# FCC Test Report

Report No.: AGC00931170503FE03

FCC ID	:	SZQBT244
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Block Party
BRAND NAME	:	TYLT
MODEL NAME	:	BLKPTYGY-T, BLKPTYBK-T, BLKPTYWD-T, BLKPTYWH-T, BLKPTYBL-T
CLIENT	:	Foreign Trade Corporation dba. Technocel
DATE OF ISSUE	:	May 26, 2017
STANDARD(S) TEST PROCEDURE(S)	:	FCC Part 15 Subpart C Section 15.249
<b>REPORT VERSION</b>	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

AGC Strenzberg

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Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 26, 2017	Valid	Original Report

# **Report Revise Record**

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Applicant	Foreign Trade Corporation dba. Technocel		
Address	85 Cochran St. Simi Valley, CA. 93065		
Manufacturer	Dongguan Taide Industrial Co., Ltd		
Address	Taide Technology Park, Phase 2, Jinfenghuang Industrial District, Huangdong Village, Fenggang Town, Dongguan City, China		
Product Designation	Block Party		
Brand Name	TYLT		
Test Model	BLKPTYGY-T		
Series Model	BLKPTYBK-T, BLKPTYWD-T, BLKPTYWH-T, BLKPTYBL-T		
Difference description	All the same except for the appearance color		
Date of test	May 23, 2017 to May 24, 2017		
Deviation	None		
Condition of Test Sample	Normal		
Report Template	AGCRT-US-BR/RF		

# **1. VERIFICATION OF CONFORMITY**

We hereby certify that:

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. The test data, the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.249.

Time throng Tested By Time Huang(Huang Nanhui) May 24, 2017 west in **Reviewed By** Forrest Lei(Lei Yonggang) May 26, 2017 Solya show Approved By Solger Zhang(Zhang Hongyi) May 26, 2017 Authorized Officer

# 2. GENERAL INFORMATION

# 2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

Operation Frequency	2.402 GHz to 2.480GHz			
RF Output Power	-1.82dBm(Max EIRP Power=Max radiation field-95.2)			
Bluetooth Version	V4.2			
Modulation	GFSK, π /4-DQPSK			
Number of channels	79			
Hardware Version	BT244-AC6905-A			
Software Version	BT244_AC6905A_BT_AUX_[DIDI]_HFP_1CH_4KEY_DRC			
Antenna Designation	PCB Antenna			
Antenna Gain	0.3dBi			
Power Supply	DC 3.7V by battery			
Note:				

The USB port only be used for charging and can't be used to transfer data with PC.
The EUT didn't support 8DPSK and BLE.

# **2.2. TABLE OF CARRIER FREQUENCYS**

**BR/EDR** Channel List

Frequency Band	Channel Number	Frequency	
	0	2402MHz	
	1	2403MHz	
	•••	:	
	38	2440 MHz	
2400~2483.5MHz	39	2441 MHz	
	40	2442 MHz	
	•••	:	
	77	2479 MHz	
	78	2480 MHz	

# **3. MEASUREMENT UNCERTAINTY**

The reported uncertainty of measurement y  $\pm$ U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	±3.18dB
2	All emissions, radiated	±3.91dB
3	Temperature	±0.5°C
4	Humidity	±2%

# 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX(GFSK)
2	Middle channel TX (GFSK)
3	High channel TX (GFSK)
4	Low channel TX(π/4-DQPSK)
5	Middle channel TX(π/4-DQPSK)
6	High channel TX (π/4-DQPSK)
7	BT Link with charging
8	BT Link

Note:

1. All the test modes can be supply by battery, only the result of the worst case was recorded in the report, if no other cases.

2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

3. The EUT used fully-charged battery when tested.

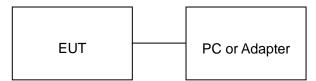
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		Soft	ware Setting				
RC FCCAssist 1.5							×
- Parameter	TX 💌						
Channel Transmit Power	<b>0</b>	Packet type Hopping	2-DH5 💌	Data Types Serial Port	Pn9 COM3	<ul><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li></ul>	
Transmit Power : 10 Send configuration info 2017-05-23_15:15: Channel: 0 Dat Transmit Power : 10 Send configuration info 2017-05-23_15:15:	a Types: Pn9 Packet type: 2 rmation successf 51 a Types: Pn9 Packet type: 2 rmation successf 52 a Types: Pn9 Packet type: 2	-DH5 ully DH5 -DH5	-	78, corresponding range 0-10, 0 is th		)2GHz-2.48	30GHZ

# **5. SYSTEM TEST CONFIGURATION**

#### **5.1. CONFIGURATION OF EUT SYSTEM**

Configure 1: (Normal hopping)



Note: Owing to the EUT has own battery, Testing will be performed while PC or adapter remove.

Configure 2: (Control continuous TX)



#### 5.2. EQUIPMENT USED IN EUT SYSTEM

ITEM	EQUIPMENT	MFR/BRAND	MODEL/TYPE NO.	REMARK
1	Block Party	TYLT	BLKPTYGY-T	EUT
2	Battery	Knap Tech	903036	Accessory
3	PC	Sony	E1412AYCW	A.E
4	PC Adapter	Sony	VGP-AC19V36	A.E
5	Control box	GZUT	N/A	A.E
6	Adapter	IPRO	NTR-S01	A.E
7	USB Cable	N/A	1.0m Unshielded	A.E

#### 5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.249(a) §15.209	Radiated Emission	Compliant
§15.249(d)	Band Edges	Compliant
§15.207	Conduction Emission	Compliant
§15.215	Bandwidth	Compliant

#### 6. TEST FACILITY

Site	Dongguan Precise Testing Service Co., Ltd.			
Location	Building D,Baoding Technology Park,Guangming Road2,Dongcheng District, Dongguan, Guangdong, China,			
FCC Registration No.	371540			
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2014.			

# 7. TEST METHOD

All measurements contained in this report were conducted with ANSI C63.10-2013

# 8. ALL TEST EQUIPMENT LIST

FOR RADIATED EMISSION TEST (BELOW 1GHz)

	Radiat	ed Emission Tes	t Site		
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	ROHDE & SCHWARZBECK	ESCI	101417	July 4, 2016	July 3, 2017
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 4, 2016	July 3, 2017
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 4, 2016	July 3, 2017
RF Cable	SCHWARZBECK	AK9515E	96221	July 4, 2016	July 3, 2017
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2016	June 5, 2017
MULTI-DEVICE Positioning Controller	MAX-FULL	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	SCHWARZBECK	FMZB1519	1519-038	June 6, 2016	June 5, 2017
Spectrum analyzer	AGILENT	E4407B	MY46185649	June 6, 2016	June 5, 2017
Radiation Cable 1	MXT	RS1	R005	June 6, 2016	June 5, 2017
Radiation Cable 2	MXT	RS1	R006	June 6, 2016	June 5, 2017
temporary antenna connector	N/A	S100		July 4, 2016	July 3, 2017

	Radiated Emission Test Site											
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration							
EMI Test Receiver	ROHDE & SCHWARZBECK	ESCI	101417	July 4, 2016	July 3, 2017							
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	July 11, 2016	July 10, 2017							
Spectrum Analyzer	AGILENT	E4411B	MY4511453	July 4, 2016	July 3, 2017							
Signal Amplifier	SCHWARZBECK	BBV 9718	9718-269	July 7, 2016	July 6, 2017							
RF Cable	SCHWARZBECK	AK9515H	96220	July 8, 2016	July 7, 2017							
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2016	June 5, 2017							
MULTI-DEVICE Positioning Controller	MAX-FULL	MF-7802	MF780208339	N/A	N/A							
Horn Ant (18G-40GHz)	SCHWARZBECK	BBHA 9170	9170-181	June 6, 2016	June 5, 2017							
Radiation Cable 1	MXT	RS1	R005	June 6, 2016	June 5, 2017							
Radiation Cable 2	МХТ	RS1	R006	June 6, 2016	June 5, 2017							

# FOR RADIATED EMISSION TEST (1GHz ABOVE)

Conducted Emission Test Site											
Name of Equipment     Manufacturer     Model Number     Serial Number     Last     Du       Calibration     Calibrati											
EMI Test Receiver	ROHDE & SCHWARZBECK	ESCI	101417	July 4, 2016	July 3, 2017						
Artificial Mains Network	NARDA	L2-16B	000WX31025	July 8, 2016	July 7, 2017						
Artificial Mains Network (AUX)	NARDA	L2-16B	000WX31026	July 8, 2016	July 7, 2017						
RF Cable	SCHWARZBECK	AK9515E	96222	July 4, 2016	July 3, 2017						
Shielded Room	CHENGYU	843	PTS-002	June 6, 2016	June 5, 2017						
Conduction Cable	MXT	SE1	S003	June 6, 2016	June 5, 2017						

# 9. RADIATED EMISSION

# 9.1TEST LIMIT

#### Standard FCC15.249

Fundamental Frequency	Field Strength of Fundamental	Field Strength of Harmonics			
	(millivolts/meter)	(microvolts/meter)			
900-928MHz	50	500			
2400-2483.5MHz	50	500			
5725-5875MHz	50	500			
24.0-24.25GHz	250	2500			

#### Standard FCC 15.209

Frequency	Distance	Field	I Strengths Limit						
(MHz)	Meters	μ V/m	dB(µV)/m						
0.009 ~ 0.490	300	2400/F(kHz)							
0.490 ~ 1.705	30	24000/F(kHz)							
1.705 ~ 30	30	30							
30 ~ 88	3	100	40.0						
88 ~ 216	3	150	43.5						
216 ~ 960	3	200	46.0						
960 ~ 1000	3	500	54.0						
Above 1000	3	Other:74.0 dB(µV)/m	ı (Peak)						
		54.0 dB(µV)/m (Average)							
Remark: (1) Emis	sion level dBµ V = 20 log	Emission level µ V/m							
(2) The smaller limit shall apply at the cross point between two frequency bands.									

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

#### 9.2. MEASUREMENT PROCEDURE

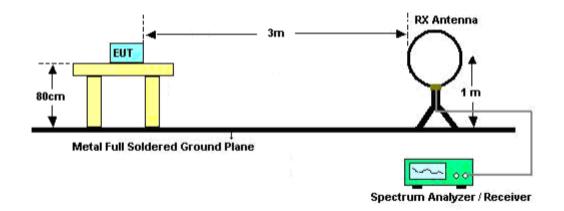
- 1. The measuring distance of 3m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(Below 1GHz)
- 2. The measuring distance of 3m shall used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(Above 1GHz)
- 3. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization Of the antenna are set to make the measurement.
- 4. The initial step in collecting radiated emission data is a receive peak detector mode. Pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 5. All readings are peak unless otherwise stated QP in column of Note. Peak denoted that the Peak reading compliance with the QP limits and then QP Mode measurement didn't perform(Below 1GHz)
- 6. All readings are Peak mode value unless otherwise stated AVG in column of Note. If the Peak mode measured value compliance with the Peak limits and lower than AVG Limits, the EUT shall be deemed to meet Peak & AVG limits and then only Peak mode was measured, but AVG mode didn't perform.(Above 1GHz)

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz RBW 2MHz/VBW 6MHz for Peak, RBW 1.5MHz/10Hz for Average
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

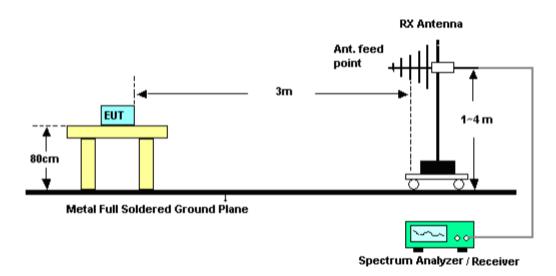
The following table is the setting of spectrum analyzer and receiver.

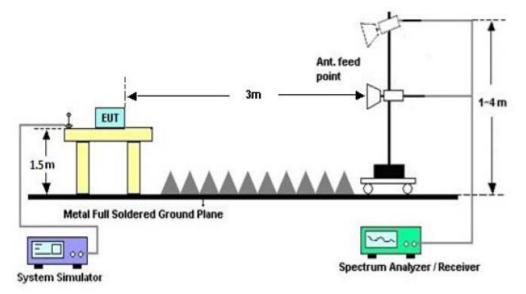
#### 9.3. TEST SETUP

#### RADIATED EMISSION TEST SETUP BELOW 30MHz



#### RADIATED EMISSION TEST SETUP 30MHz-1000MHz



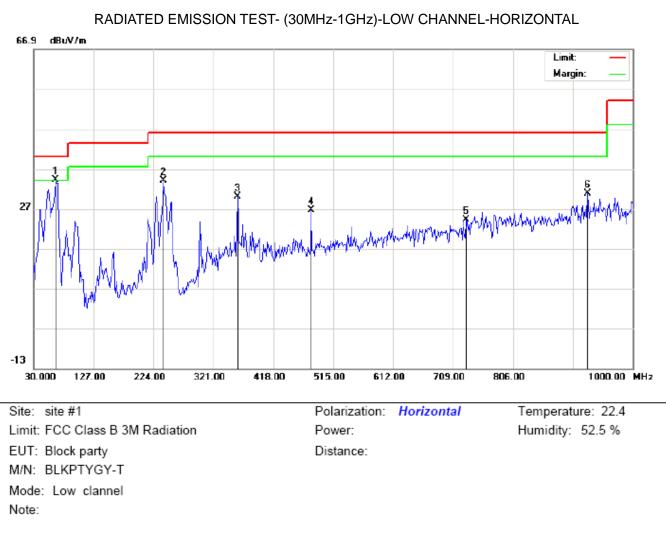


RADIATED EMISSION TEST SETUP ABOVE 1000MHz

# 9.4. TEST RESULT (Worst modulation:GFSK) FOR BR/EDR

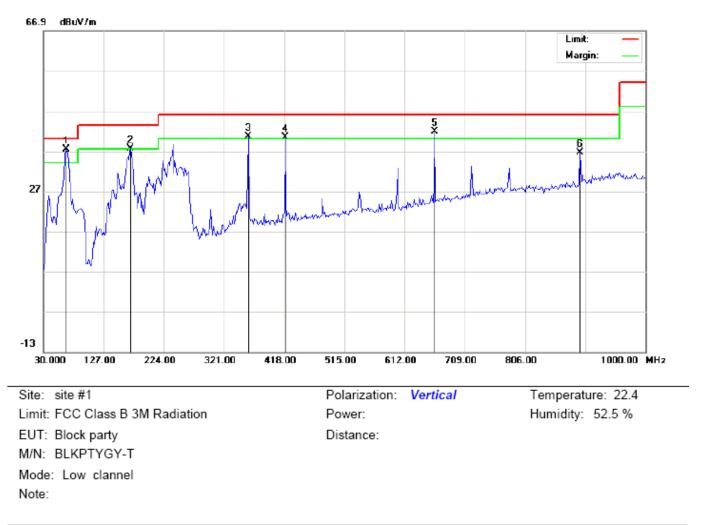
#### **RADIATED EMISSION BELOW 30MHz**

No emission found between lowest internal used/generated frequencies to 30MHz.



#### **RADIATED EMISSION BELOW 1GHz**

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	65.5667	28.31	5.93	34.24	40.00	-5.76	peak			
2		240.1667	26.11	7.90	34.01	46.00	-11.99	peak			
3		359.8000	11.16	18.80	29.96	46.00	-16.04	peak			
4		479.4333	5.68	20.91	26.59	46.00	-19.41	peak			
5		730.0167	-1.89	26.05	24.16	46.00	-21.84	peak			
6		927.2500	1.48	29.37	30.85	46.00	-15.15	peak			



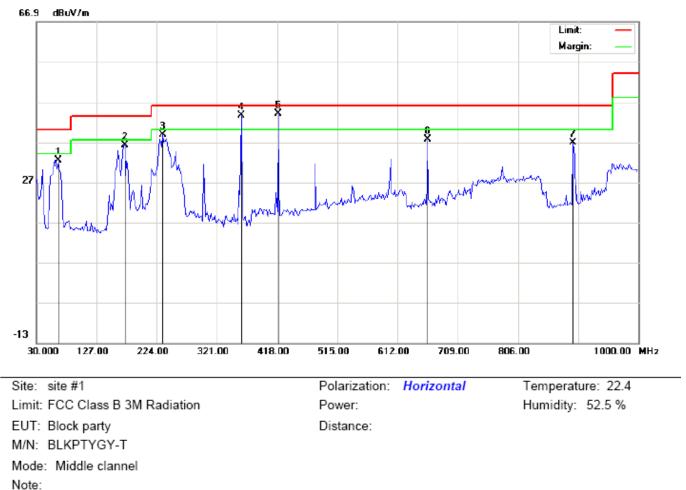
#### RADIATED EMISSION TEST- (30MHz-1GHz)-LOW CHANNEL -VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1	*	67.1833	32.11	5.36	37.47	40.00	-2.53	peak			
2	İ	170.6500	23.03	14.66	37.69	43.50	-5.81	peak			
3	İ	359.8000	21.85	18.80	40.65	46.00	-5.35	peak			
4	İ	419.6167	20.74	19.67	40.41	46.00	-5.59	peak			
5	İ	660.5000	17.68	24.13	41.81	46.00	-4.19	peak			
6		894.9167	8.07	28.48	36.55	46.00	-9.45	peak			

#### **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

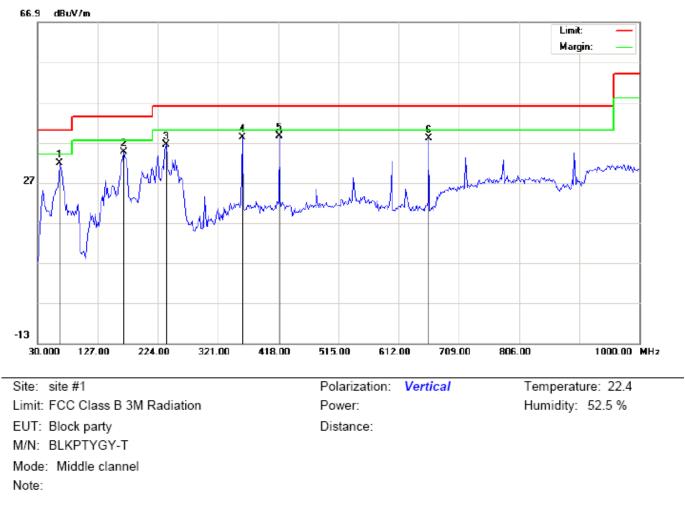
2. The "Factor" value can be calculated automatically by software of measurement system.



RADIATED EMISSION TEST- (30MHz-1GHz)-MIDDLE CHANNEL-HORIZONTAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		65.5667	21.40	11.10	32.50	40.00	-7.50	peak			
2		172.2667	21.69	14.56	36.25	43.50	-7.25	peak			
3		233.7000	25.46	13.28	38.74	46.00	-7.26	peak			
4	İ	359.8000	24.74	18.80	43.54	46.00	-2.46	peak			
5	*	419.6167	24.27	19.67	43.94	46.00	-2.06	peak			
6		660.5000	13.41	24.13	37.54	46.00	-8.46	peak			
7		894.9167	8.28	28.48	36.76	46.00	-9.24	peak			

**RESULT: PASS** 



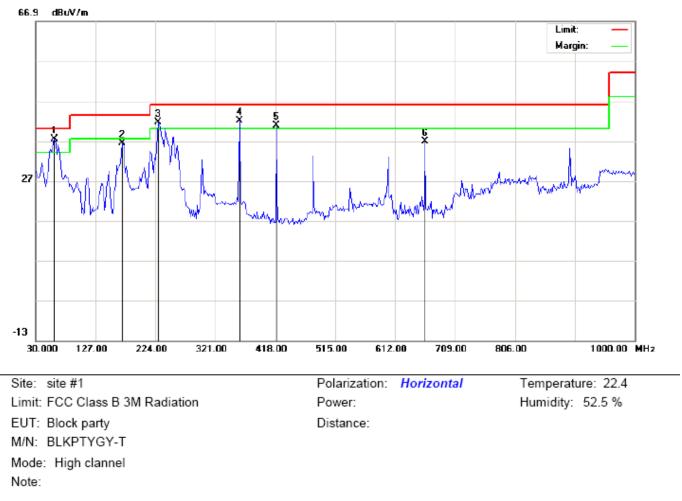
### RADIATED EMISSION TEST- (30MHz-1GHz)- MIDDLE CHANNEL -VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1		65.5667	25.91	5.98	31.89	40.00	-8.11	peak			
2		169.0333	19.84	14.76	34.60	43.50	-8.90	peak			
3		236.9333	23.86	12.62	36.48	46.00	-9.52	peak			
4		359.8000	19.35	18.80	38.15	46.00	-7.85	peak			
5	*	419.6167	18.86	19.67	38.53	46.00	-7.47	peak			
6		660.5000	13.78	24.13	37.91	46.00	-8.09	peak			

#### **RESULT: PASS**

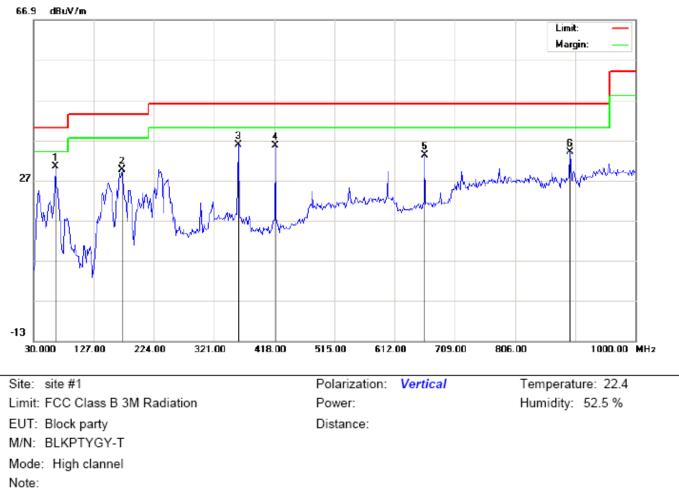
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.



RADIATED EMISSION TEST- (30MHz-1GHz)-HIGH CHANNEL-HORIZONTAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∨/m	dB		cm	degree	
1	*	60.7167	25.41	12.01	37.42	40.00	-2.58	peak			
2		170.6500	21.83	14.66	36.49	43.50	-7.01	peak			
3	İ	228.8500	28.45	13.10	41.55	46.00	-4.45	peak			
4	İ	359.8000	23.24	18.80	42.04	46.00	-3.96	peak			
5	İ	419.6167	21.17	19.67	40.84	46.00	-5.16	peak			
6		660.5000	12.61	24.13	36.74	46.00	-9.26	peak			



RADIATED EMISSION TEST- (30MHz-1GHz)-HIGH CHANNEL -VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1	*	65.5667	24.41	5.98	30.39	40.00	-9.61	peak			
2		172.2667	15.12	14.56	29.68	43.50	-13.82	peak			
3		359.8000	17.04	18.80	35.84	46.00	-10.16	peak			
4		419.6167	15.85	19.67	35.52	46.00	-10.48	peak			
5		660.5000	9.08	24.13	33.21	46.00	-12.79	peak			
6		894.9167	5.56	28.48	34.04	46.00	-11.96	peak			

# **RESULT: PASS**

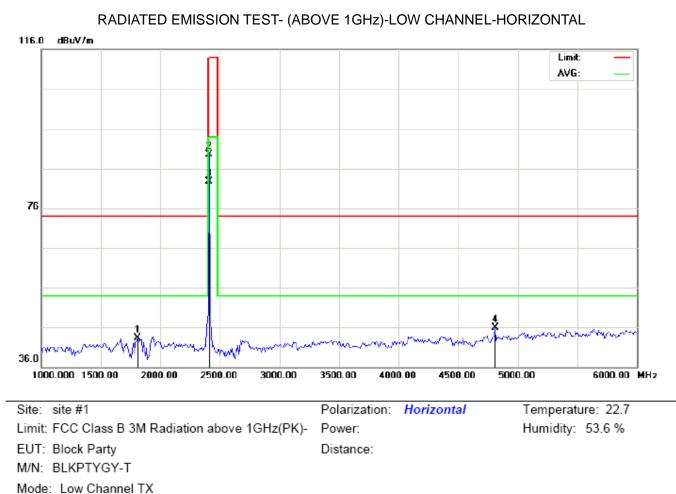
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

#### **RADIATED EMISSION ABOVE 1GHz**

#### (Worst modulation: GFSK)

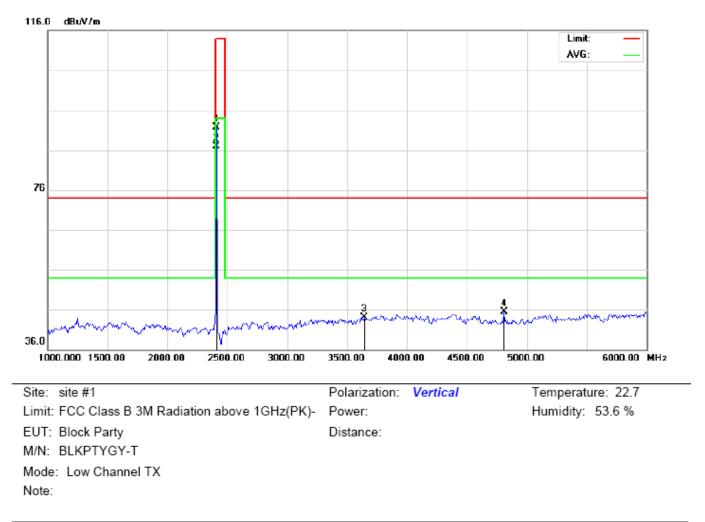
#### FOR BR/EDR



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∨	dB/m	dBu\//m	dBuV/m	dB		cm	degree	
1		1808.333	35.40	7.86	43.26	74.00	-30.74	peak			
2		2402.000	79.20	10.33	89.53	114.00	-24.47	peak			
3	*	2402.000	72.44	10.33	82.77	94.00	-11.23	AVG	100	73	
4		4808.333	38.23	7.70	45.93	74.00	-28.07	peak			

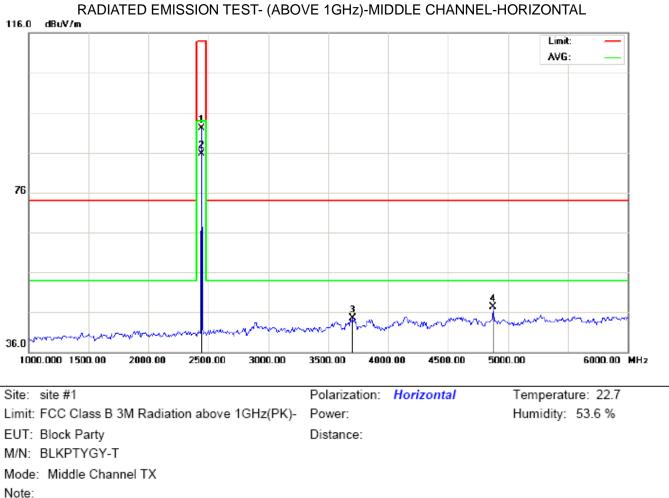
**RESULT: PASS** 

Note:



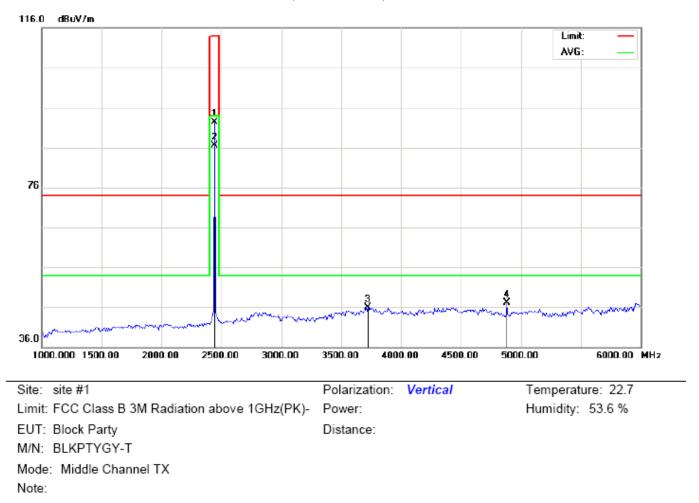
#### RADIATED EMISSION TEST- (ABOVE 1GHz)-LOW CHANNEL- VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2402.000	81.31	10.33	91.64	114.00	-22.36	peak			
2	*	2402.000	76.54	10.33	86.87	94.00	-7.13	AVG	100		
3		3641.667	31.15	12.98	44.13	74.00	-29.87	peak			
4		4808.333	37.87	7.70	45.57	74.00	-28.43	peak			



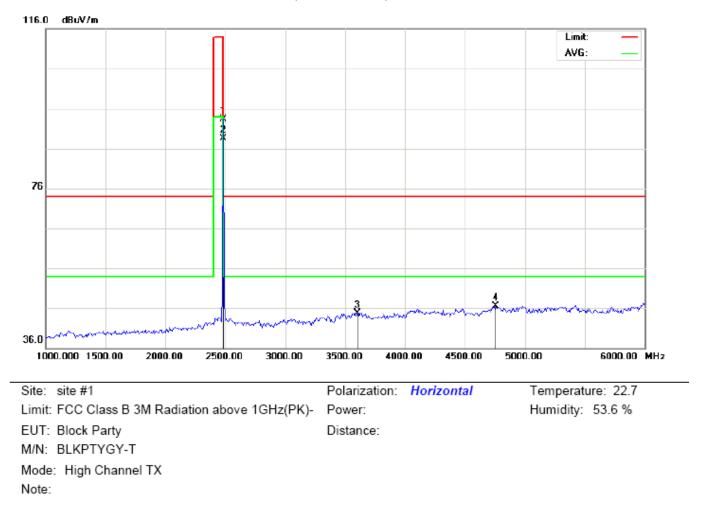
RADIATED EMISSION TEST- (ABOVE 1GHz)-MIDDLE CHANNEL-HOR	
---------------------------------------------------------	--

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	•	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2441.000	81.73	10.37	92.10	114.00	-21.90	peak			
2	*	2441.000	75.38	10.37	85.75	94.00	-8.25	AVG	100	83	
3		3700.000	31.21	13.34	44.55	74.00	-29.45	peak			
4		4875.000	39.35	7.87	47.22	74.00	-26.78	peak			

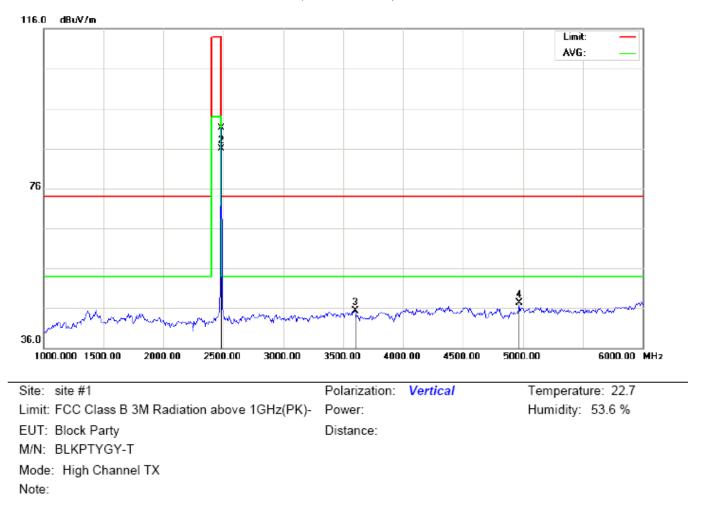


#### RADIATED EMISSION TEST- (ABOVE 1GHz)-MIDDLE CHANNEL- VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∀	dB/m	dBuV/m	dBu∨/m	dB		cm	degree	
1		2441.000	81.98	10.37	92.35	114.00	-21.65	peak			
2	*	2441.000	76.15	10.37	86.52	94.00	-7.48	AVG	100	76	
3		3725.000	32.46	13.50	45.96	74.00	-28.04	peak			
4		4883.333	39.31	7.89	47.20	74.00	-26.80	peak			



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2480.000	82.97	10.41	93.38	114.00	-20.62	peak			
2	*	2480.000	78.16	10.41	88.57	94.00	-5.43	AVG	100	53	
3		3600.000	32.07	12.73	44.80	74.00	-29.20	peak			
4		4758.333	39.01	7.57	46.58	74.00	-27.42	peak			



#### RADIATED EMISSION TEST- (ABOVE 1GHz)-HIGH CHANNEL- VERTICAL

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1		2480.000	80.69	10.41	91.10	114.00	-22.90	peak			
2	*	2480.000	75.42	10.41	85.83	94.00	-8.17	AVG	100	114	
3		3600.000	32.65	12.73	45.38	74.00	-28.62	peak			
4		4966.667	39.14	8.11	47.25	74.00	-26.75	peak			

#### **RESULT: PASS**

Note: 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

# Field strength of the fundamental signal

# 1Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	79.20	10.32	89.53	114	-24.47	Horizontal
2402	81.31	10.32	91.64	114	-22.36	Vertical
2441	81.73	10.36	92.10	114	-21.90	Horizontal
2441	81.98	10.36	92.35	114	-21.65	Vertical
2480	82.97	10.41	93.38	114	-20.62	Horizontal
2480	80.69	10.41	91.10	114	-22.90	Vertical

# Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	72.44	10.32	82.77	94	-11.23	Horizontal
2402	76.54	10.32	86.87	94	-7.13	Vertical
2441	75.38	10.36	85.75	94	-8.25	Horizontal
2441	76.15	10.36	86.52	94	-7.48	Vertical
2480	78.16	10.41	88.57	94	-5.43	Horizontal
2480	75.42	10.41	85.83	94	-8.17	Vertical

# 2Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	80.95	10.32	91.27	114	-22.73	Horizontal
2402	80.14	10.32	90.46	114	-23.54	Vertical
2441	81.93	10.36	92.29	114	-21.71	Horizontal
2441	80.97	10.36	91.33	114	-22.67	Vertical
2480	82.74	10.41	93.15	114	-20.85	Horizontal
2480	82.16	10.41	92.57	114	-21.43	Vertical

# Average value

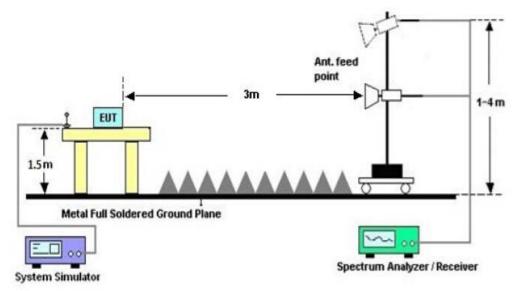
Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	73.96	10.32	84.28	94	-9.72	Horizontal
2402	73.03	10.32	83.35	94	-10.65	Vertical
2441	75.08	10.36	85.44	94	-8.56	Horizontal
2441	73.91	10.36	84.27	94	-9.73	Vertical
2480	77.05	10.41	87.46	94	-6.54	Horizontal
2480	76.03	10.41	86.44	94	-7.56	Vertical

# **10. BAND EDGE EMISSION**

#### **10.1. MEASUREMENT PROCEDURE**

- 1. The EUT operates at hopping-off test mode. The lowest or highest channels are tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
- 2. Max hold the trace of the setup1, and the EUT operates at hopping-on test mode to verify the largest spurious emissions power.
- 3. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission

#### **10.2 TEST SETUP**

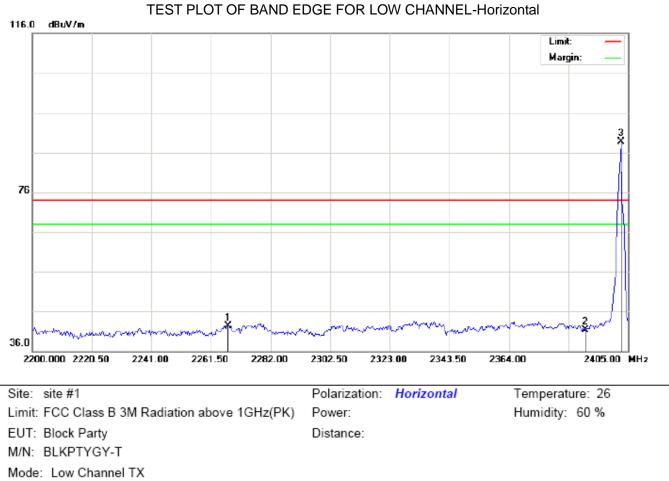


#### RADIATED EMISSION TEST SETUP

#### **10.3 RADIATED TEST RESULT**

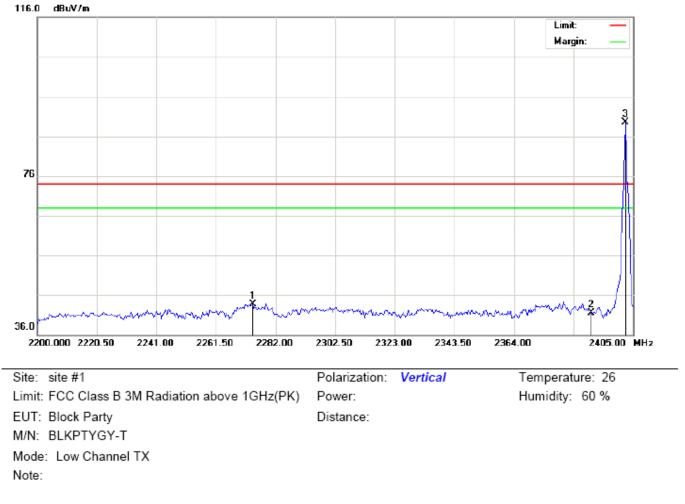
# (Worst modulation: GFSK)

#### FOR BR/EDR



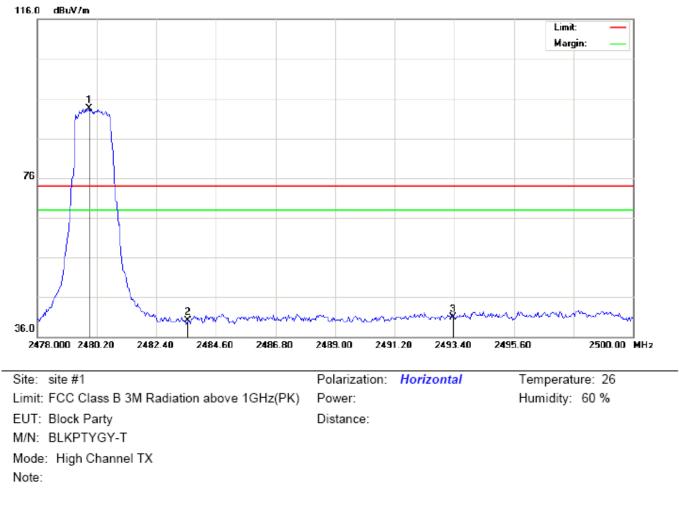
Note:	
11010.	

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∨	dB/m	dBu∀/m	dBu∨/m	dB		cm	degree	
1		2267.308	32.09	10.17	42.26	74.00	-31.74	peak			
2		2390.308	31.00	10.31	41.31	74.00	-32.69	peak			
3	*	2402.000	78.48	10.32	88.80	74.00	14.80	peak			



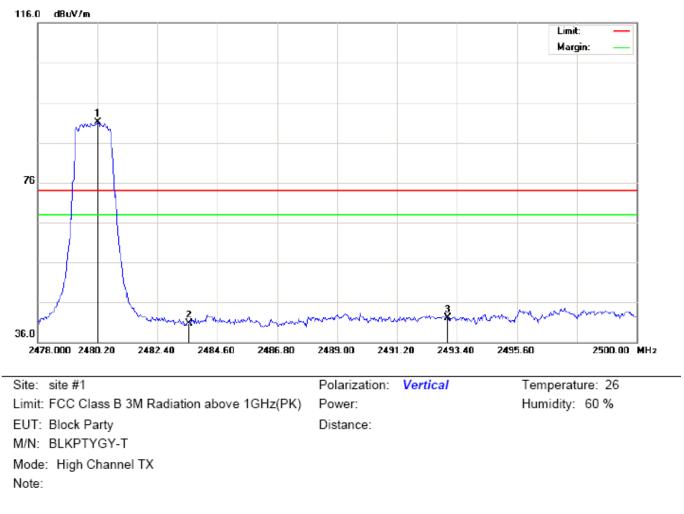
#### TEST PLOT OF BAND EDGE FOR LOW CHANNEL -Vertical

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∨	dB/m	dBu∨/m	dBuV/m	dB		cm	degree	
1		2274.142	33.57	10.18	43.75	74.00	-30.25	peak			
2		2390.650	31.10	10.31	41.41	74.00	-32.59	peak			
3	*	2402.000	79.09	10.32	89.41	74.00	15.41	peak			



#### TEST PLOT OF BAND EDGE FOR HIGH CHANNEL -Horizontal

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2480.000	83.01	10.41	93.42	74.00	19.42	peak			
2		2483.573	29.69	10.41	40.10	74.00	-33.90	peak			
3		2493.363	30.52	10.42	40.94	74.00	-33.06	peak			



#### TEST PLOT OF BAND EDGE FOR HIGH CHANNEL-Vertical

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2480.000	80.65	10.41	91.06	74.00	17.06	peak			
2		2483.573	30.29	10.41	40.70	74.00	-33.30	peak			
3		2493.070	31.62	10.42	42.04	74.00	-31.96	peak			

#### **RESULT: PASS**

**Note**: Factor=Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

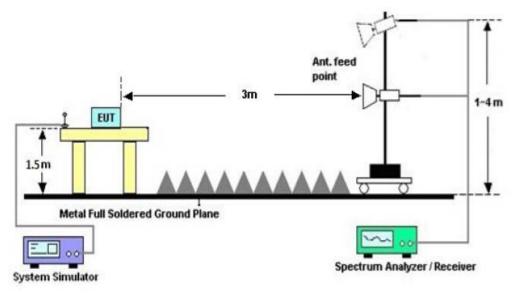
Hopping on mode and Hopping off mode have been tested, but only worst case reported.

# 11. 20DB BANDWIDTH

#### **11.1. MEASUREMENT PROCEDURE**

- 1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 2. Set Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hoping channel
- RBW  $\geq$  1% of the 20 dB bandwidth, VBW  $\geq$  RBW; Sweep = auto; Detector function = peak
- 3. Set SPA Trace 1 Max hold, then View.

#### 11.2. TEST SET-UP



#### **11.3. LIMITS AND MEASUREMENT RESULTS**

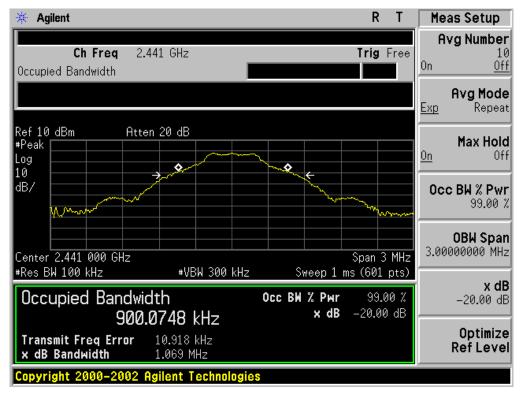
#### FOR BR/EDR

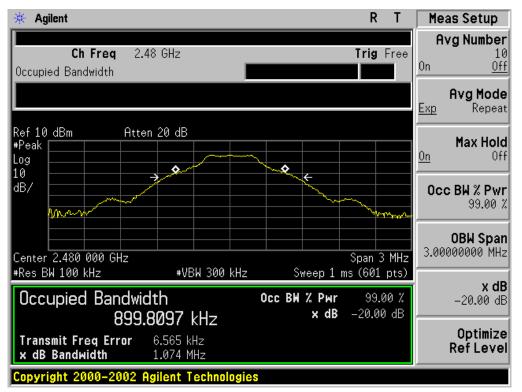
BLUETOOTH 1MBPS LIMITS AND MEASUREMENT RESULT										
	Measurement Result									
Applicable Limits		Deput								
		99%OBW (MHz)	-20dB BW(MHz)	Result						
	Low Channel	0.903	1.064	PASS						
N/A	Middle Channel	0.900	1.069	PASS						
	High Channel	0.900	1.074	PASS						



### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

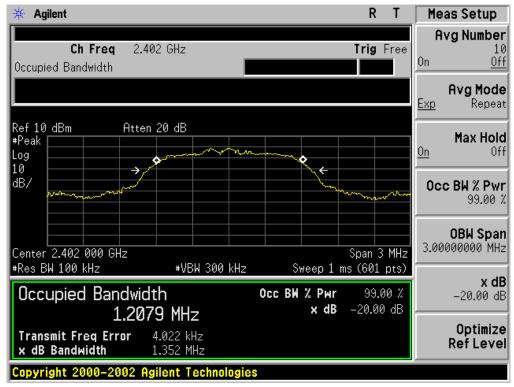




TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

BLUETOOTH 2MBPS LIMITS AND MEASUREMENT RESULT									
	Measurement Result								
Applicable Limits		Decult							
		99%OBW (MHz)	-20dB BW(MHz)	Result					
	Low Channel	1.208	1.352	PASS					
N/A	Middle Channel	1.206	1.372	PASS					
	High Channel	1.199	1.357	PASS					

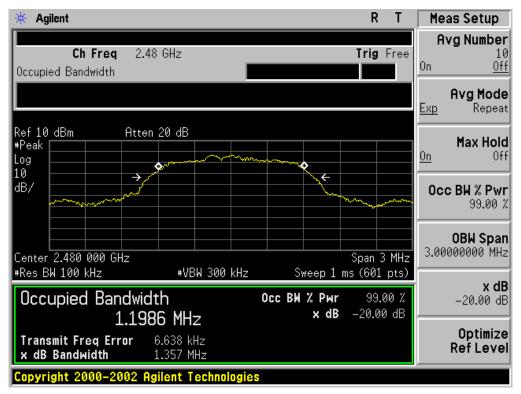
### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL





TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



# **12. FCC LINE CONDUCTED EMISSION TEST**

# 12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

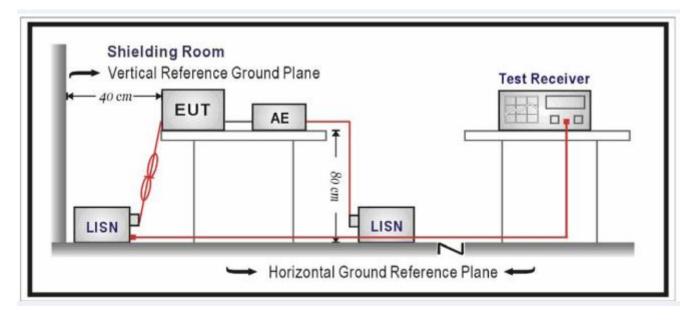
Frequency	Maximum RF Line Voltage							
Frequency	Q.P.( dBuV)	Average( dBuV)						
150kHz~500kHz	66-56	56-46						
500kHz~5MHz	56	46						
5MHz~30MHz	60	50						

Note:

1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



## 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC charging voltage by adapter or PC which received 120V/60Hzpower by a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

### 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

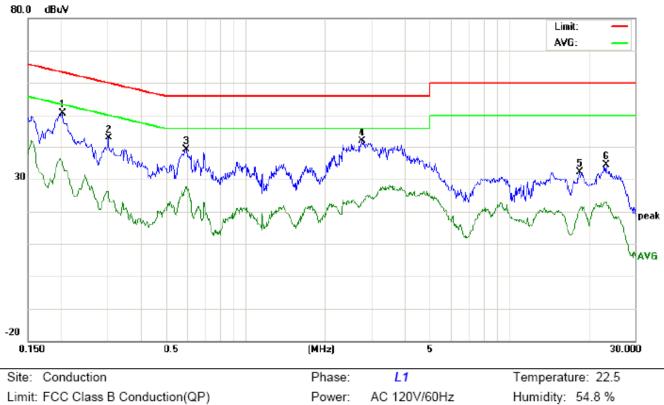
- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

## 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

#### By adapter(worst case)

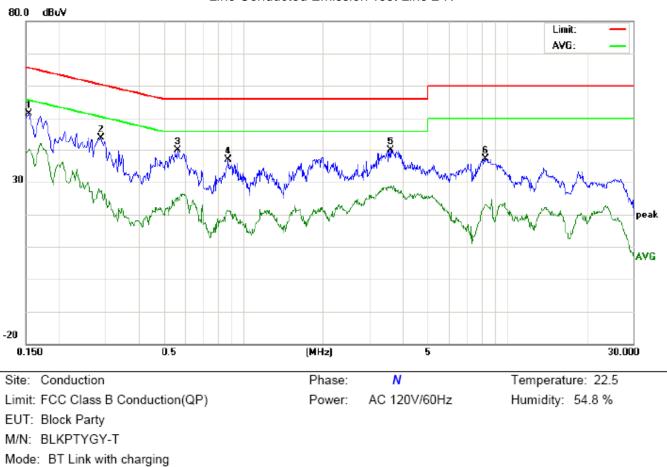
### FOR BR/EDR





Limit: FCC Class B Conduction(Q EUT: Block Party M/N: BLKPTYGY-T Mode: BT Link with charging Note:

No. Freq.		Reading_Level (dBuV)		Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2020	40.52		25.16	10.22	50.74		35.38	63.52	53.52	-12.78	-18.14	Ρ	
2	0.3019	32.59		15.85	10.29	42.88		26.14	60.19	50.19	-17.31	-24.05	Р	
3	0.5947	28.84		17.22	10.31	39.15		27.53	56.00	46.00	-16.85	-18.47	Р	
4	2.7740	31.29		12.32	10.50	41.79		22.82	56.00	46.00	-14.21	-23.18	Р	
5	18.4939	22.03		10.61	10.12	32.15		20.73	60.00	50.00	-27.85	-29.27	Р	
6	23.3500	24.27		12.92	10.11	34.38		23.03	60.00	50.00	-25.62	-26.97	Ρ	

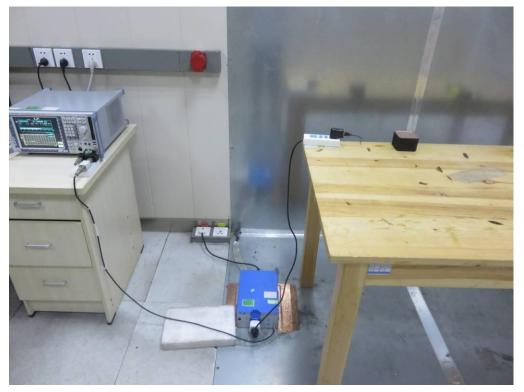


Line Conducted Emission Test Line 2-N

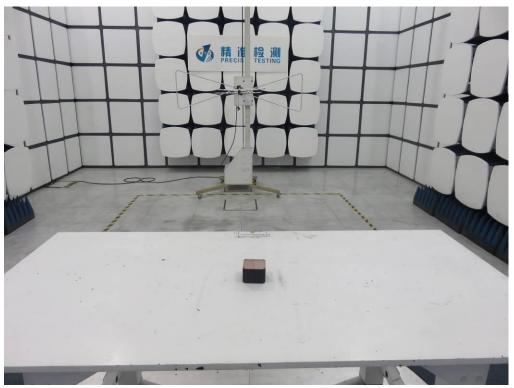
Note:

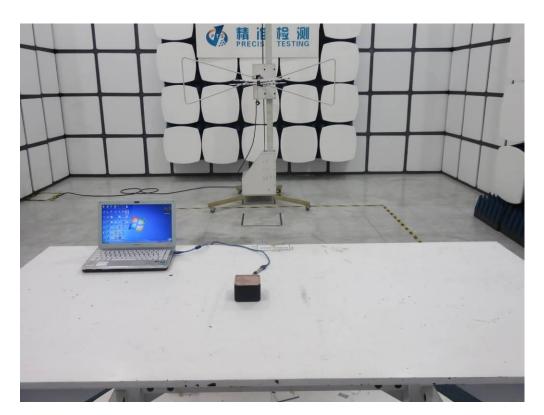
No. Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1539	39.96		28.89	10.16	50.12		39.05	65.78	55.78	-15.66	-16.73	Р	
2	0.2878	33.71		16.91	10.28	43.99		27.19	60.59	50.59	-16.60	-23.40	Р	
3	0.5656	29.45		14.93	10.34	39.79		25.27	56.00	46.00	-16.21	-20.73	Р	
4	0.8780	26.41		11.03	10.38	36.79		21.41	56.00	46.00	-19.21	-24.59	Ρ	
5	3.6059	29.49		18.36	10.49	39.98		28.85	56.00	46.00	-16.02	-17.15	Р	
6	8.3099	26.66		12.80	10.34	37.00		23.14	60.00	50.00	-23.00	-26.86	Р	

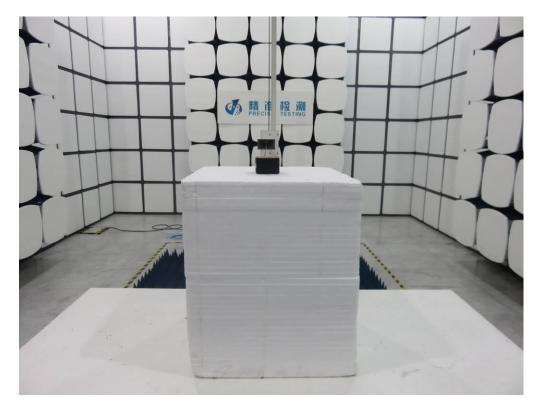
# APPENDIX A: PHOTOGRAPHS OF TEST SETUP FCC LINE CONDUCTED EMISSION TEST SETUP



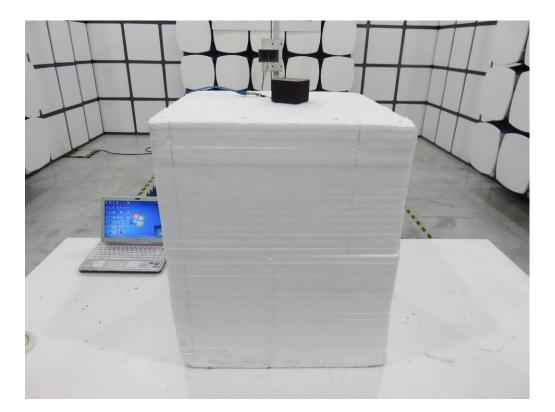
FCC RADIATED EMISSION TEST SETUP

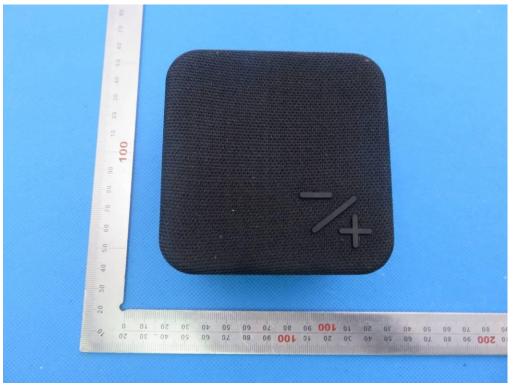






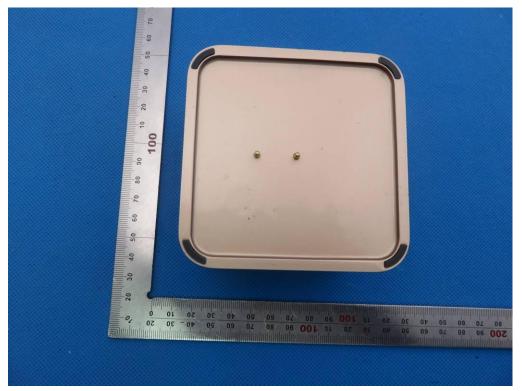
Report No.: AGC00931170503FE03 Page 47 of 55



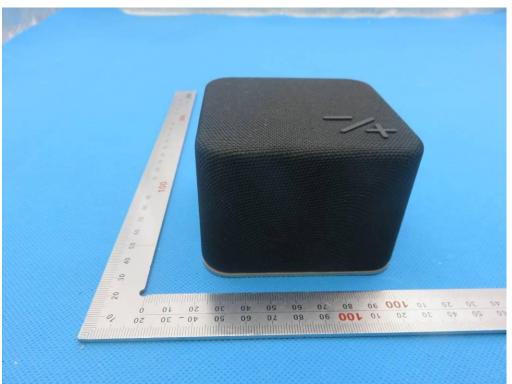


# APPENDIX B: PHOTOGRAPHS OF EUT TOP VIEW OF EUT

BOTTOM VIEW OF EUT

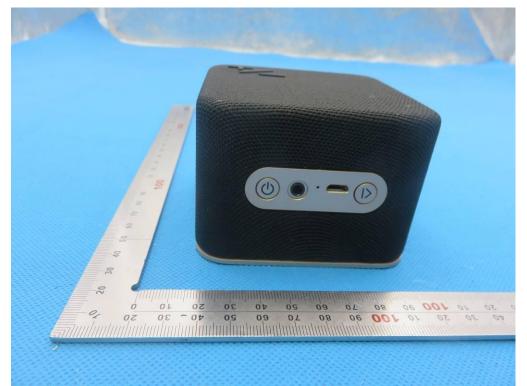


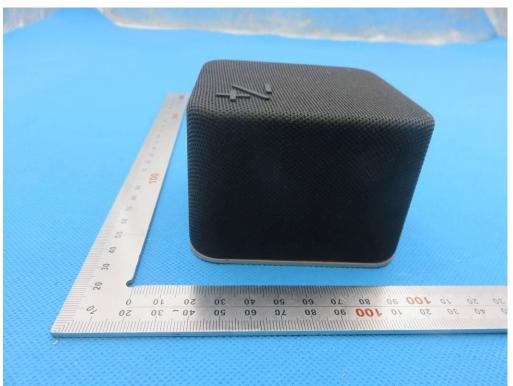
#### Report No.: AGC00931170503FE03 Page 49 of 55



FRONT VIEW OF EUT

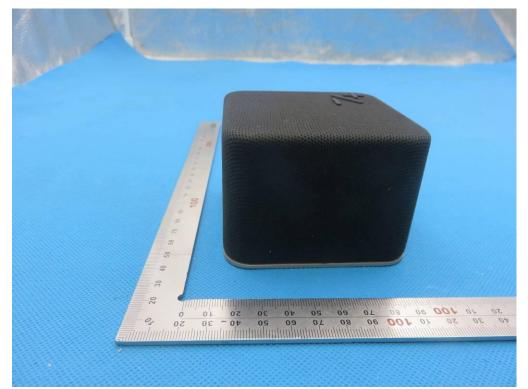
BACK VIEW OF EUT





LEFT VIEW OF EUT

**RIGHT VIEW OF EUT** 

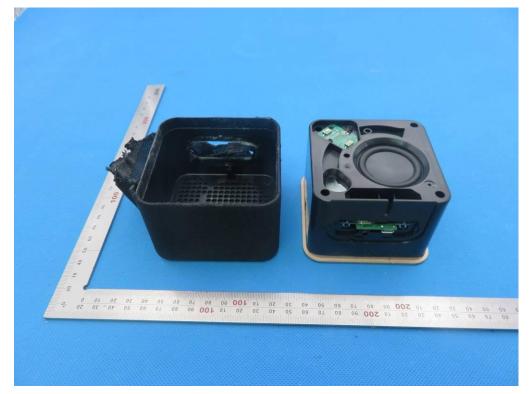


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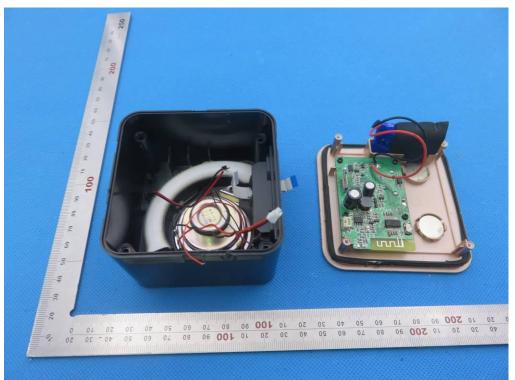


VIEW OF EUT (PORT)

**OPEN VIEW OF EUT-1** 

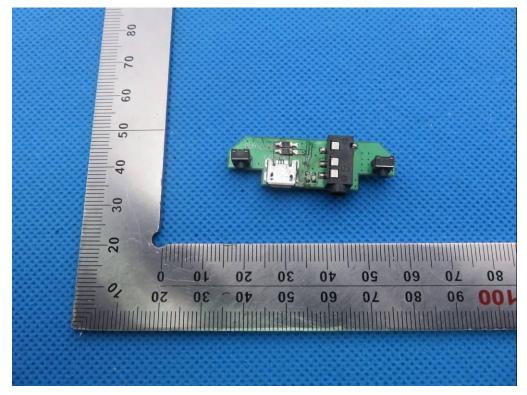


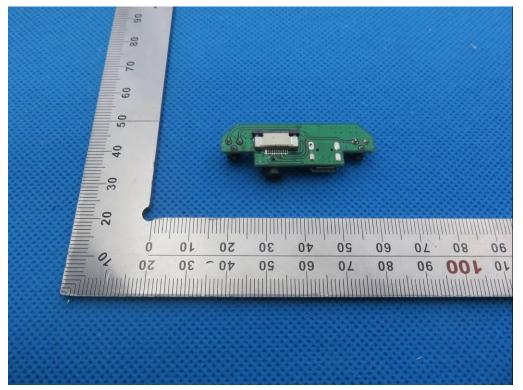
#### Report No.: AGC00931170503FE03 Page 52 of 55



#### **OPEN VIEW OF EUT-2**

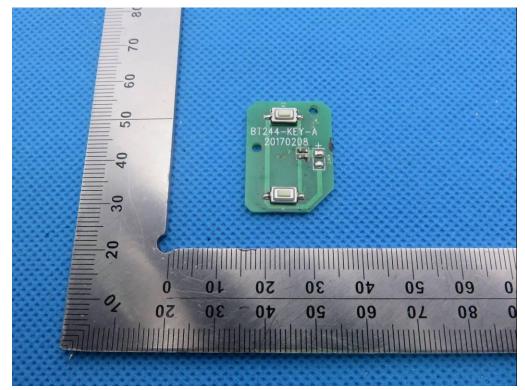
**INTERNAL VIEW OF EUT-1** 

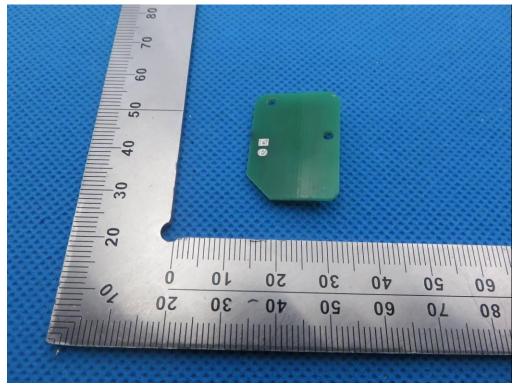




INTERNAL VIEW OF EUT-2

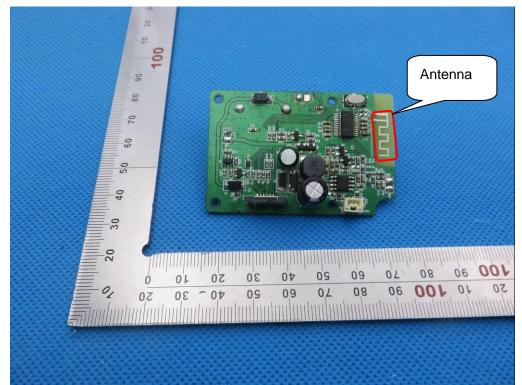
#### **INTERNAL VIEW OF EUT-3**

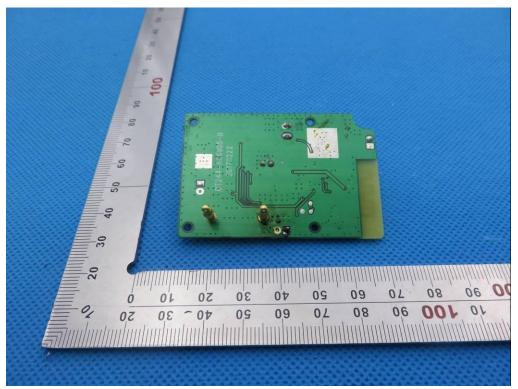




**INTERNAL VIEW OF EUT-4** 

**INTERNAL VIEW OF EUT-5** 





#### **INTERNAL VIEW OF EUT-6**

VIEW OF ADAPTER (AE)



THE ADAPTER SUPPLIED BY AGC