

Page 1 of 159

APPLICATION CERTIFICATION FCC Part 15C & RSS-247 On Behalf of Edifier International Limited

4.1 Channel SoundBar (Home Theater System) Model No.: S90, S90HD

FCC ID: Z9G-EDF65 IC: 10004A-EDF65

Prepared for : Edifier International Limited

Address : P.O. Box 6264 General Post Office Hong Kong

Prepared by : Shenzhen Accurate Technology Co., Ltd.

Address : 1/F., Building A, Changyuan New Material Port, Science &

Industry Park, Nanshan District, Shenzhen, Guangdong, P.R.

China.

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

Report No. : ATE20181417

Date of Test : June 16-July 22, 2018

Date of Report : July 28, 2018

Page 2 of 159

TABLE OF CONTENTS

Descri	iption	Page
Test R	Report Certification	
1. G	ENERAL INFORMATION	6
1.1.	Description of Device (EUT)	
1.2.	Accessory and Auxiliary Equipment	
1.3.	Description of Test Facility	
1.4.	Measurement Uncertainty	7
2. M	EASURING DEVICE AND TEST EQUIPMENT	8
3. O	PERATION OF EUT DURING TESTING	9
3.1.	Operating Mode	g
3.2.	Configuration and peripherals	9
4. Tl	EST PROCEDURES AND RESULTS	10
5. 20	DB BANDWIDTH TEST	12
5.1.	Block Diagram of Test Setup	12
5.2.	The Requirement For Section 15.247(a)(1)	12
5.3.	The Requirement For RSS-247 Section 5.1(a)	12
5.4.	EUT Configuration on Measurement	
5.5.	Operating Condition of EUT	
5.6.	Test Procedure	
5.7.	Test Result	
6. C	ARRIER FREQUENCY SEPARATION TEST	17
6.1.	Block Diagram of Test Setup	17
6.2.	The Requirement For Section 15.247(a)(1)	
6.3.	The Requirement For RSS-247 Section 5.1(b)	
6.4.	EUT Configuration on Measurement	
6.5.	Operating Condition of EUT	
6.6.	Test Procedure	
6.7.	Test Result	
	UMBER OF HOPPING FREQUENCY TEST	
7.1.	Block Diagram of Test Setup	
7.2.	The Requirement For Section 15.247(a)(1)(iii)	
7.3.	The Requirement For RSS-247 Section 5.1(d)	
7.4. 7.5.	EUT Configuration on Measurement	
7.5. 7.6.	Test Procedure	
7.0. 7.7.	Test Result	
	WELL TIME TEST	
8.1.	Block Diagram of Test Setup.	
8.1. 8.2.	The Requirement For Section 15.247(a)(1)(iii)	
8.3.	The Requirement For Section RSS-247 Section 5.1(d)	
8.4.	EUT Configuration on Measurement	
8.5.	Operating Condition of EUT	
8.6.	Test Procedure	
8.7.	Test Result	



9.	\mathbf{M}^{A}	AXIMUM PEAK OUTPUT POWER TEST FOR 2.4G	37
9	9.1.	Block Diagram of Test Setup	37
9	9.2.	The Requirement For Section 15.247(b)(1)	
9	9.3.	The Requirement For RSS-247 Section 5.4(b)	37
9	9.4.	EUT Configuration on Measurement	37
9	9.5.	Operating Condition of EUT	37
9	9.6.	Test Procedure	38
9	9.7.	Test Result	38
10.	\mathbf{M}^{A}	AXIMUM CONDUCTED OUTPUT POWER FOR 5.8G	42
	10.1.	Block Diagram of Test Setup	42
	10.2.	The Requirement For Section 15.407	
	10.3.	The Requirement For RSS-247 Section 6.2.4.1	
	10.4.	EUT Configuration on Measurement	
	10.5.	Operating Condition of EUT	
	10.6.	Test Procedure	43
	10.7.	Test Result	43
11.	RA	DIATED EMISSION TEST	4 4
	11.1.	Block Diagram of Test Setup.	44
	11.2.	The Requirement For Section 15.247(d)	
	11.3.	The Requirement For RSS-247 Section 5.5	
	11.4.	Transmitter Emission Limit	
	11.5.	Restricted bands of operation	47
	11.6.	Configuration of EUT on Measurement	
	11.7.	Test Procedure	49
	11.8.	Data Sample	50
	11.9.	The Field Strength of Radiation Emission Measurement Results	50
12.	BA	ND EDGE COMPLIANCE TEST	132
	12.1.	Block Diagram of Test Setup	132
	12.2.	The Requirement For Section 15.247(d)	132
	12.3.	The Requirement For RSS-247 Section 5.5	
	12.4.	EUT Configuration on Measurement	132
	12.5.	Operating Condition of EUT	
	12.6.	Test Procedure	
	12.7.	Test Result	133
13.	\mathbf{AC}	POWER LINE CONDUCTED EMISSION	144
	13.1.	Block Diagram of Test Setup	144
	13.2.	Test System Setup	144
	13.3.	Power Line Conducted Emission Measurement Limits	145
	13.4.	Configuration of EUT on Measurement	
	13.5.	Operating Condition of EUT	145
	13.6.	Test Procedure	145
	13.7.	Data Sample	
	13.8.	Power Line Conducted Emission Measurement Results	146
14.	999	% OCCUPIED BANDWIDTH	149
	14.1.	Block Diagram of Test Setup	149
	14.2.	The Requirement for RSS-Gen Clause 6.7	
	14.3.	EUT Configuration on Measurement	
	14.4.	Operating Condition of EUT	
	14.5.	Test Procedure	
	146	Measurement Result	150



Report No.: ATE20181417 Page 4 of 159

15. CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST.......154 15.1. 15.2. 15.3. 15.4. 15.5. 15.6. 15.7. The Requirement159 16.1. 16.2.



Page 5 of 159

Test Report Certification

Applicant : Edifier International Limited

Manufacturer : Edifier International Limited

Product : 4.1 Channel SoundBar (Home Theater System)

Model No. : S90, S90HD

(Note: Above series are identical in schematic, structure and critical components, Only the model name is different from the market requirement, Therefore, only the

S90 is used for testing.)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247 FCC Rules and Regulations Part 15 Subpart E Section 15.407 KDB 789033 D02 General UNII Test Procedures New Rules v01r04 KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10: 2013 RSS-247 Issue 2 February 2017

RSS-Gen Issue 5 April 2018

The device described above is tested by Shenzhen 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 and RSS-247 limits. The measurement results are contained in this test report and Shenzhen 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 & IC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test:	June 16-July 22, 2018
Date of Report :	July 28, 2018
Prepared by :	(S Yang Former)
Approved & Authorized Signer :	(Sean Liu, Manager)



Page 6 of 159

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

Technical Specification of Bluetooth (BDR & EDR mode)

rediffical opecification of Biactooth (BBIt & EBIt flicae)			
Technical Specification	Value		
Kind of Equipment	4.1 Channel SoundBar (Home Theater System)		
Type Designation	S90, S90HD		
Operating Frequency band	2400 – 2483.5MHz		
Channel separation	1MHz		
Extreme Temperature Range	0~+45°C		
Operation Voltage	AC 100-240V, 50/60Hz		
Modulation	FHSS (GFSK, 8DPSK, π/4DQPSK)		
Bluetooth version	4.1, BDR & EDR		
Antenna Gain	2.5dBi		

Technical Specification of 5.8GHz

Technical Specification	Value
Kind of Equipment	4.1 Channel SoundBar (Home Theater System)
Type Designation	S90, S90HD
Operating Frequency Band	5725MHz ~ 5825MHz
Operating Frequency	5730.35MHz ~ 5820.35MHz
Number of Channel	46
Receiver category	3
Extreme Temperature Range	0~+45°C
Operation Voltage	AC 100-240V, 50/60Hz
Modulation	π/4DQPSK
Antenna Gain	2.2dBi

HVIN : \$90, \$90HD

Antenna type : Integral Antenna

Applicant : Edifier International Limited

Address : P.O. Box 6264 General Post Office Hong Kong

Manufacturer : Edifier International Limited

Address : P.O. Box 6264 General Post Office Hong Kong



Page 7 of 159

1.2. Accessory and Auxiliary Equipment

Notebook PC: Manufacturer: Lenovo

M/N: ThinkPad X240

S/N:n.a

1.3.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

Accredited by American Association for Laboratory

Accreditation (A2LA)

The Certificate Number is 4297.01

Name of Firm : Shenzhen Accurate Technology Co., Ltd.

Site Location : 1/F., Building A, Changyuan New Material Port, Science

& Industry Park, Nanshan District, Shenzhen, Guangdong,

P.R. China

1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)



Page 8 of 159

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	Jan. 05, 2019
EMI Test Receiver	Rohde& Schwarz	ESR	101817	Jan. 06, 2018	Jan. 05, 2019
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Agilent	8447D	294A10619	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 06, 2018	Jan. 05, 2019
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	Jan. 05, 2019
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	Jan. 05, 2019
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 06, 2018	Jan. 05, 2019
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	Jan. 05, 2019
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS		Jan. 06, 2018	Jan. 05, 2019

Conducted Emission Measurement Software: ES-K1 V1.71

Radiated Emission Measurement Software: EZ_EMC V1.1.4.2



Page 9 of 159

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used 1: Transmitting mode

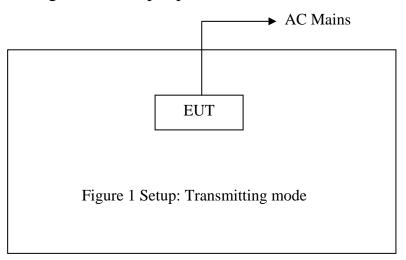
Low Channel: 2402MHz Middle Channel: 2441MHz High Channel: 2480MHz

Hopping

The mode is used 2: Transmitting mode

Low Channel: 5730.35MHz Middle Channel: 5776.35MHz High Channel: 5820.35MHz

3.2. Configuration and peripherals

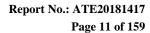




Report No.: ATE20181417
Page 10 of 159

4. TEST PROCEDURES AND RESULTS

2.4G Bluetooth FCC & IC Rules	Description of Test	Result
Section 15.207 RSS-Gen Section 8.8	AC Power Line Conducted Emission Test	Compliant
Section 15.247(a)(1) RSS-247 Section 5.1(a)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1) RSS-247 Section 5.1(b)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii) RSS-247 Section 5.1(d)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii) RSS-247 Section 5.1(d)	Dwell Time Test	Compliant
Section 15.247(b)(1) RSS-247 Section 5.4(b)	Maximum Peak Output Power Test	Compliant
Section 15.247(d) Section 15.209 RSS-247 Section 5.5 RSS-Gen Section 6.13	Radiated Emission Test	Compliant
RSS-Gen Section 6.7	99% Occupied Bandwidth	Compliant
Section 15.247(d) RSS-247 Section 5.5	Band Edge Compliance Test	Compliant
Section 15.247(d) RSS-247 Section 5.5	Conducted Spurious Emission Test	Compliant
Section 15.203 RSS-Gen Section 6.8	Antenna Requirement	Compliant





5.8G FCC & IC Rules	Description of Test	Result
Section 15.207 RSS-Gen Section 8.8	AC power Line Conducted Emission	Compliant
Section 15.403(i), 15.407(e) RSS-247 Section 6.2.4.1	6dB Occupied Bandwidth	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
	Duty cycle	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
KDB 789033 §D RSS-Gen Section 6.7	99% occupied Bandwidth	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
Section 15.407(a)(3) RSS-247 Section 6.2.4.1	Maximum conducted (average) output power	Compliant
Section 15.407(a)(3) 15.407(a)(4) RSS-247 Section 6.2.4.1	Power Spectral Density	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
Section 15.407(b)(4) Section 15.407(b)(6) Section 15.407(b)(7) Section 15.209 RSS-247 Section 6.2.4.2 RSS-Gen Section 8.9 RSS-Gen Section 8.10	Unwanted Emissions	Compliant
Section 15.407(b) RSS-Gen Section 8.9 RSS-Gen Section 8.10	Band Edge Compliance	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
Section 15.407(g) RSS-Gen Section 6.11	Frequency Stability	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200
Section 15.203, Section 15.204(b), Section 15.204(c), Section 15.212(a), 2.929(b) RSS-Gen Section 6.8	Antenna Requirement	Reference to FCC ID: 2ABA2ATM200 IC: 11534A-ATM200

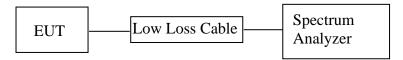
Note: The product has 5G module, We only tested the Radiated Emission, other data reference to FCC ID: 2ABA2ATM200 & IC: 11534A-ATM200.



Report No.: ATE20181417
Page 12 of 159

5. 20DB BANDWIDTH TEST

5.1.Block Diagram of Test Setup



5.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

5.3. The Requirement For RSS-247 Section 5.1(a)

RSS-247 Section 5.1(a): The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system's radio frequency (RF) bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

5.4.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.

5.5. Operating Condition of EUT

- 5.5.1. Setup the EUT and simulator as shown as Section 5.1.
- 5.5.2. Turn on the power of all equipment.
- 5.5.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.



Report No.: ATE20181417 Page 13 of 159

5.6.Test Procedure

- 5.6.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 5.6.2. The RBW should be 1%~5% of OBW.
- 5.6.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

5.7.Test Result

Channel	Frequency (MHz)	GFSK mode 20dB Bandwidth (MHz)	8DPSK mode 20dB Bandwidth (MHz)	Result
Low	2402	0.929	1.224	Pass
Middle	2441	0.938	1.211	Pass
High	2480	0.938	1.211	Pass

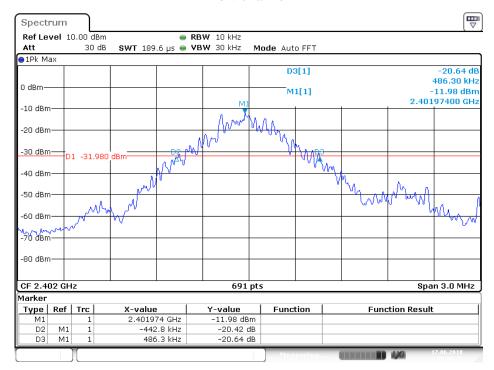
Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.



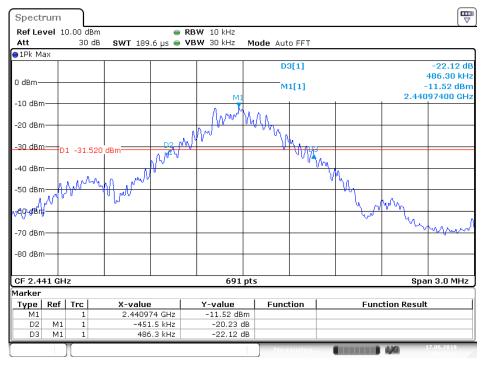
GFSK Mode

Low channel



Date: 17.JUN.2018 09:06:25

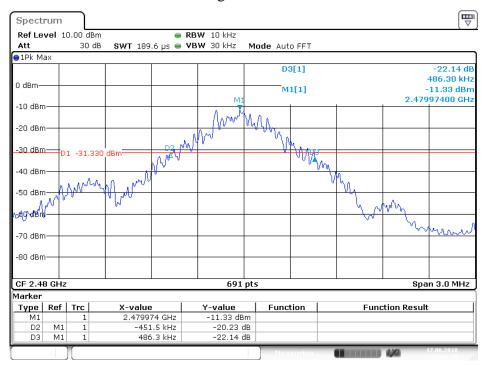
Middle channel



Date: 17.JUN.2018 09:07:37

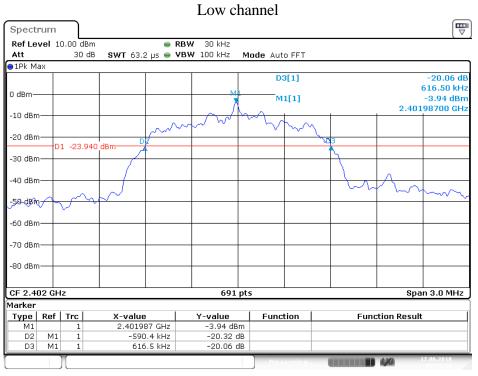


High channel

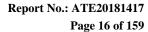


Date: 17.JUN.2018 09:08:49

8DPSK Mode



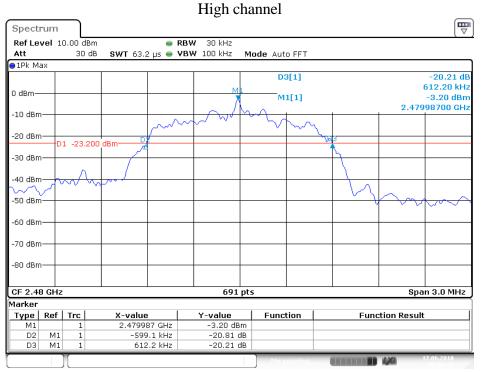
Date: 17.JUN.2018 09:13:44





Middle channel \blacksquare Spectrum RBW 30 kHzSWT 63.2 μsVBW 100 kHz Ref Level 10.00 dBm 30 dB Mode Auto FFT Att ●1Pk Max D3[1] 612.20 kHz 0 dBm--3.45 dBm M1[1] 2.44098700 GHz -10 dBm -20 dBm D1 -23,450 -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm--80 dBm CF 2.441 GHz 691 pts Span 3.0 MHz Marker Type | Ref | Trc **Y-value** -3.45 dBm Function **Function Result** X-value 2.440987 GHz -612.2 kHz 612.2 kHz D2 М1 -20.98 dB DЗ М1 -20.37 dB

Date: 17.JUN.2018 09:12:10



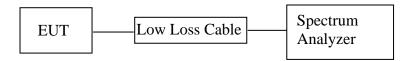
Date: 17.JUN.2018 09:10:41



Report No.: ATE20181417
Page 17 of 159

6. CARRIER FREQUENCY SEPARATION TEST

6.1.Block Diagram of Test Setup



6.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

6.3. The Requirement For RSS-247 Section 5.1(b)

RSS-247 Section 5.1(b): FHSs shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, FHSs operating in the band 2400-2483.5 MHz may have hopping channel carrier frequencies that are separated by 25 kHz or two thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided that the systems operate with an output power no greater than 0.125 W.

6.4.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.



Report No.: ATE20181417
Page 18 of 159

6.5. Operating Condition of EUT

- 6.5.1. Setup the EUT and simulator as shown as Section 6.1.
- 6.5.2. Turn on the power of all equipment.
- 6.5.3.Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

6.6.Test Procedure

- 6.6.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 6.6.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz. Adjust Span to 3MHz.
- 6.6.3. Set the adjacent channel of the EUT Maxhold another trace.
- 6.6.4. Measurement the channel separation



Report No.: ATE20181417
Page 19 of 159

6.7. Test Result

GFSK Mode

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Lovy	2402	1.0029	25KHz or 20dB	PASS
Low	2403	1.0029	bandwidth	PASS
Middle	2440	1.0020	25KHz or 20dB	PASS
Middle	2441	1.0029	bandwidth	PASS
High	2479	1.0020	25KHz or 20dB	PASS
High	2480	1.0029	bandwidth	rass

8DPSK Mode

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.0029	25KHz or 2/3*20dB	PASS
Low	2403	1.0029	bandwidth	rass
Middle	2440	1.0029	25KHz or 2/3*20dB	PASS
Wilddie	2441	1.0029	bandwidth	1 Abb
High	2479	1.0029	25KHz or 2/3*20dB	PASS
nigii	2480	1.0029	bandwidth	rass

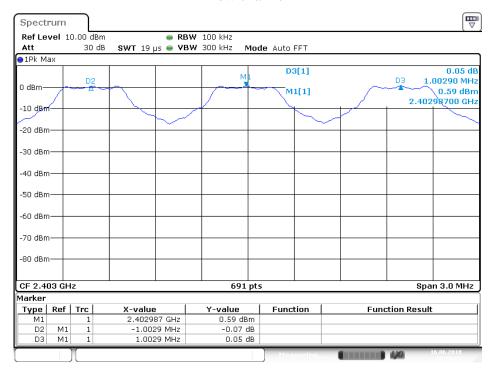
Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.



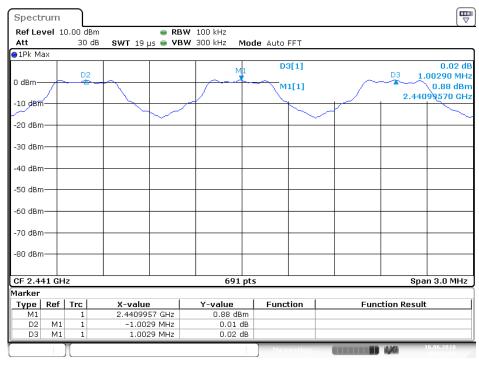
GFSK Mode

Low channel



Date: 16.JUN.2018 09:36:54

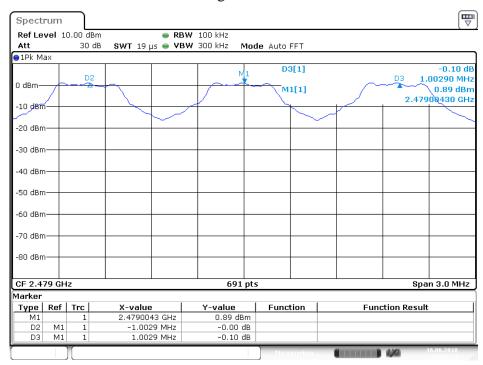
Middle channel



Date: 16.JUN.2018 09:38:07



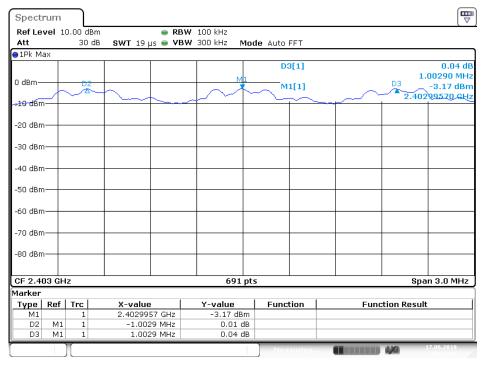
High channel



Date: 16.JUN.2018 09:39:22

8DPSK Mode

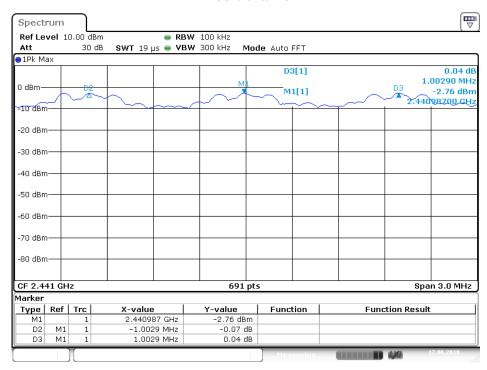
Low channel



Date: 17.JUN.2018 08:26:07

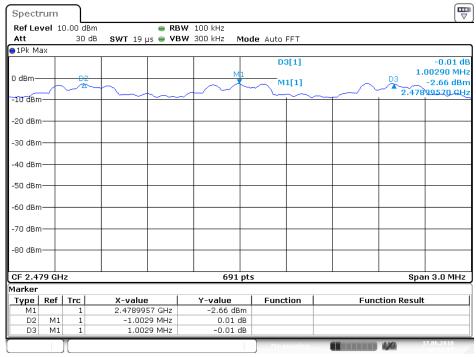


Middle channel



Date: 17.JUN.2018 08:27:48

High channel



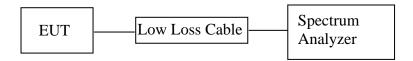
Date: 17.JUN.2018 08:29:08



Report No.: ATE20181417
Page 23 of 159

7. NUMBER OF HOPPING FREQUENCY TEST

7.1.Block Diagram of Test Setup



7.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.3. The Requirement For RSS-247 Section 5.1(d)

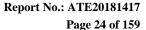
RSS-247 Section 5.1(d): FHSs operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels.

7.4.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.

7.5. Operating Condition of EUT

- 7.5.1. Setup the EUT and simulator as shown as Section 7.1.
- 7.5.2. Turn on the power of all equipment.
- 7.5.3.Let the EUT work in TX (Hopping on) modes measure it.





7.6.Test Procedure

- 7.6.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 7.6.2.Set the spectrum analyzer as Span=90MHz, RBW=100 kHz, VBW=300 kHz.
- 7.6.3.Max hold, view and count how many channel in the band.

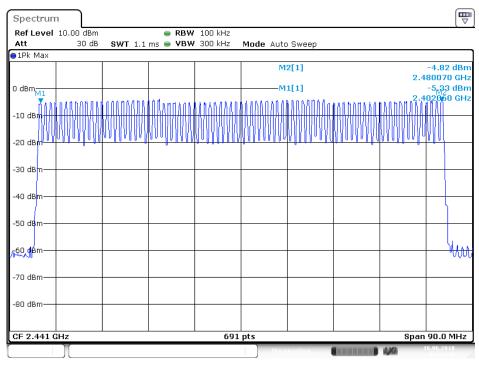
7.7.Test Result

Total number of hopping channel	Measurement result(CH)	Limit(CH)	Result
	79	≥15	PASS

Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.

Number of hopping channels (GFSK)



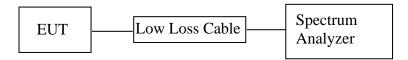
Date: 16.JUN.2018 09:34:49



Page 25 of 159

8. DWELL TIME TEST

8.1.Block Diagram of Test Setup



8.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

8.3. The Requirement For Section RSS-247 Section 5.1(d)

RSS-247 Section 5.1(d): FHSs operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that at least 15 hopping channels are used.

8.4.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.

8.5. Operating Condition of EUT

- 8.5.1. Setup the EUT and simulator as shown as Section 8.1.
- 8.5.2. Turn on the power of all equipment.
- 8.5.3.Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.



Report No.: ATE20181417
Page 26 of 159

8.6.Test Procedure

- 8.6.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 8.6.2.Set center frequency of spectrum analyzer = operating frequency.
- 8.6.3.Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=5ms, 10ms, 15ms. Get the pulse time.
- 8.6.4.Repeat above procedures until all frequency measured were complete.

8.7.Test Result

GFSK Mode

OFSK WIOGE						
Mode	Channel Frequency	Pulse Time	Dwell Time	Limit		
	(MHz)	(ms)	(ms)	(ms)		
DH1	2402	0.442	141.44	400		
	2441	0.442	141.44	400		
	2480	0.442	141.44	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$						
DH3	2402	1.710	273.60	400		
	2441	1.696	271.36	400		
	2480	1.710	273.60	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$						
DH5	2402	2.957	315.41	400		
	2441	2.957	315.41	400		
	2480	2.978	317.65	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$						



Report No.: ATE20181417 Page 27 of 159

8DPSK Mode						
Mode	Channel Frequency	Pulse Time	Dwell Time	Limit		
	(MHz)	(ms)	(ms)	(ms)		
3DH1	2402	0.457	146.24	400		
	2441	0.457	146.24	400		
	2480	0.449	143.68	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$						
3DH3	2402	1.710	273.60	400		
	2441	1.710	273.60	400		
	2480	1.725	276.00	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$						
3DH5	2402	3.000	320.00	400		
	2441	2.978	317.65	400		
	2480	2.978	317.65	400		
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$						

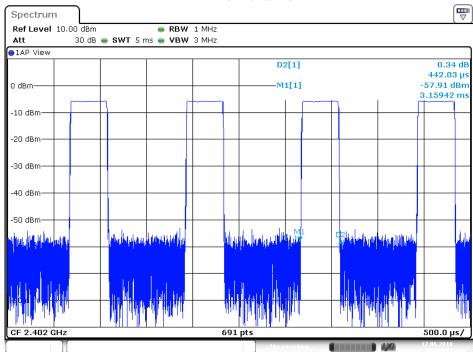
Note: This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.

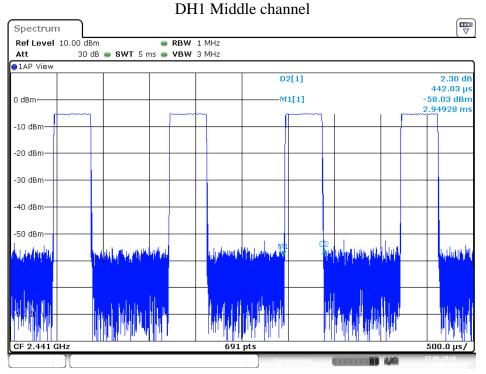


GFSK Mode

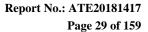
DH1 Low channel



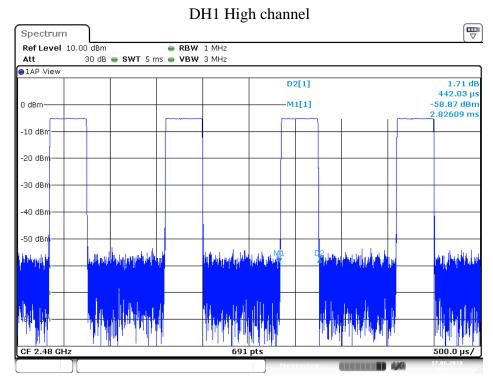
Date: 17.JUN.2018 09:04:04



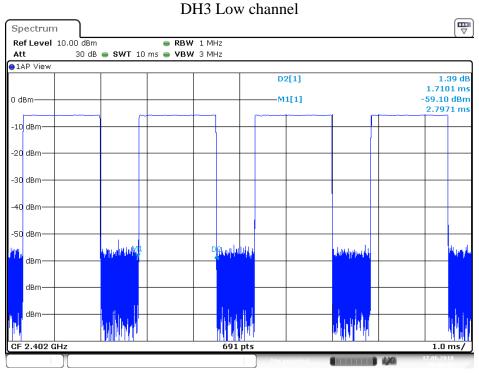
Date: 17.JUN.2018 09:03:21



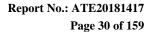




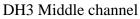
Date: 17.JUN.2018 09:02:38

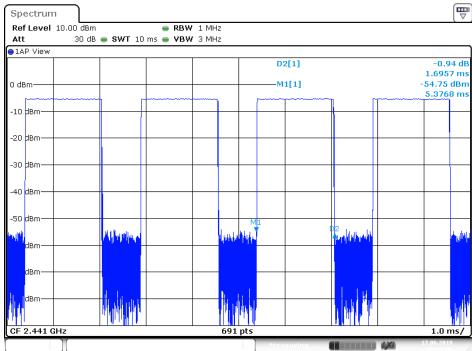


Date: 17.JUN.2018 09:00:18

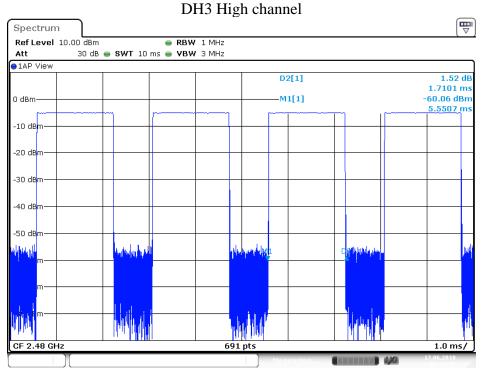




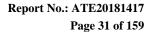




Date: 17.JUN.2018 09:01:07

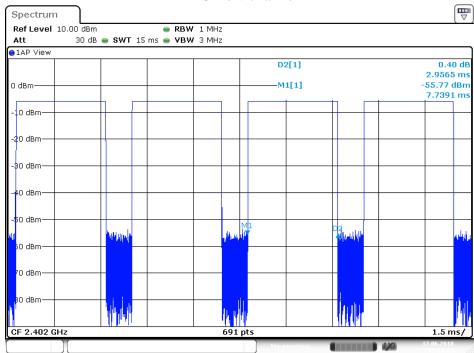


Date: 17.JUN.2018 09:01:46

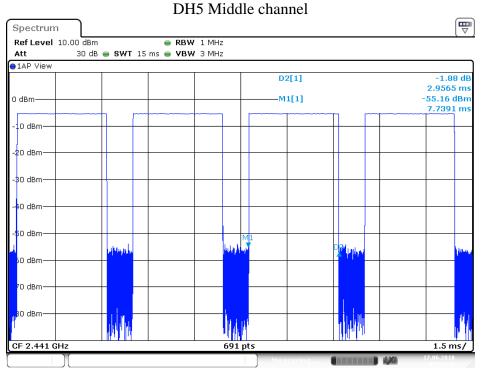




DH5 Low channel

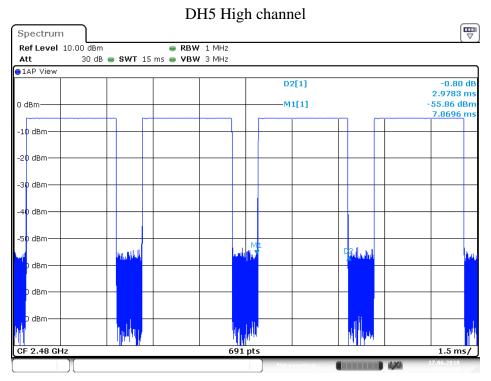


Date: 17.JUN.2018 08:59:14



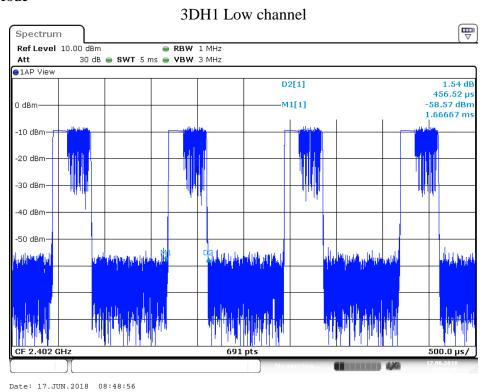
Date: 17.JUN.2018 08:58:19





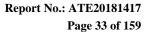
Date: 17.JUN.2018 08:56:57

8DPSK Mode

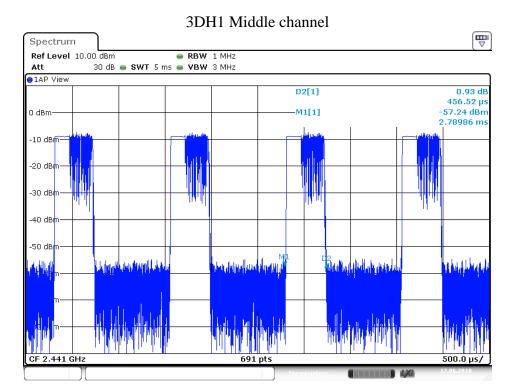


Shenzhen Accurate Technology Co., Ltd.

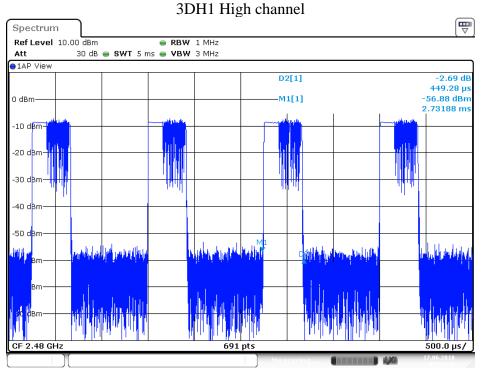
Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China Tel: +86-755-26503290 Fax: +86-755-26503396 E-mail: webmaster@atc-lab.com Http://www.atc-lab.com



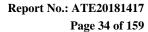




Date: 17.JUN.2018 08:49:47

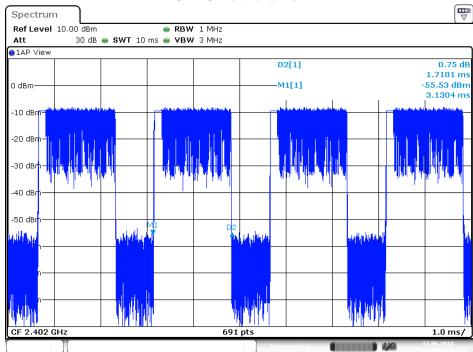


Date: 17.JUN.2018 08:50:19

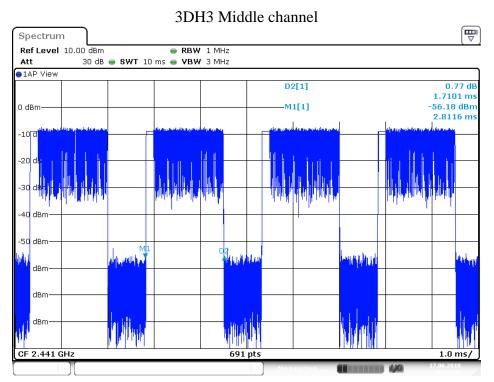




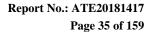
3DH3 Low channel



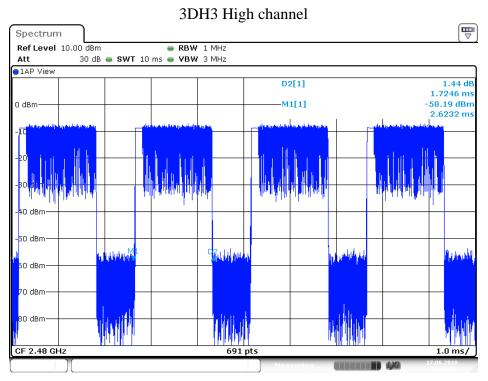
Date: 17.JUN.2018 08:53:30



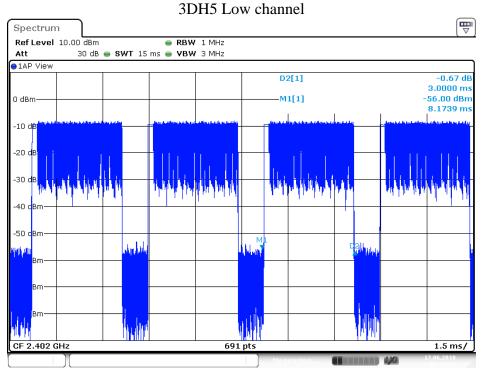
Date: 17.JUN.2018 08:52:41



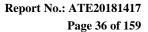




Date: 17.JUN.2018 08:51:56

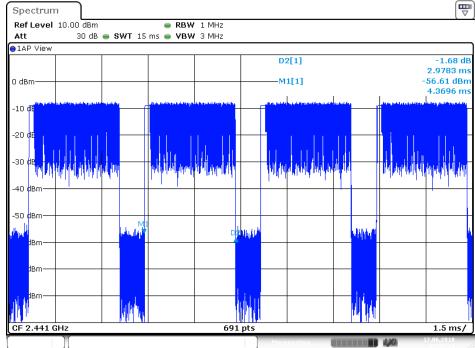


Date: 17.JUN.2018 08:54:33

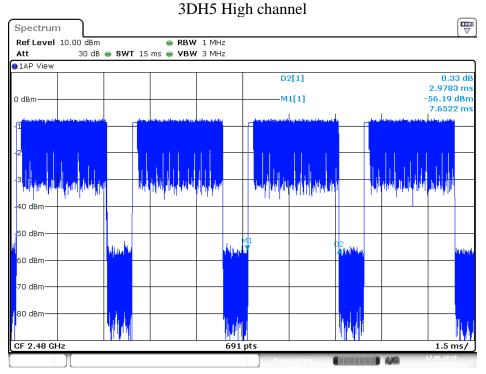




3DH5 Middle channel



Date: 17.JUN.2018 08:55:12



Date: 17.JUN.2018 08:55:54

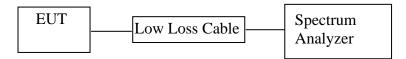


ATC

Report No.: ATE20181417
Page 37 of 159

9. MAXIMUM PEAK OUTPUT POWER TEST FOR 2.4G

9.1.Block Diagram of Test Setup



9.2. The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

9.3. The Requirement For RSS-247 Section 5.4(b)

RSS-247 Section 5.4(b): For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

9.4.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.

9.5. Operating Condition of EUT

- 9.5.1. Setup the EUT and simulator as shown as Section 9.1.
- 9.5.2. Turn on the power of all equipment.
- 9.5.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

Report No.: ATE20181417
Page 38 of 159

9.6.Test Procedure

- 9.6.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 9.6.2.Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz for GFSK mode
- 9.6.3.Set RBW of spectrum analyzer to 3MHz and VBW to 10MHz for 8DPSK mode
- 9.6.4. Measurement the maximum peak output power.

9.7.Test Result

GFSK Mode

Frequency (MHz)	Maximum peak conducted output power (dBm/W)	e.i.r.p. (dBm/W)	Limits dBm / W	Result
2402	-4.74/0.0003	-2.24/0.0006	21 / 0.125	PASS
2441	-4.32/0.0004	-1.82/0.0007	21 / 0.125	PASS
2480	-4.04/0.0004	-1.54/0.0007	21 / 0.125	PASS

8DPSK Mode

0210111000				
Frequency (MHz)	Maximum peak conducted output power (dBm/W)	e.i.r.p. (dBm/W)	Limits dBm / W	Result
2402	-1.33/0.0007	1.17/0.0013	21 / 0.125	PASS
2441	-1.03/0.0008	1.47/0.0014	21 / 0.125	PASS
2480	-0.82/0.0008	1.68/0.0015	21 / 0.125	PASS

Note: e.i.r.p= Maximum peak conducted output power+Antenna gain(2.5 dBi)

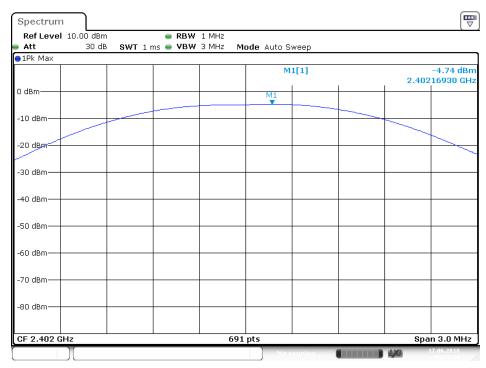
This testing was carried out on all operation modes, but only the worst case was presented in this report.

The spectrum analyzer plots are attached as below.



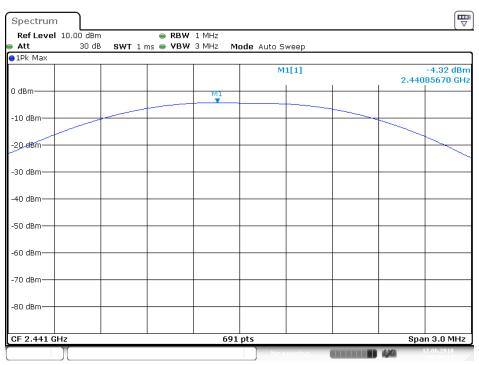
GFSK Mode

Low channel



Date: 17.JUN.2018 09:31:01

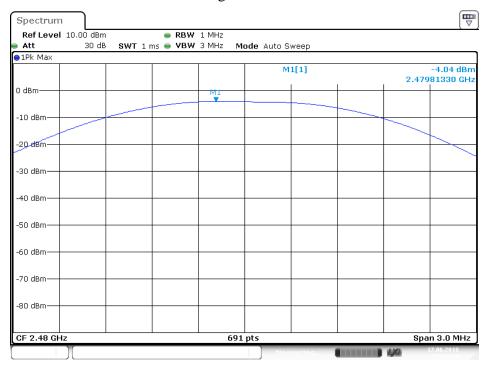
Middle channel



Date: 17.JUN.2018 09:30:18



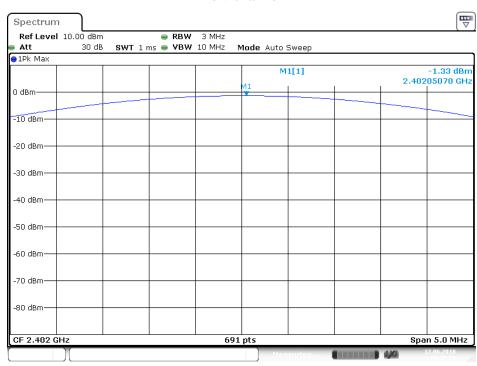
High channel



Date: 17.JUN.2018 09:29:34

8DPSK Mode

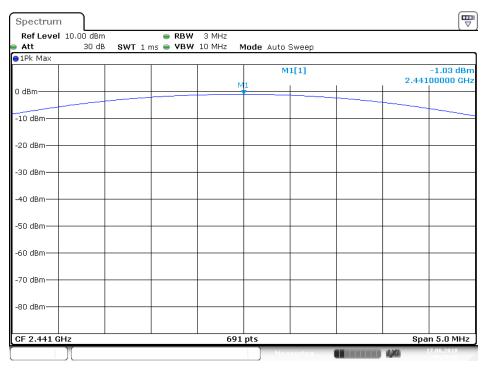
Low channel



Date: 17.JUN.2018 09:27:21

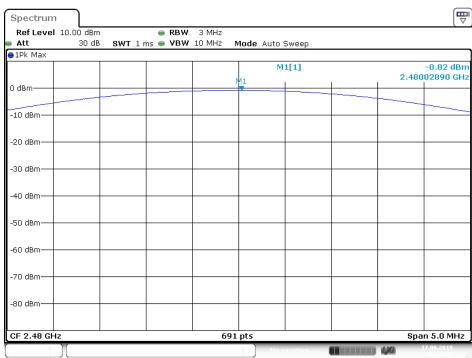


Middle channel



Date: 17.JUN.2018 09:28:07

High channel

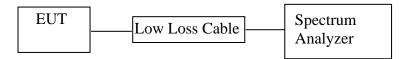


Date: 17.JUN.2018 09:28:46

Report No.: ATE20181417
Page 42 of 159

10.MAXIMUM CONDUCTED OUTPUT POWER FOR 5.8G

10.1.Block Diagram of Test Setup



10.2. The Requirement For Section 15.407

Section 15.407(a)(1): For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

Section 15.407(a)(2): For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

Section 15.407(a)(3): For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

10.3. The Requirement For RSS-247 Section 6.2.4.1

The maximum conducted output power shall not exceed 1 W.

10.4.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.

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 (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.



Report No.: ATE20181417 Page 43 of 159

10.6.Test Procedure

10.6.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

10.6.2.Set RBW = 1-5% of the OBW, not to exceed 1 MHz, VBW \geq 3 x RBW, Sweep time = auto, Set span to at least 1.5 times the OBW, Detector = RMS.

10.6.3. Measurement the Maximum conducted (average) output power.

10.7.Test Result

Final power= Ave output power+10log(1/ duty cycle)

The test was	s performed v	with Ant.0				
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (W)	Limits dBm / W
Low	5730.35	10.23	0	10.23	0.011	30 dBm / 1 W
Middle	5776.35	10.29	0	10.29	0.011	30 dBm / 1 W
High	5820.35	10.24	0	10.24	0.011	30 dBm / 1 W

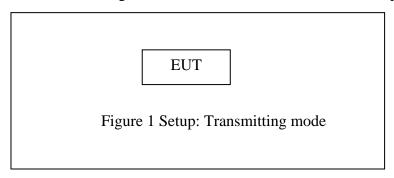
The test was	s performed v	with Ant.1				
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	Final power (W)	Limits dBm / W
Low	5730.35	10.68	0	10.68	0.012	30 dBm / 1 W
Middle	5776.35	10.39	0	10.39	0.011	30 dBm / 1 W
High	5820.35	10.07	0	10.07	0.010	30 dBm / 1 W



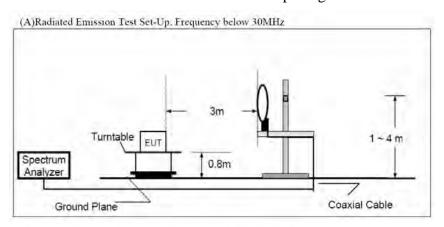
11. RADIATED EMISSION TEST

11.1.Block Diagram of Test Setup

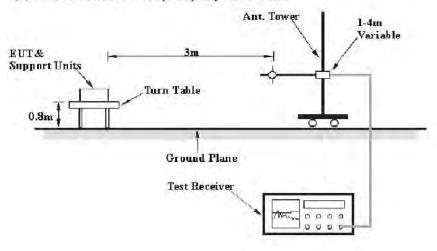
11.1.1.Block diagram of connection between the EUT and peripherals



11.1.2.Semi-Anechoic Chamber Test Setup Diagram

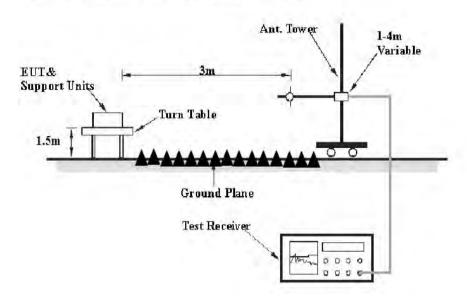


(B)Radiated Emission Test Set-Up, Frequency 30MHz-1GHz





(C) Radiated Emission Test Set-Up. Frequency above 1GHz



11.2. 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).

11.3. The Requirement For RSS-247 Section 5.5

Section 5.5: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.



Report No.: ATE20181417 Page 46 of 159

11.4. Transmitter Emission Limit

Radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 - General field strength limits at frequencies above 30 MHz

Frequency	Field strength
(MHz)	(μV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Table 6 - General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H- Field) (μA/m)	Measurement distance (m)
9 - 490 kHz ¹	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



Report No.: ATE20181417
Page 47 of 159

11.5.Restricted bands of operation

11.5.1.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

(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.

²Above 38.6



Report No.: ATE20181417
Page 48 of 159

11.5.2.RSS-Gen 8.10 Restricted bands of operation

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

- (a) The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, *Emergency Position Indicating Radio Beacons (EPIRB)*, *Emergency Locator Transmitters (ELT)*, *Personal Locator Beacons (PLB)*, and Maritime Survivor Locator Devices (MSLD).
- (b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.
- (c) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.

Table 7 - Restricted frequency bands*

MHz	MHz
0.090 - 0.110	149.9 - 150.05
0.495 - 0.505	156.52475 - 156.52525
2.1735 - 2.1905	156.7 - 156.9
3.020 - 3.026	162.0125 - 167.17
4.125 - 4.128	167.72 - 173.2
4.17725 - 4.17775	240 - 285
4.20725 - 4.20775	322 - 335.4
5.677 - 5.683	399.9 - 410
6.215 - 6.218	608 - 614
6.26775 - 6.26825	960 - 1427
6.31175 - 6.31225	1435 - 1626.5
8.291 - 8.294	1645.5 - 1646.5
8.362 - 8.366	1660 - 1710
8.37625 - 8.38675	1718.8 - 1722.2
8.41425 - 8.41475	2200 - 2300
12.29 - 12.293	2310 - 2390
2.51975 - 12.52025	2483.5 - 2500
2.57675 - 12.57725	2655 - 2900
13.36 - 13.41	3260 - 3267
16.42 - 16.423	3332 - 3339
6.69475 - 16.69525	3345.8 - 3358
6.80425 - 16.80475	3500 - 4400
25.5 - 25.67	4500 - 5150
37.5 - 38.25	5350 - 5460
73 - 74.6	7250 - 7750
74.8 - 75.2	8025 - 8500
108 - 138	/42

GHz	
9.0 - 9.2	
9.3 - 9.5	
10.6 - 12.7	
13.25 - 13.4	
14.47 - 14.5	
15.35 - 16.2	
17.7 - 21.4	
22.01 - 23.12	
23.6 - 24.0	
31.2 - 31.8	
36.43 - 36.5	
Above 38.6	

^{*} Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licenceexempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.



Report No.: ATE20181417
Page 49 of 159

11.6.Configuration of EUT on Measurement

The equipment is 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.

11.7.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 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. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- 4. All modes of operation were investigated and the worst-case emissions are reported.



Page 50 of 159

11.8.Data Sample

Frequency	Reading	Factor	Result	Limit	Margin	Remark
(MHz)	(dBµv)	(dB/m)	(dBµv/m)	(dBµv/m)	(dB)	
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz

Reading($dB\mu\nu$) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain

Result($dB\mu\nu/m$) = Reading($dB\mu\nu$) + Factor(dB/m)

Limit $(dB\mu v/m) = Limit$ stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

QP = Quasi-peak Reading

Calculation Formula:

 $Margin(dB) = Result (dB\mu V/m) - Limit(dB\mu V/m)$

Result($dB\mu V/m$)= Reading($dB\mu V$)+ 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.

11.9. The Field Strength of Radiation Emission Measurement Results

PASS.

Note: We tested Bluetooth all mode and recorded the worst case data (GFSK mode) for all test mode.

We tested bluetooth and 5.8G radiation emission data

5.8G module has two antennas, both of which have been tested, and only one of the maximum interference data has been recorded.

The spectrum analyzer plots are attached as below.



Report No.: ATE20181417 Page 51 of 159

9kHz-30MHz test data (Bluetooth)

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 2402MHz Test Site: 2# Chamber WADE Operator:

AC 120V/60Hz Test Specification:

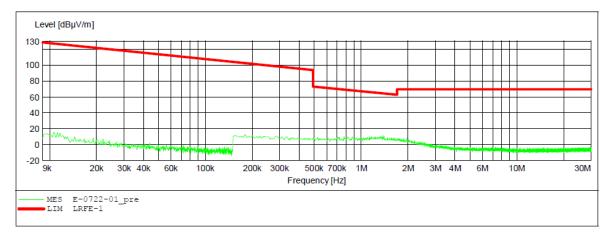
Comment:

Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin" Short Description:

_SUB_STD_VTERM2 1.70 Start Stop Step Detector Meas. IF Transducer Width Time Bandw.

Frequency Frequency 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 9.0 kHz 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Page 52 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: WADE

Test Specification: AC 120V/60Hz Comment: Y

Start of Test: 2018-7-22 /

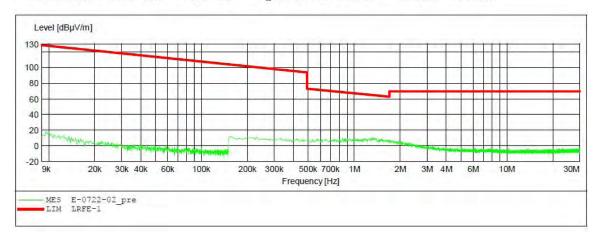
SCAN TABLE: "LFRE Fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Report No.: ATE20181417 Page 53 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 2402MHz Test Site: 2# Chamber Operator: WADE

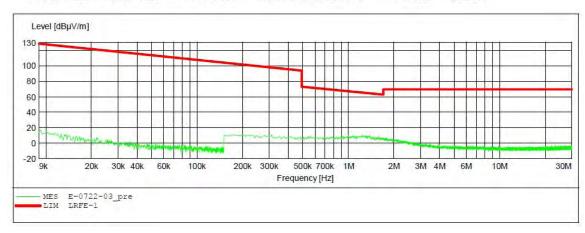
Test Specification: AC 120V/60Hz

Comment:

Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description: _SUB_STD_VTERM2 1.70

Start Stop Step IF Detector Meas. Transducer Width Frequency Frequency 9.0 kHz 150.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s Time Bandw. 9.0 kHz 200 Hz 1516M 5.0 kHz 150.0 kHz 30.0 MHz QuasiPeak 1.0 s 9 kHz 1516M





Report No.: ATE20181417 Page 54 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 2441MHz 2# Chamber Test Site: Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

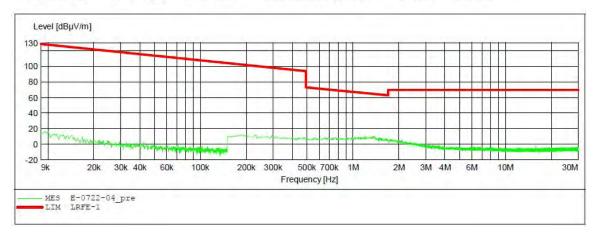
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin" Short Description:

_SUB_STD_VTERM2 1.70 Start Stop Step Detector Meas. IF Transducer

Width Time Bandw. Frequency Frequency

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 9.0 kHz 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Page 55 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER
Operating Condition: TX 2441MHz
Test Site: 2# Chamber
Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

Start of Test: 2018-7-22 /

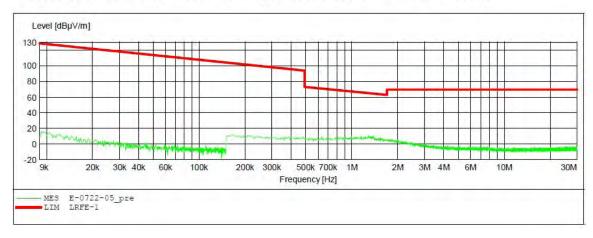
SCAN TABLE: "LFRE Fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Report No.: ATE20181417 Page 56 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

EDIFIER Manufacturer: Operating Condition: TX 2441MHz Test Site: 2# Chamber Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

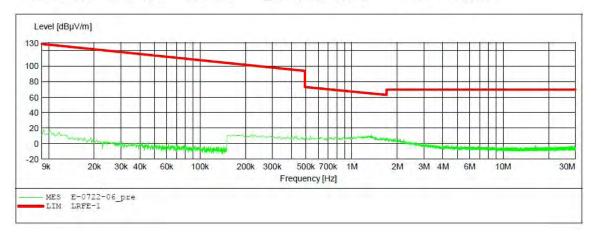
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description:

_SUB_STD_VTERM2 1.70 Step IF Start Detector Meas. Transducer Stop

Frequency Frequency Width Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Page 57 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 2480MHz Test Site: 2# Chamber Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

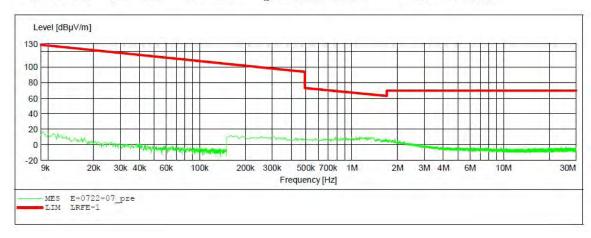
2018-7-22 / Start of Test:

SCAN TABLE: "LFRE Fin"
Short Description: _SUB_STD_VTERM2 1.70

Step Detector Meas. IF Transducer Start Stop

Time Bandw.

Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 200 Hz 1516M 9 kHz QuasiPeak 1.0 s 1516M





Report No.: ATE20181417 Page 58 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

EDIFIER Manufacturer: Operating Condition: TX 2480MHz Test Site: 2# Chamber Operator: WADE

Test Specification: AC 120V/60Hz

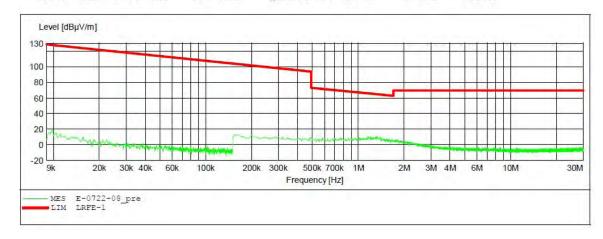
Comment:

Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description: _SUB_STD_VTERM2 1.70 Detector Meas. IF Start Stop Step

Transducer Frequency Frequency Width Time Bandw.

QuasiPeak 1.0 s 200 Hz 9.0 kHz 150.0 kHz 100.0 Hz 150.0 kHz 30.0 MHz 5.0 kHz 200 Hz 1516M 1516M





Page 59 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15C 3m Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 2480MHz 2# Chamber Test Site:

Operator: WADE Test Specification: AC 120V/60Hz

Comment:

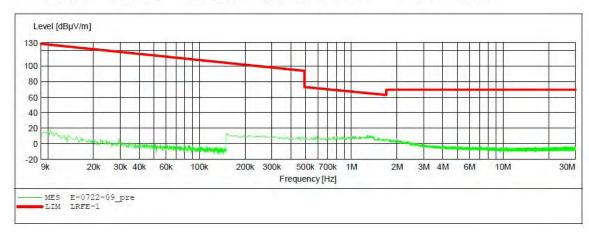
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description:

_SUB_STD_VTERM2 1.70 Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 9.0 kHz 9 kHz 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 1516M





Page 60 of 159

30MHz-1000MHz test data (Bluetooth)



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1747 Polarization: Horizontal

Standard: FCC PART 15C 3M Radiated Power Source: AC 120V/60Hz

Test item: Radiation Test Date: 18/07/14/

Temp.(C)/Hum.(%) 23 C / 48 % Time:

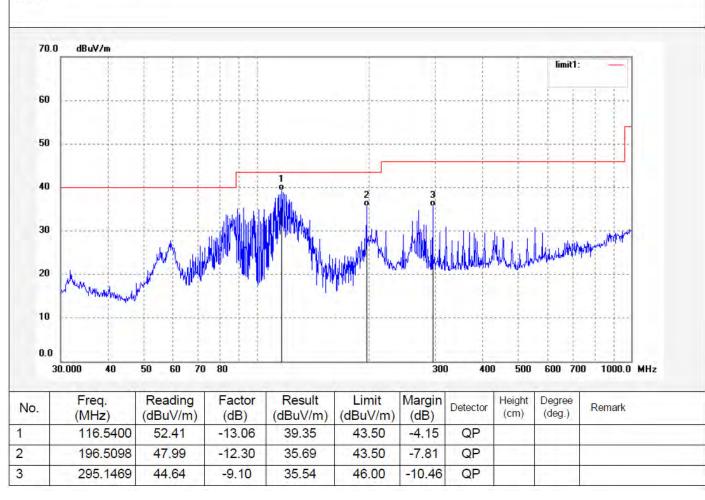
EUT: 4.1 Channel SoundBar (Home Theater System) Engineer Signature: WADE

Mode: Distance: 3m TX 2402MHz

Model: S90

Manufacturer: EDIFIER

Note:





Page 61 of 159



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1746

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2402MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/07/14/

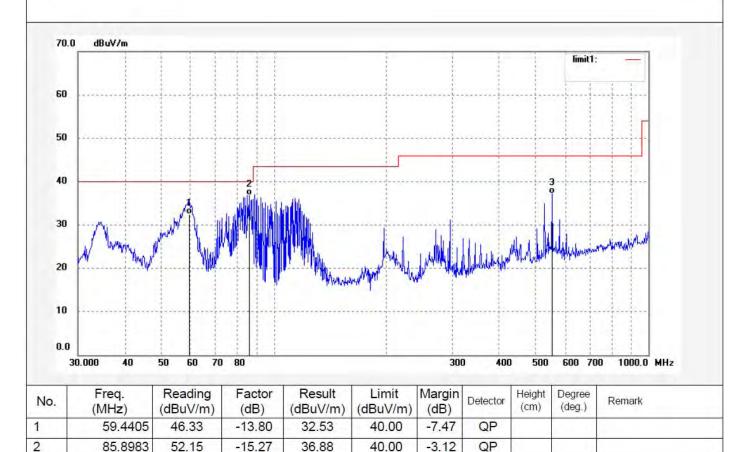
Time:

Engineer Signature: WADE

Distance: 3m

Note:

3



46.00

-8.81

QP

552.8831

40.19

-3.00

37.19



Report No.: ATE20181417
Page 62 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1748

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Horizontal

Power Source: AC 120V/60Hz

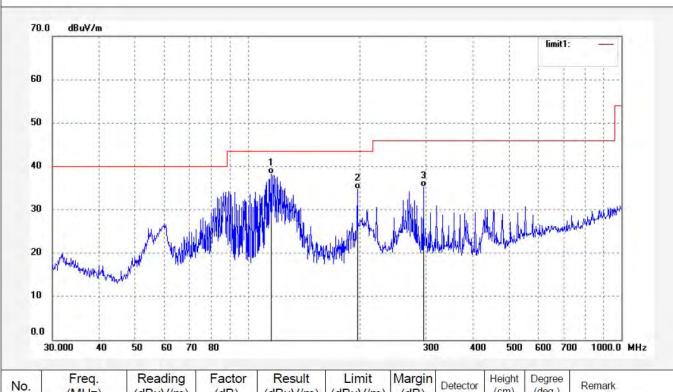
Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	115.7256	51.37	-13.06	38.31	43.50	-5.19	QP				
2	196.5098	47.05	-12.30	34.75	43.50	-8.75	QP				
3	295.1469	44.37	-9.10	35.27	46.00	-10.73	QP				



Report No.: ATE20181417 Page 63 of 159



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1749

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Note:

Manufacturer: EDIFIER

Polarization: Vertical

Power Source: AC 120V/60Hz

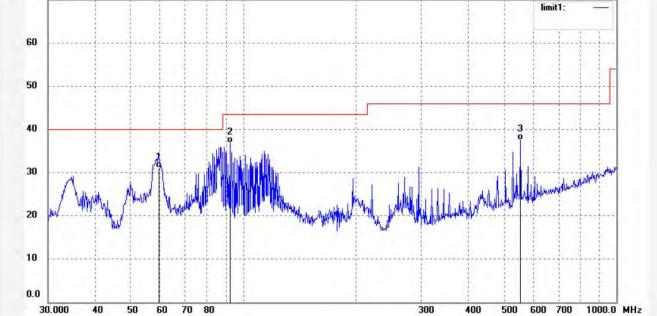
Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m

70.0	dBuV/m												
		- 1	- 11	- 35	12	4	3				7	limit1:	_
	-1	-1	1			-1	1	1	1		1		
		1		3	1	9	1	3	1		7		
	- 1	- 2	1.2	1	1	- 7	2	*	3-	1	d.	1 1	7



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	59.4405	44.80	-13.80	31.00	40.00	-9.00	QP				
2	92.1388	51.68	-14.90	36.78	43.50	-6.72	QP				
3	552.8831	40.46	-3.00	37.46	46.00	-8.54	QP				



Report No.: ATE20181417 Page 64 of 159

ATC®

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1751

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

70 80

Mode: TX 2480MHz

Model: S90

10

30.000

Manufacturer: EDIFIER

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

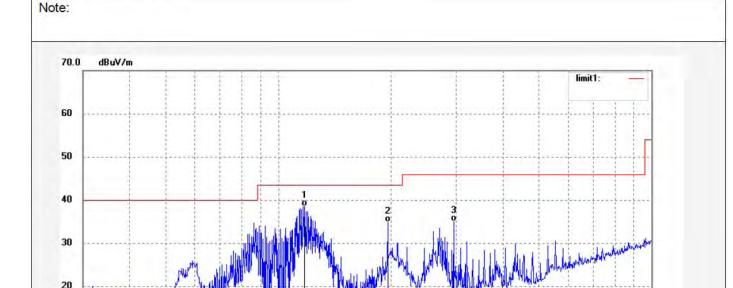
Engineer Signature: WADE

Distance: 3m

400

600 700

1000.0 MHz



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	117.7724	51.68	-13.05	38.63	43.50	-4.87	QP			
2	196.5098	47.23	-12.30	34.93	43.50	-8.57	QP			
3	295.1469	44.21	-9.10	35.11	46.00	-10.89	QP			



Report No.: ATE20181417 Page 65 of 159



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1750

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

TX 2480MHz Mode:

Model: S90

Manufacturer: EDIFIER

Time:

Engineer Signature: WADE

Date: 18/07/14/

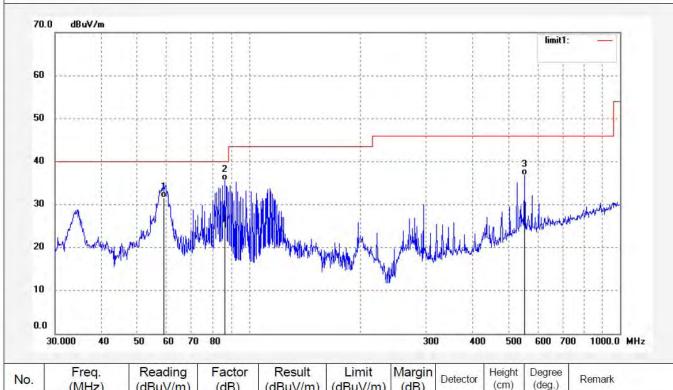
Polarization:

Vertical

Power Source: AC 120V/60Hz

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	59.0251	45.30	-13.72	31.58	40.00	-8.42	QP			
2	85.8983	50.83	-15.28	35.55	40.00	-4.45	QP			
3	552.8831	39.84	-3.00	36.84	46.00	-9.16	QP			



Page 66 of 159

1GHz-18GHz test data (Bluetooth)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1714

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2402MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m

: :						
10.0 dBuV/m	4	-				[10 to 10]
00						limit1: —
1		Company of the Company of the Company	160208208326023652	23260200002282622	Transfer and the same	00.000

20.0							
30	nonwagonominaniland	AND MANAGEMENT					
	1	Antimate make	HAN Methodography of the Breath		1 1		
40				and the state of t	washing and	Monthe Marketine	Mary more and a second
50				2			
		1			1 1		
60							
-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
70	1						
,,,	777777777777777777777777777777777777777			1	1		
80				Ĭ			
90		××					
Ž.					1 1		
100							
			1		1 1		limit1; —

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	87.74	0.89	88.63	/	1	peak			
2	4804.022	42.16	7.40	49.56	74.00	-24.44	peak			
3	4804.022	33.95	7.40	41.35	54.00	-12.65	AVG			



Page 67 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

18000.0 MHz

Job No.: LGW2018 #1715

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

2000

3000

Mode: TX 2402MHz

Model: S90

Note:

20.0

1000.000

Manufacturer: EDIFIER

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

6000 7000 8000 9000

Engineer Signature: WADE

Distance: 3m

110.0) dBuV/m	-		-	,		, ,	-				
		1		1	1			1		1	limit1:	_
100					ļ	ļ		}		ļ		
90			*	ļ	ļ.,,,,,,,					ļ	******	
								1		1		
80									****	-	******	
70				1	1	<u> </u>				İ		
		-						1				******
60			1	} }	ļ					ļ	*****	
		-						- 1		1		
50					*					-		June Personnel Was
	agradistic managed with	1		1	3				warmer sta	deputuempe	- Walnut	

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	87.67	0.89	88.56	1	1	peak			
2	4804.024	41.88	7.40	49.28	74.00	-24.72	peak			
3	4804.024	34.25	7.40	41.65	54.00	-12.35	AVG			



Report No.: ATE20181417 Page 68 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1718

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/07/14/

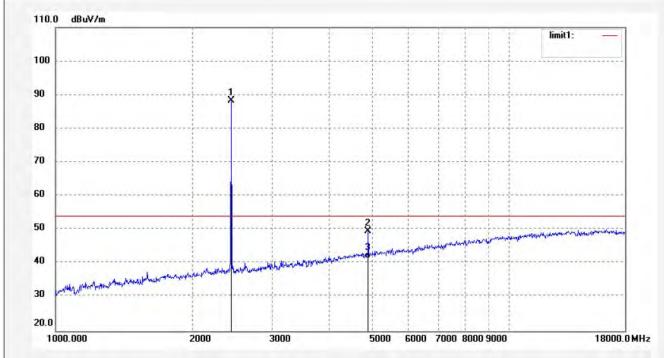
Time:

Engineer Signature: WADE

Distance: 3m

		_	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2441.000	87.14	1.06	88.20	1	1	peak				
2	4882.025	41.39	8.11	49.50	74.00	-24.50	peak				
3	4882.025	33.43	8.11	41.54	54.00	-12.46	AVG				



Page 69 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1719

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/07/14/

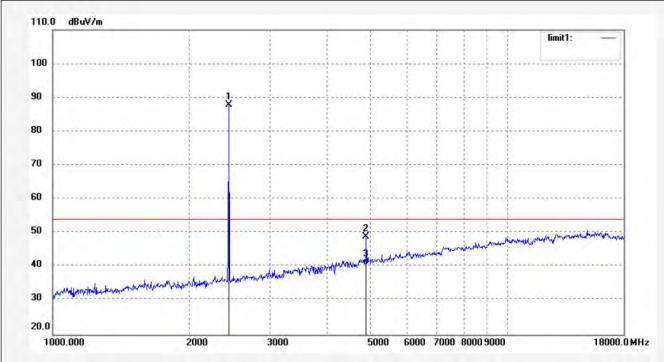
Time:

Engineer Signature: WADE

Distance: 3m

-	_	_	_	_	_

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2441.000	86.75	1.06	87.81	1	/	peak				
2	4882.026	40.81	8.11	48.92	74.00	-25.08	peak				
3	4882.026	32.44	8.11	40.55	54.00	-13.45	AVG				



Report No.: ATE20181417 Page 70 of 159



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1721

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2480MHz

Model:

Manufacturer: EDIFIER

S90

Horizontal Polarization:

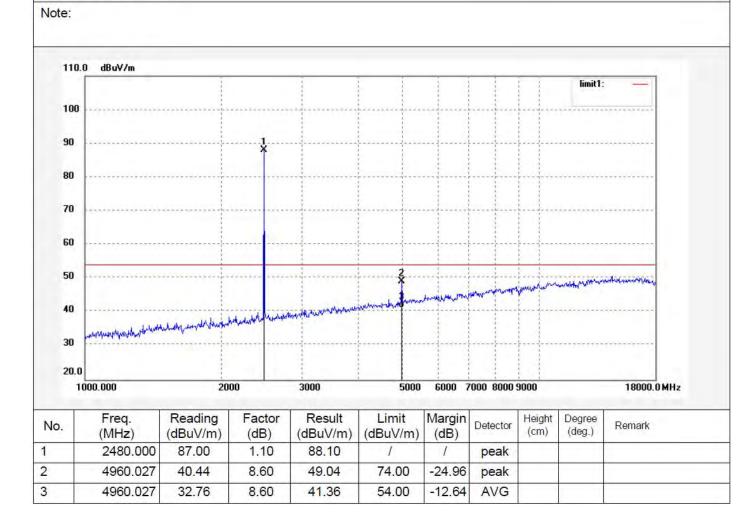
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m





Report No.: ATE20181417
Page 71 of 159

ATC®

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1720

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2480MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

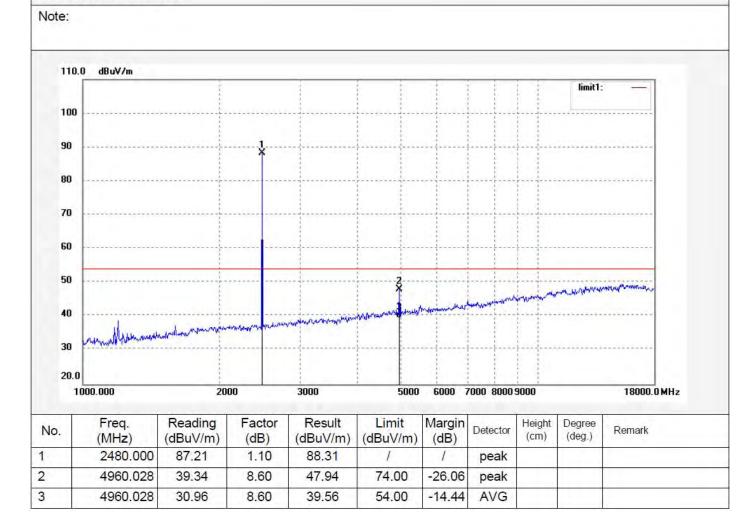
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m





Report No.: ATE20181417
Page 72 of 159

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

18GHz-26.5GHz test data (Bluetooth)



ACCURATE TECHNOLOGY CO., LTD.

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

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m

Job No.: LGW2018 #1725

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

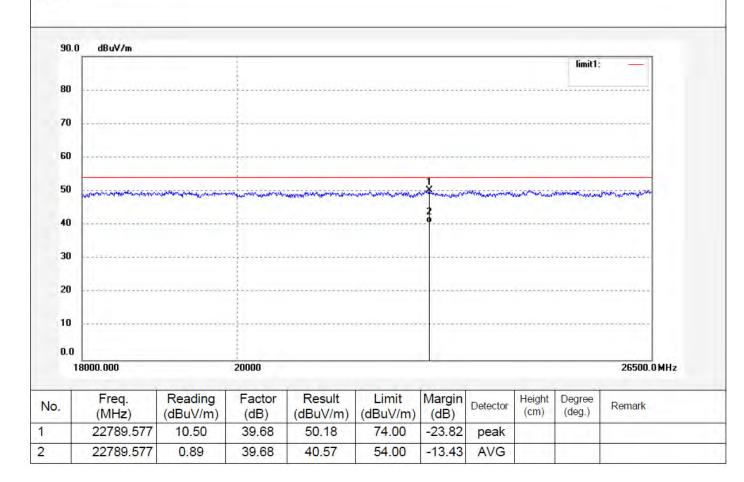
EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2402MHz

Model: S90

Manufacturer: EDIFIER

Note:





Page 73 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1724

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2402MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

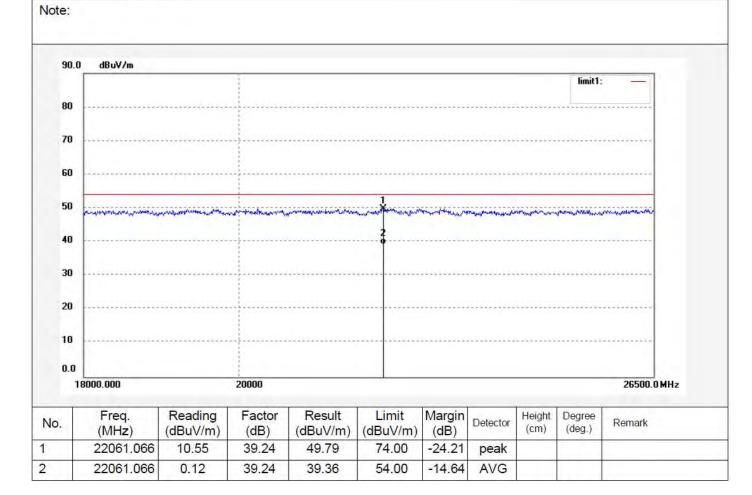
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m





Report No.: ATE20181417 Page 74 of 159

ATC[®]

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1726

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Manufacturer: EDIFIER

Mariu

Note:

1

2

Polarization: Horizontal

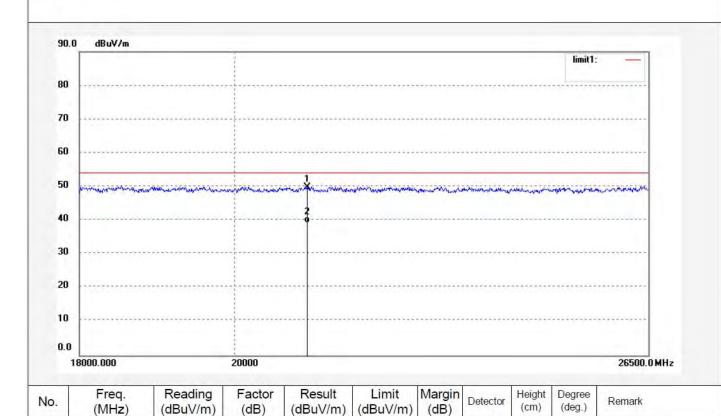
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m



21011.732

21011.732

11.39

0.94

38.42

38.42

49.81

39.36

74.00

54.00

-24.19

-14.64

peak

AVG



Page 75 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1727

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2441MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m

Note: 90.0 dBuV/m limit1: 80 70 60 50 40 30 20 10 0.0 18000.000 20000 26500.0 MHz Margin Freq. Reading Factor Result Limit Height Degree No. Detector Remark (dBuV/m) (dBuV/m) (dB) (dB) (cm) (deg.) (MHz) (dBuV/m) 1 22001.419 10.83 39.22 50.05 74.00 -23.95peak 2 22001.419 1.29 39.22 40.51 54.00 -13.49AVG



Page 76 of 159



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1729

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

4.1 Channel SoundBar (Home Theater System) EUT:

Mode: TX 2480MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Horizontal

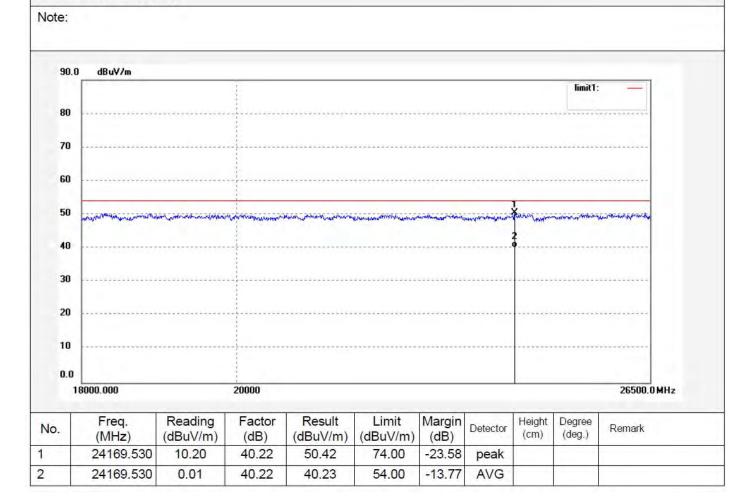
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m





Page 77 of 159



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2018 #1728

Standard: FCC PART 15C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: 4.1 Channel SoundBar (Home Theater System)

Mode: TX 2480MHz

Model: S90

Manufacturer: EDIFIER

Polarization: Vertical

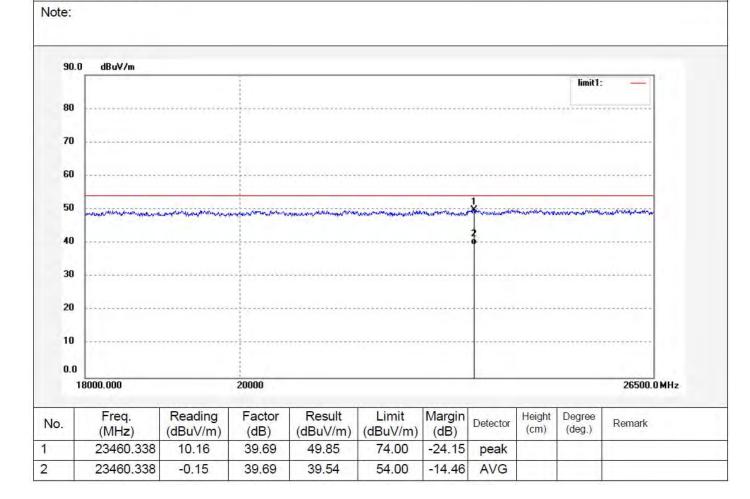
Power Source: AC 120V/60Hz

Date: 18/07/14/

Time:

Engineer Signature: WADE

Distance: 3m





Page 78 of 159

9kHz-30MHz test data (5.8G)

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 5730.35MHz 2# Chamber Test Site:

Operator: WADE

Test Specification: AC 120V/60Hz Comment:

2018-7-22 / Start of Test:

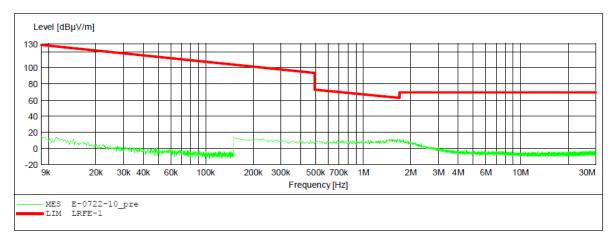
SCAN TABLE: "LFRE Fin"

SUB STD VTERM2 1.70 Short Description:

Stop Detector Meas. Start Step ΙF Transducer

Width Frequency Frequency Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 9 kHz 1516M 5.0 kHz QuasiPeak 1.0 s





Report No.: ATE20181417 Page 79 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER

Operating Condition: TX 5730.35MHz Test Site: 2# Chamber

Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

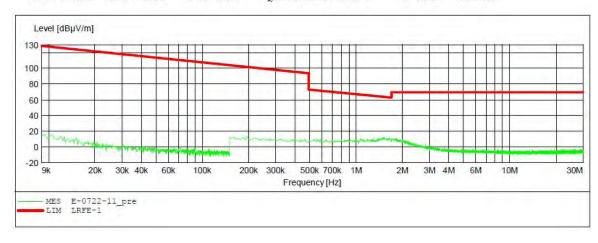
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description:
Start Stop Ste SUB STD VTERM2 1.70

Step Detector Meas. IF Transducer Stop

Frequency Frequency Width Time Bandw.

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9.0 kHz 200 Hz 1516M 150.0 kHz 30.0 MHz 9 kHz 1516M





Page 80 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 5730.35MHz Test Site: 2# Chamber

WADE Operator:

Test Specification: AC 120V/60Hz

Comment:

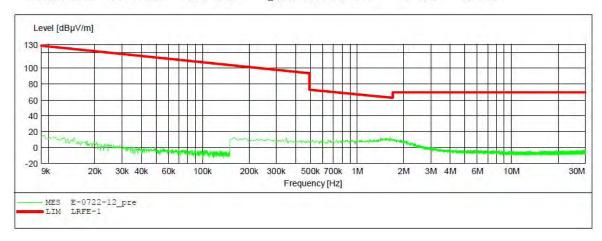
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description:

SUB STD VTERM2 1.70 Step IF Start Detector Meas. Transducer Stop

Time Bandw.

Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Report No.: ATE20181417 Page 81 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 5776.35MHz 2# Chamber Test Site:

WADE Operator:

Test Specification: AC 120V/60Hz

Comment:

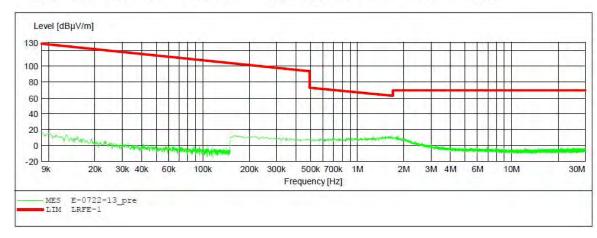
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description: SUB STD VTERM2 1.70

Step IF Start Detector Meas. Transducer Stop

Time Bandw.

Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 9 kHz 1516M





Page 82 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER Operating Condition: TX 5776.35MHz Test Site: 2# Chamber

Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

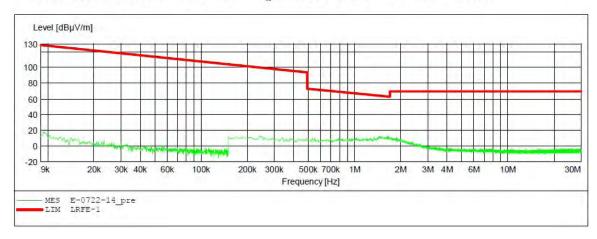
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description:

SUB STD VTERM2 1.70 IF Start Stop Step Detector Meas. Transducer

Frequency Frequency Width Time Bandw.

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 9.0 kHz 9.0 kHz 150.0 kHz 150.0 kHz 30.0 MHz 9 kHz 5.0 kHz QuasiPeak 1.0 s 1516M





Page 83 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER

Operating Condition: TX 5776.35MHz Test Site: 2# Chamber Operator: WADE

Test Specification: AC 120V/60Hz

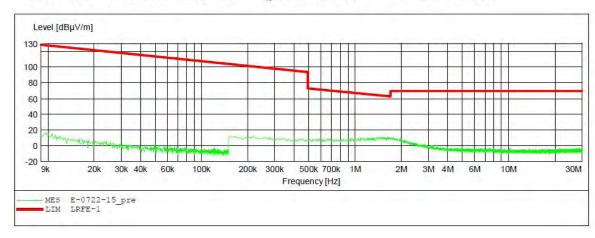
Comment:

2018-7-22 / Start of Test:

SCAN TABLE: "LFRE Fin" Short Description:

SUB STD VTERM2 1.70 Stop Detector Meas. Start Step IF Transducer

Frequency Frequency Width Time Bandw. 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Page 84 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

4.1 Channel SoundBar (Home Theater System) M/N:S90

EDIFIER Manufacturer: Operating Condition: TX 5820.35MHz Test Site: 2# Chamber

WADE Operator:

Test Specification: AC 120V/60Hz

Comment:

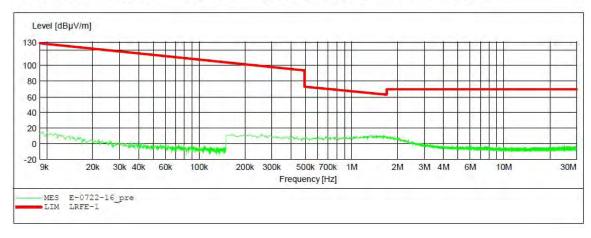
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"
Short Description: SUB STD VTERM2 1.70

IF Start Stop Step Detector Meas. Transducer

Frequency Frequency Width Time Bandw.

150.0 kHz 100.0 Hz QuasiPeak 1.0 s 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9.0 kHz 200 Hz 1516M 150.0 kHz 30.0 MHz 9 kHz 1516M





Page 85 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER
Operating Condition: TX 5820.35MHz
Test Site: 2# Chamber

Operator: WADE

Test Specification: AC 120V/60Hz

Comment:

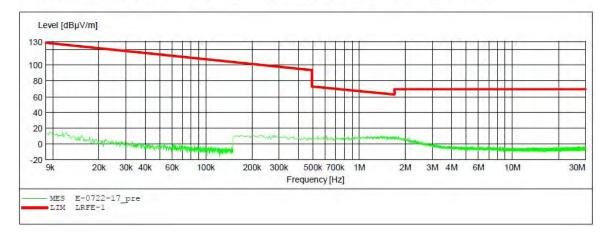
Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M





Report No.: ATE20181417
Page 86 of 159

ACCURATE TECHNOLOGY CO., LTD

FCC PART 15 3M Radiated

EUT: 4.1 Channel SoundBar (Home Theater System) M/N:S90

Manufacturer: EDIFIER
Operating Condition: TX 5820.35MHz
Test Site: 2# Chamber

Operator: WADE

Test Specification: AC 120V/60Hz

Comment: Z

Start of Test: 2018-7-22 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz 1516M 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz 1516M

