



TEST REPORT

REPORT NUMBER: 24B02W000025-001

ON

Type of Equipment: 8BIT-LW
Type of Designation: 8BIT-LW01H
Brand Name: BABIT
Manufacturer: Xi'an 8Bit Information Technology Co., Ltd.
FCC ID: 2BGK68BIT-LW01H

ACCORDING TO
FCC Part15 Subpart C
ANSI C63.10-2013

Chongqing Academy of Information and Communications Technology

Month date, year

Jun.28, 2024

Signature



Zhou Jin

Director

Note:

The test results in this test report relate only to the devices specified in this report.
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Report No.: 24B02W000025-001

Revision Version

Report Number	Revision	Date
24B02W000025-001	00	2024-06-28

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1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
Designation Number:	CN1239
Address:	No.19 East Road, Xiantao Big-data Valley, Yubei District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

1.2. Testing Environment

Normal Temperature:	15-35°C
Relative Humidity:	30-70%

1.3. Project data

Testing Start Date:	2024-05-30
Testing End Date:	2024-06-23

1.4. Signature



2024-06-28

Dong Junxin
(Prepared this test report)

Date



2024-06-28

Wang Lili
(Reviewed this test report)

Date



2024-06-28

Zhou Jin
Director of the laboratory
(Approved this test report)

Date

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2. Client Information

2.1. Applicant Information

Company Name:	Xi'an 8Bit Information Technology Co., Ltd.
Address /Post:	Room 10908, Building C, Xian National Digital Publishing Base, Keji 6th Road,High tech Zone
City:	Xian
Country:	China
Telephone:	13571822681
Fax:	--
Email:	17355508@qq.com
Contact Person:	shang jianfeng

2.2. Manufacturer Information

Company Name:	Xi'an 8Bit Information Technology Co., Ltd.
Address /Post:	Room 10908, Building C, Xian National Digital Publishing Base, Keji 6th Road,High tech Zone
City:	Xian
Country:	China
Telephone:	13571822681
Fax:	--
Email:	17355508@qq.com
Contact Person:	shang jianfeng

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3. Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	8BIT-LW
Model Name	8BIT-LW01H
Brand Name	BABIT
Frequency Range	902MHz-928MHz
Channel Number	21 channels
Extreme Temperature	-40/+85°C
Nominal Test Voltage	3.3V
Extreme Test High Voltage	3.7V
Extreme Test Low Voltage	1.7V
Antenna Type	FPC external antenna
Antenna Gain	3dBi
Antenna Model	TXGN-FPC-3308

Note1: Photographs of EUT are shown in ANNEX A of this test report.

Note2: High and low voltage values in extreme condition test are given by manufacturer.

Test frequency list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	902.450	10	915.000	20	927.550
1	903.705	11	916.255		
2	904.960	12	917.510		
3	906.215	13	918.765		
4	907.470	14	920.020		
5	908.725	15	921.275		
6	909.980	16	922.530		
7	911.235	17	923.785		
8	912.490	18	925.040		
9	913.745	19	926.295		

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3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
24B02W000025#S1	S/N:L01HB24100000063	V1.1.1	V1.4.1	2024-05-09
24B02W000025#S3	S/N:L01HB24100000122	V1.1.1	V1.4.1	2024-05-09

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Note	dB*
AE1	Cableloss	--	0.8
AE2	EVB board	8BIT-LW01x development board	--

*AE ID: is used to identify the test sample in the lab internally.

dB*: is provided customer.

3.4. EUT Test RF Config ConPicuration

EUT uses sscom tool to control emission measurement

```

[11:21:02.636]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:02.668]收←◆ 1231

[11:21:03.037]收←◆ start to tx data(freq: 866500000
[11:21:03.069]收←◆ dr: 0, bw:0, cr: 1, power: 0): 1232

[11:21:03.423]收←◆ OnTxDone

[11:21:03.463]收←◆ start to tx data(freq: 866500000
[11:21:03.493]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:03.533]收←◆ 1233

[11:21:03.898]收←◆ start to tx data(freq: 866500000
[11:21:03.928]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:03.968]收←◆ 1234

[11:21:04.292]收←◆ OnTxDone

[11:21:04.332]收←◆ start to tx data(freq: 866500000
[11:21:04.369]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:04.399]收←◆ 1235

[11:21:04.759]收←◆ start to tx data(freq: 866500000
[11:21:04.799]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:04.830]收←◆ 1236

[11:21:05.161]收←◆ OnTxDone

[11:21:05.193]收←◆ start to tx data(freq: 866500000
[11:21:05.233]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:05.263]收←◆ 1237

[11:21:05.631]收←◆ start to tx data(freq: 866500000
[11:21:05.669]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:05.696]收←◆ 1238

[11:21:06.028]收←◆ OnTxDone

[11:21:06.063]收←◆ start to tx data(freq: 866500000
[11:21:06.638]收←◆ dr: 0, bw:0, cr: 1, power: 0): 1239
start to tx data(freq: 866500000, dr: 0, bw:0, cr: 1, power: 0): 1240

[11:21:06.890]收←◆ OnTxDone

[11:21:06.920]收←◆ start to tx data(freq: 866500000
[11:21:06.960]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:06.990]收←◆ 1241

[11:21:07.360]收←◆ start to tx data(freq: 866500000
[11:21:07.390]收←◆ dr: 0, bw:0, cr: 1, power: 0):
[11:21:07.420]收←◆ 1242

[11:21:07.750]收←◆ OnTxDone
  
```

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4. Reference Documents

4.1. Documents supplied by applicant

PICS/PIXIT, referring to Annex B for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart C	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	--
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013
KDB 558074 D01 15.247 Meas Guidance v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019
Note1: KDB 558074 is not A2AL certified.		

5. Test Equipments Utilized

5.1. RF Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Spectrum Analyzer	N9030A	MY51380470	--	--	Keysight	2024-06-28

5.2. RSE Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Test Receiver	ESU26	100367	01	4.43 SP3	R&S	2024-06-28
2	Trilog Antenna	VULB9163	01392	--	--	Schwarzbeck	2025-05-04
3	Double Ridged Guide Antenna	HF907	100357	--	--	R&S	2025-03-25
4	Preamplifier1	150A	001429	--	--	Beehive	--
5	Preamplifier2	SCU18	10141	--	--	R&S	--
6	Dual cone antenna	VUBA9117	256	--	--	R&S	2025-02-27
7	Trilog Antenna	BBHA9120D	1103	--	--	Schwarzbeck	2025-05-13
8	Modulation signal Generator	SMU 200A	104517	--	--	R&S	2024-06-28
9	anechoic chamber	FACT3-2	--	--	--	ETS	2025-04-29
10	Loop Antenna	6502	00213256	--	--	ETS	2025-03-17

5.3. Climate Chamber

No.	Name	Type	SN	Manufacture	Cal.Due Date
1	--	--	--	--	--

5.4. Vibration table

No.	Name	Type	SN	Manufacture	Cal.Due Date
--	--	--	--	--	--

Anechoic chamber

Fully anechoic chamber by ETS.

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5.5. Test software

No.	Name	version	SN	Manufacture
1	EMC 32	V8.51.0	--	R&S

6. Test Results

6.1. Summary of Test Results

A brief summary of the tests carried out is shown as following.

FCC Rules	Name of Test	Result
FCC Part 15.247(b)	Maximun Conducted Output Power	Pass
FCC CFR Part 15.247(e)	Peak Power Spectral Density	Pass
FCC 47 CFR Part 15.247(a)	6dB Occupied Bandwidth	Pass
FCC 47 CFR Part 15.247(d)	Band Edges -conducted	Pass
FCC 47 CFR Part15.247 (d)	Transmitter Spurious Emission-Conducted	Pass
FCC 47 CFR Part15.247 (d)	Transmitter Spurious Emission-Radiated	Pass
FCC 47 CFR Part 15.203	Antenna requiemment	Pass ^{note1}
Note1: EUT Complies with the FCC section 15.203 antenna requirements, please refer to the External Photos.		

6.2. Maximun Conducted Output Power

SpeciPications:	FCC Part 15.247(b)
DUT Serial Number:	24B02W000025#S1:S/N:L01HB24100000063
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-70% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

The maximum peak output power of the intentional radiator shall not exceed the following:

1. For systems using digital modulation in the bands of 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz: 1 watt.
2. Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Measurement Uncertainty:

Measurement Uncertainty	0.34dB
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The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement. Enable EUT transmitter maximum power continuously.

Method of Measurement: See ANSI C63.10-2013-clause 11.9.1.1

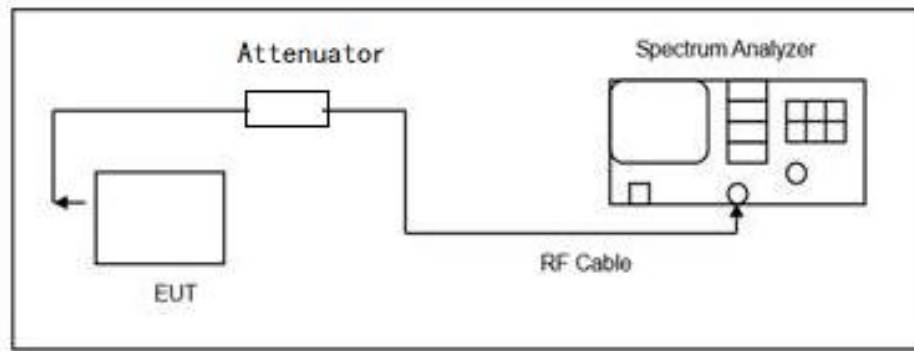
- a) Set the RBW $\geq$ DTS bandwidth.
- b) Set VBW $\geq [3 \times \text{RBW}]$.
- c) Set span $\geq [3 \times \text{RBW}]$.
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

Frequency (MHz)	Gain (dBi)
824-960	3.0

Test block diagram:

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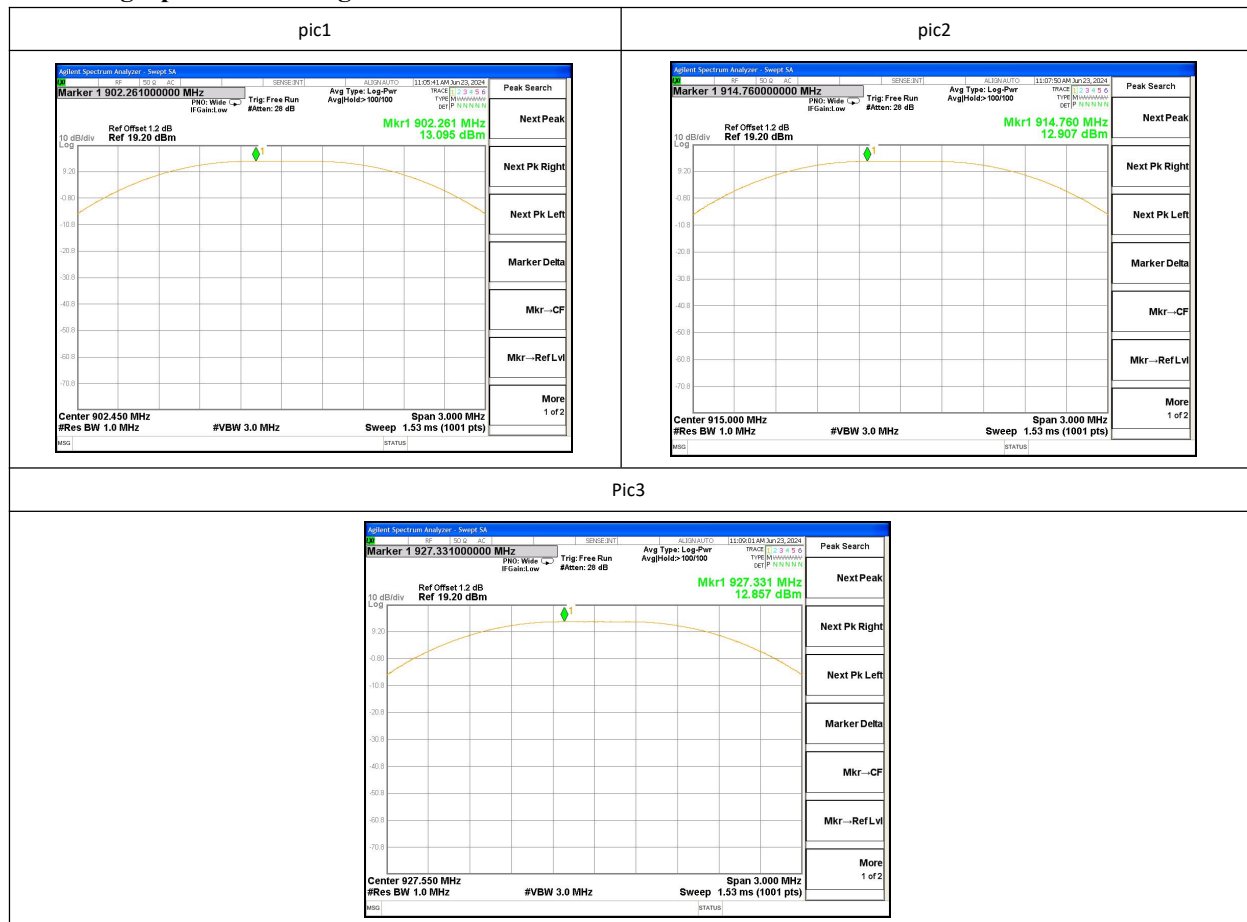
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Measurement Results:

Channel	Frequency	Conducted output power (dBm) peak	Limit (dBm)	Pic	VERDICT
0	902.450	13.10	30	Pic1	PASS
10	915.000	12.91	30	Pic2	PASS
20	927.550	12.86	30	Pic3	PASS

See test graphs as following:



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6.3. Peak Power Spectral Density

SpeciPications:	FCC CFR Part 15.247(e)
DUT Serial Number:	24B02W000025#S1:S/N:L01HB24100000063
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-70% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

Standard	Limit
FCC CFR Part 15.247(e)	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density

Measurement Uncertainty:

Measurement Uncertainty	0.34dB
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Test procedure:

The measurement is according to ANSI C63.10 clause 11.10.2

The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement. Enable EUT transmitter maximum power continuously.

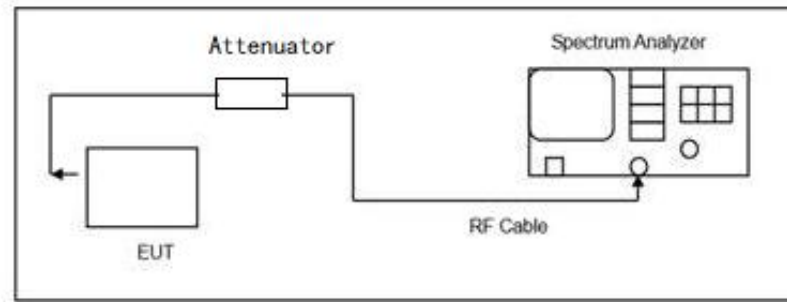
- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.
- If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

Frequency (MHz)	Gain (dBi)
824-960	3.0

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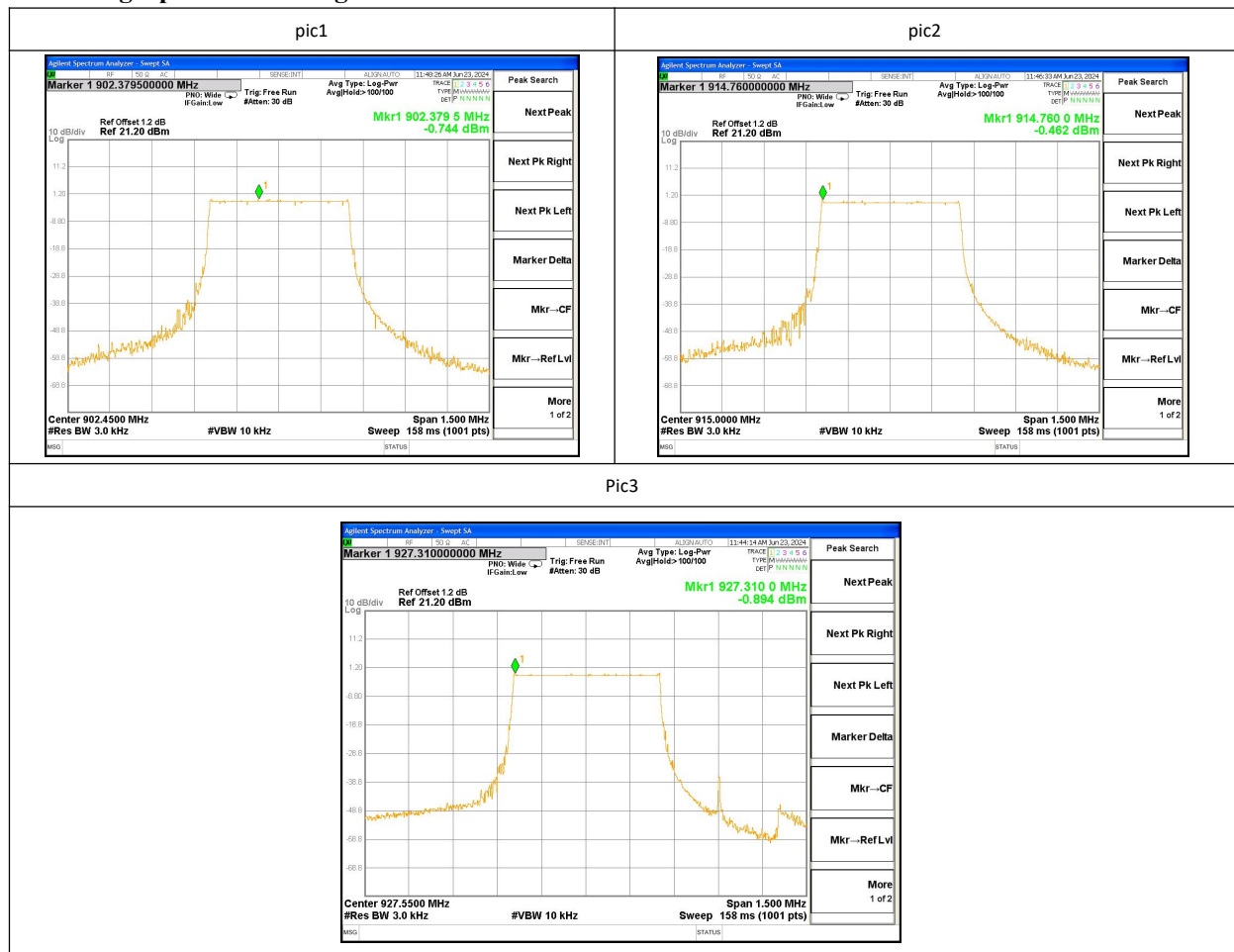
Test block diagram:



Measurement Results:

Channel	Frequency	Power spectral density (dBm/3kHz)	Limit (dBm/3kHz)	Pic	VERDICT
0	902.450	-0.74	8	Pic1	PASS
10	915.000	-0.46	8	Pic2	PASS
20	927.550	-0.89	8	Pic3	PASS

See test graphs as following:



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6.4. 6dB Occupied Bandwidth

SpeciPications:	FCC 47 CFR Part 15.247(a)
DUT Serial Number:	24B02W000025#S1:S/N:L01HB24100000063
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-70% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

Standard	Limit(KHz)
FCC 47 CFR Part 15.247(a)	Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Measurement Uncertainty:

Measurement Uncertainty	91.2Hz
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Test Procedure

The measurement is according to ANSI C63.10 clause 11.8.1

The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement. Enable EUT transmitter maximum power continuously.

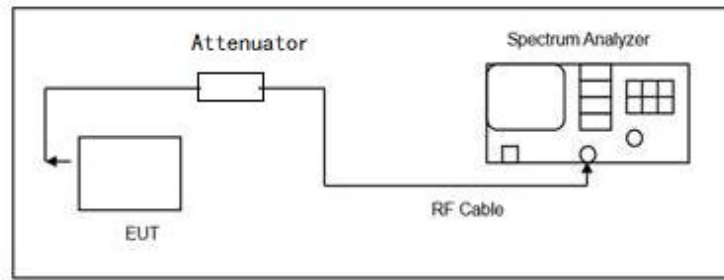
- 1.Set RBW = 100 kHz.
- 2.Set the VBW $\geq [3 \times \text{RBW}]$.
- 3.Detector = peak.
- 4.Trace mode = max hold.
- 5.Sweep = auto couple.
- 6.Allow the trace to stabilize.
- 7.Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Frequency (MHz)	Gain (dBi)
824-960	3.0

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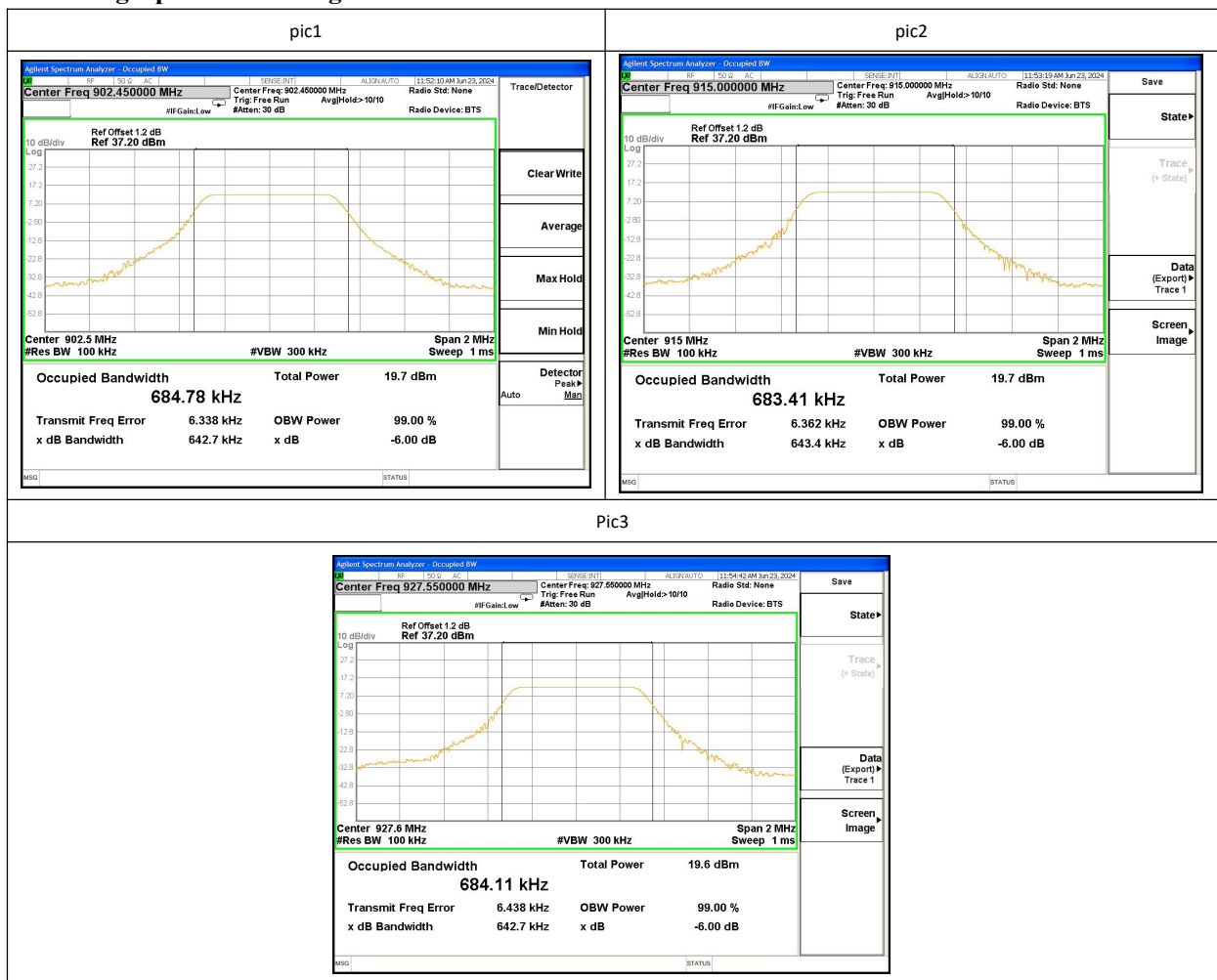
Test block diagram:



Measurement Results:

Channel	Frequency	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Pic	VERDICT
0	902.450	642.7	500	Pic1	PASS
10	915.000	643.4	500	Pic2	PASS
20	927.550	642.7	500	Pic3	PASS

See test graphs as following:



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6.5. Band Edges-Conducted

SpeciPications:	FCC 47 CFR Part 15.247(d)
DUT Serial Number:	24B02W000025#S1:S/N:L01HB24100000063
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-70% Air pressure: 86-106kPa
Test Results:	Pass

Limit

Standard	Limit
FCC 47 CFR Part15.247 (d)	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Measurement Uncertainty:

Frequency Range	Uncertainty
30MHz - 1GHz	0.62dB
1GHz - 26.5GHz	1.74dB

Test Procedure

This measurement is according to ANSI C63.10 clause 11.11

The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.

Enable EUT transmitter maximum power continuously.

Reference level measurement

- 1.Set instrument center frequency to DTS channel center frequency.
- 2.Set the span to ≥ 1.5 times the DTS bandwidth.
- 3.Set the RBW = 100 kHz.
- 4.Set the VBW $\geq [3 \times \text{RBW}]$.
- 5.Detector = peak.

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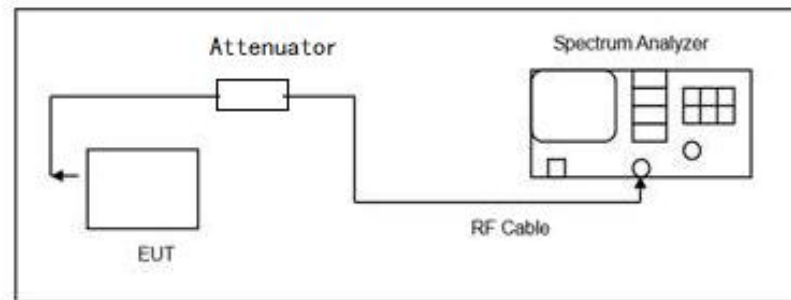
- 6.Sweep time = auto couple.
- 7.Trace mode = max hold.
- 8.Allow trace to fully stabilize.
- 9.Use the peak marker function to determine the maximum PSD level.

Emission level measurement

- 10.Set the center frequency and span to encompass frequency range to be measured.
- 11.Set the RBW = 100 kHz.
- 12.Set the VBW $\geq [3 \times \text{RBW}]$.
- 13.Detector = peak.
- 14.Sweep time = auto couple.
- 15.Trace mode = max hold.
- 16.Allow trace to fully stabilize.
- 17.Use the peak marker function to determine the maximum amplitude level.

Frequency (MHz)	Gain (dBi)
824-960	3.0

Test block diagram:



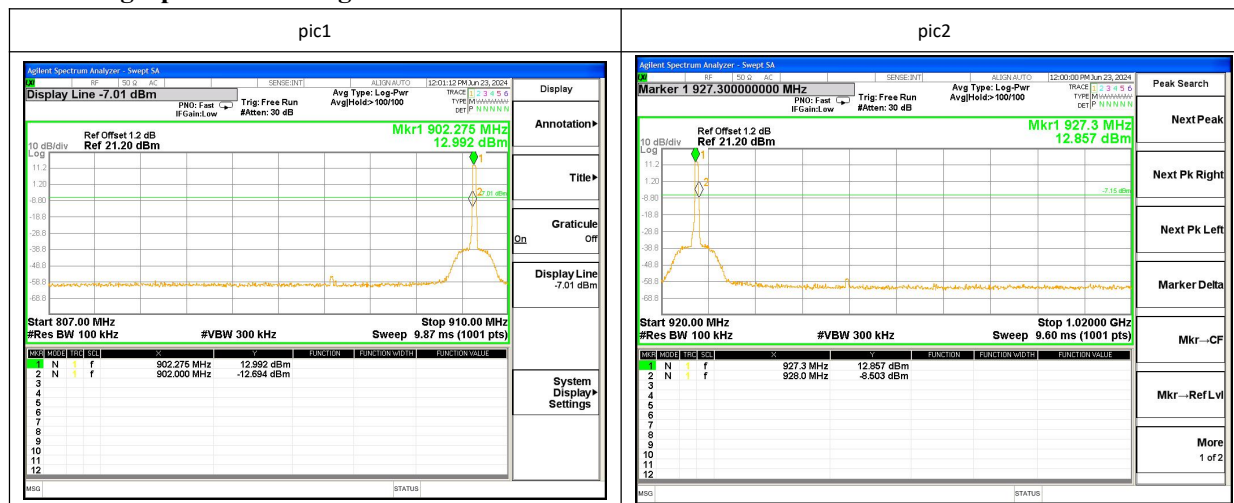
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Measurement Results:

Channel	Frequency	Band Edge(dBm)	Pic	VERDICT
0	902.450	-12.69	Pic1	PASS
20	927.550	-8.50	Pic2	PASS

See test graphs as following:



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6.6. Transmitter Spurious Emission-Conducted

SpeciPications:	FCC 47 CFR Part15.247 (d)
DUT Serial Number:	24B02W000025#S1:S/N:L01HB24100000063
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-70% Air pressure: 86-106kPa
Test Results:	--

Limit

Standard	Limit
FCC 47 CFR Part15.247 (d)	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Measurement Uncertainty:

Frequency Range	Uncertainty
30MHz - 1GHz	0.62dB
1GHz - 26.5GHz	1.74dB

Test Procedure

This measurement is according to ANSI C63.10 clause 11.11.2 and 11.11.3

The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.

Enable EUT transmitter maximum power continuously.

Reference level measurement

- 1.Set instrument center frequency to DTS channel center frequency.
- 2.Set the span to ≥ 1.5 times the DTS bandwidth.
- 3.Set the RBW = 100 kHz.
- 4.Set the VBW $\geq [3 \times \text{RBW}]$.

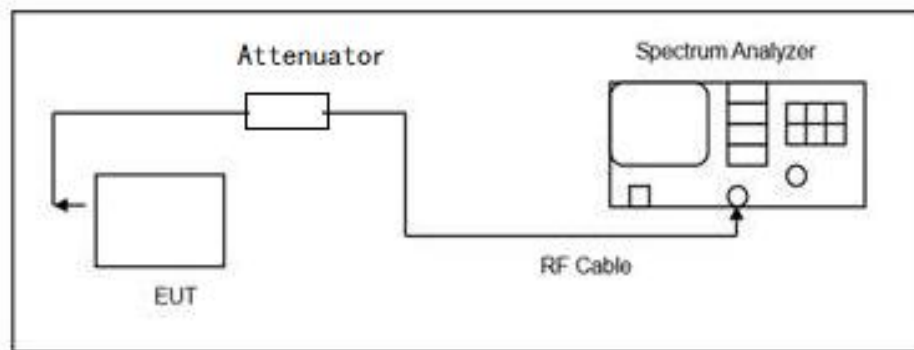
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5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum PSD level.

Emission level measurement

10. Set the center frequency and span to encompass frequency range to be measured.
11. Set the RBW = 100 kHz.
12. Set the VBW $\geq [3 \times \text{RBW}]$.
13. Detector = peak.
14. Sweep time = auto couple.
15. Trace mode = max hold.
16. Allow trace to fully stabilize.
17. Use the peak marker function to determine the maximum amplitude level.

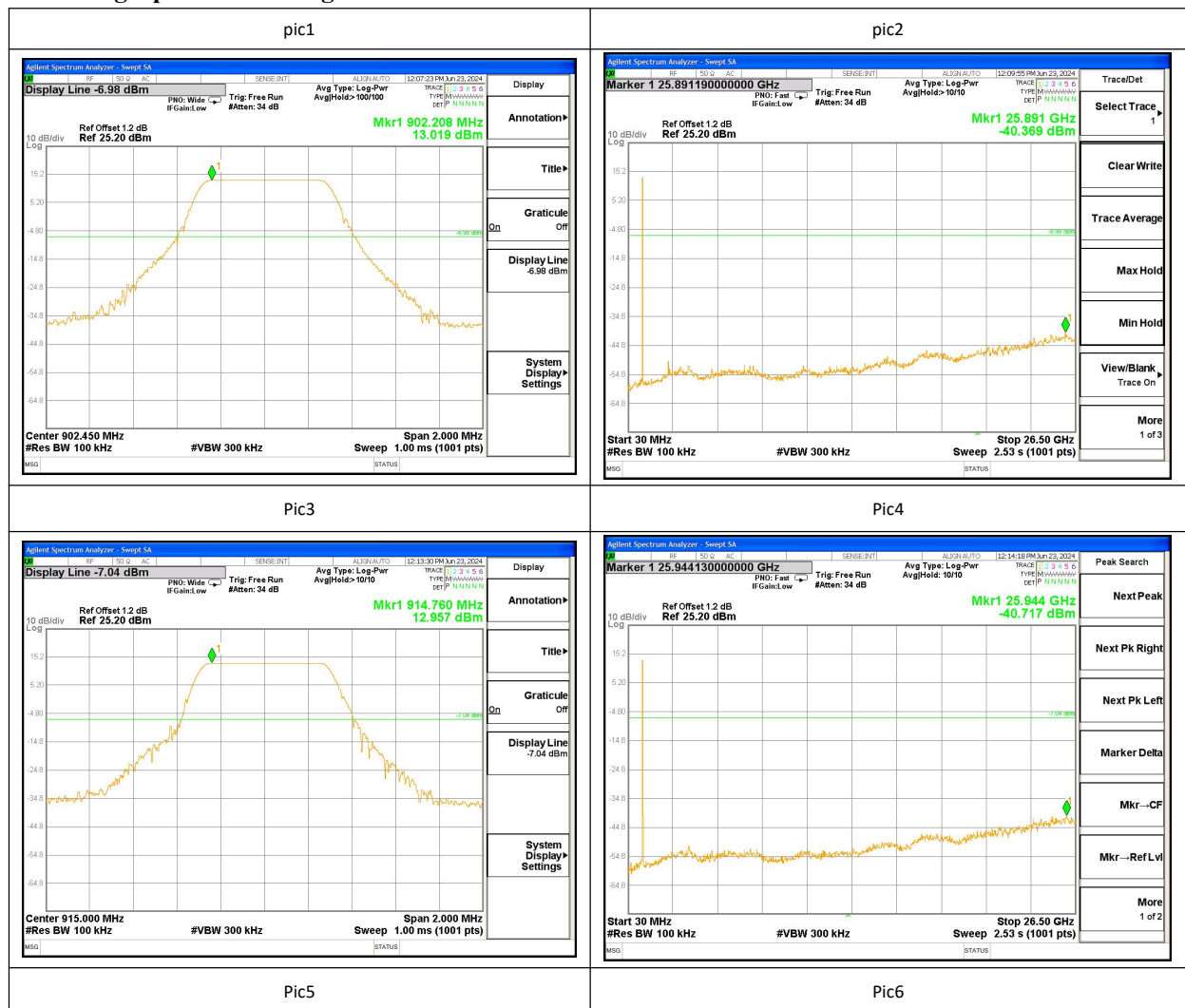
Test block diagram:**Chongqing Academy of Information and Communication Technology**

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Measurement Results:

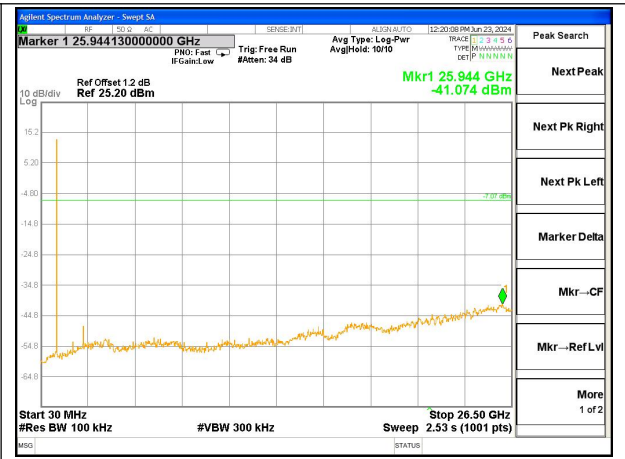
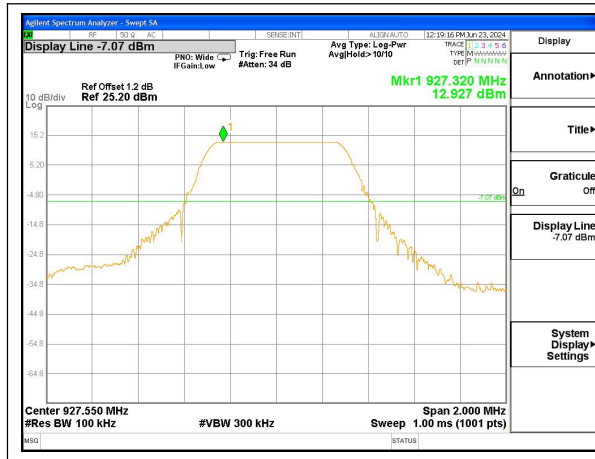
Channel	Peak Power (dBm)	Peak Pic	Frequency Range	Worst Power (dBm)	Limit (dBm)	Emission Pic	Conclusion
0	13.02	Fig.1	30.00MHz~26.50GHz	-40.37	-6.98	Fig.2	PASS
10	12.96	Fig.3	30.00MHz~26.50GHz	-40.72	-7.04	Fig.4	PASS
20	12.93	Fig.5	30.00MHz~26.50GHz	-41.07	-7.07	Fig.6	PASS

See test graphs as following:



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6.7. Transmitter Spurious Emission-Radiated

SpeciPications:	FCC 47 CFR Part 15.247(d)
DUT Serial Number:	24B02W000025#S3:S/N:L01HB24100000122
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-70% Air pressure: 86-106kPa
Test Results:	Pass

Limit

Frequency of emission (MHz)	Field strength (uV/m)	Measurement distance (meters)
0.009-0.49	2400/F(kHz)	300
0.49-1.705	24000/F(kHz)	30
1.705-30	30	30

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBuV/m)
30~88	100	40
88~216	150	43.5
216~960	200	46
Above 960	500	54

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B(dBuV/m)(at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Note:

1. Emission level in dBuV/m= $20 \log (uV/m)$
2. Measurement was performed at an antenna to the closed point of EUT distance of meters. 3.For Frequency 9kHz~30MHz:

Distance extrapolation factor = $40 \log (\text{Specific distance/ test distance})(dB)$;

Limit line=Specific limits(dBuV)+ distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor = $20 \log (\text{Specific distance/ test distance})(dB)$;

Limit line=Specific limits(dBuV)+ distance extrapolation factor.

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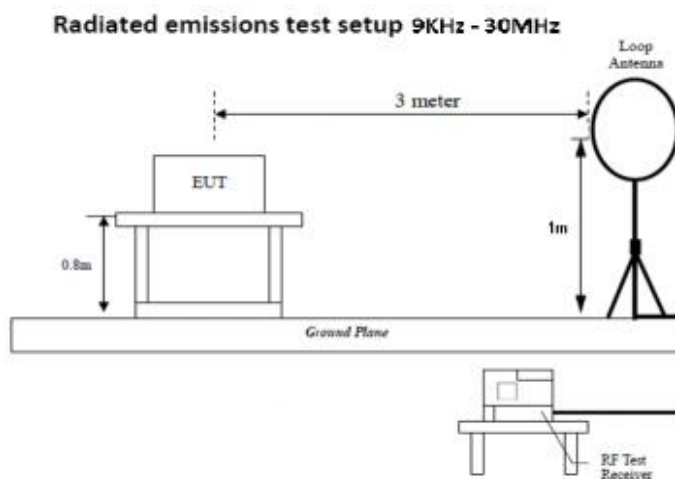
Measurement Uncertainty:

Frequency Range	Uncertainty
$9\text{kHz} \leq f \leq 30\text{MHz}$	4.54dB
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.09dB
$1\text{GHz} \leq f \leq 6\text{GHz}$	4.84dB
$6\text{GHz} \leq f \leq 18\text{GHz}$	4.52dB

Test Setup

The EUT was placed in an anechoic chamber.. The transmitter output is connected to Spectrum analyzer through a loop antenna (for frequency below 30MHz) or a Bilog antenna (for frequency 30MHz-1GHz) or a horn antenna (for frequency above 1GHz).

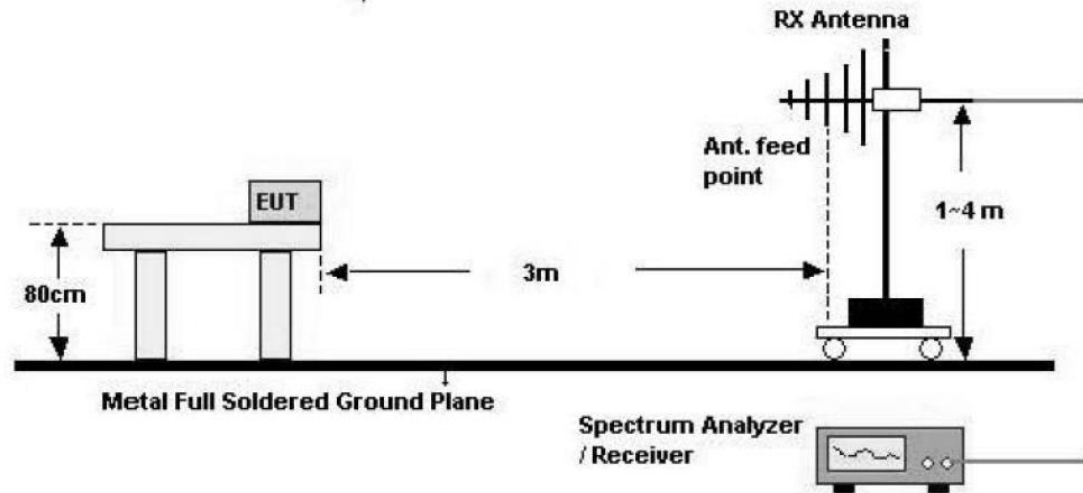
Below 30MHz:



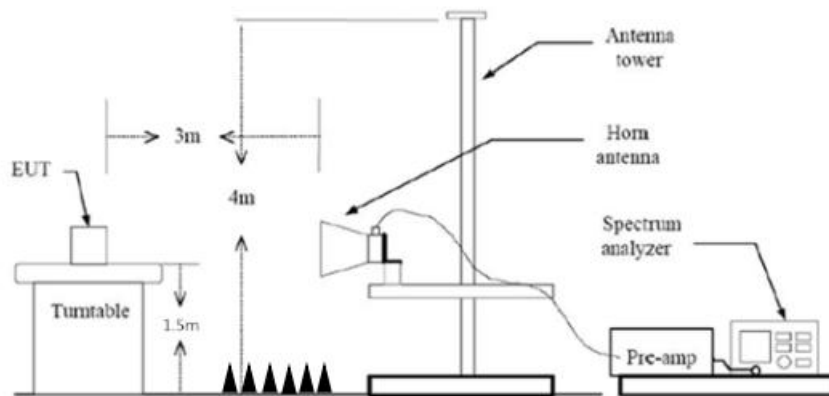
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30MHz-1GHz:



Above 1GHz:



Test Procedure

- 1.The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 3.The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

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5.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

6.If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.

3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $> 98\%$) for Average detection (AV) at frequency above 1GHz.

4. All modes of operation were investigated and the worst-case emissions are reported.

Frequency of emission (MHz)	RBW/VBW	Sweep Time (s)
0.009~0.490	10kHz/10kHz	--
0.490~1.705	10kHz/10kHz	--
1.705~30.0	10kHz/10kHz	--
30~1000	100KHz/300KHz	5
1000~4000	1MHz/1MHz	15
4000~18000	1MHz/1MHz	40
18000~26500	1MHz/1MHz	20

Test Result:

A “reference path loss” is established and AR_{pi} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

AR_{pi} = Cable loss + Antenna Gain - Preamplifier gain

Result = P_{Mea} + AR_{pi}

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Measurement Results:

Test frequency: 9kHz-30MHz

All modes have been verified . No substantial emission is found other than the noise floor.

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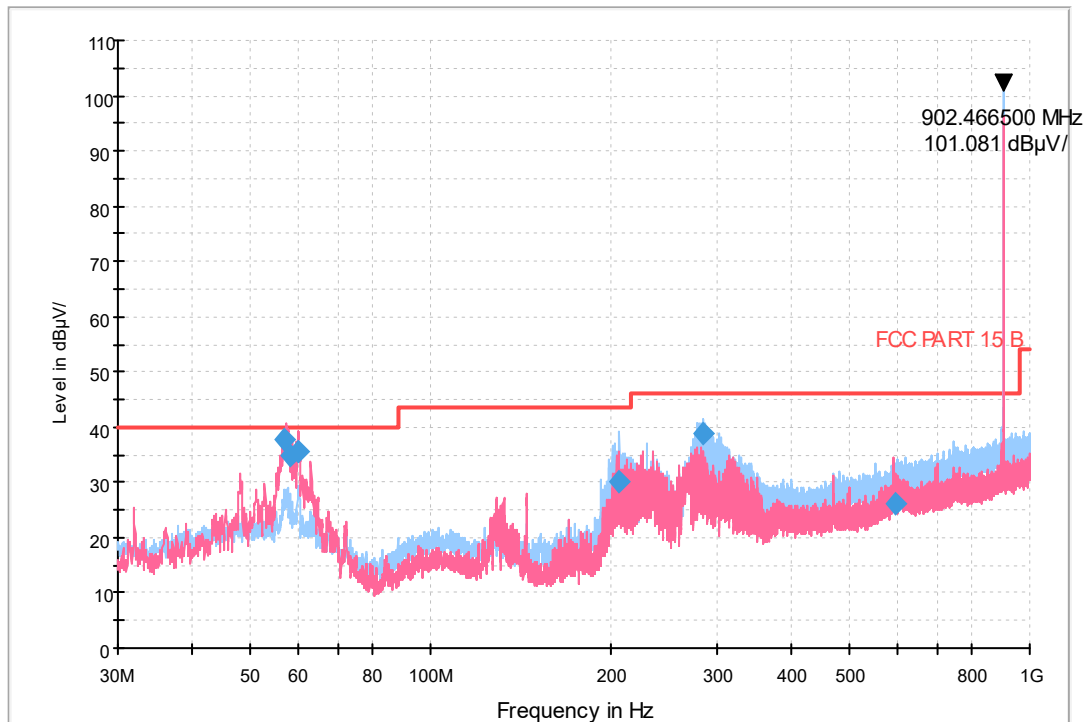
Test frequency: 30MHz-1GHz

All modes were tested,only the worst mode of each band was reported.

Raw dBuV+Cable Loss+AF=Level

Test Data (TX mode for Channel 0)

RE 30MHz-1GHz



Results

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
56.951000	4.32	-0.22	33.6	37.7	Quasi Peak	V	100.0	10.0	40.0	2.3	Pass
58.160500	2.63	-0.23	32.6	35.0	Quasi Peak	V	100.0	10.0	40.0	5.0	Pass
59.967000	4.11	-0.31	31.8	35.6	Quasi Peak	V	100.0	10.0	40.0	4.4	Pass
206.782500	8.41	-0.41	22.2	30.2	Quasi Peak	H	100.0	180.0	43.5	13.3	Pass
284.540000	23.08	-0.48	16.3	38.9	Quasi Peak	H	100.0	10.0	46.0	7.1	Pass
594.897500	12.50	-0.60	14.3	26.2	Quasi Peak	V	100.0	100.0	46.0	19.8	Pass

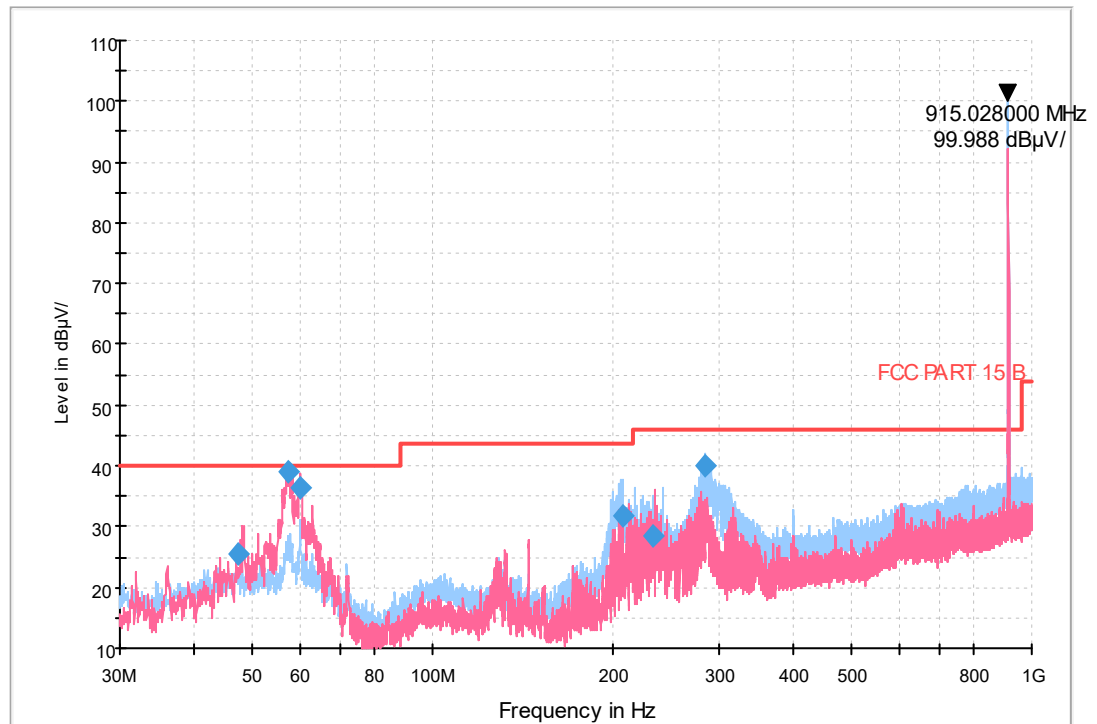
Note: Emission at around 902.4665MHz is fundamental emission.

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Test Data (TX mode for Channel 10)

RE 30MHz-1GHz



Results

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
47.442000	-6.79	-0.31	32.6	25.5	Quasi Peak	V	100.0	190.0	40.0	14.5	Pass/
57.508500	6.71	-0.31	32.6	39.0	Quasi Peak	V	100.0	10.0	40.0	1.0	Pass/
60.018500	4.81	-0.31	31.8	36.3	Quasi Peak	V	100.0	10.0	40.0	3.7	Pass/
207.419000	9.81	-0.41	22.5	31.9	Quasi Peak	H	100.0	10.0	43.5	11.6	Pass/
233.733500	9.29	-0.49	19.7	28.5	Quasi Peak	H	100.0	280.0	46.0	17.5	Pass/
284.200500	16.84	-0.44	23.5	39.9	Quasi Peak	H	100.0	10.0	46.0	6.1	Pass/

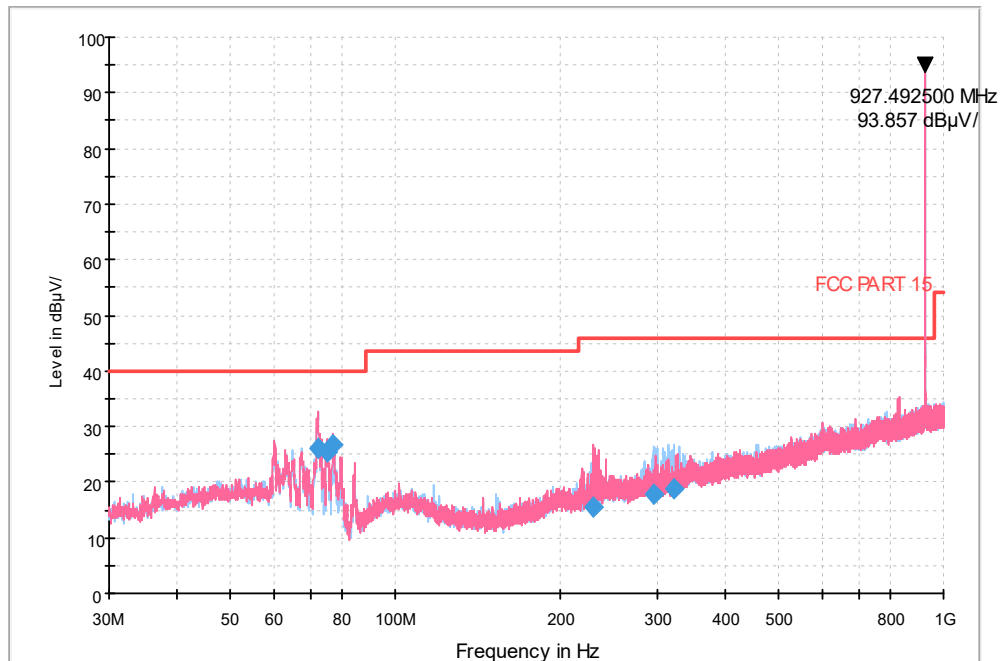
Note: Emission at around 915.028MHz is fundamental emission.

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Test Data (TX mode for Channel 20)

RE 30MHz-1GHz



Results

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
72.146500	-6.09	-0.31	32.6	26.2	Quasi Peak	H	315.0	190.0	40.0	13.8	Pass/
75.056500	-6.79	-0.31	32.6	25.5	Quasi Peak	V	315.0	260.0	40.0	14.5	Pass/
76.999500	-1.49	-0.31	28.5	26.7	Quasi Peak	V	385.0	80.0	40.0	13.3	Pass/
230.159500	-2.58	-0.32	18.5	15.6	Quasi Peak	V	215.0	260.0	46.0	30.4	Pass/
294.992000	-1.52	-0.48	19.7	17.7	Quasi Peak	H	200.0	280.0	46.0	28.3	Pass/
321.791000	-1.45	-0.45	20.5	18.6	Quasi Peak	H	115.0	80.0	46.0	27.4	Pass/

Note: Emission at around 927.4925MHz is fundamental emission.

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Report No.: 24B02W000025-001

Test frequency: 1GHz-18GHz

All modes were tested,only the worst mode of each band was reported.

Raw dBuV+Cable Loss+AF=Level

Test Data (TX mode for Channel 0)

Data 1

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3197.900000	20.27	-1.77	27.8	46.3	Peak	V	100.0	270.0	74.0	27.7	Pass
5309.400000	16.23	-2.43	31.5	45.3	Peak	V	100.0	285.0	74.0	28.7	Pass
6000.000000	21.75	-2.55	31.9	51.1	Peak	V	100.0	174.0	74.0	22.9	Pass
8090.125000	19.31	-4.61	36.5	51.2	Peak	V	100.0	15.0	74.0	22.8	Pass
10093.600000	20.31	-5.71	38.2	52.8	Peak	V	200.0	255.0	74.0	21.2	Pass
14431.250000	26.50	-6.40	40.0	60.1	Peak	V	200.0	174.0	74.0	13.9	Pass

Data 2

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3659.400000	3.91	-2.01	29.8	31.7	Average	V	200.0	-6.0	54.0	22.3	Pass
5489.100000	3.77	-2.67	31.5	32.6	Average	V	100.0	0.0	54.0	21.4	Pass
6404.325000	10.78	-2.98	31.9	39.7	Average	V	200.0	195.0	54.0	14.3	Pass
7318.950000	7.37	-3.97	34.2	37.6	Average	V	200.0	105.0	54.0	16.4	Pass
8234.250000	6.89	-4.89	37.2	39.2	Average	V	100.0	165.0	54.0	14.8	Pass
15326.450000	17.7	-7.60	39.7	49.8	Average	V	200.0	100.0	54.0	4.2	Pass

Test Data (TX mode for Channel 10)

Data 1

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3187.900000	18.37	-1.77	27.8	44.4	Peak	V	200.0	275.0	74.0	29.6	Pass
4288.200000	16.40	-2.10	30.1	44.4	Peak	V	100.0	195.0	74.0	29.6	Pass
6000.000000	21.15	-2.55	31.9	50.5	Peak	V	100.0	180.0	74.0	23.5	Pass
7070.925000	17.62	-3.92	34.5	48.2	Peak	V	200.0	0.0	74.0	25.8	Pass
8329.125000	18.79	-4.69	36.1	50.2	Peak	V	100.0	105.0	74.0	23.8	Pass
13589.275000	24.01	-6.11	40.0	57.9	Peak	V	200.0	15.0	74.0	16.1	Pass

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Data 2

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3659.700000	4.51	-2.01	29.8	32.3	Average	V	200.0	15.0	54.0	21.7	Pass
4574.700000	4.34	-2.34	30.4	32.4	Average	V	200.0	6.0	54.0	21.6	Pass
5489.700000	7.77	-2.67	31.5	36.6	Average	V	100.0	180.0	54.0	17.4	Pass
6404.650000	9.48	-2.98	31.9	38.4	Average	V	100.0	180.0	54.0	15.6	Pass
7319.675000	5.37	-3.97	34.2	35.6	Average	V	200.0	15.0	54.0	18.4	Pass
8234.250000	7.29	-4.89	37.2	39.6	Average	V	100.0	175.0	54.0	14.4	Pass

Test Data (TX mode for Channel 20)

Data 1

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3192.600000	17.37	-1.77	27.8	43.4	Peak	V	200.0	276.0	74.0	30.6	Pass
4261.100000	12.56	-2.06	30.1	40.6	Peak	V	200.0	195.0	74.0	33.4	Pass
6000.000000	19.85	-2.55	31.9	49.2	Peak	V	200.0	96.0	74.0	24.8	Pass
6404.650000	18.77	-2.67	33.5	49.6	Peak	V	200.0	195.0	74.0	24.4	Pass
8273.675000	16.87	-4.77	36.5	48.6	Peak	V	200.0	165.0	74.0	25.4	Pass
10188.025000	17.85	-5.65	38.2	50.4	Peak	V	200.0	84.0	74.0	23.6	Pass

Data 2

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass/Fail
3510.700000	0.71	-2.01	29.8	28.5	Average	V	200.0	0.0	54.0	31.5	Pass
6203.475000	1.98	-2.98	31.9	30.9	Average	V	100.0	105.0	54.0	19.1	Pass
6507.200000	3.71	-3.21	31.9	32.4	Average	V	100.0	105.0	54.0	17.6	Pass
7748.575000	3.77	-3.97	34.2	34.0	Average	V	100.0	255.0	54.0	16.0	Pass
10092.475000	4.75	-5.65	38.2	37.3	Average	V	200.0	285.0	54.0	12.7	Pass
17129.275000	16.8	-8.60	42.7	50.9	Average	V	100.0	195.0	54.0	3.1	Pass

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ANNEX A EUT Photos

See the document "24B02W000025-001-External Photos".

See the document "24B02W000025-001-Internal Photos".

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ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

*****END OF REPORT*****

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