CA/BV-10-C	Blocking performance at 2 Ms/s	Passed	A	Setup 2
32	RF-PHY/RCV-LE/CA/BV-11-C	Intermodulation performance at 2 Ms/s	Passed	A	Setup 2
33	RF-PHY/RCV-LE/CA/BV-12-C	Maximum input signal level at 2 Ms/s	Passed	A	Setup 2
34	RF-PHY/RCV-LE/CA/BV-13-C	PER Report Integrity at 2 Ms/s	Passed	A	Setup 2
35	RF-PHY/RCV-LE/CA/BV-14-C	Receiver Sensitivity at NOC, Stable Modulation Index	Passed	A	Setup 2
36	RF-PHY/RCV-LE/CA/BV-15-C	C/I and Receiver Selectivity Performance, Stable Modulation Index	Passed	A	Setup 2



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37	RF-PHY/RCV-LE/CA/BV-16-C	Blocking Performance, Stable Modulation Index	Passed	A	Setup 2
38	RF-PHY/RCV-LE/CA/BV-17-C	Intermodulation Performance, Stable Modulation Index	Passed	A	Setup 2
39	RF-PHY/RCV-LE/CA/BV-18-C	Maximum input signal level, Stable Modulation Index	Passed	A	Setup 2
40	RF-PHY/RCV-LE/CA/BV-19-C	PER Report Integrity, Stable Modulation Index	Passed	A	Setup 2
41	RF-PHY/RCV-LE/CA/BV-20-C	Receiver sensitivity at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
42	RF-PHY/RCV-LE/CA/BV-21-C	C/I and Receiver Selectivity Performance at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
43	RF-PHY/RCV-LE/CA/BV-22-C	Blocking performance at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
44	RF-PHY/RCV-LE/CA/BV-23-C	Intermodulation performance at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
45	RF-PHY/RCV-LE/CA/BV-24-C	Maximum input signal level at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
46	RF-PHY/RCV-LE/CA/BV-25-C	PER Report Integrity at 2 Ms/s, Stable Modulation Index	Passed	A	Setup 2
47	RF-PHY/RCV-LE/CA/BV-26-C	Receiver sensitivity, LE Coded (S=2)	Passed	A	Setup 2
48	RF-PHY/RCV-LE/CA/BV-27-C	Receiver sensitivity, LE Coded (S=8)	Passed	A	Setup 2
49	RF-PHY/RCV-LE/CA/BV-28-C	C/I and Receiver Selectivity Performance, LE Coded (S=2)	Passed	A	Setup 2
50	RF-PHY/RCV-LE/CA/BV-29-C	C/I and Receiver Selectivity Performance, LE Coded (S=8)	Passed	A	Setup 2
51	RF-PHY/RCV-LE/CA/BV-30-C	PER Report Integrity, LE Coded (S=2)	Passed	A	Setup 2
52	RF-PHY/RCV-LE/CA/BV-31-C	PER Report Integrity, LE Coded (S=8)	Passed	A	Setup 2
53	RF-PHY/RCV-LE/CA/BV-32-C	Receiver sensitivity, LE Coded (S=2), Stable Modulation Index	Passed	A	Setup 2
54	RF-PHY/RCV-LE/CA/BV-33-C	Receiver sensitivity, LE Coded (S=8), Stable Modulation Index	Passed	A	Setup 2
55	RF-PHY/RCV-LE/CA/BV-34-C	C/I and Receiver Selectivity Performance, LE Coded (S=2), Stable Modulation Index	Passed	A	Setup 2
56	RF-PHY/RCV-LE/CA/BV-35-C	C/I and Receiver Selectivity Performance, LE Coded (S=8), Stable Modulation Index	Passed	A	Setup 2
57	RF-PHY/RCV-LE/CA/BV-36-C	PER Report Integrity, LE Coded (S=2), Stable Modulation Index	Passed	A	Setup 2



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58	RF-PHY/RCV-LE/CA/BV-37-C	PER Report Integrity, LE Coded (S=8), Stable Modulation Index	Passed	A	Setup 2
59	RF-PHY/RCV/IQC/BV-01-C	IQ Samples Coherency, AoD Receiver at 1 Ms/s with 2 $\mu$ s Slot	N/A	B	
60	RF-PHY/RCV/IQC/BV-02-C	IQ Samples Coherency, AoD Receiver at 1 Ms/s with 1 $\mu$ s Slot	N/A	B	
61	RF-PHY/RCV/IQC/BV-03-C	IQ Samples Coherency, AoD Receiver at 2 Ms/s with 2 $\mu$ s Slot	N/A	B	
62	RF-PHY/RCV/IQC/BV-04-C	IQ Samples Coherency, AoD Receiver at 2 Ms/s with 1 $\mu$ s Slot	N/A	B	
63	RF-PHY/RCV/IQC/BV-05-C	IQ Samples Coherency, AoA Receiver at 1 Ms/s with 2 $\mu$ s Slot	N/A	B	
64	RF-PHY/RCV/IQC/BV-06-C	IQ Samples Coherency, AoA Receiver at 2 Ms/s with 2 $\mu$ s Slot	N/A	B	
65	RF-PHY/RCV/IQDR/BV-07-C	IQ Samples Dynamic Range, AoD Receiver at 1 Ms/s with 2 $\mu$ s Slot	N/A	B	
66	RF-PHY/RCV/IQDR/BV-08-C	IQ Samples Dynamic Range, AoD Receiver at 1 Ms/s with 1 $\mu$ s Slot	N/A	B	
67	RF-PHY/RCV/IQDR/BV-09-C	IQ Samples Dynamic Range, AoD Receiver at 2 Ms/s with 2 $\mu$ s Slot	N/A	B	
68	RF-PHY/RCV/IQDR/BV-10-C	IQ Samples Dynamic Range, AoD Receiver at 2 Ms/s with 1 $\mu$ s Slot	N/A	B	
69	RF-PHY/RCV/IQDR/BV-11-C	IQ Samples Dynamic Range, AoA Receiver at 1 Ms/s with 2 $\mu$ s Slot	N/A	B	
70	RF-PHY/RCV/IQDR/BV-12-C	IQ Samples Dynamic Range, AoA Receiver at 2 Ms/s with 2 $\mu$ s Slot	N/A	B	



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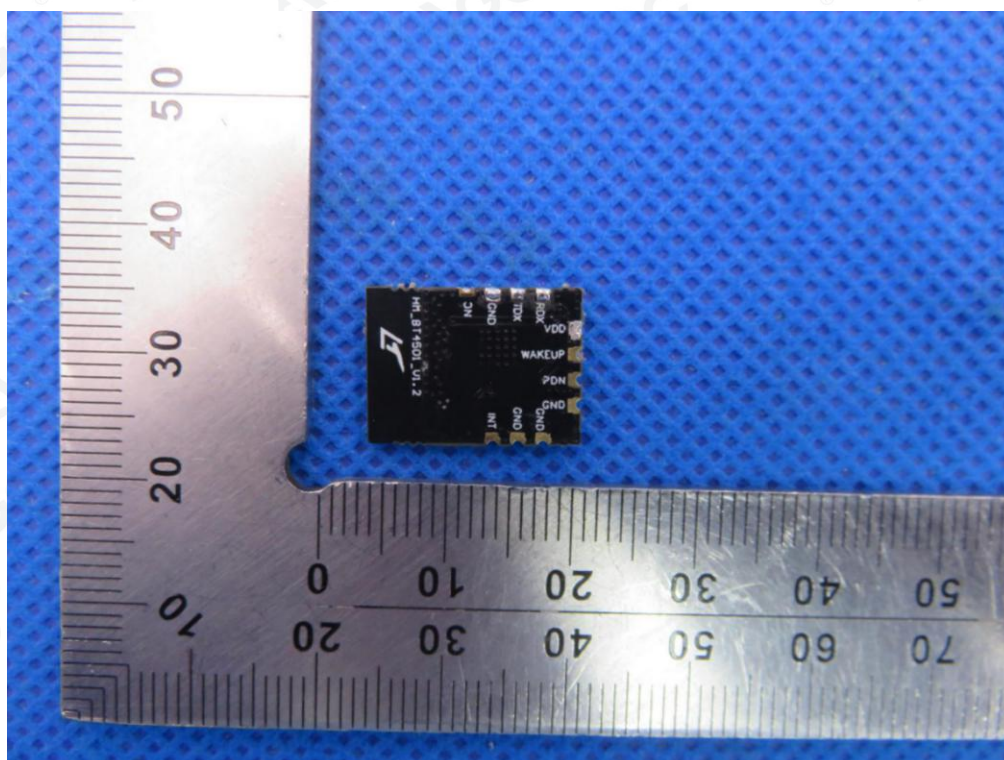
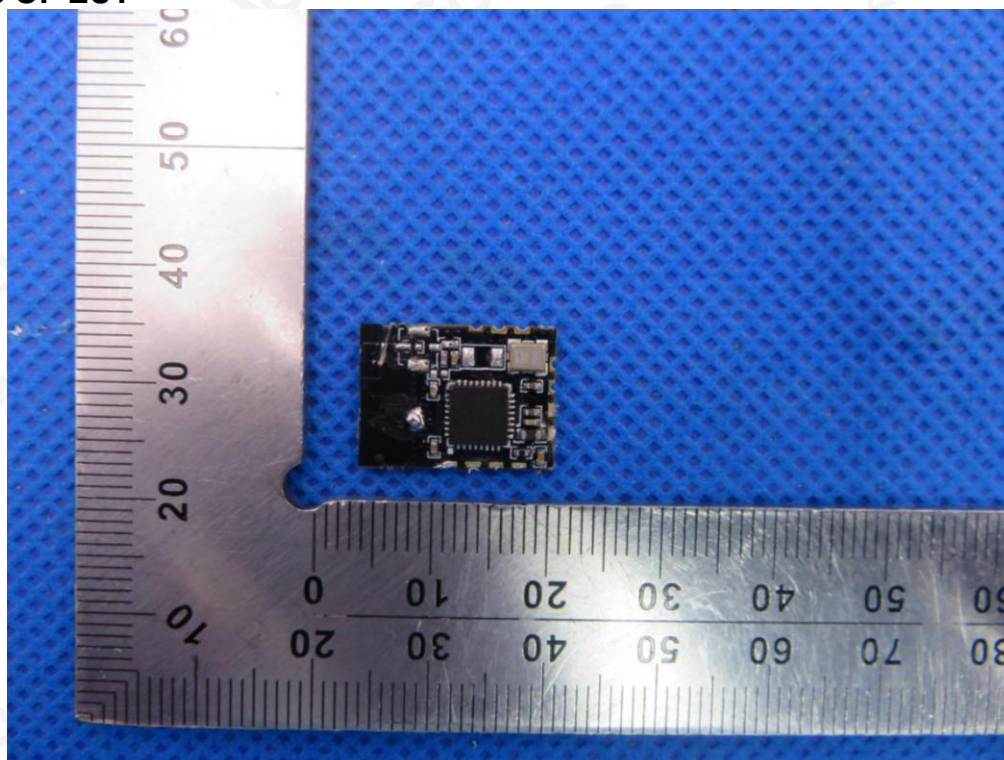
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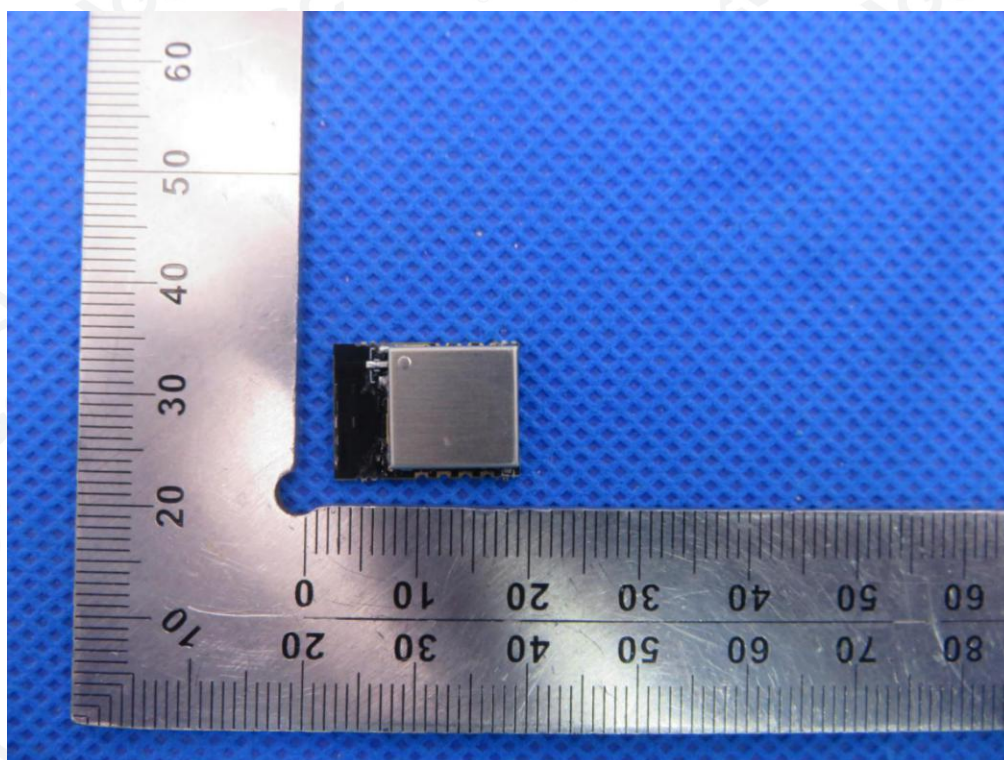
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## 9. PHOTOS OF EUT







**Note:** This report is all the same to the original report of No.AGC08509190701RB01 except for adding an EUT photo.



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## Annex A: Protocol Implementation Conformance Statement (PICS)

**Table 1: Bluetooth LE RF Physical Capabilities**

Item	Capability	Status	Support [Yes] or [No]
1	LE Transmitter	C.1	NO
2	LE Receiver	C.1	NO
3	LE Transceiver	C.1	YES
4	LE 2M PHY	C.2	YES
5	Stable Modulation Index - Transmitter	C.3	YES
6	Stable Modulation Index - Receiver	C.4	YES
7	LE Coded PHY	C.2	YES

C.1: Mandatory to support at least one of these capabilities.

C.2: Optional IF SUM ICS 21/16 "Core 5.0" AND RF PHY 1/3 "LE Transceiver" are supported, otherwise Excluded.

C.3: Optional IF SUM ICS 21/16 "Core 5.0" AND (RF PHY 1/1 "LE Transmitter" OR RF PHY 1/3 "LE Transceiver") are supported, otherwise Excluded.

C.4: Optional IF SUM ICS 21/16 "Core 5.0" AND (RF PHY 1/2 "LE Receiver" OR RF PHY 1/3 "LE Transceiver") are supported, otherwise Excluded.

**Table 2: Bluetooth LE Test Interface Capabilities**

Item	Capability	Status	Support [Yes] or [No]
1	HCI Test Interface	C.1	NO
2	UART Test Interface	C.1	YES

C.1: At least one of the capabilities shall be supported



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**Table 3: Bluetooth LE Link Layer (LL) Features**

Item	Capability	Support [Yes] or [No]	Applicable RF-PHY TCIDs
LL 9/15	Connection CTE Response	NO	RF-PHY/TRM/BV-15-C RF-PHY/TRM/BV-16-C (RF-PHY 1/1 OR RF-PHY 1/3)
LL 9/16	Connectionless CTE Transmitter	NO	RF-PHY/TRM/BV-17-C (RF-PHY 1/4)
LL 9/20	2 $\mu$ s Antenna Sampling During Constant Tone Extension Reception (AoD)	NO	RF-PHY/RCV/IQC/BV-01-C RF-PHY/RCV/IQC/BV-03-C RF-PHY/RCV/IQDR/BV-07-C RF-PHY/RCV/IQDR/BV-09-C
LL 9/23	1 $\mu$ s Antenna Sampling During Constant Tone Extension Reception (AoD)	NO	RF-PHY/RCV/IQC/BV-02-C RF-PHY/RCV/IQC/BV-04-C RF-PHY/RCV/IQDR/BV-08-C RF-PHY/RCV/IQDR/BV-10-C
LL 9/21	2 $\mu$ s Antenna Switching And Sampling During CTE Reception (AoA)	NO	RF-PHY/RCV/IQC/BV-05-C RF-PHY/RCV/IQC/BV-06-C RF-PHY/RCV/IQDR/BV-11-C RF-PHY/RCV/IQDR/BV-12-C
LL 9/18	2 $\mu$ s Antenna Switching During Constant Tone Extension Transmission (AoD)	NO	RF-PHY/TRM/PS/BV-01-C RF-PHY/TRM/PS/BV-03-C RF-PHY/TRM/ASI/BV-05-C RF-PHY/TRM/ASI/BV-07-C
LL 9/22	1 $\mu$ s Antenna Switching During Constant Tone Extension Transmission (AoD)	NO	RF-PHY/TRM/PS/BV-02-C RF-PHY/TRM/PS/BV-04-C RF-PHY/TRM/ASI/BV-06-C RF-PHY/TRM/ASI/BV-08-C



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## Annex B: Protocol Implementation Extra Information for Testing (PIXIT)

PIXIT Reference	Identifier	Sub-Identifier (Optional)	Value	Units
RF-PHY:P1:1	In band Image frequency	Low frequency	3	MHz
RF-PHY:P1:2		Middle frequency	3	MHz
RF-PHY:P1:3		High frequency	3	MHz
RF-PHY:P2:1	Value n for Intermodulation test	Low frequency	5	Integer
RF-PHY:P2:2		Middle frequency	5	Integer
RF-PHY:P2:3		High frequency	5	Integer
RF-PHY:P4	Power source voltage	Nominal (NOC)	3.3	V
RF-PHY:P5	Operating temperature	Nominal (NOC)	24.2	°C
RF-PHY:P6:1	Operating air humidity range (relative)	Maximum	75	%
RF-PHY:P6:2		Minimum	20	%
RF-PHY:P6:3	Air humidity level for NOC tests	Normal	57.3	%
RF-PHY:P7:1	Test interface implementation	HCI or 2-wire UART	UART	N/A
RF-PHY:P7:2		Data rate	115200	bps
RF-PHY:P9:1	Maximum TX packet length (MAX_TX_LENGTH)	(37 ~ 255)	37	Bytes
RF-PHY:P9:2	Maximum RX packet length (MAX_RX_LENGTH)	(37 ~ 255)	37	Bytes
RF-PHY:P9:3	Maximum TX packet length (MAX_TX_LENGTH) 2M	(37 ~ 255)	37	Bytes
RF-PHY:P9:4	Maximum TX packet length (MAX_TX_LENGTH) S=2	(37 ~ 255)	37	Bytes
RF-PHY:P9:5	Maximum TX packet length (MAX_TX_LENGTH) S=8	(37 ~ 255)	37	Bytes
RF-PHY:P9:6	Maximum RX packet length (MAX_RX_LENGTH) 2M	(37 ~ 255)	37	Bytes
RF-PHY:P9:7	Maximum RX packet length (MAX_RX_LENGTH) S=2	(37 ~ 255)	37	Bytes
RF-PHY:P9:8	Maximum RX packet length (MAX_RX_LENGTH) S=8	(37 ~ 255)	37	Bytes
RF-PHY:P10:1	Maximum TX mode output power	-20 to 10 (w/o CSA5) -20 to 20 (w CSA5)	<10	dBm
RF-PHY:11:1	Inband Image Frequency (2Ms/s)	Low frequency	3	MHz
RF-PHY:11:2		Middle frequency	3	MHz



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RF-PHY:11:3		High frequency	3	MHz
RF-PHY:12:1	Value n for Intermodulation test (2Ms/s)	Low frequency	5	Integer
RF-PHY:12:2		Middle frequency	5	Integer
RF-PHY:12:3		High frequency	5	Integer
RF-PHY:13:1	Inband Image Frequency (Stable Modulation Receiver)	Low frequency	3	MHz
RF-PHY:13:2		Middle frequency	3	MHz
RF-PHY:13:3		High frequency	3	MHz
RF-PHY:14:1	Value n for Intermodulation test (Stable Modulation Receiver)	Low frequency	5	Integer
RF-PHY:14:2		Middle frequency	5	Integer
RF-PHY:14:3		High frequency	5	Integer
RF-PHY:15:1	Inband Image Frequency (Stable Modulation Receiver, 2Ms/s)	Low frequency	3	MHz
RF-PHY:15:2		Middle frequency	3	MHz
RF-PHY:15:3		High frequency	3	MHz
RF-PHY:16:1	Value n for Intermodulation test (Stable Modulation Receiver, 2Ms/s)	Low frequency	5	Integer
RF-PHY:16:2		Middle frequency	5	Integer
RF-PHY:16:3		High frequency	5	Integer
LL:P2.7	TSPX_Report_Rate HCI_LE_Connectionless_IQ_Report events interval	N * 1.25ms, N = 0x0006 to 0xFFFF	N/A	ms
LL:P5	TSPX_CTE_len_max Maximum Constant Tone Extension Length	(2-20)	N/A	Bytes
LL:P6	TSPX_number_of_antennae Maximum Antenna Count	(1-4)	N/A	N/A

