APPLICATION FOR CERTIFICATION On Behalf of Powertech Industrial Co., Ltd. ZigBee Tracking Smart Socket Model No. : M9PC020000 FCC ID : NHS-M9PC02

Prepared for : Powertech Industrial Co., Ltd. 10F, No. 407, Chung Shan Rd., Sec 2 Chung Ho City, New Taipei City, 235 Taiwan, R.O.C.

Prepared by : AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.

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Report Number	:	EM-F1010643
Date of Test	:	Aug. 01 ~ 20, 2012
Date of Report	:	Aug. 20, 2012

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TEST REPORT CERTIFICATION

Applicant	:	Powertech Industrial Co., Ltd.					
Manufacturer	:	Dongguan Quan Sheng Electric Co., Ltd.					
EUT Description	:	ZigBee Tracking Smart Socket					
FCC ID	:	NHS-M9PC02					
		(A) Model No.		M9PC020000			
		(B) Serial No. : N/A		N/A			
		(C) Power Supply : AC 120V/60H		AC 120V/60Hz			
		(D) Test Voltage : AC 120V/60Hz					

Measurement Procedure Used: FCC RULES AND REGULATIONS PART 15 SUBPART C, Oct. 2011 (FCC CFR 47 Part 15C, §15.207, §15.249, §15.209) AND ANSI C63.4/2003

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C limits.

The measurement results are contained in this test report and AUDIX Technology Corporation is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test :	Aug. 01 ~ 20, 2012	Date of Report :	Aug. 20, 2012
Producer :(An	nie Yu/Assistant Administrator)		
Signatory:	eon fin		

(Leon Liu/Deputy General Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Description	:	ZigBee Tracking Smart Socket
FCC ID	:	NHS-M9PC02
Model Number	:	M9PC020000
Applicant	:	Powertech Industrial Co., Ltd.
		10F, No. 407, Chung Shan Rd., Sec 2 Chung Ho City, New Taipei City, 235 Taiwan, R.O.C.
Manufacturer	:	Dongguan Quan Sheng Electric Co., Ltd.
		Chu-Tang 2nd Industrial Park Hou-Chieh Town Dongguan Guangdong 523963 China.
Fundamental Range	:	2405MHz ~ 2480MHz
Antenna Connector Requirement	:	Compliance with FCC §15.203
Frequency Channel	:	16 channels
Radio Technology	:	OQPSK Modulation
Date of Receipt of Sample	:	Jul. 03, 2012
Date of Test	:	Aug. 01 ~ 20, 2012

1.2. Description of Test Facility

Name of Firm	:	AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
Test Facility & Location (C1/AC)	:	No. 1 Shielded Room & No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
		Semi-Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
		Renewal on May 11, 2012 Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

1.3. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conduction Test	150kHz~30MHz	±1.73dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.94dB
	Above 1GHz	± 5.02dB

Remark : Uncertainty = $ku_c(y)$

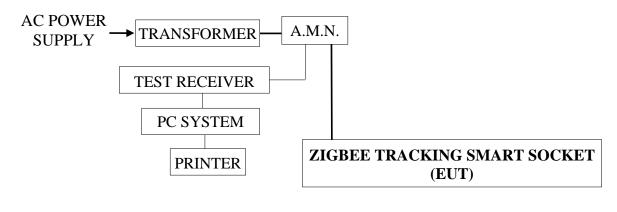
2. POWERLINE CONDUCTED EMISSION MEASUREMENT

2.1. Test Equipment

The following test equipment was used during the conducted emission measurement : (No. 1 Shielded Room)

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCS30	100265	Aug. 25, 11'	Aug. 24, 12'
2.	A.M.N.	R&S	ENV4200	100169	May 04, 12'	May 03, 13'

2.2. Block Diagram of Test Setup



____: SIGNAL LINE

2.3. Powerline Conducted Emission Limit (§15.207)

Frequency	Maximum RF Line Voltage				
riequency	Quasi-Peak Level	Average Level			
150kHz ~ 500kHz	66 ~ 56 dBµV	56 ~ 46 dBµV			
500kHz ~ 5MHz	56 dBµV	46 dBµV			
5MHz ~ 30MHz	60 dBµV	50 dBµV			

Remark1.: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2.: The lower limit applies at the band edges.

2.4. Operating Condition of EUT

- 2.4.1. Setup the EUT (ZigBee Tracking Smart Socket) as shown on 2.2.
- 2.4.2. Turn on the power of all equipment.
- 2.4.3. The **EUT** (**ZigBee Tracking Smart Socket**) was on transmitting function at work during all testing.

2.5. Test Procedure

The EUT (link to bulbs load) was put on table which was above the ground by 80cm and it's power cord was connected to power mains through an Artificial Mains Network (A.M.N.). This provided a 50 ohm coupling impedance for the measuring equipment. (Please refer to the block diagram of the test setup and photographs.) Both sides of A.C. line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions simulators of the interface cables should be manipulated according to ANSI C63.4-2003 during conducted measurement.

The bandwidth of the R & S Test Receiver ESCS 30 was set at 9kHz.

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

All the final readings from Test Receiver were measured with the Quasi-Peak detector and Average detector. (Remark: If the Average limit is met when using a Quasi-Peak detector, the Average detector is unnecessary)

2.6. Powerline Conducted Emission Measurement Results

PASSED. All emissions not reported below are too low against the prescribed limits.

The EUT was measured during this section testing and all the test results are listed in next pages.

EUT : ZigBee Tracking Smart Socket Model No. : M9PC020000

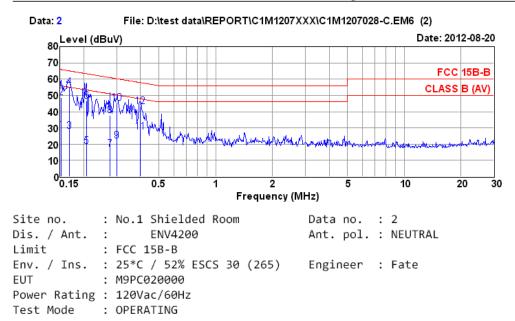
Test Date : Aug. 20, 2012Temperature : 25Humidity : 52%

The details are as follows :

Mode	Reference Test Data					
Mode	Neutral	Line				
1.	# 2	# 1				



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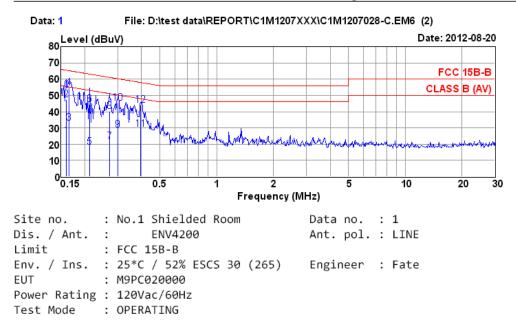


	Freq. (MHz)	AMN. Factor (dB/m)	Cable Loss (dB)	Reading (dBμV)		Limits (dBµV/m)	Margin (dB)	Remark
1	0.15	10.23	9.92	8.16	28.31	55.91	27.60	Average
2	0.15	10.23	9.92	28.55	48.70	65.91	17.21	QP
3	0.17	10.23	9.93	7.95	28.11	55.08	26.97	Average
4	0.17	10.23	9.93	34.85	55.01	65.08	10.07	QP
5	0.21	10.23	9.94	-1.71	18.46	53.36	34.90	Average
6	0.21	10.23	9.94	26.43	46.60	63.36	16.76	QP
7	0.27	10.20	9.95	-3.23	16.92	50.98	34.06	Average
8	0.27	10.20	9.95	17.67	37.82	60.98	23.16	QP
9	0.30	10.19	9.96	1.88	22.03	50.24	28.21	Average
10	0.30	10.19	9.96	24.97	45.12	60.24	15.12	QP
11	0.40	10.17	9.97	7.32	27.46	47.86	20.40	Average
12	0.40	10.17	9.97	23.21	43.35	57.86	14.51	QP
Remarks					or + Cable		0	_

2. The emission levels that are 20dB below the official limit are not reported.



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	Freq. (MHz)	AMN. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	0.16	10.22	9,92	4.82	24.96	55.52	30.56	Average
2	0.16	10.22	9.92	27.36	47.50	65.52	18.02	QP
3	0.17	10.23	9.92	12.73	32.88	55.21	22.33	Average
4	0.17	10.23	9.92	34.42	54.57	65.21	10.64	QP
5	0.21	10.24	9.94	-1.84	18.34	53.10	34.76	Average
6	0.21	10.24	9.94	24.40	44.58	63.10	18.52	QP
7	0.27	10.22	9.95	1.48	21.65	51.12	29.47	Average
8	0.27	10.22	9.95	19.95	40.12	61.12	21.00	QP
9	0.30	10.22	9.96	8.57	28.75	50.24	21.49	Average
10	0.30	10.22	9.96	24.98	45.16	60.24	15.08	QP
11	0.40	10.20	9.97	9.26	29.43	47.95	18.52	Average
12	0.40	10.20	9.97	23.97	44.14	57.95	13.81	QP
Remarks					or + Cable		0	,

2. The emission levels that are 20dB below the official limit are not reported.

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

3.1.1. For Frequency Range 30MHz~1000MHz (at Semi-Anechoic Chamber)

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 07, 12'	Aug. 06, 13'
2.	Test Receiver	R & S	ESCS30	100265	Aug. 25, 11'	Aug. 24, 12'
3.	Pre-Amplifier	HP	8447D	2944A06305	Feb. 13, 12'	Feb. 11, 13'
4.	Biconical Antenna	CHASE	VBA6106A	1264	Mar. 03, 12'	Mar. 02, 13'
5.	Log Periodic Antenna	Schwarzbeck	UHALP91 08-A	0810	Mar. 03, 12'	Mar. 02, 13'

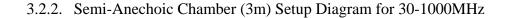
3.1.2. For Frequency Above 1GHz (at Semi-Anechoic Chamber)

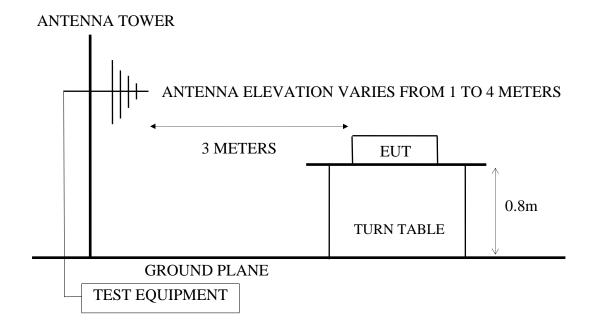
Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Aug. 07, 12'	Aug. 06, 13'
2.	Pre-Amplifier	HP	8449B	3008A00529	Dec. 09, 11'	Dec. 08, 12'
3.	Horn Antenna	EMCO	3115	9609-4927	Jul. 05, 12'	Jul. 04, 13'

3.2. Block Diagram of Test Setup

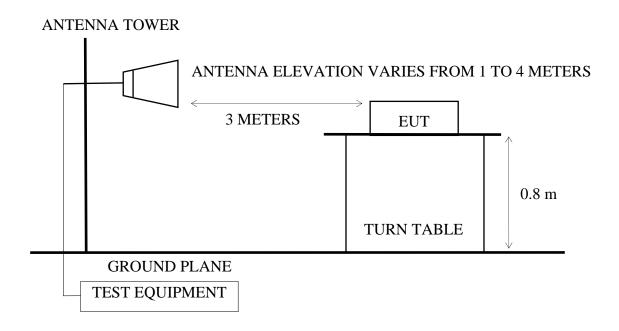
3.2.1. Block Diagram of connection between EUT and simulators

AC POWER	ZIGBEE TRACKING SMART SOCKET
SUPPLY	(EUT)





3.2.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



FREQUENCY	DISTANCE	FIELD STRENGTHS LIMITS		
MHz	Meters	μV/m	dBµV/m	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
Above 960	3	500	54.0	
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)		

3.3. Radiated Emission Limits (§15.209)

Remark : (1) Emission level ($dB\mu V/m$) = 20 log Emission level ($\mu V/m$)

(2) The tighter limit applies at the edge between two frequency bands.

- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) The limits in this table are based on CFR 47 Part 15.205(a)(b) and Part 15.209 (a).
- (5) The over 1GHz limit, FCC limit is used based on CFR 47 Part 15.35 (b) and Part 15.205(b) & Part 15.209(e) and Part 15.207(c).

3.4. Fundamental Frequency Limits [§15.249(a)]

FUNDAMENTAL FREQUENCY MHZ	LIMITS
2400-2485	114 dBµV/m (Peak)
2400-2483	94 dBµV/m (Average)

3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT (ZigBee Tracking Smart Socket) as shown on 3.2.
- 3.5.2. Turn on the power of all equipment.
- 3.5.3. The EUT was set to continuously transmit signals at 2405Hz, 2450MHz and 2480MHz during testing.

3.6. Test Procedure

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antennas such as calibrated biconical and log-periodical antenna or horn antenna were used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC ANSI C63.4-2003 regulation.

The bandwidth of the R & S Test Receiver ESCS 30 was set at 120kHz. (For 30MHz to 1000MHz)

The resolution bandwidth and video bandwidth of test spectrum analyzer is 1MHz for peak detection (PK) at frequency above 1GHz.

The frequency range from 30MHz to 25GHz (Up to 10th harmonics from fundamental frequency) was checked.

Above 1GHz was measured with peak and average detector. For frequency from 2.68GHz to 25GHz, we checked it in 1 meter distance and with a shorter cable 2 meter instead of original's. There is no signal exist

3.7. Radiated Emission Measurement Test Results

PASSED. All emissions not reported below are too low against the prescribed limits.

EUT: ZigBee Tracking Smart Socket Model No. : M9PC020000

Test Date : Aug. 09, 2012 Temperature : 25 Humidity : 61%

For Frequency Range 30MHz~1000MHz:

The EUT was measured during this section testing and all the test results are listed in section 3.7.1.

Moda	Channel	Frequency Test Mode		Reference '	Test Data
Mode	Channel			Horizontal	Vertical
1.	11	2405MHz		#2,#4	#1,#3
2.	20	2450MHz	Transmit	#2,#4	#1,#3
3.	26	2480MHz		#2,#4	# 1, # 3

* Above all final readings were measured with Quasi-Peak detector.

For Frequency above 1GHz:

section	5.1.2.			
Mode	Chnnel	Frequency	Test Mode	Test Frequency Range
1.*				1000-2680MHz*
2.				2680-4000MHz
3.*	11	2405MHz	Transmit	4000-5500MHz*
4.				5500-18000MHz
5.				18000-25000MHz
6.*				1000-2680MHz*
7.*				2680-4000MHz*
8.*	20	2450MHz	Transmit	4000-5500MHz*
9.				5500-18000MHz
10.				18000-25000MHz
11.*				1000-2680MHz*
12.*				2680-4000MHz*
13.*	26	2480MHz	Transmit	4000-5500MHz*
14.*				5500-18000MHz*
15.				18000-25000MHz

The EUT was measured during this section testing and all the test results are listed in section 3.7.2.

Note: 1. Above all final readings were measured with Peak and Average detector.

2. The emissions (up to 25GHz) not reported are too low to be measured.

3. "*" means there is spurious emission falling the frequency band and be measures.

For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 3.7.2. (The restricted bands defined in part 15.205(a))

Mode C	Channal	Eraguanay	Test Mode	Reference Test Data		
	Channel	Frequency	Test Mode	Horizontal	Vertical	
1.	11	2405MHz	Transmit	# 2	# 1	
2.	26	2480MHz	TTAIISIIIIt	# 4	# 3	

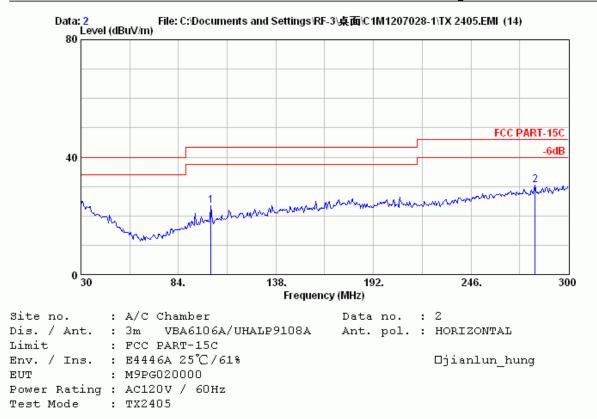
For Fundamental Frequency:

The EUT was measured during this section testing and all the test results are listed in section 3.7.4.

Mode	Channel	Frequency	Test Mode	Reference Test Data
1.	11	2405MHz		# 1
2.	20	2450MHz	Transmit	# 1
3.	26	2480MHz		# 1

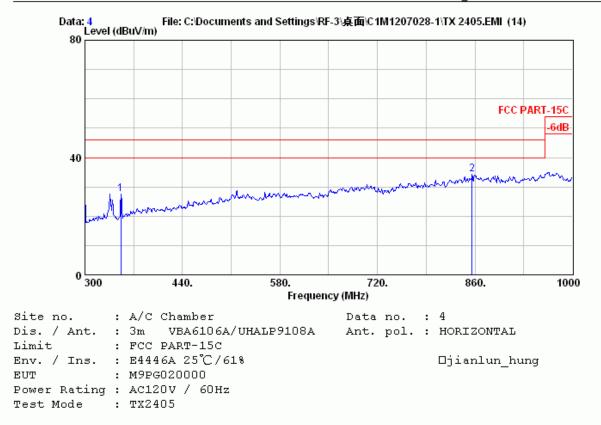
3.7.1. Frequency Range 30-1000MHz





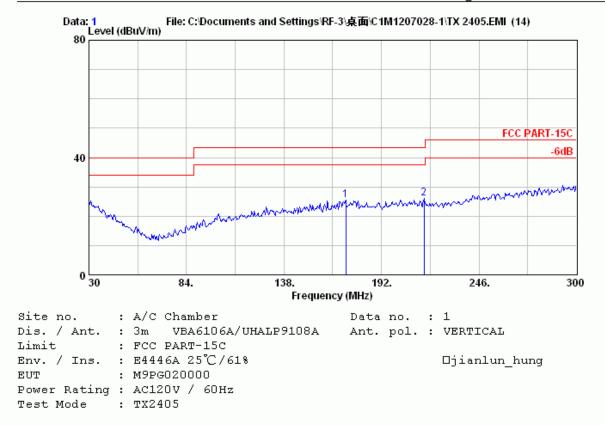
	Freq. (MHz)	Factor			Emission Level (dBµV/m)			Remark	
1 2	102.090 281.640		2.10 3.80	4.05 1.36	23.44 30.49		20.06 15.51		
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official limit are not reported.									





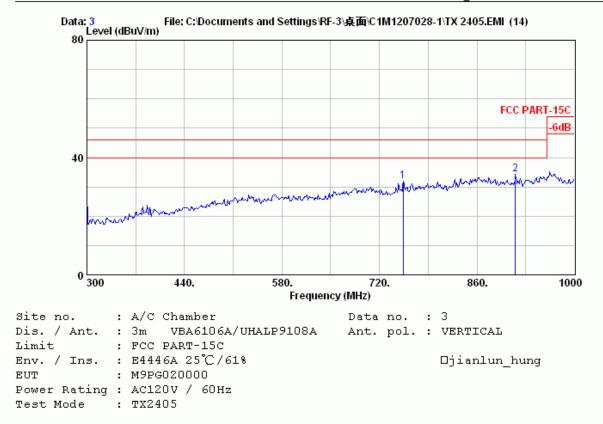
	Freq. (MHz)	Factor			Emission Level (dBµV/m)			Remark	_
1 2				7.74 1.11	27.60 34.17	46.00 46.00			
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official limit are not reported.									





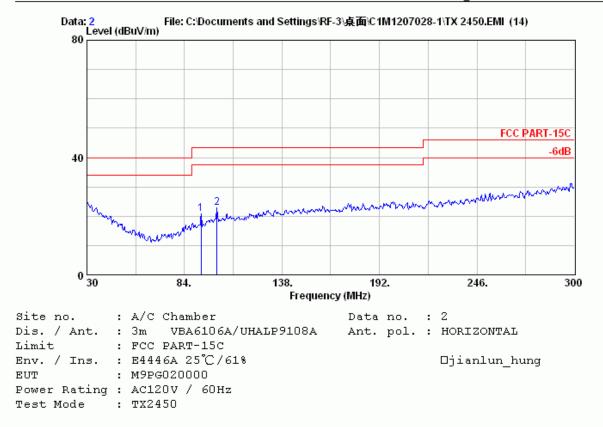
	Freq. (MHz)	Factor			Emission Level (dBµV/m)			Remark	_	
1	172.290	21.04	2.80	1.59	25.44	43.50	18.06	Peak	_	
2	215.490	21.82	3.20	1.12	26.14	43.50	17.36	Peak		
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official limit are not reported.										





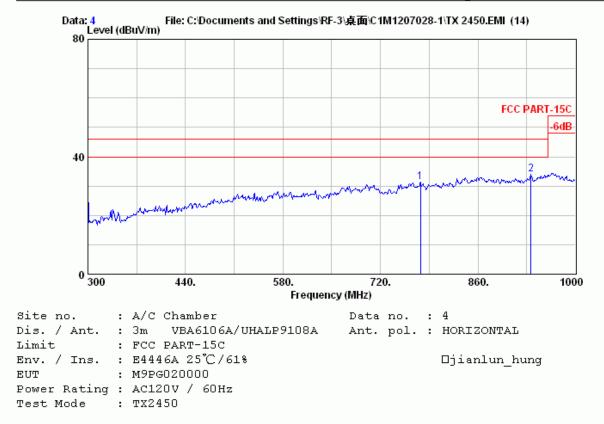
	1	Factor		Reading	Emission Level (dBµV/m)		 Remark
1 2				1.69 1.94	31.90 34.24	46.00 46.00	
 Remar	2. Th	e emiss:	ion lev		Factor + C are 20dB		-





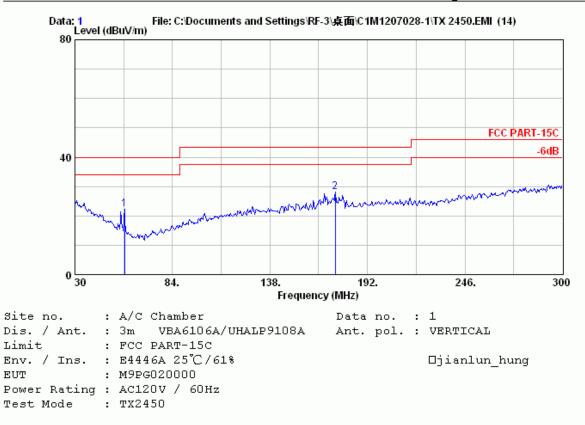
	Freq. (MHz)	Factor		Reading	Emission Level (dBµV/m)		Remark
1 2	93.180 102.090		2.00 2.10	2.64 3.44	20.89 22.83	 22.61 20.67	
Remar	2. Th	e emiss:	ion lev		Factor + C are 20dB		-





		Ant.	Cable		Emission			
	-				Level (dBµV/m)			Remark
1	777.400	24.18	6.80	0.29	31.28	46.00	14.72	Peak
2	936.300	25.39	7.50	1.08	33.97	46.00	12.03	Peak

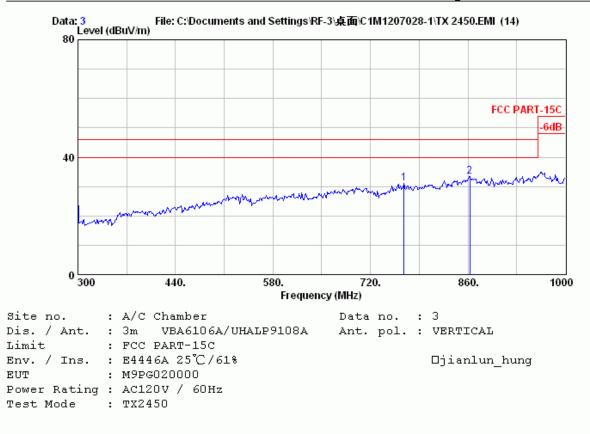




-	Loss		Emission Level (dBµV/m)		 Remark
 7.540 4.180	 	6.76 4.30	22.13 28.23	40.00 43.50	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official

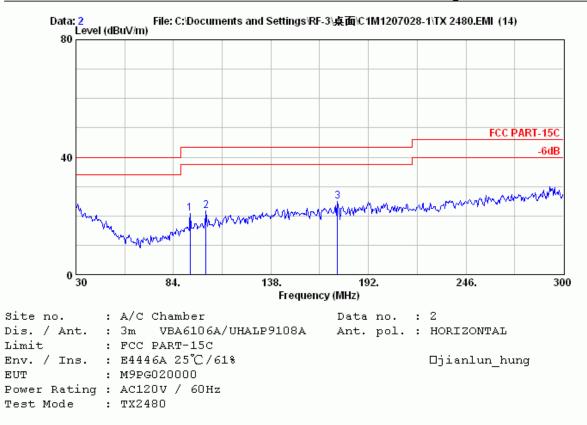




	Freq. (MHz)	Factor			Emission Level (dBµV/m)		Remark
1 2	768.300 862.800		6.80 7.20	0.37 0.17	31.04 33.46	 14.96 12.54	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official

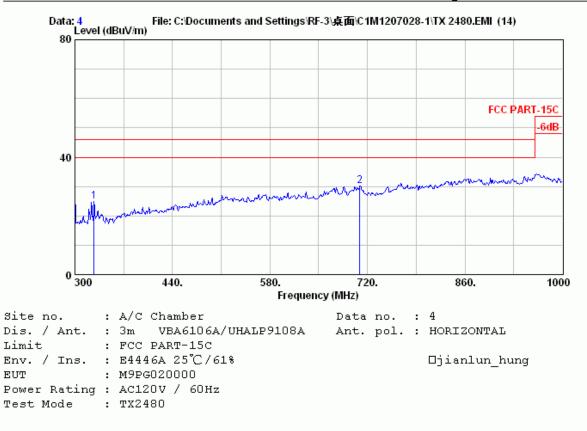




	Freq. (MHz)	Factor		5	Emission Level (dBµV/m)		Remark	
1 2 3	102.090		2.00 2.10 2.85	2.54 2.25 1.06	20.79 21.64 25.04	 22.71 21.86 18.46	Peak	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

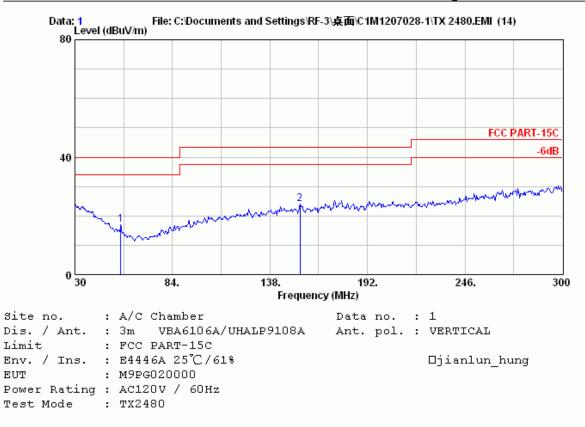




 Freq. (MHz)	Loss		Emission Level (dBµV/m)		Remark
327.300 708.800	 4.20 6.60	5.49 0.12	24.86 30.27	 21.14 15.73	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official

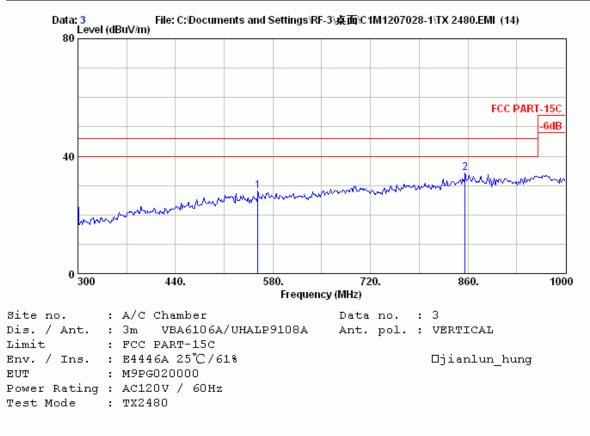




	Freq. (MHz)	Factor			Emission Level (dBµV/m)		Remark
1 2	55.380 154.740		1.50 2.63	1.00 0.60	16.89 23.93	 23.11 19.57	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official





	Freq. (MHz)	Factor		Emission Level (dBµV/m)		 Remark
1 2 	558.300 855.800		 1.52 1.11	28.10 34.17	46.00 46.00	 Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading. 2. The emission levels that are 20dB below the official

Date of Test	:	Aug.	09, 2012		Femperature :	25
EUT:	Zigł	Bee Track	ing Smart So	cket	Humidity :	61%
Test Mode :		Transr	nit, Channel:	11, Frequer	ncy: 2405MHz	
Emission Frequency	Antenna Factor	Cable Loss	Meter Reading	Emission Level	Limits	Margin
		2000	Horizontal	Horizontal		
(MHz)	(dB/m)	(dB)	U		(dBµV/m)	(dB)

3.7.2. Above 1GHz Frequency Range Measurement Results

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(dB/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
41.57	-26.01	15.56	54.00	38.44
42.91	-26.01	16.90	54.00	37.10
	(dB/m) 41.57	Correction Factor(dB/m)(dB)41.57-26.01	Correction Factor Value (dB/m) (dB) (dBµV/m) 41.57 -26.01 15.56	Correction Factor Value (dB/m) (dB) (dBµV/m) (dBµV/m) 41.57 -26.01 15.56 54.00

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Date of Test:	Aug. 09, 2012	Temperature :	25
EUT :	ZigBee Tracking Smart Socket	Humidity :	61%

•	Transmit	Channal	11 Erac	juency: 2405N	/U7
•	Transmit,	Chamer.	11, 1100	juency. 24031	1112

Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Vertical	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1650.160	26.27	6.49	19.83	52.59	74.00	21.41
4813.000	33.06	9.14	12.65	54.85	74.00	19.15

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

Test Mode

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(MHz)	(dB/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1650.16	52.59	-26.01	26.58	54.00	27.42
4813.00	54.85	-26.01	28.84	54.00	25.16
		(1 11.4	(100) 0		

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Date of Test :	Aug. 09, 2012	Temperature :	25
EUT:	ZigBee Tracking Smart Socket	Humidity :	61%

Test Mode : Transmit, Channel: 20, Frequency: 2450MHz

Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Horizontal	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1577.920	26.02	5.98	9.00	40.99	74.00	33.01
1776.160	26.78	7.04	9.68	43.50	74.00	30.50
2995.480	30.34	7.20	7.48	45.03	74.00	28.97
3659.440 4906.000	31.70 33.24	8.02 9.16	7.92 7.97	47.65 50.37	74.00 74.00	26.35 23.63

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(MHz)	(dB/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1577.92	40.99	-26.01	14.98	54.00	39.02
1776.16	43.50	-26.01	17.49	54.00	36.51
2995.48	45.03	-26.01	19.02	54.00	34.98
3659.44	47.65	-26.01	21.64	54.00	32.36
4906.00	50.37	-26.01	24.36	54.00	29.64

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Date of Test :	Aug. 09, 2012	Temperature :	25
EUT:	ZigBee Tracking Smart Socket	Humidity :	61%
Test Mode :	Transmit, Channel: 20, Freq	uency: 2450MHz	

Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Vertical	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1717.360	26.52	6.96	18.28	51.76	74.00	22.24
2926.840	30.12	7.12	8.00	45.24	74.00	28.76
3642.280 4903.000	31.66 33.24	7.98 9.16	8.01 8.90	47.65 51.30	74.00 74.00	26.35 22.70

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(MHz)	(dB/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1717.36	51.76	-26.01	25.75	54.00	28.25
2926.84	45.24	-26.01	19.23	54.00	34.77
3642.28	47.65	-26.01	21.64	54.00	32.36
4903.00	51.30	-26.01	25.29	54.00	28.71

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Date of Test:	Aug. 09, 2012	Temperature :	25
EUT:	ZigBee Tracking Smart Socket	- Humidity :	61%

Test Mode : Transmit, Channel: 25, Frequency: 2480MHz

Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Horizontal	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
2300.320 3299.080	28.24 30.93	6.23 7.45	8.64 7.91	43.11 46.29	74.00 74.00	30.89 27.71
4370.500	32.53	8.63	8.54	49.70	74.00	24.30

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(MHz)	(dB/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
2300.32	43.11	-26.01	17.10	54.00	36.90
3299.08	46.29	-26.01	20.28	54.00	33.72
4370.50	49.70	-26.01	23.69	54.00	30.31

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Date of Test:	Aug. 09, 2012	Temperature :	25	
EUT:	ZigBee Tracking Smart Socket	Humidity :	61%	

Test Mode : Transmit, Channel: 25, Frequency: 2480MHz

Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Vertical	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
1762.720	26.71	7.12	19.76	53.59	74.00	20.41
3292.480	30.93	7.45	9.02	47.41	74.00	26.59
3619.840	31.61	7.96	8.22	47.79	74.00	26.21
4783.000	33.03	9.20	8.70	50.92	74.00	23.08
4963.000	33.34	9.12	7.99	50.45	74.00	23.55
7425.000	36.42	11.58	14.11	62.11	74.00	11.89

Remarks: 1. Emission level=Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

3. All final readings of measurement were with Peak values.

4. The pre-amplifier factor has been subtracted by test program actively.

Emission Frequency	Peak Value	Duty Cycle Correction Factor	Average Value	Limit	Margin
(MHz)	(dB/m)	(dB)	$(dB\mu V/m)$	(dBµV/m)	(dB)
1762.72	53.59	-26.01	27.58	54.00	26.42
3292.48	47.41	-26.01	21.40	54.00	32.60
3619.84	47.79	-26.01	21.78	54.00	32.22
4783.00	50.92	-26.01	24.91	54.00	29.09
4963.00	50.45	-26.01	24.44	54.00	29.56
7425.00	62.11	-26.01	36.10	54.00	17.90

Remarks: 1. Duty Cycle Factor =20log(dwell time/100ms)= 20log(1.05ms/20.98ms) =-26.01

2. Average value=Peak value+ Duty Cycle Correction Factor

3. All final readings of measurement were with Average values.

Test Mode : Transmit, Channel: 11, Frequency: 2405MHz Emission Antenna Cable Meter Emission Limits Margin Frequency Factor Loss Reading Level Horizontal Horizontal (MHz) (dB/m) (dB) (dBµV) (dBµV/m) (dBµV/m) (dB) Peak * 2389.080 28.47 6.34 1.10 35.91 74.00 38.09		Date of Test :	ieu Danus N		. 09, 2012		Т	emperature :	25
$\frac{1}{1 = 10^{-1} \text{ Cable}} = \frac{1}{1 + 10^{-1} \text{ constant}} = \frac$		EUT:	ZigB	ee Tracl	king Smar	rt Socke	t	Humidity :	61%
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Test Mode :		Trans	mit, Cha	nnel: 11,	, Frequen	cy: 2405MHz	
Peak *2389.08028.476.341.1035.9174.0038.09Emission FrequencyPeak ValueDuty Cycle Correction Factor ValueLimit ValueMargin Margin (MHz)Average *2389.0835.91-26.019.9054.0044.10Average *2389.0835.91-26.019.9054.0044.10Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading. 2. Loguency section (spurious in the restricted band 2310-2430MHz).Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading. 2. Loguency section (spurious in the restricted band 2310-2430MHz).Other Structure Structure Structure Structure Structure Structure 2010g(1.05ms/20.98ms)=-26.01 "T means the period of the pulse train or 100ms if the pulse train length is greater than 100msConstructure Structure Structure Structure Structure Structure The Structure Str					Readi	ng	Level	Limits	Margin
Emission FrequencyPeak ValueDuty Cycle Correction FactorAverage ValueLimitMargin Margin(MHz)(dB/m)(dB/m)(dB)(dBµV/m)(dBµV/m)(dB)Average *2389.0835.91-26.019.9054.0044.10Termination Level = Antenna Factor + Cable Loss + Meter Reading.Constrained to the provide the		(MHz)	(dB/m)	(dB)	(dBµ'	V) (d	lBµV/m)	(dBµV/m)	(dB)
Emission Frequency Value Correction Factor Value Limit Margin (MHz) (dB/m) (dB/m) (dB) (dBµV/m) (dBµV/m) (dB) Average * 2389.08 35.91 -26.01 9.90 54.00 44.10 Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading. 2. Low frequency section (spurious in the restricted band 2310-2430MHz). 3. 's*' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209. 4. Duty Cycle Correction Factor = 20log (cumulative on/T) = 20log(1.05ms/20.98ms)=-26.01 "T' means the period of the pulse train or 100ms if the pulse train length is greater than 100ms 5. The pre-amplifier factor has been subtracted by test program activel View Correction Factor = 200 (cumulative on/T) = 20log(1.05ms/20.98ms)=-26.01 "T' means the period of the pulse train or 100ms if the pulse train length is greater than 100ms 5. The pre-amplifier factor has been subtracted by test program activel View Correction Factor = 200 (cumulative on/T) = 20log(1.05ms/20.98ms)=-26.01 "T' means the period of the pulse train or 100ms if the pulse train length is greater than 100ms 6. The pre-amplifier factor has been subtracted by test program activel View Correction Factor = 200 (cumulative on/T) = 2010(cumulative on/	Peak *	2389.080	28.47	6.34	1.10)	35.91	74.00	38.09
Average * 2389.08 35.91 -26.01 9.90 54.00 44.10		Emission Frequ	IANCV				÷	Limit	Margin
 Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading. Low frequency section (spurious in the restricted band 2310-2430MHz). *** The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209. Duty Cycle Correction Factor = 20log (cumulative onT) = 20log(1.05ms/20.98ms)=-26.01 *** The field strength of the pulse train or 100ms if the pulse train length is greater than 100ms The pre-amplifier factor has been subtracted by test program activel 		(MHz)	(dB/	m)	(dB)	(c	lBµV/m)	$(dB\mu V/m)$	(dB)
 2. Low frequency section (spurious in the restricted band 2310-2430MHz). 3. **' The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209. 4. Duty Cycle Correction Factor = 20log (cumulative on/T) = 20log(1.05ms/20.98ms)=-26.01	Average *	2389.08	35.9	€1	-26.01		9.90	54.00	44.10
Image: constraint of the second se		Data: 2	5. The pre-	-amplifie	er factor ha AUDI No.53 Count Tel:+8 Email:1	as been s X TECHNOLOGY Cd -11, Tin-fu Tsun, Lin y, Taiwan R.O.C. 86-2-26092133 Fax:- ttemc@ttemc.com.tw	-kou Hsiang, Taipei Post Code:24443 +886-2-26099303	by test progra	m actively
54		1 41	rel (dBuV/m)	ins and second sta					
54 1						FCC PART-150			
Frequency (MHz) Site no. : A/C Chamber Data no. : 2 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL Limit : : FCC PART-15C (1G-FK) Env. / Ins. : E4446A 25°C/61% Dir : M9F0020000 Power Rating : AC120 / 60Hz Test Mode : TX2405 Frequency (MHz) Ant. Cable Emission T 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.29 Ant. Cable Emission Imission Imission T 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.29 A 1.10 Imission Imission Imission Imission <		54							
Frequency (MHz) Site no. : A/C Chamber Data no. : 2 Dis. / Ant. : 3m 3115(4927) Ant. pol. : HORIZONTAL Limit : : FCC PART-15C (1G-FK) Env. / Ins. : E4446A 25°C/61% Dir : M9F0020000 Power Rating : AC120 / 60Hz Test Mode : TX2405 Frequency (MHz) Ant. Cable Emission T 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.29 Ant. Cable Emission Imission Imission T 2389.080 28.47 (.34 1.10 1 2389.080 28.47 (.34 1.29 A 1.10 Imission Imission Imission Imission <		0							
Freq. Factor Loss Reading Level Limits Margin Remark (MHz) (dB/m) (dBµV) (dBµV/m) (dBµ 1 2389.080 28.47 6.34 1.10 35.91 74.00 38.09 Peak 2 2390.040 28.47 6.34 1.29 36.11 74.00 37.89 Peak		Site no. Dis. / Ant. Limit Env. / Ins. BUT Fower Ratin	: A/C Chamber : 3m 3115(4927 : FCC PART-15C : E4446A 25°C/6J : M9F6020000 g : AC120 / 60Hz	Frequen 7) (1G-PK)	cy(MHz) Data no. : Ant. pol. :	2 HORIZONTAL			
2 2390.040 28.47 6.34 1.29 36.11 74.00 37.89 Peak		(MHz	. Factor Loss F) (dB/m) (dB)	Reading Lev (dBµV) (dBµ	vel Limits IV/m) (dBµV/m)	(dB)			
5 210.100 2012 0.00 31.15 07.02 11.00 13.02 FEAK		2 2390.0	40 28.47 6.34	1.29 36.	11 74.00	37.89 Peak			

3.7.3. Restricted Bands Measurement Results

	Date of Test :		Aug. (9, 2012	Т	emperature :	25
	EUT:	ZigB	ee Tracki	ng Smart So	cket	Humidity :	61%
	Test Mode:		Transm	nit, Channel:	11, Frequen	cy: 2405MHz	
	Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Vertical	Emission Level Horizontal	Limits	Margin
	(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
Peak *	2386.680	28.47	6.33	3.95	38.75	74.00	35.25
	Emission Frequ	ency Pea Val		uty Cycle ection Factor	Average Value	Limit	Margin
	(MHz)	(dB/	m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
Average *	2386.68	38.7	75	-26.01	12.74	54.00	41.26
	Data: 1 107	"T" mea length is 5. The pre-	ans the per s greater t amplifier	han 100ms factor has be AUDIX TECHNOI No 33-11, Tim-fut County, Taiwan R	Ilse train or 1 en subtracted OGY Corp. EMC Laboratory sun, Lin-kou Hsiang, Taipei O.C. Port Code 24443 33 Fax+836-2-20099303 c. com.tw	00ms if the pul	
	54 0 231(Site no. Dis. / Ant. Limit Env. / Ins. EUT Power Rating Test Mode Freq. (MH2) 1 2386.66 2 2390.04 3 2405.88 Remarks: 1.) 2334. : A/C Chamber : 3m 3115(4927) : FCC PART-15C (. : E4446A 25°C/61 : M9FG020000 : AC120 / 60Hz : TX2405 Ant. Cable Factor Loss R (dB/m) (dB) (. 0 28.47 6.33 0 28.51 6.36	Emissi eading Level lBµV) (dBµV/) 3.95 38.75 2.07 36.89 63.73 98.60 ntenna Factor	2382. 2406. HHz) Data no. : 1 Ant. pol. : VERTICA Djianlu Dianu (dBµU/m) (dB) 74.00 35.25 74.00 37.11	n_hung Remark Peak Peak Peak Peak		

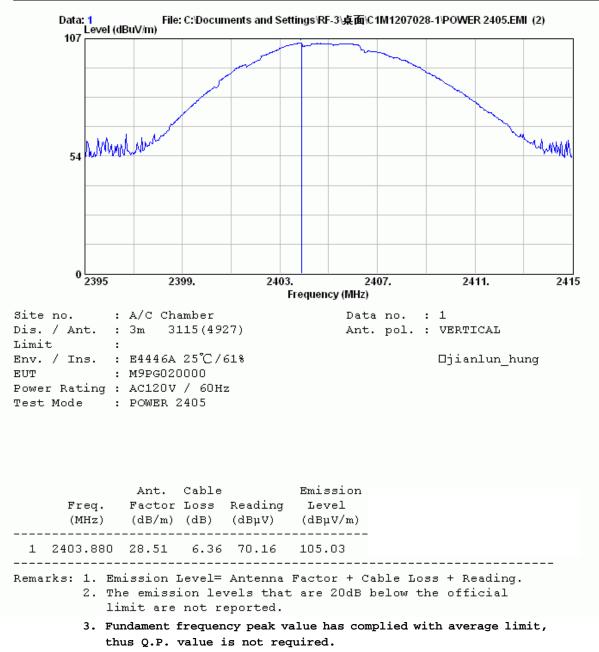
AUDIX Technology Corporation Report No.: EM-F1010643

	Date of Test :		Aug.	09, 2012	1	Cemperature :	25	
	EUT:	ZigB	ee Track	ing Smart So	cket	Humidity :	61%	
	Test Mode :	Transmit, Channel: 26, Frequency: 2480MHz						
	Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Horizontal	Emission Level Horizontal	Limits	Margin	
	(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	(dBµV/m)	(dB)	
Peak *	2483.600	28.66	6.45	1.35	36.46	74.00	37.54	
	Emission Frequ	ency Pea Val		Duty Cycle rection Factor	Average Value	Limit	Margin	
	(MHz)	(dB)	/m)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)	
Average *	2483.60	36.	46	-26.01	10.45	54.00	43.55	
	54 54 0 243 3 Site no. Dis. / Ant. Limit Env. / Ins. EUT Fower Ratin Test Mode Freq (MHz 1 2449.4) 3 2483.6) 3 2484.6] Remarks: 1.	shall no 4. Duty Cy 20log(1 "T" me length i 5. The pre- (dBu/m) File: C:Docume (dBu/m) File: C:Docume (dBu/m) File: C:Docume (dBu/m) File: C:Docume (dBu/m) File: C:Docume (dBu/m) File: C:Docume (dBu/m) (dBu/m) (dB) Ant. Cable Pactor Loss F (dB/m) (dB) Di 28.59 6.41 Di 28.66 6.45 Emission Level = 4	And the exceed value of the exceed value Correct .05ms/20 and the point sector and the point sector .05ms/20 and the point sec	ion Limits Margin /// (dBµV/m) (dB) // 7 74.00 -11.97 6 74.00 38.24	wn in section = 20log (cum 1 llse train or 1 en subtracted 	g within Part 15 15.209. ulative on/T) = 00ms if the pul l by test program	se train	

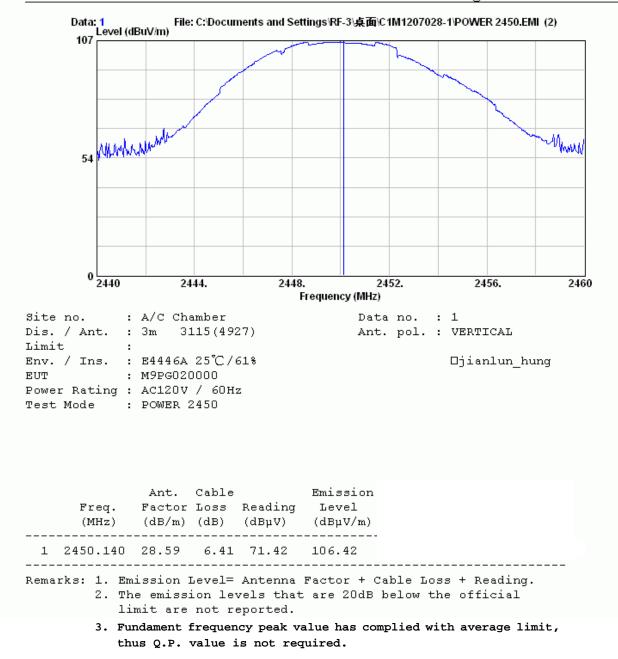
Date of Test :		Aug. (9, 2012	1	Cemperature :	25
EUT:	ZigBe	e Tracki	ng Smart So	cket	Humidity :	61%
Test Mode :		Transm	nit, Channel:	26, Frequen	cy: 2480MHz	
Emission Frequency	Antenna Factor	Cable Loss	Meter Reading Vertical	Emission Level Horizontal	Limits	Margin
(MHz)	(dB/m)	(dB)	(dBµV)	$(dB\mu V/m)$	(dBµV/m)	(dB)
2485.900	28.66	6.45	3.02	38.13	74.00	35.87
Emission Frequ	2		• •	Average Value	Limit	Margin
(MHz)	(dB/n	n)	(dB)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dB)
2485.90	38.1	3	-26.01	12.12	54.00	41.88
AUD	20log(1. "T" mea length is 5. The pre-	05ms/20. Ins the per greater t	98ms)=-26.0 riod of the pu han 100ms factor has be AUDIX TECHNO No.33.11, Tin-fu County, Taiwan F Tel-Web-2-20021	1 alse train or 1 een subtracted LOGY Corp. EMC Laboratory Fun, Lin-kou Hsiang, Taiper LOC. Post Code 24443 33 Fart+886-20099303	00ms if the pul	
Data: 3 107	File: C:'Documen el (dBuV/m)	s and Settings RF-3 द्र				
0 243 Site no. Dis. / Ant. Limit Env. / Ins. BUT Fower Rating Test Mode Freq. (MH2) 1 2449.20 2 2483.60 3 2485.90	0 2450. : A/C Chamber : 3m 3115(4927) : FCC PART-15C (1 : E4446A 25°C/618 : M9FG020000 5 AC120 / 60Hz : TX2480 Ant. Cable Factor Loss Re (db/m) (dB) (d 00 28.59 6.41 6 10 28.66 6.45 10 28.66 6.45	G-PR) G-PR) ading Level BµV) (dBµV/ 4.47 99.46 1.11 36.23 3.02 38.13	2490. 2510. H22 Data no. : 3 Ant. pol. : VERTIC. Djianly (dBµV/m) (dB) 74.00 -25.46 74.00 37.77 74.00 35.87			
	EUT : Test Mode : Emission Frequency (MHz) 2485.900 Emission Freque (MHz) 2485.90 Remark : Site no. Dis. / Ant. Linit 107 102 Site no. Dis. / Ant. Linit Site no. Dis. / Ant. Linit Frequency Site no. Dis. / Ant. Linit Site no. Site no. Dis. / Ant. Linit Site no. Site no.	EUT : ZigBe Test Mode : Test Mode : Emission Antenna Frequency Factor (MHz) (dB/m) 2485.900 28.66 Emission Frequency Peak Valu (MHz) (dB/m) 2485.90 38.11 Remark : 1. Emission 2 Low free 2470-25 3. "*" The shall not 4. Duty Cya 20log(1. "T" mea length is 5. The pre-ating 5. The pre-ating Site no. mt. : All Chamber 100 Site no. mt. : All Chamber 100 Site no. mt. : All Chamber Site no. mt. : More Chamber Site no. mt. : : More Chamber Site no. mt. : : : : : : : : : : : : : : : : : : :	EUT : ZigBee Tracki Test Mode : Transm Emission Antenna Cable Frequency Factor Loss (MHz) (dB/m) (dB) 2485.900 28.66 6.45 Emission Frequency Peak Day Value Correct (MHz) (dB/m) 2485.90 38.13 Remark : 1. Emission Level = 2. Low frequency set 2470-2530MHz). 3. "*" The field strent shall not exceed to 4. Duty Cycle Correct 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Test Mode : Tradeout Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater Site no. : MC Cheater 20log(1.05ms/20). "T" means the per- length is greater to 5. The pre-amplifier Site no. : MC Cheater Site no. : : MC Cheater Site no. : MC Cheater Site no. : : : MC Cheater Site no. : : : : : : : : : : : : : : : : : : :	EUT : ZigBee Tracking Smart So Test Mode : Transmit, Channel: Emission Antenna Cable Meter Frequency Factor Loss Reading Vertical (MHz) (dB/m) (dB) (dBµV) 2485.900 28.66 6.45 3.02 Emission Frequency Peak Duty Cycle Value Correction Factor (MHz) (dB/m) (dB) 2485.90 38.13 -26.01 Remark : 1. Emission Level = Antenna Fac 2. Low frequency section (spurio 2470-2530MHz). 3. '*' The field strength of emissis shall not exceed the limits sho 4. Duty Cycle Correction Factor 20log(1.05ms/20.98ms)=-26.00 "T" means the period of the pi length is greater than 100ms 5. The pre-amplifier factor has be 2. State for the pi has the period of the pi length is greater than 100ms 5. The pre-amplifier factor has be 2. The pre-amplifier factor has be 2. State for the pi has the period of the pi length is greater than 100ms 5. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 2. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 2. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 2. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 2. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 3. The pre-amplifier factor has be 2. State for the pi length is greater than 100ms 3. The pi length is	EUT : <u>ZigBee Tracking Smart Socket</u> Test Mode : <u>Transmit, Channel: 26, Frequen</u> <u>Frequency</u> <u>Factor</u> <u>Loss</u> <u>Reading</u> <u>Emission</u> <u>Frequency</u> <u>Factor</u> <u>Loss</u> <u>Reading</u> <u>Emission</u> <u>Level</u> <u>Vertical</u> <u>Motion Level</u> <u>Horizontal</u> (MHz) (dB/m) (dB) (dBµV) (dBµV/m) <u>2485.900</u> <u>28.66</u> <u>6.45</u> <u>3.02</u> <u>38.13</u> <u>Emission Frequency</u> <u>Peak</u> <u>Duty Cycle</u> <u>Average</u> <u>Value</u> <u>Correction Factor</u> <u>Value</u> (MHz) (dB/m) (dB) (dBµV/m) <u>2485.90</u> <u>38.13</u> <u>-26.01</u> <u>12.12</u> <u>Remark</u> : 1. Emission Level = Antenna Factor + Cable J 2. Low frequency section (spurious in the rest <u>2470-25300HHz</u>). 3. "*' The field strength of emission appearing shall not exceed the limits shown in section 4. Duty Cycle Correction Factor = 20log (cum <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor has been subtracted <u>Correction Factor = 20log (cum</u> <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor has been subtracted <u>Correction Factor = 20log (cum</u> <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor has been subtracted <u>Correction Factor = 20log (cum</u> <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor has been subtracted <u>Correction Factor = 20log (cum</u> <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor has been subtracted <u>Correction Factor = 20log (cum <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I length is greater than 100ms. 5. The pre-amplifier factor means the period of the pulse train or I <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I <u>20log(1.05ms/20.98ms)=-26.01</u> "T" means the period of the pulse train or I <u>20log(1.05ms/20.98ms)=-26.01</u> "</u>	FUT: ZigBee Tracking Smart Socket Humidity: Test Mode : Transmit, Channel: 26, Frequency: 2480MHz Transmit, Channel: 26, Frequency: 2480MHz Emission Antenna Cable Meter Emission Limits Frequency Factor Loss Reading Level Horizontal (MHz) (dB/m) (dB) (dBµV) (dBµV/m) (dBµV/m) 2485.900 28.66 6.45 3.02 38.13 74.00 Emission Frequency Peak Duty Cycle Average Limit (MHz) (dB/m) (dB) (dBµV) (dBµV/m) (dBµV/m) 2485.90 38.13 -26.01 12.12 54.00 Remark : 1. Emission Level = Antenna Factor + Cable Loss + Meter R 2. Low frequency section (spurious in the restricted band 2470-2330MHz). 3. ** The field strength of emission appearing within Part 15 shall not exceed the limits shown in section 15.209. 4. Duty Cycle Correction Factor = 20log (cumulative on/T) = 20log(1.05mx/20.98ms)=-26.01 "T" means the period of the pulse train or 100ms if the pul length is greater than 100ms. 5. The pre-amplifier factor has been subtracted by test program Future for the state train or 100ms if the pul length is greater than 100ms. 6. The pre-amplifier factor has been subtracted by test program Future for the state train or 100ms if the pul length is greater than 100ms. 6. The pre-amplifier factor has been subtracted by test program Future for the state for the state train or 100ms if the pul length is greater than 100ms. 6. The pre-amplifier factor has been subtracted by test program Future for the state for the state for the state train or 100ms if the pul length is greater than 100ms. 6. The pre-amplifier factor has been subtracted by test program Future for the state for the state for the state train or 100ms if the pul length is greater than 100ms. 7. The first for the state

3.7.4. Fundamental Frequency

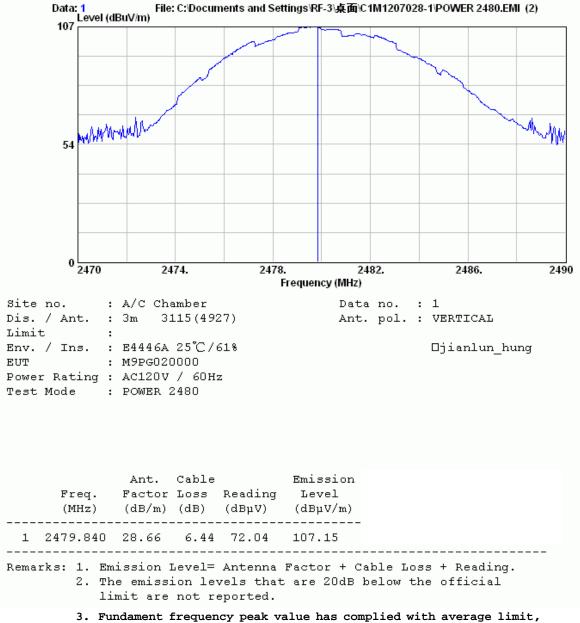












thus Q.P. value is not required.

4. DUTY CYCLE FACTOR

4.1. Test Equipment

The following test equipment was used during the duty cycle factor measurement:

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9030A-544	US51350140	Oct. 14, 11'	Oct. 13, 12'

4.2. Block Diagram of Test Setup



4.3. Test Results

PASSED. All the test results are attached in next pages.

Test Date: Aug. 01, 2012 Temperature : 26 Humidity : 63%

Agiler	nt Spectrum		yzer - Swept SA									
, X I		RF	50 Q DC			SENSE: INT	AL	Avg Type: I	on Dur		ACE 1 2	
Mar	Ker 1 Z	1.1.	05000 ms		PNO: Fast ++	. Trig: Freel Atten: 30 (Avg Type:	Log-rwr		DET P N	NNNN
10 di Log			ffset 1 dB 20.00 dBm	l						∆Mkr1	1.050) ms 3 dB
10.0												
0.00			ı									
-10.0												
-20.0		Π										
-30.0		11										
-40.0	a marine		102 Marian Mary	www.www.	Barenser	(handario-malici	(munistras)	handelsdagtleite	warde	w l	July.
		~										
-60.0												
-70.0												
	ter 2.40 BW 4 M		0000 GHz		#VB	W 3.0 MHz			Sweep	o 25.00 ms	Span (1001	
MSG								STATUS				

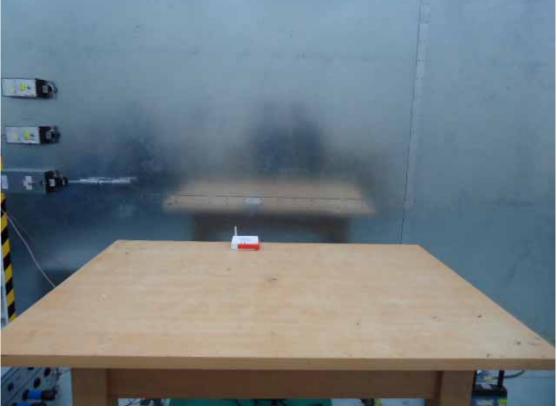
Q IF	50 Q DC	50	NSEJNT	ALISINAUTO	1171 0170 c	05:40:403	PM Aug 01, 201
Marker 1 ∆ 20.97	arker 1 Δ 20.9750 ms PNO IFGai		Trig: Free Run Atten: 30 dB	Avg Type:	Log-Pwr	ΔMkr1 2	CE 12345 PE WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW
0 dB/div Ref 20.0							1.83 dE
10.0							
			-	-			n-
0.0							
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Center 2.40500000 Res BW 4 MHz	0 GHz	#VBW	/ 3.0 MHz	1	Sweer	25.00 ms	Span 0 H (1001 pts
sa		No. 199		STATUS	10000		

 $\begin{array}{l} T_{on}=1.050ms\\ T(_{on}+_{off})=20.98ms \end{array}$

5. DEVIATION TO TEST SPECIFICATIONS [NONE]

6. PHOTOGRAPHS

6.1. Photos of Powerline Conducted Emission Measurement

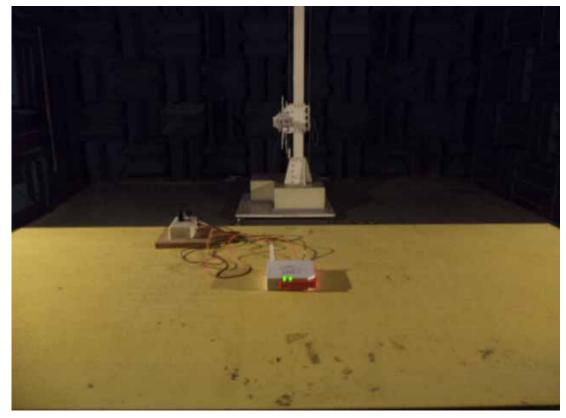


FRONT VIEW OF CONDUCTED MEASUREMENT



BACK VIEW OF CONDUCTED MEASUREMENT

6.2. Photos of Radiated Emission Measurement at Semi-Anechoic Chamber



6.2.1. For Frequency Range 30MHz~1GHz

6.2.2. For Frequency Above 1GHz

