TEST REPORT

Of

JAPAN MIC

Product :	**BT module**
Brand:	**Fanstel**
Model:	**BT832; BT832A; BT832F; BT832AF**
Model Difference:	**Please see page 5 model summaries table**
Applicant:	**Fanstel Corporation, Taipei**
Address:	**10F-10, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi-Chih, New Taipei City 221 Taiwan**

Test Performed by:

International Standards Laboratory Corp.
<LT Lab.>
*Address:
No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
*Tel : 886-3-407-1718; Fax: 886-3-407-1738

Report No.: **ISL-17LR237JAP**

Issue Date : **2018/12/10**

VERIFICATION OF COMPLIANCE

Applicant	Fanstel Corporation, Taipei
Product Name:	BT module
Brand Name:	Fanstel
Model No.:	BT832; BT832A; BT832F; BT832AF
Model Difference:	Please see page 5 model summaries table
Date of Test:	2018/11/12 ~ 2018/12/07
Date of EUT Received:	2018/11/12

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
ARIB STD-T66	Complied

The above equipment was tested by International Standards Laboratory Corp. for compliance with the requirements in the Radio equipment stipulated in the certification ordinance article Article 2, Item (19) Appendix 43, B-1 (2). Item 19 of Article 2 Paragraph 1. The results of testing in this report apply to the product system that was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Test By:	Barry Lee	***Date:***	2018/12/10
	Barry Lee / Senior Engineer		
Prepared By:	Gigi yeh	***Date:***	2018/12/10
	Gigi Yeh / Senior Engineer		
Approved By:	Dino Chen	***Date:***	2018/12/10
	Dino Chen / Senior Engineer		

Version

Version No.	Date	Description
00	2018/12/10	Initial creation of document

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1. Description of Equipment under Test (EUT)

1.1. GENERAL INFORMATION

General:

Product Name	BT module
Brand Name	Fanstel
Model Name	BT832; BT832A; BT832F; BT832AF
Model Difference	Please see page 5 model summaries table
Power Supply	5Vdc

BT:

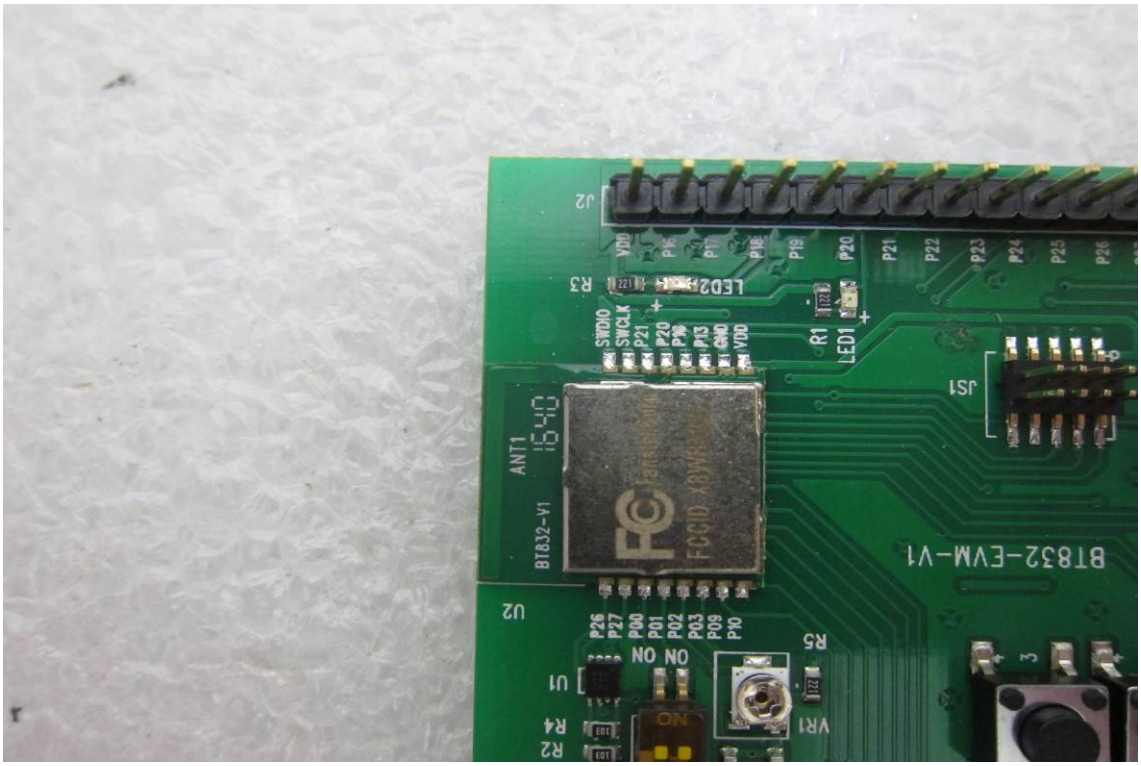
Bluetooth Version	4.2
Rated Transmit Power	2.7mW
Frequency Range	2.402GHz – 2.480GHz
Modulation Technique	GFSK
Channel number	40 channels
Dwell Time	N/A
Antenna Type	PCB Antennas
Peak Gain	BT832; BT832A: -3.38dBi BT832F; BT832AF: 2.82dBi

Model Summaries

module	BT832	BT832A	BT832F	BT832AF
MCU	Cortex M4F	Cortex M4	Cortex M4F	Cortex M4
Flash/RAM	512KB/64KB	192KB/24KB	512KB/64KB	192KB/24KB
Size	14x16x1.9mm	14x16x1.9mm	15x20.8x1.9mm	15x20.8x1.9mm
Average Bluetooth range	100 meters	100 meters	270 meters	270 meters
FCC ID	X8WBT832		X8WBT832	
Canada IC ID	4100A-BT832		4100A-BT832	
Europe				
QDID	97989		97989	

1.2. Assemble (Not easy to open/access issue)

The shielding is directly soldered to the PCB board. The inner shielding is shown in the illustration below.



2. Description of Test Modes

The EUT has been tested at continuous TX and RX modes. And software was used to control the EUT for staying in above description test modes.
Channel low, mid and High with lowest data rate was chosen for testing.

A software tool or a built-in test-mode needs to be reported with the parameter settings for creating the appropriate selection. The software settings shall be reported because of the traceability requirement of the measurements. The settings are depending upon the IEEE standard & mode and the applied modulation. Most common settings are:

The settings for Bluetooth will be influenced by the throughput and the modulation. Most common settings are:

Bluetooth 4.0: GFSK modulation

Test channels in BT 4.0 LE mode

	TX
Channel Low	2402MHz
Channel Mid	2442MHz
Channel High	2480MHz

Test conditions

Temperature & humidity	Normal
Normal voltage	5.0 Vdc
Lower extreme voltage	5.5 Vdc
Higher extreme voltage	4.5 Vdc

The test kit is powered from 6Vdc battery

3. General Description of Applied Standards

The EUT According to the Specifications, it must comply with the requirements of the following standards:

Radio equipment stipulated in the certification ordinance Article 2, Item (19) Appendix 43, B-1 (2) and Item 19 of Article 2 Paragraph 1.

4. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of **International Standards Laboratory Corp.** <LT Lab.> No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2009. FCC Registration Number is: TW1036, Canada Registration Number: 4067B-3.

5. Support Equipment

Fig. 5-1 Configuration of Tested System

Table 5-1 Equipment Used in Tested System

Item	Equipment	Mfr./Brand	Model name	Series No	Data Cable	Power Cable
1	JIG	NA	NA	NA	Non-shielded	Non-shielded
2	NB	HP	440G1	NA	Non-shielded	Non-shielded

6. Summary of Tests

Article reference	Report reference	Parameter	Status (Note 1)
General provisions			
5	6.2	Frequency tolerance	C
6	6.3	Occupied bandwidth	C
7	6.5	Spurious emission	C
Transmitting equipment			
14	6.1	Antenna Power	C
14.2	--	SAR	N/A
15	6.2	Frequency stabilization	C
Transmitting equipment			
20	1.2	Type configuration etc of transmitting antenna	C
22	1.2	Directional pattern of transmitting antenna	C
Receiving equipment			
24	6.6	Spurious emission of receiver	C
26	1.2	Refer to all articles for transmitting antenna	C
Operating frequency 2400-2483.5MHz			
49.20(1); a	1.3	High Frequency/modulation section cannot be operated easily	C
49.20(1); b	1.1	Communication method	C
49.20(1); c	1.1	Communication method	C
49.20(1); d	1.1	Spread Spectrum method	N/A
49.20(1); e	6.1	Antenna Power	C
49.20(1); f(1)	1.2	Absolute gain of transmitting antenna	C
49.20(1); f(2)	6.8	Angular width of principal radiation (AWPR)	C
49.20(1); g		Number of carriers within 1MHz bandwidth in OFDM	N/A
49.20(1); h	6.4	Diffusion bandwidth	C
49.20(1); i	6.4	Spreading factor	N/A
49.20(1); j	6.7	Frequency retention time (FH employed)	N/A
Note 1: C=Confirm NC=Not Confirm NT=Not Tested NA= Not Applicable			

6.1. Antenna Power and Tolerance

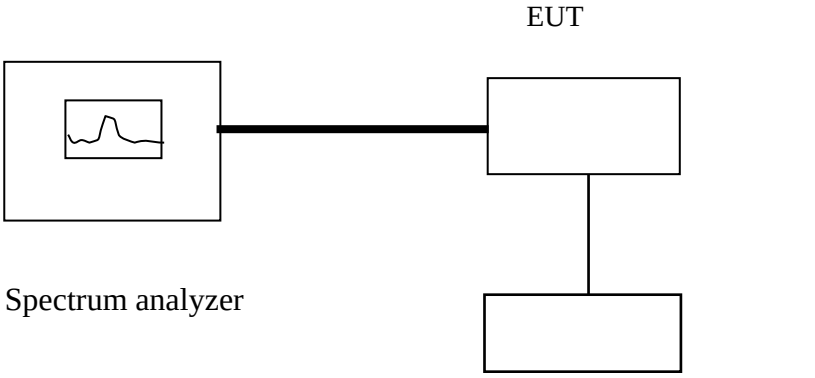
6.1.1. Limit:

BT 4.0: Antenna power: 10mW
Antenna power tolerance: + 20% to – 80%

6.1.2. Measurement Equipment Used:

Conducted Emission Test Site					
Equipment Type	**MFR**	**Model Number**	**Serial Number**	**Last Cal.**	**Cal Due.**
Power Meter 05	Anritsu	ML2495A	1116010	10/28/2018	10/27/2019
Power Sensor 05	Anritsu	MA2411B	34NKF50	10/28/2018	10/27/2019
DC Power supply	ABM	8185D	N/A	11/16/2018	11/15/2019
AC Power supply	EXTECH	CFC105W	NA	12/25/2017	12/24/2018
Splitter	MCLI	PS4-199	12465	12/26/2017	12/25/2019
Spectrum analyzer	keysight	N9010A	MY56070257	10/15/2018	10/14/2019
Spectrum analyzer	R&S	FSP40	100116	11/02/2018	11/01/2019

6.1.3. Test Setup:



6.1.4. Test Procedure:

1. Set the EUT at hopping off and modulation on.
2. Set the ETU operates at channel low, mid and high and normal/Upper/Lower voltage.
3. Connect the EUT to power meter.
4. Record the power level.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

6.1.5. Test results:

BT LE:
Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

Model: BT832
Rated Power Density = 2.70 mW
Antenna Gain= -3.38 dBi

		Channel Low	Channel Mid	Channel High	Limit
Normal Voltage 5 V	Conducted Power (dBm)	4.21	4.31	4.59	N/A
	Conducted Power (mW)	2.64	2.70	2.88	10mW
	Power Tolerance	-2.34	-0.06	6.64	+20% to -80%
Upper Voltage 5.5 V	Conducted Power (dBm)	4.21	4.32	4.60	N/A
	Conducted Power (mW)	2.63	2.70	2.88	10mW
	Power Tolerance	-2.47	0.15	6.77	+20% to -80%
Lowerl Voltage 4.5 V	Conducted Power (dBm)	4.20	4.32	4.60	N/A
	Conducted Power (mW/)	2.63	2.70	2.88	10mW
	Power Tolerance	-2.49	0.05	6.79	+20% to -80%

Remark:
1. Conducted Power (mW)= 10^(Conducted Power(dBm/MHz)/10)

Model: BT832F
Rated Power Density = 2.70 mW
Antenna Gain= 2.82 dBi

		Channel Low	Channel Mid	Channel High	Limit
Normal Voltage 5 V	Conducted Power (dBm)	4.21	4.31	4.59	N/A
	Conducted Power (mW)	2.64	2.70	2.88	10mW
	Power Tolerance	-2.34	-0.06	6.64	+20% to -80%
Upper Voltage 5.5 V	Conducted Power (dBm)	4.21	4.32	4.60	N/A
	Conducted Power (mW)	2.63	2.70	2.88	10mW
	Power Tolerance	-2.47	0.15	6.77	+20% to -80%
Lowerl Voltage 4.5 V	Conducted Power (dBm)	4.20	4.32	4.60	N/A
	Conducted Power (mW/)	2.63	2.70	2.88	10mW
	Power Tolerance	-2.49	0.05	6.79	+20% to -80%

6.2. Frequency Tolerance

6.2.1. Limit:

50ppm

6.2.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.2.3. Test Setup:

Refer to section 6.1.3 for detail.

6.2.4. Test Procedure:

1. Set the EUT modulation off.
2. Set the ETU operates at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer RBW = 300Hz, VBW=300Hz and Span = 20kHz
4. Max hold, View, Peak High, Mark and snap the screen and record the mark.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

6.2.5. Test results:

Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

BT LE mode:

		Channel Low	Channel Mid	Channel High	Limit
Normal Voltage 5 V	Measured Frequency (MHz)	2402.03880	2442.03920	2480.03980	+/-50ppm
	Frequency Tolerance (ppm)	16.15	16.05	16.05	
Upper Voltage 5.5 V	Measured Frequency (MHz)	2402.03880	2442.03920	2480.03980	+/-50ppm
	Frequency Tolerance (ppm)	16.15	16.05	16.05	
Lower Voltage 4.5 V	Measured Frequency (MHz)	2402.03880	2442.03920	2480.03980	+/-50ppm
	Frequency Tolerance (ppm)	16.15	16.05	16.05	

6.3. Occupied Bandwidth

6.3.1. Limit:

BT normal mode<83.5MHz
BT(LE) < 26MHz

6.3.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.3.3. Test Setup:

Refer to section 6.1.3 for detail.

6.3.4. Test Procedure:

1. Set the EUT modulation on.
2. Set the ETU operate at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer RBW = 300kHz, VBW=300kHz, center frequency = 2402MHz, 2442MHz, 2484MHz and Span = 5MHz
4. Turn on 99% spectrum OBW function on, Max hold, View, and snap the screen and record the mark.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

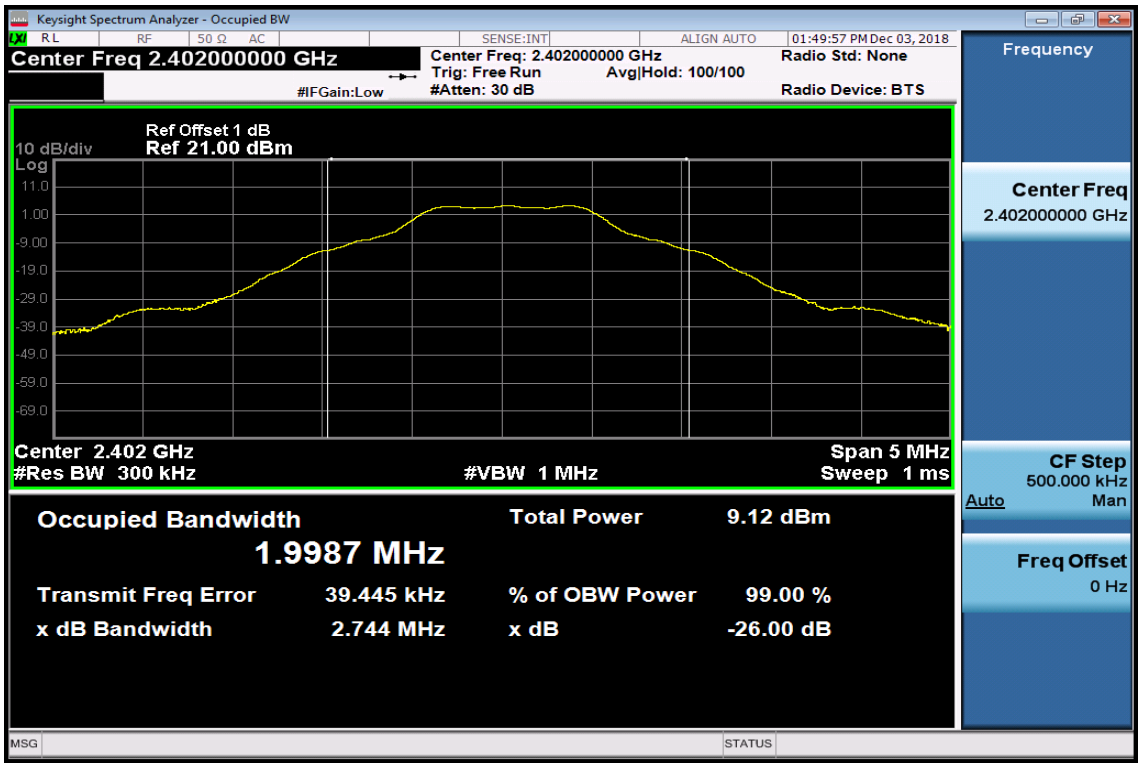
6.3.5. Test results:

Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

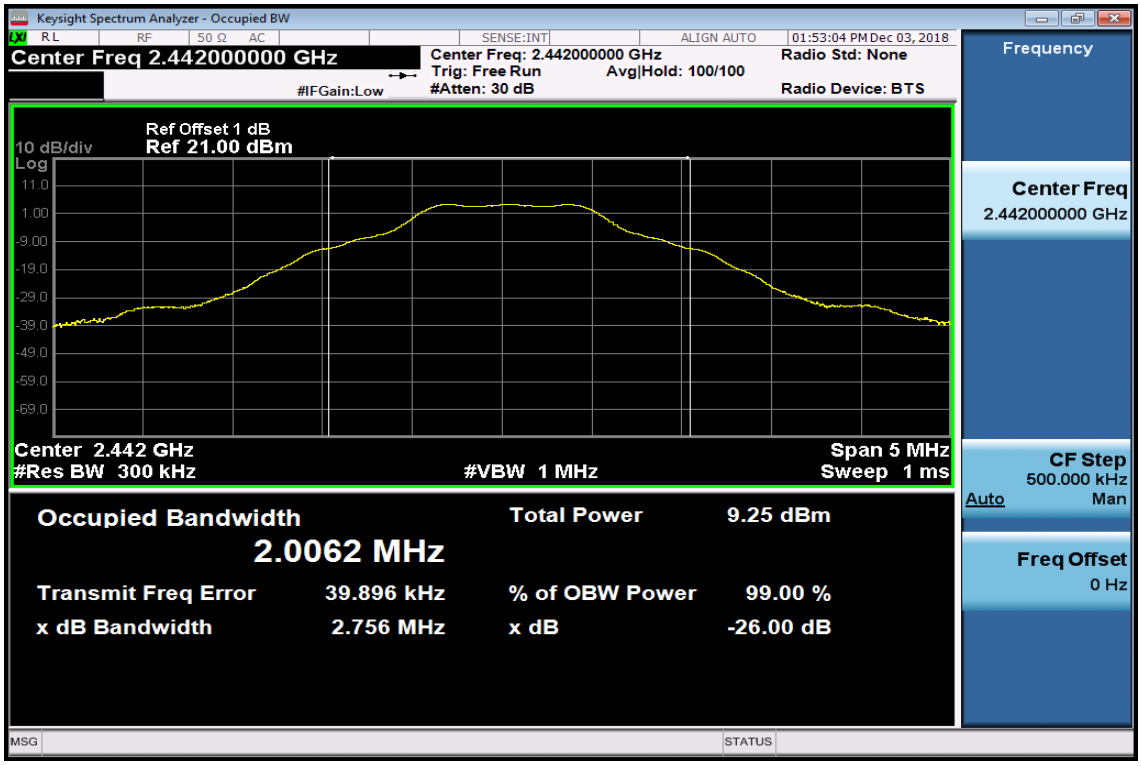
BT LE mode	Low channel (MHz)	Mid channel (MHz)	High channel (MHz)	Limit	Remark
Normal Voltage 5 V	2.00	2.01	2.01	<26MHz	Pass
Upper Voltage 5.5 V	2.00	2.01	2.01	<26MHz	Pass
Lower Voltage 4.5 V	2.00	2.01	2.01	<26MHz	Pass

Normal voltage for BT LE mode:

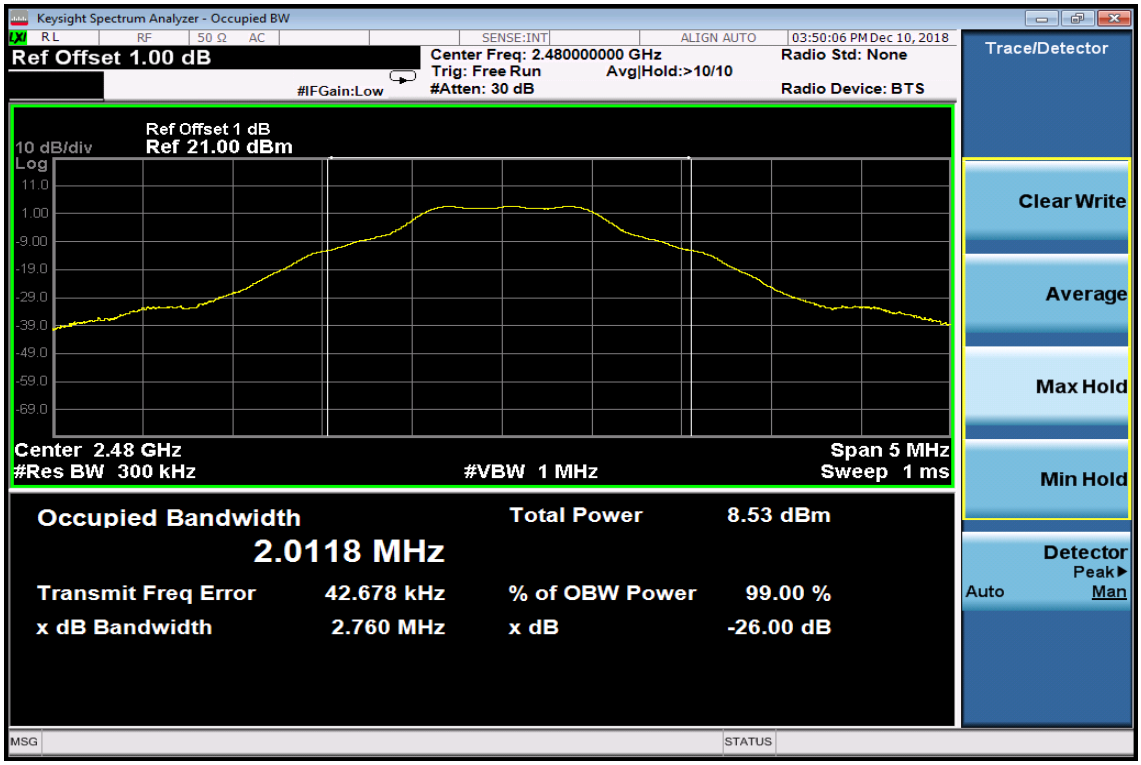
Low



Mid



High


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
03:50:06 PM Dec 10, 2018
Ref Offset 1.00 dB
#IFGain:Low
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
11.0
1.00
-9.00
-19.0
-29.0
-39.0
-49.0
-59.0
-69.0
Center 2.48 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 5 MHz
Sweep 1 ms
Occupied Bandwidth
2.0118 MHz
Total Power
8.53 dBm
Transmit Freq Error
42.678 kHz
% of OBW Power
99.00 %
x dB Bandwidth
2.760 MHz
x dB
-26.00 dB
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
MSG
STATUS

6.4. Spreading Bandwidth (90%)

6.4.1. Limit:

> 500kHz

6.4.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.4.3. Test Setup:

Refer to section 6.1.3 for detail.

6.4.4. Test Procedure:

1. Set the EUT modulation on.
2. Set the ETU operate at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer RBW = 300kHz, VBW=300kHz, center frequency =2402MHz, 2442MHz, 2480MHz and Span = 5MHz
4. Turn on 90% spectrum OBW function, Max hold, View, and snap the screen and record the mark.
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.

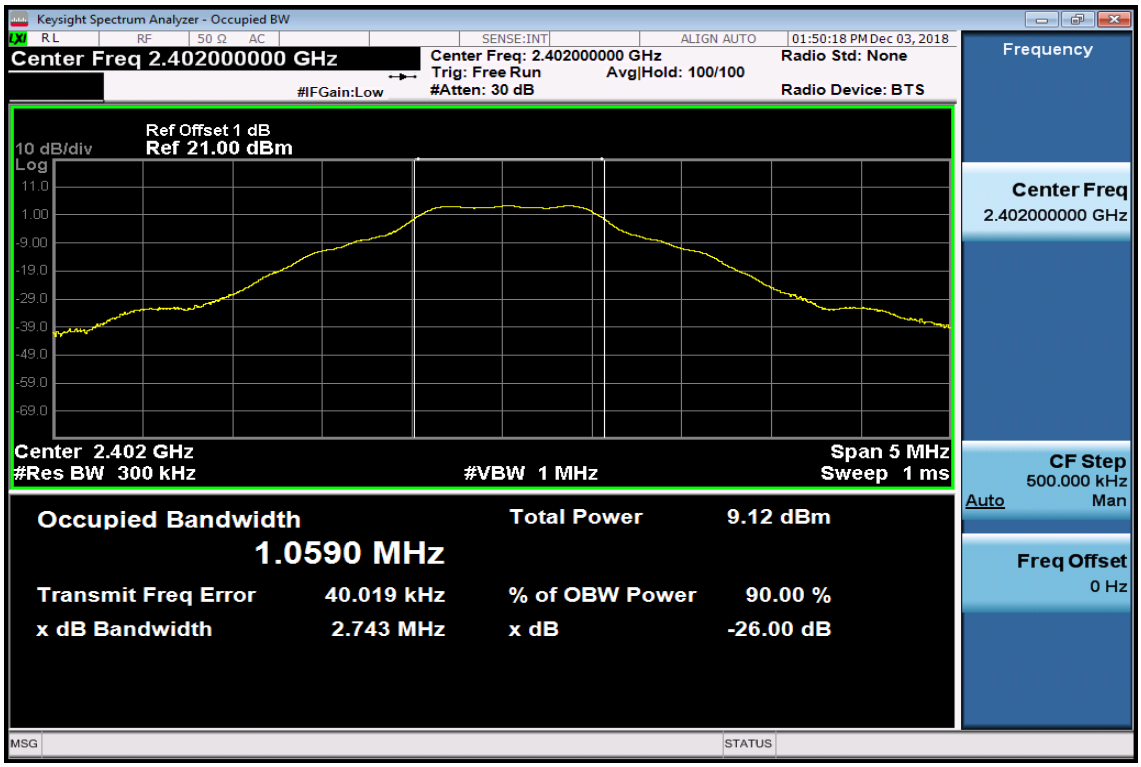
6.4.5. Test results:

Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

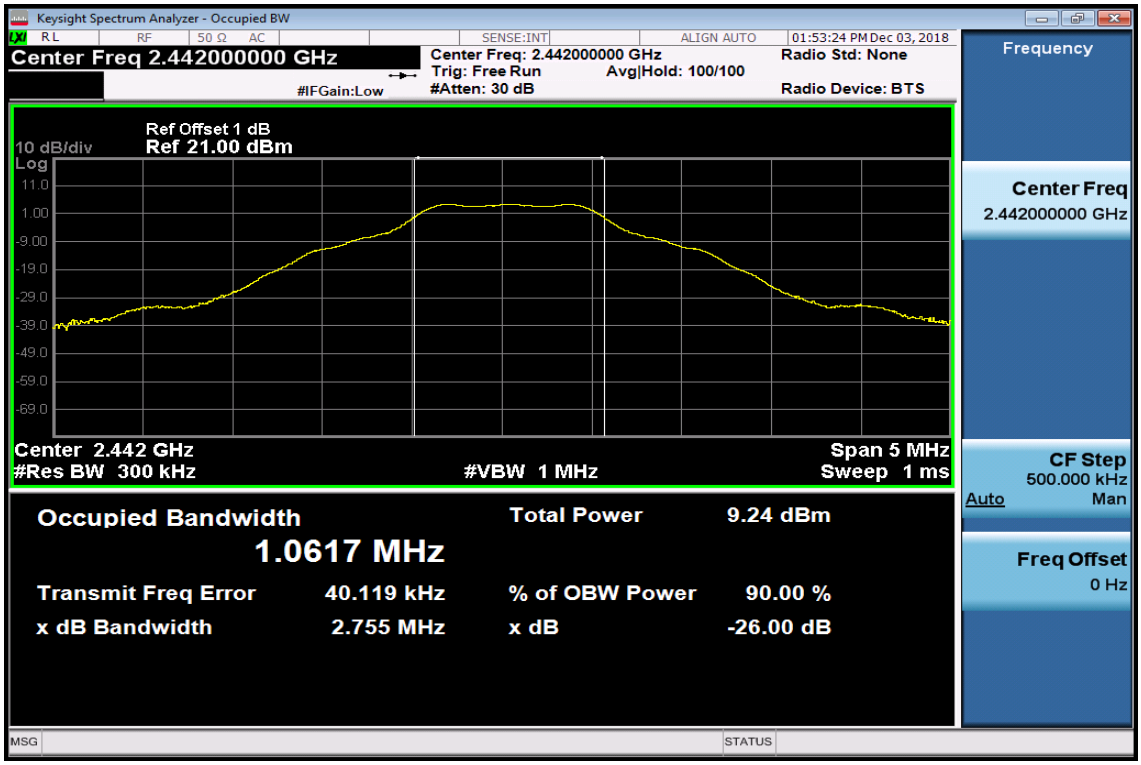
Mode: LE	Low channel (MHz)	Mid channel (MHz)	High channel (MHz)	Limit
Normal Voltage 5 V	1.06	1.06	1.07	>500kHz
Upper Voltage 5.5 V	1.06	1.06	1.07	>500kHz
Lower Voltage 4.5 V	1.06	1.06	1.07	>500kHz

Normal voltage for BT 4.0 LE mode:

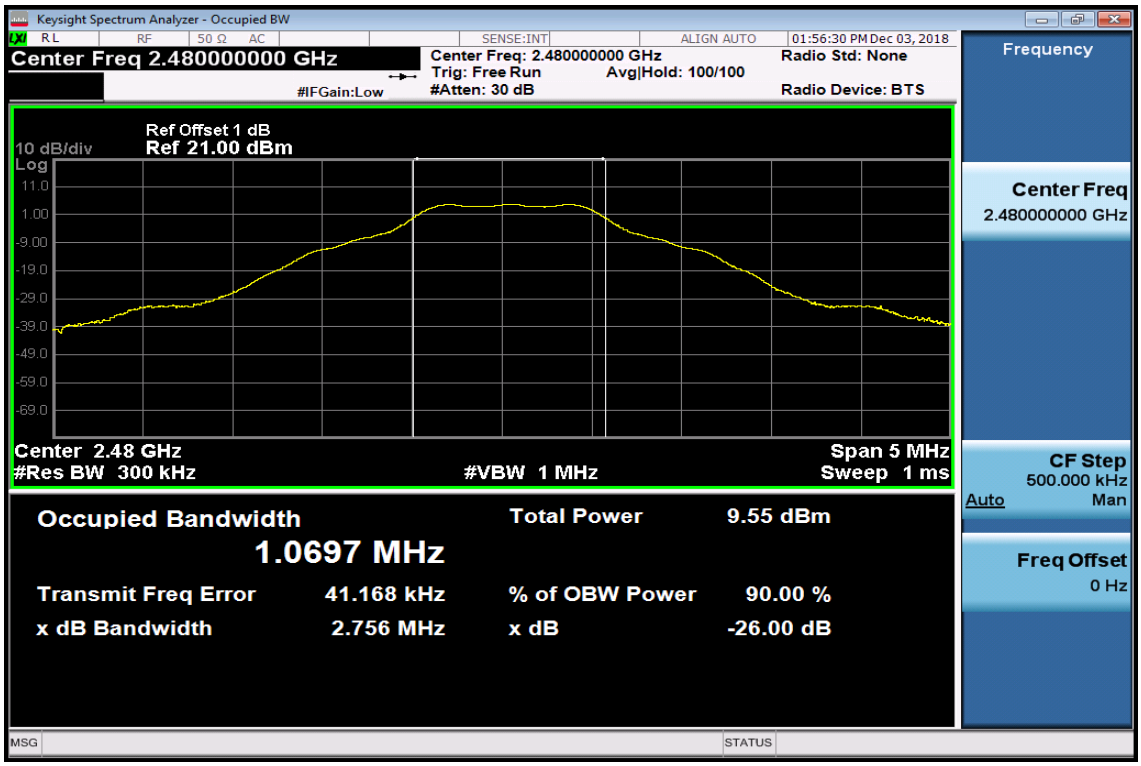
Low



Mid



High


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
01:56:30 PM Dec 03, 2018
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
11.0
1.00
-9.00
-19.0
-29.0
-39.0
-49.0
-59.0
-69.0
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 300 kHz
#VBW 1 MHz
Span 5 MHz
Sweep 1 ms
CF Step
500.000 kHz
Auto
Man
Occupied Bandwidth
1.0697 MHz
Total Power
9.55 dBm
Transmit Freq Error
41.168 kHz
% of OBW Power
90.00 %
x dB Bandwidth
2.756 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

6.5. Transmitter Spurious Emissions

6.5.1. Limit:

Frequency below 2.387 and above 2.4965GHz :2.5uW
Frequency between 2.387 – 2.400GHz, 2.4835-2.4965GHz: 25uW

6.5.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.5.3. Test Setup:

Refer to section 6.1.3 for detail.

6.5.4. Test Procedure:

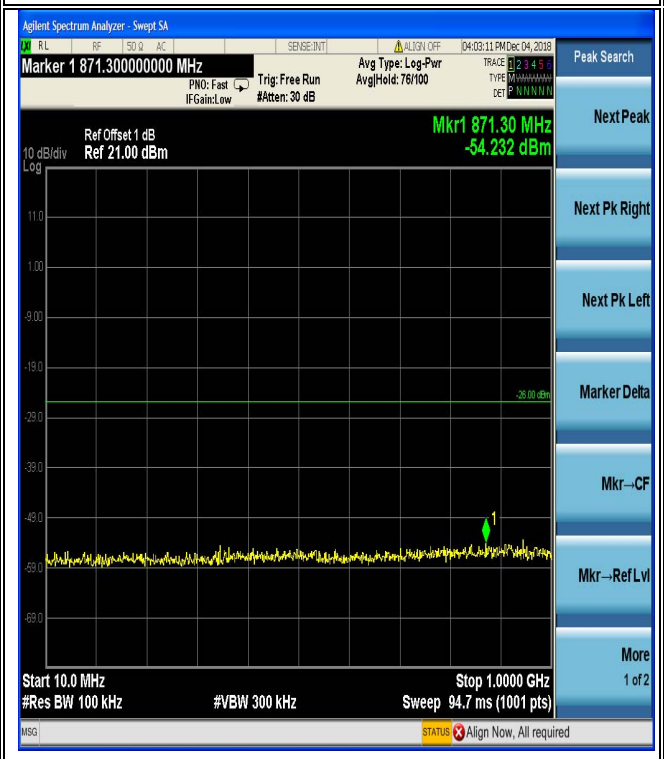
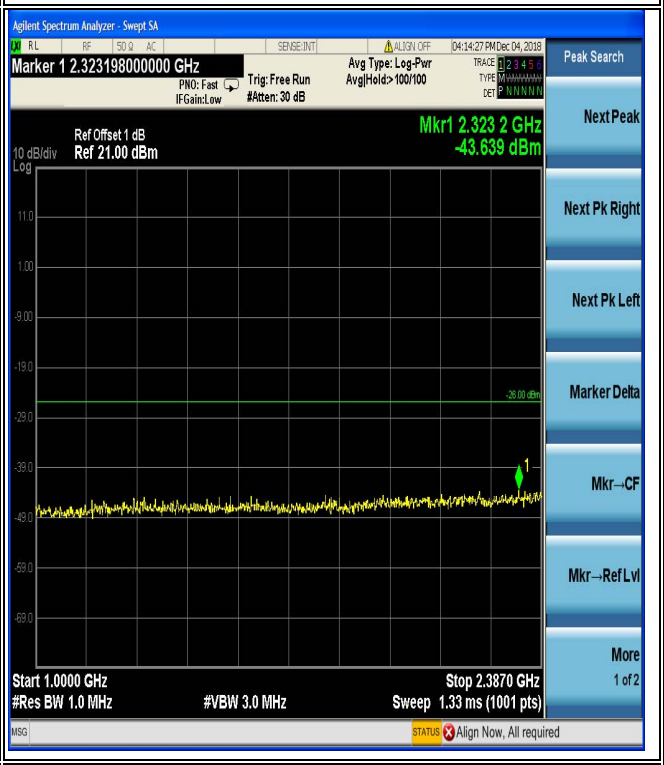
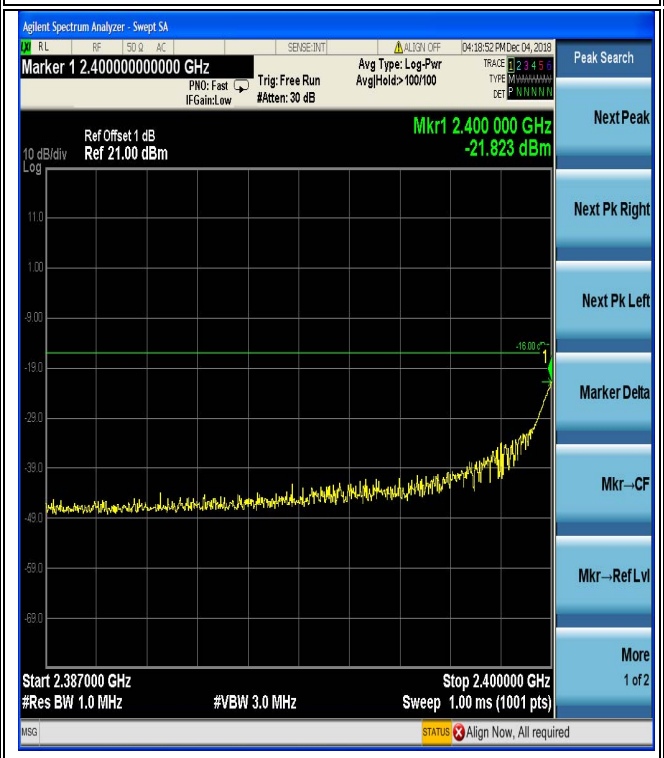
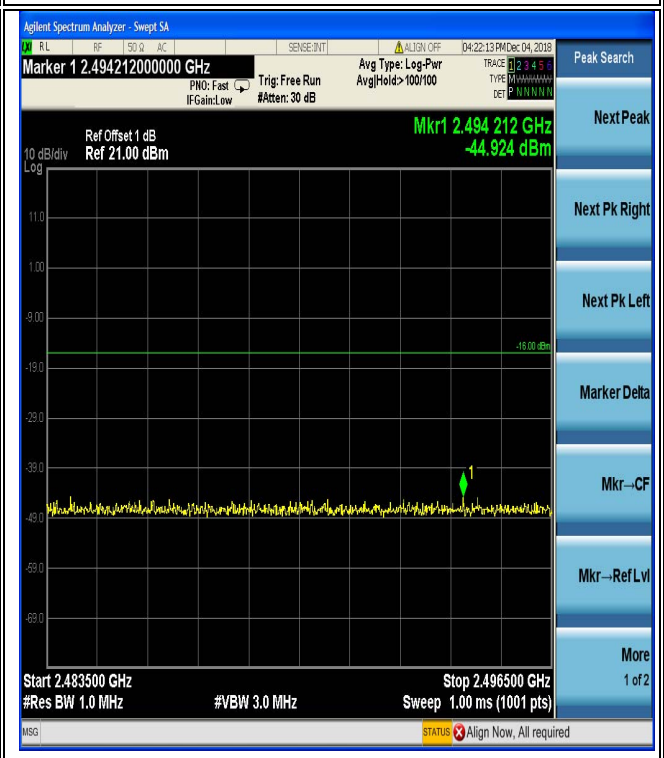
1. Set the EUT at hopping off and modulation on.
2. Set the ETU operate at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer Ref level= -10dBm; attenuation=0dB;RBW=100kHz, BW=100kHz , Sweep = auto Start=10MHz, Stop=1000MHz. Max hold view, mark highest level.
4. Set the spectrum analyzer Ref level= -10dBm; attenuation=0dB;RBW=1MHz, BW=1MHz , Sweep = auto Start=1000MHz, Stop=2387MHz. Max hold view, mark highest level.
5. Set the spectrum analyzer Ref level= -10dBm; attenuation=0dB; RBW=1MHz, RBW=1MHz, Sweep = auto, Start=2387MHz, Stop=2400MHz. Max hold view, mark highest level.
6. Set the spectrum analyzer Ref level= -10dBm; attenuation=0dB; RBW=1MHz, BW=1MHz, Sweep = auto Start=2483.5MHz, Stop=2496.5MHz. Max hold view, mark highest level.
7. Set the spectrum analyzer Ref level= -10dBm; attenuation=0dB; RBW=1MHz, BW=1MHz, Sweep = auto, Start=2496.5MHz, Stop=26GHz.Max hold view, mark highest level.
8. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 7 again.
9. The Worst data was report.

6.5.5. Test Results:

Refer to next page for plots.

Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

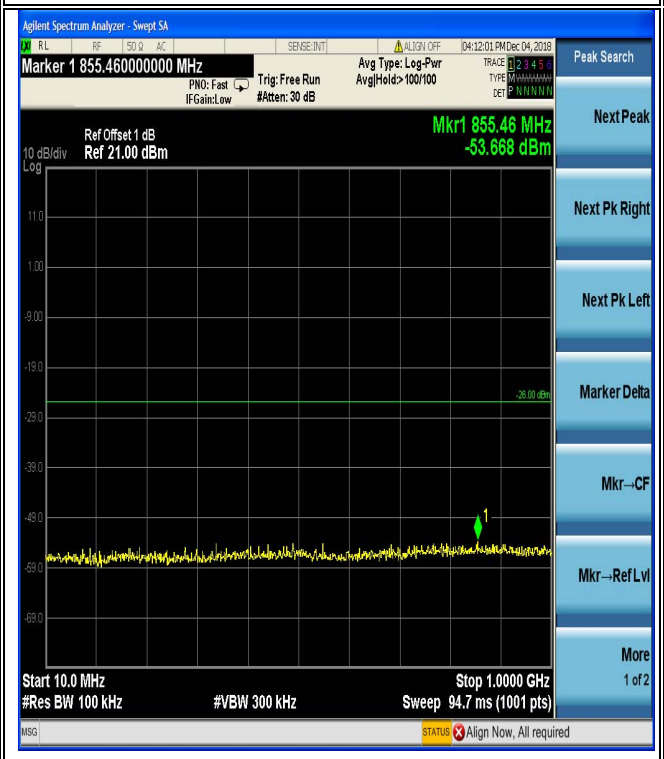
BT 4.0 LE mode:
Normal Voltage: Channel Low

10MHz – 1000MHz	1000MHz – 2387MHz
	
2387MHz – 2400MHz	**2483.5MHz – 2496.5MHz**
	

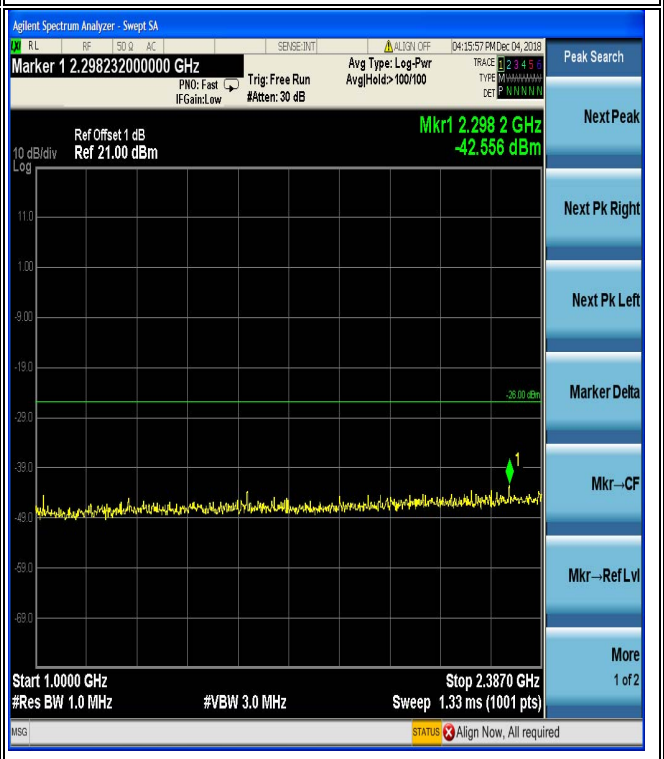
2496.5MHz –26GHz	
	

Normal Voltage: Channel Mid

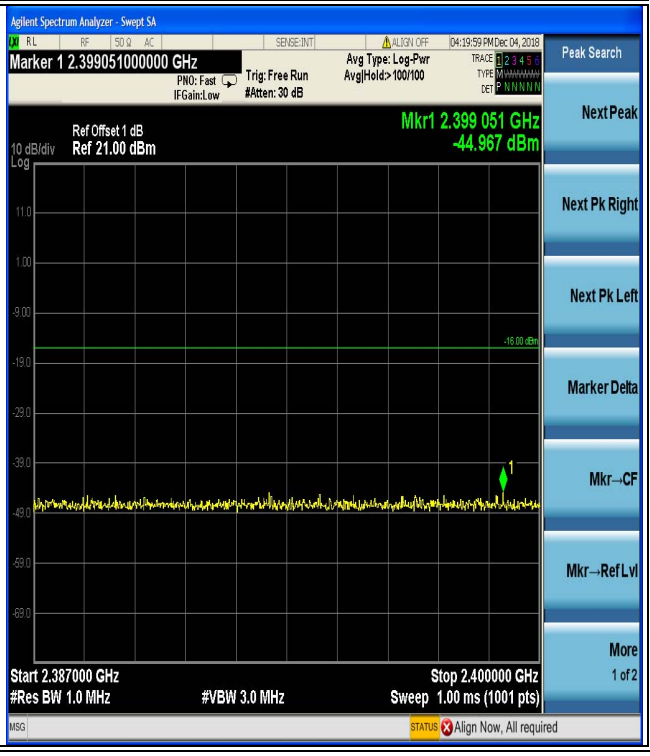
10MHz – 1000MHz



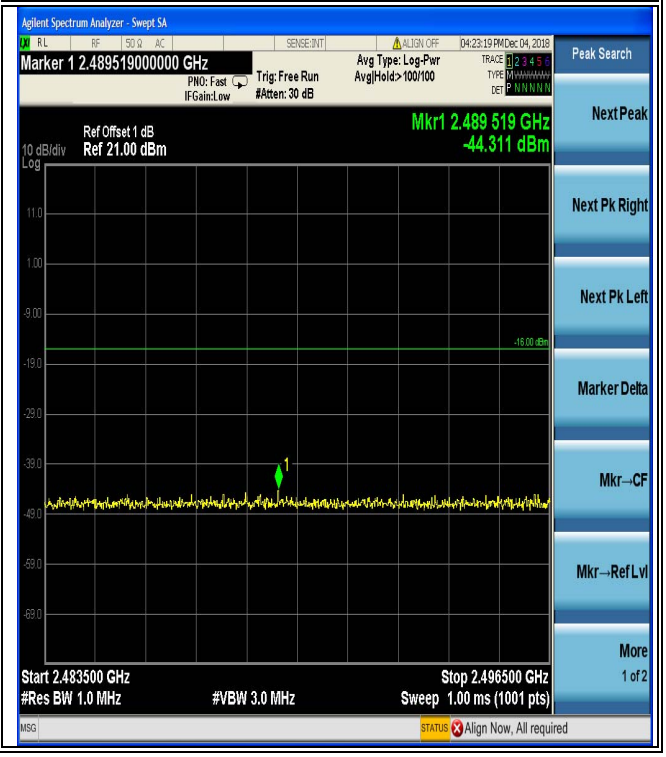
1000MHz – 2387MHz



2387MHz – 2400MHz



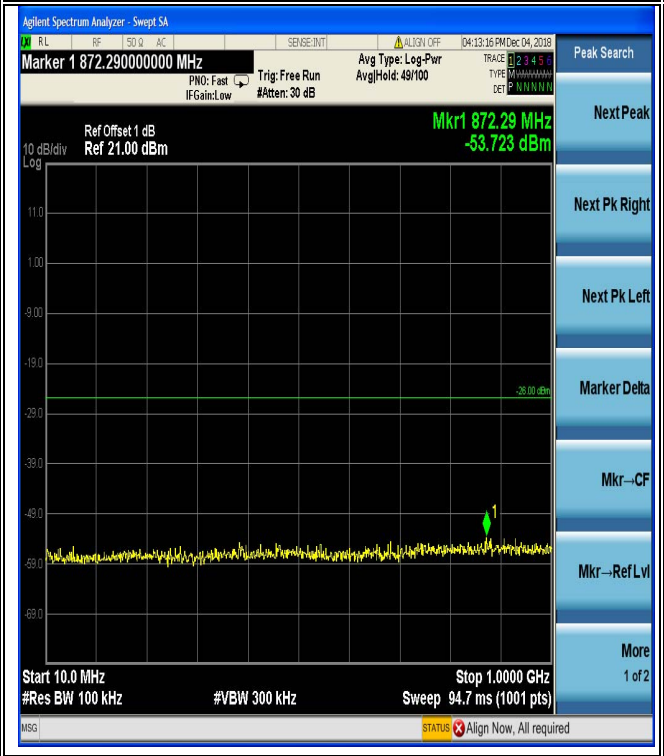
2483.5MHz – 2496.5MHz



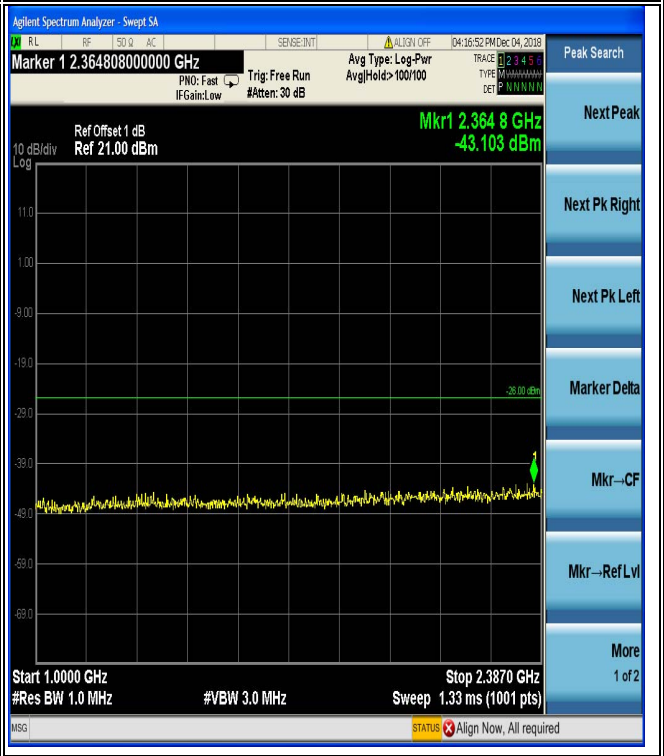
2496.5MHz –26GHz	
	

Normal Voltage: Channel High

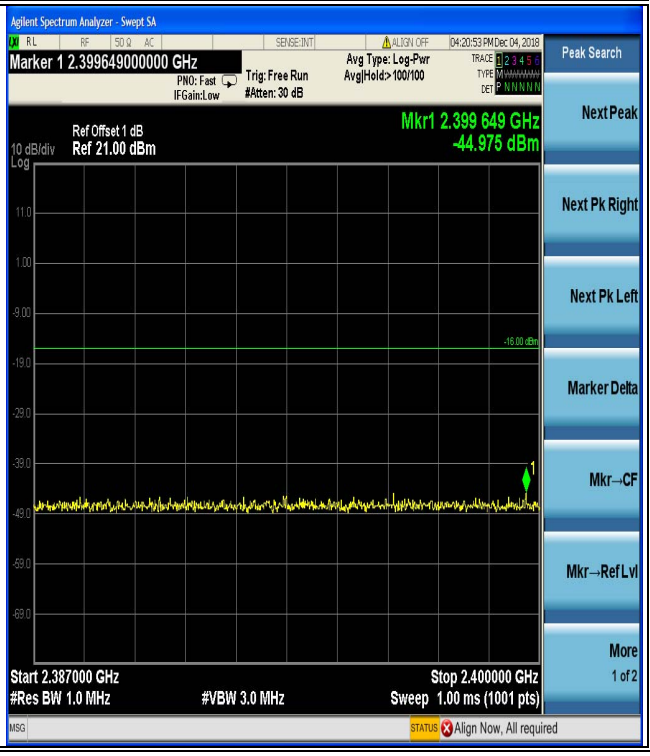
10MHz – 1000MHz



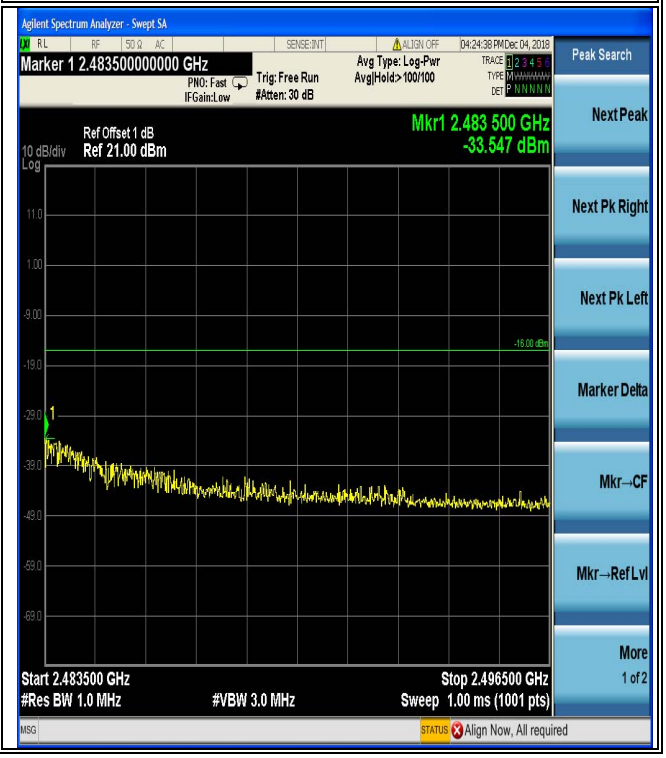
1000MHz – 2387MHz



2387MHz – 2400MHz



2483.5MHz – 2496.5MHz



2496.5MHz –26GHz	
	

6.6. Limitation of Collateral Emission of Receiver

6.6.1. Limit:

Frequency below 1GHz : 4nW
Frequency above 1GHz : 20nW

6.6.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.6.3. Test Setup:

Refer to section 6.1.3 for detail.

6.6.4. Test Procedure:

1. Setup the EUT at hopping off and modulation on.
2. Setup the ETU operate at channel low, mid and high and normal voltage.
3. Set the spectrum analyzer Ref level: -10dBm; attenuation=0dB;RBW=100kHz, VBW=100kHz, Sweep = auto, Start=10MHz, Stop=1GHz. Max hold view, mark highest level.
4. Set the spectrum analyzer Ref level: -10dBm, attenuation=0dB;RBW=1MHz, VBW=1MHz, Sweep = auto, Start=1GHz, Stop=13GHz. Max hold view, mark highest level
5. Varied input voltage to + 10% and - 10% normal voltage and repeat procedure 1 to 4 again.
6. The Worst data was report.

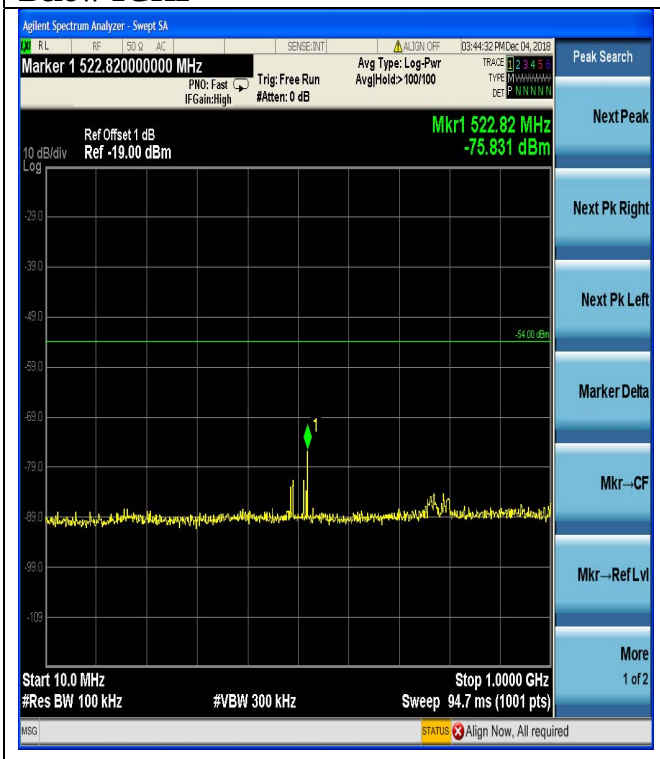
6.6.5. Test Results:

Refer to next page for plots.

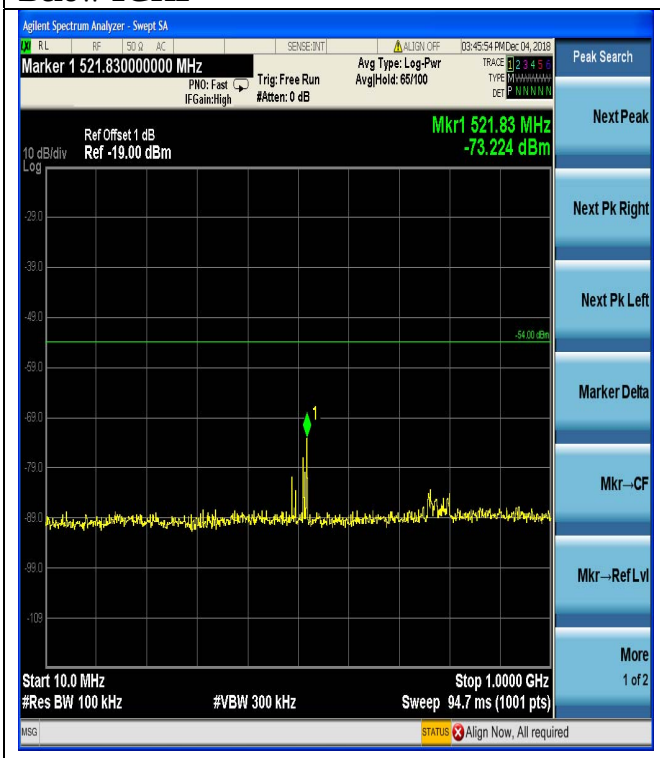
Ambient temperature: 20 ℃ Relative humidity: 65 % Test Date: 2018/12/04

Normal Voltage for BT 4.0 LE mode:

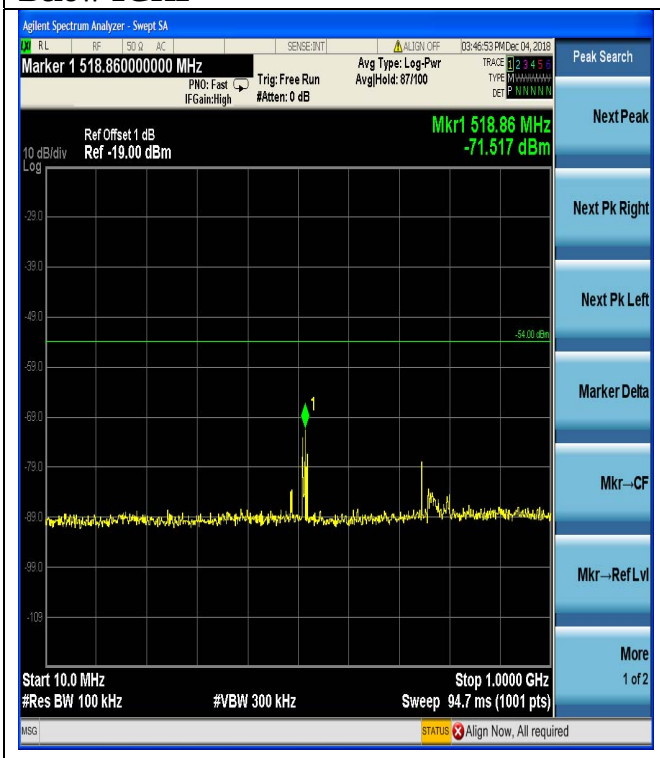
Channel Low

Below 1GHz	Above 1GHz
	

Channel Mid

Below 1GHz	Above 1GHz
	

Channel High

Below 1GHz	Above 1GHz
	

6.7. Hopping Dwell Time

6.7.1. Limit:

≤ 0.4s in one 28.5 sec period

6.7.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.7.3. Test Setup:

Refer to section 6.1.3 for detail.

6.7.4. Test Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0Hz , Adjust Sweep = 30s.
5. Repeat above procedures until all frequency measured were complete.

6.7.5. Test Results:

N/A

6.8. Angular Width of Principal Radiation (AWPR)

The angular width of principal radiation (AWPR), which follows from the antenna pattern specifications, shall satisfy the expression 360/A degree.

To be assessed:
AWPR < 360/A (degree)
A represent the value determined by dividing equivalent isotropic radiated power by the value obtained by applying an antenna power with the mean power of 3 mW to the transmitting antenna with its absolute gain being 2.14 dBi.

BT 4.0 LE mode:
Model: BT832

Antenna gain=	0.282	dBi		
		Channel Low	Channel Mid	Channel High
Normal Voltage 5 V	Conducted power (mW)	2.637	2.698	2.879
	Radiated power (dBm)	7.03	7.13	7.41
	Radiated power (mW)	5.048	5.165	5.512
	Constant A	5.048 /16.4<1	5.165 /16.4<1	5.512 /16.4<1
Upper Voltage 5.5 V	Conducted power (mW)	2.633	2.704	2.883
	Radiated power (dBm)	7.03	7.14	7.42
	Radiated power (mW)	5.041	5.176	5.518
	Constant A	5.041 /16.4<1	5.176 /16.4<1	5.518 /16.4<1
Lower Voltage 4.5 V	Conducted power (mW)	2.633	2.701	2.883
	Radiated power (dBm)	7.02	7.14	7.42
	Radiated power (mW)	5.040	5.171	5.520
	Constant A	5.040 /16.4<1	5.171 /16.4<1	5.520 /16.4<1

In these cases, according to article 49.20 (f)(2) of the Regulations the constant A should be equalized to 1.

As a result AWPR, 360 degrees, which is always satisfied.

BT 4.0 LE mode:

Model: BT832F

Antenna gain=	2.28	dBi		
		Channel Low	Channel Mid	Channel High
Normal Voltage 5 V	Conducted power (mW)	2.637	2.698	2.879
	Radiated power (dBm)	7.03	7.13	7.41
	Radiated power (mW)	5.048	5.165	5.512
	Constant A	5.048 /16.4<1	5.165 /16.4<1	5.512 /16.4<1
Upper Voltage 5.5 V	Conducted power (mW)	2.633	2.704	2.883
	Radiated power (dBm)	7.03	7.14	7.42
	Radiated power (mW)	5.041	5.176	5.518
	Constant A	5.041 /16.4<1	5.176 /16.4<1	5.518 /16.4<1
Lower Voltage 4.5 V	Conducted power (mW)	2.633	2.701	2.883
	Radiated power (dBm)	7.02	7.14	7.42
	Radiated power (mW)	5.040	5.171	5.520
	Constant A	5.040 /16.4<1	5.171 /16.4<1	5.520 /16.4<1

In these cases, according to article 49.20 (f)(2) of the Regulations the constant A should be equalized to 1.

As a result AWPR, 360 degrees, which is always satisfied.

6.9. Carrier Sense Capability

6.9.1. Limit:

Shall not transmit when received signal level is above 100 mV

Automatic cessation of transmitting is required when the electric field strength is exceeding E (mV/m):
Antenna Voltage (in dBm) = 22.79 + max. antenna Gain - 20 x Log f (f in MHz)
This voltage will be generated in de direction of the max. Gain.

2.4GHz

					Antenna Gain(dBi)				dBm
Channel Low	2402 MHz:	Pcs=	22.79	+	2.82	-	20log(2402)	=	-42.00
Channel Mid	2442 MHz:	Pcs=	22.79	+	2.82	-	20log(2442)	=	-42.14
Channel High	2480 MHz:	Pcs=	22.79	+	2.82	-	20log(2480)	=	-42.28

6.9.2. Measurement Equipment Used:

Refer to section 6.1.2 for detail.

6.9.3. Test Setup:

Refer to section 6.1.3 for detail.

6.9.4. Test Procedure:

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port through splitter to spectrum
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 50MHz , Sweep = Auto.
4. EUT link to device set it in normal mode
5. used spectrum analyzer trigger function and delta mark function

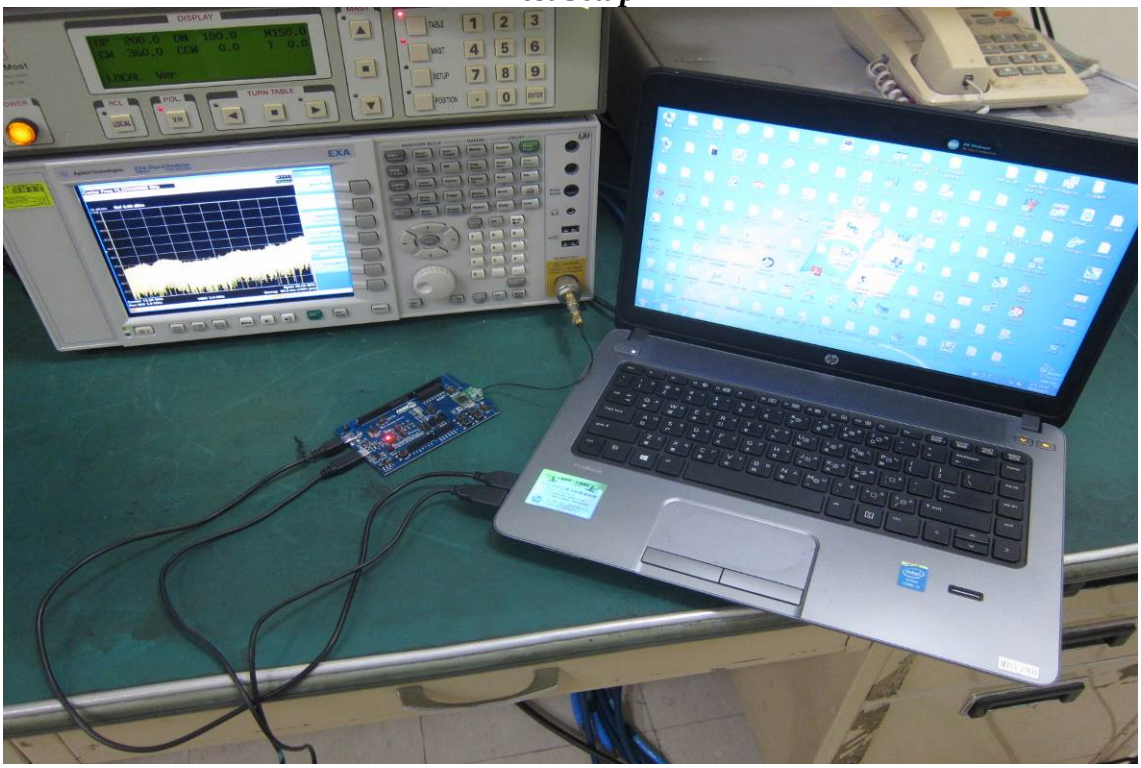
6.9.5. Test Results:

PASS

APPENDIX 1

PHOTOGRAPHS OF SETUP

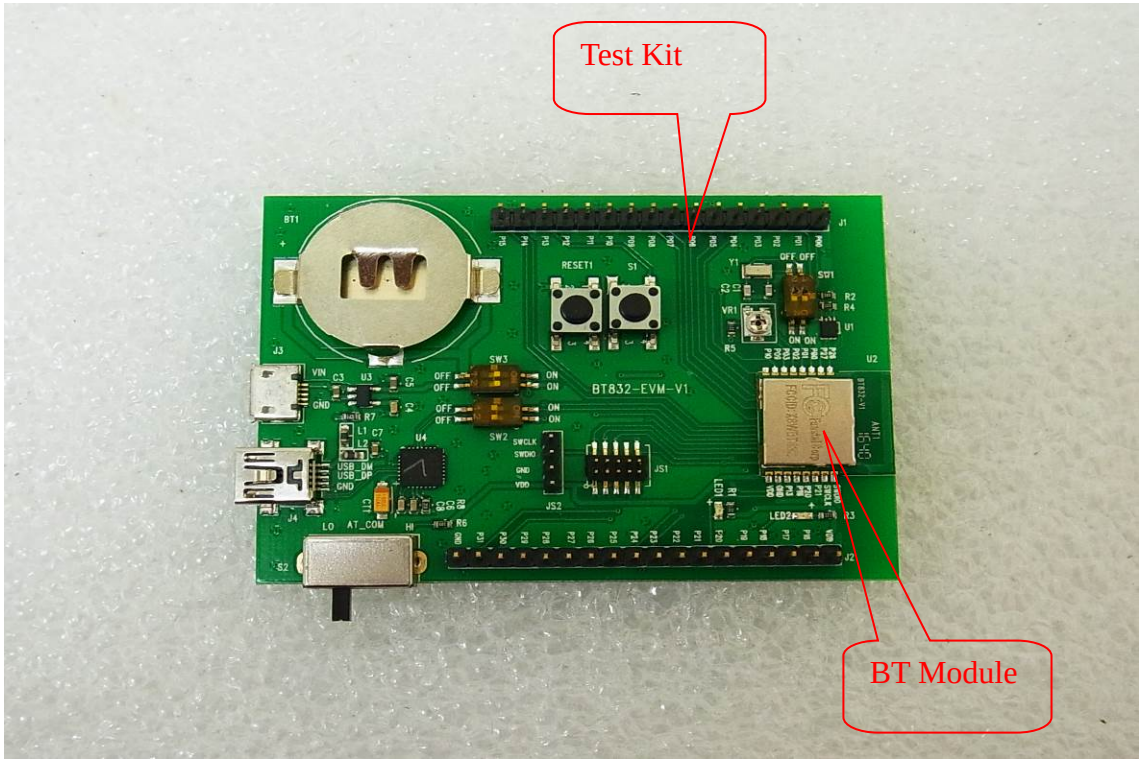
Test Setup



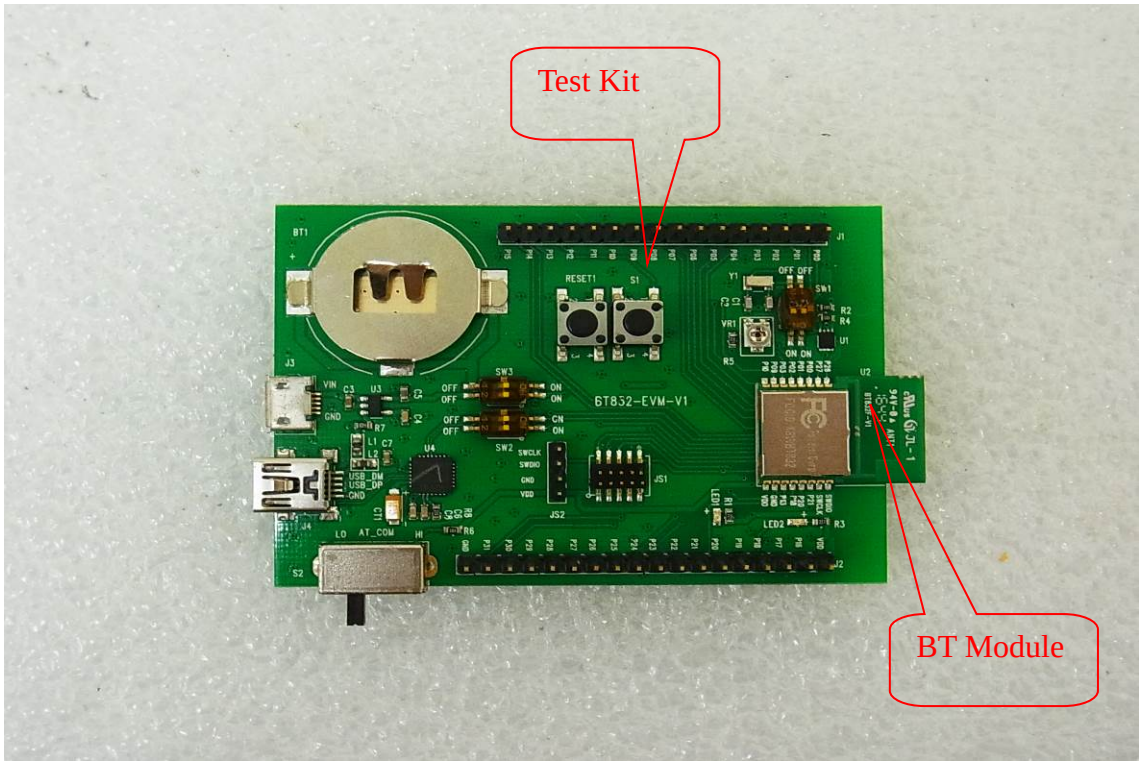
APPENDIX 2

PHOTOGRAPHS OF EUT

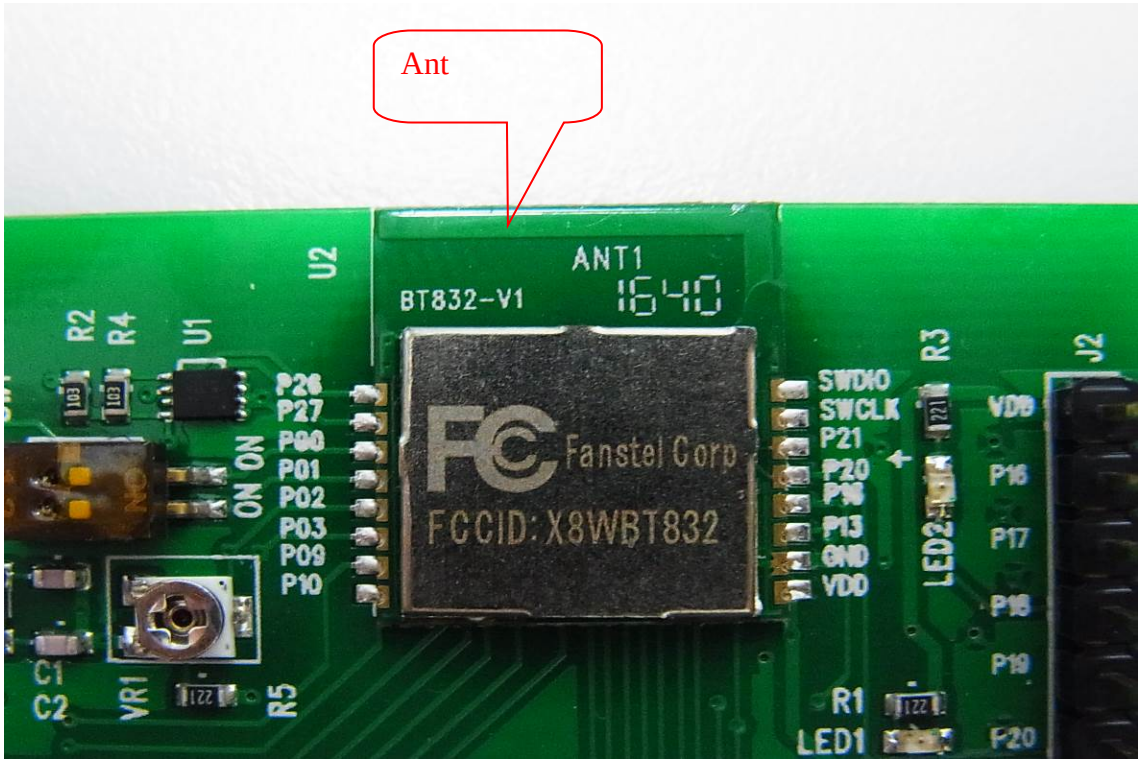
EUT 1 Model: BT832



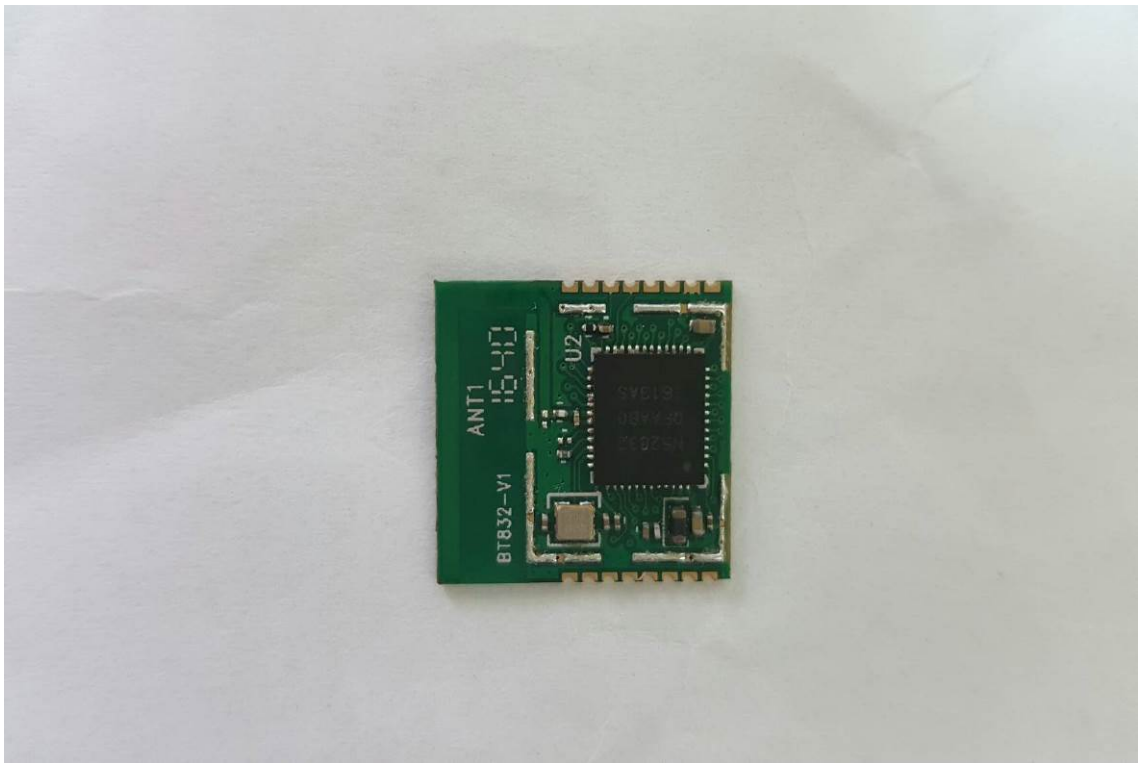
EUT 2 Model: BT832F



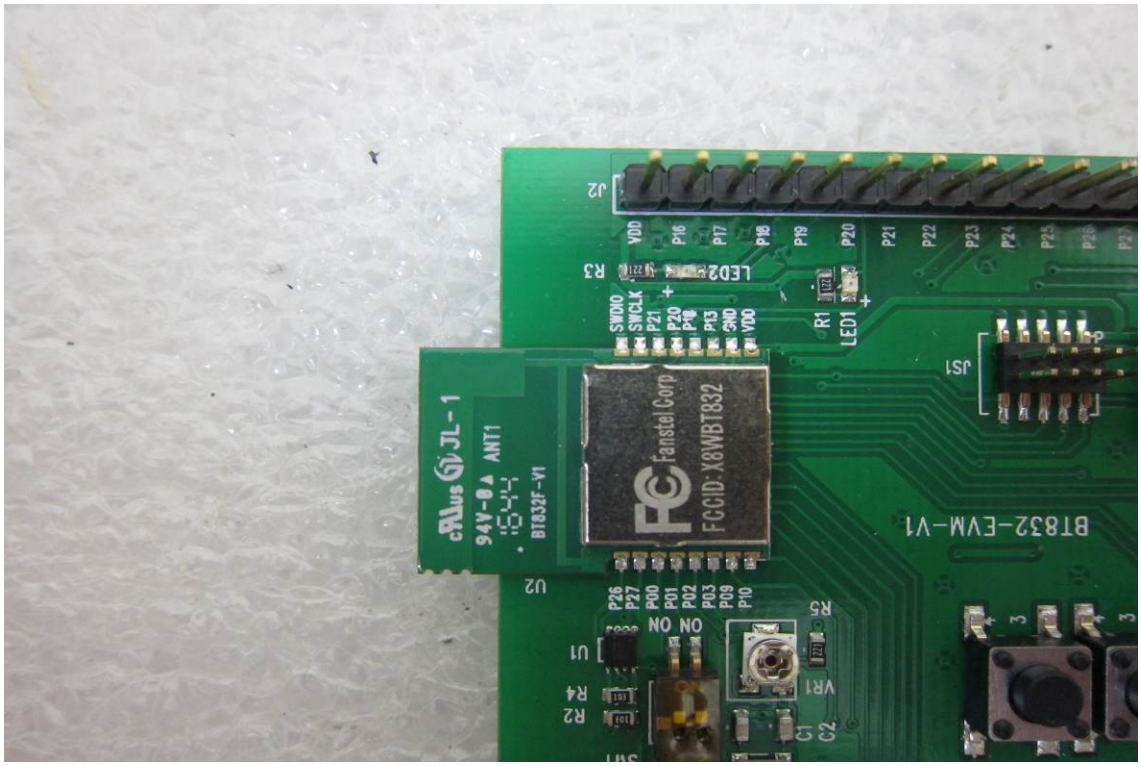
EUT 3 Model: BT832



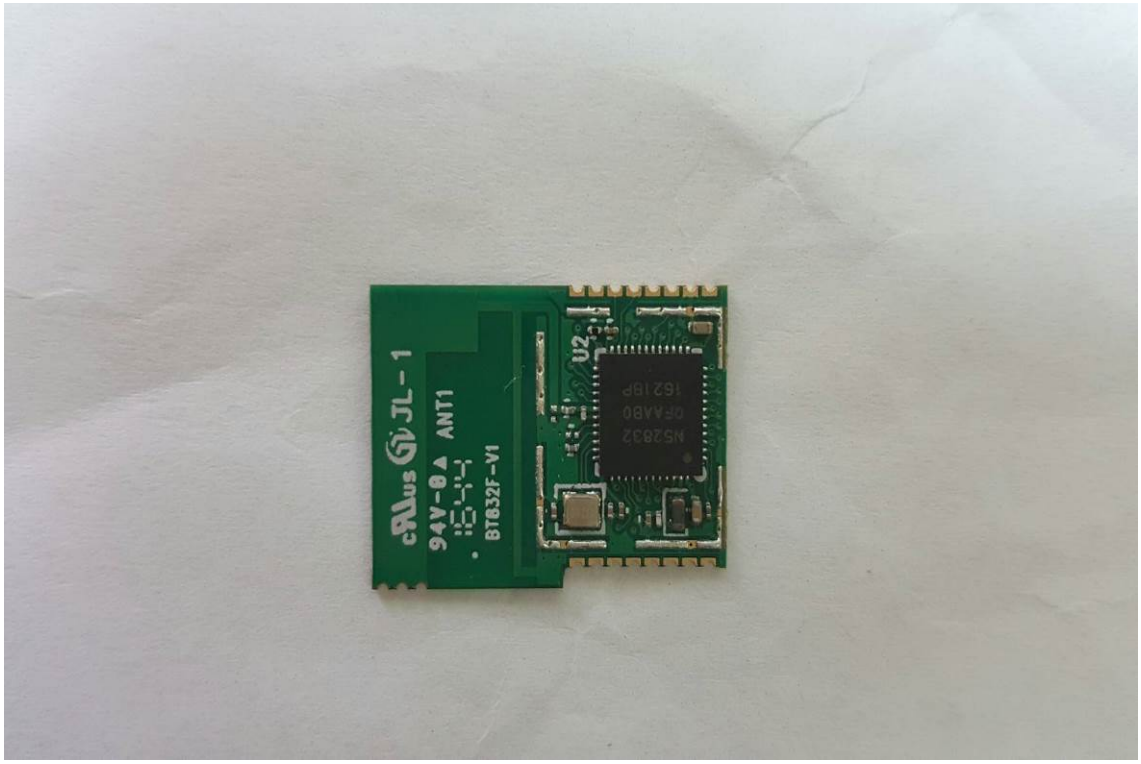
EUT 4 Model: BT832



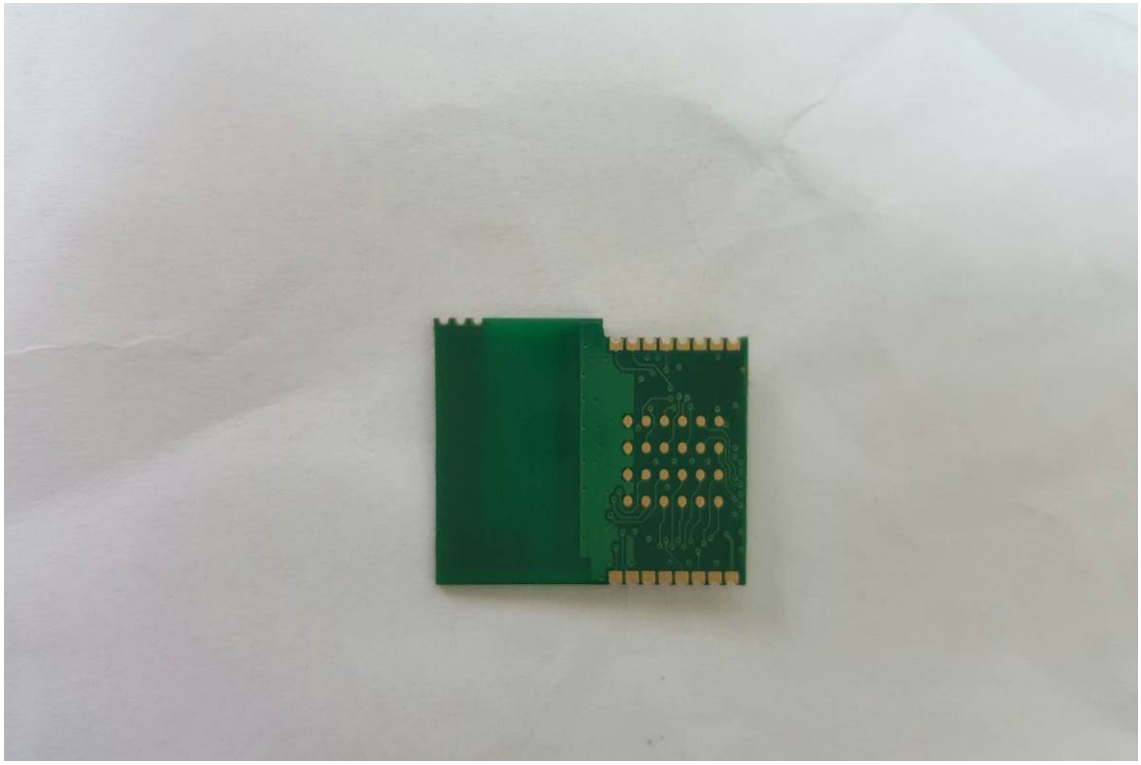
EUT 5 Model: BT832F



EUT 6 Model: BT832F

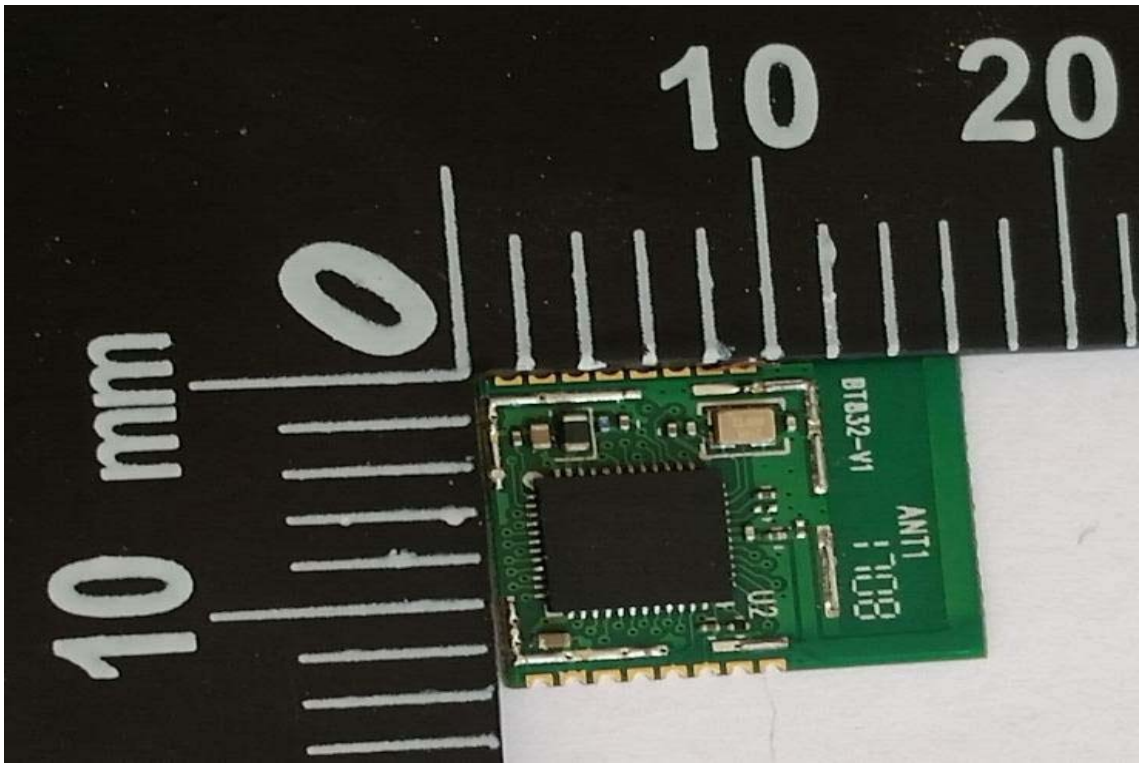


EUT 7 Model: BT832F

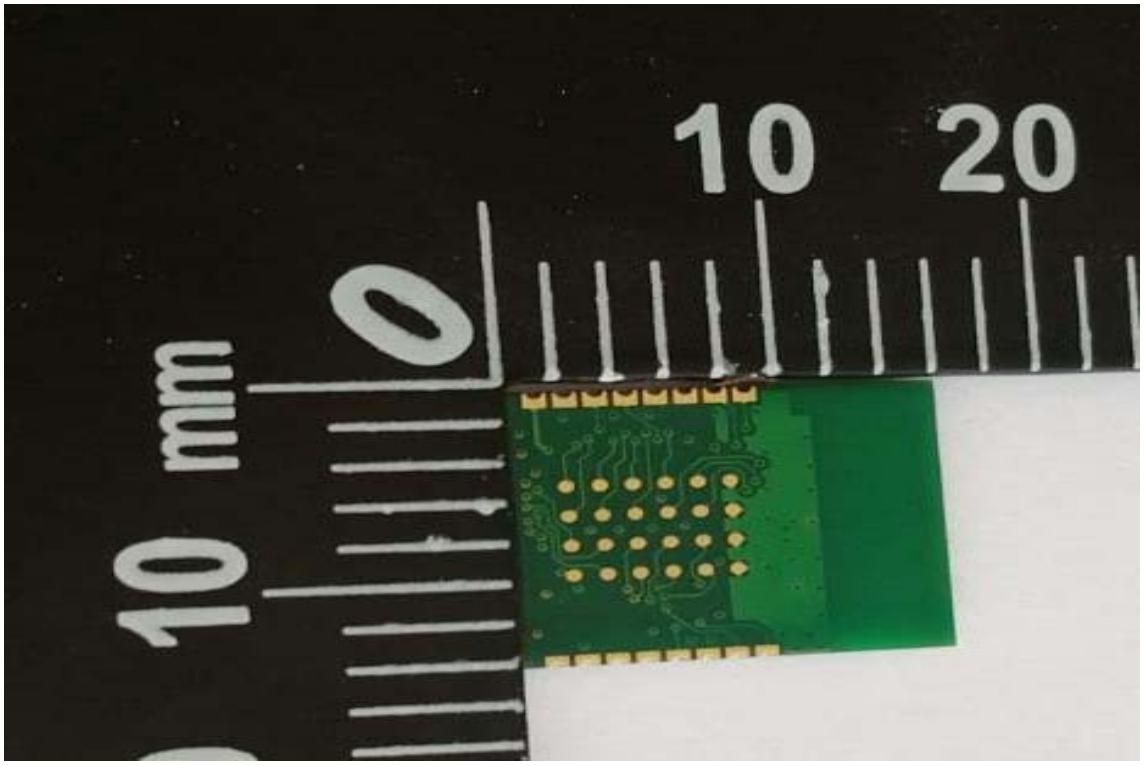


EUT 8 Model: BT832A

EUT 9 Model: BT832A

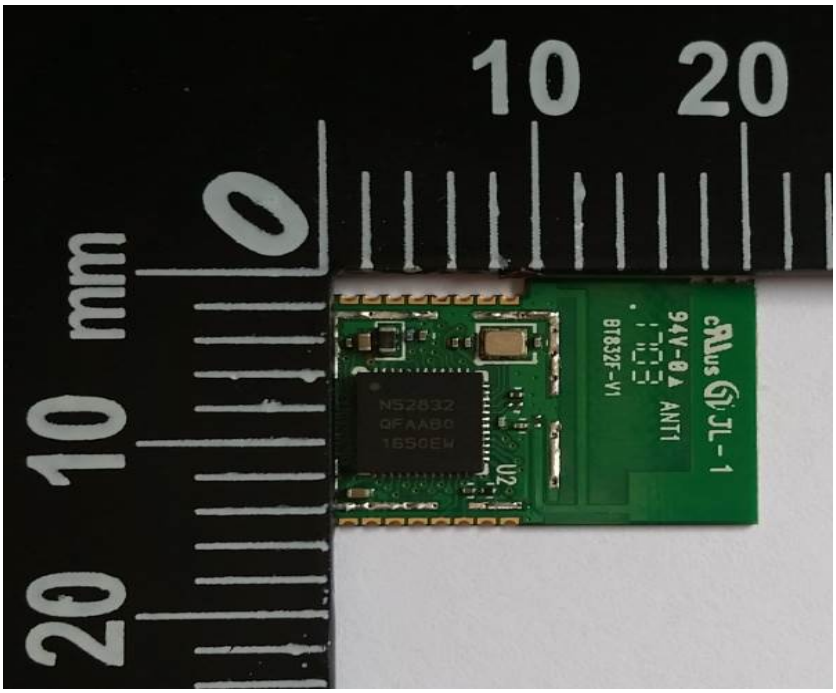


EUT 10 Model: BT832A

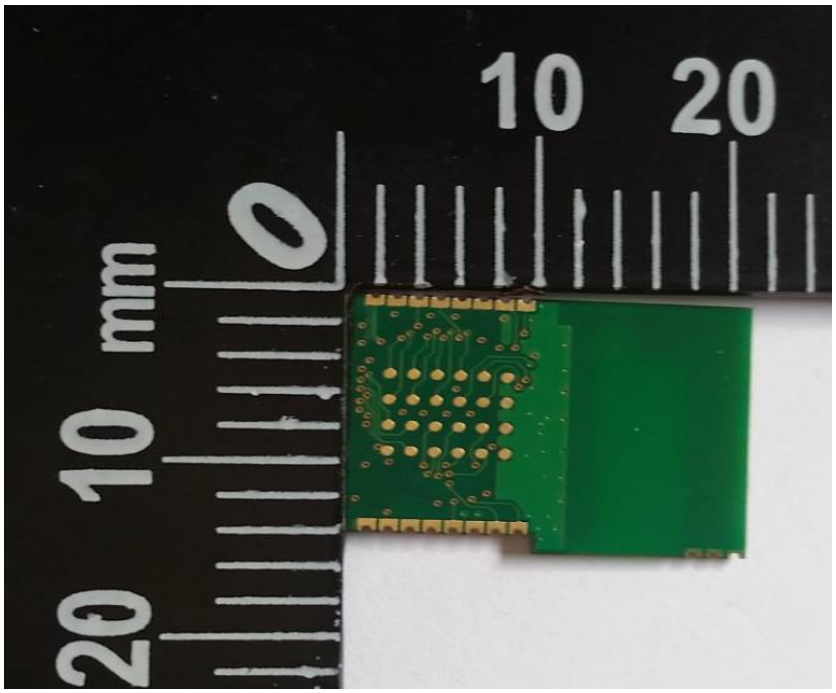


EUT 11 Model: BT832AF

EUT 12 Model: BT832AF



EUT 13 Model: BT832AF



~ End of Report ~