

Prüfbericht - Nr.: **14032498 001**
Test Report No.:
Seite 1 von 15
Page 1 of 15

Auftraggeber: **Kan Tsang Technology Ltd.**
Client:
Flat C10, 11F, Wing Hing Industrial Building
14 Hing Yip Street
Kwun Tong
Kowloon, Hong Kong

Gegenstand der Prüfung: **Bluetooth Audio Receiver**
Test Item:

Bezeichnung: **KT-518** **Serien-Nr.:** **Engineering sample**
Identification: **Serial No.:**

Wareneingangs-Nr.: **00130321320-001** **Eingangsdatum:** **21.03.2013**
Receipt No.: **Date of Receipt:**

Zustand des Prüfgegenstandes bei Anlieferung: **Test sample(s) is/are not damaged and suitable for testing.**
Condition of test item at delivery:

Prüfort: **Global United Technology Services Co., Ltd.**
Testing Location: **2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, China**

Prüfgrundlage: **FCC Part 15 Subpart C**
Test Specification: **ANSI C63.4-2003**
CISPR 22:2003

Prüfergebnis: **Das vorstehend beschriebene Gerät wurde geprüft und entspricht oben genannter Prüfgrundlage.**
Test Results:
The above mentioned product was tested and **passed**.

Prüflaboratorium: **TÜV Rheinland Hong Kong Ltd.**
Testing Laboratory: **8 - 10/F., Goldin Financial Global Square, 7 Wang Tai Road, Kowloon Bay, Kowloon, Hong Kong**

geprüft/ tested by: **kontrolliert/ reviewed by:**

23.04.2013 **Mika Chan**
Senior Project Engineer



23.04.2013

Sharon Li
Section Manager



Datum **Name/Stellung** **Unterschrift** **Datum** **Name/Stellung** **Unterschrift**
Date **Name/Position** **Signature** **Date** **Name/Position** **Signature**

Sonstiges: **FCCID: PAZ518**
Other Aspects

Abkürzungen: **P(pass)** = entspricht Prüfgrundlage
F(fail) = entspricht nicht Prüfgrundlage
N/A = nicht anwendbar
N/T = nicht getestet

Abbreviations: **P(pass)** = **passed**
F(fail) = **failed**
N/A = **not applicable**
N/T = **not tested**

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

Table of Content

	Page
Cover Page	1
Table of Content	2
Product information	3
Manufacturers declarations.....	3
Product function and intended use	4
Submitted documents	4
Remark.....	4
Special accessories and auxiliary equipment	4
List of Test and Measurement Instruments.....	5
Conducted Emission on AC Mains Terminals.....	5
Results FCC Part 15 – Subpart C	6
Subclause 15.203 – Antenna Information.....	Pass
Subclause 15.204 – Antenna Information.....	Pass
Subclause 15.207 – Disturbance Voltage on AC Mains	Pass
Subclause 15.247 (a)(1) – Carrier Frequency Separation	Pass
Subclause 15.247 (a)(1)(iii) – Number of hopping channels.....	Pass
Subclause 15.247 (a)(1)(iii) – Time of Occupancy (Dwell Time).....	Pass
Subclause 15.247 (a) – 20 dB Bandwidth	Pass
Subclause 15.247 (a) – Hopping Sequence.....	Pass
Subclause 15.247 (a) – Equal Hopping Frequency Use	Pass
Subclause 15.247 (a) – Receiver Input Bandwidth.....	Pass
Subclause 15.247 (a) – Receiver Hopping Capability	Pass
Subclause 15.247 (b)(1) – Peak Output Power.....	Pass
Subclause 15.247 (d) – Band edge compliance of conducted emissions	Pass
Subclause 15.205 – Band edge compliance of radiated emissions	Pass
Subclause 15.247 (d) – Spurious Conducted Emissions.....	Pass
Subclause 15.247 (c) – Spurious Radiated Emissions	Pass
Appendix 1 – Test protocols	26 pages
Appendix 2 – Test setup	3 pages
Appendix 3 – Photo documentation	5 pages
Appendix 4 – Product documentation	12 pages

Product information

Manufacturers declarations

	Transceiver
Operating frequency range	2402 - 2480 MHz
Type of modulation	GFSK; Pi/4 DQPSK; 8 DPSK
Number of channels	79
Channel separation	1 MHz
Type of antenna	PCB antenna
Antenna gain (dBi)	-2
Power level	fix
Type of equipment	stand alone radio device
Connection to public utility power line	No
Nominal voltage	V _{nor} : 3.7V
Independent Operation Modes	Page scan Inquiry scan Connection state - ACL Link Connection state - SCO Link

Product function and intended use

The test item is a Bluetooth Audio Receiver based on the Bluetooth technology.

Bluetooth is a short-range radio link intended to be a cable replacement between portable and/or fixed electronic devices.

Bluetooth operates in the unlicensed ISM Band at 2.4GHz. With the introduction of the enhanced data rate (EDR) feature, the data rates can be up to 3 Mb/s.

An increase in the peak data rate beyond the basic rate of 1 Mb/s is achieved by modulating the RF carrier using phase shift keying (PSK) techniques, resulting in an increase of two to three times the number of bits per symbol. The 2 Mb/s EDR packets use a Pi/4-DQPSK modulation and the 3 Mb/s EDR packets use 8DPSK modulation.

The USB connector is for charging only, no data exchange supported.

Submitted documents

Circuit Diagram
Block Diagram
Bill of material
User Manual
Label Artwork

Remark

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases.

Special accessories and auxiliary equipment

Additional accessory used for testing

The product has been tested together with the following additional accessory:

Monitor/TV	PHILIPS	19PFL3120/T3	AU1A1212002906
PC Host	DELL	OPTIPLEX745	GTS312
Keyboard	DELL	SK-8115	N/A
Mouse	DELL	N/A	N/A

Multimedia Speaker
Brand: Edifier
Model No.: iF330 Plus
S/N: 487004917236

AC/DC adapter
Brand: Edifier
Model No.: ADT-20120 UK
Input: 100-240V~ 50/60Hz 0.7A
Output: 12VDC 1.65A

List of Test and Measurement Instruments

Global United Technology Services Co., Ltd. (Registration number: 600491)

Radiated Emission

Equipment	Manufacturer	Type	Due Date
3m Semi- Anechoic Chamber	ZhongYu Electron	9.0(L)*6.0(W)* 6.0(H)	April. 5 2015
Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	N/A
ESU EMI Test Receiver	R&S	ESU26	Jul. 06 2013
Loop Antenna	Zhinan	ZN30900A	Jul. 25 2013
Bi-log Hybrid Antenna	SCHWARZBECK	VULB9163	Mar. 17 2014
Double-ridged horn antenna	SCHWARZBECK	9120D	Mar. 17 2014
Horn Antenna	ETS-LINDGREN	3160-09	Mar. 17 2014
RF Amplifier	HP	8347A	Jul. 06 2013
RF Amplifier	HP	8349B	Jul. 06 2013
EMI Test Software	AUDIX	E3	N/A
Coaxial cable	GTS	N/A	Jul. 06 2013
Coaxial Cable	GTS	N/A	Jul. 06 2013
Thermo meter	N/A	N/A	Jul. 05 2013

Conducted Emission on AC Mains Terminals

Equipment	Manufacturer	Type	Cal Due Date
Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	Sep. 07 2013
EMI Test Receiver	R&S	ESCS30	Jul. 06 2013
Pulse Limiter	R&S	ESH3-Z2	Jul. 06 2013
Coaxial Switch	ANRITSU CORP	MP59B	Jul. 06 2013
Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	Jul. 06 2013
Coaxial Cable	GTS	N/A	Jul. 06 2013
EMI Test Software	AUDIX	E3	N/A
Thermo meter	KTJ	TA328	Jul. 26 2013

Results FCC Part 15 – Subpart C

Subclause 15.203 – Antenna Information		Pass				
Requirement:	No antenna other than that furnished by the responsible party shall be used with the device					
Results:	Permanent attached antenna					
Verdict:	Pass					
Subclause 15.204 – Antenna Information		Pass				
Requirement:	Provide information for every antenna proposed for the use with the EUT					
Results:	a) Antenna type: b) Manufacturer and model no: c) Gain with reference to an isotropic radiator:	PCB antenna N.A. -2 dBi				
Verdict:	Pass					
Subclause 15.207 – Disturbance Voltage on AC Mains		Pass				
Test Port: AC mains input port of the computer Applied Voltage: 120VAC Adaptor Model: Please refer to page 4 Mode of operation: Charging + Music playing mode						
Live measurement						
Frequency range (MHz)	Frequency (MHz)	Quasi-peak dB μ V	Average dB μ V	Limit QP (dB μ V)	Limit AV (dB μ V)	Verdict
0,15 – 0,5	0.157	37.85	36.30	66 - 56	56 - 46	Pass
> 0,5 - 5	0.227	31.97	27.24	56	46	Pass
	0.611	31.56	21.46	56	46	Pass
> 5 - 30	No peak found	---	---	60	50	Pass
Neutral measurement						
Frequency range (MHz)	Frequency (MHz)	Quasi-peak dB μ V	Average dB μ V	Limit QP (dB μ V)	Limit AV (dB μ V)	Verdict
0,15 – 0,5	0.156	40.84	36.84	66 - 56	56 - 46	Pass
	0.305	31.61	21.61	66 - 56	56 - 46	Pass
> 0,5 - 5	0.611	30.86	20.86	56	46	Pass
> 5 - 30	No peak found	---	---	60	50	Pass
Results:	The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150kHz to 30MHz does not exceed the limits. For test Results plots refer to Appendix 1, page 2-3.					

Subclause 15.247 (a)(1) – Carrier Frequency Separation		Pass
Requirement: Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 2/3*20dB bandwidth of the hopping channel, whichever is greater.		
Test Specification : FCC Part 15 Subpart A – Subclause 15.31 Mode of operation : Tx mode (hopping on), 8DPSK Port of testing : Temporary antenna port Detector : Peak RBW/VBW : 100 kHz / 300 kHz Supply voltage : 3.7VDC, internal battery has been activate Temperature : 23°C Humidity : 50%		
Results: Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types. The centre frequencies of the hopping channels are separated by more than the 2/3*20dB bandwidth. For test Results plots refer to Appendix 1, page 4.		
Verdict: Pass		

Subclause 15.247 (a)(1)(iii) – Number of hopping channels		Pass
Requirement: Frequency hopping systems operating in the 2400MHz-2483.5MHz bands shall use at least 15 hopping frequencies.		
Test Specification : FCC Part 15 Subpart A – Subclause 15.31 Mode of operation : Tx mode (hopping on), 8DPSK Port of testing : Temporary antenna port Detector : Peak RBW/VBW : 1 MHz / 3 MHz Supply voltage : 3.7VDC, internal battery has been activate Temperature : 23°C Humidity : 50%		
Results: The total number of hopping frequencies is more than 15. For test Results plots refer to Appendix 1, page 5.		
Verdict: Pass		

Subclause 15.247 (a)(1)(iii) – Time of Occupancy (Dwell Time)		Pass
Requirement: 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.		
Test Specification : FCC Part 15 Subpart A – Subclause 15.31 Mode of operation : Tx mode (hopping on), DH5 packet Port of testing : Temporary antenna port Detector : Peak RBW/VBW : 1 MHz / 3 MHz Supply voltage : 3.7VDC, internal battery has been activate Temperature : 23°C Humidity : 50%		
Results: Time period calculation = $0.4 \times 79 = 31.6\text{s}$ Dwell time = $64 \times 2.92 \times 10^{-3} = 186.88 \times 10^{-3} \text{ s}$ $\leq 400 \times 10^{-3} \text{ s}$		
For test protocols please refer to Appendix 1, page 6.		
Verdict: Pass		

Subclause 15.247 (a) – 20 dB Bandwidth		Pass	
Requirement: Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 2/3*20dB bandwidth of the hopping channel, whichever is greater.			
Test Specification : FCC Part 15 Subpart A – Subclause 15.31 Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz) Port of testing : Temporary antenna port Detector : Peak RBW/VBW : 30 kHz / 100 kHz Supply voltage : 3.7VDC, internal battery has been activate Temperature : 23°C Humidity : 50%			
Results: Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types. For test protocols refer to Appendix 1, page 7-9.			
GFSK Modulation			
Frequency (MHz)	20 dB left (MHz)	20 dB right (MHz)	20dB bandwidth (MHz)
2402	0.456	0.486	0.942
2441	0.456	0.486	0.942
2480	0.462	0.480	0.942
8DPSK Modulation			

Frequency (MHz)	20 dB left (MHz)	20 dB right (MHz)	20dB bandwidth (MHz)
2402	0.642	0.648	1.290
2441	0.642	0.636	1.278
2480	0.654	0.618	1.272

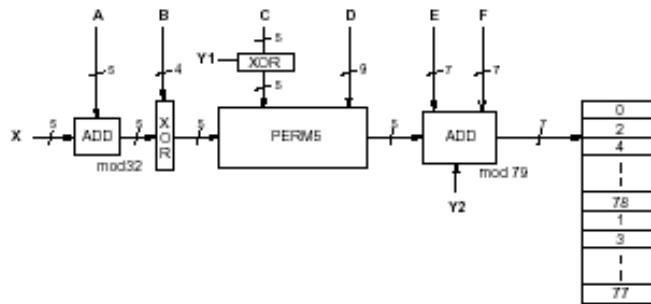
Subclause 15.247 (a) – Hopping Sequence

Pass

Requirement: The hopping sequence is generated and provided with an example.

Hopping sequence

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master. The X input determines the phase in the 32-hop segment, whereas Y1 and Y2 selects between master-to-slave and slave-to-master transmission. The inputs A to D determine the ordering within the segment, the inputs E and F determine the mapping onto the hop frequencies.



Example data:

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x00000010

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x00000010:	08 66	10 70	12 19	14 23	16 01	18 05	20 33	22 37
0x00000030:	24 03	26 07	28 35	30 39	32 72	34 76	36 25	38 29
0x00000050:	40 74	42 78	44 27	46 31	48 09	50 13	52 41	54 45
0x00000070:	56 11	58 15	60 43	62 47	32 17	36 19	34 49	38 51
0x00000090:	40 21	44 23	42 53	46 55	48 33	52 35	50 65	54 67
0x000000b0:	56 37	60 39	58 69	62 71	64 25	68 27	66 57	70 59
0x000000d0:	72 29	76 31	74 61	78 63	01 41	05 43	03 73	07 75
0x000000f0:	09 45	13 47	11 77	15 00	64 49	66 53	68 02	70 06
0x00000110:	01 51	03 55	05 04	07 08	72 57	74 61	76 10	78 14
0x00000130:	09 59	11 63	13 12	15 16	17 65	19 69	21 18	23 22
0x00000150:	33 67	35 71	37 20	39 24	25 73	27 77	29 26	31 30
0x00000170:	41 75	43 00	45 28	47 32	17 02	21 04	19 34	23 36
0x00000190:	33 06	37 08	35 38	39 40	25 10	29 12	27 42	31 44
0x000001b0:	41 14	45 16	43 46	47 48	49 18	53 20	51 50	55 52
0x000001d0:	65 22	69 24	67 54	71 56	57 26	61 28	59 58	63 60
0x000001f0:	73 30	77 32	75 62	00 64	49 34	51 42	57 66	59 74
0x00000210:	53 36	55 44	61 68	63 76	65 50	67 58	73 03	75 11
0x00000230:	69 52	71 60	77 05	00 13	02 38	04 46	10 70	12 78
0x00000250:	06 40	08 48	14 72	16 01	18 54	20 62	26 07	28 15
0x00000270:	22 56	24 64	30 09	32 17	02 66	06 74	10 19	14 27
0x00000290:	04 70	08 78	12 23	16 31	18 03	22 11	26 35	30 43
0x000002b0:	20 07	24 15	28 39	32 47	34 68	38 76	42 21	46 29
0x000002d0:	36 72	40 01	44 25	48 33	50 05	54 13	58 37	62 45
0x000002f0:	52 09	56 17	60 41	64 49	34 19	36 35	50 51	52 67
0x00000310:	38 21	40 37	54 53	56 69	42 27	44 43	58 59	60 75
0x00000330:	46 29	48 45	62 61	64 77	66 23	68 39	03 55	05 71
0x00000350:	70 25	72 41	07 57	09 73	74 31	76 47	11 63	13 00
0x00000370:	78 33	01 49	15 65	17 02	66 51	70 67	03 04	07 20
0x00000390:	68 55	72 71	05 08	09 24	74 59	78 75	11 12	15 28
0x000003b0:	76 63	01 00	13 16	17 32	19 53	23 69	35 06	39 22
0x000003d0:	21 57	25 73	37 10	41 26	27 61	31 77	43 14	47 30
0x000003f0:	29 65	33 02	45 18	49 34	19 04	21 08	23 20	25 24

Subclause 15.247 (a) – Equal Hopping Frequency Use	Pass
Requirement: Each of the transmitter's hopping channels is used equally on average.	
Equal hopping frequency use The EUT complies with the Bluetooth RF specifications. For details refer to the Bluetooth standard.	

Subclause 15.247 (a) – Receiver Input Bandwidth		Pass
Requirement: The associated receiver(s) complies with the requirement that its input bandwidth matches the bandwidth of the transmitted signal.		
Receiver input bandwidth The receiver bandwidth is equal to the receiver bandwidth in the 79 hopping channel mode, which is 1 MHz. The receiver bandwidth was verified during Bluetooth RF conformance testing.		

Subclause 15.247 (a) – Receiver Hopping Capability		Pass
Requirement: The associated receiver has the ability to shift frequencies in synchronisation with the transmitted signals.		
Receiver hopping Capability The EUT complies with the Bluetooth RF specifications. For details refer to the Bluetooth standard.		

Subclause 15.247 (b)(1) – Peak Output Power		Pass
Test Specification : FCC Part 15 Subpart A – Subclause 15.31 Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz) Port of testing : Temporary antenna port Detector : Peak RBW/VBW : 3 MHz / 10 MHz Supply voltage : 3.7VDC, internal battery has been activate Temperature : 23°C Humidity : 50%		
Requirement: For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 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.		
Results: For test protocols please refer to Appendix 1, page 10-14.		

GFSK Modulation

Frequency (MHz)	Maximum peak output power (dBm)	Cable attenuation (dB)	Output power (dBm)	Limit (W/dBm)	Verdict
2402	-5.81	0.00	-5.810	1 / 30.0	Pass
2441	-5.72	0.00	-5.720	1 / 30.0	Pass
2480	-5.87	0.00	-5.870	1 / 30.0	Pass

DQPSK Modulation

Frequency (MHz)	Maximum peak output power (dBm)	Cable attenuation (dB)	Output power (dBm)	Limit (W/dBm)	Verdict
2402	-5.17	0.00	-5.170	1 / 30.0	Pass

2441	-5.57	0.00	-5.570	1 / 30.0	Pass
2480	-5.84	0.00	-5.840	1 / 30.0	Pass

8DPSK Modulation

Frequency (MHz)	Maximum peak output power (dBm)	Cable attenuation (dB)	Output power (dBm)	Limit (W/dBm)	Verdict
2402	-4.99	0.00	-4.990	1 / 30.0	Pass
2441	-4.99	0.00	-4.990	1 / 30.0	Pass
2480	-5.20	0.00	-5.200	1 / 30.0	Pass

Subclause 15.247 (d) – Band edge compliance of conducted emissions Pass	
Test Specification	: FCC Part 15 Subpart A – Subclause 15.31
Mode of operation	: Tx mode (2402MHz, 2480MHz), 8DPSK
Port of testing	: Temporary antenna port
Detector	: Peak
RBW/VBW	: 100 kHz / 300 kHz
Supply voltage	: 3.7VDC, internal battery has been activate
Temperature	: 23°C
Humidity	: 50%
Requirement:	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.
Results:	<p>Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types.</p> <p>There is no peak found outside any 100 kHz bandwidth of the operating frequency band. For test protocols refer to Appendix 1, page 15-16.</p>

Subclause 15.205 – Band edge compliance of radiated emissions Pass	
Test Specification	: FCC Part 15 Subpart A – Subclause 15.31
Mode of operation	: Tx mode (2402MHz, 2480MHz), 8DPSK
Port of testing	: Temporary antenna port
Detector	: Peak
RBW/VBW	: 1 MHz / 1 MHz
Supply voltage	: 3.7VDC, internal battery has been activate
Temperature	: 23°C
Humidity	: 50%
Requirement:	Radiated emissions which fall in the restricted bands, as defined in 15.205 (a), must also comply with the radiated emission limits specified in 15.209(a).
Results:	There is no peak found in the restricted bands. For test protocols refer to Appendix 1, page 17-24.

Subclause 15.247 (d) – Spurious Conducted Emissions		Pass			
Test Specification	: FCC Part 15 Subpart A – Subclause 15.31				
Mode of operation	: Tx mode (2402MHz, 2441MHz, 2480MHz), 8DPSK				
Port of testing	: Temporary antenna port				
Detector	: Peak				
RBW/VBW	: 100 kHz / 300 kHz				
Supply voltage	: 3.7VDC, internal battery has been activate				
Temperature	: 23 °C				
Humidity	: 50 %				
Requirement:	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.				
Results:	<p>Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types.</p> <p>There is no peak found outside any 100kHz bandwidth of the operating frequency band in the three transmit frequency. All three transmit frequency modes comply with the limit stated in subclause 15.247(d). For test protocols refer to Appendix 1, page 25-26.</p>				
Operating frequency (MHz)	Spurious frequency (MHz)	Spurious Level (dBm)	Reference value (dBm)	Delta (dB)	Verdict
2402	3200	-53.94	-5.47	-48.47	Pass
	4800	-51.68	-5.47	-46.21	Pass
2441	3250	-53.26	-5.80	-47.46	Pass
	4850	-47.08	-5.80	-41.28	Pass
2480	3300	-50.27	-7.50	-42.77	Pass
	4950	-45.53	-7.50	-38.03	Pass

Subclause 15.247 (c) – Spurious Radiated Emissions			Pass
Test Specification	:	ANSI C63.4 – 2003	
Mode of operation	:	Tx mode (2402MHz, 2441MHz, 2480MHz), 8DPSK	
Port of testing	:	Enclosure	
Detector	:	Peak	
RBW/VBW	:	100 kHz / 300 kHz for f < 1 GHz 1 MHz / 3 MHz for f > 1 GHz	
Supply voltage	:	3.7VDC, internal battery has been activate	
Temperature	:	23°C	
Humidity	:	50%	
Requirement:	In any 100kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. 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 15.205(c).		
Results:	<p>Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types.</p> <p>All three transmit frequency modes comply with the field strength within the restricted bands. There is no spurious found below 30MHz.</p>		
Tx frequency 2402MHz	Vertical Polarization		
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m	
4804.000	45.82	74.0 / PK	
4804.000	25.85	54.0 / AV	
Tx frequency 2402MHz	Horizontal Polarization		
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m	
4804.000	45.60	74.0 / PK	
4804.000	25.55	54.0 / AV	
Tx frequency 2441MHz	Vertical Polarization		
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m	
4882.000	46.15	74.0 / PK	
4882.000	27.09	54.0 / AV	
Tx frequency 2441MHz	Horizontal Polarization		
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m	
4882.000	46.65	74.0 / PK	
4882.000	27.72	54.0 / AV	
Tx frequency 2480MHz	Vertical Polarization		
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m	
4960.000	44.91	74.0 / PK	

4960.000	25.29	54.0 / AV
Tx frequency 2480MHz		Horizontal Polarization
Freq MHz	Level dBuV/m	Limit/ Detector dBuV/m
4960.000	45.56	74.0 / PK
4960.000	25.01	54.0 / AV