

APPLICATION CERTIFICATION FCC Part 15C On Behalf of XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD

Massage Chair Model No.: AG-6800A, GRAVIS

FCC ID: YMX-GRAVIS

Prepared for Address	 XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD NO.168, QIANPU ROAD, SIMING DISTRICT, XIAMEN, FUJIAN, CHINA
Prepared by Address	 Shenzhen Accurate Technology Co., Ltd. 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China Tel: (0755) 26503290

Tel: (0755) 26503290 Fax: (0755) 26503396

Report No.	:	ATE20171812
Date of Test	:	August 29-September 15, 2017
Date of Report	:	September 18, 2017



TABLE OF CONTENTS

Description

Page

Test Re	eport Certification	
1. GF	NERAL INFORMATION	5
1.1.	Description of Device (EUT)	5
1.2.	Carrier Frequency of Channels	
1.3.	Special Accessory and Auxiliary Equipment	6
1.4.	Description of Test Facility	
1.5.	Measurement Uncertainty	
2. MI	EASURING DEVICE AND TEST EQUIPMENT	8
3. OP	PERATION OF EUT DURING TESTING	9
3.1.	Operating Mode	
3.2.	Configuration and peripherals	9
4. TE	ST PROCEDURES AND RESULTS	
5. PO	WER LINE CONDUCTED MEASUREMENT	
5.1.	Block Diagram of Test	
5.2.	Power Line Conducted Emission Measurement Limits	
5.3.	Configuration of EUT on Measurement	
5.4.	Operating Condition of EUT	
5.5.	Test Procedure	
5.6.	Data Sample	
5.7.	Power Line Conducted Emission Measurement Results	
6. 6D	B BANDWIDTH MEASUREMENT	
6.1.	Block Diagram of Test Setup	
6.2.	The Requirement For Section 15.247(a)(2)	
6.3.	EUT Configuration on Measurement	
6.4.	Operating Condition of EUT	
6.5.	Test Procedure	
6.6.	Test Result	
	AXIMUM PEAK OUTPUT POWER	
7.1.	Block Diagram of Test Setup	
7.2.	The Requirement For Section 15.247(b)(3)	
7.3.	EUT Configuration on Measurement	
7.4.	Operating Condition of EUT	
7.5. 7.6.	Test Procedure Test Result	
	WER SPECTRAL DENSITY MEASUREMENT	
8.1. 8.2.	Block Diagram of Test Setup The Requirement For Section 15.247(e)	
8.2. 8.3.	1	
8.3. 8.4.	EUT Configuration on Measurement Operating Condition of EUT	
8.4. 8.5.	Test Procedure	
8.5. 8.6.	Test Result	
	ND EDGE COMPLIANCE TEST	
9.1.	Block Diagram of Test Setup	
9.1. 9.2.	The Requirement For Section 15.247(d)	
9.3.	EUT Configuration on Measurement	
	÷ ·	

Report No.: ATE20171812 Page 3 of 55



Operating Condition of EUT	
Test Procedure	
Test Result	
DIATED SPURIOUS EMISSION TEST	
Block Diagram of Test Setup	
The Limit For Section 15.247(d)	
Restricted bands of operation	
Configuration of EUT on Measurement	
Operating Condition of EUT	
Test Procedure	
Data Sample	
The Field Strength of Radiation Emission Measurement Results	
TENNA REQUIREMENT	55
The Requirement	
	Block Diagram of Test Setup The Limit For Section 15.247(d) Restricted bands of operation Configuration of EUT on Measurement Operating Condition of EUT Test Procedure Data Sample The Field Strength of Radiation Emission Measurement Results TENNA REQUIREMENT

11.1.	The Requirement	.55
	Antenna Construction	



Test Report Certification

Applicant	:	XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD
Manufacturer	:	XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD
EUT Description	:	Massage Chair
Model No.	:	AG-6800A, GRAVIS
Trade Mark	:	n.a.

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2016 ANSI C63.10: 2013

The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test :	August 29-September 15, 2017
Date of Report:	September 18, 2017
	BobWarg
Prepared by :	(Pression)
	(Bc Wart, Chilleer)
Approved & Authorized Signer :	(emm) v
	(Sean Liu, Manager)



1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT Model Number	:	Massage Chair AG-6800A, GRAVIS (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement. So we prepare the AG-6800A for test.)
Trade Mark	:	n.a.
Bluetooth version	:	BT V4.0 LE
Frequency Range	:	2402MHz-2480MHz
Number of Channels	:	40
Antenna Gain	:	2dBi
Antenna type	:	Integral Antenna
Power Supply	:	DC 24V(Power by Adapter)
Adapter	:	Model: YJS090A-2403000D
		Input: AC 100-240V; 50/60Hz
		Output: DC 24V; 3000mA
Modulation mode	:	GFSK
Applicant	:	XIAMEN COMFORT SCIENCE & TECHNOLOGY
		GROUP CO., LTD
Address	:	NO.168, QIANPU ROAD, SIMING DISTRICT,
		XIAMEN, FUJIAN, CHINA
Manufacturer	:	XIAMEN COMFORT SCIENCE & TECHNOLOGY
Wanulactulei	•	GROUP CO., LTD
Address		NO.168, QIANPU ROAD, SIMING DISTRICT,
/ Iddiess	•	XIAMEN, FUJIAN, CHINA
Date of sample received	:	August 26, 2017
Date of Test	:	August 29-September 15, 2017



Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channe 1	Frequceny (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

1.2.Carrier Frequency of Channels

1.3. Special Accessory and Auxiliary Equipment

N/A



1.4.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358
		Listed by Innovation, Science and Economic Development Canada (ISEDC)
		The Registration Number is 5077A-2
		Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193
Name of Firm Site Location	:	Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01 Shenzhen Accurate Technology Co., Ltd. 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2



2. MEASURING DEVICE AND TEST EQUIPMENT

		т	C /NT		0 111 / 1 /1
Kind of equipment	Manufacturer	Туре	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 7, 2017	1 Year
				,	
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 7, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 7, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354	3791	Jan. 7, 2017	1 Year
		0-01			
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	1 Year
				,	
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	1 Year
	Sentralecter	2011/1202	<i>J</i> 1202 000	oun: 10, 2017	1 1001
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	1 Year
LICN	Dahda & Cabuyana	ECU2 75	100205	Ion 7 2017	1 Voor
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 7, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 7, 2017	1 Year
				,	
Highpass Filter	Wainwright	WHKX3.6/18	N/A	Jan. 7, 2017	1 Year
	Instruments	G-10SS			
Band Reject Filter	Wainwright	WRCG2400/2	N/A	Jan. 7, 2017	1 Year
5	Instruments	485-2375/2510			
		-60/11SS			
L		00/1100		1	

Table 1: List of Test and Measurement Equipment

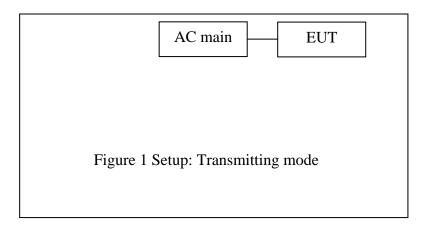


3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **BLE Transmitting mode** Low Channel: 2402MHz Middle Channel: 2440MHz High Channel: 2480MHz

3.2. Configuration and peripherals





4. TEST PROCEDURES AND RESULTS

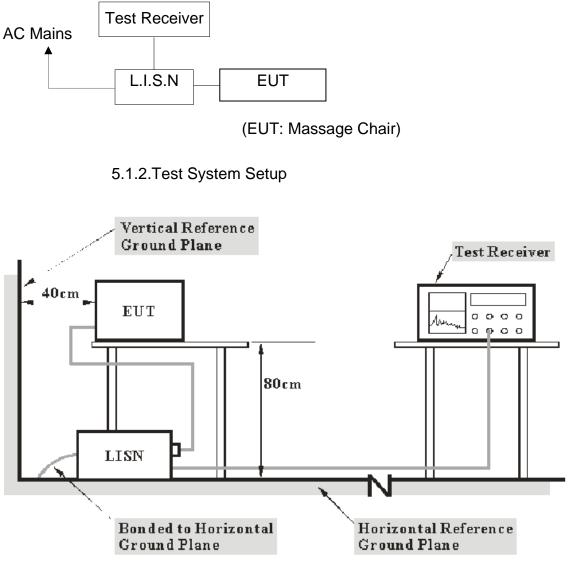
FCC Rules	Description of Test	Result
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant



5. POWER LINE CONDUCTED MEASUREMENT

5.1.Block Diagram of Test

5.1.1.Block diagram of connection between the EUT and simulators



- Note: 1. Support units were connected to second LISN.
 - 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.



Frequency	Limit d	Β(μV)				
(MHz)	Quasi-peak Level	Average Level				
0.15 - 0.50	66.0 - 56.0 *	56.0 - 46.0 *				
0.50 - 5.00	56.0	46.0				
5.00 - 30.00	60.0	50.0				
NOTE1: The lower limit sh	all apply at the transition fre	quencies.				
NOTE2: The limit decreases linearly with the logarithm of the frequency in the						
range 0.15MHz to	o 0.50MHz.					

5.2. Power Line Conducted Emission Measurement Limits

5.3.Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

5.4. Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in test mode and measure it.

5.5.Test Procedure

The EUT is put on the plane 0.1 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.



5.6.Data Sample

Frequency (MHz)	Transducer value (dB)	QuasiPeak Level (dBµV)	Average Level (dBµV)	QuasiPeak Limit (dBuV)	Average Limit (dBµV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
0.150000	10.8	51.40	46.50	66.0	56.0	14.6	9.5	Pass

 $\begin{array}{l} \mbox{Frequency(MHz)} = \mbox{Emission frequency in MHz} \\ \mbox{Transducer value(dB)} = \mbox{Insertion loss of LISN + Cable Loss} \\ \mbox{Level(dB}_{\mu}V) = \mbox{Quasi-peak Reading/Average Reading + Transducer value} \\ \mbox{Limit (dB}_{\mu}V) = \mbox{Limit stated in standard} \\ \mbox{Margin} = \mbox{Limit (dB}_{\mu}V) - \mbox{Level (dB}_{\mu}V) \end{array}$

Calculation Formula: Margin = Limit ($dB\mu V$) - Level ($dB\mu V$)



5.7. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : B	T comm	nunicatir	ng(AC	120V/60	Hz)					
EUT mode : AG-6800A MEASUREMENT RESULT: "CM-0829004 fin"										
		: "СМ-О	829004							
2017-8-29 9:55 Frequency	2 Level	Transd	Limit	Margin	Detector	Line	PE			
MHz	dBµV	dB	dBµV	dB	Detector	TTHE	ГĿ			
0.150000	51.40	10.8	66	14.6	QP	L1	GND			
0.682000 1.606000	31.60 37.30	11.1 11.2	56 56	24.4 18.7	QP QP	L1 L1	GND GND			
2.150000	32.30	11.2	56	23.7	QP	L1	GND			
6.015000	33.40	11.5	60	26.6	ΏΡ	L1	GND			
13.435000	24.70	11.6	60	35.3	QP	L1	GND			
MEASUREMENT	RESULT	: "СМ-0	829004	_fin2"						
2017-8-29 9:53	2									
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE			
0.150000	46.50	10.8	56	9.5	AV	L1	GND			
0.596000	25.00	11.0	46			L1	GND			
1.908000	27.90	11.3	46	18.1	AV	L1	GND			
2.210000 8.120000	26.10 22.80	11.3 11.5	46 50	19.9 27.2	AV AV	L1 L1	GND GND			
13.145000	17.70	11.6	50	32.3	AV	L1	GND			
MEASUREMENT	RESULT	: "СМ-О	829003	_fin"						
2017-8-29 9:4	5									
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE			
0.150000	51.50	10.8	66	14.5	QP	N	GND			
0.646000	31.40	11.0	56	24.6	QP	N	GND			
1.468000 2.125000	34.40 30.80	11.2 11.3	56 56	21.6 25.2	QP QP	N N	GND GND			
7.120000	28.40	11.5	60	31.6	0P	N	GND			
13.290000	24.30	11.6	60	35.7	Q₽	Ν	GND			
MEASUREMENT	RESULT	: "СМ-0	829003	fin2"						
2017-8-29 9:4										
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE			
MHz	dBµV	dB	dBµV	dB			-			
0.150000	46.40	10.8	56	9.6	AV	Ν	GND			
0.364000	25.00	10.9	49	23.6	AV	N	GND			
1.628000 2.125000	29.00 25.30	11.2 11.3	46 46	17.0 20.7	AV AV	N N	GND GND			
7.125000	20.60	11.5	50	29.4	AV	N	GND			
13.000000	20.00	11.6	50	30.0	AV	N	GND			



Test mode : BT communicating(AC 120V/60Hz) EUT mode : AG-6800A								
MEASUREMENT			829004	_fin"				
2017-8-29 9:53								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.150000 0.682000 1.606000 2.150000 6.015000 13.435000	51.40 31.60 37.30 32.30 33.40 24.70	10.8 11.1 11.2 11.3 11.5 11.6	66 56 56 60 60	14.6 24.4 18.7 23.7 26.6 35.3	QP QP QP QP QP QP	L1 L1 L1 L1 L1 L1	GND GND GND GND GND GND	
MEASUREMENT	RESULT	: "СМ-0	829004	l_fin2"				
2017-8-29 9:53	2							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.150000 0.596000 1.908000 2.210000 8.120000 13.145000	46.50 25.00 27.90 26.10 22.80 17.70	10.8 11.0 11.3 11.3 11.5 11.6	56 46 46 50 50	9.5 21.0 18.1 19.9 27.2 32.3	AV AV AV AV AV AV	L1 L1 L1 L1 L1 L1	GND GND GND GND GND GND	
MEASUREMENT	RESULT	: "СМ-0	829003	_fin"				
2017-8-29 9:45	5							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.150000 0.646000 1.468000 2.125000 7.120000 13.290000	51.50 31.40 34.40 30.80 28.40 24.30	10.8 11.0 11.2 11.3 11.5 11.6	66 56 56 60 60	14.5 24.6 21.6 25.2 31.6 35.7	QP QP QP QP QP QP	N N N N N	GND GND GND GND GND GND	
MEASUREMENT	RESULT	: "СМ-0	829003	_fin2"				
2017-8-29 9:45								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.150000 0.364000 1.628000 2.125000 7.125000 13.000000	46.40 25.00 29.00 25.30 20.60 20.00	10.8 10.9 11.2 11.3 11.5 11.6	56 49 46 50 50	9.6 23.6 17.0 20.7 29.4 30.0	AV AV AV AV AV AV	N N N N N	GND GND GND GND GND GND	

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

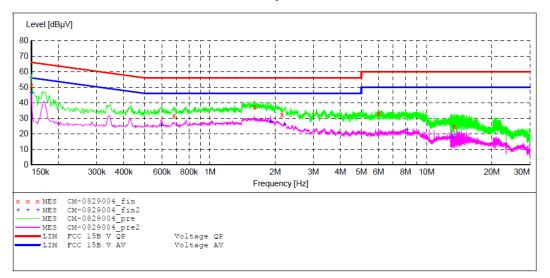


CONDUCTED EMISSION STANDARD FCC PART15B

EUT:	Massage Chair M/N:AG-6800A
Manufacturer:	COMFORT
Operating Condition:	BT communicating
Test Site:	1#Shielding Room
Operator:	DING
Test Specification:	L 120V/60Hz
Comment:	Report NO.:ATE20171812
Start of Test:	2017-8-29 / 9:51:12

SCAN TABLE: "V 150K-30MHz fin"

Short Description:				SUB STD VTE	DM2 1 70			
		-						
		-	-	Detector			Transducer	
	Frequency	Frequency	Width		Time	Bandw.		
	150.0 kHz	30.0 MHz	4.5 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008	
				Average				



MEASUREMENT RESULT: "CM-0829004_fin"

2017-8-29 9:52

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000 0.682000 1.606000 2.150000 6.015000 13.435000	51.40 31.60 37.30 32.30 33.40 24.70	10.8 11.1 11.2 11.3 11.5 11.6	66 56 56 60 60	14.6 24.4 18.7 23.7 26.6 35.3	QP QP QP QP	L1 L1 L1 L1 L1 L1	GND GND GND GND GND GND

MEASUREMENT RESULT: "CM-0829004_fin2"

2017-8-29 9:55 Frequency MHz	2 Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000 0.596000	46.50 25.00	10.8 11.0	56 46	9.5 21.0	AV AV	L1 L1	GND GND
1.908000	27.90	11.3	46	18.1	AV	L1	GND
2.210000	26.10	11.3	46	19.9	AV	L1	GND
8.120000	22.80	11.5	50	27.2	AV	L1	GND
13.145000	17.70	11.6	50	32.3	AV	L1	GND

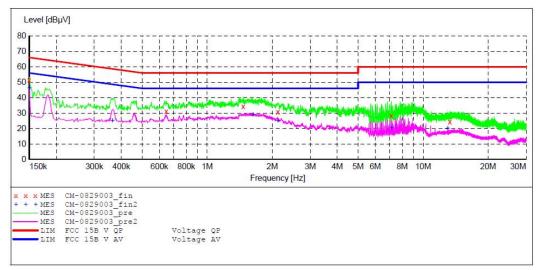


CONDUCTED EMISSION STANDARD FCC PART15B

EUT:	Massage Chair M/N:AG-6800A
Manufacturer:	COMFORT
Operating Condition:	BT communicating
Test Site:	1#Shielding Room
Operator:	DING
Test Specification:	N 120V/60Hz
Comment:	Report NO.:ATE20171812
Start of Test:	2017-8-29 / 9:41:47

SCAN TABLE: "V 150K-30MHz fin"

Short Desc	ription:		SUB STD VTE	RM2 1./0		
	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
	30.0 MHz		QuasiPeak Average	1.0 s	9 kHz	NSLK8126 2008



MEASUREMENT RESULT: "CM-0829003_fin"

2	017-8-29 9:4 Frequency MHz	5 Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.150000	51.50	10.8	66	14.5	QP	N	GND
	0.646000	31.40	11.0	56	24.6	Q P	N	GND
	1.468000	34.40	11.2	56	21.6	QP	N	GND
	2.125000	30.80	11.3	56	25.2	QP	N	GND
	7.120000	28.40	11.5	60	31.6	QP	N	GND
	13.290000	24.30	11.6	60	35.7	QP	N	GND

MEASUREMENT RESULT: "CM-0829003 fin2"

2017-8-29 9:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	46.40	10.8	56	9.6	AV	N	GND
0.364000	25.00	10.9	49	23.6	AV	N	GND
1.628000	29.00	11.2	46	17.0	AV	N	GND
2.125000	25.30	11.3	46	20.7	AV	N	GND
7.125000	20.60	11.5	50	29.4	AV	N	GND
13.000000	20.00	11.6	50	30.0	AV	N	GND



CONDUCTED EMISSION STANDARD FCC PART15B

EUT:	Massage Chair M/N:AG-6800A
Manufacturer:	COMFORT
Operating Condition:	BT communicating
Test Site:	1#Shielding Room
Operator:	DING
Test Specification:	N 240V/60Hz
Comment:	Report NO.:ATE20171812
Start of Test:	2017-8-29 / 9:58:06

SCAN TABLE: "V 150K-30MHz fin"

	ription:		_SUB_STD_VTER			
Start	Stop	Step	Detector	Meas.	IF	Transducer
	Frequency			Time	Bandw.	NOT 101 0 0 0 0 0
150.0 KHZ	30.0 MHz	4.5 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
			Average			
Louis (dBu)//						
Level [dBµV]						
) !						
)+			·		+-+-+-	
) + =	++	+		-+		
)						
m			يريد والمحاد والمحاد			
$W \setminus i_{\alpha} (\Lambda)$	WY have seen	The self of the and an and the	And the providence of the second s	فاقر بقاني فالفر بالملاء	کے کہ اور اور اور اگر	
)	the tracker has		Martin Martin		dinding and the	W. D. D. Market M. and Dates.
				-TATA COMPANY		A PARTY AND A P
) +						
) +				-++	4+-4-+	
)				-++	+-+-+-+- 	
) +		+	2M		5M 6M 8M	I 10M 20M 3
) +		00k 800k 1M	2M Frequency [H:		5M 6M 8M	
150k 3	329006_fin				5M 6M 8M	1 10M 20M 3
150k 3	329006_fin 329006_fin2	00k 800k 1M			5M 6M 8M	
150k (1000) 150k (1000) x x MES CM-08 + + MES CM-08	329006_fin 329006_fin2 329006_pre	00k 800k 1M			+-+-+ 5M 6M 8M	
x x MES CM-08 + + MES CM-08 MES CM-08 MES CM-08 LIM FCC 1	329006_fin 329006_fin2	Voltage QP Voltage AV	Frequency [H		+-+-+ 5M 6M 8M	

MEASUREMENT RESULT: "CM-0829006_fin"

2017-8-29 10:00

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.332000 0.500000 1.924000 2.425000 5.180000 16.135000	40.20 35.00 39.40 38.00 37.10 26.60	10.9 11.0 11.3 11.3 11.4 11.7	59 56 56 60 60	19.2 21.0 16.6 18.0 22.9 33.4	QP QP QP QP QP QP QP	N N N N N	GND GND GND GND GND GND

MEASUREMENT RESULT: "CM-0829006 fin2"

2017-8-29 10:00

Frequency Level Transd Limit Margin Detector Line PE MHz dBµV dB dBµV dB 10.9 13.0 AV 17.4 AV 12.5 AV 0.248000 38.80 52 GND 38.80 28.60 33.50 Ν 0.752000 46 11.1 Ν GND 11.3 11.3 11.4 1.922000 46 Ν GND 14.8 AV 21.3 AV 29.7 AV 2.425000 5.180000 31.20 28.70 20.30 46 GND Ν 50 Ν GND 16.045000 11.7 50 Ν GND

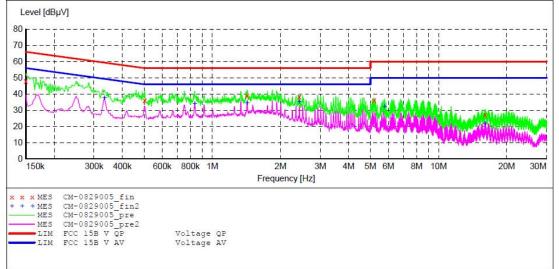


CONDUCTED EMISSION STANDARD FCC PART15B

Massage Chair M/N:AG-6800A
COMFORT
BT communicating
1#Shielding Room
DING
L 240V/60Hz
Report NO.:ATE20171812
2017-8-29 / 9:54:11

SCAN TABLE: "V 150K-30MHz fin"

Short Desc:	ription:	SHOW I A THINK I	SUB_STD_VTER	M2 1.70		
	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz		4.5 kHz	QuasiPeak Average	1.0 s		NSLK8126 2008



MEASUREMENT RESULT: "CM-0829005 fin"

2017-8-29 9:57

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	48.10	10.8	66	17.9	QP	L1	GND
0.502000	36.40	11.0	56	19.6	QP	L1	GND
1.424000	39.10	11.2	56	16.9	QP	L1	GND
2.425000	38.50	11.3	56	17.5	OP	L1	GND
5.185000	36.10	11.4	60	23.9	QP	L1	GND
16.060000	27.20	11.7	60	32.8	QP	L1	GND

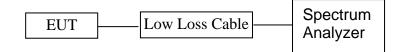
MEASUREMENT RESULT: "CM-0829005 fin2"

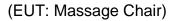
					_			
2	017-8-29 9:57	7						
	Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
		12						
	0.334000	37.60	10.9	49	11.8	AV	L1	GND
	0.836000	34.10	11.1	46	11.9	AV	L1	GND
	1.424000	34.60	11.2	46	11.4	AV	L1	GND
	2.425000	35.20	11.3	46	10.8	AV	L1	GND
	5.770000	32.20	11.5	50	17.8	AV	L1	GND
	16.060000	21.90	11.7	50	28.1	AV	L1	GND



6. 6DB BANDWIDTH MEASUREMENT

6.1.Block Diagram of Test Setup





6.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.3.EUT Configuration on Measurement

The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

- 6.4.1.Setup the EUT and simulator as shown as Section 6.1.
- 6.4.2.Turn on the power of all equipment.
- 6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

6.5.Test Procedure

- 6.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 6.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to300 kHz.
- 6.5.3.The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

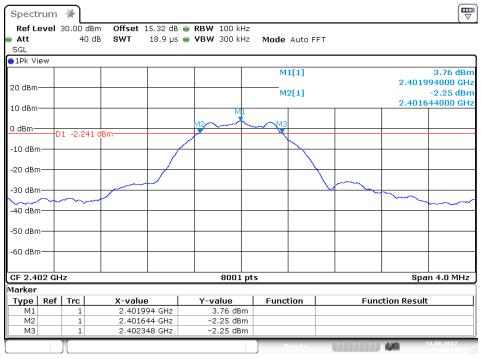


6.6.Test Result

Channel	Frequency (MHz)	6 dB Bandwith (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.704	0.5	PASS
19	2440	0.699	0.5	PASS
39	2480	0.697	0.5	PASS

The spectrum analyzer plots are attached as below.

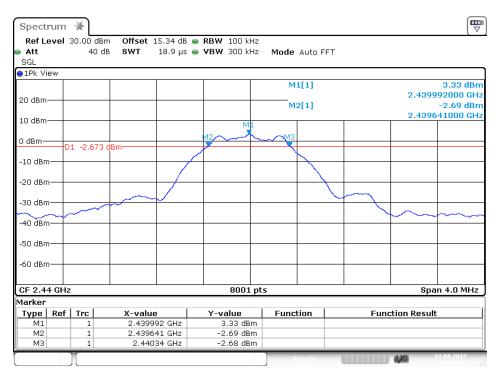
channel 0



Date: 31.AUG.2017 14:06:14

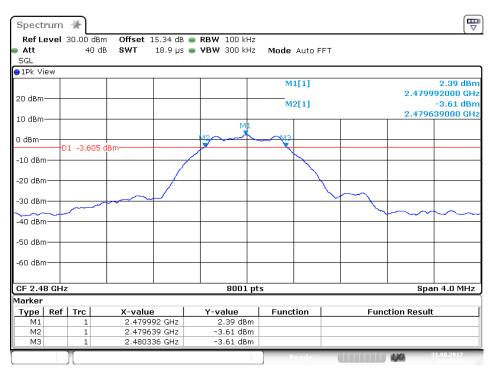


channel 19



Date: 31.AUG.2017 14:07:03

channel 39



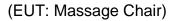
Date: 31.AUG.2017 14:07:44



7. MAXIMUM PEAK OUTPUT POWER

7.1.Block Diagram of Test Setup





7.2. The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

7.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.4. Operating Condition of EUT

7.4.1.Setup the EUT and simulator as shown as Section 7.1.

- 7.4.2.Turn on the power of all equipment.
- 7.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

7.5.Test Procedure

- 7.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 7.5.2.Set RBW of spectrum analyzer to 3 MHz and VBW to 3 MHz.
- 7.5.3.Measurement the maximum peak output power.



7.6.Test Result

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail	
0	2402	4.31	30	PASS	
19	19 2440		30	PASS	
39	2480	2.94	30	PASS	

The spectrum analyzer plots are attached as below.

Spectrum 🔆					
Ref Level 30.00 Att 41 SGL		dB e RBW 3 MH ms e VBW 3 MH		/еер	X
●1Pk Max	1 1	1 1			
			M1[1]		4.31 dBm 2.402201470 GHz
20 dBm					
10 dBm					
10 dBm			M1		
0 dBm					
-10 dBm					
-20 dBm					
-30 dBm					
-40 dBm					
-50 dBm					
co dom					
-60 dBm					
CF 2.402 GHz		8001	nts		Span 4.0 MHz
J. LINZ GIE		0001	Ready		31.08.2017

channel 0

Date: 31.AUG.2017 14:06:22

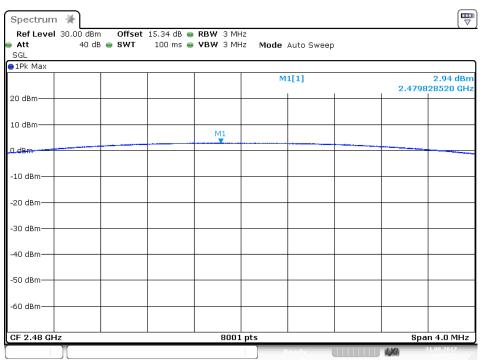


channel 19

Spectrum	*						
RefLevel 30 Att SGL		Offset e SWT	RBW 3 MH		Auto Sweep		
∋1Pk Max							
				М	1[1]	2.439	3.81 dBm 580540 GHz
20 dBm							1
10 dBm			M1				
0 dBm							
-10 dBm							
-20 dBm							
-30 dBm							
-40 dBm							
-50 dBm							
-60 dBm							
CF 2.44 GHz			8001	pts		Sna	an 4.0 MHz
					Ready	- M	31.08.2017 14:07:10

Date: 31.AUG.2017 14:07:10

channel 39



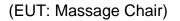
Date: 31.AUG.2017 14:07:52



8. POWER SPECTRAL DENSITY MEASUREMENT

8.1.Block Diagram of Test Setup





8.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.4. Operating Condition of EUT

- 8.4.1.Setup the EUT and simulator as shown as Section 8.1.
- 8.4.2.Turn on the power of all equipment.
- 8.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.



8.5.Test Procedure

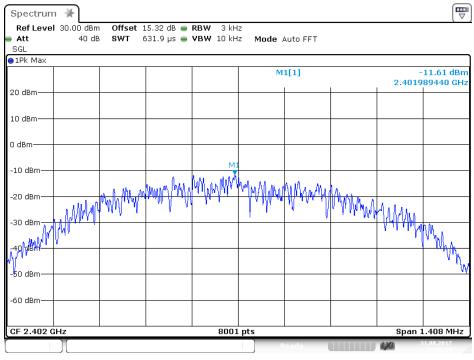
- 8.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 8.5.2. Measurement Procedure PKPSD:
- 8.5.3. This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.
 - 1. Set analyzer center frequency to DTS channel center frequency.
 - 2. Set the span to 1.5 times the DTS channel bandwidth.
 - 3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
 - 4. Set the VBW \geq 3 x RBW.
 - 5. Detector = peak.
 - 6. Sweep time = auto couple.
 - 7. Trace mode = max hold.
 - 8. Allow trace to fully stabilize.
 - 9. Use the peak marker function to determine the maximum amplitude level.
 - 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 8.5.4.Measurement the maximum power spectral density.



8.6.Test Result

CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	-11.61	8	PASS
19	2440	-12.05	8	PASS
39	2480	-12.81	8	PASS

The spectrum analyzer plots are attached as below.

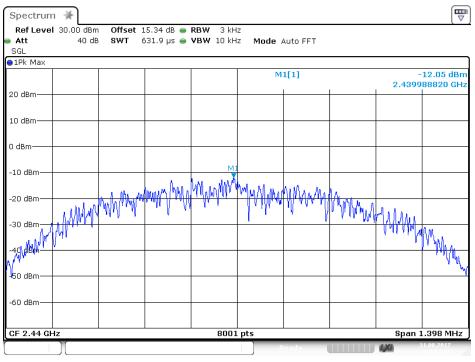


channel 0

Date: 31.AUG.2017 14:06:29

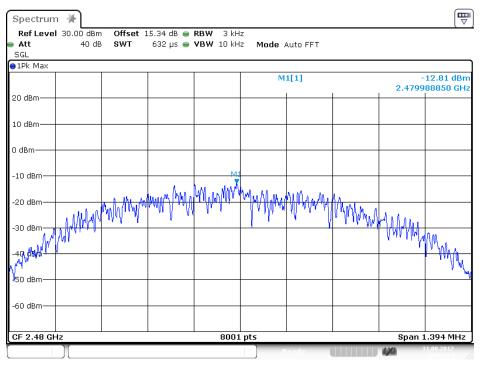


channel 19



Date: 31.AUG.2017 14:07:18

channel 39

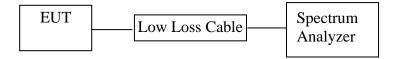


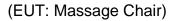
Date: 31.AUG.2017 14:09:24



9. BAND EDGE COMPLIANCE TEST

9.1.Block Diagram of Test Setup





9.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

9.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.4. Operating Condition of EUT

- 9.4.1.Setup the EUT and simulator as shown as Section 9.1.
- 9.4.2.Turn on the power of all equipment.
- 9.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2480MHz TX frequency to transmit.



9.5.Test Procedure

Conducted Band Edge:

- 9.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.
- 9.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.
- 9.5.3. Radiate Band Edge:
- 9.5.4. The EUT is placed on a turntable, which is 0.1m above the ground plane and worked at highest radiated power.
- 9.5.5.The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 9.5.6.EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 9.5.7.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

9.5.8.RBW=1MHz, VBW=1MHz

9.5.9. The band edges was measured and recorded.

9.6.Test Result

Pass

Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.4GHz	31.40	20
39	2.4835GHz	36.05	20



channel 0

Spectrum	*								
Ref Level Att SGL				RBW 100 kH: VBW 300 kH:		Auto F	FT		
😑 1Pk Max)
20 dBm						1[1]			3.78 dBm 98730 GHz
					M	2[1]			35.18 dBm 30000 GHz
10 dBm					MI				
0 dBm					<u>A</u>				
-10 dBm					\mathbb{A}				
-20 dBm	01 -16.2	20 dBm			\square				
-30 dBm			МЗ	Me	<u>A U</u>				
***	where	union and the second	MI3	welling has not at the	Mymm	<u>n de la construcción</u>	Arraphican a potenticipation of	and the second second	when when the states
-50 dBm									
-60 dBm									
CF 2.4 GHz				8001 p	nts			Snan	60.0 MHz
Marker				0001				opan	00101/11/2
Type Ref	Trc	X-value	1	Y-value	Funct	tion	Fun	ction Result	1
M1	1	2.401987	3 GHz	3.78 dBm					
M2	1		4 GHz	-35.18 dBm					
M3 M4	1	2.3	9 GHz	-38.15 dBm -35.20 dBm					
)[2.307077		33.20 UBI	R	eady		100	1.08.2017

Date: 31.AUG.2017 14:06:37

channel 39

Spectrun	n 💥									
Ref Leve Att SGL				 RBW 100 ki VBW 300 ki 		Auto F	FT			
∋1Pk Max										
					M	1[1]			2 47	2.14 dBm 999040 GHz
20 dBm					м	2[1]				-38.19 dBm
10 dBm									2.48	350000 GHz
10 00111				M1						
0 dBm				<u> </u>						
-10 dBm				<u> </u>						
-10 0011				1 11						
-20 dBm	D1 -17.	860 dBm								
-30 dBm										
				, M	2 Wh Millian M a			M3		las de la
146 Yernau	Martine grant	himmonormaliye	Contraction of the second	Work when	White Man Min	hhall/wint	- Million for the second	will write	AN ANY MAN	Protect Property and
-50 dBm										
-30 ubiii										
-60 dBm—										
CF 2.4835	GHz	•		8001	pts				Spar	n 60.0 MHz
larker										
Type Re	_	X-value		Y-value	Func	tion		Func	tion Resul	t
M1 M2	1	2.47999	04 GHz 35 GHz	2.14 dB -38.19 dB						
M3	1		.5 GHz	-39.58 dB						
M4	1	2.4996		-34.95 dB						
)[leady_			4.20	31.08.2017

Date: 31.AUG.2017 14:09:32



Radiated Band Edge Result

Date of Test:	September 15, 2017	Temperature:	25°C
EUT:	Massage Chair	Humidity:	50%
Model No.:	AG-6800A	Power Supply:	AC 120V/60Hz
Test Mode:	TX (2402MHz) GFSK	Test Engineer:	Ding

Frequency	Reading	(dBµV/m)	Factor(dB)	Result(dBµV/m)	Limit(dl	BµV/m)	Margi	n(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2390.000	31.76	40.30	-5.89	25.87	34.41	54.00	74.00	-28.13	-39.59	Vertical
2400.000	44.61	54.02	-5.80	38.81	48.22	54.00	74.00	-15.19	-25.78	Vertical
2390.000	31.75	40.39	-5.89	25.86	34.50	54.00	74.00	-28.14	-39.50	Horizontal
2400.000	40.91	49.52	-5.80	35.11	43.72	54.00	74.00	-18.89	-30.28	Horizontal

Date of Test:	September 15, 2017	Temperature:	25°C
EUT:	Massage Chair	Humidity:	50%
Model No.:	AG-6800A	Power Supply:	AC 120V/60Hz
Test Mode:	TX (2480MHz) GFSK	Test Engineer:	Ding

Freq	uency	Reading	(dBµV/m)	Factor(dB)	Result(dBµV/m)		Limit(dl	BμV/m)	Margi	Polarization	
(M	1Hz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
248	3.500	32.86	41.74	-5.51	27.35	36.23	54.00	74.00	-26.65	-37.77	Vertical
250	0.000	31.91	40.35	-5.50	26.41	34.85	54.00	74.00	-27.59	-39.15	Vertical
248	3.500	33.78	42.36	-5.51	28.27	36.85	54.00	74.00	-25.73	-37.15	Horizontal
250	0.000	29.64	38.90	-5.50	24.14	33.40	54.00	74.00	-29.86	-40.60	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.

- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows: Result = Reading + Corrected Factor
- 3. Display the measurement of peak values.



Report No.: ATE20171812 Page 34 of 55

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.Chin Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

ALC: NOT		Sc	ience & Ind	dustry Park,	Vanshan Sh	nenzhen.	,P.R.Chi	na	Fax	:+86-075	5-26503396
Job N	o.: CORNLEY	′ #100				F	Polarizati	ion: \	/ertical		
Stand	ard: FCC PK					F	Power So	ource:	AC 120	V/60Hz	
Test if	tem: Radiatic	n Test	Date: 17/09/15/								
Temp	.(<mark>C)/Hum.(%</mark>) 25 C/5	5 %	Time: 11/39/26							
EUT:	Massage	Chair	Engineer Signature:								
Mode	TX 2402	TX 2402MHz Distance: 3m									
Mode	: AG-6800/	4									
Manut	facturer: COM	FORT									
Note:	Report NO.	ATE201718	312								
10	0.0 dBuV/m										
10									limit1:]	
90									limit2:		
							A.				
80											
70											
60											
	Sala de Parte Internet a Poloso de curato			leteriellen Herzelinin en stationen mit en							
50											
							L L				
40						1,	N		knallengensende		
30	hyperperimental and a particular	44 hours and a second dependence	when the shares and	wither and the shall be a state of the state	with when applies of	unanthe sty	Arthonya .	******	Kananakanakan	or which a Hosbier of	
						4					
20											
10	0										
	2300.000									2440.0	MHz
	-	-	_	~						ŕ	
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2390.000	40.30	-5.89	34.41	74.00	-39.59	peak	150	230		
2	2390.000	31.76	-5.89	25.87	54.00	-28. <mark>1</mark> 3	AVG	150	230		
3	2400.000	54.02	-5.80	48.22	74.00	-25.78	peak	150	131		

4

2400.000

44.61

-5.80

38.81

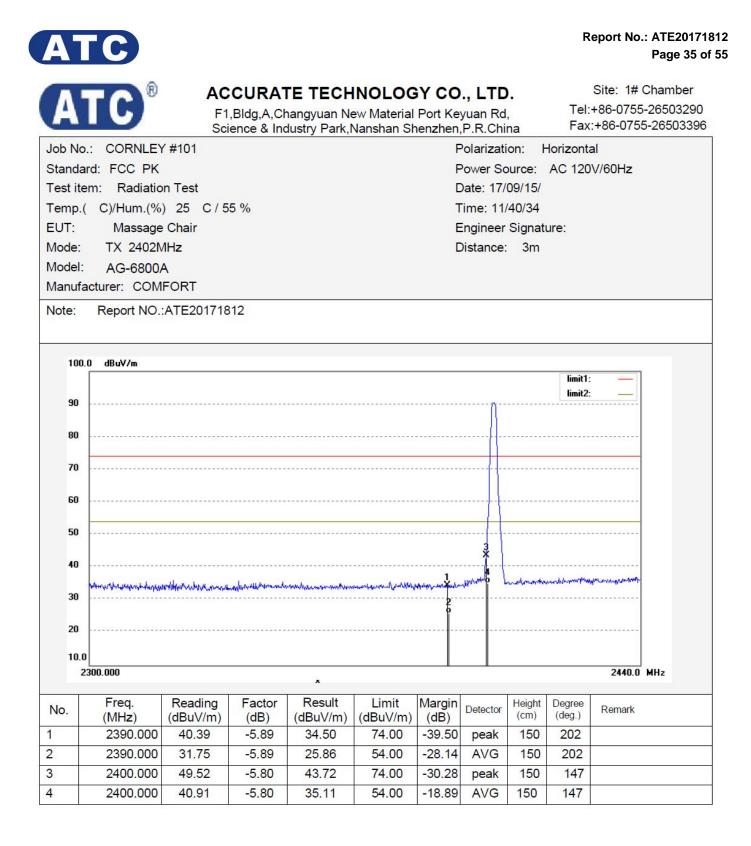
54.00

-15.19

AVG

150

131



	C								R	eport No	.: ATE2017 Page 36
A	TC®	F1	,Bldg,A,Cl	TE TECH hangyuan Ne dustry Park,I	ew Material	Port Ke	yuan Rd	,		+86-0755	Chamber 5-26503290 5-26503396
Job No	D.: CORNLEY	⁄ #108				F	olarizati	on: \	/ertical		
Standa	ard: FCC PK					F	ower Sc	ource:	AC 120	V/60Hz	
Test ite	em: Radiatio	n Test				0)ate: 17/	09/15/			
Temp.	(C)/Hum.(%) 25 C/5	5 %			Т	ime: 13/	40/11			
EUT:	Massage	Chair				E	ngineer	Signat	ure:		
Mode:	TX 2480M	1Hz				0	istance:	3m			
Model:	: AG-6800/	٩									
Manufa	acturer: COM	FORT									
Note:	Report NO.:	ATE201718	12								
	an na har 🔸 na har shin sa har ƙwallon										
100).0 dBuV/m								E_34		
		ſ	6						limit1: limit2:		
90											
80											
00											
70											
60											
50											
50											
40											
	mohumahannon	honoranth	Strating and a state	where the state of	how we have the second second	which which have made	ultimater wards	man hall	nynumunturling	white the should be	
30			2	4	·····						
20											
20											
10.0											
	2440.000			*						2600.0	MHz
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2483.500	41.74	-5.51	36.23	74.00	-37.77	peak	150	334		
•	0100 500	32.86	-5.51	27.35	54.00	-26.65	AVG	150	334		
2	2483.500										
	2483.500 2500.000	40.35	-5.50	34.85	74.00	-39.15	peak	150	247		

A	ГС								R	Report No	.: ATE20171 Page 37 o
A	TC®	F1	,Bldg,A,C	TE TECH hangyuan Ne dustry Park,l	ew Material	Port Ke	yuan Rd	,		+86-0755	Chamber 5-26503290 5-26503396
Job No	.: CORNLEY	′ #109				F	Polarizati	on: H	-lorizont	al	
Standa	rd: FCC PK					F	Power So	ource:	AC 120	V/60Hz	
Test ite	em: Radiatio	n Test				[Date: 17/	09/15/			
Temp.(C)/Hum.(%) 25 C/5	5 %			7	Time: 13/	43/22			
EUT:	Massage	Chair				E	Engineer	Signat	ure:		
Mode:	TX 2480N	1Hz				۵	Distance:	3m			
Model:	AG-6800/	٩									
Manufa	acturer: COM	FORT									
Note:	Report NO.:	ATE201718	12								
100	a 10 MJ										
100.	.0 dBuV/m								limit1:	_	
00									limit2:		
90											
80											
70											
60			1								
00											
50											
40	autoral to		- k						harren na darr	where Marshall	
30	anlinghterhistorist	lon-underlight	2	hts and a second	human winder have	New Andrew States	nathanaidhdhaunn.	and have been a second	and the first star	ALAN ALAN AN ALAN	
			0	4							
20											
										2600.0	MHz
10.0	440.000			*	1						
10.0	440.000		1		Limit	Margin	Detector	Height (cm)	Degree (deg.)	Remark	
10.0		Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	(dBuV/m)	(dB)					
10.0 2 No.	440.000 Freq.					(dB) -37.15	peak	150	102		
10.0 2	440.000 Freq. (MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)		Service Section of the second	150 150	The second second		
10.0 2 No. 1	440.000 Freq. (MHz) 2483.500	(dBuV/m) 42.36	(dB) -5.51	(dBuV/m) 36.85	(dBuV/m) 74.00	-37.15	AVG	State of the	102		

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

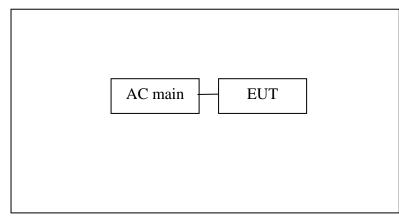
3. Display the measurement of peak values.



10.RADIATED SPURIOUS EMISSION TEST

10.1.Block Diagram of Test Setup

10.1.1.Block diagram of connection between the EUT and peripherals

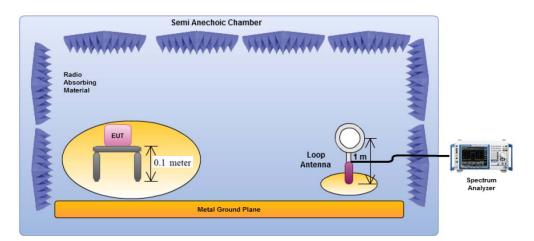


Setup: Transmitting mode

(EUT: Massage Chair)

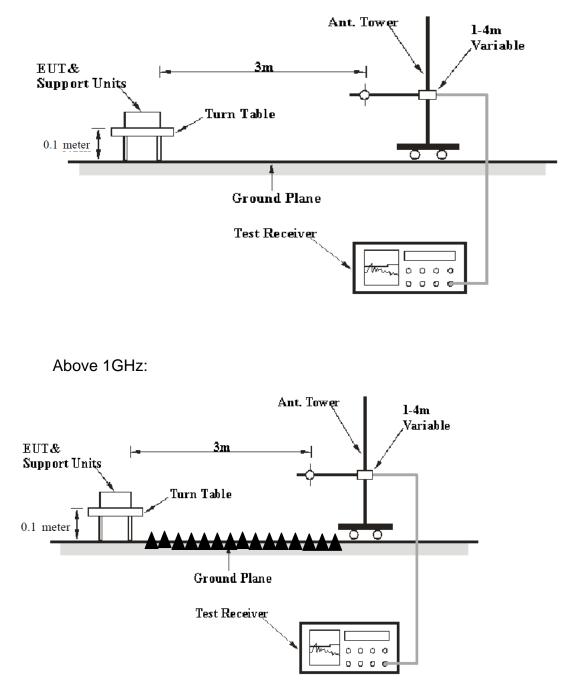
10.1.2.Semi-Anechoic Chamber Test Setup Diagram

Below 30MHz





Below 1GHz:



10.2. The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging



over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3.Restricted bands of operation

10.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	$(^{2})$
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 2 Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

10.4. Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.



10.5.Operating Condition of EUT

- 10.5.1.Setup the EUT and simulator as shown as Section 10.1.
- 10.5.2.Turn on the power of all equipment.
- 10.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

10.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.1 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 0.1 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 25GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain



10.7.Data Sample

Frequency	Reading	Factor	Result	Limit	Margin	Remark
(MHz)	(dBμv)	(dB/m)	(dBμv/m)	(dBµv/m)	(dB)	
78.5456	58.61	-22.09	36.52	40.00	-3.48	QP

Frequency(MHz) = Emission frequency in MHz Reading(dB μ v) = Uncorrected Analyzer/Receiver reading Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain Result(dB μ v/m) = Reading(dB μ v) + Factor(dB/m) Limit (dB μ v/m) = Limit stated in standard Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m) QP = Quasi-peak Reading

Calculation Formula: Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m) Result(dB μ V/m)= Reading(dB μ V)+ Factor(dB/m) The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

10.8. The Field Strength of Radiation Emission Measurement Results PASS.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

3. The radiation emissions from 18-25GHz are not reported, because the test values lower than the limits of 20dB.



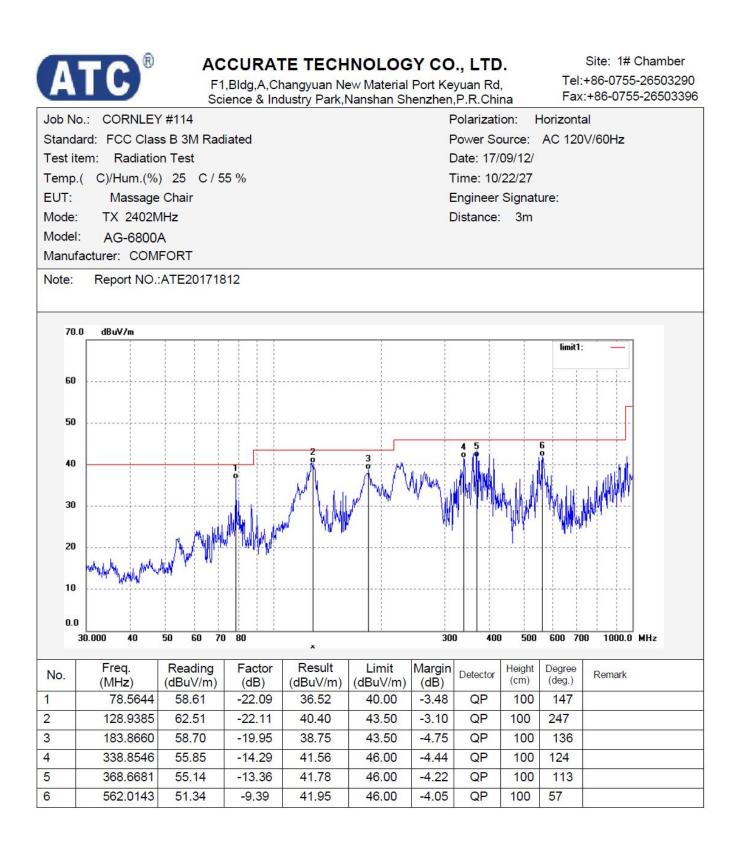
Report No.: ATE20171812 Page 43 of 55

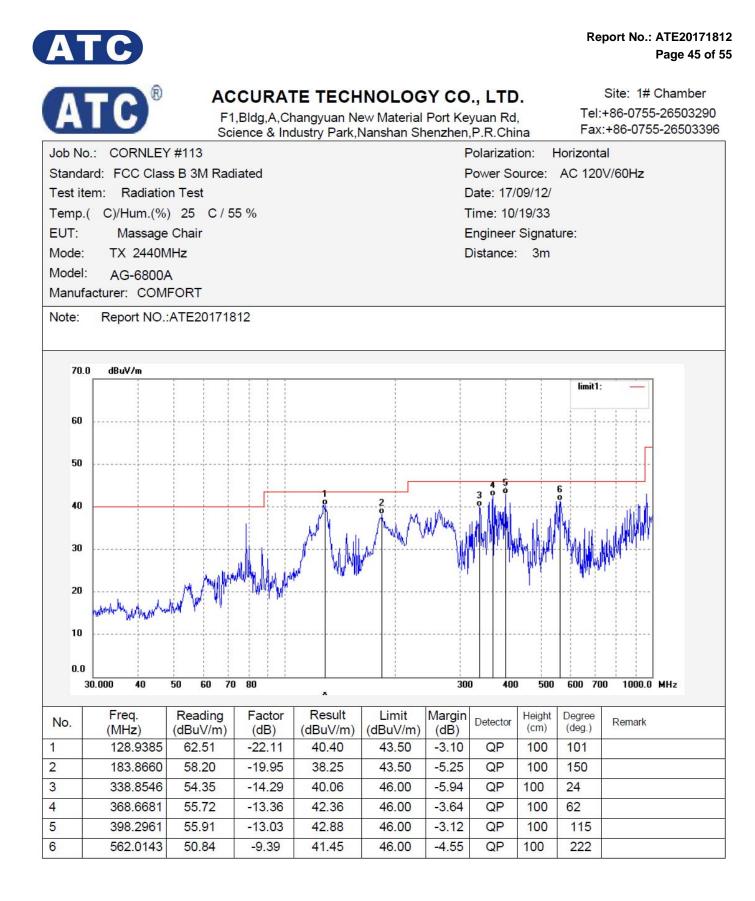
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

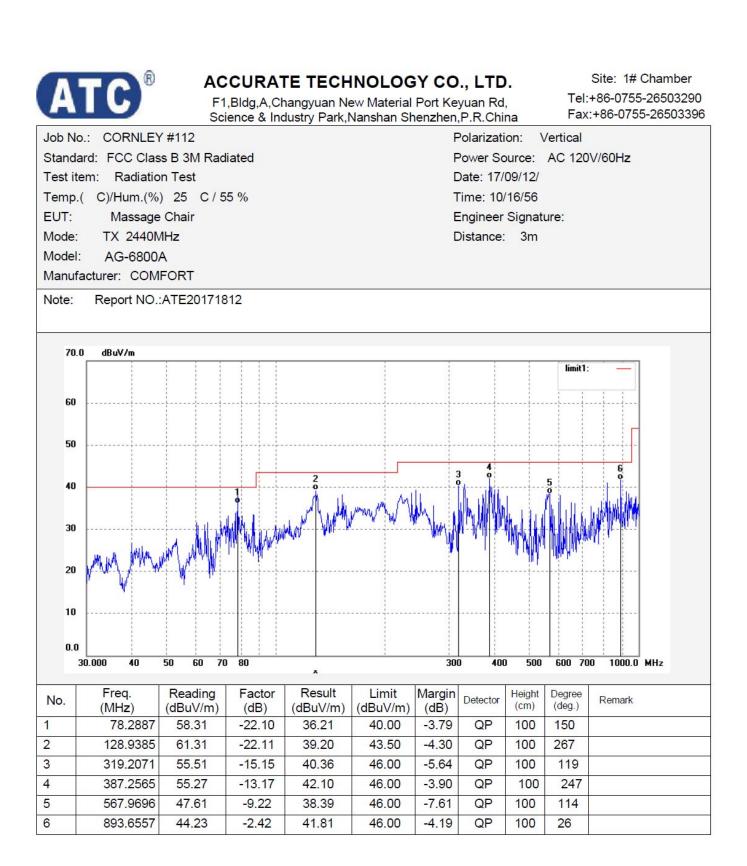
ob N	ORNLE	(#115				F	Polarizati	on: \	/ertical		
	lard: FCC Clas		ower Sc)V/60Hz					
	tem: Radiatio		Date: 17/		annen harren						
emp			ime: 10/								
UT:			Ingineer		ure:						
UT: Massage Chair Iode: TX 2402MHz							Distance:				
lode						_					
	facturer: COM										
lote:		:ATE201718	312								
70	.0 dBuV/m										
									limit1:		
60											
			1 1 1			1					
50	. L								E E E E E E E E E		
50											
				2	3	4	5			6	
50 40			1	2	3		5		1	6 0	
40				2	3	ML.	5		A. L.u.,	5	
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		5	l Male II.		6 6	
40	и 	ar alla			3. ////////////////////////////////////		5 5				
40 30	и 	wy.MM	hill the second		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		5			6 0	
40 30	mun mun	um publik d			, 3 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1	M M	5				
40 30 20	mun mun	wy.	* *		3		5			6 0	
40 30 20		er jahly			, 3 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1 , 1						
40 30 20 10	mm /mm	50 60 70			3	300) 500	600 70		
40 30 20 10 0.1	0 30.000 40 Freq.	Reading	Factor	Result	Limit (dBuV/m)	Margin		b 500 Height (cm)	600 70		
40 30 20 10 0.(Í con la Í	L	Limit (dBuV/m) 40.00			Height	Degree	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
40 30 20 10 0.1	30.000 40 Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	(dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
40 30 20 10 0.1	30.000 40 Freq. (MHz) 78.2887	Reading (dBuV/m) 57.49	Factor (dB) -22.10	Result (dBuV/m) 35.39	(dBuV/m) 40.00	Margin (dB) -4.61	Detector QP	Height (cm) 100	Degree (deg.) 222	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
40 30 20 10 0.1	5 30.000 40 Freq. (MHz) 78.2887 152.6254	Reading (dBuV/m) 57.49 61.79	Factor (dB) -22.10 -22.13	Result (dBuV/m) 35.39 39.66	(dBuV/m) 40.00 43.50	Margin (dB) -4.61 -3.84	Detector QP	Height (cm) 100 100	Degree (deg.) 222 241	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
40 30 20 10	5 30.000 40 Freq. (MHz) 78.2887 152.6254 221.5010	Reading (dBuV/m) 57.49 61.79 56.54	Factor (dB) -22.10 -22.13 -18.37	Result (dBuV/m) 35.39 39.66 38.17	(dBuV/m) 40.00 43.50 46.00	Margin (dB) -4.61 -3.84 -7.83	Detector QP QP	Height (cm) 100 100 100	Degree (deg.) 222 241 320	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	



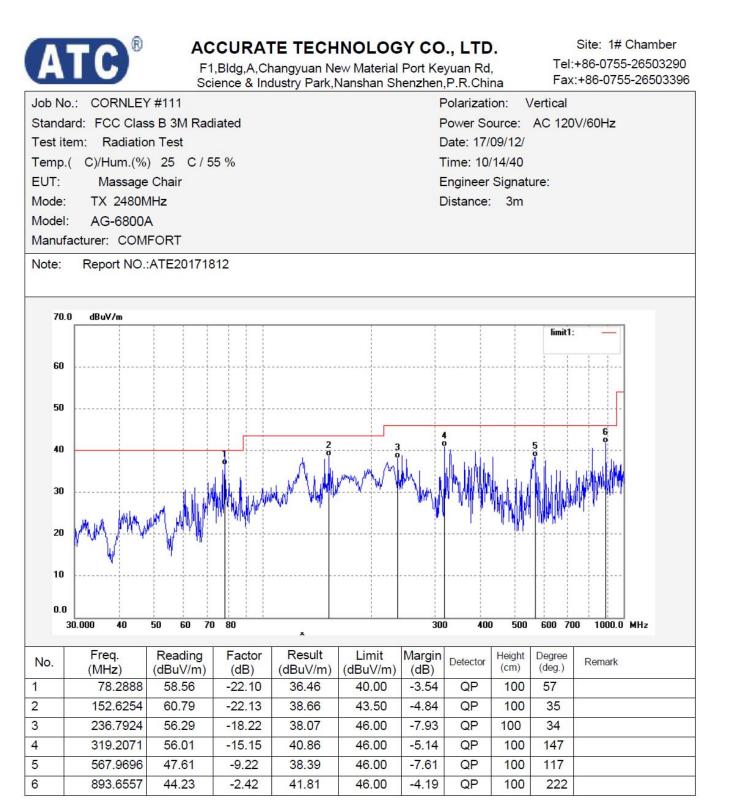










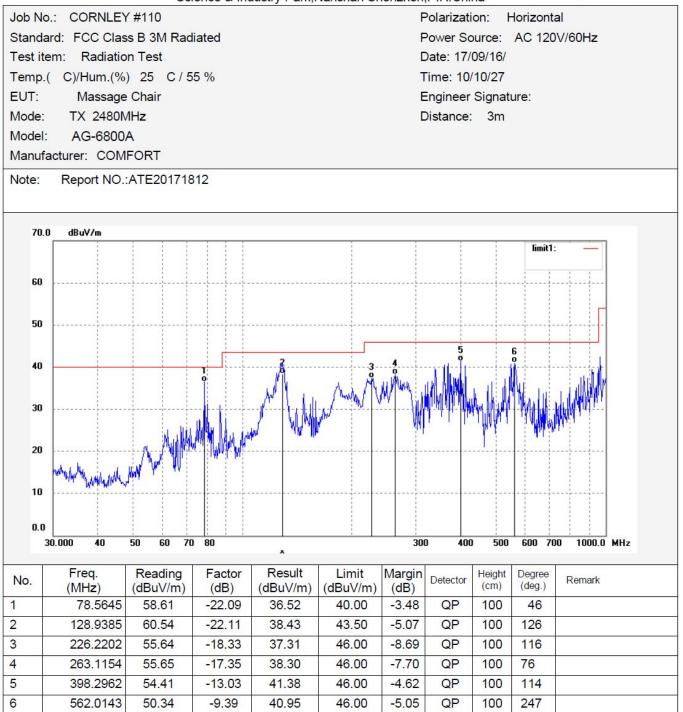






ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China



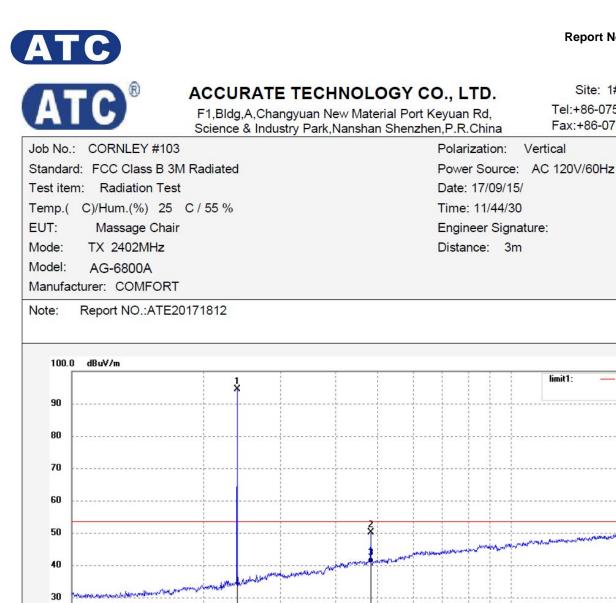




ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

ob No.	: CORNLEY	⁄ #102				F	olarizati	on: H	Iorizonta	al
tandar	d: FCC Clas	iated	F	Power Source: AC 120V/60Hz						
est iter	m: Radiatio		0	ate: 17/	09/15/					
emp.(C)/Hum.(%)	5 %	Т	ime: 11/	42/32					
UT:								Signat	ure:	
lode:								3m		
lodel:	AG-6800A	4								
lanufa	cturer: COM	FORT								
lote:	Report NO.:	ATE201718	312							
100.0	D dBuV/m								limit1:	
			j						anne i .	
90										
80										
70										
60										
50					2					
					Ť		manner	homenanter	ny Westerney	
40				manustra	Non manager and the second	and the second				
30	Matter and an and an and an and an	and the second and the second	nonementalitement	Mar Mar Mar and a second second						
30	abriller of the second second									
20										
10.0										
10.0 10	000.000	20	00	3000	5000	6000 7	000 8000	9000		18000.0 MHz
	Freq.	Reading	Factor	Result	Limit	Margin		Height	Degree	D
No.	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	(cm)	(deg.)	Remark
	2402.000	96.69	-5.98	90.71			peak	150	246	
9	4804.000	44.08	3.53	47.61	74.00	-26.39	peak	150	325	
	4804.000	35.71	3.53	39.24	54.00		AVG	150	325	



20

10.0

No.

1

2

3

1000.000

Freq.

(MHz)

2402.000

4804.000

4804.000

2000

Factor

(dB)

-5.98

3.53

3.53

Reading

(dBuV/m)

100.52

47.17

37.68

3000

Result

(dBuV/m)

94.54

50.70

41.21

18000.0 MHz

Remark

6000 7000 80009000

Detector

peak

peak AVG Height

(cm)

150

150

150

Degree

(deg.)

247

147

147

5000

Margin

(dB)

-23.30

-12.79

Limit

(dBuV/m)

74.00

54.00



Report No.: ATE20171812 Page 51 of 55

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

Job N	O.: CORNLEY			usiry Faik,i			Polarizati		/ertical		
Stand	ard: FCC Clas	s B 3M Rad	liated			F	Power So	ource:	AC 120	V/60Hz	
Test it	em: Radiatio	n Test			0	Date: 17/09/15/					
Temp	.(C)/Hum.(%) 25 C/5	5 %		٦	Time: 11	47/49				
EUT:	Massage	Chair				E	Engineer	Signat	ure:		
Mode:	TX 2440M	/Hz				[Distance:	3m			
Model	: AG-6800/	٩									
Manut	facturer: COM	FORT									
Note:	Report NO.	ATE201718	312								
-											
10	0.0 dBu∀/m										
			1 X						limit1:		
90											
80											
70											
		1									
60											
50					ž						
50							- and - prover	water	anthonorm	and an and a second second	
40				at anti-state of the	an marine the						
30	and the second with a second and	Mannanan	mudperson Autor attac	and all all all all all all all all all al							
30											
20											
10.	0										
10.	1000.000	20	100	3000	5000	6000 7	7000 8000	9000		18000.0 MHz	
	Freq.	Reading	Factor	Result	Limit	Margin		Height	Degree	2	
No.	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	(cm)	(deg.)	Remark	
1	2440.000	99.81	-5.76	94.05			peak	150	14		
2	4880.000	46.99	3.53	50.52	74.00	-23.48	peak	150	111		
3	4880.000	37.85	3.53	41.38	54.00	-12.62	AVG	150	111		



3

4880.000

35.78

4.06

39.84

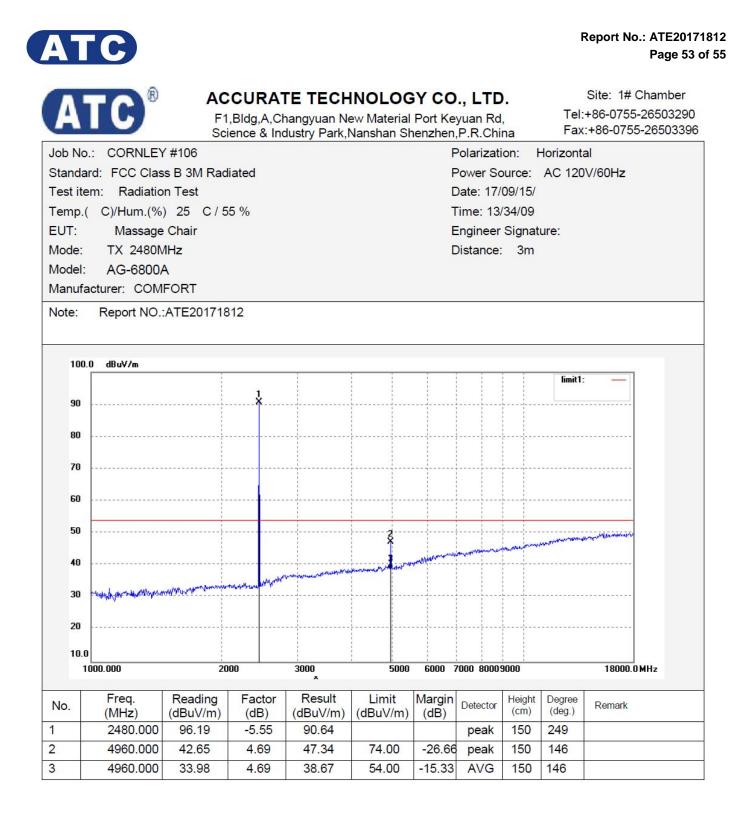
54.00

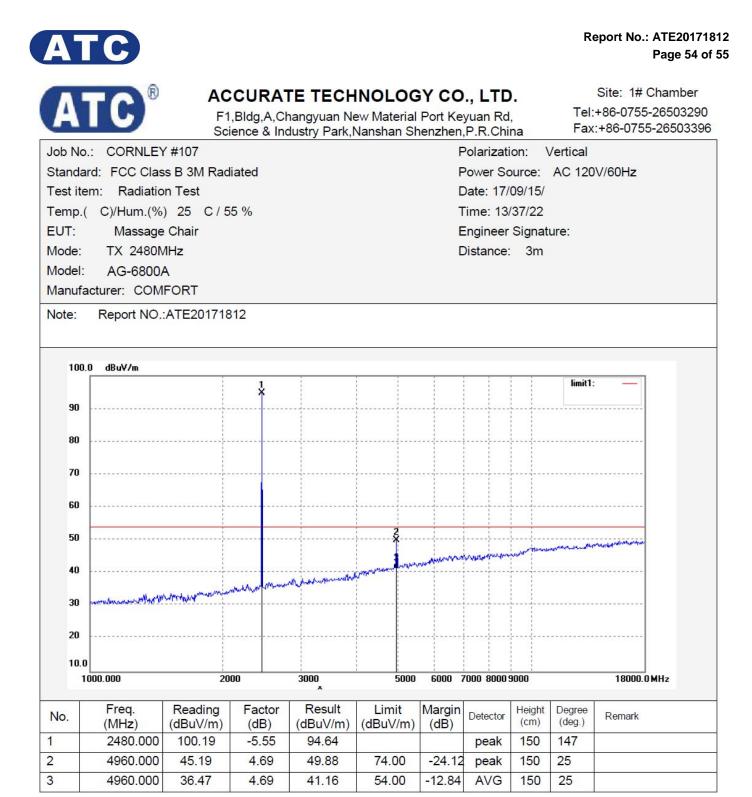
-14.16

AVG

150

321







11.ANTENNA REQUIREMENT

11.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

11.2.Antenna Construction

Device is equipped with external Antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 2.0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.

