

# **FCC Test Report**

Report No.: AGC03329180507FE03

FCC ID : 2AAXO-SML363

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: PORTABLE CDG/BLUETOOTH KARAOKE PLAYER

**BRAND NAME** : Singing Machine

MODEL NAME : See Page 4

**CLIENT**: The Singing Machine Company, Inc.

**DATE OF ISSUE** : Jun. 26, 2018

STANDARD(S)

TEST PROCEDURE(S)

: FCC Part 15 Subpart C Section 15.249

**REPORT VERSION** V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

#### **CAUTION:**

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.



The results spowed this jest eport refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a transfer o



Page 2 of 73

## **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	June 1 S	Jun. 26, 2018	Valid	Initial release

The results shown this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by KGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at http://www.agc.gett.com.

Attestation of Global Compliance



## TABLE OF CONTENTS

1. VERIFICATION OF CONFORMITY	
2. GENERAL INFORMATION	5
2.1. PRODUCT DESCRIPTION	6
3. MEASUREMENT UNCERTAINTY	
4. DESCRIPTION OF TEST MODES	
5. SYSTEM TEST CONFIGURATION	9
5.1. CONFIGURATION OF EUT SYSTEM 5.2. EQUIPMENT USED IN EUT SYSTEM	9
6. TEST FACILITY	
7.TEST METHOD	12
8. TEST EQUIPMENT LIST	
9. RADIATED EMISSION	13
9.1TEST LIMIT 9.2. MEASUREMENT PROCEDURE 9.3. TEST SETUP 9.4. TEST RESULT	13 14
10. BAND EDGE EMISSION	40
10.1. MEASUREMENT PROCEDURE	40 41
11. 20DB BANDWIDTH	45
11.1. MEASUREMENT PROCEDURE	45 45
12. FCC LINE CONDUCTED EMISSION TEST	52
12.1. LIMITS OF LINE CONDUCTED EMISSION TEST	52 53
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	56
ADDENDIX B. DHOTOGRADHS OF FUT	50



Page 4 of 73

#### 1. VERIFICATION OF CONFORMITY

Applicant	The Singing Machine Company, Inc.				
Address	6301 NW 5th Way, Suite 2900, Fort Lauderdale, FL 33309, USA				
Manufacturer	SHENZHEN JUNLAN ELECTRONIC LTD				
Address	No.277 PingKui Road, Shijing Community, Pingshan Street, Pingshan New District, Shenzhen, China				
Product Designation	PORTABLE CDG/BLUETOOTH KARAOKE PLAYER				
Brand Name	Singing Machine				
Test Model	SML363				
Series Model	SML363BK, SML363P, SML363W, SML463XX, SML363XX (XX means unit color, it can be A to Z or N/A				
Difference description	All the same except for the appearance color.				
Date of test	Jun. 12, 2018 to Jun. 18, 2018				
Deviation	None State of the				
Condition of Test Sample	Normal The state of the state o				
Report Template	AGCRT-US-BR/RF				

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) 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. The test results of this report relate only to the tested sample identified in this report.

Tested By	Jorden Wang	
The Completions (8)	Jonhen Wang(Wang Yonghuan)	Jun. 18, 2018
Reviewed By	and change	
® Franco of Clobal Compa	Cool Cheng(Cheng Mengguo)	Jun. 26, 2018
Approved By	Foresto ce	THE THE TOTAL COMMITTEE OF
modularies @ Margaratic	Forrest Lei(Lei Yonggang)  Authorized Officer	Jun. 26, 2018

The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.

Attestation of Global Compliance



Page 5 of 73

#### 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	-0.03dBm(Max EIRP Power=Max radiation field-95.2)
Bluetooth Version	V2.1+EDR
Modulation	BR ⊠GFSK, EDR ⊠π /4-DQPSK, ⊠8DPSK BLE □GFSK
Number of channels	79 for BR/EDR
Hardware Version	V1.0
Software Version	V1.0
Antenna Designation	PCB Antenna
Antenna Gain	0dBi
Power Supply (by battery)	DC 1.5V*8 by battery
Power Supply (by adapter 1)	MODEL: JY009058150BA-UL INPUT:100-240V 50/60Hz 0.5A Max OUTPUT: 5.8V 1.5A
Power Supply (by adapter 2)	MODEL: GKYPS0150058UL1 INPUT:100-240V 50/60Hz 0.5A OUTPUT: 5.8V 1500mA

Note: 1. The EUT have are two kinds of power supply mode, both have been tested and only the worst mode (adapter) test data recorded in the test report.

2. The EUT is equipped with two adapters, both have been assessed and only the worst test data of adapter 1 recorded in this report.



Page 6 of 73

#### 2.2. TABLE OF CARRIER FREQUENCYS

BR/EDR channel List

Frequency Band	Channel Number	Frequency
(S) Allestation of Co.	0	2402MHz
GO I	I the district of the state of	2403MHz
The state of the s	(a) Afficiation of Care (b) Afficiation of Care (c) Af	
S Afficiation of cloth	38	2440 MHz
2400~2483.5MHz	39	2441 MHz
The secondarion	40	2442 MHz
(a) All residence of circular (b) All residence of the circular ci	Godiner @ Ministerio d'Ole CO	
CO , CO ,	77	2479 MHz
	78	2480 MHz



Page 7 of 73

#### 3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ±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%.

- Uncertainty of Conducted Emission, Uc = ±3.2 dB
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB

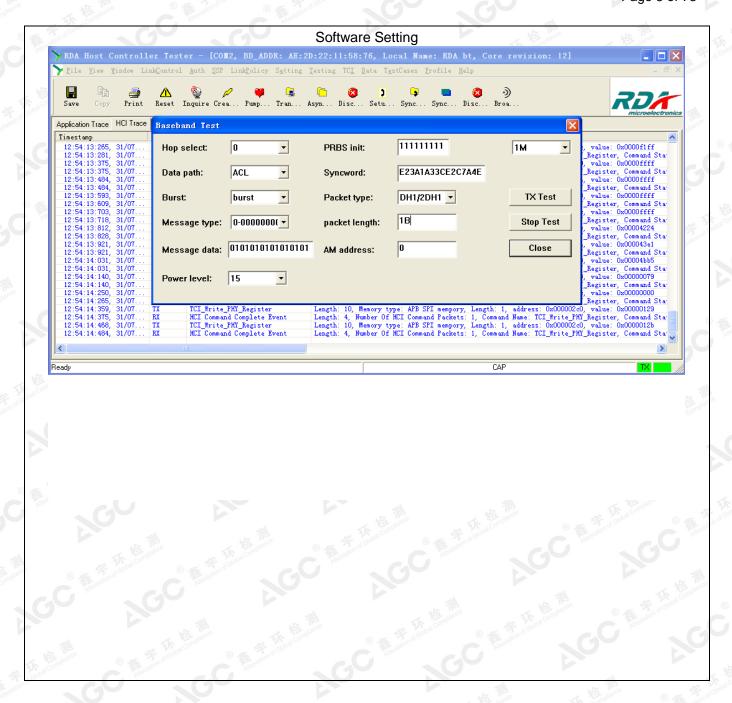
#### 4. DESCRIPTION OF TEST MODES

			llin-	The compa	The state of the s	THE STA
	NO.		TEST MODI	E DESCRIPTION		
© ## 1 rolcoon @ ##		ation of Clobal Control Of Management (Section of Clobal Control Of Control O	Low ch	annel GFSK		-1
CO	2	100	Middle c	hannel GFSK	Jill Junco	Compliance
	3	THE MANOR	High ch	nannel GFSK	® Milestation of G	Con.
根那	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	® # John of Cloud Con	Low chann	nel π /4-DQPSK	60	
opgi Courr	5, hon of Global	10 C	Middle char	nnel π /4-DQPSK	12 700	TK 1000000
100	6		High chann	nel π /4-DQPSK	Find Global Comm	atalion of Global
1/2	7	Enlance ® # Final	Low cha	annel 8DPSK		1
F of Global Co	8 S A June of Col	CC Message	Middle ch	nannel 8DPSK		liti:
Allestan	9		High cha	annel 8DPSK	The state of the s	al Compliance
	10	海河,	B. St. Market B.	BT Link	® Mestation of Allestation of Allest	a.C.
	ALCO LOGICAL	(0)	79399	Appropriate the second		

#### Note:

- 1. All the test modes can be supply by battery or adapter, 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 new battery when tested.





The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XCC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true www.ago-gent.com.

Attestation of Global Compliance

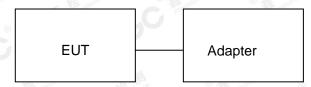


Page 9 of 73

## 5. SYSTEM TEST CONFIGURATION

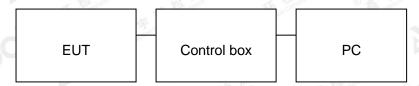
#### 5.1. CONFIGURATION OF EUT SYSTEM

Configure 1: (Normal hopping)



Note: Owing to the EUT can power supply by battery, testing may be performed while adapter removed.

Configure 2: (Control continuous TX)



## **5.2. EQUIPMENT USED IN EUT SYSTEM**

Item	Equipment	ment Mfr/Brand Model/Type No.		Remark	
1	PORTABLE CDG/BLUETOOTH KARAOKE PLAYER	Singing Machine	SML363	EÚT	
2	Mobile Phone	Huawei	V9	A.E	
3	Control box	DOFLY	LY-USB-TIL V2.2	<sup>®</sup> A.E	
4	Adapter 1	J.POWER	JY009058150BA-UL	Accessory	
5	Adapter 2	GUANGKAIYUAN	GKYPS0150058UL1	Accessory	
6	USB Cable	N/A	1m unshielded	A.E	
7	Audio out Cable	N/A	1.2m unshielded	Accessory	
8	AUX in Cable	N/A	1m unshielded	A.E	
9	Speaker	Haiyi	A3901	A.E	
10	MIC	Singing Machine	N/A	Accessory	
11 <	Battery	Nanfu	AAA 1.5V	A.E	

The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.

Attestation of Global Compliance



Page 10 of 73

#### **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



Page 11 of 73

## 6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2F., Bldg.2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District B112-B113, Bldg.12, Baoan Bldg Materials Center, No.1 of Xixiang Inner Ring Road, Baoan District, Shenzhen 518012
NVLAP Lab Code	600153-0
Designation Number	CN5028
Test Firm Registration Number	682566
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by National Voluntary Laboratory Accreditation program, NVLAP Code 600153-0



Page 12 of 73

#### 7. TEST METHOD

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

#### 8. TEST EQUIPMENT LIST

#### **TEST EQUIPMENT OF CONDUCTED EMISSION TEST**

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	Jun.20, 2017	Jun.19, 2018
LISN	R&S	ESH2-Z5	100086	Aug.21, 2017	Aug.20, 2018

#### **TEST EQUIPMENT OF RADIATED EMISSION TEST**

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun.20, 2017	Jun.19, 2018
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec.08, 2017	Dec.07, 2018
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep.20, 2017	Sep.19, 2018
preamplifier	ChengYi	EMC184045SE	980508	Sep.15, 2017	Sep.14, 2018
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 18, 2017	May 17, 2019
Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-205	Jun.20, 2017	Jun.19, 2018
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep.28, 2017	Sep.27, 2018
Loop Antenna	A.H.Systems,Inc	SAS-562B	C Ame	Mar. 01, 2018	Feb. 28, 2019
Radiation Cable 1	MXT	RS1	R005	June 6, 2018	June 5, 2019
Radiation Cable 2	MXT	RS1	R006	June 6, 2018	June 5, 2019
Filter (2.4-2.483GHz)	Micro-tronics	087	-C	Jun.20, 2017	Jun.19, 2018



Page 13 of 73

#### 9. RADIATED EMISSION

#### 9.1TEST LIMIT

#### Standard FCC15.249

Fundamental	Field Strength of Fundamental	Field Strength of Harmonics
Frequency	(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 St	rengths Limit
(MHz)	Meters	μ V/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	2
0.490 ~ 1.705	30	24000/F(kHz)	电测 乐意
1.705 ~ 30	30	30	See The second of the second o
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 Marine Commission Co	Other:74.0 dB(µV)/m (Average)	(Peak) 54.0 dB(μV)/m

Remark:

- (1) Emission level dB $\mu$  V = 20 log Emission level  $\mu$  V/m
- (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.



Page 14 of 73

#### 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)
- 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)

The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XCC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.

Attestation of Global Compliance



Page 15 of 73

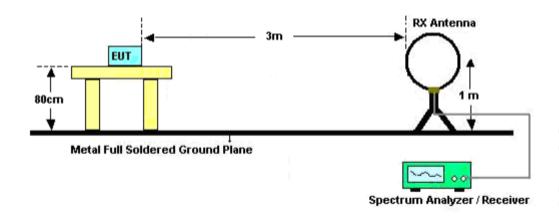
The following table is the setting of spectrum analyzer and receiver.

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	Fundamental: 2.4~2.483GHz RBW 2MHz/ VBW 6MHz for Peak, RBW 2MHz/ VBW 10Hz for Average Harmonics: 1GHz~25GHz RBW 1MHz/ VBW 3MHz for Peak, RBW 1MHz/ VBW 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

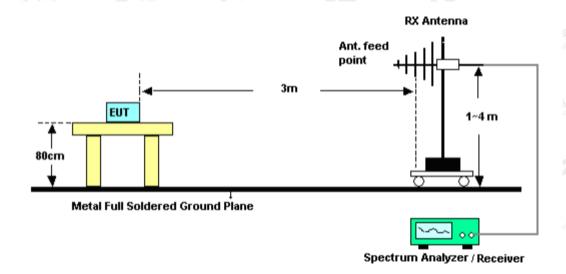


#### 9.3. TEST SETUP

#### Radiated Emission Test-Setup Frequency Below 30MHz



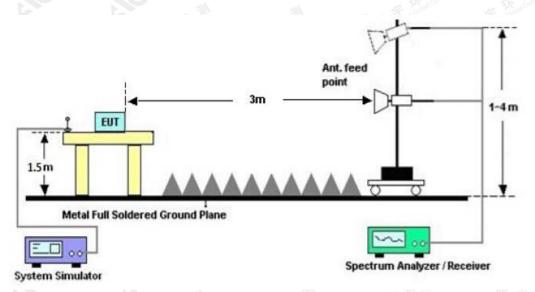
#### RADIATED EMISSION TEST SETUP 30MHz-1000MHz





Page 17 of 73

## RADIATED EMISSION TEST SETUP ABOVE 1000MHz



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by 100°C, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at although the confirmed at although the confirmed at although the confirmed at all the confirme



age 18 of 73

#### 9.4. TEST RESULT

FOR BR/EDR

(Worst modulation: GFSK)

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

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

The results spoured this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by KGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true www.agc. gent.com.

Attestation of Global Compliance

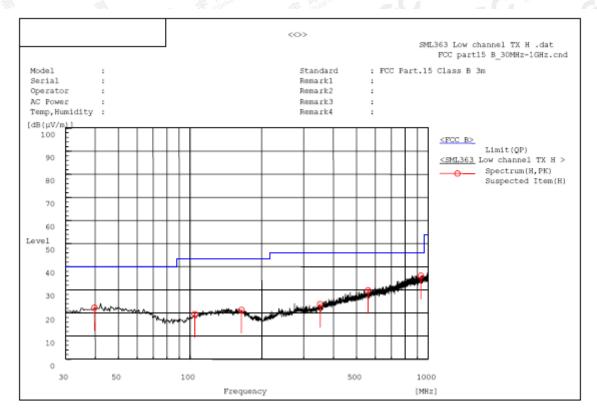
Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China



Page 19 of 73

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

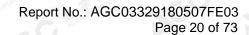
#### RADIATED EMISSION TEST- (30MHz-1GHz)-LOW CHANNEL-HORIZONTAL



#### A. Suspected List:

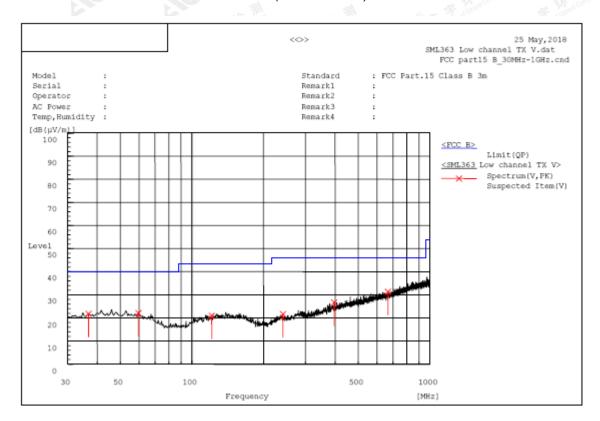
Frequency MHz	Polarization Reading dB(uV)		Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
39.700	H	4.9	17.4	22.3	40.0	17.7	Pass	150.0	70.7
104.690	Н	5.5	14.0	19.5	43.5	24.0	Pass	200.0	266.3
164.345	H	4.9	16.4	21.3	43.5	22.2	Pass	150.0	212.8
351.555	Н	4.8	19.0	23.8	46.0	22.2	Pass	200.0	266.3
558.650	Н	5.7	24.1	29.8	46.0	16.2	Pass	100.0	289.0
931.130	Н	5.6	30.5	36.1	46.0	9.9	Pass	100.0	72.0

**RESULT: PASS** 





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



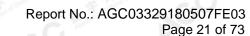
#### A. Suspected List:

	Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(u√/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
	36.790	V	5.0	16.8	21.8	40.0	18.2	Pass	100.0	266.9
Γ	59.585	V	5.9	16.2	22.1	40.0	17.9	Pass	150.0	319.9
	121.180	V	5.5	15.5	21.0	43.5	22.5	Pass	100.0	266.9
	241.460	V	5.5	16.2	21.7	46.0	24.3	Pass	100.0	15.4
	396.175	V	6.0	20.7	26.7	46.0	19.3	Pass	200.0	145.7
	666.805	V	5.5	25.8	31.3	46.0	14.7	Pass	100.0	339.0

#### **RESULT: PASS**

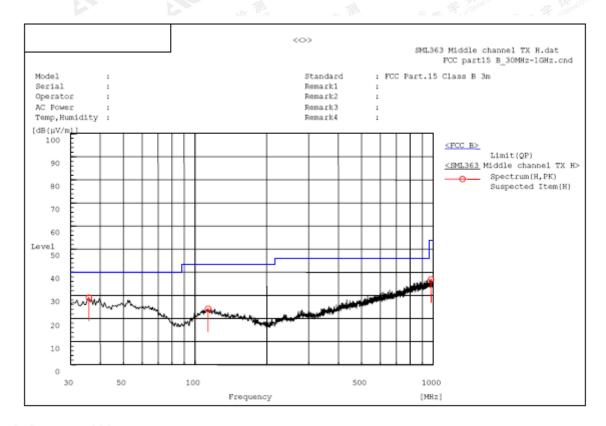
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

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





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



#### A. Suspected List:

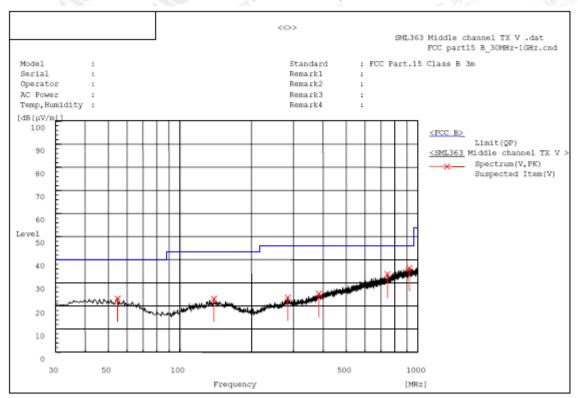
Frequency MHz	Polarization	Reading Factor dB dB(uV) (1/m)		Level dB(u√/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
35.820	H	12.5	16.5	29.0	40.0	11.0	Pass	100.0	145.8
113.420	Н	9.4	14.8	24.2	43.5	19.3	Pass	100.0	65.1
978.660	Н	6.0	30.9	36.9	54.0	17.1	Pass	200.0	179.9

RESULT: PASS





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



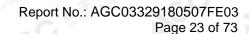
#### A. Suspected List:

Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(u√/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
54.735	V	6.5	16.7	23.2	40.0	16.8	Pass	100.0	107.2
139.125	V	6.5	16.6	23.1	43.5	20.4	Pass	100.0	72.2
284.140	V	5.9	17.7	23.6	46.0	22.4	Pass	150.0	72.2
384.050	V	5.0	20.2	25.2	46.0	20.8	Pass	100.0	107.2
745.375	V	6.3	27.4	33.7	46.0	12.3	Pass	200.0	20.4
920.945	V	6.0	30.4	36.4	46.0	9.6	Pass	200.0	20.4

#### **RESULT: PASS**

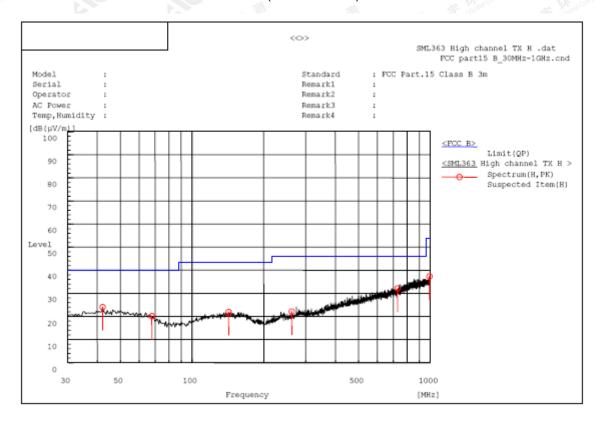
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

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





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



#### A. Suspected List:

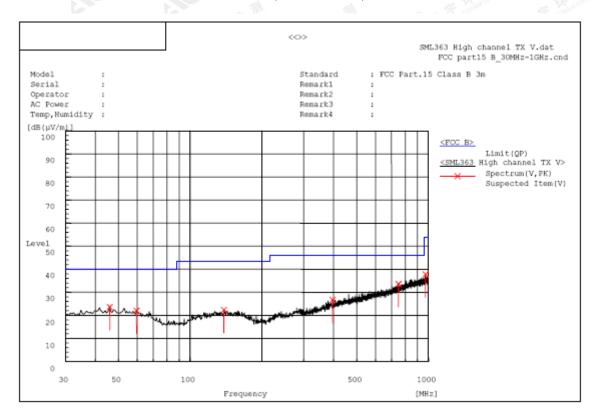
	Frequency MHz	Polarization	Polarization Reading dB(uV)		Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
	42.125	H	6.6	17.4	24.0	40.0	16.0	Pass	200.0	266.3
	67.830	Н	5.1	15.0	20.1	40.0	19.9	Pass	150.0	107.1
	142.520	Н	5.3	16.6	21.9	43.5	21.6	Pass	200.0	303.4
1	262.315	Н	6.1	16.0	22.1	46.0	23.9	Pass	100.0	216.9
	729.370	Н	5.1	27.0	32.1	46.0	13.9	Pass	200.0	266.3
	992.725	Н	6.3	31.0	37.3	54.0	16.7	Pass	200.0	266.3

**RESULT: PASS** 





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



#### A. Suspected List:

Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
46.005	V	6.3	17.3	23.6	40.0	16.4	Pass	100.0	266.9
59.585	V	5.9	16.2	22.1	40.0	17.9	Pass	150.0	319.9
138.640	V	5.8	16.6	22.4	43.5	21.1	Pass	150.0	176.4
396.175	V	6.0	20.7	26.7	46.0	19.3	Pass	200.0	145.7
748.770	v	6.1	27.5	33.6	46.0	12.4	Pass	100.0	267.4
971.870	V	6.9	30.9	37.8	54.0	16.2	Pass	150.0	70.7

#### **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.



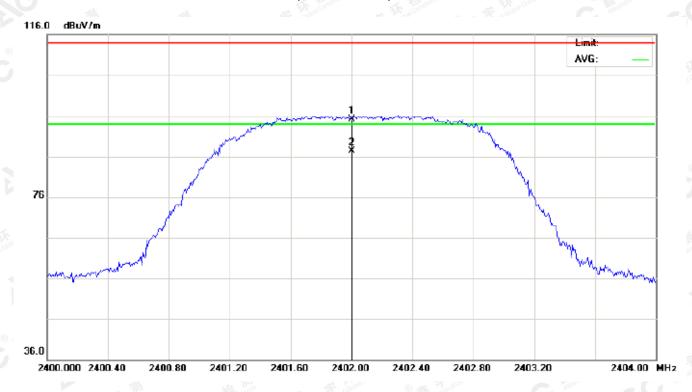
age 25 of 73

## RADIATED EMISSION ABOVE 1GHz FOR BR/EDR

(Worst modulation: GFSK)

## For Fundamental

RADIATED EMISSION TEST- (ABOVE 1GHz)-LOW CHANNEL-HORIZONTAL



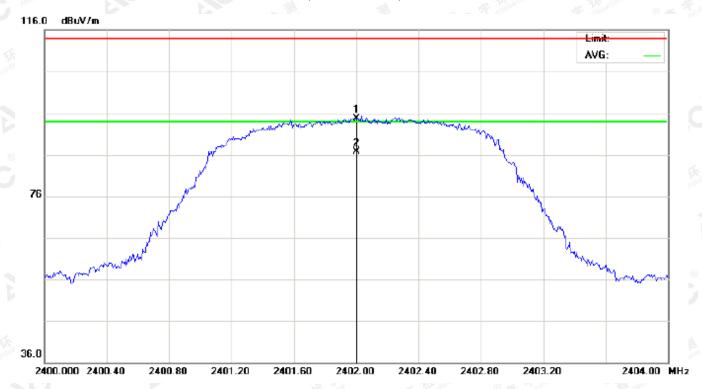
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	84.85	10.32	95.17	114.00	-18.83	peak			
2	*	2402.000	76.89	10.32	87.21	94.00	-6.79	AVG	100	331	

RESULT: PASS



Page 26 of 73

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



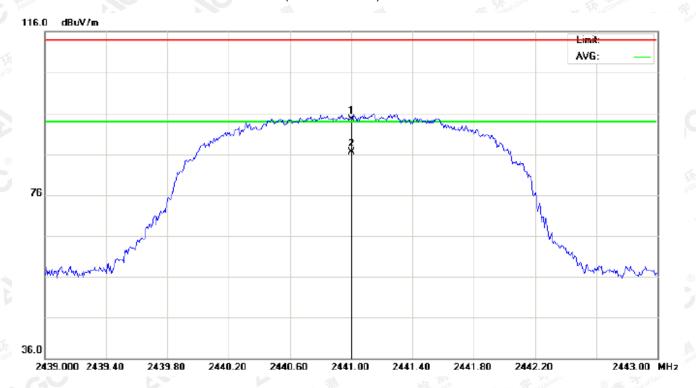
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
		MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2402.000	84.37	10.32	94.69	114.00	-19.31	peak			
2	*	2402.000	76.37	10.32	86.69	94.00	-7.31	AVG	100	107	

**RESULT: PASS** 



Page 27 of 73

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



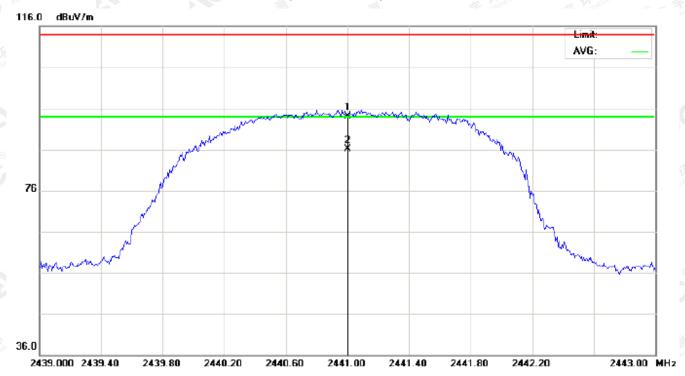
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2441.000	84.15	10.36	94.51	114.00	-19.49	peak			
2	*	2441.000	76.16	10.36	86.52	94.00	-7.48	AVG	100	342	

**RESULT: PASS** 



Page 28 of 73

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



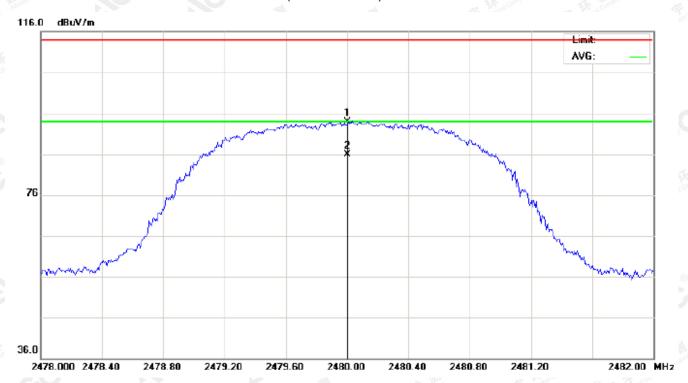
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2441.000	83.73	10.36	94.09	114.00	-19.91	peak			
2	*	2441.000	75.72	10.36	86.08	94.00	-7.92	AVG	100	109	

**RESULT: PASS** 



Page 29 of 73

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



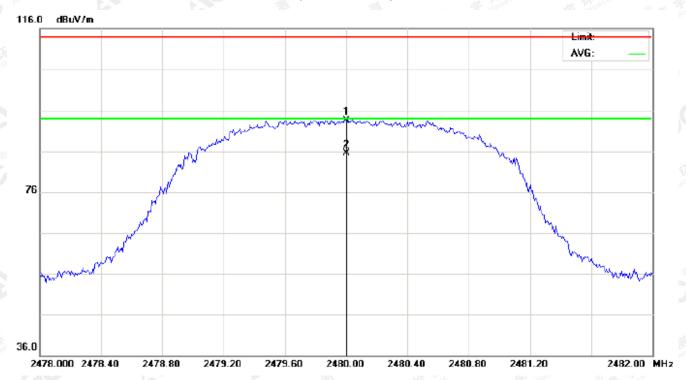
No	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2480.000	83.51	10.41	93.92	114.00	-20.08	peak			
2	*	2480.000	75.53	10.41	85.94	94.00	-8.06	AVG	100	339	

**RESULT: PASS** 



Page 30 of 73

## 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	dBu∀/m	dB		cm	degree	
1		2480.000	83.09	10.41	93.50	114.00	-20.50	peak			
2	*	2480.000	75.06	10.41	85.47	94.00	-8.53	AVG	100	121	

#### **RESULT: PASS**

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

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



age 31 of 73

## Field strength of the fundamental signal

#### 1Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Factor Measurement		Over	Antenna	
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization	
2402	84.85	10.32	95.17	114	-18.83	Horizontal	
2402	84.37	10.32	94.69	114	-19.31	Vertical	
2441	84.15	10.36	94.51	114	-19.49	Horizontal	
2441	83.73	10.36	94.09	114	-19.91	Vertical	
2480	83.51	10.41	93.92	114	-20.08	Horizontal	
2480	83.09	10.41	93.50	114	-20.50	Vertical	

#### Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna	
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization	
2402	76.89	10.32	87.21	94	-6.79	Horizontal	
2402	76.37	10.32	86.69	94	-7.31	Vertical	
2441	76.16	10.36	86.52	94	-7.48	Horizontal	
2441	75.72	10.36	86.08	94	-7.92	Vertical	
2480	75.53	10.41	85.94	94	-8.06	Horizontal	
2480	75.06	10.41	85.47	94	-8.53	Vertical	



Page 32 of 73

#### 2Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna	
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization	
2402	84.44	10.32	94.76	114	-19.24	Horizontal	
2402	83.95	10.32	94.27	114	-19.73	Vertical	
2441	83.82	10.36	94.18	114	-19.82	Horizontal	
2441	83.35	10.36	93.71	114	-20.29	Vertical	
2480	83.19	10.41	93.60	114	-20.40	Horizontal	
2480	82.75	10.41	93.16	114	-20.84	Vertical	

#### Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna	
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization	
2402	76.52	10.32	86.84	94	-7.16	Horizontal	
2402	75.98	10.32	86.30	94	-7.70	Vertical	
2441	75.75	10.36	86.11	94	-7.89	Horizontal	
2441	75.37	10.36	85.73	94	-8.27	Vertical	
2480	75.15	10.41	85.56	94	-8.44	Horizontal	
2480	74.64	10.41	85.05	94	-8.95	Vertical	



Page 33 of 73

#### 3Mbps Result:

#### Peak value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna	
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization	
2402	84.07	10.32	94.39	114	-19.61	Horizontal	
2402	83.50	10.32	93.82	114	-20.18	Vertical	
2441	83.44	10.36	93.80	114	-20.20	Horizontal	
2441	82.94	10.36	93.30	114	-20.70	Vertical	
2480	82.82	10.41	93.23	114	-20.77	Horizontal	
2480	82.38	10.41	92.79	114	-21.21	Vertical	

#### Average value

Frequency	Reading Level	Factor	Measurement	Limit	Over	Antenna
(MHz)	(dBuv)	(dB/m)	(dBuv/m)	(dBuv/m)	(dB)	Polarization
2402	76.15	10.32	86.47	94	-7.53	Horizontal
2402	75.53	10.32	85.85	94	-8.15	Vertical
2441	75.29	10.36	85.65	94	-8.35	Horizontal
2441	74.88	10.36	85.24	94	-8.76	Vertical
2480	74.69	10.41	85.10	94	-8.90	Horizontal
2480	74.26	10.41	84.67	94	-9.33	Vertical



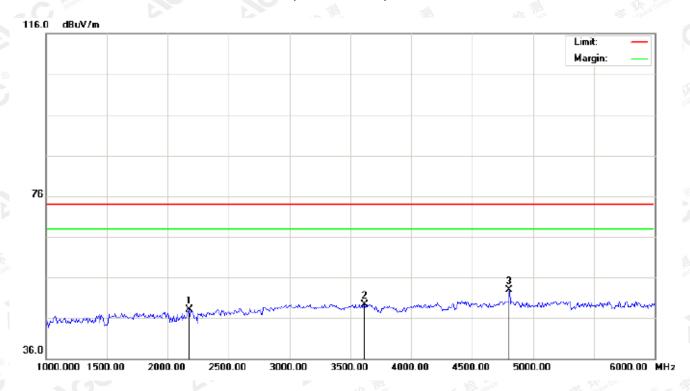
Page 34 of 73

#### FOR BR/EDR

(Worst modulation: GFSK)

#### **For Harmonics**

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



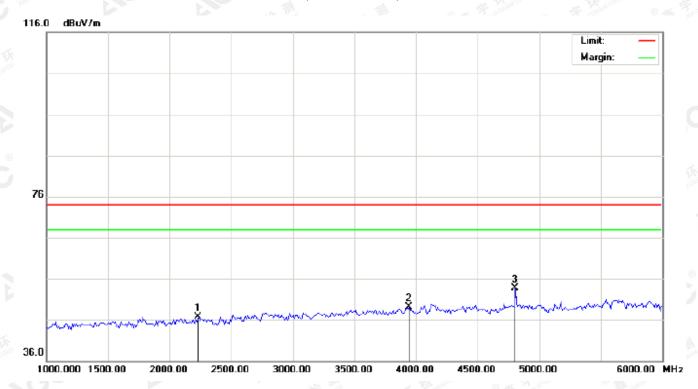
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu√/m	dB		cm	degree	
1		2175.000	38.00	10.07	48.07	74.00	-25.93	peak			
2		3616.667	36.55	12.83	49.38	74.00	-24.62	peak			
3	*	4804.000	45.21	7.69	52.90	74.00	-21.10	peak			

RESULT: PASS



Page 35 of 73

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



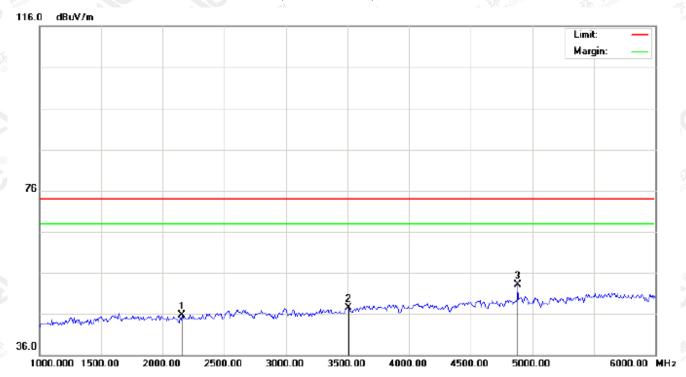
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2233.333	36.55	10.14	46.69	74.00	-27.31	peak			
2		3941.667	34.23	14.83	49.06	74.00	-24.94	peak			
3	*	4804.000	46.05	7.69	53.74	74.00	-20.26	peak			

**RESULT: PASS** 



Page 36 of 73

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



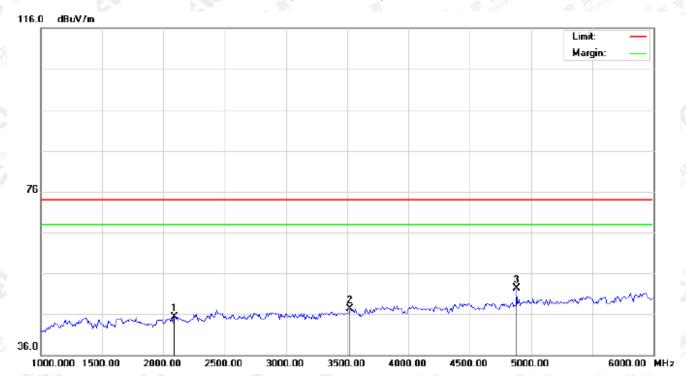
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2158.333	35.58	10.05	45.63	74.00	-28.37	peak			
2		3508.333	35.32	12.16	47.48	74.00	-26.52	peak			
3	*	4882.000	45.16	7.89	53.05	74.00	-20.95	peak			

RESULT: PASS



Page 37 of 73

## 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		2091.667	35.41	9.98	45.39	74.00	-28.61	peak			
2		3525.000	34.94	12.26	47.20	74.00	-26.80	peak			
3	*	4882.000	44.39	7.89	52.28	74.00	-21.72	peak			

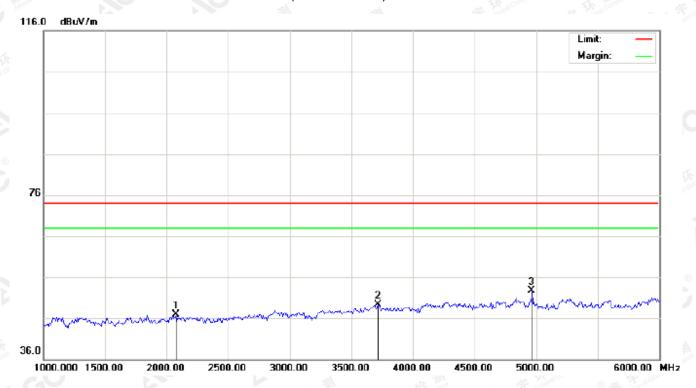
**RESULT: PASS** 

The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by 100°C, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.



Page 38 of 73

## RADIATED EMISSION TEST- (ABOVE 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		2075.000	36.96	9.96	46.92	74.00	-27.08	peak			
2		3716.667	35.85	13.44	49.29	74.00	-24.71	peak			
3	*	4960.000	44.60	8.09	52.69	74.00	-21.31	peak			

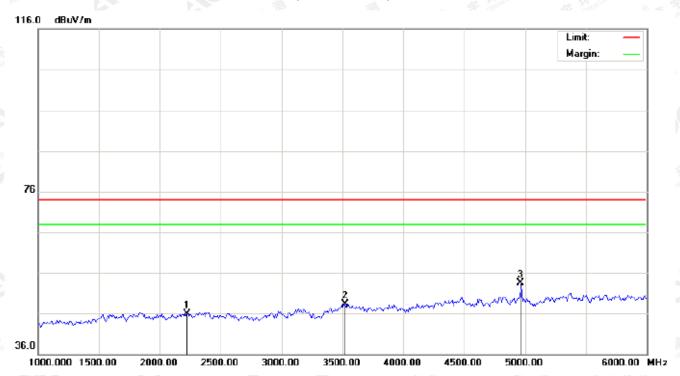
DECILIT: DACC

The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by KGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago-gett.com.



Page 39 of 73

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



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		2225.000	35.79	10.13	45.92	74.00	-28.08	peak			
2		3525.000	36.02	12.26	48.28	74.00	-25.72	peak			
3	*	4960.000	45.41	8.09	53.50	74.00	-20.50	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.

The results spoured this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



Page 40 of 73

### 10. BAND EDGE EMISSION

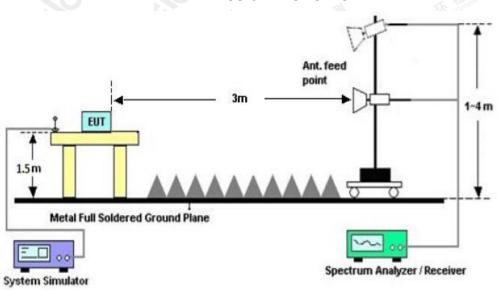
#### 10.1. MEASUREMENT PROCEDURE

- 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 setup 1, 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.

Start frequency(MHz)	Stop frequency(MHz)
2200	2405
2478	2500

#### **10.2 TEST SETUP**

### RADIATED EMISSION TEST SETUP



The results spoured this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



age 41 of 73

## **10.3 RADIATED TEST RESULT**

### FOR BR/EDR

(Worst modulation: GFSK)

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



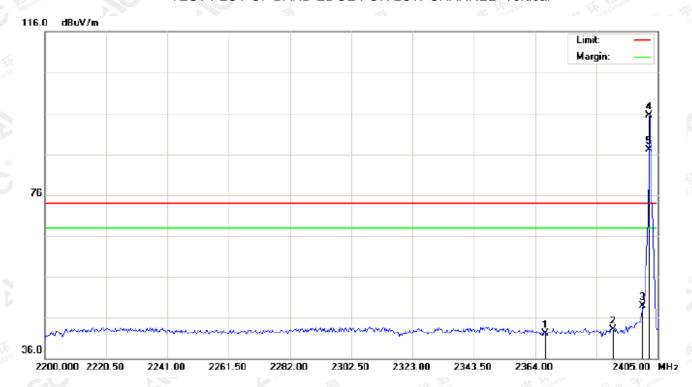
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
1		2341.792	32.91	10.26	43.17	74.00	-30.83	peak			
2		2390.000	34.00	10.31	44.31	74.00	-29.69	peak			
3		2400.000	33.97	10.32	44.29	74.00	-29.71	peak			
4	*	2402.000	85.22	10.32	95.54	74.00	21.54	peak			
5	Х	2402.000	77.32	10.32	87.64	74.00	13.64	AVG	100	334	

The results spowth this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gott.com.



Page 42 of 73

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



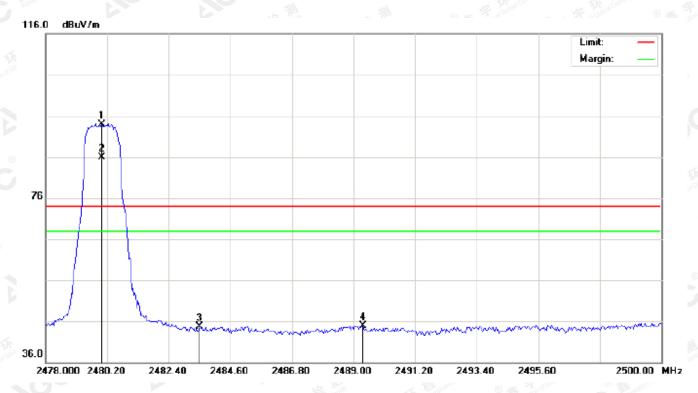
N	о.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		-	MHz	dBu∀	dB/m	dBu\//m	dBu∀/m	dB		cm	degree	
	1		2367.417	31.91	10.28	42.19	74.00	-31.81	peak			
1	2		2390.000	32.71	10.31	43.02	74.00	-30.98	peak			
	3		2400.000	38.56	10.32	48.88	74.00	-25.12	peak			
4	4	*	2402.000	85.09	10.32	95.41	74.00	21.41	peak			
į	5	Х	2402.000	76.80	10.32	87.12	74.00	13.12	AVG	100	116	

The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.



Page 43 of 73

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



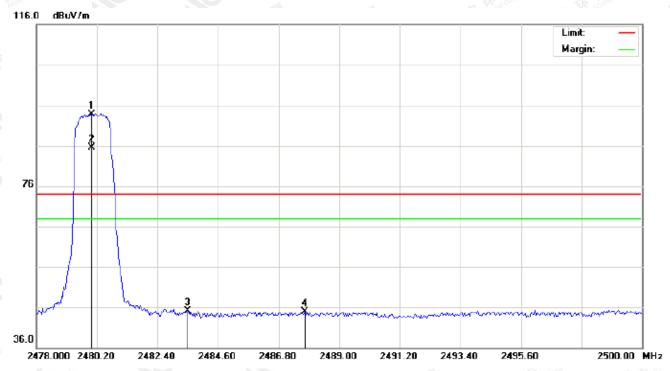
N	o.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
	1	*	2480.000	83.55	10.41	93.96	74.00	19.96	peak			
	2	Х	2480.000	75.56	10.41	85.97	74.00	11.97	AVG	100	336	
	3		2483.500	34.19	10.41	44.60	74.00	-29.40	peak			
-	4		2489.330	34.46	10.42	44.88	74.00	-29.12	peak			

The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.



Page 44 of 73

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



No. M	1 1	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1	*	2480.000	83.32	10.41	93.73	74.00	19.73	peak			
2	Х	2480.000	75.10	10.41	85.51	74.00	11.51	AVG	100	112	
3		2483.500	34.76	10.41	45.17	74.00	-28.83	peak			
4		2487.753	34.45	10.42	44.87	74.00	-29.13	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.

The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



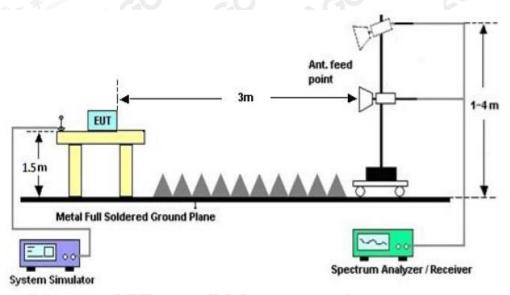
Page 45 of 73

### 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 ≥ 1% of the 20 dB bandwidth, VBW ≥ 3RBW; 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

BLUET	BLUETOOTH 1MBPS LIMITS AND MEASUREMENT RESULT										
	Measurement Result										
Applicable Limits		Day 16									
		99%OBW (MHz)	-20dB BW(MHz)	Result							
Solut Committee Co. St. Manufacture	Low Channel	0.915	1.063	PASS							
N/A	Middle Channel	0.903	1.054	PASS							
	High Channel	0.916	1.080	PASS							

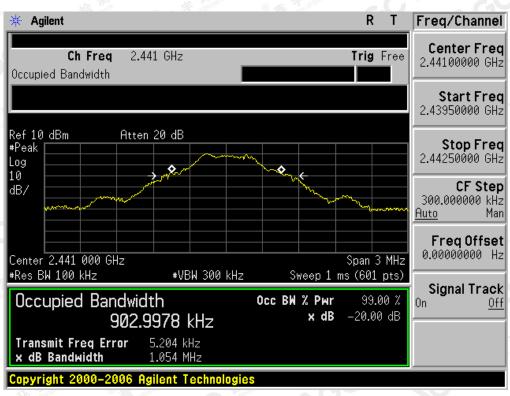
The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gent.com.



#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



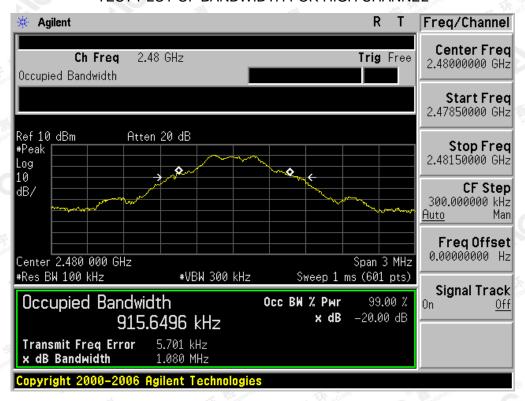
#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



The results spoured this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



Page 48 of 73

BLUET	OOTH 2MBPS LIN	MITS AND MEASU	REMENT RESULT						
	Measurement Result								
Applicable Limits									
		99%OBW (MHz)	-20dB BW(MHz)	Result					
下校期 不校期	Low Channel	1.082	1.194	PASS					
N/A	Middle Channel	1.096	1.176	PASS					
CC I	High Channel	1.097	1.190	PASS					

#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XCC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true www.ago.gent.com.



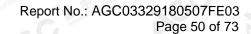
#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



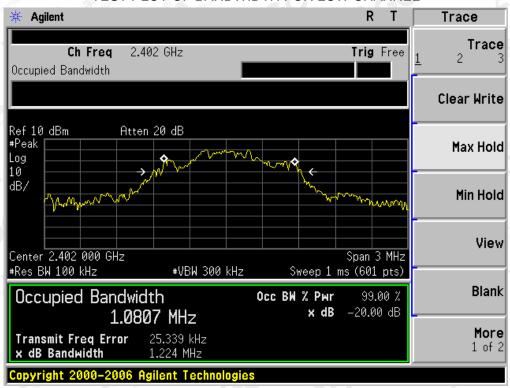
The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.





**BLUETOOTH 3MBPS LIMITS AND MEASUREMENT RESULT Measurement Result Applicable Limits** Test Data (MHz) Result 99%OBW (MHz) -20dB BW(MHz) Low Channel 1.081 **PASS** 1.224 1.009 **PASS** N/A Middle Channel 1.170 **PASS** High Channel 1.097 1.204

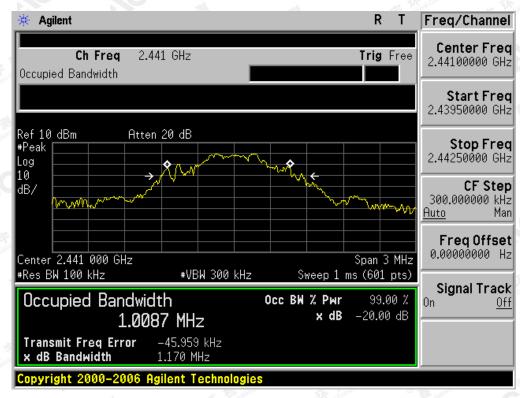
#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



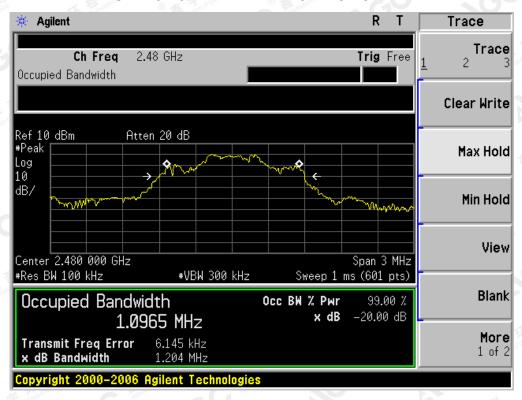
The results spowfil this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by 40°C, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



The results spowford this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XOC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



age 52 of 73

## 12. FCC LINE CONDUCTED EMISSION TEST

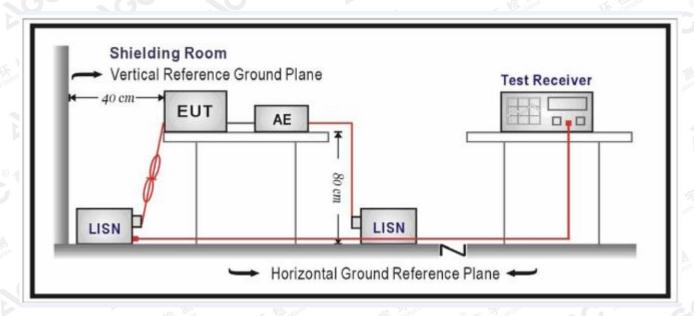
### 12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

F	Maximum RF Line Voltage							
Frequency	Q.P.( dBuV)	Average( dBuV)						
150kHz~500kHz	66-56	56-46						
500kHz~5MHz	8 Age 12	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



The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XCC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.ago.go.tt.com.



Page 53 of 73

#### 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. 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 voltage by adapter 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.

The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XCC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a trp://www.ago.go.tt.com.

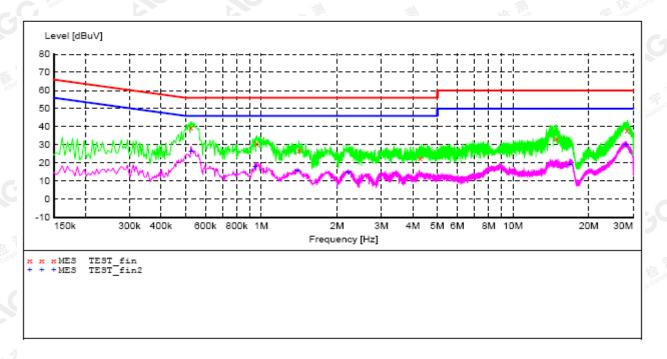
Page 54 of 73

## 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

### By adapter 1(worst case)

#### FOR BR/EDR

### Line Conducted Emission Test Line 1-L



#### MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.526000	39.70	9.9	56	16.3	QP	L1	FLO
0.958000	30.70	10.1	56	25.3	QP	L1	FLO
1.410000	27.10	10.0	56	28.9	QP	L1	FLO
4.282000	23.00	10.2	56	33.0	QP	L1	FLO
14.834000	33.20	9.5	60	26.8	QP	L1	FLO
28.290000	37.90	10.9	60	22.1	QP	L1	FLO

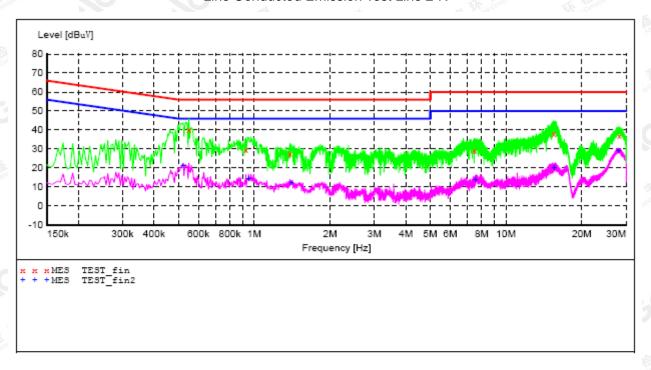
#### MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.526000 0.946000 1.390000 2.214000 16.810000 28.078000	26.80 17.90 16.20 15.10 19.20 30.20	9.9 10.1 10.0 9.9 9.5 10.9	46 46 46 46 50	19.2 28.1 29.8 30.9 30.8 19.8	AV AV AV AV AV	L1 L1 L1 L1 L1 L1	FLO FLO FLO FLO FLO

The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by (GC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a titp://www.agc.gatt.com.



#### Line Conducted Emission Test Line 2-N



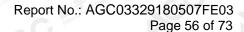
#### MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.550000 0.926000 1.386000 7.482000 15.478000 28.182000	40.00 29.90 27.40 29.10 38.10 37.00	9.9 10.1 10.0 9.9 9.5 10.9	56 56 56 60 60	16.0 26.1 28.6 30.9 21.9 23.0	QP QP QP QP QP QP	N N N N N	FLO FLO FLO FLO FLO

#### MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.522000 0.950000	21.10 14.50	9.9 10.1	46 46	24.9 31.5	AV	N N	FLO FLO
1.406000 7.570000	12.20 14.00	10.0 9.9	46 50	33.8 36.0	AV AV	N N	FLO
15.554000	20.30	9.5	50	29.7	AV	N	FLO
27.970000	29.30	10.9	50	20.7	AV	N	FLO

The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc-gett.com.





## APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



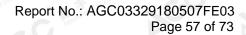
FCC RADIATED EMISSION TEST SETUP



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.go.tt.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4,Chaxi Sanwei Technical Industrial Park,Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China









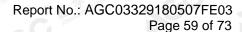
The results shown in this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true; //www.agc.gent.com.



Page 58 of 73



The results shown this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by (60°, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at http://www.agc.gett.com.





## **APPENDIX B: PHOTOGRAPHS OF EUT**

TOTAL VIEW OF EUT



TOP VIEW OF EUT



The results shown the sample (s) the sample (s) tested unless otherwise stated and the sample (s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true; // www.agc. gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China



## **BOTTOM VIEW OF EUT**



FRONT VIEW OF EUT



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China



### **BACK VIEW OF EUT**



LEFT VIEW OF EUT



The results shown in this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true of the confirmed at a true of true of the confirmed at a true of the confirmed at a



### RIGHT VIEW OF EUT



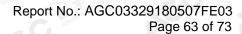
VIEW OF EUT (PORT)-1



The results spowfor this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attr://www.agc.gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China





# VIEW OF EUT (PORT)-2



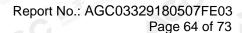
VIEW OF EUT (PORT)-3



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4,Chaxi Sanwei Technical Industrial Park,Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China

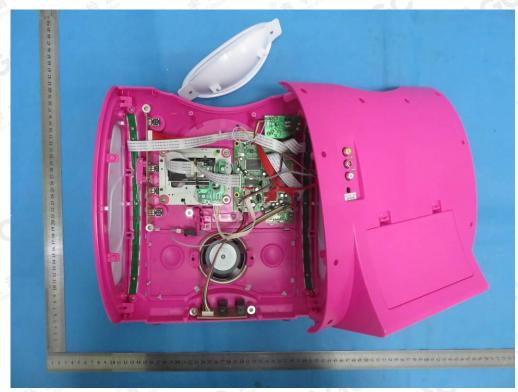




## VIEW OF EUT (PORT)-4



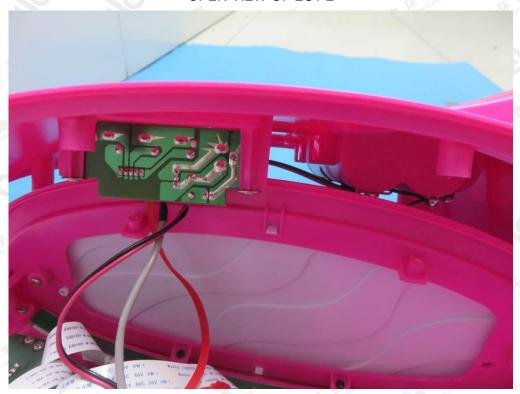
**OPEN VIEW OF EUT-1** 



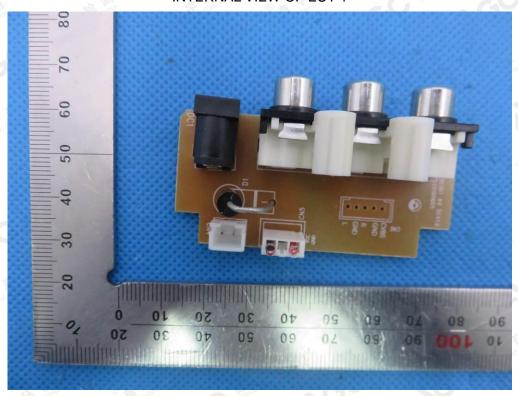
The results shown in this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true of the confirmed at a true of true of the confirmed at a true of the confirmed at a



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



**INTERNAL VIEW OF EUT-1** 

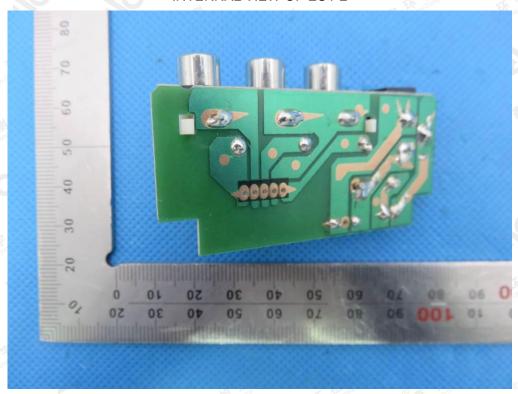


The results shown this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gett.com.

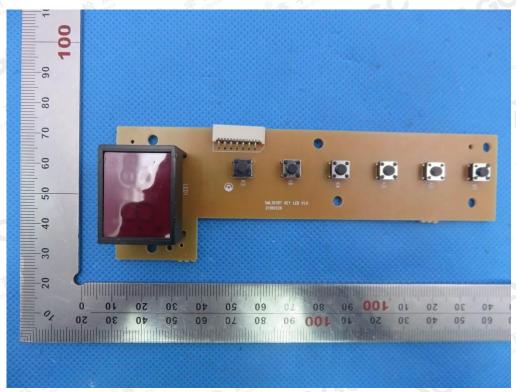
Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China





**INTERNAL VIEW OF EUT-3** 

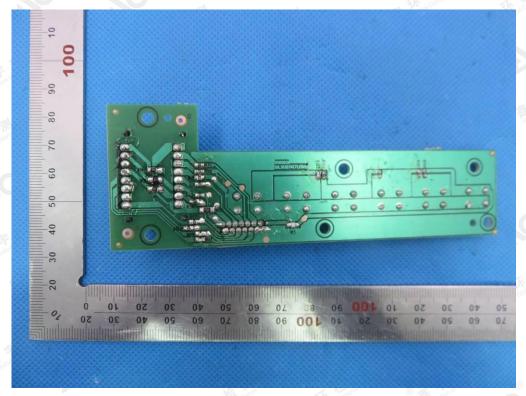


The results spowed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attr://www.agc.gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China





**INTERNAL VIEW OF EUT-5** 



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true. It www.agc.gett.com.





**INTERNAL VIEW OF EUT-7** 

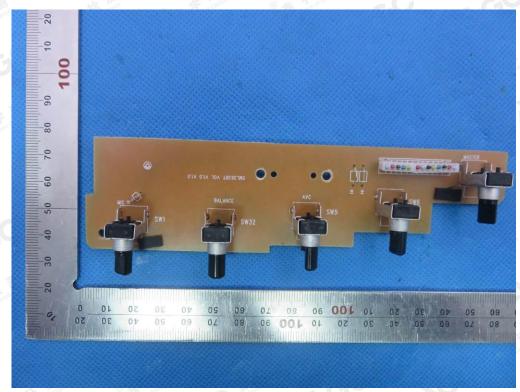


The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attr://www.agc-gett.com.





**INTERNAL VIEW OF EUT-9** 

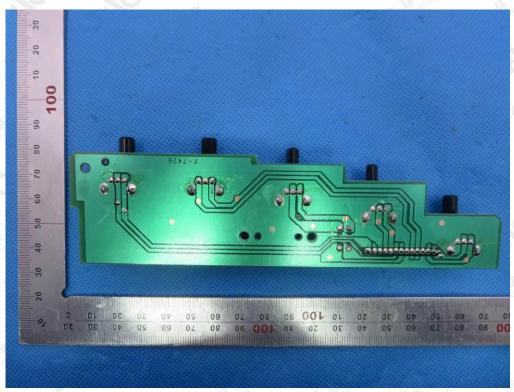


The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true. It www.agc.gett.com.

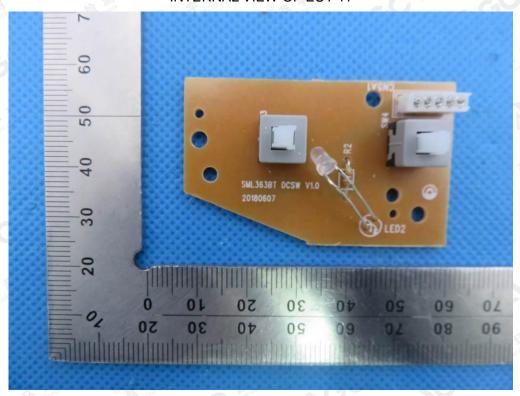
Attestation of Global Compliance

AGC 8





**INTERNAL VIEW OF EUT-11** 

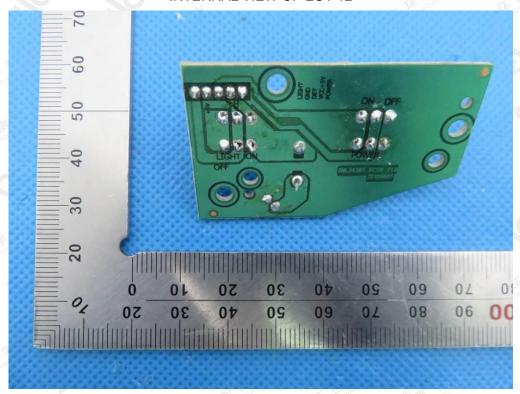


The results spoured this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by XGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true www.agc.gett.com.

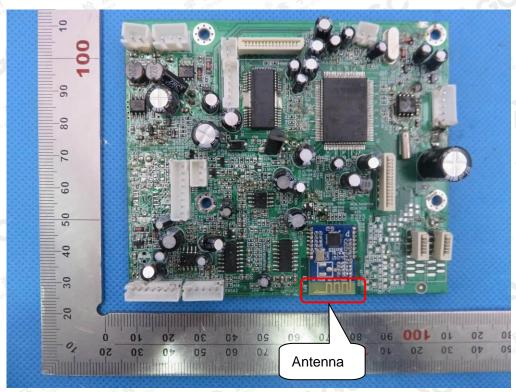
Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F. , Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China





**INTERNAL VIEW OF EUT-13** 

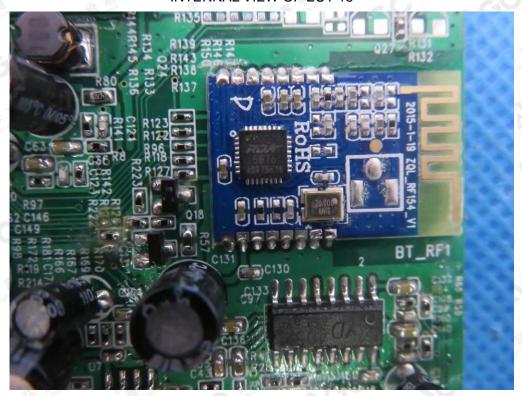


The results showing this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attp://www.agc.gent.com.





**INTERNAL VIEW OF EUT-15** 



The results showed this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at a true; //www.agc.gett.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China



#### **VIEW OF ADAPTER 1**



**VIEW OF ADAPTER 2** 



----END OF REPORT----

The results spound this jest report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by AGC, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at attr://www.agc.cent.com.

Attestation of Global Compliance

Tel: +86-755 2908 1955 Fax: +86-755 2600 8484 E-mail: agc@agc-cert.com @ 400 089 2118 Add: 2/F., Building 2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong China